SAR EVALUATION REPORT

IEEE Std 1528-2013

For
SMARTPHONE

FCC ID: BCG-E3304A
Model Name: A2221

Report Number: 12696945-S1V3
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Revision History

Rev.	Date	Revisions	Revised By
V1	7/24/2019	Initial Issue	--
V2	8/4/2019	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, 10.20, and 10.21: Updated power table. 6. Sec. 10.18: 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, and 10.21: Updated 2. Updated Appendix C and H	Devin Chang

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1. Attestation of Test Results

Applicant Name		APPLE, INC.				
FCC ID		BCG-E3304A				
Model Name		A2221				
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		0.791	0.307	1.090	1.052	0.551
Body-worn (Dist.= 5 mm)		0.999	0.811	1.080	1.175	0.573
Hotspot (Dist.= 5 mm)		0.999	0.862	1.100	1.175	0.573
Simultaneous TX	Head	1.412	1.412	1.412	1.357	1.357
	Body-worn	1.536	1.536	1.536	1.517	1.517
	Hotspot	1.536	1.536	1.536	1.517	1.517
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.

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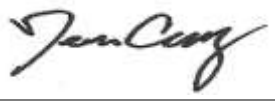
Approved & Released By:	Prepared By:
	
Devin Chang Senior Test Engineer UL Verification Services Inc.	Chakrit Thammanavarat Senior Test Engineer UL Verification Services Inc.

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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

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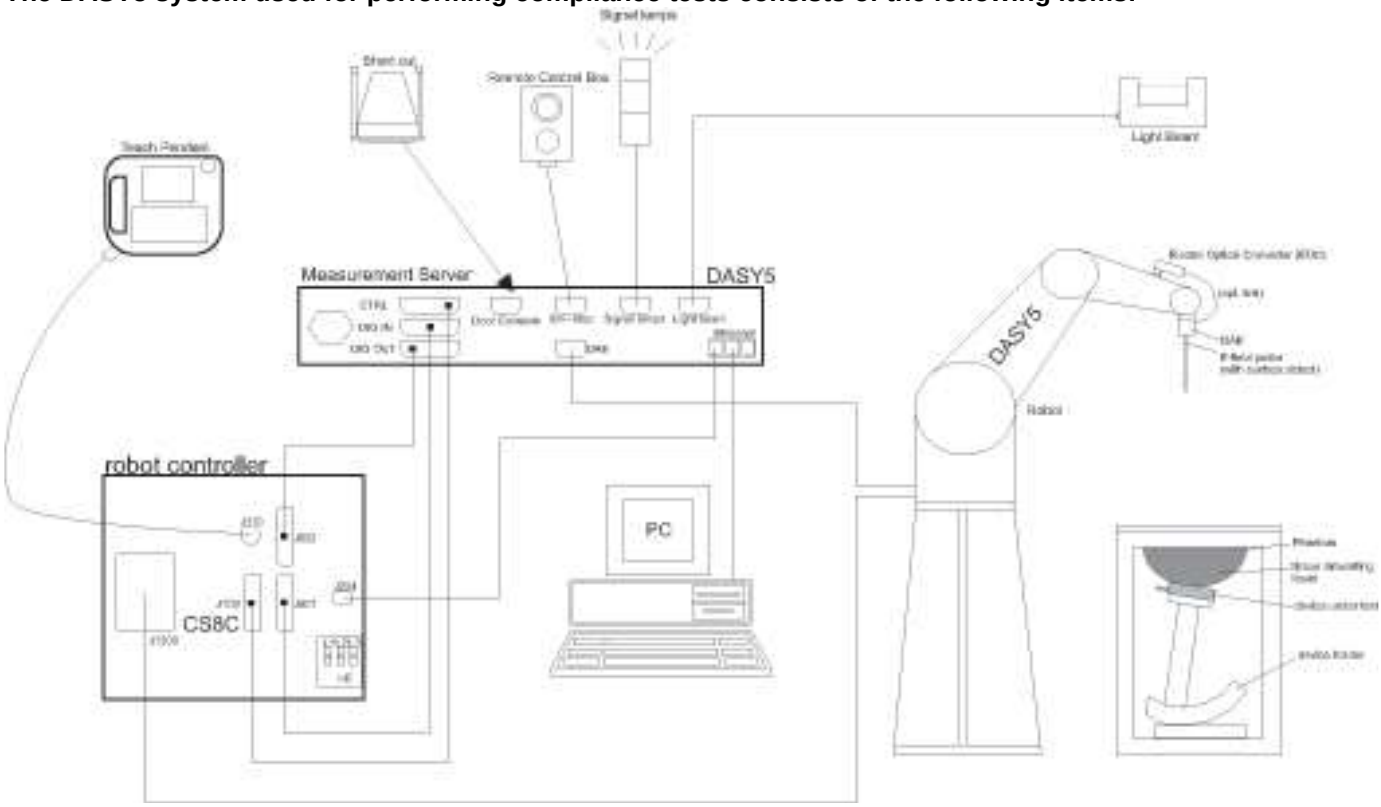
4. SAR Measurement System & Test Equipment

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.

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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	½·δ·ln(2) ± 0.5 mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location	30° ± 1°	20° ± 1°
Maximum area scan spatial resolution: Δx_{Area}, Δy_{Area}	≤ 2 GHz: ≤ 15 mm 2 – 3 GHz: ≤ 12 mm	3 – 4 GHz: ≤ 12 mm 4 – 6 GHz: ≤ 10 mm
	When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be ≤ the corresponding x or y dimension of the test device with at least one measurement point on the test device.	

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

Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details.

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

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.

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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

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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

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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 ≤ 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.

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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)

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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 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 **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)		100% (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)		99.02% (802.11a/n/ac 20MHz BW) 97.88% (802.11n/ac 40MHz BW) 95.52% (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:

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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.

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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 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/	23825/		

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Frequency range, Channel Bandwidth, Numbers and Frequencies				711	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
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.						

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Maximum power reduction (MPR)	**Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1, 2 and 3** 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
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.

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

Notes:

1. 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.
2. LTE band 41 test channels in accordance with October 2014 TCB workshop for all channels bandwidths.
3. SAR Testing for LTE was performed with the same number of RB and RB offsets transmitting on all TTI frames (maximum TTI).

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

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.

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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.

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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.

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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 ± 2°C of the temperature when the tissue parameters are characterized.
The dielectric parameters must be measured before the tissue-equivalent medium is used in a series of SAR measurements. The parameters should be re-measured after each 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 (εr) and conductivity (σ) of typical tissue-equivalent media recipes are expected to be within ± 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 εr and σ may be relaxed to ± 10%. This is limited to frequencies ≤ 3 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

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Dielectric Property Measurements Results:

SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			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

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SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			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

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SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			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

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SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			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

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SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			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

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SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			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

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SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			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

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SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			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

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SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			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

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SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			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

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SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			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

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SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			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

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SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			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

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SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			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

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SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			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

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SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			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

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SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			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

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SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			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

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SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			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

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SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			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

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SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			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

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SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			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

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SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			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

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SAR Lab	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (εr)			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

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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 ±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 ≥ 15.0 cm for SAR measurements ≤ 3 GHz and ≥ 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.

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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 ±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 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 %	
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	

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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 %	
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	

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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	

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					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	

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					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	

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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 %	
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	

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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 %	
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	

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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

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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	

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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 ≤ 1/4dB higher than GPRS/EDGE (GMSK) or the adjusted SAR of the highest reported SAR of GPRS/EDGE (GMSK) is ≤ 1.2W/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

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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	32.30	23.3	33.25	24.22	32.30	23.3	33.25	24.22
			190	836.6	32.41	23.4			32.41	23.4		
			251	848.8	32.30	23.3			32.30	23.3		
		2	128	824.2	32.20	26.2	32.25	**26.23**	32.20	26.2	32.25	**26.23**
			190	836.6	32.20	26.2			32.20	26.2		
			251	848.8	32.10	26.1			32.10	26.1		
EDGE (8PSK)	MCS5	1	128	824.2	26.90	17.9	27.75	18.72	26.90	17.9	27.75	18.72
			190	836.6	26.90	17.9			26.90	17.9		
			251	848.8	26.80	17.8			26.80	17.8		
		2	128	824.2	26.70	20.7	26.75	20.73	26.70	20.7	26.75	20.73
			190	836.6	26.80	20.8			26.80	20.8		
			251	848.8	26.70	20.7			26.70	20.7		

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	30.80	21.77	31.75	22.72	30.80	21.77	31.75	22.72
			190	836.6	30.85	21.82			30.85	21.82		
			251	848.8	30.88	21.85			30.88	21.85		
		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	30.60	24.58			30.60	24.58		
EDGE (8PSK)	MCS5	1	128	824.2	25.50	16.47	25.75	16.72	25.50	16.47	25.75	16.72
			190	836.6	25.40	16.37			25.40	16.37		
			251	848.8	25.60	16.57			25.60	16.57		
		2	128	824.2	24.50	18.48	24.75	18.73	24.50	18.48	24.75	18.73
			190	836.6	24.40	18.38			24.40	18.38		
			251	848.8	24.50	18.48			24.50	18.48		

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.

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GSM1900 Measured Results (ANT1)

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
CS1	1	512	1850.2	30.90	21.87	31.75	22.72	28.40	19.37	29.25	20.22
		661	1880.0	30.80	21.77			28.30	19.27		
		810	1909.8	30.90	21.87			28.30	19.27		
	2	512	1850.2	30.40	24.38	30.75	**24.73**	26.10	20.08	26.25	**20.23**
		661	1880.0	30.40	24.38			26.10	20.08		
		810	1909.8	30.20	24.18			26.10	20.08		
MCS5	1	512	1850.2	25.40	16.37	26.75	17.72	25.40	16.37	26.75	17.72
		661	1880.0	25.50	16.47			25.50	16.47		
		810	1909.8	25.40	16.37			25.40	16.37		
	2	512	1850.2	25.50	19.48	25.75	19.73	25.50	19.48	25.75	19.73
		661	1880.0	25.40	19.38			25.40	19.38		
		810	1909.8	25.40	19.38			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	26.22	17.19	26.50	17.47	27.18	18.15	27.50	18.47
			661	1880.0	26.29	17.26			27.27	18.24		
			810	1909.8	26.22	17.19			27.13	18.10		
		2	512	1850.2	23.27	17.25	23.50	**17.48**	24.25	18.23	24.50	**18.48**
			661	1880.0	23.40	17.38			24.31	18.29		
			810	1909.8	23.18	17.16			24.18	18.16		
EDGE (8PSK)	MCS5	1	512	1850.2	23.50	14.47	24.25	15.22	23.50	14.47	24.25	15.22
			661	1880.0	23.60	14.57			23.60	14.57		
			810	1909.8	23.40	14.37			23.40	14.37		
		2	512	1850.2	23.00	16.98	23.25	17.23	22.50	16.48	23.25	17.23
			661	1880.0	23.00	16.98			23.00	16.98		
			810	1909.8	23.00	16.98			22.40	16.38		

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.

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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
	βc/βd	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} (Note1, Note 2)	CM (dB) (Note 3)	MPR (dB) (Note 3)
1	2/15	15/15	64	2/15	4/15	0.0	0.0
2	12/15 (Note 4)	15/15 (Note 4)	64	12/15 (Note 4)	24/15	1.0	0.0
3	15/15	8/15	64	15/8	30/15	1.5	0.5
4	15/15	4/15	64	15/4	30/15	1.5	0.5

Note 1: Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 30/15 with β_{hs} = 30/15 * β_c.

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

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

Note 4: For subtest 2 the β_c/β_d ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to β_c = 11/15 and β_d = 15/15.

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} (Note1)	β_{ec}	β_{ed} (Note 4) (Note 5)	β_{ed} (SF)	β_{ed} (Codes)	CM (dB) (Note 2)	MPR (dB) (Note 2) (Note 6)	AG Index (Note 5)	E-TFCI
1	11/15 (Note 3)	15/15 (Note 3)	64	11/15 (Note 3)	22/15	209/225	1309/225	4	1	1.0	0.0	20	75
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67
3	15/15	9/15	64	15/9	30/15	30/15	β_{ed}1: 47/15 β_{ed}2: 47/15	4 4	2	2.0	1.0	15	92
4	2/15	15/15	64	2/15	4/15	2/15	56/75	4	1	3.0	2.0	17	71
5	15/15	0	-	-	5/15	5/15	47/15	4	1	1.0	0.0	12	67

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

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

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

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

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

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

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

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 (Note3)	β_d	β_{HS} (Note1)	β_{ec}	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	$\beta_{ed}1$: 30/15 $\beta_{ed}2$: 30/15	$\beta_{ed}3$: 24/15 $\beta_{ed}4$: 24/15	3.5	2.5	14	105	105

Note 1: Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 30/15 with $\beta_{hs} = 30/15 * \beta_c$.
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 β_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 ≤ ¼ 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

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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	25.20	N/A	25.70	20.20	N/A	20.25
		9400	1880.0	25.30			20.20		
		9538	1907.6	25.20			20.20		
HSDPA	Subtest 1	9262	1852.4	24.73	0	25.70	20.08	0	20.25
		9400	1880.0	24.79			20.16		
		9538	1907.6	24.81			20.12		
	Subtest 2	9262	1852.4	24.86	0	25.70	20.07	0	20.25
		9400	1880.0	24.86			20.12		
		9538	1907.6	24.90			20.04		
	Subtest 3	9262	1852.4	24.20	0.5	25.20	19.04	0.5	19.75
		9400	1880.0	24.30			19.10		
		9538	1907.6	24.25			19.05		
	Subtest 4	9262	1852.4	24.55	0.5	25.20	19.03	0.5	19.75
		9400	1880.0	24.35			19.12		
		9538	1907.6	24.32			19.07		
HSUPA	Subtest 1	9262	1852.4	24.73	0	25.70	20.07	0	20.25
		9400	1880.0	24.79			20.13		
		9538	1907.6	24.81			20.08		
	Subtest 2	9262	1852.4	22.84	2	23.70	18.05	2	18.25
		9400	1880.0	22.88			18.12		
		9538	1907.6	22.86			18.04		
	Subtest 3	9262	1852.4	23.76	1	24.70	18.34	1	19.25
		9400	1880.0	23.90			18.33		
		9538	1907.6	23.87			18.36		
	Subtest 4	9262	1852.4	22.73	2	23.70	18.04	2	18.25
		9400	1880.0	22.82			18.12		
		9538	1907.6	22.90			18.04		
	Subtest 5	9262	1852.4	24.72	0	25.70	20.08	0	20.25
		9400	1880.0	24.78			20.08		
		9538	1907.6	24.73			19.72		
DC-HSDPA	Subtest 1	9262	1852.4	24.72	0	25.70	20.10	0	20.25
		9400	1880.0	24.80			20.15		
		9538	1907.6	24.80			20.14		
	Subtest 2	9262	1852.4	24.73	0	25.70	20.10	0	20.25
		9400	1880.0	24.75			20.13		
		9538	1907.6	24.76			20.10		
	Subtest 3	9262	1852.4	24.48	0.5	25.20	19.03	0.5	19.75
		9400	1880.0	24.56			19.12		
		9538	1907.6	24.54			19.07		
	Subtest 4	9262	1852.4	24.46	0.5	25.20	19.04	0.5	19.75
		9400	1880.0	24.51			19.10		
		9538	1907.6	24.56			19.05		
HSPA+	Subtest 1	9262	1852.4	22.73	2.5	23.20	17.12	2.5	17.75
		9400	1880.0	22.79			17.15		
		9538	1907.6	22.81			17.09		

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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	17.20	N/A	17.50	18.45	N/A	18.50
		9400	1880.0	17.14			18.30		
		9538	1907.6	16.99			18.25		
HSDPA	Subtest 1	9262	1852.4	17.29	0	17.50	18.40	0	18.50
		9400	1880.0	17.03			18.31		
		9538	1907.6	16.89			18.18		
	Subtest 2	9262	1852.4	17.21	0	17.50	18.43	0	18.50
		9400	1880.0	16.95			18.25		
		9538	1907.6	16.89			18.18		
	Subtest 3	9262	1852.4	16.80	0.5	17.00	18.00	0.5	18.00
		9400	1880.0	16.95			18.00		
		9538	1907.6	16.88			18.00		
	Subtest 4	9262	1852.4	16.70	0.5	17.00	18.00	0.5	18.00
		9400	1880.0	16.92			18.00		
		9538	1907.6	16.89			18.00		
HSUPA	Subtest 1	9262	1852.4	17.18	0	17.50	18.28	0	18.50
		9400	1880.0	16.98			18.04		
		9538	1907.6	16.93			18.00		
	Subtest 2	9262	1852.4	15.27	2	15.50	16.41	2	16.50
		9400	1880.0	14.99			16.25		
		9538	1907.6	14.92			16.13		
	Subtest 3	9262	1852.4	16.20	1	16.50	17.31	1	17.50
		9400	1880.0	15.95			17.09		
		9538	1907.6	15.91			17.02		
	Subtest 4	9262	1852.4	15.23	2	15.50	16.42	2	16.50
		9400	1880.0	14.94			16.24		
		9538	1907.6	14.87			16.09		
	Subtest 5	9262	1852.4	17.22	0	17.50	18.45	0	18.50
		9400	1880.0	17.00			18.24		
		9538	1907.6	17.01			18.19		
DC-HSDPA	Subtest 1	9262	1852.4	17.25	0	17.50	18.43	0	18.50
		9400	1880.0	17.03			18.25		
		9538	1907.6	16.95			18.18		
	Subtest 2	9262	1852.4	17.26	0	17.50	18.47	0	18.50
		9400	1880.0	17.03			18.28		
		9538	1907.6	16.97			18.18		
	Subtest 3	9262	1852.4	16.26	0.5	17.00	17.45	0.5	18.00
		9400	1880.0	16.04			17.23		
		9538	1907.6	16.90			17.18		
	Subtest 4	9262	1852.4	16.27	0.5	17.00	17.43	0.5	18.00
		9400	1880.0	17.00			17.22		
		9538	1907.6	16.87			17.17		
HSPA+	Subtest 1	9262	1852.4	15.00	2.5	15.00	16.00	2.5	16.00
		9400	1880.0	15.00			16.00		
		9538	1907.6	15.00			16.00		

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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	25.70	N/A	25.70	21.50	N/A	21.50
		1413	1732.6	25.50			21.50		
		1513	1752.6	25.50			21.50		
HSDPA	Subtest 1	1312	1712.4	24.86	0	25.70	21.48	0	21.50
		1413	1732.6	25.05			21.40		
		1513	1752.6	24.79			21.39		
	Subtest 2	1312	1712.4	24.80	0	25.70	21.41	0	21.50
		1413	1732.6	24.79			21.40		
		1513	1752.6	24.73			21.41		
	Subtest 3	1312	1712.4	24.36	0.5	25.20	21.00	0.5	21.00
		1413	1732.6	24.54			21.00		
		1513	1752.6	24.29			21.00		
	Subtest 4	1312	1712.4	24.31	0.5	25.20	21.00	0.5	21.00
		1413	1732.6	24.28			21.00		
		1513	1752.6	24.26			21.00		
HSUPA	Subtest 1	1312	1712.4	24.86	0	25.70	21.26	0	21.50
		1413	1732.6	25.05			21.45		
		1513	1752.6	24.79			21.23		
	Subtest 2	1312	1712.4	22.79	2	23.70	19.50	2	19.50
		1413	1732.6	22.77			19.50		
		1513	1752.6	22.77			19.50		
	Subtest 3	1312	1712.4	23.71	1	24.70	20.31	1	20.50
		1413	1732.6	23.82			20.50		
		1513	1752.6	23.71			20.35		
	Subtest 4	1312	1712.4	22.89	2	23.70	19.49	2	19.50
		1413	1732.6	23.08			19.46		
		1513	1752.6	22.85			19.41		
	Subtest 5	1312	1712.4	24.71	0	25.70	21.44	0	21.50
		1413	1732.6	24.96			21.48		
		1513	1752.6	24.83			21.38		
DC-HSDPA	Subtest 1	1312	1712.4	24.86	0	25.70	21.40	0	21.50
		1413	1732.6	25.01			21.45		
		1513	1752.6	24.77			21.44		
	Subtest 2	1312	1712.4	24.84	0	25.70	21.40	0	21.50
		1413	1732.6	25.06			21.43		
		1513	1752.6	24.78			21.40		
	Subtest 3	1312	1712.4	24.62	0.5	25.20	20.90	0.5	21.00
		1413	1732.6	24.81			20.96		
		1513	1752.6	24.54			20.87		
	Subtest 4	1312	1712.4	24.60	0.5	25.20	20.89	0.5	21.00
		1413	1732.6	24.77			20.98		
		1513	1752.6	24.53			20.88		
HSPA+	Subtest 1	1312	1712.4	23.20	2.5	23.20	19.00	2.5	19.00
		1413	1732.6	23.20			19.00		
		1513	1752.6	23.20			19.00		

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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	21.10	N/A	21.25	21.06	N/A	21.50
		1413	1732.6	20.87			21.07		
		1513	1752.6	20.92			21.18		
HSDPA	Subtest 1	1312	1712.4	21.00	0	21.25	21.02	0	21.50
		1413	1732.6	20.75			21.07		
		1513	1752.6	20.94			21.04		
	Subtest 2	1312	1712.4	21.00	0	21.25	21.01	0	21.50
		1413	1732.6	20.77			21.03		
		1513	1752.6	20.91			21.04		
	Subtest 3	1312	1712.4	20.59	0.5	20.75	20.82	0.5	21.00
		1413	1732.6	20.37			20.66		
		1513	1752.6	20.48			20.62		
	Subtest 4	1312	1712.4	20.56	0.5	20.75	20.83	0.5	21.00
		1413	1732.6	20.34			20.66		
		1513	1752.6	20.49			20.63		
HSUPA	Subtest 1	1312	1712.4	20.98	0	21.25	21.23	0	21.50
		1413	1732.6	20.78			21.08		
		1513	1752.6	20.91			21.07		
	Subtest 2	1312	1712.4	19.05	2	19.25	19.40	2	19.50
		1413	1732.6	19.00			19.30		
		1513	1752.6	19.17			19.28		
	Subtest 3	1312	1712.4	20.19	1	20.25	20.40	1	20.50
		1413	1732.6	19.99			20.30		
		1513	1752.6	20.14			20.31		
	Subtest 4	1312	1712.4	19.11	2	19.25	19.47	2	19.50
		1413	1732.6	19.08			19.34		
		1513	1752.6	19.21			19.37		
	Subtest 5	1312	1712.4	20.99	0	21.25	21.21	0	21.50
		1413	1732.6	20.82			21.05		
		1513	1752.6	20.97			21.11		
DC-HSDPA	Subtest 1	1312	1712.4	20.99	0	21.25	21.20	0	21.50
		1413	1732.6	20.74			21.01		
		1513	1752.6	20.88			20.96		
	Subtest 2	1312	1712.4	21.00	0	21.25	20.89	0	21.50
		1413	1732.6	20.75			20.68		
		1513	1752.6	20.85			20.67		
	Subtest 3	1312	1712.4	20.62	0.5	20.75	20.82	0.5	21.00
		1413	1732.6	20.57			20.65		
		1513	1752.6	20.66			20.63		
	Subtest 4	1312	1712.4	20.62	0.5	20.75	20.84	0.5	21.00
		1413	1732.6	20.60			20.90		
		1513	1752.6	20.74			20.88		
HSPA+	Subtest 1	1312	1712.4	18.75	2.5	18.75	19.00	2.5	19.00
		1413	1732.6	18.75			19.00		
		1513	1752.6	18.75			19.00		

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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	25.20	N/A	25.70	25.20	N/A	25.70
		4183	836.6	25.20			25.20		
		4233	846.6	25.20			25.20		
HSDPA	Subtest 1	4132	826.4	25.14	0	25.70	25.14	0	25.70
		4183	836.6	24.88			24.88		
		4233	846.6	24.92			24.92		
	Subtest 2	4132	826.4	24.87	0	25.70	24.87	0	25.70
		4183	836.6	24.82			24.82		
		4233	846.6	24.89			24.89		
	Subtest 3	4132	826.4	24.59	0.5	25.20	24.59	0.5	25.20
		4183	836.6	24.37			24.37		
		4233	846.6	24.31			24.31		
	Subtest 4	4132	826.4	24.37	0.5	25.20	24.37	0.5	25.20
		4183	836.6	24.29			24.29		
		4233	846.6	24.28			24.28		
HSUPA	Subtest 1	4132	826.4	24.80	0	25.70	24.80	0	25.70
		4183	836.6	24.80			24.80		
		4233	846.6	24.99			24.99		
	Subtest 2	4132	826.4	22.88	2	23.70	22.88	2	23.70
		4183	836.6	22.83			22.83		
		4233	846.6	22.89			22.89		
	Subtest 3	4132	826.4	23.82	1	24.70	23.82	1	24.70
		4183	836.6	23.87			23.87		
		4233	846.6	23.98			23.98		
	Subtest 4	4132	826.4	23.11	2	23.70	23.11	2	23.70
		4183	836.6	22.86			22.86		
		4233	846.6	22.83			22.83		
	Subtest 5	4132	826.4	24.97	0	25.70	24.97	0	25.70
		4183	836.6	24.88			24.88		
		4233	846.6	24.94			24.94		
DC-HSDPA	Subtest 1	4132	826.4	25.15	0	25.70	25.15	0	25.70
		4183	836.6	24.87			24.87		
		4233	846.6	24.92			24.92		
	Subtest 2	4132	826.4	25.14	0	25.70	25.14	0	25.70
		4183	836.6	24.84			24.84		
		4233	846.6	24.91			24.91		
	Subtest 3	4132	826.4	24.87	0.5	25.20	24.87	0.5	25.20
		4183	836.6	24.60			24.60		
		4233	846.6	24.61			24.61		
	Subtest 4	4132	826.4	24.87	0.5	25.20	24.87	0.5	25.20
		4183	836.6	24.58			24.58		
		4233	846.6	24.59			24.59		
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		

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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	24.20	N/A	24.50	24.20	N/A	24.50
		4183	836.6	24.30			24.30		
		4233	846.6	24.30			24.30		
HSDPA	Subtest 1	4132	826.4	23.61	0	24.50	23.61	0	24.50
		4183	836.6	23.65			23.65		
		4233	846.6	23.73			23.73		
	Subtest 2	4132	826.4	23.61	0	24.50	23.61	0	24.50
		4183	836.6	23.65			23.65		
		4233	846.6	23.73			23.73		
	Subtest 3	4132	826.4	23.51	0.5	24.00	23.51	0.5	24.00
		4183	836.6	23.55			23.55		
		4233	846.6	23.53			23.53		
	Subtest 4	4132	826.4	23.51	0.5	24.00	23.51	0.5	24.00
		4183	836.6	23.55			23.55		
		4233	846.6	23.53			23.53		
HSUPA	Subtest 1	4132	826.4	23.61	0	24.50	23.61	0	24.50
		4183	836.6	23.65			23.65		
		4233	846.6	23.73			23.73		
	Subtest 2	4132	826.4	21.50	2	22.50	21.50	2	22.50
		4183	836.6	21.57			21.57		
		4233	846.6	21.58			21.58		
	Subtest 3	4132	826.4	22.55	1	23.50	22.55	1	23.50
		4183	836.6	22.54			22.54		
		4233	846.6	22.52			22.52		
	Subtest 4	4132	826.4	21.70	2	22.50	21.70	2	22.50
		4183	836.6	21.79			21.79		
		4233	846.6	21.81			21.81		
	Subtest 5	4132	826.4	23.53	0	24.50	23.53	0	24.50
		4183	836.6	23.50			23.50		
		4233	846.6	23.57			23.57		
DC-HSDPA	Subtest 1	4132	826.4	23.50	0	24.50	23.50	0	24.50
		4183	836.6	23.64			23.64		
		4233	846.6	23.64			23.64		
	Subtest 2	4132	826.4	23.61	0	24.50	23.61	0	24.50
		4183	836.6	23.65			23.65		
		4233	846.6	23.73			23.73		
	Subtest 3	4132	826.4	23.76	0.5	24.00	23.76	0.5	24.00
		4183	836.6	23.89			23.89		
		4233	846.6	23.85			23.85		
	Subtest 4	4132	826.4	23.30	0.5	24.00	23.30	0.5	24.00
		4183	836.6	23.37			23.37		
		4233	846.6	23.37			23.37		
HSPA+	Subtest 1	4132	826.4	22.00	2.5	22.00	22.00	2.5	22.00
		4183	836.6	22.00			22.00		
		4233	846.6	22.00			22.00		

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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)

	RF Channel	RF Channel Offset
Carrier [0]	31	0
Carrier [1]	1013	982

  - Under Carrier Configuration: RF Pilot

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

    For Three Carriers: Low Channel (1013)

	RF Channel	RF Channel Offset
Carrier [0]	72	0
Carrier [1]	31	-41
Carrier [2]	1013	941

  - Under Carrier Configuration: RF Pilot

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

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

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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 ≤ ¼ 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

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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	25.50	25.7	25.50	25.7
		384	836.52	25.60		25.60	
		777	848.31	25.40		25.40	
	RC3, SO55 (Loopback)	1013	824.70	25.50		25.50	
		384	836.52	25.60		25.60	
		777	848.31	25.40		25.40	
	RC3, SO32 (+F-SCH)	1013	824.70	25.50		25.50	
		384	836.52	25.60		25.60	
		777	848.31	25.40		25.40	
1xAdvanced	Fwd11/Rvs8 SO75 (Loopback)	1013	824.70	25.40	25.7	25.40	25.7
		384	836.52	25.50		25.50	
		777	848.31	25.20		25.20	
1xEv-Do Rel. 0	307.2 kbps (2 slot, QPSK)	1013	824.70	25.50	25.7	25.50	25.7
		384	836.52	25.60		25.60	
		777	848.31	25.40		25.40	
1xEv-Do Rev. A	307.2k, QPSK/ ACK channel is transmitted at all the slots	1013	824.70	25.50	25.7	25.50	25.7
		384	836.52	25.60		25.60	
		777	848.31	25.40		25.40	

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	24.30	24.50	24.30	24.50
		384	836.52	24.40		24.40	
		777	848.31	24.40		24.40	
	RC3, SO55 (Loopback)	1013	824.70	24.30		24.30	
		384	836.52	24.40		24.40	
		777	848.31	24.40		24.40	
	RC3, SO32 (+F-SCH)	1013	824.70	24.30		24.30	
		384	836.52	24.40		24.40	
		777	848.31	24.40		24.40	
1xAdvanced	Fwd11/Rvs8 SO75 (Loopback)	1013	824.70	24.00	24.50	24.00	24.50
		384	836.52	24.20		24.20	
		777	848.31	24.20		24.20	
1xEv-Do Rel. 0	307.2 kbps (2 slot, QPSK)	1013	824.70	24.30	24.50	24.30	24.50
		384	836.52	24.40		24.40	
		777	848.31	24.40		24.40	
1xEv-Do Rev. A	307.2k, QPSK/ ACK channel is transmitted at all the slots	1013	824.70	24.30	24.50	24.30	24.50
		384	836.52	24.40		24.40	
		777	848.31	24.40		24.40	

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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	19.75	20.25
		600	1880.00	25.70		19.75	
		1175	1908.75	25.70		19.75	
	RC3, SO55 (Loopback)	25	1851.25	25.70		19.75	
		600	1880.00	25.70		19.75	
		1175	1908.75	25.70		19.75	
	RC3, SO32 (+F-SCH)	25	1851.25	25.70		19.75	
		600	1880.00	25.70		19.75	
		1175	1908.75	25.70		19.75	
1xAdvanced	Fwd11/Rvs8 SO75 (Loopback)	25	1851.25	25.20	25.70	19.40	20.25
		600	1880	25.00		19.50	
		1175	1908.75	25.00		19.40	
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	17.40	17.50	18.30	18.50
		600	1880.00	17.40		18.50	
		1175	1908.75	17.50		18.30	
	RC3, SO55 (Loopback)	25	1851.25	17.40		18.30	
		600	1880.00	17.40		18.50	
		1175	1908.75	17.50		18.30	
	RC3, SO32 (+F-SCH)	25	1851.25	17.40		18.30	
		600	1880.00	17.40		18.50	
		1175	1908.75	17.50		18.30	
1xAdvanced	Fwd11/Rvs8 SO75 (Loopback)	25	1851.25	17.00	17.50	17.90	18.50
		600	1880	17.20		18.20	
		1175	1908.75	17.20		18.00	
1xEv-Do Rel. 0	307.2 kbps (2 slot, QPSK)	25	1851.25	17.40	17.50	18.30	18.50
		600	1880.00	17.40		18.50	
		1175	1908.75	17.50		18.30	
1xEv-Do Rev. A	307.2k, QPSK/ ACK channel is transmitted at all the slots	25	1851.25	17.40	17.50	18.30	18.50
		600	1880	17.40		18.50	
		1175	1908.75	17.50		18.30	

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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	25.50	25.70	25.50	25.70
	RC3, SO55 (Loopback)	560	820.00	25.50		25.50	
	RC3, SO32 (+F-SCH)	560	820.00	25.50		25.50	
1xAdvanced	Fwd11/Rvs8 SO75 (Loopback)	560	820.00	25.50	25.70	25.50	25.70
1xEv-Do Rel. 0	307.2 kbps (2 slot, QPSK)	560	820.00	25.50	25.70	25.50	25.70
1xEv-Do Rev. A	307.2k, QPSK/ ACK channel is transmitted at all the slots	560	820.00	25.50	25.70	25.50	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	24.40	24.50	24.40	24.50
	RC3, SO55 (Loopback)	560	820.00	24.40		24.40	
	RC3, SO32 (+F-SCH)	560	820.00	24.40		24.40	
1xAdvanced	Fwd11/Rvs8 SO75 (Loopback)	560	820.00	24.10	24.50	24.10	24.50
1xEv-Do Rel. 0	307.2 kbps (2 slot, QPSK)	560	820.00	24.40	24.50	24.20	24.50
1xEv-Do Rev. A	307.2k, QPSK/ ACK channel is transmitted at all the slots	560	820.00	24.40	24.50	24.40	24.50

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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

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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 ≤ 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 ≤ ½ 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 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
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

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LTE Band 5 Measured Results (ANT1)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)			Power Mode B (dBm)				
				[redacted]	20525	[redacted]	MPR	Tune-up Limit	[redacted]	20525	[redacted]	MPR	Tune-up Limit
					836.5 MHz					836.5 MHz			
10 MHz	QPSK	1	0		25.14		0	25.70		25.14		0	25.70
		1	25		25.20		0	25.70		25.20		0	25.70
		1	49		25.20		0	25.70		25.20		0	25.70
		25	0		24.05		1	24.70		24.05		1	24.70
		25	12		24.20		1	24.70		24.20		1	24.70
		25	25		24.14		1	24.70		24.14		1	24.70
		50	0		24.20		1	24.70		24.20		1	24.70
	16QAM	1	0		24.48		1	24.70		24.48		1	24.70
		1	25		24.35		1	24.70		24.35		1	24.70
		1	49		24.51		1	24.70		24.51		1	24.70
		25	0		23.09		2	23.70		23.09		2	23.70
		25	12		23.08		2	23.70		23.08		2	23.70
		25	25		23.15		2	23.70		23.15		2	23.70
		50	0		23.14		2	23.70		23.14		2	23.70
	64QAM	1	0		23.12		2	23.70		23.12		2	23.70
		1	25		23.04		2	23.70		23.04		2	23.70
		1	49		23.25		2	23.70		23.25		2	23.70
		25	0		21.94		3	22.70		21.94		3	22.70
		25	12		21.92		3	22.70		21.92		3	22.70
		25	25		22.01		3	22.70		22.01		3	22.70
		50	0		21.99		3	22.70		21.99		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	846.5 MHz			826.5 MHz	836.5 MHz	846.5 MHz		
5 MHz	QPSK	1	0	25.22	25.09	25.18	0	25.70	25.22	25.09	25.18	0	25.70
		1	12	25.23	25.07	24.97	0	25.70	25.23	25.07	24.97	0	25.70
		1	24	25.21	25.15	24.86	0	25.70	25.21	25.15	24.86	0	25.70
		12	0	24.20	24.01	23.99	1	24.70	24.20	24.01	23.99	1	24.70
		12	7	24.20	23.94	23.91	1	24.70	24.20	23.94	23.91	1	24.70
		12	13	24.15	23.96	23.89	1	24.70	24.15	23.96	23.89	1	24.70
		25	0	24.16	23.99	23.95	1	24.70	24.16	23.99	23.95	1	24.70
	16QAM	1	0	24.60	24.36	24.47	1	24.70	24.60	24.36	24.47	1	24.70
		1	12	24.60	24.33	24.30	1	24.70	24.60	24.33	24.30	1	24.70
		1	24	24.54	24.42	24.17	1	24.70	24.54	24.42	24.17	1	24.70
		12	0	23.16	22.96	23.01	2	23.70	23.16	22.96	23.01	2	23.70
		12	7	23.17	22.91	22.92	2	23.70	23.17	22.91	22.92	2	23.70
		12	13	23.13	22.93	22.85	2	23.70	23.13	22.93	22.85	2	23.70
		25	0	23.09	22.93	22.87	2	23.70	23.09	22.93	22.87	2	23.70
	64QAM	1	0	23.39	23.17	23.34	2	23.70	23.39	23.17	23.34	2	23.70
		1	12	23.36	23.11	23.11	2	23.70	23.36	23.11	23.11	2	23.70
		1	24	23.24	23.15	22.91	2	23.70	23.24	23.15	22.91	2	23.70
		12	0	22.07	21.75	21.79	3	22.70	22.07	21.75	21.79	3	22.70
		12	7	22.09	21.76	21.74	3	22.70	22.09	21.76	21.74	3	22.70
		12	13	22.05	21.73	21.79	3	22.70	22.05	21.73	21.79	3	22.70
		25	0	21.99	21.80	21.71	3	22.70	21.99	21.80	21.71	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	847.5 MHz			825.5 MHz	836.5 MHz	847.5 MHz		
3 MHz	QPSK	1	0	25.22	25.03	24.99	0	25.70	25.22	25.03	24.99	0	25.70
		1	8	25.31	25.03	24.96	0	25.70	25.31	25.03	24.96	0	25.70
		1	14	25.25	24.95	24.84	0	25.70	25.25	24.95	24.84	0	25.70
		8	0	24.06	23.83	23.82	1	24.70	24.06	23.83	23.82	1	24.70
		8	4	24.11	23.83	23.78	1	24.70	24.11	23.83	23.78	1	24.70
		8	7	24.12	23.90	23.76	1	24.70	24.12	23.90	23.76	1	24.70
		15	0	24.14	23.96	23.79	1	24.70	24.14	23.96	23.79	1	24.70
	16QAM	1	0	24.44	24.23	24.20	1	24.70	24.44	24.23	24.20	1	24.70
		1	8	24.50	24.31	24.20	1	24.70	24.50	24.31	24.20	1	24.70
		1	14	24.42	24.22	24.06	1	24.70	24.42	24.22	24.06	1	24.70
		8	0	23.07	22.87	22.76	2	23.70	23.07	22.87	22.76	2	23.70
		8	4	23.08	22.82	22.72	2	23.70	23.08	22.82	22.72	2	23.70
		8	7	23.09	22.87	22.79	2	23.70	23.09	22.87	22.79	2	23.70
		15	0	23.08	22.87	22.73	2	23.70	23.08	22.87	22.73	2	23.70
	64QAM	1	0	23.22	23.03	22.80	2	23.70	23.22	23.03	22.80	2	23.70
		1	8	23.26	22.99	22.84	2	23.70	23.26	22.99	22.84	2	23.70
		1	14	23.15	22.98	22.71	2	23.70	23.15	22.98	22.71	2	23.70
		8	0	21.84	21.76	21.75	3	22.70	21.84	21.76	21.75	3	22.70
		8	4	21.95	21.73	21.71	3	22.70	21.95	21.73	21.71	3	22.70
		8	7	21.94	21.71	21.80	3	22.70	21.94	21.71	21.80	3	22.70
		15	0	21.96	21.75	21.79	3	22.70	21.96	21.75	21.79	3	22.70

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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	25.25	25.01	24.99	0	25.70	25.25	25.01	24.99	0	25.70
		1	3	25.20	24.99	24.85	0	25.70	25.20	24.99	24.85	0	25.70
		1	5	25.30	25.11	24.93	0	25.70	25.30	25.11	24.93	0	25.70
		3	0	25.05	24.90	24.71	0	25.70	25.05	24.90	24.71	0	25.70
		3	1	25.02	24.91	24.70	0	25.70	25.02	24.91	24.70	0	25.70
		3	3	25.01	24.96	24.72	0	25.70	25.01	24.96	24.72	0	25.70
		6	0	24.05	23.89	23.75	1	24.70	24.05	23.89	23.75	1	24.70
	16QAM	1	0	24.58	24.31	24.20	1	24.70	24.58	24.31	24.20	1	24.70
		1	3	24.48	24.27	24.11	1	24.70	24.48	24.27	24.11	1	24.70
		1	5	24.55	24.32	24.15	1	24.70	24.55	24.32	24.15	1	24.70
		3	0	24.21	24.04	23.84	1	24.70	24.21	24.04	23.84	1	24.70
		3	1	24.17	24.03	23.83	1	24.70	24.17	24.03	23.83	1	24.70
		3	3	24.14	24.10	23.83	1	24.70	24.14	24.10	23.83	1	24.70
		6	0	22.96	22.99	22.75	2	23.70	22.96	22.99	22.75	2	23.70
	64QAM	1	0	23.42	22.95	22.82	2	23.70	23.42	22.95	22.82	2	23.70
		1	3	23.43	22.85	22.71	2	23.70	23.43	22.85	22.71	2	23.70
		1	5	23.41	22.97	22.72	2	23.70	23.41	22.97	22.72	2	23.70
		3	0	23.06	22.71	22.79	2	23.70	23.06	22.71	22.79	2	23.70
		3	1	23.06	22.77	22.79	2	23.70	23.06	22.77	22.79	2	23.70
		3	3	23.02	22.75	22.78	2	23.70	23.02	22.75	22.78	2	23.70
		6	0	21.83	21.73	21.77	3	22.70	21.83	21.73	21.77	3	22.70

