



SAR EVALUATION REPORT

IEEE Std 1528-2013

For
SMARTPHONE

FCC ID: BCG-E3309A
Model Name: A2111, A2222, and A2223

Report Number: 12696946-S1V3
Issue Date: 8/20/2019

Prepared for
APPLE INC.
1 APPLE PARK WAY
CUPERTINO, CA 95014

Prepared by
UL VERIFICATION SERVICES INC.
47173 BENICIA STREET
FREMONT, CA 94538, U.S.A.
TEL: (510) 319-4000
FAX: (510) 661-0888



NVLAP LAB CODE 200065-0

Revision History

Rev.	Date	Revisions	Revised By
V1	7/24/2019	Initial Issue	--
V2	8/1/2019	1. Sec. 6.1: Updated device dimension. 2. Sec. 8: Update table 3. Sec. 9.5: Updated power table 4. Sec. 9.9: Added HDR tune-up power. 5. Sec. 9.7, 9.8, 10.22, and 10.23: Updated power table. 6. Sec. 10.19: Added note. 7. Sec. 1 and 12: Updated table. 8. Updated Appendix A, C, and G	Devin Chang
V3	8/20/2019	1. Sec. 9.7, 9.8: Updated power table. 2. Sec. Updated Appendix H	Devin Chang

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1. Attestation of Test Results

Applicant Name	APPLE, INC.				
FCC ID	BCG-E3309A				
Model Name	A2111, A2222, and A2223				
Difference in Model Name	Model A2222, A2223 is electrically identical to Model A2111. Three model numbers are allocated for marketing and logistic purposes only				
Applicable Standards	Published RF exposure KDB procedures IEEE Std 1528-2013				
Exposure Category	SAR Limits (W/Kg)				
	Peak spatial-average (1g of tissue)		Extremities (hands, wrists, ankles, etc.) (10g of tissue)		
General population / Uncontrolled exposure	1.6		4		
RF Exposure Conditions	Equipment Class - Highest Reported SAR (W/kg)				
	PCE	CBE	DTS	NII	DSS
Head	0.796	0.215	1.142	0.935	0.577
Body-worn (Dist.= 5 mm)	0.999	0.971	1.142	1.169	0.589
Hotspot (Dist.= 5 mm)	0.999	0.971	1.142	1.169	0.589
Simultaneous TX	Head	1.413	1.413	1.316	1.413
	Body-worn	1.524	1.524	1.480	1.524
	Hotspot	1.524	1.524	1.480	1.524
Date Tested	6/3/2019 to 7/26/2019				
Test Results	Pass				
UL Verification Services Inc. tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report. The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. All samples tested were in good operating condition throughout the entire test program. Measurement Uncertainties are published for informational purposes only and were not taken into account unless noted otherwise. This document may not be altered or revised in any way unless done so by UL Verification Services Inc. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Inc. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of the U.S. government.					
Approved & Released By:			Prepared By:		
					
Devin Chang Senior Test Engineer UL Verification Services Inc.			Chakrit Thammanavarat Senior Test Engineer UL Verification Services Inc.		

2. Test Specification, Methods and Procedures

The tests documented in this report were performed in accordance with FCC 47 CFR § 2.1093, IEEE STD 1528-2013, the following FCC Published RF exposure [KDB](#) procedures:

- 248227 D01 802.11 Wi-Fi SAR v02r02
- 447498 D01 General RF Exposure Guidance v06
- 447498 D03 Supplement C Cross-Reference v01
- 648474 D04 Handset SAR v01r03
- 865664 D01 SAR measurement 100 MHz to 6 GHz v01r04
- 865664 D02 RF Exposure Reporting v01r02
- 941225 D01 3G SAR Procedures v03r01
- 941225 D05 SAR for LTE Devices v02r05
- 941225 D05A LTE Rel.10 KDB Inquiry Sheet v01r02
- 941225 D06 Hotspot Mode v02r01

In addition to the above, the following information was used:

- [TCB workshop](#) October 2014; RF Exposure Procedures (Other LTE Considerations)
- [TCB workshop](#) April 2015; RF Exposure Procedures (Overlapping LTE Bands)
- [TCB workshop](#) October 2015; RF Exposure Procedures (KDB 941225 D05A)
- [TCB workshop](#) April 2016; RF Exposure Procedures (LTE Carrier Aggregation for DL)
- [TCB workshop](#) October 2016; RF Exposure Procedures (LTE Carrier Aggregation for UL)
- [TCB workshop](#) October 2016; RF Exposure Procedures (Bluetooth Duty Factor)
- [TCB workshop](#) October 2016; RF Exposure Procedures (DUT Holder Perturbations)
- [TCB workshop](#) May 2017; RF Exposure Procedures (Broadband Liquid Above 3 GHz)
- [TCB workshop](#) May 2017; RF Exposure Procedures (LTE Band 41 Power Class 2)
- [TCB workshop](#) November 2017; RF Exposure Procedures (LTE UL/DL Carrier Aggregation SAR)
- [TCB workshop](#) April 2018; RF Exposure Procedures (LTE DL CA SAR Test Exclusion)
- [TCB workshop](#) October 2018; RF Exposure Procedures (LTE Inter-Band Uplink Carrier Aggregation – Interim Procedures)
- [TCB workshop](#) April 2019; RF Exposure Procedures (802.11ax SAR Testing)

3. Facilities and Accreditation

The test sites and measurement facilities used to collect data are located at

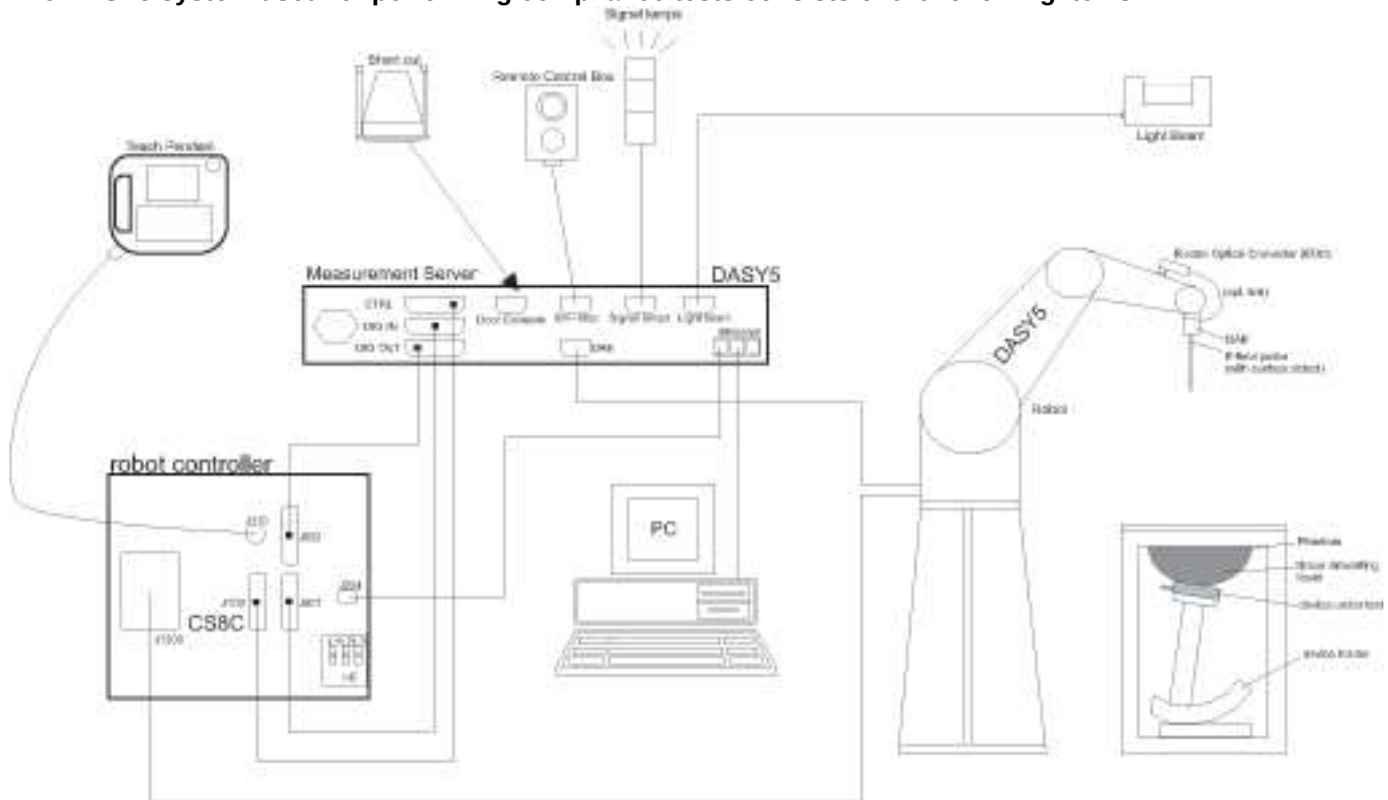
47173 Benicia Street	47266 Benicia Street
SAR Lab A	SAR Lab 1
SAR Lab B	SAR Lab 2
SAR Lab C	SAR Lab 3
SAR Lab D	SAR Lab 4
SAR Lab E	SAR Lab 5
SAR Lab F	SAR Lab 6
SAR Lab G	SAR Lab 7
SAR Lab H	SAR Lab 8
	SAR Lab 9

UL Verification Services Inc. is accredited by NVLAP, Laboratory Code 200065-0.

4. SAR Measurement System & Test Equipment

4.1. SAR Measurement System

The DASY5 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.

4.2. SAR Scan Procedures

Step 1: 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. The minimum distance of probe sensors to surface is 2.1 mm. This distance cannot be smaller than the distance of sensor calibration points to probe tip as defined in the probe properties.

Step 2: 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 locations even in relatively coarse grids. When an Area Scan has measured all reachable points, it computes the field maximal found in the scanned area, within a range of the global maximum. The range (in dB) is specified in the standards for compliance testing. For example, a 2 dB range is required in IEEE Standard 1528 and IEC 62209 standards, whereby 3 dB is a requirement when compliance is assessed in accordance with the ARIB standard (Japan). If only one Zoom Scan follows the Area Scan, then only the absolute maximum will be taken as reference. For cases where multiple maximums are detected, the number of Zoom Scans has to be increased accordingly.

Area Scan Parameters extracted from KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz

	≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface	5 ± 1 mm	$\frac{1}{2} \cdot \delta \cdot \ln(2) \pm 0.5$ mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location	$30^\circ \pm 1^\circ$	$20^\circ \pm 1^\circ$
Maximum area scan spatial resolution: 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 $\leq$ the corresponding x or y dimension of the test device with at least one measurement point on the test device.	

Step 3: Zoom Scan

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

Zoom Scan Parameters extracted from KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz

			≤ 3 GHz	> 3 GHz
Maximum zoom scan spatial resolution: $\Delta x_{\text{Zoom}}, \Delta y_{\text{Zoom}}$			≤ 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: $\Delta z_{\text{Zoom}}(n)$		≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm
	graded grid	$\Delta z_{\text{Zoom}}(1)$: between 1 st two points closest to phantom surface	≤ 4 mm	3 – 4 GHz: ≤ 3 mm 4 – 5 GHz: ≤ 2.5 mm 5 – 6 GHz: ≤ 2 mm
		$\Delta z_{\text{Zoom}}(n>1)$: between subsequent points	$\leq 1.5 \cdot \Delta z_{\text{Zoom}}(n-1)$	
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 <u>reported</u> SAR from the <i>area scan based 1-g SAR estimation</i> 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.				

Step 4: Power drift measurement

The Power Drift Measurement measures the field at the same location as the most recent power reference measurement within the same procedure, and with the same settings. The Power Drift Measurement gives the field difference in dB from the reading conducted within the last Power Reference Measurement. This allows a user to monitor the power drift of the device under test within a batch process. The measurement procedure is the same as Step 1.

4.3. Test Equipment

The measuring equipment used to perform the tests documented in this report has been calibrated in accordance with the manufacturers' recommendations, and is traceable to recognized national standards.

Dielectric Property Measurements

Name of Equipment	Manufacturer	Type/Model	Serial No.	Cal. Due Date
Network Analyzer	R&S	ZNLE6	101274-mn	3/7/2020
Dielectric Probe kit	SPEAG	DAK-3.5	1082	9/11/2019
Shorting block	SPEAG	DAK-3.5 Short	SM DAK 200 BA	9/11/2019
Thermometer	Fisher Scientific	Traceable	140562250	3/5/2020
Network Analyzer	R&S	ZNLE6	181650	4/24/2020
Dielectric Probe kit	SPEAG	DAK-3.5	SM DAK 040 CA	2/12/2020
Shorting block	SPEAG	DAK-3.5 Short	1059	9/11/2019
Thermometer	Fisher Scientific	Traceable	170064398	5/21/2020

System Check

Name of Equipment	Manufacturer	Type/Model	Serial No.	Cal. Due Date
Signal Generator	Rhode & Schwarz	SMB100A	180970	2/13/2020
Signal Generator	Rhode & Schwarz	SMB100A	181390	2/13/2020
Signal Generator	Rhode & Schwarz	SMB100A	181389	2/14/2020
Power Sensor	Rhode & Schwarz	NRP18A	100994	2/15/2020
Power Sensor	Rhode & Schwarz	NRP18A	181144	2/15/2020
Power Sensor	Rhode & Schwarz	NRP18A	181143	2/15/2020
Synthesized Signal Generator	Agilent	N5181A	MY50140610	1/31/2020
Power Meter	Keysight	N1912A	MY55196007	1/30/2020
Power Sensor	Agilent	N1921A	MY53260001	2/5/2020
Power Sensor	Agilent	N1921A	MY52200012	2/6/2020
Amplifier	MITEQ	AMF-4D-00400600-50-30P	1795092	N/A
Directional coupler	Werlatone	C8060-102	2149	N/A
DC Power Supply	Sorensen	XT 15-4	1817A02680	N/A
Synthesized Signal Generator	Agilent	N5181A	MY50140630	1/31/2020
Power Sensor	HP	437B	3125U11364	1/29/2020
Power Sensor	HP	437B	3125U16345	1/30/2020
Power Sensor	Keysight	8481A	1926AZ7048	2/7/2020
Power Sensor	Keysight	8481A	3318A92374	9/11/2019
Amplifier	MITEQ	AMF-4D-00400600-50-30P	1795093	N/A
Directional coupler	Werlatone	C8060-102	2149	N/A
DC Power Supply	HP	6296A	2841A-05955	N/A

Lab Equipment

Name of Equipment	Manufacturer	Type/Model	Serial No.	Cal. Due Date
E-Field Probe (SAR Lab A)	SPEAG	EX3DV4	3686	8/28/2019
E-Field Probe (SAR Lab B)	SPEAG	EX3DV4	3989	1/25/2020
E-Field Probe (SAR Lab C)	SPEAG	EX3DV4	3990	8/17/2019
E-Field Probe (SAR Lab C)	SPEAG	EX3DV4	7501	5/21/2020
E-Field Probe (SAR Lab D)	SPEAG	EX3DV4	7335	2/28/2020
E-Field Probe (SAR Lab E)	SPEAG	EX3DV4	3749	1/25/2020
E-Field Probe (SAR Lab F)	SPEAG	EX3DV4	7356	4/17/2020
E-Field Probe (SAR Lab G)	SPEAG	EX3DV4	7448	3/27/2020
E-Field Probe (SAR Lab H)	SPEAG	EX3DV4	7498	4/18/2020
E-Field Probe (SAR Lab 6)	SPEAG	EX3DV4	3773	3/27/2020
E-Field Probe (SAR Lab 7)	SPEAG	EX3DV4	3772	2/20/2020
E-Field Probe (SAR Lab 9)*	SPEAG	EX3DV4	7463	7/20/2019
Data Acquisition Electronics (SAR Lab A)	SPEAG	DAE4	1380	8/21/2019
Data Acquisition Electronics (SAR Lab B)	SPEAG	DAE4	1377	9/14/2019
Data Acquisition Electronics (SAR Lab C)*	SPEAG	DAE4	1439	7/10/2019
Data Acquisition Electronics (SAR Lab C)	SPEAG	DAE4	1547	5/14/2020
Data Acquisition Electronics (SAR Lab D)	SPEAG	DAE4	1434	4/16/2020
Data Acquisition Electronics (SAR Lab E)	SPEAG	DAE4	1357	2/13/2020
Data Acquisition Electronics (SAR Lab F)	SPEAG	DAE4	1548	4/16/2020
Data Acquisition Electronics (SAR Lab G)	SPEAG	DAE4	1257	9/14/2019
Data Acquisition Electronics (SAR Lab H)	SPEAG	DAE4	1545	4/12/2020
Data Acquisition Electronics (SAR Lab 6)	SPEAG	DAE4	1433	3/20/2020
Data Acquisition Electronics (SAR Lab 7)	SPEAG	DAE4	1352	8/12/2019
Data Acquisition Electronics (SAR Lab 9)	SPEAG	DAE4	1259	10/10/2019
System Validation Dipole	SPEAG	D750V3	1019	3/21/2020
System Validation Dipole	SPEAG	D750V3	1071	11/28/2019
System Validation Dipole	SPEAG	D835V2	4d002	11/28/2019
System Validation Dipole	SPEAG	D835V2	4d142	8/23/2019
System Validation Dipole	SPEAG	D835V2	4d117	5/15/2020
System Validation Dipole	SPEAG	D1750V2	1050	4/17/2020
System Validation Dipole	SPEAG	D1750V2	1077	10/16/2019
System Validation Dipole	SPEAG	D1900V2	5d163	10/16/2019
System Validation Dipole	SPEAG	D1900V2	5d043	11/29/2019
System Validation Dipole	SPEAG	D1900V2	5d140	4/17/2020
System Validation Dipole	SPEAG	D2300V2	1002	3/22/2020
System Validation Dipole	SPEAG	D2300V2	1058	10/2/2019
System Validation Dipole	SPEAG	D2450V2	899	3/22/2020
System Validation Dipole	SPEAG	D2600V2	1006	10/16/2019
System Validation Dipole	SPEAG	D2600V2	1036	3/22/2020
System Validation Dipole	SPEAG	D3500V2	1011	5/13/2020
System Validation Dipole	SPEAG	D3700V2	1039	6/12/2019
System Validation Dipole	SPEAG	D5GHzV2	1168	11/30/2019
System Validation Dipole	SPEAG	D5GHzV2	1003	2/19/2020

Note(s):

*Equipment not used past calibration due date.

Other

Name of Equipment	Manufacturer	Type/Model	Tnumber	Serial No.	Cal. Due Date
Base Station Simulator	R & S	CMW500	T375	132910-cp	2/18/2020
Base Station Simulator	R & S	CMW500	T970	137875-dz	2/21/2020
Base Station Simulator	R & S	CMW500	T979	135394-mC	2/20/2020
Base Station Simulator	R & S	CMW500	T964	134853-ud	2/21/2020
Base Station Simulator	R & S	CMW500	T959	137873-WG	2/16/2020
Base Station Simulator	R & S	CMW500	T259	124594-HX	2/17/2020
Base Station Simulator	R & S	CMW500	T919	125236-eS	4/10/2020

5. Measurement Uncertainty

Per KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz, when the highest measured 1-g SAR within a frequency band is < 1.5 W/kg and the measured 10-g SAR within a frequency band is < 3.75 W/kg. The expanded SAR measurement uncertainty must be $\leq 30\%$, 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.

Therefore, the measurement uncertainty is not required.

6. Device Under Test (DUT) Information

6.1. DUT Description

The Apple iPhone is a smartphone with multimedia functions (music, application support, and video), cellular GSM, GPRS, EGPRS, UMTS, LTE, TD-SCDMA, CDMA, IEEE 802.11a/b/g/n/ac/ax, Bluetooth, Ultra-Wide band, GPS and NFC. All models support at least one UICC based SIM. The second SIM, if present, is either UICC based pSIM (physical SIM) or e-SIM (electronic SIM). The device has a built-in inductive charging receiver. The rechargeable battery is also not user accessible.

This device has four WWAN antennas (ANT1, ANT2, ANT3, and ANT4) as well as multiple Wi-Fi/Bluetooth antennas (ANT2 and ANT5 for Wi-Fi/BT 2.4GHz, ANT4 and ANT5 for Wi-Fi 5GHz).

The device utilizes two power modes: Mode A and Mode B. Power selection is determined by the device's positioning and use case as described in Sec. 10. Mode A power is used when the device is used against the user's head, or away from the body. Mode B is used when the device is used in a body-worn configuration by the user.

The WWAN transmit antenna switching mechanism between WWAN antennas is implemented with a physical "break-before-make" switch so that only one antenna can be used for WWAN transmission at one time.

In Airplay mode, the device uses same power and power control mechanism as Wi-Fi. Airplay is not supported in hotspot mode. Airplay utilize the same 802.11 modes, modulation, MIMO, Channel Bandwidth, etc. as Wi-Fi does. Therefore Airplay usage is categorized by the Wi-Fi SAR testing contained in Section 10.

There are two vendors of the Wi-Fi/Bluetooth radio modules: variant 1 and variant 2. The Wi-Fi/BT radio modules have the same mechanical outline (e.g., the same package dimension and pin-out layout), use the same on-board antenna matching circuit, have an identical antenna structure, and are built and tested to conform to the same specifications and to operate within the same tolerances. It is confirmed that Variant 1 represents the worst case.

Device Dimension	Overall (Length x Width): 151.0 mm x 75.8 mm Overall Diagonal: 169.0 mm (6.65 inch) Display Diagonal: 153.9 mm (6.06 inch)
Back Cover	The Back Cover is not removable
Battery Options	The rechargeable battery is not user accessible.
Accessory	Headset
Wireless Router (Hotspot)	Wi-Fi Hotspot mode permits the device to share its cellular data connection with other Wi-Fi-enabled devices. ☒ Mobile Hotspot (Wi-Fi 2.4 GHz) ☐ Mobile Hotspot (Wi-Fi 5 GHz)
AirPlay	AirPlay mode enabled devices transfer data directly between each other ☒ AirPlay (Wi-Fi 2.4 GHz) ☒ AirPlay (Wi-Fi 5 GHz)
Bluetooth Tethering (Hotspot)	BT Tethering mode permits the device to share its cellular data connection with other devices. ☒ BT Tethering (Bluetooth 2.4 GHz)

6.2. Wireless Technologies

Wireless technologies	Frequency bands	Operating mode		Duty Cycle used for SAR testing
GSM	850 1900	Voice (GMSK) GPRS (GMSK) EDGE (8PSK)	GSM Class : B Multi-Slot Class: Class 10 - 2 Up, 4 Down	GSM Voice: 12.5% (E)GPRS: 1 Slot: 12.5% 2 Slots: 25%
	Does this device support DTM (Dual Transfer Mode)? ☐ Yes ☒ No			
CDMA (CDMA2000)	BC0 BC1 BC10	1xRTT (Voice & Data) 1xEV-DO Rel. 0 1xEV-DO Rev. A 1xAdvanced		100%
	Does this device support SV-DO (1xRTT-1xEVDO)? ☐ Yes ☒ No			
W-CDMA (UMTS)	Band II Band IV Band V	UMTS Rel. 99 (Voice & Data) HSDPA (Rel. 5) HSUPA (Rel. 6) HSPA+ (Rel. 7) DC-HSDPA (Rel. 8)		100%
LTE	FDD Band 2 FDD Band 4 FDD Band 5 FDD Band 7 FDD Band 12 FDD Band 13 FDD Band 14 FDD Band 17 FDD Band 25 FDD Band 26 FDD Band 29 (DL Only) FDD Band 30 TDD Band 41 ² TDD Band 46 (DL Only) TDD Band 48 FDD Band 66 FDD Band 71 Carrier Aggregation ³ FDD Band 5B FDD Band 7C TDD Band 41C	QPSK 16QAM 64QAM Carrier Aggregation (2 Uplinks and 5 Downlinks)		100% (FDD) 63.3% (TDD) Power Class 3 43.3% (TDD) Power Class 2 Refer to §6.4
	Does this device support SV-LTE (1xRTT-LTE)? ☐ Yes ☒ No			
Wi-Fi	2.4 GHz ¹	802.11b 802.11g 802.11n (HT20) 802.11ac (HT20) 802.11ax (HE20)		99.84% (802.11b)
	5 GHz ¹	802.11a 802.11n (HT20) 802.11n (HT40) 802.11ac (VHT20) 802.11ac (VHT40) 802.11ac (VHT80) 802.11ax (HE20) 802.11ax (HE40) 802.11ax (HE80)		98.92% (802.11a/n/ac 20MHz BW) 97.93% (802.11n/ac 40MHz BW) 95.83% (802.11ac 80MHz BW)
	Does this device support bands 5.60 ~ 5.65 GHz? ☒ Yes ☐ No			
	Does this device support Band gap channel(s)? ☒ Yes ☐ No			
Bluetooth	2.4 GHz	BR, EDR, LE, and HDR		100%
NFC	13.56 MHz	Type A/B/F and ISO15693		N/A ⁴
UWB (Ultra-Wideband)	6.24 GHz and 8.2368 GHz	BPSK, 4BOK		N/A ⁴

Notes:

1. Duty cycle for Wi-Fi and BT is referenced from the DTS and U-NII and BT reports.
2. This device supports Power Class 2 and Power Class 3 for LTE Band 41.
3. LTE Uplink 2CA is the total combined power of the UL CA.
LTE Uplink Cat 13, LTE 3GPP Rel-13 (LTE 3GPP Rel-14 for B41 PC2)
4. Measured Duty Cycle is not required due to SAR test exemption.

6.3. General LTE SAR Test and Reporting Considerations

Item	Description						
Frequency range, Channel Bandwidth, Numbers and Frequencies	Band 2	Frequency range: 1850 - 1910 MHz (BW = 60 MHz)					
		Channel Bandwidth					
		20 MHz	15 MHz	10 MHz	5 MHz	3 MHz	1.4 MHz
	Low	18700 /1860	18675/ 1857.5	18650/ 1855	18625/ 1852.5	18615/ 1851.5	18607/ 1850.7
	Mid	18900/ 1880	18900/ 1880	18900/ 1880	18900/ 1880	18900/ 1880	18900/ 1880
	High	19100/ 1900	19125/ 1902.5	19150/ 1905	19175/ 1907.5	19185/ 1908.5	19193/ 1909.3
	Band 4	Frequency range: 1710 - 1755 MHz (BW = 45 MHz)					
		Channel Bandwidth					
		20 MHz ¹	15 MHz	10 MHz	5 MHz	3 MHz	1.4 MHz
	Low	20050/ 1720	20025/ 1717.5	20000/ 1715	19975/ 1712.5	19965/ 1711.5	19957/ 1710.7
	Mid	20175/ 1732.5	20175/ 1732.5	20175/ 1732.5	20175/ 1732.5	20175/ 1732.5	20175/ 1732.5
	High	20300/ 1745	20325/ 1747.5	20350/ 1750	20375/ 1752.5	20385/ 1753.5	20393/ 1754.3
	Band 5	Frequency range: 824 - 849 MHz (BW = 25 MHz)					
		Channel Bandwidth					
		20 MHz	15 MHz	10 MHz ¹	5 MHz	3 MHz	1.4 MHz
	Low			20450/ 829	20425/ 826.5	20415/ 825.5	20407/ 824.7
	Mid			20525/ 836.5	20525/ 836.5	20525/ 836.5	20525/ 836.5
	High			20600/ 844	20625/ 846.5	20635/ 847.5	20643/ 848.3
	Band 7	Frequency range: 2500 - 2570 MHz (BW = 70 MHz)					
		Channel Bandwidth					
		20 MHz	15 MHz	10 MHz	5 MHz	3 MHz	1.4 MHz
	Low	20850 2510	20825 2507.5	20800 2505	20775 2502.5		
	Mid	21100 2535	21100 2535	21100 2535	21100 2535		
	High	21350 2560	21375 2562.5	21400 2565	21425 2567.5		
	Band 12	Frequency range: 699 – 716 MHz (BW = 17 MHz)					
		Channel Bandwidth					
		20 MHz	15 MHz	10 MHz ¹	5 MHz	3 MHz	1.4 MHz
	Low			23060/ 704	23035/ 701.5	23025/ 700.5	23017/ 699.7
	Mid			23095/ 707.5	23095/ 707.5	23095/ 707.5	23095/ 707.5
	High			23130/ 711	23155/ 713.5	23165/ 714.5	23173/ 715.3
	Band 13	Frequency range: 777 - 787 MHz (BW = 10 MHz)					
		Channel Bandwidth					
		20 MHz	15 MHz	10 MHz ¹	5 MHz ¹	3 MHz	1.4 MHz
	Low				23205/ 779.5		
	Mid			23230/ 782	23230/ 782		
	High				23255/ 784.5		
	Band 14	Frequency range: 788 - 798 MHz (BW = 10 MHz)					
		Channel Bandwidth					
		20 MHz	15 MHz	10 MHz ¹	5 MHz ¹	3 MHz	1.4 MHz
	Low				23305/ 790.5		
	Mid			23330/ 793	23330/ 793		
	High				23355/ 794.5		

					795.5		
Band 17	Frequency range: 704 - 716 MHz (BW = 12 MHz)						
	Channel Bandwidth						
	20 MHz	15 MHz	10 MHz ¹	5 MHz ¹	3 MHz	1.4 MHz	
Low			23780/ 709	23755/ 706.5			
Mid			23790/ 710	23790/ 710			
High			23800/ 711	23825/ 713.5			
Band 25	Frequency range: 1850 - 1915 MHz (BW = 65 MHz)						
	Channel Bandwidth						
	20 MHz	15 MHz	10 MHz	5 MHz	3 MHz	1.4 MHz	
Low	26140/ 1860	26115/ 1857.5	26090/ 1855	26065/ 1852.5	26055/ 1851.5	26047/ 1850.7	
Mid	26365/ 1882.5	26365/ 1882.5	26365/ 1882.5	26365/ 1882.5	26365/ 1882.5	26365/ 1882.5	
High	26590/ 1905	26615/ 1907.5	26640/ 1910	26665/ 1912.5	26675/ 1913.5	26683/ 1914.3	
Band 26	Frequency range: 814 - 849 MHz (BW = 35 MHz)						
	Channel Bandwidth						
	20 MHz	15 MHz	10 MHz	5 MHz	3 MHz	1.4 MHz	
Low			26740/ 819	26715/ 816.5	26705/ 815.5	26697/ 814.7	
Mid			26865/ 831.5	26865/ 831.5	26865/ 831.5	26865/ 831.5	
High			26990/ 844	27015/ 846.5	27025/ 847.5	27033/ 848.3	
Band 30	Frequency range: 2305 - 2315 MHz (BW = 10 MHz)						
	Channel Bandwidth						
	20 MHz	15 MHz	10 MHz ¹	5 MHz ¹	3 MHz	1.4 MHz	
Low				27685/ 2307.5			
Mid			27710/ 2310	27710/ 2310			
High				27735/ 2312.5			
Band 41 ²	Frequency range: 2496 - 2690 MHz (BW = 194 MHz)						
	Channel Bandwidth						
	20 MHz	15 MHz	10 MHz	5 MHz	3 MHz	1.4 MHz	
Low	39750 / 2506.0						
Low-Mid	40185 / 2549.5						
Mid	40620 / 2593.0						
Mid-High	41055 / 2636.5						
High	41490 / 2680.0						
Band 48	Frequency range: 3550 - 3700 MHz (BW = 150 MHz)						
	Channel Bandwidth						
	20 MHz	15 MHz	10 MHz	5 MHz	3 MHz	1.4 MHz	
Low	55340/ 3560	55315/ 3557.5	55290/ 3555	55265/ 3552.5			
Mid-Low	55773/ 3603.3	55765/ 3602.5	55757/ 3601.7	55748/ 3600.8			
Mid-High	56207/ 3646.7	56215/ 3647.5	56223/ 3648.3	56232/ 3649.2			
High	56640/ 3690	56665/ 3692.5	56690/ 3695	56715/ 3697.5			
Band 66	Frequency range: 1710 - 1780 MHz (BW = 70 MHz)						
	Channel Bandwidth						
	20 MHz	15 MHz	10 MHz	5 MHz	3 MHz	1.4 MHz	
Low	132072/ 1720	132047/ 1717.5	132022/ 1715	131997/ 1712.5	131987/ 1711.5	131979/ 1710.7	
Mid	132322/ 1745	132322/ 1745	132322/ 1745	132322/ 1745	132322/ 1745	132322/ 1745	
High	132572/ 1770	132597/ 1772.5	132622/ 1775	132647/ 1777.5	132657/ 1778.5	132665/ 1779.3	

	Band 71	Frequency range: 663 - 698 MHz (BW = 35 MHz)																																																																			
		Channel Bandwidth																																																																			
		20 MHz ¹	15 MHz ¹	10 MHz	5 MHz	3 MHz	1.4 MHz																																																														
		133222/ 673	133197/ 670.5	133172/ 668	133147/ 665.5																																																																
	Low																																																																				
	Mid	133297/ 680.5	133297/ 680.5	133297/ 680.5	133297/ 680.5																																																																
	High	133372/ 688	133397/ 690.5	133422/ 693	133447/ 695.5																																																																
LTE transmitter and antenna implementation	LTE can transmit from either ANT1 and ANT2. Then antenna switching is implemented with a physical, "break-before-make" switch such that only one antenna can be used for LTE transmission at a time.																																																																				
Maximum power reduction (MPR)	Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1, 2 and 3 <table border="1"> <thead> <tr> <th rowspan="2">Modulation</th><th colspan="6">Channel bandwidth / Transmission bandwidth (N_{RB})</th><th rowspan="2">MPR (dB)</th></tr> <tr> <th>1.4 MHz</th><th>3.0 MHz</th><th>5 MHz</th><th>10 MHz</th><th>15 MHz</th><th>20 MHz</th></tr> </thead> <tbody> <tr> <td>QPSK</td><td>> 5</td><td>> 4</td><td>> 8</td><td>> 12</td><td>> 16</td><td>> 18</td><td>≤ 1</td></tr> <tr> <td>16 QAM</td><td>≤ 5</td><td>≤ 4</td><td>≤ 8</td><td>≤ 12</td><td>≤ 16</td><td>≤ 18</td><td>≤ 1</td></tr> <tr> <td>64 QAM</td><td>> 5</td><td>> 4</td><td>> 8</td><td>> 12</td><td>> 16</td><td>> 18</td><td>≤ 2</td></tr> <tr> <td>256 QAM</td><td>≤ 5</td><td>≤ 4</td><td>≤ 8</td><td>≤ 12</td><td>≤ 16</td><td>≤ 18</td><td>≤ 2</td></tr> <tr> <td></td><td>> 5</td><td>> 4</td><td>> 8</td><td>> 12</td><td>> 16</td><td>> 18</td><td>≤ 3</td></tr> <tr> <td></td><td></td><td></td><td>≥ 1</td><td></td><td></td><td></td><td>≤ 5</td></tr> </tbody> </table> MPR Built-in by design The manufacturer MPR values are always within the 3GPP maximum MPR allowance but may not follow the default MPR values. A-MPR (additional MPR) was disabled during SAR testing							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	64 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 2	256 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 2		> 5	> 4	> 8	> 12	> 16	> 18	≤ 3				≥ 1				≤ 5
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																																																														
64 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 2																																																														
256 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 2																																																														
	> 5	> 4	> 8	> 12	> 16	> 18	≤ 3																																																														
			≥ 1				≤ 5																																																														
Spectrum plots for RB configurations	A properly configured base station simulator was used for the SAR and power measurements; therefore, spectrum plots for each RB allocation and offset configuration are not included in the SAR report.																																																																				

Notes:

- Maximum bandwidth does not support at least three non-overlapping channels in certain channel bandwidths. 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 per KDB 941225 D05 SAR for LTE Devices.
- LTE band 41 test channels in accordance with October 2014 TCB workshop for all channels bandwidths.
- SAR Testing for LTE was performed with the same number of RB and RB offsets transmitting on all TTI frames (maximum TTI).

6.4. LTE (TDD) Considerations

According to KDB 941225 D05 SAR for LTE Devices, for Time-Division Duplex (TDD) systems, SAR must be tested using a fixed periodic duty factor according to the highest transmission duty factor implemented for the device and supported by the defined 3GPP LTE TDD configurations.

LTE TDD Bands support 3GPP TS 36.211 section 4.2 for Type 2 Frame Structure and Table 4.2-2 for uplink-downlink configurations and Table 4.2-1 for Special subframe configurations.

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	$6592 \cdot T_s$	$(1+X) \cdot 2192 \cdot T_s$	$(1+X) \cdot 2560 \cdot T_s$	$7680 \cdot T_s$	$(1+X) \cdot 2192 \cdot T_s$	$(1+X) \cdot 2560 \cdot T_s$
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	$26336 \cdot T_s$	$(2+X) \cdot 2192 \cdot T_s$	$(2+X) \cdot 2560 \cdot T_s$	$7680 \cdot T_s$	$(2+X) \cdot 2192 \cdot T_s$	$(2+X) \cdot 2560 \cdot T_s$
5	$6592 \cdot T_s$			$20480 \cdot T_s$		
6	$19760 \cdot T_s$			$23040 \cdot T_s$		
7	$21952 \cdot T_s$			$12800 \cdot T_s$		
8	$24144 \cdot T_s$	$13152 \cdot T_s$	$12800 \cdot T_s$	-	-	-
9	$13168 \cdot T_s$			-	-	-
10	$13168 \cdot T_s$			-	-	-

Table 4.2-2: Uplink-downlink configurations & Calculated Duty Cycle

Uplink-Downlink Configuration	Downlink-to-Uplink Switch-point Periodicity	Subframe Number										Calculated Duty Cycle (%)
		0	1	2	3	4	5	6	7	8	9	
0	5 ms	D	S	U	U	U	D	S	U	U	U	63.3%
1	5 ms	D	S	U	U	D	D	S	U	U	D	43.3%
2	5 ms	D	S	U	D	D	D	S	U	D	D	23.3%
3	10 ms	D	S	U	U	U	D	D	D	D	D	31.7%
4	10 ms	D	S	U	U	D	D	D	D	D	D	21.7%
5	10 ms	D	S	U	D	D	D	D	D	D	D	11.7%
6	5 ms	D	S	U	U	U	D	S	U	U	D	53.3%

Calculated Duty Cycle = Extended cyclic prefix in uplink * (T_s) * # of S + # of U / period

Note(s):

This device supports uplink-downlink configurations 0-6. The configuration with highest duty cycle was used for SAR Testing: configuration 0 at 63.3% duty cycle.

7. RF Exposure Conditions (Test Configurations)

This device has a total of 5 antennas. From Front of the device, antennas and supported frequencies are described and located as follows:

ANT1 (all WWAN bands except for LTE Band 48) - located at the lower of the device.

ANT2 (all WWAN bands except for LTE Band 48 and Wi-Fi 2.4 GHz and Bluetooth) - located at the upper of the device.

ANT3 (LTE Band 48) – located at lower right corner of the device.

ANT4 (LTE Band 48 and Wi-Fi 5GHz Bands) – located at upper left corner of the device.

ANT5 (Wi-Fi 2.4/5 GHz Bands and Bluetooth) – located at lower left corner of the device.

Refer to separate filing submission document for the proprietary design details of the antenna-to-antenna and antenna-to-edge(s) distances.

The Body-worn accessory test configurations were tested using a conservative minimum test separation distance of 5 mm.

Lower Antenna

Wireless technologies	RF Exposure Conditions	DUT-to-User Separation	Test Position	Antenna-to-edge/surface	SAR Required	Note
WWAN (ANT1)	Head	0 mm	Left Touch	N/A	Yes	
			Left Tilt (15°)	N/A	Yes	
			Right Touch	N/A	Yes	
			Right Tilt (15°)	N/A	Yes	
	Body/Hotspot	5 mm	Rear	< 25 mm	Yes	2
			Front	< 25 mm	Yes	2
	Hotspot	5 mm	Edge 1 (Top)	> 25 mm	No	1
			Edge 2 (Right)	< 25 mm	Yes	
			Edge 3 (Bottom)	< 25 mm	Yes	
			Edge 4 (Left)	< 25 mm	Yes	
LTE B48 (ANT3)	Head	0 mm	Left Touch	N/A	Yes	
			Left Tilt (15°)	N/A	Yes	
			Right Touch	N/A	Yes	
			Right Tilt (15°)	N/A	Yes	
	Body/Hotspot	5 mm	Rear	< 25 mm	Yes	2
			Front	< 25 mm	Yes	2
	Hotspot	5 mm	Edge 1 (Top)	> 25 mm	No	1
			Edge 2 (Right)	< 25 mm	Yes	
			Edge 3 (Bottom)	< 25 mm	Yes	
			Edge 4 (Left)	> 25 mm	No	1
Wi-Fi 2.4/5 GHz and Bluetooth (ANT5)	Head	0 mm	Left Touch	N/A	Yes	
			Left Tilt (15°)	N/A	Yes	
			Right Touch	N/A	Yes	
			Right Tilt (15°)	N/A	Yes	
	Body/Hotspot	5 mm	Rear	< 25 mm	Yes	2
			Front	< 25 mm	Yes	2
	Hotspot	5 mm	Edge 1 (Top)	> 25 mm	No	1
			Edge 2 (Right)	> 25 mm	No	1
			Edge 3 (Bottom)	< 25 mm	Yes	
			Edge 4 (Left)	< 25 mm	Yes	

Note(s):

1. SAR is not required because the distance from the antenna to the edge is > 25 mm as per KDB 941225 D06 Hotspot Mode.
2. The Body-worn minimum separation distance is 5 mm. To cover both body-worn and hotspot RF exposure conditions testing was performed at a separation distance of 5 mm.

Upper Antenna

Wireless technologies	RF Exposure Conditions	DUT-to-User Separation	Test Position	Antenna-to-edge/surface	SAR Required	Note
WWAN and Wi-Fi 2.4 GHz and Bluetooth (ANT2)	Head	0 mm	Left Touch	N/A	Yes	
			Left Tilt (15°)	N/A	Yes	
			Right Touch	N/A	Yes	
			Right Tilt (15°)	N/A	Yes	
	Body/Hotspot	5 mm	Rear	< 25 mm	Yes	2
			Front	< 25 mm	Yes	2
	Hotspot	5 mm	Edge 1 (Top)	< 25 mm	Yes	
			Edge 2 (Right)	< 25 mm	Yes	
			Edge 3 (Bottom)	> 25 mm	No	1
			Edge 4 (Left)	< 25 mm	Yes	
LTE B48 and Wi-Fi 5 GHz (ANT4)	Head	0 mm	Left Touch	N/A	Yes	
			Left Tilt (15°)	N/A	Yes	
			Right Touch	N/A	Yes	
			Right Tilt (15°)	N/A	Yes	
	Body/Hotspot	5 mm	Rear	< 25 mm	Yes	2
			Front	< 25 mm	Yes	2
	Hotspot	5 mm	Edge 1 (Top)	< 25 mm	Yes	
			Edge 2 (Right)	> 25 mm	No	1
			Edge 3 (Bottom)	> 25 mm	No	1
			Edge 4 (Left)	< 25 mm	Yes	

Note(s):

1. SAR is not required because the distance from the antenna to the edge is > 25 mm as per KDB 941225 D06 Hot Spot SAR.
2. The Body-worn minimum separation distance is 5 mm. To cover both body-worn and hotspot RF exposure conditions testing was performed at a separation distance of 5 mm.

8. Dielectric Property Measurements & System Check

8.1. Dielectric Property Measurements

The temperature of the tissue-equivalent medium used during measurement must also be within 18°C to 25°C and within $\pm 2^\circ\text{C}$ of the temperature when the tissue parameters are characterized.

The dielectric parameters must be measured before the tissue-equivalent medium is used in a series of SAR measurements. The parameters should be re-measured after each 3 – 4 days of use; or earlier if the dielectric parameters can become out of tolerance; for example, when the parameters are marginal at the beginning of the measurement series.

Tissue dielectric parameters were measured at the low, middle and high frequency of each operating frequency range of the test device.

The dielectric constant (ϵ_r) and conductivity (σ) of typical tissue-equivalent media recipes are expected to be within $\pm 5\%$ of the required target values; but for SAR measurement systems that have implemented the SAR error compensation algorithms documented in IEEE Std 1528-2013, to automatically compensate the measured SAR results for deviations between the measured and required tissue dielectric parameters, the tolerance for ϵ_r and σ may be relaxed to $\pm 10\%$. This is limited to frequencies $\leq 3\text{ GHz}$.

Tissue Dielectric Parameters

FCC KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz

Target Frequency (MHz)	Head		Body	
	ϵ_r	σ (S/m)	ϵ_r	σ (S/m)
150	52.3	0.76	61.9	0.80
300	45.3	0.87	58.2	0.92
450	43.5	0.87	56.7	0.94
835	41.5	0.90	55.2	0.97
900	41.5	0.97	55.0	1.05
915	41.5	0.98	55.0	1.06
1450	40.5	1.20	54.0	1.30
1610	40.3	1.29	53.8	1.40
1800 – 2000	40.0	1.40	53.3	1.52
2450	39.2	1.80	52.7	1.95
3000	38.5	2.40	52.0	2.73
5000	36.2	4.45	49.3	5.07
5100	36.1	4.55	49.1	5.18
5200	36.0	4.66	49.0	5.30
5300	35.9	4.76	48.9	5.42
5400	35.8	4.86	48.7	5.53
5500	35.6	4.96	48.6	5.65
5600	35.5	5.07	48.5	5.77
5700	35.4	5.17	48.3	5.88
5800	35.3	5.27	48.2	6.00

IEEE Std 1528-2013

Refer to Table 3 within the IEEE Std 1528-2013

Dielectric Property Measurements Results:

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (ϵ_r)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
A	6/3/2019	2600	Head	2600	38.40	39.01	-1.57	1.91	1.96	-2.61
				2495	38.55	39.14	-1.52	1.83	1.85	-1.28
				2690	38.23	38.90	-1.72	1.98	2.06	-3.96
A	6/3/2019	2600	Body	2600	50.51	52.51	-3.81	2.12	2.16	-1.98
				2495	50.78	52.64	-3.54	1.99	2.01	-1.30
				2690	50.26	52.40	-4.08	2.23	2.29	-2.59
A	6/6/2019	2600	Head	2600	39.27	39.01	0.66	2.01	1.96	2.49
				2495	39.39	39.14	0.63	1.90	1.85	2.94
				2690	39.10	38.90	0.52	2.10	2.06	1.82
A	6/6/2019	2600	Body	2600	54.06	52.51	2.95	2.24	2.16	3.71
				2495	54.30	52.64	3.15	2.10	2.01	4.46
				2690	53.80	52.40	2.68	2.36	2.29	3.22
A	6/7/2019	2600	Head	2600	39.77	39.01	1.95	1.93	1.96	-1.84
				2495	39.89	39.14	1.91	1.83	1.85	-1.01
				2690	39.60	38.90	1.81	2.03	2.06	-1.28
A	6/7/2019	2600	Body	2600	53.40	52.51	1.69	2.23	2.16	3.39
				2495	53.67	52.64	1.95	2.10	2.01	4.16
				2690	53.11	52.40	1.36	2.35	2.29	2.79
A	6/9/2019	2600	Body	2600	50.61	52.51	-3.62	2.11	2.16	-2.40
				2495	50.87	52.64	-3.37	1.98	2.01	-1.55
				2690	50.33	52.40	-3.95	2.22	2.29	-3.07
A	6/9/2019	2600	Head	2600	39.22	39.01	0.54	1.92	1.96	-2.25
				2495	39.37	39.14	0.58	1.82	1.85	-1.44
				2690	39.04	38.90	0.37	1.99	2.06	-3.23
A	6/13/2019	2600	Head	2600	37.58	39.01	-3.67	1.93	1.96	-1.49
				2495	37.78	39.14	-3.48	1.84	1.85	-0.25
				2690	37.39	38.90	-3.88	2.00	2.06	-2.69
A	6/13/2019	2600	Body	2600	51.41	52.51	-2.10	2.16	2.15	0.28
				2495	51.76	52.64	-1.68	2.03	2.03	0.39
				2690	51.14	52.40	-2.40	2.26	2.26	0.22
A	6/18/2019	2600	Head	2600	38.26	39.01	-1.92	1.92	1.96	-2.25
				2495	38.41	39.14	-1.87	1.82	1.85	-1.39
				2690	38.09	38.90	-2.08	1.99	2.06	-3.32

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (ϵ_r)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
A	6/21/2019	2600	Body	2600	51.60	52.51	-1.73	2.10	2.16	-3.05
				2495	51.85	52.64	-1.51	1.97	2.01	-2.05
				2690	51.33	52.40	-2.04	2.20	2.29	-3.82
A	6/21/2019	2600	Head	2600	37.20	39.01	-4.64	1.98	1.96	1.06
				2495	37.34	39.14	-4.61	1.89	1.85	2.40
				2690	37.01	38.90	-4.85	2.05	2.06	-0.31
A	6/24/2019	2600	Head	2600	37.83	39.01	-3.03	1.92	1.96	-2.15
				2495	37.97	39.14	-3.00	1.83	1.85	-1.17
				2690	37.66	38.90	-3.18	1.99	2.06	-3.28
A	6/24/2019	2600	Body	2600	52.35	52.51	-0.31	2.07	2.16	-4.11
				2495	52.58	52.64	-0.12	1.94	2.01	-3.44
				2690	52.11	52.40	-0.55	2.18	2.29	-4.73
A	6/27/2019	2600	Body	2600	52.75	52.51	0.46	2.24	2.16	3.53
				2495	53.05	52.64	0.77	2.10	2.01	4.06
				2690	52.43	52.40	0.06	2.35	2.29	2.57
A	6/27/2019	2600	Head	2600	37.57	39.01	-3.69	2.00	1.96	2.13
				2495	37.78	39.14	-3.48	1.91	1.85	3.05
				2690	37.36	38.90	-3.95	2.08	2.06	0.80
A	7/1/2019	2600	Body	2600	50.08	52.51	-4.63	2.14	2.16	-1.10
				2495	50.33	52.64	-4.39	2.01	2.01	-0.11
				2690	49.81	52.40	-4.94	2.24	2.29	-1.89
A	7/1/2019	2600	Head	2600	37.32	39.01	-4.33	1.97	1.96	0.45
				2495	37.45	39.14	-4.33	1.87	1.85	1.37
				2690	37.15	38.90	-4.49	2.05	2.06	-0.56
A	7/5/2019	2600	Head	2600	39.53	39.01	1.33	1.92	1.96	-1.94
				2495	39.66	39.14	1.32	1.83	1.85	-1.17
				2690	39.38	38.90	1.24	2.01	2.06	-2.55
A	7/5/2019	2600	Body	2600	51.44	52.51	-2.04	2.07	2.16	-4.30
				2495	51.65	52.64	-1.89	1.94	2.01	-3.44
				2690	51.20	52.40	-2.29	2.18	2.29	-4.65
A	7/9/2019	2600	Body	2600	51.72	52.51	-1.51	2.07	2.16	-4.06
				2495	51.95	52.64	-1.32	1.94	2.01	-3.59
				2690	51.44	52.40	-1.83	2.18	2.29	-4.65
A	7/9/2019	2600	Head	2600	37.52	39.01	-3.82	1.94	1.96	-1.08
				2495	37.65	39.14	-3.81	1.85	1.85	-0.20
				2690	37.32	38.90	-4.06	2.01	2.06	-2.21

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (ϵ_r)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
B	6/3/2019	1750	Head	1750	39.24	40.08	-2.11	1.37	1.37	-0.22
				1710	39.28	40.15	-2.16	1.34	1.35	-0.25
				1755	39.22	40.08	-2.14	1.37	1.37	-0.28
B	6/3/2019	1900	Head	1900	38.97	40.00	-2.58	1.44	1.40	3.14
				1850	39.04	40.00	-2.40	1.42	1.40	1.43
				1920	38.97	40.00	-2.58	1.46	1.40	4.14
B	6/3/2019	1750	Body	1750	52.34	53.44	-2.06	1.43	1.49	-4.05
				1710	52.42	53.54	-2.10	1.39	1.46	-4.89
				1755	52.32	53.43	-2.07	1.43	1.49	-3.98
B	6/3/2019	1900	Body	1900	51.02	53.30	-4.28	1.54	1.52	1.58
				1850	51.15	53.30	-4.03	1.50	1.52	-1.05
				1920	50.99	53.30	-4.33	1.56	1.52	2.89
B	6/6/2019	1900	Head	1900	38.79	40.00	-3.03	1.45	1.40	3.57
				1850	38.91	40.00	-2.73	1.42	1.40	1.43
				1920	38.80	40.00	-3.00	1.47	1.40	5.00
B	6/6/2019	1750	Head	1750	39.07	40.08	-2.53	1.36	1.37	-0.80
				1710	39.12	40.15	-2.56	1.34	1.35	-0.85
				1755	39.05	40.08	-2.56	1.36	1.37	-0.86
B	6/6/2019	1900	Body	1900	53.20	53.30	-0.19	1.53	1.52	0.66
				1850	53.32	53.30	0.04	1.48	1.52	-2.70
				1920	53.16	53.30	-0.26	1.55	1.52	2.24
B	6/6/2019	1750	Body	1750	53.97	53.44	0.99	1.46	1.49	-1.69
				1710	54.12	53.54	1.08	1.42	1.46	-2.98
				1755	53.94	53.43	0.96	1.47	1.49	-1.63
B	6/9/2019	1750	Head	1750	40.30	40.08	0.54	1.32	1.37	-3.58
				1710	40.35	40.15	0.51	1.30	1.35	-3.22
				1755	40.28	40.08	0.51	1.33	1.37	-2.76
B	6/9/2019	1900	Head	1900	40.02	40.00	0.05	1.42	1.40	1.29
				1850	40.70	40.00	1.75	1.39	1.40	-0.64
				1920	39.99	40.00	-0.02	1.44	1.40	2.64
B	6/9/2019	1750	Body	1750	52.83	53.44	-1.14	1.43	1.49	-3.64
				1710	52.95	53.54	-1.11	1.39	1.46	-4.76
				1755	52.80	53.43	-1.18	1.44	1.49	-3.51
B	6/9/2019	1900	Body	1900	50.83	53.30	-4.63	1.49	1.52	-2.04
				1850	50.93	53.30	-4.45	1.45	1.52	-4.87
				1920	50.78	53.30	-4.73	1.51	1.52	-0.59

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (ϵ_r)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
B	6/13/2019	1750	Body	1750	50.93	53.44	-4.70	1.49	1.49	0.26
				1710	51.05	53.54	-4.66	1.44	1.46	-1.20
				1755	50.91	53.43	-4.71	1.50	1.49	0.45
B	6/13/2019	1750	Head	1750	38.81	40.08	-3.18	1.31	1.37	-4.53
				1710	38.84	40.15	-3.25	1.28	1.35	-4.71
				1755	38.79	40.08	-3.21	1.31	1.37	-4.58
B	6/14/2019	1900	Body	1900	50.81	53.30	-4.67	1.54	1.52	1.32
				1850	50.99	53.30	-4.33	1.49	1.52	-1.84
				1920	50.78	53.30	-4.73	1.57	1.52	2.96
B	6/14/2019	1900	Head	1900	38.28	40.00	-4.30	1.38	1.40	-1.14
				1850	38.35	40.00	-4.13	1.36	1.40	-2.64
				1920	38.29	40.00	-4.28	1.40	1.40	-0.14
B	6/17/2019	1750	Body	1750	51.93	53.44	-2.83	1.54	1.49	3.56
				1710	52.08	53.54	-2.73	1.49	1.46	2.22
				1755	51.89	53.43	-2.88	1.55	1.49	3.74
B	6/17/2019	1750	Head	1750	39.15	40.08	-2.33	1.37	1.37	0.00
				1710	39.20	40.15	-2.36	1.35	1.35	-0.03
				1755	39.12	40.08	-2.39	1.37	1.37	-0.06
B	6/17/2019	1900	Body	1900	53.55	53.30	0.47	1.56	1.52	2.57
				1850	53.77	53.30	0.88	1.50	1.52	-1.05
				1920	53.49	53.30	0.36	1.58	1.52	4.21
B	6/17/2019	1900	Head	1900	38.70	40.00	-3.25	1.44	1.40	3.14
				1850	38.77	40.00	-3.07	1.42	1.40	1.21
				1920	38.70	40.00	-3.25	1.46	1.40	4.29
B	6/21/2019	1750	Head	1750	38.26	40.08	-4.55	1.37	1.37	-0.14
				1710	38.32	40.15	-4.55	1.34	1.35	-0.40
				1755	38.25	40.08	-4.56	1.37	1.37	-0.13
B	6/21/2019	1750	Body	1750	51.20	53.44	-4.19	1.51	1.49	1.67
				1710	51.32	53.54	-4.15	1.46	1.46	0.17
				1755	51.17	53.43	-4.23	1.52	1.49	1.86
B	6/25/2019	1750	Head	1750	40.76	40.08	1.68	1.35	1.37	-1.24
				1710	40.79	40.15	1.60	1.33	1.35	-1.52
				1755	40.75	40.08	1.68	1.36	1.37	-1.22
B	6/25/2019	1750	Body	1750	53.69	53.44	0.47	1.50	1.49	0.60
				1710	53.78	53.54	0.44	1.45	1.46	-0.99
				1755	53.67	53.43	0.45	1.50	1.49	0.72

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (ϵ_r)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
B	6/29/2019	1750	Head	1750	39.42	40.08	-1.66	1.32	1.37	-3.87
				1710	39.43	40.15	-1.78	1.29	1.35	-4.04
				1755	39.41	40.08	-1.66	1.32	1.37	-3.92
B	6/29/2019	1750	Body	1750	51.18	53.44	-4.23	1.48	1.49	-0.35
				1710	51.26	53.54	-4.26	1.44	1.46	-1.75
				1755	51.16	53.43	-4.25	1.49	1.49	-0.15
B	7/2/2019	1750	Body	1750	53.04	53.44	-0.75	1.48	1.49	-0.41
				1710	53.15	53.54	-0.74	1.43	1.46	-2.02
				1755	53.02	53.43	-0.76	1.49	1.49	-0.28
B	7/2/2019	1750	Head	1750	40.61	40.08	1.31	1.33	1.37	-2.63
				1710	40.60	40.15	1.13	1.30	1.35	-3.30
				1755	40.60	40.08	1.31	1.34	1.37	-2.54
B	7/3/2019	1900	Head	1900	39.03	40.00	-2.43	1.44	1.40	2.86
				1850	39.09	40.00	-2.27	1.41	1.40	1.00
				1920	39.04	40.00	-2.40	1.45	1.40	3.71
B	7/3/2019	1900	Body	1900	51.13	53.30	-4.07	1.57	1.52	2.96
				1850	51.31	53.30	-3.73	1.51	1.52	-0.72
				1920	51.09	53.30	-4.15	1.59	1.52	4.47
B	7/6/2019	1750	Head	1750	41.28	40.08	2.98	1.33	1.37	-3.14
				1710	41.30	40.15	2.87	1.30	1.35	-3.37
				1755	41.26	40.08	2.95	1.33	1.37	-3.19
B	7/6/2019	1750	Body	1750	51.35	53.44	-3.91	1.50	1.49	0.93
				1710	51.45	53.54	-3.91	1.45	1.46	-0.72
				1755	51.33	53.43	-3.93	1.51	1.49	1.06
C	6/5/2019	1750	Head	1750	38.96	40.08	-2.81	1.40	1.37	2.41
				1710	39.18	40.15	-2.41	1.37	1.35	1.75
				1755	38.93	40.08	-2.86	1.41	1.37	2.49
C	6/5/2019	1900	Head	1900	38.72	40.00	-3.20	1.45	1.40	3.57
				1850	38.95	40.00	-2.62	1.41	1.40	0.57
				1920	38.70	40.00	-3.25	1.47	1.40	5.00
C	6/7/2019	1750	Body	1750	52.83	53.44	-1.14	1.45	1.49	-2.37
				1710	52.90	53.54	-1.20	1.41	1.46	-3.46
				1755	52.80	53.43	-1.18	1.46	1.49	-2.30
C	6/7/2019	1900	Body	1900	51.80	53.30	-2.81	1.57	1.52	3.55
				1850	51.94	53.30	-2.55	1.53	1.52	0.86
				1920	51.78	53.30	-2.85	1.59	1.52	4.87

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (ϵ_r)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
C	6/11/2019	1900	Head	1900	39.56	40.00	-1.10	1.44	1.40	3.00
				1850	39.75	40.00	-0.63	1.40	1.40	-0.07
				1920	39.52	40.00	-1.20	1.46	1.40	4.50
C	6/11/2019	1900	Body	1900	50.73	53.30	-4.82	1.57	1.52	3.03
				1850	50.86	53.30	-4.58	1.52	1.52	0.20
				1920	50.70	53.30	-4.88	1.59	1.52	4.41
C	6/14/2019	1750	Head	1750	41.59	40.08	3.76	1.32	1.37	-3.36
				1710	41.70	40.15	3.87	1.29	1.35	-4.34
				1755	41.56	40.08	3.70	1.33	1.37	-3.27
C	6/14/2019	1900	Head	1900	41.32	40.00	3.30	1.44	1.40	2.71
				1850	41.50	40.00	3.75	1.40	1.40	0.00
				1920	41.29	40.00	3.23	1.46	1.40	4.29
C	6/14/2019	1750	Body	1750	55.87	53.44	4.55	1.54	1.49	3.76
				1710	55.96	53.54	4.51	1.50	1.46	2.84
				1755	55.85	53.43	4.53	1.55	1.49	3.88
C	6/14/2019	1900	Body	1900	51.70	53.30	-3.00	1.56	1.52	2.76
				1850	51.76	53.30	-2.89	1.52	1.52	0.13
				1920	51.70	53.30	-3.00	1.58	1.52	4.14
C	6/18/2019	1900	Head	1900	39.29	40.00	-1.78	1.44	1.40	2.64
				1850	39.54	40.00	-1.15	1.40	1.40	-0.07
				1920	39.25	40.00	-1.88	1.46	1.40	4.07
C	6/18/2019	1900	Body	1900	52.78	53.30	-0.98	1.55	1.52	2.04
				1850	52.95	53.30	-0.66	1.51	1.52	-0.59
				1920	52.75	53.30	-1.03	1.57	1.52	3.36
C	6/21/2019	1900	Body	1900	54.66	53.30	2.55	1.56	1.52	2.37
				1850	54.77	53.30	2.76	1.51	1.52	-0.39
				1920	54.64	53.30	2.51	1.58	1.52	3.75
C	6/21/2019	1900	Head	1900	38.35	40.00	-4.13	1.43	1.40	2.21
				1850	38.53	40.00	-3.68	1.39	1.40	-0.79
				1920	38.31	40.00	-4.22	1.45	1.40	3.79
C	6/25/2019	1900	Head	1900	38.44	40.00	-3.90	1.44	1.40	2.79
				1850	38.63	40.00	-3.42	1.40	1.40	0.00
				1920	38.39	40.00	-4.03	1.46	1.40	4.29
C	6/25/2019	1900	Body	1900	51.25	53.30	-3.85	1.52	1.52	0.26
				1850	51.38	53.30	-3.60	1.48	1.52	-2.37
				1920	51.21	53.30	-3.92	1.55	1.52	1.64
C	6/29/2019	1900	Head	1900	38.94	40.00	-2.65	1.43	1.40	2.21
				1850	39.16	40.00	-2.10	1.39	1.40	-0.79
				1920	38.88	40.00	-2.80	1.45	1.40	3.57

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (ϵ_r)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
C	6/29/2019	1900	Body	1900	51.43	53.30	-3.51	1.51	1.52	-0.79
				1850	51.61	53.30	-3.17	1.47	1.52	-3.42
				1920	51.40	53.30	-3.56	1.53	1.52	0.46
D	6/3/2019	2300	Head	2300	39.21	39.47	-0.67	1.75	1.66	4.94
				2350	39.15	39.38	-0.60	1.78	1.71	4.35
				2400	38.99	39.30	-0.78	1.82	1.75	3.96
C	7/2/2019	1900	Body	1900	52.29	53.30	-1.89	1.50	1.52	-1.58
				1850	52.42	53.30	-1.65	1.46	1.52	-4.21
				1920	52.26	53.30	-1.95	1.52	1.52	-0.26
C	7/2/2019	1900	Head	1900	39.32	40.00	-1.70	1.43	1.40	1.79
				1850	39.49	40.00	-1.28	1.39	1.40	-0.93
				1920	39.27	40.00	-1.82	1.45	1.40	3.21
C	7/6/2019	1900	Body	1900	51.49	53.30	-3.40	1.49	1.52	-2.04
				1850	51.61	53.30	-3.17	1.45	1.52	-4.67
				1920	51.46	53.30	-3.45	1.51	1.52	-0.79
C	7/6/2019	1900	Head	1900	41.62	40.00	4.05	1.39	1.40	-0.93
				1850	41.77	40.00	4.43	1.35	1.40	-3.64
				1920	41.57	40.00	3.93	1.41	1.40	0.50
D	6/3/2019	2300	Body	2300	52.79	52.90	-0.22	1.87	1.80	3.85
				2350	52.64	52.84	-0.38	1.93	1.85	4.28
				2400	52.47	52.77	-0.57	1.99	1.90	4.69
D	6/5/2019	2600	Head	2600	37.91	39.01	-2.82	1.96	1.96	-0.16
				2495	38.09	39.14	-2.69	1.87	1.85	0.94
				2690	37.74	38.90	-2.98	2.03	2.06	-1.58
D	6/6/2019	2300	Head	2300	38.91	39.47	-1.43	1.70	1.66	2.36
				2350	38.82	39.38	-1.43	1.74	1.71	1.83
				2400	38.67	39.30	-1.59	1.78	1.75	1.39
D	6/6/2019	2300	Body	2300	52.80	52.90	-0.20	1.82	1.80	1.08
				2350	52.64	52.84	-0.38	1.88	1.85	1.63
				2400	52.46	52.77	-0.59	1.94	1.90	2.32
D	6/6/2019	2600	Body	2600	52.24	52.51	-0.52	2.23	2.16	3.06
				2495	52.50	52.64	-0.27	2.10	2.01	4.36
				2690	51.96	52.40	-0.83	2.34	2.29	2.26
D	6/9/2019	2300	Head	2300	37.69	39.47	-4.52	1.66	1.66	-0.40
				2350	37.60	39.38	-4.53	1.69	1.71	-1.04
				2400	37.46	39.30	-4.67	1.73	1.75	-1.46
D	6/9/2019	2600	Head	2600	38.99	39.01	-0.05	1.91	1.96	-2.81
				2495	39.14	39.14	-0.01	1.82	1.85	-1.82
				2690	38.82	38.90	-0.20	1.98	2.06	-3.96

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (ϵ_r)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
D	6/9/2019	2300	Body	2300	51.92	52.90	-1.86	1.86	1.80	3.30
				2350	51.78	52.84	-2.00	1.92	1.85	3.58
				2400	51.57	52.77	-2.28	1.98	1.90	4.11
D	6/9/2019	2600	Body	2600	51.02	52.51	-2.84	2.22	2.16	2.51
				2495	51.31	52.64	-2.53	2.09	2.01	3.56
				2690	50.73	52.40	-3.18	2.32	2.29	1.60
D	6/13/2019	2600	Head	2600	38.45	39.01	-1.44	1.96	1.96	-0.16
				2495	38.64	39.14	-1.29	1.87	1.85	1.05
				2690	38.29	38.90	-1.56	2.03	2.06	-1.48
D	6/13/2019	2600	Body	2600	50.66	52.51	-3.52	2.16	2.16	0.15
				2495	51.02	52.64	-3.08	2.04	2.01	1.28
				2690	50.39	52.40	-3.83	2.27	2.29	-0.97
D	6/13/2019	2300	Body	2300	51.68	52.90	-2.31	1.80	1.80	-0.25
				2350	51.53	52.84	-2.48	1.86	1.85	0.28
				2400	51.42	52.77	-2.56	1.92	1.90	1.26
D	6/13/2019	2300	Head	2300	37.87	39.47	-4.06	1.64	1.66	-1.43
				2350	37.77	39.38	-4.10	1.67	1.71	-2.21
				2400	37.66	39.30	-4.16	1.70	1.75	-2.78
D	6/17/2019	2300	Body	2300	52.29	52.90	-1.16	1.81	1.80	0.30
				2350	52.16	52.84	-1.28	1.87	1.85	0.77
				2400	52.00	52.77	-1.46	1.92	1.90	1.37
D	6/17/2019	2300	Head	2300	39.03	39.47	-1.12	1.75	1.66	4.94
				2350	38.94	39.38	-1.13	1.78	1.71	4.23
				2400	38.81	39.30	-1.24	1.82	1.75	3.79
D	6/17/2019	2600	Body	2600	50.69	52.51	-3.47	2.18	2.16	0.89
				2495	50.96	52.64	-3.20	2.05	2.01	1.83
				2690	50.39	52.40	-3.83	2.29	2.29	0.12
D	6/20/2019	2600	Head	2600	37.66	39.01	-3.46	1.99	1.96	1.52
				2495	37.82	39.14	-3.38	1.90	1.85	2.72
				2690	37.47	38.90	-3.67	2.06	2.06	0.17
D	6/21/2019	2300	Body	2300	50.77	52.90	-4.03	1.82	1.80	0.69
				2350	50.61	52.84	-4.22	1.87	1.85	0.77
				2400	50.42	52.77	-4.46	1.92	1.90	1.21
D	6/21/2019	2300	Head	2300	39.49	39.47	0.04	1.73	1.66	3.68
				2350	39.40	39.38	0.04	1.76	1.71	2.95
				2400	39.30	39.30	0.01	1.80	1.75	2.47
D	6/21/2019	2600	Body	2600	50.72	52.51	-3.41	2.22	2.16	2.60
				2495	51.01	52.64	-3.10	2.08	2.01	3.22
				2690	50.40	52.40	-3.81	2.33	2.29	1.95

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (ϵ_r)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
D	6/24/2019	2300	Head	2300	41.00	39.47	3.87	1.71	1.66	2.84
				2350	40.91	39.38	3.87	1.74	1.71	2.13
				2400	40.81	39.30	3.85	1.78	1.75	1.62
D	6/24/2019	2600	Head	2600	40.57	39.01	4.00	1.95	1.96	-0.52
				2495	40.70	39.14	3.98	1.86	1.85	0.45
				2690	40.39	38.90	3.84	2.03	2.06	-1.58
D	6/24/2019	2300	Body	2300	51.23	52.90	-3.16	1.76	1.80	-2.52
				2350	51.08	52.84	-3.33	1.81	1.85	-2.31
				2400	50.92	52.77	-3.51	1.86	1.90	-1.85
D	6/24/2019	2600	Body	2600	50.43	52.51	-3.96	2.10	2.16	-2.72
				2495	50.70	52.64	-3.69	1.97	2.01	-2.00
				2690	50.16	52.40	-4.27	2.21	2.29	-3.29
D	6/27/2019	2300	Body	2300	51.69	52.90	-2.30	1.83	1.80	1.41
				2350	51.52	52.84	-2.50	1.89	1.85	2.01
				2400	51.33	52.77	-2.73	1.95	1.90	2.69
D	6/27/2019	2600	Body	2600	50.73	52.51	-3.40	2.19	2.16	1.49
				2495	51.03	52.64	-3.06	2.06	2.01	2.42
				2690	50.41	52.40	-3.79	2.30	2.29	0.60
D	6/29/2019	2300	Head	2300	38.87	39.47	-1.53	1.66	1.66	-0.10
				2350	38.79	39.38	-1.51	1.69	1.71	-0.86
				2400	38.70	39.30	-1.52	1.73	1.75	-1.29
D	6/29/2019	2600	Head	2600	38.47	39.01	-1.39	1.89	1.96	-3.68
				2495	38.61	39.14	-1.36	1.80	1.85	-2.47
				2690	38.29	38.90	-1.56	1.96	2.06	-4.93
D	7/1/2019	2300	Body	2300	51.15	52.90	-3.32	1.84	1.80	1.97
				2350	51.01	52.84	-3.46	1.84	1.85	-0.64
				2400	50.79	52.77	-3.76	1.94	1.90	2.11
D	7/1/2019	2600	Body	2600	50.08	52.51	-4.63	2.16	2.16	0.10
				2495	50.31	52.64	-4.43	2.03	2.01	0.78
				2690	49.81	52.40	-4.94	2.25	2.29	-1.85
D	7/5/2019	2600	Head	2600	37.53	39.01	-3.80	1.91	1.96	-2.66
				2495	37.64	39.14	-3.84	1.82	1.85	-1.71
				2690	37.37	38.90	-3.93	1.99	2.06	-3.57
D	7/5/2019	2600	Body	2600	51.61	52.51	-1.72	2.11	2.16	-2.40
				2495	51.83	52.64	-1.54	1.98	2.01	-1.50
				2690	51.35	52.40	-2.00	2.22	2.29	-2.77
D	7/5/2019	2300	Head	2300	37.99	39.47	-3.76	1.68	1.66	0.92
				2350	37.91	39.38	-3.74	1.71	1.71	0.02
				2400	37.79	39.30	-3.83	1.75	1.75	-0.27

