



SAR TEST REPORT

Applicant ZTE Corporation
FCC ID SRQ-ZTEA2322G
Product 5G Digital Mobile Phone
Model ZTE A2322G
Report No. R2105A0447-S1
Issue Date August 11, 2021

TA Technology (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in **IEEE 1528- 2013, ANSI C95.1: 1992, IEEE C95.1: 1991**. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

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1 Test Laboratory

1.1 Notes of the Test Report

This report shall not be reproduced in full or partial, without the written approval of **TA technology (shanghai) co., Ltd.** The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein .Measurement Uncertainties were not taken into account and are published for informational purposes only. This report is written to support regulatory compliance of the applicable standards stated above.

1.2 Test facility

FCC (Designation number: CN1179, Test Firm Registration Number: 446626)

TA Technology (Shanghai) Co., Ltd. has been listed on the US Federal Communications Commission list of test facilities recognized to perform measurements.

A2LA (Certificate Number: 3857.01)

TA Technology (Shanghai) Co., Ltd. has been listed by American Association for Laboratory Accreditation to perform measurement.

1.3 Testing Location

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1.4 Laboratory Environment

Temperature	Min. = 18°C, Max. = 25 °C
Relative humidity	Min. = 30%, Max. = 70%
Ground system resistance	< 0.5 Ω
Ambient noise is checked and found very low and in compliance with requirement of standards. Reflection of surrounding objects is minimized and in compliance with requirement of standards.	



2 Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for the EUT are as follows:

Table 1: Highest Reported SAR

Mode	Highest Reported SAR (W/kg)			
	1g SAR Head	1g SAR Body-worn (Separation 15mm)	1g SAR Hotspot (Separation 10mm)	Product Specific 10-g SAR (Separation 0mm)
GSM 850	0.12	0.21	0.62	NA
GSM 1900	0.15	0.27	0.72	NA
WCDMA Band II	0.27	0.98	0.76	NA
WCDMA Band V	0.75	0.20	0.53	NA
LTE FDD 2	0.31	0.48	0.82	1.72
LTE FDD 4	0.15	0.44	0.87	2.36
LTE FDD 5	0.74	0.35	0.60	NA
LTE FDD 7	0.49	0.74	0.85	NA
LTE FDD 12	0.26	0.18	0.31	NA
LTE FDD 26	0.87	0.31	0.47	NA
LTE TDD 38	0.33	0.55	0.77	NA
LTE TDD 41	0.38	0.58	0.63	NA
LTE FDD 66	1.10	0.29	1.07	NA
NR n41	0.14	0.15	0.33	NA
NR n66	0.79	0.43	0.74	NA
Wi-Fi (2.4G)	0.60	0.30	0.56	NA
Wi-Fi (5G)	0.89	0.60	1.02	2.00
BT	0.38	0.09	0.09	NA

Date of Testing: June 14, 2021 ~ June 31, 2021

Date of Sample Received: May 25, 2021

Note: 1. The device is in compliance with SAR for Uncontrolled Environment /General Population exposure limits (1.6 W/kg and 4.0 W/kg) specified in ANSI C95.1: 1992/IEEE C95.1: 1991, and had been tested in accordance with the measurement methods and procedures specified in IEEE 1528-2013.

2. All indications of Pass/Fail in this report are opinions expressed by TA Technology (Shanghai) Co., Ltd. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only.



Ant 0 and Ant 2 SAR for LTE Band 17 (Frequency range: 704-716 MHz) is covered by LTE Band 12 (Frequency range 699-716 MHz) due to similar frequency range, same maximum tune up limit and same channel bandwidth.

Table 2: Highest Simultaneous Transmission SAR

Exposure Configuration	1g SAR Head	1g SAR Body-worn (Separation 15mm)	1g SAR Hotspot (Separation 10mm)	Product Specific 10-g SAR (Separation 0mm)
Highest Simultaneous Transmission SAR (W/kg)	1.578	1.585	1.565	2.842

Note: The detail for simultaneous transmission consideration is described in chapter 10.3.

3 Description of Equipment under Test

Client Information

Applicant	ZTE Corporation
Applicant address	ZTE Plaza, Keji Road South, Hi-Tech, Industrial Park, Nanshan District, Shenzhen, Guangdong, 518057, P.R.China
Manufacturer	ZTE Corporation
Manufacturer address	ZTE Plaza, Keji Road South, Hi-Tech, Industrial Park, Nanshan District, Shenzhen, Guangdong, 518057, P.R.China

General Technologies

Application Purpose	Original Grant
EUT Stage	Identical Prototype
Model	ZTE A2322G
IMEI	IMEI 1: 867210050008017 IMEI 2: 867210050008512
Hardware Version	ZTE A2322GHW1.0
Software Version 1	GEN_NA_A2322G_V1.0
Software Version 2	TEL_MX_ZTE_A2322G_V1.0
Antenna Type	Internal Antenna
Device Class	B
Wi-Fi Hotspot	Wi-Fi 2.4G Wi-Fi 5G U-NII-1&U-NII-3
Power Class	GSM850/1900:3 WCDMA Band II/V:3 LTE FDD Band 2/4/5/7/12/17/26/66/NR n66:3 LTE TDD Band 38/41:3 NR n41:2
Power Level	GSM850/1900:max power WCDMA Band II/V: max power LTE FDD Band 2/4/5/7/12/17/26/66: max power LTE TDD Band 38/41:max power NR n41/n66:max power
EUT Accessory	
Battery	Manufacturer: Ningde Ampere Technology Limited Model: Li3941T44PGh836548
Earphone 1	Manufacturer: Shen zhen FDC Electronic Co.,Ltd. Model: DEM-9B
Earphone 2	Manufacturer: JUWEI ELECTRONICS CO.,LTD Model: JWEP1092-Z01
Type-C to 3.5 mm Headphone Jack Adapter	Manufacture: HUIZHOU JUWEI ELECTRONICS CO. ,LTD Model: JWUB1389-Z01
Note: 1. The EUT is sent from the applicant to TA and the information of the EUT is declared by	



the applicant.

2. The two different software versions are for different market requirement.

Wireless Technology and Frequency Range

Wireless Technology		Modulation	Operating mode	Tx (MHz)
GSM	850	Voice(GMSK) GPRS(GMSK) EGPRS(GMSK,8PSK)	<input type="checkbox"/> Multi-slot Class:8-1UP <input type="checkbox"/> Multi-slot Class:10-2UP <input checked="" type="checkbox"/> Multi-slot Class:12-4UP <input type="checkbox"/> Multi-slot Class:33-4UP	824 ~ 849
	1900			1850 ~ 1910
	Does this device support DTM (Dual Transfer Mode)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
UMTS	Band II	QPSK, 16QAM	HSDPA UE Category:24 HSUPA UE Category:6	1850 ~ 1910
	Band V			824 ~ 849
LTE	FDD 2	QPSK, 16QAM, 64QAM	Rel.15 /Category 13	1850 ~ 1910
	FDD 4			1710 ~ 1755
	FDD 5			824 ~ 849
	FDD 7			2500 ~ 2570
	FDD 12			699 ~ 716
	FDD 17			704 ~ 716
	FDD 26			814 ~ 849
	TDD 38			2570 ~ 2620
	TDD 41			2496 ~ 2690
	FDD 66			1710 ~ 1780
	Does this device support Carrier Aggregation (CA) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
Does this device support SV-LTE (1xRTT-LTE)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
NR	TDD n41	CP-OFDM: QPSK, 16QAM, 64QAM, 256QAM; DFT-s OFDM: PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM	/	2496 ~ 2690
	FDD n66			1710 ~ 1780
BT	2.4G	Version 5.1 LE		2402 ~ 2480
Wi-Fi	2.4G	DSSS, OFDM	802.11b/g/n HT20 802.11ax HE20	2412 ~ 2462
		OFDM	802.11n HT40 802.11ax HE40	2422 ~ 2452
	5G	OFDM	802.11a/n HT20/ HT40/ 802.11ac VHT20/ VHT40/ VHT80	5150 ~ 5250 5250 ~ 5350 5470 ~ 5725 5725 ~ 5850
			802.11ax HE20/40/80	
Does this device support MIMO <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				
NFC	13.56MHz			



4 Test Specification, Methods and Procedures

The tests documented in this report were performed in accordance with FCC 47 CFR § 2.1093, IEEE 1528- 2013, ANSI C95.1: 1992, IEEE C95.1: 1991, the following FCC Published RF exposure KDB procedures:

IEC 62209-1

Reference Standards

KDB 248227 D01 802.11Wi-Fi SAR v02r02

KDB 447498 D01 General RF Exposure Guidance v06

KDB 648474 D04 Handset SAR v01r03

KDB 690783 D01 SAR Listings on Grants v01r03

KDB 865664 D01 SAR measurement 100 MHz to 6 GHz v01r04

KDB 865664 D02 RF Exposure Reporting v01r02

KDB 941225 D01 3G SAR Procedures v03r01

KDB 941225 D05 SAR for LTE Devices v02r05

KDB 941225 D05A LTE Rel.10 KDB Inquiry Sheet v01r02

KDB 941225 D06 Hotspot Mode v02r01

5 Operational Conditions during Test

5.1 Test Positions

5.1.1 Against Phantom Head

Measurements were made in “cheek” and “tilt” positions on both the left hand and right hand sides of the phantom.

The positions used in the measurements were according to IEEE 1528 - 2013 "IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques".

5.1.2 Body Worn Configuration

Body-worn operating configurations should be tested with the belt-clips and holsters attached to the device and positioned against a flat phantom in normal use configurations.

Per FCC KDB Publication 648474 D04, Body-worn accessory exposure is typically related to voice mode operations when handsets are carried in body-worn accessories. The body-worn accessory procedures in FCC KDB Publication 447498 D01 should be used to test for body-worn accessory SAR compliance, without a headset connected to it. This enables the test results for such configuration to be compatible with that required for hotspot mode when the body-worn accessory test separation distance is greater than or equal to that required for hotspot mode, when applicable. When the reported SAR for a body-worn accessory, measured without a headset connected to the handset, is > 1.2 W/kg, the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body-worn accessory with a headset attached to the handset.

Accessories for Body-worn operation configurations are divided into two categories: those that do not contain metallic components and those that do contain metallic components. When multiple accessories that do not contain metallic components are supplied with the device, the device is tested with only the accessory that dictates the closest spacing to the body. Then multiple accessories that contain metallic components are tested with the device with each accessory. If multiple accessories share an identical metallic component (i.e. the same metallic belt-clip used with different holsters with no other metallic components) only the accessory that dictates the closest spacing to the body is tested.

Body-worn accessories may not always be supplied or available as options for some devices intended to be authorized for body-worn use. In this case, a test configuration with a separation distance between the back of the device and the flat phantom is used. Test position spacing was documented. Transmitters that are designed to operate in front of a person's face, as in push-to-talk configurations, are tested for SAR compliance with the front of the device positioned to face the flat phantom in head fluid. For devices that are carried next to the body such as a shoulder, waist or chest-worn transmitters, SAR compliance is tested with the accessories, including headsets and microphones, attached to the device and positioned against a flat phantom in a normal use configuration.

5.1.3 Phablet SAR test considerations

For smart phones, with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm, that can provide similar mobile web access and multimedia support found in mini-tablets or UMPC mini-tablets and support voice calls next to the ear, unless it is confirmed otherwise through KDB inquiries, the following phablet procedures should be applied to evaluate SAR compliance for each applicable wireless modes and frequency band. Devices marketed as phablets, regardless of form factors and operating characteristics must be tested as a phablet to determine SAR compliance.

- a) The normally required head and body-worn accessory SAR test procedures for handsets, including hotspot mode, must be applied.
- b) The UMPC mini-tablet procedures must also be applied to test the SAR of all surfaces and edges with an antenna located at ≤ 25 mm from that surface or edge, in direct contact with a flat phantom, for product specific 10-g SAR according to the body-equivalent tissue dielectric parameters in KDB Publication 865664 D01 to address interactive hand use exposure conditions. The 1-g SAR at 5 mm for UMPC mini-tablets is not required. When hotspot mode applies, product specific 10-g SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg; however, when power reduction applies to hotspot mode the measured SAR must be scaled to the maximum output power, including tolerance, allowed for phablet modes to compare with the 1.2 W/kg SAR test reduction threshold. The normal tablet procedures in KDB Publication 616217 are required when the overall diagonal dimension of the device is > 20.0 cm. Hotspot mode SAR is not required when normal tablet procedures are applied. Product specific 10-g SAR is also not required for the front (top) surface of larger form factor full size tablets. The more conservative normal tablet SAR results can be used to support phablet mode product specific 10-g SAR.
- c) The simultaneous transmission operating configurations applicable to voice and data transmissions for both phone and mini-tablet modes must be taken into consideration separately for 1-g and 10-g SAR to determine the simultaneous transmission SAR test exclusion and measurement requirements for the relevant wireless modes and exposure conditions.

5.2 Measurement Variability

Per FCC KDB Publication 865664 D01, SAR measurement variability was assessed for each frequency band, which was determined by the SAR probe calibration point and tissue-equivalent medium used for the device measurements. When both head and body tissue-equivalent media were required for SAR measurements in a frequency band, the variability measurement procedures were applied to the tissue medium with the highest measured SAR, using the highest measured SAR configuration for that tissue-equivalent medium. These additional measurements were repeated after the completion of all measurements requiring the same head or body tissue-equivalent medium in a frequency band. The test device was returned to ambient conditions (normal room temperature) with the battery fully charged before it was re-mounted on the device holder for the repeated measurement(s) to minimize any unexpected variations in the repeated results.

SAR Measurement Variability was assessed using the following procedures for each frequency band:

- 1) When the original highest measured SAR is ≥ 0.80 W/kg, the measurement was repeated once.
- 2) A second repeated measurement was performed only if the ratio of largest to smallest SAR for the original and first repeated measurements was > 1.20 or when the original or repeated measurement was ≥ 1.45 W/kg (~ 10% from the 1-g SAR limit).
- 3) A third repeated measurement was performed only if the original, first or second repeated measurement was ≥ 1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20 .
- 4) Repeated measurements are not required when the original highest measured SAR is < 0.80 W/kg

The same procedures should be adapted for measurements according to extremity and occupational exposure limits by applying a factor of 2.5 for extremity exposure and a factor of 5 for occupational exposure to the corresponding SAR thresholds.

5.3 Test Configuration

5.3.1 GSM Test Configuration

According to specification 3GPP TS 51.010, the maximum power of the GSM can do the power reduction for the multi-slot. The allowed power reduction in the multi-slot configuration is as following:

Output power of reductions:

Table 3: The allowed power reduction in the multi-slot configuration

Number of timeslots in uplink assignment	Permissible nominal reduction of maximum output power (dB)
1	0
2	0 to 3,0
3	1,8 to 4,8
4	3,0 to 6,0

SAR test reduction for GPRS and EDGE modes is determined by the source-based time-averaged output power specified for production units, including tune-up tolerance. The data mode with highest specified time-averaged output power should be tested for SAR compliance in the applicable exposure conditions. For modes with the same specified maximum output power and tolerance, the higher number time-slot configuration should be tested. GSM voice and GPRS data use GMSK, which is a constant amplitude modulation with minimal peak to average power difference within the time-slot burst. For EDGE, GMSK is used for MCS 1 – MCS 4 and 8-PSK is used for MCS 5 – MCS 9; where 8-PSK has an inherently higher peak-to-average power ratio. The GMSK and 8-PSK EDGE configurations are considered separately for SAR compliance. The GMSK EDGE configurations are grouped with GPRS and considered with respect to time-averaged maximum output power to determine compliance. The 3G SAR test reduction procedure is applied to 8-PSK EDGE with GMSK GPRS/EDGE as the primary mode.

5.3.2 UMTS Test Configuration

5.3.2.1 3G SAR Test Reduction Procedure

The default test configuration is to measure SAR with an established radio link between the EUT and a communication test set using a 12.2 kbps RMC (reference measurement channel) configured in Test Loop Mode 1. SAR is selectively confirmed for other physical channel configurations modes according to output power, exposure conditions and device operating capabilities. Maximum output power is verified by applying the applicable versions of 3GPP TS 34.121.

5.3.2.2 Head SAR

SAR for next to the ear head exposure is measured using a 12.2 kbps RMC with TPC bits configured to all "1's". The 3G SAR test reduction procedure is applied to AMR configurations with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured for 12.2 kbps AMR in 3.4 kbps SRB (signaling radio bearer) using the highest SAR configuration in 12.2 kbps RMC for head exposure.

5.3.2.3 Body-worn accessory SAR

SAR for body-worn accessory configurations is measured using a 12.2 kbps RMC with TPC bits configured to all “1’s”. The 3G SAR test reduction procedure is applied to other spreading codes and multiple DPDCHn configurations supported by the EUT with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured using an applicable RMC configuration with the corresponding spreading code or DPDCHn, for the highest reported body-worn accessory exposure SAR configuration in 12.2 kbps RMC. When more than 2 DPDCHn are supported by the EUT, it may be necessary to configure additional DPDCHn using FTM (Factory Test Mode) or other chipset based test approaches with parameters similar to those used in 384 kbps and 768 kbps RMC

5.3.2.4 Release 5 HSDPA Test Configuration

The 3G SAR test reduction procedure is applied to HSDPA body-worn accessory configurations with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured for HSDPA using the HSDPA body SAR procedures in the “Release 5 HSDPA Data Devices” section of this document, for the highest SAR body-worn accessory exposure configuration in 12.2 kbps RMC. EUT with both HSDPA and HSUPA are tested according to Release 6 HSPA test procedures.

HSDPA should be configured according to the UE category of a test device. The number of HSDSCH/HS-PDSCHs, HARQ processes, minimum inter-TTI interval, transport block sizes and RV coding sequence are defined by the H-set. To maintain a consistent test configuration and stable transmission conditions, QPSK is used in the H-set for SAR testing. HS-DPCCH should be configured with a CQI feedback cycle of 4 ms with a CQI repetition factor of 2 to maintain a constant rate of active CQI slots. DPCCH and DPDCH gain factors (β_c , β_d), and HS-DPCCH power offset parameters (Δ_{ACK} , Δ_{NACK} , Δ_{CQI}) should be set according to values indicated in the Table below. The CQI value is determined by the UE category, transport block size, number of HS-PDSCHs and modulation used in the H-set.

Table 4: Subtests for UMTS Release 5 HSDPA

Sub-set	β_c	β_d	β_d (SF)	β_c/β_d	β_{hs} (note 1, note 2)	CM(dB) (note 3)	MPR(dB)
1	2/15	15/15	64	2/15	4/15	0.0	0.0
2	12/15 (note 4)	15/15 (note 4)	64	12/15 (note 4)	24/15	1.0	0.0
3	15/15	8/15	64	15/8	30/15	1.5	0.5
4	15/15	4/15	64	15/4	30/15	1.5	0.5

Note 1: Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 8 \Leftrightarrow A_{hs} = \beta_{hs}/\beta_c = 30/15 \Leftrightarrow \beta_{hs} = 30/15 * \beta_c$
 Note 2: CM=1 for $\beta_c/\beta_d = 12/15$, $\beta_{hs}/\beta_c = 24/15$.
 Note 3: For subtest 2 the β_c/β_d ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TFC1, TF1) to $\beta_c = 11/15$ and $\beta_d = 15/15$.

5.3.2.5 Release 6 HSUPA Test Configuration

The 3G SAR test reduction procedure is applied to HSPA (HSUPA/HSDPA with RMC) body-worn accessory configurations with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured for HSPA using the HSPA body SAR procedures in the “Release 6 HSPA Data Devices” section of this document, for the highest body-worn accessory exposure SAR configuration in 12.2 kbps RMC. When VOIP is applicable for next to the ear head exposure in HSPA, the 3G SAR test reduction procedure is applied to HSPA with 12.2 kbps RMC as the primary mode; otherwise, the same HSPA configuration used for body-worn accessory measurements is tested for next to the ear head exposure.

Due to inner loop power control requirements in HSPA, a communication test set is required for output power and SAR tests. The 12.2 kbps RMC, FRC H-set 1 and E-DCH configurations for HSPA are configured according to the β values indicated in Table 2 and other applicable procedures described in the ‘WCDMA EUT’ and ‘Release 5 HSDPA Data Devices’ sections of this document

Table 5: Sub-Test 5 Setup for Release 6 HSUPA

Sub-set	β_c	β_d	β_d (SF)	β_c/β_d	$\beta_{hs}^{(1)}$	β_{ec}	β_{ed}	β_{ed} (SF)	β_{ed} (codes)	CM ⁽²⁾ (dB)	MPR (dB)	AG ⁽⁴⁾ Index	E-TFCI
1	11/15 ⁽³⁾	15/15 ⁽³⁾	64	11/15 ⁽³⁾	22/15	209/225	1039/225	4	1	1.0	0.0	20	75
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67
3	15/15	9/15	64	15/9	30/15	30/15	β_{ed1} : 47/15 β_{ed2} : 47/15	4	2	2.0	1.0	15	92
4	2/15	15/15	64	2/15	4/15	2/15	56/75	4	1	3.0	2.0	17	71
5	15/15 ⁽⁴⁾	15/15 ⁽⁴⁾	64	15/15 ⁽⁴⁾	30/15	24/15	134/15	4	1	1.0	0.0	21	81

Note 1: $\Delta_{ACK}, \Delta_{NACK}$ and $\Delta_{CQI} = 8 \Leftrightarrow A_{hs} = \beta_{hs}/\beta_c = 30/15 \Leftrightarrow \beta_{hs} = 30/15 * \beta_c$.

Note 2: CM = 1 for $\beta_c/\beta_d = 12/15, \beta_{hs}/\beta_c = 24/15$. For all other combinations of DPDCH, DPCCH, HS-DPCCH, E-DPDCH and E-DPCCH the MPR is based on the relative CM difference.

Note 3: For subtest 1 the β_c/β_d ratio of 11/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 10/15$ and $\beta_d = 15/15$.

Note 4: For subtest 5 the β_c/β_d ratio of 15/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 14/15$ and $\beta_d = 15/15$.

Note 5: Testing UE using E-DPDCH Physical Layer category 1 Sub-test 3 is not required according to TS 25.306 Figure 5.1g.

Note 6: β_{ed} cannot be set directly; it is set by Absolute Grant Value.

Table 6: HSUPA UE category

UE E-DCH Category	Maximum E-DCH Codes Transmitted	Number of HARQ Processes	E-DCHTTI (ms)	Minimum Spreading Factor	Maximum E-DCH Transport Block Bits	Max Rate (Mbps)
1	1	4	10	4	7110	0.7296
2	2	8	2	4	2798	1.4592
	2	4	10	4	14484	
3	2	4	10	4	14484	1.4592



4	2	8	2	2	5772	2.9185
	2	4	10	2	20000	2.00
5	2	4	10	2	20000	2.00
6 (No DPDCH)	4	8	2	2 SF2 & 2	11484	5.76
	4	4	10	SF4	20000	2.00
7 (No DPDCH)	4	8	2	2 SF2 & 2	22996	?
	4	4	10	SF4	20000	?

NOTE: When 4 codes are transmitted in parallel, two codes shall be transmitted with SF2 and two with SF4.

UE Categories 1 to 6 supports QPSK only. UE Category 7 supports QPSK and 16QAM.
(TS25.306-7.3.0)

Table 7: HS-DSCH UE category

HS-DSCH category	Maximum number of HS-DSCH codes received	Minimum inter-TTI interval	Maximum number of bits of an HS-DSCH transport block received within an HS-DSCH TTI NOTE 1	Total number of soft channel bits	Supported modulations without MIMO operation or dual cell operation	Supported modulations with MIMO operation and without dual cell operation	Supported modulations with dual cell operation	
Category 1	5	3	7298	19200	QPSK, 16QAM	Not applicable (MIMO not supported)	Not applicable (dual cell operation not supported)	
Category 2	5	3	7298	28800				
Category 3	5	2	7298	28800				
Category 4	5	2	7298	38400				
Category 5	5	1	7298	57600				
Category 6	5	1	7298	67200				
Category 7	10	1	14411	115200				
Category 8	10	1	14411	134400				
Category 9	15	1	20251	172800				
Category 10	15	1	27952	172800				
Category 11	5	2	3630	14400				QPSK
Category 12	5	1	3630	28800				QPSK, 16QAM, 64QAM
Category 13	15	1	35280	259200				QPSK, 16QAM, 64QAM
Category 14	15	1	42192	259200				QPSK, 16QAM
Category 15	15	1	23370	345600	QPSK, 16QAM			
Category 16	15	1	27952	345600	QPSK, 16QAM			
Category 17 NOTE 2	15	1	35280	259200	QPSK, 16QAM, 64QAM	-		
			23370	345600	-	QPSK, 16QAM		
Category 18 NOTE 3	15	1	42192	259200	QPSK, 16QAM, 64QAM	-		
			27952	345600	-	QPSK, 16QAM		
Category 19	15	1	35280	518400	QPSK, 16QAM, 64QAM			
Category 20	15	1	42192	518400	QPSK, 16QAM, 64QAM			
Category 21	15	1	23370	345600	-	-	QPSK, 16QAM	
Category 22	15	1	27952	345600				
Category 23	15	1	35280	518400				
Category 24	15	1	42192	518400				

5.3.3 LTE Test Configuration

LTE modes were tested according to FCC KDB 941225 D05 publication. Please see notes after the tabulated SAR data for required test configurations. Establishing connections with base station simulators ensure a consistent means for testing SAR and are recommended for evaluating SAR. The R&S CMW500 was used for LTE output power measurements and SAR testing. Max power control was used so the UE transmits with maximum output power during SAR testing. SAR must be measured with the maximum TTI (transmit time interval) supported by the device in each LTE configuration.

A) Spectrum Plots for RB Configurations

A properly configured base station simulator was used for SAR tests and power measurements. Therefore, spectrum plots for RB configurations were not required to be included in this report.

B) MPR

MPR is permanently implemented for this device by the manufacturer. The specific manufacturer target MPR is indicated alongside the SAR results. MPR is enabled for this device, according to

3GPP TS36.101 Section 6.2.3 – 6.2.5 under Table 6.2.3-1.

C) A-MPR

A-MPR (Additional MPR) has been disabled for all SAR tests by setting NS=01 on the base station simulator.

D) Largest channel bandwidth standalone SAR test requirements

1) QPSK with 1 RB allocation

Start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel. When the reported SAR is ≤ 0.8 W/kg, testing of the remaining RB offset configurations and required test channels is not required for 1 RB allocation; otherwise, SAR is required for the remaining required test channels and only for the RB offset configuration with the highest output power for that channel. When the reported SAR of a required test channel is > 1.45 W/kg, SAR is required for all three RB offset configurations for that required test channel.

2) QPSK with 50% RB allocation

The procedures required for 1 RB allocation in 1) are applied to measure the SAR for QPSK with 50% RB allocation.

3) QPSK with 100% RB allocation

For QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100% RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation in 1) and 2) are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.

4) Higher order modulations

For each modulation besides QPSK; e.g., 16-QAM, 64-QAM, apply the QPSK procedures in above sections to determine the QAM configurations that may need SAR measurement. For each configuration identified as required for testing, SAR is required only when the highest maximum output power for the configuration in the higher order modulation is $> \frac{1}{2}$ dB higher than the same configuration in QPSK or when the reported SAR for the QPSK configuration is > 1.45 W/kg.

E) Other channel bandwidth standalone SAR test requirements

For the other channel bandwidths used by the device in a frequency band, apply all the procedures required for the largest channel bandwidth in section A) to determine the channels and RB configurations that need SAR testing and only measure SAR when the highest maximum output power of a configuration requiring testing in the smaller channel bandwidth is $> \frac{1}{2}$ dB higher than the equivalent channel configurations in the largest channel bandwidth configuration or the reported SAR of a configuration for the largest channel bandwidth is > 1.45 W/kg.

5.3.4 Additional requirements for TDD LTE specification

For Time-Division Duplex (TDD) systems, SAR must be tested using a fixed periodic duty factor according to the highest transmission duty factor implemented for the device and supported by the defined 3GPP LTE TDD configurations.

TDD LTE Band supports 3GPP TS 36.211 section 4.2 for Type 2 Frame Structure and Table: Uplink-downlink configurations for uplink-downlink configurations and Table: Configuration of special subframe (lengths of DwPTS/GP/UpPTS) for Special subframe configurations.

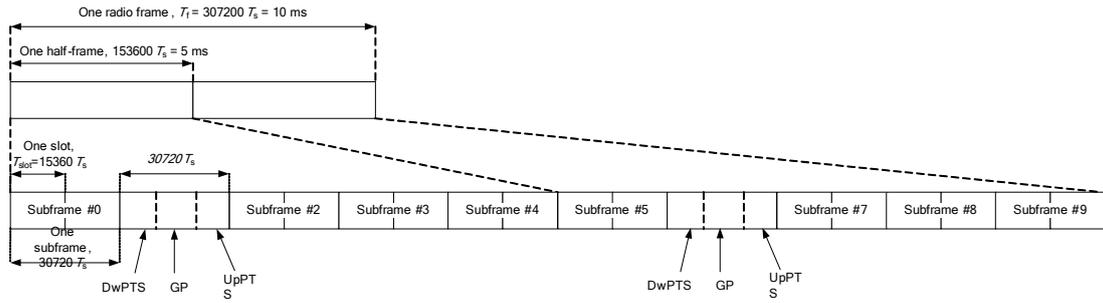


Figure 1: Frame structure type 2

Table 8: Configuration of special subframe (lengths of DwPTS/GP/UpPTS)

Special subframe configuration	Normal cyclic prefix in downlink			Extended cyclic prefix in downlink		
	DwPTS	UpPTS		DwPTS	UpPTS	
		Normal cyclic prefix in uplink	Extended cyclic prefix in uplink		Normal cyclic prefix in uplink	Extended cyclic prefix in uplink
0	$6592 \cdot T_s$	$2192 \cdot T_s$	$2560 \cdot T_s$	$7680 \cdot T_s$	$2192 \cdot T_s$	$2560 \cdot T_s$
1	$19760 \cdot T_s$			$20480 \cdot T_s$		
2	$21952 \cdot T_s$			$23040 \cdot T_s$		
3	$24144 \cdot T_s$			$25600 \cdot T_s$		
4	$26336 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$	$7680 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$
5	$6592 \cdot T_s$			$20480 \cdot T_s$		
6	$19760 \cdot T_s$			$23040 \cdot T_s$		
7	$21952 \cdot T_s$			$12800 \cdot T_s$		
8	$24144 \cdot T_s$	-	-	-	-	-
9	$13168 \cdot T_s$	-	-	-	-	-

Table 9: Uplink-downlink configurations



Uplink-downlink configuration	Downlink-to-Uplink Switch-point periodicity	Subframe number									
		0	1	2	3	4	5	6	7	8	9
0	5 ms	D	S	U	U	U	D	S	U	U	U
1	5 ms	D	S	U	U	D	D	S	U	U	D
2	5 ms	D	S	U	D	D	D	S	U	D	D
3	10 ms	D	S	U	U	U	D	D	D	D	D
4	10 ms	D	S	U	U	D	D	D	D	D	D
5	10 ms	D	S	U	D	D	D	D	D	D	D
6	5 ms	D	S	U	U	U	D	S	U	U	D

According to Figure 1, one radio frame is configured by 10 subframes, which consist of Uplink-subframe, Downlink-subframe and Special subframe. For TDD-LTE, the Duty Cycle should be calculated on Uplink-subframes and Special subframes, due to Special subframe containing both Uplink transmissions. So for one radio frame, Duty Cycle can be calculated with formula as below. The count of Uplink subframes are according to Table: Uplink-downlink configurations:

$$\text{Duty cycle} = (30720\text{Ts} * \text{Ups} + \text{Uplink Component} * \text{Specials}) / (307200\text{Ts})$$

About the uplink component of Special subframes, we can figure out by Table: Configuration of special subframe (lengths of DwPTS/GP/UpPTS):

$$\text{Uplink Component} = \text{UpPTS}$$

In conclusion, for the TDD LTE Band, Duty Cycle can be calculated with formula as below. All these sets are ok when we test, or we can set as below.

$$\text{Duty cycle} = [(30720\text{Ts} * \text{Ups}) + \text{UpPTS} * \text{Specials}] / (307200\text{Ts})$$

And we can get different Duty cycles under different configurations:

Uplink-downlink configuration	Subframe number			Configuration of special subframe							
				Normal cyclic prefix in downlink				Extended cyclic prefix in downlink			
	D	S	U	Normal cyclic prefix in uplink		Extended cyclic prefix in uplink		Normal cyclic prefix in uplink		Extended cyclic prefix in uplink	
				configuration 0~4	configuration 5~9	configuration 0~4	configuration 5~9	configuration 0~3	configuration 4~7	configuration 0~3	configuration 4~7
0	2	2	6	61.43%	62.85%	61.67%	63.33%	61.43%	62.85%	61.67%	63.33%
1	4	2	4	41.43%	42.85%	41.67%	43.33%	41.43%	42.85%	41.67%	43.33%
2	6	2	2	21.43%	22.85%	21.67%	23.33%	21.43%	22.85%	21.67%	23.33%
3	6	1	3	30.71%	31.43%	30.83%	31.67%	30.71%	31.43%	30.83%	31.67%
4	7	1	2	20.71%	21.43%	20.83%	21.67%	20.71%	21.43%	20.83%	21.67%
5	8	1	1	10.71%	11.43%	10.83%	11.67%	10.71%	11.43%	10.83%	11.67%
6	3	2	5	51.43%	52.85%	51.67%	53.33%	51.43%	52.85%	51.67%	53.33%

SAR test Plan: For TDD LTE, SAR should be tested with the highest transmission duty factor (63.33%) using Uplink-downlink configuration 0 and Special subframe configuration 7 for Frame structure type

The screenshot shows the 'LTE Signaling - Configuration' window. The 'Physical Cell Setup' section is highlighted with a red box. Below it, the 'TDD' section is also highlighted with a red box. The 'Uplink Downlink Configur...' dropdown is set to '0'. A table below shows the subframe configuration for subframes 0 through 9.

Subframe Number	0	1	2	3	4	5	6	7	8	9
Direction	↓	S	↑	↑	↑	↓	S	↑	↑	↑

On the right side of the window, there is a vertical toolbar with buttons for 'LTE', 'LTE 1 TX Meas.', 'LTE 1 RX Meas.', 'Go to...', 'Routing', 'LTE Signaling ON', and 'Config ...'. The 'LTE Signaling ON' button is highlighted with a red box.

5.3.5 5G NR Test Configuration

For 5G NR SAR testing, due to test setup limitations, SAR testing for NR was performed using factory test mode software to establish the connection and perform SAR with 100% transmission.

The DFT-s-OFDM and CP-OFDM waveforms were investigated, and DFT-s-OFDM was found to be the worst case.

The worst-case scenario for all measurements is based on an engineering evaluation and QPSK was observed as the worst one and set for all conducted and radiated. Output power measurements were measured on QPSK, 16QAM, 64QAM, 256QAM, and BPSK, modulations.

For TDD NR Band operation and final implementation, TDD NR slot configuration extended cyclic prefix uplink duty cycle =25%; However, EN-DC transmission on test DUT is only possible using FTM mode with continuous transmission (duty cycle =100%). SAR testing was performed using FTM mode at maximum output power adjusted for duty cycle to mimic final 25% cycle

Band	Power Class	5G NR(NSA) Antenna Power Level (dBm)	
		Tune-up	Tune-up
		(Not Adjusted for duty cycle)	(Adjusted for duty cycle)
NR n41(Ant 1)	Class 2	25.00	19.00
NR n66(Ant 8)	Class 3	25.50	19.50

For EN-DC SAR, as the existing SAR test system can not test the multiple different frequency bands simultaneous Transmission SAR at the same time , we suggest that the conservative "max tune-up + max 0dBm tune-up" multi-Tx and SAR scaling method can be used to evaluate the inter-band Uplink EN-DC SAR from standalone SAR test results of each LTE and NR EN-DC component band and the conservative "max tune-up + max 0dBm tune-up" multi-Tx method to combine the scaled SAR value from each EN-DC component band as the inter-band Uplink EN-DC SAR. All Simultaneous Transmission Scenarios will be evaluated independently in the final SAR report .

5.3.6 Wi-Fi Test Configuration

SAR test reduction for 802.11 Wi-Fi transmission mode configurations are considered separately for DSSS and OFDM. An initial test position is determined to reduce the number of tests required for certain exposure configurations with multiple test positions. An initial test configuration is determined for each frequency band and aggregated band according to maximum output power, channel bandwidth, wireless mode configurations and other operating parameters to streamline the measurement requirements. For 2.4 GHz DSSS, either the initial test position or DSSS procedure is applied to reduce the number of SAR tests; These are mutually exclusive. For OFDM, an initial test position is only applicable to next to the ear, UMPC mini-tablet and hotspot mode configurations, which is tested using the initial test configuration to facilitate test reduction. For other exposure conditions with a fixed test position, SAR test reduction is determined using only the initial test configuration.

The multiple test positions require SAR measurements in head, hotspot mode or UMPC mini-tablet configurations may be reduced according to the highest reported SAR determined using the *initial test position(s)* by applying the DSSS or OFDM SAR measurement procedures in the required wireless mode test configuration(s). The *initial test position(s)* is measured using the highest measured maximum output power channel in the required wireless mode test configuration(s). When the *reported SAR* for the *initial test position* is:

- ≤ 0.4 W/kg, further SAR measurement is not required for the other test positions in that exposure configuration and wireless mode combination within the frequency band or aggregated band. DSSS and OFDM configurations are considered separately according to the required SAR procedures.
- 0.4 W/kg, SAR is repeated using the same wireless mode test configuration tested in the *initial test position* to measure the subsequent next closet/smallest test separation distance and maximum coupling test position, on the highest maximum output power channel, until the *reported SAR* is ≤ 0.8 W/kg or all required test positions are tested.
 - ◇ For subsequent test positions with equivalent test separation distance or when exposure is dominated by coupling conditions, the position for maximum coupling condition should be tested.
 - ◇ When it is unclear, all equivalent conditions must be tested.
- For all positions/configurations tested using the *initial test position* and subsequent test positions, when the *reported SAR* is > 0.8 W/kg, measure the SAR for these positions/configurations on the subsequent next highest measured output power channel(s) until the *reported SAR* is ≤ 1.2 W/kg or all required test channels are considered.
 - ◇ The additional power measurements required for this step should be limited to those necessary for identifying subsequent highest output power channels to apply the test reduction.

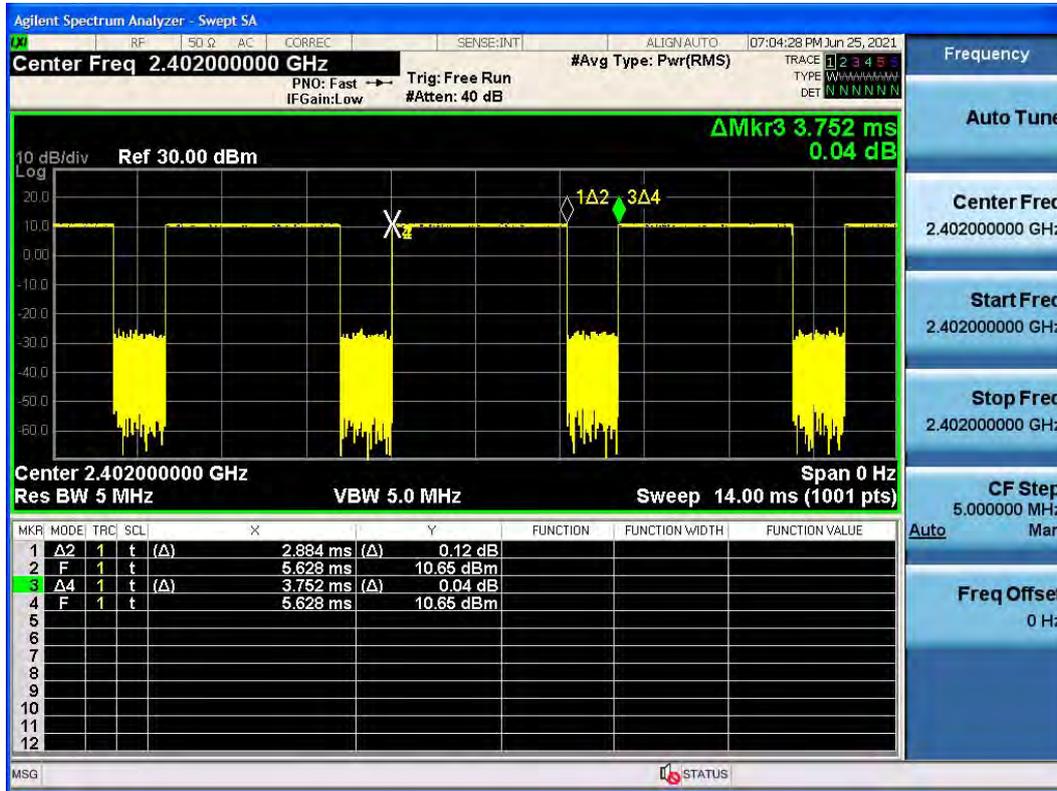
To determine the initial test position, Area Scans were performed to determine the position with the Maximum Value of SAR (measured). The position that produced the highest Maximum Value of SAR is considered the worst case position; thus used as the initial test position.

A Wi-Fi device must be configured to transmit continuously at the required data rate, channel bandwidth and signal modulation, using the highest transmission duty factor supported by the test mode tools for SAR measurement.

5.3.7 BT Test Configuration

For BT SAR testing, BT engineering testing software installed on the EUT can provide continuous transmitting RF signal with maximum output power. And the CBT control the EUT operating with hopping off and data rate set for DH5.

The SAR measurement takes full account of the BT duty cycle and is reflected in the report, and the duty factor of the device is as follow:



Note: Duty factor= Ton (ms)/ T(on+off) (ms)=2.884/3.752=76.8%

5.3.8 LTE CA specification

The device supports LTE advanced Rel. 15, Carrier Aggregation (CA) on downlink for Intra band and inter-band. Uplink CA is supported for Intra band only, more details information is provided in tables below:

1) CA Intra band contiguous

E-UTRA CA configuration / Bandwidth combination set								
E-UTRA CA configuration	Uplink CA configurations (NOTE 3)	Component carriers in order of increasing carrier frequency					Maximum aggregated bandwidth [MHz]	Bandwidth combination set
		Channel bandwidths for carrier [MHz]	Channel bandwidths for carrier [MHz]	Channel bandwidths for carrier [MHz]	Channel bandwidths for carrier [MHz]	Channel bandwidths for carrier [MHz]		
		CA_7C	CA_7C	15	15			
		20	20					



		10	20				40	1
		15	15, 20					
		20	10, 15, 20					
		15	10, 15				40	2
		20	15, 20					
CA_41C	CA_41C	10	20				40	0
		15	15, 20					
		20	10, 15, 20					
		5, 10	20				40	1
		15	15, 20					
		20	5, 10, 15, 20					
		10	15, 20				40	2
		15	10, 15, 20					
		20	10, 15, 20					
		10	20				40	3
		20	20					

NOTE 1: The CA configuration refers to an operating band and a CA bandwidth class specified in Table 5.6A-1 (the indexing letter). Absence of a CA bandwidth class for an operating band implies support of all classes.

NOTE 2: For the supported CC bandwidth combinations, the CC downlink and uplink bandwidths are equal.

NOTE 3: Uplink CA configurations are the configurations supported by the present release of specifications.

NOTE 4: Restricted to E-UTRA operation when inter-band carrier aggregation is configured. The downlink operating band is paired with the uplink operating band (external) of the carrier aggregation configuration that is supporting the configured Pcell.

5.3.9 Power Reduction Configuration

WWAN Reduced power level table

WWAN Reduced power level table					
Antenna	Position	Reduced level	Receiver	Hotspot	Transmitting conditions
ANT0	Head SAR	Level 1	On	N/A	WWAN Only
					WWAN+WLAN2.4G
					WWAN+WLAN5G
					WWAN+WLAN2.4G+WLAN5G
	Body-worn SAR&Specific SAR	Level 2	Off	N/A	WWAN Only
					WWAN+WLAN2.4G
					WWAN+WLAN5G
					WWAN+WLAN2.4G+WLAN5G
	Hotspot SAR	Level 3	Off	On	WWAN+WLAN2.4G
					WWAN+WLAN5G
					WWAN+WLAN2.4G+WLAN5G
					WWAN+WLAN5G
ANT1	Head SAR	Level 1	On	N/A	WWAN Only
					WWAN+WLAN2.4G
					WWAN+WLAN5G



	Body-worn SAR&Specific SAR	Level 2	Off	N/A	WWAN+WLAN2.4G+WLAN5G
					WWAN Only
					WWAN+WLAN2.4G
					WWAN+WLAN5G
	Hotspot SAR	Level 3	Off	On	WWAN+WLAN2.4G+WLAN5G
					WWAN+WLAN2.4G
					WWAN+WLAN5G
ANT2	Head SAR	Level 1	On	N/A	WWAN Only
					WWAN+WLAN2.4G
					WWAN+WLAN5G
					WWAN+WLAN2.4G+WLAN5G
	Body-worn SAR&Specific SAR	Level 2	Off	N/A	WWAN Only
					WWAN+WLAN2.4G
					WWAN+WLAN5G
					WWAN+WLAN2.4G+WLAN5G
	Hotspot SAR	Level 3	Off	On	WWAN+WLAN2.4G
					WWAN+WLAN5G
					WWAN+WLAN2.4G+WLAN5G
					WWAN+WLAN2.4G
ANT7	Head SAR	Level 1	On	N/A	WWAN Only
					WWAN+WLAN2.4G
					WWAN+WLAN5G
					WWAN+WLAN2.4G+WLAN5G
	Body-worn SAR&Specific SAR	Level 2	Off	N/A	WWAN Only
					WWAN+WLAN2.4G
					WWAN+WLAN5G
					WWAN+WLAN2.4G+WLAN5G
	Hotspot SAR	Level 3	Off	On	WWAN+WLAN2.4G
					WWAN+WLAN5G
					WWAN+WLAN2.4G+WLAN5G
					WWAN+WLAN2.4G
ANT8	Head SAR	Level 1	On	N/A	WWAN Only
					WWAN+WLAN2.4G
					WWAN+WLAN5G
					WWAN+WLAN2.4G+WLAN5G
	Body-worn SAR&Specific SAR	Level 2	Off	N/A	WWAN Only
					WWAN+WLAN2.4G
					WWAN+WLAN5G
					WWAN+WLAN2.4G+WLAN5G
	Hotspot SAR	Level 3	Off	On	WWAN+WLAN2.4G
					WWAN+WLAN5G
					WWAN+WLAN2.4G+WLAN5G
					WWAN+WLAN2.4G



WLAN Reduced power level table				
Antenna	Position	Reduced level	Receiver	Transmitting conditions
ANT3	Head SAR	Level 1	On	WWAN Only
		Level 4	On	WWAN+WLAN2.4G
				WWAN+WLAN5G
	Body-worn SAR&Hotspot SAR&Specific SAR	Level 2	Off	WWAN Only
		Level 3	Off	WWAN+WLAN2.4G
	WWAN+WLAN5G			
ANT4	Head SAR	Level 1	On	WWAN Only
		Level 4	On	WWAN+WLAN2.4G
				WWAN+WLAN5G
	Body-worn SAR&Hotspot SAR&Specific SAR	Level 2	Off	WWAN Only
		Level 3	Off	WWAN+WLAN2.4G
	WWAN+WLAN5G			
				WWAN+WLAN2.4G+WLAN5G

Mode	Full power (Tune up)	Antenna	Head(Receiver on)				Body wron/Product Specific(Receiver off)				Hotspot(Receiver off+Hotspot on)				
			Standalone	Simultaneous transmission			Standalone	Simultaneous transmission			Standalone	Simultaneous transmission			
				WWAN+2.4G WLAN	WWAN+5G WLAN	WWAN+2.4G+5G WLAN		WWAN+2.4G WLAN	WWAN+5G WLAN	WWAN+2.4G+5G WLAN		WWAN+2.4G WLAN	WWAN+5G WLAN	WWAN+2.4G+5G WLAN	
GSM 850	GSM (CS)	33.5	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GSM 1900	GSM (CS)	30.5	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WCDMA B2	12.2kbps RMC	25.5	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	2.5	2.5	2.5	
WCDMA B5	12.2kbps RMC	25.0	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	12.2kbps RMC	24.5	Ant.2	2.5	2.5	2.5	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
LTE Bands	LTE B2	25.5	Ant.1	0.0	0.0	0.0	0.0	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
	LTE B4	25.5	Ant.1	0.0	0.0	0.0	0.0	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
	LTE B5	25.5	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		24.5	Ant.2	2.5	2.5	2.5	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	LTE B7	25.5	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5
	LTE B12	25.5	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		24.5	Ant.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	LTE B17	25.5	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		24.5	Ant.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	LTE B26	25.5	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24.5		Ant.2	2.5	2.5	2.5	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
LTE B66	25.5	Ant.8	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	



SA Bands	LTE B38	25.5	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	LTE B41	25.5	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5	0.5
SA Bands	n41	19.0	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	n66	25.5	Ant.8	3.5	3.5	3.5	3.5	0.0	0.0	0.0	0.0	2.5	2.5	2.5	2.5
EN-DC (B66+N41)	LTE B66	25.5	Ant.8	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	n41	19.0	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EN-DC (B2+N66)	LTE B2	25.5	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	2.5	2.5	2.5
	n66	25.5	Ant.0	3.5	3.5	3.5	3.5	0.0	0.0	0.0	0.0	2.5	2.5	2.5	2.5
EN-DC (B12+N66)	LTE B12	25.5	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	n66	25.5	Ant.8	3.5	3.5	3.5	3.5	0.0	0.0	0.0	0.0	2.5	2.5	2.5	2.5
EN-DC (B12+N66)	LTE B12	24.5	Ant.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	n66	25.5	Ant.8	3.5	3.5	3.5	3.5	0.0	0.0	0.0	0.0	2.5	2.5	2.5	2.5

Mode	Band	Full power (Tune up)	Antenna	Head (Receiver on)				Body worn/Product Specific (Receiver off)				Hotspot (Receiver off+Hotspot on)			
				Simultaneous transmission				Simultaneous transmission				Simultaneous transmission			
				Stand alone	WWAN+2.4 WLAN	WWAN+5G WLAN	WWAN+2.4G WLAN +5G WLAN	Stand alone	WWAN+2.4 WLAN	WWAN+5G WLAN	WWAN+2.4G WLAN +5G WLAN	Stand alone	WWAN+2.4 WLAN	WWAN+5G WLAN	WWAN+2.4G WLAN +5G WLAN
2.4G	802.11b CH1-11	20.0	ANT 3	3.0	6.0	6.0	6.0	0.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0
	802.11g CH1-11	18.0		1.5	4.5	4.5	4.5	0.0	0.5	0.5	0.5	0.0	0.5	0.5	0.5
	802.11nHT20 CH1-11	16.5		0.0	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11nHT40 CH3-9	14.0		0.0	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11ax20 CH1-11	16.5		0.0	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11ax40 CH3-9	14.0		0.0	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.4G	802.11b CH1-11	20.0	ANT 4	4.0	7.0	7.0	7.0	0.0	3.0	3.0	3.0	0.0	3.0	3.0	3.0
	802.11g CH1-11	17.5		2.0	5.0	5.0	5.0	0.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0
	802.11nHT20 CH1-11	16.0		0.5	3.5	3.5	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11nHT40 CH3-9	13.5		0.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11ax20 CH1-11	16.0		0.5	3.5	3.5	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11ax40 CH3-9	13.5		0.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.4G	802.11b CH1-11	/	MIMO (ANT 3+4)	/	/	/	/	/	/	/	/	/	/	/	/
	802.11g CH1-11	/		/	/	/	/	/	/	/	/	/	/	/	/
	802.11n HT20 CH1-11	19.0		0.0	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11nHT40 CH3-9	16.0		0.0	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11ax20 CH1-11	19.0		0.0	3.5	3.5	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11ax40 CH3-9	16.0		0.0	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5G U-NII-1	802.11a CH36-48	13.5	ANT 3	0.0	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11nHT20 CH36-48	18.5		4.0	7.0	7.0	7.0	0.0	2.5	2.5	2.5	0.0	2.5	2.5	2.5
	802.11nHT40 CH38-46	18.5		4.0	7.0	7.0	7.0	0.0	3.0	3.0	3.0	0.0	3.0	3.0	3.0
	802.11acVHT20 CH36-48	18.5		4.0	7.0	7.0	7.0	0.0	3.0	3.0	3.0	0.0	3.0	3.0	3.0
	802.11acVHT40 CH38-46	18.5		4.0	7.0	7.0	7.0	0.0	3.0	3.0	3.0	0.0	3.0	3.0	3.0
	802.11acVHT80 CH42	15.5		1.0	4.0	4.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11ax20 CH36-48	18.0		3.5	6.5	6.5	6.5	0.0	2.5	2.5	2.5	0.0	2.5	2.5	2.5
	802.11ax40 CH38-46	16.0		1.5	4.5	4.5	4.5	0.0	0.5	0.5	0.5	0.0	0.5	0.5	0.5
	802.11ax80 CH42	15.5		1.0	4.0	4.0	4.0	0.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0
5G U-NII-1	802.11a CH36-48	13.0	ANT 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11nHT20 CH36-48	18.0		4.5	5.5	5.5	5.5	0.0	1.5	1.5	1.5	0.0	1.5	1.5	1.5
	802.11nHT40 CH38-46	18.0		4.5	5.5	5.5	5.5	0.0	1.5	1.5	1.5	0.0	1.5	1.5	1.5
	802.11acVHT20 CH36-48	18.0		4.5	5.5	5.5	5.5	0.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0
	802.11acVHT40 CH38-46	18.0		4.5	5.5	5.5	5.5	0.0	1.5	1.5	1.5	0.0	1.5	1.5	1.5



	802.11acVHT80 CH42	15.5		2.0	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11ax20 CH36-48	17.5		4.0	5.0	5.0	5.0	0.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0
	802.11ax40 CH38-46	15.5		2.0	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11ax80 CH42	15.0		1.5	2.5	2.5	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5G U-NII-1	802.11a CH36-48	/	MIMO (ANT 3+4)	/	/	/	/	/	/	/	/	/	/	/	/
	802.11nHT20 CH36-48	21.0		6.0	9.0	9.0	9.0	0.0	3.0	3.0	3.0	0.0	3.0	3.0	3.0
	802.11nHT40 CH38-46	21.0		6.5	9.5	9.5	9.5	0.0	3.5	3.5	3.5	0.0	3.5	3.5	3.5
	802.11acVHT20 CH36-48	21.0		6.5	9.5	9.5	9.5	0.0	3.5	3.5	3.5	0.0	3.5	3.5	3.5
	802.11acVHT40 CH38-46	21.0		6.5	9.5	9.5	9.5	0.0	3.5	3.5	3.5	0.0	3.5	3.5	3.5
	802.11acVHT80 CH42	18.0		3.5	6.5	6.5	6.5	0.0	0.5	0.5	0.5	0.0	0.5	0.5	0.5
	802.11ax20 CH36-48	21.0		6.5	9.5	9.5	9.5	0.0	3.5	3.5	3.5	0.0	3.5	3.5	3.5
	802.11ax40 CH38-46	19.0		4.5	7.5	7.5	7.5	0.0	1.5	1.5	1.5	0.0	1.5	1.5	1.5
802.11ax80 CH42	18.0	3.5	6.5	6.5	6.5	0.0	0.5	0.5	0.5	0.0	0.5	0.5	0.5		
5G U-NII-2A	802.11a CH52-64	13.0	ANT 3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11nHT20 CH52-64	18.0		3.0	5.5	5.5	5.5	0.0	1.5	1.5	1.5	0.0	1.5	1.5	1.5
	802.11nHT40 CH54-62	15.0		0.0	2.5	2.5	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11acVHT20 CH52-64	18.0		3.0	5.5	5.5	5.5	0.0	1.5	1.5	1.5	0.0	1.5	1.5	1.5
	802.11acVHT40 CH54-62	15.0		0.0	2.5	2.5	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11acVHT80 CH58	14.5		0.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11ax20 CH52-64	16.5		1.5	4.0	4.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11ax40 CH54-62	15.0		0.0	2.5	2.5	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
802.11ax80 CH58	14.0	0.0	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
5G U-NII-2A	802.11a CH52-64	13.0	ANT 4	0.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11nHT20 CH52-64	17.5		3.5	7.0	7.0	7.0	0.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0
	802.11nHT40 CH54-62	15.0		1.0	4.5	4.5	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11acVHT20 CH52-64	17.5		3.5	7.0	7.0	7.0	0.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0
	802.11acVHT40 CH54-62	15.0		1.0	4.5	4.5	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11acVHT80 CH58	14.0		0.0	3.5	3.5	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11ax20 CH52-64	16.5		2.5	6.0	6.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11ax40 CH54-62	15.0		1.0	4.5	4.5	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
802.11ax80 CH58	14.0	0.0	3.5	3.5	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
5G U-NII-2A	802.11a CH52-64	/	MIMO (ANT 3+4)	/	/	/	/	/	/	/	/	/	/	/	/
	802.11nHT20 CH52-64	21.0		5.0	8.0	8.0	8.0	0.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0
	802.11nHT40 CH54-62	18.0		2.5	5.5	5.5	5.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11acVHT20 CH52-64	20.5		5.0	8.0	8.0	8.0	0.0	0.5	0.5	0.5	0.0	0.5	0.5	0.5
	802.11acVHT40 CH54-62	18.0		2.5	5.5	5.5	5.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11acVHT80 CH58	17.0		1.5	4.5	4.5	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11ax20 CH52-64	20.0		4.5	7.5	7.5	7.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11ax40 CH54-62	18.0		2.5	5.5	5.5	5.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
802.11ax80 CH58	17.0	1.5	4.5	4.5	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
5G U-NII-2C	802.11a CH100-144	14.0	ANT 3	0.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11nHT20 CH100-140	13.5		0.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11nHT40 CH102-142	16.0		1.5	4.5	4.5	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11acVHT20 CH100-144	13.5		0.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11acVHT40 CH102-142	16.0		2.0	4.5	4.5	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11acVHT80 CH106-138	17.5		3.0	6.0	6.0	6.0	0.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0
	802.11axT20 CH100-144	13.5		0.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11ax40 CH102-142	15.5		1.0	4.0	4.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
802.11ax80 CH106-138	15.5	1.0	4.0	4.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
5G U-NII-2C	802.11a CH100-144	13.5	ANT 4	0.0	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11nHT20 CH100-140	13.0		0.0	2.5	2.5	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11nHT40 CH102-142	15.5		2.0	5.0	5.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11acVHT20 CH100-144	13.0		0.0	2.5	2.5	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

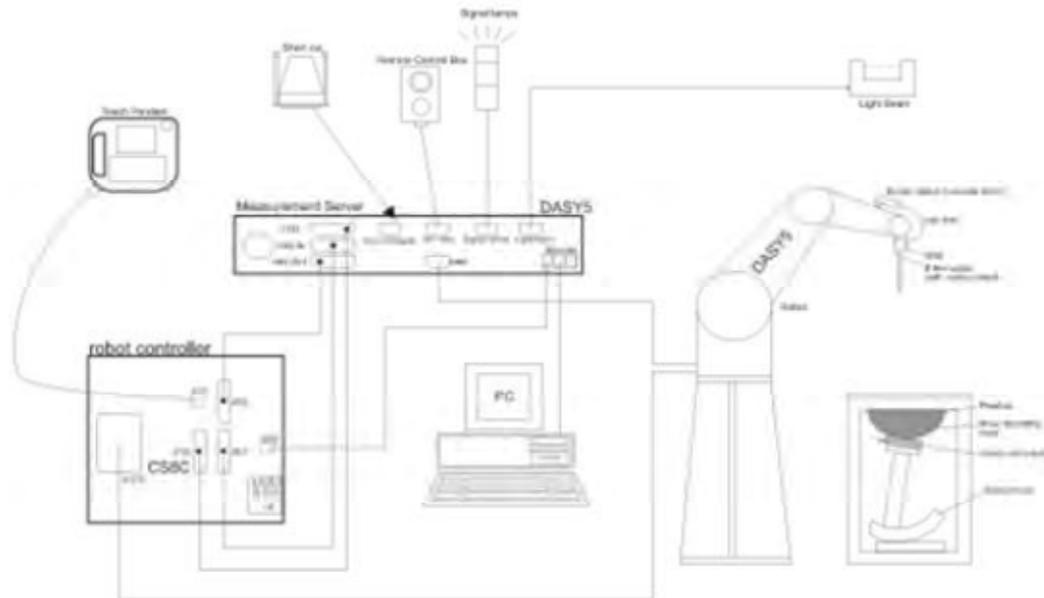


	802.11acVHT40 CH102-142	15.5		2.0	5.0	5.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11acVHT80 CH106-138	17.0		3.5	6.0	6.0	6.0	0.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0
	802.11axT20 CH100-144	13.0		0.0	2.5	2.5	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11ax40 CH102-142	15.0		1.5	4.5	4.5	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11ax80 CH106-138	15.0		1.5	4.5	4.5	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5G U-NII-2C	802.11a CH100-144	/	MIMO (ANT 3+4)	/	/	/	/	/	/	/	/	/	/	/	/
	802.11nHT20 CH100-140	16.5		0.0	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11nHT40 CH102-142	18.5		1.0	3.5	3.5	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11acVHT20 CH100-144	16.5		0.0	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11acVHT40 CH102-142	18.5		1.0	3.5	3.5	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11acVHT80 CH106-138	20.0		2.0	5.0	5.0	5.0	0.0	1.5	1.5	1.5	0.0	1.5	1.5	1.5
	802.11axT20 CH100-144	16.5		0.0	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	802.11ax40 CH102-142	18.0		0.0	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5G U-NII-3	802.11a CH149-165	15.0	ANT 3	1.0	3.0	3.0	3.0	0.0	3.0	3.0	3.0	0.0	3.0	3.0	3.0
	802.11nHT20 CH149-165	14.0		0.5	2.5	2.5	2.5	0.0	2.5	2.5	2.5	0.0	2.5	2.5	2.5
	802.11nHT40 CH151-159	16.0		2.5	4.5	4.5	4.5	0.0	4.5	4.5	4.5	0.0	4.5	4.5	4.5
	802.11acVHT20 CH149-165	14.0		0.5	2.5	2.5	2.5	0.0	2.5	2.5	2.5	0.0	2.5	2.5	2.5
	802.11acVHT40 CH151-159	15.5		2.0	4.0	4.0	4.0	0.0	4.0	4.0	4.0	0.0	4.0	4.0	4.0
	802.11acVHT80 CH155	17.0		3.5	5.5	5.5	5.5	0.0	5.5	5.5	5.5	0.0	5.5	5.5	5.5
	802.11ax20 CH149-165	14.0		0.5	2.5	2.5	2.5	0.0	2.5	2.5	2.5	0.0	2.5	2.5	2.5
	802.11ax40 CH151-159	15.0		1.5	3.5	3.5	3.5	0.0	3.5	3.5	3.5	0.0	3.5	3.5	3.5
5G U-NII-3	802.11ax80 CH155	17.0	ANT 4	3.5	5.5	5.5	5.5	0.0	5.5	5.5	5.5	0.0	5.5	5.5	5.5
	802.11a CH149-165	15.0		0.0	4.0	4.0	4.0	0.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0
	802.11nHT20 CH149-165	13.5		0.0	3.0	3.0	3.0	0.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0
	802.11nHT40 CH151-159	15.5		1.0	5.0	5.0	5.0	0.0	3.0	3.0	3.0	0.0	3.0	3.0	3.0
	802.11acVHT20 CH149-165	13.5		0.0	3.0	3.0	3.0	0.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0
	802.11acVHT40 CH151-159	15.0		0.0	4.5	4.5	4.5	0.0	2.5	2.5	2.5	0.0	2.5	2.5	2.5
	802.11acVHT80 CH155	16.5		2.0	6.0	6.0	6.0	0.0	4.0	4.0	4.0	0.0	4.0	4.0	4.0
	802.11ax20 CH149-165	13.5		0.0	3.0	3.0	3.0	0.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0
5G U-NII-3	802.11ax40 CH151-159	14.5	MIMO (ANT 3+4)	0.0	4.0	4.0	4.0	0.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0
	802.11ax80 CH155	16.5		2.0	6.0	6.0	6.0	0.0	4.0	4.0	4.0	0.0	4.0	4.0	4.0
	802.11a CH149-165	/		/	/	/	/	/	/	/	/	/	/	/	/
	802.11nHT20 CH149-165	17.0		0.0	1.0	1.0	1.0	0.0	3.5	3.5	3.5	0.0	3.5	3.5	3.5
	802.11nHT40 CH151-159	18.5		0.5	3.0	3.0	3.0	0.0	5.0	5.0	5.0	0.0	5.0	5.0	5.0
	802.11acVHT20 CH149-165	17.0		0.0	1.5	1.5	1.5	0.0	3.0	3.0	3.0	0.0	3.0	3.0	3.0
	802.11acVHT40 CH151-159	18.5		0.5	3.0	3.0	3.0	0.0	5.0	5.0	5.0	0.0	5.0	5.0	5.0
	802.11acVHT80 CH155	20.0		2.0	4.5	4.5	4.5	0.0	6.5	6.5	6.5	0.0	6.5	6.5	6.5
802.11ax20 CH149-165	17.0	0.0	1.5	1.5	1.5	0.0	3.5	3.5	3.5	0.0	3.5	3.5	3.5		
5G U-NII-3	802.11ax40 CH151-159	18.0		0.0	2.5	2.5	2.5	0.0	4.5	4.5	4.5	0.0	4.5	4.5	4.5
	802.11ax80 CH155	20.0		2.0	4.5	4.5	4.5	0.0	6.5	6.5	6.5	0.0	6.5	6.5	6.5

6 SAR Measurements System Configuration

6.1 SAR Measurement Set-up

The DASY system for performing compliance tests consists of the following items:



- A standard high precision 6-axis robot with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
- An isotropic Field probe optimized and calibrated for the targeted measurement.
- A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
- The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital communication to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.
- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.
- A computer running WinXP or Win7 and the DASY software.
- Remote control and teach pendant as well as additional circuitry for robot safety such as warning lamps, etc.
- The phantom, the device holder and other accessories according to the targeted measurement.

6.2 DASY5 E-field Probe System

The SAR measurements were conducted with the dosimetric probe EX3DV4 (manufactured by SPEAG), designed in the classical triangular configuration and optimized for dosimetric evaluation.

EX3DV4 Probe Specification

Construction	Symmetrical design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)
Calibration	ISO/IEC 17025 calibration service available
Frequency	10 MHz to > 6 GHz Linearity: ± 0.2 dB (30 MHz to 6 GHz)
Directivity	± 0.3 dB in HSL (rotation around probe axis) ± 0.5 dB in tissue material (rotation normal to probe axis)
Dynamic Range	10 μ W/g to > 100 mW/g Linearity: ± 0.2 dB (noise: typically < 1 μ W/g)
Dimensions	Overall length: 330 mm (Tip: 20 mm) Tip diameter: 2.5 mm (Body: 12 mm) Typical distance from probe tip to dipole centers: 1 mm
Application	High precision dosimetric measurements in any exposure Scenario (e.g., very strong gradient fields). Only probe which enables compliance testing for frequencies up to 6 GHz with precision of better 30%.



E-field Probe Calibration

Each probe is calibrated according to a dosimetric assessment procedure with accuracy better than $\pm 10\%$. The spherical isotropy was evaluated and found to be better than ± 0.25 dB. The sensitivity parameters (NormX, NormY, NormZ), the diode compression parameter (DCP) and the conversion factor (ConvF) of the probe are tested.

The free space E-field from amplified probe outputs is determined in a test chamber. This is performed in a TEM cell for frequencies below 1 GHz, and in a wave guide above 1 GHz for free space. For the free space calibration, the probe is placed in the volumetric center of the cavity and at the proper orientation with the field. The probe is then rotated 360 degrees.

E-field temperature correlation calibration is performed in a flat phantom filled with the appropriate simulated brain tissue. The measured free space E-field in the medium correlates to temperature rise in a dielectric medium. For temperature correlation calibration a RF transparent thermistor-based temperature probe is used in conjunction with the E-field probe.



$$\text{SAR} = C \Delta T / \Delta t$$

Where: Δt = Exposure time (30 seconds),
 C = Heat capacity of tissue (brain or muscle),
 ΔT = Temperature increase due to RF exposure.

Or

$$\text{SAR} = |E|^2 \sigma / \rho$$

Where: σ = Simulated tissue conductivity,
 ρ = Tissue density (kg/m^3).

6.3 SAR Measurement Procedure

Power Reference Measurement

The Power Reference Measurement and Power Drift Measurements are for monitoring the power drift of the device under test in the batch process. The minimum distance of probe sensors to surface determines the closest measurement point to phantom surface. This distance cannot be smaller than the distance of sensor calibration points to probe tip as defined in the probe properties.

Area Scan

The area scan is used as a fast scan in two dimensions to find the area of high field values, before doing a fine measurement around the hot spot. The sophisticated interpolation routines implemented in DASY software can find the maximum found in the scanned area, within a range of the global maximum. The range (in dB) is specified in the standards for compliance testing. For example, a 2 dB range is required in IEEE standard 1528 and IEC 62209 standards, whereby 3 dB is a requirement when compliance is assessed in accordance with the ARIB standard (Japan), if only one zoom scan follows the area scan, then only the absolute maximum will be taken as reference. For cases where multiple maximums are detected, the number of zoom scans has to be increased accordingly.

Area scan parameters extracted from FCC KDB 865664 D01 SAR measurement 100 MHz to 6 GHz.

	≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface	5 ± 1 mm	$\frac{1}{2} \cdot \delta \cdot \ln(2) \pm 0.5$ mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location	$30^\circ \pm 1^\circ$	$20^\circ \pm 1^\circ$
Maximum area scan spatial resolution: $\Delta x_{\text{Area}}, \Delta y_{\text{Area}}$	≤ 2 GHz: ≤ 15 mm $2 - 3$ GHz: ≤ 12 mm	$3 - 4$ GHz: ≤ 12 mm $4 - 6$ GHz: ≤ 10 mm
	When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be \leq the corresponding x or y dimension of the test device with at least one measurement point on the test device.	

Zoom Scan

Zoom scans are used to assess the peak spatial SAR values within a cubic averaging volume containing 1 gram and 10 gram of simulated tissue. The zoom scan measures points (refer to table below) within a cube whose base faces are centered on the maxima found in a preceding area scan job within the same procedure. When the measurement is done, the zoom scan evaluates the averaged SAR for 1 gram and 10 gram and displays these values next to the job's label.

Zoom scan parameters extracted from FCC KDB 865664 D01 SAR measurement 100 MHz to 6 GHz.

		≤3GHz	> 3 GHz
Maximum zoom scan spatial resolution: $\Delta x_{zoom} \Delta y_{zoom}$		≤2GHz: ≤8mm 2 – 3GHz: ≤5mm*	3 – 4GHz: ≤5mm* 4 – 6GHz: ≤4mm*
Maximum zoom scan spatial resolution, normal to phantom surface	Uniform grid: $\Delta z_{zoom}(n)$	≤5mm	3 – 4GHz: ≤4mm 4 – 5GHz: ≤3mm 5 – 6GHz: ≤2mm
	Graded grid $\Delta z_{zoom}(1)$: between 1 st two points closest to phantom surface	≤4mm	3 – 4GHz: ≤3mm 4 – 5GHz: ≤2.5mm 5 – 6GHz: ≤2mm
	$\Delta z_{zoom}(n > 1)$: between subsequent points	≤1.5• $\Delta z_{zoom}(n-1)$	
Minimum zoom scan volume	X, y, z	≥30mm	3 – 4GHz: ≥28mm 4 – 5GHz: ≥25mm 5 – 6GHz: ≥22mm
<p>Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details.</p> <p>* When zoom scan is required and the <u>reported</u> SAR from the <i>area scan based 1-g SAR estimation</i> procedures of KDB 447498 is ≤ 1.4W/kg, ≤8mm, ≤7mm and ≤5mm zoom scan resolution may be applied, respectively, for 2GHz to 3GHz, 3GHz to 4GHz and 4GHz to 6GHz.</p>			

Volume Scan Procedures

The volume scan is used to assess overlapping SAR distributions for antennas transmitting in different frequency bands. It is equivalent to an oversized zoom scan used in standalone measurements. The measurement volume will be used to enclose all the simultaneous transmitting antennas. For antennas transmitting simultaneously in different frequency bands, the volume scan is measured separately in each frequency band. In order to sum correctly to compute the 1g aggregate SAR, the EUT remain in the same test position for all measurements and all volume scan use the same spatial resolution and grid spacing. When all volume scan were completed, the software, SEMCAD postprocessor can combine and subsequently superpose these measurement data to calculating the multiband SAR.

Power Drift Monitoring

All SAR testing is under the EUT install full charged battery and transmit maximum output power. In DASYS measurement software, the power reference measurement and power drift measurement procedures are used for monitoring the power drift of EUT during SAR test. Both these procedures measure the field at a specified reference position before and after the SAR testing. The software will calculate the field difference in dB. If the power drifts more than 5%, the SAR will be retested.



7 Main Test Equipment

Name of Equipment	Manufacturer	Type/Model	Serial Number	Last Cal.	Cal. Due Date
Network analyzer	Agilent	E5071B	MY42404014	2021-05-15	2022-05-14
Dielectric Probe Kit	HP	85070E	US44020115	2021-05-15	2022-05-14
Power meter	Agilent	E4417A	GB41291714	2021-05-15	2022-05-14
Power sensor	Agilent	N8481H	MY50350004	2021-05-15	2022-05-14
Power sensor	Agilent	E9327A	US40441622	2021-05-15	2022-05-14
Dual directional coupler	Agilent	778D-012	50519	/	/
Dual directional coupler	Agilent	777D	50146	/	/
Dual directional coupler	UCL	UCL-DDC0 56G-S	20010600118	/	/
Amplifier	INDEXSAR	TPA-005060 G01	13030502	2021-05-15	2022-05-14
Wireless communication tester	Anritsu	MT8820C	6201342015	2020-12-13	2021-12-12
Wireless communication tester	Key sight	E5515C	MY48360988	2020-12-13	2021-12-12
Wideband radio communication tester	R&S	CMW 500	113645	2021-05-15	2022-05-14
Base Station Simulator	R&S	CMW270	100673	2021-05-15	2022-05-14
E-field Probe	SPEAG	EX3DV4	7628	2021-02-16	2022-02-15
DAE	SPEAG	DAE4	1317	2021-02-23	2022-02-22
Validation Kit 750MHz	SPEAG	D750V3	1045	2020-08-28	2023-08-27
Validation Kit 835MHz	SPEAG	D835V2	4d020	2020-08-28	2023-08-27
Validation Kit 1750MHz	SPEAG	D1750V2	1033	2020-02-25	2023-02-24
Validation Kit 1900MHz	SPEAG	D1900V2	5d060	2020-08-27	2023-08-26
Validation Kit 2450MHz	SPEAG	D2450V2	786	2020-08-27	2023-08-26
Validation Kit 2600MHz	SPEAG	D2600V2	1025	2021-04-23	2024-04-22
Validation Kit 5GHz	SPEAG	D5GHzV2	1151	2020-02-27	2023-02-26
Temperature Probe	Tianjin jinming	JM222	381	2021-05-15	2022-05-14
Hygrothermograph	Anymetr	HTC - 1	TY2020A001	2021-05-15	2022-05-14
Twin SAM Phantom	Speag	SAM1	1534	/	/
Software for Test	Speag	DASY52	/	/	/
Softwarefor Tissue	Agilent	85070	/	/	/

8 Tissue Dielectric Parameter Measurements & System Verification

8.1 Tissue Verification

The temperature of the tissue-equivalent medium used during measurement must also be within 18°C to 25°C and within ± 2°C of the temperature when the tissue parameters are characterized. The dielectric parameters must be measured before the tissue-equivalent medium is used in a series of SAR measurements. The parameters should be re-measured after each 24 hours of use; or earlier if the dielectric parameters can become out of tolerance.

Target values

Frequency (MHz)	Water (%)	Salt (%)	Sugar (%)	Glycol (%)	Preventol (%)	Cellulose (%)	ϵ_r	σ (s/m)
750	41.448	1.452	56	0	0.1	1.0	41.9	0.89
835	41.45	1.45	56	0	0.1	1.0	41.5	0.90
1750	55.24	0.31	0	44.45	0	0	40.1	1.37
1900	55.242	0.306	0	44.452	0	0	40.0	1.40
2450	62.7	0.5	0	36.8	0	0	39.2	1.80
2600	55.242	0.306	0	44.452	0	0	39.0	1.96
Frequency (MHz)	Water (%)	Diethylenglycol monohexylether			Triton X-100		ϵ_r	σ (s/m)
5250	65.53	17.24			17.23		35.9	4.71
5600	65.53	17.24			17.23		35.5	5.07
5750	65.53	17.24			17.23		35.4	5.22

**Measurements results**

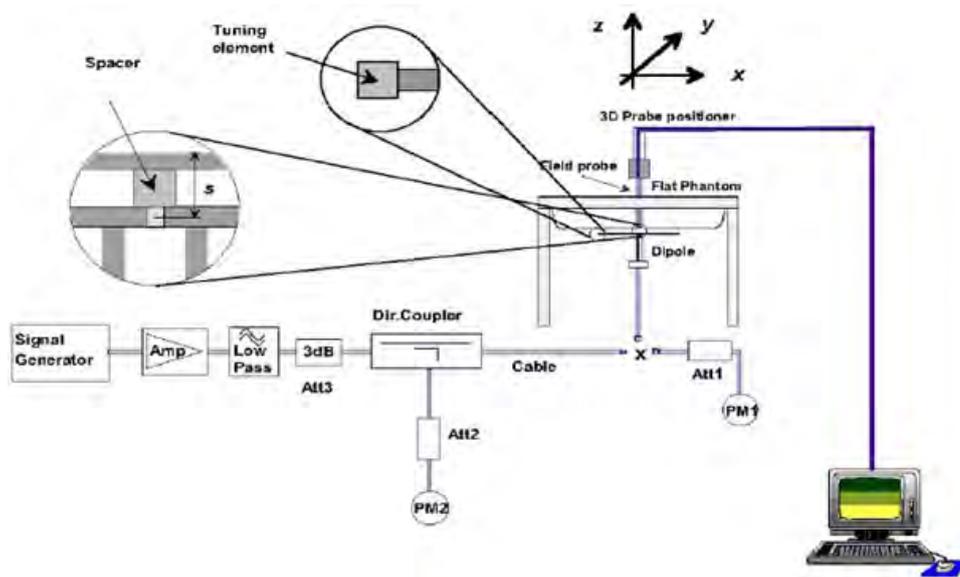
Frequency (MHz)	Test Date	Temp °C	Measured Dielectric Parameters		Target Dielectric Parameters		Limit (Within ±5%)	
			ϵ_r	σ (s/m)	ϵ_r	σ (s/m)	Dev ϵ_r (%)	Dev σ (%)
750	6/14/2021	21.5	42.3	0.88	41.9	0.89	0.95	-1.12
	6/15/2021	21.5	42.0	0.87	41.9	0.89	0.24	-2.25
835	6/21/2021	21.5	41.4	0.88	41.5	0.90	-0.24	-2.22
	6/22/2021	21.5	41.3	0.87	41.5	0.90	-0.48	-3.33
1750	6/25/2021	21.5	40.2	1.34	40.1	1.37	0.25	-2.19
	6/26/2021	21.5	40.1	1.34	40.1	1.37	0.00	-2.19
1900	6/16/2021	21.5	40.1	1.41	40.0	1.40	0.25	0.71
	6/17/2021	21.5	40.2	1.43	40.0	1.40	0.50	2.14
2450	6/23/2021	21.5	38.6	1.81	39.2	1.80	-1.53	0.56
	6/24/2021	21.5	38.7	1.81	39.2	1.80	-1.28	0.56
2600	6/18/2021	21.5	38.2	2.01	39.0	1.96	-2.05	2.55
	6/19/2021	21.5	38.4	1.94	39.0	1.96	-1.54	-1.02
	6/20/2021	21.5	38.3	1.99	39.0	1.96	-1.79	1.53
5250	6/30/2021	21.5	35.5	4.80	35.9	4.71	-1.11	1.91
	6/31/2021	21.5	35.8	4.81	35.9	4.71	-0.28	2.12
5600	6/27/2021	21.5	34.2	5.21	35.5	5.07	-3.66	2.76
5750	6/28/2021	21.5	34.9	5.21	35.4	5.22	-1.41	-0.19
	6/29/2021	21.5	35.0	5.28	35.4	5.22	-1.13	1.15

Note: The depth of tissue-equivalent liquid in a phantom must be ≥ 15.0 cm for SAR measurements ≤ 3 GHz and ≥ 10.0 cm for measurements > 3 GHz.

8.2 System Performance Check

The manufacturer calibrates the probes annually. Dielectric parameters of the tissue simulates were measured using the dielectric probe kit and the network analyzer. A system check measurement for every day was made following the determination of the dielectric parameters of the Tissue simulates, using the dipole validation kit. The dipole antenna was placed under the flat section of the twin SAM phantom.

System check is performed regularly on all frequency bands where tests are performed with the DASY system.



Picture 1 System Performance Check setup



Picture 2 Setup Photo

**Justification for Extended SAR Dipole Calibrations**

Usage of SAR dipoles calibrated less than 3 years ago but more than 1 year ago were confirmed in maintaining return loss (< - 20 dB, within 20% of prior calibration) and impedance (within 5 ohm from prior calibration) requirements per extended calibrations in KDB 865664 D01:

Dipole		Date of Measurement	Return Loss(dB)	Δ %	Impedance (Ω)	$\Delta\Omega$
Dipole D1750V2 SN: 1033	Head Liquid	2/25/2020	-38.3	/	48.8	/
		2/26/2021	-40.0	-1.7	49.9	1.1
Dipole D5GHzV2 SN: 1151 (5250MHz)	Head Liquid	2/27/2020	-23.4	/	52.4	/
		2/26/2021	-23.8	-0.4	50.0	-2.4
Dipole D5GHzV2 SN: 1151 (5600MHz)	Head Liquid	2/27/2020	-22.6	/	57.0	/
		2/26/2021	-21.5	1.1	55.6	-1.4
Dipole D5GHzV2 SN: 1151 (5750MHz)	Head Liquid	2/27/2020	-25.0	/	55.9	/
		2/26/2021	-26.8	-1.8	52.5	-3.4

System Check results

Frequency (MHz)	Test Date	Temp $^{\circ}\text{C}$	250mW /100mW Measured SAR _{1g} (W/kg)	1W Normalized SAR _{1g} (W/kg)	1W Target SAR _{1g} (W/kg)	Δ % (Limit $\pm 10\%$)	Plot No.
750	6/14/2021	21.5	2.13	8.52	8.37	1.79	1
	6/15/2021	21.5	2.10	8.40	8.37	0.36	2
835	6/21/2021	21.5	2.44	9.76	9.65	1.14	3
	6/22/2021	21.5	2.46	9.84	9.65	1.97	4
1750	6/25/2021	21.5	8.95	35.80	35.90	-0.28	5
	6/26/2021	21.5	9.11	36.44	35.90	1.50	6
1900	6/16/2021	21.5	9.88	39.52	39.50	0.05	7
	6/17/2021	21.5	9.85	39.40	39.50	-0.25	8
2450	6/23/2021	21.5	13.70	54.80	52.30	4.78	9
	6/24/2021	21.5	13.20	52.80	52.30	0.96	10
2600	6/18/2021	21.5	13.90	55.60	56.10	-0.89	11
	6/19/2021	21.5	13.88	55.52	56.10	-1.03	12
	6/20/2021	21.5	13.94	55.76	56.10	-0.61	13
5250	6/30/2021	21.5	7.87	78.70	78.00	0.90	14
	6/31/2021	21.5	7.76	77.60	78.00	-0.51	15
5600	6/27/2021	21.5	7.67	76.70	80.50	-4.72	16
5750	6/28/2021	21.5	7.66	76.60	77.40	-1.03	17
	6/29/2021	21.5	7.72	77.20	77.40	-0.26	18

Note: Target Values used derive from the calibration certificate Data Storage and Evaluation.

8.3 SAR System Validation

Per FCC KDB 865664 D02v01, SAR system verification is required to confirm measurement accuracy. The SAR systems (including SAR probes, system components and software versions) used for this device were validated against its performance specifications prior to the SAR measurements. Reference dipoles are used with the required tissue-equivalent media for system validation, according to the procedures outlined in FCC KDB 865664 D01 and IEEE 1528-2013. Since SAR probe calibrations are frequency dependent, each probe calibration point must be validated at a frequency within the valid frequency range of the probe calibration point, using the system that normally operates with the probe for routine SAR measurements and according to the required tissue-equivalent media.

A tabulated summary of the system validation status, measurement frequencies, SAR probes, calibrated signal type(s) and tissue dielectric parameters has been included.

Frequency [MHz]	Date	Probe SN	Probe Type	Probe Cal Point		PERM (Er)	COND (Σ)	CW Validation			Mod. Validation		
								Sensitivity	Probe Linearity	Probe Isotropy	Mod. Type	Duty Factor	PAR
750	2/6/2021	7628	EX3DV4	750	Head	42.81	0.85	PASS	PASS	PASS	FDD	PASS	N/A
835	2/6/2021	7628	EX3DV4	835	Head	42.22	0.90	PASS	PASS	PASS	GMSK	PASS	N/A
1750	2/6/2021	7628	EX3DV4	1750	Head	39.91	1.32	PASS	PASS	PASS	NA	N/A	N/A
1900	2/6/2021	7628	EX3DV4	1900	Head	39.43	1.42	PASS	PASS	PASS	GMSK	PASS	N/A
2450	2/6/2021	7628	EX3DV4	2450	Head	38.19	1.83	PASS	PASS	PASS	OFDM	PASS	PASS
2600	2/6/2021	7628	EX3DV4	2600	Head	37.60	1.99	PASS	PASS	PASS	TDD	PASS	N/A
5250	2/6/2021	7628	EX3DV4	5250	Head	35.36	4.83	PASS	PASS	PASS	OFDM	N/A	PASS
5600	2/6/2021	7628	EX3DV4	5600	Head	34.43	5.29	PASS	PASS	PASS	OFDM	N/A	PASS
5750	2/6/2021	7628	EX3DV4	5750	Head	34.07	5.47	PASS	PASS	PASS	OFDM	N/A	PASS

NOTE: While the probes have been calibrated for both CW and modulated signals, all measurements were performed using communication systems calibrated for CW signals only. Modulations in the table above represent test configurations for which the measurement system has been validated per FCC KDB Publication 865664D01v01 for scenarios when CW probe calibrations are used with other signal types. SAR systems were validated for modulated signals with a periodic duty cycle, such as GMSK, or with a high peak to average ratio (>5dB), such as OFDM according to KDB 865664.

9 Normal and Maximum Output Power

KDB 447498 D01 at the maximum rated output power and within the tune-up tolerance range specified for the product, but not more than 2 dB lower than the maximum tune-up tolerance limit.

9.1 GSM Mode

GSM 850 ANT 0 Full Power&Level 1&Level 2&Level 3		Burst-Averaged output power(dBm)				Division Factors	Frame-Averaged output power(dBm)			
		Tune-up	Channel/Frenqucy(MHz)				Tune-up	Channel/Frenqucy(MHz)		
		MAX	128 /824.2	190 /836.6	251 /848.8		MAX	128 /824.2	190 /836.6	251 /848.8
GSM	CS	33.50	32.96	33.04	33.05	9.03	24.47	23.93	24.01	24.02
GPRS/ EGPRS (GMSK)	1 Tx Slot	33.50	32.90	33.01	32.96	9.03	24.47	23.87	23.98	23.93
	2 Tx Slots	31.50	30.85	30.99	30.84	6.02	25.48	24.83	24.97	24.82
	3 Tx Slots	30.50	29.76	29.95	29.82	4.26	26.24	25.50	25.69	25.56
	4 Tx Slots	28.50	27.78	27.92	27.72	3.01	25.49	24.77	24.91	24.71
EGPRS (8PSK)	1 Tx Slot	27.00	26.08	26.11	26.13	9.03	17.97	17.05	17.08	17.10
	2 Tx Slots	25.50	25.01	25.09	25.14	6.02	19.48	18.99	19.07	19.12
	3 Tx Slots	24.50	23.95	24.11	24.12	4.26	20.24	19.69	19.85	19.86
	4 Tx Slots	22.50	21.88	21.95	22.00	3.01	19.49	18.87	18.94	18.99
GSM 1900 ANT 1 Full Power&Level 1&Level 2&Level 3		Burst-Averaged output power(dBm)				Division Factors	Frame-Averaged output power(dBm)			
		Tune-up	Channel/Frenqucy(MHz)				Tune-up	Channel/Frenqucy(MHz)		
		MAX	512 /1850.2	661 /1880	810 /1909.8		MAX	512 /1850.2	661 /1880	810 /1909.8
GSM	CS	30.50	29.46	29.34	29.32	9.03	21.47	20.43	20.31	20.29
GPRS/ EGPRS (GMSK)	1 Tx Slot	30.50	29.39	29.31	29.22	9.03	21.47	20.36	20.28	20.19
	2 Tx Slots	28.50	27.37	27.28	27.21	6.02	22.48	21.35	21.26	21.19
	3 Tx Slots	27.50	26.88	26.82	26.78	4.26	23.24	22.62	22.56	22.52
	4 Tx Slots	25.50	24.72	24.84	24.56	3.01	22.49	21.71	21.83	21.55
EGPRS (8PSK)	1 Tx Slot	25.00	24.42	24.40	24.45	9.03	15.97	15.39	15.37	15.42
	2 Tx Slots	24.00	23.78	23.51	23.62	6.02	17.98	17.76	17.49	17.60
	3 Tx Slots	23.50	23.33	23.29	23.34	4.26	19.24	19.07	19.03	19.08
	4 Tx Slots	22.50	21.78	21.92	22.01	3.01	19.49	18.77	18.91	19.00

Notes: The worst-case configuration and mode for SAR testing is determined to be as follows:

1. Standalone: GSM 850 GMSK (GPRS) mode with 3 time slots for Max power, GSM 1900 GMSK (GPRS) mode with 3 time slots for Max power, based on the output power measurements above..

9.2 WCDMA Mode

The following tests were completed according to the test requirements outlined in the 3GPP TS34.121 specification.

WCDMA		Band II(dBm) ANT 1 Level 3				Band V(dBm) ANT 2 Full Power&Level 2&Level 3				Band V(dBm) ANT 2 Level 1			
Tx Channel		9262	9400	9538	Tune-up	4132	4183	4233	Tune-up	4132	4183	4233	Tune-up
Frequency(MHz)		1852.4	1880	1907.6	Limit	826.4	836.6	846.6	Limit	826.4	836.6	846.6	Limit
RMC	12.2kbps	22.72	22.71	22.66	23.00	23.42	23.47	23.34	24.50	20.82	20.90	20.88	22.00
AMR	12.2kbps	22.80	22.81	22.50	23.00	23.56	23.51	23.38	24.50	20.90	20.78	20.84	22.00
HSDPA	Sub 1	22.30	22.23	22.24	22.50	23.02	23.01	22.82	24.00	20.44	20.28	20.34	21.50
	Sub 2	22.30	22.21	22.02	22.50	22.98	22.99	22.94	24.00	20.26	20.56	20.46	21.50
	Sub 3	21.88	21.79	21.54	22.00	22.40	22.43	22.34	23.50	19.70	20.02	19.78	21.00
	Sub 4	21.68	21.69	21.58	22.00	22.54	22.57	22.24	23.50	19.86	20.02	19.92	21.00
HSUPA	Sub 1	22.28	22.05	22.14	22.50	22.82	22.89	22.94	24.00	20.42	20.34	20.48	21.50
	Sub 2	21.16	21.21	21.28	21.50	21.90	21.95	21.80	23.00	19.22	19.52	19.38	20.50
	Sub 3	21.72	21.65	21.58	22.00	22.56	22.37	22.28	23.50	19.78	19.98	19.80	21.00
	Sub 4	21.08	21.23	21.28	21.50	21.92	22.13	22.00	23.00	19.18	19.28	19.32	20.50
	Sub 5	22.10	22.31	22.20	22.50	22.80	23.03	22.82	24.00	20.36	20.40	20.54	21.50

Note: 1.Per KDB 941225 D01, SAR for each exposure is measured using a 12.2 kbps RMC with TPC bits configured to all "1's".



WCDMA		Band II(dBm)				Band V(dBm)			
		ANT 1 Full Power&Level 1&Level 2				ANT 0 Full Power&Level 1&Level 2&Level 3			
Tx Channel		9262	9400	9538	Tune-up	4132	4183	4233	Tune-u
Frequency(MHz)		1852.4	1880	1907.6	Limit	826.4	836.6	846.6	p Limit
RMC	12.2kbps	24.56	24.55	24.52	25.50	24.87	24.81	24.85	25.50
AMR	12.2kbps	24.32	24.27	24.18	25.50	24.95	24.65	24.97	25.50
HSDPA	Sub 1	23.98	23.73	23.90	25.00	24.47	24.27	24.23	25.00
	Sub 2	23.90	23.93	23.66	25.00	24.27	24.17	24.35	25.00
	Sub 3	23.22	23.25	23.46	24.50	23.99	23.93	23.73	24.50
	Sub 4	23.24	23.19	23.38	24.50	23.79	23.83	23.87	24.50
HSUPA	Sub 1	23.84	23.71	23.94	25.00	24.45	24.45	24.39	25.00
	Sub 2	22.86	22.71	22.76	24.00	23.27	23.29	23.37	24.00
	Sub 3	23.38	23.31	23.38	24.50	23.77	23.97	23.83	24.50
	Sub 4	22.88	22.89	22.90	24.00	23.37	23.35	23.25	24.00
	Sub 5	23.82	23.95	23.78	25.00	24.35	24.41	24.21	25.00

Note: 1.Per KDB 941225 D01, SAR for each exposure is measured using a 12.2 kbps RMC with TPC bits configured to all "1's".

9.3 LTE Mode

UE Power Class: 3 (23 +/- 2dBm). The allowed Maximum Power Reduction (MPR) for the maximum output power due to higher order modulation and transmit bandwidth configuration (resource blocks) is specified in Table 6.2.3-1 of the 3GPP TS36.101.

Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 3

Modulation	Channel bandwidth / Transmission bandwidth (N _{RB})						MPR (dB)
	1.4 MHz	3.0 MHz	5 MHz	10 MHz	15 MHz	20 MHz	
QPSK	> 5	> 4	> 8	> 12	> 16	> 18	≤ 1
16 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 1
16 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 2
64 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 2
64 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 3

LTE FDD Band 2 ANT 1 Full Power&Level 1				Conducted Power(dBm)			Tune-up Limit
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			
				18607/1850.7	18900/1880	19193/1909.3	
1.4MHz	QPSK	1	0	24.63	24.58	24.66	25.50
		1	2	24.59	24.60	24.50	25.50
		1	5	24.56	24.62	24.33	25.50
		3	0	24.58	24.62	24.60	25.50
		3	2	24.65	24.68	24.71	25.50
		3	3	24.65	24.72	24.15	25.50
		6	0	23.73	23.74	23.79	24.50
	16QAM	1	0	23.93	24.03	23.99	24.50
		1	2	23.91	23.96	23.92	24.50
		1	5	23.90	23.87	23.80	24.50
		3	0	23.61	23.61	23.61	24.50
		3	2	23.70	23.67	23.73	24.50
		3	3	23.66	23.75	23.61	24.50
		6	0	22.73	22.72	22.82	23.50
	64QAM	1	0	23.10	23.07	23.12	23.50
		1	2	23.03	23.04	23.07	23.50
		1	5	22.99	23.04	22.98	23.50
		3	0	22.71	22.71	22.73	23.50
		3	2	22.76	22.75	22.78	23.50
		3	3	22.78	22.81	22.80	23.50
		6	0	21.73	21.76	21.80	22.50
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
3MHz	QPSK	1	0	18615/1851.5	18900/1880	19185/1908.5	25.50
				24.65	24.62	24.69	



		1	7	24.57	24.63	24.54	25.50		
		1	14	24.59	24.67	24.37	25.50		
		8	0	23.68	23.74	23.73	24.50		
		8	4	23.77	23.78	23.83	24.50		
		8	7	23.75	23.83	23.25	24.50		
		15	0	23.73	23.78	23.82	24.50		
	16QAM	1	0	23.96	24.05	24.02	24.50		
		1	7	23.94	23.96	23.96	24.50		
		1	14	23.92	23.91	23.83	24.50		
		8	0	22.72	22.74	22.73	23.50		
		8	4	22.81	22.80	22.85	23.50		
		8	7	22.76	22.87	22.74	23.50		
	64QAM	15	0	22.76	22.76	22.85	23.50		
		1	0	23.13	23.09	23.15	23.50		
		1	7	23.06	23.04	23.09	23.50		
		1	14	23.01	23.03	23.01	23.50		
		8	0	21.82	21.84	21.85	22.50		
		8	4	21.87	21.88	21.90	22.50		
			8	7	21.88	21.93	21.93	22.50	
			15	0	21.76	21.80	21.83	22.50	
			Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)		
18625/1852.5							18900/1880	19175/1907.5	
5MHz			QPSK	1	0	24.64	24.61	24.68	25.50
				1	13	24.58	24.64	24.55	25.50
				1	24	24.58	24.66	24.36	25.50
	12	0		23.68	23.74	23.73	24.50		
	12	6		23.78	23.79	23.82	24.50		
	12	13		23.75	23.85	23.26	24.50		
	25	0		23.77	23.79	23.84	24.50		
	16QAM	1	0	23.95	24.04	24.01	24.50		
		1	13	23.94	23.98	23.96	24.50		
		1	24	23.92	23.91	23.82	24.50		
		12	0	22.73	22.75	22.74	23.50		
		12	6	22.80	22.79	22.84	23.50		
		12	13	22.76	22.87	22.74	23.50		
		25	0	22.77	22.77	22.84	23.50		
	64QAM	1	0	23.12	23.08	23.14	23.50		
		1	13	23.06	23.06	23.09	23.50		
		1	24	23.01	23.03	23.00	23.50		
		12	0	21.83	21.85	21.86	22.50		
		12	6	21.86	21.87	21.89	22.50		
		12	13	21.88	21.93	21.93	22.50		
		25	0	21.77	21.81	21.82	22.50		



Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				18650/1855	18900/1880	19150/1905	
10MHz	QPSK	1	0	24.62	24.60	24.65	25.50
		1	25	24.55	24.59	24.51	25.50
		1	49	24.56	24.62	24.33	25.50
		25	0	23.65	23.69	23.69	24.50
		25	13	23.75	23.74	23.78	24.50
		25	25	23.73	23.81	23.21	24.50
		50	0	23.73	23.77	23.80	24.50
	16QAM	1	0	23.93	24.01	23.99	24.50
		1	25	23.91	23.94	23.93	24.50
		1	49	23.89	23.89	23.79	24.50
		25	0	22.70	22.70	22.70	23.50
		25	13	22.78	22.75	22.81	23.50
		25	25	22.73	22.82	22.70	23.50
		50	0	22.74	22.72	22.80	23.50
	64QAM	1	0	23.10	23.09	23.12	23.50
		1	25	23.03	23.06	23.06	23.50
		1	49	23.02	23.01	22.97	23.50
		25	0	21.80	21.80	21.86	22.50
		25	13	21.84	21.83	21.86	22.50
		25	25	21.85	21.88	21.89	22.50
		50	0	21.74	21.76	21.78	22.50
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				18675/1857.5	18900/1880	19125/1902.5	
15MHz	QPSK	1	0	24.63	24.57	24.66	25.50
		1	38	24.56	24.63	24.52	25.50
		1	74	24.55	24.61	24.32	25.50
		36	0	23.66	23.70	23.70	24.50
		36	18	23.75	23.74	23.78	24.50
		36	39	23.72	23.82	23.22	24.50
		75	0	23.75	23.75	23.79	24.50
	16QAM	1	0	23.90	24.02	23.99	24.50
		1	38	23.92	23.95	23.94	24.50
		1	74	23.89	23.87	23.79	24.50
		36	0	22.70	22.73	22.71	23.50
		36	18	22.77	22.74	22.80	23.50
		36	39	22.74	22.83	22.71	23.50
		75	0	22.74	22.72	22.80	23.50
	64QAM	1	0	23.07	23.06	23.12	23.50
		1	38	23.04	23.03	23.07	23.50
		1	74	23.02	23.02	23.01	23.50
		36	0	21.82	21.87	21.87	22.50



Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				18700/1860	18900/1880	19100/1900	
20MHz	QPSK	36	18	21.84	21.84	21.88	22.50
		36	39	21.86	21.89	21.90	22.50
		75	0	21.74	21.76	21.78	22.50
		1	0	24.60	24.53	24.63	25.50
		1	50	24.55	24.59	24.50	25.50
		1	99	24.53	24.60	24.29	25.50
		50	0	23.63	23.65	23.66	24.50
	50	25	23.73	23.70	23.75	24.50	
	50	50	23.69	23.77	23.18	24.50	
	100	0	23.72	23.70	23.75	24.50	
	16QAM	1	0	23.94	23.98	23.94	24.50
		1	50	23.88	23.93	23.90	24.50
		1	99	23.87	23.84	23.77	24.50
		50	0	22.67	22.69	22.68	23.50
		50	25	22.74	22.72	22.77	23.50
		50	50	22.71	22.78	22.67	23.50
		100	0	22.72	22.68	22.77	23.50
	64QAM	1	0	23.05	23.02	23.07	23.50
		1	50	23.00	23.01	23.03	23.50
		1	99	22.96	22.96	22.95	23.50
		50	0	21.77	21.79	21.80	22.50
50		25	21.80	21.80	21.82	22.50	
50		50	21.83	21.84	21.86	22.50	
100		0	21.72	21.72	21.75	22.50	

LTE FDD Band 2 ANT 1 Level 2&Level 3				Conducted Power(dBm)			Tune-up Limit
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			
				18607/1850.7	18900/1880	19193/1909.3	
1.4MHz	QPSK	1	0	22.70	22.72	22.80	23.00
		1	2	22.81	22.63	22.66	23.00
		1	5	22.60	22.58	22.71	23.00
		3	0	22.59	22.60	22.68	23.00
		3	2	22.66	22.73	22.82	23.00
		3	3	22.74	22.72	22.70	23.00
		6	0	21.74	21.79	21.82	22.50
	16QAM	1	0	22.20	22.24	22.08	22.50
		1	2	22.18	22.20	22.35	22.50
		1	5	22.35	22.15	22.15	22.50
		3	0	21.69	21.62	21.67	22.50
		3	2	21.58	21.76	21.52	22.50



		3	3	21.83	21.73	21.79	22.50
		6	0	20.56	20.79	21.04	21.50
	64QAM	1	0	20.83	20.80	21.02	21.50
		1	2	20.68	20.88	20.79	21.50
		1	5	20.88	20.93	20.98	21.50
		3	0	20.59	20.57	20.94	21.50
		3	2	20.52	20.80	21.01	21.50
		3	3	20.84	20.75	20.79	21.50
		6	0	20.04	20.16	19.80	20.50
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				18615/1851.5	18900/1880	19185/1908.5	
3MHz	QPSK	1	0	22.72	22.76	22.83	23.00
		1	7	22.79	22.66	22.70	23.00
		1	14	22.63	22.63	22.75	23.00
		8	0	21.69	21.72	21.81	22.50
		8	4	21.78	21.83	21.94	22.50
		8	7	21.84	21.83	21.80	22.50
		15	0	21.74	21.83	21.85	22.50
	16QAM	1	0	22.23	22.26	22.11	22.50
		1	7	22.21	22.20	22.39	22.50
		1	14	22.37	22.19	22.18	22.50
		8	0	20.80	20.75	20.79	21.50
		8	4	20.69	20.89	20.64	21.50
		8	7	20.93	20.85	20.92	21.50
		15	0	20.59	20.83	21.07	21.50
	64QAM	1	0	20.86	20.82	21.05	21.50
		1	7	20.71	20.88	20.81	21.50
		1	14	20.90	20.92	21.01	21.50
		8	0	19.70	19.70	20.06	20.50
		8	4	19.63	19.93	20.13	20.50
		8	7	19.94	19.87	19.92	20.50
		15	0	20.07	20.20	19.83	20.50
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				18625/1852.5	18900/1880	19175/1907.5	
5MHz	QPSK	1	0	22.69	22.74	22.79	23.00
		1	13	22.77	22.62	22.67	23.00
		1	24	22.60	22.58	22.71	23.00
		12	0	21.66	21.67	21.77	22.50
		12	6	21.76	21.79	21.89	22.50
		12	13	21.82	21.81	21.76	22.50
		25	0	21.74	21.82	21.83	22.50
	16QAM	1	0	22.20	22.22	22.08	22.50
		1	13	22.18	22.18	22.36	22.50



		1	24	22.34	22.17	22.14	22.50
		12	0	20.78	20.71	20.76	21.50
		12	6	20.66	20.84	20.60	21.50
		12	13	20.90	20.80	20.88	21.50
		25	0	20.57	20.79	21.02	21.50
	64QAM	1	0	20.83	20.82	21.02	21.50
		1	13	20.68	20.90	20.78	21.50
		1	24	20.91	20.90	20.97	21.50
		12	0	19.68	19.66	20.07	20.50
		12	6	19.60	19.88	20.09	20.50
		12	13	19.91	19.82	19.88	20.50
		25	0	20.05	20.16	19.78	20.50
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				18650/1855	18900/1880	19150/1905	
10MHz	QPSK	1	0	22.71	22.75	22.82	23.00
		1	25	22.80	22.67	22.71	23.00
		1	49	22.62	22.62	22.74	23.00
		25	0	21.69	21.72	21.81	22.50
		25	13	21.79	21.84	21.93	22.50
		25	25	21.84	21.85	21.81	22.50
		50	0	21.78	21.84	21.87	22.50
	16QAM	1	0	22.22	22.25	22.10	22.50
		1	25	22.21	22.22	22.39	22.50
		1	49	22.37	22.19	22.17	22.50
		25	0	20.81	20.76	20.80	21.50
		25	13	20.68	20.88	20.63	21.50
		25	25	20.93	20.85	20.92	21.50
		50	0	20.60	20.84	21.06	21.50
	64QAM	1	0	20.85	20.81	21.04	21.50
		1	25	20.71	20.90	20.81	21.50
		1	49	20.90	20.92	21.00	21.50
		25	0	19.71	19.71	20.07	20.50
		25	13	19.62	19.92	20.12	20.50
		25	25	19.94	19.87	19.92	20.50
		50	0	20.08	20.21	19.82	20.50
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				18675/1857.5	18900/1880	19125/1902.5	
15MHz	QPSK	1	0	22.70	22.71	22.80	23.00
		1	38	22.78	22.66	22.68	23.00
		1	74	22.59	22.57	22.70	23.00
		36	0	21.67	21.68	21.78	22.50
		36	18	21.76	21.79	21.89	22.50
		36	39	21.81	21.82	21.77	22.50



Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				18700/1860	18900/1880	19100/1900	
	16QAM	75	0	21.76	21.80	21.82	22.50
		1	0	22.17	22.23	22.08	22.50
		1	38	22.19	22.19	22.37	22.50
		1	74	22.34	22.15	22.14	22.50
		36	0	20.78	20.74	20.77	21.50
		36	18	20.65	20.83	20.59	21.50
		36	39	20.91	20.81	20.89	21.50
	75	0	20.57	20.79	21.02	21.50	
	64QAM	1	0	20.80	20.79	21.02	21.50
		1	38	20.69	20.87	20.79	21.50
		1	74	20.91	20.91	21.01	21.50
		36	0	19.70	19.73	20.08	20.50
		36	18	19.60	19.89	20.11	20.50
		36	39	19.92	19.83	19.89	20.50
75		0	20.05	20.16	19.78	20.50	
20MHz	QPSK	1	0	22.67	22.67	22.77	23.00
		1	50	22.77	22.62	22.66	23.00
		1	99	22.57	22.56	22.67	23.00
		50	0	21.64	21.63	21.74	22.50
		50	25	21.74	21.75	21.86	22.50
		50	50	21.78	21.77	21.73	22.50
		100	0	21.73	21.75	21.78	22.50
	16QAM	1	0	22.06	22.19	22.03	22.50
		1	50	22.15	22.17	22.33	22.50
		1	99	22.32	22.12	22.12	22.50
		50	0	20.75	20.70	20.74	21.50
		50	25	20.62	20.81	20.56	21.50
		50	50	20.88	20.76	20.85	21.50
		100	0	20.55	20.75	20.99	21.50
	64QAM	1	0	20.78	20.75	20.97	21.50
		1	50	20.65	20.85	20.75	21.50
		1	99	20.85	20.85	20.95	21.50
		50	0	19.65	19.65	20.01	20.50
		50	25	19.56	19.85	20.05	20.50
		50	50	19.89	19.78	19.85	20.50
		100	0	20.03	20.12	19.75	20.50



LTE FDD Band 4 ANT 1 Full Power&Level 1				Conducted Power(dBm)			Tune-up Limit
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			
				19957/1710.7	20175/1732.5	20393/1754.3	
1.4MHz	QPSK	1	0	24.66	24.71	24.96	25.50
		1	2	24.49	24.72	24.77	25.50
		1	5	24.66	24.79	24.69	25.50
		3	0	24.65	24.88	25.00	25.50
		3	2	24.65	24.88	24.96	25.50
		3	3	24.65	24.78	24.87	25.50
		6	0	23.77	23.94	24.00	24.50
	16QAM	1	0	23.95	24.16	24.29	24.50
		1	2	23.93	24.09	24.07	24.50
		1	5	24.04	24.10	24.11	24.50
		3	0	23.65	23.85	23.98	24.50
		3	2	23.73	23.86	23.96	24.50
		3	3	23.67	23.82	23.85	24.50
		6	0	22.75	22.93	23.02	23.50
	64QAM	1	0	23.20	23.23	23.25	23.50
		1	2	23.17	23.16	23.20	23.50
		1	5	23.22	23.27	23.21	23.50
		3	0	22.97	22.93	22.97	23.50
		3	2	22.95	22.94	22.97	23.50
		3	3	22.86	22.87	22.87	23.50
		6	0	21.94	21.97	22.01	22.50
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				19965/1711.5	20175/1732.5	20385/1753.5	
3MHz	QPSK	1	0	24.68	24.75	24.99	25.50
		1	7	24.47	24.75	24.81	25.50
		1	14	24.69	24.84	24.73	25.50
		8	0	23.75	24.00	24.13	24.50
		8	4	23.77	23.98	24.08	24.50
		8	7	23.75	23.89	23.97	24.50
		15	0	23.77	23.98	24.03	24.50
	16QAM	1	0	23.98	24.18	24.32	24.50
		1	7	23.96	24.09	24.11	24.50
		1	14	24.06	24.14	24.14	24.50
		8	0	22.76	22.98	23.10	23.50
		8	4	22.84	22.99	23.08	23.50
		8	7	22.77	22.94	22.98	23.50
		15	0	22.78	22.97	23.05	23.50
	64QAM	1	0	23.23	23.25	23.28	23.50



Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit		
				19975/1712.5	20175/1732.5	20375/1752.5			
		1	7	23.20	23.16	23.22	23.50		
		1	14	23.24	23.26	23.24	23.50		
		8	0	22.08	22.06	22.09	22.50		
		8	4	22.06	22.07	22.09	22.50		
		8	7	21.96	21.99	22.00	22.50		
		15	0	21.97	22.01	22.04	22.50		
5MHz	QPSK	1	0	24.67	24.74	24.98	25.50		
		1	13	24.48	24.76	24.82	25.50		
		1	24	24.68	24.83	24.72	25.50		
		12	0	23.75	24.00	24.13	24.50		
		12	6	23.78	23.99	24.07	24.50		
		12	13	23.75	23.91	23.98	24.50		
	16QAM	25	0	23.81	23.99	24.05	24.50		
		1	0	23.97	24.17	24.31	24.50		
		1	13	23.96	24.11	24.11	24.50		
		1	24	24.06	24.14	24.13	24.50		
		12	0	22.77	22.99	23.11	23.50		
		12	6	22.83	22.98	23.07	23.50		
	64QAM	12	13	22.77	22.94	22.98	23.50		
		25	0	22.79	22.98	23.04	23.50		
		1	0	23.22	23.24	23.27	23.50		
		1	13	23.20	23.18	23.22	23.50		
		1	24	23.24	23.26	23.23	23.50		
		12	0	22.09	22.07	22.10	22.50		
	10MHz	QPSK	12	6	22.05	22.06	22.08	22.50	
			12	13	21.96	21.99	22.00	22.50	
			25	0	21.98	22.02	22.03	22.50	
			1	0	24.66	24.70	24.96	25.50	
			1	25	24.46	24.75	24.79	25.50	
			1	49	24.65	24.78	24.68	25.50	
16QAM		25	0	23.73	23.96	24.10	24.50		
		25	13	23.75	23.94	24.03	24.50		
		25	25	23.72	23.88	23.94	24.50		
		50	0	23.79	23.95	24.00	24.50		
		1	0	23.92	24.15	24.29	24.50		
		1	25	23.94	24.08	24.09	24.50		
		1	49	24.03	24.10	24.10	24.50		
		25	0	22.74	22.97	23.08	23.50		
		25	13	22.80	22.93	23.03	23.50		
						20000/1715	20175/1732.5	20350/1750	Tune-up Limit



Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit	
				20025/1717.5	20175/1732.5	20325/1747.5		
	64QAM	25	25	22.75	22.90	22.95	23.50	
		50	0	22.76	22.93	23.00	23.50	
		1	0	23.17	23.22	23.25	23.50	
		1	25	23.18	23.15	23.20	23.50	
		1	49	23.25	23.25	23.24	23.50	
		25	0	22.08	22.09	22.11	22.50	
		25	13	22.03	22.03	22.07	22.50	
		25	25	21.94	21.95	21.97	22.50	
		50	0	21.95	21.97	21.99	22.50	
15MHz	QPSK	1	0	24.65	24.73	24.95	25.50	
		1	38	24.45	24.71	24.78	25.50	
		1	74	24.66	24.79	24.69	25.50	
		36	0	23.72	23.95	24.09	24.50	
		36	18	23.75	23.94	24.03	24.50	
		36	39	23.73	23.87	23.93	24.50	
		75	0	23.77	23.97	24.01	24.50	
	16QAM	1	0	23.95	24.14	24.29	24.50	
		1	38	23.93	24.07	24.08	24.50	
		1	74	24.03	24.12	24.10	24.50	
		36	0	22.74	22.94	23.07	23.50	
		36	18	22.81	22.94	23.04	23.50	
		36	39	22.74	22.89	22.94	23.50	
		75	0	22.76	22.93	23.00	23.50	
	64QAM	1	0	23.20	23.25	23.25	23.50	
		1	38	23.17	23.18	23.19	23.50	
		1	74	23.25	23.24	23.20	23.50	
		36	0	22.06	22.02	22.10	22.50	
		36	18	22.03	22.02	22.05	22.50	
		36	39	21.93	21.94	21.96	22.50	
		75	0	21.95	21.97	21.99	22.50	
	Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
					20050/1720	20175/1732.5	20300/1745	
	20MHz	QPSK	1	0	24.63	24.66	24.93	25.50
1			50	24.45	24.71	24.77	25.50	
1			99	24.63	24.77	24.65	25.50	
50			0	23.70	23.91	24.06	24.50	
50			25	23.73	23.90	24.00	24.50	
50			50	23.69	23.83	23.90	24.50	
100			0	23.76	23.90	23.96	24.50	
16QAM		1	0	23.95	24.11	24.24	24.50	
		1	50	23.90	24.06	24.05	24.50	



		1	99	24.01	24.07	24.08	24.50
		50	0	22.71	22.93	23.05	23.50
		50	25	22.77	22.91	23.00	23.50
		50	50	22.72	22.85	22.91	23.50
		100	0	22.74	22.89	22.97	23.50
	64QAM	1	0	23.15	23.18	23.20	23.50
		1	50	23.14	23.13	23.16	23.50
		1	99	23.19	23.19	23.18	23.50
		50	0	22.03	22.01	22.04	22.50
		50	25	21.99	21.99	22.01	22.50
		50	50	21.91	21.90	21.93	22.50
		100	0	21.93	21.93	21.96	22.50

LTE FDD Band 4 ANT 1 Level 2&Level 3				Conducted Power(dBm)			Tune-up Limit
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			
				19957/1710.7	20175/1732.5	20393/1754.3	
1.4MHz	QPSK	1	0	21.65	21.59	21.82	23.00
		1	2	21.37	21.53	21.55	23.00
		1	5	21.54	21.60	21.37	23.00
		3	0	21.47	21.61	21.69	23.00
		3	2	21.42	21.64	21.61	23.00
		3	3	21.44	21.58	21.64	23.00
		6	0	20.50	20.74	20.75	22.00
	16QAM	1	0	20.74	21.08	20.61	22.00
		1	2	20.72	21.07	20.68	22.00
		1	5	20.89	20.91	21.03	22.00
		3	0	20.40	20.63	20.78	22.00
		3	2	20.61	20.65	20.91	22.00
		3	3	20.65	20.59	20.76	22.00
		6	0	19.57	19.63	19.70	21.00
	64QAM	1	0	19.61	19.78	19.67	21.00
		1	2	19.52	19.69	19.48	21.00
		1	5	19.69	19.50	19.58	21.00
		3	0	19.79	19.61	19.63	21.00
		3	2	19.61	19.61	19.60	21.00
		3	3	19.54	19.70	19.56	21.00
		6	0	18.70	18.80	18.61	20.00
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				19965/1711.5	20175/1732.5	20385/1753.5	
3MHz	QPSK	1	0	21.67	21.63	21.85	23.00
		1	7	21.35	21.56	21.59	23.00
		1	14	21.57	21.65	21.41	23.00



		8	0	20.57	20.73	20.82	22.00	
		8	4	20.54	20.74	20.73	22.00	
		8	7	20.54	20.69	20.74	22.00	
		15	0	20.50	20.78	20.78	22.00	
	16QAM	1	0	20.77	21.10	20.64	22.00	
		1	7	20.75	21.07	20.72	22.00	
		1	14	20.91	20.95	21.06	22.00	
		8	0	19.51	19.76	19.90	21.00	
		8	4	19.72	19.78	20.03	21.00	
		8	7	19.75	19.71	19.89	21.00	
		15	0	19.60	19.67	19.73	21.00	
	64QAM	1	0	19.64	19.80	19.70	21.00	
		1	7	19.55	19.69	19.50	21.00	
		1	14	19.71	19.49	19.61	21.00	
		8	0	18.90	18.74	18.75	20.00	
		8	4	18.72	18.74	18.72	20.00	
		8	7	18.64	18.82	18.69	20.00	
		15	0	18.73	18.84	18.64	20.00	
	Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
					19975/1712.5	20175/1732.5	20375/1752.5	
	5MHz	QPSK	1	0	21.64	21.61	21.81	23.00
1			13	21.33	21.52	21.56	23.00	
1			24	21.54	21.60	21.37	23.00	
12			0	20.54	20.68	20.78	22.00	
12			6	20.52	20.70	20.68	22.00	
12			13	20.52	20.67	20.70	22.00	
25			0	20.50	20.77	20.76	22.00	
16QAM		1	0	20.74	21.06	20.61	22.00	
		1	13	20.72	21.05	20.69	22.00	
		1	24	20.88	20.93	21.02	22.00	
		12	0	19.49	19.72	19.87	21.00	
		12	6	19.69	19.73	19.99	21.00	
		12	13	19.72	19.66	19.85	21.00	
		25	0	19.58	19.63	19.68	21.00	
64QAM		1	0	19.61	19.80	19.67	21.00	
		1	13	19.52	19.71	19.47	21.00	
		1	24	19.72	19.47	19.57	21.00	
		12	0	18.88	18.70	18.76	20.00	
		12	6	18.69	18.69	18.68	20.00	
		12	13	18.61	18.77	18.65	20.00	
		25	0	18.71	18.80	18.59	20.00	
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit	
				20000/1715	20175/1732.5	20350/1750		



10MHz	QPSK	1	0	21.66	21.62	21.84	23.00
		1	25	21.36	21.57	21.60	23.00
		1	49	21.56	21.64	21.40	23.00
		25	0	20.57	20.73	20.82	22.00
		25	13	20.55	20.75	20.72	22.00
		25	25	20.54	20.71	20.75	22.00
		50	0	20.54	20.79	20.80	22.00
	16QAM	1	0	20.76	21.09	20.63	22.00
		1	25	20.75	21.09	20.72	22.00
		1	49	20.91	20.95	21.05	22.00
		25	0	19.52	19.77	19.91	21.00
		25	13	19.71	19.77	20.02	21.00
		25	25	19.75	19.71	19.89	21.00
		50	0	19.61	19.68	19.72	21.00
	64QAM	1	0	19.63	19.79	19.69	21.00
		1	25	19.55	19.71	19.50	21.00
		1	49	19.71	19.49	19.60	21.00
		25	0	18.91	18.75	18.76	20.00
		25	13	18.71	18.73	18.71	20.00
		25	25	18.64	18.82	18.69	20.00
		50	0	18.74	18.85	18.63	20.00
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				20025/1717.5	20175/1732.5	20325/1747.5	
15MHz	QPSK	1	0	21.65	21.58	21.82	23.00
		1	38	21.34	21.56	21.57	23.00
		1	74	21.53	21.59	21.36	23.00
		36	0	20.55	20.69	20.79	22.00
		36	18	20.52	20.70	20.68	22.00
		36	39	20.51	20.68	20.71	22.00
		75	0	20.52	20.75	20.75	22.00
	16QAM	1	0	20.71	21.07	20.61	22.00
		1	38	20.73	21.06	20.70	22.00
		1	74	20.88	20.91	21.02	22.00
		36	0	19.49	19.75	19.88	21.00
		36	18	19.68	19.72	19.98	21.00
		36	39	19.73	19.67	19.86	21.00
		75	0	19.58	19.63	19.68	21.00
	64QAM	1	0	19.58	19.77	19.67	21.00
		1	38	19.53	19.68	19.48	21.00
		1	74	19.72	19.48	19.61	21.00
		36	0	18.90	18.77	18.77	20.00
		36	18	18.69	18.70	18.70	20.00
		36	39	18.62	18.78	18.66	20.00



Bandwidth	Modulation	75	0	18.71	18.80	18.59	20.00
		RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				20050/1720	20175/1732.5	20300/1745	
20MHz	QPSK	1	0	21.62	21.54	21.79	23.00
		1	50	21.33	21.52	21.55	23.00
		1	99	21.51	21.58	21.33	23.00
		50	0	20.52	20.64	20.75	22.00
		50	25	20.50	20.66	20.65	22.00
		50	50	20.48	20.63	20.67	22.00
		100	0	20.49	20.70	20.71	22.00
	16QAM	1	0	21.05	21.03	20.56	22.00
		1	50	20.69	21.04	20.66	22.00
		1	99	20.86	20.88	21.00	22.00
		50	0	19.46	19.71	19.85	21.00
		50	25	19.65	19.70	19.95	21.00
		50	50	19.70	19.62	19.82	21.00
		100	0	19.56	19.59	19.65	21.00
	64QAM	1	0	19.56	19.73	19.62	21.00
		1	50	19.49	19.66	19.44	21.00
		1	99	19.66	19.42	19.55	21.00
		50	0	18.85	18.69	18.70	20.00
		50	25	18.65	18.66	18.64	20.00
		50	50	18.59	18.73	18.62	20.00
		100	0	18.69	18.76	18.56	20.00

LTE FDD Band 5 ANT 0 Full Power&Level 1&Level 2&Level 3				Conducted Power(dBm)			Tune-up Limit
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			
				20407/824.7	20525/836.5	20643/848.3	
1.4MHz	QPSK	1	0	24.97	24.93	25.05	25.50
		1	2	24.94	24.93	24.91	25.50
		1	5	24.76	24.89	24.54	25.50
		3	0	24.91	24.98	24.96	25.50
		3	2	24.96	24.99	24.98	25.50
		3	3	24.97	24.98	24.87	25.50
		6	0	24.03	24.03	24.04	24.50
	16QAM	1	0	24.30	24.31	24.42	24.50
		1	2	24.28	24.34	24.10	24.50
		1	5	24.26	24.32	23.72	24.50
		3	0	23.93	23.93	23.96	24.50
		3	2	24.01	23.97	24.00	24.50
		3	3	23.96	24.01	23.96	24.50
		6	0	23.05	23.04	23.08	23.50



Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				20415/825.5	20525/836.5	20635/847.5	
	64QAM	1	0	22.93	23.08	23.18	23.50
		1	2	22.86	23.07	22.96	23.50
		1	5	22.05	23.13	22.55	23.50
		3	0	22.60	22.64	22.68	23.50
		3	2	22.72	22.69	22.70	23.50
		3	3	22.64	22.72	22.68	23.50
		6	0	21.74	21.71	21.76	22.50
3MHz	QPSK	1	0	24.98	24.96	25.07	25.50
		1	7	24.93	24.97	24.96	25.50
		1	14	24.78	24.93	24.57	25.50
		8	0	24.01	24.10	24.09	24.50
		8	4	24.09	24.10	24.09	24.50
		8	7	24.07	24.11	23.98	24.50
		15	0	24.07	24.08	24.09	24.50
	16QAM	1	0	24.32	24.32	24.44	24.50
		1	7	24.31	24.36	24.14	24.50
		1	14	24.28	24.36	23.74	24.50
		8	0	23.05	23.07	23.09	23.50
		8	4	23.11	23.09	23.11	23.50
		8	7	23.06	23.13	23.09	23.50
		15	0	23.09	23.09	23.10	23.50
	64QAM	1	0	22.95	23.09	23.20	23.50
		1	7	22.89	23.09	22.98	23.50
		1	14	22.07	23.12	22.57	23.50
		8	0	21.72	21.78	21.81	22.50
		8	4	21.82	21.81	21.81	22.50
		8	7	21.74	21.84	21.81	22.50
		15	0	21.78	21.76	21.78	22.50
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				20425/826.5	20525/836.5	20625/846.5	
5MHz	QPSK	1	0	24.97	24.92	25.05	25.50
		1	13	24.91	24.96	24.93	25.50
		1	24	24.75	24.88	24.53	25.50
		12	0	23.99	24.06	24.06	24.50
		12	6	24.06	24.05	24.05	24.50
		12	13	24.04	24.08	23.94	24.50
		25	0	24.05	24.04	24.04	24.50
	16QAM	1	0	24.27	24.30	24.42	24.50
		1	13	24.29	24.33	24.12	24.50
		1	24	24.25	24.32	23.71	24.50
		12	0	23.02	23.05	23.06	23.50



Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit	
				20450/829	20525/836.5	20600/844		
10MHz	64QAM	12	6	23.08	23.04	23.07	23.50	
		12	13	23.04	23.09	23.06	23.50	
		25	0	23.06	23.04	23.06	23.50	
		1	0	22.90	23.07	23.18	23.50	
		1	13	22.87	23.06	22.96	23.50	
		1	24	22.08	23.11	22.58	23.50	
		12	0	21.71	21.80	21.82	22.50	
		12	6	21.80	21.78	21.80	22.50	
		12	13	21.72	21.80	21.78	22.50	
	25	0	21.75	21.71	21.74	22.50		
	10MHz	QPSK	1	0	24.94	24.88	25.02	25.50
			1	25	24.90	24.92	24.91	25.50
			1	49	24.73	24.87	24.50	25.50
			25	0	23.96	24.01	24.02	24.50
			25	13	24.04	24.01	24.02	24.50
			25	25	24.01	24.03	23.90	24.50
			50	0	24.02	23.99	24.00	24.50
		16QAM	1	0	24.31	24.26	24.37	24.50
1			25	24.25	24.31	24.08	24.50	
1			49	24.23	24.29	23.69	24.50	
25			0	22.99	23.01	23.03	23.50	
25			13	23.05	23.02	23.04	23.50	
25			25	23.01	23.04	23.02	23.50	
50			0	23.04	23.00	23.03	23.50	
64QAM		1	0	22.88	23.03	23.13	23.50	
		1	25	22.83	23.04	22.92	23.50	
		1	49	22.02	23.05	22.52	23.50	
		25	0	21.66	21.72	21.75	22.50	
		25	13	21.76	21.74	21.74	22.50	
		25	25	21.69	21.75	21.74	22.50	
		50	0	21.73	21.67	21.71	22.50	

LTE FDD Band 5 ANT 2 Full Power&Level 2&Level 3				Conducted Power(dBm)			Tune-up Limit
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			
				20407/824.7	20525/836.5	20643/848.3	
1.4MHz	QPSK	1	0	23.80	23.84	23.93	24.50
		1	2	23.91	23.93	23.76	24.50
		1	5	23.82	23.73	23.67	24.50
		3	0	23.73	23.82	23.85	24.50
		3	2	23.77	23.81	23.83	24.50



		3	3	23.80	23.72	23.93	24.50
		6	0	22.91	22.84	22.98	23.50
		16QAM	1	0	23.06	22.90	23.08
	1		2	23.04	23.06	22.79	23.50
	1		5	23.02	23.01	22.81	23.50
	3		0	22.71	22.80	22.79	23.50
	3		2	22.79	22.87	22.84	23.50
	3		3	22.82	22.86	22.84	23.50
	64QAM	6	0	21.95	21.88	22.00	22.50
		1	0	21.83	21.94	22.01	22.50
		1	2	21.74	21.81	21.84	22.50
		1	5	21.86	21.77	21.90	22.50
		3	0	21.46	21.56	21.56	22.50
		3	2	21.61	21.62	21.73	22.50
		3	3	21.78	21.64	21.69	22.50
6	0	20.73	20.78	20.83	21.50		
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				20415/825.5	20525/836.5	20635/847.5	
3MHz	QPSK	1	0	23.79	23.86	23.92	24.50
		1	7	23.87	23.92	23.77	24.50
		1	14	23.82	23.73	23.67	24.50
		8	0	22.80	22.89	22.94	23.50
		8	4	22.87	22.87	22.90	23.50
		8	7	22.88	22.81	22.99	23.50
		15	0	22.91	22.87	22.99	23.50
	16QAM	1	0	23.06	22.88	23.08	23.50
		1	7	23.04	23.04	22.80	23.50
		1	14	23.01	23.03	22.80	23.50
		8	0	21.80	21.89	21.88	22.50
		8	4	21.87	21.95	21.92	22.50
		8	7	21.89	21.93	21.93	22.50
		15	0	21.96	21.88	21.98	22.50
	64QAM	1	0	21.83	21.96	22.01	22.50
		1	7	21.74	21.83	21.83	22.50
		1	14	21.89	21.74	21.89	22.50
		8	0	20.55	20.65	20.69	21.50
		8	4	20.69	20.70	20.81	21.50
		8	7	20.85	20.71	20.78	21.50
		15	0	20.74	20.78	20.81	21.50
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				20425/826.5	20525/836.5	20625/846.5	
5MHz	QPSK	1	0	23.80	23.83	23.93	24.50
		1	13	23.88	23.96	23.78	24.50



Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit	
				20450/829	20525/836.5	20600/844		
10MHz	16QAM	1	24	23.81	23.72	23.66	24.50	
		12	0	22.81	22.90	22.95	23.50	
		12	6	22.87	22.87	22.90	23.50	
		12	13	22.87	22.82	23.00	23.50	
		25	0	22.93	22.85	22.98	23.50	
		1	0	23.03	22.89	23.08	23.50	
		1	13	23.05	23.05	22.81	23.50	
		1	24	23.01	23.01	22.80	23.50	
		12	0	21.80	21.92	21.89	22.50	
		12	6	21.86	21.94	21.91	22.50	
		12	13	21.90	21.94	21.94	22.50	
		25	0	21.96	21.88	21.98	22.50	
		64QAM	1	0	21.80	21.93	22.01	22.50
			1	13	21.75	21.80	21.84	22.50
	1		24	21.89	21.75	21.93	22.50	
	12		0	20.57	20.72	20.70	21.50	
	12		6	20.69	20.71	20.83	21.50	
	12		13	20.86	20.72	20.79	21.50	
	25		0	20.74	20.78	20.81	21.50	
	10MHz	QPSK	1	0	23.77	23.79	23.90	24.50
			1	25	23.87	23.92	23.76	24.50
			1	49	23.79	23.71	23.63	24.50
			25	0	22.78	22.85	22.91	23.50
			25	13	22.85	22.83	22.87	23.50
			25	25	22.84	22.77	22.96	23.50
			50	0	22.90	22.80	22.94	23.50
		16QAM	1	0	22.93	22.85	23.03	23.50
			1	25	23.01	23.03	22.77	23.50
1			49	22.99	22.98	22.78	23.50	
25			0	21.77	21.88	21.86	22.50	
25			13	21.83	21.92	21.88	22.50	
25			25	21.87	21.89	21.90	22.50	
50			0	21.94	21.84	21.95	22.50	
64QAM		1	0	21.78	21.89	21.96	22.50	
		1	25	21.71	21.78	21.80	22.50	
		1	49	21.83	21.69	21.87	22.50	
		25	0	20.52	20.64	20.63	21.50	
		25	13	20.65	20.67	20.77	21.50	
		25	25	20.83	20.67	20.75	21.50	
		50	0	20.72	20.74	20.78	21.50	



LTE FDD Band 5 ANT 2 Level 1				Conducted Power(dBm)			Tune-up Limit
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			
				20407/824.7	20525/836.5	20643/848.3	
1.4MHz	QPSK	1	0	21.19	21.16	21.28	22.00
		1	2	21.09	21.12	21.22	22.00
		1	5	21.09	21.03	21.09	22.00
		3	0	21.16	21.16	21.06	22.00
		3	2	21.07	21.22	21.07	22.00
		3	3	21.18	21.21	21.00	22.00
		6	0	20.16	20.24	20.17	21.00
	16QAM	1	0	20.20	20.72	20.49	21.00
		1	2	20.18	20.15	20.34	21.00
		1	5	20.19	20.48	20.38	21.00
		3	0	20.16	20.26	20.26	21.00
		3	2	20.41	20.30	20.41	21.00
		3	3	20.40	20.18	20.27	21.00
		6	0	19.66	19.30	19.50	20.50
	64QAM	1	0	19.60	19.28	19.29	20.50
		1	2	19.55	19.25	19.39	20.50
		1	5	19.48	19.40	19.25	20.50
		3	0	19.26	19.48	19.48	20.50
		3	2	19.55	19.80	19.61	20.50
		3	3	19.60	19.42	19.20	20.50
		6	0	18.57	18.59	18.30	19.50
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				20415/825.5	20525/836.5	20635/847.5	
3MHz	QPSK	1	0	21.21	21.20	21.31	22.00
		1	7	21.07	21.15	21.26	22.00
		1	14	21.12	21.08	21.13	22.00
		8	0	20.26	20.28	20.19	21.00
		8	4	20.19	20.32	20.19	21.00
		8	7	20.28	20.32	20.10	21.00
		15	0	20.16	20.28	20.20	21.00
	16QAM	1	0	20.23	20.74	20.52	21.00
		1	7	20.21	20.15	20.38	21.00
		1	14	20.21	20.52	20.41	21.00
		8	0	19.27	19.39	19.38	20.50
		8	4	19.52	19.43	19.53	20.50
		8	7	19.50	19.30	19.40	20.50
		15	0	19.69	19.34	19.53	20.50
	64QAM	1	0	19.63	19.30	19.32	20.50
		1	7	19.58	19.25	19.41	20.50



Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit	
				20425/826.5	20525/836.5	20625/846.5		
		1	14	19.50	19.39	19.28	20.50	
		8	0	18.37	18.61	18.60	19.50	
		8	4	18.66	18.93	18.73	19.50	
		8	7	18.70	18.54	18.33	19.50	
		15	0	18.60	18.63	18.33	19.50	
5MHz	QPSK	1	0	21.18	21.18	21.27	22.00	
		1	13	21.05	21.11	21.23	22.00	
		1	24	21.09	21.03	21.09	22.00	
		12	0	20.23	20.23	20.15	21.00	
		12	6	20.17	20.28	20.14	21.00	
		12	13	20.26	20.30	20.06	21.00	
		25	0	20.16	20.27	20.18	21.00	
	16QAM	1	0	20.20	20.70	20.49	21.00	
		1	13	20.18	20.13	20.35	21.00	
		1	24	20.18	20.50	20.37	21.00	
		12	0	19.25	19.35	19.35	20.50	
		12	6	19.49	19.38	19.49	20.50	
		12	13	19.47	19.25	19.36	20.50	
		25	0	19.67	19.30	19.48	20.50	
	64QAM	1	0	19.60	19.30	19.29	20.50	
		1	13	19.55	19.27	19.38	20.50	
		1	24	19.51	19.37	19.24	20.50	
		12	0	18.35	18.57	18.61	19.50	
		12	6	18.63	18.88	18.69	19.50	
		12	13	18.67	18.49	18.29	19.50	
		25	0	18.58	18.59	18.28	19.50	
	Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
					20450/829	20525/836.5	20600/844	
	10MHz	QPSK	1	0	21.16	21.31	21.22	22.00
1			25	21.05	21.11	21.22	22.00	
1			49	21.06	21.01	21.05	22.00	
25			0	20.21	20.19	20.12	21.00	
25			13	20.15	20.24	20.11	21.00	
25			25	20.22	20.26	20.03	21.00	
50			0	20.15	20.20	20.13	21.00	
16QAM		1	0	20.14	20.67	20.44	21.00	
		1	25	20.15	20.12	20.32	21.00	
		1	49	20.16	20.45	20.35	21.00	
		25	0	19.22	19.34	19.33	20.50	
		25	13	19.45	19.35	19.45	20.50	
		25	25	19.45	19.21	19.33	20.50	



	64QAM	50	0	19.65	19.26	19.45	20.50
		1	0	19.55	19.23	19.24	20.50
		1	25	19.52	19.22	19.35	20.50
		1	49	19.45	19.32	19.22	20.50
		25	0	18.32	18.56	18.55	19.50
		25	13	18.59	18.85	18.65	19.50
		25	25	18.65	18.45	18.26	19.50
		50	0	18.56	18.55	18.25	19.50

LTE FDD Band 7 ANT 1 Full Power&Level 1&Level 2				Conducted Power(dBm)			Tune-up Limit
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			
				20775/2502.5	21100/2535	21425/2567.5	
5MHz	QPSK	1	0	24.80	24.95	24.86	25.50
		1	13	24.77	24.94	24.86	25.50
		1	24	24.87	24.98	24.92	25.50
		12	0	23.91	24.07	23.98	24.50
		12	6	24.02	24.07	24.11	24.50
		12	13	24.04	24.13	24.06	24.50
		25	0	23.98	24.07	24.06	24.50
	16QAM	1	0	24.29	24.29	24.26	24.50
		1	13	24.27	24.33	24.28	24.50
		1	24	24.26	24.37	24.29	24.50
		12	0	22.92	23.03	22.97	23.50
		12	6	23.06	23.11	23.10	23.50
		12	13	23.06	23.16	23.08	23.50
		25	0	23.00	23.05	23.04	23.50
	64QAM	1	0	23.14	23.18	23.17	23.50
		1	13	23.24	23.23	23.23	23.50
		1	24	23.27	23.28	23.28	23.50
		12	0	21.93	21.94	21.91	22.50
		12	6	21.98	22.01	21.99	22.50
		12	13	21.98	22.04	21.99	22.50
		25	0	21.85	21.92	21.89	22.50
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				20800/2505	21100/2535	21400/2565	
10MHz	QPSK	1	0	24.78	24.90	24.83	25.50
		1	25	24.76	24.94	24.84	25.50
		1	49	24.83	24.92	24.87	25.50
		25	0	23.89	24.03	23.95	24.50
		25	13	24.00	24.03	24.06	24.50
		25	25	24.01	24.12	24.03	24.50
		50	0	24.00	24.04	24.03	24.50



	16QAM	1	0	24.23	24.26	24.23	24.50	
		1	25	24.25	24.32	24.26	24.50	
		1	49	24.23	24.33	24.25	24.50	
		25	0	22.90	23.02	22.95	23.50	
		25	13	23.02	23.05	23.05	23.50	
		25	25	23.04	23.12	23.05	23.50	
		50	0	22.98	23.01	22.99	23.50	
	64QAM	1	0	23.08	23.15	23.14	23.50	
		1	25	23.22	23.22	23.21	23.50	
		1	49	23.28	23.27	23.28	23.50	
		25	0	21.93	21.97	21.93	22.50	
		25	13	21.95	21.97	21.97	22.50	
		25	25	21.96	22.00	21.96	22.50	
		50	0	21.83	21.88	21.84	22.50	
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit	
				20825/2507.5	21100/2535	21375/2562.5		
15MHz	QPSK	1	0	24.79	24.94	24.85	25.50	
		1	38	24.78	24.95	24.87	25.50	
		1	74	24.86	24.97	24.91	25.50	
		36	0	23.91	24.07	23.98	24.50	
		36	18	24.03	24.08	24.10	24.50	
		36	39	24.04	24.15	24.07	24.50	
		75	0	24.02	24.08	24.08	24.50	
	16QAM	1	0	24.28	24.28	24.25	24.50	
		1	38	24.27	24.35	24.28	24.50	
		1	74	24.26	24.37	24.28	24.50	
		36	0	22.93	23.04	22.98	23.50	
		36	18	23.05	23.10	23.09	23.50	
		36	39	23.06	23.16	23.08	23.50	
		75	0	23.01	23.06	23.03	23.50	
	64QAM	1	0	23.13	23.17	23.16	23.50	
		1	38	23.24	23.25	23.23	23.50	
		1	74	23.27	23.28	23.27	23.50	
		36	0	21.94	21.95	21.92	22.50	
		36	18	21.97	22.00	21.98	22.50	
		36	39	21.98	22.04	21.99	22.50	
		75	0	21.86	21.93	21.88	22.50	
	Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
					20850/2510	21100/2535	21350/2560	
	20MHz	QPSK	1	0	24.75	24.86	24.80	25.50
			1	50	24.75	24.90	24.82	25.50
			1	99	24.81	24.91	24.84	25.50
			50	0	23.86	23.98	23.91	24.50



		50	25	23.98	23.99	24.03	24.50	
		50	50	23.98	24.07	23.99	24.50	
		100	0	23.97	23.99	23.99	24.50	
	16QAM		1	0	24.15	24.22	24.18	24.50
			1	50	24.21	24.30	24.22	24.50
			1	99	24.21	24.30	24.23	24.50
			50	0	22.87	22.98	22.92	23.50
			50	25	22.99	23.03	23.02	23.50
			50	50	23.01	23.07	23.01	23.50
			100	0	22.96	22.97	22.96	23.50
	64QAM		1	0	23.06	23.11	23.09	23.50
			1	50	23.18	23.20	23.17	23.50
			1	99	23.22	23.21	23.22	23.50
			50	0	21.88	21.89	21.86	22.50
			50	25	21.91	21.93	21.91	22.50
			50	50	21.93	21.95	21.92	22.50
			100	0	21.81	21.84	21.81	22.50

LTE FDD Band 7 ANT 1 Level 3				Conducted Power(dBm)			Tune-up Limit
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			
				20775/2502.5	21100/2535	21425/2567.5	
5MHz	QPSK	1	0	23.30	23.36	23.25	24.00
		1	13	23.22	23.24	23.38	24.00
		1	24	23.31	23.32	23.32	24.00
		12	0	22.31	22.30	22.26	23.00
		12	6	22.34	22.38	22.29	23.00
		12	13	22.40	22.42	22.30	23.00
		25	0	22.36	22.38	22.30	23.00
	16QAM	1	0	22.50	22.74	22.59	23.00
		1	13	22.48	22.74	22.39	23.00
		1	24	22.87	22.82	22.81	23.00
		12	0	21.25	21.34	21.38	22.00
		12	6	21.39	21.42	21.40	22.00
		12	13	21.47	21.44	21.55	22.00
		25	0	21.65	21.33	21.49	22.00
	64QAM	1	0	21.51	21.52	21.61	22.00
		1	13	21.61	21.53	21.70	22.00
		1	24	21.62	21.68	21.40	22.00
		12	0	20.59	20.26	20.60	21.00
		12	6	20.60	20.53	20.49	21.00
		12	13	20.77	20.69	20.36	21.00
		25	0	20.47	20.59	20.49	21.00



Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				20800/2505	21100/2535	21400/2565	
10MHz	QPSK	1	0	23.32	23.37	23.28	24.00
		1	25	23.25	23.29	23.42	24.00
		1	49	23.33	23.36	23.35	24.00
		25	0	22.34	22.35	22.30	23.00
		25	13	22.37	22.43	22.33	23.00
		25	25	22.42	22.46	22.35	23.00
		50	0	22.40	22.40	22.34	23.00
	16QAM	1	0	22.52	22.77	22.61	23.00
		1	25	22.51	22.78	22.42	23.00
		1	49	22.90	22.84	22.84	23.00
		25	0	21.28	21.39	21.42	22.00
		25	13	21.41	21.46	21.43	22.00
		25	25	21.50	21.49	21.59	22.00
		50	0	21.68	21.38	21.53	22.00
	64QAM	1	0	21.53	21.51	21.63	22.00
		1	25	21.64	21.53	21.73	22.00
		1	49	21.61	21.70	21.43	22.00
		25	0	20.62	20.31	20.60	21.00
		25	13	20.62	20.57	20.52	21.00
		25	25	20.80	20.74	20.40	21.00
		50	0	20.50	20.64	20.53	21.00
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				20825/2507.5	21100/2535	21375/2562.5	
15MHz	QPSK	1	0	23.31	23.33	23.26	24.00
		1	38	23.23	23.28	23.39	24.00
		1	74	23.30	23.31	23.31	24.00
		36	0	22.32	22.31	22.27	23.00
		36	18	22.34	22.38	22.29	23.00
		36	39	22.39	22.43	22.31	23.00
		75	0	22.38	22.36	22.29	23.00
	16QAM	1	0	22.47	22.75	22.59	23.00
		1	38	22.49	22.75	22.40	23.00
		1	74	22.87	22.80	22.81	23.00
		36	0	21.25	21.37	21.39	22.00
		36	18	21.38	21.41	21.39	22.00
		36	39	21.48	21.45	21.56	22.00
		75	0	21.65	21.33	21.49	22.00
	64QAM	1	0	21.48	21.49	21.61	22.00
		1	38	21.62	21.50	21.71	22.00
		1	74	21.62	21.69	21.44	22.00
		36	0	20.61	20.33	20.61	21.00



Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				20850/2510	21100/2535	21350/2560	
20MHz	QPSK	36	18	20.60	20.54	20.51	21.00
		36	39	20.78	20.70	20.37	21.00
		75	0	20.47	20.59	20.49	21.00
		1	0	23.28	23.29	23.23	24.00
		1	50	23.22	23.24	23.37	24.00
		1	99	23.28	23.30	23.28	24.00
		50	0	22.29	22.26	22.23	23.00
	50	25	22.32	22.34	22.26	23.00	
	50	50	22.36	22.38	22.27	23.00	
	100	0	22.35	22.31	22.25	23.00	
	16QAM	1	0	22.65	22.71	22.54	23.00
		1	50	22.45	22.73	22.36	23.00
		1	99	22.85	22.77	22.79	23.00
		50	0	21.22	21.33	21.36	22.00
		50	25	21.35	21.39	21.36	22.00
		50	50	21.45	21.40	21.52	22.00
		100	0	21.63	21.29	21.46	22.00
	64QAM	1	0	21.46	21.45	21.56	22.00
		1	50	21.58	21.48	21.67	22.00
		1	99	21.56	21.63	21.38	22.00
		50	0	20.56	20.25	20.54	21.00
50		25	20.56	20.50	20.45	21.00	
50		50	20.75	20.65	20.33	21.00	
100		0	20.45	20.55	20.46	21.00	

LTE FDD Band 12				Conducted Power(dBm)			Tune-up Limit
ANT 0 Full Power&Level 1&Level 2&Level 3				Channel/Frequency (MHz)			
Bandwidth	Modulation	RB size	RB offset	23017/699.7	23095/707.5	23173/715.3	Tune-up Limit
				1.4MHz	QPSK	1	
1	2	24.93	24.96			24.89	25.50
1	5	24.96	24.96			24.94	25.50
3	0	24.99	25.00			24.94	25.50
3	2	25.01	25.00			24.98	25.50
3	3	25.04	25.03			25.03	25.50
6	0	24.09	24.10			24.04	24.50
16QAM	1	0	24.33		24.41	24.34	24.50
	1	2	24.31		24.35	24.33	24.50
	1	5	24.33		24.35	24.32	24.50
	3	0	23.96		23.98	23.94	24.50
	3	2	24.06		24.00	23.95	24.50



Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				23025/700.5	23095/707.5	23165/714.5	
	64QAM	3	3	24.01	24.09	24.00	24.50
		6	0	23.12	23.05	23.06	23.50
		1	0	23.10	23.12	23.04	23.50
		1	2	23.03	23.10	23.08	23.50
		1	5	23.03	23.05	23.06	23.50
		3	0	22.69	22.62	22.66	23.50
		3	2	22.77	22.69	22.68	23.50
		3	3	22.72	22.75	22.67	23.50
		6	0	21.80	21.74	21.75	22.50
3MHz	QPSK	1	0	24.97	25.02	24.99	25.50
		1	7	24.91	24.99	24.93	25.50
		1	14	24.99	25.01	24.98	25.50
		8	0	24.09	24.12	24.07	24.50
		8	4	24.13	24.10	24.10	24.50
		8	7	24.14	24.14	24.13	24.50
		15	0	24.06	24.14	24.07	24.50
	16QAM	1	0	24.36	24.43	24.37	24.50
		1	7	24.34	24.35	24.37	24.50
		1	14	24.35	24.39	24.35	24.50
		8	0	23.07	23.11	23.06	23.50
		8	4	23.17	23.13	23.07	23.50
		8	7	23.11	23.21	23.13	23.50
		15	0	23.15	23.09	23.09	23.50
	64QAM	1	0	23.13	23.14	23.07	23.50
		1	7	23.06	23.05	23.10	23.50
		1	14	23.05	23.04	23.09	23.50
		8	0	21.80	21.75	21.78	22.50
		8	4	21.88	21.82	21.80	22.50
		8	7	21.82	21.87	21.80	22.50
		15	0	21.83	21.78	21.78	22.50
5MHz	QPSK	1	0	24.95	24.97	24.96	25.50
		1	13	24.90	24.99	24.91	25.50
1		24	24.95	24.95	24.93	25.50	
12		0	24.07	24.08	24.04	24.50	
12		6	24.11	24.06	24.05	24.50	
12		13	24.11	24.13	24.10	24.50	
25		0	24.02	24.11	24.04	24.50	
16QAM	1	0	24.30	24.40	24.34	24.50	
	1	13	24.32	24.34	24.35	24.50	



Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit	
				23060/704	23095/707.5	23130/711		
10MHz	64QAM	1	24	24.32	24.35	24.31	24.50	
		12	0	23.05	23.10	23.04	23.50	
		12	6	23.13	23.07	23.02	23.50	
		12	13	23.09	23.17	23.10	23.50	
		25	0	23.13	23.05	23.04	23.50	
		1	0	23.07	23.11	23.04	23.50	
		1	13	23.04	22.94	23.08	23.50	
		1	24	23.06	23.03	23.09	23.50	
		12	0	21.80	21.78	21.80	22.50	
	12	6	21.85	21.78	21.78	22.50		
	12	13	21.80	21.83	21.77	22.50		
	25	0	21.81	21.74	21.73	22.50		
	10MHz	QPSK	1	0	24.92	24.93	24.93	25.50
			1	25	24.89	24.95	24.89	25.50
			1	49	24.93	24.94	24.90	25.50
			25	0	24.04	24.03	24.00	24.50
			25	13	24.09	24.02	24.02	24.50
			25	25	24.08	24.08	24.06	24.50
50			0	24.12	24.06	24.00	24.50	
16QAM		1	0	24.31	24.36	24.29	24.50	
		1	25	24.28	24.32	24.31	24.50	
		1	49	24.30	24.32	24.29	24.50	
		25	0	23.02	23.06	23.01	23.50	
		25	13	23.10	23.05	22.99	23.50	
		25	25	23.06	23.12	23.06	23.50	
		50	0	23.11	23.01	23.01	23.50	
64QAM		1	0	23.05	23.07	22.99	23.50	
		1	25	23.00	22.95	23.04	23.50	
		1	49	23.00	22.97	23.03	23.50	
		25	0	21.75	21.70	21.73	22.50	
	25	13	21.81	21.74	21.72	22.50		
	25	25	21.77	21.78	21.73	22.50		
	50	0	21.79	21.70	21.70	22.50		

LTE FDD Band 12				Conducted Power(dBm)			Tune-up Limit
ANT 2 Full Power&Level 1&Level 2&Level 3				Channel/Frequency (MHz)			
Bandwidth	Modulation	RB size	RB offset	23017/699.7	23095/707.5	23173/715.3	Tune-up Limit
1.4MHz	QPSK	1	0	23.87	23.88	23.87	
		1	2	23.93	23.96	23.93	24.50
		1	5	23.99	23.83	23.89	24.50



		3	0	23.82	23.88	23.75	24.50	
		3	2	23.88	23.87	23.87	24.50	
		3	3	23.85	23.83	23.92	24.50	
		6	0	22.96	23.00	22.90	23.50	
	16QAM	1	0	23.11	23.11	23.04	23.50	
		1	2	23.09	23.17	23.09	23.50	
		1	5	23.04	23.08	23.01	23.50	
		3	0	22.78	22.80	22.80	23.50	
		3	2	22.84	22.88	22.92	23.50	
		3	3	22.85	22.92	22.95	23.50	
		6	0	21.98	21.98	22.03	22.50	
	64QAM	1	0	22.12	22.04	22.15	22.50	
		1	2	21.97	22.04	22.05	22.50	
		1	5	21.97	22.05	22.02	22.50	
		3	0	21.61	21.62	21.71	22.50	
		3	2	21.67	21.64	21.80	22.50	
		3	3	21.79	21.70	21.75	22.50	
		6	0	20.76	20.75	20.89	21.50	
	Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
					23025/700.5	23095/707.5	23165/714.5	
	3MHz	QPSK	1	0	23.89	23.92	23.90	24.50
1			7	23.91	23.99	23.97	24.50	
1			14	24.02	23.88	23.93	24.50	
8			0	22.92	23.00	22.88	23.50	
8			4	23.00	22.97	22.99	23.50	
8			7	22.95	22.94	23.02	23.50	
15			0	22.96	23.04	22.93	23.50	
16QAM		1	0	23.14	23.13	23.07	23.50	
		1	7	23.12	23.17	23.13	23.50	
		1	14	23.06	23.12	23.04	23.50	
		8	0	21.89	21.93	21.92	22.50	
		8	4	21.95	22.01	22.04	22.50	
		8	7	21.95	22.04	22.08	22.50	
		15	0	22.01	22.02	22.06	22.50	
64QAM		1	0	22.15	22.06	22.18	22.50	
		1	7	22.00	22.04	22.07	22.50	
		1	14	21.99	22.04	22.05	22.50	
		8	0	20.72	20.75	20.83	21.50	
		8	4	20.78	20.77	20.92	21.50	
		8	7	20.89	20.82	20.88	21.50	
		15	0	20.79	20.79	20.92	21.50	
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit	
				23035/701.5	23095/707.5	23155/713.5		



5MHz	QPSK	1	0	23.87	23.87	23.87	24.50
		1	13	23.90	23.99	23.95	24.50
		1	24	23.98	23.82	23.88	24.50
		12	0	22.90	22.96	22.85	23.50
		12	6	22.98	22.93	22.94	23.50
		12	13	22.92	22.93	22.99	23.50
		25	0	22.98	23.01	22.90	23.50
	16QAM	1	0	23.08	23.10	23.04	23.50
		1	13	23.10	23.16	23.11	23.50
		1	24	23.03	23.08	23.00	23.50
		12	0	21.87	21.92	21.90	22.50
		12	6	21.91	21.95	21.99	22.50
		12	13	21.93	22.00	22.05	22.50
		25	0	21.99	21.98	22.01	22.50
	64QAM	1	0	22.09	22.03	22.15	22.50
		1	13	21.98	22.03	22.05	22.50
		1	24	22.00	22.03	22.05	22.50
		12	0	20.72	20.78	20.85	21.50
		12	6	20.75	20.73	20.90	21.50
		12	13	20.87	20.78	20.85	21.50
		25	0	20.77	20.75	20.87	21.50
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				23060/704	23095/707.5	23130/711	
10MHz	QPSK	1	0	23.84	23.83	23.84	24.50
		1	25	23.89	23.95	23.93	24.50
		1	49	23.96	23.81	23.85	24.50
		25	0	22.87	22.91	22.81	23.50
		25	13	22.96	22.89	22.91	23.50
		25	25	22.89	22.88	22.95	23.50
		50	0	22.95	22.96	22.86	23.50
	16QAM	1	0	22.97	23.06	22.99	23.50
		1	25	23.06	23.14	23.07	23.50
		1	49	23.01	23.05	22.98	23.50
		25	0	21.84	21.88	21.87	22.50
		25	13	21.88	21.93	21.96	22.50
		25	25	21.90	21.95	22.01	22.50
		50	0	21.97	21.94	21.98	22.50
	64QAM	1	0	22.07	21.99	22.10	22.50
		1	25	21.94	22.01	22.01	22.50
		1	49	21.94	21.97	21.99	22.50
		25	0	20.67	20.70	20.78	21.50
		25	13	20.71	20.69	20.84	21.50
		25	25	20.84	20.73	20.81	21.50



		50	0	20.75	20.71	20.84	21.50
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LTE FDD Band 17				Conducted Power(dBm)			Tune-up Limit
ANT 0 Full Power&Level 1&Level 2&Level 3				Channel/Frequency (MHz)			
Bandwidth	Modulation	RB size	RB offset	23755/706.5	23790/710	23825/713.5	
5MHz	QPSK	1	0	25.01	24.99	25.02	25.50
		1	13	24.97	25.01	25.00	25.50
		1	24	24.97	24.97	24.99	25.50
		12	0	24.03	24.06	24.07	24.50
		12	6	24.17	24.12	24.12	24.50
		12	13	24.18	24.19	24.20	24.50
		25	0	24.07	24.11	24.07	24.50
	16QAM	1	0	24.36	24.36	24.40	24.50
		1	13	24.38	24.38	24.41	24.50
		1	24	24.33	24.36	24.36	24.50
		12	0	23.04	23.07	23.04	23.50
		12	6	23.21	23.06	23.09	23.50
		12	13	23.14	23.24	23.14	23.50
		25	0	23.05	23.08	23.08	23.50
	64QAM	1	0	23.08	23.07	23.14	23.50
		1	13	23.08	23.10	23.18	23.50
		1	24	23.16	23.16	23.15	23.50
		12	0	21.76	21.82	21.80	22.50
		12	6	21.91	21.79	21.85	22.50
		12	13	21.85	21.89	21.87	22.50
		25	0	21.74	21.76	21.78	22.50
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
10MHz	QPSK	1	0	24.98	24.95	24.99	25.50
		1	25	24.96	24.97	24.98	25.50
		1	49	24.95	24.96	24.96	25.50
		25	0	24.00	24.01	24.03	24.50
		25	13	24.15	24.08	24.09	24.50
		25	25	24.15	24.14	24.16	24.50
		50	0	24.04	24.06	24.03	24.50
	16QAM	1	0	24.33	24.32	24.35	24.50
		1	25	24.34	24.36	24.37	24.50
		1	49	24.31	24.33	24.34	24.50
		25	0	23.01	23.03	23.01	23.50
		25	13	23.18	23.04	23.06	23.50
		25	25	23.11	23.19	23.10	23.50
		50	0	23.03	23.04	23.05	23.50



	64QAM	1	0	23.06	23.03	23.09	23.50
		1	25	23.04	23.08	23.14	23.50
		1	49	23.10	23.10	23.09	23.50
		25	0	21.71	21.74	21.73	22.50
		25	13	21.87	21.75	21.79	22.50
		25	25	21.82	21.84	21.83	22.50
		50	0	21.72	21.72	21.75	22.50

LTE FDD Band 17 ANT 2 Full Power&Level 1&Level 2&Level 3				Conducted Power(dBm)			Tune-up Limit
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			
				23755/706.5	23790/710	23825/713.5	
5MHz	QPSK	1	0	23.87	23.89	23.79	24.50
		1	13	23.82	23.82	23.98	24.50
		1	24	23.91	23.77	23.88	24.50
		12	0	22.93	22.91	22.93	23.50
		12	6	22.97	22.94	22.95	23.50
		12	13	23.02	23.03	23.08	23.50
		25	0	22.94	22.96	22.91	23.50
	16QAM	1	0	22.95	23.11	23.09	23.50
		1	13	22.97	23.12	23.19	23.50
		1	24	23.03	23.25	23.15	23.50
		12	0	21.99	21.89	22.01	22.50
		12	6	22.03	21.89	21.96	22.50
		12	13	22.08	22.03	22.06	22.50
		25	0	21.90	21.94	22.00	22.50
	64QAM	1	0	21.96	21.95	21.91	22.50
		1	13	21.95	21.75	21.93	22.50
		1	24	21.90	21.85	21.95	22.50
		12	0	20.66	20.71	20.73	21.50
		12	6	20.70	20.82	20.74	21.50
		12	13	20.76	20.79	20.81	21.50
		25	0	20.65	20.71	20.69	21.50
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				23780/709	23790/710	23800/711	
10MHz	QPSK	1	0	23.84	23.85	23.76	24.50
		1	25	23.81	23.78	23.96	24.50
		1	49	23.89	23.76	23.85	24.50
		25	0	22.90	22.86	22.89	23.50
		25	13	22.95	22.90	22.92	23.50
		25	25	22.99	22.98	23.04	23.50
		50	0	22.91	22.91	22.87	23.50
	16QAM	1	0	22.92	23.07	23.04	23.50



		1	25	22.93	23.10	23.15	23.50
		1	49	23.01	23.22	23.13	23.50
		25	0	21.96	21.85	21.98	22.50
		25	13	22.00	21.87	21.93	22.50
		25	25	22.05	21.98	22.02	22.50
		50	0	21.88	21.90	21.97	22.50
	64QAM	1	0	21.94	21.91	21.86	22.50
		1	25	21.91	21.73	21.89	22.50
		1	49	21.84	21.79	21.89	22.50
		25	0	20.61	20.63	20.66	21.50
		25	13	20.66	20.78	20.68	21.50
		25	25	20.73	20.74	20.77	21.50
		50	0	20.63	20.67	20.66	21.50

LTE FDD Band 26				Conducted Power(dBm)			Tune-up Limit	
ANT 0 Full Power&Level 1&Level 2&Level 3				Channel/Frequency (MHz)				
Bandwidth	Modulation	RB size	RB offset	26697/814.7	26865/831.5	27033/848.3		
1.4MHz	QPSK	1	0	25.11	25.16	24.51	25.50	
		1	2	25.09	25.14	24.98	25.50	
		1	5	25.10	25.10	23.84	25.50	
		3	0	25.03	25.25	25.19	25.50	
		3	2	25.16	25.22	25.28	25.50	
		3	3	25.20	25.25	24.63	25.50	
		6	0	24.05	24.28	24.17	24.50	
	16QAM	1	0	24.33	24.40	24.38	24.50	
		1	2	24.31	24.20	24.41	24.50	
		1	5	24.42	24.40	24.19	24.50	
		3	0	24.17	24.18	24.21	24.50	
		3	2	24.21	24.19	24.28	24.50	
		3	3	24.18	24.24	24.22	24.50	
		6	0	23.27	23.30	23.33	23.50	
	64QAM	1	0	23.10	23.03	23.20	23.50	
		1	2	23.01	23.20	23.10	23.50	
		1	5	23.03	23.18	22.78	23.50	
		3	0	22.86	22.91	22.92	23.50	
		3	2	22.91	22.90	22.99	23.50	
		3	3	22.86	22.97	22.92	23.50	
		6	0	21.99	22.00	21.99	22.50	
	Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
	3MHz	QPSK	1	0	26705/815.5	26865/831.5	27025/847.5	25.50
			1	7	25.11	25.15	24.51	25.50
				25.06	25.17	25.00	25.50	



		1	14	25.09	25.09	23.83	25.50	
		8	0	24.11	24.33	24.29	24.50	
		8	4	24.26	24.28	24.35	24.50	
		8	7	24.27	24.35	23.70	24.50	
		15	0	24.21	24.29	24.17	24.50	
	16QAM	1	0	24.30	24.46	24.38	24.50	
		1	7	24.32	24.19	24.42	24.50	
		1	14	24.41	24.40	24.18	24.50	
		8	0	23.26	23.30	23.31	23.50	
		8	4	23.28	23.26	23.35	23.50	
		8	7	23.26	23.32	23.32	23.50	
		15	0	23.28	23.30	23.31	23.50	
	64QAM	1	0	23.07	23.02	23.20	23.50	
		1	7	23.02	23.19	23.10	23.50	
		1	14	23.06	23.16	22.81	23.50	
		8	0	21.97	22.07	22.06	22.50	
		8	4	21.99	21.99	22.09	22.50	
		8	7	21.94	22.05	22.02	22.50	
		15	0	22.00	22.00	21.97	22.50	
	Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
					26715/816.5	26865/831.5	27015/846.5	
5MHz	QPSK	1	0	25.12	25.19	24.53	25.50	
		1	13	25.08	25.18	25.03	25.50	
		1	24	25.12	25.14	23.87	25.50	
		12	0	24.13	24.37	24.32	24.50	
		12	6	24.29	24.33	24.39	24.50	
		12	13	24.30	24.38	23.74	24.50	
		25	0	23.92	24.33	24.22	24.50	
	16QAM	1	0	24.35	24.48	24.23	24.50	
		1	13	24.34	24.22	24.39	24.50	
		1	24	24.44	24.44	24.21	24.50	
		12	0	23.29	23.32	23.34	23.50	
		12	6	23.31	23.31	23.39	23.50	
		12	13	23.28	23.36	23.35	23.50	
		25	0	23.31	23.35	23.35	23.50	
	64QAM	1	0	23.12	23.04	23.22	23.50	
		1	13	23.04	23.22	23.12	23.50	
		1	24	23.05	23.17	22.80	23.50	
		12	0	21.98	22.05	22.05	22.50	
		12	6	22.01	22.02	22.10	22.50	
		12	13	21.96	22.09	22.05	22.50	
		25	0	22.03	22.05	22.01	22.50	
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up	



Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				26775/822.5	26865/831.5	26965/841.5	
10MHz	QPSK	1	0	26750/820	26865/831.5	26990/844	Limit
		1	0	25.10	25.18	24.50	25.50
		1	25	25.05	25.13	24.99	25.50
		1	49	25.10	25.10	23.84	25.50
		25	0	24.10	24.32	24.28	24.50
		25	13	24.26	24.28	24.35	24.50
		25	25	24.28	24.34	23.69	24.50
	50	0	23.96	24.31	24.18	24.50	
	16QAM	1	0	24.33	24.45	24.49	24.50
		1	25	24.31	24.18	24.49	24.50
		1	49	24.41	24.42	24.18	24.50
		25	0	23.26	23.27	23.30	23.50
		25	13	23.29	23.27	23.36	23.50
		25	25	23.25	23.31	23.31	23.50
		50	0	23.28	23.30	23.31	23.50
	64QAM	1	0	23.10	23.05	23.20	23.50
		1	25	23.01	23.22	23.09	23.50
		1	49	23.06	23.15	22.77	23.50
		25	0	21.95	22.00	22.05	22.50
		25	13	21.99	21.98	22.07	22.50
		25	25	21.93	22.04	22.01	22.50
50		0	22.00	22.00	21.97	22.50	
15MHz	QPSK	1	0	25.08	25.11	24.48	25.50
		1	38	25.05	25.13	24.98	25.50
		1	74	25.07	25.08	23.80	25.50
		36	0	24.08	24.28	24.25	24.50
		36	18	24.24	24.24	24.32	24.50
		36	39	24.24	24.30	23.66	24.50
		75	0	23.94	24.24	24.13	24.50
	16QAM	1	0	24.38	24.42	24.44	24.50
		1	38	24.28	24.17	24.46	24.50
		1	74	24.39	24.37	24.16	24.50
		36	0	23.23	23.26	23.28	23.50
		36	18	23.25	23.24	23.32	23.50
		36	39	23.23	23.27	23.28	23.50
		75	0	23.26	23.26	23.28	23.50
	64QAM	1	0	23.05	22.98	23.15	23.50
		1	38	22.98	23.17	23.06	23.50
		1	74	23.00	23.10	22.75	23.50
		36	0	21.92	21.99	21.99	22.50
		36	18	21.95	21.95	22.03	22.50



		36	39	21.91	22.00	21.98	22.50
		75	0	21.98	21.96	21.94	22.50

LTE FDD Band 26 ANT 2 Full Power&Level 2&Level 3				Conducted Power(dBm)			Tune-up Limit
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			
				26697/814.7	26865/831.5	27033/848.3	
1.4MHz	QPSK	1	0	23.29	23.24	23.39	24.50
		1	2	23.19	23.30	23.20	24.50
		1	5	23.21	23.18	22.95	24.50
		3	0	23.24	23.32	23.28	24.50
		3	2	23.20	23.26	23.32	24.50
		3	3	23.13	23.28	23.00	24.50
		6	0	22.38	22.26	22.37	23.50
	16QAM	1	0	22.72	22.41	22.44	23.50
		1	2	22.70	22.42	22.52	23.50
		1	5	22.56	22.44	22.31	23.50
		3	0	22.22	22.26	22.26	23.50
		3	2	22.26	22.24	22.31	23.50
		3	3	22.17	22.25	22.23	23.50
		6	0	21.38	21.41	21.29	22.50
	64QAM	1	0	21.84	21.77	21.96	22.50
		1	2	21.73	21.84	21.82	22.50
		1	5	21.79	21.84	21.50	22.50
		3	0	21.58	21.67	21.64	22.50
		3	2	21.63	21.62	21.67	22.50
		3	3	21.64	21.71	21.62	22.50
		6	0	20.79	20.80	20.79	21.50
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				26705/815.5	26865/831.5	27025/847.5	
3MHz	QPSK	1	0	23.28	23.26	23.38	24.50
		1	7	23.15	23.29	23.21	24.50
		1	14	23.21	23.18	22.95	24.50
		8	0	22.31	22.39	22.37	23.50
		8	4	22.30	22.32	22.39	23.50
		8	7	22.21	22.37	22.06	23.50
		15	0	22.38	22.29	22.38	23.50
	16QAM	1	0	22.72	22.39	22.44	23.50
		1	7	22.70	22.40	22.53	23.50
		1	14	22.55	22.46	22.30	23.50
		8	0	21.31	21.35	21.35	22.50
		8	4	21.34	21.32	21.39	22.50
		8	7	21.24	21.32	21.32	22.50



	64QAM	15	0	21.39	21.41	21.27	22.50	
		1	0	21.84	21.79	21.96	22.50	
		1	7	21.73	21.86	21.81	22.50	
		1	14	21.82	21.81	21.49	22.50	
		8	0	20.67	20.76	20.77	21.50	
		8	4	20.71	20.70	20.75	21.50	
		8	7	20.71	20.78	20.71	21.50	
		15	0	20.80	20.80	20.77	21.50	
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit	
				26715/816.5	26865/831.5	27015/846.5		
5MHz	QPSK	1	0	23.30	23.27	23.41	24.50	
		1	13	23.18	23.34	23.25	24.50	
		1	24	23.23	23.22	22.98	24.50	
		12	0	22.34	22.44	22.41	23.50	
		12	6	22.33	22.37	22.43	23.50	
		12	13	22.23	22.41	22.11	23.50	
		25	0	22.42	22.31	22.42	23.50	
	16QAM	1	0	22.74	22.42	22.46	23.50	
		1	13	22.73	22.44	22.56	23.50	
		1	24	22.58	22.48	22.33	23.50	
		12	0	21.34	21.40	21.39	22.50	
		12	6	21.36	21.36	21.42	22.50	
		12	13	21.27	21.37	21.36	22.50	
		25	0	21.42	21.46	21.31	22.50	
	64QAM	1	0	21.86	21.78	21.98	22.50	
		1	13	21.76	21.86	21.84	22.50	
		1	24	21.81	21.83	21.52	22.50	
		12	0	20.70	20.81	20.77	21.50	
		12	6	20.73	20.74	20.78	21.50	
		12	13	20.74	20.83	20.75	21.50	
		25	0	20.83	20.85	20.81	21.50	
	Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
					26750/820	26865/831.5	26990/844	
	10MHz	QPSK	1	0	23.29	23.23	23.39	24.50
1			25	23.16	23.33	23.22	24.50	
1			49	23.20	23.17	22.94	24.50	
25			0	22.32	22.40	22.38	23.50	
25			13	22.30	22.32	22.39	23.50	
25			25	22.20	22.38	22.07	23.50	
50			0	22.40	22.27	22.37	23.50	
16QAM		1	0	22.69	22.40	22.44	23.50	
		1	25	22.71	22.41	22.54	23.50	
		1	49	22.55	22.44	22.30	23.50	



Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit	
				26775/822.5	26865/831.5	26965/841.5		
15MHz	64QAM	25	0	21.31	21.38	21.36	22.50	
		25	13	21.33	21.31	21.38	22.50	
		25	25	21.25	21.33	21.33	22.50	
		50	0	21.39	21.41	21.27	22.50	
		1	0	21.81	21.76	21.96	22.50	
		1	25	21.74	21.83	21.82	22.50	
		1	49	21.82	21.82	21.53	22.50	
		25	0	20.69	20.83	20.78	21.50	
		25	13	20.71	20.71	20.77	21.50	
	25	25	20.72	20.79	20.72	21.50		
	50	0	20.80	20.80	20.77	21.50		
	15MHz	QPSK	1	0	23.26	23.19	23.36	24.50
			1	38	23.15	23.29	23.20	24.50
			1	74	23.18	23.16	22.91	24.50
			36	0	22.29	22.35	22.34	23.50
			36	18	22.28	22.28	22.36	23.50
			36	39	22.17	22.33	22.03	23.50
			75	0	22.37	22.22	22.33	23.50
		16QAM	1	0	22.49	22.36	22.39	23.50
1			38	22.67	22.39	22.50	23.50	
1			74	22.53	22.41	22.28	23.50	
36			0	21.28	21.34	21.33	22.50	
36			18	21.30	21.29	21.35	22.50	
36			39	21.22	21.28	21.29	22.50	
75			0	21.37	21.37	21.24	22.50	
64QAM		1	0	21.79	21.72	21.91	22.50	
		1	38	21.70	21.81	21.78	22.50	
		1	74	21.76	21.76	21.47	22.50	
		36	0	20.64	20.75	20.71	21.50	
		36	18	20.67	20.67	20.71	21.50	
		36	39	20.69	20.74	20.68	21.50	
		75	0	20.78	20.76	20.74	21.50	

LTE FDD Band 26 ANT 2 Level 1				Conducted Power(dBm)			Tune-up Limit
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			
				26697/814.7	26865/831.5	27033/848.3	
1.4MHz	QPSK	1	0	21.06	21.10	21.05	22.00
		1	2	21.19	21.13	21.00	22.00
		1	5	21.06	20.93	21.24	22.00
		3	0	21.11	21.11	21.09	22.00



		3	2	21.07	21.11	21.09	22.00
		3	3	21.07	21.16	21.17	22.00
		6	0	20.09	20.21	20.07	21.00
	16QAM	1	0	20.38	20.67	20.59	21.00
		1	2	20.36	20.59	20.47	21.00
		1	5	20.43	20.63	20.16	21.00
		3	0	20.20	20.12	20.08	21.00
		3	2	20.10	20.11	20.36	21.00
		3	3	20.13	20.24	20.44	21.00
	64QAM	6	0	19.33	19.17	19.28	20.00
		1	0	19.26	19.28	19.38	20.00
		1	2	19.09	19.11	19.15	20.00
		1	5	19.27	19.28	19.18	20.00
		3	0	19.20	19.27	19.25	20.00
		3	2	19.22	19.36	19.38	20.00
3		3	19.20	19.25	19.30	20.00	
6	0	18.33	18.44	18.42	19.00		
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				26705/815.5	26865/831.5	27025/847.5	
3MHz	QPSK	1	0	21.08	21.14	21.08	22.00
		1	7	21.17	21.16	21.04	22.00
		1	14	21.09	20.98	21.28	22.00
		8	0	20.21	20.23	20.22	21.00
		8	4	20.19	20.21	20.21	21.00
		8	7	20.17	20.27	20.27	21.00
		15	0	20.09	20.25	20.10	21.00
	16QAM	1	0	20.41	20.69	20.62	21.00
		1	7	20.39	20.59	20.51	21.00
		1	14	20.45	20.67	20.19	21.00
		8	0	19.31	19.25	19.20	20.00
		8	4	19.21	19.24	19.48	20.00
		8	7	19.23	19.36	19.57	20.00
		15	0	19.36	19.21	19.31	20.00
	64QAM	1	0	19.29	19.30	19.41	20.00
		1	7	19.12	19.11	19.17	20.00
		1	14	19.29	19.27	19.21	20.00
		8	0	18.31	18.40	18.37	19.00
		8	4	18.33	18.49	18.50	19.00
		8	7	18.30	18.37	18.43	19.00
		15	0	18.36	18.48	18.45	19.00
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				26715/816.5	26865/831.5	27015/846.5	
5MHz	QPSK	1	0	21.05	21.12	21.04	22.00



		1	13	21.15	21.12	21.01	22.00
		1	24	21.06	20.93	21.24	22.00
		12	0	20.18	20.18	20.18	21.00
		12	6	20.17	20.17	20.16	21.00
		12	13	20.15	20.25	20.23	21.00
		25	0	20.09	20.24	20.08	21.00
		25	13	20.09	20.24	20.08	21.00
	16QAM	1	0	20.38	20.65	20.59	21.00
		1	13	20.36	20.57	20.48	21.00
		1	24	20.42	20.65	20.15	21.00
		12	0	19.29	19.21	19.17	20.00
		12	6	19.18	19.19	19.44	20.00
		12	13	19.20	19.31	19.53	20.00
		25	0	19.34	19.17	19.26	20.00
	64QAM	1	0	19.26	19.30	19.38	20.00
		1	13	19.09	19.13	19.14	20.00
		1	24	19.30	19.25	19.17	20.00
		12	0	18.29	18.36	18.38	19.00
		12	6	18.30	18.44	18.46	19.00
		12	13	18.27	18.32	18.39	19.00
		25	0	18.34	18.44	18.40	19.00
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				26750/820	26865/831.5	26990/844	
10MHz	QPSK	1	0	21.07	21.13	21.07	22.00
		1	25	21.18	21.17	21.05	22.00
		1	49	21.08	20.97	21.27	22.00
		25	0	20.21	20.23	20.22	21.00
		25	13	20.20	20.22	20.20	21.00
		25	25	20.17	20.29	20.28	21.00
		50	0	20.13	20.26	20.12	21.00
	16QAM	1	0	20.40	20.68	20.61	21.00
		1	25	20.39	20.61	20.51	21.00
		1	49	20.45	20.67	20.18	21.00
		25	0	19.32	19.26	19.21	20.00
		25	13	19.20	19.23	19.47	20.00
		25	25	19.23	19.36	19.57	20.00
		50	0	19.37	19.22	19.30	20.00
	64QAM	1	0	19.28	19.29	19.40	20.00
		1	25	19.12	19.13	19.17	20.00
		1	49	19.29	19.27	19.20	20.00
		25	0	18.32	18.41	18.38	19.00
		25	13	18.32	18.48	18.49	19.00
		25	25	18.30	18.37	18.43	19.00
		50	0	18.37	18.49	18.44	19.00



Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				26775/822.5	26865/831.5	26965/841.5	
15MHz	QPSK	1	0	21.03	21.05	21.02	22.00
		1	38	21.15	21.12	21.00	22.00
		1	74	21.03	20.91	21.20	22.00
		36	0	20.16	20.14	20.15	21.00
		36	18	20.15	20.13	20.13	21.00
		36	39	20.11	20.21	20.20	21.00
		75	0	20.08	20.17	20.03	21.00
	16QAM	1	0	20.60	20.62	20.54	21.00
		1	38	20.33	20.56	20.45	21.00
		1	74	20.40	20.60	20.13	21.00
		36	0	19.26	19.20	19.15	20.00
		36	18	19.14	19.16	19.40	20.00
		36	39	19.18	19.27	19.50	20.00
		75	0	19.32	19.13	19.23	20.00
	64QAM	1	0	19.21	19.23	19.33	20.00
		1	38	19.06	19.08	19.11	20.00
		1	74	19.24	19.20	19.15	20.00
		36	0	18.26	18.35	18.32	19.00
		36	18	18.26	18.41	18.42	19.00
		36	39	18.25	18.28	18.36	19.00
		75	0	18.32	18.40	18.37	19.00

LTE TDD Band 38				Conducted Power(dBm)			Tune-up Limit
ANT 1 Full Power&Level 1&Level 2&Level 3				Channel/Frequency (MHz)			
Bandwidth	Modulation	RB size	RB offset	37775/2572.5	38000/2595	38225/2617.5	
5MHz	QPSK	1	0	24.73	24.85	24.82	25.50
		1	13	24.74	24.80	24.88	25.50
		1	24	24.88	24.80	24.81	25.50
		12	0	23.87	23.92	23.93	24.50
		12	6	23.95	23.94	23.96	24.50
		12	13	23.96	24.00	24.01	24.50
		25	0	23.90	23.97	23.94	24.50
	16QAM	1	0	24.04	24.03	24.12	24.50
		1	13	24.02	24.07	24.08	24.50
		1	24	24.10	24.14	24.13	24.50
		12	0	22.88	22.92	22.97	23.50
		12	6	23.00	22.95	22.99	23.50
		12	13	22.99	23.04	23.07	23.50
		25	0	22.96	22.96	22.97	23.50
	64QAM	1	0	22.42	22.40	22.47	23.50



		1	13	22.66	22.60	22.68	23.50
		1	24	22.81	22.68	22.76	23.50
		12	0	21.40	21.28	21.44	22.50
		12	6	21.45	21.36	21.47	22.50
		12	13	21.43	21.39	21.46	22.50
		25	0	21.48	21.46	21.52	22.50
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				37800/2575	38000/2595	38200/2615	
10MHz	QPSK	1	0	24.76	24.87	24.86	25.50
		1	25	24.76	24.84	24.91	25.50
		1	49	24.91	24.85	24.85	25.50
		25	0	23.90	23.97	23.97	24.50
		25	13	23.97	23.98	24.01	24.50
		25	25	23.98	24.02	24.05	24.50
		50	0	23.92	23.98	23.96	24.50
	16QAM	1	0	24.07	24.07	24.15	24.50
		1	25	24.05	24.09	24.11	24.50
		1	49	24.13	24.16	24.17	24.50
		25	0	22.90	22.96	23.00	23.50
		25	13	23.03	23.00	23.03	23.50
		25	25	23.02	23.09	23.11	23.50
		50	0	22.98	23.00	23.02	23.50
	64QAM	1	0	22.45	22.40	22.50	23.50
		1	25	22.69	22.58	22.71	23.50
		1	49	22.80	22.70	22.80	23.50
		25	0	21.42	21.32	21.43	22.50
		25	13	21.48	21.41	21.51	22.50
		25	25	21.46	21.44	21.50	22.50
		50	0	21.50	21.50	21.57	22.50
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				37825/2577.5	38000/2595	38175/2612.5	
15MHz	QPSK	1	0	24.74	24.82	24.83	25.50
		1	38	24.75	24.84	24.89	25.50
		1	74	24.87	24.79	24.80	25.50
		36	0	23.88	23.93	23.94	24.50
		36	18	23.95	23.94	23.96	24.50
		36	39	23.95	24.01	24.02	24.50
		75	0	23.88	23.95	23.93	24.50
	16QAM	1	0	24.01	24.04	24.12	24.50
		1	38	24.03	24.08	24.09	24.50
		1	74	24.10	24.12	24.13	24.50
		36	0	22.88	22.95	22.98	23.50
		36	18	22.99	22.94	22.98	23.50



Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				37850/2580	38000/2595	38150/2610	
	64QAM	36	39	23.00	23.05	23.08	23.50
		75	0	22.96	22.96	22.97	23.50
		1	0	22.39	22.37	22.47	23.50
		1	38	22.67	22.57	22.69	23.50
		1	74	22.81	22.69	22.80	23.50
		36	0	21.42	21.35	21.45	22.50
		36	18	21.45	21.37	21.49	22.50
		36	39	21.44	21.40	21.47	22.50
		75	0	21.48	21.46	21.52	22.50
		20MHz	QPSK	1	0	24.71	24.78
1	50			24.74	24.80	24.87	25.50
1	99			24.85	24.78	24.77	25.50
50	0			23.85	23.88	23.90	24.50
50	25			23.93	23.90	23.93	24.50
50	50			23.92	23.96	23.98	24.50
100	0			23.84	23.90	23.89	24.50
16QAM	1		0	24.04	24.00	24.07	24.50
	1		50	23.99	24.06	24.05	24.50
	1		99	24.08	24.09	24.11	24.50
	50		0	22.85	22.91	22.95	23.50
	50		25	22.96	22.92	22.95	23.50
	50		50	22.97	23.00	23.04	23.50
	100		0	22.94	22.92	22.94	23.50
64QAM	1		0	22.37	22.33	22.42	23.50
	1		50	22.63	22.55	22.65	23.50
	1		99	22.75	22.63	22.74	23.50
	50		0	21.37	21.27	21.38	22.50
	50		25	21.41	21.33	21.43	22.50
	50		50	21.41	21.35	21.43	22.50
	100		0	21.46	21.42	21.49	22.50

LTE TDD Band 41				Conducted Power(dBm)					Tune-up Limit (dBm)
ANT 1 Full Power&Level 1&Level 2				Channel/Frequency(MHz)					
Bandwidth	Modulation	RB size	RB offset	39675/24	40148/25	40620/2	41093/26	41565/26	
				98.5	45.8	593	40.3	87.5	
5MHz	QPSK	1	0	24.56	24.75	24.81	24.85	24.93	25.50
		1	13	24.58	24.60	24.78	24.69	24.83	25.50
		1	24	24.67	24.57	24.73	24.67	24.82	25.50
		12	0	23.71	23.56	23.76	23.74	23.84	24.50
		12	6	23.80	23.69	23.89	23.79	23.91	24.50
		12	13	23.83	23.72	23.99	23.85	23.94	24.50



	16QAM	25	0	23.76	23.68	23.84	23.80	23.91	24.50
		1	0	23.80	23.58	23.76	23.68	23.83	24.50
		1	13	23.78	23.55	23.74	23.65	23.80	24.50
		1	24	23.86	23.69	23.84	23.80	23.89	24.50
		12	0	22.84	22.60	22.81	22.80	22.86	23.50
		12	6	22.86	22.65	22.83	22.75	22.89	23.50
		12	13	22.85	22.71	22.82	22.76	22.88	23.50
		25	0	22.81	22.63	22.79	22.74	22.85	23.50
	64QAM	1	0	22.50	22.48	22.48	22.44	22.55	23.50
		1	13	22.54	22.54	22.50	22.45	22.56	23.50
		1	24	22.70	22.45	22.64	22.57	22.65	23.50
		12	0	21.60	21.42	21.55	21.50	21.64	22.50
		12	6	21.62	21.48	21.58	21.50	21.64	22.50
		12	13	21.50	21.56	21.47	21.35	21.53	22.50
		25	0	21.61	21.50	21.59	21.53	21.65	22.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)					Tune-up Limit (dBm)
				39700/2501	40160/2547	40620/2593	41080/2639	41540/2685	
10MHz	QPSK	1	0	24.58	24.76	24.83	24.86	24.96	25.50
		1	25	24.61	24.65	24.81	24.74	24.87	25.50
		1	49	24.69	24.61	24.75	24.71	24.85	25.50
		25	0	23.74	23.61	23.79	23.79	23.88	24.50
		25	13	23.83	23.74	23.92	23.84	23.95	24.50
		25	25	23.85	23.76	24.01	23.89	23.99	24.50
		50	0	23.80	23.70	23.88	23.82	23.95	24.50
	16QAM	1	0	23.82	23.61	23.78	23.71	23.85	24.50
		1	25	23.81	23.59	23.77	23.69	23.83	24.50
		1	49	23.89	23.71	23.87	23.82	23.92	24.50
		25	0	22.87	22.65	22.84	22.85	22.90	23.50
		25	13	22.88	22.69	22.85	22.79	22.92	23.50
		25	25	22.88	22.76	22.85	22.81	22.92	23.50
		50	0	22.84	22.68	22.82	22.79	22.89	23.50
	64QAM	1	0	22.52	22.47	22.50	22.43	22.57	23.50
		1	25	22.57	22.54	22.53	22.45	22.59	23.50
		1	49	22.69	22.47	22.63	22.59	22.68	23.50
		25	0	21.63	21.47	21.58	21.55	21.64	22.50
		25	13	21.64	21.52	21.60	21.54	21.67	22.50
		25	25	21.53	21.61	21.50	21.40	21.57	22.50
		50	0	21.64	21.55	21.62	21.58	21.69	22.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)					Tune-up Limit (dBm)
				39725/2503.5	40173/2548.3	40620/2593	41068/2637.8	41515/2682.5	
15MHz	QPSK	1	0	24.57	24.72	24.82	24.82	24.94	25.50



		1	38	24.59	24.64	24.79	24.73	24.84	25.50	
		1	74	24.66	24.56	24.72	24.66	24.81	25.50	
		36	0	23.72	23.57	23.77	23.75	23.85	24.50	
		36	18	23.80	23.69	23.89	23.79	23.91	24.50	
		36	39	23.82	23.73	23.98	23.86	23.95	24.50	
		75	0	23.78	23.66	23.86	23.78	23.90	24.50	
	16QAM	1	0	23.77	23.59	23.73	23.69	23.83	24.50	
		1	38	23.79	23.56	23.75	23.66	23.81	24.50	
		1	74	23.86	23.67	23.84	23.78	23.89	24.50	
		36	0	22.84	22.63	22.81	22.83	22.87	23.50	
		36	18	22.85	22.64	22.82	22.74	22.88	23.50	
		36	39	22.86	22.72	22.83	22.77	22.89	23.50	
	64QAM	75	0	22.81	22.63	22.79	22.74	22.85	23.50	
		1	0	22.47	22.45	22.45	22.41	22.55	23.50	
		1	38	22.55	22.51	22.51	22.42	22.57	23.50	
		1	74	22.70	22.46	22.64	22.58	22.69	23.50	
		36	0	21.62	21.49	21.57	21.57	21.65	22.50	
		36	18	21.62	21.49	21.58	21.51	21.66	22.50	
	Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)					Tune-up Limit (dBm)
					39750/2506	40185/2549.5	40620/2593	41055/2636.5	41490/2680	
	20MHz	QPSK	1	0	24.54	24.68	24.79	24.78	24.91	25.50
1			50	24.58	24.60	24.78	24.69	24.82	25.50	
1			99	24.64	24.55	24.70	24.65	24.78	25.50	
50			0	23.69	23.52	23.74	23.70	23.81	24.50	
50			25	23.78	23.65	23.87	23.75	23.88	24.50	
50			50	23.79	23.68	23.95	23.81	23.91	24.50	
16QAM		100	0	23.75	23.61	23.83	23.73	23.86	24.50	
		1	0	23.73	23.55	23.68	23.65	23.78	24.50	
		1	50	23.75	23.54	23.71	23.64	23.77	24.50	
		1	99	23.84	23.64	23.82	23.75	23.87	24.50	
		50	0	22.81	22.59	22.78	22.79	22.84	23.50	
		50	25	22.82	22.62	22.79	22.72	22.85	23.50	
64QAM		50	50	22.83	22.67	22.80	22.72	22.85	23.50	
		100	0	22.79	22.59	22.77	22.70	22.82	23.50	
		1	0	22.45	22.41	22.43	22.37	22.50	23.50	
		1	50	22.51	22.49	22.47	22.40	22.53	23.50	
		1	99	22.64	22.40	22.58	22.52	22.63	23.50	
		50	0	21.57	21.41	21.52	21.49	21.58	22.50	
			50	25	21.58	21.45	21.54	21.47	21.60	22.50
			50	50	21.48	21.52	21.45	21.31	21.50	22.50



		100	0	21.59	21.46	21.57	21.49	21.62	22.50
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LTE TDD Band 41 ANT 1 Level 3				Conducted Power(dBm)					Tune-up Limit (dBm)
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency(MHz)					
				39675/24 98.5	40148/25 45.8	40620/2 593	41093/26 40.3	41565/26 87.5	
5MHz	QPSK	1	0	24.23	24.13	24.28	24.43	24.31	25.00
		1	13	24.25	24.22	24.32	24.37	24.26	25.00
		1	24	24.27	24.25	24.42	24.36	24.26	25.00
		12	0	23.38	23.30	23.38	23.40	23.33	24.00
		12	6	23.39	23.40	23.41	23.36	23.39	24.00
		12	13	23.41	23.47	23.44	23.36	23.41	24.00
		25	0	23.42	23.41	23.47	23.37	23.39	24.00
	16QAM	1	0	23.29	23.59	23.50	23.30	23.67	24.00
		1	13	23.27	23.23	23.29	23.28	23.23	24.00
		1	24	23.46	23.50	23.50	23.51	23.55	24.00
		12	0	22.29	22.30	22.37	22.39	22.33	23.00
		12	6	22.39	22.32	22.45	22.35	22.33	23.00
		12	13	22.54	22.50	22.56	22.47	22.60	23.00
		25	0	22.48	22.49	22.46	22.44	22.54	23.00
	64QAM	1	0	22.54	22.53	22.59	22.58	22.62	23.00
		1	13	22.59	22.57	22.52	22.48	22.47	23.00
		1	24	22.52	22.57	22.50	22.57	22.51	23.00
		12	0	21.58	21.63	21.60	21.55	21.57	22.00
		12	6	21.60	21.63	21.54	21.64	21.55	22.00
		12	13	21.55	21.57	21.59	21.58	21.63	22.00
		25	0	21.54	21.60	21.59	21.54	21.60	22.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)					Tune-up Limit (dBm)
				39700/25 01	40160/25 47	40620/2 593	41080/26 39	41540/26 85	
10MHz	QPSK	1	0	24.25	24.14	24.31	24.45	24.32	25.00
		1	25	24.28	24.27	24.36	24.40	24.31	25.00
		1	49	24.29	24.29	24.45	24.38	24.30	25.00
		25	0	23.41	23.35	23.42	23.43	23.38	24.00
		25	13	23.42	23.45	23.45	23.39	23.44	24.00
		25	25	23.43	23.51	23.49	23.38	23.45	24.00
		50	0	23.46	23.43	23.51	23.41	23.41	24.00
	16QAM	1	0	23.31	23.62	23.52	23.32	23.70	24.00
		1	25	23.30	23.27	23.32	23.31	23.27	24.00
		1	49	23.49	23.52	23.53	23.54	23.57	24.00
		25	0	22.32	22.35	22.41	22.42	22.38	23.00
		25	13	22.41	22.36	22.48	22.37	22.37	23.00
		25	25	22.57	22.55	22.60	22.50	22.65	23.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)					Tune-up Limit (dBm)
				39725/2503.5	40173/2548.3	40620/2593	41068/2637.8	41515/2682.5	
15MHz	64QAM	50	0	22.51	22.54	22.50	22.47	22.59	23.00
		1	0	22.56	22.52	22.61	22.60	22.61	23.00
		1	25	22.62	22.57	22.55	22.51	22.47	23.00
		1	49	22.51	22.59	22.53	22.56	22.53	23.00
		25	0	21.61	21.68	21.60	21.58	21.62	22.00
		25	13	21.62	21.67	21.57	21.66	21.59	22.00
		25	25	21.58	21.62	21.63	21.61	21.68	22.00
	50	0	21.57	21.65	21.63	21.57	21.65	22.00	
15MHz	QPSK	1	0	24.24	24.10	24.29	24.44	24.28	25.00
		1	38	24.26	24.26	24.33	24.38	24.30	25.00
		1	74	24.26	24.24	24.41	24.35	24.25	25.00
		36	0	23.39	23.31	23.39	23.41	23.34	24.00
		36	18	23.39	23.40	23.41	23.36	23.39	24.00
		36	39	23.40	23.48	23.45	23.35	23.42	24.00
		75	0	23.44	23.39	23.46	23.39	23.37	24.00
	16QAM	1	0	23.26	23.60	23.50	23.27	23.68	24.00
		1	38	23.28	23.24	23.30	23.29	23.24	24.00
		1	74	23.46	23.48	23.50	23.51	23.53	24.00
		36	0	22.29	22.33	22.38	22.39	22.36	23.00
		36	18	22.38	22.31	22.44	22.34	22.32	23.00
		36	39	22.55	22.51	22.57	22.48	22.61	23.00
		75	0	22.48	22.49	22.46	22.44	22.54	23.00
	64QAM	1	0	22.51	22.50	22.59	22.55	22.59	23.00
		1	38	22.60	22.54	22.53	22.49	22.44	23.00
		1	74	22.52	22.58	22.54	22.57	22.52	23.00
		36	0	21.60	21.70	21.61	21.57	21.64	22.00
		36	18	21.60	21.64	21.56	21.64	21.56	22.00
		36	39	21.56	21.58	21.60	21.59	21.64	22.00
		75	0	21.54	21.60	21.59	21.54	21.60	22.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)					Tune-up Limit (dBm)
				39750/2506	40185/2549.5	40620/2593	41055/2636.5	41490/2680	
20MHz	QPSK	1	0	24.21	24.06	24.26	24.41	24.24	25.00
		1	50	24.25	24.22	24.31	24.37	24.26	25.00
		1	99	24.24	24.23	24.38	24.33	24.24	25.00
		50	0	23.36	23.26	23.35	23.38	23.29	24.00
		50	25	23.37	23.36	23.38	23.34	23.35	24.00
		50	50	23.37	23.43	23.41	23.32	23.37	24.00
		100	0	23.41	23.34	23.42	23.36	23.32	24.00
	16QAM	1	0	23.44	23.56	23.45	23.44	23.64	24.00



		1	50	23.24	23.22	23.26	23.25	23.22	24.00
		1	99	23.44	23.45	23.48	23.49	23.50	24.00
		50	0	22.26	22.29	22.35	22.36	22.32	23.00
		50	25	22.35	22.29	22.41	22.31	22.30	23.00
		50	50	22.52	22.46	22.53	22.45	22.56	23.00
		100	0	22.46	22.45	22.43	22.42	22.50	23.00
	64QAM	1	0	22.49	22.46	22.54	22.53	22.55	23.00
		1	50	22.56	22.52	22.49	22.45	22.42	23.00
		1	99	22.46	22.52	22.48	22.51	22.46	23.00
		50	0	21.55	21.62	21.54	21.52	21.56	22.00
		50	25	21.56	21.60	21.50	21.60	21.52	22.00
		50	50	21.53	21.53	21.56	21.56	21.59	22.00
		100	0	21.52	21.56	21.56	21.52	21.56	22.00

LTE FDD Band 66 ANT 8 Full Power&Level 2&Level 3				Conducted Power(dBm)			Tune-up Limit
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			
				131979/1710. 7	132322/1745	132665/1779. 3	
1.4MHz	QPSK	1	0	24.43	24.67	24.72	25.50
		1	2	24.38	24.82	24.68	25.50
		1	5	24.55	24.82	24.66	25.50
		3	0	24.49	24.71	24.78	25.50
		3	2	24.42	24.66	24.77	25.50
		3	3	24.59	24.68	24.76	25.50
		6	0	23.55	23.86	23.78	25.00
	16QAM	1	0	24.61	24.82	24.52	25.00
		1	2	24.59	24.68	24.31	25.00
		1	5	24.87	24.29	24.34	25.00
		3	0	23.33	23.48	23.63	25.00
		3	2	23.43	23.42	23.71	25.00
		3	3	23.12	23.28	23.75	25.00
		6	0	22.40	22.46	22.83	23.50
	64QAM	1	0	22.53	22.70	22.75	23.50
		1	2	22.34	22.81	22.71	23.50
		1	5	22.52	22.54	23.01	23.50
		3	0	22.31	22.28	22.75	23.50
		3	2	22.61	22.53	22.41	23.50
		3	3	22.44	22.65	22.43	23.50
		6	0	21.35	21.82	21.20	22.50
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				131979/1710. 7	132322/1745	132657/1778. 5	



3MHz	QPSK	1	0	24.45	24.71	24.75	25.50
		1	7	24.36	24.85	24.72	25.50
		1	14	24.58	24.87	24.70	25.50
		8	0	23.59	23.83	23.91	25.00
		8	4	23.54	23.76	23.89	25.00
		8	7	23.69	23.79	23.86	25.00
		15	0	23.55	23.90	23.81	25.00
	16QAM	1	0	24.64	24.84	24.55	25.00
		1	7	24.62	24.68	24.35	25.00
		1	14	24.89	24.33	24.37	25.00
		8	0	22.44	22.61	22.75	23.50
		8	4	22.54	22.55	22.83	23.50
		8	7	22.22	22.40	22.88	23.50
		15	0	22.43	22.50	22.86	23.50
	64QAM	1	0	22.56	22.72	22.78	23.50
		1	7	22.37	22.81	22.73	23.50
		1	14	22.54	22.53	23.04	23.50
		8	0	21.42	21.41	21.87	22.50
		8	4	21.72	21.66	21.53	22.50
		8	7	21.54	21.77	21.56	22.50
		15	0	21.38	21.86	21.23	22.50
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				131997/1712.5	132322/1745	132647/1777.5	
5MHz	QPSK	1	0	24.42	24.69	24.71	25.50
		1	13	24.34	24.81	24.69	25.50
		1	24	24.55	24.82	24.66	25.50
		12	0	23.56	23.78	23.87	25.00
		12	6	23.52	23.72	23.84	25.00
		12	13	23.67	23.77	23.82	25.00
		25	0	23.55	23.89	23.79	25.00
	16QAM	1	0	24.61	24.80	24.52	25.00
		1	13	24.59	24.66	24.32	25.00
		1	24	24.86	24.31	24.33	25.00
		12	0	22.42	22.57	22.72	23.50
		12	6	22.51	22.50	22.79	23.50
		12	13	22.19	22.35	22.84	23.50
		25	0	22.41	22.46	22.81	23.50
	64QAM	1	0	22.53	22.72	22.75	23.50
		1	13	22.34	22.83	22.70	23.50
		1	24	22.55	22.51	23.00	23.50
		12	0	21.40	21.37	21.88	22.50
		12	6	21.69	21.61	21.49	22.50



Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit	
				132022/1715	132322/1745	132622/1775		
10MHz	QPSK	12	13	21.51	21.72	21.52	22.50	
		25	0	21.36	21.82	21.18	22.50	
		1	0	24.44	24.70	24.74	25.50	
		1	25	24.37	24.86	24.73	25.50	
		1	49	24.57	24.86	24.69	25.50	
		25	0	23.59	23.83	23.91	25.00	
		25	13	23.55	23.77	23.88	25.00	
	16QAM	25	25	23.69	23.81	23.87	25.00	
		50	0	23.59	23.91	23.83	25.00	
		1	0	24.63	24.83	24.54	25.00	
		1	25	24.62	24.70	24.35	25.00	
		1	49	24.89	24.33	24.36	25.00	
		25	0	22.45	22.62	22.76	23.50	
		25	13	22.53	22.54	22.82	23.50	
	64QAM	25	25	22.22	22.40	22.88	23.50	
		50	0	22.44	22.51	22.85	23.50	
		1	0	22.55	22.71	22.77	23.50	
		1	25	22.37	22.83	22.73	23.50	
		1	49	22.54	22.53	23.03	23.50	
		25	0	21.43	21.42	21.88	22.50	
		25	13	21.71	21.65	21.52	22.50	
	15MHz	QPSK	25	25	21.54	21.77	21.56	22.50
			50	0	21.39	21.87	21.22	22.50
			1	0	24.43	24.66	24.72	25.50
1			38	24.35	24.85	24.70	25.50	
1			74	24.54	24.81	24.65	25.50	
36			0	23.57	23.79	23.88	25.00	
36			18	23.52	23.72	23.84	25.00	
16QAM		36	39	23.66	23.78	23.83	25.00	
		75	0	23.57	23.87	23.78	25.00	
		1	0	24.58	24.81	24.52	25.00	
		1	38	24.60	24.67	24.33	25.00	
		1	74	24.86	24.29	24.33	25.00	
		36	0	22.42	22.60	22.73	23.50	
		36	18	22.50	22.49	22.78	23.50	
64QAM		36	39	22.20	22.36	22.85	23.50	
		75	0	22.41	22.46	22.81	23.50	
		1	0	22.50	22.69	22.75	23.50	



Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit	
				132072/1720	132322/1745	132572/1770		
20MHz	QPSK	1	38	22.35	22.80	22.71	23.50	
		1	74	22.55	22.52	23.04	23.50	
		36	0	21.42	21.44	21.89	22.50	
		36	18	21.69	21.62	21.51	22.50	
		36	39	21.52	21.73	21.53	22.50	
		75	0	21.36	21.82	21.18	22.50	
	16QAM	16QAM	1	0	24.40	24.62	24.69	25.50
			1	50	24.34	24.91	24.68	25.50
			1	99	24.52	24.80	24.62	25.50
			50	0	23.54	23.74	23.94	25.00
			50	25	23.50	23.68	23.81	25.00
			50	50	23.63	23.73	23.79	25.00
			100	0	23.54	23.82	23.74	25.00
	64QAM	64QAM	1	0	24.37	24.77	24.47	25.00
			1	50	24.56	24.65	24.29	25.00
			1	99	24.84	24.26	24.31	25.00
			50	0	22.39	22.56	22.70	23.50
			50	25	22.47	22.47	22.75	23.50
			50	50	22.17	22.31	22.81	23.50
			100	0	22.39	22.42	22.78	23.50
	64QAM	64QAM	1	0	22.48	22.65	22.70	23.50
1			50	22.31	22.78	22.67	23.50	
1			99	22.49	22.46	22.98	23.50	
50			0	21.37	21.36	21.82	22.50	
50			25	21.65	21.58	21.45	22.50	
50			50	21.49	21.68	21.49	22.50	
100			0	21.34	21.78	21.15	22.50	



CA Com.	Test Scenario	Modulation	PCC						SCC					output power	
			PCC Band	PCC Bandwidth (MHz)	PCC UL RB size	PCC UL RB offset	PCC UL Channel	PCC DL Channel	SCC Band	SCC Bandwidth (MHz)	SCC UL Channel	SCC UL RB size	SCC UL RB offset	conducted power (dbm)	Tune up (dbm)
CA_7C	Full Power& Level 1&Level 2	QPSK	7	20	1	99	20850	2850	7	20	21048	1	0	24.65	25.50
CA_7C	Full Power& Level 1&Level 2	QPSK	7	20	1	0	21100	3100	7	20	21298	1	99	24.61	25.50
CA_7C	Full Power& Level 1&Level 2	QPSK	7	20	1	99	21100	3100	7	20	20902	1	0	24.68	25.50
CA_7C	Full Power& Level 1&Level 2	QPSK	7	20	1	0	21350	3350	7	20	21152	1	99	24.58	25.50
CA_7C	Level 3	QPSK	7	20	1	99	20850	2850	7	20	21048	1	0	23.15	24.00
CA_7C	Level 3	QPSK	7	20	1	0	21100	3100	7	20	21298	1	99	23.11	24.00
CA_7C	Level 3	QPSK	7	20	1	99	21100	3100	7	20	20902	1	0	23.08	24.00
CA_7C	Level 3	QPSK	7	20	1	0	21350	3350	7	20	21152	1	99	23.14	24.00
CA_41C	Full Power& Level 1&Level 2	QPSK	41	20	1	99	39750	39750	41	20	39948	1	0	24.64	25.50
CA_41C	Full Power& Level 1&Level 2	QPSK	41	20	1	0	40185	40185	41	20	40383	1	99	24.61	25.50
CA_41C	Full Power& Level 1&Level 2	QPSK	41	20	1	99	40185	40185	41	20	39987	1	0	24.70	25.50
CA_41C	Full Power& Level 1&Level 2	QPSK	41	20	1	0	40620	40620	41	20	40818	1	99	24.65	25.50
CA_41C	Full Power& Level 1&Level 2	QPSK	41	20	1	99	40620	40620	41	20	40422	1	0	24.58	25.50
CA_41C	Full Power& Level 1&Level 2	QPSK	41	20	1	0	41055	41055	41	20	41253	1	99	24.56	25.50
CA_41C	Full Power& Level 1&Level 2	QPSK	41	20	1	99	41055	41055	41	20	40857	1	0	24.61	25.50
CA_41C	Full Power& Level 1&Level 2	QPSK	41	20	1	0	41490	41490	41	20	41292	1	99	24.52	25.50
CA_41C	Level 3	QPSK	41	20	1	99	39750	39750	41	20	39948	1	0	24.21	25.00
CA_41C	Level 3	QPSK	41	20	1	0	40185	40185	41	20	40383	1	99	24.09	25.00
CA_41C	Level 3	QPSK	41	20	1	99	40185	40185	41	20	39987	1	0	24.11	25.00
CA_41C	Level 3	QPSK	41	20	1	0	40620	40620	41	20	40818	1	99	24.06	25.00
CA_41C	Level 3	QPSK	41	20	1	99	40620	40620	41	20	40422	1	0	24.10	25.00
CA_41C	Level 3	QPSK	41	20	1	0	41055	41055	41	20	41253	1	99	24.13	25.00
CA_41C	Level 3	QPSK	41	20	1	99	41055	41055	41	20	40857	1	0	24.16	25.00
CA_41C	Level 3	QPSK	41	20	1	0	41490	41490	41	20	41292	1	99	24.11	25.00



9.4 NR Mode

NR n41				Conducted Power(dBm)			Tune-up Limit
ANT 1 Full power&Level 1&Level 2&Level 3				Channel/Frequency(MHz)			
Bandwidth	Modulation	RB size	RB offset	501204/ 2506.2	518598/ 2592.99	535998/ 2679.99	
20MHz	DFT-s-OFDM BPSK	1	1	17.89	17.91	17.80	19.00
		1	49	17.81	17.76	17.81	19.00
		25	12	17.80	17.78	17.85	19.00
	DFT-s-OFDM QPSK	1	1	17.98	17.95	17.81	19.00
		1	49	17.76	17.94	17.94	19.00
		25	12	17.87	17.76	17.84	19.00
	DFT-s-OFDM 16QAM	1	1	17.01	17.03	17.06	18.00
		1	49	16.93	16.99	17.02	18.00
		25	12	16.81	16.78	16.83	18.00
	DFT-s-OFDM 64QAM	1	1	15.56	15.48	15.58	16.50
		1	49	15.37	15.46	15.47	16.50
		25	12	15.32	15.35	15.39	16.50
	DFT-s-OFDM 256QAM	1	1	13.48	13.43	13.51	14.50
		1	49	13.45	13.37	13.45	14.50
25		12	13.38	13.39	13.35	14.50	
CP-OFDM QPSK	1	1	16.30	16.34	16.23	18.00	
CP-OFDM 16QAM	1	1	15.60	15.66	15.57	17.00	
CP-OFDM 64QAM	1	1	14.43	14.45	14.39	16.00	
CP-OFDM 256QAM	1	1	11.47	11.52	11.35	13.00	
Bandwidth	Modulation	RB allocation	RB offset	Channel/Frequency(MHz)			Tune-up Limit
40MHz	DFT-s-OFDM BPSK	1	1	503202/2516.01	518598/2592.99	534000/2670	19.00
		1	104	17.85	17.80	17.83	19.00
		50	25	17.84	17.82	17.89	19.00
	DFT-s-OFDM QPSK	1	1	18.00	17.99	17.85	19.00
		1	104	17.80	17.98	17.98	19.00
		50	25	17.91	17.80	17.88	19.00
	DFT-s-OFDM 16QAM	1	1	17.06	17.07	17.09	18.00
		1	104	16.97	17.03	17.06	18.00
		50	25	16.85	16.82	16.87	18.00
	DFT-s-OFDM 64QAM	1	1	15.60	15.52	15.58	16.50
		1	104	15.41	15.47	15.51	16.50
		50	25	15.36	15.39	15.43	16.50
	DFT-s-OFDM 256QAM	1	1	13.52	13.47	13.55	14.50
		1	104	13.45	13.41	13.49	14.50



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up Limit
				505200/2526	518598/2595.99	531996/2659.98	
		50	25	13.42	13.43	13.39	14.50
	CP-OFDM QPSK	1	1	16.34	16.38	16.27	18.00
	CP-OFDM 16QAM	1	1	15.64	15.70	15.61	17.00
	CP-OFDM 64QAM	1	1	14.47	14.49	14.43	16.00
	CP-OFDM 256QAM	1	1	11.49	11.55	11.41	13.00
60MHz	DFT-s-OFDM BPSK	1	1	17.83	17.85	17.78	19.00
		1	160	17.77	17.72	17.75	19.00
		81	40	17.76	17.74	17.80	19.00
	DFT-s-OFDM QPSK	1	1	17.92	17.91	17.77	19.00
		1	160	17.72	17.88	17.90	19.00
		81	40	17.83	17.72	17.80	19.00
	DFT-s-OFDM 16QAM	1	1	16.98	16.99	17.01	18.00
		1	160	16.89	16.95	16.98	18.00
		81	40	16.77	16.73	16.79	18.00
	DFT-s-OFDM 64QAM	1	1	15.52	15.44	15.48	16.50
		1	160	15.33	15.39	15.43	16.50
		81	40	15.28	15.31	15.35	16.50
	DFT-s-OFDM 256QAM	1	1	13.43	13.39	13.47	14.50
		1	160	13.37	13.33	13.41	14.50
		81	40	13.34	13.35	13.33	14.50
CP-OFDM QPSK	1	1	16.26	16.30	16.19	18.00	
CP-OFDM 16QAM	1	1	15.56	15.62	15.53	17.00	
CP-OFDM 64QAM	1	1	14.39	14.41	14.35	16.00	
CP-OFDM 256QAM	1	1	11.42	11.44	11.32	13.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up Limit
				509202/2546.01	518598/2592.99	528000/2640	
100MHz	DFT-s-OFDM BPSK	1	1	17.96	17.98	17.91	19.00
		1	271	17.90	17.85	17.88	19.00
		135	67	17.89	17.87	17.92	19.00
	DFT-s-OFDM QPSK	1	1	18.05	18.03	17.90	19.00
		1	271	17.85	18.01	18.03	19.00
		135	67	17.96	17.85	17.93	19.00
	DFT-s-OFDM 16QAM	1	1	17.09	17.12	17.14	18.00
		1	271	17.02	17.08	17.11	18.00
		135	67	16.90	16.86	16.92	18.00
	DFT-s-OFDM 64QAM	1	1	15.62	15.57	15.61	16.50
		1	271	15.45	15.52	15.56	16.50
		135	67	15.41	15.44	15.48	16.50



	DFT-s-OFDM 256QAM	1	1	13.56	13.52	13.60	14.50
		1	271	13.50	13.46	13.54	14.50
		135	67	13.45	13.42	13.46	14.50
	CP-OFDM QPSK	1	1	16.52	16.33	16.32	18.00
	CP-OFDM 16QAM	1	1	15.69	15.75	15.66	17.00
	CP-OFDM 64QAM	1	1	14.52	14.54	14.48	16.00
	CP-OFDM 256QAM	1	1	11.55	11.53	11.47	13.00

NR n66 ANT 8 Full power&Level 2				Conducted Power(dBm)			Tune-up Limit
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency(MHz)			
				342500/1712.5	349000/1745	355500/1777.5	
20MHz	DFT-s-OFDM BPSK	1	1	24.71	24.67	24.48	25.50
		1	23	24.52	24.36	24.38	25.50
		12	6	24.67	24.39	24.51	25.50
	DFT-s-OFDM QPSK	1	1	24.66	24.60	24.47	25.50
		1	23	24.53	24.48	24.41	25.50
		12	6	24.68	24.53	24.52	25.50
	DFT-s-OFDM 16QAM	1	1	23.47	23.49	23.39	24.50
		1	23	23.64	23.27	23.28	24.50
		12	6	23.63	23.39	23.43	24.50
	DFT-s-OFDM 64QAM	1	1	22.16	22.15	21.94	23.00
		1	23	22.09	21.91	21.87	23.00
		12	6	22.17	21.94	22.02	23.00
	DFT-s-OFDM 256QAM	1	1	20.16	20.05	19.94	21.00
		1	23	20.01	19.93	19.85	21.00
		12	6	20.23	19.97	20.00	21.00
	CP-OFDM QPSK	1	1	23.23	23.10	23.01	24.50
CP-OFDM 16QAM	1	1	22.67	22.61	22.39	23.50	
CP-OFDM 64QAM	1	1	21.35	21.11	21.10	22.50	
CP-OFDM 256QAM	1	1	18.44	18.24	18.18	19.50	
Bandwidth	Modulation	RB allocati on	offset	Channel/Frequency(MHz)			Tune-up Limit
				343000/1715	349000/1745	355000/1775	
40MHz	DFT-s-OFDM BPSK	1	1	24.63	24.45	24.39	25.50
		1	50	24.49	24.31	24.31	25.50
		25	12	24.56	24.29	24.36	25.50
	DFT-s-OFDM QPSK	1	1	24.57	24.43	24.34	25.50
		1	50	24.44	24.31	24.28	25.50
		25	12	24.54	24.37	24.38	25.50
DFT-s-OFDM	1	1	23.40	23.26	23.20	24.50	



	16QAM	1	50	23.52	23.15	23.11	24.50
		25	12	23.51	23.32	23.31	24.50
	DFT-s-OFDM 64QAM	1	1	22.07	21.98	21.85	23.00
		1	50	21.97	21.83	21.77	23.00
		25	12	22.03	21.81	21.87	23.00
	DFT-s-OFDM 256QAM	1	1	20.07	19.88	19.81	21.00
		1	50	19.92	19.76	19.72	21.00
		25	12	20.06	19.77	19.83	21.00
	CP-OFDM QPSK	1	1	23.11	22.95	22.89	24.50
CP-OFDM 16QAM	1	1	22.50	22.44	22.30	23.50	
CP-OFDM 64QAM	1	1	21.23	21.03	20.92	22.50	
CP-OFDM 256QAM	1	1	18.30	18.11	18.03	19.50	
Bandwidth	Modulation	RB allocati on	offset	Channel/Frequency(MHz)			Tune-up Limit
				343500/1717.5	349000/1745	354500/1772.5	
60MHz	DFT-s-OFDM BPSK	1	1	24.67	24.59	24.43	25.50
		1	77	24.49	24.31	24.33	25.50
		36	18	24.62	24.33	24.44	25.50
	DFT-s-OFDM QPSK	1	1	24.61	24.51	24.40	25.50
		1	77	24.48	24.39	24.34	25.50
		36	18	24.62	24.45	24.44	25.50
	DFT-s-OFDM 16QAM	1	1	23.42	23.40	23.30	24.50
		1	77	23.59	23.21	23.21	24.50
		36	18	23.57	23.34	23.37	24.50
	DFT-s-OFDM 64QAM	1	1	22.11	22.08	21.89	23.00
		1	77	22.03	21.85	21.81	23.00
		36	18	22.11	21.87	21.95	23.00
	DFT-s-OFDM 256QAM	1	1	20.11	19.96	19.87	21.00
		1	77	19.96	19.84	19.78	21.00
36		18	20.16	19.91	19.93	21.00	
CP-OFDM QPSK	1	1	23.17	23.05	22.95	24.50	
CP-OFDM 16QAM	1	1	22.62	22.54	22.34	23.50	
CP-OFDM 64QAM	1	1	21.29	21.05	21.04	22.50	
CP-OFDM 256QAM	1	1	18.38	18.17	18.11	19.50	
Bandwidth	Modulation	RB allocati on	offset	Channel/Frequency(MHz)			Tune-up Limit
				344000/1720	349000/1745	354000/1770	
100MHz	DFT-s-OFDM BPSK	1	1	24.59	24.37	24.34	25.50
		1	104	24.46	24.26	24.26	25.50
		50	25	24.51	24.23	24.29	25.50
	DFT-s-OFDM QPSK	1	1	24.52	24.34	24.27	25.50
1		104	24.39	24.22	24.21	25.50	



		50	25	24.48	24.29	24.30	25.50
	DFT-s-OFDM 16QAM	1	1	23.35	23.17	23.11	24.50
		1	104	23.21	23.09	23.04	24.50
		50	25	23.45	23.27	23.25	24.50
	DFT-s-OFDM 64QAM	1	1	22.02	21.91	21.80	23.00
		1	104	21.91	21.77	21.71	23.00
		50	25	21.97	21.74	21.80	23.00
	DFT-s-OFDM 256QAM	1	1	20.02	19.79	19.74	21.00
		1	104	19.87	19.67	19.65	21.00
		50	25	19.99	19.71	19.76	21.00
	CP-OFDM QPSK	1	1	23.05	22.90	22.83	24.50
	CP-OFDM 16QAM	1	1	22.45	22.37	22.25	23.50
	CP-OFDM 64QAM	1	1	21.17	20.97	20.86	22.50
CP-OFDM 256QAM	1	1	18.24	18.04	17.96	19.50	

NR n66 ANT 8 Level 1				Conducted Power(dBm)			Tune-up Limit
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency(MHz)			
				342500/1712.5	349000/1745	355500/1777.5	
20MHz	DFT-s-OFDM BPSK	1	1	21.68	21.62	21.47	22.00
		1	23	21.45	21.33	21.33	22.00
		12	6	21.64	21.40	21.50	22.00
	DFT-s-OFDM QPSK	1	1	21.62	21.58	21.40	22.00
		1	23	21.46	21.45	21.47	22.00
		12	6	21.62	21.45	21.61	22.00
	DFT-s-OFDM 16QAM	1	1	20.33	20.40	20.31	21.00
		1	23	20.60	20.26	20.25	21.00
		12	6	20.59	20.31	20.39	21.00
	DFT-s-OFDM 64QAM	1	1	19.12	19.09	18.93	19.50
		1	23	19.02	18.88	18.82	19.50
		12	6	19.14	18.95	19.01	19.50
	DFT-s-OFDM 256QAM	1	1	17.12	17.05	16.92	17.50
		1	23	16.94	16.90	16.86	17.50
		12	6	17.20	16.88	16.97	17.50
	CP-OFDM QPSK	1	1	20.19	19.94	19.97	21.00
	CP-OFDM 16QAM	1	1	19.55	19.55	19.38	20.00
	CP-OFDM 64QAM	1	1	18.28	18.08	17.97	19.00
CP-OFDM 256QAM	1	1	15.41	15.25	15.17	16.00	
Bandwidth	Modulation	RB alloca tion	offset	Channel/Frequency(MHz)			Tune-up Limit
				343000/1715	349000/1745	355000/1775	
40MHz	DFT-s-OFDM	1	1	21.62	21.49	21.39	22.00



	BPSK	1	50	21.41	21.28	21.26	22.00
		25	12	21.55	21.28	21.38	22.00
	DFT-s-OFDM QPSK	1	1	21.55	21.45	21.30	22.00
		1	50	21.39	21.32	21.35	22.00
		25	12	21.53	21.36	21.50	22.00
	DFT-s-OFDM 16QAM	1	1	20.30	20.28	20.19	21.00
		1	50	20.49	20.17	20.15	21.00
		25	12	20.51	20.25	20.31	21.00
	DFT-s-OFDM 64QAM	1	1	19.04	18.98	18.84	19.50
		1	50	18.94	18.81	18.74	19.50
		25	12	19.04	18.82	18.89	19.50
	DFT-s-OFDM 256QAM	1	1	17.05	16.92	16.82	17.50
		1	50	16.87	16.77	16.74	17.50
25		12	17.07	16.79	16.87	17.50	
CP-OFDM QPSK	1	1	20.11	19.88	19.89	21.00	
CP-OFDM 16QAM	1	1	19.51	19.47	19.33	20.00	
CP-OFDM 64QAM	1	1	18.22	18.05	17.93	19.00	
CP-OFDM 256QAM	1	1	15.32	15.14	15.08	16.00	
Bandwidth	Modulation	RB alloca tion	offset	Channel/Frequency(MHz)			Tune-up Limit
				343500/1717.5	349000/1745	354500/1772.5	
60MHz	DFT-s-OFDM BPSK	1	1	21.64	21.54	21.42	22.00
		1	77	21.42	21.28	21.28	22.00
		36	18	21.59	21.34	21.43	22.00
	DFT-s-OFDM QPSK	1	1	21.57	21.49	21.33	22.00
		1	77	21.41	21.36	21.40	22.00
		36	18	21.56	21.37	21.53	22.00
	DFT-s-OFDM 16QAM	1	1	20.28	20.31	20.22	21.00
		1	77	20.55	20.20	20.18	21.00
		36	18	20.53	20.26	20.33	21.00
	DFT-s-OFDM 64QAM	1	1	19.07	19.02	18.88	19.50
		1	77	18.96	18.82	18.76	19.50
		36	18	19.08	18.88	18.94	19.50
	DFT-s-OFDM 256QAM	1	1	17.07	16.96	16.85	17.50
1		77	16.89	16.81	16.79	17.50	
36		18	17.13	16.82	16.90	17.50	
CP-OFDM QPSK	1	1	20.13	19.89	19.91	21.00	
CP-OFDM 16QAM	1	1	19.50	19.48	19.33	20.00	
CP-OFDM 64QAM	1	1	18.22	18.02	17.91	19.00	
CP-OFDM 256QAM	1	1	15.35	15.18	15.10	16.00	
Bandwidth	Modulation	RB alloca	offset	Channel/Frequency(MHz)			Tune-up Limit
				344000/1720	349000/1745	354000/1770	



		tion					
100MHz	DFT-s-OFDM BPSK	1	1	21.59	21.45	21.36	22.00
		1	104	21.40	21.24	21.24	22.00
		50	25	21.53	21.27	21.35	22.00
	DFT-s-OFDM QPSK	1	1	21.52	21.40	21.26	22.00
		1	104	21.37	21.28	21.32	22.00
		50	25	21.50	21.31	21.46	22.00
	DFT-s-OFDM 16QAM	1	1	20.27	20.23	20.15	21.00
		1	104	20.49	20.13	20.10	21.00
		50	25	20.47	20.23	20.27	21.00
	DFT-s-OFDM 64QAM	1	1	19.02	18.95	18.82	19.50
		1	104	18.91	18.77	18.71	19.50
		50	25	19.01	18.80	18.86	19.50
	DFT-s-OFDM 256QAM	1	1	17.02	16.87	16.78	17.50
		1	104	16.85	16.73	16.71	17.50
		50	25	17.05	16.75	16.82	17.50
	CP-OFDM QPSK	1	1	20.17	19.86	19.85	21.00
	CP-OFDM 16QAM	1	1	19.45	19.41	19.27	20.00
	CP-OFDM 64QAM	1	1	18.17	17.97	17.86	19.00
	CP-OFDM 256QAM	1	1	15.28	15.10	15.02	16.00

9.5 WLAN Mode

SU mode

Wi-Fi 2.4G Ant 3	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
Full power&Level 2			
802.11b (1M)	1/2412	20	19.32
	6/2437	20	19.18
	11/2462	20	19.30
802.11g (6M)	1/2412	18	16.68
	6/2437	18	16.53
	11/2462	18	16.66
802.11n-HT20 (MCS0)	1/2412	16.5	15.52
	6/2437	16.5	15.33
	11/2462	16.5	15.28
802.11n-HT40 (MCS0)	3/2422	14	12.78
	6/2437	14	12.87
	9/2452	14	12.86
802.11ax-HE20 (MCS0)	1/2412	16.5	15.52
	6/2437	16.5	15.38
	11/2462	16.5	15.42
802.11ax-HE40 (MCS0)	3/2422	14	12.62
	6/2437	14	12.76
	9/2452	14	12.68

Note: Initial test configuration is 802.11b mode.

