FCC SAR Test Report

APPLICANT	**:**	**Bullitt Group**
EQUIPMENT	**:**	**Rugged Smart Phone**
BRAND NAME	**:**	**CAT**
MODEL NAME	**:**	**S42**
FCC ID	**:**	**ZL5S42**
STANDARD	**:**	**FCC 47 CFR PART 2 (2.1093)** **ANSI/IEEE C95.1-1992** **IEEE 1528-2013**

The product was received on May 22, 2020 and testing was started from Jun. 03, 2020 and completed on Jun. 22, 2020. We, Sporton International (ShenZhen) Inc., would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International (ShenZhen) Inc., the test report shall not be reproduced except in full.

Reviewed by: Long Liang / Supervisor

Approved by: Johnny Chen / Manager

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People's Republic of China

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Revision History

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FA052014-01	Rev. 01	Initial issue of report	Jul. 10, 2020

1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for **Bullitt Group, Rugged Smart Phone, S42,** are as follows.

Highest Standalone 1g SAR Summary						
Equipment Class	Frequency Band		Head (Separation 0mm)	Hotspot (Separation 10mm)	Body-worn (Separation 10mm)	Highest Simultaneous Transmission 1g SAR (W/kg)
			1g SAR (W/kg)			
Licensed	GSM	GSM850	0.96	0.68	0.68	1.58
		GSM1900	0.85	0.70	0.54	
	WCDMA	Band V	0.69	0.32	0.32	
		Band IV	1.01	0.96	0.96	
		Band II	0.91	1.00	0.74	
	LTE	Band 71	0.90	0.40	0.40	
		Band 12/Band 17	0.94	0.52	0.52	
		Band 13	0.62	0.46	0.46	
		Band 14	0.54	0.38	0.38	
		Band 26	0.82	0.29	0.29	
		Band 5	0.74	0.33	0.33	
		Band 66/Band 4	**1.07**	1.05	1.05	
		Band 25/Band 2	1.06	1.06	0.90	
		Band 7	1.01	1.09	1.01	
		Band 41	1.02	**1.10**	**1.06**	
DTS	WLAN	2.4GHz WLAN	0.72	0.15	0.15	1.56
NII		5GHz WLAN	0.73	0.33	0.35	1.58
DSS	Bluetooth	Bluetooth	0.17	<0.10	<0.10	1.12

Highest 10g SAR Summary			
Equipment Class	Frequency Band		Product Specific 10g SAR (W/kg) (Separation 0mm)
NII	WLAN	5GHz WLAN	**0.58**
Date of Testing:			2020/6/3~2020/6/22

Remark:

1. This device supports LTE B2 / B4 / B17 and B25 / B66 / B12. Since the supported frequency span for LTE B2 / B4 / B17 falls completely within the supports frequency span for LTE B25 / B66 / B12, both LTE bands have the same target power, and both LTE bands share the same transmission path; therefore, SAR was only assessed for LTE B25 / B66 / B12.

Declaration of Conformity:
The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.
Comments and Explanations:
The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

This device is in compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits (1.6 W/kg for Partial-Body 1g SAR, 4.0 W/kg for Product Specific 10g SAR) specified in FCC 47 CFR part 2 (2.1093) and ANSI/IEEE C95.1-1992, and had been tested in accordance with the measurement methods and procedures specified in IEEE 1528-2013 and FCC KDB publications.

2. Administration Data

Sporton International (Shenzhen) Inc. is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.01.

Testing Laboratory		
Test Firm	Sporton International (Shenzhen) Inc.	
Test Site Location	1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055 People's Republic of China TEL: +86-755-86379589 FAX: +86-755-86379595	
Test Site No.	FCC Designation No.	FCC Test Firm Registration No.
	CN1256	421272

Applicant	
Company Name	Bullitt Group
Address	One Valpy, Valpy Street, Reading, Berkshire, England RG1 1AR

Manufacturer	
Company Name	Bullitt Group
Address	One Valpy, Valpy Street, Reading, Berkshire, England RG1 1AR

3. Guidance Applied

The Specific Absorption Rate (SAR) testing specification, method, and procedure for this device is in accordance with the following standards:

- FCC 47 CFR Part 2 (2.1093)
- ANSI/IEEE C95.1-1992
- IEEE 1528-2013
- FCC KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz v01r04
- FCC KDB 865664 D02 SAR Reporting v01r02
- FCC KDB 447498 D01 General RF Exposure Guidance v06
- FCC KDB 648474 D04 SAR Evaluation Considerations for Wireless Handsets v01r03
- FCC KDB 248227 D01 802.11 Wi-Fi SAR v02r02
- FCC KDB 941225 D01 3G SAR Procedures v03r01
- FCC KDB 941225 D05 SAR for LTE Devices v02r05
- FCC KDB 941225 D05A Rel.10 LTE SAR Test Guidance v01r02
- FCC KDB 941225 D06 Hotspot Mode SAR v02r01

4. Equipment Under Test (EUT) Information

4.1 General Information

Product Feature & Specification	
Equipment Name	Rugged Smart Phone
Brand Name	CAT
Model Name	S42
FCC ID	ZL5S42
IMEI Code	SIM1: 359145660003021 SIM2: 359145660007022
Wireless Technology and Frequency Range	GSM850: 824.2 MHz ~ 848.8 MHz GSM1900: 1850.2 MHz ~ 1909.8 MHz WCDMA Band II: 1852.4 MHz ~ 1907.6 MHz WCDMA Band IV: 1712.4 MHz ~ 1752.6 MHz WCDMA Band V: 826.4 MHz ~ 846.6 MHz LTE Band 2: 1850.7 MHz ~ 1909.3 MHz LTE Band 4: 1710.7 MHz ~ 1754.3 MHz LTE Band 5: 824.7 MHz ~ 848.3 MHz LTE Band 7: 2502.5 MHz ~ 2567.5 MHz LTE Band 12: 699.7 MHz ~ 715.3 MHz LTE Band 13: 779.5 MHz ~ 784.5 MHz LTE Band 14: 790.5 MHz ~ 795.5 MHz LTE Band 17: 706.5 MHz ~ 713.5 MHz LTE Band 25: 1850.7 MHz ~ 1914.3 MHz LTE Band 26: 814.7 MHz ~ 848.3 MHz LTE Band 41: 2498.5 MHz ~ 2687.5 MHz LTE Band 66: 1710.7 MHz ~ 1779.3 MHz LTE Band 71: 665.5 MHz ~ 695.5 MHz WLAN 2.4GHz Band: 2412 MHz ~ 2462 MHz WLAN 5.2GHz Band: 5180 MHz ~ 5240 MHz WLAN 5.3GHz Band: 5260 MHz ~ 5320 MHz WLAN 5.5GHz Band: 5500 MHz ~ 5720 MHz WLAN 5.8GHz Band: 5745 MHz ~ 5825 MHz Bluetooth: 2402 MHz ~ 2480 MHz NFC : 13.56 MHz
Mode	GSM/GPRS/EGPRS RMC/AMR 12.2Kbps HSDPA HSUPA DC-HSDPA HSPA+ (16QAM uplink is not supported) LTE: QPSK, 16QAM, 64QAM WLAN 2.4GHz : 802.11b/g/n HT20 WLAN 5GHz : 802.11a/n/ac HT20/HT40/VHT20/VHT40/VHT80 Bluetooth BR/EDR/LE NFC:ASK
GSM / (E)GPRS Transfer mode	Class B – EUT cannot support Packet Switched and Circuit Switched Network simultaneously but can automatically switch between Packet and Circuit Switched Network.
EUT Stage	Production Unit

Remark:

1. 802.11n-HT40 is not supported in 2.4GHz WLAN.
2. This device supports VoIP in GPRS, EGPRS, WCDMA and LTE (e.g. for 3rd-party VoIP), LTE supports VoLTE operation.
3. This device does not support DTM operation and support GRPS/EGRPS mode up to multi-slot class 12.
4. This device supports HPUE for LTE band 41 with class 2 power level, so HPUE SAR has been performed.
5. This device WLAN 2.4GHz supports hotspot operation and Bluetooth support tethering applications.
6. This device 2.4GHz WLAN/5.2GHz WLAN/5.8GHz WLAN support hotspot operation, and 5.2GHz WLAN/5.8GHz WLAN supports WiFi Direct (GC/GO), and 5.3GHz / 5.5GHz supports WiFi Direct (GC only).
7. For dual SIM card mobile has two SIM slots and supports dual SIM dual standby. The WWAN radio transmission will be enabled by either one SIM at a time (single active). After pre-scan two SIM cards power, we found test result of the SIM1 was the worse, so we chose SIM1 slot to perform all tests.

8. This device has two WWAN transmit antennas. WWAN bottom antenna is located at the bottom edge of the device, and WWAN top antenna is located at the top edge of the device which can refer to antenna location chapter. Top and Bottom antenna support the same WWAN frequency bands, and they can't transmit simultaneously.
9. ACC((Accelerative) sensor implanted and when the mobile phone get stressed by accelerative forces, ACC sensor would detect the change of the coordinate axis and CPU calculates results and system will invoke correspondent power table.
10. When the phone is in talking mode and receiver worked, then head power will be invoke correspondent power table.
11. When the phone is in talking mode and receiver not worked, then receiver off power, then body-worn, hotspot will be invoke correspondent power table.

4.2 General LTE SAR Test and Reporting Considerations

Summarized necessary items addressed in KDB 941225 D05 v02r05	
FCC ID	ZL5S42
Equipment Name	Rugged Smart Phone
Operating Frequency Range of each LTE transmission band	LTE Band 2: 1850.7 MHz ~ 1909.3 MHz LTE Band 4: 1710.7 MHz ~ 1754.3 MHz LTE Band 5: 824.7 MHz ~ 848.3 MHz LTE Band 7: 2502.5 MHz ~ 2567.5 MHz LTE Band 12: 699.7 MHz ~ 715.3 MHz LTE Band 13: 779.5 MHz ~ 784.5 MHz LTE Band 14: 790.5 MHz ~ 795.5 MHz LTE Band 17: 706.5 MHz ~ 713.5 MHz LTE Band 25: 1850.7 MHz ~ 1914.3 MHz LTE Band 26: 814.7 MHz ~ 848.3 MHz LTE Band 41: 2498.5 MHz ~ 2687.5 MHz LTE Band 66: 1710.7 MHz ~ 1779.3 MHz LTE Band 71: 665.5 MHz ~ 695.5 MHz
Channel Bandwidth	LTE Band 2:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 4:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 5:1.4MHz, 3MHz, 5MHz, 10MHz LTE Band 7: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 12:1.4MHz, 3MHz, 5MHz, 10MHz LTE Band 13: 5MHz, 10MHz LTE Band 14: 5MHz, 10MHz LTE Band 17: 5MHz, 10MHz LTE Band 25:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 26:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz LTE Band 41: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 66:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 71: 5MHz, 10MHz, 15MHz, 20MHz
Uplink Modulations used	QPSK / 16QAM / 64QAM
LTE Voice / Data requirements	Voice and Data
LTE Release Version	R11, Cat 6
CA Support	Yes, Downlink only
LTE MPR permanently built-in by design	**Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1, 2 and 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 | ≤ 3 256 QAM: ≥ 1 | ≤ 5
LTE A-MPR	In the base station simulator configuration, Network Setting value is set to NS_01 to disable A-MPR during SAR testing and the LTE SAR tests was transmitting on all TTI frames (Maximum TTI)
Spectrum plots for RB configuration	A properly configured base station simulator was used for the SAR and power measurement; therefore, spectrum plots for each RB allocation and offset configuration are not included in the SAR report.
Power reduction applied to satisfy SAR compliance	Yes, the detail please referred to section 13
LTE Carrier Aggregation Combinations	Inter-Band and Intra-Band possible combinations and the detail power verification please referred to section 13.
LTE Carrier Aggregation Additional Information	1. This device supports Carrier Aggregation on downlink only for inter and intra band, Uplink CA is not supported. 2. This device supports maximum of 2 carriers in the downlink. Additional following LTE Release features are not supported: Relay, HetNet, Enhanced MIMO, eICI, WiFi Offloading, MDH, eMBMA, Cross-Carrier Scheduling, Enhanced SC-FDMA.

Transmission (H, M, L) channel numbers and frequencies in each LTE band												
LTE Band 2												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	18607	1850.7	18615	1851.5	18625	1852.5	18650	1855	18675	1857.5	18700	1860
M	18900	1880	18900	1880	18900	1880	18900	1880	18900	1880	18900	1880
H	19193	1909.3	19185	1908.5	19175	1907.5	19150	1905	19125	1902.5	19100	1900
LTE Band 4												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	19957	1710.7	19965	1711.5	19975	1712.5	20000	1715	20025	1717.5	20050	1720
M	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5
H	20393	1754.3	20385	1753.5	20375	1752.5	20350	1750	20325	1747.5	20300	1745
LTE Band 5								
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	20407	824.7	20415	825.5	20425	826.5	20450	829
M	20525	836.5	20525	836.5	20525	836.5	20525	836.5
H	20643	848.3	20635	847.5	20625	846.5	20600	844
LTE Band 7								
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	20775	2502.5	20800	2505	20825	2507.5	20850	2510
M	21100	2535	21100	2535	21100	2535	21100	2535
H	21425	2567.5	21400	2565	21375	2562.5	21350	2560
LTE Band 12								
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	23017	699.7	23025	700.5	23035	701.5	23060	704
M	23095	707.5	23095	707.5	23095	707.5	23095	707.5
H	23173	715.3	23165	714.5	23155	713.5	23130	711
LTE Band 13				
	Bandwidth 5 MHz		Bandwidth 10 MHz	
	Channel #	Freq.(MHz)	Channel #	Freq.(MHz)
L	23205	779.5	23230	782
M	23230	782		
H	23255	784.5		
LTE Band 14				
	Bandwidth 5 MHz		Bandwidth 10 MHz	
	Channel #	Channel #	Channel #	Freq.(MHz)
L	23305	790.5	23330	793
M	23330	793		
H	23355	795.5		
LTE Band 17				
	Bandwidth 5 MHz		Bandwidth 10 MHz	
	Channel #	Freq.(MHz)	Channel #	Freq. (MHz)
L	23755	706.5	23780	709
M	23790	710	23790	710
H	23825	713.5	23800	711
LTE Band 25												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	26047	1850.7	26055	1851.5	26065	1852.5	26090	1855	26115	1857.5	26140	1860
M	26340	1880	26340	1880	26340	1880	26340	1880	26340	1880	26340	1880
H	26683	1914.3	26675	1913.5	26665	1912.5	26640	1910	26615	1907.5	26590	1905

LTE Band 26										
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	26697	814.7	26705	815.5	26715	816.5	26740	819	26765	821.5
M	26865	831.5	26865	831.5	26865	831.5	26865	831.5	26865	831.5
H	27033	848.3	27025	847.5	27015	846.5	26990	844	26965	841.5

LTE Band 41								
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	39675	2498.5	39700	2501	39725	2503.5	39750	2506
LM	40148	2545.8	40160	2547	40173	2548.3	40185	2549.5
M	40620	2593	40620	2593	40620	2593	40620	2593
HM	41093	2640.3	41080	2639	41068	2637.8	41055	2636.5
H	41565	2687.5	41540	2685	41515	2682.5	41490	2680

LTE Band 66												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	131979	1710.7	131987	1711.5	131997	1712.5	132022	1715	132047	1717.5	132072	1720
M	132322	1745	132322	1745	132322	1745	132322	1745	132322	1745	132322	1745
H	132665	1779.3	132657	1778.5	132647	1777.5	132622	1775	132597	1772.5	132572	1770

LTE Band 71								
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	133147	665.5	133172	668	133197	670.5	133222	673
M	133247	675.5	133272	678	133297	680.5	133322	683
H	133447	695.5	133422	693	133397	690.5	133372	688

5. RF Exposure Limits

5.1 Uncontrolled Environment

Uncontrolled Environments are defined as locations where there is the exposure of individuals who have no knowledge or control of their exposure. The general population/uncontrolled exposure limits are applicable to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Members of the general public would come under this category when exposure is not employment-related; for example, in the case of a wireless transmitter that exposes persons in its vicinity.

5.2 Controlled Environment

Controlled Environments are defined as locations where there is exposure that may be incurred by persons who are aware of the potential for exposure, (i.e. as a result of employment or occupation). In general, occupational/controlled exposure limits are applicable to situations in which persons are exposed as a consequence of their employment, who have been made fully aware of the potential for exposure and can exercise control over their exposure. The exposure category is also applicable when the exposure is of a transient nature due to incidental passage through a location where the exposure levels may be higher than the general population/uncontrolled limits, but the exposed person is fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

Limits for Occupational/Controlled Exposure (W/kg)

Whole-Body	Partial-Body	Hands, Wrists, Feet and Ankles
0.4	8.0	20.0

Limits for General Population/Uncontrolled Exposure (W/kg)

Whole-Body	Partial-Body	Hands, Wrists, Feet and Ankles
0.08	1.6	4.0

Whole-Body SAR is averaged over the entire body, partial-body SAR is averaged over any 1gram of tissue defined as a tissue volume in the shape of a cube. SAR for hands, wrists, feet and ankles is averaged over any 10 grams of tissue defined as a tissue volume in the shape of a cube.

6. Specific Absorption Rate (SAR)

6.1 Introduction

SAR is related to the rate at which energy is absorbed per unit mass in an object exposed to a radio field. The SAR distribution in a biological body is complicated and is usually carried out by experimental techniques or numerical modeling. The standard recommends limits for two tiers of groups, occupational/controlled and general population/uncontrolled, based on a person's awareness and ability to exercise control over his or her exposure. In general, occupational/controlled exposure limits are higher than the limits for general population/uncontrolled.

6.2 SAR Definition

The SAR definition is the time derivative (rate) of the incremental energy (dW) absorbed by (dissipated in) an incremental mass (dm) contained in a volume element (dv) of a given density (ρ). The equation description is as below:

$$\mathbf{SAR} = \frac{\mathbf{d}}{\mathbf{dt}}\left(\frac{\mathbf{dW}}{\mathbf{dm}}\right) = \frac{\mathbf{d}}{\mathbf{dt}}\left(\frac{\mathbf{dW}}{\boldsymbol{\rho}\mathbf{dv}}\right)$$

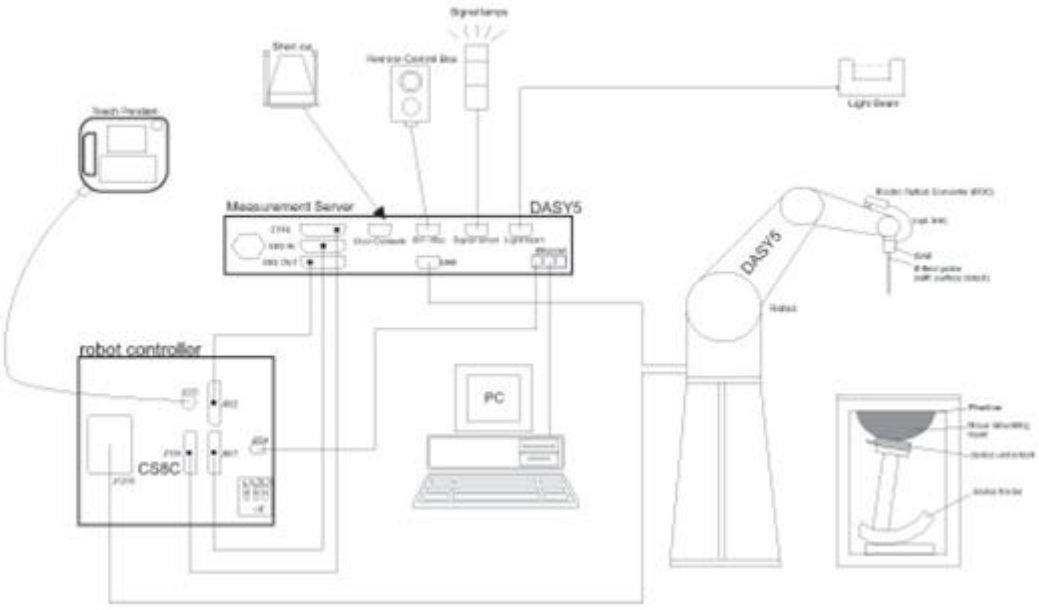
SAR is expressed in units of Watts per kilogram (W/kg)

$$\mathbf{SAR} = \frac{\boldsymbol{\sigma}|\mathbf{E}|^2}{\boldsymbol{\rho}}$$

Where: σ is the conductivity of the tissue, ρ is the mass density of the tissue and E is the RMS electrical field strength.

7. System Description and Setup

The DASY system used 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 DASY5 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.

7.1 E-Field Probe

The SAR measurement is conducted with the dosimetric probe (manufactured by SPEAG).The probe is specially designed and calibrated for use in liquid with high permittivity. The dosimetric probe has special calibration in liquid at different frequency. This probe has a built in optical surface detection system to prevent from collision with phantom.

<EX3DV4 Probe>

Construction	Symmetric design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)
Frequency	10 MHz – >6 GHz Linearity: ±0.2 dB (30 MHz – 6 GHz)
Directivity	±0.3 dB in TSL (rotation around probe axis) ±0.5 dB in TSL (rotation normal to probe axis)
Dynamic Range	10 µW/g – >100 mW/g Linearity: ±0.2 dB (noise: typically <1 µW/g)
Dimensions	Overall length: 337 mm (tip: 20 mm) Tip diameter: 2.5 mm (body: 12 mm) Typical distance from probe tip to dipole centers: 1 mm

7.2 Data Acquisition Electronics (DAE)

The data acquisition electronics (DAE) consists of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converter and a command decoder and control logic unit. Transmission to the measurement server is accomplished through an optical downlink for data and status information as well as an optical uplink for commands and the clock.

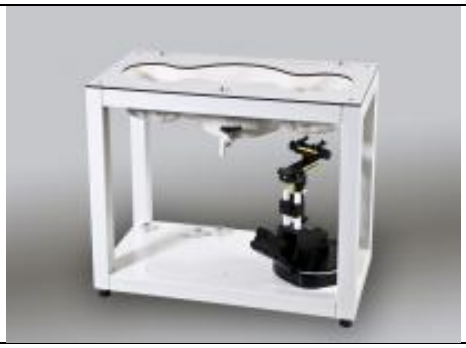
The input impedance of the DAE is 200 MOhm; the inputs are symmetrical and floating. Common mode rejection is above 80 dB.

Photo of DAE

7.3 Phantom

<SAM Twin Phantom>

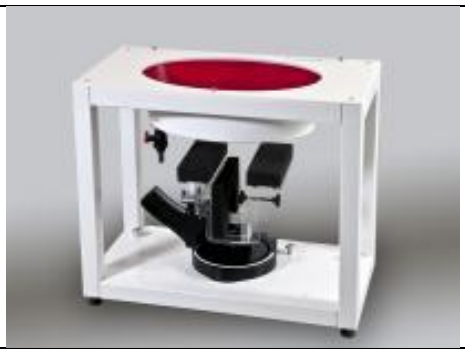
Shell Thickness	2 ± 0.2 mm; Center ear point: 6 ± 0.2 mm
Filling Volume	Approx. 25 liters
Dimensions	Length: 1000 mm; Width: 500 mm; Height: adjustable feet
Measurement Areas	Left Hand, Right Hand, Flat Phantom



The bottom plate contains three pair of bolts for locking the device holder. The device holder positions are adjusted to the standard measurement positions in the three sections. A white cover is provided to tap the phantom during off-periods to prevent water evaporation and changes in the liquid parameters. On the phantom top, three reference markers are provided to identify the phantom position with respect to the robot.

<ELI Phantom>

Shell Thickness	2 ± 0.2 mm (sagging: <1%)
Filling Volume	Approx. 30 liters
Dimensions	Major ellipse axis: 600 mm Minor axis: 400 mm



The ELI phantom is intended for compliance testing of handheld and body-mounted wireless devices in the frequency range of 30 MHz to 6 GHz. ELI4 is fully compatible with standard and all known tissue simulating liquids.

7.4 Device Holder

<Mounting Device for Hand-Held Transmitter>

In combination with the Twin SAM V5.0/V5.0c or ELI phantoms, the Mounting Device for Hand-Held Transmitters enables rotation of the mounted transmitter device to specified spherical coordinates. At the heads, the rotation axis is at the ear opening. Transmitter devices can be easily and accurately positioned according to IEC 62209-1, IEEE 1528, FCC, or other specifications. The device holder can be locked for positioning at different phantom sections (left head, right head, flat). And upgrade kit to Mounting Device to enable easy mounting of wider devices like big smart-phones, e-books, small tablets, etc. It holds devices with width up to 140 mm.

Mounting Device for Hand-Held Transmitters

Mounting Device Adaptor for Wide-Phones

<Mounting Device for Laptops and other Body-Worn Transmitters>

The extension is lightweight and made of POM, acrylic glass and foam. It fits easily on the upper part of the mounting device in place of the phone positioned. The extension is fully compatible with the SAM Twin and ELI phantoms.

Mounting Device for Laptops

8. Measurement Procedures

The measurement procedures are as follows:

<Conducted power measurement>

(a) For WWAN power measurement, use base station simulator to configure EUT WWAN transmission in conducted connection with RF cable, at maximum power in each supported wireless interface and frequency band.
(b) Read the WWAN RF power level from the base station simulator.
(c) For WLAN/BT power measurement, use engineering software to configure EUT WLAN/BT continuously transmission, at maximum RF power in each supported wireless interface and frequency band
(d) Connect EUT RF port through RF cable to the power meter, and measure WLAN/BT output power

<SAR measurement>

(a) Use base station simulator to configure EUT WWAN transmission in radiated connection, and engineering software to configure EUT WLAN/BT continuously transmission, at maximum RF power, in the highest power channel.
(b) Place the EUT in the positions as Appendix D demonstrates.
(c) Set scan area, grid size and other setting on the DASY software.
(d) Measure SAR results for the highest power channel on each testing position.
(e) Find out the largest SAR result on these testing positions of each band
(f) Measure SAR results for other channels in worst SAR testing position if the reported SAR of highest power channel is larger than 0.8 W/kg

According to the test standard, the recommended procedure for assessing the peak spatial-average SAR value consists of the following steps:

(a) Power reference measurement
(b) Area scan
(c) Zoom scan
(d) Power drift measurement

8.1 Spatial Peak SAR Evaluation

The procedure for spatial peak SAR evaluation has been implemented according to the test standard. It can be conducted for 1g and 10g, as well as for user-specific masses. The DASY software includes all numerical procedures necessary to evaluate the spatial peak SAR value.

The base for the evaluation is a "cube" measurement. The measured volume must include the 1g and 10g cubes with the highest averaged SAR values. For that purpose, the center of the measured volume is aligned to the interpolated peak SAR value of a previously performed area scan.

The entire evaluation of the spatial peak values is performed within the post-processing engine (SEMCAD). The system always gives the maximum values for the 1g and 10g cubes. The algorithm to find the cube with highest averaged SAR is divided into the following stages:

(a) Extraction of the measured data (grid and values) from the Zoom Scan
(b) Calculation of the SAR value at every measurement point based on all stored data (A/D values and measurement parameters)
(c) Generation of a high-resolution mesh within the measured volume
(d) Interpolation of all measured values form the measurement grid to the high-resolution grid
(e) Extrapolation of the entire 3-D field distribution to the phantom surface over the distance from sensor to surface
(f) Calculation of the averaged SAR within masses of 1g and 10g

8.2 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.

8.3 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 dB0 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 D01v01r04 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	½·δ·ln(2) ± 0.5 mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location	30° ± 1°	20° ± 1°
Maximum area scan spatial resolution: Δx_{Area}, Δy_{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 ≤ the corresponding x or y dimension of the test device with at least one measurement point on the test device.	

8.4 Zoom Scan

Zoom scans are used 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 shoes 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 D01v01r04 SAR measurement 100 MHz to 6 GHz.

			≤ 3 GHz	> 3 GHz
Maximum zoom scan spatial resolution: Δx_{Zoom}, Δy_{Zoom}			≤ 2 GHz: ≤ 8 mm 2 – 3 GHz: ≤ 5 mm*	3 – 4 GHz: ≤ 5 mm* 4 – 6 GHz: ≤ 4 mm*
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{Zoom}(n)$		≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm
	graded grid	$\Delta z_{Zoom}(1)$: between 1st two points closest to phantom surface	≤ 4 mm	3 – 4 GHz: ≤ 3 mm 4 – 5 GHz: ≤ 2.5 mm 5 – 6 GHz: ≤ 2 mm
		$\Delta z_{Zoom}(n>1)$: between subsequent points	≤ 1.5·$\Delta z_{Zoom}(n-1)$	
Minimum zoom scan volume	x, y, z		≥ 30 mm	3 – 4 GHz: ≥ 28 mm 4 – 5 GHz: ≥ 25 mm 5 – 6 GHz: ≥ 22 mm

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.

* When zoom scan is required and the *reported* SAR from the *area scan based 1-g SAR estimation* procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.

8.5 Volume Scan Procedures

The volume scan is used for 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.

8.6 Power Drift Monitoring

All SAR testing is under the EUT install full charged battery and transmit maximum output power. In DASY 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.

9. Test Equipment List

Manufacturer	Name of Equipment	Type/Model	Serial Number	Calibration	
				Last Cal.	Due Date
SPEAG	750MHz System Validation Kit	D750V3	1099	Dec. 06, 2018	Dec. 05, 2021
SPEAG	835MHz System Validation Kit	D835V2	4d162	Dec. 05, 2018	Dec. 04, 2021
SPEAG	1750MHz System Validation Kit	D1750V2	1137	Jul. 30, 2018	Jul. 29, 2021
SPEAG	1900MHz System Validation Kit	D1900V2	5d182	Dec. 07, 2018	Dec. 06, 2021
SPEAG	2450MHz System Validation Kit	D2450V2	924	Apr. 15, 2019	Apr. 14, 2022
SPEAG	2600MHz System Validation Kit	D2600V2	1070	Dec. 07, 2018	Dec. 06, 2021
SPEAG	5000MHz System Validation Kit	D5GHzV2	1167	Aug. 03, 2018	Aug. 02, 2021
SPEAG	Data Acquisition Electronics	DAE4	1356	May 19, 2020	May 18, 2021
SPEAG	Dosimetric E-Field Probe	EX3DV4	7577	Feb. 03, 2020	Feb. 02, 2021
SPEAG	SAM Twin Phantom	SAM V4.0	1575	NCR	NCR
SPEAG	Phone Positioner	N/A	N/A	NCR	NCR
Anritsu	Radio communication analyzer	MT8820C	6201300653	Jul. 22, 2019	Jul. 21, 2020
Anritsu	Radio communication analyzer	MT8821C	6201588572	Dec. 26, 2019	Dec. 25, 2020
Agilent	Wireless Communication Test Set	E5515C	MY50267224	Jul. 22, 2019	Jul. 21, 2020
Agilent	Network Analyzer	E5071C	MY46523671	Oct. 17, 2019	Oct. 16, 2020
Speag	Dielectric Assessment KIT	DAK-3.5	1071	Oct. 28, 2019	Oct. 27, 2020
Agilent	Signal Generator	N5181A	MY50145381	Dec. 26, 2019	Dec. 25, 2020
Anritsu	Power Senor	MA2411B	1306099	Jul. 22, 2019	Jul. 21, 2020
Anritsu	Power Meter	ML2495A	1349001	Jul. 22, 2019	Jul. 21, 2020
Anritsu	Power Sensor	MA2411B	1207253	Dec. 26, 2019	Dec. 25, 2020
Anritsu	Power Meter	ML2495A	1218010	Dec. 26, 2019	Dec. 25, 2020
R&S	CBT BLUETOOTH TESTER	CBT	100963	Dec. 26, 2019	Dec. 25, 2020
R&S	Spectrum Analyzer	FSP7	100818	Jul. 22, 2019	Jul. 21, 2020
LKM electronic	Hygrometer	DTM3000	3241	Jul. 25, 2019	Jul. 24, 2020
Anymetre	Thermo-Hygrometer	JR593	2015030903	Dec. 30, 2019	Dec. 29, 2020
AR	Amplifier	5S1G4	0333096	Note 1	
mini-circuits	Amplifier	ZVE-3W-83+	599201528	Note 1	
ARRA	Power Divider	A3200-2	N/A	Note 1	
PASTERNACK	Dual Directional Coupler	PE2214-10	N/A	Note 1	
Agilent	Dual Directional Coupler	778D	50422	Note 1	
MCL	Attenuation1	BW-S10W5	N/A	Note 1	
Weinschel	Attenuation2	3M-20	N/A	Note 1	
Zhongjilianhe	Attenuation3	MVE2214-03	N/A	Note 1	

Note:

1. Prior to system verification and validation, the path loss from the signal generator to the system check source and the power meter, which includes the amplifier, cable, attenuator and directional coupler, was measured by the network analyzer. The reading of the power meter was offset by the path loss difference between the path to the power meter and the path to the system check source to monitor the actual power level fed to the system check source.
2. Referring to KDB 865664 D01v01r04, the dipole calibration interval can be extended to 3 years with justification. The dipoles are also not physically damaged, or repaired during the interval.
3. The justification data of dipole can be found in appendix C. The return loss is < -20dB, within 20% of prior calibration, the impedance is within 5 ohm of prior calibration.

10. System Verification

10.1 Tissue Simulating Liquids

For the measurement of the field distribution inside the SAM phantom with DASY, the phantom must be filled with around 25 liters of homogeneous body tissue simulating liquid. For head SAR testing, the liquid height from the ear reference point (ERP) of the phantom to the liquid top surface is larger than 15 cm, which is shown in Fig. 10.1. For 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 Fig. 10.2.

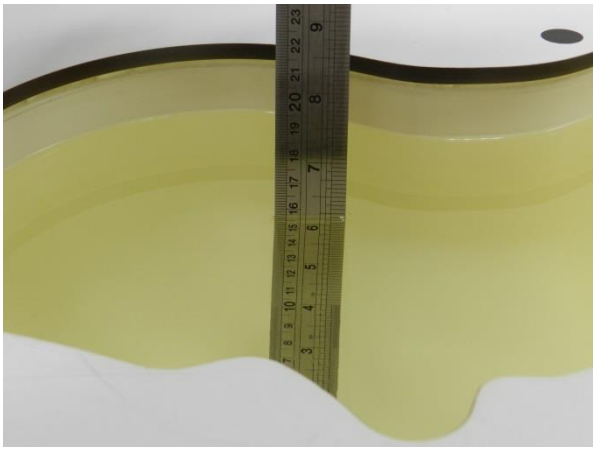


Fig 10.1Photo of Liquid Height for Head SAR

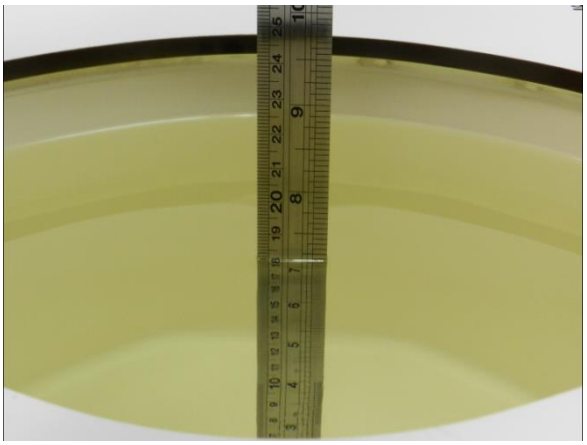


Fig 10.2 Photo of Liquid Height for Body SAR

10.2 Tissue Verification

The following tissue formulations are provided for reference only as some of the parameters have not been thoroughly verified. The composition of ingredients may be modified accordingly to achieve the desired target tissue parameters required for routine SAR evaluation.

Frequency (MHz)	Water (%)	Sugar (%)	Cellulose (%)	Salt (%)	Preventol (%)	DGBE (%)	Conductivity (σ)	Permittivity (εr)
For Head								
750	41.1	57.0	0.2	1.4	0.2	0	0.89	41.9
835	40.3	57.9	0.2	1.4	0.2	0	0.90	41.5
1800, 1900, 2000	55.2	0	0	0.3	0	44.5	1.40	40.0
2450	55.0	0	0	0	0	45.0	1.80	39.2
2600	54.8	0	0	0.1	0	45.1	1.96	39.0

Simulating Liquid for 5GHz, Manufactured by SPEAG

Ingredients	(% by weight)
Water	64~78%
Mineral oil	11~18%
Emulsifiers	9~15%
Additives and Salt	2~3%

<Tissue Dielectric Parameter Check Results>

Frequency (MHz)	Tissue Type	Liquid Temp. (℃)	Conductivity (σ)	Permittivity (ε_r)	Conductivity Target (σ)	Permittivity Target (ε_r)	Delta (σ) (%)	Delta (ε_r) (%)	Limit (%)	Date
750	Head	22.6	0.887	40.873	0.89	41.90	-0.34	-2.45	±5	2020/6/5
835	Head	22.5	0.902	40.749	0.90	41.50	0.22	-1.81	±5	2020/6/6
835	Head	22.7	0.928	42.730	0.90	41.50	3.11	2.96	±5	2020/6/15
1750	Head	22.7	1.385	39.563	1.37	40.10	1.09	-1.34	±5	2020/6/10
1750	Head	22.4	1.392	40.573	1.37	40.10	1.61	1.18	±5	2020/6/18
1900	Head	22.6	1.447	40.017	1.40	40.00	3.36	0.04	±5	2020/6/3
1900	Head	22.4	1.399	41.136	1.40	40.00	-0.07	2.84	±5	2020/6/17
2450	Head	22.7	1.825	39.664	1.80	39.20	1.39	1.18	±5	2020/6/9
2450	Head	22.6	1.770	39.386	1.80	39.20	-1.67	0.47	±5	2020/6/19
2600	Head	22.4	2.053	38.007	1.96	39.00	4.74	-2.55	±5	2020/6/4
2600	Head	22.8	2.049	37.739	1.96	39.00	4.54	-3.23	±5	2020/6/16
5250	Head	22.6	4.597	36.241	4.71	35.95	-2.40	0.81	±5	2020/6/12
5250	Head	22.6	4.673	35.938	4.71	35.95	-0.79	-0.03	±5	2020/6/20
5600	Head	22.9	4.954	35.793	5.07	35.50	-2.29	0.83	±5	2020/6/13
5600	Head	22.4	5.080	35.374	5.07	35.50	0.20	-0.35	±5	2020/6/21
5750	Head	22.8	5.119	35.497	5.22	35.35	-1.93	0.42	±5	2020/6/14
5750	Head	22.6	5.250	35.137	5.22	35.35	0.57	-0.60	±5	2020/6/22

10.3 System Performance Check Results

Comparing to the original SAR value provided by SPEAG, the verification data should be within its specification of 10 %. Below table shows the target SAR and measured SAR after normalized to 1W input power. The table below indicates the system performance check can meet the variation criterion and the plots can be referred to Appendix A of this report.

<1g SAR>

Date	Frequency (MHz)2	Tissue Type2	Input Power (mW)	Dipole S/N	Probe S/N	DAE S/N	Measured 1g SAR (W/kg)	Targeted 1g SAR (W/kg)	Normalized 1g SAR (W/kg)	Deviation (%)
2020/6/5	750	Head	250	1099	7577	1356	2.27	8.52	9.08	6.57
2020/6/6	835	Head	250	4d162	7577	1356	2.61	9.61	10.44	8.64
2020/6/15	835	Head	250	4d162	7577	1356	2.63	9.61	10.52	9.47
2020/6/10	1750	Head	250	1137	7577	1356	8.98	36.50	35.92	-1.59
2020/6/18	1750	Head	250	1137	7577	1356	9.02	36.50	36.08	-1.15
2020/6/3	1900	Head	250	5d182	7577	1356	10.00	39.60	40	1.01
2020/6/17	1900	Head	250	5d182	7577	1356	9.70	39.60	38.8	-2.02
2020/6/9	2450	Head	250	924	7577	1356	13.20	52.10	52.8	1.34
2020/6/19	2450	Head	250	924	7577	1356	12.80	52.10	51.2	-1.73
2020/6/4	2600	Head	250	1070	7577	1356	14.50	58.10	58	-0.17
2020/6/16	2600	Head	250	1070	7577	1356	14.10	58.10	56.4	-2.93
2020/6/12	5250	Head	100	1167	7577	1356	7.70	77.00	77	0.00
2020/6/20	5250	Head	100	1167	7577	1356	7.83	77.00	78.3	1.69
2020/6/13	5600	Head	100	1167	7577	1356	8.45	80.80	84.5	4.58
2020/6/21	5600	Head	100	1167	7577	1356	8.66	80.80	86.6	7.18
2020/6/14	5750	Head	100	1167	7577	1356	7.87	76.90	78.7	2.34
2020/6/22	5750	Head	100	1167	7577	1356	8.08	76.90	80.8	5.07

<10g SAR>

Date	Frequency (MHz)	Tissue Type	Input Power (mW)	Dipole S/N	Probe S/N	DAE S/N	Measured 10g SAR (W/kg)	Targeted 10g SAR (W/kg)	Normalized 10g SAR (W/kg)	Deviation (%)
2020/6/20	5250	HSL	100	1167	7577	1356	2.19	22.00	21.9	-0.45
2020/6/21	5600	HSL	100	1167	7577	1356	2.41	23.20	24.1	3.88

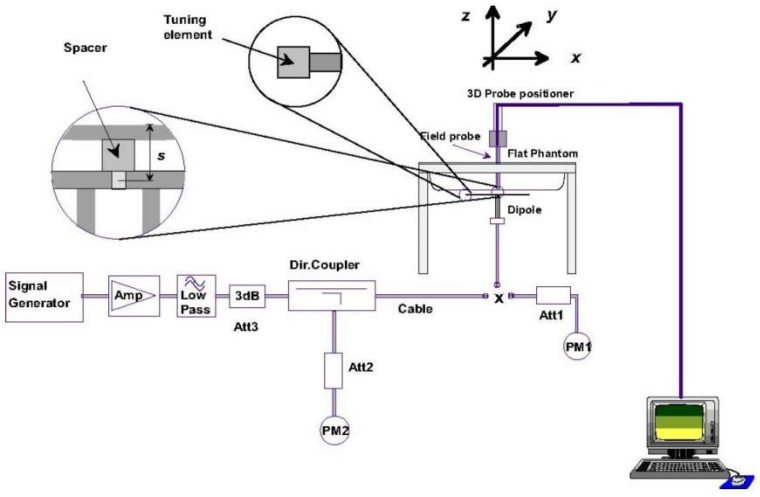


Fig 10.3.1 System Performance Check Setup

Fig 10.3.2 Setup Photo

11. RF Exposure Positions

11.1 Ear and handset reference point

Figure 11.1.1 shows the front, back, and side views of the SAM phantom. The center-of-mouth reference point is labeled “M,” the left ear reference point (ERP) is marked “LE,” and the right ERP is marked “RE.” Each ERP is 15 mm along the B-M (back-mouth) line behind the entrance-to-ear-canal (EEC) point, as shown in Figure 11.1.2 The Reference Plane is defined as passing through the two ear reference points and point M. The line N-F (neck-front), also called the reference pivoting line, is normal to the Reference Plane and perpendicular to both a line passing through RE and LE and the B-M line (see Figure 11.1.3). Both N-F and B-M lines should be marked on the exterior of the phantom shell to facilitate handset positioning. Posterior to the N-F line the ear shape is a flat surface with 6 mm thickness at each ERP, and forward of the N-F line the ear is truncated, as illustrated in Figure 11.1.2. The ear truncation is introduced to preclude the ear lobe from interfering with handset tilt, which could lead to unstable positioning at the cheek.

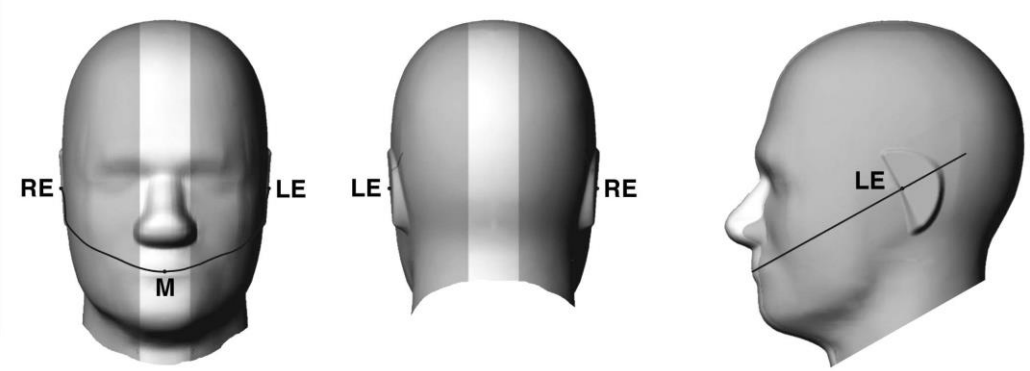


Fig 11.1.1 Front, back, and side views of SAM twin phantom

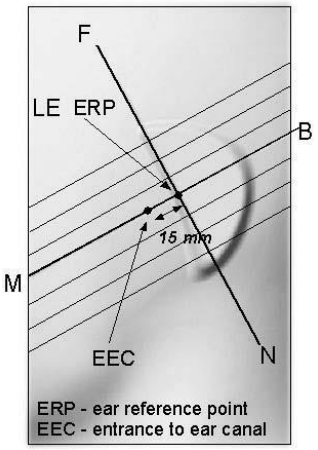


Fig 11.1.2 Close-up side view of phantom showing the ear region.