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (ϵ_r)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
D	7/5/2019	2300	Body	2300	52.41	52.90	-0.93	1.76	1.80	-2.19
				2350	52.26	52.84	-1.09	1.81	1.85	-1.99
				2400	52.10	52.77	-1.27	1.88	1.90	-1.11
D	7/9/2019	2600	Head	2600	38.26	39.01	-1.92	1.95	1.96	-0.47
				2495	38.39	39.14	-1.92	1.86	1.85	0.56
				2690	38.07	38.90	-2.13	2.03	2.06	-1.58
D	7/9/2019	2600	Body	2600	50.94	52.51	-2.99	2.11	2.16	-2.49
				2495	51.18	52.64	-2.78	1.98	2.01	-1.80
				2690	50.65	52.40	-3.33	2.22	2.29	-3.16
E	6/6/2019	5750	Body	5750	46.44	48.27	-3.80	6.12	5.94	3.02
				5700	46.51	48.34	-3.79	6.04	5.88	2.80
				5850	46.29	48.20	-3.96	6.24	6.00	4.05
E	6/6/2019	5750	Head	5750	35.16	35.36	-0.57	5.20	5.21	-0.30
				5700	35.18	35.42	-0.68	5.08	5.16	-1.58
				5850	35.00	35.30	-0.85	5.25	5.27	-0.42
E	6/10/2019	5750	Head	5750	35.71	35.36	0.98	5.25	5.21	0.75
				5700	35.83	35.42	1.16	5.19	5.16	0.51
				5850	35.62	35.30	0.91	5.35	5.27	1.59
E	6/10/2019	5750	Body	5750	47.52	48.27	-1.56	6.02	5.94	1.38
				5700	47.65	48.34	-1.43	5.94	5.88	1.03
				5850	47.42	48.20	-1.62	6.15	6.00	2.50
E	6/13/2019	5750	Head	5750	35.67	35.36	0.87	5.13	5.21	-1.63
				5700	35.82	35.42	1.13	5.06	5.16	-2.03
				5850	35.56	35.30	0.74	5.21	5.27	-1.16
E	6/13/2019	5750	Body	5750	46.89	48.27	-2.87	6.15	5.94	3.57
				5700	47.07	48.34	-2.63	6.06	5.88	3.07
				5850	46.78	48.20	-2.95	6.26	6.00	4.40
E	6/13/2019	2450	Body	2450	51.52	52.70	-2.24	1.87	1.95	-3.95
				2400	51.66	52.77	-2.11	1.81	1.90	-4.64
				2480	51.46	52.66	-2.28	1.91	1.99	-4.17
E	6/17/2019	5750	Body	5750	47.43	48.27	-1.75	6.00	5.94	1.00
				5700	47.49	48.34	-1.76	5.95	5.88	1.20
				5850	47.31	48.20	-1.85	6.14	6.00	2.40

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (ϵ_r)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
E	6/17/2019	5750	Head	5750	35.60	35.36	0.67	5.01	5.21	-3.98
				5700	35.67	35.42	0.71	4.97	5.16	-3.81
				5850	35.48	35.30	0.51	5.12	5.27	-2.79
E	6/20/2019	5750	Head	5750	35.22	35.36	-0.40	5.03	5.21	-3.56
				5700	35.31	35.42	-0.31	4.97	5.16	-3.73
				5850	35.13	35.30	-0.48	5.12	5.27	-2.92
E	6/20/2019	5750	Body	5750	46.75	48.27	-3.16	6.07	5.94	2.29
				5700	46.85	48.34	-3.09	6.00	5.88	2.10
				5850	46.63	48.20	-3.26	6.20	6.00	3.38
E	6/24/2019	5750	Head	5750	34.82	35.36	-1.53	5.07	5.21	-2.74
				5700	34.92	35.42	-1.41	5.01	5.16	-2.97
				5850	34.72	35.30	-1.64	5.17	5.27	-1.84
E	6/24/2019	5750	Body	5750	46.10	48.27	-4.50	6.11	5.94	2.93
				5700	46.25	48.34	-4.33	5.99	5.88	1.84
				5850	45.96	48.20	-4.65	6.21	6.00	3.50
E	6/24/2019	2450	Body	2450	50.30	52.70	-4.55	1.94	1.95	-0.36
				2400	50.45	52.77	-4.40	1.88	1.90	-1.16
				2480	50.24	52.66	-4.60	1.98	1.99	-0.56
E	6/28/2019	5750	Body	5750	47.00	48.27	-2.64	6.08	5.94	2.44
				5700	47.01	48.34	-2.76	6.04	5.88	2.70
				5850	46.80	48.20	-2.90	6.24	6.00	4.02
E	6/28/2019	5750	Head	5750	35.93	35.36	1.60	5.09	5.21	-2.45
				5700	35.92	35.42	1.41	5.06	5.16	-1.97
				5850	35.78	35.30	1.36	5.21	5.27	-1.16
E	6/29/2019	5250	Head	5250	35.30	35.93	-1.76	4.59	4.70	-2.30
				5150	35.24	36.05	-2.24	4.48	4.60	-2.54
				5350	35.10	35.82	-2.01	4.76	4.80	-0.86
E	6/29/2019	5250	Body	5250	49.45	48.95	1.02	5.34	5.35	-0.30
				5150	49.25	49.09	0.33	5.22	5.24	-0.35
				5350	49.36	48.82	1.11	5.55	5.47	1.54
E	7/2/2019	5750	Head	5750	35.93	35.36	1.60	5.22	5.21	0.14
				5700	36.07	35.42	1.84	5.11	5.16	-0.96
				5850	35.81	35.30	1.44	5.29	5.27	0.32
E	7/2/2019	5750	Body	5750	46.62	48.27	-3.43	6.16	5.94	3.84
				5700	46.84	48.34	-3.11	5.90	5.88	0.36
				5850	46.36	48.20	-3.82	6.16	6.00	2.65

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (ϵ_r)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
E	7/6/2019	5750	Head	5750	37.01	35.36	4.66	5.18	5.21	-0.74
				5700	36.91	35.42	4.21	4.93	5.16	-4.58
				5850	36.61	35.30	3.71	5.17	5.27	-1.92
E	7/6/2019	5750	Body	5750	46.96	48.27	-2.72	6.15	5.94	3.64
				5700	46.78	48.34	-3.23	5.83	5.88	-0.74
				5850	46.41	48.20	-3.71	6.18	6.00	2.95
E	7/9/2019	5750	Head	5750	36.37	35.36	2.85	5.16	5.21	-1.09
				5700	36.40	35.42	2.77	5.12	5.16	-0.92
				5850	36.25	35.30	2.69	5.28	5.27	0.09
E	7/9/2019	5750	Body	5750	47.56	48.27	-1.48	5.97	5.94	0.49
				5700	47.60	48.34	-1.54	5.92	5.88	0.64
				5850	47.42	48.20	-1.62	6.12	6.00	1.98
F	6/3/2019	2450	Head	2450	40.43	39.20	3.14	1.88	1.80	4.28
				2400	40.71	39.30	3.60	1.82	1.75	3.96
				2480	40.31	39.16	2.93	1.91	1.83	4.40
F	6/3/2019	2450	Body	2450	51.49	52.70	-2.30	2.03	1.95	4.26
				2400	51.79	52.77	-1.86	1.97	1.90	3.69
				2480	51.39	52.66	-2.42	2.08	1.99	4.16
F	6/6/2019	2450	Head	2450	38.92	39.20	-0.71	1.87	1.80	3.94
				2400	39.08	39.30	-0.55	1.81	1.75	3.50
				2480	38.82	39.16	-0.87	1.91	1.83	4.01
F	6/6/2019	2450	Body	2450	50.51	52.70	-4.16	2.02	1.95	3.54
				2400	50.68	52.77	-3.97	1.95	1.90	2.79
				2480	50.42	52.66	-4.26	2.06	1.99	3.30
F	6/10/2019	2450	Head	2450	38.36	39.20	-2.14	1.83	1.80	1.44
				2400	38.54	39.30	-1.93	1.77	1.75	0.93
				2480	38.28	39.16	-2.25	1.86	1.83	1.50
F	6/10/2019	2450	Body	2450	50.58	52.70	-4.02	2.01	1.95	3.03
				2400	50.74	52.77	-3.85	1.94	1.90	2.32
				2480	50.49	52.66	-4.12	2.05	1.99	2.80
F	6/13/2019	2450	Head	2450	38.63	39.20	-1.45	1.88	1.80	4.56
				2400	38.91	39.30	-0.98	1.82	1.75	4.02
				2480	38.52	39.16	-1.64	1.92	1.83	4.67
F	6/13/2019	2450	Body	2450	51.02	52.70	-3.19	2.00	1.95	2.31
				2400	51.29	52.77	-2.81	1.92	1.90	1.37
				2480	50.91	52.66	-3.33	2.04	1.99	2.15
F	6/17/2019	2450	Body	2450	51.92	52.70	-1.48	1.98	1.95	1.59
				2400	52.10	52.77	-1.27	1.91	1.90	0.79
				2480	51.85	52.66	-1.54	2.02	1.99	1.30

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (ϵ_r)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
F	6/17/2019	2450	Head	2450	39.82	39.20	1.58	1.88	1.80	4.50
				2400	40.01	39.30	1.82	1.82	1.75	3.96
				2480	39.74	39.16	1.48	1.91	1.83	4.45
F	6/20/2019	2450	Head	2450	38.69	39.20	-1.30	1.89	1.80	4.83
				2400	38.86	39.30	-1.11	1.83	1.75	4.53
				2480	38.61	39.16	-1.41	1.92	1.83	4.78
F	6/20/2019	2450	Body	2450	51.15	52.70	-2.94	2.03	1.95	4.15
				2400	51.31	52.77	-2.77	1.97	1.90	3.63
				2480	51.06	52.66	-3.04	2.07	1.99	3.86
F	6/24/2019	2450	Head	2450	39.79	39.20	1.51	1.82	1.80	1.00
				2400	39.95	39.30	1.66	1.76	1.75	0.59
				2480	39.72	39.16	1.42	1.85	1.83	0.90
F	6/24/2019	2450	Body	2450	51.27	52.70	-2.71	2.01	1.95	3.28
				2400	51.44	52.77	-2.53	1.95	1.90	2.69
				2480	51.20	52.66	-2.78	2.05	1.99	2.85
F	6/28/2019	2450	Body	2450	51.26	52.70	-2.73	2.04	1.95	4.77
				2400	51.44	52.77	-2.53	1.97	1.90	3.74
				2480	51.21	52.66	-2.76	2.08	1.99	4.31
F	6/28/2019	2450	Head	2450	38.67	39.20	-1.35	1.87	1.80	4.06
				2400	38.88	39.30	-1.06	1.81	1.75	3.56
				2480	38.61	39.16	-1.41	1.91	1.83	4.01
F	7/1/2019	2450	Head	2450	38.38	39.20	-2.09	1.88	1.80	4.56
				2400	38.57	39.30	-1.85	1.82	1.75	4.07
				2480	38.31	39.16	-2.18	1.92	1.83	4.51
F	7/1/2019	2450	Body	2450	52.27	52.70	-0.82	1.99	1.95	2.26
				2400	52.45	52.77	-0.61	1.93	1.90	1.47
				2480	52.21	52.66	-0.86	2.03	1.99	1.90
F	7/5/2019	2450	Body	2450	52.49	52.70	-0.40	1.97	1.95	0.92
				2400	52.67	52.77	-0.19	1.91	1.90	0.42
				2480	52.37	52.66	-0.55	2.00	1.99	0.59
F	7/5/2019	2450	Head	2450	38.35	39.20	-2.17	1.89	1.80	4.72
				2400	38.52	39.30	-1.98	1.83	1.75	4.47
				2480	38.23	39.16	-2.38	1.92	1.83	4.62
F	7/9/2019	2450	Head	2450	40.85	39.20	4.21	1.89	1.80	4.78
				2400	41.05	39.30	4.46	1.82	1.75	4.07
				2480	40.79	39.16	4.16	1.92	1.83	4.78
F	7/9/2019	2450	Body	2450	51.46	52.70	-2.35	2.05	1.95	4.97
				2400	51.67	52.77	-2.09	1.97	1.90	3.74
				2480	51.41	52.66	-2.38	2.08	1.99	4.61

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (ϵ_r)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
G	6/3/2019	5250	Head	5250	37.50	35.93	4.36	4.91	4.70	4.34
				5150	37.60	36.05	4.31	4.78	4.60	3.92
				5350	37.41	35.82	4.44	5.03	4.80	4.67
G	6/3/2019	5250	Body	5250	47.51	48.95	-2.95	5.50	5.35	2.71
				5150	47.58	49.09	-3.07	5.35	5.24	2.21
				5350	47.45	48.82	-2.80	5.66	5.47	3.54
G	6/6/2019	5250	Body	5250	47.05	48.95	-3.89	5.26	5.35	-1.68
				5150	47.17	49.09	-3.91	5.12	5.24	-2.26
				5350	46.85	48.82	-4.03	5.40	5.47	-1.29
G	6/6/2019	5250	Head	5250	36.36	35.93	1.19	4.57	4.70	-2.87
				5150	36.51	36.05	1.28	4.47	4.60	-2.89
				5350	36.22	35.82	1.12	4.68	4.80	-2.67
G	6/10/2019	5250	Head	5250	37.61	35.93	4.67	4.62	4.70	-1.85
				5150	37.75	36.05	4.72	4.51	4.60	-1.87
				5350	37.46	35.82	4.58	4.72	4.80	-1.78
G	6/10/2019	5250	Body	5250	47.51	48.95	-2.95	5.43	5.35	1.44
				5150	47.70	49.09	-2.83	5.29	5.24	1.08
				5350	47.32	48.82	-3.07	5.57	5.47	1.85
G	6/13/2019	5250	Body	5250	48.18	48.95	-1.58	5.45	5.35	1.81
				5150	48.39	49.09	-1.42	5.30	5.24	1.16
				5350	47.93	48.82	-1.82	5.58	5.47	1.98
G	6/13/2019	5250	Head	5250	37.53	35.93	4.44	4.67	4.70	-0.62
				5150	37.71	36.05	4.61	4.56	4.60	-0.78
				5350	37.33	35.82	4.22	4.79	4.80	-0.36
G	6/17/2019	5250	Head	5250	36.68	35.93	2.08	4.68	4.70	-0.51
				5150	36.84	36.05	2.20	4.58	4.60	-0.39
				5350	36.52	35.82	1.96	4.80	4.80	-0.09
G	6/17/2019	5250	Body	5250	48.11	48.95	-1.72	5.34	5.35	-0.32
				5150	48.30	49.09	-1.60	5.20	5.24	-0.68
				5350	47.94	48.82	-1.80	5.48	5.47	0.23
G	6/20/2019	5250	Head	5250	36.25	35.93	0.88	4.52	4.70	-3.83
				5150	36.42	36.05	1.03	4.43	4.60	-3.80
				5350	36.11	35.82	0.81	4.62	4.80	-3.80
G	6/20/2019	5250	Body	5250	46.97	48.95	-4.05	5.22	5.35	-2.56
				5150	47.16	49.09	-3.93	5.09	5.24	-2.74
				5350	46.80	48.82	-4.13	5.34	5.47	-2.35
G	6/24/2019	5250	Head	5250	36.04	35.93	0.30	4.65	4.70	-1.22
				5150	36.20	36.05	0.42	4.54	4.60	-1.28
				5350	35.88	35.82	0.17	4.75	4.80	-1.05

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (ϵ_r)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
G	6/24/2019	5250	Body	5250	47.31	48.95	-3.35	5.39	5.35	0.69
				5150	47.51	49.09	-3.21	5.25	5.24	0.32
				5350	47.11	48.82	-3.50	5.53	5.47	1.14
G	6/26/2019	2600	Body	2600	51.06	52.51	-2.76	2.17	2.16	0.52
				2495	51.39	52.64	-2.38	2.02	2.01	0.29
				2690	50.70	52.40	-3.24	2.30	2.29	0.51
G	7/1/2019	2600	Body	2600	51.11	52.51	-2.67	2.24	2.16	3.85
				2495	51.55	52.64	-2.08	2.07	2.01	2.67
				2690	50.81	52.40	-3.03	2.37	2.29	3.79
G	7/1/2019	5250	Head	5250	35.65	35.93	-0.79	4.56	4.70	-3.00
				5150	35.80	36.05	-0.69	4.46	4.60	-3.00
				5350	35.48	35.82	-0.95	4.67	4.80	-2.76
G	7/1/2019	5250	Body	5250	49.71	48.95	1.55	5.39	5.35	0.77
				5150	49.90	49.09	1.66	5.26	5.24	0.49
				5350	49.52	48.82	1.44	5.55	5.47	1.53
G	7/3/2019	1900	Body	1900	51.43	53.30	-3.51	1.54	1.52	1.32
				1850	51.66	53.30	-3.08	1.48	1.52	-2.37
				1920	51.34	53.30	-3.68	1.56	1.52	2.89
G	7/5/2019	5250	Head	5250	35.68	35.93	-0.70	4.88	4.70	3.74
				5150	35.71	36.05	-0.94	4.68	4.60	1.70
				5350	35.26	35.82	-1.56	5.00	4.80	4.03
G	7/5/2019	5250	Body	5250	48.92	48.95	-0.07	5.30	5.35	-1.01
				5150	48.83	49.09	-0.52	5.05	5.24	-3.50
				5350	48.46	48.82	-0.73	5.46	5.47	-0.16
G	7/9/2019	5250	Head	5250	36.57	35.93	1.77	4.67	4.70	-0.64
				5150	36.70	36.05	1.81	4.58	4.60	-0.50
				5350	36.41	35.82	1.65	4.80	4.80	-0.16
G	7/9/2019	5250	Body	5250	47.06	48.95	-3.86	5.33	5.35	-0.47
				5150	47.19	49.09	-3.87	5.22	5.24	-0.39
				5350	46.89	48.82	-3.95	5.49	5.47	0.28
H	6/3/2019	5600	Head	5600	34.79	35.53	-2.09	5.05	5.06	-0.12
				5500	34.87	35.65	-2.18	4.91	4.96	-1.05
				5725	34.54	35.39	-2.41	5.19	5.19	0.00

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (ϵ_r)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
H	6/3/2019	5600	Body	5600	47.36	48.48	-2.31	5.70	5.76	-1.08
				5500	47.51	48.61	-2.27	5.60	5.64	-0.84
				5725	47.07	48.31	-2.56	5.84	5.91	-1.06
H	6/6/2019	5600	Head	5600	36.49	35.53	2.69	4.89	5.06	-3.36
				5500	36.66	35.65	2.84	4.77	4.96	-3.73
				5725	36.28	35.39	2.51	5.04	5.19	-2.86
H	6/6/2019	5600	Body	5600	49.10	48.48	1.28	5.58	5.76	-3.18
				5500	49.23	48.61	1.27	5.43	5.64	-3.78
				5725	48.90	48.31	1.22	5.75	5.91	-2.59
H	6/10/2019	5600	Head	5600	34.40	35.53	-3.19	4.95	5.06	-2.10
				5500	34.56	35.65	-3.05	4.84	4.96	-2.38
				5725	34.17	35.39	-3.45	5.10	5.19	-1.64
H	6/10/2019	5600	Body	5600	47.48	48.48	-2.06	5.56	5.76	-3.47
				5500	47.62	48.61	-2.04	5.42	5.64	-3.94
				5725	47.27	48.31	-2.15	5.74	5.91	-2.86
H	6/13/2019	5600	Head	5600	36.83	35.53	3.65	5.00	5.06	-1.13
				5500	37.04	35.65	3.90	4.90	4.96	-1.25
				5725	36.58	35.39	3.36	5.17	5.19	-0.41
H	6/13/2019	5600	Body	5600	47.12	48.48	-2.80	5.85	5.76	1.46
				5500	47.31	48.61	-2.68	5.72	5.64	1.25
				5725	46.88	48.31	-2.96	6.03	5.91	2.14
H	6/13/2019	2450	Body	2450	54.44	52.70	3.30	1.94	1.95	-0.41
				2400	54.55	52.77	3.37	1.89	1.90	-0.63
				2480	54.40	52.66	3.30	1.98	1.99	-0.86
H	6/16/2019	5600	Body	5600	48.38	48.48	-0.20	5.55	5.76	-3.71
				5500	48.55	48.61	-0.13	5.41	5.64	-4.17
				5725	48.17	48.31	-0.29	5.73	5.91	-3.01
H	6/17/2019	5600	Head	5600	34.73	35.53	-2.26	4.91	5.06	-2.93
				5500	34.91	35.65	-2.07	4.80	4.96	-3.27
				5725	34.51	35.39	-2.49	5.07	5.19	-2.34
H	6/20/2019	5600	Head	5600	36.11	35.53	1.62	4.84	5.06	-4.45
				5500	36.25	35.65	1.69	4.72	4.96	-4.78
				5725	35.91	35.39	1.47	4.97	5.19	-4.15
H	6/20/2019	5600	Body	5600	46.87	48.48	-3.32	5.71	5.76	-0.87
				5500	47.00	48.61	-3.32	5.57	5.64	-1.39
				5725	46.65	48.31	-3.43	5.88	5.91	-0.50
H	6/24/2019	5600	Head	5600	34.85	35.53	-1.92	4.96	5.06	-2.00
				5500	35.03	35.65	-1.73	4.84	4.96	-2.40
				5725	34.63	35.39	-2.15	5.12	5.19	-1.37

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (ϵ_r)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
H	6/24/2019	5600	Body	5600	49.34	48.48	1.78	5.56	5.76	-3.51
				5500	49.48	48.61	1.78	5.41	5.64	-4.08
				5725	49.15	48.31	1.74	5.74	5.91	-2.84
H	6/25/2019	2450	Head	2450	37.31	39.20	-4.82	1.75	1.80	-2.56
				2400	37.39	39.30	-4.85	1.72	1.75	-2.09
				2480	37.32	39.16	-4.70	1.78	1.83	-3.03
H	6/28/2019	5600	Body	5600	46.64	48.48	-3.79	5.48	5.76	-4.88
				5500	47.02	48.61	-3.28	5.39	5.64	-4.47
				5725	46.38	48.31	-3.99	5.63	5.91	-4.65
H	6/28/2019	5600	Head	5600	33.94	35.53	-4.49	4.88	5.06	-3.60
				5500	34.23	35.65	-3.98	4.81	4.96	-3.08
				5725	33.66	35.39	-4.89	5.02	5.19	-3.32
H	6/29/2019	5250	Body	5250	51.23	48.95	4.65	5.10	5.35	-4.80
				5150	51.43	49.09	4.77	4.99	5.24	-4.72
				5350	51.09	48.82	4.66	5.24	5.47	-4.16
H	6/30/2019	1900	Head	1900	39.12	40.00	-2.20	1.42	1.40	1.50
				1850	39.27	40.00	-1.82	1.40	1.40	-0.14
				1920	39.11	40.00	-2.23	1.44	1.40	2.57
H	7/5/2019	5600	Head	5600	34.53	35.53	-2.83	4.81	5.06	-4.97
				5500	34.97	35.65	-1.90	4.75	4.96	-4.29
				5725	34.25	35.39	-3.22	4.97	5.19	-4.28
H	7/5/2019	5600	Body	5600	47.16	48.48	-2.72	5.95	5.76	3.32
				5500	47.77	48.61	-1.73	5.84	5.64	3.48
				5725	46.77	48.31	-3.18	6.16	5.91	4.24
H	7/9/2019	5600	Head	5600	36.58	35.53	2.94	5.06	5.06	0.00
				5500	36.76	35.65	3.12	4.95	4.96	-0.22
				5725	36.36	35.39	2.74	5.22	5.19	0.52
H	7/9/2019	5600	Body	5600	49.53	48.48	2.17	5.60	5.76	-2.83
				5500	49.69	48.61	2.22	5.51	5.64	-2.31
				5725	49.35	48.31	2.16	5.77	5.91	-2.38
6	6/3/2019	750	Head	750	39.63	41.96	-5.56	0.86	0.89	-3.77
				660	39.07	42.42	-7.90	0.81	0.89	-8.19
				800	39.31	41.71	-5.74	0.88	0.90	-2.34
6	6/3/2019	750	Body	750	54.54	55.55	-1.81	0.96	0.96	-0.03
				660	55.67	55.89	-0.40	0.87	0.96	-9.42
				800	54.69	55.35	-1.20	1.01	0.97	4.46
6	6/4/2019	750	Head	750	44.26	41.96	5.48	0.92	0.89	2.56
				660	41.72	42.42	-1.66	0.89	0.89	0.06
				800	42.09	41.71	0.92	0.95	0.90	5.54

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (ϵ_r)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
6	6/4/2019	750	Body	750	55.87	55.55	0.58	0.97	0.96	0.63
				660	57.12	55.89	2.20	0.86	0.96	-9.90
				800	55.93	55.35	1.04	1.01	0.97	4.25
6	6/5/2019	750	Body	750	51.97	55.55	-6.44	0.99	0.96	2.30
				660	53.79	55.89	-3.76	0.88	0.96	-8.01
				800	52.00	55.35	-6.06	1.04	0.97	7.04
6	6/5/2019	750	Head	750	39.68	41.96	-5.44	0.87	0.89	-2.92
				660	39.80	42.42	-6.18	0.81	0.89	-8.47
				800	40.08	41.71	-3.90	0.87	0.90	-3.08
6	6/6/2019	750	Head	750	41.35	41.96	-1.46	0.86	0.89	-4.01
				660	41.48	42.42	-2.22	0.83	0.89	-6.69
				800	41.10	41.71	-1.45	0.88	0.90	-2.07
6	6/6/2019	750	Body	750	52.92	55.55	-4.73	0.93	0.96	-3.80
				660	54.20	55.89	-3.03	0.84	0.96	-12.40
				800	52.69	55.35	-4.81	0.98	0.97	1.17
6	6/7/2019	750	Body	750	53.79	55.55	-3.16	0.97	0.96	0.88
				660	55.42	55.89	-0.85	0.90	0.96	-6.31
				800	53.41	55.35	-3.51	1.02	0.97	5.59
6	6/7/2019	750	Head	750	40.88	41.96	-2.58	0.86	0.89	-3.19
				660	41.27	42.42	-2.72	0.83	0.89	-6.49
				800	40.88	41.71	-1.98	0.87	0.90	-2.93
6	6/8/2019	750	Body	750	53.31	55.55	-4.03	0.96	0.96	-0.08
				660	53.37	55.89	-4.51	0.88	0.96	-7.55
				800	52.15	55.35	-5.79	1.01	0.97	4.66
6	6/8/2019	750	Head	750	41.35	41.96	-1.46	0.81	0.89	-9.12
				660	41.38	42.42	-2.46	0.80	0.89	-9.98
				800	41.50	41.71	-0.49	0.84	0.90	-6.88
6	6/9/2019	750	Head	750	43.83	41.96	4.45	0.92	0.89	3.46
				660	44.13	42.42	4.02	0.89	0.89	0.08
				800	43.43	41.71	4.14	0.94	0.90	4.66
6	6/9/2019	750	Body	750	59.95	55.55	7.93	0.95	0.96	-1.25
				660	61.12	55.89	9.35	0.87	0.96	-9.27
				800	59.72	55.35	7.89	0.99	0.97	2.54
6	6/10/2019	750	Body	750	53.53	55.55	-3.63	1.01	0.96	4.98
				660	55.68	55.89	-0.38	0.88	0.96	-7.59
				800	53.58	55.35	-3.20	1.03	0.97	6.83
6	6/11/2019	2300	Body	2300	50.69	52.90	-4.19	1.92	1.80	6.35
				2350	50.51	52.84	-4.41	1.98	1.85	6.93
				2400	50.44	52.77	-4.42	2.01	1.90	6.01

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (ϵ_r)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
6	6/12/2019	2300	Body	2300	57.82	52.90	9.29	1.95	1.80	8.07
				2350	57.69	52.84	9.18	2.02	1.85	8.98
				2400	57.50	52.77	8.96	2.08	1.90	9.54
6	6/13/2019	2300	Body	2300	53.31	52.90	0.77	1.94	1.80	7.57
				2350	53.20	52.84	0.68	2.01	1.85	8.39
				2400	53.05	52.77	0.53	2.07	1.90	8.80
6	6/14/2019	750	Body	750	53.45	55.55	-3.77	0.97	0.96	0.65
				660	54.28	55.89	-2.88	0.89	0.96	-7.37
				800	52.85	55.35	-4.52	1.02	0.97	5.59
6	6/14/2019	750	Head	750	41.08	41.96	-2.10	0.90	0.89	0.83
				660	41.10	42.42	-3.12	0.87	0.89	-1.83
				800	40.89	41.71	-1.95	0.92	0.90	2.63
6	6/15/2019	750	Body	750	50.79	55.55	-8.56	1.00	0.96	4.04
				660	52.18	55.89	-6.64	0.92	0.96	-4.21
				800	50.19	55.35	-9.33	1.06	0.97	9.83
6	6/16/2019	750	Head	750	40.17	41.96	-4.27	0.89	0.89	-0.14
				660	40.44	42.42	-4.67	0.86	0.89	-2.95
				800	40.14	41.71	-3.75	0.91	0.90	1.37
6	6/16/2019	750	Body	750	53.65	55.55	-3.41	1.01	0.96	4.77
				660	54.85	55.89	-1.86	0.92	0.96	-3.89
				800	53.23	55.35	-3.84	1.06	0.97	9.52
6	6/17/2019	750	Body	750	53.93	55.55	-2.91	0.96	0.96	-0.32
				660	54.81	55.89	-1.94	0.87	0.96	-9.28
				800	53.30	55.35	-3.71	1.01	0.97	4.66
6	6/18/2019	750	Body	750	54.37	55.55	-2.12	0.96	0.96	-0.55
				660	55.12	55.89	-1.38	0.87	0.96	-8.97
				800	53.70	55.35	-2.99	1.01	0.97	4.14
6	6/18/2019	750	Head	750	41.56	41.96	-0.96	0.94	0.89	4.91
				660	41.67	42.42	-1.78	0.90	0.89	1.03
				800	41.19	41.71	-1.24	0.96	0.90	6.56
6	6/19/2019	750	Body	750	55.90	55.55	0.64	0.99	0.96	3.22
				660	56.45	55.89	1.00	0.91	0.96	-4.65
				800	55.02	55.35	-0.60	1.04	0.97	7.66
6	6/19/2019	750	Head	750	40.45	41.96	-3.60	0.90	0.89	0.54
				660	40.31	42.42	-4.98	0.87	0.89	-1.73
				800	39.97	41.71	-4.16	0.94	0.90	4.95
6	6/21/2019	2300	Head	2300	38.62	39.47	-2.16	1.62	1.66	-2.63
				2350	38.55	39.38	-2.12	1.67	1.71	-2.50
				2400	38.47	39.30	-2.10	1.70	1.75	-2.95

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (ϵ_r)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
6	6/22/2019	1900	Head	1900	38.57	40.00	-3.58	1.46	1.40	4.07
				1850	38.63	40.00	-3.42	1.43	1.40	2.36
				1920	38.51	40.00	-3.73	1.46	1.40	4.57
6	6/24/2019	1750	Head	1750	39.13	40.08	-2.38	1.40	1.37	2.49
				1710	39.15	40.15	-2.48	1.37	1.35	1.38
				1755	39.14	40.08	-2.34	1.41	1.37	2.57
6	6/25/2019	2600	Head	2600	37.21	39.01	-4.62	2.04	1.96	3.97
				2495	37.43	39.14	-4.38	1.93	1.85	4.29
				2690	37.02	38.90	-4.83	2.11	2.06	2.31
6	6/25/2019	750	Head	750	40.82	41.96	-2.72	0.93	0.89	4.28
				660	41.35	42.42	-2.53	0.88	0.89	-1.10
				800	40.86	41.71	-2.03	0.94	0.90	4.77
6	6/25/2019	750	Body	750	55.38	55.55	-0.30	0.96	0.96	-0.41
				660	55.88	55.89	-0.02	0.87	0.96	-9.27
				800	54.96	55.35	-0.71	1.01	0.97	4.14
6	6/28/2019	3500	Head	3500	38.83	37.93	2.37	2.89	2.91	-0.67
				3600	38.97	37.82	3.05	2.92	3.01	-3.15
				3700	38.89	37.70	3.15	2.97	3.12	-4.69
6	6/30/2019	3500	Head	3500	36.53	37.93	-3.69	2.89	2.91	-0.60
				3400	36.70	38.04	-3.53	2.81	2.81	-0.01
				3600	36.28	37.82	-4.06	2.98	3.01	-0.99
6	7/2/2019	3500	Head	3500	39.20	37.93	3.35	2.79	2.91	-4.11
				3600	39.02	37.82	3.19	2.89	3.01	-4.24
				3700	38.83	37.70	2.99	2.98	3.12	-4.34
6	7/2/2019	3500	Body	3500	50.98	51.32	-0.67	3.40	3.31	2.69
				3600	50.72	51.19	-0.91	3.54	3.43	3.14
				3700	50.47	51.05	-1.14	3.67	3.55	3.41
6	7/6/2019	3500	Head	3500	39.35	37.93	3.74	2.81	2.91	-3.49
				3600	39.15	37.82	3.53	2.90	3.01	-3.75
				3700	38.83	37.70	2.99	2.98	3.12	-4.34
6	7/6/2019	3500	Body	3500	52.40	51.32	2.10	3.35	3.31	1.15
				3600	52.12	51.19	1.82	3.48	3.43	1.59
				3700	51.83	51.05	1.52	3.63	3.55	2.25

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (ϵ_r)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
7	6/3/2019	835	Body	835	52.87	55.20	-4.22	1.02	0.97	4.74
				805	53.28	55.33	-3.71	1.00	0.97	3.48
				850	52.84	55.16	-4.20	1.02	0.99	3.63
7	6/3/2019	835	Head	835	40.82	41.50	-1.64	0.93	0.90	2.96
				805	40.92	41.68	-1.82	0.92	0.90	2.07
				850	40.69	41.50	-1.95	0.93	0.92	2.11
7	6/7/2019	835	Body	835	54.06	55.20	-2.07	0.98	0.97	0.88
				805	54.27	55.33	-1.92	0.97	0.97	0.09
				850	53.97	55.16	-2.15	0.99	0.99	0.24
7	6/7/2019	835	Head	835	39.75	41.50	-4.22	0.88	0.90	-2.58
				805	39.85	41.68	-4.39	0.87	0.90	-2.94
				850	39.72	41.50	-4.29	0.89	0.92	-2.86
7	6/10/2019	750	Head	750	45.34	41.96	8.05	0.96	0.89	7.68
				660	45.67	42.42	7.65	0.92	0.89	4.16
				805	44.92	41.68	7.77	0.98	0.90	9.39
7	6/10/2019	750	Body	750	53.73	55.55	-3.27	0.97	0.96	1.15
				660	53.88	55.89	-3.60	0.93	0.96	-2.41
				800	53.55	55.35	-3.26	1.00	0.97	3.13
7	6/11/2019	2600	Head	2600	37.30	39.01	-4.39	1.93	1.96	-1.49
				2495	37.46	39.14	-4.30	1.85	1.85	0.24
				2690	37.12	38.90	-4.57	2.02	2.06	-2.06
7	6/11/2019	2600	Body	2600	51.55	52.51	-1.83	2.22	2.16	2.60
				2495	51.72	52.64	-1.75	2.11	2.01	4.86
				2690	51.37	52.40	-1.96	2.32	2.29	1.47
7	6/14/2019	835	Head	835	40.58	41.50	-2.22	0.93	0.90	3.86
				805	40.66	41.68	-2.45	0.93	0.90	3.09
				850	40.51	41.50	-2.39	0.94	0.92	2.51
7	6/14/2019	835	Body	835	52.75	55.20	-4.44	1.02	0.97	4.95
				805	52.79	55.33	-4.60	1.01	0.97	4.21
				850	52.70	55.16	-4.45	1.02	0.99	3.53
7	6/18/2019	835	Body	835	54.21	55.20	-1.79	1.05	0.97	8.04
				805	54.17	55.33	-2.10	1.03	0.97	6.17
				850	54.19	55.16	-1.75	1.05	0.99	6.77
7	6/19/2019	835	Head	835	39.80	41.50	-4.10	0.94	0.90	4.28
				805	39.82	41.68	-4.46	0.93	0.90	3.43
				850	39.75	41.50	-4.22	0.94	0.92	2.94
7	6/21/2019	2600	Head	2600	40.42	39.01	3.61	1.89	1.96	-3.58
				2495	40.54	39.14	3.57	1.78	1.85	-3.50
				2690	40.26	38.90	3.50	1.96	2.06	-4.98

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (ϵ_r)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
7	6/25/2019	835	Head	835	39.48	41.50	-4.87	0.94	0.90	4.48
				805	39.60	41.68	-4.99	0.94	0.90	4.20
				850	39.43	41.50	-4.99	0.95	0.92	3.37
7	6/25/2019	835	Body	835	53.78	55.20	-2.57	1.01	0.97	4.54
				805	53.87	55.33	-2.65	1.01	0.97	4.10
				850	53.74	55.16	-2.57	1.02	0.99	3.33
7	6/25/2019	2600	Head	2600	37.15	39.01	-4.77	2.00	1.96	2.13
				2495	37.33	39.14	-4.63	1.89	1.85	2.18
				2690	36.96	38.90	-4.98	2.06	2.06	0.17
7	6/27/2019	2600	Body	2600	52.91	52.51	0.76	2.08	2.16	-3.74
				2495	53.02	52.64	0.72	1.93	2.01	-4.09
				2690	52.76	52.40	0.69	2.20	2.29	-3.95
7	7/1/2019	835	Body	835	53.39	55.20	-3.28	1.02	0.97	4.74
				805	53.37	55.33	-3.55	1.00	0.97	3.69
				850	53.39	55.16	-3.20	1.02	0.99	3.63
7	7/5/2019	835	Head	835	40.02	41.50	-3.57	0.90	0.90	-0.10
				805	40.28	41.68	-3.36	0.89	0.90	-0.46
				850	39.94	41.50	-3.76	0.90	0.92	-1.62
7	7/5/2019	835	Body	835	52.89	55.20	-4.18	0.99	0.97	2.44
				805	53.11	55.33	-4.02	0.99	0.97	2.14
				850	52.82	55.16	-4.24	0.99	0.99	0.78
7	7/9/2019	835	Head	835	41.57	41.50	0.17	0.98	0.90	9.24
				805	41.59	41.68	-0.21	0.96	0.90	7.22
				850	41.54	41.50	0.10	0.99	0.92	8.10
7	7/9/2019	835	Body	835	52.66	55.20	-4.60	0.94	0.97	-3.49
				805	52.77	55.33	-4.63	0.94	0.97	-3.30
				850	52.63	55.16	-4.58	0.94	0.99	-4.90
7	7/21/2019	2600	Body	2600	51.50	52.51	-1.92	2.17	2.16	0.56
				2495	51.65	52.64	-1.89	2.06	2.01	2.47
				2690	51.34	52.40	-2.02	2.25	2.29	-1.50
9	6/6/2019	835	Head	835	41.88	41.50	0.92	0.87	0.90	-3.29
				805	42.33	41.68	1.56	0.87	0.90	-2.99
				850	41.82	41.50	0.77	0.88	0.92	-4.26
9	6/6/2019	835	Body	835	54.44	55.20	-1.38	0.96	0.97	-1.35
				805	54.83	55.33	-0.91	0.93	0.97	-3.52
				850	54.31	55.16	-1.54	0.97	0.99	-1.41
9	6/10/2019	835	Body	835	53.83	55.20	-2.48	0.95	0.97	-2.31
				805	54.23	55.33	-2.00	0.93	0.97	-3.66
				850	53.64	55.16	-2.75	0.96	0.99	-2.69
9	6/10/2019	835	Head	835	43.43	41.50	4.65	0.92	0.90	2.46
				805	43.59	41.68	4.58	0.91	0.90	1.73
				850	43.45	41.50	4.70	0.94	0.92	2.20

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (ϵ_r)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
9	6/12/2019	1900	Head	1900	40.49	40.00	1.23	1.43	1.40	2.14
				1850	40.52	40.00	1.30	1.40	1.40	0.29
				1920	40.44	40.00	1.10	1.44	1.40	2.71
9	6/12/2019	3500	Head	3500	39.46	37.93	4.03	2.91	2.91	-0.09
				3400	39.67	38.04	4.27	2.83	2.81	0.67
				3690	39.31	37.71	4.24	3.11	3.11	0.03
9	6/16/2019	835	Head	835	41.56	41.50	0.14	0.94	0.90	3.93
				805	41.59	41.68	-0.21	0.92	0.90	3.04
				850	41.53	41.50	0.07	0.94	0.92	2.72
9	6/19/2019	3500	Head	3500	37.49	37.93	-1.16	2.83	2.91	-2.97
				3400	37.74	38.04	-0.80	2.76	2.81	-1.82
				3690	37.25	37.71	-1.23	3.02	3.11	-2.93
9	6/19/2019	3500	Body	3500	51.52	51.32	0.39	3.44	3.31	3.75
				3400	51.87	51.46	0.80	3.33	3.20	4.15
				3690	51.23	51.07	0.32	3.70	3.53	4.54
9	6/24/2019	3500	Head	3500	37.97	37.93	0.11	2.90	2.91	-0.54
				3600	37.86	37.82	0.12	2.97	3.01	-1.56
				3700	37.54	37.70	-0.43	3.06	3.12	-1.77
9	6/24/2019	3500	Body	3500	52.55	51.32	2.39	3.15	3.31	-4.80
				3600	52.30	51.19	2.17	3.29	3.43	-4.10
				3700	52.06	51.05	1.98	3.43	3.55	-3.41
9	6/28/2019	750	Body	750	53.55	55.55	-3.59	0.96	0.96	-0.31
				660	55.39	55.89	-0.90	0.90	0.96	-6.13
				800	53.25	55.35	-3.80	1.01	0.97	4.46
9	6/28/2019	750	Head	750	42.67	41.96	1.69	0.92	0.89	3.42
				660	43.01	42.42	1.38	0.88	0.89	-0.78
				800	42.53	41.71	1.98	0.95	0.90	5.58
9	6/28/2019	2600	Head	2600	40.07	39.01	2.72	1.96	1.96	-0.31
				2495	40.60	39.14	3.72	1.76	1.85	-4.74
				2690	39.41	38.90	1.32	2.07	2.06	0.61
9	7/2/2019	750	Head	750	42.00	41.96	0.09	0.92	0.89	2.72
				660	42.22	42.42	-0.48	0.89	0.89	0.33
				800	41.67	41.71	-0.08	0.93	0.90	4.07

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (ϵ_r)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
9	7/2/2019	750	Body	750	53.72	55.55	-3.29	0.99	0.96	2.43
				660	54.60	55.89	-2.31	0.90	0.96	-6.32
				800	53.21	55.35	-3.87	1.04	0.97	7.35
9	7/3/2019	750	Body	750	54.39	55.55	-2.08	0.96	0.96	-0.46
				660	55.45	55.89	-0.79	0.88	0.96	-8.09
				800	53.83	55.35	-2.75	1.01	0.97	3.94
9	7/4/2019	750	Body	750	58.97	55.55	6.16	0.95	0.96	-1.37
				660	58.59	55.89	4.83	0.88	0.96	-8.44
				800	57.79	55.35	4.40	0.98	0.97	1.50
9	7/5/2019	750	Body	750	53.63	55.55	-3.45	0.97	0.96	0.76
				660	54.74	55.89	-2.06	0.89	0.96	-6.72
				800	53.15	55.35	-3.98	1.01	0.97	4.77
9	7/5/2019	835	Body	835	52.89	55.20	-4.18	0.99	0.97	2.44
				805	53.11	55.33	-4.02	0.99	0.97	2.14
				850	52.82	55.16	-4.24	0.99	0.99	0.78
9	7/5/2019	835	Head	835	40.02	41.50	-3.57	0.90	0.90	-0.10
				805	40.28	41.68	-3.36	0.89	0.90	-0.46
				850	39.94	41.50	-3.76	0.90	0.92	-1.62
9	7/6/2019	750	Body	750	53.45	55.55	-3.77	0.96	0.96	-0.37
				660	54.36	55.89	-2.74	0.87	0.96	-8.69
				800	52.83	55.35	-4.56	1.00	0.97	3.83
9	7/6/2019	750	Head	750	40.79	41.96	-2.79	0.90	0.89	0.63
				660	40.71	42.42	-4.04	0.87	0.89	-1.96
				800	40.43	41.71	-3.06	0.91	0.90	1.60
9	7/7/2019	750	Body	750	55.16	55.55	-0.70	0.94	0.96	-2.02
				660	56.52	55.89	1.12	0.87	0.96	-9.29
				800	54.91	55.35	-0.80	0.98	0.97	1.80
9	7/8/2019	750	Body	750	53.77	55.55	-3.20	0.95	0.96	-1.04
				660	55.05	55.89	-1.51	0.88	0.96	-8.02
				800	53.23	55.35	-3.84	1.00	0.97	3.02
9	7/9/2019	750	Body	750	53.38	55.55	-3.90	0.95	0.96	-1.41
				660	54.30	55.89	-2.85	0.87	0.96	-9.49
				800	52.63	55.35	-4.92	0.99	0.97	2.69

8.2. System Check

SAR system verification is required to confirm measurement accuracy, according to the tissue dielectric media, probe calibration points and other system operating parameters required for measuring the SAR of a test device. The system verification must be performed for each frequency band and within the valid range of each probe calibration point required for testing the device. The same SAR probe(s) and tissue-equivalent media combinations used with each specific SAR system for system verification must be used for device testing. When multiple probe calibration points are required to cover substantially large transmission bands, independent system verifications are required for each probe calibration point. A system verification must be performed before each series of SAR measurements using the same probe calibration point and tissue-equivalent medium. Additional system verification should be considered according to the conditions of the tissue-equivalent medium and measured tissue dielectric parameters, typically every three to four days when the liquid parameters are re-measured or sooner when marginal liquid parameters are used at the beginning of a series of measurements.

System Performance Check Measurement Conditions:

- The measurements were performed in the flat section of the TWIN SAM or ELI phantom, shell thickness: 2.0 $\pm$ 0.2 mm (bottom plate) filled with Body or Head simulating liquid of the following parameters.
- The depth of tissue-equivalent liquid in a phantom must be $\geq$ 15.0 cm for SAR measurements $\leq$ 3 GHz and $\geq$ 10.0 cm for measurements $>$ 3 GHz.
- The DASY system with an E-Field Probe was used for the measurements.
- The dipole was mounted on the small tripod so that the dipole feed point was positioned below the center marking of the flat phantom section and the dipole was oriented parallel to the body axis (the long side of the phantom). The standard measuring distance was 10 mm (above 1 GHz) and 15 mm (below 1 GHz) from dipole center to the simulating liquid surface.
- The coarse grid with a grid spacing of 15 mm was aligned with the dipole.
For 5 GHz band - The coarse grid with a grid spacing of 10 mm was aligned with the dipole.
- Special 7x7x7 (below 3 GHz) and/or 8x8x7 (above 3 GHz) fine cube was chosen for the cube.
- Distance between probe sensors and phantom surface was set to 3 mm.
For 5 GHz band - Distance between probe sensors and phantom surface was set to 2.5 mm
- The dipole input power (forward power) was 100 mW.
- The results are normalized to 1 W input power.

System Check Results

The 1-g and 10-g SAR measured with a reference dipole, using the required tissue-equivalent medium at the test frequency, must be within $\pm 10\%$ of the manufacturer calibrated dipole SAR target. Refer to Appendix B for the SAR System Check Plots.

SAR Lab	Date	Tissue Type	Dipole Type Serial #	Dipole Cal. Due Date	Measured Results for 1g SAR				Measured Results for 10g SAR				Plot No.
					Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta $\pm 10\%$	Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta $\pm 10\%$	
A	6/3/2019	Head	D2600V2 SN:1006	10/16/2019	5.710	57.10	59.31	-3.73	2.540	25.40	26.43	-3.90	1,2
A	6/3/2019	Body	D2600V2 SN:1006	10/16/2019	5.740	57.40	58.52	-1.91	2.550	25.50	26.15	-2.49	
A	6/6/2019	Head	D2600V2 SN:1006	10/16/2019	6.100	61.00	59.31	2.85	2.720	27.20	26.43	2.91	
A	6/6/2019	Body	D2600V2 SN:1006	10/16/2019	5.770	57.70	58.52	-1.40	2.540	25.40	26.15	-2.87	
A	6/7/2019	Head	D2600V2 SN:1006	10/16/2019	5.810	58.10	59.31	-2.04	2.600	26.00	26.43	-1.63	
A	6/7/2019	Body	D2600V2 SN:1006	10/16/2019	5.950	59.50	58.52	1.67	2.660	26.60	26.15	1.72	
A	6/9/2019	Body	D2600V2 SN:1006	10/16/2019	5.900	59.00	58.52	0.82	2.620	26.20	26.15	0.19	
A	6/9/2019	Head	D2600V2 SN:1006	10/16/2019	5.900	59.00	59.31	-0.52	2.640	26.40	26.43	-0.11	
A	6/13/2019	Head	D2600V2 SN:1036	3/22/2020	5.740	57.40	55.90	2.68	2.560	25.60	24.80	3.23	
A	6/13/2019	Body	D2600V2 SN:1036	3/22/2020	5.840	58.40	53.90	8.35	2.570	25.70	23.90	7.53	3,4
A	6/18/2019	Head	D2600V2 SN:1036	3/22/2020	5.450	54.50	55.90	-2.50	2.430	24.30	24.80	-2.02	
A	6/21/2019	Body	D2600V2 SN:1036	3/22/2020	5.680	56.80	53.90	5.38	2.550	25.50	23.90	6.69	
A	6/21/2019	Head	D2600V2 SN:1036	3/22/2020	5.810	58.10	55.90	3.94	2.600	26.00	24.80	4.84	
A	6/24/2019	Head	D2600V2 SN:1036	3/22/2020	5.640	56.40	55.90	0.89	2.530	25.30	24.80	2.02	
A	6/24/2019	Body	D2600V2 SN:1036	3/22/2020	5.500	55.00	53.90	2.04	2.480	24.80	23.90	3.77	
A	6/27/2019	Body	D2600V2 SN:1036	3/22/2020	5.660	56.60	53.90	5.01	2.500	25.00	23.90	4.60	
A	6/27/2019	Head	D2600V2 SN:1036	3/22/2020	5.840	58.40	55.90	4.47	2.620	26.20	24.80	5.65	
A	7/1/2019	Body	D2600V2 SN:1036	3/22/2020	5.750	57.50	53.90	6.68	2.570	25.70	23.90	7.53	
A	7/1/2019	Head	D2600V2 SN:1036	3/22/2020	5.960	59.60	55.90	6.62	2.680	26.80	24.80	8.06	
A	7/5/2019	Head	D2600V2 SN:1036	3/22/2020	5.960	59.60	55.90	6.62	2.670	26.70	24.80	7.66	
A	7/5/2019	Body	D2600V2 SN:1036	3/22/2020	5.710	57.10	53.90	5.94	2.560	25.60	23.90	7.11	
A	7/9/2019	Body	D2600V2 SN:1036	3/22/2020	5.620	56.20	53.90	4.27	2.540	25.40	23.90	6.28	
A	7/9/2019	Head	D2600V2 SN:1036	3/22/2020	5.770	57.70	55.90	3.22	2.600	26.00	24.80	4.84	
B	6/3/2019	Head	D1750V2 SN:1077	10/16/2019	3.600	36.00	38.69	-6.95	1.920	19.20	20.46	-6.16	5,6
B	6/3/2019	Head	D1900V2 SN:5d163	10/16/2019	3.960	39.60	42.19	-6.14	2.050	20.50	21.73	-5.66	
B	6/3/2019	Body	D1750V2 SN:1077	10/16/2019	3.780	37.80	39.29	-3.79	2.010	20.10	21.05	-4.51	
B	6/3/2019	Body	D1900V2 SN:5d163	10/16/2019	4.320	43.20	42.59	1.43	2.220	22.20	22.17	0.14	
B	6/6/2019	Head	D1900V2 SN:5d163	10/16/2019	4.270	42.70	42.19	1.21	2.200	22.00	21.73	1.24	
B	6/6/2019	Head	D1750V2 SN:1050	4/17/2020	3.560	35.60	35.40	0.56	1.880	18.80	18.60	1.08	
B	6/6/2019	Body	D1900V2 SN:5d163	10/16/2019	4.250	42.50	42.59	-0.21	2.210	22.10	22.17	-0.32	
B	6/6/2019	Body	D1750V2 SN:1050	4/17/2020	3.900	39.00	36.40	7.14	2.090	20.90	19.20	8.85	
B	6/9/2019	Head	D1750V2 SN:1050	4/17/2020	3.670	36.70	35.40	3.67	1.940	19.40	18.60	4.30	
B	6/9/2019	Head	D1900V2 SN:5d163	10/16/2019	4.210	42.10	42.19	-0.21	2.160	21.60	21.73	-0.60	

SAR Lab	Date	Tissue Type	Dipole Type Serial #	Dipole Cal. Due Date	Measured Results for 1g SAR				Measured Results for 10g SAR				Plot No.
					Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	
B	6/9/2019	Body	D1750V2 SN:1050	4/17/2020	3.590	35.90	36.40	-1.37	1.940	19.40	19.20	1.04	
B	6/9/2019	Body	D1900V2 SN:5d163	10/16/2019	3.850	38.50	42.59	-9.60	2.020	20.20	22.17	-8.89	7,8
B	6/13/2019	Body	D1750V2 SN:1050	4/17/2020	3.710	37.10	36.40	1.92	1.940	19.40	19.20	1.04	
B	6/13/2019	Head	D1750V2 SN:1050	4/17/2020	3.560	35.60	35.40	0.56	1.880	18.80	18.60	1.08	
B	6/14/2019	Body	D1900V2 SN:5d140	4/17/2020	4.220	42.20	40.40	4.46	2.170	21.70	21.30	1.88	9,10
B	6/14/2019	Head	D1900V2 SN:5d140	4/17/2020	4.090	40.90	39.50	3.54	2.100	21.00	20.60	1.94	
B	6/17/2019	Body	D1750V2 SN:1050	4/17/2020	3.770	37.70	36.40	3.57	1.970	19.70	19.20	2.60	
B	6/17/2019	Head	D1750V2 SN:1050	4/17/2020	3.670	36.70	35.40	3.67	1.940	19.40	18.60	4.30	
B	6/17/2019	Body	D1900V2 SN:5d140	4/17/2020	4.000	40.00	40.40	-0.99	2.060	20.60	21.30	-3.29	
B	6/17/2019	Head	D1900V2 SN:5d140	4/17/2020	3.980	39.80	39.50	0.76	2.050	20.50	20.60	-0.49	
B	6/21/2019	Head	D1750V2 SN:1050	4/17/2020	3.730	37.30	35.40	5.37	1.970	19.70	18.60	5.91	
B	6/21/2019	Body	D1750V2 SN:1050	4/17/2020	3.920	39.20	36.40	7.69	2.030	20.30	19.20	5.73	11,12
B	6/25/2019	Head	D1750V2 SN:1077	10/16/2019	3.650	36.50	38.69	-5.66	1.930	19.30	20.46	-5.67	
B	6/25/2019	Body	D1750V2 SN:1077	10/16/2019	3.700	37.00	39.29	-5.83	1.930	19.30	21.05	-8.31	
B	6/29/2019	Head	D1750V2 SN:1050	4/17/2020	3.580	35.80	35.40	1.13	1.890	18.90	18.60	1.61	
B	6/29/2019	Body	D1750V2 SN:1050	4/17/2020	3.540	35.40	36.40	-2.75	1.840	18.40	19.20	-4.17	
B	7/2/2019	Body	D1750V2 SN:1077	10/16/2019	3.950	39.50	39.29	0.53	2.060	20.60	21.05	-2.14	
B	7/2/2019	Head	D1750V2 SN:1077	10/16/2019	3.630	36.30	38.69	-6.18	1.910	19.10	20.46	-6.65	
B	7/3/2019	Head	D1900V2 SN:5d163	10/16/2019	4.230	42.30	42.19	0.26	2.170	21.70	21.73	-0.14	
B	7/3/2019	Body	D1900V2 SN:5d163	10/16/2019	4.530	45.30	42.59	6.36	2.340	23.40	22.17	5.55	
B	7/6/2019	Head	D1750V2 SN:1050	4/17/2020	3.530	35.30	35.40	-0.28	1.890	18.90	18.60	1.61	
B	7/6/2019	Body	D1750V2 SN:1050	4/17/2020	3.710	37.10	36.40	1.92	1.980	19.80	19.20	3.13	
C	6/5/2019	Head	D1750V2 SN:1050	4/17/2020	3.660	36.60	35.40	3.39	1.930	19.30	18.60	3.76	
C	6/5/2019	Head	D1900V2 SN:5d140	4/17/2020	4.110	41.10	39.50	4.05	2.080	20.80	20.60	0.97	
C	6/7/2019	Body	D1750V2 SN:1077	10/16/2019	3.640	36.40	39.29	-7.36	1.910	19.10	21.05	-9.26	13,14
C	6/7/2019	Body	D1900V2 SN:5d163	10/16/2019	3.990	39.90	42.59	-6.32	2.020	20.20	22.17	-8.89	
C	6/11/2019	Head	D1900V2 SN:5d163	10/16/2019	4.110	41.10	42.19	-2.58	2.080	20.80	21.73	-4.28	
C	6/11/2019	Body	D1900V2 SN:5d163	10/16/2019	4.590	45.90	42.59	7.77	2.370	23.70	22.17	6.90	15,16
C	6/14/2019	Head	D1750V2 SN:1050	4/17/2020	3.590	35.90	35.40	1.41	1.880	18.80	18.60	1.08	
C	6/14/2019	Head	D1900V2 SN:5d140	4/17/2020	3.930	39.30	39.50	-0.51	2.000	20.00	20.60	-2.91	
C	6/14/2019	Body	D1750V2 SN:1050	4/17/2020	3.920	39.20	36.40	7.69	2.050	20.50	19.20	6.77	
C	6/14/2019	Body	D1900V2 SN:5d140	4/17/2020	4.240	42.40	40.40	4.95	2.160	21.60	21.30	1.41	17,18
C	6/18/2019	Head	D1900V2 SN:5d163	10/16/2019	4.160	41.60	42.19	-1.40	2.110	21.10	21.73	-2.90	

SAR Lab	Date	Tissue Type	Dipole Type _Serial #	Dipole Cal. Due Data	Measured Results for 1g SAR				Measured Results for 10g SAR				Plot No.
					Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	
C	6/18/2019	Body	D1900V2 SN:5d163	10/16/2019	4.350	43.50	42.59	2.14	2.210	22.10	22.17	-0.32	
C	6/21/2019	Body	D1900V2 SN:5d140	4/17/2020	4.060	40.60	40.40	0.50	2.030	20.30	21.30	-4.69	
C	6/21/2019	Head	D1900V2 SN:5d140	4/17/2020	4.120	41.20	39.50	4.30	2.070	20.70	20.60	0.49	
C	6/25/2019	Head	D1900V2 SN:5d163	10/16/2019	4.140	41.40	42.19	-1.87	2.100	21.00	21.73	-3.36	
C	6/25/2019	Body	D1900V2 SN:5d163	10/16/2019	4.100	41.00	42.59	-3.73	2.130	21.30	22.17	-3.92	
C	6/29/2019	Head	D1900V2 SN:5d140	4/17/2020	4.050	40.50	39.50	2.53	2.050	20.50	20.60	-0.49	
C	6/29/2019	Body	D1900V2 SN:5d140	4/17/2020	4.140	41.40	40.40	2.48	2.110	21.10	21.30	-0.94	
C	7/2/2019	Body	D1900V2 SN:5d140	4/17/2020	4.170	41.70	40.40	3.22	2.150	21.50	21.30	0.94	
C	7/2/2019	Head	D1900V2 SN:5d140	4/17/2020	4.300	43.00	39.50	8.86	2.170	21.70	20.60	5.34	19.20
C	7/6/2019	Body	D1900V2 SN:5d140	4/17/2020	4.060	40.60	40.40	0.50	2.090	20.90	21.30	-1.88	
C	7/6/2019	Head	D1900V2 SN:5d140	4/17/2020	3.760	37.60	39.50	-4.81	1.900	19.00	20.60	-7.77	
D	6/3/2019	Head	D2300V2 SN:1002	3/22/2020	4.930	49.30	48.30	2.07	2.350	23.50	23.30	0.86	
D	6/3/2019	Body	D2300V2 SN:1002	3/22/2020	4.700	47.00	46.80	0.43	2.200	22.00	22.60	-2.65	
D	6/5/2019	Head	D2600V2 SN:1006	10/16/2019	5.670	56.70	59.31	-4.40	2.530	25.30	26.43	-4.28	
D	6/6/2019	Head	D2300V2 SN:1002	3/22/2020	4.950	49.50	48.30	2.48	2.350	23.50	23.30	0.86	
D	6/6/2019	Body	D2300V2 SN:1002	3/22/2020	4.590	45.90	46.80	-1.92	2.200	22.00	22.60	-2.65	
D	6/6/2019	Body	D2600V2 SN:1006	10/16/2019	5.870	58.70	58.52	0.31	2.610	26.10	26.15	-0.19	
D	6/9/2019	Head	D2300V2 SN:1002	3/22/2020	5.200	52.00	48.30	7.66	2.460	24.60	23.30	5.58	
D	6/9/2019	Head	D2600V2 SN:1036	3/22/2020	5.510	55.10	55.90	-1.43	2.460	24.60	24.80	-0.81	
D	6/9/2019	Body	D2300V2 SN:1002	3/22/2020	4.560	45.60	46.80	-2.56	2.180	21.80	22.60	-3.54	
D	6/9/2019	Body	D2600V2 SN:1036	3/22/2020	5.370	53.70	53.90	-0.37	2.360	23.60	23.90	-1.26	
D	6/13/2019	Head	D2600V2 SN:1006	10/16/2019	5.780	57.80	59.31	-2.55	2.590	25.90	26.43	-2.01	
D	6/13/2019	Body	D2600V2 SN:1006	10/16/2019	5.360	53.60	58.52	-8.41	2.390	23.90	26.15	-8.60	21.22
D	6/13/2019	Body	D2300V2 SN:1002	3/22/2020	4.830	48.30	46.80	3.21	2.320	23.20	22.60	2.65	
D	6/13/2019	Head	D2300V2 SN:1002	3/22/2020	4.980	49.80	48.30	3.11	2.360	23.60	23.30	1.29	
D	6/17/2019	Body	D2300V2 SN:1002	3/22/2020	4.420	44.20	46.80	-5.56	2.140	21.40	22.60	-5.31	
D	6/17/2019	Head	D2300V2 SN:1002	3/22/2020	5.020	50.20	48.30	3.93	2.390	23.90	23.30	2.58	
D	6/17/2019	Body	D2600V2 SN:1036	3/22/2020	5.370	53.70	53.90	-0.37	2.410	24.10	23.90	0.84	
D	6/20/2019	Head	D2600V2 SN:1036	3/22/2020	5.400	54.00	55.90	-3.40	2.430	24.30	24.80	-2.02	
D	6/21/2019	Body	D2300V2 SN:1002	3/22/2020	4.880	48.80	46.80	4.27	2.360	23.60	22.60	4.42	
D	6/21/2019	Head	D2300V2 SN:1002	3/22/2020	5.190	51.90	48.30	7.45	2.470	24.70	23.30	6.01	
D	6/21/2019	Body	D2600V2 SN:1036	3/22/2020	5.590	55.90	53.90	3.71	2.480	24.80	23.90	3.77	
D	6/24/2019	Head	D2300V2 SN:1002	3/22/2020	5.060	50.60	48.30	4.76	2.430	24.30	23.30	4.29	

SAR Lab	Date	Tissue Type	Dipole Type _Serial #	Dipole Cal. Due Date	Measured Results for 1g SAR				Measured Results for 10g SAR				Plot No.
					Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	
D	6/24/2019	Head	D2600V2 SN:1036	3/22/2020	5.530	55.30	55.90	-1.07	2.480	24.80	24.80	0.00	
D	6/24/2019	Body	D2300V2 SN:1002	3/22/2020	4.490	44.90	46.80	-4.06	2.150	21.50	22.60	-4.87	
D	6/24/2019	Body	D2600V2 SN:1036	3/22/2020	5.250	52.50	53.90	-2.60	2.340	23.40	23.90	-2.09	
D	6/27/2019	Body	D2300V2 SN:1002	3/22/2020	4.880	48.80	46.80	4.27	2.370	23.70	22.60	4.87	
D	6/27/2019	Body	D2600V2 SN:1036	3/22/2020	5.380	53.80	53.90	-0.19	2.390	23.90	23.90	0.00	
D	6/29/2019	Head	D2300V2 SN:1002	3/22/2020	4.880	48.80	48.30	1.04	2.330	23.30	23.30	0.00	
D	6/29/2019	Head	D2600V2 SN:1036	3/22/2020	5.620	56.20	55.90	0.54	2.520	25.20	24.80	1.61	
D	7/1/2019	Body	D2300V2 SN:1002	3/22/2020	4.620	46.20	46.80	-1.28	2.220	22.20	22.60	-1.77	
D	7/1/2019	Body	D2600V2 SN:1036	3/22/2020	5.220	52.20	53.90	-3.15	2.350	23.50	23.90	-1.67	
D	7/5/2019	Head	D2600V2 SN:1036	3/22/2020	5.370	53.70	55.90	-3.94	2.400	24.00	24.80	-3.23	
D	7/5/2019	Body	D2600V2 SN:1036	3/22/2020	5.150	51.50	53.90	-4.45	2.300	23.00	23.90	-3.77	23,24
D	7/5/2019	Head	D2300V2 SN:1002	3/22/2020	4.940	49.40	48.30	2.28	2.350	23.50	23.30	0.86	
D	7/5/2019	Body	D2300V2 SN:1002	3/22/2020	4.550	45.50	46.80	-2.78	2.200	22.00	22.60	-2.65	
D	7/9/2019	Head	D2600V2 SN:1036	3/22/2020	5.750	57.50	55.90	2.86	2.570	25.70	24.80	3.63	
D	7/9/2019	Body	D2600V2 SN:1036	3/22/2020	5.220	52.20	53.90	-3.15	2.350	23.50	23.90	-1.67	
E	6/6/2019	Body	D5GHzV2 SN:1168 (5.75 GHz)	11/30/2019	7.300	73.00	70.70	3.25	2.030	20.30	19.70	3.05	
E	6/6/2019	Head	D5GHzV2 SN:1168 (5.75 GHz)	11/30/2019	7.610	76.10	80.80	-5.82	2.170	21.70	23.00	-5.65	
E	6/10/2019	Head	D5GHzV2 SN:1168 (5.75 GHz)	11/30/2019	7.360	73.60	80.80	-8.91	2.110	21.10	23.00	-8.26	
E	6/10/2019	Body	D5GHzV2 SN:1168 (5.75 GHz)	11/30/2019	6.580	65.80	70.70	-6.93	1.830	18.30	19.70	-7.11	
E	6/13/2019	Head	D5GHzV2 SN:1168 (5.75 GHz)	11/30/2019	7.500	75.00	80.80	-7.18	2.150	21.50	23.00	-6.52	
E	6/13/2019	Body	D5GHzV2 SN:1168 (5.75 GHz)	11/30/2019	7.730	77.30	70.70	9.34	2.150	21.50	19.70	9.14	25,26
E	6/13/2019	Body	D2450V2 SN:899	3/22/2020	5.060	50.60	50.00	1.20	2.360	23.60	23.50	0.43	
E	6/17/2019	Body	D5GHzV2 SN:1168 (5.75 GHz)	11/30/2019	6.980	69.80	70.70	-1.27	1.960	19.60	19.70	-0.51	
E	6/17/2019	Head	D5GHzV2 SN:1168 (5.75 GHz)	11/30/2019	7.350	73.50	80.80	-9.03	2.100	21.00	23.00	-8.70	
E	6/20/2019	Head	D5GHzV2 SN:1168 (5.75 GHz)	11/30/2019	7.460	74.60	80.80	-7.67	2.140	21.40	23.00	-6.96	
E	6/20/2019	Body	D5GHzV2 SN:1168 (5.75 GHz)	11/30/2019	6.980	69.80	70.70	-1.27	1.940	19.40	19.70	-1.52	
E	6/24/2019	Head	D5GHzV2 SN:1168 (5.75 GHz)	11/30/2019	7.390	73.90	80.80	-8.54	2.110	21.10	23.00	-8.26	
E	6/24/2019	Body	D5GHzV2 SN:1168 (5.75 GHz)	11/30/2019	7.180	71.80	70.70	1.56	2.010	20.10	19.70	2.03	
E	6/24/2019	Body	D2450V2 SN:899	3/22/2020	4.860	48.60	50.00	-2.80	2.270	22.70	23.50	-3.40	27,28
E	6/28/2019	Body	D5GHzV2 SN:1168 (5.75 GHz)	11/30/2019	7.320	73.20	70.70	3.54	2.040	20.40	19.70	3.55	
E	6/28/2019	Head	D5GHzV2 SN:1168 (5.75 GHz)	11/30/2019	7.530	75.30	80.80	-6.81	2.160	21.60	23.00	-6.09	

SAR Lab	Date	Tissue Type	Dipole Type _Serial #	Dipole Cal. Due Data	Measured Results for 1g SAR				Measured Results for 10g SAR				Plot No.
					Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	
E	6/29/2019	Head	D5GHzV2 SN:1168 (5.25 GHz)	11/30/2019	7.690	76.90	81.70	-5.88	2.200	22.00	23.40	-5.98	
E	6/29/2019	Body	D5GHzV2 SN:1168 (5.25 GHz)	11/30/2019	6.960	69.60	71.20	-2.25	1.950	19.50	19.90	-2.01	
E	7/2/2019	Head	D5GHzV2 SN:1168 (5.75 GHz)	11/30/2019	7.770	77.70	80.80	-3.84	2.220	22.20	23.00	-3.48	
E	7/2/2019	Body	D5GHzV2 SN:1168 (5.75 GHz)	11/30/2019	7.360	73.60	70.70	4.10	2.050	20.50	19.70	4.06	
E	7/6/2019	Head	D5GHzV2 SN:1168 (5.75 GHz)	11/30/2019	7.540	75.40	80.80	-6.68	2.160	21.60	23.00	-6.09	
E	7/6/2019	Body	D5GHzV2 SN:1168 (5.75 GHz)	11/30/2019	7.490	74.90	70.70	5.94	2.090	20.90	19.70	6.09	
E	7/9/2019	Head	D5GHzV2 SN:1168 (5.75 GHz)	11/30/2019	7.350	73.50	80.80	-9.03	2.100	21.00	23.00	-8.70	
E	7/9/2019	Body	D5GHzV2 SN:1168 (5.75 GHz)	11/30/2019	7.110	71.10	70.70	0.57	1.980	19.80	19.70	0.51	
F	6/3/2019	Head	D2450V2 SN:899	3/22/2020	5.320	53.20	51.60	3.10	2.390	23.90	24.10	-0.83	
F	6/3/2019	Body	D2450V2 SN:899	3/22/2020	5.360	53.60	50.00	7.20	2.450	24.50	23.50	4.26	
F	6/6/2019	Head	D2450V2 SN:899	3/22/2020	5.220	52.20	51.60	1.16	2.360	23.60	24.10	-2.07	
F	6/6/2019	Body	D2450V2 SN:899	3/22/2020	4.960	49.60	50.00	-0.80	2.280	22.80	23.50	-2.98	
F	6/10/2019	Head	D2450V2 SN:899	3/22/2020	5.180	51.80	51.60	0.39	2.340	23.40	24.10	-2.90	
F	6/10/2019	Body	D2450V2 SN:899	3/22/2020	5.250	52.50	50.00	5.00	2.410	24.10	23.50	2.55	
F	6/13/2019	Head	D2450V2 SN:899	3/22/2020	5.510	55.10	51.60	6.78	2.510	25.10	24.10	4.15	
F	6/13/2019	Body	D2450V2 SN:899	3/22/2020	5.290	52.90	50.00	5.80	2.420	24.20	23.50	2.98	
F	6/17/2019	Body	D2450V2 SN:899	3/22/2020	5.330	53.30	50.00	6.60	2.440	24.40	23.50	3.83	
F	6/17/2019	Head	D2450V2 SN:899	3/22/2020	5.480	54.80	51.60	6.20	2.500	25.00	24.10	3.73	
F	6/20/2019	Head	D2450V2 SN:899	3/22/2020	5.590	55.90	51.60	8.33	2.540	25.40	24.10	5.39	
F	6/20/2019	Body	D2450V2 SN:899	3/22/2020	5.350	53.50	50.00	7.00	2.450	24.50	23.50	4.26	
F	6/24/2019	Head	D2450V2 SN:899	3/22/2020	5.170	51.70	51.60	0.19	2.360	23.60	24.10	-2.07	
F	6/24/2019	Body	D2450V2 SN:899	3/22/2020	5.450	54.50	50.00	9.00	2.510	25.10	23.50	6.81	29,30
F	6/28/2019	Body	D2450V2 SN:899	3/22/2020	5.250	52.50	50.00	5.00	2.450	24.50	23.50	4.26	
F	6/28/2019	Head	D2450V2 SN:899	3/22/2020	5.320	53.20	51.60	3.10	2.440	24.40	24.10	1.24	
F	7/1/2019	Head	D2450V2 SN:899	3/22/2020	5.590	55.90	51.60	8.33	2.550	25.50	24.10	5.81	
F	7/1/2019	Body	D2450V2 SN:899	3/22/2020	5.200	52.00	50.00	4.00	2.390	23.90	23.50	1.70	
F	7/5/2019	Body	D2450V2 SN:899	3/22/2020	4.870	48.70	50.00	-2.60	2.240	22.40	23.50	-4.68	
F	7/5/2019	Head	D2450V2 SN:899	3/22/2020	5.260	52.60	51.60	1.94	2.390	23.90	24.10	-0.83	
F	7/9/2019	Head	D2450V2 SN:899	3/22/2020	4.960	49.60	51.60	-3.88	2.260	22.60	24.10	-6.22	
F	7/9/2019	Body	D2450V2 SN:899	3/22/2020	5.340	53.40	50.00	6.80	2.440	24.40	23.50	3.83	
G	6/3/2019	Head	D5GHzV2 SN:1168 (5.25 GHz)	11/30/2019	7.520	75.20	81.70	-7.96	2.140	21.40	23.40	-8.55	
G	6/3/2019	Body	D5GHzV2 SN:1168 (5.25 GHz)	11/30/2019	7.370	73.70	71.20	3.51	2.080	20.80	19.90	4.52	
G	6/6/2019	Body	D5GHzV2 SN:1168 (5.25 GHz)	11/30/2019	7.210	72.10	71.20	1.26	2.040	20.40	19.90	2.51	