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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	23.93	0	24.50		23.93	0	24.50	
		1	25	24.30	0	24.50		24.30	0	24.50	
		1	49	23.87	0	24.50		23.87	0	24.50	
		25	0	22.92	1	23.50		22.92	1	23.50	
		25	12	23.40	1	23.50		23.40	1	23.50	
		25	25	22.80	1	23.50		22.80	1	23.50	
		50	0	23.00	1	23.50		23.00	1	23.50	
	16QAM	1	0	23.19	1	23.50		23.19	1	23.50	
		1	25	23.21	1	23.50		23.21	1	23.50	
		1	49	23.10	1	23.50		23.10	1	23.50	
		25	0	21.92	2	22.50		21.92	2	22.50	
		25	12	21.93	2	22.50		21.93	2	22.50	
		25	25	21.81	2	22.50		21.81	2	22.50	
		50	0	21.89	2	22.50		21.89	2	22.50	
	64QAM	1	0	22.12	2	22.50		22.12	2	22.50	
		1	25	22.17	2	22.50		22.17	2	22.50	
		1	49	22.09	2	22.50		22.09	2	22.50	
		25	0	20.98	3	21.50		20.98	3	21.50	
		25	12	20.99	3	21.50		20.99	3	21.50	
		25	25	20.89	3	21.50		20.89	3	21.50	
		50	0	20.94	3	21.50		20.94	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	846.5 MHz			826.5 MHz	836.5 MHz	846.5 MHz		
5 MHz	QPSK	1	0	23.73	23.89	23.83	0	24.50	23.73	23.89	23.83	0	24.50
		1	12	23.69	23.86	23.93	0	24.50	23.69	23.86	23.93	0	24.50
		1	24	23.80	23.82	24.02	0	24.50	23.80	23.82	24.02	0	24.50
		12	0	22.60	22.84	22.76	1	23.50	22.60	22.84	22.76	1	23.50
		12	7	22.63	22.83	22.87	1	23.50	22.63	22.83	22.87	1	23.50
		12	13	22.67	22.78	22.90	1	23.50	22.67	22.78	22.90	1	23.50
		25	0	22.65	22.78	22.91	1	23.50	22.65	22.78	22.91	1	23.50
	16QAM	1	0	23.10	23.18	23.19	1	23.50	23.10	23.18	23.19	1	23.50
		1	12	23.07	23.10	23.27	1	23.50	23.07	23.10	23.27	1	23.50
		1	24	23.18	23.07	23.36	1	23.50	23.18	23.07	23.36	1	23.50
		12	0	21.59	21.79	21.78	2	22.50	21.59	21.79	21.78	2	22.50
		12	7	21.60	21.80	21.83	2	22.50	21.60	21.80	21.83	2	22.50
		12	13	21.65	21.77	21.83	2	22.50	21.65	21.77	21.83	2	22.50
		25	0	21.61	21.73	21.82	2	22.50	21.61	21.73	21.82	2	22.50
	64QAM	1	0	22.01	22.10	22.07	2	22.50	22.01	22.10	22.07	2	22.50
		1	12	21.96	22.05	22.14	2	22.50	21.96	22.05	22.14	2	22.50
		1	24	21.97	21.99	22.35	2	22.50	21.97	21.99	22.35	2	22.50
		12	0	20.67	20.85	20.72	3	21.50	20.67	20.85	20.72	3	21.50
		12	7	20.67	20.77	20.76	3	21.50	20.67	20.77	20.76	3	21.50
		12	13	20.69	20.72	20.79	3	21.50	20.69	20.72	20.79	3	21.50
		25	0	20.63	20.77	20.79	3	21.50	20.63	20.77	20.79	3	21.50

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	847.5 MHz			825.5 MHz	836.5 MHz	847.5 MHz		
3 MHz	QPSK	1	0	23.70	23.86	23.93	0	24.50	23.70	23.86	23.93	0	24.50
		1	8	23.74	23.84	24.01	0	24.50	23.74	23.84	24.01	0	24.50
		1	14	23.70	23.79	23.95	0	24.50	23.70	23.79	23.95	0	24.50
		8	0	22.55	22.74	22.78	1	23.50	22.55	22.74	22.78	1	23.50
		8	4	22.54	22.74	22.84	1	23.50	22.54	22.74	22.84	1	23.50
		8	7	22.53	22.67	22.86	1	23.50	22.53	22.67	22.86	1	23.50
		15	0	22.54	22.72	22.86	1	23.50	22.54	22.72	22.86	1	23.50
	16QAM	1	0	22.95	23.15	23.23	1	23.50	22.95	23.15	23.23	1	23.50
		1	8	22.92	23.07	23.31	1	23.50	22.92	23.07	23.31	1	23.50
		1	14	22.94	23.05	23.24	1	23.50	22.94	23.05	23.24	1	23.50
		8	0	21.58	21.71	21.74	2	22.50	21.58	21.71	21.74	2	22.50
		8	4	21.55	21.71	21.74	2	22.50	21.55	21.71	21.74	2	22.50
		8	7	21.52	21.66	21.75	2	22.50	21.52	21.66	21.75	2	22.50
		15	0	21.59	21.65	21.78	2	22.50	21.59	21.65	21.78	2	22.50
	64QAM	1	0	21.85	22.03	21.95	2	22.50	21.85	22.03	21.95	2	22.50
		1	8	21.84	21.88	22.09	2	22.50	21.84	21.88	22.09	2	22.50
		1	14	21.74	21.90	22.07	2	22.50	21.74	21.90	22.07	2	22.50
		8	0	20.55	20.67	20.72	3	21.50	20.55	20.67	20.72	3	21.50
		8	4	20.53	20.73	20.72	3	21.50	20.53	20.73	20.72	3	21.50
		8	7	20.55	20.68	20.73	3	21.50	20.55	20.68	20.73	3	21.50
		15	0	20.56	20.66	20.70	3	21.50	20.56	20.66	20.70	3	21.50

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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	23.73	23.91	24.02	0	24.50	23.73	23.91	24.02	0	24.50
		1	3	23.66	23.89	24.00	0	24.50	23.66	23.89	24.00	0	24.50
		1	5	23.69	23.87	24.03	0	24.50	23.69	23.87	24.03	0	24.50
		3	0	23.59	23.77	23.94	0	24.50	23.59	23.77	23.94	0	24.50
		3	1	23.58	23.73	23.92	0	24.50	23.58	23.73	23.92	0	24.50
		3	3	23.57	23.65	23.93	0	24.50	23.57	23.65	23.93	0	24.50
		6	0	22.53	22.61	22.85	1	23.50	22.53	22.61	22.85	1	23.50
	16QAM	1	0	22.96	23.14	23.15	1	23.50	22.96	23.14	23.15	1	23.50
		1	3	22.90	23.16	23.17	1	23.50	22.90	23.16	23.17	1	23.50
		1	5	22.98	23.06	23.20	1	23.50	22.98	23.06	23.20	1	23.50
		3	0	22.70	22.90	22.98	1	23.50	22.70	22.90	22.98	1	23.50
		3	1	22.66	22.87	22.94	1	23.50	22.66	22.87	22.94	1	23.50
		3	3	22.64	22.79	22.93	1	23.50	22.64	22.79	22.93	1	23.50
		6	0	21.57	21.74	21.82	2	22.50	21.57	21.74	21.82	2	22.50
	64QAM	1	0	22.02	22.00	22.30	2	22.50	22.02	22.00	22.30	2	22.50
		1	3	21.88	21.94	22.33	2	22.50	21.88	21.94	22.33	2	22.50
		1	5	21.89	21.89	22.40	2	22.50	21.89	21.89	22.40	2	22.50
		3	0	21.61	21.81	22.07	2	22.50	21.61	21.81	22.07	2	22.50
		3	1	21.62	21.81	22.04	2	22.50	21.62	21.81	22.04	2	22.50
		3	3	21.58	21.73	22.02	2	22.50	21.58	21.73	22.02	2	22.50
		6	0	20.60	20.65	20.86	3	21.50	20.60	20.65	20.86	3	21.50

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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	24.76	24.92	24.76	0	25.70	19.97	20.20	19.91	0	20.50
		1	49	25.20	25.20	25.20	0	25.70	20.30	20.40	20.30	0	20.50
		1	99	24.91	24.74	24.75	0	25.70	20.13	19.92	20.05	0	20.50
		50	0	23.84	23.93	23.75	1	24.70	20.08	20.22	19.96	0	20.50
		50	24	24.20	24.20	24.20	1	24.70	20.30	20.40	20.30	0	20.50
		50	50	23.81	23.78	23.83	1	24.70	20.15	20.03	20.15	0	20.50
		100	0	24.20	24.20	24.20	1	24.70	20.30	20.30	20.30	0	20.50
	16QAM	1	0	24.06	24.31	24.09	1	24.70	20.29	20.30	20.23	0	20.50
		1	49	24.22	24.24	24.21	1	24.70	20.48	20.30	20.40	0	20.50
		1	99	24.19	24.05	24.20	1	24.70	20.47	20.31	20.37	0	20.50
		50	0	22.80	22.91	22.77	2	23.70	20.12	20.25	20.00	0	20.50
		50	24	22.86	22.80	22.79	2	23.70	20.11	20.09	20.12	0	20.50
		50	50	22.81	22.76	22.86	2	23.70	20.10	20.06	20.16	0	20.50
		100	0	22.81	22.77	22.80	2	23.70	20.11	20.07	20.04	0	20.50
	64QAM	1	0	22.98	23.30	23.09	2	23.70	20.30	20.51	19.89	0	20.50
		1	49	23.03	23.15	23.13	2	23.70	20.30	20.42	20.04	0	20.50
		1	99	23.02	22.94	23.12	2	23.70	20.30	20.12	20.00	0	20.50
		50	0	21.90	21.94	21.77	3	22.70	20.05	20.19	19.95	0	20.50
		50	24	21.94	21.84	21.75	3	22.70	20.07	20.09	20.05	0	20.50
		50	50	21.87	21.77	21.80	3	22.70	19.99	20.04	20.12	0	20.50
		100	0	21.92	21.77	21.74	3	22.70	20.07	20.08	19.97	0	20.50

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	24.80	24.94	24.75	0	25.70	19.95	20.19	19.98	0	20.50
		1	37	24.77	24.80	24.89	0	25.70	20.04	20.04	20.16	0	20.50
		1	74	24.80	24.76	24.73	0	25.70	20.05	19.90	20.04	0	20.50
		36	0	23.77	23.90	23.73	1	24.70	20.09	20.21	20.05	0	20.50
		36	20	23.78	23.85	23.86	1	24.70	20.11	20.17	20.14	0	20.50
		36	39	23.80	23.74	23.76	1	24.70	20.14	20.05	20.07	0	20.50
		75	0	23.75	23.74	23.84	1	24.70	20.10	20.08	20.12	0	20.50
	16QAM	1	0	23.94	24.28	24.20	1	24.70	20.19	20.00	20.23	0	20.50
		1	37	24.02	24.15	24.25	1	24.70	20.23	20.35	20.47	0	20.50
		1	74	24.07	24.05	24.06	1	24.70	20.31	20.22	20.30	0	20.50
		36	0	22.82	22.97	22.78	2	23.70	20.11	20.27	20.06	0	20.50
		36	20	22.82	22.91	22.90	2	23.70	20.15	20.20	20.18	0	20.50
		36	39	22.84	22.78	22.81	2	23.70	20.18	20.08	20.11	0	20.50
		75	0	22.78	22.78	22.87	2	23.70	20.11	20.09	20.16	0	20.50
	64QAM	1	0	22.98	23.21	23.03	2	23.70	20.14	20.32	20.04	0	20.50
		1	37	22.89	23.03	23.03	2	23.70	20.19	20.16	20.17	0	20.50
		1	74	23.03	22.95	22.87	2	23.70	20.23	20.05	19.97	0	20.50
		36	0	21.85	21.92	21.78	3	22.70	20.06	20.19	19.97	0	20.50
		36	20	21.88	21.87	21.86	3	22.70	20.06	20.17	20.06	0	20.50
		36	39	21.94	21.72	21.79	3	22.70	20.10	20.04	20.03	0	20.50
		75	0	21.84	21.75	21.76	3	22.70	19.98	20.05	20.03	0	20.50

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	24.72	24.95	24.85	0	25.70	19.97	20.23	20.09	0	20.50
		1	25	24.85	24.89	24.82	0	25.70	20.11	20.15	20.09	0	20.50
		1	49	24.89	24.82	24.79	0	25.70	20.21	20.07	20.06	0	20.50
		25	0	23.75	23.94	23.88	1	24.70	20.04	20.24	20.15	0	20.50
		25	12	23.81	23.87	23.78	1	24.70	20.11	20.17	20.09	0	20.50
		25	25	23.81	23.77	23.70	1	24.70	20.11	20.07	20.01	0	20.50
		50	0	23.81	23.79	23.77	1	24.70	20.11	20.10	20.05	0	20.50
	16QAM	1	0	24.00	24.37	24.18	1	24.70	20.25	20.10	20.39	0	20.50
		1	25	24.09	24.23	24.16	1	24.70	20.37	20.10	20.41	0	20.50
		1	49	24.14	24.22	24.16	1	24.70	20.46	20.44	20.30	0	20.50
		25	0	22.75	22.93	22.91	2	23.70	20.08	20.29	20.17	0	20.50
		25	12	22.77	22.94	22.83	2	23.70	20.14	20.22	20.12	0	20.50
		25	25	22.76	22.83	22.74	2	23.70	20.15	20.12	20.05	0	20.50
		50	0	22.74	22.84	22.83	2	23.70	20.14	20.14	20.06	0	20.50
	64QAM	1	0	22.97	23.20	22.95	2	23.70	20.01	20.42	20.11	0	20.50
		1	25	23.10	23.09	22.97	2	23.70	20.16	20.34	20.20	0	20.50
		1	49	23.15	22.99	22.85	2	23.70	20.19	20.22	20.12	0	20.50
		25	0	21.84	21.97	21.77	3	22.70	20.02	20.25	20.08	0	20.50
		25	12	21.88	21.89	21.81	3	22.70	20.06	20.18	20.02	0	20.50
		25	25	21.89	21.78	21.72	3	22.70	20.05	20.05	19.93	0	20.50
		50	0	21.88	21.84	21.73	3	22.70	20.02	20.09	20.02	0	20.50

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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	24.81	25.15	24.97	0	25.70	19.82	20.17	20.05	0	20.50
		1	12	24.91	25.01	24.87	0	25.70	19.86	19.99	19.94	0	20.50
		1	24	24.97	24.99	24.89	0	25.70	19.99	19.96	20.02	0	20.50
		12	0	23.75	23.97	23.87	1	24.70	19.78	20.01	19.99	0	20.50
		12	7	23.80	23.95	23.84	1	24.70	19.82	20.01	19.89	0	20.50
		12	13	23.88	23.86	23.81	1	24.70	19.90	19.94	19.86	0	20.50
		25	0	23.78	23.86	23.82	1	24.70	19.82	19.94	19.89	0	20.50
	16QAM	1	0	24.17	24.44	24.41	1	24.70	20.22	20.43	20.47	0	20.50
		1	12	24.27	24.25	24.23	1	24.70	20.28	20.25	20.30	0	20.50
		1	24	24.40	24.25	24.28	1	24.70	20.35	20.24	20.43	0	20.50
		12	0	22.79	22.95	22.91	2	23.70	19.77	19.99	20.02	0	20.50
		12	7	22.73	22.95	22.81	2	23.70	19.81	20.01	19.93	0	20.50
		12	13	22.81	22.88	22.77	2	23.70	19.88	19.95	19.90	0	20.50
		25	0	22.78	22.84	22.73	2	23.70	19.82	19.90	19.86	0	20.50
	64QAM	1	0	23.18	23.45	23.34	2	23.70	20.00	20.39	20.24	0	20.50
		1	12	23.19	23.20	23.19	2	23.70	20.06	20.19	20.11	0	20.50
		1	24	23.32	23.16	23.30	2	23.70	20.11	20.23	20.23	0	20.50
		12	0	21.88	21.92	21.89	3	22.70	19.73	20.02	19.86	0	20.50
		12	7	21.86	21.96	21.78	3	22.70	19.80	19.98	19.80	0	20.50
		12	13	21.92	21.86	21.78	3	22.70	19.87	19.90	19.78	0	20.50
		25	0	21.88	21.89	21.76	3	22.70	19.78	19.91	19.77	0	20.50

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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	17.62	17.44	17.52	0	17.75	19.60	19.33	19.42	0	19.75
		1	49	17.75	17.74	17.70	0	17.75	19.75	19.65	19.60	0	19.75
		1	99	17.64	17.55	17.59	0	17.75	19.23	19.39	19.54	0	19.75
		50	0	17.60	17.39	17.60	0	17.75	19.55	19.30	19.50	0	19.75
		50	24	17.75	17.68	17.75	0	17.75	19.72	19.65	19.70	0	19.75
		50	50	17.55	17.58	17.60	0	17.75	19.24	19.45	19.55	0	19.75
		100	0	17.69	17.74	17.75	0	17.75	19.58	19.65	19.60	0	19.75
	16QAM	1	0	17.57	17.27	17.41	0	17.75	19.64	19.22	19.41	0	19.75
		1	49	17.45	17.31	17.38	0	17.75	19.41	19.22	19.34	0	19.75
		1	99	17.65	17.38	17.48	0	17.75	19.32	19.26	19.43	0	19.75
		50	0	17.59	17.43	17.67	0	17.75	19.58	19.38	19.55	0	19.75
		50	24	17.46	17.48	17.63	0	17.75	19.52	19.44	19.60	0	19.75
		50	50	17.52	17.59	17.64	0	17.75	19.31	19.50	19.61	0	19.75
		100	0	17.60	17.42	17.65	0	17.75	19.44	19.38	19.61	0	19.75
	64QAM	1	0	17.43	17.38	17.14	0	17.75	19.52	19.27	19.04	0	19.75
		1	49	17.24	17.38	16.97	0	17.75	19.35	19.32	19.03	0	19.75
		1	99	17.10	17.33	17.03	0	17.75	19.20	19.31	19.08	0	19.75
		50	0	17.02	16.90	17.11	0	17.75	19.01	18.82	18.97	0	19.75
		50	24	16.89	17.01	17.07	0	17.75	18.93	18.90	18.95	0	19.75
		50	50	16.96	17.08	17.08	0	17.75	18.76	18.97	18.98	0	19.75
		100	0	17.66	16.95	17.06	0	17.75	18.85	18.83	18.94	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	17.59	17.38	17.73	0	17.75	19.36	19.12	19.37	0	19.75
		1	37	17.48	17.49	17.70	0	17.75	19.29	19.21	19.43	0	19.75
		1	74	17.38	17.51	17.53	0	17.75	19.06	19.20	19.36	0	19.75
		36	0	17.53	17.37	17.61	0	17.75	19.31	19.10	19.32	0	19.75
		36	20	17.50	17.46	17.63	0	17.75	19.28	19.21	19.39	0	19.75
		36	39	17.45	17.56	17.61	0	17.75	19.25	19.29	19.37	0	19.75
		75	0	17.49	17.41	17.64	0	17.75	19.26	19.19	19.36	0	19.75
	16QAM	1	0	17.63	17.55	17.68	0	17.75	19.69	19.56	19.13	0	19.75
		1	37	17.51	17.64	17.61	0	17.75	19.64	19.61	19.12	0	19.75
		1	74	17.68	17.64	17.66	0	17.75	19.32	19.56	19.65	0	19.75
		36	0	17.59	17.44	17.70	0	17.75	19.36	19.18	19.38	0	19.75
		36	20	17.57	17.52	17.69	0	17.75	19.34	19.29	19.47	0	19.75
		36	39	17.50	17.63	17.69	0	17.75	19.25	19.36	19.45	0	19.75
		75	0	17.54	17.45	17.68	0	17.75	19.30	19.25	19.42	0	19.75
	64QAM	1	0	17.41	17.13	17.46	0	17.75	19.13	18.92	19.08	0	19.75
		1	37	17.24	17.24	17.31	0	17.75	19.06	19.03	19.19	0	19.75
		1	74	17.17	17.16	17.20	0	17.75	18.90	18.94	18.96	0	19.75
		36	0	17.08	16.92	17.09	0	17.75	18.96	18.87	19.00	0	19.75
		36	20	17.06	17.03	17.11	0	17.75	18.95	18.98	19.05	0	19.75
		36	39	17.70	17.64	17.11	0	17.75	18.92	19.05	19.03	0	19.75
		75	0	17.73	17.66	17.09	0	17.75	18.90	18.91	18.99	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	17.57	17.35	17.59	0	17.75	19.40	19.11	19.52	0	19.75
		1	25	17.54	17.48	17.69	0	17.75	19.35	19.22	19.52	0	19.75
		1	49	17.58	17.57	17.62	0	17.75	19.37	19.36	19.41	0	19.75
		25	0	17.56	17.38	17.66	0	17.75	19.32	19.13	19.49	0	19.75
		25	12	17.52	17.48	17.63	0	17.75	19.32	19.20	19.44	0	19.75
		25	25	17.57	17.59	17.53	0	17.75	19.35	19.30	19.34	0	19.75
		50	0	17.54	17.46	17.65	0	17.75	19.32	19.21	19.41	0	19.75
	16QAM	1	0	17.57	17.50	17.62	0	17.75	19.67	19.61	19.16	0	19.75
		1	25	17.57	17.61	17.57	0	17.75	19.68	19.62	19.17	0	19.75
		1	49	17.60	17.52	17.75	0	17.75	19.66	19.70	19.06	0	19.75
		25	0	17.63	17.51	17.74	0	17.75	19.39	19.21	19.50	0	19.75
		25	12	17.58	17.57	17.70	0	17.75	19.40	19.28	19.46	0	19.75
		25	25	17.63	17.68	17.61	0	17.75	19.42	19.38	19.39	0	19.75
		50	0	17.60	17.54	17.71	0	17.75	19.38	19.27	19.45	0	19.75
	64QAM	1	0	17.29	17.09	17.10	0	17.75	19.04	18.87	19.14	0	19.75
		1	25	17.20	17.23	17.25	0	17.75	18.95	18.92	19.07	0	19.75
		1	49	17.27	17.32	17.21	0	17.75	19.00	19.14	18.98	0	19.75
		25	0	17.15	16.93	17.12	0	17.75	19.01	18.86	19.04	0	19.75
		25	12	17.10	17.00	17.07	0	17.75	19.00	18.93	19.00	0	19.75
		25	25	17.15	17.06	16.95	0	17.75	19.03	19.01	18.88	0	19.75
		50	0	17.12	16.99	17.07	0	17.75	18.99	18.90	19.00	0	19.75

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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	17.49	17.35	17.69	0	17.75	19.52	19.33	19.62	0	19.75
		1	12	17.44	17.42	17.57	0	17.75	19.40	19.43	19.50	0	19.75
		1	24	17.50	17.57	17.56	0	17.75	19.52	19.52	19.45	0	19.75
		12	0	17.37	17.33	17.52	0	17.75	19.36	19.29	19.48	0	19.75
		12	7	17.36	17.33	17.49	0	17.75	19.34	19.29	19.42	0	19.75
		12	13	17.36	17.34	17.49	0	17.75	19.35	19.30	19.41	0	19.75
		25	0	17.38	17.35	17.48	0	17.75	19.35	19.28	19.42	0	19.75
	16QAM	1	0	17.63	17.44	17.61	0	17.75	19.42	19.16	19.57	0	19.75
		1	12	17.60	17.51	17.70	0	17.75	19.30	19.21	19.48	0	19.75
		1	24	17.66	17.65	17.52	0	17.75	19.44	19.32	19.46	0	19.75
		12	0	17.39	17.38	17.51	0	17.75	19.40	19.32	19.55	0	19.75
		12	7	17.37	17.36	17.49	0	17.75	19.36	19.31	19.47	0	19.75
		12	13	17.36	17.38	17.54	0	17.75	19.38	19.33	19.47	0	19.75
		25	0	17.39	17.33	17.47	0	17.75	19.36	19.27	19.43	0	19.75
	64QAM	1	0	17.26	17.10	17.48	0	17.75	19.21	19.04	19.43	0	19.75
		1	12	17.16	17.15	17.28	0	17.75	19.16	19.08	19.28	0	19.75
		1	24	17.28	17.23	17.37	0	17.75	19.73	19.74	19.73	0	19.75
		12	0	17.64	16.75	17.62	0	17.75	19.13	18.95	19.13	0	19.75
		12	7	17.64	17.45	17.55	0	17.75	19.10	18.94	19.07	0	19.75
		12	13	17.63	17.51	17.59	0	17.75	19.10	18.96	19.07	0	19.75
		25	0	17.59	17.52	17.53	0	17.75	19.06	18.97	19.05	0	19.75

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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	24.88	0	25.70		24.88	0	25.70	
		1	25	25.70	0	25.70		25.70	0	25.70	
		1	49	25.32	0	25.70		25.32	0	25.70	
		25	0	23.94	1	24.70		23.94	1	24.70	
		25	12	24.60	1	24.70		24.60	1	24.70	
		25	25	24.02	1	24.70		24.02	1	24.70	
		50	0	24.60	1	24.70		24.60	1	24.70	
	16QAM	1	0	24.10	1	24.70		24.10	1	24.70	
		1	25	24.22	1	24.70		24.22	1	24.70	
		1	49	24.70	1	24.70		24.70	1	24.70	
		25	0	22.99	2	23.70		22.99	2	23.70	
		25	12	22.88	2	23.70		22.88	2	23.70	
		25	25	23.11	2	23.70		23.11	2	23.70	
		50	0	22.92	2	23.70		22.92	2	23.70	
	64QAM	1	0	22.83	2	23.70		22.83	2	23.70	
		1	25	22.93	2	23.70		22.93	2	23.70	
		1	49	23.21	2	23.70		23.21	2	23.70	
		25	0	21.85	3	22.70		21.85	3	22.70	
		25	12	21.77	3	22.70		21.77	3	22.70	
		25	25	21.84	3	22.70		21.84	3	22.70	
		50	0	21.77	3	22.70		21.77	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	25.01	24.99	25.27	0	25.70	25.01	24.99	25.27	0	25.70
		1	12	24.97	24.86	25.05	0	25.70	24.97	24.86	25.05	0	25.70
		1	24	24.88	25.05	24.97	0	25.70	24.88	25.05	24.97	0	25.70
		12	0	23.89	23.81	24.23	1	24.70	23.89	23.81	24.23	1	24.70
		12	7	23.92	23.79	24.05	1	24.70	23.92	23.79	24.05	1	24.70
		12	13	23.87	23.75	23.87	1	24.70	23.87	23.75	23.87	1	24.70
		25	0	23.95	23.74	23.98	1	24.70	23.95	23.74	23.98	1	24.70
	16QAM	1	0	24.39	24.31	24.51	1	24.70	24.39	24.31	24.51	1	24.70
		1	12	24.38	24.19	24.45	1	24.70	24.38	24.19	24.45	1	24.70
		1	24	24.24	24.35	24.35	1	24.70	24.24	24.35	24.35	1	24.70
		12	0	22.92	22.82	23.20	2	23.70	22.92	22.82	23.20	2	23.70
		12	7	22.88	22.71	23.00	2	23.70	22.88	22.71	23.00	2	23.70
		12	13	22.84	22.81	22.86	2	23.70	22.84	22.81	22.86	2	23.70
		25	0	22.87	22.74	22.99	2	23.70	22.87	22.74	22.99	2	23.70
	64QAM	1	0	23.08	23.19	23.27	2	23.70	23.08	23.19	23.27	2	23.70
		1	12	22.89	22.97	23.28	2	23.70	22.89	22.97	23.28	2	23.70
		1	24	22.97	23.13	23.16	2	23.70	22.97	23.13	23.16	2	23.70
		12	0	21.80	21.77	21.93	3	22.70	21.80	21.77	21.93	3	22.70
		12	7	21.71	21.73	21.77	3	22.70	21.71	21.73	21.77	3	22.70
		12	13	21.73	21.78	21.77	3	22.70	21.73	21.78	21.77	3	22.70
		25	0	21.74	21.71	21.80	3	22.70	21.74	21.71	21.80	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	24.91	25.11	0	25.70	25.02	24.91	25.11	0	25.70
		1	8	25.01	24.91	24.97	0	25.70	25.01	24.91	24.97	0	25.70
		1	14	24.87	24.92	24.97	0	25.70	24.87	24.92	24.97	0	25.70
		8	0	23.80	23.72	23.87	1	24.70	23.80	23.72	23.87	1	24.70
		8	4	23.85	23.71	23.81	1	24.70	23.85	23.71	23.81	1	24.70
		8	7	23.88	23.75	23.78	1	24.70	23.88	23.75	23.78	1	24.70
		15	0	23.90	23.80	23.81	1	24.70	23.90	23.80	23.81	1	24.70
	16QAM	1	0	24.25	24.20	24.45	1	24.70	24.25	24.20	24.45	1	24.70
		1	8	24.26	24.23	24.19	1	24.70	24.26	24.23	24.19	1	24.70
		1	14	24.09	24.26	24.25	1	24.70	24.09	24.26	24.25	1	24.70
		8	0	22.85	22.80	22.81	2	23.70	22.85	22.80	22.81	2	23.70
		8	4	22.85	22.72	22.70	2	23.70	22.85	22.72	22.70	2	23.70
		8	7	22.86	22.71	22.72	2	23.70	22.86	22.71	22.72	2	23.70
		15	0	22.83	22.79	22.82	2	23.70	22.83	22.79	22.82	2	23.70
	64QAM	1	0	23.00	23.01	23.27	2	23.70	23.00	23.01	23.27	2	23.70
		1	8	23.02	22.97	23.01	2	23.70	23.02	22.97	23.01	2	23.70
		1	14	22.84	22.99	22.96	2	23.70	22.84	22.99	22.96	2	23.70
		8	0	21.76	21.76	21.73	3	22.70	21.76	21.76	21.73	3	22.70
		8	4	21.75	21.74	21.71	3	22.70	21.75	21.74	21.71	3	22.70
		8	7	21.78	21.73	21.80	3	22.70	21.78	21.73	21.80	3	22.70
		15	0	21.80	21.73	21.78	3	22.70	21.80	21.73	21.78	3	22.70

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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	25.07	24.91	24.99	0	25.70	25.07	24.91	24.99	0	25.70
		1	3	24.99	24.87	25.02	0	25.70	24.99	24.87	25.02	0	25.70
		1	5	25.02	24.95	25.06	0	25.70	25.02	24.95	25.06	0	25.70
		3	0	24.87	24.73	24.92	0	25.70	24.87	24.73	24.92	0	25.70
		3	1	24.87	24.79	24.94	0	25.70	24.87	24.79	24.94	0	25.70
		3	3	24.87	24.76	24.91	0	25.70	24.87	24.76	24.91	0	25.70
		6	0	23.85	23.76	23.84	1	24.70	23.85	23.76	23.84	1	24.70
	16QAM	1	0	24.26	24.14	24.14	1	24.70	24.26	24.14	24.14	1	24.70
		1	3	24.28	24.03	24.25	1	24.70	24.28	24.03	24.25	1	24.70
		1	5	24.29	24.17	24.24	1	24.70	24.29	24.17	24.24	1	24.70
		3	0	23.99	23.86	23.95	1	24.70	23.99	23.86	23.95	1	24.70
		3	1	23.96	23.84	23.93	1	24.70	23.96	23.84	23.93	1	24.70
		3	3	23.97	23.89	23.91	1	24.70	23.97	23.89	23.91	1	24.70
		6	0	22.77	22.80	22.80	2	23.70	22.77	22.80	22.80	2	23.70
	64QAM	1	0	23.26	23.00	22.92	2	23.70	23.26	23.00	22.92	2	23.70
		1	3	23.16	22.90	22.88	2	23.70	23.16	22.90	22.88	2	23.70
		1	5	23.16	22.91	23.03	2	23.70	23.16	22.91	23.03	2	23.70
		3	0	22.86	22.78	22.75	2	23.70	22.86	22.78	22.75	2	23.70
		3	1	22.83	22.78	22.74	2	23.70	22.83	22.78	22.74	2	23.70
		3	3	22.87	22.75	22.72	2	23.70	22.87	22.75	22.72	2	23.70
		6	0	21.79	21.78	21.70	3	22.70	21.79	21.78	21.70	3	22.70

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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	23.90	0	24.50		23.90	0	24.50	
		1	25	24.12	0	24.50		24.12	0	24.50	
		1	49	24.00	0	24.50		24.00	0	24.50	
		25	0	23.03	1	23.50		23.03	1	23.50	
		25	12	23.50	1	23.50		23.50	1	23.50	
		25	25	22.99	1	23.50		22.99	1	23.50	
		50	0	23.50	1	23.50		23.50	1	23.50	
	16QAM	1	0	23.24	1	23.50		23.24	1	23.50	
		1	25	23.40	1	23.50		23.40	1	23.50	
		1	49	23.33	1	23.50		23.33	1	23.50	
		25	0	22.04	2	22.50		22.04	2	22.50	
		25	12	22.04	2	22.50		22.04	2	22.50	
		25	25	22.02	2	22.50		22.02	2	22.50	
		50	0	22.06	2	22.50		22.06	2	22.50	
	64QAM	1	0	22.11	2	22.50		22.11	2	22.50	
		1	25	22.15	2	22.50		22.15	2	22.50	
		1	49	22.15	2	22.50		22.15	2	22.50	
		25	0	20.98	3	21.50		20.98	3	21.50	
		25	12	21.05	3	21.50		21.05	3	21.50	
		25	25	21.01	3	21.50		21.01	3	21.50	
		50	0	21.02	3	21.50		21.02	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	713.5 MHz		
5 MHz	QPSK	1	0	23.90	24.00	23.96	0	24.50	23.90	24.00	23.96	0	24.50
		1	12	23.82	24.00	23.85	0	24.50	23.82	24.00	23.85	0	24.50
		1	24	23.84	24.04	23.87	0	24.50	23.84	24.04	23.87	0	24.50
		12	0	22.65	22.87	22.80	1	23.50	22.65	22.87	22.80	1	23.50
		12	7	22.73	22.95	22.72	1	23.50	22.73	22.95	22.72	1	23.50
		12	13	22.70	23.02	22.76	1	23.50	22.70	23.02	22.76	1	23.50
		25	0	22.75	22.98	22.77	1	23.50	22.75	22.98	22.77	1	23.50
	16QAM	1	0	23.31	23.31	23.40	1	23.50	23.31	23.31	23.40	1	23.50
		1	12	23.24	23.32	23.30	1	23.50	23.24	23.32	23.30	1	23.50
		1	24	23.25	23.31	23.25	1	23.50	23.25	23.31	23.25	1	23.50
		12	0	21.66	21.89	21.87	2	22.50	21.66	21.89	21.87	2	22.50
		12	7	21.71	21.95	21.80	2	22.50	21.71	21.95	21.80	2	22.50
		12	13	21.66	22.03	21.81	2	22.50	21.66	22.03	21.81	2	22.50
		25	0	21.72	21.93	21.79	2	22.50	21.72	21.93	21.79	2	22.50
	64QAM	1	0	22.31	22.20	22.33	2	22.50	22.31	22.20	22.33	2	22.50
		1	12	22.13	22.16	22.26	2	22.50	22.13	22.16	22.26	2	22.50
		1	24	22.16	22.32	22.20	2	22.50	22.16	22.32	22.20	2	22.50
		12	0	20.74	20.76	20.78	3	21.50	20.74	20.76	20.78	3	21.50
		12	7	20.82	20.91	20.68	3	21.50	20.82	20.91	20.68	3	21.50
		12	13	20.79	20.94	20.77	3	21.50	20.79	20.94	20.77	3	21.50
		25	0	20.80	20.91	20.79	3	21.50	20.80	20.91	20.79	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	714.5 MHz		
3 MHz	QPSK	1	0	23.91	23.97	23.90	0	24.50	23.91	23.97	23.90	0	24.50
		1	8	23.84	23.98	23.91	0	24.50	23.84	23.98	23.91	0	24.50
		1	14	23.79	23.98	23.85	0	24.50	23.79	23.98	23.85	0	24.50
		8	0	22.65	22.81	22.71	1	23.50	22.65	22.81	22.71	1	23.50
		8	4	22.56	22.81	22.75	1	23.50	22.56	22.81	22.75	1	23.50
		8	7	22.65	22.83	22.73	1	23.50	22.65	22.83	22.73	1	23.50
		15	0	22.68	22.87	22.77	1	23.50	22.68	22.87	22.77	1	23.50
	16QAM	1	0	23.08	23.16	23.23	1	23.50	23.08	23.16	23.23	1	23.50
		1	8	23.06	23.25	23.21	1	23.50	23.06	23.25	23.21	1	23.50
		1	14	23.01	23.28	23.09	1	23.50	23.01	23.28	23.09	1	23.50
		8	0	21.73	21.75	21.67	2	22.50	21.73	21.75	21.67	2	22.50
		8	4	21.63	21.86	21.69	2	22.50	21.63	21.86	21.69	2	22.50
		8	7	21.69	21.88	21.68	2	22.50	21.69	21.88	21.68	2	22.50
		15	0	21.69	21.87	21.76	2	22.50	21.69	21.87	21.76	2	22.50
	64QAM	1	0	22.12	22.19	22.10	2	22.50	22.12	22.19	22.10	2	22.50
		1	8	22.09	22.25	22.10	2	22.50	22.09	22.25	22.10	2	22.50
		1	14	21.95	22.25	21.95	2	22.50	21.95	22.25	21.95	2	22.50
		8	0	20.70	20.87	20.63	3	21.50	20.70	20.87	20.63	3	21.50
		8	4	20.60	20.86	20.74	3	21.50	20.60	20.86	20.74	3	21.50
		8	7	20.66	20.88	20.70	3	21.50	20.66	20.88	20.70	3	21.50
		15	0	20.70	20.86	20.68	3	21.50	20.70	20.86	20.68	3	21.50

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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	23.93	24.02	23.88	0	24.50	23.93	24.02	23.88	0	24.50
		1	3	23.82	23.99	23.85	0	24.50	23.82	23.99	23.85	0	24.50
		1	5	23.76	24.06	23.90	0	24.50	23.76	24.06	23.90	0	24.50
		3	0	23.68	23.87	23.78	0	24.50	23.68	23.87	23.78	0	24.50
		3	1	23.69	23.87	23.76	0	24.50	23.69	23.87	23.76	0	24.50
		3	3	23.66	23.87	23.77	0	24.50	23.66	23.87	23.77	0	24.50
		6	0	22.65	22.79	22.70	1	23.50	22.65	22.79	22.70	1	23.50
	16QAM	1	0	23.20	23.29	23.09	1	23.50	23.20	23.29	23.09	1	23.50
		1	3	23.18	23.28	23.05	1	23.50	23.18	23.28	23.05	1	23.50
		1	5	23.11	23.31	23.08	1	23.50	23.11	23.31	23.08	1	23.50
		3	0	22.80	23.00	22.76	1	23.50	22.80	23.00	22.76	1	23.50
		3	1	22.81	22.96	22.75	1	23.50	22.81	22.96	22.75	1	23.50
		3	3	22.80	22.98	22.78	1	23.50	22.80	22.98	22.78	1	23.50
		6	0	21.62	21.89	21.66	2	22.50	21.62	21.89	21.66	2	22.50
	64QAM	1	0	22.31	22.22	22.08	2	22.50	22.31	22.22	22.08	2	22.50
		1	3	22.34	22.17	21.96	2	22.50	22.34	22.17	21.96	2	22.50
		1	5	22.23	22.34	22.00	2	22.50	22.23	22.34	22.00	2	22.50
		3	0	22.01	21.91	21.82	2	22.50	22.01	21.91	21.82	2	22.50
		3	1	21.99	21.92	21.78	2	22.50	21.99	21.92	21.78	2	22.50
		3	3	21.98	21.94	21.76	2	22.50	21.98	21.94	21.76	2	22.50
		6	0	20.75	20.94	20.74	3	21.50	20.75	20.94	20.74	3	21.50