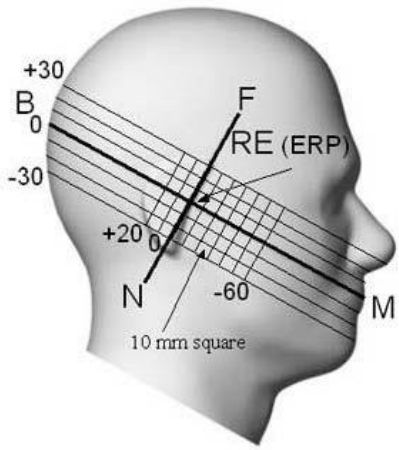


Fig 11.1.3 Side view of the phantom showing relevant markings and seven cross-sectional plane locations

11.2 Definition of the cheek position

1. Ready the handset for talk operation, if necessary. For example, for handsets with a cover piece (flip cover), open the cover. If the handset can transmit with the cover closed, both configurations must be tested.
2. Define two imaginary lines on the handset—the vertical centerline and the horizontal line. The vertical centerline passes through two points on the front side of the handset—the midpoint of the width wt of the handset at the level of the acoustic output (point A in Figure 11.2.1 and Figure 11.2.2), and the midpoint of the width wb of the bottom of the handset (point B). The horizontal line is perpendicular to the vertical centerline and passes through the center of the acoustic output (see Figure 11.2.1). The two lines intersect at point A. Note that for many handsets, point A coincides with the center of the acoustic output; however, the acoustic output may be located elsewhere on the horizontal line. Also note that the vertical centerline is not necessarily parallel to the front face of the handset (see Figure 11.2.2), especially for clamshell handsets, handsets with flip covers, and other irregularly-shaped handsets.
3. Position the handset close to the surface of the phantom such that point A is on the (virtual) extension of the line passing through points RE and LE on the phantom (see Figure 11.2.3), such that the plane defined by the vertical centerline and the horizontal line of the handset is approximately parallel to the sagittal plane of the phantom.
4. Translate the handset towards the phantom along the line passing through RE and LE until handset point A touches the pinna at the ERP.
5. While maintaining the handset in this plane, rotate it around the LE-RE line until the vertical centerline is in the plane normal to the plane containing B-M and N-F lines, i.e., the Reference Plane.
6. Rotate the handset around the vertical centerline until the handset (horizontal line) is parallel to the N-F line.
7. While maintaining the vertical centerline in the Reference Plane, keeping point A on the line passing through RE and LE, and maintaining the handset contact with the pinna, rotate the handset about the N-F line until any point on the handset is in contact with a phantom point below the pinna on the cheek. See Figure 11.2.3. The actual rotation angles should be documented in the test report.

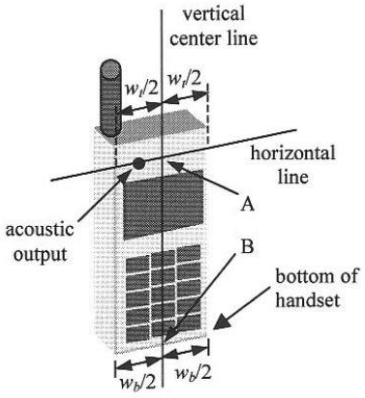


Fig 11.2.1 Handset vertical and horizontal reference lines—"fixed case

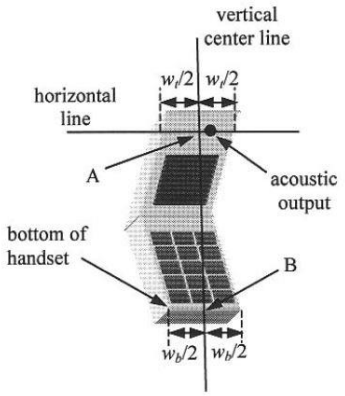


Fig 11.2.2 Handset vertical and horizontal reference lines—"clam-shell case"

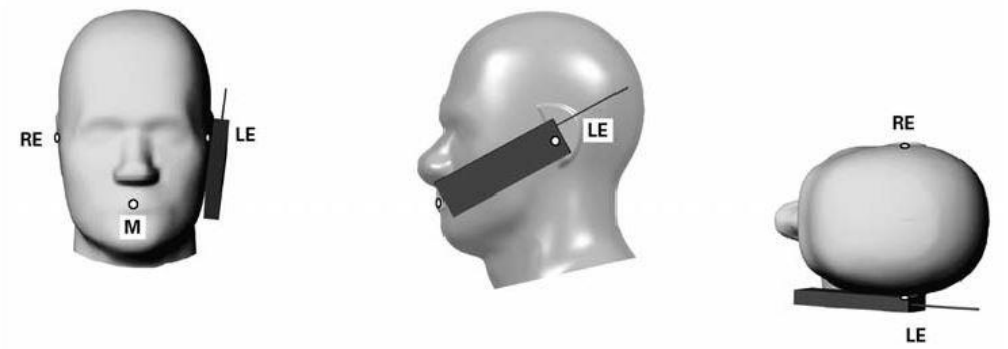


Fig 11.2.3 cheek or touch position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which establish the Reference Plane for handset positioning, are indicated.

11.3 Definition of the tilt position

1. Ready the handset for talk operation, if necessary. For example, for handsets with a cover piece (flip cover), open the cover. If the handset can transmit with the cover closed, both configurations must be tested.
2. While maintaining the orientation of the handset, move the handset away from the pinna along the line passing through RE and LE far enough to allow a rotation of the handset away from the cheek by 15°.
3. Rotate the handset around the horizontal line by 15°.
4. While maintaining the orientation of the handset, move the handset towards the phantom on the line passing through RE and LE until any part of the handset touches the ear. The tilt position is obtained when the contact point is on the pinna. See Figure 11.3.1. If contact occurs at any location other than the pinna, e.g., the antenna at the back of the phantom head, the angle of the handset should be reduced. In this case, the tilt position is obtained if any point on the handset is in contact with the pinna and a second point

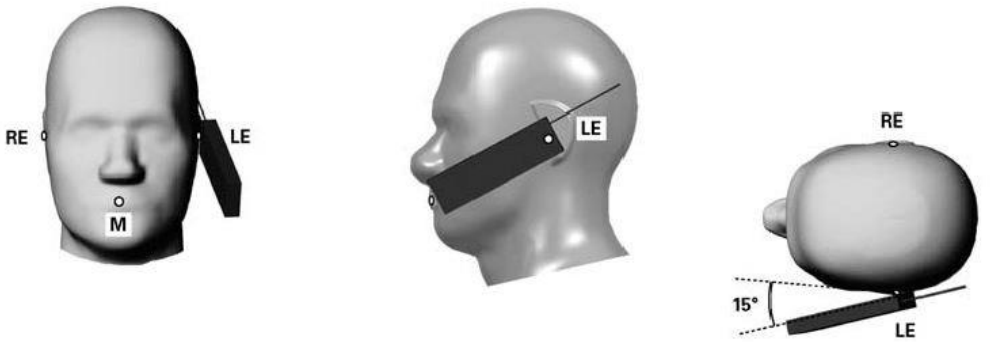


Fig 11.3.1 Tilt position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which define the Reference Plane for handset positioning, are indicated.

11.4 Body Worn Accessory

Body-worn operating configurations are tested with the belt-clips and holsters attached to the device and positioned against a flat phantom in a normal use configuration (see Figure 11.4). Per KDB648474 D04v01r03, 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 447498 D01v06 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 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 handset 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 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 test with the device with each accessory. If multiple accessories share an identical metallic component (i.e. the same metallic belt-chip used with different holsters with no other metallic components) only the accessory that dictates the closest spacing to the body is tested.

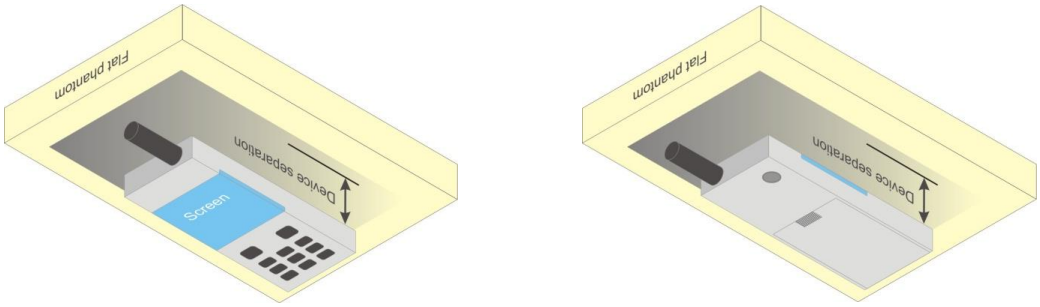


Fig 11.4 Body Worn Position

11.5 Product Specific 10g SAR Exposure

For smart phones with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm that provide similar mobile web access and multimedia support found in mini-tablets or UMPC mini-tablets that support voice calls next to the ear, According to KDB648474 D04v01r03, 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

1. The normally required head and body-worn accessory SAR test procedures for handsets, including hotspot mode, must be applied.

2. 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 10-g extremity SAR according to the body-equivalent tissue dielectric parameters in KDB 865664 to address interactive hand use exposure conditions.6 The UMPC mini-tablet 1-g SAR at 5 mm is not required. When hotspot mode applies, 10-g extremity SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg.

11.6 Wireless Router

Some battery-operated handsets have the capability to transmit and receive user through simultaneous transmission of WIFI simultaneously with a separate licensed transmitter. The FCC has provided guidance in FCC KDB Publication 941225 D06 v02r01 where SAR test considerations for handsets (L x W ≥ 9 cm x 5 cm) are based on a composite test separation distance of 10mm from the front, back and edges of the device containing transmitting antennas within 2.5cm of their edges, determined form general mixed use conditions for this type of devices. Since the hotspot SAR results may overlap with the body-worn accessory SAR requirements, the more conservative configurations can be considered, thus excluding some body-worn accessory SAR tests.

When the user enables the personal wireless router functions for the handset, actual operations include simultaneous transmission of both the WIFI transmitter and another licensed transmitter. Both transmitters often do not transmit at the same transmitting frequency and thus cannot be evaluated for SAR under actual use conditions due to the limitations of the SAR assessment probes. Therefore, SAR must be evaluated for each frequency transmission and mode separately and spatially summed with the WIFI transmitter according to FCC KDB Publication 447498 D01v06 publication procedures. The “Portable Hotspot” feature on the handset was NOT activated during SAR assessments, to ensure the SAR measurements were evaluated for a single transmission frequency RF signal at a time.

12. Conducted RF Output Power (Unit: dBm)

The detailed conducted power table can refer to Appendix E.

<GSM Conducted Power>

General Note:

1. Per KDB 447498 D01v06, the maximum output power channel is used for SAR testing and for further SAR test reduction.
2. Per KDB 941225 D01v03r01, for SAR test reduction for GSM / GPRS / EDGE modes is determined by the source-based time-averaged output power including tune-up tolerance. The 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. Therefore, the GPRS (4Tx slots) for GSM850/GSM1900 is considered as the primary mode.
3. Other configurations of GSM / GPRS / EDGE are considered as secondary modes. The 3G SAR test reduction procedure is applied, when the maximum output power and tune-up tolerance specified for production units in a secondary mode is ≤ ¼ dB higher than the primary mode, SAR measurement is not required for the secondary mode.

<WCDMA Conducted Power>

1. The following tests were conducted according to the test requirements outlines in 3GPP TS 34.121 specification.
2. The procedures in KDB 941225 D01v03r01 are applied for 3GPP Rel. 6 HSPA to configure the device in the required sub-test mode(s) to determine SAR test exclusion.
3. For DC-HSDPA, the device was configured according to the H-Set 12, Fixed Reference Channel (FRC) configuration in Table C.8.1.12 of 3GPP TS 34.121-1, with the primary and the secondary serving HS-DSCH Cell enabled during the power measurement.

A summary of these settings are illustrated below:

HSDPA Setup Configuration:

a. The EUT was connected to Base Station Agilent E5515C referred to the Setup Configuration.
b. The RF path losses were compensated into the measurements.
c. A call was established between EUT and Base Station with following setting:
   i. Set Gain Factors (β_c and β_d) and parameters were set according to each
   ii. Specific sub-test in the following table, C10.1.4, quoted from the TS 34.121
   iii. Set RMC 12.2Kbps + HSDPA mode.
   iv. Set Cell Power = -86 dBm
   v. Set HS-DSCH Configuration Type to FRC (H-set 1, QPSK)
   vi. Select HSDPA Uplink Parameters
   vii. Set Delta ACK, Delta NACK and Delta CQI = 8
   viii. Set Ack-Nack Repetition Factor to 3
   ix. Set CQI Feedback Cycle (k) to 4 ms
   x. Set CQI Repetition Factor to 2
   xi. Power Ctrl Mode = All Up bits
d. The transmitted maximum output power was recorded.

Table C.10.1.4: β values for transmitter characteristics tests with HS-DPCCH

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{HS} (Note1, Note 2)	CM (dB) (Note 3)	MPR (dB) (Note 3)
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 Δ_{CQI} = 30/15 with β_{hs} = 30/15 * β_c.

Note 2: For the HS-DPCCH power mask requirement test in clause 5.2C, 5.7A, and the Error Vector Magnitude (EVM) with HS-DPCCH test in clause 5.13.1A, and HSDPA EVM with phase discontinuity in clause 5.13.1AA, Δ_{ACK} and Δ_{NACK} = 30/15 with β_{hs} = 30/15 * β_c, and Δ_{CQI} = 24/15 with β_{hs} = 24/15 * β_c.

Note 3: CM = 1 for β_c/β_d =12/15, β_{hs}/β_c=24/15. For all other combinations of DPDCH, DPCCH and HS-DPCCH the MPR is based on the relative CM difference. This is applicable for only UEs that support HSDPA in release 6 and later releases.

Note 4: 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 signalled gain factors for the reference TFC (TF1, TF1) to β_c = 11/15 and β_d = 15/15.

Setup Configuration

HSUPA Setup Configuration:

a. The EUT was connected to Base Station Agilent E5515C referred to the Setup Configuration.
b. The RF path losses were compensated into the measurements.
c. A call was established between EUT and Base Station with following setting * :
   i. Call Configs = 5.2B, 5.9B, 5.10B, and 5.13.2B with QPSK
   ii. Set the Gain Factors (β_c and β_d) and parameters (AG Index) were set according to each specific sub-test in the following table, C11.1.3, quoted from the TS 34.121
   iii. Set Cell Power = -86 dBm
   iv. Set Channel Type = 12.2k + HSPA
   v. Set UE Target Power
   vi. Power Ctrl Mode= Alternating bits
   vii. Set and observe the E-TFCI
   viii. Confirm that E-TFCI is equal to the target E-TFCI of 75 for sub-test 1, and other subtest's E-TFCI
d. The transmitted maximum output power was recorded.

Table C.11.1.3: β values for transmitter characteristics tests with HS-DPCCH and E-DCH

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{HS} (Note1)	β_{ec}	β_{ed} (Note 4) (Note 5)	β_{ed} (SF)	β_{ed} (Codes)	CM (dB) (Note 2)	MPR (dB) (Note 2) (Note 6)	AG Index (Note 5)	E-TFCI
1	11/15 (Note 3)	15/15 (Note 3)	64	11/15 (Note 3)	22/15	209/225	1309/225	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	$\beta_{ed}1$: 47/15 $\beta_{ed}2$: 47/15	4 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	0	-	-	5/15	5/15	47/15	4	1	1.0	0.0	12	67

Note 1: For sub-test 1 to 4, Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 30/15 with β_{hs} = 30/15 * β_c. For sub-test 5, Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 5/15 with β_{hs} = 5/15 * β_c.

Note 2: CM = 1 for β_c/β_d =12/15, β_{hs}/β_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 signalled gain factors for the reference TFC (TF1, TF1) to β_c = 10/15 and β_d = 15/15.

Note 4: In case of testing by UE using E-DPDCH Physical Layer category 1, Sub-test 3 is omitted according to TS25.306 Table 5.1g.

Note 5: β_{ed} can not be set directly; it is set by Absolute Grant Value.

Note 6: For subtests 2, 3 and 4, UE may perform E-DPDCH power scaling at max power which could results in slightly smaller MPR values.

Setup Configuration

DC-HSDPA 3GPP release 8 Setup Configuration:

a. The EUT was connected to Base Station Agilent E5515C referred to the Setup Configuration below
b. The RF path losses were compensated into the measurements.
c. A call was established between EUT and Base Station with following setting:
   i. Set RMC 12.2Kbps + HSDPA mode.
   ii. Set Cell Power = -25 dBm
   iii. Set HS-DSCH Configuration Type to FRC (H-set 12, QPSK)
   iv. Select HSDPA Uplink Parameters
   v. Set Gain Factors (β_c and β_d) and parameters were set according to each Specific sub-test in the following table, C10.1.4, quoted from the TS 34.121
      a). Subtest 1: β_c/β_d=2/15
      b). Subtest 2: β_c/β_d=12/15
      c). Subtest 3: β_c/β_d=15/8
      d). Subtest 4: β_c/β_d=15/4
   vi. Set Delta ACK, Delta NACK and Delta CQI = 8
   vii. Set Ack-Nack Repetition Factor to 3
   viii. Set CQI Feedback Cycle (k) to 4 ms
   ix. Set CQI Repetition Factor to 2
   x. Power Ctrl Mode = All Up bits
d. The transmitted maximum output power was recorded.

The following tests were conducted according to the test requirements outlines in 3GPP TS 34.121 specification.
A summary of these settings are illustrated below:

C.8.1.12 Fixed Reference Channel Definition H-Set 12

Table C.8.1.12: Fixed Reference Channel H-Set 12

Parameter	Unit	Value
Nominal Avg. Inf. Bit Rate	kbps	60
Inter-TTI Distance	TTI's	1
Number of HARQ Processes	Proces ses	6
Information Bit Payload (N_{INF})	Bits	120
Number Code Blocks	Blocks	1
Binary Channel Bits Per TTI	Bits	960
Total Available SML's in UE	SML's	19200
Number of SML's per HARQ Proc.	SML's	3200
Coding Rate		0.15
Number of Physical Channel Codes	Codes	1
Modulation		QPSK
Note 1: The RMC is intended to be used for DC-HSDPA mode and both cells shall transmit with identical parameters as listed in the table.		
Note 2: Maximum number of transmission is limited to 1, i.e., retransmission is not allowed. The redundancy and constellation version 0 shall be used.		

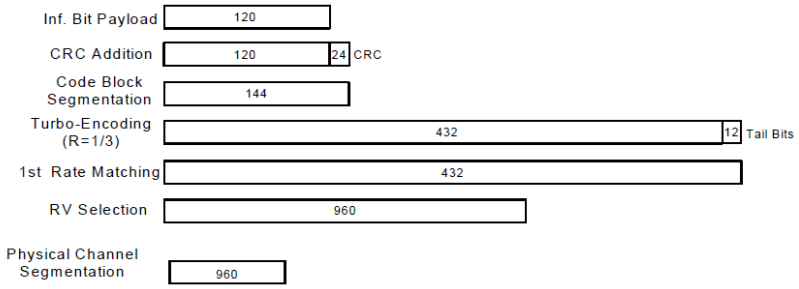


Figure C.8.19: Coding rate for Fixed reference Channel H-Set 12 (QPSK)

Setup Configuration

<WCDMA Conducted Power>

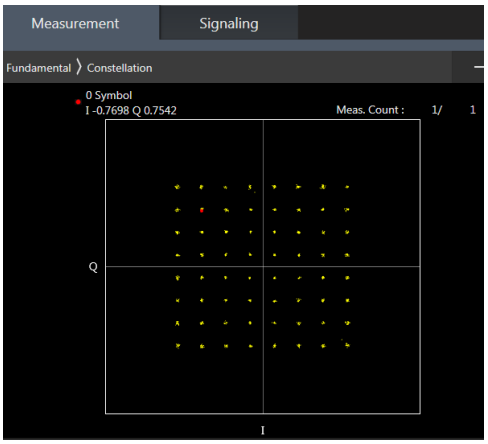
General Note:

1. Per KDB 941225 D01v03r01, for SAR testing is measured using a 12.2 kbps RMC with TPC bits configured to all "1's".
2. Per KDB 941225 D01v03r01, RMC 12.2kbps setting is used to evaluate SAR. The maximum output power and tune-up tolerance specified for production units in HSDPA / HSUPA / DC-HSDPA is ≤ ¼ dB higher than RMC 12.2Kbps or when the highest reported SAR of the RMC12.2Kbps is scaled by the ratio of specified maximum output power and tune-up tolerance of HSDPA / HSUPA / DC-HSDPA to RMC12.2Kbps and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA, and according to the following RF output power, the output power results of the secondary modes (HSDPA / HSUPA / DC-HSDPA) are less than ¼ dB higher than the primary modes; therefore, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA

<LTE Conducted Power>

General Note:

1. Anritsu MT8821C base station simulator was used to setup the connection with EUT; the frequency band, channel bandwidth, RB allocation configuration, modulation type are set in the base station simulator to configure EUT transmitting at maximum power and at different configurations which are requested to be reported to FCC, for conducted power measurement and SAR testing.
2. Per KDB 941225 D05v02r05, when a properly configured base station simulator is used for the SAR and power measurements, spectrum plots for each RB allocation and offset configuration is not required.
3. Per KDB 941225 D05v02r05, 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.
4. Per KDB 941225 D05v02r05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
5. Per KDB 941225 D05v02r05, 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 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.
6. Per KDB 941225 D05v02r05, 16QAM output power for each RB allocation configuration is > not ½ dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, 16QAM SAR testing is not required.
7. Per KDB 941225 D05v02r05, smaller bandwidth output power for each RB allocation configuration is > not ½ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, smaller bandwidth SAR testing is not required.
8. For LTE B4 / B5 / B12 / B17 / B71 the maximum bandwidth does not support three non-overlapping channels, per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
9. LTE B17 / B2 / B4 SAR test was covered by B12 / B25 / B66; according to April 2015 TCB workshop, SAR test for overlapping LTE bands can be reduced if
   a. the maximum output power, including tolerance, for the smaller band is ≤ the larger band to qualify for the SAR test exclusion
   b. the channel bandwidth and other operating parameters for the smaller band are fully supported by the larger band
10. According to 2017 TCB workshop, for 64QAM and 16QAM should be verified by checking the signal constellation with a call box to avoid incorrect maximum power levels due to MPR and other requirements associated with signal modulation, and the following figure is taken from the "Fundamental Measurement >> Modulation Analysis >> constellation" mode of the device connect to the MT8821C base station, therefore, the device 64QAM and 16QAM signal modulation are correct.



64QAM

16QAM

<TDD LTE SAR Measurement>

TDD LTE configuration setup for SAR measurement

SAR was tested with a fixed periodic duty factor according to the highest transmission duty factor implemented for the device and supported by 3GPP.

a. 3GPP TS 36.211 section 4.2 for Type 2 Frame Structure and Table 4.2-2 for uplink-downlink configurations

b. "special subframe S" contains both uplink and downlink transmissions, it has been taken into consideration to determine the transmission duty factor according to the worst case uplink and downlink cyclic prefix requirements for UpPTS

c. Establishing connections with base station simulators ensure a consistent means for testing SAR and recommended for evaluating SAR. The Anritsu MT8820C (firmware: #22.52#004) was used for LTE output power measurements and SAR testing.

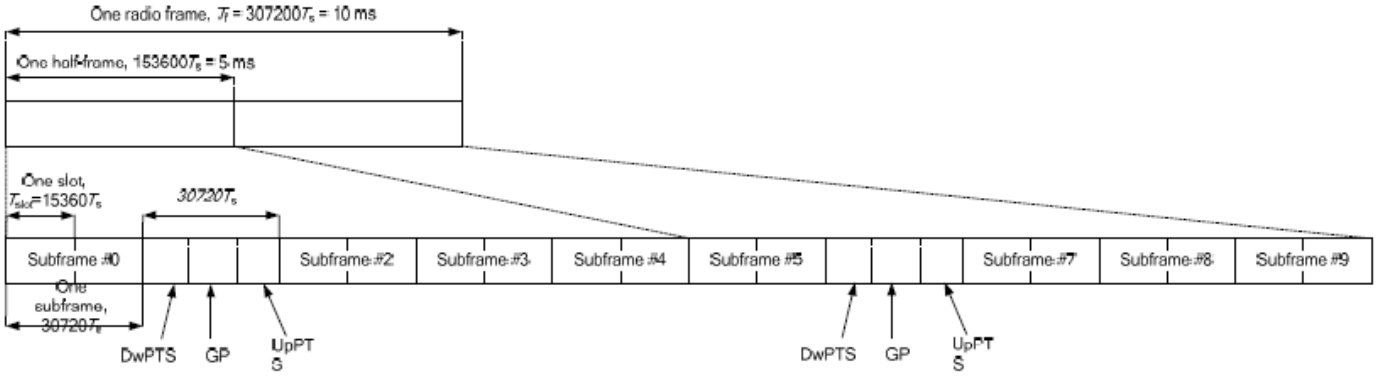


Figure 4.2-1: Frame structure type 2 (for 5 ms switch-point periodicity).

Table 4.2-2: 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

Table 4.2-1: 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	$26336 \cdot T_s$			$7680 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$
5	$6592 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$	$20480 \cdot T_s$		
6	$19760 \cdot T_s$			$23040 \cdot T_s$		
7	$21952 \cdot T_s$			$12800 \cdot T_s$		
8	$24144 \cdot T_s$			-	-	-
9	$13168 \cdot T_s$			-	-	-

Special subframe (30720·T_s): Normal cyclic prefix in downlink (UpPTS)			
	Special subframe configuration	**Normal cyclic prefix in uplink**	**Extended cyclic prefix in uplink**
Uplink duty factor in one special subframe	**0~4**	7.13%	8.33%
	5~9	14.3%	16.7%

Special subframe(30720·T_s): Extended cyclic prefix in downlink (UpPTS)			
	Special subframe configuration	**Normal cyclic prefix in uplink**	**Extended cyclic prefix in uplink**
Uplink duty factor in one special subframe	**0~3**	7.13%	8.33%
	4~7	14.3%	16.7%

The highest duty factor is resulted from:

For LTE Band 41 Power class 2

i. Uplink-downlink configuration: 1. In a half-frame consisted of 5 subfames, uplink operation is in 2 uplink subframes and 1 special subframe.
ii. special subframe configuration: 5-9 for normal cyclic prefix in downlink, 4-7 for extended cyclic prefix in downlink
iii. for special subframe with extended cyclic prefix in uplink, the total uplink duty factor in one half-frame is: (2+0.167)/5 = 43.3%
iv. for special subframe with normal cyclic prefix in uplink, the total uplink duty factor in one half-frame is: (2+0.143)/5 = 42.9%
v. For TDD LTE SAR measurement, the duty cycle 1:2.33 (42.9 %) was used perform testing and considering the theoretical duty cycle of 43.3% for extended cyclic prefix in the uplink, and the theoretical duty cycle of 42.9% for normal cyclic prefix in uplink, a scaling factor of extended cyclic prefix 43.3%/42.9% = 1.009 is applied to scale-up the measured SAR result. The scaled TDD LTE SAR = measured SAR (W/kg)* Tune-up Scaling Factor* scaling factor for extended cyclic prefix.

For LTE Band 41 Power class 3

i. Uplink-downlink configuration: 0. In a half-frame consisted of 5 subfames, uplink operation is in 3 uplink subframes and 1 special subframe.
ii. special subframe configuration: 5-9 for normal cyclic prefix in downlink, 4-7 for extended cyclic prefix in downlink
iii. for special subframe with extended cyclic prefix in uplink, the total uplink duty factor in one half-frame is: (3+0.167)/5 = 63.3%
iv. for special subframe with normal cyclic prefix in uplink, the total uplink duty factor in one half-frame is: (3+0.143)/5 = 62.9%
v. For TDD LTE SAR measurement, the duty cycle 1:1.59 (62.9 %) was used perform testing and considering the theoretical duty cycle of 63.3% for extended cyclic prefix in the uplink, and the theoretical duty cycle of 62.9% for normal cyclic prefix in uplink, a scaling factor of extended cyclic prefix 63.3%/62.9% = 1.006 is applied to scale-up the measured SAR result. The scaled TDD LTE SAR = measured SAR (W/kg)* Tune-up Scaling Factor* scaling factor for extended cyclic prefix.

The device can adjust uplink/downlink configuration automatically according to the transmitting power class level, as followings:

LTE TDD Band	Power Class level	support uplink/downlink configuration
LTE Band 41	> 23	1,2,3,4,5
	=23	0,1,2,3,4,5,6
	< 23	0,1,2,3,4,5,6

<LTE Carrier Aggregation>

General Note:

1. This device supports Carrier Aggregation on downlink only for inter and intra band, Uplink CA is not supported. For the device supports combination bands and configurations are according to 3GPP.
2. In applying the existing power measurement procedures of KDB 941225 D05A for DL CA SAR test exclusion, only the subset with the largest number of combinations of frequency bands and CCs in each row need combination, and for this device that all the configurations were choose to power measurement.
3. All permutations exist. No restrictions on Pcell & Scell combinations.

Index	2CC
2CC #1	CA_2A-2A
2CC #2	CA_2C
2CC #3	CA_2A-5A
2CC #4	CA_2A-7A
2CC #5	CA_2A-12A
2CC #6	CA_2A-13A
2CC #7	CA_2A-17A
2CC #8	CA_4A-4A
2CC #9	CA_4A-5A
2CC #10	CA_4A-12A
2CC #11	CA_4A-13A
2CC #12	CA_4A-17A
2CC #13	CA_5A-5A
2CC #14	CA_5B
2CC #15	CA_12B
2CC #16	CA_12A-66A
2CC #17	CA_12A-25A
2CC #18	CA_25A-25A
2CC #19	CA_25A-26A
2CC #20	CA_25A-41A
2CC #21	CA_41A-41A
2CC #22	CA_41C
2CC #23	CA_66C
2CC #24	CA_66A-66A

LTE Carrier Aggregation Conducted Power (Downlink)

General Note:

i. According to KDB941225 D05A v01r02, uplink maximum output power measurement with downlink carrier aggregation active should be measured, using the highest output channel measured without downlink carrier aggregation, to confirm that uplink maximum output power with downlink carrier aggregation active remains within the specified tune-up tolerance limits and not more than ¼ dB higher than the maximum output measured without downlink carrier aggregation active.

ii. Uplink maximum output power with downlink carrier aggregation active does not show more than ¼ dB higher than the maximum output power without downlink carrier aggregation active, therefore SAR evaluation with downlink carrier aggregation active can be excluded.

iii. For power measurement were control and acknowledge data is sent on uplink channels that operate identical to specifications when downlink carrier aggregation is inactive.

iv. Selected highest measured power when downlink carrier aggregation is inactive for conducted power comparison with downlink carrier aggregation is active, to confirm that when downlink carrier aggregation is active uplink maximum output power remains within the specified tune-up tolerance limits and not more than ¼ dB higher than the maximum output power measured when downlink carrier aggregation inactive.

v. For Intra-band, contiguous CA, the downlink channels selected to perform the uplink power measurement must satisfy 3GPP channel spacing (5.4.1A of 3GPP TS 36.521 or equivalent) and channel bandwidth (5.4.2A) requirements.

$$\text{Nominal channel spacing} = \left\lfloor \frac{BW_{Channel(1)} + BW_{Channel(2)} - 0.1\left|BW_{Channel(1)} - BW_{Channel(2)}\right|}{0.6} \right\rfloor 0.3 \ \ [\text{MHz}]$$

<WLAN Conducted Power>

General Note:

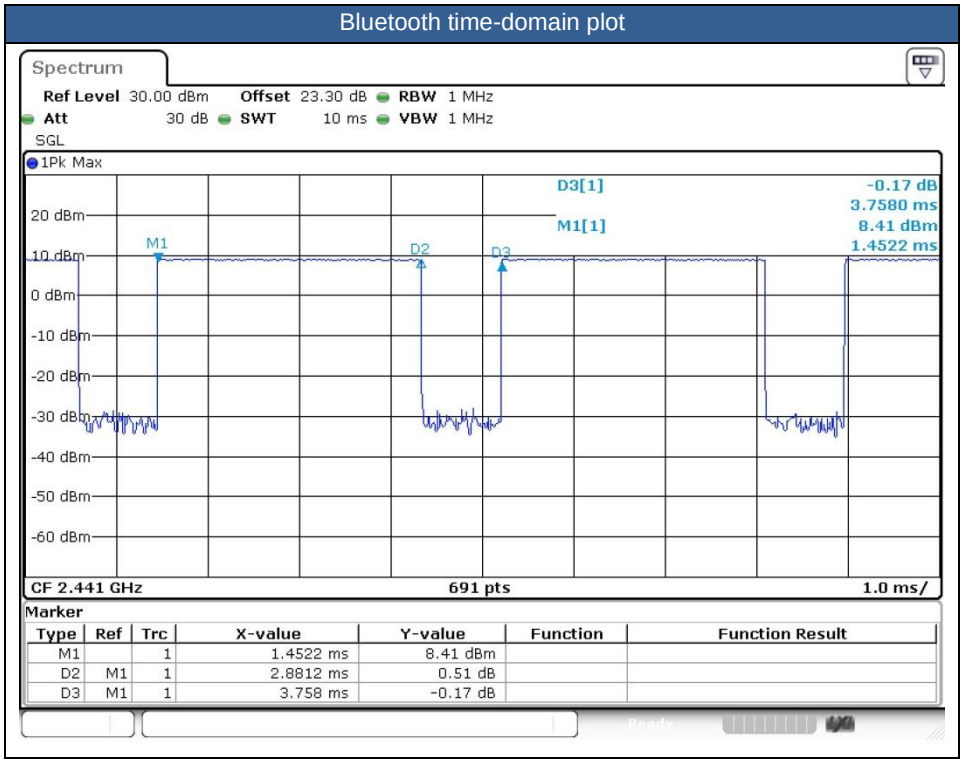
1. Per KDB 248227 D01v02r02, SAR test reduction is determined according to 802.11 transmission mode configurations and certain exposure conditions with multiple test positions. In the 2.4 GHz band, separate SAR procedures are applied to DSSS and OFDM configurations to simplify DSSS test requirements. For OFDM, in both 2.4 and 5 GHz bands, an initial test configuration must be determined for each standalone and aggregated frequency band, according to the transmission mode configuration with the highest maximum output power specified for production units to perform SAR measurements. If the same highest maximum output power applies to different combinations of channel bandwidths, modulations and data rates, additional procedures are applied to determine which test configurations require SAR measurement. When applicable, an initial test position may be applied to reduce the number of SAR measurements required for next to the ear, UMPC mini-tablet or hotspot mode configurations with multiple test positions.
2. For 2.4 GHz 802.11b DSSS, either the initial test position procedure for multiple exposure test positions or the DSSS procedure for fixed exposure position is applied; these are mutually exclusive. For 2.4 GHz and 5 GHz OFDM configurations, the initial test configuration is applied to measure SAR using either the initial test position procedure for multiple exposure test position configurations or the initial test configuration procedures for fixed exposure test conditions. Based on the reported SAR of the measured configurations and maximum output power of the transmission mode configurations that are not included in the initial test configuration, the subsequent test configuration and initial test position procedures are applied to determine if SAR measurements are required for the remaining OFDM transmission configurations. In general, the number of test channels that require SAR measurement is minimized based on maximum output power measured for the test sample(s).
3. For OFDM transmission configurations in the 2.4 GHz and 5 GHz bands, When the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11a/g/n/ac mode is used for SAR measurement, on the highest measured output power channel for each frequency band.
4. DSSS and OFDM configurations are considered separately according to the required SAR procedures. SAR is measured in the initial test position using the 802.11 transmission mode configuration required by the DSSS procedure or initial test configuration and subsequent test configuration(s) according to the OFDM procedures.18 The initial test position procedure is described in the following:
   a. When the reported SAR of 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 802.11 transmission mode combinations within the frequency band or aggregated band.
   b. When the reported SAR of the test position is > 0.4 W/kg, SAR is repeated for the 802.11 transmission mode 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 report SAR is ≤ 0.8 W/kg or all required test position are tested.
   c. For all positions/configurations, when the reported SAR is > 0.8 W/kg, SAR is measured for these test positions/configurations on the subsequent next highest measured output power channel(s) until the reported SAR is ≤ 1.2 W/kg or all required channels are tested.

<2.4GHz Bluetooth>

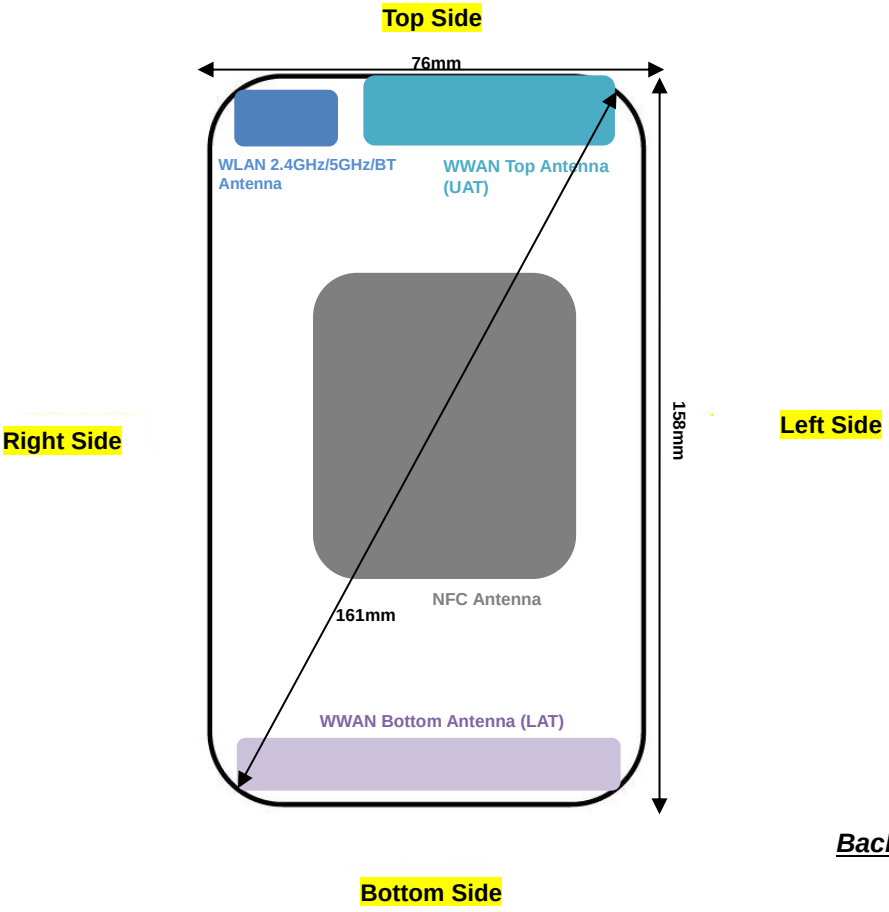
General Note:

1. For 2.4GHz Bluetooth SAR testing was selected 1Mbps, due to its highest average power.
2. The Bluetooth duty cycle is 76.7% as following figure, according to 2016 Oct. TCB workshop for Bluetooth SAR scaling need further consideration and the theoretical duty cycle is 83.3%, therefore the actual duty cycle will be scaled up to the theoretical value of Bluetooth reported SAR calculation.

Bluetooth time-domain plot



13. Antenna Location



Antenna	Support Band
WWAN Top Antenna (UAT)	GSM: 850 / 1900 WCDMA: B2 / B4 / B5 LTE: B2 / B4 / B5 / B7 / B12 / B13 / B14 / B17 / B25 / B26 / B41 / B66 / B71
WWAN Bottom Antenna (LAT)	GSM: 850 / 1900 WCDMA: B2 / B4 / B5 LTE: B2 / B4 / B5 / B7 / B12 / B13 / B14 / B17 / B25 / B26 / B41 / B66 / B71
WLAN 2.4GHz/5GHz/BT Antenna	WLAN 2.4GHz WLAN 5GHz Bluetooth
NFC Antenna	NFC

Distance of the Antenna to the EUT surface/edge						
Antennas	Back	Front	Top Side	Bottom Side	Right Side	Left Side
WWAN Top Antenna(UAT)	≤ 25mm	≤ 25mm	≤ 25mm	>25mm	≤ 25mm	≤ 25mm
WWAN Bottom Antenna(LAT)	≤ 25mm	≤ 25mm	>25mm	≤ 25mm	≤ 25mm	≤ 25mm
WLAN 2.4GHz/5GHz/BT	≤ 25mm	≤ 25mm	≤ 25mm	>25mm	≤ 25mm	>25mm

Distance of the Antenna to the EUT surface/edge						
Antennas	Back	Front	Top Side	Bottom Side	Right Side	Left Side
WWAN Top Antenna(UAT)	Yes	Yes	Yes	No	Yes	Yes
WWAN Bottom Antenna(LAT)	Yes	Yes	No	Yes	Yes	Yes
WLAN 2.4GHz/5GHz/BT	Yes	Yes	Yes	No	Yes	No

General Note:
Referring to KDB 941225 D06 v02r01, when the overall device length and width are ≥ 9cm*5cm, the test distance is 10 mm. SAR must be measured for all sides and surfaces with a transmitting antenna located within 25mm from that surface or edge.

14. SAR Test Results

General Note:

1. Per KDB 447498 D01v06, the reported SAR is the measured SAR value adjusted for maximum tune-up tolerance.
   a. Tune-up scaling Factor = tune-up limit power (mW) / EUT RF power (mW), where tune-up limit is the maximum rated power among all production units.
   b. For SAR testing of WLAN signal with non-100% duty cycle, the measured SAR is scaled-up by the duty cycle scaling factor which is equal to "1/(duty cycle)"
   c. For WWAN: Reported SAR(W/kg)= Measured SAR(W/kg)*Tune-up Scaling Factor
   d. For WLAN/Bluetooth: Reported SAR(W/kg)= Measured SAR(W/kg)* Duty Cycle scaling factor * Tune-up scaling factor
   e. For TDD LTE SAR measurement, the duty cycle 1:1.59 (62.9 %) was used perform testing and considering the theoretical duty cycle of 63.3% for extended cyclic prefix in the uplink, and the theoretical duty cycle of 62.9% for normal cyclic prefix in uplink, a scaling factor of extended cyclic prefix 63.3%/62.9% = 1.006 is applied to scale-up the measured SAR result. The Reported TDD LTE SAR = measured SAR (W/kg)* Tune-up Scaling Factor* scaling factor for extended cyclic prefix.
2. Per KDB 447498 D01v06, 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:
   - ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz
   - ≤ 0.6 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
   - ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz
3. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required when the measured SAR is ≥ 0.8W/kg. Per KDB 865664 D01v01r04, if the extremity repeated SAR is necessary, 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.
4. Per KDB 648474 D04v01r03, when the reported SAR for a body-worn accessory measured without a headset connected to the handset is ≤ 1.2 W/kg, SAR testing with a headset connected to the handset is not required.
5. This device has two WWAN transmit antennas. WWAN bottom antenna is located at the bottom edge of the device, and WWAN top antenna is located at the top edge of the device which can refer to antenna location chapter. Top and Bottom antenna support the same WWAN frequency bands, and they can't transmit simultaneously.
6. ACC((Accelerative) sensor implanted and when the mobile phone get stressed by accelerative forces, ACC sensor would detect the change of the coordinate axis and CPU calculates results and system will invoke correspondent power table.
7. When the phone is in talking mode and receiver worked, then head power will be invoke correspondent power table.
8. When the phone is in talking mode and receiver not worked, then receiver off power, then body-worn, hotspot will be invoke correspondent power table.
9. Per KDB648474 D04v01r03, for smart phones with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm, when hotspot mode applies, 10-g product specific 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. Although hotspot reduced power, extremity power invoke receiver off power and with the same power level of hotspot reduced power. So, in this report all the hotspot mode results including scaled power SAR are < 1.2W/kg.
10. For 5.3GHz / 5.5GHz WLAN product specific SAR is necessary too, due to an overall diagonal dimension is > 16cm.
11. UAT means top antenna, LAT means bottom antenna.