SAR Lab	Date	Tissue Type	Dipole Type Serial #	Dipole Cal. Due Date	Measured Results for 1g SAR				Measured Results for 10g SAR				Plot No.
					Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	
G	6/6/2019	Head	D5GHzV2 SN:1168 (5.25 GHz)	11/30/2019	7.700	77.00	81.70	-5.75	2.200	22.00	23.40	-5.98	
G	6/10/2019	Head	D5GHzV2 SN:1168 (5.25 GHz)	11/30/2019	7.870	78.70	81.70	-3.67	2.260	22.60	23.40	-3.42	
G	6/10/2019	Body	D5GHzV2 SN:1168 (5.25 GHz)	11/30/2019	7.040	70.40	71.20	-1.12	1.990	19.90	19.90	0.00	
G	6/13/2019	Body	D5GHzV2 SN:1168 (5.25 GHz)	11/30/2019	7.580	75.80	71.20	6.46	2.140	21.40	19.90	7.54	
G	6/13/2019	Head	D5GHzV2 SN:1168 (5.25 GHz)	11/30/2019	7.690	76.90	81.70	-5.88	2.200	22.20	23.40	-5.13	
G	6/17/2019	Head	D5GHzV2 SN:1168 (5.25 GHz)	11/30/2019	7.540	75.40	81.70	-7.71	2.140	21.40	23.40	-8.55	
G	6/17/2019	Body	D5GHzV2 SN:1168 (5.25 GHz)	11/30/2019	7.260	72.60	71.20	1.97	2.060	20.60	19.90	3.52	
G	6/20/2019	Head	D5GHzV2 SN:1168 (5.25 GHz)	11/30/2019	7.360	73.60	81.70	-9.91	2.110	21.10	23.40	-9.83	31,32
G	6/20/2019	Body	D5GHzV2 SN:1168 (5.25 GHz)	11/30/2019	7.520	75.20	71.20	5.62	2.130	21.30	19.90	7.04	
G	6/24/2019	Head	D5GHzV2 SN:1168 (5.25 GHz)	11/30/2019	7.380	73.80	81.70	-9.67	2.120	21.20	23.40	-9.40	
G	6/24/2019	Body	D5GHzV2 SN:1168 (5.25 GHz)	11/30/2019	7.440	74.40	71.20	4.49	2.110	21.10	19.90	6.03	
G	6/26/2019	Body	D2600V2 SN:1036	3/22/2020	5.030	50.30	53.90	-6.68	2.190	21.90	23.90	-8.37	33,34
G	7/1/2019	Body	D2600V2 SN:1036	3/22/2020	5.300	53.00	53.90	-1.67	2.340	23.40	23.90	-2.09	
G	7/1/2019	Head	D5GHzV2 SN:1168 (5.25 GHz)	11/30/2019	7.970	79.70	81.70	-2.45	2.280	22.80	23.40	-2.56	
G	7/1/2019	Body	D5GHzV2 SN:1168 (5.25 GHz)	11/30/2019	7.320	73.20	71.20	2.81	2.090	20.90	19.90	5.03	
G	7/3/2019	Body	D1900V2 SN:5d140	4/17/2020	4.010	40.10	40.40	-0.74	2.100	21.00	21.30	-1.41	35,36
G	7/5/2019	Head	D5GHzV2 SN:1003 (5.25 GHz)	2/19/2020	7.340	73.40	80.80	-9.16	2.100	21.00	23.30	-9.87	37,38
G	7/5/2019	Body	D5GHzV2 SN:1003 (5.25 GHz)	2/19/2020	6.830	68.30	74.40	-8.20	1.930	19.30	20.80	-7.21	
G	7/9/2019	Head	D5GHzV2 SN:1168 (5.25 GHz)	11/30/2019	8.290	82.90	81.70	1.47	2.380	23.80	23.40	1.71	
G	7/9/2019	Body	D5GHzV2 SN:1168 (5.25 GHz)	11/30/2019	7.120	71.20	71.20	0.00	2.020	20.20	19.90	1.51	
H	6/3/2019	Head	D5GHzV2 SN:1168 (5.60 GHz)	11/30/2019	8.320	83.20	87.00	-4.37	2.330	23.30	24.70	-5.67	
H	6/3/2019	Body	D5GHzV2 SN:1168 (5.60 GHz)	11/30/2019	8.120	81.20	76.20	6.56	2.270	22.70	21.20	7.08	
H	6/6/2019	Head	D5GHzV2 SN:1168 (5.60 GHz)	11/30/2019	8.080	80.80	87.00	-7.13	2.280	22.80	24.70	-7.69	
H	6/6/2019	Body	D5GHzV2 SN:1168 (5.60 GHz)	11/30/2019	7.530	75.30	76.20	-1.18	2.110	21.10	21.20	-0.47	
H	6/10/2019	Head	D5GHzV2 SN:1003 (5.60 GHz)	2/19/2020	8.590	85.90	82.70	3.87	2.430	24.30	23.80	2.10	
H	6/10/2019	Body	D5GHzV2 SN:1003 (5.60 GHz)	2/19/2020	8.330	83.30	79.30	5.04	2.340	23.40	22.30	4.93	
H	6/13/2019	Head	D5GHzV2 SN:1168 (5.60 GHz)	11/30/2019	8.180	81.80	87.00	-5.98	2.310	23.10	24.70	-6.48	
H	6/13/2019	Body	D5GHzV2 SN:1168 (5.60 GHz)	11/30/2019	8.230	82.30	76.20	8.01	2.320	23.20	21.20	9.43	39,40
H	6/13/2019	Body	D2450V2 SN:899	3/22/2020	4.870	48.70	50.00	-2.60	2.250	22.50	23.50	-4.26	
H	6/16/2019	Body	D5GHzV2 SN:1168 (5.60 GHz)	11/30/2019	7.540	75.40	76.20	-1.05	2.130	21.30	21.20	0.47	
H	6/17/2019	Head	D5GHzV2 SN:1168 (5.60 GHz)	11/30/2019	8.780	87.80	87.00	0.92	2.470	24.70	24.70	0.00	
H	6/20/2019	Head	D5GHzV2 SN:1003 (5.60 GHz)	2/19/2020	8.320	83.20	82.70	0.60	2.340	23.40	23.80	-1.68	
H	6/20/2019	Body	D5GHzV2 SN:1003 (5.60 GHz)	2/19/2020	7.840	78.40	79.30	-1.13	2.200	22.00	22.30	-1.35	

SAR Lab	Date	Tissue Type	Dipole Type _Serial #	Dipole Cal. Due Date	Measured Results for 1g SAR				Measured Results for 10g SAR				Plot No.
					Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	
H	6/24/2019	Head	D5GHzV2 SN:1003 (5.60 GHz)	2/19/2020	8.000	80.00	82.70	-3.26	2.280	22.80	23.80	-4.20	
H	6/24/2019	Body	D5GHzV2 SN:1003 (5.60 GHz)	2/19/2020	8.170	81.70	79.30	3.03	2.290	22.90	22.30	2.69	
H	6/25/2019	Head	D2450V2 SN:899	3/22/2020	5.000	50.00	51.60	-3.10	2.320	23.20	24.10	-3.73	41,42
H	6/28/2019	Body	D5GHzV2 SN:1003 (5.60 GHz)	2/19/2020	7.900	79.00	79.30	-0.38	2.220	22.20	22.30	-0.45	
H	6/28/2019	Head	D5GHzV2 SN:1003 (5.60 GHz)	2/19/2020	8.620	86.20	82.70	4.23	2.430	24.30	23.80	2.10	
H	6/29/2019	Body	D5GHzV2 SN:1168 (5.25 GHz)	11/30/2019	7.120	71.20	71.20	0.00	2.040	20.40	19.90	2.51	
H	6/30/2019	Head	D1900V2 SN:5d140	4/17/2020	4.170	41.70	39.50	5.57	2.140	21.40	20.60	3.88	43,44
H	7/5/2019	Head	D5GHzV2 SN:1003 (5.60 GHz)	2/19/2020	8.870	88.70	82.70	7.26	2.500	25.00	23.80	5.04	45,46
H	7/5/2019	Body	D5GHzV2 SN:1003 (5.60 GHz)	2/19/2020	8.440	84.40	79.30	6.43	2.370	23.70	22.30	6.28	
H	7/9/2019	Head	D5GHzV2 SN:1168 (5.60 GHz)	11/30/2019	8.160	81.60	87.00	-6.21	2.300	23.00	24.70	-6.88	
H	7/9/2019	Body	D5GHzV2 SN:1168 (5.60 GHz)	11/30/2019	7.580	75.80	76.20	-0.52	2.130	21.30	21.20	0.47	
6	6/3/2019	Head	D750V3 SN:1071	11/28/2019	0.784	7.84	8.32	-5.77	0.516	5.16	5.45	-5.32	47,48
6	6/3/2019	Body	D750V3 SN:1071	11/28/2019	0.856	8.56	8.63	-0.81	0.572	5.72	5.65	1.24	
6	6/7/2019	Body	D750V3 SN:1071	11/28/2019	0.874	8.74	8.63	1.27	0.584	5.84	5.65	3.36	
6	6/7/2019	Head	D750V3 SN:1071	11/28/2019	0.788	7.88	8.32	-5.29	0.516	5.16	5.45	-5.32	
6	6/11/2019	Body	D2300V2 SN:1058	10/2/2019	4.920	49.20	51.35	-4.19	2.370	23.70	24.44	-3.03	
6	6/14/2019	Body	D750V3 SN:1071	11/28/2019	0.884	8.84	8.63	2.43	0.588	5.88	5.65	4.07	
6	6/14/2019	Head	D750V3 SN:1071	11/28/2019	0.817	8.17	8.32	-1.80	0.536	5.36	5.45	-1.65	
6	6/18/2019	Body	D750V3 SN:1071	11/28/2019	0.875	8.75	8.63	1.39	0.581	5.81	5.65	2.83	
6	6/18/2019	Head	D750V3 SN:1071	11/28/2019	0.862	8.62	8.32	3.61	0.564	5.64	5.45	3.49	
6	6/21/2019	Head	D2300V2 SN:1058	10/2/2019	4.780	47.80	51.75	-7.63	2.260	22.60	24.52	-7.83	49,50
6	6/22/2019	Head	D1900V2 SN:5d140	4/17/2020	4.290	42.90	39.50	8.61	2.200	22.00	20.60	6.80	51,52
6	6/24/2019	Head	D1750V2 SN:1050	4/17/2020	3.860	38.60	35.40	9.04	2.030	20.30	18.60	9.14	53,54
6	6/25/2019	Head	D2600V2 SN:1006	10/16/2019	6.140	61.40	59.31	3.52	2.740	27.40	26.43	3.67	55,56
6	6/25/2019	Head	D750V3 SN:1071	11/28/2019	0.841	8.41	8.32	1.08	0.550	5.50	5.45	0.92	
6	6/25/2019	Body	D750V3 SN:1071	11/28/2019	0.875	8.75	8.63	1.39	0.584	5.84	5.65	3.36	
6	6/28/2019	Head	D3500V2 SN:1011	5/13/2020	6.690	66.90	64.50	3.72	2.560	25.60	24.30	5.35	
6	6/28/2019	Body	D3500V2 SN:1011	5/13/2020	6.060	60.60	66.00	-8.18	2.250	22.50	24.40	-7.79	57,58
6	6/28/2019	Body	D3700V2 SN:1039	6/12/2020	6.280	62.80	62.90	-0.16	2.250	22.50	22.50	0.00	
6	6/28/2019	Head	D3700V2 SN:1039	6/12/2020	6.530	65.30	66.50	-1.80	2.410	24.10	24.20	-0.41	
6	7/2/2019	Head	D3500V2 SN:1011	5/13/2020	6.600	66.00	64.50	2.33	2.510	25.10	24.30	3.29	
6	7/2/2019	Body	D3500V2 SN:1011	5/13/2020	6.580	65.80	66.00	-0.30	2.320	23.20	24.40	-4.92	
6	7/2/2019	Head	D3700V2 SN:1039	6/12/2020	6.850	68.50	66.50	3.01	2.540	25.40	24.20	4.96	

SAR Lab	Date	Tissue Type	Dipole Type _Serial #	Dipole Cal. Due Data	Measured Results for 1g SAR				Measured Results for 10g SAR				Plot No.
					Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	
6	7/2/2019	Body	D3700V2 SN:1039	6/12/2020	6.030	60.30	62.90	-4.13	2.070	20.70	22.50	-8.00	
6	7/6/2019	Head	D3700V2 SN:1039	6/12/2020	6.070	60.70	66.50	-8.72	2.240	22.40	24.20	-7.44	59,60
6	7/6/2019	Body	D3700V2 SN:1039	6/12/2020	5.980	59.80	62.90	-4.93	2.100	21.00	22.50	-6.67	
6	7/6/2019	Head	D3500V2 SN:1011	5/13/2020	6.180	61.80	64.50	-4.19	2.340	23.40	24.30	-3.70	
6	7/6/2019	Body	D3500V2 SN:1011	5/13/2020	6.300	63.00	66.00	-4.55	2.280	22.80	24.40	-6.56	
7	6/3/2019	Body	D835V2 SN:4d002	8/23/2019	1.010	10.10	9.68	4.34	0.660	6.60	6.36	3.77	61,62
7	6/3/2019	Head	D835V2 SN:4d142	8/23/2019	0.972	9.72	9.48	2.53	0.636	6.36	6.10	4.26	
7	6/7/2019	Body	D835V2 SN:4d002	11/28/2019	0.970	9.70	10.07	-3.67	0.633	6.33	6.56	-3.51	
7	6/7/2019	Head	D835V2 SN:4d002	11/28/2019	0.930	9.30	9.87	-5.78	0.606	6.06	6.36	-4.72	
7	6/10/2019	Head	D750V3 SN:1019	3/21/2020	0.851	8.51	8.29	2.65	0.557	5.57	5.44	2.39	
7	6/10/2019	Body	D750V3 SN:1019	3/21/2020	0.889	8.89	8.47	4.96	0.582	5.82	5.59	4.11	63,64
7	6/11/2019	Head	D2600V2 SN:1036	3/22/2020	5.720	57.20	55.90	2.33	2.570	25.70	24.80	3.63	
7	6/11/2019	Body	D2600V2 SN:1036	3/22/2020	5.610	56.10	53.90	4.08	2.460	24.60	23.90	2.93	65,66
7	6/14/2019	Head	D835V2 SN:4d002	11/28/2019	0.980	9.80	9.87	-0.71	0.638	6.38	6.36	0.31	
7	6/14/2019	Body	D835V2 SN:4d002	11/28/2019	1.020	10.20	10.07	1.29	0.662	6.62	6.56	0.91	
7	6/18/2019	Body	D835V2 SN:4d002	11/28/2019	1.100	11.00	10.07	9.24	0.715	7.15	6.56	8.99	67,68
7	6/19/2019	Head	D835V2 SN:4d002	11/28/2019	0.997	9.97	9.87	1.01	0.650	6.50	6.36	2.20	
7	6/21/2019	Head	D2600V2 SN:1036	3/22/2020	5.790	57.90	55.90	3.58	2.600	26.00	24.80	4.84	
7	6/25/2019	Head	D835V2 SN:4d002	11/28/2019	1.000	10.00	9.87	1.32	0.652	6.52	6.36	2.52	
7	6/25/2019	Body	D835V2 SN:4d002	11/28/2019	1.020	10.20	10.07	1.29	0.657	6.57	6.56	0.15	
7	6/27/2019	Body	D2600V2 SN:1006	10/16/2019	5.490	54.90	58.52	-6.19	2.400	24.00	26.15	-8.22	
7	7/1/2019	Body	D835V2 SN:4d002	11/28/2019	0.976	9.76	10.07	-3.08	0.631	6.31	6.56	-3.81	
7	7/5/2019	Head	D835V2 SN:4d117	5/15/2020	0.956	9.56	9.50	0.63	0.621	6.21	6.17	0.65	
7	7/5/2019	Body	D835V2 SN:4d117	5/15/2020	0.992	9.92	9.68	2.48	0.641	6.41	6.32	1.42	
7	7/9/2019	Head	D835V2 SN:4d117	5/15/2020	1.040	10.40	9.50	9.47	0.676	6.76	6.17	9.56	69,70
7	7/9/2019	Body	D835V2 SN:4d117	5/15/2020	0.930	9.30	9.68	-3.93	0.602	6.02	6.32	-4.75	
7	7/21/2019	Body	D2600V2 SN:1006	10/16/2019	5.730	57.30	58.52	-2.08	2.490	24.90	26.15	-4.78	71,72
9	6/6/2019	Head	D835V2 SN:4d002	11/28/2019	0.934	9.34	9.87	-5.37	0.615	6.15	6.36	-3.30	73,74
9	6/6/2019	Body	D835V2 SN:4d002	11/28/2019	0.998	9.98	10.07	-0.89	0.659	6.59	6.56	0.46	
9	6/10/2019	Body	D835V2 SN:4d002	11/28/2019	0.988	9.88	10.07	-1.89	0.652	6.52	6.56	-0.61	
9	6/10/2019	Head	D835V2 SN:4d002	11/28/2019	0.993	9.93	9.87	0.61	0.654	6.54	6.36	2.83	
9	6/12/2019	Head	D1900V2 SN:5d043	11/29/2019	3.920	39.20	41.80	-6.22	2.050	20.50	21.69	-5.49	75,76
9	6/12/2019	Head	D3500V2 SN:1011	5/13/2020	6.530	65.30	64.50	1.24	2.500	25.00	24.30	2.88	
9	6/16/2019	Head	D835V2 SN:4d117	5/15/2020	0.924	9.24	9.50	-2.74	0.611	6.11	6.17	-0.97	77,78

SAR Lab	Date	Tissue Type	Dipole Type _Serial #	Dipole Cal. Due Data	Measured Results for 1g SAR				Measured Results for 10g SAR				Plot No.
					Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	
9	6/19/2019	Head	D3500V2 SN:1011	5/13/2020	6.320	63.20	64.50	-2.02	2.440	24.40	24.30	0.41	
9	6/19/2019	Body	D3500V2 SN:1011	5/13/2020	6.180	61.80	66.00	-6.36	2.270	22.70	24.40	-6.97	79,80
9	6/24/2019	Head	D3500V2 SN:1011	5/13/2020	6.820	68.20	64.50	5.74	2.650	26.50	24.30	9.05	
9	6/24/2019	Body	D3500V2 SN:1011	5/13/2020	6.250	62.50	66.00	-5.30	2.370	23.70	24.40	-2.87	
9	6/24/2019	Head	D3700V2 SN:1039	6/12/2020	6.460	64.60	66.50	-2.86	2.410	24.10	24.20	-0.41	
9	6/24/2019	Body	D3700V2 SN:1039	6/12/2020	5.850	58.50	62.90	-7.00	2.170	21.70	22.50	-3.56	81,82
9	6/28/2019	Head	D750V3 SN:1071	11/28/2019	0.827	8.27	8.32	-0.60	0.546	5.46	5.45	0.18	
9	6/28/2019	Body	D750V3 SN:1071	11/28/2019	0.915	9.15	8.63	6.03	0.610	6.10	5.65	7.96	83,84
9	6/28/2019	Head	D2600V2 SN:1006	10/16/2019	5.470	54.70	59.31	-7.77	2.460	24.60	26.43	-6.92	85,86
9	7/2/2019	Head	D750V3 SN:1019	3/21/2020	0.815	8.15	8.29	-1.69	0.538	5.38	5.44	-1.10	
9	7/2/2019	Body	D750V3 SN:1019	3/21/2020	0.892	8.92	8.47	5.31	0.594	5.94	5.59	6.26	87,88
9	7/6/2019	Head	D750V3 SN:1071	11/28/2019	0.799	7.99	8.32	-3.97	0.524	5.24	5.45	-3.85	
9	7/6/2019	Body	D750V3 SN:1071	11/28/2019	0.891	8.91	8.63	3.24	0.593	5.93	5.65	4.96	

9. Conducted Output Power Measurements

Power measurements were performed in accordance to the device's two power modes, Mode A and Mode B for each antenna. Mode A power is used when the device is used against the user's head or away from the body. Mode B power is used when the device is used in a Body-worn configuration by the user.

The selection between antennas ANT1, ANT2, ANT3, ANT4, and ANT5 in the application is based on RSSI based antenna selection. The full details of power selections are described in the operational description. Refer to Sec. 7 and Sec. 10 for details of the testing. Test reductions have applied accordingly following the SAR KDB Procedure for the supported wireless technologies of the DUT. This is noted in detail for each technology in their respective Sections.

The Tune-up limit already includes component tolerance of ± 0.5 dB for all modulations other than GSM which includes a ± 0.75 dB tolerance and LTE 2UL CA intra- band which includes a ± 1.0 dB tolerance. KDB 447498 sec.4.1.(d) at the maximum rated output power and within the tune-up tolerance range specified for the product, but not more than 2 dB lower than the maximum tune-up tolerance limit.

9.1. GSM

Per KDB 941225 D01 3G SAR Procedures:

SAR test reduction for GPRS and EDGE modes is determined by the source-based time-averaged output power specified for production units, including tune-up tolerance. The data mode with highest specified time-averaged output power should be tested for SAR compliance in the applicable exposure conditions. For modes with the same specified maximum output power and tolerance, the higher number time-slot configuration should be tested.

When different maximum output power applies to GSM voice or GPRS/EDGE time slots, GSM voice and GPRS/EDGE time slots should be tested separately to determine compliance by summing the corresponding reported SAR.

The GMSK EDGE configurations are grouped with GPRS and considered with respect to time-averaged maximum output power to determine compliance

Per October 2013 TCB Workshop:

When the maximum frame-averaged powers levels are within 0.25 dB of each other, test the configuration with the most number of time slots.

Maximum Output Power (Tune-up Limit) for GSM

SAR is not required for EDGE (8PSK) mode because the maximum output power and tune-up limit is $\leq 1/4$ dB higher than GPRS/EDGE (GMSK) or the adjusted SAR of the highest reported SAR of GPRS/EDGE (GMSK) is ≤ 1.2 W/kg.

RF Air interface	Mode	Maximum Output Power (Tune-up Limit) (dBm)			
		ANT1		ANT2	
		Mode A	Mode B	Mode A	Mode B
GSM850	Voice/GPRS (1 slot)	33.25	33.25	31.75	31.75
	GPRS 2 slots	32.25	32.25	30.75	30.75
	EGPRS 1 slot	27.75	27.75	25.75	25.75
	EGPRS 2 slots	26.75	26.75	24.75	24.75
GSM1900	Voice/GPRS (1 slot)	31.75	29.25	26.50	27.50
	GPRS 2 slots	30.75	26.25	23.50	24.50
	EGPRS 1 slot	26.75	26.75	24.25	24.25
	EGPRS 2 slots	25.75	25.75	23.25	23.25

GSM850 Measured Results (ANT1)

Mode	Coding Scheme	Time Slots	Ch No.	Freq. (MHz)	Power Mode A (dBm)				Power Mode B (dBm)			
					Measured		Tune-up Limit		Measured		Tune-up Limit	
					Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr
GPRS/EDGE (GMSK)	CS1	1	128	824.2	32.40	23.37	33.25	24.22	32.40	23.37	33.25	24.22
			190	836.6	32.40	23.37			32.40	23.37		
			251	848.8	32.40	23.37			32.40	23.37		
		2	128	824.2	32.10	26.08	32.25	26.23	32.10	26.08	32.25	26.23
			190	836.6	32.10	26.08			32.10	26.08		
			251	848.8	32.10	26.08			32.10	26.08		
EDGE (8PSK)	MCS5	1	128	824.2	26.90	17.87	27.75	18.72	26.90	17.87	27.75	18.72
			190	836.6	26.90	17.87			26.90	17.87		
			251	848.8	26.90	17.87			26.90	17.87		
		2	128	824.2	25.80	19.78	26.75	20.73	25.80	19.78	26.75	20.73
			190	836.6	25.80	19.78			25.80	19.78		
			251	848.8	25.75	19.73			25.75	19.73		

Notes:

Based on the Tune-up Procedure, GPRS/EDGE (GMSK) mode with 2 time slots for Mode A and Mode B have maximum frame-averaged power.

GSM850 Measured Results (ANT2)

Mode	Coding Scheme	Time Slots	Ch No.	Freq. (MHz)	Power Mode A (dBm)				Power Mode B (dBm)			
					Measured		Tune-up Limit		Measured		Tune-up Limit	
					Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr
GPRS/EDGE (GMSK)	CS1	1	128	824.2	31.00	21.97	31.75	22.72	31.00	21.97	31.75	22.72
			190	836.6	30.80	21.77			30.80	21.77		
			251	848.8	30.80	21.77			30.80	21.77		
		2	128	824.2	30.70	24.68	30.75	24.73	30.70	24.68	30.75	24.73
			190	836.6	30.70	24.68			30.70	24.68		
			251	848.8	30.70	24.68			30.70	24.68		
EDGE (8PSK)	MCS5	1	128	824.2	25.10	16.07	25.75	16.72	25.10	16.07	25.75	16.72
			190	836.6	25.10	16.07			25.10	16.07		
			251	848.8	25.20	16.17			25.20	16.17		
		2	128	824.2	23.90	17.88	24.75	18.73	23.90	17.88	24.75	18.73
			190	836.6	23.90	17.88			23.90	17.88		
			251	848.8	24.00	17.98			24.00	17.98		

Notes:

Based on the Tune-up Procedure, GPRS/EDGE (GMSK) mode with 2 time slots for Mode A and Mode B have maximum frame-averaged power.

GSM1900 Measured Results (ANT1)

Mode	Coding Scheme	Time Slots	Ch No.	Freq. (MHz)	Power Mode A (dBm)				Power Mode B (dBm)			
					Measured		Tune-up Limit		Measured		Tune-up Limit	
					Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr
GPRS/EDGE (GMSK)	CS1	1	512	1850.2	30.80	21.77	31.75	22.72	28.50	19.47	29.25	20.22
			661	1880.0	30.80	21.77			28.50	19.47		
			810	1909.8	30.80	21.77			28.50	19.47		
		2	512	1850.2	30.30	24.28	30.75	24.73	26.20	20.18	26.25	20.23
			661	1880.0	30.50	24.48			26.20	20.18		
			810	1909.8	30.40	24.38			26.20	20.18		
EDGE (8PSK)	MCS5	1	512	1850.2	25.80	16.77	26.75	17.72	25.80	16.77	26.75	17.72
			661	1880.0	25.80	16.77			25.80	16.77		
			810	1909.8	25.80	16.77			25.80	16.77		
		2	512	1850.2	24.35	18.33	25.75	19.73	25.30	19.28	25.75	19.73
			661	1880.0	24.40	18.38			25.40	19.38		
			810	1909.8	24.50	18.48			25.40	19.38		

Notes:

Based on the Tune-up Procedure, GPRS/EDGE (GMSK) mode with 2 time slots for Mode A and Mode B have maximum frame-averaged power.

GSM1900 Measured Results (ANT2)

Mode	Coding Scheme	Time Slots	Ch No.	Freq. (MHz)	Power Mode A (dBm)				Power Mode B (dBm)			
					Measured		Tune-up Limit		Measured		Tune-up Limit	
					Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr	Burst Pwr	Frame Pwr
GPRS/EDGE (GMSK)	CS1	1	512	1850.2	25.06	16.03	26.50	17.47	27.13	18.10	27.50	18.47
			661	1880.0	25.11	16.08			27.13	18.10		
			810	1909.8	25.05	16.02			27.13	18.10		
		2	512	1850.2	23.50	17.48	23.50	17.48	24.20	18.18	24.50	18.48
			661	1880.0	23.20	17.18			24.10	18.08		
			810	1909.8	23.00	16.98			24.00	17.98		
EDGE (8PSK)	MCS5	1	512	1850.2	23.89	14.86	24.25	15.22	23.29	14.26	24.25	15.22
			661	1880.0	23.89	14.86			23.37	14.34		
			810	1909.8	23.83	14.80			23.28	14.25		
		2	512	1850.2	22.84	16.82	23.25	17.23	23.25	17.23	23.25	17.23
			661	1880.0	22.89	16.87			23.25	17.23		
			810	1909.8	22.86	16.84			23.25	17.23		

Notes:

Based on the Tune-up Procedure, GPRS/EDGE (GMSK) mode with 2 time slots for Mode A and Mode B have maximum frame-averaged power.

9.2. W-CDMA

Per KDB 941225 D01 3G SAR Procedures for W-CDMA:

Maximum output power is verified on the high, middle and low channels and using the appropriate 12.2 kbps RMC with TPC (transmit power control) set to all "1's"

Release 99 Setup Procedures used to establish the test signals

The following tests were completed according to the test requirements outlined in section 5.2 of the 3GPP TS34.121-1. A summary of these settings is illustrated below:

Mode	Subtest	Rel99
WCDMA General Settings	Loopback Mode	Test Mode 2
	Rel99 RMC	12.2kbps RMC
	Power Control Algorithm	Algorithm2
	β_c/β_d	8/15

HSDPA Setup Procedures used to establish the test signals

The following 4 Sub-tests were completed according to procedures in table C.10.1.4 of 3GPP TS 34.121-1. A summary of these settings is illustrated below:

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} (Note 1, 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 $\Delta_{CQI} = 30/15$ with $\beta_{HS} = 30/15 * \beta_c$.

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 $\Delta_{NACK} = 30/15$ with $\beta_{HS} = 30/15 * \beta_c$, and $\Delta_{CQI} = 24/15$ with $\beta_{HS} = 24/15 * \beta_c$.

Note 3: CM = 1 for $\beta_c/\beta_d = 12/15$, $\beta_{HS}/\beta_c = 24/15$. 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 $\beta_c = 11/15$ and $\beta_d = 15/15$.

HSUPA Setup Procedures used to establish the test signals

The following 5 Sub-tests were completed according to procedures in table C.11.1.3 of 3GPP TS 34.121-1. A summary of these settings is illustrated below:

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} (Note 1)	β_{EC}	β_{ES} (Note 4) (Note 5)	β_{ES} (SF)	β_{ES} (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	209/25	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	$\beta_{ES1}: 47/15$ $\beta_{ES2}: 47/15$	4	2	2.0	1.0	15	92
4	2/15	15/15	64	2/15	4/15	2/15	56/75	4	1	3.0	2.0	17	71
5	15/15	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 $\Delta_{CQI} = 30/15$ with $\beta_{HS} = 30/15 * \beta_c$. For sub-test 5, Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 5/15$ with $\beta_{HS} = 5/15 * \beta_c$.

Note 2: CM = 1 for $\beta_c/\beta_d = 12/15$, $\beta_{HS}/\beta_c = 24/15$. For all other combinations of DPDCH, DPCCH, HS-DPCCH, E-DPCCH 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 $\beta_c = 10/15$ and $\beta_d = 15/15$. In case of testing by UE using E-DPCCH Physical Layer category 1, Sub-test 3 is omitted according to TS25.306 Table 5.1g.

Note 4: β_{ES} can not be set directly; it is set by Absolute Grant Value.

Note 5: For subtests 2, 3 and 4, UE may perform E-DPCCH power scaling at max power which could results in slightly smaller MPR values.

DC-HSDPA Setup Procedures used to establish the test signals

The following 4 Sub-tests for DC-HSDPA were completed according to procedures in table C08.1.12 of 3GPP TS 34.121-1. A summary of subtest settings is illustrated below:

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	Processes	6
Information Bit Payload (N_{DP})	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.		

HSPA+ Setup Procedures used to establish the test signals

The following 1 Sub-test was completed according to procedures in table C.11.1.4 of 3GPP TS34.121. A summary of these settings is illustrated below:

Table C.11.1.4: β values for transmitter characteristics tests with HS-DPCCH and E-DCH with 16QAM

Sub-test	β_c (Note 3)	β_d	β_{HS} (Note 1)	β_{SC}	β_{ed} (2xSF2) (Note 4)	β_{ed} (2xSF4) (Note 4)	CM (dB) (Note 2)	MPR (dB) (Note 2)	AG Index (Note 4)	E-TFCI (Note 5)	E-TFCI (boost)
1	1	0	30/15	30/15	β_{ed1} : 30/15 β_{ed2} : 30/15	β_{ed3} : 24/15 β_{ed4} : 24/15	3.5	2.5	14	105	105
Note 1: Δ_{ACK} , Δ_{NACK} and $\Delta_{CGI} = 30/15$ with $\beta_{ed} = 30/15 * \beta_c$.											
Note 2: CM = 3.5 and the MPR is based on the relative CM difference, MPR = MAX(CM-1,0).											
Note 3: DPDCH is not configured, therefore the β_c is set to 1 and $\beta_d = 0$ by default.											
Note 4: β_{ed} can not be set directly; it is set by Absolute Grant Value.											
Note 5: All the sub-tests require the UE to transmit 2SF2+2SF4 16QAM EDCH and they apply for UE using E-DPDCH category 7. E-DCH TTI is set to 2ms TTI and E-DCH table index = 2. To support these E-DCH configurations DPDCH is not allocated. The UE is signalled to use the extrapolation algorithm.											

Maximum Output Power (Tune-up Limit) for W-CDMA

SAR measurement is not required for the HSDPA, HSUPA, DC-HSDPA and HSPA+. When primary mode and the adjusted SAR is ≤ 1.2 W/kg and secondary mode is $\leq 1/4$ dB higher than the primary mode

RF Air interface	Mode	Maximum Output Power (Tune-up Limit) (dBm)			
		ANT1		ANT2	
		Mode A	Mode B	Mode A	Mode B
W-CDMA Band 2	R99	25.70	20.25	17.50	18.50
	HSDPA	25.70	20.25	17.50	18.50
	HSUPA	25.70	20.25	17.50	18.50
	DC-HSDPA	25.70	20.25	17.50	18.50
	HSPA+	25.70	20.25	17.50	18.50
W-CDMA Band 4	R99	25.70	21.50	21.25	21.50
	HSDPA	25.70	21.50	21.25	21.50
	HSUPA	25.70	21.50	21.25	21.50
	DC-HSDPA	25.70	21.50	21.25	21.50
	HSPA+	25.70	21.50	21.25	21.50
W-CDMA Band 5	R99	25.70	25.70	24.50	24.50
	HSDPA	25.70	25.70	24.50	24.50
	HSUPA	25.70	25.70	24.50	24.50
	DC-HSDPA	25.70	25.70	24.50	24.50
	HSPA+	25.70	25.70	24.50	24.50

W-CDMA Band II Measured Results (ANT1)

Mode		UL Ch No.	Freq. (MHz)	Power Mode A (dBm)			Power Mode B (dBm)		
				Measured Pwr	MPR	Tune-up Limit	Measured Pwr	MPR	Tune-up Limit
Release 99	Rel 99 (RMC, 12.2 kbps)	9262	1852.4	25.55	N/A	25.70	20.00	N/A	20.25
		9400	1880.0	25.63			20.24		
		9538	1907.6	25.70			20.22		
HSDPA	Subtest 1	9262	1852.4	24.71	0	25.70	20.15	0	20.25
		9400	1880.0	24.72			20.25		
		9538	1907.6	24.74			20.25		
	Subtest 2	9262	1852.4	24.70	0	25.70	20.12	0	20.25
		9400	1880.0	24.74			20.25		
		9538	1907.6	24.70			20.22		
	Subtest 3	9262	1852.4	24.05	0.5	25.20	19.75	0.5	19.75
		9400	1880.0	24.22			19.75		
		9538	1907.6	24.17			19.75		
	Subtest 4	9262	1852.4	23.80	0.5	25.20	19.75	0.5	19.75
		9400	1880.0	23.96			19.75		
		9538	1907.6	23.90			19.75		
HSUPA	Subtest 1	9262	1852.4	24.71	0	25.70	19.91	0	20.25
		9400	1880.0	24.72			20.08		
		9538	1907.6	24.74			20.03		
	Subtest 2	9262	1852.4	22.71	2	23.70	18.25	2	18.25
		9400	1880.0	22.87			18.25		
		9538	1907.6	22.81			18.25		
	Subtest 3	9262	1852.4	23.99	1	24.70	19.25	1	19.25
		9400	1880.0	23.84			19.25		
		9538	1907.6	23.90			19.25		
	Subtest 4	9262	1852.4	22.75	2	23.70	18.25	2	18.25
		9400	1880.0	22.73			18.25		
		9538	1907.6	22.76			18.25		
	Subtest 5	9262	1852.4	24.71	0	25.70	20.06	0	20.25
		9400	1880.0	24.88			20.25		
		9538	1907.6	24.73			20.22		
DC-HSDPA	Subtest 1	9262	1852.4	24.70	0	25.70	20.10	0	20.25
		9400	1880.0	24.71			20.25		
		9538	1907.6	24.78			20.12		
	Subtest 2	9262	1852.4	24.77	0	25.70	19.82	0	20.25
		9400	1880.0	24.83			19.99		
		9538	1907.6	24.80			19.96		
	Subtest 3	9262	1852.4	24.83	0.5	25.20	19.75	0.5	19.75
		9400	1880.0	24.99			19.75		
		9538	1907.6	25.00			19.75		
	Subtest 4	9262	1852.4	24.30	0.5	25.20	19.75	0.5	19.75
		9400	1880.0	24.40			19.75		
		9538	1907.6	24.40			19.75		
HSPA+	Subtest 1	9262	1852.4	22.56	2.5	23.20	17.75	2.5	17.75
		9400	1880.0	22.72			17.75		
		9538	1907.6	22.74			17.75		

W-CDMA Band II Measured Results (ANT2)

Mode		UL Ch No.	Freq. (MHz)	Power Mode A (dBm)			Power Mode B (dBm)		
				Measured Pwr	MPR	Tune-up Limit	Measured Pwr	MPR	Tune-up Limit
Release 99	Rel 99 (RMC, 12.2 kbps)	9262	1852.4	17.44	N/A	17.50	18.45	N/A	18.50
		9400	1880.0	17.43			18.38		
		9538	1907.6	17.28			18.22		
HSDPA	Subtest 1	9262	1852.4	17.43	0	17.50	18.18	0	18.50
		9400	1880.0	17.29			18.12		
		9538	1907.6	17.19			17.98		
	Subtest 2	9262	1852.4	17.35	0	17.50	18.17	0	18.50
		9400	1880.0	17.26			18.03		
		9538	1907.6	17.16			17.95		
	Subtest 3	9262	1852.4	16.88	0.5	17.00	17.98	0.5	18.00
		9400	1880.0	16.77			17.82		
		9538	1907.6	16.66			17.96		
	Subtest 4	9262	1852.4	16.86	0.5	17.00	17.76	0.5	18.00
		9400	1880.0	16.74			17.98		
		9538	1907.6	16.68			17.96		
HSUPA	Subtest 1	9262	1852.4	17.50	0	17.50	18.20	0	18.50
		9400	1880.0	17.26			18.01		
		9538	1907.6	17.49			17.94		
	Subtest 2	9262	1852.4	15.49	2	15.50	16.20	2	16.50
		9400	1880.0	15.41			16.05		
		9538	1907.6	15.46			15.94		
	Subtest 3	9262	1852.4	16.27	1	16.50	17.20	1	17.50
		9400	1880.0	16.34			17.03		
		9538	1907.6	16.26			16.96		
	Subtest 4	9262	1852.4	15.36	2	15.50	16.17	2	16.50
		9400	1880.0	15.44			16.02		
		9538	1907.6	15.41			15.96		
	Subtest 5	9262	1852.4	17.41	0	17.50	18.17	0	18.50
		9400	1880.0	17.27			18.49		
		9538	1907.6	17.21			18.49		
DC-HSDPA	Subtest 1	9262	1852.4	17.29	0	17.50	18.42	0	18.50
		9400	1880.0	17.43			18.33		
		9538	1907.6	17.47			18.47		
	Subtest 2	9262	1852.4	17.17	0	17.50	18.50	0	18.50
		9400	1880.0	17.33			18.44		
		9538	1907.6	17.30			18.23		
	Subtest 3	9262	1852.4	16.83	0.5	17.00	17.87	0.5	18.00
		9400	1880.0	16.99			17.94		
		9538	1907.6	17.00			18.00		
	Subtest 4	9262	1852.4	16.93	0.5	17.00	17.23	0.5	18.00
		9400	1880.0	16.90			17.55		
		9538	1907.6	17.00			17.98		
HSPA+	Subtest 1	9262	1852.4	15.73	2.5	15.00	15.98	2.5	16.00
		9400	1880.0	15.59			15.92		
		9538	1907.6	15.59			15.98		

W-CDMA Band IV Measured Results (ANT1)

Mode		UL Ch No.	Freq. (MHz)	Power Mode A (dBm)			Power Mode B (dBm)		
				Measured Pwr	MPR	Tune-up Limit	Measured Pwr	MPR	Tune-up Limit
Release 99	Rel 99 (RMC, 12.2 kbps)	1312	1712.4	25.63	N/A	25.70	21.35	N/A	21.50
		1413	1732.6	25.64			21.42		
		1513	1752.6	25.58			21.50		
HSDPA	Subtest 1	1312	1712.4	24.79	0	25.70	20.58	0	21.50
		1413	1732.6	24.93			20.75		
		1513	1752.6	24.88			20.65		
	Subtest 2	1312	1712.4	24.73	0	25.70	20.57	0	21.50
		1413	1732.6	24.71			20.72		
		1513	1752.6	24.79			20.60		
	Subtest 3	1312	1712.4	24.29	0.5	25.20	20.56	0.5	21.00
		1413	1732.6	24.48			20.73		
		1513	1752.6	24.39			20.65		
	Subtest 4	1312	1712.4	24.22	0.5	25.20	20.56	0.5	21.00
		1413	1732.6	24.26			20.73		
		1513	1752.6	24.33			20.66		
HSUPA	Subtest 1	1312	1712.4	24.79	0	25.70	20.58	0	21.50
		1413	1732.6	24.93			20.70		
		1513	1752.6	24.88			20.59		
	Subtest 2	1312	1712.4	22.73	2	23.70	18.57	2	19.50
		1413	1732.6	22.72			18.74		
		1513	1752.6	22.76			18.65		
	Subtest 3	1312	1712.4	23.70	1	24.70	19.57	1	20.50
		1413	1732.6	23.84			19.70		
		1513	1752.6	23.83			19.59		
	Subtest 4	1312	1712.4	22.78	2	23.70	19.50	2	19.50
		1413	1732.6	22.96			19.50		
		1513	1752.6	22.82			19.50		
	Subtest 5	1312	1712.4	24.71	0	25.70	20.60	0	21.50
		1413	1732.6	24.84			20.71		
		1513	1752.6	24.86			20.66		
DC-HSDPA	Subtest 1	1312	1712.4	24.73	0	25.70	20.56	0	21.50
		1413	1732.6	24.99			20.79		
		1513	1752.6	24.78			20.57		
	Subtest 2	1312	1712.4	24.92	0	25.70	21.27	0	21.50
		1413	1732.6	25.16			21.44		
		1513	1752.6	24.94			21.33		
	Subtest 3	1312	1712.4	24.29	0.5	25.20	21.00	0.5	21.00
		1413	1732.6	24.25			21.00		
		1513	1752.6	24.31			21.00		
	Subtest 4	1312	1712.4	24.30	0.5	25.20	20.20	0.5	21.00
		1413	1732.6	24.40			20.30		
		1513	1752.6	24.40			20.30		
HSPA+	Subtest 1	1312	1712.4	22.80	2.5	23.20	19.00	2.5	19.00
		1413	1732.6	22.98			19.00		
		1513	1752.6	22.86			19.00		

W-CDMA Band IV Measured Results (ANT2)

Mode		UL Ch No.	Freq. (MHz)	Power Mode A (dBm)			Power Mode B (dBm)		
				Measured Pwr	MPR	Tune-up Limit	Measured Pwr	MPR	Tune-up Limit
Release 99	Rel 99 (RMC, 12.2 kbps)	1312	1712.4	21.20	N/A	21.25	21.39	N/A	21.50
		1413	1732.6	21.25			21.34		
		1513	1752.6	21.14			21.36		
HSDPA	Subtest 1	1312	1712.4	21.10	0	21.25	21.30	0	21.50
		1413	1732.6	21.18			21.33		
		1513	1752.6	21.20			21.32		
	Subtest 2	1312	1712.4	21.00	0	21.25	21.30	0	21.50
		1413	1732.6	21.10			21.38		
		1513	1752.6	21.19			21.38		
	Subtest 3	1312	1712.4	20.10	0.5	20.75	21.00	0.5	21.00
		1413	1732.6	20.00			21.00		
		1513	1752.6	20.00			21.00		
	Subtest 4	1312	1712.4	20.50	0.5	20.75	21.00	0.5	21.00
		1413	1732.6	20.40			21.00		
		1513	1752.6	20.60			21.00		
HSUPA	Subtest 1	1312	1712.4	21.14	0	21.25	21.30	0	21.50
		1413	1732.6	21.18			21.36		
		1513	1752.6	21.18			21.34		
	Subtest 2	1312	1712.4	19.20	2	19.25	19.50	2	19.50
		1413	1732.6	19.20			19.50		
		1513	1752.6	19.15			19.50		
	Subtest 3	1312	1712.4	20.20	1	20.25	20.50	1	20.50
		1413	1732.6	20.10			20.50		
		1513	1752.6	20.10			20.50		
	Subtest 4	1312	1712.4	19.20	2	19.25	19.50	2	19.50
		1413	1732.6	19.10			19.50		
		1513	1752.6	19.10			19.50		
	Subtest 5	1312	1712.4	21.16	0	21.25	21.30	0	21.50
		1413	1732.6	21.17			21.30		
		1513	1752.6	21.18			21.20		
DC-HSDPA	Subtest 1	1312	1712.4	21.15	0	21.25	21.30	0	21.50
		1413	1732.6	21.19			21.33		
		1513	1752.6	21.19			21.32		
	Subtest 2	1312	1712.4	21.10	0	21.25	21.30	0	21.50
		1413	1732.6	21.17			21.32		
		1513	1752.6	21.17			21.33		
	Subtest 3	1312	1712.4	20.60	0.5	20.75	21.00	0.5	21.00
		1413	1732.6	20.50			21.00		
		1513	1752.6	20.50			21.00		
	Subtest 4	1312	1712.4	20.60	0.5	20.75	21.00	0.5	21.00
		1413	1732.6	20.50			21.00		
		1513	1752.6	20.50			21.00		
HSPA+	Subtest 1	1312	1712.4	18.70	2.5	18.75	19.00	2.5	19.00
		1413	1732.6	18.70			19.00		
		1513	1752.6	18.60			19.00		

W-CDMA Band V Measured Results (ANT1)

Mode		UL Ch No.	Freq. (MHz)	Power Mode A (dBm)			Power Mode B (dBm)		
				Measured Pwr	MPR	Tune-up Limit	Measured Pwr	MPR	Tune-up Limit
Release 99	Rel 99 (RMC, 12.2 kbps)	4132	826.4	25.60	N/A	25.70	25.60	N/A	25.70
		4183	836.6	25.60			25.60		
		4233	846.6	25.60			25.60		
HSDPA	Subtest 1	4132	826.4	25.70	0	25.70	25.70	0	25.70
		4183	836.6	25.60			25.60		
		4233	846.6	25.70			25.70		
	Subtest 2	4132	826.4	25.40	0	25.70	25.40	0	25.70
		4183	836.6	25.50			25.50		
		4233	846.6	25.40			25.40		
	Subtest 3	4132	826.4	25.10	0.5	25.20	25.10	0.5	25.20
		4183	836.6	25.00			25.00		
		4233	846.6	25.10			25.10		
	Subtest 4	4132	826.4	24.90	0.5	25.20	24.90	0.5	25.20
		4183	836.6	24.90			24.90		
		4233	846.6	24.90			24.90		
HSUPA	Subtest 1	4132	826.4	25.70	0	25.70	25.70	0	25.70
		4183	836.6	25.60			25.60		
		4233	846.6	25.70			25.70		
	Subtest 2	4132	826.4	22.90	2	23.70	22.90	2	23.70
		4183	836.6	22.90			22.90		
		4233	846.6	22.80			22.80		
	Subtest 3	4132	826.4	23.00	1	24.70	23.00	1	24.70
		4183	836.6	23.40			23.40		
		4233	846.6	23.30			23.30		
	Subtest 4	4132	826.4	22.60	2	23.70	22.60	2	23.70
		4183	836.6	22.50			22.50		
		4233	846.6	22.50			22.50		
	Subtest 5	4132	826.4	25.50	0	25.70	25.50	0	25.70
		4183	836.6	25.40			25.40		
		4233	846.6	25.50			25.50		
DC-HSDPA	Subtest 1	4132	826.4	25.40	0	25.70	25.40	0	25.70
		4183	836.6	25.50			25.50		
		4233	846.6	25.40			25.40		
	Subtest 2	4132	826.4	25.70	0	25.70	25.70	0	25.70
		4183	836.6	25.60			25.60		
		4233	846.6	25.70			25.70		
	Subtest 3	4132	826.4	24.90	0.5	25.20	24.90	0.5	25.20
		4183	836.6	24.90			24.90		
		4233	846.6	24.90			24.90		
	Subtest 4	4132	826.4	25.10	0.5	25.20	25.10	0.5	25.20
		4183	836.6	25.00			25.00		
		4233	846.6	25.10			25.10		
HSPA+	Subtest 1	4132	826.4	23.20	2.5	23.20	23.20	2.5	23.20
		4183	836.6	23.20			23.20		
		4233	846.6	23.20			23.20		

W-CDMA Band V Measured Results (ANT2)

Mode		UL Ch No.	Freq. (MHz)	Power Mode A (dBm)			Power Mode B (dBm)		
				Measured Pwr	MPR	Tune-up Limit	Measured Pwr	MPR	Tune-up Limit
Release 99	Rel 99 (RMC, 12.2 kbps)	4132	826.4	24.50	N/A	24.5	24.50	N/A	24.5
		4183	836.6	24.50			24.50		
		4233	846.6	24.50			24.50		
HSDPA	Subtest 1	4132	826.4	23.59	0	24.5	23.59	0	24.5
		4183	836.6	23.77			23.77		
		4233	846.6	23.71			23.71		
	Subtest 2	4132	826.4	23.50	0	24.5	23.50	0	24.5
		4183	836.6	23.57			23.57		
		4233	846.6	23.50			23.50		
	Subtest 3	4132	826.4	23.04	0.5	24.0	23.04	0.5	24.0
		4183	836.6	23.25			23.25		
		4233	846.6	23.08			23.08		
	Subtest 4	4132	826.4	23.10	0.5	24.0	23.10	0.5	24.0
		4183	836.6	23.02			23.02		
		4233	846.6	23.03			23.03		
HSUPA	Subtest 1	4132	826.4	23.59	0	24.5	23.59	0	24.5
		4183	836.6	23.53			23.53		
		4233	846.6	23.54			23.54		
	Subtest 2	4132	826.4	21.57	2	22.5	21.57	2	22.5
		4183	836.6	21.57			21.57		
		4233	846.6	21.60			21.60		
	Subtest 3	4132	826.4	22.51	1	23.5	22.51	1	23.5
		4183	836.6	22.57			22.57		
		4233	846.6	22.53			22.53		
	Subtest 4	4132	826.4	21.64	2	22.5	21.64	2	22.5
		4183	836.6	21.87			21.87		
		4233	846.6	21.69			21.69		
	Subtest 5	4132	826.4	23.67	0	24.5	23.67	0	24.5
		4183	836.6	23.80			23.80		
		4233	846.6	23.65			23.65		
DC-HSDPA	Subtest 1	4132	826.4	23.54	0	24.5	23.54	0	24.5
		4183	836.6	23.79			23.79		
		4233	846.6	23.68			23.68		
	Subtest 2	4132	826.4	23.58	0	24.5	23.58	0	24.5
		4183	836.6	23.78			23.78		
		4233	846.6	23.60			23.60		
	Subtest 3	4132	826.4	23.37	0.5	24.0	23.37	0.5	24.0
		4183	836.6	23.56			23.56		
		4233	846.6	23.44			23.44		
	Subtest 4	4132	826.4	23.24	0.5	24.0	23.24	0.5	24.0
		4183	836.6	23.54			23.54		
		4233	846.6	23.40			23.40		
HSPA+	Subtest 1	4132	826.4	21.70	2.5	22.0	21.70	2.5	22.0
		4183	836.6	21.91			21.91		
		4233	846.6	21.74			21.74		

9.3. CDMA

1x Advanced Setup Procedures used to establish the test signals

Call box setup procedure

- Protocol Rev > 6 (IS-2000-0)
- System ID: 331; NID: 65535, Reg. Ch. #.:
- Radio Config (RC) > Fwd11, Rvs8
- Service Option (SO) Setup > SO75 (Loopback)
- Traffic Data Rate > Full
- Rvs Power Ctrl > All Up bits (Maximum Tx Pout)
- Reverse Power Control Mode: 00-200 to 400 bps
- Smart blanking was disabled.

1xEV-DO Rev. B Setup Procedures used to establish the test signals

Call box setup procedure

- CMW 500 Signal Generator > 1xEV-DO Taskbar Enable
- CMW 500 1xEV-DO Signaling Configuration Window >
- 1xEV-DO Signaling On Window:
Under Access Network Control:
Band Class: BC0: US Cellular
RF Channel: 31
1xEV-DO Power: -70 dBm
Release B
- 1xEV-DO Signaling Configuration Window

Under RF Frequency Band / Channel: Enter Ch. Frequency
➤ Under Carrier Configuration: RF Frequency
For Two Carriers: Low Channel (1013)

	<u>RF Channel</u>	<u>RF Channel Offset</u>
Carrier [0]	31	0
Carrier [1]	1013	982

	<u>Carrier Sector</u>	<u>Active on AN</u>	<u>Assigned to AT</u>
Pilot [0]	C0/S0	✓	✓
	CA/S1	✓	✓

For Three Carriers: Low Channel (1013)

	<u>RF Channel</u>	<u>RF Channel Offset</u>
Carrier [0]	72	0
Carrier [1]	31	-41
Carrier [2]	1013	941

	<u>Carrier Sector</u>	<u>Active on AN</u>	<u>Assigned to AT</u>
Pilot [0]	C0/S0	✓	✓
Pilot [1]	C1/S1	✓	✓
Pilot [2]	C2/S2	✓	✓

- Rvs Power Ctrl > All Up bits (to get the maximum power)

Maximum Output Power (Tune-up Limit) for CDMA

SAR for next to the ear head exposure is measured in RC3 with the handset configured to transmit at full rate in SO55. The 3G SAR test reduction procedure is applied to RC1 with RC3 as the primary mode

Body-worn accessory SAR is measured in RC3 with the handset configured in TDSO/SO32 to transmit at full rate on FCH only with all other code channels disabled. The body-worn accessory procedures in KDB Publication 447498 D01 are applied. The 3G SAR test reduction procedure is applied to the multiple code channel configuration (FCH+SCHn), with FCH only as the primary mode.

When VOIP is supported by Ev-Do devices for next to the ear use, head exposure SAR is required.

SAR measurement is not required for the 1xEVDO Rev. A, Rel. 0 and 1x-Advanced. When primary mode and the adjusted SAR is ≤ 1.2 W/kg and secondary mode is $\leq \frac{1}{4}$ dB higher than the primary mode

RF Air interface	Mode	Maximum Output Power (Tune-up Limit) (dBm)			
		ANT1		ANT2	
		Mode A	Mode B	Mode A	Mode B
CDMA BC0	1xRTT	25.70	25.70	24.50	24.50
	1xAdvanced	25.70	25.70	24.50	24.50
	1xEVDO Rel. 0	25.70	25.70	24.50	24.50
	1xEVDO Rev. A	25.70	25.70	24.50	24.50
CDMA BC1	1xRTT	25.70	20.25	17.50	18.50
	1xAdvanced	25.70	20.25	17.50	18.50
	1xEVDO Rel. 0	25.70	20.25	17.50	18.50
	1xEVDO Rev. A	25.70	20.25	17.50	18.50
CDMA BC10	1xRTT	25.70	25.70	24.50	24.50
	1xAdvanced	25.70	25.70	24.50	24.50
	1xEVDO Rel. 0	25.70	25.70	24.50	24.50
	1xEVDO Rev. A	25.70	25.70	24.50	24.50

CDMA BC0 Measured Results (ANT1)

Mode		Channel	Freq. (MHz)	Power Mode A (dBm)		Power Mode B (dBm)	
				Measured Pwr	Tune-up Limit	Measured Pwr	Tune-up Limit
1xRTT	RC1, SO55 (Loopback)	1013	824.70	25.70	25.70	25.70	25.70
		384	836.52	25.70		25.70	
		777	848.31	25.70		25.70	
	RC3, SO55 (Loopback)	1013	824.70	25.70		25.70	
		384	836.52	25.70		25.70	
		777	848.31	25.70		25.70	
	RC3, SO32 (+F-SCH)	1013	824.70	25.70		25.70	
		384	836.52	25.70		25.70	
		777	848.31	25.70		25.70	
1xAdvanced	Fwd11/Rvs8 SO75 (Loopback)	1013	824.70	24.90	25.70	24.90	25.70
		384	836.52	25.20		25.20	
		777	848.31	25.00		25.00	
1xEv-Do Rel. 0	307.2 kbps (2 slot, QPSK)	1013	824.70	25.70	25.70	25.70	25.70
		384	836.52	25.70		25.70	
		777	848.31	25.70		25.70	
1xEv-Do Rev. A	307.2k, QPSK/ ACK channel is transmitted at all the slots	1013	824.70	25.70	25.70	25.70	25.70
		384	836.52	25.70		25.70	
		777	848.31	25.70		25.70	

CDMA BC0 Measured Results (ANT2)

Mode		Channel	Freq. (MHz)	Power Mode A (dBm)		Power Mode B (dBm)	
				Measured Pwr	Tune-up Limit	Measured Pwr	Tune-up Limit
1xRTT	RC1, SO55 (Loopback)	1013	824.70	24.50	24.50	24.50	24.50
		384	836.52	24.50		24.50	
		777	848.31	24.50		24.50	
	RC3, SO55 (Loopback)	1013	824.70	24.50		24.50	
		384	836.52	24.50		24.50	
		777	848.31	24.50		24.50	
	RC3, SO32 (+F-SCH)	1013	824.70	24.50		24.50	
		384	836.52	24.50		24.50	
		777	848.31	24.50		24.50	
1xAdvanced	Fwd11/Rvs8 SO75 (Loopback)	1013	824.70	24.40	24.50	24.40	24.50
		384	836.52	24.50		24.50	
		777	848.31	24.30		24.30	
1xEv-Do Rel. 0	307.2 kbps (2 slot, QPSK)	1013	824.70	24.50	24.50	24.50	24.50
		384	836.52	24.50		24.50	
		777	848.31	24.50		24.50	
1xEv-Do Rev. A	307.2k, QPSK/ ACK channel is transmitted at all the slots	1013	824.70	24.50	24.50	24.50	24.50
		384	836.52	24.50		24.50	
		777	848.31	24.50		24.50	

CDMA BC1 Measured Results (ANT1)

Mode		Channel	Freq. (MHz)	Power Mode A (dBm)		Power Mode B (dBm)	
				Measured Pwr	Tune-up Limit	Measured Pwr	Tune-up Limit
1xRTT	RC1, SO55 (Loopback)	25	1851.25	25.70	25.70	19.80	20.25
		600	1880.00	25.70		19.80	
		1175	1908.75	25.70		19.80	
	RC3, SO55 (Loopback)	25	1851.25	25.70		19.80	
		600	1880.00	25.70		19.75	
		1175	1908.75	25.70		19.75	
	RC3, SO32 (+F-SCH)	25	1851.25	25.40		19.75	
		600	1880.00	25.40		19.75	
		1175	1908.75	25.70		19.75	
1xAdvanced	Fwd11/Rvs8 SO75 (Loopback)	25	1851.25	25.40	25.70	19.75	20.25
		600	1880	25.40		19.75	
		1175	1908.75	25.70		19.75	
1xEv-Do Rel. 0	307.2 kbps (2 slot, QPSK)	25	1851.25	25.70	25.70	19.75	20.25
		600	1880.00	25.70		19.75	
		1175	1908.75	25.70		19.75	
1xEv-Do Rev. A	307.2k, QPSK/ ACK channel is transmitted at all the slots	25	1851.25	25.70	25.70	19.75	20.25
		600	1880	25.70		19.75	
		1175	1908.75	25.70		19.75	

CDMA BC1 Measured Results (ANT2)

Mode		Channel	Freq. (MHz)	Power Mode A (dBm)		Power Mode B (dBm)	
				Measured Pwr	Tune-up Limit	Measured Pwr	Tune-up Limit
1xRTT	RC1, SO55 (Loopback)	25	1851.25	17.50	17.50	18.00	18.50
		600	1880.00	17.40		18.00	
		1175	1908.75	17.50		18.00	
	RC3, SO55 (Loopback)	25	1851.25	17.50		18.00	
		600	1880.00	17.30		17.90	
		1175	1908.75	17.30		18.20	
	RC3, SO32 (+F-SCH)	25	1851.25	17.10		18.00	
		600	1880.00	17.20		18.00	
		1175	1908.75	17.00		18.00	
1xAdvanced	Fwd11/Rvs8 SO75 (Loopback)	25	1851.25	16.90	17.50	17.90	18.50
		600	1880	17.20		18.00	
		1175	1908.75	17.10		18.00	
1xEv-Do Rel. 0	307.2 kbps (2 slot, QPSK)	25	1851.25	17.30	17.50	18.10	18.50
		600	1880.00	17.50		18.00	
		1175	1908.75	17.30		18.00	
1xEv-Do Rev. A	307.2k, QPSK/ ACK channel is transmitted at all the slots	25	1851.25	17.20	17.50	18.00	18.50
		600	1880	17.30		18.00	
		1175	1908.75	17.30		18.20	

CDMA BC10 Measured Results (ANT1)

Mode		Channel	Freq. (MHz)	Power Mode A (dBm)		Power Mode B (dBm)	
				Measured Pwr	Tune-up Limit	Measured Pwr	Tune-up Limit
1xRTT	RC1, SO55 (Loopback)	560	820.00	25.70	25.70	25.70	25.70
	RC3, SO55 (Loopback)	560	820.00	25.70		25.70	
	RC3, SO32 (+F-SCH)	560	820.00	25.70		25.70	
1xAdvanced	Fwd11/Rvs8 SO75 (Loopback)	560	820.00	25.70	25.70	25.70	25.70
1xEv-Do Rel. 0	307.2 kbps (2 slot, QPSK)	560	820.00	25.70	25.70	25.70	25.70
1xEv-Do Rev. A	307.2k, QPSK/ ACK channel is transmitted at all the slots	560	820.00	25.70	25.70	25.70	25.70

CDMA BC10 Measured Results (ANT2)

Mode		Channel	Freq. (MHz)	Power Mode A (dBm)		Power Mode B (dBm)	
				Measured Pwr	Tune-up Limit	Measured Pwr	Tune-up Limit
1xRTT	RC1, SO55 (Loopback)	560	820.00	24.50	24.50	24.50	24.50
	RC3, SO55 (Loopback)	560	820.00	24.50		24.50	
	RC3, SO32 (+F-SCH)	560	820.00	24.50		24.50	
1xAdvanced	Fwd11/Rvs8 SO75 (Loopback)	560	820.00	24.50	24.50	24.50	24.50
1xEv-Do Rel. 0	307.2 kbps (2 slot, QPSK)	560	820.00	24.50	24.50	24.50	24.50
1xEv-Do Rev. A	307.2k, QPSK/ ACK channel is transmitted at all the slots	560	820.00	24.50	24.50	24.50	24.50

9.4. LTE

The following tests were conducted according to the test requirements outlined in section 6.2 of the 3GPP TS36.101 specification.

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

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

The allowed A-MPR values specified below in Table 6.2.4.-1 of 3GPP TS36.101 are in addition to the allowed MPR requirements. All the measurements below were performed with A-MPR disabled, by using Network Signaling Value of "NS_01".

Table 6.2.4-1: Additional Maximum Power Reduction (A-MPR)

Network Signalling value	Requirements (subclause)	E-UTRA Band	Channel bandwidth (MHz)	Resources Blocks (N_{RB})	A-MPR (dB)
NS_01	6.6.2.1.1	Table 5.5-1	1.4, 3, 5, 10, 15, 20	Table 5.6-1	N/A

Maximum Output Power (Tune-up Limit) for LTE

According to April 2015 TCB workshop, SAR test exclusion can be applied for testing overlapping LTE bands as follows:

- a) The maximum output power, including tolerance, for the smaller band must be $\leq$ the larger band to qualify for the SAR test exclusion.
- b) The channel bandwidth and other operating parameters for the smaller band must be fully supported by the larger band.
 - LTE Band 2 (1850-1910 MHz) is covered by LTE Band 25 (1850-1915 MHz)
 - LTE Band 4 (1710-1755 MHz) is covered by LTE Band 66 (1710-1780 MHz)
 - LTE Band 17 (704-716 MHz) is covered by LTE Band 12 (699-716 MHz)

Maximum bandwidth does not support at least three non-overlapping channels in certain channel bandwidths. 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 per KDB 941225 D05 SAR for LTE Devices.

LTE QPSK configuration has the highest maximum average output power per 3GPP standard.

SAR measurement is not required for the 16QAM and 64QAM. When the highest maximum output power for 16QAM and 64QAM is $\leq \frac{1}{2}$ dB higher than the QPSK or when the reported SAR for the QPSK configuration is ≤ 1.45 W/kg.

Please refer to section 6.3. for LTE detail test channels.