Wi-Fi 2.4G Ant 3	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
Level 3			
802.11b (1M)	1/2412	18	17.60
	6/2437	18	17.50
	11/2462	18	17.32
802.11g (6M)	1/2412	17.5	16.23
	6/2437	17.5	16.58
	11/2462	17.5	16.56
802.11n-HT20 (MCS0)	1/2412	16.5	15.52
	6/2437	16.5	15.33
	11/2462	16.5	15.28
802.11n-HT40	3/2422	14	12.78



(MCS0)	6/2437	14	12.87
	9/2452	14	12.86
802.11ax-HE20 (MCS0)	1/2412	16.5	15.52
	6/2437	16.5	15.38
	11/2462	16.5	15.42
802.11ax-HE40 (MCS0)	3/2422	14	12.62
	6/2437	14	12.76
	9/2452	14	12.68

Note: Initial test configuration is 802.11b mode.

Wi-Fi 2.4G Ant 3	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
Level 1			
802.11b (1M)	1/2412	17	16.09
	6/2437	17	16.32
	11/2462	17	15.89
802.11g (6M)	1/2412	16.5	16.21
	6/2437	16.5	15.65
	11/2462	16.5	15.69
802.11n-HT20 (MCS0)	1/2412	16.5	15.52
	6/2437	16.5	15.33
	11/2462	16.5	15.28
802.11n-HT40 (MCS0)	3/2422	14	12.78
	6/2437	14	12.87
	9/2452	14	12.86
802.11ax-HE20 (MCS0)	1/2412	16.5	15.52
	6/2437	16.5	15.38
	11/2462	16.5	15.42
802.11ax-HE40 (MCS0)	3/2422	14	12.62
	6/2437	14	12.76
	9/2452	14	12.68

Note: Initial test configuration is 802.11b mode.

Wi-Fi 2.4G Ant 3	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
Level 4			
802.11b (1M)	1/2412	14	13.65
	6/2437	14	13.24
	11/2462	14	13.26
802.11g	1/2412	13.5	12.25



(6M)	6/2437	13.5	13.25
	11/2462	13.5	12.95
802.11n-HT20 (MCS0)	1/2412	13.5	12.85
	6/2437	13.5	13.06
	11/2462	13.5	13.25
802.11n-HT40 (MCS0)	3/2422	13.5	12.97
	6/2437	13.5	12.65
	9/2452	13.5	11.95
802.11ax-HE20 (MCS0)	1/2412	13.5	12.06
	6/2437	13.5	12.32
	11/2462	13.5	11.85
802.11ax-HE40 (MCS0)	3/2422	13.5	11.75
	6/2437	13.5	12.45
	9/2452	13.5	11.85

Note: Initial test configuration is 802.11b mode.

Wi-Fi 2.4G Ant 4	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
Full power&Level 2			
802.11b (1M)	1/2412	20	19.92
	6/2437	20	19.85
	11/2462	20	19.97
802.11g (6M)	1/2412	17.5	15.93
	6/2437	17.5	15.36
	11/2462	17.5	15.62
802.11n-HT20 (MCS0)	1/2412	16	14.82
	6/2437	16	14.08
	11/2462	16	14.32
802.11n-HT40 (MCS0)	3/2422	13.5	11.88
	6/2437	13.5	11.82
	9/2452	13.5	12.26
802.11ax-HE20 (MCS0)	1/2412	16	14.82
	6/2437	16	14.22
	11/2462	16	14.38
802.11ax-HE40 (MCS0)	3/2422	13.5	11.98
	6/2437	13.5	11.66
	9/2452	13.5	12.06

Note: Initial test configuration is 802.11b mode.

Wi-Fi 2.4G Ant 4	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
Level 4			
802.11b (1M)	1/2412	13	12.06
	6/2437	13	11.88
	11/2462	13	12.10
802.11g (6M)	1/2412	12.5	11.37
	6/2437	12.5	11.20
	11/2462	12.5	11.18
802.11n-HT20 (MCS0)	1/2412	12.5	11.12
	6/2437	12.5	11.05
	11/2462	12.5	11.05
802.11n-HT40 (MCS0)	3/2422	12.5	11.42
	6/2437	12.5	11.55
	9/2452	12.5	11.45
802.11ax-HE20 (MCS0)	1/2412	12.5	11.06
	6/2437	12.5	10.92
	11/2462	12.5	11.22
802.11ax-HE40 (MCS0)	3/2422	12.5	11.07
	6/2437	12.5	11.11
	9/2452	12.5	11.02

Note: Initial test configuration is 802.11b mode.

Wi-Fi 2.4G Ant 4	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
Level 1			
802.11b (1M)	1/2412	16	15.06
	6/2437	16	15.18
	11/2462	16	15.21
802.11g (6M)	1/2412	15.5	14.60
	6/2437	15.5	14.80
	11/2462	15.5	15.10
802.11n-HT20 (MCS0)	1/2412	15.5	14.60
	6/2437	15.5	14.32
	11/2462	15.5	15.03
802.11n-HT40 (MCS0)	3/2422	13.5	11.88
	6/2437	13.5	11.82
	9/2452	13.5	12.26
802.11ax-HE20	1/2412	15.5	14.05



(MCS0)	6/2437	15.5	15.03
	11/2462	15.5	15.12
802.11ax-HE40 (MCS0)	3/2422	13.5	11.98
	6/2437	13.5	11.66
	9/2452	13.5	12.06

Note: Initial test configuration is 802.11b mode.

Wi-Fi 2.4G Ant 4	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
Level 3			
802.11b (1M)	1/2412	17	16.10
	6/2437	17	15.90
	11/2462	17	16.14
802.11g (6M)	1/2412	16.5	15.39
	6/2437	16.5	15.24
	11/2462	16.5	15.20
802.11n-HT20 (MCS0)	1/2412	16	14.82
	6/2437	16	14.08
	11/2462	16	14.32
802.11n-HT40 (MCS0)	3/2422	13.5	11.88
	6/2437	13.5	11.82
	9/2452	13.5	12.26
802.11ax-HE20 (MCS0)	1/2412	16	14.82
	6/2437	16	14.22
	11/2462	16	14.38
802.11ax-HE40 (MCS0)	3/2422	13.5	11.98
	6/2437	13.5	11.66
	9/2452	13.5	12.06

Note: Initial test configuration is 802.11b mode.

Wi-Fi 2.4G MIMO	Channel /Frequency(MHz)	Maximum Output Power (dBm)			
		Tune-up	Meas.	Ant4	Ant3
Full power&Level 1&Level 2&Level 3					
802.11n-HT20 (MCS0)	1/2412	19	18.43	14.97	15.83
	6/2437	19	17.69	14.12	15.17
	11/2462	19	17.76	14.28	15.18
802.11n-HT40 (MCS0)	3/2422	16	15.25	11.82	12.63
	6/2437	16	15.31	11.78	12.76
	9/2452	16	15.46	12.06	12.81



802.11ax-HE20 (MCS0)	1/2412	19	18.08	14.68	15.42
	6/2437	19	17.84	14.26	15.33
	11/2462	19	17.85	14.39	15.24
802.11ax-HE40 (MCS0)	3/2422	16	15.10	11.68	12.46
	6/2437	16	15.20	11.63	12.68
	9/2452	16	15.29	11.91	12.62

Note: Initial test configuration is 802.11n-HT20 mode.

Wi-Fi 2.4G MIMO Level 4	Channel /Frequency(MHz)	Maximum Output Power (dBm)			
		Tune-up	Meas.	Ant4	Ant3
802.11n-HT20 (MCS0)	1/2412	16	15.74	12.80	12.66
	6/2437	16	14.96	12.56	11.23
	11/2462	16	15.33	12.56	12.06
802.11n-HT40 (MCS0)	3/2422	15.5	15.29	12.33	12.23
	6/2437	15.5	15.11	12.11	12.09
	9/2452	15.5	14.80	11.89	11.69
802.11ax-HE20 (MCS0)	1/2412	15.5	14.93	12.06	11.78
	6/2437	15.5	15.28	12.56	11.95
	11/2462	15.5	14.83	11.59	12.03
802.11ax-HE40 (MCS0)	3/2422	15.5	14.83	11.56	12.06
	6/2437	15.5	15.24	12.21	12.25
	9/2452	15.5	15.12	12.26	11.96

Note: Initial test configuration is 802.11n-HT20 mode.

Wi-Fi 5G (U-NII-1) Ant 3	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
Full power&Level 2			
802.11a (6M)	36/5180	13.50	12.54
	40/5200	13.50	12.31
	48/5240	13.50	12.16
802.11n-HT20 (MCS0)	36/5180	18.50	18.15
	40/5200	18.50	18.03
	48/5240	18.50	17.87
802.11n-HT40 (MCS0)	38/5190	18.50	18.17
	46/5230	18.50	17.81
802.11ac-VHT20 (MCS0)	36/5180	18.50	18.13
	40/5200	18.50	17.94
	48/5240	18.50	17.82
802.11ac-VHT40 (MCS0)	38/5190	18.50	18.16
	46/5230	18.50	17.74
802.11ac-VHT80 (MCS0)	42/5210	15.50	14.35
802.11ax-HE20 (MCS0)	36/5180	18.00	16.92
	40/5200	18.00	16.78
	48/5240	18.00	16.61
802.11ax-HE40 (MCS0)	38/5190	16.00	15.09
	46/5230	16.00	14.73
802.11ax-HE80 (MCS0)	42/5210	15.50	14.38

Note. Initial test configuration is 802.11n-HT40 mode, since the highest maximum output power, the largest channel bandwidth, and lowest order.

Wi-Fi 5G (U-NII-1) Ant 3	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
Level 1			
802.11a (6M)	36/5180	13.50	12.54
	40/5200	13.50	12.31
	48/5240	13.50	12.16
802.11n-HT20 (MCS0)	36/5180	14.50	13.63
	40/5200	14.50	13.86
	48/5240	14.50	13.73
802.11n-HT40 (MCS0)	38/5190	14.50	13.11
	46/5230	14.50	13.09



802.11ac-VHT20 (MCS0)	36/5180	14.50	13.21
	40/5200	14.50	13.24
	48/5240	14.50	13.12
802.11ac-VHT40 (MCS0)	38/5190	14.50	13.05
	46/5230	14.50	13.11
802.11ac-VHT80 (MCS0)	42/5210	14.50	13.24
802.11ax-HE20 (MCS0)	36/5180	14.50	13.01
	40/5200	14.50	12.92
	48/5240	14.50	12.89
802.11ax-HE40 (MCS0)	38/5190	14.50	12.73
	46/5230	14.50	12.78
802.11ax-HE80 (MCS0)	42/5210	14.50	13.24

Note. Initial test configuration is 802.11n-HT20 mode, since the highest maximum output power, the largest channel bandwidth, and lowest order.

Wi-Fi 5G (U-NII-1) Ant 3 Level 3	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a (6M)	36/5180	13.50	12.54
	40/5200	13.50	12.31
	48/5240	13.50	12.16
802.11n-HT20 (MCS0)	36/5180	16.00	14.73
	40/5200	16.00	15.04
	48/5240	16.00	14.84
802.11n-HT40 (MCS0)	38/5190	15.50	14.21
	46/5230	15.50	14.20
802.11ac-VHT20 (MCS0)	36/5180	15.50	14.31
	40/5200	15.50	14.35
	48/5240	15.50	14.22
802.11ac-VHT40 (MCS0)	38/5190	15.50	14.05
	46/5230	15.50	14.25
802.11ac-VHT80 (MCS0)	42/5210	15.50	14.38
802.11ax-HE20 (MCS0)	36/5180	15.50	14.11
	40/5200	15.50	14.06
	48/5240	15.50	14.10
802.11ax-HE40 (MCS0)	38/5190	15.50	13.80
	46/5230	15.50	13.92



802.11ax-HE80 (MCS0)	42/5210	14.50	13.54
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Note. Initial test configuration is 802.11n-HT20 mode, since the highest maximum output power, the largest channel bandwidth, and lowest order.

Wi-Fi 5G (U-NII-1) Ant 3 Level 4	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a (6M)	36/5180	12.00	10.70
	40/5200	12.00	10.95
	48/5240	12.00	10.66
802.11n-HT20 (MCS0)	36/5180	11.50	10.17
	40/5200	11.50	10.28
	48/5240	11.50	10.40
802.11n-HT40 (MCS0)	38/5190	11.50	10.15
	46/5230	11.50	10.26
802.11ac-VHT20 (MCS0)	36/5180	11.50	10.25
	40/5200	11.50	10.41
	48/5240	11.50	10.33
802.11ac-VHT40 (MCS0)	38/5190	11.50	10.20
	46/5230	11.50	10.36
802.11ac-VHT80 (MCS0)	42/5210	11.50	10.32
802.11ax-HE20 (MCS0)	36/5180	11.50	10.00
	40/5200	11.50	10.17
	48/5240	11.50	10.04
802.11ax-HE40 (MCS0)	38/5190	11.50	9.88
	46/5230	11.50	9.98
802.11ax-HE80 (MCS0)	42/5210	11.50	9.96

Note. Initial test configuration is 802.11a mode, since the highest maximum output power, the largest channel bandwidth, and lowest order.

Wi-Fi 5G (U-NII-2A) Ant 3 Full power&Level 2	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a (6M)	52/5260	13.00	12.21
	56/5280	13.00	11.87
	60/5300	13.00	11.96
802.11n-HT20 (MCS0)	52/5260	18.00	16.93
	56/5280	18.00	16.62



	60/5300	18.00	16.74
802.11n-HT40 (MCS0)	54/5270	15.00	13.95
	62/5310	15.00	13.93
802.11ac-HT20 (MCS0)	52/5260	18.00	16.88
	56/5280	18.00	16.59
	60/5300	18.00	16.64
802.11ac-HT40 (MCS0)	54/5270	15.00	13.89
	62/5310	15.00	13.91
802.11ac-HT80 (MCS0)	58/5290	14.50	13.23
802.11ax-HE20 (MCS0)	52/5260	16.50	15.57
	60/5300	16.50	15.22
	64/5320	16.50	15.37
802.11ax-HE40 (MCS0)	54/5270	15.00	13.82
	62/5310	15.00	13.86
802.11ax-HE80 (MCS0)	58/5290	14.00	13.23

Note. Initial test configuration is 802.11n-HT20 mode, since the highest maximum output power, the largest channel bandwidth, and lowest order.

Wi-Fi 5G (U-NII-2A)	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
Level 1			
802.11a (6M)	52/5260	13.00	12.21
	56/5280	13.00	11.87
	60/5300	13.00	11.96
802.11n-HT20 (MCS0)	52/5260	15.00	14.57
	56/5280	15.00	14.80
	60/5300	15.00	14.60
802.11n-HT40 (MCS0)	54/5270	15.00	13.95
	62/5310	15.00	13.93
802.11ac-HT20 (MCS0)	52/5260	15.00	14.15
	56/5280	15.00	14.00
	60/5300	15.00	14.06
802.11ac-HT40 (MCS0)	54/5270	15.00	13.89
	62/5310	15.00	13.91
802.11ac-HT80 (MCS0)	58/5290	14.50	13.23
802.11ax-HE20 (MCS0)	52/5260	15.00	13.95
	60/5300	15.00	13.82



	64/5320	15.00	13.83
802.11ax-HE40 (MCS0)	54/5270	15.00	13.82
	62/5310	15.00	13.86
802.11ax-HE80 (MCS0)	58/5290	14.00	13.23

Note. Initial test configuration is 802.11n-HT20 mode, since the highest maximum output power, the largest channel bandwidth, and lowest order.

Wi-Fi 5G (U-NII-2A) Ant 3 Level 3	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a (6M)	52/5260	13.00	12.21
	56/5280	13.00	11.87
	60/5300	13.00	11.96
802.11n-HT20 (MCS0)	52/5260	16.50	15.53
	56/5280	16.50	15.62
	60/5300	16.50	15.50
802.11n-HT40 (MCS0)	54/5270	15.00	13.95
	62/5310	15.00	13.93
802.11ac-HT20 (MCS0)	52/5260	16.50	15.32
	56/5280	16.50	15.11
	60/5300	16.50	15.09
802.11ac-HT40 (MCS0)	54/5270	15.00	13.89
	62/5310	15.00	13.91
802.11ac-HT80 (MCS0)	58/5290	14.50	13.23
802.11ax-HE20 (MCS0)	52/5260	16.50	15.57
	60/5300	16.50	15.22
	64/5320	16.50	15.37
802.11ax-HE40 (MCS0)	54/5270	15.00	13.82
	62/5310	15.00	13.86
802.11ax-HE80 (MCS0)	58/5290	14.00	13.23

Note. Initial test configuration is 802.11n-HT20 mode, since the highest maximum output power, the largest channel bandwidth, and lowest order.

Wi-Fi 5G (U-NII-2A) Ant 3 Level 4	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a	52/5260	13.00	12.21



(6M)	56/5280	13.00	11.87
	60/5300	13.00	11.96
802.11n-HT20 (MCS0)	52/5260	12.50	11.20
	56/5280	12.50	11.32
	60/5300	12.50	11.45
802.11n-HT40 (MCS0)	54/5270	12.50	11.19
	62/5310	12.50	11.28
802.11ac-HT20 (MCS0)	52/5260	12.50	11.28
	56/5280	12.50	11.11
	60/5300	12.50	11.36
802.11ac-HT40 (MCS0)	54/5270	12.50	11.03
	62/5310	12.50	11.19
802.11ac-HT80 (MCS0)	58/5290	12.50	10.87
802.11ax-HE20 (MCS0)	52/5260	12.50	11.08
	60/5300	12.50	11.02
	64/5320	12.50	11.00
802.11ax-HE40 (MCS0)	54/5270	12.50	11.05
	62/5310	12.50	11.22
802.11ax-HE80 (MCS0)	58/5290	12.50	11.21

Note. Initial test configuration is 802.11a mode, since the highest maximum output power, the largest channel bandwidth, and lowest order.

Wi-Fi 5G (U-NII-2C) Ant 3 Full power&Level 2	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a (6M)	100/5500	14.00	12.54
	116/5580	14.00	12.76
	140/5700	14.00	13.06
	144/5720	14.00	13.13
802.11n-HT20 (MCS0)	100/5500	13.50	12.29
	116/5580	13.50	12.52
	140/5700	13.50	12.81
	144/5720	13.50	12.88
802.11n-HT40 (MCS0)	102/5510	16.00	14.54
	110/5550	16.00	14.56
	134/5670	16.00	15.66
	142/5710	16.00	15.34
802.11ac-HT20	100/5500	13.50	12.31



(MCS0)	116/5580	13.50	12.48
	140/5700	13.50	12.82
	144/5720	13.50	12.86
802.11ac-HT40 (MCS0)	102/5510	16.00	14.46
	110/5550	16.00	14.58
	134/5670	16.00	15.64
	142/5710	16.00	15.28
802.11ac-HT80 (MCS0)	106/5530	17.50	16.09
	138/5690	17.50	17.28
802.11ax-HE20 (MCS0)	100/5500	13.50	12.37
	116/5580	13.50	12.64
	140/5700	13.50	12.71
	144/5720	13.50	12.83
802.11ax-HE40 (MCS0)	102/5510	15.50	13.74
	110/5550	15.50	13.93
	134/5670	15.50	14.92
	142/5710	15.50	14.51
802.11ax-HE80 (MCS0)	106/5530	15.50	14.07
	138/5690	15.50	15.12

Note. Initial test configuration is 802.11ac-HT80 mode, since the highest maximum output power, the largest channel bandwidth, and lowest order.

Wi-Fi 5G (U-NII-2C) Ant 3 Level 1	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a (6M)	100/5500	14.00	12.54
	116/5580	14.00	12.76
	140/5700	14.00	13.06
	144/5720	14.00	13.13
802.11n-HT20 (MCS0)	100/5500	13.50	12.29
	116/5580	13.50	12.52
	140/5700	13.50	12.81
	144/5720	13.50	12.88
802.11n-HT40 (MCS0)	102/5510	14.50	12.60
	110/5550	14.50	12.58
	134/5670	14.50	12.70
	142/5710	14.50	12.66
802.11ac-HT20 (MCS0)	100/5500	13.50	12.31
	116/5580	13.50	12.48
	140/5700	13.50	12.82



	144/5720	13.50	12.86
802.11ac-HT40 (MCS0)	102/5510	14.00	12.66
	110/5550	14.00	12.50
	134/5670	14.00	12.34
	142/5710	14.00	12.30
802.11ac-HT80 (MCS0)	106/5530	14.50	14.02
	138/5690	14.50	13.95
802.11ax-HE20 (MCS0)	100/5500	13.50	12.37
	116/5580	13.50	12.64
	140/5700	13.50	12.71
	144/5720	13.50	12.83
802.11ax-HE40 (MCS0)	102/5510	14.50	12.91
	110/5550	14.50	12.93
	134/5670	14.50	12.85
	142/5710	14.50	12.71
802.11ax-HE80 (MCS0)	106/5530	14.50	12.81
	138/5690	14.50	12.90

Note. Initial test configuration is 802.11ac-HT80 mode, since the highest maximum output power, the largest channel bandwidth, and lowest order.

Wi-Fi 5G (U-NII-2C) Ant 3 Level 3	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a (6M)	100/5500	14.00	12.54
	116/5580	14.00	12.76
	140/5700	14.00	13.06
	144/5720	14.00	13.13
802.11n-HT20 (MCS0)	100/5500	13.50	12.29
	116/5580	13.50	12.52
	140/5700	13.50	12.81
	144/5720	13.50	12.88
802.11n-HT40 (MCS0)	102/5510	16.00	14.54
	110/5550	16.00	14.56
	134/5670	16.00	15.66
	142/5710	16.00	15.34
802.11ac-HT20 (MCS0)	100/5500	13.50	12.31
	116/5580	13.50	12.48
	140/5700	13.50	12.82
	144/5720	13.50	12.86
802.11ac-HT40	102/5510	16.00	14.46



(MCS0)	110/5550	16.00	14.58
	134/5670	16.00	15.64
	142/5710	16.00	15.28
802.11ac-HT80 (MCS0)	106/5530	16.50	15.20
	138/5690	16.50	16.12
802.11ax-HE20 (MCS0)	100/5500	13.50	12.37
	116/5580	13.50	12.64
	140/5700	13.50	12.71
	144/5720	13.50	12.83
802.11ax-HE40 (MCS0)	102/5510	15.50	13.74
	110/5550	15.50	13.93
	134/5670	15.50	14.92
802.11ax-HE80 (MCS0)	142/5710	15.50	14.51
	106/5530	15.50	14.07
	138/5690	15.50	15.12

Note. Initial test configuration is 802.11ac-HT80 mode, since the highest maximum output power, the largest channel bandwidth, and lowest order.

Wi-Fi 5G (U-NII-2C) Ant 3 Level 4	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a (6M)	100/5500	12.00	10.50
	116/5580	12.00	10.62
	140/5700	12.00	10.66
	144/5720	12.00	10.69
802.11n-HT20 (MCS0)	100/5500	11.50	10.05
	116/5580	11.50	10.18
	140/5700	11.50	10.15
	144/5720	11.50	10.30
802.11n-HT40 (MCS0)	102/5510	11.50	10.03
	110/5550	11.50	10.11
	134/5670	11.50	10.12
802.11ac-HT20 (MCS0)	142/5710	11.50	10.29
	100/5500	11.50	9.96
	116/5580	11.50	10.21
802.11ac-HT40 (MCS0)	140/5700	11.50	9.88
	144/5720	11.50	10.03
	102/5510	11.50	10.25
802.11ac-HT40 (MCS0)	110/5550	11.50	9.92
	134/5670	11.50	10.06



	142/5710	11.50	10.17
802.11ac-HT80 (MCS0)	106/5530	11.50	10.15
	138/5690	11.50	10.31
802.11ax-HE20 (MCS0)	100/5500	11.50	10.10
	116/5580	11.50	9.98
	140/5700	11.50	9.87
	144/5720	11.50	9.89
802.11ax-HE40 (MCS0)	102/5510	11.50	10.13
	110/5550	11.50	10.11
	134/5670	11.50	10.28
	142/5710	11.50	10.00
802.11ax-HE80 (MCS0)	106/5530	11.50	10.18
	138/5690	11.50	10.27

Note. Initial test configuration is 802.11a mode, since the highest maximum output power, the largest channel bandwidth, and lowest order.

Wi-Fi 5G (U-NII-3) Ant 3 Full power&Level 2	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a (6M)	149/5745	15.50	13.82
	157/5785	15.50	13.78
	165/5825	15.50	14.03
802.11n-HT20 (MCS0)	149/5745	14.00	12.58
	157/5785	14.00	12.46
	165/5825	14.00	12.72
802.11n-HT40 (MCS0)	151/5755	16.00	14.32
	159/5795	16.00	14.75
802.11ac-HT20 (MCS0)	149/5745	14.00	12.47
	157/5785	14.00	12.43
	165/5825	14.00	12.72
802.11ac-HT40 (MCS0)	151/5755	15.50	14.28
	159/5795	15.50	14.74
802.11ac-HT80 (MCS0)	155/5775	17.00	16.02
802.11ax-HE20 (MCS0)	149/5745	14.00	12.47
	157/5785	14.00	12.49
	165/5825	14.00	12.74
802.11ax-HE40 (MCS0)	151/5755	15.00	13.53
	159/5795	15.00	14.01
802.11ax-HE80	155/5775	17.00	15.89



(MCS0)			
Note. Initial test configuration is 802.11ac-HT80 mode, since the highest maximum output power, the largest channel bandwidth, and lowest order.			

Wi-Fi 5G (U-NII-3) Ant 3	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
Level 1			
802.11a (6M)	149/5745	14.00	12.76
	157/5785	14.00	12.59
	165/5825	14.00	12.52
802.11n-HT20 (MCS0)	149/5745	13.50	11.86
	157/5785	13.50	11.97
	165/5825	13.50	12.20
802.11n-HT40 (MCS0)	151/5755	13.50	12.04
	159/5795	13.50	12.07
802.11ac-HT20 (MCS0)	149/5745	13.50	11.95
	157/5785	13.50	11.93
	165/5825	13.50	12.05
802.11ac-HT40 (MCS0)	151/5755	13.50	12.08
	159/5795	13.50	11.90
802.11ac-HT80 (MCS0)	155/5775	13.50	11.96
802.11ax-HE20 (MCS0)	149/5745	13.50	11.89
	157/5785	13.50	11.95
	165/5825	13.50	12.08
802.11ax-HE40 (MCS0)	151/5755	13.50	11.85
	159/5795	13.50	11.76
802.11ax-HE80 (MCS0)	155/5775	13.50	11.72

Note. Initial test configuration is 802.11a mode, since the highest maximum output power, the largest channel bandwidth, and lowest order.

Wi-Fi 5G (U-NII-3) Ant 3	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
Level 3			
802.11a (6M)	149/5745	12.00	10.65
	157/5785	12.00	10.61
	165/5825	12.00	10.47
802.11n-HT20 (MCS0)	149/5745	11.50	9.81
	157/5785	11.50	9.99



	165/5825	11.50	10.15
802.11n-HT40 (MCS0)	151/5755	11.50	9.99
	159/5795	11.50	10.09
802.11ac-HT20 (MCS0)	149/5745	11.50	9.97
	157/5785	11.50	9.88
	165/5825	11.50	10.00
802.11ac-HT40 (MCS0)	151/5755	11.50	10.10
	159/5795	11.50	9.85
802.11ac-HT80 (MCS0)	155/5775	11.50	9.98
802.11ax-HE20 (MCS0)	149/5745	11.50	9.84
	157/5785	11.50	9.90
	165/5825	11.50	10.10
802.11ax-HE40 (MCS0)	151/5755	11.50	9.80
	159/5795	11.50	9.78
802.11ax-HE80 (MCS0)	155/5775	11.50	10.05

Note. Initial test configuration is 802.11a mode, since the highest maximum output power, the largest channel bandwidth, and lowest order.

Wi-Fi 5G (U-NII-3) Ant 3 Level 4	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a (6M)	149/5745	12.00	10.65
	157/5785	12.00	10.61
	165/5825	12.00	10.47
802.11n-HT20 (MCS0)	149/5745	11.50	9.81
	157/5785	11.50	9.99
	165/5825	11.50	10.15
802.11n-HT40 (MCS0)	151/5755	11.50	9.99
	159/5795	11.50	10.09
802.11ac-HT20 (MCS0)	149/5745	11.50	9.97
	157/5785	11.50	9.88
	165/5825	11.50	10.00
802.11ac-HT40 (MCS0)	151/5755	11.50	10.10
	159/5795	11.50	9.85
802.11ac-HT80 (MCS0)	155/5775	11.50	9.98
802.11ax-HE20 (MCS0)	149/5745	11.50	9.84
	157/5785	11.50	9.90



	165/5825	11.50	10.10
802.11ax-HE40 (MCS0)	151/5755	11.50	9.80
	159/5795	11.50	9.78
802.11ax-HE80 (MCS0)	155/5775	11.50	10.05

Note. Initial test configuration is 802.11a mode, since the highest maximum output power, the largest channel bandwidth, and lowest order.

Wi-Fi 5G (U-NII-1) Ant 4 Full power&Level 2	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a (6M)	36/5180	13.00	11.52
	40/5200	13.00	11.44
	48/5240	13.00	11.28
802.11n-HT20 (MCS0)	36/5180	18.00	17.19
	40/5200	18.00	17.09
	48/5240	18.00	16.92
802.11n-HT40 (MCS0)	38/5190	18.00	17.05
	46/5230	18.00	16.94
802.11ac-VHT20 (MCS0)	36/5180	18.00	17.43
	40/5200	18.00	17.20
	48/5240	18.00	17.05
802.11ac-VHT40 (MCS0)	38/5190	18.00	17.13
	46/5230	18.00	16.97
802.11ac-VHT80 (MCS0)	42/5210	15.50	13.52
802.11ax-HE20 (MCS0)	36/5180	17.50	15.94
	40/5200	17.50	15.85
	48/5240	17.50	15.74
802.11ax-HE40 (MCS0)	38/5190	15.50	14.04
	46/5230	15.50	13.87
802.11ax-HE80 (MCS0)	42/5210	15.00	13.52

Note. Initial test configuration is 802.11ac-VHT20 mode, since the highest maximum output power, the largest channel bandwidth, and lowest order.

Wi-Fi 5G (U-NII-1) Ant 4 Level 1	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a (6M)	36/5180	13.00	11.52
	40/5200	13.00	11.44



	48/5240	13.00	11.28
802.11n-HT20 (MCS0)	36/5180	13.50	11.98
	40/5200	13.50	12.19
	48/5240	13.50	12.28
802.11n-HT40 (MCS0)	38/5190	13.50	12.54
	46/5230	13.50	12.41
802.11ac-VHT20 (MCS0)	36/5180	13.50	12.70
	40/5200	13.50	12.82
	48/5240	13.50	12.63
802.11ac-VHT40 (MCS0)	38/5190	13.50	12.03
	46/5230	13.50	12.35
802.11ac-VHT80 (MCS0)	42/5210	13.50	12.08
802.11ax-HE20 (MCS0)	36/5180	13.50	11.90
	40/5200	13.50	12.00
	48/5240	13.50	12.07
802.11ax-HE40 (MCS0)	38/5190	13.50	12.11
	46/5230	13.50	12.04
802.11ax-HE80 (MCS0)	42/5210	13.50	12.38

Note. Initial test configuration is 802.11ac-VHT20 mode, since the highest maximum output power, the largest channel bandwidth, and lowest order.

Wi-Fi 5G (U-NII-1) Ant 4 Level 3	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a (6M)	36/5180	13.00	11.52
	40/5200	13.00	11.44
	48/5240	13.00	11.28
802.11n-HT20 (MCS0)	36/5180	16.50	14.63
	40/5200	16.50	14.52
	48/5240	16.50	14.38
802.11n-HT40 (MCS0)	38/5190	16.50	14.43
	46/5230	16.50	14.62
802.11ac-VHT20 (MCS0)	36/5180	17.00	15.49
	40/5200	17.00	15.48
	48/5240	17.00	15.61
802.11ac-VHT40 (MCS0)	38/5190	16.50	14.53
	46/5230	16.50	14.68
802.11ac-VHT80	42/5210	15.50	13.52



(MCS0)			
802.11ax-HE20 (MCS0)	36/5180	16.50	14.46
	40/5200	16.50	14.72
	48/5240	16.50	14.82
802.11ax-HE40 (MCS0)	38/5190	15.50	14.04
	46/5230	15.50	13.87
802.11ax-HE80 (MCS0)	42/5210	15.00	13.52
<p>Note. Initial test configuration is 802.11ac-VHT20 mode, since the highest maximum output power, the largest channel bandwidth, and lowest order.</p>			

Wi-Fi 5G (U-NII-1) Ant 4 Level 4	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a (6M)	36/5180	13.00	11.20
	40/5200	13.00	11.18
	48/5240	13.00	11.36
802.11n-HT20 (MCS0)	36/5180	12.50	10.56
	40/5200	12.50	10.84
	48/5240	12.50	10.90
802.11n-HT40 (MCS0)	38/5190	12.50	10.66
	46/5230	12.50	10.46
802.11ac-VHT20 (MCS0)	36/5180	12.50	10.85
	40/5200	12.50	10.90
	48/5240	12.50	10.75
802.11ac-VHT40 (MCS0)	38/5190	12.50	10.61
	46/5230	12.50	11.00
802.11ac-VHT80 (MCS0)	42/5210	12.50	10.73
802.11ax-HE20 (MCS0)	36/5180	12.50	10.45
	40/5200	12.50	10.62
	48/5240	12.50	10.72
802.11ax-HE40 (MCS0)	38/5190	12.50	10.69
	46/5230	12.50	10.66
802.11ax-HE80 (MCS0)	42/5210	12.50	10.69
<p>Note. Initial test configuration is 802.11a mode, since the highest maximum output power, the largest channel bandwidth, and lowest order.</p>			



Wi-Fi 5G (U-NII-2A) Ant 4	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
Full power&Level 2			
802.11a (6M)	52/5260	13.00	11.31
	56/5280	13.00	11.08
	60/5300	13.00	11.16
802.11n-HT20 (MCS0)	52/5260	17.50	16.02
	56/5280	17.50	15.91
	60/5300	17.50	15.82
802.11n-HT40 (MCS0)	54/5270	15.00	13.16
	62/5310	15.00	13.14
802.11ac-HT20 (MCS0)	52/5260	17.50	16.03
	56/5280	17.50	15.94
	60/5300	17.50	16.01
802.11ac-HT40 (MCS0)	54/5270	15.00	13.08
	62/5310	15.00	13.12
802.11ac-HT80 (MCS0)	58/5290	14.00	13.16
802.11ax-HE20 (MCS0)	52/5260	16.50	14.73
	60/5300	16.50	14.54
	64/5320	16.50	14.64
802.11ax-HE40 (MCS0)	54/5270	15.00	13.02
	62/5310	15.00	13.08
802.11ax-HE80 (MCS0)	58/5290	14.00	12.43

Note. Initial test configuration is 802.11ac-VHT20 mode, since the highest maximum output power, the largest channel bandwidth, and lowest order.

Wi-Fi 5G (U-NII-2A) Ant 4	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
Level 1			
802.11a (6M)	52/5260	13.00	11.31
	56/5280	13.00	11.08
	60/5300	13.00	11.16
802.11n-HT20 (MCS0)	52/5260	14.00	12.41
	56/5280	14.00	12.36
	60/5300	14.00	12.18
802.11n-HT40 (MCS0)	54/5270	14.00	12.26
	62/5310	14.00	12.14



802.11ac-HT20 (MCS0)	52/5260	14.00	12.08
	56/5280	14.00	12.47
	60/5300	14.00	12.33
802.11ac-HT40 (MCS0)	54/5270	14.00	12.52
	62/5310	14.00	12.33
802.11ac-HT80 (MCS0)	58/5290	14.00	13.16
802.11ax-HE20 (MCS0)	52/5260	14.00	12.33
	60/5300	14.00	12.27
	64/5320	14.00	12.37
802.11ax-HE40 (MCS0)	54/5270	14.00	12.44
	62/5310	14.00	12.49
802.11ax-HE80 (MCS0)	58/5290	14.00	12.43

Note. Initial test configuration is 802.11ac-VHT80mode, since the highest maximum output power, the largest channel bandwidth, and lowest order.

Wi-Fi 5G (U-NII-2A) Ant 4 Level 3	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a (6M)	52/5260	13.00	11.31
	56/5280	13.00	11.08
	60/5300	13.00	11.16
802.11n-HT20 (MCS0)	52/5260	16.50	15.03
	56/5280	16.50	14.95
	60/5300	16.50	14.80
802.11n-HT40 (MCS0)	54/5270	15.00	13.16
	62/5310	15.00	13.14
802.11ac-HT20 (MCS0)	52/5260	16.50	15.12
	56/5280	16.50	15.03
	60/5300	16.50	15.01
802.11ac-HT40 (MCS0)	54/5270	15.00	13.08
	62/5310	15.00	13.12
802.11ac-HT80 (MCS0)	58/5290	14.00	13.16
802.11ax-HE20 (MCS0)	52/5260	16.50	14.73
	60/5300	16.50	14.54
	64/5320	16.50	14.64
802.11ax-HE40 (MCS0)	54/5270	15.00	13.02
	62/5310	15.00	13.08



802.11ax-HE80 (MCS0)	58/5290	14.00	12.43
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Note. Initial test configuration is 802.11ac-HT20 mode, since the highest maximum output power, the largest channel bandwidth, and lowest order.

Wi-Fi 5G (U-NII-2A) Ant 4 Level 4	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a (6M)	52/5260	11.00	9.58
	56/5280	11.00	9.40
	60/5300	11.00	9.45
802.11n-HT20 (MCS0)	52/5260	10.50	8.67
	56/5280	10.50	8.62
	60/5300	10.50	8.84
802.11n-HT40 (MCS0)	54/5270	10.50	8.77
	62/5310	10.50	8.68
802.11ac-HT20 (MCS0)	52/5260	10.50	8.96
	56/5280	10.50	8.82
	60/5300	10.50	8.97
802.11ac-HT40 (MCS0)	54/5270	10.50	8.72
	62/5310	10.50	8.90
802.11ac-HT80 (MCS0)	58/5290	10.50	8.84
802.11ax-HE20 (MCS0)	52/5260	10.50	8.67
	60/5300	10.50	9.03
	64/5320	10.50	8.94
802.11ax-HE40 (MCS0)	54/5270	10.50	8.80
	62/5310	10.50	8.88
802.11ax-HE80 (MCS0)	58/5290	10.50	9.00

Note. Initial test configuration is 802.11a mode, since the highest maximum output power, the largest channel bandwidth, and lowest order.

Wi-Fi 5G (U-NII-2C) Ant 4 Full power&Level 2	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a (6M)	100/5500	13.50	11.54
	116/5580	13.50	11.43
	140/5700	13.50	11.23
	144/5720	13.50	11.42
802.11n-HT20	100/5500	13.00	11.26



(MCS0)	116/5580	13.00	11.25
	140/5700	13.00	11.08
	144/5720	13.00	11.24
802.11n-HT40 (MCS0)	102/5510	15.50	13.83
	110/5550	15.50	13.59
	134/5670	15.50	13.63
	142/5710	15.50	13.63
802.11ac-HT20 (MCS0)	100/5500	13.00	11.36
	116/5580	13.00	11.32
	140/5700	13.00	11.13
	144/5720	13.00	11.33
802.11ac-HT40 (MCS0)	102/5510	15.50	13.79
	110/5550	15.50	13.62
	134/5670	15.50	13.60
	142/5710	15.50	13.66
802.11ac-HT80 (MCS0)	106/5530	17.00	15.32
	138/5690	17.00	15.41
802.11ax-HE20 (MCS0)	100/5500	13.00	11.47
	116/5580	13.00	11.41
	140/5700	13.00	11.24
	144/5720	13.00	11.43
802.11ax-HE40 (MCS0)	102/5510	15.00	13.24
	110/5550	15.00	12.95
	134/5670	15.00	13.06
	142/5710	15.00	13.10
802.11ax-HE80 (MCS0)	106/5530	15.00	13.39
	138/5690	15.00	13.51

Note. Initial test configuration is 802.11ac-HT80 mode, since the highest maximum output power, the largest channel bandwidth, and lowest order.

Wi-Fi 5G (U-NII-2C) Ant 4 Level 1	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a (6M)	100/5500	13.50	11.54
	116/5580	13.50	11.43
	140/5700	13.50	11.23
	144/5720	13.50	11.42
802.11n-HT20 (MCS0)	100/5500	13.00	11.26
	116/5580	13.00	11.25
	140/5700	13.00	11.08



	144/5720	13.00	11.24
802.11n-HT40 (MCS0)	102/5510	13.50	12.03
	110/5550	13.50	12.06
	134/5670	13.50	12.14
	142/5710	13.50	12.04
802.11ac-HT20 (MCS0)	100/5500	13.00	11.36
	116/5580	13.00	11.32
	140/5700	13.00	11.13
	144/5720	13.00	11.33
802.11ac-HT40 (MCS0)	102/5510	13.50	12.05
	110/5550	13.50	12.06
	134/5670	13.50	11.99
	142/5710	13.50	12.07
802.11ac-HT80 (MCS0)	106/5530	13.50	12.81
	138/5690	13.50	12.97
802.11ax-HE20 (MCS0)	100/5500	13.00	11.47
	116/5580	13.00	11.41
	140/5700	13.00	11.24
	144/5720	13.00	11.43
802.11ax-HE40 (MCS0)	102/5510	13.50	11.65
	110/5550	13.50	11.95
	134/5670	13.50	12.06
	142/5710	13.50	11.70
802.11ax-HE80 (MCS0)	106/5530	13.50	11.75
	138/5690	13.50	11.70

Note. Initial test configuration is 802.11ac-HT80 mode, since the highest maximum output power, the largest channel bandwidth, and lowest order.

Wi-Fi 5G (U-NII-2C) Ant 4 Level 3	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a (6M)	100/5500	13.50	11.54
	116/5580	13.50	11.43
	140/5700	13.50	11.23
	144/5720	13.50	11.42
802.11n-HT20 (MCS0)	100/5500	13.00	11.26
	116/5580	13.00	11.25
	140/5700	13.00	11.08
	144/5720	13.00	11.24
802.11n-HT40	102/5510	15.50	13.83



(MCS0)	110/5550	15.50	13.59
	134/5670	15.50	13.63
	142/5710	15.50	13.63
802.11ac-HT20 (MCS0)	100/5500	13.00	11.36
	116/5580	13.00	11.32
	140/5700	13.00	11.13
	144/5720	13.00	11.33
802.11ac-HT40 (MCS0)	102/5510	15.50	13.79
	110/5550	15.50	13.62
	134/5670	15.50	13.60
	142/5710	15.50	13.66
802.11ac-HT80 (MCS0)	106/5530	16.00	14.38
	138/5690	16.00	14.62
802.11ax-HE20 (MCS0)	100/5500	13.00	11.47
	116/5580	13.00	11.41
	140/5700	13.00	11.24
	144/5720	13.00	11.43
802.11ax-HE40 (MCS0)	102/5510	15.00	13.24
	110/5550	15.00	12.95
	134/5670	15.00	13.06
	142/5710	15.00	13.10
802.11ax-HE80 (MCS0)	106/5530	15.00	13.39
	138/5690	15.00	13.51

Note. Initial test configuration is 802.11ac-HT80 mode, since the highest maximum output power, the largest channel bandwidth, and lowest order.

Wi-Fi 5G (U-NII-2C) Ant 4 Level 4	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a (6M)	100/5500	10.50	9.68
	116/5580	10.50	9.87
	140/5700	10.50	9.63
	144/5720	10.50	9.72
802.11n-HT20 (MCS0)	100/5500	10.50	9.70
	116/5580	10.50	10.16
	140/5700	10.50	9.65
	144/5720	10.50	9.94
802.11n-HT40 (MCS0)	102/5510	10.50	9.87
	110/5550	10.50	9.71
	134/5670	10.50	10.06



	142/5710	10.50	10.15
802.11ac-HT20 (MCS0)	100/5500	10.50	9.92
	116/5580	10.50	10.00
	140/5700	10.50	9.75
	144/5720	10.50	10.00
802.11ac-HT40 (MCS0)	102/5510	10.50	9.87
	110/5550	10.50	9.77
	134/5670	10.50	9.87
	142/5710	10.50	10.13
802.11ac-HT80 (MCS0)	106/5530	11.00	10.47
	138/5690	11.00	10.33
802.11ax-HE20 (MCS0)	100/5500	10.50	9.98
	116/5580	10.50	10.10
	140/5700	10.50	10.00
	144/5720	10.50	9.85
802.11ax-HE40 (MCS0)	102/5510	10.50	10.01
	110/5550	10.50	10.07
	134/5670	10.50	10.02
	142/5710	10.50	9.95
802.11ax-HE80 (MCS0)	106/5530	10.50	9.98
	138/5690	10.50	10.10

Note. Initial test configuration is 802.11ac-HT80 mode, since the highest maximum output power, the largest channel bandwidth, and lowest order.

Wi-Fi 5G (U-NII-3) Ant 4 Full power&Level 2	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a (6M)	149/5745	15.00	13.03
	157/5785	15.00	12.74
	165/5825	15.00	12.89
802.11n-HT20 (MCS0)	149/5745	13.50	11.70
	157/5785	13.50	11.52
	165/5825	13.50	11.81
802.11n-HT40 (MCS0)	151/5755	15.50	13.52
	159/5795	15.50	13.74
802.11ac-HT20 (MCS0)	149/5745	13.50	11.85
	157/5785	13.50	11.61
	165/5825	13.50	11.81
802.11ac-HT40 (MCS0)	151/5755	15.00	13.48
	159/5795	15.00	13.74



802.11ac-HT80 (MCS0)	155/5775	16.50	15.18
802.11ax-HE20 (MCS0)	149/5745	13.50	11.88
	157/5785	13.50	11.72
	165/5825	13.50	11.91
802.11ax-HE40 (MCS0)	151/5755	14.50	12.92
	159/5795	14.50	13.13
802.11ax-HE80 (MCS0)	155/5775	16.50	15.26

Note. Initial test configuration is 802.11ax-HE80 mode, since the highest maximum output power, the largest channel bandwidth, and lowest order.

Wi-Fi 5G (U-NII-3) Ant 4 Level 1	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a (6M)	149/5745	15.00	13.03
	157/5785	15.00	12.74
	165/5825	15.00	12.89
802.11n-HT20 (MCS0)	149/5745	13.50	11.70
	157/5785	13.50	11.52
	165/5825	13.50	11.81
802.11n-HT40 (MCS0)	151/5755	14.50	12.68
	159/5795	14.50	12.78
802.11ac-HT20 (MCS0)	149/5745	13.50	11.85
	157/5785	13.50	11.61
	165/5825	13.50	11.81
802.11ac-HT40 (MCS0)	151/5755	15.00	13.48
	159/5795	15.00	13.74
802.11ac-HT80 (MCS0)	155/5775	14.50	12.93
802.11ax-HE20 (MCS0)	149/5745	13.50	11.88
	157/5785	13.50	11.72
	165/5825	13.50	11.91
802.11ax-HE40 (MCS0)	151/5755	14.50	12.92
	159/5795	14.50	13.13
802.11ax-HE80 (MCS0)	155/5775	14.50	13.12

Note. Initial test configuration is 802.11ac-HT40 mode, since the highest maximum output power, the largest channel bandwidth, and lowest order.



Wi-Fi 5G (U-NII-3) Ant 4	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
Level 3			
802.11a (6M)	149/5745	13.00	11.18
	157/5785	13.00	11.16
	165/5825	13.00	11.11
802.11n-HT20 (MCS0)	149/5745	12.50	10.66
	157/5785	12.50	10.85
	165/5825	12.50	10.90
802.11n-HT40 (MCS0)	151/5755	12.50	10.65
	159/5795	12.50	10.52
802.11ac-HT20 (MCS0)	149/5745	12.50	10.61
	157/5785	12.50	10.63
	165/5825	12.50	10.55
802.11ac-HT40 (MCS0)	151/5755	12.50	10.53
	159/5795	12.50	10.55
802.11ac-HT80 (MCS0)	155/5775	12.50	10.72
802.11ax-HE20 (MCS0)	149/5745	12.50	10.55
	157/5785	12.50	10.60
	165/5825	12.50	10.49
802.11ax-HE40 (MCS0)	151/5755	12.50	10.72
	159/5795	12.50	10.62
802.11ax-HE80 (MCS0)	155/5775	12.50	10.76

Note. Initial test configuration is 802.11a mode, since the highest maximum output power, the largest channel bandwidth, and lowest order.

Wi-Fi 5G (U-NII-3) Ant 4	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
Level 4			
802.11a (6M)	149/5745	11.00	10.30
	157/5785	11.00	10.26
	165/5825	11.00	10.29
802.11n-HT20 (MCS0)	149/5745	10.50	9.87
	157/5785	10.50	9.62
	165/5825	10.50	10.01
802.11n-HT40 (MCS0)	151/5755	10.50	10.09
	159/5795	10.50	9.82
802.11ac-HT20	149/5745	10.50	9.91



(MCS0)	157/5785	10.50	9.67
	165/5825	10.50	9.91
802.11ac-HT40 (MCS0)	151/5755	10.50	9.78
	159/5795	10.50	9.71
802.11ac-HT80 (MCS0)	155/5775	10.50	9.60
802.11ax-HE20 (MCS0)	149/5745	10.50	9.87
	157/5785	10.50	9.77
	165/5825	10.50	9.54
802.11ax-HE40 (MCS0)	151/5755	10.50	9.77
	159/5795	10.50	9.88
802.11ax-HE80 (MCS0)	155/5775	10.50	9.75

Note. Initial test configuration is 802.11a mode, since the highest maximum output power, the largest channel bandwidth, and lowest order.

Wi-Fi 5G (U-NII-1) MIMO Level 4	Channel /Frequency(MHz)	Maximum Output Power (dBm)			
		Tune-up	Meas.	Ant4	Ant3
802.11n-HT20 (MCS0)	36/5180	12.00	10.46	6.95	7.90
	40/5200	12.00	10.52	7.20	7.80
	48/5240	12.00	10.33	6.95	7.66
802.11n-HT40 (MCS0)	38/5190	11.50	10.14	6.53	7.65
	46/5230	11.50	10.50	6.62	8.21
802.11ac-VHT20 (MCS0)	36/5180	11.50	9.92	6.45	7.32
	40/5200	11.50	10.36	6.41	8.12
	48/5240	11.50	10.13	6.51	7.65
802.11ac-VHT40 (MCS0)	38/5190	11.50	9.81	6.71	6.89
	46/5230	11.50	10.40	6.51	8.12
802.11ac-VHT80 (MCS0)	42/5210	11.50	9.90	7.19	6.56
802.11ax-HE20 (MCS0)	36/5180	11.50	9.86	7.32	6.32
	40/5200	11.50	10.08	7.61	6.45
	48/5240	11.50	10.13	6.92	7.32
802.11ax-HE40 (MCS0)	38/5190	11.50	10.18	6.75	7.56
	46/5230	11.50	10.32	6.52	7.98
802.11ax-HE80 (MCS0)	42/5210	11.50	10.39	6.62	8.02

Note. Initial test configuration is 802.11n-HT20 mode, since the highest maximum output power, the largest channel bandwidth, and lowest order.



Wi-Fi 5G (U-NII-2A) MIMO Full power&Level 2	Channel /Frequency(MHz)	Maximum Output Power (dBm)			
		Tune-up	Meas.	Ant4	Ant3
802.11n-HT20 (MCS0)	52/5260	13.00	11.80	8.45	9.11
	56/5280	13.00	11.33	7.96	8.65
	60/5300	13.00	11.53	8.61	8.42
802.11n-HT40 (MCS0)	54/5270	12.50	11.05	7.92	8.15
	62/5310	12.50	10.99	8.23	7.72
802.11ac-HT20 (MCS0)	52/5260	12.50	10.64	7.21	8.02
	56/5280	12.50	10.91	7.56	8.21
	60/5300	12.50	10.76	7.46	8.02
802.11ac-HT40 (MCS0)	54/5270	12.50	10.83	7.51	8.11
	62/5310	12.50	10.97	6.56	9.02
802.11ac-HT80 (MCS0)	58/5290	12.50	10.94	6.54	8.98
802.11ax-HE20 (MCS0)	52/5260	12.50	10.93	6.89	8.75
	60/5300	12.50	10.57	7.21	7.89
	64/5320	12.50	10.76	7.45	8.03
802.11ax-HE40 (MCS0)	54/5270	12.50	10.62	6.85	8.25
	62/5310	12.50	10.81	7.42	8.15
802.11ax-HE80 (MCS0)	58/5290	12.50	10.62	7.32	7.89

Note. Initial test configuration is 802.11n-HT20 mode, since the highest maximum output power, the largest channel bandwidth, and lowest order.

Wi-Fi 5G (U-NII-2C) MIMO Level 4	Channel /Frequency(MHz)	Maximum Output Power (dBm)			
		Tune-up	Meas.	Ant4	Ant3
802.11n-HT20 (MCS0)	100/5500	15.00	13.13	9.66	10.53
	116/5580	15.00	13.19	9.76	10.56
	140/5700	15.00	13.27	9.98	10.52
	144/5720	15.00	13.28	9.85	10.66
802.11n-HT40 (MCS0)	102/5510	15.00	13.25	10.02	10.45
	110/5550	15.00	13.16	9.69	10.56
	134/5670	15.00	13.18	9.74	10.56
802.11ac-HT20 (MCS0)	142/5710	15.00	13.18	9.71	10.58
	100/5500	15.00	13.21	9.85	10.52
	116/5580	15.00	13.23	9.99	10.44
	140/5700	15.00	13.26	9.86	10.60
	144/5720	15.00	13.04	9.56	10.45



802.11ac-HT40 (MCS0)	102/5510	15.00	13.18	10.28	10.06
	110/5550	15.00	13.08	9.56	10.53
	134/5670	15.00	13.01	9.23	10.65
	142/5710	15.00	13.01	9.62	10.34
802.11ac-HT80 (MCS0)	106/5530	15.00	13.12	10.26	9.95
	138/5690	15.00	13.26	10.45	10.04
802.11ax-HE20 (MCS0)	100/5500	15.00	13.25	10.26	10.21
	116/5580	15.00	13.23	9.95	10.48
	140/5700	15.00	13.27	9.75	10.71
	144/5720	15.00	13.26	9.68	10.75
802.11ax-HE40 (MCS0)	102/5510	15.00	13.26	9.71	10.73
	110/5550	15.00	13.23	10.06	10.38
	134/5670	15.00	13.16	9.75	10.51
	142/5710	15.00	13.22	9.85	10.55
802.11ax-HE80 (MCS0)	106/5530	15.00	13.26	10.00	10.49
	138/5690	15.00	13.10	9.78	10.38

Note. Initial test configuration is 802.11n-HT20 mode, since the highest maximum output power, the largest channel bandwidth, and lowest order.

Wi-Fi 5G (U-NII-3) MIMO Level 4	Channel /Frequency(MHz)	Maximum Output Power (dBm)			
		Tune-up	Meas.	Ant4	Ant3
802.11n-HT20 (MCS0)	149/5745	16.00	14.55	10.52	12.36
	157/5785	16.00	14.50	10.84	12.06
	165/5825	16.00	14.29	10.75	11.76
802.11n-HT40 (MCS0)	151/5755	15.50	14.07	10.53	11.53
	159/5795	15.50	13.96	10.26	11.55
802.11ac-HT20 (MCS0)	149/5745	15.50	13.57	10.12	10.95
	157/5785	15.50	13.82	10.01	11.48
	165/5825	15.50	13.80	10.15	11.35
802.11ac-HT40 (MCS0)	151/5755	15.50	13.62	9.86	11.25
	159/5795	15.50	13.86	9.99	11.56
802.11ac-HT80 (MCS0)	155/5775	15.50	14.32	10.55	11.95
802.11ax-HE20 (MCS0)	149/5745	15.50	14.06	10.25	11.72
	157/5785	15.50	14.09	10.19	11.82
	165/5825	15.50	13.89	10.65	11.09
802.11ax-HE40 (MCS0)	151/5755	15.50	13.93	10.56	11.25
	159/5795	15.50	14.20	11.02	11.35
802.11ax-HE80	155/5775	15.50	13.72	10.32	11.06



(MCS0)

Note. Initial test configuration is 802.11n-HT20 mode, since the highest maximum output power, the largest channel bandwidth, and lowest order.

RU mode

2.4GHz Wi-Fi Ant3	RU Size (Tone)	RU Index	Channel /Freq.(MHz)	Maximum Output Power (dBm)	
				Tune-up	Meas.
802.11ax-HE20 MU mode (MCS0)	26	0	1/2412	16	14.68
		4	7/2442	16	15.39
		8	13/2472	16	14.58
	52	37	1/2412	16	15.08
		38	7/2442	16	15.45
		40	13/2472	16	14.76
	106	53	1/2412	16	15.29
		53	7/2442	16	15.57
		54	13/2472	16	14.96
802.11ax-HE20 SU mode (MCS0)	242	61	1/2412	16.5	15.73
		61	7/2442	16.5	15.62
		61	13/2472	16.5	14.93
802.11ax-HE40 SU mode (MCS0)	484	65	1/2412	14	12.92
		65	7/2442	14	13.03
		65	13/2472	14	12.95

Note. Initial test configuration is 802.11ax-HE20 mode, since the highest maximum output power, the largest channel bandwidth, and lowest order.

2.4GHz Wi-Fi Ant4	RU Size (Tone)	RU Index	Channel /Freq.(MHz)	Maximum Output Power (dBm)	
				Tune-up	Meas.
802.11ax-HE20 MU mode (MCS0)	26	0	1/2412	15.5	13.68
		4	7/2442	15.5	14.25
		8	13/2472	15.5	13.59
	52	37	1/2412	15.5	13.98
		38	7/2442	15.5	14.27
		40	13/2472	15.5	13.69
	106	53	1/2412	15.5	14.38
		53	7/2442	15.5	14.32
		54	13/2472	15.5	13.87
802.11ax-HE20 SU mode (MCS0)	242	61	1/2412	16.5	15.01
		61	7/2442	16.5	14.56
		61	13/2472	16.5	14.67
802.11ax-HE40 SU mode (MCS0)	484	65	1/2412	14	12.14
		65	7/2442	14	12.02
		65	13/2472	14	12.33

Note. Initial test configuration is 802.11ax-HE20 mode, since the highest maximum output power, the



largest channel bandwidth, and lowest order.

2.4GHz Wi-Fi MIMO	RU Size (Tone)	RU Index	Channel /Freq.(MHz)	Maximum Output Power (dBm)			
				Tune-up	Meas.	Ant3	Ant4
802.11ax-HE20 MU mode (MCS0)	26	0	1/2412	18.5	17.15	14.68	13.52
		4	7/2442	18.5	17.79	15.38	14.08
		8	13/2472	18.5	17.05	14.62	13.38
	52	37	1/2412	18.5	17.44	14.92	13.88
		38	7/2442	18.5	17.91	15.49	14.21
		40	13/2472	18.5	17.15	14.69	13.52
	106	53	1/2412	18.5	17.85	15.31	14.32
		53	7/2442	18.5	17.92	15.52	14.21
		54	13/2472	18.5	17.41	14.95	13.77
802.11ax-HE20 SU mode (MCS0)	242	61	1/2412	18.5	18.38	15.81	14.87
		61	7/2442	18.5	18.04	15.56	14.42
		61	13/2472	18.5	17.76	14.91	14.58
802.11ax-HE40 SU mode (MCS0)	484	65	1/2412	16	15.41	12.84	11.92
		65	7/2442	16	15.50	13.01	11.89
		65	13/2472	16	15.58	12.93	12.18

Note. Initial test configuration is 802.11ax-HE20 mode, since the highest maximum output power, the largest channel bandwidth, and lowest order.

5GHz Wi-Fi U-NII-1 Ant3	RU Size (Tone)	RU Index	Channel /Freq.(MHz)	Maximum Output Power (dBm)	
				Tune-up	Meas.
802.11ax-HE20 MU mode (MCS0)	26	0	36/5180	12.5	10.91
		4	40/5200	12.5	11.85
		8	48/5240	12.5	10.80
	52	37	36/5180	14.5	14.07
		38	40/5200	14.5	14.12
		40	48/5240	14.5	13.36
	106	53	36/5180	17.5	17.17
		53	40/5200	17.5	17.03
		54	48/5240	17.5	16.38
802.11ax-HE20 SU mode (MCS0)	242	61	36/5180	17.5	17.07
		61	40/5200	17.5	16.87
		61	48/5240	17.5	16.71
802.11ax-HE40 SU mode (MCS0)	484	65	38/5190	16.0	15.33
		65	46/5230	16.0	14.92
802.11ax-HE80 SU mode	996	67	42/5210	15.5	14.11



(MCS0)			
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Note. Initial test configuration is 802.11ax-HE20 mode, since the highest maximum output power, the largest channel bandwidth, and lowest order.

5GHz Wi-Fi U-NII-1 Ant4	RU Size (Tone)	RU Index	Channel /Freq.(MHz)	Maximum Output Power (dBm)	
				Tune-up	Meas.
802.11ax-HE20 MU mode (MCS0)	26	0	36/5180	12.0	10.28
		4	40/5200	12.0	11.23
		8	48/5240	12.0	10.17
	52	37	36/5180	14.5	13.28
		38	40/5200	14.5	13.20
		40	48/5240	14.5	12.67
	106	53	36/5180	17.5	16.33
		53	40/5200	17.5	16.25
		54	48/5240	17.5	15.62
802.11ax-HE20 SU mode (MCS0)	242	61	36/5180	17.5	16.93
		61	40/5200	17.5	16.77
		61	48/5240	17.5	16.73
802.11ax-HE40 SU mode (MCS0)	484	65	38/5190	16.0	14.15
		65	46/5230	16.0	14.05
802.11ax-HE80 SU mode (MCS0)	996	67	42/5210	15.0	13.36

Note. Initial test configuration is 802.11ax-HE20 mode, since the highest maximum output power, the largest channel bandwidth, and lowest order.

5GHz Wi-Fi U-NII-1 MIMO	RU Size (Tone)	RU Index	Channel /Freq.(MHz)	Maximum Output Power (dBm)			
				Tune-up	Meas.	Ant3	Ant4
802.11ax-HE20 MU mode (MCS0)	26	0	36/5180	15	13.44	10.33	10.52
		4	40/5200	15	14.49	11.47	11.48
		8	48/5240	15	13.59	10.76	10.39
	52	37	36/5180	18	16.55	13.42	13.65
		38	40/5200	18	16.60	13.55	13.62
		40	48/5240	18	16.17	13.37	12.94
	106	53	36/5180	20	19.55	16.39	16.68
		53	40/5200	20	19.48	16.48	16.46
		54	48/5240	20	19.35	16.25	16.43
802.11ax-HE20 SU mode (MCS0)	242	61	36/5180	20	19.69	16.98	16.35
		61	40/5200	20	19.52	16.73	16.27
		61	48/5240	20	19.43	16.62	16.21



802.11ax-HE40 SU mode (MCS0)	484	65	38/5190	19	17.54	15.24	13.67
		65	46/5230	19	17.24	14.84	13.52
802.11ax-HE80 SU mode (MCS0)	996	67	42/5210	18	16.56	14.01	13.04

Note. Initial test configuration is 802.11ax-HE20 mode, since the highest maximum output power, the largest channel bandwidth, and lowest order.



5GHz Wi-Fi U-NII-2A Ant3	RU Size (Tone)	RU Index	Channel /Freq.(MHz)	Maximum Output Power (dBm)	
				Tune-up	Meas.
802.11ax-HE20 MU mode (MCS0)	26	0	52/5260	12.5	10.81
		4	60/5300	12.5	11.79
		8	64/5320	12.5	10.96
	52	37	52/5260	14.5	13.38
		38	60/5300	14.5	13.42
		40	64/5320	14.5	13.51
	106	53	52/5260	17.5	16.36
		53	60/5300	17.5	16.32
		54	64/5320	17.5	16.43
802.11ax-HE20 SU mode (MCS0)	242	61	52/5260	16.0	15.68
		61	60/5300	16.0	15.40
		61	64/5320	16.0	15.52
802.11ax-HE40 SU mode (MCS0)	484	65	54/5270	15.0	14.10
		65	62/5310	15.0	14.02
802.11ax-HE80 SU mode (MCS0)	996	67	58/5290	14.5	13.26

Note. Initial test configuration is 802.11ax-HE20 mode, since the highest maximum output power, the largest channel bandwidth, and lowest order.

5GHz Wi-Fi U-NII-2A Ant4	RU Size (Tone)	RU Index	Channel /Freq.(MHz)	Maximum Output Power (dBm)	
				Tune-up	Meas.
802.11ax-HE20 MU mode (MCS0)	26	0	52/5260	12.5	10.17
		4	60/5300	12.5	11.26
		8	64/5320	12.5	10.58
	52	37	52/5260	14.5	12.71
		38	60/5300	14.5	12.81
		40	64/5320	14.5	13.02
	106	53	52/5260	17.0	15.65
		53	60/5300	17.0	15.83
		54	64/5320	17.0	15.91
802.11ax-HE20 SU mode (MCS0)	242	61	52/5260	16.0	15.63
		61	60/5300	16.0	15.38
		61	64/5320	16.0	15.50
802.11ax-HE40 SU mode (MCS0)	484	65	54/5270	15.0	13.24
		65	62/5310	15.0	13.25



802.11ax-HE80 SU mode (MCS0)	996	67	58/5290	14.0	12.18
Note. Initial test configuration is 802.11ax-HE20 mode, since the highest maximum output power, the largest channel bandwidth, and lowest order.					

5GHz Wi-Fi U-NII-2A Ant4	RU Size (Tone)	RU Index	Channel /Freq.(MHz)	Maximum Output Power (dBm)			
				Tune-up	Meas.	Ant3	Ant4
802.11ax-HE20 MU mode (MCS0)	26	0	52/5260	15	13.49	10.65	10.30
		4	60/5300	15	14.58	11.80	11.32
		8	64/5320	15	13.78	11.06	10.45
	52	37	52/5260	18	16.36	13.62	13.07
		38	60/5300	18	16.41	13.67	13.12
		40	64/5320	18	16.34	13.58	13.06
	106	53	52/5260	20	19.17	16.23	16.08
		53	60/5300	20	19.22	16.43	15.97
		54	64/5320	20	19.28	16.50	16.03
802.11ax-HE20 SU mode (MCS0)	242	61	52/5260	20	18.58	15.61	15.52
		61	60/5300	20	18.34	15.32	15.34
		61	64/5320	20	18.46	15.46	15.43
802.11ax-HE40 SU mode (MCS0)	484	65	54/5270	18	16.62	14.02	13.16
		65	62/5310	18	16.57	13.95	13.12
802.11ax-HE80 SU mode (MCS0)	996	67	58/5290	17	15.63	13.12	12.06
Note. Initial test configuration is 802.11ax-HE20 mode, since the highest maximum output power, the largest channel bandwidth, and lowest order.							

5GHz Wi-Fi U-NII-2C Ant3	RU Size (Tone)	RU Index	Channel /Freq.(MHz)	Maximum Output Power (dBm)	
				Tune-up	Meas.
802.11ax-HE20 MU mode (MCS0)	26	0	100/5500	12.5	10.62
		4	116/5580	12.5	11.61
		8	140/5700	12.5	10.90
		8	144/5720	12.5	10.63
	52	37	100/5500	15.0	13.09
		38	116/5580	15.0	13.78
		40	140/5700	15.0	13.92
		40	144/5720	15.0	13.85
	106	53	100/5500	15.0	12.85



		53	116/5580	15.0	13.17
		54	140/5700	15.0	13.32
		54	144/5720	15.0	13.48
802.11ax-HE20 SU mode (MCS0)	242	61	100/5500	15.0	13.03
		61	116/5580	15.0	13.29
		61	140/5700	15.0	13.53
		61	144/5720	15.0	13.61
802.11ax-HE40 SU mode (MCS0)	484	65	102/5510	15.5	14.08
		65	110/5550	15.5	14.03
		65	134/5670	15.5	15.23
		65	142/5710	15.5	14.68
802.11ax-HE80 SU mode (MCS0)	996	67	106/5530	15.5	13.79
		67	138/5690	15.5	14.88

Note. Initial test configuration is 802.11ax-HE40 mode, since the highest maximum output power, the largest channel bandwidth, and lowest order.

5GHz Wi-Fi U-NII-2C Ant4	RU Size (Tone)	RU Index	Channel /Freq.(MHz)	Maximum Output Power (dBm)	
				Tune-up	Meas.
802.11ax-HE20 MU mode (MCS0)	26	0	100/5500	12.0	10.05
		4	116/5580	12.0	10.72
		8	140/5700	12.0	9.61
		8	144/5720	12.0	9.66
	52	37	100/5500	14.5	12.56
		38	116/5580	14.5	12.84
		40	140/5700	14.5	12.63
		40	144/5720	14.5	12.67
	106	53	100/5500	14.5	12.86
		53	116/5580	14.5	13.12
		54	140/5700	14.5	13.26
		54	144/5720	14.5	13.46
802.11ax-HE20 SU mode (MCS0)	242	61	100/5500	14.5	13.04
		61	116/5580	14.5	13.31
		61	140/5700	14.5	13.52
		61	144/5720	14.5	13.59
802.11ax-HE40 SU mode (MCS0)	484	65	102/5510	15.0	13.40
		65	110/5550	15.0	13.14
		65	134/5670	15.0	13.27
		65	142/5710	15.0	13.24
802.11ax-HE80 SU mode (MCS0)	996	67	106/5530	15.0	13.16
		67	138/5690	15.0	13.27



Note. Initial test configuration is 802.11ax-HE20 mode, since the highest maximum output power, the largest channel bandwidth, and lowest order.

5GHz Wi-Fi U-NII-2C MIMO	RU Size (Tone)	RU Index	Channel /Freq.(MHz)	Maximum Output Power (dBm)			
				Tune-up	Meas.	Ant3	Ant4
802.11ax-HE20 MU mode (MCS0)	26	0	100/5500	15	13.46	10.76	10.11
		4	116/5580	15	14.10	11.62	10.48
		8	140/5700	15	13.25	10.68	9.75
		8	144/5720	15	13.20	10.49	9.87
	52	37	100/5500	17	15.92	13.24	12.56
		38	116/5580	17	16.26	13.62	12.84
		40	140/5700	17	15.84	12.96	12.69
		40	144/5720	17	15.97	13.08	12.84
	106	53	100/5500	17	15.79	12.78	12.78
		53	116/5580	17	16.08	13.10	13.04
		54	140/5700	17	16.23	13.25	13.18
		54	144/5720	17	16.41	13.41	13.38
802.11ax-HE20 SU mode (MCS0)	242	61	100/5500	17	15.97	12.96	12.96
		61	116/5580	17	16.24	13.22	13.23
		61	140/5700	17	16.38	13.46	13.28
		61	144/5720	17	16.54	13.54	13.51
802.11ax-HE40 SU mode (MCS0)	484	65	102/5510	18	16.69	14.01	13.32
		65	110/5550	18	16.54	13.96	13.06
		65	134/5670	18	17.30	15.16	13.19
		65	142/5710	18	16.95	14.61	13.14
802.11ax-HE80 SU mode (MCS0)	996	67	106/5530	18	16.42	13.72	13.08
		67	138/5690	18	17.08	14.81	13.17

Note. Initial test configuration is 802.11ax-HE40 mode, since the highest maximum output power, the largest channel bandwidth, and lowest order.

5GHz Wi-Fi U-NII-3 Ant3	RU Size (Tone)	RU Index	Channel /Freq.(MHz)	Maximum Output Power (dBm)	
				Tune-up	Meas.
802.11ax-HE20 MU mode (MCS0)	26	0	149/5745	14.0	12.72
		4	157/5785	14.0	12.30
		8	165/5825	14.0	12.37
	52	37	149/5745	14.0	12.75
		38	157/5785	14.0	12.37
		40	165/5825	14.0	12.53



	106	53	149/5745	14.0	12.80
		53	157/5785	14.0	12.34
		54	165/5825	14.0	12.67
802.11ax-HE20 SU mode (MCS0)	242	61	149/5745	14.0	12.74
		61	157/5785	14.0	12.62
		61	165/5825	14.0	13.04
802.11ax-HE40 SU mode (MCS0)	484	65	151/5755	15.0	13.79
		65	159/5795	15.0	14.18
802.11ax-HE80 SU mode (MCS0)	996	67	155/5775	16.5	15.63

Note. Initial test configuration is 802.11ax-HE80 mode, since the highest maximum output power, the largest channel bandwidth, and lowest order.

5GHz Wi-Fi U-NII-3 Ant4	RU Size (Tone)	RU Index	Channel /Freq.(MH z)	Maximum Output Power (dBm)	
				Tune-up	Meas.
802.11ax-HE20 MU mode (MCS0)	26	0	149/5745	13.5	11.94
		4	157/5785	13.5	11.47
		8	165/5825	13.5	11.71
	52	37	149/5745	13.5	11.97
		38	157/5785	13.5	11.72
		40	165/5825	13.5	11.81
	106	53	149/5745	13.5	11.97
		53	157/5785	13.5	11.70
		54	165/5825	13.5	11.89
802.11ax-HE20 SU mode (MCS0)	242	61	149/5745	13.5	12.09
		61	157/5785	13.5	11.93
		61	165/5825	13.5	12.15
802.11ax-HE40 SU mode (MCS0)	484	65	151/5755	14.5	13.19
		65	159/5795	14.5	13.26
802.11ax-HE80 SU mode (MCS0)	996	67	155/5775	16.0	15.03

Note. Initial test configuration is 802.11ax-HE80 mode, since the highest maximum output power, the largest channel bandwidth, and lowest order.

5GHz Wi-Fi U-NII-3 MIMO	RU Size (Tone)	RU Index	Channel /Freq.(MHz)	Maximum Output Power (dBm)			
				Tune-up	Meas.	Ant3	Ant4
802.11ax-HE20 MU mode (MCS0)	26	0	149/5745	16.5	15.29	12.66	11.86
		4	157/5785	16.5	14.84	12.23	11.39
		8	165/5825	16.5	14.98	12.28	11.63
	52	37	149/5745	16.5	15.32	12.69	11.89
		38	157/5785	16.5	14.99	12.31	11.62
		40	165/5825	16.5	15.13	12.47	11.73
	106	53	149/5745	16.5	15.33	12.71	11.89
		53	157/5785	16.5	14.97	12.28	11.62
		54	165/5825	16.5	15.25	12.61	11.84
802.11ax-HE20 SU mode (MCS0)	242	61	149/5745	17	15.35	12.64	12.01
		61	157/5785	17	15.23	12.56	11.85
		61	165/5825	17	15.56	12.98	12.07
802.11ax-HE40 SU mode (MCS0)	484	65	151/5755	18	16.41	13.68	13.11
		65	159/5795	18	16.69	14.12	13.18
802.11ax-HE80 SU mode (MCS0)	996	67	155/5775	19	18.22	15.55	14.83

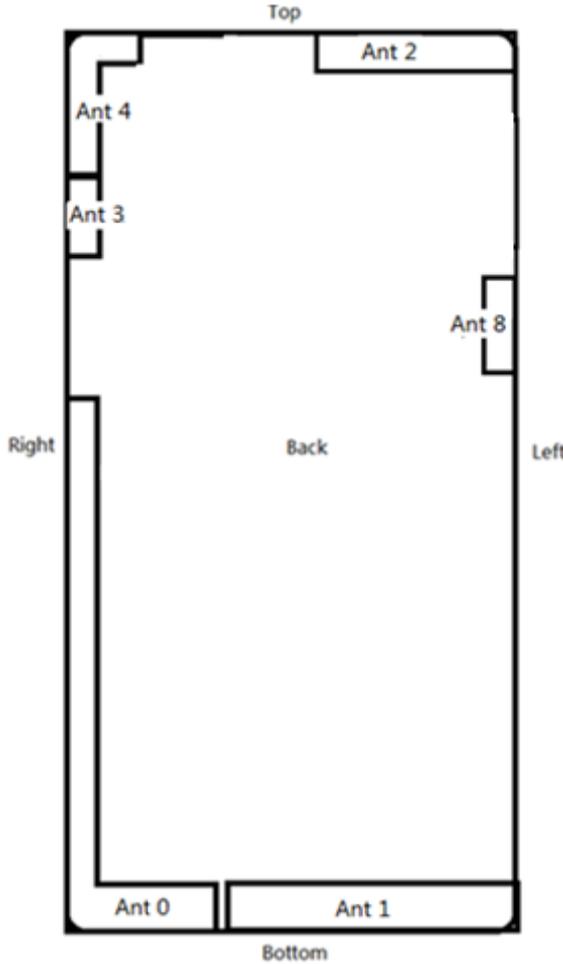
Note. Initial test configuration is 802.11ax-HE80 mode, since the highest maximum output power, the largest channel bandwidth, and lowest order.

9.6 Bluetooth Mode

BT	Conducted Power(dBm)			Tune-up Limit (dBm)
	Channel/Frequency(MHz)			
	Ch 0/2402 MHz	Ch 39/2441 MHz	Ch 78/2480 MHz	
GFSK	10.81	11.58	11.35	12.50
$\pi/4$ DQPSK	10.76	11.39	11.42	12.50
8DPSK	10.89	11.52	11.29	12.50
BLE	Ch 0/2402 MHz	Ch 19/2440 MHz	Ch 39/2480 MHz	Tune-up Limit (dBm)
GFSK(1M)	7.13	8.06	7.57	9.00
GFSK(2M)	4.47	5.66	5.14	9.00

10 Measured and Reported (Scaled) SAR Results

10.1 EUT Antenna Locations



- Ant 0 : G850/B5/B26/WB5/B12/B17/B28
- Ant 1 : B2/G1900/WB2/B4/B7/B38/B41 NR n41
- Ant 2 : B5/B26/WB5/B12/B17/B28
- Ant 3 : Wi-Fi 2.4G/Wi-Fi 5G
- Ant 4 : Wi-Fi 2.4G/Wi-Fi 5G
- Ant 8 : NR n66/B66

Overall (Length x Width): 170 mm x 77mm						
Overall Diagonal: 186 mm/Display Diagonal: 180mm						
Distance of the Antenna to the EUT surface/edge						
Antenna	Back Side	Front side	Left Edge	Right Edge	Top Edge	Bottom Edge
Ant 0	<25mm	<25mm	>25mm	<25mm	>25mm	<25mm
Ant 1	<25mm	<25mm	<25mm	<25mm	>25mm	<25mm
Ant 2	<25mm	<25mm	<25mm	>25mm	<25mm	>25mm
Ant 3	<25mm	<25mm	>25mm	<25mm	<25mm	>25mm
Ant 4	<25mm	<25mm	>25mm	<25mm	<25mm	>25mm
Ant 8	<25mm	<25mm	<25mm	>25mm	<25mm	>25mm
Hotspot mode, Positions for SAR tests						
Mode	Back Side	Front side	Left Edge	Right Edge	Top Edge	Bottom Edge
Ant 0	Yes	Yes	N/A	Yes	N/A	Yes
Ant 1	Yes	Yes	Yes	Yes	N/A	Yes
Ant 2	Yes	Yes	Yes	N/A	Yes	N/A



Ant 3	Yes	Yes	N/A	Yes	Yes	N/A
Ant 4	Yes	Yes	N/A	Yes	Yes	N/A
Ant 8	Yes	Yes	Yes	N/A	Yes	N/A

Note: 1. Per KDB 941225 D06, when the overall device length and width are $\geq 9\text{cm} \times 5\text{cm}$, the test distance is 10mm. SAR must be measured for all sides and surfaces with a transmitting antenna located within 25mm from that surface or edge.

2. For smart phones with an overall diagonal dimension is 186mm. Per KDB 648474 D04, for smart phones with a display diagonal dimension $> 15.0\text{ cm}$ or an overall diagonal dimension $> 16.0\text{ cm}$, product specific 10-g SAR must be tested as a phablet to determine SAR compliance. For Phablet, Since hotspot mode 1-g *reported* SAR $< 1.2\text{ W/kg}$, product specific 10-g SAR is no required.

3. Per FCC KDB 447498 D01,

for each exposure position, testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is:

a) $\leq 0.8\text{ W/kg}$ or 2.0 W/kg , for 1-g or 10-g respectively, when the transmission band is $\leq 100\text{MHz}$

b) $\leq 0.6\text{ W/kg}$ or 1.5 W/kg , for 1-g or 10-g

respectively, when the transmission band is between 100 MHz and 200 MHz.

c) $\leq 0.4\text{ W/kg}$ or 1.0 W/kg , for 1-g or 10-g respectively, when the transmission band is $\geq 200\text{ MHz}$.

4. When the original highest measured SAR is $\geq 0.80\text{ W/kg}$, the measurement was repeated once.

5. Per FCC KDB Publication 648474 D04, SAR was evaluated without a headset connected to the device. Since the reported SAR was $\leq 1.2\text{ W/kg}$, no additional SAR evaluations using a headset cable were required.



10.2 Measured SAR Results

Head SAR

Band	Ant	Test Position	Dist. (mm)	Mode	Power Reduction	RB	offset	Ch./Freq. (MHz)	Tune-up (dBm)	Measured power (dBm)	Measured SAR1g	Power Drift (dB)	Scaling Factor	Report SAR1g	Plot No.
GSM 850	ANT 0	Left cheek	0	GSM	Level 1	-	-	190/836.6	33.50	33.04	0.110	0.133	1.11	0.122	19
		Left Tilt	0	GSM	Level 1	-	-	190/836.6	33.50	33.04	0.032	0.057	1.11	0.036	/
		Right cheek	0	GSM	Level 1	-	-	190/836.6	33.50	33.04	0.082	0.165	1.11	0.091	/
		Right Tilt	0	GSM	Level 1	-	-	190/836.6	33.50	33.04	0.036	0.153	1.11	0.039	/
GSM 1900	ANT 1	Left cheek	0	GSM	Level 1	-	-	661/1880	30.50	29.34	0.071	0.043	1.31	0.093	/
		Left Tilt	0	GSM	Level 1	-	-	661/1880	30.50	29.34	0.081	0.030	1.31	0.106	/
		Right cheek	0	GSM	Level 1	-	-	661/1880	30.50	29.34	0.116	0.160	1.31	0.152	20
		Right Tilt	0	GSM	Level 1	-	-	661/1880	30.50	29.34	0.063	0.060	1.31	0.082	/
WCDMA II	ANT 1	Left cheek	0	RMC 12.2K	Level 1	-	-	9400/1880	25.50	24.55	0.184	0.140	1.24	0.229	/
		Left Tilt	0	RMC 12.2K	Level 1	-	-	9400/1880	25.50	24.55	0.118	0.100	1.24	0.147	/
		Right cheek	0	RMC 12.2K	Level 1	-	-	9400/1880	25.50	24.55	0.215	0.130	1.24	0.268	21
		Right Tilt	0	RMC 12.2K	Level 1	-	-	9400/1880	25.50	24.55	0.093	0.090	1.24	0.115	/
WCDMA V	ANT 0	Left cheek	0	RMC 12.2K	Level 1	-	-	4183/836.6	25.50	24.81	0.156	0.099	1.17	0.183	/
		Left Tilt	0	RMC 12.2K	Level 1	-	-	4183/836.6	25.50	24.81	0.044	0.027	1.17	0.052	/
		Right cheek	0	RMC 12.2K	Level 1	-	-	4183/836.6	25.50	24.81	0.121	0.132	1.17	0.142	/
		Right Tilt	0	RMC 12.2K	Level 1	-	-	4183/836.6	25.50	24.81	0.052	0.030	1.17	0.060	/
	ANT 2	Left cheek	0	RMC 12.2K	Level 1	-	-	4183/836.6	22.00	20.90	0.294	0.040	1.29	0.379	/
		Left Tilt	0	RMC 12.2K	Level 1	-	-	4183/836.6	22.00	20.90	0.377	0.010	1.29	0.486	/
		Right cheek	0	RMC 12.2K	Level 1	-	-	4183/836.6	22.00	20.90	0.501	0.130	1.29	0.645	/
		Right Tilt	0	RMC 12.2K	Level 1	-	-	4183/836.6	22.00	20.90	0.585	0.150	1.29	0.754	22
LTE 2	ANT 1	Left cheek	0	QPSK	Level 1	1	0	19100/1900	25.50	24.63	0.163	0.034	1.22	0.199	/
			0	QPSK	Level 1	50%	50	18900/1880	24.50	23.77	0.127	0.192	1.18	0.150	/
		Left Tilt	0	QPSK	Level 1	1	0	19100/1900	25.50	24.63	0.102	0.140	1.22	0.125	/
			0	QPSK	Level 1	50%	50	18900/1880	24.50	23.77	0.091	0.047	1.18	0.108	/
		Right cheek	0	QPSK	Level 1	1	0	19100/1900	25.50	24.63	0.252	0.096	1.22	0.308	23
			0	QPSK	Level 1	50%	50	18900/1880	24.50	23.77	0.208	0.035	1.18	0.246	/
		Right Tilt	0	QPSK	Level 1	1	0	19100/1900	25.50	24.63	0.093	-0.021	1.22	0.113	/
			0	QPSK	Level 1	50%	50	18900/1880	24.50	23.77	0.095	0.020	1.18	0.112	/
LTE 4	ANT 1	Left cheek	0	QPSK	Level 1	1	0	20300/1745	25.50	24.93	0.093	0.080	1.14	0.106	/
			0	QPSK	Level 1	50%	0	20300/1745	24.50	24.06	0.067	0.023	1.11	0.074	/
		Left Tilt	0	QPSK	Level 1	1	0	20300/1745	25.50	24.93	0.064	0.010	1.14	0.073	/
			0	QPSK	Level 1	50%	0	20300/1745	24.50	24.06	0.049	0.160	1.11	0.054	/
		Right cheek	0	QPSK	Level 1	1	0	20300/1745	25.50	24.93	0.130	0.120	1.14	0.148	24
			0	QPSK	Level 1	50%	0	20300/1745	24.50	24.06	0.101	0.043	1.11	0.112	/
		Right Tilt	0	QPSK	Level 1	1	0	20300/1745	25.50	24.93	0.077	0.130	1.14	0.087	/
			0	QPSK	Level 1	50%	0	20300/1745	24.50	24.06	0.057	0.060	1.11	0.064	/



LTE 5	ANT 0	Left cheek	0	QPSK	Level 1	1	0	20600/844	25.50	25.02	0.150	0.068	1.12	0.168	/
			0	QPSK	Level 1	50%	13	20450/829	24.50	24.04	0.115	0.096	1.11	0.128	/
		Left Tilt	0	QPSK	Level 1	1	0	20600/844	25.50	25.02	0.064	0.032	1.12	0.071	/
			0	QPSK	Level 1	50%	13	20450/829	24.50	24.04	0.049	0.037	1.11	0.054	/
		Right cheek	0	QPSK	Level 1	1	0	20600/844	25.50	25.02	0.154	0.035	1.12	0.172	/
			0	QPSK	Level 1	50%	13	20450/829	24.50	24.04	0.110	0.022	1.11	0.122	/
	Right Tilt	0	QPSK	Level 1	1	0	20600/844	25.50	25.02	0.078	0.037	1.12	0.087	/	
		0	QPSK	Level 1	50%	13	20450/829	24.50	24.04	0.052	0.057	1.11	0.057	/	
	ANT 2	Left cheek	0	QPSK	Level 1	1	25	20525/836.5	22.00	21.31	0.405	-0.080	1.17	0.475	/
			0	QPSK	Level 1	50%	25	20600/844	21.00	20.26	0.364	-0.070	1.19	0.432	/
		Left Tilt	0	QPSK	Level 1	1	25	20525/836.5	22.00	21.31	0.447	0.110	1.17	0.524	/
			0	QPSK	Level 1	50%	25	20600/844	21.00	20.26	0.389	-0.050	1.19	0.461	/
		Right cheek	0	QPSK	Level 1	1	25	20525/836.5	22.00	21.31	0.556	-0.080	1.17	0.652	/
			0	QPSK	Level 1	50%	25	20600/844	21.00	20.26	0.574	-0.060	1.19	0.681	/
Right Tilt	0	QPSK	Level 1	1	25	20525/836.5	22.00	21.31	0.628	0.050	1.17	0.736	25		
	0	QPSK	Level 1	50%	25	20600/844	21.00	20.26	0.627	0.023	1.19	0.743	/		
LTE 7	ANT 1	Left cheek	0	QPSK	Level 1	1	99	21100/2535	25.50	24.91	0.425	0.047	1.15	0.487	26
			0	QPSK	Level 1	50%	50	21100/2535	24.50	24.07	0.346	0.134	1.10	0.382	/
		Left Tilt	0	QPSK	Level 1	1	99	21100/2535	25.50	24.91	0.138	0.024	1.15	0.158	/
			0	QPSK	Level 1	50%	50	21100/2535	24.50	24.07	0.113	0.031	1.10	0.125	/
		Right cheek	0	QPSK	Level 1	1	99	21100/2535	25.50	24.91	0.186	0.130	1.15	0.213	/
			0	QPSK	Level 1	50%	50	21100/2535	24.50	24.07	0.143	0.120	1.10	0.158	/
	Right Tilt	0	QPSK	Level 1	1	99	21100/2535	25.50	24.91	0.126	0.038	1.15	0.144	/	
		0	QPSK	Level 1	50%	50	21100/2535	24.50	24.07	0.107	0.037	1.10	0.118	/	
LTE 12	ANT 0	Left cheek	0	QPSK	Level 1	1	25	23095/707.5	25.50	24.95	0.102	-0.190	1.14	0.116	/
			0	QPSK	Level 1	50%	13	23060/704	24.50	24.09	0.082	0.039	1.10	0.090	/
		Left Tilt	0	QPSK	Level 1	1	25	23095/707.5	25.50	24.95	0.043	0.038	1.14	0.049	/
			0	QPSK	Level 1	50%	13	23060/704	24.50	24.09	0.035	0.056	1.10	0.038	/
		Right cheek	0	QPSK	Level 1	1	25	23095/707.5	25.50	24.95	0.160	-0.020	1.14	0.182	/
			0	QPSK	Level 1	50%	13	23060/704	24.50	24.09	0.113	0.062	1.10	0.124	/
	Right Tilt	0	QPSK	Level 1	1	25	23095/707.5	25.50	24.95	0.054	0.050	1.14	0.061	/	
		0	QPSK	Level 1	50%	13	23060/704	24.50	24.09	0.029	0.066	1.10	0.032	/	
	ANT 2	Left cheek	0	QPSK	Level 1	1	49	23060/704	24.50	23.96	0.117	0.080	1.13	0.132	/
			0	QPSK	Level 1	50%	13	23060/704	23.50	22.96	0.059	0.010	1.13	0.067	/
		Left Tilt	0	QPSK	Level 1	1	49	23060/704	24.50	23.96	0.157	0.050	1.13	0.178	/
			0	QPSK	Level 1	50%	13	23060/704	23.50	22.96	0.116	-0.040	1.13	0.131	/
		Right cheek	0	QPSK	Level 1	1	49	23060/704	24.50	23.96	0.126	0.120	1.13	0.143	/
			0	QPSK	Level 1	50%	13	23060/704	23.50	22.96	0.099	0.021	1.13	0.112	/
Right Tilt	0	QPSK	Level 1	1	49	23060/704	24.50	23.96	0.191	0.090	1.13	0.216	/		
	0	QPSK	Level 1	50%	13	23060/704	23.50	22.96	0.226	0.060	1.13	0.256	27		
LTE	ANT 0	Left cheek	0	QPSK	Level 1	1	38	26865/831.5	25.50	25.13	0.124	0.113	1.09	0.135	/



26			0	QPSK	Level 1	50%	18	26965/841.5	24.50	24.32	0.115	0.096	1.04	0.120	/
		Left Tilt	0	QPSK	Level 1	1	38	26865/831.5	25.50	25.13	0.053	0.052	1.09	0.058	/
			0	QPSK	Level 1	50%	18	26965/841.5	24.50	24.32	0.049	0.037	1.04	0.051	/
		Right cheek	0	QPSK	Level 1	1	38	26865/831.5	25.50	25.13	0.135	0.131	1.09	0.147	/
			0	QPSK	Level 1	50%	18	26965/841.5	24.50	24.32	0.116	0.140	1.04	0.121	/
		Right Tilt	0	QPSK	Level 1	1	38	26865/831.5	25.50	25.13	0.059	0.047	1.09	0.064	/
	0		QPSK	Level 1	50%	18	26965/841.5	24.50	24.32	0.056	0.064	1.04	0.058	/	
	ANT 2	Left cheek	0	QPSK	Level 1	1	74	26965/841.5	22.00	21.20	0.238	0.032	1.20	0.286	/
			0	QPSK	Level 1	50%	39	26865/831.5	21.00	20.21	0.312	0.011	1.20	0.374	/
		Left Tilt	0	QPSK	Level 1	1	74	26965/841.5	22.00	21.20	0.506	-0.090	1.20	0.608	/
			0	QPSK	Level 1	50%	39	26865/831.5	21.00	20.21	0.446	0.024	1.20	0.535	/
		Right cheek	0	QPSK	Level 1	1	74	26965/841.5	22.00	21.20	0.452	0.043	1.20	0.543	/
			0	QPSK	Level 1	50%	39	26865/831.5	21.00	20.21	0.426	0.018	1.20	0.511	/
		Right Tilt	0	QPSK	Level 1	1	38	26765/821.5	22.00	21.15	0.692	0.035	1.22	0.842	/
			0	QPSK	Level 1	1	38	26865/831.5	22.00	21.12	0.708	-0.049	1.22	0.867	/
		Right Tilt	0	QPSK	Level 1	1	74	26965/841.5	22.00	21.20	0.710	0.090	1.20	0.854	28
			0	QPSK	Level 1	50%	39	26865/831.5	21.00	20.21	0.665	0.080	1.20	0.798	/
		0	QPSK	Level 1	100%	0	26865/831.5	21.00	20.17	0.634	0.032	1.21	0.768	/	
LTE 38 TDD		ANT 1	Left cheek	0	QPSK	Level 1	1	50	38150/2610	25.50	24.87	0.286	0.171	1.16	0.331
	0			QPSK	Level 1	50%	50	38150/2610	24.50	23.98	0.272	0.040	1.13	0.307	/
	Left Tilt		0	QPSK	Level 1	1	50	38150/2610	25.50	24.87	0.077	-0.049	1.16	0.089	/
			0	QPSK	Level 1	50%	50	38150/2610	24.50	23.98	0.062	0.195	1.13	0.070	/
	Right cheek		0	QPSK	Level 1	1	50	38150/2610	25.50	24.87	0.116	-0.050	1.16	0.134	/
			0	QPSK	Level 1	50%	50	38150/2610	24.50	23.98	0.101	0.011	1.13	0.114	/
Right Tilt	0	QPSK	Level 1	1	50	38150/2610	25.50	24.87	0.065	0.029	1.16	0.075	/		
	0	QPSK	Level 1	50%	50	38150/2610	24.50	23.98	0.052	-0.017	1.13	0.059	/		
LTE 41 TDD	ANT 1	Left cheek	0	QPSK	Level 1	1	0	41490/2680	25.50	24.91	0.331	0.058	1.15	0.379	30
			0	QPSK	Level 1	50%	50	40620/2593	24.50	23.95	0.232	0.065	1.14	0.263	/
		Left Tilt	0	QPSK	Level 1	1	0	41490/2680	25.50	24.91	0.089	0.020	1.15	0.102	/
			0	QPSK	Level 1	50%	50	40620/2593	24.50	23.95	0.056	-0.068	1.14	0.064	/
		Right cheek	0	QPSK	Level 1	1	0	41490/2680	25.50	24.91	0.135	0.034	1.15	0.155	/
			0	QPSK	Level 1	50%	50	40620/2593	24.50	23.95	0.098	0.020	1.14	0.111	/
Right Tilt	0	QPSK	Level 1	1	0	41490/2680	25.50	24.91	0.123	0.037	1.15	0.141	/		
	0	QPSK	Level 1	50%	50	40620/2593	24.50	23.95	0.088	0.041	1.14	0.100	/		
Left cheek	0	QPSK	Level 1	1	99	40185/2549.5	25.50	24.70	0.294	0.022	1.20	0.353	/		
				1	0	39987/2529.7							/		
LTE 66	ANT 8	Left cheek	0	QPSK	Level 1	1	50	132322/1745	24.00	23.53	0.514	0.026	1.11	0.573	/
			0	QPSK	Level 1	50%	0	132572/1770	23.50	22.39	0.372	-0.072	1.29	0.480	/
		Left Tilt	0	QPSK	Level 1	1	50	132322/1745	24.00	23.53	0.228	0.010	1.11	0.254	/
			0	QPSK	Level 1	50%	0	132572/1770	23.50	22.39	0.194	0.035	1.29	0.250	/
		Right cheek	0	QPSK	Level 1	1	99	132072/1720	24.00	23.16	0.895	0.020	1.21	1.086	/
		Right cheek	0	QPSK	Level 1	1	50	132572/1770	24.00	23.38	0.936	0.016	1.15	1.080	/
Right cheek	0	QPSK	Level 1	1	50	132322/1745	24.00	23.53	0.979	0.072	1.11	1.091	/		



		repeat													
		Right cheek	0	QPSK	Level 1	1	50	132322/1745	24.00	23.53	0.987	0.010	1.11	1.100	31
		Right cheek SIM2	0	QPSK	Level 1	1	50	132322/1745	24.00	23.53	0.962	0.000	1.11	1.072	/
		Right cheek	0	QPSK	Level 1	50%	50	132072/1720	23.50	22.28	0.826	0.027	1.32	1.094	/
			0	QPSK	Level 1	50%	0	132322/1745	23.50	22.27	0.815	-0.010	1.33	1.082	/
			0	QPSK	Level 1	50%	0	132572/1770	23.50	22.39	0.849	0.043	1.29	1.096	/
			0	QPSK	Level 1	100%	0	132072/1720	23.50	22.26	0.711	0.038	1.33	0.946	/
			0	QPSK	Level 1	100%	0	132322/1745	23.50	22.33	0.739	-0.027	1.31	0.967	/
			0	QPSK	Level 1	100%	0	132572/1770	23.50	22.22	0.762	0.030	1.34	1.023	/
		Right Tilt	0	QPSK	Level 1	1	50	132322/1745	24.00	23.53	0.276	-0.021	1.11	0.308	/
			0	QPSK	Level 1	50%	0	132572/1770	23.50	22.39	0.242	0.018	1.29	0.312	/

Note: 1.The value with blue color is the maximum SAR Value of each test band.

Band	Antenna	Test Position	Dist. (mm)	Mode	Power Reduction	RB	offset	Ch./Freq. (MHz)	Tune-up (dBm)	Measured power (dBm)	Measured SAR1g	Power Drift (dB)	Scaling Factor	Report SAR1g	Plot No.		
n41 SA&NSA	ANT1	Left cheek	0	DFT-s-OFDM QPSK	Level 1	1	1	509202/2546.01	19.00	18.05	0.089	0.025	1.24	0.111	/		
			0	DFT-s-OFDM QPSK	Level 1	135	67	509202/2546.01	19.00	17.96	0.107	0.080	1.27	0.136	32		
		Left Tilt	0	DFT-s-OFDM QPSK	Level 1	1	1	509202/2546.01	19.00	18.05	0.026	0.112	1.24	0.032	/		
			0	DFT-s-OFDM QPSK	Level 1	135	67	509202/2546.01	19.00	17.96	0.020	0.113	1.27	0.025	/		
		Right cheek	0	DFT-s-OFDM QPSK	Level 1	1	1	509202/2546.01	19.00	18.05	0.052	0.053	1.24	0.064	/		
			0	DFT-s-OFDM QPSK	Level 1	135	67	509202/2546.01	19.00	17.96	0.059	0.185	1.27	0.074	/		
		Right Tilt	0	DFT-s-OFDM QPSK	Level 1	1	1	509202/2546.01	19.00	18.05	0.045	0.063	1.24	0.056	/		
			0	DFT-s-OFDM QPSK	Level 1	135	67	509202/2546.01	19.00	17.96	0.042	0.052	1.27	0.053	/		
				Left cheek	0	CP-OFDM QPSK	Level 1	1	1	509202/2546.01	18.00	16.52	0.088	-0.060	1.41	0.124	/
		n66 SA&NSA	ANT8	Left cheek	0	DFT-s-OFDM QPSK	Level 1	1	1	344000/1720	22.00	21.52	0.383	-0.170	1.12	0.428	/
0	DFT-s-OFDM QPSK				Level 1	50	25	344000/1720	22.00	21.50	0.305	0.083	1.12	0.342	/		
Left Tilt	0			DFT-s-OFDM QPSK	Level 1	1	1	344000/1720	22.00	21.52	0.161	0.116	1.12	0.180	/		
	0			DFT-s-OFDM QPSK	Level 1	50	25	344000/1720	22.00	21.50	0.122	0.132	1.12	0.137	/		



		Right cheek	0	DFT-s-OFDM QPSK	Level 1	1	1	344000/1720	22.00	21.52	0.625	0.150	1.12	0.698	/
			0	DFT-s-OFDM QPSK	Level 1	50	25	344000/1720	22.00	21.50	0.705	-0.160	1.12	0.791	33
		Right Tilt	0	DFT-s-OFDM QPSK	Level 1	1	1	344000/1720	22.00	21.52	0.191	0.022	1.12	0.213	/
			0	DFT-s-OFDM QPSK	Level 1	50	25	344000/1720	22.00	21.50	0.171	0.080	1.12	0.192	/
		Right cheek	0	CP-OFDM QPSK	Level 1	1	0	344000/1720	21.00	20.17	0.587	-0.042	1.21	0.711	/

Note: 1.The value with blue color is the maximum SAR Value of each test band.

Band	Antenna	Test Position	Mode	Duty Cycle	Power Reduction	Ch./Freq. (MHz)	Tune-up (dBm)	Measured power (dBm)	Measured SAR1g	Power Drift (dB)	Scaling Factor	Report SAR1g	Plot No.
Wi-Fi2.4G		Left cheek	802.11b	98.0%	Level 1	11/2462	16.00	15.21	0.492	0.030	1.22	0.602	34
		Left Tilt	802.11b	98.0%	Level 1	11/2462	16.00	15.21	0.415	-0.026	1.22	0.508	/
		Right cheek	802.11b	98.0%	Level 1	11/2462	16.00	15.21	0.149	0.180	1.22	0.182	/
		Right Tilt	802.11b	98.0%	Level 1	11/2462	16.00	15.21	0.172	0.022	1.22	0.211	/
U-NII-1		Left cheek	11ac-VHT20	100.0%	Level 1	40/5200	13.50	12.82	0.761	0.029	1.17	0.890	35
		Left cheek	11ac-VHT20	100.0%	Level 1	36/5180	13.50	12.70	0.735	0.091	1.20	0.884	/
		Left cheek	11ac-VHT20	100.0%	Level 1	48/5240	13.50	12.63	0.702	-0.022	1.22	0.858	/
		Left Tilt	11ac-VHT20	100.0%	Level 1	40/5200	13.50	12.82	0.489	0.013	1.17	0.572	/
		Right cheek	11ac-VHT20	100.0%	Level 1	40/5200	13.50	12.82	0.192	-0.090	1.17	0.225	/
		Right Tilt	11ac-VHT20	100.0%	Level 1	40/5200	13.50	12.82	0.285	0.000	1.17	0.333	/
U-NII-2A	ANT 4	Left cheek	11ac-VHT80	100.0%	Level 1	58/5290	14.00	13.16	0.732	0.048	1.21	0.888	36
		Left Tilt	11ac-VHT80	100.0%	Level 1	58/5290	14.00	13.16	0.612	0.020	1.21	0.743	/
		Right cheek	11ac-VHT80	100.0%	Level 1	58/5290	14.00	13.16	0.059	0.035	1.21	0.072	/
		Right Tilt	11ac-VHT80	100.0%	Level 1	58/5290	14.00	13.16	0.058	0.028	1.21	0.070	/
U-NII-2C		Left cheek	11ac-VHT80	100.0%	Level 1	138/5690	13.50	12.97	0.787	0.130	1.13	0.889	37
		Left cheek	11ac-VHT80	100.0%	Level 1	106/5530	13.50	12.81	0.762	0.019	1.17	0.894	/
		Left Tilt	11ac-VHT80	100.0%	Level 1	138/5690	13.50	12.97	0.485	0.031	1.13	0.548	/
		Right cheek	11ac-VHT80	100.0%	Level 1	138/5690	13.50	12.97	0.241	-0.049	1.13	0.272	/
U-NII-3		Right Tilt	11ac-VHT80	100.0%	Level 1	138/5690	13.50	12.97	0.189	0.027	1.13	0.214	/
		Left cheek	11ac-VHT40	100.0%	Level 1	151/5755	15.00	13.48	0.612	0.050	1.42	0.868	/
		Left cheek	11ac-VHT40	100.0%	Level 1	159/5795	15.00	13.74	0.668	0.026	1.34	0.893	38
		Left Tilt	11ac-VHT40	100.0%	Level 1	159/5795	15.00	13.74	0.492	0.011	1.34	0.658	/
		Right cheek	11ac-VHT40	100.0%	Level 1	159/5795	15.00	13.74	0.285	0.035	1.34	0.381	/
Wi-Fi2.4G	ANT 3	Right Tilt	11ac-VHT40	100.0%	Level 1	159/5795	15.00	13.74	0.328	0.014	1.34	0.438	/
		Left cheek	802.11b	98.0%	Level 1	1/2412	17.00	16.32	0.262	0.028	1.19	0.313	39
		Left Tilt	802.11b	98.0%	Level 1	1/2412	17.00	16.32	0.082	-0.014	1.19	0.098	/
		Right cheek	802.11b	98.0%	Level 1	1/2412	17.00	16.32	0.061	-0.032	1.19	0.073	/
		Right Tilt	802.11b	98.0%	Level 1	1/2412	17.00	16.32	0.040	0.040	1.19	0.048	/



U-NII-1	Left cheek	11nHT20	100.0%	Level 1	40/5200	14.50	13.86	0.515	0.117	1.16	0.597	40	
	Left Tilt	11nHT20	100.0%	Level 1	40/5200	14.50	13.86	0.056	-0.060	1.16	0.065	/	
	Right cheek	11nHT20	100.0%	Level 1	40/5200	14.50	13.86	0.042	0.012	1.16	0.049	/	
	Right Tilt	11nHT20	100.0%	Level 1	40/5200	14.50	13.86	0.000	0.000	1.16	0.000	/	
U-NII-2A	Left cheek	11nHT20	100.0%	Level 1	56/5280	15.00	14.80	0.602	-0.153	1.05	0.630	41	
	Left Tilt	11nHT20	100.0%	Level 1	56/5280	15.00	14.80	0.105	0.018	1.05	0.110	/	
	Right cheek	11nHT20	100.0%	Level 1	56/5280	15.00	14.80	0.132	-0.020	1.05	0.138	/	
	Right Tilt	11nHT20	100.0%	Level 1	56/5280	15.00	14.80	0.038	0.090	1.05	0.040	/	
U-NII-2C	Left cheek	11ac-VHT80	100.0%	Level 1	106/5530	14.50	14.02	0.449	0.127	1.12	0.501	42	
	Left Tilt	11ac-VHT80	100.0%	Level 1	106/5530	14.50	14.02	0.126	0.042	1.12	0.141	/	
	Right cheek	11ac-VHT80	100.0%	Level 1	106/5530	14.50	14.02	0.113	-0.070	1.12	0.126	/	
	Right Tilt	11ac-VHT80	100.0%	Level 1	106/5530	14.50	14.02	0.052	0.099	1.12	0.058	/	
U-NII-3	Left cheek	11a	100.0%	Level 1	149/5745	14.00	12.76	0.432	0.010	1.33	0.575	43	
	Left Tilt	11a	100.0%	Level 1	149/5745	14.00	12.76	0.078	-0.011	1.33	0.104	/	
	Right cheek	11a	100.0%	Level 1	149/5745	14.00	12.76	0.125	0.013	1.33	0.166	/	
	Right Tilt	11a	100.0%	Level 1	149/5745	14.00	12.76	0.027	-0.070	1.33	0.036	/	
Wi-Fi2.4G	Left cheek	11nHT20	98.0%	Level 1	1/2412	19.00	18.43	0.598	0.013	1.16	0.696	44	
	Left Tilt	11nHT20	98.0%	Level 1	1/2412	19.00	18.43	0.438	-0.091	1.16	0.510	/	
	Right cheek	11nHT20	98.0%	Level 1	1/2412	19.00	18.43	0.281	0.022	1.16	0.327	/	
	Right Tilt	11nHT20	98.0%	Level 1	1/2412	19.00	18.43	0.176	-0.035	1.16	0.205	/	
U-NII-1	Left cheek	11nHT20	100.0%	Level 1	40/5200	15.00	13.77	0.362	0.018	1.33	0.481	45	
	Left Tilt	11nHT20	100.0%	Level 1	40/5200	15.00	13.77	0.241	-0.040	1.33	0.320	/	
	Right cheek	11nHT20	100.0%	Level 1	40/5200	15.00	13.77	0.126	-0.041	1.33	0.167	/	
	Right Tilt	11nHT20	100.0%	Level 1	40/5200	15.00	13.77	0.095	-0.020	1.33	0.126	/	
U-NII-2A	Left cheek	11nHT20	100.0%	Level 1	52/5260	16.00	14.20	0.385	0.060	1.51	0.583	46	
	Left Tilt	11nHT20	100.0%	Level 1	52/5260	16.00	14.20	0.302	-0.024	1.51	0.457	/	
	Right cheek	11nHT20	100.0%	Level 1	52/5260	16.00	14.20	0.148	-0.019	1.51	0.224	/	
	Right Tilt	11nHT20	100.0%	Level 1	52/5260	16.00	14.20	0.117	0.012	1.51	0.177	/	
U-NII-2C	Left cheek	11ax 80	100.0%	Level 1	138/5690	18.00	17.29	0.753	0.061	1.18	0.886	47	
	Left cheek	11ax 80	100.0%	Level 1	106/5530	18.00	16.66	0.624	0.02	1.36	0.849	/	
	Left Tilt	11ax 80	100.0%	Level 1	138/5690	18.00	17.29	0.442	0.000	1.18	0.520	/	
	Right cheek	11ax 80	100.0%	Level 1	138/5690	18.00	17.29	0.198	0.024	1.18	0.233	/	
	Right Tilt	11ax 80	100.0%	Level 1	138/5690	18.00	17.29	0.346	0.016	1.18	0.407	/	
U-NII-3	Left cheek	11ac-VHT40	100.0%	Level 1	159/5795	18.00	16.54	0.490	0.171	1.40	0.686	48	
	Left Tilt	11ac-VHT40	100.0%	Level 1	159/5795	18.00	16.54	0.268	-0.015	1.40	0.375	/	
	Right cheek	11ac-VHT40	100.0%	Level 1	159/5795	18.00	16.54	0.185	0.019	1.40	0.259	/	
	Right Tilt	11ac-VHT40	100.0%	Level 1	159/5795	18.00	16.54	0.201	0.023	1.40	0.281	/	
Bluetooth	ANT 4	Left cheek	DH5	76.0%	-	39/2441	12.50	11.58	0.236	0.130	1.63	0.384	49
		Left Tilt	DH5	76.0%	-	39/2441	12.50	11.58	0.135	-0.029	1.63	0.220	/
		Right cheek	DH5	76.0%	-	39/2441	12.50	11.58	0.071	0.030	1.63	0.115	/
		Right Tilt	DH5	76.0%	-	39/2441	12.50	11.58	0.060	0.042	1.63	0.097	/

Note: 1. The value with blue color is the maximum SAR Value of each test band.



