



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-G973F/DS, SM-G973F, SM-G973X

FCC ID: A3LSMG973F

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Prepared for
SAMSUNG ELECTRONICS CO., LTD.
129 SAMSUNG-RO, YEONGTONG-GU, SUWON-SI,
GYEONGGI-DO, 16677, KOREA

Prepared by

UL Korea, Ltd.

26th floor, 152, Teheran-ro, Gangnam-gu Seoul, 06236, Korea

Suwon Test Site: UL Korea, Ltd. Suwon Laboratory
218 Maeyeong-ro, Yeongtong-gu,
Suwon-si, Gyeonggi-do, 16675, Korea
TEL: (031) 337-9902
FAX: (031) 213-5433



TL-637

Revision History

Rev.	Date	Revisions	Revised By
V1	12/27/2018	Initial Issue	Sunghoon Kim
V2	1/9/2019	Sec.6.1 -Revised information of Wi-Fi Hotspot in table. Sec.6.3 -Added target power of 16QAM, 64QAM in LTE Bands. -Added target power of EDR in Bluetooth Band. -Added note 5. Sec.6.8.3 -Revised typo in table. Appendix E -Revised document in EX3DV4 probe.	Sunghoon Kim
V3	1/11/2019	Sec.1 -Revised Simultaneous Tx SAR level of Head & Body-worn exposure. Sec.13.19 -Added original SAR level in table. Appendix A -Added Edge 1 test photo in phablet exposure.	Sunghoon Kim
V4	1/17/2019	Revised Sec.6.7, Sec.8.1, Sec.8.2 and Appendix C	Sunghoon Kim
V5	1/28/2019	Sec.10.20, 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		A3LSMG973F			
Model Number		SM-G973F/DS, SM-G973F, SM-G973X			
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	UNII	DSS(BT)
Head		0.35	0.43	0.15	0.93
Body-worn		0.79	<0.10	0.42	<0.10
Hotspot		1.07	0.17	0.60	0.16
Phablet-10g		2.96	N/A	1.15	N/A
Simultaneous TX	Head	1.48	0.88	1.48	1.48
	Body-worn	1.59	1.17	1.59	1.59
	Hotspot	1.53	1.49	1.53	1.53
	Phablet-10g	3.97	N/A	3.97	N/A
Date Tested		11/7/2018 to 12/27/2018 and 1/17/2019			
Test Results		Pass			
<p>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.</p> <p>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.</p>					
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

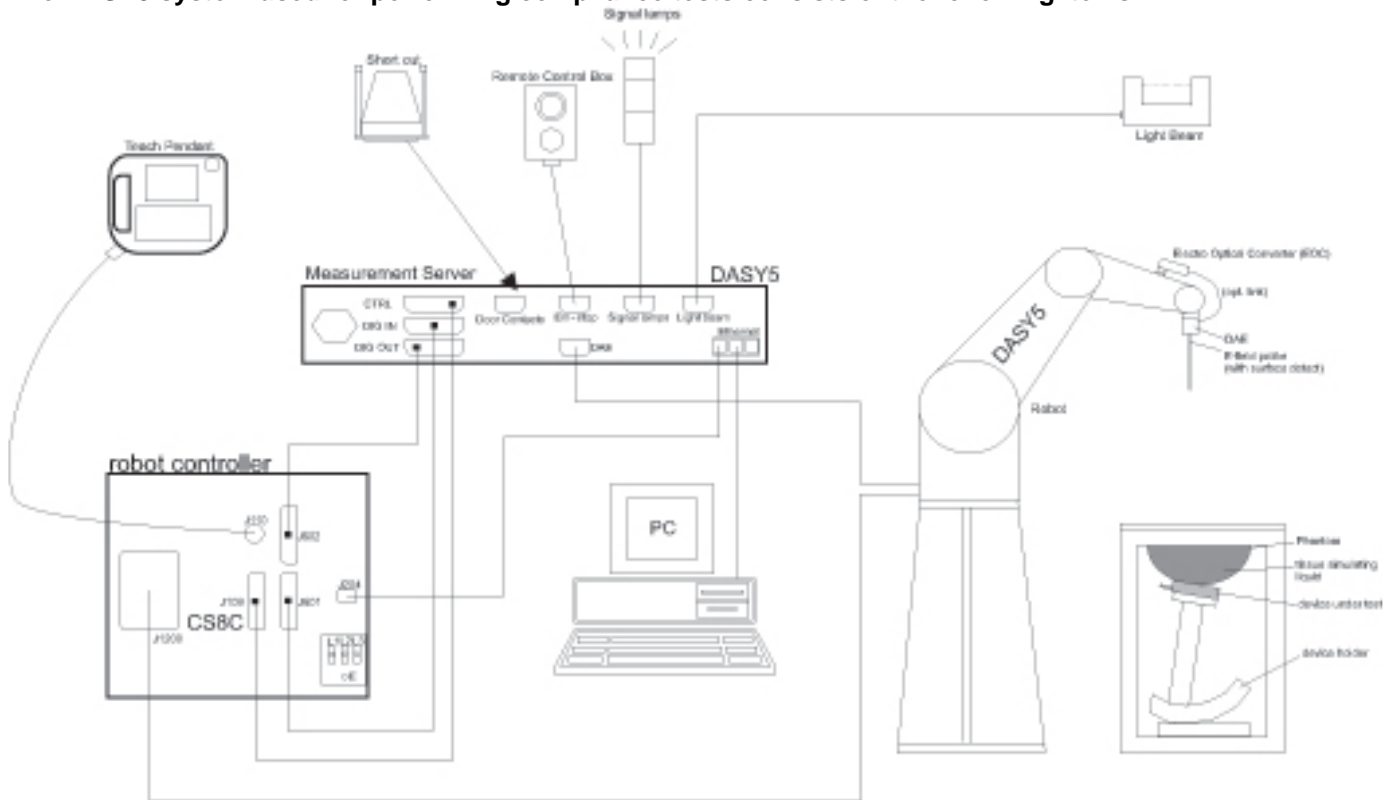
UL Korea, Ltd. is accredited by IAS, Laboratory Code TL-637.