RF Air interface	Mode	Maximum Output Power (Tune-up Limit) (dBm)			
		ANT1		ANT2	
		Mode A	Mode B	Mode A	Mode B
LTE Band 2	QPSK	25.70	20.25	17.50	18.50
LTE Band 4	QPSK	25.70	21.50	21.25	21.50
LTE Band 5	QPSK	25.70	25.70	24.50	24.50
LTE Band 7	QPSK	25.70	20.50	17.75	19.75
LTE Band 12	QPSK	25.70	25.70	24.50	24.50
LTE Band 13	QPSK	25.70	25.70	24.50	24.50
LTE Band 14	QPSK	25.70	25.70	24.50	24.50
LTE Band 17	QPSK	25.70	25.70	24.50	24.50
LTE Band 25	QPSK	25.70	20.25	17.50	18.50
LTE Band 26	QPSK	25.70	25.70	24.50	24.50
LTE Band 30	QPSK	25.70	24.00	17.75	20.50
LTE Band 41 (PC3)	QPSK	25.70	23.00	19.75	21.50
LTE Band 41 (PC 2)	QPSK	28.70	23.00	19.75	21.50
LTE Band 66	QPSK	25.70	21.50	21.25	21.50
LTE Band 71	QPSK	25.70	25.70	24.50	24.50
RF Air interface	Mode	Maximum Output Power (Tune-up Limit) (dBm)			
		ANT3		ANT4	
		Mode A	Mode B	Mode A	Mode B
LTE Band 48	QPSK	25.70	24.00	22.50	22.50

LTE Band 5 Measured Results (ANT1)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
					20525		MPR	Tune-up Limit		20525		MPR	Tune-up Limit
					836.5 MHz					836.5 MHz			
10 MHz	QPSK	1	0		25.50		0	25.70		25.50		0	25.70
		1	25		25.58		0	25.70		25.58		0	25.70
		1	49		25.30		0	25.70		25.30		0	25.70
		25	0		23.78		1	24.70		23.78		1	24.70
		25	12		24.58		1	24.70		24.58		1	24.70
		25	25		23.90		1	24.70		23.90		1	24.70
		50	0		24.55		1	24.70		24.55		1	24.70
	16QAM	1	0		23.89		1	24.70		23.89		1	24.70
		1	25		24.17		1	24.70		24.17		1	24.70
		1	49		24.24		1	24.70		24.24		1	24.70
		25	0		22.79		2	23.70		22.79		2	23.70
		25	12		22.87		2	23.70		22.87		2	23.70
		25	25		22.93		2	23.70		22.93		2	23.70
		50	0		22.87		2	23.70		22.87		2	23.70
	64QAM	1	0		22.76		2	23.70		22.76		2	23.70
		1	25		23.10		2	23.70		23.10		2	23.70
		1	49		23.11		2	23.70		23.11		2	23.70
		25	0		21.82		3	22.70		21.82		3	22.70
		25	12		21.87		3	22.70		21.87		3	22.70
		25	25		21.95		3	22.70		21.95		3	22.70
		50	0		21.88		3	22.70		21.88		3	22.70
BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				20425	20525	20625	MPR	Tune-up Limit	20425	20525	20625	MPR	Tune-up Limit
					826.5 MHz	836.5 MHz				826.5 MHz	836.5 MHz		
5 MHz	QPSK	1	0	24.88	25.01	25.15	0	25.70	24.88	25.01	25.15	0	25.70
		1	12	24.86	25.04	25.00	0	25.70	24.86	25.04	25.00	0	25.70
		1	24	24.99	25.10	24.92	0	25.70	24.99	25.10	24.92	0	25.70
		12	0	23.86	23.85	24.03	1	24.70	23.86	23.85	24.03	1	24.70
		12	7	23.93	23.91	23.88	1	24.70	23.93	23.91	23.88	1	24.70
		12	13	23.92	23.92	23.76	1	24.70	23.92	23.92	23.76	1	24.70
		25	0	23.89	23.93	23.97	1	24.70	23.89	23.93	23.97	1	24.70
	16QAM	1	0	24.35	24.38	24.51	1	24.70	24.35	24.38	24.51	1	24.70
		1	12	24.17	24.42	24.43	1	24.70	24.17	24.42	24.43	1	24.70
		1	24	24.38	24.52	24.31	1	24.70	24.38	24.52	24.31	1	24.70
		12	0	22.93	22.82	22.98	2	23.70	22.93	22.82	22.98	2	23.70
		12	7	22.89	22.87	22.85	2	23.70	22.89	22.87	22.85	2	23.70
		12	13	22.88	22.89	22.76	2	23.70	22.88	22.89	22.76	2	23.70
		25	0	22.91	22.89	22.88	2	23.70	22.91	22.89	22.88	2	23.70
	64QAM	1	0	23.13	23.23	23.36	2	23.70	23.13	23.23	23.36	2	23.70
		1	12	23.00	23.32	23.33	2	23.70	23.00	23.32	23.33	2	23.70
		1	24	23.19	23.42	23.07	2	23.70	23.19	23.42	23.07	2	23.70
		12	0	21.76	21.92	22.06	3	22.70	21.76	21.92	22.06	3	22.70
		12	7	21.72	21.95	21.95	3	22.70	21.72	21.95	21.95	3	22.70
		12	13	21.72	21.94	21.82	3	22.70	21.72	21.94	21.82	3	22.70
		25	0	21.71	21.92	21.92	3	22.70	21.71	21.92	21.92	3	22.70
BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				20415	20525	20635	MPR	Tune-up Limit	20415	20525	20635	MPR	Tune-up Limit
					825.5 MHz	836.5 MHz				825.5 MHz	836.5 MHz		
3 MHz	QPSK	1	0	25.00	25.09	25.15	0	25.70	25.00	25.09	25.15	0	25.70
		1	8	24.91	25.18	25.04	0	25.70	24.91	25.18	25.04	0	25.70
		1	14	24.85	25.14	25.03	0	25.70	24.85	25.14	25.03	0	25.70
		8	0	23.77	23.89	23.93	1	24.70	23.77	23.89	23.93	1	24.70
		8	4	23.74	23.96	23.81	1	24.70	23.74	23.96	23.81	1	24.70
		8	7	23.73	23.96	23.80	1	24.70	23.73	23.96	23.80	1	24.70
		15	0	23.77	23.98	23.85	1	24.70	23.77	23.98	23.85	1	24.70
	16QAM	1	0	24.21	24.30	24.45	1	24.70	24.21	24.30	24.45	1	24.70
		1	8	24.13	24.44	24.22	1	24.70	24.13	24.44	24.22	1	24.70
		1	14	24.02	24.42	24.26	1	24.70	24.02	24.42	24.26	1	24.70
		8	0	22.75	22.89	22.92	2	23.70	22.75	22.89	22.92	2	23.70
		8	4	22.72	22.96	22.83	2	23.70	22.72	22.96	22.83	2	23.70
		8	7	22.80	22.96	22.78	2	23.70	22.80	22.96	22.78	2	23.70
		15	0	22.79	22.94	22.81	2	23.70	22.79	22.94	22.81	2	23.70
	64QAM	1	0	23.08	23.12	23.37	2	23.70	23.08	23.12	23.37	2	23.70
		1	8	23.04	23.28	23.25	2	23.70	23.04	23.28	23.25	2	23.70
		1	14	22.95	23.30	23.28	2	23.70	22.95	23.30	23.28	2	23.70
		8	0	21.78	21.90	21.98	3	22.70	21.78	21.90	21.98	3	22.70
		8	4	21.75	21.94	21.85	3	22.70	21.75	21.94	21.85	3	22.70
		8	7	21.71	21.94	21.83	3	22.70	21.71	21.94	21.83	3	22.70
		15	0	21.76	21.93	21.87	3	22.70	21.76	21.93	21.87	3	22.70

LTE Band 5 Measured Results (ANT1) (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				20407	20525	20643	MPR	Tune-up Limit	20407	20525	20643	MPR	Tune-up Limit
				824.7 MHz	836.5 MHz	848.3 MHz			824.7 MHz	836.5 MHz	848.3 MHz		
1.4 MHz	QPSK	1	0	25.1	25.2	25.0	0	25.7	25.1	25.2	25.0	0	25.7
		1	3	25.0	25.1	25.0	0	25.7	25.0	25.1	25.0	0	25.7
		1	5	25.0	25.2	25.1	0	25.7	25.0	25.2	25.1	0	25.7
		3	0	24.8	25.0	24.8	0	25.7	24.8	25.0	24.8	0	25.7
		3	1	24.8	25.0	24.8	0	25.7	24.8	25.0	24.8	0	25.7
		3	3	24.8	25.0	24.8	0	25.7	24.8	25.0	24.8	0	25.7
	16QAM	6	0	23.7	23.9	23.7	1	24.7	23.7	23.9	23.7	1	24.7
		1	0	24.2	24.4	24.2	1	24.7	24.2	24.4	24.2	1	24.7
		1	3	24.2	24.4	24.2	1	24.7	24.2	24.4	24.2	1	24.7
		1	5	24.2	24.4	24.3	1	24.7	24.2	24.4	24.3	1	24.7
		3	0	24.0	24.1	23.9	1	24.7	24.0	24.1	23.9	1	24.7
		3	1	24.0	24.2	23.9	1	24.7	24.0	24.2	23.9	1	24.7
	64QAM	3	3	23.9	24.1	23.9	1	24.7	23.9	24.1	23.9	1	24.7
		6	0	22.8	23.0	22.9	2	23.7	22.8	23.0	22.9	2	23.7
		1	0	23.3	23.5	23.1	2	23.7	23.3	23.5	23.1	2	23.7
		1	3	23.3	23.6	23.2	2	23.7	23.3	23.6	23.2	2	23.7
		1	5	23.3	23.6	23.3	2	23.7	23.3	23.6	23.3	2	23.7
		3	0	23.1	23.2	22.9	2	23.7	23.1	23.2	22.9	2	23.7
	64QAM	3	1	23.0	23.2	22.9	2	23.7	23.0	23.2	22.9	2	23.7
		3	3	23.0	23.2	22.9	2	23.7	23.0	23.2	22.9	2	23.7
		6	0	21.8	22.0	21.8	3	22.7	21.8	22.0	21.8	3	22.7

LTE Band 5 Measured Results (ANT2)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
					20525		MPR	Tune-up Limit		20525		MPR	Tune-up Limit
					836.5 MHz					836.5 MHz			
10 MHz	QPSK	1	0		23.81		0	24.50		23.81		0	24.50
		1	25		24.24		0	24.50		24.24		0	24.50
		1	49		23.88		0	24.50		23.88		0	24.50
		25	0		22.85		1	23.50		22.85		1	23.50
		25	12		23.29		1	23.50		23.29		1	23.50
		25	25		22.79		1	23.50		22.79		1	23.50
		50	0		23.20		1	23.50		23.20		1	23.50
	16QAM	1	0		23.03		1	23.50		23.03		1	23.50
		1	25		23.08		1	23.50		23.08		1	23.50
		1	49		23.13		1	23.50		23.13		1	23.50
		25	0		21.87		2	22.50		21.87		2	22.50
		25	12		21.88		2	22.50		21.88		2	22.50
		25	25		21.83		2	22.50		21.83		2	22.50
		50	0		21.82		2	22.50		21.82		2	22.50
	64QAM	1	0		21.93		2	22.50		21.93		2	22.50
		1	25		21.94		2	22.50		21.94		2	22.50
		1	49		21.95		2	22.50		21.95		2	22.50
		25	0		20.94		3	21.50		20.94		3	21.50
		25	12		20.93		3	21.50		20.93		3	21.50
		25	25		20.87		3	21.50		20.87		3	21.50
		50	0		20.84		3	21.50		20.84		3	21.50
BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				20425	20525	20625	MPR	Tune-up Limit	20425	20525	20625	MPR	Tune-up Limit
					826.5 MHz	836.5 MHz				826.5 MHz	836.5 MHz		
5 MHz	QPSK	1	0	23.72	23.88	23.65	0	24.50	23.72	23.88	23.65	0	24.50
		1	12	23.57	23.77	23.61	0	24.50	23.57	23.77	23.61	0	24.50
		1	24	23.61	23.86	23.87	0	24.50	23.61	23.86	23.87	0	24.50
		12	0	22.56	22.76	22.54	1	23.50	22.56	22.76	22.54	1	23.50
		12	7	22.51	22.78	22.58	1	23.50	22.51	22.78	22.58	1	23.50
		12	13	22.55	22.77	22.60	1	23.50	22.55	22.77	22.60	1	23.50
		25	0	22.59	22.78	22.67	1	23.50	22.59	22.78	22.67	1	23.50
	16QAM	1	0	23.03	23.25	22.98	1	23.50	23.03	23.25	22.98	1	23.50
		1	12	22.93	23.17	22.97	1	23.50	22.93	23.17	22.97	1	23.50
		1	24	23.03	23.20	23.19	1	23.50	23.03	23.20	23.19	1	23.50
		12	0	21.54	21.77	21.54	2	22.50	21.54	21.77	21.54	2	22.50
		12	7	21.53	21.78	21.53	2	22.50	21.53	21.78	21.53	2	22.50
		12	13	21.56	21.73	21.54	2	22.50	21.56	21.73	21.54	2	22.50
		25	0	21.58	21.71	21.58	2	22.50	21.58	21.71	21.58	2	22.50
	64QAM	1	0	21.93	22.09	21.88	2	22.50	21.93	22.09	21.88	2	22.50
		1	12	21.88	21.91	21.89	2	22.50	21.88	21.91	21.89	2	22.50
		1	24	21.80	22.03	21.98	2	22.50	21.80	22.03	21.98	2	22.50
		12	0	20.52	20.76	20.56	3	21.50	20.52	20.76	20.56	3	21.50
		12	7	20.57	20.81	20.59	3	21.50	20.57	20.81	20.59	3	21.50
		12	13	20.59	20.79	20.59	3	21.50	20.59	20.79	20.59	3	21.50
		25	0	20.58	20.73	20.60	3	21.50	20.58	20.73	20.60	3	21.5
BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				20415	20525	20635	MPR	Tune-up Limit	20415	20525	20635	MPR	Tune-up Limit
					825.5 MHz	836.5 MHz				825.5 MHz	836.5 MHz		
3 MHz	QPSK	1	0	23.70	23.84	23.74	0	24.50	23.70	23.84	23.74	0	24.50
		1	8	23.58	23.87	23.74	0	24.50	23.58	23.87	23.74	0	24.50
		1	14	23.54	23.81	23.88	0	24.50	23.54	23.81	23.88	0	24.50
		8	0	22.68	22.70	22.58	1	23.50	22.68	22.70	22.58	1	23.50
		8	4	22.57	22.70	22.59	1	23.50	22.57	22.70	22.59	1	23.50
		8	7	22.57	22.68	22.62	1	23.50	22.57	22.68	22.62	1	23.50
		15	0	22.59	22.69	22.65	1	23.50	22.59	22.69	22.65	1	23.50
	16QAM	1	0	22.90	23.04	22.94	1	23.50	22.90	23.04	22.94	1	23.50
		1	8	22.77	23.06	23.02	1	23.50	22.77	23.06	23.02	1	23.50
		1	14	22.77	23.07	23.07	1	23.50	22.77	23.07	23.07	1	23.50
		8	0	21.51	21.70	21.56	2	22.50	21.51	21.70	21.56	2	22.50
		8	4	21.60	21.73	21.57	2	22.50	21.60	21.73	21.57	2	22.50
		8	7	21.61	21.65	21.60	2	22.50	21.61	21.65	21.60	2	22.50
		15	0	21.58	21.61	21.55	2	22.50	21.58	21.61	21.55	2	22.50
	64QAM	1	0	21.76	21.82	21.56	2	22.50	21.76	21.82	21.56	2	22.50
		1	8	21.76	21.85	21.95	2	22.50	21.76	21.85	21.95	2	22.50
		1	14	21.74	21.84	22.01	2	22.50	21.74	21.84	22.01	2	22.50
		8	0	20.51	20.66	20.58	3	21.50	20.51	20.66	20.58	3	21.50
		8	4	20.61	20.65	20.57	3	21.50	20.61	20.65	20.57	3	21.50
		8	7	20.62	20.57	20.61	3	21.50	20.62	20.57	20.61	3	21.50
		15	0	20.62	20.60	20.62	3	21.50	20.62	20.60	20.62	3	21.50

LTE Band 5 Measured Results (ANT2) (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				20407	20525	20643	MPR	Tune-up Limit	20407	20525	20643	MPR	Tune-up Limit
				824.7 MHz	836.5 MHz	848.3 MHz			824.7 MHz	836.5 MHz	848.3 MHz		
1.4 MHz	QPSK	1	0	23.71	23.91	23.84	0	24.50	23.71	23.91	23.84	0	24.50
		1	3	23.68	23.89	23.83	0	24.50	23.68	23.89	23.83	0	24.50
		1	5	23.62	23.81	23.91	0	24.50	23.62	23.81	23.91	0	24.50
		3	0	23.63	23.74	23.70	0	24.50	23.63	23.74	23.70	0	24.50
		3	1	23.56	23.73	23.70	0	24.50	23.56	23.73	23.70	0	24.50
		3	3	23.56	23.67	23.76	0	24.50	23.56	23.67	23.76	0	24.50
	16QAM	6	0	22.69	22.60	22.65	1	23.50	22.69	22.60	22.65	1	23.50
		1	0	22.88	23.10	23.03	1	23.50	22.88	23.10	23.03	1	23.50
		1	3	22.82	23.09	23.12	1	23.50	22.82	23.09	23.12	1	23.50
		1	5	22.74	23.05	23.16	1	23.50	22.74	23.05	23.16	1	23.50
		3	0	22.64	22.83	22.81	1	23.50	22.64	22.83	22.81	1	23.50
		3	1	22.56	22.84	22.84	1	23.50	22.56	22.84	22.84	1	23.50
	64QAM	3	3	22.54	22.79	22.86	1	23.50	22.54	22.79	22.86	1	23.50
		6	0	21.60	21.70	21.76	2	22.50	21.60	21.70	21.76	2	22.50
		1	0	21.84	22.20	22.15	2	22.50	21.84	22.20	22.15	2	22.50
		1	3	21.80	22.14	22.22	2	22.50	21.80	22.14	22.22	2	22.50
		1	5	21.75	22.10	22.23	2	22.50	21.75	22.10	22.23	2	22.50
		3	0	21.68	21.86	21.80	2	22.50	21.68	21.86	21.80	2	22.50
		3	1	21.66	21.90	21.85	2	22.50	21.66	21.90	21.85	2	22.50
		3	3	21.65	21.82	21.84	2	22.50	21.65	21.82	21.84	2	22.50
		6	0	20.56	20.65	20.65	3	21.50	20.56	20.65	20.65	3	21.50

LTE Band 7 Measured Results (ANT1)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				20850	21100	21350	MPR	Tune-up Limit	20850	21100	21350	MPR	Tune-up Limit
				2510 MHz	2535 MHz	2560 MHz			2510 MHz	2535 MHz	2560 MHz		
20 MHz	QPSK	1	0	25.01	25.01	24.98	0	25.70	20.33	20.38	20.29	0	20.50
		1	49	25.48	25.50	25.42	0	25.70	20.40	20.40	20.40	0	20.50
		1	99	25.08	24.83	24.97	0	25.70	20.37	20.16	20.31	0	20.50
		50	0	23.99	23.95	24.02	1	24.70	20.27	20.28	20.29	0	20.50
		50	24	24.50	24.50	24.40	1	24.70	20.30	20.30	20.30	0	20.50
		50	50	24.02	23.93	23.96	1	24.70	20.32	20.26	20.25	0	20.50
	16QAM	100	0	23.96	23.91	23.98	1	24.70	20.30	20.30	20.30	0	20.50
		1	0	24.35	24.39	24.34	1	24.70	20.48	20.40	20.39	0	20.50
		1	49	24.27	24.21	24.32	1	24.70	20.42	20.42	20.42	0	20.50
		1	99	24.36	24.18	24.28	1	24.70	20.42	20.33	20.47	0	20.50
		50	0	22.99	22.98	23.07	2	23.70	20.15	20.18	20.38	0	20.50
		50	24	22.97	22.92	23.00	2	23.70	20.34	20.31	20.35	0	20.50
	64QAM	50	50	22.99	22.94	22.99	2	23.70	20.40	20.29	20.37	0	20.50
		100	0	22.95	22.90	22.99	2	23.70	20.34	20.25	20.35	0	20.50
		1	0	23.19	23.11	22.96	2	23.70	20.47	20.49	20.43	0	20.50
		1	49	23.07	22.95	23.11	2	23.70	20.43	20.29	20.44	0	20.50
		1	99	23.11	22.94	23.15	2	23.70	20.45	20.31	20.47	0	20.50
		50	0	22.06	21.98	22.05	3	22.70	20.42	20.35	20.38	0	20.50
15 MHz	QPSK	50	24	21.97	21.92	22.00	3	22.70	20.41	20.28	20.35	0	20.50
		50	50	22.01	21.94	22.01	3	22.70	20.42	20.25	20.37	0	20.50
		100	0	21.93	21.90	21.99	3	22.70	20.39	20.20	20.33	0	20.50
	16QAM	1	0	25.04	25.07	25.05	0	25.70	20.29	20.42	20.45	0	20.50
		1	37	25.03	24.98	25.06	0	25.70	20.32	20.29	20.49	0	20.50
		1	74	25.07	24.93	24.93	0	25.70	20.41	20.22	20.32	0	20.50
		36	0	24.05	23.92	24.05	1	24.70	20.27	20.19	20.38	0	20.50
		36	20	24.06	23.89	24.02	1	24.70	20.31	20.14	20.38	0	20.50
		36	39	24.04	24.03	24.01	1	24.70	20.30	20.29	20.35	0	20.50
	64QAM	75	0	24.04	23.96	24.04	1	24.70	20.29	20.23	20.38	0	20.50
		1	0	24.34	24.42	24.41	1	24.70	20.22	20.37	20.37	0	20.50
		1	37	24.33	24.29	24.33	1	24.70	20.25	20.30	20.30	0	20.50
		1	74	24.37	24.24	24.22	1	24.70	20.33	20.19	20.29	0	20.50
		36	0	23.06	22.96	23.06	2	23.70	20.35	20.30	20.50	0	20.50
		36	20	23.07	22.90	23.11	2	23.70	20.39	20.23	20.50	0	20.50
10 MHz	QPSK	36	39	23.04	23.06	23.07	2	23.70	20.39	20.39	20.44	0	20.50
		75	0	23.03	22.95	23.02	2	23.70	20.35	20.31	20.38	0	20.50
	16QAM	1	0	23.25	23.40	23.32	2	23.70	20.24	20.39	20.37	0	20.50
		1	37	23.35	23.29	23.32	2	23.70	20.22	20.29	20.38	0	20.50
		1	74	23.35	23.17	23.24	2	23.70	20.28	20.16	20.26	0	20.50
		36	0	22.06	22.03	22.08	3	22.70	20.36	20.34	20.44	0	20.50
	64QAM	36	20	22.09	21.96	22.06	3	22.70	20.41	20.29	20.46	0	20.50
		36	39	22.07	22.10	22.05	3	22.70	20.38	20.43	20.41	0	20.50
		75	0	21.99	22.00	22.03	3	22.70	20.34	20.34	20.34	0	20.50
	QPSK	1	0	25.14	25.05	25.08	0	25.70	20.39	20.42	20.45	0	20.50
		1	25	25.11	24.93	25.05	0	25.70	20.42	20.29	20.40	0	20.50
		1	49	25.11	25.05	25.04	0	25.70	20.44	20.43	20.37	0	20.50
		25	0	24.11	23.95	24.04	1	24.70	20.33	20.29	20.33	0	20.50
		25	12	24.09	23.90	24.02	1	24.70	20.32	20.25	20.32	0	20.50
		25	25	24.07	24.03	24.09	1	24.70	20.32	20.39	20.36	0	20.50
	16QAM	50	0	24.05	23.96	24.03	1	24.70	20.33	20.26	20.33	0	20.50
		1	0	24.42	24.32	24.39	1	24.70	20.25	20.29	20.35	0	20.50
		1	25	24.34	24.20	24.30	1	24.70	20.24	20.12	20.30	0	20.50
		1	49	24.30	24.30	24.25	1	24.70	20.29	20.24	20.27	0	20.50
		25	0	23.12	23.01	23.10	2	23.70	20.41	20.34	20.46	0	20.50
		25	12	23.12	22.92	23.08	2	23.70	20.41	20.27	20.42	0	20.50
	64QAM	25	25	23.11	23.05	23.12	2	23.70	20.41	20.42	20.47	0	20.50
		50	0	23.10	22.98	23.07	2	23.70	20.41	20.32	20.42	0	20.50
		1	0	23.22	23.16	23.27	2	23.70	20.23	20.38	20.44	0	20.50
		1	25	23.20	23.04	23.15	2	23.70	20.33	20.14	20.40	0	20.50
		1	49	23.17	23.12	23.19	2	23.70	20.39	20.37	20.33	0	20.50
		25	0	22.07	21.97	22.09	3	22.70	20.38	20.33	20.43	0	20.50
	64QAM	25	12	22.07	21.89	22.05	3	22.70	20.37	20.26	20.49	0	20.50
		25	25	22.07	22.05	22.13	3	22.70	20.39	20.41	20.41	0	20.50
		50	0	22.04	21.97	22.05	3	22.70	20.38	20.29	20.48	0	20.50
		50	0	22.04	21.97	22.05	3	22.70	20.38	20.29	20.48	0	20.50

LTE Band 7 Measured Results (ANT1) (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				20775	21100	21425	MPR	Tune-up Limit	20775	21100	21425	MPR	Tune-up Limit
				2502.5 MHz	2535 MHz	2567.5 MHz			2502.5 MHz	2535 MHz	2567.5 MHz		
5 MHz	QPSK	1	0	24.95	24.90	24.91	0	25.70	20.36	20.23	20.31	0	20.50
		1	12	24.95	24.89	24.97	0	25.70	20.27	20.18	20.30	0	20.50
		1	24	24.96	25.03	24.95	0	25.70	20.35	20.30	20.23	0	20.50
		12	0	23.87	23.78	23.88	1	24.70	20.21	20.04	20.14	0	20.50
		12	7	23.87	23.80	23.92	1	24.70	20.21	20.04	20.19	0	20.50
		12	13	23.87	23.83	23.92	1	24.70	20.23	20.11	20.19	0	20.50
		25	0	23.87	23.82	23.96	1	24.70	20.23	20.11	20.23	0	20.50
	16QAM	1	0	24.37	24.33	24.39	1	24.70	20.33	20.25	20.37	0	20.50
		1	12	24.38	24.34	24.37	1	24.70	20.32	20.25	20.35	0	20.50
		1	24	24.38	24.38	24.32	1	24.70	20.42	20.34	20.26	0	20.50
		12	0	22.83	22.74	22.90	2	23.70	20.26	20.10	20.20	0	20.50
		12	7	22.83	22.79	22.90	2	23.70	20.26	20.10	20.26	0	20.50
		12	13	22.82	22.85	22.91	2	23.70	20.26	20.16	20.24	0	20.50
		25	0	22.81	22.83	22.90	2	23.70	20.25	20.14	20.25	0	20.50
	64QAM	1	0	23.24	23.06	23.23	2	23.70	20.49	20.24	20.36	0	20.50
		1	12	23.18	23.12	23.26	2	23.70	20.42	20.17	20.34	0	20.50
		1	24	23.28	23.10	23.14	2	23.70	20.47	20.27	20.28	0	20.50
		12	0	21.92	21.80	21.80	3	22.70	20.17	20.08	20.27	0	20.50
		12	7	21.90	21.72	21.81	3	22.70	20.15	20.08	20.31	0	20.50
		12	13	21.89	21.78	21.81	3	22.70	20.17	20.16	20.29	0	20.50
		25	0	21.87	21.74	21.83	3	22.70	20.11	20.10	20.27	0	20.50

LTE Band 7 Measured Results (ANT2)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				20850	21100	21350	MPR	Tune-up Limit	20850	21100	21350	MPR	Tune-up Limit
				2510 MHz	2535 MHz	2560 MHz			2510 MHz	2535 MHz	2560 MHz		
20 MHz	QPSK	1	0	17.19	17.11	17.31	0	17.75	19.14	19.02	19.28	0	19.75
		1	49	17.56	17.71	17.71	0	17.75	19.60	19.60	19.70	0	19.75
		1	99	17.09	17.30	17.28	0	17.75	19.00	19.20	19.23	0	19.75
		50	0	17.25	17.02	17.23	0	17.75	19.21	18.94	19.14	0	19.75
		50	24	17.55	17.74	17.66	0	17.75	19.70	19.40	19.70	0	19.75
		50	50	17.00	17.13	17.36	0	17.75	18.94	19.10	19.32	0	19.75
	16QAM	100	0	17.51	17.72	17.74	0	17.75	19.50	19.30	19.70	0	19.75
		1	0	17.55	17.50	17.69	0	17.75	19.52	19.47	19.71	0	19.75
		1	49	17.57	17.43	17.57	0	17.75	19.55	19.46	19.61	0	19.75
		1	99	17.44	17.61	17.53	0	17.75	19.43	19.56	19.55	0	19.75
		50	0	17.29	17.07	17.30	0	17.75	19.25	19.03	19.20	0	19.75
		50	24	17.31	17.12	17.33	0	17.75	19.28	19.05	19.27	0	19.75
	64QAM	50	50	17.07	17.20	17.44	0	17.75	19.03	19.12	19.41	0	19.75
		100	0	17.25	17.06	17.31	0	17.75	19.24	19.00	19.28	0	19.75
		1	0	17.54	17.34	17.47	0	17.75	19.58	19.17	19.48	0	19.75
		1	49	17.59	17.16	17.39	0	17.75	19.67	19.17	19.37	0	19.75
		1	99	17.61	17.38	17.37	0	17.75	19.44	19.30	19.36	0	19.75
		50	0	17.27	17.07	17.27	0	17.75	19.29	19.01	19.19	0	19.75
		50	24	17.29	17.08	17.27	0	17.75	19.28	19.11	19.27	0	19.75
		50	50	17.06	17.16	17.39	0	17.75	19.06	19.19	19.42	0	19.75
		100	0	17.25	17.01	17.25	0	17.75	19.23	19.00	19.26	0	19.75
BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				20825	21100	21375	MPR	Tune-up Limit	20825	21100	21375	MPR	Tune-up Limit
				2507.5 MHz	2535 MHz	2562.5 MHz			2507.5 MHz	2535 MHz	2562.5 MHz		
15 MHz	QPSK	1	0	17.16	16.93	17.22	0	17.75	19.10	18.84	19.11	0	19.75
		1	37	17.26	16.97	17.38	0	17.75	19.22	18.96	19.27	0	19.75
		1	74	17.02	17.02	17.16	0	17.75	18.90	18.97	19.09	0	19.75
		36	0	17.06	16.89	17.17	0	17.75	19.05	18.83	19.06	0	19.75
		36	20	17.22	16.99	17.25	0	17.75	19.22	18.88	19.20	0	19.75
		36	39	17.10	17.08	17.21	0	17.75	19.08	18.93	19.16	0	19.75
	16QAM	75	0	17.21	16.92	17.26	0	17.75	19.21	18.87	19.22	0	19.75
		1	0	17.41	17.22	17.59	0	17.75	19.49	19.19	19.46	0	19.75
		1	37	17.47	17.30	17.66	0	17.75	19.57	19.32	19.58	0	19.75
		1	74	17.29	17.22	17.38	0	17.75	19.16	19.25	19.41	0	19.75
		36	0	17.10	16.96	17.23	0	17.75	19.13	18.90	19.16	0	19.75
		36	20	17.28	16.99	17.34	0	17.75	19.30	18.96	19.30	0	19.75
	64QAM	36	39	17.14	17.06	17.30	0	17.75	19.16	19.02	19.25	0	19.75
		75	0	17.24	16.97	17.33	0	17.75	19.27	18.93	19.28	0	19.75
		1	0	17.53	17.26	17.56	0	17.75	19.43	19.24	19.47	0	19.75
		1	37	17.57	17.30	17.66	0	17.75	19.51	19.34	19.62	0	19.75
		1	74	17.39	17.24	17.46	0	17.75	19.20	19.29	19.37	0	19.75
		36	0	17.13	16.96	17.18	0	17.75	19.11	18.96	19.18	0	19.75
		36	20	17.29	17.07	17.29	0	17.75	19.29	19.01	19.32	0	19.75
		36	39	17.16	17.16	17.24	0	17.75	19.14	19.06	19.28	0	19.75
		75	0	17.26	16.97	17.28	0	17.75	19.26	18.97	19.29	0	19.75
BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				20800	21100	21400	MPR	Tune-up Limit	20800	21100	21400	MPR	Tune-up Limit
				2505 MHz	2535 MHz	2565 MHz			2505 MHz	2535 MHz	2565 MHz		
10 MHz	QPSK	1	0	17.23	17.03	17.39	0	17.75	19.21	19.08	19.40	0	19.75
		1	25	17.23	17.12	17.35	0	17.75	19.25	19.09	19.37	0	19.75
		1	49	17.35	17.22	17.31	0	17.75	19.36	19.20	19.33	0	19.75
		25	0	17.20	17.02	17.42	0	17.75	19.12	18.99	19.40	0	19.75
		25	12	17.24	17.09	17.33	0	17.75	19.19	19.06	19.33	0	19.75
		25	25	17.35	17.20	17.31	0	17.75	19.30	19.14	19.31	0	19.75
	16QAM	50	0	17.17	17.10	17.35	0	17.75	19.20	19.07	19.34	0	19.75
		1	0	17.44	17.37	17.70	0	17.75	19.45	19.33	19.62	0	19.75
		1	25	17.46	17.42	17.68	0	17.75	19.55	19.45	19.61	0	19.75
		1	49	17.57	17.48	17.61	0	17.75	19.61	19.50	19.58	0	19.75
		25	0	17.20	17.12	17.53	0	17.75	19.20	19.09	19.44	0	19.75
		25	12	17.24	17.18	17.42	0	17.75	19.28	19.16	19.37	0	19.75
	64QAM	25	25	17.35	17.28	17.40	0	17.75	19.38	19.24	19.33	0	19.75
		50	0	17.24	17.16	17.43	0	17.75	19.26	19.13	19.37	0	19.75
		1	0	17.47	17.14	17.55	0	17.75	19.46	19.25	19.57	0	19.75
		1	25	17.44	17.28	17.52	0	17.75	19.41	19.29	19.50	0	19.75
		1	49	17.52	17.40	17.49	0	17.75	19.52	19.40	19.50	0	19.75
		25	0	17.33	17.10	17.53	0	17.75	19.21	19.05	19.47	0	19.75
		25	12	17.36	17.18	17.44	0	17.75	19.26	19.12	19.38	0	19.75
		25	25	17.45	17.29	17.39	0	17.75	19.36	19.20	19.34	0	19.75
		50	0	17.29	17.17	17.43	0	17.75	19.26	19.13	19.36	0	19.75

LTE Band 7 Measured Results (ANT2) (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				20775	21100	21425	MPR	Tune-up Limit	20775	21100	21425	MPR	Tune-up Limit
				2502.5 MHz	2535 MHz	2567.5 MHz			2502.5 MHz	2535 MHz	2567.5 MHz		
5 MHz	QPSK	1	0	17.10	17.06	17.40	0	17.75	19.07	18.99	19.30	0	19.75
		1	12	17.12	17.06	17.26	0	17.75	19.05	18.96	19.22	0	19.75
		1	24	17.20	17.17	17.19	0	17.75	19.14	19.07	19.11	0	19.75
		12	0	17.04	16.97	17.20	0	17.75	19.00	18.89	19.14	0	19.75
		12	7	17.05	16.97	17.16	0	17.75	19.00	18.89	19.09	0	19.75
		12	13	17.04	16.99	17.11	0	17.75	18.97	18.89	19.04	0	19.75
		25	0	17.08	17.00	17.20	0	17.75	18.93	18.90	19.11	0	19.75
	16QAM	1	0	17.48	17.45	17.69	0	17.75	19.46	19.39	19.66	0	19.75
		1	12	17.56	17.44	17.61	0	17.75	19.41	19.43	19.65	0	19.75
		1	24	17.61	17.59	17.59	0	17.75	19.61	19.53	19.53	0	19.75
		12	0	17.05	17.00	17.24	0	17.75	18.94	18.94	19.19	0	19.75
		12	7	17.09	17.01	17.18	0	17.75	18.95	18.93	19.16	0	19.75
		12	13	17.08	17.02	17.12	0	17.75	18.97	18.94	19.08	0	19.75
		25	0	17.11	16.99	17.18	0	17.75	18.97	18.93	19.14	0	19.75
	64QAM	1	0	17.34	17.25	17.65	0	17.75	19.40	19.32	19.68	0	19.75
		1	12	17.35	17.34	17.48	0	17.75	19.34	19.35	19.53	0	19.75
		1	24	17.40	17.37	17.49	0	17.75	19.43	19.37	19.44	0	19.75
		12	0	17.03	17.00	17.28	0	17.75	19.05	18.97	19.24	0	19.75
		12	7	17.08	16.99	17.23	0	17.75	18.97	18.95	19.16	0	19.75
		12	13	17.04	17.02	17.17	0	17.75	18.97	18.96	19.13	0	19.75
		25	0	17.07	16.95	17.18	0	17.75	18.93	18.92	19.13	0	19.75

LTE Band 12 Measured Results (ANT1)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)					
					23095		MPR	Tune-up Limit		23095		MPR	Tune-up Limit	
					707.5 MHz					707.5 MHz				
10 MHz	QPSK	1	0		24.70		0	25.70		24.70		0	25.70	
		1	25		25.20		0	25.70		25.20		0	25.70	
		1	49		24.80		0	25.70		24.80		0	25.70	
		25	0		24.18		1	24.70		24.18		1	24.70	
		25	12		24.20		1	24.70		24.20		1	24.70	
		25	25		24.30		1	24.70		24.30		1	24.70	
		50	0		24.20		1	24.70		24.20		1	24.70	
	16QAM	1	0		23.89		1	24.70		23.89		1	24.70	
		1	25		24.17		1	24.70		24.17		1	24.70	
		1	49		24.24		1	24.70		24.24		1	24.70	
		25	0		22.79		2	23.70		22.79		2	23.70	
		25	12		22.87		2	23.70		22.87		2	23.70	
		25	25		22.93		2	23.70		22.93		2	23.70	
		50	0		22.87		2	23.70		22.87		2	23.70	
	64QAM	1	0		22.76		2	23.70		22.76		2	23.70	
		1	25		23.10		2	23.70		23.10		2	23.70	
		1	49		23.11		2	23.70		23.11		2	23.70	
		25	0		21.82		3	22.70		21.82		3	22.70	
		25	12		21.87		3	22.70		21.87		3	22.70	
		25	25		21.95		3	22.70		21.95		3	22.70	
		50	0		21.88		3	22.70		21.88		3	22.70	
BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)					
				23035	23095	23155	MPR	Tune-up Limit	23035	23095	23155	MPR	Tune-up Limit	
				701.5 MHz	707.5 MHz	713.5 MHz			701.5 MHz	707.5 MHz	713.5 MHz			
5 MHz	QPSK	1	0		24.91	25.04	25.18	0	25.70	24.91	25.04	25.18	0	25.70
		1	12		24.80	25.07	25.03	0	25.70	24.80	25.07	25.03	0	25.70
		1	24		25.02	25.13	24.95	0	25.70	25.02	25.13	24.95	0	25.70
		12	0		23.80	23.88	24.06	1	24.70	23.80	23.88	24.06	1	24.70
		12	7		23.76	23.94	23.91	1	24.70	23.76	23.94	23.91	1	24.70
		12	13		23.75	23.95	23.79	1	24.70	23.75	23.95	23.79	1	24.70
		25	0		23.82	23.96	24.00	1	24.70	23.82	23.96	24.00	1	24.70
	16QAM	1	0		24.38	24.41	24.54	1	24.70	24.38	24.41	24.54	1	24.70
		1	12		24.20	24.45	24.46	1	24.70	24.20	24.45	24.46	1	24.70
		1	24		24.41	24.55	24.34	1	24.70	24.41	24.55	24.34	1	24.70
		12	0		22.76	22.85	23.01	2	23.70	22.76	22.85	23.01	2	23.70
		12	7		22.72	22.90	22.88	2	23.70	22.72	22.90	22.88	2	23.70
		12	13		22.71	22.92	22.79	2	23.70	22.71	22.92	22.79	2	23.70
		25	0		22.74	22.92	22.91	2	23.70	22.74	22.92	22.91	2	23.70
	64QAM	1	0		23.16	23.26	23.39	2	23.70	23.16	23.26	23.39	2	23.70
		1	12		23.03	23.35	23.36	2	23.70	23.03	23.35	23.36	2	23.70
		1	24		23.22	23.45	23.10	2	23.70	23.22	23.45	23.10	2	23.70
		12	0		21.79	21.95	22.09	3	22.70	21.79	21.95	22.09	3	22.70
		12	7		21.75	21.98	21.98	3	22.70	21.75	21.98	21.98	3	22.70
		12	13		21.75	21.97	21.85	3	22.70	21.75	21.97	21.85	3	22.70
		25	0		21.74	21.95	21.95	3	22.70	21.74	21.95	21.95	3	22.70
BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)					
				23025	23095	23165	MPR	Tune-up Limit	23025	23095	23165	MPR	Tune-up Limit	
				700.5 MHz	707.5 MHz	714.5 MHz			700.5 MHz	707.5 MHz	714.5 MHz			
3 MHz	QPSK	1	0		25.02	25.11	25.17	0	25.70	25.02	25.11	25.17	0	25.70
		1	8		24.93	25.20	25.06	0	25.70	24.93	25.20	25.06	0	25.70
		1	14		24.87	25.16	25.05	0	25.70	24.87	25.16	25.05	0	25.70
		8	0		23.79	23.91	23.95	1	24.70	23.79	23.91	23.95	1	24.70
		8	4		23.76	23.98	23.83	1	24.70	23.76	23.98	23.83	1	24.70
		8	7		23.75	23.98	23.82	1	24.70	23.75	23.98	23.82	1	24.70
		15	0		23.79	24.00	23.87	1	24.70	23.79	24.00	23.87	1	24.70
	16QAM	1	0		24.23	24.32	24.47	1	24.70	24.23	24.32	24.47	1	24.70
		1	8		24.15	24.46	24.24	1	24.70	24.15	24.46	24.24	1	24.70
		1	14		24.04	24.44	24.28	1	24.70	24.04	24.44	24.28	1	24.70
		8	0		22.77	22.91	22.94	2	23.70	22.77	22.91	22.94	2	23.70
		8	4		22.74	22.98	22.85	2	23.70	22.74	22.98	22.85	2	23.70
		8	7		22.72	22.98	22.80	2	23.70	22.72	22.98	22.80	2	23.70
		15	0		22.71	22.96	22.83	2	23.70	22.71	22.96	22.83	2	23.70
	64QAM	1	0		23.10	23.14	23.39	2	23.70	23.10	23.14	23.39	2	23.70
		1	8		23.06	23.30	23.27	2	23.70	23.06	23.30	23.27	2	23.70
		1	14		22.97	23.32	23.30	2	23.70	22.97	23.32	23.30	2	23.70
		8	0		21.80	21.92	22.00	3	22.70	21.80	21.92	22.00	3	22.70
		8	4		21.77	21.96	21.87	3	22.70	21.77	21.96	21.87	3	22.70
		8	7		21.73	21.96	21.85	3	22.70	21.73	21.96	21.85	3	22.70
		15	0		21.78	21.95	21.89	3	22.70	21.78	21.95	21.89	3	22.70

LTE Band 12 Measured Results (ANT1) (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				23017	23095	23173	MPR	Tune-up Limit	23017	23095	23173	MPR	Tune-up Limit
				699.7 MHz	707.5 MHz	715.3 MHz			699.7 MHz	707.5 MHz	715.3 MHz		
1.4 MHz	QPSK	1	0	25.05	25.18	24.98	0	25.70	25.05	25.18	24.98	0	25.70
		1	3	24.93	25.12	25.03	0	25.70	24.93	25.12	25.03	0	25.70
		1	5	24.95	25.17	25.04	0	25.70	24.95	25.17	25.04	0	25.70
		3	0	24.79	24.96	24.79	0	25.70	24.79	24.96	24.79	0	25.70
		3	1	24.79	24.97	24.78	0	25.70	24.79	24.97	24.78	0	25.70
		3	3	24.77	24.97	24.77	0	25.70	24.77	24.97	24.77	0	25.70
	16QAM	6	0	23.72	23.87	23.71	1	24.70	23.72	23.87	23.71	1	24.70
		1	0	24.22	24.41	24.14	1	24.70	24.22	24.41	24.14	1	24.70
		1	3	24.20	24.40	24.15	1	24.70	24.20	24.40	24.15	1	24.70
		1	5	24.20	24.40	24.27	1	24.70	24.20	24.40	24.27	1	24.70
		3	0	23.99	24.13	23.90	1	24.70	23.99	24.13	23.90	1	24.70
		3	1	23.93	24.13	23.87	1	24.70	23.93	24.13	23.87	1	24.70
	64QAM	3	3	23.91	24.11	23.89	1	24.70	23.91	24.11	23.89	1	24.70
		6	0	22.83	22.98	22.84	2	23.70	22.83	22.98	22.84	2	23.70
		1	0	23.32	23.52	23.03	2	23.70	23.32	23.52	23.03	2	23.70
		1	3	23.28	23.53	23.14	2	23.70	23.28	23.53	23.14	2	23.70
		1	5	23.29	23.60	23.29	2	23.70	23.29	23.60	23.29	2	23.70
		3	0	23.04	23.22	22.90	2	23.70	23.04	23.22	22.90	2	23.70
		3	1	22.97	23.20	22.86	2	23.70	22.97	23.20	22.86	2	23.70
		3	3	22.95	23.22	22.84	2	23.70	22.95	23.22	22.84	2	23.70
		6	0	21.82	22.01	21.82	3	22.70	21.82	22.01	21.82	3	22.70

LTE Band 12 Measured Results (ANT2)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)					
					23095		MPR	Tune-up Limit		23095		MPR	Tune-up Limit	
					707.5 MHz					707.5 MHz				
10 MHz	QPSK	1	0		24.12		0	24.50		24.12		0	24.50	
		1	25		24.37		0	24.50		24.37		0	24.50	
		1	49		24.27		0	24.50		24.27		0	24.50	
		25	0		23.19		1	23.50		23.19		1	23.50	
		25	12		23.30		1	23.50		23.30		1	23.50	
		25	25		23.27		1	23.50		23.27		1	23.50	
	16QAM	50	0		23.34		1	23.50		23.34		1	23.50	
		1	0		23.36		1	23.50		23.36		1	23.50	
		1	25		23.41		1	23.50		23.41		1	23.50	
		1	49		23.37		1	23.50		23.37		1	23.50	
		25	0		22.22		2	22.50		22.22		2	22.50	
		25	12		22.35		2	22.50		22.35		2	22.50	
	64QAM	25	25		22.31		2	22.50		22.31		2	22.50	
		50	0		22.37		2	22.50		22.37		2	22.50	
		1	0		22.33		2	22.50		22.33		2	22.50	
		1	25		22.32		2	22.50		22.32		2	22.50	
		1	49		22.43		2	22.50		22.43		2	22.50	
		25	0		21.23		3	21.50		21.23		3	21.50	
		25	12		21.37		3	21.50		21.37		3	21.50	
		25	25		21.33		3	21.50		21.33		3	21.50	
		50	0		21.35		3	21.50		21.35		3	21.50	
BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)					
				23035	23095	23155	MPR	Tune-up Limit	23035	23095	23155	MPR	Tune-up Limit	
					701.5 MHz	707.5 MHz				713.5 MHz	701.5 MHz			707.5 MHz
5 MHz	QPSK	1	0		24.28	24.21	24.25	0	24.50	24.28	24.21	24.25	0	24.50
		1	12		24.10	24.34	24.25	0	24.50	24.10	24.34	24.25	0	24.50
		1	24		24.21	24.31	24.25	0	24.50	24.21	24.31	24.25	0	24.50
		12	0		23.07	23.22	23.20	1	23.50	23.07	23.22	23.20	1	23.50
		12	7		23.04	23.26	23.15	1	23.50	23.04	23.26	23.15	1	23.50
		12	13		23.03	23.21	23.10	1	23.50	23.03	23.21	23.10	1	23.50
	16QAM	25	0		23.06	23.30	23.19	1	23.50	23.06	23.30	23.19	1	23.50
		1	0		23.40	23.34	23.38	1	23.50	23.40	23.34	23.38	1	23.50
		1	12		23.24	23.42	23.36	1	23.50	23.24	23.42	23.36	1	23.50
		1	24		23.33	23.45	23.32	1	23.50	23.33	23.45	23.32	1	23.50
		12	0		22.04	22.18	22.20	2	22.50	22.04	22.18	22.20	2	22.50
		12	7		22.04	22.27	22.14	2	22.50	22.04	22.27	22.14	2	22.50
	64QAM	12	13		22.02	22.19	22.08	2	22.50	22.02	22.19	22.08	2	22.50
		25	0		22.05	22.28	22.17	2	22.50	22.05	22.28	22.17	2	22.50
		1	0		22.36	22.41	22.33	2	22.50	22.36	22.41	22.33	2	22.50
		1	12		22.32	22.32	22.30	2	22.50	22.32	22.32	22.30	2	22.50
		1	24		22.43	22.40	22.50	2	22.50	22.43	22.40	22.50	2	22.50
		12	0		21.06	21.21	21.20	3	21.50	21.06	21.21	21.20	3	21.50
		12	7		21.05	21.26	21.15	3	21.50	21.05	21.26	21.15	3	21.50
		12	13		21.03	21.22	21.12	3	21.50	21.03	21.22	21.12	3	21.50
		25	0		21.01	21.25	21.12	3	21.50	21.01	21.25	21.12	3	21.50
BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)					
				23025	23095	23165	MPR	Tune-up Limit	23025	23095	23165	MPR	Tune-up Limit	
					700.5 MHz	707.5 MHz				714.5 MHz	700.5 MHz			707.5 MHz
3 MHz	QPSK	1	0		24.26	24.27	24.33	0	24.50	24.26	24.27	24.33	0	24.50
		1	8		24.22	24.40	24.32	0	24.50	24.22	24.40	24.32	0	24.50
		1	14		24.14	24.32	24.31	0	24.50	24.14	24.32	24.31	0	24.50
		8	0		23.11	23.19	23.16	1	23.50	23.11	23.19	23.16	1	23.50
		8	4		23.03	23.24	23.12	1	23.50	23.03	23.24	23.12	1	23.50
		8	7		23.03	23.25	23.12	1	23.50	23.03	23.25	23.12	1	23.50
	16QAM	15	0		23.06	23.26	23.15	1	23.50	23.06	23.26	23.15	1	23.50
		1	0		23.37	23.38	23.43	1	23.50	23.37	23.38	23.43	1	23.50
		1	8		23.44	23.48	23.37	1	23.50	23.44	23.48	23.37	1	23.50
		1	14		23.39	23.35	23.48	1	23.50	23.39	23.35	23.48	1	23.50
		8	0		22.15	22.20	22.17	2	22.50	22.15	22.20	22.17	2	22.50
		8	4		22.03	22.26	22.14	2	22.50	22.03	22.26	22.14	2	22.50
	64QAM	8	7		22.03	22.28	22.12	2	22.50	22.03	22.28	22.12	2	22.50
		15	0		22.01	22.24	22.12	2	22.50	22.01	22.24	22.12	2	22.50
		1	0		22.43	22.43	22.33	2	22.50	22.43	22.43	22.33	2	22.50
		1	8		22.28	22.50	22.47	2	22.50	22.28	22.50	22.47	2	22.50
		1	14		22.32	22.41	22.35	2	22.50	22.32	22.41	22.35	2	22.50
		8	0		21.04	21.10	21.09	3	21.50	21.04	21.10	21.09	3	21.50
		8	4		20.95	21.13	21.05	3	21.50	20.95	21.13	21.05	3	21.50
		8	7		20.95	21.17	21.03	3	21.50	20.95	21.17	21.03	3	21.50
		15	0		20.99	21.18	21.05	3	21.50	20.99	21.18	21.05	3	21.50

LTE Band 12 Measured Results (ANT2) (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				23017	23095	23173	MPR	Tune-up Limit	23017	23095	23173	MPR	Tune-up Limit
				699.7 MHz	707.5 MHz	715.3 MHz			699.7 MHz	707.5 MHz	715.3 MHz		
1.4 MHz	QPSK	1	0	24.31	24.44	24.28	0	24.50	24.31	24.44	24.28	0	24.50
		1	3	24.29	24.42	24.32	0	24.50	24.29	24.42	24.32	0	24.50
		1	5	24.25	24.47	24.33	0	24.50	24.25	24.47	24.33	0	24.50
		3	0	24.13	24.28	24.17	0	24.50	24.13	24.28	24.17	0	24.50
		3	1	24.13	24.27	24.17	0	24.50	24.13	24.27	24.17	0	24.50
		3	3	24.12	24.33	24.15	0	24.50	24.12	24.33	24.15	0	24.50
	16QAM	6	0	23.04	23.18	23.05	1	23.50	23.04	23.18	23.05	1	23.50
		1	0	23.35	23.38	23.28	1	23.50	23.35	23.38	23.28	1	23.50
		1	3	23.27	23.38	23.26	1	23.50	23.27	23.38	23.26	1	23.50
		1	5	23.24	23.45	23.28	1	23.50	23.24	23.45	23.28	1	23.50
		3	0	23.30	23.41	23.29	1	23.50	23.30	23.41	23.29	1	23.50
		3	1	23.25	23.42	23.27	1	23.50	23.25	23.42	23.27	1	23.50
	64QAM	3	3	23.29	23.45	23.25	1	23.50	23.29	23.45	23.25	1	23.50
		6	0	22.21	22.36	22.22	2	22.50	22.21	22.36	22.22	2	22.50
		1	0	22.36	22.41	22.34	2	22.50	22.36	22.41	22.34	2	22.50
		1	3	22.39	22.41	22.32	2	22.50	22.39	22.41	22.32	2	22.50
		1	5	22.25	22.47	22.33	2	22.50	22.25	22.47	22.33	2	22.50
		3	0	22.33	22.41	22.30	2	22.50	22.33	22.41	22.30	2	22.50
	64QAM	3	1	22.29	22.40	22.27	2	22.50	22.29	22.40	22.27	2	22.50
		3	3	22.31	22.42	22.25	2	22.50	22.31	22.42	22.25	2	22.50
		6	0	21.10	21.22	21.06	3	21.50	21.10	21.22	21.06	3	21.50

LTE Band 13 Measured Results (ANT1)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)				Power Mode B (dBm)			
				23230	782 MHz	MPR	Tune-up Limit	23230	782 MHz	MPR	Tune-up Limit
10 MHz	QPSK	1	0	25.02		0	25.70	25.02		0	25.70
		1	25	25.20		0	25.70	25.20		0	25.70
		1	49	25.00		0	25.70	25.00		0	25.70
		25	0	24.00		1	24.70	24.00		1	24.70
		25	12	24.20		1	24.70	24.20		1	24.70
		25	25	24.00		1	24.70	24.00		1	24.70
		50	0	24.08		1	24.70	24.08		1	24.70
	16QAM	1	0	24.29		1	24.70	24.29		1	24.70
		1	25	24.00		1	24.70	24.00		1	24.70
		1	49	24.29		1	24.70	24.29		1	24.70
		25	0	22.70		2	23.70	22.70		2	23.70
		25	12	22.70		2	23.70	22.70		2	23.70
	64QAM	25	25	22.73		2	23.70	22.73		2	23.70
		50	0	22.74		2	23.70	22.74		2	23.70
		1	0	23.06		2	23.70	23.06		2	23.70
		1	25	22.82		2	23.70	22.82		2	23.70
		1	49	23.24		2	23.70	23.24		2	23.70
		25	0	21.70		3	22.70	21.70		3	22.70
		25	12	21.70		3	22.70	21.70		3	22.70
		25	25	21.76		3	22.70	21.76		3	22.70
		50	0	21.76		3	22.70	21.76		3	22.70
BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)				Power Mode B (dBm)			
				23230	782 MHz	MPR	Tune-up Limit	23230	782 MHz	MPR	Tune-up Limit
5 MHz	QPSK	1	0	24.70		0	25.70	24.70		0	25.70
		1	12	24.72		0	25.70	24.72		0	25.70
		1	24	24.76		0	25.70	24.76		0	25.70
		12	0	23.70		1	24.70	23.70		1	24.70
		12	7	23.70		1	24.70	23.70		1	24.70
		12	13	23.70		1	24.70	23.70		1	24.70
		25	0	23.70		1	24.70	23.70		1	24.70
	16QAM	1	0	23.97		1	24.70	23.97		1	24.70
		1	12	24.03		1	24.70	24.03		1	24.70
		1	24	24.17		1	24.70	24.17		1	24.70
		12	0	22.70		2	23.70	22.70		2	23.70
		12	7	22.70		2	23.70	22.70		2	23.70
	64QAM	12	13	22.70		2	23.70	22.70		2	23.70
		25	0	22.70		2	23.70	22.70		2	23.70
		1	0	22.78		2	23.70	22.78		2	23.70
		1	12	22.85		2	23.70	22.85		2	23.70
		1	24	23.09		2	23.70	23.09		2	23.70
		12	0	21.70		3	22.70	21.70		3	22.70
		12	7	21.70		3	22.70	21.70		3	22.70
		12	13	21.70		3	22.70	21.70		3	22.70
		25	0	21.70		3	22.70	21.70		3	22.70

LTE Band 13 Measured Results (ANT2)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)				Power Mode B (dBm)			
				23230 782 MHz		MPR	Tune-up Limit	23230 782 MHz		MPR	Tune-up Limit
10 MHz	QPSK	1	0	23.96		0	24.50	23.96		0	24.50
		1	25	24.00		0	24.50	24.00		0	24.50
		1	49	23.89		0	24.50	23.89		0	24.50
		25	0	22.68		1	23.50	22.68		1	23.50
		25	12	23.05		1	23.50	23.05		1	23.50
		25	25	22.71		1	23.50	22.71		1	23.50
		50	0	23.18		1	23.50	23.18		1	23.50
	16QAM	1	0	23.17		1	23.50	23.17		1	23.50
		1	25	22.82		1	23.50	22.82		1	23.50
		1	49	23.19		1	23.50	23.19		1	23.50
		25	0	21.66		2	22.50	21.66		2	22.50
		25	12	21.61		2	22.50	21.61		2	22.50
	64QAM	25	25	21.78		2	22.50	21.78		2	22.50
		50	0	21.71		2	22.50	21.71		2	22.50
		1	0	22.05		2	22.50	22.05		2	22.50
		1	25	21.80		2	22.50	21.80		2	22.50
		1	49	22.13		2	22.50	22.13		2	22.50
		25	0	20.69		3	21.50	20.69		3	21.50
		25	12	20.63		3	21.50	20.63		3	21.50
		25	25	20.81		3	21.50	20.81		3	21.50
		50	0	20.74		3	21.50	20.74		3	21.50
BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)				Power Mode B (dBm)			
				23230 782 MHz		MPR	Tune-up Limit	23230 782 MHz		MPR	Tune-up Limit
5 MHz	QPSK	1	0	23.53		0	24.50	23.53		0	24.50
		1	12	23.58		0	24.50	23.58		0	24.50
		1	24	23.76		0	24.50	23.76		0	24.50
		12	0	22.55		1	23.50	22.55		1	23.50
		12	7	22.67		1	23.50	22.67		1	23.50
		12	13	22.62		1	23.50	22.62		1	23.50
		25	0	22.59		1	23.50	22.59		1	23.50
	16QAM	1	0	22.95		1	23.50	22.95		1	23.50
		1	12	22.99		1	23.50	22.99		1	23.50
		1	24	23.15		1	23.50	23.15		1	23.50
		12	0	21.52		2	22.50	21.52		2	22.50
		12	7	21.67		2	22.50	21.67		2	22.50
		12	13	21.62		2	22.50	21.62		2	22.50
	64QAM	25	0	21.58		2	22.50	21.58		2	22.50
		1	0	21.81		2	22.50	21.81		2	22.50
		1	12	21.80		2	22.50	21.80		2	22.50
		1	24	22.01		2	22.50	22.01		2	22.50
		12	0	20.54		3	21.50	20.54		3	21.50
		12	7	20.58		3	21.50	20.58		3	21.50
		12	13	20.63		3	21.50	20.63		3	21.50
		25	0	20.55		3	21.50	20.55		3	21.50

LTE Band 14 Measured Results (ANT1)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)				Power Mode B (dBm)			
				23330	793 MHz	MPR	Tune-up Limit	23330	793 MHz	MPR	Tune-up Limit
10 MHz	QPSK	1	0	24.81		0	25.70	24.81		0	25.70
		1	25	25.20		0	25.70	25.20		0	25.70
		1	49	24.83		0	25.70	24.83		0	25.70
		25	0	23.78		1	24.70	23.78		1	24.70
		25	12	24.22		1	24.70	24.22		1	24.70
		25	25	23.79		1	24.70	23.79		1	24.70
		50	0	24.20		1	24.70	24.20		1	24.70
	16QAM	1	0	24.05		1	24.70	24.05		1	24.70
		1	25	24.11		1	24.70	24.11		1	24.70
		1	49	24.07		1	24.70	24.07		1	24.70
		25	0	22.82		2	23.70	22.82		2	23.70
		25	12	22.82		2	23.70	22.82		2	23.70
	64QAM	25	25	22.81		2	23.70	22.81		2	23.70
		50	0	22.72		2	23.70	22.72		2	23.70
		1	0	22.93		2	23.70	22.93		2	23.70
		1	25	23.13		2	23.70	23.13		2	23.70
		1	49	23.00		2	23.70	23.00		2	23.70
		25	0	21.90		3	22.70	21.90		3	22.70
		25	12	21.89		3	22.70	21.89		3	22.70
		25	25	21.91		3	22.70	21.91		3	22.70
		50	0	21.79		3	22.70	21.79		3	22.70
BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)				Power Mode B (dBm)			
				23330	793 MHz	MPR	Tune-up Limit	23330	793 MHz	MPR	Tune-up Limit
5 MHz	QPSK	1	0	24.89		0	25.70	24.89		0	25.70
		1	12	24.74		0	25.70	24.74		0	25.70
		1	24	24.79		0	25.70	24.79		0	25.70
		12	0	23.76		1	24.70	23.76		1	24.70
		12	7	23.78		1	24.70	23.78		1	24.70
		12	13	23.77		1	24.70	23.77		1	24.70
		25	0	23.76		1	24.70	23.76		1	24.70
	16QAM	1	0	24.28		1	24.70	24.28		1	24.70
		1	12	24.16		1	24.70	24.16		1	24.70
		1	24	24.24		1	24.70	24.24		1	24.70
		12	0	22.72		2	23.70	22.72		2	23.70
		12	7	22.78		2	23.70	22.78		2	23.70
	64QAM	12	13	22.75		2	23.70	22.75		2	23.70
		25	0	22.71		2	23.70	22.71		2	23.70
		1	0	23.14		2	23.70	23.14		2	23.70
		1	12	23.01		2	23.70	23.01		2	23.70
		1	24	23.00		2	23.70	23.00		2	23.70
		12	0	21.77		3	22.70	21.77		3	22.70
		12	7	21.73		3	22.70	21.73		3	22.70
		12	13	21.77		3	22.70	21.77		3	22.70
		25	0	21.71		3	22.70	21.71		3	22.70

LTE Band 14 Measured Results (ANT2)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)				Power Mode B (dBm)			
				23330	793 MHz	MPR	Tune-up Limit	23330	793 MHz	MPR	Tune-up Limit
10 MHz	QPSK	1	0	23.50		0	24.50	23.50		0	24.50
		1	25	24.23		0	24.50	24.23		0	24.50
		1	49	23.69		0	24.50	23.69		0	24.50
		25	0	22.77		1	23.50	22.77		1	23.50
		25	12	23.17		1	23.50	23.17		1	23.50
		25	25	22.67		1	23.50	22.67		1	23.50
	16QAM	50	0	23.09		1	23.50	23.09		1	23.50
		1	0	22.90		1	23.50	22.90		1	23.50
		1	25	22.81		1	23.50	22.81		1	23.50
		1	49	22.91		1	23.50	22.91		1	23.50
		25	0	21.83		2	22.50	21.83		2	22.50
		25	12	21.82		2	22.50	21.82		2	22.50
	64QAM	25	25	21.73		2	22.50	21.73		2	22.50
		50	0	21.77		2	22.50	21.77		2	22.50
		1	0	22.42		2	22.50	22.42		2	22.50
		1	25	22.48		2	22.50	22.48		2	22.50
		1	49	22.48		2	22.50	22.48		2	22.50
		25	0	21.07		3	21.50	21.07		3	21.50
		25	12	21.07		3	21.50	21.07		3	21.50
		25	25	21.05		3	21.50	21.05		3	21.50
		50	0	21.03		3	21.50	21.03		3	21.50
BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)				Power Mode B (dBm)			
				23330	793 MHz	MPR	Tune-up Limit	23330	793 MHz	MPR	Tune-up Limit
5 MHz	QPSK	1	0	23.77		0	24.50	23.77		0	24.50
		1	12	23.80		0	24.50	23.80		0	24.50
		1	24	23.72		0	24.50	23.72		0	24.50
		12	0	22.69		1	23.50	22.69		1	23.50
		12	7	22.63		1	23.50	22.63		1	23.50
		12	13	22.62		1	23.50	22.62		1	23.50
	16QAM	25	0	22.64		1	23.50	22.64		1	23.50
		1	0	23.04		1	23.50	23.04		1	23.50
		1	12	23.10		1	23.50	23.10		1	23.50
		1	24	23.04		1	23.50	23.04		1	23.50
		12	0	21.68		2	22.50	21.68		2	22.50
		12	7	21.66		2	22.50	21.66		2	22.50
	64QAM	12	13	21.65		2	22.50	21.65		2	22.50
		25	0	21.64		2	22.50	21.64		2	22.50
		1	0	22.15		2	22.50	22.15		2	22.50
		1	12	22.45		2	22.50	22.45		2	22.50
		1	24	22.46		2	22.50	22.46		2	22.50
		12	0	21.16		3	21.50	21.16		3	21.50
		12	7	21.18		3	21.50	21.18		3	21.50
		12	13	21.20		3	21.50	21.20		3	21.50
		25	0	21.17		3	21.50	21.17		3	21.50

LTE Band 25 Measured Results (ANT1)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				26140	26365	26590	MPR	Tune-up Limit	26140	26365	26590	MPR	Tune-up Limit
				1860 MHz	1882.5 MHz	1905 MHz			1860 MHz	1882.5 MHz	1905 MHz		
20 MHz	QPSK	1	0	24.84	25.13	25.20	0	25.70	20.02	20.17	20.07	0	20.25
		1	49	25.20	25.23	25.20	0	25.70	20.23	20.25	20.16	0	20.25
		1	99	25.08	25.18	24.91	0	25.70	20.19	20.16	20.09	0	20.25
		50	0	23.77	23.99	23.99	1	24.70	19.92	20.19	20.06	0	20.25
		50	24	24.20	24.21	24.20	1	24.70	20.25	20.22	20.12	0	20.25
		50	50	23.99	24.04	23.97	1	24.70	20.06	20.17	20.00	0	20.25
	16QAM	100	0	24.20	24.24	24.20	1	24.70	20.25	20.18	20.13	0	20.25
		1	0	24.27	24.45	24.53	1	24.70	19.92	20.20	20.07	0	20.25
		1	49	24.29	24.37	24.29	1	24.70	19.97	20.01	19.84	0	20.25
		1	99	24.55	24.52	24.25	1	24.70	20.09	19.94	19.96	0	20.25
		50	0	22.80	23.02	23.06	2	23.70	20.02	19.70	20.17	0	20.25
		50	24	22.90	23.07	22.98	2	23.70	20.07	20.24	20.08	0	20.25
	64QAM	50	50	23.02	23.08	23.05	2	23.70	20.18	20.18	20.10	0	20.25
		100	0	22.90	23.06	23.02	2	23.70	20.01	20.18	20.00	0	20.25
		1	0	22.95	23.23	23.32	2	23.70	20.14	19.90	19.99	0	20.25
		1	49	23.00	23.14	23.05	2	23.70	20.13	19.75	19.86	0	20.25
		1	99	23.25	23.18	23.05	2	23.70	19.77	19.80	20.01	0	20.25
		50	0	21.85	22.03	22.06	3	22.70	19.93	20.21	20.14	0	20.25
		50	24	21.96	22.04	21.97	3	22.70	19.97	20.19	20.03	0	20.25
		50	50	22.09	22.04	22.04	3	22.70	20.10	20.20	20.03	0	20.25
		100	0	21.95	22.02	21.99	3	22.70	19.97	20.18	20.02	0	20.25
BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				26115	26365	26615	MPR	Tune-up Limit	26115	26365	26615	MPR	Tune-up Limit
				1857.5 MHz	1882.5 MHz	1907.5 MHz			1857.5 MHz	1882.5 MHz	1907.5 MHz		
15 MHz	QPSK	1	0	24.78	25.04	25.08	0	25.70	20.03	20.02	20.14	0	20.25
		1	37	24.90	25.03	25.01	0	25.70	20.00	20.22	19.98	0	20.25
		1	74	25.01	25.13	24.91	0	25.70	20.10	20.13	20.10	0	20.25
		36	0	23.74	23.98	23.96	1	24.70	19.89	20.19	19.98	0	20.25
		36	20	23.85	24.04	24.01	1	24.70	19.99	20.06	19.98	0	20.25
		36	39	23.89	24.04	24.03	1	24.70	19.96	20.12	20.01	0	20.25
		75	0	23.82	24.03	24.04	1	24.70	19.95	20.09	20.00	0	20.25
	16QAM	1	0	24.04	24.30	24.43	1	24.70	19.70	19.97	19.98	0	20.25
		1	37	24.15	24.34	24.33	1	24.70	19.79	19.95	19.77	0	20.25
		1	74	24.35	24.38	24.24	1	24.70	20.01	19.80	20.00	0	20.25
		36	0	22.81	23.03	23.00	2	23.70	19.99	20.23	20.11	0	20.25
		36	20	22.92	23.09	23.02	2	23.70	20.08	20.16	20.09	0	20.25
		36	39	22.96	23.08	23.04	2	23.70	20.08	20.20	20.10	0	20.25
		75	0	22.90	23.06	23.03	2	23.70	19.99	20.16	20.06	0	20.25
	64QAM	1	0	23.17	23.38	23.37	2	23.70	19.74	19.99	19.97	0	20.25
		1	37	23.18	23.41	23.26	2	23.70	19.82	20.05	19.76	0	20.25
		1	74	23.32	23.45	23.23	2	23.70	19.94	19.90	19.96	0	20.25
		36	0	21.84	22.12	21.97	3	22.70	20.02	19.65	20.13	0	20.25
		36	20	21.92	22.17	22.03	3	22.70	20.07	20.20	20.13	0	20.25
		36	39	21.95	22.16	22.04	3	22.70	20.01	20.25	20.12	0	20.25
		75	0	21.88	22.13	22.01	3	22.70	19.98	20.18	20.08	0	20.25
BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				26090	26365	26640	MPR	Tune-up Limit	26090	26365	26640	MPR	Tune-up Limit
				1855 MHz	1882.5 MHz	1910 MHz			1855 MHz	1882.5 MHz	1910 MHz		
10 MHz	QPSK	1	0	24.90	25.04	25.01	0	25.70	20.14	20.25	20.07	0	20.25
		1	25	24.84	25.12	25.11	0	25.70	20.00	20.21	20.03	0	20.25
		1	49	24.95	25.12	24.96	0	25.70	20.14	20.20	20.17	0	20.25
		25	0	23.77	24.03	23.98	1	24.70	20.00	20.10	19.94	0	20.25
		25	12	23.75	24.02	23.99	1	24.70	19.90	20.07	19.96	0	20.25
		25	25	23.87	24.03	23.90	1	24.70	19.93	20.10	19.97	0	20.25
		50	0	23.76	24.03	24.01	1	24.70	19.90	20.14	20.00	0	20.25
	16QAM	1	0	24.08	24.29	24.29	1	24.70	19.77	20.00	19.90	0	20.25
		1	25	24.02	24.32	24.36	1	24.70	19.80	20.01	19.84	0	20.25
		1	49	24.25	24.33	24.21	1	24.70	19.87	19.99	19.98	0	20.25
		25	0	22.82	23.10	23.01	2	23.70	20.06	20.21	20.04	0	20.25
		25	12	22.78	23.15	23.01	2	23.70	19.99	20.17	20.05	0	20.25
		25	25	22.89	23.14	22.95	2	23.70	20.01	20.19	20.08	0	20.25
		50	0	22.78	23.13	23.00	2	23.70	19.97	20.22	20.07	0	20.25
	64QAM	1	0	23.08	23.23	23.19	2	23.70	19.96	19.94	19.81	0	20.25
		1	25	22.96	23.28	23.26	2	23.70	19.76	19.99	19.80	0	20.25
		1	49	23.23	23.25	23.12	2	23.70	19.92	19.88	19.95	0	20.25
		25	0	21.88	22.14	22.08	3	22.70	20.11	20.22	20.05	0	20.25
		25	12	21.85	22.12	22.08	3	22.70	20.00	20.22	20.09	0	20.25
		25	25	21.94	22.12	22.01	3	22.70	20.10	20.22	20.12	0	20.25
		50	0	21.87	22.13	22.08	3	22.70	19.99	20.15	20.10	0	20.25

LTE Band 25 Measured Results (ANT1) (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				26065	26365	26665	MPR	Tune-up Limit	26065	26365	26665	MPR	Tune-up Limit
				1852.5 MHz	1882.5 MHz	1912.5 MHz			1852.5 MHz	1882.5 MHz	1912.5 MHz		
5 MHz	QPSK	1	0	24.94	25.18	25.26	0	25.70	20.04	20.15	20.01	0	20.25
		1	12	24.90	25.13	25.04	0	25.70	19.90	20.21	19.96	0	20.25
		1	24	24.97	25.17	25.11	0	25.70	19.86	20.10	20.12	0	20.25
		12	0	23.87	24.06	24.11	1	24.70	19.79	19.99	19.86	0	20.25
		12	7	23.84	24.04	23.99	1	24.70	19.78	19.98	19.87	0	20.25
		12	13	23.86	24.05	23.96	1	24.70	19.75	20.02	19.90	0	20.25
	16QAM	25	0	23.83	24.05	24.02	1	24.70	19.79	20.03	19.91	0	20.25
		1	0	24.44	24.52	24.63	1	24.70	19.87	19.98	19.90	0	20.25
		1	12	24.30	24.55	24.41	1	24.70	19.77	20.02	19.81	0	20.25
		1	24	24.39	24.52	24.48	1	24.70	19.75	19.96	19.94	0	20.25
		12	0	22.87	23.09	23.08	2	23.70	19.84	20.04	19.87	0	20.25
		12	7	22.83	23.07	22.95	2	23.70	19.81	20.04	19.91	0	20.25
	64QAM	12	13	22.83	23.06	22.93	2	23.70	19.81	20.07	19.92	0	20.25
		25	0	22.82	23.06	22.96	2	23.70	19.84	20.07	19.87	0	20.25
		1	0	23.20	23.42	23.43	2	23.70	19.86	19.86	19.73	0	20.25
		1	12	23.17	23.41	23.30	2	23.70	19.66	19.95	20.24	0	20.25
		1	24	23.35	23.43	23.38	2	23.70	19.70	19.79	19.91	0	20.25
		12	0	21.81	22.16	22.06	3	22.70	19.92	20.08	19.94	0	20.25
3 MHz	QPSK	12	7	21.77	22.16	22.00	3	22.70	19.92	20.03	19.91	0	20.25
		12	13	21.77	22.16	21.96	3	22.70	19.89	20.10	19.98	0	20.25
		25	0	21.81	22.13	21.94	3	22.70	19.87	20.05	19.90	0	20.25
	16QAM	1	0	25.06	25.21	25.18	0	25.70	20.03	20.05	19.93	0	20.25
		1	8	25.06	25.29	25.15	0	25.70	19.90	20.17	20.00	0	20.25
		1	14	24.97	25.19	25.11	0	25.70	19.97	20.08	20.04	0	20.25
		8	0	23.86	24.04	23.98	1	24.70	19.73	19.89	19.77	0	20.25
		8	4	23.84	24.03	23.94	1	24.70	19.70	19.88	19.77	0	20.25
		8	7	23.83	24.04	23.93	1	24.70	19.72	19.94	19.79	0	20.25
	64QAM	15	0	23.82	24.01	23.93	1	24.70	19.73	19.94	19.79	0	20.25
		1	0	24.30	24.44	24.33	1	24.70	19.87	19.93	20.22	0	20.25
		1	8	24.27	24.46	24.38	1	24.70	20.16	20.05	20.19	0	20.25
		1	14	24.19	24.40	24.35	1	24.70	20.24	19.99	19.86	0	20.25
		8	0	22.87	23.07	23.00	2	23.70	19.78	19.96	19.76	0	20.25
		8	4	22.85	23.12	22.97	2	23.70	19.77	19.95	19.78	0	20.25
1.4 MHz	QPSK	8	7	22.86	23.11	22.94	2	23.70	19.78	20.00	19.80	0	20.25
		15	0	22.86	23.04	22.90	2	23.70	19.72	19.96	19.74	0	20.25
		1	0	23.18	23.27	23.27	2	23.70	20.18	20.21	19.99	0	20.25
		1	8	23.15	23.33	23.32	2	23.70	20.05	20.18	20.11	0	20.25
		1	14	23.04	23.31	23.22	2	23.70	20.21	20.22	20.23	0	20.25
		8	0	21.76	22.03	21.90	3	22.70	19.71	19.90	19.71	0	20.25
	16QAM	8	4	21.77	22.01	21.94	3	22.70	19.67	19.88	19.73	0	20.25
		8	7	21.74	22.03	21.93	3	22.70	19.69	19.94	19.75	0	20.25
		15	0	21.75	22.01	21.92	3	22.70	19.67	19.92	19.73	0	20.25
		1	0	25.06	25.30	25.17	0	25.70	20.04	20.10	20.04	0	20.25
		1	3	25.01	25.30	25.10	0	25.70	19.93	20.03	20.00	0	20.25
		1	5	25.03	25.27	25.19	0	25.70	19.89	20.09	20.08	0	20.25
	64QAM	3	0	24.87	25.11	24.92	0	25.70	19.82	19.89	19.84	0	20.25
		3	1	24.85	25.12	24.90	0	25.70	19.75	19.89	19.85	0	20.25
		3	3	24.87	25.10	24.90	0	25.70	19.71	19.93	19.84	0	20.25
		6	0	23.77	24.00	23.81	1	24.70	19.65	19.84	19.74	0	20.25
		1	0	24.35	24.48	24.39	1	24.70	20.10	20.21	20.10	0	20.25
		1	3	24.28	24.45	24.33	1	24.70	20.19	20.12	20.10	0	20.25
1.4 MHz	QPSK	1	5	24.25	24.46	24.36	1	24.70	20.17	20.18	20.11	0	20.25
		3	0	24.04	24.26	24.12	1	24.70	20.05	20.09	19.99	0	20.25
		3	1	24.03	24.26	24.10	1	24.70	19.94	20.10	20.01	0	20.25
		3	3	24.00	24.23	24.09	1	24.70	19.90	20.14	20.04	0	20.25
		6	0	22.92	23.15	23.01	2	23.70	19.80	20.03	19.89	0	20.25
		1	0	23.19	23.62	23.58	2	23.70	20.20	20.20	20.20	0	20.25
	16QAM	1	3	23.30	23.62	23.50	2	23.70	20.20	20.20	20.20	0	20.25
		1	5	23.22	23.55	23.52	2	23.70	20.20	20.20	20.20	0	20.25
		3	0	23.07	23.24	23.14	2	23.70	20.13	20.09	19.90	0	20.25
		3	1	23.08	23.23	23.16	2	23.70	20.04	20.03	19.89	0	20.25
		3	3	23.07	23.24	23.09	2	23.70	20.02	20.12	19.93	0	20.25
		6	0	21.92	22.09	21.98	3	22.70	19.78	20.10	19.91	0	20.25