Simultaneous

Band	Antenna	Test Position	Mode	Duty Cycle	Power Reduction	Ch./Freq. (MHz)	Tune-up (dBm)	Measured power (dBm)	Measured SAR1g	Power Drift (dB)	Scaling Factor	Report SAR1g	Plot No.
Wi-Fi2.4G	ANT 4	Left cheek	802.11b	98.0%	Level 4	11/2462	13.00	12.10	0.150	-0.150	1.26	0.188	/
		Left Tilt	802.11b	98.0%	Level 4	11/2462	13.00	12.10	0.142	0.011	1.26	0.178	/
		Right cheek	802.11b	98.0%	Level 4	11/2462	13.00	12.10	0.065	-0.022	1.26	0.082	/
		Right Tilt	802.11b	98.0%	Level 4	11/2462	13.00	12.10	0.071	0.050	1.26	0.089	/
U-NII-1		Left cheek	802.11a	100.0%	Level 4	48/5240	13.00	11.36	0.414	0.102	1.46	0.604	/
		Left Tilt	802.11a	100.0%	Level 4	48/5240	13.00	11.36	0.260	0.020	1.46	0.379	/
		Right cheek	802.11a	100.0%	Level 4	48/5240	13.00	11.36	0.120	0.100	1.46	0.175	/
		Right Tilt	802.11a	100.0%	Level 4	48/5240	13.00	11.36	0.190	0.060	1.46	0.277	/
U-NII-2A		Left cheek	802.11a	100.0%	Level 4	52/5260	11.00	9.58	0.252	0.151	1.39	0.349	/
		Left Tilt	802.11a	100.0%	Level 4	52/5260	11.00	9.58	0.193	0.032	1.39	0.268	/
		Right cheek	802.11a	100.0%	Level 4	52/5260	11.00	9.58	0.018	-0.100	1.39	0.025	/
		Right Tilt	802.11a	100.0%	Level 4	52/5260	11.00	9.58	0.012	0.000	1.39	0.017	/
U-NII-2C		Left cheek	802.11ac-VHT80	100.0%	Level 4	106/5530	11.00	10.47	0.537	-0.150	1.13	0.607	/
		Left Tilt	802.11ac-VHT80	100.0%	Level 4	106/5530	11.00	10.47	0.321	0.016	1.13	0.363	/
		Right cheek	802.11ac-VHT80	100.0%	Level 4	106/5530	11.00	10.47	0.224	0.032	1.13	0.253	/
		Right Tilt	802.11ac-VHT80	100.0%	Level 4	106/5530	11.00	10.47	0.048	0.013	1.13	0.054	/
U-NII-3	Left cheek	802.11a	100.0%	Level 4	149/5745	11.00	10.30	0.472	0.094	1.17	0.555	/	
	Left Tilt	802.11a	100.0%	Level 4	149/5745	11.00	10.30	0.381	-0.024	1.17	0.448	/	
	Right cheek	802.11a	100.0%	Level 4	149/5745	11.00	10.30	0.197	0.016	1.17	0.231	/	
	Right Tilt	802.11a	100.0%	Level 4	149/5745	11.00	10.30	0.201	0.030	1.17	0.236	/	
2.4G	Left cheek	802.11b	98.0%	Level 4	1/2412	14.00	13.65	0.229	0.115	1.11	0.253	/	
	Left Tilt	802.11b	98.0%	Level 4	1/2412	14.00	13.65	0.065	0.062	1.11	0.072	/	
	Right cheek	802.11b	98.0%	Level 4	1/2412	14.00	13.65	0.060	0.058	1.11	0.066	/	
	Right Tilt	802.11b	98.0%	Level 4	1/2412	14.00	13.65	0.040	0.025	1.11	0.044	/	
U-NII-1	Left cheek	802.11a	100.0%	Level 4	40/5200	12.00	10.95	0.344	0.027	1.27	0.438	/	
	Left Tilt	802.11a	100.0%	Level 4	40/5200	12.00	10.95	0.062	0.031	1.27	0.079	/	
	Right cheek	802.11a	100.0%	Level 4	40/5200	12.00	10.95	0.058	-0.091	1.27	0.074	/	
	Right Tilt	802.11a	100.0%	Level 4	40/5200	12.00	10.95	0.024	0.022	1.27	0.031	/	
U-NII-2A	Left cheek	802.11a	100.0%	Level 4	52/5260	13.00	12.21	0.378	0.049	1.20	0.453	/	
	Left Tilt	802.11a	100.0%	Level 4	52/5260	13.00	12.21	0.088	0.028	1.20	0.106	/	
	Right cheek	802.11a	100.0%	Level 4	52/5260	13.00	12.21	0.092	0.036	1.20	0.110	/	
	Right Tilt	802.11a	100.0%	Level 4	52/5260	13.00	12.21	0.021	-0.010	1.20	0.025	/	
U-NII-2C	Left cheek	802.11a	100.0%	Level 4	144/5720	12.00	10.69	0.223	0.036	1.35	0.302	/	
	Left Tilt	802.11a	100.0%	Level 4	144/5720	12.00	10.69	0.082	0.050	1.35	0.111	/	
	Right cheek	802.11a	100.0%	Level 4	144/5720	12.00	10.69	0.078	0.089	1.35	0.105	/	
	Right Tilt	802.11a	100.0%	Level 4	144/5720	12.00	10.69	0.035	-0.021	1.35	0.047	/	
U-NII-3	Left cheek	802.11a	100.0%	Level 4	149/5745	12.00	10.65	0.230	0.039	1.36	0.314	/	
	Left Tilt	802.11a	100.0%	Level 4	149/5745	12.00	10.65	0.083	0.158	1.36	0.114	/	
	Right cheek	802.11a	100.0%	Level 4	149/5745	12.00	10.65	0.068	0.024	1.36	0.093	/	



		Right Tilt	802.11a	100.0%	Level 4	149/5745	12.00	10.65	0.000	-0.100	1.36	0.000	/
2.4G		Left cheek	11nHT20	98.0%	Level 4	1/2412	16.00	15.74	0.367	0.090	1.08	0.398	/
		Left Tilt	11nHT20	98.0%	Level 4	1/2412	16.00	15.74	0.248	-0.011	1.08	0.269	/
		Right cheek	11nHT20	98.0%	Level 4	1/2412	16.00	15.74	0.156	0.035	1.08	0.169	/
		Right Tilt	11nHT20	98.0%	Level 4	1/2412	16.00	15.74	0.092	0.020	1.08	0.100	/
U-NII-1		Left cheek	11nHT20	100.0%	Level 4	40/5200	12.00	10.52	0.215	0.018	1.41	0.302	/
		Left Tilt	11nHT20	100.0%	Level 4	40/5200	12.00	10.52	0.134	-0.016	1.41	0.188	/
		Right cheek	11nHT20	100.0%	Level 4	40/5200	12.00	10.52	0.069	-0.040	1.41	0.097	/
		Right Tilt	11nHT20	100.0%	Level 4	40/5200	12.00	10.52	0.054	0.022	1.41	0.076	/
U-NII-2A	MIMO	Left cheek	11nHT20	100.0%	Level 4	52/5260	13.00	11.80	0.203	0.026	1.32	0.267	/
		Left Tilt	11nHT20	100.0%	Level 4	52/5260	13.00	11.80	0.158	0.033	1.32	0.208	/
		Right cheek	11nHT20	100.0%	Level 4	52/5260	13.00	11.80	0.074	-0.019	1.32	0.097	/
		Right Tilt	11nHT20	100.0%	Level 4	52/5260	13.00	11.80	0.063	-0.012	1.32	0.083	/
U-NII-2C		Left cheek	11nHT20	100.0%	Level 4	144/5720	15.00	13.28	0.275	0.023	1.48	0.408	/
		Left Tilt	11nHT20	100.0%	Level 4	144/5720	15.00	13.28	0.139	0.028	1.48	0.206	/
		Right cheek	11nHT20	100.0%	Level 4	144/5720	15.00	13.28	0.066	-0.040	1.48	0.098	/
		Right Tilt	11nHT20	100.0%	Level 4	144/5720	15.00	13.28	0.098	0.016	1.48	0.145	/
U-NII-3		Left cheek	11nHT20	100.0%	Level 4	149/5745	16.00	14.55	0.287	0.080	1.40	0.401	/
		Left Tilt	11nHT20	100.0%	Level 4	149/5745	16.00	14.55	0.179	0.015	1.40	0.250	/
		Right cheek	11nHT20	100.0%	Level 4	149/5745	16.00	14.55	0.124	0.021	1.40	0.173	/
		Right Tilt	11nHT20	100.0%	Level 4	149/5745	16.00	14.55	0.135	-0.023	1.40	0.189	/

Body-worn SAR

Band	Ant	Test Position	Dist. (mm)	Mode	Power Reduction	RB	offset	Ch./Freq. (MHz)	Tune-up (dBm)	Measured power (dBm)	Measured SAR1g	Power Drift (dB)	Scaling Factor	Report SAR1g	Plot No.
GSM 850	ANT 0	Back Side	15	GSM	Level 2	-	-	190/836.6	33.50	33.04	0.189	0.030	1.11	0.210	50
		Front Side	15	GSM	Level 2	-	-	190/836.6	33.50	33.04	0.130	0.120	1.11	0.145	/
GSM 1900	ANT 1	Back Side	15	GSM	Level 2	-	-	661/1880	30.50	29.34	0.207	0.113	1.31	0.270	51
		Front Side	15	GSM	Level 2	-	-	661/1880	30.50	29.34	0.120	0.105	1.31	0.157	/
WCDMA II	ANT 1	Back Side	15	RMC	Level 2	-	-	9262/1852.4	25.50	24.56	0.724	0.019	1.24	0.899	/
			15	RMC	Level 2	-	-	9400/1880	25.50	24.55	0.785	0.140	1.24	0.977	52
		Back Side SIM2	15	RMC	Level 2	-	-	9400/1880	25.50	24.55	0.749	0.010	1.24	0.932	/
		Back Side	15	RMC	Level 2	-	-	9538/1907.6	25.50	24.52	0.685	0.033	1.25	0.858	/
		Front Side	15	RMC	Level 2	-	-	9400/1880	25.50	24.55	0.431	0.141	1.24	0.536	/
WCDMA V	ANT 0	Back Side	15	RMC	Level 2	-	-	4183/836.6	25.50	24.81	0.170	-0.010	1.17	0.199	53
		Front Side	15	RMC	Level 2	-	-	4183/836.6	25.50	24.81	0.157	0.022	1.17	0.184	/
	ANT 2	Back Side	15	RMC	Level 2	-	-	4183/836.6	24.50	23.47	0.159	0.190	1.27	0.202	/
		Front Side	15	RMC	Level 2	-	-	4183/836.6	24.50	23.47	0.092	0.104	1.27	0.117	/
LTE 2	ANT 1	Back Side	15	QPSK	Level 2	1	0	19100/1900	23.00	22.77	0.457	0.070	1.05	0.482	54
			15	QPSK	Level 2	50%	25	19100/1900	22.50	21.86	0.281	0.088	1.16	0.326	/
		Front Side	15	QPSK	Level 2	1	0	19100/1900	23.00	22.77	0.254	-0.012	1.05	0.268	/



			15	QPSK	Level 2	50%	25	19100/1900	22.50	21.86	0.193	0.024	1.16	0.224	/
LTE 4	ANT 1	Back Side	15	QPSK	Level 2	1	0	20300/1745	23.00	21.79	0.332	0.030	1.32	0.439	55
			15	QPSK	Level 2	50%	0	20300/1745	22.00	20.75	0.257	-0.070	1.33	0.343	/
		Front Side	15	QPSK	Level 2	1	0	20300/1745	23.00	21.79	0.176	0.026	1.32	0.233	/
			15	QPSK	Level 2	50%	0	20300/1745	22.00	20.75	0.158	0.019	1.33	0.211	/
LTE 5	ANT 0	Back Side	15	QPSK	Level 2	1	0	20600/844	25.50	25.02	0.310	-0.030	1.12	0.346	56
			15	QPSK	Level 2	50%	13	20450/829	24.50	24.04	0.212	0.124	1.11	0.236	/
		Front Side	15	QPSK	Level 2	1	0	20600/844	25.50	25.02	0.200	0.035	1.12	0.223	/
			15	QPSK	Level 2	50%	13	20450/829	24.50	24.04	0.154	0.101	1.11	0.171	/
	ANT 2	Back Side	15	QPSK	Level 2	1	25	20525/836.5	24.50	23.92	0.138	0.060	1.14	0.158	/
			15	QPSK	Level 2	50%	25	20600/844	23.50	22.96	0.086	0.064	1.13	0.097	/
		Front Side	15	QPSK	Level 2	1	25	20525/836.5	24.50	23.92	0.076	0.054	1.14	0.087	/
			15	QPSK	Level 2	50%	25	20600/844	23.50	22.96	0.068	0.021	1.13	0.077	/
LTE 7	ANT 1	Back Side	15	QPSK	Level 2	1	99	21100/2535	25.50	24.91	0.448	-0.077	1.15	0.513	/
			15	QPSK	Level 2	50%	50	21100/2535	24.50	24.07	0.366	-0.049	1.10	0.404	/
		Front Side	15	QPSK	Level 2	1	99	21100/2535	25.50	24.91	0.646	0.040	1.15	0.740	57
			15	QPSK	Level 2	50%	50	21100/2535	24.50	24.07	0.464	0.042	1.10	0.512	/
		Front Side	15	QPSK	Level 2	1	99	21100/2535	25.50	24.68	0.564	-0.019	1.21	0.681	/
			1	0	20902/2515.2										
LTE 12	ANT 0	Back Side	15	QPSK	Level 2	1	25	23095/707.5	25.50	24.95	0.157	0.020	1.14	0.178	58
			15	QPSK	Level 2	50%	13	23060/704	24.50	24.09	0.124	0.121	1.10	0.136	/
		Front Side	15	QPSK	Level 2	1	25	23095/707.5	25.50	24.95	0.122	0.105	1.14	0.138	/
			15	QPSK	Level 2	50%	13	23060/704	24.50	24.09	0.103	0.114	1.10	0.113	/
	ANT 2	Back Side	15	QPSK	Level 2	1	49	23060/704	24.50	23.96	0.017	0.186	1.13	0.019	/
			15	QPSK	Level 2	50%	13	23060/704	23.50	22.96	0.009	0.000	1.13	0.010	/
		Front Side	15	QPSK	Level 2	1	49	23060/704	24.50	23.96	0.010	0.032	1.13	0.011	/
			15	QPSK	Level 2	50%	13	23060/704	23.50	22.96	0.005	-0.090	1.13	0.006	/
LTE 26	ANT 0	Back Side	15	QPSK	Level 2	1	38	26865/831.5	25.50	25.13	0.283	0.040	1.09	0.308	59
			15	QPSK	Level 2	50%	18	26965/841.5	24.50	24.32	0.204	0.032	1.04	0.213	/
		Front Side	15	QPSK	Level 2	1	38	26865/831.5	25.50	25.13	0.162	0.105	1.09	0.176	/
			15	QPSK	Level 2	50%	18	26965/841.5	24.50	24.32	0.144	-0.054	1.04	0.150	/
	ANT 2	Back Side	15	QPSK	Level 2	1	0	26965/841.5	24.50	23.36	0.090	-0.054	1.30	0.117	/
			15	QPSK	Level 2	50%	18	26965/841.5	23.50	22.36	0.097	0.024	1.30	0.126	/
Front Side	15	QPSK	Level 2	1	0	26965/841.5	24.50	23.36	0.074	0.105	1.30	0.096	/		
	15	QPSK	Level 2	50%	18	26965/841.5	23.50	22.36	0.071	0.064	1.30	0.092	/		
LTE 38 TDD	ANT 1	Back Side	15	QPSK	Level 2	1	50	38150/2610	25.50	24.87	0.269	-0.040	1.16	0.311	/
			15	QPSK	Level 2	50%	50	38150/2610	24.50	23.98	0.223	0.074	1.13	0.251	/
		Front Side	15	QPSK	Level 2	1	50	38150/2610	25.50	24.87	0.471	-0.074	1.16	0.545	60
			15	QPSK	Level 2	50%	50	38150/2610	24.50	23.98	0.363	0.100	1.13	0.409	/
LTE 41 TDD	ANT 1	Back Side	15	QPSK	Level 2	1	0	41490/2680	25.50	24.91	0.269	0.024	1.15	0.308	/
			15	QPSK	Level 2	50%	50	40620/2593	24.50	23.95	0.237	-0.030	1.14	0.269	/
		Front Side	15	QPSK	Level 2	1	0	41490/2680	25.50	24.91	0.509	0.120	1.15	0.583	61
			15	QPSK	Level 2	50%	50	40620/2593	24.50	23.95	0.373	0.039	1.14	0.423	/



LTE 66	ANT 8	Front Side	15	QPSK	Level 2	1	99	40185/2549.5	25.50	24.70	0.415	-0.060	1.20	0.499	/
						1	0	39987/2529.7							/
		Back Side	15	QPSK	Level 2	1	50	132322/1745	25.50	24.91	0.208	0.022	1.15	0.238	/
			15	QPSK	Level 2	50%	0	132572/1770	25.00	23.94	0.187	-0.019	1.28	0.239	/
Front Side	15	QPSK	Level 2	1	50	132322/1745	25.50	24.91	0.257	0.045	1.15	0.294	62		
	15	QPSK	Level 2	50%	0	132572/1770	25.00	23.94	0.133	0.000	1.28	0.170	/		

Note: 1.The value with blue color is the maximum SAR Value of each test band.

Band	Antenna	Test Position	Dist. (mm)	Mode	Power Reduction	RB offset	Ch./Freq. (MHz)	Tune-up (dBm)	Measured power (dBm)	Measured SAR1g	Power Drift (dB)	Scaling Factor	Report SAR1g	Plot No.	
n41 SA&NSA	ANT1	Back Side	15	DFT-s-OFDM QPSK	Level 2	1	1	509202/2546.01	19.00	18.05	0.095	-0.058	1.24	0.118	/
			15	DFT-s-OFDM QPSK	Level 2	135	67	509202/2546.01	19.00	17.96	0.101	0.022	1.27	0.128	/
		Front Side	15	DFT-s-OFDM QPSK	Level 2	1	1	509202/2546.01	19.00	18.05	0.115	0.034	1.24	0.143	/
			15	DFT-s-OFDM QPSK	Level 2	135	67	509202/2546.01	19.00	17.96	0.119	0.040	1.27	0.151	63
		Front Side	15	CP-OFDM QPSK	Level 2	1	1	509202/2546.01	18.00	16.52	0.105	0.000	1.41	0.148	/
n66 SA&NSA	ANT8	Back Side	15	DFT-s-OFDM QPSK	Level 2	1	1	344000/1720	25.50	24.52	0.346	0.080	1.25	0.434	64
			15	DFT-s-OFDM QPSK	Level 2	50	25	344000/1720	25.50	24.48	0.287	0.000	1.26	0.363	/
		Front Side	15	DFT-s-OFDM QPSK	Level 2	1	1	344000/1720	25.50	24.52	0.259	0.031	1.25	0.325	/
			15	DFT-s-OFDM QPSK	Level 2	50	25	344000/1720	25.50	24.48	0.206	-0.070	1.26	0.261	/
		Back Side	15	CP-OFDM QPSK	Level 2	1	1	344000/1720	24.50	23.05	0.246	0.018	1.40	0.344	/

Note: 1.The value with blue color is the maximum SAR Value of each test band.

Band	Antenna	Test Position	Dist. (mm)	Mode	Duty Cycle	Power Reduction	Ch./Freq. (MHz)	Tune-up (dBm)	Measured power (dBm)	Measured SAR1g	Power Drift (dB)	Scaling Factor	Report SAR1g	Plot No.
Wi-Fi2.4G	ANT 4	Back Side	15	802.11b	98.0%	Level 2	11/2462	20.00	19.97	0.289	0.016	1.03	0.297	65
		Front Side	15	802.11b	98.0%	Level 2	11/2462	20.00	19.97	0.126	-0.070	1.03	0.129	/
U-NII-1		Back Side	15	11ac-VHT20	100.0%	Level 2	36/5180	18.00	17.23	0.264	-0.139	1.19	0.315	66
		Front Side	15	11ac-VHT20	100.0%	Level 2	36/5180	18.00	17.23	0.223	-0.014	1.19	0.266	/
U-NII-2A		Back Side	15	11ac-VHT20	100.0%	Level 2	52/5260	17.50	16.03	0.325	0.010	1.40	0.456	/
		Front Side	15	11ac-VHT20	100.0%	Level 2	52/5260	17.50	16.03	0.426	-0.030	1.40	0.598	67
U-NII-2C		Back Side	15	11ac-VHT80	100.0%	Level 2	138/5690	17.00	15.41	0.153	-0.010	1.44	0.221	68



U-NII-3		Front Side	15	11ac-VHT80	100.0%	Level 2	138/5690	17.00	15.41	0.109	0.052	1.44	0.157	/
		Back Side	15	11ax HE80	100.0%	Level 2	155/5775	16.50	15.26	0.109	0.000	1.33	0.145	/
		Front Side	15	11ax HE80	100.0%	Level 2	155/5775	16.50	15.26	0.185	-0.040	1.33	0.246	69
Wi-Fi2.4G		Back Side	15	802.11b	98.0%	Level 2	1/2412	20.00	19.32	0.198	0.014	1.19	0.236	70
		Front Side	15	802.11b	98.0%	Level 2	1/2412	20.00	19.32	0.187	0.030	1.19	0.223	/
U-NII-1		Back Side	15	11nHT40	100.0%	Level 2	38/5190	18.50	18.17	0.352	0.134	1.08	0.380	71
		Front Side	15	11nHT40	100.0%	Level 2	38/5190	18.50	18.17	0.294	0.031	1.08	0.317	/
U-NII-2A	ANT 3	Back Side	15	11nHT20	100.0%	Level 2	52/5260	18.00	16.93	0.326	0.027	1.28	0.417	72
		Front Side	15	11nHT20	100.0%	Level 2	52/5260	18.00	16.93	0.245	0.010	1.28	0.313	/
U-NII-2C		Back Side	15	11ac-VHT80	100.0%	Level 2	138/5690	17.50	17.28	0.256	0.088	1.05	0.269	73
		Front Side	15	11ac-VHT80	100.0%	Level 2	138/5690	17.50	17.28	0.149	0.010	1.05	0.157	/
U-NII-3		Back Side	15	11ac-VHT80	100.0%	Level 2	155/5775	17.00	16.02	0.254	0.071	1.25	0.318	74
		Front Side	15	11ac-VHT80	100.0%	Level 2	155/5775	17.00	16.02	0.143	-0.090	1.25	0.179	/
Wi-Fi2.4G		Back Side	15	11nHT20	98.0%	Level 2	1/2412	19.00	18.43	0.207	0.020	1.16	0.241	75
		Front Side	15	11nHT20	98.0%	Level 2	1/2412	19.00	18.43	0.182	-0.100	1.16	0.212	/
U-NII-1		Back Side	15	11ac-VHT20	100.0%	Level 2	36/5180	21.00	20.61	0.406	0.111	1.09	0.444	76
		Front Side	15	11ac-VHT20	100.0%	Level 2	36/5180	21.00	20.61	0.342	0.018	1.09	0.374	/
U-NII-2A	MIMO	Back Side	15	11nHT20	100.0%	Level 2	52/5260	21.00	19.43	0.269	0.013	1.44	0.387	77
		Front Side	15	11nHT20	100.0%	Level 2	52/5260	21.00	19.43	0.203	-0.060	1.44	0.292	/
U-NII-2C		Back Side	15	11ac-VHT80	100.0%	Level 2	138/5690	20.00	19.43	0.390	0.109	1.14	0.445	78
		Front Side	15	11ac-VHT80	100.0%	Level 2	138/5690	20.00	19.43	0.167	0.024	1.14	0.190	/
U-NII-3		Back Side	15	11ax HE80	100.0%	Level 2	155/5775	20.00	18.56	0.418	0.180	1.39	0.582	79
		Front Side	15	11ax HE80	100.0%	Level 2	155/5775	20.00	18.56	0.316	0.000	1.39	0.440	/

Note: 1. The value with blue color is the maximum SAR Value of each test band.

Simultaneous

Band	Antenna	Test Position	Dist. (mm)	Mode	Duty Cycle	Power Reduction	Ch./Freq. (MHz)	Tune-up (dBm)	Measured power (dBm)	Measured SAR1g	Power Drift (dB)	Scaling Factor	Report SAR1g	Plot No.
Wi-Fi2.4G	ANT 4	Back Side	15	802.11b	98.0%	Level 3	11/2462	17.00	16.14	0.155	0.047	1.24	0.193	/
U-NII-1		Back Side	15	11ac-VHT20	100.0%	Level 3	48/5240	17.00	15.61	0.152	-0.091	1.38	0.209	/
U-NII-2A		Back Side	15	11ac-VHT20	100.0%	Level 3	52/5260	16.50	15.12	0.267	0.014	1.37	0.367	/
U-NII-2C		Back Side	15	11ac-VHT80	100.0%	Level 3	138/5690	16.00	14.62	0.163	-0.040	1.37	0.224	/
U-NII-3		Back Side	15	802.11a	100.0%	Level 3	149/5745	13.00	11.18	0.049	0.000	1.52	0.075	/
Wi-Fi2.4G	ANT 3	Back Side	15	802.11b	98.0%	Level 3	1/2412	18.00	17.60	0.112	0.020	1.12	0.125	/
U-NII-1		Back Side	15	11nHT20	100.0%	Level 3	40/5200	16.00	15.04	0.185	0.070	1.25	0.231	/
U-NII-2A		Back Side	15	11nHT20	100.0%	Level 3	52/5260	16.50	15.62	0.240	0.072	1.22	0.294	/
U-NII-2C		Back Side	15	11ac-VHT80	100.0%	Level 3	138/5690	16.50	16.12	0.216	-0.080	1.09	0.236	/
U-NII-3		Back Side	15	802.11a	100.0%	Level 3	149/5745	12.00	10.65	0.091	0.090	1.36	0.124	/
U-NII-1	MIMO	Back Side	15	11n HT20	100.0%	Level 3	48/5240	18.00	16.29	0.168	0.160	1.48	0.249	/
U-NII-2A		Back Side	15	11n HT20	100.0%	Level 3	52/5260	20.00	19.43	0.269	0.021	1.14	0.307	/
U-NII-2C		Back Side	15	11ac-VHT80	100.0%	Level 3	138/5690	18.50	17.86	0.294	-0.050	1.16	0.341	/
U-NII-3		Back Side	15	11ac-VHT20	100.0%	Level 3	149/5745	14.00	12.38	0.118	0.014	1.45	0.171	/



Table 3: Hotspot

Band	Ant	Test Position	Dist. (mm)	Mode	Power Reduction	RB	offset	Ch./Freq. (MHz)	Tune-up (dBm)	Measured power (dBm)	Measured SAR1g	Power Drift (dB)	Scaling Factor	Report SAR1g	Plot No.
GSM850	ANT 0	Back Side	10	3TX Slots	Level 3	-	-	190/836.6	30.50	29.95	0.543	-0.064	1.14	0.616	80
		Front Side	10	3TX Slots	Level 3	-	-	190/836.6	30.50	29.95	0.315	0.113	1.14	0.358	/
		Left Edge	10	3TX Slots	Level 3	-	-	190/836.6	30.50	29.95	0.082	0.121	1.14	0.093	/
		Right Edge	10	3TX Slots	Level 3	-	-	190/836.6	30.50	29.95	0.206	0.042	1.14	0.234	/
		Bottom Edge	10	3TX Slots	Level 3	-	-	190/836.6	30.50	29.95	0.165	0.105	1.14	0.187	/
GSM1900	ANT 1	Back Side	10	3TX Slots	Level 3	-	-	661/1880	27.50	26.82	0.611	0.036	1.17	0.715	81
		Front Side	10	3TX Slots	Level 3	-	-	661/1880	27.50	26.82	0.420	0.115	1.17	0.491	/
		Left Edge	10	3TX Slots	Level 3	-	-	661/1880	27.50	26.82	0.099	0.032	1.17	0.116	/
		Right Edge	10	3TX Slots	Level 3	-	-	661/1880	27.50	26.82	0.045	0.144	1.17	0.053	/
		Bottom Edge	10	3TX Slots	Level 3	-	-	661/1880	27.50	26.82	0.526	0.052	1.17	0.615	/
WCDMA II	ANT 1	Back Side	10	RMC	Level 3	-	-	9400/1880	23.00	22.71	0.712	0.012	1.07	0.761	82
		Front Side	10	RMC	Level 3	-	-	9400/1880	23.00	22.71	0.549	-0.070	1.07	0.587	/
		Left Edge	10	RMC	Level 3	-	-	9400/1880	23.00	22.71	0.163	0.042	1.07	0.174	/
		Right Edge	10	RMC	Level 3	-	-	9400/1880	23.00	22.71	0.013	-0.095	1.07	0.014	/
		Bottom Edge	10	RMC	Level 3	-	-	9400/1880	23.00	22.71	0.621	0.032	1.07	0.664	/
WCDMA V	ANT 0	Back Side	10	RMC	Level 3	-	-	4183/836.6	25.50	24.81	0.449	0.000	1.17	0.526	83
		Front Side	10	RMC	Level 3	-	-	4183/836.6	25.50	24.81	0.129	0.164	1.17	0.151	/
		Left Edge	10	RMC	Level 3	-	-	4183/836.6	25.50	24.81	0.063	0.175	1.17	0.074	/
		Right Edge	10	RMC	Level 3	-	-	4183/836.6	25.50	24.81	0.045	-0.185	1.17	0.053	/
		Bottom Edge	10	RMC	Level 3	-	-	4183/836.6	25.50	24.81	0.106	0.035	1.17	0.124	/
	ANT 2	Back Side	10	RMC	Level 3	-	-	4183/836.6	24.50	23.47	0.213	0.015	1.27	0.270	/
		Front Side	10	RMC	Level 3	-	-	4183/836.6	24.50	23.47	0.157	0.033	1.27	0.199	/
		Left Edge	10	RMC	Level 3	-	-	4183/836.6	24.50	23.47	0.047	-0.042	1.27	0.060	/
		Right Edge	10	RMC	Level 3	-	-	4183/836.6	24.50	23.47	0.000	0.019	1.27	0.000	/
		Top Edge	10	RMC	Level 3	-	-	4183/836.6	24.50	23.47	0.255	-0.020	1.27	0.323	/
LTE 2	ANT 1	Back Side	10	QPSK	Level 3	1	50	18700/1860	23.00	22.77	0.752	0.030	1.05	0.793	/
			10	QPSK	Level 3	1	0	18900/1880	23.00	22.67	0.759	-0.017	1.08	0.819	/
			10	QPSK	Level 3	1	0	19100/1900	23.00	22.77	0.781	0.024	1.05	0.823	84
			10	QPSK	Level 3	50%	25	19100/1900	22.50	21.86	0.619	0.022	1.16	0.717	/
			10	QPSK	Level 3	100%	0	19100/1900	22.50	21.78	0.632	0.040	1.18	0.746	/
		Front Side	10	QPSK	Level 3	1	0	19100/1900	23.00	22.77	0.492	-0.040	1.05	0.519	/
			10	QPSK	Level 3	50%	25	19100/1900	22.50	21.86	0.237	-0.011	1.16	0.275	/
		Left Edge	10	QPSK	Level 3	1	0	19100/1900	23.00	22.77	0.218	0.027	1.05	0.230	/
			10	QPSK	Level 3	50%	25	19100/1900	22.50	21.86	0.156	0.013	1.16	0.181	/
		Right Edge	10	QPSK	Level 3	1	0	19100/1900	23.00	22.77	0.012	0.000	1.05	0.013	/
			10	QPSK	Level 3	50%	25	19100/1900	22.50	21.86	0.000	0.000	1.16	0.000	/
		Bottom Edge	10	QPSK	Level 3	1	0	19100/1900	23.00	22.77	0.739	0.028	1.05	0.779	/



LTE 4	ANT 1	Back Side	10	QPSK	Level 3	50%	25	19100/1900	22.50	21.86	0.658	-0.025	1.16	0.762	/
			10	QPSK	Level 3	1	0	20300/1745	23.00	21.79	0.604	0.150	1.32	0.798	/
		Front Side	10	QPSK	Level 3	50%	0	20300/1745	22.00	20.75	0.497	0.039	1.33	0.663	/
			10	QPSK	Level 3	1	0	20300/1745	23.00	21.79	0.364	-0.140	1.32	0.481	/
		Left Edge	10	QPSK	Level 3	1	0	20300/1745	23.00	21.79	0.055	0.000	1.32	0.073	/
			10	QPSK	Level 3	50%	0	20300/1745	22.00	20.75	0.059	0.012	1.33	0.079	/
		Right Edge	10	QPSK	Level 3	1	0	20300/1745	23.00	21.79	0.066	0.051	1.32	0.087	/
			10	QPSK	Level 3	50%	0	20300/1745	22.00	20.75	0.070	-0.029	1.33	0.093	/
		Bottom Edge	10	QPSK	Level 3	1	0	20050/1720	23.00	21.62	0.634	-0.015	1.37	0.871	/
		Bottom Edge	10	QPSK	Level 3	1	99	20175/1732.5	23.00	21.58	0.621	0.022	1.39	0.861	/
		Bottom Edge	10	QPSK	Level 3	1	0	20300/1745	23.00	21.79	0.661	0.040	1.32	0.873	85
			10	QPSK	Level 3	50%	0	20300/1745	22.00	20.75	0.517	0.030	1.33	0.689	/
Bottom Edge	10	QPSK	Level 3	100%	0	20300/1745	22.00	20.71	0.533	0.060	1.35	0.717	/		
LTE 5	ANT 0	Back Side	10	QPSK	Level 3	1	0	20600/844	25.50	25.02	0.536	-0.050	1.12	0.599	86
			10	QPSK	Level 3	50%	13	20450/829	24.50	24.04	0.379	0.044	1.11	0.421	/
		Front Side	10	QPSK	Level 3	1	0	20600/844	25.50	25.02	0.324	0.067	1.12	0.362	/
			10	QPSK	Level 3	50%	13	20450/829	24.50	24.04	0.246	0.152	1.11	0.273	/
		Left Edge	10	QPSK	Level 3	1	0	20600/844	25.50	25.02	0.060	0.034	1.12	0.067	/
			10	QPSK	Level 3	50%	13	20450/829	24.50	24.04	0.053	0.025	1.11	0.059	/
		Right Edge	10	QPSK	Level 3	1	0	20600/844	25.50	25.02	0.205	0.047	1.12	0.229	/
			10	QPSK	Level 3	50%	13	20450/829	24.50	24.04	0.169	0.105	1.11	0.188	/
		Bottom Edge	10	QPSK	Level 3	1	0	20600/844	25.50	25.02	0.173	0.116	1.12	0.193	/
			10	QPSK	Level 3	50%	13	20450/829	24.50	24.04	0.174	0.152	1.11	0.193	/
	ANT 2	Back Side	10	QPSK	Level 3	1	25	20525/836.5	24.50	23.92	0.195	0.023	1.14	0.223	/
			10	QPSK	Level 3	50%	25	20600/844	23.50	22.96	0.151	0.046	1.13	0.171	/
		Front Side	10	QPSK	Level 3	1	25	20525/836.5	24.50	23.92	0.143	0.034	1.14	0.163	/
			10	QPSK	Level 3	50%	25	20600/844	23.50	22.96	0.125	-0.052	1.13	0.142	/
		Left Edge	10	QPSK	Level 3	1	25	20525/836.5	24.50	23.92	0.047	-0.035	1.14	0.054	/
			10	QPSK	Level 3	50%	25	20600/844	23.50	22.96	0.000	0.000	1.13	0.000	/
		Right Edge	10	QPSK	Level 3	1	25	20525/836.5	24.50	23.92	0.000	0.000	1.14	0.000	/
			10	QPSK	Level 3	50%	25	20600/844	23.50	22.96	0.000	0.104	1.13	0.000	/
		Top Edge	10	QPSK	Level 3	1	25	20525/836.5	24.50	23.92	0.303	0.022	1.14	0.346	/
			10	QPSK	Level 3	50%	25	20600/844	23.50	22.96	0.157	0.025	1.13	0.178	/
LTE 7	ANT 1	Back Side	10	QPSK	Level 3	1	50	21350/2560	24.00	23.37	0.382	-0.027	1.16	0.442	/
			10	QPSK	Level 3	50%	50	21100/2535	23.00	22.38	0.320	-0.025	1.15	0.369	/
		Front Side	10	QPSK	Level 3	1	50	21350/2560	24.00	23.37	0.678	0.010	1.16	0.784	/
			10	QPSK	Level 3	50%	50	21100/2535	23.00	22.38	0.595	0.080	1.15	0.686	/
		Left Edge	10	QPSK	Level 3	1	50	21350/2560	24.00	23.37	0.507	-0.030	1.16	0.586	/
			10	QPSK	Level 3	50%	50	21100/2535	23.00	22.38	0.423	-0.023	1.15	0.488	/
		Right Edge	10	QPSK	Level 3	1	50	21350/2560	24.00	23.37	0.098	-0.130	1.16	0.113	/
			10	QPSK	Level 3	50%	50	21100/2535	23.00	22.38	0.086	-0.150	1.15	0.099	/
Bottom Edge	10	QPSK	Level 3	1	99	20850/2510	24.00	23.28	0.685	0.090	1.18	0.809	/		



		Bottom Edge	10	QPSK	Level 3	1	99	21100/2535	24.00	23.30	0.692	-0.072	1.17	0.813	/
		Bottom Edge	10	QPSK	Level 3	1	50	21350/2560	24.00	23.37	0.732	0.025	1.16	0.846	87
			10	QPSK	Level 3	50%	50	21100/2535	23.00	22.38	0.626	0.033	1.15	0.722	/
			10	QPSK	Level 3	100%	0	20850/2510	23.00	22.35	0.675	-0.010	1.16	0.784	/
		Bottom Edge	10	QPSK	Level 3	1	99	20850/2510	24.00	23.15	0.520	-0.047	1.22	0.632	/
						1	0	21048/2529.8							
LTE 12	ANT 0	Back Side	10	QPSK	Level 3	1	25	23095/707.5	25.50	24.95	0.269	0.040	1.14	0.305	88
			10	QPSK	Level 3	50%	13	23060/704	24.50	24.09	0.208	0.034	1.10	0.229	/
		Front Side	10	QPSK	Level 3	1	25	23095/707.5	25.50	24.95	0.177	-0.122	1.14	0.201	/
			10	QPSK	Level 3	50%	13	23060/704	24.50	24.09	0.146	0.143	1.10	0.160	/
		Left Edge	10	QPSK	Level 3	1	25	23095/707.5	25.50	24.95	0.078	0.125	1.14	0.089	/
			10	QPSK	Level 3	50%	13	23060/704	24.50	24.09	0.062	0.136	1.10	0.068	/
		Right Edge	10	QPSK	Level 3	1	25	23095/707.5	25.50	24.95	0.245	0.102	1.14	0.278	/
			10	QPSK	Level 3	50%	13	23060/704	24.50	24.09	0.191	0.034	1.10	0.210	/
	Bottom Edge	10	QPSK	Level 3	1	25	23095/707.5	25.50	24.95	0.086	0.027	1.14	0.098	/	
		10	QPSK	Level 3	50%	13	23060/704	24.50	24.09	0.076	0.038	1.10	0.084	/	
	ANT 2	Back Side	10	QPSK	Level 3	1	49	23060/704	24.50	23.96	0.000	0.000	1.13	0.000	/
			10	QPSK	Level 3	50%	13	23060/704	23.50	22.96	0.000	0.000	1.13	0.000	/
		Front Side	10	QPSK	Level 3	1	49	23060/704	24.50	23.96	0.000	0.000	1.13	0.000	/
			10	QPSK	Level 3	50%	13	23060/704	23.50	22.96	0.000	0.000	1.13	0.000	/
		Left Edge	10	QPSK	Level 3	1	49	23060/704	24.50	23.96	0.000	0.000	1.13	0.000	/
			10	QPSK	Level 3	50%	13	23060/704	23.50	22.96	0.000	0.000	1.13	0.000	/
Right Edge		10	QPSK	Level 3	1	49	23060/704	24.50	23.96	0.000	0.000	1.13	0.000	/	
		10	QPSK	Level 3	50%	13	23060/704	23.50	22.96	0.000	0.000	1.13	0.000	/	
Top Edge	10	QPSK	Level 3	1	49	23060/704	24.50	23.96	0.051	-0.052	1.13	0.058	/		
	10	QPSK	Level 3	50%	13	23060/704	23.50	22.96	0.049	-0.035	1.13	0.055	/		
LTE 26	ANT 0	Back Side	10	QPSK	Level 3	1	38	26865/831.5	25.50	25.13	0.435	-0.070	1.09	0.474	89
			10	QPSK	Level 3	50%	18	26965/841.5	24.50	24.32	0.355	0.025	1.04	0.370	/
		Front Side	10	QPSK	Level 3	1	38	26865/831.5	25.50	25.13	0.286	0.064	1.09	0.311	/
			10	QPSK	Level 3	50%	18	26965/841.5	24.50	24.32	0.233	0.035	1.04	0.243	/
		Left Edge	10	QPSK	Level 3	1	38	26865/831.5	25.50	25.13	0.054	0.033	1.09	0.059	/
			10	QPSK	Level 3	50%	18	26965/841.5	24.50	24.32	0.000	0.103	1.04	0.000	/
		Right Edge	10	QPSK	Level 3	1	38	26865/831.5	25.50	25.13	0.168	0.102	1.09	0.183	/
			10	QPSK	Level 3	50%	18	26965/841.5	24.50	24.32	0.153	0.115	1.04	0.159	/
	Bottom Edge	10	QPSK	Level 3	1	38	26865/831.5	25.50	25.13	0.154	0.163	1.09	0.168	/	
		10	QPSK	Level 3	50%	18	26965/841.5	24.50	24.32	0.104	0.034	1.04	0.108	/	
	ANT 2	Back Side	10	QPSK	Level 3	1	0	26965/841.5	24.50	23.36	0.205	0.035	1.30	0.267	/
			10	QPSK	Level 3	50%	18	26965/841.5	23.50	22.36	0.199	0.024	1.30	0.259	/
		Front Side	10	QPSK	Level 3	1	0	26965/841.5	24.50	23.36	0.131	0.011	1.30	0.170	/
			10	QPSK	Level 3	50%	18	26965/841.5	23.50	22.36	0.140	0.035	1.30	0.182	/
Left Edge		10	QPSK	Level 3	1	0	26965/841.5	24.50	23.36	0.051	0.055	1.30	0.066	/	
		10	QPSK	Level 3	50%	18	26965/841.5	23.50	22.36	0.046	-0.024	1.30	0.060	/	
Right Edge	10	QPSK	Level 3	1	0	26965/841.5	24.50	23.36	0.000	0.000	1.30	0.000	/		



		Top Edge	10	QPSK	Level 3	50%	18	26965/841.5	23.50	22.36	0.000	0.000	1.30	0.000	/
			10	QPSK	Level 3	1	0	26965/841.5	24.50	23.36	0.205	-0.024	1.30	0.267	/
			10	QPSK	Level 3	50%	18	26965/841.5	23.50	22.36	0.288	0.028	1.30	0.374	/
LTE 38 TDD	ANT 1	Back Side	10	QPSK	Level 3	1	50	38150/2610	25.50	24.87	0.601	-0.025	1.16	0.695	/
			10	QPSK	Level 3	50%	50	38150/2610	24.50	23.98	0.418	0.076	1.13	0.471	/
		Front Side	10	QPSK	Level 3	1	50	38150/2610	25.50	24.87	0.664	-0.050	1.16	0.768	90
			10	QPSK	Level 3	50%	50	38150/2610	24.50	23.98	0.539	0.027	1.13	0.608	/
		Left Edge	10	QPSK	Level 3	1	50	38150/2610	25.50	24.87	0.382	-0.014	1.16	0.442	/
			10	QPSK	Level 3	50%	50	38150/2610	24.50	23.98	0.284	0.000	1.13	0.320	/
		Right Edge	10	QPSK	Level 3	1	50	38150/2610	25.50	24.87	0.052	0.020	1.16	0.060	/
			10	QPSK	Level 3	50%	50	38150/2610	24.50	23.98	0.041	0.034	1.13	0.046	/
		Bottom Edge	10	QPSK	Level 3	1	50	38150/2610	25.50	24.87	0.426	-0.042	1.16	0.493	/
			10	QPSK	Level 3	50%	50	38150/2610	24.50	23.98	0.296	0.018	1.13	0.334	/
LTE 41 TDD	ANT 1	Back Side	10	QPSK	Level 3	1	0	41055/2636.5	25.00	24.41	0.260	0.033	1.15	0.298	/
			10	QPSK	Level 3	50%	50	40185/2549.5	24.00	23.43	0.315	-0.080	1.14	0.359	/
		Front Side	10	QPSK	Level 3	1	0	41055/2636.5	25.00	24.41	0.446	0.042	1.15	0.511	/
			10	QPSK	Level 3	50%	50	40185/2549.5	24.00	23.43	0.552	0.020	1.14	0.629	91
		Left Edge	10	QPSK	Level 3	1	0	41055/2636.5	25.00	24.41	0.236	0.011	1.15	0.270	/
			10	QPSK	Level 3	50%	50	40185/2549.5	24.00	23.43	0.329	0.060	1.14	0.375	/
		Right Edge	10	QPSK	Level 3	1	0	41055/2636.5	25.00	24.41	0.015	0.032	1.15	0.017	/
			10	QPSK	Level 3	50%	50	40185/2549.5	24.00	23.43	0.022	-0.090	1.14	0.025	/
		Bottom Edge	10	QPSK	Level 3	1	0	41055/2636.5	25.00	24.41	0.315	-0.032	1.15	0.361	/
			10	QPSK	Level 3	50%	50	40185/2549.5	24.00	23.43	0.379	0.018	1.14	0.432	/
Front Side	10	QPSK	Level 3	1	99	39750/2506	25.00	24.21	0.402	-0.060	1.20	0.482	/		
				1	0	39948/2525.8									
LTE 66 (EN-DC)	ANT 8	Back Side	10	QPSK	Level 3	1	50	132322/1745	25.50	24.91	0.682	0.026	1.15	0.781	/
			10	QPSK	Level 3	50%	0	132572/1770	25.00	23.94	0.513	0.011	1.28	0.369	/
		Front Side	10	QPSK	Level 3	1	50	132322/1745	25.50	24.91	0.289	0.035	1.15	0.289	/
			10	QPSK	Level 3	50%	0	132572/1770	25.00	23.94	0.252	0.070	1.28	0.322	/
		Left Edge	10	QPSK	Level 3	1	50	132322/1745	25.50	24.91	0.930	0.000	1.15	1.065	92
		Left Edge repeat	10	QPSK	Level 3	1	50	132322/1745	25.50	24.91	0.922	0.012	1.15	1.056	/
		Left Edge SIM2	10	QPSK	Level 3	1	50	132322/1745	25.50	24.91	0.885	-0.049	1.15	1.014	/
		Left Edge	10	QPSK	Level 3	1	99	132072/1720	25.50	24.52	0.849	0.028	1.25	1.064	/
			10	QPSK	Level 3	1	0	132572/1770	25.50	24.69	0.872	0.010	1.21	1.051	/
			10	QPSK	Level 3	50%	50	132072/1720	25.00	23.63	0.765	0.014	1.37	1.049	/
			10	QPSK	Level 3	50%	0	132322/1745	25.00	23.74	0.739	-0.090	1.34	0.988	/
			10	QPSK	Level 3	50%	0	132572/1770	25.00	23.94	0.812	0.050	1.28	1.036	/
			10	QPSK	Level 3	100%	0	132072/1720	25.00	23.54	0.719	-0.094	1.40	1.006	/
10	QPSK		Level 3	100%	0	132322/1745	25.00	23.82	0.776	0.000	1.31	1.018	/		
Right Edge	10	QPSK	Level 3	100%	0	132572/1770	25.00	23.74	0.735	0.022	1.34	0.982	/		
Right Edge	10	QPSK	Level 3	1	50	132322/1745	25.50	24.91	0.023	-0.080	1.15	0.026	/		



		10	QPSK	Level 3	50%	0	132572/1770	25.00	23.94	0.015	-0.019	1.28	0.019	/
	Top Edge	10	QPSK	Level 3	1	50	132322/1745	25.50	24.91	0.082	-0.142	1.15	0.094	/
		10	QPSK	Level 3	50%	0	132572/1770	25.00	23.94	0.058	0.037	1.28	0.074	/

Note: 1. The value with blue color is the maximum SAR Value of each test band.

Band	Ant	Test Position	Dist. (mm)	Mode	Power Reduction	RB	offset	Ch./Freq. (MHz)	Tune-up (dBm)	Measured power (dBm)	Measured SAR1g	Power Drift (dB)	Scaling Factor	Report SAR1g	Plot No.
n41 SA&NSA	ANT1	Back Side	10	DFT-s-OFDM QPSK	Level 3	1	1	509202/2546.01	19.00	18.05	0.173	0.012	1.24	0.215	/
			10	DFT-s-OFDM QPSK	Level 3	135	67	509202/2546.01	19.00	17.96	0.190	-0.040	1.27	0.241	/
		Front Side	10	DFT-s-OFDM QPSK	Level 3	1	1	509202/2546.01	19.00	18.05	0.218	0.020	1.24	0.271	/
			10	DFT-s-OFDM QPSK	Level 3	135	67	509202/2546.01	19.00	17.96	0.257	0.130	1.27	0.327	93
		Left Edge	10	DFT-s-OFDM QPSK	Level 3	1	1	509202/2546.01	19.00	18.05	0.092	-0.016	1.24	0.114	/
			10	DFT-s-OFDM QPSK	Level 3	135	67	509202/2546.01	19.00	17.96	0.137	0.070	1.27	0.174	/
		Right Edge	10	DFT-s-OFDM QPSK	Level 3	1	1	509202/2546.01	19.00	18.05	0.000	0.000	1.24	0.000	/
			10	DFT-s-OFDM QPSK	Level 3	135	67	509202/2546.01	19.00	17.96	0.000	0.000	1.27	0.000	/
		Top Edge	10	DFT-s-OFDM QPSK	Level 3	1	1	509202/2546.01	19.00	18.05	0.137	0.080	1.24	0.170	/
			10	DFT-s-OFDM QPSK	Level 3	135	67	509202/2546.01	19.00	17.96	0.155	-0.092	1.27	0.197	/
		Front Side	10	CP-OFDM QPSK	Level 3	1	1	509202/2546.01	18.00	16.52	0.189	0.033	1.41	0.266	/
n66 SA&NSA	ANT8	Back Side	10	DFT-s-OFDM QPSK	Level 3	1	1	349000/1745	23.00	22.42	0.418	0.016	1.14	0.478	/
			10	DFT-s-OFDM QPSK	Level 3	50	25	344000/1720	23.00	22.40	0.361	-0.050	1.15	0.414	/
		Front Side	10	DFT-s-OFDM QPSK	Level 3	1	1	349000/1745	23.00	22.42	0.275	0.033	1.14	0.314	/
			10	DFT-s-OFDM QPSK	Level 3	50	25	344000/1720	23.00	22.40	0.277	0.047	1.15	0.318	/
		Left Edge	10	DFT-s-OFDM QPSK	Level 3	1	1	349000/1745	23.00	22.42	0.645	0.053	1.14	0.737	94
			10	DFT-s-OFDM QPSK	Level 3	50	25	344000/1720	23.00	22.40	0.612	0.026	1.15	0.703	/
		Right Edge	10	DFT-s-OFDM QPSK	Level 3	1	1	349000/1745	23.00	22.42	0.000	0.000	1.14	0.000	/



		10	DFT-s-OFDM QPSK	Level 3	50	25	344000/1720	23.00	22.40	0.000	0.000	1.15	0.000	/
	Top Edge	10	DFT-s-OFDM QPSK	Level 3	1	1	349000/1745	23.00	22.42	0.060	0.030	1.14	0.069	/
		10	DFT-s-OFDM QPSK	Level 3	50	25	344000/1720	23.00	22.40	0.046	0.018	1.15	0.053	/
	Left Edge	10	CP-OFDM QPSK	Level 3	1	1	344000/1720	22.00	20.97	0.548	0.023	1.27	0.695	/

Note: 1.The value with blue color is the maximum SAR Value of each test band.

Band	Antenna	Test Position	Dist. (mm)	Mode	Duty Cycle	Power Reduction	Ch./Freq. (MHz)	Tune-up (dBm)	Measured power (dBm)	Measured SAR1g	Power Drift (dB)	Scaling Factor	Report SAR1g	Plot No.
Wi-Fi2.4G	ANT 4	Back Side	10	802.11b	98.0%	Level 2	11/2462	20.00	19.97	0.501	-0.029	1.03	0.515	95
		Front Side	10	802.11b	98.0%	Level 2	11/2462	20.00	19.97	0.383	0.021	1.03	0.394	/
		Left Edge	10	802.11b	98.0%	Level 2	11/2462	20.00	19.97	0.000	0.000	1.03	0.000	/
		Right Edge	10	802.11b	98.0%	Level 2	11/2462	20.00	19.97	0.296	0.035	1.03	0.304	/
		Top Edge	10	802.11b	98.0%	Level 2	11/2462	20.00	19.97	0.234	0.090	1.03	0.240	/
		Bottom Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
U-NII-1	ANT 4	Back Side	10	11ac-VHT20	100.0%	Level 2	36/5180	18.00	17.43	0.542	0.018	1.14	0.618	/
		Front Side	10	11ac-VHT20	100.0%	Level 2	36/5180	18.00	17.43	0.514	-0.070	1.14	0.586	/
		Left Edge	10	11ac-VHT20	100.0%	Level 2	36/5180	18.00	17.43	0.082	0.015	1.14	0.094	/
		Right Edge	10	11ac-VHT20	100.0%	Level 2	36/5180	18.00	17.43	0.892	-0.040	1.14	1.017	96
		Right Edge	10	11ac-VHT20	100.0%	Level 2	40/5200	18.00	17.20	0.842	0.110	1.20	1.012	/
		Right Edge	10	11ac-VHT20	100.0%	Level 2	48/5240	18.00	17.05	0.805	0.038	1.24	1.002	/
		Right Edge repeat	10	11ac-VHT20	100.0%	Level 2	36/5180	18.00	17.43	0.887	0.026	1.14	1.011	/
		Top Edge	10	11ac-VHT20	100.0%	Level 2	36/5180	18.00	17.43	0.529	0.000	1.14	0.603	/
Bottom Edge	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
U-NII-3	ANT 4	Back Side	10	11ax HE80	100.0%	Level 2	155/5775	16.50	15.26	0.123	0.010	1.33	0.164	/
		Front Side	10	11ax HE80	100.0%	Level 2	155/5775	16.50	15.26	0.116	0.132	1.33	0.154	/
		Left Edge	10	11ax HE80	100.0%	Level 2	155/5775	16.50	15.26	0.052	0.034	1.33	0.069	/
		Right Edge	10	11ax HE80	100.0%	Level 2	155/5775	16.50	15.26	0.266	0.052	1.33	0.354	97
		Top Edge	10	11ax HE80	100.0%	Level 2	155/5775	16.50	15.26	0.100	0.011	1.33	0.133	/
		Bottom Edge	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Wi-Fi2.4G	ANT 3	Back Side	10	802.11b	98.0%	Level 2	1/2412	20.00	19.32	0.144	-0.060	1.19	0.172	/
		Front Side	10	802.11b	98.0%	Level 2	1/2412	20.00	19.32	0.126	0.018	1.19	0.150	/
		Left Edge	10	802.11b	98.0%	Level 2	1/2412	20.00	19.32	0.000	0.000	1.19	0.000	/
		Right Edge	10	802.11b	98.0%	Level 2	1/2412	20.00	19.32	0.213	0.029	1.19	0.254	98
		Top Edge	10	802.11b	98.0%	Level 2	1/2412	20.00	19.32	0.049	0.000	1.19	0.058	/
		Bottom Edge	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
U-NII-1	ANT 3	Back Side	10	11nHT40	100.0%	Level 2	38/5190	18.50	18.17	0.306	0.036	1.08	0.330	/
		Front Side	10	11nHT40	100.0%	Level 2	38/5190	18.50	18.17	0.218	0.022	1.08	0.235	/



		Left Edge	10	11nHT40	100.0%	Level 2	38/5190	18.50	18.17	0.038	-0.099	1.08	0.041	/
		Right Edge	10	11nHT40	100.0%	Level 2	38/5190	18.50	18.17	0.758	-0.011	1.08	0.818	/
		Right Edge	10	11nHT40	100.0%	Level 2	38/5190	18.50	18.17	0.863	-0.190	1.08	0.931	99
		Right Edge	10	11nHT40	100.0%	Level 2	38/5190	18.50	18.17	0.729	0.040	1.08	0.787	/
		Right Edge repeat	10	11nHT40	100.0%	Level 2	38/5190	18.50	18.17	0.852	0.015	1.08	0.919	/
		Top Edge	10	11nHT40	100.0%	Level 2	38/5190	18.50	18.17	0.039	0.130	1.08	0.042	
		Bottom Edge	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
U-NII-3		Back Side	10	11ac-VHT80	100.0%	Level 2	155/5775	17.00	16.02	0.287	-0.070	1.25	0.360	/
		Front Side	10	11ac-VHT80	100.0%	Level 2	155/5775	17.00	16.02	0.184	0.033	1.25	0.231	/
		Left Edge	10	11ac-VHT80	100.0%	Level 2	155/5775	17.00	16.02	0.065	0.028	1.25	0.081	/
		Right Edge	10	11ac-VHT80	100.0%	Level 2	155/5775	17.00	16.02	0.714	0.100	1.25	0.895	100
		Top Edge	10	11ac-VHT80	100.0%	Level 2	155/5775	17.00	16.02	0.053	0.042	1.25	0.066	
		Bottom Edge	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Wi-Fi2.4G		Back Side	10	11nHT20	98.0%	Level 2	1/2412	19.00	18.43	0.481	-0.062	1.16	0.559	/
		Front Side	10	11nHT20	98.0%	Level 2	1/2412	19.00	18.43	0.392	0.033	1.16	0.456	/
		Left Edge	10	11nHT20	98.0%	Level 2	1/2412	19.00	18.43	0.027	0.011	1.16	0.031	/
		Right Edge	10	11nHT20	98.0%	Level 2	1/2412	19.00	18.43	0.485	0.000	1.16	0.564	101
		Top Edge	10	11nHT20	98.0%	Level 2	1/2412	19.00	18.43	0.297	0.014	1.16	0.345	/
		Bottom Edge	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
U-NII-1	MIMO	Back Side	10	11ac-VHT20	100.0%	Level 2	36/5180	21.00	20.61	0.375	0.014	1.09	0.410	/
		Front Side	10	11ac-VHT20	100.0%	Level 2	36/5180	21.00	20.61	0.380	0.025	1.09	0.416	/
		Left Edge	10	11ac-VHT20	100.0%	Level 2	36/5180	21.00	20.61	0.041	-0.024	1.09	0.045	/
		Right Edge	10	11ac-VHT20	100.0%	Level 2	48/5240	21.00	20.37	0.801	0.000	1.16	0.927	/
		Right Edge	10	11ac-VHT20	100.0%	Level 2	36/5180	21.00	20.60	0.847	0.047	1.10	0.928	102
		Right Edge	10	11ac-VHT20	100.0%	Level 2	40/5200	21.00	20.61	0.827	0.025	1.09	0.904	/
		Right Edge repeat	10	11ac-VHT20	100.0%	Level 2	36/5180	21.00	20.61	0.839	0.038	1.09	0.918	/
		Top Edge	10	11ac-VHT20	100.0%	Level 2	36/5180	21.00	20.60	0.335	0.017	1.10	0.367	/
		Bottom Edge	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
U-NII-3		Back Side	10	11ax HE80	100.0%	Level 2	155/5775	20.00	18.56	0.335	0.081	1.39	0.467	/
		Front Side	10	11ax HE80	100.0%	Level 2	155/5775	20.00	18.56	0.232	-0.033	1.39	0.323	/
		Left Edge	10	11ax HE80	100.0%	Level 2	155/5775	20.00	18.56	0.060	0.027	1.39	0.084	/
		Right Edge	10	11ax HE80	100.0%	Level 2	155/5775	20.00	18.56	0.703	0.035	1.39	0.979	103
		Right Edge	10	11ax HE80	100.0%	Level 2	155/5775	20.00	18.56	0.623	0.090	1.39	0.868	/
		Right Edge	10	11ax HE80	100.0%	Level 2	155/5775	20.00	18.56	0.673	-0.040	1.39	0.938	/
		Top Edge	10	11ax HE80	100.0%	Level 2	155/5775	20.00	18.56	0.127	0.026	1.39	0.177	/
		Bottom Edge	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bluetooth	ANT 4	Back Side	10	DH5	76.0%	-	39/2441	12.50	11.58	0.058	-0.170	1.63	0.094	104
		Front Side	10	DH5	76.0%	-	39/2441	12.50	11.58	0.040	-0.103	1.63	0.065	/
		Left Edge	10	DH5	76.0%	-	39/2441	12.50	11.58	0.004	0.040	1.63	0.006	/
		Right Edge	10	DH5	76.0%	-	39/2441	12.50	11.58	0.028	0.022	1.63	0.045	/
		Top Edge	10	DH5	76.0%	-	39/2441	12.50	11.58	0.000	0.000	1.63	0.000	/



		Bottom Edge	10	DH5	76.0%	-	39/2441	12.50	11.58	0.000	0.000	1.63	0.000	/
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Note: 1.The value with blue color is the maximum SAR Value of each test band.

Simultaneous

Band	Antenna	Test Position	Dist. (mm)	Mode	Duty Cycle	Power Reduction	Ch./Freq. (MHz)	Tune-up (dBm)	Measured power (dBm)	Measured SAR1g	Power Drift (dB)	Scaling Factor	Report SAR1g	Plot No.
Wi-Fi2.4G	ANT 4	Back Side	10	802.11b	98.0%	Level 3	11/2462	17.00	16.14	0.253	0.026	1.24	0.315	/
		Front Side	10	802.11b	98.0%	Level 3	11/2462	17.00	16.14	0.126	-0.050	1.24	0.157	/
		Left Edge	10	802.11b	98.0%	Level 3	11/2462	17.00	16.14	0.000	0.000	1.24	0.000	/
		Right Edge	10	802.11b	98.0%	Level 3	11/2462	17.00	16.14	0.112	0.012	1.24	0.139	/
		Top Edge	10	802.11b	98.0%	Level 3	11/2462	17.00	16.14	0.129	0.054	1.24	0.160	/
		Bottom Edge	10	802.11b	98.0%	Level 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
U-NII-1	ANT 4	Back Side	10	802.11ac-VHT20	100.0%	Level 3	48/5240	17.00	15.61	0.279	0.090	1.38	0.384	/
		Front Side	10	802.11ac-VHT20	100.0%	Level 3	48/5240	17.00	15.61	0.418	0.062	1.38	0.576	/
		Left Edge	10	802.11ac-VHT20	100.0%	Level 3	48/5240	17.00	15.61	0.035	-0.018	1.38	0.048	/
		Right Edge	10	802.11ac-VHT20	100.0%	Level 3	48/5240	17.00	15.61	0.535	-0.022	1.38	0.737	/
		Top Edge	10	802.11ac-VHT20	100.0%	Level 3	48/5240	17.00	15.61	0.141	0.022	1.38	0.194	/
		Bottom Edge	10	802.11ac-VHT20	100.0%	Level 3	48/5240	N/A	N/A	N/A	N/A	N/A	N/A	N/A
U-NII-3	ANT 4	Back Side	10	802.11a	100.0%	Level 3	149/5745	13.00	11.18	0.059	0.070	1.52	0.090	/
		Front Side	10	802.11a	100.0%	Level 3	149/5745	13.00	11.18	0.062	-0.010	1.52	0.094	/
		Left Edge	10	802.11a	100.0%	Level 3	149/5745	13.00	11.18	0.013	0.016	1.52	0.020	/
		Right Edge	10	802.11a	100.0%	Level 3	149/5745	13.00	11.18	0.082	0.080	1.52	0.125	/
		Top Edge	10	802.11a	100.0%	Level 3	149/5745	13.00	11.18	0.025	0.000	1.52	0.038	/
		Bottom Edge	10	802.11a	100.0%	Level 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2.4G	ANT 4	Back Side	10	802.11b	98.0%	Level 3	1/2412	18.00	17.60	0.098	0.032	1.12	0.110	/
		Front Side	10	802.11b	98.0%	Level 3	1/2412	18.00	17.60	0.082	-0.039	1.12	0.092	/
		Left Edge	10	802.11b	98.0%	Level 3	1/2412	18.00	17.60	0.000	0.000	1.12	0.000	/
		Right Edge	10	802.11b	98.0%	Level 3	1/2412	18.00	17.60	0.114	0.050	1.12	0.128	/
		Top Edge	10	802.11b	98.0%	Level 3	1/2412	18.00	17.60	0.019	-0.100	1.12	0.021	/
		Bottom Edge	10	802.11b	98.0%	Level 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
U-NII-1	ANT 3	Back Side	10	11nHT20	100.0%	Level 3	40/5200	16.00	15.04	0.355	0.021	1.25	0.443	/
		Front Side	10	11nHT20	100.0%	Level 3	40/5200	16.00	15.04	0.143	-0.010	1.25	0.178	/
		Left Edge	10	11nHT20	100.0%	Level 3	40/5200	16.00	15.04	0.035	0.024	1.25	0.044	/
		Right Edge	10	11nHT20	100.0%	Level 3	40/5200	16.00	15.04	0.598	-0.100	1.25	0.746	/
		Top Edge	10	11nHT20	100.0%	Level 3	40/5200	16.00	15.04	0.053	0.030	1.25	0.066	/
		Bottom Edge	10	11nHT20	100.0%	Level 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
U-NII-3	ANT 3	Back Side	10	802.11a	100.0%	Level 3	149/5745	12.00	10.65	0.148	0.060	1.36	0.202	/
		Front Side	10	802.11a	100.0%	Level 3	149/5745	12.00	10.65	0.092	-0.014	1.36	0.126	/
		Left Edge	10	802.11a	100.0%	Level 3	149/5745	12.00	10.65	0.024	0.040	1.36	0.033	/
		Right Edge	10	802.11a	100.0%	Level 3	149/5745	12.00	10.65	0.342	0.070	1.36	0.467	/
		Top Edge	10	802.11a	100.0%	Level 3	149/5745	12.00	10.65	0.031	0.020	1.36	0.042	/
		Bottom Edge	10	802.11a	100.0%	Level 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A



Wi-Fi2.4G	MIMO	Back Side	10	11nHT20	98.0%	Level 3	1/2412	19.00	18.43	0.223	0.062	1.16	0.259	/
		Front Side	10	11nHT20	98.0%	Level 3	1/2412	19.00	18.43	0.176	-0.015	1.16	0.205	/
		Left Edge	10	11nHT20	98.0%	Level 3	1/2412	19.00	18.43	0.000	0.000	1.16	0.000	/
		Right Edge	10	11nHT20	98.0%	Level 3	1/2412	19.00	18.43	0.201	0.010	1.16	0.234	/
		Top Edge	10	11nHT20	98.0%	Level 3	1/2412	19.00	18.43	0.096	0.025	1.16	0.112	/
		Bottom Edge	10	11nHT20	98.0%	Level 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
U-NII-1		Back Side	10	11nHT20	100.0%	Level 3	48/5240	18.00	16.29	0.192	-0.013	1.48	0.285	/
		Front Side	10	11nHT20	100.0%	Level 3	48/5240	18.00	16.29	0.203	-0.025	1.48	0.301	/
		Left Edge	10	11nHT20	100.0%	Level 3	48/5240	18.00	16.29	0.026	0.000	1.48	0.039	/
		Right Edge	10	11nHT20	100.0%	Level 3	48/5240	18.00	16.29	0.473	-0.160	1.48	0.702	/
		Top Edge	10	11nHT20	100.0%	Level 3	48/5240	18.00	16.29	0.185	0.020	1.48	0.275	/
		Bottom Edge	10	11nHT20	100.0%	Level 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
U-NII-3		Back Side	10	802.11ac-VHT20	100.0%	Level 3	149/5745	14.00	12.38	0.147	0.016	1.45	0.213	/
		Front Side	10	802.11ac-VHT20	100.0%	Level 3	149/5745	14.00	12.38	0.116	0.038	1.45	0.168	/
		Left Edge	10	802.11ac-VHT20	100.0%	Level 3	149/5745	14.00	12.38	0.053	0.010	1.45	0.077	/
		Right Edge	10	802.11ac-VHT20	100.0%	Level 3	149/5745	14.00	12.38	0.368	0.080	1.45	0.534	/
		Top Edge	10	802.11ac-VHT20	100.0%	Level 3	149/5745	14.00	12.38	0.064	0.011	1.45	0.093	/
		Bottom Edge	10	802.11ac-VHT20	100.0%	Level 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/

Product-specific 10g SAR

Band	Antenna	Test Position	Mode	Power Reduction	RB	offset	Channel Frequency(MHz)	Tune-up (dBm)	Measured power (dBm)	Measured SAR1g	Scaling Factor	Report SAR1g	0mm SAR
WCDMA II	ANT 1	Back Side	RMC	Level 3	--	--	9400/1880	25.50	23.00	0.483	1.78	0.859	NO
		Front Side	RMC	Level 3	--	--	9400/1880	25.50	23.00	0.373	1.78	0.663	NO
		Left Edge	RMC	Level 3	--	--	9400/1880	25.50	23.00	0.111	1.78	0.198	NO
		Right Edge	RMC	Level 3	--	--	9400/1880	25.50	23.00	0.000	1.78	0.000	NO
		Bottom Edge	RMC	Level 3	--	--	9400/1880	25.50	23.00	0.422	1.78	0.751	NO
LTE 2	ANT 1	Back Side	QPSK	Level 3	1	50	18700/1860	25.50	23.00	0.793	1.78	1.410	YES
			QPSK	Level 3	1	0	18900/1880	25.50	23.00	0.819	1.78	1.456	YES
			QPSK	Level 3	1	0	19100/1900	25.50	23.00	0.823	1.78	1.464	YES
			QPSK	Level 3	50%	25	19100/1900	24.50	22.50	0.717	1.58	1.137	NO
		Front Side	QPSK	Level 3	1	0	19100/1900	25.50	23.00	0.519	1.78	0.922	NO
			QPSK	Level 3	50%	25	19100/1900	24.50	22.50	0.275	1.58	0.435	NO
		Left Edge	QPSK	Level 3	1	0	19100/1900	25.50	23.00	0.230	1.78	0.409	NO
			QPSK	Level 3	50%	25	19100/1900	24.50	22.50	0.181	1.58	0.286	NO
		Right Edge	QPSK	Level 3	1	0	19100/1900	25.50	23.00	0.000	1.78	0.000	NO
			QPSK	Level 3	50%	25	19100/1900	24.50	22.50	0.000	1.58	0.000	NO
		Bottom Edge	QPSK	Level 3	1	0	19100/1900	25.50	23.00	0.779	1.78	1.386	YES
			QPSK	Level 3	50%	25	19100/1900	24.50	22.50	0.762	1.58	1.208	YES
LTE 4	ANT 1	Back Side	QPSK	Level 3	1	0	20300/1745	25.50	23.00	0.798	1.78	1.419	YES



		Front Side	QPSK	Level 3	50%	0	20300/1745	24.50	22.00	0.663	1.78	1.179	NO
			QPSK	Level 3	1	0	20300/1745	25.50	23.00	0.481	1.78	0.855	NO
		Left Edge	QPSK	Level 3	50%	0	20300/1745	24.50	22.00	0.415	1.78	0.737	NO
			QPSK	Level 3	1	0	20300/1745	25.50	23.00	0.073	1.78	0.129	NO
		Right Edge	QPSK	Level 3	50%	0	20300/1745	24.50	22.00	0.079	1.78	0.140	NO
			QPSK	Level 3	1	0	20300/1745	25.50	23.00	0.087	1.78	0.155	NO
		Bottom Edge	QPSK	Level 3	1	0	20050/1720	25.50	23.00	0.871	1.78	1.549	YES
		Bottom Edge	QPSK	Level 3	1	99	20175/1732.5	25.50	23.00	0.861	1.78	1.531	YES
		Bottom Edge	QPSK	Level 3	1	0	20300/1745	25.50	23.00	0.873	1.78	1.553	YES
			QPSK	Level 3	50%	0	20300/1745	24.50	22.00	0.689	1.78	1.226	YES
Bottom Edge	QPSK	Level 3	100%	0	20300/1745	24.50	22.00	0.717	1.78	1.276	YES		
LTE 7	ANT 1	Back Side	QPSK	Level 3	1	50	21350/2560	25.50	24.00	0.475	1.41	0.671	NO
			QPSK	Level 3	50%	50	21100/2535	24.50	23.00	0.338	1.41	0.477	NO
		Front Side	QPSK	Level 3	1	50	21350/2560	25.50	24.00	0.514	1.41	0.727	NO
			QPSK	Level 3	50%	50	21100/2535	24.50	23.00	0.407	1.41	0.575	NO
		Left Edge	QPSK	Level 3	1	50	21350/2560	25.50	24.00	0.245	1.41	0.346	NO
			QPSK	Level 3	50%	50	21100/2535	24.50	23.00	0.179	1.41	0.253	NO
		Right Edge	QPSK	Level 3	1	50	21350/2560	25.50	24.00	0.000	1.41	0.000	NO
			QPSK	Level 3	50%	50	21100/2535	24.50	23.00	0.000	1.41	0.000	NO
		Bottom Edge	QPSK	Level 3	1	50	21350/2560	25.50	24.00	0.289	1.41	0.408	NO
			QPSK	Level 3	50%	50	21100/2535	24.50	23.00	0.362	1.41	0.512	NO
LTE 7	ANT 1	Back Side	QPSK	Level 3	1	50	21350/2560	25.50	24.00	0.442	1.41	0.624	NO
			QPSK	Level 3	50%	50	21100/2535	24.50	23.00	0.369	1.41	0.521	NO
		Front Side	QPSK	Level 3	1	50	21350/2560	25.50	24.00	0.784	1.41	1.107	NO
			QPSK	Level 3	50%	50	21100/2535	24.50	23.00	0.686	1.41	0.969	NO
		Left Edge	QPSK	Level 3	1	50	21350/2560	25.50	24.00	0.586	1.41	0.828	NO
			QPSK	Level 3	50%	50	21100/2535	24.50	23.00	0.488	1.41	0.689	NO
		Right Edge	QPSK	Level 3	1	50	21350/2560	25.50	24.00	0.113	1.41	0.160	NO
			QPSK	Level 3	50%	50	21100/2535	24.50	23.00	0.099	1.41	0.140	NO
		Bottom Edge	QPSK	Level 3	1	99	20850/2510	25.50	24.00	0.809	1.41	1.142	NO
		Bottom Edge	QPSK	Level 3	1	99	21100/2535	24.50	23.00	0.813	1.41	1.148	NO
Bottom Edge	QPSK	Level 3	1	50	21350/2560	25.50	24.00	0.846	1.41	1.195	NO		
	QPSK	Level 3	50%	50	21100/2535	24.50	23.00	0.722	1.41	1.020	NO		
LTE 41 TDD	ANT 1	Back Side	QPSK	Level 3	1	0	41055/2636.5	25.50	25.00	0.298	1.12	0.334	NO
			QPSK	Level 3	50%	50	40185/2549.5	24.50	24.00	0.359	1.12	0.403	NO
		Front Side	QPSK	Level 3	1	0	41055/2636.5	25.50	25.00	0.511	1.12	0.573	NO
			QPSK	Level 3	50%	50	40185/2549.5	24.50	24.00	0.629	1.12	0.706	NO
		Left Edge	QPSK	Level 3	1	0	41055/2636.5	25.50	25.00	0.270	1.12	0.303	NO
			QPSK	Level 3	50%	50	40185/2549.5	24.50	24.00	0.375	1.12	0.421	NO
		Right Edge	QPSK	Level 3	1	0	41055/2636.5	25.50	25.00	0.017	1.12	0.019	NO
			QPSK	Level 3	50%	50	40185/2549.5	24.50	24.00	0.025	1.12	0.028	NO
Bottom Edge	QPSK	Level 3	1	0	41055/2636.5	25.50	25.00	0.361	1.12	0.405	NO		



			QPSK	Level 3	50%	50	40185/2549.5	24.50	24.00	0.432	1.12	0.485	NO
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Band	Antenna	Test Position	Dist. (mm)	Mode	Power Reduction	RB	offset	Ch./Freq. (MHz)	Tune-up (dBm)	Measured power (dBm)	Measured SAR10g	Power Drift (dB)	Scaling Factor	Report SAR10g	Plot No.
LTE 2	ANT 1	Back Side	0	QPSK	Level 2	1	50	18700/1860	23.00	22.77	1.490	-0.040	1.05	1.571	/
		Back Side	0	QPSK	Level 2	1	0	18900/1880	23.00	22.67	1.520	0.025	1.08	1.640	/
		Back Side	0	QPSK	Level 2	1	0	19100/1900	23.00	22.77	1.630	0.179	1.05	1.719	105
		Bottom Edge	0	QPSK	Level 2	1	0	19100/1900	23.00	22.77	1.430	0.000	1.05	1.508	/
		Bottom Edge	0	QPSK	Level 2	50%	50	18900/1880	22.50	21.86	1.250	0.018	1.16	1.448	/
LTE 4	ANT 1	Back Side	0	QPSK	Level 2	1	0	20300/1745	23.00	21.79	1.250	0.018	1.32	1.652	/
		Bottom Edge	0	QPSK	Level 2	1	0	20050/1720	23.00	21.62	1.110	0.041	1.37	1.525	/
		Bottom Edge	0	QPSK	Level 2	1	99	20175/1732.5	23.00	21.58	1.700	-0.060	1.39	2.357	106
		Bottom Edge SIM2	0	QPSK	Level 2	1	99	20175/1732.5	23.00	21.58	1.650	0.023	1.39	2.288	/
		Bottom Edge	0	QPSK	Level 2	1	0	20300/1745	23.00	21.79	1.560	-0.050	1.32	2.061	/
		Bottom Edge	0	QPSK	Level 2	50%	0	20300/1745	22.00	20.75	1.640	-0.020	1.33	2.187	/
		Bottom Edge	0	QPSK	Level 2	100%	0	20300/1745	22.00	20.71	1.290	0.020	1.35	1.736	/

Note: 1. The value with blue color is the maximum SAR Value of each test band.

Band	Antenna	Test Position	Dist. (mm)	Mode	Duty Cycle	Power Reduction	Ch./Freq. (MHz)	Tune-up (dBm)	Measured power (dBm)	Measured SAR10g	Power Drift (dB)	Scaling Factor	Report SAR10g	Plot No.
U-NII-2A	ANT 4	Back Side	0	11ac-VHT20	100.0%	Level 2	52/5260	17.50	16.03	0.762	0.080	1.40	1.069	/
		Front Side	0	11ac-VHT20	100.0%	Level 2	52/5260	17.50	16.03	1.010	-0.028	1.40	1.417	/
		Right Edge	0	11ac-VHT20	100.0%	Level 2	52/5260	17.50	16.03	1.150	0.182	1.40	1.613	107
		Top Edge	0	11ac-VHT20	100.0%	Level 2	52/5260	17.50	16.03	0.902	-0.050	1.40	1.265	/
U-NII-2C	ANT 4	Back Side	0	11ac-VHT80	100.0%	Level 2	138/5690	17.00	15.41	0.352	0.020	1.44	0.508	/
		Front Side	0	11ac-VHT80	100.0%	Level 2	138/5690	17.00	15.41	0.369	-0.010	1.44	0.532	/
		Right Edge	0	11ac-VHT80	100.0%	Level 2	138/5690	17.00	15.41	0.684	0.170	1.44	0.986	108
		Top Edge	0	11ac-VHT80	100.0%	Level 2	138/5690	17.00	15.41	0.378	-0.090	1.44	0.545	/
U-NII-2A	ANT 3	Back Side	0	11nHT20	100.0%	Level 2	52/5260	18.00	16.93	0.602	0.015	1.28	0.770	/
		Front Side	0	11nHT20	100.0%	Level 2	52/5260	18.00	16.93	0.688	0.031	1.28	0.880	/
		Right Edge	0	11nHT20	100.0%	Level 2	52/5260	18.00	16.93	1.550	0.023	1.28	1.983	109
		Top Edge	0	11nHT20	100.0%	Level 2	52/5260	18.00	16.93	0.132	0.020	1.28	0.169	/
U-NII-2C	ANT 3	Back Side	0	11ac-VHT80	100.0%	Level 2	138/5690	17.50	17.28	1.010	-0.128	1.05	1.062	/
		Front Side	0	11ac-VHT80	100.0%	Level 2	138/5690	17.50	17.28	1.450	0.038	1.05	1.525	110
		Right Edge	0	11ac-VHT80	100.0%	Level 2	138/5690	17.50	17.28	1.320	-0.017	1.05	1.389	/
		Top Edge	0	11ac-VHT80	100.0%	Level 2	138/5690	17.50	17.28	0.952	0.049	1.05	1.001	/
U-NII-2A	MIMO	Back Side	0	11nHT20	100.0%	Level 2	52/5260	21.00	19.43	0.471	0.025	1.44	0.677	/
		Front Side	0	11nHT20	100.0%	Level 2	52/5260	21.00	19.43	0.505	-0.010	1.44	0.726	/
		Right Edge	0	11nHT20	100.0%	Level 2	52/5260	21.00	19.43	1.300	0.127	1.44	1.868	111
		Top Edge	0	11nHT20	100.0%	Level 2	52/5260	21.00	19.43	0.100	0.032	1.44	0.144	/



SAR Test Report

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U-NII-2C	Back Side	0	11ac-VHT80	100.0%	Level 2	138/5690	20.00	19.43	0.985	0.010	1.14	1.123	/
	Front Side	0	11ac-VHT80	100.0%	Level 2	138/5690	20.00	19.43	1.100	0.000	1.14	1.254	/
	Right Edge	0	11ac-VHT80	100.0%	Level 2	138/5690	20.00	19.43	1.750	0.169	1.14	1.996	112
	Top Edge	0	11ac-VHT80	100.0%	Level 2	138/5690	20.00	19.43	0.326	0.024	1.14	0.372	/

Note: 1. The value with blue color is the maximum SAR Value of each test band.

10.3 Simultaneous Transmission Analysis

Simultaneous Transmission Configurations	Head	Body-worn	Hotspot	Product Specific 10-g SAR
WWAN+BT	Yes	Yes	Yes	Yes
WWAN + Wi-Fi 2.4G(Ant 3)	Yes	Yes	Yes	Yes
WWAN + Wi-Fi 2.4G(Ant 4)	Yes	Yes	Yes	Yes
WWAN + Wi-Fi 2.4G(MIMO)	Yes	Yes	Yes	Yes
WWAN + Wi-Fi 5G(Ant 3)	Yes	Yes	Yes	Yes
WWAN + Wi-Fi 5G(Ant 4)	Yes	Yes	Yes	Yes
WWAN + Wi-Fi 5G(MIMO)	Yes	Yes	Yes	Yes
WWAN + Wi-Fi 2.4G(Ant 3) + Wi-Fi 5G(Ant 4)	Yes	Yes	Yes	Yes
WWAN + Wi-Fi 2.4G(Ant 4) + Wi-Fi 5G(Ant 3)	Yes	Yes	Yes	Yes
WWAN + Wi-Fi 2.4G(Ant 4) + Wi-Fi 5G(Ant 4)	Yes	Yes	Yes	Yes
WWAN + Wi-Fi 2.4G(Ant 3) +Wi-Fi 5G(MIMO)	Yes	Yes	Yes	Yes
WWAN + Wi-Fi 2.4G(Ant 4) +Wi-Fi 5G(MIMO)	Yes	Yes	Yes	Yes
WWAN + Wi-Fi 2.4G(MIMO) + Wi-Fi 5G(Ant 3)	Yes	Yes	Yes	Yes
WWAN + Wi-Fi 2.4G(MIMO) + Wi-Fi 5G(Ant 4)	Yes	Yes	Yes	Yes
WWAN + Wi-Fi 2.4G(MIMO) +Wi-Fi 5G(MIMO)	Yes	Yes	Yes	Yes

General Note:

1. The Scaled SAR summation is calculated based on the same configuration and test position.
2. Per KDB 447498 D01, simultaneous transmission SAR is compliant if,
 - i) Scalar SAR summation < 1.6W/kg, simultaneously transmission SAR measurement is not necessary.
 - ii) $SPLSR = (SAR1 + SAR2)^{1.5} / (\text{min. separation distance, mm})$, and the peak separation distance is determined from the square root of $[(x1-x2)^2 + (y1-y2)^2 + (z1-z2)^2]$, where (x1, y1, z1) and (x2, y2, z2) are the coordinates of the extrapolated peak SAR locations in the zoom scan.
 - iii) If $SPLSR \leq 0.04$, simultaneously transmission SAR measurement is not necessary.



The maximum SAR_{1g/10g} Value for GSM/ WCDMA/LTE/NR-Antenna
NR full power output, LTE 0dB

Test Position		SAR _{1g} (W/kg)	LTE 66	NR n41	DC_66A-n41A	LTE 2	NR n66	DC_2A-n66A	LTE 2	NR n66	DC_12A-n66A	LTE B12	n66	DC_12A-n66A	EN-DC MAX.SAR _{1g}
			Ant 8	Ant 1	Ant 8+1	Ant 1	Ant 8	Ant 1+8	Ant 0	Ant 8	Ant 0+8	Ant 2	Ant 8	Ant 2+8	
Head	Left Cheek	0.000	0.136	0.136	0.000	0.428	0.428	0.000	0.428	0.428	0.000	0.428	0.428	0.428	
	Left Tilt	0.000	0.032	0.032	0.000	0.180	0.180	0.000	0.180	0.180	0.000	0.180	0.180	0.180	
	Right Cheek	0.000	0.074	0.074	0.000	0.791	0.791	0.000	0.791	0.791	0.000	0.791	0.791	0.791	
	Right Tilt	0.000	0.056	0.056	0.000	0.213	0.213	0.000	0.213	0.213	0.000	0.213	0.213	0.213	
Body worn	Back Side	0.000	0.128	0.128	0.000	0.434	0.434	0.000	0.434	0.434	0.000	0.434	0.434	0.434	
	Front Side	0.000	0.151	0.151	0.000	0.325	0.325	0.000	0.325	0.325	0.000	0.325	0.325	0.325	
Hotspot	Back Side	0.000	0.241	0.241	0.000	0.478	0.478	0.000	0.478	0.478	0.000	0.478	0.478	0.478	
	Front Side	0.000	0.327	0.327	0.000	0.318	0.318	0.000	0.318	0.318	0.000	0.318	0.318	0.327	
	Left Edge	0.000	0.174	0.174	0.000	0.737	0.737	0.000	0.737	0.737	0.000	0.737	0.737	0.737	
	Right Edge	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	Top Edge	0.000	0.197	0.197	0.000	0.069	0.069	0.000	0.069	0.069	0.000	0.069	0.069	0.197	
	Bottom Edge	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

LTE full power output, NR 0dB

Test Position		SAR _{1g} (W/kg)	LTE 66	NR n41	DC_66A-n41A	LTE 2	NR n66	DC_2A-n66A	LTE 2	NR n66	DC_12A-n66A	LTE B12	n66	DC_12A-n66A	EN-DC MAX.SAR _{1g}
			Ant 8	Ant 1	Ant 8+1	Ant 1	Ant 8	Ant 1+8	Ant 0	Ant 8	Ant 0+8	Ant 2	Ant 8	Ant 2+8	
Head	Left Cheek	0.573	0.000	0.573	0.199	0.000	0.199	0.116	0.000	0.116	0.132	0.000	0.132	0.573	
	Left Tilt	0.254	0.000	0.254	0.125	0.000	0.125	0.049	0.000	0.049	0.178	0.000	0.178	0.254	
	Right Cheek	1.100	0.000	1.100	0.308	0.000	0.308	0.182	0.000	0.182	0.143	0.000	0.143	1.100	
	Right Tilt	0.312	0.000	0.312	0.113	0.000	0.113	0.061	0.000	0.061	0.256	0.000	0.256	0.312	
Body worn	Back Side	0.239	0.000	0.239	0.904	0.000	0.904	0.178	0.000	0.178	0.019	0.000	0.019	0.904	
	Front Side	0.294	0.000	0.294	0.492	0.000	0.492	0.138	0.000	0.138	0.011	0.000	0.011	0.492	
Hotspot	Back Side	0.781	0.000	0.781	0.823	0.000	0.823	0.305	0.000	0.305	0.000	0.000	0.000	0.823	
	Front Side	0.322	0.000	0.322	0.519	0.000	0.519	0.201	0.000	0.201	0.000	0.000	0.000	0.519	
	Left Edge	1.065	0.000	1.065	0.230	0.000	0.230	0.089	0.000	0.089	0.000	0.000	0.000	1.065	
	Right Edge	0.026	0.000	0.026	0.013	0.000	0.013	0.278	0.000	0.278	0.000	0.000	0.000	0.278	
	Top Edge	0.094	0.000	0.094	0.000	0.000	0.000	0.000	0.000	0.000	0.058	0.000	0.058	0.094	
	Bottom Edge	0.000	0.000	0.000	0.779	0.000	0.779	0.098	0.000	0.098	0.000	0.000	0.000	0.779	



Test Position		SAR _{1g/10g} (W/kg)	GSM	GSM	WCD	WCD	LTE	NR	NR	EN-DC	MAX.							
		850	1900	MA II	MA V	2	4	5	7	12	26	38	41	66	n41	n66		SAR _{1g/10g}
Head	Left Cheek	0.122	0.093	0.229	0.379	0.199	0.106	0.475	0.487	0.132	0.374	0.331	0.379	0.573	0.136	0.428	0.573	0.573
	Left Tilt	0.036	0.106	0.147	0.486	0.125	0.073	0.524	0.158	0.178	0.608	0.089	0.102	0.254	0.032	0.180	0.254	0.608
	Right Cheek	0.091	0.152	0.268	0.645	0.308	0.148	0.681	0.213	0.182	0.543	0.134	0.155	1.100	0.074	0.791	1.100	1.100
	Right Tilt	0.039	0.082	0.115	0.754	0.113	0.087	0.743	0.144	0.256	0.867	0.075	0.141	0.312	0.056	0.213	0.312	0.867
Body worn	Back Side	0.210	0.270	0.977	0.202	0.482	0.439	0.346	0.513	0.178	0.308	0.545	0.308	0.239	0.128	0.434	0.904	0.977
	Front Side	0.145	0.157	0.536	0.184	0.326	0.343	0.223	0.740	0.138	0.176	0.409	0.583	0.294	0.151	0.325	0.492	0.740
Hotspot	Back Side	0.616	0.715	0.761	0.526	0.823	0.798	0.599	0.442	0.305	0.474	0.695	0.359	0.781	0.241	0.478	0.823	0.823
	Front Side	0.358	0.491	0.587	0.199	0.519	0.481	0.362	0.784	0.201	0.311	0.768	0.629	0.322	0.327	0.318	0.519	0.784
	Left Edge	0.093	0.116	0.174	0.074	0.230	0.079	0.067	0.586	0.089	0.066	0.442	0.375	1.065	0.174	0.737	1.065	1.065
	Right Edge	0.234	0.053	0.014	0.053	0.013	0.093	0.229	0.113	0.278	0.183	0.060	0.025	0.026	0.000	0.000	0.278	0.278
	Top Edge	N/A	N/A	N/A	N/A	N/A	N/A	0.346	N/A	0.058	0.374	N/A	N/A	0.094	0.197	0.069	0.197	0.374
	Bottom Edge	0.187	0.615	0.664	0.124	0.779	0.873	0.193	0.846	0.098	0.168	0.493	0.432	N/A	N/A	N/A	0.779	0.873
Product Specific 10-g SAR	Back Side	N/A	N/A	N/A	N/A	1.719	1.652	N/A	1.719									
	Front Side	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.000
	Left Edge	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.000
	Right Edge	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.000
	Top Edge	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.000
	Bottom Edge	N/A	N/A	N/A	N/A	1.508	2.357	N/A	2.357									

Test Position		SAR _{10g} (W/kg)	Wi-Fi 5G			MAX. SAR _{10g}											
			U-NII-1			U-NII-2A			U-NII-2C			U-NII-3			Wi-Fi 5G		
			Ant3	Ant4	MIMO	Ant3	Ant4	MIMO									
Head	Left Cheek	0.438	0.604	0.302	0.453	0.349	0.267	0.302	0.607	0.408	0.314	0.555	0.401	0.453	0.607	0.408	
	Left Tilt	0.079	0.379	0.188	0.106	0.268	0.208	0.111	0.363	0.206	0.114	0.448	0.250	0.114	0.448	0.250	
	Right Cheek	0.074	0.175	0.097	0.110	0.025	0.097	0.105	0.253	0.098	0.093	0.231	0.173	0.110	0.253	0.173	
	Right Tilt	0.031	0.277	0.076	0.025	0.017	0.083	0.047	0.054	0.145	0.000	0.236	0.189	0.047	0.277	0.189	
Body worn	Back Side	0.231	0.209	0.249	0.294	0.367	0.307	0.236	0.224	0.341	0.124	0.075	0.171	0.294	0.367	0.341	
	Front Side	0.317	0.266	0.374	0.313	0.598	0.292	0.157	0.157	0.190	0.179	0.246	0.440	0.317	0.598	0.440	
Hotspot	Back Side	0.443	0.384	0.285	N/A	N/A	N/A	N/A	N/A	N/A	0.202	0.090	0.213	0.443	0.384	0.285	
	Front Side	0.178	0.576	0.301	N/A	N/A	N/A	N/A	N/A	N/A	0.126	0.094	0.168	0.178	0.576	0.301	
	Left Edge	0.044	0.048	0.039	N/A	N/A	N/A	N/A	N/A	N/A	0.033	0.020	0.077	0.044	0.048	0.077	
	Right Edge	0.746	0.737	0.702	N/A	N/A	N/A	N/A	N/A	N/A	0.467	0.125	0.534	0.746	0.737	0.702	
	Top Edge	0.066	0.194	0.275	N/A	N/A	N/A	N/A	N/A	N/A	0.042	0.038	0.093	0.066	0.194	0.275	
	Bottom Edge	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	



Product Specific 10-g SAR	Back Side	N/A	N/A	N/A	0.770	1.069	0.677	1.062	0.508	1.123	N/A	N/A	N/A	1.062	1.069	1.123
	Front Side	N/A	N/A	N/A	0.880	1.417	0.726	1.525	0.532	1.254	N/A	N/A	N/A	1.525	1.417	1.254
	Left Edge	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Right Edge	N/A	N/A	N/A	1.983	1.613	1.868	1.389	0.986	1.996	N/A	N/A	N/A	1.983	1.613	1.996
	Top Edge	N/A	N/A	N/A	0.169	1.265	0.144	1.001	0.545	0.372	N/A	N/A	N/A	1.001	1.265	0.372
	Bottom Edge	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

SAR _{10g} (W/kg)		Wi-Fi 2.4G			MAX. SAR _{10g} Wi-Fi 5G			Wi-Fi 2.4G + Wi-Fi 5G			MAX. SAR _{10g} Wi-Fi 2.4G + Wi-Fi 5G
		Ant3	Ant4	MIMO	Ant3	Ant4	MIMO	1+Max (4, 5, 6)	2+Max (4, 6)	3+Max (4, 5, 6)	
		1	2	3	4	5	6				
Head	Left Cheek	0.253	0.188	0.398	0.453	0.607	0.408	0.860	0.706	1.005	1.005
	Left Tilt	0.072	0.178	0.269	0.114	0.448	0.250	0.520	0.322	0.717	0.717
	Right Cheek	0.066	0.082	0.169	0.110	0.253	0.173	0.319	0.239	0.422	0.422
	Right Tilt	0.044	0.089	0.100	0.047	0.277	0.189	0.321	0.233	0.377	0.377
Body	Back Side	0.125	0.193	0.241	0.294	0.367	0.341	0.492	0.466	0.608	0.608
	Front Side	0.223	0.129	0.212	0.317	0.598	0.440	0.821	0.663	0.810	0.821
Hotspot	Back Side	0.110	0.315	0.259	0.443	0.384	0.285	0.553	0.553	0.702	0.702
	Front Side	0.092	0.157	0.205	0.178	0.576	0.301	0.668	0.393	0.781	0.781
	Left Edge	0.000	0.000	0.000	0.044	0.048	0.077	0.077	0.077	0.077	0.077
	Right Edge	0.128	0.139	0.234	0.746	0.737	0.702	0.874	0.874	0.980	0.980
	Top Edge	0.021	0.160	0.112	0.066	0.194	0.275	0.296	0.296	0.387	0.387
	Bottom Edge	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Product Specific 10-g SAR	Back Side	N/A	N/A	N/A	1.062	1.069	1.123	1.123	1.123	1.123	1.123
	Front Side	N/A	N/A	N/A	1.525	1.417	1.254	1.525	1.525	1.525	1.525
	Left Edge	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Right Edge	N/A	N/A	N/A	1.983	1.613	1.996	1.996	1.996	1.996	1.996
	Top Edge	N/A	N/A	N/A	1.001	1.265	0.372	1.265	1.001	1.265	1.265
	Bottom Edge	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A



WWAN + WLAN 2.4G / WLAN 5G/BT

Test Position		SAR _{1g/10g} (W/kg)	WWAN MAX. SAR _{1g/10g}	Wi-Fi 2.4G			Wi-Fi 5G			BT	MAX. SAR _{10g} Wi-Fi 2.4G + Wi-Fi 5G	MAX. ΣSAR _{1g/10g}			
				Ant3	Ant4	MIMO	Ant3	Ant4	MIMO			1+Max (2, 3, 4)	1+ Max (5, 6, 7)	1+9	1+8
		1	2	3	4	5	6	7	8	9					
Head	Left, Cheek	0.573	0.253	0.188	0.398	0.453	0.607	0.408	0.384	1.005	0.971	1.180	1.578	0.957	
	Left, Tilt	0.608	0.072	0.178	0.269	0.114	0.448	0.250	0.220	0.717	0.877	1.056	1.325	0.828	
	Right, Cheek	1.100	0.066	0.082	0.169	0.110	0.253	0.173	0.115	0.422	1.269	1.353	1.522	1.215	
	Right, Tilt	0.867	0.044	0.089	0.100	0.047	0.277	0.189	0.097	0.377	0.967	1.144	1.244	0.964	
Body worn	Back Side	0.977	0.125	0.193	0.241	0.294	0.367	0.341	0.094	0.608	1.218	1.344	1.585	1.071	
	Front Side	0.740	0.223	0.129	0.212	0.317	0.598	0.440	0.065	0.821	0.963	1.338	1.561	0.805	
Hotspot	Back Side	0.823	0.110	0.315	0.259	0.443	0.384	0.285	0.094	0.702	1.138	1.266	1.525	0.917	
	Front Side	0.784	0.092	0.157	0.205	0.178	0.576	0.301	0.065	0.781	0.989	1.360	1.565	0.849	
	Left Edge	1.065	N/A	N/A	N/A	0.044	0.048	0.077	0.006	0.077	1.065	1.142	1.142	1.071	
	Right Edge	0.278	0.128	0.139	0.234	0.746	0.737	0.702	0.045	0.980	0.512	1.024	1.258	0.323	
	Top Edge	0.374	0.021	0.160	0.112	0.066	0.194	0.275	N/A	0.387	0.534	0.649	0.761	0.374	
	Bottom Edge	0.873	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.873	0.873	0.873	
Product Specific 10-g SAR	Back Side	1.719	N/A	N/A	N/A	1.062	1.069	1.123	N/A	1.123	1.719	2.842	2.842	1.719	
	Front Side	N/A	N/A	N/A	N/A	1.525	1.417	1.254	N/A	1.525	N/A	1.525	1.525	N/A	
	Left Edge	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.000	N/A	N/A	N/A	N/A	
	Right Edge	N/A	N/A	N/A	N/A	1.983	1.613	1.996	N/A	1.996	N/A	1.996	1.996	N/A	
	Top Edge	N/A	N/A	N/A	N/A	1.001	1.265	0.372	N/A	1.265	0.000	1.265	1.265	N/A	
	Bottom Edge	2.357	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.000	2.357	2.357	2.357	2.357	

Note: 1.The value with blue color is the maximum ΣSAR_{1g/10g} Value.

2.MAX. ΣSAR_{1g/10g} =Unlicensed SAR_{MAX} +Licensed SAR_{MAX}

MAX. ΣSAR_{1g} = 1.585W/kg<1.6W/kg and MAX. ΣSAR_{10g} =2.842W/kg<4 W/kg, so the Simultaneous transimtion SAR with volum scan are not required for WWAN and WLAN 2.4G / WLAN 5G/BT Antenna.



11 Measurement Uncertainty

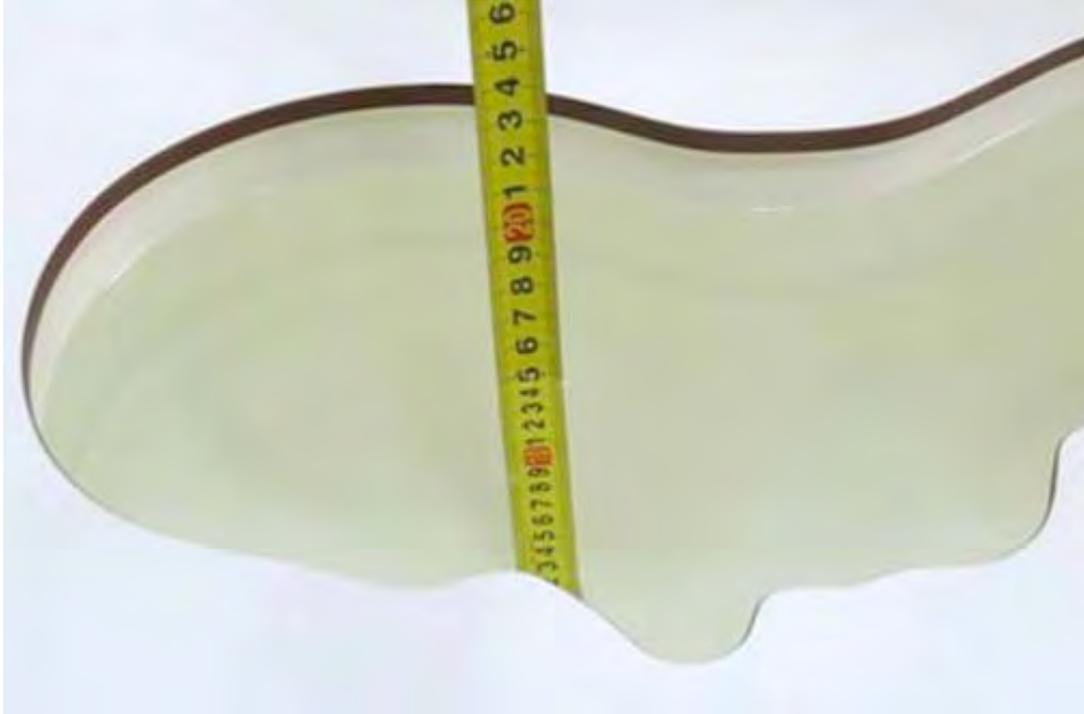
Per KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz, when the highest measured 1-g SAR within a frequency band is < 1.5 W/kg, the extensive SAR measurement uncertainty analysis described in IEEE Std 1528- 2013 is not required in SAR reports submitted for equipment approval.

ANNEX A: Test Layout

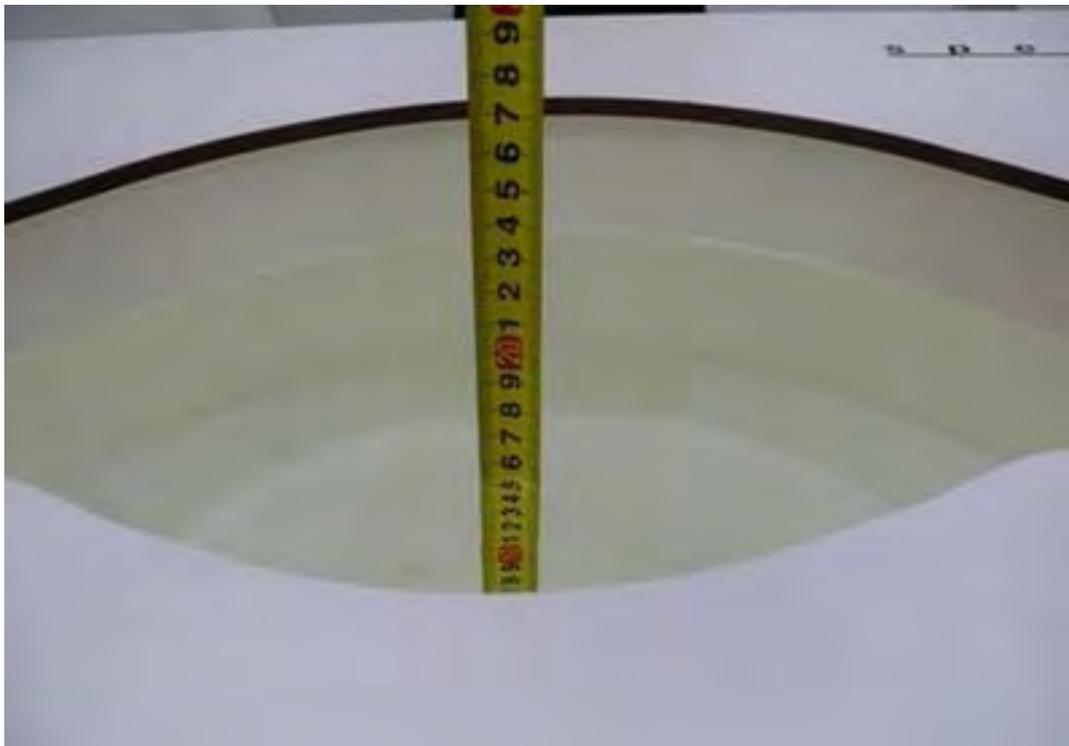


Tissue Simulating Liquids

For the measurement of the field distribution inside the flat phantom with DASy, the phantom must be filled with around 25 liters of homogeneous body tissue simulating liquid. For Head and Body SAR testing, the liquid height from the center of the flat phantom to the liquid top surface is larger than 15 cm, which is shown in Picture 3 and Picture 4.



