FCC 47 CFR § 2.1093
IEEE Std 1528-2013

SAR EVALUATION REPORT

FOR

GSM/WCDMA/LTE Phone + BT/BLE, DTS/UNII a/b/g/n/ac/ax, ANT+, NFC and WPT

MODEL NUMBER: SM-G973N

FCC ID: A3LSMG973KOR

REPORT NUMBER: 4788725709-S1V3

ISSUE DATE: 1/28/2019

Prepared for
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ACCREDITED
Testing Laboratory

TL-637

Revision History

Rev.	Date	Revisions	Revised By
V1	1/10/2019	Initial Issue	Sunghoon Kim
V2	1/19/2019	Revised Sec.6.6, Sec.8.1, Sec.8.2 and Appendix C	Sunghoon Kim
V3	1/28/2019	Sec.10.18, Sec.11, Appendix B. Removed 5.2G Wi-Fi direct SAR results.	Sunghoon Kim

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1. Attestation of Test Results

Applicant Name		SAMSUNG ELECTRONICS CO.,LTD.			
FCC ID		A3LSMG973KOR			
Model Number		SM-G973N			
Applicable Standards		FCC 47 CFR § 2.1093 Published RF exposure KDB procedures IEEE Std 1528-2013			
SAR Limits (W/Kg)					
Exposure Category		Peak spatial-average(1g of tissue)		Phablet (10g of tissue)	
General population / Uncontrolled exposure		1.6		4.0	
The Highest Reported SAR (W/kg)					
RF Exposure Conditions		**Equipment Class**			
		Licensed	**DTS**	**U-NII**	**DSS(BT)**
Head		0.37	0.47	0.15	1.04
Body-worn		0.78	< 0.10	0.23	< 0.10
Hotspot		1.18	0.17	0.44	0.21
Phablet-10g		3.27	N/A	1.33	N/A
Simultaneous TX	Head	1.57	1.06	1.57	1.57
	Body-worn	1.18	0.95	1.18	1.18
	Hotspot	1.59	1.49	1.59	1.59
	Phablet-10g	3.91	N/A	3.91	N/A
Date Tested		11/15/2018 to 1/4/2019 and 1/17/2019			
Test Results		Pass			

UL Korea, Ltd. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL Korea, Ltd. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL Korea, Ltd. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Korea, Ltd. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by IAS, any agency of the Federal Government, or any agency of any government.

Approved & Released By:	Prepared By:
	
Justin Park Lead Test Engineer UL Korea, Ltd. Suwon Laboratory	Sunghoon Kim Test Engineer UL Korea, Ltd. Suwon Laboratory

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
- 648474 D04 Handset SAR v01r03
- 690783 D01 SAR Listings on Grants 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
- 941225 D07 UMPC Mini Tablet v01r02

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

- TCB workshop October, 2014; Page 37, RF Exposure Procedures Update (Other LTE Considerations)
- TCB workshop October, 2016; Page 7, RF Exposure Procedures (Bluetooth Duty Factor)
- TCB workshop October, 2016; Page 18, RF Exposure Procedures (DUT Holder Perturbations)
- TCB workshop May, 2017; Page 6, RF Exposure Procedures (LTE Test Conditions)
- TCB workshop Nov, 2017; Page 3, RF Exposure Procedures (LTE UL/DL Carrier Aggregation SAR)
- TCB workshop April, 2018; Page 3, RF Exposure Procedures (LTE DL CA SAR Test Exclusion Update)

3. Facilities and Accreditation

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

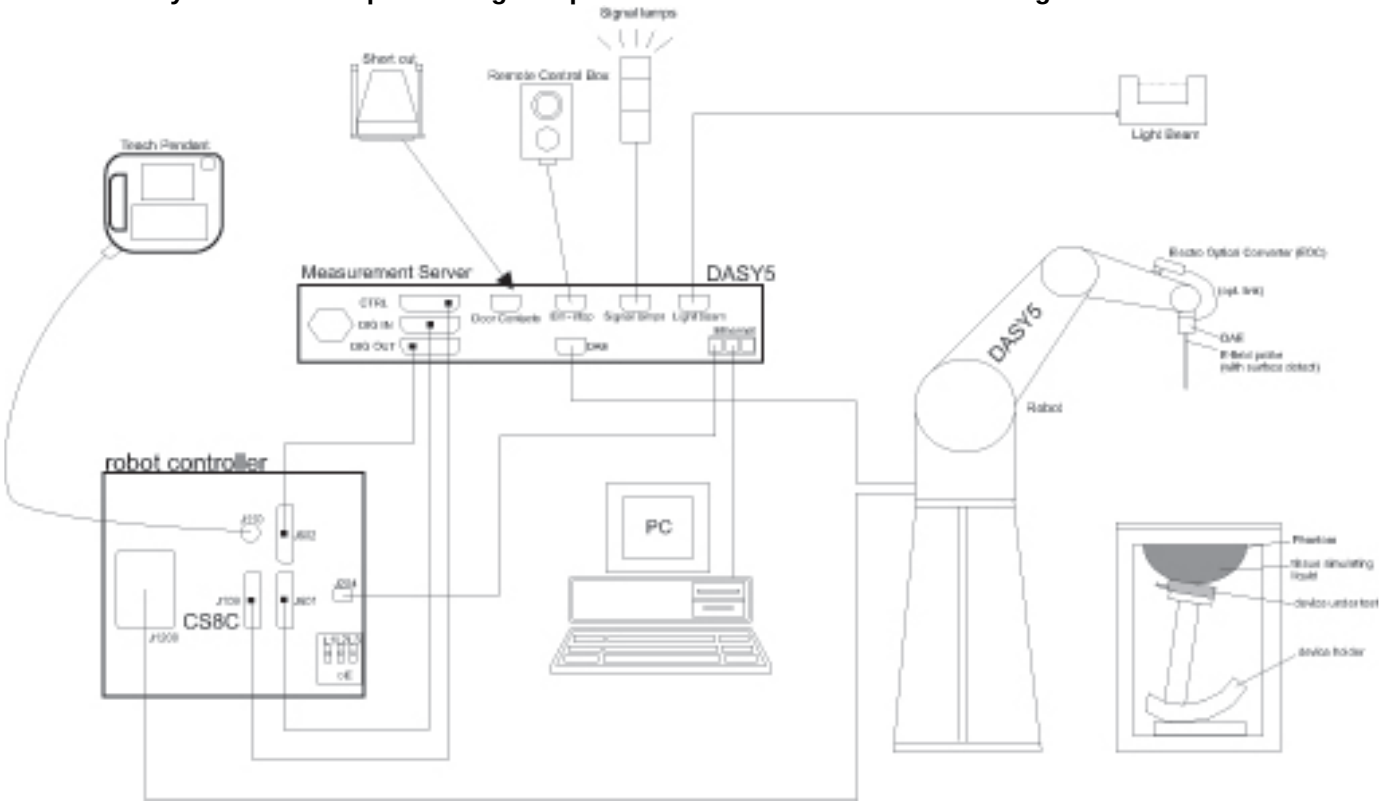
Suwon
SAR 1 Room
SAR 2 Room
SAR 3 Room
SAR 4 Room

UL Korea, Ltd. is accredited by IAS, Laboratory Code TL-637.
The full scope of accreditation can be viewed at http://www.iasonline.org/PDF/TL/TL-637.pdf.

4. SAR Measurement System & Test Equipment

4.1. SAR Measurement System

The DASY5 system used for performing compliance tests consists of the following items:



- A standard high precision 6-axis robot with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
- An isotropic Field probe optimized and calibrated for the targeted measurement.
- A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
- The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital communication to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.
- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.
- A computer running WinXP or Win7 and the DASY5 software.
- Remote control and teach pendant as well as additional circuitry for robot safety such as warning lamps, etc.
- The phantom, the device holder and other accessories according to the targeted measurement.

4.2. SAR Scan Procedures

Step 1: Power Reference Measurement

The Power Reference Measurement and Power Drift Measurements are for monitoring the power drift of the device under test in the batch process. The minimum distance of probe sensors to surface determines the closest measurement point to phantom surface. The minimum distance of probe sensors to surface is 2.1 mm. This distance cannot be smaller than the distance of sensor calibration points to probe tip as defined in the probe properties.

Step 2: Area Scan

The Area Scan is used as a fast scan in two dimensions to find the area of high field values, before doing a fine measurement around the hot spot. The sophisticated interpolation routines implemented in DASY software can find the maximum locations even in relatively coarse grids. When an Area Scan has measured all reachable points, it computes the field maximal found in the scanned area, within a range of the global maximum. The range (in dB) is specified in the standards for compliance testing. For example, a 2 dB range is required in IEEE Standard 1528 and IEC 62209 standards, whereby 3 dB is a requirement when compliance is assessed in accordance with the ARIB standard (Japan). If only one Zoom Scan follows the Area Scan, then only the absolute maximum will be taken as reference. For cases where multiple maximums are detected, the number of Zoom Scans has to be increased accordingly.

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

	≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface	5 ± 1 mm	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.	

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	≤ $1.5 \cdot \Delta z_{Zoom}(n-1)$	
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.

Step 5: Z-Scan (FCC only)

The Z Scan measures points along a vertical straight line. The line runs along the Z-axis of a one-dimensional grid. In order to get a reasonable extrapolation the extrapolated distance should not be larger than the step size in Z-direction.

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	Agilent	E5071C	MY46522054	8-7-2019
Dielectric Assessment Kit	SPEAG	DAK-3.5	1196	6-26-2019
Shorting block	SPEAG	DAK-3.5 Short	SM DAK 200 BA	N/A
Thermometer	LKM	DTM3000	3424	8-9-2019
Thermometer	Lutron	MHB-382SD	AH.91478	8-8-2019

System Check

Name of Equipment	Manufacturer	Type/Model	Serial No.	Cal. Due Date
MXG Analog Signal Generator	Agilent	N5181A	MY50145882	8-7-2019
Power Sensor	Agilent	U2000A	MY54260010	8-7-2019
Power Sensor	Agilent	U2000A	MY54260007	8-7-2019
Power Amplifier	EXODUS	1410025-AMP2027-10003	10003	8-8-2019
Directional Coupler	Agilent	772D	MY52180193	8-7-2019
Directional Coupler	Agilent	778D	MY52180432	8-7-2019
Low Pass Filter	MICROLAB	LA-15N	03943	8-7-2019
Low Pass Filter	FILTRON	L14012FL	1410003S	8-7-2019
Low Pass Filter	MICROLAB	LA-60N	03942	8-7-2019
Attenuator	Agilent	8491B/003	MY39269292	8-7-2019
Attenuator	Agilent	8491B/010	MY39269315	8-7-2019
Attenuator	Agilent	8491B/020	MY39269298	8-7-2019
E-Field Probe (SAR1)	SPEAG	EX3DV4	7330	1-22-2019
E-Field Probe (SAR2)	SPEAG	EX3DV4	7376	9-26-2019
E-Field Probe (SAR2)	SPEAG	EX3DV4	7313	2-20-2019
E-Field Probe (SAR3)	SPEAG	EX3DV4	7314	8-30-2019
E-Field Probe (SAR4)	SPEAG	EX3DV4	3991	5-24-2019
Data Acquisition Electronics (SAR1)	SPEAG	DAE4	1494	7-23-2019
Data Acquisition Electronics (SAR2)	SPEAG	DAE4	1447	3-15-2019
Data Acquisition Electronics (SAR3)	SPEAG	DAE4	1468	8-22-2019
Data Acquisition Electronics (SAR4)	SPEAG	DAE4	1259	7-26-2019
System Validation Dipole	SPEAG	D750V3	1122	2-19-2019
System Validation Dipole	SPEAG	D835V2	4d194	7-24-2019
System Validation Dipole	SPEAG	D1750V2	1125	2-16-2019
System Validation Dipole	SPEAG	D1900V2	5d199	3-15-2019
System Validation Dipole	SPEAG	D2450V2	960	3-20-2019
System Validation Dipole	SPEAG	D2600V2	1097	1-17-2019
System Validation Dipole	SPEAG	D5GHzV2	1209	2-15-2019
Thermometer (SAR1)	Lutron	MHB-382SD	AH.91463	8-8-2019
Thermometer (SAR2)	Lutron	MHB-382SD	AH.50215	8-13-2019
Thermometer (SAR3)	Lutron	MHB-382SD	AH.50213	8-14-2019
Thermometer (SAR4)	Lutron	MHB-382SD	AH.91478	8-8-2019

Others

Name of Equipment	Manufacturer	Type/Model	Serial No.	Cal. Due Date
Base Station Simulator	R & S	CMW500	150313	8-9-2019
Base Station Simulator	R & S	CMW500	150314	8-9-2019
Base Station Simulator	R & S	CMW500	162790	8-9-2019
Bluetooth Tester	TESCOM	TC-3000C	3000C000546	8-7-2019

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.

6. Device Under Test (DUT) Information

6.1. DUT Description

Device Dimension	Overall (Length x Width): 149.9 mm x 70.4 mm Overall Diagonal: 160.8 mm Display Diagonal: 151.7 mm		
Back Cover	☒ The Back Cover is not removable.		
Battery Options	☒ The rechargeable battery is not user accessible		
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_U-NII-3 band)		
Wi-Fi Direct	Wi-Fi Direct enabled devices transfer data directly between each other ☒ Wi-Fi Direct (Wi-Fi 2.4 GHz) ☒ Wi-Fi Direct (Wi-Fi 5 GHz_Ch.36 – Ch.48, Ch 149 – Ch161)		
Test Sample Information	**No.**	**S/N**	**Notes**
	1	R39K80JAMRW	Wi-Fi/BT conduction
	2	R39KA0LFAKR	Main conduction
	3	R39KA0LF8MV	Main conduction
	4	R39KA0LEA8D	SAR
	5	R39KA0LEABW	SAR
	6	R39KA0LEA1A	SAR
	7	R39KA0LETVN	SAR
	8	R39KA0LF5PR	SAR
	9	R39K80JB6R	SAR
	10	R39K80JB5M	SAR

6.2. Wireless Technologies

Wireless technologies	Frequency bands	Operating mode		Duty Cycle used for SAR testing
GSM	850 1900	Voice (GMSK) GPRS (GMSK) EGPRS (8PSK)	GPRS Multi-Slot Class: ☐ Class 8 - 1 Up, 4 Down ☐ Class 10 - 2 Up, 4 Down ☐ Class 12 - 4 Up, 4 Down ☒ Class 33 - 4 Up, 5 Down	GSM Voice: 12.5% (E)GPRS: 1 Slot: 12.5% 2 Slots: 25% 3 Slots: 37.5% 4 Slots: 50%
	Does this device support DTM (Dual Transfer Mode)? ☐ Yes ☒ No			
W-CDMA (UMTS)	Band II Band IV Band V	UMTS Rel. 99 (Voice & Data) HSDPA (category 14) HSUPA (category 6) HSPA+ (DL Only)		100%
LTE	FDD Band 2 FDD Band 4 FDD Band 5 FDD Band 12 FDD Band 13 FDD Band 17 FDD Band 25 FDD Band 26 TDD Band 41 FDD Band 66	QPSK 16QAM 64QAM Rel. 10 Does not support Carrier Aggregation (CA)		100% (FDD) 63.3% (TDD)[1]
	Does this device support SV-LTE (1xRTT-LTE)? ☐ Yes ☒ No			
Wi-Fi	2.4 GHz	802.11b 802.11g 802.11n (HT20) 802.11ax (HE20)		99.7% (802.11b) 98.2% (802.11g) 98.0% (802.11n 20MHz BW) 97.5% (802.11ax 20MHz BW)
	5 GHz	802.11a 802.11n (HT20, HT40) 802.11ac (VHT20, VHT40, VHT80) 802.11ax (HE20, HE40, HE80)		98.2% (802.11a) 98.1% (802.11n,ac 20MHz BW) 98.2% (802.11n,ac 40MHz BW) 98.1% (802.11n,ac 80MHz BW) 97.5% (802.11ax 20MHz BW) 97.7% (802.11ax 40MHz BW) 97.7% (802.11ax 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	Version 5.0 LE		76.5% (DH5)
WPT	110 Hz – 148 Hz	Wireless power charging		100%

Notes:

1. This device supports uplink-downlink configuration 0-6. The configuration with the highest duty cycle was used (Subframe Number 0 at 63.3%).
2. The Bluetooth protocol is considered source-based averaging. Bluetooth GFSK (DH5) was verified to have the highest duty cycle of 76.5% and was considered and used for SAR Testing.
3. Duty cycle for Wi-Fi is referenced from the DTS and UNII report.
4. WPT (wireless power transfer) is evaluated MPE exposure condition.

6.3. Nominal and Maximum Output Power

KDB 447498 sec.4.1. 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

RF Air interface	Antenna	Mode	Time Slots	Max. RF Output Power (dBm)		Reduced. RF Output Power Hotspot back-off (dBm)		Reduced. RF Output Power Proximity sensor back-off (dBm)	
				Tune-up Limit	Frame Pwr	Tune-up Limit	Frame Pwr	Tune-up Limit	Frame Pwr
GSM850	Main 1-1	Voice/GPRS	1	**33.5**	**24.5**				
		GPRS	2	**33.0**	**27.0**				
		GPRS	3	**30.5**	**26.2**				
		GPRS	4	**29.5**	**26.5**				
		EGPRS	1	**28.0**	**19.0**				
		EGPRS	2	**26.0**	**20.0**				
		EGPRS	3	**24.5**	**20.2**				
		EGPRS	4	**23.0**	**20.0**				
GSM1900	Main 1-1	Voice/GPRS	1	**30.3**	**21.3**				
		GPRS	2	**27.5**	**21.5**				
		GPRS	3	**26.0**	**21.7**				
		GPRS	4	**24.5**	**21.5**				
		EGPRS	1	**27.0**	**18.0**				
		EGPRS	2	**25.0**	**19.0**				
		EGPRS	3	**23.3**	**19.0**				
		EGPRS	4	**22.1**	**19.1**				

RF Air interface	Antenna	Mode	Max. RF Output Power (dBm)	Reduced. RF Output Power Hotspot back-off (dBm)	Reduced. RF Output Power Proximity sensor back-off (dBm)
W-CDMA Band II	Main 1-1	R99	**24.0**	**21.0**	**21.0**
		HSDPA	**23.5**	**21.0**	**21.0**
		HSUPA	**23.5**	**21.0**	**21.0**
W-CDMA Band IV	Main 1-1	R99	**24.0**	**21.0**	**21.0**
		HSDPA	**24.0**	**21.0**	**21.0**
		HSUPA	**24.0**	**21.0**	**21.0**
W-CDMA Band V	Main 1-1	R99	**24.0**		
		HSDPA	**23.0**		
		HSUPA	**23.5**		

RF Air interface	Antenaa	Mode	Max. RF Output Power (dBm)	Reduced. RF Output Power Hotspot back-off (dBm)	Reduced. RF Output Power Proximity sensor back-off (dBm)
LTE Band 2	Main 1-1	QPSK	**24.0**	**21.0**	**21.0**
		16QAM	**23.0**	**21.0**	**21.0**
		64QAM	**22.0**	**21.0**	**21.0**
LTE Band 4	Main 1-1	QPSK	**24.0**	**21.0**	**21.0**
		16QAM	**23.0**	**21.0**	**21.0**
		64QAM	**22.0**	**21.0**	**21.0**
LTE Band 5	Main 1-1	QPSK	**25.0**		
		16QAM	**24.0**		
		64QAM	**23.0**		
LTE Band 12	Main 1-1	QPSK	**24.0**		
		16QAM	**23.0**		
		64QAM	**22.0**		
LTE Band 13	Main 1-1	QPSK	**24.0**		
		16QAM	**23.0**		
		64QAM	**22.0**		
LTE Band 17	Main 1-1	QPSK	**24.0**		
		16QAM	**23.0**		
		64QAM	**22.0**		
LTE Band 25	Main 1-1	QPSK	**24.0**	**21.0**	**21.0**
		16QAM	**23.0**	**21.0**	**21.0**
		64QAM	**22.0**	**21.0**	**21.0**
LTE Band 26	Main 1-1	QPSK	**24.0**		
		16QAM	**23.0**		
		64QAM	**22.0**		
LTE Band 41	Main 1-2	QPSK	**24.0**	**21.0**	**21.0**
		16QAM	**23.0**	**21.0**	**21.0**
		64QAM	**22.0**	**21.0**	**21.0**
LTE Band 66	Main 1-1	QPSK	**24.0**	**21.0**	**21.0**
		16QAM	**23.0**	**21.0**	**21.0**
		64QAM	**22.0**	**21.0**	**21.0**

Notes:

1. The device utilizes power reduction under some portable hotspot conditions for SAR compliance. There is power reduction for WWAN bands (WCDMA Band II, IV, LTE Band 2, 4, 25, 41, 66). The reduced powers were confirmed via conducted power measurements the RF port. Detailed description of the hotspot power reduction mechanism is included in the operational description.
2. WWAN bands (WCDMA Band II, IV, LTE Band 2, 4, 25, 41, 66) has support to proximity sensor back-off function. it is operating during extremity (hand-held) use conditions. And This function is apply to phablet 10-g SAR exposure condition. Other Head and Body exposure conditions are performed SAR test at full power. The proximity sensor details explain in SAR report according to Section 6 in KDB 616217.
3. Both back-off functions are not operating at the same time.
4. LTE QPSK configuration has the highest maximum average output power per 3GPP standard.
5. WWAN bands (WCDMA Band IV, LTE Band 4, 66) has support to power reduction when earphone is connected to phone. But Max power's *reported* SAR result is not over 1.2 W/kg in body-worn exposure condition. so we don't need to evaluation for phone + earphone configuration in body-worn accessory exposure condition according to Sec.2.3 in KDB 648474 D04. Therefore we don't need to consider about power reduction when earphone is connected to phone.

RF Air interface	Mode	Max. RF Output Power (dBm)	Reduced. RF Output Power (dBm)
WiFi 2.4 GHz (Ch.1 - Ch.10)	802.11b	**19.0**	**16.0**
	802.11g	**16.0**	
	802.11n HT20	**16.0**	
	802.11ax HE20	**16.0**	
WiFi 2.4 GHz (Ch.11)	802.11b	**19.0**	**16.0**
	802.11g	**15.0**	
	802.11n HT20	**15.0**	
	802.11ax HE20	**14.0**	
WiFi 2.4 GHz (Ch.12)	802.11b	**3.5**	
	802.11g	**3.5**	
	802.11n HT20	**3.5**	
	802.11ax HE20	**3.5**	
WiFi 2.4 GHz (Ch.13)	802.11b	**1.5**	
	802.11g	**1.5**	
	802.11n HT20	**1.5**	
	802.11ax HE20	**1.5**	
WiFi 5 GHz (UNII-1 & UNII 2-A)	802.11a	**15.0**	**13.0**
	802.11n HT20	**15.0**	**13.0**
	802.11n HT40	**15.0**	**13.0**
	802.11ac VHT20	**15.0**	**13.0**
	802.11ac VHT40	**15.0**	**13.0**
	802.11ac VHT80	**14.0**	**13.0**
	802.11ax HE20	**15.0**	**13.0**
	802.11ax HE40	**15.0**	**13.0**
	802.11ax HE80	**14.0**	**13.0**
WiFi 5 GHz (UNII-2C)	802.11a	**16.0**	**13.0**
	802.11n HT20	**16.0**	**13.0**
	802.11n HT40	**15.0**	**13.0**
	802.11ac VHT20	**16.0**	**13.0**
	802.11ac VHT40	**15.0**	**13.0**
	802.11ac VHT80	**14.0**	**13.0**
	802.11ax HE20	**16.0**	**13.0**
	802.11ax HE40	**15.0**	**13.0**
	802.11ax HE80	**14.0**	**13.0**
WiFi 5 GHz (UNII-3)	802.11a	**17.0**	**13.0**
	802.11n HT20	**17.0**	**13.0**
	802.11n HT40	**15.0**	**13.0**
	802.11ac VHT20	**17.0**	**13.0**
	802.11ac VHT40	**15.0**	**13.0**
	802.11ac VHT80	**14.0**	**13.0**
	802.11ax HE20	**17.0**	**13.0**
	802.11ax HE40	**15.0**	**13.0**
	802.11ax HE80	**14.0**	**13.0**
Bluetooth		**20.0**	
Bluetooth EDR		**14.0**	
Bluetooth LE		**9.5**	

Note(s):

This device uses an independent fixed level power reduction mechanism for WLAN operations during RCV operated
Detailed descriptions of the power reduction mechanism are included in the operational description.

WLAN target power of RSDB operation scenario

RF Air interface	Mode	Max. RF Output Power (dBm)	Reduced. RF Output Power (dBm)
WiFi 2.4 GHz (Ch.1 - Ch.10)	802.11b	**16.0**	**14.0**
	802.11g	**16.0**	**14.0**
	802.11n HT20	**16.0**	**14.0**
	802.11ax HE20	**16.0**	**14.0**
WiFi 2.4 GHz (Ch.11)	802.11b	**16.0**	**14.0**
	802.11g	**15.0**	**14.0**
	802.11n HT20	**15.0**	**14.0**
	802.11ax HE20	**14.0**	
WiFi 2.4 GHz (Ch.12)	802.11b	**3.5**	
	802.11g	**3.5**	
	802.11n HT20	**3.5**	
	802.11ax HE20	**3.5**	
WiFi 2.4 GHz (Ch.13)	802.11b	**1.5**	
	802.11g	**1.5**	
	802.11n HT20	**1.5**	
	802.11ax HE20	**1.5**	
WiFi 5 GHz	802.11a	**14.0**	**13.0**
	802.11n HT20	**14.0**	**13.0**
	802.11n HT40	**14.0**	**13.0**
	802.11ac VHT20	**14.0**	**13.0**
	802.11ac VHT40	**14.0**	**13.0**
	802.11ac VHT80	**14.0**	**13.0**
	802.11ax HE20	**14.0**	**13.0**
	802.11ax HE40	**14.0**	**13.0**
	802.11ax HE80	**14.0**	**13.0**

Note(s):

RSDB operation is supporting simultaneous transmission in 2.4GHz and 5GHz bands. It works according to RSDB operation scenario. Detail of scenario refer to Sec.12 in Report.

6.4. General LTE SAR Test and Reporting Considerations

Item	Description						
Frequency range, Channel Bandwidth, Numbers and Frequencies	Band 2	Frequency range: 1850 - 1910 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					
		Channel Bandwidth					
		20 MHz	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					
		Channel Bandwidth					
		20 MHz	15 MHz	10 MHz	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 12	Frequency range: 699 – 716 MHz					
		Channel Bandwidth					
		20 MHz	15 MHz	10 MHz	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					
		Channel Bandwidth					
		20 MHz	15 MHz	10 MHz	5 MHz	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					
		Channel Bandwidth					
		20 MHz	15 MHz	10 MHz	5 MHz	3 MHz	1.4 MHz
	Low			23780/ 709	23755/ 706.5		
	Mid			23790/ 710	23790/ 710		
	High			23800/ 711	23825/ 713.5		

General LTE SAR Test and Reporting Considerations (Continued)

Frequency range, Channel Bandwidth, Numbers and Frequencies

Band 25	Frequency range: 1850 - 1915 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					
	Channel Bandwidth					
	20 MHz	15 MHz	10 MHz	5 MHz	3 MHz	1.4 MHz
Low		26765/ 821.5	26740/ 819	26715/ 816.5	26705/ 815.5	26697/ 814.7
Mid		26865/ 831.5	26865/ 831.5	26865/ 831.5	26865/ 831.5	26865/ 831.5
High		26965/ 841.5	26990/ 844	27015/ 846.5	27025/ 847.5	27033/ 848.3

Band 41	Frequency range: 2496 - 2690 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 66	Frequency range: 1710 - 1780 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

Refer to Appendix A.

Maximum power reduction (MPR)

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

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

Power reduction

Yes

Spectrum plots for RB configurations

A properly configured base station simulator was used for the SAR and power measurements; therefore, spectrum plots for each RB allocation and offset configuration are not included in the SAR report.

Notes:

1. SAR Testing for LTE was performed with the same number of RB and RB offsets transmitting on all TTI frames (maximum TTI).

6.5. 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	$6592 \cdot T_s$	$2192 \cdot T_s$	$2560 \cdot T_s$	$7680 \cdot T_s$	$2192 \cdot T_s$	$2560 \cdot T_s$
1	$19760 \cdot T_s$			$20480 \cdot T_s$		
2	$21952 \cdot T_s$			$23040 \cdot T_s$		
3	$24144 \cdot T_s$			$25600 \cdot T_s$		
4	$26336 \cdot T_s$			$7680 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$
5	$6592 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$	$20480 \cdot T_s$		
6	$19760 \cdot T_s$			$23040 \cdot T_s$		
7	$21952 \cdot T_s$			$12800 \cdot T_s$		
8	$24144 \cdot T_s$			-	-	-
9	$13168 \cdot T_s$			-	-	-

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	63.33
1	5 ms	D	S	U	U	D	D	S	U	U	D	43.33
2	5 ms	D	S	U	D	D	D	S	U	D	D	23.33
3	10 ms	D	S	U	U	U	D	D	D	D	D	31.67
4	10 ms	D	S	U	U	D	D	D	D	D	D	21.67
5	10 ms	D	S	U	D	D	D	D	D	D	D	11.67
6	5 ms	D	S	U	U	U	D	S	U	U	D	53.33

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

Example for Calculated Duty Cycle for Uplink-Downlink Configuration 0:
Calculated Duty Cycle = 5120 x [1/(15000 x 2048)] x 2 + 6 ms = 63.33%
where
T_s = 1/(15000 x 2048) seconds

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 and Special Subframe 7

6.6. Dynamic antenna tuning operation

This Device supports an AIT (Antenna impedance tuner) feature which optimizes antenna matching for actual certain use conditions. The device supports two states of Dynamic Antenna Tuning: default state and auto tuner state. Default state does not use the AIT, while the auto tuner state will dynamically change the impedance of the device to reach the optimal radiated state. Dynamic Antenna Tuning is supported only for LTE Band 2/4/5/12/13/17. Please refer to the Dynamic Antenna Tuning Operation Description for full details.

Single point measurements were performed using a time-sweep method on the worst case test position per test configuration for LTE Band 2/4/5/12/13/17 to determine which Index produced the highest result.

Test results

RF exposure	Band	Test position	Ch.	Freq (MHz)	Reported 1-g SAR (W/kg)	Single point measurement			
						Default state value (W/kg)	Auto tuner states		
							Tuner	XGND	Value (W/kg)
Head exposure	LTE Band 2	Left Touch	18900	1880.0	0.208	**0.193**	1200	786800	0.192
	LTE Band 4	Left Touch	20175	1732.5	0.294	**0.244**	1200	286800	0.237
	LTE Band 5	Right Touch	20525	836.5	0.243	**0.222**	19F8	110B00	0.064
	LTE Band 12	Right Touch	23095	707.5	0.115	**0.116**	1DAF	869900	0.027
	LTE Band 13	Right Touch	23230	782.0	0.201	**0.139**	1A0F	811B00	0.017
	LTE Band 17	Left Touch	23790	710.0	0.121	**0.114**	1DAF	829900	0.025

RF exposure	Band	Test position	Ch.	Freq (MHz)	Reported 1-g SAR (W/kg)	Single point measurement			
						Default state value (W/kg)	Auto tuner states		
							Tuner	XGND	Value (W/kg)
Body-Worn Exposure	LTE Band 2	Rear - 15mm	18900	1880.0	0.575	**0.659**	1200	786800	0.652
	LTE Band 4	Rear - 15mm	20175	1732.5	0.732	**0.765**	1200	286800	0.754
	LTE Band 5	Rear - 15mm	20525	836.5	0.381	**0.335**	19F8	110B00	0.072
	LTE Band 12	Rear - 15mm	23095	707.5	0.211	**0.206**	1DAF	869900	0.057
	LTE Band 13	Rear - 15mm	23230	782.0	0.237	**0.222**	1A0F	811B00	0.024
	LTE Band 17	Rear - 15mm	23790	710.0	0.214	**0.219**	1DAF	829900	0.058

RF exposure	Band	Test position	Ch.	Freq (MHz)	Reported 1-g SAR (W/kg)	Single point measurement			
						Default state value (W/kg)	Auto tuner states		
							Tuner	XGND	Value (W/kg)
Hotspot Exposure	LTE Band 2	Edge 3 - 10mm	18700	1860.0	1.084	**0.990**	1200	786800	0.989
	LTE Band 4	Edge 3 - 10mm	20175	1732.5	0.889	**0.952**	1200	286800	0.948
	LTE Band 5	Rear - 10mm	20525	836.5	0.667	**0.740**	19F8	110B00	0.174
	LTE Band 12	Rear - 10mm	23095	707.5	0.325	**0.281**	1DAF	869900	0.080
	LTE Band 13	Rear - 10mm	23230	782.0	0.372	**0.421**	1A0F	811B00	0.053
	LTE Band 17	Rear - 10mm	23790	710.0	0.346	**0.295**	1DAF	829900	0.082

RF exposure	Band	Test position	Ch.	Freq (MHz)	Reported 10-g SAR (W/kg)	Single point measurement			
						Default state value (W/kg)	Auto tuner states		
							Tuner	XGND	Value (W/kg)
Phablet Exposure	LTE Band 2	Rear - 0mm	18900	1880.0	2.286	**5.789**	1200	786800	5.770
	LTE Band 4	Edge 3 - 0mm	20175	1732.5	3.271	**8.601**	1200	286800	8.455

Note(s):

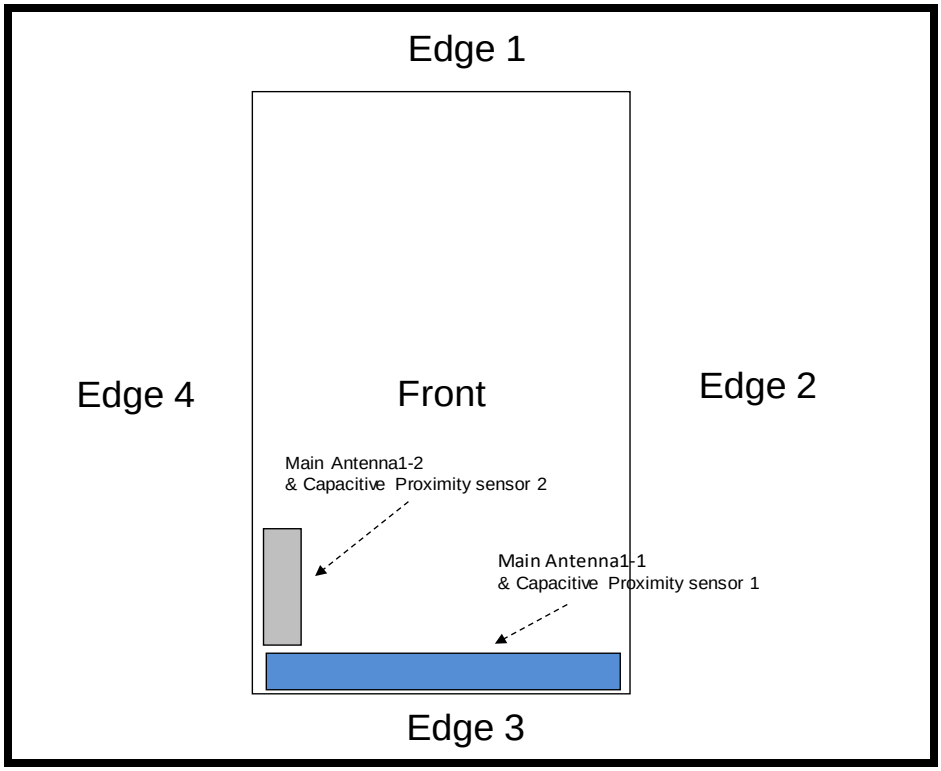
Only two bands will be tested for the 10-g extremity exposure condition at 0mm separation distance. All other bands are excluded based on hot spot SAR values < 1.2 W/Kg.

Conclusion:

Testing was performed on Indexes that had unique Tuner ID and XGND codes, as shown in the Dynamic Antenna Tuning Operational Description and on Default state (DAT not active). From these single point measurement results, the Default state was determined to be the worst case. Full SAR testing was performed on Default state.

6.7. Proximity Sensor feature

The DUT has two proximity sensors to reduce the output power. The position of the sensors and antenna are as shown in the graphic.

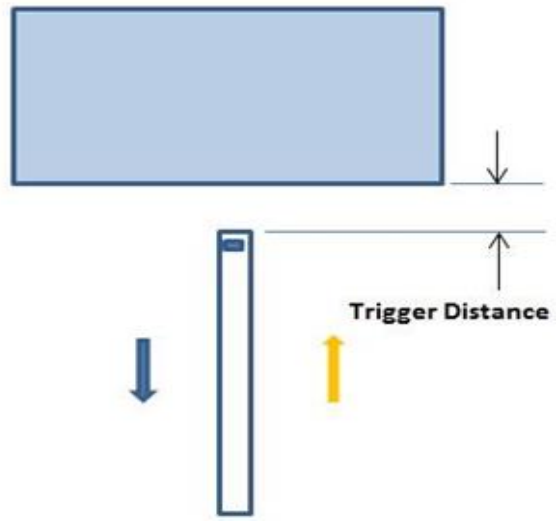


6.7.1. Proximity Sensor Triggering Distance (KDB 616217 §6.2)

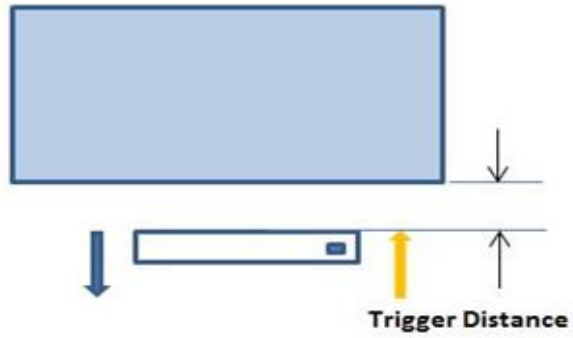
Front, Rear and Edge 3 of the DUT was placed directly below the flat phantom. The DUT was moved toward the phantom in accordance with the steps outlined in KDB 616217 §6.2 to determine the trigger distance for enabling power reduction. The DUT was moved away from the phantom to determine the trigger distance for resuming full power.

The DUT featured a visual indicator on its display that showed the status of the proximity sensor (Triggered or not triggered). This was used to determine the status of the sensor during the proximity sensor assessment as monitoring the output power directly was not practical without affecting the measurement.

It was confirmed separately that the output power was altered according to the proximity sensor status indication. This was achieved by observing the proximity sensor status at the same time as monitoring the conducted power. Section 9 contains both the full and reduced conducted power measurements.



Proximity Sensor Trigger Distance Assessment
KDB 616217 §6.2, Edge 3



Proximity Sensor Trigger Distance Assessment
KDB 616217 §6.2, Rear, Front

LEGEND

Direction of DUT travel for determination of power reduction triggering point

Direction of DUT travel for determination of full power resumption triggering point

Summary of Trigger Distances

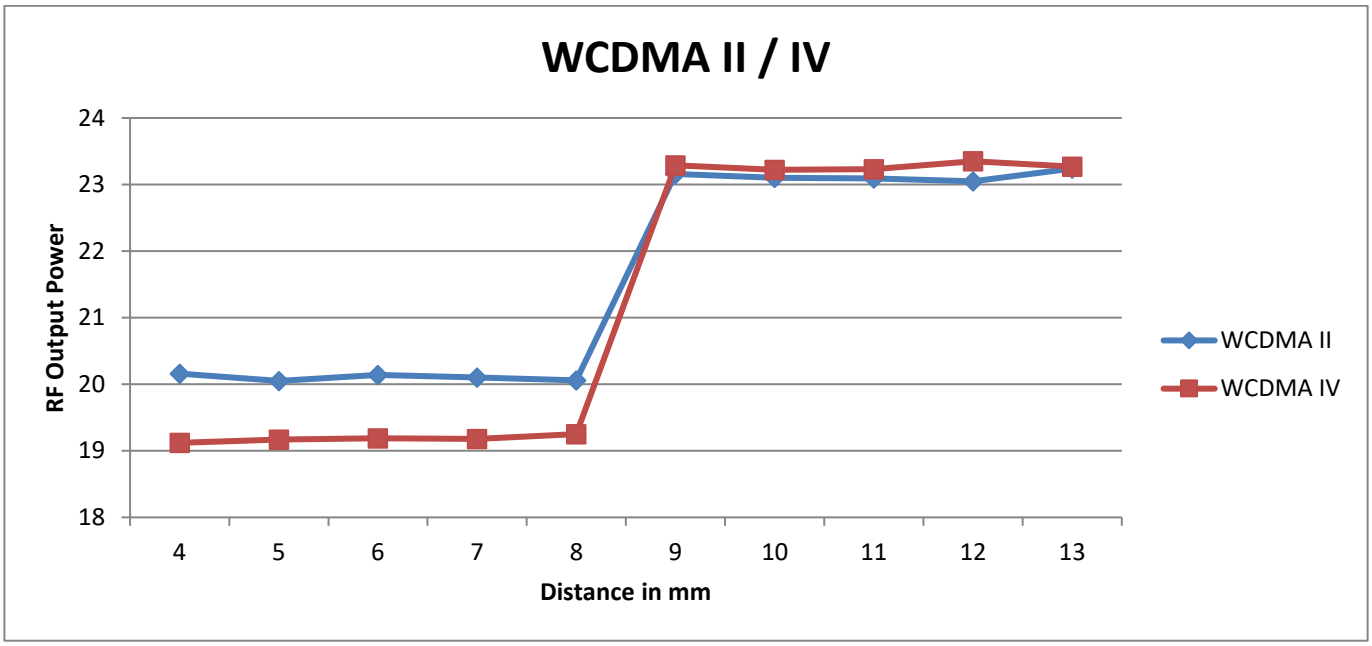
Tissue simulating liquid	Trigger distance - Rear		Trigger distance - Front		Trigger distance – Edge 3	
	Moving toward phantom	Moving from phantom	Moving toward phantom	Moving from phantom	Moving toward phantom	Moving from phantom
1750 Body	8 mm	8 mm	6 mm	6 mm	12 mm	12 mm
1900 Body	8 mm	8 mm	6 mm	6 mm	12 mm	12 mm
2600 Body	8 mm	8 mm	6 mm	6 mm	12 mm	12 mm

Proximity Sensor Triggering Distance Measurement Results

WCDMA Band II/IV (Main Ant.1-1)

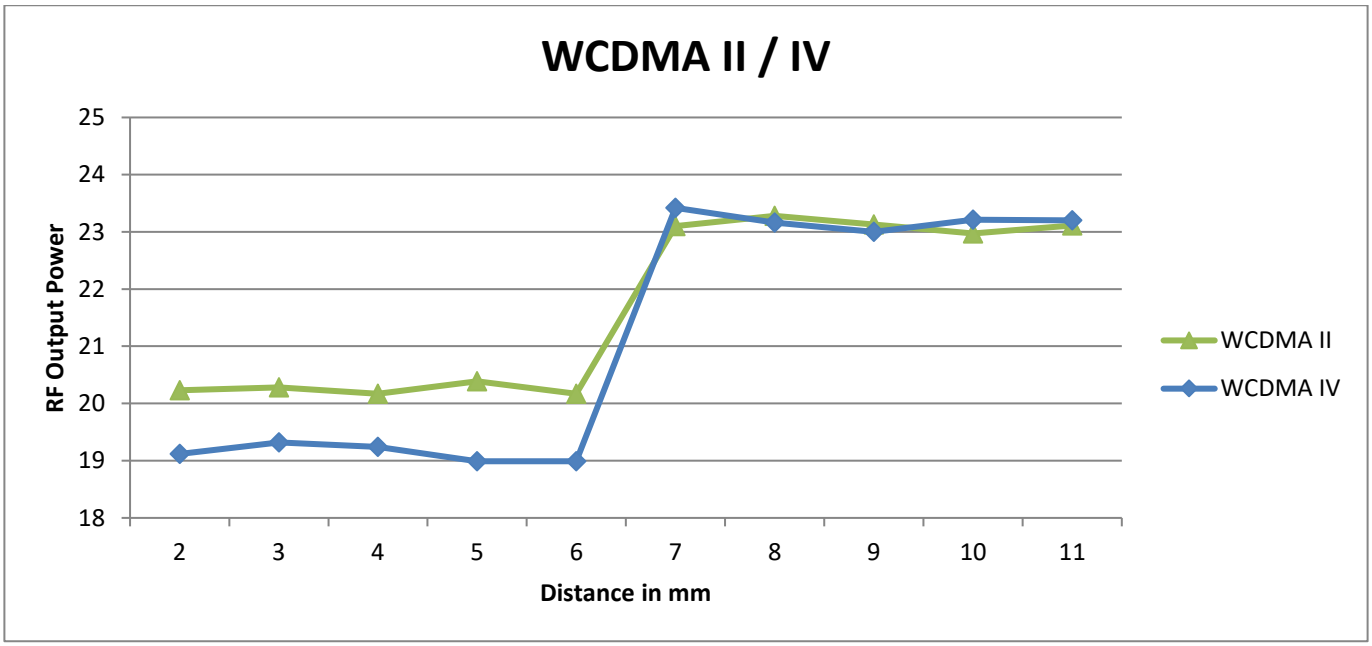
Rear, DUT Moving Toward (Trigger) from the Phantom

Distance to DUT vs. Output Power in dBm										
Distance (mm)	4	5	6	7	8	9	10	11	12	13
WCDMA II	20.2	20.1	20.1	20.1	20.1	23.2	23.1	23.1	23.1	23.2
WCDMA IV	19.1	19.2	19.2	19.2	19.3	23.3	23.2	23.2	23.4	23.3



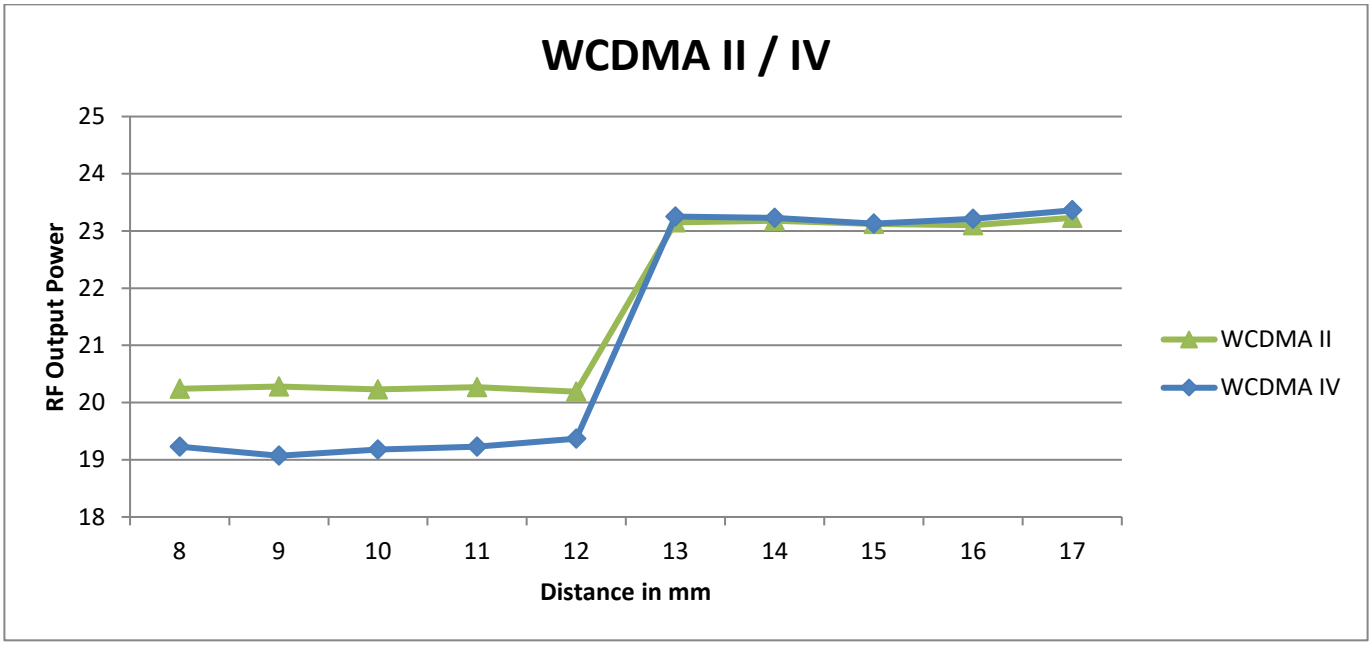
Front, DUT Moving Toward (Trigger) from the Phantom

Distance to DUT vs. Output Power in dBm										
Distance (mm)	2	3	4	5	6	7	8	9	10	11
WCDMA II	20.2	20.3	20.2	20.4	20.2	23.1	23.3	23.1	23.0	23.1
WCDMA IV	19.1	19.3	19.2	19.0	19.0	23.4	23.2	23.0	23.2	23.2



Edge 3, DUT Moving Toward (Trigger) from the Phantom

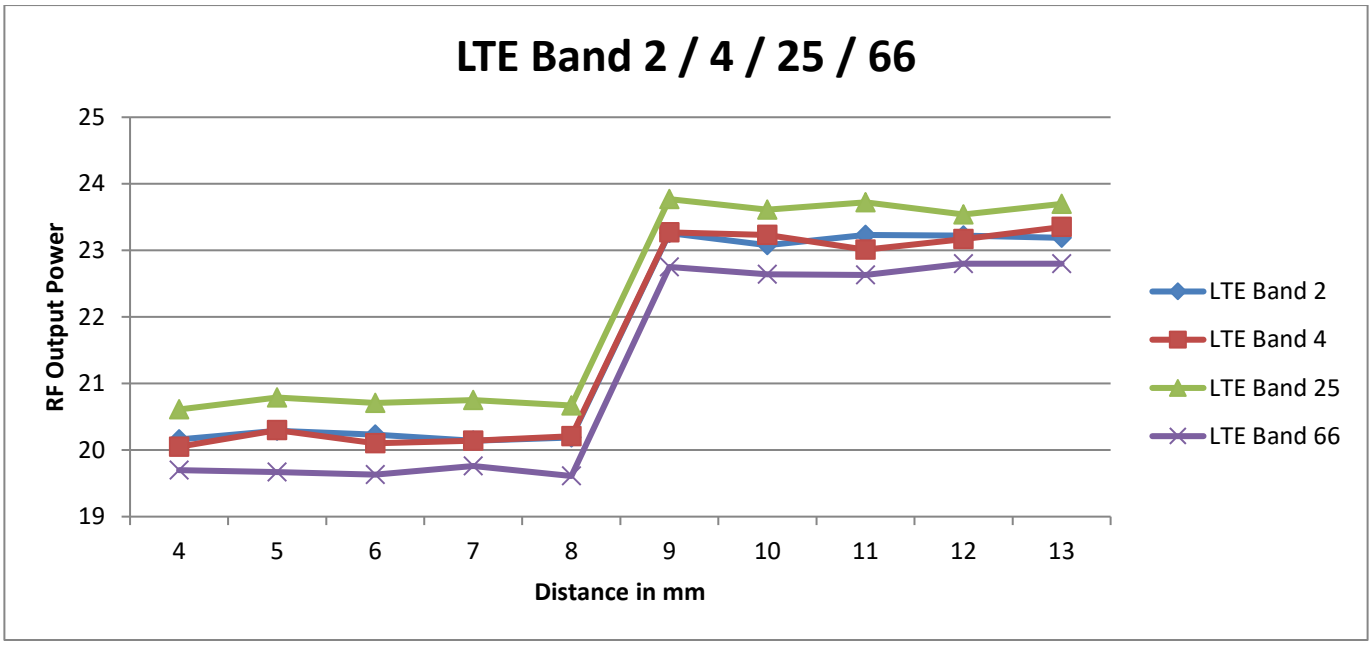
Distance to DUT vs. Output Power in dBm										
Distance (mm)	8	9	10	11	12	13	14	15	16	17
WCDMA II	20.2	20.3	20.2	20.3	20.2	23.2	23.2	23.1	23.1	23.2
WCDMA IV	19.2	19.1	19.2	19.2	19.4	23.3	23.2	23.1	23.2	23.4



LTE Band 2/4/25/66 (Main Ant.1-1)