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LTE Band 13 Measured Results (ANT1)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)			Power Mode B (dBm)		
				23230	MPR	Tune-up Limit	23230	MPR	Tune-up Limit
				782 MHz			782 MHz		
10 MHz	QPSK	1	0	25.21	0	25.70	25.21	0	25.70
		1	25	25.70	0	25.70	25.70	0	25.70
		1	49	25.15	0	25.70	25.15	0	25.70
		25	0	24.10	1	24.70	24.10	1	24.70
		25	12	24.70	1	24.70	24.70	1	24.70
		25	25	24.02	1	24.70	24.02	1	24.70
		50	0	24.70	1	24.70	24.70	1	24.70
	16QAM	1	0	24.52	1	24.70	24.52	1	24.70
		1	25	24.41	1	24.70	24.41	1	24.70
		1	49	24.59	1	24.70	24.59	1	24.70
		25	0	23.06	2	23.70	23.06	2	23.70
		25	12	23.12	2	23.70	23.12	2	23.70
		25	25	23.03	2	23.70	23.03	2	23.70
		50	0	23.06	2	23.70	23.06	2	23.70
	64QAM	1	0	23.61	2	23.70	23.61	2	23.70
		1	25	23.58	2	23.70	23.58	2	23.70
		1	49	23.69	2	23.70	23.69	2	23.70
		25	0	22.29	3	22.70	22.29	3	22.70
		25	12	22.36	3	22.70	22.36	3	22.70
		25	25	22.24	3	22.70	22.24	3	22.70
		50	0	22.28	3	22.70	22.28	3	22.70

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)			Power Mode B (dBm)		
				23230	MPR	Tune-up Limit	23230	MPR	Tune-up Limit
				782 MHz			782 MHz		
5 MHz	QPSK	1	0	25.06	0	25.70	25.06	0	25.70
		1	12	25.04	0	25.70	25.04	0	25.70
		1	24	24.98	0	25.70	24.98	0	25.70
		12	0	24.01	1	24.70	24.01	1	24.70
		12	7	24.04	1	24.70	24.04	1	24.70
		12	13	23.99	1	24.70	23.99	1	24.70
		25	0	23.98	1	24.70	23.98	1	24.70
	16QAM	1	0	24.33	1	24.70	24.33	1	24.70
		1	12	24.34	1	24.70	24.34	1	24.70
		1	24	24.36	1	24.70	24.36	1	24.70
		12	0	22.95	2	23.70	22.95	2	23.70
		12	7	22.98	2	23.70	22.98	2	23.70
		12	13	22.96	2	23.70	22.96	2	23.70
		25	0	22.92	2	23.70	22.92	2	23.70
	64QAM	1	0	23.42	2	23.70	23.42	2	23.70
		1	12	23.33	2	23.70	23.33	2	23.70
		1	24	23.55	2	23.70	23.55	2	23.70
		12	0	22.09	3	22.70	22.09	3	22.70
		12	7	22.08	3	22.70	22.08	3	22.70
		12	13	22.07	3	22.70	22.07	3	22.70
		25	0	22.11	3	22.70	22.11	3	22.70

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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	24.03	0	24.50	24.03	0	24.50
		1	25	24.03	0	24.50	24.03	0	24.50
		1	49	23.94	0	24.50	23.94	0	24.50
		25	0	22.59	1	23.50	22.59	1	23.50
		25	12	23.05	1	23.50	23.05	1	23.50
		25	25	22.89	1	23.50	22.89	1	23.50
		50	0	23.18	1	23.50	23.18	1	23.50
	16QAM	1	0	23.32	1	23.50	23.32	1	23.50
		1	25	23.18	1	23.50	23.18	1	23.50
		1	49	23.31	1	23.50	23.31	1	23.50
		25	0	21.59	2	22.50	21.59	2	22.50
		25	12	21.82	2	22.50	21.82	2	22.50
		25	25	21.91	2	22.50	21.91	2	22.50
		50	0	21.93	2	22.50	21.93	2	22.50
	64QAM	1	0	21.73	2	22.50	21.73	2	22.50
		1	25	21.87	2	22.50	21.87	2	22.50
		1	49	22.02	2	22.50	22.02	2	22.50
		25	0	20.58	3	21.50	20.58	3	21.50
		25	12	20.64	3	21.50	20.64	3	21.50
		25	25	20.71	3	21.50	20.71	3	21.50
		50	0	20.72	3	21.50	20.72	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	23.95	0	24.50	23.95	0	24.50
		1	12	23.51	0	24.50	23.51	0	24.50
		1	24	23.69	0	24.50	23.69	0	24.50
		12	0	22.68	1	23.50	22.68	1	23.50
		12	7	22.51	1	23.50	22.51	1	23.50
		12	13	22.62	1	23.50	22.62	1	23.50
		25	0	22.56	1	23.50	22.56	1	23.50
	16QAM	1	0	23.22	1	23.50	23.22	1	23.50
		1	12	22.87	1	23.50	22.87	1	23.50
		1	24	23.15	1	23.50	23.15	1	23.50
		12	0	21.63	2	22.50	21.63	2	22.50
		12	7	21.58	2	22.50	21.58	2	22.50
		12	13	21.65	2	22.50	21.65	2	22.50
		25	0	21.55	2	22.50	21.55	2	22.50
	64QAM	1	0	21.80	2	22.50	21.80	2	22.50
		1	12	21.61	2	22.50	21.61	2	22.50
		1	24	21.85	2	22.50	21.85	2	22.50
		12	0	20.56	3	21.50	20.56	3	21.50
		12	7	20.56	3	21.50	20.56	3	21.50
		12	13	20.73	3	21.50	20.73	3	21.50
		25	0	20.54	3	21.50	20.54	3	21.50

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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	24.92	25.05	25.02	0	25.70	20.00	20.21	19.78	0	20.25
		1	49	25.30	25.20	25.30	0	25.70	20.10	20.10	20.10	0	20.25
		1	99	25.22	25.08	25.00	0	25.70	19.84	20.18	20.21	0	20.25
		50	0	23.85	23.89	23.80	1	24.70	19.88	19.94	19.93	0	20.25
		50	24	24.20	24.20	24.30	1	24.70	20.00	20.00	20.10	0	20.25
		50	50	24.00	23.90	24.01	1	24.70	19.97	20.02	20.12	0	20.25
		100	0	24.20	24.20	24.30	1	24.70	20.10	20.10	20.10	0	20.25
	16QAM	1	0	24.38	24.39	24.40	1	24.70	20.24	19.97	19.80	0	20.25
		1	49	24.33	24.10	24.30	1	24.70	19.78	19.89	19.88	0	20.25
		1	99	24.64	24.36	24.38	1	24.70	19.99	20.09	19.96	0	20.25
		50	0	22.90	22.95	22.88	2	23.70	20.02	20.20	20.08	0	20.25
		50	24	22.94	22.90	22.92	2	23.70	20.01	20.12	20.11	0	20.25
		50	50	23.08	22.98	23.04	2	23.70	20.12	20.19	20.22	0	20.25
		100	0	22.95	22.90	22.93	2	23.70	20.01	20.11	20.11	0	20.25
	64QAM	1	0	23.22	23.57	23.16	2	23.70	19.97	19.94	19.86	0	20.25
		1	49	23.13	23.27	23.09	2	23.70	20.05	20.24	19.79	0	20.25
		1	99	23.53	23.38	23.22	2	23.70	19.76	19.93	19.91	0	20.25
		50	0	21.85	22.05	21.94	3	22.70	20.12	20.13	20.07	0	20.25
		50	24	21.87	21.92	21.94	3	22.70	20.13	20.07	20.15	0	20.25
		50	50	22.05	21.86	22.00	3	22.70	20.23	20.14	20.24	0	20.25
		100	0	21.93	21.92	21.96	3	22.70	20.11	20.05	20.16	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	24.88	24.94	24.90	0	25.70	20.05	20.22	20.17	0	20.25
		1	37	24.92	24.78	25.00	0	25.70	20.12	20.04	20.24	0	20.25
		1	74	24.99	24.99	24.95	0	25.70	20.20	20.24	20.14	0	20.25
		36	0	23.80	23.86	23.89	1	24.70	19.90	20.03	20.04	0	20.25
		36	20	23.88	23.75	23.94	1	24.70	19.99	19.91	20.14	0	20.25
		36	39	23.83	23.80	24.02	1	24.70	19.97	19.96	20.19	0	20.25
		75	0	23.85	23.79	23.96	1	24.70	19.98	19.96	20.15	0	20.25
	16QAM	1	0	24.18	24.37	24.39	1	24.70	20.02	20.18	20.22	0	20.25
		1	37	24.23	24.17	24.28	1	24.70	20.12	20.03	20.12	0	20.25
		1	74	24.27	24.34	24.30	1	24.70	20.18	20.20	20.08	0	20.25
		36	0	22.79	22.88	22.92	2	23.70	20.07	20.21	20.20	0	20.25
		36	20	22.91	22.84	22.99	2	23.70	20.24	20.10	20.22	0	20.25
		36	39	22.91	22.89	23.09	2	23.70	20.21	20.13	20.20	0	20.25
		75	0	22.90	22.88	23.02	2	23.70	20.20	20.13	20.25	0	20.25
	64QAM	1	0	23.17	23.39	23.16	2	23.70	20.17	20.24	20.14	0	20.25
		1	37	23.20	23.22	23.04	2	23.70	20.23	20.15	20.21	0	20.25
		1	74	23.32	23.20	23.30	2	23.70	20.25	20.19	20.19	0	20.25
		36	0	21.93	22.12	21.97	3	22.70	20.12	20.22	20.14	0	20.25
		36	20	21.96	22.03	21.92	3	22.70	20.24	20.12	20.21	0	20.25
		36	39	21.91	21.96	22.04	3	22.70	20.20	20.17	20.20	0	20.25
		75	0	21.92	21.97	21.90	3	22.70	20.20	20.13	20.19	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	24.95	24.86	24.91	0	25.70	20.17	20.14	20.17	0	20.25
		1	25	24.83	24.73	25.10	0	25.70	20.03	20.01	20.24	0	20.25
		1	49	24.98	24.90	24.96	0	25.70	20.19	20.12	20.15	0	20.25
		25	0	23.92	23.79	23.93	1	24.70	20.01	19.93	20.07	0	20.25
		25	12	23.80	23.74	24.03	1	24.70	19.90	19.95	20.10	0	20.25
		25	25	23.90	23.78	24.03	1	24.70	20.00	19.96	20.13	0	20.25
		50	0	23.86	23.81	24.00	1	24.70	19.96	19.97	20.09	0	20.25
	16QAM	1	0	24.18	24.26	24.34	1	24.70	20.22	20.18	20.25	0	20.25
		1	25	24.09	24.10	24.44	1	24.70	20.09	20.06	20.25	0	20.25
		1	49	24.18	24.20	24.32	1	24.70	20.21	20.21	20.18	0	20.25
		25	0	22.93	22.88	23.00	2	23.70	20.22	20.13	20.18	0	20.25
		25	12	22.84	22.84	23.07	2	23.70	20.11	20.07	20.21	0	20.25
		25	25	23.01	22.87	23.11	2	23.70	20.21	20.09	20.23	0	20.25
		50	0	22.94	22.89	23.10	2	23.70	20.14	20.09	20.23	0	20.25
	64QAM	1	0	23.05	23.33	23.05	2	23.70	20.19	20.17	20.21	0	20.25
		1	25	23.08	23.21	23.25	2	23.70	19.96	20.11	20.25	0	20.25
		1	49	23.06	23.14	23.30	2	23.70	20.24	20.13	20.25	0	20.25
		25	0	21.96	22.06	21.89	3	22.70	20.21	20.12	20.17	0	20.25
		25	12	21.92	22.03	21.90	3	22.70	20.11	20.09	20.21	0	20.25
		25	25	21.96	21.98	22.02	3	22.70	20.24	20.14	20.23	0	20.25
		50	0	21.92	22.01	22.01	3	22.70	20.16	20.15	20.22	0	20.25

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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	24.91	24.83	24.96	0	25.70	20.09	19.89	20.11	0	20.25
		1	12	24.85	24.77	25.03	0	25.70	19.97	19.91	20.14	0	20.25
		1	24	24.76	24.77	24.84	0	25.70	19.91	19.93	19.97	0	20.25
		12	0	23.78	23.87	23.88	1	24.70	19.72	19.64	19.84	0	20.25
		12	7	23.75	23.89	23.93	1	24.70	19.74	19.58	19.87	0	20.25
		12	13	23.87	23.72	23.89	1	24.70	19.71	19.60	19.82	0	20.25
		25	0	23.71	23.73	23.92	1	24.70	19.71	19.60	19.85	0	20.25
	16QAM	1	0	24.24	24.16	24.38	1	24.70	20.19	20.01	20.01	0	20.25
		1	12	24.25	24.13	24.47	1	24.70	20.07	19.99	20.11	0	20.25
		1	24	24.13	24.14	24.30	1	24.70	20.17	19.97	20.21	0	20.25
		12	0	22.75	22.74	22.90	2	23.70	19.92	19.84	20.06	0	20.25
		12	7	22.81	22.88	22.92	2	23.70	19.83	19.76	20.05	0	20.25
		12	13	22.75	22.72	22.85	2	23.70	19.79	19.83	19.99	0	20.25
		25	0	22.79	22.90	22.89	2	23.70	19.85	19.80	20.08	0	20.25
	64QAM	1	0	23.16	23.21	23.43	2	23.70	20.25	20.06	20.13	0	20.25
		1	12	23.04	23.13	23.35	2	23.70	19.97	20.16	20.06	0	20.25
		1	24	23.09	23.03	23.36	2	23.70	20.21	20.03	20.18	0	20.25
		12	0	21.77	21.81	21.85	3	22.70	20.00	19.90	20.08	0	20.25
		12	7	21.79	21.75	21.87	3	22.70	19.99	19.88	20.09	0	20.25
		12	13	21.80	21.72	21.91	3	22.70	19.92	19.92	20.06	0	20.25
		25	0	21.73	21.77	21.88	3	22.70	19.94	19.99	20.08	0	20.25

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				26055	26365	26675	MPR	Tune-up Limit	26055	26365	26675	MPR	Tune-up Limit
				1851.5 MHz	1882.5 MHz	1913.5 MHz			1851.5 MHz	1882.5 MHz	1913.5 MHz		
3 MHz	QPSK	1	0	25.03	24.84	24.95	0	25.70	20.02	19.89	20.17	0	20.25
		1	8	24.98	24.94	24.93	0	25.70	20.00	19.98	20.17	0	20.25
		1	14	24.95	24.90	24.74	0	25.70	19.96	19.93	19.99	0	20.25
		8	0	23.79	23.74	23.79	1	24.70	20.19	20.19	19.79	0	20.25
		8	4	23.77	23.70	23.77	1	24.70	20.19	20.15	19.70	0	20.25
		8	7	23.81	23.74	23.77	1	24.70	20.21	20.18	19.70	0	20.25
		15	0	23.79	23.76	23.76	1	24.70	20.21	20.20	19.73	0	20.25
	16QAM	1	0	24.08	23.92	24.31	1	24.70	20.02	19.96	20.23	0	20.25
		1	8	24.04	23.97	24.31	1	24.70	19.97	19.93	20.19	0	20.25
		1	14	24.01	23.94	24.08	1	24.70	19.94	19.84	19.99	0	20.25
		8	0	22.86	22.72	22.81	2	23.70	19.86	19.74	19.92	0	20.25
		8	4	22.83	22.79	22.72	2	23.70	19.85	19.72	19.80	0	20.25
		8	7	22.83	22.75	22.71	2	23.70	19.85	19.79	19.79	0	20.25
		15	0	22.78	22.72	22.71	2	23.70	19.82	19.76	19.80	0	20.25
	64QAM	1	0	23.03	22.98	23.07	2	23.70	20.08	19.98	19.98	0	20.25
		1	8	22.98	23.04	23.27	2	23.70	19.92	20.06	20.11	0	20.25
		1	14	23.01	22.90	23.07	2	23.70	19.87	19.84	20.02	0	20.25
		8	0	21.82	21.90	21.77	3	22.70	19.83	19.79	20.00	0	20.25
		8	4	21.82	21.87	21.77	3	22.70	19.79	19.81	19.94	0	20.25
		8	7	21.83	21.85	21.79	3	22.70	19.84	19.85	19.93	0	20.25
		15	0	21.80	21.82	21.77	3	22.70	19.78	19.80	19.83	0	20.25

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				26047	26365	26683	MPR	Tune-up Limit	26047	26365	26683	MPR	Tune-up Limit
				1850.7 MHz	1882.5 MHz	1914.3 MHz			1850.7 MHz	1882.5 MHz	1914.3 MHz		
1.4 MHz	QPSK	1	0	24.93	24.90	24.79	0	25.70	20.02	20.07	19.44	0	20.25
		1	3	24.79	24.84	24.86	0	25.70	19.92	20.05	20.23	0	20.25
		1	5	24.82	24.76	24.90	0	25.70	19.92	20.13	19.38	0	20.25
		3	0	24.90	24.73	24.74	0	25.70	19.32	19.53	20.18	0	20.25
		3	1	24.88	24.74	24.71	0	25.70	19.95	19.98	20.17	0	20.25
		3	3	24.85	24.82	24.72	0	25.70	19.90	19.97	20.20	0	20.25
		6	0	23.88	23.72	23.72	1	24.70	19.91	20.07	19.44	0	20.25
	16QAM	1	0	24.06	23.90	23.92	1	24.70	19.34	19.28	19.78	0	20.25
		1	3	23.96	23.89	23.77	1	24.70	19.65	19.47	19.75	0	20.25
		1	5	24.03	23.74	23.78	1	24.70	19.62	19.52	19.66	0	20.25
		3	0	23.91	23.73	23.78	1	24.70	19.60	19.48	19.93	0	20.25
		3	1	23.83	23.72	23.73	1	24.70	19.98	19.82	19.98	0	20.25
		3	3	23.81	23.73	23.71	1	24.70	19.90	19.79	19.98	0	20.25
		6	0	22.84	22.84	22.73	2	23.70	19.90	19.80	20.05	0	20.25
	64QAM	1	0	22.98	22.78	22.88	2	23.70	20.08	19.93	20.20	0	20.25
		1	3	23.02	22.86	22.80	2	23.70	20.09	19.91	20.21	0	20.25
		1	5	22.91	22.72	22.82	2	23.70	19.92	19.87	20.16	0	20.25
		3	0	22.86	22.87	22.85	2	23.70	20.02	20.00	20.13	0	20.25
		3	1	22.83	22.90	22.84	2	23.70	19.96	20.00	20.14	0	20.25
		3	3	22.80	22.87	22.83	2	23.70	19.93	20.05	20.14	0	20.25
		6	0	21.84	22.04	21.89	3	22.70	19.95	19.92	19.88	0	20.25

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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	17.17	17.36	17.48	0	17.50	18.36	18.43	18.10	0	18.50
		1	49	17.27	17.45	17.49	0	17.50	18.40	18.46	18.47	0	18.50
		1	99	17.25	17.43	17.14	0	17.50	18.32	18.35	18.14	0	18.50
		50	0	17.42	17.45	17.46	0	17.50	18.30	18.41	18.42	0	18.50
		50	24	17.26	17.44	17.33	0	17.50	18.30	18.48	18.48	0	18.50
		50	50	17.19	17.38	17.17	0	17.50	18.16	18.41	18.14	0	18.50
		100	0	17.22	17.45	17.37	0	17.50	18.08	18.38	18.39	0	18.50
	16QAM	1	0	17.22	17.41	17.37	0	17.50	18.33	18.38	18.45	0	18.50
		1	49	17.22	17.47	17.40	0	17.50	18.19	18.25	18.34	0	18.50
		1	99	17.23	17.50	17.48	0	17.50	18.30	18.36	18.50	0	18.50
		50	0	17.47	17.49	17.11	0	17.50	18.35	18.48	18.49	0	18.50
		50	24	17.31	17.47	17.37	0	17.50	18.28	18.37	18.37	0	18.50
		50	50	17.24	17.43	17.21	0	17.50	18.22	18.48	18.21	0	18.50
		100	0	17.26	17.47	17.40	0	17.50	18.25	18.38	18.38	0	18.50
	64QAM	1	0	17.34	17.18	17.44	0	17.50	18.49	18.20	18.29	0	18.50
		1	49	17.46	17.30	17.41	0	17.50	18.38	18.47	18.39	0	18.50
		1	99	17.31	17.39	17.12	0	17.50	18.47	18.50	18.31	0	18.50
		50	0	17.28	17.31	17.43	0	17.50	18.37	18.47	18.44	0	18.50
		50	24	17.06	17.32	17.27	0	17.50	18.30	18.34	18.34	0	18.50
		50	50	17.01	17.29	17.12	0	17.50	18.22	18.46	18.20	0	18.50
		100	0	17.03	17.32	17.28	0	17.50	18.25	18.37	18.34	0	18.50

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	17.50	17.36	17.13	0	17.50	18.35	18.41	18.42	0	18.50
		1	37	17.35	17.40	17.36	0	17.50	18.37	18.35	18.29	0	18.50
		1	74	17.15	17.47	17.17	0	17.50	18.29	18.35	18.10	0	18.50
		36	0	17.45	17.42	17.41	0	17.50	18.26	18.40	18.35	0	18.50
		36	20	17.30	17.10	17.25	0	17.50	18.27	18.30	18.24	0	18.50
		36	39	17.21	17.39	17.17	0	17.50	18.27	18.40	18.11	0	18.50
		75	0	17.27	17.43	17.21	0	17.50	18.25	18.31	18.22	0	18.50
	16QAM	1	0	17.37	17.29	17.43	0	17.50	18.29	18.42	18.45	0	18.50
		1	37	17.33	17.36	17.40	0	17.50	18.40	18.29	18.33	0	18.50
		1	74	17.43	17.40	17.42	0	17.50	18.22	18.35	18.37	0	18.50
		36	0	17.49	17.48	17.46	0	17.50	18.28	18.47	18.43	0	18.50
		36	20	17.35	17.15	17.31	0	17.50	18.34	18.35	18.30	0	18.50
		36	39	17.27	17.43	17.21	0	17.50	18.34	18.46	18.19	0	18.50
		75	0	17.29	17.48	17.27	0	17.50	18.30	18.36	18.25	0	18.50
	64QAM	1	0	17.26	17.43	17.21	0	17.50	18.33	18.42	18.41	0	18.50
		1	37	17.13	17.44	17.49	0	17.50	18.38	18.39	18.30	0	18.50
		1	74	17.28	17.18	17.21	0	17.50	18.22	18.40	18.42	0	18.50
		36	0	17.36	17.33	17.39	0	17.50	18.30	18.21	18.42	0	18.50
		36	20	17.21	17.42	17.21	0	17.50	18.34	18.39	18.31	0	18.50
		36	39	17.12	17.28	17.14	0	17.50	18.32	18.21	18.20	0	18.50
		75	0	17.15	17.31	17.15	0	17.50	18.28	18.39	18.25	0	18.50

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	17.50	17.41	17.48	0	17.50	18.45	18.11	18.39	0	18.50
		1	25	17.40	17.46	17.29	0	17.50	18.37	18.39	18.22	0	18.50
		1	49	17.26	17.39	17.21	0	17.50	18.37	18.05	18.23	0	18.50
		25	0	17.46	17.47	17.28	0	17.50	18.32	18.36	18.25	0	18.50
		25	12	17.37	17.47	17.22	0	17.50	18.32	18.36	18.16	0	18.50
		25	25	17.27	17.43	17.18	0	17.50	18.34	18.40	18.11	0	18.50
		50	0	17.31	17.42	17.20	0	17.50	18.36	18.39	18.10	0	18.50
	16QAM	1	0	17.35	17.41	17.50	0	17.50	17.99	18.12	18.15	0	18.50
		1	25	17.28	17.38	17.33	0	17.50	18.10	17.99	18.45	0	18.50
		1	49	17.16	17.38	17.14	0	17.50	17.92	18.05	18.41	0	18.50
		25	0	17.10	17.12	17.34	0	17.50	18.39	18.46	18.27	0	18.50
		25	12	17.42	17.12	17.27	0	17.50	18.40	18.44	18.18	0	18.50
		25	25	17.34	17.49	17.23	0	17.50	18.42	18.47	18.18	0	18.50
		50	0	17.35	17.46	17.27	0	17.50	18.35	18.41	18.16	0	18.50
	64QAM	1	0	17.14	17.15	17.18	0	17.50	18.03	18.12	18.11	0	18.50
		1	25	17.43	17.16	17.36	0	17.50	18.46	18.09	18.45	0	18.50
		1	49	17.29	17.17	17.25	0	17.50	17.92	18.10	18.42	0	18.50
		25	0	17.36	17.44	17.21	0	17.50	18.37	18.44	18.37	0	18.50
		25	12	17.29	17.45	17.14	0	17.50	18.38	18.42	18.21	0	18.50
		25	25	17.23	17.42	17.10	0	17.50	18.40	18.47	18.21	0	18.50
		50	0	17.25	17.36	17.10	0	17.50	18.40	18.46	18.19	0	18.50

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LTE Band 25 Measured Results (ANT2) (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	17.40	17.41	17.27	0	17.50	18.41	18.36	18.26	0	18.50
		1	12	17.28	17.33	17.14	0	17.50	18.25	18.26	18.14	0	18.50
		1	24	17.30	17.37	17.12	0	17.50	18.31	18.32	18.24	0	18.50
		12	0	17.29	17.32	17.10	0	17.50	18.23	18.22	18.03	0	18.50
		12	7	17.28	17.32	17.06	0	17.50	18.23	18.22	18.01	0	18.50
		12	13	17.22	17.27	16.99	0	17.50	18.20	18.22	18.03	0	18.50
		25	0	17.30	17.26	17.07	0	17.50	18.23	18.22	18.04	0	18.50
	16QAM	1	0	17.39	17.32	17.32	0	17.50	18.48	18.42	18.28	0	18.50
		1	12	17.23	17.22	17.17	0	17.50	18.31	18.32	18.22	0	18.50
		1	24	17.29	17.25	17.11	0	17.50	18.39	18.43	18.28	0	18.50
		12	0	17.31	17.35	17.13	0	17.50	18.23	18.19	18.02	0	18.50
		12	7	17.28	17.34	17.05	0	17.50	18.21	18.24	18.02	0	18.50
		12	13	17.22	17.29	16.98	0	17.50	18.13	18.22	18.03	0	18.50
		25	0	17.27	17.24	17.06	0	17.50	18.19	18.22	18.01	0	18.50
	64QAM	1	0	17.12	17.16	17.14	0	17.50	18.40	18.27	18.49	0	18.50
		1	12	17.36	17.11	17.38	0	17.50	18.45	18.49	18.40	0	18.50
		1	24	17.46	17.11	17.32	0	17.50	18.26	18.24	18.45	0	18.50
		12	0	17.21	17.24	16.96	0	17.50	18.24	18.23	18.04	0	18.50
		12	7	17.18	17.20	16.91	0	17.50	18.24	18.26	18.04	0	18.50
		12	13	17.14	17.17	16.85	0	17.50	18.20	18.27	18.06	0	18.50
		25	0	17.17	17.17	16.88	0	17.50	18.21	18.22	18.00	0	18.50

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				26055	26365	26675	MPR	Tune-up Limit	26055	26365	26675	MPR	Tune-up Limit
				1851.5 MHz	1882.5 MHz	1913.5 MHz			1851.5 MHz	1882.5 MHz	1913.5 MHz		
3 MHz	QPSK	1	0	17.34	17.26	17.04	0	17.50	18.36	18.30	18.18	0	18.50
		1	8	17.38	17.25	17.03	0	17.50	18.33	18.29	18.19	0	18.50
		1	14	17.23	17.22	17.05	0	17.50	18.23	18.28	18.24	0	18.50
		8	0	17.20	17.18	16.91	0	17.50	18.13	18.14	17.99	0	18.50
		8	4	17.20	17.18	16.87	0	17.50	18.11	18.14	17.98	0	18.50
		8	7	17.18	17.13	16.95	0	17.50	18.11	18.14	17.97	0	18.50
		15	0	17.21	17.15	16.88	0	17.50	18.12	18.14	17.98	0	18.50
	16QAM	1	0	17.20	17.12	17.39	0	17.50	18.22	18.21	18.35	0	18.50
		1	8	17.25	17.17	17.35	0	17.50	18.23	18.25	18.48	0	18.50
		1	14	17.12	17.16	17.35	0	17.50	18.42	18.24	18.42	0	18.50
		8	0	17.22	17.18	16.87	0	17.50	18.12	18.17	17.97	0	18.50
		8	4	17.22	17.18	16.84	0	17.50	18.09	18.15	18.00	0	18.50
		8	7	17.20	17.13	16.90	0	17.50	18.09	18.16	18.00	0	18.50
		15	0	17.18	17.09	16.85	0	17.50	18.06	18.12	17.96	0	18.50
	64QAM	1	0	17.43	17.42	17.09	0	17.50	18.49	18.46	18.22	0	18.50
		1	8	17.47	17.33	17.09	0	17.50	18.48	18.49	18.27	0	18.50
		1	14	17.19	17.36	17.05	0	17.50	18.29	18.41	18.23	0	18.50
		8	0	17.10	17.11	16.71	0	17.50	18.10	18.07	17.86	0	18.50
		8	4	17.10	17.10	16.68	0	17.50	18.05	18.09	17.86	0	18.50
		8	7	17.05	17.04	16.74	0	17.50	18.04	18.08	17.91	0	18.50
		15	0	17.07	17.02	16.62	0	17.50	18.06	18.08	17.92	0	18.50

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				26047	26365	26683	MPR	Tune-up Limit	26047	26365	26683	MPR	Tune-up Limit
				1850.7 MHz	1882.5 MHz	1914.3 MHz			1850.7 MHz	1882.5 MHz	1914.3 MHz		
1.4 MHz	QPSK	1	0	17.38	17.42	17.15	0	17.50	18.45	18.29	18.21	0	18.50
		1	3	17.36	17.38	17.06	0	17.50	18.30	18.21	18.18	0	18.50
		1	5	17.38	17.33	17.10	0	17.50	18.33	18.28	18.23	0	18.50
		3	0	17.33	17.26	17.03	0	17.50	18.24	18.10	17.96	0	18.50
		3	1	17.32	17.26	17.01	0	17.50	18.16	18.10	17.96	0	18.50
		3	3	17.29	17.22	17.01	0	17.50	18.16	18.11	17.95	0	18.50
		6	0	17.20	17.14	16.95	0	17.50	18.07	18.04	17.85	0	18.50
	16QAM	1	0	17.14	17.26	17.39	0	17.50	18.39	18.23	18.37	0	18.50
		1	3	17.11	17.29	17.29	0	17.50	18.50	18.20	18.39	0	18.50
		1	5	17.15	17.22	17.33	0	17.50	18.29	18.24	18.49	0	18.50
		3	0	17.33	17.41	17.11	0	17.50	18.31	18.26	18.11	0	18.50
		3	1	17.35	17.42	17.10	0	17.50	18.29	18.28	18.08	0	18.50
		3	3	17.34	17.35	17.02	0	17.50	18.30	18.29	18.10	0	18.50
		6	0	17.22	17.27	16.96	0	17.50	18.19	18.20	18.03	0	18.50
	64QAM	1	0	17.15	17.40	17.36	0	17.50	18.22	18.42	18.28	0	18.50
		1	3	17.49	17.34	17.33	0	17.50	18.35	18.47	18.23	0	18.50
		1	5	17.43	17.37	17.32	0	17.50	18.33	18.47	18.35	0	18.50
		3	0	17.16	17.22	17.04	0	17.50	18.44	18.27	18.02	0	18.50
		3	1	17.11	17.21	17.03	0	17.50	18.34	18.27	17.97	0	18.50
		3	3	17.15	17.16	17.00	0	17.50	18.34	18.28	18.01	0	18.50
		6	0	17.17	17.08	16.80	0	17.50	18.17	18.20	17.90	0	18.50

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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	25.38	25.39	25.22	0	25.70	25.38	25.39	25.22	0	25.70
		1	25	25.44	25.70	25.61	0	25.70	25.44	25.70	25.61	0	25.70
		1	49	25.27	25.07	24.95	0	25.70	25.27	25.07	24.95	0	25.70
		25	0	24.14	24.27	24.13	1	24.70	24.14	24.27	24.13	1	24.70
		25	12	24.42	24.70	24.62	1	24.70	24.42	24.70	24.62	1	24.70
		25	25	24.19	24.11	24.07	1	24.70	24.19	24.11	24.07	1	24.70
		50	0	24.42	24.70	24.55	1	24.70	24.42	24.70	24.55	1	24.70
	16QAM	1	0	24.61	24.69	24.53	1	24.70	24.61	24.69	24.53	1	24.70
		1	25	24.30	24.48	24.51	1	24.70	24.30	24.48	24.51	1	24.70
		1	49	24.54	24.41	24.19	1	24.70	24.54	24.41	24.19	1	24.70
		25	0	23.14	23.29	23.19	2	23.70	23.14	23.29	23.19	2	23.70
		25	12	23.04	23.20	23.22	2	23.70	23.04	23.20	23.22	2	23.70
		25	25	23.21	23.13	23.06	2	23.70	23.21	23.13	23.06	2	23.70
		50	0	23.11	23.21	23.20	2	23.70	23.11	23.21	23.20	2	23.70
	64QAM	1	0	23.54	23.40	23.29	2	23.70	23.54	23.40	23.29	2	23.70
		1	25	23.09	23.09	23.28	2	23.70	23.09	23.09	23.28	2	23.70
		1	49	23.52	23.14	23.05	2	23.70	23.52	23.14	23.05	2	23.70
		25	0	22.09	22.16	22.08	3	22.70	22.09	22.16	22.08	3	22.70
		25	12	22.05	22.10	22.09	3	22.70	22.05	22.10	22.09	3	22.70
		25	25	22.18	22.00	21.99	3	22.70	22.18	22.00	21.99	3	22.70
		50	0	22.11	22.13	22.06	3	22.70	22.11	22.13	22.06	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	25.37	25.28	25.22	0	25.70	25.37	25.28	25.22	0	25.70
		1	12	25.06	25.17	25.05	0	25.70	25.06	25.17	25.05	0	25.70
		1	24	25.00	25.13	24.86	0	25.70	25.00	25.13	24.86	0	25.70
		12	0	24.13	24.11	24.06	1	24.70	24.13	24.11	24.06	1	24.70
		12	7	24.01	24.08	23.96	1	24.70	24.01	24.08	23.96	1	24.70
		12	13	23.92	24.06	23.91	1	24.70	23.92	24.06	23.91	1	24.70
		25	0	24.00	24.07	23.97	1	24.70	24.00	24.07	23.97	1	24.70
	16QAM	1	0	24.69	24.57	24.58	1	24.70	24.69	24.57	24.58	1	24.70
		1	12	24.41	24.36	24.41	1	24.70	24.41	24.36	24.41	1	24.70
		1	24	24.39	24.42	24.28	1	24.70	24.39	24.42	24.28	1	24.70
		12	0	23.06	23.08	23.06	2	23.70	23.06	23.08	23.06	2	23.70
		12	7	22.96	23.05	22.95	2	23.70	22.96	23.05	22.95	2	23.70
		12	13	22.91	23.04	22.89	2	23.70	22.91	23.04	22.89	2	23.70
		25	0	22.95	23.01	22.91	2	23.70	22.95	23.01	22.91	2	23.70
	64QAM	1	0	23.29	23.40	23.35	2	23.70	23.29	23.40	23.35	2	23.70
		1	12	23.29	23.21	23.19	2	23.70	23.29	23.21	23.19	2	23.70
		1	24	23.03	23.19	22.97	2	23.70	23.03	23.19	22.97	2	23.70
		12	0	21.96	22.04	21.86	3	22.70	21.96	22.04	21.86	3	22.70
		12	7	21.87	21.97	21.78	3	22.70	21.87	21.97	21.78	3	22.70
		12	13	21.93	21.96	21.80	3	22.70	21.93	21.96	21.80	3	22.70
		25	0	21.95	21.95	21.82	3	22.70	21.95	21.95	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	25.38	25.09	25.03	0	25.70	25.38	25.09	25.03	0	25.70
		1	8	25.20	25.14	25.00	0	25.70	25.20	25.14	25.00	0	25.70
		1	14	25.10	25.08	24.85	0	25.70	25.10	25.08	24.85	0	25.70
		8	0	24.09	23.98	23.88	1	24.70	24.09	23.98	23.88	1	24.70
		8	4	24.02	23.95	23.84	1	24.70	24.02	23.95	23.84	1	24.70
		8	7	24.01	23.94	23.82	1	24.70	24.01	23.94	23.82	1	24.70
		15	0	24.02	24.00	23.85	1	24.70	24.02	24.00	23.85	1	24.70
	16QAM	1	0	24.61	24.29	24.27	1	24.70	24.61	24.29	24.27	1	24.70
		1	8	24.42	24.35	24.26	1	24.70	24.42	24.35	24.26	1	24.70
		1	14	24.34	24.29	24.10	1	24.70	24.34	24.29	24.10	1	24.70
		8	0	23.07	22.93	22.80	2	23.70	23.07	22.93	22.80	2	23.70
		8	4	22.98	22.91	22.74	2	23.70	22.98	22.91	22.74	2	23.70
		8	7	22.96	22.91	22.72	2	23.70	22.96	22.91	22.72	2	23.70
		15	0	22.95	22.90	22.75	2	23.70	22.95	22.90	22.75	2	23.70
	64QAM	1	0	23.44	23.08	23.01	2	23.70	23.44	23.08	23.01	2	23.70
		1	8	23.18	23.03	23.08	2	23.70	23.18	23.03	23.08	2	23.70
		1	14	23.16	23.07	22.96	2	23.70	23.16	23.07	22.96	2	23.70
		8	0	21.95	21.83	21.72	3	22.70	21.95	21.83	21.72	3	22.70
		8	4	21.85	21.79	21.78	3	22.70	21.85	21.79	21.78	3	22.70
		8	7	21.85	21.80	21.76	3	22.70	21.85	21.80	21.76	3	22.70
		15	0	21.88	21.81	21.72	3	22.70	21.88	21.81	21.72	3	22.70

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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	25.43	25.15	24.99	0	25.70	25.43	25.15	24.99	0	25.70
		1	3	25.28	25.12	24.87	0	25.70	25.28	25.12	24.87	0	25.70
		1	5	25.21	25.12	24.88	0	25.70	25.21	25.12	24.88	0	25.70
		3	0	25.18	25.01	24.80	0	25.70	25.18	25.01	24.80	0	25.70
		3	1	25.13	24.99	24.78	0	25.70	25.13	24.99	24.78	0	25.70
		3	3	25.02	24.99	24.77	0	25.70	25.02	24.99	24.77	0	25.70
		6	0	24.00	23.96	23.77	1	24.70	24.00	23.96	23.77	1	24.70
	16QAM	1	0	24.60	24.28	24.19	1	24.70	24.60	24.28	24.19	1	24.70
		1	3	24.54	24.29	24.14	1	24.70	24.54	24.29	24.14	1	24.70
		1	5	24.39	24.23	24.18	1	24.70	24.39	24.23	24.18	1	24.70
		3	0	24.30	24.07	23.84	1	24.70	24.30	24.07	23.84	1	24.70
		3	1	24.21	24.05	23.81	1	24.70	24.21	24.05	23.81	1	24.70
		3	3	24.12	24.05	23.81	1	24.70	24.12	24.05	23.81	1	24.70
		6	0	23.05	22.93	22.79	2	23.70	23.05	22.93	22.79	2	23.70
	64QAM	1	0	23.45	23.28	22.89	2	23.70	23.45	23.28	22.89	2	23.70
		1	3	23.36	23.33	22.87	2	23.70	23.36	23.33	22.87	2	23.70
		1	5	23.16	23.32	22.86	2	23.70	23.16	23.32	22.86	2	23.70
		3	0	23.24	23.04	22.77	2	23.70	23.24	23.04	22.77	2	23.70
		3	1	23.20	23.02	22.79	2	23.70	23.20	23.02	22.79	2	23.70
		3	3	23.08	23.02	22.78	2	23.70	23.08	23.02	22.78	2	23.70
		6	0	22.03	21.87	21.79	3	22.70	22.03	21.87	21.79	3	22.70

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LTE Band 26 Measured Results (ANT2)

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	24.05	23.91	24.00	0	24.50	24.05	23.91	24.00	0	24.50
		1	25	24.40	24.40	24.40	0	24.50	24.40	24.40	24.40	0	24.50
		1	49	23.93	24.04	24.26	0	24.50	23.93	24.04	24.26	0	24.50
		25	0	23.09	22.91	22.93	1	23.50	23.09	22.91	22.93	1	23.50
		25	12	23.40	23.40	23.40	1	23.50	23.40	23.40	23.40	1	23.50
		25	25	22.86	22.99	23.09	1	23.50	22.86	22.99	23.09	1	23.50
		50	0	23.40	23.40	23.40	1	23.50	23.40	23.40	23.40	1	23.50
	16QAM	1	0	23.27	23.19	23.26	1	23.50	23.27	23.19	23.26	1	23.50
		1	25	23.27	23.19	23.22	1	23.50	23.27	23.19	23.22	1	23.50
		1	49	23.13	23.39	23.50	1	23.50	23.13	23.39	23.50	1	23.50
		25	0	22.08	21.93	21.93	2	22.50	22.08	21.93	21.93	2	22.50
		25	12	21.96	21.97	21.92	2	22.50	21.96	21.97	21.92	2	22.50
		25	25	21.89	22.00	22.06	2	22.50	21.89	22.00	22.06	2	22.50
		50	0	21.93	21.98	22.01	2	22.50	21.93	21.98	22.01	2	22.50
	64QAM	1	0	22.06	21.96	21.96	2	22.50	22.06	21.96	21.96	2	22.50
		1	25	21.92	21.92	21.84	2	22.50	21.92	21.92	21.84	2	22.50
		1	49	21.85	22.02	22.06	2	22.50	21.85	22.02	22.06	2	22.50
		25	0	20.92	20.78	20.80	3	21.50	20.92	20.78	20.80	3	21.50
		25	12	20.79	20.81	20.72	3	21.50	20.79	20.81	20.72	3	21.50
		25	25	20.74	20.85	20.88	3	21.50	20.74	20.85	20.88	3	21.50
		50	0	20.78	20.83	20.83	3	21.50	20.78	20.83	20.83	3	21.50