GSM Note:

1. Per KDB 941225 D01v03r01, for SAR test reduction for GSM / GPRS / EDGE modes is determined by the source-based time-averaged output power including tune-up tolerance. The 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. Therefore, the GPRS (4Tx slots) for GSM850/GSM1900 are considered as the primary mode.
2. Other configurations of GSM / GPRS / EDGE are considered as secondary modes. The 3G SAR test reduction procedure is applied, when the maximum output power and tune-up tolerance specified for production units in a secondary mode is ≤ ¼ dB higher than the primary mode, SAR measurement is not required for the secondary mode.

WCDMA Note:

1. Per KDB 941225 D01v03r01, for SAR testing is measured using a 12.2 kbps RMC with TPC bits configured to all "1's".
2. Per KDB 941225 D01v03r01, RMC 12.2kbps setting is used to evaluate SAR. The maximum output power and tune-up tolerance specified for production units in HSDPA / HSUPA / DC-HSDPA is ≤ ¼ dB higher than RMC 12.2Kbps or when the highest reported SAR of the RMC12.2Kbps is scaled by the ratio of specified maximum output power and tune-up tolerance of HSDPA / HSUPA / DC-HSDPA to RMC12.2Kbps and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA, and according to the following RF output power, the output power results of the secondary modes (HSDPA / HSUPA / DC-HSDPA) are less than ¼ dB higher than the primary modes; therefore, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA.

LTE Note:

1. Per KDB 941225 D05v02r05, 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.
2. Per KDB 941225 D05v02r05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
3. Per KDB 941225 D05v02r05, 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 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. Per KDB 941225 D05v02r05, 16QAM output power for each RB allocation configuration is > not ½ dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, 16QAM SAR testing is not required.
5. Per KDB 941225 D05v02r05, smaller bandwidth output power for each RB allocation configuration is > not ½ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, smaller bandwidth SAR testing is not required.
6. This device supports HPUE for LTE band 41 with class 2 level, so HPUE SAR has been performed.
7. For LTE B4 / B5 / B12 / B17 / B71 the maximum bandwidth does not support three non-overlapping channels, per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
8. LTE B2 / B4 / B17 SAR test was covered by LTE B25 / B66 / B12; according to April 2015 TCB workshop, SAR test for overlapping LTE bands can be reduced if
   a. the maximum output power, including tolerance, for the smaller band is ≤ the larger band to qualify for the SAR test exclusion
   b. the channel bandwidth and other operating parameters for the smaller band are fully supported by the larger band

WLAN Note:

1. Per KDB 248227 D01v02r02, for 2.4GHz 802.11g/n SAR testing is not required when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg.
2. Per KDB 248227 D01v02r02, U-NII-1 SAR testing is not required when the U-NII-2A band highest reported SAR for a test configuration is ≤ 1.2 W/kg, SAR is not required for U-NII-1 band.
3. When the reported SAR of the test position is > 0.4 W/kg, SAR is repeated for the 802.11 transmission mode 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 report SAR is ≤ 0.8 W/kg or all required test position are tested.
4. For all positions / configurations, when the reported SAR is > 0.8 W/kg, SAR is measured for these test positions / configurations on the subsequent next highest measured output power channel(s) until the reported SAR is ≤ 1.2 W/kg or all required channels are tested.
5. During SAR testing the WLAN transmission was verified using a spectrum analyzer.

14.1 Head SAR

<GSM SAR>

Plot No.	Band	Mode	Test Position	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	GSM850_UAT	GPRS(4 Tx slots)	Right Cheek	128	824.2	24.63	25.00	1.089	0.07	0.677	0.737
	GSM850_UAT	GPRS(4 Tx slots)	Right Tilted	128	824.2	24.63	25.00	1.089	0.03	0.401	0.437
	GSM850_UAT	GPRS(4 Tx slots)	Left Cheek	128	824.2	24.63	25.00	1.089	0.05	0.537	0.585
	GSM850_UAT	GPRS(4 Tx slots)	Left Tilted	128	824.2	24.63	25.00	1.089	0.04	0.346	0.377
	GSM850_UAT	GPRS(4 Tx slots)	Right Cheek	189	836.4	24.47	25.00	1.130	0.02	0.724	0.818
01	GSM850_UAT	GPRS(4 Tx slots)	Right Cheek	251	848.8	24.33	25.00	1.167	0.05	0.819	**0.956**
	GSM850_LAT	GPRS(4 Tx slots)	Right Cheek	128	824.2	27.54	28.00	1.112	0.06	0.404	0.449
	GSM850_LAT	GPRS(4 Tx slots)	Right Tilted	128	824.2	27.54	28.00	1.112	0.04	0.339	0.377
	GSM850_LAT	GPRS(4 Tx slots)	Left Cheek	128	824.2	27.54	28.00	1.112	0.01	0.357	0.397
	GSM850_LAT	GPRS(4 Tx slots)	Left Tilted	128	824.2	27.54	28.00	1.112	0.08	0.326	0.362
	GSM850_LAT	GPRS(4 Tx slots)	Right Cheek	189	836.4	27.45	28.00	1.135	0.02	0.388	0.440
	GSM850_LAT	GPRS(4 Tx slots)	Right Cheek	251	848.8	27.30	28.00	1.175	0.11	0.401	0.471
02	GSM1900_UAT	GPRS(4 Tx slots)	Right Cheek	810	1909.8	20.78	21.00	1.052	-0.06	0.811	**0.853**
	GSM1900_UAT	GPRS(4 Tx slots)	Right Tilted	810	1909.8	20.78	21.00	1.052	0.04	0.763	0.803
	GSM1900_UAT	GPRS(4 Tx slots)	Left Cheek	810	1909.8	20.78	21.00	1.052	0.09	0.785	0.826
	GSM1900_UAT	GPRS(4 Tx slots)	Left Tilted	810	1909.8	20.78	21.00	1.052	0.01	0.711	0.748
	GSM1900_UAT	GPRS(4 Tx slots)	Right Cheek	512	1850.2	20.71	21.00	1.069	0.04	0.690	0.738
	GSM1900_UAT	GPRS(4 Tx slots)	Right Cheek	661	1880	20.66	21.00	1.081	0.06	0.726	0.785
	GSM1900_UAT	GPRS(4 Tx slots)	Right Tilted	512	1850.2	20.71	21.00	1.069	0.07	0.586	0.626
	GSM1900_UAT	GPRS(4 Tx slots)	Right Tilted	661	1880	20.66	21.00	1.081	0.06	0.693	0.749
	GSM1900_UAT	GPRS(4 Tx slots)	Left Cheek	512	1850.2	20.71	21.00	1.069	0.04	0.513	0.548
	GSM1900_UAT	GPRS(4 Tx slots)	Left Cheek	661	1880	20.66	21.00	1.081	-0.07	0.580	0.627
	GSM1900_LAT	GPRS(4 Tx slots)	Right Cheek	810	1909.8	24.67	25.00	1.079	0.03	0.061	0.066
	GSM1900_LAT	GPRS(4 Tx slots)	Right Tilted	810	1909.8	24.67	25.00	1.079	-0.05	0.047	0.051
	GSM1900_LAT	GPRS(4 Tx slots)	Left Cheek	810	1909.8	24.67	25.00	1.079	0.02	0.106	0.114
	GSM1900_LAT	GPRS(4 Tx slots)	Left Tilted	810	1909.8	24.67	25.00	1.079	0.06	0.047	0.051
	GSM1900_LAT	GPRS(4 Tx slots)	Left Cheek	512	1850.2	24.57	25.00	1.104	0.09	0.083	0.092
	GSM1900_LAT	GPRS(4 Tx slots)	Left Cheek	661	1880	24.62	25.00	1.091	0.04	0.102	0.111

<WCDMA SAR>

Plot No.	Band	Mode	Test Position	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WCDMA V_UAT	RMC 12.2Kbps	Right Cheek	4233	846.6	23.20	24.00	1.202	0.06	0.570	0.685
	WCDMA V_UAT	RMC 12.2Kbps	Right Tilted	4233	846.6	23.20	24.00	1.202	0.04	0.368	0.442
03	WCDMA V_UAT	RMC 12.2Kbps	Left Cheek	4233	846.6	23.20	24.00	1.202	0.02	0.577	**0.694**
	WCDMA V_UAT	RMC 12.2Kbps	Left Tilted	4233	846.6	23.20	24.00	1.202	0.03	0.346	0.416
	WCDMA V_UAT	RMC 12.2Kbps	Left Cheek	4132	826.4	23.10	24.00	1.230	0.08	0.433	0.533
	WCDMA V_UAT	RMC 12.2Kbps	Left Cheek	4182	836.4	23.14	24.00	1.219	0.04	0.469	0.572
	WCDMA V_LAT	RMC 12.2Kbps	Right Cheek	4233	846.6	23.20	24.00	1.202	0.07	0.237	0.285
	WCDMA V_LAT	RMC 12.2Kbps	Right Tilted	4233	846.6	23.20	24.00	1.202	0.03	0.178	0.214
	WCDMA V_LAT	RMC 12.2Kbps	Left Cheek	4233	846.6	23.20	24.00	1.202	0.05	0.184	0.221
	WCDMA V_LAT	RMC 12.2Kbps	Left Tilted	4233	846.6	23.20	24.00	1.202	0.04	0.148	0.178
	WCDMA V_LAT	RMC 12.2Kbps	Right Cheek	4132	826.4	23.10	24.00	1.230	0.02	0.212	0.261
	WCDMA V_LAT	RMC 12.2Kbps	Right Cheek	4182	836.4	23.14	24.00	1.219	0.05	0.225	0.274
04	WCDMA IV_UAT	RMC 12.2Kbps	Right Cheek	1513	1752.6	19.21	20.00	1.199	0.04	0.841	**1.009**
	WCDMA IV_UAT	RMC 12.2Kbps	Right Tilted	1513	1752.6	19.21	20.00	1.199	0.02	0.739	0.886
	WCDMA IV_UAT	RMC 12.2Kbps	Left Cheek	1513	1752.6	19.21	20.00	1.199	0.08	0.641	0.769
	WCDMA IV_UAT	RMC 12.2Kbps	Left Tilted	1513	1752.6	19.21	20.00	1.199	0.05	0.599	0.719
	WCDMA IV_UAT	RMC 12.2Kbps	Right Cheek	1312	1712.4	19.15	20.00	1.216	0.04	0.800	0.973
	WCDMA IV_UAT	RMC 12.2Kbps	Right Cheek	1413	1732.6	18.94	20.00	1.276	0.03	0.783	0.999
	WCDMA IV_UAT	RMC 12.2Kbps	Right Tilted	1312	1712.4	19.15	20.00	1.216	-0.07	0.689	0.838
	WCDMA IV_UAT	RMC 12.2Kbps	Right Tilted	1413	1732.6	18.94	20.00	1.276	0.06	0.698	0.891
	WCDMA IV_LAT	RMC 12.2Kbps	Right Cheek	1513	1752.6	23.02	24.00	1.253	0.06	0.019	0.024
	WCDMA IV_LAT	RMC 12.2Kbps	Right Tilted	1513	1752.6	23.02	24.00	1.253	0.04	0.013	0.016
	WCDMA IV_LAT	RMC 12.2Kbps	Left Cheek	1513	1752.6	23.02	24.00	1.253	0.09	0.020	0.026
	WCDMA IV_LAT	RMC 12.2Kbps	Left Tilted	1513	1752.6	23.02	24.00	1.253	0.01	0.020	0.025
	WCDMA IV_LAT	RMC 12.2Kbps	Left Cheek	1312	1712.4	22.98	24.00	1.265	0.04	0.041	0.052
	WCDMA IV_LAT	RMC 12.2Kbps	Left Cheek	1413	1732.6	22.91	24.00	1.285	0.06	0.025	0.032
05	WCDMA II_UAT	RMC 12.2Kbps	Right Cheek	9538	1907.6	18.72	19.00	1.067	-0.04	0.851	**0.908**
	WCDMA II_UAT	RMC 12.2Kbps	Right Tilted	9538	1907.6	18.72	19.00	1.067	0.06	0.805	0.859
	WCDMA II_UAT	RMC 12.2Kbps	Left Cheek	9538	1907.6	18.72	19.00	1.067	0.03	0.778	0.830
	WCDMA II_UAT	RMC 12.2Kbps	Left Tilted	9538	1907.6	18.72	19.00	1.067	0.08	0.726	0.774
	WCDMA II_UAT	RMC 12.2Kbps	Right Cheek	9262	1852.4	18.56	19.00	1.107	0.04	0.720	0.797
	WCDMA II_UAT	RMC 12.2Kbps	Right Cheek	9400	1880	18.69	19.00	1.074	0.03	0.784	0.842
	WCDMA II_UAT	RMC 12.2Kbps	Right Tilted	9262	1852.4	18.56	19.00	1.107	0.01	0.662	0.733
	WCDMA II_UAT	RMC 12.2Kbps	Right Tilted	9400	1880	18.69	19.00	1.074	0.06	0.726	0.780
	WCDMA II_UAT	RMC 12.2Kbps	Left Cheek	9262	1852.4	18.56	19.00	1.107	0.02	0.603	0.667
	WCDMA II_UAT	RMC 12.2Kbps	Left Cheek	9400	1880	18.69	19.00	1.074	-0.07	0.689	0.740
	WCDMA II_LAT	RMC 12.2Kbps	Right Cheek	9538	1907.6	23.64	24.00	1.086	0.04	0.078	0.085
	WCDMA II_LAT	RMC 12.2Kbps	Right Tilted	9538	1907.6	23.64	24.00	1.086	0.06	0.047	0.051
	WCDMA II_LAT	RMC 12.2Kbps	Left Cheek	9538	1907.6	23.64	24.00	1.086	0.01	0.131	0.142
	WCDMA II_LAT	RMC 12.2Kbps	Left Tilted	9538	1907.6	23.64	24.00	1.086	0.08	0.069	0.075
	WCDMA II_LAT	RMC 12.2Kbps	Left Cheek	9262	1852.4	23.42	24.00	1.143	0.03	0.120	0.137
	WCDMA II_LAT	RMC 12.2Kbps	Left Cheek	9400	1880	23.51	24.00	1.119	0.07	0.128	0.143

<FDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
06	LTE Band 71_UAT	20M	QPSK	1	49	Right Cheek	133322	683	22.78	24.00	1.324	0.03	0.681	**0.902**
	LTE Band 71_UAT	20M	QPSK	1	49	Right Tilted	133322	683	22.78	24.00	1.324	0.07	0.479	0.634
	LTE Band 71_UAT	20M	QPSK	1	49	Left Cheek	133322	683	22.78	24.00	1.324	0.04	0.481	0.637
	LTE Band 71_UAT	20M	QPSK	1	49	Left Tilted	133322	683	22.78	24.00	1.324	0.03	0.333	0.441
	LTE Band 71_UAT	20M	QPSK	50	24	Right Cheek	133322	683	21.75	23.00	1.334	-0.1	0.464	0.619
	LTE Band 71_UAT	20M	QPSK	50	24	Right Tilted	133322	683	21.75	23.00	1.334	0.07	0.383	0.511
	LTE Band 71_UAT	20M	QPSK	50	24	Left Cheek	133322	683	21.75	23.00	1.334	0.05	0.373	0.497
	LTE Band 71_UAT	20M	QPSK	50	24	Left Tilted	133322	683	21.75	23.00	1.334	0.09	0.263	0.351
	LTE Band 71_UAT	20M	QPSK	100	0	Right Cheek	133322	683	21.68	23.00	1.355	0.04	0.457	0.619
	LTE Band 71_LAT	20M	QPSK	1	49	Right Cheek	133322	683	22.78	24.00	1.324	0.02	0.146	0.193
	LTE Band 71_LAT	20M	QPSK	1	49	Right Tilted	133322	683	22.78	24.00	1.324	0.03	0.091	0.121
	LTE Band 71_LAT	20M	QPSK	1	49	Left Cheek	133322	683	22.78	24.00	1.324	0.06	0.110	0.146
	LTE Band 71_LAT	20M	QPSK	1	49	Left Tilted	133322	683	22.78	24.00	1.324	0.02	0.073	0.097
	LTE Band 71_LAT	20M	QPSK	50	24	Right Cheek	133322	683	21.75	23.00	1.334	0.04	0.111	0.148
	LTE Band 71_LAT	20M	QPSK	50	24	Right Tilted	133322	683	21.75	23.00	1.334	-0.09	0.067	0.089
	LTE Band 71_LAT	20M	QPSK	50	24	Left Cheek	133322	683	21.75	23.00	1.334	0.01	0.088	0.117
	LTE Band 71_LAT	20M	QPSK	50	24	Left Tilted	133322	683	21.75	23.00	1.334	0.07	0.059	0.079
07	LTE Band 12_UAT	10M	QPSK	1	25	Right Cheek	23095	707.5	22.91	24.00	1.285	0.02	0.730	**0.938**
	LTE Band 12_UAT	10M	QPSK	1	25	Right Tilted	23095	707.5	22.91	24.00	1.285	0.08	0.538	0.691
	LTE Band 12_UAT	10M	QPSK	1	25	Left Cheek	23095	707.5	22.91	24.00	1.285	0.05	0.608	0.781
	LTE Band 12_UAT	10M	QPSK	1	25	Left Tilted	23095	707.5	22.91	24.00	1.285	0.04	0.414	0.532
	LTE Band 12_UAT	10M	QPSK	25	0	Right Cheek	23095	707.5	21.83	23.00	1.309	-0.08	0.575	0.753
	LTE Band 12_UAT	10M	QPSK	25	0	Right Tilted	23095	707.5	21.83	23.00	1.309	0.06	0.439	0.575
	LTE Band 12_UAT	10M	QPSK	25	0	Left Cheek	23095	707.5	21.83	23.00	1.309	0.04	0.474	0.621
	LTE Band 12_UAT	10M	QPSK	25	0	Left Tilted	23095	707.5	21.83	23.00	1.309	0.02	0.330	0.432
	LTE Band 12_UAT	10M	QPSK	50	0	Right Cheek	23095	707.5	21.79	23.00	1.321	0.06	0.573	0.757
	LTE Band 12_LAT	10M	QPSK	1	25	Right Cheek	23095	707.5	22.91	24.00	1.285	-0.03	0.262	0.337
	LTE Band 12_LAT	10M	QPSK	1	25	Right Tilted	23095	707.5	22.91	24.00	1.285	0.09	0.139	0.179
	LTE Band 12_LAT	10M	QPSK	1	25	Left Cheek	23095	707.5	22.91	24.00	1.285	0.04	0.165	0.212
	LTE Band 12_LAT	10M	QPSK	1	25	Left Tilted	23095	707.5	22.91	24.00	1.285	0.02	0.112	0.144
	LTE Band 12_LAT	10M	QPSK	25	0	Right Cheek	23095	707.5	21.83	23.00	1.309	-0.04	0.198	0.259
	LTE Band 12_LAT	10M	QPSK	25	0	Right Tilted	23095	707.5	21.83	23.00	1.309	0.06	0.105	0.137
	LTE Band 12_LAT	10M	QPSK	25	0	Left Cheek	23095	707.5	21.83	23.00	1.309	0.08	0.144	0.189
	LTE Band 12_LAT	10M	QPSK	25	0	Left Tilted	23095	707.5	21.83	23.00	1.309	0.08	0.083	0.109

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
08	LTE Band 13_UAT	10M	QPSK	1	0	Right Cheek	23230	782	22.75	24.00	1.334	0.03	0.463	**0.617**
	LTE Band 13_UAT	10M	QPSK	1	0	Right Tilted	23230	782	22.75	24.00	1.334	0.01	0.303	0.404
	LTE Band 13_UAT	10M	QPSK	1	0	Left Cheek	23230	782	22.75	24.00	1.334	0.06	0.372	0.496
	LTE Band 13_UAT	10M	QPSK	1	0	Left Tilted	23230	782	22.75	24.00	1.334	0.02	0.241	0.321
	LTE Band 13_UAT	10M	QPSK	25	0	Right Cheek	23230	782	21.81	23.00	1.315	0.05	0.400	0.526
	LTE Band 13_UAT	10M	QPSK	25	0	Right Tilted	23230	782	21.81	23.00	1.315	0.04	0.261	0.343
	LTE Band 13_UAT	10M	QPSK	25	0	Left Cheek	23230	782	21.81	23.00	1.315	0.06	0.322	0.424
	LTE Band 13_UAT	10M	QPSK	25	0	Left Tilted	23230	782	21.81	23.00	1.315	-0.03	0.207	0.272
	LTE Band 13_LAT	10M	QPSK	1	0	Right Cheek	23230	782	22.75	24.00	1.334	0.08	0.220	0.293
	LTE Band 13_LAT	10M	QPSK	1	0	Right Tilted	23230	782	22.75	24.00	1.334	0.04	0.155	0.207
	LTE Band 13_LAT	10M	QPSK	1	0	Left Cheek	23230	782	22.75	24.00	1.334	0.04	0.139	0.185
	LTE Band 13_LAT	10M	QPSK	1	0	Left Tilted	23230	782	22.75	24.00	1.334	0.05	0.110	0.147
	LTE Band 13_LAT	10M	QPSK	25	0	Right Cheek	23230	782	21.81	23.00	1.315	0.02	0.177	0.233
	LTE Band 13_LAT	10M	QPSK	25	0	Right Tilted	23230	782	21.81	23.00	1.315	0.06	0.124	0.163
	LTE Band 13_LAT	10M	QPSK	25	0	Left Cheek	23230	782	21.81	23.00	1.315	0.01	0.119	0.157
	LTE Band 13_LAT	10M	QPSK	25	0	Left Tilted	23230	782	21.81	23.00	1.315	0.07	0.097	0.128
09	LTE Band 14_UAT	10M	QPSK	1	25	Right Cheek	23330	793	22.83	24.00	1.309	0.12	0.409	**0.535**
	LTE Band 14_UAT	10M	QPSK	1	25	Right Tilted	23330	793	22.83	24.00	1.309	0.06	0.261	0.342
	LTE Band 14_UAT	10M	QPSK	1	25	Left Cheek	23330	793	22.83	24.00	1.309	0.01	0.330	0.432
	LTE Band 14_UAT	10M	QPSK	1	25	Left Tilted	23330	793	22.83	24.00	1.309	0.04	0.214	0.280
	LTE Band 14_UAT	10M	QPSK	25	12	Right Cheek	23330	793	21.72	23.00	1.343	-0.03	0.325	0.436
	LTE Band 14_UAT	10M	QPSK	25	12	Right Tilted	23330	793	21.72	23.00	1.343	0.02	0.207	0.278
	LTE Band 14_UAT	10M	QPSK	25	12	Left Cheek	23330	793	21.72	23.00	1.343	-0.06	0.304	0.408
	LTE Band 14_UAT	10M	QPSK	25	12	Left Tilted	23330	793	21.72	23.00	1.343	0.05	0.169	0.227
	LTE Band 14_LAT	10M	QPSK	1	25	Right Cheek	23330	793	22.83	24.00	1.309	0.04	0.190	0.249
	LTE Band 14_LAT	10M	QPSK	1	25	Right Tilted	23330	793	22.83	24.00	1.309	0.09	0.142	0.186
	LTE Band 14_LAT	10M	QPSK	1	25	Left Cheek	23330	793	22.83	24.00	1.309	0.05	0.131	0.172
	LTE Band 14_LAT	10M	QPSK	1	25	Left Tilted	23330	793	22.83	24.00	1.309	0.07	0.114	0.149
	LTE Band 14_LAT	10M	QPSK	25	12	Right Cheek	23330	793	21.72	23.00	1.343	0.01	0.144	0.193
	LTE Band 14_LAT	10M	QPSK	25	12	Right Tilted	23330	793	21.72	23.00	1.343	0.06	0.113	0.152
	LTE Band 14_LAT	10M	QPSK	25	12	Left Cheek	23330	793	21.72	23.00	1.343	0.08	0.109	0.146
	LTE Band 14_LAT	10M	QPSK	25	12	Left Tilted	23330	793	21.72	23.00	1.343	0.04	0.086	0.115

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 26_UAT	15M	QPSK	1	37	Right Cheek	26865	831.5	23.09	24.00	1.233	0.03	0.537	0.662
	LTE Band 26_UAT	15M	QPSK	1	37	Right Tilted	26865	831.5	23.09	24.00	1.233	0.08	0.366	0.451
	LTE Band 26_UAT	15M	QPSK	1	37	Left Cheek	26865	831.5	23.09	24.00	1.233	0.04	0.443	0.546
	LTE Band 26_UAT	15M	QPSK	1	37	Left Tilted	26865	831.5	23.09	24.00	1.233	0.06	0.281	0.347
	LTE Band 26_UAT	15M	QPSK	1	37	Right Cheek	26765	821.5	22.79	24.00	1.321	0.09	0.463	0.612
10	LTE Band 26_UAT	15M	QPSK	1	37	Right Cheek	26965	841.5	22.94	24.00	1.276	0.02	0.641	**0.818**
	LTE Band 26_UAT	15M	QPSK	36	20	Right Cheek	26865	831.5	21.93	23.00	1.279	0.02	0.428	0.548
	LTE Band 26_UAT	15M	QPSK	36	20	Right Tilted	26865	831.5	21.93	23.00	1.279	0.06	0.289	0.370
	LTE Band 26_UAT	15M	QPSK	36	20	Left Cheek	26865	831.5	21.93	23.00	1.279	0.04	0.324	0.415
	LTE Band 26_UAT	15M	QPSK	36	20	Left Tilted	26865	831.5	21.93	23.00	1.279	0.08	0.216	0.276
	LTE Band 26_UAT	15M	QPSK	75	0	Right Cheek	26865	831.5	21.89	23.00	1.291	0.06	0.414	0.535
	LTE Band 26_LAT	15M	QPSK	1	37	Right Cheek	26865	831.5	23.09	24.00	1.233	-0.01	0.255	0.314
	LTE Band 26_LAT	15M	QPSK	1	37	Right Tilted	26865	831.5	23.09	24.00	1.233	0.05	0.120	0.148
	LTE Band 26_LAT	15M	QPSK	1	37	Left Cheek	26865	831.5	23.09	24.00	1.233	0.07	0.167	0.206
	LTE Band 26_LAT	15M	QPSK	1	37	Left Tilted	26865	831.5	23.09	24.00	1.233	0.08	0.127	0.157
	LTE Band 26_LAT	15M	QPSK	1	37	Right Cheek	26765	821.5	22.79	24.00	1.321	0.13	0.212	0.280
	LTE Band 26_LAT	15M	QPSK	1	37	Right Cheek	26965	841.5	22.94	24.00	1.276	0.06	0.258	0.329
	LTE Band 26_LAT	15M	QPSK	36	20	Right Cheek	26865	831.5	21.93	23.00	1.279	0.09	0.200	0.256
	LTE Band 26_LAT	15M	QPSK	36	20	Right Tilted	26865	831.5	21.93	23.00	1.279	0.03	0.093	0.119
	LTE Band 26_LAT	15M	QPSK	36	20	Left Cheek	26865	831.5	21.93	23.00	1.279	0.03	0.127	0.162
	LTE Band 26_LAT	15M	QPSK	36	20	Left Tilted	26865	831.5	21.93	23.00	1.279	0.04	0.099	0.127
11	LTE Band 5_UAT	10M	QPSK	1	25	Right Cheek	20525	836.5	22.78	24.00	1.324	-0.07	0.556	**0.736**
	LTE Band 5_UAT	10M	QPSK	1	25	Right Tilted	20525	836.5	22.78	24.00	1.324	0.02	0.371	0.491
	LTE Band 5_UAT	10M	QPSK	1	25	Left Cheek	20525	836.5	22.78	24.00	1.324	0.04	0.470	0.622
	LTE Band 5_UAT	10M	QPSK	1	25	Left Tilted	20525	836.5	22.78	24.00	1.324	0.02	0.291	0.385
	LTE Band 5_UAT	10M	QPSK	25	25	Right Cheek	20525	836.5	21.77	23.00	1.327	0.06	0.417	0.554
	LTE Band 5_UAT	10M	QPSK	25	25	Right Tilted	20525	836.5	21.77	23.00	1.327	0.08	0.272	0.361
	LTE Band 5_UAT	10M	QPSK	25	25	Left Cheek	20525	836.5	21.77	23.00	1.327	0.04	0.348	0.462
	LTE Band 5_UAT	10M	QPSK	25	25	Left Tilted	20525	836.5	21.77	23.00	1.327	0.03	0.218	0.289
	LTE Band 5_LAT	10M	QPSK	1	25	Right Cheek	20525	836.5	22.78	24.00	1.324	0.08	0.248	0.328
	LTE Band 5_LAT	10M	QPSK	1	25	Right Tilted	20525	836.5	22.78	24.00	1.324	0.05	0.117	0.155
	LTE Band 5_LAT	10M	QPSK	1	25	Left Cheek	20525	836.5	22.78	24.00	1.324	0.01	0.180	0.238
	LTE Band 5_LAT	10M	QPSK	1	25	Left Tilted	20525	836.5	22.78	24.00	1.324	0.03	0.117	0.155
	LTE Band 5_LAT	10M	QPSK	25	25	Right Cheek	20525	836.5	21.77	23.00	1.327	0.06	0.189	0.251
	LTE Band 5_LAT	10M	QPSK	25	25	Right Tilted	20525	836.5	21.77	23.00	1.327	0.07	0.095	0.125
	LTE Band 5_LAT	10M	QPSK	25	25	Left Cheek	20525	836.5	21.77	23.00	1.327	0.06	0.139	0.185
	LTE Band 5_LAT	10M	QPSK	25	25	Left Tilted	20525	836.5	21.77	23.00	1.327	0.05	0.091	0.121

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 66_UAT	20M	QPSK	1	49	Right Cheek	132072	1720	19.04	20.00	1.247	0.06	0.810	1.010
	LTE Band 66_UAT	20M	QPSK	1	49	Right Tilted	132072	1720	19.04	20.00	1.247	0.01	0.714	0.891
	LTE Band 66_UAT	20M	QPSK	1	49	Left Cheek	132072	1720	19.04	20.00	1.247	-0.06	0.660	0.823
	LTE Band 66_UAT	20M	QPSK	1	49	Left Tilted	132072	1720	19.04	20.00	1.247	0.09	0.605	0.755
	LTE Band 66_UAT	20M	QPSK	1	49	Right Cheek	132322	1745	18.89	20.00	1.291	0.12	0.806	1.041
12	LTE Band 66_UAT	20M	QPSK	1	49	Right Cheek	132572	1770	18.90	20.00	1.288	0.06	0.829	**1.068**
	LTE Band 66_UAT	20M	QPSK	1	49	Right Tilted	132322	1745	18.89	20.00	1.291	0.01	0.734	0.948
	LTE Band 66_UAT	20M	QPSK	1	49	Right Tilted	132572	1770	18.90	20.00	1.288	0.04	0.762	0.982
	LTE Band 66_UAT	20M	QPSK	1	49	Left Cheek	132322	1745	18.89	20.00	1.291	0.06	0.642	0.829
	LTE Band 66_UAT	20M	QPSK	1	49	Left Cheek	132572	1770	18.90	20.00	1.288	0.07	0.656	0.845
	LTE Band 66_UAT	20M	QPSK	50	0	Right Cheek	132072	1720	17.91	19.00	1.285	-0.06	0.632	0.812
	LTE Band 66_UAT	20M	QPSK	50	0	Right Tilted	132072	1720	17.91	19.00	1.285	0.05	0.563	0.724
	LTE Band 66_UAT	20M	QPSK	50	0	Left Cheek	132072	1720	17.91	19.00	1.285	0.08	0.511	0.657
	LTE Band 66_UAT	20M	QPSK	50	0	Left Tilted	132072	1720	17.91	19.00	1.285	0.04	0.469	0.603
	LTE Band 66_UAT	20M	QPSK	50	0	Right Cheek	132322	1745	17.81	19.00	1.315	0.09	0.641	0.843
	LTE Band 66_UAT	20M	QPSK	50	0	Right Cheek	132572	1770	17.89	19.00	1.291	0.07	0.681	0.879
	LTE Band 66_UAT	20M	QPSK	100	0	Right Cheek	132072	1720	17.97	19.00	1.268	0.09	0.619	0.785
	LTE Band 66_UAT	20M	QPSK	100	0	Right Tilted	132072	1720	17.97	19.00	1.268	0.02	0.559	0.709
	LTE Band 66_UAT	20M	QPSK	100	0	Left Cheek	132072	1720	17.97	19.00	1.268	-0.06	0.502	0.636
	LTE Band 66_LAT	20M	QPSK	1	49	Right Cheek	132072	1720	22.88	24.00	1.294	0.04	0.041	0.053
	LTE Band 66_LAT	20M	QPSK	1	49	Right Tilted	132072	1720	22.88	24.00	1.294	0.05	0.016	0.020
	LTE Band 66_LAT	20M	QPSK	1	49	Left Cheek	132072	1720	22.88	24.00	1.294	0.01	0.058	0.075
	LTE Band 66_LAT	20M	QPSK	1	49	Left Tilted	132072	1720	22.88	24.00	1.294	0.07	0.011	0.014
	LTE Band 66_LAT	20M	QPSK	1	49	Left Cheek	132322	1745	22.75	24.00	1.334	0.06	0.037	0.049
	LTE Band 66_LAT	20M	QPSK	1	49	Left Cheek	132572	1770	22.83	24.00	1.309	0.05	0.020	0.026
	LTE Band 66_LAT	20M	QPSK	50	0	Right Cheek	132072	1720	21.84	23.00	1.306	0.01	0.032	0.042
	LTE Band 66_LAT	20M	QPSK	50	0	Right Tilted	132072	1720	21.84	23.00	1.306	0.02	0.013	0.017
	LTE Band 66_LAT	20M	QPSK	50	0	Left Cheek	132072	1720	21.84	23.00	1.306	0.05	0.055	0.072
	LTE Band 66_LAT	20M	QPSK	50	0	Left Tilted	132072	1720	21.84	23.00	1.306	-0.07	0.009	0.012
	LTE Band 25_UAT	20M	QPSK	1	49	Right Cheek	26340	1880	18.40	19.00	1.148	0.03	0.783	0.899
	LTE Band 25_UAT	20M	QPSK	1	49	Right Tilted	26340	1880	18.40	19.00	1.148	0.04	0.738	0.847
	LTE Band 25_UAT	20M	QPSK	1	49	Left Cheek	26340	1880	18.40	19.00	1.148	0.08	0.697	0.800
	LTE Band 25_UAT	20M	QPSK	1	49	Left Tilted	26340	1880	18.40	19.00	1.148	-0.02	0.643	0.738
	LTE Band 25_UAT	20M	QPSK	1	49	Right Cheek	26140	1860	18.13	19.00	1.222	0.01	0.735	0.898
13	LTE Band 25_UAT	20M	QPSK	1	49	Right Cheek	26590	1905	18.23	19.00	1.194	0.05	0.889	**1.061**
	LTE Band 25_UAT	20M	QPSK	1	49	Right Tilted	26140	1860	18.13	19.00	1.222	0.03	0.658	0.804
	LTE Band 25_UAT	20M	QPSK	1	49	Right Tilted	26590	1905	18.23	19.00	1.194	0.02	0.805	0.961
	LTE Band 25_UAT	20M	QPSK	1	49	Left Cheek	26140	1860	18.13	19.00	1.222	0.04	0.627	0.766
	LTE Band 25_UAT	20M	QPSK	1	49	Left Cheek	26590	1905	18.23	19.00	1.194	0.02	0.707	0.844
	LTE Band 25_UAT	20M	QPSK	50	24	Right Cheek	26340	1880	17.24	18.00	1.191	-0.08	0.617	0.735
	LTE Band 25_UAT	20M	QPSK	50	24	Right Tilted	26340	1880	17.24	18.00	1.191	0.08	0.587	0.699
	LTE Band 25_UAT	20M	QPSK	50	24	Left Cheek	26340	1880	17.24	18.00	1.191	0.04	0.539	0.642
	LTE Band 25_UAT	20M	QPSK	50	24	Left Tilted	26340	1880	17.24	18.00	1.191	0.03	0.501	0.597
	LTE Band 25_UAT	20M	QPSK	100	0	Right Cheek	26340	1880	17.21	18.00	1.199	0.04	0.598	0.717
	LTE Band 25_UAT	20M	QPSK	100	0	Right Tilted	26340	1880	17.21	18.00	1.199	0.01	0.577	0.692
	LTE Band 25_UAT	20M	QPSK	100	0	Left Cheek	26340	1880	17.21	18.00	1.199	0.06	0.536	0.643
	LTE Band 25_LAT	20M	QPSK	1	49	Right Cheek	26340	1880	23.21	24.00	1.199	0.06	0.074	0.089
	LTE Band 25_LAT	20M	QPSK	1	49	Right Tilted	26340	1880	23.21	24.00	1.199	0.04	0.042	0.050
	LTE Band 25_LAT	20M	QPSK	1	49	Left Cheek	26340	1880	23.21	24.00	1.199	0.02	0.113	0.136
	LTE Band 25_LAT	20M	QPSK	1	49	Left Tilted	26340	1880	23.21	24.00	1.199	0.07	0.052	0.062
	LTE Band 25_LAT	20M	QPSK	1	49	Left Cheek	26140	1860	23.10	24.00	1.230	-0.02	0.082	0.101
	LTE Band 25_LAT	20M	QPSK	1	49	Left Cheek	26590	1905	23.16	24.00	1.213	0.06	0.141	0.171
	LTE Band 25_LAT	20M	QPSK	50	24	Right Cheek	26340	1880	22.15	23.00	1.216	-0.06	0.059	0.072
	LTE Band 25_LAT	20M	QPSK	50	24	Right Tilted	26340	1880	22.15	23.00	1.216	0.04	0.039	0.047
	LTE Band 25_LAT	20M	QPSK	50	24	Left Cheek	26340	1880	22.15	23.00	1.216	0.01	0.090	0.109
	LTE Band 25_LAT	20M	QPSK	50	24	Left Tilted	26340	1880	22.15	23.00	1.216	0.06	0.042	0.051

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
14	LTE Band 7_UAT	20M	QPSK	1	49	Right Cheek	21350	2560	17.62	18.00	1.091	-0.07	0.921	**1.005**
	LTE Band 7_UAT	20M	QPSK	1	49	Right Tilted	21350	2560	17.62	18.00	1.091	0.09	0.911	0.994
	LTE Band 7_UAT	20M	QPSK	1	49	Left Cheek	21350	2560	17.62	18.00	1.091	0.06	0.574	0.626
	LTE Band 7_UAT	20M	QPSK	1	49	Left Tilted	21350	2560	17.62	18.00	1.091	0.04	0.577	0.630
	LTE Band 7_UAT	20M	QPSK	1	49	Right Cheek	20850	2510	17.41	18.00	1.146	0.05	0.795	0.911
	LTE Band 7_UAT	20M	QPSK	1	49	Right Cheek	21100	2535	17.39	18.00	1.151	0.01	0.809	0.931
	LTE Band 7_UAT	20M	QPSK	1	49	Right Tilted	20850	2510	17.41	18.00	1.146	0.07	0.778	0.891
	LTE Band 7_UAT	20M	QPSK	1	49	Right Tilted	21100	2535	17.39	18.00	1.151	0.07	0.807	0.929
	LTE Band 7_UAT	20M	QPSK	50	24	Right Cheek	21350	2560	16.49	17.00	1.125	-0.03	0.697	0.784
	LTE Band 7_UAT	20M	QPSK	50	24	Right Tilted	21350	2560	16.49	17.00	1.125	0.01	0.654	0.735
	LTE Band 7_UAT	20M	QPSK	50	24	Left Cheek	21350	2560	16.49	17.00	1.125	0.02	0.495	0.557
	LTE Band 7_UAT	20M	QPSK	50	24	Left Tilted	21350	2560	16.49	17.00	1.125	0.05	0.492	0.553
	LTE Band 7_UAT	20M	QPSK	100	0	Right Cheek	21350	2560	16.48	17.00	1.127	0.09	0.690	0.778
	LTE Band 7_UAT	20M	QPSK	100	0	Right Tilted	21350	2560	16.48	17.00	1.127	0.06	0.671	0.756
	LTE Band 7_LAT	20M	QPSK	1	49	Right Cheek	21350	2560	23.54	24.00	1.112	0.08	0.061	0.068
	LTE Band 7_LAT	20M	QPSK	1	49	Right Tilted	21350	2560	23.54	24.00	1.112	0.01	0.043	0.048
	LTE Band 7_LAT	20M	QPSK	1	49	Left Cheek	21350	2560	23.54	24.00	1.112	0.06	0.059	0.066
	LTE Band 7_LAT	20M	QPSK	1	49	Left Tilted	21350	2560	23.54	24.00	1.112	0.04	0.040	0.045
	LTE Band 7_LAT	20M	QPSK	1	49	Right Cheek	20850	2510	23.48	24.00	1.127	0.03	0.056	0.063
	LTE Band 7_LAT	20M	QPSK	1	49	Right Cheek	21100	2535	23.49	24.00	1.125	0.02	0.045	0.050
	LTE Band 7_LAT	20M	QPSK	50	24	Right Cheek	21350	2560	22.56	23.00	1.107	0.04	0.048	0.053
	LTE Band 7_LAT	20M	QPSK	50	24	Right Tilted	21350	2560	22.56	23.00	1.107	0.09	0.033	0.037
	LTE Band 7_LAT	20M	QPSK	50	24	Left Cheek	21350	2560	22.56	23.00	1.107	0.05	0.045	0.050
	LTE Band 7_LAT	20M	QPSK	50	24	Left Tilted	21350	2560	22.56	23.00	1.107	0.08	0.037	0.041

<TDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 41_UAT	20M	QPSK	1	49	Right Cheek	40620	2593	19.44	20.00	1.138	62.9	1.006	-0.03	0.868	0.993
	LTE Band 41_UAT	20M	QPSK	1	49	Right Tilted	40620	2593	19.44	20.00	1.138	62.9	1.006	0.06	0.787	0.901
	LTE Band 41_UAT	20M	QPSK	1	49	Left Cheek	40620	2593	19.44	20.00	1.138	62.9	1.006	-0.07	0.496	0.568
	LTE Band 41_UAT	20M	QPSK	1	49	Left Tilted	40620	2593	19.44	20.00	1.138	62.9	1.006	0.08	0.513	0.587
	LTE Band 41_UAT	20M	QPSK	1	49	Right Cheek	39750	2506	19.32	20.00	1.169	62.9	1.006	0.04	0.770	0.906
	LTE Band 41_UAT	20M	QPSK	1	49	Right Cheek	40185	2549.5	19.20	20.00	1.202	62.9	1.006	0.01	0.805	0.974
	LTE Band 41_UAT	20M	QPSK	1	49	Right Cheek	41055	2636.5	19.33	20.00	1.167	62.9	1.006	0.06	0.859	1.008
	LTE Band 41_UAT	20M	QPSK	1	49	Right Cheek	41490	2680	19.31	20.00	1.172	62.9	1.006	-0.08	0.750	0.884
	LTE Band 41_UAT	20M	QPSK	1	49	Right Tilted	39750	2506	19.32	20.00	1.169	62.9	1.006	0.07	0.656	0.772
	LTE Band 41_UAT	20M	QPSK	1	49	Right Tilted	40185	2549.5	19.20	20.00	1.202	62.9	1.006	0.02	0.690	0.835
	LTE Band 41_UAT	20M	QPSK	1	49	Right Tilted	41055	2636.5	19.33	20.00	1.167	62.9	1.006	0.01	0.760	0.892
	LTE Band 41_UAT	20M	QPSK	1	49	Right Tilted	41490	2680	19.31	20.00	1.172	62.9	1.006	-0.09	0.688	0.811
	LTE Band 41_UAT_HPUE	20M	QPSK	1	49	Right Cheek	40620	2593	20.75	21.50	1.189	42.9	1.009	0.08	0.799	0.958
	LTE Band 41_UAT_HPUE	20M	QPSK	1	49	Right Cheek	39750	2506	20.72	21.50	1.197	42.9	1.009	0.03	0.634	0.766
	LTE Band 41_UAT_HPUE	20M	QPSK	1	49	Right Cheek	40185	2549.5	20.71	21.50	1.199	42.9	1.009	0.05	0.667	0.807
15	LTE Band 41_UAT_HPUE	20M	QPSK	1	49	Right Cheek	41055	2636.5	20.43	21.50	1.279	42.9	1.009	0.09	0.787	**1.016**
	LTE Band 41_UAT_HPUE	20M	QPSK	1	49	Right Cheek	41490	2680	20.62	21.50	1.225	42.9	1.009	0.13	0.660	0.816
	LTE Band 41_UAT	20M	QPSK	50	0	Right Cheek	40620	2593	18.45	19.00	1.135	62.9	1.006	0.05	0.695	0.794
	LTE Band 41_UAT	20M	QPSK	50	0	Right Tilted	40620	2593	18.45	19.00	1.135	62.9	1.006	0.02	0.626	0.715
	LTE Band 41_UAT	20M	QPSK	50	0	Left Cheek	40620	2593	18.45	19.00	1.135	62.9	1.006	0.08	0.450	0.514
	LTE Band 41_UAT	20M	QPSK	50	0	Left Tilted	40620	2593	18.45	19.00	1.135	62.9	1.006	0.01	0.457	0.522
	LTE Band 41_UAT	20M	QPSK	50	0	Right Cheek	39750	2506	18.39	19.00	1.151	62.9	1.006	0.04	0.609	0.705
	LTE Band 41_UAT	20M	QPSK	50	0	Right Cheek	40185	2549.5	18.30	19.00	1.175	62.9	1.006	-0.07	0.645	0.762
	LTE Band 41_UAT	20M	QPSK	50	0	Right Cheek	41055	2636.5	18.33	19.00	1.167	62.9	1.006	0.02	0.690	0.810
	LTE Band 41_UAT	20M	QPSK	50	0	Right Cheek	41490	2680	18.13	19.00	1.222	62.9	1.006	0.08	0.586	0.720
	LTE Band 41_UAT	20M	QPSK	50	0	Right Tilted	39750	2506	18.39	19.00	1.151	62.9	1.006	0.05	0.523	0.605
	LTE Band 41_UAT	20M	QPSK	50	0	Right Tilted	40185	2549.5	18.30	19.00	1.175	62.9	1.006	0.06	0.567	0.670
	LTE Band 41_UAT	20M	QPSK	50	0	Right Tilted	41055	2636.5	18.33	19.00	1.167	62.9	1.006	0.01	0.590	0.693
	LTE Band 41_UAT	20M	QPSK	50	0	Right Tilted	41490	2680	18.13	19.00	1.222	62.9	1.006	-0.09	0.541	0.665
	LTE Band 41_UAT	20M	QPSK	100	0	Right Cheek	40620	2593	18.31	19.00	1.172	62.9	1.006	0.03	0.683	0.805
	LTE Band 41_UAT	20M	QPSK	100	0	Right Tilted	40620	2593	18.31	19.00	1.172	62.9	1.006	0.03	0.620	0.731
	LTE Band 41_LAT	20M	QPSK	1	49	Right Cheek	40620	2593	23.30	24.00	1.175	62.9	1.006	0.03	0.044	0.052
	LTE Band 41_LAT	20M	QPSK	1	49	Right Tilted	40620	2593	23.30	24.00	1.175	62.9	1.006	0.08	0.032	0.038
	LTE Band 41_LAT	20M	QPSK	1	49	Left Cheek	40620	2593	23.30	24.00	1.175	62.9	1.006	0.04	0.040	0.047
	LTE Band 41_LAT	20M	QPSK	1	49	Left Tilted	40620	2593	23.30	24.00	1.175	62.9	1.006	0.01	0.022	0.026
	LTE Band 41_LAT	20M	QPSK	1	49	Right Cheek	39750	2506	23.22	24.00	1.197	62.9	1.006	0.06	0.024	0.029
	LTE Band 41_LAT	20M	QPSK	1	49	Right Cheek	40185	2549.5	23.16	24.00	1.213	62.9	1.006	0.11	0.025	0.031
	LTE Band 41_LAT	20M	QPSK	1	49	Right Cheek	41055	2636.5	23.21	24.00	1.199	62.9	1.006	0.07	0.065	0.079
	LTE Band 41_LAT	20M	QPSK	1	49	Right Cheek	41490	2680	23.19	24.00	1.205	62.9	1.006	0.08	0.090	0.109
	LTE Band 41_LAT_HPUE	20M	QPSK	1	49	Right Cheek	40620	2593	26.14	27.00	1.219	42.9	1.009	0.03	0.059	0.073
	LTE Band 41_LAT_HPUE	20M	QPSK	1	49	Right Cheek	39750	2506	26.07	27.00	1.239	42.9	1.009	0.05	0.044	0.055
	LTE Band 41_LAT_HPUE	20M	QPSK	1	49	Right Cheek	40185	2549.5	26.09	27.00	1.233	42.9	1.009	0.06	0.031	0.039
	LTE Band 41_LAT_HPUE	20M	QPSK	1	49	Right Cheek	41055	2636.5	25.92	27.00	1.282	42.9	1.009	0.11	0.084	0.108
	LTE Band 41_LAT_HPUE	20M	QPSK	1	49	Right Cheek	41490	2680	26.01	27.00	1.256	42.9	1.009	0.08	0.119	0.151
	LTE Band 41_LAT	20M	QPSK	50	0	Right Cheek	40620	2593	22.27	23.00	1.183	62.9	1.006	0.03	0.037	0.044
	LTE Band 41_LAT	20M	QPSK	50	0	Right Tilted	40620	2593	22.27	23.00	1.183	62.9	1.006	0.05	0.027	0.032
	LTE Band 41_LAT	20M	QPSK	50	0	Left Cheek	40620	2593	22.27	23.00	1.183	62.9	1.006	0.03	0.033	0.039
	LTE Band 41_LAT	20M	QPSK	50	0	Left Tilted	40620	2593	22.27	23.00	1.183	62.9	1.006	-0.06	0.019	0.023

<Bluetooth SAR>

Plot No.	Band	Mode	Test Position	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	Bluetooth	1Mbps	Right Cheek	0	2402	9.90	11.00	1.288	76.7	1.086	0.05	0.039	0.054
	Bluetooth	1Mbps	Right Tilted	0	2402	9.90	11.00	1.288	76.7	1.086	0.03	0.033	0.046
	Bluetooth	1Mbps	Left Cheek	0	2402	9.90	11.00	1.288	76.7	1.086	-0.02	0.081	0.113
	Bluetooth	1Mbps	Left Tilted	0	2402	9.90	11.00	1.288	76.7	1.086	0.08	0.054	0.076
	Bluetooth	1Mbps	Left Cheek	39	2441	9.40	11.00	1.445	76.7	1.086	0.06	0.107	0.168
16	Bluetooth	1Mbps	Left Cheek	78	2480	9.50	11.00	1.413	76.7	1.086	-0.01	0.111	**0.170**

<WLAN2.4G SAR>

Plot No.	Band	Mode	Test Position	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	6	2437	14.10	15.50	1.380	100	1.000	0.08	0.236	0.326
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	6	2437	14.10	15.50	1.380	100	1.000	0.05	0.174	0.240
17	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	6	2437	14.10	15.50	1.380	100	1.000	0.03	0.519	**0.716**
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	6	2437	14.10	15.50	1.380	100	1.000	-0.06	0.339	0.468
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	1	2412	13.70	15.50	1.514	100	1.000	0.01	0.423	0.640
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	11	2462	13.90	15.50	1.445	100	1.000	0.06	0.442	0.639

<WLAN5G SAR>

Plot No.	Band	Mode	Test Position	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WLAN5.3GHz	802.11a 6Mbps	Right Cheek	64	5320	16.53	18.00	1.403	100	1.000	0.03	0.366	0.513
	WLAN5.3GHz	802.11a 6Mbps	Right Tilted	64	5320	16.53	18.00	1.403	100	1.000	-0.07	0.340	0.477
18	WLAN5.3GHz	802.11a 6Mbps	Left Cheek	64	5320	16.53	18.00	1.403	100	1.000	-0.05	0.463	**0.650**
	WLAN5.3GHz	802.11a 6Mbps	Left Tilted	64	5320	16.53	18.00	1.403	100	1.000	0.06	0.277	0.389
	WLAN5.3GHz	802.11a 6Mbps	Left Cheek	52	5260	16.32	18.00	1.472	100	1.000	-0.01	0.399	0.587
	WLAN5.3GHz	802.11a 6Mbps	Left Cheek	56	5280	16.50	18.00	1.413	100	1.000	0.06	0.408	0.576
	WLAN5.3GHz	802.11a 6Mbps	Left Cheek	60	5300	16.46	18.00	1.426	100	1.000	0.08	0.419	0.597
	WLAN5.5GHz	802.11a 6Mbps	Right Cheek	100	5500	14.27	16.00	1.489	100	1.000	-0.06	0.151	0.225
	WLAN5.5GHz	802.11a 6Mbps	Right Tilted	100	5500	14.27	16.00	1.489	100	1.000	0.02	0.120	0.179
	WLAN5.5GHz	802.11a 6Mbps	Left Cheek	100	5500	14.27	16.00	1.489	100	1.000	0.09	0.289	0.430
	WLAN5.5GHz	802.11a 6Mbps	Left Tilted	100	5500	14.27	16.00	1.489	100	1.000	-0.06	0.116	0.173
	WLAN5.5GHz	802.11a 6Mbps	Left Cheek	116	5580	14.17	16.00	1.524	100	1.000	0.07	0.402	0.613
	WLAN5.5GHz	802.11a 6Mbps	Left Cheek	124	5620	14.24	16.00	1.500	100	1.000	-0.06	0.446	0.669
	WLAN5.5GHz	802.11a 6Mbps	Left Cheek	132	5660	14.12	16.00	1.542	100	1.000	0.01	0.444	0.685
19	WLAN5.5GHz	802.11a 6Mbps	Left Cheek	140	5700	14.22	16.00	1.507	100	1.000	0.09	0.487	**0.734**
	WLAN5.5GHz	802.11a 6Mbps	Left Cheek	144	5720	14.25	16.00	1.496	100	1.000	0.08	0.434	0.649
	WLAN5.8GHz	802.11a 6Mbps	Right Cheek	165	5825	14.72	16.00	1.343	100	1.000	-0.03	0.226	0.303
	WLAN5.8GHz	802.11a 6Mbps	Right Tilted	165	5825	14.72	16.00	1.343	100	1.000	0.01	0.183	0.246
	WLAN5.8GHz	802.11a 6Mbps	Left Cheek	165	5825	14.72	16.00	1.343	100	1.000	0.08	0.433	0.581
	WLAN5.8GHz	802.11a 6Mbps	Left Tilted	165	5825	14.72	16.00	1.343	100	1.000	0.09	0.273	0.367
	WLAN5.8GHz	802.11a 6Mbps	Left Cheek	149	5745	14.60	16.00	1.380	100	1.000	-0.05	0.464	0.640
20	WLAN5.8GHz	802.11a 6Mbps	Left Cheek	157	5785	14.40	16.00	1.445	100	1.000	0.04	0.461	**0.666**

14.2 Hotspot SAR

<GSM SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	GSM850_UAT	GPRS(4 Tx slots)	Front	10mm	128	824.2	27.54	28.00	1.112	0.05	0.200	0.222
	GSM850_UAT	GPRS(4 Tx slots)	Back	10mm	128	824.2	27.54	28.00	1.112	0.06	0.248	0.276
	GSM850_UAT	GPRS(4 Tx slots)	Left side	10mm	128	824.2	27.54	28.00	1.112	0.02	0.106	0.118
	GSM850_UAT	GPRS(4 Tx slots)	Right Side	10mm	128	824.2	27.54	28.00	1.112	-0.01	0.100	0.111
	GSM850_UAT	GPRS(4 Tx slots)	Top Side	10mm	128	824.2	27.54	28.00	1.112	0.08	0.134	0.149
	GSM850_UAT	GPRS(4 Tx slots)	Back	10mm	189	836.4	27.45	28.00	1.135	0.06	0.309	0.351
	GSM850_UAT	GPRS(4 Tx slots)	Back	10mm	251	848.8	27.30	28.00	1.175	-0.15	0.388	0.456
	GSM850_LAT	GPRS(4 Tx slots)	Front	10mm	128	824.2	27.54	28.00	1.112	0.04	0.384	0.427
	GSM850_LAT	GPRS(4 Tx slots)	Back	10mm	128	824.2	27.54	28.00	1.112	0.06	0.546	0.607
	GSM850_LAT	GPRS(4 Tx slots)	Left Side	10mm	128	824.2	27.54	28.00	1.112	0.09	0.301	0.335
	GSM850_LAT	GPRS(4 Tx slots)	Right Side	10mm	128	824.2	27.54	28.00	1.112	0.06	0.417	0.464
	GSM850_LAT	GPRS(4 Tx slots)	Bottom Side	10mm	128	824.2	27.54	28.00	1.112	0.06	0.212	0.236
	GSM850_LAT	GPRS(4 Tx slots)	Back	10mm	189	836.4	27.45	28.00	1.135	-0.02	0.535	0.607
21	GSM850_LAT	GPRS(4 Tx slots)	Back	10mm	251	848.8	27.30	28.00	1.175	0.08	0.582	**0.684**
	GSM1900_UAT	GPRS(4 Tx slots)	Front	10mm	810	1909.8	24.67	25.00	1.079	0.02	0.502	0.542
	GSM1900_UAT	GPRS(4 Tx slots)	Back	10mm	810	1909.8	24.67	25.00	1.079	0.01	0.390	0.421
	GSM1900_UAT	GPRS(4 Tx slots)	Left Side	10mm	810	1909.8	24.67	25.00	1.079	0.06	0.171	0.184
	GSM1900_UAT	GPRS(4 Tx slots)	Right Side	10mm	810	1909.8	24.67	25.00	1.079	0.04	0.023	0.025
22	GSM1900_UAT	GPRS(4 Tx slots)	Top Side	10mm	810	1909.8	24.67	25.00	1.079	-0.06	0.647	**0.698**
	GSM1900_UAT	GPRS(4 Tx slots)	Top Side	10mm	512	1850.2	24.57	25.00	1.104	-0.07	0.612	0.676
	GSM1900_UAT	GPRS(4 Tx slots)	Top Side	10mm	661	1880	24.62	25.00	1.091	0.03	0.542	0.592
	GSM1900_UAT	GPRS(4 Tx slots)	Front	10mm	512	1850.2	24.57	25.00	1.104	0.06	0.388	0.428
	GSM1900_UAT	GPRS(4 Tx slots)	Front	10mm	661	1880	24.62	25.00	1.091	0.01	0.435	0.475
	GSM1900_LAT	GPRS(4 Tx slots)	Front	10mm	810	1909.8	24.67	25.00	1.079	-0.09	0.227	0.245
	GSM1900_LAT	GPRS(4 Tx slots)	Back	10mm	810	1909.8	24.67	25.00	1.079	0.05	0.296	0.319
	GSM1900_LAT	GPRS(4 Tx slots)	Left Side	10mm	810	1909.8	24.67	25.00	1.079	0.06	0.111	0.120
	GSM1900_LAT	GPRS(4 Tx slots)	Right Side	10mm	810	1909.8	24.67	25.00	1.079	0.11	0.064	0.069
	GSM1900_LAT	GPRS(4 Tx slots)	Bottom Side	10mm	810	1909.8	24.67	25.00	1.079	0.08	0.273	0.295
	GSM1900_LAT	GPRS(4 Tx slots)	Back	10mm	512	1850.2	24.57	25.00	1.104	0.06	0.435	0.480
	GSM1900_LAT	GPRS(4 Tx slots)	Back	10mm	661	1880	24.62	25.00	1.091	0.08	0.371	0.405

<WCDMA SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WCDMA V_UAT	RMC 12.2Kbps	Front	10mm	4233	846.6	23.20	24.00	1.202	0.02	0.105	0.126
	WCDMA V_UAT	RMC 12.2Kbps	Back	10mm	4233	846.6	23.20	24.00	1.202	0.06	0.145	0.174
	WCDMA V_UAT	RMC 12.2Kbps	Left Side	10mm	4233	846.6	23.20	24.00	1.202	0.09	0.050	0.060
	WCDMA V_UAT	RMC 12.2Kbps	Right Side	10mm	4233	846.6	23.20	24.00	1.202	-0.02	0.044	0.053
	WCDMA V_UAT	RMC 12.2Kbps	Top Side	10mm	4233	846.6	23.20	24.00	1.202	0.01	0.083	0.100
	WCDMA V_UAT	RMC 12.2Kbps	Back	10mm	4132	826.4	23.10	24.00	1.230	0.03	0.108	0.133
	WCDMA V_UAT	RMC 12.2Kbps	Back	10mm	4182	836.4	23.14	24.00	1.219	0.05	0.129	0.157
	WCDMA V_LAT	RMC 12.2Kbps	Front	10mm	4233	846.6	23.20	24.00	1.202	-0.02	0.172	0.207
23	WCDMA V_LAT	RMC 12.2Kbps	Back	10mm	4233	846.6	23.20	24.00	1.202	0.08	0.267	**0.321**
	WCDMA V_LAT	RMC 12.2Kbps	Left Side	10mm	4233	846.6	23.20	24.00	1.202	0.06	0.148	0.178
	WCDMA V_LAT	RMC 12.2Kbps	Right Side	10mm	4233	846.6	23.20	24.00	1.202	-0.01	0.191	0.230
	WCDMA V_LAT	RMC 12.2Kbps	Bottom Side	10mm	4233	846.6	23.20	24.00	1.202	0.06	0.122	0.147
	WCDMA V_LAT	RMC 12.2Kbps	Back	10mm	4132	826.4	23.10	24.00	1.230	0.08	0.193	0.237
	WCDMA V_LAT	RMC 12.2Kbps	Back	10mm	4182	836.4	23.14	24.00	1.219	-0.06	0.234	0.285
	WCDMA IV_UAT	RMC 12.2Kbps	Front	10mm	1513	1752.6	23.02	24.00	1.253	0.08	0.577	0.723
	WCDMA IV_UAT	RMC 12.2Kbps	Back	10mm	1513	1752.6	23.02	24.00	1.253	0.01	0.441	0.553
	WCDMA IV_UAT	RMC 12.2Kbps	Left Side	10mm	1513	1752.6	23.02	24.00	1.253	0.01	0.346	0.434
	WCDMA IV_UAT	RMC 12.2Kbps	Right Side	10mm	1513	1752.6	23.02	24.00	1.253	0.08	0.100	0.125
	WCDMA IV_UAT	RMC 12.2Kbps	Top Side	10mm	1513	1752.6	23.02	24.00	1.253	0.09	0.567	0.711
	WCDMA IV_UAT	RMC 12.2Kbps	Front	10mm	1312	1712.4	22.98	24.00	1.265	0.07	0.548	0.693
	WCDMA IV_UAT	RMC 12.2Kbps	Front	10mm	1413	1732.6	22.91	24.00	1.285	0.06	0.503	0.646
	WCDMA IV_LAT	RMC 12.2Kbps	Front	10mm	1513	1752.6	22.06	23.00	1.242	0.06	0.281	0.349
	WCDMA IV_LAT	RMC 12.2Kbps	Back	10mm	1513	1752.6	22.06	23.00	1.242	0.02	0.714	0.887
	WCDMA IV_LAT	RMC 12.2Kbps	Left Side	10mm	1513	1752.6	22.06	23.00	1.242	0.08	0.024	0.030
	WCDMA IV_LAT	RMC 12.2Kbps	Right Side	10mm	1513	1752.6	22.06	23.00	1.242	-0.09	0.050	0.062
	WCDMA IV_LAT	RMC 12.2Kbps	Bottom Side	10mm	1513	1752.6	22.06	23.00	1.242	-0.1	0.625	0.776
	WCDMA IV_LAT	RMC 12.2Kbps	Back	10mm	1312	1712.4	21.99	23.00	1.262	0.08	0.674	0.850
24	WCDMA IV_LAT	RMC 12.2Kbps	Back	10mm	1413	1732.6	22.01	23.00	1.256	0.04	0.765	**0.961**
	WCDMA II_UAT	RMC 12.2Kbps	Front	10mm	9538	1907.6	23.13	23.50	1.089	0.07	0.683	0.744
	WCDMA II_UAT	RMC 12.2Kbps	Back	10mm	9538	1907.6	23.13	23.50	1.089	0.02	0.574	0.625
	WCDMA II_UAT	RMC 12.2Kbps	Left Side	10mm	9538	1907.6	23.13	23.50	1.089	0.06	0.284	0.309
	WCDMA II_UAT	RMC 12.2Kbps	Right Side	10mm	9538	1907.6	23.13	23.50	1.089	-0.18	0.030	0.033
25	WCDMA II_UAT	RMC 12.2Kbps	Top Side	10mm	9538	1907.6	23.13	23.50	1.089	0.16	0.920	**1.002**
	WCDMA II_UAT	RMC 12.2Kbps	Top Side	10mm	9262	1852.4	22.93	23.50	1.140	0.16	0.746	0.851
	WCDMA II_UAT	RMC 12.2Kbps	Top Side	10mm	9400	1880	23.00	23.50	1.122	-0.06	0.766	0.859
	WCDMA II_UAT	RMC 12.2Kbps	Front	10mm	9262	1852.4	22.93	23.50	1.140	0.12	0.537	0.612
	WCDMA II_UAT	RMC 12.2Kbps	Front	10mm	9400	1880	23.00	23.50	1.122	-0.11	0.603	0.677
	WCDMA II_LAT	RMC 12.2Kbps	Front	10mm	9538	1907.6	23.64	24.00	1.086	0.03	0.425	0.462
	WCDMA II_LAT	RMC 12.2Kbps	Back	10mm	9538	1907.6	23.64	24.00	1.086	0.01	0.455	0.494
	WCDMA II_LAT	RMC 12.2Kbps	Left Side	10mm	9538	1907.6	23.64	24.00	1.086	0.05	0.243	0.264
	WCDMA II_LAT	RMC 12.2Kbps	Right Side	10mm	9538	1907.6	23.64	24.00	1.086	0.14	0.097	0.105
	WCDMA II_LAT	RMC 12.2Kbps	Bottom Side	10mm	9538	1907.6	23.64	24.00	1.086	0.06	0.500	0.543
	WCDMA II_LAT	RMC 12.2Kbps	Bottom Side	10mm	9262	1852.4	23.42	24.00	1.143	0.01	0.667	0.762
	WCDMA II_LAT	RMC 12.2Kbps	Bottom Side	10mm	9400	1880	23.51	24.00	1.119	-0.05	0.651	0.729
	WCDMA II_LAT	RMC 12.2Kbps	Back	10mm	9262	1852.4	23.42	24.00	1.143	0.09	0.522	0.597
	WCDMA II_LAT	RMC 12.2Kbps	Back	10mm	9400	1880	23.51	24.00	1.119	0.04	0.425	0.476

<FDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 71_UAT	20M	QPSK	1	49	Front	10mm	133322	683	22.78	24.00	1.324	0.03	0.197	0.261
	LTE Band 71_UAT	20M	QPSK	1	49	Back	10mm	133322	683	22.78	24.00	1.324	0.02	0.278	0.368
	LTE Band 71_UAT	20M	QPSK	1	49	Left Side	10mm	133322	683	22.78	24.00	1.324	-0.03	0.202	0.268
	LTE Band 71_UAT	20M	QPSK	1	49	Right Side	10mm	133322	683	22.78	24.00	1.324	0.08	0.159	0.211
	LTE Band 71_UAT	20M	QPSK	1	49	Top Side	10mm	133322	683	22.78	24.00	1.324	0.04	0.057	0.075
	LTE Band 71_UAT	20M	QPSK	50	24	Front	10mm	133322	683	21.75	23.00	1.334	0.09	0.154	0.205
	LTE Band 71_UAT	20M	QPSK	50	24	Back	10mm	133322	683	21.75	23.00	1.334	0.06	0.220	0.293
	LTE Band 71_UAT	20M	QPSK	50	24	Left Side	10mm	133322	683	21.75	23.00	1.334	0.06	0.155	0.207
	LTE Band 71_UAT	20M	QPSK	50	24	Right Side	10mm	133322	683	21.75	23.00	1.334	0.09	0.126	0.168
	LTE Band 71_UAT	20M	QPSK	50	24	Top Side	10mm	133322	683	21.75	23.00	1.334	0.04	0.046	0.061
	LTE Band 71_LAT	20M	QPSK	1	49	Front	10mm	133322	683	22.78	24.00	1.324	0.06	0.196	0.260
26	LTE Band 71_LAT	20M	QPSK	1	49	Back	10mm	133322	683	22.78	24.00	1.324	0.01	0.305	**0.404**
	LTE Band 71_LAT	20M	QPSK	1	49	Left Side	10mm	133322	683	22.78	24.00	1.324	-0.07	0.172	0.228
	LTE Band 71_LAT	20M	QPSK	1	49	Right Side	10mm	133322	683	22.78	24.00	1.324	-0.02	0.289	0.383
	LTE Band 71_LAT	20M	QPSK	1	49	Bottom Side	10mm	133322	683	22.78	24.00	1.324	0.06	0.095	0.126
	LTE Band 71_LAT	20M	QPSK	50	24	Front	10mm	133322	683	21.75	23.00	1.334	0.04	0.159	0.212
	LTE Band 71_LAT	20M	QPSK	50	24	Back	10mm	133322	683	21.75	23.00	1.334	0.06	0.245	0.327
	LTE Band 71_LAT	20M	QPSK	50	24	Left Side	10mm	133322	683	21.75	23.00	1.334	0.02	0.132	0.176
	LTE Band 71_LAT	20M	QPSK	50	24	Right Side	10mm	133322	683	21.75	23.00	1.334	0.09	0.228	0.304
	LTE Band 71_LAT	20M	QPSK	50	24	Bottom Side	10mm	133322	683	21.75	23.00	1.334	0.01	0.080	0.107
	LTE Band 12_UAT	10M	QPSK	1	25	Front	10mm	23095	707.5	22.91	24.00	1.285	0.06	0.247	0.317
	LTE Band 12_UAT	10M	QPSK	1	25	Back	10mm	23095	707.5	22.91	24.00	1.285	-0.04	0.319	0.410
	LTE Band 12_UAT	10M	QPSK	1	25	Left Side	10mm	23095	707.5	22.91	24.00	1.285	0.02	0.221	0.284
	LTE Band 12_UAT	10M	QPSK	1	25	Right Side	10mm	23095	707.5	22.91	24.00	1.285	-0.07	0.173	0.222
	LTE Band 12_UAT	10M	QPSK	1	25	Top Side	10mm	23095	707.5	22.91	24.00	1.285	0.07	0.078	0.100
	LTE Band 12_LAT	10M	QPSK	25	0	Front	10mm	23095	707.5	21.83	23.00	1.309	0.06	0.185	0.242
	LTE Band 12_LAT	10M	QPSK	25	0	Back	10mm	23095	707.5	21.83	23.00	1.309	0.04	0.244	0.319
	LTE Band 12_LAT	10M	QPSK	25	0	Left Side	10mm	23095	707.5	21.83	23.00	1.309	0.08	0.167	0.219
	LTE Band 12_LAT	10M	QPSK	25	0	Right Side	10mm	23095	707.5	21.83	23.00	1.309	0.06	0.131	0.172
	LTE Band 12_LAT	10M	QPSK	25	0	Top Side	10mm	23095	707.5	21.83	23.00	1.309	0.02	0.062	0.081
	LTE Band 12_LAT	10M	QPSK	1	25	Front	10mm	23095	707.5	22.91	24.00	1.285	-0.04	0.282	0.362
27	LTE Band 12_LAT	10M	QPSK	1	25	Back	10mm	23095	707.5	22.91	24.00	1.285	-0.03	0.404	**0.519**
	LTE Band 12_LAT	10M	QPSK	1	25	Left Side	10mm	23095	707.5	22.91	24.00	1.285	0.06	0.236	0.303
	LTE Band 12_LAT	10M	QPSK	1	25	Right Side	10mm	23095	707.5	22.91	24.00	1.285	0.08	0.376	0.483
	LTE Band 12_LAT	10M	QPSK	1	25	Bottom Side	10mm	23095	707.5	22.91	24.00	1.285	0.16	0.073	0.094
	LTE Band 12_LAT	10M	QPSK	25	0	Front	10mm	23095	707.5	21.83	23.00	1.309	0.04	0.213	0.279
	LTE Band 12_LAT	10M	QPSK	25	0	Back	10mm	23095	707.5	21.83	23.00	1.309	0.04	0.311	0.407
	LTE Band 12_LAT	10M	QPSK	25	0	Left Side	10mm	23095	707.5	21.83	23.00	1.309	-0.07	0.182	0.238
	LTE Band 12_LAT	10M	QPSK	25	0	Right Side	10mm	23095	707.5	21.83	23.00	1.309	0.01	0.221	0.289
	LTE Band 12_LAT	10M	QPSK	25	0	Bottom Side	10mm	23095	707.5	21.83	23.00	1.309	0.04	0.055	0.072

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 13_UAT	10M	QPSK	1	0	Front	10mm	23230	782	22.75	24.00	1.334	-0.02	0.147	0.196
	LTE Band 13_UAT	10M	QPSK	1	0	Back	10mm	23230	782	22.75	24.00	1.334	0.06	0.219	0.292
	LTE Band 13_UAT	10M	QPSK	1	0	Left Side	10mm	23230	782	22.75	24.00	1.334	0.01	0.110	0.147
	LTE Band 13_UAT	10M	QPSK	1	0	Right Side	10mm	23230	782	22.75	24.00	1.334	0.08	0.107	0.143
	LTE Band 13_UAT	10M	QPSK	1	0	Top Side	10mm	23230	782	22.75	24.00	1.334	0.06	0.074	0.099
	LTE Band 13_UAT	10M	QPSK	25	0	Front	10mm	23230	782	21.81	23.00	1.315	0.08	0.122	0.160
	LTE Band 13_UAT	10M	QPSK	25	0	Back	10mm	23230	782	21.81	23.00	1.315	0.09	0.183	0.241
	LTE Band 13_UAT	10M	QPSK	25	0	Left Side	10mm	23230	782	21.81	23.00	1.315	-0.07	0.090	0.118
	LTE Band 13_UAT	10M	QPSK	25	0	Right Side	10mm	23230	782	21.81	23.00	1.315	0.08	0.089	0.117
	LTE Band 13_UAT	10M	QPSK	25	0	Top Side	10mm	23230	782	21.81	23.00	1.315	0.01	0.061	0.080
	LTE Band 13_LAT	10M	QPSK	1	0	Front	10mm	23230	782	22.75	24.00	1.334	0.08	0.217	0.289
28	LTE Band 13_LAT	10M	QPSK	1	0	Back	10mm	23230	782	22.75	24.00	1.334	0.13	0.344	**0.459**
	LTE Band 13_LAT	10M	QPSK	1	0	Left Side	10mm	23230	782	22.75	24.00	1.334	0.07	0.155	0.207
	LTE Band 13_LAT	10M	QPSK	1	0	Right Side	10mm	23230	782	22.75	24.00	1.334	0.02	0.279	0.372
	LTE Band 13_LAT	10M	QPSK	1	0	Bottom Side	10mm	23230	782	22.75	24.00	1.334	-0.06	0.155	0.207
	LTE Band 13_LAT	10M	QPSK	25	0	Front	10mm	23230	782	21.81	23.00	1.315	0.07	0.176	0.231
	LTE Band 13_LAT	10M	QPSK	25	0	Back	10mm	23230	782	21.81	23.00	1.315	-0.06	0.277	0.364
	LTE Band 13_LAT	10M	QPSK	25	0	Left Side	10mm	23230	782	21.81	23.00	1.315	0.05	0.126	0.166
	LTE Band 13_LAT	10M	QPSK	25	0	Right Side	10mm	23230	782	21.81	23.00	1.315	0.02	0.228	0.300
	LTE Band 13_LAT	10M	QPSK	25	0	Bottom Side	10mm	23230	782	21.81	23.00	1.315	0.08	0.131	0.172
	LTE Band 14_UAT	10M	QPSK	1	25	Front	10mm	23330	793	22.83	24.00	1.309	0.06	0.134	0.175
	LTE Band 14_UAT	10M	QPSK	1	25	Back	10mm	23330	793	22.83	24.00	1.309	-0.06	0.204	0.267
	LTE Band 14_UAT	10M	QPSK	1	25	Left Side	10mm	23330	793	22.83	24.00	1.309	0.04	0.096	0.126
	LTE Band 14_UAT	10M	QPSK	1	25	Right Side	10mm	23330	793	22.83	24.00	1.309	0.01	0.115	0.151
	LTE Band 14_UAT	10M	QPSK	1	25	Top Side	10mm	23330	793	22.83	24.00	1.309	0.05	0.066	0.086
	LTE Band 14_UAT	10M	QPSK	25	12	Front	10mm	23330	793	21.72	23.00	1.343	0.02	0.106	0.142
	LTE Band 14_UAT	10M	QPSK	25	12	Back	10mm	23330	793	21.72	23.00	1.343	0.06	0.162	0.218
	LTE Band 14_UAT	10M	QPSK	25	12	Left Side	10mm	23330	793	21.72	23.00	1.343	0.07	0.075	0.101
	LTE Band 14_UAT	10M	QPSK	25	12	Right Side	10mm	23330	793	21.72	23.00	1.343	0.01	0.091	0.122
	LTE Band 14_UAT	10M	QPSK	25	12	Top Side	10mm	23330	793	21.72	23.00	1.343	0.09	0.053	0.071
	LTE Band 14_LAT	10M	QPSK	1	25	Front	10mm	23330	793	22.83	24.00	1.309	0.02	0.196	0.257
29	LTE Band 14_LAT	10M	QPSK	1	25	Back	10mm	23330	793	22.83	24.00	1.309	0.04	0.288	**0.377**
	LTE Band 14_LAT	10M	QPSK	1	25	Left Side	10mm	23330	793	22.83	24.00	1.309	0.08	0.130	0.170
	LTE Band 14_LAT	10M	QPSK	1	25	Right Side	10mm	23330	793	22.83	24.00	1.309	0.09	0.272	0.356
	LTE Band 14_LAT	10M	QPSK	1	25	Bottom Side	10mm	23330	793	22.83	24.00	1.309	0.04	0.150	0.196
	LTE Band 14_LAT	10M	QPSK	25	12	Front	10mm	23330	793	21.72	23.00	1.343	-0.12	0.157	0.211
	LTE Band 14_LAT	10M	QPSK	25	12	Back	10mm	23330	793	21.72	23.00	1.343	0.08	0.229	0.307
	LTE Band 14_LAT	10M	QPSK	25	12	Left Side	10mm	23330	793	21.72	23.00	1.343	-0.04	0.103	0.138
	LTE Band 14_LAT	10M	QPSK	25	12	Right Side	10mm	23330	793	21.72	23.00	1.343	-0.16	0.217	0.291
	LTE Band 14_LAT	10M	QPSK	25	12	Bottom Side	10mm	23330	793	21.72	23.00	1.343	0.08	0.119	0.160

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 26_UAT	15M	QPSK	1	37	Front	10mm	26865	831.5	23.09	24.00	1.233	-0.04	0.075	0.092
	LTE Band 26_UAT	15M	QPSK	1	37	Back	10mm	26865	831.5	23.09	24.00	1.233	0.08	0.135	0.166
	LTE Band 26_UAT	15M	QPSK	1	37	Left Side	10mm	26865	831.5	23.09	24.00	1.233	0.06	0.048	0.059
	LTE Band 26_UAT	15M	QPSK	1	37	Right Side	10mm	26865	831.5	23.09	24.00	1.233	0.05	0.046	0.057
	LTE Band 26_UAT	15M	QPSK	1	37	Top Side	10mm	26865	831.5	23.09	24.00	1.233	0.07	0.061	0.075
	LTE Band 26_UAT	15M	QPSK	1	37	Back	10mm	26765	821.5	22.79	24.00	1.321	0.07	0.123	0.163
	LTE Band 26_UAT	15M	QPSK	1	37	Back	10mm	26965	841.5	22.94	24.00	1.276	0.17	0.115	0.147
	LTE Band 26_UAT	15M	QPSK	36	20	Front	10mm	26865	831.5	21.93	23.00	1.279	-0.19	0.059	0.075
	LTE Band 26_UAT	15M	QPSK	36	20	Back	10mm	26865	831.5	21.93	23.00	1.279	0.05	0.103	0.132
	LTE Band 26_UAT	15M	QPSK	36	20	Left Side	10mm	26865	831.5	21.93	23.00	1.279	0.05	0.038	0.049
	LTE Band 26_UAT	15M	QPSK	36	20	Right Side	10mm	26865	831.5	21.93	23.00	1.279	0.15	0.035	0.045
	LTE Band 26_UAT	15M	QPSK	36	20	Top Side	10mm	26865	831.5	21.93	23.00	1.279	0.17	0.046	0.059
	LTE Band 26_LAT	15M	QPSK	1	37	Front	10mm	26865	831.5	23.09	24.00	1.233	0.01	0.164	0.202
30	LTE Band 26_LAT	15M	QPSK	1	37	Back	10mm	26865	831.5	23.09	24.00	1.233	-0.09	0.231	**0.285**
	LTE Band 26_LAT	15M	QPSK	1	37	Left Side	10mm	26865	831.5	23.09	24.00	1.233	-0.09	0.129	0.159
	LTE Band 26_LAT	15M	QPSK	1	37	Right Side	10mm	26865	831.5	23.09	24.00	1.233	-0.04	0.168	0.207
	LTE Band 26_LAT	15M	QPSK	1	37	Bottom Side	10mm	26865	831.5	23.09	24.00	1.233	0.02	0.092	0.113
	LTE Band 26_LAT	15M	QPSK	1	37	Back	10mm	26765	821.5	22.79	24.00	1.321	-0.02	0.212	0.280
	LTE Band 26_LAT	15M	QPSK	1	37	Back	10mm	26965	841.5	22.94	24.00	1.276	-0.14	0.213	0.272
	LTE Band 26_LAT	15M	QPSK	36	20	Front	10mm	26865	831.5	21.93	23.00	1.279	0.05	0.130	0.166
	LTE Band 26_LAT	15M	QPSK	36	20	Back	10mm	26865	831.5	21.93	23.00	1.279	0.09	0.195	0.249
	LTE Band 26_LAT	15M	QPSK	36	20	Left Side	10mm	26865	831.5	21.93	23.00	1.279	0.14	0.100	0.128
	LTE Band 26_LAT	15M	QPSK	36	20	Right Side	10mm	26865	831.5	21.93	23.00	1.279	0.01	0.132	0.169
	LTE Band 26_LAT	15M	QPSK	36	20	Bottom Side	10mm	26865	831.5	21.93	23.00	1.279	0.15	0.073	0.093
	LTE Band 5_UAT	10M	QPSK	1	25	Front	10mm	20525	836.5	22.78	24.00	1.324	-0.11	0.088	0.117
	LTE Band 5_UAT	10M	QPSK	1	25	Back	10mm	20525	836.5	22.78	24.00	1.324	-0.17	0.134	0.177
	LTE Band 5_UAT	10M	QPSK	1	25	Left Side	10mm	20525	836.5	22.78	24.00	1.324	0.12	0.053	0.070
	LTE Band 5_UAT	10M	QPSK	1	25	Right Side	10mm	20525	836.5	22.78	24.00	1.324	0.02	0.057	0.075
	LTE Band 5_UAT	10M	QPSK	1	25	Top Side	10mm	20525	836.5	22.78	24.00	1.324	0.14	0.062	0.082
	LTE Band 5_UAT	10M	QPSK	25	25	Front	10mm	20525	836.5	21.77	23.00	1.327	-0.02	0.063	0.084
	LTE Band 5_UAT	10M	QPSK	25	25	Back	10mm	20525	836.5	21.77	23.00	1.327	0.04	0.100	0.132
	LTE Band 5_UAT	10M	QPSK	25	25	Left Side	10mm	20525	836.5	21.77	23.00	1.327	0.02	0.047	0.062
	LTE Band 5_UAT	10M	QPSK	25	25	Right Side	10mm	20525	836.5	21.77	23.00	1.327	-0.06	0.052	0.069
	LTE Band 5_UAT	10M	QPSK	25	25	Top Side	10mm	20525	836.5	21.77	23.00	1.327	-0.07	0.043	0.057
	LTE Band 5_LAT	10M	QPSK	1	25	Front	10mm	20525	836.5	22.78	24.00	1.324	-0.05	0.163	0.216
31	LTE Band 5_LAT	10M	QPSK	1	25	Back	10mm	20525	836.5	22.78	24.00	1.324	0.06	0.252	**0.334**
	LTE Band 5_LAT	10M	QPSK	1	25	Left Side	10mm	20525	836.5	22.78	24.00	1.324	-0.07	0.121	0.160
	LTE Band 5_LAT	10M	QPSK	1	25	Right Side	10mm	20525	836.5	22.78	24.00	1.324	-0.17	0.179	0.237
	LTE Band 5_LAT	10M	QPSK	1	25	Bottom Side	10mm	20525	836.5	22.78	24.00	1.324	0.13	0.128	0.170
	LTE Band 5_LAT	10M	QPSK	25	25	Front	10mm	20525	836.5	21.77	23.00	1.327	-0.15	0.124	0.165
	LTE Band 5_LAT	10M	QPSK	25	25	Back	10mm	20525	836.5	21.77	23.00	1.327	-0.07	0.193	0.256
	LTE Band 5_LAT	10M	QPSK	25	25	Left Side	10mm	20525	836.5	21.77	23.00	1.327	0.18	0.095	0.126
	LTE Band 5_LAT	10M	QPSK	25	25	Right Side	10mm	20525	836.5	21.77	23.00	1.327	-0.12	0.137	0.182
	LTE Band 5_LAT	10M	QPSK	25	25	Bottom Side	10mm	20525	836.5	21.77	23.00	1.327	-0.05	0.092	0.122

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 66_UAT	20M	QPSK	1	49	Front	10mm	132072	1720	22.88	24.00	1.294	0.16	0.534	0.691
	LTE Band 66_UAT	20M	QPSK	1	49	Back	10mm	132072	1720	22.88	24.00	1.294	0.17	0.381	0.493
	LTE Band 66_UAT	20M	QPSK	1	49	Left Side	10mm	132072	1720	22.88	24.00	1.294	0.15	0.242	0.313
	LTE Band 66_UAT	20M	QPSK	1	49	Right Side	10mm	132072	1720	22.88	24.00	1.294	0.02	0.062	0.080
	LTE Band 66_UAT	20M	QPSK	1	49	Top Side	10mm	132072	1720	22.88	24.00	1.294	-0.12	0.506	0.655
	LTE Band 66_UAT	20M	QPSK	1	49	Front	10mm	132322	1745	22.75	24.00	1.334	-0.1	0.546	0.728
	LTE Band 66_UAT	20M	QPSK	1	49	Front	10mm	132572	1770	22.83	24.00	1.309	-0.06	0.586	0.767
	LTE Band 66_UAT	20M	QPSK	50	0	Front	10mm	132072	1720	21.84	23.00	1.306	0.04	0.438	0.572
	LTE Band 66_UAT	20M	QPSK	50	0	Back	10mm	132072	1720	21.84	23.00	1.306	-0.03	0.290	0.379
	LTE Band 66_UAT	20M	QPSK	50	0	Left Side	10mm	132072	1720	21.84	23.00	1.306	0.03	0.186	0.243
	LTE Band 66_UAT	20M	QPSK	50	0	Right Side	10mm	132072	1720	21.84	23.00	1.306	0.19	0.053	0.069
	LTE Band 66_UAT	20M	QPSK	50	0	Top Side	10mm	132072	1720	21.84	23.00	1.306	0.19	0.396	0.517
	LTE Band 66_LAT	20M	QPSK	1	49	Front	10mm	132072	1720	21.94	23.00	1.276	0.17	0.277	0.354
32	LTE Band 66_LAT	20M	QPSK	1	49	Back	10mm	132072	1720	21.94	23.00	1.276	-0.06	0.823	**1.051**
	LTE Band 66_LAT	20M	QPSK	1	49	Left Side	10mm	132072	1720	21.94	23.00	1.276	0.03	0.053	0.068
	LTE Band 66_LAT	20M	QPSK	1	49	Right Side	10mm	132072	1720	21.94	23.00	1.276	0.01	0.046	0.059
	LTE Band 66_LAT	20M	QPSK	1	49	Bottom Side	10mm	132072	1720	21.94	23.00	1.276	-0.14	0.662	0.845
	LTE Band 66_LAT	20M	QPSK	1	49	Bottom Side	10mm	132322	1745	21.86	23.00	1.300	0.05	0.660	0.858
	LTE Band 66_LAT	20M	QPSK	1	49	Bottom Side	10mm	132572	1770	21.91	23.00	1.285	0.03	0.588	0.756
	LTE Band 66_LAT	20M	QPSK	1	49	Back	10mm	132322	1745	21.86	23.00	1.300	0.12	0.793	1.031
	LTE Band 66_LAT	20M	QPSK	1	49	Back	10mm	132572	1770	21.91	23.00	1.285	-0.08	0.730	0.938
	LTE Band 66_LAT	20M	QPSK	50	0	Front	10mm	132072	1720	20.95	22.00	1.274	0.04	0.224	0.285
	LTE Band 66_LAT	20M	QPSK	50	0	Back	10mm	132072	1720	20.95	22.00	1.274	-0.03	0.641	0.816
	LTE Band 66_LAT	20M	QPSK	50	0	Left Side	10mm	132072	1720	20.95	22.00	1.274	0.13	0.039	0.050
	LTE Band 66_LAT	20M	QPSK	50	0	Right Side	10mm	132072	1720	20.95	22.00	1.274	-0.06	0.260	0.331
	LTE Band 66_LAT	20M	QPSK	50	0	Bottom Side	10mm	132072	1720	20.95	22.00	1.274	0.07	0.524	0.667
	LTE Band 66_LAT	20M	QPSK	50	0	Back	10mm	132322	1745	20.83	22.00	1.309	-0.14	0.632	0.827
	LTE Band 66_LAT	20M	QPSK	50	0	Back	10mm	132572	1770	20.85	22.00	1.303	-0.12	0.586	0.764
	LTE Band 66_LAT	20M	QPSK	100	0	Back	10mm	132072	1720	20.89	22.00	1.291	-0.17	0.643	0.830
	LTE Band 66_LAT	20M	QPSK	100	0	Bottom Side	10mm	132072	1720	20.89	22.00	1.291	0.04	0.516	0.666