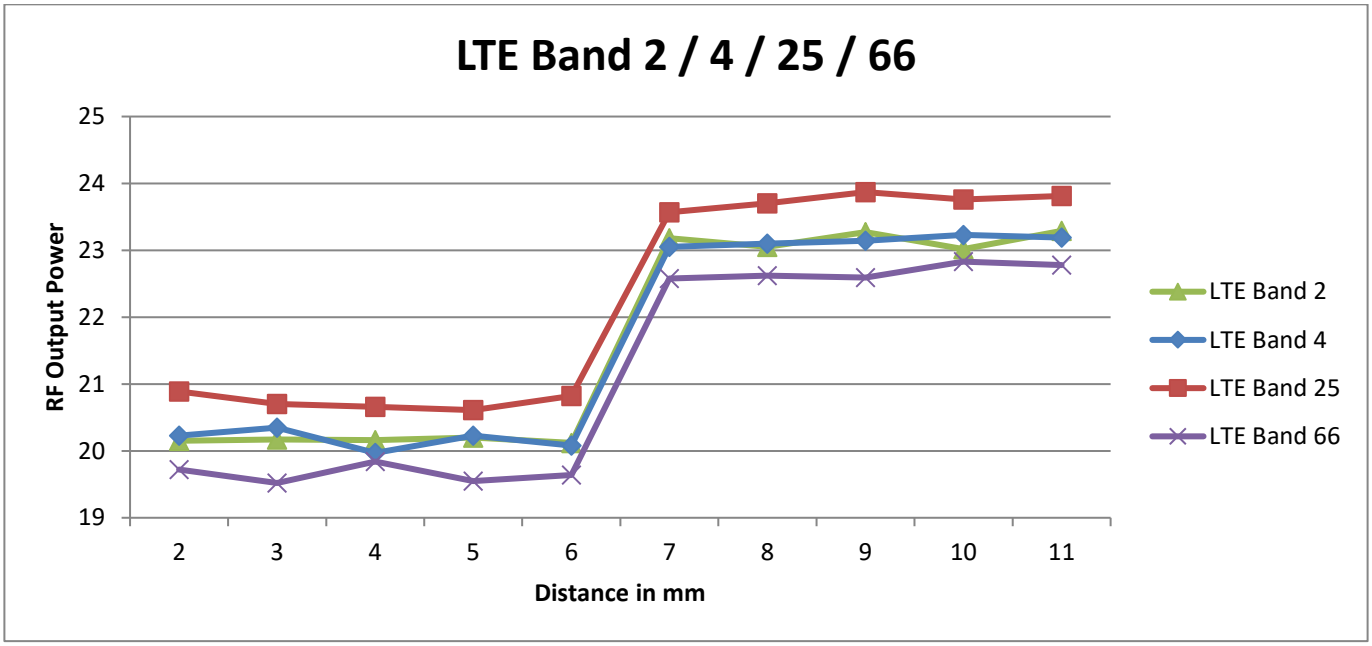
Rear, DUT Moving Away (Release) from the Phantom

Distance to DUT vs. Output Power in dBm										
Distance (mm)	4	5	6	7	8	9	10	11	12	13
LTE Band 2	20.2	20.3	20.2	20.1	20.2	23.3	23.1	23.2	23.2	23.2
LTE Band 4	20.1	20.3	20.1	20.1	20.2	23.3	23.2	23.0	23.2	23.4
LTE Band 25	20.6	20.8	20.7	20.8	20.7	23.8	23.6	23.7	23.5	23.7
LTE Band 66	19.7	19.7	19.6	19.8	19.6	22.8	22.6	22.6	22.8	22.8



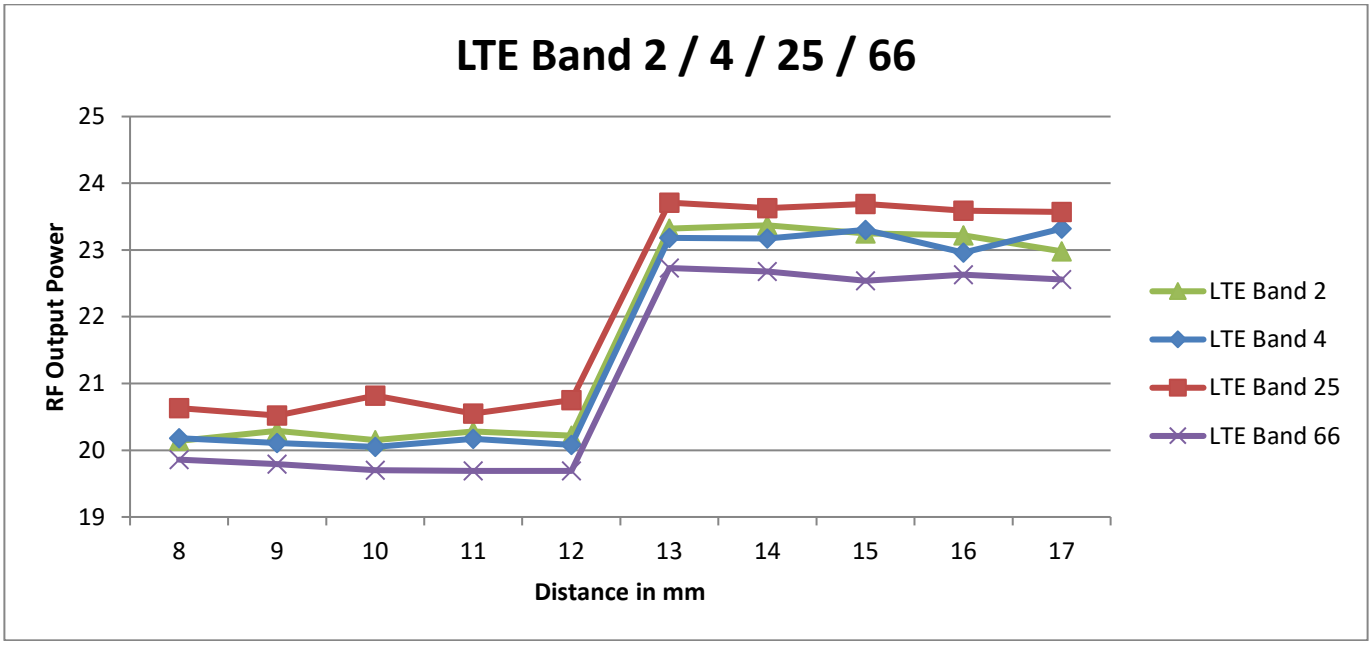
Front, DUT Moving Away (Release) from the Phantom

Distance to DUT vs. Output Power in dBm										
Distance (mm)	2	3	4	5	6	7	8	9	10	11
LTE Band 2	20.2	20.2	20.2	20.2	20.1	23.2	23.1	23.3	23.0	23.3
LTE Band 4	20.2	20.4	20.0	20.2	20.1	23.1	23.1	23.1	23.2	23.2
LTE Band 25	20.9	20.7	20.7	20.6	20.8	23.6	23.7	23.9	23.8	23.8
LTE Band 66	19.7	19.5	19.8	19.6	19.6	22.6	22.6	22.6	22.8	22.8



Edge 3, DUT Moving Away (Release) from the Phantom

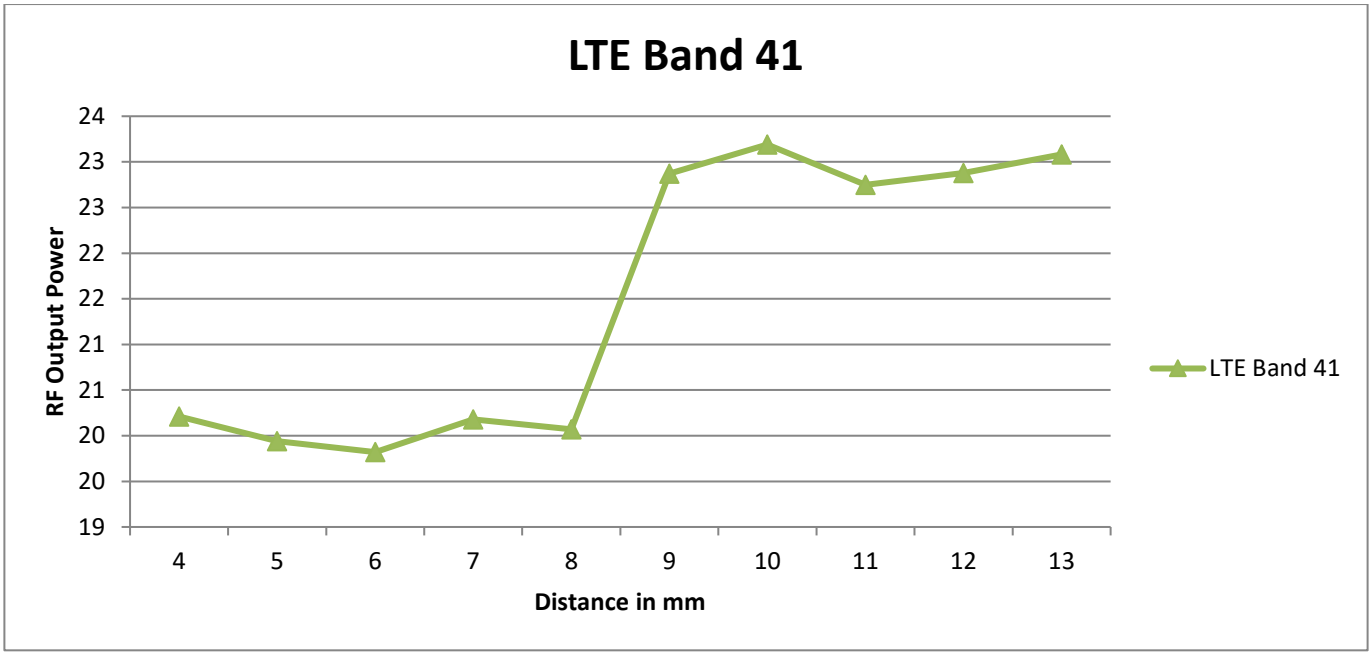
Distance to DUT vs. Output Power in dBm										
Distance (mm)	8	9	10	11	12	13	14	15	16	17
LTE Band 2	20.1	20.3	20.2	20.3	20.2	23.3	23.4	23.3	23.2	23.0
LTE Band 4	20.2	20.1	20.1	20.2	20.1	23.2	23.2	23.3	23.0	23.3
LTE Band 25	20.6	20.5	20.8	20.6	20.8	23.7	23.6	23.7	23.6	23.6
LTE Band 66	19.9	19.8	19.7	19.7	19.7	22.7	22.7	22.5	22.6	22.6



LTE Band 41 (Main Ant.1-2)

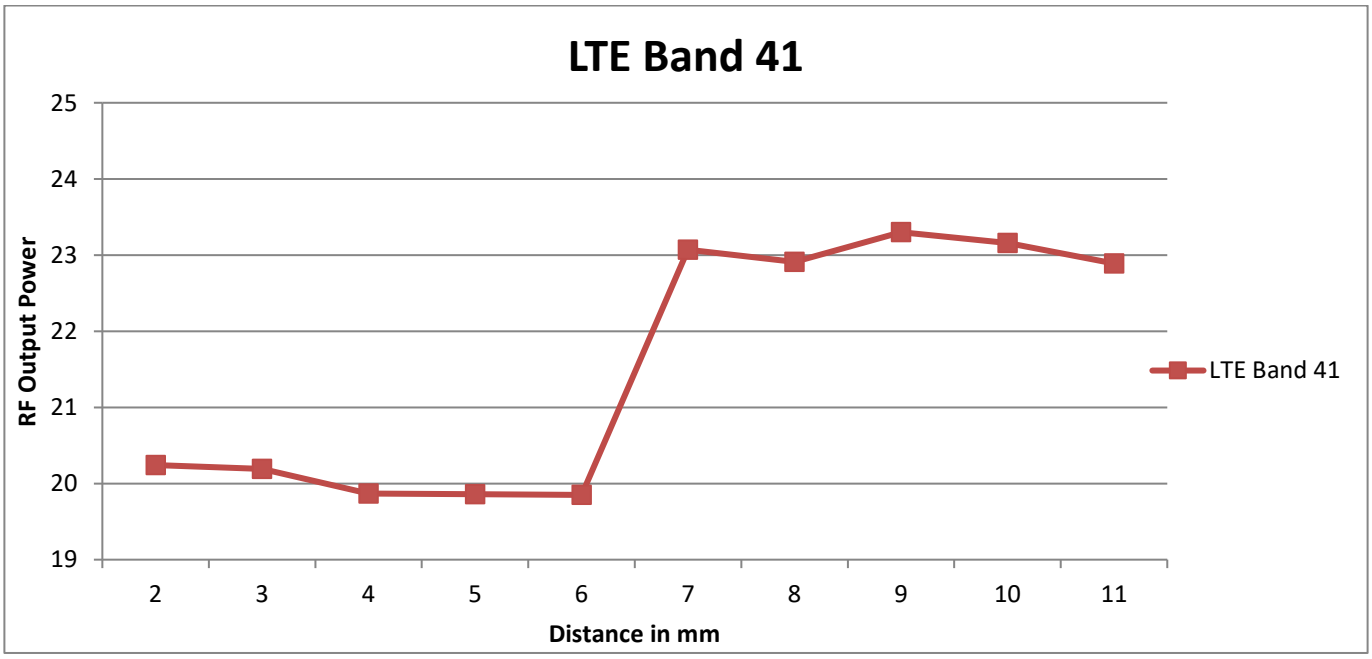
Rear, DUT Moving Away (Release) from the Phantom

Distance to DUT vs. Output Power in dBm										
Distance (mm)	4	5	6	7	8	9	10	11	12	13
LTE Band 41	20.2	19.9	19.8	20.2	20.1	22.9	23.2	22.8	22.9	23.1



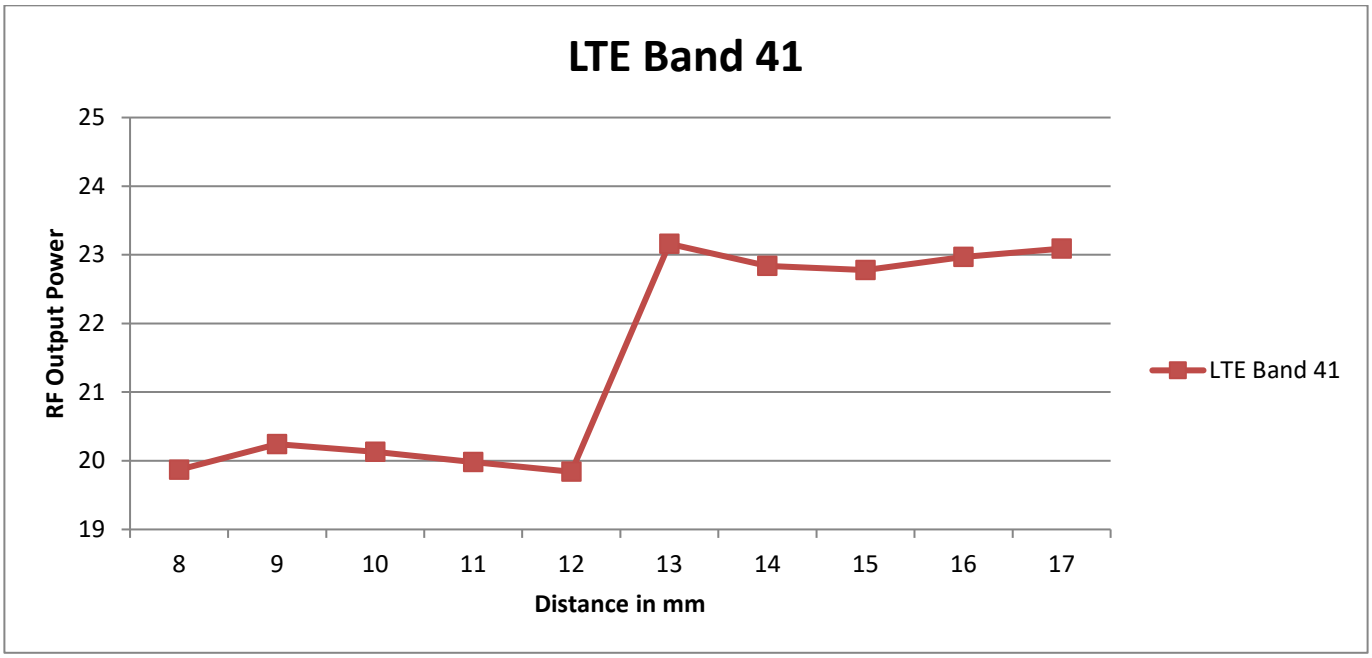
Front, DUT Moving Away (Release) from the Phantom

Distance to DUT vs. Output Power in dBm										
Distance (mm)	2	3	4	5	6	7	8	9	10	11
LTE Band 41	20.2	20.2	19.9	19.9	19.9	23.1	22.9	23.3	23.2	22.9



Edge 3, DUT Moving Away (Release) from the Phantom

Distance to DUT vs. Output Power in dBm										
Distance (mm)	8	9	10	11	12	13	14	15	16	17
LTE Band 41	19.9	20.2	20.1	20.0	19.8	23.2	22.8	22.8	23.0	23.1



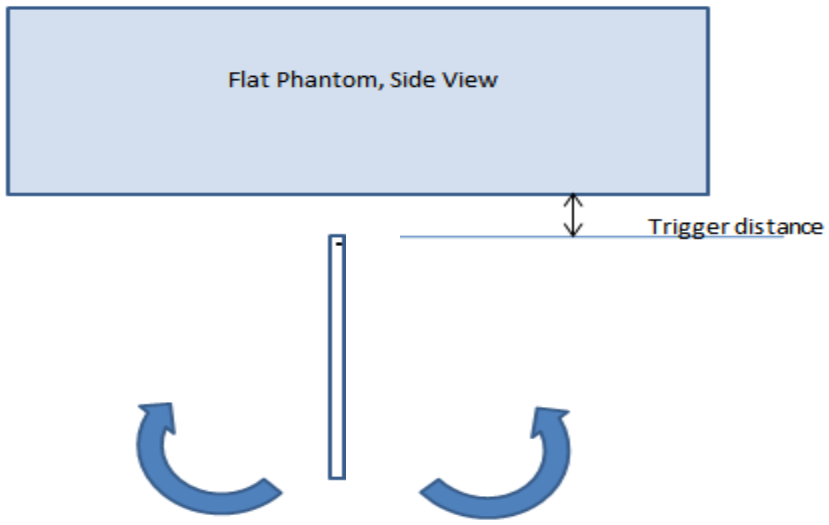
6.7.2 Proximity Sensor Coverage (KDB 616217 §6.3)

As there is no spatial offset between the antenna and the proximity sensor element, proximity sensor coverage did not need to be assessed.

6.7.3 Proximity Sensor Tilt Angle Assessment (KDB 616217 §6.4)

The DUT was positioned directly below the flat phantom at the minimum measured trigger distance with Edge 3 parallel to the base of the flat phantom for each band.

The DUT was rotated about Edge 3 for angles up to +/- 45°. If the output power increased during the rotation the DUT was moved 1mm toward the phantom and the rotation repeated. This procedure was repeated until the power remained reduced for all angles up to +/- 45°.



Proximity sensor tilt angle assessment (Edge 3) KDB 616217 §6.4

Summary of DUT Tilt Angle Influence to Proximity Sensor Triggering (Edge 3)

Band (MHz)	Minimum trigger distance measured according to KDB 616217 §6.2	Minimum distance at which power reduction was maintained over +/-45°	Power reduction status										
			-45°	-40°	-30°	-20°	-10°	0°	10°	20°	30°	40°	45°
1750	12 mm	12 mm	On	On	On	On	On	On	On	On	On	On	On
1900	12 mm	12 mm	On	On	On	On	On	On	On	On	On	On	On
2600	12 mm	12 mm	On	On	On	On	On	On	On	On	On	On	On

6.7.4 Resulting test positions for SAR measurements

Wireless technologies	DUT Position	§6.2 Triggering Distance	§6.3 Coverage	§6.4 Tilt Angle	Worst case distance for SAR
Main Ant.1-1 & Main Ant.1-2	Rear	8 mm	N/A	N/A	7 mm
	Front	6 mm	N/A	N/A	5 mm
	Edge 3	12 mm	N/A	12 mm	11 mm

7. RF Exposure Conditions (Test Configurations)

Refer to Appendix A for the specific details of the antenna-to-antenna and antenna-to-edge(s) distances.

Wireless technologies	RF Exposure Conditions	Antenaa	DUT-to-User Separation	Test Position	Antenna-to-edge/surface	SAR Required	Note
WWAN	Head	Main Ant. 1-1 & 1-2	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	Main Ant. 1-1 & 1-2	15 mm	Rear	N/A	Yes	
				Front	N/A	Yes	
	Hotspot	Main Ant.1-1	10 mm	Rear	< 25 mm	Yes	
				Front	< 25 mm	Yes	
				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	
	Hotspot	Main Ant.1-2	10 mm	Rear	< 25 mm	Yes	
				Front	< 25 mm	Yes	
				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	
	Phablet-10g	Main Ant.1-1	0 mm	Rear	< 25 mm	Yes	
				Front	< 25 mm	Yes	
				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	
	Phablet-10g	Main Ant.1-2	0 mm	Rear	< 25 mm	Yes	
				Front	< 25 mm	Yes	
				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	
WLAN	Head	Wi-Fi Ant.1 & 2	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		15 mm	Rear	N/A	Yes	
				Front	N/A	Yes	
	Hotspot		10 mm	Rear	< 25 mm	Yes	
				Front	< 25 mm	Yes	
				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	
	Phablet-10g		0 mm	Rear	< 25 mm	Yes	
				Front	< 25 mm	Yes	
				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	

Notes:

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. When Hotspot Mode is not supported, 10-g Phablet 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.
3. When hotspot mode applies, 10-g Phablet SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg. When hotspot mode does not apply, 10-g Phablet SAR is required for all surfaces and Edges within 25mm of the antenna.

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.

Tissue Dielectric Parameters

FCC KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz

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

IEEE Std 1528-2013

Refer to Table 3 within the IEEE Std 1528-2013

Dielectric Property Measurements Results:

SAR 1 Room

Date	Freq. (MHz)	Liquid Parameters			Measured	Target	Delta (%)	Limit ±(%)
11-19-2018	Head 2600	e'	38.4000	Relative Permittivity (ε_r):	38.40	39.01	-1.57	5
		e''	13.4400	Conductivity (σ):	1.94	1.96	-0.98	5
	Head 2500	e'	38.7300	Relative Permittivity (ε_r):	38.73	39.14	-1.04	5
		e''	13.2400	Conductivity (σ):	1.84	1.85	-0.73	5
	Head 2700	e'	38.0800	Relative Permittivity (ε_r):	38.08	38.88	-2.07	5
		e''	13.6400	Conductivity (σ):	2.05	2.07	-1.09	5
11-21-2018	Body 2600	e'	52.4700	Relative Permittivity (ε_r):	52.47	52.51	-0.08	5
		e''	14.9800	Conductivity (σ):	2.17	2.16	0.22	5
	Body 2500	e'	52.7200	Relative Permittivity (ε_r):	52.72	52.64	0.16	5
		e''	14.7400	Conductivity (σ):	2.05	2.02	1.42	5
	Body 2700	e'	52.1900	Relative Permittivity (ε_r):	52.19	52.38	-0.37	5
		e''	15.2300	Conductivity (σ):	2.29	2.30	-0.65	5
12-5-2018	Body 2450	e'	52.5400	Relative Permittivity (ε_r):	52.54	52.70	-0.30	5
		e''	14.8600	Conductivity (σ):	2.02	1.95	3.81	5
	Body 2400	e'	52.6800	Relative Permittivity (ε_r):	52.68	52.77	-0.18	5
		e''	14.7100	Conductivity (σ):	1.96	1.90	3.42	5
	Body 2480	e'	52.4600	Relative Permittivity (ε_r):	52.46	52.66	-0.38	5
		e''	14.9600	Conductivity (σ):	2.06	1.99	3.55	5
12-7-2018	Body 2450	e'	53.0200	Relative Permittivity (ε_r):	53.02	52.70	0.61	5
		e''	14.4100	Conductivity (σ):	1.96	1.95	0.67	5
	Body 2400	e'	53.1400	Relative Permittivity (ε_r):	53.14	52.77	0.70	5
		e''	14.2800	Conductivity (σ):	1.91	1.90	0.40	5
	Body 2480	e'	52.9400	Relative Permittivity (ε_r):	52.94	52.66	0.53	5
		e''	14.4800	Conductivity (σ):	2.00	1.99	0.23	5
12-8-2018	Head 5250	e'	36.9000	Relative Permittivity (ε_r):	36.90	35.93	2.69	5
		e''	15.9200	Conductivity (σ):	4.65	4.70	-1.17	5
	Head 5260	e'	36.8700	Relative Permittivity (ε_r):	36.87	35.92	2.64	5
		e''	15.9300	Conductivity (σ):	4.66	4.71	-1.13	5
	Head 5600	e'	36.2700	Relative Permittivity (ε_r):	36.27	35.53	2.07	5
		e''	16.1700	Conductivity (σ):	5.03	5.06	-0.50	5
	Head 5750	e'	36.0300	Relative Permittivity (ε_r):	36.03	35.36	1.89	5
		e''	16.2700	Conductivity (σ):	5.20	5.21	-0.23	5
	Head 5825	e'	35.9000	Relative Permittivity (ε_r):	35.90	35.30	1.70	5
		e''	16.3200	Conductivity (σ):	5.29	5.27	0.30	5
12-10-2018	Head 2450	e'	40.6200	Relative Permittivity (ε_r):	40.62	39.20	3.62	5
		e''	13.6700	Conductivity (σ):	1.86	1.80	3.46	5
	Head 2400	e'	40.7800	Relative Permittivity (ε_r):	40.78	39.30	3.77	5
		e''	13.5100	Conductivity (σ):	1.80	1.75	2.92	5
	Head 2480	e'	40.5200	Relative Permittivity (ε_r):	40.52	39.16	3.47	5
		e''	13.7600	Conductivity (σ):	1.90	1.83	3.55	5
1-4-2019	Body 5250	e'	49.2400	Relative Permittivity (ε_r):	49.24	48.95	0.59	5
		e''	18.7600	Conductivity (σ):	5.48	5.35	2.30	5
	Body 5260	e'	49.2100	Relative Permittivity (ε_r):	49.21	48.94	0.56	5
		e''	18.7700	Conductivity (σ):	5.49	5.36	2.33	5
	Body 5600	e'	48.6100	Relative Permittivity (ε_r):	48.61	48.48	0.27	5
		e''	19.0800	Conductivity (σ):	5.94	5.76	3.13	5
	Body 5750	e'	48.4200	Relative Permittivity (ε_r):	48.42	48.27	0.30	5
		e''	19.2300	Conductivity (σ):	6.15	5.94	3.58	5
	Body 5825	e'	48.2800	Relative Permittivity (ε_r):	48.28	48.20	0.17	5
		e''	19.2900	Conductivity (σ):	6.25	6.00	4.13	5
1-17-2019	Head 2600	e'	38.1300	Relative Permittivity (ε_r):	38.13	39.01	-2.26	5
		e''	13.9000	Conductivity (σ):	2.01	1.96	2.41	5
	Head 2500	e'	38.4700	Relative Permittivity (ε_r):	38.47	39.14	-1.70	5
		e''	13.6800	Conductivity (σ):	1.90	1.85	2.57	5
	Head 2700	e'	37.7900	Relative Permittivity (ε_r):	37.79	38.88	-2.82	5
		e''	14.1200	Conductivity (σ):	2.12	2.07	2.39	5

SAR 2 Room

Date	Freq. (MHz)	Liquid Parameters			Measured	Target	Delta (%)	Limit ±(%)
12-11-2018	Body 835	e'	54.8100	Relative Permittivity (ε_r):	54.81	55.20	-0.71	5
		e''	21.8400	Conductivity (σ):	1.01	0.97	4.54	5
	Body 820	e'	54.9300	Relative Permittivity (ε_r):	54.93	55.28	-0.63	5
		e''	21.9400	Conductivity (σ):	1.00	0.97	3.29	5
	Body 850	e'	54.6700	Relative Permittivity (ε_r):	54.67	55.16	-0.88	5
		e''	21.7600	Conductivity (σ):	1.03	0.99	4.18	5
12-27-2018	Body 750	e'	56.1700	Relative Permittivity (ε_r):	56.17	55.55	1.12	5
		e''	23.1300	Conductivity (σ):	0.96	0.96	0.16	5
	Body 700	e'	56.5600	Relative Permittivity (ε_r):	56.56	55.74	1.47	5
		e''	23.6300	Conductivity (σ):	0.92	0.96	-4.12	5
	Body 790	e'	55.8200	Relative Permittivity (ε_r):	55.82	55.39	0.77	5
		e''	22.6700	Conductivity (σ):	1.00	0.97	3.07	5
1-16-2019	Body 750	e'	57.4400	Relative Permittivity (ε_r):	57.44	55.55	3.41	5
		e''	23.1900	Conductivity (σ):	0.97	0.96	0.42	5
	Body 700	e'	57.9100	Relative Permittivity (ε_r):	57.91	55.74	3.90	5
		e''	23.7300	Conductivity (σ):	0.92	0.96	-3.71	5
	Body 790	e'	57.3700	Relative Permittivity (ε_r):	57.37	55.39	3.57	5
		e''	22.9300	Conductivity (σ):	1.01	0.97	4.25	5

SAR 3 Room

Date	Freq. (MHz)	Liquid Parameters			Measured	Target	Delta (%)	Limit ±(%)
11-16-2018	Body 750	e'	57.1800	Relative Permittivity (ε_r):	57.18	55.55	2.94	5
		e''	23.2900	Conductivity (σ):	0.97	0.96	0.85	5
	Body 700	e'	57.6200	Relative Permittivity (ε_r):	57.62	55.74	3.38	5
		e''	23.8300	Conductivity (σ):	0.93	0.96	-3.31	5
	Body 790	e'	56.7400	Relative Permittivity (ε_r):	56.74	55.39	2.43	5
		e''	22.9700	Conductivity (σ):	1.01	0.97	4.43	5
11-19-2018	Body 750	e'	55.9500	Relative Permittivity (ε_r):	55.95	55.55	0.73	5
		e''	23.1300	Conductivity (σ):	0.96	0.96	0.16	5
	Body 700	e'	56.4200	Relative Permittivity (ε_r):	56.42	55.74	1.22	5
		e''	23.5400	Conductivity (σ):	0.92	0.96	-4.48	5
	Body 790	e'	55.6000	Relative Permittivity (ε_r):	55.60	55.39	0.37	5
		e''	22.8000	Conductivity (σ):	1.00	0.97	3.66	5
11-21-2018	Head 750	e'	43.3900	Relative Permittivity (ε_r):	43.39	41.96	3.40	5
		e''	21.5200	Conductivity (σ):	0.90	0.89	0.49	5
	Head 700	e'	44.0400	Relative Permittivity (ε_r):	44.04	42.22	4.32	5
		e''	21.8800	Conductivity (σ):	0.85	0.89	-4.23	5
	Head 790	e'	42.8700	Relative Permittivity (ε_r):	42.87	41.76	2.67	5
		e''	21.2100	Conductivity (σ):	0.93	0.90	3.96	5
11-22-2018	Body 835	e'	53.0100	Relative Permittivity (ε_r):	53.01	55.20	-3.97	5
		e''	21.5300	Conductivity (σ):	1.00	0.97	3.05	5
	Body 820	e'	53.1800	Relative Permittivity (ε_r):	53.18	55.28	-3.79	5
		e''	21.5700	Conductivity (σ):	0.98	0.97	1.55	5
	Body 850	e'	52.8300	Relative Permittivity (ε_r):	52.83	55.16	-4.22	5
		e''	21.5000	Conductivity (σ):	1.02	0.99	2.94	5
11-23-2018	Head 835	e'	40.5000	Relative Permittivity (ε_r):	40.50	41.50	-2.41	5
		e''	19.9600	Conductivity (σ):	0.93	0.90	2.97	5
	Head 820	e'	40.6700	Relative Permittivity (ε_r):	40.67	41.60	-2.24	5
		e''	19.9800	Conductivity (σ):	0.91	0.90	1.39	5
	Head 850	e'	40.3100	Relative Permittivity (ε_r):	40.31	41.50	-2.87	5
		e''	19.9200	Conductivity (σ):	0.94	0.92	2.89	5

SAR 3 Room (continued)

Date	Freq. (MHz)	Liquid Parameters			Measured	Target	Delta (%)	Limit ±(%)
11-27-2018	Head 835	e'	42.4000	Relative Permittivity (ε_r):	42.40	41.50	2.17	5
		e"	19.5800	Conductivity (σ):	0.91	0.90	1.01	5
	Head 820	e'	42.5300	Relative Permittivity (ε_r):	42.53	41.60	2.23	5
		e"	19.6400	Conductivity (σ):	0.90	0.90	-0.33	5
	Head 850	e'	42.2800	Relative Permittivity (ε_r):	42.28	41.50	1.88	5
		e"	19.5600	Conductivity (σ):	0.92	0.92	1.03	5
12-1-2018	Body 1750	e'	51.7400	Relative Permittivity (ε_r):	51.74	53.44	-3.18	5
		e"	15.1500	Conductivity (σ):	1.47	1.49	-0.81	5
	Body 1710	e'	51.9000	Relative Permittivity (ε_r):	51.90	53.54	-3.07	5
		e"	15.1000	Conductivity (σ):	1.44	1.46	-1.77	5
	Body 1755	e'	51.7300	Relative Permittivity (ε_r):	51.73	53.43	-3.18	5
		e"	15.1600	Conductivity (σ):	1.48	1.49	-0.66	5
12-3-2018	Body 1750	e'	51.9200	Relative Permittivity (ε_r):	51.92	53.44	-2.85	5
		e"	14.6400	Conductivity (σ):	1.42	1.49	-4.15	5
	Body 1710	e'	52.0800	Relative Permittivity (ε_r):	52.08	53.54	-2.73	5
		e"	14.6400	Conductivity (σ):	1.39	1.46	-4.76	5
	Body 1755	e'	51.9100	Relative Permittivity (ε_r):	51.91	53.43	-2.84	5
		e"	14.6400	Conductivity (σ):	1.43	1.49	-4.07	5
12-4-2018	Body 1900	e'	52.4800	Relative Permittivity (ε_r):	52.48	53.30	-1.54	5
		e"	14.4600	Conductivity (σ):	1.53	1.52	0.50	5
	Body 1850	e'	52.6200	Relative Permittivity (ε_r):	52.62	53.30	-1.28	5
		e"	14.3200	Conductivity (σ):	1.47	1.52	-3.09	5
	Body 1910	e'	52.4500	Relative Permittivity (ε_r):	52.45	53.30	-1.59	5
		e"	14.5000	Conductivity (σ):	1.54	1.52	1.31	5
12-11-2018	Body 1900	e'	52.4900	Relative Permittivity (ε_r):	52.49	53.30	-1.52	5
		e"	14.6800	Conductivity (σ):	1.55	1.52	2.03	5
	Body 1850	e'	52.7000	Relative Permittivity (ε_r):	52.70	53.30	-1.13	5
		e"	14.5100	Conductivity (σ):	1.49	1.52	-1.80	5
	Body 1910	e'	52.4500	Relative Permittivity (ε_r):	52.45	53.30	-1.59	5
		e"	14.7200	Conductivity (σ):	1.56	1.52	2.85	5
12-12-2018	Head 835	e'	42.9700	Relative Permittivity (ε_r):	42.97	41.50	3.54	5
		e"	19.7600	Conductivity (σ):	0.92	0.90	1.94	5
	Head 820	e'	43.1300	Relative Permittivity (ε_r):	43.13	41.60	3.67	5
		e"	19.8100	Conductivity (σ):	0.90	0.90	0.53	5
	Head 850	e'	42.8100	Relative Permittivity (ε_r):	42.81	41.50	3.16	5
		e"	19.7100	Conductivity (σ):	0.93	0.92	1.81	5
12-17-2018	Body 1900	e'	51.1800	Relative Permittivity (ε_r):	51.18	53.30	-3.98	5
		e"	14.3000	Conductivity (σ):	1.51	1.52	-0.61	5
	Body 1850	e'	51.3500	Relative Permittivity (ε_r):	51.35	53.30	-3.66	5
		e"	14.1400	Conductivity (σ):	1.45	1.52	-4.31	5
	Body 1910	e'	51.1400	Relative Permittivity (ε_r):	51.14	53.30	-4.05	5
		e"	14.3400	Conductivity (σ):	1.52	1.52	0.19	5
1-17-2019	Head 750	e'	42.1800	Relative Permittivity (ε_r):	42.18	41.96	0.52	5
		e"	21.4700	Conductivity (σ):	0.90	0.89	0.25	5
	Head 700	e'	42.9100	Relative Permittivity (ε_r):	42.91	42.22	1.64	5
		e"	21.8100	Conductivity (σ):	0.85	0.89	-4.54	5
	Head 790	e'	41.6000	Relative Permittivity (ε_r):	41.60	41.76	-0.37	5
		e"	21.1800	Conductivity (σ):	0.93	0.90	3.82	5
1-17-2019	Body 2600	e'	51.8500	Relative Permittivity (ε_r):	51.85	52.51	-1.26	5
		e"	15.2100	Conductivity (σ):	2.20	2.16	1.76	5
	Body 2500	e'	52.2200	Relative Permittivity (ε_r):	52.22	52.64	-0.79	5
		e"	14.7500	Conductivity (σ):	2.05	2.02	1.49	5
	Body 2700	e'	51.4400	Relative Permittivity (ε_r):	51.44	52.38	-1.80	5
		e"	15.6100	Conductivity (σ):	2.34	2.30	1.83	5

SAR 4 Room

Date	Freq. (MHz)	Liquid Parameters			Measured	Target	Delta (%)	Limit ±(%)
11-15-2018	Body 1750	e'	53.4300	Relative Permittivity (ε_r):	53.43	53.44	-0.02	5
		e"	15.6900	Conductivity (σ):	1.53	1.49	2.73	5
	Body 1710	e'	53.4800	Relative Permittivity (ε_r):	53.48	53.54	-0.12	5
		e"	15.6600	Conductivity (σ):	1.49	1.46	1.88	5
	Body 1755	e'	53.4200	Relative Permittivity (ε_r):	53.42	53.43	-0.02	5
		e"	15.7000	Conductivity (σ):	1.53	1.49	2.88	5
11-19-2018	Head 1750	e'	40.4900	Relative Permittivity (ε_r):	40.49	40.08	1.01	5
		e"	13.5000	Conductivity (σ):	1.31	1.37	-4.04	5
	Head 1710	e'	40.6200	Relative Permittivity (ε_r):	40.62	40.15	1.18	5
		e"	13.4800	Conductivity (σ):	1.28	1.35	-4.81	5
	Head 1755	e'	40.4700	Relative Permittivity (ε_r):	40.47	40.08	0.98	5
		e"	13.5000	Conductivity (σ):	1.32	1.37	-3.97	5
11-19-2018	Head 1900	e'	40.0300	Relative Permittivity (ε_r):	40.03	40.00	0.08	5
		e"	13.7700	Conductivity (σ):	1.45	1.40	3.91	5
	Head 1850	e'	40.2100	Relative Permittivity (ε_r):	40.21	40.00	0.53	5
		e"	13.6500	Conductivity (σ):	1.40	1.40	0.29	5
	Head 1910	e'	39.9900	Relative Permittivity (ε_r):	39.99	40.00	-0.02	5
		e"	13.8000	Conductivity (σ):	1.47	1.40	4.68	5
11-19-2018	Body 1900	e'	53.7900	Relative Permittivity (ε_r):	53.79	53.30	0.92	5
		e"	14.8100	Conductivity (σ):	1.56	1.52	2.94	5
	Body 1850	e'	53.8700	Relative Permittivity (ε_r):	53.87	53.30	1.07	5
		e"	14.8100	Conductivity (σ):	1.52	1.52	0.23	5
	Body 1910	e'	53.7600	Relative Permittivity (ε_r):	53.76	53.30	0.86	5
		e"	14.8200	Conductivity (σ):	1.57	1.52	3.55	5
11-30-2018	Head 1750	e'	39.2200	Relative Permittivity (ε_r):	39.22	40.08	-2.16	5
		e"	13.5200	Conductivity (σ):	1.32	1.37	-3.90	5
	Head 1710	e'	39.3800	Relative Permittivity (ε_r):	39.38	40.15	-1.91	5
		e"	13.5000	Conductivity (σ):	1.28	1.35	-4.67	5
	Head 1755	e'	39.2000	Relative Permittivity (ε_r):	39.20	40.08	-2.19	5
		e"	13.5200	Conductivity (σ):	1.32	1.37	-3.82	5
12-4-2018	Head 1750	e'	39.1900	Relative Permittivity (ε_r):	39.19	40.08	-2.23	5
		e"	13.5400	Conductivity (σ):	1.32	1.37	-3.76	5
	Head 1710	e'	39.3400	Relative Permittivity (ε_r):	39.34	40.15	-2.01	5
		e"	13.5200	Conductivity (σ):	1.29	1.35	-4.52	5
	Head 1755	e'	39.1700	Relative Permittivity (ε_r):	39.17	40.08	-2.26	5
		e"	13.5400	Conductivity (σ):	1.32	1.37	-3.68	5
12-4-2018	Head 1900	e'	38.7000	Relative Permittivity (ε_r):	38.70	40.00	-3.25	5
		e"	13.7300	Conductivity (σ):	1.45	1.40	3.61	5
	Head 1850	e'	38.8600	Relative Permittivity (ε_r):	38.86	40.00	-2.85	5
		e"	13.6600	Conductivity (σ):	1.41	1.40	0.37	5
	Head 1910	e'	38.6600	Relative Permittivity (ε_r):	38.66	40.00	-3.35	5
		e"	13.7500	Conductivity (σ):	1.46	1.40	4.31	5

SAR 4 Room (Continued)

Date	Freq. (MHz)	Liquid Parameters			Measured	Target	Delta (%)	Limit ±(%)
12-6-2018	Body 5150	e'	48.1600	Relative Permittivity (ϵ_r):	48.16	49.09	-1.89	5
		e''	18.5400	Conductivity (σ):	5.31	5.24	1.39	5
	Body 5300	e'	47.9000	Relative Permittivity (ϵ_r):	47.90	48.88	-2.01	5
		e''	18.6800	Conductivity (σ):	5.50	5.41	1.73	5
	Body 5600	e'	47.3900	Relative Permittivity (ϵ_r):	47.39	48.48	-2.24	5
		e''	18.9400	Conductivity (σ):	5.90	5.76	2.37	5
	Body 5800	e'	47.0800	Relative Permittivity (ϵ_r):	47.08	48.20	-2.32	5
		e''	19.1700	Conductivity (σ):	6.18	6.00	3.04	5
	Body 5825	e'	47.0300	Relative Permittivity (ϵ_r):	47.03	48.20	-2.43	5
		e''	19.1800	Conductivity (σ):	6.21	6.00	3.54	5
12-9-2018	Body 5180	e'	47.6400	Relative Permittivity (ϵ_r):	47.64	49.05	-2.87	5
		e''	18.5200	Conductivity (σ):	5.33	5.27	1.19	5
	Body 5300	e'	47.4300	Relative Permittivity (ϵ_r):	47.43	48.88	-2.97	5
		e''	18.6000	Conductivity (σ):	5.48	5.41	1.29	5
	Body 5600	e'	46.8800	Relative Permittivity (ϵ_r):	46.88	48.48	-3.30	5
		e''	18.8900	Conductivity (σ):	5.88	5.76	2.10	5
	Body 5800	e'	46.5500	Relative Permittivity (ϵ_r):	46.55	48.20	-3.42	5
		e''	19.0400	Conductivity (σ):	6.14	6.00	2.34	5
	Body 5825	e'	46.5100	Relative Permittivity (ϵ_r):	46.51	48.20	-3.51	5
		e''	19.0900	Conductivity (σ):	6.18	6.00	3.05	5
12-17-2018	Head 1900	e'	38.5000	Relative Permittivity (ϵ_r):	38.50	40.00	-3.75	5
		e''	13.7000	Conductivity (σ):	1.45	1.40	3.38	5
	Head 1850	e'	38.7000	Relative Permittivity (ϵ_r):	38.70	40.00	-3.25	5
		e''	13.6300	Conductivity (σ):	1.40	1.40	0.15	5
	Head 1910	e'	38.4700	Relative Permittivity (ϵ_r):	38.47	40.00	-3.83	5
		e''	13.7000	Conductivity (σ):	1.45	1.40	3.93	5

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 2.5 mm.
  For 5 GHz band - Distance between probe sensors and phantom surface was set to 1.4 mm
- The dipole input power (forward power) was 100 mW.
- The results are normalized to 1 W input power.

Reference Target SAR Values

The reference SAR values can be obtained from the calibration certificate of system validation dipoles.

System Dipole	Serial No.	Cal. Date	Freq. (MHz)	Target SAR Values (W/kg)		
				1g/10g	Head	Body
D750V3	1122	2-19-2018	750	1g	8.22	8.63
				10g	5.35	5.72
D835V2	4d194	7-24-2018	835	1g	9.36	9.61
				10g	6.02	6.32
D1750V2	1125	2-16-2018	1750	1g	36.50	36.80
				10g	19.30	19.50
D1900V2	5d199	3-15-2018	1900	1g	40.40	39.60
				10g	21.10	20.80
D2450V2	960	3-20-2018	2450	1g	53.60	49.80
				10g	25.10	23.50
D2600V2	1097	1-17-2018	2600	1g	56.40	54.40
				10g	25.30	24.20
D5GHzV2	1209	2-15-2018	5250	1g	80.80	75.70
				10g	23.10	21.00
			5600	1g	83.40	79.00
				10g	23.80	21.90
			5750	1g	80.70	75.60
				10g	22.90	20.80

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.

SAR 1 Room

Date Tested	System Dipole		T.S. Liquid		Measured Results		Target (Ref. Value)	Delta ±10 %	Plot No.
	Type	Serial #			Zoom Scan to 100 mW	Normalize to 1 W			
11-19-2018	D2600V2	1097	Head	1g	5.60	56.00	56.40	-0.71	
				10g	2.42	24.20	25.30	-4.35	
11-21-2018	D2600V2	1097	Body	1g	5.19	51.90	54.40	-4.60	1, 2
				10g	2.28	22.80	24.20	-5.79	
12-5-2018	D2450V2	960	Body	1g	5.12	51.20	49.80	2.81	3, 4
				10g	2.35	23.50	23.50	0.00	
12-7-2018	D2450V2	960	Body	1g	4.87	48.70	49.80	-2.21	
				10g	2.20	22.00	23.50	-6.38	
12-8-2018	D5GHzV2	1209	Head	1g	7.62	76.20	80.80	-5.69	
				10g	2.15	21.50	23.10	-6.93	
12-8-2018	D5GHzV2	1209	Head	1g	8.78	87.80	83.40	5.28	
				10g	2.46	24.60	23.80	3.36	
12-8-2018	D5GHzV2	1209	Head	1g	7.96	79.60	80.70	-1.36	
				10g	2.25	22.50	22.90	-1.75	
12-10-2018	D2450V2	960	Head	1g	5.30	53.00	53.60	-1.12	
				10g	2.39	23.90	25.10	-4.78	
1-4-2019	D5GHzV2 (5750)	1209	Body	1g	8.05	80.50	75.60	6.48	
				10g	2.23	22.30	20.80	7.21	
1-17-2019	D2600V2	1097	Head	1g	6.10	61.00	56.40	8.16	5, 6
				10g	2.65	26.50	25.30	4.74	

SAR 2 Room

Date Tested	System Dipole		T.S. Liquid		Measured Results		Target (Ref. Value)	Delta ±10 %	Plot No.
	Type	Serial #			Zoom Scan to 100 mW	Normalize to 1 W			
12-11-2018	D835V2	4d194	Body	1g	1.01	10.10	9.61	5.10	7, 8
				10g	0.66	6.63	6.32	4.91	
12-27-2018	D750V3	1122	Body	1g	0.87	8.66	8.63	0.35	
				10g	0.58	5.77	5.72	0.87	
1-16-2019	D750V3	1122	Body	1g	0.90	9.04	8.63	4.75	9, 10
				10g	0.60	6.02	5.72	5.24	

SAR 3 Room

Date Tested	System Dipole		T.S. Liquid		Measured Results		Target (Ref. Value)	Delta ±10 %	Plot No.
	Type	Serial #			Zoom Scan to 100 mW	Normalize to 1 W			
11-16-2018	D750V3	1122	Body	1g	0.83	8.28	8.63	-4.06	11, 12
				10g	0.55	5.53	5.72	-3.32	
11-19-2018	D750V3	1122	Body	1g	0.84	8.40	8.63	-2.67	
				10g	0.56	5.61	5.72	-1.92	
11-21-2018	D750V3	1122	Head	1g	0.85	8.54	8.22	3.89	
				10g	0.57	5.65	5.35	5.61	
11-22-2018	D835V2	4d194	Body	1g	0.95	9.47	9.61	-1.46	
				10g	0.62	6.23	6.32	-1.42	
11-23-2018	D835V2	4d194	Head	1g	0.95	9.46	9.36	1.07	
				10g	0.62	6.21	6.02	3.16	
11-27-2018	D835V2	4d194	Head	1g	0.98	9.81	9.36	4.81	
				10g	0.64	6.44	6.02	6.98	
12-1-2018	D1750V2	1125	Body	1g	3.76	37.60	36.80	2.17	
				10g	1.99	19.90	19.50	2.05	
12-3-2018	D1750V2	1125	Body	1g	3.51	35.10	36.80	-4.62	13, 14
				10g	1.86	18.60	19.50	-4.62	
12-4-2018	D1900V2	5d199	Body	1g	4.28	42.80	39.60	8.08	
				10g	2.20	22.00	20.80	5.77	
12-11-2018	D1900V2	5d199	Body	1g	4.26	42.60	39.60	7.58	
				10g	2.19	21.90	20.80	5.29	
12-12-2018	D835V2	4d194	Head	1g	1.00	9.97	9.36	6.52	15, 16
				10g	0.66	6.55	6.02	8.80	
12-17-2018	D1900V2	5d199	Body	1g	4.14	41.40	39.60	4.55	
				10g	2.10	21.00	20.80	0.96	
1-17-2019	D750V3	1122	Head	1g	0.81	8.11	8.22	-1.34	
				10g	0.54	5.37	5.35	0.37	
1-17-2019	D2600V2	1097	Body	1g	5.43	54.30	54.40	-0.18	
				10g	2.40	24.00	24.20	-0.83	

SAR 4 Room

Date Tested	System Dipole		T.S. Liquid		Measured Results		Target (Ref. Value)	Delta ±10 %	Plot No.
	Type	Serial #			Zoom Scan to 100 mW	Normalize to 1 W			
11-15-2018	D1750V2	1125	Body	1g	3.74	37.40	36.80	1.63	
				10g	1.96	19.60	19.50	0.51	
11-19-2018	D1750V2	1125	Head	1g	3.59	35.90	36.50	-1.64	
				10g	1.88	18.80	19.30	-2.59	
11-19-2018	D1900V2	5d199	Head	1g	4.34	43.40	40.40	7.43	
				10g	2.19	21.90	21.10	3.79	
11-19-2018	D1900V2	5d199	Body	1g	4.21	42.10	39.60	6.31	
				10g	2.18	21.80	20.80	4.81	
11-30-2018	D1750V2	1125	Head	1g	3.63	36.30	36.50	-0.55	
				10g	1.92	19.20	19.30	-0.52	
12-4-2018	D1750V2	1125	Head	1g	3.58	35.80	36.50	-1.92	
				10g	1.89	18.90	19.30	-2.07	
12-4-2018	D1900V2	5d199	Head	1g	4.39	43.90	40.40	8.66	13, 14
				10g	2.24	22.40	21.10	6.16	
12-6-2018	D5GHzV2 (5250)	1209	Body	1g	7.80	78.00	75.70	3.04	
				10g	2.19	21.90	21.00	4.29	
12-6-2018	D5GHzV2 (5600)	1209	Body	1g	8.33	83.30	79.00	5.44	
				10g	2.30	23.00	21.90	5.02	
12-6-2018	D5GHzV2 (5750)	1209	Head	1g	8.06	80.60	75.60	6.61	
				10g	2.25	22.50	20.80	8.17	
12-9-2018	D5GHzV2 (5250)	1209	Body	1g	7.42	74.20	75.70	-1.98	
				10g	2.05	20.50	21.00	-2.38	
12-9-2018	D5GHzV2 (5600)	1209	Body	1g	8.04	80.40	79.00	1.77	
				10g	2.22	22.20	21.90	1.37	
12-9-2018	D5GHzV2 (5750)	1209	Body	1g	8.12	81.20	75.60	7.41	15, 16
				10g	2.24	22.40	20.80	7.69	
12-17-2018	D1900V2	5d199	Head	1g	4.32	43.20	40.40	6.93	
				10g	2.19	21.90	21.10	3.79	

9. Conducted Output Power Measurements

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.