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

Step 3: Zoom Scan

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

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

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

Step 4: Power drift measurement

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

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 $\leq 30\%$, for a confidence interval of $k = 2$. If these conditions are met, extensive SAR measurement uncertainty analysis described in IEEE Std 1528-2013 is not required in SAR reports submitted for equipment approval.

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	<input checked="" type="checkbox"/> The Back Cover is not removable.																								
Battery Options	<input checked="" type="checkbox"/> 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. <input checked="" type="checkbox"/> Mobile Hotspot (Wi-Fi 2.4 GHz) <input checked="" type="checkbox"/> Mobile Hotspot (Wi-Fi 5 GHz_U-NII-3 band)																								
Wi-Fi Direct	Wi-Fi Direct enabled devices transfer data directly between each other <input checked="" type="checkbox"/> Wi-Fi Direct (Wi-Fi 2.4 GHz) <input checked="" type="checkbox"/> Wi-Fi Direct (Wi-Fi 5 GHz_Ch.36 – Ch.48, Ch 149 – Ch161)																								
Test Sample Information	<table border="1"> <thead> <tr> <th>No.</th> <th>S/N</th> <th>Notes</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>R38KA0BCW8E</td> <td>Wi-Fi/BT conduction</td> </tr> <tr> <td>2</td> <td>R38K806534T</td> <td>Main conduction</td> </tr> <tr> <td>3</td> <td>R38KA0BCT9R</td> <td>Main conduction</td> </tr> <tr> <td>4</td> <td>R38KA0BE34A</td> <td>SAR</td> </tr> <tr> <td>5</td> <td>R38KA0BE0GF</td> <td>SAR</td> </tr> <tr> <td>6</td> <td>R38KA0BEF0L</td> <td>SAR</td> </tr> <tr> <td>7</td> <td>R38K8065W2V</td> <td>SAR</td> </tr> </tbody> </table>	No.	S/N	Notes	1	R38KA0BCW8E	Wi-Fi/BT conduction	2	R38K806534T	Main conduction	3	R38KA0BCT9R	Main conduction	4	R38KA0BE34A	SAR	5	R38KA0BE0GF	SAR	6	R38KA0BEF0L	SAR	7	R38K8065W2V	SAR
No.	S/N	Notes																							
1	R38KA0BCW8E	Wi-Fi/BT conduction																							
2	R38K806534T	Main conduction																							
3	R38KA0BCT9R	Main conduction																							
4	R38KA0BE34A	SAR																							
5	R38KA0BE0GF	SAR																							
6	R38KA0BEF0L	SAR																							
7	R38K8065W2V	SAR																							

6.2. Wireless Technologies

Wireless technologies	Frequency bands	Operating mode		Duty Cycle used for SAR testing
GSM	850 1900	Voice (GMSK)	GPRS Multi-Slot Class:	GSM Voice: 12.5% (E)GPRS: 1 Slot: 12.5% 2 Slots: 25% 3 Slots: 37.5% 4 Slots: 50%
		GPRS (GMSK)	<input type="checkbox"/> Class 8 - 1 Up, 4 Down	
		EGPRS (8PSK)	<input type="checkbox"/> Class 10 - 2 Up, 4 Down	
			<input type="checkbox"/> Class 12 - 4 Up, 4 Down	
			<input checked="" type="checkbox"/> Class 33 - 4 Up, 5 Down	
Does this device support DTM (Dual Transfer Mode)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
W-CDMA (UMTS)	Band II Band IV Band V	UMTS Rel. 99 (Voice & Data) HSDPA (category 24) HSUPA (category 6) DC-HSDPA (category 24) HSPA+ (DL Only)		100%
LTE	FDD Band 2	QPSK 16QAM 64QAM Rel. 14 Carrier Aggregation (2 Uplink and 4 Downlinks)		100% (FDD) 63.3% (TDD) ¹
	FDD Band 4			
	FDD Band 5			
	FDD Band 7			
	FDD Band 12			
	FDD Band 13			
	FDD Band 17			
	FDD Band 25			
	FDD Band 26			
	TDD Band 38			
	TDD Band 41			
	FDD Band 66			
	FDD Band 7_2CC			
	TDD Band 38_2CC			
Does this device support SV-LTE (1xRTT-LTE)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
Wi-Fi	2.4 GHz	802.11b		99.7% (802.11b)
		802.11g		98.2% (802.11g)
		802.11n (HT20)		98.0% (802.11n 20MHz BW)
		802.11ax (HE20)		97.5% (802.11ax 20MHz BW)
	5 GHz	802.11a		98.2% (802.11a)
		802.11n (HT20, HT40)		98.1% (802.11n,ac 20MHz BW)
		802.11ac (VHT20, VHT40, VHT80)		98.2% (802.11n,ac 40MHz BW)
		802.11ax (HE20, HE40, HE80)		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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				
Does this device support Band gap channel(s)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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 Power	Tune-up Limit	Frame Power	Tune-up Limit	Frame Power
GSM850	Main 1-1	Voice/GPRS	1	34.0	25.0				
		GPRS	2	31.0	25.0				
		GPRS	3	29.8	25.5				
		GPRS	4	28.6	25.6				
		EGPRS	1	27.5	18.5				
		EGPRS	2	25.5	19.5				
		EGPRS	3	24.3	20.0				
		EGPRS	4	23.1	20.1				
GSM1900	Main 1-1	Voice/GPRS	1	31.0	22.0				
		GPRS	2	27.5	21.5				
		GPRS	3	26.0	21.7				
		GPRS	4	24.5	21.5				
		EGPRS	1	26.5	17.5				
		EGPRS	2	24.5	18.5				
		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	24.5	21.5	21.5
		HSDPA	24.0	21.0	21.0
		HSUPA	24.0	21.0	21.0
		DC-HSDPA	24.0	21.0	21.0
W-CDMA Band IV	Main 1-1	R99	24.5	20.5	20.5
		HSDPA	24.0	20.0	20.0
		HSUPA	24.0	20.0	20.0
		DC-HSDPA	24.0	20.0	20.0
W-CDMA Band V	Main 1-1	R99	25.0		
		HSDPA	24.0		
		HSUPA	24.0		
		DC-HSDPA	24.0		