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 25_UAT	20M	QPSK	1	49	Front	10mm	26340	1880	23.21	24.00	1.199	0.06	0.644	0.772
	LTE Band 25_UAT	20M	QPSK	1	49	Back	10mm	26340	1880	23.21	24.00	1.199	-0.16	0.500	0.600
	LTE Band 25_UAT	20M	QPSK	1	49	Left Side	10mm	26340	1880	23.21	24.00	1.199	-0.19	0.304	0.365
	LTE Band 25_UAT	20M	QPSK	1	49	Right Side	10mm	26340	1880	23.21	24.00	1.199	0.06	0.021	0.025
	LTE Band 25_UAT	20M	QPSK	1	49	Top Side	10mm	26340	1880	23.21	24.00	1.199	0.18	0.768	0.921
	LTE Band 25_UAT	20M	QPSK	1	49	Top Side	10mm	26140	1860	23.10	24.00	1.230	-0.14	0.741	0.912
33	LTE Band 25_UAT	20M	QPSK	1	49	Top Side	10mm	26590	1905	23.16	24.00	1.213	0.19	0.874	**1.061**
	LTE Band 25_UAT	20M	QPSK	1	49	Front	10mm	26140	1860	23.10	24.00	1.230	0.03	0.613	0.754
	LTE Band 25_UAT	20M	QPSK	1	49	Front	10mm	26590	1905	23.16	24.00	1.213	0.07	0.742	0.900
	LTE Band 25_UAT	20M	QPSK	50	24	Front	10mm	26340	1880	22.15	23.00	1.216	-0.02	0.499	0.607
	LTE Band 25_UAT	20M	QPSK	50	24	Back	10mm	26340	1880	22.15	23.00	1.216	-0.06	0.401	0.488
	LTE Band 25_UAT	20M	QPSK	50	24	Left Side	10mm	26340	1880	22.15	23.00	1.216	-0.1	0.244	0.297
	LTE Band 25_UAT	20M	QPSK	50	24	Right Side	10mm	26340	1880	22.15	23.00	1.216	0.09	0.018	0.022
	LTE Band 25_UAT	20M	QPSK	50	24	Top Side	10mm	26340	1880	22.15	23.00	1.216	0.01	0.629	0.765
	LTE Band 25_UAT	20M	QPSK	100	0	Top Side	10mm	26340	1880	22.09	23.00	1.233	0.01	0.624	0.769
	LTE Band 25_UAT	20M	QPSK	100	0	Front	10mm	26340	1880	22.09	23.00	1.233	0.01	0.473	0.583
	LTE Band 25_LAT	20M	QPSK	1	49	Front	10mm	26340	1880	23.21	24.00	1.199	0.07	0.337	0.404
	LTE Band 25_LAT	20M	QPSK	1	49	Back	10mm	26340	1880	23.21	24.00	1.199	0.03	0.500	0.600
	LTE Band 25_LAT	20M	QPSK	1	49	Left Side	10mm	26340	1880	23.21	24.00	1.199	0.01	0.146	0.175
	LTE Band 25_LAT	20M	QPSK	1	49	Right Side	10mm	26340	1880	23.21	24.00	1.199	0.14	0.118	0.142
	LTE Band 25_LAT	20M	QPSK	1	49	Bottom Side	10mm	26340	1880	23.21	24.00	1.199	0.06	0.447	0.536
	LTE Band 25_LAT	20M	QPSK	1	49	Back	10mm	26140	1860	23.10	24.00	1.230	-0.18	0.580	0.714
	LTE Band 25_LAT	20M	QPSK	1	49	Back	10mm	26590	1905	23.16	24.00	1.213	0.06	0.370	0.449
	LTE Band 25_LAT	20M	QPSK	50	24	Front	10mm	26340	1880	22.15	23.00	1.216	0.02	0.267	0.325
	LTE Band 25_LAT	20M	QPSK	50	24	Back	10mm	26340	1880	22.15	23.00	1.216	-0.06	0.407	0.495
	LTE Band 25_LAT	20M	QPSK	50	24	Left Side	10mm	26340	1880	22.15	23.00	1.216	-0.08	0.118	0.144
	LTE Band 25_LAT	20M	QPSK	50	24	Right Side	10mm	26340	1880	22.15	23.00	1.216	0.14	0.095	0.116
	LTE Band 25_LAT	20M	QPSK	50	24	Bottom Side	10mm	26340	1880	22.15	23.00	1.216	0.04	0.355	0.432

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 7_UAT	20M	QPSK	1	49	Front	10mm	21350	2560	21.10	21.50	1.096	0.12	0.417	0.457
	LTE Band 7_UAT	20M	QPSK	1	49	Back	10mm	21350	2560	21.10	21.50	1.096	0.18	0.918	1.007
	LTE Band 7_UAT	20M	QPSK	1	49	Left Side	10mm	21350	2560	21.10	21.50	1.096	-0.11	0.273	0.299
	LTE Band 7_UAT	20M	QPSK	1	49	Right Side	10mm	21350	2560	21.10	21.50	1.096	0.12	0.037	0.041
34	LTE Band 7_UAT	20M	QPSK	1	49	Top Side	10mm	21350	2560	21.10	21.50	1.096	-0.04	0.996	**1.092**
	LTE Band 7_UAT	20M	QPSK	1	49	Top Side	10mm	20850	2510	21.03	21.50	1.114	-0.03	0.876	0.976
	LTE Band 7_UAT	20M	QPSK	1	49	Top Side	10mm	21100	2535	21.05	21.50	1.109	-0.04	0.935	1.037
	LTE Band 7_UAT	20M	QPSK	1	49	Back	10mm	20850	2510	21.03	21.50	1.114	0.1	0.831	0.926
	LTE Band 7_UAT	20M	QPSK	1	49	Back	10mm	21100	2535	21.05	21.50	1.109	-0.08	0.891	0.988
	LTE Band 7_UAT	20M	QPSK	50	24	Front	10mm	21350	2560	20.09	20.50	1.099	0.09	0.335	0.368
	LTE Band 7_UAT	20M	QPSK	50	24	Back	10mm	21350	2560	20.09	20.50	1.099	0.1	0.729	0.801
	LTE Band 7_UAT	20M	QPSK	50	24	Left Side	10mm	21350	2560	20.09	20.50	1.099	-0.15	0.240	0.264
	LTE Band 7_UAT	20M	QPSK	50	24	Right Side	10mm	21350	2560	20.09	20.50	1.099	-0.02	0.031	0.034
	LTE Band 7_UAT	20M	QPSK	50	24	Top Side	10mm	21350	2560	20.09	20.50	1.099	0.07	0.774	0.851
	LTE Band 7_UAT	20M	QPSK	50	24	Top Side	10mm	20850	2510	19.94	20.50	1.138	0.06	0.677	0.770
	LTE Band 7_UAT	20M	QPSK	50	24	Top Side	10mm	21100	2535	20.00	20.50	1.122	-0.08	0.724	0.812
	LTE Band 7_UAT	20M	QPSK	50	24	Back	10mm	20850	2510	19.94	20.50	1.138	-0.07	0.660	0.751
	LTE Band 7_UAT	20M	QPSK	50	24	Back	10mm	21100	2535	20.00	20.50	1.122	0.04	0.700	0.785
	LTE Band 7_UAT	20M	QPSK	100	0	Back	10mm	21350	2560	20.04	20.50	1.112	0.03	0.716	0.796
	LTE Band 7_UAT	20M	QPSK	100	0	Top Side	10mm	21350	2560	20.04	20.50	1.112	0.19	0.727	0.808
	LTE Band 7_LAT	20M	QPSK	1	49	Front	10mm	21350	2560	21.10	21.50	1.096	0.18	0.377	0.413
	LTE Band 7_LAT	20M	QPSK	1	49	Back	10mm	21350	2560	21.10	21.50	1.096	-0.05	0.896	0.982
	LTE Band 7_LAT	20M	QPSK	1	49	Left Side	10mm	21350	2560	21.10	21.50	1.096	-0.08	0.065	0.071
	LTE Band 7_LAT	20M	QPSK	1	49	Right Side	10mm	21350	2560	21.10	21.50	1.096	0.03	0.082	0.090
	LTE Band 7_LAT	20M	QPSK	1	49	Bottom Side	10mm	21350	2560	21.10	21.50	1.096	-0.07	0.980	1.075
	LTE Band 7_LAT	20M	QPSK	1	49	Bottom Side	10mm	20850	2510	21.03	21.50	1.114	-0.17	0.706	0.787
	LTE Band 7_LAT	20M	QPSK	1	49	Bottom Side	10mm	21100	2535	21.05	21.50	1.109	-0.18	0.803	0.891
	LTE Band 7_LAT	20M	QPSK	1	49	Back	10mm	20850	2510	21.03	21.50	1.114	-0.11	0.751	0.837
	LTE Band 7_LAT	20M	QPSK	1	49	Back	10mm	21100	2535	21.05	21.50	1.109	-0.05	0.805	0.893
	LTE Band 7_LAT	20M	QPSK	50	24	Front	10mm	21350	2560	20.09	20.50	1.099	0.11	0.302	0.332
	LTE Band 7_LAT	20M	QPSK	50	24	Back	10mm	21350	2560	20.09	20.50	1.099	0.04	0.675	0.742
	LTE Band 7_LAT	20M	QPSK	50	24	Left Side	10mm	21350	2560	20.09	20.50	1.099	0.07	0.042	0.046
	LTE Band 7_LAT	20M	QPSK	50	24	Right Side	10mm	21350	2560	20.09	20.50	1.099	0.15	0.065	0.071
	LTE Band 7_LAT	20M	QPSK	50	24	Bottom Side	10mm	21350	2560	20.09	20.50	1.099	-0.11	0.753	0.828
	LTE Band 7_LAT	20M	QPSK	50	24	Bottom Side	10mm	20850	2510	19.94	20.50	1.138	-0.16	0.559	0.636
	LTE Band 7_LAT	20M	QPSK	50	24	Bottom Side	10mm	21100	2535	20.00	20.50	1.122	0.01	0.636	0.714
	LTE Band 7_LAT	20M	QPSK	100	0	Back	10mm	21350	2560	20.04	20.50	1.112	-0.17	0.656	0.729
	LTE Band 7_LAT	20M	QPSK	100	0	Bottom Side	10mm	21350	2560	20.04	20.50	1.112	-0.14	0.742	0.825

<TDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 41_UAT	20M	QPSK	1	49	Front	10mm	40620	2593	22.35	23.00	1.161	62.9	1.006	-0.06	0.383	0.448
	LTE Band 41_UAT	20M	QPSK	1	49	Back	10mm	40620	2593	22.35	23.00	1.161	62.9	1.006	-0.16	0.855	0.999
	LTE Band 41_UAT	20M	QPSK	1	49	Left Side	10mm	40620	2593	22.35	23.00	1.161	62.9	1.006	-0.19	0.276	0.322
	LTE Band 41_UAT	20M	QPSK	1	49	Right Side	10mm	40620	2593	22.35	23.00	1.161	62.9	1.006	-0.13	0.045	0.053
	LTE Band 41_UAT	20M	QPSK	1	49	Top Side	10mm	40620	2593	22.35	23.00	1.161	62.9	1.006	0.18	0.875	1.022
	LTE Band 41_UAT	20M	QPSK	1	49	Back	10mm	39750	2506	22.22	23.00	1.197	62.9	1.006	0.19	0.676	0.814
	LTE Band 41_UAT	20M	QPSK	1	49	Back	10mm	40185	2549.5	22.20	23.00	1.202	62.9	1.006	-0.14	0.727	0.879
	LTE Band 41_UAT	20M	QPSK	1	49	Back	10mm	41055	2636.5	22.25	23.00	1.189	62.9	1.006	-0.02	0.837	1.001
	LTE Band 41_UAT	20M	QPSK	1	49	Back	10mm	41490	2680	22.23	23.00	1.194	62.9	1.006	0.03	0.747	0.897
	LTE Band 41_UAT/HPUE	20M	QPSK	1	49	Back	10mm	40620	2593	24.23	25.00	1.194	42.9	1.009	0.04	0.881	1.061
	LTE Band 41_UAT/HPUE	20M	QPSK	1	49	Back	10mm	39750	2506	24.17	25.00	1.211	42.9	1.009	0.07	0.682	0.833
	LTE Band 41_UAT/HPUE	20M	QPSK	1	49	Back	10mm	40185	2549.5	24.11	25.00	1.227	42.9	1.009	0.07	0.739	0.915
	LTE Band 41_UAT/HPUE	20M	QPSK	1	49	Back	10mm	41055	2636.5	23.98	25.00	1.265	42.9	1.009	0.04	0.833	1.063
	LTE Band 41_UAT/HPUE	20M	QPSK	1	49	Back	10mm	41490	2680	24.05	25.00	1.245	42.9	1.009	0.05	0.764	0.959
	LTE Band 41_UAT	20M	QPSK	1	49	Top Side	10mm	39750	2506	22.22	23.00	1.197	62.9	1.006	0.07	0.677	0.815
	LTE Band 41_UAT	20M	QPSK	1	49	Top Side	10mm	40185	2549.5	22.20	23.00	1.202	62.9	1.006	0.01	0.753	0.911
	LTE Band 41_UAT	20M	QPSK	1	49	Top Side	10mm	41055	2636.5	22.25	23.00	1.189	62.9	1.006	-0.01	0.876	1.047
	LTE Band 41_UAT	20M	QPSK	1	49	Top Side	10mm	41490	2680	22.23	23.00	1.194	62.9	1.006	0.15	0.796	0.956
	LTE Band 41_UAT/HPUE	20M	QPSK	1	49	Top Side	10mm	40620	2593	24.23	25.00	1.194	42.9	1.009	0.04	0.902	1.087
	LTE Band 41_UAT/HPUE	20M	QPSK	1	49	Top Side	10mm	39750	2506	24.17	25.00	1.211	42.9	1.009	0.02	0.715	0.873
	LTE Band 41_UAT/HPUE	20M	QPSK	1	49	Top Side	10mm	40185	2549.5	24.11	25.00	1.227	42.9	1.009	0.1	0.790	0.978
35	LTE Band 41_UAT/HPUE	20M	QPSK	1	49	Top Side	10mm	41055	2636.5	23.98	25.00	1.265	42.9	1.009	0.06	0.858	**1.095**
	LTE Band 41_UAT/HPUE	20M	QPSK	1	49	Top Side	10mm	41490	2680	24.05	25.00	1.245	42.9	1.009	0.12	0.809	1.016
	LTE Band 41_UAT	20M	QPSK	50	0	Front	10mm	40620	2593	21.28	22.00	1.180	62.9	1.006	0.01	0.301	0.357
	LTE Band 41_UAT	20M	QPSK	50	0	Back	10mm	40620	2593	21.28	22.00	1.180	62.9	1.006	0.08	0.648	0.769
	LTE Band 41_UAT	20M	QPSK	50	0	Left Side	10mm	40620	2593	21.28	22.00	1.180	62.9	1.006	0.05	0.216	0.256
	LTE Band 41_UAT	20M	QPSK	50	0	Right Side	10mm	40620	2593	21.28	22.00	1.180	62.9	1.006	0.03	0.039	0.046
	LTE Band 41_UAT	20M	QPSK	50	0	Top Side	10mm	40620	2593	21.28	22.00	1.180	62.9	1.006	0.01	0.676	0.803
	LTE Band 41_UAT	20M	QPSK	50	0	Back	10mm	39750	2506	21.26	22.00	1.186	62.9	1.006	0.05	0.540	0.644
	LTE Band 41_UAT	20M	QPSK	50	0	Back	10mm	40185	2549.5	21.27	22.00	1.183	62.9	1.006	0.03	0.576	0.686
	LTE Band 41_UAT	20M	QPSK	50	0	Back	10mm	41055	2636.5	21.26	22.00	1.186	62.9	1.006	0.01	0.645	0.769
	LTE Band 41_UAT	20M	QPSK	50	0	Back	10mm	41490	2680	21.13	22.00	1.222	62.9	1.006	0.09	0.587	0.721
	LTE Band 41_UAT	20M	QPSK	50	0	Top Side	10mm	39750	2506	21.26	22.00	1.186	62.9	1.006	0.06	0.550	0.656
	LTE Band 41_UAT	20M	QPSK	50	0	Top Side	10mm	40185	2549.5	21.27	22.00	1.183	62.9	1.006	-0.18	0.605	0.720
	LTE Band 41_UAT	20M	QPSK	50	0	Top Side	10mm	41055	2636.5	21.26	22.00	1.186	62.9	1.006	0.06	0.701	0.836
	LTE Band 41_UAT	20M	QPSK	50	0	Top Side	10mm	41490	2680	21.13	22.00	1.222	62.9	1.006	0.04	0.626	0.769
	LTE Band 41_UAT	20M	QPSK	100	0	Back	10mm	40620	2593	21.23	22.00	1.194	62.9	1.006	-0.07	0.647	0.777
	LTE Band 41_UAT	20M	QPSK	100	0	Top Side	10mm	40620	2593	21.23	22.00	1.194	62.9	1.006	0.06	0.643	0.772

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 41_LAT	20M	QPSK	1	49	Front	10mm	40620	2593	22.35	23.00	1.161	62.9	1.006	-0.08	0.305	0.356
	LTE Band 41_LAT	20M	QPSK	1	49	Back	10mm	40620	2593	22.35	23.00	1.161	62.9	1.006	0.08	0.801	0.936
	LTE Band 41_LAT	20M	QPSK	1	49	Left Side	10mm	40620	2593	22.35	23.00	1.161	62.9	1.006	-0.08	0.039	0.046
	LTE Band 41_LAT	20M	QPSK	1	49	Right Side	10mm	40620	2593	22.35	23.00	1.161	62.9	1.006	0.07	0.098	0.115
	LTE Band 41_LAT	20M	QPSK	1	49	Bottom Side	10mm	40620	2593	22.35	23.00	1.161	62.9	1.006	-0.19	0.839	0.980
	LTE Band 41_LAT	20M	QPSK	1	49	Back	10mm	39750	2506	22.22	23.00	1.197	62.9	1.006	0.01	0.579	0.697
	LTE Band 41_LAT	20M	QPSK	1	49	Back	10mm	40185	2549.5	22.20	23.00	1.202	62.9	1.006	0.05	0.698	0.844
	LTE Band 41_LAT	20M	QPSK	1	49	Back	10mm	41055	2636.5	22.25	23.00	1.189	62.9	1.006	0.08	0.862	1.031
	LTE Band 41_LAT	20M	QPSK	1	49	Back	10mm	41490	2680	22.23	23.00	1.194	62.9	1.006	0.04	0.828	0.995
	LTE Band 41_LAT/HPUE	20M	QPSK	1	49	Back	10mm	40620	2593	23.71	24.50	1.199	42.9	1.009	0.02	0.768	0.930
	LTE Band 41_LAT/HPUE	20M	QPSK	1	49	Back	10mm	39750	2506	23.61	24.50	1.227	42.9	1.009	0.01	0.641	0.794
	LTE Band 41_LAT/HPUE	20M	QPSK	1	49	Back	10mm	40185	2549.5	23.60	24.50	1.230	42.9	1.009	0.06	0.685	0.850
	LTE Band 41_LAT/HPUE	20M	QPSK	1	49	Back	10mm	41055	2636.5	23.45	24.50	1.274	42.9	1.009	0.04	0.801	1.029
	LTE Band 41_LAT/HPUE	20M	QPSK	1	49	Back	10mm	41490	2680	23.50	24.50	1.259	42.9	1.009	0.08	0.754	0.958
	LTE Band 41_LAT	20M	QPSK	1	49	Bottom Side	10mm	39750	2506	22.22	23.00	1.197	62.9	1.006	-0.18	0.604	0.727
	LTE Band 41_LAT	20M	QPSK	1	49	Bottom Side	10mm	40185	2549.5	22.20	23.00	1.202	62.9	1.006	0.11	0.723	0.874
	LTE Band 41_LAT	20M	QPSK	1	49	Bottom Side	10mm	41055	2636.5	22.25	23.00	1.189	62.9	1.006	-0.05	0.868	1.038
	LTE Band 41_LAT	20M	QPSK	1	49	Bottom Side	10mm	41490	2680	22.23	23.00	1.194	62.9	1.006	0.07	0.843	1.013
	LTE Band 41_LAT/HPUE	20M	QPSK	1	49	Bottom Side	10mm	40620	2593	23.71	24.50	1.199	42.9	1.009	0.02	0.790	0.956
	LTE Band 41_LAT/HPUE	20M	QPSK	1	49	Bottom Side	10mm	39750	2506	23.61	24.50	1.227	42.9	1.009	0.08	0.666	0.875
	LTE Band 41_LAT/HPUE	20M	QPSK	1	49	Bottom Side	10mm	40185	2549.5	23.60	24.50	1.230	42.9	1.009	0.04	0.713	0.935
	LTE Band 41_LAT/HPUE	20M	QPSK	1	49	Bottom Side	10mm	41055	2636.5	23.45	24.50	1.274	42.9	1.009	0.05	0.833	1.070
	LTE Band 41_LAT/HPUE	20M	QPSK	1	49	Bottom Side	10mm	41490	2680	23.50	24.50	1.259	42.9	1.009	0.08	0.821	1.043
	LTE Band 41_LAT	20M	QPSK	50	0	Front	10mm	40620	2593	21.28	22.00	1.180	62.9	1.006	0.08	0.231	0.274
	LTE Band 41_LAT	20M	QPSK	50	0	Back	10mm	40620	2593	21.28	22.00	1.180	62.9	1.006	-0.04	0.596	0.708
	LTE Band 41_LAT	20M	QPSK	50	0	Left Side	10mm	40620	2593	21.28	22.00	1.180	62.9	1.006	-0.16	0.030	0.036
	LTE Band 41_LAT	20M	QPSK	50	0	Right Side	10mm	40620	2593	21.28	22.00	1.180	62.9	1.006	0.08	0.071	0.084
	LTE Band 41_LAT	20M	QPSK	50	0	Bottom Side	10mm	40620	2593	21.28	22.00	1.180	62.9	1.006	0.03	0.633	0.752
	LTE Band 41_LAT	20M	QPSK	50	0	Back	10mm	39750	2506	21.26	22.00	1.186	62.9	1.006	0.01	0.465	0.555
	LTE Band 41_LAT	20M	QPSK	50	0	Back	10mm	40185	2549.5	21.27	22.00	1.183	62.9	1.006	0.09	0.576	0.686
	LTE Band 41_LAT	20M	QPSK	50	0	Back	10mm	41055	2636.5	21.26	22.00	1.186	62.9	1.006	-0.08	0.698	0.833
	LTE Band 41_LAT	20M	QPSK	50	0	Back	10mm	41490	2680	21.13	22.00	1.222	62.9	1.006	0.05	0.643	0.790
	LTE Band 41_LAT	20M	QPSK	50	0	Bottom Side	10mm	39750	2506	21.26	22.00	1.186	62.9	1.006	0.08	0.473	0.564
	LTE Band 41_LAT	20M	QPSK	50	0	Bottom Side	10mm	40185	2549.5	21.27	22.00	1.183	62.9	1.006	0.06	0.591	0.703
	LTE Band 41_LAT	20M	QPSK	50	0	Bottom Side	10mm	41055	2636.5	21.26	22.00	1.186	62.9	1.006	0.05	0.688	0.821
	LTE Band 41_LAT	20M	QPSK	50	0	Bottom Side	10mm	41490	2680	21.13	22.00	1.222	62.9	1.006	0.07	0.658	0.809
	LTE Band 41_LAT	20M	QPSK	100	0	Back	10mm	40620	2593	21.23	22.00	1.194	62.9	1.006	-0.03	0.587	0.705
	LTE Band 41_LAT	20M	QPSK	100	0	Bottom Side	10mm	40620	2593	21.23	22.00	1.194	62.9	1.006	0.06	0.621	0.746

<Bluetooth SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	Bluetooth	1Mbps	Front	10mm	0	2402	9.90	11.00	1.288	76.7	1.086	0.06	0.022	0.030
	Bluetooth	1Mbps	Back	10mm	0	2402	9.90	11.00	1.288	76.7	1.086	0.02	0.024	0.033
	Bluetooth	1Mbps	Left Side	10mm	0	2402	9.90	11.00	1.288	76.7	1.086	0.19	0.003	0.004
	Bluetooth	1Mbps	Right Side	10mm	0	2402	9.90	11.00	1.288	76.7	1.086	-0.09	0.015	0.021
	Bluetooth	1Mbps	Top Side	10mm	0	2402	9.90	11.00	1.288	76.7	1.086	0.07	0.008	0.011
36	Bluetooth	1Mbps	Back	10mm	39	2441	9.40	11.00	1.445	76.7	1.086	0.06	0.029	**0.045**
	Bluetooth	1Mbps	Back	10mm	78	2480	9.50	11.00	1.413	76.7	1.086	-0.03	0.023	0.035

<WLAN2.4G SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WLAN2.4GHz	802.11b 1Mbps	Front	10mm	6	2437	14.1	15.5	1.380	100	1.000	0.07	0.099	0.137
37	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	6	2437	14.1	15.5	1.380	100	1.000	0.04	0.109	**0.150**
	WLAN2.4GHz	802.11b 1Mbps	Left Side	10mm	6	2437	14.1	15.5	1.380	100	1.000	-0.06	0.012	0.017
	WLAN2.4GHz	802.11b 1Mbps	Right Side	10mm	6	2437	14.1	15.5	1.380	100	1.000	0.05	0.082	0.113
	WLAN2.4GHz	802.11b 1Mbps	Top Side	10mm	6	2437	14.1	15.5	1.380	100	1.000	0.08	0.021	0.029
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	1	2412	13.7	15.5	1.514	100	1.000	-0.06	0.081	0.123
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	11	2462	13.9	15.5	1.445	100	1.000	0.01	0.098	0.142

<WLAN5G SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WLAN5.2GHz	802.11a 6Mbps	Front	10mm	36	5180	16.22	18	1.507	100	1.000	0.06	0.130	0.196
	WLAN5.2GHz	802.11a 6Mbps	Back	10mm	36	5180	16.22	18	1.507	100	1.000	0.04	0.206	0.310
	WLAN5.2GHz	802.11a 6Mbps	Left Side	10mm	36	5180	16.22	18	1.507	100	1.000	-0.06	0.072	0.108
	WLAN5.2GHz	802.11a 6Mbps	Right Side	10mm	36	5180	16.22	18	1.507	100	1.000	0.03	0.187	0.282
	WLAN5.2GHz	802.11a 6Mbps	Top Side	10mm	36	5180	16.22	18	1.507	100	1.000	0.08	0.197	0.297
	WLAN5.2GHz	802.11a 6Mbps	Back	10mm	40	5200	16.16	18	1.528	100	1.000	-0.07	0.204	0.312
38	WLAN5.2GHz	802.11a 6Mbps	Back	10mm	44	5220	16.18	18	1.521	100	1.000	-0.03	0.218	**0.331**
	WLAN5.2GHz	802.11a 6Mbps	Back	10mm	48	5240	16.13	18	1.538	100	1.000	0.06	0.191	0.294
	WLAN5.8GHz	802.11a 6Mbps	Front	10mm	165	5825	14.72	16	1.343	100	1.000	-0.05	0.127	0.171
	WLAN5.8GHz	802.11a 6Mbps	Back	10mm	165	5825	14.72	16	1.343	100	1.000	0.04	0.102	0.137
	WLAN5.8GHz	802.11a 6Mbps	Left Side	10mm	165	5825	14.72	16	1.343	100	1.000	0.08	0.020	0.027
	WLAN5.8GHz	802.11a 6Mbps	Right Side	10mm	165	5825	14.72	16	1.343	100	1.000	0.03	0.161	0.216
	WLAN5.8GHz	802.11a 6Mbps	Top Side	10mm	165	5825	14.72	16	1.343	100	1.000	-0.08	0.103	0.138
39	WLAN5.8GHz	802.11a 6Mbps	Right Side	10mm	149	5745	14.6	16	1.380	100	1.000	-0.05	0.186	**0.257**
	WLAN5.8GHz	802.11a 6Mbps	Right Side	10mm	157	5785	14.4	16	1.445	100	1.000	0.03	0.160	0.231
	WLAN5.8GHz	802.11a 6Mbps	Front	10mm	149	5745	14.6	16	1.380	100	1.000	-0.07	0.163	0.225
	WLAN5.8GHz	802.11a 6Mbps	Front	10mm	157	5785	14.4	16	1.445	100	1.000	0.03	0.151	0.218

14.3 Body Worn Accessory SAR

<GSM SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	GSM850_UAT	GPRS(4 Tx slots)	Front	10mm	128	824.2	27.54	28.00	1.112	0.05	0.200	0.222
	GSM850_UAT	GPRS(4 Tx slots)	Back	10mm	128	824.2	27.54	28.00	1.112	0.06	0.248	0.276
	GSM850_UAT	GPRS(4 Tx slots)	Back	10mm	189	836.4	27.45	28.00	1.135	0.06	0.309	0.351
	GSM850_UAT	GPRS(4 Tx slots)	Back	10mm	251	848.8	27.30	28.00	1.175	-0.15	0.388	0.456
	GSM850_LAT	GPRS(4 Tx slots)	Front	10mm	128	824.2	27.54	28.00	1.112	0.04	0.384	0.427
	GSM850_LAT	GPRS(4 Tx slots)	Back	10mm	128	824.2	27.54	28.00	1.112	0.06	0.546	0.607
	GSM850_LAT	GPRS(4 Tx slots)	Back	10mm	189	836.4	27.45	28.00	1.135	-0.02	0.535	0.607
40	GSM850_LAT	GPRS(4 Tx slots)	Back	10mm	251	848.8	27.30	28.00	1.175	0.08	0.582	**0.684**
41	GSM1900_UAT	GPRS(4 Tx slots)	Front	10mm	810	1909.8	24.67	25.00	1.079	0.02	0.502	**0.542**
	GSM1900_UAT	GPRS(4 Tx slots)	Back	10mm	810	1909.8	24.67	25.00	1.079	0.01	0.390	0.421
	GSM1900_UAT	GPRS(4 Tx slots)	Front	10mm	512	1850.2	24.57	25.00	1.104	0.06	0.388	0.428
	GSM1900_UAT	GPRS(4 Tx slots)	Front	10mm	661	1880	24.62	25.00	1.091	0.01	0.435	0.475
	GSM1900_LAT	GPRS(4 Tx slots)	Front	10mm	810	1909.8	24.67	25.00	1.079	-0.09	0.227	0.245
	GSM1900_LAT	GPRS(4 Tx slots)	Back	10mm	810	1909.8	24.67	25.00	1.079	0.05	0.296	0.319
	GSM1900_LAT	GPRS(4 Tx slots)	Back	10mm	512	1850.2	24.57	25.00	1.104	0.06	0.435	0.480
	GSM1900_LAT	GPRS(4 Tx slots)	Back	10mm	661	1880	24.62	25.00	1.091	0.08	0.371	0.405

<WCDMA SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WCDMA V_UAT	RMC 12.2Kbps	Front	10mm	4233	846.6	23.20	24.00	1.202	0.02	0.105	0.126
	WCDMA V_UAT	RMC 12.2Kbps	Back	10mm	4233	846.6	23.20	24.00	1.202	0.06	0.145	0.174
	WCDMA V_UAT	RMC 12.2Kbps	Back	10mm	4132	826.4	23.10	24.00	1.230	0.03	0.108	0.133
	WCDMA V_UAT	RMC 12.2Kbps	Back	10mm	4182	836.4	23.14	24.00	1.219	0.05	0.129	0.157
	WCDMA V_LAT	RMC 12.2Kbps	Front	10mm	4233	846.6	23.20	24.00	1.202	-0.02	0.172	0.207
42	WCDMA V_LAT	RMC 12.2Kbps	Back	10mm	4233	846.6	23.20	24.00	1.202	0.08	0.267	**0.321**
	WCDMA V_LAT	RMC 12.2Kbps	Back	10mm	4132	826.4	23.10	24.00	1.230	0.08	0.193	0.237
	WCDMA V_LAT	RMC 12.2Kbps	Back	10mm	4182	836.4	23.14	24.00	1.219	-0.06	0.234	0.285
	WCDMA IV_UAT	RMC 12.2Kbps	Front	10mm	1513	1752.6	23.02	24.00	1.253	0.08	0.577	0.723
	WCDMA IV_UAT	RMC 12.2Kbps	Back	10mm	1513	1752.6	23.02	24.00	1.253	0.01	0.441	0.553
	WCDMA IV_UAT	RMC 12.2Kbps	Front	10mm	1312	1712.4	22.98	24.00	1.265	0.07	0.548	0.693
	WCDMA IV_UAT	RMC 12.2Kbps	Front	10mm	1413	1732.6	22.91	24.00	1.285	0.06	0.503	0.646
	WCDMA IV_LAT	RMC 12.2Kbps	Front	10mm	1513	1752.6	22.06	23.00	1.242	0.06	0.281	0.349
	WCDMA IV_LAT	RMC 12.2Kbps	Back	10mm	1513	1752.6	22.06	23.00	1.242	0.02	0.714	0.887
	WCDMA IV_LAT	RMC 12.2Kbps	Back	10mm	1312	1712.4	21.99	23.00	1.262	0.08	0.674	0.850
43	WCDMA IV_LAT	RMC 12.2Kbps	Back	10mm	1413	1732.6	22.01	23.00	1.256	0.04	0.765	**0.961**
44	WCDMA II_UAT	RMC 12.2Kbps	Front	10mm	9538	1907.6	23.13	23.50	1.089	0.07	0.683	**0.744**
	WCDMA II_UAT	RMC 12.2Kbps	Back	10mm	9538	1907.6	23.13	23.50	1.089	0.02	0.574	0.625
	WCDMA II_UAT	RMC 12.2Kbps	Front	10mm	9262	1852.4	22.93	23.50	1.140	0.12	0.537	0.612
	WCDMA II_UAT	RMC 12.2Kbps	Front	10mm	9400	1880	23.00	23.50	1.122	-0.11	0.603	0.677
	WCDMA II_LAT	RMC 12.2Kbps	Front	10mm	9538	1907.6	23.64	24.00	1.086	0.03	0.425	0.462
	WCDMA II_LAT	RMC 12.2Kbps	Back	10mm	9538	1907.6	23.64	24.00	1.086	0.01	0.455	0.494
	WCDMA II_LAT	RMC 12.2Kbps	Back	10mm	9262	1852.4	23.42	24.00	1.143	0.09	0.522	0.597
	WCDMA II_LAT	RMC 12.2Kbps	Back	10mm	9400	1880	23.51	24.00	1.119	0.04	0.425	0.476

<FDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 71_UAT	20M	QPSK	1	49	Front	10mm	133322	683	22.78	24.00	1.324	0.03	0.197	0.261
	LTE Band 71_UAT	20M	QPSK	1	49	Back	10mm	133322	683	22.78	24.00	1.324	0.02	0.278	0.368
	LTE Band 71_UAT	20M	QPSK	50	24	Front	10mm	133322	683	21.75	23.00	1.334	0.09	0.154	0.205
	LTE Band 71_UAT	20M	QPSK	50	24	Back	10mm	133322	683	21.75	23.00	1.334	0.06	0.220	0.293
	LTE Band 71_LAT	20M	QPSK	1	49	Front	10mm	133322	683	22.78	24.00	1.324	0.06	0.196	0.260
45	LTE Band 71_LAT	20M	QPSK	1	49	Back	10mm	133322	683	22.78	24.00	1.324	0.01	0.305	**0.404**
	LTE Band 71_LAT	20M	QPSK	50	24	Front	10mm	133322	683	21.75	23.00	1.334	0.04	0.159	0.212
	LTE Band 71_LAT	20M	QPSK	50	24	Back	10mm	133322	683	21.75	23.00	1.334	0.06	0.245	0.327
	LTE Band 12_UAT	10M	QPSK	1	25	Front	10mm	23095	707.5	22.91	24.00	1.285	0.06	0.247	0.317
	LTE Band 12_UAT	10M	QPSK	1	25	Back	10mm	23095	707.5	22.91	24.00	1.285	-0.04	0.319	0.410
	LTE Band 12_LAT	10M	QPSK	25	0	Front	10mm	23095	707.5	21.83	23.00	1.309	0.06	0.185	0.242
	LTE Band 12_LAT	10M	QPSK	25	0	Back	10mm	23095	707.5	21.83	23.00	1.309	0.04	0.244	0.319
	LTE Band 12_LAT	10M	QPSK	1	25	Front	10mm	23095	707.5	22.91	24.00	1.285	-0.04	0.282	0.362
46	LTE Band 12_LAT	10M	QPSK	1	25	Back	10mm	23095	707.5	22.91	24.00	1.285	-0.03	0.404	**0.519**
	LTE Band 12_LAT	10M	QPSK	25	0	Front	10mm	23095	707.5	21.83	23.00	1.309	0.04	0.213	0.279
	LTE Band 12_LAT	10M	QPSK	25	0	Back	10mm	23095	707.5	21.83	23.00	1.309	0.04	0.311	0.407
	LTE Band 13_UAT	10M	QPSK	1	0	Front	10mm	23230	782	22.75	24.00	1.334	-0.02	0.147	0.196
	LTE Band 13_UAT	10M	QPSK	1	0	Back	10mm	23230	782	22.75	24.00	1.334	0.06	0.219	0.292
	LTE Band 13_UAT	10M	QPSK	25	0	Front	10mm	23230	782	21.81	23.00	1.315	0.08	0.122	0.160
	LTE Band 13_UAT	10M	QPSK	25	0	Back	10mm	23230	782	21.81	23.00	1.315	0.09	0.183	0.241
	LTE Band 13_LAT	10M	QPSK	1	0	Front	10mm	23230	782	22.75	24.00	1.334	0.08	0.217	0.289
47	LTE Band 13_LAT	10M	QPSK	1	0	Back	10mm	23230	782	22.75	24.00	1.334	0.13	0.344	**0.459**
	LTE Band 13_LAT	10M	QPSK	25	0	Front	10mm	23230	782	21.81	23.00	1.315	0.07	0.176	0.231
	LTE Band 13_LAT	10M	QPSK	25	0	Back	10mm	23230	782	21.81	23.00	1.315	-0.06	0.277	0.364
	LTE Band 14_UAT	10M	QPSK	1	25	Front	10mm	23330	793	22.83	24.00	1.309	0.06	0.134	0.175
	LTE Band 14_UAT	10M	QPSK	1	25	Back	10mm	23330	793	22.83	24.00	1.309	-0.06	0.204	0.267
	LTE Band 14_UAT	10M	QPSK	25	12	Front	10mm	23330	793	21.72	23.00	1.343	0.02	0.106	0.142
	LTE Band 14_UAT	10M	QPSK	25	12	Back	10mm	23330	793	21.72	23.00	1.343	0.06	0.162	0.218
	LTE Band 14_LAT	10M	QPSK	1	25	Front	10mm	23330	793	22.83	24.00	1.309	0.02	0.196	0.257
48	LTE Band 14_LAT	10M	QPSK	1	25	Back	10mm	23330	793	22.83	24.00	1.309	0.04	0.288	**0.377**
	LTE Band 14_LAT	10M	QPSK	25	12	Front	10mm	23330	793	21.72	23.00	1.343	-0.12	0.157	0.211
	LTE Band 14_LAT	10M	QPSK	25	12	Back	10mm	23330	793	21.72	23.00	1.343	0.08	0.229	0.307
	LTE Band 26_UAT	15M	QPSK	1	37	Front	10mm	26865	831.5	23.09	24.00	1.233	-0.04	0.075	0.092
	LTE Band 26_UAT	15M	QPSK	1	37	Back	10mm	26865	831.5	23.09	24.00	1.233	0.08	0.135	0.166
	LTE Band 26_UAT	15M	QPSK	1	37	Back	10mm	26765	821.5	22.79	24.00	1.321	0.07	0.123	0.163
	LTE Band 26_UAT	15M	QPSK	1	37	Back	10mm	26965	841.5	22.94	24.00	1.276	0.17	0.115	0.147
	LTE Band 26_UAT	15M	QPSK	36	20	Front	10mm	26865	831.5	21.93	23.00	1.279	-0.19	0.059	0.075
	LTE Band 26_UAT	15M	QPSK	36	20	Back	10mm	26865	831.5	21.93	23.00	1.279	0.05	0.103	0.132
	LTE Band 26_LAT	15M	QPSK	1	37	Front	10mm	26865	831.5	23.09	24.00	1.233	0.01	0.164	0.202
49	LTE Band 26_LAT	15M	QPSK	1	37	Back	10mm	26865	831.5	23.09	24.00	1.233	-0.09	0.231	**0.285**
	LTE Band 26_LAT	15M	QPSK	1	37	Back	10mm	26765	821.5	22.79	24.00	1.321	-0.02	0.212	0.280
	LTE Band 26_LAT	15M	QPSK	1	37	Back	10mm	26965	841.5	22.94	24.00	1.276	-0.14	0.213	0.272
	LTE Band 26_LAT	15M	QPSK	36	20	Front	10mm	26865	831.5	21.93	23.00	1.279	0.05	0.130	0.166
	LTE Band 26_LAT	15M	QPSK	36	20	Back	10mm	26865	831.5	21.93	23.00	1.279	0.09	0.195	0.249