GSM850 Measured Results

Full Power

Mode	Coding Scheme	Time Slots	Ch No.	Freq. (MHz)	Burst Pwr (dBm)	Frame Pwr (dBm)	Max. Frame Pwr (dBm)
GSM (Voice)	CS1	1	128	824.4	32.5	23.5	24.5
			190	836.6	32.8	23.8	
			251	848.8	32.8	23.8	
GPRS (GMSK)	CS1	1	128	824.4	32.6	23.5	24.5
			190	836.6	32.8	23.8	
			251	848.8	32.9	23.8	
		2	128	824.4	32.6	26.6	**27.0**
			190	836.6	32.6	26.6	
			251	848.8	32.7	26.7	
		3	128	824.4	30.3	26.1	26.2
			190	836.6	30.5	26.2	
			251	848.8	30.5	26.2	
		4	128	824.4	29.3	26.3	26.5
			190	836.6	29.4	26.4	
			251	848.8	29.5	26.5	
EGPRS (8PSK)	MCS5	1	128	824.4	27.7	18.7	19.0
			190	836.6	27.2	18.2	
			251	848.8	27.3	18.3	
		2	128	824.4	25.5	19.5	20.0
			190	836.6	25.0	19.0	
			251	848.8	25.2	19.1	
		3	128	824.4	23.9	19.7	20.2
			190	836.6	23.9	19.6	
			251	848.8	24.1	19.8	
		4	128	824.4	22.7	19.7	20.0
			190	836.6	22.7	19.7	
			251	848.8	22.8	19.8	

Notes:

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

- GMSK (GPRS) mode with 2 time slots for Max power, based on the Tune-up Procedure. Refer to §6.3.
- SAR is not required for EGPRS (8PSK) mode because the maximum output power and tune-up limit is ≤ 1/4dB higher than GMSK GPRS or the adjusted SAR of the highest reported SAR of GMSK GPRS is ≤ 1.2W/kg.

GSM1900 Measured Results

Full Power

Mode	Coding Scheme	Time Slots	Ch No.	Freq. (MHz)	Burst Pwr (dBm)	Frame Pwr (dBm)	Max. Frame Pwr (dBm)
GSM (Voice)	CS1	1	512	1850.2	29.6	20.5	21.3
			661	1880.0	29.5	20.4	
			810	1909.8	29.2	20.2	
GPRS (GMSK)	CS1	1	512	1850.2	29.6	20.6	21.3
			661	1880.0	29.4	20.4	
			810	1909.8	29.2	20.2	
		2	512	1850.2	27.2	21.2	21.5
			661	1880.0	27.5	21.5	
			810	1909.8	27.2	21.2	
		3	512	1850.2	25.7	21.5	**21.7**
			661	1880.0	26.0	21.7	
			810	1909.8	25.6	21.3	
		4	512	1850.2	24.0	21.0	21.5
			661	1880.0	24.4	21.4	
			810	1909.8	24.0	21.0	
EGPRS (8PSK)	MCS5	1	512	1850.2	26.0	17.0	18.0
			661	1880.0	26.0	16.9	
			810	1909.8	25.6	16.6	
		2	512	1850.2	23.9	17.9	19.0
			661	1880.0	24.3	18.2	
			810	1909.8	23.9	17.9	
		3	512	1850.2	22.6	18.4	19.0
			661	1880.0	22.7	18.5	
			810	1909.8	22.5	18.2	
		4	512	1850.2	21.2	18.2	19.1
			661	1880.0	21.6	18.5	
			810	1909.8	21.2	18.2	

Notes:

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

- GMSK (GPRS) mode with 3 time slots for Max power, based on the Tune-up Procedure. Refer to §6.3.
- SAR is not required for EGPRS (8PSK) mode because the maximum output power and tune-up limit is ≤ 1/4dB higher than GMSK GPRS or the adjusted SAR of the highest reported SAR of GMSK GPRS is ≤ 1.2W/kg.

9.2 W-CDMA

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 specification. The DUT supports power Class 3, which has a nominal maximum output power of 24 dBm (+1.7/-3.7).

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 Release 5 procedures in section 5.2 of 3GPP TS34.121. A summary of these settings are illustrated below:

	Mode	HSDPA	HSDPA	HSDPA	HSDPA
	Subtest	1	2	3	4
W-CDMA General Settings	Loopback Mode	Test Mode 1			
	Rel99 RMC	12.2kbps RMC			
	HSDPA FRC	H-Set 1			
	Power Control Algorithm	Algorithm 2			
	βc	2/15	11/15	15/15	15/15
	βd	15/15	15/15	8/15	4/15
	Bd (SF)	64			
	βc/βd	2/15	11/15	15/8	15/4
	βhs	4/15	24/15	30/15	30/15
	MPR (dB)	0	0	0.5	0.5
HSDPA Specific Settings	D_{ACK}	8			
	D_{NAK}	8			
	DCQI	8			
	Ack-Nack repetition factor	3			
	CQI Feedback (Table 5.2B.4)	4ms			
	CQI Repetition Factor (Table 5.2B.4)	2			
	Ahs=βhs/βc	30/15			

HSPA (HSDPA & HSUPA) Setup Procedures used to establish the test signals

The following 5 Sub-tests were completed according to Release 6 procedures in table C,11.1.3 of 3GPP TS 34.121-1 v13.
A summary of these settings are illustrated below:

	Mode	HSPA				
	Subtest	1	2	3	4	5
WCDMA General Settings	Loopback Mode	Test Mode 1				
	Rel99 RMC	12.2 kbps RMC				
	HSDPA FRC	H-Set 1				
	HSUPA Test	HSPA				
	Power Control Algorithm	Algorithm 2				Algorithm 1
	βc	11/15	6/15	15/15	2/15	15/15
	βd	15/15	15/15	9/15	15/15	0
	βec	209/225	12/15	30/15	2/15	5/15
	βc/βd	11/15	6/15	15/9	2/15	-
	βhs	22/15	12/15	30/15	4/15	5/15
	βed	1309/225	94/75	47/15	56/75	47/15
	CM (dB)	1	3	2	3	1
	MPR (dB)	0	2	1	2	0
HSDPA Specific Settings	DACK	8				0
	DNAK	8				0
	DCQI	8				0
	Ack-Nack repetition factor	3				
	CQI Feedback (Table 5.2B.4)	4ms				
	CQI Repetition Factor (Table 5.2B.4)	2				
	Ahs = βhs/βc	30/15				
HSUPA Specific Settings	E-DPDCCH	6	8	8	5	0
	DHARQ	0	0	0	0	0
	AG Index	20	12	15	17	12
	ETFCI (from 34.121 Table C.11.1.3)	75	67	92	71	67
	Associated Max UL Data Rate kbps	242.1	174.9	482.8	205.8	308.9
	Reference E-TFCIs	5	5	2	5	1
	Reference E-TFCI	11	11	11	11	67
	Reference E-TFCI PO	4	4	4	4	18
	Reference E-TFCI	67	67	92	67	67
	Reference E-TFCI PO	18	18	18	18	18
	Reference E-TFCI	71	71	71	71	71
	Reference E-TFCI PO	23	23	23	23	23
	Reference E-TFCI	75	75	75	75	75
	Reference E-TFCI PO	26	26	26	26	26
	Reference E-TFCI	81	81	81	81	81
	Reference E-TFCI PO	27	27	27	27	27
	Maximum Channelization Codes	2xSF2				SF4

HSPA+

HSPA+ is only support to down link. Therefore, the RF conducted power is not measured.

W-CDMA Band II Measured Results

Band	Mode		UL Ch No.	Freq. (MHz)	MPR (dB)	Max. RF output power (dBm)	MPR (dB)	Reduced. RF output power Hotspot back-off (dBm)	Reduced. RF output power Proximity sensor back-off (dBm)
						Meas. Avg Pwr		Meas. Avg Pwr	Meas. Avg Pwr
W-CDMA Band II	Rel 99	RMC, 12.2 kbps	9262	1852.4	N/A	23.0	N/A	20.5	20.5
			9400	1880.0		23.3		20.4	20.4
			9538	1907.6		23.2		20.5	20.5
	HSDPA	Subtest 1	9262	1852.4	0	23.1	0	20.5	20.5
			9400	1880.0		23.3		20.4	20.4
			9538	1907.6		23.2		20.5	20.5
		Subtest 2	9262	1852.4	0	22.5	0	20.5	20.5
			9400	1880.0		22.7		20.4	20.4
			9538	1907.6		22.6		20.5	20.5
		Subtest 3	9262	1852.4	0.5	22.1	0	20.5	20.5
			9400	1880.0		22.2		20.4	20.4
			9538	1907.6		22.1		20.5	20.5
		Subtest 4	9262	1852.4	0.5	21.6	0	20.5	20.5
			9400	1880.0		21.8		20.4	20.4
			9538	1907.6		21.7		20.5	20.5
	HSUPA	Subtest 1	9262	1852.4	0	22.1	0	19.5	19.5
			9400	1880.0		22.2		19.4	19.4
			9538	1907.6		22.1		19.5	19.5
		Subtest 2	9262	1852.4	2	21.1	0	19.5	19.5
			9400	1880.0		19.2		18.9	18.9
			9538	1907.6		19.1		19.0	19.0
		Subtest 3	9262	1852.4	1	22.0	0	19.5	19.5
			9400	1880.0		22.2		19.4	19.4
			9538	1907.6		22.1		19.5	19.5
		Subtest 4	9262	1852.4	2	20.8	0	19.4	19.5
			9400	1880.0		21.1		19.4	19.4
			9538	1907.6		21.1		19.5	19.5
		Subtest 5	9262	1852.4	0	22.8	0	20.5	20.5
			9400	1880.0		23.0		20.5	20.4
			9538	1907.6		23.0		20.5	20.5

W-CDMA Band IV Measured Results

Band	Mode		UL Ch No.	Freq. (MHz)	MPR (dB)	Max. RF output power (dBm)	MPR (dB)	Reduced. RF output power Hotspot back-off (dBm)	Reduced. RF output power Proximity sensor back-off (dBm)
						Meas. Avg Pwr		Meas. Avg Pwr	Meas. Avg Pwr
W-CDMA Band IV	Rel 99	RMC, 12.2 kbps	1312	1712.4	N/A	23.6	N/A	20.7	20.8
			1413	1732.6		23.2		20.2	20.2
			1513	1752.6		23.1		20.2	20.2
	HSDPA	Subtest 1	1312	1712.4	0	23.6	0	20.8	20.6
			1413	1732.6		23.3		20.3	20.2
			1513	1752.6		23.1		20.3	20.1
		Subtest 2	1312	1712.4	0.5	21.2	0	20.8	20.6
			1413	1732.6		22.4		20.3	20.2
			1513	1752.6		23.0		20.2	20.1
		Subtest 3	1312	1712.4	0.5	22.2	0	20.8	20.6
			1413	1732.6		21.8		20.3	20.2
			1513	1752.6		21.6		20.2	20.1
		Subtest 4	1312	1712.4	0.5	21.2	0	20.8	20.6
			1413	1732.6		21.8		20.3	20.2
			1513	1752.6		21.7		20.2	20.1
	HSUPA	Subtest 1	1312	1712.4	0	22.2	0	19.7	19.7
			1413	1732.6		21.8		19.2	19.2
			1513	1752.6		21.6		19.1	19.1
		Subtest 2	1312	1712.4	2	21.2	0	19.7	19.7
			1413	1732.6		20.7		19.2	19.2
			1513	1752.6		20.5		19.1	19.1
		Subtest 3	1312	1712.4	1	22.2	0	19.7	19.7
			1413	1732.6		21.8		19.2	19.2
			1513	1752.6		21.6		19.1	19.1
		Subtest 4	1312	1712.4	2	21.2	0	19.7	19.7
			1413	1732.6		20.7		19.2	19.2
			1513	1752.6		20.5		19.1	19.1
		Subtest 5	1312	1712.4	0	23.8	0	20.7	20.7
			1413	1732.6		23.3		20.3	20.3
			1513	1752.6		23.2		20.1	20.1

W-CDMA Band V Measured Results

Band	Mode		UL Ch No.	Freq. (MHz)	MPR (dB)	Max. RF output power (dBm)
						Meas. Avg Pwr
W-CDMA Band V	Rel 99	RMC, 12.2 kbps	4132	826.4	N/A	23.0
			4183	836.6		23.0
			4233	846.6		22.9
	HSDPA	Subtest 1	4132	826.4	0	22.9
			4183	836.6		23.0
			4233	846.6		22.9
		Subtest 2	4132	826.4	0	23.0
			4183	836.6		23.0
			4233	846.6		23.0
		Subtest 3	4132	826.4	0.5	22.0
			4183	836.6		22.1
			4233	846.6		22.0
		Subtest 4	4132	826.4	0.5	22.0
			4183	836.6		22.1
			4233	846.6		22.0
	HSUPA	Subtest 1	4132	826.4	0	22.0
			4183	836.6		22.1
			4233	846.6		22.0
		Subtest 2	4132	826.4	2	19.9
			4183	836.6		20.1
			4233	846.6		19.9
		Subtest 3	4132	826.4	1	21.0
			4183	836.6		21.0
			4233	846.6		20.9
		Subtest 4	4132	826.4	2	19.9
			4183	836.6		20.0
			4233	846.6		19.9
		Subtest 5	4132	826.4	0	23.2
			4183	836.6		23.2
			4233	846.6		23.2

9.3 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
NS_03	6.6.2.2.1	2, 4,10, 23, 25, 35, 36, 66, 70	3	>5	≤ 1
			5	>6	≤ 1
			10	>6	≤ 1
			15	>8	≤ 1
			20	>10	≤ 1
NS_04	6.6.2.2.2, 6.6.3.3.19	41	5, 10, 15, 20	Table 6.2.4-4, Table 6.2.4-4a	
NS_05	6.6.3.3.1	1	10,15,20	≥ 50 (NOTE1)	≤ 1 (NOTE1)
			15, 20	Table 6.2.4-18 (NOTE2)	
		65 (NOTE 3)	10,15,20	≥ 50	≤ 1 (NOTE 1)
			15,20	Table 6.2.4-18 (NOTE 2)	
NS_06	6.6.2.2.3	12, 13, 14, 17	1.4, 3, 5, 10	Table 5.6-1	N/A
NS_07	6.6.2.2.3 6.6.3.3.2	13	10	Table 6.2.4-2	
NS_08	6.6.3.3.3	19	10, 15	> 44	≤ 3
NS_09	6.6.3.3.4	21	10, 15	> 40	≤ 1
				> 55	≤ 2
NS_10		20	15, 20	Table 6.2.4-3	
NS_11	6.6.2.2.1 6.6.3.3.13	23	1.4, 3, 5, 10, 15, 20	Table 6.2.4-5	
NS_12	6.6.3.3.5	26	1.4, 3, 5, 10, 15	Table 6.2.4-6	
NS_13	6.6.3.3.6	26	5	Table 6.2.4-7	
NS_14	6.6.3.3.7	26	10, 15	Table 6.2.4-8	
NS_15	6.6.3.3.8	26	1.4, 3, 5, 10, 15	Table 6.2.4-9 Table 6.2.4-10	
NS_16	6.6.3.3.9	27	3, 5, 10	Table 6.2.4-11, Table 6.2.4-12, Table 6.2.4-13	
NS_17	6.6.3.3.10	28	5, 10	Table 5.6-1	N/A
NS_18	6.6.3.3.11	28	5	≥ 2	≤ 1
			10, 15, 20	≥ 1	≤ 4
NS_19	6.6.3.3.12	44	10, 15, 20	Table 6.2.4-14	
NS_20	6.2.2 6.6.2.2.1 6.6.3.3.14	23	5, 10, 15, 20	Table 6.2.4-15	
NS_21	6.6.2.2.1 6.6.3.3.15	30	5, 10	Table 6.2.4-16	
NS_22	6.6.3.3.16	42, 43	5, 10, 15, 20	Table 6.2.4-17	
NS_23	6.6.3.3.17	42, 43	5, 10, 15, 20	N/A	
NS_24	6.6.3.3.20	65 (NOTE 4)	5, 10, 15, 20	Table 6.2.4-19	
NS_25	6.6.3.3.21	65 (NOTE 4)	5, 10, 15, 20	Table 6.2.4-20	
NS_26	6.6.3.3.22	68	10, 15	Table 6.2.4-21	
NS_27	6.6.2.2.5, 6.6.3.3.23	48	5, 10, 15, 20	Table 6.2.4-22	
NS_28	6.2.2A, 6.6.3.3.24	46 (NOTE 5)	20	Table 6.2.4-23	
NS_29	6.2.2A, 6.6.2.3.1a, 6.6.3.3.25	46 (NOTE 5)	20	Table 6.2.4-24	
NS_30	6.2.2A, 6.6.3.3.26	46 (NOTE 5)	20	Table 6.2.4-25	
NS_31	6.2.2A, 6.6.3.3.27	46 (NOTE 5)	20	Table 6.2.4-26	
NS_32	-	-	-	-	-

NOTE 1: Applicable when the lower edge of the assigned E-UTRA UL channel bandwidth frequency is larger than or equal to the upper edge of PHS band (1915.7 MHz) + 4 MHz + the channel BW assigned, where channel BW is as defined in subclause 5.6. A-MPR for

Max power Results

LTE Band 2 Measured Results

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Meas. Avg Pwr (dBm)		
						1860 MHz	1880 MHz	1900 MHz
LTE Band 2	20	QPSK	1	0	0	22.6	22.9	22.9
			1	49	0	22.5	22.8	22.4
			1	99	0	22.5	22.7	22.6
			50	0	1	21.6	21.8	21.8
			50	24	1	21.6	21.8	21.7
			50	50	1	21.5	21.8	21.7
			100	0	1	21.6	21.8	21.7
		16QAM	1	0	1	22.1	22.4	22.1
			1	49	1	21.7	22.2	21.9
			1	99	1	21.9	22.2	21.9
			50	0	2	20.7	20.8	20.8
			50	24	2	20.6	20.8	20.7
			50	50	2	20.5	20.7	20.7
			100	0	2	20.6	20.8	20.7
		64QAM	1	0	2	20.9	21.2	21.1
			1	49	2	20.7	21.1	20.7
			1	99	2	20.7	21.1	20.7
			50	0	3	19.6	19.8	19.8
			50	24	3	19.6	19.8	19.7
			50	50	3	19.5	19.8	19.6
			100	0	3	19.5	19.7	19.7
Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Meas. Avg Pwr (dBm)		
						1857.5 MHz	1880 MHz	1902.5 MHz
LTE Band 2	15	QPSK	1	0	0	22.6	22.9	22.9
			1	37	0	22.6	22.6	22.9
			1	74	0	22.4	22.7	22.6
			36	0	1	21.6	21.8	21.8
			36	20	1	21.5	21.8	21.8
			36	39	1	21.5	21.8	21.7
			75	0	1	21.6	21.9	21.8
		16QAM	1	0	1	21.9	22.1	22.2
			1	37	1	22.0	22.0	22.2
			1	74	1	21.7	22.0	21.9
			36	0	2	20.6	20.8	20.8
			36	20	2	20.5	20.8	20.8
			36	39	2	20.5	20.7	20.7
			75	0	2	20.6	20.8	20.8
		64QAM	1	0	2	20.8	21.0	21.1
			1	37	2	20.7	21.0	21.2
			1	74	2	20.6	20.9	21.0
			36	0	3	19.6	19.8	19.7
			36	20	3	19.5	19.8	19.7
			36	39	3	19.5	19.7	19.6
			75	0	3	19.5	19.8	19.7

LTE Band 2 Measured Results (continued)

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Meas. Avg Pwr (dBm)		
						1855 MHz	1880 MHz	1905 MHz
LTE Band 2	10	QPSK	1	0	0	22.6	22.8	22.8
			1	25	0	22.4	22.7	22.6
			1	49	0	22.5	22.7	22.7
			25	0	1	21.5	21.8	21.7
			25	12	1	21.5	21.8	21.7
			25	25	1	21.5	21.8	21.7
			50	0	1	21.5	21.8	21.7
		16QAM	1	0	1	21.9	22.3	21.9
			1	25	1	21.8	21.8	21.6
			1	49	1	21.8	22.1	21.8
			25	0	2	20.6	20.9	20.8
			25	12	2	20.6	20.8	20.8
			25	25	2	20.6	20.8	20.7
			50	0	2	20.6	20.8	20.8
		64QAM	1	0	2	20.6	21.0	20.9
			1	25	2	20.5	20.8	20.7
			1	49	2	20.6	21.0	20.7
			25	0	3	19.6	19.9	19.9
			25	12	3	19.6	19.8	19.8
			25	25	3	19.5	19.8	19.8
			50	0	3	19.5	19.8	19.8

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Meas. Avg Pwr (dBm)		
						1852.5 MHz	1880 MHz	1907.5 MHz
LTE Band 2	5	QPSK	1	0	0	22.5	22.8	22.7
			1	12	0	22.4	22.9	22.7
			1	24	0	22.5	22.8	22.7
			12	0	1	21.5	21.8	21.7
			12	7	1	21.5	21.8	21.7
			12	13	1	21.5	21.8	21.8
			25	0	1	21.5	21.7	21.7
		16QAM	1	0	1	21.9	22.1	22.0
			1	12	1	21.9	22.1	22.1
			1	24	1	21.7	22.2	22.0
			12	0	2	20.6	20.9	20.8
			12	7	2	20.5	20.8	20.7
			12	13	2	20.5	20.8	20.7
			25	0	2	20.5	20.8	20.7
		64QAM	1	0	2	20.7	20.9	21.1
			1	12	2	20.8	20.7	20.8
			1	24	2	20.8	21.0	20.9
			12	0	3	19.5	19.9	19.8
			12	7	3	19.5	19.8	19.7
			12	13	3	19.5	19.9	19.7
			25	0	3	19.5	19.8	19.7

LTE Band 2 Measured Results (continued)

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Meas. Avg Pwr (dBm)		
						1851.5 MHz	1880 MHz	1908.5 MHz
LTE Band 2	3	QPSK	1	0	0	22.5	22.8	22.7
			1	8	0	22.7	22.6	22.9
			1	14	0	22.5	22.7	22.8
			8	0	1	21.4	21.8	21.7
			8	4	1	21.4	21.7	21.6
			8	7	1	21.4	21.7	21.7
			15	0	1	21.4	21.7	21.6
		16QAM	1	0	1	21.9	22.0	21.8
			1	8	1	22.1	22.0	21.9
			1	14	1	21.9	21.9	21.8
			8	0	2	20.5	20.9	20.7
			8	4	2	20.5	20.9	20.7
			8	7	2	20.4	20.9	20.7
			15	0	2	20.5	20.8	20.7
		64QAM	1	0	2	20.6	20.9	21.0
			1	8	2	20.8	20.9	21.1
			1	14	2	20.8	20.9	20.9
			8	0	3	19.4	19.8	19.7
			8	4	3	19.5	19.8	19.7
			8	7	3	19.5	19.7	19.7
			15	0	3	19.5	19.7	19.6

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Meas. Avg Pwr (dBm)		
						1850.7 MHz	1880 MHz	1909.3 MHz
LTE Band 2	1.4	QPSK	1	0	0	22.6	22.9	22.7
			1	3	0	22.4	22.7	22.5
			1	5	0	22.5	22.8	22.6
			3	0	0	22.4	22.7	22.5
			3	1	0	22.5	22.7	22.5
			3	3	0	22.4	22.7	22.5
			6	0	1	21.5	21.7	21.5
		16QAM	1	0	1	21.7	22.2	21.9
			1	3	1	21.4	22.1	21.8
			1	5	1	21.9	22.0	21.8
			3	0	1	21.5	21.8	21.6
			3	1	1	21.4	21.9	21.5
			3	3	1	21.5	21.9	21.6
			6	0	2	20.6	20.7	20.6
		64QAM	1	0	2	20.5	20.9	21.0
			1	3	2	20.4	20.7	20.9
			1	5	2	20.6	20.9	20.8
			3	0	2	20.6	20.8	20.7
			3	1	2	20.6	20.8	20.7
			3	3	2	20.6	20.9	20.7
			6	0	3	19.5	19.8	19.6

LTE Band 4 Measured Results

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Meas. Avg Pwr (dBm)		
						1720 MHz	1732.5 MHz	1745 MHz
LTE Band 4	20	QPSK	1	0	0		22.6	
			1	49	0		22.3	
			1	99	0		22.6	
			50	0	1		21.6	
			50	24	1		21.6	
			50	50	1		21.5	
			100	0	1		21.6	
		16QAM	1	0	1		22.1	
			1	49	1		21.8	
			1	99	1		22.0	
			50	0	2		20.6	
			50	24	2		20.6	
			50	50	2		20.6	
			100	0	2		20.6	
		64QAM	1	0	2		20.9	
			1	49	2		20.8	
			1	99	2		20.9	
			50	0	3		19.6	
			50	24	3		19.5	
			50	50	3		19.6	
			100	0	3		19.6	

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Meas. Avg Pwr (dBm)		
						1717.5 MHz	1732.5 MHz	1747.5 MHz
LTE Band 4	15	QPSK	1	0	0	22.4	22.6	22.7
			1	37	0	22.6	22.5	22.8
			1	74	0	22.4	22.5	22.5
			36	0	1	21.4	21.6	21.7
			36	20	1	21.4	21.6	21.6
			36	39	1	21.4	21.6	21.6
			75	0	1	21.5	21.6	21.7
		16QAM	1	0	1	21.8	21.8	22.0
			1	37	1	22.0	21.8	22.0
			1	74	1	21.8	21.7	21.8
			36	0	2	20.5	20.6	20.7
			36	20	2	20.4	20.6	20.6
			36	39	2	20.4	20.6	20.6
			75	0	2	20.4	20.7	20.7
		64QAM	1	0	2	20.7	20.9	20.9
			1	37	2	20.7	20.9	20.9
			1	74	2	20.5	20.8	20.9
			36	0	3	19.4	19.6	19.7
			36	20	3	19.4	19.6	19.7
			36	39	3	19.3	19.6	19.7
			75	0	3	19.4	19.6	19.7

LTE Band 4 Measured Results (continued)

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Meas. Avg Pwr (dBm)		
						1715 MHz	1732.5 MHz	1750 MHz
LTE Band 4	10	QPSK	1	0	0	22.4	22.6	22.7
			1	25	0	22.3	22.5	22.6
			1	49	0	22.3	22.6	22.6
			25	0	1	21.4	21.6	21.7
			25	12	1	21.4	21.6	21.6
			25	25	1	21.4	21.6	21.6
			50	0	1	21.4	21.6	21.6
		16QAM	1	0	1	21.9	21.9	21.8
			1	25	1	21.7	21.6	21.7
			1	49	1	21.8	21.8	21.8
			25	0	2	20.4	20.6	20.7
			25	12	2	20.4	20.6	20.6
			25	25	2	20.4	20.6	20.6
			50	0	2	20.4	20.6	20.7
		64QAM	1	0	2	20.5	20.8	20.7
			1	25	2	20.5	20.6	20.6
			1	49	2	20.6	20.8	20.6
			25	0	3	19.4	19.6	19.7
			25	12	3	19.4	19.6	19.7
			25	25	3	19.4	19.6	19.7
			50	0	3	19.4	19.6	19.7

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Meas. Avg Pwr (dBm)		
						1712.5 MHz	1732.5 MHz	1752.5 MHz
LTE Band 4	5	QPSK	1	0	0	22.3	22.6	22.6
			1	12	0	22.3	22.6	22.7
			1	24	0	22.3	22.6	22.7
			12	0	1	21.3	21.6	21.6
			12	7	1	21.3	21.5	21.6
			12	13	1	21.3	21.5	21.5
			25	0	1	21.3	21.5	21.6
		16QAM	1	0	1	21.7	21.9	21.8
			1	12	1	21.6	21.9	22.0
			1	24	1	21.6	21.9	21.9
			12	0	2	20.3	20.6	20.7
			12	7	2	20.3	20.5	20.7
			12	13	2	20.3	20.6	20.6
			25	0	2	20.3	20.6	20.5
		64QAM	1	0	2	20.5	20.9	20.9
			1	12	2	20.6	20.7	21.0
			1	24	2	20.6	20.9	20.9
			12	0	3	19.2	19.6	19.7
			12	7	3	19.3	19.5	19.7
			12	13	3	19.3	19.6	19.7
			25	0	3	19.3	19.6	19.6

LTE Band 4 Measured Results (continued)

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Meas. Avg Pwr (dBm)		
						1711.5 MHz	1732.5 MHz	1753.5 MHz
LTE Band 4	3	QPSK	1	0	0	22.2	22.6	22.6
			1	8	0	22.6	22.5	22.8
			1	14	0	22.3	22.5	22.7
			8	0	1	21.3	21.5	21.6
			8	4	1	21.3	21.6	21.6
			8	7	1	21.2	21.5	21.6
			15	0	1	21.3	21.5	21.5
		16QAM	1	0	1	21.7	22.0	21.8
			1	8	1	22.1	21.8	21.9
			1	14	1	21.9	21.7	21.9
			8	0	2	20.2	20.6	20.6
			8	4	2	20.3	20.6	20.6
			8	7	2	20.3	20.6	20.6
			15	0	2	20.3	20.6	20.6
		64QAM	1	0	2	20.1	20.8	20.7
			1	8	2	20.7	20.7	20.7
			1	14	2	20.7	20.9	20.6
			8	0	3	19.2	19.7	19.6
			8	4	3	19.3	19.6	19.6
			8	7	3	19.2	19.7	19.6
			15	0	3	19.2	19.6	19.6

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Meas. Avg Pwr (dBm)		
						1710.7 MHz	1732.5 MHz	1754.3 MHz
LTE Band 4	1.4	QPSK	1	0	0	22.4	22.7	22.6
			1	3	0	22.3	22.6	22.6
			1	5	0	22.3	22.6	22.6
			3	0	0	22.2	22.5	22.6
			3	1	0	22.2	22.4	22.6
			3	3	0	22.2	22.5	22.6
			6	0	1	21.3	21.5	21.6
		16QAM	1	0	1	21.9	22.0	21.8
			1	3	1	21.7	21.7	21.4
			1	5	1	21.7	21.8	21.7
			3	0	1	21.4	21.6	21.7
			3	1	1	21.5	21.5	21.7
			3	3	1	21.5	21.7	21.7
			6	0	2	20.3	20.6	20.7
		64QAM	1	0	2	20.3	20.7	20.9
			1	3	2	20.3	20.6	20.8
			1	5	2	20.5	20.5	20.8
			3	0	2	20.3	20.5	20.6
			3	1	2	20.4	20.5	20.7
			3	3	2	20.3	20.5	20.7
			6	0	3	19.4	19.4	19.5

Note(s):

20 MHz Bandwidths does not support at least three non-overlapping channels in certain channel bandwidths. When a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing per KDB 941225 D05 SAR for LTE Devices

LTE Band 5 Measured Results

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Meas. Avg Pwr (dBm)		
						829 MHz	836.5 MHz	844 MHz
LTE Band 5	10	QPSK	1	0	0		23.8	
			1	25	0		23.6	
			1	49	0		23.6	
			25	0	1		21.8	
			25	12	1		21.7	
			25	25	1		21.7	
			50	0	1		21.8	
		16QAM	1	0	1		22.2	
			1	25	1		21.8	
			1	49	1		22.1	
			25	0	2		20.8	
			25	12	2		20.8	
			25	25	2		20.8	
			50	0	2		20.8	
		64QAM	1	0	2		21.1	
			1	25	2		20.9	
			1	49	2		21.0	
			25	0	3		19.8	
			25	12	3		19.8	
			25	25	3		19.8	
			50	0	3		19.8	

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Meas. Avg Pwr (dBm)		
						826.5 MHz	836.5 MHz	846.5 MHz
LTE Band 5	5	QPSK	1	0	0	23.8	23.8	23.6
			1	12	0	24.0	23.8	23.4
			1	24	0	23.8	23.8	23.5
			12	0	1	21.8	21.8	21.6
			12	7	1	21.8	21.7	21.6
			12	13	1	21.8	21.7	21.6
			25	0	1	21.8	21.8	21.6
		16QAM	1	0	1	22.1	22.0	22.0
			1	12	1	21.9	22.0	22.0
			1	24	1	22.1	22.1	21.9
			12	0	2	20.9	20.9	20.6
			12	7	2	20.9	20.8	20.5
			12	13	2	20.9	20.9	20.5
			25	0	2	20.8	20.7	20.6
		64QAM	1	0	2	21.2	20.8	20.8
			1	12	2	20.9	21.0	20.8
			1	24	2	21.1	20.8	20.8
			12	0	3	19.8	19.7	19.5
			12	7	3	19.8	19.7	19.5
			12	13	3	19.8	19.7	19.6
			25	0	3	19.8	19.7	19.6

LTE Band 5 Measured Results (continued)

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Meas. Avg Pwr (dBm)		
						825.5 MHz	836.5 MHz	847.5 MHz
LTE Band 5	3	QPSK	1	0	0	23.8	23.8	23.6
			1	8	0	24.0	23.7	23.8
			1	14	0	23.8	23.7	23.6
			8	0	1	21.8	21.7	21.5
			8	4	1	21.8	21.8	21.5
			8	7	1	21.8	21.7	21.5
			15	0	1	21.8	21.7	21.6
		16QAM	1	0	1	22.3	22.1	21.7
			1	8	1	22.5	22.2	21.9
			1	14	1	22.3	22.0	21.7
			8	0	2	20.8	20.8	20.6
			8	4	2	20.9	20.7	20.6
			8	7	2	20.8	20.8	20.6
			15	0	2	20.8	20.8	20.6
		64QAM	1	0	2	20.7	20.9	20.7
			1	8	2	21.0	21.0	20.6
			1	14	2	20.9	20.7	20.6
			8	0	3	19.8	19.8	19.6
			8	4	3	19.8	19.7	19.5
			8	7	3	19.8	19.8	19.5
			15	0	3	19.9	19.7	19.5

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Meas. Avg Pwr (dBm)		
						824.7 MHz	836.5 MHz	848.3 MHz
LTE Band 5	1.4	QPSK	1	0	0	23.8	23.8	23.6
			1	3	0	23.7	23.7	23.6
			1	5	0	23.8	23.8	23.6
			3	0	0	23.7	23.7	23.5
			3	1	0	23.7	23.5	23.6
			3	3	0	23.7	23.7	23.5
			6	0	1	21.7	21.7	21.5
		16QAM	1	0	1	22.1	21.9	21.7
			1	3	1	22.3	21.8	21.6
			1	5	1	22.2	21.8	21.5
			3	0	1	21.8	21.7	21.6
			3	1	1	21.9	21.6	21.6
			3	3	1	21.9	21.8	21.6
			6	0	2	20.7	20.8	20.7
		64QAM	1	0	2	20.7	20.9	20.7
			1	3	2	20.9	21.1	20.8
			1	5	2	21.0	20.9	20.7
			3	0	2	20.7	20.8	20.7
			3	1	2	20.7	20.8	20.7
			3	3	2	20.8	20.8	20.7
			6	0	3	19.7	19.8	19.6

Note(s):

10 MHz Bandwidths does not support at least three non-overlapping channels in certain channel bandwidths. When a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing per KDB 941225 D05 SAR for LTE Devices

LTE Band 12 Measured Results

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Meas. Avg Pwr (dBm)		
						704 MHz	707.5 MHz	711 MHz
LTE Band 12	10	QPSK	1	0	0		22.6	
			1	25	0		22.5	
			1	49	0		22.5	
			25	0	1		21.6	
			25	12	1		21.5	
			25	25	1		21.5	
			50	0	1		21.6	
		16QAM	1	0	1		21.7	
			1	25	1		21.4	
			1	49	1		21.6	
			25	0	2		20.6	
			25	12	2		20.6	
			25	25	2		20.5	
			50	0	2		20.6	
		64QAM	1	0	2		20.8	
			1	25	2		20.5	
			1	49	2		20.6	
			25	0	3		19.6	
			25	12	3		19.6	
			25	25	3		19.6	
			50	0	3		19.6	

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Meas. Avg Pwr (dBm)		
						701.5 MHz	707.5 MHz	713.5 MHz
LTE Band 12	5	QPSK	1	0	0	22.6	22.5	22.6
			1	12	0	22.5	22.4	22.5
			1	24	0	22.6	22.6	22.5
			12	0	1	21.6	21.5	21.6
			12	7	1	21.6	21.5	21.6
			12	13	1	21.6	21.5	21.6
			25	0	1	21.6	21.5	21.6
		16QAM	1	0	1	22.1	22.0	22.0
			1	12	1	22.1	22.1	22.1
			1	24	1	22.0	21.9	21.9
			12	0	2	20.7	20.5	20.5
			12	7	2	20.6	20.6	20.6
			12	13	2	20.6	20.6	20.6
			25	0	2	20.6	20.6	20.6
		64QAM	1	0	2	20.8	21.1	20.8
			1	12	2	20.8	20.9	20.6
			1	24	2	20.9	20.9	20.9
			12	0	3	19.7	19.6	19.6
			12	7	3	19.6	19.6	19.6
			12	13	3	19.7	19.6	19.6
			25	0	3	19.6	19.6	19.6

LTE Band 12 Measured Results (continued)

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Meas. Avg Pwr (dBm)		
						700.5 MHz	707.5 MHz	714.5 MHz
LTE Band 12	3	QPSK	1	0	0	21.6	22.6	22.6
			1	8	0	22.9	22.9	22.8
			1	14	0	22.6	22.7	22.6
			8	0	1	21.6	21.5	21.6
			8	4	1	21.6	21.5	21.5
			8	7	1	21.6	21.5	21.5
			15	0	1	21.6	21.5	21.6
		16QAM	1	0	1	22.1	21.9	22.1
			1	8	1	22.3	22.3	22.3
			1	14	1	22.0	21.9	22.0
			8	0	2	20.7	20.7	20.6
			8	4	2	20.7	20.7	20.7
			8	7	2	20.7	20.7	20.7
			15	0	2	20.7	20.6	20.6
		64QAM	1	0	2	20.5	22.0	20.7
			1	8	2	20.9	20.8	20.7
			1	14	2	20.8	20.7	20.4
			8	0	3	19.6	19.6	19.6
			8	4	3	19.6	19.6	19.6
			8	7	3	19.6	19.6	19.6
			15	0	3	19.7	19.6	19.6

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Meas. Avg Pwr (dBm)		
						699.7 MHz	707.5 MHz	715.3 MHz
LTE Band 12	1.4	QPSK	1	0	0	22.7	22.6	22.7
			1	3	0	22.6	22.5	22.5
			1	5	0	22.6	22.6	22.6
			3	0	0	22.5	22.5	22.5
			3	1	0	22.6	22.5	22.5
			3	3	0	22.6	22.5	22.6
			6	0	1	21.6	21.5	21.5
		16QAM	1	0	1	22.0	21.7	22.1
			1	3	1	21.7	21.6	21.9
			1	5	1	21.8	21.8	22.1
			3	0	1	21.6	21.6	21.6
			3	1	1	21.5	21.6	21.8
			3	3	1	21.6	21.6	21.8
			6	0	2	20.7	20.6	20.5
		64QAM	1	0	2	20.6	20.6	20.6
			1	3	2	20.6	20.6	20.5
			1	5	2	20.7	20.8	20.7
			3	0	2	20.5	20.6	20.7
			3	1	2	20.6	20.7	20.7
			3	3	2	20.6	20.7	20.7
			6	0	3	19.6	19.6	19.6

Note(s):

10 MHz Bandwidths does not support at least three non-overlapping channels in certain channel bandwidths. When a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing per KDB 941225 D05 SAR for LTE Devices

LTE Band 13 Measured Results

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Meas. Avg Pwr (dBm)		
							782 MHz	
LTE Band 13	10	QPSK	1	0	0		22.9	
			1	25	0		22.9	
			1	49	0		22.9	
			25	0	1		21.9	
			25	12	1		21.9	
			25	25	1		21.9	
			50	0	1		21.9	
		16QAM	1	0	1		22.2	
			1	25	1		22.0	
			1	49	1		22.1	
			25	0	2		21.0	
			25	12	2		20.9	
			25	25	2		20.9	
			50	0	2		20.9	
		64QAM	1	0	2		21.3	
			1	25	2		21.1	
			1	49	2		21.2	
			25	0	3		19.9	
			25	12	3		19.9	
			25	25	3		19.9	
			50	0	3		19.9	

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Meas. Avg Pwr (dBm)		
							782 MHz	
LTE Band 13	5	QPSK	1	0	0		22.9	
			1	12	0		22.8	
			1	24	0		22.9	
			12	0	1		21.9	
			12	7	1		21.8	
			12	13	1		21.8	
			25	0	1		21.8	
		16QAM	1	0	1		22.3	
			1	12	1		22.3	
			1	24	1		22.2	
			12	0	2		20.9	
			12	7	2		20.8	
			12	13	2		20.9	
			25	0	2		20.8	
		64QAM	1	0	2		21.4	
			1	12	2		21.1	
			1	24	2		21.2	
			12	0	3		19.9	
			12	7	3		19.9	
			12	13	3		19.9	
			25	0	3		19.9	

Note(s):

10/5 MHz Bandwidths does not support at least three non-overlapping channels in certain channel bandwidths. When a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing per KDB 941225 D05 SAR for LTE Devices

LTE Band 17 Measured Results

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Meas. Avg Pwr (dBm)		
						709 MHz	710 MHz	711 MHz
LTE Band 17	10	QPSK	1	0	0		22.5	
			1	25	0		22.4	
			1	49	0		22.4	
			25	0	1		21.5	
			25	12	1		21.4	
			25	25	1		21.4	
			50	0	1		21.4	
		16QAM	1	0	1		21.6	
			1	25	1		21.3	
			1	49	1		21.5	
			25	0	2		20.5	
			25	12	2		20.5	
			25	25	2		20.4	
			50	0	2		20.5	
		64QAM	1	0	2		20.8	
			1	25	2		20.5	
			1	49	2		20.6	
			25	0	3		19.6	
			25	12	3		19.5	
			25	25	3		19.5	
			50	0	3		19.5	

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Meas. Avg Pwr (dBm)		
						706.5 MHz	710 MHz	713.5 MHz
LTE Band 17	5	QPSK	1	0	0		22.5	
			1	12	0		22.4	
			1	24	0		22.5	
			12	0	1		21.5	
			12	7	1		21.4	
			12	13	1		21.5	
			25	0	1		21.4	
		16QAM	1	0	1		21.9	
			1	12	1		21.9	
			1	24	1		21.8	
			12	0	2		20.5	
			12	7	2		20.5	
			12	13	2		20.4	
			25	0	2		20.5	
		64QAM	1	0	2		21.0	
			1	12	2		20.7	
			1	24	2		20.8	
			12	0	3		19.5	
			12	7	3		19.5	
			12	13	3		19.5	
			25	0	3		19.5	

Note(s):

10/5 MHz Bandwidths does not support at least three non-overlapping channels in certain channel bandwidths. When a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing per KDB 941225 D05 SAR for LTE Devices

LTE Band 25 Measured Results

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Meas. Avg Pwr (dBm)		
						1860 MHz	1882.5 MHz	1905 MHz
LTE Band 25	20	QPSK	1	0	0	22.7	22.9	23.0
			1	49	0	22.4	22.6	22.6
			1	99	0	22.5	22.8	22.7
			50	0	1	21.7	21.9	21.9
			50	24	1	21.6	21.9	21.8
			50	50	1	21.6	21.8	21.8
			100	0	1	21.6	21.8	21.8
		16QAM	1	0	1	22.1	22.2	22.4
			1	49	1	21.8	22.0	22.1
			1	99	1	21.9	22.1	22.2
			50	0	2	20.7	20.9	20.9
			50	24	2	20.6	20.8	20.8
			50	50	2	20.6	20.8	20.8
			100	0	2	20.6	20.8	20.8
		64QAM	1	0	2	21.0	21.2	21.4
			1	49	2	20.6	21.0	21.0
			1	99	2	20.8	21.1	21.1
			50	0	3	19.7	19.9	19.9
			50	24	3	19.6	19.8	19.8
			50	50	3	19.6	19.8	19.7
			100	0	3	19.6	19.8	19.8

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Meas. Avg Pwr (dBm)		
						1857.5 MHz	1882.5 MHz	1907.5 MHz
LTE Band 25	15	QPSK	1	0	0	22.7	22.9	22.9
			1	37	0	22.8	23.0	23.0
			1	74	0	22.6	22.7	22.7
			36	0	1	21.7	21.9	21.9
			36	20	1	21.6	21.8	21.8
			36	39	1	21.6	21.8	21.8
			75	0	1	21.7	21.9	21.9
		16QAM	1	0	1	22.0	22.1	22.1
			1	37	1	21.9	22.1	22.1
			1	74	1	21.8	21.9	22.0
			36	0	2	20.7	20.8	20.9
			36	20	2	20.6	20.8	20.8
			36	39	2	20.6	20.8	20.8
			75	0	2	20.7	20.9	20.9
		64QAM	1	0	2	20.9	21.1	21.3
			1	37	2	20.7	21.1	21.1
			1	74	2	20.8	21.0	21.1
			36	0	3	19.6	19.8	19.8
			36	20	3	19.5	19.7	19.7
			36	39	3	19.5	19.7	19.7
			75	0	3	19.6	19.8	19.8

LTE Band 25 Measured Results (continued)

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Meas. Avg Pwr (dBm)		
						1855 MHz	1882.5 MHz	1910 MHz
LTE Band 25	10	QPSK	1	0	0	22.6	22.9	22.8
			1	25	0	22.5	22.8	22.7
			1	49	0	22.6	22.8	22.8
			25	0	1	21.6	21.8	21.8
			25	12	1	21.6	21.9	21.8
			25	25	1	21.6	21.8	21.8
			50	0	1	21.6	21.8	21.8
		16QAM	1	0	1	21.9	22.1	22.1
			1	25	1	21.6	21.9	21.9
			1	49	1	21.7	22.1	22.0
			25	0	2	20.6	20.9	20.9
			25	12	2	20.6	20.9	20.9
			25	25	2	20.6	20.9	20.9
			50	0	2	20.6	20.9	20.8
		64QAM	1	0	2	20.8	21.1	21.1
			1	25	2	20.6	20.9	20.9
			1	49	2	20.8	20.9	21.1
			25	0	3	19.7	19.9	19.9
			25	12	3	19.6	19.9	19.9
			25	25	3	19.6	19.9	19.9
			50	0	3	19.6	19.8	19.9

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Meas. Avg Pwr (dBm)		
						1852.5 MHz	1882.5 MHz	1912.5 MHz
LTE Band 25	5	QPSK	1	0	0	22.5	22.8	22.7
			1	12	0	22.5	22.7	22.7
			1	24	0	22.5	22.8	22.7
			12	0	1	21.5	21.8	21.7
			12	7	1	21.5	21.8	21.7
			12	13	1	21.5	21.8	21.7
			25	0	1	21.5	21.8	21.7
		16QAM	1	0	1	22.0	22.3	22.1
			1	12	1	22.1	22.3	22.1
			1	24	1	21.9	22.2	22.1
			12	0	2	20.5	20.9	20.7
			12	7	2	20.5	20.7	20.7
			12	13	2	20.5	20.7	20.6
			25	0	2	20.5	20.8	20.7
		64QAM	1	0	2	21.0	21.1	21.0
			1	12	2	20.7	21.0	20.7
			1	24	2	20.9	21.1	21.1
			12	0	3	19.6	19.8	19.7
			12	7	3	19.6	19.8	19.7
			12	13	3	19.6	19.8	19.7
			25	0	3	19.6	19.8	19.7

LTE Band 25 Measured Results (continued)

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Meas. Avg Pwr (dBm)		
						1851.5 MHz	1882.5 MHz	1913.5 MHz
LTE Band 25	3	QPSK	1	0	0	22.6	21.8	22.7
			1	8	0	22.8	23.0	22.7
			1	14	0	22.6	22.8	22.8
			8	0	1	21.5	21.8	21.7
			8	4	1	21.5	21.7	21.7
			8	7	1	21.5	21.7	21.7
			15	0	1	21.5	21.8	21.7
		16QAM	1	0	1	21.8	21.8	22.0
			1	8	1	22.0	21.9	22.3
			1	14	1	22.0	21.9	22.1
			8	0	2	20.5	20.8	20.7
			8	4	2	20.5	20.8	20.8
			8	7	2	20.5	20.8	20.7
			15	0	2	20.5	20.8	20.7
		64QAM	1	0	2	20.8	21.1	20.7
			1	8	2	20.4	21.3	20.8
			1	14	2	20.4	21.2	21.1
			8	0	3	19.5	19.8	19.6
			8	4	3	19.5	19.8	19.6
			8	7	3	19.5	19.8	19.6
			15	0	3	19.5	19.8	19.7

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Meas. Avg Pwr (dBm)		
						1850.7 MHz	1882.5 MHz	1914.3 MHz
LTE Band 25	1.4	QPSK	1	0	0	22.6	22.9	22.7
			1	3	0	22.5	22.8	22.7
			1	5	0	22.5	22.8	22.7
			3	0	0	22.4	22.7	22.6
			3	1	0	22.4	22.7	22.5
			3	3	0	22.5	22.7	22.6
			6	0	1	21.5	21.8	21.7
		16QAM	1	0	1	21.8	22.2	22.0
			1	3	1	21.4	21.9	22.0
			1	5	1	21.7	22.2	21.8
			3	0	1	21.5	21.9	21.7
			3	1	1	21.5	21.9	21.7
			3	3	1	21.5	22.0	21.8
			6	0	2	20.6	20.8	20.8
		64QAM	1	0	2	20.6	21.0	21.8
			1	3	2	20.5	21.1	21.2
			1	5	2	20.5	21.2	21.1
			3	0	2	20.5	20.9	20.6
			3	1	2	20.6	20.9	20.6
			3	3	2	20.6	20.9	20.7
			6	0	3	19.6	19.8	19.6

LTE Band 26 Measured Results

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Meas. Avg Pwr (dBm)		
						821.5 MHz	831.5 MHz	841.5 MHz
LTE Band 26	15	QPSK	1	0	0		22.9	
			1	37	0		22.7	
			1	74	0		22.7	
			36	0	1		21.9	
			36	20	1		21.8	
			36	39	1		21.8	
			75	0	1		21.9	
		16QAM	1	0	1		22.1	
			1	37	1		22.1	
			1	74	1		21.9	
			36	0	2		20.9	
			36	20	2		20.8	
			36	39	2		20.8	
			75	0	2		20.9	
		64QAM	1	0	2		21.2	
			1	37	2		21.2	
			1	74	2		21.0	
			36	0	3		19.9	
			36	20	3		19.8	
			36	39	3		19.8	
			75	0	3		19.8	

LTE Band 26 Measured Results (continued)

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Meas. Avg Pwr (dBm)		
						819 MHz	831.5 MHz	844 MHz
LTE Band 26	10	QPSK	1	0	0	22.9	22.9	22.7
			1	25	0	22.8	22.7	22.5
			1	49	0	22.8	22.7	22.5
			25	0	1	21.9	21.8	21.6
			25	12	1	21.9	21.8	21.6
			25	25	1	21.8	21.8	21.6
			50	0	1	21.9	21.8	21.6
		16QAM	1	0	1	22.4	22.3	21.8
			1	25	1	22.2	21.9	21.5
			1	49	1	22.2	22.1	21.7
			25	0	2	21.0	20.9	20.7
			25	12	2	20.9	20.9	20.7
			25	25	2	20.9	20.9	20.7
			50	0	2	20.9	20.8	20.6
		64QAM	1	0	2	21.2	21.1	20.6
			1	25	2	21.0	20.9	20.3
			1	49	2	21.1	21.1	20.5
			25	0	3	20.0	19.9	19.7
			25	12	3	19.9	19.9	19.6
			25	25	3	19.9	19.9	19.6
			50	0	3	19.9	19.8	19.6