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	24.00	23.87	23.91	0	24.50	24.00	23.87	23.91	0	24.50
		1	12	24.00	23.87	24.02	0	24.50	24.00	23.87	24.02	0	24.50
		1	24	23.93	23.92	24.17	0	24.50	23.93	23.92	24.17	0	24.50
		12	0	22.95	22.83	22.90	1	23.50	22.95	22.83	22.90	1	23.50
		12	7	22.93	22.82	22.97	1	23.50	22.93	22.82	22.97	1	23.50
		12	13	22.87	22.83	23.00	1	23.50	22.87	22.83	23.00	1	23.50
		25	0	22.95	22.83	23.00	1	23.50	22.95	22.83	23.00	1	23.50
	16QAM	1	0	23.36	23.12	23.24	1	23.50	23.36	23.12	23.24	1	23.50
		1	12	23.33	23.16	23.35	1	23.50	23.33	23.16	23.35	1	23.50
		1	24	23.30	23.21	23.40	1	23.50	23.30	23.21	23.40	1	23.50
		12	0	21.89	21.79	21.87	2	22.50	21.89	21.79	21.87	2	22.50
		12	7	21.89	21.78	21.92	2	22.50	21.89	21.78	21.92	2	22.50
		12	13	21.85	21.80	21.93	2	22.50	21.85	21.80	21.93	2	22.50
		25	0	21.88	21.75	21.91	2	22.50	21.88	21.75	21.91	2	22.50
	64QAM	1	0	21.94	21.87	22.01	2	22.50	21.94	21.87	22.01	2	22.50
		1	12	21.99	21.89	22.12	2	22.50	21.99	21.89	22.12	2	22.50
		1	24	21.93	21.95	22.22	2	22.50	21.93	21.95	22.22	2	22.50
		12	0	20.73	20.56	20.66	3	21.50	20.73	20.56	20.66	3	21.50
		12	7	20.73	20.61	20.71	3	21.50	20.73	20.61	20.71	3	21.50
		12	13	20.68	20.59	20.72	3	21.50	20.68	20.59	20.72	3	21.50
		25	0	20.69	20.60	20.72	3	21.50	20.69	20.60	20.72	3	21.50

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	24.01	23.87	24.01	0	24.50	24.01	23.87	24.01	0	24.50
		1	8	24.12	23.90	24.12	0	24.50	24.12	23.90	24.12	0	24.50
		1	14	24.06	23.87	24.14	0	24.50	24.06	23.87	24.14	0	24.50
		8	0	22.86	22.78	22.95	1	23.50	22.86	22.78	22.95	1	23.50
		8	4	22.91	22.76	22.96	1	23.50	22.91	22.76	22.96	1	23.50
		8	7	22.93	22.78	22.98	1	23.50	22.93	22.78	22.98	1	23.50
		15	0	22.93	22.81	22.97	1	23.50	22.93	22.81	22.97	1	23.50
	16QAM	1	0	23.21	23.11	23.33	1	23.50	23.21	23.11	23.33	1	23.50
		1	8	23.37	23.14	23.39	1	23.50	23.37	23.14	23.39	1	23.50
		1	14	23.27	23.16	23.40	1	23.50	23.27	23.16	23.40	1	23.50
		8	0	21.85	21.74	21.87	2	22.50	21.85	21.74	21.87	2	22.50
		8	4	21.89	21.72	21.87	2	22.50	21.89	21.72	21.87	2	22.50
		8	7	21.89	21.71	21.87	2	22.50	21.89	21.71	21.87	2	22.50
		15	0	21.86	21.71	21.90	2	22.50	21.86	21.71	21.90	2	22.50
	64QAM	1	0	21.88	21.83	21.92	2	22.50	21.88	21.83	21.92	2	22.50
		1	8	22.02	21.92	21.96	2	22.50	22.02	21.92	21.96	2	22.50
		1	14	21.87	21.90	21.96	2	22.50	21.87	21.90	21.96	2	22.50
		8	0	20.59	20.56	20.63	3	21.50	20.59	20.56	20.63	3	21.50
		8	4	20.64	20.54	20.64	3	21.50	20.64	20.54	20.64	3	21.50
		8	7	20.65	20.55	20.63	3	21.50	20.65	20.55	20.63	3	21.50
		15	0	20.68	20.56	20.61	3	21.50	20.68	20.56	20.61	3	21.50

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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	24.02	23.82	24.11	0	24.50	24.02	23.82	24.11	0	24.50
		1	3	23.98	23.91	24.17	0	24.50	23.98	23.91	24.17	0	24.50
		1	5	24.06	23.97	24.21	0	24.50	24.06	23.97	24.21	0	24.50
		3	0	23.87	23.85	24.04	0	24.50	23.87	23.85	24.04	0	24.50
		3	1	23.86	23.81	24.04	0	24.50	23.86	23.81	24.04	0	24.50
		3	3	23.84	23.80	24.04	0	24.50	23.84	23.80	24.04	0	24.50
		6	0	22.76	22.75	23.02	1	23.50	22.76	22.75	23.02	1	23.50
	16QAM	1	0	23.25	23.05	23.40	1	23.50	23.25	23.05	23.40	1	23.50
		1	3	23.13	23.02	23.44	1	23.50	23.13	23.02	23.44	1	23.50
		1	5	23.27	23.12	23.45	1	23.50	23.27	23.12	23.45	1	23.50
		3	0	22.95	22.82	23.13	1	23.50	22.95	22.82	23.13	1	23.50
		3	1	22.92	22.82	23.13	1	23.50	22.92	22.82	23.13	1	23.50
		3	3	22.91	22.83	23.10	1	23.50	22.91	22.83	23.10	1	23.50
		6	0	21.83	21.70	21.92	2	22.50	21.83	21.70	21.92	2	22.50
	64QAM	1	0	21.93	22.02	22.02	2	22.50	21.93	22.02	22.02	2	22.50
		1	3	21.89	22.00	22.04	2	22.50	21.89	22.00	22.04	2	22.50
		1	5	21.89	22.06	22.07	2	22.50	21.89	22.06	22.07	2	22.50
		3	0	21.75	21.75	21.80	2	22.50	21.75	21.75	21.80	2	22.50
		3	1	21.75	21.76	21.79	2	22.50	21.75	21.76	21.79	2	22.50
		3	3	21.71	21.75	21.77	2	22.50	21.71	21.75	21.77	2	22.50
		6	0	20.65	20.58	20.80	3	21.50	20.65	20.58	20.80	3	21.50

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LTE Band 30 Measured Results (ANT1)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)			Power Mode B (dBm)		
				27710 2310 MHz	MPR	Tune-up Limit	27710 2310 MHz	MPR	Tune-up Limit
10 MHz	QPSK	1	0	24.88	0	25.70	23.99	0	24.00
		1	25	25.70	0	25.70	23.99	0	24.00
		1	49	24.78	0	25.70	23.98	0	24.00
		25	0	23.72	1	24.70	23.59	0	24.00
		25	12	24.70	1	24.70	23.65	0	24.00
		25	25	24.67	1	24.70	23.64	0	24.00
		50	0	24.70	1	24.70	23.63	0	24.00
	16QAM	1	0	24.06	1	24.70	23.97	0	24.00
		1	25	23.89	1	24.70	23.92	0	24.00
		1	49	23.99	1	24.70	23.98	0	24.00
		25	0	22.77	2	23.70	22.86	0.3	23.70
		25	12	22.80	2	23.70	22.98	0.3	23.70
		25	25	22.72	2	23.70	22.70	0.3	23.70
		50	0	22.78	2	23.70	22.98	0.3	23.70
	64QAM	1	0	22.96	2	23.70	22.92	0.3	23.70
		1	25	22.80	2	23.70	22.99	0.3	23.70
		1	49	22.81	2	23.70	22.77	0.3	23.70
		25	0	21.77	3	22.70	21.97	1.3	22.70
		25	12	21.75	3	22.70	21.84	1.3	22.70
		25	25	21.78	3	22.70	21.87	1.3	22.70
		50	0	21.75	3	22.70	21.84	1.3	22.70

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)			Power Mode B (dBm)		
				27710 2310 MHz	MPR	Tune-up Limit	27710 2310 MHz	MPR	Tune-up Limit
5 MHz	QPSK	1	0	24.98	0	25.70	23.96	0	24.00
		1	12	24.86	0	25.70	23.93	0	24.00
		1	24	24.90	0	25.70	23.95	0	24.00
		12	0	23.80	1	24.70	23.60	0	24.00
		12	7	23.77	1	24.70	23.49	0	24.00
		12	13	23.79	1	24.70	23.40	0	24.00
		25	0	23.77	1	24.70	23.49	0	24.00
	16QAM	1	0	24.00	1	24.70	23.94	0	24.00
		1	12	23.87	1	24.70	23.89	0	24.00
		1	24	23.84	1	24.70	23.98	0	24.00
		12	0	22.80	2	23.70	22.88	0.3	23.70
		12	7	22.76	2	23.70	22.77	0.3	23.70
		12	13	22.80	2	23.70	22.78	0.3	23.70
		25	0	22.72	2	23.70	22.83	0.3	23.70
	64QAM	1	0	22.94	2	23.70	23.64	0.3	23.70
		1	12	22.76	2	23.70	22.75	0.3	23.70
		1	24	22.80	2	23.70	22.72	0.3	23.70
		12	0	21.78	3	22.70	21.77	1.3	22.70
		12	7	21.73	3	22.70	21.71	1.3	22.70
		12	13	21.75	3	22.70	21.77	1.3	22.70
		25	0	21.71	3	22.70	21.70	1.3	22.70

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LTE Band 30 Measured Results (ANT2)

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)			Power Mode B (dBm)		
				27710 2310 MHz	MPR	Tune-up Limit	27710 2310 MHz	MPR	Tune-up Limit
10 MHz	QPSK	1	0	17.69	0	17.75	20.11	0	20.50
		1	25	17.54	0	17.75	20.50	0	20.50
		1	49	17.46	0	17.75	20.28	0	20.50
		25	0	17.50	0	17.75	20.18	0	20.50
		25	12	17.51	0	17.75	20.50	0	20.50
		25	25	17.46	0	17.75	20.07	0	20.50
		50	0	17.71	0	17.75	20.44	0	20.50
	16QAM	1	0	17.69	0	17.75	20.15	0	20.50
		1	25	17.50	0	17.75	20.46	0	20.50
		1	49	17.75	0	17.75	20.39	0	20.50
		25	0	17.61	0	17.75	20.08	0	20.50
		25	12	17.53	0	17.75	20.05	0	20.50
		25	25	17.50	0	17.75	20.01	0	20.50
		50	0	17.43	0	17.75	19.97	0	20.50
	64QAM	1	0	17.18	0	17.75	20.25	0	20.50
		1	25	17.47	0	17.75	20.19	0	20.50
		1	49	17.48	0	17.75	20.29	0	20.50
		25	0	17.31	0	17.75	20.14	0.25	20.25
		25	12	17.23	0	17.75	20.10	0.25	20.25
		25	25	17.23	0	17.75	20.08	0.25	20.25
		50	0	17.15	0	17.75	20.18	0.25	20.25

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)			Power Mode B (dBm)		
				27710 2310 MHz	MPR	Tune-up Limit	27710 2310 MHz	MPR	Tune-up Limit
5 MHz	QPSK	1	0	17.47	0	17.75	20.47	0	20.50
		1	12	17.27	0	17.75	20.40	0	20.50
		1	24	17.28	0	17.75	20.38	0	20.50
		12	0	17.24	0	17.75	20.18	0	20.50
		12	7	17.20	0	17.75	20.08	0	20.50
		12	13	17.16	0	17.75	20.01	0	20.50
		25	0	17.17	0	17.75	20.08	0	20.50
	16QAM	1	0	17.74	0	17.75	20.47	0	20.50
		1	12	17.57	0	17.75	20.46	0	20.50
		1	24	17.55	0	17.75	20.47	0	20.50
		12	0	17.25	0	17.75	20.18	0	20.50
		12	7	17.23	0	17.75	20.07	0	20.50
		12	13	17.17	0	17.75	20.00	0	20.50
		25	0	17.14	0	17.75	20.04	0	20.50
	64QAM	1	0	17.58	0	17.75	20.48	0	20.50
		1	12	17.51	0	17.75	20.38	0	20.50
		1	24	17.44	0	17.75	20.32	0	20.50
		12	0	17.28	0	17.75	20.20	0.25	20.25
		12	7	17.19	0	17.75	20.08	0.25	20.25
		12	13	17.11	0	17.75	20.09	0.25	20.25
		25	0	17.14	0	17.75	20.09	0.25	20.25

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LTE Band 41 Power Class 3 Measured Results (ANT1)

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		
20 MHz	QPSK	1	0	25.08	25.08	25.09	24.81	24.87	0	25.70	22.82	22.85	22.69	22.57	22.64	0	23.00
		1	49	25.20	25.20	25.20	25.20	25.20	0	25.70	22.80	23.00	22.90	22.90	22.90	0	23.00
		1	99	25.10	24.90	25.13	24.80	24.86	0	25.70	22.74	22.68	22.71	22.48	22.53	0	23.00
		50	0	24.07	24.04	23.98	23.73	23.86	1	24.70	22.76	22.77	22.66	22.46	22.63	0	23.00
		50	24	24.20	24.20	24.20	24.20	24.20	1	24.70	22.80	23.00	22.80	22.90	22.90	0	23.00
		50	50	24.05	23.91	23.97	23.79	23.88	1	24.70	22.74	22.70	22.69	22.46	22.54	0	23.00
		100	0	24.20	24.20	24.20	24.20	24.20	1	24.70	22.80	23.00	22.80	22.90	22.90	0	23.00
	16QAM	1	0	24.29	24.19	24.29	23.96	23.89	1	24.70	22.93	22.94	22.81	22.67	22.75	0	23.00
		1	49	24.13	24.10	24.17	23.74	23.96	1	24.70	22.85	22.89	22.78	22.55	22.68	0	23.00
		1	99	24.18	24.05	24.28	23.83	23.96	1	24.70	22.81	22.84	22.87	22.62	22.65	0	23.00
		50	0	23.09	23.09	23.02	22.74	22.91	2	23.70	22.91	22.92	22.90	22.73	22.85	0	23.00
		50	24	23.03	22.99	23.00	22.79	22.87	2	23.70	22.51	22.45	22.40	22.17	22.23	0	23.00
		50	50	23.09	22.95	23.01	22.73	22.89	2	23.70	22.49	22.44	22.42	22.20	22.21	0	23.00
		100	0	23.04	22.98	22.99	22.78	22.86	2	23.70	22.53	22.44	22.39	22.17	22.22	0	23.00
	64QAM	1	0	23.64	23.27	23.63	23.03	23.32	2	23.70	22.67	22.68	22.52	22.44	22.41	0	23.00
		1	49	23.54	23.15	23.57	22.83	23.21	2	23.70	22.47	22.53	22.46	22.22	22.33	0	23.00
		1	99	23.60	23.09	23.64	22.92	23.20	2	23.70	22.55	22.56	22.58	22.28	22.31	0	23.00
		50	0	22.55	22.07	22.43	21.86	22.33	3	22.70	21.51	21.54	21.43	21.24	21.38	0.3	22.70
		50	24	22.56	21.99	22.43	21.80	22.25	3	22.70	21.54	21.46	21.42	21.19	21.31	0.3	22.70
		50	50	22.54	21.97	22.45	21.82	22.23	3	22.70	21.51	21.43	21.44	21.22	21.29	0.3	22.70
		100	0	22.55	21.98	22.38	21.81	22.23	3	22.70	21.53	21.43	21.40	21.18	21.29	0.3	22.70

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		
15 MHz	QPSK	1	0	25.0	25.06	25.01	24.82	24.88	0	25.70	22.48	22.53	22.40	22.20	22.32	0	23.00
		1	37	25.0	24.99	25.01	24.71	24.85	0	25.70	22.49	22.46	22.41	22.14	22.24	0	23.00
		1	74	25.0	24.93	25.08	24.73	24.80	0	25.70	22.51	22.41	22.44	22.22	22.20	0	23.00
		36	0	24.1	24.07	23.98	23.76	23.86	1	24.70	22.52	22.54	22.41	22.13	22.29	0	23.00
		36	20	24.1	23.98	23.99	23.74	23.86	1	24.70	22.55	22.43	22.36	22.12	22.20	0	23.00
		36	39	24.0	23.94	24.00	23.75	23.90	1	24.70	22.52	22.39	22.36	22.15	22.18	0	23.00
		75	0	24.0	23.95	23.98	23.73	23.83	1	24.70	22.54	22.38	22.35	22.11	22.17	0	23.00
	16QAM	1	0	24.1	24.05	23.97	23.84	23.90	1	24.70	22.54	22.57	22.44	22.23	22.29	0	23.00
		1	37	24.0	24.04	23.94	23.82	23.87	1	24.70	22.53	22.47	22.40	22.17	22.22	0	23.00
		1	74	24.1	24.01	24.08	23.79	23.85	1	24.70	22.56	22.41	22.45	22.20	22.19	0	23.00
		36	0	23.1	23.14	23.03	22.80	22.91	2	23.70	22.44	22.43	22.39	22.21	22.29	0	23.00
		36	20	23.1	23.06	23.02	22.76	22.90	2	23.70	22.26	22.18	22.12	21.89	21.94	0	23.00
		36	39	23.0	23.03	23.03	22.82	22.91	2	23.70	22.24	22.15	22.13	21.91	21.93	0	23.00
		75	0	23.0	23.03	23.01	22.75	22.87	2	23.70	22.26	22.14	22.11	21.85	21.92	0	23.00
	64QAM	1	0	23.6	23.19	23.38	22.89	23.40	2	23.70	22.22	22.28	22.19	22.03	22.09	0	23.00
		1	37	23.4	23.06	23.36	22.85	23.33	2	23.70	22.22	22.27	22.20	21.93	22.01	0	23.00
		1	74	23.5	23.00	23.41	22.85	23.24	2	23.70	22.24	22.21	22.26	21.97	21.98	0	23.00
		36	0	22.4	22.11	22.41	21.84	22.29	3	22.70	21.21	21.29	21.16	20.92	21.03	0.3	22.70
		36	20	22.5	22.05	22.42	21.79	22.30	3	22.70	21.24	21.21	21.16	20.90	20.95	0.3	22.70
		36	39	22.5	22.01	22.42	21.80	22.26	3	22.70	21.24	21.17	21.14	20.95	20.93	0.3	22.70
		75	0	22.4	22.01	22.38	21.77	22.27	3	22.70	21.26	21.14	21.11	20.88	20.93	0.3	22.70

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		
10 MHz	QPSK	1	0	25.02	25.06	25.04	24.79	24.90	0	25.70	22.95	22.94	22.83	22.63	22.74	0	23.00
		1	25	25.04	24.94	24.99	24.73	24.91	0	25.70	22.88	22.89	22.83	22.55	22.65	0	23.00
		1	49	25.00	24.97	25.07	24.75	24.87	0	25.70	22.91	22.92	22.92	22.65	22.63	0	23.00
		25	0	24.07	24.00	23.99	23.77	23.88	1	24.70	22.90	22.93	22.85	22.55	22.64	0	23.00
		25	12	24.04	23.97	23.98	23.75	23.92	1	24.70	22.91	22.85	22.79	22.53	22.65	0	23.00
		25	25	24.03	23.98	24.00	23.79	23.92	1	24.70	22.92	22.85	22.82	22.60	22.66	0	23.00
		50	0	24.04	23.98	23.98	23.76	23.93	1	24.70	22.93	22.86	22.80	22.53	22.66	0	23.00
	16QAM	1	0	24.12	24.12	23.97	23.90	23.91	1	24.70	22.83	22.83	22.73	22.49	22.65	0	23.00
		1	25	24.15	24.06	23.95	23.88	23.92	1	24.70	22.77	22.74	22.67	22.42	22.53	0	23.00
		1	49	24.08	24.10	24.01	23.85	23.91	1	24.70	22.80	22.80	22.79	22.46	22.55	0	23.00
		25	0	23.09	23.08	23.03	22.83	22.93	2	23.70	22.79	22.72	22.77	22.52	22.62	0	23.00
		25	12	23.06	23.06	23.02	22.80	22.94	2	23.70	21.99	22.01	21.97	21.79	21.81	0	23.00
		25	25	23.06	23.05	23.04	22.87	22.93	2	23.70	22.01	22.02	21.99	21.76	21.83	0	23.00
		50	0	23.06	23.04	23.03	22.79	22.93	2	23.70	22.03	22.01	21.96	21.78	21.81	0	23.00
	64QAM	1	0	23.68	23.12	23.46	22.93	23.33	2	23.70	22.15	22.07	22.01	21.84	21.93	0	23.00
		1	25	23.57	23.09	23.45	22.80	23.30	2	23.70	22.01	22.06	22.07	21.76	21.77	0	23.00
		1	49	23.56	23.16	23.55	22.94	23.29	2	23.70	22.16	22.15	22.13	21.83	21.83	0	23.00
		25	0	22.49	22.06	22.47	21.87	22.28	3	22.70	21.04	21.02	21.01	20.78	20.83	0.3	22.70
		25	12	22.54	22.04	22.45	21.81	22.25	3	22.70	21.08	20.99	20.97	20.75	20.82	0.3	22.70
		25	25	22.51	22.03	22.47	21.86	22.26	3	22.70	21.08	20.98	20.97	20.75	20.83	0.3	22.70
		50	0	22.52	22.03	22.45	21.80	22.25	3	22.70	21.11	20.98	20.93	20.79	20.81	0.3	22.70

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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	24.98	24.99	24.92	24.71	24.83	0	25.70	22.89	22.92	22.88	22.63	22.87	0	23.00
		1	12	24.98	24.90	24.90	24.71	24.82	0	25.70	22.93	22.91	22.81	22.58	22.86	0	23.00
		1	24	25.01	24.97	24.95	24.72	24.81	0	25.70	22.96	22.89	22.87	22.69	22.91	0	23.00
		12	0	23.95	23.85	23.83	23.81	23.74	1	24.70	22.89	22.82	22.77	22.56	22.92	0	23.00
		12	7	23.93	23.84	23.81	23.79	23.73	1	24.70	22.88	22.80	22.77	22.54	22.89	0	23.00
		12	13	23.91	23.84	23.81	23.79	23.71	1	24.70	22.87	22.81	22.77	22.53	22.90	0	23.00
		25	0	23.91	23.84	23.82	23.80	23.74	1	24.70	22.90	22.81	22.77	22.55	22.90	0	23.00
	16QAM	1	0	24.01	23.98	23.92	23.93	23.98	1	24.70	22.91	22.98	22.90	22.66	22.86	0	23.00
		1	12	24.01	23.95	23.92	23.88	23.97	1	24.70	22.94	22.91	22.87	22.57	22.82	0	23.00
		1	24	24.02	23.98	23.99	23.92	23.97	1	24.70	22.97	22.91	22.92	22.72	22.88	0	23.00
		12	0	22.95	22.92	22.83	22.73	22.73	2	23.70	21.91	21.93	21.87	21.69	21.89	0	23.00
		12	7	22.91	22.85	22.87	22.77	22.88	2	23.70	21.79	21.79	21.78	21.73	21.81	0	23.00
		12	13	22.88	22.84	22.87	22.73	22.90	2	23.70	21.80	21.80	21.79	21.73	21.81	0	23.00
		25	0	22.86	22.82	22.87	22.75	22.89	2	23.70	21.81	21.81	21.77	21.73	21.80	0	23.00
	64QAM	1	0	23.61	23.10	23.40	23.06	23.30	2	23.70	21.87	21.87	22.03	22.00	21.93	0	23.00
		1	12	23.51	23.03	23.34	22.98	23.23	2	23.70	21.97	21.97	21.94	21.89	21.99	0	23.00
		1	24	23.59	23.01	23.41	23.02	23.27	2	23.70	22.03	22.03	21.97	22.00	21.86	0	23.00
		12	0	22.31	21.84	22.21	21.84	22.05	3	22.70	20.91	20.91	20.85	20.79	20.79	0.3	22.70
		12	7	22.31	21.83	22.18	21.82	22.04	3	22.70	20.90	20.90	20.82	20.81	20.81	0.3	22.70
		12	13	22.30	21.84	22.21	21.83	22.06	3	22.70	20.87	20.87	20.83	20.82	20.83	0.3	22.70
		25	0	22.27	21.79	22.24	21.78	22.07	3	22.70	20.82	20.82	20.79	20.78	20.73	0.3	22.70

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LTE Band 41 Power Class 3 Measured Results (ANT2)

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		
20 MHz	QPSK	1	0	19.32	19.32	19.47	19.34	19.64	0	19.75	21.22	21.48	21.30	21.30	21.25	0	21.50
		1	49	19.45	19.35	19.73	19.25	19.71	0	19.75	21.30	21.50	21.40	21.44	21.27	0	21.50
		1	99	19.43	19.31	19.11	19.63	19.68	0	19.75	21.23	21.29	21.32	21.21	21.26	0	21.50
		50	0	19.32	19.25	19.30	19.29	19.65	0	19.75	21.30	21.45	21.31	21.45	21.36	0	21.50
		50	24	19.35	19.28	19.73	19.29	19.67	0	19.75	21.30	21.43	21.37	21.47	21.28	0	21.50
		50	50	19.31	19.27	19.17	19.43	19.68	0	19.75	21.23	21.27	21.27	21.47	21.27	0	21.50
		100	0	19.18	19.28	19.70	19.30	19.67	0	19.75	21.23	21.43	21.28	21.46	21.27	0	21.50
	16QAM	1	0	19.38	19.40	19.56	19.41	19.41	0	19.75	21.34	21.30	21.26	21.43	21.43	0	21.50
		1	49	19.30	19.41	19.37	19.40	19.57	0	19.75	21.49	21.21	21.39	21.27	21.21	0	21.50
		1	99	19.46	19.38	19.20	19.71	19.42	0	19.75	21.44	21.39	21.45	21.35	21.25	0	21.50
		50	0	19.32	19.29	19.34	19.32	19.32	0	19.75	21.22	20.79	20.86	21.05	20.75	0	21.50
		50	24	19.27	19.32	19.25	19.32	19.72	0	19.75	21.14	20.75	20.84	21.03	20.65	0	21.50
		50	50	19.29	19.32	19.19	19.47	19.71	0	19.75	21.12	20.85	20.72	21.00	20.64	0	21.50
		100	0	19.24	19.31	19.25	19.31	19.70	0	19.75	21.11	20.77	20.75	21.00	20.63	0	21.50
	64QAM	1	0	19.28	19.38	19.51	19.37	19.39	0	19.75	21.10	21.43	21.05	21.29	21.33	0	21.50
		1	49	19.43	19.44	19.36	19.27	19.40	0	19.75	21.27	21.49	20.93	21.17	21.12	0	21.50
		1	99	19.50	19.40	19.21	19.66	19.38	0	19.75	21.39	21.37	21.01	21.23	21.16	0	21.50
		50	0	19.38	19.36	19.36	19.30	19.56	0	19.75	21.19	21.20	21.48	21.24	21.10	0	21.50
		50	24	19.30	19.40	19.27	19.30	19.66	0	19.75	21.13	21.24	21.38	21.17	21.05	0	21.50
		50	50	19.36	19.39	19.20	19.44	19.36	0	19.75	21.22	21.24	21.29	21.28	21.07	0	21.50
		100	0	19.25	19.38	19.26	19.28	19.74	0	19.75	21.15	21.24	20.89	21.16	21.03	0	21.50

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		
15 MHz	QPSK	1	0	19.26	19.32	19.27	19.68	19.67	0	19.75	21.42	21.02	21.48	21.45	21.48	0	21.50
		1	37	19.13	19.29	19.09	19.69	19.48	0	19.75	21.45	21.41	21.45	21.35	21.33	0	21.50
		1	74	19.13	19.25	19.00	19.67	19.54	0	19.75	21.47	21.37	21.49	21.46	21.26	0	21.50
		36	0	19.20	19.27	19.14	19.74	19.51	0	19.75	21.47	21.48	21.44	21.45	21.34	0	21.50
		36	20	19.18	19.31	19.05	19.35	19.49	0	19.75	21.47	21.46	21.46	21.41	21.31	0	21.50
		36	39	19.23	19.31	19.05	19.60	19.63	0	19.75	21.45	21.46	21.44	21.42	21.28	0	21.50
		75	0	19.15	19.31	19.68	19.47	19.52	0	19.75	21.44	21.46	21.43	21.42	21.28	0	21.50
	16QAM	1	0	19.40	19.43	19.65	19.61	19.69	0	19.75	21.49	21.43	21.46	21.29	21.49	0	21.50
		1	37	19.39	19.42	19.34	19.70	19.65	0	19.75	21.43	21.24	21.40	21.25	21.38	0	21.50
		1	74	19.53	19.39	19.40	19.30	19.62	0	19.75	21.44	21.49	21.40	21.37	21.28	0	21.50
		36	0	19.48	19.33	19.67	19.72	19.58	0	19.75	21.02	21.05	20.51	21.04	20.69	0	21.50
		36	20	19.38	19.36	19.58	19.35	19.49	0	19.75	21.01	21.02	20.68	20.99	20.63	0	21.50
		36	39	19.40	19.37	19.73	19.32	19.50	0	19.75	21.00	21.03	20.67	21.00	20.61	0	21.50
		75	0	19.32	19.36	19.59	19.31	19.50	0	19.75	21.00	21.03	20.65	21.01	20.60	0	21.50
	64QAM	1	0	19.54	19.42	19.64	19.20	19.67	0	19.75	21.48	21.36	21.22	21.38	21.18	0	21.50
		1	37	19.34	19.33	19.55	19.14	19.67	0	19.75	21.34	21.36	21.34	21.26	21.12	0	21.50
		1	74	19.43	19.35	19.45	19.23	19.63	0	19.75	21.35	21.34	21.42	21.10	21.20	0	21.50
		36	0	19.48	19.30	19.65	19.17	19.61	0	19.75	20.80	21.02	20.96	20.61	21.13	0	21.50
		36	20	19.37	19.33	19.61	19.17	19.53	0	19.75	20.79	21.00	20.98	20.67	21.07	0	21.50
		36	39	19.40	19.33	19.62	19.29	19.54	0	19.75	20.78	21.04	20.98	20.66	21.14	0	21.50
		75	0	19.30	19.27	19.62	19.16	19.53	0	19.75	20.78	20.95	20.94	20.64	21.04	0	21.50

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		
10 MHz	QPSK	1	0	19.26	19.16	19.22	19.13	19.62	0	19.75	21.46	21.45	21.48	21.45	21.40	0	21.50
		1	25	19.13	19.15	19.12	19.11	19.48	0	19.75	21.28	21.46	21.40	21.43	21.33	0	21.50
		1	49	19.24	19.15	19.01	19.24	19.52	0	19.75	21.50	21.44	21.50	21.42	21.34	0	21.50
		25	0	19.13	19.19	19.13	19.12	19.51	0	19.75	21.34	21.43	21.48	21.42	21.30	0	21.50
		25	12	19.17	19.17	19.11	19.11	19.50	0	19.75	21.24	21.43	21.44	21.41	21.30	0	21.50
		25	25	19.21	19.18	19.04	19.18	19.51	0	19.75	21.21	21.48	21.48	21.43	21.30	0	21.50
		50	0	19.17	19.18	19.11	19.12	19.51	0	19.75	21.50	21.34	21.48	21.42	21.31	0	21.50
	16QAM	1	0	19.32	19.20	19.27	19.17	19.72	0	19.75	21.49	21.39	21.26	21.39	21.40	0	21.50
		1	25	19.23	19.20	19.16	19.16	19.62	0	19.75	21.31	21.48	21.27	21.38	21.37	0	21.50
		1	49	19.33	19.21	19.10	19.31	19.64	0	19.75	21.23	21.49	21.36	21.30	21.36	0	21.50
		25	0	19.18	19.24	19.19	19.18	19.58	0	19.75	21.26	20.98	20.51	20.99	20.64	0	21.50
		25	12	19.21	19.24	19.17	19.17	19.59	0	19.75	21.17	20.96	20.70	20.98	20.63	0	21.50
		25	25	19.25	19.23	19.11	19.24	19.58	0	19.75	21.17	20.97	20.53	20.97	20.63	0	21.50
		50	0	19.21	19.22	19.16	19.17	19.56	0	19.75	21.18	21.02	20.69	20.99	20.62	0	21.50
	64QAM	1	0	19.20	19.20	19.28	19.17	19.75	0	19.75	21.39	21.13	21.36	21.28	21.24	0	21.50
		1	25	19.07	19.24	19.10	19.13	19.58	0	19.75	21.25	21.22	21.33	21.23	21.09	0	21.50
		1	49	19.28	19.20	19.02	19.28	19.59	0	19.75	21.42	21.21	21.40	21.48	21.18	0	21.50
		25	0	19.15	19.26	19.20	19.22	19.59	0	19.75	21.25	21.31	21.48	21.33	21.05	0	21.50
		25	12	19.20	19.27	19.18	19.22	19.59	0	19.75	21.28	21.30	21.48	21.33	21.05	0	21.50
		25	25	19.24	19.28	19.12	19.27	19.59	0	19.75	21.32	21.29	21.49	21.39	21.14	0	21.50
		50	0	19.20	19.27	19.18	19.27	19.59	0	19.75	21.28	21.28	21.49	21.34	21.04	0	21.50

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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	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	19.07	19.22	19.22	19.22	19.58	0	19.75	21.39	20.95	21.33	21.03	21.50	0	21.50
		1	12	19.14	19.22	19.20	19.12	19.57	0	19.75	21.34	21.36	21.30	21.00	21.48	0	21.50
		1	24	19.10	19.26	19.20	19.25	19.61	0	19.75	21.37	21.30	21.36	21.06	21.49	0	21.50
		12	0	18.95	19.19	19.19	19.11	19.44	0	19.75	21.33	21.44	21.31	21.01	21.40	0	21.50
		12	7	18.99	19.17	19.15	19.09	19.43	0	19.75	21.25	21.42	21.31	21.01	21.39	0	21.50
		12	13	18.98	19.17	19.17	19.10	19.43	0	19.75	21.27	21.38	21.31	21.01	21.39	0	21.50
		25	0	19.02	19.12	19.17	19.11	19.44	0	19.75	21.27	21.41	21.30	21.00	21.40	0	21.50
	16QAM	1	0	19.06	19.21	19.27	19.19	19.56	0	19.75	21.38	21.26	21.27	21.27	21.44	0	21.50
		1	12	19.07	19.18	19.17	19.14	19.55	0	19.75	21.31	21.48	21.18	21.18	21.48	0	21.50
		1	24	19.14	19.25	19.10	19.25	19.58	0	19.75	21.35	21.46	21.16	21.16	21.46	0	21.50
		12	0	18.89	19.16	19.08	19.09	19.49	0	19.75	21.15	21.50	21.47	21.47	21.31	0	21.50
		12	7	18.99	19.11	19.08	19.09	19.46	0	19.75	21.16	21.47	21.48	21.48	21.30	0	21.50
		12	13	18.97	19.09	19.07	19.07	19.43	0	19.75	21.13	21.45	21.47	21.47	21.30	0	21.50
		25	0	18.97	19.10	19.05	19.07	19.43	0	19.75	21.16	21.36	21.46	21.47	21.31	0	21.50
	64QAM	1	0	19.03	19.28	19.27	19.15	19.70	0	19.75	21.25	21.34	21.48	21.24	21.48	0	21.50
		1	12	19.04	19.28	19.30	19.19	19.58	0	19.75	21.26	21.29	21.42	21.20	21.41	0	21.50
		1	24	19.13	19.37	19.22	19.23	19.38	0	19.75	21.36	21.29	21.48	21.37	21.48	0	21.50
		12	0	18.98	19.28	19.17	19.08	19.62	0	19.75	21.10	21.15	21.30	21.13	21.27	0	21.50
		12	7	19.01	19.15	19.16	19.07	19.61	0	19.75	21.17	21.11	21.30	21.12	21.26	0	21.50
		12	13	19.02	18.96	19.15	19.07	19.56	0	19.75	21.14	21.13	21.30	21.13	21.28	0	21.50
		25	0	19.00	19.13	19.11	19.09	19.51	0	19.75	21.14	21.13	21.31	21.10	21.29	0	21.50

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LTE Band 48 Measured Results (ANT3)

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.