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)
LTE Band 2	Main 1-1	QPSK	24.5	21.5	21.5
		16QAM	23.5	21.5	21.5
		64QAM	22.5	21.5	21.5
LTE Band 4	Main 1-1	QPSK	24.5	21.5	21.5
		16QAM	23.5	21.5	21.5
		64QAM	22.5	21.5	21.5
LTE Band 5	Main 1-1	QPSK	25.0		
		16QAM	23.0		
		64QAM	22.0		
LTE Band 7	Main 1-2	QPSK	25.0	21.0	21.0
		16QAM	24.0	21.0	21.0
		64QAM	23.0	21.0	21.0
LTE Band 12	Main 1-1	QPSK	25.0		
		16QAM	23.0		
		64QAM	22.0		
LTE Band 13	Main 1-1	QPSK	25.0		
		16QAM	23.0		
		64QAM	22.0		
LTE Band 17	Main 1-1	QPSK	25.0		
		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	24.5		
		16QAM	23.5		
		64QAM	22.5		
LTE Band 38	Main 1-2	QPSK	24.5	21.5	21.5
		16QAM	23.5	21.5	21.5
		64QAM	22.5	21.5	21.5
LTE Band 41	Main 1-2	QPSK	24.5	21.5	21.5
		16QAM	23.5	21.5	21.5
		64QAM	22.5	21.5	21.5
LTE Band 66	Main 1-1	QPSK	25.0	21.0	21.0
		16QAM	24.0	21.0	21.0
		64QAM	23.0	21.0	21.0
LTE-Uplink 2CA Band 7	Main 1-2	QPSK	23.5	20.0	20.0
		16QAM	22.5	20.0	20.0
		64QAM	21.5	20.0	20.0
LTE-Uplink 2CA Band 38	Main 1-2	QPSK	24.0	21.5	21.5
		16QAM	23.0	21.5	21.5
		64QAM	22.0	21.5	21.5

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, 7, 25, 38, 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, 7, 25, 38, 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, 7, 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
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
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 7	Frequency range: 2500 - 2570 MHz					
		Channel Bandwidth					
		20 MHz	15 MHz	10 MHz	5 MHz	3 MHz	1.4 MHz
	Low	20850 2510	20825 2507.5	20800 2505	20775 2502.5		
	Mid	21100 2535	21100 2535	21100 2535	21100 2535		
	High	21350 2560	21375 2562.5	21400 2565	21425 2567.5		
	Band 12	Frequency range: 699 – 716 MHz					
		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			

General LTE SAR Test and Reporting Considerations (Continued)

Frequency range, Channel Bandwidth, Numbers and Frequencies	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		
	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 38	Frequency range: 2570 - 2620 MHz					
		Channel Bandwidth					
		20 MHz	15 MHz	10 MHz	5 MHz	3 MHz	1.4 MHz
	Low	37850/ 2580	37825/ 2577.5	37800/ 2575	37775/ 2572.5		
	Mid	38000/ 2595	38000/ 2595	38000/ 2595	38000/ 2595		
	High	38150/ 2610	38175/ 2612.5	38200/ 2615	38225/ 2617.5		
	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

General LTE SAR Test and Reporting Considerations (Continued)

LTE transmitter and antenna implementation	Refer to Appendix A.																																																														
Maximum power reduction (MPR)	<p align="center">Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1, 2 and 3</p> <table border="1"> <thead> <tr> <th rowspan="2">Modulation</th> <th colspan="6">Channel bandwidth / Transmission bandwidth (N_{RB})</th> <th rowspan="2">MPR (dB)</th> </tr> <tr> <th>1.4 MHz</th> <th>3.0 MHz</th> <th>5 MHz</th> <th>10 MHz</th> <th>15 MHz</th> <th>20 MHz</th> </tr> </thead> <tbody> <tr> <td>QPSK</td> <td>> 5</td> <td>> 4</td> <td>> 8</td> <td>> 12</td> <td>> 16</td> <td>> 18</td> <td>≤ 1</td> </tr> <tr> <td>16 QAM</td> <td>≤ 5</td> <td>≤ 4</td> <td>≤ 8</td> <td>≤ 12</td> <td>≤ 16</td> <td>≤ 18</td> <td>≤ 1</td> </tr> <tr> <td>16 QAM</td> <td>> 5</td> <td>> 4</td> <td>> 8</td> <td>> 12</td> <td>> 16</td> <td>> 18</td> <td>≤ 2</td> </tr> <tr> <td>64 QAM</td> <td>≤ 5</td> <td>≤ 4</td> <td>≤ 8</td> <td>≤ 12</td> <td>≤ 16</td> <td>≤ 18</td> <td>≤ 2</td> </tr> <tr> <td>64 QAM</td> <td>> 5</td> <td>> 4</td> <td>> 8</td> <td>> 12</td> <td>> 16</td> <td>> 18</td> <td>≤ 3</td> </tr> <tr> <td>256 QAM</td> <td colspan="6" style="text-align: center;">≥ 1</td> <td>≤ 5</td> </tr> </tbody> </table> <p>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</p>	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
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																																																								
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:

- 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 Carrier Aggregation

DL Inter-Band (2CC Max)