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 5_UAT	10M	QPSK	1	25	Front	10mm	20525	836.5	22.78	24.00	1.324	-0.11	0.088	0.117
	LTE Band 5_UAT	10M	QPSK	1	25	Back	10mm	20525	836.5	22.78	24.00	1.324	-0.17	0.134	0.177
	LTE Band 5_UAT	10M	QPSK	25	25	Front	10mm	20525	836.5	21.77	23.00	1.327	-0.02	0.063	0.084
	LTE Band 5_UAT	10M	QPSK	25	25	Back	10mm	20525	836.5	21.77	23.00	1.327	0.04	0.100	0.132
	LTE Band 5_LAT	10M	QPSK	1	25	Front	10mm	20525	836.5	22.78	24.00	1.324	-0.05	0.163	0.216
50	LTE Band 5_LAT	10M	QPSK	1	25	Back	10mm	20525	836.5	22.78	24.00	1.324	0.06	0.252	**0.334**
	LTE Band 5_LAT	10M	QPSK	25	25	Front	10mm	20525	836.5	21.77	23.00	1.327	-0.15	0.124	0.165
	LTE Band 5_LAT	10M	QPSK	25	25	Back	10mm	20525	836.5	21.77	23.00	1.327	-0.07	0.193	0.256
	LTE Band 66_UAT	20M	QPSK	1	49	Front	10mm	132072	1720	22.88	24.00	1.294	0.16	0.534	0.691
	LTE Band 66_UAT	20M	QPSK	1	49	Back	10mm	132072	1720	22.88	24.00	1.294	0.17	0.381	0.493
	LTE Band 66_UAT	20M	QPSK	1	49	Front	10mm	132322	1745	22.75	24.00	1.334	-0.1	0.546	0.728
	LTE Band 66_UAT	20M	QPSK	1	49	Front	10mm	132572	1770	22.83	24.00	1.309	-0.06	0.586	0.767
	LTE Band 66_UAT	20M	QPSK	50	0	Front	10mm	132072	1720	21.84	23.00	1.306	0.04	0.438	0.572
	LTE Band 66_UAT	20M	QPSK	50	0	Back	10mm	132072	1720	21.84	23.00	1.306	-0.03	0.290	0.379
	LTE Band 66_LAT	20M	QPSK	1	49	Front	10mm	132072	1720	21.94	23.00	1.276	0.17	0.277	0.354
51	LTE Band 66_LAT	20M	QPSK	1	49	Back	10mm	132072	1720	21.94	23.00	1.276	-0.06	0.823	**1.051**
	LTE Band 66_LAT	20M	QPSK	1	49	Back	10mm	132322	1745	21.86	23.00	1.300	0.12	0.793	1.031
	LTE Band 66_LAT	20M	QPSK	1	49	Back	10mm	132572	1770	21.91	23.00	1.285	-0.08	0.730	0.938
	LTE Band 66_LAT	20M	QPSK	50	0	Front	10mm	132072	1720	20.95	22.00	1.274	0.04	0.224	0.285
	LTE Band 66_LAT	20M	QPSK	50	0	Back	10mm	132072	1720	20.95	22.00	1.274	-0.03	0.641	0.816
	LTE Band 66_LAT	20M	QPSK	50	0	Back	10mm	132322	1745	20.83	22.00	1.309	-0.14	0.632	0.827
	LTE Band 66_LAT	20M	QPSK	50	0	Back	10mm	132572	1770	20.85	22.00	1.303	-0.12	0.586	0.764
	LTE Band 66_LAT	20M	QPSK	100	0	Back	10mm	132072	1720	20.89	22.00	1.291	-0.17	0.643	0.830
	LTE Band 25_UAT	20M	QPSK	1	49	Front	10mm	26340	1880	23.21	24.00	1.199	0.06	0.644	0.772
	LTE Band 25_UAT	20M	QPSK	1	49	Back	10mm	26340	1880	23.21	24.00	1.199	-0.16	0.500	0.600
	LTE Band 25_UAT	20M	QPSK	1	49	Front	10mm	26140	1860	23.10	24.00	1.230	0.03	0.613	0.754
52	LTE Band 25_UAT	20M	QPSK	1	49	Front	10mm	26590	1905	23.16	24.00	1.213	0.07	0.742	**0.900**
	LTE Band 25_UAT	20M	QPSK	50	24	Front	10mm	26340	1880	22.15	23.00	1.216	-0.02	0.499	0.607
	LTE Band 25_UAT	20M	QPSK	50	24	Back	10mm	26340	1880	22.15	23.00	1.216	-0.06	0.401	0.488
	LTE Band 25_UAT	20M	QPSK	100	0	Front	10mm	26340	1880	22.09	23.00	1.233	0.01	0.473	0.583
	LTE Band 25_LAT	20M	QPSK	1	49	Front	10mm	26340	1880	23.21	24.00	1.199	0.07	0.337	0.404
	LTE Band 25_LAT	20M	QPSK	1	49	Back	10mm	26340	1880	23.21	24.00	1.199	0.03	0.500	0.600
	LTE Band 25_LAT	20M	QPSK	1	49	Back	10mm	26140	1860	23.10	24.00	1.230	-0.18	0.580	0.714
	LTE Band 25_LAT	20M	QPSK	1	49	Back	10mm	26590	1905	23.16	24.00	1.213	0.06	0.370	0.449
	LTE Band 25_LAT	20M	QPSK	50	24	Front	10mm	26340	1880	22.15	23.00	1.216	0.02	0.267	0.325
	LTE Band 25_LAT	20M	QPSK	50	24	Back	10mm	26340	1880	22.15	23.00	1.216	-0.06	0.407	0.495

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 7_UAT	20M	QPSK	1	49	Front	10mm	21350	2560	21.10	21.50	1.096	0.12	0.417	0.457
53	LTE Band 7_UAT	20M	QPSK	1	49	Back	10mm	21350	2560	21.10	21.50	1.096	0.18	0.918	**1.007**
	LTE Band 7_UAT	20M	QPSK	1	49	Back	10mm	20850	2510	21.03	21.50	1.114	0.1	0.831	0.926
	LTE Band 7_UAT	20M	QPSK	1	49	Back	10mm	21100	2535	21.05	21.50	1.109	-0.08	0.891	0.988
	LTE Band 7_UAT	20M	QPSK	50	24	Front	10mm	21350	2560	20.09	20.50	1.099	0.09	0.335	0.368
	LTE Band 7_UAT	20M	QPSK	50	24	Back	10mm	21350	2560	20.09	20.50	1.099	0.1	0.729	0.801
	LTE Band 7_UAT	20M	QPSK	50	24	Back	10mm	20850	2510	19.94	20.50	1.138	-0.07	0.660	0.751
	LTE Band 7_UAT	20M	QPSK	50	24	Back	10mm	21100	2535	20.00	20.50	1.122	0.04	0.700	0.785
	LTE Band 7_UAT	20M	QPSK	100	0	Back	10mm	21350	2560	20.04	20.50	1.112	0.03	0.716	0.796
	LTE Band 7_LAT	20M	QPSK	1	49	Front	10mm	21350	2560	21.10	21.50	1.096	0.18	0.377	0.413
	LTE Band 7_LAT	20M	QPSK	1	49	Back	10mm	21350	2560	21.10	21.50	1.096	-0.05	0.896	0.982
	LTE Band 7_LAT	20M	QPSK	1	49	Back	10mm	20850	2510	21.03	21.50	1.114	-0.11	0.751	0.837
	LTE Band 7_LAT	20M	QPSK	1	49	Back	10mm	21100	2535	21.05	21.50	1.109	-0.05	0.805	0.893
	LTE Band 7_LAT	20M	QPSK	50	24	Front	10mm	21350	2560	20.09	20.50	1.099	0.11	0.302	0.332
	LTE Band 7_LAT	20M	QPSK	50	24	Back	10mm	21350	2560	20.09	20.50	1.099	0.04	0.675	0.742
	LTE Band 7_LAT	20M	QPSK	100	0	Back	10mm	21350	2560	20.04	20.50	1.112	-0.17	0.656	0.729

<TDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 41_UAT	20M	QPSK	1	49	Front	10mm	40620	2593	22.35	23.00	1.161	62.9	1.006	-0.06	0.383	0.448
	LTE Band 41_UAT	20M	QPSK	1	49	Back	10mm	40620	2593	22.35	23.00	1.161	62.9	1.006	-0.16	0.855	0.999
	LTE Band 41_UAT	20M	QPSK	1	49	Back	10mm	39750	2506	22.22	23.00	1.197	62.9	1.006	0.19	0.676	0.814
	LTE Band 41_UAT	20M	QPSK	1	49	Back	10mm	40185	2549.5	22.20	23.00	1.202	62.9	1.006	-0.14	0.727	0.879
	LTE Band 41_UAT	20M	QPSK	1	49	Back	10mm	41055	2636.5	22.25	23.00	1.189	62.9	1.006	-0.02	0.837	1.001
	LTE Band 41_UAT	20M	QPSK	1	49	Back	10mm	41490	2680	22.23	23.00	1.194	62.9	1.006	0.03	0.747	0.897
	LTE Band 41_UAT/HPUE	20M	QPSK	1	49	Back	10mm	40620	2593	24.23	25.00	1.194	42.9	1.009	0.04	0.881	1.061
	LTE Band 41_UAT/HPUE	20M	QPSK	1	49	Back	10mm	39750	2506	24.17	25.00	1.211	42.9	1.009	0.07	0.682	0.833
	LTE Band 41_UAT/HPUE	20M	QPSK	1	49	Back	10mm	40185	2549.5	24.11	25.00	1.227	42.9	1.009	0.07	0.739	0.915
54	LTE Band 41_UAT/HPUE	20M	QPSK	1	49	Back	10mm	41055	2636.5	23.98	25.00	1.265	42.9	1.009	0.04	0.833	**1.063**
	LTE Band 41_UAT/HPUE	20M	QPSK	1	49	Back	10mm	41490	2680	24.05	25.00	1.245	42.9	1.009	0.05	0.764	0.959
	LTE Band 41_UAT	20M	QPSK	50	0	Front	10mm	40620	2593	21.28	22.00	1.180	62.9	1.006	0.01	0.301	0.357
	LTE Band 41_UAT	20M	QPSK	50	0	Back	10mm	40620	2593	21.28	22.00	1.180	62.9	1.006	0.08	0.648	0.769
	LTE Band 41_UAT	20M	QPSK	50	0	Back	10mm	39750	2506	21.26	22.00	1.186	62.9	1.006	0.05	0.540	0.644
	LTE Band 41_UAT	20M	QPSK	50	0	Back	10mm	40185	2549.5	21.27	22.00	1.183	62.9	1.006	0.03	0.576	0.686
	LTE Band 41_UAT	20M	QPSK	50	0	Back	10mm	41055	2636.5	21.26	22.00	1.186	62.9	1.006	0.01	0.645	0.769
	LTE Band 41_UAT	20M	QPSK	50	0	Back	10mm	41490	2680	21.13	22.00	1.222	62.9	1.006	0.09	0.587	0.721
	LTE Band 41_UAT	20M	QPSK	100	0	Back	10mm	40620	2593	21.23	22.00	1.194	62.9	1.006	-0.07	0.647	0.777
	LTE Band 41_LAT	20M	QPSK	1	49	Front	10mm	40620	2593	22.35	23.00	1.161	62.9	1.006	-0.08	0.305	0.356
	LTE Band 41_LAT	20M	QPSK	1	49	Back	10mm	40620	2593	22.35	23.00	1.161	62.9	1.006	0.08	0.801	0.936
	LTE Band 41_LAT	20M	QPSK	1	49	Back	10mm	39750	2506	22.22	23.00	1.197	62.9	1.006	0.01	0.579	0.697
	LTE Band 41_LAT	20M	QPSK	1	49	Back	10mm	40185	2549.5	22.20	23.00	1.202	62.9	1.006	0.05	0.698	0.844
	LTE Band 41_LAT	20M	QPSK	1	49	Back	10mm	41055	2636.5	22.25	23.00	1.189	62.9	1.006	0.08	0.862	1.031
	LTE Band 41_LAT	20M	QPSK	1	49	Back	10mm	41490	2680	22.23	23.00	1.194	62.9	1.006	0.04	0.828	0.995
	LTE Band 41_LAT/HPUE	20M	QPSK	1	49	Back	10mm	40620	2593	23.71	24.50	1.199	42.9	1.009	0.02	0.768	0.930
	LTE Band 41_LAT/HPUE	20M	QPSK	1	49	Back	10mm	39750	2506	23.61	24.50	1.227	42.9	1.009	0.01	0.641	0.794
	LTE Band 41_LAT/HPUE	20M	QPSK	1	49	Back	10mm	40185	2549.5	23.60	24.50	1.230	42.9	1.009	0.06	0.685	0.850
	LTE Band 41_LAT/HPUE	20M	QPSK	1	49	Back	10mm	41055	2636.5	23.45	24.50	1.274	42.9	1.009	0.04	0.801	1.029
	LTE Band 41_LAT/HPUE	20M	QPSK	1	49	Back	10mm	41490	2680	23.50	24.50	1.259	42.9	1.009	0.08	0.754	0.958
	LTE Band 41_LAT	20M	QPSK	50	0	Front	10mm	40620	2593	21.28	22.00	1.180	62.9	1.006	0.08	0.231	0.274
	LTE Band 41_LAT	20M	QPSK	50	0	Back	10mm	40620	2593	21.28	22.00	1.180	62.9	1.006	-0.04	0.596	0.708
	LTE Band 41_LAT	20M	QPSK	50	0	Back	10mm	39750	2506	21.26	22.00	1.186	62.9	1.006	0.01	0.465	0.555
	LTE Band 41_LAT	20M	QPSK	50	0	Back	10mm	40185	2549.5	21.27	22.00	1.183	62.9	1.006	0.09	0.576	0.686
	LTE Band 41_LAT	20M	QPSK	50	0	Back	10mm	41055	2636.5	21.26	22.00	1.186	62.9	1.006	-0.08	0.698	0.833
	LTE Band 41_LAT	20M	QPSK	50	0	Back	10mm	41490	2680	21.13	22.00	1.222	62.9	1.006	0.05	0.643	0.790
	LTE Band 41_LAT	20M	QPSK	100	0	Back	10mm	40620	2593	21.23	22.00	1.194	62.9	1.006	-0.03	0.587	0.705

<Bluetooth SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	Bluetooth	1Mbps	Front	10mm	0	2402	9.90	11.00	1.288	76.7	1.086	0.06	0.022	0.030
	Bluetooth	1Mbps	Back	10mm	0	2402	9.90	11.00	1.288	76.7	1.086	0.02	0.024	0.033
55	Bluetooth	1Mbps	Back	10mm	39	2441	9.40	11.00	1.445	76.7	1.086	0.06	0.029	**0.045**
	Bluetooth	1Mbps	Back	10mm	78	2480	9.50	11.00	1.413	76.7	1.086	-0.03	0.023	0.035

<WLAN2.4G SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WLAN2.4GHz	802.11b 1Mbps	Front	10mm	6	2437	14.1	15.5	1.380	100	1.000	0.07	0.099	0.137
56	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	6	2437	14.1	15.5	1.380	100	1.000	0.04	0.109	**0.150**
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	1	2412	13.7	15.5	1.514	100	1.000	-0.06	0.081	0.123
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	11	2462	13.9	15.5	1.445	100	1.000	0.01	0.098	0.142

<WLAN5G SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WLAN5.3GHz	802.11a 6Mbps	Front	10mm	64	5320	16.53	18	1.403	100	1.000	0.06	0.144	0.202
	WLAN5.3GHz	802.11a 6Mbps	Back	10mm	64	5320	16.53	18	1.403	100	1.000	0.01	0.222	0.311
	WLAN5.3GHz	802.11a 6Mbps	Back	10mm	52	5260	16.32	18	1.472	100	1.000	0.07	0.237	0.349
57	WLAN5.3GHz	802.11a 6Mbps	Back	10mm	56	5280	16.5	18	1.413	100	1.000	0.02	0.249	**0.352**
	WLAN5.3GHz	802.11a 6Mbps	Back	10mm	60	5300	16.46	18	1.426	100	1.000	0.03	0.240	0.342
	WLAN5.5GHz	802.11a 6Mbps	Front	10mm	100	5500	14.27	16	1.489	100	1.000	0.05	0.036	0.054
	WLAN5.5GHz	802.11a 6Mbps	Back	10mm	100	5500	14.27	16	1.489	100	1.000	0.07	0.118	0.176
	WLAN5.5GHz	802.11a 6Mbps	Back	10mm	116	5580	14.17	16	1.524	100	1.000	0.06	0.109	0.166
	WLAN5.5GHz	802.11a 6Mbps	Back	10mm	124	5620	14.24	16	1.500	100	1.000	0.06	0.123	0.184
	WLAN5.5GHz	802.11a 6Mbps	Back	10mm	132	5660	14.12	16	1.542	100	1.000	0.06	0.115	0.177
58	WLAN5.5GHz	802.11a 6Mbps	Back	10mm	140	5700	14.22	16	1.507	100	1.000	0.01	0.124	**0.187**
	WLAN5.5GHz	802.11a 6Mbps	Back	10mm	144	5720	14.25	16	1.496	100	1.000	-0.07	0.119	0.178
	WLAN5.8GHz	802.11a 6Mbps	Front	10mm	165	5825	14.72	16	1.343	100	1.000	-0.05	0.127	0.171
	WLAN5.8GHz	802.11a 6Mbps	Back	10mm	165	5825	14.72	16	1.343	100	1.000	0.04	0.102	0.137
59	WLAN5.8GHz	802.11a 6Mbps	Front	10mm	149	5745	14.6	16	1.380	100	1.000	-0.07	0.163	**0.225**
	WLAN5.8GHz	802.11a 6Mbps	Front	10mm	157	5785	14.4	16	1.445	100	1.000	0.03	0.151	0.218

14.4 Product specific 10g SAR

Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
	WLAN5.3GHz	802.11a 6Mbps	Front	0mm	64	5320	16.53	18	1.403	100	1.000	0.06	0.246	0.345
	WLAN5.3GHz	802.11a 6Mbps	Back	0mm	64	5320	16.53	18	1.403	100	1.000	-0.06	0.330	0.463
	WLAN5.3GHz	802.11a 6Mbps	Left Side	0mm	64	5320	16.53	18	1.403	100	1.000	0.04	0.060	0.084
	WLAN5.3GHz	802.11a 6Mbps	Right Side	0mm	64	5320	16.53	18	1.403	100	1.000	0.02	0.253	0.355
	WLAN5.3GHz	802.11a 6Mbps	Top Side	0mm	64	5320	16.53	18	1.403	100	1.000	0.09	0.182	0.255
	WLAN5.3GHz	802.11a 6Mbps	Back	0mm	52	5260	16.32	18	1.472	100	1.000	-0.07	0.364	0.536
	WLAN5.3GHz	802.11a 6Mbps	Back	0mm	56	5280	16.5	18	1.413	100	1.000	0.03	0.356	0.503
60	WLAN5.3GHz	802.11a 6Mbps	Back	0mm	60	5300	16.46	18	1.426	100	1.000	0.09	0.410	**0.584**
	WLAN5.5GHz	802.11a 6Mbps	Front	0mm	100	5500	14.27	16	1.489	100	1.000	0.06	0.134	0.200
	WLAN5.5GHz	802.11a 6Mbps	Back	0mm	100	5500	14.27	16	1.489	100	1.000	0.07	0.217	0.323
	WLAN5.5GHz	802.11a 6Mbps	Left Side	0mm	100	5500	14.27	16	1.489	100	1.000	0.06	0.021	0.031
	WLAN5.5GHz	802.11a 6Mbps	Right Side	0mm	100	5500	14.27	16	1.489	100	1.000	0.09	0.127	0.189
	WLAN5.5GHz	802.11a 6Mbps	Top Side	0mm	100	5500	14.27	16	1.489	100	1.000	-0.05	0.102	0.152
61	WLAN5.5GHz	802.11a 6Mbps	Back	0mm	116	5580	14.17	16	1.524	100	1.000	0.04	0.243	**0.370**
	WLAN5.5GHz	802.11a 6Mbps	Back	0mm	124	5620	14.24	16	1.500	100	1.000	0.11	0.241	0.361
	WLAN5.5GHz	802.11a 6Mbps	Back	0mm	132	5660	14.12	16	1.542	100	1.000	0.06	0.212	0.327
	WLAN5.5GHz	802.11a 6Mbps	Back	0mm	140	5700	14.22	16	1.507	100	1.000	0.07	0.239	0.360
	WLAN5.5GHz	802.11a 6Mbps	Back	0mm	144	5720	14.25	16	1.496	100	1.000	-0.03	0.235	0.352

14.5 Repeated SAR Measurement

No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Ratio	Reported 1g SAR (W/kg)
1st	GSM850_UAT	-	-	-	-	GPRS(4 Tx slots)	Right Cheek	0	Receiver on	251	848.8	24.33	25.00	1.167	0.05	0.819	1	0.956
2nd	GSM850_UAT	-	-	-	-	GPRS(4 Tx slots)	Right Cheek	0	Receiver on	251	848.8	24.33	25.00	1.167	0.09	0.810	1.011	0.945
1st	WCDMA IV_UAT	-	-	-	-	RMC 12.2Kbps	Right Cheek	0	Receiver on	1513	1752.6	19.21	20.00	1.199	0.04	0.841	1	1.009
2nd	WCDMA IV_UAT	-	-	-	-	RMC 12.2Kbps	Right Cheek	0	Receiver on	1513	1752.6	19.21	20.00	1.199	0.04	0.832	1.011	0.998
1st	LTE Band 25_UAT	20M	QPSK	1	49	-	Right Cheek	0	Receiver on	26590	1905	18.23	19.00	1.194	0.05	0.889	1	1.061
2nd	LTE Band 25_UAT	20M	QPSK	1	49	-	Right Cheek	0	Receiver on	26590	1905	18.23	19.00	1.194	0.05	0.881	1.009	1.052
1st	LTE Band 7_UAT	20M	QPSK	1	49	-	Top Side	10	Hotspot on	21350	2560	21.10	21.50	1.096	-0.04	0.996	1	1.092
2nd	LTE Band 7_UAT	20M	QPSK	1	49	-	Top Side	10	Hotspot on	21350	2560	21.10	21.50	1.096	-0.07	0.990	1.006	1.086

General Note:

1. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required only when the measured SAR is ≥0.8W/kg.
2. Per KDB 865664 D01v01r04, if the ratio among the repeated measurement is ≤ 1.2 and the measured SAR <1.45W/kg, only one repeated measurement is required.
3. The ratio is the difference in percentage between original and repeated *measured SAR*.
4. All measurement SAR result is scaled-up to account for tune-up tolerance and is compliant.

14.6 LTE Band 41 Power Class 2 and Power Class 3 Linearity

This device support Power Class 2 and Power Class 3 operations for LTE Band 41. The highest available duty cycle for Power Class 2 operation is 43.3% using UL-DL configuration 1. Per FCC Guidance based on the device behavior, all SAR tests were performed using Power Class 3. Power Class 2 is tested using the highest SAR test configuration in Power Class 3 for each LTE configuration and exposure condition combination, according to the highest time averaged power for all applicable uplink-downlink configurations in Power Class 2. When the reported SAR vs. output power is linearly scaled with < 10% discrepancy between power classes and all reported SAR are < 1.4 W/kg, Separate SAR testing for Power Class 2 is not required

Head

UAT			LAT		
LTE Band 41(HPUE)-Linearity Data for Head			LTE Band 41(HPUE)-Linearity Data for Head		
	LTE Band 41 (Power Class 3)	LTE Band 41 (Power Class 2)		LTE Band 41 (Power Class 3)	LTE Band 41 (Power Class 2)
Maximum Tune up Power (dBm)	20.00	21.50	Maximum Tune up Power (dBm)	24.00	27.00
Reported 1g SAR (W/kg)	1.008	1.016	Reported 1g SAR (W/kg)	0.109	0.151
Duty Cycle	63.30%	43.30%	Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	63.30	61.16	Frame Averaged (mW)	159.00	217.01
Linearity SAR (W/kg)	0.974		Linearity SAR (W/kg)	0.149	
% deviation from expected linearity		4.32%	% deviation from expected linearity		1.50%

Hotspot

UAT			LAT		
LTE Band 41(HPUE)-Linearity Data for Hotspot			LTE Band 41(HPUE)-Linearity Data for Hotspot		
	LTE Band 41 (Power Class 3)	LTE Band 41 (Power Class 2)		LTE Band 41 (Power Class 3)	LTE Band 41 (Power Class 2)
Maximum Tune up Power (dBm)	23.00	25.00	Maximum Tune up Power (dBm)	23.00	24.50
Reported 1g SAR (W/kg)	1.047	1.095	Reported 1g SAR (W/kg)	1.038	1.070
Duty Cycle	63.30%	43.30%	Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	126.30	136.93	Frame Averaged (mW)	126.30	122.04
Linearity SAR (W/kg)	1.135		Linearity SAR (W/kg)	1.003	
% deviation from expected linearity		-3.53%	% deviation from expected linearity		6.68%

Body-worn

UAT			LAT		
LTE Band 41(HPUE)-Linearity Data for Body-worn			LTE Band 41(HPUE)-Linearity Data for Body-worn		
	LTE Band 41 (Power Class 3)	LTE Band 41 (Power Class 2)		LTE Band 41 (Power Class 3)	LTE Band 41 (Power Class 2)
Maximum Tune up Power (dBm)	23.00	25.00	Maximum Tune up Power (dBm)	23.00	24.50
Reported 1g SAR (W/kg)	1.001	1.063	Reported 1g SAR (W/kg)	1.031	1.029
Duty Cycle	63.30%	43.30%	Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	126.30	136.93	Frame Averaged (mW)	126.30	122.04
Linearity SAR (W/kg)	1.085		Linearity SAR (W/kg)	0.996	
% deviation from expected linearity		-2.05%	% deviation from expected linearity		3.29%

15. Simultaneous Transmission Analysis

No.	Simultaneous Transmission Configurations	Portable Handset			
		Head	Body-worn	Hotspot	Product specific
1.	GSM Voice + Bluetooth	Yes	Yes		Yes
2.	GPRS/EDGE + Bluetooth	Yes	Yes	Yes	Yes
3.	WCDMA + Bluetooth	Yes	Yes	Yes	Yes
4.	LTE + Bluetooth	Yes	Yes	Yes	Yes
5.	GSM Voice + 2.4GHz WLAN	Yes	Yes		Yes
6.	GPRS/EDGE + 2.4GHz WLAN	Yes	Yes	Yes	Yes
7.	WCDMA +2.4GHz WLAN	Yes	Yes	Yes	Yes
8.	LTE + 2.4GHz WLAN	Yes	Yes	Yes	Yes
9.	GSM Voice + WLAN5.3/5.5GHz	Yes	Yes		Yes
10.	GPRS/EDGE + WLAN5.3/5.5GHz	Yes	Yes		Yes
11.	WCDMA + WLAN5.3/5.5GHz	Yes	Yes		Yes
12.	LTE + WLAN5.3/5.5GHz	Yes	Yes		Yes
13.	GSM Voice + WLAN5.2/5.8GHz	Yes	Yes		Yes
14.	GPRS/EDGE + WLAN5.2/5.8GHz	Yes	Yes	Yes	Yes
15.	WCDMA + WLAN5.2/5.8GHz	Yes	Yes	Yes	Yes
16.	LTE + WLAN5.2/5.8GHz	Yes	Yes	Yes	Yes

General Note:

1. This device supports VoIP in GPRS, EGPRS, WCDMA and LTE (e.g. for 3rd-party VoIP), and LTE supports VoLTE function.
2. EUT will choose each GSM, WCDMA and LTE according to the network signal condition; therefore, they will not operate simultaneously at any moment.
3. This device WLAN 2.4GHz supports hotspot operation and Bluetooth support tethering applications.
4. WLAN 2.4GHz and Bluetooth share the same antenna so can't transmit simultaneously.
5. WLAN 5GHz and Bluetooth can't transmit simultaneously.
6. EUT will choose either WLAN 2.4GHz or WLAN 5GHz according to the network signal condition; therefore, 2.4GHz WLAN and 5GHz WLAN will not operate simultaneously at any moment.
7. All licensed modes share the same antenna part and cannot transmit simultaneously.
8. The reported SAR summation is calculated based on the same configuration and test position
9. Per KDB 447498 D01v06, simultaneous transmission SAR is compliant if,
   i) Scalar SAR summation < 1.6W/kg.
   ii) SPLSR = (SAR1 + SAR2)^1.5 / (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 ≤ 0.04, simultaneously transmission SAR measurement is not necessary.
   iv) Simultaneously transmission SAR measurement, and the reported multi-band SAR < 1.6W/kg.

15.1 Head Exposure Conditions

WWAN Band		Exposure Position	1	2	3	4	1+2	1+3	1+4
			WWAN	2.4GHz WLAN Ant 1	5GHz WLAN Ant 1	Bluetooth Ant 1	Summed	Summed	Summed
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
GSM	GSM850_UAT	Right Cheek	0.956	0.326	0.513	0.054	1.282	1.469	1.010
		Right Tilted	0.437	0.240	0.477	0.046	0.677	0.914	0.483
		Left Cheek	0.585	0.716	0.734	0.170	1.301	1.319	0.755
		Left Tilted	0.377	0.468	0.389	0.076	0.845	0.766	0.453
	GSM1900_UAT	Right Cheek	0.853	0.326	0.513	0.054	1.179	1.366	0.907
		Right Tilted	0.803	0.240	0.477	0.046	1.043	1.280	0.849
		Left Cheek	0.826	0.716	0.734	0.170	1.542	1.560	0.996
		Left Tilted	0.748	0.468	0.389	0.076	1.216	1.137	0.824
WCDMA	WCDMA V_UAT	Right Cheek	0.685	0.326	0.513	0.054	1.011	1.198	0.739
		Right Tilted	0.442	0.240	0.477	0.046	0.682	0.919	0.488
		Left Cheek	0.694	0.716	0.734	0.170	1.410	1.428	0.864
		Left Tilted	0.416	0.468	0.389	0.076	0.884	0.805	0.492
	WCDMA IV_UAT	Right Cheek	1.009	0.326	0.513	0.054	1.335	1.522	1.063
		Right Tilted	0.891	0.240	0.477	0.046	1.131	1.368	0.937
		Left Cheek	0.769	0.716	0.734	0.170	1.485	1.503	0.939
		Left Tilted	0.719	0.468	0.389	0.076	1.187	1.108	0.795
	WCDMA II_UAT	Right Cheek	0.908	0.326	0.513	0.054	1.234	1.421	0.962
		Right Tilted	0.859	0.240	0.477	0.046	1.099	1.336	0.905
		Left Cheek	0.830	0.716	0.734	0.170	1.546	1.564	1.000
		Left Tilted	0.774	0.468	0.389	0.076	1.242	1.163	0.850
LTE	LTE Band 71_UAT	Right Cheek	0.902	0.326	0.513	0.054	1.228	1.415	0.956
		Right Tilted	0.634	0.240	0.477	0.046	0.874	1.111	0.680
		Left Cheek	0.637	0.716	0.734	0.170	1.353	1.371	0.807
		Left Tilted	0.441	0.468	0.389	0.076	0.909	0.830	0.517
	LTE Band 12_UAT	Right Cheek	0.938	0.326	0.513	0.054	1.264	1.451	0.992
		Right Tilted	0.691	0.240	0.477	0.046	0.931	1.168	0.737
		Left Cheek	0.781	0.716	0.734	0.170	1.497	1.515	0.951
		Left Tilted	0.532	0.468	0.389	0.076	1.000	0.921	0.608
	LTE Band 13_UAT	Right Cheek	0.617	0.326	0.513	0.054	0.943	1.130	0.671
		Right Tilted	0.404	0.240	0.477	0.046	0.644	0.881	0.450
		Left Cheek	0.496	0.716	0.734	0.170	1.212	1.230	0.666
		Left Tilted	0.321	0.468	0.389	0.076	0.789	0.710	0.397
	LTE Band 14_UAT	Right Cheek	0.535	0.326	0.513	0.054	0.861	1.048	0.589
		Right Tilted	0.342	0.240	0.477	0.046	0.582	0.819	0.388
		Left Cheek	0.432	0.716	0.734	0.170	1.148	1.166	0.602
		Left Tilted	0.280	0.468	0.389	0.076	0.748	0.669	0.356

WWAN Band		Exposure Position	1	2	3	4	1+2	1+3	1+4
			WWAN	2.4GHz WLAN Ant 1	5GHz WLAN Ant 1	Bluetooth Ant 1	Summed	Summed	Summed
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
LTE	LTE Band 26_UAT	Right Cheek	0.818	0.326	0.513	0.054	1.144	1.331	0.872
		Right Tilted	0.451	0.240	0.477	0.046	0.691	0.928	0.497
		Left Cheek	0.546	0.716	0.734	0.170	1.262	1.280	0.716
		Left Tilted	0.347	0.468	0.389	0.076	0.815	0.736	0.423
	LTE Band 5_UAT	Right Cheek	0.736	0.326	0.513	0.054	1.062	1.249	0.790
		Right Tilted	0.491	0.240	0.477	0.046	0.731	0.968	0.537
		Left Cheek	0.622	0.716	0.734	0.170	1.338	1.356	0.792
		Left Tilted	0.385	0.468	0.389	0.076	0.853	0.774	0.461
	LTE Band 66_UAT	Right Cheek	1.068	0.326	0.513	0.054	1.394	**1.581**	**1.122**
		Right Tilted	0.982	0.240	0.477	0.046	1.222	1.459	1.028
		Left Cheek	0.845	0.716	0.734	0.170	**1.561**	1.579	1.015
		Left Tilted	0.755	0.468	0.389	0.076	1.223	1.144	0.831
	LTE Band 25_UAT	Right Cheek	1.061	0.326	0.513	0.054	1.387	1.574	1.115
		Right Tilted	0.961	0.240	0.477	0.046	1.201	1.438	1.007
		Left Cheek	0.844	0.716	0.734	0.170	1.560	1.578	1.014
		Left Tilted	0.738	0.468	0.389	0.076	1.206	1.127	0.814
	LTE Band 7_UAT	Right Cheek	1.005	0.326	0.513	0.054	1.331	1.518	1.059
		Right Tilted	0.994	0.240	0.477	0.046	1.234	1.471	1.040
		Left Cheek	0.626	0.716	0.734	0.170	1.342	1.360	0.796
		Left Tilted	0.630	0.468	0.389	0.076	1.098	1.019	0.706
	LTE Band 41_UAT	Right Cheek	1.016	0.326	0.513	0.054	1.342	1.529	1.070
		Right Tilted	0.901	0.240	0.477	0.046	1.141	1.378	0.947
		Left Cheek	0.568	0.716	0.734	0.170	1.284	1.302	0.738
		Left Tilted	0.587	0.468	0.389	0.076	1.055	0.976	0.663

WWAN Band		Exposure Position	1	2	3	4	1+2	1+3	1+4
			WWAN	2.4GHz WLAN Ant 1	5GHz WLAN Ant 1	Bluetooth Ant 1	Summed	Summed	Summed
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
GSM	GSM850_LAT	Right Cheek	0.471	0.326	0.513	0.054	0.797	0.984	0.525
		Right Tilted	0.377	0.240	0.477	0.046	0.617	0.854	0.423
		Left Cheek	0.397	0.716	0.734	0.170	1.113	1.131	0.567
		Left Tilted	0.362	0.468	0.389	0.076	0.830	0.751	0.438
	GSM1900_LAT	Right Cheek	0.066	0.326	0.513	0.054	0.392	0.579	0.120
		Right Tilted	0.051	0.240	0.477	0.046	0.291	0.528	0.097
		Left Cheek	0.114	0.716	0.734	0.170	0.830	0.848	0.284
		Left Tilted	0.051	0.468	0.389	0.076	0.519	0.440	0.127
WCDMA	WCDMA V_LAT	Right Cheek	0.285	0.326	0.513	0.054	0.611	0.798	0.339
		Right Tilted	0.214	0.240	0.477	0.046	0.454	0.691	0.260
		Left Cheek	0.221	0.716	0.734	0.170	0.937	0.955	0.391
		Left Tilted	0.178	0.468	0.389	0.076	0.646	0.567	0.254
	WCDMA IV_LAT	Right Cheek	0.024	0.326	0.513	0.054	0.350	0.537	0.078
		Right Tilted	0.016	0.240	0.477	0.046	0.256	0.493	0.062
		Left Cheek	0.052	0.716	0.734	0.170	0.768	0.786	0.222
		Left Tilted	0.025	0.468	0.389	0.076	0.493	0.414	0.101
	WCDMA II_LAT	Right Cheek	0.085	0.326	0.513	0.054	0.411	0.598	0.139
		Right Tilted	0.051	0.240	0.477	0.046	0.291	0.528	0.097
		Left Cheek	0.143	0.716	0.734	0.170	0.859	0.877	0.313
		Left Tilted	0.075	0.468	0.389	0.076	0.543	0.464	0.151
LTE	LTE Band 71_LAT	Right Cheek	0.193	0.326	0.513	0.054	0.519	0.706	0.247
		Right Tilted	0.121	0.240	0.477	0.046	0.361	0.598	0.167
		Left Cheek	0.146	0.716	0.734	0.170	0.862	0.880	0.316
		Left Tilted	0.097	0.468	0.389	0.076	0.565	0.486	0.173
	LTE Band 12_LAT	Right Cheek	0.337	0.326	0.513	0.054	0.663	0.850	0.391
		Right Tilted	0.179	0.240	0.477	0.046	0.419	0.656	0.225
		Left Cheek	0.212	0.716	0.734	0.170	0.928	0.946	0.382
		Left Tilted	0.144	0.468	0.389	0.076	0.612	0.533	0.220
	LTE Band 13_LAT	Right Cheek	0.293	0.326	0.513	0.054	0.619	0.806	0.347
		Right Tilted	0.207	0.240	0.477	0.046	0.447	0.684	0.253
		Left Cheek	0.185	0.716	0.734	0.170	0.901	0.919	0.355
		Left Tilted	0.147	0.468	0.389	0.076	0.615	0.536	0.223
	LTE Band 14_LAT	Right Cheek	0.249	0.326	0.513	0.054	0.575	0.762	0.303
		Right Tilted	0.186	0.240	0.477	0.046	0.426	0.663	0.232
		Left Cheek	0.172	0.716	0.734	0.170	0.888	0.906	0.342
		Left Tilted	0.149	0.468	0.389	0.076	0.617	0.538	0.225

WWAN Band		Exposure Position	1	2	3	4	1+2	1+3	1+4
			WWAN	2.4GHz WLAN Ant 1	5GHz WLAN Ant 1	Bluetooth Ant 1	Summed	Summed	Summed
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
LTE	LTE Band 26_LAT	Right Cheek	0.329	0.326	0.513	0.054	0.655	0.842	0.383
		Right Tilted	0.148	0.240	0.477	0.046	0.388	0.625	0.194
		Left Cheek	0.206	0.716	0.734	0.170	0.922	0.940	0.376
		Left Tilted	0.157	0.468	0.389	0.076	0.625	0.546	0.233
	LTE Band 5_LAT	Right Cheek	0.328	0.326	0.513	0.054	0.654	0.841	0.382
		Right Tilted	0.155	0.240	0.477	0.046	0.395	0.632	0.201
		Left Cheek	0.238	0.716	0.734	0.170	0.954	0.972	0.408
		Left Tilted	0.155	0.468	0.389	0.076	0.623	0.544	0.231
	LTE Band 66_LAT	Right Cheek	0.053	0.326	0.513	0.054	0.379	0.566	0.107
		Right Tilted	0.020	0.240	0.477	0.046	0.260	0.497	0.066
		Left Cheek	0.075	0.716	0.734	0.170	0.791	0.809	0.245
		Left Tilted	0.014	0.468	0.389	0.076	0.482	0.403	0.090
	LTE Band 25_LAT	Right Cheek	0.089	0.326	0.513	0.054	0.415	0.602	0.143
		Right Tilted	0.050	0.240	0.477	0.046	0.290	0.527	0.096
		Left Cheek	0.171	0.716	0.734	0.170	0.887	0.905	0.341
		Left Tilted	0.062	0.468	0.389	0.076	0.530	0.451	0.138
	LTE Band 7_LAT	Right Cheek	0.068	0.326	0.513	0.054	0.394	0.581	0.122
		Right Tilted	0.048	0.240	0.477	0.046	0.288	0.525	0.094
		Left Cheek	0.066	0.716	0.734	0.170	0.782	0.800	0.236
		Left Tilted	0.045	0.468	0.389	0.076	0.513	0.434	0.121
	LTE Band 41_LAT	Right Cheek	0.151	0.326	0.513	0.054	0.477	0.664	0.205
		Right Tilted	0.038	0.240	0.477	0.046	0.278	0.515	0.084
		Left Cheek	0.047	0.716	0.734	0.170	0.763	0.781	0.217
		Left Tilted	0.026	0.468	0.389	0.076	0.494	0.415	0.102

15.2 Hotspot Exposure Conditions

WWAN Band		Exposure Position	1	2	3	4	1+2 Summed 1g SAR (W/kg)	1+3 Summed 1g SAR (W/kg)	1+4 Summed 1g SAR (W/kg)
			WWAN	2.4GHz WLAN Ant 1	5GHz WLAN Ant 1	Bluetooth Ant 1			
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)			
GSM	GSM850_UAT	Front	0.222	0.137	0.225	0.030	0.359	0.447	0.252
		Back	0.456	0.150	0.331	0.045	0.606	0.787	0.501
		Left side	0.118	0.017	0.108	0.004	0.135	0.226	0.122
		Right side	0.111	0.113	0.282	0.021	0.224	0.393	0.132
		Top side	0.149	0.029	0.297	0.011	0.178	0.446	0.160
	GSM1900_UAT	Front	0.542	0.137	0.225	0.030	0.679	0.767	0.572
		Back	0.421	0.150	0.331	0.045	0.571	0.752	0.466
		Left side	0.184	0.017	0.108	0.004	0.201	0.292	0.188
		Right side	0.025	0.113	0.282	0.021	0.138	0.307	0.046
		Top side	0.698	0.029	0.297	0.011	0.727	0.995	0.709
WCDMA	WCDMA V_UAT	Front	0.126	0.137	0.225	0.030	0.263	0.351	0.156
		Back	0.174	0.150	0.331	0.045	0.324	0.505	0.219
		Left side	0.060	0.017	0.108	0.004	0.077	0.168	0.064
		Right side	0.053	0.113	0.282	0.021	0.166	0.335	0.074
		Top side	0.100	0.029	0.297	0.011	0.129	0.397	0.111
	WCDMA IV_UAT	Front	0.723	0.137	0.225	0.030	0.860	0.948	0.753
		Back	0.553	0.150	0.331	0.045	0.703	0.884	0.598
		Left side	0.434	0.017	0.108	0.004	0.451	0.542	0.438
		Right side	0.125	0.113	0.282	0.021	0.238	0.407	0.146
		Top side	0.711	0.029	0.297	0.011	0.740	1.008	0.722
	WCDMA II_UAT	Front	0.744	0.137	0.225	0.030	0.881	0.969	0.774
		Back	0.625	0.150	0.331	0.045	0.775	0.956	0.670
		Left side	0.309	0.017	0.108	0.004	0.326	0.417	0.313
		Right side	0.033	0.113	0.282	0.021	0.146	0.315	0.054
		Top side	1.002	0.029	0.297	0.011	1.031	1.299	1.013
LTE	LTE Band 71_UAT	Front	0.261	0.137	0.225	0.030	0.398	0.486	0.291
		Back	0.368	0.150	0.331	0.045	0.518	0.699	0.413
		Left side	0.268	0.017	0.108	0.004	0.285	0.376	0.272
		Right side	0.211	0.113	0.282	0.021	0.324	0.493	0.232
		Top side	0.075	0.029	0.297	0.011	0.104	0.372	0.086
	LTE Band 12_UAT	Front	0.317	0.137	0.225	0.030	0.454	0.542	0.347
		Back	0.410	0.150	0.331	0.045	0.560	0.741	0.455
		Left side	0.284	0.017	0.108	0.004	0.301	0.392	0.288
		Right side	0.222	0.113	0.282	0.021	0.335	0.504	0.243
		Top side	0.100	0.029	0.297	0.011	0.129	0.397	0.111
	LTE Band 13_UAT	Front	0.196	0.137	0.225	0.030	0.333	0.421	0.226
		Back	0.292	0.150	0.331	0.045	0.442	0.623	0.337
		Left side	0.147	0.017	0.108	0.004	0.164	0.255	0.151
		Right side	0.143	0.113	0.282	0.021	0.256	0.425	0.164
		Top side	0.099	0.029	0.297	0.011	0.128	0.396	0.110
	LTE Band 14_UAT	Front	0.175	0.137	0.225	0.030	0.312	0.400	0.205
		Back	0.267	0.150	0.331	0.045	0.417	0.598	0.312
		Left side	0.126	0.017	0.108	0.004	0.143	0.234	0.130
		Right side	0.151	0.113	0.282	0.021	0.264	0.433	0.172
		Top side	0.086	0.029	0.297	0.011	0.115	0.383	0.097

WWAN Band		Exposure Position	1 WWAN 1g SAR (W/kg)	2 2.4GHz WLAN Ant 1 1g SAR (W/kg)	3 5GHz WLAN Ant 1 1g SAR (W/kg)	4 Bluetooth Ant 1 1g SAR (W/kg)	1+2 Summed 1g SAR (W/kg)	1+3 Summed 1g SAR (W/kg)	1+4 Summed 1g SAR (W/kg)
LTE	LTE Band 26_UAT	Front	0.092	0.137	0.225	0.03	0.229	0.317	0.122
		Back	0.166	0.150	0.331	0.045	0.316	0.497	0.211
		Left side	0.059	0.017	0.108	0.004	0.076	0.167	0.063
		Right side	0.057	0.113	0.282	0.021	0.170	0.339	0.078
		Top side	0.075	0.029	0.297	0.011	0.104	0.372	0.086
	LTE Band 5_UAT	Front	0.117	0.137	0.225	0.03	0.254	0.342	0.147
		Back	0.177	0.150	0.331	0.045	0.327	0.508	0.222
		Left side	0.070	0.017	0.108	0.004	0.087	0.178	0.074
		Right side	0.075	0.113	0.282	0.021	0.188	0.357	0.096
		Top side	0.082	0.029	0.297	0.011	0.111	0.379	0.093
	LTE Band 66_UAT	Front	0.767	0.137	0.225	0.03	0.904	0.992	0.797
		Back	0.493	0.150	0.331	0.045	0.643	0.824	0.538
		Left side	0.313	0.017	0.108	0.004	0.330	0.421	0.317
		Right side	0.080	0.113	0.282	0.021	0.193	0.362	0.101
		Top side	0.655	0.029	0.297	0.011	0.684	0.952	0.666
	LTE Band 25_UAT	Front	0.900	0.137	0.225	0.03	1.037	1.125	0.930
		Back	0.600	0.150	0.331	0.045	0.750	0.931	0.645
		Left side	0.365	0.017	0.108	0.004	0.382	0.473	0.369
		Right side	0.025	0.113	0.282	0.021	0.138	0.307	0.046
		Top side	1.061	0.029	0.297	0.011	1.090	1.358	1.072
	LTE Band 7_UAT	Front	0.457	0.137	0.225	0.03	0.594	0.682	0.487
		Back	1.007	0.150	0.331	0.045	1.157	1.338	1.052
		Left side	0.299	0.017	0.108	0.004	0.316	0.407	0.303
		Right side	0.041	0.113	0.282	0.021	0.154	0.323	0.062
		Top side	1.092	0.029	0.297	0.011	1.121	1.389	1.103
	LTE Band 41_UAT	Front	0.448	0.137	0.225	0.03	0.585	0.673	0.478
		Back	1.063	0.150	0.331	0.045	1.213	1.394	1.108
		Left side	0.322	0.017	0.108	0.004	0.339	0.430	0.326
		Right side	0.053	0.113	0.282	0.021	0.166	0.335	0.074
		Top side	1.095	0.029	0.297	0.011	1.124	1.392	1.106