Picture 3: liquid depth in the head Phantom



Picture 4: Liquid depth in the flat Phantom

ANNEX B: System Check Results

Plot 1 System Performance Check at 750 MHz TSL

DUT: Dipole 750 MHz; Type: D750V3; Serial: D750V3

Date: 6/14/2021

Communication System: CW (0); Frequency: 750 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 750 \text{ MHz}$; $\sigma = 0.88 \text{ S/m}$; $\epsilon_r = 42.3$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: $22.3 \text{ }^\circ\text{C}$ Liquid Temperature: $21.5 \text{ }^\circ\text{C}$

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(10.48, 10.48, 10.48); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

d=15mm, Pin=250mW/Area Scan (4x12x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 2.29 W/kg

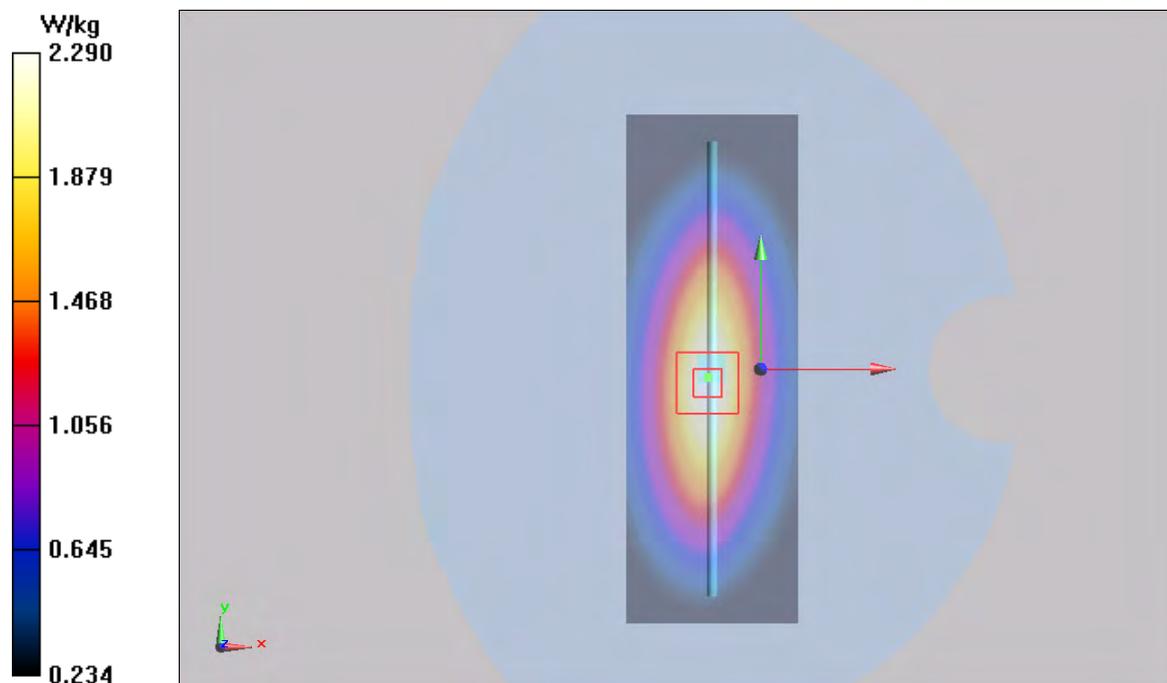
d=15mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 50.653 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 3.16 W/kg

SAR(1 g) = 2.13 W/kg; SAR(10 g) = 1.41 W/kg

Maximum value of SAR (measured) = 2.29 W/kg



Plot 2 System Performance Check at 750 MHz TSL

DUT: Dipole 750 MHz; Type: D750V3; Serial: D750V3

Date: 6/15/2021

Communication System: CW (0); Frequency: 750 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 750 \text{ MHz}$; $\sigma = 0.87 \text{ S/m}$; $\epsilon_r = 42.0$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: $22.3 \text{ }^\circ\text{C}$ Liquid Temperature: $21.5 \text{ }^\circ\text{C}$

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(10.48, 10.48, 10.48); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

d=15mm, Pin=250mW/Area Scan (4x12x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 2.31 W/kg

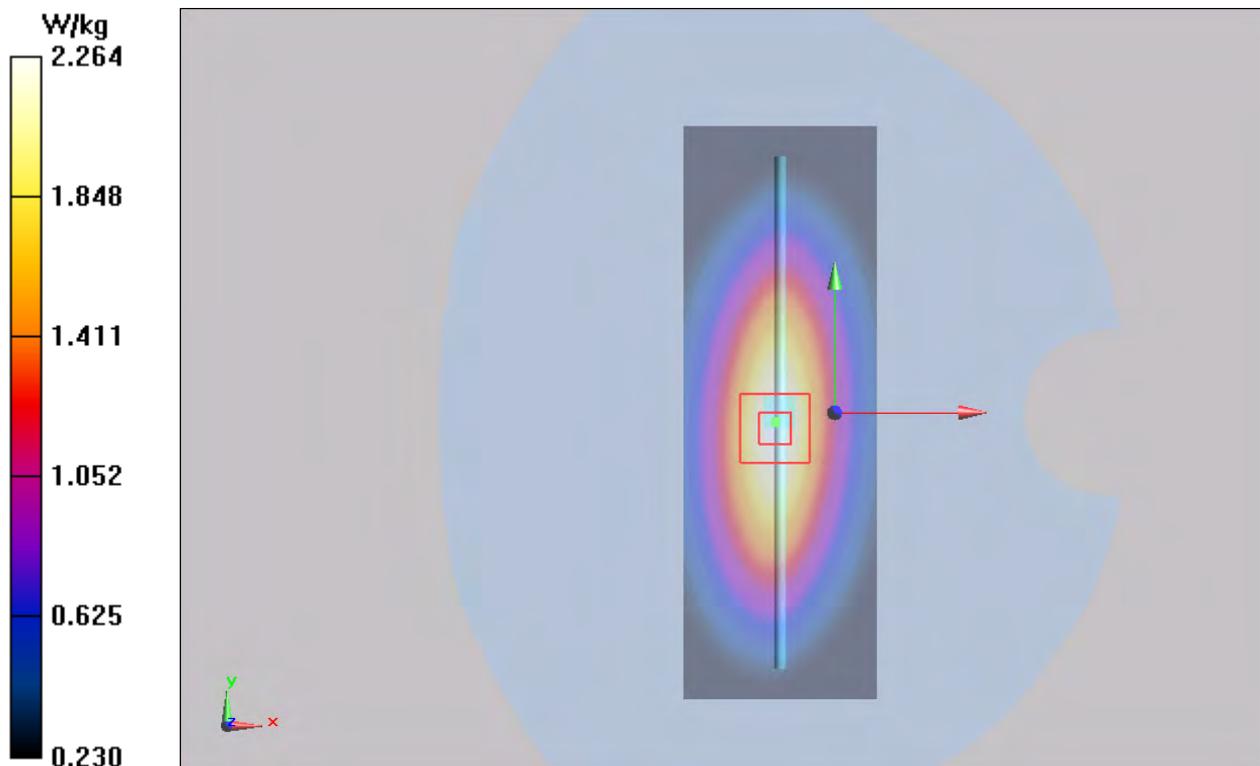
d=15mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 50.557 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 3.14 W/kg

SAR(1 g) = 2.10 W/kg; SAR(10 g) = 1.37 W/kg

Maximum value of SAR (measured) = 2.264 W/kg



Plot 3 System Performance Check at 835 MHz TSL

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2

Date: 6/21/2021

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.88 \text{ S/m}$; $\epsilon_r = 41.4$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: $22.3 \text{ }^\circ\text{C}$ Liquid Temperature: $21.5 \text{ }^\circ\text{C}$

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(10.15, 10.15, 10.15); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

d=15mm, Pin=250mW/Area Scan (4x12x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 2.64 mW/g

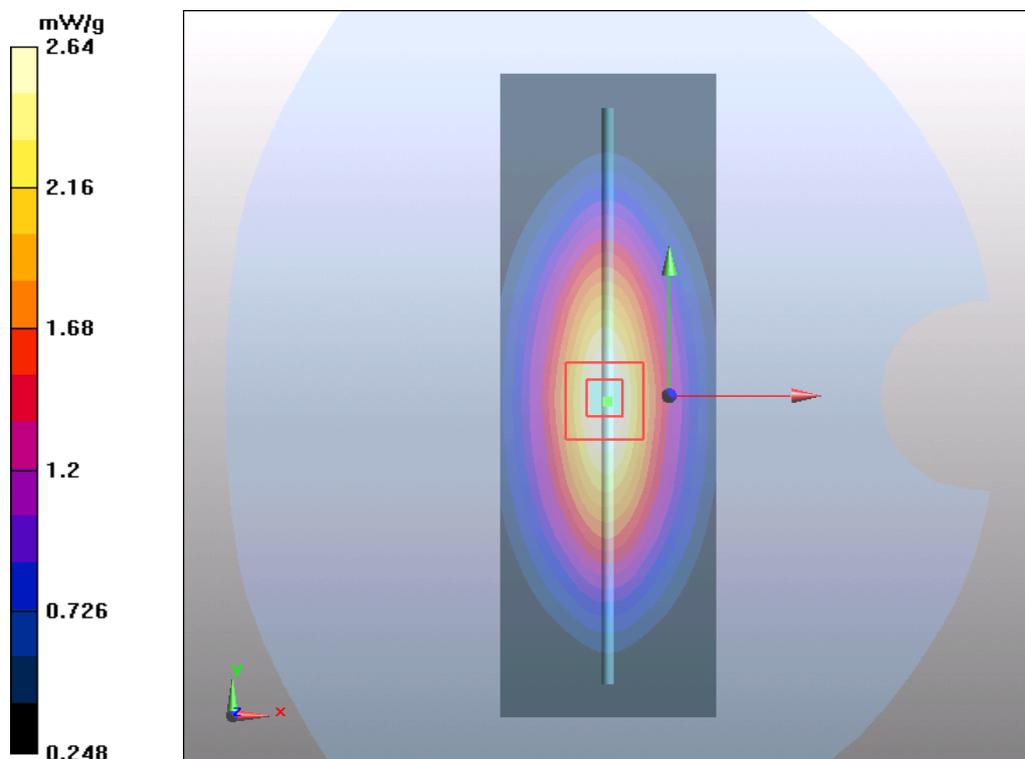
d=15mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 54.4 V/m; Power Drift = -0.076 dB

Peak SAR (extrapolated) = 3.67 W/kg

SAR(1 g) = 2.44 mW/g; SAR(10 g) = 1.6 mW/g

Maximum value of SAR (measured) = 2.64 mW/g



Plot 4 System Performance Check at 835 MHz TSL

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2

Date: 6/22/2021

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.87 \text{ S/m}$; $\epsilon_r = 41.3$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: $22.3 \text{ }^\circ\text{C}$ Liquid Temperature: $21.5 \text{ }^\circ\text{C}$

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(10.15, 10.15, 10.15); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

d=15mm, Pin=250mW/Area Scan (4x12x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 2.59 mW/g

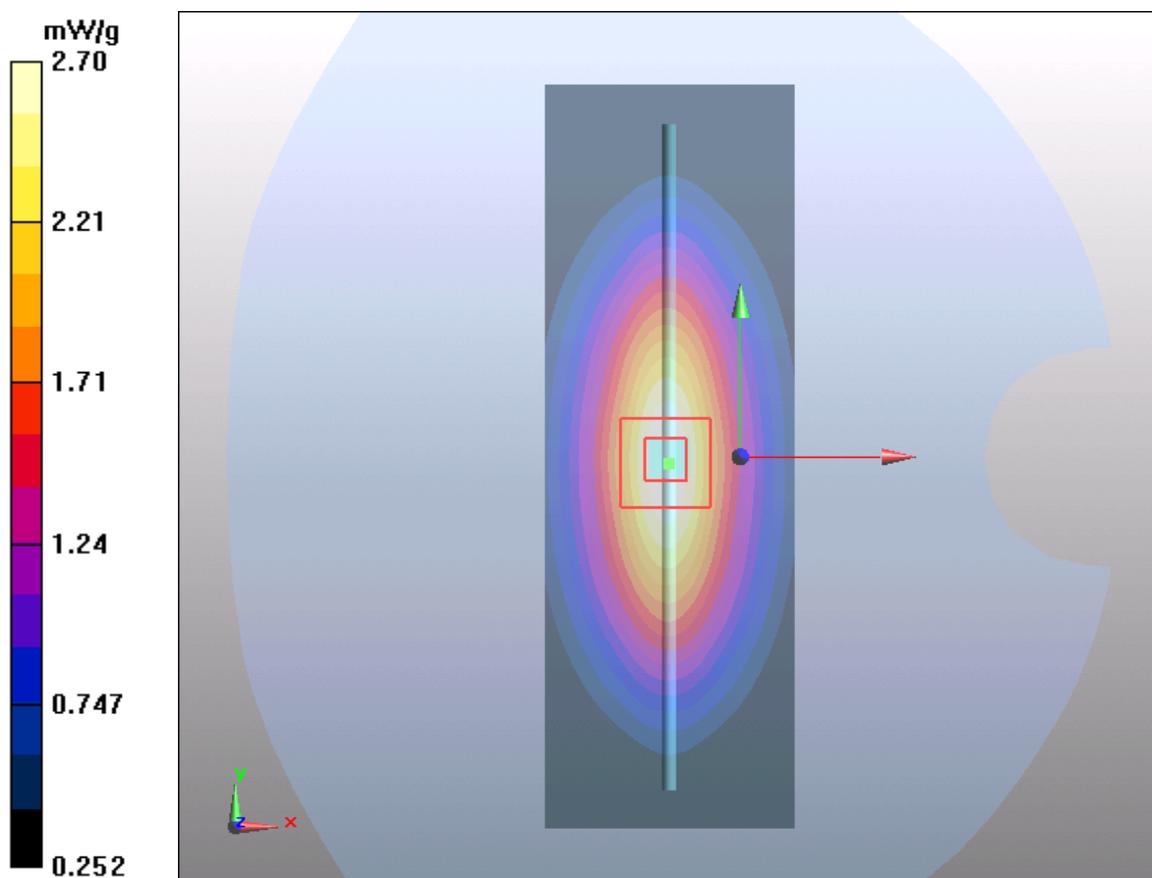
d=15mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 54.3 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 3.67 W/kg

SAR(1 g) = 2.46 mW/g; SAR(10 g) = 1.65 mW/g

Maximum value of SAR (measured) = 2.70 mW/g



Plot 5 System Performance Check at 1750 MHz TSL

DUT: Dipole 1750 MHz; Type: D1750V2; Serial: D1750V2

Date: 6/25/2021

Communication System: CW; Frequency: 1750 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1750$ MHz; $\sigma = 1.34$ S/m; $\epsilon_r = 40.2$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.76, 8.76, 8.76); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

d=10mm, Pin=250mW/Area Scan (5x8x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 9.78 mW/g

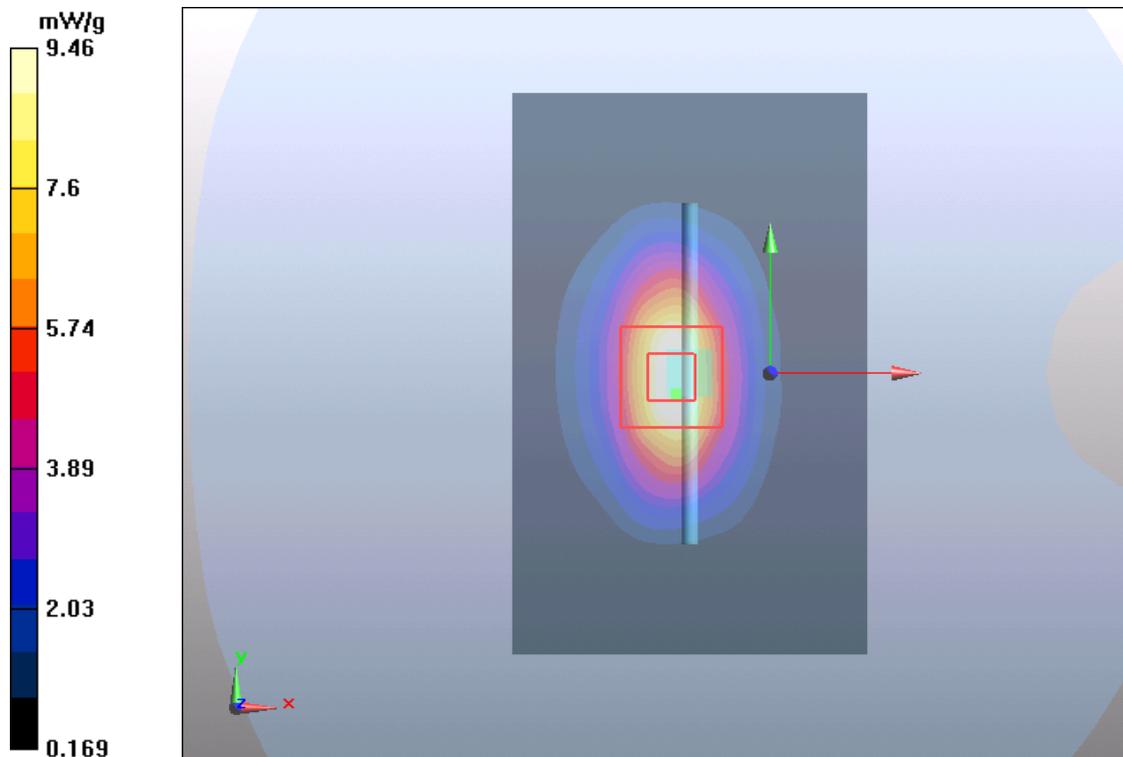
d=10mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 80 V/m; Power Drift = 0.075 dB

Peak SAR (extrapolated) = 15.5 W/kg

SAR(1 g) = 8.95 mW/g; SAR(10 g) = 4.5 mW/g

Maximum value of SAR (measured) = 9.46 mW/g



Plot 6 System Performance Check at 1750 MHz TSL

DUT: Dipole 1750 MHz; Type: D1750V2; Serial: D1750V2

Date: 6/26/2021

Communication System: CW; Frequency: 1750 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1750$ MHz; $\sigma = 1.34$ S/m; $\epsilon_r = 40.1$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.76, 8.76, 8.76); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

d=10mm, Pin=250mW/Area Scan (5x8x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 9.77 mW/g

d=10mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

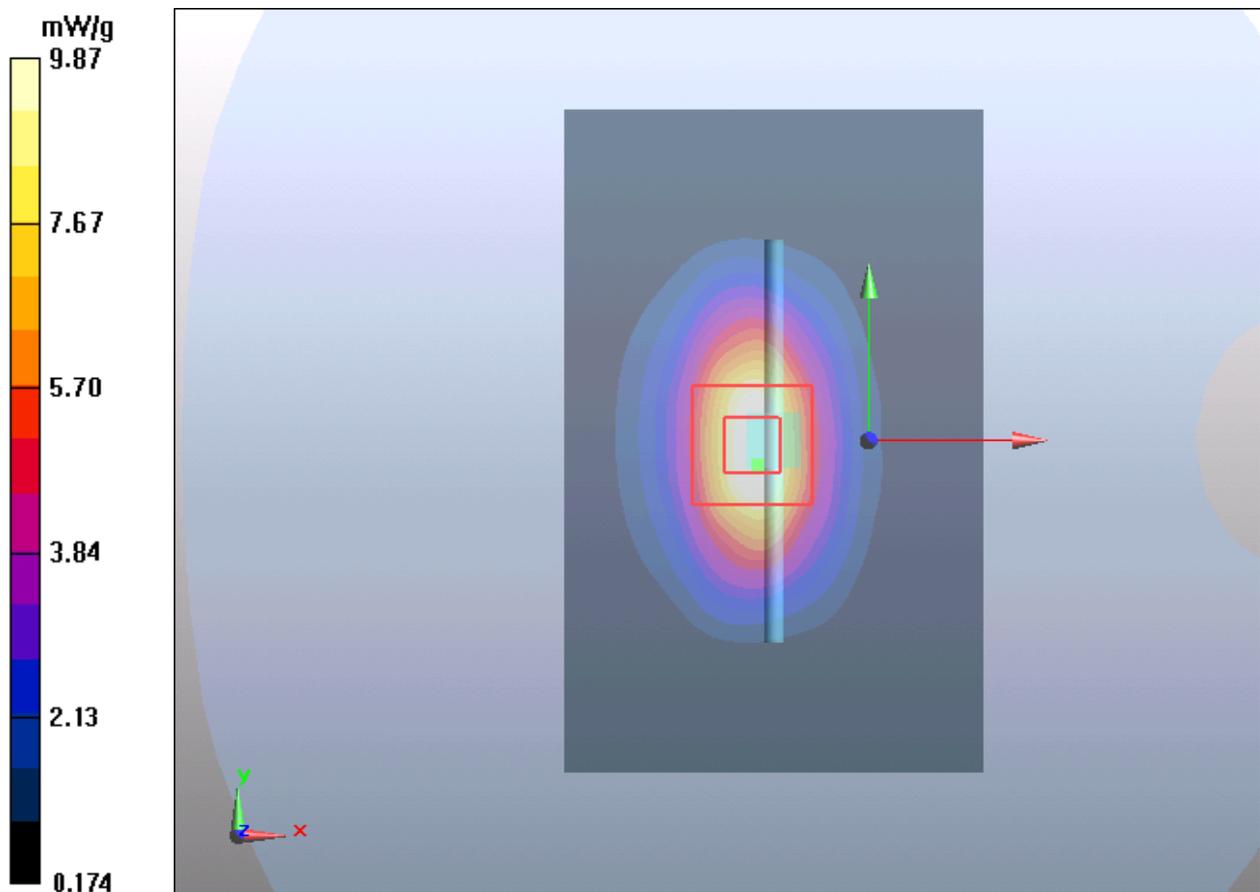
dz=5mm

Reference Value = 80 V/m; Power Drift = 0.055 dB

Peak SAR (extrapolated) = 15.51 W/kg

SAR(1 g) = 9.11 mW/g; SAR(10 g) = 4.77 mW/g

Maximum value of SAR (measured) = 9.87 mW/g



Plot 7 System Performance Check at 1900 MHz TSL

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2

Date: 6/16/2021

Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.41$ S/m; $\epsilon_r = 40.1$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.38, 8.38, 8.38); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

d=10mm, Pin=250mW/Area Scan (4x7x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 11.3 mW/g

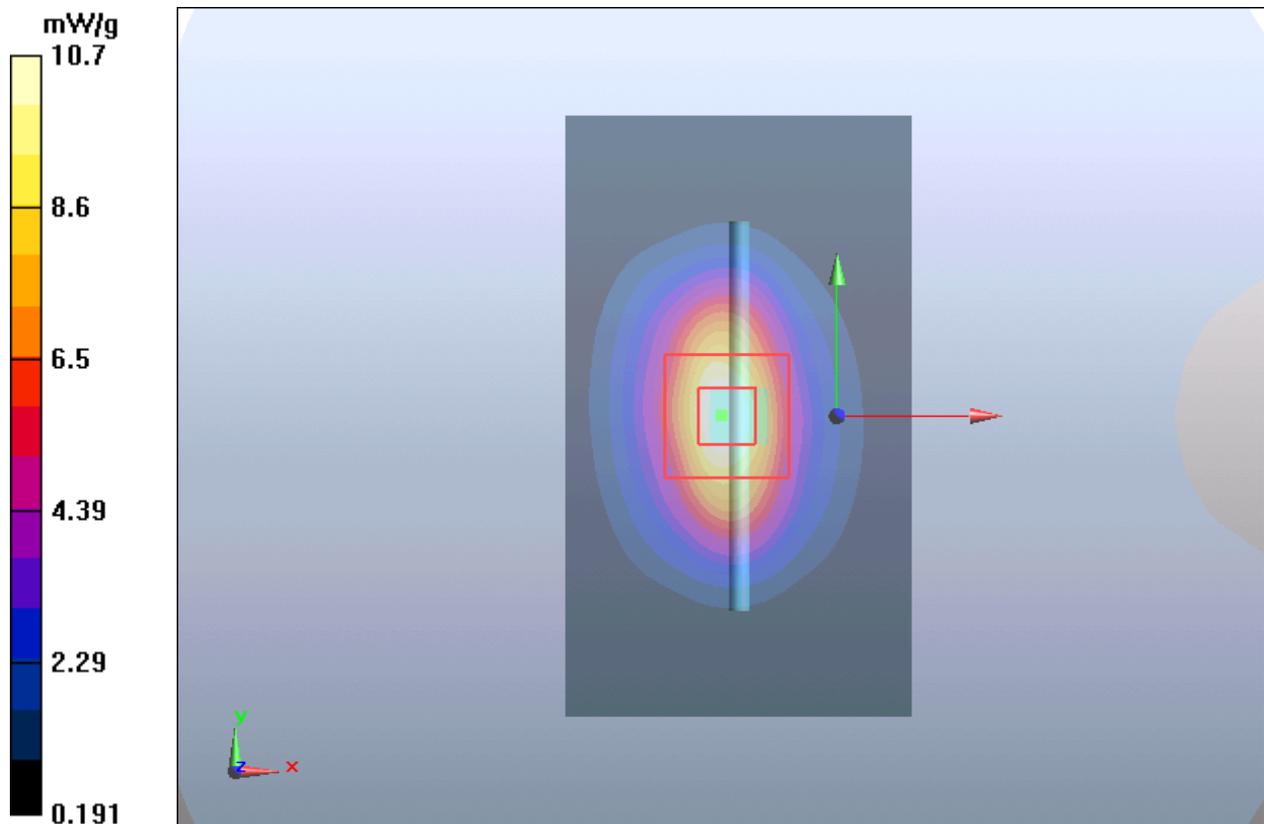
d=10mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 85.5 V/m; Power Drift = 0.028 dB

Peak SAR (extrapolated) = 17.8 W/kg

SAR(1 g) = 9.88 mW/g; SAR(10 g) = 4.9 mW/g

Maximum value of SAR (measured) = 10.7 mW/g



Plot 8 System Performance Check at 1900 MHz TSL

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2

Date: 6/17/2021

Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.43$ S/m; $\epsilon_r = 40.2$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.38, 8.38, 8.38); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

d=10mm, Pin=250mW/Area Scan (4x7x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 11.23 mW/g

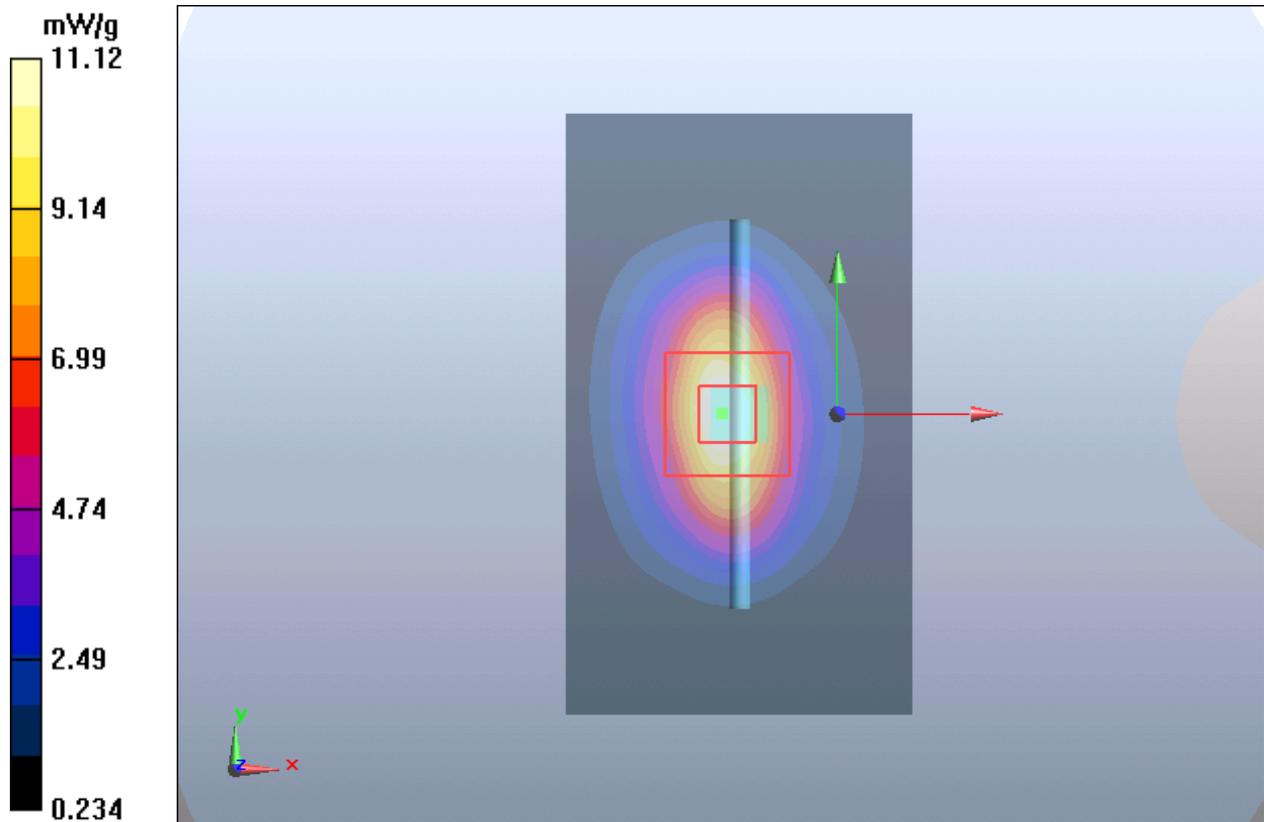
d=10mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 85.0 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 17.8 W/kg

SAR(1 g) = 9.85 mW/g; SAR(10 g) = 4.93 mW/g

Maximum value of SAR (measured) = 11.12 mW/g



Plot 9 System Performance Check at 2450 MHz TSL

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2

Date: 6/23/2021

Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2450$ MHz; $\sigma = 1.81$ S/m; $\epsilon_r = 38.6$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.01, 8.01, 8.01); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

d=10mm, Pin=250mW/Area Scan (4x7x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 18.2 mW/g

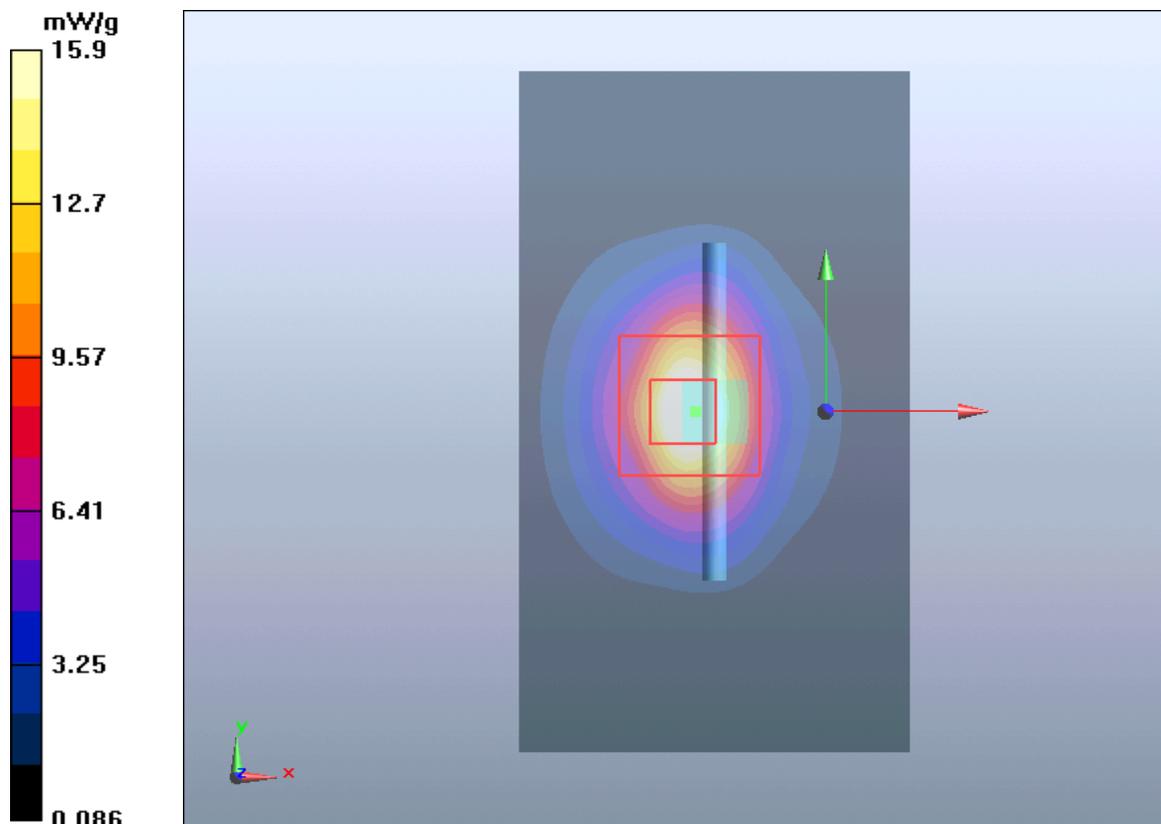
d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 88.8 V/m; Power Drift = 0.075 dB

Peak SAR (extrapolated) = 30 W/kg

SAR(1 g) = 13.7 mW/g; SAR(10 g) = 6.22 mW/g

Maximum value of SAR (measured) = 15.9 mW/g



Plot 10 System Performance Check at 2450 MHz TSL

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2

Date: 6/24/2021

Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2450$ MHz; $\sigma = 1.81$ mho/m; $\epsilon_r = 38.7$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.01, 8.01, 8.01); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

d=10mm, Pin=250mW/Area Scan (4x7x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 18.2 mW/g

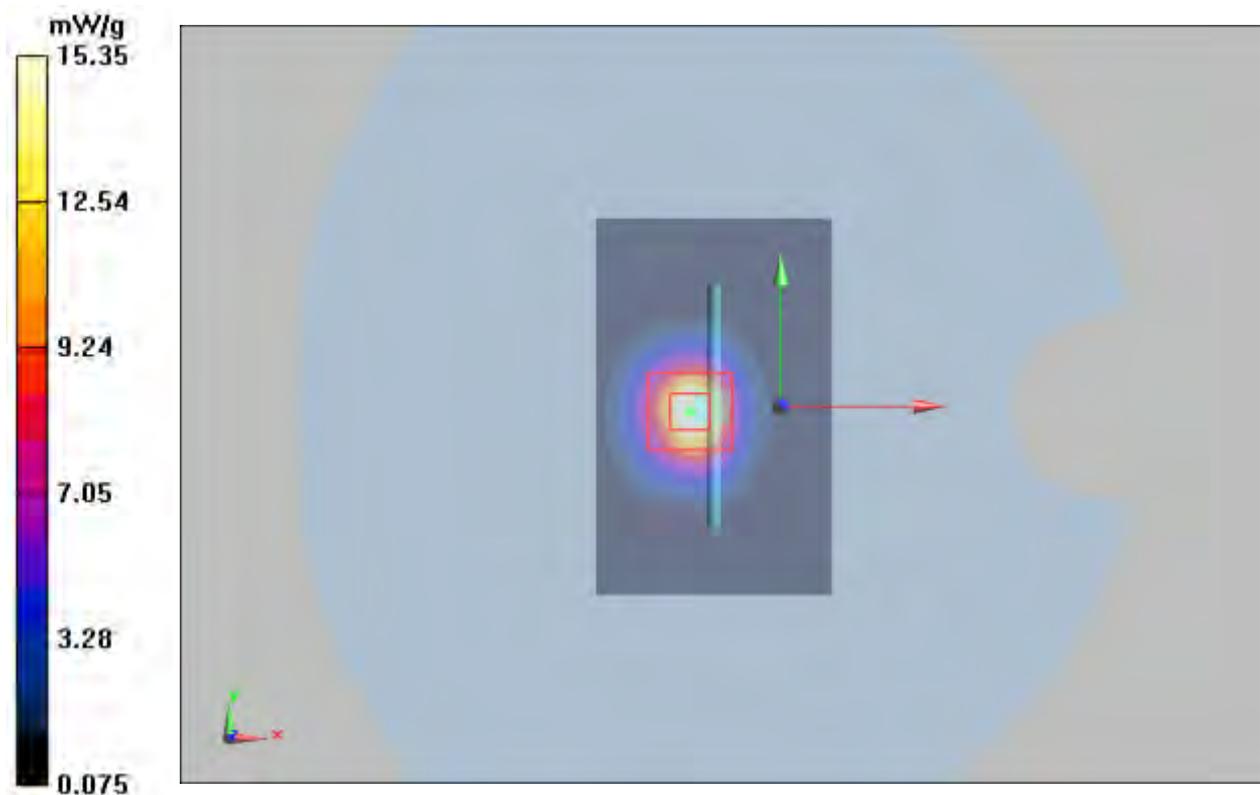
d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 67.0 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 28.0 W/kg

SAR(1 g) = 13.20 mW/g; SAR(10 g) = 6.47 mW/g

Maximum value of SAR (measured) = 15.35 mW/g



Plot 11 System Performance Check at 2600 MHz TSL

DUT: Dipole 2600 MHz; Type: D2600V2; Serial: D2600V2

Date: 6/18/2021

Communication System: CW; Frequency: 2600 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2600$ MHz; $\sigma = 2.01$ S/m; $\epsilon_r = 38.2$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(7.71, 7.71, 7.71); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

d=10mm, Pin=250mW/Area Scan (4x7x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 17.439 mW/g

d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm,

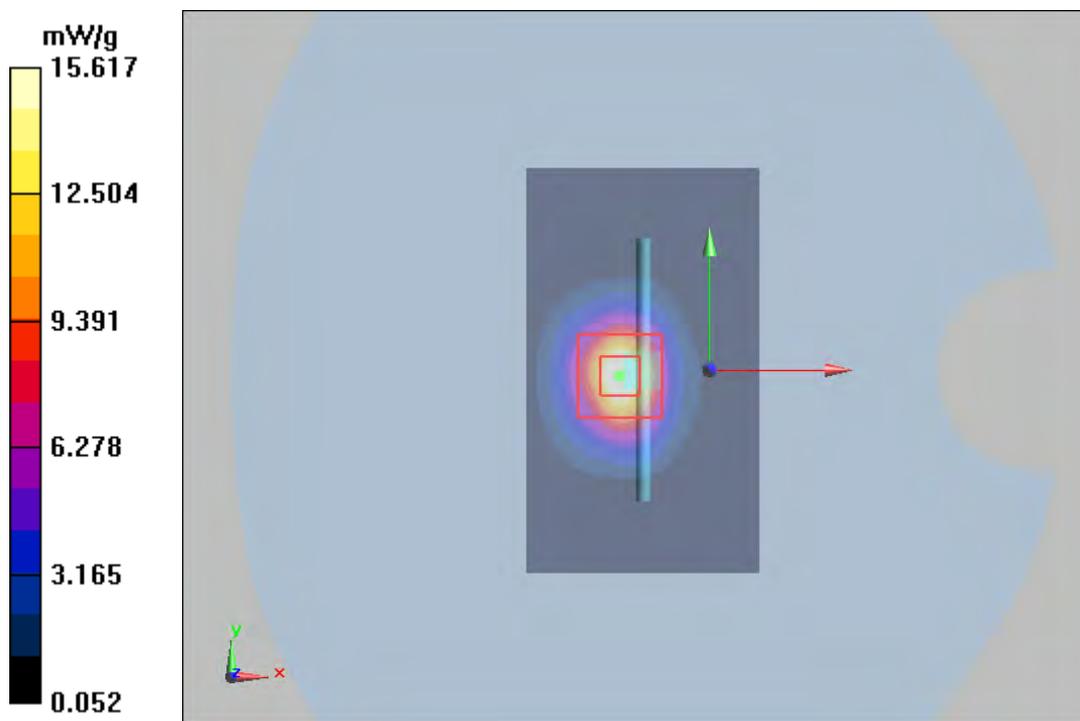
dz=5mm

Reference Value = 87.998 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 31.858 W/kg

SAR(1 g) = 13.9 mW/g; SAR(10 g) = 6.07 mW/g

Maximum value of SAR (measured) = 15.617 mW/g



Plot 12 System Performance Check at 2600 MHz TSL

DUT: Dipole 2600 MHz; Type: D2600V2; Serial: D2600V2

Date: 6/19/2021

Communication System: CW; Frequency: 2600 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2600$ MHz; $\sigma = 1.94$ S/m; $\epsilon_r = 38.4$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(7.71, 7.71, 7.71); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

d=10mm, Pin=250mW/Area Scan (4x7x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 17.59 mW/g

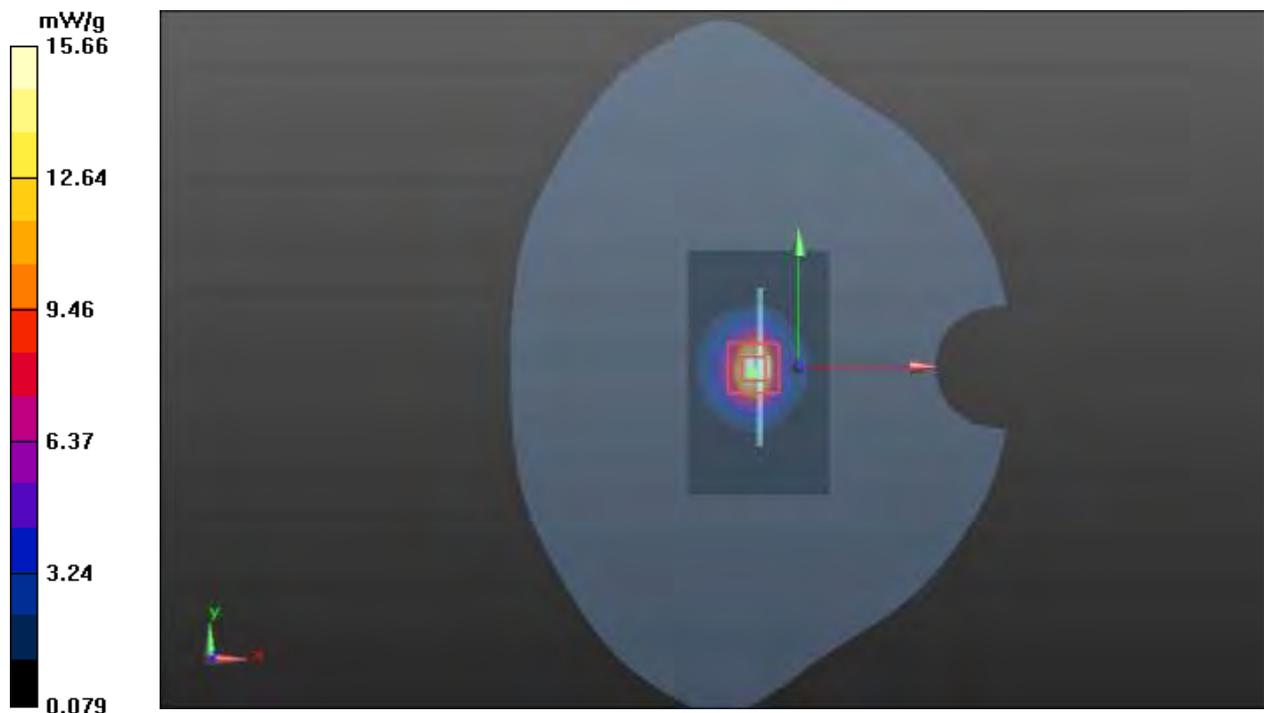
d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 87.998 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 31.858 W/kg

SAR(1 g) = 13.88 mW/g; SAR(10 g) = 6.09 mW/g

Maximum value of SAR (measured) = 15.66 mW/g



Plot 13 System Performance Check at 2600 MHz TSL

DUT: Dipole 2600 MHz; Type: D2600V2; Serial: D2600V2

Date: 6/20/2021

Communication System: CW; Frequency: 2600 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2600$ MHz; $\sigma = 1.99$ mho/m; $\epsilon_r = 38.3$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(7.71, 7.71, 7.71); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

d=10mm, Pin=250mW/Area Scan (4x7x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 17.32 mW/g

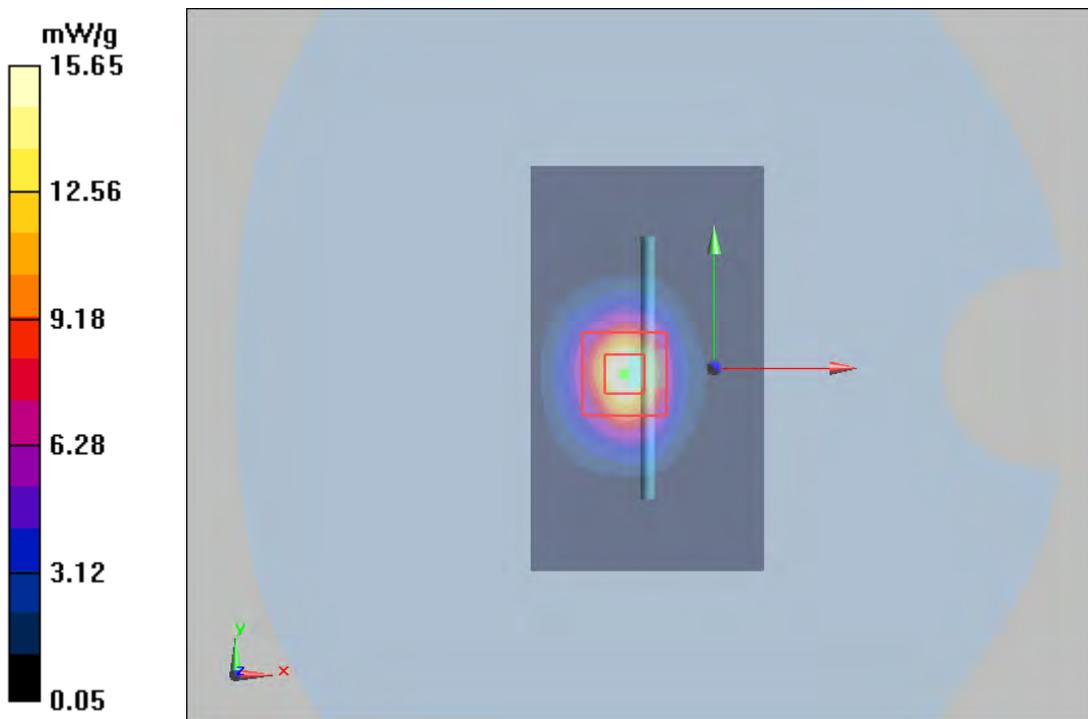
d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 87.465 V/m; Power Drift = 0.146 dB

Peak SAR (extrapolated) = 31.85 W/kg

SAR(1 g) = 13.94 mW/g; SAR(10 g) = 6.11 mW/g

Maximum value of SAR (measured) = 15.65 mW/g



Plot 14 System Performance Check at 5250 MHz TSL

DUT: Dipole 5250 MHz; Type: D5GHzV2; Serial: D5GHzV2

Date: 6/30/2021

Communication System: CW; Frequency: 5250 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5250 \text{ MHz}$; $\sigma = 4.80 \text{ S/m}$; $\epsilon_r = 35.5$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: $22.3 \text{ }^\circ\text{C}$ Liquid Temperature: $21.5 \text{ }^\circ\text{C}$

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(5.51, 5.51, 5.51); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

d=10mm, Pin=100mW/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 9.14 mW/g

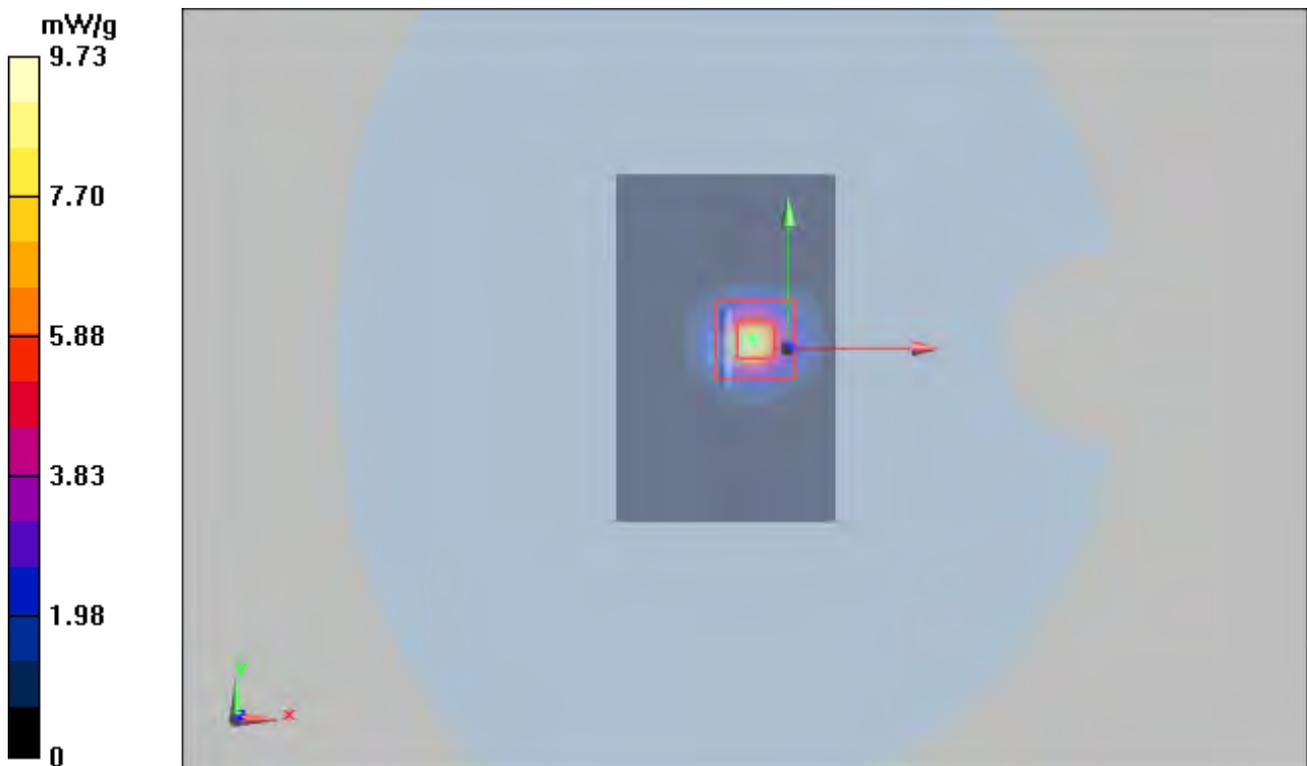
d=10mm, Pin=100mW/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 33.6 V/m; Power Drift = -0.095 dB

Peak SAR (extrapolated) = 52.2 W/kg

SAR(1 g) = 7.87 mW/g; SAR(10 g) = 2.25 mW/g

Maximum value of SAR (measured) = 9.73 mW/g



Plot 15 System Performance Check at 5250 MHz TSL

DUT: Dipole 5250 MHz; Type: D5GHzV2; Serial: D5GHzV2

Date: 6/31/2021

Communication System: CW; Frequency: 5200 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5200$ MHz; $\sigma = 4.81$ mho/m; $\epsilon_r = 35.8$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(5.51, 5.51, 5.51); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

d=10mm, Pin=100mW/Area Scan (61x101x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 9.10 mW/g

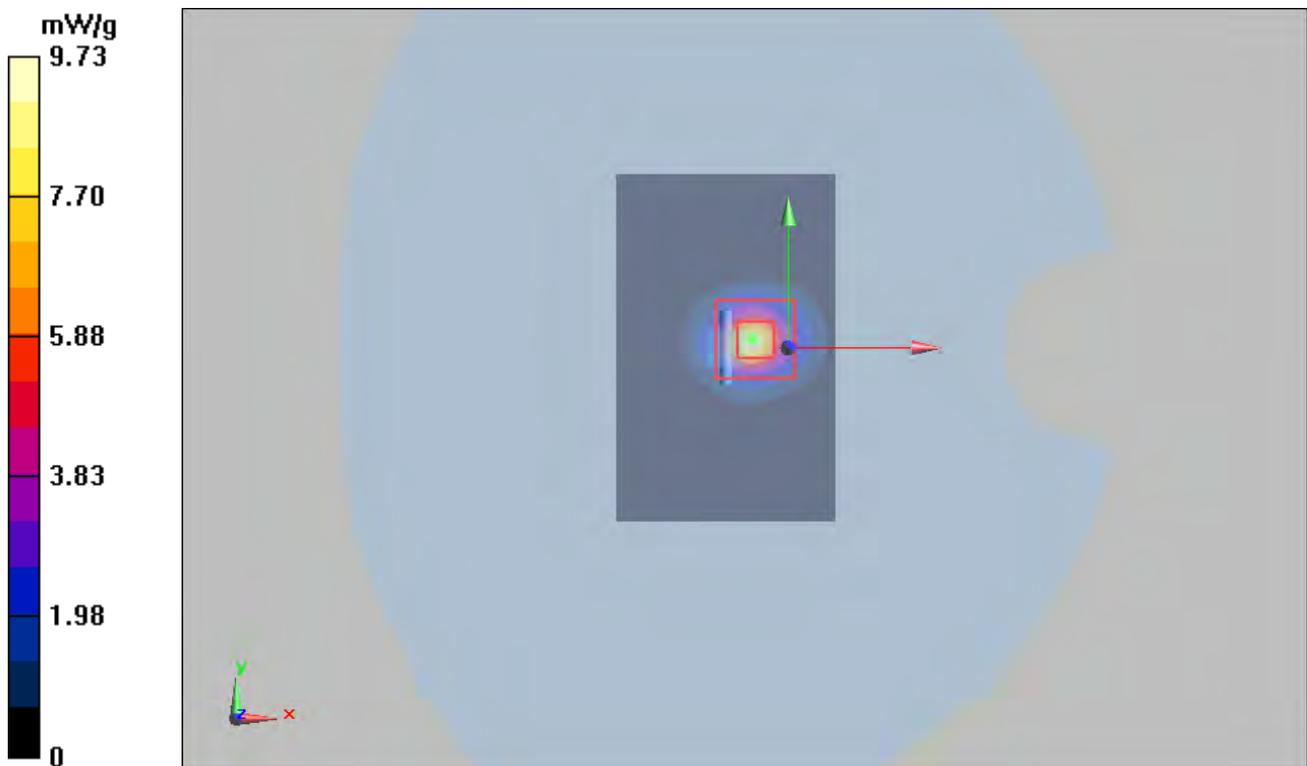
d=10mm, Pin=100mW/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 33.6 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 52.2 W/kg

SAR(1 g) = 7.76 mW/g; SAR(10 g) = 2.23 mW/g

Maximum value of SAR (measured) = 9.73 mW/g



Plot 16 System Performance Check at 5600 MHz TSL

DUT: Dipole 5600 MHz; Type: D5GHzV2; Serial: D5GHzV2

Date: 6/27/2021

Communication System: CW; Frequency: 5600 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5600$ MHz; $\sigma = 5.21$ S/m; $\epsilon_r = 34.2$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(5.00, 5.00, 5.00); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

d=10mm, Pin=100mW/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 8.25 mW/g

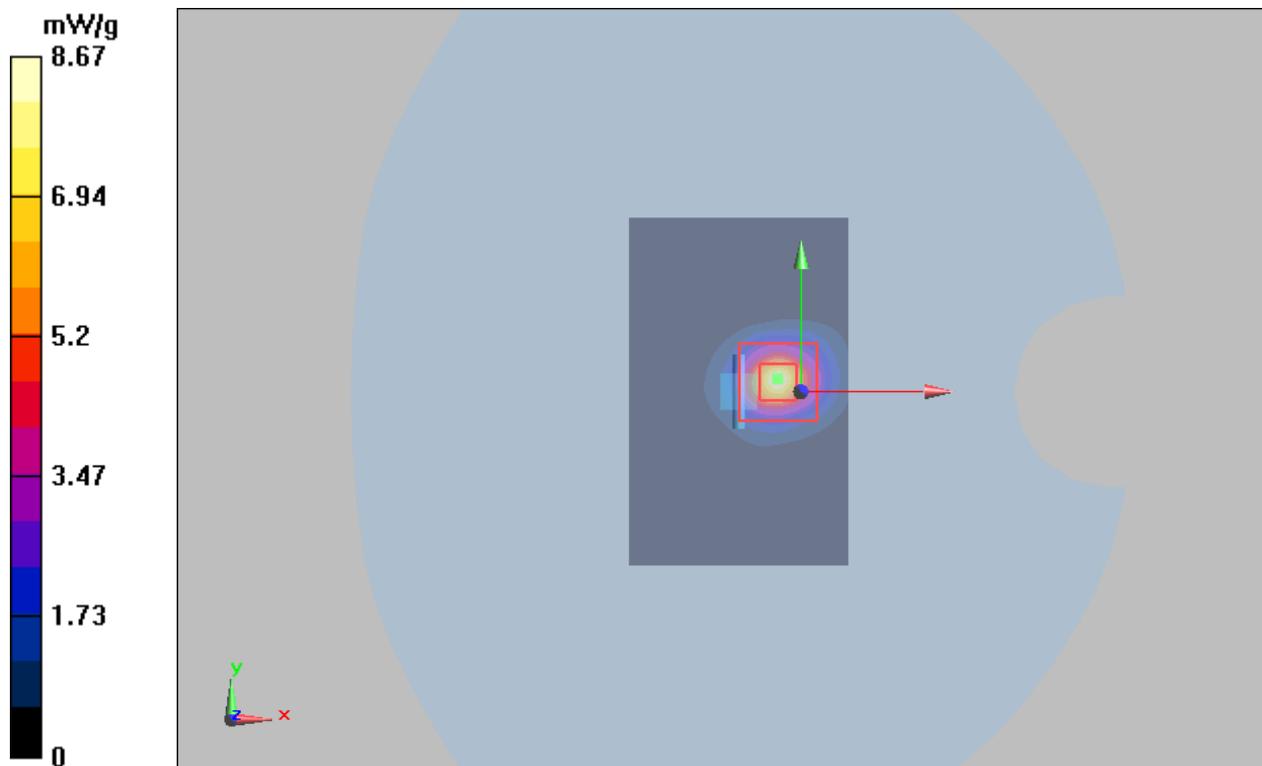
d=10mm, Pin=100mW/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 23.1 V/m; Power Drift = -0.028 dB

Peak SAR (extrapolated) = 22.9 W/kg

SAR(1 g) = 7.67 mW/g; SAR(10 g) = 2.27 mW/g

Maximum value of SAR (measured) = 8.67 mW/g



Plot 17 System Performance Check at 5750 MHz TSL

DUT: Dipole 5750 MHz; Type: D5GHzV2; Serial: D5GHzV2

Date: 6/28/2021

Communication System: CW; Frequency: 5750 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5750$ MHz; $\sigma = 5.21$ S/m; $\epsilon_r = 34.9$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(5.00, 5.00, 5.00); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

d=10mm, Pin=100mW/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 8.31 mW/g

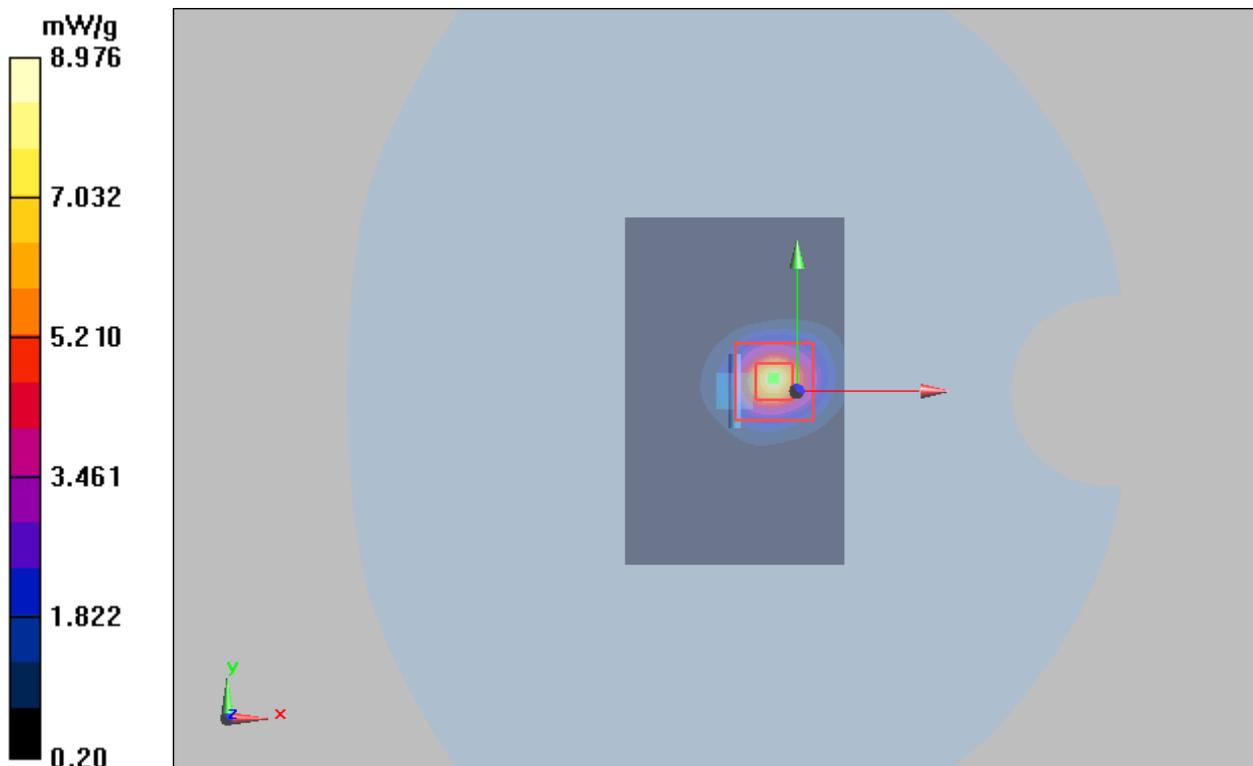
d=10mm, Pin=100mW/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 23.1 V/m; Power Drift = 0.044 dB

Peak SAR (extrapolated) = 23.4 W/kg

SAR(1 g) = 7.66 mW/g; SAR(10 g) = 2.27 mW/g

Maximum value of SAR (measured) = 8.976 mW/g



Plot 18 System Performance Check at 5750 MHz TSL

DUT: Dipole 5750 MHz; Type: D5GHzV2; Serial: D5GHzV2

Date: 6/29/2021

Communication System: CW; Frequency: 5800 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5800$ MHz; $\sigma = 5.28$ mho/m; $\epsilon_r = 35$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 – SN7628; ConvF(4.95, 4.95, 4.95); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

d=10mm, Pin=100mW/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 8.31 mW/g

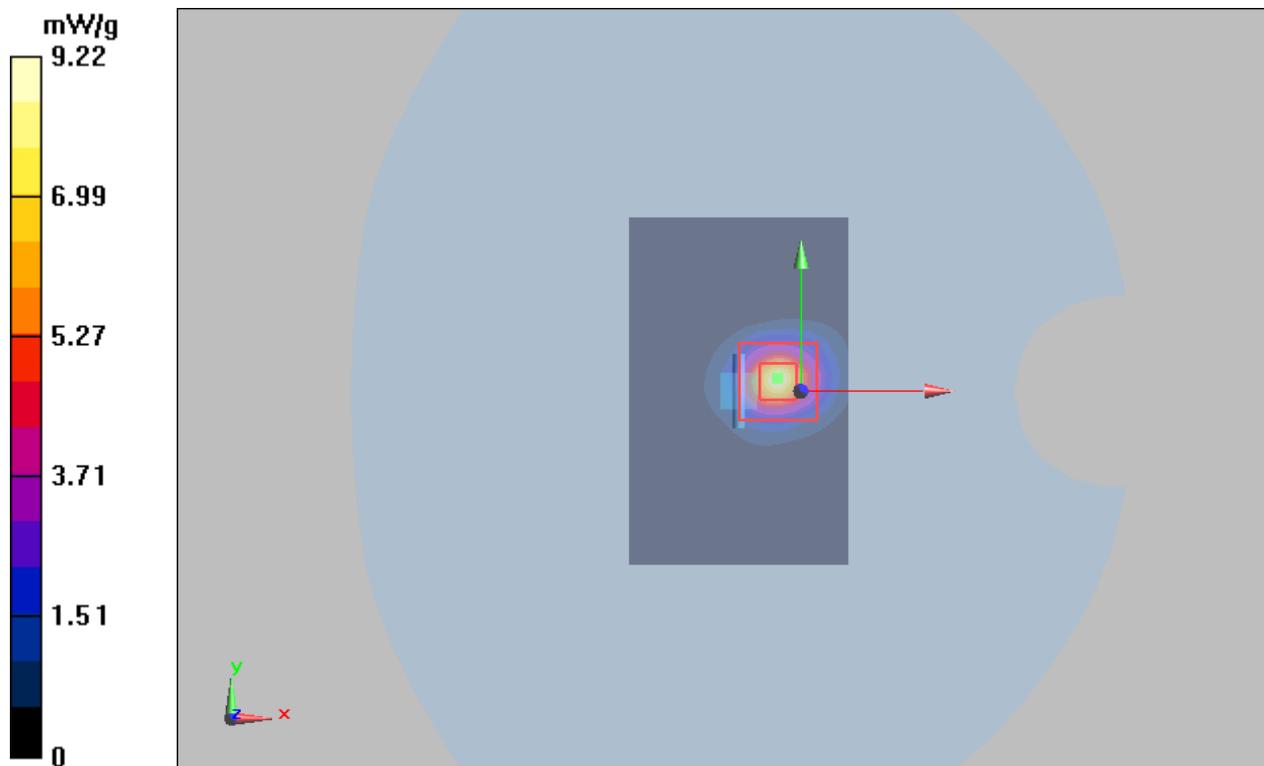
d=10mm, Pin=100mW/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 23.1 V/m; Power Drift = -0.008 dB

Peak SAR (extrapolated) = 22.9 W/kg

SAR(1 g) = 7.72 mW/g; SAR(10 g) = 2.13 mW/g

Maximum value of SAR (measured) = 9.22 mW/g



ANNEX C: Highest Graph Results

Plot 19 GSM 850 Left Cheek Middle

Date: 6/21/2021

Communication System: UID 0, GSM (0); Frequency: 836.6 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 0.953 \text{ S/m}$; $\epsilon_r = 39.762$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Left Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(10.15, 10.15, 10.15); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Left Cheek Middle/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.122 W/kg

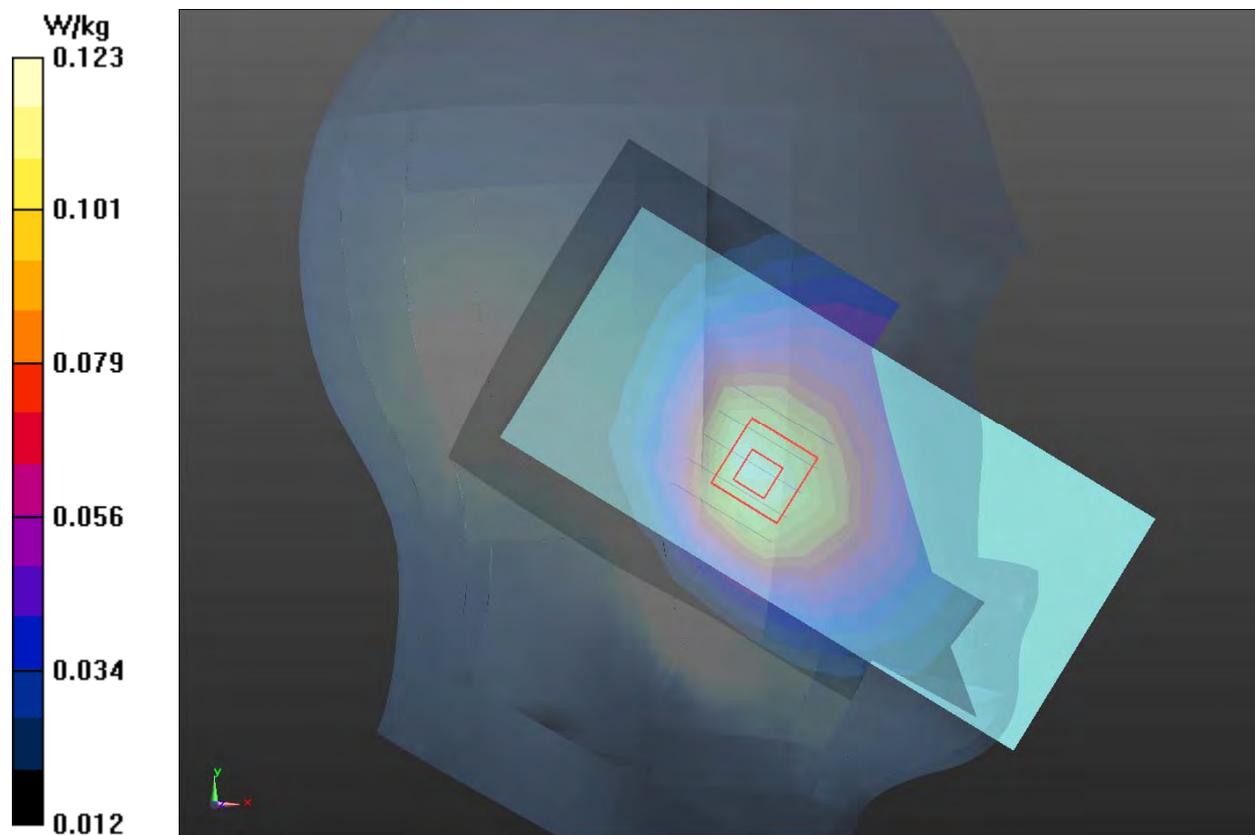
Left Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.240 V/m; Power Drift = 0.133 dB

Peak SAR (extrapolated) = 0.151 W/kg

SAR(1 g) = 0.110 W/kg; SAR(10 g) = 0.081 W/kg

Maximum value of SAR (measured) = 0.123 W/kg



Plot 20 GSM 1900 Right Cheek Middle

Date: 6/16/2021

Communication System: UID 0, GSM (0); Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.42$ S/m; $\epsilon_r = 38.948$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.38, 8.38, 8.38); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Right Cheek Middle/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.132 W/kg

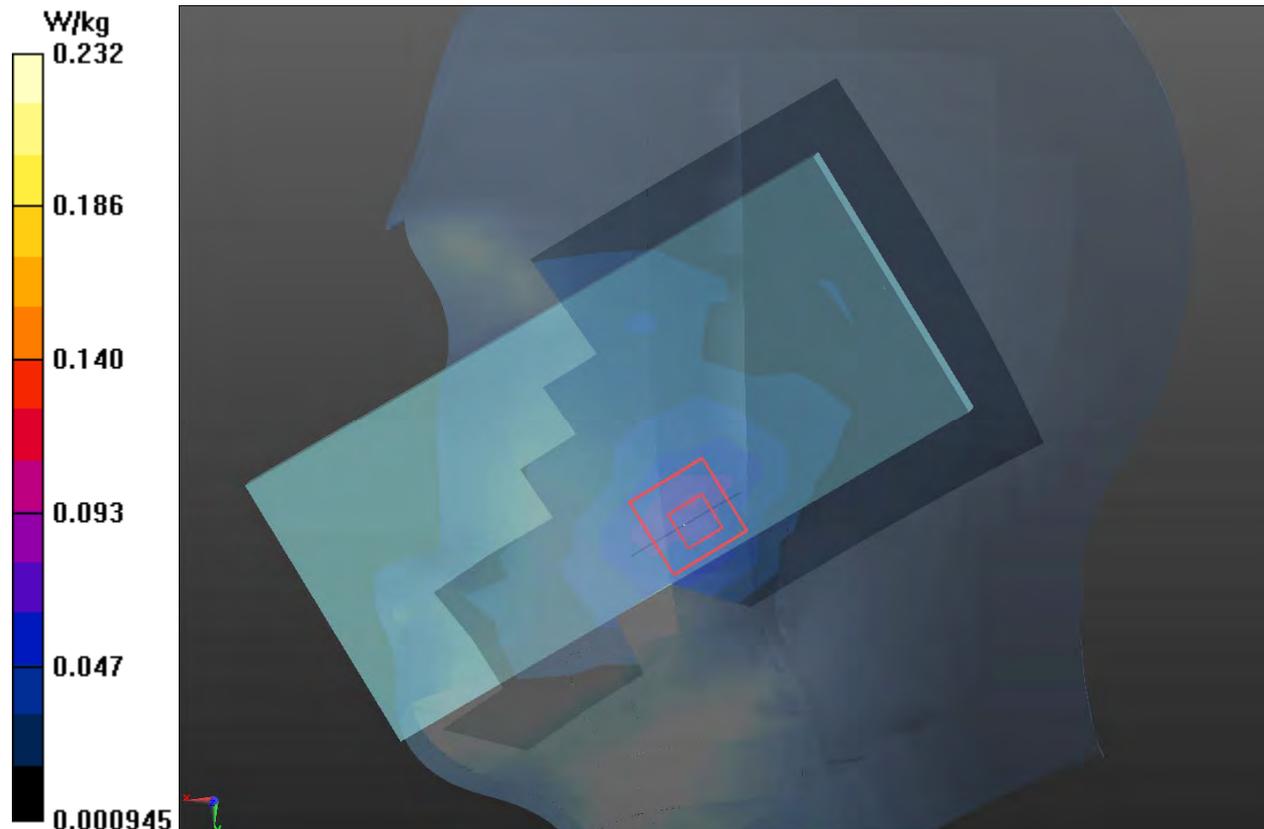
Right Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.403 V/m; Power Drift = 0.160 dB

Peak SAR (extrapolated) = 0.109 W/kg

SAR(1 g) = 0.116 W/kg; SAR(10 g) = 0.072 W/kg

Maximum value of SAR (measured) = 0.232 W/kg



Plot 21 UMTS Band II Right Cheek Middle

Date: 6/17/2021

Communication System: UID 0, WCDMA (0); Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.42$ S/m; $\epsilon_r = 38.948$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.38, 8.38, 8.38); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Right Cheek Middle/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.283 W/kg

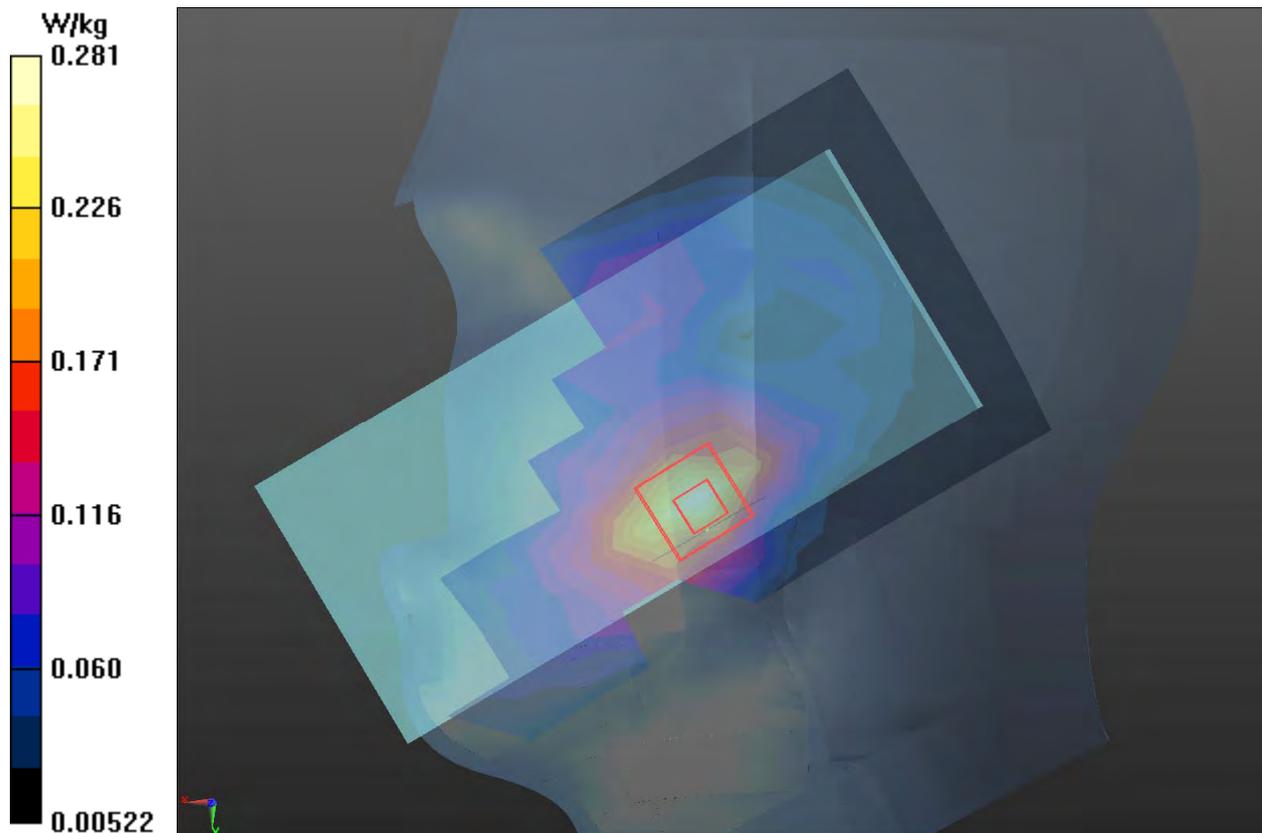
Right Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.577 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 0.356 W/kg

SAR(1 g) = 0.215 W/kg; SAR(10 g) = 0.128 W/kg

Maximum value of SAR (measured) = 0.281 W/kg



Plot 22 UMTS Band V Right Tilt Middle

Date: 6/21/2021

Communication System: UID 0, WCDMA (0); Frequency: 836.6 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 0.953 \text{ S/m}$; $\epsilon_r = 39.762$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: $22.3 \text{ }^\circ\text{C}$ Liquid Temperature: $21.5 \text{ }^\circ\text{C}$

Phantom section: Left Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(10.15, 10.15, 10.15); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Right Tilt Middle /Area Scan (8x14x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.617 W/kg

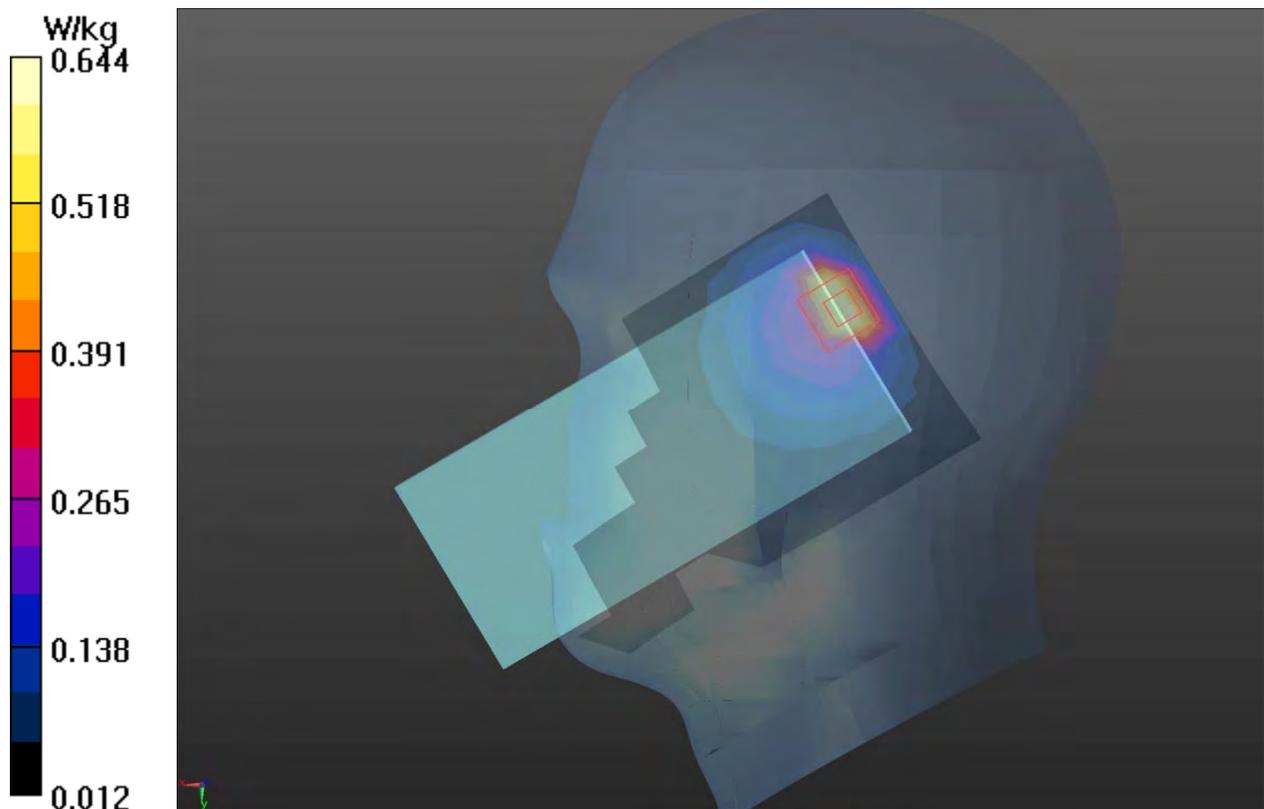
Right Tilt Middle /Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 19.25 V/m ; Power Drift = 0.15 dB

Peak SAR (extrapolated) = 1.62 W/kg

SAR(1 g) = 0.585 W/kg ; SAR(10 g) = 0.261 W/kg

Maximum value of SAR (measured) = 0.644 W/kg



Plot 23 LTE Band 2 1RB Right Cheek High

Date: 6/17/2021

Communication System: UID 0, LTE (0); Frequency: 1900 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.434$ S/m; $\epsilon_r = 38.861$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.38, 8.38, 8.38); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Right Cheek High/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.263 W/kg

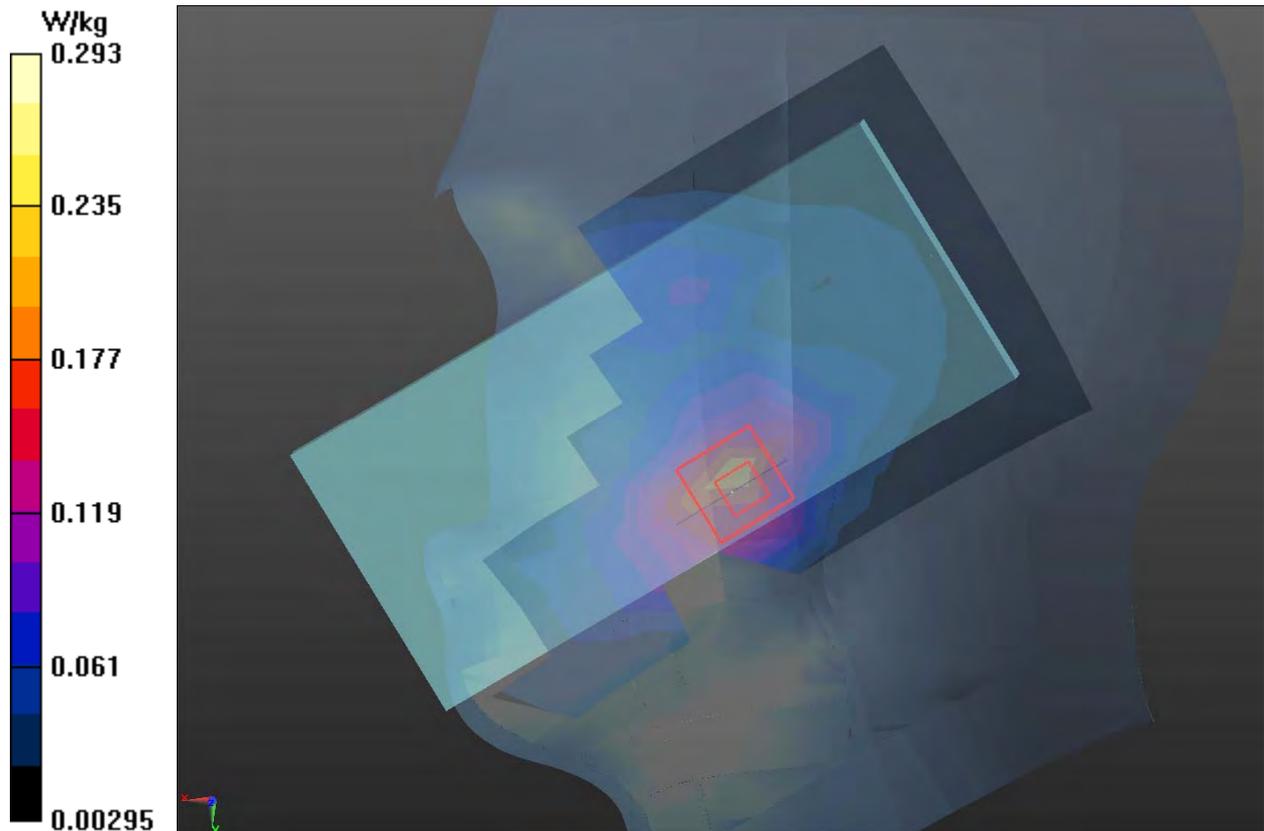
Right Cheek High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.628 V/m; Power Drift = 0.096 dB

Peak SAR (extrapolated) = 0.256 W/kg

SAR(1 g) = 0.252 W/kg; SAR(10 g) = 0.153W/kg

Maximum value of SAR (measured) = 0.293 W/kg



Plot 24 LTE Band 4 1RB Right Cheek High

Date: 6/25/2021

Communication System: UID 0, LTE (0); Frequency: 1745 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1745$ MHz; $\sigma = 1.323$ S/m; $\epsilon_r = 39.378$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.76, 8.76, 8.76); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Right Cheek High/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.142 W/kg

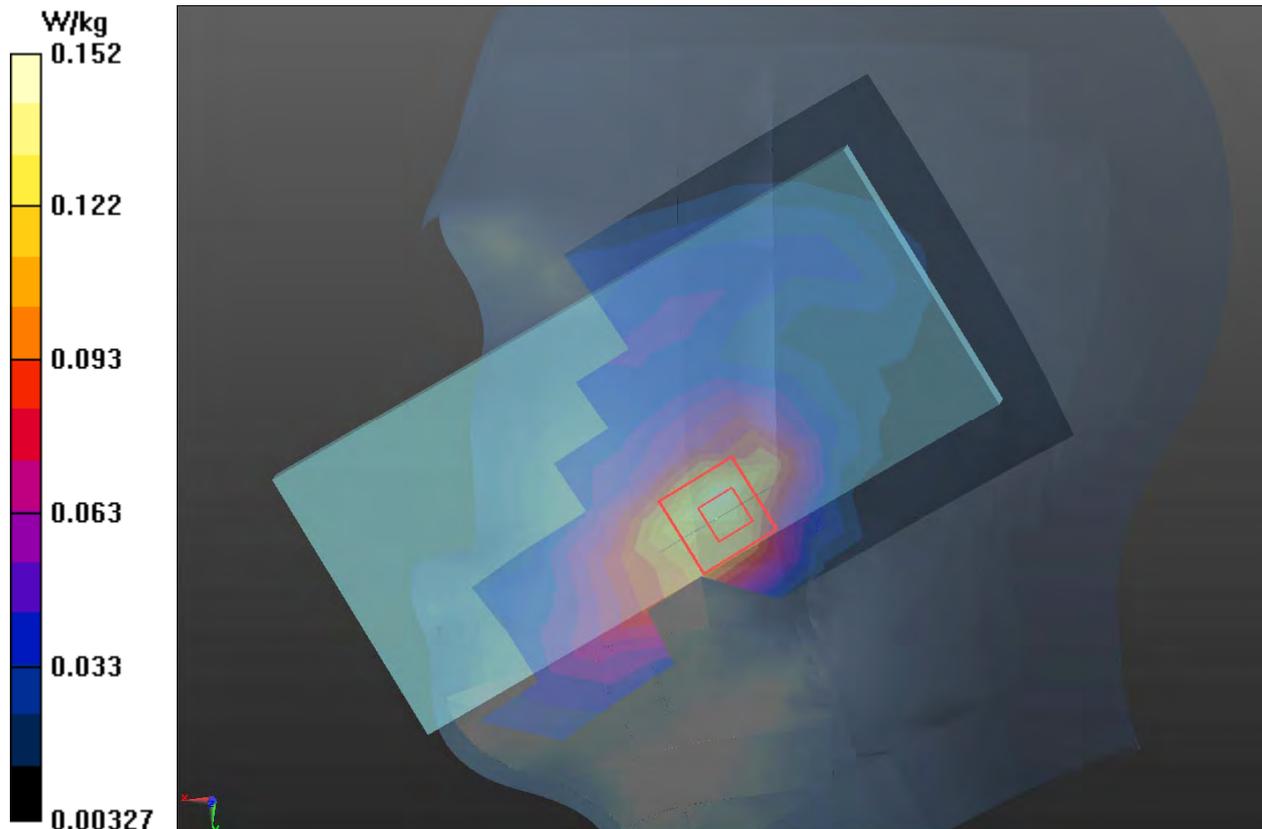
Right Cheek High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.617 V/m; Power Drift = 0.120 dB

Peak SAR (extrapolated) = 0.199 W/kg

SAR(1 g) = 0.130 W/kg; SAR(10 g) = 0.081 W/kg

Maximum value of SAR (measured) = 0.152 W/kg



Plot 25 LTE Band 5 1RB Right Tilt Middle

Date: 6/22/2021

Communication System: UID 0, LTE (0); Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.923$ S/m; $\epsilon_r = 42.199$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5°C

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(10.15, 10.15, 10.15); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Right Tilt Middle/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.882 W/kg

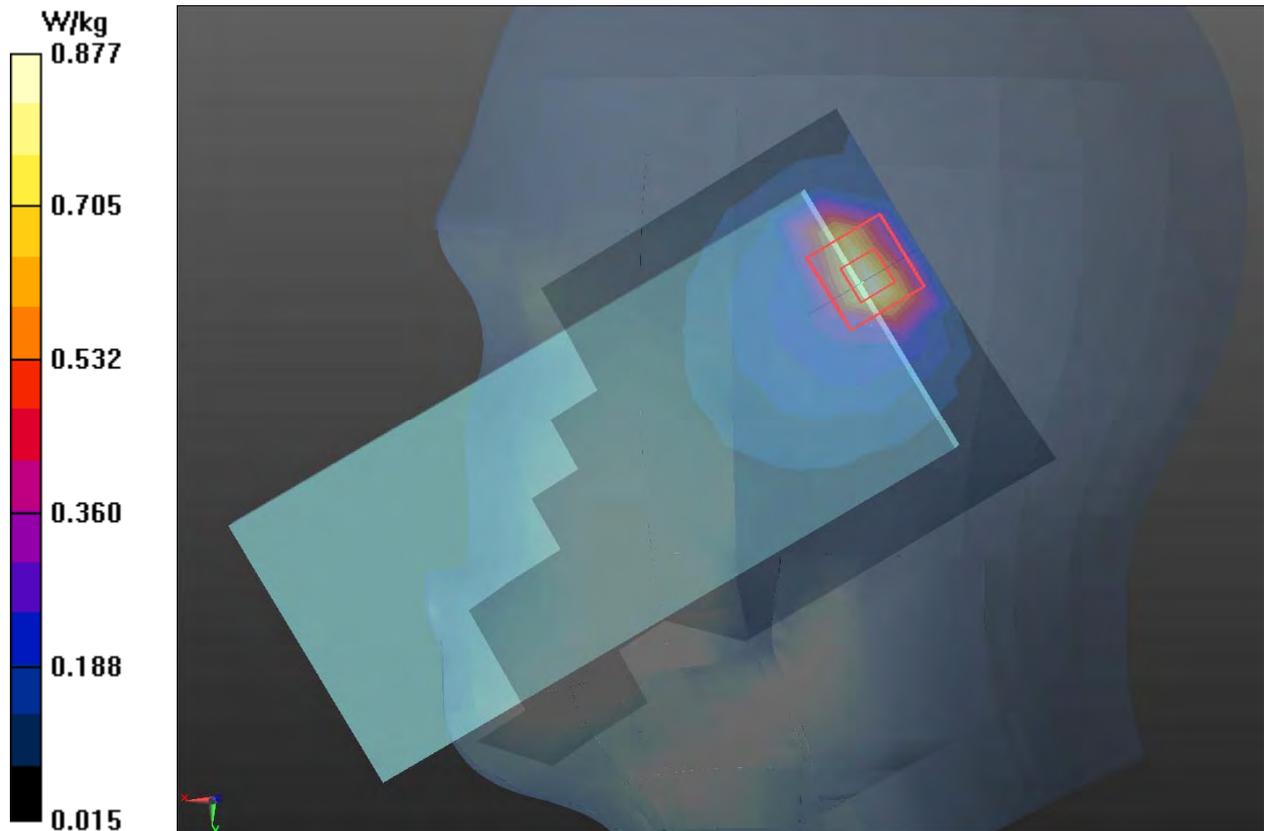
Right Tilt Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 21.43 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 1.78 W/kg

SAR(1 g) = 0.628 W/kg; SAR(10 g) = 0.276 W/kg

Maximum value of SAR (measured) = 0.877 W/kg



Plot 26 LTE Band 7 1RB Left Cheek Middle

Date: 6/18/2021

Communication System: UID 0, LTE (0); Frequency: 2535 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2535$ MHz; $\sigma = 1.94$ S/m; $\epsilon_r = 37.31$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Left Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(7.71, 7.71, 7.71); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Left Cheek Middle/Area Scan (10x18x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.460 W/kg

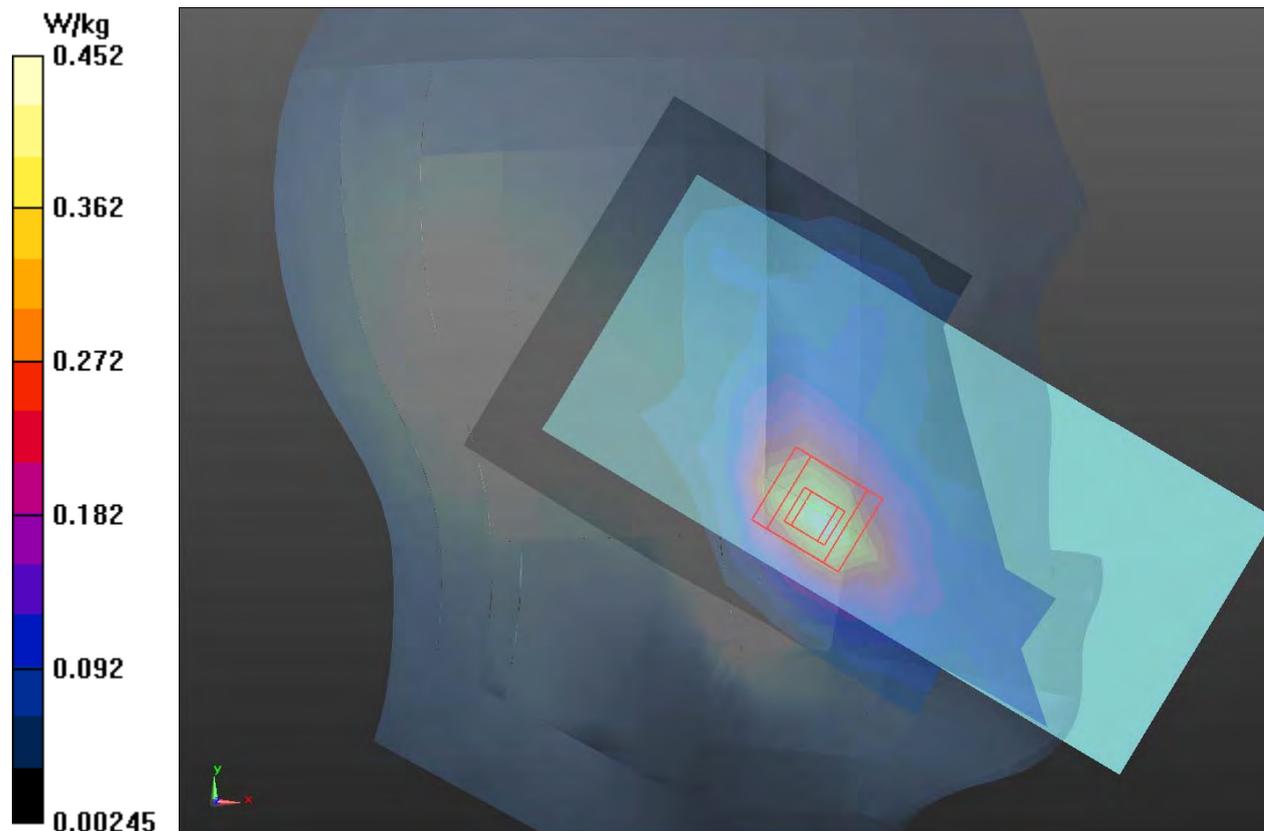
Left Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.365 V/m; Power Drift = 0.047 dB

Peak SAR (extrapolated) = 0.820 W/kg

SAR(1 g) = 0.425 W/kg; SAR(10 g) = 0.216 W/kg

Maximum value of SAR (measured) = 0.452 W/kg



Plot 27 LTE Band 12 50%RB Right Tilt Low

Date: 6/14/2021

Communication System: UID 0, LTE (0); Frequency: 704 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 704 \text{ MHz}$; $\sigma = 0.846 \text{ S/m}$; $\epsilon_r = 42.775$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: $22.3 \text{ }^\circ\text{C}$ Liquid Temperature: $21.5 \text{ }^\circ\text{C}$

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(10.48, 10.48, 10.48); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Right Tilt Low/Area Scan (8x14x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.300 W/kg

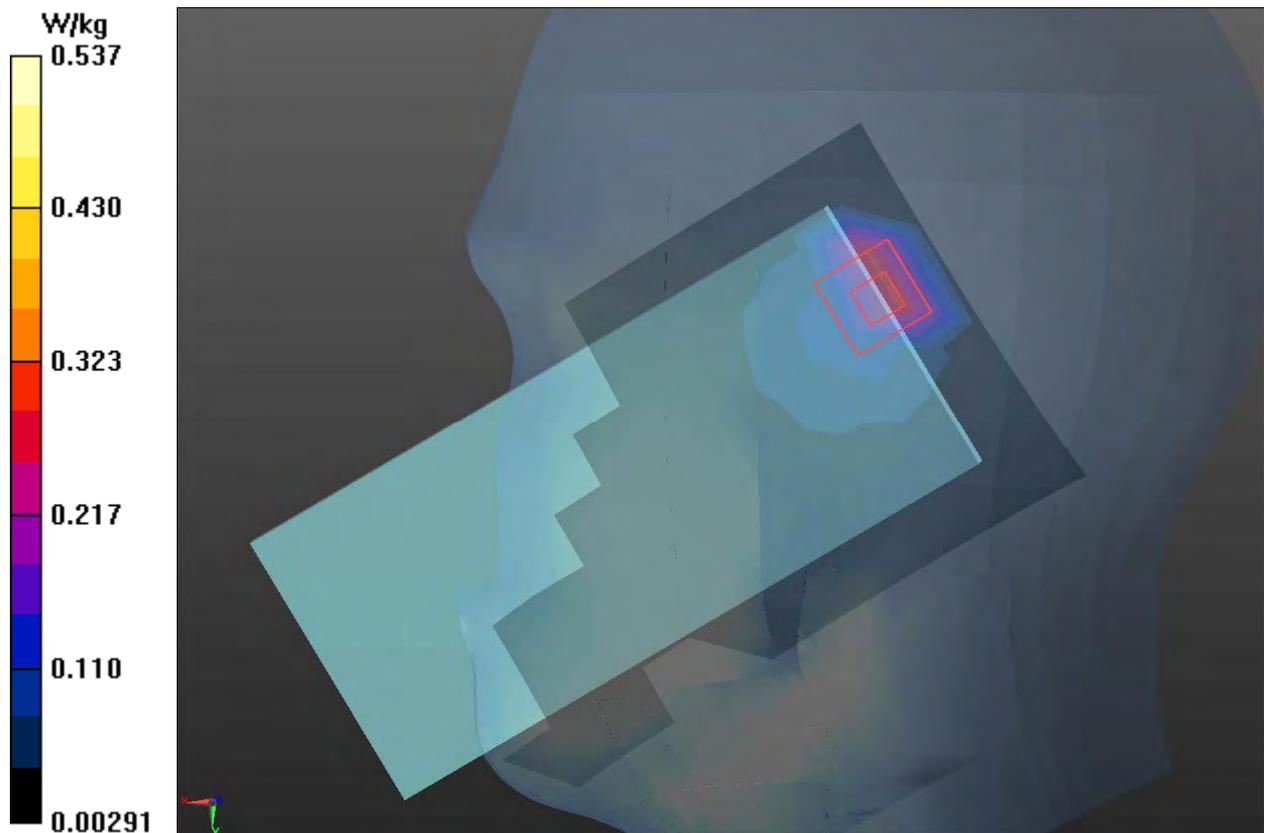
Right Tilt Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 13.63 V/m ; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 0.795 W/kg

SAR(1 g) = 0.226 W/kg ; SAR(10 g) = 0.089 W/kg

Maximum value of SAR (measured) = 0.537 W/kg



Plot 28 LTE Band 26 1RB Right Tilt High

Date: 6/22/2021

Communication System: UID 0, LTE (0); Frequency: 841.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 841.5$ MHz; $\sigma = 0.927$ S/m; $\epsilon_r = 42.208$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(10.15, 10.15, 10.15); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Right Tilt High/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.920 W/kg

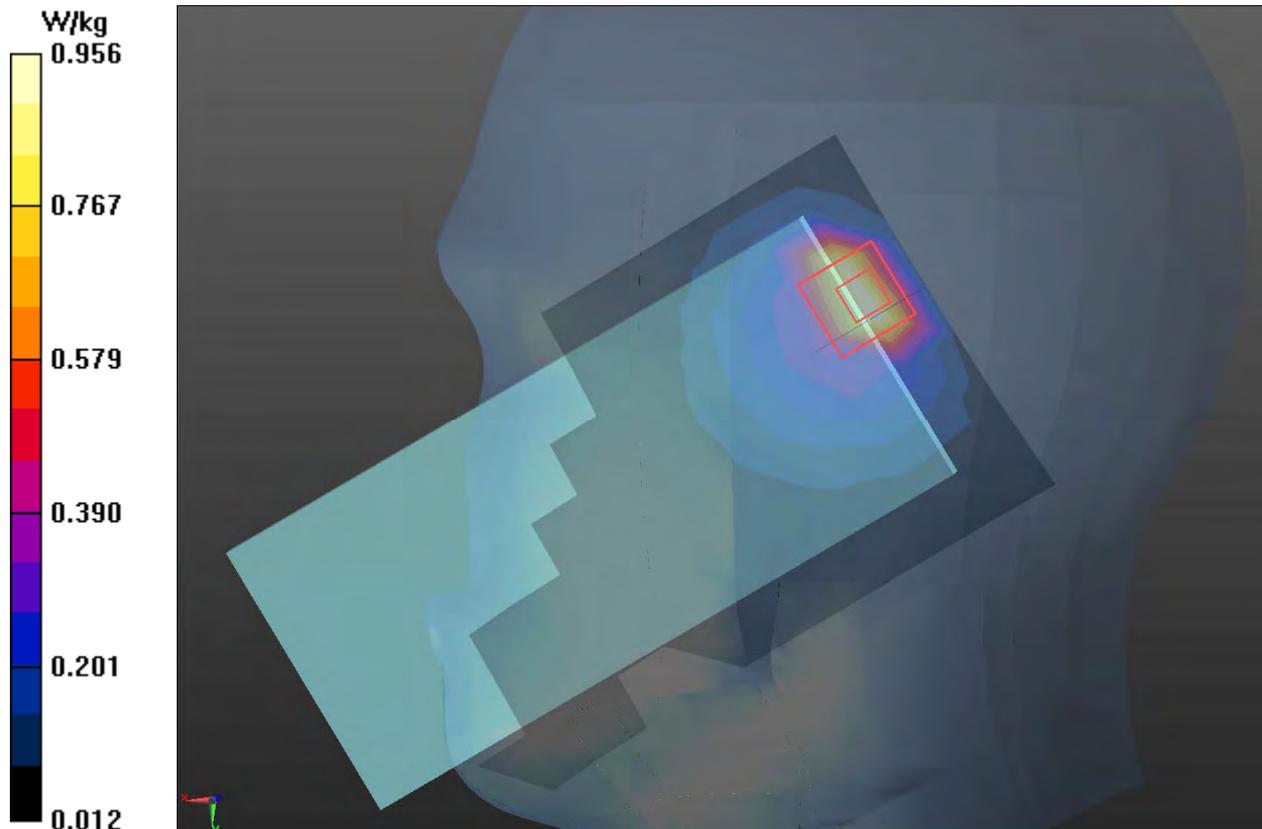
Right Tilt High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 21.85 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 2.04 W/kg

SAR(1 g) = 0.710 W/kg; SAR(10 g) = 0.311 W/kg

Maximum value of SAR (measured) = 0.956 W/kg



Plot 29 LTE Band 38 1RB Left Cheek High

Date: 6/18/2021

Communication System: UID 0, LTE (0); Frequency: 2610 MHz; Duty Cycle: 1:1.58

Medium parameters used: $f = 2610$ MHz; $\sigma = 2.027$ S/m; $\epsilon_r = 37.056$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Left Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(7.71, 7.71, 7.71); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Left Cheek High/Area Scan (10x18x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.311 W/kg

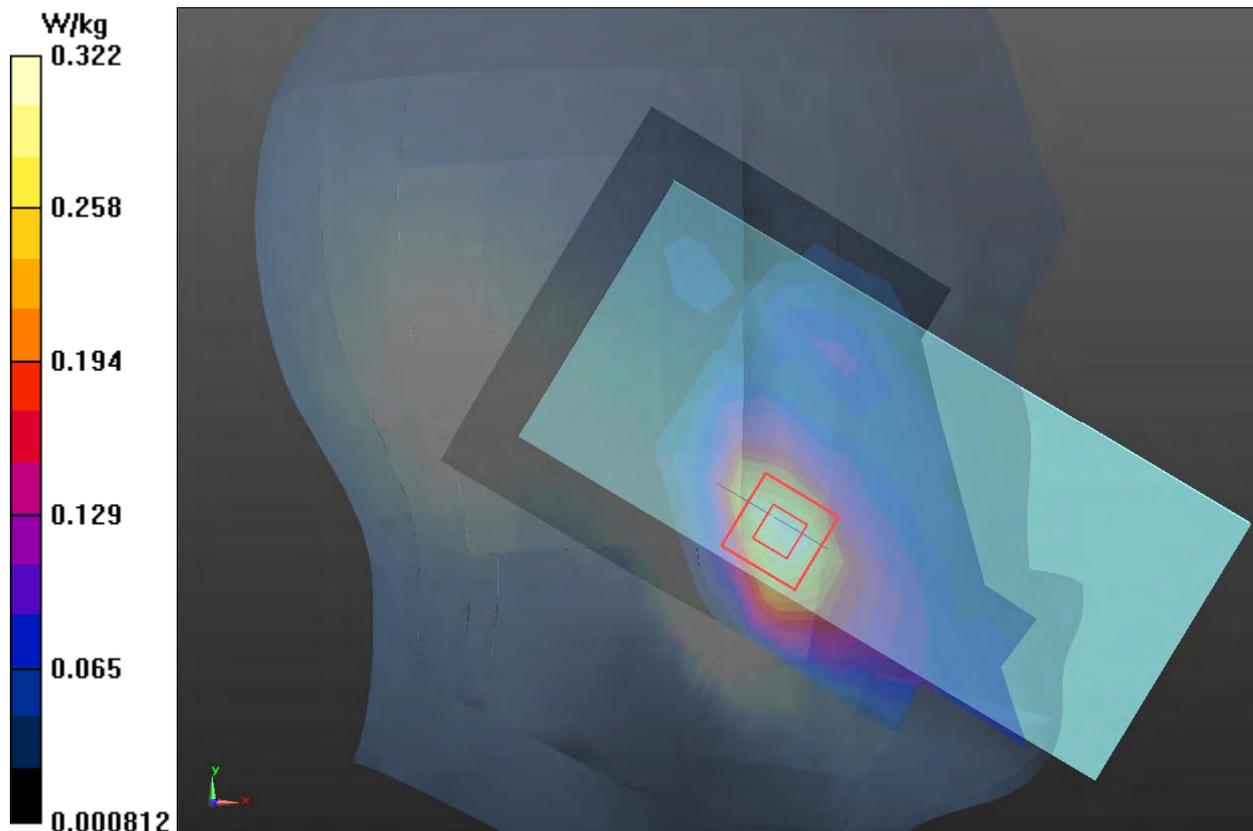
Left Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 1.765 V/m; Power Drift = 0.171 dB

Peak SAR (extrapolated) = 0.524 W/kg

SAR(1 g) = 0.286 W/kg; SAR(10 g) = 0.148 W/kg

Maximum value of SAR (measured) = 0.322 W/kg



Plot 30 LTE Band 41 1RB Left Cheek High

Date: 6/18/2021

Communication System: UID 0, LTE (0); Frequency: 2680 MHz; Duty Cycle: 1:1.58

Medium parameters used: $f = 2680$ MHz; $\sigma = 2.106$ S/m; $\epsilon_r = 36.793$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Left Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(7.71, 7.71, 7.71); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Left Cheek High/Area Scan (10x18x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.342 W/kg

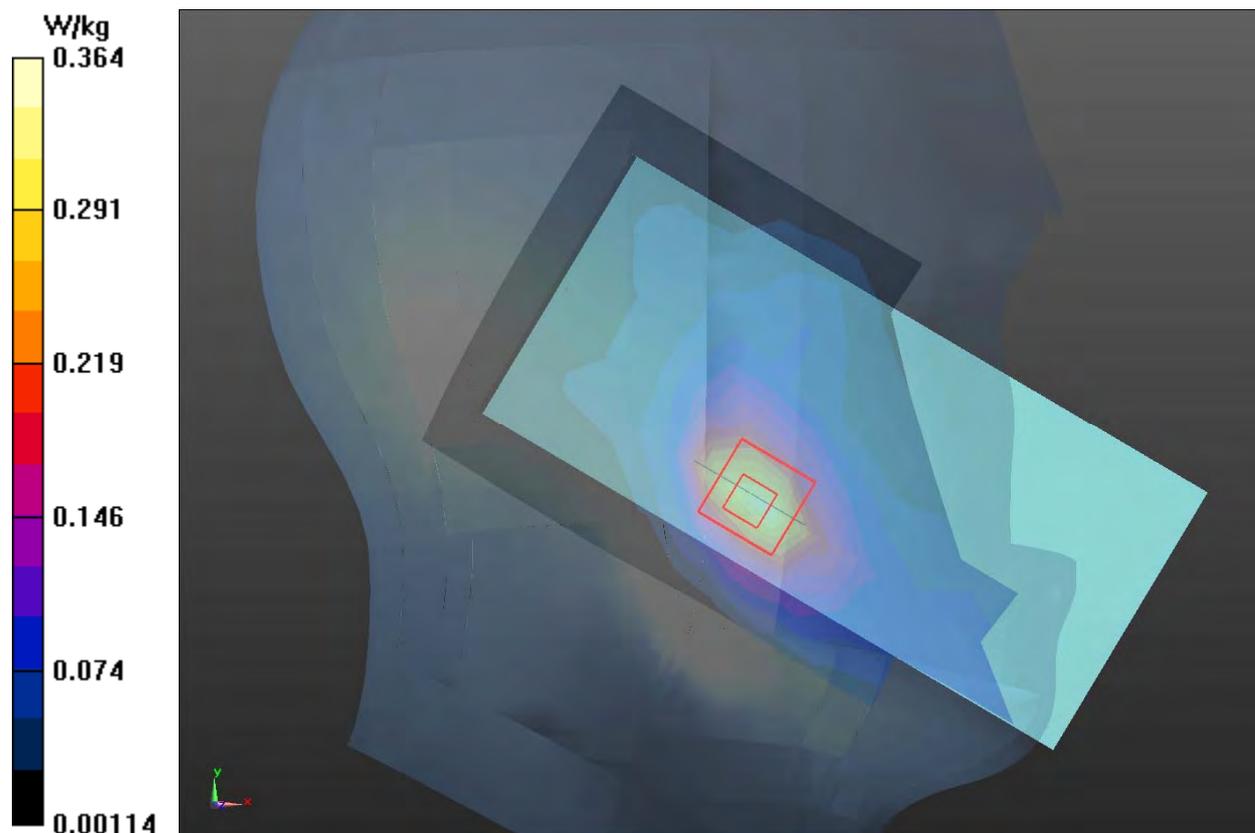
Left Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 2.867 V/m; Power Drift = 0.058 dB

Peak SAR (extrapolated) = 0.664 W/kg

SAR(1 g) = 0.331 W/kg; SAR(10 g) = 0.164 W/kg

Maximum value of SAR (measured) = 0.364 W/kg



Plot 31 LTE Band 66 1RB Right Cheek Middle

Date: 6/26/2021

Communication System: UID 0, LTE (0); Frequency: 1745 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1745 \text{ MHz}$; $\sigma = 1.323 \text{ S/m}$; $\epsilon_r = 39.378$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: $22.3 \text{ }^\circ\text{C}$ Liquid Temperature: $21.5 \text{ }^\circ\text{C}$

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.76, 8.76, 8.76); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Right Cheek Middle/Area Scan (8x14x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 1.02 W/kg

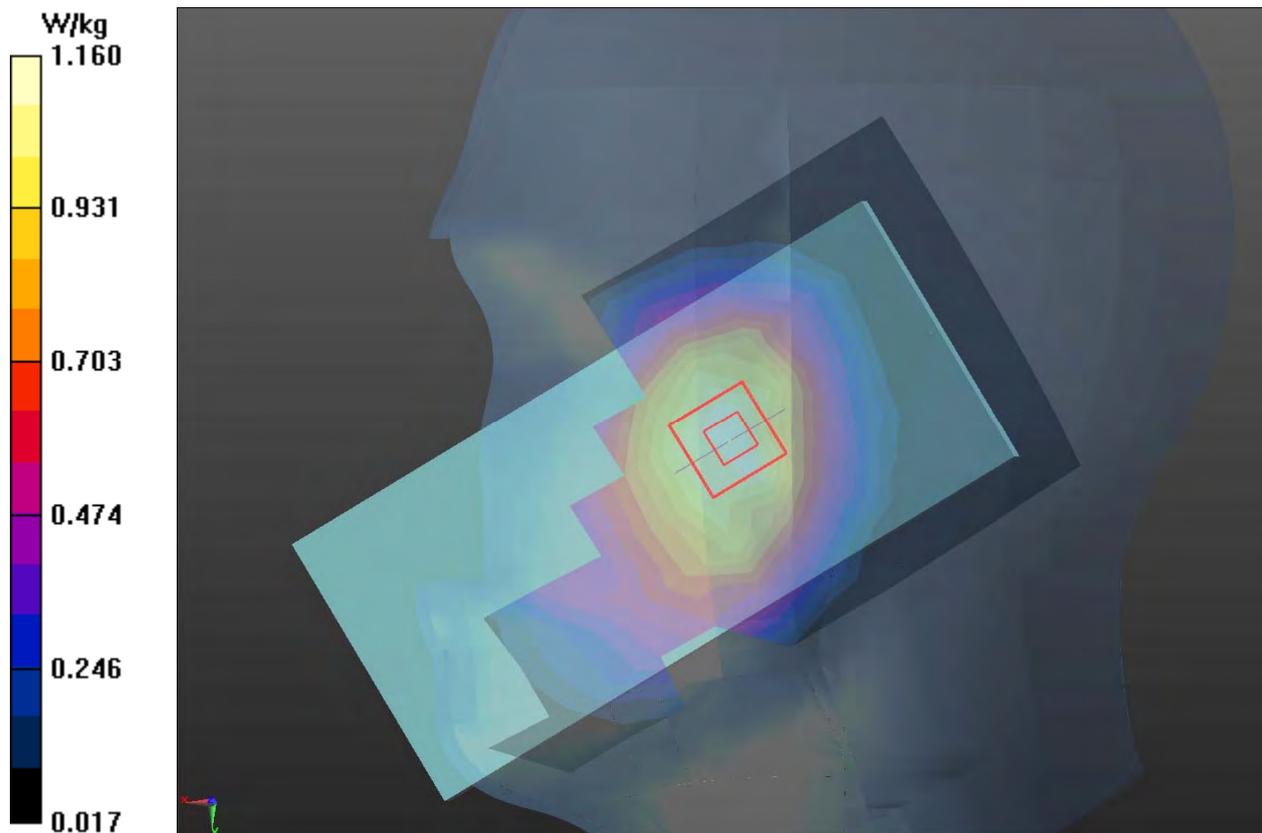
Right Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 8.485 V/m ; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 1.87 W/kg

SAR(1 g) = 0.987 W/kg ; SAR(10 g) = 0.500 W/kg

Maximum value of SAR (measured) = 1.16 W/kg



Plot 32 NR n41 135RB Left Cheek Low

Date: 6/18/2021

Communication System: UID 0, 5G NR (0); Frequency: 2546.01 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 2546.01$ MHz; $\sigma = 1.953$ S/m; $\epsilon_r = 37.275$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Left Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(7.71, 7.71, 7.71); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Left Cheek Low/Area Scan(10x18x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.111 W/kg

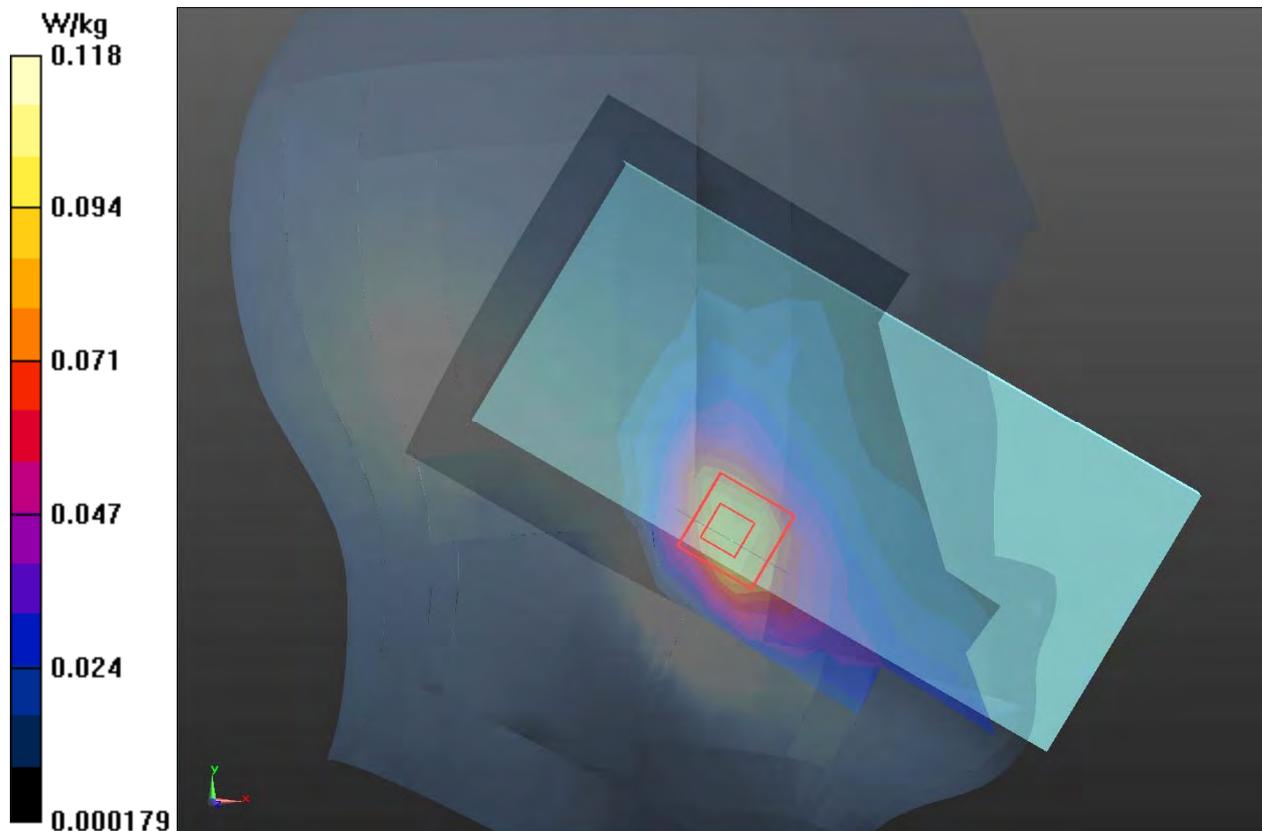
Left Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 1.843 V/m; Power Drift = 0.080 dB

Peak SAR (extrapolated) = 0.199 W/kg

SAR(1 g) = 0.107 W/kg; SAR(10 g) = 0.056 W/kg

Maximum value of SAR (measured) = 0.118 W/kg



Plot 33 NR n66 50%RB Right Cheek Low

Date: 6/26/2021

Communication System: UID 0, 5G NR (0); Frequency: 1720 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1720$ MHz; $\sigma = 1.303$ S/m; $\epsilon_r = 39.467$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.76, 8.76, 8.76); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Right Cheek Low/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.791 W/kg