E-UTRA CA configuration (BCS)	E-UTRA Band	Bandwidth						Max Aggregated BW
		1.4 MHz	3 MHz	5 MHz	10 MHz	15 MHz	20 MHz	
CA_2A-4A (0)(1)(2)	Band 2	Yes	Yes	Yes	Yes	Yes	Yes	40 MHz
	Band 4			Yes	Yes	Yes	Yes	
	Band 2			Yes	Yes			20 MHz
	Band 4			Yes	Yes			
CA_2A-5A (0)(1)	Band 2			Yes	Yes	Yes	Yes	40 MHz
	Band 4			Yes	Yes	Yes	Yes	
	Band 2			Yes	Yes			30 MHz
	Band 5			Yes	Yes			
CA_2A-7A (0)	Band 2			Yes	Yes	Yes	Yes	40 MHz
	Band 7			Yes	Yes	Yes	Yes	
CA_2A-12A (0)(1)(2)	Band 2			Yes	Yes	Yes	Yes	30 MHz
	Band 12			Yes	Yes			
	Band 2		Yes	Yes	Yes	Yes	Yes	30 MHz
	Band 12			Yes	Yes			
CA_2A-13A (0)(1)	Band 2			Yes	Yes	Yes	Yes	30 MHz
	Band 13				Yes			
	Band 2			Yes	Yes			20 MHz
CA_2A-17A (0)	Band 2			Yes	Yes			20 MHz
	Band 17			Yes	Yes			
CA_2A-66A (0)(1)(2)	Band 2	Yes	Yes	Yes	Yes	Yes	Yes	40 MHz
	Band 66			Yes	Yes	Yes	Yes	
	Band 2			Yes	Yes			20 MHz
	Band 66			Yes	Yes			
	Band 2			Yes	Yes	Yes	Yes	40 MHz
Band 66			Yes	Yes	Yes	Yes		
CA_4A-5A (0)(1)	Band 4			Yes	Yes			20 MHz
	Band 5			Yes	Yes			
	Band 4			Yes	Yes	Yes	Yes	30 MHz
	Band 5			Yes	Yes			
CA_4A-7A (0)(1)	Band 4			Yes	Yes			30 MHz
	Band 7			Yes	Yes	Yes	Yes	
	Band 4			Yes	Yes	Yes	Yes	40 MHz
	Band 7			Yes	Yes	Yes	Yes	
CA_4A-12A (0)(1)(2)(3)(4)(5)	Band 4	Yes	Yes	Yes	Yes			20 MHz
	Band 12			Yes	Yes			
	Band 4	Yes	Yes	Yes	Yes	Yes	Yes	30 MHz
	Band 12			Yes	Yes			
	Band 4			Yes	Yes	Yes	Yes	30 MHz
	Band 12		Yes	Yes	Yes			
	Band 4			Yes	Yes			20 MHz
	Band 12			Yes	Yes			
	Band 4			Yes	Yes	Yes	Yes	30 MHz
	Band 12			Yes	Yes			
Band 4			Yes	Yes	Yes		20 MHz	
Band 12			Yes	Yes				
CA_4A-13A (0)(1)	Band 4			Yes	Yes	Yes	Yes	30 MHz
	Band 13				Yes			
	Band 4			Yes	Yes			20 MHz
CA_4A-17A (0)	Band 4			Yes	Yes			20 MHz
	Band 17			Yes	Yes			
CA_5A-7A (0)(1)	Band 5	Yes	Yes	Yes	Yes			30 MHz
	Band 7			Yes	Yes	Yes	Yes	
	Band 5			Yes	Yes			30 MHz
	Band 7				Yes	Yes	Yes	

DL Inter-Band (2CC Max) (Continued)

E-UTRA CA configuration (BCS)	E-UTRA Band	Bandwidth						Max Aggregated BW
		1.4 MHz	3 MHz	5 MHz	10 MHz	15 MHz	20 MHz	
CA_5A-41A (0)	Band 5			Yes	Yes			30 MHz
	Band 41						Yes	
CA_12A-66A (0)(1)(2)(3)(4)(5)	Band 12			Yes	Yes			20 MHz
	Band 66	Yes	Yes	Yes	Yes			30 MHz
	Band 12			Yes	Yes			
	Band 66	Yes	Yes	Yes	Yes	Yes	Yes	30 MHz
	Band 12		Yes	Yes	Yes			
	Band 66			Yes	Yes	Yes	Yes	20 MHz
	Band 12			Yes	Yes			
	Band 66			Yes	Yes			30 MHz
	Band 12			Yes	Yes			
	Band 66			Yes	Yes	Yes	Yes	20 MHz

DL Inter-Band (3CC Max)

E-UTRA CA configuration (BCS)	E-UTRA Band	Bandwidth						Max Aggregated BW
		1.4 MHz	3 MHz	5 MHz	10 MHz	15 MHz	20 MHz	
CA_2A-4A-5A (0)	Band 2			Yes	Yes	Yes	Yes	50 MHz
	Band 4			Yes	Yes	Yes	Yes	
	Band 5			Yes	Yes			
CA_2A-4A-7A (0)	Band 2			Yes	Yes	Yes	Yes	60 MHz
	Band 4			Yes	Yes	Yes	Yes	
	Band 7			Yes	Yes	Yes	Yes	
CA_2A-4A-13A (0)	Band 2			Yes	Yes	Yes	Yes	50 MHz
	Band 4			Yes	Yes	Yes	Yes	
	Band 13				Yes			
CA_2A-7A-7A (0)	Band 2			Yes		Yes	Yes	60 MHz
	Band 7	See CA_7A-7A (1)						
CA_2A-7C (0)	Band 2			Yes	Yes	Yes	Yes	60 MHz
	Band 7	See CA_7C (1)						
CA_4A-4A-12A (0)	Band 4	See CA_4A-4A (0)						50 MHz
	Band 12			Yes	Yes			
CA_4A-4A-17A (0)	Band 4	See CA_4A-4A (0)						50 MHz
	Band 17				Yes			
CA_4A-7C (0)	Band 4			Yes	Yes	Yes	Yes	60 MHz
	Band 7	See CA_7C (1)						
CA_5A-7A-7A (0)	Band 5			Yes	Yes			50 MHz
	Band 7	See CA_7A-7A (3)						
CA_5A-7C (0)	Band 5			Yes	Yes			50 MHz
	Band 7	See CA_7C (1)						
CA_7A-66A-66A (0)	Band 7			Yes	Yes	Yes	Yes	60 MHz
	Band 66	See CA_66A-66A (0)						
CA_12A-66A-66A (0)	Band 12			Yes	Yes			50 MHz
	Band 66	See CA_66A-66A (0)						

DL Inter-Band (4CC Max)

E-UTRA CA configuration (BCS)	E-UTRA Band	Bandwidth						Max Aggregated BW
		1.4 MHz	3 MHz	5 MHz	10 MHz	15 MHz	20 MHz	
CA_7C-66A-66A (0)	Band 7	See CA_7C (1)						80 MHz
	Band 66	See CA_66A-66A (0)						