WWAN Band		Exposure Position	1	2	3	4	1+2 Summed 1g SAR (W/kg)	1+3 Summed 1g SAR (W/kg)	1+4 Summed 1g SAR (W/kg)
			WWAN	2.4GHz WLAN Ant 1	5GHz WLAN Ant 1	Bluetooth Ant 1			
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)			
GSM	GSM850_LAT	Front	0.427	0.137	0.225	0.03	0.564	0.652	0.457
		Back	0.684	0.150	0.331	0.045	0.834	1.015	0.729
		Left side	0.335	0.017	0.108	0.004	0.352	0.443	0.339
		Right side	0.464	0.113	0.282	0.021	0.577	0.746	0.485
		Top side		0.029	0.297	0.011	0.029	0.297	0.011
		Bottom side	0.236				0.236	0.236	0.236
	GSM1900_LAT	Front	0.245	0.137	0.225	0.03	0.382	0.470	0.275
		Back	0.480	0.150	0.331	0.045	0.630	0.811	0.525
		Left side	0.120	0.017	0.108	0.004	0.137	0.228	0.124
		Right side	0.069	0.113	0.282	0.021	0.182	0.351	0.090
		Top side		0.029	0.297	0.011	0.029	0.297	0.011
		Bottom side	0.295				0.295	0.295	0.295
WCDMA	WCDMA V_LAT	Front	0.207	0.137	0.225	0.03	0.344	0.432	0.237
		Back	0.321	0.150	0.331	0.045	0.471	0.652	0.366
		Left side	0.178	0.017	0.108	0.004	0.195	0.286	0.182
		Right side	0.230	0.113	0.282	0.021	0.343	0.512	0.251
		Top side		0.029	0.297	0.011	0.029	0.297	0.011
		Bottom side	0.147				0.147	0.147	0.147
	WCDMA IV_LAT	Front	0.349	0.137	0.225	0.03	0.486	0.574	0.379
		Back	0.961	0.150	0.331	0.045	1.111	1.292	1.006
		Left side	0.030	0.017	0.108	0.004	0.047	0.138	0.034
		Right side	0.062	0.113	0.282	0.021	0.175	0.344	0.083
		Top side		0.029	0.297	0.011	0.029	0.297	0.011
		Bottom side	0.776				0.776	0.776	0.776
	WCDMA II_LAT	Front	0.462	0.137	0.225	0.03	0.599	0.687	0.492
		Back	0.597	0.150	0.331	0.045	0.747	0.928	0.642
		Left side	0.264	0.017	0.108	0.004	0.281	0.372	0.268
		Right side	0.105	0.113	0.282	0.021	0.218	0.387	0.126
		Top side		0.029	0.297	0.011	0.029	0.297	0.011
		Bottom side	0.762				0.762	0.762	0.762
LTE	LTE Band 71_LAT	Front	0.260	0.137	0.225	0.03	0.397	0.485	0.290
		Back	0.404	0.150	0.331	0.045	0.554	0.735	0.449
		Left side	0.228	0.017	0.108	0.004	0.245	0.336	0.232
		Right side	0.383	0.113	0.282	0.021	0.496	0.665	0.404
		Top side		0.029	0.297	0.011	0.029	0.297	0.011
		Bottom side	0.126				0.126	0.126	0.126
	LTE Band 12_LAT	Front	0.362	0.137	0.225	0.03	0.499	0.587	0.392
		Back	0.519	0.150	0.331	0.045	0.669	0.850	0.564
		Left side	0.303	0.017	0.108	0.004	0.320	0.411	0.307
		Right side	0.483	0.113	0.282	0.021	0.596	0.765	0.504
		Top side	0.081	0.029	0.297	0.011	0.110	0.378	0.092
		Bottom side	0.094				0.094	0.094	0.094

WWAN Band		Exposure Position	1 WWAN 1g SAR (W/kg)	2 2.4GHz WLAN Ant 1 1g SAR (W/kg)	3 5GHz WLAN Ant 1 1g SAR (W/kg)	4 Bluetooth Ant 1 1g SAR (W/kg)	1+2 Summed 1g SAR (W/kg)	1+3 Summed 1g SAR (W/kg)	1+4 Summed 1g SAR (W/kg)
LTE	LTE Band 13_LAT	Front	0.289	0.137	0.225	0.03	0.426	0.514	0.319
		Back	0.459	0.150	0.331	0.045	0.609	0.790	0.504
		Left side	0.207	0.017	0.108	0.004	0.224	0.315	0.211
		Right side	0.372	0.113	0.282	0.021	0.485	0.654	0.393
		Top side		0.029	0.297	0.011	0.029	0.297	0.011
		Bottom side	0.207				0.207	0.207	0.207
	LTE Band 14_LAT	Front	0.257	0.137	0.225	0.03	0.394	0.482	0.287
		Back	0.377	0.150	0.331	0.045	0.527	0.708	0.422
		Left side	0.170	0.017	0.108	0.004	0.187	0.278	0.174
		Right side	0.356	0.113	0.282	0.021	0.469	0.638	0.377
		Top side		0.029	0.297	0.011	0.029	0.297	0.011
		Bottom side	0.196				0.196	0.196	0.196
	LTE Band 26_LAT	Front	0.202	0.137	0.225	0.03	0.339	0.427	0.232
		Back	0.285	0.150	0.331	0.045	0.435	0.616	0.330
		Left side	0.159	0.017	0.108	0.004	0.176	0.267	0.163
		Right side	0.207	0.113	0.282	0.021	0.320	0.489	0.228
		Top side		0.029	0.297	0.011	0.029	0.297	0.011
		Bottom side	0.113				0.113	0.113	0.113
	LTE Band 5_LAT	Front	0.216	0.137	0.225	0.03	0.353	0.441	0.246
		Back	0.334	0.150	0.331	0.045	0.484	0.665	0.379
		Left side	0.160	0.017	0.108	0.004	0.177	0.268	0.164
		Right side	0.237	0.113	0.282	0.021	0.350	0.519	0.258
		Top side		0.029	0.297	0.011	0.029	0.297	0.011
		Bottom side	0.170				0.170	0.170	0.170
	LTE Band 66_LAT	Front	0.354	0.137	0.225	0.03	0.491	0.579	0.384
		Back	1.051	0.150	0.331	0.045	1.201	1.382	1.096
		Left side	0.068	0.017	0.108	0.004	0.085	0.176	0.072
		Right side	0.331	0.113	0.282	0.021	0.444	0.613	0.352
		Top side		0.029	0.297	0.011	0.029	0.297	0.011
		Bottom side	0.858				0.858	0.858	0.858
	LTE Band 25_LAT	Front	0.404	0.137	0.225	0.03	0.541	0.629	0.434
		Back	0.714	0.150	0.331	0.045	0.864	1.045	0.759
		Left side	0.175	0.017	0.108	0.004	0.192	0.283	0.179
		Right side	0.142	0.113	0.282	0.021	0.255	0.424	0.163
		Top side		0.029	0.297	0.011	0.029	0.297	0.011
		Bottom side	0.536				0.536	0.536	0.536
	LTE Band 7_LAT	Front	0.413	0.137	0.225	0.03	0.550	0.638	0.443
		Back	0.982	0.150	0.331	0.045	1.132	1.313	1.027
		Left side	0.071	0.017	0.108	0.004	0.088	0.179	0.075
		Right side	0.090	0.113	0.282	0.021	0.203	0.372	0.111
		Top side	0.808	0.029	0.297	0.011	0.837	1.105	0.819
		Bottom side	1.075				1.075	1.075	1.075
	LTE Band 41_LAT	Front	0.356	0.137	0.225	0.03	0.493	0.581	0.386
		Back	1.031	0.150	0.331	0.045	1.181	1.362	1.076
		Left side	0.046	0.017	0.108	0.004	0.063	0.154	0.050
		Right side	0.115	0.113	0.282	0.021	0.228	0.397	0.136
		Top side		0.029	0.297	0.011	0.029	0.297	0.011
		Bottom side	1.070				1.070	1.070	1.070

15.3 Body-Worn Accessory Exposure Conditions

WWAN Band		Exposure Position	1	2	3	4	1+2 Summed 1g SAR (W/kg)	1+3 Summed 1g SAR (W/kg)	1+4 Summed 1g SAR (W/kg)
			WWAN	2.4GHz WLAN Ant 1	5GHz WLAN Ant 1	Bluetooth Ant 1			
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)			
GSM	GSM850_UAT	Front	0.222	0.137	0.225	0.030	0.359	0.447	0.252
		Back	0.456	0.150	0.352	0.045	0.606	0.808	0.501
	GSM1900_UAT	Front	0.542	0.137	0.225	0.030	0.679	0.767	0.572
		Back	0.421	0.150	0.352	0.045	0.571	0.773	0.466
WCDMA	WCDMA V_UAT	Front	0.126	0.137	0.225	0.030	0.263	0.351	0.156
		Back	0.174	0.150	0.352	0.045	0.324	0.526	0.219
	WCDMA IV_UAT	Front	0.723	0.137	0.225	0.030	0.860	0.948	0.753
		Back	0.553	0.150	0.352	0.045	0.703	0.905	0.598
	WCDMA II_UAT	Front	0.744	0.137	0.225	0.030	0.881	0.969	0.774
		Back	0.625	0.150	0.352	0.045	0.775	0.977	0.670
LTE	LTE Band 71_UAT	Front	0.261	0.137	0.225	0.030	0.398	0.486	0.291
		Back	0.368	0.150	0.352	0.045	0.518	0.720	0.413
	LTE Band 12_UAT	Front	0.317	0.137	0.225	0.030	0.454	0.542	0.347
		Back	0.410	0.150	0.352	0.045	0.560	0.762	0.455
	LTE Band 13_UAT	Front	0.196	0.137	0.225	0.030	0.333	0.421	0.226
		Back	0.292	0.150	0.352	0.045	0.442	0.644	0.337
	LTE Band 14_UAT	Front	0.175	0.137	0.225	0.030	0.312	0.400	0.205
		Back	0.267	0.150	0.352	0.045	0.417	0.619	0.312
	LTE Band 26_UAT	Front	0.092	0.137	0.225	0.030	0.229	0.317	0.122
		Back	0.166	0.150	0.352	0.045	0.316	0.518	0.211
	LTE Band 5_UAT	Front	0.117	0.137	0.225	0.030	0.254	0.342	0.147
		Back	0.177	0.150	0.352	0.045	0.327	0.529	0.222
	LTE Band 66_UAT	Front	0.767	0.137	0.225	0.030	0.904	0.992	0.797
		Back	0.493	0.150	0.352	0.045	0.643	0.845	0.538
	LTE Band 25_UAT	Front	0.900	0.137	0.225	0.030	1.037	1.125	0.930
		Back	0.600	0.150	0.352	0.045	0.750	0.952	0.645
	LTE Band 7_UAT	Front	0.457	0.137	0.225	0.030	0.594	0.682	0.487
		Back	1.007	0.150	0.352	0.045	1.157	1.359	1.052
	LTE Band 41_UAT	Front	0.448	0.137	0.225	0.030	0.585	0.673	0.478
		Back	1.063	0.150	0.352	0.045	1.213	1.415	1.108

WWAN Band		Exposure Position	1	2	3	4	1+2 Summed 1g SAR (W/kg)	1+3 Summed 1g SAR (W/kg)	1+4 Summed 1g SAR (W/kg)
			WWAN	2.4GHz WLAN Ant 1	5GHz WLAN Ant 1	Bluetooth Ant 1			
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)			
GSM	GSM850_LAT	Front	0.427	0.137	0.225	0.030	0.564	0.652	0.457
		Back	0.684	0.150	0.352	0.045	0.834	1.036	0.729
	GSM1900_LAT	Front	0.245	0.137	0.225	0.030	0.382	0.470	0.275
		Back	0.480	0.150	0.352	0.045	0.630	0.832	0.525
WCDMA	WCDMA V_LAT	Front	0.207	0.137	0.225	0.030	0.344	0.432	0.237
		Back	0.321	0.150	0.352	0.045	0.471	0.673	0.366
	WCDMA IV_LAT	Front	0.349	0.137	0.225	0.030	0.486	0.574	0.379
		Back	0.961	0.150	0.352	0.045	1.111	1.313	1.006
	WCDMA II_LAT	Front	0.462	0.137	0.225	0.030	0.599	0.687	0.492
		Back	0.597	0.150	0.352	0.045	0.747	0.949	0.642
LTE	LTE Band 71_LAT	Front	0.260	0.137	0.225	0.030	0.397	0.485	0.290
		Back	0.404	0.150	0.352	0.045	0.554	0.756	0.449
	LTE Band 12_LAT	Front	0.362	0.137	0.225	0.030	0.499	0.587	0.392
		Back	0.519	0.150	0.352	0.045	0.669	0.871	0.564
	LTE Band 13_LAT	Front	0.289	0.137	0.225	0.030	0.426	0.514	0.319
		Back	0.459	0.150	0.352	0.045	0.609	0.811	0.504
	LTE Band 14_LAT	Front	0.257	0.137	0.225	0.030	0.394	0.482	0.287
		Back	0.377	0.150	0.352	0.045	0.527	0.729	0.422
	LTE Band 26_LAT	Front	0.202	0.137	0.225	0.030	0.339	0.427	0.232
		Back	0.285	0.150	0.352	0.045	0.435	0.637	0.330
	LTE Band 5_LAT	Front	0.216	0.137	0.225	0.030	0.353	0.441	0.246
		Back	0.334	0.150	0.352	0.045	0.484	0.686	0.379
	LTE Band 66_LAT	Front	0.354	0.137	0.225	0.030	0.491	0.579	0.384
		Back	1.051	0.150	0.352	0.045	1.201	1.403	1.096
	LTE Band 25_LAT	Front	0.404	0.137	0.225	0.030	0.541	0.629	0.434
		Back	0.714	0.150	0.352	0.045	0.864	1.066	0.759
	LTE Band 7_LAT	Front	0.413	0.137	0.225	0.030	0.550	0.638	0.443
		Back	0.982	0.150	0.352	0.045	1.132	1.334	1.027
	LTE Band 41_LAT	Front	0.356	0.137	0.225	0.030	0.493	0.581	0.386
		Back	1.031	0.150	0.352	0.045	1.181	1.383	1.076

Test Engineer： Changlin Huang, Bin He, Mengming Dai

16. Uncertainty Assessment

Per KDB 865664 D01 SAR measurement 100MHz to 6GHz, when the highest measured 1-g SAR within a frequency band is < 1.5 W/kg and the measured 10-g SAR within a frequency band is < 3.75 W/kg. The expanded SAR measurement uncertainty must be ≤ 30%, for a confidence interval of k = 2. If these conditions are met, extensive SAR measurement uncertainty analysis described in IEEE Std 1528-2013 is not required in SAR reports submitted for equipment approval. For this device, the highest measured 1-g SAR is less 1.5W/kg and highest measured 10-g SAR is less 3.75W/kg. Therefore, the measurement uncertainty table is not required in this report.

17. References

[1] FCC 47 CFR Part 2 “Frequency Allocations and Radio Treaty Matters; General Rules and Regulations”

[2] ANSI/IEEE Std. C95.1-1992, “IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz”, September 1992

[3] IEEE Std. 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”, Sep 2013

[4] SPEAG DASY System Handbook

[5] FCC KDB 865664 D01 v01r04, "SAR Measurement Requirements for 100 MHz to 6 GHz", Aug 2015.

[6] FCC KDB 865664 D02 v01r02, “RF Exposure Compliance Reporting and Documentation Considerations” Oct 2015.

[7] FCC KDB 248227 D01 v02r02, “SAR Guidance for IEEE 802.11 (WiFi) Transmitters”, Oct 2015.

[8] FCC KDB 447498 D01 v06, “Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Policies”, Oct 2015

[9] FCC KDB 648474 D04 v01r03, “SAR Evaluation Considerations for Wireless Handsets”, Oct 2015.

[10] FCC KDB 941225 D01 v03r01, “3G SAR MEAUREMENT PROCEDURES”, Oct 2015

[11] FCC KDB 941225 D05 v02r05, “SAR Evaluation Considerations for LTE Devices”, Dec 2015

[12] FCC KDB 941225 D05A v01r02, “Rel. 10 LTE SAR Test Guidance and KDB Inquiries”, Oct 2015

[13] FCC KDB 941225 D06 v02r01, "SAR Evaluation Procedures for Portable Devices with Wireless Router Capabilities", Oct 2015.

------THE END------

Appendix A. Plots of System Performance Check

The plots are shown as follows.

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 05/06/2020

System Check_Head_750MHz

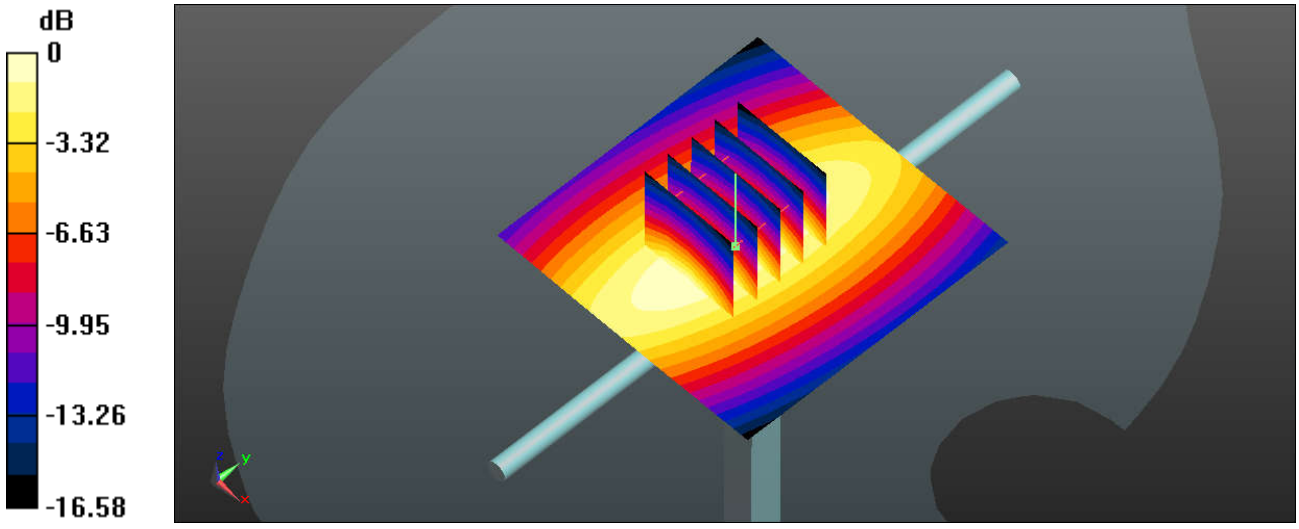
DUT: D750V3-SN:1099

Communication System: UID 0, CW (0); Frequency: 750 MHz;Duty Cycle: 1:1
Medium: HSL_750_200605 Medium parameters used: f = 750 MHz; σ = 0.887 S/m; ε_r = 40.873; ρ = 1000 kg/m^3
Ambient Temperature：23.4 ℃; Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7577; ConvF(10.10, 10.10, 10.10); Calibrated: 03/02/2020;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1356; Calibrated: 19/05/2020
- Phantom: SAM with CRP v4.0(Front); Type: QD000P40CC; Serial: TP:1575
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Pin=250mW/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 2.83 W/kg

Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 57.70 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 3.31 W/kg
SAR(1 g) = 2.27 W/kg; SAR(10 g) = 1.52 W/kg
Maximum value of SAR (measured) = 2.84 W/kg



0 dB = 2.83 W/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 06/06/2020

System Check_Head_835MHz

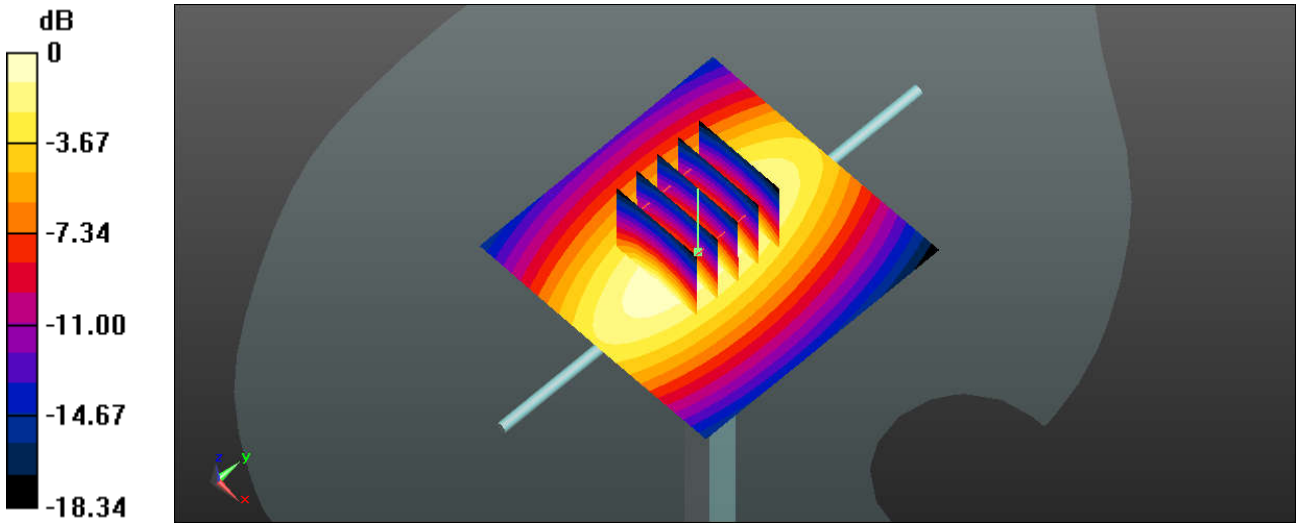
DUT: D835V2-SN:4d162

Communication System: UID 0, CW; Frequency: 835 MHz;Duty Cycle: 1:1
Medium: HSL_835_200606 Medium parameters used: f = 835 MHz; σ = 0.902 S/m; ε_r = 40.749; ρ = 1000 kg/m^3
Ambient Temperature：23.4 ℃; Liquid Temperature：22.5 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7577; ConvF(9.69, 9.69, 9.69); Calibrated: 03/02/2020;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1356; Calibrated: 19/05/2020
- Phantom: SAM with CRP v4.0(Front); Type: QD000P40CC; Serial: TP:1575
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Pin=250mW/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 3.33 W/kg

Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 61.17 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 3.93 W/kg
SAR(1 g) = 2.61 W/kg; SAR(10 g) = 1.72 W/kg
Maximum value of SAR (measured) = 3.33 W/kg



0 dB = 3.33 W/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 15/06/2020

System Check_Head_835MHz

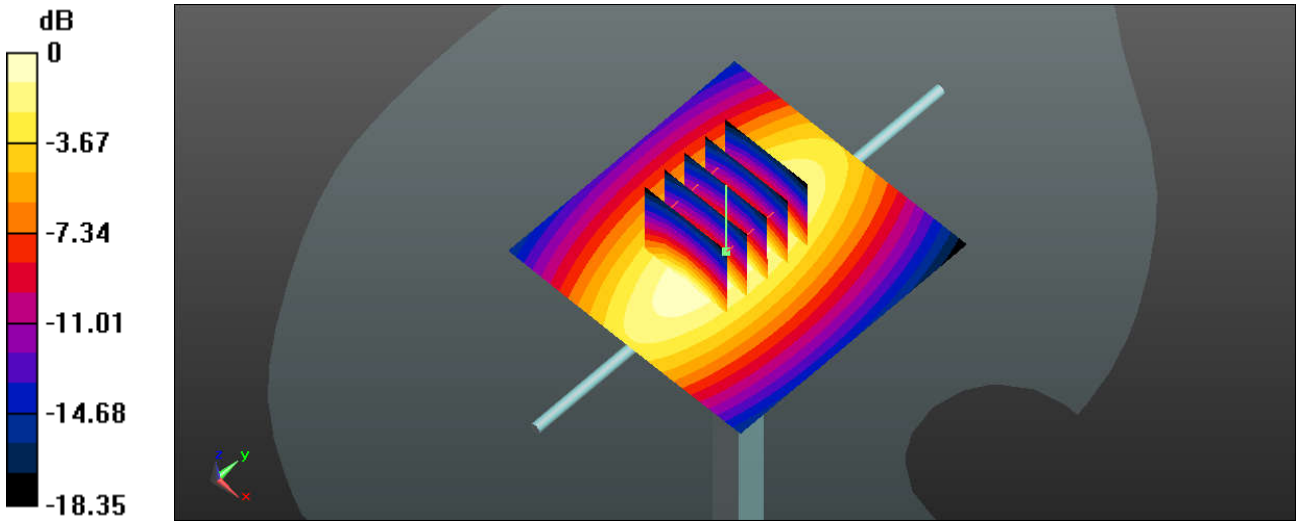
DUT: D835V2-SN:4d162

Communication System: UID 0, CW; Frequency: 835 MHz;Duty Cycle: 1:1
Medium: HSL_835_200615 Medium parameters used: f = 835 MHz; σ = 0.928 S/m; ε_r = 42.73; ρ = 1000 kg/m^3
Ambient Temperature：23.5 ℃; Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7577; ConvF(9.69, 9.69, 9.69); Calibrated: 03/02/2020;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1356; Calibrated: 19/05/2020
- Phantom: SAM with CRP v4.0(Front); Type: QD000P40CC; Serial: TP:1575
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Pin=250mW/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 3.43 W/kg

Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 61.17 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 4.04 W/kg
SAR(1 g) = 2.63 W/kg; SAR(10 g) = 1.70 W/kg
Maximum value of SAR (measured) = 3.43 W/kg



0 dB = 3.43 W/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 10/06/2020

System Check_Head_1750MHz

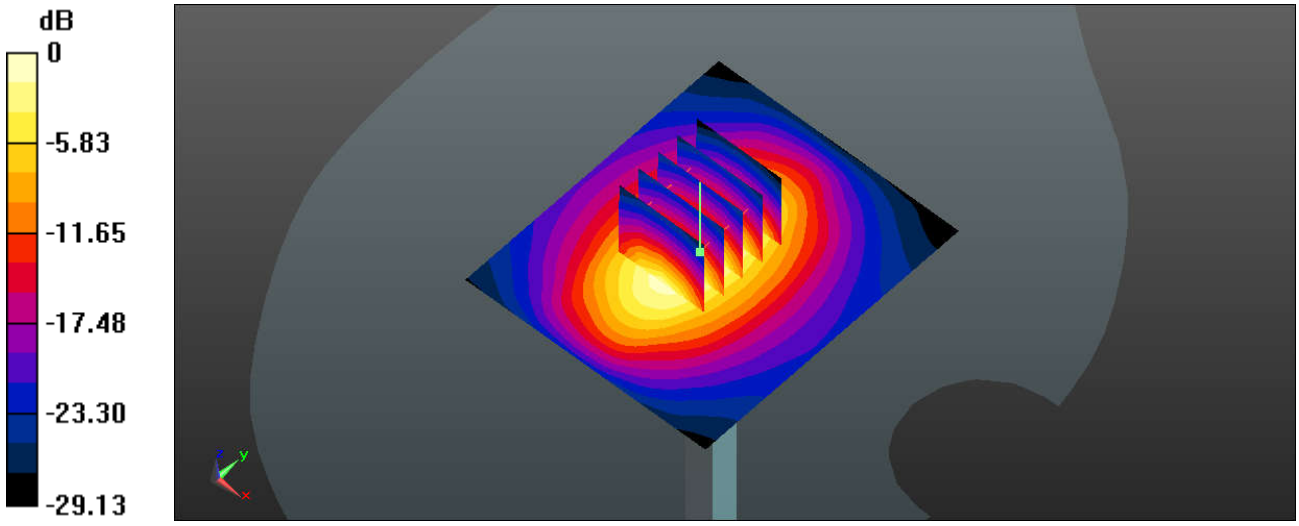
DUT: D1750V2-SN:1137

Communication System: UID 0, CW; Frequency: 1750 MHz;Duty Cycle: 1:1
Medium: HSL_1750_200610 Medium parameters used: f = 1750 MHz; σ = 1.385 S/m; ε_r = 39.563; ρ = 1000 kg/m^3
Ambient Temperature：23.5 ℃; Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7577; ConvF(8.62, 8.62, 8.62); Calibrated: 03/02/2020;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1356; Calibrated: 19/05/2020
- Phantom: SAM with CRP v4.0(Front); Type: QD000P40CC; Serial: TP:1575
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Pin=250mW/Area Scan (61x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 13.2 W/kg

Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 92.88 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 15.8 W/kg
SAR(1 g) = 8.98 W/kg; SAR(10 g) = 4.83 W/kg
Maximum value of SAR (measured) = 12.7 W/kg



0 dB = 13.2 W/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 18/06/2020

System Check_Head_1750MHz

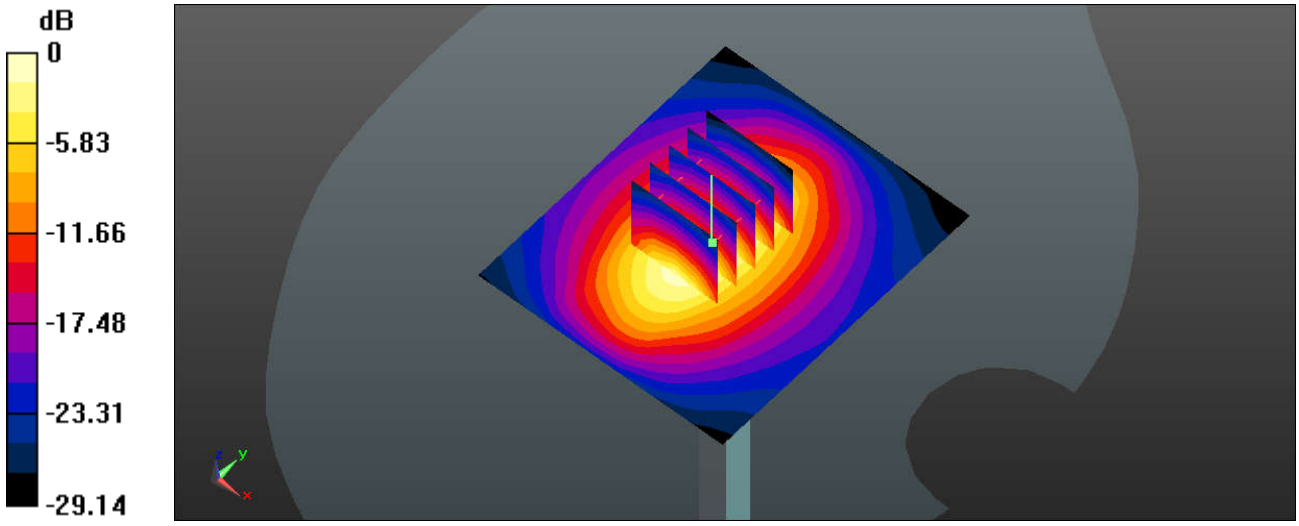
DUT: D1750V2-SN:1137

Communication System: UID 0, CW; Frequency: 1750 MHz;Duty Cycle: 1:1
Medium: HSL_1750_200618 Medium parameters used: f = 1750 MHz; σ = 1.392 S/m; ε_r = 40.573; ρ = 1000 kg/m^3
Ambient Temperature：23.4 ℃; Liquid Temperature：22.4 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7577; ConvF(8.62, 8.62, 8.62); Calibrated: 03/02/2020;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1356; Calibrated: 19/05/2020
- Phantom: SAM with CRP v4.0(Front); Type: QD000P40CC; Serial: TP:1575
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Pin=250mW/Area Scan (61x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 13.3 W/kg

Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 92.88 V/m; Power Drift = 0.19 dB
Peak SAR (extrapolated) = 15.9 W/kg
SAR(1 g) = 9.02 W/kg; SAR(10 g) = 4.85 W/kg
Maximum value of SAR (measured) = 12.7 W/kg



0 dB = 13.3 W/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 03/06/2020

System Check_Head_1900MHz

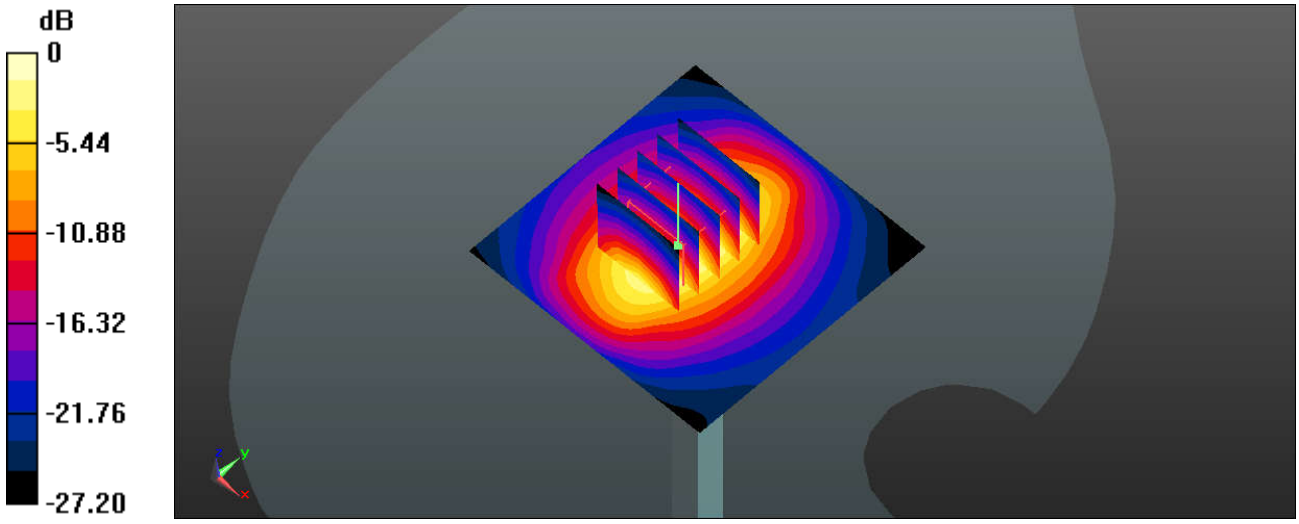
DUT: D1900V2-SN:5d182

Communication System: UID 0, CW; Frequency: 1900 MHz;Duty Cycle: 1:1
Medium: HSL_1900_200603 Medium parameters used: f = 1900 MHz; σ = 1.447 S/m; ε_r = 40.017; ρ = 1000 kg/m^3
Ambient Temperature：23.5 ℃; Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7577; ConvF(8.34, 8.34, 8.34); Calibrated: 03/02/2020;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1356; Calibrated: 19/05/2020
- Phantom: SAM with CRP v4.0(Front); Type: QD000P40CC; Serial: TP:1575
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Pin=250mW/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 14.5 W/kg

Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 96.05 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 18.7 W/kg
SAR(1 g) = 10 W/kg; SAR(10 g) = 5.16 W/kg
Maximum value of SAR (measured) = 14.5 W/kg



0 dB = 14.5 W/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 17/06/2020

System Check_Head_1900MHz

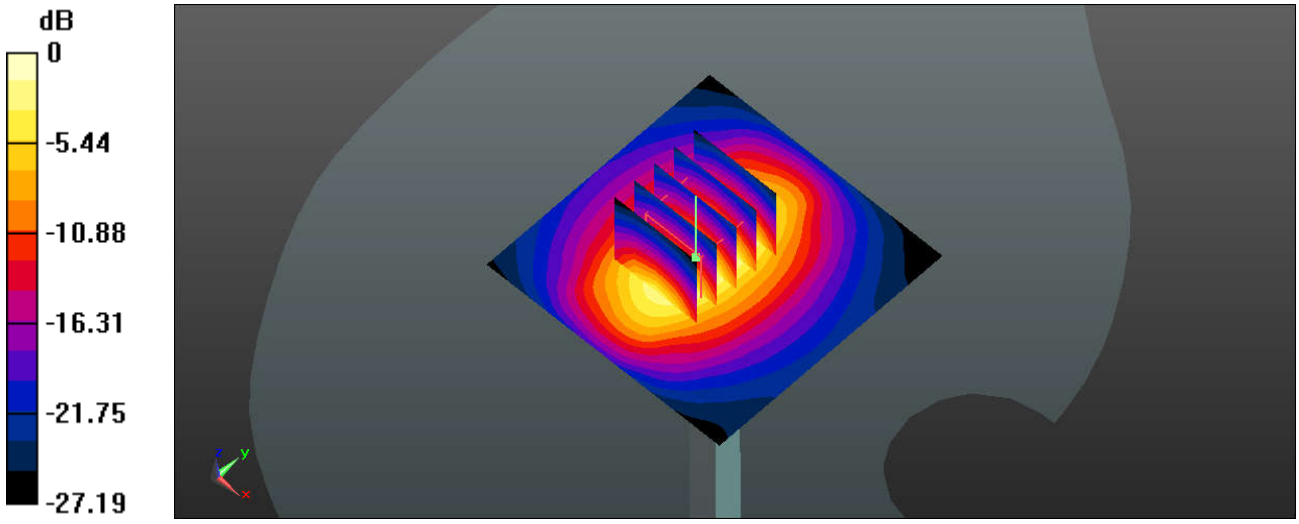
DUT: D1900V2-SN:5d182

Communication System: UID 0, CW; Frequency: 1900 MHz;Duty Cycle: 1:1
Medium: HSL_1900_200617 Medium parameters used: f = 1900 MHz; σ = 1.399 S/m; ε_r = 41.136; ρ = 1000 kg/m^3
Ambient Temperature：23.6 ℃; Liquid Temperature：22.4 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7577; ConvF(8.34, 8.34, 8.34); Calibrated: 03/02/2020;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1356; Calibrated: 19/05/2020
- Phantom: SAM with CRP v4.0(Front); Type: QD000P40CC; Serial: TP:1575
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Pin=250mW/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 14.0 W/kg

Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 96.05 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 18.1 W/kg
SAR(1 g) = 9.7 W/kg; SAR(10 g) = 4.99 W/kg
Maximum value of SAR (measured) = 14.1 W/kg



0 dB = 14.0 W/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 09/06/2020

System Check_Head_2450MHz

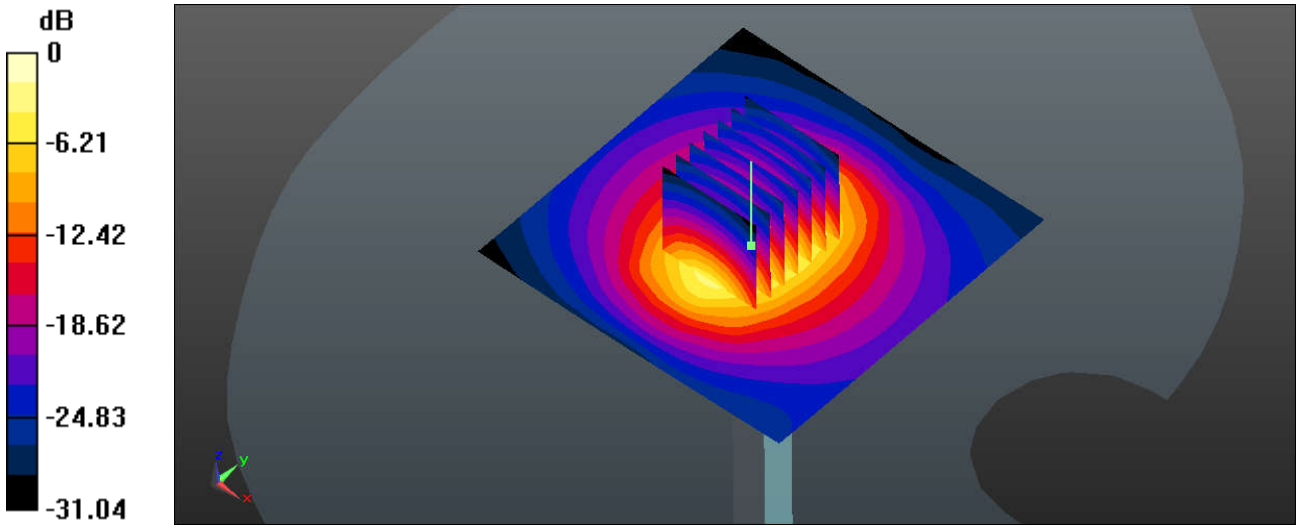
DUT: D2450V2-SN:924

Communication System: UID 0, CW (0); Frequency: 2450 MHz;Duty Cycle: 1:1
Medium: HSL_2450_200609 Medium parameters used: f = 2450 MHz; σ = 1.825 S/m; ε_r = 39.664; ρ = 1000 kg/m^3
Ambient Temperature：23.4 ℃; Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7577; ConvF(7.80, 7.80, 7.80); Calibrated: 03/02/2020;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1356; Calibrated: 19/05/2020
- Phantom: SAM with CRP v4.0(Front); Type: QD000P40CC; Serial: TP:1575
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Pin=250mW/Area Scan (81x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 17.8 W/kg

Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 101.7 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 26.7 W/kg
SAR(1 g) = 13.2 W/kg; SAR(10 g) = 5.81 W/kg
Maximum value of SAR (measured) = 17.4 W/kg



0 dB = 17.8 W/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 19/06/2020

System Check_Head_2450MHz

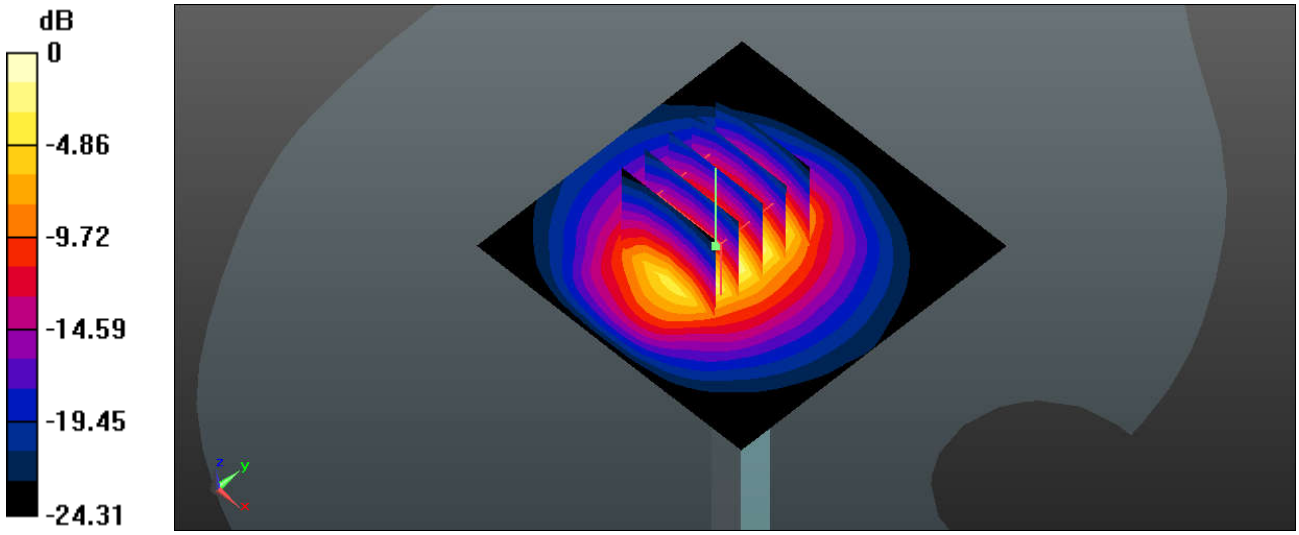
DUT: D2450V2-SN:924

Communication System: UID 0, CW (0); Frequency: 2450 MHz;Duty Cycle: 1:1
Medium: HSL_2450_200619 Medium parameters used: f = 2450 MHz; σ = 1.77 S/m; ε_r = 39.386; ρ = 1000 kg/m^3
Ambient Temperature：23.5 ℃; Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7577; ConvF(7.80, 7.80, 7.80); Calibrated: 03/02/2020;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1356; Calibrated: 19/05/2020
- Phantom: SAM with CRP v4.0(Front); Type: QD000P40CC; Serial: TP:1575
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Pin=250mW/Area Scan (81x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 19.8 W/kg

Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 83.59 V/m; Power Drift = 0.15 dB
Peak SAR (extrapolated) = 26.9 W/kg
SAR(1 g) = 12.8 W/kg; SAR(10 g) = 5.63 W/kg
Maximum value of SAR (measured) = 19.7 W/kg



0 dB = 19.8 W/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 04/06/2020

System Check_Head_2600MHz

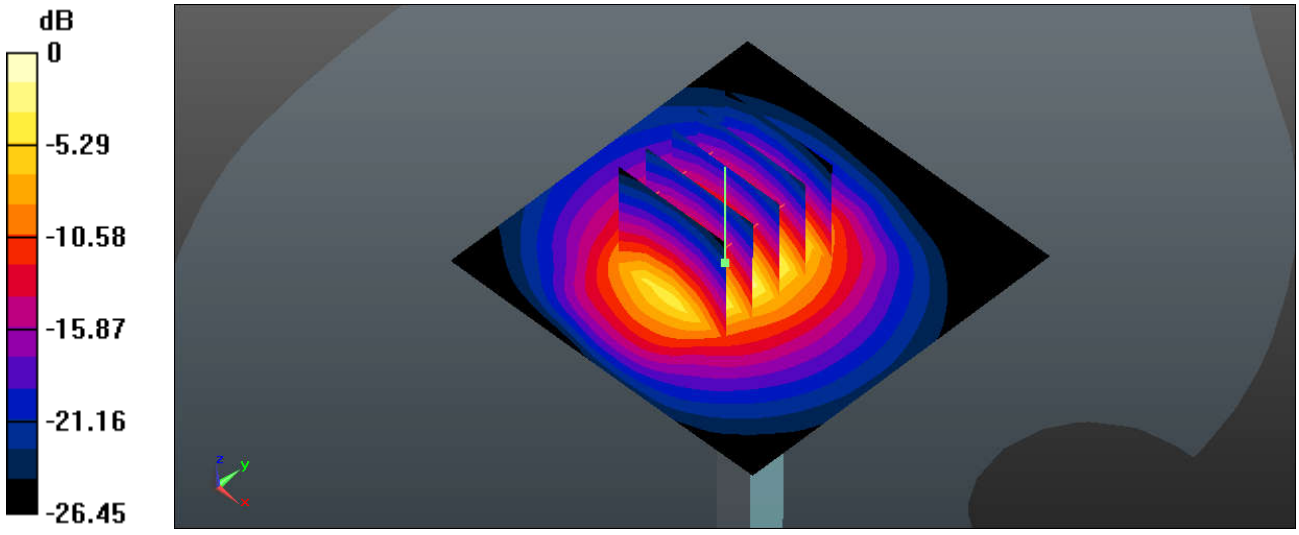
DUT: D2600V2-SN:1070

Communication System: UID 0, CW (0); Frequency: 2600 MHz;Duty Cycle: 1:1
Medium: HSL_2600_200604 Medium parameters used: f = 2600 MHz; σ = 2.053 S/m; ε_r = 38.007; ρ = 1000 kg/m^3
Ambient Temperature：23.5 ℃; Liquid Temperature：22.4 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7577; ConvF(7.51, 7.51, 7.51); Calibrated: 03/02/2020;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1356; Calibrated: 19/05/2020
- Phantom: SAM with CRP v4.0(Front); Type: QD000P40CC; Serial: TP:1575
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Pin=250mW/Area Scan (81x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 23.8 W/kg

Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 101.1 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 34.5 W/kg
SAR(1 g) = 14.5 W/kg; SAR(10 g) = 6.3 W/kg
Maximum value of SAR (measured) = 24.2 W/kg



0 dB = 23.8 W/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 16/06/2020

System Check_Head_2600MHz

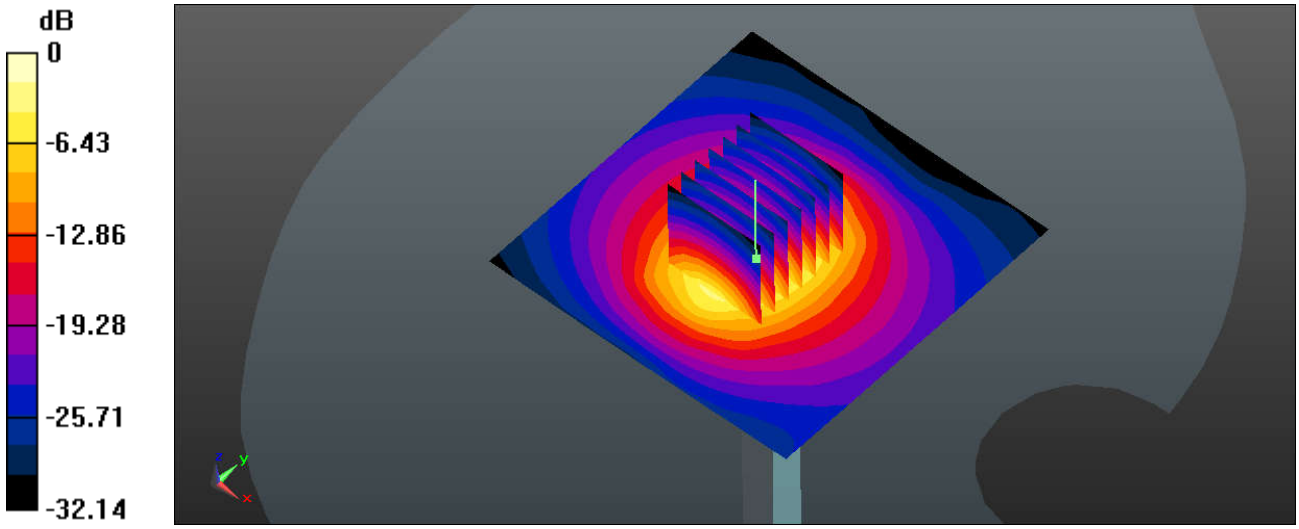
DUT: D2600V2-SN:1070

Communication System: UID 0, CW (0); Frequency: 2600 MHz;Duty Cycle: 1:1
Medium: HSL_2600_200616 Medium parameters used: f = 2600 MHz; σ = 2.049 S/m; ε_r = 37.739; ρ = 1000 kg/m^3
Ambient Temperature：23.4 ℃; Liquid Temperature：22.8 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7577; ConvF(7.51, 7.51, 7.51); Calibrated: 03/02/2020;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1356; Calibrated: 19/05/2020
- Phantom: SAM with CRP v4.0(Front); Type: QD000P40CC; Serial: TP:1575
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Pin=250mW/Area Scan (81x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 21.2 W/kg

Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 101.6 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 32.3 W/kg
SAR(1 g) = 14.1 W/kg; SAR(10 g) = 6.22 W/kg
Maximum value of SAR (measured) = 20.5 W/kg



0 dB = 21.2 W/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 12/06/2020

System Check_Head_5250MHz

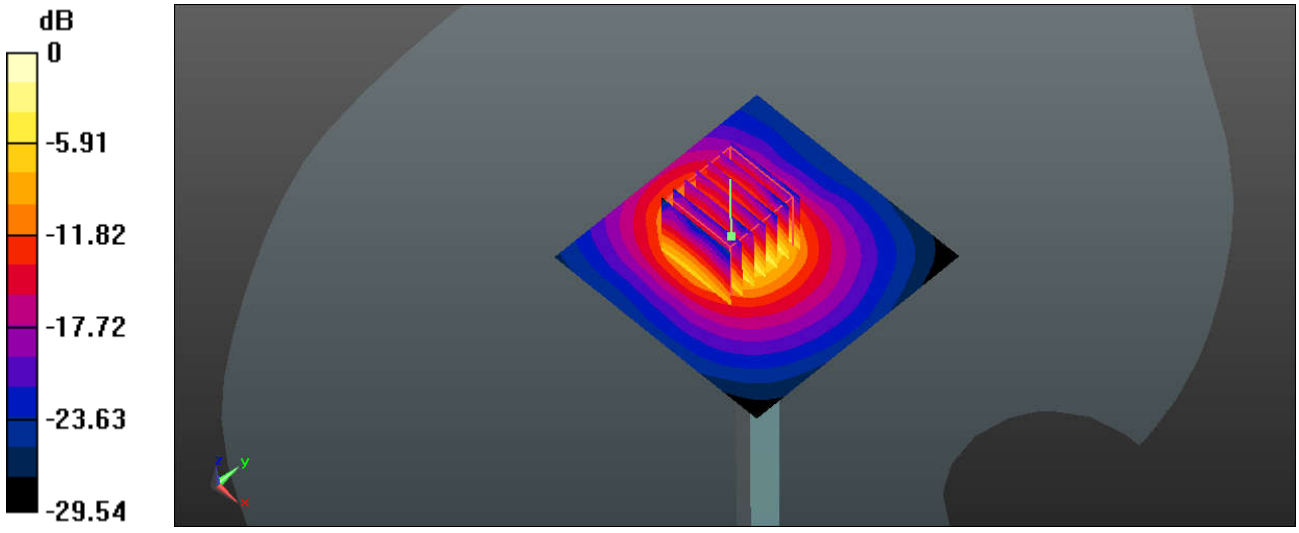
DUT: D5GHzV2-SN:1167

Communication System: UID 0, CW (0); Frequency: 5250 MHz;Duty Cycle: 1:1
Medium: HSL_5250_200612 Medium parameters used: f = 5250 MHz; σ = 4.597 S/m; ε_r = 36.241; ρ = 1000 kg/m^3
Ambient Temperature：23.5 ℃; Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7577; ConvF(5.14, 5.14, 5.14); Calibrated: 03/02/2020;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1356; Calibrated: 19/05/2020
- Phantom: SAM with CRP v4.0(Front); Type: QD000P40CC; Serial: TP:1575
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Pin=100mW/Area Scan (71x71x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 18.7 W/kg

Pin=100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 45.69 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 30.4 W/kg
SAR(1 g) = 7.7 W/kg; SAR(10 g) = 2.15 W/kg
Maximum value of SAR (measured) = 18.9 W/kg



0 dB = 18.7 W/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 20/06/2020

System Check_Head_5250MHz

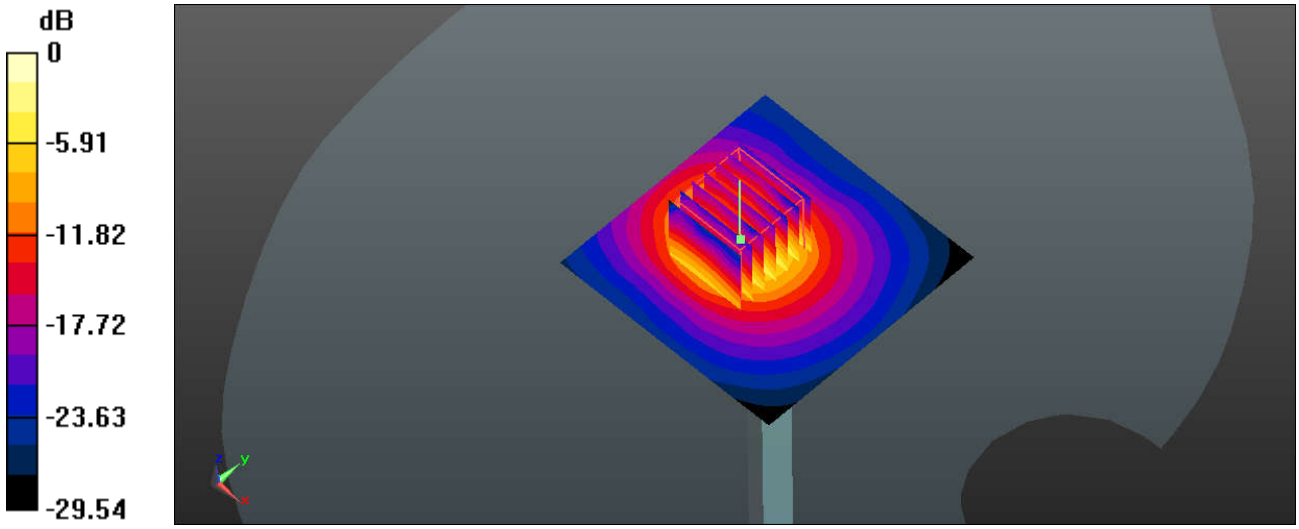
DUT: D5GHzV2-SN:1167

Communication System: UID 0, CW (0); Frequency: 5250 MHz;Duty Cycle: 1:1
Medium: HSL_5250_200620 Medium parameters used: f = 5250 MHz; σ = 4.673 S/m; ε_r = 35.938; ρ = 1000 kg/m^3
Ambient Temperature：23.5 ℃; Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7577; ConvF(5.14, 5.14, 5.14); Calibrated: 03/02/2020;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1356; Calibrated: 19/05/2020
- Phantom: SAM with CRP v4.0(Front); Type: QD000P40CC; Serial: TP:1575
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Pin=100mW/Area Scan (71x71x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 19.0 W/kg

Pin=100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 45.69 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 30.9 W/kg
SAR(1 g) = 7.83 W/kg; SAR(10 g) = 2.19 W/kg
Maximum value of SAR (measured) = 19.2 W/kg



0 dB = 19.0 W/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 13/06/2020

System Check_Head_5600MHz

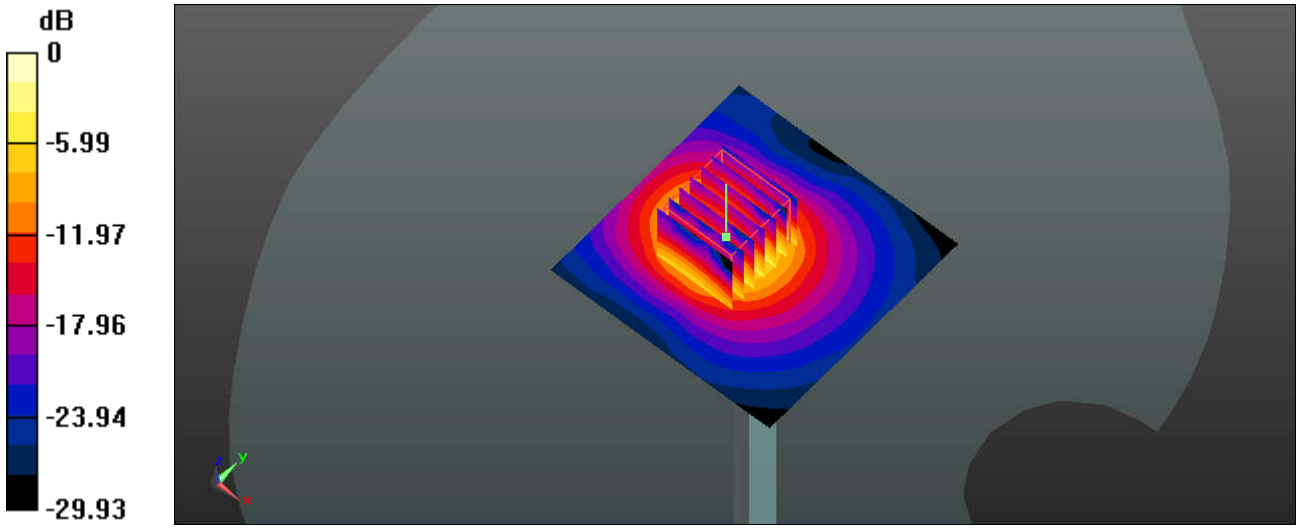
DUT: D5GHzV2-SN:1167

Communication System: UID 0, CW (0); Frequency: 5600 MHz;Duty Cycle: 1:1
Medium: HSL_5600_200613 Medium parameters used: f = 5600 MHz; σ = 4.954 S/m; ε_r = 35.793; ρ = 1000 kg/m^3
Ambient Temperature：23.4 ℃; Liquid Temperature：22.9 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7577; ConvF(4.56, 4.56, 4.56); Calibrated: 03/02/2020;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1356; Calibrated: 19/05/2020
- Phantom: SAM with CRP v4.0(Front); Type: QD000P40CC; Serial: TP:1575
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Pin=100mW/Area Scan (71x71x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 21.4 W/kg

Pin=100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 47.56 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 36.0 W/kg
SAR(1 g) = 8.45 W/kg; SAR(10 g) = 2.35 W/kg
Maximum value of SAR (measured) = 21.1 W/kg



0 dB = 21.4 W/kg

System Check_Head_5600MHz

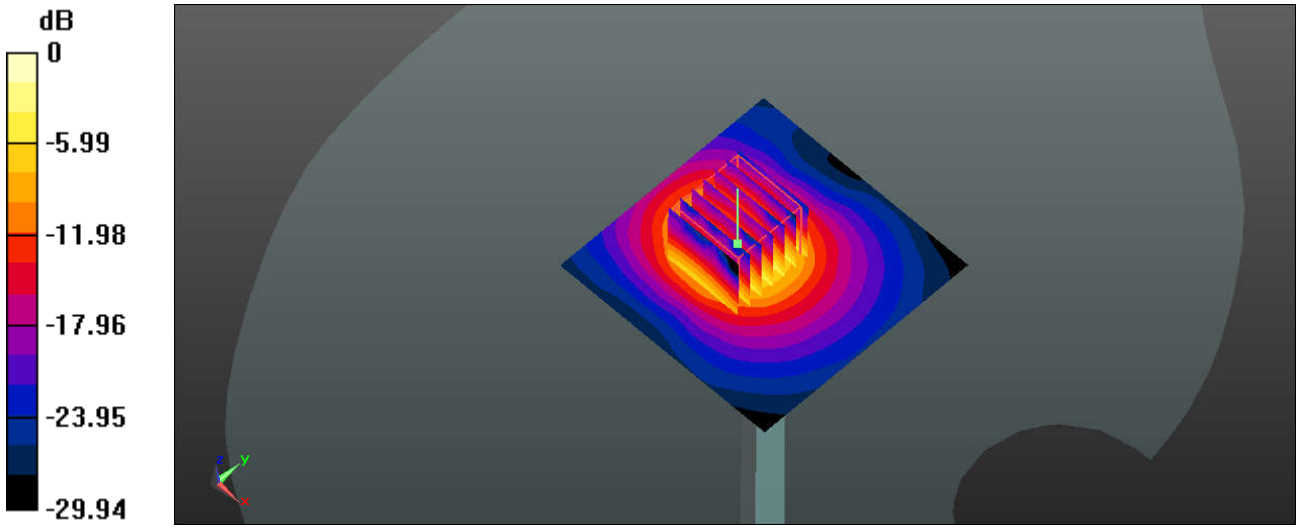
DUT: D5GHzV2-SN:1167

Communication System: UID 0, CW (0); Frequency: 5600 MHz;Duty Cycle: 1:1
Medium: HSL_5600_200621 Medium parameters used: f = 5600 MHz; σ = 5.08 S/m; ε_r = 35.374; ρ = 1000 kg/m^3
Ambient Temperature：23.6 ℃; Liquid Temperature：22.4 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7577; ConvF(4.56, 4.56, 4.56); Calibrated: 03/02/2020;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1356; Calibrated: 19/05/2020
- Phantom: SAM with CRP v4.0(Front); Type: QD000P40CC; Serial: TP:1575
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Pin=100mW/Area Scan (71x71x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 22.0 W/kg

Pin=100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 47.56 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 36.9 W/kg
SAR(1 g) = 8.66 W/kg; SAR(10 g) = 2.41 W/kg
Maximum value of SAR (measured) = 21.6 W/kg



0 dB = 22.0 W/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 14/06/2020

System Check_Head_5750MHz

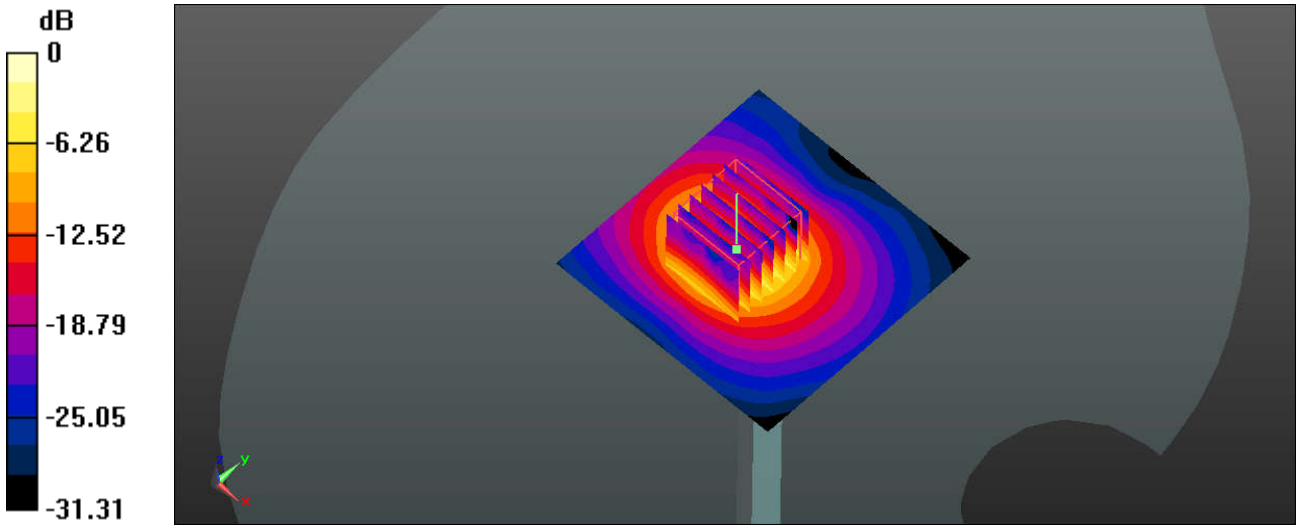
DUT: D5GHzV2-SN:1167

Communication System: UID 0, CW (0); Frequency: 5750 MHz;Duty Cycle: 1:1
Medium: HSL_5750_200614 Medium parameters used: f = 5750 MHz; σ = 5.119 S/m; ε_r = 35.497; ρ = 1000 kg/m^3
Ambient Temperature：23.5 ℃; Liquid Temperature：22.8 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7577; ConvF(4.78, 4.78, 4.78); Calibrated: 03/02/2020;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1356; Calibrated: 19/05/2020
- Phantom: SAM with CRP v4.0(Front); Type: QD000P40CC; Serial: TP:1575
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Pin=100mW/Area Scan (71x71x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 19.7 W/kg

Pin=100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 50.71 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 35.1 W/kg
SAR(1 g) = 7.87 W/kg; SAR(10 g) = 2.16 W/kg
Maximum value of SAR (measured) = 20.5 W/kg



0 dB = 19.7 W/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 22/06/2020

System Check_Head_5750MHz

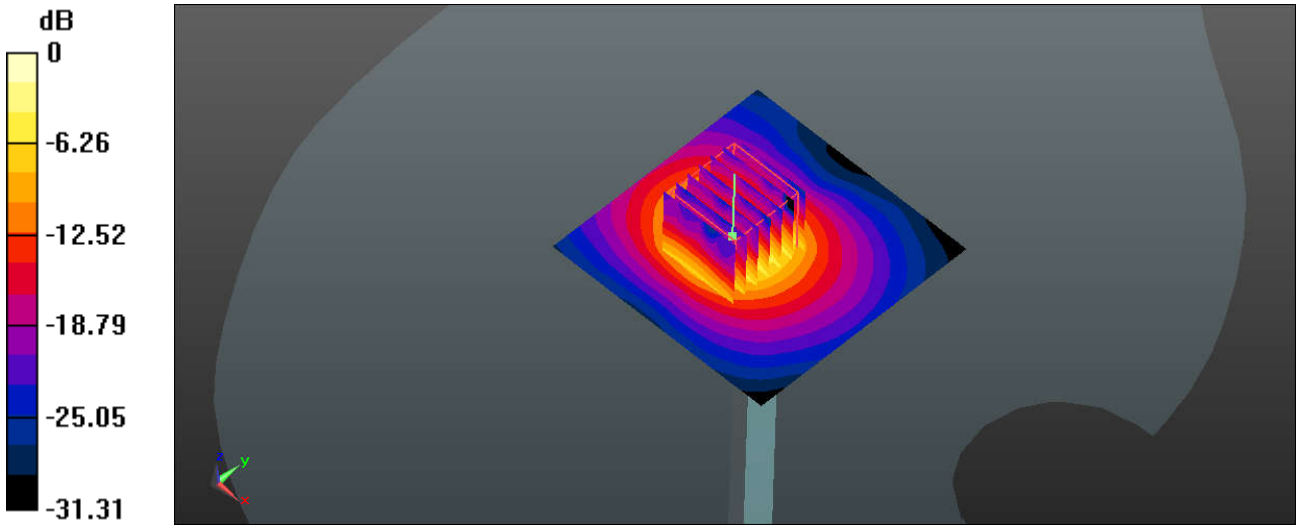
DUT: D5GHzV2-SN:1167

Communication System: UID 0, CW (0); Frequency: 5750 MHz;Duty Cycle: 1:1
Medium: HSL_5750_200622 Medium parameters used: f = 5750 MHz; σ = 5.25 S/m; ε_r = 35.137; ρ = 1000 kg/m^3
Ambient Temperature：23.6 ℃; Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7577; ConvF(4.78, 4.78, 4.78); Calibrated: 03/02/2020;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1356; Calibrated: 19/05/2020
- Phantom: SAM with CRP v4.0(Front); Type: QD000P40CC; Serial: TP:1575
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Pin=100mW/Area Scan (71x71x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 20.2 W/kg

Pin=100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 50.71 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 36.0 W/kg
SAR(1 g) = 8.08 W/kg; SAR(10 g) = 2.21 W/kg
Maximum value of SAR (measured) = 21.0 W/kg



0 dB = 20.2 W/kg

Appendix B. Plots of High SAR Measurement

The plots are shown as follows.

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 15/06/2020

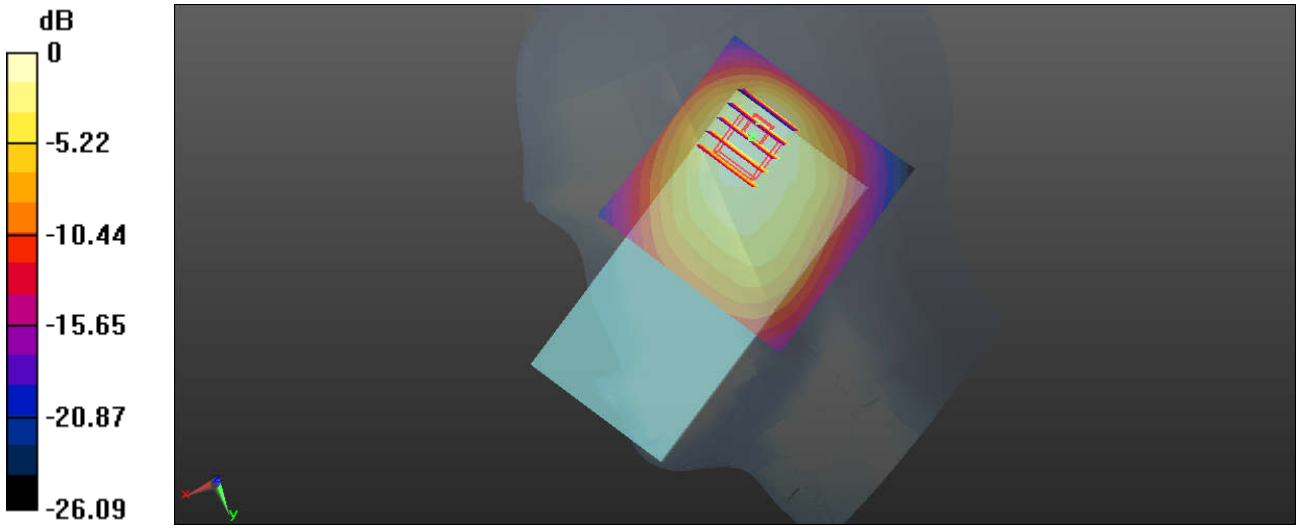
01_GSM850_GPRS(4 Tx slots)_Right Cheek_Ch251

Communication System: UID 0, GPRS/EGPRS(0); Frequency: 848.8 MHz;Duty Cycle: 1:2.08
Medium: HSL_835_200615 Medium parameters used: f = 849 MHz; σ = 0.942 S/m; ε_r = 42.559; ρ = 1000 kg/m^3
Ambient Temperature：23.5 ℃; Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7577; ConvF(9.69, 9.69, 9.69); Calibrated: 03/02/2020;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1356; Calibrated: 19/05/2020
- Phantom: SAM with CRP v4.0(Front); Type: QD000P40CC; Serial: TP:1575
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch251/Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.04 W/kg

Ch251/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 26.70 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 1.43 W/kg
SAR(1 g) = 0.819 W/kg; SAR(10 g) = 0.518 W/kg
Maximum value of SAR (measured) = 0.979 W/kg



0 dB = 1.04 W/kg

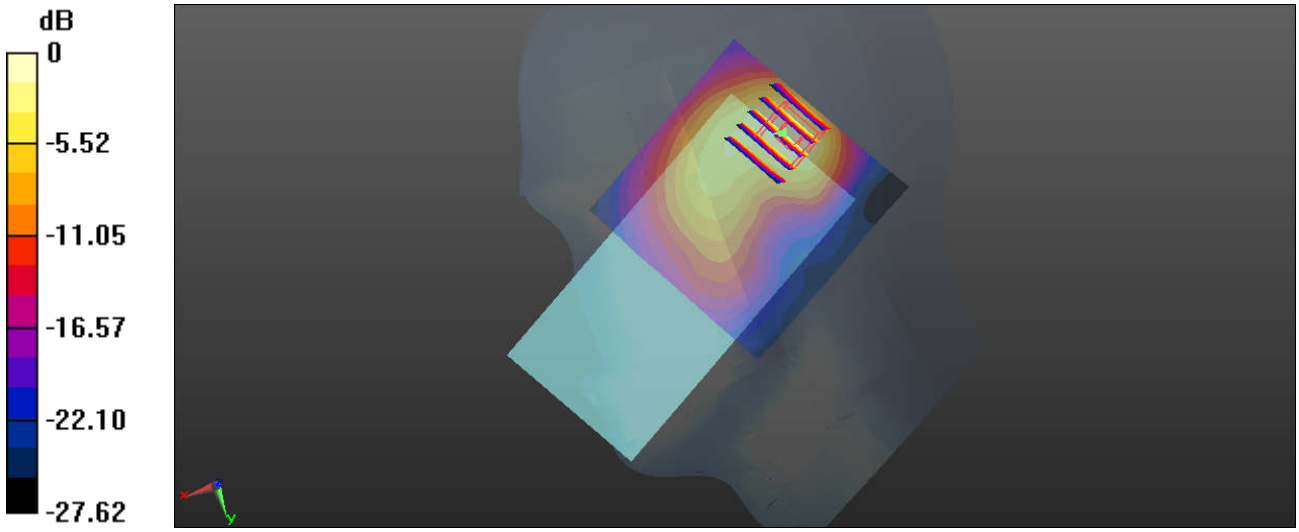
02_GSM1900_GPRS(4 Tx slots)_Right Cheek_Ch810

Communication System: UID 0, GPRS/EGPRS(0); Frequency: 1909.8 MHz;Duty Cycle:1:2.08
Medium: HSL_1900_200617 Medium parameters used: f = 1910 MHz; σ = 1.411 S/m; ε_r = 41.097; ρ = 1000 kg/m^3
Ambient Temperature：23.6 ℃; Liquid Temperature：22.4 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7577; ConvF(8.34, 8.34, 8.34); Calibrated: 03/02/2020;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1356; Calibrated: 19/05/2020
- Phantom: SAM with CRP v4.0(Front); Type: QD000P40CC; Serial: TP:1575
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch810/Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.03 W/kg

Ch810/Zoom Scan (5x5x7)/Cube 0: Measurement grid:dx=8mm, dy=8mm, dz=5mm
Reference Value = 17.15 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 1.53 W/kg
SAR(1 g) = 0.811 W/kg; SAR(10 g) = 0.393 W/kg
Maximum value of SAR (measured) = 1.01 W/kg



0 dB = 1.03 W/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 06/06/2020

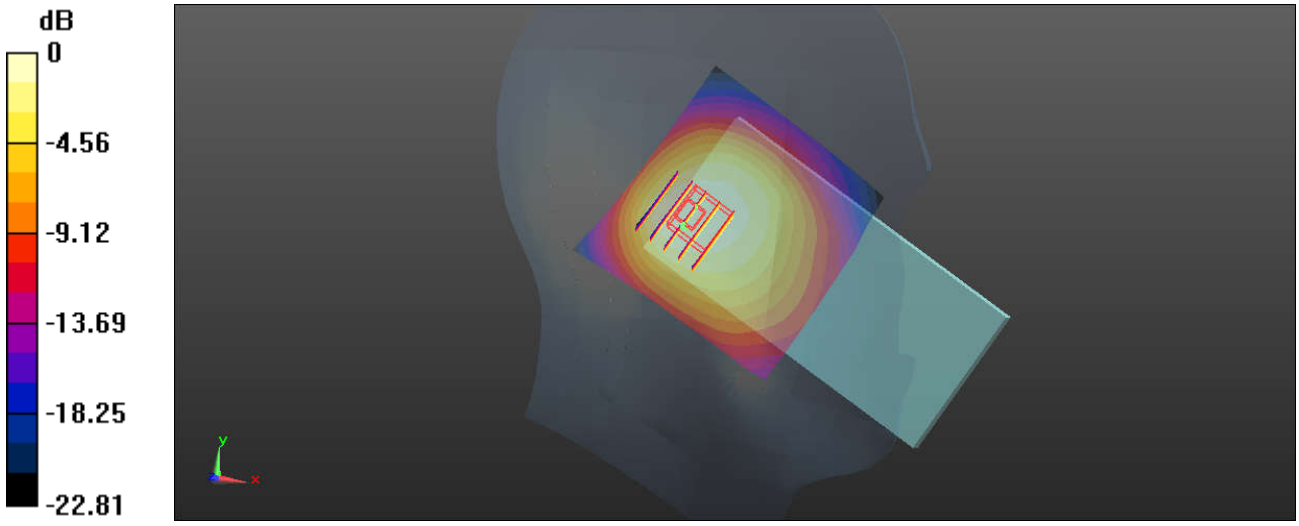
03_WCDMA V_RMC 12.2Kbps_Left Cheek_Ch4233

Communication System: UID 0, WCDMA (0); Frequency: 846.6 MHz;Duty Cycle: 1:1
Medium: HSL_835_200606 Medium parameters used: f = 846.6 MHz; σ = 0.927 S/m; ε_r = 41.879; ρ = 1000 kg/m^3
Ambient Temperature：23.4 ℃; Liquid Temperature：22.5 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7577; ConvF(9.69, 9.69, 9.69); Calibrated: 03/02/2020;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1356; Calibrated: 19/05/2020
- Phantom: SAM with CRP v4.0(Front); Type: QD000P40CC; Serial: TP:1575
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch4233/Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.691 W/kg

Ch4233/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 26.56 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.880 W/kg
SAR(1 g) = 0.577 W/kg; SAR(10 g) = 0.399 W/kg
Maximum value of SAR (measured) = 0.648 W/kg



0 dB = 0.691 W/kg

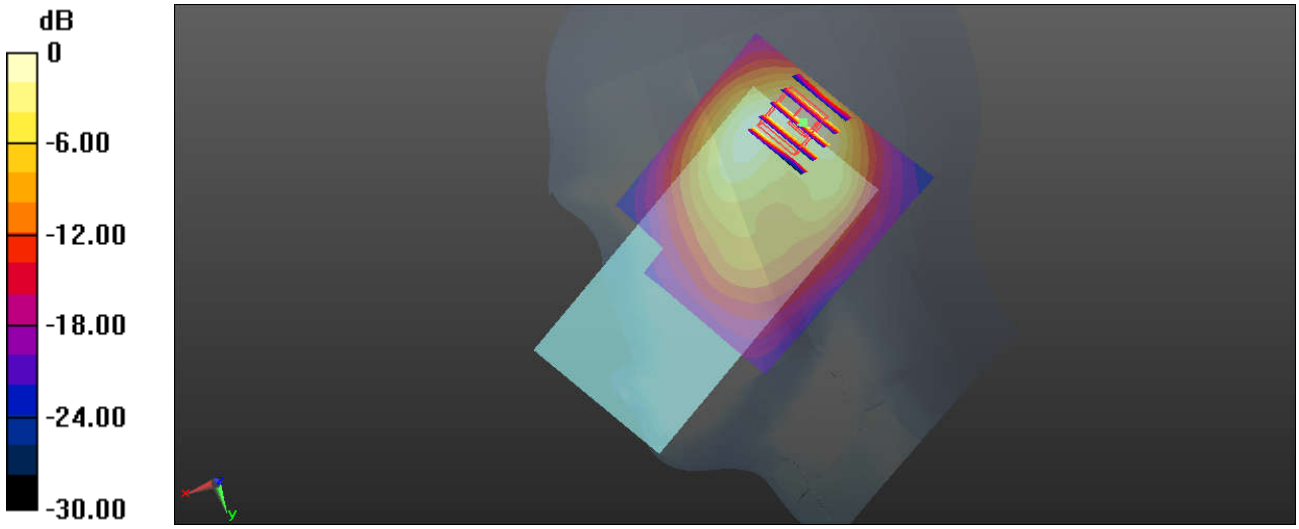
04_WCDMA IV_RMC 12.2Kbps_Right Cheek_Ch1513

Communication System: UID 0, WCDMA (0); Frequency: 1752.6 MHz;Duty Cycle: 1:1
Medium: HSL_1750_200618 Medium parameters used: f = 1753 MHz; σ = 1.395 S/m; ε_r = 40.563; ρ = 1000 kg/m^3
Ambient Temperature：23.4 ℃； Liquid Temperature：22.4 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7577; ConvF(8.62, 8.62, 8.62); Calibrated: 03/02/2020;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1356; Calibrated: 19/05/2020
- Phantom: SAM with CRP v4.0(Front); Type: QD000P40CC; Serial: TP:1575
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch1513/Area Scan (71x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.04 W/kg

Ch1513/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12.19 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 1.48 W/kg
SAR(1 g) = 0.841 W/kg; SAR(10 g) = 0.433 W/kg
Maximum value of SAR (measured) = 1.08 W/kg



0 dB = 1.04 W/kg

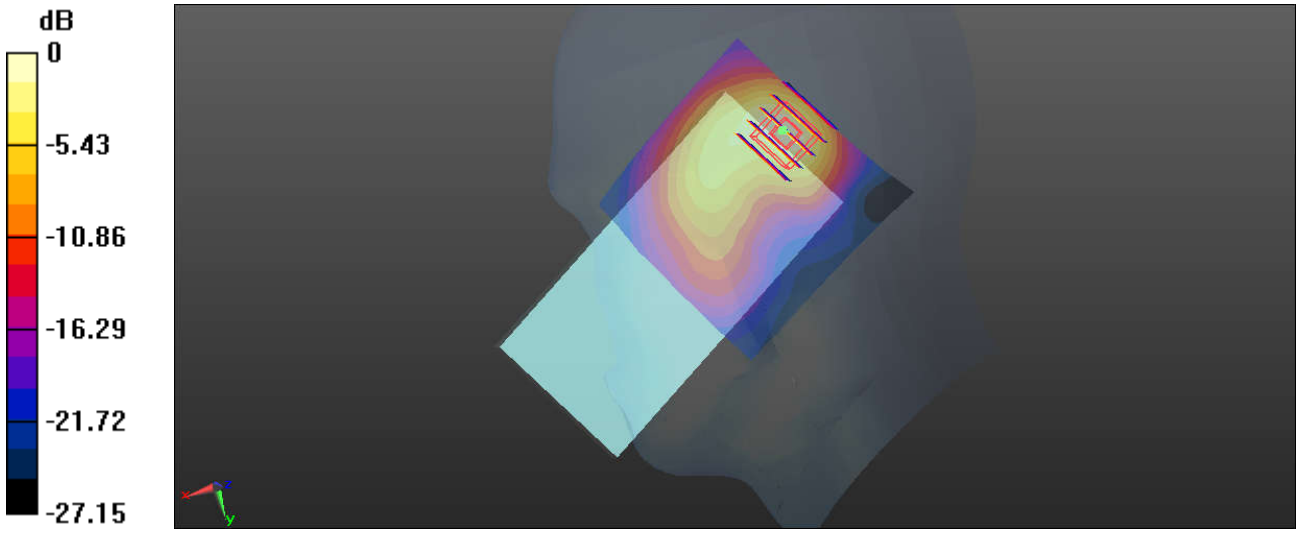
05_WCDMA II_RMC 12.2Kbps_Right Cheek_Ch9538

Communication System: UID 0, WCDMA (0); Frequency: 1907.6 MHz;Duty Cycle: 1:1
Medium: HSL_1900_200617 Medium parameters used: f = 1908 MHz; σ = 1.408 S/m; ε_r = 41.107; ρ = 1000 kg/m^3
Ambient Temperature：23.6 ℃; Liquid Temperature：22.4 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7577; ConvF(8.34, 8.34, 8.34); Calibrated: 03/02/2020;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1356; Calibrated: 19/05/2020
- Phantom: SAM with CRP v4.0(Front); Type: QD000P40CC; Serial: TP:1575
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch9538/Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.10 W/kg

Ch9538/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 16.26 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 1.64 W/kg
SAR(1 g) = 0.851 W/kg; SAR(10 g) = 0.414 W/kg
Maximum value of SAR (measured) = 1.12 W/kg



0 dB = 1.10 W/kg

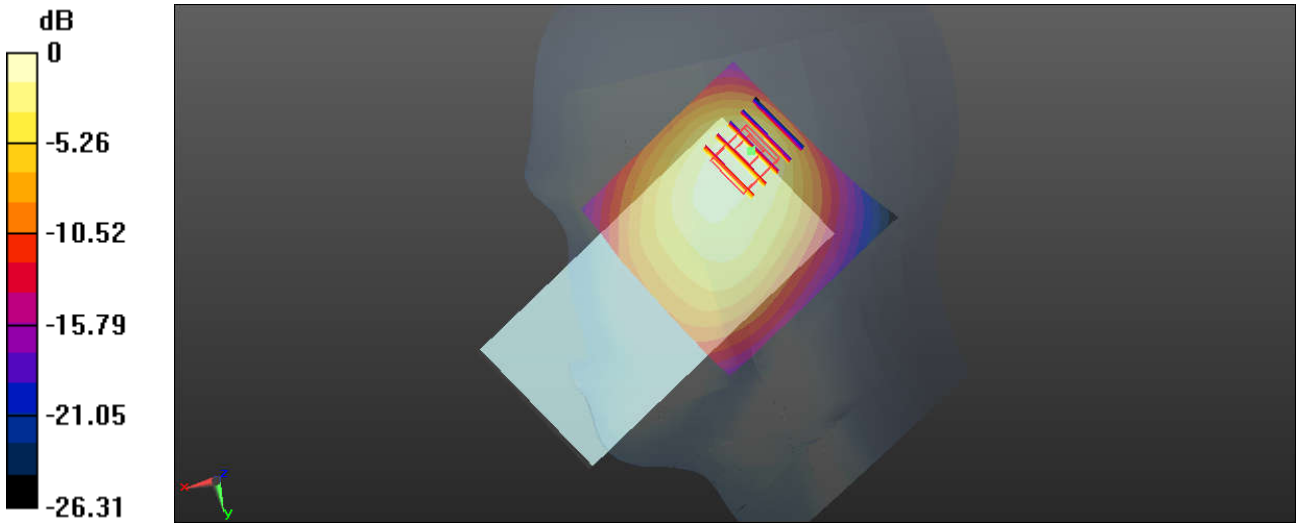
06_LTE Band 71_20M_QPSK_1RB_49Offset_Right Cheek_Ch133322

Communication System: UID 0, FDD-LTE (0); Frequency: 683 MHz;Duty Cycle: 1:1
Medium: HSL_750_200605 Medium parameters used : f = 683 MHz; σ = 0.865 S/m; ε_r = 42.183; ρ = 1000 kg/m^3
Ambient Temperature：23.4 ℃; Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7577; ConvF(10.10, 10.10, 10.10); Calibrated: 03/02/2020;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1356; Calibrated: 19/05/2020
- Phantom: SAM with CRP v4.0(Front); Type: QD000P40CC; Serial: TP:1575
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch133322/Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.839 W/kg

Ch133322/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 25.54 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 1.29 W/kg
SAR(1 g) = 0.681 W/kg; SAR(10 g) = 0.435 W/kg
Maximum value of SAR (measured) = 0.818 W/kg



0 dB = 0.839 W/kg