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	25.53	25.68	25.12	25.63	0	25.7	23.50	23.62	23.90	23.52	0	24
		1	49	25.45	25.61	25.65	25.47	0	25.7	23.69	23.70	23.90	23.60	0	24
		1	99	25.46	25.63	24.94	25.70	0	25.7	23.66	23.83	23.82	23.64	0	24
		50	0	24.43	23.76	23.94	24.51	1	24.7	23.61	23.53	23.77	23.35	0	24
		50	24	24.43	23.77	24.48	24.47	1	24.7	23.60	23.29	23.90	23.44	0	24
		50	50	24.37	23.84	23.93	24.50	1	24.7	23.60	23.59	23.81	23.44	0	24
		100	0	24.51	23.92	24.01	24.52	1	24.7	23.50	23.38	23.60	23.19	0	24
	16QAM	1	0	24.61	23.71	24.35	24.69	1	24.7	23.96	23.84	23.85	23.63	0	24
		1	49	24.54	23.71	24.03	24.56	1	24.7	23.92	23.76	23.84	23.50	0	24
		1	99	24.58	23.72	24.09	24.60	1	24.7	23.90	23.83	23.98	23.76	0	24
		50	0	23.41	22.73	22.91	23.40	2	23.7	23.03	22.92	23.18	22.77	0.3	23.7
		50	24	23.42	22.75	22.86	23.36	2	23.7	22.81	22.71	22.90	22.80	0.3	23.7
		50	50	23.33	22.84	22.86	23.43	2	23.7	22.99	23.00	23.21	22.86	0.3	23.7
		100	0	23.53	22.86	22.99	23.47	2	23.7	22.95	22.84	23.04	22.71	0.3	23.7
	64QAM	1	0	23.50	22.99	23.36	23.69	2	23.7	23.42	23.15	23.31	23.50	0.3	23.7
		1	49	23.44	22.97	23.08	23.53	2	23.7	23.41	23.15	23.27	23.57	0.3	23.7
		1	99	23.42	23.23	23.18	23.60	2	23.7	23.51	23.28	23.22	23.66	0.3	23.7
		50	0	22.39	22.23	22.39	22.44	3	22.7	22.24	22.43	22.66	22.26	1.3	22.7
		50	24	22.41	22.27	22.39	22.42	3	22.7	22.29	22.48	22.58	22.31	1.3	22.7
		50	50	22.35	22.28	22.43	22.49	3	22.7	22.30	22.47	22.62	22.33	1.3	22.7
		100	0	22.55	22.41	22.49	22.55	3	22.7	22.36	22.55	22.63	22.39	1.3	22.7
BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)						Power Mode B (dBm)					
				55315	55765	56215	56665	MPR	Tune-up Limit	55315	55765	56215	56665	MPR	Tune-up Limit
				3557.5 MHz	3602.5 MHz	3647.5 MHz	3692.5 MHz			3557.5 MHz	3602.5 MHz	3647.5 MHz	3692.5 MHz		
15 MHz	QPSK	1	0	25.32	25.01	25.20	25.34	0	25.7	23.64	23.27	23.93	23.44	0	24
		1	37	25.26	25.02	25.12	25.43	0	25.7	23.42	23.09	23.60	23.14	0	24
		1	74	25.33	25.19	25.08	25.56	0	25.7	23.64	23.41	23.95	23.61	0	24
		36	0	24.17	23.99	24.16	24.29	1	24.7	23.57	23.11	23.78	23.33	0	24
		36	20	24.20	24.03	24.07	24.35	1	24.7	23.61	23.83	23.79	23.34	0	24
		36	39	24.21	24.04	24.12	24.37	1	24.7	23.49	23.21	23.80	23.42	0	24
		75	0	24.26	24.08	24.12	24.41	1	24.7	23.40	23.45	23.56	23.12	0	24
	16QAM	1	0	24.28	24.12	24.37	24.39	1	24.7	23.67	23.50	23.94	23.52	0	24
		1	37	24.24	24.13	24.23	24.44	1	24.7	23.45	23.25	23.61	23.19	0	24
		1	74	24.25	24.23	24.24	24.50	1	24.7	23.68	23.62	23.99	23.64	0	24
		36	0	23.09	22.94	23.09	23.20	2	23.7	23.54	22.82	23.16	23.61	0.3	23.7
		36	20	23.11	22.97	23.02	23.24	2	23.7	23.49	23.64	23.66	23.21	0.3	23.7
		36	39	23.11	22.96	23.05	23.26	2	23.7	23.38	23.09	23.67	23.26	0.3	23.7
		75	0	23.20	23.06	23.09	23.35	2	23.7	23.31	23.66	23.46	23.02	0.3	23.7
	64QAM	1	0	23.28	23.18	23.30	23.34	2	23.7	23.42	23.15	23.31	23.50	0.3	23.7
		1	37	23.24	23.24	23.27	23.42	2	23.7	23.41	23.15	23.27	23.57	0.3	23.7
		1	74	23.34	23.23	23.19	23.48	2	23.7	23.51	23.28	23.22	23.66	0.3	23.7
		36	0	22.10	22.39	22.64	22.13	3	22.7	22.24	22.43	22.66	22.26	1.3	22.7
		36	20	22.13	22.43	22.58	22.19	3	22.7	22.29	22.48	22.58	22.31	1.3	22.7
		36	39	22.11	22.43	22.60	22.22	3	22.7	22.30	22.47	22.62	22.33	1.3	22.7
		75	0	22.16	22.50	22.63	22.31	3	22.7	22.4	22.5	22.6	22.4	1.3	22.7
BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)						Power Mode B (dBm)					
				55290	55757	56223	56690	MPR	Tune-up Limit	55290	55757	56223	56690	MPR	Tune-up Limit
				3555 MHz	3601.7 MHz	3648.3 MHz	3695 MHz			3555 MHz	3601.7 MHz	3648.3 MHz	3695 MHz		
10 MHz	QPSK	1	0	25.53	25.19	25.31	25.59	0	25.7	23.74	23.43	23.94	23.49	0	24
		1	25	25.33	24.95	24.95	25.43	0	25.7	23.49	23.18	23.72	23.29	0	24
		1	49	25.67	25.24	25.20	25.66	0	25.7	23.78	23.44	23.94	23.60	0	24
		25	0	24.38	24.09	24.16	24.47	1	24.7	23.67	23.34	23.86	23.38	0	24
		25	12	24.38	24.05	24.12	24.42	1	24.7	23.64	23.36	23.80	23.31	0	24
		25	25	24.50	24.10	24.19	24.48	1	24.7	23.65	23.25	23.85	23.43	0	24
		50	0	24.50	24.12	24.22	24.53	1	24.7	23.49	23.16	23.68	23.21	0	24
	16QAM	1	0	24.65	24.29	24.44	24.53	1	24.7	23.81	23.44	23.82	23.57	0	24
		1	25	24.47	24.13	24.13	24.29	1	24.7	23.69	23.19	23.81	23.28	0	24
		1	49	24.65	24.36	24.33	24.64	1	24.7	23.89	23.40	23.80	23.68	0	24
		25	0	23.26	22.97	23.02	23.28	2	23.7	22.99	22.80	23.15	22.78	0.3	23.7
		25	12	23.24	22.99	22.95	23.23	2	23.7	22.98	22.75	23.09	22.72	0.3	23.7
		25	25	23.37	23.04	23.03	23.30	2	23.7	22.98	22.74	23.14	22.72	0.3	23.7
		50	0	23.42	23.16	23.21	23.46	2	23.7	22.91	22.76	23.09	22.79	0.3	23.7
	64QAM	1	0	23.39	23.23	23.37	23.46	2	23.7	23.45	23.23	23.31	23.57	0.3	23.7
		1	25	23.19	22.99	23.02	23.25	2	23.7	23.29	23.01	23.00	23.36	0.3	23.7
		1	49	23.50	23.29	23.20	23.55	2	23.7	23.62	23.26	23.21	23.65	0.3	23.7
		25	0	22.16	22.51	22.53	22.28	3	22.7	22.18	22.51	22.50	22.28	1.3	22.7
		25	12	22.18	22.45	22.48	22.26	3	22.7	22.21	22.45	22.45	22.22	1.3	22.7
		25	25	22.30	22.52	22.56	22.32	3	22.7	22.31	22.51	22.54	22.30	1.3	22.7
		50	0	22.39	22.61	22.65	22.45	3	22.7	22.3	22.6	22.7	22.4	1.3	22.7

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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	25.40	25.08	25.23	25.62	0	25.7	23.70	23.60	23.89	23.44	0	24
		1	12	25.30	24.74	24.91	25.38	0	25.7	23.22	23.33	23.40	23.15	0	24
		1	24	25.57	25.25	25.24	25.65	0	25.7	23.73	23.77	23.87	23.44	0	24
		12	0	24.34	24.00	24.02	24.46	1	24.7	23.61	23.52	23.74	23.25	0	24
		12	7	24.25	23.93	23.97	24.37	1	24.7	23.51	23.53	23.69	23.20	0	24
		12	13	24.36	23.98	24.02	24.43	1	24.7	23.54	23.53	23.74	23.24	0	24
		25	0	24.44	24.15	24.16	24.55	1	24.7	23.50	23.31	23.60	23.16	0	24
	16QAM	1	0	24.29	24.19	24.24	24.62	1	24.7	23.81	23.64	23.86	23.48	0	24
		1	12	24.22	23.98	24.05	24.32	1	24.7	23.26	23.35	23.36	23.06	0	24
		1	24	24.52	24.19	24.23	24.58	1	24.7	23.72	23.84	23.86	23.52	0	24
		12	0	23.01	22.86	22.80	23.27	2	23.7	22.91	22.92	23.02	22.72	0.3	23.7
		12	7	23.00	22.80	22.80	23.18	2	23.7	22.81	22.91	22.91	22.76	0.3	23.7
		12	13	23.10	22.86	22.81	23.19	2	23.7	22.81	22.91	22.97	22.72	0.3	23.7
		25	0	23.26	23.02	23.01	23.40	2	23.7	22.78	22.74	22.93	22.74	0.3	23.7
	64QAM	1	0	23.14	23.01	23.24	23.33	2	23.7	23.49	23.17	23.15	23.52	0.3	23.7
		1	12	22.96	22.89	23.04	23.13	2	23.7	23.34	23.01	22.91	23.13	0.3	23.7
		1	24	23.34	23.10	23.30	23.37	2	23.7	23.60	23.23	23.12	23.40	0.3	23.7
		12	0	21.97	22.46	22.22	21.94	3	22.7	22.03	22.34	22.11	22.10	1.3	22.7
		12	7	21.94	22.27	22.18	21.84	3	22.7	21.92	22.24	22.29	22.15	1.3	22.7
		12	13	22.15	22.40	22.40	21.88	3	22.7	22.11	22.08	22.32	22.25	1.3	22.7
		25	0	22.23	22.49	22.49	22.39	3	22.7	22.37	22.50	22.63	22.29	1.3	22.7

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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	22.14	22.34	22.38	21.82	0	22.5	22.14	22.34	22.38	21.82	0	22.5
		1	49	22.04	22.27	22.40	21.78	0	22.5	22.20	22.40	22.40	22.00	0	22.5
		1	99	22.12	22.35	22.32	22.03	0	22.5	22.12	22.40	22.32	22.03	0	22.5
		50	0	21.07	21.31	21.26	20.78	1	21.5	21.07	21.31	21.26	20.78	1	21.5
		50	24	20.85	21.08	21.30	20.61	1	21.5	21.10	21.30	21.30	21.00	1	21.5
		50	50	21.05	21.32	21.30	21.00	1	21.5	21.05	21.32	21.30	21.00	1	21.5
		100	0	20.96	21.18	21.09	20.74	1	21.5	20.96	21.18	21.09	20.74	1	21.5
	16QAM	1	0	21.30	21.46	21.41	21.01	1	21.5	21.30	21.46	21.41	21.01	1	21.5
		1	49	21.24	21.44	21.37	20.91	1	21.5	21.24	21.44	21.37	20.91	1	21.5
		1	99	21.34	21.34	21.41	21.16	1	21.5	21.34	21.34	21.41	21.16	1	21.5
		50	0	20.04	20.27	20.23	19.74	2	20.5	20.04	20.27	20.23	19.74	2	20.5
		50	24	19.83	20.06	19.97	19.59	2	20.5	19.83	20.06	19.97	19.59	2	20.5
		50	50	20.02	20.28	20.27	19.96	2	20.5	20.02	20.28	20.27	19.96	2	20.5
		100	0	19.96	20.17	20.07	19.71	2	20.5	19.96	20.17	20.07	19.71	2	20.5
	64QAM	1	0	20.48	20.28	20.20	20.27	2	20.5	20.48	20.28	20.20	20.27	2	20.5
		1	49	20.26	20.44	20.38	19.94	2	20.5	20.26	20.44	20.38	19.94	2	20.5
		1	99	20.37	20.47	20.32	20.16	2	20.5	20.37	20.47	20.32	20.16	2	20.5
		50	0	19.04	19.28	19.16	18.72	3	19.5	19.04	19.28	19.16	18.72	3	19.5
		50	24	18.82	19.05	18.92	18.57	3	19.5	18.82	19.05	18.92	18.57	3	19.5
		50	50	19.00	19.30	19.23	18.95	3	19.5	19.00	19.30	19.23	18.95	3	19.5
		100	0	18.96	19.19	19.01	18.71	3	19.5	18.96	19.19	19.01	18.71	3	19.5

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)						Power Mode B (dBm)					
				55315	55765	56215	56665	MPR	Tune-up Limit	55315	55765	56215	56665	MPR	Tune-up Limit
				3557.5 MHz	3602.5 MHz	3647.5 MHz	3692.5 MHz			3557.5 MHz	3602.5 MHz	3647.5 MHz	3692.5 MHz		
15 MHz	QPSK	1	0	22.08	22.36	22.32	21.82	0	22.5	22.08	22.36	22.32	21.82	0	22.5
		1	37	21.80	22.16	21.76	21.62	0	22.5	21.80	22.16	21.76	21.62	0	22.5
		1	74	22.17	22.41	21.99	21.94	0	22.5	22.17	22.41	21.99	21.94	0	22.5
		36	0	20.95	21.35	21.14	20.81	1	21.5	20.95	21.35	21.14	20.81	1	21.5
		36	20	21.01	21.28	21.05	20.95	1	21.5	21.01	21.28	21.05	20.95	1	21.5
		36	39	21.02	21.33	20.92	20.89	1	21.5	21.02	21.33	20.92	20.89	1	21.5
		75	0	20.82	21.17	20.85	20.77	1	21.5	20.82	21.17	20.85	20.77	1	21.5
	16QAM	1	0	21.12	21.44	21.35	20.83	1	21.5	21.12	21.44	21.35	20.83	1	21.5
		1	37	20.87	21.33	20.85	20.68	1	21.5	20.87	21.33	20.85	20.68	1	21.5
		1	74	21.23	21.42	21.10	20.97	1	21.5	21.23	21.42	21.10	20.97	1	21.5
		36	0	19.90	20.27	20.07	19.74	2	20.5	19.90	20.27	20.07	19.74	2	20.5
		36	20	19.95	20.19	19.98	19.88	2	20.5	19.95	20.19	19.98	19.88	2	20.5
		36	39	19.96	20.24	19.87	19.83	2	20.5	19.96	20.24	19.87	19.83	2	20.5
		75	0	19.77	20.13	19.78	19.70	2	20.5	19.77	20.13	19.78	19.70	2	20.5
	64QAM	1	0	20.14	20.42	20.48	19.87	2	20.5	20.14	20.42	20.48	19.87	2	20.5
		1	37	19.89	20.28	19.89	19.81	2	20.5	19.89	20.28	19.89	19.81	2	20.5
		1	74	20.23	20.43	20.11	20.03	2	20.5	20.23	20.43	20.11	20.03	2	20.5
		36	0	18.87	19.29	19.04	18.67	3	19.5	18.87	19.29	19.04	18.67	3	19.5
		36	20	18.92	19.22	18.97	18.83	3	19.5	18.92	19.22	18.97	18.83	3	19.5
		36	39	18.95	19.29	18.83	18.77	3	19.5	18.95	19.29	18.83	18.77	3	19.5
		75	0	18.75	19.19	18.78	18.65	3	19.5	18.75	19.19	18.78	18.65	3	19.5

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)						Power Mode B (dBm)					
				55290	55757	56223	56690	MPR	Tune-up Limit	55290	55757	56223	56690	MPR	Tune-up Limit
				3555 MHz	3601.7 MHz	3648.3 MHz	3695 MHz			3555 MHz	3601.7 MHz	3648.3 MHz	3695 MHz		
10 MHz	QPSK	1	0	22.11	22.11	22.32	22.01	0	22.5	22.11	22.11	22.32	22.01	0	22.5
		1	25	21.82	21.87	22.10	21.87	0	22.5	21.82	21.87	22.10	21.87	0	22.5
		1	49	22.25	22.25	22.23	21.89	0	22.5	22.25	22.25	22.23	21.89	0	22.5
		25	0	20.97	20.90	21.27	20.98	1	21.5	20.97	20.90	21.27	20.98	1	21.5
		25	12	20.95	20.90	21.21	20.84	1	21.5	20.95	20.90	21.21	20.84	1	21.5
		25	25	21.07	21.02	21.26	20.83	1	21.5	21.07	21.02	21.26	20.83	1	21.5
		50	0	20.80	20.76	21.10	20.74	1	21.5	20.80	20.76	21.10	20.74	1	21.5
	16QAM	1	0	21.26	21.20	21.47	21.08	1	21.5	21.26	21.20	21.47	21.08	1	21.5
		1	25	21.06	21.00	21.21	20.82	1	21.5	21.06	21.00	21.21	20.82	1	21.5
		1	49	21.43	21.39	21.46	21.09	1	21.5	21.43	21.39	21.46	21.09	1	21.5
		25	0	19.88	19.85	20.20	19.87	2	20.5	19.88	19.85	20.20	19.87	2	20.5
		25	12	19.87	19.83	20.14	19.74	2	20.5	19.87	19.83	20.14	19.74	2	20.5
		25	25	19.97	19.94	20.18	19.74	2	20.5	19.97	19.94	20.18	19.74	2	20.5
		50	0	19.77	19.75	20.09	19.69	2	20.5	19.77	19.75	20.09	19.69	2	20.5
	64QAM	1	0	20.21	20.21	20.09	19.97	2	20.5	20.21	20.21	20.09	19.97	2	20.5
		1	25	19.96	19.87	20.15	19.79	2	20.5	19.96	19.87	20.15	19.79	2	20.5
		1	49	20.36	20.32	20.28	20.00	2	20.5	20.36	20.32	20.28	20.00	2	20.5
		25	0	18.89	18.85	19.17	18.90	3	19.5	18.89	18.85	19.17	18.90	3	19.5
		25	12	18.87	18.86	19.11	18.77	3	19.5	18.87	18.86	19.11	18.77	3	19.5
		25	25	18.97	18.94	19.17	18.76	3	19.5	18.97	18.94	19.17	18.76	3	19.5
		50	0	18.81	18.79	19.10	18.74	3	19.5	18.81	18.79	19.10	18.74	3	19.5

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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	21.57	22.37	22.31	22.00	0	22.5	21.57	22.37	22.31	22.00	0	22.5
		1	12	21.62	21.91	21.83	22.35	0	22.5	21.56	21.91	21.83	21.55	0	22.5
		1	24	22.00	22.41	22.26	21.85	0	22.5	22.00	22.41	22.26	21.85	0	22.5
		12	0	20.79	21.31	21.14	20.81	1	21.5	20.79	21.31	21.14	20.81	1	21.5
		12	7	20.72	21.25	21.09	20.67	1	21.5	20.72	21.25	21.09	20.67	1	21.5
		12	13	20.84	21.25	21.14	20.71	1	21.5	20.84	21.25	21.14	20.71	1	21.5
		25	0	20.70	21.08	21.07	20.66	1	21.5	20.70	21.08	21.07	20.66	1	21.5
	16QAM	1	0	21.00	21.24	21.31	20.99	1	21.5	21.00	21.24	21.31	20.99	1	21.5
		1	12	20.60	20.86	20.90	20.56	1	21.5	20.60	20.86	20.90	20.56	1	21.5
		1	24	21.08	21.35	21.25	20.90	1	21.5	21.08	21.35	21.25	20.90	1	21.5
		12	0	19.73	20.11	20.06	19.68	2	20.5	19.73	20.11	20.06	19.68	2	20.5
		12	7	19.60	20.04	19.95	19.51	2	20.5	19.60	20.04	19.95	19.51	2	20.5
		12	13	19.72	20.10	19.97	19.57	2	20.5	19.72	20.10	19.97	19.57	2	20.5
		25	0	19.58	20.08	19.94	19.52	2	20.5	19.58	20.08	19.94	19.52	2	20.5
	64QAM	1	0	19.83	20.30	20.34	19.82	2	20.5	19.83	20.30	20.34	19.82	2	20.5
		1	12	19.57	19.91	19.75	19.59	2	20.5	19.57	19.91	19.75	19.59	2	20.5
		1	24	19.94	20.34	20.29	19.70	2	20.5	19.94	20.34	20.29	19.70	2	20.5
		12	0	18.58	19.07	19.01	18.60	3	19.5	18.58	19.07	19.01	18.60	3	19.5
		12	7	18.69	19.03	19.08	18.51	3	19.5	18.69	19.03	19.08	18.51	3	19.5
		12	13	18.84	19.04	19.09	18.62	3	19.5	18.84	19.04	19.09	18.62	3	19.5
		25	0	18.61	19.03	18.97	19.00	3	19.5	18.61	19.03	18.97	19.00	3	19.5

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LTE Band 66 Measured Results (ANT1)

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	25.48	25.45	25.44	0	25.70	21.40	21.31	21.22	0	21.50
		1	49	25.60	25.70	25.68	0	25.70	21.34	21.31	21.22	0	21.50
		1	99	25.54	25.65	25.42	0	25.70	21.12	21.21	21.31	0	21.50
		50	0	24.47	24.57	24.65	1	24.70	21.06	21.36	21.43	0	21.50
		50	24	24.60	24.70	24.70	1	24.70	21.32	21.28	21.50	0	21.50
		50	50	24.53	24.65	24.49	1	24.70	21.05	21.17	21.26	0	21.50
		100	0	24.60	24.70	24.70	1	24.70	21.30	21.20	21.46	0	21.50
	16QAM	1	0	24.59	24.45	24.48	1	24.70	21.12	21.21	21.11	0	21.50
		1	49	24.60	24.45	24.60	1	24.70	21.42	21.16	21.34	0	21.50
		1	99	24.69	24.63	24.41	1	24.70	21.13	21.15	21.25	0	21.50
		50	0	23.56	23.58	23.69	2	23.70	21.04	21.40	21.50	0	21.50
		50	24	23.60	23.45	23.66	2	23.70	21.09	21.30	21.47	0	21.50
		50	50	23.62	23.67	23.53	2	23.70	21.10	21.21	21.32	0	21.50
		100	0	23.59	23.41	23.62	2	23.70	21.08	21.25	21.44	0	21.50
	64QAM	1	0	23.47	23.43	23.30	2	23.70	21.27	21.34	21.19	0	21.50
		1	49	23.38	23.55	23.65	2	23.70	21.24	21.21	21.49	0	21.50
		1	99	23.55	23.65	23.38	2	23.70	21.34	21.20	21.29	0	21.50
		50	0	22.10	22.49	22.56	3	22.70	21.15	21.10	21.13	0	21.50
		50	24	22.13	22.37	22.54	3	22.70	21.21	21.33	21.35	0	21.50
		50	50	22.16	22.28	22.42	3	22.70	21.24	21.27	21.38	0	21.50
		100	0	22.14	22.34	22.50	3	22.70	21.19	21.31	21.50	0	21.50

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				132047	132322	132597	MPR	Tune-up Limit	132047	132322	132597	MPR	Tune-up Limit
				1717.5 MHz	1745 MHz	1772.5 MHz			1717.5 MHz	1745 MHz	1772.5 MHz		
15 MHz	QPSK	1	0	25.49	25.44	25.63	0	25.70	21.07	21.30	20.90	0	21.50
		1	37	25.43	25.61	25.53	0	25.70	21.03	21.21	21.32	0	21.50
		1	74	25.56	25.52	25.44	0	25.70	21.02	21.09	21.26	0	21.50
		36	0	24.56	24.52	24.69	1	24.70	21.06	21.34	21.46	0	21.50
		36	20	24.53	24.50	24.56	1	24.70	21.05	21.29	21.30	0	21.50
		36	39	24.56	24.67	24.59	1	24.70	21.05	21.16	21.32	0	21.50
		75	0	24.48	24.42	24.59	1	24.70	21.02	21.23	21.33	0	21.50
	16QAM	1	0	24.42	24.43	24.54	1	24.70	21.31	21.12	21.25	0	21.50
		1	37	24.62	24.67	24.61	1	24.70	21.37	21.02	21.18	0	21.50
		1	74	24.56	24.61	24.41	1	24.70	21.37	21.42	21.14	0	21.50
		36	0	23.57	23.59	23.50	2	23.70	21.10	21.38	20.95	0	21.50
		36	20	23.55	23.55	23.62	2	23.70	21.09	21.34	21.35	0	21.50
		36	39	23.56	23.70	23.62	2	23.70	21.07	21.21	21.35	0	21.50
		75	0	23.51	23.45	23.61	2	23.70	21.07	21.26	21.37	0	21.50
	64QAM	1	0	23.41	23.54	23.40	2	23.70	21.38	21.17	21.42	0	21.50
		1	37	23.39	23.45	23.51	2	23.70	21.41	21.41	21.45	0	21.50
		1	74	23.47	23.36	23.40	2	23.70	21.16	21.38	21.46	0	21.50
		36	0	22.20	22.50	22.55	3	22.70	21.15	21.49	21.09	0	21.50
		36	20	22.16	22.48	22.47	3	22.70	21.16	21.44	21.44	0	21.50
		36	39	22.19	22.32	22.47	3	22.70	21.24	21.30	21.42	0	21.50
		75	0	22.14	22.35	22.45	3	22.70	21.14	21.31	21.38	0	21.50

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				132022	132322	132622	MPR	Tune-up Limit	132022	132322	132622	MPR	Tune-up Limit
				1715 MHz	1745 MHz	1775 MHz			1715 MHz	1745 MHz	1775 MHz		
10 MHz	QPSK	1	0	25.49	25.49	25.62	0	25.70	21.06	21.25	21.42	0	21.50
		1	25	25.47	25.42	25.58	0	25.70	21.04	21.20	21.33	0	21.50
		1	49	25.60	25.56	25.50	0	25.70	21.07	21.11	21.34	0	21.50
		25	0	24.59	24.56	24.59	1	24.70	21.06	21.28	21.34	0	21.50
		25	12	24.50	24.49	24.59	1	24.70	21.00	21.22	21.34	0	21.50
		25	25	24.49	24.68	24.52	1	24.70	20.99	21.12	21.32	0	21.50
		50	0	24.48	24.43	24.58	1	24.70	21.01	21.19	21.34	0	21.50
	16QAM	1	0	24.64	24.64	24.56	1	24.70	21.29	21.18	21.34	0	21.50
		1	25	24.55	24.55	24.54	1	24.70	21.29	21.12	21.21	0	21.50
		1	49	24.64	24.66	24.66	1	24.70	21.30	21.44	21.23	0	21.50
		25	0	23.66	23.60	23.64	2	23.70	21.10	21.33	21.39	0	21.50
		25	12	23.57	23.53	23.62	2	23.70	21.06	21.27	21.40	0	21.50
		25	25	23.55	23.41	23.57	2	23.70	21.04	21.18	21.38	0	21.50
		50	0	23.52	23.46	23.63	2	23.70	21.06	21.23	21.40	0	21.50
	64QAM	1	0	23.36	23.65	23.67	2	23.70	21.36	21.21	21.21	0	21.50
		1	25	23.33	23.58	23.46	2	23.70	21.31	21.48	21.41	0	21.50
		1	49	23.32	23.52	23.52	2	23.70	21.34	21.42	21.47	0	21.50
		25	0	22.29	22.56	22.46	3	22.70	21.22	21.10	21.43	0	21.50
		25	12	22.20	22.49	22.47	3	22.70	21.17	21.39	21.42	0	21.50
		25	25	22.18	22.35	22.43	3	22.70	21.15	21.28	21.39	0	21.50
		50	0	22.18	22.41	22.48	3	22.70	21.19	21.32	21.42	0	21.50

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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	25.40	25.41	25.49	0	25.70	21.06	21.37	21.35	0	21.50
		1	12	25.41	25.61	25.47	0	25.70	21.02	21.17	21.29	0	21.50
		1	24	25.39	25.55	25.47	0	25.70	21.05	21.16	21.31	0	21.50
		12	0	24.43	24.68	24.51	1	24.70	20.98	21.19	21.32	0	21.50
		12	7	24.41	24.65	24.43	1	24.70	20.97	21.19	21.25	0	21.50
		12	13	24.34	24.57	24.41	1	24.70	20.92	21.12	21.28	0	21.50
		25	0	24.41	24.58	24.70	1	24.70	20.98	21.14	21.25	0	21.50
	16QAM	1	0	24.48	24.42	24.53	1	24.70	21.41	21.21	21.33	0	21.50
		1	12	24.53	24.53	24.56	1	24.70	21.28	21.38	21.24	0	21.50
		1	24	24.43	24.53	24.52	1	24.70	21.36	21.37	21.23	0	21.50
		12	0	23.41	23.66	23.49	2	23.70	20.94	21.19	21.29	0	21.50
		12	7	23.41	23.65	23.42	2	23.70	20.93	21.22	21.28	0	21.50
		12	13	23.39	23.58	23.48	2	23.70	20.91	21.15	21.29	0	21.50
		25	0	23.46	23.57	23.44	2	23.70	20.96	21.11	21.22	0	21.50
	64QAM	1	0	23.29	23.62	23.64	2	23.70	21.30	21.20	21.17	0	21.50
		1	12	23.23	23.47	23.64	2	23.70	21.18	21.35	21.14	0	21.50
		1	24	23.29	23.44	23.58	2	23.70	21.26	21.33	21.15	0	21.50
		12	0	22.11	22.27	22.35	3	22.70	21.00	21.25	21.25	0	21.50
		12	7	22.08	22.24	22.28	3	22.70	20.99	21.18	21.19	0	21.50
		12	13	22.01	22.16	22.26	3	22.70	20.94	21.09	21.22	0	21.50
		25	0	22.03	22.16	22.23	3	22.70	20.97	21.15	21.17	0	21.50

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	25.04	25.03	25.08	0	25.70	21.45	21.37	21.44	0	21.50
		1	8	25.01	25.04	25.11	0	25.70	21.39	21.41	21.33	0	21.50
		1	14	25.02	25.04	25.10	0	25.70	21.23	21.34	21.29	0	21.50
		8	0	23.93	23.96	23.95	1	24.70	21.25	21.24	21.20	0	21.50
		8	4	23.91	23.93	23.94	1	24.70	21.25	21.23	21.19	0	21.50
		8	7	23.93	23.95	23.93	1	24.70	21.26	21.24	21.19	0	21.50
		15	0	23.94	23.89	23.95	1	24.70	21.18	21.24	21.21	0	21.50
	16QAM	1	0	24.22	24.18	24.30	1	24.70	21.22	21.17	21.23	0	21.50
		1	8	24.19	24.29	24.33	1	24.70	21.22	21.24	21.19	0	21.50
		1	14	24.15	24.22	24.36	1	24.70	21.26	21.16	21.12	0	21.50
		8	0	22.88	22.88	22.97	2	23.70	21.27	21.27	21.22	0	21.50
		8	4	22.91	22.92	22.96	2	23.70	21.26	21.25	21.20	0	21.50
		8	7	22.90	22.94	22.95	2	23.70	21.23	21.28	21.22	0	21.50
		15	0	22.89	22.90	22.93	2	23.70	21.37	21.23	21.18	0	21.50
	64QAM	1	0	23.18	23.14	23.14	2	23.70	21.11	21.40	21.44	0	21.50
		1	8	23.11	23.10	23.20	2	23.70	21.44	21.47	21.43	0	21.50
		1	14	23.05	23.11	23.20	2	23.70	21.15	21.50	21.40	0	21.50
		8	0	21.89	21.85	21.95	3	22.70	21.16	21.16	21.13	0	21.50
		8	4	21.89	21.85	21.95	3	22.70	21.17	21.14	21.13	0	21.50
		8	7	21.88	21.85	21.94	3	22.70	21.15	21.18	21.12	0	21.50
		15	0	21.88	21.86	21.95	3	22.70	21.15	21.15	21.13	0	21.50

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	25.12	25.09	25.16	0	25.70	21.10	21.39	21.43	0	21.50
		1	3	25.05	25.03	25.06	0	25.70	21.41	21.35	21.34	0	21.50
		1	5	25.02	25.09	25.21	0	25.70	21.10	21.45	21.38	0	21.50
		3	0	24.97	24.94	25.00	0	25.70	21.36	21.36	21.32	0	21.50
		3	1	24.91	24.94	25.00	0	25.70	21.37	21.35	21.25	0	21.50
		3	3	24.90	24.97	24.95	0	25.70	21.37	21.34	21.25	0	21.50
		6	0	23.90	23.93	23.93	1	24.70	21.31	21.24	21.21	0	21.50
	16QAM	1	0	24.36	24.32	24.41	1	24.70	21.29	21.18	21.19	0	21.50
		1	3	24.29	24.30	24.37	1	24.70	21.26	21.18	21.11	0	21.50
		1	5	24.32	24.32	24.51	1	24.70	21.33	21.20	21.11	0	21.50
		3	0	24.14	24.07	24.15	1	24.70	21.45	21.31	21.40	0	21.50
		3	1	24.08	24.08	24.14	1	24.70	21.42	21.35	21.37	0	21.50
		3	3	24.06	24.09	24.15	1	24.70	21.44	21.37	21.34	0	21.50
		6	0	22.98	23.01	23.08	2	23.70	21.32	21.25	21.24	0	21.50
	64QAM	1	0	23.45	23.15	23.38	2	23.70	21.36	21.29	21.32	0	21.50
		1	3	23.34	23.08	23.40	2	23.70	21.31	21.18	21.23	0	21.50
		1	5	23.33	23.14	23.47	2	23.70	21.35	21.32	21.23	0	21.50
		3	0	23.22	22.94	23.06	2	23.70	21.45	21.41	21.42	0	21.50
		3	1	23.13	22.95	23.07	2	23.70	21.41	21.39	21.33	0	21.50
		3	3	23.08	22.93	23.08	2	23.70	21.39	21.36	21.33	0	21.50
		6	0	22.00	21.94	21.92	3	22.70	21.22	21.21	21.19	0	21.50

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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	21.03	21.13	21.09	0	21.25	21.38	21.35	21.32	0	21.50
		1	49	21.10	21.25	21.17	0	21.25	21.43	21.34	21.34	0	21.50
		1	99	21.09	21.19	21.13	0	21.25	21.40	21.43	21.36	0	21.50
		50	0	21.06	21.09	21.02	0	21.25	21.42	21.28	21.23	0	21.50
		50	24	21.22	21.07	21.10	0	21.25	21.42	21.31	21.34	0	21.50
		50	50	21.02	21.19	20.95	0	21.25	21.37	21.35	21.18	0	21.50
		100	0	21.23	21.16	21.11	0	21.25	21.43	21.36	21.33	0	21.50
	16QAM	1	0	21.17	21.24	21.20	0	21.25	21.31	21.42	21.32	0	21.50
		1	49	21.24	21.07	21.12	0	21.25	21.48	21.37	21.31	0	21.50
		1	99	21.20	21.20	21.18	0	21.25	21.32	21.49	21.38	0	21.50
		50	0	21.19	20.84	20.84	0	21.25	21.13	20.81	20.78	0	21.50
		50	24	21.17	20.88	20.84	0	21.25	21.19	20.85	20.79	0	21.50
		50	50	21.16	20.92	20.76	0	21.25	21.09	20.92	20.72	0	21.50
		100	0	21.20	20.87	20.82	0	21.25	21.17	20.83	20.78	0	21.50
	64QAM	1	0	21.19	21.24	21.06	0	21.25	21.28	21.40	21.38	0	21.50
		1	49	21.17	21.16	21.25	0	21.25	21.50	21.33	21.30	0	21.50
		1	99	21.25	21.24	21.24	0	21.25	21.40	21.48	21.41	0	21.50
		50	0	20.37	20.04	20.02	0.75	20.5	20.38	20.04	19.96	1	20.50
		50	24	20.44	20.05	20.01	0.75	20.5	20.42	20.06	19.99	1	20.50
		50	50	20.33	20.11	20.03	0.75	20.5	20.33	20.14	19.92	1	20.50
		100	0	20.43	20.07	20.08	0.75	20.5	20.41	20.06	19.98	1	20.50

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				132047	132322	132597	MPR	Tune-up Limit	132047	132322	132597	MPR	Tune-up Limit
				1717.5 MHz	1745 MHz	1772.5 MHz			1717.5 MHz	1745 MHz	1772.5 MHz		
15 MHz	QPSK	1	0	21.22	21.06	21.04	0	21.25	21.36	21.03	20.96	0	21.50
		1	37	21.01	20.68	20.64	0	21.25	21.25	21.11	21.12	0	21.50
		1	74	20.90	20.74	20.75	0	21.25	21.25	21.02	21.05	0	21.50
		36	0	20.90	20.61	20.64	0	21.25	21.39	21.01	20.95	0	21.50
		36	20	20.98	20.58	20.57	0	21.25	21.39	21.12	20.96	0	21.50
		36	39	20.96	20.69	20.57	0	21.25	21.37	21.04	20.93	0	21.50
		75	0	20.95	20.64	20.55	0	21.25	21.47	21.40	21.36	0	21.50
	16QAM	1	0	21.05	21.02	20.98	0	21.25	21.44	21.13	21.07	0	21.50
		1	37	20.87	21.01	20.99	0	21.25	21.32	21.25	21.23	0	21.50
		1	74	21.16	21.08	21.09	0	21.25	21.32	21.50	21.48	0	21.50
		36	0	21.03	20.83	20.88	0	21.25	21.04	20.82	20.85	0	21.50
		36	20	21.18	20.80	20.78	0	21.25	21.18	20.81	20.78	0	21.50
		36	39	21.19	20.92	20.79	0	21.25	21.19	20.94	20.76	0	21.50
		75	0	21.16	20.84	20.74	0	21.25	21.17	20.84	20.73	0	21.50
	64QAM	1	0	21.17	21.01	21.13	0	21.25	21.44	21.25	21.15	0	21.50
		1	37	21.15	20.98	21.09	0	21.25	21.37	21.20	21.09	0	21.50
		1	74	21.04	21.03	21.13	0	21.25	21.49	21.20	21.20	0	21.50
		36	0	20.27	20.05	20.03	0.75	20.5	20.23	20.02	19.97	1	20.50
		36	20	20.41	20.04	20.01	0.75	20.5	20.43	20.04	19.94	1	20.50
		36	39	20.42	20.15	20.03	0.75	20.5	20.44	20.14	19.95	1	20.50
		75	0	20.38	20.04	20.08	0.75	20.5	20.37	20.04	19.89	1	20.50

BW (MHz)	Mode	RB Allocation	RB offset	Power Mode A (dBm)					Power Mode B (dBm)				
				132022	132322	132622	MPR	Tune-up Limit	132022	132322	132622	MPR	Tune-up Limit
				1715 MHz	1745 MHz	1775 MHz			1715 MHz	1745 MHz	1775 MHz		
10 MHz	QPSK	1	0	20.97	20.58	20.62	0	21.25	21.49	21.27	21.37	0	21.50
		1	25	21.10	20.72	20.78	0	21.25	21.31	20.99	21.02	0	21.50
		1	49	20.79	20.61	20.56	0	21.25	21.50	21.14	21.17	0	21.50
		25	0	20.92	20.58	20.60	0	21.25	21.18	21.01	20.96	0	21.50
		25	12	20.97	20.71	20.69	0	21.25	21.30	20.98	20.99	0	21.50
		25	25	20.92	20.67	20.56	0	21.25	21.38	21.11	21.06	0	21.50
		50	0	21.09	21.02	21.04	0	21.25	21.30	21.04	20.99	0	21.50
	16QAM	1	0	21.21	20.94	20.97	0	21.25	21.46	21.37	21.50	0	21.50
		1	25	21.23	21.07	21.12	0	21.25	21.32	21.33	21.43	0	21.50
		1	49	20.63	20.43	20.37	0	21.25	20.75	21.49	20.54	0	21.50
		25	0	21.03	20.83	20.77	0	21.25	21.00	20.81	20.79	0	21.50
		25	12	21.13	20.80	20.78	0	21.25	21.10	20.79	20.80	0	21.50
		25	25	21.21	20.93	20.91	0	21.25	21.19	20.93	20.90	0	21.50
		50	0	21.12	20.86	20.79	0	21.25	21.09	20.86	20.78	0	21.50
	64QAM	1	0	21.05	21.19	21.21	0	21.25	21.34	21.25	21.28	0	21.50
		1	25	21.14	21.22	21.10	0	21.25	21.41	21.16	21.15	0	21.50
		1	49	21.15	21.04	21.04	0	21.25	21.37	21.35	21.27	0	21.50
		25	0	20.18	20.06	20.01	0.75	20.5	20.19	20.04	19.93	1	20.50
		25	12	20.33	20.02	20.03	0.75	20.5	20.32	20.04	19.98	1	20.50
		25	25	20.40	20.17	20.08	0.75	20.5	20.42	20.18	20.05	1	20.50
		50	0	20.34	20.06	20.03	0.75	20.5	20.33	20.09	19.96	1	20.50

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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	21.07	21.04	20.98	0	21.25	21.35	21.22	21.19	0	21.50
		1	12	21.10	21.01	21.03	0	21.25	21.31	21.20	21.18	0	21.50
		1	24	21.21	21.13	21.19	0	21.25	21.42	21.29	21.37	0	21.50
		12	0	21.00	20.93	20.95	0	21.25	21.26	21.10	21.11	0	21.50
		12	7	20.98	20.91	20.98	0	21.25	21.26	21.07	21.13	0	21.50
		12	13	21.04	20.97	21.03	0	21.25	21.33	21.11	21.20	0	21.50
		25	0	20.96	20.97	20.98	0	21.25	21.25	21.12	21.14	0	21.50
	16QAM	1	0	21.00	20.93	21.01	0	21.25	21.38	21.29	21.34	0	21.50
		1	12	21.02	20.93	21.03	0	21.25	21.41	21.24	21.40	0	21.50
		1	24	21.12	20.96	21.18	0	21.25	21.35	21.33	21.36	0	21.50
		12	0	20.77	20.64	20.66	0	21.25	20.80	20.62	20.66	0	21.50
		12	7	20.75	20.69	20.78	0	21.25	20.78	20.59	20.70	0	21.50
		12	13	20.80	20.76	20.82	0	21.25	20.82	20.66	20.75	0	21.50
		25	0	20.76	20.72	20.75	0	21.25	20.77	20.65	20.72	0	21.50
	64QAM	1	0	21.21	21.24	21.19	0	21.25	21.30	21.27	21.19	0	21.50
		1	12	21.00	21.16	21.21	0	21.25	21.29	21.19	21.25	0	21.50
		1	24	21.18	21.22	21.14	0	21.25	21.41	21.21	21.45	0	21.50
		12	0	20.03	19.96	20.02	0.75	20.5	20.05	19.80	19.85	1	20.50
		12	7	20.01	19.97	20.06	0.75	20.5	20.04	19.75	19.86	1	20.50
		12	13	20.08	20.02	20.13	0.75	20.5	20.11	19.80	19.93	1	20.50
		25	0	19.97	20.04	20.04	0.75	20.5	20.00	19.86	19.85	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	21.01	20.94	21.03	0	21.25	21.28	21.14	21.26	0	21.50
		1	8	21.13	21.00	21.13	0	21.25	21.39	21.17	21.39	0	21.50
		1	14	21.07	20.93	21.14	0	21.25	21.27	21.10	21.33	0	21.50
		8	0	20.95	20.80	20.91	0	21.25	21.17	20.98	21.08	0	21.50
		8	4	20.95	20.79	20.96	0	21.25	21.15	20.97	21.16	0	21.50
		8	7	20.95	20.86	20.97	0	21.25	21.16	21.03	21.17	0	21.50
		15	0	20.94	20.88	20.95	0	21.25	21.15	21.04	21.14	0	21.50
	16QAM	1	0	21.21	21.25	20.92	0	21.25	21.46	21.44	21.32	0	21.50
		1	8	20.87	20.88	21.03	0	21.25	21.30	21.43	21.42	0	21.50
		1	14	21.23	21.22	20.97	0	21.25	21.27	21.37	21.44	0	21.50
		8	0	20.67	20.58	20.64	0	21.25	20.69	20.59	20.60	0	21.50
		8	4	20.69	20.56	20.69	0	21.25	20.68	20.52	20.70	0	21.50
		8	7	20.70	20.64	20.71	0	21.25	20.67	20.62	20.71	0	21.50
		15	0	20.68	20.61	20.68	0	21.25	20.66	20.58	20.69	0	21.50
	64QAM	1	0	21.13	21.03	21.11	0	21.25	21.03	21.05	21.09	0	21.50
		1	8	21.15	21.16	21.09	0	21.25	21.20	21.19	21.06	0	21.50
		1	14	21.13	21.01	21.13	0	21.25	21.15	21.11	21.10	0	21.50
		8	0	20.05	20.14	20.02	0.75	20.5	19.83	19.74	19.76	1	20.50
		8	4	20.08	20.14	19.99	0.75	20.5	19.83	19.73	19.76	1	20.50
		8	7	20.11	20.18	19.99	0.75	20.5	19.83	19.76	19.75	1	20.50
		15	0	20.08	20.14	20.12	0.75	20.5	19.81	19.73	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	21.03	21.00	21.13	0	21.25	21.31	21.22	21.32	0	21.50
		1	3	21.08	20.97	21.11	0	21.25	21.36	21.15	21.26	0	21.50
		1	5	21.10	21.04	21.20	0	21.25	21.37	21.23	21.37	0	21.50
		3	0	20.90	20.83	21.02	0	21.25	21.12	21.05	21.18	0	21.50
		3	1	20.96	20.82	20.96	0	21.25	21.19	21.03	21.17	0	21.50
		3	3	20.96	20.88	20.95	0	21.25	21.19	21.08	21.16	0	21.50
		6	0	20.95	20.79	20.88	0	21.25	21.18	20.99	21.10	0	21.50
	16QAM	1	0	20.93	20.87	21.06	0	21.25	21.28	21.39	21.48	0	21.50
		1	3	20.88	21.16	21.04	0	21.25	21.39	21.26	21.45	0	21.50
		1	5	20.98	20.94	21.03	0	21.25	21.46	21.44	21.32	0	21.50
		3	0	20.97	21.00	21.13	0	21.25	21.24	21.19	21.24	0	21.50
		3	1	21.00	20.98	21.15	0	21.25	21.31	21.17	21.24	0	21.50
		3	3	21.02	21.05	21.11	0	21.25	21.31	21.19	21.22	0	21.50
		6	0	20.62	20.71	20.80	0	21.25	20.68	20.63	20.65	0	21.50
	64QAM	1	0	21.03	21.19	21.22	0	21.25	21.27	21.22	21.17	0	21.50
		1	3	21.25	21.19	21.21	0	21.25	21.17	21.28	21.11	0	21.50
		1	5	21.22	21.00	21.19	0	21.25	21.18	21.25	21.12	0	21.50
		3	0	21.02	20.93	20.89	0	21.25	21.04	20.96	20.83	0	21.50
		3	1	21.03	20.92	20.88	0	21.25	21.05	20.95	20.81	0	21.50
		3	3	20.98	20.98	20.91	0	21.25	21.05	21.00	20.82	0	21.50
		6	0	20.10	20.01	20.08	0.75	20.5	19.94	19.82	19.82	1	20.50

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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 WPDK 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

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

Where M_A is defined as follows

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

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$3.83 – 0.83A$;$0.4 \le A \le 1$

and M_{IM5} is defined as follows

$M_{IM5} =$ 4.5 ; $\Delta_{IM5} < 1.5 * BW_{Channel_CA}$

6.0 ; $1.5 * BW_{Channel_CA} \le \Delta_{IM5} < BW_{Channel_CA}/2 + \Delta f_{ooB}$

M_A ; $\Delta_{IM5} \ge BW_{Channel_CA}/2 + \Delta f_{ooB}$

Where

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

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

CEIL{M_A, 0.5} means rounding upwards to closest 0.5dB, i.e. MPR ∈ [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 $W_{GAP} \le 42.2$ MHz as follows

MPR = CEIL{M_A, 0.5}

Where M_N is defined as follows

$M_N =$ $-0.125N + 18.25$; $2 \le N \le 50$

$-0.0333 N + 13.67$; $50 < N \le 200$

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.