DL Intra-Band Non-contiguous

E-UTRA CA configuration (BCS)	E-UTRA Band	Allowed Channel BW Per Carrier (MHz)					Max Aggregated BW
		1st Carrier	2nd Carrier	3rd Carrier	4th Carrier	5th Carrier	
CA_2A-2A (0)	Band 2	5,10,15,20	5,10,15,20				40 MHz
CA_4A-4A (0),(1)	Band 4	5,10,15,20	5,10,15,20				40 MHz
	Band 4	5,10	5,10				20 MHz
CA_7A-7A (0),(1),(2),(3)	Band 7	5	15				40 MHz
		10	10,15				
		15	15,20				
		20	20				
	Band 7	5,10,15,20	5,10,15,20				40 MHz
	Band 7	5,10,15,20	5,10				30 MHz
CA_41A-41A (0),(1)	Band 41	10,15,20	10,15,20				40 MHz
	Band 41	5,10,15,20	5,10,15,20				40 MHz
CA_66A-66A(0)	Band 66	5,10,15,20	5,10,15,20				40 MHz
CA_41A-41C (0)	Band 41	5,10,15,20	See CA_41C (1)				60 MHz
		See CA_41C (1)	5,10,15,20				
CA_41C-41C (0)	Band 41	See CA_41C (0)					80 MHz
	Band 41	See CA_41C (0)					
CA_41A-41D (0)	Band 41	5,10,15,20	See CA_41D (0)				80 MHz
	Band 41	See CA_41D (0)	5,10,15,20				

DL Intra-Band Contiguous

E-UTRA CA configuration (BCS)	E-UTRA Band	Allowed Channel BW Per Carrier (MHz)					Max Aggregated BW
		1st Carrier	2nd Carrier	3rd Carrier	4th Carrier	5th Carrier	
CA_2C (0)	Band 2	5	20				40 MHz
		10	15,20				
		15	10,15,20				
		20	5,10,15,20				
CA_7C (0),(1),(2)	Band 7	15	15				40 MHz
		20	20				
		10	20				40 MHz
		15	15,20				
		20	10,15,20				40 MHz
		15	10,15				
CA_38C (0)	Band 38	15	15				40 MHz
		20	20				
CA_41C (0),(1),(2),(3)	Band 41	10	20				40 MHz
		15	15,20				
		20	10,15,20				
	Band 41	5,10	20				40 MHz
		15	15,20				
		20	5,10,15,20				
	Band 41	10	15,20				40 MHz
		15	10,15,20				
		20	10,15,20				
	Band 41	10	20				40 MHz
		20	20				

DL Intra-Band Contiguous (Continued)

E-UTRA CA configuration (BCS)	E-UTRA Band	Allowed Channel BW Per Carrier (MHz)					Max Aggregated BW
		1st Carrier	2nd Carrier	3rd Carrier	4th Carrier	5th Carrier	
CA_66B (0)	Band 66	5	5,10,15				20 MHz
		10	5,10				
		15	5				
CA_66C (0)	Band 66	5	20				40 MHz
		10	15,20				
		15	10,15,20				
CA_41D (0)	Band 41	10	20	15			60 MHz
		10	15,20	20			
		15	20	10,15			
		15	10,15,20	20			
		20	15,20	10			
		20	10,15,20	15,20			

UL Intra-Band Contiguous

E-UTRA CA configuration (BCS)	E-UTRA Band	Allowed Channel BW Per Carrier (MHz)					Max Aggregated BW
		1st Carrier	2nd Carrier	3rd Carrier	4th Carrier	5th Carrier	
CA_7C (0),(1),(2)	Band 7	15	15				40 MHz
		20	20				
		10	20				40 MHz
		15	15,20				
		20	10,15,20				40 MHz
		15	10,15				
CA_38C (0)	Band 38	20	15,20				40 MHz
		15	15				
		20	20				

Note(s):

1. For supported channels, please refer to §6.4.
2. This device supports DL 4x4 MIMO for LTE Band 4, 7, 66. please refer to §9.3.1 for detailed LTE CA combination with 4x4 DL MIMO.

6.6. 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	$26336 \cdot T_s$			$7680 \cdot T_s$		
5	$6592 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$	$20480 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$
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 $\times (T_s) \times \#$ of S + $\#$ of U

Example for Calculated Duty Cycle for Uplink-Downlink Configuration 0:

Calculated Duty Cycle = $5120 \times [1/(15000 \times 2048)] \times 2 + 6 \text{ ms} = 63.33\%$

where

$T_s = 1/(15000 \times 2048)$ 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

6.7. Dynamic antenna tuning Test Considerations & Procedure

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 2/4/5/7/12/13/17. 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 2/4/5/7/12/13/17 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	0.194	0.204	1200	786800	0.200
	LTE Band 4	Left Touch	20175	1732.5	0.292	0.218	1200	286800	0.215
	LTE Band 5	Right Touch	20525	836.5	0.282	0.287	19F8	110B00	0.071
	LTE Band 7	Right Tilt	20850	2510.0	0.094	0.115	2505	840E00	0.110
	LTE Band 12	Right Touch	23095	707.5	0.150	0.129	1DAF	869900	0.032
	LTE Band 13	Right Touch	23230	782.0	0.239	0.205	1A0F	811B00	0.022
	LTE Band 17	Right Touch	23790	710.0	0.156	0.133	1DAF	829900	0.030
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	0.635	0.742	1200	786800	0.723
	LTE Band 4	Rear - 15mm	20175	1732.5	0.786	0.738	1200	286800	0.726
	LTE Band 5	Rear - 15mm	20525	836.5	0.455	0.440	19F8	110B00	0.087
	LTE Band 7	Rear - 15mm	20850	2510.0	0.753	0.752	2505	840E00	0.744
	LTE Band 12	Rear - 15mm	23095	707.5	0.267	0.240	1DAF	869900	0.069
	LTE Band 13	Rear - 15mm	23230	782.0	0.350	0.323	1A0F	811B00	0.037
	LTE Band 17	Rear - 15mm	23790	710.0	0.280	0.245	1DAF	829900	0.063

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	18900	1880.0	1.067	1.319	1200	786800	1.287
	LTE Band 4	Edge 3 - 10mm	20175	1732.5	0.847	0.837	1200	286800	0.828
	LTE Band 5	Rear - 10mm	20525	836.5	0.783	0.817	19F8	110B00	0.184
	LTE Band 7	Edge 3 - 10mm	20850	2510.0	0.422	0.373	2505	840E00	0.358
	LTE Band 12	Rear - 10mm	23095	707.5	0.367	0.324	1DAF	869900	0.097
	LTE Band 13	Rear - 10mm	23230	782.0	0.520	0.562	1A0F	811B00	0.071
	LTE Band 17	Rear - 10mm	23790	710.0	0.370	0.326	1DAF	829900	0.088
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	18700	1860.0	2.373	5.455	1200	786800	5.446
	LTE Band 4	Edge 3 - 0mm	20175	1732.5	2.963	7.864	1200	286800	7.785