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Meas. Avg Pwr (dBm)		
						816.5 MHz	831.5 MHz	846.5 MHz
LTE Band 26	5	QPSK	1	0	0	22.8	22.8	22.6
			1	12	0	23.0	22.9	22.6
			1	24	0	22.8	22.8	22.6
			12	0	1	21.8	21.8	21.6
			12	7	1	21.8	21.8	21.6
			12	13	1	21.8	21.8	21.6
			25	0	1	21.8	21.8	21.6
		16QAM	1	0	1	22.2	22.0	22.0
			1	12	1	22.1	22.1	22.0
			1	24	1	22.2	22.1	22.0
			12	0	2	21.0	20.9	20.7
			12	7	2	20.9	20.8	20.6
			12	13	2	20.9	20.8	20.6
			25	0	2	20.8	20.8	20.6
		64QAM	1	0	2	20.9	21.1	21.1
			1	12	2	21.1	20.8	20.9
			1	24	2	21.0	21.1	20.9
			12	0	3	19.8	19.8	19.6
			12	7	3	19.8	19.8	19.6
			12	13	3	19.8	19.8	19.6
			25	0	3	19.8	19.8	19.6

LTE Band 26 Measured Results (continued)

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Meas. Avg Pwr (dBm)		
						815.5 MHz	831.5 MHz	847.5 MHz
LTE Band 26	3	QPSK	1	0	0	22.8	22.9	22.6
			1	8	0	23.1	22.6	22.8
			1	14	0	22.9	22.7	22.6
			8	0	1	21.8	21.8	21.5
			8	4	1	21.8	21.8	21.5
			8	7	1	21.8	21.7	21.6
			15	0	1	21.8	21.8	21.6
		16QAM	1	0	1	22.3	22.1	21.5
			1	8	1	22.7	22.1	21.4
			1	14	1	22.5	22.1	21.5
			8	0	2	20.8	20.9	20.6
			8	4	2	20.9	20.9	20.6
			8	7	2	20.8	20.9	20.6
			15	0	2	20.9	20.8	20.6
		64QAM	1	0	2	21.0	21.2	20.5
			1	8	2	21.3	21.3	20.3
			1	14	2	21.2	21.3	20.5
			8	0	3	19.9	19.8	19.6
			8	4	3	19.9	19.8	19.6
			8	7	3	19.8	19.8	19.6
			15	0	3	19.9	19.8	19.6

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Meas. Avg Pwr (dBm)		
						814.7 MHz	831.5 MHz	848.3 MHz
LTE Band 26	1.4	QPSK	1	0	0	22.9	22.9	22.6
			1	3	0	22.8	22.8	22.6
			1	5	0	22.8	22.8	22.6
			3	0	0	22.7	22.7	22.5
			3	1	0	22.7	22.7	22.4
			3	3	0	22.8	22.7	22.5
			6	0	1	21.8	21.8	21.6
		16QAM	1	0	1	22.1	22.3	21.9
			1	3	1	21.9	22.1	21.9
			1	5	1	22.0	22.2	21.8
			3	0	1	21.9	21.8	21.5
			3	1	1	21.8	21.9	21.5
			3	3	1	21.8	21.9	21.7
			6	0	2	20.9	20.7	20.6
		64QAM	1	0	2	21.4	20.9	20.6
			1	3	2	21.5	20.9	20.5
			1	5	2	21.1	21.1	20.5
			3	0	2	20.9	20.8	20.5
			3	1	2	20.8	20.9	20.6
			3	3	2	20.9	20.9	20.6
			6	0	3	19.8	19.8	19.7

Note(s):

15 MHz Bandwidths does not support at least three non-overlapping channels in certain channel bandwidths. When a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing per KDB 941225 D05 SAR for LTE Devices

LTE Band 66 Measured Results

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Meas. Avg Pwr (dBm)		
						1720 MHz	1745 MHz	1770 MHz
LTE Band 66	20	QPSK	1	0	0	22.6	22.8	22.8
			1	49	0	22.4	22.7	22.5
			1	99	0	22.5	22.7	22.6
			50	0	1	21.5	21.7	21.7
			50	24	1	21.5	21.7	21.7
			50	50	1	21.5	21.7	21.7
			100	0	1	21.5	21.7	21.7
		16QAM	1	0	1	21.8	22.1	22.1
			1	49	1	21.6	21.9	21.9
			1	99	1	21.7	22.0	22.0
			50	0	2	20.5	20.7	20.7
			50	24	2	20.5	20.7	20.7
			50	50	2	20.5	20.7	20.6
			100	0	2	20.4	20.7	20.7
		64QAM	1	0	2	20.6	21.1	20.9
			1	49	2	20.4	20.9	20.7
			1	99	2	20.5	21.1	20.8
			50	0	3	19.5	19.8	19.8
			50	24	3	19.5	19.7	19.7
			50	50	3	19.5	19.7	19.7
			100	0	3	19.5	19.7	19.7

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Meas. Avg Pwr (dBm)		
						1717.5 MHz	1745 MHz	1772.5 MHz
LTE Band 66	15	QPSK	1	0	0	22.5	22.7	22.8
			1	37	0	22.7	22.6	22.9
			1	74	0	22.4	22.7	22.6
			36	0	1	21.5	21.7	21.8
			36	20	1	21.5	21.7	21.7
			36	39	1	21.4	21.7	21.7
			75	0	1	21.5	21.8	21.8
		16QAM	1	0	1	21.9	22.1	22.0
			1	37	1	22.0	22.2	22.2
			1	74	1	21.8	22.0	21.9
			36	0	2	20.5	20.7	20.8
			36	20	2	20.4	20.7	20.7
			36	39	2	20.4	20.7	20.7
			75	0	2	20.5	20.7	20.8
		64QAM	1	0	2	20.7	21.0	21.0
			1	37	2	20.7	21.1	21.0
			1	74	2	20.7	21.0	20.9
			36	0	3	19.4	19.7	19.7
			36	20	3	19.4	19.7	19.7
			36	39	3	19.4	19.7	19.6
			75	0	3	19.5	19.8	19.7

LTE Band 66 Measured Results (continued)

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Meas. Avg Pwr (dBm)		
						1715 MHz	1745 MHz	1775 MHz
LTE Band 66	10	QPSK	1	0	0	22.4	22.7	22.8
			1	25	0	22.3	22.5	22.7
			1	49	0	22.4	22.6	22.7
			25	0	1	21.4	21.7	21.8
			25	12	1	21.4	21.7	21.7
			25	25	1	21.4	21.7	21.7
			50	0	1	21.4	21.7	21.7
		16QAM	1	0	1	21.7	22.1	21.9
			1	25	1	21.6	21.8	21.8
			1	49	1	21.7	22.0	21.9
			25	0	2	20.5	20.8	20.8
			25	12	2	20.5	20.7	20.8
			25	25	2	20.4	20.8	20.8
			50	0	2	20.4	20.8	20.8
		64QAM	1	0	2	20.6	21.1	21.1
			1	25	2	20.5	21.0	20.8
			1	49	2	20.7	21.1	20.9
			25	0	3	19.5	19.8	19.8
			25	12	3	19.5	19.8	19.8
			25	25	3	19.5	19.8	19.8
			50	0	3	19.4	19.8	19.8

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Meas. Avg Pwr (dBm)		
						1712.5 MHz	1745 MHz	1777.5 MHz
LTE Band 66	5	QPSK	1	0	0	22.4	22.7	22.7
			1	12	0	22.6	22.7	22.6
			1	24	0	22.4	22.7	22.8
			12	0	1	21.4	21.6	21.7
			12	7	1	21.3	21.7	21.7
			12	13	1	21.4	21.7	21.8
			25	0	1	21.4	21.7	21.7
		16QAM	1	0	1	21.7	21.9	22.0
			1	12	1	21.6	21.8	22.0
			1	24	1	21.8	21.9	22.0
			12	0	2	20.4	20.8	20.7
			12	7	2	20.4	20.7	20.7
			12	13	2	20.5	20.7	20.7
			25	0	2	20.4	20.7	20.7
		64QAM	1	0	2	20.5	21.0	21.2
			1	12	2	20.6	20.9	21.0
			1	24	2	20.6	21.1	21.1
			12	0	3	19.4	19.8	19.8
			12	7	3	19.4	19.8	19.7
			12	13	3	19.4	19.8	19.8
			25	0	3	19.3	19.7	19.7

LTE Band 66 Measured Results (continued)

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Meas. Avg Pwr (dBm)		
						1711.5 MHz	1745 MHz	1778.5 MHz
LTE Band 66	3	QPSK	1	0	0	22.4	22.7	22.8
			1	8	0	22.6	22.5	23.0
			1	14	0	22.4	22.6	22.8
			8	0	1	21.3	21.6	21.7
			8	4	1	21.4	21.6	21.7
			8	7	1	21.4	21.6	21.7
			15	0	1	21.4	21.7	21.7
		16QAM	1	0	1	21.7	22.0	21.8
			1	8	1	22.0	22.1	22.3
			1	14	1	21.8	22.0	22.1
			8	0	2	20.3	20.8	20.7
			8	4	2	20.4	20.8	20.8
			8	7	2	20.3	20.8	20.8
			15	0	2	20.4	20.7	20.8
		64QAM	1	0	2	20.6	20.9	20.9
			1	8	2	20.9	21.0	20.7
			1	14	2	20.7	21.0	20.6
			8	0	3	19.3	19.7	19.7
			8	4	3	19.3	19.7	19.7
			8	7	3	19.3	19.7	19.7
			15	0	3	19.4	19.7	19.8

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Meas. Avg Pwr (dBm)		
						1710.7 MHz	1745 MHz	1779.3 MHz
LTE Band 66	1.4	QPSK	1	0	0	22.4	22.7	22.8
			1	3	0	22.3	22.6	22.7
			1	5	0	22.3	22.6	22.7
			3	0	0	22.3	22.6	22.7
			3	1	0	22.3	22.5	22.7
			3	3	0	22.3	22.6	22.6
			6	0	1	21.4	21.7	21.7
		16QAM	1	0	1	21.9	22.0	21.8
			1	3	1	21.7	21.9	21.5
			1	5	1	21.6	21.9	21.8
			3	0	1	21.3	21.6	21.7
			3	1	1	21.3	21.6	21.6
			3	3	1	21.4	21.6	21.6
			6	0	2	20.3	20.7	20.8
		64QAM	1	0	2	20.7	20.9	20.8
			1	3	2	20.7	20.5	20.7
			1	5	2	20.6	20.9	20.7
			3	0	2	20.3	20.8	20.7
			3	1	2	20.4	20.9	20.8
			3	3	2	20.4	21.0	20.8
			6	0	3	19.4	19.7	19.8

Reduced power Results

LTE Band 2 Measured Results

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Hotspot Back-off Reduced. Meas. Avg Pwr (dBm)			Proximity sensor Back-off Reduced. Meas. Avg Pwr (dBm)		
						1860 MHz	1880 MHz	1900 MHz	1860 MHz	1880 MHz	1900 MHz
LTE Band 2	20	QPSK	1	0	0	19.6	19.9	19.8	19.6	19.9	19.9
			1	49	0	19.5	19.7	19.5	19.4	19.7	19.5
			1	99	0	19.5	19.7	19.6	19.5	19.7	19.6
			50	0	0	19.6	19.8	19.8	19.6	19.8	19.8
			50	24	0	19.5	19.7	19.7	19.5	19.7	19.7
			50	50	0	19.5	19.7	19.6	19.5	19.7	19.6
			100	0	0	19.5	19.7	19.7	19.5	19.8	19.7
		16QAM	1	0	0	19.9	20.3	20.2	19.9	20.2	20.2
			1	49	0	19.5	20.1	19.9	19.5	20.0	20.0
			1	99	0	19.7	20.1	19.9	19.7	20.1	20.0
			50	0	0	19.6	19.8	19.7	19.6	19.7	19.7
			50	24	0	19.6	19.7	19.7	19.5	19.7	19.6
			50	50	0	19.5	19.7	19.6	19.5	19.7	19.6
			100	0	0	19.5	19.7	19.7	19.5	19.7	19.7
		64QAM	1	0	0	20.1	20.1	20.1	19.9	20.1	19.9
			1	49	0	19.9	19.9	19.8	19.7	19.8	19.6
			1	99	0	19.9	19.9	19.7	19.7	19.9	19.7
			50	0	0	19.6	19.8	19.8	19.6	19.8	19.8
			50	24	0	19.6	19.7	19.7	19.5	19.7	19.7
			50	50	0	19.5	19.7	19.6	19.5	19.7	19.6
			100	0	0	19.5	19.7	19.6	19.5	19.7	19.6

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Hotspot Back-off Reduced. Meas. Avg Pwr (dBm)			Proximity sensor Back-off Reduced. Meas. Avg Pwr (dBm)		
						1857.5 MHz	1880 MHz	1902.5 MHz	1857.5 MHz	1880 MHz	1902.5 MHz
LTE Band 2	15	QPSK	1	0	0	19.5	19.7	19.8	19.6	19.8	19.8
			1	37	0	19.7	19.7	19.9	19.7	19.7	19.9
			1	74	0	19.3	19.6	19.5	19.4	19.6	19.5
			36	0	0	19.5	19.8	19.7	19.5	19.8	19.8
			36	20	0	19.5	19.7	19.6	19.5	19.7	19.7
			36	39	0	19.4	19.7	19.6	19.4	19.7	19.6
			75	0	0	19.5	19.8	19.7	19.5	19.7	19.8
		16QAM	1	0	0	20.0	20.1	20.0	19.9	20.1	20.1
			1	37	0	20.1	20.1	20.1	20.0	20.1	20.1
			1	74	0	19.9	20.0	19.8	19.7	19.9	19.9
			36	0	0	19.5	19.8	19.8	19.6	19.8	19.7
			36	20	0	19.4	19.7	19.7	19.5	19.7	19.7
			36	39	0	19.4	19.7	19.6	19.4	19.7	19.7
			75	0	0	19.5	19.7	19.7	19.5	19.8	19.7
		64QAM	1	0	0	19.8	20.0	20.2	19.6	20.0	20.0
			1	37	0	19.9	20.0	20.1	19.6	20.0	19.8
			1	74	0	19.6	19.9	20.0	19.4	19.8	19.8
			36	0	0	19.6	19.8	19.7	19.5	19.7	19.7
			36	20	0	19.5	19.7	19.6	19.5	19.7	19.6
			36	39	0	19.5	19.7	19.6	19.4	19.7	19.6
			75	0	0	19.5	19.8	19.7	19.5	19.7	19.6

LTE Band 2 Measured Results (continued)

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Hotspot Back-off Reduced. Meas. Avg Pwr (dBm)			Proximity sensor Back-off Reduced. Meas. Avg Pwr (dBm)		
						1855 MHz	1880 MHz	1905 MHz	1855 MHz	1880 MHz	1905 MHz
LTE Band 2	10	QPSK	1	0	0	19.5	19.8	19.8	19.5	19.8	19.8
			1	25	0	19.4	19.6	19.6	19.4	19.6	19.6
			1	49	0	19.5	19.7	19.6	19.4	19.7	19.6
			25	0	0	19.5	19.7	19.7	19.5	19.8	19.7
			25	12	0	19.4	19.7	19.6	19.5	19.7	19.7
			25	25	0	19.4	19.7	19.6	19.4	19.7	19.6
			50	0	0	19.4	19.7	19.7	19.5	19.7	19.7
		16QAM	1	0	0	19.9	20.2	19.9	19.9	20.2	20.0
			1	25	0	19.7	19.8	19.6	19.8	19.8	19.7
			1	49	0	19.8	20.1	19.8	19.9	20.0	19.9
			25	0	0	19.5	19.8	19.8	19.6	19.8	19.8
			25	12	0	19.5	19.8	19.7	19.5	19.8	19.7
			25	25	0	19.5	19.8	19.7	19.5	19.8	19.7
			50	0	0	19.5	19.7	19.7	19.5	19.8	19.7
		64QAM	1	0	0	19.5	20.1	20.2	19.6	19.9	19.9
			1	25	0	19.4	19.9	19.9	19.5	19.6	19.7
			1	49	0	19.5	20.0	19.9	19.6	19.8	19.7
			25	0	0	19.5	19.8	19.8	19.5	19.8	19.8
			25	12	0	19.5	19.8	19.7	19.5	19.8	19.7
			25	25	0	19.5	19.8	19.7	19.4	19.8	19.7
			50	0	0	19.4	19.8	19.7	19.5	19.8	19.7

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Hotspot Back-off Reduced. Meas. Avg Pwr (dBm)			Proximity sensor Back-off Reduced. Meas. Avg Pwr (dBm)		
						1852.5 MHz	1880 MHz	1907.5 MHz	1852.5 MHz	1880 MHz	1907.5 MHz
LTE Band 2	5	QPSK	1	0	0	19.5	19.7	19.7	19.5	19.7	19.7
			1	12	0	19.6	19.7	19.7	19.6	19.7	19.9
			1	24	0	19.5	19.7	19.6	19.5	19.7	19.7
			12	0	0	19.5	19.7	19.7	19.4	19.7	19.7
			12	7	0	19.4	19.7	19.7	19.5	19.7	19.7
			12	13	0	19.5	19.7	19.7	19.5	19.7	19.7
			25	0	0	19.4	19.7	19.7	19.4	19.7	19.7
		16QAM	1	0	0	19.7	20.0	20.1	19.7	20.2	20.0
			1	12	0	19.8	20.0	20.1	19.8	20.2	19.9
			1	24	0	19.8	19.9	20.1	19.7	20.0	20.0
			12	0	0	19.5	19.8	19.8	19.5	19.6	19.8
			12	7	0	19.5	19.7	19.8	19.5	19.6	19.8
			12	13	0	19.5	19.7	19.8	19.5	19.7	19.7
			25	0	0	19.5	19.7	19.7	19.5	19.7	19.7
		64QAM	1	0	0	19.4	19.9	20.1	19.4	20.1	19.7
			1	12	0	19.6	19.9	19.9	19.4	19.9	20.0
			1	24	0	19.5	20.0	20.0	19.5	20.2	20.0
			12	0	0	19.4	19.7	19.6	19.5	19.9	19.6
			12	7	0	19.4	19.7	19.6	19.4	19.8	19.6
			12	13	0	19.4	19.8	19.7	19.4	19.8	19.7
			25	0	0	19.4	19.7	19.6	19.4	19.7	19.7

LTE Band 2 Measured Results (continued)

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Hotspot Back-off Reduced. Meas. Avg Pwr (dBm)			Proximity sensor Back-off Reduced. Meas. Avg Pwr (dBm)		
						1851.5 MHz	1880 MHz	1908.5 MHz	1851.5 MHz	1880 MHz	1908.5 MHz
LTE Band 2	3	QPSK	1	0	0	19.5	19.7	19.6	19.5	19.7	19.7
			1	8	0	19.7	19.6	19.8	19.7	19.6	19.9
			1	14	0	19.6	19.7	19.7	19.5	19.7	19.6
			8	0	0	19.4	19.7	19.6	19.4	19.7	19.6
			8	4	0	19.4	19.6	19.6	19.4	19.6	19.6
			8	7	0	19.4	19.7	19.6	19.4	19.6	19.6
			15	0	0	19.4	19.7	19.6	19.4	19.7	19.6
		16QAM	1	0	0	19.7	20.1	19.9	20.0	20.1	20.0
			1	8	0	20.2	20.3	19.9	20.2	20.1	20.1
			1	14	0	20.1	19.9	19.8	20.1	20.0	20.1
			8	0	0	19.5	19.8	19.7	19.4	19.8	19.7
			8	4	0	19.5	19.8	19.7	19.5	19.8	19.6
			8	7	0	19.5	19.8	19.7	19.4	19.9	19.7
			15	0	0	19.4	19.7	19.7	19.5	19.7	19.7
		64QAM	1	0	0	19.6	19.8	19.9	19.5	19.7	19.6
			1	8	0	19.7	20.1	19.8	19.5	20.1	19.5
			1	14	0	19.6	19.9	19.6	19.8	19.8	19.5
			8	0	0	19.4	19.8	19.6	19.4	19.7	19.6
			8	4	0	19.4	19.8	19.6	19.4	19.7	19.6
			8	7	0	19.4	19.8	19.6	19.4	19.7	19.6
			15	0	0	19.5	19.6	19.6	19.5	19.7	19.6

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Hotspot Back-off Reduced. Meas. Avg Pwr (dBm)			Proximity sensor Back-off Reduced. Meas. Avg Pwr (dBm)		
						1850.7 MHz	1880 MHz	1909.3 MHz	1850.7 MHz	1880 MHz	1909.3 MHz
LTE Band 2	1.4	QPSK	1	0	0	19.5	19.7	19.6	19.5	19.8	19.7
			1	3	0	19.4	19.6	19.6	19.4	19.6	19.5
			1	5	0	19.4	19.7	19.5	19.4	19.7	19.6
			3	0	0	19.4	19.6	19.4	19.3	19.6	19.4
			3	1	0	19.4	19.6	19.4	19.3	19.6	19.4
			3	3	0	19.4	19.6	19.4	19.3	19.6	19.5
			6	0	0	19.3	19.6	19.5	19.4	19.6	19.5
		16QAM	1	0	0	19.5	20.1	19.9	19.6	19.9	19.9
			1	3	0	19.4	20.0	19.5	19.6	19.5	19.8
			1	5	0	19.3	20.0	19.5	19.5	19.9	19.8
			3	0	0	19.4	19.7	19.5	19.4	19.7	19.6
			3	1	0	19.4	19.9	19.6	19.3	19.7	19.7
			3	3	0	19.3	19.8	19.6	19.5	19.7	19.6
			6	0	0	19.4	19.6	19.6	19.4	19.8	19.4
		64QAM	1	0	0	19.7	19.7	19.7	19.8	20.1	19.8
			1	3	0	19.5	19.8	19.7	19.8	20.1	19.7
			1	5	0	19.5	19.9	19.6	19.5	19.8	19.8
			3	0	0	19.4	19.7	19.5	19.4	19.8	19.5
			3	1	0	19.4	19.8	19.6	19.5	19.8	19.6
			3	3	0	19.4	19.8	19.6	19.6	19.8	19.6
			6	0	0	19.4	19.7	19.6	19.5	19.7	19.5

LTE Band 4 Measured Results

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Hotspot Back-off Reduced. Meas. Avg Pwr (dBm)			Proximity sensor Back-off Reduced. Meas. Avg Pwr (dBm)		
						1720 MHz	1732.5 MHz	1745 MHz	1720 MHz	1732.5 MHz	1745 MHz
LTE Band 4	20	QPSK	1	0	0		19.6			19.7	
			1	49	0		19.5			19.4	
			1	99	0		19.6			19.6	
			50	0	0		19.7			19.7	
			50	24	0		19.6			19.6	
			50	50	0		19.6			19.6	
			100	0	0		19.6			19.6	
		16QAM	1	0	0		20.1			20.1	
			1	49	0		19.7			19.9	
			1	99	0		20.0			20.0	
			50	0	0		19.6			19.7	
			50	24	0		19.6			19.6	
			50	50	0		19.6			19.6	
			100	0	0		19.6			19.6	
		64QAM	1	0	0		20.0			20.0	
			1	49	0		19.8			19.8	
			1	99	0		20.0			19.9	
			50	0	0		19.6			19.6	
			50	24	0		19.5			19.6	
			50	50	0		19.6			19.6	
			100	0	0		19.6			19.6	

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Hotspot Back-off Reduced. Meas. Avg Pwr (dBm)			Proximity sensor Back-off Reduced. Meas. Avg Pwr (dBm)		
						1717.5 MHz	1732.5 MHz	1747.5 MHz	1717.5 MHz	1732.5 MHz	1747.5 MHz
LTE Band 4	15	QPSK	1	0	0	19.4	19.5	19.6	19.4	19.5	19.6
			1	37	0	19.6	19.4	19.7	19.6	19.5	19.8
			1	74	0	19.3	19.4	19.5	19.4	19.5	19.5
			36	0	0	19.4	19.6	19.6	19.4	19.5	19.6
			36	20	0	19.3	19.5	19.6	19.4	19.6	19.6
			36	39	0	19.3	19.5	19.5	19.4	19.5	19.6
			75	0	0	19.4	19.6	19.6	19.4	19.6	19.6
		16QAM	1	0	0	19.8	19.9	19.9	19.9	19.8	20.0
			1	37	0	19.9	19.9	20.1	20.0	19.9	19.9
			1	74	0	19.7	19.8	19.8	19.8	19.8	19.9
			36	0	0	19.4	19.6	19.6	19.4	19.6	19.7
			36	20	0	19.3	19.6	19.6	19.4	19.6	19.6
			36	39	0	19.3	19.5	19.6	19.4	19.6	19.6
			75	0	0	19.3	19.6	19.6	19.4	19.6	19.7
		64QAM	1	0	0	19.5	19.8	19.8	19.6	20.1	20.1
			1	37	0	19.6	19.9	19.9	19.6	20.1	20.1
			1	74	0	19.4	19.8	19.7	19.6	20.0	19.9
			36	0	0	19.4	19.6	19.7	19.4	19.6	19.7
			36	20	0	19.4	19.6	19.7	19.4	19.6	19.7
			36	39	0	19.4	19.6	19.6	19.4	19.6	19.6
			75	0	0	19.4	19.6	19.7	19.4	19.6	19.7

LTE Band 4 Measured Results (continued)

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Hotspot Back-off Reduced. Meas. Avg Pwr (dBm)			Proximity sensor Back-off Reduced. Meas. Avg Pwr (dBm)		
						1715 MHz	1732.5 MHz	1750 MHz	1715 MHz	1732.5 MHz	1750 MHz
LTE Band 4	10	QPSK	1	0	0	19.4	19.5	19.6	19.4	19.6	19.6
			1	25	0	19.3	19.4	19.6	19.3	19.5	19.6
			1	49	0	19.4	19.4	19.6	19.4	19.5	19.6
			25	0	0	19.4	19.6	19.6	19.4	19.6	19.7
			25	12	0	19.4	19.5	19.6	19.4	19.6	19.6
			25	25	0	19.3	19.5	19.6	19.4	19.6	19.6
			50	0	0	19.4	19.6	19.6	19.4	19.6	19.6
		16QAM	1	0	0	19.8	19.9	19.9	19.9	20.0	19.9
			1	25	0	19.7	19.6	19.7	19.8	19.6	19.6
			1	49	0	19.9	19.8	19.9	19.9	19.9	19.8
			25	0	0	19.4	19.6	19.7	19.4	19.6	19.7
			25	12	0	19.4	19.6	19.7	19.4	19.6	19.6
			25	25	0	19.4	19.6	19.6	19.4	19.6	19.6
			50	0	0	19.4	19.6	19.6	19.4	19.6	19.7
		64QAM	1	0	0	19.6	19.9	19.9	19.4	20.0	19.8
			1	25	0	19.5	19.8	19.7	19.4	19.8	19.6
			1	49	0	19.6	19.9	19.8	19.5	20.0	19.7
			25	0	0	19.4	19.6	19.7	19.4	19.6	19.7
			25	12	0	19.4	19.6	19.7	19.4	19.6	19.7
			25	25	0	19.4	19.6	19.7	19.4	19.6	19.7
			50	0	0	19.4	19.6	19.7	19.4	19.6	19.7

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Hotspot Back-off Reduced. Meas. Avg Pwr (dBm)			Proximity sensor Back-off Reduced. Meas. Avg Pwr (dBm)		
						1712.5 MHz	1732.5 MHz	1752.5 MHz	1712.5 MHz	1732.5 MHz	1752.5 MHz
LTE Band 4	5	QPSK	1	0	0	19.3	19.6	19.6	19.3	19.6	19.6
			1	12	0	19.4	19.6	19.6	19.4	19.5	19.7
			1	24	0	19.3	19.6	19.6	19.4	19.6	19.7
			12	0	0	19.3	19.5	19.6	19.3	19.6	19.6
			12	7	0	19.3	19.5	19.6	19.3	19.6	19.6
			12	13	0	19.3	19.5	19.6	19.3	19.6	19.6
			25	0	0	19.3	19.5	19.6	19.3	19.6	19.6
		16QAM	1	0	0	19.6	19.9	20.1	19.7	20.0	19.9
			1	12	0	19.6	19.9	20.1	19.7	20.0	19.8
			1	24	0	19.7	19.9	20.0	19.7	20.0	20.0
			12	0	0	19.5	19.6	19.6	19.4	19.6	19.7
			12	7	0	19.3	19.6	19.6	19.4	19.6	19.7
			12	13	0	19.4	19.6	19.6	19.4	19.6	19.7
			25	0	0	19.3	19.5	19.6	19.3	19.6	19.7
		64QAM	1	0	0	19.4	19.9	20.0	19.5	19.8	19.9
			1	12	0	19.3	19.7	19.9	19.5	19.6	19.7
			1	24	0	19.4	20.0	19.9	19.6	19.9	19.9
			12	0	0	19.3	19.6	19.7	19.3	19.6	19.6
			12	7	0	19.3	19.6	19.6	19.3	19.6	19.6
			12	13	0	19.3	19.6	19.6	19.3	19.6	19.6
			25	0	0	19.3	19.6	19.6	19.4	19.6	19.6

LTE Band 4 Measured Results (continued)

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Hotspot Back-off Reduced. Meas. Avg Pwr (dBm)			Proximity sensor Back-off Reduced. Meas. Avg Pwr (dBm)		
						1711.5 MHz	1732.5 MHz	1753.5 MHz	1711.5 MHz	1732.5 MHz	1753.5 MHz
LTE Band 4	3	QPSK	1	0	0	19.3	19.5	19.6	19.3	19.6	19.6
			1	8	0	19.5	19.3	19.7	19.6	19.5	19.9
			1	14	0	19.3	19.5	19.7	19.4	19.5	19.7
			8	0	0	19.2	19.5	19.5	19.3	19.5	19.6
			8	4	0	19.2	19.4	19.5	19.2	19.6	19.5
			8	7	0	19.2	19.5	19.5	19.2	19.5	19.5
			15	0	0	19.3	19.5	19.6	19.3	19.6	19.6
		16QAM	1	0	0	19.8	19.8	19.6	19.9	20.0	19.8
			1	8	0	20.0	20.1	19.8	19.9	20.0	19.9
			1	14	0	19.7	19.7	19.7	19.9	19.9	19.8
			8	0	0	19.3	19.6	19.6	19.3	19.6	19.7
			8	4	0	19.3	19.6	19.5	19.3	19.6	19.7
			8	7	0	19.2	19.6	19.6	19.3	19.6	19.7
			15	0	0	19.3	19.5	19.6	19.3	19.5	19.6
		64QAM	1	0	0	19.3	20.0	19.9	19.6	19.6	19.9
			1	8	0	19.7	19.9	19.6	19.6	19.8	19.6
			1	14	0	19.4	19.7	19.8	19.7	20.0	19.8
			8	0	0	19.3	19.6	19.7	19.2	19.6	19.7
			8	4	0	19.3	19.6	19.6	19.2	19.7	19.7
			8	7	0	19.2	19.6	19.7	19.2	19.6	19.6
			15	0	0	19.3	19.6	19.5	19.3	19.6	19.6

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Hotspot Back-off Reduced. Meas. Avg Pwr (dBm)			Proximity sensor Back-off Reduced. Meas. Avg Pwr (dBm)		
						1710.7 MHz	1732.5 MHz	1754.3 MHz	1710.7 MHz	1732.5 MHz	1754.3 MHz
LTE Band 4	1.4	QPSK	1	0	0	19.3	19.6	19.7	19.4	19.7	19.7
			1	3	0	19.2	19.4	19.9	19.3	19.5	19.7
			1	5	0	19.3	19.5	19.6	19.3	19.6	19.6
			3	0	0	19.1	19.4	19.6	19.2	19.5	19.5
			3	1	0	19.2	19.4	19.5	19.2	19.5	19.4
			3	3	0	19.2	19.4	19.5	19.2	19.5	19.6
			6	0	0	19.2	19.5	19.5	19.2	19.5	19.5
		16QAM	1	0	0	19.7	19.8	19.9	19.7	19.8	19.9
			1	3	0	19.7	19.7	19.6	19.8	19.2	19.9
			1	5	0	19.6	19.7	19.8	19.6	19.7	19.9
			3	0	0	19.2	19.6	19.7	19.3	19.6	19.7
			3	1	0	19.3	19.5	19.6	19.2	19.6	19.8
			3	3	0	19.4	19.7	19.6	19.3	19.6	19.8
			6	0	0	19.2	19.6	19.7	19.4	19.6	19.6
		64QAM	1	0	0	19.7	19.4	19.8	19.7	19.6	19.8
			1	3	0	19.6	19.5	19.9	19.8	19.4	19.7
			1	5	0	19.5	19.8	19.7	19.5	19.6	19.6
			3	0	0	19.4	19.7	19.5	19.4	19.6	19.6
			3	1	0	19.4	19.7	19.6	19.5	19.7	19.7
			3	3	0	19.4	19.7	19.5	19.5	19.6	19.7
			6	0	0	19.4	19.6	19.6	19.3	19.6	19.5

Note(s):

20 MHz Bandwidths does not support at least three non-overlapping channels in certain channel bandwidths. When a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing per KDB 941225 D05 SAR for LTE Devices

LTE Band 25 Measured Results

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Hotspot Back-off Reduced. Meas. Avg Pwr (dBm)			Proximity sensor Back-off Reduced. Meas. Avg Pwr (dBm)		
						1860 MHz	1882.5 MHz	1905 MHz	1860 MHz	1882.5 MHz	1905 MHz
LTE Band 25	20	QPSK	1	0	0	19.7	19.9	19.9	19.7	19.9	20.0
			1	49	0	19.5	19.8	19.6	19.5	19.8	19.5
			1	99	0	19.6	19.8	19.7	19.6	19.8	19.7
			50	0	0	19.7	19.9	19.9	19.7	19.9	19.9
			50	24	0	19.6	19.8	19.8	19.6	19.8	19.8
			50	50	0	19.6	19.8	19.7	19.6	19.8	19.7
			100	0	0	19.6	19.8	19.8	19.6	19.8	19.8
		16QAM	1	0	0	20.2	20.3	20.4	20.1	20.3	20.3
			1	49	0	19.7	20.0	20.1	19.7	20.2	20.0
			1	99	0	20.0	20.1	20.2	19.9	20.3	20.1
			50	0	0	19.7	19.9	19.9	19.7	19.9	19.8
			50	24	0	19.6	19.8	19.8	19.6	19.8	19.8
			50	50	0	19.6	19.8	19.7	19.6	19.8	19.7
			100	0	0	19.6	19.8	19.8	19.6	19.8	19.8
		64QAM	1	0	0	20.0	20.3	20.3	20.1	20.3	20.2
			1	49	0	19.7	20.1	20.0	19.9	20.0	19.8
			1	99	0	19.8	20.2	20.1	19.9	20.1	19.9
			50	0	0	19.7	19.9	19.9	19.7	19.9	19.9
			50	24	0	19.6	19.9	19.8	19.6	19.8	19.8
			50	50	0	19.6	19.8	19.7	19.6	19.8	19.8
			100	0	0	19.6	19.8	19.8	19.6	19.8	19.8
Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Hotspot Back-off Reduced. Meas. Avg Pwr (dBm)			Proximity sensor Back-off Reduced. Meas. Avg Pwr (dBm)		
						1857.5 MHz	1882.5 MHz	1907.5 MHz	1857.5 MHz	1882.5 MHz	1907.5 MHz
LTE Band 25	15	QPSK	1	0	0	19.7	19.9	19.9	19.7	19.9	19.9
			1	37	0	19.9	19.8	20.0	19.9	19.8	20.0
			1	74	0	19.6	19.7	19.7	19.6	19.7	19.7
			36	0	0	19.7	19.9	19.9	19.6	19.9	19.9
			36	20	0	19.6	19.8	19.8	19.6	19.8	19.8
			36	39	0	19.6	19.8	19.8	19.6	19.8	19.7
			75	0	0	19.6	19.9	19.9	19.7	19.9	19.8
		16QAM	1	0	0	20.2	20.1	20.3	20.1	20.1	20.3
			1	37	0	20.3	20.1	20.4	20.2	20.2	20.2
			1	74	0	20.0	20.0	20.2	20.0	20.0	20.1
			36	0	0	19.6	19.8	19.8	19.7	19.9	19.8
			36	20	0	19.6	19.8	19.8	19.6	19.8	19.7
			36	39	0	19.5	19.8	19.7	19.6	19.8	19.7
			75	0	0	19.6	19.8	19.9	19.6	19.8	19.8
		64QAM	1	0	0	19.9	20.0	20.2	19.8	20.2	20.2
			1	37	0	19.9	20.0	20.1	19.9	20.1	20.1
			1	74	0	19.7	19.9	20.1	19.6	20.0	20.0
			36	0	0	19.7	19.8	19.8	19.7	19.8	19.8
			36	20	0	19.6	19.8	19.7	19.6	19.8	19.7
			36	39	0	19.6	19.8	19.7	19.6	19.8	19.7
			75	0	0	19.6	19.8	19.8	19.6	19.9	19.8

LTE Band 25 Measured Results (continued)

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Hotspot Back-off Reduced. Meas. Avg Pwr (dBm)			Proximity sensor Back-off Reduced. Meas. Avg Pwr (dBm)		
						1855 MHz	1882.5 MHz	1910 MHz	1855 MHz	1882.5 MHz	1910 MHz
LTE Band 25	10	QPSK	1	0	0	19.6	19.8	19.8	19.6	19.8	19.9
			1	25	0	19.5	19.7	19.7	19.4	19.7	19.7
			1	49	0	19.5	19.7	19.8	19.5	19.7	19.8
			25	0	0	19.6	19.8	19.8	19.6	19.8	19.8
			25	12	0	19.6	19.8	19.8	19.6	19.8	19.8
			25	25	0	19.5	19.8	19.7	19.5	19.8	19.8
			50	0	0	19.6	19.8	19.8	19.6	19.8	19.8
		16QAM	1	0	0	20.0	20.2	19.9	20.0	20.3	20.0
			1	25	0	19.8	19.8	19.7	19.9	19.9	19.7
			1	49	0	19.9	20.0	19.9	20.0	20.1	19.9
			25	0	0	19.6	19.9	19.9	19.7	19.9	19.8
			25	12	0	19.6	19.9	19.8	19.6	19.8	19.8
			25	25	0	19.6	19.8	19.8	19.6	19.9	19.8
			50	0	0	19.6	19.8	19.8	19.6	19.8	19.8
		64QAM	1	0	0	19.8	20.1	20.0	19.9	20.0	20.0
			1	25	0	19.7	20.0	19.7	19.8	19.9	19.8
			1	49	0	19.9	20.0	19.8	19.9	20.0	19.9
			25	0	0	19.7	19.9	19.8	19.6	19.9	19.8
			25	12	0	19.6	19.8	19.8	19.6	19.8	19.8
			25	25	0	19.6	19.8	19.8	19.6	19.8	19.8
			50	0	0	19.6	19.8	19.8	19.6	19.9	19.8

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Hotspot Back-off Reduced. Meas. Avg Pwr (dBm)			Proximity sensor Back-off Reduced. Meas. Avg Pwr (dBm)		
						1852.5 MHz	1882.5 MHz	1912.5 MHz	1852.5 MHz	1882.5 MHz	1912.5 MHz
LTE Band 25	5	QPSK	1	0	0	19.6	19.8	19.7	19.6	19.8	19.8
			1	12	0	19.7	19.7	20.0	19.7	19.8	19.9
			1	24	0	19.6	19.8	19.8	19.6	19.8	19.8
			12	0	0	19.5	19.8	19.7	19.5	19.8	19.7
			12	7	0	19.5	19.8	19.7	19.5	19.8	19.7
			12	13	0	19.5	19.8	19.7	19.5	19.8	19.8
			25	0	0	19.5	19.8	19.7	19.5	19.8	19.7
		16QAM	1	0	0	19.8	20.2	20.2	19.8	20.3	20.1
			1	12	0	19.8	20.3	20.1	19.7	20.2	19.9
			1	24	0	19.8	20.2	20.2	19.8	20.2	20.2
			12	0	0	19.7	19.8	19.8	19.6	19.7	19.8
			12	7	0	19.6	19.8	19.8	19.6	19.7	19.8
			12	13	0	19.6	19.8	19.8	19.6	19.8	19.9
			25	0	0	19.6	19.8	19.7	19.5	19.8	19.8
		64QAM	1	0	0	19.7	20.1	20.1	19.9	20.2	19.8
			1	12	0	19.7	19.8	19.9	19.7	20.1	19.8
			1	24	0	19.7	20.1	20.0	19.9	20.1	19.9
			12	0	0	19.5	19.8	19.7	19.6	19.8	19.8
			12	7	0	19.5	19.9	19.7	19.5	19.8	19.7
			12	13	0	19.5	19.8	19.8	19.5	19.8	19.7
			25	0	0	19.5	19.8	19.7	19.5	19.8	19.7

LTE Band 25 Measured Results (continued)

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Hotspot Back-off Reduced. Meas. Avg Pwr (dBm)			Proximity sensor Back-off Reduced. Meas. Avg Pwr (dBm)		
						1851.5 MHz	1882.5 MHz	1913.5 MHz	1851.5 MHz	1882.5 MHz	1913.5 MHz
LTE Band 25	3	QPSK	1	0	0	19.6	19.9	19.7	19.5	19.8	19.7
			1	8	0	19.8	19.6	19.9	19.7	19.9	19.9
			1	14	0	19.6	19.8	19.7	19.5	19.7	19.8
			8	0	0	19.5	19.8	19.6	19.5	19.8	19.6
			8	4	0	19.5	19.8	19.6	19.5	19.7	19.6
			8	7	0	19.5	19.8	19.6	19.5	19.8	19.6
			15	0	0	19.5	19.8	19.7	19.5	19.8	19.7
		16QAM	1	0	0	19.9	20.2	19.9	19.8	20.0	19.7
			1	8	0	20.1	20.0	19.9	20.0	20.2	19.9
			1	14	0	20.0	19.8	19.9	20.0	20.0	19.9
			8	0	0	19.5	19.9	19.7	19.6	19.9	19.7
			8	4	0	19.5	19.9	19.7	19.6	19.9	19.7
			8	7	0	19.5	19.9	19.7	19.6	19.9	19.7
			15	0	0	19.5	19.8	19.7	19.5	19.8	19.7
		64QAM	1	0	0	19.6	19.7	19.9	19.8	20.1	19.9
			1	8	0	19.7	20.1	19.7	19.8	20.1	19.7
			1	14	0	19.7	20.2	19.8	19.8	20.0	19.8
			8	0	0	19.6	19.8	19.7	19.5	19.8	19.7
			8	4	0	19.6	19.8	19.6	19.6	19.7	19.7
			8	7	0	19.6	19.8	19.7	19.6	19.7	19.7
			15	0	0	19.5	19.8	19.7	19.5	19.8	19.7

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Hotspot Back-off Reduced. Meas. Avg Pwr (dBm)			Proximity sensor Back-off Reduced. Meas. Avg Pwr (dBm)		
						1850.7 MHz	1882.5 MHz	1914.3 MHz	1850.7 MHz	1882.5 MHz	1914.3 MHz
LTE Band 25	1.4	QPSK	1	0	0	19.6	19.9	19.7	19.6	19.8	19.7
			1	3	0	19.5	19.8	19.6	19.5	19.8	19.7
			1	5	0	19.5	19.8	19.7	19.5	19.8	19.7
			3	0	0	19.4	19.7	19.5	19.4	19.7	19.6
			3	1	0	19.4	19.8	19.5	19.5	19.7	19.7
			3	3	0	19.4	19.8	19.6	19.5	19.7	19.6
			6	0	0	19.5	19.7	19.6	19.5	19.7	19.6
		16QAM	1	0	0	19.8	20.1	20.1	19.9	20.0	19.9
			1	3	0	19.7	20.0	19.9	19.9	20.1	19.8
			1	5	0	19.7	20.0	20.0	19.9	19.9	19.9
			3	0	0	19.5	19.9	19.7	19.5	19.8	19.7
			3	1	0	19.3	19.8	19.7	19.6	19.8	19.8
			3	3	0	19.5	19.9	19.7	19.6	19.9	19.8
			6	0	0	19.6	19.9	19.6	19.4	19.8	19.7
		64QAM	1	0	0	20.0	19.8	19.8	19.6	20.1	19.6
			1	3	0	20.1	19.4	19.7	19.6	20.2	19.5
			1	5	0	19.7	20.0	19.6	19.5	20.0	19.8
			3	0	0	19.5	19.7	19.5	19.5	19.9	19.6
			3	1	0	19.6	19.7	19.6	19.6	19.9	19.7
			3	3	0	19.6	19.7	19.6	19.6	20.0	19.7
			6	0	0	19.5	19.8	19.7	19.6	19.8	19.6

LTE Band 66 Measured Results

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Hotspot Back-off Reduced. Meas. Avg Pwr (dBm)			Proximity sensor Back-off Reduced. Meas. Avg Pwr (dBm)		
						1720 MHz	1745 MHz	1770 MHz	1720 MHz	1745 MHz	1770 MHz
LTE Band 66	20	QPSK	1	0	0	19.5	19.7	19.7	19.5	19.7	19.7
			1	49	0	19.3	19.6	19.5	19.4	19.7	19.4
			1	99	0	19.4	19.6	19.6	19.4	19.7	19.6
			50	0	0	19.5	19.7	19.7	19.5	19.7	19.7
			50	24	0	19.5	19.7	19.7	19.4	19.7	19.7
			50	50	0	19.5	19.7	19.7	19.5	19.7	19.7
			100	0	0	19.5	19.7	19.7	19.5	19.7	19.7
		16QAM	1	0	0	19.9	20.0	20.1	19.8	20.2	20.1
			1	49	0	19.6	20.0	20.0	19.5	20.1	20.0
			1	99	0	19.8	20.0	20.1	19.7	20.1	20.1
			50	0	0	19.5	19.7	19.8	19.5	19.7	19.7
			50	24	0	19.5	19.7	19.7	19.5	19.7	19.7
			50	50	0	19.5	19.7	19.7	19.5	19.7	19.7
			100	0	0	19.5	19.7	19.7	19.5	19.7	19.7
		64QAM	1	0	0	19.8	20.1	19.9	19.8	20.0	19.9
			1	49	0	19.7	19.9	19.7	19.6	19.9	19.8
			1	99	0	19.7	20.0	19.8	19.8	19.9	19.8
			50	0	0	19.5	19.7	19.8	19.5	19.7	19.7
			50	24	0	19.5	19.7	19.7	19.5	19.7	19.7
			50	50	0	19.5	19.7	19.7	19.5	19.7	19.7
			100	0	0	19.4	19.7	19.7	19.5	19.7	19.7
Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Hotspot Back-off Reduced. Meas. Avg Pwr (dBm)			Proximity sensor Back-off Reduced. Meas. Avg Pwr (dBm)		
						1717.5 MHz	1745 MHz	1772.5 MHz	1717.5 MHz	1745 MHz	1772.5 MHz
LTE Band 66	15	QPSK	1	0	0	19.5	19.6	19.8	19.4	19.7	19.8
			1	37	0	19.7	19.5	19.9	19.7	19.6	19.9
			1	74	0	19.4	19.6	19.6	19.4	19.6	19.7
			36	0	0	19.4	19.7	19.8	19.5	19.7	19.8
			36	20	0	19.4	19.7	19.7	19.4	19.7	19.7
			36	39	0	19.4	19.7	19.7	19.4	19.7	19.7
			75	0	0	19.5	19.7	19.8	19.5	19.8	19.8
		16QAM	1	0	0	19.8	19.9	20.0	19.9	20.1	19.9
			1	37	0	19.9	19.9	20.0	20.1	20.0	19.9
			1	74	0	19.7	19.9	19.8	19.8	20.0	19.8
			36	0	0	19.4	19.7	19.7	19.5	19.7	19.8
			36	20	0	19.4	19.7	19.7	19.4	19.7	19.7
			36	39	0	19.4	19.7	19.7	19.4	19.7	19.7
			75	0	0	19.5	19.7	19.8	19.5	19.7	19.8
		64QAM	1	0	0	19.8	19.9	20.0	19.9	20.0	19.9
			1	37	0	19.8	19.9	20.2	19.9	20.1	19.9
			1	74	0	19.7	19.8	19.9	19.8	19.9	19.8
			36	0	0	19.5	19.7	19.7	19.4	19.7	19.7
			36	20	0	19.4	19.7	19.7	19.4	19.7	19.7
			36	39	0	19.4	19.7	19.7	19.4	19.7	19.7
			75	0	0	19.4	19.7	19.7	19.5	19.7	19.7

LTE Band 66 Measured Results (continued)

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Hotspot Back-off Reduced. Meas. Avg Pwr (dBm)			Proximity sensor Back-off Reduced. Meas. Avg Pwr (dBm)		
						1715 MHz	1745 MHz	1775 MHz	1715 MHz	1745 MHz	1775 MHz
LTE Band 66	10	QPSK	1	0	0	19.4	19.7	19.7	19.4	19.7	19.8
			1	25	0	19.3	19.5	19.7	19.3	19.6	19.7
			1	49	0	19.4	19.6	19.7	19.4	19.7	19.7
			25	0	0	19.4	19.7	19.8	19.4	19.7	19.8
			25	12	0	19.4	19.7	19.7	19.4	19.7	19.7
			25	25	0	19.4	19.7	19.7	19.4	19.7	19.7
			50	0	0	19.4	19.7	19.8	19.4	19.7	19.7
		16QAM	1	0	0	19.7	20.1	20.1	19.7	20.1	20.0
			1	25	0	19.6	19.7	19.9	19.5	19.8	19.8
			1	49	0	19.7	20.0	20.0	19.7	20.0	19.9
			25	0	0	19.4	19.7	19.8	19.5	19.7	19.8
			25	12	0	19.4	19.7	19.8	19.4	19.7	19.8
			25	25	0	19.4	19.7	19.8	19.4	19.7	19.8
			50	0	0	19.4	19.8	19.8	19.4	19.7	19.8
		64QAM	1	0	0	19.6	19.9	20.0	19.7	20.0	20.0
			1	25	0	19.4	19.7	19.8	19.6	19.8	19.8
			1	49	0	19.6	19.9	19.8	19.8	20.0	19.9
			25	0	0	19.5	19.8	19.8	19.5	19.8	19.8
			25	12	0	19.5	19.8	19.8	19.4	19.7	19.8
			25	25	0	19.4	19.8	19.8	19.4	19.7	19.8
			50	0	0	19.4	19.8	19.8	19.4	19.8	19.8

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Hotspot Back-off Reduced. Meas. Avg Pwr (dBm)			Proximity sensor Back-off Reduced. Meas. Avg Pwr (dBm)		
						1712.5 MHz	1745 MHz	1777.5 MHz	1712.5 MHz	1745 MHz	1777.5 MHz
LTE Band 66	5	QPSK	1	0	0	19.4	19.7	19.7	19.4	19.6	19.7
			1	12	0	19.4	19.7	19.7	19.4	19.7	19.9
			1	24	0	19.4	19.7	19.7	19.4	19.7	19.8
			12	0	0	19.4	19.7	19.7	19.4	19.7	19.7
			12	7	0	19.4	19.7	19.7	19.3	19.7	19.7
			12	13	0	19.4	19.7	19.7	19.4	19.7	19.7
			25	0	0	19.3	19.7	19.7	19.3	19.7	19.7
		16QAM	1	0	0	19.6	19.9	20.2	19.6	20.1	20.0
			1	12	0	19.5	20.0	20.2	19.7	20.2	20.0
			1	24	0	19.7	20.0	20.1	19.7	20.1	20.1
			12	0	0	19.5	19.7	19.8	19.5	19.7	19.8
			12	7	0	19.4	19.7	19.8	19.4	19.7	19.8
			12	13	0	19.4	19.7	19.7	19.4	19.7	19.9
			25	0	0	19.4	19.7	19.7	19.4	19.7	19.8
		64QAM	1	0	0	19.7	19.7	20.0	19.8	19.8	20.0
			1	12	0	19.4	19.9	19.9	19.6	20.0	19.8
			1	24	0	19.7	19.8	20.1	19.7	19.9	20.0
			12	0	0	19.3	19.6	19.8	19.3	19.7	19.8
			12	7	0	19.4	19.7	19.8	19.3	19.6	19.8
			12	13	0	19.4	19.7	19.8	19.4	19.7	19.8
			25	0	0	19.3	19.7	19.7	19.4	19.7	19.7