LTE Band 25 Measured Results (ANT2)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				26140	26365	26590	MPR	Tune-up Limit	26140	26365	26590	MPR	Tune-up Limit
				1860 MHz	1882.5 MHz	1905 MHz			1860 MHz	1882.5 MHz	1905 MHz		
20 MHz	QPSK	1	0	17.34	17.42	17.30	0	17.50	18.14	18.15	18.14	0	18.50
		1	49	17.42	17.36	17.32	0	17.50	18.12	18.12	18.04	0	18.50
		1	99	17.29	17.37	17.19	0	17.50	17.99	18.04	17.90	0	18.50
		50	0	17.30	17.37	17.30	0	17.50	18.01	18.11	18.04	0	18.50
		50	24	17.37	17.40	17.34	0	17.50	18.08	18.14	18.02	0	18.50
		50	50	17.20	17.43	17.10	0	17.50	17.94	18.15	17.84	0	18.50
	16QAM	100	0	17.36	17.41	17.37	0	17.50	18.07	18.16	18.05	0	18.50
		1	0	17.34	17.45	17.44	0	17.50	18.02	18.06	18.10	0	18.50
		1	49	17.31	17.36	17.30	0	17.50	17.97	18.02	17.86	0	18.50
		1	99	17.31	17.50	17.47	0	17.50	17.91	18.05	17.90	0	18.50
		50	0	17.46	17.44	17.37	0	17.50	18.20	18.17	18.11	0	18.50
		50	24	17.34	17.40	17.26	0	17.50	18.06	18.13	17.97	0	18.50
	64QAM	50	50	17.26	17.50	17.15	0	17.50	17.99	18.12	17.91	0	18.50
		100	0	17.30	17.43	17.28	0	17.50	18.02	18.14	17.94	0	18.50
		1	0	17.31	17.21	17.17	0	17.50	18.19	18.10	17.89	0	18.50
		1	49	17.29	17.47	17.40	0	17.50	18.15	18.02	18.06	0	18.50
		1	99	17.36	17.12	17.23	0	17.50	18.15	18.09	18.05	0	18.50
		50	0	17.46	17.48	17.43	0	17.50	18.20	18.06	18.15	0	18.50
15 MHz	QPSK	50	24	17.37	17.46	17.30	0	17.50	18.09	18.05	18.02	0	18.50
		50	50	17.29	17.15	17.17	0	17.50	18.02	18.18	17.91	0	18.50
		100	0	17.35	17.47	17.29	0	17.50	18.02	18.07	17.95	0	18.50
	16QAM	1	0	17.30	17.38	17.41	0	17.50	18.05	17.98	18.08	0	18.50
		1	37	17.41	17.39	17.27	0	17.50	18.17	17.98	17.98	0	18.50
		1	74	17.22	17.34	17.04	0	17.50	17.98	18.00	17.78	0	18.50
		36	0	17.49	17.36	17.20	0	17.50	18.15	18.03	17.95	0	18.50
		36	20	17.35	17.37	17.20	0	17.50	18.12	18.04	17.90	0	18.50
		36	39	17.29	17.43	17.10	0	17.50	18.08	18.12	17.86	0	18.50
	64QAM	75	0	17.28	17.35	17.20	0	17.50	18.09	18.04	17.90	0	18.50
		1	0	17.27	17.37	17.40	0	17.50	17.89	17.81	17.93	0	18.50
		1	37	17.41	17.29	17.21	0	17.50	18.07	17.76	17.77	0	18.50
		1	74	17.22	17.30	17.29	0	17.50	17.85	17.91	18.07	0	18.50
		36	0	17.46	17.42	17.28	0	17.50	17.79	18.08	17.97	0	18.50
		36	20	17.36	17.43	17.27	0	17.50	18.18	18.09	17.99	0	18.50
10 MHz	QPSK	36	39	17.37	17.48	17.17	0	17.50	18.16	18.18	17.94	0	18.50
		75	0	17.33	17.38	17.25	0	17.50	18.11	18.07	17.95	0	18.50
	16QAM	1	0	17.23	17.23	17.27	0	17.50	17.90	17.87	17.98	0	18.50
		1	37	17.50	17.26	17.20	0	17.50	18.03	17.83	17.83	0	18.50
		1	74	17.22	17.28	17.42	0	17.50	17.80	17.86	18.07	0	18.50
		36	0	17.16	17.38	17.28	0	17.50	17.80	18.13	17.99	0	18.50
	64QAM	36	20	17.46	17.40	17.32	0	17.50	18.17	18.14	17.98	0	18.50
		36	39	17.45	17.48	17.24	0	17.50	18.15	17.72	17.93	0	18.50
		75	0	17.42	17.37	17.27	0	17.50	18.13	18.11	17.95	0	18.50
	QPSK	1	0	17.11	17.32	17.27	0	17.50	18.12	18.07	17.98	0	18.50
		1	25	17.11	17.35	17.21	0	17.50	17.83	18.01	17.93	0	18.50
		1	49	17.42	17.46	17.15	0	17.50	18.12	18.14	17.89	0	18.50
		25	0	17.48	17.34	17.25	0	17.50	18.18	18.00	17.93	0	18.50
		25	12	17.49	17.33	17.19	0	17.50	18.20	17.99	17.90	0	18.50
		25	25	17.41	17.35	17.07	0	17.50	18.11	18.01	17.81	0	18.50
10 MHz	16QAM	50	0	17.46	17.36	17.19	0	17.50	17.82	18.01	17.90	0	18.50
		1	0	17.29	17.24	17.11	0	17.50	18.02	17.91	17.83	0	18.50
		1	25	17.30	17.23	17.49	0	17.50	18.14	17.90	17.86	0	18.50
		1	49	17.23	17.35	17.43	0	17.50	18.01	18.03	17.82	0	18.50
		25	0	17.46	17.38	17.33	0	17.50	17.84	18.07	18.01	0	18.50
		25	12	17.49	17.37	17.27	0	17.50	17.88	18.06	17.97	0	18.50
	64QAM	25	25	17.42	17.37	17.16	0	17.50	18.18	18.08	17.89	0	18.50
		50	0	17.11	17.35	17.20	0	17.50	17.88	18.07	17.93	0	18.50
		1	0	17.28	17.25	17.10	0	17.50	17.97	17.80	17.81	0	18.50
		1	25	17.29	17.21	17.41	0	17.50	17.91	17.84	17.82	0	18.50
		1	49	17.19	17.35	17.29	0	17.50	17.84	17.95	18.08	0	18.50
		25	0	17.12	17.46	17.32	0	17.50	17.81	18.05	18.01	0	18.50
10 MHz	64QAM	25	12	17.16	17.46	17.26	0	17.50	17.85	18.06	17.96	0	18.50
		25	25	17.12	17.48	17.14	0	17.50	18.17	18.09	17.88	0	18.50
		50	0	17.13	17.47	17.26	0	17.50	17.88	18.08	17.94	0	18.50

LTE Band 26 Measured Results (ANT1)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				26740	26865	26990	MPR	Tune-up Limit	26740	26865	26990	MPR	Tune-up Limit
				819 MHz	831.5 MHz	844 MHz			819 MHz	831.5 MHz	844 MHz		
10 MHz	QPSK	1	0	24.98	25.01	24.87	0	25.70	24.98	25.01	24.87	0	25.70
		1	25	25.36	25.22	25.22	0	25.70	25.36	25.22	25.22	0	25.70
		1	49	25.13	24.96	24.98	0	25.70	25.13	24.96	24.98	0	25.70
		25	0	23.87	23.89	23.82	1	24.70	23.87	23.89	23.82	1	24.70
		25	12	24.39	24.26	24.24	1	24.70	24.39	24.26	24.24	1	24.70
		25	25	24.09	23.88	23.77	1	24.70	24.09	23.88	23.77	1	24.70
	16QAM	50	0	24.48	24.30	24.20	1	24.70	24.48	24.30	24.20	1	24.70
		1	0	24.18	24.26	24.21	1	24.70	24.18	24.26	24.21	1	24.70
		1	25	24.20	23.99	24.00	1	24.70	24.20	23.99	24.00	1	24.70
		1	49	24.38	24.22	24.19	1	24.70	24.38	24.22	24.19	1	24.70
		25	0	22.88	22.90	22.85	2	23.70	22.88	22.90	22.85	2	23.70
		25	12	22.96	22.79	22.76	2	23.70	22.96	22.79	22.76	2	23.70
	64QAM	25	25	23.14	22.89	22.77	2	23.70	23.14	22.89	22.77	2	23.70
		50	0	23.02	22.84	22.78	2	23.70	23.02	22.84	22.78	2	23.70
		1	0	23.06	23.13	23.02	2	23.70	23.06	23.13	23.02	2	23.70
		1	25	22.96	22.81	22.85	2	23.70	22.96	22.81	22.85	2	23.70
		1	49	23.20	23.06	22.99	2	23.70	23.20	23.06	22.99	2	23.70
		25	0	21.83	21.86	21.85	3	22.70	21.83	21.86	21.85	3	22.70
		25	12	21.93	21.77	21.77	3	22.70	21.93	21.77	21.77	3	22.70
		25	25	22.07	21.85	21.74	3	22.70	22.07	21.85	21.74	3	22.70
		50	0	22.01	21.84	21.79	3	22.70	22.01	21.84	21.79	3	22.70
BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				26715	26865	27015	MPR	Tune-up Limit	26715	26865	27015	MPR	Tune-up Limit
				816.5 MHz	831.5 MHz	846.5 MHz			816.5 MHz	831.5 MHz	846.5 MHz		
5 MHz	QPSK	1	0	25.15	25.04	24.96	0	25.70	25.15	25.04	24.96	0	25.70
		1	12	25.03	24.91	24.95	0	25.70	25.03	24.91	24.95	0	25.70
		1	24	25.13	25.14	25.17	0	25.70	25.13	25.14	25.17	0	25.70
		12	0	24.00	23.92	23.88	1	24.70	24.00	23.92	23.88	1	24.70
		12	7	23.97	23.90	23.89	1	24.70	23.97	23.90	23.89	1	24.70
		12	13	23.99	23.90	23.96	1	24.70	23.99	23.90	23.96	1	24.70
	16QAM	25	0	23.98	23.93	23.95	1	24.70	23.98	23.93	23.95	1	24.70
		1	0	24.57	24.38	24.37	1	24.70	24.57	24.38	24.37	1	24.70
		1	12	24.31	24.23	24.24	1	24.70	24.31	24.23	24.24	1	24.70
		1	24	24.47	24.50	24.51	1	24.70	24.47	24.50	24.51	1	24.70
		12	0	22.96	22.88	22.84	2	23.70	22.96	22.88	22.84	2	23.70
		12	7	22.93	22.85	22.86	2	23.70	22.93	22.85	22.86	2	23.70
	64QAM	12	13	22.96	22.84	22.90	2	23.70	22.96	22.84	22.90	2	23.70
		25	0	22.95	22.86	22.88	2	23.70	22.95	22.86	22.88	2	23.70
		1	0	23.30	23.19	23.13	2	23.70	23.30	23.19	23.13	2	23.70
		1	12	23.06	23.02	22.99	2	23.70	23.06	23.02	22.99	2	23.70
		1	24	23.23	23.28	23.27	2	23.70	23.23	23.28	23.27	2	23.70
		12	0	21.94	21.90	21.82	3	22.70	21.94	21.90	21.82	3	22.70
		12	7	21.90	21.85	21.83	3	22.70	21.90	21.85	21.83	3	22.70
		12	13	21.92	21.84	21.91	3	22.70	21.92	21.84	21.91	3	22.70
		25	0	21.86	21.83	21.82	3	22.70	21.86	21.83	21.82	3	22.70
BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				26705	26865	27025	MPR	Tune-up Limit	26705	26865	27025	MPR	Tune-up Limit
				815.5 MHz	831.5 MHz	847.5 MHz			815.5 MHz	831.5 MHz	847.5 MHz		
3 MHz	QPSK	1	0	25.20	24.96	24.93	0	25.70	25.20	24.96	24.93	0	25.70
		1	8	25.09	25.01	25.09	0	25.70	25.09	25.01	25.09	0	25.70
		1	14	25.13	24.97	25.18	0	25.70	25.13	24.97	25.18	0	25.70
		8	0	24.00	23.88	23.85	1	24.70	24.00	23.88	23.85	1	24.70
		8	4	23.91	23.86	23.91	1	24.70	23.91	23.86	23.91	1	24.70
		8	7	23.90	23.86	23.92	1	24.70	23.90	23.86	23.92	1	24.70
	16QAM	15	0	23.92	23.89	23.95	1	24.70	23.92	23.89	23.95	1	24.70
		1	0	24.47	24.25	24.22	1	24.70	24.47	24.25	24.22	1	24.70
		1	8	24.24	24.24	24.33	1	24.70	24.24	24.24	24.33	1	24.70
		1	14	24.32	24.17	24.36	1	24.70	24.32	24.17	24.36	1	24.70
		8	0	22.97	22.85	22.83	2	23.70	22.97	22.85	22.83	2	23.70
		8	4	22.88	22.83	22.87	2	23.70	22.88	22.83	22.87	2	23.70
		8	7	22.87	22.82	22.88	2	23.70	22.87	22.82	22.88	2	23.70
		15	0	22.89	22.82	22.85	2	23.70	22.89	22.82	22.85	2	23.70
	64QAM	1	0	23.34	23.07	22.98	2	23.70	23.34	23.07	22.98	2	23.70
		1	8	23.10	22.97	23.09	2	23.70	23.10	22.97	23.09	2	23.70
		1	14	23.12	22.90	23.22	2	23.70	23.12	22.90	23.22	2	23.70
		8	0	21.88	21.73	21.71	3	22.70	21.88	21.73	21.71	3	22.70
		8	4	21.76	21.73	21.77	3	22.70	21.76	21.73	21.77	3	22.70
		8	7	21.76	21.73	21.77	3	22.70	21.76	21.73	21.77	3	22.70
		15	0	21.82	21.76	21.82	3	22.70	21.82	21.76	21.82	3	22.70

LTE Band 26 Measured Results (ANT1) (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				26697	26865	27033	MPR	Tune-up Limit	26697	26865	27033	MPR	Tune-up Limit
				814.7 MHz	831.5 MHz	848.3 MHz			814.7 MHz	831.5 MHz	848.3 MHz		
1.4 MHz	QPSK	1	0	25.22	24.99	25.11	0	25.70	25.22	24.99	25.11	0	25.70
		1	3	25.17	24.97	25.18	0	25.70	25.17	24.97	25.18	0	25.70
		1	5	25.09	25.01	25.26	0	25.70	25.09	25.01	25.26	0	25.70
		3	0	25.01	24.86	25.03	0	25.70	25.01	24.86	25.03	0	25.70
		3	1	24.97	24.85	25.01	0	25.70	24.97	24.85	25.01	0	25.70
		3	3	24.96	24.82	25.02	0	25.70	24.96	24.82	25.02	0	25.70
	16QAM	6	0	23.92	23.79	23.91	1	24.70	23.92	23.79	23.91	1	24.70
		1	0	24.49	24.21	24.33	1	24.70	24.49	24.21	24.33	1	24.70
		1	3	24.32	24.16	24.35	1	24.70	24.32	24.16	24.35	1	24.70
		1	5	24.25	24.27	24.49	1	24.70	24.25	24.27	24.49	1	24.70
		3	0	24.09	23.94	24.11	1	24.70	24.09	23.94	24.11	1	24.70
		3	1	24.05	23.91	24.09	1	24.70	24.05	23.91	24.09	1	24.70
	64QAM	3	3	24.02	23.93	24.09	1	24.70	24.02	23.93	24.09	1	24.70
		6	0	22.94	22.85	23.04	2	23.70	22.94	22.85	23.04	2	23.70
		1	0	23.47	23.15	23.38	2	23.70	23.47	23.15	23.38	2	23.70
		1	3	23.42	22.93	23.44	2	23.70	23.42	22.93	23.44	2	23.70
		1	5	23.22	22.98	23.43	2	23.70	23.22	22.98	23.43	2	23.70
		3	0	23.08	22.85	23.06	2	23.70	23.08	22.85	23.06	2	23.70
		3	1	23.06	22.86	23.05	2	23.70	23.06	22.86	23.05	2	23.70
		3	3	23.01	22.89	23.06	2	23.70	23.01	22.89	23.06	2	23.70
		6	0	21.87	21.79	21.86	3	22.70	21.87	21.79	21.86	3	22.70

LTE Band 26 Measured Results (ANT2) (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				26697	26865	27033	MPR	Tune-up Limit	26697	26865	27033	MPR	Tune-up Limit
				814.7 MHz	831.5 MHz	848.3 MHz			814.7 MHz	831.5 MHz	848.3 MHz		
1.4 MHz	QPSK	1	0	23.82	23.81	23.79	0	24.50	23.82	23.81	23.79	0	24.50
		1	3	23.76	23.74	23.79	0	24.50	23.76	23.74	23.79	0	24.50
		1	5	23.76	23.78	23.83	0	24.50	23.76	23.78	23.83	0	24.50
		3	0	23.68	23.64	23.63	0	24.50	23.68	23.64	23.63	0	24.50
		3	1	23.67	23.64	23.58	0	24.50	23.67	23.64	23.58	0	24.50
		3	3	23.66	23.65	23.60	0	24.50	23.66	23.65	23.60	0	24.50
	16QAM	6	0	22.61	22.56	22.52	1	23.50	22.61	22.56	22.52	1	23.50
		1	0	23.13	22.99	23.00	1	23.50	23.13	22.99	23.00	1	23.50
		1	3	23.01	22.94	22.95	1	23.50	23.01	22.94	22.95	1	23.50
		1	5	23.02	22.99	22.98	1	23.50	23.02	22.99	22.98	1	23.50
		3	0	22.78	22.73	22.72	1	23.50	22.78	22.73	22.72	1	23.50
		3	1	22.78	22.72	22.71	1	23.50	22.78	22.72	22.71	1	23.50
	64QAM	3	3	22.78	22.73	22.70	1	23.50	22.78	22.73	22.70	1	23.50
		6	0	21.69	21.67	21.68	2	22.50	21.69	21.67	21.68	2	22.50
		1	0	21.97	22.05	22.15	2	22.50	21.97	22.05	22.15	2	22.50
		1	3	21.90	21.96	22.13	2	22.50	21.90	21.96	22.13	2	22.50
		1	5	21.87	22.05	22.11	2	22.50	21.87	22.05	22.11	2	22.50
		3	0	21.73	21.76	21.75	2	22.50	21.73	21.76	21.75	2	22.50
		3	1	21.69	21.73	21.75	2	22.50	21.69	21.73	21.75	2	22.50
		3	3	21.67	21.72	21.73	2	22.50	21.67	21.72	21.73	2	22.50
		6	0	20.66	20.58	20.53	3	21.50	20.66	20.58	20.53	3	21.50

LTE Band 30 Measured Results (ANT1)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)				Power Mode B (dBm)			
				27710		MPR	Tune-up Limit	27710		MPR	Tune-up Limit
10 MHz	QPSK	1	0	24.82		0	25.70	23.50		0	24.00
		1	25	25.20		0	25.70	23.50		0	24.00
		1	49	24.87		0	25.70	23.50		0	24.00
		25	0	23.72		1	24.70	23.05		0	24.00
		25	12	24.20		1	24.70	23.55		0	24.00
		25	25	23.79		1	24.70	23.16		0	24.00
		50	0	24.20		1	24.70	23.58		0	24.00
	16QAM	1	0	24.07		1	24.70	23.43		0	24.00
		1	25	23.91		1	24.70	23.31		0	24.00
		1	49	24.11		1	24.70	23.46		0	24.00
		25	0	22.75		2	23.70	22.87		0.3	23.70
		25	12	22.80		2	23.70	22.84		0.3	23.70
		25	25	22.79		2	23.70	22.94		0.3	23.70
	64QAM	50	0	22.80		2	23.70	22.83		0.3	23.70
		1	0	23.02		2	23.70	23.02		0.3	23.70
		1	25	22.85		2	23.70	22.88		0.3	23.70
		1	49	23.08		2	23.70	23.07		0.3	23.70
		25	0	21.75		3	22.70	21.75		1.3	22.70
		25	12	21.72		3	22.70	21.80		1.3	22.70
		25	25	21.85		3	22.70	21.84		1.3	22.70
		50	0	21.72		3	22.70	21.71		1.3	22.70
BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)				Power Mode B (dBm)			
				27710		MPR	Tune-up Limit	27710		MPR	Tune-up Limit
5 MHz	QPSK	1	0	24.76		0	25.70	23.54		0	24.00
		1	12	24.71		0	25.70	23.50		0	24.00
		1	24	24.86		0	25.70	23.67		0	24.00
		12	0	23.71		1	24.70	23.01		0	24.00
		12	7	23.71		1	24.70	23.03		0	24.00
		12	13	23.78		1	24.70	23.03		0	24.00
		25	0	23.71		1	24.70	23.03		0	24.00
	16QAM	1	0	24.05		1	24.70	23.34		0	24.00
		1	12	23.96		1	24.70	23.32		0	24.00
		1	24	24.15		1	24.70	23.46		0	24.00
		12	0	22.76		2	23.70	22.89		0.3	23.70
		12	7	22.80		2	23.70	22.85		0.3	23.70
	64QAM	12	13	22.77		2	23.70	22.83		0.3	23.70
		25	0	22.75		2	23.70	22.81		0.3	23.70
		1	0	23.01		2	23.70	23.24		0.3	23.70
		1	12	22.92		2	23.70	23.12		0.3	23.70
		1	24	23.12		2	23.70	23.30		0.3	23.70
		12	0	21.70		3	22.70	21.83		1.3	22.70
		12	7	21.73		3	22.70	21.74		1.3	22.70
		12	13	21.70		3	22.70	21.74		1.3	22.70
		25	0	21.80		3	22.70	21.71		1.3	22.70

LTE Band 30 Measured Results (ANT2)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)				Power Mode B (dBm)			
				27710	MPR	Tune-up Limit		27710	MPR	Tune-up Limit	
				2310 MHz				2310 MHz			
10 MHz	QPSK	1	0	17.45	0	17.75		19.97	0	20.50	
		1	25	17.70	0	17.75		20.33	0	20.50	
		1	49	17.50	0	17.75		19.85	0	20.50	
		25	0	17.53	0	17.75		19.61	0	20.50	
		25	12	17.60	0	17.75		20.30	0	20.50	
		25	25	17.56	0	17.75		19.63	0	20.50	
		50	0	17.60	0	17.75		20.33	0	20.50	
	16QAM	1	0	17.75	0	17.75		20.04	0	20.50	
		1	25	17.59	0	17.75		19.97	0	20.50	
		1	49	17.53	0	17.75		19.95	0	20.50	
		25	0	17.57	0	17.75		20.05	0	20.50	
		25	12	17.57	0	17.75		20.06	0	20.50	
		25	25	17.57	0	17.75		20.06	0	20.50	
		50	0	17.48	0	17.75		19.98	0	20.50	
	64QAM	1	0	17.62	0	17.75		20.07	0	20.50	
		1	25	17.53	0	17.75		20.00	0	20.50	
		1	49	17.74	0	17.75		19.98	0	20.50	
		25	0	17.62	0	17.75		20.08	0.25	20.25	
		25	12	17.62	0	17.75		20.10	0.25	20.25	
		25	25	17.60	0	17.75		20.09	0.25	20.25	
		50	0	17.52	0	17.75		20.02	0.25	20.25	
BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)				Power Mode B (dBm)			
				27710	MPR	Tune-up Limit		27710	MPR	Tune-up Limit	
				2310 MHz				2310 MHz			
5 MHz	QPSK	1	0	17.61	0	17.75		19.87	0	20.50	
		1	12	17.54	0	17.75		19.71	0	20.50	
		1	24	17.55	0	17.75		19.81	0	20.50	
		12	0	17.47	0	17.75		19.63	0	20.50	
		12	7	17.35	0	17.75		19.62	0	20.50	
		12	13	17.37	0	17.75		19.54	0	20.50	
		25	0	17.34	0	17.75		19.58	0	20.50	
	16QAM	1	0	17.64	0	17.75		19.81	0	20.50	
		1	12	17.50	0	17.75		19.71	0	20.50	
		1	24	17.52	0	17.75		19.79	0	20.50	
		12	0	17.42	0	17.75		19.83	0	20.50	
		12	7	17.36	0	17.75		19.87	0	20.50	
		12	13	17.38	0	17.75		19.76	0	20.50	
		25	0	17.34	0	17.75		19.80	0	20.50	
	64QAM	1	0	17.68	0	17.75		19.98	0	20.50	
		1	12	17.57	0	17.75		19.86	0	20.50	
		1	24	17.58	0	17.75		19.87	0	20.50	
		12	0	17.56	0	17.75		19.89	0.25	20.25	
		12	7	17.50	0	17.75		19.88	0.25	20.25	
		12	13	17.51	0	17.75		19.88	0.25	20.25	
		25	0	17.5	0	17.75		19.86	0.25	20.25	

LTE Band 41 Power Class 3 Measured Results (ANT1) (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)							Power Mode B (dBm)						
				39750	40185	40620	41055	41490	MPR	Tune-up Limit	39750	40185	40620	41055	41490	MPR	Tune-up Limit
				2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz			2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz		
5 MHz	QPSK	1	0	24.89	24.84	24.85	24.86	24.89	0	25.70	22.57	22.57	22.65	22.25	22.36	0	23.00
		1	12	24.91	24.81	24.76	24.76	24.85	0	25.70	22.60	22.54	22.53	22.19	22.33	0	23.00
		1	24	24.96	24.86	24.78	24.82	24.90	0	25.70	22.62	22.62	22.53	22.26	22.42	0	23.00
		12	0	23.86	23.75	23.72	23.73	23.79	1	24.70	22.54	22.47	22.44	22.17	22.26	0	23.00
		12	7	23.83	23.72	23.75	23.73	23.77	1	24.70	22.52	22.45	22.37	22.15	22.24	0	23.00
		12	13	23.81	23.72	23.75	23.72	23.77	1	24.70	22.52	22.44	22.36	22.12	22.24	0	23.00
		25	0	23.81	23.73	23.77	23.73	23.79	1	24.70	22.54	22.44	22.39	22.15	22.24	0	23.00
	16QAM	1	0	23.86	23.89	24.00	23.85	23.93	1	24.70	22.58	22.60	22.57	22.27	22.36	0	23.00
		1	12	23.90	23.86	23.94	23.81	23.88	1	24.70	22.66	22.55	22.63	22.20	22.34	0	23.00
		1	24	23.91	23.96	24.01	23.86	23.97	1	24.70	22.69	22.62	22.67	22.30	22.43	0	23.00
		12	0	22.84	22.74	22.74	22.74	22.79	2	23.70	22.40	22.34	22.71	22.43	22.51	0	23.00
		12	7	22.83	22.75	22.72	22.73	22.77	2	23.70	22.38	22.30	22.64	22.43	22.50	0	23.00
		12	13	22.81	22.77	22.72	22.71	22.76	2	23.70	22.39	22.32	22.68	22.40	22.49	0	23.00
		25	0	22.78	22.78	22.79	22.71	22.76	2	23.70	22.40	22.29	22.66	22.44	22.46	0	23.00
	64QAM	1	0	23.01	23.07	23.14	23.10	23.11	2	23.70	22.53	22.33	22.61	22.63	22.86	0	23.00
		1	12	23.06	23.05	23.07	23.03	23.07	2	23.70	22.48	22.59	22.55	22.28	22.41	0	23.00
		1	24	23.12	23.07	23.05	23.07	23.18	2	23.70	22.59	22.19	22.57	22.26	22.40	0	23.00
		12	0	21.98	21.90	21.92	21.91	21.90	3	22.70	21.78	21.75	21.90	21.73	21.73	0.3	22.70
		12	7	21.98	21.89	21.84	21.96	21.89	3	22.70	21.78	21.73	21.81	21.79	21.70	0.3	22.70
		12	13	21.97	21.91	21.86	21.94	21.86	3	22.70	21.81	21.74	21.79	21.73	21.70	0.3	22.70
		25	0	21.95	21.91	21.88	21.92	21.92	3	22.70	21.82	21.78	21.76	21.71	21.74	0.3	22.70

LTE Band 41 Power Class 3 Measured Results (ANT2) (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)						Power Mode B (dBm)					
				39750	40185	40620	41055	41490	MPR	Tune-up Limit	39750	40185	40620	41055	41490
				2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz			2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz
5 MHz	QPSK	1	0	19.16	19.15	19.35	19.18	19.22	0	19.75	21.07	21.01	21.26	21.07	21.15
		1	12	19.23	19.12	19.31	19.13	19.23	0	19.75	21.13	20.98	21.24	21.04	21.10
		1	24	19.34	19.16	19.34	19.21	19.26	0	19.75	21.22	21.03	21.28	21.16	21.14
		12	0	19.13	19.09	19.28	19.11	19.16	0	19.75	20.98	20.94	21.20	21.02	21.04
		12	7	19.20	19.08	19.27	19.09	19.17	0	19.75	21.06	20.93	21.18	20.97	21.04
		12	13	19.17	19.09	19.27	19.09	19.17	0	19.75	21.03	20.94	21.16	20.96	21.03
		25	0	19.21	19.09	19.27	19.10	19.16	0	19.75	21.03	20.93	21.14	20.97	21.04
	16QAM	1	0	19.20	19.16	19.36	19.17	19.26	0	19.75	20.98	21.05	21.23	21.04	21.17
		1	12	19.25	19.15	19.34	19.13	19.22	0	19.75	21.04	21.01	21.20	21.00	21.14
		1	24	19.32	19.22	19.34	19.21	19.29	0	19.75	21.20	21.06	21.21	21.07	21.16
		12	0	19.02	19.11	19.29	19.07	19.13	0	19.75	20.66	20.69	20.90	20.69	20.72
		12	7	19.11	19.09	19.25	19.10	19.17	0	19.75	20.73	20.65	20.83	20.67	20.77
		12	13	19.10	19.05	19.24	19.09	19.13	0	19.75	20.72	20.67	20.82	20.66	20.75
		25	0	19.09	19.05	19.23	19.06	19.12	0	19.75	20.76	20.65	20.83	20.66	20.75
	64QAM	1	0	19.17	19.13	19.34	19.19	19.30	0	19.75	20.82	20.81	21.02	20.86	20.94
		1	12	19.28	19.12	19.37	19.16	19.37	0	19.75	20.94	20.76	21.03	20.81	20.91
		1	24	19.34	19.19	19.34	19.24	19.29	0	19.75	21.05	20.83	20.98	20.92	20.93
		12	0	19.16	19.08	19.30	19.15	19.16	0	19.75	19.75	19.72	19.94	19.75	19.78
		12	7	19.21	19.06	19.28	19.11	19.19	0	19.75	19.79	19.69	19.92	19.75	19.74
		12	13	19.17	19.07	19.28	19.12	19.19	0	19.75	19.80	19.69	19.92	19.75	19.72
		25	0	19.10	19.04	19.25	19.08	19.14	0	19.75	19.76	19.65	19.89	19.72	19.70

LTE Band 48 Measured Results (ANT3) (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)						Power Mode B (dBm)					
				55265	55748	56232	56715	MPR	Tune-up Limit	55265	55748	56232	56715	MPR	Tune-up Limit
				3552.5 MHz	3600.8 MHz	3649.2 MHz	3697.5 MHz			3552.5 MHz	3600.8 MHz	3649.2 MHz	3697.5 MHz		
5 MHz	QPSK	1	0	25.42	25.33	25.37	25.47	0	25.70	23.77	23.61	23.96	23.62	0	24.00
		1	12	25.24	25.08	25.10	25.44	0	25.70	23.60	23.38	23.65	23.74	0	24.00
		1	24	25.57	25.36	25.31	25.67	0	25.70	23.93	23.66	23.96	23.87	0	24.00
		12	0	24.37	24.17	24.24	24.54	1	24.70	23.80	23.48	23.45	23.81	0	24.00
		12	7	24.33	24.09	24.18	24.47	1	24.70	23.77	23.39	23.40	23.72	0	24.00
		12	13	24.38	24.13	24.22	24.51	1	24.70	23.82	23.45	23.41	23.77	0	24.00
		25	0	24.50	24.28	24.35	24.65	1	24.70	23.93	23.58	23.49	23.92	0	24.00
	16QAM	1	0	24.47	24.35	24.52	24.31	1	24.70	23.83	23.64	23.63	23.97	0	24.00
		1	12	24.40	24.15	24.23	24.58	1	24.70	23.77	23.43	23.34	23.70	0	24.00
		1	24	24.52	24.37	24.36	24.56	1	24.70	24.00	23.69	23.48	23.99	0	24.00
		12	0	23.20	23.04	23.07	23.36	2	23.70	22.71	22.97	23.07	22.76	0.3	23.70
		12	7	23.22	22.99	23.02	23.29	2	23.70	22.77	22.93	22.97	22.74	0.3	23.70
		12	13	23.24	22.97	23.04	23.37	2	23.70	22.72	22.94	22.98	22.79	0.3	23.70
		25	0	23.49	23.23	23.23	23.53	2	23.70	22.84	23.14	23.19	22.78	0.3	23.70
	64QAM	1	0	23.41	23.34	23.34	23.56	2	23.70	22.86	23.13	23.38	22.83	0.3	23.70
		1	12	23.30	23.13	23.02	23.37	2	23.70	22.76	23.06	23.02	22.75	0.3	23.70
		1	24	23.47	23.42	23.33	23.61	2	23.70	23.01	23.32	23.26	22.81	0.3	23.70
		12	0	22.33	21.98	22.14	22.50	3	22.70	21.71	21.87	22.00	22.01	1.3	22.70
		12	7	22.14	21.81	22.09	22.27	3	22.70	22.04	22.54	22.53	22.10	1.3	22.70
		12	13	22.19	21.83	22.08	22.44	3	22.70	21.99	22.66	22.65	22.12	1.3	22.70
		25	0	22.38	22.15	22.22	22.51	3	22.70	22.38	22.62	22.50	22.21	1.3	22.70

LTE Band 48 Measured Results (ANT4)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)						Power Mode B (dBm)					
				55340	55773	56207	56640	MPR	Tune-up Limit	55340	55773	56207	56640	MPR	Tune-up Limit
				3560 MHz	3603.3 MHz	3646.7 MHz	3690 MHz			3560 MHz	3603.3 MHz	3646.7 MHz	3690 MHz		
20 MHz	QPSK	1	0	22.27	22.37	21.84	22.19	0	22.5	22.27	22.37	21.84	22.19	0	22.5
		1	49	22.25	22.14	22.40	22.11	0	22.5	22.25	22.14	22.40	22.11	0	22.5
		1	99	22.30	22.22	22.02	22.37	0	22.5	22.30	22.22	22.02	22.37	0	22.5
		50	0	21.28	21.26	20.83	21.18	1	21.5	21.28	21.26	20.83	21.18	1	21.5
		50	24	21.06	20.98	21.40	20.99	1	21.5	21.06	20.98	21.40	20.99	1	21.5
		50	50	21.33	21.22	21.00	21.35	1	21.5	21.33	21.22	21.00	21.35	1	21.5
	16QAM	100	0	21.17	21.04	21.30	21.11	1	21.5	21.17	21.04	21.30	21.11	1	21.5
		1	0	21.49	21.49	21.02	21.37	1	21.5	21.49	21.49	21.02	21.37	1	21.5
		1	49	21.48	21.34	20.92	21.27	1	21.5	21.48	21.34	20.92	21.27	1	21.5
		1	99	21.43	21.44	21.18	21.44	1	21.5	21.43	21.44	21.18	21.44	1	21.5
		50	0	20.28	20.22	19.79	20.14	2	20.5	20.28	20.22	19.79	20.14	2	20.5
		50	24	20.05	19.95	19.60	19.95	2	20.5	20.05	19.95	19.60	19.95	2	20.5
	64QAM	50	50	20.31	20.15	19.97	20.32	2	20.5	20.31	20.15	19.97	20.32	2	20.5
		100	0	20.16	20.05	19.72	20.07	2	20.5	20.16	20.05	19.72	20.07	2	20.5
		1	0	20.46	20.50	19.91	20.26	2	20.5	20.46	20.50	19.91	20.26	2	20.5
		1	49	20.47	20.25	19.87	20.22	2	20.5	20.47	20.25	19.87	20.22	2	20.5
		1	99	20.34	20.32	20.06	20.41	2	20.5	20.34	20.32	20.06	20.41	2	20.5
		50	0	19.26	19.22	18.79	19.14	3	19.5	19.26	19.22	18.79	19.14	3	19.5
15 MHz	QPSK	50	24	19.03	18.93	18.59	18.94	3	19.5	19.03	18.93	18.59	18.94	3	19.5
		50	50	19.29	19.17	18.94	19.29	3	19.5	19.29	19.17	18.94	19.29	3	19.5
		100	0	19.32	19.49	19.40	19.09	3	19.5	19.32	19.49	19.40	19.09	3	19.5
	16QAM	1	0	22.28	22.33	21.83	22.18	0	22.5	22.28	22.33	21.83	22.18	0	22.5
		1	37	22.04	21.95	21.64	21.99	0	22.5	22.04	21.95	21.64	21.99	0	22.5
		1	74	22.39	22.20	21.92	22.27	0	22.5	22.39	22.20	21.92	22.27	0	22.5
		36	0	21.21	21.25	20.88	21.23	1	21.5	21.21	21.25	20.88	21.23	1	21.5
		36	20	21.27	21.24	20.94	21.29	1	21.5	21.27	21.24	20.94	21.29	1	21.5
		36	39	21.26	21.24	20.90	21.25	1	21.5	21.26	21.24	20.90	21.25	1	21.5
	64QAM	75	0	21.09	21.03	20.74	21.09	1	21.5	21.09	21.03	20.74	21.09	1	21.5
		1	0	21.36	21.35	20.82	21.17	1	21.5	21.36	21.35	20.82	21.17	1	21.5
		1	37	21.10	20.96	20.63	20.98	1	21.5	21.10	20.96	20.63	20.98	1	21.5
		1	74	21.46	21.24	20.91	21.26	1	21.5	21.46	21.24	20.91	21.26	1	21.5
		36	0	20.18	20.19	20.04	20.14	2	20.5	20.18	20.19	20.04	20.14	2	20.5
		36	20	20.25	20.18	20.11	20.21	2	20.5	20.25	20.18	20.11	20.21	2	20.5
10 MHz	QPSK	36	39	20.22	20.18	20.03	20.13	2	20.5	20.22	20.18	20.03	20.13	2	20.5
		75	0	20.05	19.99	19.94	20.04	2	20.5	20.05	19.99	19.94	20.04	2	20.5
	16QAM	1	0	20.47	20.32	20.17	20.27	2	20.5	20.47	20.32	20.17	20.27	2	20.5
		1	37	20.15	19.93	19.96	20.06	2	20.5	20.15	19.93	19.96	20.06	2	20.5
		1	74	20.46	20.16	20.22	20.32	2	20.5	20.46	20.16	20.22	20.32	2	20.5
		36	0	19.15	19.16	19.00	19.10	3	19.5	19.15	19.16	19.00	19.10	3	19.5
	64QAM	36	20	19.21	19.16	19.07	19.17	3	19.5	19.21	19.16	19.07	19.17	3	19.5
		36	39	19.19	19.15	19.02	19.12	3	19.5	19.19	19.15	19.02	19.12	3	19.5
		75	0	19.11	19.37	19.30	19.46	3	19.5	19.11	19.37	19.30	19.46	3	19.5
	QPSK	1	0	22.39	22.32	21.96	22.31	0	22.5	22.39	22.32	21.96	22.31	0	22.5
		1	25	22.26	22.05	21.78	22.13	0	22.5	22.26	22.05	21.78	22.13	0	22.5
		1	49	22.44	22.23	21.86	22.21	0	22.5	22.44	22.23	21.86	22.21	0	22.5
		25	0	21.32	21.28	20.94	21.29	1	21.5	21.32	21.28	20.94	21.29	1	21.5
		25	12	21.25	21.21	20.82	21.17	1	21.5	21.25	21.21	20.82	21.17	1	21.5
		25	25	21.29	21.25	20.80	21.15	1	21.5	21.29	21.25	20.80	21.15	1	21.5
	16QAM	50	0	21.14	21.10	20.72	21.07	1	21.5	21.14	21.10	20.72	21.07	1	21.5
		1	0	21.50	21.46	20.97	21.32	1	21.5	21.50	21.46	20.97	21.32	1	21.5
		1	25	21.29	21.20	20.81	21.16	1	21.5	21.29	21.20	20.81	21.16	1	21.5
		1	49	21.45	21.29	21.00	21.35	1	21.5	21.45	21.29	21.00	21.35	1	21.5
		25	0	20.25	20.19	20.10	20.20	2	20.5	20.25	20.19	20.10	20.20	2	20.5
		25	12	20.18	20.12	19.96	20.06	2	20.5	20.18	20.12	19.96	20.06	2	20.5
	64QAM	25	25	20.22	20.16	19.94	20.04	2	20.5	20.22	20.16	19.94	20.04	2	20.5
		50	0	20.13	20.07	19.92	20.02	2	20.5	20.13	20.07	19.92	20.02	2	20.5
		1	0	20.47	20.31	20.19	20.29	2	20.5	20.47	20.31	20.19	20.29	2	20.5
		1	25	20.24	20.04	19.89	19.99	2	20.5	20.24	20.04	19.89	19.99	2	20.5
		1	49	20.48	20.21	20.09	20.19	2	20.5	20.48	20.21	20.09	20.19	2	20.5
		25	0	19.27	19.21	19.11	19.21	3	19.5	19.27	19.21	19.11	19.21	3	19.5
	64QAM	25	12	19.20	19.15	19.36	19.07	3	19.5	19.20	19.15	19.36	19.07	3	19.5
		25	25	19.25	19.19	19.22	19.07	3	19.5	19.25	19.19	19.22	19.07	3	19.5
		50	0	19.22	19.50	19.22	19.03	3	19.5	19.22	19.50	19.22	19.03	3	19.5
		50	0	19.22	19.50	19.22	19.03	3	19.5	19.22	19.50	19.22	19.03	3	19.5

LTE Band 48 Measured Results (ANT4) (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)						Power Mode B (dBm)					
				55265	55748	56232	56715	MPR	Tune-up Limit	55265	55748	56232	56715	MPR	Tune-up Limit
				3552.5 MHz	3600.8 MHz	3649.2 MHz	3697.5 MHz			3552.5 MHz	3600.8 MHz	3649.2 MHz	3697.5 MHz		
5 MHz	QPSK	1	0	22.30	22.31	21.90	22.25	0	22.5	22.30	22.31	21.90	22.25	0	22.5
		1	12	21.81	21.83	21.59	21.74	0	22.5	21.81	21.83	21.59	21.74	0	22.5
		1	24	22.32	22.29	21.75	22.10	0	22.5	22.32	22.29	21.75	22.10	0	22.5
		12	0	21.27	21.22	20.78	21.13	1	21.5	21.27	21.22	20.78	21.13	1	21.5
		12	7	21.18	21.15	20.66	21.01	1	21.5	21.18	21.15	20.66	21.01	1	21.5
		12	13	21.24	21.19	20.70	21.05	1	21.5	21.24	21.19	20.70	21.05	1	21.5
		25	0	21.17	21.15	20.64	20.99	1	21.5	21.17	21.15	20.64	20.99	1	21.5
	16QAM	1	0	21.38	21.39	20.88	21.23	1	21.5	21.38	21.39	20.88	21.23	1	21.5
		1	12	21.04	20.84	20.55	20.70	1	21.5	21.04	20.84	20.55	20.70	1	21.5
		1	24	21.49	21.33	20.79	21.14	1	21.5	21.49	21.33	20.79	21.14	1	21.5
		12	0	20.16	20.11	20.12	20.02	2	20.5	20.16	20.11	20.12	20.02	2	20.5
		12	7	20.06	20.02	20.33	20.43	2	20.5	20.06	20.02	20.33	20.43	2	20.5
		12	13	20.08	20.05	20.36	20.46	2	20.5	20.08	20.05	20.36	20.46	2	20.5
		25	0	20.03	20.49	20.22	19.82	2	20.5	20.03	20.49	20.22	19.82	2	20.5
	64QAM	1	0	20.28	20.32	20.26	20.16	2	20.5	20.28	20.32	20.26	20.16	2	20.5
		1	12	19.85	20.45	20.36	19.66	2	20.5	19.85	20.45	20.36	19.66	2	20.5
		1	24	20.31	20.31	20.10	20.00	2	20.5	20.31	20.31	20.10	20.00	2	20.5
		12	0	19.00	18.98	19.03	18.93	3	19.5	19.00	18.98	19.03	18.93	3	19.5
		12	7	19.12	18.89	18.98	18.88	3	19.5	19.12	18.89	18.98	18.88	3	19.5
		12	13	19.16	18.85	19.06	18.96	3	19.5	19.16	18.85	19.06	18.96	3	19.5
		25	0	19.01	19.35	19.40	18.81	3	19.5	19.01	19.35	19.40	18.81	3	19.5

LTE Band 66 Measured Results (ANT1) (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				131997	132322	132647	MPR	Tune-up Limit	131997	132322	132647	MPR	Tune-up Limit
				1712.5 MHz	1745 MHz	1777.5 MHz			1712.5 MHz	1745 MHz	1777.5 MHz		
5 MHz	QPSK	1	0	25.09	25.34	25.44	0	25.70	21.07	21.31	21.33	0	21.50
		1	12	25.10	25.23	25.35	0	25.70	21.13	21.24	21.24	0	21.50
		1	24	25.23	25.29	25.38	0	25.70	21.25	21.23	21.28	0	21.50
		12	0	24.12	24.32	24.41	1	24.70	21.09	21.30	21.29	0	21.50
		12	7	24.11	24.30	24.33	1	24.70	21.08	21.29	21.23	0	21.50
		12	13	24.14	24.26	24.33	1	24.70	21.14	21.23	21.24	0	21.50
	16QAM	25	0	24.11	24.28	24.36	1	24.70	21.09	21.26	21.27	0	21.50
		1	0	24.38	24.66	24.64	1	24.70	21.27	21.48	21.47	0	21.50
		1	12	24.39	24.61	24.66	1	24.70	21.32	21.42	21.41	0	21.50
		1	24	24.53	24.59	24.65	1	24.70	21.46	21.41	21.42	0	21.50
		12	0	23.08	23.34	23.41	2	23.70	21.09	21.32	21.29	0	21.50
		12	7	23.08	23.32	23.35	2	23.70	21.10	21.31	21.23	0	21.50
	64QAM	12	13	23.16	23.25	23.35	2	23.70	21.15	21.25	21.24	0	21.50
		25	0	23.09	23.26	23.33	2	23.70	21.08	21.24	21.24	0	21.50
		1	0	23.34	23.55	23.55	2	23.70	21.30	21.43	21.48	0	21.50
		1	12	23.37	23.49	23.51	2	23.70	21.36	21.41	21.40	0	21.50
		1	24	23.52	23.56	23.54	2	23.70	21.49	21.45	21.45	0	21.50
		12	0	22.13	22.38	22.40	3	22.70	21.13	21.32	21.28	0	21.50
3 MHz	QPSK	12	7	22.14	22.36	22.32	3	22.70	21.13	21.31	21.24	0	21.50
		12	13	22.26	22.32	22.34	3	22.70	21.19	21.24	21.24	0	21.50
		25	0	22.13	22.28	22.32	3	22.70	21.09	21.22	21.22	0	21.50
	16QAM	1	0	24.89	24.90	24.95	0	25.70	21.12	21.10	21.10	0	21.50
		1	8	24.96	24.99	25.02	0	25.70	21.16	21.17	21.17	0	21.50
		1	14	24.88	24.93	24.99	0	25.70	21.14	21.16	21.16	0	21.50
		8	0	23.80	23.90	23.87	1	24.70	21.00	21.07	21.07	0	21.50
		8	4	23.80	23.88	23.84	1	24.70	20.99	21.05	21.05	0	21.50
		8	7	23.79	23.88	23.85	1	24.70	20.98	21.06	21.06	0	21.50
	64QAM	15	0	23.83	23.88	23.86	1	24.70	20.99	21.06	21.06	0	21.50
		1	0	24.19	24.20	24.17	1	24.70	21.34	21.49	21.49	0	21.50
		1	8	24.19	24.28	24.22	1	24.70	21.35	21.46	21.46	0	21.50
		1	14	24.08	24.24	24.19	1	24.70	21.32	21.47	21.47	0	21.50
		8	0	22.84	22.87	22.89	2	23.70	20.95	21.05	21.05	0	21.50
		8	4	22.83	22.85	22.87	2	23.70	20.97	21.04	21.04	0	21.50
1.4 MHz	QPSK	8	7	22.82	22.83	22.86	2	23.70	21.00	21.07	21.19	0	21.50
		15	0	22.78	22.83	22.82	2	23.70	20.96	21.04	21.16	0	21.50
		1	0	23.16	23.09	23.01	2	23.70	21.24	21.30	21.38	0	21.50
		1	8	23.07	23.20	23.18	2	23.70	21.34	21.39	21.41	0	21.50
		1	14	23.02	23.13	23.07	2	23.70	21.19	21.25	21.38	0	21.50
		8	0	21.87	21.87	21.83	3	22.70	20.99	20.99	21.12	0	21.50
	16QAM	8	4	21.84	21.86	21.80	3	22.70	20.99	20.98	21.13	0	21.50
		8	7	21.82	21.88	21.78	3	22.70	20.97	21.00	21.12	0	21.50
		15	0	21.82	21.85	21.74	3	22.70	20.98	20.97	21.06	0	21.50
		1	0	24.78	24.82	24.95	0	25.70	21.07	21.09	21.32	0	21.50
		1	3	24.77	24.73	24.91	0	25.70	21.05	21.08	21.29	0	21.50
		1	5	24.82	24.77	24.95	0	25.70	21.07	21.11	21.33	0	21.50
	64QAM	3	0	24.87	24.88	24.82	0	25.70	20.97	20.96	21.21	0	21.50
		3	1	24.86	24.88	24.83	0	25.70	20.98	20.96	21.20	0	21.50
		3	3	24.82	24.88	24.82	0	25.70	20.98	20.96	21.19	0	21.50
		6	0	23.81	23.83	23.82	1	24.70	20.92	20.89	21.16	0	21.50
		1	0	24.11	23.96	24.24	1	24.70	21.29	21.30	21.47	0	21.50
		1	3	24.10	23.99	24.20	1	24.70	21.31	21.35	21.41	0	21.50
1.4 MHz	QPSK	1	5	24.07	23.95	24.20	1	24.70	21.27	21.39	21.48	0	21.50
		3	0	23.79	23.75	24.23	1	24.70	21.04	21.14	21.28	0	21.50
		3	1	23.79	23.74	24.22	1	24.70	21.04	21.11	21.24	0	21.50
		3	3	23.79	23.73	24.26	1	24.70	21.05	21.12	21.22	0	21.50
		6	0	22.90	22.82	23.07	2	23.70	20.94	21.02	21.06	0	21.50
		1	0	22.76	23.10	23.16	2	23.70	21.40	21.30	21.37	0	21.50
	16QAM	1	3	22.95	23.11	23.16	2	23.70	21.41	21.29	21.41	0	21.50
		1	5	22.97	23.16	23.09	2	23.70	21.44	21.40	21.38	0	21.50
		3	0	22.85	22.87	22.89	2	23.70	21.24	21.08	21.22	0	21.50
		3	1	22.86	22.87	22.84	2	23.70	21.24	21.07	21.22	0	21.50
		3	3	22.86	22.84	22.86	2	23.70	21.19	21.10	21.24	0	21.50
		6	0	21.78	21.71	21.85	3	22.70	21.02	21.08	21.15	0	21.50

LTE Band 66 Measured Results (ANT2)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				132072	132322	132572	MPR	Tune-up Limit	132072	132322	132572	MPR	Tune-up Limit
				1720 MHz	1745 MHz	1770 MHz			1720 MHz	1745 MHz	1770 MHz		
20 MHz	QPSK	1	0	20.49	20.48	20.42	0.0	21.25	21.04	20.75	20.60	0	21.50
		1	49	21.20	21.20	20.90	0.0	21.25	21.40	21.40	21.40	0	21.50
		1	99	20.29	20.42	20.47	0.0	21.25	20.77	20.67	20.71	0	21.50
		50	0	20.39	20.47	20.32	0.0	21.25	20.94	20.73	20.69	0	21.50
		50	24	21.10	21.10	20.90	0.0	21.25	21.40	21.40	21.40	0	21.50
		50	50	20.36	20.48	20.30	0.0	21.25	20.93	20.69	20.53	0	21.50
	16QAM	100	0	21.10	21.05	20.90	0.0	21.25	21.40	21.40	21.20	0	21.50
		1	0	20.76	20.52	20.34	0.0	21.25	21.36	21.02	20.90	0	21.50
		1	49	20.86	20.54	20.35	0.0	21.25	21.32	21.04	20.87	0	21.50
		1	99	20.59	20.50	20.46	0.0	21.25	21.12	20.99	21.02	0	21.50
		50	0	20.45	20.54	20.30	0.0	21.25	20.96	20.74	20.55	0	21.50
		50	24	20.51	20.56	20.34	0.0	21.25	21.02	20.78	20.57	0	21.50
	64QAM	50	50	20.44	20.54	20.37	0.0	21.25	20.94	20.75	20.60	0	21.50
		100	0	20.50	20.54	20.32	0.0	21.25	21.02	20.75	20.56	0	21.50
		1	0	20.61	20.87	20.32	0.0	21.25	21.15	20.86	20.74	0	21.50
		1	49	20.59	20.56	20.54	0.0	21.25	21.16	20.79	20.65	0	21.50
		1	99	20.36	20.51	20.65	0.0	21.25	20.90	20.82	20.78	0	21.50
		50	0	19.97	19.78	19.56	0.75	20.5	20.01	19.71	19.54	1	20.50
15 MHz	QPSK	50	24	20.01	19.79	19.60	0.75	20.5	20.04	19.75	19.55	1	20.50
		50	50	19.95	19.73	19.65	0.75	20.5	19.98	19.72	19.56	1	20.50
		100	0	20.01	19.74	19.58	0.75	20.5	20.02	19.72	19.54	1	20.50
	16QAM	1	0	20.49	20.53	20.33	0	21.25	20.96	20.72	20.51	0	21.50
		1	37	20.42	20.55	20.37	0	21.25	20.92	20.69	20.68	0	21.50
		1	74	20.41	20.46	20.41	0	21.25	20.90	20.65	20.62	0	21.50
		36	0	20.45	20.47	20.34	0	21.25	20.91	20.68	20.55	0	21.50
		36	20	20.38	20.52	20.33	0	21.25	20.92	20.74	20.54	0	21.50
		36	39	20.44	20.50	20.37	0	21.25	20.98	20.71	20.56	0	21.50
	64QAM	75	0	20.37	20.52	20.31	0	21.25	20.92	20.72	20.51	0	21.50
		1	0	20.71	20.53	20.53	0	21.25	21.22	20.98	20.80	0	21.50
		1	37	20.74	20.52	20.32	0	21.25	21.28	21.03	20.83	0	21.50
		1	74	20.73	20.51	20.46	0	21.25	21.26	20.95	20.94	0	21.50
		36	0	20.45	20.25	20.41	0	21.25	20.98	20.76	20.62	0	21.50
		36	20	20.45	20.30	20.39	0	21.25	20.99	20.81	20.61	0	21.50
10 MHz	QPSK	36	39	20.52	20.27	20.43	0	21.25	21.06	20.79	20.63	0	21.50
		75	0	20.44	20.27	20.36	0	21.25	20.97	20.73	20.57	0	21.50
	16QAM	1	0	20.77	20.55	20.37	0	21.25	21.25	20.98	20.77	0	21.50
		1	37	20.78	20.54	20.35	0	21.25	21.27	20.99	20.84	0	21.50
		1	74	20.73	20.49	20.41	0	21.25	21.19	20.94	20.97	0	21.50
		36	0	19.98	19.77	19.62	0.75	20.5	20.01	19.77	19.67	1	20.50
	64QAM	36	20	19.99	19.81	19.59	0.75	20.5	19.99	19.80	19.63	1	20.50
		36	39	20.04	19.78	19.59	0.75	20.5	20.06	19.77	19.65	1	20.50
		75	0	19.96	19.76	19.55	0.75	20.5	19.97	19.77	19.60	1	20.50
10 MHz	QPSK	1	0	20.54	20.58	20.47	0	21.25	21.01	20.76	20.68	0	21.50
		1	25	20.44	20.55	20.42	0	21.25	20.97	20.78	20.66	0	21.50
		1	49	20.58	20.59	20.56	0	21.25	21.05	20.78	20.76	0	21.50
		25	0	20.39	20.50	20.38	0	21.25	20.92	20.67	20.57	0	21.50
		25	12	20.36	20.54	20.40	0	21.25	20.91	20.72	20.59	0	21.50
		25	25	20.38	20.49	20.53	0	21.25	20.93	20.72	20.73	0	21.50
	16QAM	50	0	20.37	20.50	20.40	0	21.25	20.91	20.73	20.60	0	21.50
		1	0	20.67	20.48	20.38	0	21.25	21.25	21.02	20.89	0	21.50
		1	25	20.65	20.47	20.36	0	21.25	21.16	21.04	20.83	0	21.50
		1	49	20.81	20.53	20.45	0	21.25	21.32	21.06	20.96	0	21.50
		25	0	20.45	20.53	20.38	0	21.25	21.00	20.77	20.58	0	21.50
		25	12	20.43	20.56	20.43	0	21.25	20.98	20.82	20.62	0	21.50
10 MHz	64QAM	25	25	20.46	20.56	20.53	0	21.25	21.00	20.81	20.74	0	21.50
		50	0	20.43	20.57	20.42	0	21.25	20.99	20.81	20.60	0	21.50
		1	0	20.74	20.39	20.40	0	21.25	21.18	20.85	20.87	0	21.50
		1	25	20.56	20.39	20.36	0	21.25	21.05	21.00	20.81	0	21.50
		1	49	20.78	20.44	20.47	0	21.25	21.23	20.99	20.97	0	21.50
		25	0	20.05	19.80	19.66	0.75	20.5	19.98	19.79	19.66	1	20.50
	64QAM	25	12	20.02	19.82	19.70	0.75	20.5	19.95	19.82	19.70	1	20.50
		25	25	20.00	19.82	19.83	0.75	20.5	19.98	19.81	19.81	1	20.50
		50	0	19.97	19.80	19.71	0.75	20.5	19.97	19.80	19.70	1	20.50

LTE Band 66 Measured Results (ANT2) (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				131997	132322	132647	MPR	Tune-up Limit	131997	132322	132647	MPR	Tune-up Limit
				1712.5 MHz	1745 MHz	1777.5 MHz			1712.5 MHz	1745 MHz	1777.5 MHz		
5 MHz	QPSK	1	0	20.45	20.49	20.39	0	21.25	20.96	20.69	20.61	0	21.50
		1	12	20.41	20.47	20.48	0	21.25	20.87	20.65	20.66	0	21.50
		1	24	20.38	20.46	20.53	0	21.25	20.89	20.68	20.72	0	21.50
		12	0	20.32	20.41	20.34	0	21.25	20.83	20.62	20.54	0	21.50
		12	7	20.31	20.40	20.40	0	21.25	20.82	20.62	20.59	0	21.50
		12	13	20.31	20.40	20.40	0	21.25	20.83	20.62	20.59	0	21.50
		25	0	20.31	20.41	20.41	0	21.25	20.83	20.59	20.61	0	21.50
	16QAM	1	0	20.85	20.43	20.38	0	21.25	21.27	20.96	20.93	0	21.50
		1	12	20.78	20.41	20.44	0	21.25	21.24	20.99	21.00	0	21.50
		1	24	20.78	20.41	20.43	0	21.25	21.24	20.99	21.08	0	21.50
		12	0	20.34	20.38	20.43	0	21.25	20.78	20.61	20.52	0	21.50
		12	7	20.32	20.68	20.73	0	21.25	20.77	20.59	20.56	0	21.50
		12	13	20.33	20.41	20.44	0	21.25	20.79	20.58	20.55	0	21.50
		25	0	20.32	20.41	20.43	0	21.25	20.80	20.59	20.56	0	21.50
	64QAM	1	0	20.70	20.38	20.43	0	21.25	21.22	20.93	20.86	0	21.50
		1	12	20.63	20.42	20.38	0	21.25	21.08	20.93	20.94	0	21.50
		1	24	20.65	20.40	20.46	0	21.25	21.12	20.90	21.01	0	21.50
		12	0	19.88	19.67	19.57	0.75	20.5	19.89	19.62	19.61	1	20.50
		12	7	19.84	19.66	19.61	0.75	20.5	19.87	19.63	19.64	1	20.50
		12	13	19.83	19.65	19.59	0.75	20.5	19.87	19.61	19.63	1	20.50
		25	0	19.80	19.62	19.58	0.75	20.5	19.83	19.59	19.62	1	20.50
BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				131987	132322	132657	MPR	Tune-up Limit	131987	132322	132657	MPR	Tune-up Limit
				1711.5 MHz	1745 MHz	1778.5 MHz			1711.5 MHz	1745 MHz	1778.5 MHz		
3 MHz	QPSK	1	0	20.67	20.46	20.39	0	21.25	20.93	20.73	20.68	0	21.50
		1	8	20.72	20.49	20.47	0	21.25	20.88	20.74	20.72	0	21.50
		1	14	20.66	20.44	20.51	0	21.25	20.88	20.61	20.71	0	21.50
		8	0	20.49	20.30	20.25	0	21.25	20.77	20.52	20.52	0	21.50
		8	4	20.48	20.29	20.25	0	21.25	20.77	20.52	20.52	0	21.50
		8	7	20.48	20.30	20.27	0	21.25	20.74	20.52	20.53	0	21.50
		15	0	20.50	20.29	20.26	0	21.25	20.72	20.51	20.51	0	21.50
	16QAM	1	0	20.59	20.37	20.31	0	21.25	21.13	20.90	20.91	0	21.50
		1	8	20.68	20.44	20.45	0	21.25	21.12	20.96	20.99	0	21.50
		1	14	20.61	20.36	20.35	0	21.25	21.10	20.88	20.97	0	21.50
		8	0	20.53	20.32	20.30	0	21.25	20.76	20.58	20.57	0	21.50
		8	4	20.52	20.33	20.30	0	21.25	20.76	20.55	20.56	0	21.50
		8	7	20.52	20.33	20.30	0	21.25	20.77	20.56	20.56	0	21.50
		15	0	20.49	20.29	20.44	0	21.25	20.72	20.51	20.52	0	21.50
	64QAM	1	0	20.82	20.56	20.45	0	21.25	21.00	20.89	20.73	0	21.50
		1	8	20.50	20.32	20.26	0	21.25	21.08	20.83	20.85	0	21.50
		1	14	20.48	20.27	20.34	0	21.25	20.93	20.80	20.80	0	21.50
		8	0	19.64	19.72	19.72	0.75	20.5	19.69	19.53	19.70	1	20.50
		8	4	19.63	19.73	19.71	0.75	20.5	19.66	19.50	19.66	1	20.50
		8	7	19.64	19.73	19.73	0.75	20.5	19.67	19.52	19.51	1	20.50
		15	0	19.64	19.72	19.70	0.75	20.5	19.64	19.50	19.68	1	20.50
BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				131979	132322	132665	MPR	Tune-up Limit	131979	132322	132665	MPR	Tune-up Limit
				1710.7 MHz	1745 MHz	1779.3 MHz			1710.7 MHz	1745 MHz	1779.3 MHz		
1.4 MHz	QPSK	1	0	20.66	20.48	20.49	0	21.25	20.99	20.77	20.69	0	21.50
		1	3	20.64	20.46	20.48	0	21.25	20.92	20.77	20.68	0	21.50
		1	5	20.68	20.49	20.58	0	21.25	20.92	20.72	20.72	0	21.50
		3	0	20.60	20.31	20.31	0	21.25	20.81	20.64	20.70	0	21.50
		3	1	20.51	20.29	20.30	0	21.25	20.81	20.64	20.68	0	21.50
		3	3	20.52	20.30	20.30	0	21.25	20.80	20.57	20.69	0	21.50
		6	0	20.46	20.53	20.52	0	21.25	20.67	20.51	20.62	0	21.50
	16QAM	1	0	20.53	20.40	20.43	0	21.25	21.16	20.91	20.92	0	21.50
		1	3	20.50	20.42	20.41	0	21.25	21.16	20.85	20.87	0	21.50
		1	5	20.53	20.40	20.49	0	21.25	21.17	20.87	21.00	0	21.50
		3	0	20.62	20.49	20.49	0	21.25	20.91	20.68	20.67	0	21.50
		3	1	20.64	20.44	20.49	0	21.25	20.91	20.68	20.65	0	21.50
		3	3	20.64	20.43	20.49	0	21.25	20.90	20.64	20.65	0	21.50
		6	0	20.51	20.36	20.40	0	21.25	20.82	20.56	20.59	0	21.50
	64QAM	1	0	20.55	20.34	20.52	0	21.25	21.35	20.95	20.54	0	21.50
		1	3	20.51	20.36	20.50	0	21.25	21.36	20.89	21.03	0	21.50
		1	5	20.61	20.32	20.59	0	21.25	21.25	20.88	21.12	0	21.50
		3	0	20.68	20.44	20.54	0	21.25	21.28	20.74	20.84	0	21.50
		3	1	20.66	20.42	20.47	0	21.25	21.26	20.72	20.77	0	21.50
		3	3	20.62	20.45	20.46	0	21.25	21.22	20.75	20.76	0	21.50
		6	0	20.03	19.82	19.79	0.75	20.5	20.00	19.60	19.54	1	20.50

LTE Band 71 Measured Results (ANT1)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
					133297		MPR	Tune-up Limit		133297		MPR	Tune-up Limit
					680.5 MHz					680.5 MHz			
20 MHz	QPSK	1	0		24.95		0	25.70		24.95		0	25.70
		1	49		25.37		0	25.70		25.37		0	25.70
		1	99		25.26		0	25.70		25.26		0	25.70
		50	0		24.11		1	24.70		24.11		1	24.70
		50	24		24.41		1	24.70		24.41		1	24.70
		50	50		23.90		1	24.70		23.90		1	24.70
	16QAM	100	0		24.36		1	24.70		24.36		1	24.70
		1	0		24.32		1	24.70		24.32		1	24.70
		1	49		24.06		1	24.70		24.06		1	24.70
		1	99		24.49		1	24.70		24.49		1	24.70
		50	0		23.08		2	23.70		23.08		2	23.70
		50	24		22.75		2	23.70		22.75		2	23.70
	64QAM	50	50		22.91		2	23.70		22.91		2	23.70
		100	0		22.75		2	23.70		22.75		2	23.70
		1	0		23.01		2	23.70		23.01		2	23.70
		1	49		22.79		2	23.70		22.79		2	23.70
		1	99		23.21		2	23.70		23.21		2	23.70
		50	0		22.08		3	22.70		22.08		3	22.70
		50	24		21.78		3	22.70		21.78		3	22.70
		50	50		21.92		3	22.70		21.92		3	22.70
		100	0		21.75		3	22.70		21.75		3	22.70
BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
					133297		MPR	Tune-up Limit		133297		MPR	Tune-up Limit
					680.5 MHz					680.5 MHz			
15 MHz	QPSK	1	0		24.93		0	25.70		24.93		0	25.70
		1	37		24.83		0	25.70		24.83		0	25.70
		1	74		24.85		0	25.70		24.85		0	25.70
		36	0		23.87		1	24.70		23.87		1	24.70
		36	20		23.86		1	24.70		23.86		1	24.70
		36	39		23.94		1	24.70		23.94		1	24.70
	16QAM	75	0		23.91		1	24.70		23.91		1	24.70
		1	0		24.23		1	24.70		24.23		1	24.70
		1	37		24.14		1	24.70		24.14		1	24.70
		1	74		24.05		1	24.70		24.05		1	24.70
		36	0		22.86		2	23.70		22.86		2	23.70
		36	20		22.87		2	23.70		22.87		2	23.70
	64QAM	36	39		22.98		2	23.70		22.98		2	23.70
		75	0		22.92		2	23.70		22.92		2	23.70
		1	0		23.27		2	23.70		23.27		2	23.70
		1	37		23.20		2	23.70		23.20		2	23.70
		1	74		23.03		2	23.70		23.03		2	23.70
		36	0		21.73		3	22.70		21.73		3	22.70
		36	20		21.92		3	22.70		21.92		3	22.70
		36	39		21.99		3	22.70		21.99		3	22.70
		75	0		21.94		3	22.70		21.94		3	22.70
BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				133172	133297	133422	MPR	Tune-up Limit	133172	133297	133422	MPR	Tune-up Limit
				668 MHz	680.5 MHz	693 MHz			668 MHz	680.5 MHz	693 MHz		
10 MHz	QPSK	1	0		25.10	24.79	0	25.70		25.10	24.79	0	25.70
		1	25		24.85	24.87	0	25.70		24.85	24.87	0	25.70
		1	49		25.01	25.06	0	25.70		25.01	25.06	0	25.70
		25	0		23.86	23.79	1	24.70		23.86	23.79	1	24.70
		25	12		23.82	23.78	1	24.70		23.82	23.78	1	24.70
		25	25		23.96	23.83	1	24.70		23.96	23.83	1	24.70
	16QAM	50	0		23.84	23.83	1	24.70		23.84	23.83	1	24.70
		1	0		24.27	24.03	1	24.70		24.27	24.03	1	24.70
		1	25		24.05	24.09	1	24.70		24.05	24.09	1	24.70
		1	49		24.18	24.32	1	24.70		24.18	24.32	1	24.70
		25	0		22.81	22.77	2	23.70		22.81	22.77	2	23.70
		25	12		22.80	22.83	2	23.70		22.80	22.83	2	23.70
	64QAM	25	25		22.97	22.87	2	23.70		22.97	22.87	2	23.70
		50	0		22.82	22.85	2	23.70		22.82	22.85	2	23.70
		1	0		23.15	23.03	2	23.70		23.15	23.03	2	23.70
		1	25		23.00	23.13	2	23.70		23.00	23.13	2	23.70
		1	49		23.11	23.19	2	23.70		23.11	23.19	2	23.70
		25	0		21.81	21.83	3	22.70		21.81	21.83	3	22.70
		25	12		21.80	21.89	3	22.70		21.80	21.89	3	22.70
		25	25		21.98	21.95	3	22.70		21.98	21.95	3	22.70
		50	0		21.84	21.93	3	22.70		21.84	21.93	3	22.70

LTE Band 71 Measured Results (ANT1) (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				133147	133297	133447	MPR	Tune-up Limit	133147	133297	133447	MPR	Tune-up Limit
				665.5 MHz	680.5 MHz	695.5 MHz			665.5 MHz	680.5 MHz	695.5 MHz		
5 MHz	QPSK	1	0	25.18	24.79	24.77	0	25.70	25.18	24.79	24.77	0	25.70
		1	12	24.90	24.86	24.92	0	25.70	24.90	24.86	24.92	0	25.70
		1	24	24.92	24.93	25.03	0	25.70	24.92	24.93	25.03	0	25.70
		12	0	23.96	23.77	23.72	1	24.70	23.96	23.77	23.72	1	24.70
		12	7	23.82	23.76	23.76	1	24.70	23.82	23.76	23.76	1	24.70
		12	13	23.80	23.78	23.83	1	24.70	23.80	23.78	23.83	1	24.70
		25	0	23.83	23.78	23.85	1	24.70	23.83	23.78	23.85	1	24.70
	16QAM	1	0	24.45	24.25	24.21	1	24.70	24.45	24.25	24.21	1	24.70
		1	12	24.15	24.26	24.28	1	24.70	24.15	24.26	24.28	1	24.70
		1	24	24.27	24.30	24.39	1	24.70	24.27	24.30	24.39	1	24.70
		12	0	22.91	22.73	22.86	2	23.70	22.91	22.73	22.86	2	23.70
		12	7	22.77	22.77	22.77	2	23.70	22.77	22.77	22.77	2	23.70
		12	13	22.76	22.81	22.84	2	23.70	22.76	22.81	22.84	2	23.70
		25	0	22.72	22.79	22.80	2	23.70	22.72	22.79	22.80	2	23.70
	64QAM	1	0	23.35	23.11	23.35	2	23.70	23.35	23.11	23.35	2	23.70
		1	12	23.01	23.15	23.00	2	23.70	23.01	23.15	23.00	2	23.70
		1	24	23.09	23.21	23.01	2	23.70	23.09	23.21	23.01	2	23.70
		12	0	21.73	21.82	21.81	3	22.70	21.73	21.82	21.81	3	22.70
		12	7	21.76	21.82	21.77	3	22.70	21.76	21.82	21.77	3	22.70
		12	13	21.75	21.82	21.89	3	22.70	21.75	21.82	21.89	3	22.70
		25	0	21.76	21.77	21.78	3	22.70	21.76	21.77	21.78	3	22.70

LTE Band 71 Measured Results (ANT2)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
					133297		MPR	Tune-up Limit		133297		MPR	Tune-up Limit
					680.5 MHz					680.5 MHz			
20 MHz	QPSK	1	0		23.82		0	24.50		23.82		0	24.50
		1	49		24.48		0	24.50		24.48		0	24.50
		1	99		23.99		0	24.50		23.99		0	24.50
		50	0		22.54		1	23.50		22.54		1	23.50
		50	24		23.47		1	23.50		23.47		1	23.50
		50	50		22.59		1	23.50		22.59		1	23.50
		100	0		23.50		1	23.50		23.50		1	23.50
	16QAM	1	0		23.23		1	23.50		23.23		1	23.50
		1	49		22.92		1	23.50		22.92		1	23.50
		1	99		22.95		1	23.50		22.95		1	23.50
		50	0		21.89		2	22.50		21.89		2	22.50
		50	24		22.01		2	22.50		22.01		2	22.50
		50	50		22.28		2	22.50		22.28		2	22.50
		100	0		22.10		2	22.50		22.10		2	22.50
	64QAM	1	0		22.39		2	22.50		22.39		2	22.50
		1	49		22.03		2	22.50		22.03		2	22.50
		1	99		22.16		2	22.50		22.16		2	22.50
		50	0		21.23		3	21.50		21.23		3	21.50
		50	24		21.34		3	21.50		21.34		3	21.50
		50	50		21.09		3	21.50		21.09		3	21.50
		100	0		21.4		3	21.50		21.4		3	21.50
BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
					133297		MPR	Tune-up Limit		133297		MPR	Tune-up Limit
					680.5 MHz					680.5 MHz			
15 MHz	QPSK	1	0		24.13		0	24.50		24.13		0	24.50
		1	37		24.28		0	24.50		24.28		0	24.50
		1	74		23.98		0	24.50		23.98		0	24.50
		36	0		23.11		1	23.50		23.11		1	23.50
		36	20		23.26		1	23.50		23.26		1	23.50
		36	39		23.17		1	23.50		23.17		1	23.50
		75	0		23.21		1	23.50		23.21		1	23.50
	16QAM	1	0		23.37		1	23.50		23.37		1	23.50
		1	37		23.29		1	23.50		23.29		1	23.50
		1	74		23.31		1	23.50		23.31		1	23.50
		36	0		22.13		2	22.50		22.13		2	22.50
		36	20		22.24		2	22.50		22.24		2	22.50
		36	39		22.18		2	22.50		22.18		2	22.50
		75	0		22.22		2	22.50		22.22		2	22.50
	64QAM	1	0		22.22		2	22.50		22.22		2	22.50
		1	37		22.09		2	22.50		22.09		2	22.50
		1	74		21.80		2	22.50		21.80		2	22.50
		36	0		21.22		3	21.50		21.22		3	21.50
		36	20		21.05		3	21.50		21.05		3	21.50
		36	39		20.96		3	21.50		20.96		3	21.50
		75	0		21.43		3	21.50		21.43		3	21.50
BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				133172	133297	133422	MPR	Tune-up Limit	133172	133297	133422	MPR	Tune-up Limit
				668 MHz	680.5 MHz	693 MHz			668 MHz	680.5 MHz	693 MHz		
10 MHz	QPSK	1	0	24.23	24.32	24.35	0	24.50	24.23	24.32	24.35	0	24.50
		1	25	24.38	24.49	24.35	0	24.50	24.38	24.49	24.35	0	24.50
		1	49	24.38	24.20	24.39	0	24.50	24.38	24.20	24.39	0	24.50
		25	0	23.21	23.32	23.44	1	23.50	23.21	23.32	23.44	1	23.50
		25	12	23.36	23.45	23.26	1	23.50	23.36	23.45	23.26	1	23.50
		25	25	23.27	23.36	23.34	1	23.50	23.27	23.36	23.34	1	23.50
		50	0	23.31	23.43	23.46	1	23.50	23.31	23.43	23.46	1	23.50
	16QAM	1	0	23.47	23.13	23.16	1	23.50	23.47	23.13	23.16	1	23.50
		1	25	23.29	23.24	23.44	1	23.50	23.29	23.24	23.44	1	23.50
		1	49	23.41	23.20	23.33	1	23.50	23.41	23.20	23.33	1	23.50
		25	0	22.23	22.48	22.19	2	22.50	22.23	22.48	22.19	2	22.50
		25	12	22.34	22.36	22.19	2	22.50	22.34	22.36	22.19	2	22.50
		25	25	22.28	22.21	22.32	2	22.50	22.28	22.21	22.32	2	22.50
		50	0	22.32	22.11	22.49	2	22.50	22.32	22.11	22.49	2	22.50
	64QAM	1	0	22.11	22.05	22.07	2	22.50	22.11	22.05	22.07	2	22.50
		1	25	22.04	21.90	22.11	2	22.50	22.04	21.90	22.11	2	22.50
		1	49	22.12	22.10	22.18	2	22.50	22.12	22.10	22.18	2	22.50
		25	0	20.85	20.88	20.94	3	21.50	20.85	20.88	20.94	3	21.50
		25	12	20.80	20.76	20.87	3	21.50	20.80	20.76	20.87	3	21.50
		25	25	20.84	20.93	20.92	3	21.50	20.84	20.93	20.92	3	21.50
		50	0	20.82	20.76	20.86	3	21.50	20.82	20.76	20.86	3	21.50

LTE Band 71 Measured Results (ANT2) (continued)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				133147	133297	133447	MPR	Tune-up Limit	133147	133297	133447	MPR	Tune-up Limit
				665.5 MHz	680.5 MHz	695.5 MHz			665.5 MHz	680.5 MHz	695.5 MHz		
5 MHz	QPSK	1	0	24.14	23.59	24.26	0	24.50	24.14	23.59	24.26	0	24.50
		1	12	24.15	23.76	24.02	0	24.50	24.15	23.76	24.02	0	24.50
		1	24	24.29	23.61	24.01	0	24.50	24.29	23.61	24.01	0	24.50
		12	0	22.97	22.70	22.95	1	23.50	22.97	22.70	22.95	1	23.50
		12	7	23.03	22.62	22.90	1	23.50	23.03	22.62	22.90	1	23.50
		12	13	23.14	22.55	22.85	1	23.50	23.14	22.55	22.85	1	23.50
		25	0	23.06	22.57	22.92	1	23.50	23.06	22.57	22.92	1	23.50
	16QAM	1	0	23.07	23.46	23.21	1	23.50	23.07	23.46	23.21	1	23.50
		1	12	23.02	23.22	23.00	1	23.50	23.02	23.22	23.00	1	23.50
		1	24	23.27	23.21	22.97	1	23.50	23.27	23.21	22.97	1	23.50
		12	0	21.65	22.45	21.53	2	22.50	21.65	22.45	21.53	2	22.50
		12	7	22.39	22.30	22.37	2	22.50	22.39	22.30	22.37	2	22.50
		12	13	22.49	22.25	22.27	2	22.50	22.49	22.25	22.27	2	22.50
		25	0	22.43	22.32	22.29	2	22.50	22.43	22.32	22.29	2	22.50
	64QAM	1	0	22.32	21.71	22.25	2	22.50	22.32	21.71	22.25	2	22.50
		1	12	22.12	21.60	22.26	2	22.50	22.12	21.60	22.26	2	22.50
		1	24	22.00	21.57	22.31	2	22.50	22.00	21.57	22.31	2	22.50
		12	0	21.09	20.63	20.79	3	21.50	21.09	20.63	20.79	3	21.50
		12	7	21.00	20.57	20.74	3	21.50	21.00	20.57	20.74	3	21.50
		12	13	20.95	20.57	20.74	3	21.50	20.95	20.57	20.74	3	21.50
		25	0	20.99	20.59	20.72	3	21.50	20.99	20.59	20.72	3	21.50

9.5. LTE Up-Link Carrier Aggregation

The following tests were conducted according to the test requirements outlined in section 6.2 of the 3GPP TS36.101 specification.