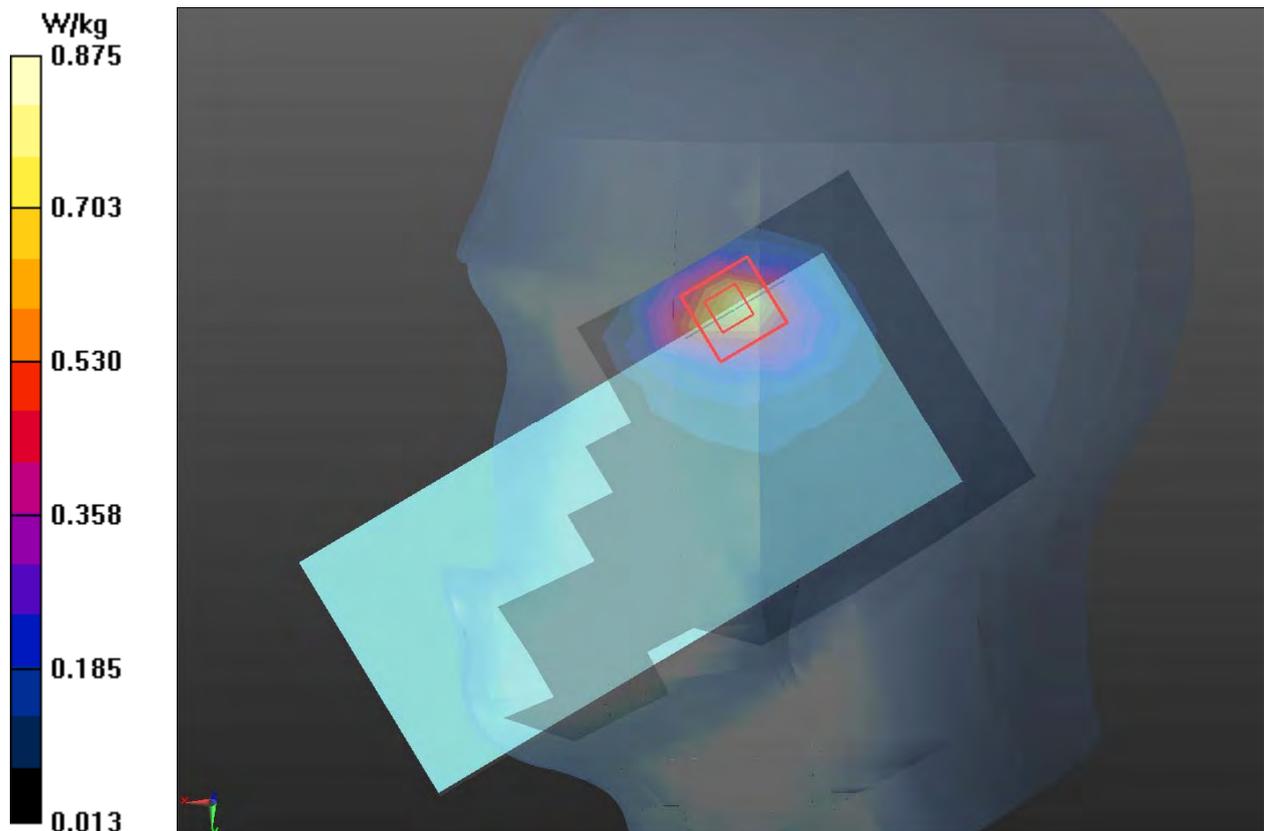
Right Cheek Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.329 V/m; Power Drift = -0.16 dB

Peak SAR (extrapolated) = 1.55 W/kg

SAR(1 g) = 0.705 W/kg; SAR(10 g) = 0.357 W/kg

Maximum value of SAR (measured) = 0.875 W/kg



Plot 34 802.11b Left Cheek High (Ant 4)

Date: 6/23/2021

Communication System: UID 0, 802.11b (0); Frequency: 2462 MHz; Duty Cycle: 1:1.02

Medium parameters used: $f = 2462 \text{ MHz}$; $\sigma = 1.859 \text{ S/m}$; $\epsilon_r = 37.58$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: $22.3 \text{ }^\circ\text{C}$ Liquid Temperature: $21.5 \text{ }^\circ\text{C}$

Phantom section: Left Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.01, 8.01, 8.01); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Left Cheek High/Area Scan (10x18x1): Measurement grid: $dx=12\text{mm}$, $dy=12\text{mm}$

Maximum value of SAR (measured) = 0.532 W/kg

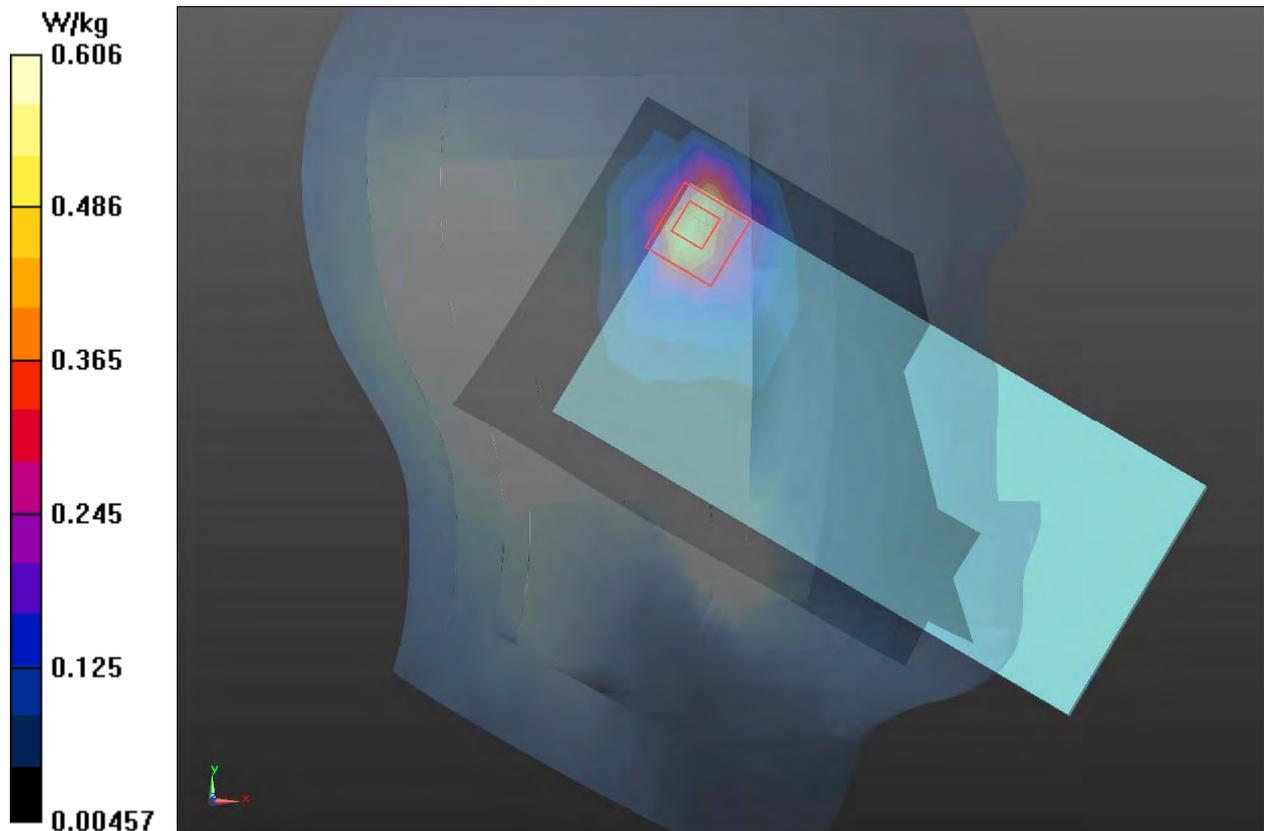
Left Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 8.051 V/m ; Power Drift = 0.30 dB

Peak SAR (extrapolated) = 1.28 W/kg

SAR(1 g) = 0.492 W/kg ; SAR(10 g) = 0.216 W/kg

Maximum value of SAR (measured) = 0.606 W/kg



Plot 35 802.11ac-VHT20 U-NII-1 Left Cheek Middle (Ant 4)

Date: 6/30/2021

Communication System: UID 0, 802.11ac-VHT20(0); Frequency: 5200 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5200 \text{ MHz}$; $\sigma = 4.823 \text{ S/m}$; $\epsilon_r = 36.7$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: $22.3 \text{ }^\circ\text{C}$ Liquid Temperature: $21.5 \text{ }^\circ\text{C}$

Phantom section: Left Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(5.51, 5.51, 5.51); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Left Cheek Middle/Area Scan (12x21x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (measured) = 0.874 W/kg

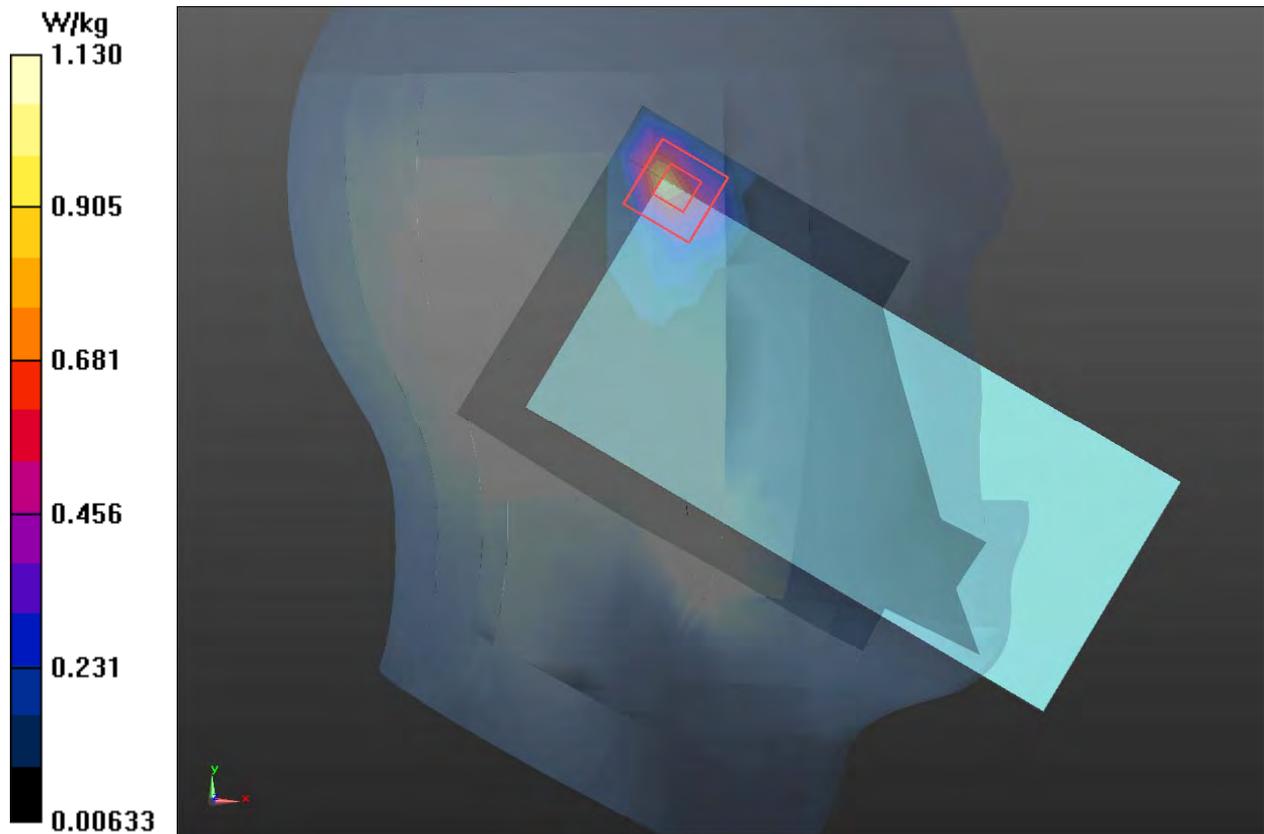
Left Cheek Middle/Zoom Scan (7x7x12)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 3.770 V/m ; Power Drift = 0.029 dB

Peak SAR (extrapolated) = 2.41 W/kg

SAR(1 g) = 0.761 W/kg ; SAR(10 g) = 0.275 W/kg

Maximum value of SAR (measured) = 1.13 W/kg



Plot 36 802.11n HT80 U-NII-2A Left Cheek Middle (Ant 4)

Date: 6/30/2021

Communication System: UID 0, 802.11n HT80 (0); Frequency: 5290 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5290 \text{ MHz}$; $\sigma = 4.8 \text{ S/m}$; $\epsilon_r = 36.809$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: $22.3 \text{ }^\circ\text{C}$ Liquid Temperature: $21.5 \text{ }^\circ\text{C}$

Phantom section: Left Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(5.51, 5.51, 5.51); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Left Cheek Middle/Area Scan(12x21x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (measured) = 2.10 W/kg

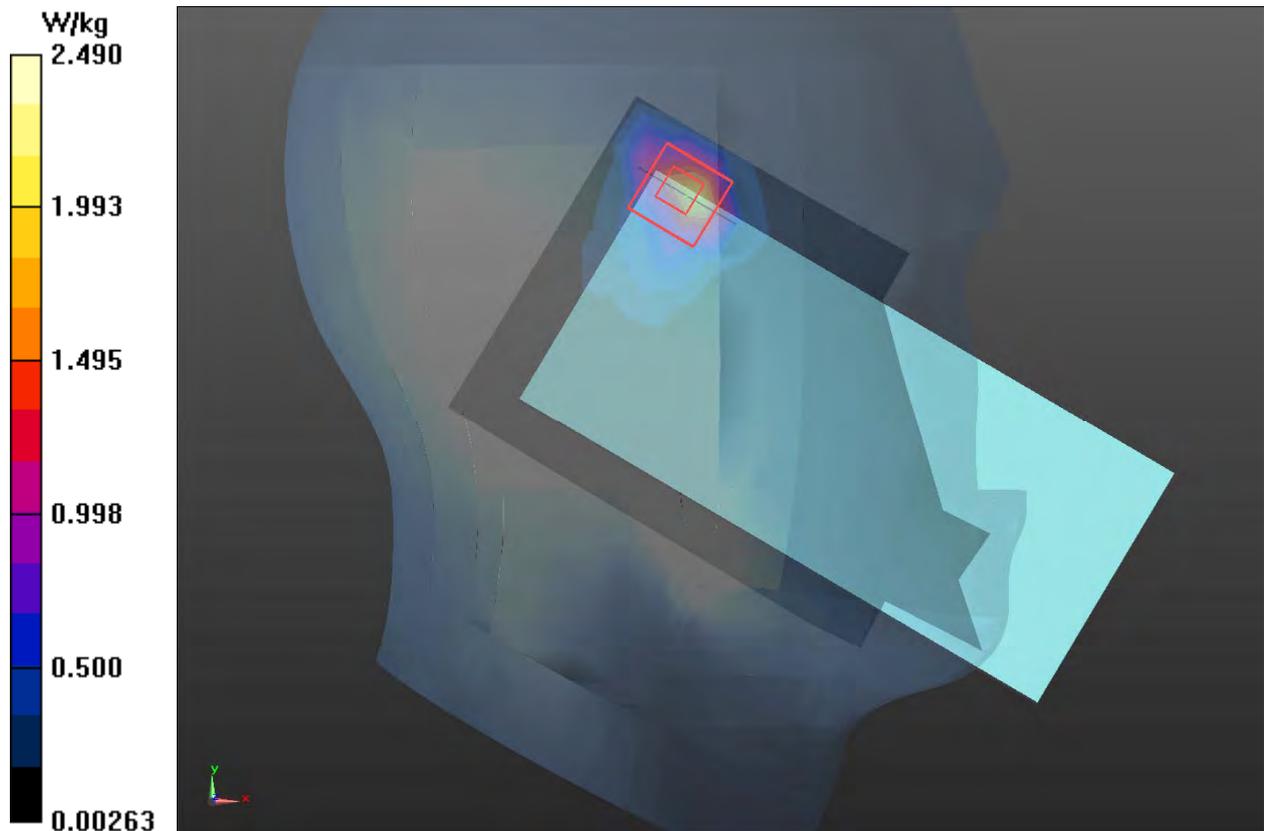
Left Cheek Middle/Zoom Scan (7x7x12)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 4.456 V/m ; Power Drift = 0.048 dB

Peak SAR (extrapolated) = 4.58 W/kg

SAR(1 g) = 0.732 W/kg ; SAR(10 g) = 0.242 W/kg

Maximum value of SAR (measured) = 2.49 W/kg



Plot 37 802.11ac-VHT80 U-NII-2C Left Cheek Middle (Ant 4)

Date: 6/27/2021

Communication System: UID 0, 802.11ac-VHT80; Frequency: 5690 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5690$ MHz; $\sigma = 5.15$ S/m; $\epsilon_r = 35.498$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Left Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(5.51, 5.51, 5.51); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Left Cheek Middle/Area Scan(12x21x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.851 W/kg

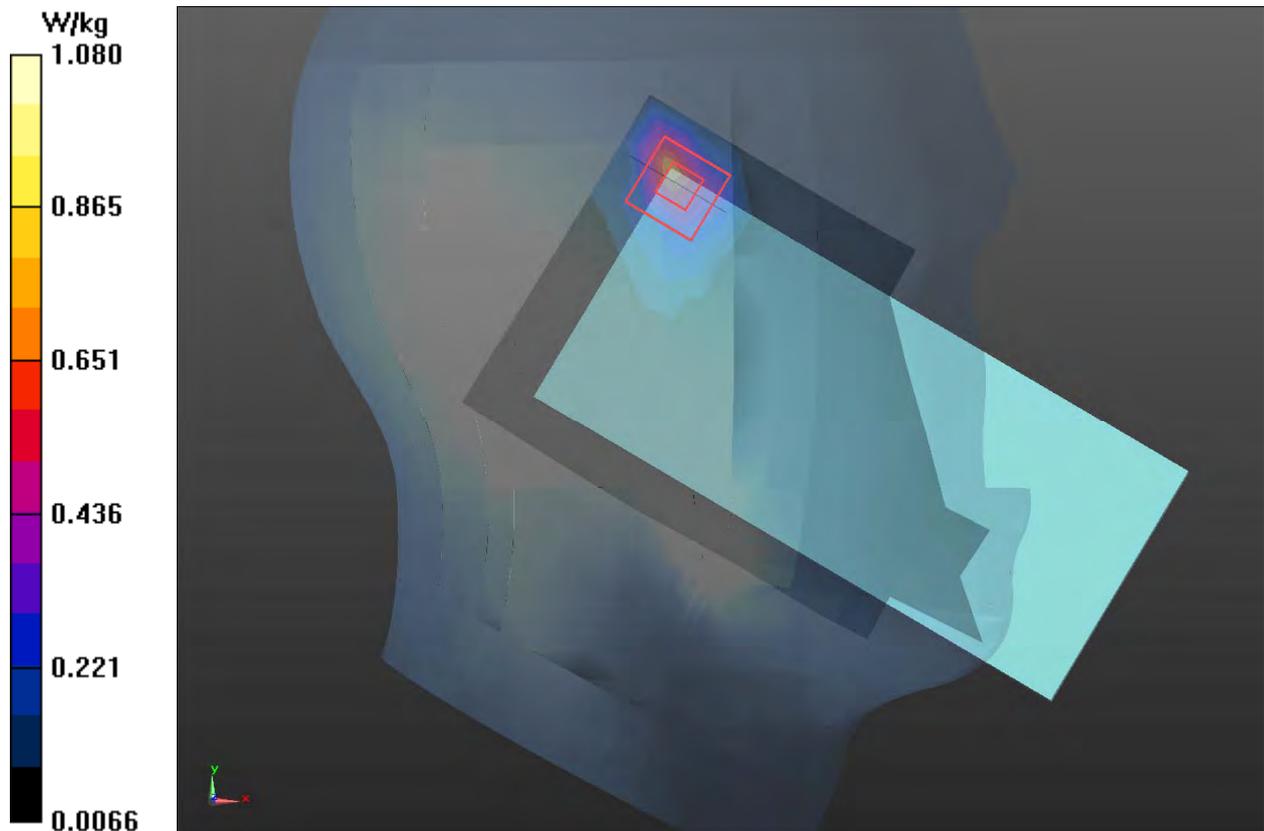
Left Cheek Middle/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 3.216 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 2.41 W/kg

SAR(1 g) = 0.787 W/kg; SAR(10 g) = 0.266 W/kg

Maximum value of SAR (measured) = 1.08 W/kg



Plot 38 802.11ac-VHT40 U-NII-3 Left Cheek Middle (Ant 4)

Date: 6/28/2021

Communication System: UID 0, 802.11ac-VHT40; Frequency: 5795 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5795$ MHz; $\sigma = 5.48$ S/m; $\epsilon_r = 35.341$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Left Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(4.95, 4.95, 4.95); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Left Cheek Middle/Area Scan (12x21x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.736 W/kg

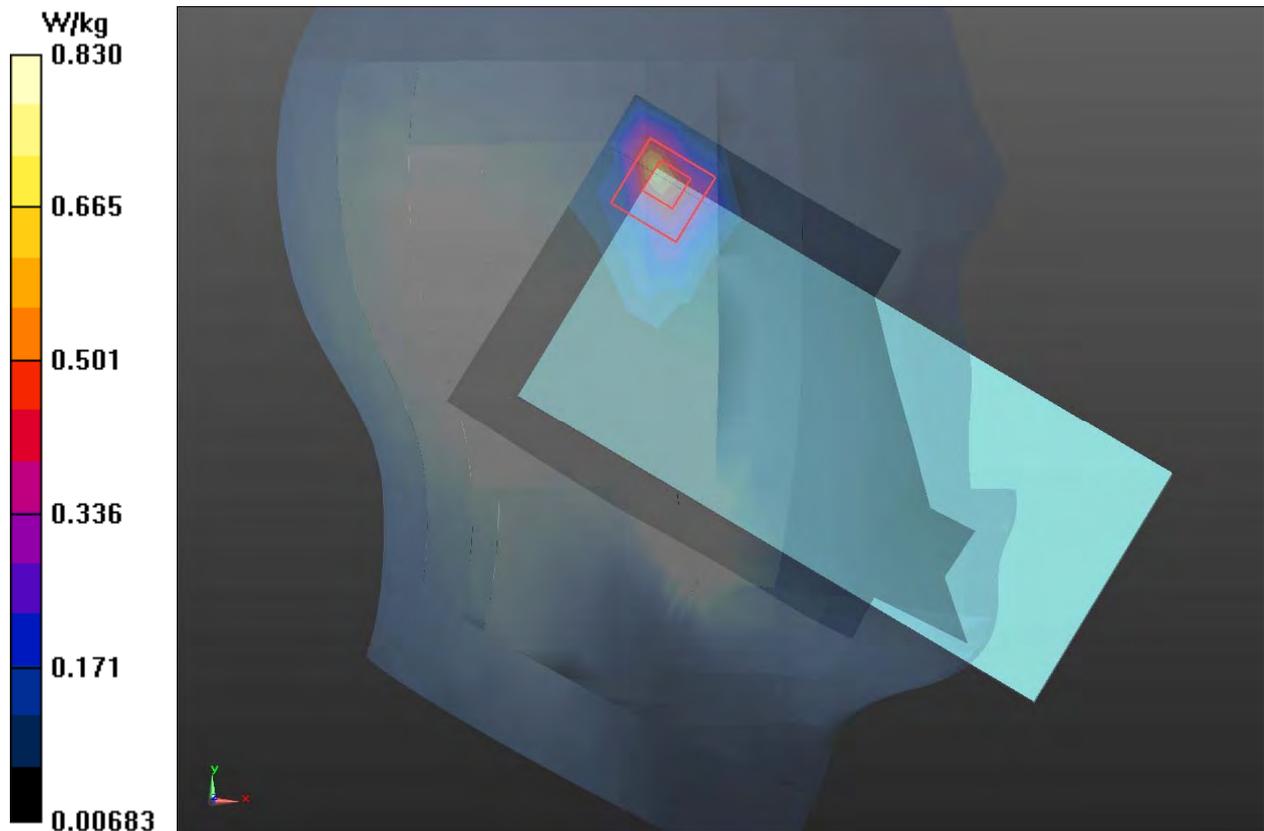
Left Cheek Middle/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 2.230 V/m; Power Drift = 0.026 dB

Peak SAR (extrapolated) = 2.03 W/kg

SAR(1 g) = 0.668 W/kg; SAR(10 g) = 0.237 W/kg

Maximum value of SAR (measured) = 0.830 W/kg



Plot 39 802.11b Left Cheek Low (Ant 3)

Date: 6/23/2021

Communication System: UID 0, 802.11b (0); Frequency: 2412 MHz; Duty Cycle: 1:1.02

Medium parameters used: $f = 2412 \text{ MHz}$; $\sigma = 1.801 \text{ S/m}$; $\epsilon_r = 37.737$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: $22.3 \text{ }^\circ\text{C}$ Liquid Temperature: $21.5 \text{ }^\circ\text{C}$

Phantom section: Left Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.01, 8.01, 8.01); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Left Cheek Low/Area Scan (10x18x1): Measurement grid: $dx=12\text{mm}$, $dy=12\text{mm}$

Maximum value of SAR (measured) = 1.07 W/kg

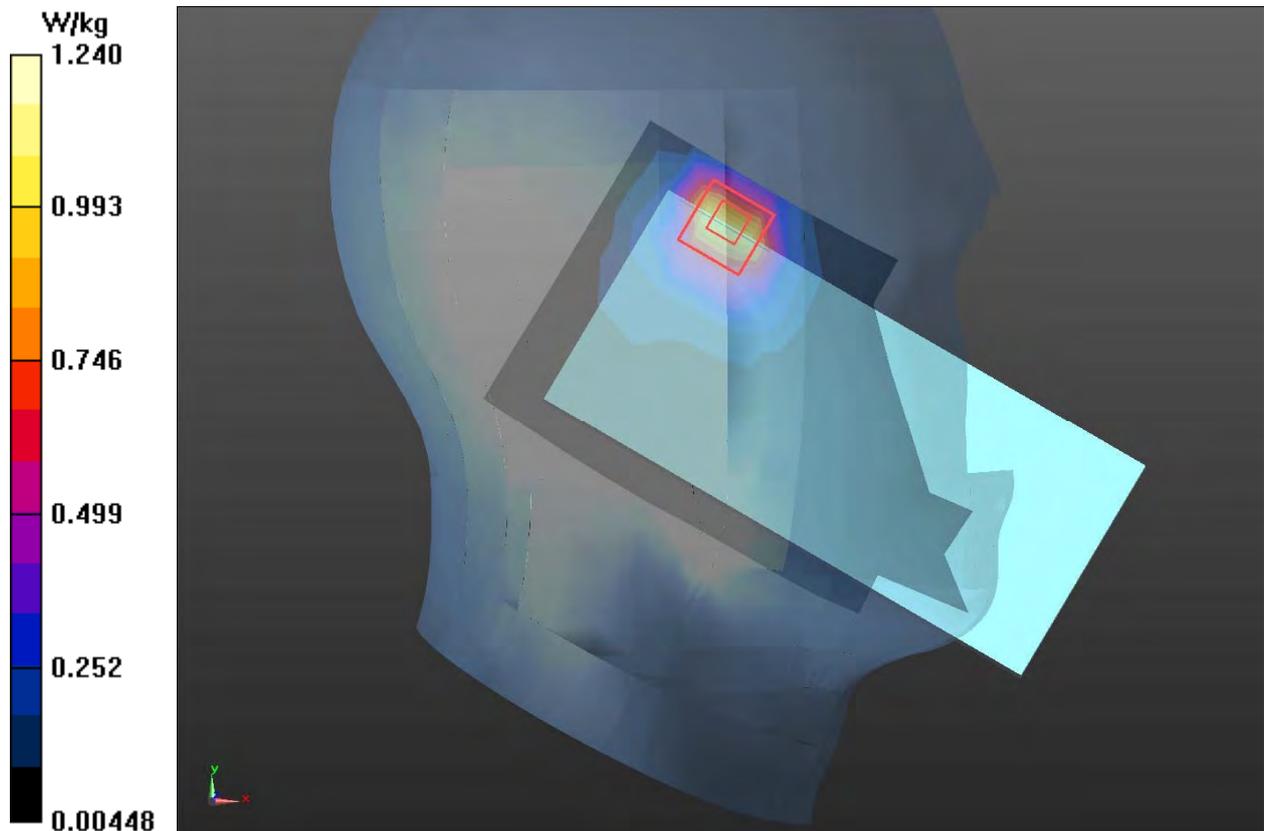
Left Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 8.684 V/m ; Power Drift = 0.028 dB

Peak SAR (extrapolated) = 2.69 W/kg

SAR(1 g) = 0.262 W/kg ; SAR(10 g) = 0.113 W/kg

Maximum value of SAR (measured) = 1.24 W/kg



Plot 40 802.11n HT20 Left Cheek Low (Ant 3)

Date: 6/30/2021

Communication System: UID 0, 802.11n HT20 (0); Frequency: 5200 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5200$ MHz; $\sigma = 4.808$ S/m; $\epsilon_r = 36.877$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Left Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(5.51, 5.51, 5.51); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Left Cheek Low/Area Scan (12x21x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.564 W/kg

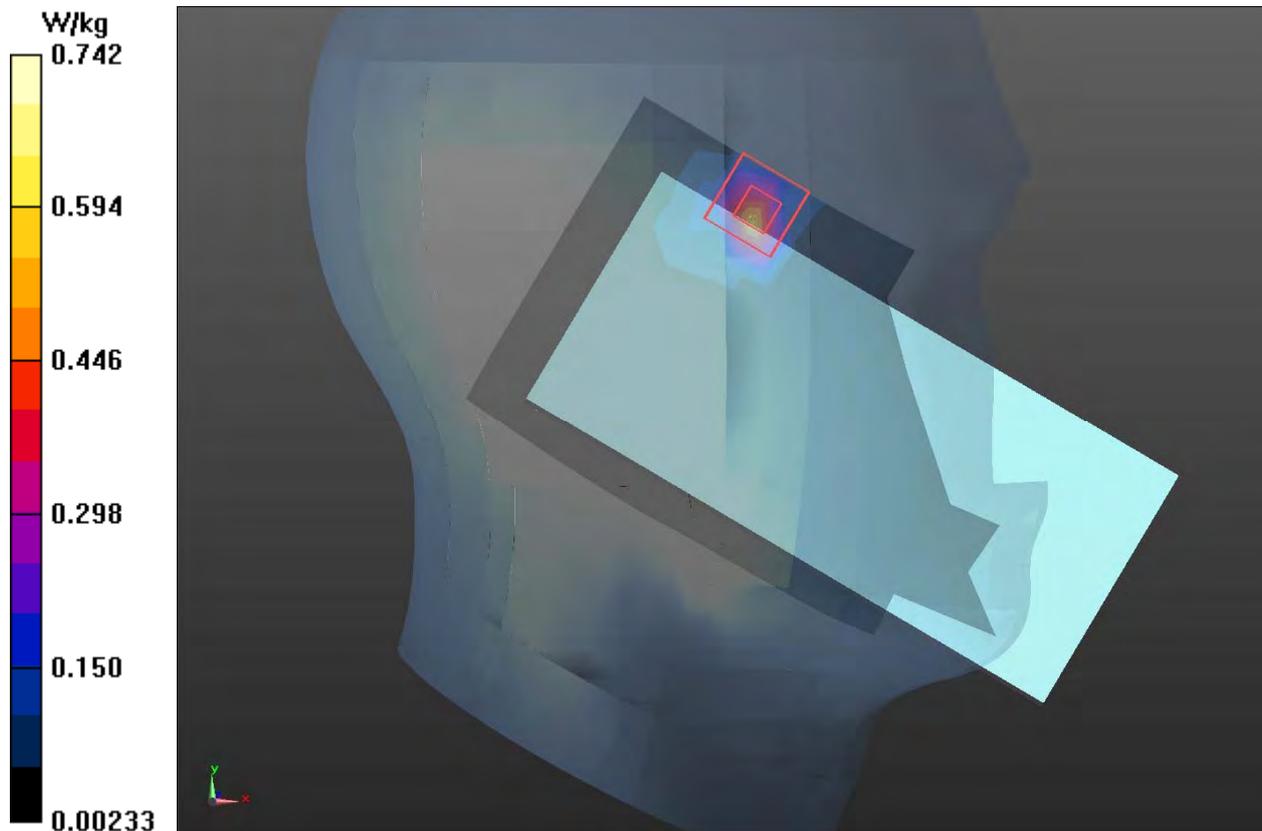
Left Cheek Low/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 0.4240 V/m; Power Drift = 0.117 dB

Peak SAR (extrapolated) = 1.51 W/kg

SAR(1 g) = 0.515 W/kg; SAR(10 g) = 0.153 W/kg

Maximum value of SAR (measured) = 0.742 W/kg



Plot 41 802.11n HT20 Left Cheek Low (Ant 3)

Date: 6/30/2021

Communication System: UID 0, 802.11n HT20 (0); Frequency: 5280 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5280$ MHz; $\sigma = 4.805$ S/m; $\epsilon_r = 36.71$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Left Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(5.51, 5.51, 5.51); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Left Cheek Low/Area Scan (12x21x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 1.52 W/kg

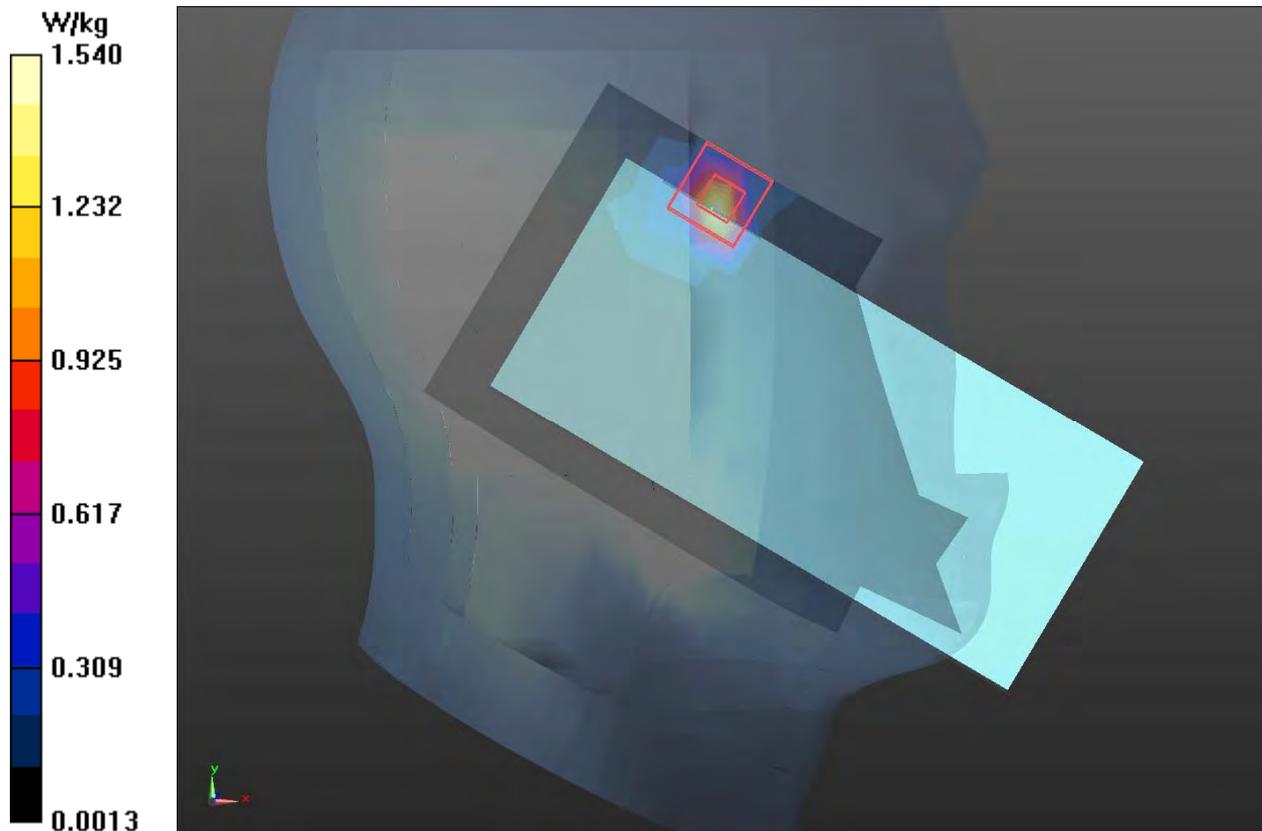
Left Cheek Low/Zoom Scan(7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 1.535 V/m; Power Drift = -0.153 dB

Peak SAR (extrapolated) = 3.18 W/kg

SAR(1 g) = 0.602 W/kg; SAR(10 g) = 0.180 W/kg

Maximum value of SAR (measured) = 1.54 W/kg



Plot 42 802.11ac-VHT80 Left Cheek Middle (Ant 3)

Date: 6/27/2021

Communication System: UID 0, 802.11ac-VHT80; Frequency: 5530 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5530$ MHz; $\sigma = 5.12$ S/m; $\epsilon_r = 36.075$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Left Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(5.51, 5.51, 5.51); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Left Cheek Middle/Area Scan (12x21x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.584 W/kg

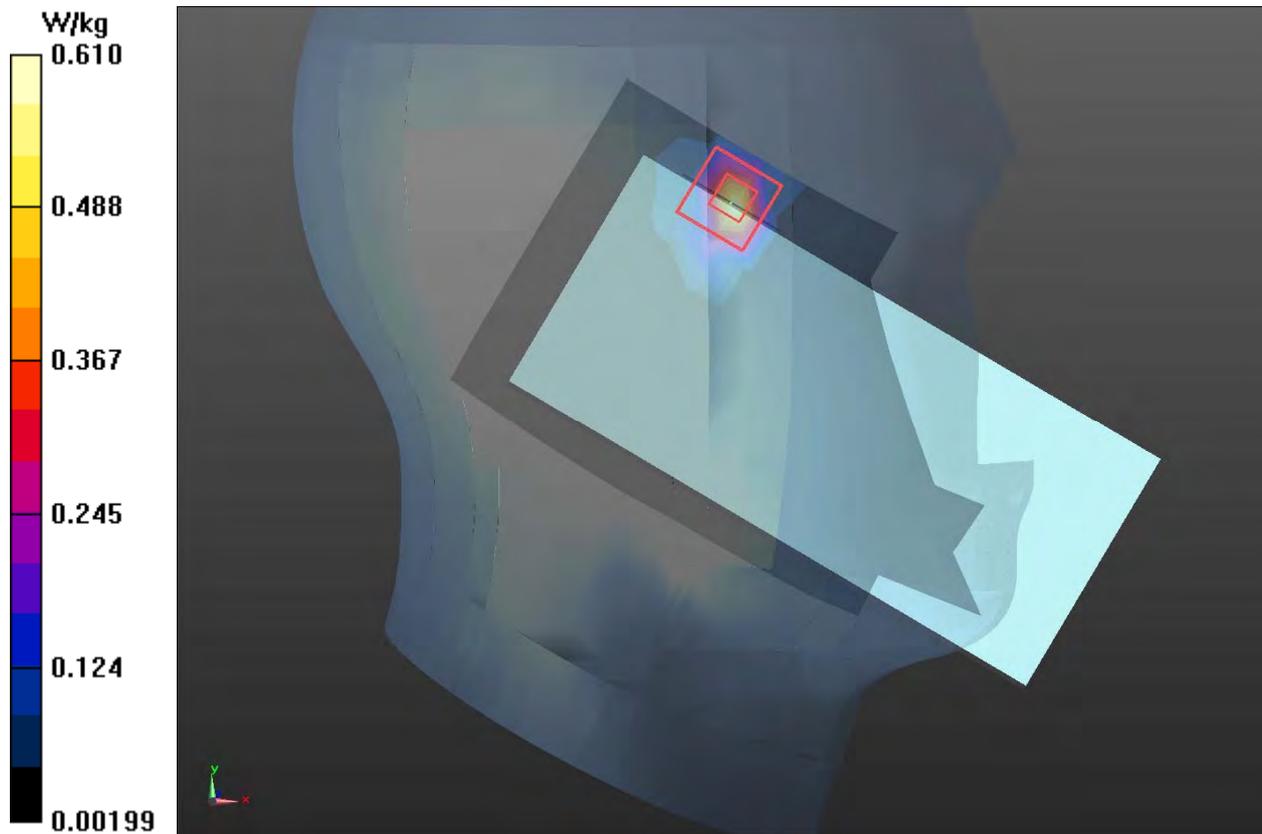
Left Cheek Middle/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 1.087 V/m; Power Drift = 0.127 dB

Peak SAR (extrapolated) = 1.40 W/kg

SAR(1 g) = 0.449 W/kg; SAR(10 g) = 0.140 W/kg

Maximum value of SAR (measured) = 0.610 W/kg



Plot 43 802.11a U-NII-3 Left Cheek Low (Ant 3)

Date: 6/28/2021

Communication System: UID 0, 802.11a (0); Frequency: 5745 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5745 \text{ MHz}$; $\sigma = 5.48 \text{ S/m}$; $\epsilon_r = 35.27$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: $22.3 \text{ }^\circ\text{C}$ Liquid Temperature: $21.5 \text{ }^\circ\text{C}$

Phantom section: Left Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(4.95, 4.95, 4.95); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Left Cheek Low/Area Scan (12x21x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (measured) = 1.41 W/kg

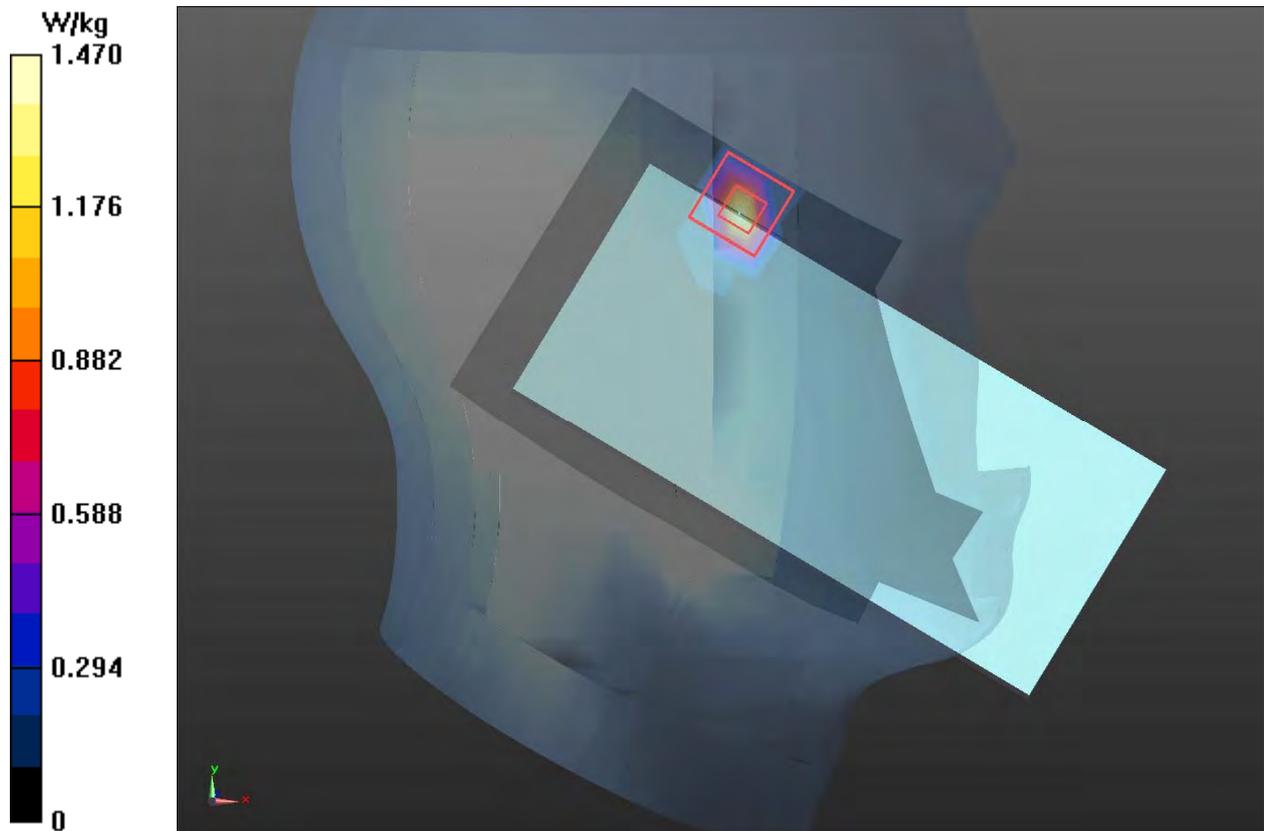
Left Cheek Low/Zoom Scan (7x7x12)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 1.811 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 3.01 W/kg

SAR(1 g) = 0.432 W/kg; SAR(10 g) = 0.123 W/kg

Maximum value of SAR (measured) = 1.47 W/kg



Plot 44 802.11nHT20 Left Cheek Low (MIMO)

Date: 6/23/2021

Communication System: UID 0, 802.11n HT20 (0); Frequency: 2412 MHz; Duty Cycle: 1:1.02

Medium parameters used: $f = 2412 \text{ MHz}$; $\sigma = 1.801 \text{ S/m}$; $\epsilon_r = 37.737$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: $22.3 \text{ }^\circ\text{C}$ Liquid Temperature: $21.5 \text{ }^\circ\text{C}$

Phantom section: Left Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.01, 8.01, 8.01); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Left Cheek Low/Area Scan (10x18x1): Measurement grid: $dx=12\text{mm}$, $dy=12\text{mm}$

Maximum value of SAR (measured) = 0.744 W/kg

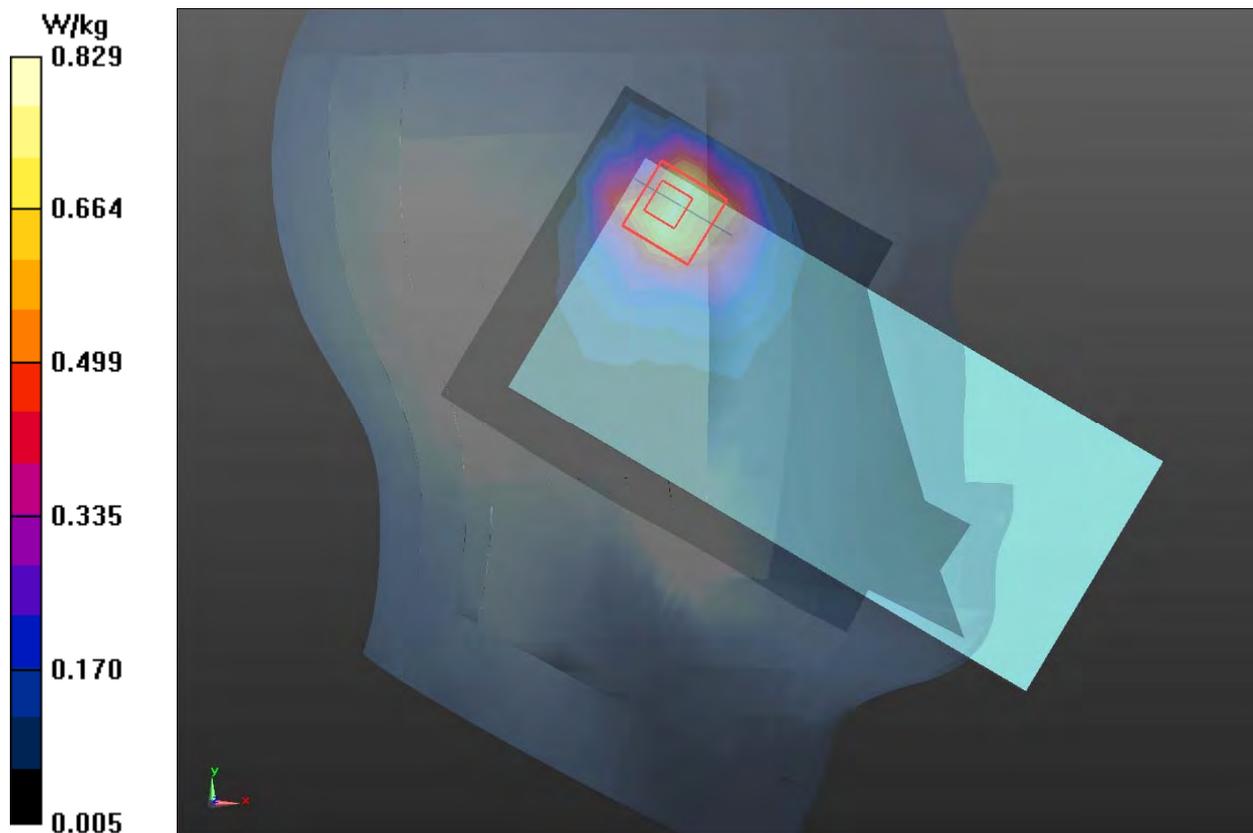
Left Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 8.690 V/m ; Power Drift = 0.013 dB

Peak SAR (extrapolated) = 1.77 W/kg

SAR(1 g) = 0.598 W/kg ; SAR(10 g) = 0.264 W/kg

Maximum value of SAR (measured) = 0.829 W/kg



Plot 45 802.11nHT20 Left Cheek Low (MIMO)

Date: 6/30/2021

Communication System: UID 0, 802.11n HT20 (0); Frequency: 5200 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5200 \text{ MHz}$; $\sigma = 4.823 \text{ S/m}$; $\epsilon_r = 36.7$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: $22.3 \text{ }^\circ\text{C}$ Liquid Temperature: $21.5 \text{ }^\circ\text{C}$

Phantom section: Left Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(5.51, 5.51,5.51); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Left Cheek Low/Area Scan (12x21x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (measured) = 0.395 W/kg

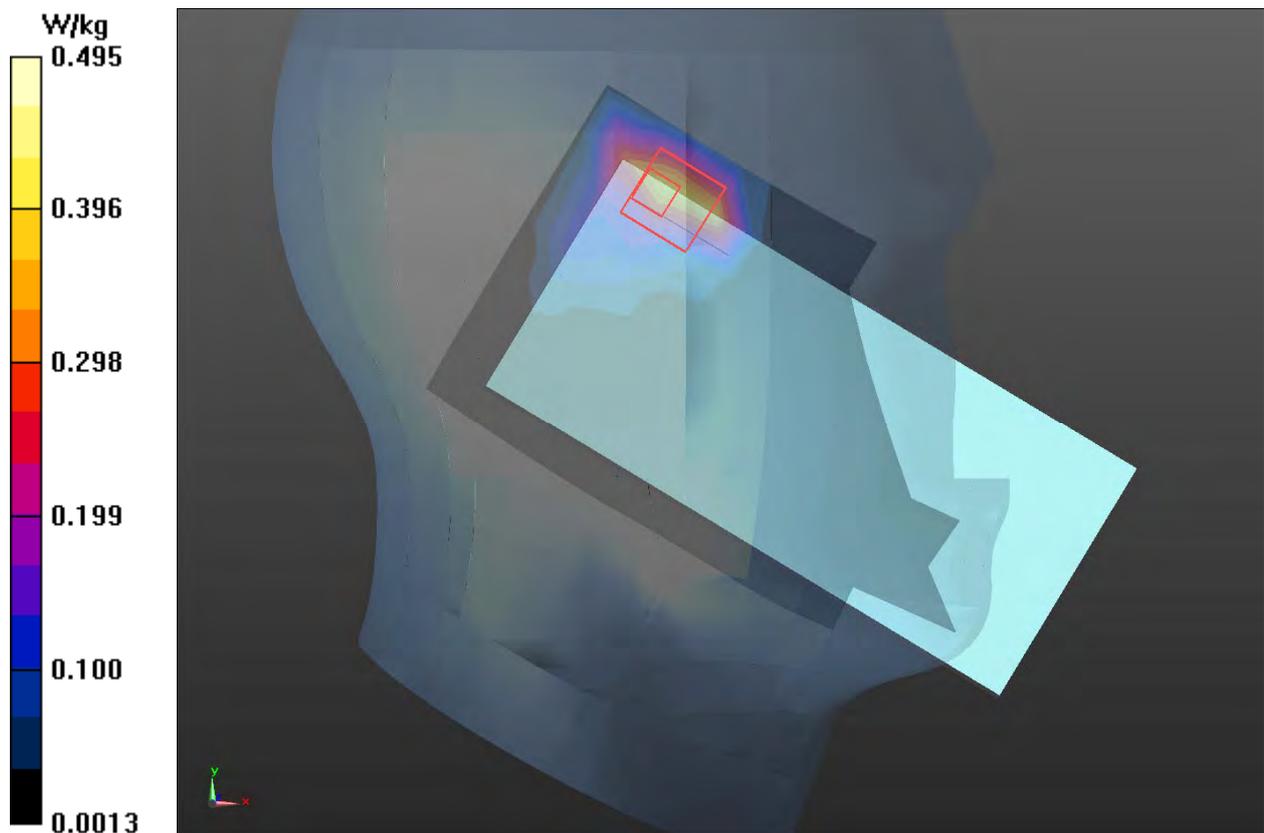
Left Cheek Low/Zoom Scan (7x7x12)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 4.787 V/m ; Power Drift = 0.018 dB

Peak SAR (extrapolated) = 2.51 W/kg

SAR(1 g) = 0.362 W/kg ; SAR(10 g) = 0.113 W/kg

Maximum value of SAR (measured) = 0.495 W/kg



Plot 46 802.11nHT20 Left Cheek Low (MIMO)

Date: 6/31/2021

Communication System: UID 0, 802.11n HT20 (0); Frequency: 5260 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5260$ MHz; $\sigma = 4.808$ S/m; $\epsilon_r = 36.877$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Left Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(5.51, 5.51, 5.51); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Left Cheek Low/Area Scan (12x21x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.923 W/kg

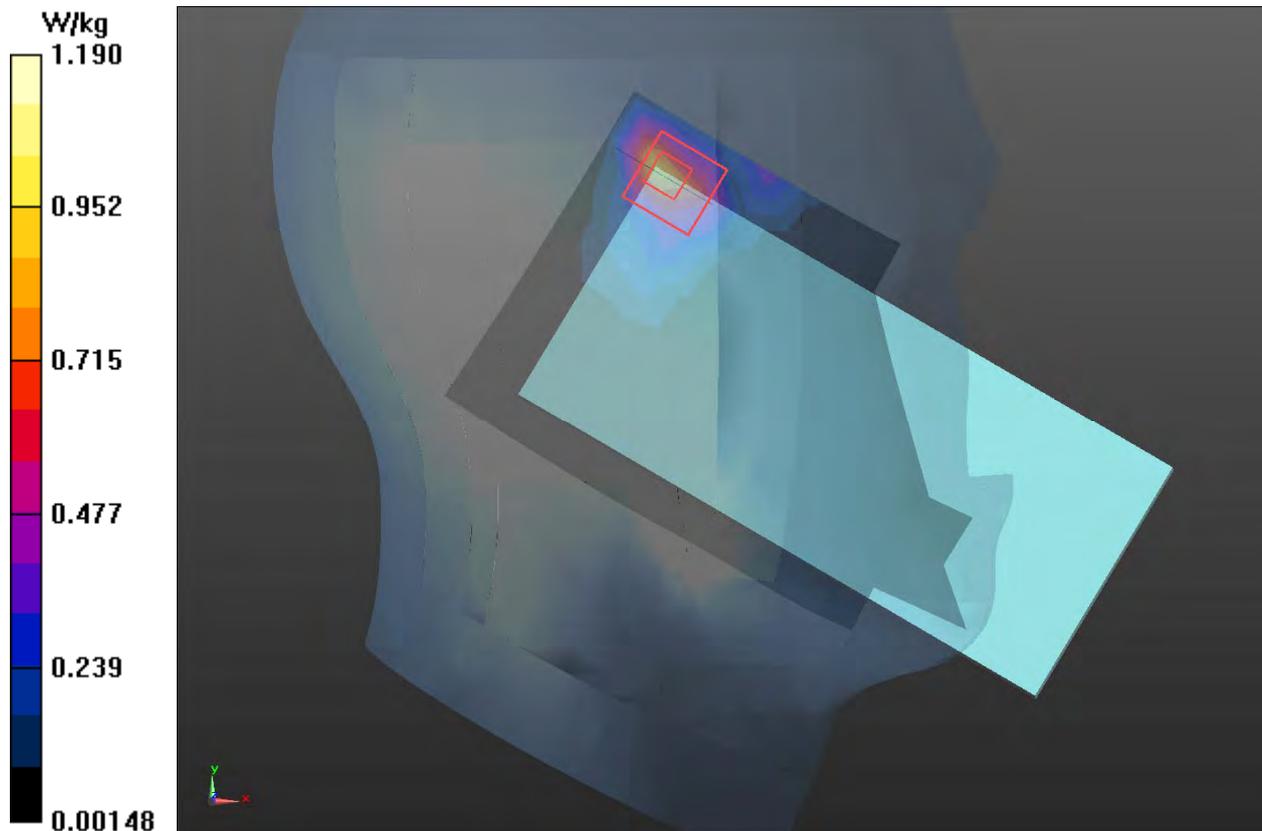
Left Cheek Low/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 4.865 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 2.69 W/kg

SAR(1 g) = 0.385 W/kg; SAR(10 g) = 0.136 W/kg

Maximum value of SAR (measured) = 1.19 W/kg



Plot 47 802.11ax HE80 Left Cheek Middle (MIMO)

Date: 6/27/2021

Communication System: UID 0, 802.11ax 80M(0); Frequency: 5690 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5690$ MHz; $\sigma = 5.3$ S/m; $\epsilon_r = 35.498$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Left Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(5.51, 5.51, 5.51); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Left Cheek Middle/Area Scan(12x21x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 1.84 W/kg

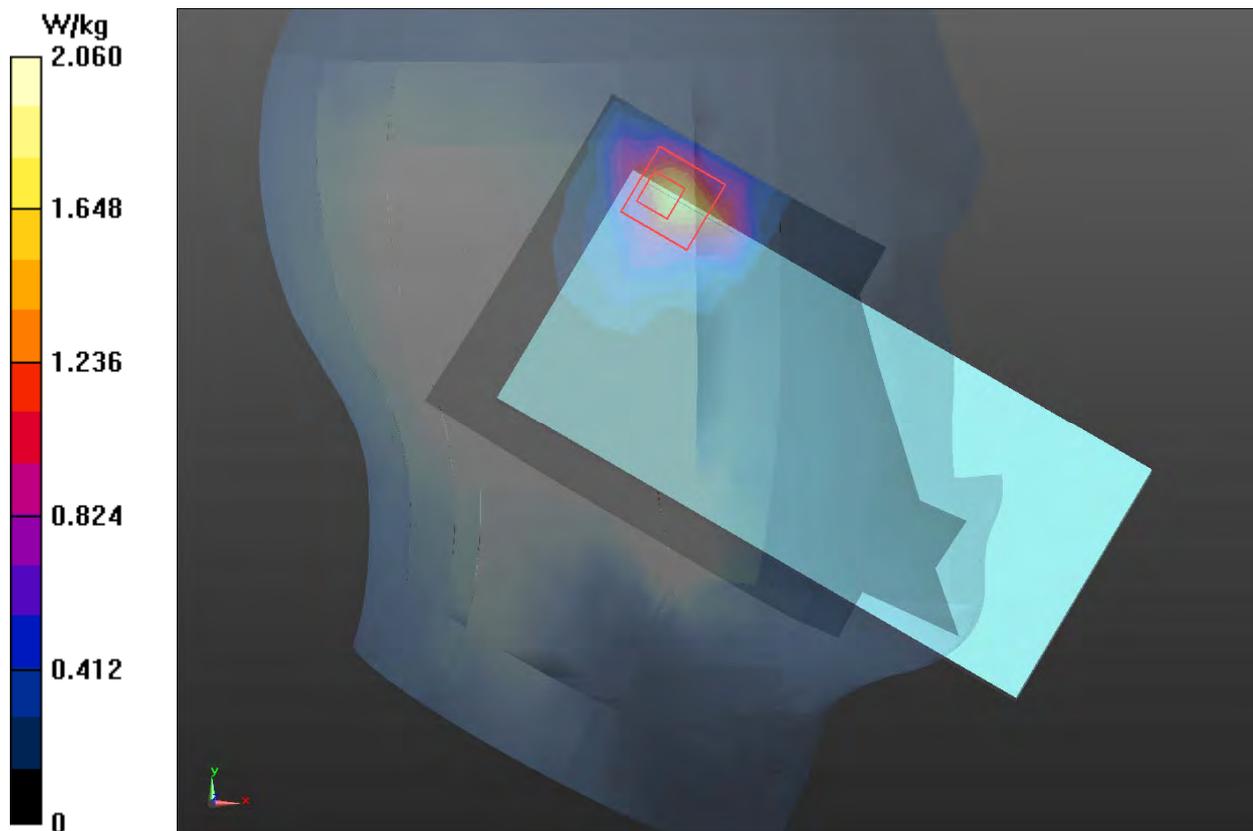
Left Cheek Middle/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 4.202 V/m; Power Drift = 0.061 dB

Peak SAR (extrapolated) = 3.61 W/kg

SAR(1 g) = 0.753 W/kg; SAR(10 g) = 0.285 W/kg

Maximum value of SAR (measured) = 2.06 W/kg



Plot 48 802.11ac-VHT40 Left Cheek Middle (MIMO)

Date: 6/28/2021

Communication System: UID 0, 802.11ac-VHT40; Frequency: 5795 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5795$ MHz; $\sigma = 5.48$ S/m; $\epsilon_r = 35.341$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Left Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(4.95, 4.95, 4.95); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Left Cheek Middle/Area Scan(12x21x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.585 W/kg

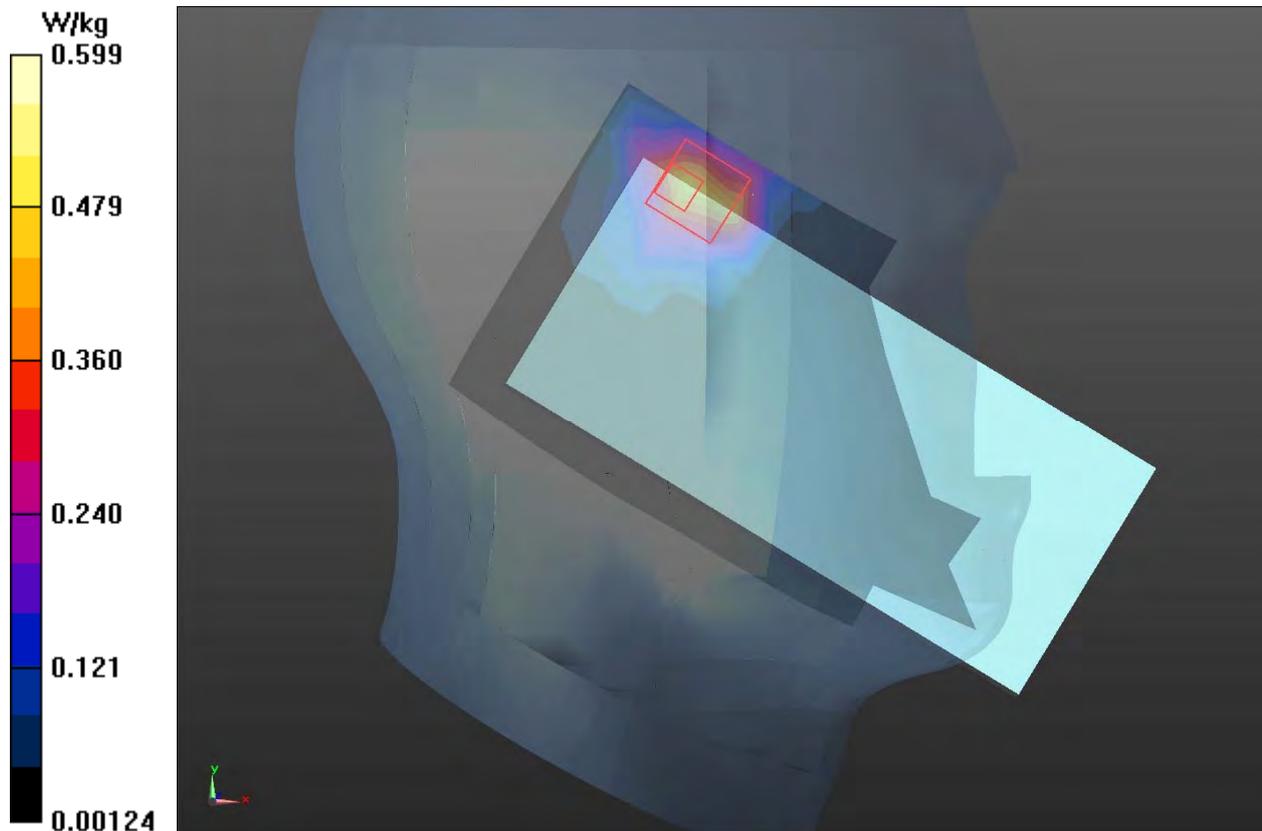
Left Cheek Middle/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 3.139 V/m; Power Drift = 0.171 dB

Peak SAR (extrapolated) = 1.61 W/kg

SAR(1 g) = 0.490 W/kg; SAR(10 g) = 0.207 W/kg

Maximum value of SAR (measured) = 0.599 W/kg



Plot 49 Bluetooth Left Cheek Low (MIMO)

Date: 6/24/2021

Communication System: UID 0, BT (0); Frequency: 2441 MHz; Duty Cycle: 1:1.32

Medium parameters used: $f = 2441$ MHz; $\sigma = 1.834$ S/m; $\epsilon_r = 37.585$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Left Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.01, 8.01, 8.01); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Left Cheek Low/Area Scan(10x18x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.247 W/kg

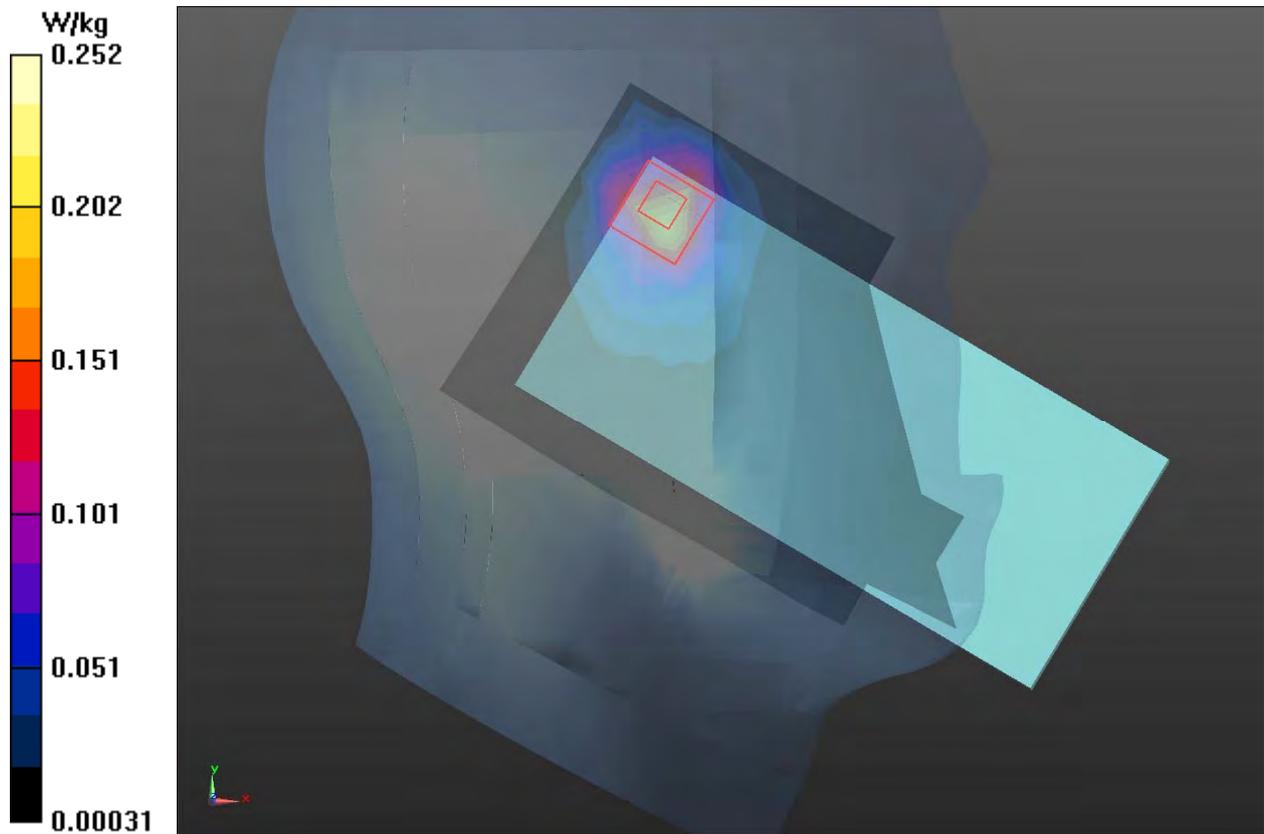
Left Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.227 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 0.557 W/kg

SAR(1 g) = 0.236 W/kg; SAR(10 g) = 0.108 W/kg

Maximum value of SAR (measured) = 0.252 W/kg



Plot 50 GSM 850 Back Side Middle (Distance 15mm)

Date: 6/21/2021

Communication System: UID 0, GSM (0); Frequency: 836.6 MHz; Duty Cycle: 1:2.77

Medium parameters used: $f = 836.6\text{MHz}$; $\sigma = 0.923\text{ S/m}$; $\epsilon_r = 42.201$; $\rho = 1000\text{ kg/m}^3$ Ambient Temperature: $22.3\text{ }^\circ\text{C}$ Liquid Temperature: $21.5\text{ }^\circ\text{C}$

Phantom section: Flat Section

DASY5 Configuration:

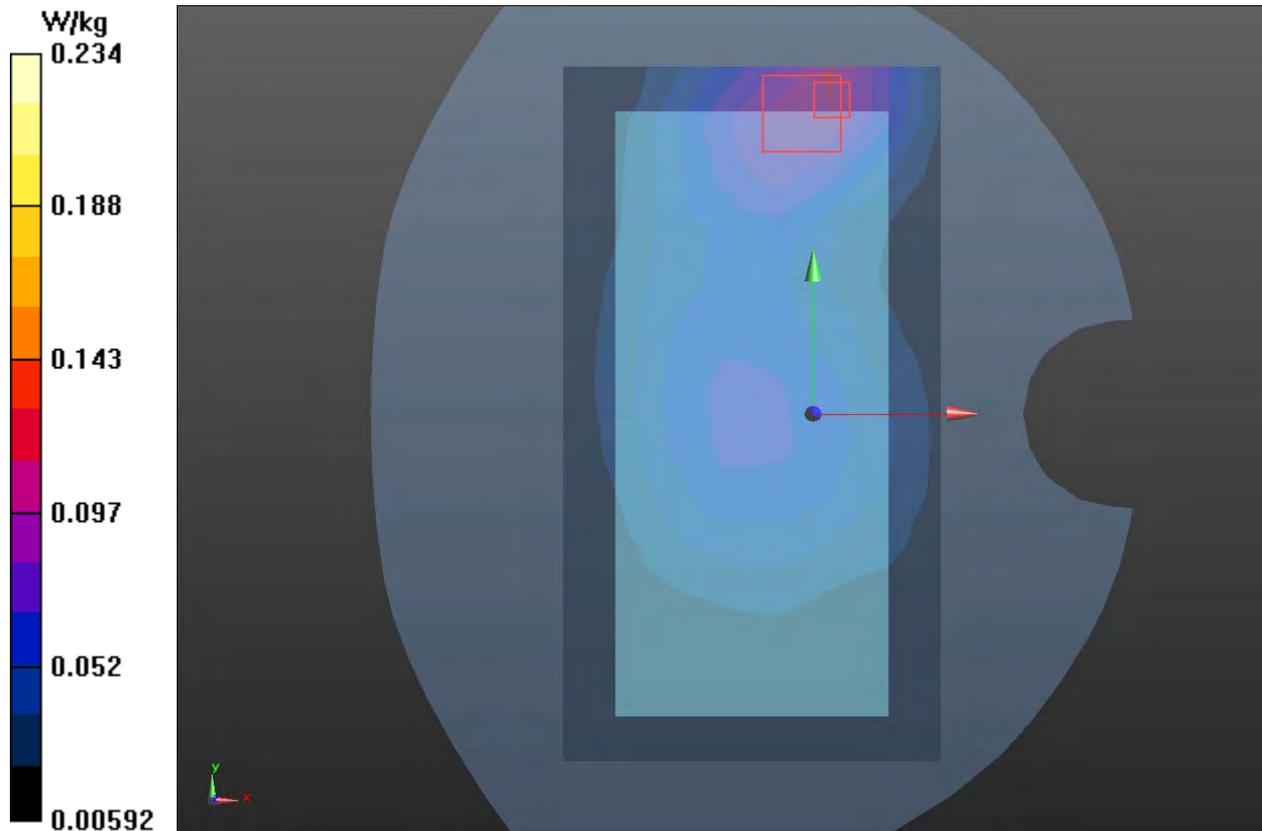
Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(10.15, 10.15, 10.15); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side Middle/Area Scan (8x14x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$ Maximum value of SAR (measured) = 0.190 W/kg **Back Side Middle/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$ Reference Value = 8.340 V/m ; Power Drift = 0.030 dB Peak SAR (extrapolated) = 0.144 W/kg **SAR(1 g) = 0.189 W/kg ; SAR(10 g) = 0.119 W/kg** Maximum value of SAR (measured) = 0.234 W/kg 

Plot 51 GSM 1900 Back Side Middle (Distance 15mm)

Date: 6/16/2021

Communication System: UID 0, GSM (0); Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.42$ S/m; $\epsilon_r = 38.948$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.38, 8.38, 8.38); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side Middle/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.277 W/kg

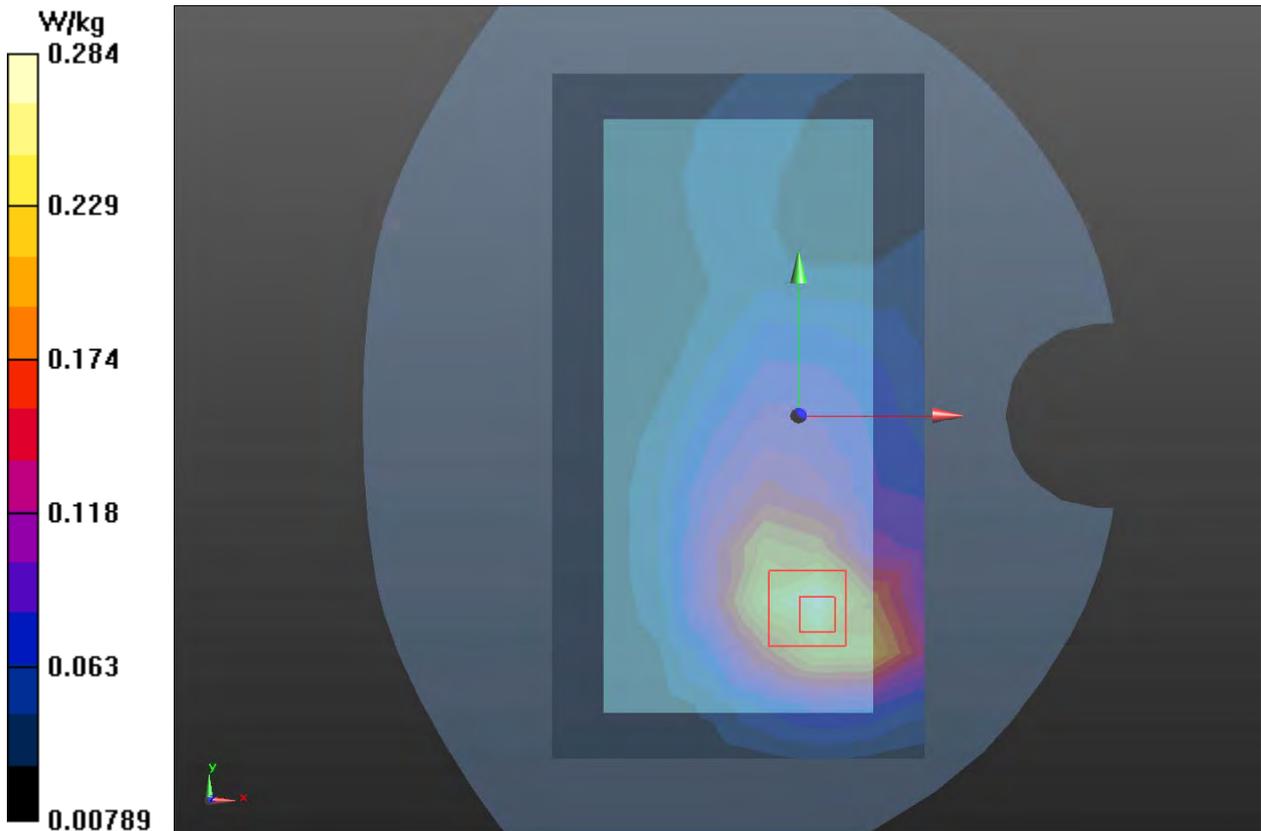
Back Side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.087 V/m; Power Drift = 0.113 dB

Peak SAR (extrapolated) = 0.341 W/kg

SAR(1 g) = 0.207 W/kg; SAR(10 g) = 0.122 W/kg

Maximum value of SAR (measured) = 0.284 W/kg



Plot 52 UMTS Band II Back Side Middle (Distance 15mm)

Date: 6/17/2021

Communication System: UID 0, WCDMA (0); Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.42$ S/m; $\epsilon_r = 38.948$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.38, 8.38, 8.38); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side Middle/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.850 W/kg

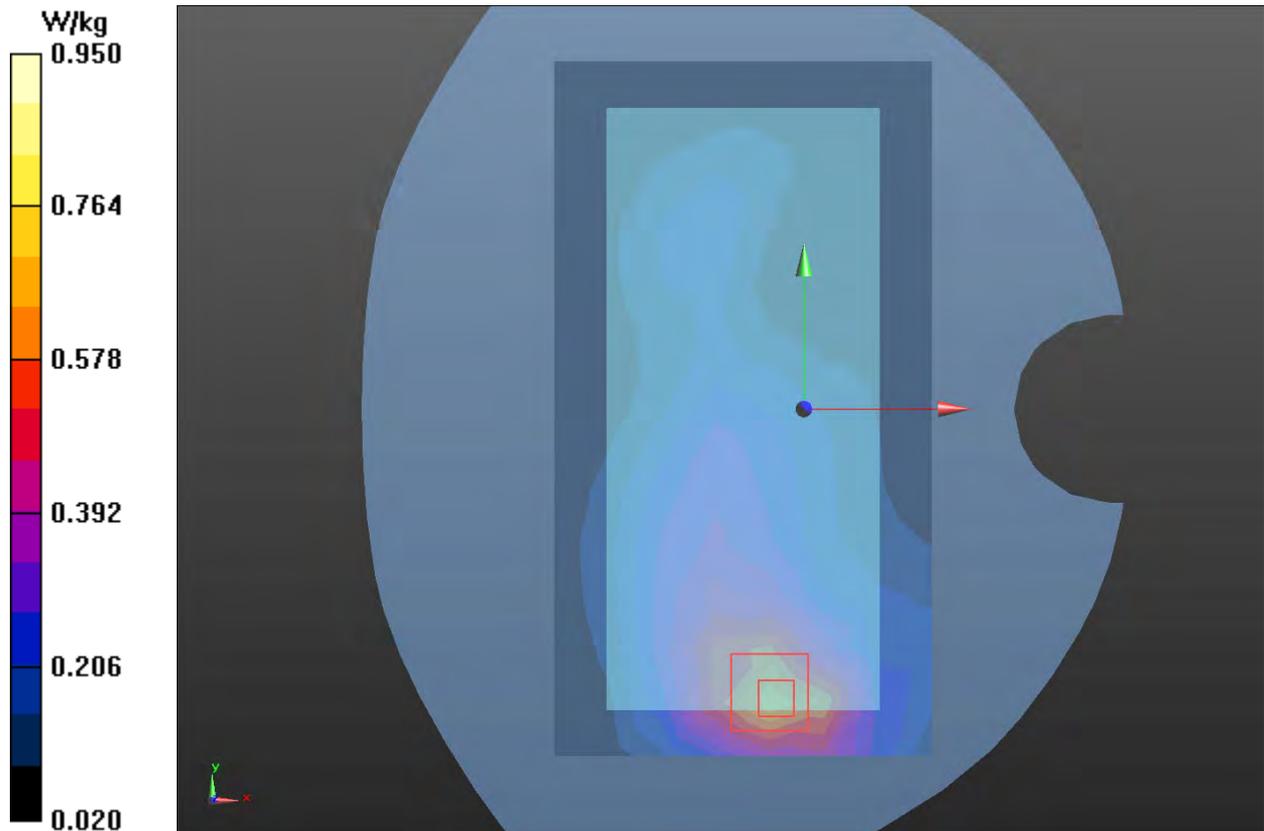
Back Side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.31 V/m; Power Drift = 0.140 dB

Peak SAR (extrapolated) = 0.924 W/kg

SAR(1 g) = 0.785 W/kg; SAR(10 g) = 0.474 W/kg

Maximum value of SAR (measured) = 0.950 W/kg



Plot 53 UMTS Band V Back Side Middle(Distance 15mm)

Date: 6/21/2021

Communication System: UID 0, WCDMA (0); Frequency: 836.6 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 836.6$ MHz; $\sigma = 0.953$ S/m; $\epsilon_r = 39.762$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(10.15, 10.15, 10.15); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side Middle/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.179 W/kg

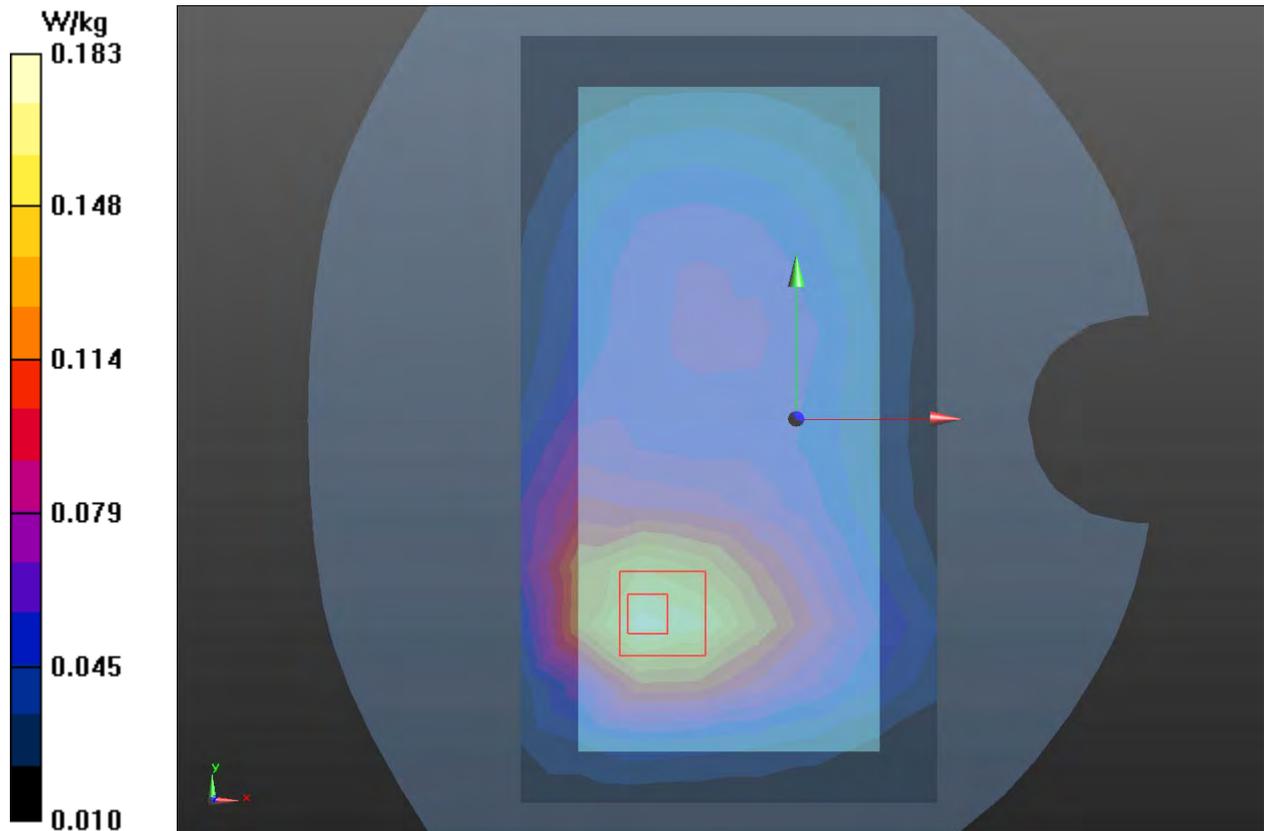
Back Side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.404 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 0.258 W/kg

SAR(1 g) = 0.170 W/kg; SAR(10 g) = 0.113 W/kg

Maximum value of SAR (measured) = 0.183 W/kg



Plot 54 LTE Band 2 1RB Back Side High (Distance 15mm)

Date: 6/17/2021

Communication System: UID 0, LTE (0); Frequency: 1900 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.434$ S/m; $\epsilon_r = 38.861$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.38, 8.38, 8.38); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side High/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 1.01 W/kg

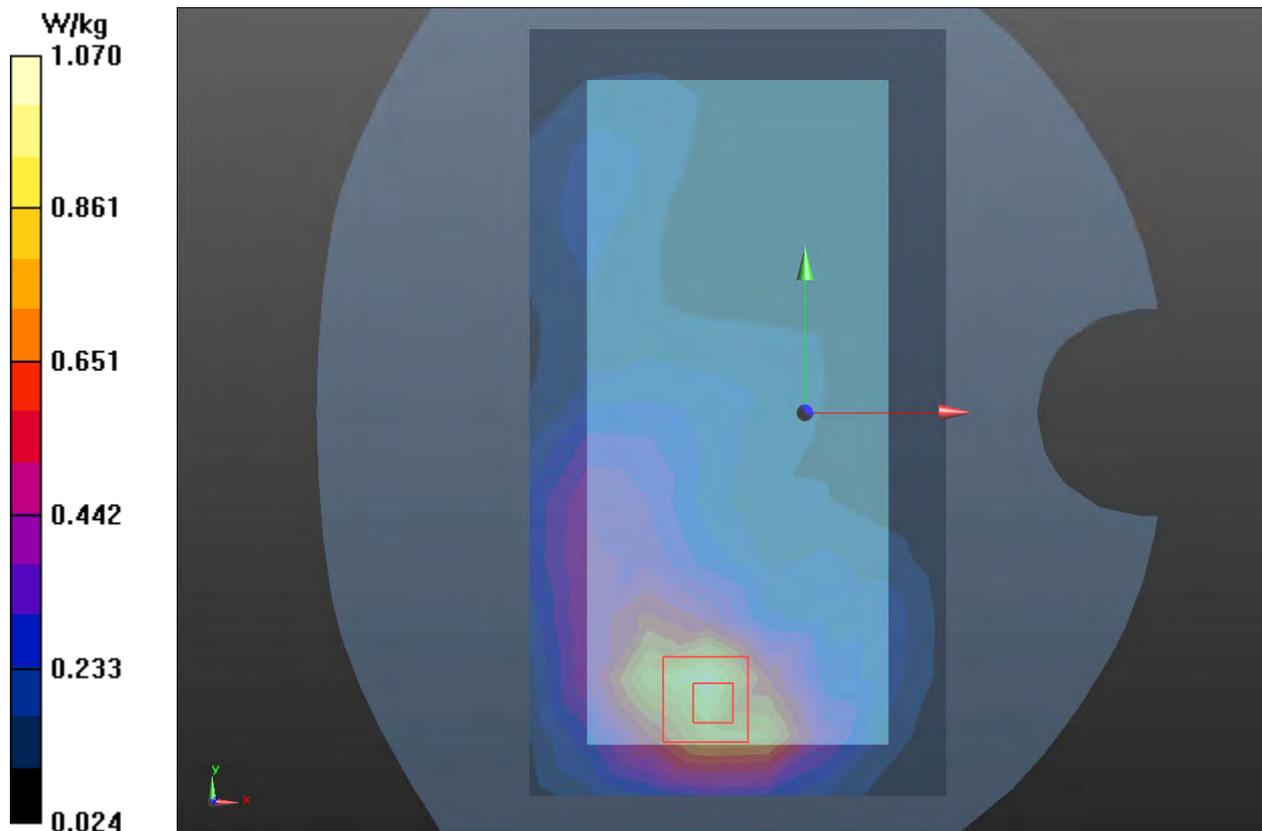
Back Side High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.07 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 1.29 W/kg

SAR(1 g) = 0.457 W/kg; SAR(10 g) = 0.272 W/kg

Maximum value of SAR (measured) = 1.07 W/kg



Plot 55 LTE Band 4 1RB Back Side High (Distance 15mm)

Date: 6/25/2021

Communication System: UID 0, LTE (0); Frequency: 1745 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1745$ MHz; $\sigma = 1.323$ S/m; $\epsilon_r = 39.378$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.76, 8.76, 8.76); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side High/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.606 W/kg

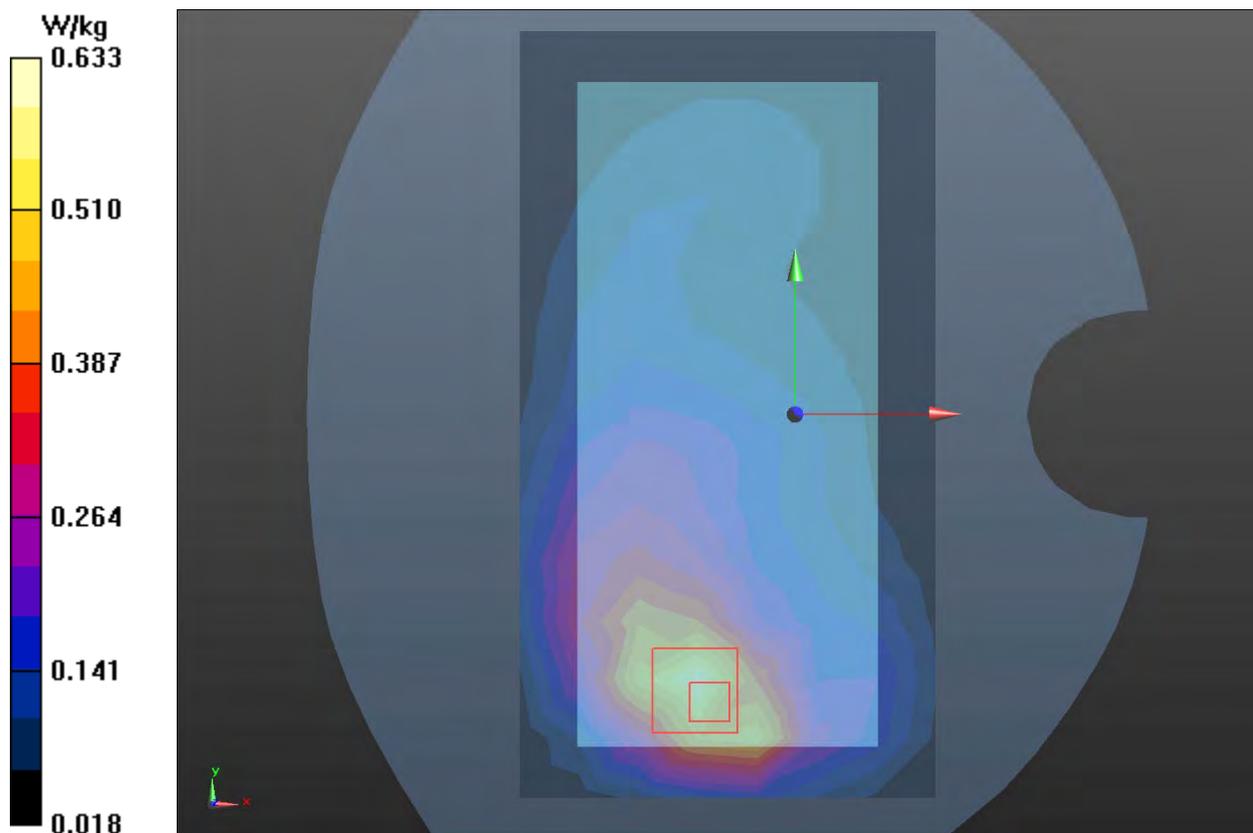
Back Side High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.61 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 0.856 W/kg

SAR(1 g) = 0.332 W/kg; SAR(10 g) = 0.201 W/kg

Maximum value of SAR (measured) = 0.633 W/kg



Plot 56 LTE Band 5 1RB Back Side High (Distance 15mm)

Date: 6/22/2021

Communication System: UID 0, LTE (0); Frequency: 844 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 844$ MHz; $\sigma = 0.928$ S/m; $\epsilon_r = 42.206$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(10.15, 10.15, 10.15); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side High/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.415 W/kg

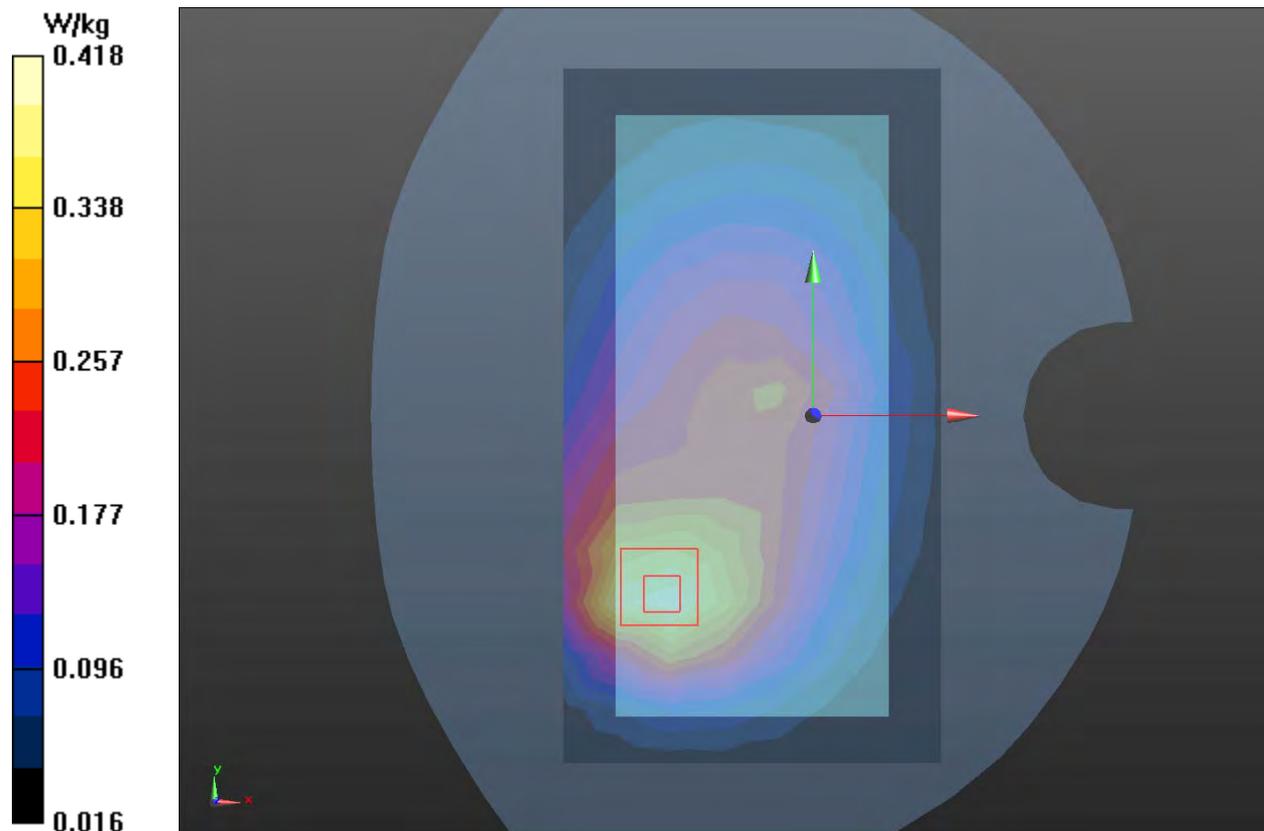
Back Side High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.10 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 0.492 W/kg

SAR(1 g) = 0.310 W/kg; SAR(10 g) = 0.206 W/kg

Maximum value of SAR (measured) = 0.418 W/kg



Plot 57 LTE Band 7 1RB Front Side Middle (Distance 15mm)

Date: 6/19/2021

Communication System: UID 0, LTE (0); Frequency: 2535 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2535$ MHz; $\sigma = 1.94$ S/m; $\epsilon_r = 37.31$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(7.71, 7.71, 7.71); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Front Side Middle/Area Scan (10x18x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.885 W/kg

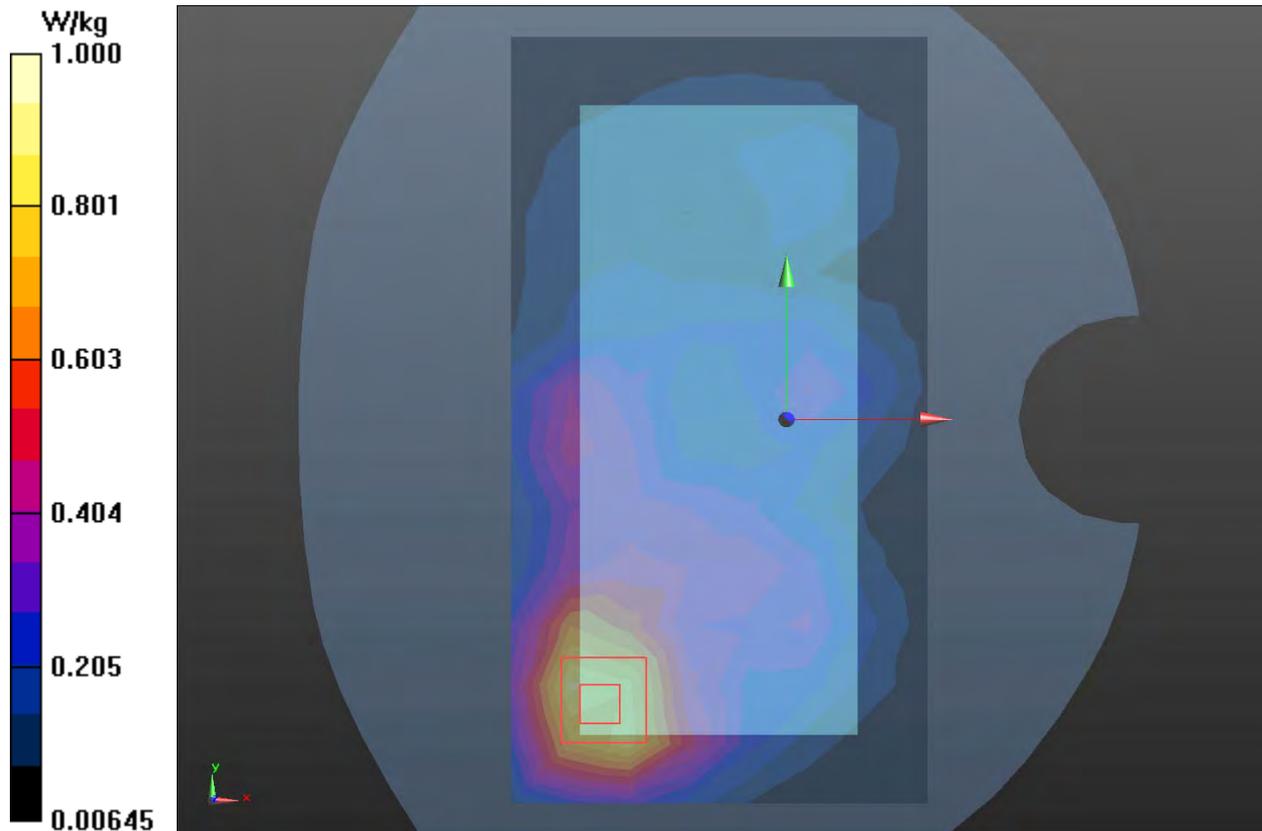
Front Side Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.177 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 1.25 W/kg

SAR(1 g) = 0.646 W/kg; SAR(10 g) = 0.320 W/kg

Maximum value of SAR (measured) = 1.00 W/kg



Plot 58 LTE Band 12 1RB Back Side Middle (Distance 15mm)

Date: 6/14/2021

Communication System: UID 0, LTE (0); Frequency: 707.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 707.5$ MHz; $\sigma = 0.848$ S/m; $\epsilon_r = 42.763$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(10.48, 10.48, 10.48); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side Middle/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.195 W/kg

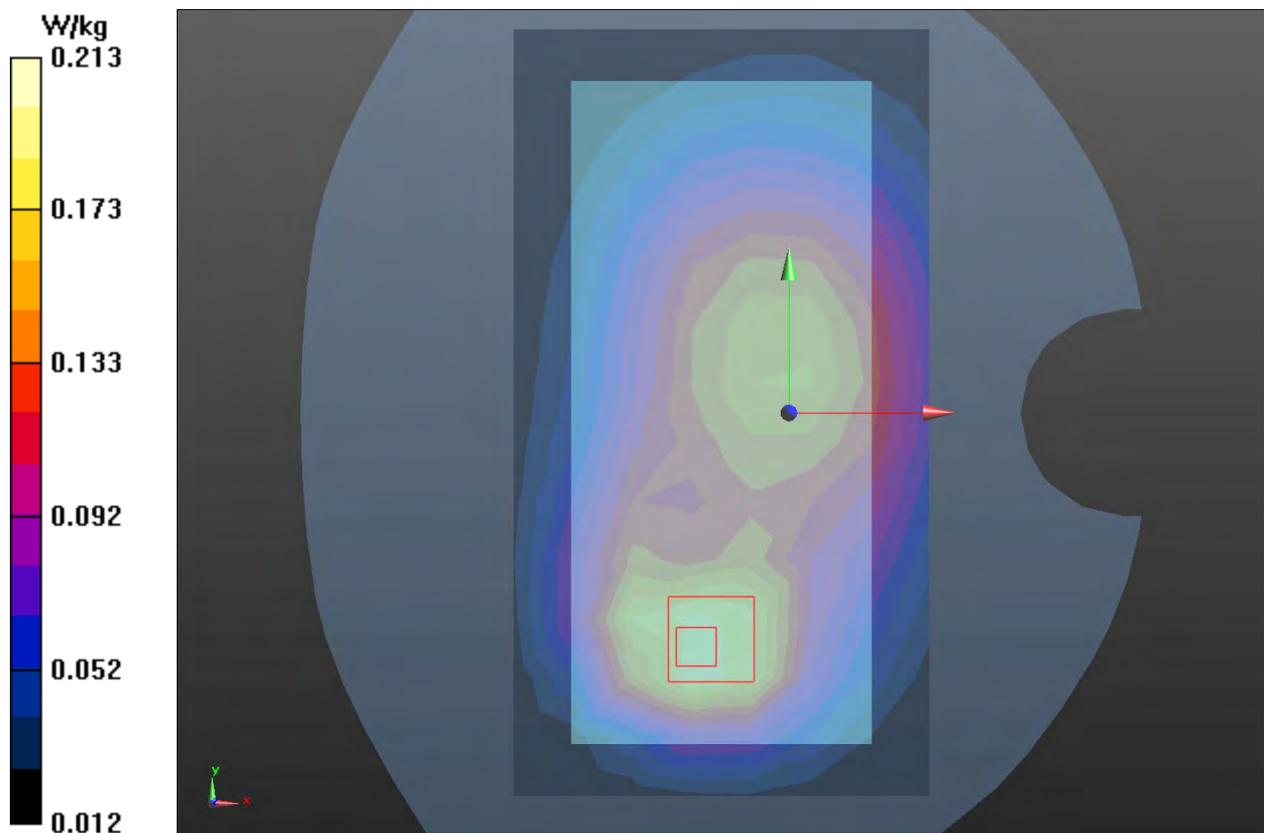
Back Side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.96 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.250 W/kg

SAR(1 g) = 0.157 W/kg; SAR(10 g) = 0.107 W/kg

Maximum value of SAR (measured) = 0.213 W/kg



Plot 59 LTE Band 26 1RB Back Side Middle (Distance 15mm)

Date: 6/22/2021

Communication System: UID 0, LTE (0); Frequency: 831.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 831.5$ MHz; $\sigma = 0.919$ S/m; $\epsilon_r = 42.185$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(10.15, 10.15, 10.15); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side Middle/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.352 W/kg

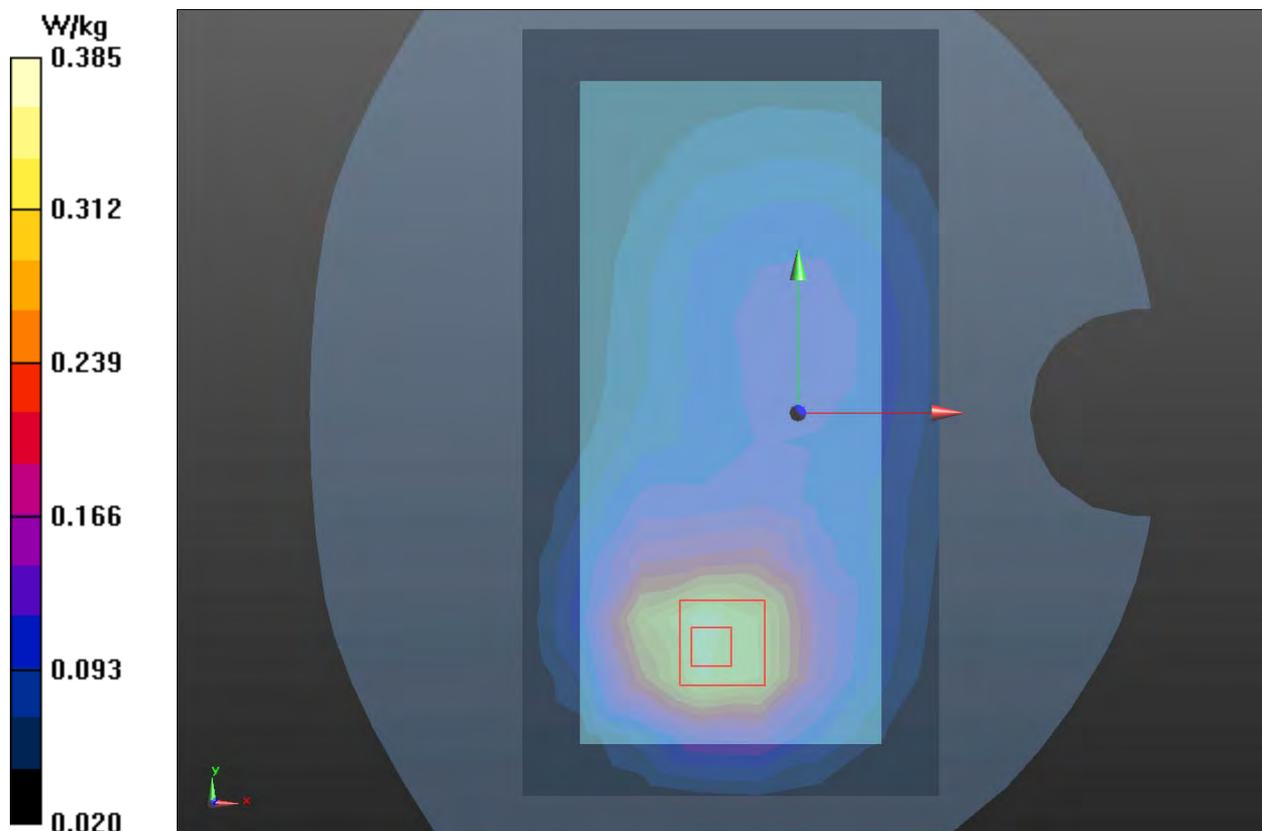
Back Side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.939 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 0.459 W/kg

SAR(1 g) = 0.283 W/kg; SAR(10 g) = 0.185 W/kg

Maximum value of SAR (measured) = 0.385 W/kg



Plot 60 LTE Band 38 1RB Front Side High (Distance 15mm)

Date: 6/19/2021

Communication System: UID 0, LTE (0); Frequency: 2610 MHz; Duty Cycle: 1:1.58

Medium parameters used: $f = 2610$ MHz; $\sigma = 2.027$ S/m; $\epsilon_r = 37.056$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(7.71, 7.71, 7.71); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Front Side High/Area Scan (10x18x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.667 W/kg

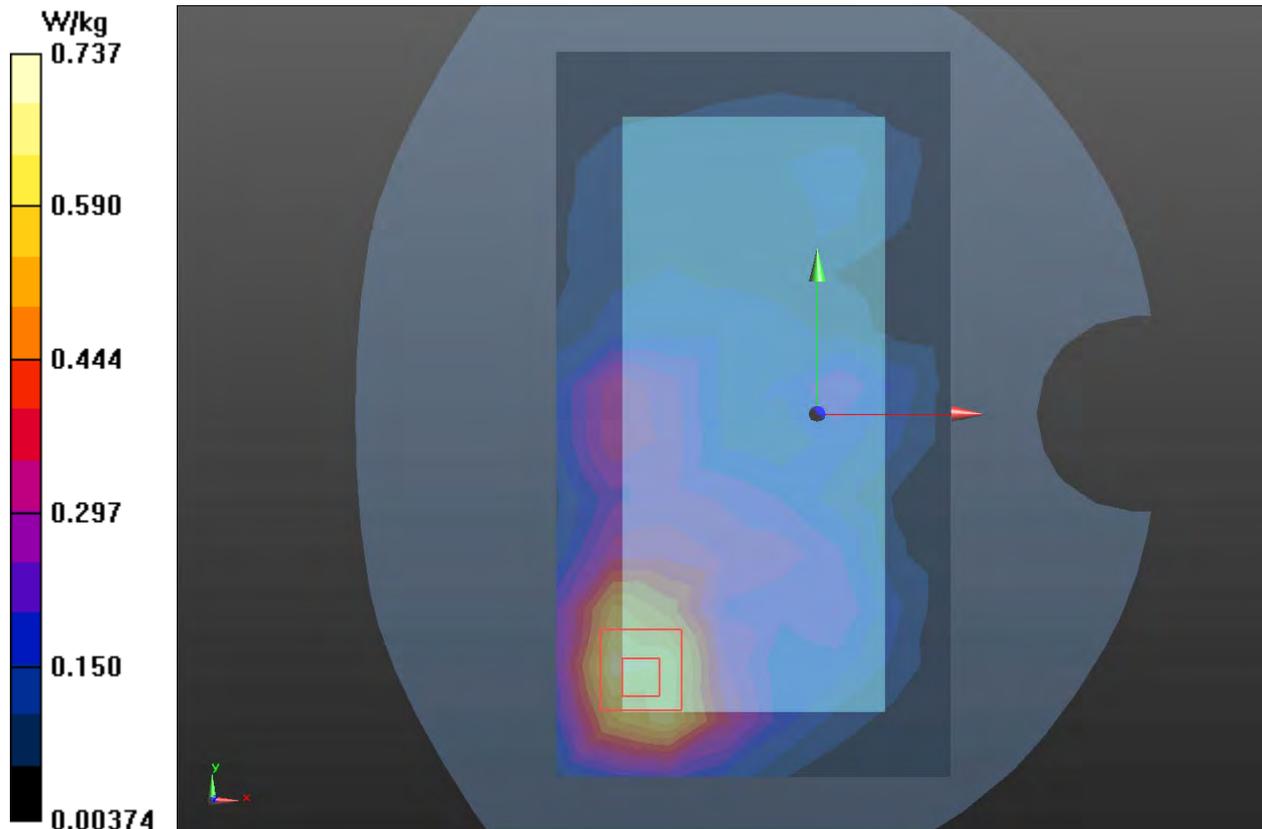
Front Side High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.853 V/m; Power Drift = -0.074 dB

Peak SAR (extrapolated) = 0.917 W/kg

SAR(1 g) = 0.471 W/kg; SAR(10 g) = 0.257 W/kg

Maximum value of SAR (measured) = 0.737 W/kg



Plot 61 LTE Band 41 1RB Front Side High (Distance 15mm)

Date: 6/19/2021

Communication System: UID 0, LTE (0); Frequency: 2680 MHz; Duty Cycle: 1:1.58

Medium parameters used: $f = 2680$ MHz; $\sigma = 2.106$ S/m; $\epsilon_r = 36.793$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(7.71, 7.71, 7.71); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Front Side High/Area Scan (10x18x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.689 W/kg