LTE Band 66 Measured Results (continued)

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Hotspot Back-off Reduced. Meas. Avg Pwr (dBm)			Proximity sensor Back-off Reduced. Meas. Avg Pwr (dBm)		
						1711.5 MHz	1745 MHz	1778.5 MHz	1711.5 MHz	1745 MHz	1778.5 MHz
LTE Band 66	3	QPSK	1	0	0	19.4	19.7	19.7	19.4	19.7	19.7
			1	8	0	19.6	19.6	19.9	19.6	19.6	19.9
			1	14	0	19.4	19.6	19.8	19.4	19.7	19.8
			8	0	0	19.3	19.6	19.7	19.4	19.7	19.7
			8	4	0	19.3	19.6	19.7	19.3	19.6	19.7
			8	7	0	19.3	19.6	19.7	19.3	19.6	19.7
			15	0	0	19.3	19.6	19.7	19.3	19.7	19.7
		16QAM	1	0	0	19.5	20.1	19.8	19.8	20.0	20.1
			1	8	0	19.9	20.0	20.0	20.0	20.1	20.1
			1	14	0	19.8	20.0	19.9	19.7	19.9	20.0
			8	0	0	19.4	19.7	19.7	19.3	19.7	19.8
			8	4	0	19.4	19.7	19.7	19.4	19.7	19.8
			8	7	0	19.4	19.7	19.8	19.3	19.7	19.8
			15	0	0	19.4	19.7	19.7	19.4	19.7	19.7
		64QAM	1	0	0	19.5	20.0	20.0	19.4	20.2	19.8
			1	8	0	19.6	20.2	19.7	19.6	20.2	19.8
			1	14	0	19.6	20.2	19.9	19.5	20.2	19.8
			8	0	0	19.4	19.7	19.7	19.3	19.7	19.7
			8	4	0	19.4	19.7	19.7	19.3	19.6	19.7
			8	7	0	19.4	19.7	19.7	19.3	19.7	19.7
			15	0	0	19.4	19.7	19.7	19.4	19.7	19.7

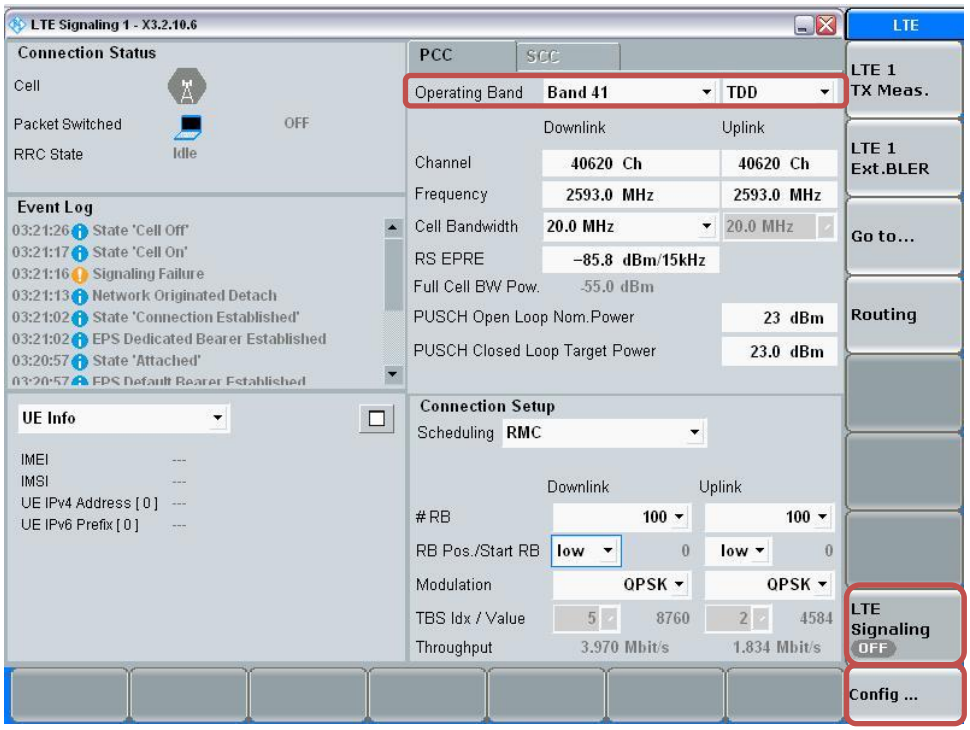
Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Hotspot Back-off Reduced. Meas. Avg Pwr (dBm)			Proximity sensor Back-off Reduced. Meas. Avg Pwr (dBm)		
						1710.7 MHz	1745 MHz	1779.3 MHz	1710.7 MHz	1745 MHz	1779.3 MHz
LTE Band 66	1.4	QPSK	1	0	0	19.4	19.7	19.8	19.5	19.7	19.8
			1	3	0	19.3	19.6	19.7	19.3	19.7	19.6
			1	5	0	19.4	19.7	19.8	19.4	19.7	19.7
			3	0	0	19.3	19.6	19.6	19.3	19.6	19.6
			3	1	0	19.2	19.6	19.6	19.3	19.6	19.6
			3	3	0	19.3	19.6	19.7	19.3	19.6	19.6
			6	0	0	19.3	19.6	19.7	19.3	19.6	19.6
		16QAM	1	0	0	19.5	20.0	20.0	19.8	20.2	19.8
			1	3	0	19.8	19.9	20.2	19.3	20.1	19.7
			1	5	0	19.4	19.8	20.2	19.7	20.1	19.9
			3	0	0	19.2	19.7	19.8	19.4	19.6	19.6
			3	1	0	19.2	19.7	19.9	19.3	19.7	19.6
			3	3	0	19.3	19.7	19.9	19.3	19.8	19.6
			6	0	0	19.4	19.7	19.7	19.3	19.6	19.7
		64QAM	1	0	0	19.6	20.2	20.0	19.6	19.6	20.1
			1	3	0	19.5	19.9	20.0	19.7	19.7	19.7
			1	5	0	19.5	20.0	19.9	19.5	19.8	19.6
			3	0	0	19.4	19.7	19.8	19.4	19.8	19.7
			3	1	0	19.5	19.8	19.8	19.5	19.8	19.7
			3	3	0	19.5	19.8	19.7	19.4	19.8	19.8
			6	0	0	19.4	19.8	19.7	19.4	19.6	19.8

LTE Band TDD Measured Results

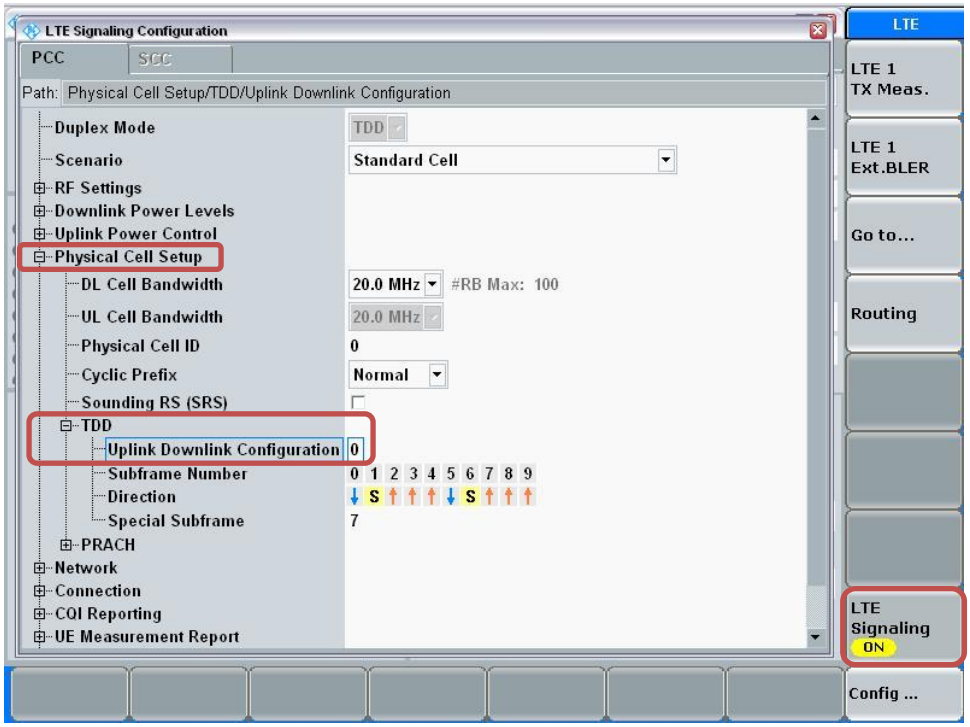
Procedure used to establish SAR test signal for LTE TDD Band

Set to CMW-500 with following parameters:

- Turn the LTE Signaling off using “ON | OFF” key
- Operating Band: Select Band 41 and TDD
- Go to “Config….”

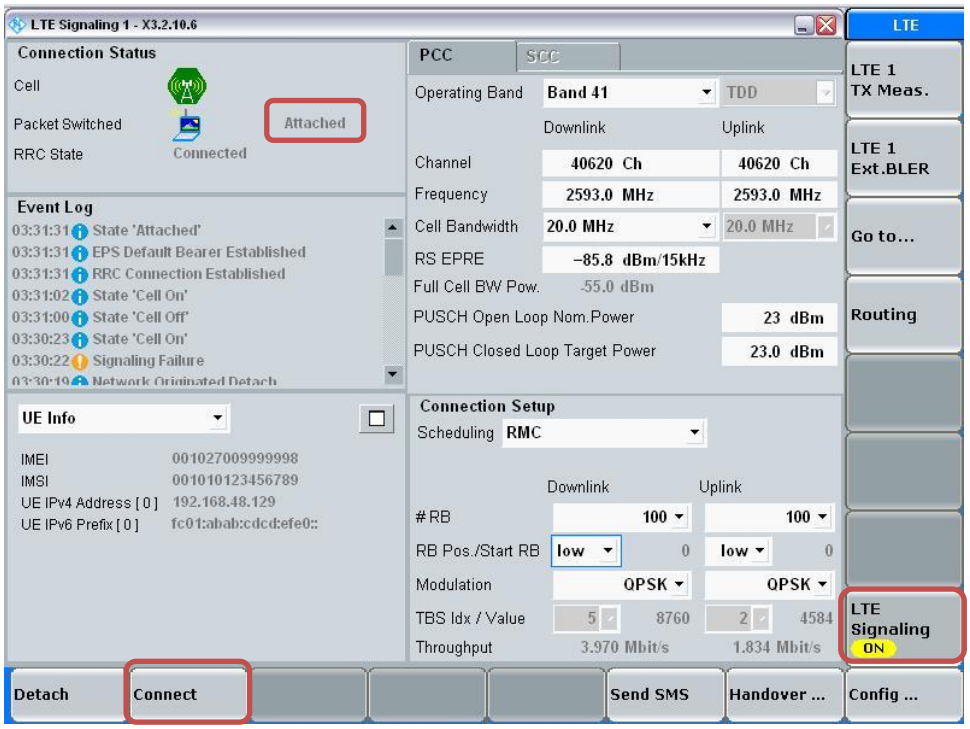


- Go to “Physical Cell Setup”
- Select “TDD” and Set “Uplink Downlink Configuration” to “0”
- Turn the cell on using “ON | OFF” key



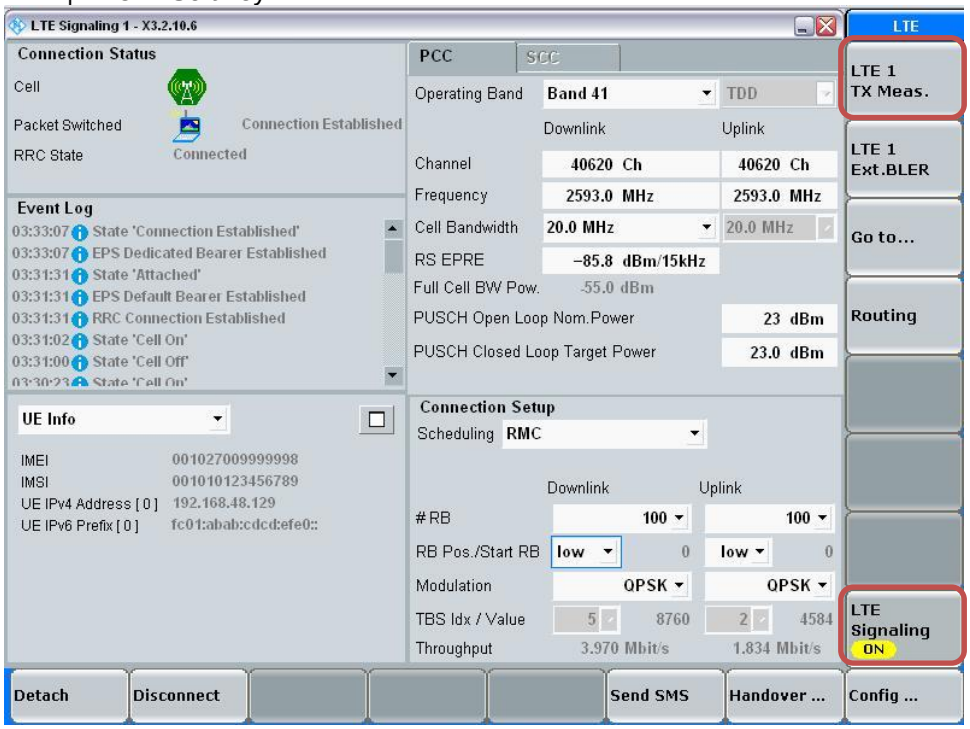
Connect to EUT

- Turn the cell on using “ON | OFF” key
- After EUT is Attached
- Select “Connect”

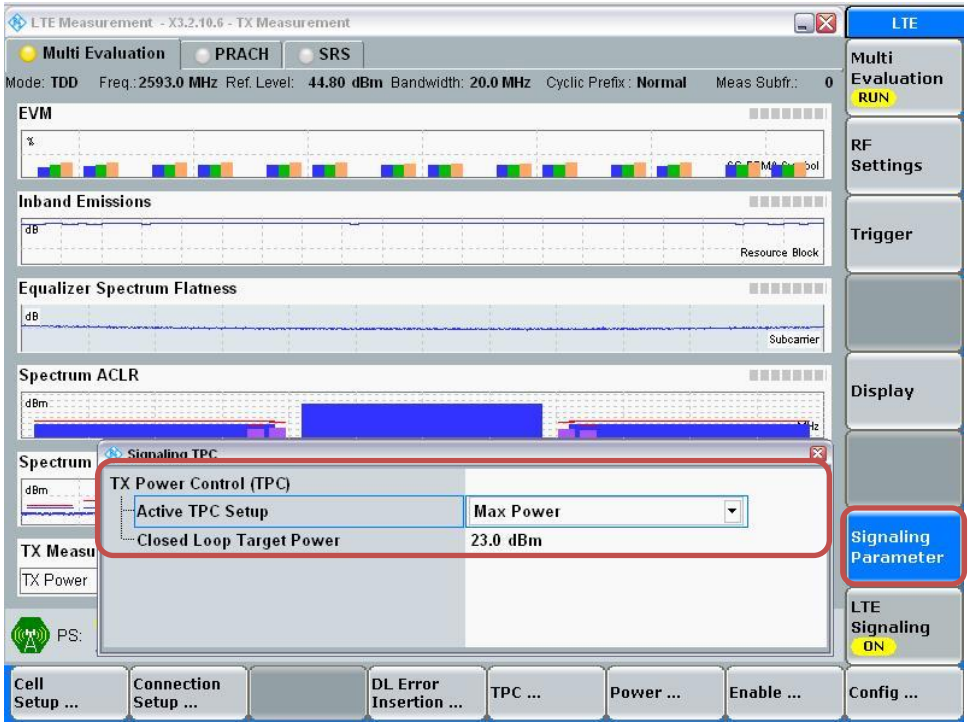


Max Power Setting

- Select “LTE 1 TX Meas.”
- Press “RESTART | STOP” Soft key

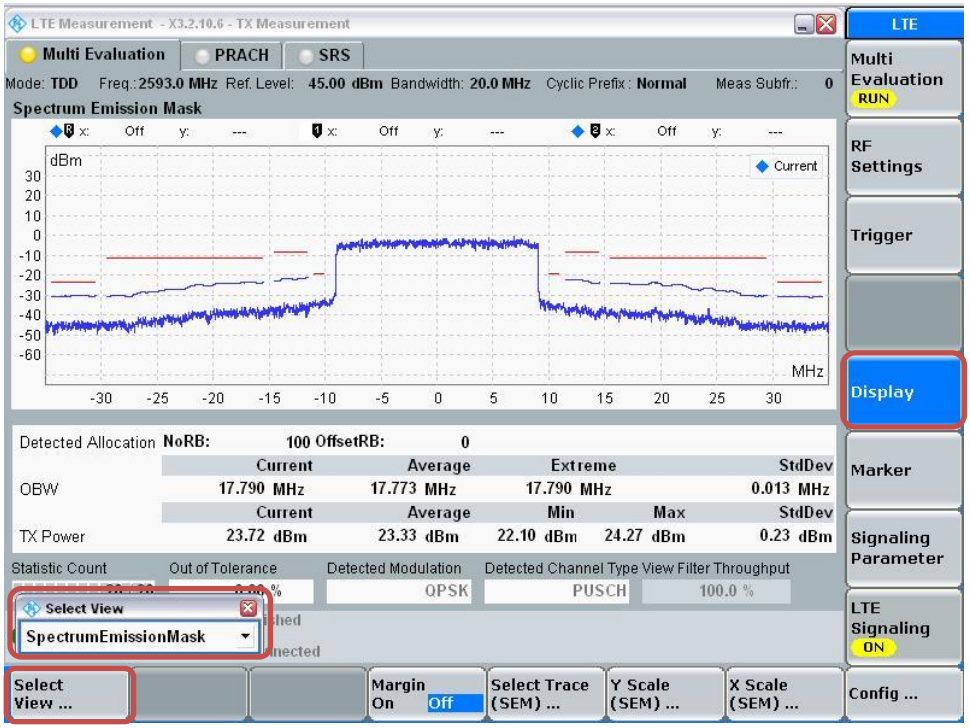


- Select “Signaling Parameter”
- Select “TX Power Control (TPC)” > Select “Active TPC Setup” to “Max Power” > Set “Closed Loop Target Power” to “23 dBm”



View TX Power

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



Max power Results

LTE Band 41 Measured Results

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Meas. Avg Pwr (dBm)				
						2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz
LTE Band 41	20	QPSK	1	0	0	23.0	22.8	22.9	23.1	23.3
			1	49	0	22.8	22.6	22.8	23.0	23.1
			1	99	0	22.8	22.6	22.7	22.9	22.9
			50	0	1	21.9	21.7	21.9	22.0	22.1
			50	24	1	21.9	21.6	21.8	22.0	22.1
			50	50	1	21.8	21.6	21.8	21.9	22.0
			100	0	1	21.8	21.6	21.8	22.0	22.1
		16QAM	1	0	1	22.1	21.7	22.0	22.0	22.2
			1	49	1	22.0	21.6	21.8	22.2	22.4
			1	99	1	21.9	21.8	21.8	22.0	21.9
			50	0	2	20.9	20.7	20.8	21.0	21.2
			50	24	2	20.9	20.7	20.9	20.9	21.1
			50	50	2	20.8	20.6	20.8	20.9	21.0
			100	0	2	20.9	20.6	20.8	20.9	21.0
		64QAM	1	0	2	21.1	21.0	20.8	21.0	21.2
			1	49	2	20.7	20.5	20.2	20.9	21.3
			1	99	2	20.9	20.7	20.6	20.9	21.2
			50	0	3	20.0	19.7	19.9	20.0	20.1
			50	24	3	19.9	19.6	19.8	19.9	20.0
			50	50	3	19.8	19.6	19.8	19.9	20.0
			100	0	3	19.8	19.6	19.8	19.9	20.1
Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Meas. Avg Pwr (dBm)				
						2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz
LTE Band 41	15	QPSK	1	0	0	22.9	22.8	22.8	23.1	23.1
			1	37	0	22.8	22.6	22.6	22.8	23.0
			1	74	0	22.8	22.5	22.7	22.9	23.0
			36	0	1	21.9	21.7	21.9	22.0	22.1
			36	20	1	21.9	21.6	21.8	22.0	22.1
			36	39	1	21.8	21.6	21.8	21.9	22.0
			75	0	1	21.9	21.7	21.9	22.0	22.1
		16QAM	1	0	1	22.1	21.7	21.9	21.9	22.2
			1	37	1	21.6	21.5	21.8	21.7	22.2
			1	74	1	21.7	21.4	21.6	21.8	22.2
			36	0	2	20.9	20.6	20.9	21.0	21.1
			36	20	2	20.9	20.6	20.8	21.0	21.1
			36	39	2	20.8	20.6	20.8	20.9	21.0
			75	0	2	20.9	20.7	20.9	21.0	21.1
		64QAM	1	0	2	20.4	20.6	20.9	20.8	21.1
			1	37	2	20.3	20.4	20.9	20.5	20.9
			1	74	2	20.2	20.4	21.1	20.5	21.0
			36	0	3	19.9	19.6	19.8	19.9	20.0
			36	20	3	19.8	19.5	19.7	19.9	20.0
			36	39	3	19.8	19.5	19.7	19.9	19.9
			75	0	3	19.9	19.6	19.8	20.0	20.1

LTE Band 41 Measured Results (continued)

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Meas. Avg Pwr (dBm)				
						2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz
LTE Band 41	10	QPSK	1	0	0	22.9	22.6	22.8	23.0	23.1
			1	25	0	22.9	22.4	22.8	23.0	22.9
			1	49	0	22.8	22.5	22.7	22.9	22.9
			25	0	1	21.9	21.7	21.8	22.0	22.1
			25	12	1	21.8	21.6	21.8	21.9	22.1
			25	25	1	21.8	21.6	21.8	21.9	22.0
			50	0	1	21.9	21.6	21.8	22.0	22.1
		16QAM	1	0	1	21.9	21.8	21.8	21.9	22.3
			1	25	1	21.7	21.7	21.7	21.8	22.1
			1	49	1	21.7	21.8	21.6	21.8	22.2
			25	0	2	20.9	20.7	20.8	21.0	21.1
			25	12	2	20.9	20.6	20.8	21.0	21.1
			25	25	2	20.9	20.6	20.8	21.0	21.0
			50	0	2	20.8	20.6	20.8	20.9	21.0
		64QAM	1	0	2	20.7	20.6	21.1	20.9	21.1
			1	25	2	20.6	20.4	20.9	20.7	20.9
			1	49	2	20.6	20.5	20.9	20.7	21.0
			25	0	3	19.9	19.7	19.9	20.0	20.1
			25	12	3	19.9	19.7	19.8	19.9	20.1
			25	25	3	19.9	19.6	19.8	19.9	20.1
			50	0	3	19.9	19.6	19.8	19.9	20.1

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Meas. Avg Pwr (dBm)				
						2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz
LTE Band 41	5	QPSK	1	0	0	22.9	22.6	22.8	23.0	23.1
			1	12	0	22.7	22.5	22.7	22.8	23.0
			1	24	0	22.8	22.6	22.7	22.9	23.0
			12	0	1	21.8	21.6	21.8	21.9	22.0
			12	7	1	21.8	21.6	21.8	21.9	22.0
			12	13	1	21.8	21.6	21.7	21.9	22.0
			25	0	1	21.8	21.6	21.8	21.9	22.0
		16QAM	1	0	1	21.8	21.5	21.8	21.9	21.9
			1	12	1	21.7	21.3	21.8	21.8	21.7
			1	24	1	21.7	21.5	21.8	21.8	21.8
			12	0	2	20.8	20.6	20.8	20.9	21.0
			12	7	2	20.8	20.6	20.8	20.8	21.0
			12	13	2	20.8	20.6	20.8	20.8	21.0
			25	0	2	20.8	20.6	20.7	20.9	21.0
		64QAM	1	0	2	21.0	20.7	20.8	21.1	21.1
			1	12	2	20.8	20.5	20.7	20.9	21.0
			1	24	2	20.8	20.6	20.8	20.9	20.9
			12	0	3	19.8	19.7	19.7	19.9	20.1
			12	7	3	19.8	19.6	19.7	19.9	20.1
			12	13	3	19.8	19.6	19.7	19.9	20.0
			25	0	3	19.8	19.6	19.7	19.9	20.1

Reduced power Results

LTE Band 41 Measured Results

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Hotspot Back-off Reduced. Meas. Avg Pwr (dBm)					Proximity sensor Back-off Reduced. Meas. Avg Pwr (dBm)				
						2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz	2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz
LTE Band 41	20	QPSK	1	0	0	19.9	19.7	19.9	20.1	20.1	19.9	19.7	19.9	20.0	20.2
			1	49	0	19.8	19.6	19.7	19.9	20.0	19.7	19.5	19.7	19.8	20.0
			1	99	0	19.8	19.5	19.6	19.7	19.9	19.7	19.5	19.7	19.8	19.9
			50	0	0	19.9	19.7	19.9	20.0	20.1	19.9	19.6	19.8	20.0	20.1
			50	24	0	19.8	19.6	19.8	19.9	20.0	19.9	19.6	19.8	19.9	20.0
			50	50	0	19.8	19.6	19.7	19.9	20.0	19.8	19.6	19.8	19.9	20.0
			100	0	0	19.8	19.6	19.8	20.0	20.1	19.8	19.6	19.8	19.9	20.0
		16QAM	1	0	0	20.1	19.7	20.0	20.2	20.3	20.1	20.0	20.4	20.4	20.1
			1	49	0	19.8	19.9	19.8	20.2	20.2	19.9	19.7	19.5	20.1	20.0
			1	99	0	19.9	19.9	19.6	20.1	20.3	19.8	19.8	19.7	19.9	20.1
			50	0	0	19.9	19.6	19.9	20.0	20.1	19.9	19.6	19.8	20.0	20.1
			50	24	0	19.8	19.6	19.8	19.9	20.0	19.9	19.6	19.8	19.9	20.0
			50	50	0	19.8	19.6	19.8	19.9	20.0	19.8	19.5	19.8	19.8	20.0
			100	0	0	19.8	19.6	19.8	19.9	20.1	19.9	19.6	19.8	19.9	20.0
		64QAM	1	0	0	20.0	19.7	20.0	19.8	20.2	19.7	19.9	19.6	19.6	20.6
			1	49	0	19.6	19.7	19.6	19.4	19.9	20.1	19.5	19.1	19.8	19.9
			1	99	0	19.7	19.6	19.7	19.8	19.9	19.5	19.7	19.4	19.4	19.9
			50	0	0	19.9	19.7	19.9	20.0	20.1	19.9	19.6	19.8	20.1	20.1
			50	24	0	19.9	19.6	19.8	20.0	20.0	19.8	19.6	19.9	19.9	20.0
			50	50	0	19.8	19.6	19.8	19.9	20.0	19.8	19.5	19.8	19.9	20.0
			100	0	0	19.8	19.6	19.8	19.9	20.1	19.8	19.6	19.8	19.9	20.0

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Hotspot Back-off Reduced. Meas. Avg Pwr (dBm)					Proximity sensor Back-off Reduced. Meas. Avg Pwr (dBm)				
						2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz	2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz
LTE Band 41	15	QPSK	1	0	0	19.9	19.6	19.9	19.9	20.1	19.8	19.6	19.9	20.0	20.1
			1	37	0	19.7	19.4	19.7	19.8	19.9	19.8	19.4	19.6	19.7	19.9
			1	74	0	19.7	19.5	19.7	19.8	19.8	19.7	19.4	19.6	19.8	19.8
			36	0	0	19.8	19.6	19.8	20.0	20.1	19.8	19.6	19.8	20.0	20.0
			36	20	0	19.8	19.6	19.8	19.9	20.0	19.8	19.6	19.7	19.9	20.0
			36	39	0	19.8	19.6	19.7	19.9	20.0	19.7	19.5	19.7	19.9	20.0
			75	0	0	19.9	19.6	19.8	20.0	20.1	19.8	19.6	19.8	20.0	20.1
		16QAM	1	0	0	19.8	19.5	19.8	19.9	20.2	20.2	19.7	19.9	20.0	20.1
			1	37	0	19.6	19.6	19.7	19.6	19.9	19.8	19.5	19.5	19.9	19.9
			1	74	0	19.6	19.5	19.8	19.8	20.2	19.8	19.5	19.5	19.9	19.9
			36	0	0	19.9	19.6	19.8	20.0	20.1	19.8	19.6	19.8	19.9	20.0
			36	20	0	19.8	19.5	19.8	20.0	20.0	19.7	19.6	19.8	19.9	20.0
			36	39	0	19.8	19.6	19.8	19.9	20.0	19.7	19.6	19.8	19.9	20.0
			75	0	0	19.9	19.7	19.8	20.0	20.1	19.9	19.6	19.8	20.0	20.1
		64QAM	1	0	0	19.9	19.9	19.4	20.2	20.4	19.4	19.7	19.8	19.8	20.4
			1	37	0	19.7	19.6	19.3	20.0	19.9	19.2	19.7	20.0	19.7	19.8
			1	74	0	20.0	19.6	19.3	19.8	20.1	19.5	19.5	19.7	19.6	20.4
			36	0	0	19.9	19.5	19.8	20.0	20.0	19.8	19.6	19.8	19.9	20.0
			36	20	0	19.8	19.5	19.7	19.9	20.0	19.8	19.5	19.7	19.9	19.9
			36	39	0	19.8	19.5	19.7	19.9	19.9	19.8	19.5	19.7	19.9	19.9
			75	0	0	19.9	19.6	19.8	19.9	20.0	19.9	19.6	19.8	19.9	20.1

LTE Band 41 Measured Results (continued)

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Hotspot Back-off Reduced. Meas. Avg Pwr (dBm)					Proximity sensor Back-off Reduced. Meas. Avg Pwr (dBm)				
						2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz	2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz
LTE Band 41	10	QPSK	1	0	0	19.9	19.6	19.9	20.0	20.1	19.8	19.6	19.8	19.9	20.1
			1	25	0	19.9	19.4	19.9	19.9	19.9	19.7	19.6	19.8	19.8	20.0
			1	49	0	19.7	19.5	19.8	19.9	19.9	19.7	19.5	19.7	19.8	19.9
			25	0	0	19.9	19.6	19.8	20.0	20.1	19.8	19.6	19.8	19.9	20.1
			25	12	0	19.8	19.6	19.8	19.9	20.0	19.8	19.6	19.8	19.9	20.0
			25	25	0	19.8	19.6	19.7	19.9	20.0	19.8	19.6	19.7	19.9	20.0
			50	0	0	19.8	19.6	19.8	19.9	20.0	19.8	19.6	19.8	19.9	20.0
		16QAM	1	0	0	20.0	19.9	19.7	19.9	20.4	20.1	19.6	19.8	20.1	20.0
			1	25	0	19.8	19.8	19.7	19.8	20.3	20.0	19.4	19.7	20.0	19.9
			1	49	0	19.9	19.8	19.6	19.8	20.3	20.0	19.5	19.7	20.0	19.9
			25	0	0	19.9	19.7	19.8	20.0	20.1	19.9	19.6	19.8	20.0	20.1
			25	12	0	19.9	19.6	19.8	19.9	20.1	19.9	19.6	19.8	19.9	20.0
			25	25	0	19.9	19.6	19.8	19.9	20.1	19.9	19.6	19.8	19.9	20.0
			50	0	0	19.9	19.6	19.8	19.9	20.0	19.8	19.6	19.8	19.9	20.0
		64QAM	1	0	0	20.1	19.5	19.7	20.2	19.9	19.8	19.6	19.9	19.8	20.0
			1	25	0	19.9	19.3	19.6	20.0	19.7	19.7	19.4	19.8	19.7	19.8
			1	49	0	19.9	19.5	19.6	20.0	19.8	19.6	19.5	19.8	19.6	19.8
			25	0	0	19.9	19.7	19.8	20.0	20.1	19.9	19.6	19.8	19.9	20.1
			25	12	0	19.9	19.6	19.8	20.0	20.1	19.8	19.6	19.8	19.9	20.0
			25	25	0	19.8	19.6	19.8	19.9	20.0	19.8	19.6	19.8	19.9	20.0
			50	0	0	19.9	19.6	19.8	20.0	20.1	19.9	19.6	19.8	19.9	20.0

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Hotspot Back-off Reduced. Meas. Avg Pwr (dBm)					Proximity sensor Back-off Reduced. Meas. Avg Pwr (dBm)				
						2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz	2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz
LTE Band 41	5	QPSK	1	0	0	19.8	19.6	19.8	20.0	20.0	20.0	19.6	19.9	20.1	20.1
			1	12	0	19.7	19.5	19.7	19.8	19.9	19.9	19.7	19.9	20.1	20.1
			1	24	0	19.8	19.5	19.7	19.8	19.9	19.9	19.6	19.9	20.0	20.0
			12	0	0	19.8	19.6	19.8	19.9	20.0	19.9	19.7	19.9	20.0	20.1
			12	7	0	19.8	19.6	19.7	19.9	20.0	19.9	19.7	19.9	20.0	20.1
			12	13	0	19.8	19.6	19.7	19.9	20.0	19.9	19.7	19.8	20.0	20.1
			25	0	0	19.8	19.6	19.7	19.9	20.0	19.9	19.7	19.9	20.0	20.1
		16QAM	1	0	0	19.7	19.7	19.9	19.8	20.1	20.0	19.9	20.1	20.2	20.2
			1	12	0	19.6	19.6	19.7	19.6	20.0	19.8	19.7	20.1	20.0	20.2
			1	24	0	19.8	19.7	19.9	19.8	20.0	19.8	19.7	20.0	20.1	20.2
			12	0	0	19.8	19.5	19.7	20.0	20.0	19.9	19.7	19.9	20.0	20.1
			12	7	0	19.8	19.5	19.8	19.9	20.0	19.9	19.7	19.9	19.9	20.2
			12	13	0	19.8	19.5	19.7	19.9	20.0	19.9	19.7	19.9	19.9	20.1
			25	0	0	19.8	19.6	19.7	19.9	20.0	19.9	19.7	19.8	19.9	20.2
		64QAM	1	0	0	19.8	19.6	19.8	20.0	20.1	19.9	19.6	19.7	20.0	20.0
			1	12	0	19.6	19.5	19.7	19.8	19.9	19.8	19.5	19.5	19.9	19.9
			1	24	0	19.7	19.5	19.8	19.8	20.0	19.8	19.6	19.5	20.0	20.0
			12	0	0	19.8	19.6	19.8	20.0	20.0	19.8	19.5	19.8	19.9	20.0
			12	7	0	19.8	19.5	19.7	20.0	20.0	19.8	19.5	19.8	19.8	20.0
			12	13	0	19.8	19.5	19.7	20.0	20.0	19.7	19.5	19.8	19.8	19.9
			25	0	0	19.8	19.5	19.7	19.9	20.0	19.8	19.5	19.8	19.9	20.0

9.4 Wi-Fi 2.4 GHz (DTS Band)

Measured Results

Antenna	Mode	Data Rate	Ch #	Freq. (MHz)	Meas. Avg Pwr (dBm)	Max Output Power (dBm)	SAR Test (Yes/No)	Meas. Avg Pwr (dBm)	Reduced. Output Power (dBm)	SAR Test (Yes/No)
SISO Ant.1	802.11b	1 Mbps	1	2412.0	18.3	19.0	Yes	15.8	16.0	Yes
			6	2437.0	18.2			15.6		
			11	2462.0	18.1			15.8		
			12	2467.0	3.1	3.5	No	3.1	3.5	No
			13	2472.0	0.4	1.5		0.4	1.5	
	802.11g	6 Mbps	1	2412.0	Not Required	16.0	No	15.9	16.0	No
			6	2437.0				15.9		
			11	2462.0		15.0		14.6	15.0	
			12	2467.0		3.5		3.0	3.5	
			13	2472.0		1.5		1.4	1.5	
	802.11n (HT20)	6.5 Mbps	1	2412.0	Not Required	16.0	No	15.9	16.0	No
			6	2437.0				15.9		
			11	2462.0		15.0		14.6	15.0	
			12	2467.0		3.5		2.4	3.5	
			13	2472.0		1.5		0.8	1.5	
	802.11ax (HE20)	7.3 Mbps	1	2412.0	Not Required	16.0	No	15.6	16.0	No
			6	2437.0				15.7		
			11	2462.0		14.0		13.6	14.0	
			12	2467.0		3.5		3.3	3.5	
			13	2472.0		1.5		1.1	1.5	
Antenna	Mode	Data Rate	Ch #	Freq. (MHz)	Meas. Avg Pwr (dBm)	Max Output Power (dBm)	SAR Test (Yes/No)	Meas. Avg Pwr (dBm)	Reduced. Output Power (dBm)	SAR Test (Yes/No)
SISO Ant.2	802.11b	1 Mbps	1	2412.0	18.2	19.0	Yes	15.7	16.0	Yes
			6	2437.0	18.5			15.7		
			11	2462.0	18.0			15.2		
			12	2467.0	3.2	3.5	No	3.2	3.5	No
			13	2472.0	1.1	1.5		1.1	1.5	
	802.11g	6 Mbps	1	2412.0	Not Required	16.0	No	15.7	16.0	No
			6	2437.0				15.9		
			11	2462.0		15.0		14.6	15.0	
			12	2467.0		3.5		3.2	3.5	
			13	2472.0		1.5		0.9	1.5	
	802.11n (HT20)	6.5 Mbps	1	2412.0	Not Required	16.0	No	15.8	16.0	No
			6	2437.0				15.6		
			11	2462.0		15.0		14.7	15.0	
			12	2467.0		3.5		3.1	3.5	
			13	2472.0		1.5		0.9	1.5	
	802.11ax (HE20)	7.3 Mbps	1	2412.0	Not Required	16.0	No	15.7	16.0	No
			6	2437.0				15.9		
			11	2462.0		14.0		13.6	14.0	
			12	2467.0		3.5		3.1	3.5	
			13	2472.0		1.5		1.2	1.5	

Note(s):

1. SAR is not required for 802.11g/n modes when the adjusted SAR for 802.11b is < 1.2 W/kg.
2. For “Not required”, 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.
3. Additionally, SAR is not required for Channels 12 and 13 because the tune-up limit and the measured output power for these two channels are no greater than those for the default test channels. Refer to §6.3.

Measured Results of RSDB operation

Antenna	Mode	Data Rate	Ch #	Freq. (MHz)	Meas. Avg Pwr (dBm)	Max Output Power (dBm)	SAR Test (Yes/No)	Meas. Avg Pwr (dBm)	Reduced. Output Power (dBm)	SAR Test (Yes/No)
SISO Ant.1	802.11b	1 Mbps	1	2412.0	15.8	16.0	Yes	13.6	14.0	Yes
			6	2437.0	15.6			13.9		
			11	2462.0	15.8			13.8		
			12	2467.0	3.1	3.5	No	3.1	3.5	No
			13	2472.0	0.4	1.5		0.4	1.5	
	802.11g	6 Mbps	1	2412.0	15.9	16.0	No	13.6	14.0	No
			6	2437.0	15.9			13.5		
			11	2462.0	14.6	15.0		13.9		
			12	2467.0	3.0	3.5		3.0	3.5	
			13	2472.0	1.4	1.5		1.4	1.5	
	802.11n (HT20)	6.5 Mbps	1	2412.0	15.9	16.0	No	13.7	14.0	No
			6	2437.0	15.9			13.6		
			11	2462.0	14.6	15.0		13.5		
			12	2467.0	2.4	3.5		2.4	3.5	
			13	2472.0	0.8	1.5		0.8	1.5	
	802.11ax (HE20)	7.3 Mbps	1	2412.0	15.6	16.0	No	13.7	14.0	No
			6	2437.0	15.7			13.6		
			11	2462.0	13.6	14.0		13.6		
			12	2467.0	3.3	3.5		3.3	3.5	
			13	2472.0	1.1	1.5		1.1	1.5	

Antenna	Mode	Data Rate	Ch #	Freq. (MHz)	Meas. Avg Pwr (dBm)	Max Output Power (dBm)	SAR Test (Yes/No)	Meas. Avg Pwr (dBm)	Reduced. Output Power (dBm)	SAR Test (Yes/No)
SISO Ant.2	802.11b	1 Mbps	1	2412.0	15.7	16.0	Yes	13.7	14.0	Yes
			6	2437.0	15.7			13.7		
			11	2462.0	15.2			13.7		
			12	2467.0	3.2	3.5	No	3.2	3.5	No
			13	2472.0	1.1	1.5		1.1	1.5	
	802.11g	6 Mbps	1	2412.0	15.7	16.0	No	13.8	14.0	No
			6	2437.0	15.9			13.9		
			11	2462.0	14.6	15.0		13.7		
			12	2467.0	3.2	3.5		3.2	3.5	
			13	2472.0	0.9	1.5		0.9	1.5	
	802.11n (HT20)	6.5 Mbps	1	2412.0	15.8	16.0	No	13.9	14.0	No
			6	2437.0	15.6			13.4		
			11	2462.0	14.7	15.0		13.9		
			12	2467.0	3.1	3.5		3.1	3.5	
			13	2472.0	0.9	1.5		0.9	1.5	
	802.11ax (HE20)	7.3 Mbps	1	2412.0	15.7	16.0	No	13.4	14.0	No
			6	2437.0	15.9			13.8		
			11	2462.0	13.6	14.0		13.6		
			12	2467.0	3.1	3.5		3.1	3.5	
			13	2472.0	1.2	1.5		1.2	1.5	

Antenna	Mode	Data Rate	Ch #	Freq. (MHz)	Meas. Avg Pwr (dBm)	Max Output Power (dBm)	SAR Test (Yes/No)	Meas. Avg Pwr (dBm)	Reduced. Output Power (dBm)	SAR Test (Yes/No)
MIMO Ant.1	802.11n (HT20)	6.5 Mbps	1	2412.0	15.0	16.0	Yes	13.5	14.0	Yes
			6	2437.0	15.1			13.3		
			11	2462.0	14.0	15.0		13.2		
			12	2467.0	2.3	3.5		2.3	3.5	
			13	2472.0	0.5	1.5		0.5	1.5	
	802.11ax (HE20)	7.3 Mbps	1	2412.0	15.0	16.0	No	13.3	14.0	No
			6	2437.0	15.0			13.4		
			11	2462.0	13.3	14.0		13.3		
			12	2467.0	2.2	3.5		2.2	3.5	
			13	2472.0	0.2	1.5		0.2	1.5	

Antenna	Mode	Data Rate	Ch #	Freq. (MHz)	Meas. Avg Pwr (dBm)	Max Output Power (dBm)	SAR Test (Yes/No)	Meas. Avg Pwr (dBm)	Reduced. Output Power (dBm)	SAR Test (Yes/No)
MIMO Ant.2	802.11n (HT20)	6.5 Mbps	1	2412.0	15.4	16.0	Yes	13.8	14.0	Yes
			6	2437.0	15.5			13.7		
			11	2462.0	14.4	15.0		13.7		
			12	2467.0	3.0	3.5		3.0	3.5	
			13	2472.0	1.0	1.5		1.0	1.5	
	802.11ax (HE20)	7.3 Mbps	1	2412.0	15.3	16.0	No	13.7	14.0	No
			6	2437.0	15.4			13.6		
			11	2462.0	13.9	14.0		13.6		
			12	2467.0	3.0	3.5		3.0	3.5	
			13	2472.0	1.3	1.5		1.3	1.5	

Note(s):

1_SAR is not required for 802.11g/n/ax modes when the adjusted SAR for 802.11b is < 1.2 W/kg.

2_For “Not required”, 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/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.

3_Additionally, SAR is not required for Channels 12 and 13 because the tune-up limit and the measured output power for these two channels are no greater than those for the default test channels. Refer to §6.3.

9.5 Wi-Fi 5GHz (U-NII Bands)

Measured Results of SISO Ant.1

Antenna	Band (GHz)	Mode	Data Rate	Ch #	Freq. (MHz)	Max Pwr.			Reduction Pwr.		
						Avg Pwr (dBm)	Max Output Power (dBm)	SAR Test (Yes/No)	Avg Pwr (dBm)	Max Output Power (dBm)	SAR Test (Yes/No)
SISO Ant 1	5.2 (U-NII 1)	802.11a	6 Mbps	36	5180.0	Not Required	15.0	No	Not Required	13.0	No
				40	5200.0						
				44	5220.0						
				48	5240.0						
		802.11n (HT20)	6.5 Mbps	36	5180.0	Not Required	15.0	No	Not Required	13.0	No
				40	5200.0						
				44	5220.0						
				48	5240.0						
		802.11n (HT40)	13.5 Mbps	38	5190.0	14.3	15.0	Yes	Not Required	13.0	No
				46	5230.0	14.3					
		802.11ac (VHT20)	6.5 Mbps	36	5180.0	Not Required	15.0	No	Not Required	13.0	No
				40	5200.0						
				44	5220.0						
				48	5240.0						
		802.11ac (VHT40)	13.5 Mbps	38	5190.0	14.6	15.0	No	Not Required	13.0	No
				46	5230.0	14.6					
		802.11ac (VHT80)	29.3 Mbps	42	5210.0	Not Required	14.0	No	12.5	13.0	Yes
		802.11ax (HE20)	7.3 Mbps	36	5180.0	Not Required	15.0	No	Not Required	13.0	No
				40	5200.0						
				44	5220.0						
				48	5240.0						
		802.11ax (HE40)	14.6 Mbps	38	5190.0	14.2	15.0	No	Not Required	13.0	No
				46	5230.0	14.2					
		802.11ax (HE80)	30.6 Mbps	42	5210.0	Not Required	14.0	No	12.4	13.0	No
	5.3 (U-NII 2A)	802.11a	6 Mbps	52	5260.0	Not Required	15.0	No	Not Required	13.0	No
				56	5280.0						
				60	5300.0						
				64	5320.0						
		802.11n (HT20)	6.5 Mbps	52	5260.0	Not Required	15.0	No	Not Required	13.0	No
				56	5280.0						
				60	5300.0						
				64	5320.0						
		802.11n (HT40)	13.5 Mbps	54	5270.0	14.8	15.0	Yes	Not Required	13.0	No
				62	5310.0	14.8					
		802.11ac (VHT20)	6.5 Mbps	52	5260.0	Not Required	15.0	No	Not Required	13.0	No
				56	5280.0						
				60	5300.0						
				64	5320.0						
		802.11ac (VHT40)	13.5 Mbps	54	5270.0	14.6	15.0	No	Not Required	13.0	No
				62	5310.0	14.7					
		802.11ac (VHT80)	29.3 Mbps	58	5290.0	Not Required	14.0	No	12.5	13.0	Yes
		802.11ax (HE20)	7.3 Mbps	52	5260.0	Not Required	15.0	No	Not Required	13.0	No
				56	5280.0						
				60	5300.0						
				64	5320.0						
		802.11ax (HE40)	14.6 Mbps	54	5270.0	14.4	15.0	No	Not Required	13.0	No
				62	5310.0	14.3					
		802.11ax (HE80)	30.6 Mbps	58	5290.0	Not Required	14.0	No	12.4	13.0	No

Measured Results of SISO Ant.1 (Continued)

Antenna	Band (GHz)	Mode	Data Rate	Ch #	Freq. (MHz)	Max Pwr.			Reduction Pwr.		
						Avg Pwr (dBm)	Max Output Power (dBm)	SAR Test (Yes/No)	Avg Pwr (dBm)	Max Output Power (dBm)	SAR Test (Yes/No)
SISO Ant 1	5.5 (U-NII 2C)	802.11a	6 Mbps	100	5500.0	15.6	16.0	Yes	Not Required	13.0	No
				120	5600.0	15.8					
				124	5620.0	15.8					
				144	5720.0	15.6					
		802.11n (HT20)	6.5 Mbps	100	5500.0	15.5	16.0	No	Not Required	13.0	No
				120	5600.0	15.8					
				124	5620.0	15.7					
				144	5720.0	15.6					
		802.11n (HT40)	13.5 Mbps	102	5510.0	Not Required	15.0	No	Not Required	13.0	No
				118	5590.0						
				126	5630.0						
				142	5710.0						
		802.11ac (VHT20)	6.5 Mbps	100	5500.0	15.8	16.0	No	Not Required	13.0	No
				120	5600.0	15.8					
				124	5620.0	15.8					
				144	5720.0	15.9					
		802.11ac (VHT40)	13.5 Mbps	102	5510.0	Not Required	15.0	No	Not Required	13.0	No
				118	5590.0						
				126	5630.0						
				142	5710.0						
		802.11ac (VHT80)	29.3 Mbps	106	5530.0	Not Required	14.0	No	13.0	13.0	Yes
				122	5610.0				12.7		
				138	5690.0				12.8		
		802.11ax (HE20)	7.3 Mbps	100	5500.0	15.6	16.0	No	Not Required	13.0	No
				120	5600.0	15.7					
				124	5620.0	15.7					
				144	5720.0	15.5					
		802.11ax (HE40)	14.6 Mbps	102	5510.0	Not Required	15.0	No	Not Required	13.0	No
				118	5590.0						
				126	5630.0						
				142	5710.0						
		802.11ax (HE80)	30.6 Mbps	106	5530.0	Not Required	14.0	No	12.3	13.0	No
				122	5610.0				12.7		
				138	5690.0				12.8		
	5.8 (U-NII 3)	802.11a	6 Mbps	149	5745.0	16.5	17.0	Yes	Not Required	13.0	No
				157	5785.0	16.5					
				165	5825.0	16.5					
		802.11n (HT20)	6.5 Mbps	149	5745.0	16.5	17.0	No	Not Required	13.0	No
				157	5785.0	16.5					
				165	5825.0	16.4					
		802.11n (HT40)	13.5 Mbps	151	5755.0	Not Required	15.0	No	Not Required	13.0	No
				159	5795.0						
		802.11ac (VHT20)	6.5 Mbps	149	5745.0	16.8	17.0	No	Not Required	13.0	No
				157	5785.0	16.8					
				165	5825.0	16.7					
		802.11ac (VHT40)	13.5 Mbps	151	5755.0	Not Required	15.0	No	Not Required	13.0	No
				159	5795.0						
		802.11ac (VHT80)	29.3 Mbps	155	5775.0	Not Required	14.0	No	12.7	13.0	Yes
		802.11ax (HE20)	7.3 Mbps	149	5745.0	16.4	17.0	No	Not Required	13.0	No
				157	5785.0	16.4					
				165	5825.0	16.4					
		802.11ax (HE40)	14.6 Mbps	151	5755.0	Not Required	15.0	No	Not Required	13.0	No
				159	5795.0						
		802.11ax (HE80)	30.6 Mbps	155	5775.0	Not Required	14.0	No	12.6	13.0	No