For inter-band carrier aggregation with uplink assigned to one E-UTRA band (Table 5.6A-1), the requirements in subclause 6.2.3 apply.

For inter-band carrier aggregation with one component carrier per operating band and the uplink active in two E-UTRA bands, the requirements in subclause 6.2.3 apply for each uplink component carrier.

For intra-band contiguous carrier aggregation the allowed Maximum Power Reduction (MPR) for the maximum output power applicable to the DUT in table below. In case the modulation format is different on different component carriers then the MPR is determined by the rules applied to higher order of those modulations.

Modulation	CA bandwidth Class B and C / Smallest Component Carrier Transmission Bandwidth Configuration				MPR (dB)
	25 RB	50 RB	75 RB	100 RB	
QPSK	> 8 and ≤ 25	> 12 and ≤ 50	> 16 and ≤ 75	> 18 and ≤ 100	≤ 1
QPSK	> 25	> 50	> 75	> 100	≤ 2
16 QAM	≤ 8	≤ 12	≤ 16	≤ 18	≤ 1
16 QAM	> 8 and ≤ 25	> 12 and ≤ 50	> 16 and ≤ 75	> 18 and ≤ 100	≤ 2
16 QAM	> 25	> 50	> 75	> 100	≤ 3
64 QAM	≤ 8 and allocation wholly contained within a single CC	≤ 12 and allocation wholly contained within a single CC	≤ 16 and allocation wholly contained within a single CC	≤ 18 and allocation wholly contained within a single CC	≤ 2
64 QAM	> 8 or allocation extends across two CC's	> 12 or allocation extends across two CC's	> 16 or allocation extends across two CC's	> 18 or allocation extends across two CC's	≤ 3

For PUCCH and SRS transmissions, the allowed MPR is according to that specified for PUSCH WPKD modulation for the corresponding transmission bandwidth.

For intra-band contiguous carrier aggregation bandwidth class C with non-contiguous resource allocation, the allowed Maximum Power Reduction (MPR) for the maximum output power in Table 6.2.2A-1 is specified as follows

$$\text{MPR} = \text{CEIL} \{ \min(M_A, M_{\text{IM5}}), 0.5 \}$$

Where M_A is defined as follows

$$M_A = \begin{cases} 8.2 & ; 0 \leq A < 0.025 \\ 9.2 - 40A & ; 0.025 \leq A < 0.05 \\ 8 - 16A & ; 0.05 \leq A < 0.25 \\ 4.83 - 3.33A & ; 0.25 \leq A \leq 0.4 \end{cases}$$

$$3.83 - 0.83A \quad ; 0.4 \leq A \leq 1$$

and M_{IM5} is defined as follows

$$M_{IM5} = \begin{aligned} &4.5 \quad ; \Delta_{IM5} < 1.5 * BW_{Channel_CA} \\ &6.0 \quad ; 1.5 * BW_{Channel_CA} \leq \Delta_{IM5} < BW_{Channel_CA}/2 + \Delta f_{00B} \\ &M_A \quad ; \Delta_{IM5} \geq BW_{Channel_CA}/2 + \Delta f_{00B} \end{aligned}$$

Where

$$A = N_{RB_alloc} / N_{RB_agg}$$

$$\Delta_{IM5} = \max(|F_{C_agg} - (3 * F_{agg_alloc_low} - 2 * F_{agg_alloc_high})|, |F_{C_agg} - (3 * F_{agg_alloc_high} - 2 * F_{agg_alloc_low})|)$$

$CEIL\{M_A, 0.5\}$ means rounding upwards to closest 0.5dB, i.e. $MPR \in [3.0, 3.5, 4.0, 4.5, 5.0, 5.5, 6.0, 6.5, 7.0, 7.5, 8.0, 8.5]$

For intra-band carrier aggregation, the MPR is evaluated per slot and given by the maximum value taken over the transmission(s) on all component carriers within the slot; the maximum MPR over the two slots is then applied for the entire subframe.

For intra-band non-contiguous carrier aggregation with one uplink carrier on the PCC, the requirements in the subclause 6.2.3 apply. For intra-band non-contiguous aggregation with two uplink carriers the MPR is defined for those E-UTRA bands where maximum possible $W_{GAP} \leq 42.2$ MHz as follows

$$MPR = CEIL\{M_A, 0.5\}$$

Where M_N is defined as follows

$$M_N = \begin{aligned} &-0.125N + 18.25 \quad ; 2 \leq N \leq 50 \\ &-0.0333 N + 13.67 \quad ; 50 < N \leq 200 \end{aligned}$$

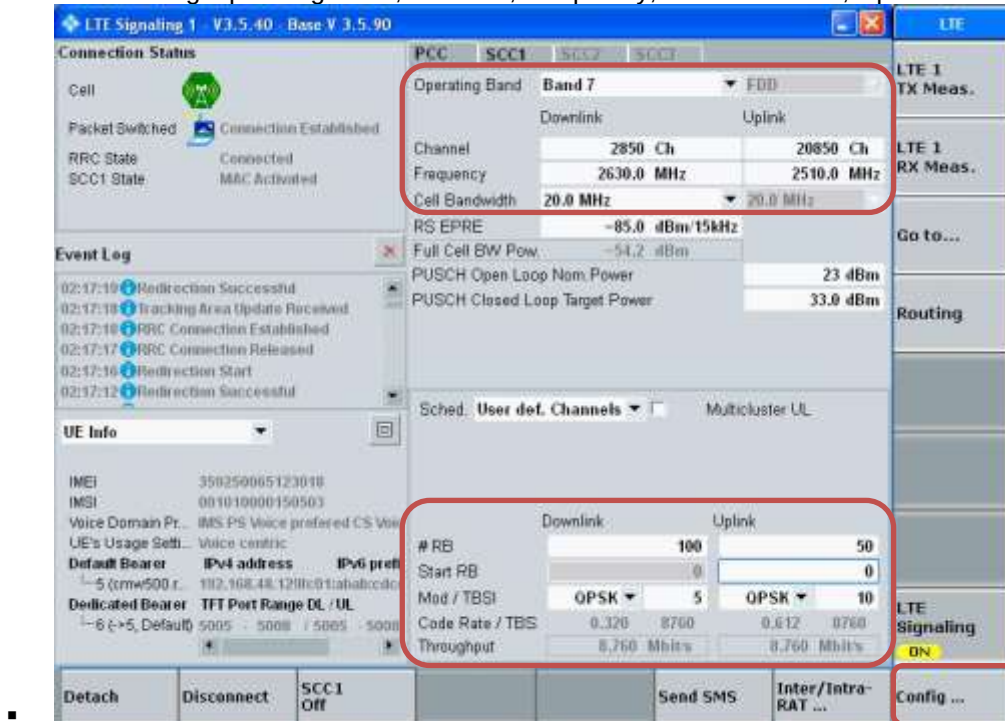
Where $N = N_{RB_alloc}$ is the number of allocated resource blocks.

For the UE maximum output power modified by MPR, the power limits specified in subclause 6.2.5A apply.

LTE Carrier Aggregation Test Signal Set-up Procedure**(Use normal LTE set-up procedure in addition with the following steps)**

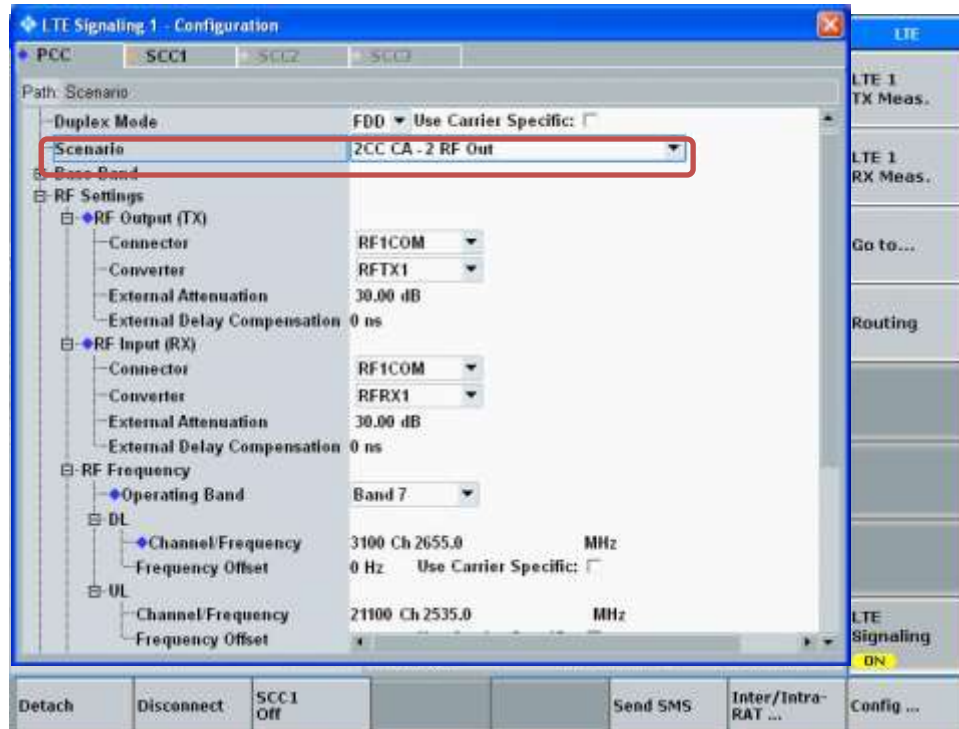
Set to CMW-500 with following parameters:

- PCC tab:
 - Select the testing Operating Band, Channel, Frequency, Cell Bandwidth, Uplink RBs

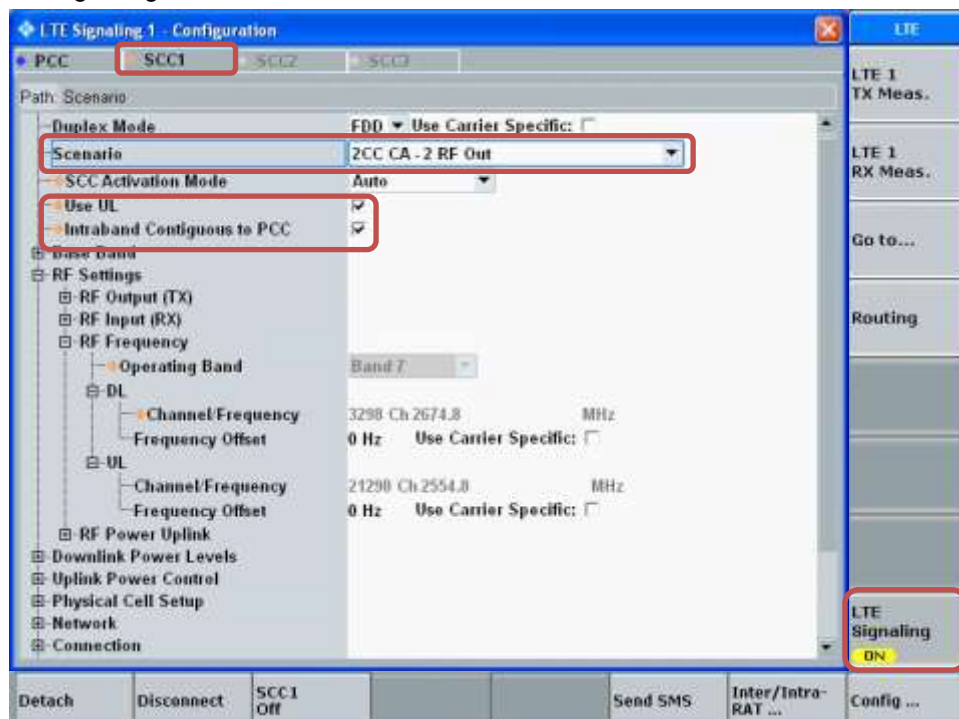


- Go to "Config...."

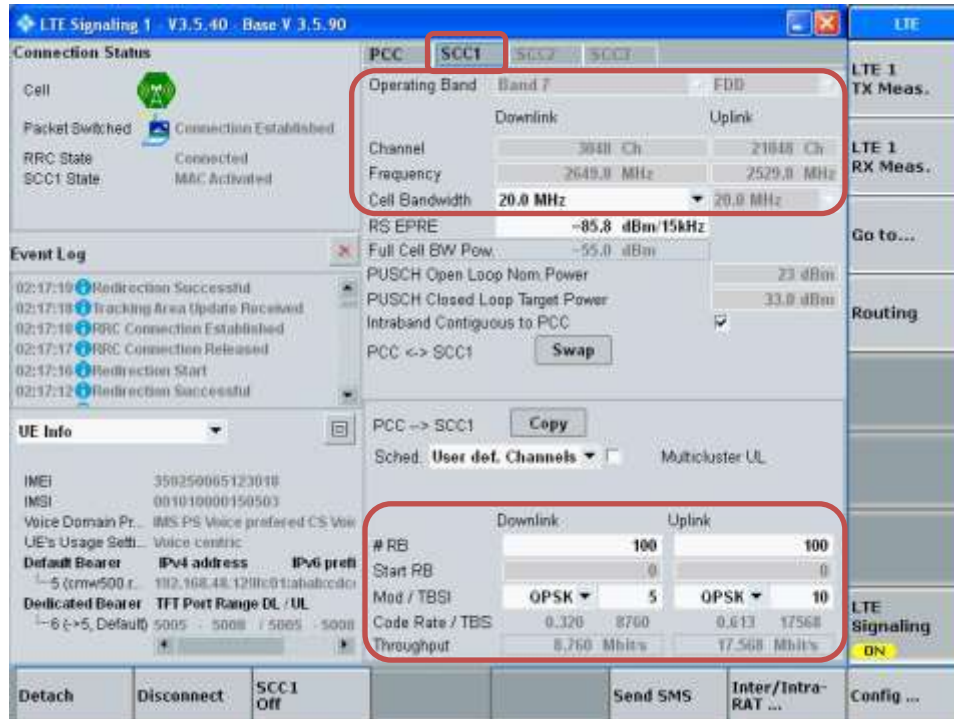
- Go to "Scenario"
- Set to "2CC CA – 2 RF Out"



- Select "SCC1" tab
- Go to "Scenario"
- Set to "2CC CA – 2 RF Out"
- Enable "Use UL"
- Enable "Intraband Contiguous to PCC"
- Select "LTE Signaling" button

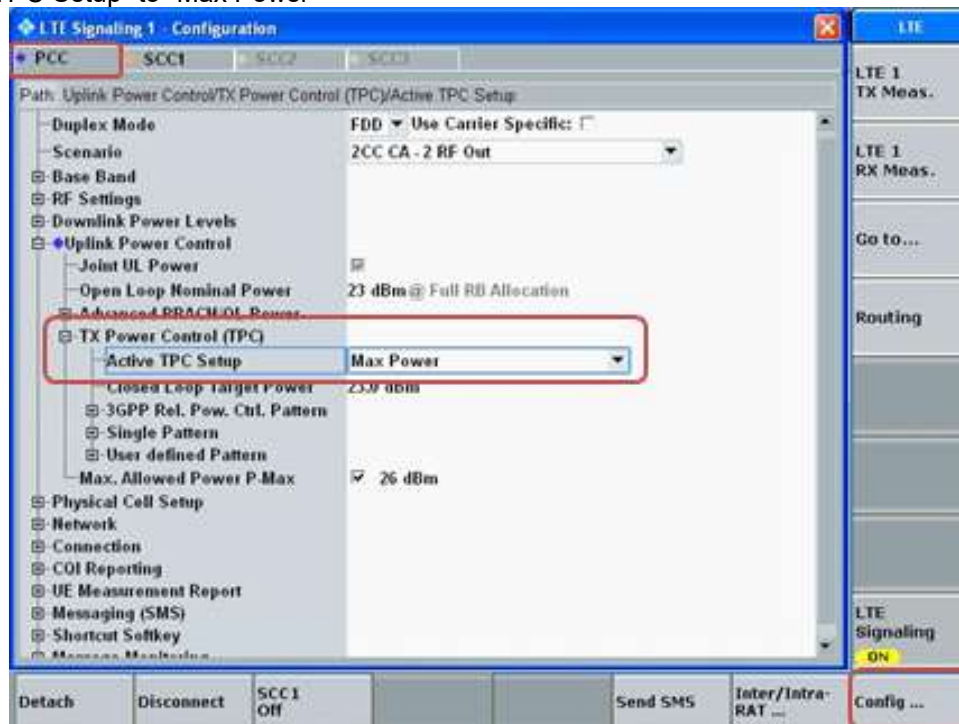


- Select “SCC1” tab
 - Select the testing Cell Bandwidth, Uplink RBs

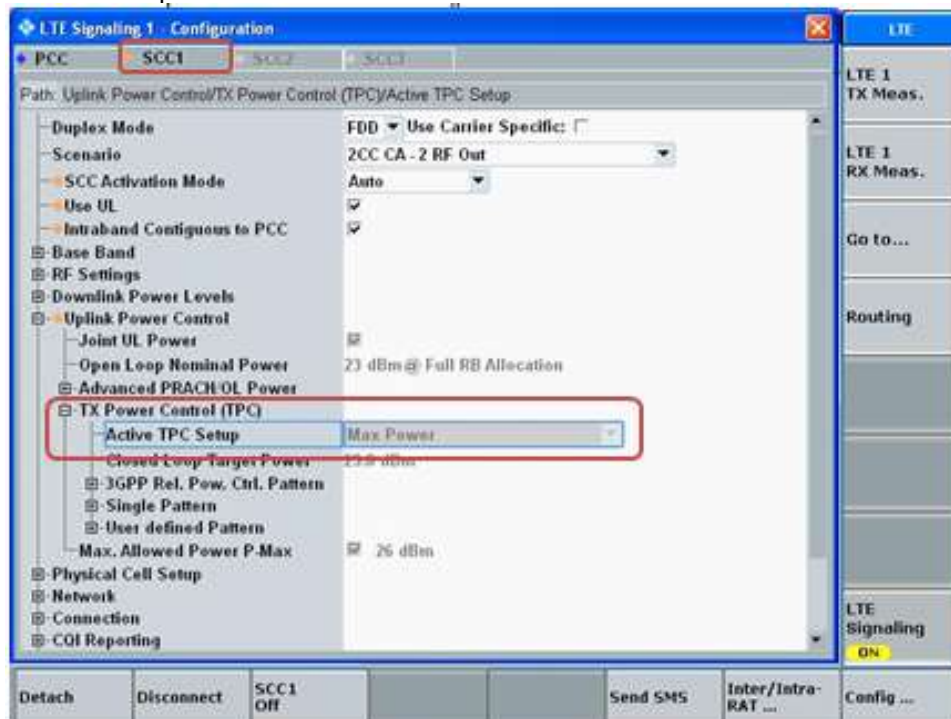


Max Power Setting

- Select “Config ...” button
- Select PCC tab
- Set “Active TPC Setup” to “Max Power”

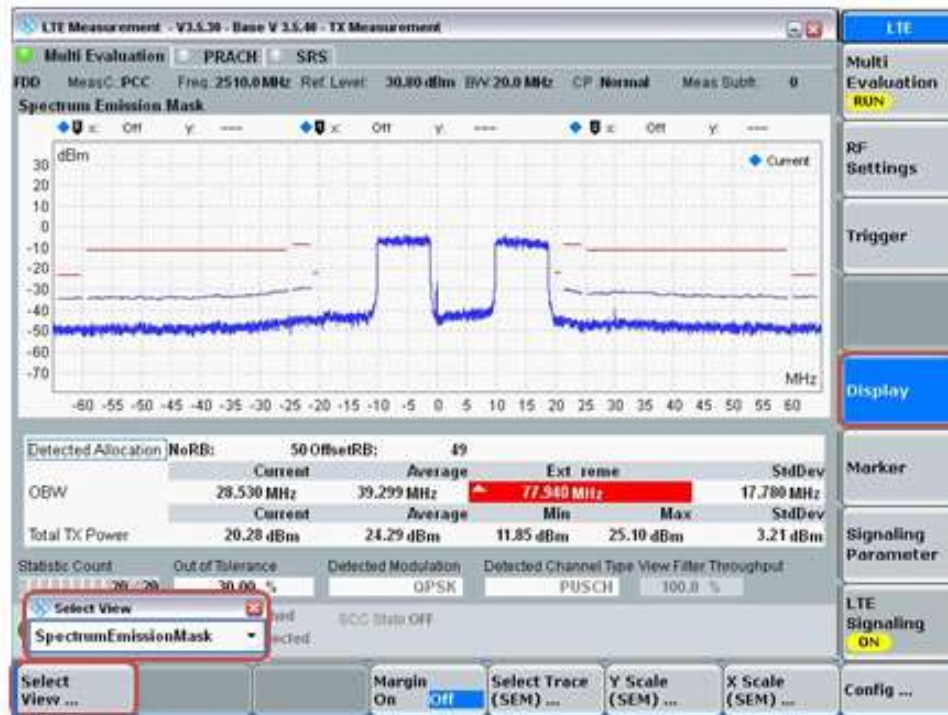


- Select SCC1 tab
- Verify that “Active TPC Setup” is set to “Max Power”



View TX Power

- Go to “Display”
- Select “Select View...”
- Select “Spectrum Emission Mask”



LTE Intra-Band Contiguous Carrier Aggregation

UL CA shall be tested based on the worst-case SAR configuration determined from non-CA SAR testing result. The channel BW, channel number, RB allocation, etc. would be selected to allow contiguous CA of PCC and SCC. Uplink output power for UL CA is the total power measured across the PCC and SCC.

UL CA power measurements were performed for each antennas (ANT1 and ANT2) at with QPSK modulation based on the worst-case standalone SAR.

The UL CA mode power measurements represent the total power across both carriers. Measurements were made for all supported PCC bandwidths using the channel/RB combination resulting in the highest standalone output power at the least MPR (0 dB). SCCs were set to use configurations similar to the PCC to establish conservative or worst case equivalent SAR test conditions (highest maximum power with MPR of 0 dB and RB allocation setting).

The standalone power measurement is the power for the PCC in the non-CA mode (i.e. single carrier power). In all cases the UL CA power is less than or equal to the standalone power, which is in accordance with the tune-up limits in table below.

According to November 2017 TCB workshop, Uplink CA SAR Test Guidance as follows:

- a) When the maximum output for UL CA is $\leq$ standalone LTE mode (without CA)
 - PCC is configured according to the highest standalone SAR configuration tested
 - SCC and subsequent CCs are configured according to procedures used for power measurement and parameters (BW, RB etc.) similar to that used for the PCC
- b) When the Reported SAR for UL CA configuration, described above, is > 1.2 W/kg, UL CA SAR is also required for all required test channels(PCC based)
- c) UL CA SAR is also required for standalone SAR configurations > 1.2 W/kg when they are scaled to the UL CA power level

Maximum Output Power (Tune-up Limit) for LTE UL Carrier Aggregation

Intra-Band Contiguous	Mode	Maximum Output Power (Tune-up Limit) (dBm)			
		ANT1		ANT2	
		Mode A	Mode B	Mode A	Mode B
CA_5B	QPSK	25.00	25.00	23.50	23.50
CA_7C	QPSK	25.00	20.50	17.75	19.75
CA_41C (PC3)	QPSK	25.00	23.00	19.75	21.50
CA_41C (PC2)	QPSK	27.00	23.00	19.75	21.50

LTE CA 5B Measured Results

UL CA Combination	Antenna	Power Mode	Modulation	PCC1/25				SCC				Standalone Power		(PCC + SCC) UL CA Power		
				BW (MHz)	Freq	RB	Offset	BW (MHz)	Freq	RB	Offset	Tune-Up Limit (dBm)	UL CA Inactive (dBm)	Tune-Up Limit (dBm)	UL CA active (dBm)	Delta
CA_5B	ANT 1	Mode A	QPSK	10	836.5	1	49	5	843.7	1	0	25.70	25.58	25.00	24.83	-0.8
CA_5B	ANT 1	Mode B	QPSK	10	836.5	1	49	5	843.7	1	0	25.70	25.58	25.00	24.83	-0.8
CA_5B	ANT 2	Mode A	QPSK	10	836.5	1	49	5	843.7	1	0	24.50	24.24	23.50	23.30	-0.9
CA_5B	ANT 2	Mode B	QPSK	10	836.5	1	49	5	843.7	1	0	24.50	24.24	23.50	23.30	-0.9

Note(s):

PCC RB allocation setting for UL CA has been adjusted based on the worst-case power.

LTE CA 7C Measured Results

UL CA Combination	Antenna	Power Mode	Modulation	PCC				SCC				Standalone Power		(PCC + SCC) UL CA Power		
				BW (MHz)	Freq	RB	Offset	BW (MHz)	Freq	RB	Offset	Tune-Up Limit (dBm)	UL CA Inactive (dBm)	Tune-Up Limit (dBm)	UL CA active (dBm)	Delta
CA_7C	ANT 1	Mode A	QPSK	20	2535	1	99	20	2554.8	1	0	25.70	25.50	25.00	24.70	-0.8
CA_7C	ANT 1	Mode B	QPSK	20	2535	1	99	20	2554.8	1	0	20.50	20.30	20.50	20.40	0.1
CA_7C	ANT 2	Mode A	QPSK	20	2535	1	99	20	2554.8	1	0	17.75	17.74	17.75	17.74	0.0
CA_7C	ANT 2	Mode B	QPSK	20	2535	1	99	20	2554.8	1	0	19.75	19.40	19.75	19.68	0.3

Note(s):

PCC RB allocation setting for UL CA has been adjusted based on the worst-case power.

LTE CA 41C (PC3) Measured Results

UL CA Combination	Antenna	Power Mode	Modulation	PCC				SCC				Standalone Power		(PCC + SCC) UL CA Power		
				BW (MHz)	Freq	RB	Offset	BW (MHz)	Freq	RB	Offset	Tune-Up Limit (dBm)	UL CA Inactive (dBm)	Tune-Up Limit (dBm)	UL CA active (dBm)	Delta
CA_41C	ANT 1	Mode A	QPSK	20	2593	1	99	20	2612.8	1	0	25.70	25.59	25.00	24.97	-0.6
CA_41C	ANT 1	Mode B	QPSK	20	2593	1	99	20	2612.8	1	0	23.00	22.50	23.00	23.00	0.5
CA_41C	ANT 1	Mode B	QPSK	20	2549.5	1	99	20	2569.3	1	0	23.00	22.51	23.00	22.98	0.5
CA_41C	ANT 2	Mode A	QPSK	20	2593	1	99	20	2612.8	1	0	19.75	19.56	19.75	19.60	0.0
CA_41C	ANT 2	Mode B	QPSK	20	2593	1	99	20	2612.8	1	0	21.50	21.40	21.25	21.10	-0.3

Note(s):

1. PCC RB allocation setting for UL CA has been adjusted based on the worst-case power.
2. Additional SAR for UL CA PC2 is not required. Test reduction has been applied base on standalone SAR.

LTE Inter-Band Carrier Aggregation

According to October 2018 TCB workshop, Uplink CA SAR Test Guidance as follows:

- Provide the single uplink SAR values you have obtained for the relevant SAR configurations and frequency bands that employ inter-band uplink carrier aggregation.
- If the single uplink 1-g SAR values for each band are both less than 0.8 W/kg and the algebraic summation of the 1-g SAR values are less than 1.45 W/kg no additional measurements need to be performed.
- If one of the single uplink 1-g SAR values is greater than 0.8 W/kg, instead of algebraically summing the 1-g SAR values, sum up the SAR distributions, similar to the enlarged zoom scan (volume scan) procedures found in FCC KDB Publication 865664 D01 SAR Measurement 100 MHz to 6 GHz v01r04.
- If the algebraic sum of the 1-g SAR values is > 1.45 W/kg additional measurements may have to be made. Submit a KDB inquiry for additional guidance.

Maximum Output Power (Tune-up Limit) and SAR test exemption for LTE UL Carrier Aggregation

Test positions and test channels used for the testing below are based on the standalone worst-case SAR results. UL CA is reduced by 3dB therefore power and SAR was estimated based on standalone results.

UL CA inter-bands	RF Exposure Conditions	Antenna Ports				Standalone worst-case position				UL CA				
						Tune-up Limit (dBm)		Reported 1-g SAR (W/kg)		Tune-up Limit (-3dB) (dBm)		Reported 1-g SAR (W/kg)		
		CC1		CC2		CC1	CC2	CC1	CC2	CC1	CC2	CC1	CC2	CC1+CC2
CA_2A-5A	Head	ANT1	2A	ANT2	5A	25.70	24.50	0.426	0.455	22.70	21.50	0.214	0.228	0.442
		ANT2	2A	ANT1	5A	17.50	25.70	0.744	0.259	14.50	22.70	0.373	0.130	0.503
	Body & Hotspot	ANT1	2A	ANT2	5A	20.25	24.50	0.940	0.309	17.25	21.50	0.471	0.155	0.626
		ANT2	2A	ANT1	5A	18.50	25.70	0.855	0.367	15.50	22.70	0.429	0.184	0.612
CA_2A-12A	Head	ANT1	2A	ANT2	12A	25.70	24.50	0.426	0.367	22.70	21.50	0.214	0.184	0.397
		ANT2	2A	ANT1	12A	17.50	25.70	0.744	0.256	14.50	22.70	0.373	0.128	0.501
	Body & Hotspot	ANT1	2A	ANT2	12A	20.25	24.50	0.940	0.486	17.25	21.50	0.471	0.244	0.715
		ANT2	2A	ANT1	12A	18.50	25.70	0.855	0.791	15.50	22.70	0.429	0.396	0.825
CA_2A-13A	Head	ANT1	2A	ANT2	13A	25.70	24.50	0.426	0.482	22.70	21.50	0.214	0.242	0.455
		ANT2	2A	ANT1	13A	17.50	25.70	0.744	0.274	14.50	22.70	0.373	0.137	0.510
	Body & Hotspot	ANT1	2A	ANT2	13A	20.25	24.50	0.940	0.612	17.25	21.50	0.471	0.307	0.778
		ANT2	2A	ANT1	13A	18.50	25.70	0.855	0.755	15.50	22.70	0.429	0.378	0.807
CA_2A-14A	Head	ANT1	2A	ANT2	14A	25.70	24.50	0.426	0.376	22.70	21.50	0.214	0.188	0.402
		ANT2	2A	ANT1	14A	17.50	25.70	0.744	0.293	14.50	22.70	0.373	0.147	0.520
	Body & Hotspot	ANT1	2A	ANT2	14A	20.25	24.50	0.940	0.519	17.25	21.50	0.471	0.260	0.731
		ANT2	2A	ANT1	14A	18.50	25.70	0.855	0.699	15.50	22.70	0.429	0.350	0.779
CA_4A-5A	Head	ANT1	4A	ANT2	5A	25.70	24.50	0.289	0.455	22.70	21.50	0.145	0.228	0.373
		ANT2	4A	ANT1	5A	21.25	25.70	0.744	0.259	18.25	22.70	0.373	0.130	0.503
	Body & Hotspot	ANT1	4A	ANT2	5A	21.50	24.50	0.944	0.309	18.50	21.50	0.473	0.155	0.628
		ANT2	4A	ANT1	5A	21.50	25.70	0.875	0.367	18.50	22.70	0.439	0.184	0.622
CA_4A-12A	Head	ANT1	4A	ANT2	12A	25.70	24.50	0.289	0.367	22.70	21.50	0.145	0.184	0.329
		ANT2	4A	ANT1	12A	21.25	25.70	0.744	0.256	18.25	22.70	0.373	0.128	0.501
	Body & Hotspot	ANT1	4A	ANT2	12A	21.50	24.50	0.944	0.486	18.50	21.50	0.473	0.244	0.717
		ANT2	4A	ANT1	12A	21.50	25.70	0.875	0.791	18.50	22.70	0.439	0.396	0.835
CA_4A-13A	Head	ANT1	4A	ANT2	13A	25.70	24.50	0.289	0.482	22.70	21.50	0.145	0.242	0.386
		ANT2	4A	ANT1	13A	21.25	25.70	0.744	0.274	18.25	22.70	0.373	0.137	0.510
	Body & Hotspot	ANT1	4A	ANT2	13A	21.50	24.50	0.944	0.612	18.50	21.50	0.473	0.307	0.780
		ANT2	4A	ANT1	13A	21.50	25.70	0.875	0.755	18.50	22.70	0.439	0.378	0.817
CA_5A-7A	Head	ANT1	5A	ANT2	7A	25.70	17.75	0.259	0.796	22.70	14.75	0.130	0.399	0.529
		ANT2	5A	ANT1	7A	24.50	25.70	0.455	0.421	21.50	22.70	0.228	0.211	0.439
	Body & Hotspot	ANT1	5A	ANT2	7A	25.70	19.75	0.586	0.875	22.70	16.75	0.294	0.439	0.732
		ANT2	5A	ANT1	7A	24.50	20.50	0.367	0.927	21.50	17.50	0.184	0.465	0.649
CA_5A-66A	Head	ANT1	5A	ANT2	66A	25.70	21.25	0.259	0.744	22.70	18.25	0.130	0.373	0.503
		ANT2	5A	ANT1	66A	24.50	25.70	0.455	0.289	21.50	22.70	0.228	0.145	0.373
	Body & Hotspot	ANT1	5A	ANT2	66A	25.70	21.50	0.586	0.875	22.70	18.50	0.294	0.439	0.732
		ANT2	5A	ANT1	66A	24.50	21.50	0.367	0.994	21.50	18.50	0.184	0.498	0.682

UL CA inter-bands	RF Exposure Conditions	Antennna Ports				Standalone worst-case position				UL CA				
						Tune-up Limit (dBm)		Reported 1-g SAR (W/kg)		Tune-up Limit (-3dB) (dBm)		Reported 1-g SAR (W/kg)		
		CC1		CC2		CC1	CC2	CC1	CC2	CC1	CC2	CC1	CC2	CC1+CC2
CA_12A-30A	Head	ANT1	12A	ANT2	30A	25.70	17.75	0.256	0.746	22.70	14.75	0.128	0.374	0.502
		ANT2	12A	ANT1	30A	24.50	25.70	0.367	0.534	21.50	22.70	0.184	0.268	0.452
	Body & Hotspot	ANT1	12A	ANT2	30A	25.70	20.50	0.791	0.853	22.70	17.50	0.396	0.428	0.824
		ANT2	12A	ANT1	30A	24.50	24.00	0.486	0.969	21.50	21.00	0.244	0.486	0.729
CA_12A-66A	Head	ANT1	12A	ANT2	66A	25.70	21.25	0.256	0.744	22.70	18.25	0.128	0.373	0.501
		ANT2	12A	ANT1	66A	24.50	25.70	0.367	0.289	21.50	22.70	0.184	0.145	0.329
	Body & Hotspot	ANT1	12A	ANT2	66A	25.70	21.50	0.791	0.875	22.70	18.50	0.396	0.439	0.835
		ANT2	12A	ANT1	66A	24.50	21.50	0.486	0.994	21.50	18.50	0.244	0.498	0.742
CA_13A-66A	Head	ANT1	13A	ANT2	66A	25.70	21.25	0.274	0.744	22.70	18.25	0.137	0.373	0.510
		ANT2	13A	ANT1	66A	24.50	25.70	0.482	0.289	21.50	22.70	0.242	0.145	0.386
	Body & Hotspot	ANT1	13A	ANT2	66A	25.70	21.50	0.755	0.875	22.70	18.50	0.378	0.439	0.817
		ANT2	13A	ANT1	66A	24.50	21.50	0.612	0.994	21.50	18.50	0.307	0.498	0.805
CA_14A-30A	Head	ANT1	14A	ANT2	30A	25.70	17.75	0.293	0.746	22.70	14.75	0.147	0.374	0.521
		ANT2	14A	ANT1	30A	24.50	25.70	0.376	0.534	21.50	22.70	0.188	0.268	0.456
	Body & Hotspot	ANT1	14A	ANT2	30A	25.70	20.50	0.699	0.853	22.70	17.50	0.350	0.428	0.778
		ANT2	14A	ANT1	30A	24.50	24.00	0.519	0.969	21.50	21.00	0.260	0.486	0.746
CA_14A-66A	Head	ANT1	14A	ANT2	66A	25.70	21.25	0.293	0.744	22.70	18.25	0.147	0.373	0.520
		ANT2	14A	ANT1	66A	24.50	25.70	0.376	0.289	21.50	22.70	0.188	0.145	0.333
	Body & Hotspot	ANT1	14A	ANT2	66A	25.70	21.50	0.699	0.875	22.70	18.50	0.350	0.439	0.789
		ANT2	14A	ANT1	66A	24.50	21.50	0.519	0.994	21.50	18.50	0.260	0.498	0.758

Conclusion:

The single uplink 1-g SAR values for each band are both less than 0.8 W/kg and the algebraic summation of the 1-g SAR values are less than 1.45 W/kg. Therefore, no additional measurements are required.

9.6. LTE Down-Link Carrier Aggregation

This device supports LTE downlink carrier aggregation (CA). The tables appendix G is show the supported frequency bands of the device for DL Inter-band and DL Intra-band combinations.

9.7. Wi-Fi 2.4GHz (DTS Band)

Wi-Fi 2.4 GHz ($P_{\text{cell_OFF}}$ and $P_{\text{cell_ON}}$)

When the same transmission mode configurations have the same maximum output power on the same channel for the 802.11 b/g/n/ac/ax modes, the channel in the lower order/sequence 802.11 mode (i.e. a, g, n then ac) is selected. Therefore the SAR measurements performed for the 802.11b modes, as the lowest order modulation, cover 802.11g/n/ac/ax modes.

According to KDB 248227 D01, simultaneous SAR provisions in KDB 447498 D01 apply to determine simultaneous transmission SAR test exclusion for Wi-Fi MIMO. If the sum of 1-g single transmission chain SAR measurements is $<1.6\text{W/kg}$ and/or the MIMO output power is equal or less than a single chain, then no additional SAR measurements for simultaneously at the specified maximum output power of MIMO operation.

When antennas are spatially separated to the extent that SAR distributions do not overlap and can be treated independently, SAR compliance for simultaneous transmission is determined separately for each individual antenna.

For 2.4 GHz band, there are two use cases:

- $P_{\text{Cell_ON}}$: This will be used when both WWAN and Wi-Fi radios are ON.
- $P_{\text{Cell_OFF}}$: This will be used when only Wi-Fi radio is ON

Mode	Channel	Frequency	Pcell OFF				Pcell ON			
			ANT5		ANT2		ANT5		ANT2	
			Mode A	Mode B	Mode A	Mode B	Mode A	Mode B	Mode A	Mode B
802.11b DSSS (SISO)	1	2412	20.50	20.50	20.25	20.50	20.50	16.50	17.00	18.25
	2	2417	21.50	20.75	20.25	21.50	21.50	16.50	17.00	18.25
	3	2421.5	21.50	20.75	20.25	21.50	21.50	16.50	17.00	18.25
	4	2427	21.50	20.75	20.25	21.50	21.50	16.50	17.00	18.25
	5	2432	21.50	20.75	20.25	21.50	21.50	16.50	17.00	18.25
	6	2437	21.50	20.75	20.25	21.50	21.50	16.50	17.00	18.25
	7	2442	21.50	20.75	20.25	21.50	21.50	16.50	17.00	18.25
	8	2447	21.50	20.75	20.25	21.50	21.50	16.50	17.00	18.25
	9	2452	21.50	20.75	20.25	21.50	21.50	16.50	17.00	18.25
	10	2457	21.50	20.75	20.25	21.50	21.50	16.50	17.00	18.25
	11	2462	21.50	20.75	20.25	21.50	21.50	16.50	17.00	18.25
	12	2467	20.50	20.50	20.25	20.50	20.50	16.50	17.00	18.25
	13	2472	19.00	19.00	19.00	19.00	19.00	16.50	17.00	18.25
Mode	Channel	Frequency	Pcell OFF				Pcell ON			
			ANT5		ANT2		ANT5		ANT2	
			Mode A	Mode B	Mode A	Mode B	Mode A	Mode B	Mode A	Mode B
802.11g/n/ac OFDM (SISO)	1	2412	17.50	17.50	17.50	17.50	17.50	16.50	17.00	17.50
	2	2417	19.50	19.50	19.50	19.50	19.50	16.50	17.00	18.25
	3	2421.5	21.50	20.75	20.25	21.50	21.50	16.50	17.00	18.25
	4	2427	21.50	20.75	20.25	21.50	21.50	16.50	17.00	18.25
	5	2432	21.50	20.75	20.25	21.50	21.50	16.50	17.00	18.25
	6	2437	21.50	20.75	20.25	21.50	21.50	16.50	17.00	18.25
	7	2442	21.50	20.75	20.25	21.50	21.50	16.50	17.00	18.25
	8	2447	21.50	20.75	20.25	21.50	21.50	16.50	17.00	18.25
	9	2452	21.50	20.75	20.25	21.50	21.50	16.50	17.00	18.25
	10	2457	19.50	19.50	19.50	19.50	19.50	16.50	17.00	18.25
	11	2462	17.50	17.50	17.50	17.50	17.50	16.50	17.00	17.50
	12	2467	15.50	15.50	15.50	15.50	15.50	15.50	15.50	15.50
	13	2472	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
Mode	Channel	Frequency	Pcell OFF				Pcell ON			
			ANT5		ANT2		ANT5		ANT2	
			Mode A	Mode B	Mode A	Mode B	Mode A	Mode B	Mode A	Mode B
802.11ax HE20 SU OFDMA (SISO)	1	2412	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
	2	2417	18.00	18.00	18.00	18.00	18.00	16.50	17.00	18.00
	3	2422	21.50	20.75	20.25	21.50	21.50	16.50	17.00	18.25
	4	2427	21.50	20.75	20.25	21.50	21.50	16.50	17.00	18.25
	5	2432	21.50	20.75	20.25	21.50	21.50	16.50	17.00	18.25
	6	2437	21.50	20.75	20.25	21.50	21.50	16.50	17.00	18.25
	7	2442	21.50	20.75	20.25	21.50	21.50	16.50	17.00	18.25
	8	2447	21.50	20.75	20.25	21.50	21.50	16.50	17.00	18.25
	9	2452	21.50	20.75	20.25	21.50	21.50	16.50	17.00	18.25
	10	2457	18.00	18.00	18.00	18.00	18.00	16.50	17.00	18.00
	11	2462	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
	12	2467	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
	13	2472	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50

Mode	Channel	Frequency	Pcell OFF				Pcell ON			
			ANT5		ANT2		ANT5		ANT2	
			Mode A	Mode B	Mode A	Mode B	Mode A	Mode B	Mode A	Mode B
802.11ax RU106/RU52 OFDMA (SISO)	1	2412	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
	2	2417	18.00	18.00	18.00	18.00	18.00	16.50	17.00	18.00
	3	2422	21.50	20.75	20.25	21.50	21.50	16.50	17.00	18.25
	4	2427	21.50	20.75	20.25	21.50	21.50	16.50	17.00	18.25
	5	2432	21.50	20.75	20.25	21.50	21.50	16.50	17.00	18.25
	6	2437	21.50	20.75	20.25	21.50	21.50	16.50	17.00	18.25
	7	2442	21.50	20.75	20.25	21.50	21.50	16.50	17.00	18.25
	8	2447	21.50	20.75	20.25	21.50	21.50	16.50	17.00	18.25
	9	2452	21.50	20.75	20.25	21.50	21.50	16.50	17.00	18.25
	10	2457	18.00	18.00	18.00	18.00	18.00	16.50	17.00	18.00
	11	2462	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
	12	2467	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
	13	2472	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Mode	Channel	Frequency	Pcell OFF				Pcell ON			
			ANT5		ANT2		ANT5		ANT2	
			Mode A	Mode B	Mode A	Mode B	Mode A	Mode B	Mode A	Mode B
802.11ax HE20 RU26 OFDMA (SISO)	1	2412	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
	2	2417	18.00	18.00	18.00	18.00	18.00	16.50	17.00	18.00
	3	2422	21.50	20.75	20.25	21.50	21.50	16.50	17.00	18.25
	4	2427	21.50	20.75	20.25	21.50	21.50	16.50	17.00	18.25
	5	2432	21.50	20.75	20.25	21.50	21.50	16.50	17.00	18.25
	6	2437	21.50	20.75	20.25	21.50	21.50	16.50	17.00	18.25
	7	2442	21.50	20.75	20.25	21.50	21.50	16.50	17.00	18.25
	8	2447	21.50	20.75	20.25	21.50	21.50	16.50	17.00	18.25
	9	2452	21.50	20.75	20.25	21.50	21.50	16.50	17.00	18.25
	10	2457	18.00	18.00	18.00	18.00	18.00	16.50	17.00	18.00
	11	2462	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
	12	2467	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
	13	2472	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mode	Channel	Frequency	Pcell OFF				Pcell ON			
			ANT5		ANT2		ANT5		ANT2	
			Mode A	Mode B	Mode A	Mode B	Mode A	Mode B	Mode A	Mode B
802.11n/ac OFDM (MIMO)	1	2412	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50
	2	2417	18.50	18.50	18.50	18.50	18.50	16.50	17.00	18.25
	3	2422	20.00	20.00	20.00	20.00	20.00	16.50	17.00	18.25
	4	2427	21.50	20.75	20.25	21.50	21.50	16.50	17.00	18.25
	5	2432	21.50	20.75	20.25	21.50	21.50	16.50	17.00	18.25
	6	2437	21.50	20.75	20.25	21.50	21.50	16.50	17.00	18.25
	7	2442	21.50	20.75	20.25	21.50	21.50	16.50	17.00	18.25
	8	2447	21.50	20.75	20.25	21.50	21.50	16.50	17.00	18.25
	9	2452	20.00	20.00	20.00	20.00	20.00	16.50	17.00	18.25
	10	2457	18.50	18.50	18.50	18.50	18.50	16.50	17.00	18.25
	11	2462	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50
	12	2467	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50
	13	2472	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00

Mode	Channel	Frequency	Pcell OFF				Pcell ON			
			ANT5		ANT2		ANT5		ANT2	
			Mode A	Mode B	Mode A	Mode B	Mode A	Mode B	Mode A	Mode B
802.11ax HE20 SU OFDMA (MIMO)	1	2412	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00
	2	2417	17.00	17.00	17.00	17.00	17.00	16.50	17.00	17.00
	3	2422	19.00	19.00	19.00	19.00	19.00	16.50	17.00	18.25
	4	2427	21.50	20.75	20.25	21.50	21.50	16.50	17.00	18.25
	5	2432	21.50	20.75	20.25	21.50	21.50	16.50	17.00	18.25
	6	2437	21.50	20.75	20.25	21.50	21.50	16.50	17.00	18.25
	7	2442	21.50	20.75	20.25	21.50	21.50	16.50	17.00	18.25
	8	2447	21.50	20.75	20.25	21.50	21.50	16.50	17.00	18.25
	9	2452	18.50	18.50	18.50	18.50	18.50	16.50	17.00	18.25
	10	2457	17.00	17.00	17.00	17.00	17.00	16.50	17.00	17.00
	11	2462	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00
	12	2467	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00
	13	2472	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50
Mode	Channel	Frequency	Pcell OFF				Pcell ON			
			ANT5		ANT2		ANT5		ANT2	
			Mode A	Mode B	Mode A	Mode B	Mode A	Mode B	Mode A	Mode B
802.11ax HE20 RU106/RU52 OFDMA (MIMO)	1	2412	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00
	2	2417	17.00	17.00	17.00	17.00	17.00	16.50	17.00	17.00
	3	2422	19.00	19.00	19.00	19.00	19.00	16.50	17.00	18.25
	4	2427	21.50	20.75	20.25	21.50	21.50	16.50	17.00	18.25
	5	2432	21.50	20.75	20.25	21.50	21.50	16.50	17.00	18.25
	6	2437	21.50	20.75	20.25	21.50	21.50	16.50	17.00	18.25
	7	2442	21.50	20.75	20.25	21.50	21.50	16.50	17.00	18.25
	8	2447	21.50	20.75	20.25	21.50	21.50	16.50	17.00	18.25
	9	2452	18.50	18.50	18.50	18.50	18.50	16.50	17.00	18.25
	10	2457	17.00	17.00	17.00	17.00	17.00	16.50	17.00	17.00
	11	2462	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00
	12	2467	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00
	13	2472	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Mode	Channel	Frequency	Pcell OFF				Pcell ON			
			ANT5		ANT2		ANT5		ANT2	
			Mode A	Mode B	Mode A	Mode B	Mode A	Mode B	Mode A	Mode B
802.11ax HE20 RU26 OFDMA (MIMO)	1	2412	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00
	2	2417	17.00	17.00	17.00	17.00	17.00	16.50	17.00	17.00
	3	2422	19.00	19.00	19.00	19.00	19.00	16.50	17.00	18.25
	4	2427	20.00	20.00	20.00	20.00	20.00	16.50	17.00	18.25
	5	2432	20.00	20.00	20.00	20.00	20.00	16.50	17.00	18.25
	6	2437	20.00	20.00	20.00	20.00	20.00	16.50	17.00	18.25
	7	2442	20.00	20.00	20.00	20.00	20.00	16.50	17.00	18.25
	8	2447	20.00	20.00	20.00	20.00	20.00	16.50	17.00	18.25
	9	2452	18.50	18.50	18.50	18.50	18.50	16.50	17.00	18.25
	10	2457	17.00	17.00	17.00	17.00	17.00	16.50	17.00	17.00
	11	2462	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00
	12	2467	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00
	13	2472	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Wi-Fi 2.4GHz Measured Results

The maximum output power specified for production units are determined for all applicable 802.11 transmission modes in each standalone and aggregated frequency band. Maximum output power is measured for the highest maximum output power configuration(s) in each frequency band according to the default power measurement procedures.

SAR Test reduction was applied from KDB 248227 guidance, Sec. 2.1, b), 1) 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 802.11g/n/ac/ax mode is used for SAR measurement, on the highest measured output power channel in the initial test configuration, for each frequency band. Additional output power measurements were not deemed necessary.

SAR testing is not required for OFDM mode(s) 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.

Power Mode	Antenna	Mode	Data Rate	Ch #	Freq. (MHz)	Power Mode A (dBm)			Power Mode B (dBm)		
						Meas Pwr	Tune-up	SAR Test (Yes/No)	Meas Pwr	Tune-up	SAR Test (Yes/No)
Pcell OFF	ANT5	DSSS 802.11b	1 Mbps	1	2412	20.50	20.50	Yes	20.50	20.50	Yes
				2	2417	21.50	21.50		20.75	20.75	
				6	2437	21.50	21.50		20.75	20.75	
				11	2462	21.50	21.50		20.75	20.75	
				12	2467	20.50	20.50		20.50	20.50	
				13	2472	19.00	19.00		19.00	19.00	
	ANT2	DSSS 802.11b	1 Mbps	1	2412	20.25	20.25	Yes	20.50	20.50	Yes
				2	2417	20.25	20.25		21.40	21.50	
				6	2437	20.25	20.25		21.50	21.50	
				11	2462	20.25	20.25		21.50	21.50	
				12	2467	20.25	20.50		20.50	20.50	
				13	2472	19.00	19.00		19.00	19.00	
Power Mode	Antenna	Mode	Data Rate	Ch #	Freq. (MHz)	Power Mode A (dBm)			Power Mode B (dBm)		
						Meas Pwr	Tune-up	SAR Test (Yes/No)	Meas Pwr	Tune-up	SAR Test (Yes/No)
Pcell ON	ANT5	DSSS 802.11b	1 Mbps	1	2412	20.50	20.50	Yes	16.40	16.50	Yes
				2	2417	21.50	21.50		16.50	16.50	
				6	2437	21.50	21.50		16.50	16.50	
				11	2462	21.50	21.50		16.40	16.50	
				12	2467	20.50	20.50		16.50	16.50	
				13	2472	19.00	19.00		16.50	16.50	
	ANT2	DSSS 802.11b	1 Mbps	1	2412	16.90	17.00	Yes	18.25	18.25	Yes
				6	2437	17.00	17.00		18.25	18.25	
				11	2462	17.00	17.00		18.10	18.25	
				12	2467	17.00	17.00		18.25	18.25	
				13	2472	16.90	17.00		18.25	18.25	

Note(s):

SAR is not required for channel 12 and 13 because the tune-up limit and the measured output power for these two channels are not greater than those for the default test channels. Refer to KDB 248227 D01 section 3.1

9.8. Wi-Fi 5GHz (U-NII Bands)

Wi-Fi 5 GHz ($P_{\text{cell_OFF}}$ and $P_{\text{cell_ON}}$)

When the same transmission mode configurations have the same maximum output power on the same channel for the 802.11 a/n/ac/ax modes, the channel in the lower order/sequence 802.11 mode (i.e. a, g, n then ac) is selected. Therefore the SAR measurements performed for the 802.11n/ac modes, as the lowest order modulation, cover 802.11ax modes.

When the specified maximum output power is the same for both UNII 1 and UNII 2A, begin SAR measurements in UNII 2A with the channel with the highest measured output power. If the reported SAR for UNII 2A is ≤ 1.2 W/kg, SAR is not required for UNII 1; otherwise treat the remaining bands separately and test them independently for SAR.

According to KDB 248227 D01, simultaneous SAR provisions in KDB 447498 D01 apply to determine simultaneous transmission SAR test exclusion for Wi-Fi MIMO. If the sum of 1-g single transmission chain SAR measurements is < 1.6 W/kg and/or the MIMO output power is equal or less than a single chain, then no additional SAR measurements for simultaneously at the specified maximum output power of MIMO operation.

When antennas are spatially separated to the extent that SAR distributions do not overlap and can be treated independently, SAR compliance for simultaneous transmission is determined separately for each individual antenna.

For 5GHz band, there are two use cases:

- $P_{\text{Cell_ON}}$: This will be used when both WWAN and Wi-Fi radios are ON.
- $P_{\text{Cell_OFF}}$: This will be used when only Wi-Fi radio is ON

Mode	Bandwidth	Channel	Frequency	Pcell OFF				Pcell ON			
				ANT5		ANT4		ANT5		ANT4	
				Mode A	Mode B	Mode A	Mode B	Mode A	Mode B	Mode A	Mode B
U-NII-1 5.2 GHz (SISO)	802.11a/n/ac 20 MHz	36	5180	19.00	19.00	19.00	18.50	19.00	14.25	18.50	14.25
		40	5200	21.00	19.75	21.00	18.50	21.00	14.25	18.50	14.25
		44	5220	21.00	19.75	21.00	18.50	21.00	14.25	18.50	14.25
		48	5240	21.00	19.75	21.00	18.50	21.00	14.25	18.50	14.25
	802.11n/ac 40 MHz	38	5190	17.50	17.50	17.50	17.50	17.50	14.25	17.50	14.25
		46	5230	21.50	19.75	21.50	18.50	21.50	14.25	18.50	14.25
		42	5210	17.50	17.50	17.50	17.50	17.50	14.25	17.50	14.25
U-NII-2A 5.3 GHz (SISO)	802.11a/n/ac 20 MHz	52	5260	21.00	19.25	21.00	20.00	21.00	14.00	17.75	15.75
		56	5280	21.00	19.25	21.00	20.00	21.00	14.00	17.75	15.75
		60	5300	21.00	19.25	21.00	20.00	21.00	14.00	17.75	15.75
		64	5320	19.00	19.00	19.00	19.00	19.00	14.00	17.75	15.75
	802.11n/ac 40 MHz	54	5270	21.50	19.25	21.25	20.00	21.50	14.00	17.75	15.75
		62	5310	17.50	17.50	17.50	17.50	17.50	14.00	17.50	15.75
	802.11ac 80 MHz	58	5290	17.50	17.50	17.50	17.50	17.50	14.00	17.50	15.75
Mode	Bandwidth	Channel	Frequency	Pcell OFF				Pcell ON			
				ANT5		ANT4		ANT5		ANT4	
				Mode A	Mode B	Mode A	Mode B	Mode A	Mode B	Mode A	Mode B
U-NII-2C 5.5 GHz (SISO)	802.11a/n/ac 20 MHz	100	5500	19.00	18.25	19.00	18.50	19.00	12.75	19.00	14.25
		104	5520	21.00	18.25	21.00	18.50	21.00	12.75	20.25	14.25
		108	5540	21.00	18.25	21.00	18.50	21.00	12.75	20.25	14.25
		112	5560	21.00	18.25	21.00	18.50	21.00	12.75	20.25	14.25
		116	5580	21.00	18.25	21.00	18.50	21.00	12.75	20.25	14.25
		120	5600	21.00	18.25	21.00	18.50	21.00	12.75	20.25	14.25
		124	5620	21.00	18.25	21.00	18.50	21.00	12.75	20.25	14.25
		128	5640	21.00	18.25	21.00	18.50	21.00	12.75	20.25	14.25
		132	5660	21.00	18.25	21.00	18.50	21.00	12.75	20.25	14.25
		136	5680	21.00	18.25	21.00	18.50	21.00	12.75	20.25	14.25
	802.11n/ac 40 MHz	140	5700	19.00	18.25	19.00	18.50	19.00	12.75	19.00	14.25
		144	5720	21.00	18.25	21.00	18.50	21.00	12.75	20.25	14.25
		102	5510	17.50	17.50	17.50	17.50	17.50	12.75	17.50	14.25
		110	5550	21.50	18.25	21.50	18.50	21.50	12.75	20.25	14.25
		118	5590	21.50	18.25	21.50	18.50	21.50	12.75	20.25	14.25
		126	5630	21.50	18.25	21.50	18.50	21.50	12.75	20.25	14.25
	802.11ac 80 MHz	134	5670	21.50	18.25	21.50	18.50	21.50	12.75	20.25	14.25
		142	5710	21.50	18.25	21.50	18.50	21.50	12.75	20.25	14.25
106		5530	17.50	17.50	17.50	17.50	17.50	12.75	17.50	14.25	
122		5610	21.50	18.25	21.50	18.50	21.50	12.75	20.25	14.25	
		138	5690	21.50	18.25	21.50	18.50	21.50	12.75	20.25	14.25
Mode	Bandwidth	Channel	Frequency	Pcell OFF				Pcell ON			
				ANT5		ANT4		ANT5		ANT4	
				Mode A	Mode B	Mode A	Mode B	Mode A	Mode B	Mode A	Mode B
U-NII-3 5.8 GHz (SISO)	802.11a/n/ac 20 MHz	149	5745	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
		153	5765	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
		157	5785	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
		161	5805	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
	802.11n/ac 40 MHz	165	5825	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
		151	5755	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
	159	5795	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25	
802.11ac 80 MHz	155	5775	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25	

Mode	Bandwidth	Channel	Frequency	Pcell OFF				Pcell ON			
				ANT5		ANT4		ANT5		ANT4	
				Mode A	Mode B	Mode A	Mode B	Mode A	Mode B	Mode A	Mode B
U-NII-1 5.2 GHz (SISO)	802.11ax HE20/SU	36	5180	18.00	18.00	18.00	18.00	18.00	14.25	18.00	14.25
		40	5200	21.00	19.75	21.00	18.50	21.00	14.25	18.50	14.25
		44	5220	21.00	19.75	21.00	18.50	21.00	14.25	18.50	14.25
		48	5240	21.00	19.75	21.00	18.50	21.00	14.25	18.50	14.25
	802.11ax HE40/SU	38	5190	16.00	16.00	16.00	16.00	16.00	14.25	16.00	14.25
		46	5230	21.50	19.75	21.50	18.50	21.50	14.25	18.50	14.25
U-NII-2A 5.3 GHz (SISO)	802.11ax HE20/SU	52	5260	21.00	19.25	21.00	20.00	21.00	14.00	17.75	15.75
		56	5280	21.00	19.25	21.00	20.00	21.00	14.00	17.75	15.75
		60	5300	21.00	19.25	21.00	20.00	21.00	14.00	17.75	15.75
		64	5320	18.00	18.00	18.00	18.00	18.00	14.00	17.75	15.75
	802.11ax HE40/SU	54	5270	21.50	19.25	21.25	20.00	21.50	14.00	17.75	15.75
		62	5310	16.00	16.00	16.00	16.00	16.00	14.00	16.00	15.75
U-NII-2C 5.5 GHz (SISO)	802.11ax HE20/SU	100	5500	18.00	18.00	18.00	18.00	18.00	12.75	18.00	14.25
		104	5520	21.00	18.25	21.00	18.50	21.00	12.75	20.25	14.25
		108	5540	21.00	18.25	21.00	18.50	21.00	12.75	20.25	14.25
		112	5560	21.00	18.25	21.00	18.50	21.00	12.75	20.25	14.25
	802.11ax HE40/SU	116	5580	21.00	18.25	21.00	18.50	21.00	12.75	20.25	14.25
		120	5600	21.00	18.25	21.00	18.50	21.00	12.75	20.25	14.25
124		5620	21.00	18.25	21.00	18.50	21.00	12.75	20.25	14.25	
128		5640	21.00	18.25	21.00	18.50	21.00	12.75	20.25	14.25	
132		5660	21.00	18.25	21.00	18.50	21.00	12.75	20.25	14.25	
136		5680	21.00	18.25	21.00	18.50	21.00	12.75	20.25	14.25	
U-NII-3 5.8 GHz (SISO)	802.11ax HE20/SU	140	5700	18.00	18.00	18.00	18.00	18.00	12.75	18.00	14.25
		144	5720	21.00	18.25	21.00	18.50	21.00	12.75	20.25	14.25
		102	5510	16.00	16.00	16.00	16.00	16.00	12.75	16.00	14.25
		110	5550	21.50	18.25	21.50	18.50	21.50	12.75	20.25	14.25
	802.11ax HE40/SU	118	5590	21.50	18.25	21.50	18.50	21.50	12.75	20.25	14.25
		126	5630	21.50	18.25	21.50	18.50	21.50	12.75	20.25	14.25
U-NII-3 5.8 GHz (SISO)	802.11ax HE40/SU	134	5670	19.50	18.25	19.50	18.50	19.50	12.75	19.50	14.25
		142	5710	21.50	18.25	21.50	18.50	21.50	12.75	20.25	14.25
		106	5530	14.50	14.50	14.50	14.50	14.50	12.75	14.50	14.25
		122	5610	21.50	18.25	21.50	18.50	21.50	12.75	20.25	14.25
	802.11ax HE80/SU	138	5690	21.50	18.25	21.50	18.50	21.50	12.75	20.25	14.25
		149	5745	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
U-NII-3 5.8 GHz (SISO)	802.11ax HE20/SU	153	5765	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
		157	5785	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
		161	5805	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
		165	5825	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
	802.11ax HE40/SU	151	5755	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
		159	5795	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
U-NII-3 5.8 GHz (SISO)	802.11ax HE40/SU	155	5775	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
		155	5775	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
		155	5775	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
		155	5775	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
	802.11ax HE80/SU	155	5775	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
		155	5775	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25

Note(s):

The powers in the table above are for the fully loaded channels. When operating on partially loaded channels the power levels for HE80 RU484 are the same or lower than the equivalent HE40 SU power for the mode (A or B, Pcell_ON or Pcell_OFF); the power levels for HE80 RU242 and for HE40 RU242 are the same or lower than the equivalent HE20 SU power; the power levels for all other RU allocations for all bandwidths (RU106, RU52 and RU26) are all the same or lower than HE20 SU power.