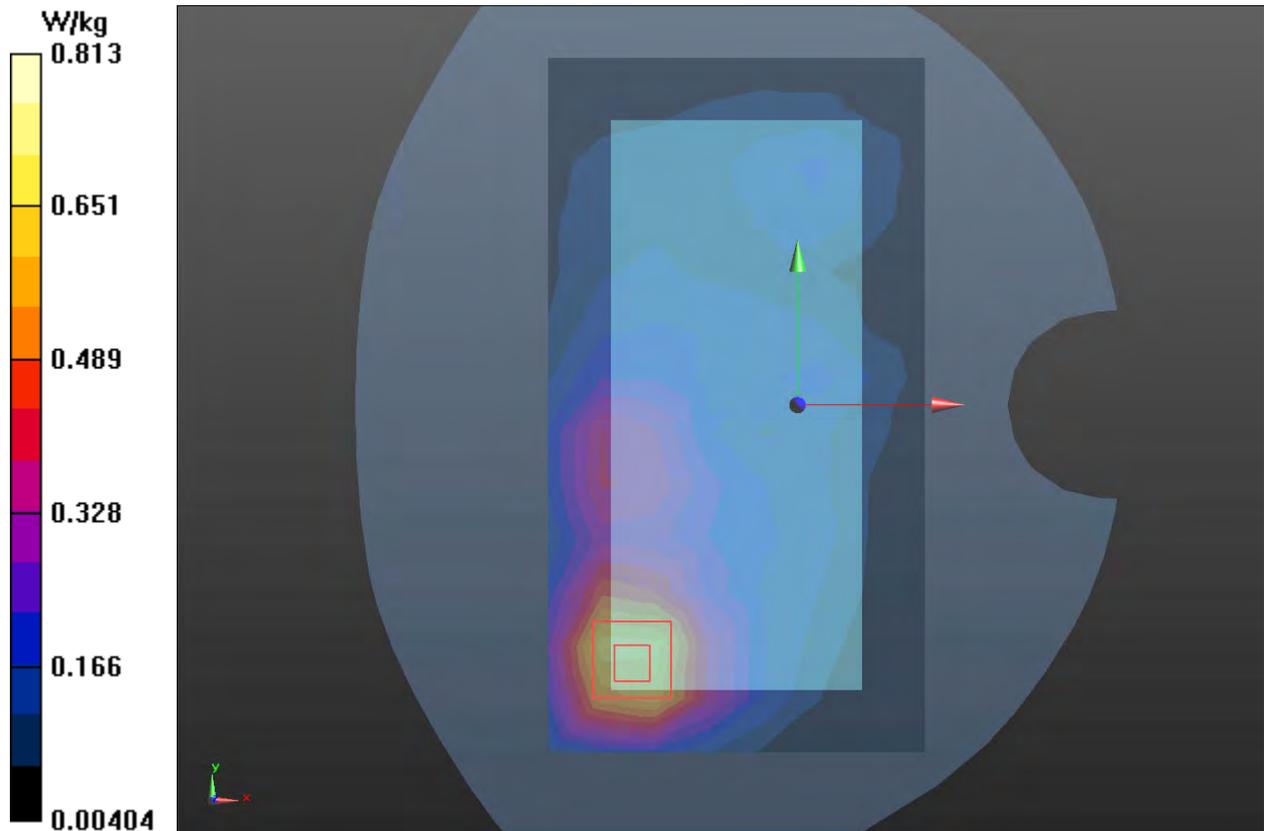
Front Side High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.827 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 1.02 W/kg

SAR(1 g) = 0.509 W/kg; SAR(10 g) = 0.270 W/kg

Maximum value of SAR (measured) = 0.813 W/kg



Plot 62 LTE Band 66 1RB Front Side Middle (Distance 15mm)

Date: 6/26/2021

Communication System: UID 0, LTE (0); Frequency: 1745 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1745 \text{ MHz}$; $\sigma = 1.323 \text{ S/m}$; $\epsilon_r = 39.378$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: $22.3 \text{ }^\circ\text{C}$ Liquid Temperature: $21.5 \text{ }^\circ\text{C}$

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.76, 8.76, 8.76); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Front Side Middle/Area Scan (8x14x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.259 W/kg

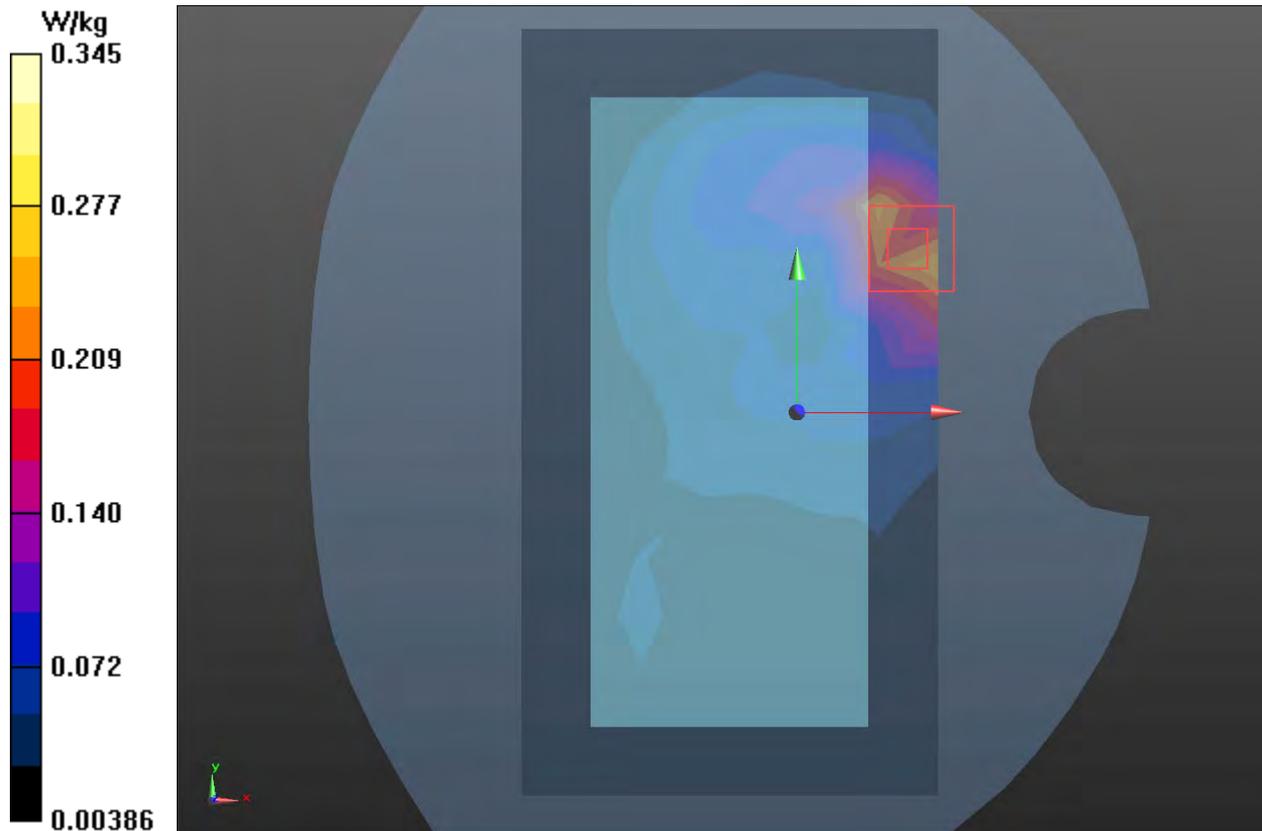
Front Side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 6.703 V/m ; Power Drift = 0.045 dB

Peak SAR (extrapolated) = 0.379 W/kg

SAR(1 g) = 0.257 W/kg ; SAR(10 g) = 0.163 W/kg

Maximum value of SAR (measured) = 0.345 W/kg



Plot 63 NR n41 1RB Front Side Low (Distance 15mm)

Date: 6/19/2021

Communication System: UID 0, 5G NR (0); Frequency: 2546.01 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 2546.01$ MHz; $\sigma = 1.953$ S/m; $\epsilon_r = 37.275$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(7.71, 7.71, 7.71); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Front Side Low/Area Scan (10x18x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.144 W/kg

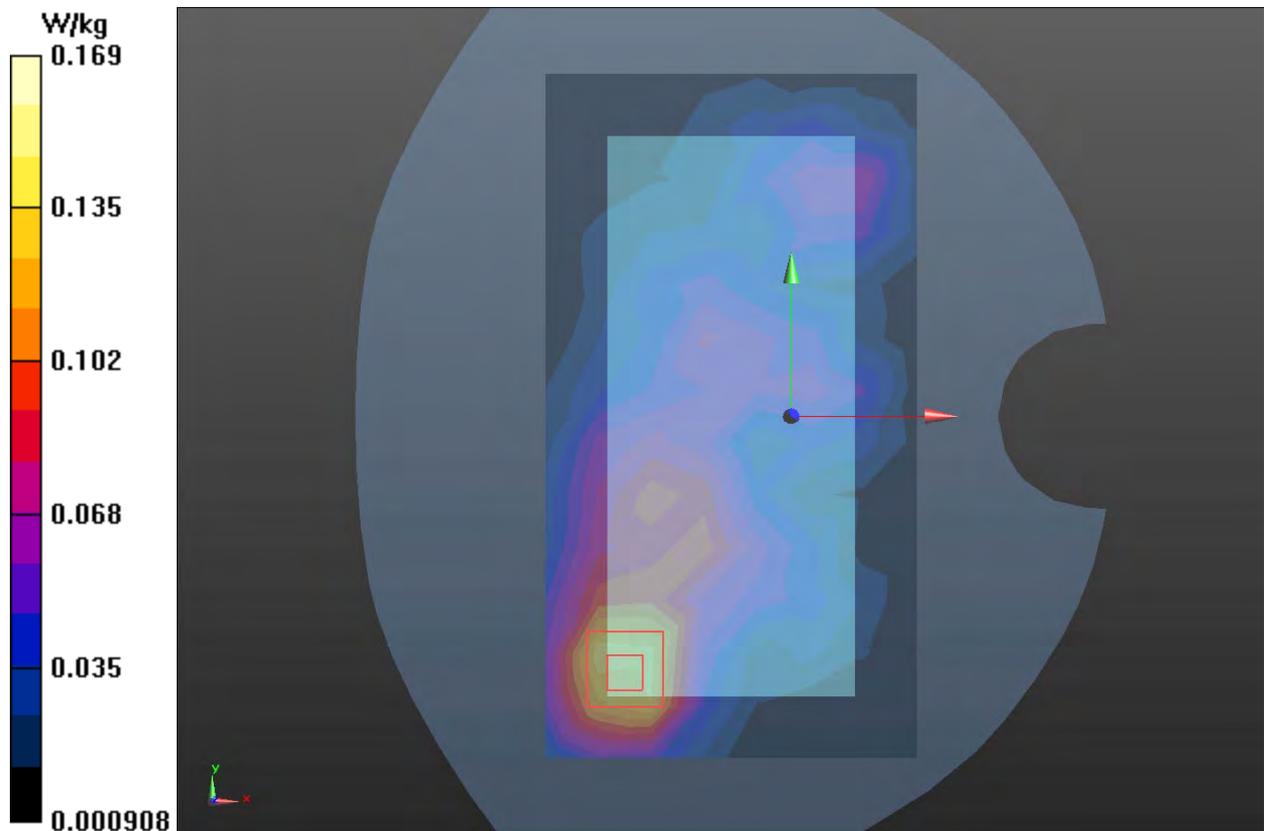
Front Side Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.015 V/m; Power Drift = 0.040 dB

Peak SAR (extrapolated) = 0.211 W/kg

SAR(1 g) = 0.119 W/kg; SAR(10 g) = 0.066 W/kg

Maximum value of SAR (measured) = 0.169 W/kg



Plot 64 NR n66 1RB Back Side Low (Distance 15mm)

Date: 6/26/2021

Communication System: UID 0, 5G NR (0); Frequency: 1720 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1720$ MHz; $\sigma = 1.303$ S/m; $\epsilon_r = 39.467$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.76, 8.76, 8.76); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side Low/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.453 W/kg

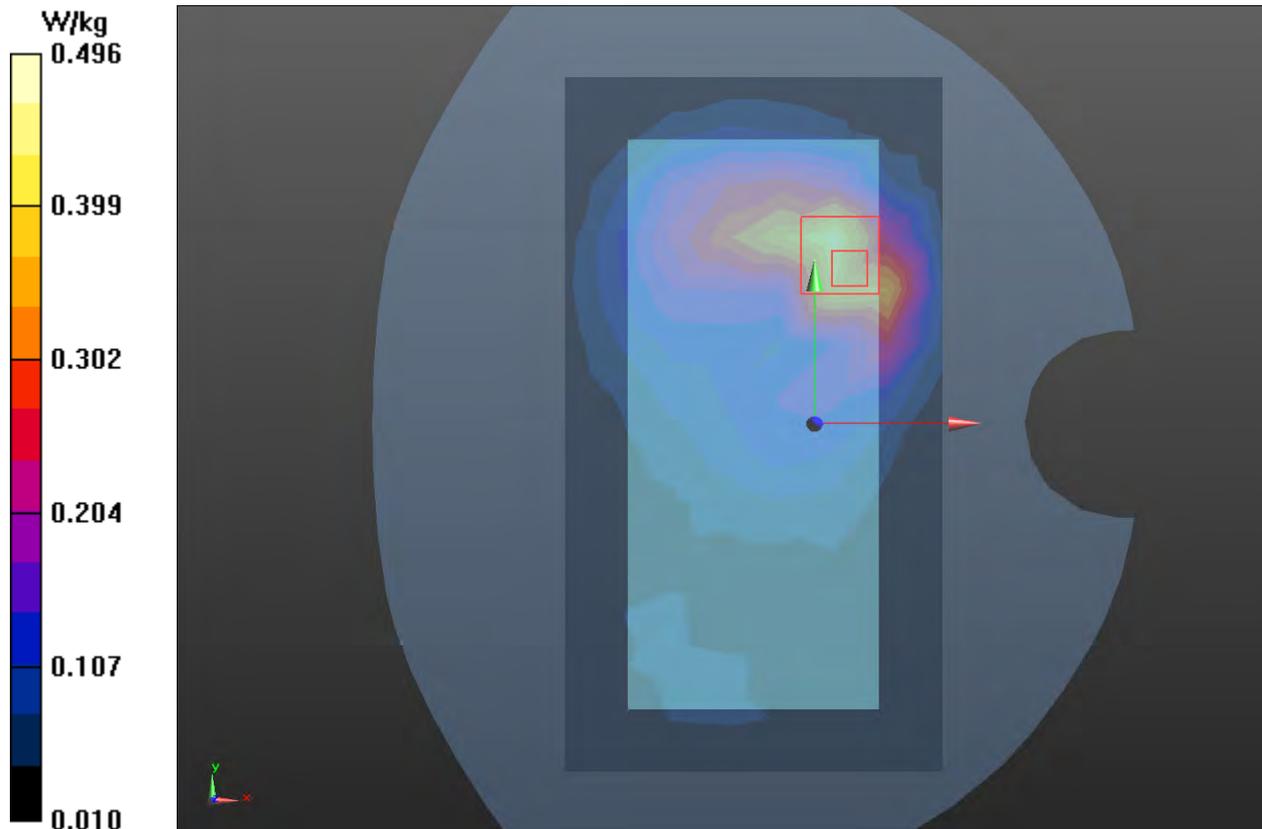
Back Side Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.05 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 0.610 W/kg

SAR(1 g) = 0.346 W/kg; SAR(10 g) = 0.200 W/kg

Maximum value of SAR (measured) = 0.496 W/kg



Plot 65 802.11b Back Side High (Distance 15mm,Ant 4)

Date: 6/24/2021

Communication System: UID 0, 802.11b (0); Frequency: 2462 MHz;Duty Cycle: 1:1.02

Medium parameters used: $f = 2462 \text{ MHz}$; $\sigma = 1.859 \text{ S/m}$; $\epsilon_r = 37.58$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature:22.3 °C Liquid Temperature: 21.5°C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.01, 8.01, 8.01); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side High/Area Scan(10x18x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.665 W/kg

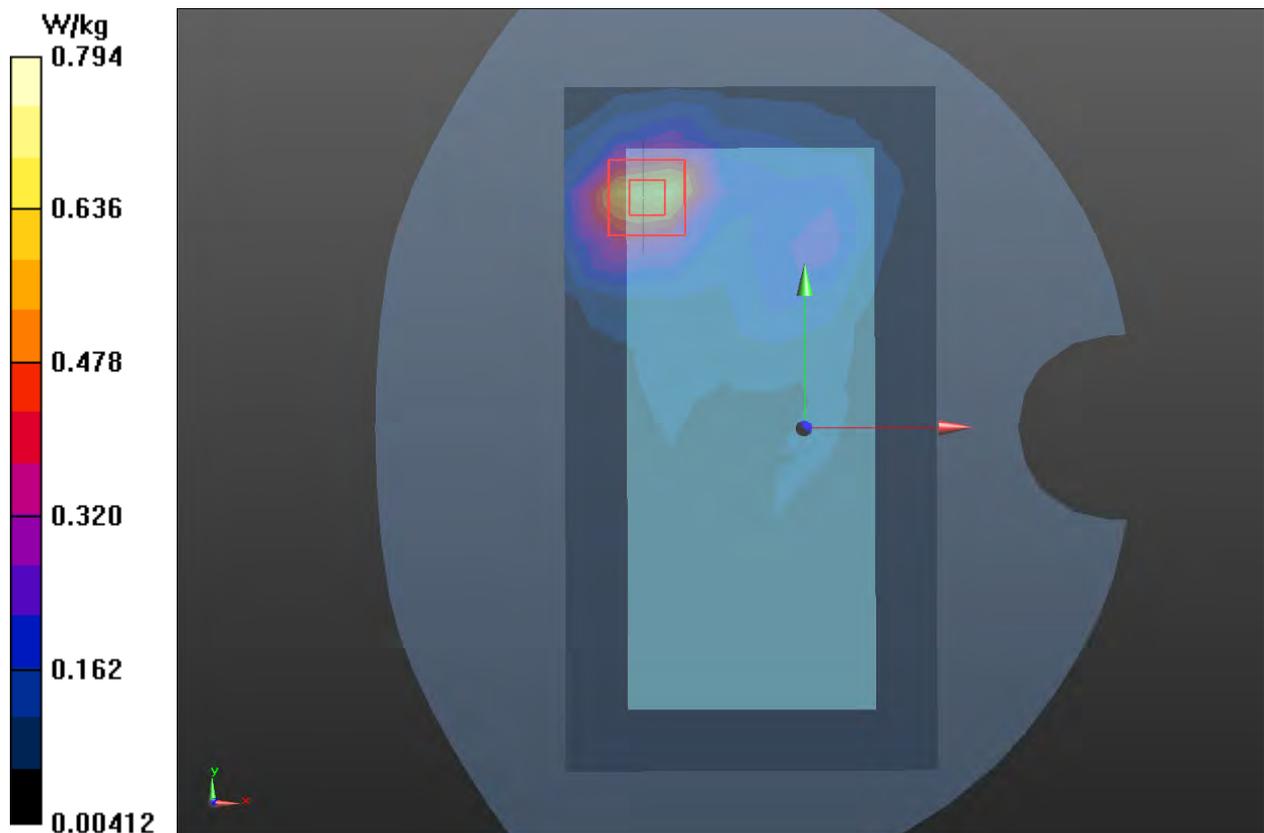
Back Side High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.234 V/m; Power Drift = 0.016 dB

Peak SAR (extrapolated) = 0.989 W/kg

SAR(1 g) = 0.289 W/kg; SAR(10 g) = 0.132 W/kg

Maximum value of SAR (measured) = 0.794 W/kg



Plot 66 802.11ac-VHT20 U-NII-1 Back Side Low (Distance 15mm ,Ant 4)

Date: 6/31/2021

Communication System: UID 0, 802.11ac VHT20 (0); Frequency: 5180 MHz;Duty Cycle: 1:1

Medium parameters used: $f = 5180 \text{ MHz}$; $\sigma = 4.75 \text{ S/m}$; $\epsilon_r = 36.766$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature:22.3 °C Liquid Temperature: 21.5°C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(5.51, 5.51,5.51); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side Low/Area Scan (12x21x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.431 W/kg

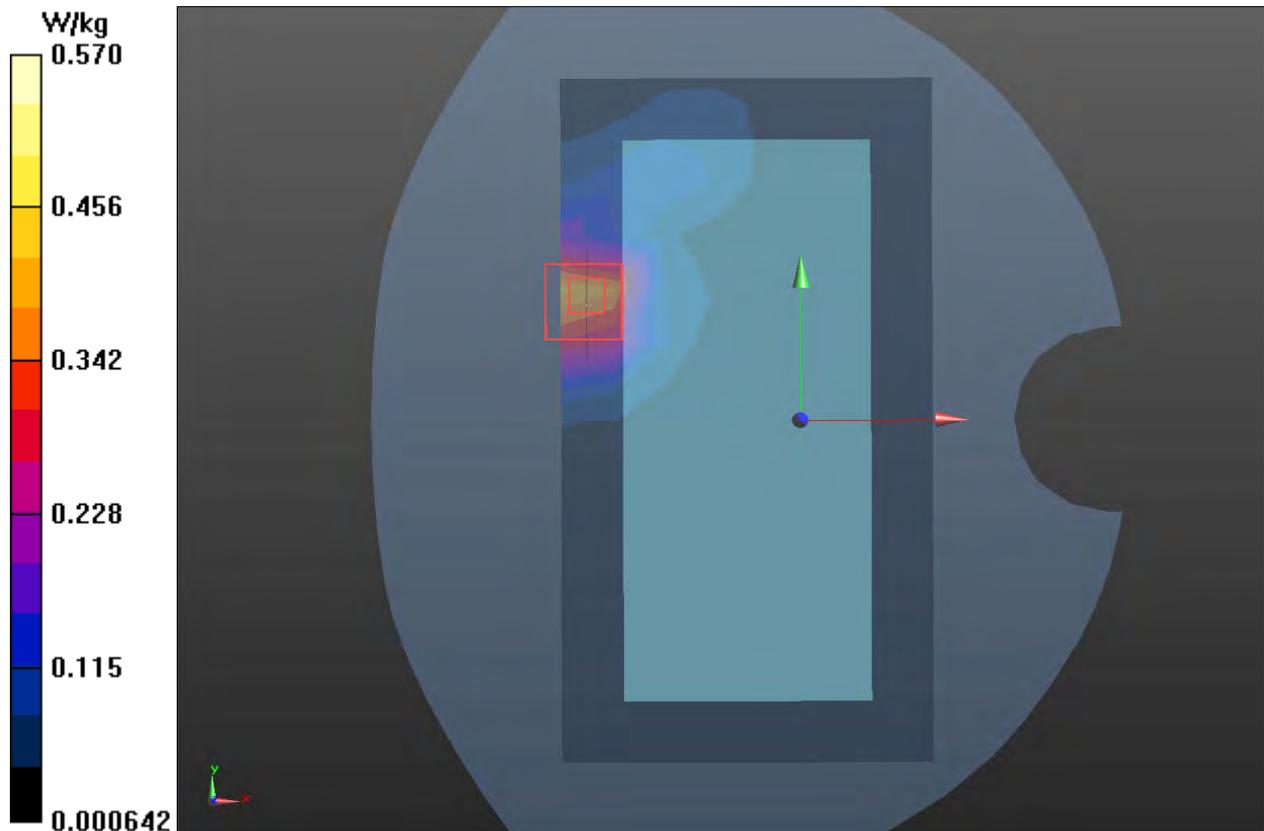
Back Side Low/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 1.332 V/m; Power Drift = -0.139 dB

Peak SAR (extrapolated) = 0.842 W/kg

SAR(1 g) = 0.264 W/kg; SAR(10 g) = 0.099 W/kg

Maximum value of SAR (measured) = 0.570 W/kg



Plot 67 802.11ac-VHT20 U-NII-2A Front Side Low (Distance 15mm ,Ant 4)

Date: 6/31/2021

Communication System: UID 0, 802.11ac VHT20 (0); Frequency: 5260 MHz;Duty Cycle: 1:1

Medium parameters used: $f = 5260$ MHz; $\sigma = 4.808$ S/m; $\epsilon_r = 36.877$; $\rho = 1000$ kg/m³

Ambient Temperature:22.3 °C Liquid Temperature: 21.5°C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(5.51, 5.51,5.51); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Front Side Low/Area Scan (12x21x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.914 W/kg

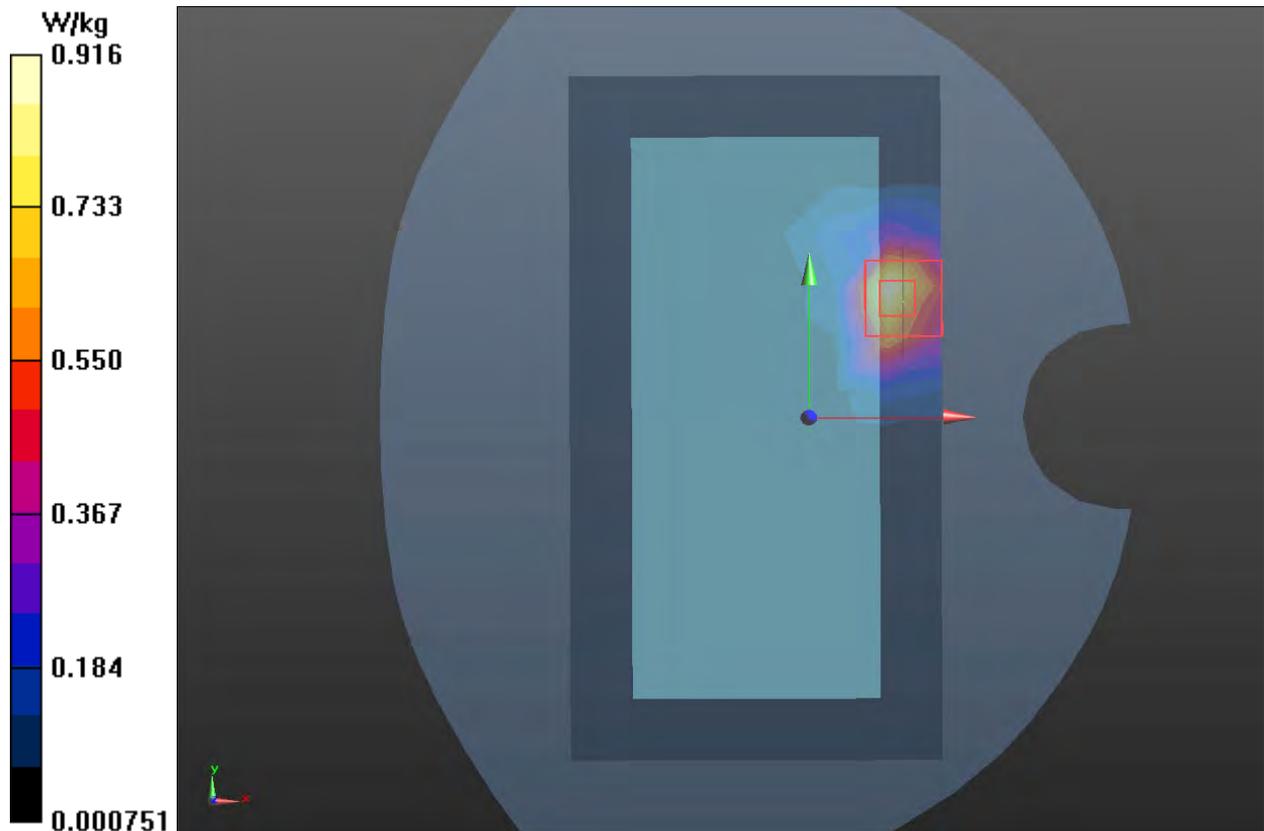
Front Side Low/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 1.395 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 1.48 W/kg

SAR(1 g) = 0.426 W/kg; SAR(10 g) = 0.164 W/kg

Maximum value of SAR (measured) = 0.916 W/kg



Plot 68 802.11ac-VHT80 U-NII-2C Back Side High (Distance 15mm ,Ant 4)

Date: 6/27/2021

Communication System: UID 0, 802.11ac VHT80 (0); Frequency: 5690 MHz;Duty Cycle: 1:1

Medium parameters used: $f = 5690$ MHz; $\sigma = 5.32$ S/m; $\epsilon_r = 35.498$; $\rho = 1000$ kg/m³

Ambient Temperature:22.3 °C Liquid Temperature: 21.5°C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(5.51, 5.51,5.51); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side High/Area Scan(12x21x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.427 W/kg

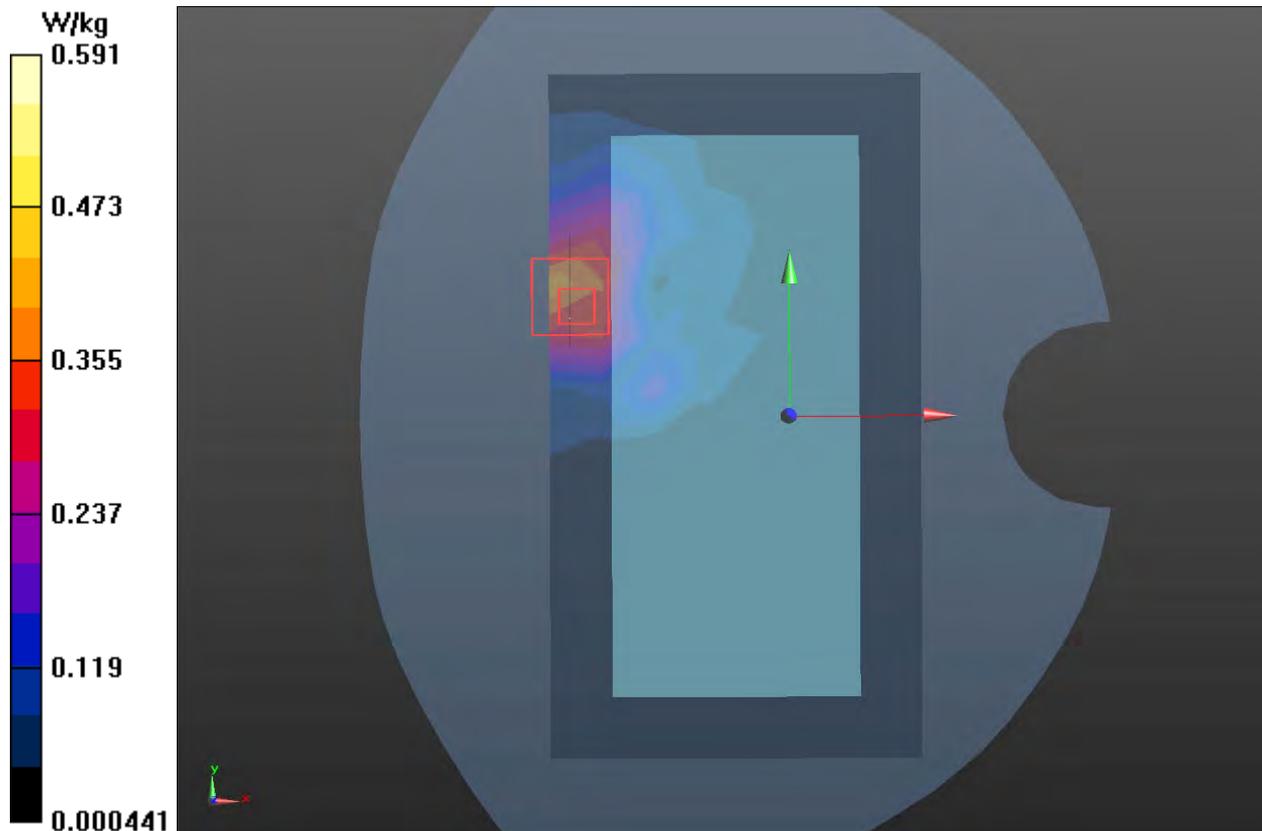
Back Side High/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 2.579 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 1.04 W/kg

SAR(1 g) = 0.153 W/kg; SAR(10 g) = 0.053 W/kg

Maximum value of SAR (measured) = 0.591 W/kg



Plot 69 802.11ax HE80 U-NII-3 Front Side Middle (Distance 15mm,Ant 4)

Date: 6/28/2021

Communication System: UID 0, 802.11ax (0); Frequency: 5775 MHz;Duty Cycle: 1:1

Medium parameters used: $f = 5775$ MHz; $\sigma = 5.46$ S/m; $\epsilon_r = 35.329$; $\rho = 1000$ kg/m³

Ambient Temperature:22.3 °C Liquid Temperature: 21.5°C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(4.95, 4.95,4.95); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Front Side Middle/Area Scan (12x21x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.399 W/kg

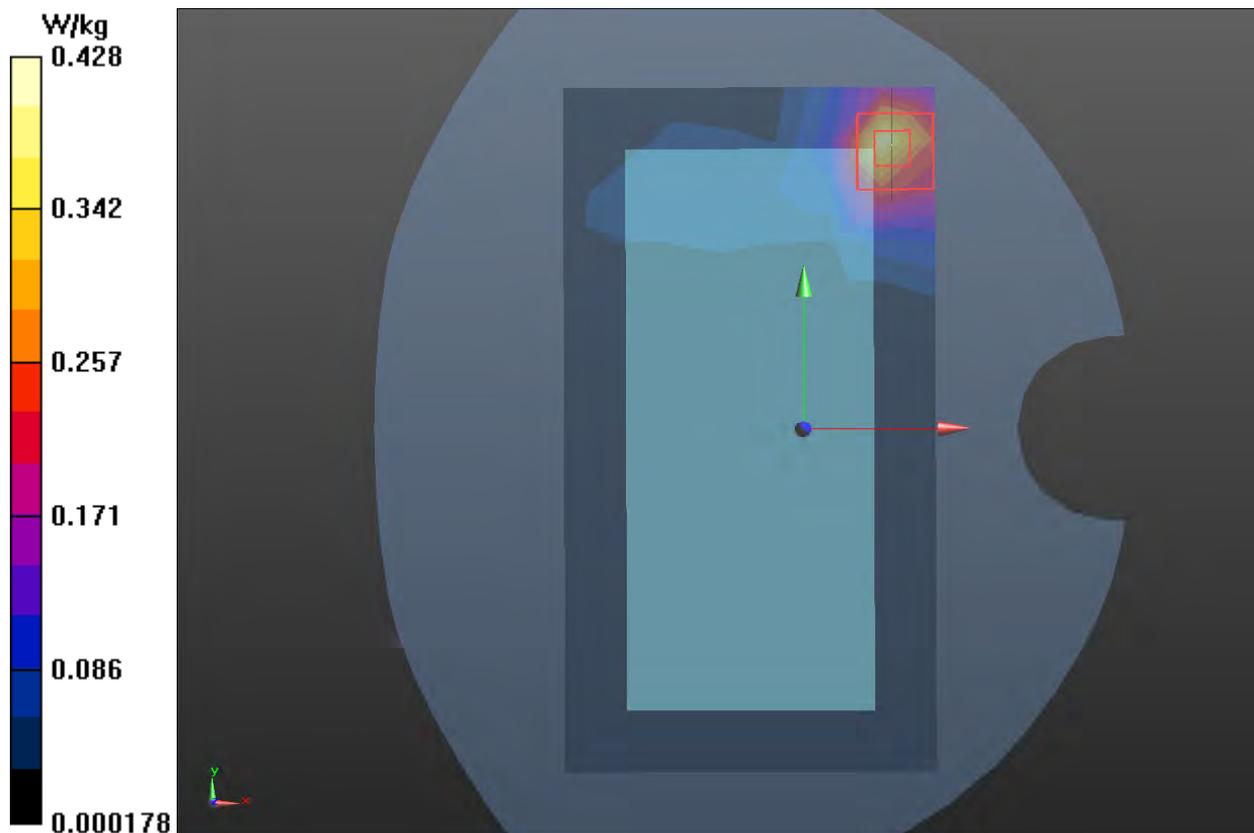
Front Side Middle/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 1.255 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 0.778 W/kg

SAR(1 g) = 0.185 W/kg; SAR(10 g) = 0.072 W/kg

Maximum value of SAR (measured) = 0.428 W/kg



Plot 70 802.11b Back Side Low (Distance 15mm, Ant 3)

Date: 6/24/2021

Communication System: UID 0, 802.11b (0); Frequency: 2412 MHz; Duty Cycle: 1:1.02

Medium parameters used: $f = 2412$ MHz; $\sigma = 1.801$ S/m; $\epsilon_r = 37.737$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.01, 8.01, 8.01); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side Low/Area Scan (10x18x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.411 W/kg

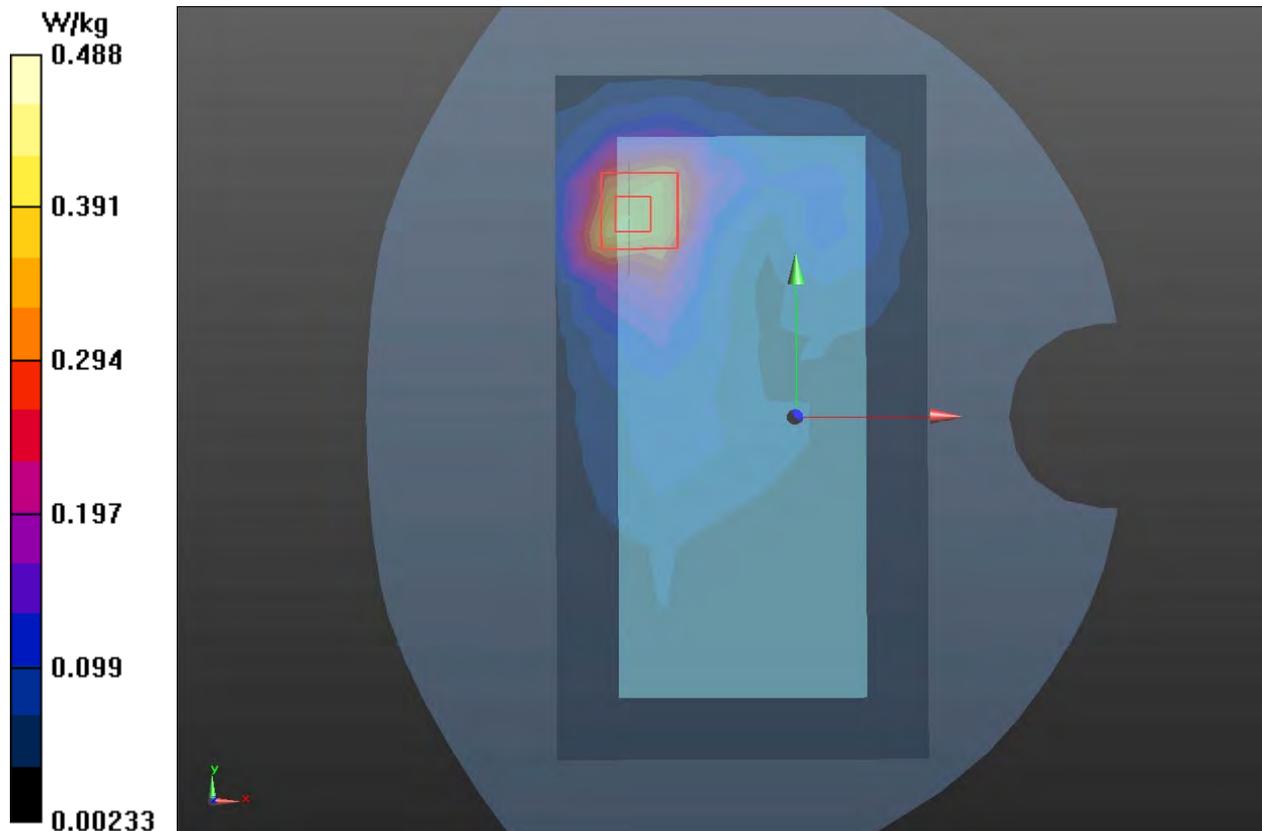
Back Side Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.760 V/m; Power Drift = 0.014 dB

Peak SAR (extrapolated) = 0.604 W/kg

SAR(1 g) = 0.198 W/kg; SAR(10 g) = 0.103 W/kg

Maximum value of SAR (measured) = 0.488 W/kg



Plot 71 802.11nHT40 U-NII-1 Back Side Low (Distance 15mm ,Ant 3)

Date: 6/31/2021

Communication System: UID 0, 802.11n HT40 (0); Frequency: 5190 MHz;Duty Cycle: 1:1

Medium parameters used: $f = 5190$ MHz; $\sigma = 4.79$ S/m; $\epsilon_r = 36.719$; $\rho = 1000$ kg/m³

Ambient Temperature:22.3 °C Liquid Temperature: 21.5°C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(5.51, 5.51,5.51); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side Low/Area Scan (12x21x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.764 W/kg

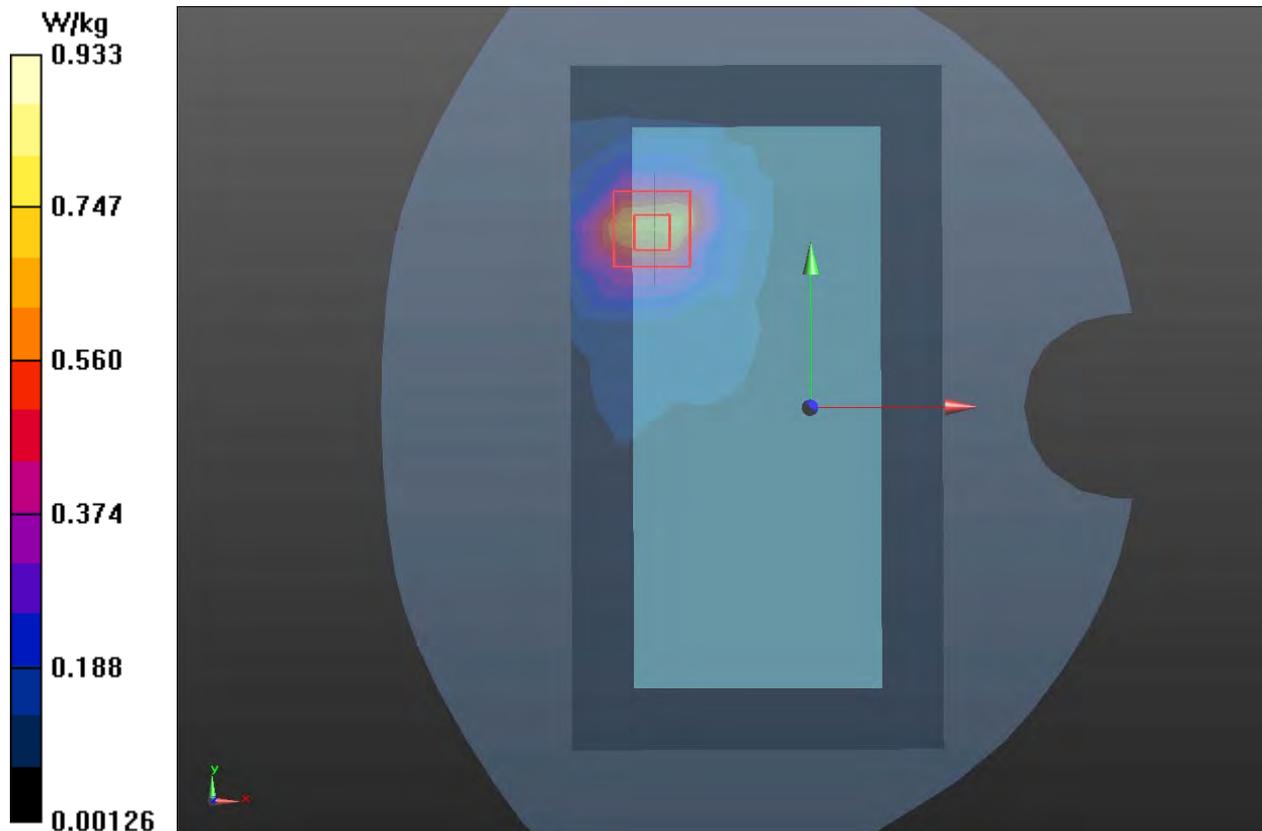
Back Side Low/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 2.537 V/m; Power Drift = 0.134 dB

Peak SAR (extrapolated) = 1.49 W/kg

SAR(1 g) = 0.352 W/kg; SAR(10 g) = 0.153 W/kg

Maximum value of SAR (measured) = 0.933 W/kg



Plot 72 802.11nHT20 U-NII-2A Back Side Low (Distance 15mm ,Ant 3)

Date: 6/31/2021

Communication System: UID 0, 802.11n HT20 (0); Frequency: 5260 MHz;Duty Cycle: 1:1

Medium parameters used: $f = 5260 \text{ MHz}$; $\sigma = 4.808 \text{ S/m}$; $\epsilon_r = 36.877$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature:22.3 °C Liquid Temperature: 21.5°C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(5.51, 5.51,5.51); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side Low/Area Scan(12x21x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.653 W/kg

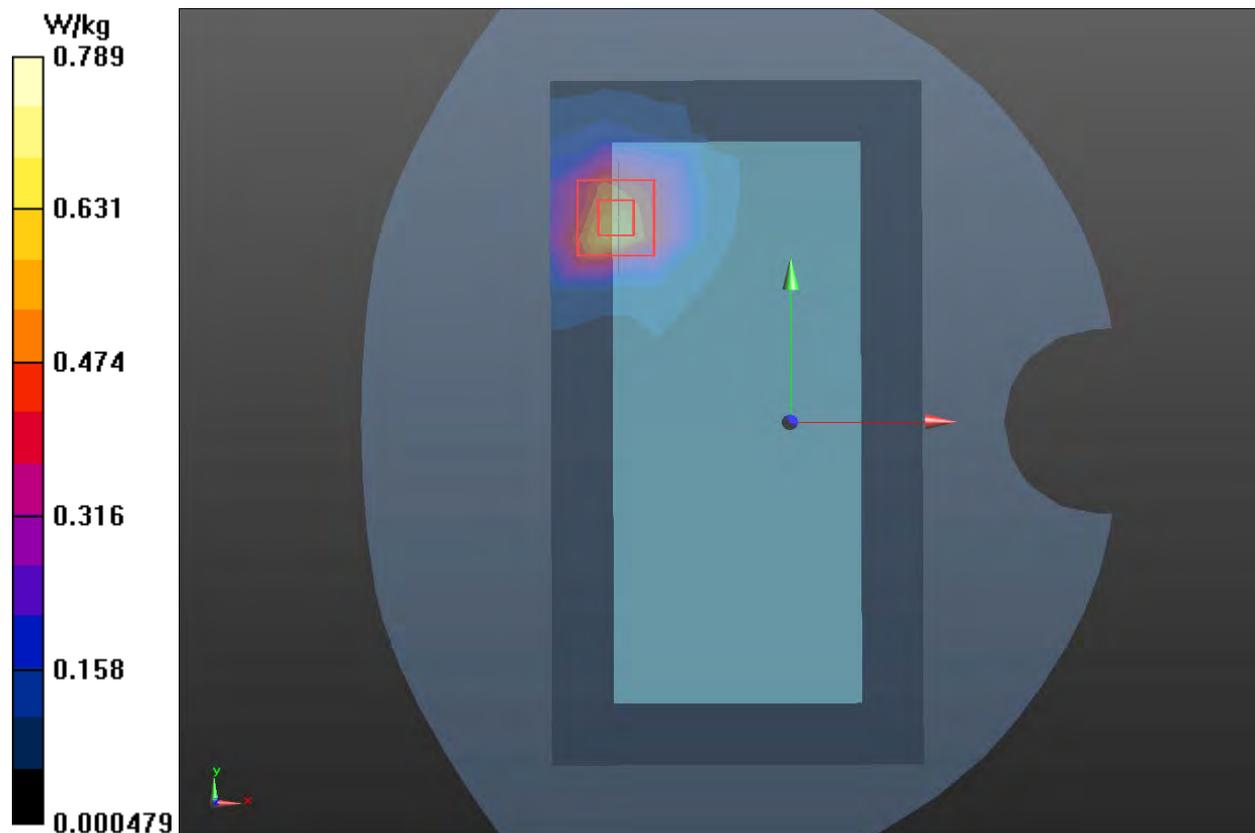
Back Side Low/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 1.369 V/m; Power Drift = 0.027 dB

Peak SAR (extrapolated) = 1.29 W/kg

SAR(1 g) = 0.326 W/kg; SAR(10 g) = 0.141 W/kg

Maximum value of SAR (measured) = 0.789 W/kg



Plot 73 802.11ac-VHT80 U-NII-2C Back Side High (Distance 15mm ,Ant 3)

Date: 6/27/2021

Communication System: UID 0, 802.11ac VHT80 (0); Frequency: 5690 MHz;Duty Cycle: 1:1

Medium parameters used: $f = 5690$ MHz; $\sigma = 5.32$ S/m; $\epsilon_r = 35.498$; $\rho = 1000$ kg/m³

Ambient Temperature:22.3 °C Liquid Temperature: 21.5°C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(5.51, 5.51,5.51); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side High/Area Scan (12x21x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.470 W/kg

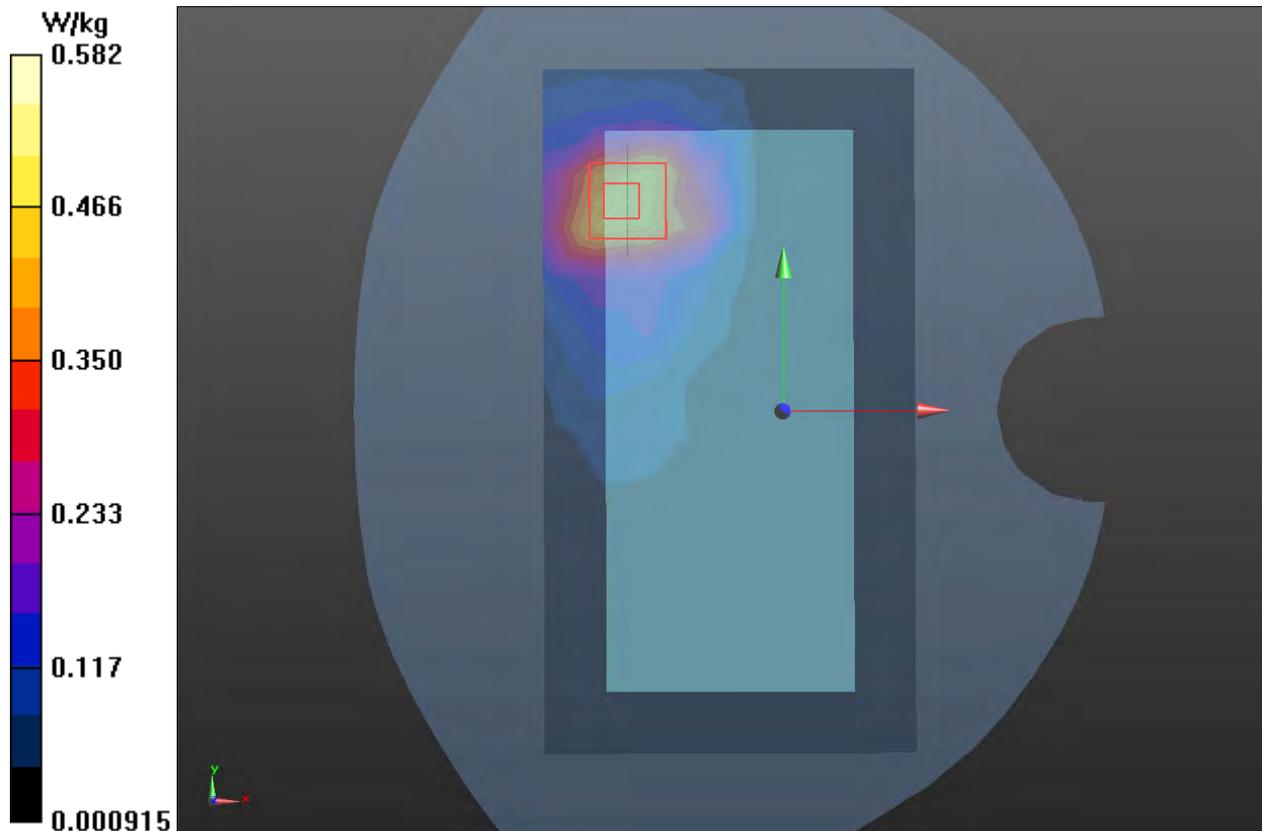
Back Side High/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 2.177 V/m; Power Drift = 0.089 dB

Peak SAR (extrapolated) = 1.03 W/kg

SAR(1 g) = 0.256 W/kg; SAR(10 g) = 0.107 W/kg

Maximum value of SAR (measured) = 0.582 W/kg



Plot 74 802.11ac-VHT80 U-NII-3 Back Side Middle (Distance 15mm,Ant 3)

Date: 6/28/2021

Communication System: UID 0, 802.11ac VHT80 (0); Frequency: 5775 MHz;Duty Cycle: 1:1

Medium parameters used: $f = 5775 \text{ MHz}$; $\sigma = 5.48 \text{ S/m}$; $\epsilon_r = 35.329$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature:22.3 °C Liquid Temperature: 21.5°C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(4.95, 4.95,4.95); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side Middle/Area Scan (12x21x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.301 W/kg

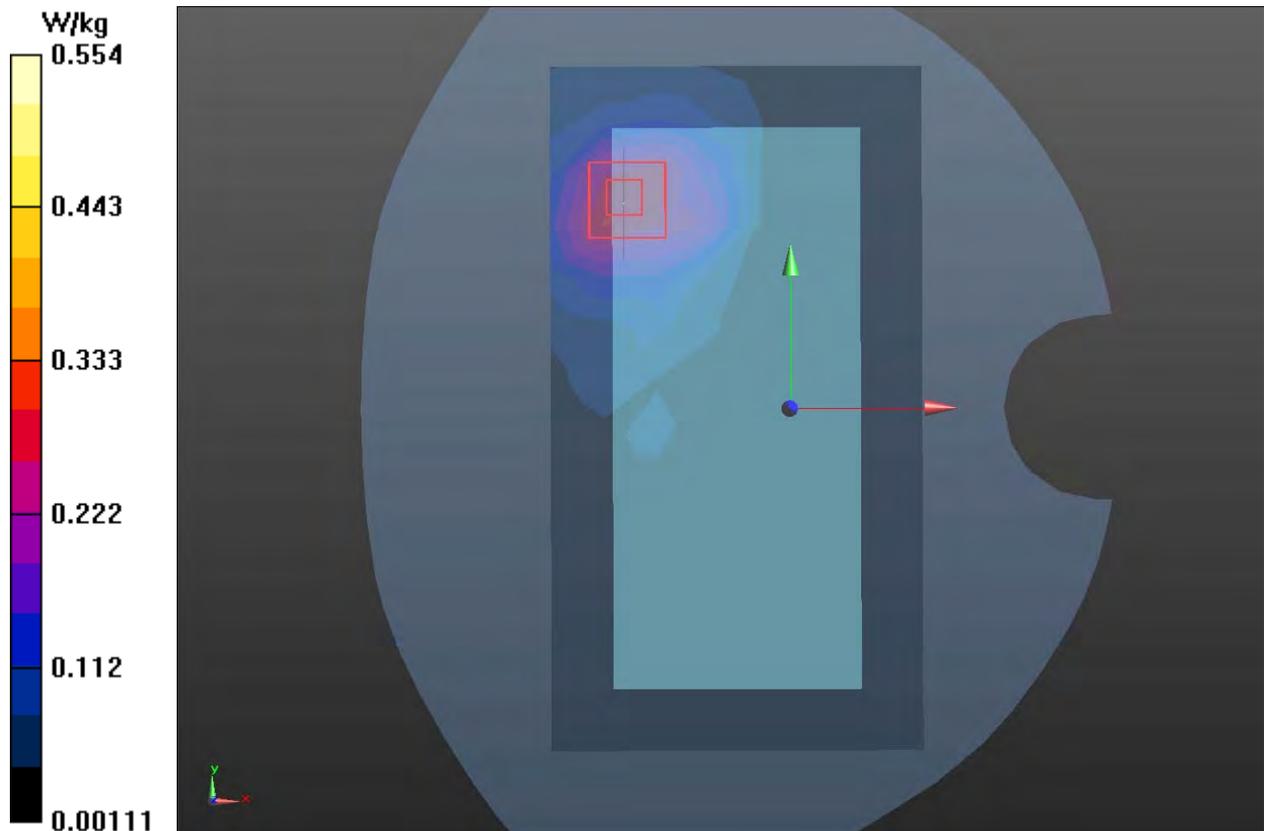
Back Side Middle/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 1.050 V/m; Power Drift = 0.071 dB

Peak SAR (extrapolated) = 0.949 W/kg

SAR(1 g) = 0.254 W/kg; SAR(10 g) = 0.086 W/kg

Maximum value of SAR (measured) = 0.554 W/kg



Plot 75 802.11n HT20 Back Side Low (Distance 15mm,MIMO)

Date: 6/24/2021

Communication System: UID 0, 802.11n HT20 (0); Frequency: 2412 MHz;Duty Cycle: 1:1.02

Medium parameters used: $f = 2412$ MHz; $\sigma = 1.801$ S/m; $\epsilon_r = 37.737$; $\rho = 1000$ kg/m³

Ambient Temperature:22.3 °C Liquid Temperature: 21.5°C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.01, 8.01, 8.01); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side Low/Area Scan (10x18x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.316 W/kg

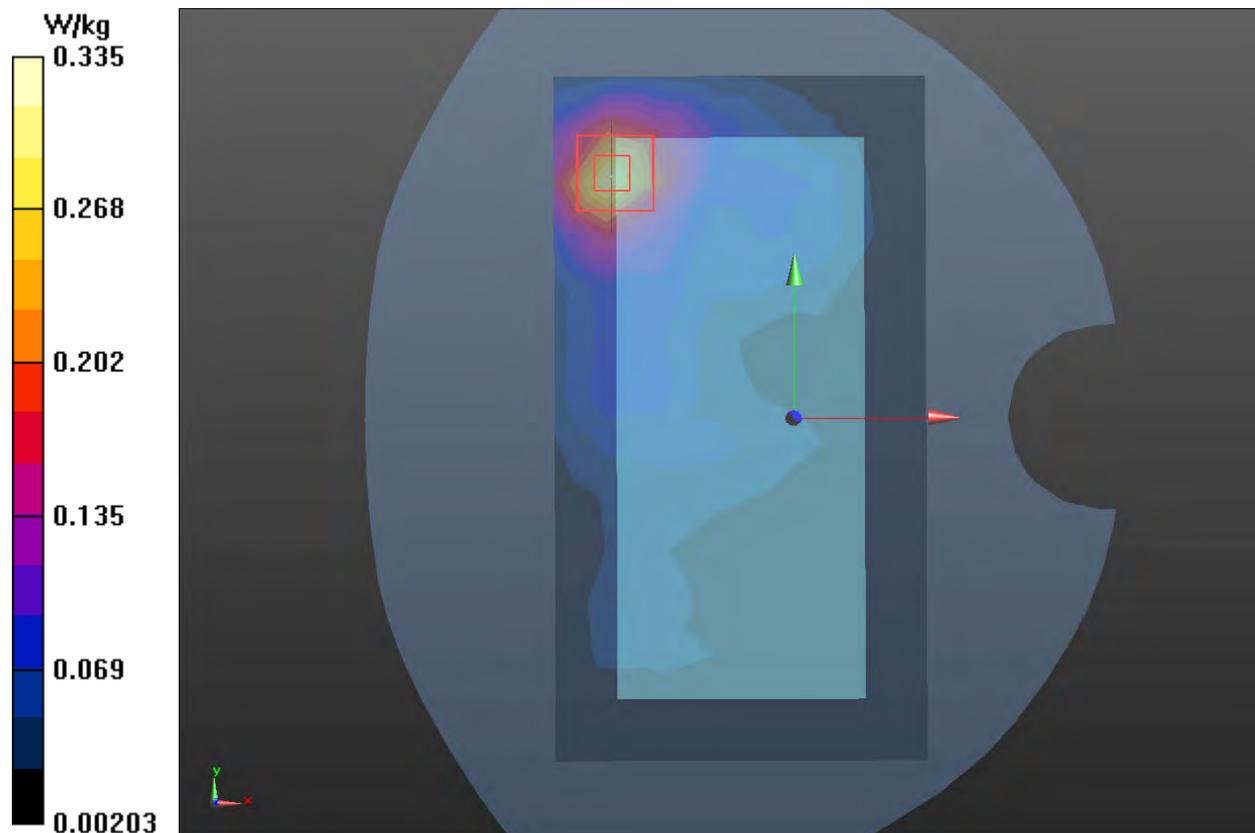
Back Side Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.044 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.414 W/kg

SAR(1 g) = 0.207 W/kg; SAR(10 g) = 0.108 W/kg

Maximum value of SAR (measured) = 0.335 W/kg



Plot 76802.11ac-VHT20 U-NII-1 Back Side Low (Distance 15mm ,MIMO)

Date: 6/31/2021

Communication System: UID 0, 802.11ac VHT20 (0); Frequency: 5180 MHz;Duty Cycle: 1:1

Medium parameters used: $f = 5180 \text{ MHz}$; $\sigma = 4.75 \text{ S/m}$; $\epsilon_r = 36.766$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature:22.3 °C Liquid Temperature: 21.5°C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(5.51, 5.51,5.51); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side Low/Area Scan(12x21x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.870 W/kg

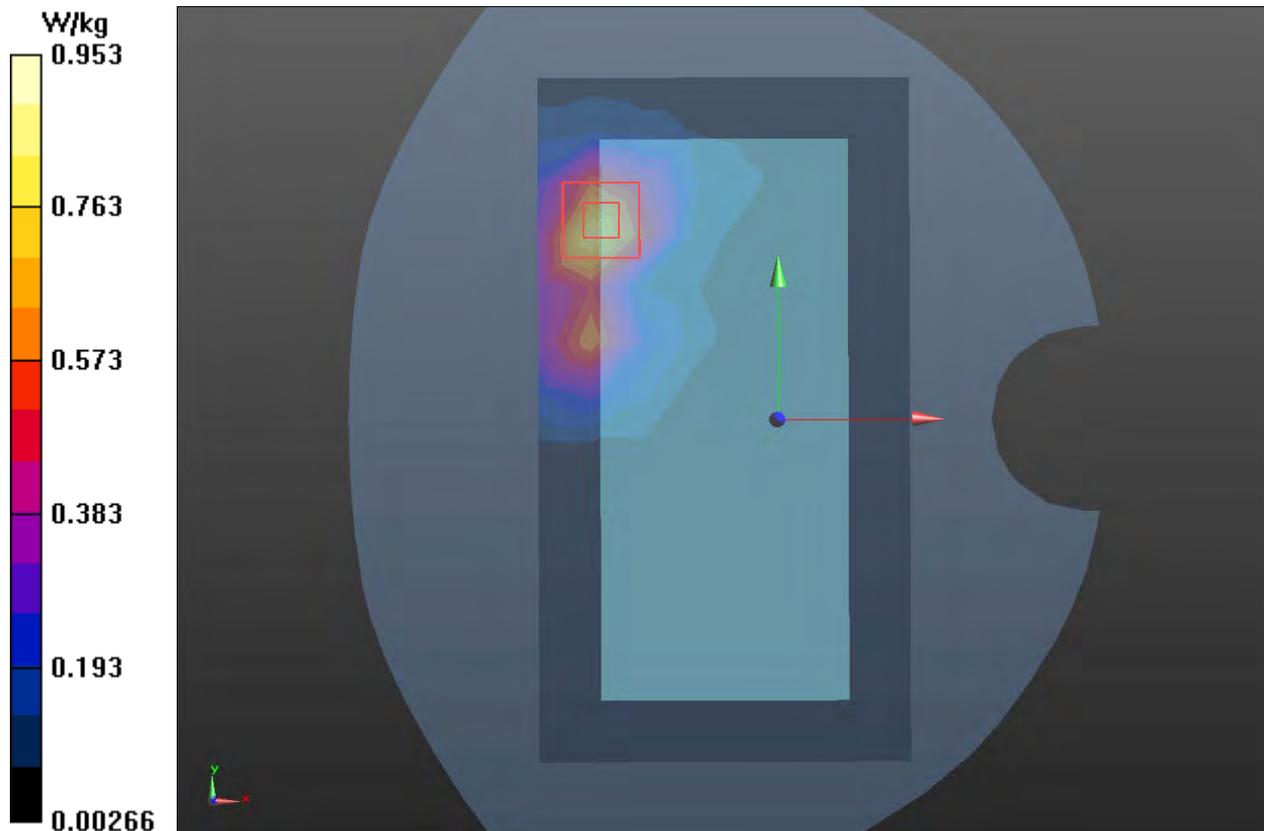
Back Side Low/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 1.818 V/m; Power Drift = 0.111 dB

Peak SAR (extrapolated) = 1.49 W/kg

SAR(1 g) = 0.406 W/kg; SAR(10 g) = 0.176 W/kg

Maximum value of SAR (measured) = 0.953 W/kg



Plot 77 802.11nHT20 U-NII-2A Back Side Low (Distance 15mm ,MIMO)

Date: 6/31/2021

Communication System: UID 0, 802.11n HT20 (0); Frequency: 5260 MHz;Duty Cycle: 1:1

Medium parameters used: $f = 5260 \text{ MHz}$; $\sigma = 4.808 \text{ S/m}$; $\epsilon_r = 36.877$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: $22.3 \text{ }^\circ\text{C}$ Liquid Temperature: $21.5 \text{ }^\circ\text{C}$

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(5.51, 5.51,5.51); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side Low/Area Scan (12x21x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (measured) = 0.854 W/kg

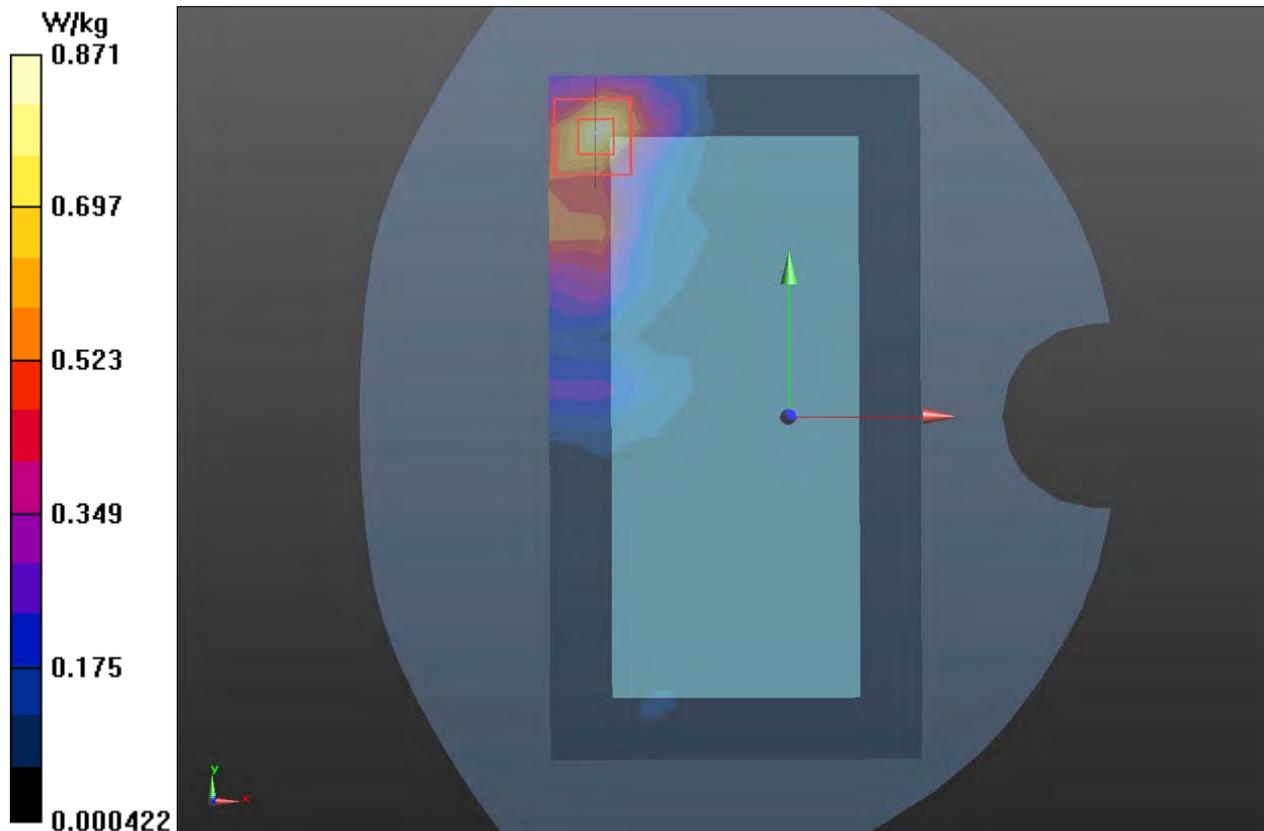
Back Side Low/Zoom Scan (7x7x12)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 2.554 V/m ; Power Drift = 0.013 dB

Peak SAR (extrapolated) = 1.40 W/kg

SAR(1 g) = 0.269 W/kg ; SAR(10 g) = 0.113 W/kg

Maximum value of SAR (measured) = 0.871 W/kg



Plot 78 802.11ac-VHT80 U-NII-2C Back Side High (Distance 15mm ,MIMO)

Date: 6/27/2021

Communication System: UID 0, 802.11ac VHT80 (0); Frequency: 5690 MHz;Duty Cycle: 1:1

Medium parameters used: $f = 5690$ MHz; $\sigma = 5.32$ S/m; $\epsilon_r = 35.498$; $\rho = 1000$ kg/m³

Ambient Temperature:22.3 °C Liquid Temperature: 21.5°C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(5.51, 5.51,5.51); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side High/Area Scan(12x21x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.748 W/kg

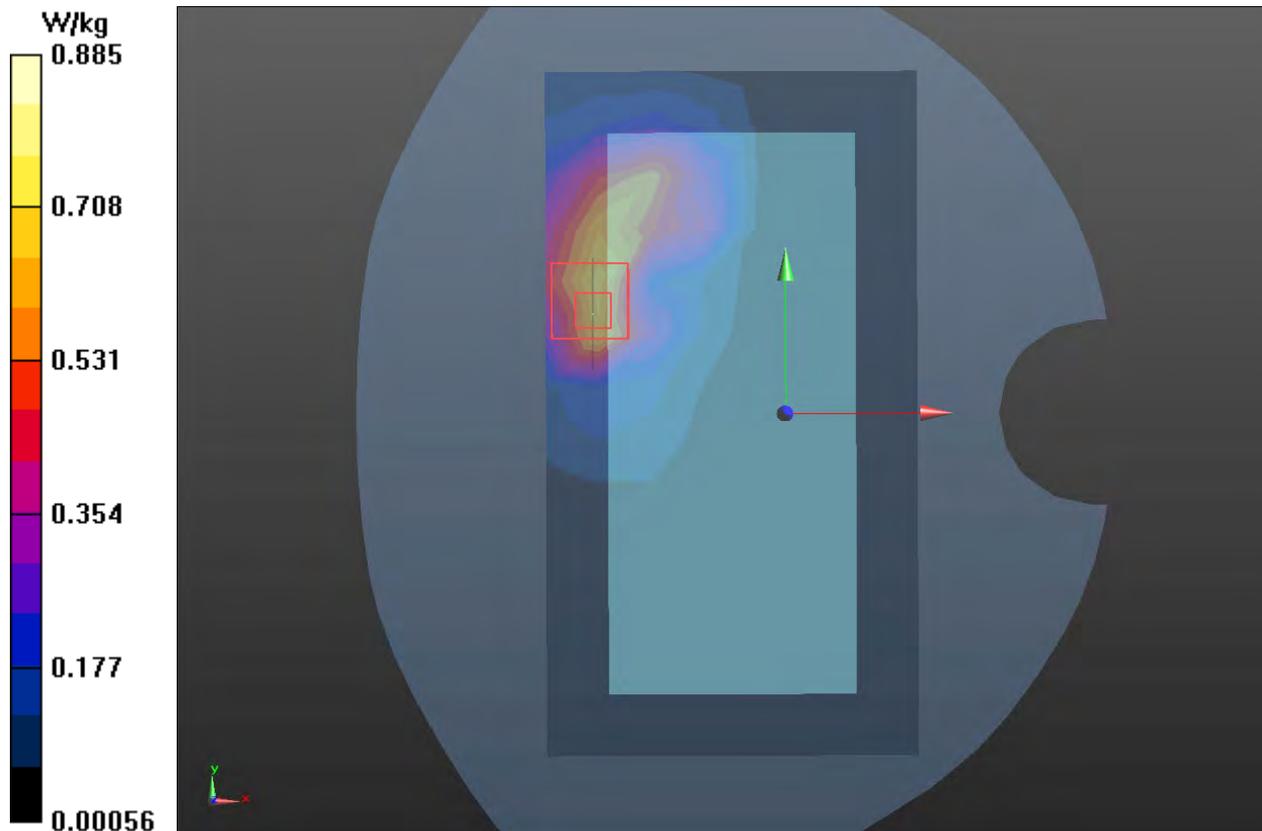
Back Side High/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 2.416 V/m; Power Drift = 0.109 dB

Peak SAR (extrapolated) = 1.61 W/kg

SAR(1 g) = 0.390 W/kg; SAR(10 g) = 0.150 W/kg

Maximum value of SAR (measured) = 0.885 W/kg



Plot 79 802.11ax 80 U-NII-3 Back Side Middle (Distance 15mm,MIMO)

Date: 6/28/2021

Communication System: UID 0, 802.11ax 80M (0); Frequency: 5775 MHz;Duty Cycle: 1:1

Medium parameters used: $f = 5775 \text{ MHz}$; $\sigma = 5.48 \text{ S/m}$; $\epsilon_r = 35.329$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature:22.3 °C Liquid Temperature: 21.5°C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(4.95, 4.95,4.95); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side Middle/Area Scan (12x21x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.844 W/kg

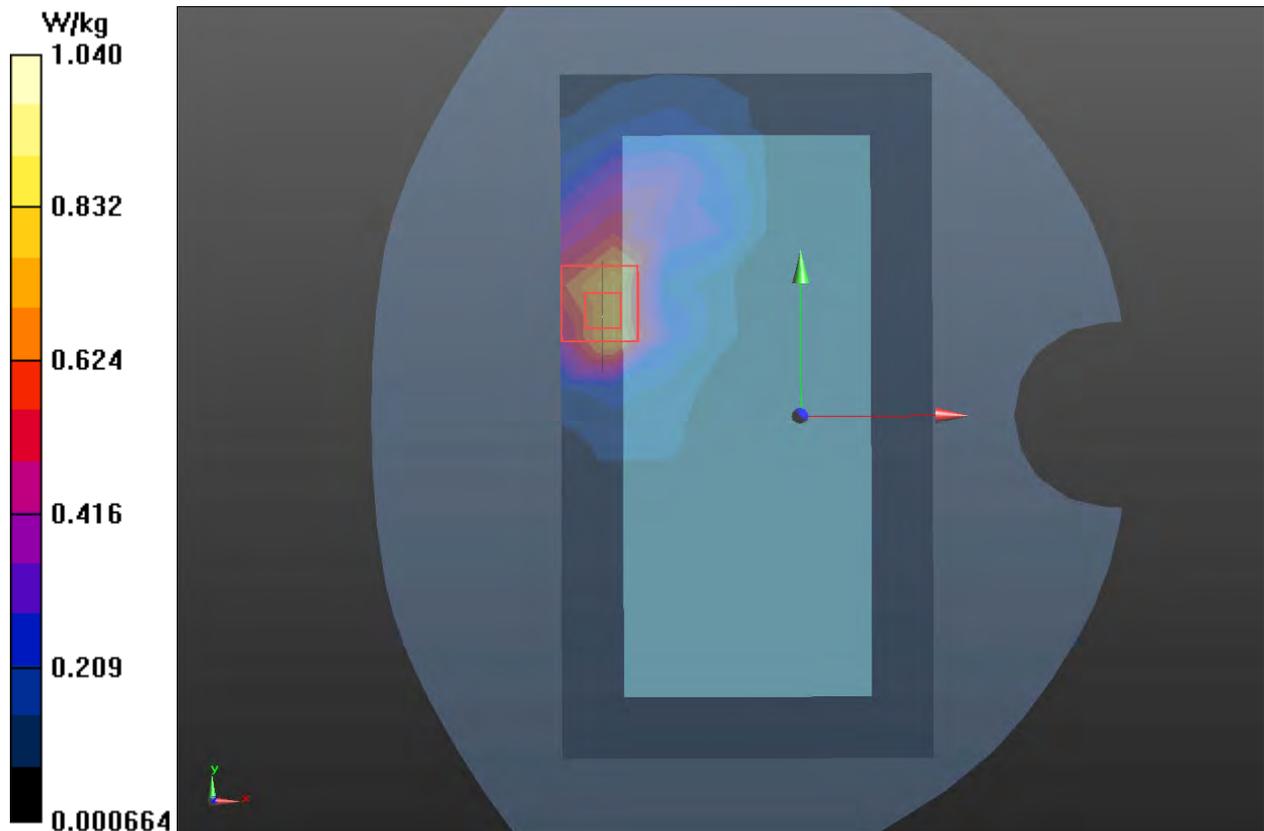
Back Side Middle/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 2.015 V/m; Power Drift = 0.18 dB

Peak SAR (extrapolated) = 1.79 W/kg

SAR(1 g) = 0.418 W/kg; SAR(10 g) = 0.177 W/kg

Maximum value of SAR (measured) = 1.04 W/kg



Plot 80 GSM 850 GPRS (3Txslots) Back Side Middle (Distance 10mm)

Date: 6/21/2021

Communication System: UID 0, GPRS 3TX (0); Frequency: 836.6 MHz; Duty Cycle: 1:2.77

Medium parameters used: $f = 836.6$ MHz; $\sigma = 0.923$ S/m; $\epsilon_r = 42.201$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(10.15, 10.15, 10.15); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side Middle/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.673 W/kg

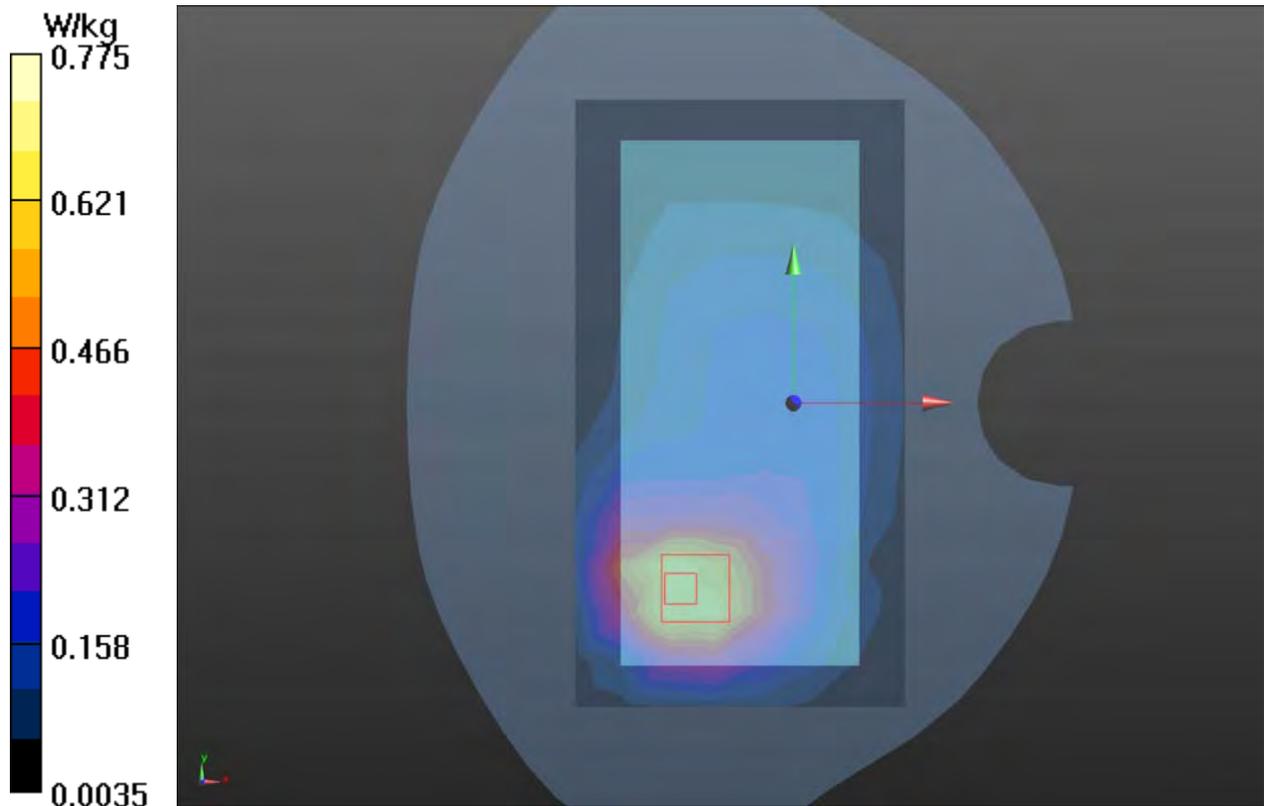
Back Side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.12 V/m; Power Drift = -0.064 dB

Peak SAR (extrapolated) = 0.952 W/kg

SAR(1 g) = 0.543 W/kg; SAR(10 g) = 0.340 W/kg

Maximum value of SAR (measured) = 0.775 W/kg



Plot 81 GSM 1900 GPRS (3Txslots) Back Side Middle (Distance 10mm)

Date: 6/16/2021

Communication System: UID 0, GPRS 3TX (0); Frequency: 1880 MHz; Duty Cycle: 1:2.77

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.42$ S/m; $\epsilon_r = 38.948$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.38, 8.38, 8.38); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side Middle/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.714 W/kg

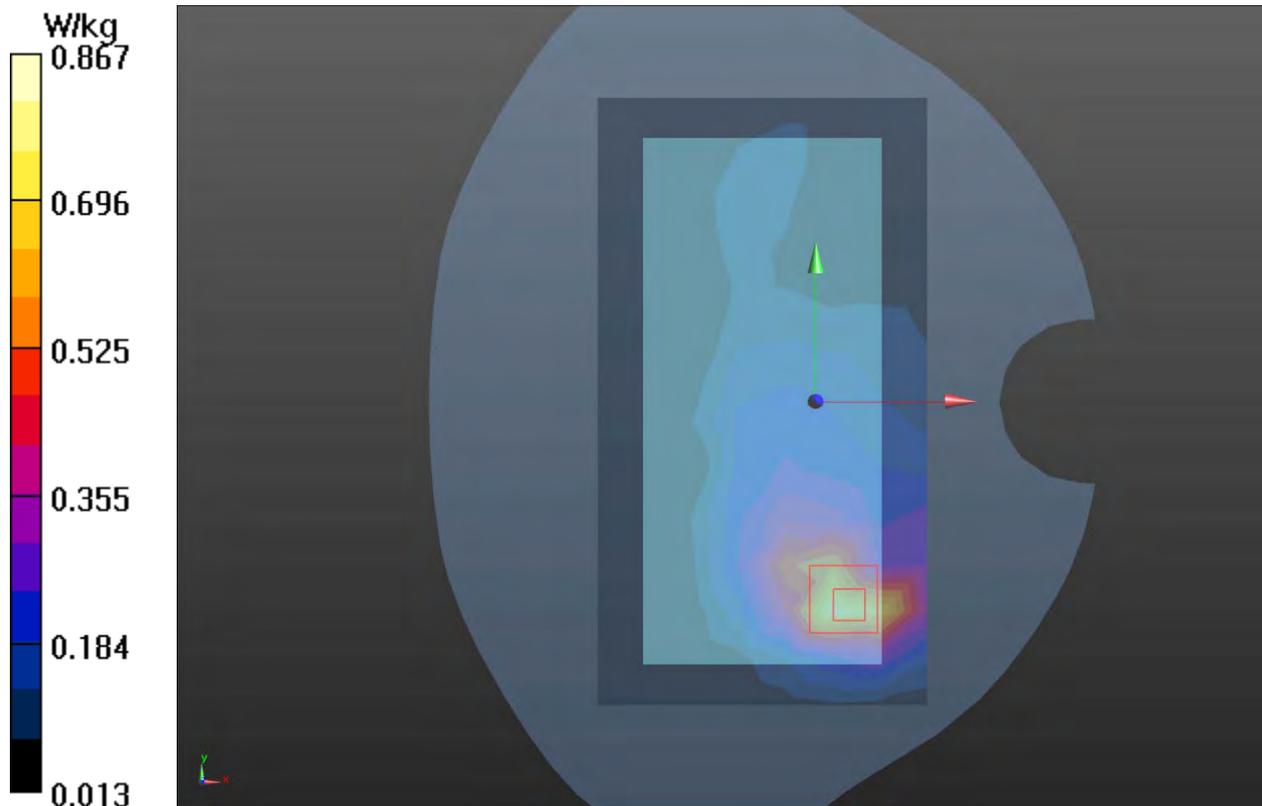
Back Side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.42 V/m; Power Drift = 0.036 dB

Peak SAR (extrapolated) = 1.07 W/kg

SAR(1 g) = 0.611 W/kg; SAR(10 g) = 0.338 W/kg

Maximum value of SAR (measured) = 0.867 W/kg



Plot 82 UMTS Band II Back Side Middle (Distance 10mm)

Date: 6/17/2021

Communication System: UID 0, WCDMA (0); Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.42$ S/m; $\epsilon_r = 38.948$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.38, 8.38, 8.38); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side Middle/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.770 W/kg

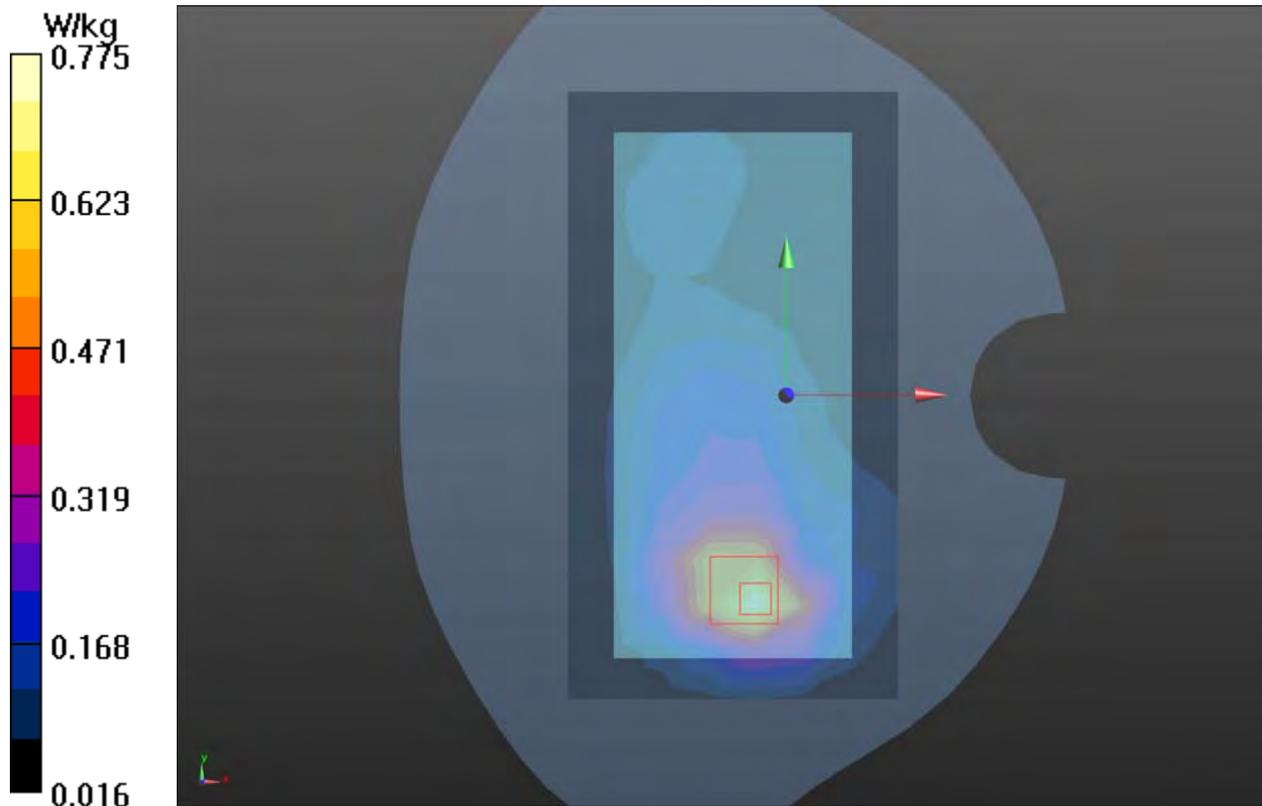
Back Side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.13 V/m; Power Drift = 0.012 dB

Peak SAR (extrapolated) = 1.26 W/kg

SAR(1 g) = 0.712 W/kg; SAR(10 g) = 0.404 W/kg

Maximum value of SAR (measured) = 0.775 W/kg



Plot 83 UMTS Band V Back Side Middle(Distance 10mm)

Date: 6/21/2021

Communication System: UID 0, WCDMA (0); Frequency: 836.6 MHz;Duty Cycle: 1:1

Medium parameters used: $f = 836.6$ MHz; $\sigma = 0.923$ S/m; $\epsilon_r = 42.201$; $\rho = 1000$ kg/m³

Ambient Temperature:22.3 °C Liquid Temperature: 21.5°C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(10.15, 10.15, 10.15); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side Middle/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.599 W/kg

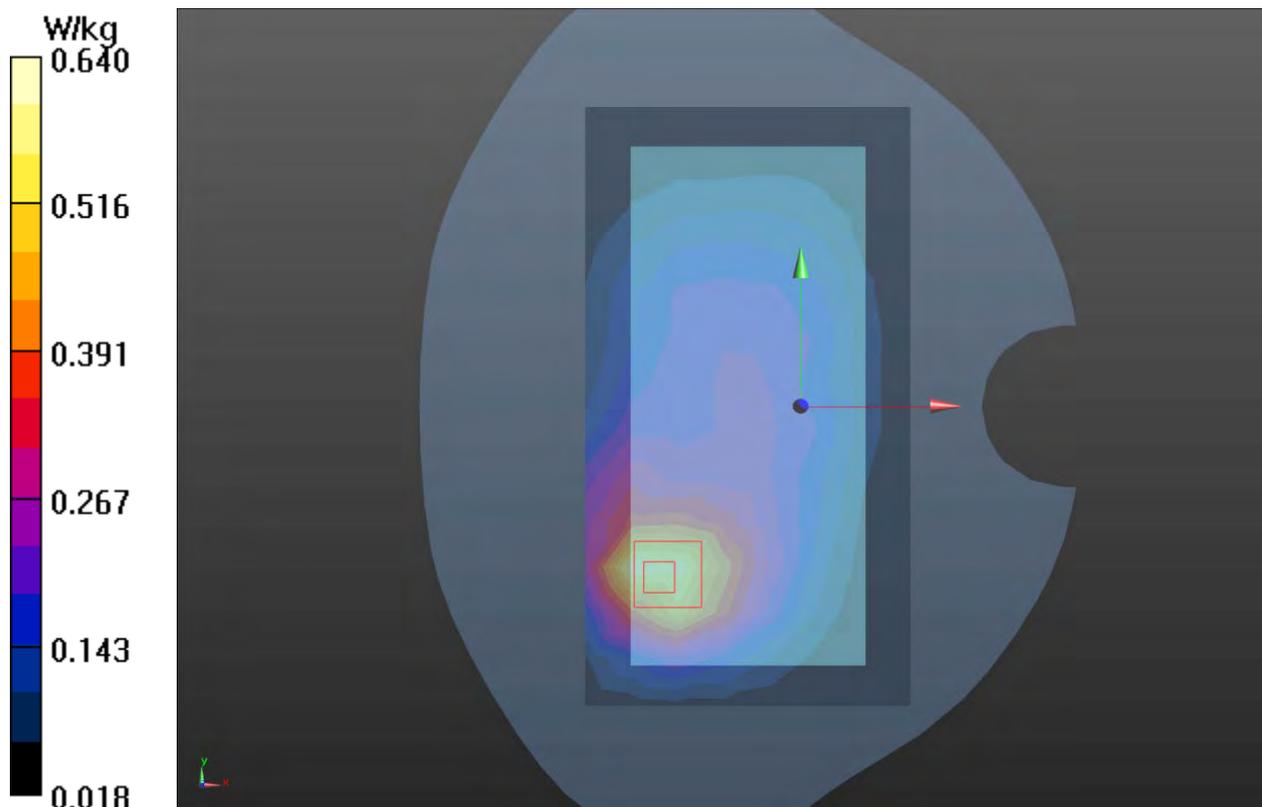
Back Side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.03 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 0.772 W/kg

SAR(1 g) = 0.449 W/kg; SAR(10 g) = 0.285 W/kg

Maximum value of SAR (measured) = 0.640 W/kg



Plot 84 LTE Band 2 1RB Back Side High (Distance 10mm)

Date: 6/17/2021

Communication System: UID 0, LTE (0); Frequency: 1900 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.434$ S/m; $\epsilon_r = 38.861$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.38, 8.38, 8.38); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side High/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 1.02 W/kg

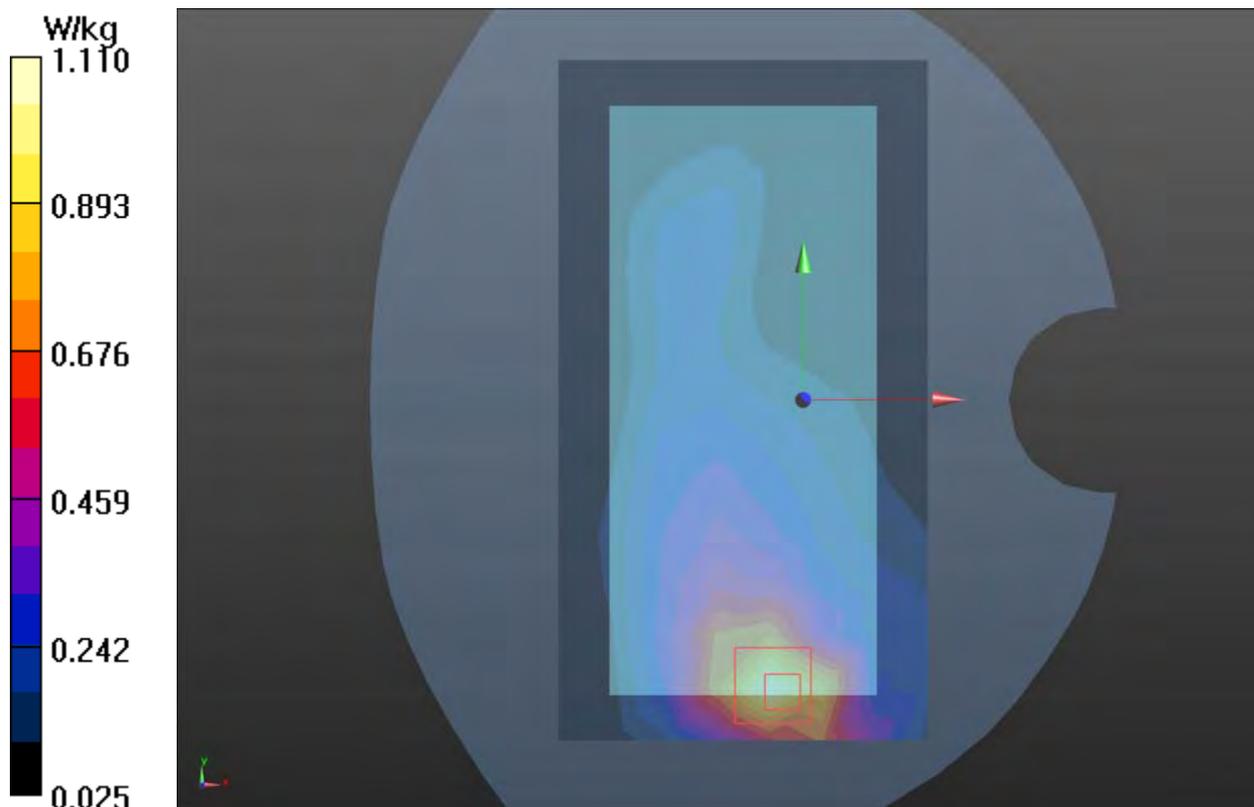
Back Side High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.43 V/m; Power Drift = 0.024 dB

Peak SAR (extrapolated) = 1.38 W/kg

SAR(1 g) = 0.781 W/kg; SAR(10 g) = 0.449 W/kg

Maximum value of SAR (measured) = 1.11 W/kg



Plot 85 LTE Band 4 1RB Back Side High (Distance 10mm)

Date: 6/25/2021

Communication System: UID 0, LTE (0); Frequency: 1745 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1745$ MHz; $\sigma = 1.323$ S/m; $\epsilon_r = 39.378$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.76, 8.76, 8.76); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side High/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 1.18 W/kg

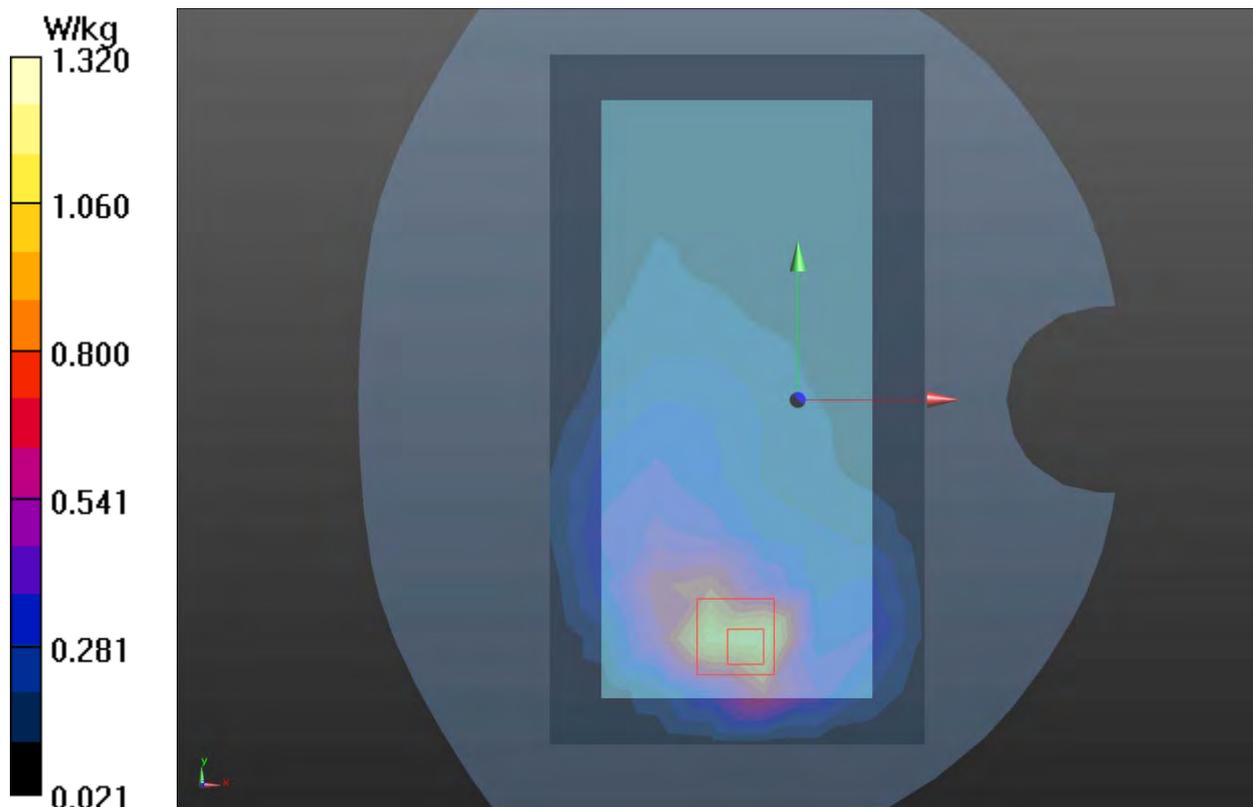
Back Side High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.76 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 1.86 W/kg

SAR(1 g) = 0.661 W/kg; SAR(10 g) = 0.371 W/kg

Maximum value of SAR (measured) = 1.32 W/kg



Plot 86 LTE Band 5 1RB Back Side High (Distance 10mm)

Date: 6/22/2021

Communication System: UID 0, LTE (0); Frequency: 844 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 844 \text{ MHz}$; $\sigma = 0.928 \text{ S/m}$; $\epsilon_r = 42.206$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: $22.3 \text{ }^\circ\text{C}$ Liquid Temperature: $21.5 \text{ }^\circ\text{C}$

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(10.15, 10.15, 10.15); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side High/Area Scan (8x14x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.678 W/kg

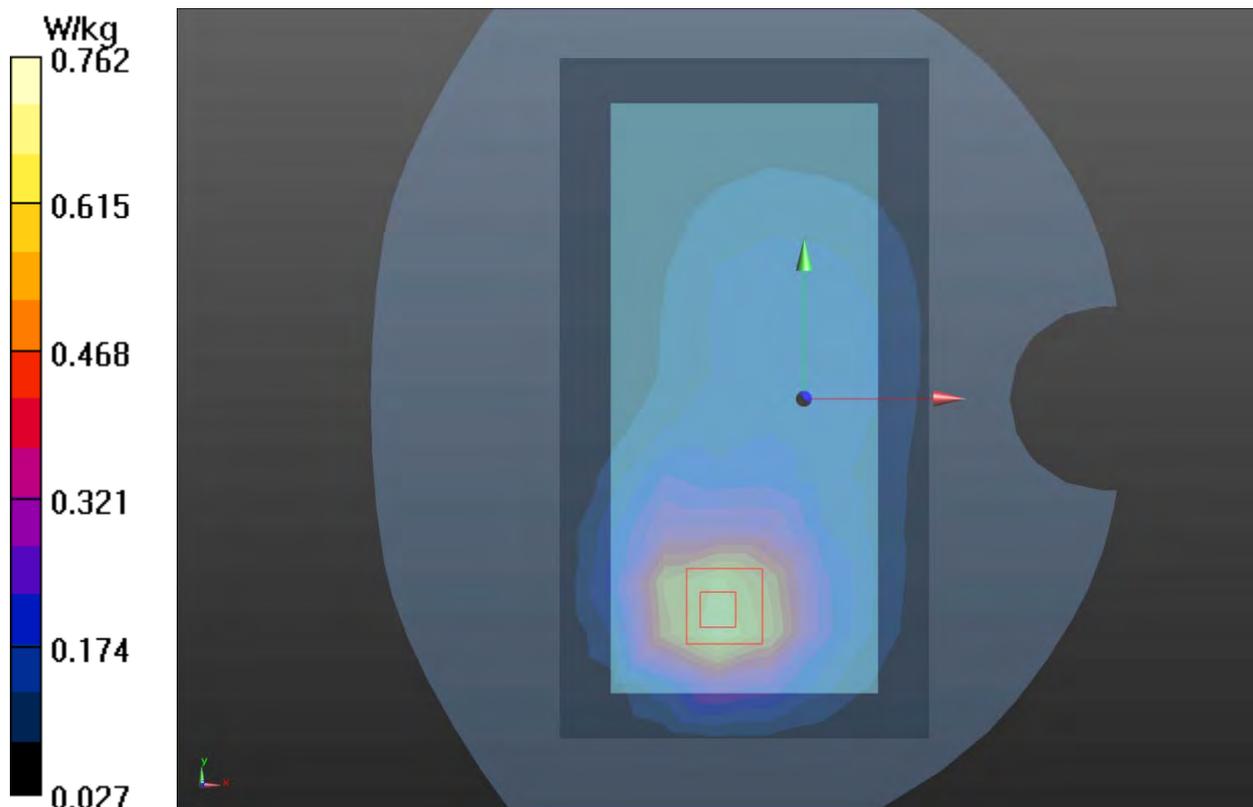
Back Side High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 11.64 V/m ; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 0.928 W/kg

SAR(1 g) = 0.536 W/kg ; SAR(10 g) = 0.334 W/kg

Maximum value of SAR (measured) = 0.762 W/kg



Plot 87 LTE Band 7 1RB Bottom Edge High (Distance 10mm)

Date: 6/20/2021

Communication System: UID 0, LTE (0); Frequency: 2560 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2560$ MHz; $\sigma = 1.971$ S/m; $\epsilon_r = 37.231$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(7.71, 7.71, 7.71); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Bottom Edge High/Area Scan (5x10x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 1.08 W/kg

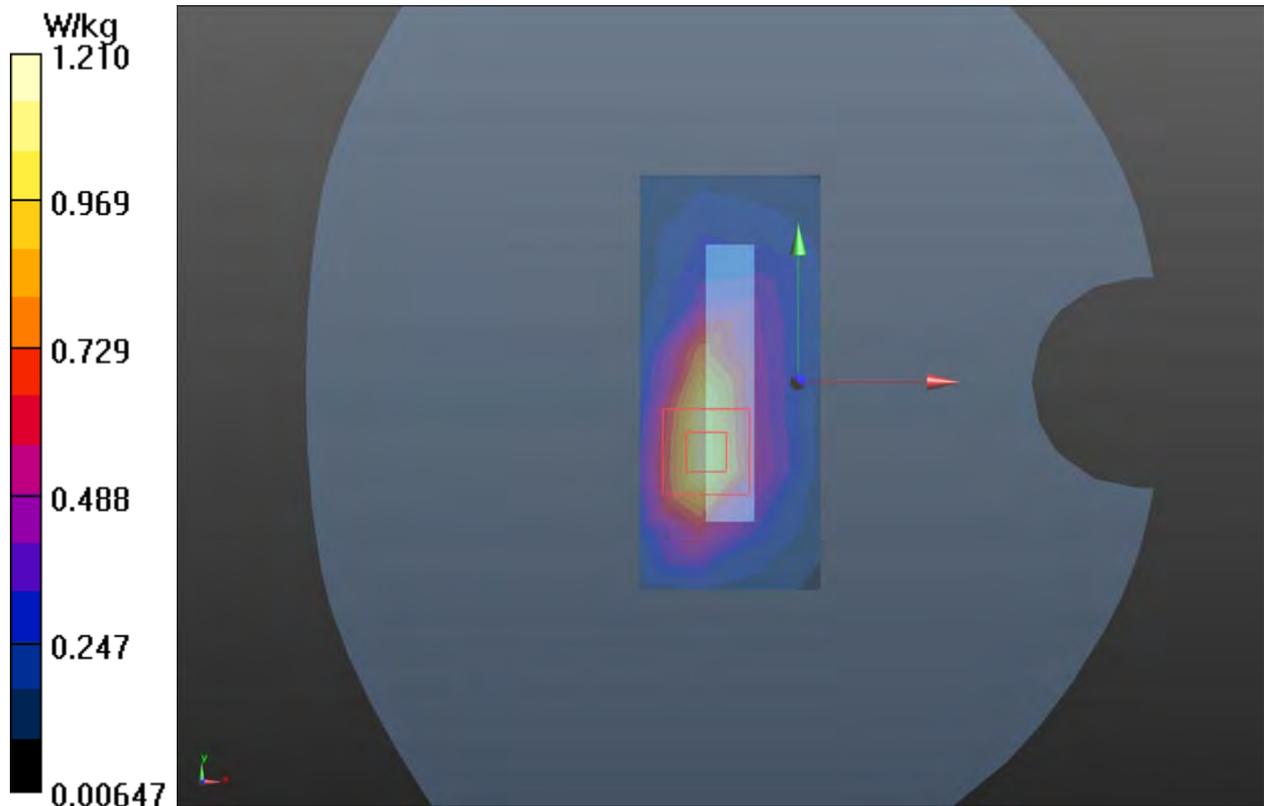
Bottom Edge High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 20.50 V/m; Power Drift = 0.025 dB

Peak SAR (extrapolated) = 1.50 W/kg

SAR(1 g) = 0.732 W/kg; SAR(10 g) = 0.368 W/kg

Maximum value of SAR (measured) = 1.21 W/kg



Plot 88 LTE Band 12 1RB Back Side Middle (Distance 10mm)

Date: 6/14/2021

Communication System: UID 0, LTE (0); Frequency: 707.5 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 707.5$ MHz; $\sigma = 0.848$ S/m; $\epsilon_r = 42.763$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(10.48, 10.48, 10.48); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side Middle/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.349 W/kg

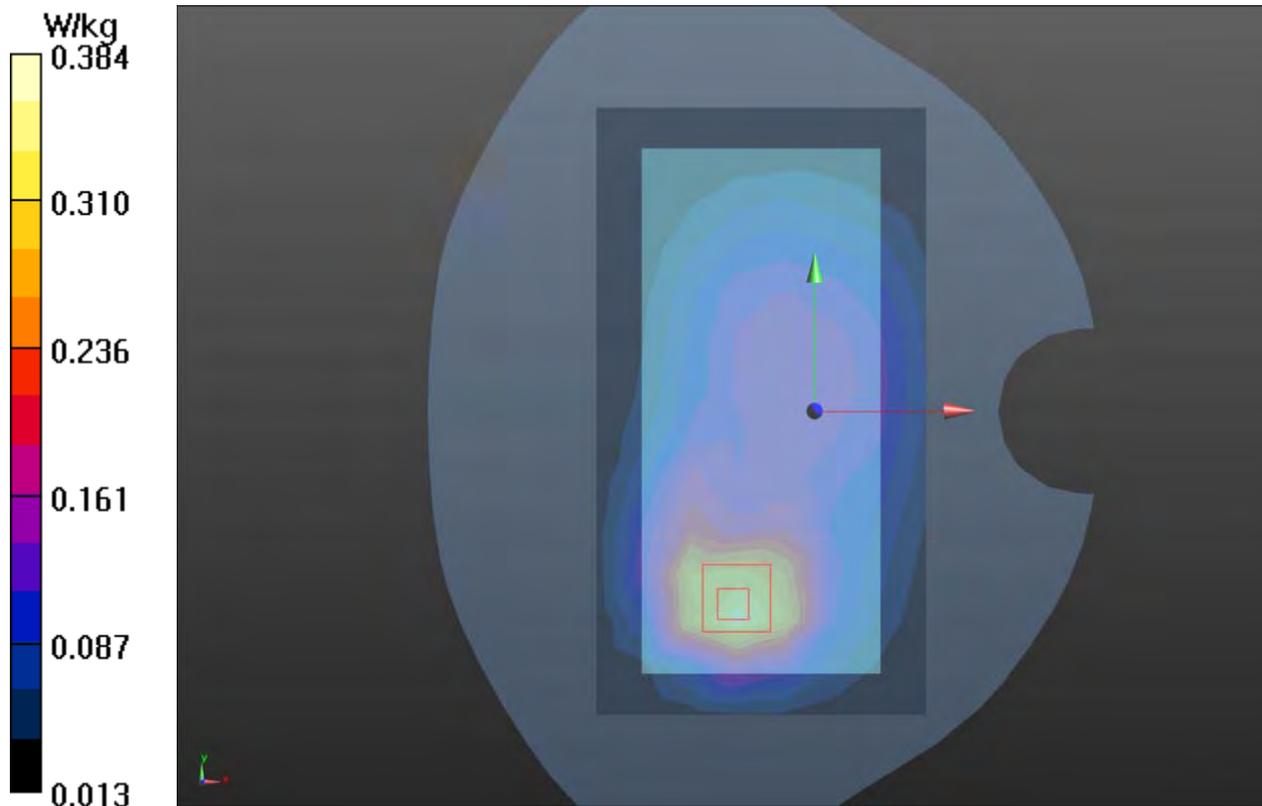
Back Side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.21 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 0.456 W/kg

SAR(1 g) = 0.269 W/kg; SAR(10 g) = 0.173 W/kg

Maximum value of SAR (measured) = 0.384 W/kg



Plot 89 LTE Band 26 1RB Back Side Middle (Distance 10mm)

Date: 6/22/2021

Communication System: UID 0, LTE (0); Frequency: 831.5 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 831.5$ MHz; $\sigma = 0.919$ S/m; $\epsilon_r = 42.185$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(10.15, 10.15, 10.15); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side Middle/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.598 W/kg

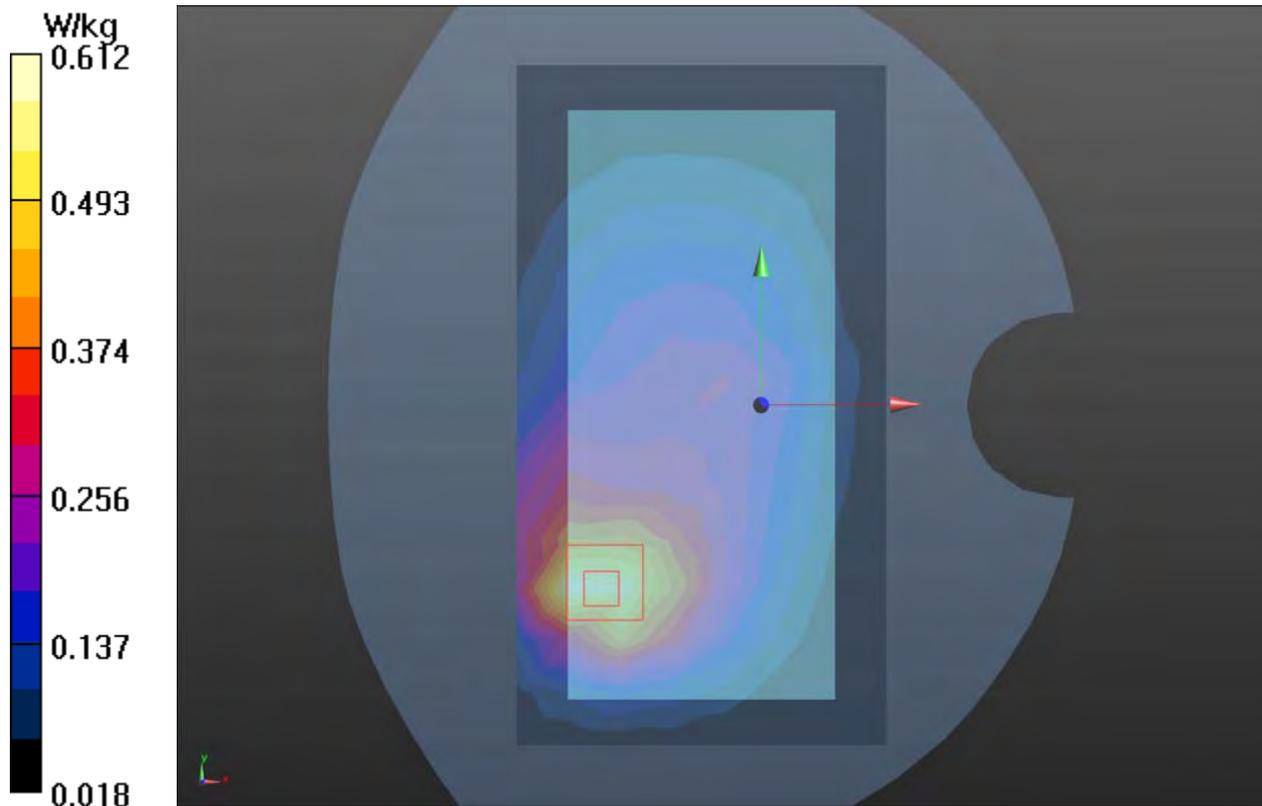
Back Side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.47 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 0.734 W/kg