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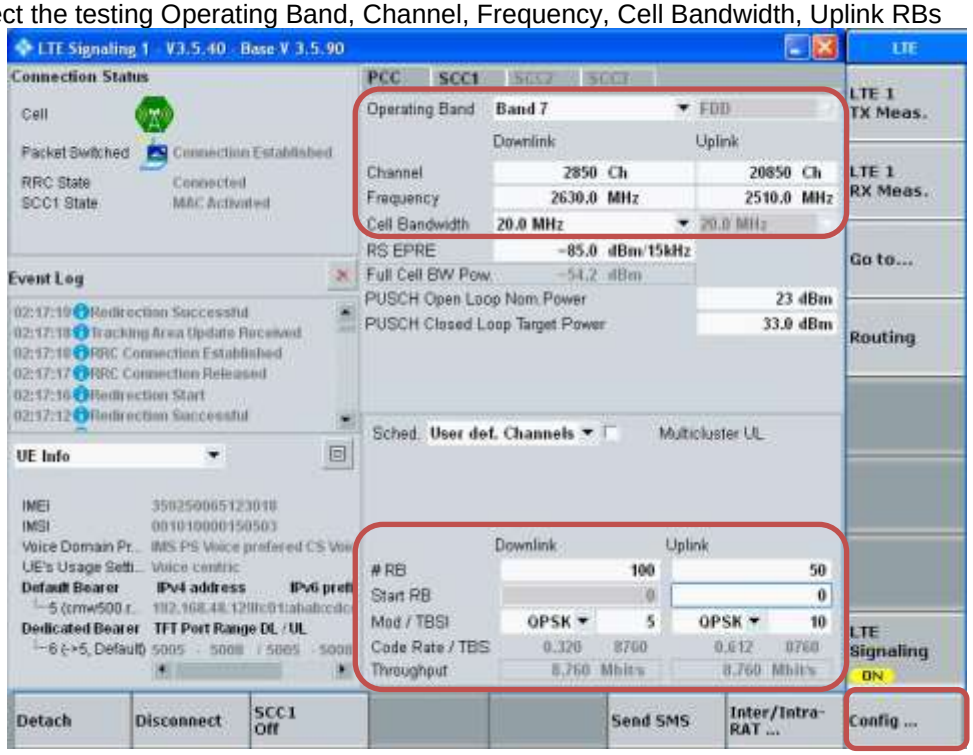
LTE Carrier Aggregation Test Signal Set-up Procedure

(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….”

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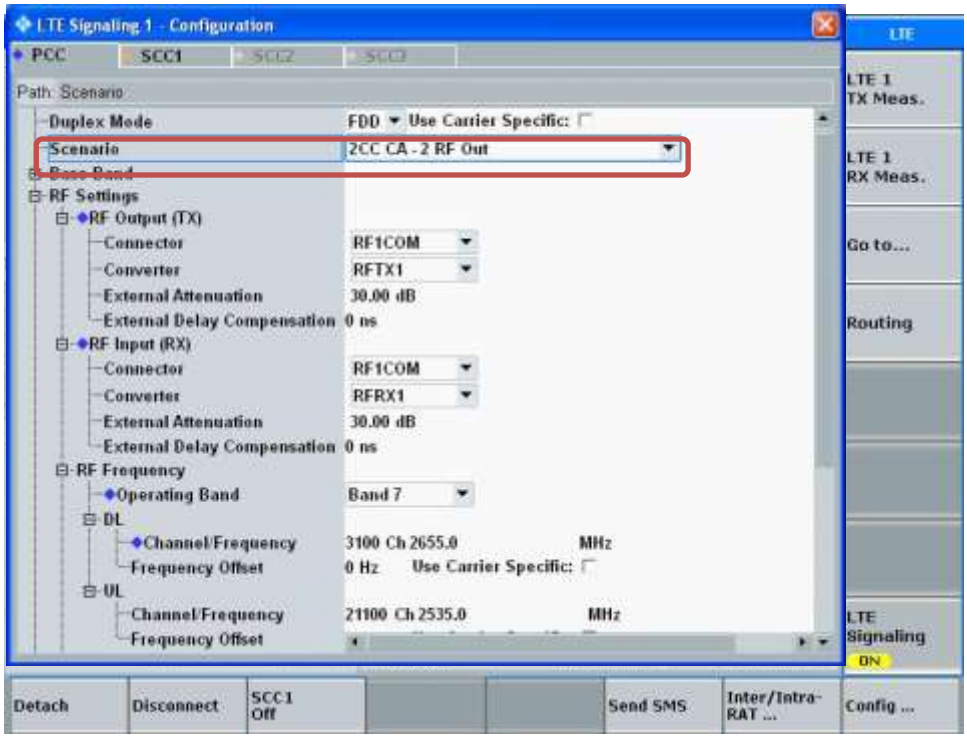
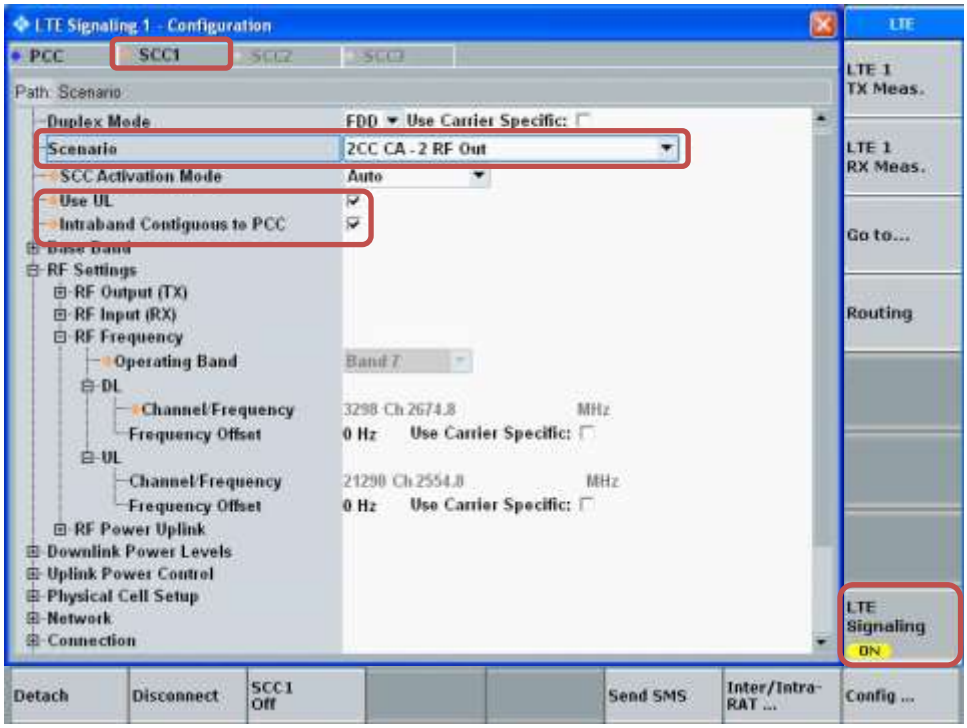
- Go to “Scenario”
- Set to “2CC CA – 2 RF Out”



- 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



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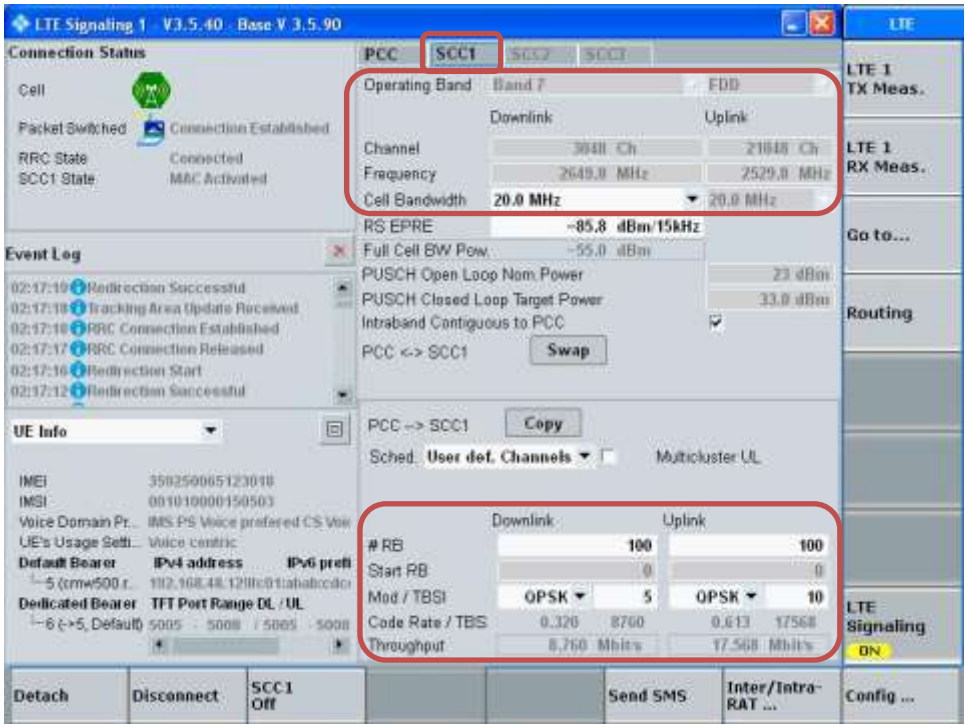
- Select “SCC1” tab
  - Select the testing Cell Bandwidth, Uplink RBs



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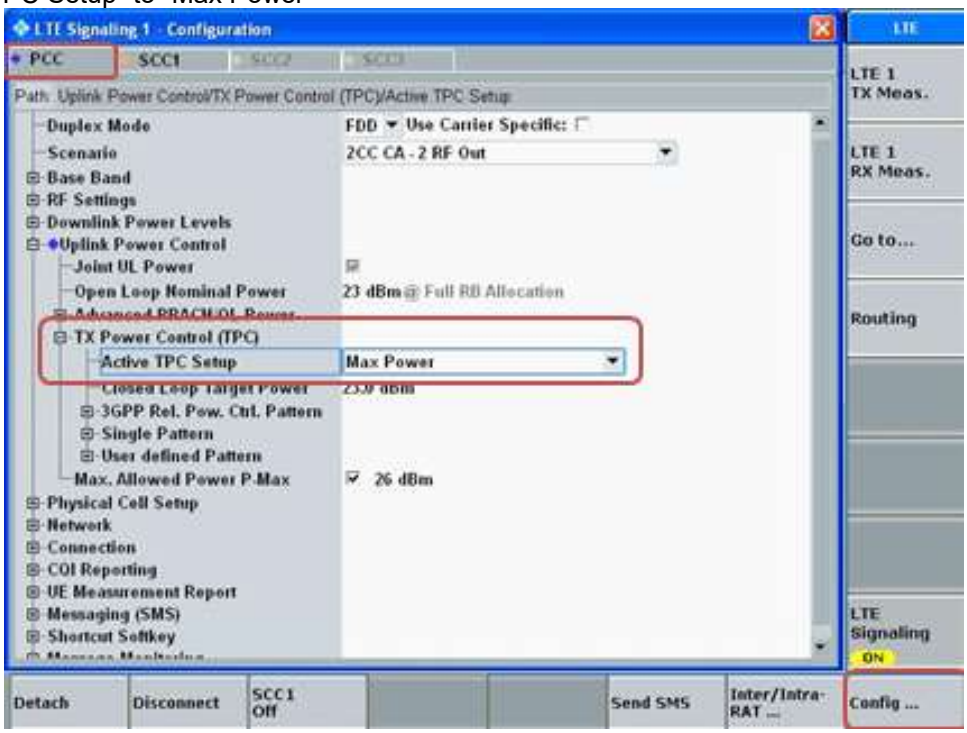
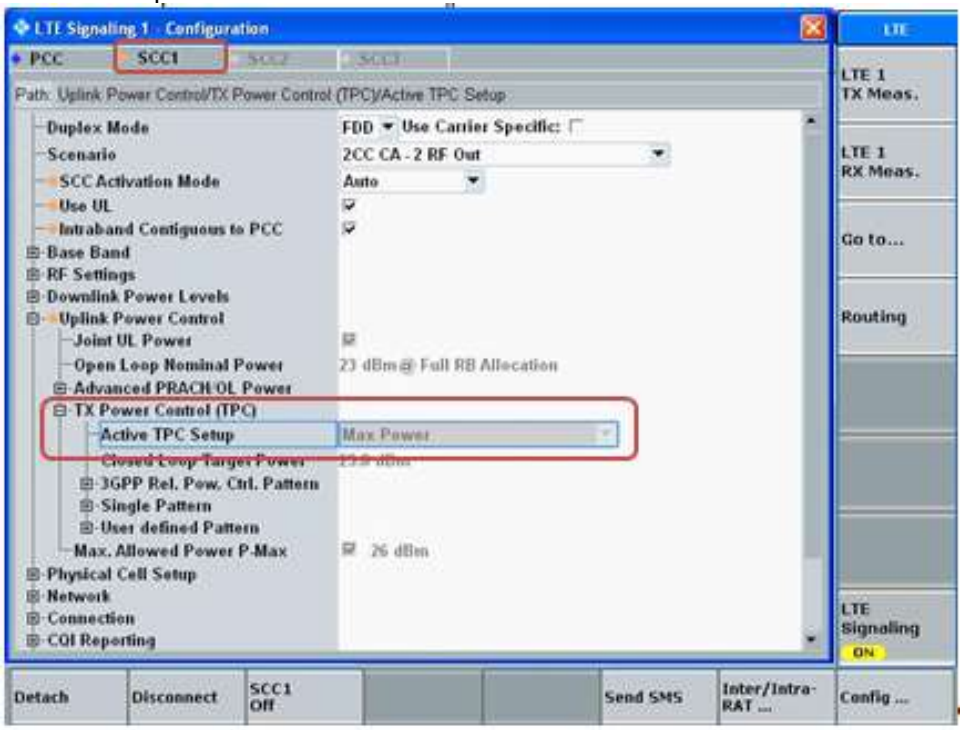
Max Power Setting

- 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”



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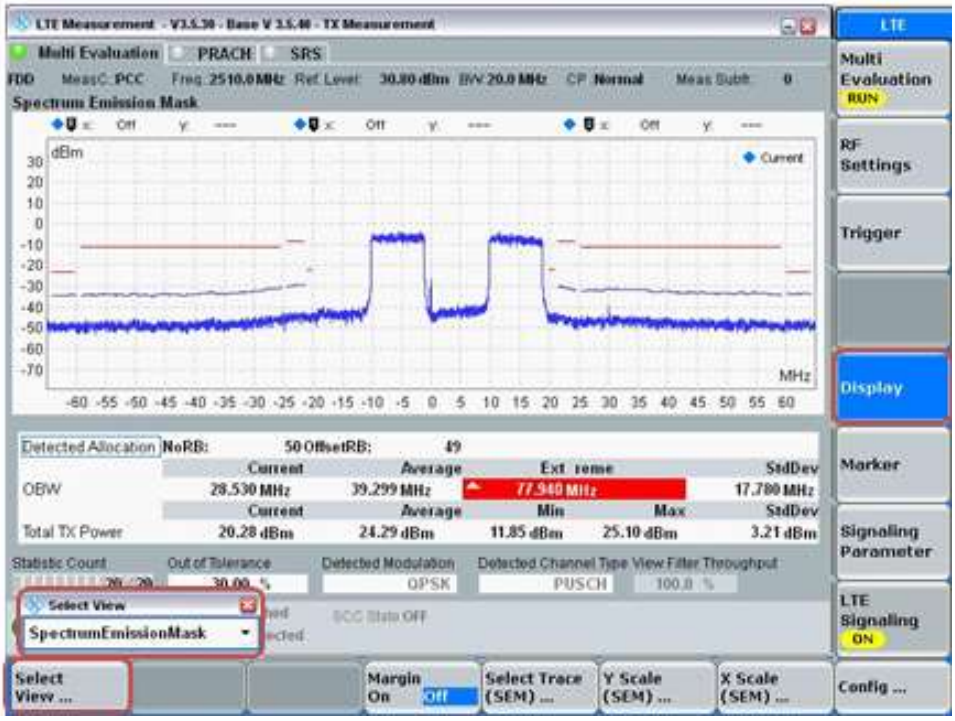
View TX Power

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



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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).

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 ≤ 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	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_5B	ANT 1	Mode A	QPSK	10	836.5	1	49	5	843.7	1	0	25.70	25.20	25.00	24.85	-0.3
CA_5B	ANT 1	Mode B	QPSK	10	836.5	1	49	5	843.7	1	0	25.70	25.20	25.00	24.85	-0.3
CA_5B	ANT 2	Mode A	QPSK	10	836.5	1	49	5	843.7	1	0	24.50	24.30	23.50	23.30	-1.0
CA_5B	ANT 2	Mode B	QPSK	10	836.5	1	49	5	843.7	1	0	24.50	24.30	23.50	23.30	-1.0

Note(s):

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

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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	25.20	25.00	24.85	-0.3
CA_7C	ANT 1	Mode B	QPSK	20	2510	1	99	20	2529.8	1	0	20.50	20.30	20.50	20.30	0.0
CA_7C	ANT 2	Mode A	QPSK	20	2535	1	99	20	2554.8	1	0	17.75	17.68	17.75	17.63	-0.1
CA_7C	ANT 2	Mode B	QPSK	20	2535	1	99	20	2554.8	1	0	19.75	19.65	19.75	19.60	0.0

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	25.20	25.00	24.97	-0.2
CA_41C	ANT 1	Mode B	QPSK	20	2549.5	1	99	20	2569.3	1	0	23.00	23.00	23.00	22.98	0.0
CA_41C	ANT 2	Mode A	QPSK	20	2593	1	99	20	2612.8	1	0	19.75	19.73	19.75	19.63	-0.1
CA_41C	ANT 2	Mode B	QPSK	20	2506	1	99	20	2525.8	1	0	21.50	21.30	21.50	21.10	-0.2

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.

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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	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_2A-5A	Head	ANT1	2A	ANT2	5A	25.70	24.50	0.461	0.555	22.70	21.50	0.231	0.278	**0.509**
		ANT2	2A	ANT1	5A	17.50	25.70	0.695	0.257	14.50	22.70	0.348	0.129	**0.477**
	Body & Hotspot	ANT1	2A	ANT2	5A	20.25	24.50	0.980	0.399	17.25	21.50	0.491	0.200	**0.691**
		ANT2	2A	ANT1	5A	18.50	25.70	0.897	0.752	15.50	22.70	0.450	0.377	**0.826**
CA_2A-12A	Head	ANT1	2A	ANT2	12A	25.70	24.50	0.461	0.426	22.70	21.50	0.231	0.214	**0.445**
		ANT2	2A	ANT1	12A	17.50	25.70	0.695	0.183	14.50	22.70	0.348	0.092	**0.440**
	Body & Hotspot	ANT1	2A	ANT2	12A	20.25	24.50	0.980	0.617	17.25	21.50	0.491	0.309	**0.800**
		ANT2	2A	ANT1	12A	18.50	25.70	0.897	0.790	15.50	22.70	0.450	0.396	**0.846**
CA_2A-13A	Head	ANT1	2A	ANT2	13A	25.70	24.50	0.461	0.387	22.70	21.50	0.231	0.194	**0.425**
		ANT2	2A	ANT1	13A	17.50	25.70	0.695	0.254	14.50	22.70	0.348	0.127	**0.476**
	Body & Hotspot	ANT1	2A	ANT2	13A	20.25	24.50	0.980	0.540	17.25	21.50	0.491	0.271	**0.762**
		ANT2	2A	ANT1	13A	18.50	25.70	0.897	0.656	15.50	22.70	0.450	0.329	**0.778**
CA_4A-5A	Head	ANT1	4A	ANT2	5A	25.70	24.50	0.315	0.555	22.70	21.50	0.158	0.278	**0.436**
		ANT2	4A	ANT1	5A	21.25	25.70	0.791	0.257	18.25	22.70	0.396	0.129	**0.525**
	Body & Hotspot	ANT1	4A	ANT2	5A	21.50	24.50	0.973	0.399	18.50	21.50	0.488	0.200	**0.688**
		ANT2	4A	ANT1	5A	21.50	25.70	0.811	0.752	18.50	22.70	0.406	0.377	**0.783**
CA_4A-12A	Head	ANT1	4A	ANT2	12A	25.70	24.50	0.315	0.426	22.70	21.50	0.158	0.214	**0.371**
		ANT2	4A	ANT1	12A	21.25	25.70	0.791	0.183	18.25	22.70	0.396	0.092	**0.488**
	Body & Hotspot	ANT1	4A	ANT2	12A	21.50	24.50	0.973	0.617	18.50	21.50	0.488	0.309	**0.797**
		ANT2	4A	ANT1	12A	21.50	25.70	0.811	0.790	18.50	22.70	0.406	0.396	**0.802**
CA_4A-13A	Head	ANT1	4A	ANT2	13A	25.70	24.50	0.315	0.387	22.70	21.50	0.158	0.194	**0.352**
		ANT2	4A	ANT1	13A	21.25	25.70	0.791	0.254	18.25	22.70	0.396	0.127	**0.524**
	Body & Hotspot	ANT1	4A	ANT2	13A	21.50	24.50	0.973	0.540	18.50	21.50	0.488	0.271	**0.758**
		ANT2	4A	ANT1	13A	21.50	25.70	0.811	0.656	18.50	22.70	0.406	0.329	**0.735**
CA_5A-7A	Head	ANT1	5A	ANT2	7A	25.70	17.75	0.257	0.767	22.70	14.75	0.129	0.384	**0.513**
		ANT2	5A	ANT1	7A	24.50	25.70	0.555	0.544	21.50	22.70	0.278	0.273	**0.551**
	Body & Hotspot	ANT1	5A	ANT2	7A	25.70	19.75	0.752	0.897	22.70	16.75	0.377	0.450	**0.826**
		ANT2	5A	ANT1	7A	24.50	20.50	0.399	0.952	21.50	17.50	0.200	0.477	**0.677**
CA_5A-66A	Head	ANT1	5A	ANT2	66A	25.70	21.25	0.257	0.791	22.70	18.25	0.129	0.396	**0.525**
		ANT2	5A	ANT1	66A	24.50	25.70	0.555	0.315	21.50	22.70	0.278	0.158	**0.436**
	Body & Hotspot	ANT1	5A	ANT2	66A	25.70	21.50	0.752	0.811	22.70	18.50	0.377	0.406	**0.783**
		ANT2	5A	ANT1	66A	24.50	21.50	0.399	0.973	21.50	18.50	0.200	0.488	**0.688**
CA_12A-30A	Head	ANT1	12A	ANT2	30A	25.70	17.75	0.183	0.737	22.70	14.75	0.092	0.369	**0.461**
		ANT2	12A	ANT1	30A	24.50	25.70	0.426	0.464	21.50	22.70	0.214	0.233	**0.446**
	Body & Hotspot	ANT1	12A	ANT2	30A	25.70	20.50	0.790	0.850	22.70	17.50	0.396	0.426	**0.822**
		ANT2	12A	ANT1	30A	24.50	24.00	0.617	0.999	21.50	21.00	0.309	0.501	**0.810**
CA_12A-66A	Head	ANT1	12A	ANT2	66A	25.70	21.25	0.183	0.791	22.70	18.25	0.092	0.396	**0.488**
		ANT2	12A	ANT1	66A	24.50	25.70	0.426	0.315	21.50	22.70	0.214	0.158	**0.371**
	Body & Hotspot	ANT1	12A	ANT2	66A	25.70	21.50	0.790	0.811	22.70	18.50	0.396	0.406	**0.802**
		ANT2	12A	ANT1	66A	24.50	21.50	0.617	0.973	21.50	18.50	0.309	0.488	**0.797**
CA_13A-66A	Head	ANT1	13A	ANT2	66A	25.70	21.25	0.254	0.791	22.70	18.25	0.127	0.396	**0.524**
		ANT2	13A	ANT1	66A	24.50	25.70	0.387	0.315	21.50	22.70	0.194	0.158	**0.352**
	Body & Hotspot	ANT1	13A	ANT2	66A	25.70	21.50	0.656	0.811	22.70	18.50	0.329	0.406	**0.735**
		ANT2	13A	ANT1	66A	24.50	21.50	0.540	0.973	21.50	18.50	0.271	0.488	**0.758**

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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.

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9.7. Wi-Fi 2.4GHz (DTS Band)

Wi-Fi 2.4 GHz (P_{cell_OFF} and P_{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 <1.6W/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.

For 2.4 GHz band, there are two use cases:

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

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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

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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 (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

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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

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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		20.60	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		21.50	21.50	
				6	2437	20.25	20.25		21.50	21.50	
				11	2462	20.25	20.25		21.50	21.50	
				12	2467	20.50	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	16.50	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		16.50	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	17.00	17.00	Yes	18.25	18.25	Yes
				6	2437	17.00	17.00		18.25	18.25	
				11	2462	17.00	17.00		18.25	18.25	
				12	2467	17.00	17.00		18.25	18.25	
				13	2472	17.00	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

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

Wi-Fi 5 GHz (P_{cell_OFF} and P_{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 <1.6W/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.

For 5GHz band, there are two use cases:

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

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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
	802.11ac 80 MHz	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
		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
	802.11n/ac 40 MHz	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
		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
	802.11ac 80 MHz	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
		165	5825	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
	802.11n/ac 40 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
	802.11ac 80 MHz	155	5775	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25

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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
	802.11ax HE80/SU	42	5210	16.00	16.00	16.00	16.00	16.00	14.25	16.00	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
	802.11ax HE80/SU	58	5290	16.00	16.00	16.00	16.00	16.00	14.00	16.00	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)	802.11ax 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
		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
		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
	802.11ax HE40/SU	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
		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
		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
	802.11ax HE80/SU	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
		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)	802.11ax 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
		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
	802.11ax HE80/SU	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.

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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
	802.11ax HE80/RU106	42	5210	16.00	16.00	16.00	16.00	16.00	14.25	16.00	14.25
U-NII-2A 5.3 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
	802.11ax HE80/RU106	58	5290	16.00	16.00	16.00	16.00	16.00	14.00	16.00	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)	802.11ax 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
		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
	802.11ax HE40/RU106	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
		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
	802.11ax HE80/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

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/RU106	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/RU106	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

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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
	802.11ax HE80/RU52	42	5210	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
	802.11ax HE80/RU52	58	5290	15.00	15.00	15.00	15.00	15.00	14.00	15.00	15.00

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-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
		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
	802.11ax HE80/RU52	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

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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
	802.11ax HE80/RU26	42	5210	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
	802.11ax HE80/RU26	58	5290	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-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
		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
	802.11ax HE40/RU26	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
		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
	802.11ax HE80/RU26	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

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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
	802.11ac 80 MHz	42	5210	16.50	16.50	16.50	16.50	16.50	14.25	16.50	14.25
U-NII-2A 5.3 GHz (MIMO)	802.11a/n/ac 20 MHz	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
	802.11n/ac 40 MHz	54	5270	20.00	19.25	20.00	20.00	20.00	14.00	17.75	15.75
		62	5310	17.00	17.00	17.00	17.00	17.00	14.00	17.00	15.75
	802.11ac 80 MHz	58	5290	16.50	16.50	16.50	16.50	16.50	14.00	16.50	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 (MIMO)	802.11a/n/ac 20 MHz	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
		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
	802.11n/ac 40 MHz	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
		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
	802.11ac 80 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

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)	802.11a/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
		165	5825	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25
	802.11n/ac 40 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
	802.11ac 80 MHz	155	5775	21.50	18.50	21.50	18.50	21.50	13.25	21.50	14.25

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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
	802.11ax HE80/SU	42	5210	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/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
	802.11ax HE80/SU	58	5290	15.00	15.00	15.00	15.00	15.00	14.00	15.00	15.00

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-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
		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
		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
	802.11ax HE40/SU	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
		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	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
	802.11ax HE80/SU	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
		138	5690	20.00	18.25	20.00	18.50	20.00	12.75	20.00	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
		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
	802.11ax HE80/SU	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.

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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
	802.11ax HE80/RU106	42	5210	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
	802.11ax HE80/RU106	58	5290	15.00	15.00	15.00	15.00	15.00	14.00	15.00	15.00

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-2C 5.5 GHz (MIMO)	802.11ax HE20/RU106	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/RU106	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
		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
	802.11ax HE80/RU106	106	5530	14.00	14.00	14.00	14.00	14.00	12.75	14.00	14.00
		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 (MIMO)	802.11ax HE20/RU106	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/RU106	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	20.50	18.50	20.50	18.50	20.50	13.25	20.50	14.25

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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
	802.11ax HE80/RU52	42	5210	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
	802.11ax HE80/RU52	58	5290	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-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
		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
	802.11ax HE40/RU52	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
		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
	802.11ax HE80/RU52	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 (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

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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
	802.11ax HE80/RU26	42	5210	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
U-NII-2A 5.3 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
	802.11ax HE80/RU26	58	5290	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-2C 5.5 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
		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
	802.11ax HE80/RU26	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

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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	17.30	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	17.50	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	17.30	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	18.40	18.50				
		U-NII-2A	802.11ac VHT80	58	5290				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

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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 $P_{standalone}$)

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 $P_{standalone}$ 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 $P_{standalone}$			
	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 ≤ ¼ dB higher than the primary mode.

Power Mode	Antenna	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)
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 $P_{standalone}$	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	

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Duty Factor Measured Results

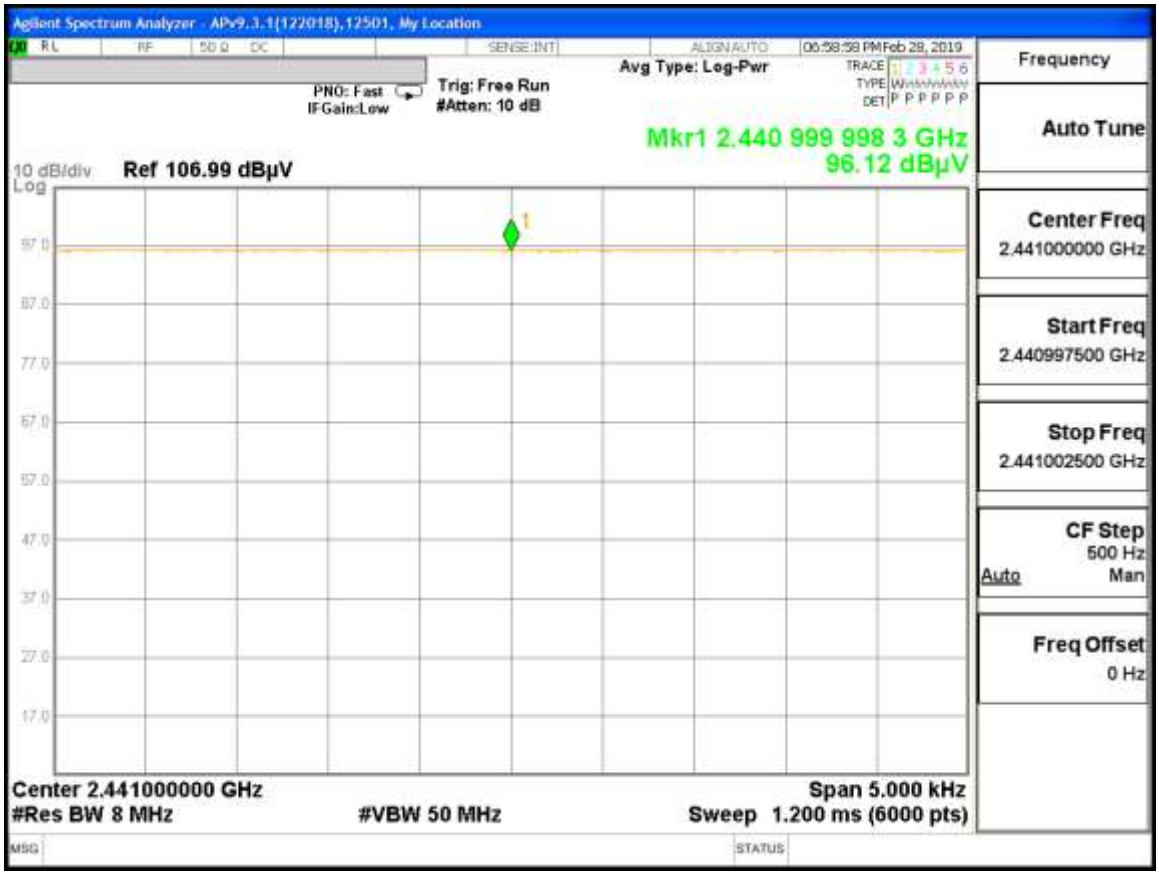
Mode	Type	T on (ms)	Period (ms)	Duty Cycle	Crest Factor (1/duty cycle)
GFSK	DH5	1	1	100.00%	1.00

Note(s):

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

Duty Cycle plots

GFSK



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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 ≤ ¼ 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.