Mode	Bandwidth	Channel	Frequency	Pcell OFF				Pcell ON			
				ANT5		ANT4		ANT5		ANT4	
				Mode A	Mode B	Mode A	Mode B	Mode A	Mode B	Mode A	Mode B
U-NII-1 5.2 GHz (SISO)	802.11ax HE20/RU106	36	5180	18.00	18.00	18.00	18.00	18.00	14.25	18.00	14.25
		40	5200	18.00	18.00	18.00	18.00	18.00	14.25	18.00	14.25
		44	5220	18.00	18.00	18.00	18.00	18.00	14.25	18.00	14.25
		48	5240	18.00	18.00	18.00	18.00	18.00	14.25	18.00	14.25
	802.11ax HE40/RU106	38	5190	16.00	16.00	16.00	16.00	16.00	14.25	16.00	14.25
		46	5230	18.00	18.00	18.00	18.00	18.00	14.25	18.00	14.25
U-NII-2A 5.2 GHz (SISO)	802.11ax HE20/RU106	52	5260	18.00	18.00	18.00	18.00	18.00	14.00	17.75	15.75
		56	5280	18.00	18.00	18.00	18.00	18.00	14.00	17.75	15.75
		60	5300	18.00	18.00	18.00	18.00	18.00	14.00	17.75	15.75
		64	5320	18.00	18.00	18.00	18.00	18.00	14.00	17.75	15.75
	802.11ax HE40/RU106	54	5270	18.00	18.00	18.00	18.00	18.00	14.00	17.75	15.75
		62	5310	16.00	16.00	16.00	16.00	16.00	14.00	16.00	15.75
U-NII-2C 5.5 GHz (SISO)	802.11ax HE20/RU106	100	5500	18.00	18.00	18.00	18.00	18.00	12.75	18.00	14.25
		104	5520	18.00	18.00	18.00	18.00	18.00	12.75	18.00	14.25
		108	5540	18.00	18.00	18.00	18.00	18.00	12.75	18.00	14.25
		112	5560	18.00	18.00	18.00	18.00	18.00	12.75	18.00	14.25
		116	5580	18.00	18.00	18.00	18.00	18.00	12.75	18.00	14.25
		120	5600	18.00	18.00	18.00	18.00	18.00	12.75	18.00	14.25
		124	5620	18.00	18.00	18.00	18.00	18.00	12.75	18.00	14.25
		128	5640	18.00	18.00	18.00	18.00	18.00	12.75	18.00	14.25
		132	5660	18.00	18.00	18.00	18.00	18.00	12.75	18.00	14.25
		136	5680	18.00	18.00	18.00	18.00	18.00	12.75	18.00	14.25
	802.11ax HE40/RU106	140	5700	18.00	18.00	18.00	18.00	18.00	12.75	18.00	14.25
		144	5720	18.00	18.00	18.00	18.00	18.00	12.75	18.00	14.25
		102	5510	16.00	16.00	16.00	16.00	16.00	12.75	16.00	14.25
		110	5550	18.00	18.00	18.00	18.00	18.00	12.75	18.00	14.25
		118	5590	18.00	18.00	18.00	18.00	18.00	12.75	18.00	14.25
		126	5630	18.00	18.00	18.00	18.00	18.00	12.75	18.00	14.25
	802.11ax HE80/RU106	134	5670	18.00	18.00	18.00	18.00	18.00	12.75	18.00	14.25
		142	5710	18.00	18.00	18.00	18.00	18.00	12.75	18.00	14.25
U-NII-3 5.8 GHz (SISO)	802.11ax HE20/RU106	106	5530	14.50	14.50	14.50	14.50	14.50	12.75	14.50	14.25
		122	5610	18.00	18.00	18.00	18.00	18.00	12.75	18.00	14.25
		138	5690	18.00	18.00	18.00	18.00	18.00	12.75	18.00	14.25
		149	5745	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
		153	5765	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
	802.11ax HE40/RU106	157	5785	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
		161	5805	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
		165	5825	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
		151	5755	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
		159	5795	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
	802.11ax HE80/RU106	155	5775	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25

Mode	Bandwidth	Channel	Frequency	Pcell OFF				Pcell ON			
				ANT5		ANT4		ANT5		ANT4	
				Mode A	Mode B	Mode A	Mode B	Mode A	Mode B	Mode A	Mode B
U-NII-1 5.2 GHz (SISO)	802.11ax HE20/RU52	36	5180	15.00	15.00	15.00	15.00	15.00	14.25	15.00	14.25
		40	5200	15.00	15.00	15.00	15.00	15.00	14.25	15.00	14.25
		44	5220	15.00	15.00	15.00	15.00	15.00	14.25	15.00	14.25
		48	5240	15.00	15.00	15.00	15.00	15.00	14.25	15.00	14.25
	802.11ax HE40/RU52	38	5190	15.00	15.00	15.00	15.00	15.00	14.25	15.00	14.25
		46	5230	15.00	15.00	15.00	15.00	15.00	14.25	15.00	14.25
U-NII-2A 5.3 GHz (SISO)	802.11ax HE20/RU52	52	5260	15.00	15.00	15.00	15.00	15.00	14.00	15.00	15.00
		56	5280	15.00	15.00	15.00	15.00	15.00	14.00	15.00	15.00
		60	5300	15.00	15.00	15.00	15.00	15.00	14.00	15.00	15.00
		64	5320	15.00	15.00	15.00	15.00	15.00	14.00	15.00	15.00
	802.11ax HE40/RU52	54	5270	15.00	15.00	15.00	15.00	15.00	14.00	15.00	15.00
		62	5310	15.00	15.00	15.00	15.00	15.00	14.00	15.00	15.00
U-NII-2C 5.5 GHz (SISO)	802.11ax HE20/RU52	100	5500	15.00	15.00	15.00	15.00	15.00	12.75	15.00	14.25
		104	5520	15.00	15.00	15.00	15.00	15.00	12.75	15.00	14.25
		108	5540	15.00	15.00	15.00	15.00	15.00	12.75	15.00	14.25
		112	5560	15.00	15.00	15.00	15.00	15.00	12.75	15.00	14.25
		116	5580	15.00	15.00	15.00	15.00	15.00	12.75	15.00	14.25
		120	5600	15.00	15.00	15.00	15.00	15.00	12.75	15.00	14.25
		124	5620	15.00	15.00	15.00	15.00	15.00	12.75	15.00	14.25
		128	5640	15.00	15.00	15.00	15.00	15.00	12.75	15.00	14.25
		132	5660	15.00	15.00	15.00	15.00	15.00	12.75	15.00	14.25
		136	5680	15.00	15.00	15.00	15.00	15.00	12.75	15.00	14.25
		140	5700	15.00	15.00	15.00	15.00	15.00	12.75	15.00	14.25
		144	5720	15.00	15.00	15.00	15.00	15.00	12.75	15.00	14.25
	802.11ax HE40/RU52	102	5510	15.00	15.00	15.00	15.00	15.00	12.75	15.00	14.25
		110	5550	15.00	15.00	15.00	15.00	15.00	12.75	15.00	14.25
		118	5590	15.00	15.00	15.00	15.00	15.00	12.75	15.00	14.25
		126	5630	15.00	15.00	15.00	15.00	15.00	12.75	15.00	14.25
	802.11ax HE80/RU52	134	5670	15.00	15.00	15.00	15.00	15.00	12.75	15.00	14.25
		142	5710	15.00	15.00	15.00	15.00	15.00	12.75	15.00	14.25
		106	5530	14.50	14.50	14.50	14.50	14.50	12.75	14.50	14.25
		122	5610	15.00	15.00	15.00	15.00	15.00	12.75	15.00	14.25
		138	5690	15.00	15.00	15.00	15.00	15.00	12.75	15.00	14.25
Mode	Bandwidth	Channel	Frequency	Pcell OFF				Pcell ON			
				ANT5		ANT4		ANT5		ANT4	
				Mode A	Mode B	Mode A	Mode B	Mode A	Mode B	Mode A	Mode B
U-NII-3 5.8 GHz (SISO)	802.11ax HE20/RU52	149	5745	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
		153	5765	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
		157	5785	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
		161	5805	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
		165	5825	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
	802.11ax HE40/RU52	151	5755	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
		159	5795	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
	802.11ax HE80/RU52	155	5775	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25

Mode	Bandwidth	Channel	Frequency	Pcell OFF				Pcell ON			
				ANT5		ANT4		ANT5		ANT4	
				Mode A	Mode B	Mode A	Mode B	Mode A	Mode B	Mode A	Mode B
U-NII-1 5.2 GHz (SISO)	802.11ax HE20/RU26	36	5180	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
		40	5200	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
		44	5220	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
		48	5240	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
	802.11ax HE40/RU26	38	5190	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
		46	5230	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
U-NII-2A 5.3 GHz (SISO)	802.11ax HE20/RU26	52	5260	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
		56	5280	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
		60	5300	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
		64	5320	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
	802.11ax HE40/RU26	54	5270	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
		62	5310	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
U-NII-2C 5.5 GHz (SISO)	802.11ax HE20/RU26	100	5500	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
		104	5520	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
		108	5540	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
		112	5560	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
		116	5580	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
		120	5600	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
		124	5620	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
		128	5640	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
		132	5660	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
		136	5680	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
	802.11ax HE40/RU26	140	5700	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
		144	5720	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
		102	5510	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
		110	5550	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
		118	5590	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
		126	5630	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
	802.11ax HE80/RU26	134	5670	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
		142	5710	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
		106	5530	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
		122	5610	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
		138	5690	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
Mode	Bandwidth	Channel	Frequency	Pcell OFF				Pcell ON			
				ANT5		ANT4		ANT5		ANT4	
				Mode A	Mode B	Mode A	Mode B	Mode A	Mode B	Mode A	Mode B
U-NII-3 5.8 GHz (SISO)	802.11ax HE20/RU26	149	5745	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
		153	5765	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
		157	5785	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
		161	5805	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
		165	5825	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
	802.11ax HE40/RU26	151	5755	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
		159	5795	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
	802.11ax HE80/RU26	155	5775	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25

Mode	Bandwidth	Channel	Frequency	Pcell OFF				Pcell ON			
				ANT5		ANT4		ANT5		ANT4	
				Mode A	Mode B	Mode A	Mode B	Mode A	Mode B	Mode A	Mode B
U-NII-1 5.2 GHz (MIMO)	802.11a/n/ac 20 MHz	36	5180	18.00	18.00	18.00	18.00	18.00	14.25	18.00	14.25
		40	5200	18.00	18.00	18.00	18.00	18.00	14.25	18.00	14.25
		44	5220	18.00	18.00	18.00	18.00	18.00	14.25	18.00	14.25
		48	5240	18.00	18.00	18.00	18.00	18.00	14.25	18.00	14.25
	802.11n/ac 40 MHz	38	5190	17.00	17.00	17.00	17.00	17.00	14.25	17.00	14.25
		46	5230	20.00	19.75	20.00	18.50	20.00	14.25	18.50	14.25
U-NII-2A 5.8 GHz (MIMO)	802.11a/n/ac 20 MHz	42	5210	16.50	16.50	16.50	16.50	16.50	14.25	16.50	14.25
		52	5260	18.00	18.00	18.00	18.00	18.00	14.00	17.75	15.75
		56	5280	18.00	18.00	18.00	18.00	18.00	14.00	17.75	15.75
		60	5300	18.00	18.00	18.00	18.00	18.00	14.00	17.75	15.75
	802.11n/ac 40 MHz	64	5320	18.00	18.00	18.00	18.00	18.00	14.00	17.75	15.75
		54	5270	20.00	19.25	20.00	20.00	20.00	14.00	17.75	15.75
U-NII-2C 5.3 GHz (MIMO)	802.11a/n/ac 20 MHz	62	5310	17.00	17.00	17.00	17.00	17.00	14.00	17.00	15.75
		58	5290	16.50	16.50	16.50	16.50	16.50	14.00	16.50	15.75
		100	5500	18.00	18.00	18.00	18.00	18.00	12.75	18.00	14.25
		104	5520	18.00	18.00	18.00	18.00	18.00	12.75	18.00	14.25
		108	5540	18.00	18.00	18.00	18.00	18.00	12.75	18.00	14.25
		112	5560	18.00	18.00	18.00	18.00	18.00	12.75	18.00	14.25
		116	5580	18.00	18.00	18.00	18.00	18.00	12.75	18.00	14.25
		120	5600	18.00	18.00	18.00	18.00	18.00	12.75	18.00	14.25
		124	5620	18.00	18.00	18.00	18.00	18.00	12.75	18.00	14.25
		128	5640	18.00	18.00	18.00	18.00	18.00	12.75	18.00	14.25
	802.11n/ac 40 MHz	132	5660	18.00	18.00	18.00	18.00	18.00	12.75	18.00	14.25
		136	5680	18.00	18.00	18.00	18.00	18.00	12.75	18.00	14.25
		140	5700	18.00	18.00	18.00	18.00	18.00	12.75	18.00	14.25
		144	5720	18.00	18.00	18.00	18.00	18.00	12.75	18.00	14.25
		102	5510	16.50	16.50	16.50	16.50	16.50	12.75	16.50	14.25
		110	5550	20.00	18.25	20.00	18.50	20.00	12.75	20.00	14.25
	802.11ac 80 MHz	118	5590	20.00	18.25	20.00	18.50	20.00	12.75	20.00	14.25
		126	5630	20.00	18.25	20.00	18.50	20.00	12.75	20.00	14.25
		134	5670	20.00	18.25	20.00	18.50	20.00	12.75	20.00	14.25
		142	5710	20.00	18.25	20.00	18.50	20.00	12.75	20.00	14.25
U-NII-3 5.8 GHz (MIMO)	802.11a/n/ac 20 MHz	106	5530	15.50	15.50	15.50	15.50	15.50	12.75	15.50	14.25
		122	5610	20.00	18.25	20.00	18.50	20.00	12.75	20.00	14.25
		138	5690	20.00	18.25	20.00	18.50	20.00	12.75	20.00	14.25
		149	5745	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
		153	5765	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
	802.11n/ac 40 MHz	157	5785	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
		161	5805	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
		165	5825	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
	802.11ac 80 MHz	151	5755	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
		159	5795	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
U-NII-3 5.8 GHz (MIMO)	802.11ac 80 MHz	155	5775	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25

Mode	Bandwidth	Channel	Frequency	Pcell OFF				Pcell ON			
				ANT5		ANT4		ANT5		ANT4	
				Mode A	Mode B	Mode A	Mode B	Mode A	Mode B	Mode A	Mode B
U-NII-1 5.2 GHz (MIMO)	802.11ax HE20/SU	36	5180	16.50	16.50	16.50	16.50	16.50	14.25	16.50	14.25
		40	5200	18.00	18.00	18.00	18.00	18.00	14.25	18.00	14.25
		44	5220	18.00	18.00	18.00	18.00	18.00	14.25	18.00	14.25
		48	5240	18.00	18.00	18.00	18.00	18.00	14.25	18.00	14.25
	802.11ax HE40/SU	38	5190	15.50	15.50	15.50	15.50	15.50	14.25	15.50	14.25
		46	5230	20.00	19.75	20.00	18.50	20.00	14.25	18.50	14.25
U-NII-2A 5.3 GHz (MIMO)	802.11ax HE20/SU	52	5260	18.00	18.00	18.00	18.00	18.00	14.00	17.75	15.75
		56	5280	18.00	18.00	18.00	18.00	18.00	14.00	17.75	15.75
		60	5300	18.00	18.00	18.00	18.00	18.00	14.00	17.75	15.75
		64	5320	16.50	16.50	16.50	16.50	16.50	14.00	16.50	15.75
	802.11ax HE40/SU	54	5270	20.00	19.25	20.00	20.00	20.00	14.00	17.75	15.75
		62	5310	15.50	15.50	15.50	15.50	15.50	14.00	15.50	15.50
U-NII-2C 5.5 GHz (MIMO)	802.11ax HE20/SU	100	5500	16.50	16.50	16.50	16.50	16.50	12.75	16.50	14.25
		104	5520	18.00	18.00	18.00	18.00	18.00	12.75	18.00	14.25
		108	5540	18.00	18.00	18.00	18.00	18.00	12.75	18.00	14.25
		112	5560	18.00	18.00	18.00	18.00	18.00	12.75	18.00	14.25
	802.11ax HE40/SU	116	5580	18.00	18.00	18.00	18.00	18.00	12.75	18.00	14.25
		120	5600	18.00	18.00	18.00	18.00	18.00	12.75	18.00	14.25
124		5620	18.00	18.00	18.00	18.00	18.00	12.75	18.00	14.25	
128		5640	18.00	18.00	18.00	18.00	18.00	12.75	18.00	14.25	
132		5660	18.00	18.00	18.00	18.00	18.00	12.75	18.00	14.25	
136		5680	18.00	18.00	18.00	18.00	18.00	12.75	18.00	14.25	
U-NII-3 5.8 GHz (MIMO)	802.11ax HE20/SU	140	5700	16.50	16.50	16.50	16.50	16.50	12.75	16.50	14.25
		144	5720	18.00	18.00	18.00	18.00	18.00	12.75	18.00	14.25
		102	5510	15.00	15.00	15.00	15.00	15.00	12.75	15.00	14.25
		110	5550	20.00	18.25	20.00	18.50	20.00	12.75	20.00	14.25
	802.11ax HE40/SU	118	5590	20.00	18.25	20.00	18.50	20.00	12.75	20.00	14.25
		126	5630	20.00	18.25	20.00	18.50	20.00	12.75	20.00	14.25
U-NII-3 5.8 GHz (MIMO)	802.11ax HE40/SU	134	5670	19.00	18.25	19.00	18.50	19.00	12.75	19.00	14.25
		142	5710	20.00	18.25	20.00	18.50	20.00	12.75	20.00	14.25
		106	5530	14.00	14.00	14.00	14.00	14.00	12.75	14.00	14.00
		122	5610	20.00	18.25	20.00	18.50	20.00	12.75	20.00	14.25
	802.11ax HE80/SU	138	5690	20.00	18.25	20.00	18.50	20.00	12.75	20.00	14.25
		146	5730	18.00	18.00	18.00	18.00	18.00	12.75	18.00	14.25
Mode	Bandwidth	Channel	Frequency	Pcell OFF				Pcell ON			
				ANT5		ANT4		ANT5		ANT4	
				Mode A	Mode B	Mode A	Mode B	Mode A	Mode B	Mode A	Mode B
U-NII-3 5.8 GHz (MIMO)	802.11ax HE20/SU	149	5745	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
		153	5765	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
		157	5785	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
		161	5805	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
	802.11ax HE40/SU	165	5825	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
		151	5755	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
	802.11ax HE80/SU	159	5795	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
		155	5775	20.50	18.50	20.50	18.50	20.50	13.25	20.50	14.25

Note(s):

The powers in the table above are for the fully loaded channels. When operating on partially loaded channels the power levels for HE80 RU484 are the same or lower than the equivalent HE40 SU power for the mode (A or B, Pcell_ON or Pcell_OFF); the power levels for HE80 RU242 and for HE40 RU242 are the same or lower than the equivalent HE20 SU power; the power levels for all other RU allocations for all bandwidths (RU106, RU52 and RU26) are all the same or lower than HE20 SU power.

Mode	Bandwidth	Channel	Frequency	Pcell OFF				Pcell ON			
				ANT5		ANT4		ANT5		ANT4	
				Mode A	Mode B	Mode A	Mode B	Mode A	Mode B	Mode A	Mode B
U-NII-1 5.2 GHz (MIMO)	802.11ax HE20/RU106	36	5180	15.00	15.00	15.00	15.00	15.00	14.25	15.00	14.25
		40	5200	15.00	15.00	15.00	15.00	15.00	14.25	15.00	14.25
		44	5220	15.00	15.00	15.00	15.00	15.00	14.25	15.00	14.25
		48	5240	15.00	15.00	15.00	15.00	15.00	14.25	15.00	14.25
	802.11ax HE40/RU106	38	5190	15.00	15.00	15.00	15.00	15.00	14.25	15.00	14.25
		46	5230	15.00	15.00	15.00	15.00	15.00	14.25	15.00	14.25
U-NII-2A 5.3 GHz (MIMO)	802.11ax HE20/RU106	52	5260	15.00	15.00	15.00	15.00	15.00	14.00	15.00	15.00
		56	5280	15.00	15.00	15.00	15.00	15.00	14.00	15.00	15.00
		60	5300	15.00	15.00	15.00	15.00	15.00	14.00	15.00	15.00
		64	5320	15.00	15.00	15.00	15.00	15.00	14.00	15.00	15.00
	802.11ax HE40/RU106	54	5270	15.00	15.00	15.00	15.00	15.00	14.00	15.00	15.00
		62	5310	15.00	15.00	15.00	15.00	15.00	14.00	15.00	15.00
U-NII-2C 5.5 GHz (MIMO)	802.11ax HE20/RU106	58	5290	15.00	15.00	15.00	15.00	15.00	14.00	15.00	15.00
		100	5500	15.00	15.00	15.00	15.00	15.00	12.75	15.00	14.25
		104	5520	15.00	15.00	15.00	15.00	15.00	12.75	15.00	14.25
		108	5540	15.00	15.00	15.00	15.00	15.00	12.75	15.00	14.25
		112	5560	15.00	15.00	15.00	15.00	15.00	12.75	15.00	14.25
		116	5580	15.00	15.00	15.00	15.00	15.00	12.75	15.00	14.25
		120	5600	15.00	15.00	15.00	15.00	15.00	12.75	15.00	14.25
		124	5620	15.00	15.00	15.00	15.00	15.00	12.75	15.00	14.25
		128	5640	15.00	15.00	15.00	15.00	15.00	12.75	15.00	14.25
		132	5660	15.00	15.00	15.00	15.00	15.00	12.75	15.00	14.25
	802.11ax HE40/RU106	136	5680	15.00	15.00	15.00	15.00	15.00	12.75	15.00	14.25
		140	5700	15.00	15.00	15.00	15.00	15.00	12.75	15.00	14.25
		144	5720	15.00	15.00	15.00	15.00	15.00	12.75	15.00	14.25
		102	5510	15.00	15.00	15.00	15.00	15.00	12.75	15.00	14.25
		110	5550	15.00	15.00	15.00	15.00	15.00	12.75	15.00	14.25
		118	5590	15.00	15.00	15.00	15.00	15.00	12.75	15.00	14.25
	802.11ax HE80/RU106	126	5630	15.00	15.00	15.00	15.00	15.00	12.75	15.00	14.25
		134	5670	15.00	15.00	15.00	15.00	15.00	12.75	15.00	14.25
		142	5710	15.00	15.00	15.00	15.00	15.00	12.75	15.00	14.25
		106	5530	14.00	14.00	14.00	14.00	14.00	12.75	14.00	14.00
U-NII-3 5.8 GHz (MIMO)	802.11ax HE20/RU106	122	5610	15.00	15.00	15.00	15.00	15.00	12.75	15.00	14.25
		138	5690	15.00	15.00	15.00	15.00	15.00	12.75	15.00	14.25
		149	5745	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
		153	5765	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
		157	5785	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
	802.11ax HE40/RU106	161	5805	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
		165	5825	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
		151	5755	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
	802.11ax HE80/RU106	159	5795	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
		155	5775	20.50	18.50	20.50	18.50	20.50	13.25	20.50	14.25

Mode	Bandwidth	Channel	Frequency	Pcell OFF				Pcell ON			
				ANT5		ANT4		ANT5		ANT4	
				Mode A	Mode B	Mode A	Mode B	Mode A	Mode B	Mode A	Mode B
U-NII-1 5.2 GHz (MIMO)	802.11ax HE20/RU52	36	5180	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
		40	5200	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
		44	5220	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
		48	5240	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
	802.11ax HE40/RU52	38	5190	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
		46	5230	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
U-NII-2A 5.3 GHz (MIMO)	802.11ax HE20/RU52	52	5260	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
		56	5280	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
		60	5300	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
		64	5320	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
	802.11ax HE40/RU52	54	5270	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
		62	5310	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
U-NII-2C 5.5 GHz (MIMO)	802.11ax HE20/RU52	100	5500	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
		104	5520	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
		108	5540	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
		112	5560	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
		116	5580	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
		120	5600	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
		124	5620	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
		128	5640	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
		132	5660	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
		136	5680	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
	802.11ax HE40/RU52	140	5700	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
		144	5720	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
		102	5510	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
		110	5550	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
		118	5590	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
		126	5630	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
	802.11ax HE80/RU52	134	5670	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
		142	5710	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
		106	5530	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
		122	5610	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
U-NII-3 5.8 GHz (MIMO)	802.11ax HE20/RU52	149	5745	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
		153	5765	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
		157	5785	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
		161	5805	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
		165	5825	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
	802.11ax HE40/RU52	151	5755	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
		159	5795	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
	802.11ax HE80/RU52	155	5775	20.50	18.50	20.50	18.50	20.50	13.25	20.50	14.25

Mode	Bandwidth	Channel	Frequency	Pcell OFF				Pcell ON			
				ANT5		ANT4		ANT5		ANT4	
				Mode A	Mode B	Mode A	Mode B	Mode A	Mode B	Mode A	Mode B
U-NII-1 5.2 GHz (MIMO)	802.11ax HE20/RU26	36	5180	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
		40	5200	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
		44	5220	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
		48	5240	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
	802.11ax HE40/RU26	38	5190	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
		46	5230	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
U-NII-2A 5.2 GHz (MIMO)	802.11ax HE20/RU26	52	5260	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
		56	5280	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
		60	5300	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
		64	5320	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
	802.11ax HE40/RU26	54	5270	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
		62	5310	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
U-NII-2C 5.3 GHz (MIMO)	802.11ax HE20/RU26	100	5500	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
		104	5520	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
		108	5540	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
		112	5560	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
		116	5580	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
		120	5600	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
		124	5620	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
		128	5640	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
		132	5660	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
		136	5680	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
		140	5700	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
		144	5720	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
	802.11ax HE40/RU26	102	5510	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
		110	5550	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
		118	5590	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
		126	5630	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
	802.11ax HE80/RU26	134	5670	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
		142	5710	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
		106	5530	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
		122	5610	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
		138	5690	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
Mode	Bandwidth	Channel	Frequency	Pcell OFF				Pcell ON			
				ANT5		ANT4		ANT5		ANT4	
				Mode A	Mode B	Mode A	Mode B	Mode A	Mode B	Mode A	Mode B
U-NII-3 5.8 GHz (MIMO)	802.11ax HE20/RU26	149	5745	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
		153	5765	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
		157	5785	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
		161	5805	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
		165	5825	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
	802.11ax HE40/RU26	151	5755	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
		159	5795	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
	802.11ax HE80/RU26	155	5775	20.50	18.50	20.50	18.50	20.50	13.25	20.50	14.25

Wi-Fi 5 GHz Measured Results

The maximum output power specified for production units are determined for all applicable 802.11 transmission modes in each standalone and aggregated frequency band. Maximum output power is measured for the highest maximum output power configuration(s) in each frequency band according to the default power measurement procedures.

When the same transmission mode configurations have the same maximum output power on the same channel for the 802.11 a/g/n/ac modes, the channel in the lower order/sequence 802.11 mode (i.e. a, g, n then ac) is selected.

SAR Test reduction was applied from KDB 248227 guidance, Sec. 2.1, b), 1) 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 in the initial test configuration, for each frequency band. Additional output power measurements were not deemed necessary.

Power Mode	Antenna	Mode	Mode	Ch #	Freq. (MHz)	Power Mode A (dBm)			Power Mode B (dBm)		
						Meas Pwr	Tune-up	SAR Test (Yes/No)	Meas Pwr	Tune-up	SAR Test (Yes/No)
Pcell OFF	ANT5	U-NII-2A	802.11n HT40	54	5270	21.50	21.50	Yes			
				62	5310	17.50	17.50	Yes			
		U-NII-1	802.11n HT40	38	5190				17.50	17.50	Yes
				46	5230				19.75	19.75	Yes
		U-NII-2C	802.11ac VHT80	106	5530	17.50	17.50	Yes	17.40	17.50	Yes
				122	5610	21.50	21.50		18.25	18.25	
				138	5690	21.50	21.50		18.25	18.25	
		I-NII-3	802.11ac VHT80	155	5775	21.50	21.50	Yes	18.50	18.50	Yes
	ANT4	U-NII-1	802.11n HT40	38	5190	17.50	17.50	Yes			
				46	5230	21.50	21.50				
		U-NII-2A	802.11n HT40	54	5270				20.00	20.00	Yes
				62	5310				17.50	17.50	Yes
		U-NII-2C	802.11ac VHT80	106	5530	17.50	17.50	Yes	17.50	17.50	Yes
				122	5610	21.50	21.50		18.50	18.50	
				138	5690	21.50	21.50		18.50	18.50	
		I-NII-3	802.11ac VHT80	155	5775	21.50	21.50	Yes	18.50	18.50	Yes
Power Mode	Antenna	Mode	Mode	Ch #	Freq. (MHz)	Power Mode A (dBm)			Power Mode B (dBm)		
						Meas Pwr	Tune-up	SAR Test (Yes/No)	Meas Pwr	Tune-up	SAR Test (Yes/No)
Pcell ON	ANT5	U-NII-2A	802.11n/ac HT40	54	5270	21.50	21.50	Yes			
				62	5310	17.50	17.50				
		U-NII-1	802.11ac VHT80	42	5210				14.25	14.25	Yes
		U-NII-2C	802.11ac VHT80	106	5530	17.50	17.50	Yes	12.75	12.75	Yes
				122	5610	21.50	21.50		12.75	12.75	
				138	5690	21.50	21.50		12.75	12.75	
	U-NII-3	802.11ac VHT80	155	5775	21.50	21.50	Yes	13.25	13.25	Yes	
	ANT4	U-NII-1	802.11n/ac HT40	38	5190	17.50	17.50	Yes			
				46	5230	18.50	18.50				
		U-NII-1	802.11ac VHT80	42	5210				15.75	15.75	Yes
		U-NII-2C	802.11ac VHT80	106	5530	17.50	17.50	Yes	14.25	14.25	Yes
				122	5610	20.25	20.25		14.25	14.25	
				138	5690	20.10	20.25		14.10	14.25	
	U-NII-3	802.11ac VHT80	155	5775	21.50	21.50	Yes	14.25	14.25	Yes	

9.9. Bluetooth

From October 2016 TCB workshop, this device power and SAR measured is performed with test software, the duty cycle is 100%.

According to KDB 447498 D01 apply to determine simultaneous transmission SAR test exclusion for Wi-Fi MIMO. If the sum of 1-g single transmission chain SAR measurements is <1.6W/kg and/or the MIMO output power is equal or less than a single chain, then no additional SAR measurements for simultaneously at the specified maximum output power of MIMO operation.

When antennas are spatially separated to the extent that SAR distributions do not overlap and can be treated independently, SAR compliance for simultaneous transmission is determined separately for each individual antenna.

Bluetooth (P_{low} , P_{high} , and $P_{\text{standalone}}$)

For Bluetooth, there are three use cases:

- Bluetooth P_{low} is used with Wi-Fi and WWAN antennas are active.
- Bluetooth P_{high} is used when Wi-Fi antenna is active and WWAN antenna is inactive or with Wi-Fi inactive and WWAN antenna is active.
- Bluetooth $P_{\text{standalone}}$ is used with Wi-Fi and WWAN antennas are inactive.

Mode	Maximum Output Power (Tune-up Limit) (dBm)											
	Bluetooth P_{low}				Bluetooth P_{high}				Bluetooth $P_{\text{standalone}}$			
	ANT5		ANT2		ANT5		ANT2		ANT5		ANT2	
	Mode A	Mode B	Mode A	Mode B	Mode A	Mode B	Mode A	Mode B	Mode A	Mode B	Mode A	Mode B
GFSK	17.50	11.00	10.00	11.50	20.00	15.00	14.00	15.50	20.00	18.50	17.50	19.00
EDR	16.00	11.00	10.00	11.50	16.00	15.00	14.00	15.50	16.00	16.00	16.00	16.00
LE	17.50	11.00	10.00	11.50	20.00	15.00	14.00	15.50	20.00	18.50	17.50	19.00
HDR	12.00	11.00	10.00	11.50	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00

This device supports Bluetooth beamforming. SAR measurement is not required for Beamforming when the output power is equal or less than a single chain. Please refer to BT tune-up procedure.

Bluetooth Measured Results

SAR measurement is not required for the EDR and LE and HDR and Beamforming. When the secondary mode is $\leq \frac{1}{4}$ dB higher than the primary mode.

Power Mode	Antenna	Mode	Ch #	Freq. (MHz)	Power Mode A (dBm)		SAR Test (Yes/No)	Power Mode B (dBm)		SAR Test (Yes/No)
					Meas Pwr	Tune-up		Meas Pwr	Tune-up	
Bluetooth P_{low}	ANT5	GFSK	0	2402	17.50	17.50	Yes	10.50	11.00	Yes
			39	2441	17.50	17.50		10.50	11.00	
			78	2480	17.50	17.50		10.50	11.00	
	ANT2	GFSK	0	2402	10.00	10.00	Yes	11.50	11.50	Yes
			39	2441	10.00	10.00		11.50	11.50	
			78	2480	10.00	10.00		11.50	11.50	
Bluetooth P_{high}	ANT5	GFSK	0	2402	20.00	20.00	Yes	15.00	15.00	Yes
			39	2441	20.00	20.00		15.00	15.00	
			78	2480	20.00	20.00		15.00	15.00	
	ANT2	GFSK	0	2402	14.00	14.00	Yes	15.50	15.50	Yes
			39	2441	14.00	14.00		15.50	15.50	
			78	2480	14.00	14.00		15.50	15.50	
Bluetooth $P_{\text{standalone}}$	ANT5	GFSK	0	2402	20.00	20.00	Yes	18.50	18.50	Yes
			39	2441	20.00	20.00		18.50	18.50	
			78	2480	20.00	20.00		18.50	18.50	
	ANT2	GFSK	0	2402	17.50	17.50	Yes	19.00	19.00	Yes
			39	2441	17.50	17.50		19.00	19.00	
			78	2480	17.50	17.50		19.00	19.00	

Duty Factor Measured Results

Mode	Type	T on (ms)	Period (ms)	Duty Cycle	Crest Factor (1/duty cycle)
GFSK	DH5	1	1	100.00%	1.00

Note(s):

Duty Cycle = (T on / period) * 100%

Duty Cycle plots

GFSK



10. Measured and Reported (Scaled) SAR Results

SAR Test Reduction criteria are as follows:

- Reported SAR(W/kg) for WWAN = Measured SAR * Tune-up Scaling Factor
- Reported SAR(W/kg) for Wi-Fi and Bluetooth = Measured SAR * Tune-up scaling factor * Duty Cycle scaling factor
- Duty Cycle scaling factor = 1 / Duty cycle (%)

KDB 447498 D01 General RF Exposure Guidance:

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

KDB 648474 D04 Handset SAR:

With headset attached, 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 headset attached to the handset.

KDB 648474 D04 Handset SAR (Phablet Only):

For smart phones, with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm.

When hotspot mode does not apply, 10-g Extremity SAR is required for all surfaces and edges with an antenna located at ≤ 25 mm from that surface or edge in direct contact with a flat phantom, to address interactive hand use exposure conditions. 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; 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.

Additional 1-g SAR testing at 5 mm is not required when hotspot mode 10-g extremity SAR is not required for the surfaces and edges; since all 1-g reported SAR < 1.2 W/kg.

KDB 941225 D01 SAR test for 3G devices:

When the maximum output power and tune-up tolerance specified for production units in a secondary mode is $\leq \frac{1}{4}$ dB higher than the primary mode or when the highest reported SAR of the primary mode is scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for the secondary mode.

KDB 941225 D05 SAR for LTE Devices:

SAR test reduction is applied using the following criteria:

- Start with the largest channel bandwidth and measure SAR for QPSK with 1 RB, and 50% RB allocation, using the RB offset and required test channel combination with the highest maximum output power among RB offsets at the upper edge, middle and lower edge of each required test channel.
- When the reported SAR is > 0.8 W/kg, testing for other Channels is performed at the highest output power level for 1RB, and 50% RB configuration for that channel.
- Testing for 100% RB configuration is performed at the highest output power level for 100% RB configuration across the Low, Mid and High Channel when the highest reported SAR for 1 RB and 50% RB are > 0.8 W/kg. Testing for the remaining required channels is not needed because the reported SAR for 100% RB Allocation < 1.45 W/kg.
- Testing for 16-QAM modulation is not required because the reported SAR for QPSK is < 1.45 W/Kg and its output power is not more than 0.5 dB higher than that of QPSK.
- Testing for the other channel bandwidths is not required because the reported SAR for the highest channel bandwidth is < 1.45 W/Kg and its output power is not more than 0.5 dB higher than that of the highest channel bandwidth.
- For LTE bands that do not support at least three non-overlapping channels in certain channel bandwidths, test the available non-overlapping channels instead. 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; therefore, the requirement for H, M and L channels may not fully apply.

KDB 248227 D01 SAR meas for 802.11:

SAR test reduction for 802.11 Wi-Fi transmission mode configurations are considered separately for DSSS and OFDM. An initial test position is determined to reduce the number of tests required for certain exposure configurations with multiple test positions.

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

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

- ≤ 0.4 W/kg, further SAR measurement is not required for the other test positions in that exposure configuration and wireless mode combination within the frequency band or aggregated band. DSSS and OFDM configurations are considered separately according to the required SAR procedures.
- > 0.4 W/kg, SAR is repeated using the same wireless mode test configuration tested in the initial test position to measure the subsequent next closest/smallest test separation distance and maximum coupling test position, on the highest maximum output power channel, until the reported SAR is ≤ 0.8 W/kg or all required test positions are tested.
 - For subsequent test positions with equivalent test separation distance or when exposure is dominated by coupling conditions, the position for maximum coupling condition should be tested.
 - When it is unclear, all equivalent conditions must be tested.
- For all positions/configurations tested using the initial test position and subsequent test positions, when the reported SAR is > 0.8 W/kg, measure the SAR for these positions/configurations on the subsequent next highest measured output power channel(s) until the reported SAR is ≤ 1.2 W/kg or all required test channels are considered.
 - The additional power measurements required for this step should be limited to those necessary for identifying subsequent highest output power channels to apply the test reduction.
- When the specified maximum output power is the same for both UNII 1 and UNII 2A, begin SAR measurements in UNII 2A with the channel with the highest measured output power. If the reported SAR for UNII 2A is ≤ 1.2 W/kg, SAR is not required for UNII 1; otherwise treat the remaining bands separately and test them independently for SAR.
- When the specified maximum output power is different between UNII 1 and UNII 2A, begin SAR with the band that has the higher specified maximum output. If the highest reported SAR for the band with the highest specified power is ≤ 1.2 W/kg, testing for the band with the lower specified output power is not required; otherwise test the remaining bands independently for SAR.

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

10.1. GSM850

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
								Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT1	Head	GPRS 2 Slots	Mode A	0	Left Touch	190	836.6	32.25	32.10	0.226	0.234	0.171	0.177	1
					Left Tilt	190	836.6	32.25	32.10	0.112	0.116	0.087	0.090	
					Right Touch	190	836.6	32.25	32.10	0.186	0.193	0.145	0.150	
					Right Tilt	190	836.6	32.25	32.10	0.113	0.117	0.087	0.090	
	Body & Hotspot	GPRS 2 Slots	Mode B	5	Rear	190	836.6	32.25	32.10	0.425	0.440	0.258	0.267	2
					Front	190	836.6	32.25	32.10	0.199	0.206	0.152	0.157	
	Hotspot	GPRS 2 Slots	Mode B	5	Edge 2	190	836.6	32.25	32.10	0.178	0.184	0.116	0.120	
					Edge 3	190	836.6	32.25	32.10	0.302	0.313	0.145	0.150	
					Edge 4	190	836.6	32.25	32.10	0.493	0.510	0.322	0.333	3
Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
								Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT2	Head	GPRS 2 Slots	Mode A	0	Left Touch	190	836.6	30.75	30.70	0.392	0.397	0.290	0.293	
					Left Tilt	190	836.6	30.75	30.70	0.399	0.404	0.203	0.205	4
					Right Touch	190	836.6	30.75	30.70	0.346	0.350	0.216	0.219	
					Right Tilt	190	836.6	30.75	30.70	0.281	0.284	0.156	0.158	
	Body & Hotspot	GPRS 2 Slots	Mode B	5	Rear	190	836.6	30.75	30.70	0.312	0.316	0.171	0.173	5
					Front	190	836.6	30.75	30.70	0.240	0.243	0.138	0.140	
	Hotspot	GPRS 2 Slots	Mode B	5	Edge 1	190	836.6	30.75	30.70	0.240	0.243	0.112	0.113	
					Edge 2	190	836.6	30.75	30.70	0.381	0.385	0.248	0.251	6
					Edge 4	190	836.6	30.75	30.70	0.096	0.097	0.062	0.063	

10.2. GSM1900

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
								Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT1	Head	GPRS 2 Slots	Mode A	0	Left Touch	661	1880.0	30.75	30.50	0.146	0.155	0.092	0.098	7
					Left Tilt	661	1880.0	30.75	30.50	0.111	0.118	0.063	0.067	
					Right Touch	661	1880.0	30.75	30.50	0.235	0.249	0.148	0.157	
					Right Tilt	661	1880.0	30.75	30.50	0.127	0.135	0.075	0.080	
	Body & Hotspot	GPRS 2 Slots	Mode B	5	Rear	512	1850.2	26.25	26.20	0.922	0.933	0.437	0.442	
						661	1880.0	26.25	26.20	0.902	0.912	0.427	0.432	
						810	1909.8	26.25	26.20	0.944	0.955	0.434	0.439	
					Front	661	1880.0	26.25	26.20	0.235	0.238	0.128	0.129	
	Hotspot	GPRS 2 Slots	Mode B	5	Edge 2	661	1880.0	26.25	26.20	0.333	0.337	0.175	0.177	
					Edge 3	661	1880.0	26.25	26.20	0.474	0.479	0.210	0.212	
Edge 4					661	1880.0	26.25	26.20	0.076	0.077	0.041	0.041		
Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
								Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT2	Head	GPRS 2 Slots	Mode A	0	Left Touch	661	1880.0	23.50	23.20	0.145	0.155	0.073	0.078	9
					Left Tilt	661	1880.0	23.50	23.20	0.168	0.180	0.081	0.087	
					Right Touch	661	1880.0	23.50	23.20	0.493	0.528	0.230	0.246	
					Right Tilt	661	1880.0	23.50	23.20	0.729	0.781	0.321	0.344	
	Body & Hotspot	GPRS 2 Slots	Mode B	5	Rear	512	1850.2	24.50	24.20	0.759	0.813	0.342	0.366	10
						661	1880.0	24.50	24.10	0.816	0.895	0.363	0.398	
						810	1909.8	24.50	24.00	0.790	0.886	0.346	0.388	
					Front	661	1880.0	24.50	24.10	0.224	0.246	0.103	0.113	
	Hotspot	GPRS 2 Slots	Mode B	5	Edge 1	661	1880.0	24.50	24.10	0.344	0.377	0.131	0.144	
					Edge 2	661	1880.0	24.50	24.10	0.074	0.081	0.038	0.042	
Edge 4					661	1880.0	24.50	24.10	0.232	0.254	0.123	0.135		

10.3. W-CDMA Band II

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
								Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT1	Head	Rel 99 RMC 12.2 kbps	Mode A	0	Left Touch	9400	1880.0	25.70	25.63	0.225	0.229	0.141	0.143	11
					Left Tilt	9400	1880.0	25.70	25.63	0.160	0.163	0.091	0.092	
					Right Touch	9400	1880.0	25.70	25.63	0.366	0.372	0.222	0.226	
					Right Tilt	9400	1880.0	25.70	25.63	0.188	0.191	0.113	0.115	
	Body & Hotspot	Rel 99 RMC 12.2 kbps	Mode B	5	Rear	9262	1852.4	20.25	20.00	0.938	0.994	0.453	0.480	12
						9400	1880.0	20.25	20.24	0.932	0.934	0.454	0.455	
						9538	1907.6	20.25	20.22	0.989	0.996	0.466	0.469	
					Front	9400	1880.0	20.25	20.24	0.449	0.450	0.243	0.244	
	Hotspot	Rel 99 RMC 12.2 kbps	Mode B	5	Edge 2	9400	1880.0	20.25	20.24	0.523	0.524	0.275	0.276	
					Edge 3	9400	1880.0	20.25	20.24	0.615	0.616	0.279	0.280	
					Edge 4	9400	1880.0	20.25	20.24	0.114	0.114	0.062	0.062	
Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
								Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT2	Head	Rel 99 RMC 12.2 kbps	Mode A	0	Left Touch	9400	1880.0	17.50	17.43	0.222	0.226	0.109	0.111	13
					Left Tilt	9400	1880.0	17.50	17.43	0.329	0.334	0.151	0.153	
					Right Touch	9400	1880.0	17.50	17.43	0.779	0.792	0.364	0.370	
					Right Tilt	9400	1880.0	17.50	17.43	0.693	0.704	0.309	0.314	
	Body & Hotspot	Rel 99 RMC 12.2 kbps	Mode B	5	Rear	9262	1852.4	18.50	18.45	0.744	0.753	0.345	0.349	14
						9400	1880.0	18.50	18.38	0.802	0.824	0.365	0.375	
						9538	1907.6	18.50	18.22	0.833	0.888	0.377	0.402	
					Front	9400	1880.0	18.50	18.38	0.278	0.286	0.135	0.139	
	Hotspot	Rel 99 RMC 12.2 kbps	Mode B	5	Edge 1	9400	1880.0	18.50	18.38	0.436	0.448	0.173	0.178	
					Edge 2	9400	1880.0	18.50	18.38	0.121	0.124	0.062	0.064	
					Edge 4	9400	1880.0	18.50	18.38	0.363	0.373	0.191	0.196	

10.4. W-CDMA Band IV

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
								Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT1	Head	Rel 99 RMC 12.2 kbps	Mode A	0	Left Touch	1413	1732.6	25.70	25.64	0.244	0.247	0.154	0.156	15
					Left Tilt	1413	1732.6	25.70	25.64	0.164	0.166	0.093	0.095	
					Right Touch	1413	1732.6	25.70	25.64	0.256	0.260	0.162	0.164	
					Right Tilt	1413	1732.6	25.70	25.64	0.166	0.168	0.107	0.108	
	Body & Hotspot	Rel 99 RMC 12.2 kbps	Mode B	5	Rear	1413	1732.6	21.50	21.42	0.694	0.707	0.365	0.372	16
					Front	1413	1732.6	21.50	21.42	0.431	0.439	0.233	0.237	
	Hotspot	Rel 99 RMC 12.2 kbps	Mode B	5	Edge 2	1413	1732.6	21.50	21.42	0.354	0.361	0.195	0.199	17
					Edge 3	1312	1712.4	21.50	21.35	0.960	0.994	0.470	0.487	
						1413	1732.6	21.50	21.42	0.926	0.943	0.456	0.464	
					Edge 4	1413	1732.6	21.50	21.42	0.876	0.876	0.432	0.432	
Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
								Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT2	Head	Rel 99 RMC 12.2 kbps	Mode A	0	Left Touch	1413	1732.6	21.25	21.25	0.197	0.197	0.104	0.104	18
					Left Tilt	1413	1732.6	21.25	21.25	0.224	0.224	0.114	0.114	
					Right Touch	1413	1732.6	21.25	21.25	0.788	0.788	0.397	0.397	
					Right Tilt	1413	1732.6	21.25	21.25	0.592	0.592	0.276	0.276	
	Body & Hotspot	Rel 99 RMC 12.2 kbps	Mode B	5	Rear	1312	1712.4	21.50	21.39	0.795	0.815	0.367	0.376	19
						1413	1732.6	21.50	21.34	0.800	0.830	0.383	0.397	
					Front	1413	1732.6	21.50	21.34	0.319	0.331	0.161	0.167	
	Hotspot	Rel 99 RMC 12.2 kbps	Mode B	5	Edge 1	1413	1732.6	21.50	21.34	0.312	0.324	0.152	0.158	
					Edge 2	1413	1732.6	21.50	21.34	0.030	0.031	0.016	0.017	
					Edge 4	1413	1732.6	21.50	21.34	0.313	0.325	0.172	0.178	

10.5. W-CDMA Band V

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
								Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT1	Head	Rel 99 RMC 12.2 kbps	Mode A	0	Left Touch	4183	836.6	25.70	25.60	0.256	0.262	0.195	0.200	20
					Left Tilt	4183	836.6	25.70	25.60	0.131	0.134	0.101	0.103	
					Right Touch	4183	836.6	25.70	25.60	0.203	0.208	0.157	0.161	
					RightTilt	4183	836.6	25.70	25.60	0.123	0.126	0.095	0.097	
	Body & Hotspot	Rel 99 RMC 12.2 kbps	Mode B	5	Rear	4183	836.6	25.70	25.60	0.517	0.529	0.316	0.323	21
					Front	4183	836.6	25.70	25.60	0.286	0.293	0.174	0.178	
	Hotspot	Rel 99 RMC 12.2 kbps	Mode B	5	Edge 2	4183	836.6	25.70	25.60	0.144	0.147	0.093	0.095	
					Edge 3	4183	836.6	25.70	25.60	0.351	0.359	0.171	0.175	
ANT2	Head	Rel 99 RMC 12.2 kbps	Mode A	0	Edge 4	4183	836.6	25.70	25.60	0.459	0.470	0.301	0.308	
					Left Touch	4183	836.6	24.50	24.50	0.492	0.492	0.318	0.318	22
					Left Tilt	4183	836.6	24.50	24.50	0.451	0.451	0.227	0.227	
					Right Touch	4183	836.6	24.50	24.50	0.347	0.347	0.226	0.226	
	Body & Hotspot	Rel 99 RMC 12.2 kbps	Mode B	5	Right Tilt	4183	836.6	24.50	24.50	0.313	0.313	0.176	0.176	
					Rear	4183	836.6	24.50	24.50	0.321	0.321	0.184	0.184	23
	Hotspot	Rel 99 RMC 12.2 kbps	Mode B	5	Front	4183	836.6	24.50	24.50	0.271	0.271	0.161	0.161	
					Edge 1	4183	836.6	24.50	24.50	0.262	0.262	0.124	0.124	
					Edge 2	4183	836.6	24.50	24.50	0.357	0.357	0.233	0.233	24
					Edge 4	4183	836.6	24.50	24.50	0.083	0.083	0.054	0.054	

10.6. CDMA BC0

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
								Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT1	Head	1xRTT RC3 SO55	Mode A	0	Left Touch	384	836.5	25.70	25.70	0.275	0.275	0.215	0.215	25
					Left Tilt	384	836.5	25.70	25.70	0.126	0.126	0.100	0.100	
					Right Touch	384	836.5	25.70	25.70	0.243	0.243	0.193	0.193	
					Right Tilt	384	836.5	25.70	25.70	0.150	0.150	0.118	0.118	
		1xEVDO Rel. 0	Mode A	0	Left Touch	384	836.5	25.70	25.70	0.216	0.216	0.169	0.169	
					Left Tilt	384	836.5	25.70	25.70	0.093	0.093	0.073	0.073	
					Right Touch	384	836.5	25.70	25.70	0.172	0.172	0.136	0.136	
					Right Tilt	384	836.5	25.70	25.70	0.097	0.097	0.076	0.076	
	Body & Hotspot	1xRTT RC3 SO32	Mode B	5	Rear	384	836.5	25.70	25.70	0.648	0.648	0.386	0.386	26
					Front	384	836.5	25.70	25.70	0.353	0.353	0.210	0.210	
ANT2	Head	1xRTT RC3 SO32	Mode B	5	Edge 2	384	836.5	25.70	25.70	0.205	0.205	0.132	0.132	
					Edge 3	384	836.5	25.70	25.70	0.284	0.284	0.139	0.139	
					Edge 4	384	836.5	25.70	25.70	0.554	0.554	0.362	0.362	
		1xEVDO Rel. 0	Mode A	0	Left Touch	384	836.5	24.50	24.50	0.501	0.501	0.317	0.317	27
					Left Tilt	384	836.5	24.50	24.50	0.452	0.452	0.223	0.223	
					Right Touch	384	836.5	24.50	24.50	0.401	0.401	0.249	0.249	
					Right Tilt	384	836.5	24.50	24.50	0.316	0.316	0.174	0.174	
	Body & Hotspot	1xRTT RC3 SO32	Mode B	5	Left Touch	384	836.5	24.50	24.50	0.423	0.423	0.280	0.280	
					Left Tilt	384	836.5	24.50	24.50	0.376	0.376	0.201	0.201	
					Right Touch	384	836.5	24.50	24.50	0.399	0.399	0.247	0.247	
					Right Tilt	384	836.5	24.50	24.50	0.314	0.314	0.176	0.176	

10.7. CDMA BC1

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
								Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT1	Head	1xRTT RC3 SO55	Mode A	0	Left Touch	600	1880.0	25.70	25.70	0.227	0.227	0.140	0.140	
					Left Tilt	600	1880.0	25.70	25.70	0.202	0.202	0.113	0.113	
					Right Touch	600	1880.0	25.70	25.70	0.241	0.241	0.152	0.152	
					Right Tilt	600	1880.0	25.70	25.70	0.205	0.205	0.121	0.121	
		1xEVDO Rel. 0	Mode A	0	Left Touch	600	1880.0	25.70	25.70	0.226	0.226	0.143	0.143	
					Left Tilt	600	1880.0	25.70	25.70	0.199	0.199	0.115	0.115	
					Right Touch	600	1880.0	25.70	25.70	0.430	0.430	0.271	0.271	30
					Right Tilt	600	1880.0	25.70	25.70	0.211	0.211	0.128	0.128	
	Body & Hotspot	1xRTT RC3 SO32	Mode B	5	Rear	25	1851.3	20.25	19.75	0.853	0.957	0.410	0.460	
						600	1880.0	20.25	19.75	0.890	0.999	0.423	0.475	31
						1175	1908.8	20.25	19.75	0.833	0.935	0.391	0.439	
					Front	600	1880.0	20.25	19.75	0.355	0.398	0.189	0.212	
	Hotspot	1xRTT RC3 SO32	Mode B	5	Edge 2	600	1880.0	20.25	19.75	0.353	0.396	0.188	0.211	
					Edge 3	600	1880.0	20.25	19.75	0.491	0.551	0.223	0.250	
					Edge 4	600	1880.0	20.25	19.75	0.086	0.096	0.047	0.053	
Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
								Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT2	Head	1xRTT RC3 SO55	Mode A	0	Left Touch	600	1880.0	17.50	17.50	0.173	0.173	0.086	0.086	
					Left Tilt	600	1880.0	17.50	17.50	0.247	0.247	0.114	0.114	
					Right Touch	600	1880.0	17.50	17.50	0.546	0.546	0.259	0.259	
					Right Tilt	600	1880.0	17.50	17.50	0.714	0.714	0.304	0.304	
		1xEVDO Rel. 0	Mode A	0	Left Touch	600	1880.0	17.50	17.50	0.182	0.182	0.090	0.090	
					Left Tilt	600	1880.0	17.50	17.50	0.231	0.231	0.109	0.109	
					Right Touch	600	1880.0	17.50	17.50	0.587	0.587	0.266	0.266	
					Right Tilt	600	1880.0	17.50	17.50	0.742	0.742	0.313	0.313	32
	Body & Hotspot	1xRTT RC3 SO32	Mode B	5	Rear	25	1851.3	18.50	18.00	0.695	0.780	0.321	0.360	
						600	1880.0	18.50	18.00	0.714	0.801	0.328	0.368	
						1175	1908.8	18.50	18.00	0.774	0.868	0.347	0.389	33
					Front	600	1880.0	18.50	18.00	0.262	0.294	0.127	0.142	
	Hotspot	1xRTT RC3 SO32	Mode B	5	Edge 1	600	1880.0	18.50	18.00	0.332	0.373	0.134	0.150	
					Edge 2	600	1880.0	18.50	18.00	0.090	0.101	0.046	0.052	
					Edge 4	600	1880.0	18.50	18.00	0.250	0.281	0.135	0.151	

10.8. CDMA BC10

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
								Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT1	Head	1xRTT RC3 SO55	Mode A	0	Left Touch	560	820.0	25.70	25.70	0.229	0.229	0.397	0.397	34
					Left Tilt	560	820.0	25.70	25.70	0.117	0.117	0.339	0.339	
					Right Touch	560	820.0	25.70	25.70	0.158	0.158	0.392	0.392	
					Right Tilt	560	820.0	25.70	25.70	0.114	0.114	0.348	0.348	
		1xEVDO Rel. 0	Mode A	0	Left Touch	560	820.0	25.70	25.70	0.155	0.155	0.430	0.430	
					Left Tilt	560	820.0	25.70	25.70	0.091	0.091	0.363	0.363	
					Right Touch	560	820.0	25.70	25.70	0.117	0.117	0.402	0.402	
					Right Tilt	560	820.0	25.70	25.70	0.075	0.075	0.310	0.310	
	Body & Hotspot	1xRTT RC3 SO32	Mode B	5	Rear	560	820.0	25.70	25.70	0.512	0.512	0.307	0.307	35
					Front	560	820.0	25.70	25.70	0.242	0.242	0.253	0.253	
	Hotspot	1xRTT RC3 SO32	Mode B	5	Edge 2	560	820.0	25.70	25.70	0.158	0.158	0.262	0.262	
					Edge 3	560	820.0	25.70	25.70	0.194	0.194	0.425	0.425	
					Edge 4	560	820.0	25.70	25.70	0.480	0.480	0.133	0.133	
Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
								Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT2	Head	1xRTT RC3 SO55	Mode A	0	Left Touch	560	820.0	24.50	24.50	0.397	0.397	0.275	0.275	
					Left Tilt	560	820.0	24.50	24.50	0.339	0.339	0.185	0.185	
					Right Touch	560	820.0	24.50	24.50	0.392	0.392	0.247	0.247	
					Right Tilt	560	820.0	24.50	24.50	0.348	0.348	0.192	0.192	
		1xEVDO Rel. 0	Mode A	0	Left Touch	560	820.0	24.50	24.50	0.430	0.430	0.294	0.294	36
					Left Tilt	560	820.0	24.50	24.50	0.363	0.363	0.198	0.198	
					Right Touch	560	820.0	24.50	24.50	0.402	0.402	0.250	0.250	
					Right Tilt	560	820.0	24.50	24.50	0.310	0.310	0.172	0.172	
	Body & Hotspot	1xRTT RC3 SO32	Mode B	5	Rear	560	820.0	24.50	24.50	0.349	0.349	0.194	0.194	37
					Front	560	820.0	24.50	24.50	0.253	0.253	0.151	0.151	
	Hotspot	1xRTT RC3 SO32	Mode B	5	Edge 1	560	820.0	24.50	24.50	0.262	0.262	0.124	0.124	
					Edge 2	560	820.0	24.50	24.50	0.425	0.425	0.281	0.281	38
					Edge 4	560	820.0	24.50	24.50	0.133	0.133	0.087	0.087	

10.9. LTE Band 5 (10MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT1	Head	QPSK	Mode A	0	Left Touch	20525	836.5	1	25	25.70	25.58	0.252	0.259	0.198	0.204	39
								25	12	24.70	24.58	0.192	0.197	0.151	0.155	
					Left Tilt	20525	836.5	1	25	25.70	25.58	0.130	0.134	0.101	0.104	
								25	12	24.70	24.58	0.098	0.101	0.076	0.078	
					Right Touch	20525	836.5	1	25	25.70	25.58	0.197	0.203	0.157	0.161	
								25	12	24.70	24.58	0.164	0.169	0.129	0.133	
					Right Tilt	20525	836.5	1	25	25.70	25.58	0.134	0.138	0.103	0.106	
								25	12	24.70	24.58	0.104	0.107	0.081	0.084	
	Body & Hotspot	QPSK	Mode B	5	Rear	20525	836.5	1	25	25.70	25.58	0.346	0.356	0.207	0.213	40
								25	12	24.70	24.58	0.276	0.284	0.165	0.170	
					Front	20525	836.5	1	25	25.70	25.58	0.324	0.333	0.197	0.203	
								25	12	24.70	24.58	0.262	0.269	0.158	0.162	
	Hotspot	QPSK	Mode B	5	Edge 2	20525	836.5	1	25	25.70	25.58	0.255	0.262	0.166	0.171	
								25	12	24.70	24.58	0.199	0.205	0.129	0.133	
					Edge 3	20525	836.5	1	25	25.70	25.58	0.302	0.310	0.145	0.149	
								25	12	24.70	24.58	0.243	0.250	0.116	0.119	
					Edge 4	20525	836.5	1	25	25.70	25.58	0.570	0.586	0.373	0.383	41
								25	12	24.70	24.58	0.452	0.465	0.296	0.304	

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT2	Head	QPSK	Mode A	0	Left Touch	20525	836.5	1	25	24.50	24.24	0.429	0.455	0.272	0.289	42
								25	12	23.50	23.29	0.344	0.361	0.218	0.229	
					Left Tilt	20525	836.5	1	25	24.50	24.24	0.420	0.446	0.219	0.233	
								25	12	23.50	23.29	0.331	0.347	0.173	0.182	
					Right Touch	20525	836.5	1	25	24.50	24.24	0.396	0.420	0.248	0.263	
								25	12	23.50	23.29	0.315	0.331	0.197	0.207	
					Right Tilt	20525	836.5	1	25	24.50	24.24	0.324	0.344	0.180	0.191	
								25	12	23.50	23.29	0.258	0.271	0.143	0.150	
	Body & Hotspot	QPSK	Mode B	5	Rear	20525	836.5	1	25	24.50	24.24	0.291	0.309	0.165	0.175	43
								25	12	23.50	23.29	0.229	0.240	0.130	0.136	
					Front	20525	836.5	1	25	24.50	24.24	0.266	0.282	0.153	0.162	
								25	12	23.50	23.29	0.212	0.223	0.121	0.127	
	Hotspot	QPSK	Mode B	5	Edge 1	20525	836.5	1	25	24.50	24.24	0.316	0.335	0.148	0.157	
								25	12	23.50	23.29	0.249	0.261	0.115	0.121	
					Edge 2	20525	836.5	1	25	24.50	24.24	0.346	0.367	0.224	0.238	44
								25	12	23.50	23.29	0.277	0.291	0.180	0.189	
					Edge 4	20525	836.5	1	25	24.50	24.24	0.083	0.088	0.053	0.057	
								25	12	23.50	23.29	0.067	0.070	0.043	0.045	

UL CA 5B

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	PCC UL				SCC UL				Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
						Ch #.	Freq. (MHz)	RB Allocation	RB offset	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT 1	Head	QPSK	Mode A	0	Left Touch	20525	836.5	1	49	20599	843.7	1	0	25.00	24.83	0.175	0.182	0.135	0.140	
ANT 1	Body	QPSK	Mode B	5	Rear	20525	836.5	1	49	20599	843.7	1	0	25.00	24.83	0.339	0.353	0.213	0.222	
ANT 1	Hotspot	QPSK	Mode B	5	Edge 4	20525	836.5	1	49	20599	843.7	1	0	25.00	24.83	0.436	0.453	0.280	0.291	
ANT 2	Head	QPSK	Mode A	0	Left Touch	20525	836.5	1	49	20599	843.7	1	0	23.50	23.30	0.395	0.414	0.257	0.269	
ANT 2	Body	QPSK	Mode B	5	Rear	20525	836.5	1	49	20599	843.7	1	0	23.50	23.30	0.276	0.289	0.163	0.171	
ANT 2	Hotspot	QPSK	Mode B	5	Edge 2	20525	836.5	1	49	20599	843.7	1	0	23.50	23.30	0.219	0.229	0.139	0.146	

Note(s):

PCC RB allocation setting for UL CA has been adjusted based on the worst-case power.

10.10. LTE Band 7 (20MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT1	Head	QPSK	Mode A	0	Left Touch	21100	2535.0	1	49	25.70	25.50	0.402	0.421	0.219	0.229	45
								50	24	24.70	24.50	0.370	0.387	0.207	0.217	
					Left Tilt	21100	2535.0	1	49	25.70	25.50	0.136	0.142	0.063	0.066	
								50	24	24.70	24.50	0.116	0.121	0.059	0.062	
					Right Touch	21100	2535.0	1	49	25.70	25.50	0.338	0.354	0.161	0.169	
								50	24	24.70	24.50	0.224	0.235	0.124	0.130	
					Right Tilt	21100	2535.0	1	49	25.70	25.50	0.276	0.289	0.133	0.139	
								50	24	24.70	24.50	0.211	0.221	0.109	0.114	
	Body & Hotspot	QPSK	Mode B	5	Rear	20850	2510.0	1	49	20.50	20.40	0.665	0.680	0.291	0.298	
								50	24	20.50	20.30	0.676	0.708	0.288	0.302	
						21100	2535.0	1	49	20.50	20.40	0.884	0.905	0.401	0.410	
								50	24	20.50	20.30	0.885	0.927	0.392	0.410	46
					Front	21350	2560.0	100	0	20.50	20.30	0.871	0.912	0.371	0.388	
								1	49	20.50	20.40	0.679	0.695	0.303	0.310	
						21100	2535.0	50	24	20.50	20.30	0.686	0.718	0.297	0.311	
								1	49	20.50	20.40	0.752	0.770	0.329	0.337	
	Hotspot	QPSK	Mode B	5	Edge 2	21100	2535.0	50	24	20.50	20.30	0.759	0.795	0.337	0.353	
								1	49	20.50	20.40	0.002	0.002	0.001	0.001	
					Edge 3	21100	2535.0	50	24	20.50	20.30	0.022	0.023	0.010	0.010	
								1	49	20.50	20.40	0.580	0.594	0.169	0.173	
					Edge 4	21100	2535.0	50	24	20.50	20.30	0.625	0.654	0.190	0.199	
								1	49	20.50	20.40	0.695	0.711	0.306	0.313	
								50	24	20.50	20.30	0.686	0.718	0.302	0.316	
								1	49	20.50	20.40	0.695	0.711	0.306	0.313	
ANT2	Head	QPSK	Mode A	0	Left Touch	21100	2535.0	1	49	17.75	17.71	0.782	0.789	0.304	0.307	
								50	24	17.75	17.74	0.794	0.796	0.300	0.301	47
					Left Tilt	21100	2535.0	1	49	17.75	17.71	0.533	0.538	0.220	0.222	
								50	24	17.75	17.74	0.524	0.525	0.215	0.215	
					Right Touch	21100	2535.0	1	49	17.75	17.71	0.281	0.284	0.127	0.128	
								50	24	17.75	17.74	0.255	0.256	0.120	0.120	
					Right Tilt	21100	2535.0	1	49	17.75	17.71	0.325	0.328	0.144	0.145	
								50	24	17.75	17.74	0.325	0.326	0.146	0.146	
	Body & Hotspot	QPSK	Mode B	5	Rear	20850	2510.0	1	49	19.75	19.60	0.753	0.779	0.324	0.335	
								50	24	19.75	19.70	0.743	0.752	0.312	0.316	
					21100	2535.0	2560.0	1	49	19.75	19.60	0.788	0.816	0.324	0.335	
								50	24	19.75	19.40	0.792	0.858	0.325	0.352	48
					Front	21350	2560.0	100	0	19.75	19.30	0.754	0.836	0.323	0.358	
								1	49	19.75	19.70	0.686	0.694	0.297	0.300	
						21100	2535.0	50	24	19.75	19.70	0.806	0.815	0.340	0.344	
								1	49	19.75	19.60	0.477	0.494	0.207	0.214	
	Hotspot	QPSK	Mode B	5	Edge 1	21100	2535.0	50	24	19.75	19.40	0.488	0.529	0.185	0.201	
								1	49	19.75	19.60	0.349	0.361	0.118	0.122	
					Edge 2	20850	2510.0	50	24	19.75	19.40	0.336	0.364	0.123	0.133	
								1	49	19.75	19.60	0.782	0.809	0.308	0.319	
						21100	2535.0	50	24	19.75	19.70	0.818	0.827	0.318	0.322	
								1	49	19.75	19.60	0.804	0.832	0.318	0.329	
					Edge 4	21100	2535.0	50	24	19.75	19.40	0.807	0.875	0.318	0.345	49
								100	0	19.75	19.30	0.705	0.782	0.284	0.315	
ANT2	Body & Hotspot	QPSK	Mode B	5	Rear	21350	2560.0	1	49	19.75	19.70	0.789	0.798	0.309	0.313	
								50	24	19.75	19.70	0.819	0.828	0.315	0.319	
					Edge 4	21100	2535.0	1	49	19.75	19.60	0.022	0.023	0.014	0.014	
								50	24	19.75	19.40	0.012	0.013	0.003	0.004	

UL CA 7C

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	PCC UL				SCC UL				Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
						Ch #.	Freq. (MHz)	RB Allocation	RB offset	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT 1	Head	QPSK	Mode A	0	Left Touch	21100	2535.0	1	99	21298	2554.8	1	0	25.00	24.70	0.383	0.410	0.203	0.218	
ANT 1	Body	QPSK	Mode B	5	Rear	21100	2535.0	1	99	21298	2554.8	1	0	20.50	20.40	0.692	0.708	0.292	0.299	
ANT 2	Head	QPSK	Mode A	0	Left Touch	21100	2535.0	1	99	21298	2554.8	1	0	17.75	17.74	0.765	0.767	0.307	0.308	
ANT 2	Body	QPSK	Mode B	5	Rear	21100	2535.0	1	99	21298	2554.8	1	0	19.75	19.68	0.623	0.633	0.277	0.282	
ANT 2	Hotspot	QPSK	Mode B	5	Edge 2	21100	2535.0	1	99	21298	2554.8	1	0	19.75	19.68	0.696	0.707	0.281	0.286	

Note(s):

PCC RB allocation setting for UL CA has been adjusted based on the worst-case power.

10.11. LTE Band 12 (10MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT1	Head	QPSK	Mode A	0	Left Touch	23095	707.5	1	25	25.70	25.20	0.228	0.256	0.175	0.196	50
								25	12	24.70	24.20	0.177	0.199	0.137	0.154	
					Left Tilt	23095	707.5	1	25	25.70	25.20	0.125	0.140	0.099	0.111	
								25	12	24.70	24.20	0.093	0.104	0.073	0.082	
					Right Touch	23095	707.5	1	25	25.70	25.20	0.203	0.228	0.156	0.175	
								25	12	24.70	24.20	0.154	0.173	0.120	0.135	
	Body & Hotspot	QPSK	Mode B	5	Right Tilt	23095	707.5	1	25	25.70	25.20	0.148	0.166	0.118	0.132	
								25	12	24.70	24.20	0.117	0.131	0.093	0.104	
					Rear	23095	707.5	1	25	25.70	25.20	0.705	0.791	0.384	0.431	51
								25	12	24.70	24.20	0.579	0.650	0.315	0.353	
					Front	23095	707.5	1	25	25.70	25.20	0.422	0.473	0.242	0.272	
								25	12	24.70	24.20	0.343	0.385	0.197	0.221	
	Hotspot	QPSK	Mode B	5	Edge 2	23095	707.5	1	25	25.70	25.20	0.328	0.368	0.220	0.247	
								25	12	24.70	24.20	0.264	0.296	0.175	0.196	
					Edge 3	23095	707.5	1	25	25.70	25.20	0.539	0.605	0.249	0.279	
								25	12	24.70	24.20	0.427	0.479	0.197	0.221	
					Edge 4	23095	707.5	1	25	25.70	25.20	0.683	0.766	0.456	0.512	
								25	12	24.70	24.20	0.562	0.631	0.376	0.422	
Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT2	Head	QPSK	Mode A	0	Left Touch	23095	707.5	1	25	24.50	24.37	0.327	0.337	0.246	0.253	
								25	12	23.50	23.30	0.253	0.265	0.187	0.196	
					Left Tilt	23095	707.5	1	25	24.50	24.37	0.356	0.367	0.197	0.203	52
								25	12	23.50	23.30	0.271	0.284	0.151	0.158	
					Right Touch	23095	707.5	1	25	24.50	24.37	0.288	0.297	0.195	0.201	
								25	12	23.50	23.30	0.223	0.234	0.150	0.157	
	Body & Hotspot	QPSK	Mode B	5	Right Tilt	23095	707.5	1	25	24.50	24.37	0.295	0.304	0.168	0.173	
								25	12	23.50	23.30	0.228	0.239	0.130	0.136	
					Rear	23095	707.5	1	25	24.50	24.37	0.231	0.238	0.180	0.185	53
								25	12	23.50	23.30	0.178	0.186	0.139	0.146	
					Front	23095	707.5	1	25	24.50	24.37	0.197	0.203	0.154	0.159	
								25	12	23.50	23.30	0.150	0.157	0.117	0.123	
	Hotspot	QPSK	Mode B	5	Edge 1	23095	707.5	1	25	24.50	24.37	0.100	0.103	0.049	0.050	
								25	12	23.50	23.30	0.075	0.079	0.037	0.039	
					Edge 2	23095	707.5	1	25	24.50	24.37	0.472	0.486	0.317	0.327	54
								25	12	23.50	23.30	0.361	0.378	0.241	0.252	
					Edge 4	23095	707.5	1	25	24.50	24.37	0.353	0.364	0.235	0.242	
								25	12	23.50	23.30	0.268	0.281	0.179	0.187	

10.12. LTE Band 13 (10MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT1	Head	QPSK	Mode A	0	Left Touch	23230	782.0	1	25	25.70	25.20	0.233	0.261	0.179	0.201	
								25	12	24.70	24.20	0.193	0.217	0.149	0.167	
					Left Tilt	23230	782.0	1	25	25.70	25.20	0.130	0.146	0.103	0.116	
								25	12	24.70	24.20	0.107	0.120	0.085	0.095	
					Right Touch	23230	782.0	1	25	25.70	25.20	0.244	0.274	0.187	0.210	55
								25	12	24.70	24.20	0.191	0.214	0.147	0.165	
					Right Tilt	23230	782.0	1	25	25.70	25.20	0.180	0.202	0.143	0.160	
								25	12	24.70	24.20	0.143	0.160	0.113	0.127	
	Body & Hotspot	QPSK	Mode B	5	Rear	23230	782.0	1	25	25.70	25.20	0.673	0.755	0.407	0.457	56
								25	12	24.70	24.20	0.527	0.591	0.319	0.358	
					Front	23230	782.0	1	25	25.70	25.20	0.288	0.323	0.212	0.238	
								25	12	24.70	24.20	0.216	0.242	0.166	0.186	
	Hotspot	QPSK	Mode B	5	Edge 2	23230	782.0	1	25	25.70	25.20	0.374	0.420	0.248	0.278	
								25	12	24.70	24.20	0.285	0.320	0.188	0.211	
					Edge 3	23230	782.0	1	25	25.70	25.20	0.242	0.272	0.120	0.135	
								25	12	24.70	24.20	0.191	0.214	0.094	0.105	
					Edge 4	23230	782.0	1	25	25.70	25.20	0.654	0.734	0.435	0.488	
								25	12	24.70	24.20	0.503	0.564	0.334	0.375	

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT2	Head	QPSK	Mode A	0	Left Touch	23230	782.0	1	25	24.50	24.00	0.430	0.482	0.316	0.355	57
								25	12	23.50	23.05	0.344	0.382	0.253	0.281	
					Left Tilt	23230	782.0	1	25	24.50	24.00	0.361	0.405	0.199	0.223	
								25	12	23.50	23.05	0.283	0.314	0.155	0.172	
					Right Touch	23230	782.0	1	25	24.50	24.00	0.308	0.346	0.225	0.252	
								25	12	23.50	23.05	0.248	0.275	0.182	0.202	
					Right Tilt	23230	782.0	1	25	24.50	24.00	0.238	0.267	0.135	0.151	
								25	12	23.50	23.05	0.187	0.207	0.105	0.116	
	Body & Hotspot	QPSK	Mode B	5	Rear	23230	782.0	1	25	24.50	24.00	0.300	0.337	0.167	0.187	58
								25	12	23.50	23.05	0.237	0.263	0.132	0.146	
					Front	23230	782.0	1	25	24.50	24.00	0.201	0.226	0.154	0.173	
								25	12	23.50	23.05	0.160	0.177	0.119	0.132	
	Hotspot	QPSK	Mode B	5	Edge 1	23230	782.0	1	25	24.50	24.00	0.201	0.226	0.092	0.103	
								25	12	23.50	23.05	0.160	0.177	0.074	0.082	
					Edge 2	23230	782.0	1	25	24.50	24.00	0.545	0.612	0.356	0.399	59
								25	12	23.50	23.05	0.429	0.476	0.281	0.312	
					Edge 4	23230	782.0	1	25	24.50	24.00	0.237	0.266	0.153	0.172	
								25	12	23.50	23.05	0.183	0.203	0.118	0.131	

10.13. LTE Band 14 (10MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT1	Head	QPSK	Mode A	0	Left Touch	23330	793.0	1	25	25.70	25.20	0.261	0.293	0.197	0.221	60
								25	12	24.70	24.22	0.202	0.226	0.153	0.171	
					Left Tilt	23330	793.0	1	25	25.70	25.20	0.152	0.171	0.119	0.134	
								25	12	24.70	24.22	0.121	0.135	0.095	0.106	
					Right Touch	23330	793.0	1	25	25.70	25.20	0.202	0.227	0.155	0.174	
								25	12	24.70	24.22	0.161	0.180	0.122	0.136	
	Body & Hotspot	QPSK	Mode B	5	Right Tilt	23330	793.0	1	25	25.70	25.20	0.150	0.168	0.116	0.130	
								25	12	24.70	24.22	0.114	0.127	0.089	0.099	
					Rear	23330	793.0	1	25	25.70	25.20	0.449	0.504	0.280	0.314	61
								25	12	24.70	24.22	0.361	0.403	0.224	0.250	
					Front	23330	793.0	1	25	25.70	25.20	0.447	0.502	0.265	0.297	
								25	12	24.70	24.22	0.220	0.246	0.139	0.155	
	Hotspot	QPSK	Mode B	5	Edge 2	23330	793.0	1	25	25.70	25.20	0.526	0.590	0.342	0.384	
								25	12	24.70	24.22	0.425	0.475	0.276	0.308	
					Edge 3	23330	793.0	1	25	25.70	25.20	0.293	0.329	0.137	0.154	
								25	12	24.70	24.22	0.236	0.264	0.109	0.122	
					Edge 4	23330	793.0	1	25	25.70	25.20	0.623	0.699	0.408	0.458	62
								25	12	24.70	24.22	0.535	0.598	0.348	0.389	
ANT2	Head	QPSK	Mode A	0	Left Touch	23330	793.0	1	25	24.50	24.23	0.353	0.376	0.260	0.277	63
								25	12	23.50	23.17	0.305	0.329	0.223	0.241	
					Left Tilt	23330	793.0	1	25	24.50	24.23	0.317	0.337	0.176	0.187	
								25	12	23.50	23.17	0.253	0.273	0.141	0.152	
					Right Touch	23330	793.0	1	25	24.50	24.23	0.312	0.332	0.197	0.210	
								25	12	23.50	23.17	0.247	0.266	0.157	0.169	
					Right Tilt	23330	793.0	1	25	24.50	24.23	0.251	0.267	0.142	0.151	
								25	12	23.50	23.17	0.223	0.241	0.125	0.135	
	Body & Hotspot	QPSK	Mode B	5	Rear	23330	793.0	1	25	24.50	24.23	0.269	0.286	0.155	0.165	64
								25	12	23.50	23.17	0.214	0.231	0.122	0.132	
					Front	23330	793.0	1	25	24.50	24.23	0.235	0.250	0.136	0.145	
								25	12	23.50	23.17	0.189	0.204	0.109	0.118	
	Hotspot	QPSK	Mode B	5	Edge 1	23330	793.0	1	25	24.50	24.23	0.216	0.230	0.102	0.109	
								25	12	23.50	23.17	0.174	0.188	0.081	0.087	
					Edge 2	23330	793.0	1	25	24.50	24.23	0.488	0.519	0.320	0.341	65
								25	12	23.50	23.17	0.392	0.423	0.255	0.275	
					Edge 4	23330	793.0	1	25	24.50	24.23	0.130	0.138	0.084	0.089	
								25	12	23.50	23.17	0.104	0.112	0.067	0.072	

10.14. LTE Band 25 (20MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.				
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled					
ANT1	Head	QPSK	Mode A	0	Left Touch	26365	1882.5	1	49	25.70	25.23	0.234	0.261	0.148	0.165	66				
								50	24	24.70	24.21	0.165	0.185	0.105	0.118					
					Left Tilt	26365	1882.5	1	49	25.70	25.23	0.185	0.206	0.104	0.116					
								50	24	24.70	24.21	0.145	0.162	0.082	0.091					
					Right Touch	26365	1882.5	1	49	25.70	25.23	0.382	0.426	0.239	0.266					
								50	24	24.70	24.21	0.293	0.328	0.183	0.205					
					Right Tilt	26365	1882.5	1	49	25.70	25.23	0.226	0.252	0.131	0.146					
								50	24	24.70	24.21	0.174	0.195	0.102	0.114					
	Body & Hotspot	QPSK	Mode B	5	Rear	26140	1860.0	1	49	20.25	20.23	0.788	0.792	0.391	0.393	67				
								50	24	20.25	20.25	0.773	0.773	0.387	0.387					
						26365	1882.5	1	49	20.25	20.25	0.846	0.846	0.400	0.400					
								50	24	20.25	20.22	0.934	0.940	0.454	0.457					
						26590	1905.0	100	0	20.25	20.18	0.769	0.781	0.377	0.383					
								1	49	20.25	20.16	0.835	0.852	0.402	0.410					
					Front	26365	1882.5	50	24	20.25	20.12	0.791	0.815	0.380	0.392					
								1	49	20.25	20.25	0.454	0.454	0.238	0.238					
					Hotspot	QPSK	Mode B	5	Edge 2	26365	1882.5	50	24	20.25	20.22		0.471	0.474	0.244	0.246
												1	49	20.25	20.25		0.430	0.430	0.228	0.228
									Edge 3	26365	1882.5	1	49	20.25	20.25		0.587	0.587	0.266	0.266
												50	24	20.25	20.22		0.694	0.699	0.305	0.307
	Edge 4	26365	1882.5	1					49	20.25	20.25	0.094	0.094	0.053	0.053					
				50					24	20.25	20.22	0.093	0.094	0.051	0.052					