Note(s):

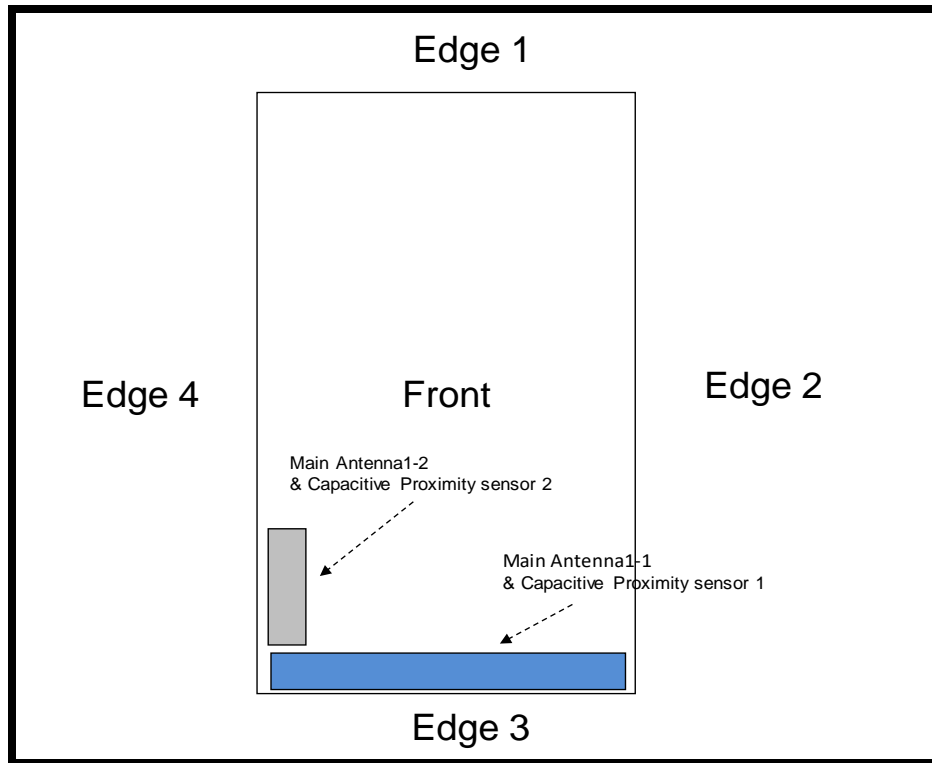
Only two bands are tested for the 10-g extremity exposure condition at 0mm separation distance. All other bands are excluded based on hot spot SAR values < 1.2 W/Kg.

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.

6.8. 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.

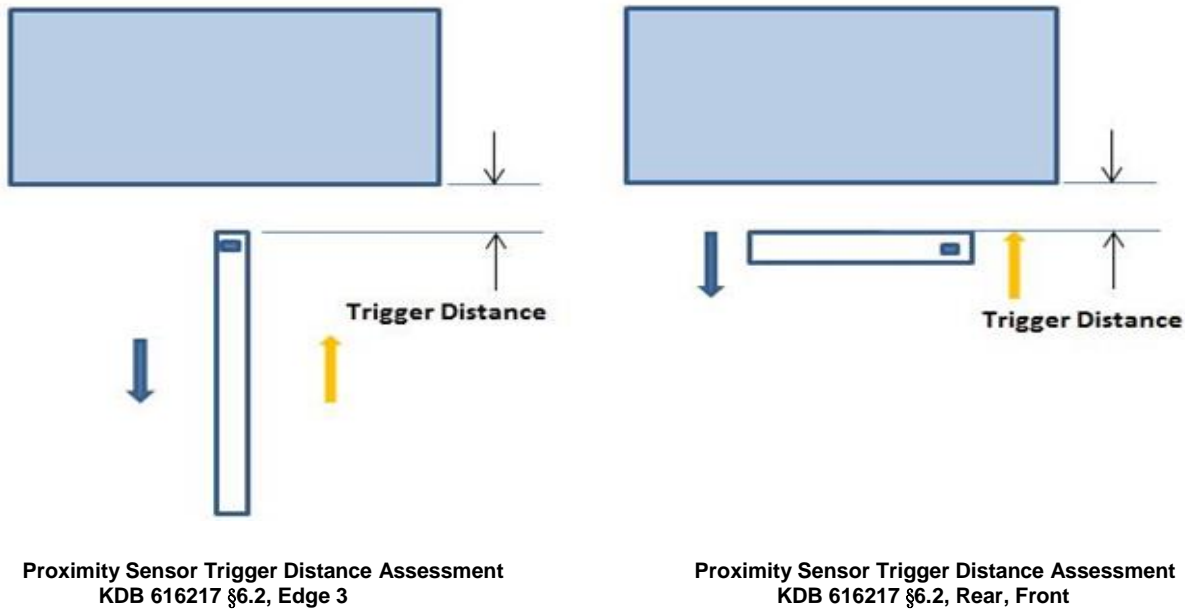


6.8.1. Proximity Sensor Triggering Distance (KDB 616217 §6.2)

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.