Measured Results of SISO Ant.2

Antenna	Band (GHz)	Mode	Data Rate	Ch #	Freq. (MHz)	Max Pwr.			Reduction Pwr.		
						Avg Pwr (dBm)	Max Output Power (dBm)	SAR Test (Yes/No)	Avg Pwr (dBm)	Max Output Power (dBm)	SAR Test (Yes/No)
SISO Ant 2	5.2 (U-NII 1)	802.11a	6 Mbps	36	5180.0	Not Required	15.0	No	Not Required	13.0	No
				40	5200.0						
				44	5220.0						
				48	5240.0						
		802.11n (HT20)	6.5 Mbps	36	5180.0	Not Required	15.0	No	Not Required	13.0	No
				40	5200.0						
				44	5220.0						
				48	5240.0						
		802.11n (HT40)	13.5 Mbps	38	5190.0	13.9	15.0	Yes	Not Required	13.0	No
				46	5230.0	13.9					
		802.11ac (VHT20)	6.5 Mbps	36	5180.0	Not Required	15.0	No	Not Required	13.0	No
				40	5200.0						
				44	5220.0						
				48	5240.0						
		802.11ac (VHT40)	13.5 Mbps	38	5190.0	14.9	15.0	No	Not Required	13.0	No
				46	5230.0	14.9					
		802.11ac (VHT80)	29.3 Mbps	42	5210.0	Not Required	14.0	No	12.7	13.0	Yes
		802.11ax (HE20)	7.3 Mbps	36	5180.0	Not Required	15.0	No	Not Required	13.0	No
				40	5200.0						
				44	5220.0						
				48	5240.0						
		802.11ax (HE40)	14.6 Mbps	38	5190.0	13.8	15.0	No	Not Required	13.0	No
				46	5230.0	13.8					
		802.11ax (HE80)	30.6 Mbps	42	5210.0	Not Required	14.0	No	12.6	13.0	No
	5.3 (U-NII 2A)	802.11a	6 Mbps	52	5260.0	Not Required	15.0	No	Not Required	13.0	No
				56	5280.0						
				60	5300.0						
				64	5320.0						
		802.11n (HT20)	6.5 Mbps	52	5260.0	Not Required	15.0	No	Not Required	13.0	No
				56	5280.0						
				60	5300.0						
				64	5320.0						
		802.11n (HT40)	13.5 Mbps	54	5270.0	14.3	15.0	Yes	Not Required	13.0	No
				62	5310.0	14.4					
		802.11ac (VHT20)	6.5 Mbps	52	5260.0	Not Required	15.0	No	Not Required	13.0	No
				56	5280.0						
				60	5300.0						
				64	5320.0						
		802.11ac (VHT40)	13.5 Mbps	54	5270.0	14.9	15.0	No	Not Required	13.0	No
				62	5310.0	15.0					
		802.11ac (VHT80)	29.3 Mbps	58	5290.0	Not Required	14.0	No	12.6	13.0	Yes
		802.11ax (HE20)	7.3 Mbps	52	5260.0	Not Required	15.0	No	Not Required	13.0	No
				56	5280.0						
				60	5300.0						
				64	5320.0						
		802.11ax (HE40)	14.6 Mbps	54	5270.0	13.9	15.0	No	Not Required	13.0	No
				62	5310.0	13.8					
		802.11ax (HE80)	30.6 Mbps	58	5290.0	Not Required	14.0	No	12.4	13.0	No

Measured Results of SISO Ant.2 (Continued)

Antenna	Band (GHz)	Mode	Data Rate	Ch #	Freq. (MHz)	Max Pwr.			Reduction Pwr.		
						Avg Pwr (dBm)	Max Output Power (dBm)	SAR Test (Yes/No)	Avg Pwr (dBm)	Max Output Power (dBm)	SAR Test (Yes/No)
SISO Ant 2	5.5 (U-NII 2C)	802.11a	6 Mbps	100	5500.0	15.4	16.0	Yes	Not Required	13.0	No
				120	5600.0	15.5					
				124	5620.0	15.5					
				144	5720.0	15.5					
		802.11n (HT20)	6.5 Mbps	100	5500.0	15.3	16.0	No	Not Required	13.0	No
				120	5600.0	15.5					
				124	5620.0	15.5					
				144	5720.0	15.4					
		802.11n (HT40)	13.5 Mbps	102	5510.0	Not Required	15.0	No	Not Required	13.0	No
				118	5590.0						
				126	5630.0						
				142	5710.0						
		802.11ac (VHT20)	6.5 Mbps	100	5500.0	15.9	16.0	No	Not Required	13.0	No
				120	5600.0	15.5					
				124	5620.0	15.6					
				144	5720.0	15.5					
		802.11ac (VHT40)	13.5 Mbps	102	5510.0	Not Required	15.0	No	Not Required	13.0	No
				118	5590.0						
				126	5630.0						
				142	5710.0						
		802.11ac (VHT80)	29.3 Mbps	106	5530.0	Not Required	14.0	No	13.0	13.0	Yes
				122	5610.0				12.6		
				138	5690.0				12.7		
		802.11ax (HE20)	7.3 Mbps	100	5500.0	15.0	16.0	No	Not Required	13.0	No
				120	5600.0	14.7					
				124	5620.0	14.8					
				144	5720.0	14.9					
		802.11ax (HE40)	14.6 Mbps	102	5510.0	Not Required	15.0	No	Not Required	13.0	No
				118	5590.0						
				126	5630.0						
				142	5710.0						
		802.11ax (HE80)	30.6 Mbps	106	5530.0	Not Required	14.0	No	12.9	13.0	No
				122	5610.0				12.6		
				138	5690.0				12.5		
	5.8 (U-NII 3)	802.11a	6 Mbps	149	5745.0	16.5	17.0	Yes	Not Required	13.0	No
				157	5785.0	16.5					
				165	5825.0	16.4					
		802.11n (HT20)	6.5 Mbps	149	5745.0	16.5	17.0	No	Not Required	13.0	No
				157	5785.0	16.5					
				165	5825.0	16.4					
		802.11n (HT40)	13.5 Mbps	151	5755.0	Not Required	15.0	No	Not Required	13.0	No
				159	5795.0						
		802.11ac (VHT20)	6.5 Mbps	149	5745.0	16.6	17.0	No	Not Required	13.0	No
				157	5785.0	16.6					
				165	5825.0	16.5					
		802.11ac (VHT40)	13.5 Mbps	151	5755.0	Not Required	15.0	No	Not Required	13.0	No
				159	5795.0						
		802.11ac (VHT80)	29.3 Mbps	155	5775.0	Not Required	14.0	No	12.6	13.0	Yes
		802.11ax (HE20)	7.3 Mbps	149	5745.0	16.4	17.0	No	Not Required	13.0	No
				157	5785.0	16.4					
				165	5825.0	16.4					
		802.11ax (HE40)	14.6 Mbps	151	5755.0	Not Required	15.0	No	Not Required	13.0	No
				159	5795.0						
		802.11ax (HE80)	30.6 Mbps	155	5775.0	Not Required	14.0	No	12.5	13.0	No

Measured Results of MIMO Ant.1

Antenna	Band (GHz)	Mode	Data Rate	Ch #	Freq. (MHz)	Max Pwr.		
						Avg Pwr (dBm)	Max Output Power (dBm)	SAR Test (Yes/No)
MIMO Ant.1	5.3 (U-NII-2A)	802.11n (HT20)	6.5 Mbps	52	5260.0	Not Required	15.0	No
				56	5280.0			
				60	5300.0			
				64	5320.0			
		802.11n (HT40)	13.5 Mbps	54	5270.0	14.8	15.0	Yes
				62	5310.0	14.8		
		802.11ac (VHT20)	6.5 Mbps	52	5260.0	Not Required	15.0	No
				56	5280.0			
				60	5300.0			
				64	5320.0			
		802.11ac (VHT40)	13.5 Mbps	54	5270.0	14.6	15.0	No
				62	5310.0	14.7		
		802.11ac (VHT80)	29.3 Mbps	58	5290.0	Not Required	14.0	No
		802.11ax (HE20)	7.3 Mbps	52	5260.0	Not Required	15.0	No
				56	5280.0			
				60	5300.0			
				64	5320.0			
		802.11ax (HE40)	14.6 Mbps	54	5270.0	13.6	15.0	No
				62	5310.0	13.4		
		802.11ax (HE80)	30.6 Mbps	58	5290.0	Not Required	14.0	No
	5.5 (U-NII-2C)	802.11n (HT20)	6.5 Mbps	100	5500.0	15.5	16.0	Yes
				120	5600.0	15.7		
				124	5620.0	15.7		
				144	5720.0	15.5		
		802.11n (HT40)	13.5 Mbps	102	5510.0	Not Required	15.0	No
				118	5590.0			
				126	5630.0			
				142	5710.0			
		802.11ac (VHT20)	6.5 Mbps	100	5500	15.8	16.0	No
				120	5600	15.8		
				124	5620	15.8		
				144	5720	15.9		
		802.11ac (VHT40)	13.5 Mbps	102	5510.0	Not Required	15.0	No
				118	5590.0			
				126	5630.0			
				142	5710.0			
		802.11ac (VHT80)	29.3 Mbps	106	5530.0	Not Required	14.0	No
				122	5610.0			
				138	5690.0			
		802.11ax (HE20)	7.3 Mbps	100	5500.0	15.1	16.0	No
				120	5600.0	15.2		
				124	5620.0	15.4		
				144	5720.0	15.6		
		802.11ax (HE40)	14.6 Mbps	102	5510.0	Not Required	15.0	No
				118	5590.0			
				126	5630.0			
				142	5710.0			
		802.11ax (HE80)	30.6 Mbps	106	5530.0	Not Required	14.0	No
				122	5610.0			
				138	5690.0			

Measured Results of MIMO Ant.2

Antenna	Band (GHz)	Mode	Data Rate	Ch #	Freq. (MHz)	Max Pwr.		
						Avg Pwr (dBm)	Max Output Power (dBm)	SAR Test (Yes/No)
MIMO Ant.2	5.3 (U-NII-2A)	802.11n (HT20)	6.5 Mbps	52	5260.0	Not Required	15.0	No
				56	5280.0			
				60	5300.0			
				64	5320.0			
		802.11n (HT40)	13.5 Mbps	54	5270.0	14.3	15.0	Yes
				62	5310.0	14.4		
		802.11ac (VHT20)	6.5 Mbps	52	5260.0	Not Required	15.0	No
				56	5280.0			
				60	5300.0			
				64	5320.0			
		802.11ac (VHT40)	13.5 Mbps	54	5270.0	14.9	15.0	No
				62	5310.0	15.0		
		802.11ac (VHT80)	29.3 Mbps	58	5290.0	Not Required	14.0	No
		802.11ax (HE20)	6.5 Mbps	52	5260.0	Not Required	15.0	No
				56	5280.0			
				60	5300.0			
				64	5320.0			
		802.11ax (HE40)	13.5 Mbps	54	5270.0	14.3	15.0	No
				62	5310.0	14.3		
		802.11ax (HE80)	29.3 Mbps	58	5290.0	Not Required	14.0	No
	5.5 (U-NII-2C)	802.11n (HT20)	6.5 Mbps	100	5500.0	15.4	16.0	Yes
				120	5600.0	15.3		
				124	5620.0	15.4		
				144	5720.0	15.4		
		802.11n (HT40)	13.5 Mbps	102	5510.0	Not Required	15.0	No
				118	5590.0			
				126	5630.0			
				142	5710.0			
		802.11ac (VHT20)	6.5 Mbps	100	5500	15.9	16.0	No
				120	5600	15.5		
				124	5620	15.6		
				144	5720	15.5		
		802.11ac (VHT40)	13.5 Mbps	102	5510.0	Not Required	15.0	No
				118	5590.0			
				126	5630.0			
				142	5710.0			
		802.11ac (VHT80)	29.3 Mbps	106	5530.0	Not Required	14.0	No
				122	5610.0			
				138	5690.0			
		802.11ax (HE20)	6.5 Mbps	100	5500.0	15.3	16.0	No
				120	5600.0	15.3		
				124	5620.0	15.3		
				144	5720.0	15.3		
		802.11ax (HE40)	13.5 Mbps	102	5510.0	Not Required	15.0	No
				118	5590.0			
				126	5630.0			
				142	5710.0			
		802.11ax (HE80)	29.3 Mbps	106	5530.0	Not Required	14.0	No
				122	5610.0			
				138	5690.0			

Note(s):

1. For “Not required”, 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/ax mode is used for SAR measurement, on the highest measured output power channel in the initial test configuration, for each frequency band.
2. When the same transmission mode configurations have the same maximum output power on the same channel for the 802.11 a/g/n/ac/ax modes, the channel in the lower order/sequence 802.11 mode (i.e. a, g, n ac then ax) is selected.
3. When the specified maximum output power is the same for both UNII band I and UNII band 2A, begin SAR measurement in UNII band 2A; and if the highest *reported* SAR for UNII band 2A is
   - ≤ 1.2 W/kg, SAR is not required for UNII band I
   - > 1.2 W/kg, both bands should be tested independently for SAR.

Measured Results of SISO Ant.1 of RSDB operation

Antenna	Band (GHz)	Mode	Data Rate	Ch #	Freq. (MHz)	Max Pwr.			Reduction Pwr.		
						Avg Pwr (dBm)	Max Output Power (dBm)	SAR Test (Yes/No)	Avg Pwr (dBm)	Max Output Power (dBm)	SAR Test (Yes/No)
SISO Ant 1	5.2 (U-NII 1)	802.11a	6 Mbps	36	5180.0	Not Required	14.0	No	Not Required	13.0	No
				40	5200.0						
				44	5220.0						
				48	5240.0						
		802.11n (HT20)	6.5 Mbps	36	5180.0	Not Required	14.0	No	Not Required	13.0	No
				40	5200.0						
				44	5220.0						
				48	5240.0						
		802.11n (HT40)	13.5 Mbps	38	5190.0	Not Required	14.0	No	Not Required	13.0	No
				46	5230.0						
		802.11ac (VHT20)	6.5 Mbps	36	5180.0	Not Required	14.0	No	Not Required	13.0	No
				40	5200.0						
				44	5220.0						
				48	5240.0						
		802.11ac (VHT40)	13.5 Mbps	38	5190.0	Not Required	14.0	No	Not Required	13.0	No
				46	5230.0						
		802.11ac (VHT80)	29.3 Mbps	42	5210.0	13.4	14.0	Yes	12.5	13.0	Yes
		802.11ax (HE20)	7.3 Mbps	36	5180.0	Not Required	14.0	No	Not Required	13.0	No
				40	5200.0						
				44	5220.0						
				48	5240.0						
		802.11ax (HE40)	14.6 Mbps	38	5190.0	Not Required	14.0	No	Not Required	13.0	No
				46	5230.0						
		802.11ax (HE80)	30.6 Mbps	42	5210.0	13.3	14.0	No	12.4	13.0	No
	5.3 (U-NII 2A)	802.11a	6 Mbps	52	5260.0	Not Required	14.0	No	Not Required	13.0	No
				56	5280.0						
				60	5300.0						
				64	5320.0						
		802.11n (HT20)	6.5 Mbps	52	5260.0	Not Required	14.0	No	Not Required	13.0	No
				56	5280.0						
				60	5300.0						
				64	5320.0						
		802.11n (HT40)	13.5 Mbps	54	5270.0	Not Required	14.0	No	Not Required	13.0	No
				62	5310.0						
		802.11ac (VHT20)	6.5 Mbps	52	5260.0	Not Required	14.0	No	Not Required	13.0	No
				56	5280.0						
				60	5300.0						
				64	5320.0						
		802.11ac (VHT40)	13.5 Mbps	54	5270.0	Not Required	14.0	No	Not Required	13.0	No
				62	5310.0						
		802.11ac (VHT80)	29.3 Mbps	58	5290.0	13.8	14.0	Yes	12.5	13.0	Yes
		802.11ax (HE20)	7.3 Mbps	52	5260.0	Not Required	14.0	No	Not Required	13.0	No
				56	5280.0						
				60	5300.0						
				64	5320.0						
		802.11ax (HE40)	14.6 Mbps	54	5270.0	Not Required	14.0	No	Not Required	13.0	No
				62	5310.0						
		802.11ax (HE80)	30.6 Mbps	58	5290.0	13.5	14.0	No	12.4	13.0	No

Measured Results of SISO Ant.1 of RSDB operation (Continued)

Antenna	Band (GHz)	Mode	Data Rate	Ch #	Freq. (MHz)	Max Pwr.			Reduction Pwr.		
						Avg Pwr (dBm)	Max Output Power (dBm)	SAR Test (Yes/No)	Avg Pwr (dBm)	Max Output Power (dBm)	SAR Test (Yes/No)
SISO Ant 1	5.5 (U-NII 2C)	802.11a	6 Mbps	100	5500.0	Not Required	14.0	No	Not Required	13.0	No
				120	5600.0						
				124	5620.0						
				144	5720.0						
		802.11n (HT20)	6.5 Mbps	100	5500.0	Not Required	14.0	No	Not Required	13.0	No
				120	5600.0						
				124	5620.0						
				144	5720.0						
		802.11n (HT40)	13.5 Mbps	102	5510.0	Not Required	14.0	No	Not Required	13.0	No
				118	5590.0						
				126	5630.0						
				142	5710.0						
		802.11ac (VHT20)	6.5 Mbps	100	5500.0	Not Required	14.0	No	Not Required	13.0	No
				120	5600.0						
				124	5620.0						
				144	5720.0						
		802.11ac (VHT40)	13.5 Mbps	102	5510.0	Not Required	14.0	No	Not Required	13.0	No
				118	5590.0						
				126	5630.0						
				142	5710.0						
		802.11ac (VHT80)	29.3 Mbps	106	5530.0	13.6	14.0	Yes	13.0	13.0	Yes
				122	5610.0	13.7			12.7		
				138	5690.0	13.7			12.8		
		802.11ax (HE20)	7.3 Mbps	100	5500.0	Not Required	14.0	No	Not Required	13.0	No
				120	5600.0						
				124	5620.0						
				144	5720.0						
		802.11ax (HE40)	14.6 Mbps	102	5510.0	Not Required	14.0	No	Not Required	13.0	No
				118	5590.0						
				126	5630.0						
				142	5710.0						
		802.11ax (HE80)	30.6 Mbps	106	5530.0	13.5	14.0	No	12.9	13.0	No
				122	5610.0	13.6			12.6		
				138	5690.0	13.6			12.7		
	5.8 (U-NII 3)	802.11a	6 Mbps	149	5745.0	Not Required	14.0	No	Not Required	13.0	No
				157	5785.0						
				165	5825.0						
		802.11n (HT20)	6.5 Mbps	149	5745.0	Not Required	14.0	No	Not Required	13.0	No
				157	5785.0						
				165	5825.0						
		802.11n (HT40)	13.5 Mbps	151	5755.0	Not Required	14.0	No	Not Required	13.0	No
				159	5795.0						
		802.11ac (VHT20)	6.5 Mbps	149	5745.0	Not Required	14.0	No	Not Required	13.0	No
				157	5785.0						
				165	5825.0						
		802.11ac (VHT40)	13.5 Mbps	151	5755.0	Not Required	14.0	No	Not Required	13.0	No
				159	5795.0						
		802.11ac (VHT80)	29.3 Mbps	155	5775.0	13.6	14.0	Yes	12.7	13.0	Yes
		802.11ax (HE20)	7.3 Mbps	149	5745.0	Not Required	14.0	No	Not Required	13.0	No
				157	5785.0						
				165	5825.0						
		802.11ax (HE40)	14.6 Mbps	151	5755.0	Not Required	14.0	No	Not Required	13.0	No
				159	5795.0						
		802.11ax (HE80)	30.6 Mbps	155	5775.0	13.5	14.0	No	12.6	13.0	No

Measured Results of SISO Ant.2 of RSDB operation

Antenna	Band (GHz)	Mode	Data Rate	Ch #	Freq. (MHz)	Max Pwr.			Reduction Pwr.		
						Avg Pwr (dBm)	Max Output Power (dBm)	SAR Test (Yes/No)	Avg Pwr (dBm)	Max Output Power (dBm)	SAR Test (Yes/No)
SISO Ant 2	5.2 (U-NII 1)	802.11a	6 Mbps	36	5180.0	Not Required	14.0	No	Not Required	13.0	No
				40	5200.0						
				44	5220.0						
				48	5240.0						
		802.11n (HT20)	6.5 Mbps	36	5180.0	Not Required	14.0	No	Not Required	13.0	No
				40	5200.0						
				44	5220.0						
				48	5240.0						
		802.11n (HT40)	13.5 Mbps	38	5190.0	Not Required	14.0	No	Not Required	13.0	No
				46	5230.0						
		802.11ac (VHT20)	6.5 Mbps	36	5180.0	Not Required	14.0	No	Not Required	13.0	No
				40	5200.0						
				44	5220.0						
				48	5240.0						
		802.11ac (VHT40)	13.5 Mbps	38	5190.0	Not Required	14.0	No	Not Required	13.0	No
				46	5230.0						
		802.11ac (VHT80)	29.3 Mbps	42	5210.0	12.7	14.0	Yes	12.7	13.0	Yes
		802.11ax (HE20)	7.3 Mbps	36	5180.0	Not Required	14.0	No	Not Required	13.0	No
				40	5200.0						
				44	5220.0						
				48	5240.0						
		802.11ax (HE40)	14.6 Mbps	38	5190.0	Not Required	14.0	No	Not Required	13.0	No
				46	5230.0						
		802.11ax (HE80)	30.6 Mbps	42	5210.0	12.6	14.0	No	12.6	13.0	No
	5.3 (U-NII 2A)	802.11a	6 Mbps	52	5260.0	Not Required	14.0	No	Not Required	13.0	No
				56	5280.0						
				60	5300.0						
				64	5320.0						
		802.11n (HT20)	6.5 Mbps	52	5260.0	Not Required	14.0	No	Not Required	13.0	No
				56	5280.0						
				60	5300.0						
				64	5320.0						
		802.11n (HT40)	13.5 Mbps	54	5270.0	Not Required	14.0	No	Not Required	13.0	No
				62	5310.0						
		802.11ac (VHT20)	6.5 Mbps	52	5260.0	Not Required	14.0	No	Not Required	13.0	No
				56	5280.0						
				60	5300.0						
				64	5320.0						
		802.11ac (VHT40)	13.5 Mbps	54	5270.0	Not Required	14.0	No	Not Required	13.0	No
				62	5310.0						
		802.11ac (VHT80)	29.3 Mbps	58	5290.0	13.1	14.0	Yes	12.6	13.0	Yes
		802.11ax (HE20)	7.3 Mbps	52	5260.0	Not Required	14.0	No	Not Required	13.0	No
				56	5280.0						
				60	5300.0						
				64	5320.0						
		802.11ax (HE40)	14.6 Mbps	54	5270.0	Not Required	14.0	No	Not Required	13.0	No
				62	5310.0						
		802.11ax (HE80)	30.6 Mbps	58	5290.0	13.0	14.0	No	12.5	13.0	No

Measured Results of SISO Ant.2 of RSDB operation (Continued)

Antenna	Band (GHz)	Mode	Data Rate	Ch #	Freq. (MHz)	Max Pwr.			Reduction Pwr.		
						Avg Pwr (dBm)	Max Output Power (dBm)	SAR Test (Yes/No)	Avg Pwr (dBm)	Max Output Power (dBm)	SAR Test (Yes/No)
SISO Ant 2	5.5 (U-NII 2C)	802.11a	6 Mbps	100	5500.0	Not Required	14.0	No	Not Required	13.0	No
				120	5600.0						
				124	5620.0						
				144	5720.0						
		802.11n (HT20)	6.5 Mbps	100	5500.0	Not Required	14.0	No	Not Required	13.0	No
				120	5600.0						
				124	5620.0						
				144	5720.0						
		802.11n (HT40)	13.5 Mbps	102	5510.0	Not Required	14.0	No	Not Required	13.0	No
				118	5590.0						
				126	5630.0						
				142	5710.0						
		802.11ac (VHT20)	6.5 Mbps	100	5500.0	Not Required	14.0	No	Not Required	13.0	No
				120	5600.0						
				124	5620.0						
				144	5720.0						
		802.11ac (VHT40)	13.5 Mbps	102	5510.0	Not Required	14.0	No	Not Required	13.0	No
				118	5590.0						
				126	5630.0						
				142	5710.0						
		802.11ac (VHT80)	29.3 Mbps	106	5530.0	13.4	14.0	Yes	13.0	13.0	Yes
				122	5610.0	13.5			12.6		
				138	5690.0	13.6			12.7		
		802.11ax (HE20)	7.3 Mbps	100	5500.0	Not Required	14.0	No	Not Required	13.0	No
				120	5600.0						
				124	5620.0						
				144	5720.0						
		802.11ax (HE40)	14.6 Mbps	102	5510.0	Not Required	14.0	No	Not Required	13.0	No
				118	5590.0						
				126	5630.0						
				142	5710.0						
		802.11ax (HE80)	30.6 Mbps	106	5530.0	12.9	14.0	No	12.4	13.0	No
				122	5610.0	12.7			12.5		
				138	5690.0	12.8			12.6		
	5.8 (U-NII 3)	802.11a	6 Mbps	149	5745.0	Not Required	14.0	No	Not Required	13.0	No
				157	5785.0						
				165	5825.0						
		802.11n (HT20)	6.5 Mbps	149	5745.0	Not Required	14.0	No	Not Required	13.0	No
				157	5785.0						
				165	5825.0						
		802.11n (HT40)	13.5 Mbps	151	5755.0	Not Required	14.0	No	Not Required	13.0	No
				159	5795.0						
		802.11ac (VHT20)	6.5 Mbps	149	5745.0	Not Required	14.0	No	Not Required	13.0	No
				157	5785.0						
				165	5825.0						
		802.11ac (VHT40)	13.5 Mbps	151	5755.0	Not Required	14.0	No	Not Required	13.0	No
				159	5795.0						
		802.11ac (VHT80)	29.3 Mbps	155	5775.0	13.7	14.0	Yes	12.6	13.0	Yes
		802.11ax (HE20)	7.3 Mbps	149	5745.0	Not Required	14.0	No	Not Required	13.0	No
				157	5785.0						
				165	5825.0						
		802.11ax (HE40)	14.6 Mbps	151	5755.0	Not Required	14.0	No	Not Required	13.0	No
				159	5795.0						
		802.11ax (HE80)	30.6 Mbps	155	5775.0	13.6	14.0	No	12.5	13.0	No

Measured Results of MIMO Ant.1 of RSDB operation

Antenna	Band (GHz)	Mode	Data Rate	Ch #	Freq. (MHz)	Max Pwr.			Reduction Pwr.		
						Avg Pwr (dBm)	Max Output Power (dBm)	SAR Test (Yes/No)	Avg Pwr (dBm)	Max Output Power (dBm)	SAR Test (Yes/No)
MIMO Ant 1	5.2 (U-NII 1)	802.11n (HT20)	6.5 Mbps	36	5180.0	Not Required	14.0	No	Not Required	13.0	No
				40	5200.0						
				44	5220.0						
				48	5240.0						
		802.11n (HT40)	13.5 Mbps	38	5190.0	Not Required	14.0	No	Not Required	13.0	No
				46	5230.0						
		802.11ac (VHT20)	6.5 Mbps	36	5180.0	Not Required	14.0	No	Not Required	13.0	No
				40	5200.0						
				44	5220.0						
				48	5240.0						
		802.11ac (VHT40)	13.5 Mbps	38	5190.0	Not Required	14.0	No	Not Required	13.0	No
				46	5230.0						
		802.11ac (VHT80)	29.3 Mbps	42	5210.0	13.8	14.0	Yes	12.4	13.0	Yes
		802.11ax (HE20)	7.3 Mbps	36	5180.0	Not Required	14.0	No	Not Required	13.0	No
				40	5200.0						
				44	5220.0						
				48	5240.0						
		802.11ax (HE40)	14.6 Mbps	38	5190.0	Not Required	14.0	No	Not Required	13.0	No
				46	5230.0						
		802.11ax (HE80)	30.6 Mbps	42	5210.0	13.0	14.0	No	12.0	13.0	No
	5.3 (U-NII 2A)	802.11n (HT20)	6.5 Mbps	52	5260.0	Not Required	14.0	No	Not Required	13.0	No
				56	5280.0						
				60	5300.0						
				64	5320.0						
		802.11n (HT40)	13.5 Mbps	54	5270.0	Not Required	14.0	No	Not Required	13.0	No
				62	5310.0						
		802.11ac (VHT20)	6.5 Mbps	52	5260.0	Not Required	14.0	No	Not Required	13.0	No
				56	5280.0						
				60	5300.0						
				64	5320.0						
		802.11ac (VHT40)	13.5 Mbps	54	5270.0	Not Required	14.0	No	Not Required	13.0	No
				62	5310.0						
		802.11ac (VHT80)	29.3 Mbps	58	5290.0	13.6	14.0	Yes	12.4	13.0	Yes
		802.11ax (HE20)	7.3 Mbps	52	5260.0	Not Required	14.0	No	Not Required	13.0	No
				56	5280.0						
				60	5300.0						
				64	5320.0						
		802.11ax (HE40)	14.6 Mbps	54	5270.0	Not Required	14.0	No	Not Required	13.0	No
				62	5310.0						
		802.11ax (HE80)	30.6 Mbps	58	5290.0	12.4	14.0	No	11.4	13.0	No

Measured Results of MIMO Ant.1 of RSDB operation (Continued)

Antenna	Band (GHz)	Mode	Data Rate	Ch #	Freq. (MHz)	Max Pwr.			Reduction Pwr.		
						Avg Pwr (dBm)	Max Output Power (dBm)	SAR Test (Yes/No)	Avg Pwr (dBm)	Max Output Power (dBm)	SAR Test (Yes/No)
MIMO Ant 1	5.5 (U-NII 2C)	802.11n (HT20)	6.5 Mbps	100	5500.0	Not Required	14.0	No	Not Required	13.0	No
				120	5600.0						
				124	5620.0						
				144	5720.0						
		802.11n (HT40)	13.5 Mbps	102	5510.0	Not Required	14.0	No	Not Required	13.0	No
				118	5590.0						
				126	5630.0						
				142	5710.0						
		802.11ac (VHT20)	6.5 Mbps	100	5500.0	Not Required	14.0	No	Not Required	13.0	No
				120	5600.0						
				124	5620.0						
				144	5720.0						
		802.11ac (VHT40)	13.5 Mbps	102	5510.0	Not Required	14.0	No	Not Required	13.0	No
				118	5590.0						
				126	5630.0						
				142	5710.0						
		802.11ac (VHT80)	29.3 Mbps	106	5530.0	13.5	14.0	Yes	12.7	13.0	Yes
				122	5610.0	13.6			12.5		
				138	5690.0	13.5			12.6		
		802.11ax (HE20)	7.3 Mbps	100	5500.0	Not Required	14.0	No	Not Required	13.0	No
				120	5600.0						
				124	5620.0						
				144	5720.0						
		802.11ax (HE40)	14.6 Mbps	102	5510.0	Not Required	14.0	No	Not Required	13.0	No
				118	5590.0						
				126	5630.0						
				142	5710.0						
		802.11ax (HE80)	30.6 Mbps	106	5530.0	13.1	14.0	No	12.3	13.0	No
				122	5610.0	13.2			12.2		
				138	5690.0	13.4			12.5		
	5.8 (U-NII 3)	802.11n (HT20)	6.5 Mbps	149	5745.0	Not Required	14.0	No	Not Required	13.0	No
				157	5785.0						
				165	5825.0						
		802.11n (HT40)	13.5 Mbps	151	5755.0	Not Required	14.0	No	Not Required	13.0	No
				159	5795.0						
		802.11ac (VHT20)	6.5 Mbps	149	5745.0	Not Required	14.0	No	Not Required	13.0	No
				157	5785.0						
				165	5825.0						
		802.11ac (VHT40)	13.5 Mbps	151	5755.0	Not Required	14.0	No	Not Required	13.0	No
				159	5795.0						
		802.11ac (VHT80)	29.3 Mbps	155	5775.0	13.5	14.0	Yes	12.6	13.0	Yes
		802.11ax (HE20)	7.3 Mbps	149	5745.0	Not Required	14.0	No	Not Required	13.0	No
				157	5785.0						
				165	5825.0						
		802.11ax (HE40)	14.6 Mbps	151	5755.0	Not Required	14.0	No	Not Required	13.0	No
				159	5795.0						
		802.11ax (HE80)	30.6 Mbps	155	5775.0	13.4	14.0	No	12.5	13.0	No

Measured Results of MIMO Ant.2 of RSDB operation

Antenna	Band (GHz)	Mode	Data Rate	Ch #	Freq. (MHz)	Max Pwr.			Reduction Pwr.		
						Avg Pwr (dBm)	Max Output Power (dBm)	SAR Test (Yes/No)	Avg Pwr (dBm)	Max Output Power (dBm)	SAR Test (Yes/No)
MIMO Ant 2	5.2 (U-NII 1)	802.11n (HT20)	6.5 Mbps	36	5180.0	Not Required	14.0	No	Not Required	13.0	No
				40	5200.0						
				44	5220.0						
				48	5240.0						
		802.11n (HT40)	13.5 Mbps	38	5190.0	Not Required	14.0	No	Not Required	13.0	No
				46	5230.0						
		802.11ac (VHT20)	6.5 Mbps	36	5180.0	Not Required	14.0	No	Not Required	13.0	No
				40	5200.0						
				44	5220.0						
				48	5240.0						
		802.11ac (VHT40)	13.5 Mbps	38	5190.0	Not Required	14.0	No	Not Required	13.0	No
				46	5230.0						
		802.11ac (VHT80)	29.3 Mbps	42	5210.0	13.4	14.0	Yes	12.6	13.0	Yes
		802.11ax (HE20)	7.3 Mbps	36	5180.0	Not Required	14.0	No	Not Required	13.0	No
				40	5200.0						
				44	5220.0						
				48	5240.0						
		802.11ax (HE40)	14.6 Mbps	38	5190.0	Not Required	14.0	No	Not Required	13.0	No
				46	5230.0						
		802.11ax (HE80)	30.6 Mbps	42	5210.0	12.9	14.0	No	12.5	13.0	No
	5.3 (U-NII 2A)	802.11n (HT20)	6.5 Mbps	52	5260.0	Not Required	14.0	No	Not Required	13.0	No
				56	5280.0						
				60	5300.0						
				64	5320.0						
		802.11n (HT40)	13.5 Mbps	54	5270.0	Not Required	14.0	No	Not Required	13.0	No
				62	5310.0						
		802.11ac (VHT20)	6.5 Mbps	52	5260.0	Not Required	14.0	No	Not Required	13.0	No
				56	5280.0						
				60	5300.0						
				64	5320.0						
		802.11ac (VHT40)	13.5 Mbps	54	5270.0	Not Required	14.0	No	Not Required	13.0	No
				62	5310.0						
		802.11ac (VHT80)	29.3 Mbps	58	5290.0	13.0	14.0	Yes	12.5	13.0	Yes
		802.11ax (HE20)	7.3 Mbps	52	5260.0	Not Required	14.0	No	Not Required	13.0	No
				56	5280.0						
				60	5300.0						
				64	5320.0						
		802.11ax (HE40)	14.6 Mbps	54	5270.0	Not Required	14.0	No	Not Required	13.0	No
				62	5310.0						
		802.11ax (HE80)	30.6 Mbps	58	5290.0	12.8	14.0	No	12.4	13.0	No

Measured Results of MIMO Ant.2 of RSDB operation (Continued)

Antenna	Band (GHz)	Mode	Data Rate	Ch #	Freq. (MHz)	Max Pwr.			Reduction Pwr.		
						Avg Pwr (dBm)	Max Output Power (dBm)	SAR Test (Yes/No)	Avg Pwr (dBm)	Max Output Power (dBm)	SAR Test (Yes/No)
MIMO Ant 2	5.5 (U-NII 2C)	802.11n (HT20)	6.5 Mbps	100	5500.0	Not Required	14.0	No	Not Required	13.0	No
				120	5600.0						
				124	5620.0						
				144	5720.0						
		802.11n (HT40)	13.5 Mbps	102	5510.0	Not Required	14.0	No	Not Required	13.0	No
				118	5590.0						
				126	5630.0						
				142	5710.0						
		802.11ac (VHT20)	6.5 Mbps	100	5500.0	Not Required	14.0	No	Not Required	13.0	No
				120	5600.0						
				124	5620.0						
				144	5720.0						
		802.11ac (VHT40)	13.5 Mbps	102	5510.0	Not Required	14.0	No	Not Required	13.0	No
				118	5590.0						
				126	5630.0						
				142	5710.0						
		802.11ac (VHT80)	29.3 Mbps	106	5530.0	13.4	14.0	Yes	12.9	13.0	Yes
				122	5610.0	13.4			12.5		
				138	5690.0	13.4			12.4		
		802.11ax (HE20)	7.3 Mbps	100	5500.0	Not Required	14.0	No	Not Required	13.0	No
				120	5600.0						
				124	5620.0						
				144	5720.0						
		802.11ax (HE40)	14.6 Mbps	102	5510.0	Not Required	14.0	No	Not Required	13.0	No
				118	5590.0						
				126	5630.0						
				142	5710.0						
		802.11ax (HE80)	30.6 Mbps	106	5530.0	13.3	14.0	No	12.8	13.0	No
				122	5610.0	13.3			12.4		
				138	5690.0	13.3			12.4		
	5.8 (U-NII 3)	802.11n (HT20)	6.5 Mbps	149	5745.0	Not Required	14.0	No	Not Required	13.0	No
				157	5785.0						
				165	5825.0						
		802.11n (HT40)	13.5 Mbps	151	5755.0	Not Required	14.0	No	Not Required	13.0	No
				159	5795.0						
		802.11ac (VHT20)	6.5 Mbps	149	5745.0	Not Required	14.0	No	Not Required	13.0	No
				157	5785.0						
				165	5825.0						
		802.11ac (VHT40)	13.5 Mbps	151	5755.0	Not Required	14.0	No	Not Required	13.0	No
				159	5795.0						
		802.11ac (VHT80)	29.3 Mbps	155	5775.0	13.7	14.0	Yes	12.4	13.0	Yes
		802.11ax (HE20)	7.3 Mbps	149	5745.0	Not Required	14.0	No	Not Required	13.0	No
				157	5785.0						
				165	5825.0						
		802.11ax (HE40)	14.6 Mbps	151	5755.0	Not Required	14.0	No	Not Required	13.0	No
				159	5795.0						
		802.11ax (HE80)	30.6 Mbps	155	5775.0	13.5	14.0	No	12.3	13.0	No

Note(s):

1. For “Not required”, 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/ax mode is used for SAR measurement, on the highest measured output power channel in the initial test configuration, for each frequency band.
2. When the same transmission mode configurations have the same maximum output power on the same channel for the 802.11 a/g/n/ac/ax modes, the channel in the lower order/sequence 802.11 mode (i.e. a, g, n ac then ax) is selected.
3. When the specified maximum output power is the same for both UNII band I and UNII band 2A, begin SAR measurement in UNII band 2A; and if the highest *reported* SAR for UNII band 2A is
   - ≤ 1.2 W/kg, SAR is not required for UNII band I
   - > 1.2 W/kg, both bands should be tested independently for SAR.

9.6 Bluetooth

Average Power Measured Results

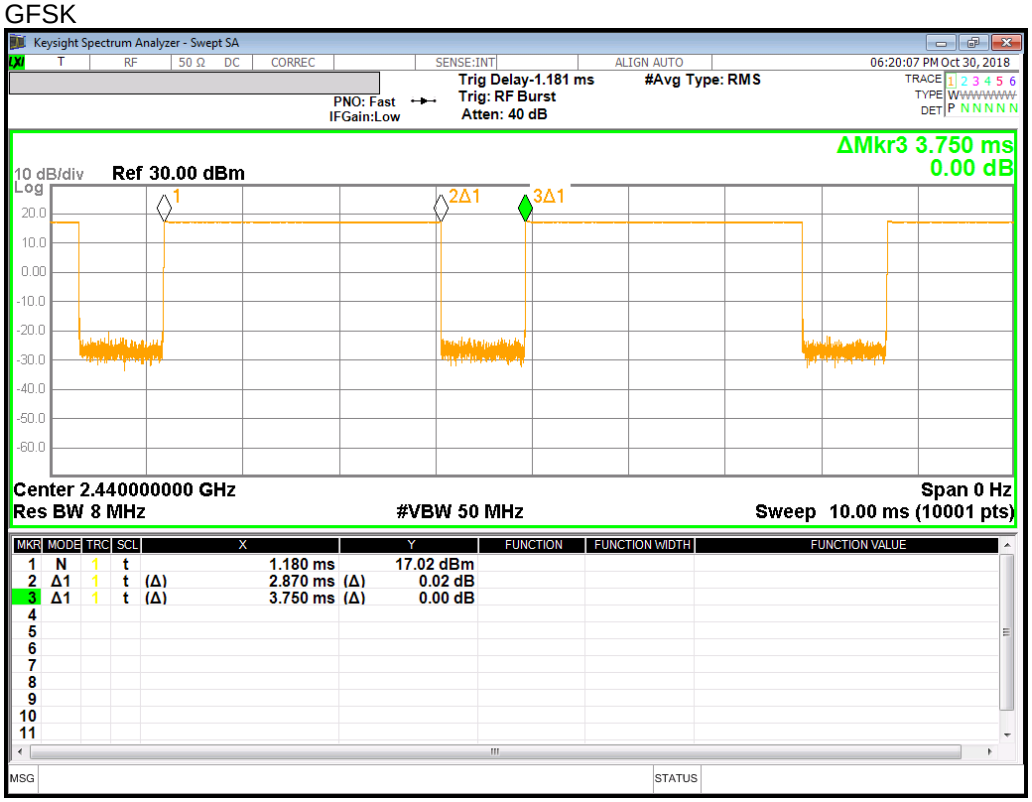
Band (GHz)	Mode	Ch #	Freq. (MHz)	Meas. Avg Pwr (dBm)
2.4	GFSK	0	2402	18.3
		39	2441	19.0
		78	2480	18.2
	EDR, 8-DPSK	0	2402	12.4
		39	2441	13.7
		78	2480	12.9
	LE, GFSK-1M	0	2402	7.2
		19	2440	8.5
		39	2480	6.8
	LE, GFSK-2M	0	2402	8.2
		19	2440	9.2
		39	2480	7.7

Duty Factor Measured Results

Mode	Type	T on (ms)	Period (ms)	Duty Cycle	Crest Factor (1/duty cycle)
GFSK	DH5	2.87	3.750	76.5%	1.31

Duty Cycle plots

GFSK



10. Measured and Reported (Scaled) SAR Results

SAR Test Reduction criteria are as follows:

Reported SAR(W/kg) for WWAN= Measured SAR *Tune-up Scaling Factor

Reported SAR(W/kg) for Wi-Fi and Bluetooth= Measured SAR * Tune-up scaling factor * Duty Cycle scaling factor

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):
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 .

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. 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*.

10.1 GSM 850

Antenna	RF Exposure Conditions	Mode	PWR Back-off	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.
								Tune-up limit	Meas.	Meas.	Scaled	
Main 1-1	Head	Voice	Off	0	Left Touch	190	836.6	33.5	32.8	0.144	0.169	
					Left Tilt	190	836.6	33.5	32.8	0.090	0.106	
					Right Touch	190	836.6	33.5	32.8	0.206	0.242	
					Right Tilt	190	836.6	33.5	32.8	0.094	0.110	
		GPRS 2 Slot	Off	0	Left Touch	190	836.6	33.0	32.6	0.271	0.296	
					Left Tilt	190	836.6	33.0	32.6	0.165	0.180	
					Right Touch	190	836.6	33.0	32.6	0.338	0.369	1
					Right Tilt	190	836.6	33.0	32.6	0.157	0.171	
	Body-worn	Voice	Off	15	Rear	190	836.6	33.5	32.8	0.266	0.312	
					Front	190	836.6	33.5	32.8	0.219	0.257	
		GPRS 2 Slot	Off	15	Rear	190	836.6	33.0	32.6	0.494	0.539	2
					Front	190	836.6	33.0	32.6	0.473	0.516	
	Hotspot	GPRS 2 Slot	Off	10	Rear	128	824.4	33.0	32.6	0.701	0.772	
						190	836.6	33.0	32.6	0.928	1.013	
						251	848.8	33.0	32.7	1.100	1.181	3
					Front	190	836.6	33.0	32.6	0.671	0.732	
					Edge 2	190	836.6	33.0	32.6	0.499	0.545	
					Edge 3	190	836.6	33.0	32.6	0.617	0.673	
					Edge 4	190	836.6	33.0	32.6	0.117	0.128	

10.2 GSM1900

Antenna	RF Exposure Conditions	Mode	PWR Back-off	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.
								Tune-up limit	Meas.	Meas.	Scaled	
Main 1-1	Head	Voice	Off	0	Left Touch	661	1880.0	30.3	29.5	0.065	0.079	
					Left Tilt	661	1880.0	30.3	29.5	0.030	0.036	
					Right Touch	661	1880.0	30.3	29.5	0.038	0.046	
					Right Tilt	661	1880.0	30.3	29.5	0.020	0.025	
		GPRS 3 Slot	Off	0	Left Touch	661	1880.0	26.0	26.0	0.097	0.097	4
					Left Tilt	661	1880.0	26.0	26.0	0.041	0.041	
					Right Touch	661	1880.0	26.0	26.0	0.067	0.067	
					Right Tilt	661	1880.0	26.0	26.0	0.040	0.040	
	Body-worn	Voice	Off	15	Rear	661	1880.0	30.3	29.5	0.245	0.298	
					Front	661	1880.0	30.3	29.5	0.185	0.225	
		GPRS 3 Slot	Off	15	Rear	661	1880.0	26.0	26.0	0.380	0.380	5
					Front	661	1880.0	26.0	26.0	0.279	0.279	
	Hotspot	GPRS 3 Slot	Off	10	Rear	661	1880.0	26.0	26.0	0.733	0.733	
					Front	661	1880.0	26.0	26.0	0.606	0.606	
					Edge 2	661	1880.0	26.0	26.0	0.077	0.077	
					Edge 3	512	1850.2	26.0	25.7	0.798	0.852	
						661	1880.0	26.0	26.0	0.981	0.981	
						810	1909.8	26.0	25.6	0.945	1.039	6
					Edge 4	661	1880.0	26.0	26.0	0.173	0.173	

10.3 W-CDMA Band II

Antenna	RF Exposure Conditions	Mode	PWR Back-off	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.
								Tune-up limit	Meas.	Meas.	Scaled	
Main 1-1	Head	Rel 99 RMC	Off	0	Left Touch	9400	1880.0	24.0	23.3	0.166	0.196	7
					Left Tilt	9400	1880.0	24.0	23.3	0.053	0.063	
					Right Touch	9400	1880.0	24.0	23.3	0.108	0.128	
					Rightt Tilt	9400	1880.0	24.0	23.3	0.073	0.087	
	Bod-worn	Rel 99 RMC	Off	15	Rear	9400	1880.0	24.0	23.3	0.574	0.678	8
					Front	9400	1880.0	24.0	23.3	0.439	0.519	
	Hotspot	Rel 99 RMC	On	10	Rear	9400	1880.0	21.0	20.4	0.562	0.649	
					Front	9400	1880.0	21.0	20.4	0.429	0.495	
					Edge 2	9400	1880.0	21.0	20.4	0.071	0.082	
					Edge 3	9262	1852.4	21.0	20.5	0.954	1.074	
						9400	1880.0	21.0	20.4	0.938	1.083	
						9538	1907.6	21.0	20.5	1.050	1.174	9
					Edge 4	9400	1880.0	21.0	20.4	0.133	0.153	

Antenna	RF Exposure Conditions	Mode	PWR Back-off	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		10-g SAR (W/kg)		Plot No.
								Tune-up limit	Meas.	Meas.	Scaled	
Main 1-1	Phablet-10g	Rel 99 RMC	Off	7	Rear	9400	1880.0	24.0	23.3	1.000	1.182	
				5	Front	9400	1880.0	24.0	23.3	1.070	1.265	
				0	Edge 2	9400	1880.0	24.0	23.3	0.257	0.304	
				11	Edge 3	9400	1880.0	24.0	23.3	0.819	0.968	
				0	Edge 4	9400	1880.0	24.0	23.3	0.626	0.740	
			On	0	Rear	9262	1852.4	21.0	20.5	2.170	2.443	10
						9400	1880.0	21.0	20.4	2.110	2.435	
						9538	1907.6	21.0	20.5	2.010	2.248	
					Front	9400	1880.0	21.0	20.4	1.180	1.362	
					Edge 3	9400	1880.0	21.0	20.4	1.340	1.546	

10.4 W-CDMA Band IV

Antenna	RF Exposure Conditions	Mode	PWR Back-off	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.
								Tune-up limit	Meas.	Meas.	Scaled	
Main 1-1	Head	Rel 99 RMC	Off	0	Left Touch	1312	1712.4	24.0	23.6	0.242	0.262	11
					Left Tilt	1312	1712.4	24.0	23.6	0.097	0.105	
					Right Touch	1312	1712.4	24.0	23.6	0.187	0.203	
					Rightt Tilt	1312	1712.4	24.0	23.6	0.082	0.088	
	Bod-worn	Rel 99 RMC	Off	15	Rear	1312	1712.4	24.0	23.6	0.719	0.779	12
					Front	1312	1712.4	24.0	23.6	0.544	0.590	
	Hotspot	Rel 99 RMC	On	10	Rear	1312	1712.4	21.0	20.7	0.651	0.693	
					Front	1312	1712.4	21.0	20.7	0.540	0.575	
					Edge 2	1312	1712.4	21.0	20.7	0.094	0.099	
					Edge 3	1312	1712.4	21.0	20.7	0.966	1.028	13
						1413	1732.6	21.0	20.2	0.832	0.996	
						1513	1752.6	21.0	20.2	0.812	0.983	
					Edge 4	1312	1712.4	21.0	20.7	0.192	0.204	
Antenna	RF Exposure Conditions	Mode	PWR Back-off	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		10-g SAR (W/kg)		Plot No.
								Tune-up limit	Meas.	Meas.	Scaled	
Main 1-1	Phablet-10g	Rel 99 RMC	Off	7	Rear	1312	1712.4	24.0	23.6	1.070	1.160	
				5	Front	1312	1712.4	24.0	23.6	1.290	1.398	
				0	Edge 2	1312	1712.4	24.0	23.6	0.368	0.399	
				11	Edge 3	1312	1712.4	24.0	23.6	0.883	0.957	
				0	Edge 4	1312	1712.4	24.0	23.6	0.854	0.926	
			On	0	Rear	1312	1712.4	21.0	20.8	2.140	2.251	
						1413	1732.6	21.0	20.2	1.960	2.351	
						1513	1752.6	21.0	20.2	2.000	2.416	
					Front	1312	1712.4	21.0	20.8	1.740	1.830	
					Edge 3	1312	1712.4	21.0	20.8	2.850	2.998	14
						1413	1732.6	21.0	20.2	2.220	2.663	
						1513	1752.6	21.0	20.2	1.960	2.367	

10.5 W-CDMA Band V

Antenna	RF Exposure Conditions	Mode	PWR Back-off	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		Plot No.
								Tune-up limit	Meas.	Meas.	Scaled	
Main 1-1	Head	Rel 99 RMC	Off	0	Left Touch	4183	836.6	24.0	23.0	0.123	0.153	
					Left Tilt	4183	836.6	24.0	23.0	0.078	0.097	
					Right Touch	4183	836.6	24.0	23.0	0.180	0.224	15
					Rightt Tilt	4183	836.6	24.0	23.0	0.084	0.105	
	Bod-worn	Rel 99 RMC	Off	15	Rear	4183	836.6	24.0	23.0	0.233	0.290	16
					Front	4183	836.6	24.0	23.0	0.217	0.270	
	Hotspot	Rel 99 RMC	Off	10	Rear	4183	836.6	24.0	23.0	0.461	0.574	17
					Front	4183	836.6	24.0	23.0	0.411	0.512	
					Edge 2	4183	836.6	24.0	23.0	0.158	0.197	
					Edge 3	4183	836.6	24.0	23.0	0.322	0.401	
					Edge 4	4183	836.6	24.0	23.0	0.065	0.081	

10.6 LTE Band 2 (20MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	PWR Back-off	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up limit	Meas.	Meas.	Scaled	
Main 1-1	Head	QPSK	Off	0	Left Touch	18900	1880.0	1	0	24.0	22.9	0.161	0.208	18
								50	0	23.0	21.8	0.126	0.165	
					Left Tilt	18900	1880.0	1	0	24.0	22.9	0.049	0.064	
								50	0	23.0	21.8	0.034	0.044	
					Right Touch	18900	1880.0	1	0	24.0	22.9	0.100	0.129	
								50	0	23.0	21.8	0.077	0.100	
					Right Tilt	18900	1880.0	1	0	24.0	22.9	0.073	0.094	
								50	0	23.0	21.8	0.058	0.076	
	Body-worn	QPSK	Off	15	Rear	18900	1880.0	1	0	24.0	22.9	0.445	0.575	19
								50	0	23.0	21.8	0.349	0.456	
					Front	18900	1880.0	1	0	24.0	22.9	0.414	0.535	
								50	0	23.0	21.8	0.312	0.408	
	Hotspot	QPSK	On	10	Rear	18900	1880.0	1	0	21.0	19.9	0.490	0.638	
								50	0	21.0	19.8	0.470	0.623	
					Front	18900	1880.0	1	0	21.0	19.9	0.409	0.533	
								50	0	21.0	19.8	0.424	0.562	
					Edge 2	18900	1880.0	1	0	21.0	19.9	0.056	0.072	
								50	0	21.0	19.8	0.053	0.071	
					Edge 3	18700	1860.0	1	0	21.0	19.6	0.784	1.075	
								50	0	21.0	19.6	0.779	1.084	20
						18900	1880.0	1	0	21.0	19.9	0.764	0.995	
								50	0	21.0	19.8	0.764	1.013	
								100	0	21.0	19.7	0.759	1.020	
						19100	1900.0	1	0	21.0	19.8	0.776	1.013	
								50	0	21.0	19.8	0.772	1.027	
					Edge 4	18900	1880.0	1	0	21.0	19.9	0.115	0.150	
								50	0	21.0	19.8	0.113	0.150	