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

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

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

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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	32.20	0.229	0.232	0.174	0.176	1
					Left Tilt	190	836.6	32.25	32.20	0.110	0.111	0.085	0.086	
					Right Touch	190	836.6	32.25	32.20	0.187	0.189	0.140	0.142	
					Right Tilt	190	836.6	32.25	32.20	0.111	0.112	0.086	0.087	
	Body & Hotspot	GPRS 2 Slots	Mode B	5	Rear	190	836.6	32.25	32.20	0.634	0.641	0.378	0.382	2
					Front	190	836.6	32.25	32.20	0.316	0.320	0.191	0.193	
	Hotspot	GPRS 2 Slots	Mode B	5	Edge 2	190	836.6	32.25	32.20	0.268	0.271	0.171	0.173	
					Edge 3	190	836.6	32.25	32.20	0.254	0.257	0.125	0.126	
					Edge 4	190	836.6	32.25	32.20	0.587	0.594	0.380	0.384	
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	0.359	0.363	0.222	0.225	3
					Left Tilt	190	836.6	30.75	30.70	0.339	0.343	0.175	0.177	
					Right Touch	190	836.6	30.75	30.70	0.305	0.309	0.194	0.196	
					Right Tilt	190	836.6	30.75	30.70	0.259	0.262	0.145	0.147	
	Body & Hotspot	GPRS 2 Slots	Mode B	5	Rear	190	836.6	30.75	30.70	0.355	0.359	0.188	0.190	4
					Front	190	836.6	30.75	30.70	0.289	0.292	0.162	0.164	
	Hotspot	GPRS 2 Slots	Mode B	5	Edge 1	190	836.6	30.75	30.70	0.252	0.255	0.117	0.118	
					Edge 2	190	836.6	30.75	30.70	0.309	0.313	0.200	0.202	
					Edge 4	190	836.6	30.75	30.70	0.072	0.073	0.046	0.047	

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	30.40	0.146	0.158	0.091	0.099	
					Left Tilt	661	1880.0	30.75	30.40	0.109	0.118	0.063	0.068	
					Right Touch	661	1880.0	30.75	30.40	0.257	0.279	0.158	0.171	5
					Right Tilt	661	1880.0	30.75	30.40	0.130	0.141	0.077	0.083	
	Body & Hotspot	GPRS 2 Slots	Mode B	5	Rear	512	1850.2	26.25	26.10	0.919	0.951	0.443	0.459	6
						661	1880.0	26.25	26.10	0.819	0.848	0.385	0.399	
						810	1909.8	26.25	26.10	0.820	0.849	0.383	0.396	
					Front	661	1880.0	26.25	26.10	0.371	0.384	0.195	0.202	
	Hotspot	GPRS 2 Slots	Mode B	5	Edge 2	661	1880.0	26.25	26.10	0.354	0.366	0.187	0.194	
					Edge 3	661	1880.0	26.25	26.10	0.484	0.501	0.214	0.222	
					Edge 4	661	1880.0	26.25	26.10	0.075	0.078	0.041	0.043	
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	23.40	0.225	0.230	0.110	0.113	
					Left Tilt	661	1880.0	23.50	23.40	0.289	0.296	0.134	0.137	
					Right Touch	661	1880.0	23.50	23.40	0.697	0.713	0.329	0.337	
					Right Tilt	661	1880.0	23.50	23.40	0.751	0.768	0.326	0.334	7
	Body & Hotspot	GPRS 2 Slots	Mode B	5	Rear	512	1850.2	24.50	24.25	0.807	0.855	0.373	0.395	
						661	1880.0	24.50	24.31	0.841	0.879	0.383	0.400	
						810	1909.8	24.50	24.18	0.829	0.892	0.375	0.404	8
					Front	661	1880.0	24.50	24.31	0.405	0.423	0.191	0.200	
	Hotspot	GPRS 2 Slots	Mode B	5	Edge 1	661	1880.0	24.50	24.31	0.476	0.497	0.188	0.196	
					Edge 2	661	1880.0	24.50	24.31	0.137	0.143	0.071	0.074	
					Edge 4	661	1880.0	24.50	24.31	0.378	0.395	0.198	0.207	

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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	25.30	0.294	0.322	0.180	0.197	
					Left Tilt	9400	1880.0	25.70	25.30	0.145	0.159	0.084	0.092	
					Right Touch	9400	1880.0	25.70	25.30	0.576	0.632	0.339	0.372	9
					Right Tilt	9400	1880.0	25.70	25.30	0.193	0.212	0.116	0.127	
	Body & Hotspot	Rel 99 RMC 12.2 kbps	Mode B	5	Rear	9262	1852.4	20.25	20.20	0.826	0.836	0.398	0.403	
						9400	1880.0	20.25	20.20	0.860	0.870	0.410	0.415	
						9538	1907.6	20.25	20.20	0.873	0.883	0.413	0.418	10
					Front	9400	1880.0	20.25	20.20	0.468	0.473	0.243	0.246	
	Hotspot	Rel 99 RMC 12.2 kbps	Mode B	5	Edge 2	9400	1880.0	20.25	20.20	0.400	0.405	0.211	0.213	
					Edge 3	9400	1880.0	20.25	20.20	0.557	0.563	0.250	0.253	
					Edge 4	9400	1880.0	20.25	20.20	0.092	0.093	0.050	0.051	
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	17.14	0.141	0.153	0.070	0.076	
					Left Tilt	9400	1880.0	17.50	17.14	0.158	0.172	0.076	0.082	
					Right Touch	9400	1880.0	17.50	17.14	0.630	0.684	0.297	0.323	
					Right Tilt	9400	1880.0	17.50	17.14	0.655	0.712	0.283	0.307	11
	Body & Hotspot	Rel 99 RMC 12.2 kbps	Mode B	5	Rear	9262	1852.4	18.50	18.45	0.798	0.807	0.354	0.358	
						9400	1880.0	18.50	18.30	0.849	0.889	0.372	0.390	12
						9538	1907.6	18.50	18.25	0.806	0.854	0.363	0.385	
					Front	9400	1880.0	18.50	18.30	0.358	0.375	0.165	0.173	
	Hotspot	Rel 99 RMC 12.2 kbps	Mode B	5	Edge 1	9400	1880.0	18.50	18.30	0.381	0.399	0.155	0.162	
					Edge 2	9400	1880.0	18.50	18.30	0.108	0.113	0.058	0.061	
					Edge 4	9400	1880.0	18.50	18.30	0.303	0.317	0.159	0.166	

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	25.50	0.288	0.302	0.180	0.188	
					Left Tilt	1413	1732.6	25.70	25.50	0.193	0.202	0.111	0.116	
					Right Touch	1413	1732.6	25.70	25.50	0.302	0.316	0.192	0.201	13
					Right Tilt	1413	1732.6	25.70	25.50	0.170	0.178	0.107	0.112	
	Body & Hotspot	Rel 99 RMC 12.2 kbps	Mode B	5	Rear	1413	1732.6	21.50	21.50	0.542	0.542	0.298	0.298	14
					Front	1413	1732.6	21.50	21.50	0.367	0.367	0.208	0.208	
	Hotspot	Rel 99 RMC 12.2 kbps	Mode B	5	Edge 2	1413	1732.6	21.50	21.50	0.385	0.385	0.206	0.206	
					Edge 3	1312	1712.4	21.50	21.50	0.887	0.887	0.440	0.440	
						1413	1732.6	21.50	21.50	0.897	0.897	0.451	0.451	15
						1513	1752.6	21.50	21.50	0.813	0.813	0.407	0.407	
					Edge 4	1413	1732.6	21.50	21.50	0.286	0.286	0.156	0.156	
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	20.87	0.186	0.203	0.098	0.107	
					Left Tilt	1413	1732.6	21.25	20.87	0.199	0.217	0.101	0.110	
					Right Touch	1413	1732.6	21.25	20.87	0.684	0.747	0.342	0.373	16
					Right Tilt	1413	1732.6	21.25	20.87	0.646	0.705	0.305	0.333	
	Body & Hotspot	Rel 99 RMC 12.2 kbps	Mode B	5	Rear	1312	1712.4	21.50	21.06	0.730	0.808	0.350	0.387	
						1413	1732.6	21.50	21.07	0.740	0.817	0.354	0.391	
						1513	1752.6	21.50	21.18	0.802	0.863	0.381	0.410	17
					Front	1413	1732.6	21.50	21.07	0.276	0.305	0.138	0.152	
	Hotspot	Rel 99 RMC 12.2 kbps	Mode B	5	Edge 1	1413	1732.6	21.50	21.07	0.351	0.388	0.164	0.181	
					Edge 2	1413	1732.6	21.50	21.07	0.022	0.024	0.013	0.014	
					Edge 4	1413	1732.6	21.50	21.07	0.277	0.306	0.154	0.170	

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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	25.20	0.245	0.275	0.185	0.208	18
					Left Tilt	4183	836.6	25.70	25.20	0.108	0.121	0.084	0.094	
					Right Touch	4183	836.6	25.70	25.20	0.188	0.211	0.144	0.162	
					RighttTilt	4183	836.6	25.70	25.20	0.107	0.120	0.082	0.092	
	Body & Hotspot	Rel 99 RMC 12.2 kbps	Mode B	5	Rear	4183	836.6	25.70	25.20	0.672	0.754	0.404	0.453	19
					Front	4183	836.6	25.70	25.20	0.320	0.359	0.197	0.221	
	Hotspot	Rel 99 RMC 12.2 kbps	Mode B	5	Edge 2	4183	836.6	25.70	25.20	0.212	0.238	0.137	0.154	
					Edge 3	4183	836.6	25.70	25.20	0.299	0.335	0.147	0.165	
					Edge 4	4183	836.6	25.70	25.20	0.553	0.620	0.362	0.406	
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	4183	836.6	24.50	24.30	0.366	0.383	0.247	0.259	
					Left Tilt	4183	836.6	24.50	24.30	0.397	0.416	0.207	0.217	
					Right Touch	4183	836.6	24.50	24.30	0.408	0.427	0.258	0.270	20
					Right Tilt	4183	836.6	24.50	24.30	0.313	0.328	0.174	0.182	
	Body & Hotspot	Rel 99 RMC 12.2 kbps	Mode B	5	Rear	4183	836.6	24.50	24.30	0.360	0.377	0.199	0.208	
					Front	4183	836.6	24.50	24.30	0.255	0.267	0.149	0.156	
	Hotspot	Rel 99 RMC 12.2 kbps	Mode B	5	Edge 1	4183	836.6	24.50	24.30	0.309	0.324	0.144	0.151	
					Edge 2	4183	836.6	24.50	24.30	0.362	0.379	0.235	0.246	21
					Edge 4	4183	836.6	24.50	24.30	0.085	0.089	0.055	0.058	

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	25.60	0.235	0.240	0.456	0.467	
					Left Tilt	384	836.5	25.70	25.60	0.093	0.095	0.368	0.377	
					Right Touch	384	836.5	25.70	25.60	0.186	0.190	0.396	0.405	
					Right Tilt	384	836.5	25.70	25.60	0.096	0.098	0.353	0.361	
		1xEVDO Rel. 0	Mode A	0	Left Touch	384	836.5	25.70	25.60	0.256	0.262	0.419	0.429	22
					Left Tilt	384	836.5	25.70	25.60	0.115	0.118	0.360	0.368	
					Right Touch	384	836.5	25.70	25.60	0.219	0.224	0.384	0.393	
					Right Tilt	384	836.5	25.70	25.60	0.144	0.147	0.339	0.347	
	Body & Hotspot	1xRTT RC3 SO32	Mode B	5	Rear	384	836.5	25.70	25.60	0.671	0.687	0.344	0.352	23
					Front	384	836.5	25.70	25.60	0.360	0.368	0.252	0.258	
	Hotspot	1xRTT RC3 SO32	Mode B	5	Edge 2	384	836.5	25.70	25.60	0.225	0.230	0.248	0.254	
					Edge 3	384	836.5	25.70	25.60	0.348	0.356	0.395	0.404	
					Edge 4	384	836.5	25.70	25.60	0.579	0.592	0.090	0.092	
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	384	836.5	24.50	24.40	0.456	0.467	0.288	0.295	24
					Left Tilt	384	836.5	24.50	24.40	0.368	0.377	0.196	0.201	
					Right Touch	384	836.5	24.50	24.40	0.396	0.405	0.244	0.250	
					Right Tilt	384	836.5	24.50	24.40	0.353	0.361	0.195	0.200	
		1xEVDO Rel. 0	Mode A	0	Left Touch	384	836.5	24.50	24.40	0.419	0.429	0.282	0.289	
					Left Tilt	384	836.5	24.50	24.40	0.360	0.368	0.201	0.206	
					Right Touch	384	836.5	24.50	24.40	0.384	0.393	0.248	0.254	
					Right Tilt	384	836.5	24.50	24.40	0.339	0.347	0.189	0.193	
	Body & Hotspot	1xRTT RC3 SO32	Mode B	5	Rear	384	836.5	24.50	24.40	0.344	0.352	0.189	0.193	25
					Front	384	836.5	24.50	24.40	0.252	0.258	0.148	0.151	
	Hotspot	1xRTT RC3 SO32	Mode B	5	Edge 1	384	836.5	24.50	24.40	0.248	0.254	0.115	0.118	
					Edge 2	384	836.5	24.50	24.40	0.395	0.404	0.259	0.265	26
					Edge 4	384	836.5	24.50	24.40	0.090	0.092	0.058	0.059	

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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	0.234	0.234	0.147	0.147	
					Left Tilt	600	1880.0	25.70	25.70	0.183	0.183	0.105	0.105	
					Right Touch	600	1880.0	25.70	25.70	0.417	0.417	0.259	0.259	27
					Right Tilt	600	1880.0	25.70	25.70	0.252	0.252	0.149	0.149	
		1xEVDO Rel. 0	Mode A	0	Left Touch	600	1880.0	25.70	25.70	0.213	0.213	0.138	0.138	
					Left Tilt	600	1880.0	25.70	25.70	0.187	0.187	0.107	0.107	
					Right Touch	600	1880.0	25.70	25.70	0.404	0.404	0.252	0.252	
					Right Tilt	600	1880.0	25.70	25.70	0.223	0.223	0.136	0.136	
	Body & Hotspot	1xRTT RC3 SO32	Mode B	5	Rear	25	1851.3	20.25	19.75	0.774	0.868	0.371	0.416	
						600	1880.0	20.25	19.75	0.814	0.913	0.384	0.431	
						1175	1908.8	20.25	19.75	0.825	0.926	0.386	0.433	28
					Front	600	1880.0	20.25	19.75	0.179	0.201	0.097	0.109	
	Hotspot	1xRTT RC3 SO32	Mode B	5	Edge 2	600	1880.0	20.25	19.75	0.285	0.320	0.153	0.172	
					Edge 3	600	1880.0	20.25	19.75	0.452	0.507	0.203	0.228	
					Edge 4	600	1880.0	20.25	19.75	0.068	0.076	0.037	0.042	

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	17.40	0.162	0.166	0.081	0.083	
					Left Tilt	600	1880.0	17.50	17.40	0.241	0.247	0.116	0.119	
					Right Touch	600	1880.0	17.50	17.40	0.606	0.620	0.280	0.287	
					Rightt Tilt	600	1880.0	17.50	17.40	0.713	0.730	0.307	0.314	
		1xEVDO Rel. 0	Mode A	0	Left Touch	600	1880.0	17.50	17.40	0.194	0.199	0.098	0.100	
					Left Tilt	600	1880.0	17.50	17.40	0.248	0.254	0.116	0.119	
					Right Touch	600	1880.0	17.50	17.40	0.541	0.554	0.265	0.271	
					Right Tilt	600	1880.0	17.50	17.40	0.757	0.775	0.324	0.332	29
	Body & Hotspot	1xRTT RC3 SO32	Mode B	5	Rear	25	1851.3	18.50	18.30	0.782	0.819	0.364	0.381	
						600	1880.0	18.50	18.50	0.883	0.883	0.404	0.404	30
						1175	1908.8	18.50	18.30	0.815	0.853	0.373	0.391	
					Front	600	1880.0	18.50	18.50	0.229	0.229	0.105	0.105	
	Hotspot	1xRTT RC3 SO32	Mode B	5	Edge 1	600	1880.0	18.50	18.50	0.364	0.364	0.146	0.146	
					Edge 2	600	1880.0	18.50	18.50	0.079	0.079	0.041	0.041	
					Edge 4	600	1880.0	18.50	18.50	0.274	0.274	0.147	0.147	

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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	25.50	0.229	0.240	0.179	0.187	
					Left Tilt	560	820.0	25.70	25.50	0.125	0.131	0.098	0.103	
					Right Touch	560	820.0	25.70	25.50	0.168	0.176	0.128	0.134	
					Right Tilt	560	820.0	25.70	25.50	0.111	0.116	0.085	0.089	
		1xEVDO Rel. 0	Mode A	0	Left Touch	560	820.0	25.70	25.50	0.210	0.220	0.164	0.172	31
					Left Tilt	560	820.0	25.70	25.50	0.124	0.130	0.098	0.103	
					Right Touch	560	820.0	25.70	25.50	0.168	0.176	0.133	0.139	
					Right Tilt	560	820.0	25.70	25.50	0.113	0.118	0.087	0.091	
	Body & Hotspot	1xRTT RC3 SO32	Mode B	5	Rear	560	820.0	25.70	25.50	0.532	0.557	0.321	0.336	32
					Front	560	820.0	25.70	25.50	0.291	0.305	0.179	0.187	
	Hotspot	1xRTT RC3 SO32	Mode B	5	Edge 2	560	820.0	25.70	25.50	0.184	0.193	0.121	0.127	
					Edge 3	560	820.0	25.70	25.50	0.279	0.292	0.138	0.145	
					Edge 4	560	820.0	25.70	25.50	0.555	0.581	0.367	0.384	33

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	24.40	0.451	0.462	0.329	0.337	34
					Left Tilt	560	820.0	24.50	24.40	0.353	0.361	0.192	0.196	
					Right Touch	560	820.0	24.50	24.40	0.387	0.396	0.233	0.238	
					Right Tilt	560	820.0	24.50	24.40	0.325	0.333	0.182	0.186	
		1xEVDO Rel. 0	Mode A	0	Left Touch	560	820.0	24.50	24.40	0.399	0.408	0.308	0.315	
					Left Tilt	560	820.0	24.50	24.40	0.351	0.359	0.198	0.203	
					Right Touch	560	820.0	24.50	24.40	0.426	0.436	0.270	0.276	
					Right Tilt	560	820.0	24.50	24.40	0.337	0.345	0.190	0.194	
	Body & Hotspot	1xRTT RC3 SO32	Mode B	5	Rear	560	820.0	24.50	24.40	0.301	0.308	0.174	0.178	35
					Front	560	820.0	24.50	24.40	0.232	0.237	0.139	0.142	
	Hotspot	1xRTT RC3 SO32	Mode B	5	Edge 1	560	820.0	24.50	24.40	0.243	0.249	0.117	0.120	
					Edge 2	560	820.0	24.50	24.40	0.401	0.410	0.265	0.271	36
					Edge 4	560	820.0	24.50	24.40	0.121	0.124	0.080	0.082	

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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	25.20	0.229	0.257	0.162	0.182	37
								25	12	24.70	24.20	0.106	0.119	0.078	0.087	
					Left Tilt	20525	836.5	1	25	25.70	25.20	0.072	0.081	0.051	0.057	
								25	12	24.70	24.20	0.061	0.068	0.442	0.496	
					Right Touch	20525	836.5	1	25	25.70	25.20	0.108	0.121	0.079	0.089	
								25	12	24.70	24.20	0.051	0.057	0.040	0.044	
					Right Tilt	20525	836.5	1	25	25.70	25.20	0.108	0.121	0.077	0.086	
								25	12	24.70	24.20	0.090	0.101	0.070	0.079	
	Body & Hotspot	QPSK	Mode B	5	Rear	20525	836.5	1	25	25.70	25.20	0.670	0.752	0.394	0.442	38
								25	12	24.70	24.20	0.537	0.603	0.316	0.355	
					Front	20525	836.5	1	25	25.70	25.20	0.353	0.396	0.211	0.237	
								25	12	24.70	24.20	0.279	0.313	0.167	0.187	
	Hotspot	QPSK	Mode B	5	Edge 2	20525	836.5	1	25	25.70	25.20	0.262	0.294	0.171	0.192	
								25	12	24.70	24.20	0.215	0.241	0.139	0.156	
					Edge 3	20525	836.5	1	25	25.70	25.20	0.252	0.283	0.122	0.137	
								25	12	24.70	24.20	0.218	0.245	0.106	0.119	
					Edge 4	20525	836.5	1	25	25.70	25.20	0.654	0.734	0.430	0.482	
								25	12	24.70	24.20	0.520	0.583	0.342	0.384	

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	24.30	0.530	0.555	0.326	0.341	39
								25	12	23.50	23.40	0.417	0.427	0.257	0.263	
					Left Tilt	20525	836.5	1	25	24.50	24.30	0.471	0.493	0.238	0.249	
								25	12	23.50	23.40	0.367	0.376	0.184	0.188	
					Right Touch	20525	836.5	1	25	24.50	24.30	0.405	0.424	0.248	0.260	
								25	12	23.50	23.40	0.319	0.326	0.195	0.200	
					Right Tilt	20525	836.5	1	25	24.50	24.30	0.340	0.356	0.187	0.196	
								25	12	23.50	23.40	0.266	0.272	0.146	0.149	
	Body & Hotspot	QPSK	Mode B	5	Rear	20525	836.5	1	25	24.50	24.30	0.264	0.276	0.152	0.159	
								25	12	23.50	23.40	0.211	0.216	0.120	0.123	
					Front	20525	836.5	1	25	24.50	24.30	0.276	0.289	0.159	0.166	40
								25	12	23.50	23.40	0.217	0.222	0.125	0.128	
	Hotspot	QPSK	Mode B	5	Edge 1	20525	836.5	1	25	24.50	24.30	0.325	0.340	0.151	0.158	
								25	12	23.50	23.40	0.250	0.256	0.114	0.117	
					Edge 2	20525	836.5	1	25	24.50	24.30	0.381	0.399	0.248	0.260	41
								25	12	23.50	23.40	0.304	0.311	0.197	0.202	
					Edge 4	20525	836.5	1	25	24.50	24.30	0.098	0.103	0.063	0.066	
								25	12	23.50	23.40	0.076	0.078	0.050	0.051	

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 offest	Ch #.	Freq. (MHz)	RB Allocation	RB offest	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	24.85	0.216	0.224	0.167	0.173	
ANT 1	Body	QPSK	Mode B	5	Rear	20525	836.5	1	49	20599	843.7	1	0	25.00	24.85	0.373	0.386	0.229	0.237	
ANT 2	Head	QPSK	Mode A	0	Left Touch	20525	836.5	1	49	20599	843.7	1	0	23.50	23.30	0.360	0.377	0.225	0.236	
ANT 2	Body	QPSK	Mode B	5	Front	20525	836.5	1	49	20599	843.7	1	0	23.50	23.30	0.166	0.174	0.095	0.100	
ANT 2	Hotspot	QPSK	Mode B	5	Edge 2	20525	836.5	1	49	20599	843.7	1	0	23.50	23.30	0.292	0.306	0.185	0.194	

Note(s):

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

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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	25.20	0.485	0.544	0.263	0.295	42
								50	24	24.70	24.20	0.382	0.429	0.207	0.232	
					Left Tilt	21100	2535.0	1	49	25.70	25.20	0.137	0.154	0.073	0.082	
								50	24	24.70	24.20	0.105	0.118	0.057	0.064	
					Right Touch	21100	2535.0	1	49	25.70	25.20	0.241	0.270	0.132	0.148	
								50	24	24.70	24.20	0.181	0.203	0.100	0.112	
					Right Tilt	21100	2535.0	1	49	25.70	25.20	0.243	0.273	0.122	0.137	
								50	24	24.70	24.20	0.185	0.208	0.090	0.101	
	Body & Hotspot	QPSK	Mode B	5	Rear	20850	2510.0	1	49	20.50	20.30	0.838	0.877	0.350	0.366	
								50	24	20.50	20.30	0.909	0.952	0.370	0.387	43
						21100	2535.0	1	49	20.50	20.40	0.838	0.858	0.352	0.360	
								50	24	20.50	20.40	0.837	0.856	0.352	0.360	
								100	0	20.50	20.30	0.824	0.863	0.347	0.363	
						21350	2560.0	1	49	20.50	20.30	0.847	0.887	0.362	0.379	
								50	24	20.50	20.30	0.850	0.890	0.363	0.380	
					Front	21100	2535.0	1	49	20.50	20.40	0.325	0.333	0.152	0.156	
								50	24	20.50	20.40	0.319	0.326	0.148	0.151	
	Hotspot	QPSK	Mode B	5	Edge 2	21100	2535.0	1	49	20.50	20.40	0.619	0.633	0.269	0.275	
								50	24	20.50	20.40	0.618	0.632	0.269	0.275	
					Edge 3	21100	2535.0	1	49	20.50	20.40	0.460	0.471	0.169	0.173	
								50	24	20.50	20.40	0.474	0.485	0.173	0.177	
					Edge 4	21100	2535.0	1	49	20.50	20.40	0.734	0.751	0.312	0.319	
								50	24	20.50	20.40	0.680	0.696	0.293	0.300	

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	21100	2535.0	1	49	17.75	17.74	0.763	0.765	0.293	0.294	
								50	24	17.75	17.68	0.755	0.767	0.286	0.291	44
					Left Tilt	21100	2535.0	1	49	17.75	17.74	0.496	0.497	0.203	0.203	
								50	24	17.75	17.68	0.491	0.499	0.191	0.194	
					Right Touch	21100	2535.0	1	49	17.75	17.74	0.284	0.285	0.134	0.134	
								50	24	17.75	17.68	0.284	0.289	0.132	0.134	
					Right Tilt	21100	2535.0	1	49	17.75	17.74	0.321	0.322	0.145	0.145	
								50	24	17.75	17.68	0.298	0.303	0.134	0.136	
	Body & Hotspot	QPSK	Mode B	5	Rear	20850	2510.0	1	49	19.75	19.75	0.838	0.838	0.332	0.332	
								50	24	19.75	19.72	0.846	0.852	0.344	0.346	
						21100	2535.0	1	49	19.75	19.65	0.869	0.889	0.354	0.362	
								50	24	19.75	19.65	0.877	0.897	0.348	0.356	45
								100	0	19.75	19.65	0.877	0.897	0.357	0.365	
						21350	2560	1	49	19.75	19.60	0.866	0.896	0.349	0.361	
								50	24	19.75	19.70	0.887	0.897	0.358	0.362	
					Front	21100	2535.0	1	49	19.75	19.65	0.534	0.546	0.190	0.194	
								50	24	19.75	19.65	0.520	0.532	0.197	0.202	
	Hotspot	QPSK	Mode B	5	Edge 1	21100	2535.0	1	49	19.75	19.65	0.561	0.574	0.249	0.255	
								50	24	19.75	19.65	0.449	0.459	0.201	0.206	
					Edge 2	21100	2535.0	1	49	19.75	19.65	0.665	0.680	0.258	0.264	
								50	24	19.75	19.65	0.692	0.708	0.261	0.267	
					Edge 4	21100	2535.0	1	49	19.75	19.65	0.025	0.026	0.010	0.010	
								50	24	19.75	19.65	0.020	0.020	0.008	0.008	

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 offest	Ch #.	Freq. (MHz)	RB Allocation	RB offest	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	24.85	0.404	0.418	0.220	0.228	
ANT 1	Body	QPSK	Mode B	5	Rear	20850	2510.0	1	99	21048	2529.8	1	0	20.50	20.30	0.801	0.839	0.335	0.351	
ANT 2	Head	QPSK	Mode A	0	Left Touch	21100	2535.0	1	99	21298	2554.8	1	0	17.75	17.63	0.572	0.588	0.250	0.257	
ANT 2	Body	QPSK	Mode B	5	Rear	21100	2535.0	1	99	21298	2554.8	1	0	19.75	19.60	0.623	0.645	0.270	0.279	

Note(s):

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

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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	25.70	0.183	0.183	0.142	0.142	46
								25	12	24.70	24.60	0.141	0.144	0.110	0.113	
					Left Tilt	23095	707.5	1	25	25.70	25.70	0.105	0.105	0.082	0.082	
								25	12	24.70	24.60	0.076	0.078	0.060	0.061	
					Right Touch	23095	707.5	1	25	25.70	25.70	0.152	0.152	0.117	0.117	
								25	12	24.70	24.60	0.121	0.124	0.093	0.095	
					Right Tilt	23095	707.5	1	25	25.70	25.70	0.121	0.121	0.095	0.095	
								25	12	24.70	24.60	0.091	0.093	0.071	0.073	
	Body & Hotspot	QPSK	Mode B	5	Rear	23095	707.5	1	25	25.70	25.70	0.775	0.775	0.424	0.424	47
								25	12	24.70	24.60	0.620	0.634	0.337	0.345	
					Front	23095	707.5	1	25	25.70	25.70	0.414	0.414	0.239	0.239	
								25	12	24.70	24.60	0.357	0.365	0.200	0.205	
	Hotspot	QPSK	Mode B	5	Edge 2	23095	707.5	1	25	25.70	25.70	0.329	0.329	0.218	0.218	
								25	12	24.70	24.60	0.257	0.263	0.170	0.174	
					Edge 3	23095	707.5	1	25	25.70	25.70	0.429	0.429	0.200	0.200	
								25	12	24.70	24.60	0.413	0.423	0.193	0.197	
					Edge 4	23095	707.5	1	25	25.70	25.70	0.790	0.790	0.526	0.526	48
								25	12	24.70	24.60	0.619	0.633	0.412	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	24.12	0.390	0.426	0.293	0.320	49
								25	12	23.50	23.50	0.298	0.298	0.224	0.224	
					Left Tilt	23095	707.5	1	25	24.50	24.12	0.370	0.404	0.213	0.232	
								25	12	23.50	23.50	0.284	0.284	0.163	0.163	
					Right Touch	23095	707.5	1	25	24.50	24.12	0.318	0.347	0.214	0.234	
								25	12	23.50	23.50	0.242	0.242	0.164	0.164	
					Right Tilt	23095	707.5	1	25	24.50	24.12	0.309	0.337	0.172	0.188	
								25	12	23.50	23.50	0.235	0.235	0.135	0.135	
	Body & Hotspot	QPSK	Mode B	5	Rear	23095	707.5	1	25	24.50	24.12	0.223	0.243	0.176	0.192	50
								25	12	23.50	23.50	0.175	0.175	0.139	0.139	
					Front	23095	707.5	1	25	24.50	24.12	0.177	0.193	0.134	0.146	
								25	12	23.50	23.50	0.137	0.137	0.103	0.103	
	Hotspot	QPSK	Mode B	5	Edge 1	23095	707.5	1	25	24.50	24.12	0.104	0.114	0.049	0.053	
								25	12	23.50	23.50	0.086	0.086	0.041	0.041	
					Edge 2	23095	707.5	1	25	24.50	24.12	0.565	0.617	0.377	0.411	51
								25	12	23.50	23.50	0.433	0.433	0.289	0.289	
					Edge 4	23095	707.5	1	25	24.50	24.12	0.387	0.422	0.263	0.287	
								25	12	23.50	23.50	0.298	0.298	0.200	0.200	

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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	25.70	0.254	0.254	0.202	0.202	52
								25	12	24.70	24.70	0.193	0.193	0.154	0.154	
					Left Tilt	23230	782.0	1	25	25.70	25.70	0.150	0.150	0.118	0.118	
								25	12	24.70	24.70	0.117	0.117	0.092	0.092	
					Right Touch	23230	782.0	1	25	25.70	25.70	0.237	0.237	0.188	0.188	
								25	12	24.70	24.70	0.190	0.190	0.148	0.148	
					Right Tilt	23230	782.0	1	25	25.70	25.70	0.131	0.131	0.101	0.101	
								25	12	24.70	24.70	0.103	0.103	0.080	0.080	
	Body & Hotspot	QPSK	Mode B	5	Rear	23230	782.0	1	25	25.70	25.70	0.506	0.506	0.322	0.322	53
								25	12	24.70	24.70	0.394	0.394	0.251	0.251	
					Front	23230	782.0	1	25	25.70	25.70	0.283	0.283	0.225	0.225	
								25	12	24.70	24.70	0.219	0.219	0.174	0.174	
	Hotspot	QPSK	Mode B	5	Edge 2	23230	782.0	1	25	25.70	25.70	0.428	0.428	0.283	0.283	
								25	12	24.70	24.70	0.344	0.344	0.227	0.227	
					Edge 3	23230	782.0	1	25	25.70	25.70	0.237	0.237	0.117	0.117	
								25	12	24.70	24.70	0.182	0.182	0.090	0.090	
					Edge 4	23230	782.0	1	25	25.70	25.70	0.656	0.656	0.436	0.436	54
								25	12	24.70	24.70	0.527	0.527	0.349	0.349	

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	24.03	0.347	0.387	0.261	0.291	55
								25	12	23.50	23.05	0.277	0.307	0.208	0.231	
					Left Tilt	23230	782.0	1	25	24.50	24.03	0.337	0.376	0.188	0.209	
								25	12	23.50	23.05	0.268	0.297	0.149	0.165	
					Right Touch	23230	782.0	1	25	24.50	24.03	0.321	0.358	0.233	0.260	
								25	12	23.50	23.05	0.257	0.285	0.187	0.207	
					Right Tilt	23230	782.0	1	25	24.50	24.03	0.273	0.304	0.154	0.172	
								25	12	23.50	23.05	0.222	0.246	0.125	0.139	
	Body & Hotspot	QPSK	Mode B	5	Rear	23230	782.0	1	25	24.50	24.03	0.224	0.250	0.151	0.168	56
								25	12	23.50	23.05	0.180	0.200	0.121	0.134	
					Front	23230	782.0	1	25	24.50	24.03	0.173	0.193	0.135	0.150	
								25	12	23.50	23.05	0.147	0.163	0.088	0.097	
	Hotspot	QPSK	Mode B	5	Edge 1	23230	782.0	1	25	24.50	24.03	0.180	0.201	0.086	0.096	
								25	12	23.50	23.05	0.163	0.181	0.077	0.085	
					Edge 2	23230	782.0	1	25	24.50	24.03	0.485	0.540	0.323	0.360	57
								25	12	23.50	23.05	0.397	0.440	0.263	0.292	
					Edge 4	23230	782.0	1	25	24.50	24.03	0.205	0.228	0.137	0.153	
								25	12	23.50	23.05	0.169	0.187	0.112	0.124	

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10.13. 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	25.20	0.231	0.259	0.145	0.163	
								50	24	24.70	24.20	0.177	0.199	0.112	0.126	
					Left Tilt	26365	1882.5	1	49	25.70	25.20	0.169	0.190	0.099	0.111	
								50	24	24.70	24.20	0.132	0.148	0.077	0.086	
					Right Touch	26365	1882.5	1	49	25.70	25.20	0.411	0.461	0.253	0.284	58
								50	24	24.70	24.20	0.316	0.355	0.195	0.219	
					Right Tilt	26365	1882.5	1	49	25.70	25.20	0.203	0.228	0.120	0.135	
								50	24	24.70	24.20	0.156	0.175	0.092	0.103	
	Body & Hotspot	QPSK	Mode B	5	Rear	26140	1860.0	1	49	20.25	20.10	0.766	0.793	0.368	0.381	
								50	24	20.25	20.00	0.767	0.812	0.367	0.389	
						26365	1882.5	1	49	20.25	20.10	0.947	0.980	0.450	0.466	59
								50	24	20.25	20.00	0.906	0.960	0.430	0.455	
								100	0	20.25	20.10	0.908	0.940	0.429	0.444	
						26590	1905.0	1	49	20.25	20.10	0.864	0.894	0.403	0.417	
								50	24	20.25	20.10	0.847	0.877	0.397	0.411	
					Front	26365	1882.5	1	49	20.25	20.10	0.358	0.371	0.188	0.195	
								50	24	20.25	20.00	0.338	0.358	0.182	0.193	
	Hotspot	QPSK	Mode B	5	Edge 2	26365	1882.5	1	49	20.25	20.10	0.310	0.321	0.168	0.174	
								50	24	20.25	20.00	0.320	0.339	0.169	0.179	
					Edge 3	26365	1882.5	1	49	20.25	20.10	0.401	0.415	0.171	0.177	
								50	24	20.25	20.00	0.382	0.405	0.165	0.175	
					Edge 4	26365	1882.5	1	49	20.25	20.10	0.060	0.062	0.032	0.033	
								50	24	20.25	20.00	0.052	0.055	0.027	0.029	
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	17.45	0.178	0.180	0.089	0.090	
								50	24	17.50	17.44	0.175	0.177	0.087	0.089	
					Left Tilt	26365	1882.5	1	49	17.50	17.45	0.216	0.219	0.103	0.104	
								50	24	17.50	17.44	0.212	0.215	0.100	0.101	
					Right Touch	26365	1882.5	1	49	17.50	17.45	0.655	0.663	0.299	0.302	
								50	24	17.50	17.44	0.685	0.695	0.267	0.271	60
					Right Tilt	26365	1882.5	1	49	17.50	17.45	0.573	0.580	0.250	0.253	
								50	24	17.50	17.44	0.564	0.572	0.246	0.249	
	Body & Hotspot	QPSK	Mode B	5	Rear	26140	1860.0	1	49	18.50	18.40	0.803	0.822	0.361	0.369	
								50	24	18.50	18.30	0.769	0.805	0.347	0.363	
						26365	1882.5	1	49	18.50	18.46	0.889	0.897	0.396	0.400	61
								50	24	18.50	18.48	0.888	0.892	0.395	0.397	
								100	0	18.50	18.38	0.800	0.822	0.364	0.374	
						26590	1905.0	1	49	18.50	18.47	0.862	0.868	0.382	0.385	
								50	24	18.50	18.48	0.851	0.855	0.375	0.377	
					Front	26365	1882.5	1	49	18.50	18.46	0.333	0.336	0.153	0.154	
								50	24	18.50	18.48	0.322	0.323	0.148	0.149	
	Hotspot	QPSK	Mode B	5	Edge 1	26365	1882.5	1	49	18.50	18.46	0.556	0.561	0.215	0.217	
								50	24	18.50	18.48	0.482	0.484	0.192	0.193	
					Edge 2	26365	1882.5	1	49	18.50	18.46	0.148	0.149	0.078	0.079	
								50	24	18.50	18.48	0.156	0.157	0.081	0.081	
					Edge 4	26365	1882.5	1	49	18.50	18.46	0.593	0.598	0.299	0.302	
								50	24	18.50	18.48	0.617	0.620	0.307	0.308	

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10.14. 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	25	25.70	25.70	0.220	0.220	0.169	0.169	62
								25	12	24.70	24.70	0.177	0.177	0.136	0.136	
					Left Tilt	26865	831.5	1	25	25.70	25.70	0.116	0.116	0.090	0.090	
								25	12	24.70	24.70	0.089	0.089	0.070	0.070	
					Right Touch	26865	831.5	1	25	25.70	25.70	0.212	0.212	0.162	0.162	
								25	12	24.70	24.70	0.163	0.163	0.127	0.127	
					Right Tilt	26865	831.5	1	25	25.70	25.70	0.139	0.139	0.107	0.107	
								25	12	24.70	24.70	0.106	0.106	0.082	0.082	
	Body & Hotspot	QPSK	Mode B	5	Rear	26865	831.5	1	25	25.70	25.70	0.568	0.568	0.340	0.340	63
								25	12	24.70	24.70	0.454	0.454	0.273	0.273	
					Front	26865	831.5	1	25	25.70	25.70	0.305	0.305	0.188	0.188	
								25	12	24.70	24.70	0.245	0.245	0.161	0.161	
	Hotspot	QPSK	Mode B	5	Edge 2	26865	831.5	1	25	25.70	25.70	0.289	0.289	0.190	0.190	
								25	12	24.70	24.70	0.233	0.233	0.154	0.154	
					Edge 3	26865	831.5	1	25	25.70	25.70	0.301	0.301	0.146	0.146	
								25	12	24.70	24.70	0.230	0.230	0.114	0.114	
					Edge 4	26865	831.5	1	25	25.70	25.70	0.640	0.640	0.426	0.426	64
								25	12	24.70	24.70	0.519	0.519	0.345	0.345	

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	26865	831.5	1	25	24.50	24.40	0.728	0.745	0.537	0.550	65
								25	12	23.50	23.40	0.583	0.597	0.393	0.402	
					Left Tilt	26865	831.5	1	25	24.50	24.40	0.306	0.313	0.158	0.162	
								25	12	23.50	23.40	0.244	0.250	0.128	0.131	
					Right Touch	26865	831.5	1	25	24.50	24.40	0.361	0.369	0.225	0.230	
								25	12	23.50	23.40	0.265	0.271	0.185	0.189	
					Right Tilt	26865	831.5	1	25	24.50	24.40	0.188	0.192	0.103	0.105	
								25	12	23.50	23.40	0.154	0.158	0.085	0.087	
	Body & Hotspot	QPSK	Mode B	5	Rear	26865	831.5	1	25	24.50	24.40	0.271	0.277	0.155	0.159	66
								25	12	23.50	23.40	0.218	0.223	0.125	0.128	
					Front	26865	831.5	1	25	24.50	24.40	0.235	0.240	0.137	0.140	
								25	12	23.50	23.40	0.189	0.193	0.110	0.113	
	Hotspot	QPSK	Mode B	5	Edge 1	26865	831.5	1	25	24.50	24.40	0.258	0.264	0.121	0.124	
								25	12	23.50	23.40	0.237	0.243	0.107	0.109	
					Edge 2	26865	831.5	1	25	24.50	24.40	0.369	0.378	0.242	0.248	67
								25	12	23.50	23.40	0.296	0.303	0.194	0.199	
					Edge 4	26865	831.5	1	25	24.50	24.40	0.099	0.102	0.064	0.066	
								25	12	23.50	23.40	0.079	0.081	0.052	0.053	

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10.15. 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	25.70	0.464	0.464	0.257	0.257	68
								25	12	24.70	24.70	0.368	0.368	0.204	0.204	
					Left Tilt	27710	2310.0	1	25	25.70	25.70	0.184	0.184	0.094	0.094	
								25	12	24.70	24.70	0.146	0.146	0.076	0.076	
					Right Touch	27710	2310.0	1	25	25.70	25.70	0.256	0.256	0.151	0.151	
								25	12	24.70	24.70	0.206	0.206	0.121	0.121	
					Right Tilt	27710	2310.0	1	25	25.70	25.70	0.190	0.190	0.103	0.103	
								25	12	24.70	24.70	0.151	0.151	0.082	0.082	
	Body & Hotspot	QPSK	Mode B	5	Rear	27710	2310.0	1	25	24.00	23.99	0.923	0.925	0.399	0.400	
								25	12	24.00	23.65	0.922	0.999	0.398	0.431	69
								50	0	24.00	23.63	0.880	0.958	0.379	0.413	
					Front	27710	2310.0	1	25	24.00	23.99	0.588	0.589	0.281	0.282	
								25	12	24.00	23.65	0.591	0.641	0.282	0.306	
	Hotspot	QPSK	Mode B	5	Edge 2	27710	2310.0	1	25	24.00	23.99	0.145	0.145	0.064	0.064	
								25	12	24.00	23.65	0.138	0.150	0.058	0.062	
					Edge 3	27710	2310.0	1	25	24.00	23.99	0.729	0.731	0.258	0.259	
								25	12	24.00	23.65	0.708	0.767	0.250	0.271	
					Edge 4	27710	2310.0	1	25	24.00	23.99	0.684	0.686	0.349	0.350	
								25	12	24.00	23.65	0.672	0.728	0.342	0.371	

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	17.54	0.685	0.719	0.298	0.313	
								25	12	17.75	17.51	0.675	0.713	0.294	0.311	
					Left Tilt	27710	2310.0	1	25	17.75	17.54	0.694	0.728	0.269	0.282	
								25	12	17.75	17.51	0.697	0.737	0.270	0.285	70
					Right Touch	27710	2310.0	1	25	17.75	17.54	0.326	0.342	0.139	0.146	
								25	12	17.75	17.51	0.325	0.343	0.138	0.146	
					Right Tilt	27710	2310.0	1	25	17.75	17.54	0.316	0.332	0.135	0.142	
								25	12	17.75	17.51	0.308	0.325	0.130	0.137	
	Body & Hotspot	QPSK	Mode B	5	Rear	27710	2310.0	1	25	20.50	20.50	0.683	0.683	0.256	0.256	71
								25	12	20.50	20.50	0.634	0.634	0.237	0.237	
					Front	27710	2310.0	1	25	20.50	20.50	0.578	0.578	0.248	0.248	
								25	12	20.50	20.50	0.431	0.431	0.191	0.191	
	Hotspot	QPSK	Mode B	5	Edge 1	27710	2310.0	1	25	20.50	20.50	0.387	0.387	0.139	0.139	
								25	12	20.50	20.50	0.302	0.302	0.115	0.115	
					Edge 2	27710	2310.0	1	25	20.50	20.50	0.850	0.850	0.371	0.371	72
								25	12	20.50	20.50	0.732	0.732	0.318	0.318	
					Edge 4	27710	2310.0	1	25	20.50	20.50	0.171	0.171	0.080	0.080	
								25	12	20.50	20.50	0.131	0.131	0.061	0.061	

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10.16. 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	25.20	0.228	0.256	0.124	0.139	73
								50	24	24.70	24.20	0.191	0.214	0.098	0.110	
					Left Tilt	40620	2593.0	1	49	25.70	25.20	0.061	0.068	0.026	0.029	
								50	24	24.70	24.20	0.048	0.054	0.024	0.027	
					Right Touch	40620	2593.0	1	49	25.70	25.20	0.124	0.139	0.067	0.075	
								50	24	24.70	24.20	0.095	0.107	0.052	0.058	
					Right Tilt	40620	2593.0	1	49	25.70	25.20	0.128	0.144	0.062	0.070	
								50	24	24.70	24.20	0.099	0.111	0.039	0.044	
	Body & Hotspot	QPSK	Mode B	5	Rear	39750	2506.0	1	49	23.00	22.80	0.802	0.840	0.342	0.358	
								50	24	23.00	22.80	0.785	0.822	0.337	0.353	
						40185	2549.5	1	49	23.00	23.00	0.938	0.938	0.400	0.400	74
								50	24	23.00	23.00	0.877	0.877	0.387	0.387	
						40620	2593.0	1	49	23.00	22.90	0.748	0.765	0.327	0.335	
								50	24	23.00	22.80	0.802	0.840	0.354	0.371	
								100	0	23.00	22.80	0.739	0.774	0.323	0.338	
						41055	2636.5	1	49	23.00	22.90	0.780	0.798	0.333	0.341	
								50	24	23.00	22.90	0.786	0.804	0.334	0.342	
						41490	2680.0	1	49	23.00	22.90	0.818	0.837	0.338	0.346	
								50	24	23.00	22.90	0.740	0.757	0.316	0.323	
					Front	40620	2593.0	1	49	23.00	22.90	0.574	0.587	0.249	0.255	
								50	24	23.00	22.80	0.574	0.601	0.249	0.261	
	Hotspot	QPSK	Mode B	5	Edge 2	40620	2593.0	1	49	23.00	22.90	0.025	0.026	0.013	0.013	
								50	24	23.00	22.80	0.025	0.026	0.013	0.014	
					Edge 3	40620	2593.0	1	49	23.00	22.90	0.441	0.451	0.167	0.171	
								50	24	23.00	22.80	0.446	0.467	0.169	0.177	
					Edge 4	40620	2593.0	1	49	23.00	22.90	0.676	0.692	0.290	0.297	
								50	24	23.00	22.80	0.664	0.695	0.283	0.296	

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	19.73	0.760	0.764	0.292	0.293	
								50	24	19.75	19.73	0.763	0.767	0.293	0.294	75
					Left Tilt	40620	2593.0	1	49	19.75	19.73	0.426	0.428	0.185	0.186	
								50	24	19.75	19.73	0.426	0.428	0.183	0.184	
					Right Touch	40620	2593.0	1	49	19.75	19.73	0.227	0.228	0.112	0.113	
								50	24	19.75	19.73	0.223	0.224	0.112	0.113	
					Right Tilt	40620	2593.0	1	49	19.75	19.73	0.310	0.311	0.135	0.136	
								50	24	19.75	19.73	0.305	0.306	0.137	0.138	
	Body & Hotspot	QPSK	Mode B	5	Rear	39750	2506.0	1	49	21.50	21.30	0.713	0.747	0.311	0.326	
								50	24	21.50	21.30	0.833	0.872	0.361	0.378	76
						40185	2549.5	1	49	21.50	21.50	0.766	0.766	0.334	0.334	
								50	24	21.50	21.43	0.733	0.745	0.310	0.315	
						40620	2593.0	1	49	21.50	21.40	0.787	0.805	0.327	0.335	
								50	24	21.50	21.37	0.787	0.811	0.326	0.336	
								100	0	21.50	21.28	0.779	0.819	0.317	0.333	
						41055	2636.5	1	49	21.50	21.44	0.647	0.656	0.281	0.285	
								50	24	21.50	21.47	0.665	0.670	0.282	0.284	
						41490	2680.0	1	49	21.50	21.27	0.596	0.628	0.248	0.261	
								50	24	21.50	21.28	0.584	0.614	0.220	0.231	
					Front	40620	2593.0	1	49	21.50	21.40	0.489	0.500	0.209	0.214	
								50	24	21.50	21.37	0.467	0.481	0.201	0.207	
	Hotspot	QPSK	Mode B	5	Edge 1	40620	2593.0	1	49	21.50	21.40	0.314	0.321	0.126	0.129	
								50	24	21.50	21.37	0.278	0.286	0.120	0.124	
					Edge 2	40620	2593.0	1	49	21.50	21.40	0.709	0.726	0.283	0.290	
								50	24	21.50	21.37	0.719	0.741	0.285	0.294	
					Edge 4	40620	2593.0	1	49	21.50	21.40	0.101	0.103	0.046	0.047	
								50	24	21.50	21.37	0.100	0.103	0.046	0.047	

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UL CA 41C (Power Class 3)

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 offest	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
ANT 1	Head	QPSK	Mode A	5	Left Touch	40620	2593	1	99	40818	2612.8	1	0	25.00	24.97	0.146	0.147	0.078	0.079	
ANT 1	Body	QPSK	Mode B	5	Rear	40185	2549.5	1	99	40383	2569.3	1	0	23.00	22.98	0.841	0.845	0.359	0.361	
ANT 2	Head	QPSK	Mode A	5	Left Touch	40620	2593	1	99	40818	2612.8	1	0	19.75	19.63	0.615	0.632	0.250	0.257	
ANT 2	Body	QPSK	Mode B	5	Rear	39750	2506	1	99	39948	2525.8	1	0	21.50	21.10	0.668	0.732	0.329	0.361	

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. Refer to §10.17.