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

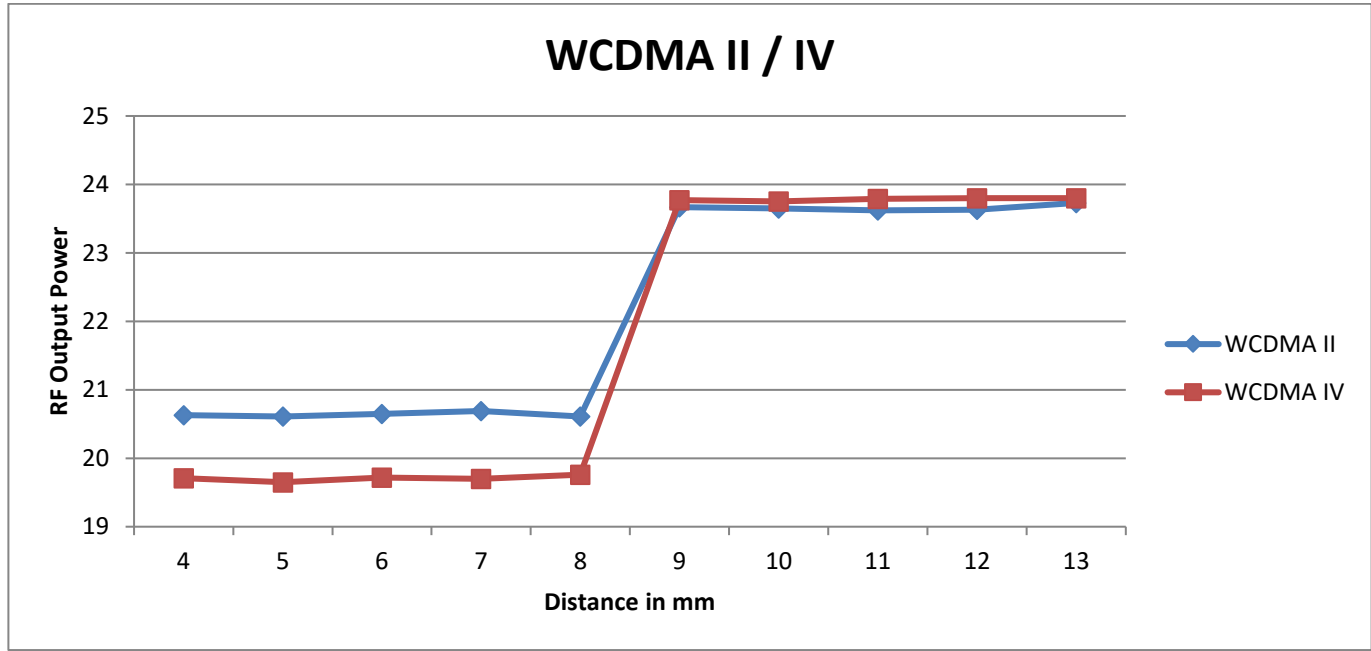
Tissue simulating liquid	Trigger distance - Rear		Trigger distance - Front		Trigger distance – Edge 3	
	Moving toward phantom	Moving from phantom	Moving toward phantom	Moving from phantom	Moving toward phantom	Moving from phantom
1750 Body	8 mm	8 mm	6 mm	6 mm	12 mm	12 mm
1900 Body	8 mm	8 mm	6 mm	6 mm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

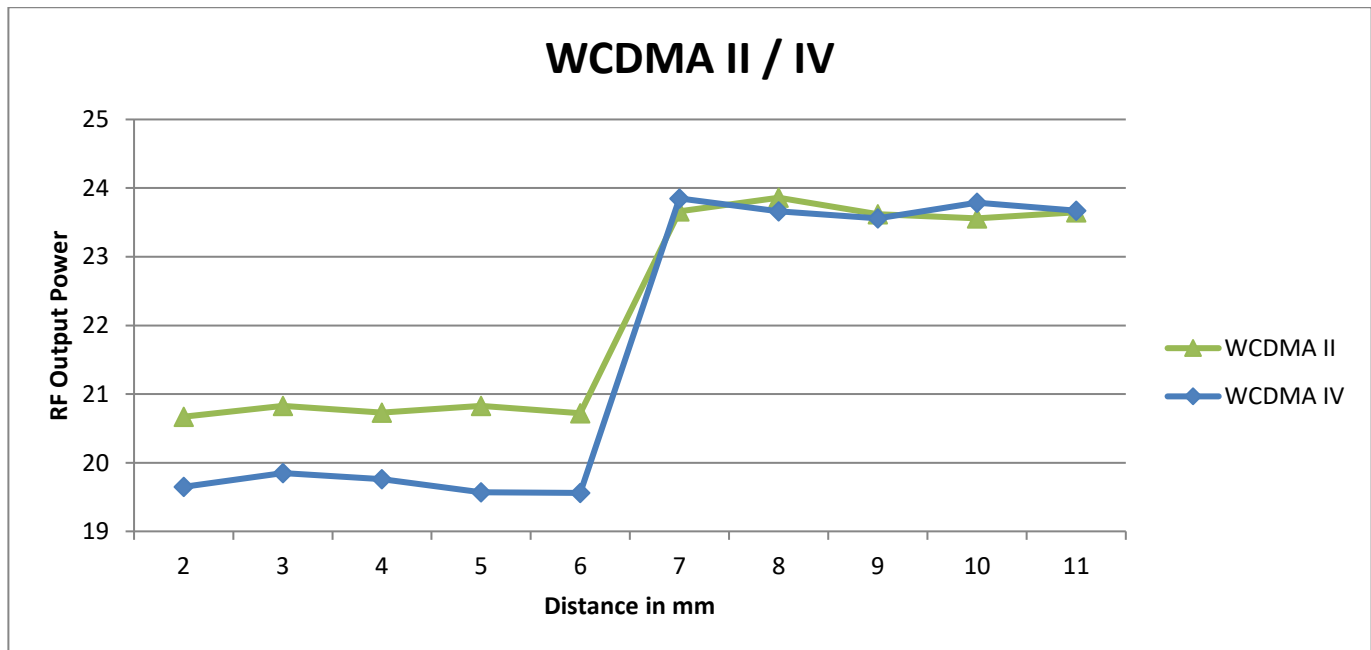
Rear, DUT Moving Toward (Trigger) from the Phantom

Distance to DUT vs. Output Power in dBm										
Distance (mm)	4	5	6	7	8	9	10	11	12	13
WCDMA II	20.6	20.6	20.7	20.7	20.6	23.7	23.7	23.6	23.6	23.7
WCDMA IV	19.7	19.7	19.7	19.7	19.8	23.8	23.8	23.8	23.8	23.8