Antenna	RF Exposure Conditions	Mode	PWR Back-off	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		10-g SAR (W/kg)		Plot No.
										Tune-up limit	Meas.	Meas.	Scaled	
Main 1-1	Phablet -10g	QPSK	Off	7	Rear	18900	1880.0	1	0	24.0	22.9	0.752	0.972	
								50	0	23.0	21.8	0.594	0.776	
				5	Front	18900	1880.0	1	0	24.0	22.9	0.764	0.988	
								50	0	23.0	21.8	0.598	0.782	
				0	Edge 2	18900	1880.0	1	0	24.0	22.9	0.216	0.279	
								50	0	23.0	21.8	0.171	0.224	
				11	Edge 3	18900	1880.0	1	0	24.0	22.9	0.765	0.989	
								50	0	23.0	21.8	0.585	0.765	
				0	Edge 4	18900	1880.0	1	0	24.0	22.9	0.524	0.677	
								50	0	23.0	21.8	0.409	0.535	
			On	0	Rear	18700	1860.0	1	0	21.0	19.6	1.630	2.245	
								50	0	21.0	19.6	1.590	2.199	
						18900	1880.0	1	0	21.0	19.9	1.700	2.213	
								50	0	21.0	19.8	1.720	2.286	21
								100	0	21.0	19.8	1.660	2.210	
						19100	1900.0	1	0	21.0	19.9	1.700	2.215	
								50	0	21.0	19.8	1.670	2.222	
					Front	18900	1880.0	1	0	21.0	19.9	0.931	1.212	
								50	0	21.0	19.8	0.917	1.219	
					Edge 3	18900	1880.0	1	0	21.0	19.9	1.360	1.770	
								50	0	21.0	19.8	1.340	1.781	

10.7 LTE Band 4 (20MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	PWR Back-off	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up limit	Meas.	Meas.	Scaled	
Main 1-1	Head	QPSK	Off	0	Left Touch	20175	1732.5	1	0	24.0	22.6	0.213	0.294	22
								50	0	23.0	21.6	0.175	0.240	
					Left Tilt	20175	1732.5	1	0	24.0	22.6	0.063	0.086	
								50	0	23.0	21.6	0.049	0.068	
					Right Touch	20175	1732.5	1	0	24.0	22.6	0.130	0.179	
								50	0	23.0	21.6	0.101	0.139	
					Right Tilt	20175	1732.5	1	0	24.0	22.6	0.055	0.076	
								50	0	23.0	21.6	0.041	0.056	
	Body-worn	QPSK	Off	15	Rear	20175	1732.5	1	0	24.0	22.6	0.531	0.732	23
								50	0	23.0	21.6	0.473	0.649	
					Front	20175	1732.5	1	0	24.0	22.6	0.474	0.653	
								50	0	23.0	21.6	0.363	0.498	
	Hotspot	QPSK	On	10	Rear	20175	1732.5	1	0	21.0	19.6	0.482	0.659	
								50	0	21.0	19.7	0.487	0.662	
					Front	20175	1732.5	1	0	21.0	19.6	0.450	0.615	
								50	0	21.0	19.7	0.460	0.626	
					Edge 2	20175	1732.5	1	0	21.0	19.6	0.053	0.073	
								50	0	21.0	19.7	0.064	0.087	
					Edge 3	20175	1732.5	1	0	21.0	19.6	0.635	0.868	
								50	0	21.0	19.7	0.643	0.874	
								100	0	21.0	19.6	0.644	0.889	24
					Edge 4	20175	1732.5	1	0	21.0	19.6	0.129	0.176	
								50	0	21.0	19.7	0.141	0.192	

Antenna	RF Exposure Conditions	Mode	PWR Back-off	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		10-g SAR (W/kg)		Plot No.
										Tune-up limit	Meas.	Meas.	Scaled	
Main 1-1	Phablet -10g	QPSK	Off	7	Rear	20175	1732.5	1	0	24.0	22.6	1.030	1.420	
								50	0	23.0	21.6	0.828	1.136	
				5	Front	20175	1732.5	1	0	24.0	22.6	0.989	1.363	
								50	0	23.0	21.6	0.748	1.026	
				0	Edge 2	20175	1732.5	1	0	24.0	22.6	0.287	0.396	
								50	0	23.0	21.6	0.228	0.313	
				11	Edge 3	20175	1732.5	1	0	24.0	22.6	0.727	1.002	
								50	0	23.0	21.6	0.554	0.760	
				0	Edge 4	20175	1732.5	1	0	24.0	22.6	0.603	0.831	
								50	0	23.0	21.6	0.454	0.623	
			On	0	Rear	20175	1732.5	1	0	21.0	19.7	1.780	2.427	
								50	0	21.0	19.7	1.910	2.582	
								100	0	21.0	19.6	1.870	2.575	
					Front	20175	1732.5	1	0	21.0	19.7	1.180	1.609	
								50	0	21.0	19.7	1.200	1.622	
					Edge 3	20175	1732.5	1	0	21.0	19.7	2.390	3.259	
								50	0	21.0	19.7	2.420	3.271	25
								100	0	21.0	19.6	2.360	3.250	

10.8 LTE Band 5 (10MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	PWR Back-off	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up limit	Meas.	Meas.	Scaled	
Main 1-1	Head	QPSK	Off	0	Left Touch	20525	836.5	1	0	25.0	23.8	0.123	0.161	
								25	0	23.0	21.8	0.086	0.114	
					Left Tilt	20525	836.5	1	0	25.0	23.8	0.100	0.130	
								25	0	23.0	21.8	0.064	0.084	
					Right Touch	20525	836.5	1	0	25.0	23.8	0.186	0.243	26
								25	0	23.0	21.8	0.125	0.166	
					Right Tilt	20525	836.5	1	0	25.0	23.8	0.095	0.124	
								25	0	23.0	21.8	0.065	0.086	
	Body-worn	QPSK	Off	15	Rear	20525	836.5	1	0	25.0	23.8	0.291	0.381	27
								25	0	23.0	21.8	0.191	0.254	
					Front	20525	836.5	1	0	25.0	23.8	0.248	0.324	
								25	0	23.0	21.8	0.161	0.214	
	Hotspot	QPSK	Off	10	Rear	20525	836.5	1	0	25.0	23.8	0.510	0.667	28
								25	0	23.0	21.8	0.336	0.446	
					Front	20525	836.5	1	0	25.0	23.8	0.429	0.561	
								25	0	23.0	21.8	0.284	0.377	
					Edge 2	20525	836.5	1	0	25.0	23.8	0.271	0.354	
								25	0	23.0	21.8	0.169	0.224	
					Edge 3	20525	836.5	1	0	25.0	23.8	0.336	0.439	
								25	0	23.0	21.8	0.223	0.296	
					Edge 4	20525	836.5	1	0	25.0	23.8	0.055	0.072	
								25	0	23.0	21.8	0.038	0.051	

10.9 LTE Band 12 (10MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	PWR Back-off	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up limit	Meas.	Meas.	Scaled	
Main 1-1	Head	QPSK	Off	0	Left Touch	23095	707.5	1	0	24.0	22.6	0.075	0.104	
								25	0	23.0	21.6	0.064	0.089	
					Left Tilt	23095	707.5	1	0	24.0	22.6	0.038	0.053	
								25	0	23.0	21.6	0.033	0.045	
					Right Touch	23095	707.5	1	0	24.0	22.6	0.083	0.115	29
								25	0	23.0	21.6	0.063	0.088	
					Right Tilt	23095	707.5	1	0	24.0	22.6	0.042	0.058	
								25	0	23.0	21.6	0.032	0.045	
	Body-worn	QPSK	Off	15	Rear	23095	707.5	1	0	24.0	22.6	0.152	0.211	30
								25	0	23.0	21.6	0.122	0.169	
					Front	23095	707.5	1	0	24.0	22.6	0.124	0.172	
								25	0	23.0	21.6	0.100	0.138	
	Hotspot	QPSK	Off	10	Rear	23095	707.5	1	0	24.0	22.6	0.234	0.325	31
								25	0	23.0	21.6	0.173	0.240	
					Front	23095	707.5	1	0	24.0	22.6	0.163	0.226	
								25	0	23.0	21.6	0.131	0.182	
					Edge 2	23095	707.5	1	0	24.0	22.6	0.092	0.128	
								25	0	23.0	21.6	0.071	0.098	
					Edge 3	23095	707.5	1	0	24.0	22.6	0.089	0.123	
								25	0	23.0	21.6	0.073	0.101	
					Edge 4	23095	707.5	1	0	24.0	22.6	0.090	0.125	
								25	0	23.0	21.6	0.072	0.100	

10.10 LTE Band 13 (10MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	PWR Back-off	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up limit	Meas.	Meas.	Scaled	
Main 1-1	Head	QPSK	Off	0	Left Touch	23230	782.0	1	0	24.0	22.9	0.131	0.167	
								25	0	23.0	21.9	0.105	0.134	
					Left Tilt	23230	782.0	1	0	24.0	22.9	0.082	0.104	
								25	0	23.0	21.9	0.067	0.085	
					Right Touch	23230	782.0	1	0	24.0	22.9	0.158	0.201	32
								25	0	23.0	21.9	0.129	0.165	
					Right Tilt	23230	782.0	1	0	24.0	22.9	0.081	0.104	
								25	0	23.0	21.9	0.069	0.088	
	Body-worn	QPSK	Off	15	Rear	23230	782.0	1	0	24.0	22.9	0.186	0.237	33
								25	0	23.0	21.9	0.151	0.193	
					Front	23230	782.0	1	0	24.0	22.9	0.181	0.231	
								25	0	23.0	21.9	0.147	0.188	
	Hotspot	QPSK	Off	10	Rear	23230	782.0	1	0	24.0	22.9	0.292	0.372	34
								25	0	23.0	21.9	0.233	0.298	
					Front	23230	782.0	1	0	24.0	22.9	0.237	0.302	
								25	0	23.0	21.9	0.190	0.243	
					Edge 2	23230	782.0	1	0	24.0	22.9	0.176	0.224	
								25	0	23.0	21.9	0.147	0.188	
					Edge 3	23230	782.0	1	0	24.0	22.9	0.156	0.199	
								25	0	23.0	21.9	0.124	0.159	
					Edge 4	23230	782.0	1	0	24.0	22.9	0.126	0.161	
								25	0	23.0	21.9	0.100	0.128	

10.11 LTE Band 17 (10MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	PWR Back-off	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up limit	Meas.	Meas.	Scaled	
Main 1-1	Head	QPSK	Off	0	Left Touch	23790	710.0	1	0	24.0	22.5	0.085	0.121	35
								25	0	23.0	21.5	0.069	0.099	
					Left Tilt	23790	710.0	1	0	24.0	22.5	0.043	0.060	
								25	0	23.0	21.5	0.034	0.049	
					Right Touch	23790	710.0	1	0	24.0	22.5	0.085	0.120	
								25	0	23.0	21.5	0.071	0.100	
					Right Tilt	23790	710.0	1	0	24.0	22.5	0.044	0.063	
								25	0	23.0	21.5	0.035	0.050	
	Body-worn	QPSK	Off	15	Rear	23790	710.0	1	0	24.0	22.5	0.151	0.214	36
								25	0	23.0	21.5	0.121	0.172	
					Front	23790	710.0	1	0	24.0	22.5	0.127	0.180	
								25	0	23.0	21.5	0.102	0.145	
	Hotspot	QPSK	Off	10	Rear	23790	710.0	1	0	24.0	22.5	0.244	0.346	37
								25	0	23.0	21.5	0.175	0.249	
					Front	23790	710.0	1	0	24.0	22.5	0.170	0.241	
								25	0	23.0	21.5	0.137	0.195	
					Edge 2	23790	710.0	1	0	24.0	22.5	0.087	0.123	
								25	0	23.0	21.5	0.067	0.094	
					Edge 3	23790	710.0	1	0	24.0	22.5	0.091	0.130	
								25	0	23.0	21.5	0.072	0.102	
					Edge 4	23790	710.0	1	0	24.0	22.5	0.091	0.128	
								25	0	23.0	21.5	0.072	0.103	

10.12 LTE Band 25 (20MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	PWR Back-off	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up limit	Meas.	Meas.	Scaled	
Main 1-1	Head	QPSK	Off	0	Left Touch	26590	1905.0	1	0	24.0	23.0	0.147	0.187	38
								50	0	23.0	21.9	0.113	0.145	
					Left Tilt	26590	1905.0	1	0	24.0	23.0	0.031	0.039	
								50	0	23.0	21.9	0.022	0.028	
					Right Touch	26590	1905.0	1	0	24.0	23.0	0.098	0.124	
								50	0	23.0	21.9	0.074	0.095	
					Right Tilt	26590	1905.0	1	0	24.0	23.0	0.060	0.076	
								50	0	23.0	21.9	0.045	0.057	
	Body-worn	QPSK	Off	15	Rear	26590	1905.0	1	0	24.0	23.0	0.488	0.619	39
								50	0	23.0	21.9	0.390	0.501	
					Front	26590	1905.0	1	0	24.0	23.0	0.369	0.468	
								50	0	23.0	21.9	0.284	0.365	
	Hotspot	QPSK	On	10	Rear	26590	1905.0	1	0	21.0	19.9	0.492	0.629	
								50	0	21.0	19.9	0.485	0.626	
					Front	26590	1905.0	1	0	21.0	19.9	0.373	0.477	
								50	0	21.0	19.9	0.371	0.479	
					Edge 2	26590	1905.0	1	0	21.0	19.9	0.059	0.075	
								50	0	21.0	19.9	0.062	0.080	
					Edge 3	26140	1860.0	1	0	21.0	19.7	0.826	1.108	
								50	0	21.0	19.7	0.804	1.089	
						26365	1882.5	1	0	21.0	19.9	0.832	1.064	
								50	0	21.0	19.9	0.836	1.080	
								100	0	21.0	19.8	0.787	1.028	
						26590	1905.0	1	0	21.0	19.9	0.891	1.139	40
								50	0	21.0	19.9	0.851	1.098	
					Edge 4	26590	1905.0	1	0	21.0	19.9	0.119	0.152	
								50	0	21.0	19.9	0.110	0.142	

Antenna	RF Exposure Conditions	Mode	PWR Back-off	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		10-g SAR (W/kg)		Plot No.
										Tune-up limit	Meas.	Meas.	Scaled	
Main 1-1	Phablet -10g	QPSK	Off	7	Rear	26590	1905.0	1	0	24.0	23.0	0.875	1.110	
								50	0	23.0	21.9	0.672	0.863	
				5	Front	26590	1905.0	1	0	24.0	23.0	0.979	1.242	
								50	0	23.0	21.9	0.805	1.034	
				0	Edge 2	26590	1905.0	1	0	24.0	23.0	0.263	0.334	
								50	0	23.0	21.9	0.203	0.261	
				11	Edge 3	26590	1905.0	1	0	24.0	23.0	0.773	0.981	
								50	0	23.0	21.9	0.608	0.781	
				0	Edge 4	26590	1905.0	1	0	24.0	23.0	0.575	0.730	
								50	0	23.0	21.9	0.435	0.558	
			On	0	Rear	26590	1905.0	1	0	21.0	20.0	1.560	1.986	41
								50	0	21.0	19.9	1.510	1.947	
					Front	26590	1905.0	1	0	21.0	20.0	1.020	1.299	
								50	0	21.0	19.9	0.976	1.259	
					Edge 3	26590	1905.0	1	0	21.0	20.0	0.952	1.212	
								50	0	21.0	19.9	0.942	1.215	

10.13 LTE Band 26 (20MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	PWR Back-off	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up limit	Meas.	Meas.	Scaled	
Main 1-1	Head	QPSK	Off	0	Left Touch	26865	831.5	1	0	24.0	22.9	0.159	0.203	
								36	0	23.0	21.9	0.110	0.143	
					Left Tilt	26865	831.5	1	0	24.0	22.9	0.097	0.124	
								36	0	23.0	21.9	0.067	0.086	
					Right Touch	26865	831.5	1	0	24.0	22.9	0.226	0.288	42
								36	0	23.0	21.9	0.150	0.194	
					Right Tilt	26865	831.5	1	0	24.0	22.9	0.108	0.138	
								36	0	23.0	21.9	0.072	0.094	
	Body-worn	QPSK	Off	15	Rear	26865	831.5	1	0	24.0	22.9	0.351	0.448	43
								36	0	23.0	21.9	0.235	0.305	
					Front	26865	831.5	1	0	24.0	22.9	0.326	0.416	
								36	0	23.0	21.9	0.222	0.288	
	Hotspot	QPSK	Off	10	Rear	26865	831.5	1	0	24.0	22.9	0.686	0.876	44
								36	0	23.0	21.9	0.467	0.605	
					Front	26865	831.5	1	0	24.0	22.9	0.576	0.735	
								36	0	23.0	21.9	0.391	0.507	
					Edge 2	26865	831.5	1	0	24.0	22.9	0.241	0.308	
								36	0	23.0	21.9	0.176	0.228	
					Edge 3	26865	831.5	1	0	24.0	22.9	0.396	0.505	
								36	0	23.0	21.9	0.259	0.336	
					Edge 4	26865	831.5	1	0	24.0	22.9	0.083	0.106	
								36	0	23.0	21.9	0.061	0.079	

10.14 LTE Band 41 (20MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	PWR Back-off	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up limit	Meas.	Meas.	Scaled	
Main 1-2	Head	QPSK	Off	0	Left Touch	41490	2680.0	1	0	24.0	23.3	0.027	0.032	45
								50	0	23.0	22.1	0.018	0.022	
					Left Tilt	41490	2680.0	1	0	24.0	23.3	0.014	0.016	
								50	0	23.0	22.1	0.010	0.013	
					Right Touch	41490	2680.0	1	0	24.0	23.3	0.022	0.026	
								50	0	23.0	22.1	0.011	0.013	
					Right Tilt	41490	2680.0	1	0	24.0	23.3	0.024	0.028	
								50	0	23.0	22.1	0.017	0.021	
	Body-worn	QPSK	Off	15	Rear	41490	2680.0	1	0	24.0	23.3	0.171	0.202	46
								50	0	23.0	22.1	0.132	0.161	
					Front	41490	2680.0	1	0	24.0	23.3	0.119	0.140	
								50	0	23.0	22.1	0.094	0.115	
	Hotspot	QPSK	Off	10	Rear	41490	2680.0	1	0	21.0	20.1	0.179	0.221	
								50	0	21.0	20.1	0.180	0.221	
					Front	41490	2680.0	1	0	21.0	20.1	0.130	0.161	
								50	0	21.0	20.1	0.128	0.157	
					Edge 3	41490	2680.0	1	0	21.0	20.1	0.273	0.338	47
								50	0	21.0	20.1	0.267	0.327	
					Edge 4	41490	2680.0	1	0	21.0	20.1	0.062	0.077	
								50	0	21.0	20.1	0.060	0.074	

10.15 LTE Band 66 (20MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	PWR Back-off	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up limit	Meas.	Meas.	Scaled	
Main 1-1	Head	QPSK	Off	0	Left Touch	132572	1770.0	1	0	24.0	22.8	0.191	0.253	48
								50	0	23.0	21.7	0.148	0.198	
					Left Tilt	132572	1770.0	1	0	24.0	22.8	0.067	0.089	
								50	0	23.0	21.7	0.051	0.069	
					Right Touch	132572	1770.0	1	0	24.0	22.8	0.132	0.175	
								50	0	23.0	21.7	0.104	0.139	
					Right Tilt	132572	1770.0	1	0	24.0	22.8	0.051	0.067	
								50	0	23.0	21.7	0.041	0.054	
	Body-worn	QPSK	Off	15	Rear	132572	1770.0	1	0	24.0	22.8	0.554	0.733	49
								50	0	23.0	21.7	0.440	0.590	
					Front	132572	1770.0	1	0	24.0	22.8	0.444	0.588	
								50	0	23.0	21.7	0.353	0.473	
	Hotspot	QPSK	On	10	Rear	132572	1770.0	1	0	21.0	19.7	0.403	0.538	
								50	0	21.0	19.7	0.398	0.532	
					Front	132572	1770.0	1	0	21.0	19.7	0.333	0.444	
								50	0	21.0	19.7	0.333	0.445	
					Edge 2	132572	1770.0	1	0	21.0	19.7	0.059	0.078	
								50	0	21.0	19.7	0.056	0.075	
					Edge 3	132572	1770.0	1	0	21.0	19.7	0.596	0.795	50
								50	0	21.0	19.7	0.592	0.791	
					Edge 4	132572	1770.0	1	0	21.0	19.7	0.118	0.157	
								50	0	21.0	19.7	0.116	0.155	

Antenna	RF Exposure Conditions	Mode	PWR Back-off	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offest	Power (dBm)		10-g SAR (W/kg)		Plot No.
										Tune-up limit	Meas.	Meas.	Scaled	
Main 1-1	Phablet -10g	QPSK	Off	7	Rear	132572	1770.0	1	0	24.0	22.8	0.949	1.256	
								50	0	23.0	21.7	0.748	1.003	
				5	Front	132572	1770.0	1	0	24.0	22.8	1.100	1.456	
								50	0	23.0	21.7	0.878	1.177	
				0	Edge 2	132572	1770.0	1	0	24.0	22.8	0.077	0.102	
								50	0	23.0	21.7	0.062	0.083	
				11	Edge 3	132572	1770.0	1	0	24.0	22.8	0.691	0.915	
								50	0	23.0	21.7	0.548	0.735	
				0	Edge 4	132572	1770.0	1	0	24.0	22.8	0.645	0.854	
								50	0	23.0	21.7	0.509	0.682	
			On	0	Rear	132572	1770.0	1	0	21.0	19.7	1.400	1.872	
								50	0	21.0	19.7	1.390	1.854	
					Front	132572	1770.0	1	0	21.0	19.7	1.090	1.457	
								50	0	21.0	19.7	1.080	1.440	
					Edge 3	132572	1770.0	1	0	21.0	19.7	1.480	1.978	51
								50	0	21.0	19.7	1.440	1.921	

10.16 Wi-Fi (DTS Band)

Antenna	Frequency Band	Mode	RF Exposure Conditions	PWR Back-off	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle (%)	Power (dBm)		1-g SAR (W/kg)		Note	Plot No.
											Tune-up limit	Meas.	Meas.	Scaled		
SISO (WiFi Ant.1)	2.4GHz	802.11b 1 Mbps	Head	On	0	Left Touch	1	2412.0	0.152	99.7	16.0	15.8				
						Left Tilt	1	2412.0	0.177	99.7	16.0	15.8				
						Right Touch	1	2412.0	0.638	99.7	16.0	15.8	0.450	0.469		52
						Rightt Tilt	1	2412.0	0.601	99.7	16.0	15.8	0.392	0.409	2	
			Body-worn	Off	15	Rear	1	2412.0	0.068	99.7	19.0	18.3	0.055	0.065	1	53
						Front	1	2412.0	0.050	99.7	19.0	18.3				
			Hotspot	Off	10	Rear	1	2412.0	0.177	99.7	19.0	18.3	0.146	0.173	1	54
						Front	1	2412.0	0.111	99.7	19.0	18.3				
						Edge 1	1	2412.0	0.117	99.7	19.0	18.3				
						Edge 4	1	2412.0	0.114	99.7	19.0	18.3				
SISO (WiFi Ant.2)	2.4GHz	802.11b 1 Mbps	Head	On	0	Left Touch	1	2412.0	0.178	99.7	16.0	15.7				
						Left Tilt	1	2412.0	0.198	99.7	16.0	15.7	0.206	0.220	1	
						Right Touch	1	2412.0	0.112	99.7	16.0	15.7				
						Rightt Tilt	1	2412.0	0.145	99.7	16.0	15.7				
			Body-worn	Off	15	Rear	6	2437.0	0.048	99.7	19.0	18.5	0.036	0.040	1	
						Front	6	2437.0	0.020	99.7	19.0	18.5				
			Hotspot	Off	10	Rear	6	2437.0	0.116	99.7	19.0	18.5				
						Front	6	2437.0	0.048	99.7	19.0	18.5				
						Edge 1	6	2437.0	0.136	99.7	19.0	18.5	0.097	0.109	1	
						Edge 4	6	2437.0	0.001	99.7	19.0	18.5				

Note(s):

1. When the Highest reported SAR is ≤ 0.4 or 1.0 W/kg (1-g or 10-g respectively). Therefore, further SAR measurements within this exposure condition are not required.
2. Highest reported SAR is > 0.4 or 1.0 W/kg (1-g or 10-g respectively). Due to the highest reported SAR for this test position, other test positions in this exposure condition were evaluated until a SAR ≤ 0.8 or 2.0 W/kg (1-g or 10-g respectively) was reported.
3. Testing for a second channel was required because the reported SAR for this test position was > 0.8 or 2.0 W/kg (1-g or 10-g respectively).
4. Additional testing required in order satisfying FCC simultaneous transmission limit criteria.
5. 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.
6. Wi-Fi Direct only available in hand used configuration.

10.17 Wi-Fi (DTS Band) of RSDB operation

Antenna	Frequency Band	Mode	RF Exposure Conditions	PWR Back-off	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle (%)	Power (dBm)		1-g SAR (W/kg)		Note	Plot No.
											Tune-up limit	Meas.	Meas.	Scaled		
SISO (WiFi Ant.1)	2.4GHz	802.11b 1 Mbps	Head	On	0	Left Touch	6	2437.0	0.113	99.7	14.0	13.9				
						Left Tilt	6	2437.0	0.120	99.7	14.0	13.9				
						Right Touch	6	2437.0	0.459	99.7	14.0	13.9	0.353	0.367	1	55
						Rightt Tilt	6	2437.0	0.381	99.7	14.0	13.9				
			Body-worn	Off	15	Rear	1	2412.0	0.057	99.7	16.0	15.8	0.042	0.044	1	56
						Front	1	2412.0	0.043	99.7	16.0	15.8				
			Hotspot	Off	10	Rear	1	2412.0	0.133	99.7	16.0	15.8	0.097	0.101	1	57
						Front	1	2412.0	0.076	99.7	16.0	15.8				
						Edge 1	1	2412.0	0.087	99.7	16.0	15.8				
						Edge 4	1	2412.0	0.115	99.7	16.0	15.8				
SISO (WiFi Ant.2)	2.4GHz	802.11b 1 Mbps	Head	On	0	Left Touch	1	2412.0	0.105	99.7	14.0	13.7				
						Left Tilt	1	2412.0	0.106	99.7	14.0	13.7	0.112	0.121	1	
						Right Touch	1	2412.0	0.064	99.7	14.0	13.7				
						Rightt Tilt	1	2412.0	0.072	99.7	14.0	13.7				
			Body-worn	Off	15	Rear	1	2412.0	0.035	99.7	16.0	15.7	0.024	0.025	1	
						Front	1	2412.0	0.015	99.7	16.0	15.7				
			Hotspot	Off	10	Rear	1	2412.0	0.094	99.7	16.0	15.7	0.064	0.069	1	
						Front	1	2412.0	0.039	99.7	16.0	15.7				
						Edge 1	1	2412.0	0.085	99.7	16.0	15.7				
						Edge 4	1	2412.0	0.008	99.7	16.0	15.7				
MIMO (WiFi Ant.1)	2.4GHz	802.11n 6.5 Mbps	Head	On	0	Left Touch	1	2412.0	0.113	98.0	14.0	13.5				
						Left Tilt	1	2412.0	0.106	98.0	14.0	13.5				
						Right Touch	1	2412.0	0.423	98.0	14.0	13.5	0.301	0.347	1	
						Rightt Tilt	1	2412.0	0.380	98.0	14.0	13.5				
			Body-worn	Off	15	Rear	6	2437.0	0.037	98.0	16.0	15.1	0.029	0.037	1	
						Front	6	2437.0	0.022	98.0	16.0	15.1				
			Hotspot	Off	10	Rear	6	2437.0	0.080	98.0	16.0	15.1				
						Front	6	2437.0	0.047	98.0	16.0	15.1				
						Edge 1	6	2437.0	0.088	98.0	16.0	15.1	0.062	0.078	1	
						Edge 4	6	2437.0	0.077	98.0	16.0	15.1				
MIMO (WiFi Ant.2)	2.4GHz	802.11n 6.5 Mbps	Head	On	0	Left Touch	1	2412.0	0.113	98.0	14.0	13.8				
						Left Tilt	1	2412.0	0.106	98.0	14.0	13.8				
						Right Touch	1	2412.0	0.423	98.0	14.0	13.8				
						Rightt Tilt	1	2412.0	0.380	98.0	14.0	13.8				
			Body-worn	Off	15	Rear	6	2437.0	0.037	98.0	16.0	15.5				
						Front	6	2437.0	0.022	98.0	16.0	15.5				
			Hotspot	Off	10	Rear	6	2437.0	0.080	98.0	16.0	15.5				
						Front	6	2437.0	0.047	98.0	16.0	15.5				
						Edge 1	6	2437.0	0.088	98.0	16.0	15.5				
						Edge 4	6	2437.0	0.077	98.0	16.0	15.5				

Note(s):

1. When the Highest reported SAR is ≤ 0.4 or 1.0 W/kg (1-g or 10-g respectively). Therefore, further SAR measurements within this exposure condition are not required.
2. Highest reported SAR is > 0.4 or 1.0 W/kg (1-g or 10-g respectively). Due to the highest reported SAR for this test position, other test positions in this exposure condition were evaluated until a SAR ≤ 0.8 or 2.0 W/kg (1-g or 10-g respectively) was reported.
3. Testing for a second channel was required because the reported SAR for this test position was > 0.8 or 2.0 W/kg (1-g or 10-g respectively).
4. Additional testing required in order satisfying FCC simultaneous transmission limit criteria.
5. 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.
6. Wi-Fi Direct only available in hand used configuration.

10.18 Wi-Fi (U-NII Bands)

Antenna	Frequency Band	Mode	RF Exposure Conditions	PWR Back-off	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)		Note	Plot No.
											Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled		
SISO (WiFI Ant.1)	5.3 GHz U-NII 2A	802.11ac VHT 80 29.3 Mbps	Head	On	0	Left Touch	58	5290.0	0.093	98.1	13.0	12.5						
						Left Tilt	58	5290.0	0.093	98.1	13.0	12.5						
						Right Touch	58	5290.0	0.176	98.1	13.0	12.5						
						Right Tilt	58	5290.0	0.192	98.1	13.0	12.5	0.094	0.106			1	58
		802.11n HT 40 13.5 Mbps	Body-worn	Off	15	Rear	62	5310.0	0.094	98.2	15.0	14.8	0.030	0.032			1	
						Front	62	5310.0	0.015	98.2	15.0	14.8						
			Phablet-10g	Off	0	Rear	62	5310.0	1.392	98.2	15.0	14.8						
						Front	62	5310.0	0.396	98.2	15.0	14.8						
						Edge 1	62	5310.0	0.570	98.2	15.0	14.8						
						Edge 4	62	5310.0	2.472	98.2	15.0	14.8			0.312	0.330	1	
SISO (WiFI Ant.2)	5.3 GHz U-NII 2A	802.11ac VHT 80 29.3 Mbps	Head	On	0	Left Touch	58	5290.0	0.027	98.1	13.0	12.6						
						Left Tilt	58	5290.0	0.029	98.1	13.0	12.6	0.009	0.010			1	
						Right Touch	58	5290.0	0.016	98.1	13.0	12.6						
						Right Tilt	58	5290.0	0.018	98.1	13.0	12.6						
		802.11n HT 40 13.5 Mbps	Body-worn	Off	15	Rear	62	5310.0	0.240	98.2	15.0	14.4	0.106	0.123			1	59
						Front	62	5310.0	0.006	98.2	15.0	14.4						
			Phablet-10g	Off	0	Rear	62	5310.0	10.430	98.2	15.0	14.4			0.574	0.666	1	
						Front	62	5310.0	0.087	98.2	15.0	14.4						
						Edge 1	62	5310.0	0.422	98.2	15.0	14.4						
						Edge 4	62	5310.0	0.195	98.2	15.0	14.4						
MIMO (WiFI Ant.1)	5.3 GHz U-NII 2A	802.11n HT 40 13.5 Mbps	Phablet-10g	Off	0	Rear	62	5310.0	12.292	98.2	15.0	14.8						
						Front	62	5310.0	1.147	98.2	15.0	14.8						
						Edge 1	62	5310.0	0.845	98.2	15.0	14.8						
						Edge 4	62	5310.0	2.888	98.2	15.0	14.8						
MIMO (WiFI Ant.2)	5.3 GHz U-NII 2A	802.11n HT 40 13.5 Mbps	Phablet-10g	Off	0	Rear	62	5310.0	12.292	98.2	15.0	14.4			0.741	0.874	1	60
						Front	62	5310.0	1.147	98.2	15.0	14.4						
						Edge 1	62	5310.0	0.845	98.2	15.0	14.4						
						Edge 4	62	5310.0	2.888	98.2	15.0	14.4						

Note(s):

1. Highest *reported* SAR is ≤ 0.4 or 1.0 W/kg (1-g or 10-g respectively). Therefore, further SAR measurements within this exposure condition are not required.
2. Highest *reported* SAR is > 0.4 or 1.0 W/kg (1-g or 10-g respectively). Due to the highest *reported* SAR for this test position, other test positions in this exposure condition were evaluated until a SAR ≤ 0.8 or 2.0 W/kg (1-g or 10-g respectively) was *reported*.
3. Testing for a second channel was required because the *reported* SAR for this test position was > 0.8 or 2.0 W/kg (1-g or 10-g respectively).
4. Additional testing required in order satisfying FCC simultaneous transmission limit criteria.
5. Wi-Fi Direct only available in hand used configuration.

Antenna	Frequency Band	Mode	RF Exposure Conditions	PWR Back-off	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)		Note	Plot No.
											Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled		
SISO (WiFi Ant.1)	5.5 GHz U-NII 2C	802.11ac VHT 80 29.3 Mbps	Head	On	0	Left Touch	106	5530.0	0.089	98.1	13.0	13.0						
						Left Tilt	106	5530.0	0.100	98.1	13.0	13.0						
						Right Touch	106	5530.0	0.224	98.1	13.0	13.0						
						Right Tilt	106	5530.0	0.254	98.1	13.0	13.0	0.098	0.101			1	61
		802.11a 6 Mbps	Body-worn	Off	15	Rear	124	5620.0	0.153	98.2	16.0	15.8	0.064	0.068			1	
						Front	124	5620.0	0.016	98.2	16.0	15.8						
			Phablet-10g	Off	0	Rear	124	5620.0	5.398	98.2	16.0	15.8			0.268	0.286	1	
						Front	124	5620.0	0.937	98.2	16.0	15.8						
						Edge 1	124	5620.0	1.194	98.2	16.0	15.8						
						Edge 4	124	5620.0	2.617	98.2	16.0	15.8						
SISO (WiFi Ant.2)	5.5 GHz U-NII 2C	802.11ac VHT 80 29.3 Mbps	Head	On	0	Left Touch	106	5530.0	0.074	98.1	13.0	13.0						
						Left Tilt	106	5530.0	0.098	98.1	13.0	13.0						
						Right Touch	106	5530.0	0.111	98.1	13.0	13.0						
						Right Tilt	106	5530.0	0.174	98.1	13.0	13.0	0.048	0.049			1	
		802.11a 6 Mbps	Body-worn	Off	15	Rear	120	5600.0	0.443	98.2	16.0	15.5	0.204	0.231			1	62
						Front	120	5600.0	0.007	98.2	16.0	15.5						
			Phablet-10g	Off	0	Rear	120	5600.0	17.361	98.2	16.0	15.5			1.140	1.290		
						Front	120	5600.0	0.707	98.2	16.0	15.5						
						Edge 1	120	5600.0	1.282	98.2	16.0	15.5			0.153	0.173	2	
						Edge 4	120	5600.0	0.356	98.2	16.0	15.5						
MIMO (WiFi Ant.1)	5.5 GHz U-NII 2C	802.11n HT 20 6.5 Mbps	Phablet-10g	Off	0	Rear	124	5620.0	20.188	98.1	16.0	15.7						
						Front	124	5620.0	1.746	98.1	16.0	15.7						
						Edge 1	124	5620.0	1.622	98.1	16.0	15.7						
						Edge 4	124	5620.0	1.539	98.1	16.0	15.7						
MIMO (WiFi Ant.2)	5.5 GHz U-NII 2C	802.11n HT 20 6.5 Mbps	Phablet-10g	Off	0	Rear	124	5620.0	20.188	98.1	16.0	15.4			1.140	1.325		63
						Front	124	5620.0	1.746	98.1	16.0	15.4			0.118	0.137	2	
						Edge 1	124	5620.0	1.622	98.1	16.0	15.4						
						Edge 4	124	5620.0	1.539	98.1	16.0	15.4						

Antenna	Frequency Band	Mode	RF Exposure Conditions	PWR Back-off	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle (%)	Power (dBm)		1-g SAR (W/kg)		Note	Plot No.
											Tune-up limit	Meas.	Meas.	Scaled		
SISO (WiFi Ant.1)	5.8 GHz U-NII 3	802.11ac VHT 80 29.3 Mbps	Head	On	0	Left Touch	155	5775.0	0.069	98.1	13.0	12.7				
						Left Tilt	155	5775.0	0.067	98.1	13.0	12.7				
						Right Touch	155	5775.0	0.148	98.1	13.0	12.7	0.063	0.068	1	64
						Right Tilt	155	5775.0	0.129	98.1	13.0	12.7				
		802.11a 6 Mbps	Body-worn	Off	15	Rear	149	5745.0	0.158	98.2	17.0	16.5	0.070	0.079	1	
						Front	149	5745.0	0.013	98.2	17.0	16.5				
			Hotspot	Off	10	Rear	149	5745.0	0.264	98.2	17.0	16.5	0.114	0.130	1	
						Front	149	5745.0	0.087	98.2	17.0	16.5	0.028	0.032	4	
						Edge 1	149	5745.0	0.098	98.2	17.0	16.5				
						Edge 4	149	5745.0	0.122	98.2	17.0	16.5				
SISO (WiFi Ant.2)	5.8 GHz U-NII 3	802.11ac VHT 80 29.3 Mbps	Head	On	0	Left Touch	155	5775.0	0.047	98.1	13.0	12.6				
						Left Tilt	155	5775.0	0.046	98.1	13.0	12.6				
						Right Touch	155	5775.0	0.084	98.1	13.0	12.6	0.015	0.017	1	
						Right Tilt	155	5775.0	0.047	98.1	13.0	12.6				
		802.11a 6 Mbps	Body-worn	Off	15	Rear	149	5745.0	0.456	98.2	17.0	16.5	0.196	0.223	1	65
						Front	149	5745.0	0.008	98.2	17.0	16.5				
			Hotspot	Off	10	Rear	149	5745.0	0.934	98.2	17.0	16.5	0.382	0.435		66
						Front	149	5745.0	0.033	98.2	17.0	16.5	<0.001	<0.001	4	
						Edge 1	149	5745.0	0.173	98.2	17.0	16.5	0.062	0.070	2	
						Edge 4	149	5745.0	0.036	98.2	17.0	16.5				

Note(s):

1. Highest *reported* SAR is ≤ 0.4 or 1.0 W/kg (1-g or 10-g respectively). Therefore, further SAR measurements within this exposure condition are not required.
2. Highest *reported* SAR is > 0.4 or 1.0 W/kg (1-g or 10-g respectively). Due to the highest *reported* SAR for this test position, other test positions in this exposure condition were evaluated until a SAR ≤ 0.8 or 2.0 W/kg (1-g or 10-g respectively) was *reported*.
3. Testing for a second channel was required because the *reported* SAR for this test position was > 0.8 or 2.0 W/kg (1-g or 10-g respectively).
4. Additional testing required in order satisfying FCC simultaneous transmission limit criteria.
5. Wi-Fi Direct only available in hand used configuration.

10.19 Wi-Fi (U-NII Bands) of RSDB operation

Antenna	Frequency Band	Mode	RF Exposure Conditions	PWR Back-off	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)		Note	Plot No.
											Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled		
SISO (WiFI Ant.1)	5.3 GHz U-NII 2A	802.11ac VHT 80 29.3 Mbps	Body-worn	Off	15	Rear	58	5290.0	0.091	98.1	14.0	13.8	0.031	0.033			1	
						Front	58	5290.0	0.008	98.1	14.0	13.8						
			Phablet-10g	Off	0	Rear	58	5290.0	2.702	98.1	14.0	13.8						
						Front	58	5290.0	0.683	98.1	14.0	13.8						
						Edge 1	58	5290.0	0.650	98.1	14.0	13.8						
						Edge 4	58	5290.0	2.815	98.1	14.0	13.8			0.205	0.221	1	
SISO (WiFI Ant.2)	5.3 GHz U-NII 2A	802.11ac VHT 80 13.5 Mbps	Body-worn	Off	15	Rear	58	5290.0	0.172	98.1	14.0	13.1	0.068	0.086			1	
						Front	58	5290.0	0.005	98.1	14.0	13.1						
			Phablet-10g	Off	0	Rear	58	5290.0	6.473	98.1	14.0	13.1			0.361	0.454	1	
						Front	58	5290.0	0.116	98.1	14.0	13.1						
						Edge 1	58	5290.0	0.280	98.1	14.0	13.1						
						Edge 4	58	5290.0	0.087	98.1	14.0	13.1						
MIMO (WiFI Ant.1)	5.3 GHz U-NII 2A	802.11ac VHT 80 29.3 Mbps	Head	On	0	Left Touch	58	5290.0	0.113	98.1	13.0	12.4						
						Left Tilt	58	5290.0	0.124	98.1	13.0	12.4						
						Right Touch	58	5290.0	0.136	98.1	13.0	12.4						
						Right Tilt	58	5290.0	0.158	98.1	13.0	12.4	0.060	0.070			1	67
		802.11ac VHT 80 13.5 Mbps	Body-worn	Off	15	Rear	58	5290.0	0.216	98.1	14.0	13.6						
						Front	58	5290.0	0.010	98.1	14.0	13.6						
			Phablet-10g	Off	0	Rear	58	5290.0	8.943	98.1	14.0	13.6						
						Front	58	5290.0	0.789	98.1	14.0	13.6						
						Edge 1	58	5290.0	0.639	98.1	14.0	13.6						
						Edge 4	58	5290.0	1.923	98.1	14.0	13.6						
MIMO (WiFI Ant.2)	5.3 GHz U-NII 2A	802.11ac VHT 80 29.3 Mbps	Head	On	0	Left Touch	58	5290.0	0.113	98.1	13.0	12.5						
						Left Tilt	58	5290.0	0.124	98.1	13.0	12.5						
						Right Touch	58	5290.0	0.136	98.1	13.0	12.5						
						Right Tilt	58	5290.0	0.158	98.1	13.0	12.5						
		802.11ac VHT 80 13.5 Mbps	Body-worn	Off	15	Rear	58	5290.0	0.216	98.1	14.0	13.0	0.108	0.137			1	68
						Front	58	5290.0	0.010	98.1	14.0	13.0						
			Phablet-10g	Off	0	Rear	58	5290.0	8.943	98.1	14.0	13.0			0.467	0.594	1	69
						Front	58	5290.0	0.789	98.1	14.0	13.0						
						Edge 1	58	5290.0	0.639	98.1	14.0	13.0						
						Edge 4	58	5290.0	1.923	98.1	14.0	13.0						

Note(s):

1. Highest *reported* SAR is ≤ 0.4 or 1.0 W/kg (1-g or 10-g respectively). Therefore, further SAR measurements within this exposure condition are not required.
2. Highest *reported* SAR is > 0.4 or 1.0 W/kg (1-g or 10-g respectively). Due to the highest *reported* SAR for this test position, other test positions in this exposure condition were evaluated until a SAR ≤ 0.8 or 2.0 W/kg (1-g or 10-g respectively) was *reported*.
3. Testing for a second channel was required because the *reported* SAR for this test position was > 0.8 or 2.0 W/kg (1-g or 10-g respectively).
4. Additional testing required in order satisfying FCC simultaneous transmission limit criteria.
5. WLAN has same target power at head exposure condition even if RDSB operation is work or not work. So Please refer to SISO head SAR results in Section 10.18.
6. Wi-Fi Direct only available in hand used configuration.

Antenna	Frequency Band	Mode	RF Exposure Conditions	PWR Back-off	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)		Note	Plot No.
											Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled		
SISO (WiFI Ant.1)	5.5 GHz U-NII 2C	802.11ac VHT 80 29.3 Mbps	Body-worn	Off	15	Rear	122	5610.0	0.119	98.1	14.0	13.7	0.045	0.050			1	
						Front	122	5610.0	0.008	98.1	14.0	13.7						
			Phablet-10g	Off	0	Rear	122	5610.0	1.093	98.1	14.0	13.7			0.149	0.164	1	
						Front	122	5610.0	0.785	98.1	14.0	13.7						
						Edge 1	122	5610.0	0.677	98.1	14.0	13.7						
						Edge 4	122	5610.0	0.632	98.1	14.0	13.7						
SISO (WiFI Ant.2)	5.5 GHz U-NII 2C	802.11ac VHT 80 29.3 Mbps	Body-worn	Off	15	Rear	138	5690.0	0.251	98.1	14.0	13.6	0.092	0.103			1	
						Front	138	5690.0	0.003	98.1	14.0	13.6						
			Phablet-10g	Off	0	Rear	138	5690.0	9.786	98.1	14.0	13.6			0.480	0.536	1	
						Front	138	5690.0	0.265	98.1	14.0	13.6						
						Edge 1	138	5690.0	0.587	98.1	14.0	13.6						
						Edge 4	138	5690.0	0.168	98.1	14.0	13.6						
MIMO (WiFI Ant.1)	5.5 GHz U-NII 2C	802.11ac VHT 80 29.3 Mbps	Head	On	0	Left Touch	106	5530.0	0.145	98.1	13.0	12.7						
						Left Tilt	106	5530.0	0.186	98.1	13.0	12.7						
						Right Touch	106	5530.0	0.284	98.1	13.0	12.7						
						Right Tilt	106	5530.0	0.398	98.1	13.0	12.7	0.136	0.148			1	70
		802.11ac VHT 80 29.3 Mbps	Body-worn	Off	15	Rear	122	5610.0	0.291	98.1	14.0	13.6						
						Front	122	5610.0	0.013	98.1	14.0	13.6						
			Phablet-10g	Off	0	Rear	122	5610.0	8.619	98.1	14.0	13.6						
						Front	122	5610.0	1.163	98.1	14.0	13.6						
						Edge 1	122	5610.0	1.115	98.1	14.0	13.6						
						Edge 4	122	5610.0	1.185	98.1	14.0	13.6						
MIMO (WiFI Ant.2)	5.5 GHz U-NII 2C	802.11ac VHT 80 29.3 Mbps	Head	On	0	Left Touch	106	5530.0	0.145	98.1	13.0	12.9						
						Left Tilt	106	5530.0	0.186	98.1	13.0	12.9						
						Right Touch	106	5530.0	0.284	98.1	13.0	12.9						
						Right Tilt	106	5530.0	0.398	98.1	13.0	12.9						
		802.11ac VHT 80 29.3 Mbps	Body-worn	Off	15	Rear	122	5610.0	0.291	98.1	14.0	13.4	0.111	0.129			1	71
						Front	122	5610.0	0.013	98.1	14.0	13.4						
			Phablet-10g	Off	0	Rear	122	5610.0	8.619	98.1	14.0	13.4			0.700	0.812	1	72
						Front	122	5610.0	1.163	98.1	14.0	13.4						
						Edge 1	122	5610.0	1.115	98.1	14.0	13.4						
						Edge 4	122	5610.0	1.185	98.1	14.0	13.4						

Note(s):

1. Highest *reported* SAR is ≤ 0.4 or 1.0 W/kg (1-g or 10-g respectively). Therefore, further SAR measurements within this exposure condition are not required.
2. Highest *reported* SAR is > 0.4 or 1.0 W/kg (1-g or 10-g respectively). Due to the highest *reported* SAR for this test position, other test positions in this exposure condition were evaluated until a SAR ≤ 0.8 or 2.0 W/kg (1-g or 10-g respectively) was *reported*.
3. Testing for a second channel was required because the *reported* SAR for this test position was > 0.8 or 2.0 W/kg (1-g or 10-g respectively).
4. Additional testing required in order satisfying FCC simultaneous transmission limit criteria.
5. WLAN has same target power at head exposure condition even if RDSB operation is work or not work. So Please refer to SISO head SAR results in Section 10.18.
6. Wi-Fi Direct only available in hand used configuration.

Antenna	Frequency Band	Mode	RF Exposure Conditions	PWR Back-off	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Area Scan Max. SAR (W/kg)	Duty Cycle (%)	Power (dBm)		1-g SAR (W/kg)		Note	Plot No.
											Tune-up limit	Meas.	Meas.	Scaled		
SISO (WiFI Ant.1)	5.8 GHz U-NII 3	802.11ac VHT 80 29.3 Mbps	Body-worn	Off	15	Rear	155	5775.0	0.064	98.1	14.0	13.6	0.029	0.033	1	
						Front	155	5775.0	0.014	98.1	14.0	13.6				
			Hotspot	Off	10	Rear	155	5775.0	0.120	98.1	14.0	13.6	0.048	0.054	1	
						Front	155	5775.0	0.010	98.1	14.0	13.6				
						Edge 1	155	5775.0	0.041	98.1	14.0	13.6				
						Edge 4	155	5775.0	0.040	98.1	14.0	13.6				
SISO (WiFI Ant.2)	5.8 GHz U-NII 3	802.11ac VHT 80 29.3 Mbps	Body-worn	Off	15	Rear	155	5775.0	0.240	98.1	14.0	13.7	0.093	0.101	1	73
						Front	155	5775.0	0.054	98.1	14.0	13.7				
			Hotspot	Off	10	Rear	155	5775.0	0.519	98.1	14.0	13.7	0.195	0.212	1	74
						Front	155	5775.0	0.012	98.1	14.0	13.7				
						Edge 1	155	5775.0	0.058	98.1	14.0	13.7				
						Edge 4	155	5775.0	0.013	98.1	14.0	13.7				
MIMO (WiFI Ant.1)	5.8 GHz U-NII 3	802.11ac VHT 80 29.3 Mbps	Head	On	0	Left Touch	155	5775.0	0.103	98.1	13.0	12.6				
						Left Tilt	155	5775.0	0.109	98.1	13.0	12.6				
						Right Touch	155	5775.0	0.167	98.1	13.0	12.6				
						Right Tilt	155	5775.0	0.170	98.1	13.0	12.6	0.060	0.067	1	75
		802.11ac VHT 80 29.3 Mbps	Body-worn	Off	15	Rear	155	5775.0	0.252	98.1	14.0	13.5				
						Front	155	5775.0	0.012	98.1	14.0	13.5				
			Hotspot	Off	10	Rear	155	5775.0	0.503	98.1	14.0	13.5				
						Front	155	5775.0	0.011	98.1	14.0	13.5				
						Edge 1	155	5775.0	0.099	98.1	14.0	13.5				
						Edge 4	155	5775.0	0.048	98.1	14.0	13.5				
MIMO (WiFI Ant.2)	5.8 GHz U-NII 3	802.11ac VHT 80 29.3 Mbps	Head	On	0	Left Touch	155	5775.0	0.103	98.1	13.0	12.4				
						Left Tilt	155	5775.0	0.109	98.1	13.0	12.4				
						Right Touch	155	5775.0	0.167	98.1	13.0	12.4				
						Right Tilt	155	5775.0	0.170	98.1	13.0	12.4				
		802.11ac VHT 80 29.3 Mbps	Body-worn	Off	15	Rear	155	5775.0	0.252	98.1	14.0	13.7	0.088	0.096	1	
						Front	155	5775.0	0.012	98.1	14.0	13.7				
			Hotspot	Off	10	Rear	155	5775.0	0.503	98.1	14.0	13.7	0.184	0.200	1	
						Front	155	5775.0	0.011	98.1	14.0	13.7				
						Edge 1	155	5775.0	0.099	98.1	14.0	13.7				
						Edge 4	155	5775.0	0.048	98.1	14.0	13.7				

Note(s):

1. Highest *reported* SAR is ≤ 0.4 or 1.0 W/kg (1-g or 10-g respectively). Therefore, further SAR measurements within this exposure condition are not required.
2. Highest *reported* SAR is > 0.4 or 1.0 W/kg (1-g or 10-g respectively). Due to the highest *reported* SAR for this test position, other test positions in this exposure condition were evaluated until a SAR ≤ 0.8 or 2.0 W/kg (1-g or 10-g respectively) was *reported*.
3. Testing for a second channel was required because the *reported* SAR for this test position was > 0.8 or 2.0 W/kg (1-g or 10-g respectively).
4. Additional testing required in order satisfying FCC simultaneous transmission limit criteria.
5. WLAN has same target power at head exposure condition even if RDSB operation is work or not work. So Please refer to SISO head SAR results in Section 10.18.
6. Wi-Fi Direct only available in hand used configuration.