10.17. 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	27.75	0.176	0.219	0.100	0.124	

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 SAR (W/kg)	Duty Cycle	Tune-up Power (dBm)	Frame Avg. Power (mW)	Reported SAR (W/kg)		
ANT1	Head	43.3%	28.70	320.99	0.219	63.3%	25.70	235.18	0.256	0.349	-37.32%

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%.

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10.18. 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	25.65	0.157	0.159	0.075	0.076	
								50	24	24.70	24.48	0.125	0.131	0.060	0.063	
					Left Tilt	56207	3646.7	1	49	25.70	25.65	0.110	0.111	0.045	0.046	
								50	24	24.70	24.48	0.088	0.093	0.039	0.041	
					Right Touch	56207	3646.7	1	49	25.70	25.65	0.303	0.307	0.136	0.138	77
								50	24	24.70	24.48	0.273	0.287	0.120	0.126	
					Right Tilt	56207	3646.7	1	49	25.70	25.65	0.099	0.100	0.040	0.040	
								50	24	24.70	24.48	0.094	0.099	0.038	0.040	
	Body & Hotspot	QPSK	Mode B	5	Rear	55340	3560.0	1	49	24.00	23.69	0.744	0.799	0.259	0.278	
						55773	3603.3	1	49	24.00	23.70	0.723	0.775	0.285	0.305	
						56207	3646.7	1	49	24.00	23.90	0.793	0.811	0.308	0.315	78
								50	24	24.00	23.90	0.774	0.792	0.298	0.305	
						56640	3690.0	1	49	24.00	23.60	0.722	0.792	0.277	0.304	
					Front	56207	3646.7	1	49	24.00	23.90	0.649	0.664	0.225	0.230	
								50	24	24.00	23.90	0.613	0.627	0.215	0.220	
	Hotspot	QPSK	Mode B	5	Edge 2	55340	3560.0	1	49	24.00	23.69	0.800	0.859	0.285	0.306	
						55773	3603.3	1	49	24.00	23.70	0.804	0.862	0.274	0.294	79
						56207	3646.7	1	49	24.00	23.90	0.799	0.818	0.295	0.302	
								50	24	24.00	23.90	0.768	0.786	0.286	0.293	
						56640	3690.0	1	49	24.00	23.60	0.603	0.661	0.210	0.230	
					Edge 3	56207	3646.7	1	49	24.00	23.90	0.308	0.315	0.105	0.107	
								50	24	24.00	23.90	0.301	0.308	0.102	0.104	

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	
ANT4	Head	QPSK	Mode A	0	Left Touch	56207	3646.7	1	49	22.50	22.40	0.179	0.183	0.062	0.063	
								50	24	21.50	21.30	0.131	0.137	0.049	0.051	
					Left Tilt	56207	3646.7	1	49	22.50	22.40	0.120	0.123	0.036	0.037	
								50	24	21.50	21.30	0.092	0.096	0.025	0.026	
					Right Touch	56207	3646.7	1	49	22.50	22.40	0.215	0.220	0.078	0.080	
								50	24	21.50	21.30	0.174	0.182	0.061	0.064	
					Right Tilt	56207	3646.7	1	49	22.50	22.40	0.273	0.279	0.087	0.089	80
								50	24	21.50	21.30	0.217	0.227	0.067	0.070	
	Body & Hotspot	QPSK	Mode B	5	Rear	56207	3646.7	1	49	22.50	22.40	0.579	0.592	0.189	0.193	81
								50	24	21.50	21.30	0.410	0.429	0.189	0.198	
					Front	56207	3646.7	1	49	22.50	22.40	0.111	0.114	0.043	0.044	
								50	24	21.50	21.30	0.096	0.100	0.038	0.039	
	Hotspot	QPSK	Mode B	5	Edge 1	56207	3646.7	1	49	22.50	22.40	0.161	0.165	0.051	0.052	
								50	24	21.50	21.30	0.121	0.127	0.047	0.049	
					Edge 4	56207	3646.7	1	49	22.50	22.40	0.434	0.444	0.161	0.165	
								50	24	21.50	21.30	0.418	0.438	0.148	0.155	

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.

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10.19. 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	25.70	0.266	0.266	0.172	0.172	
								50	24	24.70	24.70	0.208	0.208	0.135	0.135	
					Left Tilt	132322	1745.0	1	49	25.70	25.70	0.198	0.198	0.114	0.114	
								50	24	24.70	24.70	0.155	0.155	0.089	0.089	
					Right Touch	132322	1745.0	1	49	25.70	25.70	0.315	0.315	0.202	0.202	82
								50	24	24.70	24.70	0.253	0.253	0.162	0.162	
					Right Tilt	132322	1745.0	1	49	25.70	25.70	0.175	0.175	0.111	0.111	
								50	24	24.70	24.70	0.141	0.141	0.089	0.089	
	Body & Hotspot	QPSK	Mode B	5	Rear	132072	1720.0	1	49	21.50	21.34	0.758	0.786	0.415	0.431	
								50	24	21.50	21.32	0.773	0.806	0.420	0.438	
						132322	1745.0	1	49	21.50	21.31	0.821	0.858	0.440	0.460	
								50	24	21.50	21.28	0.814	0.856	0.435	0.458	
								100	0	21.50	21.20	0.828	0.887	0.443	0.475	
						132572	1770.0	1	49	21.50	21.22	0.912	0.973	0.488	0.520	83
								50	24	21.50	21.50	0.908	0.908	0.460	0.460	
					Front	132322	1745.0	1	49	21.50	21.31	0.669	0.699	0.347	0.363	
								50	24	21.50	21.28	0.566	0.595	0.311	0.327	
	Hotspot	QPSK	Mode B	5	Edge 2	132322	1745.0	1	49	21.50	21.31	0.399	0.417	0.209	0.218	
								50	24	21.50	21.28	0.364	0.383	0.193	0.203	
					Edge 3	132072	1720.0	1	49	21.50	21.34	0.833	0.864	0.407	0.422	
								50	24	21.50	21.32	0.879	0.916	0.419	0.437	
						132322	1745.0	1	49	21.50	21.31	0.883	0.922	0.423	0.442	
								50	24	21.50	21.28	0.878	0.924	0.420	0.442	
								100	0	21.50	21.20	0.810	0.868	0.415	0.445	
						132572	1770.0	1	49	21.50	21.22	0.884	0.943	0.406	0.433	
								50	24	21.50	21.50	0.812	0.812	0.377	0.377	
					Edge 4	132322	1745.0	1	49	21.50	21.31	0.254	0.265	0.135	0.141	
								50	24	21.50	21.28	0.256	0.269	0.135	0.142	

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	21.25	0.224	0.224	0.123	0.123	
								50	24	21.25	21.07	0.226	0.236	0.124	0.129	
					Left Tilt	132322	1745.0	1	49	21.25	21.25	0.281	0.281	0.146	0.146	
								50	24	21.25	21.07	0.278	0.290	0.144	0.150	
					Right Touch	132322	1745.0	1	49	21.25	21.25	0.791	0.791	0.397	0.397	84
								50	24	21.25	21.07	0.638	0.665	0.321	0.335	
					Right Tilt	132322	1745.0	1	49	21.25	21.25	0.567	0.567	0.264	0.264	
								50	24	21.25	21.07	0.572	0.596	0.267	0.278	
	Body & Hotspot	QPSK	Mode B	5	Rear	132072	1720.0	1	49	21.50	21.43	0.629	0.639	0.309	0.314	
								50	24	21.50	21.42	0.643	0.655	0.309	0.315	
						132322	1745.0	1	49	21.50	21.34	0.771	0.800	0.363	0.377	
								50	24	21.50	21.31	0.770	0.804	0.365	0.381	
								100	0	21.50	21.36	0.775	0.800	0.365	0.377	
						132572	1770.0	1	49	21.50	21.34	0.782	0.811	0.370	0.384	85
								50	24	21.50	21.34	0.776	0.805	0.367	0.381	
					Front	132322	1745.0	1	49	21.50	21.34	0.278	0.288	0.140	0.145	
								50	24	21.50	21.31	0.289	0.302	0.147	0.154	
	Hotspot	QPSK	Mode B	5	Edge 1	132322	1745.0	1	49	21.50	21.34	0.398	0.413	0.191	0.198	
								50	24	21.50	21.31	0.439	0.459	0.205	0.214	
					Edge 2	132322	1745.0	1	49	21.50	21.34	0.034	0.035	0.019	0.020	
								50	24	21.50	21.31	0.033	0.034	0.017	0.018	
					Edge 4	132322	1745.0	1	49	21.50	21.34	0.234	0.243	0.129	0.134	
								50	24	21.50	21.31	0.269	0.281	0.145	0.151	

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10.20. 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	0.313	100.0%	21.50	21.50	0.234	0.234	0.126	0.126	86
						Left Tilt	6	2437	0.115	100.0%	21.50	21.50					
						Right Touch	6	2437	0.149	100.0%	21.50	21.50					
						Right Tilt	6	2437	0.133	100.0%	21.50	21.50					
		Body & Hotspot	802.11b	Mode B	5	Rear	2	2417	1.240	100.0%	20.75	20.75	0.828	0.828	0.342	0.342	
							6	2437	1.490	100.0%	20.75	20.75	1.080	1.080	0.440	0.440	87
							11	2462	1.070	100.0%	20.75	20.75	0.871	0.871	0.347	0.347	
						Front	6	2437	0.366	100.0%	20.75	20.75					
		Hotspot	802.11b	Mode B	5	Edge 3	6	2437	0.231	100.0%	20.75	20.75					
						Edge 4	6	2437	0.630	100.0%	20.75	20.75	0.708	0.708	0.253	0.253	
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	6	2437	1.280	100.0%	20.25	20.25	1.060	1.060	0.454	0.454	
							11	2462	1.480	100.0%	20.25	20.25	1.070	1.070	0.435	0.435	
						Left Tilt	6	2437	1.500	100.0%	20.25	20.25	1.090	1.090	0.395	0.395	88
							11	2462	1.340	100.0%	20.25	20.25	1.030	1.030	0.400	0.400	
						Right Touch	6	2437	0.239	100.0%	20.25	20.25					
						Right Tilt	6	2437	0.635	100.0%	20.25	20.25	0.539	0.539	0.225	0.225	
		Body & Hotspot	802.11b	Mode B	5	Rear	6	2437	1.550	100.0%	21.50	21.50	1.010	1.010	0.453	0.453	
							11	2462	1.780	100.0%	21.50	21.50	1.040	1.040	0.471	0.471	89
						Front	6	2437	1.400	100.0%	21.50	21.50	0.739	0.739	0.346	0.346	
		Hotspot	802.11b	Mode B	5	Edge 1	6	2437	0.890	100.0%	21.50	21.50					
						Edge 2	2	2417	1.910	100.0%	21.50	21.50	1.050	1.050	0.426	0.426	
							6	2437	1.660	100.0%	21.50	21.50	1.100	1.100	0.449	0.449	90
							11	2462	1.810	100.0%	21.50	21.50	1.080	1.080	0.440	0.440	
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	0.525	100.0%	16.50	16.50	0.402	0.402	0.163	0.163	91
						Front	6	2437	0.178	100.0%	16.50	16.50	0.117	0.117	0.058	0.058	
		Hotspot	802.11b	Mode B	5	Edge 3	6	2437	0.123	100.0%	16.50	16.50					
						Edge 4	6	2437	0.350	100.0%	16.50	16.50	0.240	0.240	0.105	0.105	
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	0.772	100.0%	17.00	17.00	0.645	0.645	0.266	0.266	92
						Left Tilt	6	2437	0.572	100.0%	17.00	17.00	0.433	0.433	0.170	0.170	
						Right Touch	6	2437	0.258	100.0%	17.00	17.00					
						Right Tilt	6	2437	0.265	100.0%	17.00	17.00					
		Body & Hotspot	802.11b	Mode B	5	Rear	6	2437	0.735	100.0%	18.25	18.25	0.537	0.537	0.231	0.231	93
						Front	6	2437	0.702	100.0%	18.25	18.25	0.391	0.391	0.173	0.173	
		Hotspot	802.11b	Mode B	5	Edge 1	6	2437	0.470	100.0%	18.25	18.25					
						Edge 2	6	2437	0.556	100.0%	18.25	18.25					

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10.21. 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 (HT40)	Mode A	0	Left Touch	54	5270	0.249	97.9%	21.50	21.50	0.132	0.135	0.044	0.045	94
							Left Tilt	54	5270	0.103	97.9%	21.50	21.50					
							Right Touch	54	5270	0.049	97.9%	21.50	21.50					
							Right Tilt	54	5270	0.051	97.9%	21.50	21.50					
		U-NII-1	Body & Airplay	802.11n (HT40)	Mode B	5	Rear	38	5190	1.720	95.5%	17.50	17.50	0.721	0.755	0.227	0.238	
								46	5230	2.090	95.5%	19.75	19.75	1.040	1.089	0.326	0.341	95
							Front	46	5230	0.119	95.5%	19.75	19.75					
			Airplay	802.11n (HT40)	Mode B	5	Edge 3	46	5230	0.508	95.5%	19.75	19.75	0.246	0.258	0.083	0.087	
							Edge 4	46	5230	0.198	95.5%	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	0.071	95.5%	21.50	21.50	0.026	0.027	0.008	0.008	96
							Left Tilt	122	5610	0.036	95.5%	21.50	21.50					
							Right Touch	122	5610	0.036	95.5%	21.50	21.50					
							Right Tilt	122	5610	0.045	95.5%	21.50	21.50					
			Body & Airplay	802.11ac (VHT80)	Mode B	5	Rear	106	5530	1.730	95.5%	17.50	17.50	0.747	0.782	0.253	0.265	
								122	5610	2.210	95.5%	18.25	18.25	1.040	1.089	0.325	0.340	97
								138	5690	1.570	95.5%	18.25	18.25	0.776	0.812	0.243	0.254	
							Front	122	5610	0.179	95.5%	18.25	18.25					
			Airplay	802.11ac (VHT80)	Mode B	5	Edge 3	122	5610	0.346	95.5%	18.25	18.25	0.169	0.177	0.059	0.062	
							Edge 4	122	5610	0.171	95.5%	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	0.089	95.5%	21.50	21.50	0.042	0.044	0.016	0.017	98
							Left Tilt	155	5775	0.034	95.5%	21.50	21.50					
							Right Touch	155	5775	0.025	95.5%	21.50	21.50					
							Right Tilt	155	5775	0.031	95.5%	21.50	21.50					
			Body & Airplay	802.11ac (VHT80)	Mode B	5	Rear	155	5775	1.620	95.5%	18.50	18.50	1.040	1.089	0.277	0.290	99
							Front	155	5775	0.114	95.5%	18.50	18.50					
			Airplay	802.11ac (VHT80)	Mode B	5	Edge 3	155	5775	0.756	95.5%	18.50	18.50	0.312	0.327	0.117	0.122	
							Edge 4	155	5775	0.268	95.5%	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	0.471	97.9%	21.50	21.50	0.330	0.337	0.114	0.116	
							Left Tilt	46	5230	0.165	97.9%	21.50	21.50					
							Right Touch	38	5190	0.675	97.9%	17.50	17.50	0.370	0.378	0.133	0.136	
								46	5230	2.010	97.9%	21.50	21.50	1.030	1.052	0.331	0.338	100
							Right Tilt	38	5190	0.490	97.9%	17.50	17.50	0.342	0.349	0.110	0.112	
								46	5230	1.480	97.9%	21.50	21.50	0.781	0.798	0.249	0.254	
		U-NII-2A	Body & Airplay	802.11n (HT40)	Mode B	5	Rear	54	5270	2.730	97.9%	20.00	20.00	1.150	1.175	0.311	0.318	101
								62	5310	0.560	97.9%	17.50	17.50	0.264	0.270	0.073	0.075	
							Front	54	5270	0.692	97.9%	20.00	20.00					
			Airplay	802.11n (HT40)	Mode B	5	Edge 1	54	5270	0.341	97.9%	20.00	20.00					
							Edge 4	54	5270	0.885	97.9%	20.00	20.00	0.350	0.358	0.112	0.114	

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	122	5610	0.517	95.5%	21.50	21.50					
							Left Tilt	122	5610	0.526	95.5%	21.50	21.50	0.298	0.312	0.088	0.092	
							Right Touch	122	5610	1.450	95.5%	21.50	21.50	0.905	0.947	0.264	0.276	102
								138	5690	1.490	95.5%	21.50	21.50	0.754	0.789	0.210	0.220	
							Right Tilt	122	5610	1.530	95.5%	21.50	21.50	0.726	0.760	0.202	0.211	
								138	5690	1.130	95.5%	21.50	21.50	0.617	0.646	0.167	0.175	
			Body & Airplay	802.11ac (VHT80)	Mode B	5	Rear	106	5530	0.795	95.5%	17.50	17.50	0.457	0.478	0.123	0.129	
								122	5610	3.150	95.5%	18.50	18.50	1.120	1.173	0.307	0.321	103
								138	5690	3.350	95.5%	18.50	18.50	1.070	1.120	0.308	0.322	
							Front	122	5610	0.470	95.5%	18.50	18.50	0.208	0.218	0.061	0.064	
			Airplay	802.11ac (VHT80)	Mode B	5	Edge 1	122	5610	0.228	95.5%	18.50	18.50					
							Edge 4	122	5610	0.236	95.5%	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	0.751	95.5%	21.50	21.50					
							Left Tilt	155	5775	0.829	95.5%	21.50	21.50	0.465	0.487	0.141	0.148	
							Right Touch	155	5775	1.210	95.5%	21.50	21.50	0.724	0.758	0.214	0.224	
							Right Tilt	155	5775	1.150	95.5%	21.50	21.50	0.781	0.818	0.218	0.228	104
			Body & Airplay	802.11ac (VHT80)	Mode B	5	Rear	155	5775	2.690	95.5%	18.50	18.50	1.080	1.131	0.301	0.315	105
							Front	155	5775	0.442	95.5%	18.50	18.50	0.081	0.085	0.027	0.028	
			Airplay	802.11ac (VHT80)	Mode B	5	Edge 1	155	5775	0.342	95.5%	18.50	18.50					
							Edge 4	155	5775	0.244	95.5%	18.50	18.50					

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ANT5 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	0.827	95.5%	14.25	14.25	0.326	0.341	0.109	0.114	106
							Front	42	5210	0.096	95.5%	14.25	14.25					
			Airplay	802.11ac (VHT80)	Mode B	5	Edge 3	42	5210	0.316	95.5%	14.25	14.25					
							Edge 4	42	5210	0.164	95.5%	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	0.526	95.5%	12.75	12.75	0.305	0.319	0.091	0.095	107
							Front	122	5610	0.132	95.5%	12.75	12.75					
			Airplay	802.11ac (VHT80)	Mode B	5	Edge 3	122	5610	0.108	95.5%	12.75	12.75					
							Edge 4	122	5610	0.197	95.5%	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	0.865	95.5%	13.25	13.25	0.329	0.344	0.097	0.102	108
							Front	155	5775	0.031	95.5%	13.25	13.25					
			Airplay	802.11ac (VHT80)	Mode B	5	Edge 3	155	5775	0.042	95.5%	13.25	13.25					
							Edge 4	155	5775	0.039	95.5%	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 (HT40)	Mode A	0	Left Touch	46	5230	0.237	97.9%	18.50	18.40					
							Left Tilt	46	5230	0.161	97.9%	18.50	18.40					
							Right Touch	46	5230	0.881	97.9%	18.50	18.40	0.493	0.515	0.162	0.169	109
							Right Tilt	46	5230	0.850	97.9%	18.50	18.40	0.391	0.409	0.124	0.130	
		U-NII-2A	Body & Airplay	802.11ac (VHT80)	Mode B	5	Rear	58	5290	1.010	95.5%	15.75	15.75	0.393	0.411	0.101	0.106	110
							Front	58	5290	0.134	95.5%	15.75	15.75					
			Airplay	802.11ac (VHT80)	Mode B	5	Edge 1	58	5290	0.112	95.5%	15.75	15.75					
							Edge 4	58	5290	0.309	95.5%	15.75	15.75	0.160	0.168	0.043	0.045	
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	0.416	95.5%	20.25	20.25					
							Left Tilt	122	5610	0.544	95.5%	20.25	20.25					
							Right Touch	122	5610	0.682	95.5%	20.25	20.25	0.507	0.531	0.143	0.150	111
							Right Tilt	122	5610	0.768	95.5%	20.25	20.25	0.432	0.452	0.116	0.121	
			Body & Airplay	802.11ac (VHT80)	Mode B	5	Rear	122	5610	0.976	95.5%	14.25	14.25	0.412	0.431	0.113	0.118	112
							Front	122	5610	0.792	95.5%	14.25	14.25	0.102	0.107	0.031	0.032	
			Airplay	802.11ac (VHT80)	Mode B	5	Edge 1	122	5610	0.105	95.5%	14.25	14.25					
							Edge 4	122	5610	0.146	95.5%	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	Head	802.11ac (VHT80)	Mode A	0	Left Touch	155	5775	0.490	95.5%	21.50	21.50					
							Left Tilt	155	5775	0.390	95.5%	21.50	21.50					
							Right Touch	155	5775	0.784	95.5%	21.50	21.50	0.444	0.465	0.115	0.120	127
							Right Tilt	155	5775	0.639	95.5%	21.50	21.50	0.308	0.322	0.086	0.090	
			Body & Airplay	802.11ac (VHT80)	Mode B	5	Rear	155	5775	1.110	95.5%	14.25	14.25	0.410	0.429	0.110	0.115	113
							Front	155	5775	0.084	95.5%	14.25	14.25					
			Airplay	802.11ac (VHT80)	Mode B	5	Edge 1	155	5775	0.165	95.5%	14.25	14.25	0.072	0.075	0.026	0.027	
							Edge 4	155	5775	0.089	95.5%	14.25	14.25					

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10.22. 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	0.044	0.044	0.024	0.024	114
					Left Tilt	39	2441	100.0%	17.50	17.50	0.021	0.021	0.010	0.010	
					Right Touch	39	2441	100.0%	17.50	17.50	0.035	0.035	0.020	0.020	
					Right Tilt	39	2441	100.0%	17.50	17.50	0.028	0.028	0.014	0.014	
	Body & Hotspot	GFSK	Mode B	5	Rear	39	2441	100.0%	11.00	10.50	0.077	0.086	0.034	0.038	115
					Front	39	2441	100.0%	11.00	10.50	0.034	0.038	0.017	0.019	
	Hotspot	GFSK	Mode B	5	Edge 3	39	2441	100.0%	11.00	10.50	0.013	0.015	0.005	0.006	
					Edge 4	39	2441	100.0%	11.00	10.50	0.051	0.057	0.022	0.025	
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_{high}	Body & Hotspot	GFSK	Mode B	5	Rear	39	2441	100.0%	15.00	15.00	0.239	0.239	0.099	0.099	116
					Front	39	2441	100.0%	15.00	15.00	0.069	0.069	0.030	0.030	
	Hotspot	GFSK	Mode B	5	Edge 3	39	2441	100.0%	15.00	15.00	0.038	0.038	0.018	0.018	
					Edge 4	39	2441	100.0%	15.00	15.00	0.120	0.120	0.053	0.053	
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 $P_{standlone}$	Head	GFSK	Mode A	0	Left Touch	39	2441	100.0%	20.00	20.00	0.214	0.214	0.114	0.114	117
					Left Tilt	39	2441	100.0%	20.00	20.00	0.070	0.070	0.034	0.034	
					Right Touch	39	2441	100.0%	20.00	20.00	0.102	0.102	0.057	0.057	
					Right Tilt	39	2441	100.0%	20.00	20.00	0.097	0.097	0.050	0.050	
	Body & Hotspot	GFSK	Mode B	5	Rear	39	2441	100.0%	18.50	18.50	0.573	0.573	0.241	0.241	118
					Front	39	2441	100.0%	18.50	18.50	0.157	0.157	0.074	0.074	
	Hotspot	GFSK	Mode B	5	Edge 3	39	2441	100.0%	18.50	18.50	0.078	0.078	0.034	0.034	
					Edge 4	39	2441	100.0%	18.50	18.50	0.329	0.329	0.147	0.147	
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	
ANT2 P_{low}	Head	GFSK	Mode A	0	Left Touch	39	2441	100.0%	10.00	10.00	0.090	0.090	0.038	0.038	
					Left Tilt	39	2441	100.0%	10.00	10.00	0.091	0.091	0.034	0.034	119
					Right Touch	39	2441	100.0%	10.00	10.00	0.029	0.029	0.012	0.012	
					Right Tilt	39	2441	100.0%	10.00	10.00	0.066	0.066	0.027	0.027	
	Body & Hotspot	GFSK	Mode B	5	Rear	39	2441	100.0%	11.50	11.50	0.076	0.076	0.032	0.032	120
					Front	39	2441	100.0%	11.50	11.50	0.057	0.057	0.025	0.025	
	Hotspot	GFSK	Mode B	5	Edge 1	39	2441	100.0%	11.50	11.50	0.034	0.034	0.010	0.010	
					Edge 2	39	2441	100.0%	11.50	11.50	0.093	0.093	0.037	0.037	
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	
ANT2 P_{high}	Head	GFSK	Mode A	0	Left Touch	39	2441	100.0%	14.00	14.00	0.228	0.228	0.093	0.093	121
					Left Tilt	39	2441	100.0%	14.00	14.00	0.221	0.221	0.085	0.085	
					Right Touch	39	2441	100.0%	14.00	14.00	0.138	0.138	0.062	0.062	
					Right Tilt	39	2441	100.0%	14.00	14.00	0.132	0.132	0.059	0.059	
	Body & Hotspot	GFSK	Mode B	5	Rear	39	2441	100.0%	15.50	15.50	0.238	0.238	0.101	0.101	122
					Front	39	2441	100.0%	15.50	15.50	0.156	0.156	0.068	0.068	
	Hotspot	GFSK	Mode B	5	Edge 1	39	2441	100.0%	15.50	15.50	0.093	0.093	0.037	0.037	
					Edge 2	39	2441	100.0%	15.50	15.50	0.244	0.244	0.095	0.095	123
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	
ANT2 $P_{standlone}$	Head	GFSK	Mode A	0	Left Touch	39	2441	100.0%	17.50	17.50	0.551	0.551	0.224	0.224	124
					Left Tilt	39	2441	100.0%	17.50	17.50	0.544	0.544	0.218	0.218	
					Right Touch	39	2441	100.0%	17.50	17.50	0.236	0.236	0.113	0.113	
					Right Tilt	39	2441	100.0%	17.50	17.50	0.298	0.298	0.126	0.126	
	Body & Hotspot	GFSK	Mode B	5	Rear	39	2441	100.0%	19.00	19.00	0.444	0.444	0.207	0.207	125
					Front	39	2441	100.0%	19.00	19.00	0.357	0.357	0.162	0.162	
	Hotspot	GFSK	Mode B	5	Edge 1	39	2441	100.0%	19.00	19.00	0.146	0.146	0.063	0.063	
					Edge 2	39	2441	100.0%	19.00	19.00	0.555	0.555	0.219	0.219	126

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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	Body & Hotspot	Rear	Yes	0.912	0.902	1.01
1900	LTE Band 25	Body & Hotspot	Rear	Yes	0.947	0.944	1.00
2300	LTE Band 30	Body & Hotspot	Rear	Yes	0.923	0.899	1.03
2400	Wi-Fi 802.11b/g/n	Hotspot	Edge 2	Yes	1.100	1.090	1.01
2600	LTE Band 41	Body & Hotspot	Rear	Yes	0.938	0.854	1.10
3600	LTE Band 48	Hotspot	Edge 2	Yes	0.804	0.804	1.00
5200	Wi-Fi 802.11a/n/ac	Body & Hotspot	Rear	Yes	1.040	1.020	1.02
5300	Wi-Fi 802.11a/n/ac	Body & Hotspot	Rear	Yes	1.150	1.120	1.03
5500	Wi-Fi 802.11a/n/ac	Body & Hotspot	Rear	Yes	1.120	1.090	1.03
5800	Wi-Fi 802.11a/n/ac	Body & Hotspot	Rear	Yes	1.080	1.07	1.01

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.

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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:

SAR_1 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

SAR_2 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 SAR_1.or SAR_2. 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.

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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 publication 248227 D01, simultaneous SAR provisions in KDB Publication 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 Body Worn Accessory Hotspot (for 2.4 GHz) Airplay (for 2.4/5 GHz)	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]
	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})
	14				+	(ANT5) Bluetooth (P_{High})
	15				+	Bluetooth Beamforming [7]
	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):

1. Wi-Fi 2.4GHz & Bluetooth cannot transmit simultaneously.
2. Wi-Fi 2.4GHz & Wi-Fi 5GHz cannot transmit simultaneously.
3. WWAN ANT1, ANT2, ANT3, and ANT4 cannot transmit simultaneously.
4. Bluetooth P_{low} is used with Wi-Fi and WWAN antennas are active.
5. 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.
6. Bluetooth $P_{standalone}$ is used with Wi-Fi and WWAN antennas are inactive.

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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)				∑ 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	0.135	0.337	0.214	0.228	0.349	0.363	0.551	0.565
	Left Tilt	0.135	0.487	0.070	0.221	0.205	0.356	0.557	0.708
	Right Touch	0.135	1.052	0.102	0.138	0.237	0.273	1.154	1.190
	Right Tilt	0.135	0.818	0.097	0.132	0.232	0.267	0.915	0.950
Body-worn & Hotspot	Rear	1.089	1.175	0.239	0.238	1.328	1.327	1.414	1.413
	Front	0.327	0.218	0.069	0.156	0.396	0.483	0.286	0.374
Hotspot	Edge 1		0.358		0.093		0.093	0.358	0.451
	Edge 2				0.244		0.244		0.602
	Edge 3	0.327		0.038		0.365	0.327	0.038	
	Edge 4	0.327	0.358	0.120		0.447	0.327	0.478	0.358

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

RF Exposure conditions	Test Position	Standalone SAR (W/kg)					∑ 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	0.544	0.234	0.645	0.214	0.228	0.778	1.189	0.758	0.772
	Left Tilt	0.202	0.234	0.433	0.070	0.221	0.436	0.635	0.272	0.423
	Right Touch	0.632	0.234	0.433	0.102	0.138	0.866	1.065	0.734	0.770
	Right Tilt	0.273	0.234	0.433	0.097	0.132	0.507	0.706	0.370	0.405
Body-worn & Hptspot	Rear	0.999	0.402	0.537	0.239	0.238	1.401	1.536	1.238	1.237
	Front	0.699	0.117	0.391	0.069	0.156	0.816	1.090	0.768	0.855
Hotspot	Edge 2	0.633		0.391		0.244	0.633	1.024	0.633	0.877
	Edge 3	0.943	0.240	0.391	0.038		1.183	1.334	0.981	0.943
	Edge 4	0.790	0.240		0.120		1.030	0.790	0.910	0.790

RF Exposure conditions	Test Position	Standalone SAR (W/kg)					∑ 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	0.544	0.135	0.452	0.044	0.090	0.723	0.769	1.040	1.086
	Left Tilt	0.202	0.135	0.452	0.021	0.091	0.358	0.428	0.675	0.745
	Right Touch	0.632	0.135	0.531	0.035	0.029	0.802	0.796	1.197	1.191
	Right Tilt	0.273	0.135	0.452	0.028	0.066	0.436	0.474	0.753	0.791
Body-worn & Hptspot	Rear	0.999	0.344	0.431	0.086	0.076	1.429	1.419	1.517	1.506
	Front	0.699	0.344	0.107	0.038	0.057	1.081	1.100	0.844	0.863
Hotspot	Edge 2	0.633				0.093	0.633	0.726	0.633	0.726
	Edge 3	0.943	0.344		0.015		1.301	1.287	0.957	0.943
	Edge 4	0.790	0.344	0.168	0.057		1.191	1.134	1.015	0.958

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

RF Exposure conditions	Test Position	Standalone SAR (W/kg)					∑ 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	0.767	0.234	0.645	0.214	0.228	1.001	1.412	0.981	0.995
	Left Tilt	0.737	0.234	0.433	0.070	0.221	0.971	1.170	0.807	0.958
	Right Touch	0.791	0.234	0.433	0.102	0.138	1.025	1.224	0.893	0.929
	Right Tilt	0.775	0.234	0.433	0.097	0.132	1.009	1.208	0.872	0.907
Body-worn & Hptspot	Rear	0.897	0.402	0.537	0.239	0.238	1.299	1.434	1.136	1.135
	Front	0.578	0.117	0.391	0.069	0.156	0.695	0.969	0.647	0.734
Hotspot	Edge 1	0.574		0.391		0.244	0.574	0.965	0.574	0.818
	Edge 2	0.850	0.240	0.391	0.038		1.090	1.241	0.888	0.850
	Edge 4	0.620	0.240		0.120		0.860	0.620	0.740	0.620

RF Exposure conditions	Test Position	Standalone SAR (W/kg)					∑ 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	0.767	0.135	0.452	0.044	0.090	0.946	0.992	1.263	1.309
	Left Tilt	0.737	0.135	0.452	0.021	0.091	0.893	0.963	1.210	1.280
	Right Touch	0.791	0.135	0.531	0.035	0.029	0.961	0.955	1.357	1.351
	Right Tilt	0.775	0.135	0.452	0.028	0.066	0.938	0.976	1.255	1.293
Body-worn & Hptspot	Rear	0.897	0.344	0.431	0.086	0.076	1.328	1.317	1.415	1.405
	Front	0.578	0.344	0.107	0.038	0.057	0.960	0.979	0.723	0.742
Hotspot	Edge 1	0.574				0.093	0.574	0.667	0.574	0.667
	Edge 2	0.850	0.344		0.015		1.209	1.194	0.865	0.850
	Edge 4	0.620	0.344	0.168	0.057		1.021	0.964	0.845	0.787

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

RF Exposure conditions	Test Position	Standalone SAR (W/kg)					∑ 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	0.159	0.234	0.645	0.214	0.228	0.393	0.804	0.373	0.387
	Left Tilt	0.111	0.234	0.433	0.070	0.221	0.345	0.544	0.181	0.332
	Right Touch	0.307	0.234	0.433	0.102	0.138	0.541	0.740	0.409	0.445
	Right Tilt	0.100	0.234	0.433	0.097	0.132	0.334	0.533	0.197	0.232
Body-worn & Hptspot	Rear	0.811	0.402	0.537	0.239	0.238	1.213	1.348	1.050	1.049
	Front	0.664	0.117	0.391	0.069	0.156	0.781	1.055	0.733	0.820
Hotspot	Edge 2	0.862		0.391		0.244	0.862	1.253	0.862	1.106
	Edge 3	0.315	0.240	0.391	0.038		0.555	0.706	0.353	0.315

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RF Exposure conditions	Test Position	Standalone SAR (W/kg)					∑ 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	0.159	0.135	0.452	0.044	0.090	0.338	0.384	0.655	0.701
	Left Tilt	0.111	0.135	0.452	0.021	0.091	0.267	0.337	0.584	0.654
	Right Touch	0.307	0.135	0.531	0.035	0.029	0.477	0.471	0.872	0.866
	Right Tilt	0.100	0.135	0.452	0.028	0.066	0.263	0.301	0.580	0.618
Body-worn & Hptspot	Rear	0.811	0.344	0.431	0.086	0.076	1.242	1.231	1.329	1.319
	Front	0.664	0.344	0.107	0.038	0.057	1.046	1.065	0.809	0.828
Hotspot	Edge 2	0.862				0.093	0.862	0.955	0.862	0.955
	Edge 3	0.315	0.344		0.015		0.674	0.659	0.330	0.315

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

RF Exposure conditions	Test Position	Standalone SAR (W/kg)					∑ 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	0.183	0.234	0.645	0.214	0.228	0.417	0.828	0.397	0.411
	Left Tilt	0.123	0.234	0.433	0.070	0.221	0.357	0.556	0.193	0.344
	Right Touch	0.220	0.234	0.433	0.102	0.138	0.454	0.653	0.322	0.358
	Right Tilt	0.279	0.234	0.433	0.097	0.132	0.513	0.712	0.376	0.411
Body-worn & Hptspot	Rear	0.592	0.402	0.537	0.239	0.238	0.994	1.129	0.831	0.830
	Front	0.114	0.117	0.391	0.069	0.156	0.231	0.505	0.182	0.270
Hotspot	Edge 1	0.165		0.391		0.244	0.165	0.556	0.165	0.409
	Edge 4	0.444	0.240		0.120		0.684	0.444	0.564	0.444

RF Exposure conditions	Test Position	Standalone SAR (W/kg)					∑ 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	0.183	0.135	0.452	0.044	0.090	0.362	0.408	0.679	0.725
	Left Tilt	0.123	0.135	0.452	0.021	0.091	0.279	0.349	0.596	0.666
	Right Touch	0.220	0.135	0.531	0.035	0.029	0.390	0.384	0.786	0.780
	Right Tilt	0.279	0.135	0.452	0.028	0.066	0.442	0.480	0.760	0.798
Body-worn & Hptspot	Rear	0.592	0.344	0.431	0.086	0.076	1.023	1.012	1.110	1.100
	Front	0.114	0.344	0.107	0.038	0.057	0.496	0.515	0.259	0.277
Hotspot	Edge 1	0.165				0.093	0.165	0.258	0.165	0.258
	Edge 4	0.444	0.344	0.168	0.057		0.845	0.788	0.669	0.612

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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

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