SAR(1 g) = 0.435 W/kg; SAR(10 g) = 0.278 W/kg

Maximum value of SAR (measured) = 0.612 W/kg



Plot 90 LTE Band 38 1RB Front Side High (Distance 10mm)

Date: 6/20/2021

Communication System: UID 0, LTE (0); Frequency: 2610 MHz; Duty Cycle: 1:1.58

Medium parameters used: $f = 2610$ MHz; $\sigma = 2.027$ S/m; $\epsilon_r = 37.056$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(7.71, 7.71, 7.71); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Front Side High/Area Scan (10x18x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 1.01 W/kg

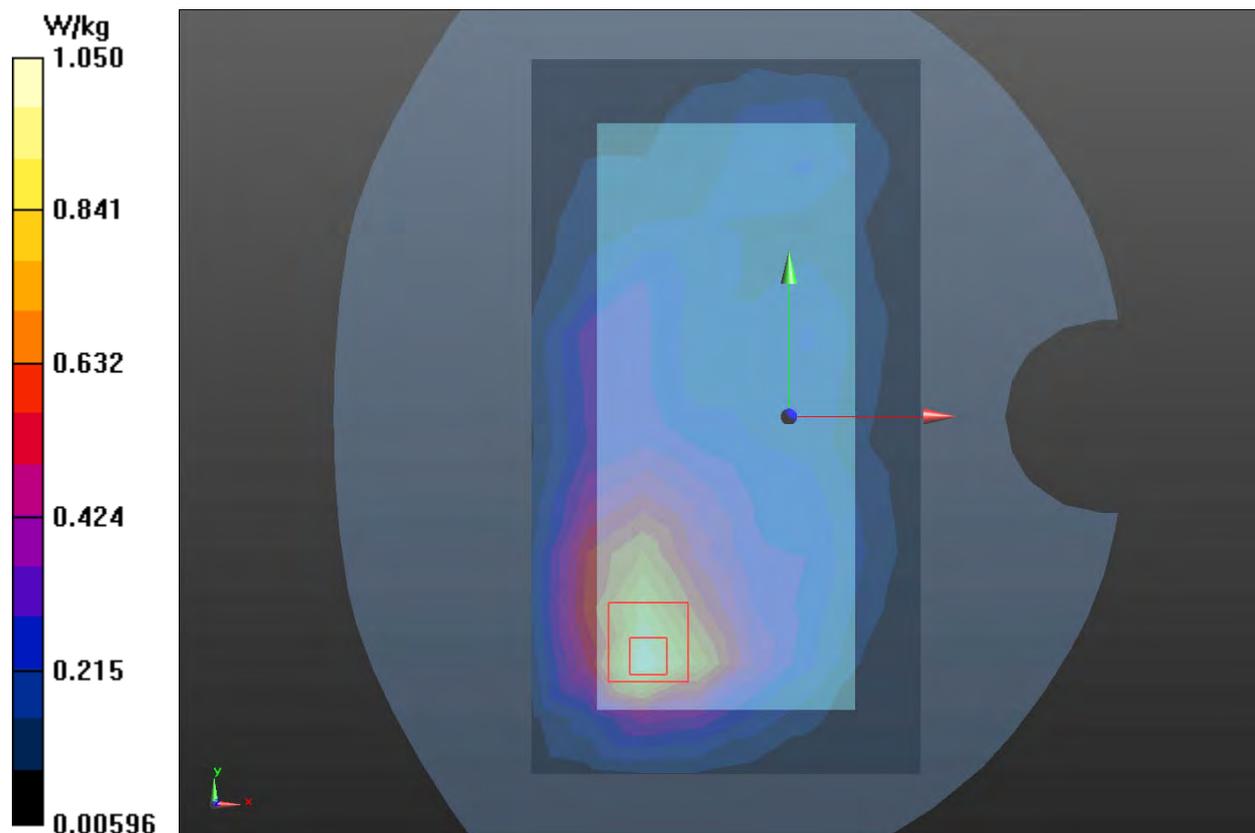
Front Side High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.67 V/m; Power Drift = -0.05dB

Peak SAR (extrapolated) = 1.32 W/kg

SAR(1 g) = 0.664 W/kg; SAR(10 g) = 0.350 W/kg

Maximum value of SAR (measured) = 1.05 W/kg



Plot 91 LTE Band 41 50%RB Front Side Middle (Distance 10mm)

Date: 6/20/2021

Communication System: UID 0, LTE (0); Frequency: 2549.5 MHz; Duty Cycle: 1:1.58

Medium parameters used (interpolated): $f = 2549.5$ MHz; $\sigma = 1.958$ S/m; $\epsilon_r = 37.264$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(7.71, 7.71, 7.71); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Front Side Middle/Area Scan (10x18x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.884 W/kg

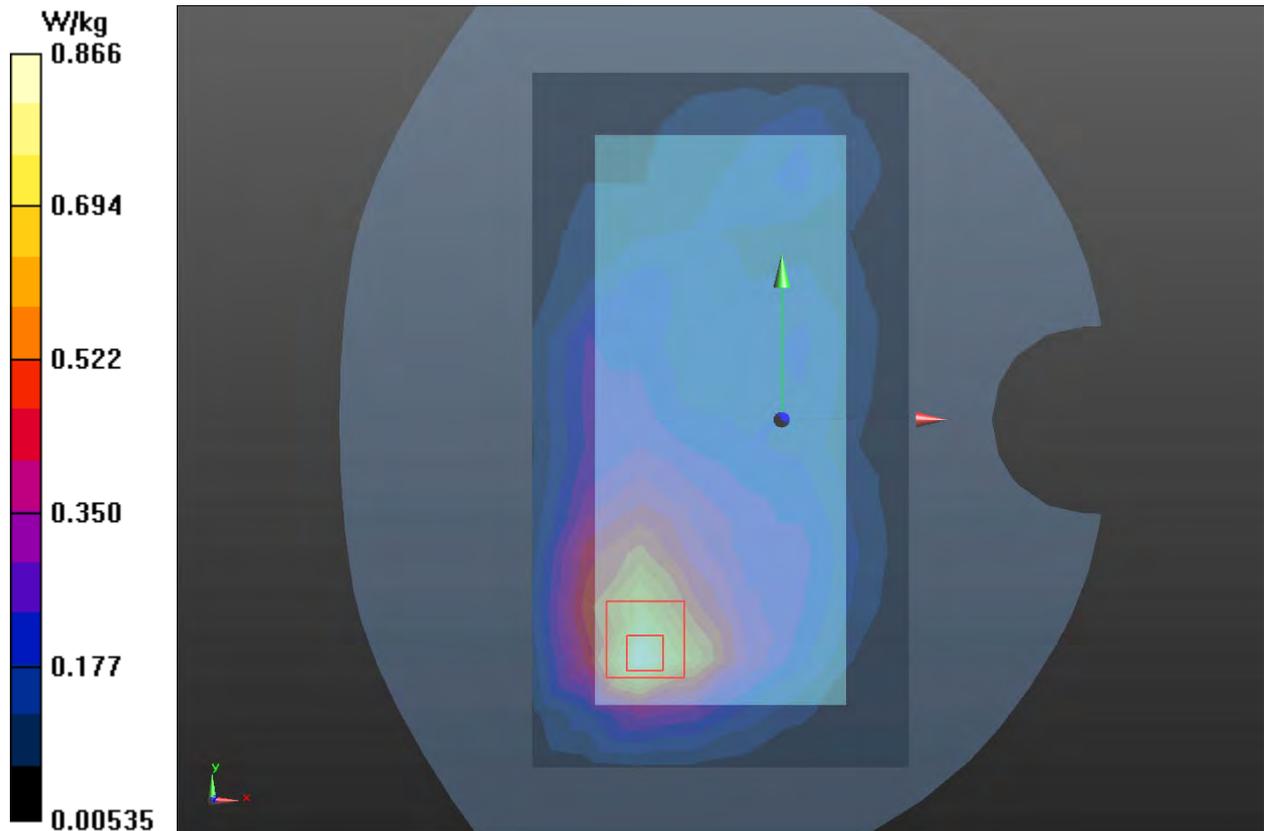
Front Side Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.701 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 1.10 W/kg

SAR(1 g) = 0.552 W/kg; SAR(10 g) = 0.293 W/kg

Maximum value of SAR (measured) = 0.866 W/kg



Plot 92 LTE Band 66 1RB Left Edge Middle (Distance 10mm)

Date: 6/26/2021

Communication System: UID 0, LTE (0); Frequency: 1745 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1745$ MHz; $\sigma = 1.323$ S/m; $\epsilon_r = 39.378$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.76, 8.76, 8.76); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Left Edge Middle/Area Scan (4x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.982 W/kg

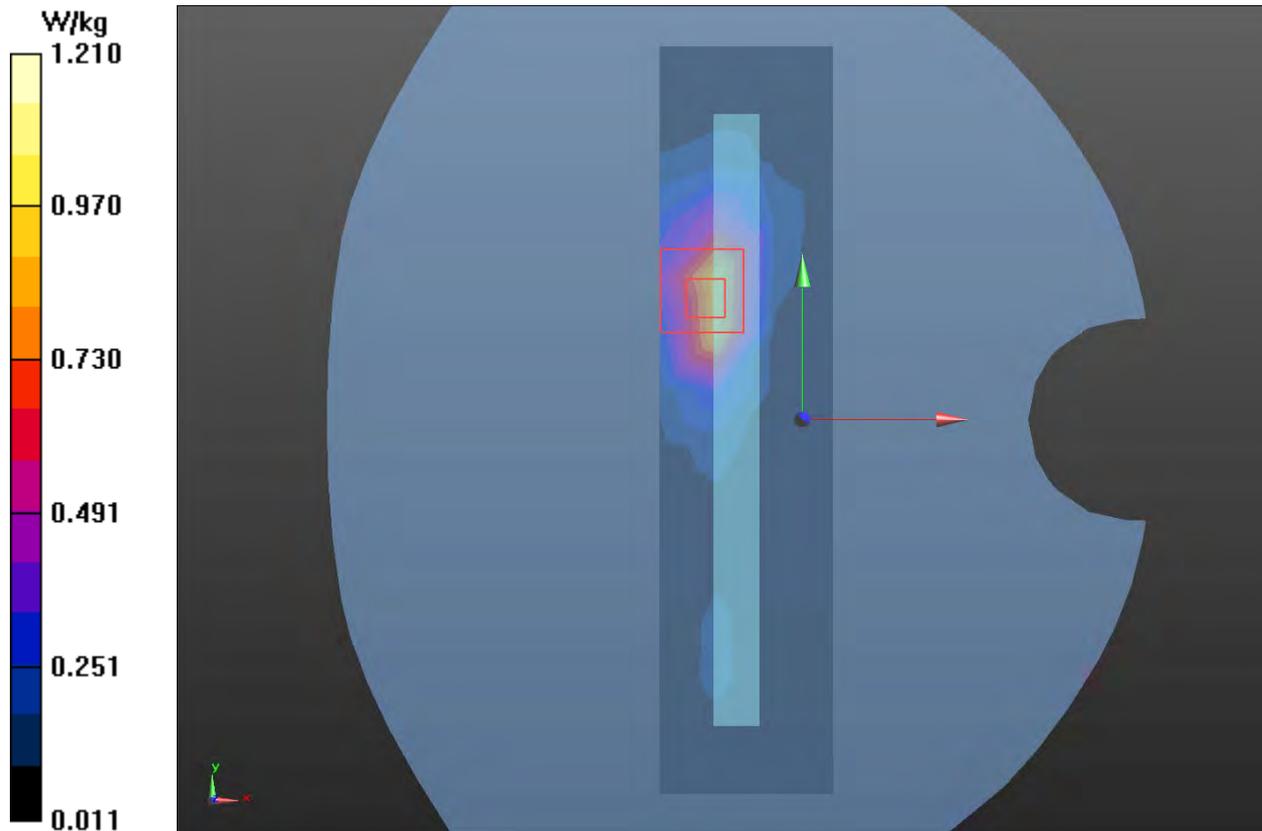
Left Edge Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.94 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 1.44 W/kg

SAR(1 g) = 0.930 W/kg; SAR(10 g) = 0.489W/kg

Maximum value of SAR (measured) = 1.21 W/kg



Plot 93 NR n41 135RB Front Side Low (Distance 10mm)

Date: 6/20/2021

Communication System: UID 0, 5G NR (0); Frequency: 2546.01 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 2546.01$ MHz; $\sigma = 1.953$ S/m; $\epsilon_r = 37.275$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(7.71, 7.71, 7.71); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Front Side Low/Area Scan (10x18x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.352 W/kg

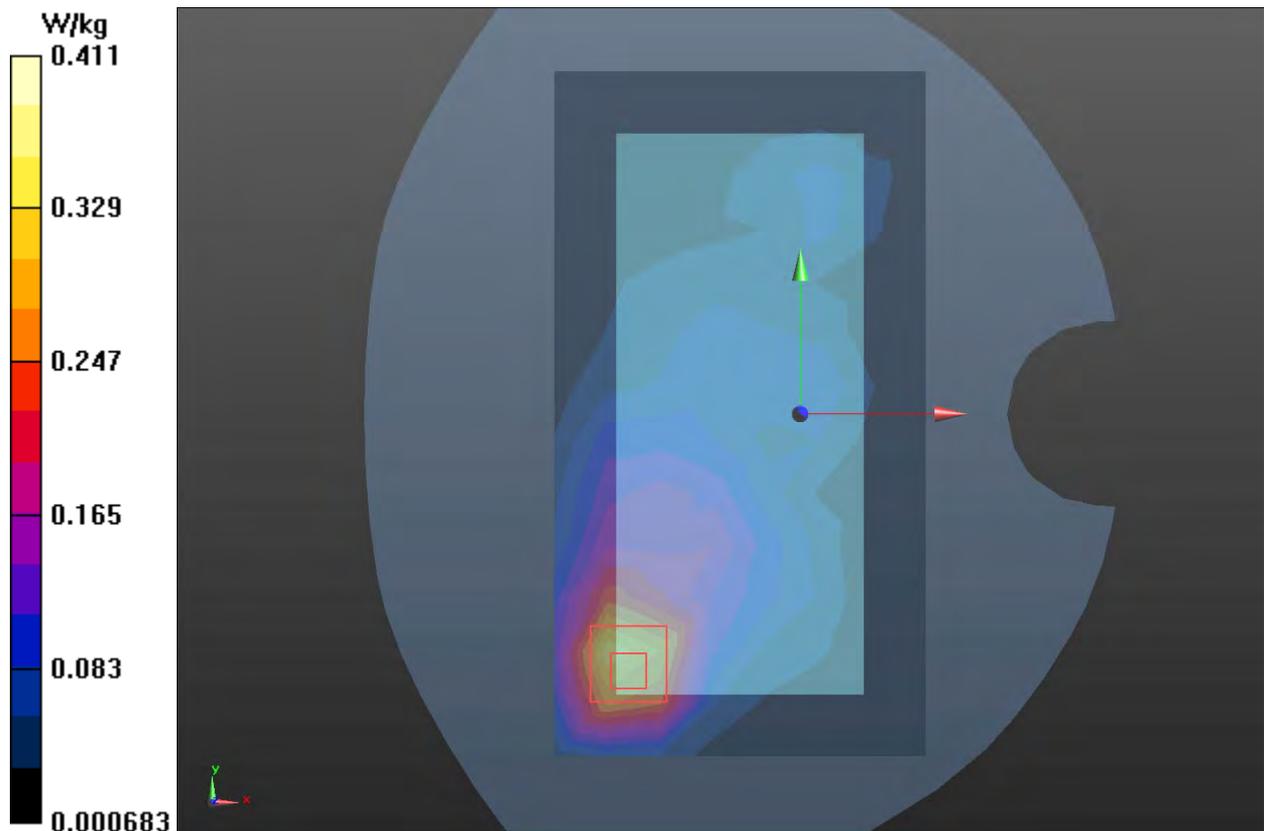
Front Side Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.062 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 0.513 W/kg

SAR(1 g) = 0.257 W/kg; SAR(10 g) = 0.133 W/kg

Maximum value of SAR (measured) = 0.411 W/kg



Plot 94 NR n66 1RB Left Edge Middle (Distance 10mm)

Date: 6/26/2021

Communication System: UID 0, 5G NR (0); Frequency: 1745 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1745$ MHz; $\sigma = 1.323$ S/m; $\epsilon_r = 39.378$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.76, 8.76, 8.76); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Left Edge Middle/Area Scan (4x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.657 W/kg

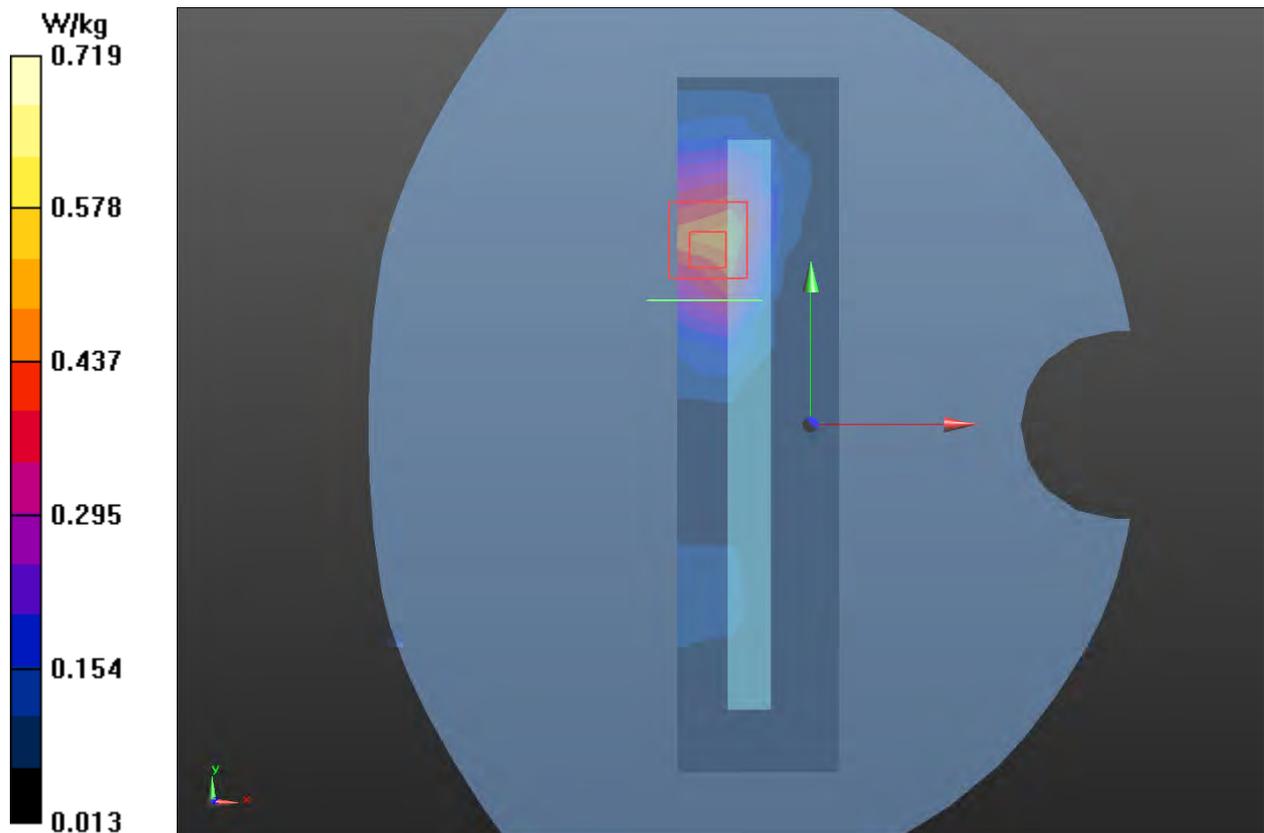
Left Edge Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.086 V/m; Power Drift = 0.053 dB

Peak SAR (extrapolated) = 1.17 W/kg

SAR(1 g) = 0.645 W/kg; SAR(10 g) = 0.340 W/kg

Maximum value of SAR (measured) = 0.719 W/kg



Plot 95 802.11b Back Side High (Distance 10mm, Ant 4)

Date: 6/24/2021

Communication System: UID 0, 802.11b (0); Frequency: 2462 MHz; Duty Cycle: 1:1.02

Medium parameters used: $f = 2462$ MHz; $\sigma = 1.859$ S/m; $\epsilon_r = 37.58$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.01, 8.01, 8.01); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side High/Area Scan (10x18x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.734 W/kg

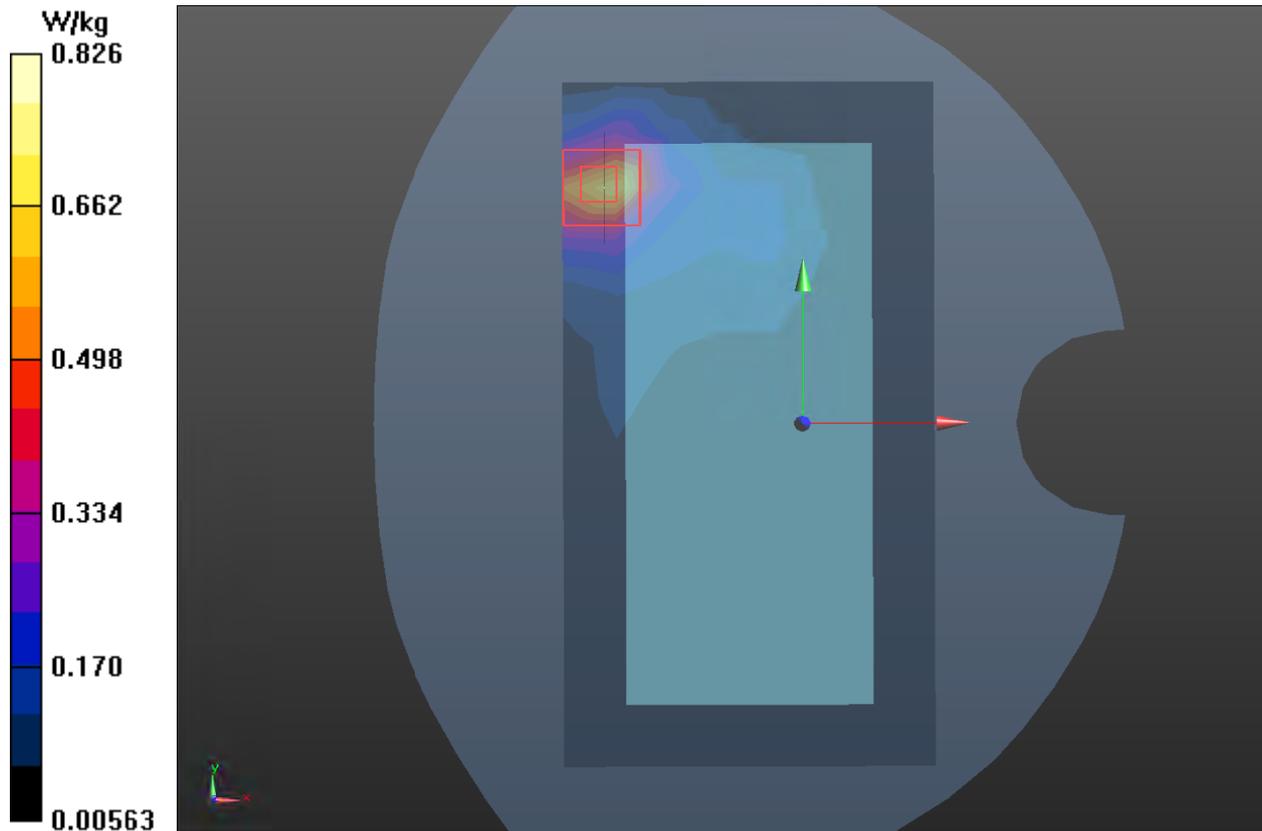
Back Side High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.570 V/m; Power Drift = -0.029 dB

Peak SAR (extrapolated) = 1.06 W/kg

SAR(1 g) = 0.501 W/kg; SAR(10 g) = 0.235 W/kg

Maximum value of SAR (measured) = 0.826 W/kg



Plot 96 802.11ac-VHT20 Right Edge Middle (Distance 10mm, Ant 4)

Date: 6/31/2021

Communication System: UID 0, 802.11ac-VHT20 (0); Frequency: 5180 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5180 \text{ MHz}$; $\sigma = 4.75 \text{ S/m}$; $\epsilon_r = 36.766$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: $22.3 \text{ }^\circ\text{C}$ Liquid Temperature: $21.5 \text{ }^\circ\text{C}$

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(5.51, 5.51,5.51); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Right Edge Middle/Area Scan (6x21x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (measured) = 1.50 W/kg

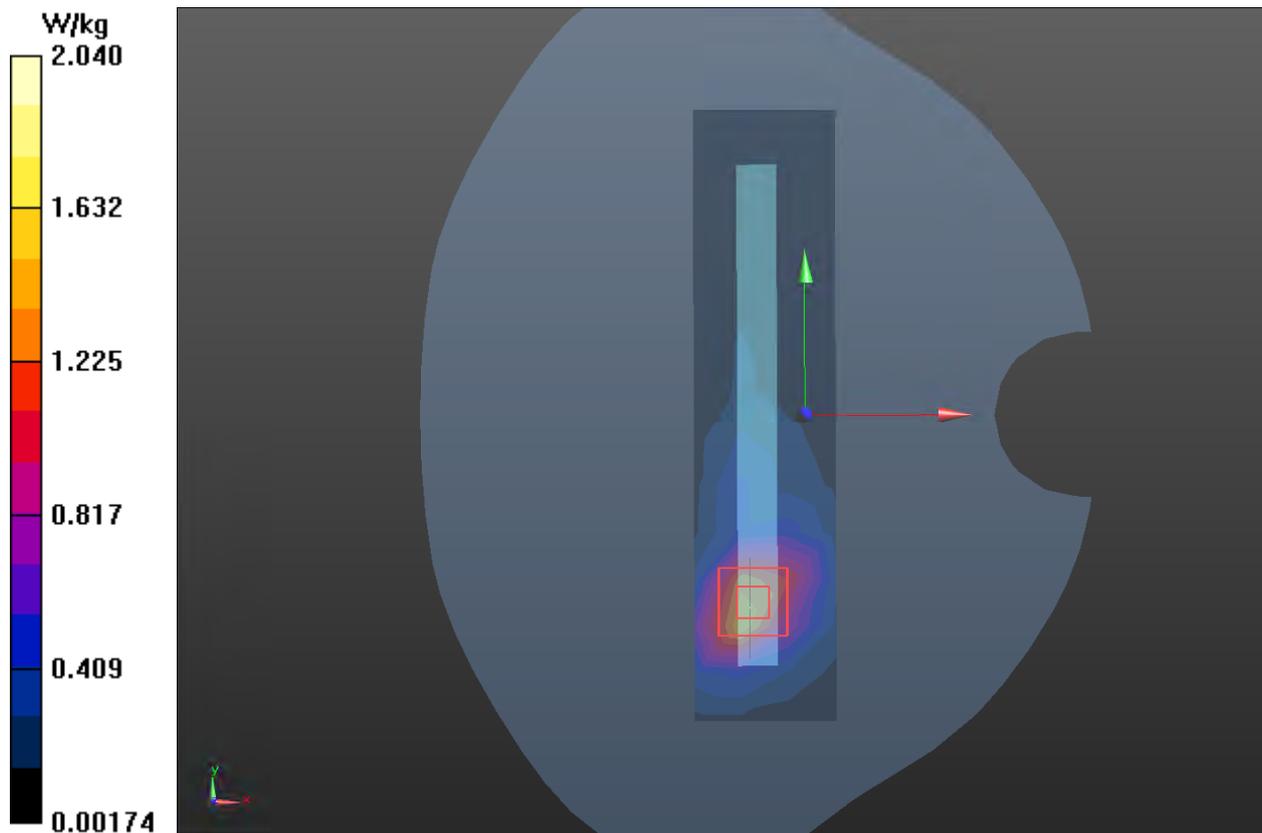
Right Edge Middle/Zoom Scan (7x7x12)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 6.755 V/m ; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 3.27 W/kg

SAR(1 g) = 0.892 W/kg ; SAR(10 g) = 0.350 W/kg

Maximum value of SAR (measured) = 2.04 W/kg



Plot 97 802.11ac-VHT80 Right Edge Middle (Distance 10mm, Ant 4)

Date: 6/29/2021

Communication System: UID 0, 802.11ac-VHT80; Frequency: 5775 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5775$ MHz; $\sigma = 5.22$ S/m; $\epsilon_r = 35.329$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(5.00, 5.00, 5.00); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Right Edge Middle/Area Scan (6x21x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.513 W/kg

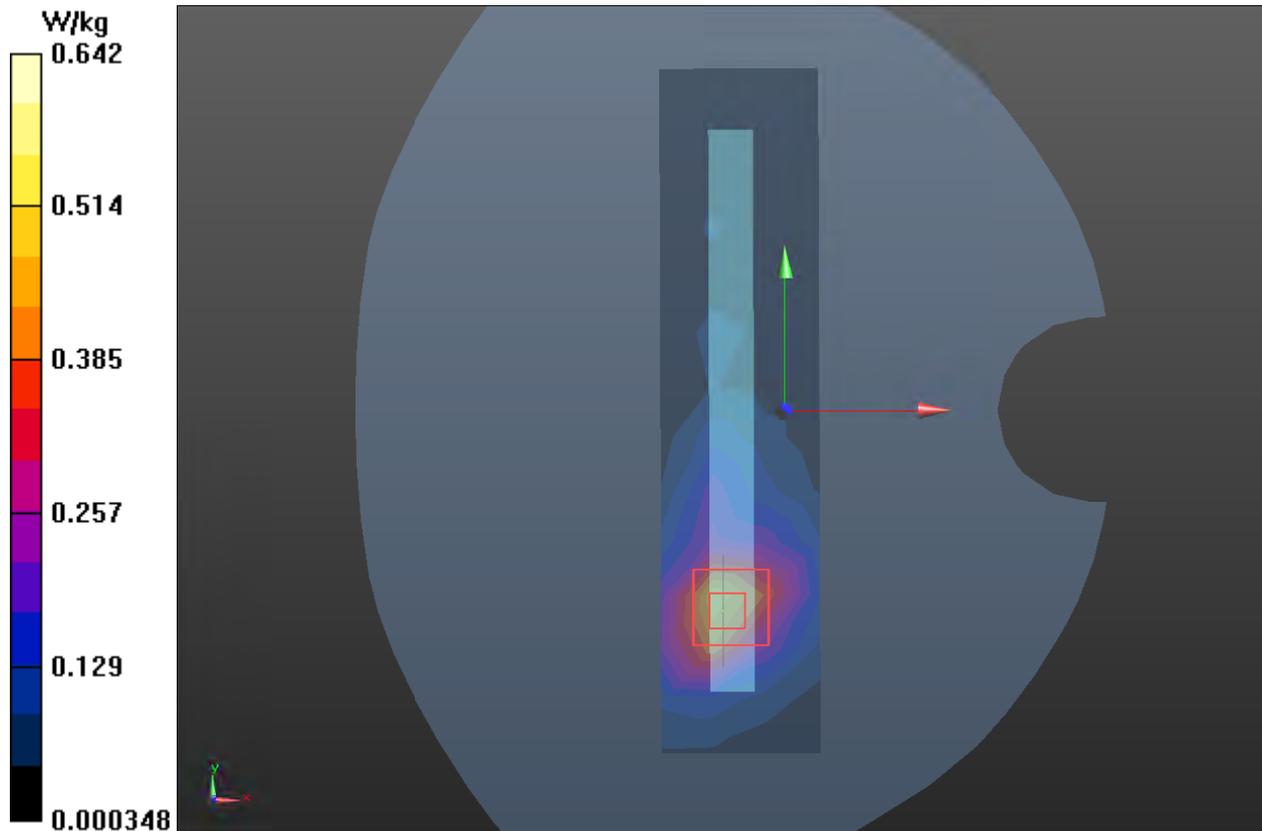
Right Edge Middle/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 4.621 V/m; Power Drift = 0.052 dB

Peak SAR (extrapolated) = 1.14 W/kg

SAR(1 g) = 0.266 W/kg; SAR(10 g) = 0.099 W/kg

Maximum value of SAR (measured) = 0.642 W/kg



Plot 98 802.11b Right Edge Low (Distance 10mm, Ant 3)

Date: 6/24/2021

Communication System: UID 0, 802.11b (0); Frequency: 2412 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2412$ MHz; $\sigma = 1.801$ S/m; $\epsilon_r = 37.737$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.01, 8.01, 8.01); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Right Edge Low/Area Scan (10x18x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.350 W/kg

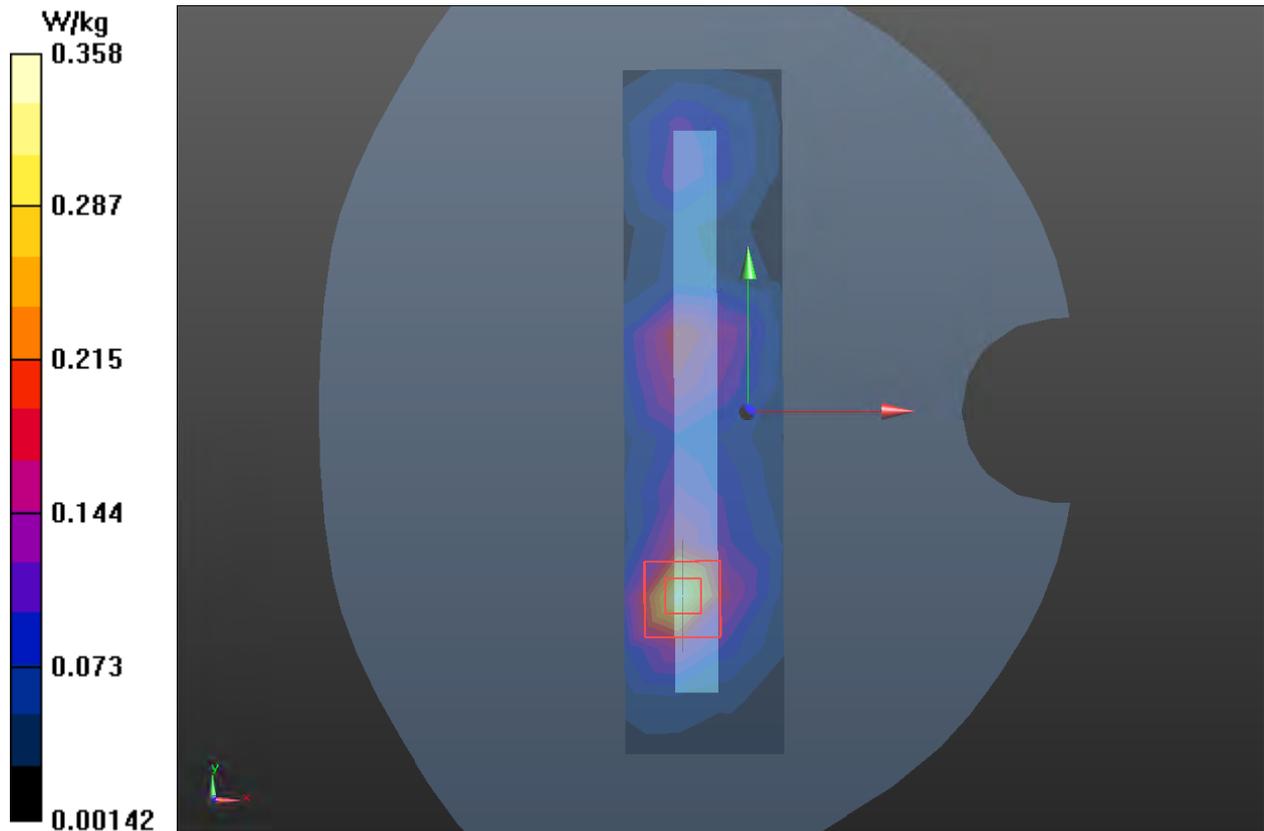
Right Edge Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.864 V/m; Power Drift = 0.029 dB

Peak SAR (extrapolated) = 0.443 W/kg

SAR(1 g) = 0.213 W/kg; SAR(10 g) = 0.106 W/kg

Maximum value of SAR (measured) = 0.358 W/kg



Plot 99 802.11nHT40 Right Edge Low (Distance 10mm, Ant 3)

Date: 6/31/2021

Communication System: UID 0, 802.11n HT40 (0); Frequency: 5190 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5190$ MHz; $\sigma = 4.79$ S/m; $\epsilon_r = 36.719$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(5.51, 5.51, 5.51); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Right Edge Low/Area Scan (6x21x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 1.61 W/kg

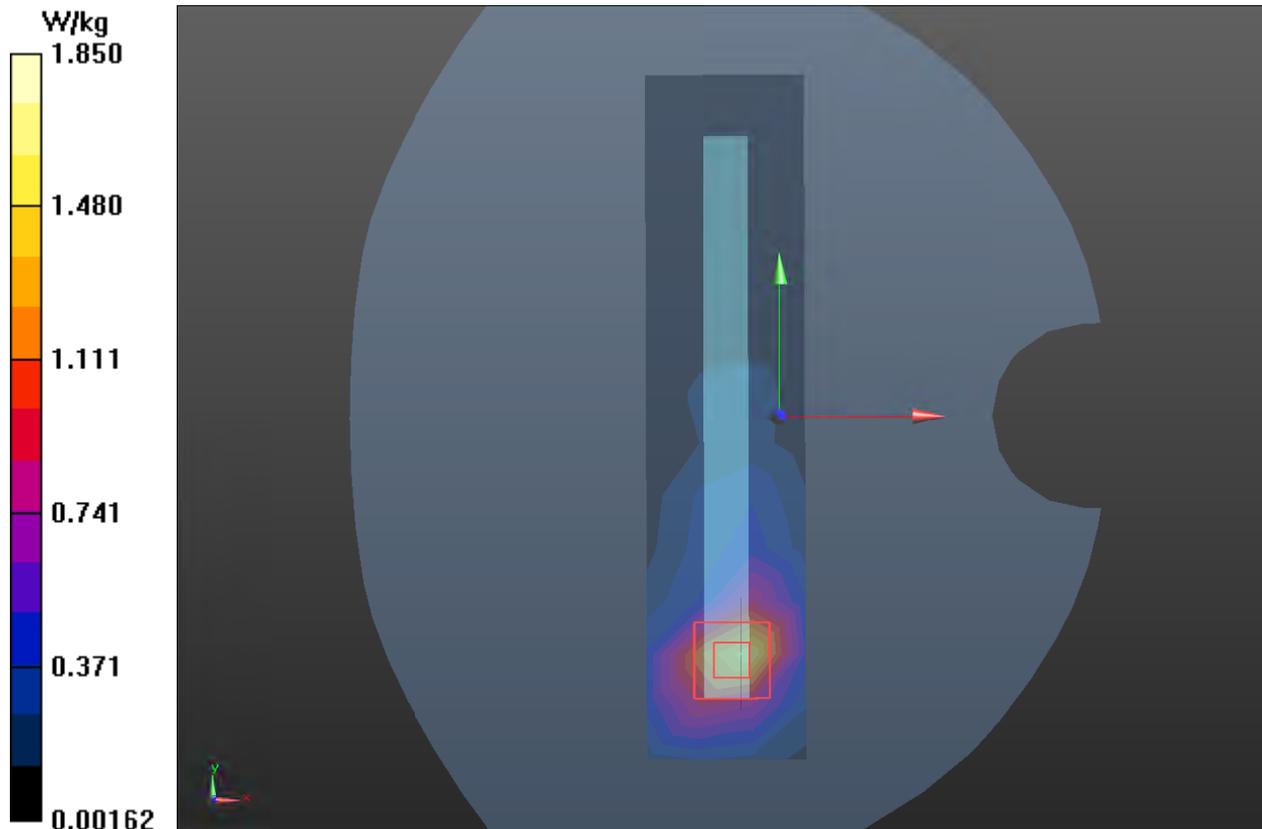
Right Edge Low/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 7.497 V/m; Power Drift = -0.19 dB

Peak SAR (extrapolated) = 3.03 W/kg

SAR(1 g) = 0.863 W/kg; SAR(10 g) = 0.332 W/kg

Maximum value of SAR (measured) = 1.85 W/kg

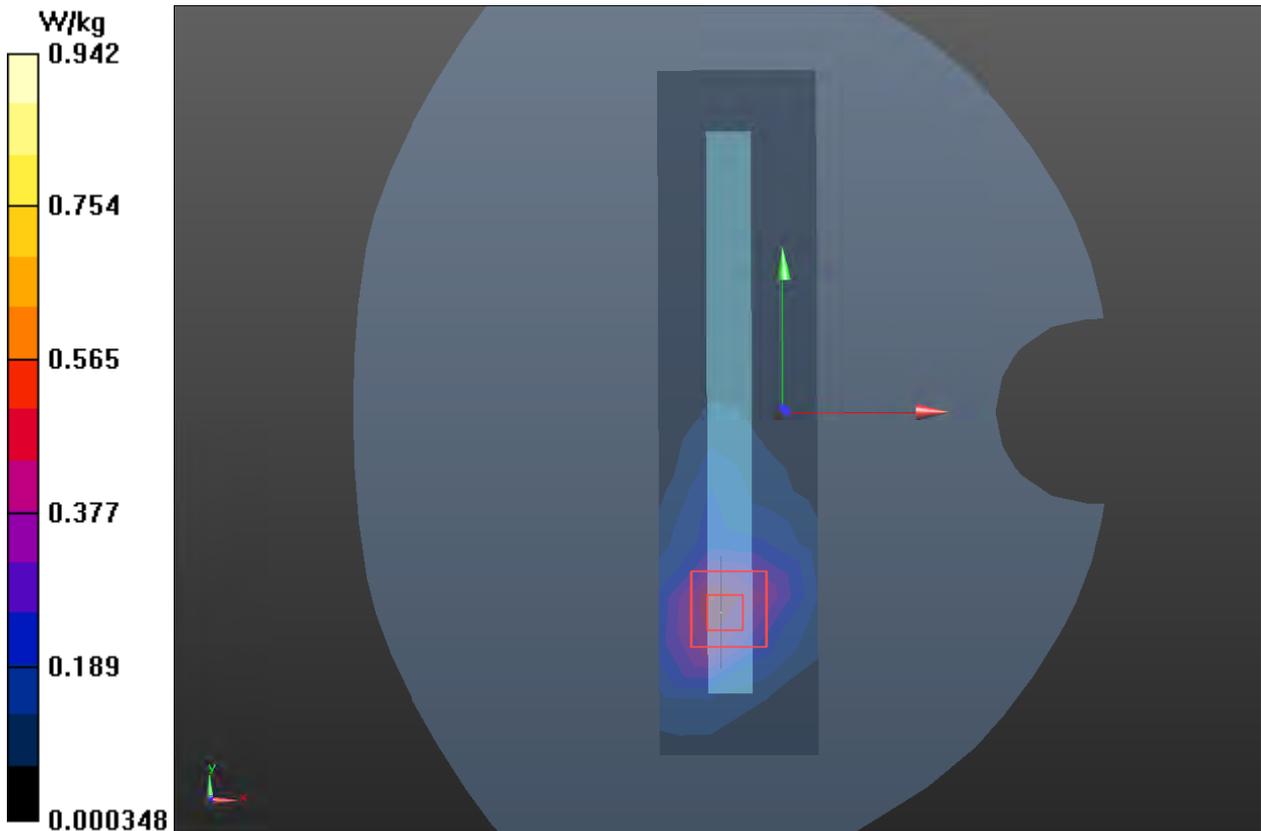


Plot 100 802.11ac-VHT80 Right Edge Middle (Distance 10mm, Ant 3)

Date: 6/29/2021
 Communication System: UID 0, 802.11ac-VHT80; Frequency: 5775 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 5775 \text{ MHz}$; $\sigma = 5.22 \text{ S/m}$; $\epsilon_r = 35.329$; $\rho = 1000 \text{ kg/m}^3$
 Ambient Temperature: $22.3 \text{ }^\circ\text{C}$ Liquid Temperature: $21.5 \text{ }^\circ\text{C}$
 Phantom section: Flat Section
 DASY5 Configuration:
 Sensor-Surface: 1.4mm (Mechanical Surface Detection)
 Probe: EX3DV4 - SN7628; ConvF(5.00, 5.00, 5.00); Calibrated: 2/16/2021;
 Electronics: DAE4 SN1317; Calibrated: 2/23/2021
 Phantom: SAM1; Type: SAM; Serial: TP-1534
 Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Right Edge Middle/Area Scan (6x21x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$
 Maximum value of SAR (measured) = 0.813 W/kg

Right Edge Middle/Zoom Scan (7x7x12)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$
 Reference Value = 4.621 V/m ; Power Drift = 0.100 dB
 Peak SAR (extrapolated) = 1.14 W/kg
SAR(1 g) = 0.714 W/kg ; SAR(10 g) = 0.216 W/kg
 Maximum value of SAR (measured) = 0.942 W/kg



Plot 101 802.11b Right Edge Low (Distance 10mm, MIMO)

Date: 6/24/2021

Communication System: UID 0, 802.11b (0); Frequency: 2412 MHz; Duty Cycle: 1:1.02

Medium parameters used: $f = 2412$ MHz; $\sigma = 1.801$ S/m; $\epsilon_r = 37.737$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.01, 8.01, 8.01); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Right Edge Low/Area Scan (10x18x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.619 W/kg

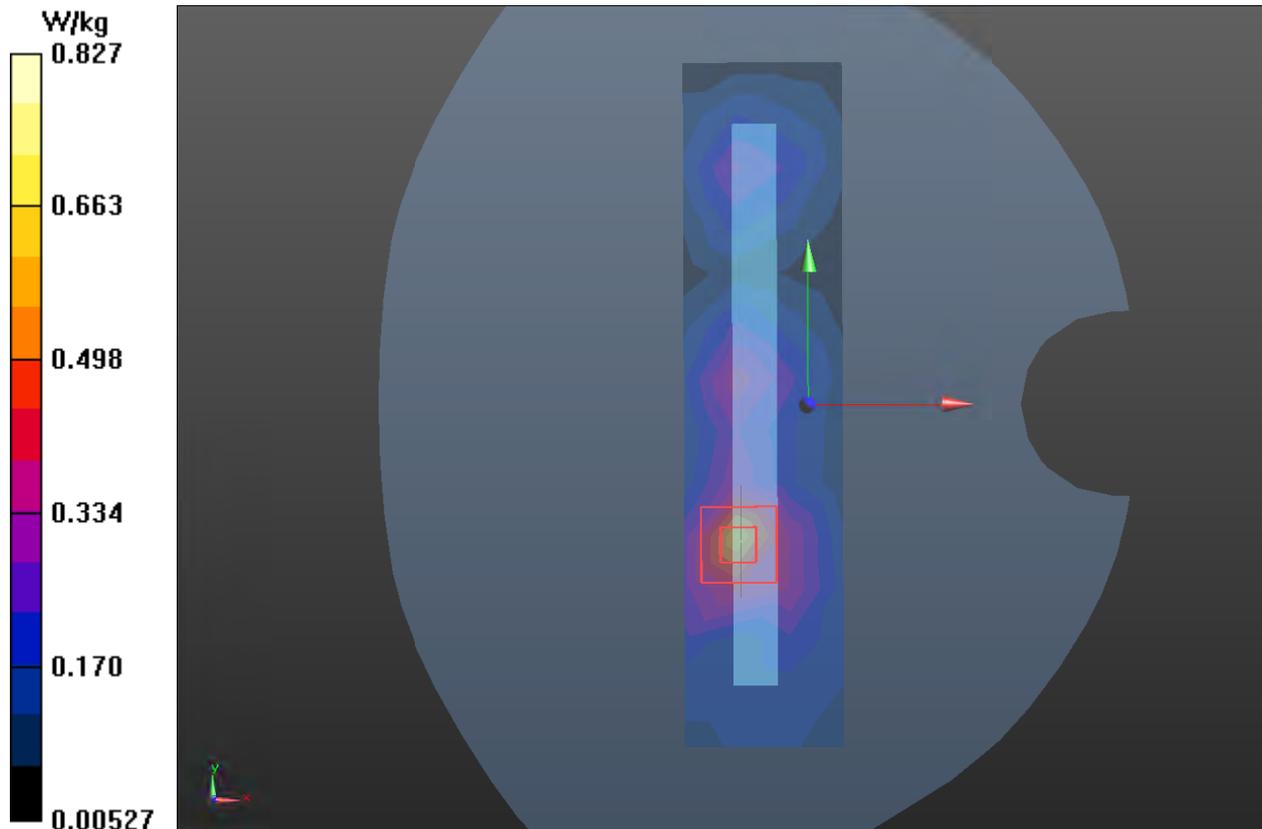
Right Edge Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 14.51 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 0.980 W/kg

SAR(1 g) = 0.485 W/kg; SAR(10 g) = 0.245 W/kg

Maximum value of SAR (measured) = 0.827 W/kg



Plot 102 802.11ac-VHT20 Right Edge Low (Distance 10mm, MIMO)

Date: 6/31/2021

Communication System: UID 0, 802.11ac VHT20 (0); Frequency: 5180 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5180$ MHz; $\sigma = 4.75$ S/m; $\epsilon_r = 36.766$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(5.51, 5.51, 5.51); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Right Edge Low/Area Scan (6x21x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 1.82 W/kg

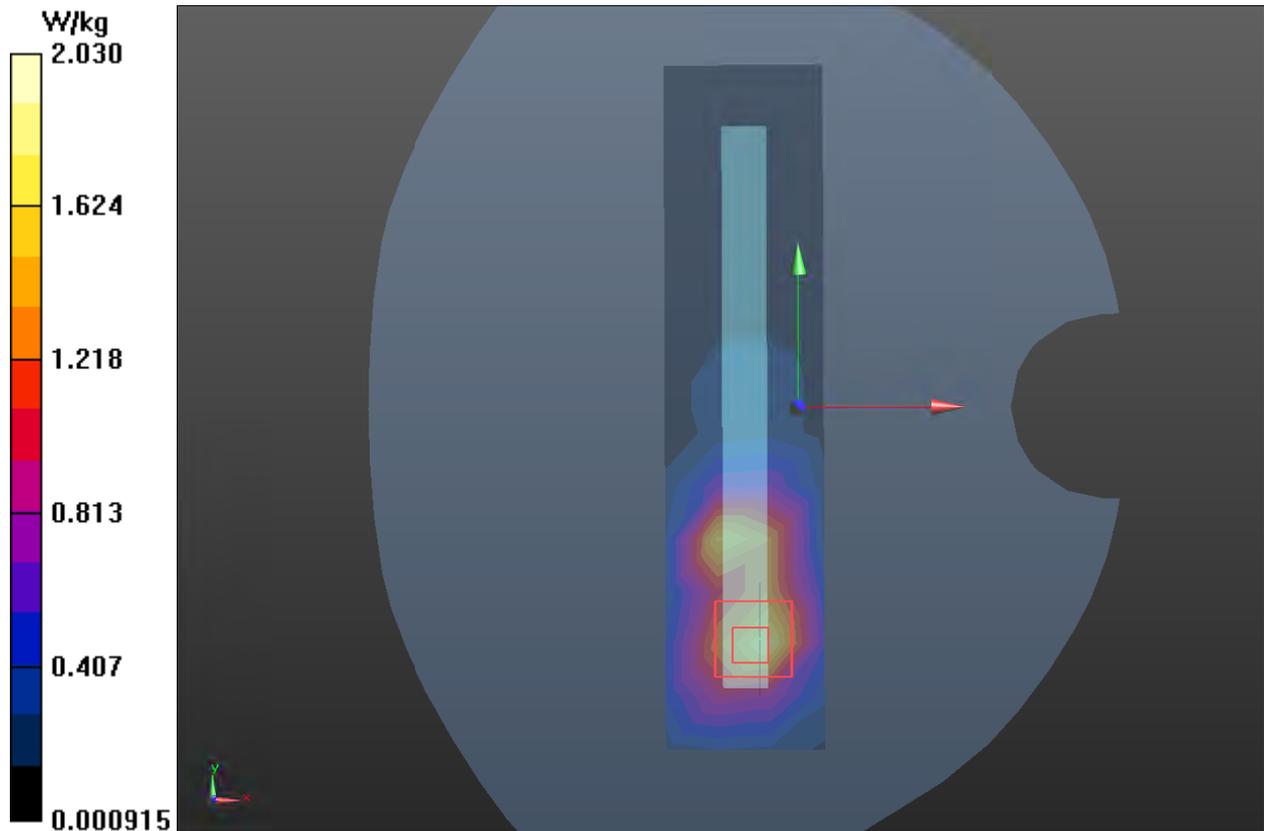
Right Edge Low/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 8.606 V/m; Power Drift = 0.047 dB

Peak SAR (extrapolated) = 3.24 W/kg

SAR(1 g) = 0.847 W/kg; SAR(10 g) = 0.326 W/kg

Maximum value of SAR (measured) = 2.03 W/kg



Plot 103 802.11ax HE80 Right Edge Middle (Distance 10mm, MIMO)

Date: 6/29/2021

Communication System: UID 0, 802.11ax 80M (0); Frequency: 5775 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5775 \text{ MHz}$; $\sigma = 5.48 \text{ S/m}$; $\epsilon_r = 35.27$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: $22.3 \text{ }^\circ\text{C}$ Liquid Temperature: $21.5 \text{ }^\circ\text{C}$

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(5.00, 5.00,5.00); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Right Edge Low/Area Scan (6x21x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (measured) = 1.70 W/kg

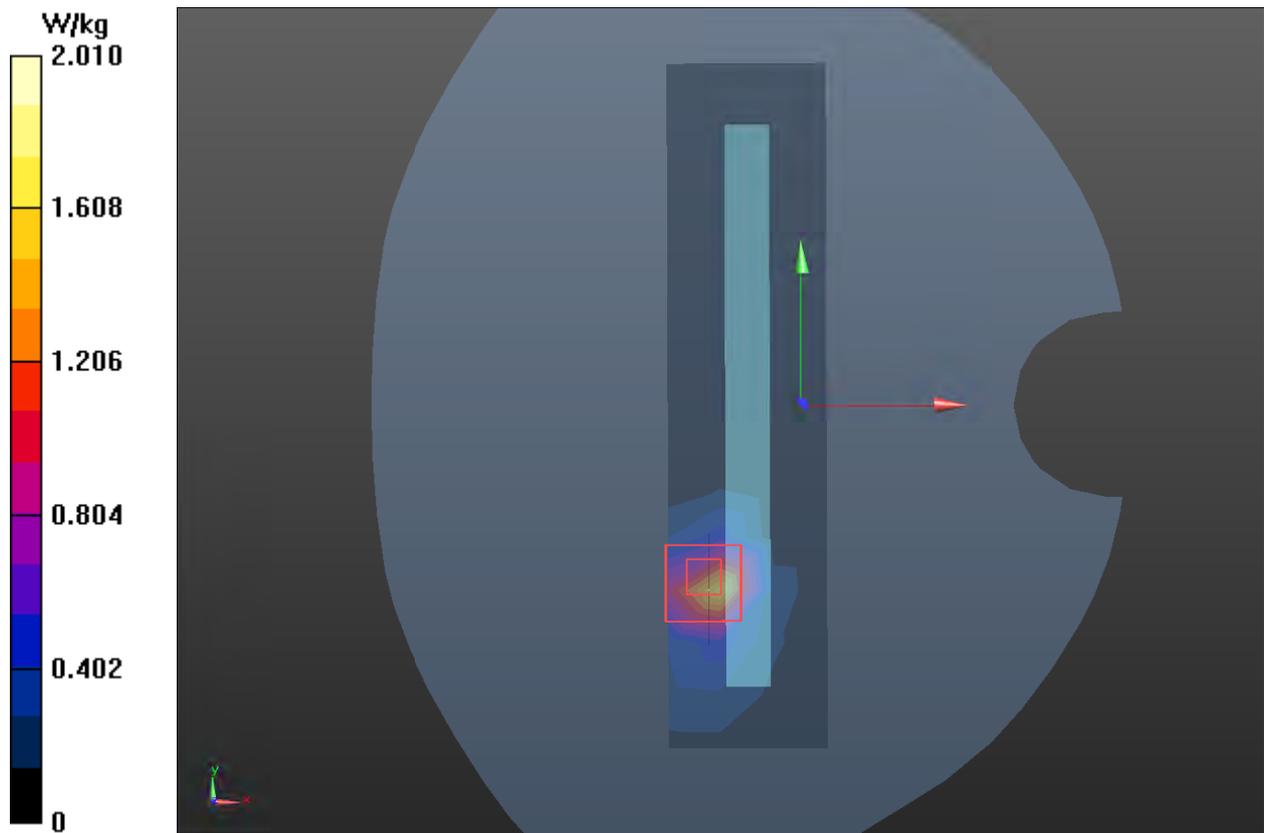
Right Edge Low/Zoom Scan (7x7x12)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 1.347 V/m ; Power Drift = 0.035 dB

Peak SAR (extrapolated) = 4.34 W/kg

SAR(1 g) = 0.703 W/kg ; SAR(10 g) = 0.281 W/kg

Maximum value of SAR (measured) = 2.01 W/kg



Plot 104 Bluetooth Back Side Middle (Distance 10mm)

Date: 6/24/2021

Communication System: UID 0, BT (0); Frequency: 2441 MHz; Duty Cycle: 1:1.32

Medium parameters used: $f = 2441$ MHz; $\sigma = 1.834$ S/m; $\epsilon_r = 37.585$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.01, 8.01, 8.01); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side Middle/Area Scan (10x18x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.080 W/kg

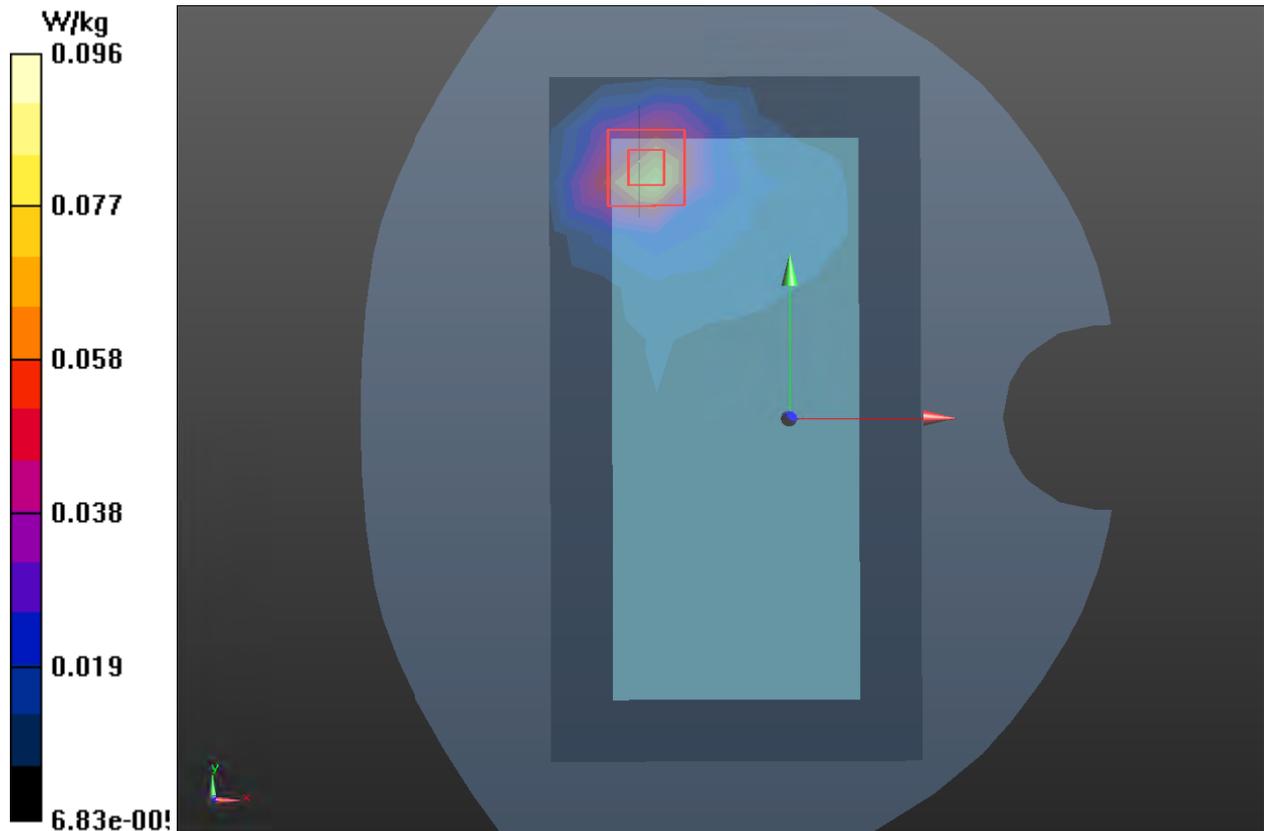
Back Side Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 0.9450 V/m; Power Drift = -0.17 dB

Peak SAR (extrapolated) = 0.122 W/kg

SAR(1 g) = 0.058 W/kg; SAR(10 g) = 0.027 W/kg

Maximum value of SAR (measured) = 0.096 W/kg



Plot 105 LTE Band 2 1RB Back Side High (Distance 0mm)

Date: 6/17/2021

Communication System: UID 0, LTE (0); Frequency: 1900 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.434$ S/m; $\epsilon_r = 38.861$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.38, 8.38, 8.38); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side High/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 7.11 W/kg

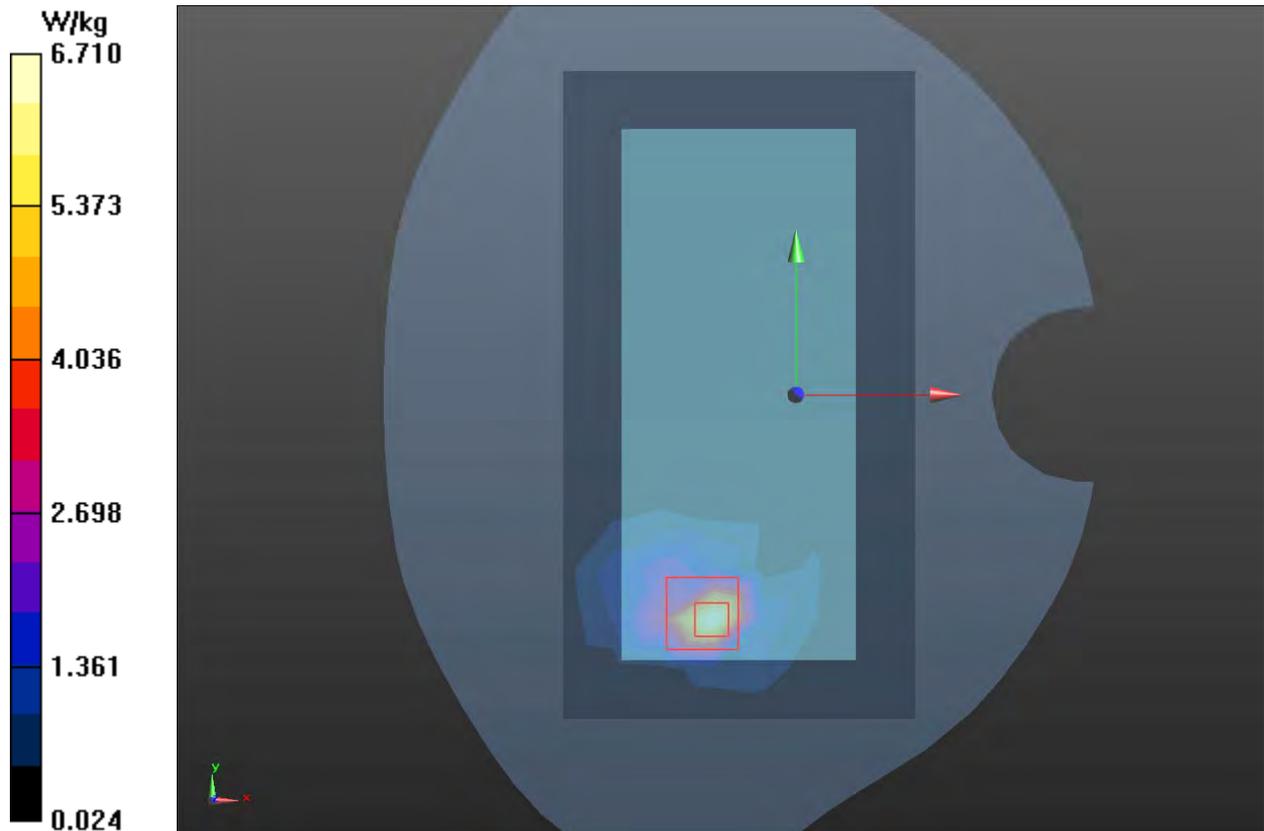
Back Side High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.121 V/m; Power Drift = 0.179 dB

Peak SAR (extrapolated) = 8.37 W/kg

SAR(1 g) = 3.65 W/kg; SAR(10 g) = 1.63 W/kg

Maximum value of SAR (measured) = 6.71 W/kg



Plot 106 LTE Band 4 1RB Bottom Edge Middle (Distance 0mm)

Date: 6/25/2021

Communication System: UID 0, LTE (0); Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 1732.5$ MHz; $\sigma = 1.313$ S/m; $\epsilon_r = 39.384$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.38, 8.38, 8.38); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Bottom Edge Middle/Area Scan (4x8x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 3.17 W/kg

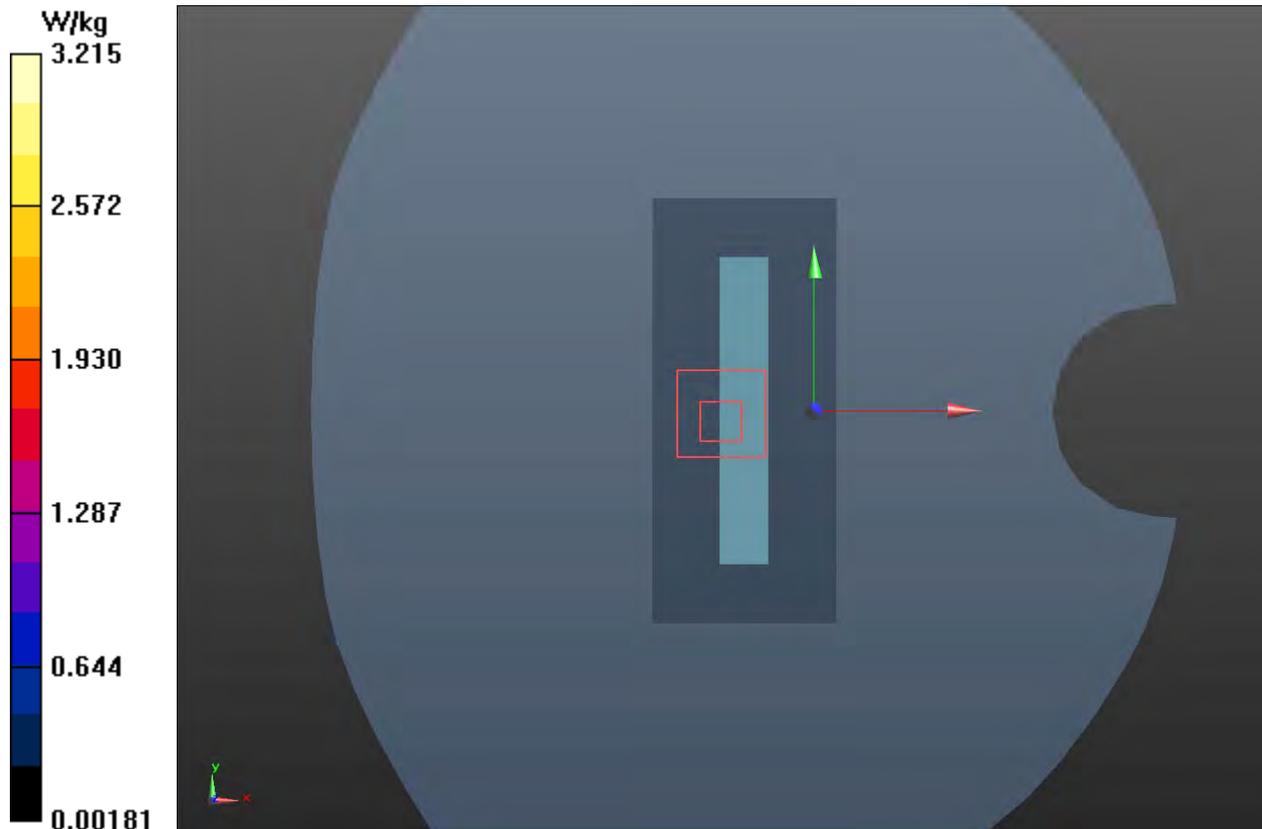
Bottom Edge Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.523 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 4.2 W/kg

SAR(1 g) = 3.15 W/kg; SAR(10 g) = 1.7 W/kg

Maximum value of SAR (measured) = 3.215 W/kg



Plot 107 802.11ac-VHT20 Right Edge Low (Distance 0mm, Ant 4)

Date: 6/31/2021

Communication System: UID 0, 802.11ac-VHT20 (0); Frequency: 5260 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5260$ MHz; $\sigma = 4.805$ S/m; $\epsilon_r = 36.71$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(5.51, 5.51, 5.51); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Right Edge Low/Area Scan (6x21x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 6.0 W/kg

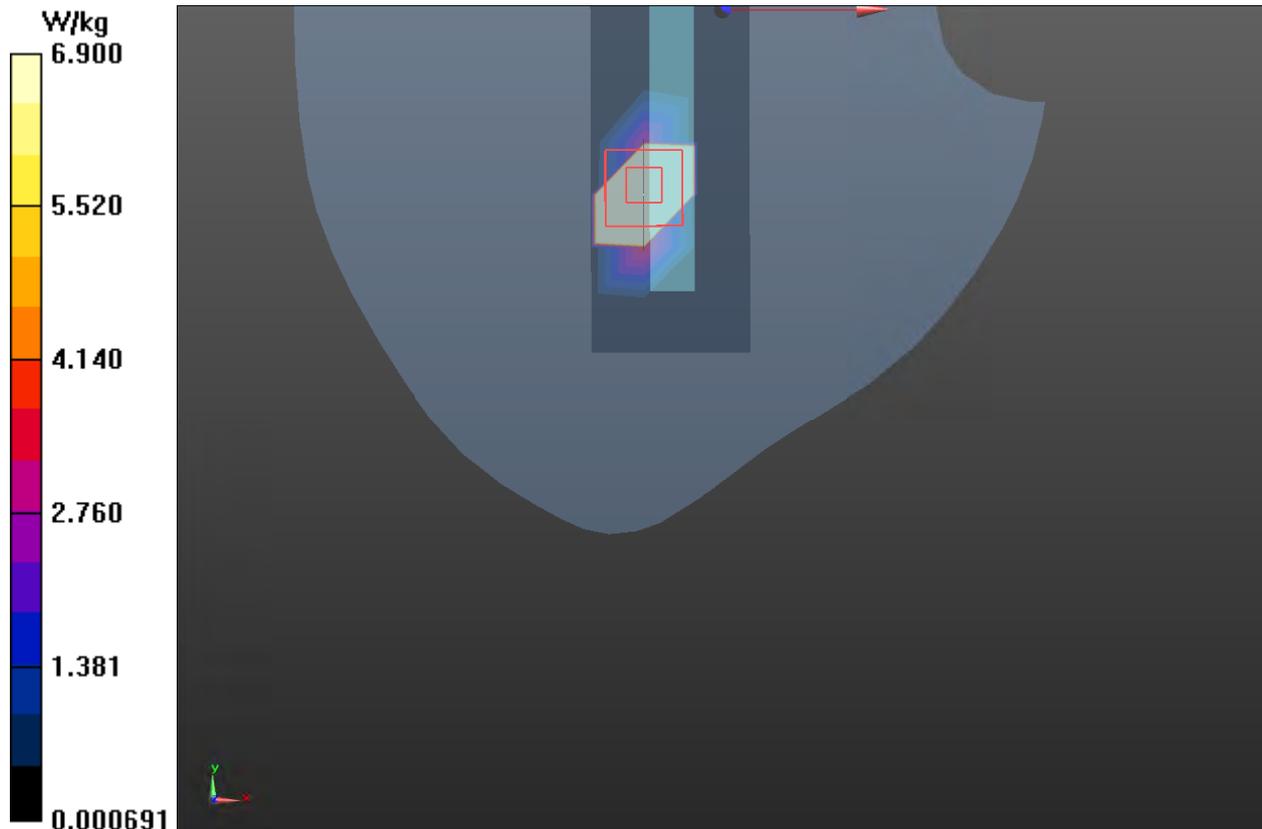
Right Edge Low/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 5.035 V/m; Power Drift = 0.182 dB

Peak SAR (extrapolated) = 9.4 W/kg

SAR(1 g) = 4.26 W/kg; SAR(10 g) = 1.15 W/kg

Maximum value of SAR (measured) = 6.9 W/kg



Plot 108 802.11ac-VHT80 Right Edge Middle (Distance 0mm, Ant 4)

Date: 6/27/2021

Communication System: UID 0, 802.11ac-VHT80(0); Frequency: 5690 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5690 \text{ MHz}$; $\sigma = 5.3 \text{ S/m}$; $\epsilon_r = 35.498$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: $22.3 \text{ }^\circ\text{C}$ Liquid Temperature: $21.5 \text{ }^\circ\text{C}$

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(5.00, 5.00,5.00); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Right Edge Middle/Area Scan (6x21x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (measured) = 2.53 W/kg

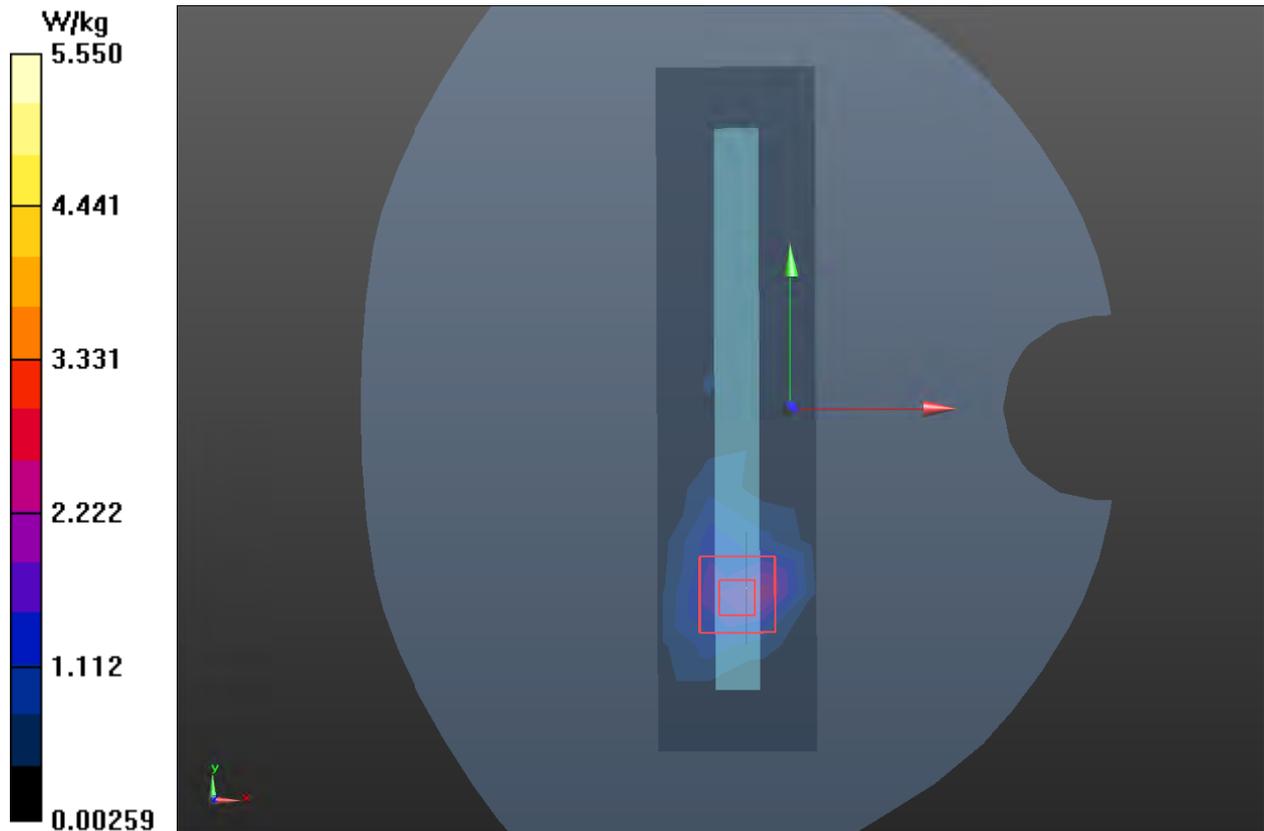
Right Edge Middle/Zoom Scan (7x7x12)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 9.112 V/m ; Power Drift = 0.17 dB

Peak SAR (extrapolated) = 11.6 W/kg

SAR(1 g) = 2.34 W/kg ; SAR(10 g) = 0.684 W/kg

Maximum value of SAR (measured) = 5.55 W/kg



Plot 109 802.11ac-VHT20 Right Edge Middle (Distance 10mm, Ant 3)

Date: 6/31/2021

Communication System: UID 0, 802.11ac-VHT20(0); Frequency: 5260 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5260$ MHz; $\sigma = 4.808$ S/m; $\epsilon_r = 36.877$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(5.51, 5.51, 5.51); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Right Edge Middle/Area Scan (6x21x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 9.76 W/kg

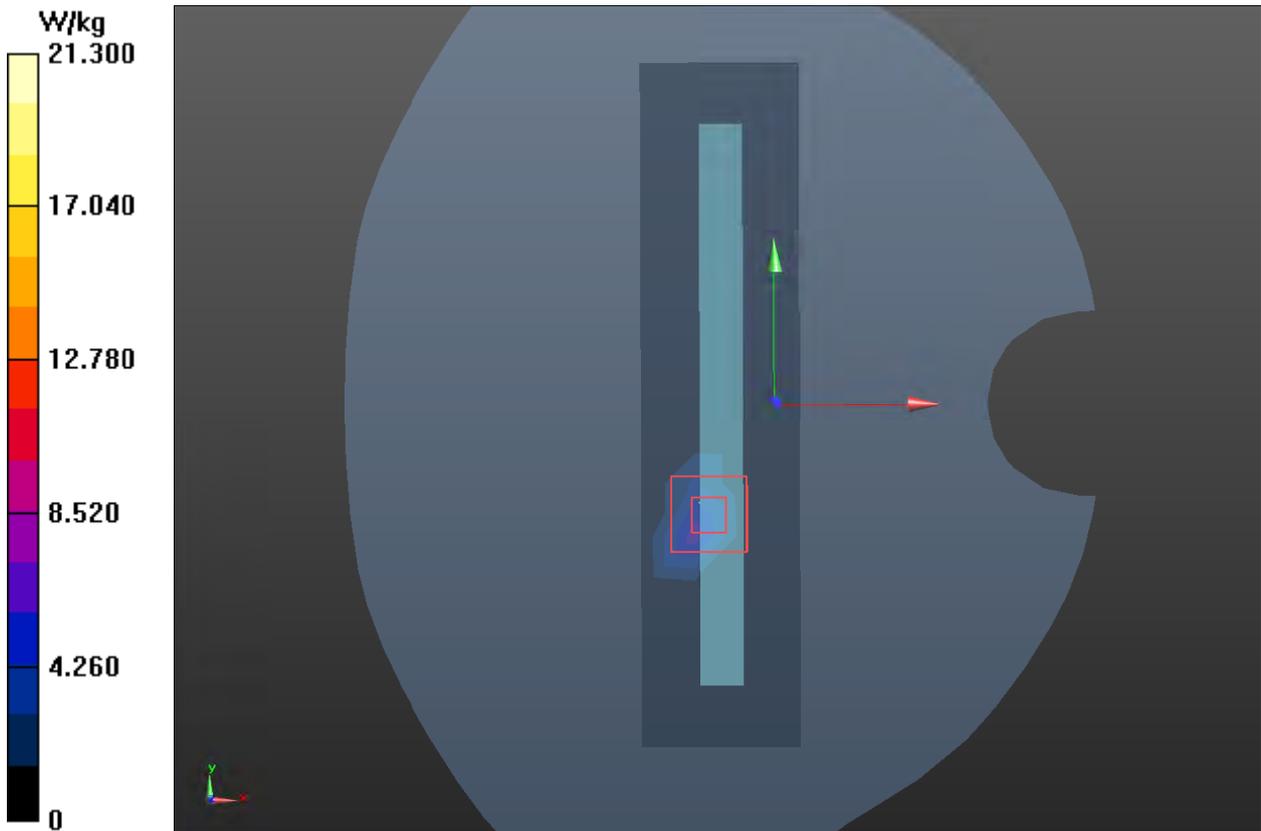
Right Edge Middle/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 8.843 V/m; Power Drift = 0.023 dB

Peak SAR (extrapolated) = 44.3 W/kg

SAR(1 g) = 8.08 W/kg; SAR(10 g) = 1.55 W/kg

Maximum value of SAR (measured) = 21.3 W/kg



Plot 110 802.11ac-VHT80 Right Edge Middle (Distance 0mm, Ant 3)

Date: 6/27/2021

Communication System: UID 0, 802.11ac-VHT80(0); Frequency: 5690 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5690$ MHz; $\sigma = 5.3$ S/m; $\epsilon_r = 35.498$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(5.00, 5.00, 5.00); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Right Edge Middle/Area Scan (6x21x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 8.15 W/kg

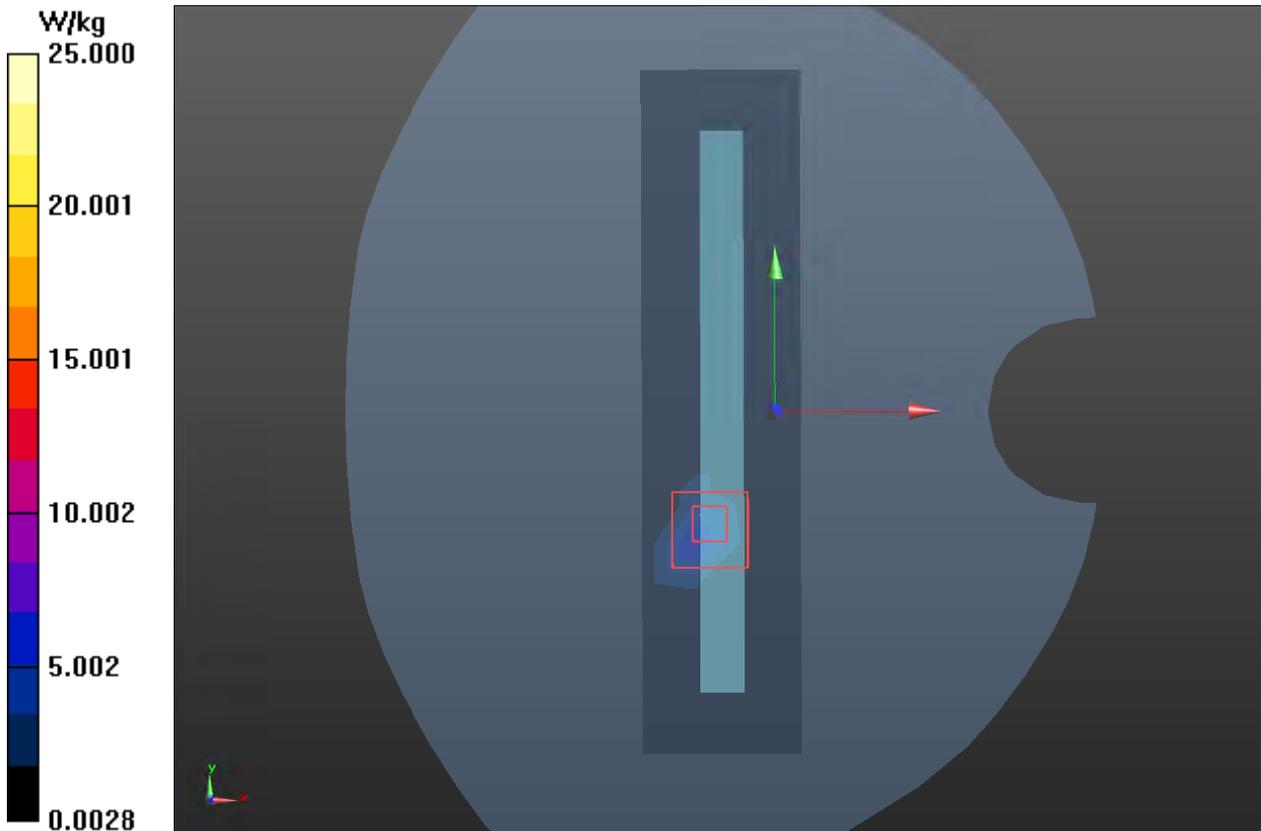
Right Edge Middle/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 3.496 V/m; Power Drift = 0.038 dB

Peak SAR (extrapolated) = 47.5 W/kg

SAR(1 g) = 7.32 W/kg; SAR(10 g) = 1.45 W/kg

Maximum value of SAR (measured) = 25.0 W/kg



Plot 111 802.11nHT20 Right Edge Low (Distance 0mm, MIMO)

Date: 6/31/2021

Communication System: UID 0, 802.11n HT20 (0); Frequency: 5260 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5260$ MHz; $\sigma = 4.808$ S/m; $\epsilon_r = 36.877$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(5.51, 5.51, 5.51); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Right Edge Low/Area Scan (6x21x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 5.98 W/kg

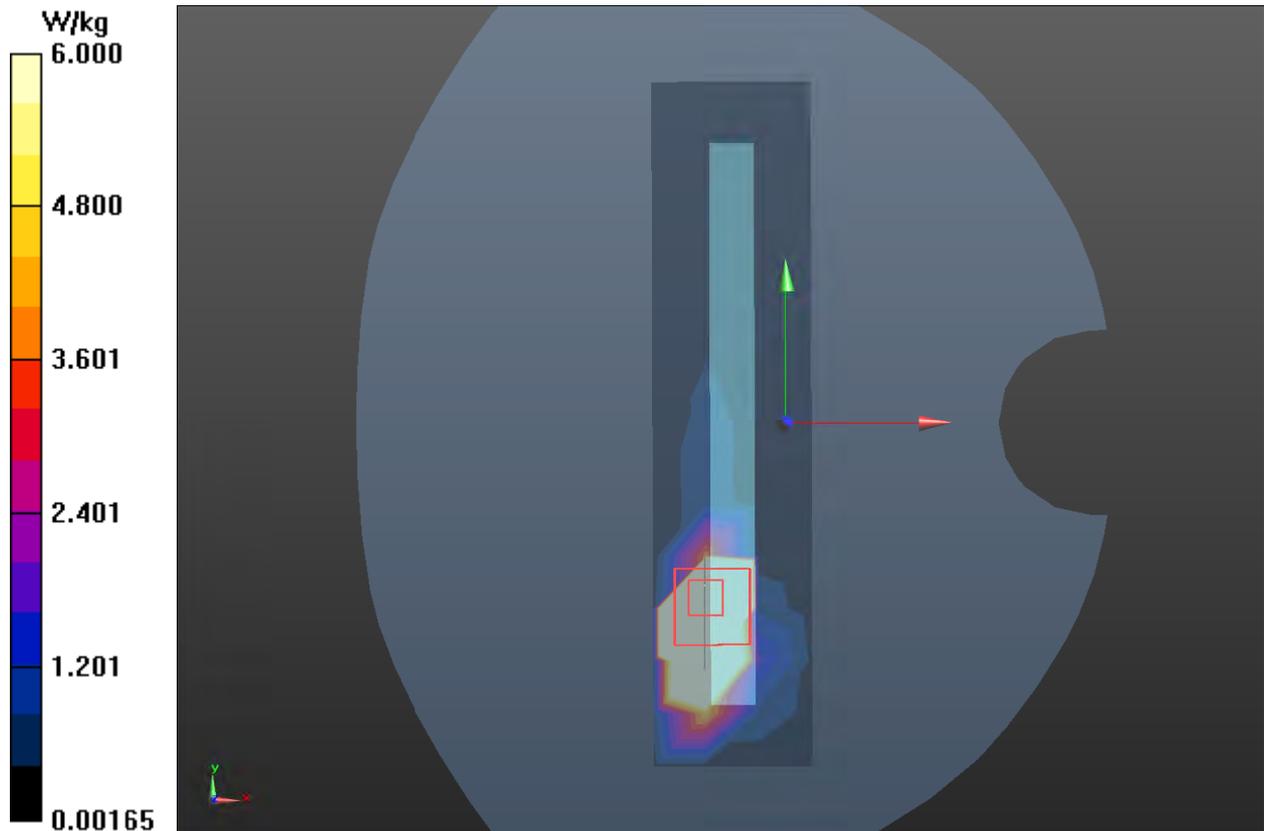
Right Edge Low/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 11.89 V/m; Power Drift = 0.127 dB

Peak SAR (extrapolated) = 10.7 W/kg

SAR(1 g) = 5.96 W/kg; SAR(10 g) = 1.3 W/kg

Maximum value of SAR (measured) = 6.0 W/kg



Plot 112 802.11ac-VHT80 Right Edge Middle (Distance 0mm, MIMO)

Date: 6/27/2021

Communication System: UID 0, 802.11ac-VHT80(0); Frequency: 5690 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5690$ MHz; $\sigma = 5.3$ S/m; $\epsilon_r = 35.498$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(5.00, 5.00, 5.00); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Right Edge Middle/Area Scan (6x21x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 9.13 W/kg

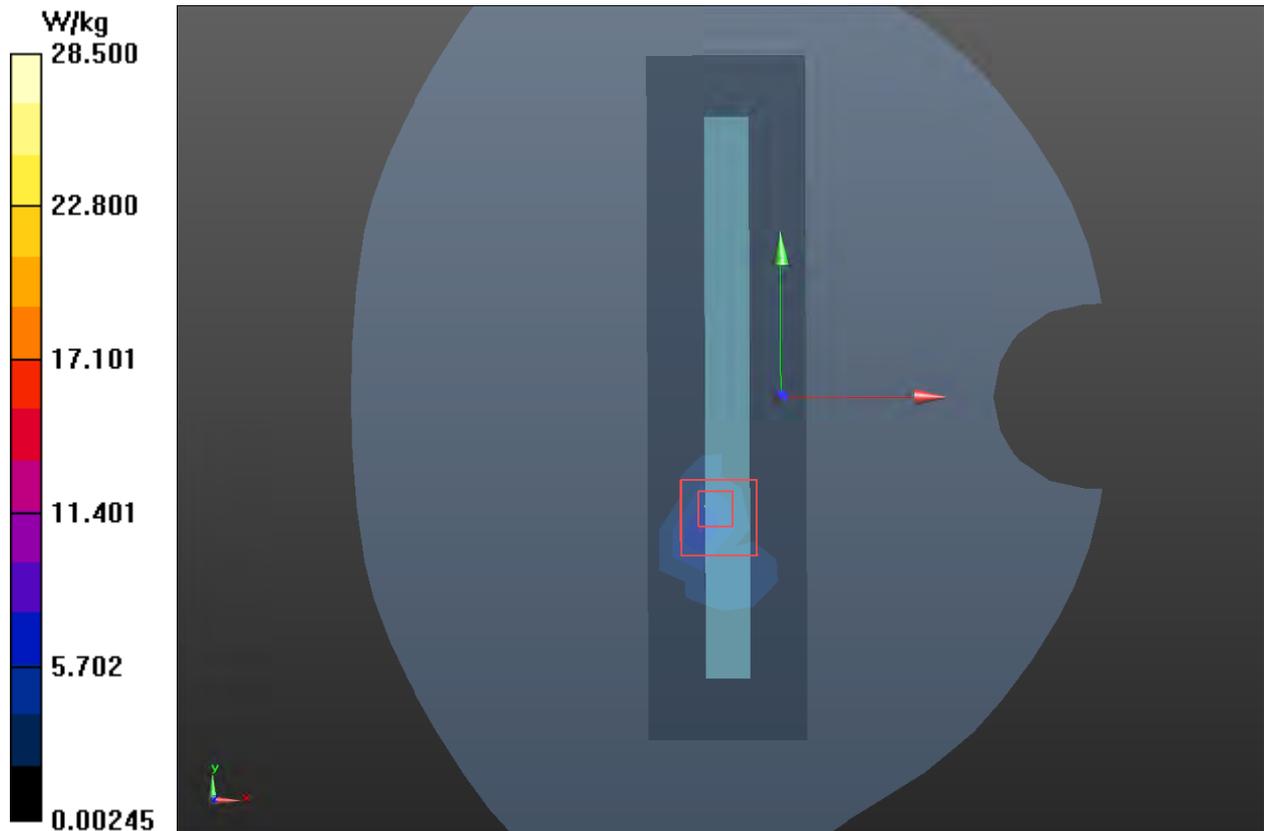
Right Edge Middle/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 9.548 V/m; Power Drift = 0.169 dB

Peak SAR (extrapolated) = 50.9 W/kg

SAR(1 g) = 8.29 W/kg; SAR(10 g) = 1.75 W/kg

Maximum value of SAR (measured) = 28.5 W/kg



ANNEX D: Probe Calibration Certificate

**Calibration Laboratory of
Schmid & Partner
Engineering AG**
Zeughausstrasse 43, 8004 Zurich, Switzerland



S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
S Servizio svizzero di taratura
S Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)
The Swiss Accreditation Service is one of the signatories to the EA
Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 0108**

Client **Auden**

Certificate No: **EX3-7628_Feb21**

CALIBRATION CERTIFICATE	
Object	EX3DV4 - SN:7628
Calibration procedure(s)	QA CAL-01.v9, QA CAL-14.v6, QA CAL-23.v5, QA CAL-25.v7 Calibration procedure for dosimetric E-field probes.
Calibration date:	February 16, 2021
This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI). The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.	
All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.	
Calibration Equipment used (M&TE critical for calibration)	

Primary Standards	ID	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104778	01-Apr-20 (No. 217-03100/03101)	Apr-21
Power sensor NRP-Z91	SN: 103244	01-Apr-20 (No. 217-03100)	Apr-21
Power sensor NRP-Z91	SN: 103245	01-Apr-20 (No. 217-03101)	Apr-21
Reference 20 dB Attenuator	SN: CC2552 (20x)	31-Mar-20 (No. 217-03106)	Apr-21
DAE4	SN: 660	23-Dec-20 (No. DAE4-660_Dec20)	Dec-21
Reference Probe ES3DV2	SN: 3013	30-Dec-20 (No. ES3-3013_Dec20)	Dec-21
Secondary Standards	ID	Check Date (in house)	Scheduled Check
Power meter E4419B	SN: GB41293874	06-Apr-16 (in house check Jun-20)	In house check: Jun-22
Power sensor E4412A	SN: MY41498087	06-Apr-16 (in house check Jun-20)	In house check: Jun-22
Power sensor E4412A	SN: 000110210	06-Apr-16 (in house check Jun-20)	In house check: Jun-22
RF generator HP 8648C	SN: US3642U01700	04-Aug-99 (in house check Jun-20)	In house check: Jun-22
Network Analyzer E8358A	SN: US41080477	31-Mar-14 (in house check Oct-20)	In house check: Oct-21

Calibrated by:	Name Jeton Kastrati	Function Laboratory Technician	Signature
Approved by:	Name Katja Pokovic	Function Technical Manager	Signature
			Issued: February 16, 2021
This calibration certificate shall not be reproduced except in full without written approval of the laboratory.			

**Calibration Laboratory of
Schmid & Partner
Engineering AG**
Zeughausstrasse 43, 8004 Zurich, Switzerland



S Schweizerischer Kalibrierdienst
S Service suisse d'étalonnage
C Servizio svizzero di taratura
S Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)

Accreditation No.: SCS 0108

The Swiss Accreditation Service is one of the signatories to the EA
Multilateral Agreement for the recognition of calibration certificates

Glossary:

TSL	tissue simulating liquid
NORM _{x,y,z}	sensitivity in free space
ConvF	sensitivity in TSL / NORM _{x,y,z}
DCP	diode compression point
CF	crest factor (1/duty_cycle) of the RF signal
A, B, C, D	modulation dependent linearization parameters
Polarization φ	φ rotation around probe axis
Polarization ϑ	ϑ rotation around an axis that is in the plane normal to probe axis (at measurement center), i.e., $\vartheta = 0$ is normal to probe axis
Connector Angle	information used in DASY system to align probe sensor X to the robot coordinate system

Calibration is Performed According to the Following Standards:

- a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- b) IEC 62209-1, "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from hand-held and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016
- c) IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
- d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Methods Applied and Interpretation of Parameters:

- **NORM_{x,y,z}**: Assessed for E-field polarization $\vartheta = 0$ ($f \leq 900$ MHz in TEM-cell; $f > 1800$ MHz: R22 waveguide). NORM_{x,y,z} are only intermediate values, i.e., the uncertainties of NORM_{x,y,z} does not affect the E²-field uncertainty inside TSL (see below ConvF).
- **NORM(f)_{x,y,z} = NORM_{x,y,z} * frequency_response** (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of ConvF.
- **DCP_{x,y,z}**: DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal (no uncertainty required). DCP does not depend on frequency nor media.
- **PAR**: PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics
- **A_{x,y,z}; B_{x,y,z}; C_{x,y,z}; D_{x,y,z}; VR_{x,y,z}; A, B, C, D** are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. VR is the maximum calibration range expressed in RMS voltage across the diode.
- **ConvF and Boundary Effect Parameters**: Assessed in flat phantom using E-field (or Temperature Transfer Standard for $f \leq 800$ MHz) and inside waveguide using analytical field distributions based on power measurements for $f > 800$ MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to NORM_{x,y,z} * ConvF whereby the uncertainty corresponds to that given for ConvF. A frequency dependent ConvF is used in DASY version 4.4 and higher which allows extending the validity from ± 50 MHz to ± 100 MHz.
- **Spherical isotropy (3D deviation from isotropy)**: in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- **Sensor Offset**: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.
- **Connector Angle**: The angle is assessed using the information gained by determining the NORM_x (no uncertainty required).



EX3DV4 – SN:7628

February 16, 2021

DASY/EASY - Parameters of Probe: EX3DV4 - SN:7628**Basic Calibration Parameters**

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm ($\mu\text{V}/(\text{V}/\text{m})^2$) ^A	0.61	0.56	0.61	± 10.1 %
DCP (mV) ^B	109.2	108.2	109.0	

Calibration Results for Modulation Response

UID	Communication System Name		A dB	B dB μV	C	D dB	VR mV	Max dev.	Max Unc ^E (k=2)
0	CW	X	0.00	0.00	1.00	0.00	149.4	± 2.7 %	± 4.7 %
		Y	0.00	0.00	1.00		155.2		
		Z	0.00	0.00	1.00		166.3		
10352-AAA	Pulse Waveform (200Hz, 10%)	X	1.78	61.75	7.06	10.00	60.0	± 2.9 %	± 9.6 %
		Y	1.55	60.76	6.50		60.0		
		Z	1.58	60.81	6.57		60.0		
10353-AAA	Pulse Waveform (200Hz, 20%)	X	0.85	60.00	5.15	6.99	80.0	± 2.3 %	± 9.6 %
		Y	0.85	60.00	5.03		80.0		
		Z	0.79	60.00	4.98		80.0		
10354-AAA	Pulse Waveform (200Hz, 40%)	X	0.44	60.00	4.18	3.98	95.0	± 2.5 %	± 9.6 %
		Y	8.00	70.00	7.00		95.0		
		Z	0.10	132.92	0.43		95.0		
10355-AAA	Pulse Waveform (200Hz, 60%)	X	0.26	60.00	3.63	2.22	120.0	± 1.6 %	± 9.6 %
		Y	10.15	157.55	9.99		120.0		
		Z	7.49	159.80	25.97		120.0		
10387-AAA	QPSK Waveform, 1 MHz	X	0.71	69.02	16.11	1.00	150.0	± 3.3 %	± 9.6 %
		Y	0.53	63.89	12.42		150.0		
		Z	0.53	63.57	12.67		150.0		
10388-AAA	QPSK Waveform, 10 MHz	X	1.60	69.56	15.90	0.00	150.0	± 1.1 %	± 9.6 %
		Y	1.33	66.14	13.93		150.0		
		Z	1.33	66.05	14.03		150.0		
10396-AAA	64-QAM Waveform, 100 kHz	X	1.78	65.59	16.29	3.01	150.0	± 1.0 %	± 9.6 %
		Y	1.71	64.82	15.85		150.0		
		Z	1.57	63.48	15.49		150.0		
10399-AAA	64-QAM Waveform, 40 MHz	X	2.93	67.49	15.80	0.00	150.0	± 1.4 %	± 9.6 %
		Y	2.81	66.48	15.12		150.0		
		Z	2.80	66.27	15.10		150.0		
10414-AAA	WLAN CCDF, 64-QAM, 40MHz	X	3.83	66.82	15.68	0.00	150.0	± 2.5 %	± 9.6 %
		Y	3.77	66.09	15.24		150.0		
		Z	3.92	66.64	15.56		150.0		

Note: For details on UID parameters see Appendix

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

^A The uncertainties of Norm X,Y,Z do not affect the E²-field uncertainty inside TSL (see Pages 5 and 6).^B Numerical linearization parameter: uncertainty not required.^E Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.



EX3DV4- SN:7628

February 16, 2021

DASY/EASY - Parameters of Probe: EX3DV4 - SN:7628**Sensor Model Parameters**

	C1 fF	C2 fF	α V^{-1}	T1 ms. V^{-2}	T2 ms. V^{-1}	T3 ms	T4 V^{-2}	T5 V^{-1}	T6
X	8.5	59.16	31.40	4.05	0.00	4.90	0.60	0.00	1.00
Y	9.3	65.93	32.35	4.45	0.00	4.92	0.54	0.00	1.00
Z	9.2	65.89	32.86	1.60	0.00	4.90	0.18	0.00	1.00

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (°)	-144.2
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	337 mm
Probe Body Diameter	10 mm
Tip Length	9 mm
Tip Diameter	2.5 mm
Probe Tip to Sensor X Calibration Point	1 mm
Probe Tip to Sensor Y Calibration Point	1 mm
Probe Tip to Sensor Z Calibration Point	1 mm
Recommended Measurement Distance from Surface	1.4 mm

Note: Measurement distance from surface can be increased to 3-4 mm for an *Area Scan* job.



EX3DV4- SN:7628

February 16, 2021

DASY/EASY - Parameters of Probe: EX3DV4 - SN:7628**Calibration Parameter Determined in Head Tissue Simulating Media**

f (MHz) ^C	Relative Permittivity ^F	Conductivity (S/m) ^F	ConvF X	ConvF Y	ConvF Z	Alpha ^G	Depth ^G (mm)	Unc (k=2)
750	41.9	0.89	10.48	10.48	10.48	0.43	0.80	± 12.0 %
835	41.5	0.90	10.15	10.15	10.15	0.46	0.80	± 12.0 %
900	41.5	0.97	9.77	9.77	9.77	0.51	0.86	± 12.0 %
1450	40.5	1.20	9.03	9.03	9.03	0.35	0.80	± 12.0 %
1750	40.1	1.37	8.76	8.76	8.76	0.28	0.86	± 12.0 %
1900	40.0	1.40	8.38	8.38	8.38	0.28	0.86	± 12.0 %
2000	40.0	1.40	8.29	8.29	8.29	0.37	0.88	± 12.0 %
2300	39.5	1.67	8.15	8.15	8.15	0.36	0.92	± 12.0 %
2450	39.2	1.80	8.01	8.01	8.01	0.27	0.92	± 12.0 %
2600	39.0	1.96	7.71	7.71	7.71	0.40	0.92	± 12.0 %
3300	38.2	2.71	7.24	7.24	7.24	0.30	1.35	± 13.1 %
3500	37.9	2.91	7.04	7.04	7.04	0.30	1.35	± 13.1 %
3700	37.7	3.12	7.00	7.00	7.00	0.35	1.35	± 13.1 %
3900	37.5	3.32	6.83	6.83	6.83	0.35	1.50	± 13.1 %
4100	37.2	3.53	6.73	6.73	6.73	0.35	1.50	± 13.1 %
4200	37.1	3.63	6.46	6.46	6.46	0.35	1.60	± 13.1 %
4400	36.9	3.84	6.39	6.39	6.39	0.35	1.60	± 13.1 %
4600	36.7	4.04	6.12	6.12	6.12	0.35	1.70	± 13.1 %
4800	36.4	4.25	6.16	6.16	6.16	0.40	1.80	± 13.1 %
4950	36.3	4.40	5.94	5.94	5.94	0.40	1.80	± 13.1 %
5250	35.9	4.71	5.51	5.51	5.51	0.40	1.80	± 13.1 %
5600	35.5	5.07	5.00	5.00	5.00	0.40	1.80	± 13.1 %
5750	35.4	5.22	4.95	4.95	4.95	0.40	1.80	± 13.1 %

^C Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Validity of ConvF assessed at 6 MHz is 4-9 MHz, and ConvF assessed at 13 MHz is 9-19 MHz. Above 5 GHz frequency validity can be extended to ± 110 MHz.

^F At frequencies below 3 GHz, the validity of tissue parameters (ϵ and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ϵ and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

^G Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.



EX3DV4– SN:7628

February 16, 2021

DASY/EASY - Parameters of Probe: EX3DV4 - SN:7628**Calibration Parameter Determined in Head Tissue Simulating Media**

f (MHz) ^C	Relative Permittivity ^F	Conductivity (S/m) ^F	ConvF X	ConvF Y	ConvF Z	Alpha ^G	Depth ^G (mm)	Unc (k=2)
6500	34.5	6.07	5.50	5.50	5.50	0.20	2.50	± 18.6 %
7000	33.9	6.65	5.60	5.60	5.60	0.25	2.50	± 18.6 %
8000	32.7	7.84	5.40	5.40	5.40	0.50	1.50	± 18.6 %
9000	31.5	9.08	5.35	5.35	5.35	0.50	1.80	± 18.6 %

^C Frequency validity above 6GHz is ± 700 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.

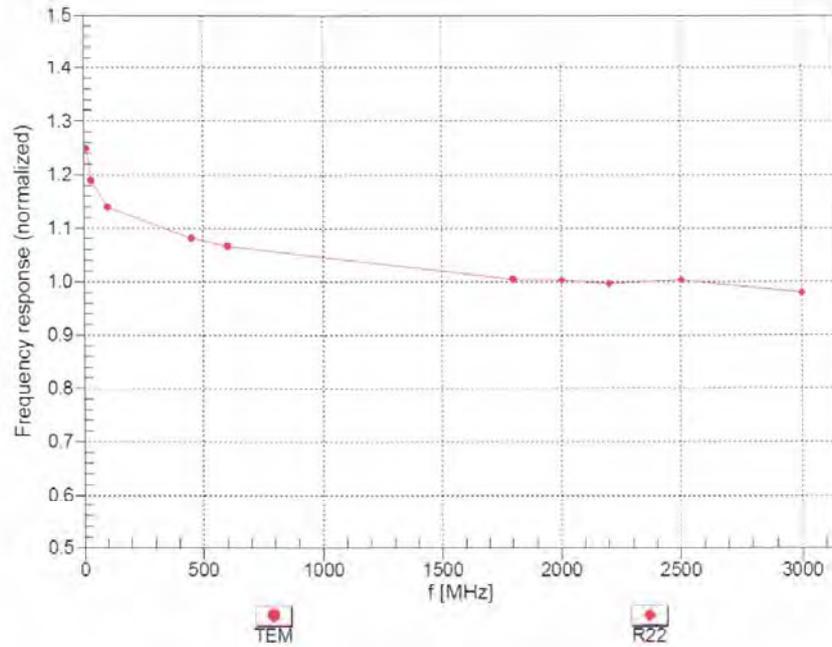
^F At frequencies 6-10 GHz, the validity of tissue parameters (ϵ and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

^G Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz; below ± 2% for frequencies between 3-6 GHz; and below ± 4% for frequencies between 6-10 GHz at any distance larger than half the probe tip diameter from the boundary.

EX3DV4- SN:7628

February 16, 2021

Frequency Response of E-Field (TEM-Cell: ifi110 EXX, Waveguide: R22)

Uncertainty of Frequency Response of E-field: $\pm 6.3\%$ ($k=2$)

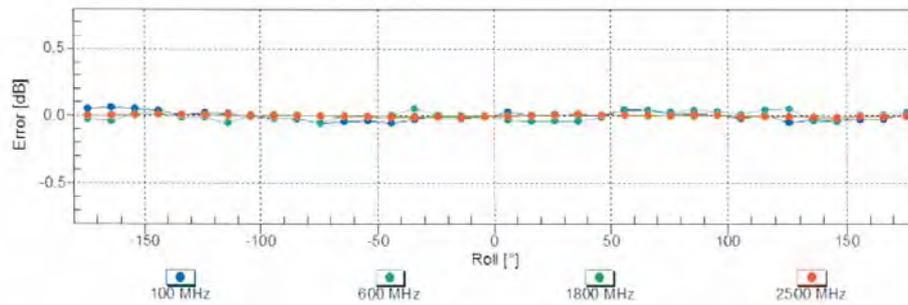
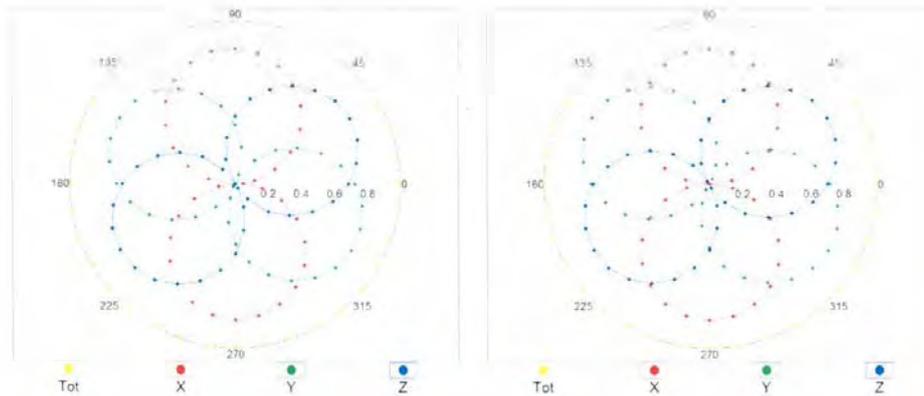
EX3DV4- SN:7628

February 16, 2021

Receiving Pattern (ϕ), $\theta = 0^\circ$

f=600 MHz,TEM

f=1800 MHz,R22

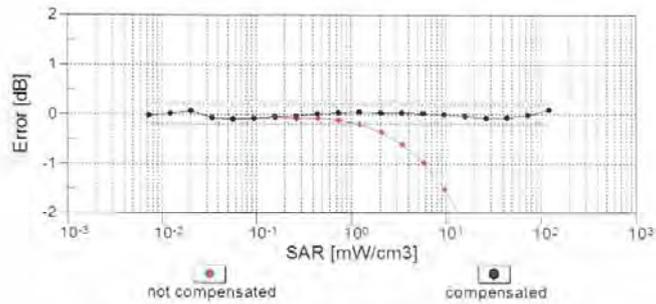
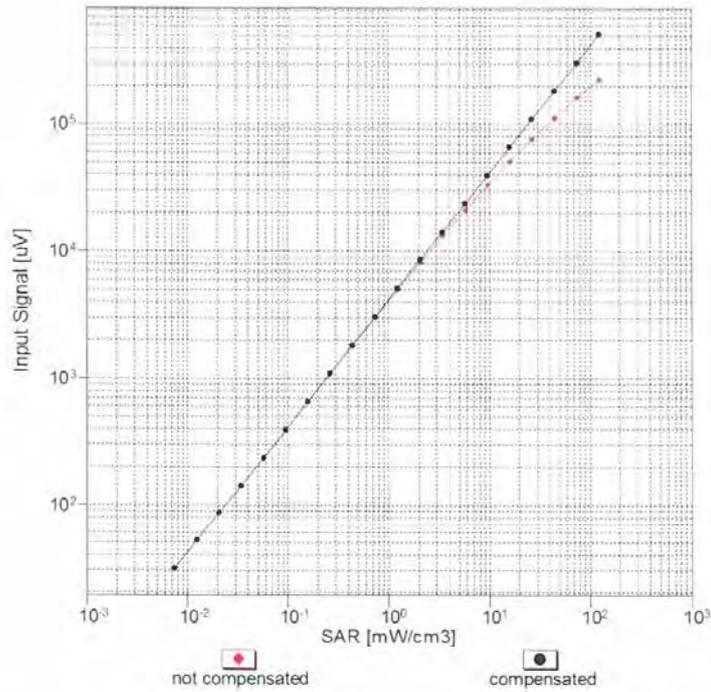


Uncertainty of Axial Isotropy Assessment: $\pm 0.5\%$ (k=2)

EX3DV4- SN:7628

February 16, 2021

Dynamic Range $f(SAR_{head})$ (TEM cell, $f_{eval}=1900$ MHz)



Uncertainty of Linearity Assessment: $\pm 0.6\%$ ($k=2$)