10.20 Bluetooth

Antenna	Frequency Band	Mode	RF Exposure Conditions	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Duty Cycle (%)	Power (dBm)		1-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	
WiFi Ant.1	2.4GHz	GFSK	Head	0	Left Touch	39	2441.0	76.5	20.0	19.0	0.175	0.286	
					Left Tilt	39	2441.0	76.5	20.0	19.0	0.165	0.270	
					Right Touch	0	2402.0	76.5	20.0	18.3	0.456	0.885	
						39	2441.0	76.5	20.0	19.0	0.600	0.980	
						78	2480.0	76.5	20.0	18.2	0.527	1.042	76
					Rightt Tilt	0	2402.0	76.5	20.0	18.3	0.461	0.895	
						39	2441.0	76.5	20.0	19.0	0.540	0.882	
						78	2480.0	76.5	20.0	18.2	0.480	0.949	
			Body-worn	15	Rear	39	2441.0	76.5	20.0	19.0	0.055	0.090	77
					Front	39	2441.0	76.5	20.0	19.0	0.054	0.089	
			Hotspot	10	Rear	39	2441.0	76.5	20.0	19.0	0.093	0.152	
					Front	39	2441.0	76.5	20.0	19.0	0.122	0.199	
					Edge 1	39	2441.0	76.5	20.0	19.0	0.105	0.172	
					Edge 4	39	2441.0	76.5	20.0	19.0	0.131	0.214	78

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.

Peak spatial-average (1g of tissue)

Frequency Band (MHz)	Air Interface	RF Exposure Conditions	Test Position	Repeated SAR (Yes/No)	Highest Measured SAR (W/kg)	Repeated Measured SAR (W/kg)	Largest to Smallest SAR Ratio
750	LTE Band 12	Hotspot	Rear	No	0.234	N/A	N/A
	LTE Band 13	Hotspot	Rear	No	0.292	N/A	N/A
	LTE Band 17	Hotspot	Rear	No	0.244	N/A	N/A
835	GSM 850	Hotspot	Rear	Yes	1.100	1.040	1.06
	WCDMA Band V	Hotspot	Rear	No	0.461	N/A	N/A
	LTE Band 5	Hotspot	Rear	No	0.510	N/A	N/A
	LTE Band 26	Hotspot	Rear	No	0.686	N/A	N/A
1750	WCDMA Band IV	Hotspot	Rear	Yes	0.966	0.963	1.00
	LTE Band 4	Hotspot	Edge 3	No	0.644	N/A	N/A
	LTE Band 66	Hotspot	Edge 3	No	0.596	N/A	N/A
1900	GSM 1900	Hotspot	Edge 3	No	0.981	N/A	N/A
	WCDMA Band II	Hotspot	Edge 3	Yes	1.050	1.050	1.00
	LTE Band 2	Hotspot	Edge 3	No	0.779	N/A	N/A
	LTE Band 25	Hotspot	Edge 3	No	0.891	N/A	N/A
2400	Wi-Fi 802.11b/g/n	Head	Right Touch	No	0.450	N/A	N/A
	Bluetooth	Head	Right Touch	No	0.600	N/A	N/A
2600	LTE Band 41	Hotspot	Edge 3	No	0.273	N/A	N/A
5300	Wi-Fi 802.11a/n	Body	Rear	No	0.108	N/A	N/A
5500	Wi-Fi 802.11a/n	Body	Rear	No	0.204	N/A	N/A
5800	Wi-Fi 802.11a/n	Hotspot	Rear	No	0.382	N/A	N/A

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 not > 1.20.

Peak spatial-average (10g of tissue)

Frequency Band (MHz)	Air Interface	RF Exposure Conditions	Test Position	Repeated SAR (Yes/No)	Highest Measured SAR (W/kg)	Repeated Measured SAR (W/kg)	Largest to Smallest SAR Ratio
1750	WCDMA Band IV	Phablet-10g	Edge 3	Yes	2.850	2.780	1.03
	LTE Band 4	Phablet-10g	Edge 3	No	2.420	N/A	N/A
	LTE Band 66	Phablet-10g	Edge 3	No	1.480	N/A	N/A
1900	WCDMA Band II	Phablet-10g	Edge 3	Yes	2.170	2.160	1.00
	LTE Band 2	Phablet-10g	Rear	No	1.720	N/A	N/A
	LTE Band 25	Phablet-10g	Rear	No	1.560	N/A	N/A
5300	Wi-Fi 802.11a/n	Phablet-10g	Rear	No	0.741	N/A	N/A
5500	Wi-Fi 802.11a/n	Phablet-10g	Rear	No	1.140	N/A	N/A

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 not > 1.20.

12. DUT Holder Perturbations

In accordance with published DUT Holder Perturbations in Oct.2016 TCB workshop,

When Highest reported SAR is over 1.2 or 3.0 W/kg (1-g or 10-g respectively), Holder perturbation verification is required for each antenna, using the highest configuration among all applicable frequency bands. Both Head test and Body test (Edge 1-4 sides) are evaluated with DUT holder. Both Front and Rear sides are evaluated without DUT holder. (Details of test setup are refer to Appendix A.)

So we are only consider about Head test and Body test (Edge 1-4 sides).

Main Antenna 1-1

Frequency Band (MHz)	Air Interface	RF Exposure Conditions	Test Position	DUT Holder Perturbation (Yes/No)	Highest Reported SAR (W/kg)	SAR test without holder Scaled SAR (W/kg)
1700	LTE Band 4	Phablet-10g	Edge 3	Yes	3.271	3.176

Note(s):

Both deviation should be within measurement uncertainty (22%).

13. Simultaneous Transmission SAR Analysis

Simultaneous Transmission Condition

RF Exposure Condition	Item	Capable Transmit Configurations				
Head & Body-worn & Phablet-10g	1	GSM(Voice/GPRS)	+	DTS_Ant.1	+	DTS_Ant.1
	2	GSM(Voice/GPRS)	+	U-NII_Ant.1	+	U-NII_Ant.2
	3	GSM(Voice/GPRS)	+	BT		
	4	GSM(Voice/GPRS)	+	U-NII_Ant.1	+	BT
	5	GSM(Voice/GPRS)	+	U-NII_Ant.2	+	BT
	6	GSM(Voice/GPRS)	+	UNII_Ant.1 + UNII_Ant.2	+	BT
	7	GSM(Voice/GPRS)	+	***RSDB scenarios***		
	8	W-CDMA	+	DTS_Ant.1	+	DTS_Ant.1
	9	W-CDMA	+	U-NII_Ant.1	+	U-NII_Ant.2
	10	W-CDMA	+	BT		
	11	W-CDMA	+	U-NII_Ant.1	+	BT
	12	W-CDMA	+	U-NII_Ant.2	+	BT
	13	W-CDMA	+	UNII_Ant.1 + UNII_Ant.2	+	BT
	14	W-CDMA	+	***RSDB scenarios***		
	15	LTE	+	DTS_Ant.1	+	DTS_Ant.1
	16	LTE	+	U-NII_Ant.1	+	U-NII_Ant.2
	17	LTE	+	BT		
	18	LTE	+	U-NII_Ant.1	+	BT
	19	LTE	+	U-NII_Ant.2	+	BT
	20	LTE	+	UNII_Ant.1 + UNII_Ant.2	+	BT
	21	LTE	+	***RSDB scenarios***		
Hotspot	22	GSM(GPRS)	+	DTS_Ant.1	+	DTS_Ant.1
	23	GSM(GPRS)	+	U-NII_Ant.1	+	U-NII_Ant.2
	24	GSM(GPRS)	+	BT		
	25	GSM(GPRS)	+	U-NII_Ant.1	+	BT
	26	GSM(GPRS)	+	U-NII_Ant.2	+	BT
	27	GSM(GPRS)	+	UNII_Ant.1 + UNII_Ant.2	+	BT
	28	GSM(GPRS)	+	***RSDB scenarios***		
	29	W-CDMA	+	DTS_Ant.1	+	DTS_Ant.1
	30	W-CDMA	+	U-NII_Ant.1	+	U-NII_Ant.2
	31	W-CDMA	+	BT		
	32	W-CDMA	+	U-NII_Ant.1	+	BT
	33	W-CDMA	+	U-NII_Ant.2	+	BT
	34	W-CDMA	+	UNII_Ant.1 + UNII_Ant.2	+	BT
	35	W-CDMA	+	***RSDB scenarios***		
	36	LTE	+	DTS_Ant.1	+	DTS_Ant.1
	37	LTE	+	U-NII_Ant.1	+	U-NII_Ant.2
	38	LTE	+	BT		
	39	LTE	+	U-NII_Ant.1	+	BT
	40	LTE	+	U-NII_Ant.2	+	BT
	41	LTE	+	UNII_Ant.1 + UNII_Ant.2	+	BT
	42	LTE	+	***RSDB scenarios***		

Notes:

1. DTS supports Wi-Fi Direct, Hotspot and VoIP.
2. U-NII supports Wi-Fi Direct, Hotspot and VoIP.
3. GPRS, W-CDMA, LTE supports Hotspot and VoIP.
4. U-NII Radio can transmit simultaneously with Bluetooth Radio.
5. DTS Radio cannot transmit simultaneously with Bluetooth Radio.
6. DTS Radio can only transmit simultaneously with U-NII Radio in RSDB scenarios.
7. BT tethering is consider about each RF exposure conditions

RSDB scenarios

Mode	Scenario	# of TX	5GHz		2.4GHz	
			Ant1	Ant2	Ant1	Ant2
2.4GHz+5GHz RSDB Only	1	2	On	-	-	On
	2	2	-	On	On	-
	3	2	On	-	On	-
	4	2	-	On	-	On
2.4GHz+5GHz RSDB&MIMO	5	3	On	On	On	-
	6	3	On	On	-	On
	7	3	On	-	On	On
	8	3	-	On	On	On
2.4GHz+5GHz RSDB MIMO	9	4	On	On	On	On

Simultaneous transmission SAR test exclusion considerations

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

The antennas for the unlicensed transmitters are closely situated. As a result, the associated SAR hotspots are also closely situated. Some of the sum of SAR calculations yielded results over 1.6 W/kg. The SPSLR calculations for these situations were performed by treating the unlicensed SAR values as a single transmitter. The most conservative distance between all the unlicensed hotspots to the licensed hotspot was used for the value of *d* in the SPSLR calculation.

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 DASY5 volume scan postprocessing 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.

DASY5 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 DASY5= Combined MultiBand Averaged SAR.

Combined Multi Band Averaged SAR allows - in addition to the data extraction - an evaluation of the 1 g, 10 g and/or arbitrary averaged mass SAR.
Power Scaling Factor is used to allow the volume scans to be scaled by a value other than "1", this is important when the results need to be scaled to different maximum power levels. The Power Scaling Factor is applied to each individual point of the scan. When power scaling is used in multi-band combinations the scaling factor is applied to each individual point of the first scan, the second factor is then applied to each individual point of the second scan and so on. The scans are then combined.

13.1 Sum of the SAR for GSM 850 & Wi-Fi & BT

RF Exposure	Test Position	Standalone SAR (W/kg)						∑ SAR (W/kg)									
		WWAN ①	DTS Ant.1 ②	DTS Ant.2 ③	UNII Ant.1 ④	UNII Ant.2 ⑤	BT ⑥	WWAN + DTS Ant.1 ① + ②	WWAN + DTS Ant.2 ① + ③	WWAN + DTS Ant.1 + DTS Ant.2 ① + ② + ③	WWAN + U-NII Ant.1 ① + ④	WWAN + U-NII Ant.2 ① + ⑤	WWAN + U-NII Ant.1 + U-NII Ant.2 ① + ④ + ⑤	WWAN + BT ① + ⑥	WWAN + UNII Ant.1 + BT ① + ④ + ⑥	WWAN + UNII Ant.2 + BT ① + ⑤ + ⑥	WWAN + UNII Ant.1 + UNII Ant.2 + BT ①+④+⑤+⑥
Head (1g-SAR)	All position	0.369	0.469	0.220	0.106	0.049	1.042	0.838	0.589	1.058	0.475	0.418	0.524	1.411	1.517	1.460	1.566
Body-Worn (1g-SAR)	All position	0.539	0.065	0.040	0.079	0.231	0.090	0.604	0.579	0.644	0.618	0.770	0.849	0.629	0.708	0.860	0.939
Hotspot (1-g SAR)	Rear	1.181	0.173	0.109	0.130	0.435	0.152	1.354	1.290	1.463	1.311	1.616	1.746	1.333	1.463	1.768	1.898
	Front	0.732	0.173	0.109	0.032	0.001	0.199	0.905	0.841	1.014	0.764	0.733	0.765	0.931	0.963	0.932	0.964
	Edge 1		0.173	0.109	0.130	0.070	0.172										
	Edge 2	0.545															
	Edge 3	0.673															
	Edge 4	0.128	0.173	0.109	0.130	0.435	0.214	0.301	0.237	0.410	0.258	0.563	0.693	0.342	0.472	0.777	0.907

SAR to Peak Location Separation Ratio (SPLSR)

RF Exposure	Test Position	Standalone SAR (W/kg)						∑ SAR (W/kg)		Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/ No)	Figure
		WWAN ①	DTS Ant.1 ②	DTS Ant.2 ③	UNII Ant.1 ④	UNII Ant.2 ⑤	BT ⑥						
Hotspot (1-g SAR)	Rear	1.181			0.130	0.435	0.152	①+④+⑤+⑥	1.898				1
		1.181			0.130			①+④	1.311	152.0	0.01	No	
		1.181				0.435		①+⑤	1.616	143.9	0.01	No	
		1.181					0.152	①+⑥	1.333	159.9	0.01	No	
					0.130	0.435		④+⑤	0.565	12.2	0.03	No	
					0.130		0.152	④+⑥	0.282	13.1	0.01	No	
						0.435	0.152	⑤+⑥	0.587	16.0	0.03	No	

Note(s):

SPLSR was evaluated at Worst case of simultaneous scenarios. Because the result of worst case contains other cases.

13.2 Sum of the SAR for GSM 1900 & Wi-Fi & BT

RF Exposure	Test Position	Standalone SAR (W/kg)						∑ SAR (W/kg)									
		WWAN ①	DTS Ant.1 ②	DTS Ant.2 ③	UNII Ant.1 ④	UNII Ant.2 ⑤	BT ⑥	WWAN + DTS Ant.1 ① + ②	WWAN + DTS Ant.2 ① + ③	WWAN + DTS Ant.1 + DTS Ant.2 ① + ② + ③	WWAN + U-NII Ant.1 ① + ④	WWAN + U-NII Ant.2 ① + ⑤	WWAN + U-NII Ant.1 + U-NII Ant.2 ① + ④ + ⑤	WWAN + BT ① + ⑥	WWAN + UNII Ant.1 + BT ① + ④ + ⑥	WWAN + UNII Ant.2 + BT ① + ⑤ + ⑥	WWAN + UNII Ant.1 + UNII Ant.2 + BT ①+④+⑤+⑥
Head (1g-SAR)	All position	0.097	0.469	0.220	0.106	0.049	1.042	0.566	0.317	0.786	0.203	0.146	0.252	1.139	1.245	1.188	1.294
Body-Worn (1g-SAR)	All position	0.380	0.065	0.040	0.079	0.231	0.090	0.445	0.420	0.485	0.459	0.611	0.690	0.470	0.549	0.701	0.780
Hotspot (1-g SAR)	Rear	0.733	0.173	0.109	0.130	0.435	0.152	0.906	0.842	1.015	0.863	1.168	1.298	0.885	1.015	1.320	1.450
	Front	0.606	0.173	0.109	0.032	0.001	0.199	0.779	0.715	0.888	0.638	0.607	0.639	0.805	0.837	0.806	0.838
	Edge 1		0.173	0.109	0.130	0.070	0.172										
	Edge 2	0.077															
	Edge 3	1.039															
	Edge 4	0.173	0.173	0.109	0.130	0.435	0.214	0.346	0.282	0.455	0.303	0.608	0.738	0.387	0.517	0.822	0.952

13.3 Sum of the SAR for WCDMA Band II & Wi-Fi & BT

RF Exposure	Test Position	Standalone SAR (W/kg)							∑ SAR (W/kg)										
		WWAN ①	DTS Ant.1 ②	DTS Ant.2 ③	UNII Ant.1 ④	UNII Ant.2 ⑤	UNII MIMO ⑥	BT ⑦	WWAN + DTS Ant.1 ① + ②	WWAN + DTS Ant.2 ① + ③	WWAN + DTS Ant.1 + DTS Ant.2 ① + ② + ③	WWAN + U-NII Ant.1 ① + ④	WWAN + U-NII Ant.2 ① + ⑤	WWAN + U-NII Ant.1 + U-NII Ant.2 ① + ④ + ⑤	WWAN + U-NII MIMO ① + ⑥	WWAN + BT ① +⑦	WWAN + UNII Ant.1 + BT ① + ④ + ⑦	WWAN + UNII Ant.2 + BT ① + ⑤ + ⑦	WWAN + UNII Ant.1 + UNII Ant.2 + BT ①+④+⑤+⑦
Head (1g-SAR)	All position	0.196	0.469	0.220	0.106	0.049		1.042	0.665	0.416	0.885	0.302	0.245	0.351		1.238	1.344	1.287	1.393
Body-Worn (1g-SAR)	All position	0.678	0.065	0.040	0.079	0.231		0.090	0.743	0.718	0.783	0.757	0.909	0.988		0.768	0.847	0.999	1.078
Hotspot (1-g SAR)	Rear	0.649	0.173	0.109	0.130	0.435		0.152	0.822	0.758	0.931	0.779	1.084	1.214		0.801	0.931	1.236	1.366
	Front	0.495	0.173	0.109	0.032	0.001		0.199	0.668	0.604	0.777	0.527	0.496	0.528		0.694	0.726	0.695	0.727
	Edge 1		0.173	0.109	0.130	0.070		0.172											
	Edge 2	0.082																	
	Edge 3	1.174																	
	Edge 4	0.153	0.173	0.109	0.130	0.435		0.214	0.326	0.262	0.435	0.283	0.588	0.718		0.367	0.497	0.802	0.932
Phablet-10g	Rear	2.443			0.330	1.290	1.325					2.773	3.733	4.063 (Note1)	3.768				
	Front	1.362			0.330	1.290	1.325					1.692	2.652	2.982					
	Edge 1				0.330	0.173	0.137												
	Edge 2	0.304																	
	Edge 3	1.546																	
	Edge 4	0.740			0.330	1.290	1.325					1.070	2.030	2.360					

Note(s):

1. The Sum of WWAN+U-NII Ant.1+U-NII Ant.2 is over 4.0 W/kg (10-g SAR). So MIMO test was evaluated to determine simultaneous transmission SAR test exclusion for Ant.1 & Ant.2 of UNII bands.

13.4 Sum of the SAR for WCDMA Band IV & Wi-Fi & BT

RF Exposure	Test Position	Standalone SAR (W/kg)							∑ SAR (W/kg)										
		WWAN ①	DTS Ant.1 ②	DTS Ant.2 ③	UNII Ant.1 ④	UNII Ant.2 ⑤	UNII MIMO ⑥	BT ⑦	WWAN + DTS Ant.1 ① + ②	WWAN + DTS Ant.2 ① + ③	WWAN + DTS Ant.1 + DTS Ant.2 ① + ② + ③	WWAN + U-NII Ant.1 ① + ④	WWAN + U-NII Ant.2 ① + ⑤	WWAN + U-NII Ant.1 + U-NII Ant.2 ① + ④ + ⑤	WWAN + U-NII MIMO ① + ⑥	WWAN + BT ① +⑦	WWAN + UNII Ant.1 + BT ① + ④ + ⑦	WWAN + UNII Ant.2 + BT ① + ⑤ + ⑦	WWAN + UNII Ant.1 + UNII Ant.2 +BT ①+④+⑤+⑦
Head (1g-SAR)	All position	0.262	0.469	0.220	0.106	0.049		1.042	0.731	0.482	0.951	0.368	0.311	0.417		1.304	1.410	1.353	1.459
Body-Worn (1g-SAR)	All position	0.779	0.065	0.040	0.079	0.231		0.090	0.844	0.819	0.884	0.858	1.010	1.089		0.869	0.948	1.100	1.179
Hotspot (1-g SAR)	Rear	0.693	0.173	0.109	0.130	0.435		0.152	0.866	0.802	0.975	0.823	1.128	1.258		0.845	0.975	1.280	1.410
	Front	0.575	0.173	0.109	0.032	0.001		0.199	0.748	0.684	0.857	0.607	0.576	0.608		0.774	0.806	0.775	0.807
	Edge 1		0.173	0.109	0.130	0.070		0.172											
	Edge 2	0.099																	
	Edge 3	1.028																	
	Edge 4	0.204	0.173	0.109	0.130	0.435		0.214	0.377	0.313	0.486	0.334	0.639	0.769		0.418	0.548	0.853	0.983
Phablet-10g	Rear	2.416			0.330	1.290	1.325					2.746	3.706	4.036 (Note1)	3.741				
	Front	1.830			0.330	1.290	1.325					2.160	3.120	3.450					
	Edge 1				0.330	0.173	0.137												
	Edge 2	0.399																	
	Edge 3	2.998																	
	Edge 4	0.926			0.330	1.290	1.325					1.256	2.216	2.546					

Note(s):

1. The Sum of WWAN+U-NII Ant.1+U-NII Ant.2 is over 4.0 W/kg (10-g SAR). So MIMO test was evaluated to determine simultaneous transmission SAR test exclusion for Ant.1 & Ant.2 of UNII bands.

13.5 Sum of the SAR for WCDMA Band V & Wi-Fi & BT

RF Exposure	Test Position	Standalone SAR (W/kg)						∑ SAR (W/kg)									
		WWAN ①	DTS Ant.1 ②	DTS Ant.2 ③	UNII Ant.1 ④	UNII Ant.2 ⑤	BT ⑥	WWAN + DTS Ant.1 ① + ②	WWAN + DTS Ant.2 ① + ③	WWAN + DTS Ant.1 + DTS Ant.2 ① + ② + ③	WWAN + U-NII Ant.1 ① + ④	WWAN + U-NII Ant.2 ① + ⑤	WWAN + U-NII Ant.1 + U-NII Ant.2 ① + ④ + ⑤	WWAN + BT ① + ⑥	WWAN + UNII Ant.1 + BT ① + ④ + ⑥	WWAN + UNII Ant.2 + BT ① + ⑤ + ⑥	WWAN + UNII Ant.1 + UNII Ant.2 +BT ①+④+⑤+⑥
Head (1g-SAR)	All position	0.224	0.469	0.220	0.106	0.049	1.042	0.693	0.444	0.913	0.330	0.273	0.379	1.266	1.372	1.315	1.421
Body-Worn (1g-SAR)	All position	0.290	0.065	0.040	0.079	0.231	0.090	0.355	0.330	0.395	0.369	0.521	0.600	0.380	0.459	0.611	0.690
Hotspot (1-g SAR)	Rear	0.574	0.173	0.109	0.130	0.435	0.152	0.747	0.683	0.856	0.704	1.009	1.139	0.726	0.856	1.161	1.291
	Front	0.512	0.173	0.109	0.032	0.001	0.199	0.685	0.621	0.794	0.544	0.513	0.545	0.711	0.743	0.712	0.744
	Edge 1		0.173	0.109	0.130	0.070	0.172										
	Edge 2	0.197															
	Edge 3	0.401															
	Edge 4	0.081	0.173	0.109	0.130	0.435	0.214	0.254	0.190	0.363	0.211	0.516	0.646	0.295	0.425	0.730	0.860

13.6 Sum of the SAR for LTE Band 2 & Wi-Fi & BT

RF Exposure	Test Position	Standalone SAR (W/kg)						∑ SAR (W/kg)									
		WWAN ①	DTS Ant.1 ②	DTS Ant.2 ③	UNII Ant.1 ④	UNII Ant.2 ⑤	BT ⑥	WWAN + DTS Ant.1 ① + ②	WWAN + DTS Ant.2 ① + ③	WWAN + DTS Ant.1 + DTS Ant.2 ① + ② + ③	WWAN + U-NII Ant.1 ① + ④	WWAN + U-NII Ant.2 ① + ⑤	WWAN + U-NII Ant.1 + U-NII Ant.2 ① + ④ + ⑤	WWAN + BT ① + ⑥	WWAN + UNII Ant.1 + BT ① + ④ + ⑥	WWAN + UNII Ant.2 + BT ① + ⑤ + ⑥	WWAN + UNII Ant.1 + UNII Ant.2 +BT ①+④+⑤+⑥
Head (1g-SAR)	All position	0.208	0.469	0.220	0.106	0.049	1.042	0.677	0.428	0.897	0.314	0.257	0.363	1.250	1.356	1.299	1.405
Body-Worn (1g-SAR)	All position	0.575	0.065	0.040	0.079	0.231	0.090	0.640	0.615	0.680	0.654	0.806	0.885	0.665	0.744	0.896	0.975
Hotspot (1-g SAR)	Rear	0.638	0.173	0.109	0.130	0.435	0.152	0.811	0.747	0.920	0.768	1.073	1.203	0.790	0.920	1.225	1.355
	Front	0.562	0.173	0.109	0.032	0.001	0.199	0.735	0.671	0.844	0.594	0.563	0.595	0.761	0.793	0.762	0.794
	Edge 1		0.173	0.109	0.130	0.070	0.172										
	Edge 2	0.072															
	Edge 3	1.084															
	Edge 4	0.150	0.173	0.109	0.130	0.435	0.214	0.323	0.259	0.432	0.280	0.585	0.715	0.364	0.494	0.799	0.929
Phablet-10g	Rear	2.286			0.330	1.290					2.616	3.576	3.906				
	Front	1.219			0.330	1.290					1.549	2.509	2.839				
	Edge 1				0.330	0.173											
	Edge 2	0.279															
	Edge 3	1.781															
	Edge 4	0.677			0.330	1.290					1.007	1.967	2.297				

13.7 Sum of the SAR for LTE Band 4 & Wi-Fi & BT

RF Exposure	Test Position	Standalone SAR (W/kg)							∑ SAR (W/kg)										
		WWAN ①	DTS Ant.1 ②	DTS Ant.2 ③	UNII Ant.1 ④	UNII Ant.2 ⑤	UNII MIMO ⑥	BT ⑦	WWAN + DTS Ant.1 ① + ②	WWAN + DTS Ant.2 ① + ③	WWAN + DTS Ant.1 + DTS Ant.2 ① + ② + ③	WWAN + U-NII Ant.1 ① + ④	WWAN + U-NII Ant.2 ① + ⑤	WWAN + U-NII Ant.1 + U-NII Ant.2 ① + ④ + ⑤	WWAN + U-NII MIMO ① + ⑥	WWAN + BT ① +⑦	WWAN + UNII Ant.1 + BT ① + ④ + ⑦	WWAN + UNII Ant.2 + BT ① + ⑤ + ⑦	WWAN + UNII Ant.1 + UNII Ant.2 +BT ①+④+⑤+⑦
Head (1g-SAR)	All position	0.294	0.469	0.220	0.106	0.049		1.042	0.763	0.514	0.983	0.400	0.343	0.449		1.336	1.442	1.385	1.491
Body-Worn (1g-SAR)	All position	0.732	0.065	0.040	0.079	0.231		0.090	0.797	0.772	0.837	0.811	0.963	1.042		0.822	0.901	1.053	1.132
Hotspot (1-g SAR)	Rear	0.662	0.173	0.109	0.130	0.435		0.152	0.835	0.771	0.944	0.792	1.097	1.227		0.814	0.944	1.249	1.379
	Front	0.626	0.173	0.109	0.032	0.001		0.199	0.799	0.735	0.908	0.658	0.627	0.659		0.825	0.857	0.826	0.858
	Edge 1		0.173	0.109	0.130	0.070		0.172											
	Edge 2	0.087																	
	Edge 3	0.889																	
	Edge 4	0.192	0.173	0.109	0.130	0.435		0.214	0.365	0.301	0.474	0.322	0.627	0.757		0.406	0.536	0.841	0.971
Phablet-10g	Rear	2.582			0.330	1.290	1.325					2.912	3.872	4.202 (Note 1)	3.907				
	Front	1.622			0.330	1.290	1.325					1.952	2.912	3.242					
	Edge 1				0.330	0.173	0.137												
	Edge 2	0.396																	
	Edge 3	3.271																	
	Edge 4	0.831			0.330	1.290	1.325					1.161	2.121	2.451					

13.8 Sum of the SAR for LTE Band 5 & Wi-Fi & BT

RF Exposure	Test Position	Standalone SAR (W/kg)						∑ SAR (W/kg)									
		WWAN ①	DTS Ant.1 ②	DTS Ant.2 ③	UNII Ant.1 ④	UNII Ant.2 ⑤	BT ⑥	WWAN + DTS Ant.1 ① + ②	WWAN + DTS Ant.2 ① + ③	WWAN + DTS Ant.1 + DTS Ant.2 ① + ② + ③	WWAN + U-NII Ant.1 ① + ④	WWAN + U-NII Ant.2 ① + ⑤	WWAN + U-NII Ant.1 + U-NII Ant.2 ① + ④ + ⑤	WWAN + BT ① + ⑥	WWAN + UNII Ant.1 + BT ① + ④ + ⑥	WWAN + UNII Ant.2 + BT ① + ⑤ + ⑥	WWAN + UNII Ant.1 + UNII Ant.2 +BT ①+④+⑤+⑥
Head (1g-SAR)	All position	0.243	0.469	0.220	0.106	0.049	1.042	0.712	0.463	0.932	0.349	0.292	0.398	1.285	1.391	1.334	1.440
Body-Worn (1g-SAR)	All position	0.381	0.065	0.040	0.079	0.231	0.090	0.446	0.421	0.486	0.460	0.612	0.691	0.471	0.550	0.702	0.781
Hotspot (1-g SAR)	Rear	0.667	0.173	0.109	0.130	0.435	0.152	0.840	0.776	0.949	0.797	1.102	1.232	0.819	0.949	1.254	1.384
	Front	0.561	0.173	0.109	0.032	0.001	0.199	0.734	0.670	0.843	0.593	0.562	0.594	0.760	0.792	0.761	0.793
	Edge 1		0.173	0.109	0.130	0.070	0.172										
	Edge 2	0.354															
	Edge 3	0.439															
	Edge 4	0.072	0.173	0.109	0.130	0.435	0.214	0.245	0.181	0.354	0.202	0.507	0.637	0.286	0.416	0.721	0.851

13.9 Sum of the SAR for LTE Band 12 & Wi-Fi & BT

RF Exposure	Test Position	Standalone SAR (W/kg)						∑ SAR (W/kg)									
		WWAN ①	DTS Ant.1 ②	DTS Ant.2 ③	UNII Ant.1 ④	UNII Ant.2 ⑤	BT ⑥	WWAN + DTS Ant.1 ① + ②	WWAN + DTS Ant.2 ① + ③	WWAN + DTS Ant.1 + DTS Ant.2 ① + ② + ③	WWAN + U-NII Ant.1 ① + ④	WWAN + U-NII Ant.2 ① + ⑤	WWAN + U-NII Ant.1 + U-NII Ant.2 ① + ④ + ⑤	WWAN + BT ① + ⑥	WWAN + UNII Ant.1 + BT ① + ④ + ⑥	WWAN + UNII Ant.2 + BT ① + ⑤ + ⑥	WWAN + UNII Ant.1 + UNII Ant.2 +BT ①+④+⑤+⑥
Head (1g-SAR)	All position	0.115	0.469	0.220	0.106	0.049	1.042	0.584	0.335	0.804	0.221	0.164	0.270	1.157	1.263	1.206	1.312
Body-Worn (1g-SAR)	All position	0.211	0.065	0.040	0.079	0.231	0.090	0.276	0.251	0.316	0.290	0.442	0.521	0.301	0.380	0.532	0.611
Hotspot (1-g SAR)	Rear	0.325	0.173	0.109	0.130	0.435	0.152	0.498	0.434	0.607	0.455	0.760	0.890	0.477	0.607	0.912	1.042
	Front	0.226	0.173	0.109	0.032	0.001	0.199	0.399	0.335	0.508	0.258	0.227	0.259	0.425	0.457	0.426	0.458
	Edge 1		0.173	0.109	0.130	0.070	0.172										
	Edge 2	0.128															
	Edge 3	0.123															
	Edge 4	0.125	0.173	0.109	0.130	0.435	0.214	0.298	0.234	0.407	0.255	0.560	0.690	0.339	0.469	0.774	0.904

13.10 Sum of the SAR for LTE Band 13 & Wi-Fi & BT

RF Exposure	Test Position	Standalone SAR (W/kg)						∑ SAR (W/kg)									
		WWAN ①	DTS Ant.1 ②	DTS Ant.2 ③	UNII Ant.1 ④	UNII Ant.2 ⑤	BT ⑥	WWAN + DTS Ant.1 ① + ②	WWAN + DTS Ant.2 ① + ③	WWAN + DTS Ant.1 + DTS Ant.2 ① + ② + ③	WWAN + U-NII Ant.1 ① + ④	WWAN + U-NII Ant.2 ① + ⑤	WWAN + U-NII Ant.1 + U-NII Ant.2 ① + ④ + ⑤	WWAN + BT ① + ⑥	WWAN + UNII Ant.1 + BT ① + ④ + ⑥	WWAN + UNII Ant.2 + BT ① + ⑤ + ⑥	WWAN + UNII Ant.1 + UNII Ant.2 + BT ①+④+⑤+⑥
Head (1g-SAR)	All position	0.201	0.469	0.220	0.106	0.049	1.042	0.670	0.421	0.890	0.307	0.250	0.356	1.243	1.349	1.292	1.398
Body-Worn (1g-SAR)	All position	0.237	0.065	0.040	0.079	0.231	0.090	0.302	0.277	0.342	0.316	0.468	0.547	0.327	0.406	0.558	0.637
Hotspot (1-g SAR)	Rear	0.372	0.173	0.109	0.130	0.435	0.152	0.545	0.481	0.654	0.502	0.807	0.937	0.524	0.654	0.959	1.089
	Front	0.302	0.173	0.109	0.032	0.001	0.199	0.475	0.411	0.584	0.334	0.303	0.335	0.501	0.533	0.502	0.534
	Edge 1		0.173	0.109	0.130	0.070	0.172										
	Edge 2	0.224															
	Edge 3	0.199															
	Edge 4	0.161	0.173	0.109	0.130	0.435	0.214	0.334	0.270	0.443	0.291	0.596	0.726	0.375	0.505	0.810	0.940

13.11 Sum of the SAR for LTE Band 17 & Wi-Fi & BT

RF Exposure	Test Position	Standalone SAR (W/kg)						∑ SAR (W/kg)									
		WWAN ①	DTS Ant.1 ②	DTS Ant.2 ③	UNII Ant.1 ④	UNII Ant.2 ⑤	BT ⑥	WWAN + DTS Ant.1 ① + ②	WWAN + DTS Ant.2 ① + ③	WWAN + DTS Ant.1 + DTS Ant.2 ① + ② + ③	WWAN + U-NII Ant.1 ① + ④	WWAN + U-NII Ant.2 ① + ⑤	WWAN + U-NII Ant.1 + U-NII Ant.2 ① + ④ + ⑤	WWAN + BT ① + ⑥	WWAN + UNII Ant.1 + BT ① + ④ + ⑥	WWAN + UNII Ant.2 + BT ① + ⑤ + ⑥	WWAN + UNII Ant.1 + UNII Ant.2 + BT ①+④+⑤+⑥
Head (1g-SAR)	All position	0.121	0.469	0.220	0.106	0.049	1.042	0.590	0.341	0.810	0.227	0.170	0.276	1.163	1.269	1.212	1.318
Body-Worn (1g-SAR)	All position	0.214	0.065	0.040	0.079	0.231	0.090	0.279	0.254	0.319	0.293	0.445	0.524	0.304	0.383	0.535	0.614
Hotspot (1-g SAR)	Rear	0.346	0.173	0.109	0.130	0.435	0.152	0.519	0.455	0.628	0.476	0.781	0.911	0.498	0.628	0.933	1.063
	Front	0.241	0.173	0.109	0.032	0.001	0.199	0.414	0.350	0.523	0.273	0.242	0.274	0.440	0.472	0.441	0.473
	Edge 1		0.173	0.109	0.130	0.070	0.172										
	Edge 2	0.123															
	Edge 3	0.130															
	Edge 4	0.128	0.173	0.109	0.130	0.435	0.214	0.301	0.237	0.410	0.258	0.563	0.693	0.342	0.472	0.777	0.907

13.12 Sum of the SAR for LTE Band 25 & Wi-Fi & BT

RF Exposure	Test Position	Standalone SAR (W/kg)						∑ SAR (W/kg)									
		WWAN ①	DTS Ant.1 ②	DTS Ant.2 ③	UNII Ant.1 ④	UNII Ant.2 ⑤	BT ⑥	WWAN + DTS Ant.1 ① + ②	WWAN + DTS Ant.2 ① + ③	WWAN + DTS Ant.1 + DTS Ant.2 ① + ② + ③	WWAN + U-NII Ant.1 ① + ④	WWAN + U-NII Ant.2 ① + ⑤	WWAN + U-NII Ant.1 + U-NII Ant.2 ① + ④ + ⑤	WWAN + BT ① + ⑥	WWAN + UNII Ant.1 + BT ① + ④ + ⑥	WWAN + UNII Ant.2 + BT ① + ⑤ + ⑥	WWAN + UNII Ant.1 + UNII Ant.2 + BT ①+④+⑤+⑥
Head (1g-SAR)	All position	0.187	0.469	0.220	0.106	0.049	1.042	0.656	0.407	0.876	0.293	0.236	0.342	1.229	1.335	1.278	1.384
Body-Worn (1g-SAR)	All position	0.619	0.065	0.040	0.079	0.231	0.090	0.684	0.659	0.724	0.698	0.850	0.929	0.709	0.788	0.940	1.019
Hotspot (1-g SAR)	Rear	0.629	0.173	0.109	0.130	0.435	0.152	0.802	0.738	0.911	0.759	1.064	1.194	0.781	0.911	1.216	1.346
	Front	0.479	0.173	0.109	0.032	0.001	0.199	0.652	0.588	0.761	0.511	0.480	0.512	0.678	0.710	0.679	0.711
	Edge 1		0.173	0.109	0.130	0.070	0.172										
	Edge 2	0.080															
	Edge 3	1.139															
	Edge 4	0.152	0.173	0.109	0.130	0.435	0.214	0.325	0.261	0.434	0.282	0.587	0.717	0.366	0.496	0.801	0.931
Phablet-10g	Rear	1.986			0.330	1.290					2.316	3.276	3.606				
	Front	1.299			0.330	1.290					1.629	2.589	2.919				
	Edge 1				0.330	0.173											
	Edge 2	0.334															
	Edge 3	1.215															
	Edge 4	0.730			0.330	1.290					1.060	2.020	2.350				

13.13 Sum of the SAR for LTE Band 26 & Wi-Fi & BT

RF Exposure	Test Position	Standalone SAR (W/kg)						∑ SAR (W/kg)									
		WWAN ①	DTS Ant.1 ②	DTS Ant.2 ③	UNII Ant.1 ④	UNII Ant.2 ⑤	BT ⑥	WWAN + DTS Ant.1 ① + ②	WWAN + DTS Ant.2 ① + ③	WWAN + DTS Ant.1 + DTS Ant.2 ① + ② + ③	WWAN + U-NII Ant.1 ① + ④	WWAN + U-NII Ant.2 ① + ⑤	WWAN + U-NII Ant.1 + U-NII Ant.2 ① + ④ + ⑤	WWAN + BT ① + ⑥	WWAN + UNII Ant.1 + BT ① + ④ + ⑥	WWAN + UNII Ant.2 + BT ① + ⑤ + ⑥	WWAN + UNII Ant.1 + UNII Ant.2 +BT ①+④+⑤+⑥
Head (1g-SAR)	All position	0.288	0.469	0.220	0.106	0.049	1.042	0.757	0.508	0.977	0.394	0.337	0.443	1.330	1.436	1.379	1.485
Body-Worn (1g-SAR)	All position	0.448	0.065	0.040	0.079	0.231	0.090	0.513	0.488	0.553	0.527	0.679	0.758	0.538	0.617	0.769	0.848
Hotspot (1-g SAR)	Rear	0.876	0.173	0.109	0.130	0.435	0.152	1.049	0.985	1.158	1.006	1.311	1.441	1.028	1.158	1.463	1.593
	Front	0.735	0.173	0.109	0.032	0.001	0.199	0.908	0.844	1.017	0.767	0.736	0.768	0.934	0.966	0.935	0.967
	Edge 1		0.173	0.109	0.130	0.070	0.172										
	Edge 2	0.308															
	Edge 3	0.505															
	Edge 4	0.106	0.173	0.109	0.130	0.435	0.214	0.279	0.215	0.388	0.236	0.541	0.671	0.320	0.450	0.755	0.885

13.14 Sum of the SAR for LTE Band 41 & Wi-Fi & BT

RF Exposure	Test Position	Standalone SAR (W/kg)						∑ SAR (W/kg)									
		WWAN ①	DTS Ant.1 ②	DTS Ant.2 ③	UNII Ant.1 ④	UNII Ant.2 ⑤	BT ⑥	WWAN + DTS Ant.1 ① + ②	WWAN + DTS Ant.2 ① + ③	WWAN + DTS Ant.1 + DTS Ant.2 ① + ② + ③	WWAN + U-NII Ant.1 ① + ④	WWAN + U-NII Ant.2 ① + ⑤	WWAN + U-NII Ant.1 + U-NII Ant.2 ① + ④ + ⑤	WWAN + BT ① + ⑥	WWAN + UNII Ant.1 + BT ① + ④ + ⑥	WWAN + UNII Ant.2 + BT ① + ⑤ + ⑥	WWAN + UNII Ant.1 + UNII Ant.2 +BT ①+④+⑤+⑥
Head (1g-SAR)	All position	0.032	0.469	0.220	0.106	0.049	1.042	0.501	0.252	0.721	0.138	0.081	0.187	1.074	1.180	1.123	1.229
Body-Worn (1g-SAR)	All position	0.202	0.065	0.040	0.079	0.231	0.090	0.267	0.242	0.307	0.281	0.433	0.512	0.292	0.371	0.523	0.602
Hotspot (1-g SAR)	Rear	0.221	0.173	0.109	0.130	0.435	0.152	0.394	0.330	0.503	0.351	0.656	0.786	0.373	0.503	0.808	0.938
	Front	0.161	0.173	0.109	0.032	0.001	0.199	0.334	0.270	0.443	0.193	0.162	0.194	0.360	0.392	0.361	0.393
	Edge 1		0.173	0.109	0.130	0.070	0.172										
	Edge 2																
	Edge 3	0.338															
	Edge 4	0.077	0.173	0.109	0.130	0.435	0.214	0.250	0.186	0.359	0.207	0.512	0.642	0.291	0.421	0.726	0.856

13.15 Sum of the SAR for LTE Band 66 & Wi-Fi & BT

RF Exposure	Test Position	Standalone SAR (W/kg)						∑ SAR (W/kg)									
		WWAN ①	DTS Ant.1 ②	DTS Ant.2 ③	UNII Ant.1 ④	UNII Ant.2 ⑤	BT ⑥	WWAN + DTS Ant.1 ① + ②	WWAN + DTS Ant.2 ① + ③	WWAN + DTS Ant.1 + DTS Ant.2 ① + ② + ③	WWAN + U-NII Ant.1 ① + ④	WWAN + U-NII Ant.2 ① + ⑤	WWAN + U-NII Ant.1 + U-NII Ant.2 ① + ④ + ⑤	WWAN + BT ① + ⑥	WWAN + UNII Ant.1 + BT ① + ④ + ⑥	WWAN + UNII Ant.2 + BT ① + ⑤ + ⑥	WWAN + UNII Ant.1 + UNII Ant.2 +BT ①+④+⑤+⑥
Head (1g-SAR)	All position	0.253	0.469	0.220	0.106	0.049	1.042	0.722	0.473	0.942	0.359	0.302	0.408	1.295	1.401	1.344	1.450
Body-Worn (1g-SAR)	All position	0.733	0.065	0.040	0.079	0.231	0.090	0.798	0.773	0.838	0.812	0.964	1.043	0.823	0.902	1.054	1.133
Hotspot (1-g SAR)	Rear	0.538	0.173	0.109	0.130	0.435	0.152	0.711	0.647	0.820	0.668	0.973	1.103	0.690	0.820	1.125	1.255
	Front	0.445	0.173	0.109	0.032	0.001	0.199	0.618	0.554	0.727	0.477	0.446	0.478	0.644	0.676	0.645	0.677
	Edge 1		0.173	0.109	0.130	0.070	0.172										
	Edge 2	0.078															
	Edge 3	0.795															
	Edge 4	0.157	0.173	0.109	0.130	0.435	0.214	0.330	0.266	0.439	0.287	0.592	0.722	0.371	0.501	0.806	0.936
Phablet-10g	Rear	1.872			0.330	1.290					2.202	3.162	3.492				
	Front	1.457			0.330	1.290					1.787	2.747	3.077				
	Edge 1				0.330	0.173											
	Edge 2	0.102															
	Edge 3	1.978															
	Edge 4	0.854			0.330	1.290					1.184	2.144	2.474				

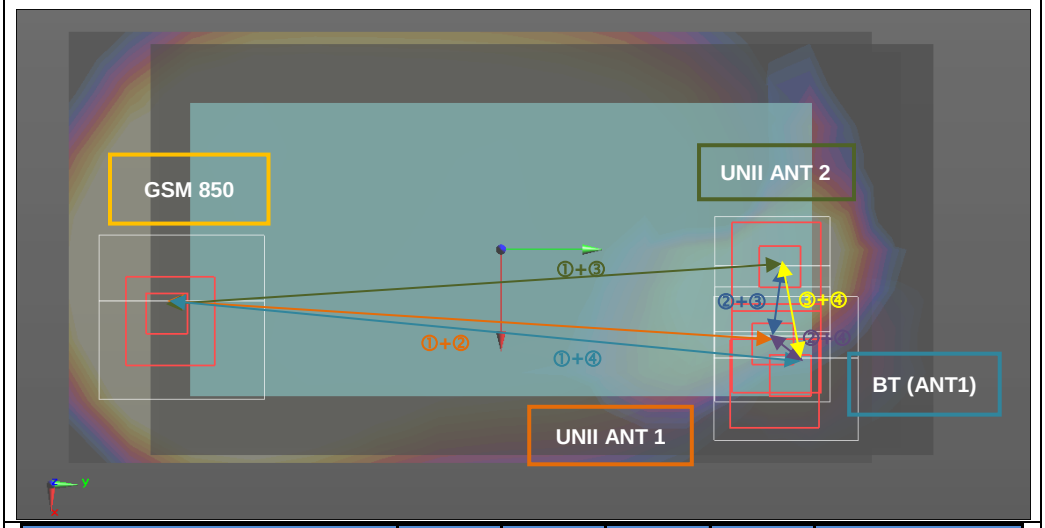
13.16 Sum of the SAR for WWAN & Wi-Fi (RSDB)

RF Exposure	Test Position	Standalone SAR (W/kg)							∑ SAR (W/kg)								
		WWAN ①	DTS Ant.1 ②	DTS Ant.2 ③	UNII Ant.1 ⑤	UNII Ant.2 ⑥	DTS MIMO ⑦	UNII MIMO ⑧	WWAN + UNII Ant.1 + DTS Ant.2 ① +⑤ + ③	WWAN + UNII Ant.2 + DTS Ant.1 ① + ⑥ + ②	WWAN + UNII Ant.1 + DTS Ant.1 ① + ⑤ + ②	WWAN + UNII Ant.2 + DTS Ant.2 ① + ⑥ + ③	WWAN + U-NII MIMO + DTS Ant.1 ① + ⑧ + ②	WWAN + U-NII MIMO + DTS Ant.2 ① + ⑧ + ③	WWAN + U-NII Ant.1 + DTS MIMO ① + ⑤ + ⑦	WWAN + U-NII Ant.2 + DTS MIMO ① + ⑥ + ⑦	WWAN + DTS MIMO + UNII MIMO ① + ⑦ + ⑧
Head (1g-SAR)	All position	0.369	0.376	0.121	0.106	0.049	0.347	0.148	0.596	0.794	0.851	0.539	0.893	0.638	0.822	0.765	0.864
Body-Worn (1g-SAR)	All position	0.779	0.044	0.025	0.050	0.103	0.037	0.137	0.854	0.926	0.873	0.907	0.960	0.941	0.866	0.919	0.953
Hotspot (1g-SAR)	All position	1.181	0.101	0.069	0.054	0.212	0.078	0.200	1.304	1.494	1.336	1.462	1.482	1.450	1.313	1.471	1.459
Phablet (10g-SAR)	Rear	2.582			0.221	0.537		0.812	2.803	3.119	2.803	3.119	3.394	3.394	2.803	3.119	3.394
	Front	1.830			0.221	0.537		0.812	2.051	2.367	2.051	2.367	2.642	2.642	2.051	2.367	2.642
	Edge 1				0.221	0.537		0.812									
	Edge 2	0.399															
	Edge 3	3.271															
	Edge 4	0.926			0.221	0.537		0.812	1.147	1.463	1.147	1.463	1.738	1.738	1.147	1.463	1.738

Conclusion:

Simultaneous transmission SAR measurement (Volume Scan) is not required because the either sum of the 1-g SAR is < 1.6 W/kg or the SPLSR is ≤ 0.04 for all circumstances that require SPLSR calculation.

Figure (1)



Mode		SAR	X	Y	Z	d: Calculated distance (mm)	
		W/kg	m	m	m		
GSM 850	①	1.181	0.0157	-0.0799	-0.0026	①+②	152.0
UNII Ant.1	②	0.130	0.0254	0.0718	-0.0018	①+③	143.9
UNII Ant.2	③	0.435	0.0170	0.0640	-0.0060	①+④	159.9
BT	④	0.152	0.0160	0.0800	-0.0058	②+③	12.2
The Peak Location Separation Distance is computed by using the formula below:						②+④	13.1
SQRT((X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2)						③+④	16.0

Appendixes

Refer to separated files for the following appendixes.

4788725709-S1V3 FCC Report SAR_App A_Photos & Ant. Locations

4788725709-S1V3 FCC Report SAR_App B_Highest SAR Test Plots

4788725709-S1V3 FCC Report SAR_App C_System Check Plots

4788725709-S1V3 FCC Report SAR_App D_SAR Tissue Ingredients

4788725709-S1V3 FCC Report SAR_App E_Probe Cal. Certificates

4788725709-S1V3 FCC Report SAR_App F_Dipole Cal. Certificates

END OF REPORT