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT2	Head	QPSK	Mode A	0	Left Touch	26365	1882.5	1	49	17.50	17.36	0.168	0.174	0.084	0.087	68
								50	24	17.50	17.40	0.167	0.171	0.083	0.085	
					Left Tilt	26365	1882.5	1	49	17.50	17.36	0.228	0.235	0.108	0.112	
								50	24	17.50	17.40	0.228	0.233	0.108	0.111	
					Right Touch	26365	1882.5	1	49	17.50	17.36	0.575	0.594	0.277	0.286	
								50	24	17.50	17.40	0.576	0.589	0.275	0.281	
					Right Tilt	26365	1882.5	1	49	17.50	17.36	0.720	0.744	0.305	0.315	
								50	24	17.50	17.40	0.718	0.735	0.303	0.310	
	Body & Hotspot	QPSK	Mode B	5	Rear	26140	1860.0	1	49	18.50	18.12	0.616	0.672	0.289	0.315	69
								50	24	18.50	18.08	0.623	0.686	0.290	0.319	
						26365	1882.5	1	49	18.50	18.12	0.783	0.855	0.354	0.386	
								50	24	18.50	18.14	0.774	0.841	0.350	0.380	
						26590	1905.0	100	0	18.50	18.16	0.682	0.738	0.315	0.341	
								1	49	18.50	18.04	0.713	0.793	0.326	0.362	
					Front	26365	1882.5	50	24	18.50	18.02	0.708	0.791	0.325	0.363	
								1	49	18.50	18.12	0.240	0.262	0.113	0.123	
					Hotspot	QPSK	Mode B	5	Edge 1	26365	1882.5	50	24	18.50	18.14	
	1	49	18.50	18.12								0.491	0.536	0.192	0.210	
	Edge 2	26365	1882.5	1					49	18.50	18.12	0.123	0.134	0.064	0.070	
				50					24	18.50	18.14	0.117	0.127	0.061	0.066	
	Edge 4	26365	1882.5	1					49	18.50	18.12	0.446	0.487	0.228	0.249	
				50					24	18.50	18.14	0.438	0.476	0.224	0.243	

10.15. LTE Band 26 (10MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT1	Head	QPSK	Mode A	0	Left Touch	26865	831.5	1	24	25.70	25.22	0.246	0.275	0.189	0.211	70
								25	12	24.70	24.26	0.193	0.214	0.147	0.163	
					Left Tilt	26865	831.5	1	24	25.70	25.22	0.128	0.143	0.100	0.111	
								25	12	24.70	24.26	0.098	0.109	0.076	0.084	
					Right Touch	26865	831.5	1	24	25.70	25.22	0.164	0.183	0.130	0.145	
								25	12	24.70	24.26	0.135	0.149	0.106	0.117	
	Body & Hotspot	QPSK	Mode B	5	Right Tilt	26865	831.5	1	24	25.70	25.22	0.110	0.123	0.086	0.096	
								25	12	24.70	24.26	0.087	0.096	0.068	0.075	
					Rear	26865	831.5	1	24	25.70	25.22	0.509	0.568	0.305	0.341	71
								25	12	24.70	24.26	0.405	0.448	0.242	0.268	
					Front	26865	831.5	1	24	25.70	25.22	0.258	0.288	0.161	0.180	
								25	12	24.70	24.26	0.205	0.227	0.128	0.142	
	Hotspot	QPSK	Mode B	5	Edge 2	26865	831.5	1	24	25.70	25.22	0.211	0.236	0.138	0.154	
								25	12	24.70	24.26	0.174	0.193	0.114	0.126	
					Edge 3	26865	831.5	1	24	25.70	25.22	0.245	0.274	0.121	0.135	
								25	12	24.70	24.26	0.157	0.174	0.080	0.089	
					Edge 4	26865	831.5	1	24	25.70	25.22	0.529	0.591	0.350	0.391	72
								25	12	24.70	24.26	0.422	0.467	0.280	0.310	
ANT2	Head	QPSK	Mode A	0	Left Touch	26865	831.5	1	24	24.50	24.12	0.562	0.613	0.407	0.444	73
								25	12	23.50	23.21	0.458	0.490	0.332	0.355	
					Left Tilt	26865	831.5	1	24	24.50	24.12	0.498	0.544	0.253	0.276	
								25	12	23.50	23.21	0.399	0.427	0.203	0.217	
					Right Touch	26865	831.5	1	24	24.50	24.12	0.397	0.433	0.249	0.272	
								25	12	23.50	23.21	0.322	0.344	0.201	0.215	
					Right Tilt	26865	831.5	1	24	24.50	24.12	0.330	0.360	0.183	0.200	
								25	12	23.50	23.21	0.263	0.281	0.146	0.156	
	Body & Hotspot	QPSK	Mode B	5	Rear	26865	831.5	1	24	24.50	24.12	0.428	0.467	0.237	0.259	74
								25	12	23.50	23.21	0.343	0.367	0.190	0.203	
					Front	26865	831.5	1	24	24.50	24.12	0.245	0.267	0.143	0.156	
								25	12	23.50	23.21	0.196	0.210	0.114	0.122	
	Hotspot	QPSK	Mode B	5	Edge 1	26865	831.5	1	24	24.50	24.12	0.248	0.271	0.116	0.127	
								25	12	23.50	23.21	0.213	0.228	0.099	0.106	
					Edge 2	26865	831.5	1	24	24.50	24.12	0.349	0.381	0.230	0.251	75
								25	12	23.50	23.21	0.281	0.300	0.184	0.197	
					Edge 4	26865	831.5	1	24	24.50	24.12	0.091	0.099	0.059	0.065	
								25	12	23.50	23.21	0.075	0.080	0.048	0.051	

10.16. LTE Band 30 (10MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.			
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled				
ANT1	Head	QPSK	Mode A	0	Left Touch	27710	2310.0	1	25	25.70	25.20	0.476	0.534	0.268	0.301	76			
								25	12	24.70	24.20	0.381	0.427	0.213	0.239				
					Left Tilt	27710	2310.0	1	25	25.70	25.20	0.167	0.187	0.088	0.099				
								25	12	24.70	24.20	0.131	0.147	0.069	0.077				
					Right Touch	27710	2310.0	1	25	25.70	25.20	0.238	0.267	0.142	0.159				
								25	12	24.70	24.20	0.190	0.213	0.114	0.128				
	Right Tilt	27710	2310.0	1	25	25.70	25.20	0.194	0.218	0.107	0.120								
				25	12	24.70	24.20	0.155	0.174	0.086	0.096								
	Body & Hotspot	QPSK	Mode B	5	Rear	27710	2310.0	1	25	24.00	23.50	0.810	0.909	0.358	0.402				
								25	12	24.00	23.55	0.811	0.900	0.358	0.397				
					Front	27710	2310.0	50	0	24.00	23.58	0.880	0.969	0.379	0.417	77			
								1	25	24.00	23.50	0.740	0.830	0.354	0.397				
								25	12	24.00	23.55	0.655	0.727	0.330	0.366				
	Hotspot	QPSK	Mode B	5	Edge 2	27710	2310.0	1	25	24.00	23.50	0.144	0.162	0.067	0.075				
								25	12	24.00	23.55	0.153	0.170	0.075	0.083				
					Edge 3	27710	2310.0	1	25	24.00	23.50	0.656	0.736	0.239	0.268				
								25	12	24.00	23.55	0.687	0.762	0.249	0.276				
Edge 4					27710	2310.0	1	25	24.00	23.50	0.757	0.849	0.382	0.429					
							25	12	24.00	23.55	0.777	0.862	0.386	0.428					
											50	0	24.00	23.58	0.718	0.791	0.367	0.404	

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.			
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled				
ANT2	Head	QPSK	Mode A	0	Left Touch	27710	2310.0	1	25	17.75	17.70	0.661	0.669	0.288	0.291				
								25	12	17.75	17.60	0.657	0.680	0.284	0.294				
					Left Tilt	27710	2310.0	1	25	17.75	17.70	0.732	0.740	0.283	0.286				
								25	12	17.75	17.60	0.721	0.746	0.278	0.288	78			
					Right Touch	27710	2310.0	1	25	17.75	17.70	0.341	0.345	0.144	0.146				
								25	12	17.75	17.60	0.334	0.346	0.142	0.147				
	Right Tilt	27710	2310.0	1	25	17.75	17.70	0.397	0.402	0.159	0.161								
				25	12	17.75	17.60	0.394	0.408	0.158	0.164								
	Body & Hotspot	QPSK	Mode B	5	Rear	27710	2310.0	1	25	20.50	20.33	0.820	0.853	0.316	0.329	79			
								25	12	20.50	20.30	0.768	0.804	0.295	0.309				
					Front	27710	2310.0	50	0	20.50	20.33	0.751	0.781	0.290	0.302				
								1	25	20.50	20.33	0.497	0.517	0.221	0.230				
								25	12	20.50	20.30	0.482	0.505	0.216	0.226				
	Hotspot	QPSK	Mode B	5	Edge 1	27710	2310.0	1	25	20.50	20.33	0.676	0.703	0.235	0.244				
								25	12	20.50	20.30	0.542	0.568	0.188	0.197				
					Edge 2	27710	2310.0	1	25	20.50	20.33	0.773	0.804	0.337	0.350				
								25	12	20.50	20.30	0.650	0.681	0.277	0.290				
Edge 4					27710	2310.0	1	25	20.50	20.33	0.308	0.320	0.148	0.154					
							25	12	20.50	20.30	0.248	0.260	0.119	0.125					

10.17. LTE Band 41 Power Class 3 (20MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT1	Head	QPSK	Mode A	0	Left Touch	40620	2593.0	1	49	25.70	25.59	0.242	0.248	0.130	0.133	80
								50	24	24.70	24.55	0.209	0.216	0.112	0.116	
					Left Tilt	40620	2593.0	1	49	25.70	25.59	0.074	0.075	0.028	0.029	
								50	24	24.70	24.55	0.064	0.066	0.029	0.030	
					Right Touch	40620	2593.0	1	49	25.70	25.59	0.145	0.149	0.080	0.082	
								50	24	24.70	24.55	0.079	0.082	0.040	0.041	
					Right Tilt	40620	2593.0	1	49	25.70	25.59	0.086	0.088	0.039	0.040	
								50	24	24.70	24.55	0.058	0.060	0.025	0.026	
	Body & Hotspot	QPSK	Mode B	5	Rear	39750	2506.0	1	49	23.00	22.98	0.705	0.708	0.293	0.294	
								50	24	23.00	23.00	0.846	0.846	0.346	0.346	
						40185	2549.5	1	49	23.00	22.51	0.701	0.785	0.315	0.353	
								50	24	23.00	22.50	0.692	0.776	0.308	0.346	
						40620	2593.0	1	49	23.00	22.50	0.803	0.901	0.339	0.380	
								50	24	23.00	22.50	0.799	0.896	0.332	0.373	
					Rear	40620	2593.0	100	0	23.00	22.50	0.808	0.907	0.347	0.389	81
								1	49	23.00	22.50	0.606	0.680	0.256	0.287	
						41055	2636.5	50	24	23.00	22.50	0.613	0.688	0.263	0.295	
								1	49	23.00	22.50	0.648	0.727	0.270	0.303	
						41490	2680.0	50	24	23.00	22.50	0.650	0.729	0.278	0.312	
								1	49	23.00	22.50	0.431	0.484	0.193	0.217	
					Front	40620	2593.0	50	24	23.00	22.50	0.378	0.424	0.168	0.188	
								1	49	23.00	22.50	0.025	0.028	0.011	0.013	
	Hotspot	QPSK	Mode B	5	Edge 2	40620	2593.0	50	24	23.00	22.50	0.013	0.014	0.008	0.009	
								1	49	23.00	22.50	0.491	0.551	0.138	0.155	
					Edge 3	40620	2593.0	50	24	23.00	22.50	0.513	0.576	0.147	0.165	
								1	49	23.00	22.98	0.540	0.542	0.226	0.227	
					Edge 4	39750	2506.0	50	24	23.00	23.00	0.642	0.642	0.279	0.279	
								1	49	23.00	22.51	0.821	0.919	0.355	0.397	82
						40185	2549.5	50	24	23.00	22.50	0.802	0.900	0.345	0.387	
						40620	2593.0	1	49	23.00	22.50	0.768	0.862	0.323	0.362	
								50	24	23.00	22.50	0.758	0.850	0.317	0.356	
						40620	2593.0	100	0	23.00	22.50	0.660	0.741	0.265	0.297	
						41055	2636.5	1	49	23.00	22.50	0.497	0.558	0.200	0.224	
								50	24	23.00	22.50	0.501	0.562	0.219	0.246	
					41490	2680.0	2680.0	1	49	23.00	22.50	0.564	0.633	0.224	0.251	
								50	24	23.00	22.50	0.568	0.637	0.245	0.275	
Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT2	Head	QPSK	Mode A	0	Left Touch	40620	2593.0	1	49	19.75	19.55	0.706	0.739	0.270	0.283	83
								50	24	19.75	19.56	0.709	0.741	0.271	0.283	
					Left Tilt	40620	2593.0	1	49	19.75	19.55	0.414	0.434	0.175	0.183	
								50	24	19.75	19.56	0.395	0.413	0.167	0.174	
					Right Touch	40620	2593.0	1	49	19.75	19.55	0.206	0.216	0.106	0.111	
								50	24	19.75	19.56	0.210	0.219	0.108	0.113	
					Right Tilt	40620	2593.0	1	49	19.75	19.55	0.254	0.266	0.123	0.129	
								50	24	19.75	19.56	0.255	0.266	0.124	0.130	
	Body & Hotspot	QPSK	Mode B	5	Rear	39750	2506.0	1	49	21.50	21.30	0.823	0.862	0.327	0.342	
								50	24	21.50	21.32	0.845	0.881	0.345	0.360	
						40185	2549.5	1	49	21.50	21.40	0.863	0.883	0.354	0.362	
								50	24	21.50	21.23	0.827	0.880	0.344	0.366	
						40620	2593.0	1	49	21.50	21.30	0.801	0.839	0.395	0.414	
								50	24	21.50	21.32	0.852	0.888	0.355	0.370	
					Rear	40620	2593.0	100	0	21.50	21.40	0.876	0.896	0.359	0.367	84
								1	49	21.50	21.20	0.744	0.797	0.290	0.311	
						41055	2636.5	50	24	21.50	21.23	0.748	0.796	0.316	0.336	
								1	49	21.50	21.25	0.777	0.823	0.309	0.327	
						41490	2680.0	50	24	21.50	21.22	0.736	0.785	0.294	0.314	
								1	49	21.50	21.30	0.405	0.424	0.172	0.180	
					Front	40620	2593.0	50	24	21.50	21.32	0.445	0.464	0.188	0.196	
	Hotspot	QPSK	Mode B	5	Edge 1	40620	2593.0	1	49	21.50	21.30	0.289	0.303	0.116	0.121	
								50	24	21.50	21.32	0.367	0.383	0.138	0.144	
					Edge 2	40620	2593.0	1	49	21.50	21.30	0.722	0.756	0.268	0.281	
								50	24	21.50	21.32	0.650	0.678	0.254	0.265	
					Edge 4	40620	2593.0	1	49	21.50	21.30	0.073	0.076	0.034	0.036	
								50	24	21.50	21.32	0.086	0.090	0.038	0.040	

UL CA 41C

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	PCC UL				SCC UL				Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
						Ch #.	Freq. (MHz)	RB Allocation	RB offset	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT 1	Head	QPSK	Mode A	0	Left Touch	40620	2593.0	1	99	40818	2612.8	1	0	25.00	24.97	0.203	0.204	0.132	0.133	
ANT 1	Body	QPSK	Mode B	5	Rear	40620	2593.0	1	99	40818	2612.8	1	0	23.00	23.00	0.636	0.636	0.313	0.313	
ANT 1	Hotspot	QPSK	Mode B	5	Edge 4	40185	2549.5	1	99	40383	2569.3	1	0	23.00	22.98	0.707	0.710	0.298	0.299	
ANT 2	Head	QPSK	Mode A	0	Left Touch	40620	2593.0	1	99	40818	2612.8	1	0	19.75	19.60	0.624	0.646	0.252	0.261	
ANT 2	Body	QPSK	Mode B	5	Rear	40620	2593.0	1	99	40818	2612.8	1	0	21.25	21.10	0.558	0.578	0.242	0.251	

Note(s):

PCC RB allocation setting for UL CA has been adjusted based on the worst-case power.

Additional SAR for UL CA PC2 is not required. Test reduction has been applied base on standalone SAR.

10.18. LTE Band 41 Power Class 2 (20MHz Bandwidth)

According to Section 9.4, SAR evaluation for PC2 is only required when its Maximum output power (Tune-up Limit) is higher from PC3.

LTE Band 41 Power Class 2 SAR Measured Results

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT1	Head	QPSK	Mode A	0	Left Touch	40620	2593.0	1	49	28.70	27.74	0.157	0.196	0.081	0.101	138

From May 2017 TCB Workshop, SAR tested were performed using Power Class 3. SAR test for 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 UL-DL configurations, configuration # 1 with duty cycle 43.3% is used for Power Class 2 SAR test.

Additional SAR testing for Power Class 2 is not required when:

- The reported SAR vs. output power can be linearly scaled with < 10% discrepancy between power classes and all reported SAR are < 1.4 W/kg

Reported SAR vs. Output Power linearly scaled

Antenna	RF Exposure Conditions	Power Class 2				Power Class 3				PC2 linearly scaled Reported SAR (W/kg)	Linearly scaled (<10%)
		Duty Cycle	Tune-up Power (dBm)	Frame Avg. Power (mW)	Reported 1-g SAR (W/kg)	Duty Cycle	Tune-up Power (dBm)	Frame Avg. Power (mW)	Reported 1-g SAR (W/kg)		
ANT1	Head	43.3%	28.70	320.99	0.196	63.3%	25.70	235.18	0.248	0.338	-42.09%

Conclusion:

SAR test for Power Class 2 is not required base on the reported SAR <1.4 W/kg and reported SAR vs. output power linearly scaled <10%.

10.19. LTE Band 48 (20MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT3	Head	QPSK	Mode A	0	Left Touch	56207	3646.7	1	49	25.70	25.50	0.182	0.191	0.086	0.090	
								50	24	24.70	24.40	0.140	0.150	0.064	0.069	
					Left Tilt	56207	3646.7	1	49	25.70	25.50	0.151	0.158	0.056	0.059	
								50	24	24.70	24.40	0.130	0.139	0.052	0.056	
					Right Touch	56207	3646.7	1	49	25.70	25.50	0.190	0.199	0.091	0.095	85
								50	24	24.70	24.40	0.159	0.170	0.076	0.081	
					Right Tilt	56207	3646.7	1	49	25.70	25.50	0.108	0.113	0.047	0.049	
								50	24	24.70	24.40	0.082	0.088	0.032	0.034	
	Body & Hotspot	QPSK	Mode B	5	Rear	55340	3560.0	1	49	24.00	23.85	0.832	0.861	0.323	0.334	
								50	24	24.00	23.76	0.710	0.750	0.268	0.283	
						55773	3603.3	1	49	24.00	23.60	0.851	0.933	0.334	0.366	86
								50	24	24.00	23.70	0.906	0.971	0.352	0.377	
						56640	3690.0	1	49	24.00	23.75	0.828	0.877	0.323	0.342	
								50	24	24.00	23.88	0.832	0.855	0.324	0.333	
					Front	56640	3690.0	100	0	24.00	23.97	0.669	0.674	0.263	0.265	
								1	49	24.00	23.80	0.681	0.713	0.263	0.275	
						56640	3690.0	50	24	24.00	23.75	0.519	0.550	0.198	0.210	
								1	49	24.00	23.80	0.614	0.643	0.205	0.215	
						56640	3690.0	50	24	24.00	23.75	0.560	0.593	0.139	0.147	
								1	49	24.00	23.85	0.880	0.911	0.321	0.332	
ANT4	Head	QPSK	Mode A	0	Edge 2	55340	3560.0	50	24	24.00	23.76	0.669	0.707	0.244	0.258	
								1	49	24.00	23.60	0.847	0.929	0.312	0.342	
						55773	3603.3	50	24	24.00	23.70	0.807	0.865	0.297	0.318	
								100	0	24.00	23.75	0.915	0.969	0.323	0.342	
						56640	3690.0	1	49	24.00	23.88	0.901	0.926	0.315	0.324	87
								50	24	24.00	23.97	0.748	0.753	0.267	0.269	
					Edge 3	56640	3690.0	1	49	24.00	23.80	0.725	0.759	0.257	0.269	
								50	24	24.00	23.75	0.541	0.573	0.196	0.208	
						56640	3690.0	1	49	24.00	23.80	0.387	0.405	0.133	0.139	
								50	24	24.00	23.75	0.515	0.546	0.162	0.172	
	Body & Hotspot	QPSK	Mode B	5	Edge 1	56640	3690.0	1	49	22.50	22.40	0.073	0.074	0.030	0.031	
								50	24	21.50	21.40	0.049	0.050	0.021	0.021	
						56640	3690.0	1	49	22.50	22.40	0.082	0.084	0.027	0.027	
								50	24	21.50	21.40	0.056	0.057	0.019	0.019	
					Right Touch	56640	3690.0	1	49	22.50	22.40	0.171	0.175	0.069	0.070	
								50	24	21.50	21.40	0.133	0.136	0.050	0.052	
					Right Tilt	56640	3690.0	1	49	22.50	22.40	0.210	0.215	0.066	0.068	88
								50	24	21.50	21.40	0.189	0.193	0.055	0.056	
					Rear	56640	3690.0	1	49	22.50	22.40	0.482	0.493	0.165	0.169	89
								50	24	21.50	21.40	0.387	0.396	0.130	0.133	
					Front	56640	3690.0	1	49	22.50	22.40	0.098	0.100	0.034	0.035	
								50	24	21.50	21.40	0.067	0.069	0.023	0.024	
	Hotspot	QPSK	Mode B	5	Edge 1	56640	3690.0	1	49	22.50	22.40	0.074	0.076	0.022	0.023	
								50	24	21.50	21.40	0.047	0.048	0.013	0.013	
					Edge 4	56640	3690.0	1	49	22.50	22.40	0.321	0.328	0.114	0.117	
								50	24	21.50	21.40	0.251	0.257	0.088	0.090	

Notes:

Low and high channels were tested using the maximum tune-up limit. This is for testing purpose only. For device placing to the market would follow the tune up procedure.

10.20. LTE Band 66 (20MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT1	Head	QPSK	Mode A	0	Left Touch	132322	1745.0	1	49	25.70	25.49	0.269	0.282	0.169	0.177	90
								50	24	24.70	24.52	0.210	0.219	0.132	0.138	
					Left Tilt	132322	1745.0	1	49	25.70	25.49	0.197	0.207	0.112	0.118	
								50	24	24.70	24.52	0.156	0.163	0.089	0.092	
					Right Touch	132322	1745.0	1	49	25.70	25.49	0.275	0.289	0.177	0.186	
								50	24	24.70	24.52	0.214	0.223	0.138	0.144	
					Right Tilt	132322	1745.0	1	49	25.70	25.49	0.175	0.184	0.109	0.114	
								50	24	24.70	24.52	0.124	0.129	0.077	0.080	
	Body & Hotspot	QPSK	Mode B	5	Rear	132322	1745.0	1	49	21.50	21.44	0.733	0.743	0.385	0.390	91
								50	24	21.50	21.38	0.738	0.759	0.385	0.396	
					Front	132322	1745.0	1	49	21.50	21.44	0.243	0.246	0.139	0.141	
								50	24	21.50	21.38	0.243	0.250	0.139	0.143	
	Hotspot	QPSK	Mode B	5	Edge 2	132322	1745.0	1	49	21.50	21.44	0.363	0.368	0.192	0.195	92
								50	24	21.50	21.38	0.360	0.370	0.191	0.196	
					Edge 3	132072	1720.0	1	49	21.50	21.40	0.856	0.876	0.420	0.430	
								50	24	21.50	21.30	0.854	0.894	0.419	0.439	
						132322	1745.0	1	49	21.50	21.44	0.897	0.909	0.443	0.449	
								50	24	21.50	21.38	0.907	0.932	0.446	0.458	
						132572	1770.0	100	0	21.50	21.40	0.911	0.932	0.449	0.459	
								1	49	21.50	21.50	0.994	0.994	0.490	0.490	
								50	24	21.50	21.40	0.891	0.912	0.446	0.456	
					Edge 4	132322	1745.0	1	49	21.50	21.44	0.174	0.176	0.097	0.098	
								50	24	21.50	21.38	0.171	0.176	0.095	0.098	
Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT2	Head	QPSK	Mode A	0	Left Touch	132322	1745.0	1	49	21.25	21.20	0.252	0.255	0.133	0.135	93
								50	24	21.25	21.10	0.252	0.261	0.133	0.138	
					Left Tilt	132322	1745.0	1	49	21.25	21.20	0.194	0.196	0.100	0.101	
								50	24	21.25	21.10	0.194	0.201	0.099	0.102	
					Right Touch	132322	1745.0	1	49	21.25	21.20	0.680	0.688	0.345	0.349	
								50	24	21.25	21.10	0.697	0.721	0.352	0.364	
					Right Tilt	132322	1745.0	1	49	21.25	21.20	0.704	0.712	0.327	0.331	
								50	24	21.25	21.10	0.719	0.744	0.334	0.346	
	Body & Hotspot	QPSK	Mode B	5	Rear	132072	1720.0	1	49	21.50	21.40	0.715	0.732	0.340	0.348	94
								50	24	21.50	21.40	0.700	0.716	0.333	0.341	
					Rear	132322	1745.0	1	49	21.50	21.40	0.770	0.788	0.369	0.378	
								50	24	21.50	21.40	0.772	0.790	0.365	0.374	
						132572	1770.0	100	0	21.50	21.40	0.783	0.801	0.370	0.379	
								1	49	21.50	21.20	0.817	0.875	0.386	0.414	
					Front	132322	1745.0	50	24	21.50	21.20	0.810	0.868	0.382	0.409	
								1	49	21.50	21.40	0.393	0.402	0.198	0.203	
								50	24	21.50	21.40	0.332	0.340	0.168	0.172	
	Hotspot	QPSK	Mode B	5	Edge 1	132322	1745.0	1	49	21.50	21.40	0.663	0.678	0.315	0.322	
								50	24	21.50	21.40	0.566	0.579	0.269	0.275	
					Edge 2	132322	1745.0	1	49	21.50	21.40	0.055	0.056	0.030	0.031	
								50	24	21.50	21.40	0.046	0.047	0.025	0.026	
					Edge 4	132322	1745.0	1	49	21.50	21.40	0.383	0.392	0.213	0.218	
								50	24	21.50	21.40	0.325	0.333	0.180	0.184	

10.21. LTE Band 71 (20MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT1	Head	QPSK	Mode A	0	Left Touch	133297	680.5	1	49	25.70	25.37	0.195	0.210	0.149	0.161	95
								50	24	24.70	24.41	0.158	0.169	0.120	0.128	
					Left Tilt	133297	680.5	1	49	25.70	25.37	0.088	0.095	0.068	0.073	
								50	24	24.70	24.41	0.069	0.074	0.055	0.059	
					Right Touch	133297	680.5	1	49	25.70	25.37	0.137	0.148	0.107	0.115	
								50	24	24.70	24.41	0.115	0.123	0.090	0.096	
					Right Tilt	133297	680.5	1	49	25.70	25.37	0.095	0.102	0.076	0.082	
								50	24	24.70	24.41	0.086	0.092	0.069	0.074	
	Body & Hotspot	QPSK	Mode B	5	Rear	133297	680.5	1	49	25.70	25.37	0.645	0.696	0.365	0.394	96
								50	24	24.70	24.41	0.649	0.694	0.366	0.391	
					Front	133297	680.5	1	49	25.70	25.37	0.456	0.492	0.255	0.275	
								50	24	24.70	24.41	0.365	0.390	0.204	0.218	
	Hotspot	QPSK	Mode B	5	Edge 2	133297	680.5	1	49	25.70	25.37	0.207	0.223	0.137	0.148	
								50	24	24.70	24.41	0.164	0.175	0.109	0.117	
					Edge 3	133297	680.5	1	49	25.70	25.37	0.487	0.525	0.230	0.248	
								50	24	24.70	24.41	0.396	0.423	0.187	0.200	
					Edge 4	133297	680.5	1	49	25.70	25.37	0.521	0.562	0.346	0.373	
								50	24	24.70	24.41	0.422	0.451	0.282	0.301	

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
										Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT2	Head	QPSK	Mode A	0	Left Touch	133297	680.5	1	49	24.50	24.48	0.233	0.234	0.154	0.155	
								50	24	23.50	23.47	0.187	0.188	0.142	0.143	
					Left Tilt	133297	680.5	1	49	24.50	24.48	0.253	0.254	0.141	0.142	97
								50	24	23.50	23.47	0.216	0.217	0.116	0.117	
					Right Touch	133297	680.5	1	49	24.50	24.48	0.220	0.221	0.148	0.149	
								50	24	23.50	23.47	0.170	0.171	0.115	0.116	
					Right Tilt	133297	680.5	1	49	24.50	24.48	0.223	0.224	0.126	0.127	
								50	24	23.50	23.47	0.170	0.171	0.094	0.095	
	Body & Hotspot	QPSK	Mode B	5	Rear	133297	680.5	1	49	24.50	24.48	0.219	0.220	0.167	0.168	98
								50	24	23.50	23.47	0.165	0.166	0.126	0.127	
					Front	133297	680.5	1	49	24.50	24.48	0.150	0.151	0.120	0.121	
								50	24	23.50	23.47	0.115	0.116	0.092	0.093	
	Hotspot	QPSK	Mode B	5	Edge 1	133297	680.5	1	49	24.50	24.48	0.109	0.110	0.053	0.053	
								50	24	23.50	23.47	0.085	0.086	0.041	0.041	
					Edge 2	133297	680.5	1	49	24.50	24.48	0.329	0.331	0.224	0.225	99
								50	24	23.50	23.47	0.268	0.270	0.180	0.181	
					Edge 4	133297	680.5	1	49	24.50	24.48	0.260	0.261	0.174	0.175	
								50	24	23.50	23.47	0.249	0.251	0.161	0.162	

10.22. Wi-Fi (DTS Band)

When the 802.11b reported SAR of the highest measured maximum output power channel is ≤ 0.8 W/kg, no further SAR testing is required. If SAR is > 0.8 W/kg and ≤ 1.2 W/kg, SAR is required for the next highest measured output power channel. Finally, if SAR is > 1.2 W/kg, SAR is required for the third channel.

SAR testing is not required for OFDM mode(s) 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.

ANT5 Power Mode A the P_{Cell_ON} is same as P_{Cell_OFF}

Antenna	WWAN Power	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
											Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT5	Cell OFF	Head	802.11b	Mode A	0	Left Touch	6	2437	0.441	99.8%	21.50	21.50	0.256	0.256	0.141	0.141	100
						Left Tilt	6	2437	0.116	99.8%	21.50	21.50					
						Right Touch	6	2437	0.165	99.8%	21.50	21.50					
						Right Tilt	6	2437	0.138	99.8%	21.50	21.50					
		Body & Hotspot	802.11b	Mode B	5	Rear	6	2437	1.55	99.8%	20.75	20.75	1.100	1.102	0.457	0.458	101
							11	2462	1.61	99.8%	20.75	20.75	1.060	1.062	0.449	0.450	
						Front	6	2437	0.568	99.8%	20.75	20.75					
		Hotspot	802.11b	Mode B	5	Edge 3	6	2437	0.576	99.8%	20.75	20.75					
						Edge 4	6	2437	0.974	99.8%	20.75	20.75	0.667	0.668	0.288	0.288	
Antenna	WWAN Power	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
											Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT2	Cell OFF	Head	802.11b	Mode A	0	Left Touch	1	2412	1.12	99.8%	20.25	20.25	0.704	0.705	0.316	0.317	
							6	2437	1.7	99.8%	20.25	20.25	1.140	1.142	0.469	0.470	102
							11	2462	1.27	99.8%	20.25	20.25	1.020	1.022	0.419	0.420	
						Left Tilt	6	2437	1.74	99.8%	20.25	20.25	1.100	1.102	0.416	0.417	
							11	2462	0.983	99.8%	20.25	20.25	0.921	0.922	0.342	0.343	
						Right Touch	6	2437	0.593	99.8%	20.25	20.25					
						Right Tilt	6	2437	0.711	99.8%	20.25	20.25	0.566	0.567	0.244	0.244	
		Body & Hotspot	802.11b	Mode B	5	Rear	2	2417	1.60	99.8%	21.50	21.40	0.984	1.009	0.430	0.441	
							6	2437	1.43	99.8%	21.50	21.50	1.070	1.072	0.475	0.476	
							11	2462	1.84	99.8%	21.50	21.50	1.140	1.142	0.495	0.496	103
						Front	6	2437	1.11	99.8%	21.50	21.50	0.605	0.606	0.266	0.266	
		Hotspot	802.11b	Mode B	5	Edge 1	6	2437	0.79	99.8%	21.50	21.50					
						Edge 2	6	2437	1.15	99.8%	21.50	21.50	0.946	0.948	0.403	0.404	
							11	2462	1.51	99.8%	21.50	21.50	1.030	1.032	0.402	0.403	
Antenna	WWAN Power	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
											Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT5	Cell ON	Body & Hotspot	802.11b	Mode B	5	Rear	6	2437	0.578	99.8%	16.50	16.50	0.374	0.375	0.153	0.153	104
						Front	6	2437	0.209	99.8%	16.50	16.50					
		Hotspot	802.11b	Mode B	5	Edge 3	6	2437	0.111	99.8%	16.50	16.50					
						Edge 4	6	2437	0.394	99.8%	16.50	16.50	0.243	0.243	0.098	0.098	
Antenna	WWAN Power	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
											Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT2	Cell ON	Head	802.11b	Mode A	0	Left Touch	6	2437	0.748	99.8%	17.00	17.00	0.519	0.520	0.215	0.215	105
						Left Tilt	6	2437	0.561	99.8%	17.00	17.00	0.495	0.496	0.179	0.179	
						Right Touch	6	2437	0.26	99.8%	17.00	17.00					
						Right Tilt	6	2437	0.278	99.8%	17.00	17.00					
		Body & Hotspot	802.11b	Mode B	5	Rear	6	2437	0.84	99.8%	18.25	18.25	0.480	0.481	0.209	0.209	106
						Front	6	2437	0.637	99.8%	18.25	18.25					
		Hotspot	802.11b	Mode B	5	Edge 1	6	2437	0.308	99.8%	18.25	18.25					
						Edge 2	6	2437	0.811	99.8%	18.25	18.25	0.446	0.447	0.179	0.179	

10.23. Wi-Fi (U-NII Band)

Antenna	WWAN Power	Band	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.	
												Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled		
ANT5	Cell OFF	U-NII-2A	Head	802.11n (HT 40)	Mode A	0	Left Touch	54	5270	0.244	97.9%	21.50	21.50	0.138	0.141	0.044	0.045	107	
							Left Tilt	54	5270	0.0356	97.9%	21.50	21.50						
							Right Touch	54	5270	0.0469	97.9%	21.50	21.50						
							Right Tilt	54	5270	0.103	97.9%	21.50	21.50						
		U-NII-1	Body & Airplay	802.11n (HT 40)	Mode B	5	Rear	38	5190	1.110	97.9%	17.50	17.50	0.478	0.488	0.142	0.145	108	
								46	5230	2.460	97.9%	19.75	19.75	1.060	1.082	0.349	0.356		
							Front	38	5190	0.532	97.9%	19.75	19.75	0.294	0.300	0.093	0.095		
								Edge 3	38	5190	0.455	97.9%	19.75	19.75					
Edge 4	38	5190	0.259	97.9%	19.75	19.75													
Antenna	WWAN Power	Band	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.	
												Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled		
ANT5	Cell OFF	U-NII-2C	Head	802.11ac (VHT80)	Mode A	0	Left Touch	122	5610	0.097	95.8%	21.50	21.50	0.055	0.057	0.021	0.022	109	
							Left Tilt	122	5610	0.032	95.8%	21.50	21.50						
							Right Touch	122	5610	0.029	95.8%	21.50	21.50						
							Right Tilt	122	5610	0.049	95.8%	21.50	21.50						
			Body & Airplay	802.11ac (VHT80)	Mode B	5	Rear	106	5530	1.950	95.8%	17.50	17.40	0.695	0.742	0.222	0.237	110	
								122	5610	2.270	95.8%	18.25	18.25	1.050	1.096	0.317	0.331		
							Front	138	5690	1.970	95.8%	18.25	18.25	0.863	0.901	0.277	0.289		
								122	5610	0.080	95.8%	18.25	18.25	0.036	0.038	0.009	0.009		
Edge 3	122	5610	0.232	95.8%	18.25	18.25	0.134	0.140	0.048	0.050									
	Edge 4	122	5610	0.149	95.8%	18.25	18.25												
Antenna	WWAN Power	Band	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.	
												Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled		
ANT5	Cell OFF	U-NII-3	Head	802.11ac (VHT80)	Mode A	0	Left Touch	155	5775	0.048	95.8%	21.50	21.50	0.025	0.026	0.010	0.010	111	
							Left Tilt	155	5775	0.021	95.8%	21.50	21.50						
							Right Touch	155	5775	0.027	95.8%	21.50	21.50						
							Right Tilt	155	5775	0.028	95.8%	21.50	21.50						
			Body & Airplay	802.11ac (VHT80)	Mode B	5	Rear	155	5775	2.210	95.8%	18.50	18.50	1.090	1.137	0.340	0.355	112	
								Front	155	5775	0.102	95.8%	18.50	18.50					
							Edge 3	155	5775	0.373	95.8%	18.50	18.50	0.145	0.151	0.051	0.053		
								Edge 4	155	5775	0.210	95.8%	18.50	18.50					
Antenna	WWAN Power	Band	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.	
												Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled		
ANT4	Cell OFF	U-NII-1	Head	802.11n (HT40)	Mode A	0	Left Touch	46	5230	0.423	97.9%	21.50	21.50						
							Left Tilt	46	5230	0.435	97.9%	21.50	21.50	0.100	0.102	0.027	0.028		
							Right Touch	38	5190	0.907	97.9%	17.50	17.50	0.507	0.518	0.156	0.159		
								46	5230	1.300	97.9%	21.50	21.50	0.825	0.842	0.278	0.284		
			Right Tilt	38	5190	0.569	97.9%	17.50	17.50	0.332	0.339	0.101	0.103	113					
				46	5230	1.040	97.9%	21.50	21.50	0.916	0.935	0.301	0.307						
				Rear	54	5270	2.090	97.9%	20.00	20.00	1.100	1.123	0.300		0.306				
					62	5310	0.929	97.9%	17.50	17.50	0.421	0.430	0.112		0.114				
		Front	54	5270	0.625	97.9%	20.00	20.00											
			Edge 1	54	5270	0.268	97.9%	20.00	20.00										
Edge 4	54	5270	0.653	97.9%	20.00	20.00	0.502	0.513	0.147	0.150									
Antenna	WWAN Power	Band	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.	
												Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled		
ANT4	Cell OFF	U-NII-2C	Head	802.11ac (VHT80)	Mode A	0	Left Touch	138	5690	0.672	95.8%	21.50	21.50						
							Left Tilt	138	5690	0.756	95.8%	21.50	21.50						
							Right Touch	122	5610	1.190	95.8%	21.50	21.50	0.769	0.802	0.210	0.219		
								138	5690	1.140	95.8%	21.50	21.50	0.636	0.664	0.175	0.183		
							Right Tilt	122	5610	1.430	95.8%	21.50	21.50	0.856	0.893	0.227	0.237		115
								138	5690	1.260	95.8%	21.50	21.50	0.735	0.767	0.200	0.209		
			Body & Airplay	802.11ac (VHT80)	Mode B	5	Rear	106	5530	1.270	95.8%	17.50	17.50	0.551	0.575	0.156	0.163	116	
								122	5610	2.210	95.8%	18.50	18.50	1.010	1.054	0.283	0.295		
							Front	138	5690	2.290	95.8%	18.50	18.50	0.987	1.030	0.271	0.283		
								138	5690	0.336	95.8%	18.50	18.50	0.124	0.129	0.036	0.038		
Edge 1	138	5690	0.171	95.8%	18.50	18.50													
	Edge 4	138	5690	0.139	95.8%	18.50	18.50												
Antenna	WWAN Power	Band	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.	
												Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled		
ANT4	Cell OFF	U-NII-3	Head	802.11ac (VHT80)	Mode A	0	Left Touch	155	5775	0.353	95.8%	21.50	21.50					117	
							Left Tilt	155	5775	0.428	95.8%	21.50	21.50						
							Right Touch	155	5775	1.070	95.8%	21.50	21.50	0.464	0.484	0.123	0.128		
							Right Tilt	155	5775	1.080	95.8%	21.50	21.50	0.451	0.471	0.119	0.124		
			Body & Airplay	802.11ac (VHT80)	Mode B	5	Rear	155	5775	2.320	95.8%	18.50	18.50	1.120	1.169	0.317	0.331	118	
								Front	155	5775	0.046	95.8%	18.50	18.50					
							Edge 1	155	5775	0.309	95.8%	18.50	18.50	0.150	0.157	0.056	0.058		
								Edge 4	155	5775	0.260	95.8%	18.50	18.50					

ANT5 Power Mode A the P_{Cell_ON} is same as P_{Cell_OFF}ANT4 U-NII-3 Power Mode A the P_{Cell_ON} is same as P_{Cell_OFF}

Antenna	WWAN Power	Band	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
												Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT5	Cell ON	U-NII-1	Body & Airplay	802.11ac (VHT80)	Mode B	5	Rear	42	5210	0.594	95.8%	14.25	14.25	0.268	0.280	0.085	0.089	119
							Front	42	5210	0.032	95.8%	14.25	14.25					
			Airplay	802.11ac (VHT80)	Mode B	5	Edge 3	42	5210	0.11	95.8%	14.25	14.25					
							Edge 4	42	5210	0.045	95.8%	14.25	14.25					
Antenna	WWAN Power	Band	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
												Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT5	Cell ON	U-NII-2C	Body & Airplay	802.11ac (VHT80)	Mode B	5	Rear	122	5610	0.716	95.8%	12.75	12.75	0.302	0.315	0.102	0.106	120
							Front	122	5610	0.0433	95.8%	12.75	12.75					
			Airplay	802.11ac (VHT80)	Mode B	5	Edge 3	122	5610	0.227	95.8%	12.75	12.75					
							Edge 4	122	5610	0.0634	95.8%	12.75	12.75					
Antenna	WWAN Power	Band	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
												Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT5	Cell ON	U-NII-3	Body & Airplay	802.11ac (VHT80)	Mode B	5	Rear	155	5775	0.91	95.8%	13.25	13.25	0.315	0.329	0.097	0.101	121
							Front	155	5775	0.0409	95.8%	13.25	13.25					
			Airplay	802.11ac (VHT80)	Mode B	5	Edge 3	155	5775	0.111	95.8%	13.25	13.25					
							Edge 4	155	5775	0.397	95.8%	13.25	13.25					
Antenna	WWAN Power	Band	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
												Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT4	Cell ON	U-NII-1	Head	802.11n (HT 40)	Mode A	0	Left Touch	46	5230	0.202	97.9%	18.50	18.50					
							Left Tilt	46	5230	0.179	97.9%	18.50	18.50					
							Right Touch	46	5230	0.833	97.9%	18.50	18.50	0.503	0.514	0.168	0.172	
							Right Tilt	46	5230	0.695	97.9%	18.50	18.50	0.338	0.345	0.110	0.112	
		U-NII-2A	Body & Airplay	802.11ac (VHT80)	Mode B	5	Rear	58	5290	1.31	95.8%	15.75	15.75	0.414	0.432	0.110	0.115	123
							Front	58	5290	0.325	95.8%	15.75	15.75	0.138	0.144	0.045	0.047	
							Edge 1	58	5290	0.087	95.8%	15.75	15.75					
							Edge 4	58	5290	0.286	95.8%	15.75	15.75					
Antenna	WWAN Power	Band	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
												Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT4	Cell ON	U-NII-2C	Head	802.11ac (VHT80)	Mode A	0	Left Touch	122	5610	0.074	95.8%	20.25	20.25					
							Left Tilt	122	5610	0.123	95.8%	20.25	20.25					
							Right Touch	122	5610	0.976	95.8%	20.25	20.25	0.501	0.523	0.145	0.151	
							Right Tilt	122	5610	0.779	95.8%	20.25	20.25	0.456	0.476	0.129	0.135	
			Body & Airplay	802.11ac (VHT80)	Mode B	5	Rear	122	5610	1.06	95.8%	14.25	14.25	0.403	0.421	0.107	0.112	125
							Front	122	5610	0.103	95.8%	14.25	14.25	0.005	0.005	0.001	0.001	
							Edge 1	122	5610	0.092	95.8%	14.25	14.25					
							Edge 4	122	5610	0.052	95.8%	14.25	14.25					
Antenna	WWAN Power	Band	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
												Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT4	Cell ON	U-NII-3	Body & Airplay	802.11ac (VHT80)	Mode B	5	Rear	155	5775	0.925	95.8%	14.25	14.25	0.396	0.413	0.105	0.110	126
							Front	155	5775	0.079	95.8%	14.25	14.25					
			Airplay	802.11ac (VHT80)	Mode B	5	Edge 1	155	5775	0.101	95.8%	14.25	14.25					
							Edge 4	155	5775	0.107	95.8%	14.25	14.25	0.038	0.040	0.013	0.014	

10.24. Bluetooth

ANT5 Power Mode A the P_{high} is same as P_{standalone}

Antenna	RF Exposure Conditions	Mode	Power Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Duty Cycle	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
									Tune-up Limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT5 P _{low}	Head	GFSK	Mode A	0	Left Touch	39	2441	100.0%	17.50	17.50	0.043	0.043	0.024	0.024	127
					Left Tilt	39	2441	100.0%	17.50	17.50	0.013	0.013	0.005	0.005	
					Right Touch	39	2441	100.0%	17.50	17.50	0.034	0.034	0.015	0.015	
					Right Tilt	39	2441	100.0%	17.50	17.50	0.016	0.016	0.008	0.008	
	Body & Hotspot	GFSK	Mode B	5	Rear	39	2441	100.0%	11.00	10.50	0.078	0.088	0.029	0.033	128
					Front	39	2441	100.0%	11.00	10.50	0.018	0.020	0.008	0.009	
ANT5 P _{high}	Hotspot	GFSK	Mode B	5	Edge 3	39	2441	100.0%	11.00	10.50	0.009	0.010	0.003	0.003	
					Edge 4	39	2441	100.0%	11.00	10.50	<0.01	<0.01	<0.01	<0.01	
	Body & Hotspot	GFSK	Mode B	5	Rear	39	2441	100.0%	15.00	15.00	0.202	0.202	0.083	0.083	129
					Front	39	2441	100.0%	15.00	15.00	0.058	0.058	0.028	0.028	
ANT5 P _{standalone}	Hotspot	GFSK	Mode B	5	Edge 3	39	2441	100.0%	15.00	15.00	0.035	0.035	0.009	0.009	
					Edge 4	39	2441	100.0%	15.00	15.00	0.092	0.092	0.042	0.042	
	Body & Hotspot	GFSK	Mode B	5	Rear	39	2441	100.0%	18.50	18.50	0.589	0.589	0.231	0.231	131
					Front	39	2441	100.0%	18.50	18.50	0.110	0.110	0.054	0.054	
ANT2 P _{low}	Head	GFSK	Mode A	0	Left Touch	39	2441	100.0%	20.00	20.00	0.223	0.223	0.114	0.114	130
					Left Tilt	39	2441	100.0%	20.00	20.00	0.067	0.067	0.031	0.031	
					Right Touch	39	2441	100.0%	20.00	20.00	0.116	0.116	0.060	0.060	
					Right Tilt	39	2441	100.0%	20.00	20.00	0.090	0.090	0.044	0.044	
	Body & Hotspot	GFSK	Mode B	5	Rear	39	2441	100.0%	18.50	18.50	0.589	0.589	0.231	0.231	131
					Front	39	2441	100.0%	18.50	18.50	0.110	0.110	0.054	0.054	
ANT2 P _{high}	Hotspot	GFSK	Mode B	5	Edge 3	39	2441	100.0%	18.50	18.50	0.052	0.052	0.020	0.020	
					Edge 4	39	2441	100.0%	18.50	18.50	0.195	0.195	0.077	0.077	
	Body & Hotspot	GFSK	Mode B	5	Rear	39	2441	100.0%	11.50	11.50	0.093	0.093	0.039	0.039	133
					Front	39	2441	100.0%	11.50	11.50	0.084	0.084	0.036	0.036	
ANT2 P _{standalone}	Hotspot	GFSK	Mode B	5	Edge 1	39	2441	100.0%	11.50	11.50	0.042	0.042	0.019	0.019	
					Edge 2	39	2441	100.0%	11.50	11.50	0.098	0.098	0.039	0.039	
	Body & Hotspot	GFSK	Mode B	5	Rear	39	2441	100.0%	15.50	15.50	0.197	0.197	0.081	0.081	135
					Front	39	2441	100.0%	15.50	15.50	0.144	0.144	0.061	0.061	
ANT2 P _{high}	Hotspot	GFSK	Mode B	5	Edge 1	39	2441	100.0%	15.50	15.50	0.141	0.141	0.049	0.049	
					Edge 2	39	2441	100.0%	15.50	15.50	0.221	0.221	0.087	0.087	
	Body & Hotspot	GFSK	Mode B	5	Rear	39	2441	100.0%	19.00	19.00	0.320	0.320	0.144	0.144	137
					Front	39	2441	100.0%	19.00	19.00	0.256	0.256	0.119	0.119	
ANT2 P _{standalone}	Hotspot	GFSK	Mode B	5	Edge 1	39	2441	100.0%	19.00	19.00	0.207	0.207	0.074	0.074	
					Edge 2	39	2441	100.0%	19.00	19.00	0.529	0.529	0.213	0.213	
	Body & Hotspot	GFSK	Mode B	5	Rear	39	2441	100.0%	17.50	17.50	0.506	0.506	0.212	0.212	136
					Front	39	2441	100.0%	17.50	17.50	0.577	0.577	0.217	0.217	

11. SAR Measurement Variability

In accordance with published RF Exposure KDB 865664 D01 SAR measurement 100 MHz to 6 GHz. These additional measurements are repeated after the completion of all measurements requiring the same head or body tissue-equivalent medium in a frequency band. The test device should be returned to ambient conditions (normal room temperature) with the battery fully charged before it is re-mounted on the device holder for the repeated measurement(s) to minimize any unexpected variations in the repeated results.

- 1) Repeated measurement is not required when the original highest measured SAR is < 0.8 or 2 W/kg (1-g or 10-g respectively); steps 2) through 4) do not apply.
- 2) When the original highest measured SAR is ≥ 0.8 or 2 W/kg (1-g or 10-g respectively), repeat that measurement once.
- 3) Perform a second repeated measurement only if the **ratio of largest to smallest SAR** for the original and first repeated measurements is > 1.20 or when the original or repeated measurement is ≥ 1.45 or 3.6 W/kg (~ 10% from the 1-g or 10-g respective SAR limit).
- 4) Perform a third repeated measurement only if the original, first, or second repeated measurement is ≥ 1.5 or 3.75 W/kg (1-g or 10-g respectively) and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20 .

Frequency Band (MHz)	Air Interface	RF Exposure Conditions	Test Position	Repeated SAR (Yes/No)	Highest Measured SAR (W/kg)	First Repeated	
						Measured SAR (W/kg)	Largest to Smallest SAR Ratio
1700	LTE Band 66	Hotspot	Edge 3	Yes	0.994	0.994	1.00
1900	WCDMA Band II	Body & Hotspot	Rear	Yes	0.989	0.976	1.01
2300	LTE Band 30	Body & Hotspot	Rear	Yes	0.880	0.864	1.02
2400	Wi-Fi 802.11b/g/n	Body & Hotspot	Rear	Yes	1.140	1.110	1.03
2500	LTE Band 7	Body & Hotspot	Rear	Yes	0.885	0.850	1.04
2600	LTE Band 41	Body & Hotspot	Rear	Yes	0.876	0.839	1.04
3600	LTE Band 48	Body & Hotspot	Rear	Yes	0.915	0.892	1.03
5200	Wi-Fi 802.11a/n/ac	Body & Hotspot	Rear	Yes	1.100	1.080	1.02
5300	Wi-Fi 802.11a/n/ac	Body & Hotspot	Rear	Yes	1.060	1.000	1.06
5500	Wi-Fi 802.11a/n/ac	Body & Hotspot	Rear	Yes	1.050	1.010	1.04
5800	Wi-Fi 802.11a/n/ac	Body & Hotspot	Rear	Yes	1.120	1.08	1.04

Note(s):

Second Repeated Measurement is not required since the ratio of the largest to smallest SAR for the original and first repeated measurement is < 1.20 .

12. Simultaneous Transmission Conditions

KDB 447498 D01 General RF Exposure Guidance provides two procedures for determining simultaneous transmission SAR test exclusion: Sum of SAR and SAR to Peak Location Ratio (SPLSR)

Sum of SAR

To qualify for simultaneous transmission SAR test exclusion based upon Sum of SAR the sum of the reported standalone SARs for all simultaneously transmitting antennas shall be below the applicable standalone SAR limit. If the sum of the SARs is above the applicable limit then simultaneous transmission SAR test exclusion may still apply if the requirements of the SAR to Peak Location Ratio (SPLSR) evaluation are met.

SAR to Peak Location Ratio (SPLSR)

KDB 447498 D01 General RF Exposure Guidance explains how to calculate the SAR to Peak Location Ratio (SPLSR) between pairs of simultaneously transmitting antennas:

$$SPLSR = (SAR_1 + SAR_2)^{1.5} / Ri$$

Where:

SAR₁ is the highest reported or estimated SAR for the first of a pair of simultaneous transmitting antennas, in a specific test operating mode and exposure condition

SAR₂ is the highest reported or estimated SAR for the second of a pair of simultaneous transmitting antennas, in the same test operating mode and exposure condition as the first

Ri is the separation distance between the pair of simultaneous transmitting antennas. When the SAR is measured, for both antennas in the pair, it is determined by the actual x, y and z coordinates in the 1-g SAR for each SAR peak location, based on the extrapolated and interpolated result in the zoom scan measurement, using the formula of $[(x_1 - x_2)^2 + (y_1 - y_2)^2 + (z_1 - z_2)^2]$

In order for a pair of simultaneous transmitting antennas with the sum of 1-g SAR > 1.6 W/kg to qualify for exemption from Simultaneous Transmission SAR measurements, it has to satisfy the condition of:

$$(SAR_1 + SAR_2)^{1.5} / Ri \leq 0.04$$

When an individual antenna transmits at on two bands simultaneously, the sum of the highest reported SAR for the frequency bands should be used to determine **SAR₁** or **SAR₂**. When SPLSR is necessary, the smallest distance between the peak SAR locations for the antenna pair with respect to the peaks from each antenna should be used.

The antennas in all antenna pairs that do not qualify for simultaneous transmission SAR test exclusion must be tested for SAR compliance, according to the enlarged zoom scan and volume scan post-processing procedures in KDB Publication 865664 D01

Simultaneous transmission SAR measurement

When simultaneous transmission SAR measurements are required in different frequency bands not covered by a single probe calibration point then separate tests for each frequency band are performed. The tests are performed using enlarged zoom scans which are processed, by means of superposition, using the DASY volume scan post-processing procedures to determine the 1-g SAR for the aggregate SAR distribution.

The spatial resolution used for all enlarged zoom scans is the same as used for the most stringent zoom scans. I.E. the scan parameters required for the highest frequency assessed are used for all enlarged zoom scans. The scans cover the complete area of the device to ensure all transmitting antennas and radiating structures are assessed.

DASY provides the ability to perform Multiband Evaluations according to the latest standards using the Volume Scan job as well as appropriate routines for the Post-processing.

In order to extract and process measurements within different frequency bands, the SEMCAD X Post-processor performs the combination and subsequent superposition of these measurement data via DASY = Combined MultiBand Averaged SAR.

Combined Multi Band Averaged SAR allows - in addition to the data extraction - an evaluation of the 1 g, 10 g and/or arbitrary averaged mass SAR.

Power Scaling Factor is used to allow the volume scans to be scaled by a value other than "1", this is important when the results need to be scaled to different maximum power levels. The Power Scaling Factor is applied to each individual point of the scan. When power scaling is used in multi-band combinations the scaling factor is applied to each individual point of the first scan, the second factor is then applied to each individual point of the second scan and so on. The scans are then combined.

Simultaneous transmission SAR Exclusion

According to KDB 248227 D01, simultaneous SAR provisions in KDB 447498 D01 apply to determine simultaneous transmission SAR test exclusion for Wi-Fi MIMO. If the sum of 1-g single transmission chain SAR measurements is <1.6W/kg and/or the MIMO output power is equal or less than a single chain, then no additional SAR measurements for simultaneously at the specified maximum output power of MIMO operation.

When antennas are spatially separated to the extent that SAR distributions do not overlap and can be treated independently, SAR compliance for simultaneous transmission is determined separately for each individual antenna.

In Airplay mode, the device uses same power and power control mechanism as Wi-Fi. Airplay is not supported in hotspot mode. Airplay utilize the same 802.11 modes, modulation, MIMO, Channel Bandwidth, etc. as Wi-Fi does. Therefore Airplay usage is categorized by the Wi-Fi SAR testing contained in Section 10.

The simultaneous transmission possibilities for this device are listed as below.

RF Exposure Condition	Item	Capable Transmit Configurations				
Head	1	WWAN OFF (CELLULAR ANTENNAS OFF)	+	(ANT4) Wi-Fi 5 GHz SISO	+	(ANT2) Bluetooth (P _{High})
	2		+	(ANT5) Wi-Fi 5 GHz SISO	+	(ANT2) Bluetooth (P _{High})
	3		+	Wi-Fi 5 GHz MIMO ⁷	+	(ANT2) Bluetooth (P _{High})
	4		+	(ANT4) Wi-Fi 5 GHz SISO	+	(ANT5) Bluetooth (P _{High})
	5		+	(ANT5) Wi-Fi 5 GHz SISO	+	(ANT5) Bluetooth (P _{High})
	6		+	Wi-Fi 5 GHz MIMO ⁷	+	(ANT5) Bluetooth (P _{High})
	7		+	(ANT4) Wi-Fi 5 GHz SISO	+	Bluetooth Beamforming ⁷
	8		+	(ANT5) Wi-Fi 5 GHz SISO	+	Bluetooth Beamforming ⁷
	9		+	Wi-Fi 5 GHz MIMO ⁷	+	Bluetooth Beamforming ⁷
Body Worn Accessory	10	WWAN ON (CELLULAR ANTENNAS ON)	+	(ANT2) Wi-Fi 2.4 GHz SISO		
	11		+	(ANT5) Wi-Fi 2.4 GHz SISO		
	12		+	Wi-Fi 2.4 GHz MIMO ⁷		
13				+	(ANT2) Bluetooth (P _{High})	
Hotspot (for 2.4 GHz)	14				+	(ANT5) Bluetooth (P _{High})
	15				+	Bluetooth Beamforming ⁷
Airplay (for 2.4/5 GHz)	16		+	(ANT4) Wi-Fi 5 GHz SISO		
	17		+	(ANT5) Wi-Fi 5 GHz SISO		
	18		+	Wi-Fi 5 GHz MIMO ⁷		
	19		+	(ANT4) Wi-Fi 5 GHz SISO	+	(ANT2) Bluetooth (P _{low})
	20		+	(ANT5) Wi-Fi 5 GHz SISO	+	(ANT2) Bluetooth (P _{low})
	21		+	Wi-Fi 5 GHz MIMO ⁷	+	(ANT2) Bluetooth (P _{low})
	22		+	(ANT4) Wi-Fi 5 GHz SISO	+	(ANT5) Bluetooth (P _{low})
	23		+	(ANT5) Wi-Fi 5 GHz SISO	+	(ANT5) Bluetooth (P _{low})
	24		+	Wi-Fi 5 GHz MIMO ⁷	+	(ANT5) Bluetooth (P _{low})
	25		+	(ANT4) Wi-Fi 5 GHz SISO	+	Bluetooth Beamforming ⁷
	26		+	(ANT5) Wi-Fi 5 GHz SISO	+	Bluetooth Beamforming ⁷
	27		+	Wi-Fi 5 GHz MIMO ⁷	+	Bluetooth Beamforming ⁷

Note(s):

- Wi-Fi 2.4GHz & Bluetooth cannot transmit simultaneously.
- Wi-Fi 2.4GHz & Wi-Fi 5GHz cannot transmit simultaneously.
- WWAN ANT1, ANT2, ANT3, and ANT4 cannot transmit simultaneously.
- Bluetooth P_{Low} is used with Wi-Fi and WWAN antennas are active.
- Bluetooth P_{High} is used when Wi-Fi antenna is active and WWAN antenna is inactive or with Wi-Fi inactive and WWAN antenna is active.
- Bluetooth P_{standalone} is used with Wi-Fi and WWAN antennas are inactive.

7. Wi-Fi SISO mode SAR result can also represent for MIMO mode SAR and is used for MIMO mode simultaneous transmission analysis because antennas are not overlapping and the MIMO mode maximum power is equal or less than SISO mode.

12.1. Sum of the SAR for WWAN Cell-off & Wi-Fi & BT results

RF Exposure conditions	Test Position	Standalone SAR (W/kg)				Σ 1-g SAR (W/kg)			
		1	2	3	4	1+3	1+4	2+3	2+4
		Wi-Fi 5G ANT5	Wi-Fi 5G ANT4	BT(P _{high}) ANT5	BT(P _{high}) ANT2				
Head	Left Touch	0.141	0.102	0.223	0.235	0.364	0.376	0.325	0.337
	Left Tilt	0.141	0.102	0.067	0.233	0.208	0.374	0.169	0.335
	Right Touch	0.141	0.842	0.116	0.113	0.257	0.254	0.958	0.955
	Right Tilt	0.141	0.935	0.090	0.137	0.231	0.278	1.025	1.072
Body-worn & Hotspot	Rear	1.137	1.169	0.202	0.209	1.339	1.346	1.371	1.377
	Front	0.300	0.129	0.058	0.153	0.358	0.453	0.187	0.282
Hotspot	Edge 1		0.157		0.149		0.149	0.157	0.306
	Edge 2				0.234		0.234		0.234
	Edge 3	0.151		0.035		0.186	0.151	0.035	
	Edge 4	0.151	0.513	0.092		0.243	0.151	0.605	0.513

12.2. Sum of the SAR for WWAN Cell-on(ANT1) & Wi-Fi & BT results

RF Exposure conditions	Test Position	Standalone SAR (W/kg)					Σ 1-g SAR (W/kg)			
		1	2	3	6	7	1+2	1+3	1+6	1+7
		WWAN Cell-on ANT1	Wi-Fi 2.4G ANT5	Wi-Fi 2.4G ANT2	BT(P _{high}) ANT5	BT(P _{high}) ANT2				
Head	Left Touch	0.534	0.256	0.520	0.223	0.235	0.790	1.054	0.757	0.769
	Left Tilt	0.207	0.256	0.496	0.067	0.233	0.463	0.703	0.274	0.440
	Right Touch	0.430	0.256	0.496	0.116	0.113	0.686	0.926	0.546	0.543
	Right Tilt	0.289	0.256	0.496	0.090	0.137	0.545	0.785	0.379	0.426
Body-worn & Hptspot	Rear	0.999	0.375	0.481	0.202	0.197	1.374	1.480	1.201	1.196
	Front	0.830	0.243	0.447	0.058	0.144	1.073	1.277	0.888	0.974
Hotspot	Edge 2	0.590		0.447		0.221	0.590	1.037	0.590	0.811
	Edge 3	0.994	0.243		0.035		1.237	0.994	1.029	0.994
	Edge 4	0.919	0.243		0.092		1.162	0.919	1.011	0.919
RF Exposure conditions	Test Position	Standalone SAR (W/kg)					Σ 1-g SAR (W/kg)			
		1	4	5	8	9	1+4+8	1+4+9	1+5+8	1+5+9
		WWAN Cell-on ANT1	Wi-Fi 5G ANT5	Wi-Fi 5G ANT4	BT(P _{Low}) ANT5	BT(P _{Low}) ANT2				
Head	Left Touch	0.534	0.141	0.528	0.043	0.089	0.718	0.764	1.105	1.151
	Left Tilt	0.207	0.141	0.528	0.013	0.092	0.361	0.440	0.748	0.827
	Right Touch	0.430	0.141	0.543	0.034	0.037	0.605	0.608	1.007	1.010
	Right Tilt	0.289	0.141	0.528	0.016	0.041	0.446	0.471	0.833	0.858
Body-worn & Hptspot	Rear	0.999	0.329	0.432	0.088	0.093	1.415	1.420	1.519	1.524
	Front	0.830	0.329	0.144	0.020	0.084	1.179	1.243	0.994	1.058
Hotspot	Edge 2	0.590				0.098	0.590	0.688	0.590	0.688
	Edge 3	0.994	0.329		0.010		1.333	1.323	1.004	0.994
	Edge 4	0.919	0.329	0.040	0.010		1.258	1.248	0.969	0.959

12.3. Sum of the SAR for WWAN Cell-on(ANT2) & Wi-Fi & BT results

RF Exposure conditions	Test Position	Standalone SAR (W/kg)					Σ 1-g SAR (W/kg)			
		1	2	3	6	7	1+2	1+3	1+6	1+7
		WWAN Cell-on ANT2	Wi-Fi 2.4G ANT5	Wi-Fi 2.4G ANT2	BT(P _{high}) ANT5	BT(P _{high}) ANT2				
Head	Left Touch	0.796	0.256	0.520	0.223	0.235	1.052	1.316	1.019	1.031
	Left Tilt	0.746	0.256	0.496	0.067	0.233	1.002	1.242	0.813	0.979
	Right Touch	0.792	0.256	0.496	0.116	0.113	1.048	1.288	0.908	0.905
	Right Tilt	0.781	0.256	0.496	0.090	0.137	1.037	1.277	0.871	0.918
Body-worn & Hptspot	Rear	0.896	0.375	0.481	0.202	0.197	1.271	1.377	1.098	1.093
	Front	0.529	0.243	0.447	0.058	0.144	0.772	0.976	0.587	0.673
Hotspot	Edge 1	0.703		0.447		0.141	0.703	1.150	0.703	0.844
	Edge 2	0.875		0.447		0.221	0.875	1.322	0.875	1.096
	Edge 4	0.487	0.243		0.092		0.730	0.487	0.579	0.487
RF Exposure conditions	Test Position	Standalone SAR (W/kg)					Σ 1-g SAR (W/kg)			
		1	4	5	8	9	1+4+8	1+4+9	1+5+8	1+5+9
		WWAN Cell-on ANT2	Wi-Fi 5G ANT5	Wi-Fi 5G ANT4	BT(P _{Low}) ANT5	BT(P _{Low}) ANT2				
Head	Left Touch	0.796	0.141	0.528	0.043	0.089	0.980	1.026	1.367	1.413
	Left Tilt	0.746	0.141	0.528	0.013	0.092	0.900	0.979	1.287	1.366
	Right Touch	0.792	0.141	0.543	0.034	0.037	0.967	0.970	1.369	1.372
	Right Tilt	0.781	0.141	0.528	0.016	0.041	0.938	0.963	1.325	1.350
Body-worn & Hptspot	Rear	0.896	0.329	0.432	0.088	0.093	1.313	1.318	1.416	1.421
	Front	0.529	0.329	0.144	0.020	0.084	0.878	0.942	0.693	0.757
Hotspot	Edge 1	0.703		0.040		0.042	0.703	0.745	0.743	0.785
	Edge 2	0.875				0.098	0.875	0.973	0.875	0.973
	Edge 4	0.487	0.329	0.040	0.010		0.826	0.816	0.537	0.527

12.4. Sum of the SAR for WWAN Cell-on(ANT3) & Wi-Fi & BT results

RF Exposure conditions	Test Position	Standalone SAR (W/kg)					Σ 1-g SAR (W/kg)			
		1	2	3	6	7	1+2	1+3	1+6	1+7
		WWAN Cell-on ANT3	Wi-Fi 2.4G ANT5	Wi-Fi 2.4G ANT2	BT(P _{high}) ANT5	BT(P _{high}) ANT2				
Head	Left Touch	0.191	0.256	0.520	0.223	0.235	0.447	0.711	0.414	0.426
	Left Tilt	0.158	0.256	0.496	0.067	0.233	0.414	0.654	0.225	0.391
	Right Touch	0.199	0.256	0.496	0.116	0.113	0.455	0.695	0.315	0.312
	Right Tilt	0.113	0.256	0.496	0.090	0.137	0.369	0.609	0.203	0.250
Body-worn & Hptspot	Rear	0.971	0.375	0.481	0.202	0.197	1.346	1.452	1.173	1.168
	Front	0.643	0.243	0.447	0.058	0.144	0.886	1.090	0.701	0.787
Hotspot	Edge 2	0.969		0.447		0.221	0.969	1.416	0.969	1.190
	Edge 3	0.546	0.243		0.035		0.789	0.546	0.581	0.546

RF Exposure conditions	Test Position	Standalone SAR (W/kg)					Σ 1-g SAR (W/kg)			
		1	4	5	8	9	1+4+8	1+4+9	1+5+8	1+5+9
		WWAN Cell-on ANT3	Wi-Fi 5G ANT5	Wi-Fi 5G ANT4	BT(P _{Low}) ANT5	BT(P _{Low}) ANT2				
Head	Left Touch	0.191	0.141	0.528	0.043	0.089	0.375	0.421	0.762	0.808
	Left Tilt	0.158	0.141	0.528	0.013	0.092	0.312	0.391	0.699	0.778
	Right Touch	0.199	0.141	0.543	0.034	0.037	0.374	0.377	0.776	0.779
	Right Tilt	0.113	0.141	0.528	0.016	0.041	0.270	0.295	0.657	0.682
Body-worn & Htpspot	Rear	0.971	0.329	0.432	0.088	0.093	1.388	1.393	1.491	1.496
	Front	0.643	0.329	0.144	0.020	0.084	0.992	1.056	0.807	0.871
Hotspot	Edge 2	0.969				0.098	0.969	1.067	0.969	1.067
	Edge 3	0.546	0.329		0.010		0.885	0.875	0.556	0.546

12.5. Sum of the SAR for WWAN Cell-on(ANT4) & Wi-Fi & BT results

RF Exposure conditions	Test Position	Standalone SAR (W/kg)					Σ 1-g SAR (W/kg)			
		1	2	3	6	7	1+2	1+3	1+6	1+7
		WWAN Cell-on ANT4	Wi-Fi 2.4G ANT5	Wi-Fi 2.4G ANT2	BT(P _{high}) ANT5	BT(P _{high}) ANT2				
Head	Left Touch	0.074	0.256	0.520	0.223	0.235	0.330	0.594	0.297	0.309
	Left Tilt	0.084	0.256	0.496	0.067	0.233	0.340	0.580	0.151	0.317
	Right Touch	0.175	0.256	0.496	0.116	0.113	0.431	0.671	0.291	0.288
	Right Tilt	0.215	0.256	0.496	0.090	0.137	0.471	0.711	0.305	0.352
Body-worn & Htpspot	Rear	0.493	0.375	0.481	0.202	0.197	0.868	0.974	0.695	0.690
	Front	0.100	0.243	0.447	0.058	0.144	0.343	0.547	0.158	0.244
Hotspot	Edge 1	0.076		0.447		0.141	0.076	0.523	0.076	0.217
	Edge 4	0.328	0.243		0.092		0.571	0.328	0.420	0.328
RF Exposure conditions	Test Position	Standalone SAR (W/kg)					Σ 1-g SAR (W/kg)			
		1	4	5	8	9	1+4+8	1+4+9	1+5+8	1+5+9
		WWAN Cell-on ANT4	Wi-Fi 5G ANT5	Wi-Fi 5G ANT4	BT(P _{Low}) ANT5	BT(P _{Low}) ANT2				
Head	Left Touch	0.074	0.141	0.528	0.043	0.089	0.258	0.304	0.645	0.691
	Left Tilt	0.084	0.141	0.528	0.013	0.092	0.238	0.317	0.625	0.704
	Right Touch	0.175	0.141	0.543	0.034	0.037	0.350	0.353	0.752	0.755
	Right Tilt	0.215	0.141	0.528	0.016	0.041	0.372	0.397	0.759	0.784
Body-worn & Htpspot	Rear	0.493	0.329	0.432	0.088	0.093	0.910	0.915	1.013	1.018
	Front	0.100	0.329	0.144	0.020	0.084	0.449	0.513	0.264	0.328
Hotspot	Edge 1	0.076		0.040		0.042	0.076	0.118	0.116	0.158
	Edge 4	0.328	0.329	0.040	0.010		0.667	0.657	0.378	0.368

Appendixes

Refer to separated files for the following appendixes.

Appendix A: SAR Setup Photos

Appendix B: SAR System Check Plots

Appendix C: SAR Highest Test Plots

Appendix D: SAR Tissue Ingredients

Appendix E: SAR Probe Certificates

Appendix F: SAR Dipole Certificates

Appendix G: LTE Down-Link Carrier Aggregation

Appendix H: Body Detect Validation

END OF REPORT