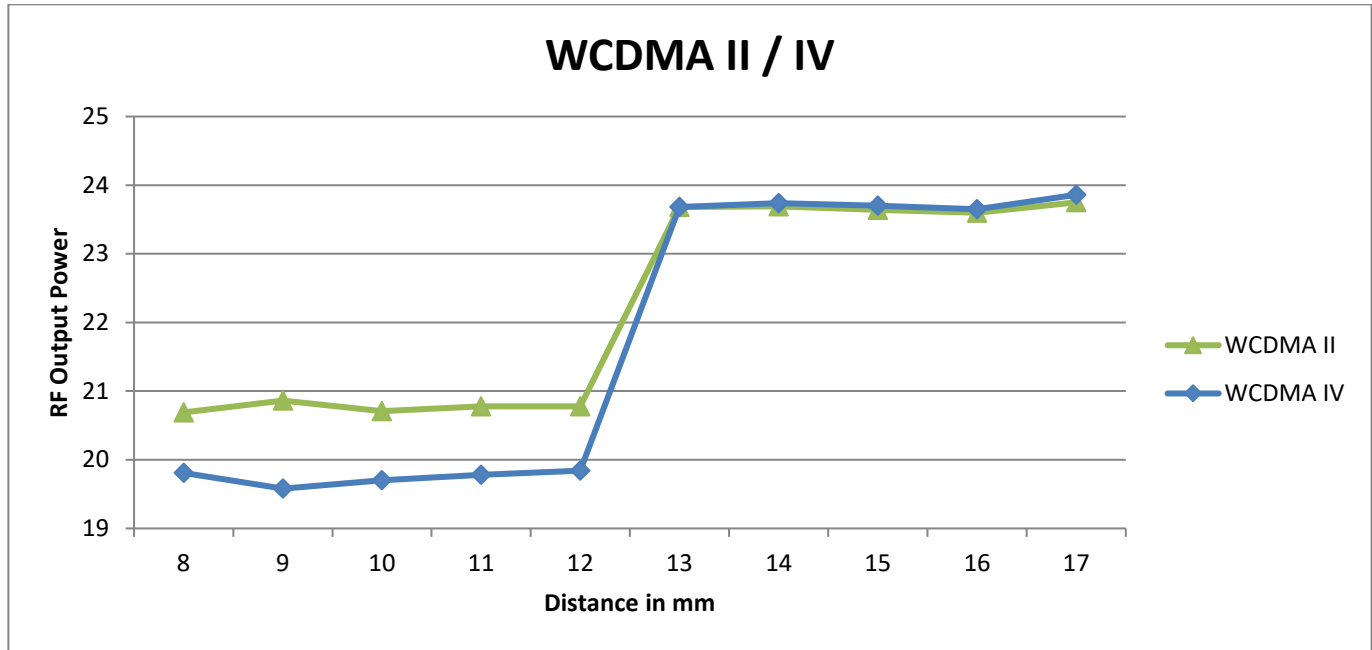
Front, DUT Moving Toward (Trigger) from the Phantom

Distance to DUT vs. Output Power in dBm										
Distance (mm)	2	3	4	5	6	7	8	9	10	11
WCDMA II	20.7	20.8	20.7	20.8	20.7	23.7	23.9	23.6	23.6	23.7
WCDMA IV	19.7	19.9	19.8	19.6	19.6	23.9	23.7	23.6	23.8	23.7



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

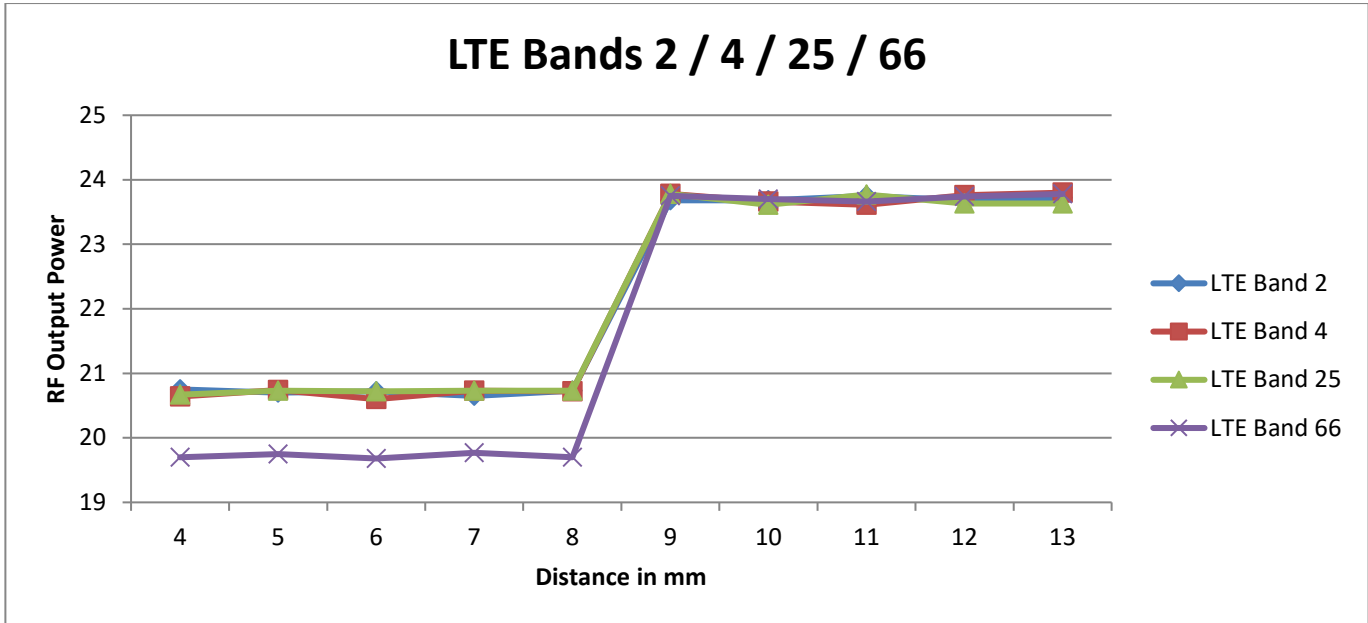
Distance to DUT vs. Output Power in dBm										
Distance (mm)	8	9	10	11	12	13	14	15	16	17
WCDMA II	20.7	20.9	20.7	20.8	20.8	23.7	23.7	23.6	23.6	23.8
WCDMA IV	19.8	19.6	19.7	19.8	19.8	23.7	23.7	23.7	23.7	23.9



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

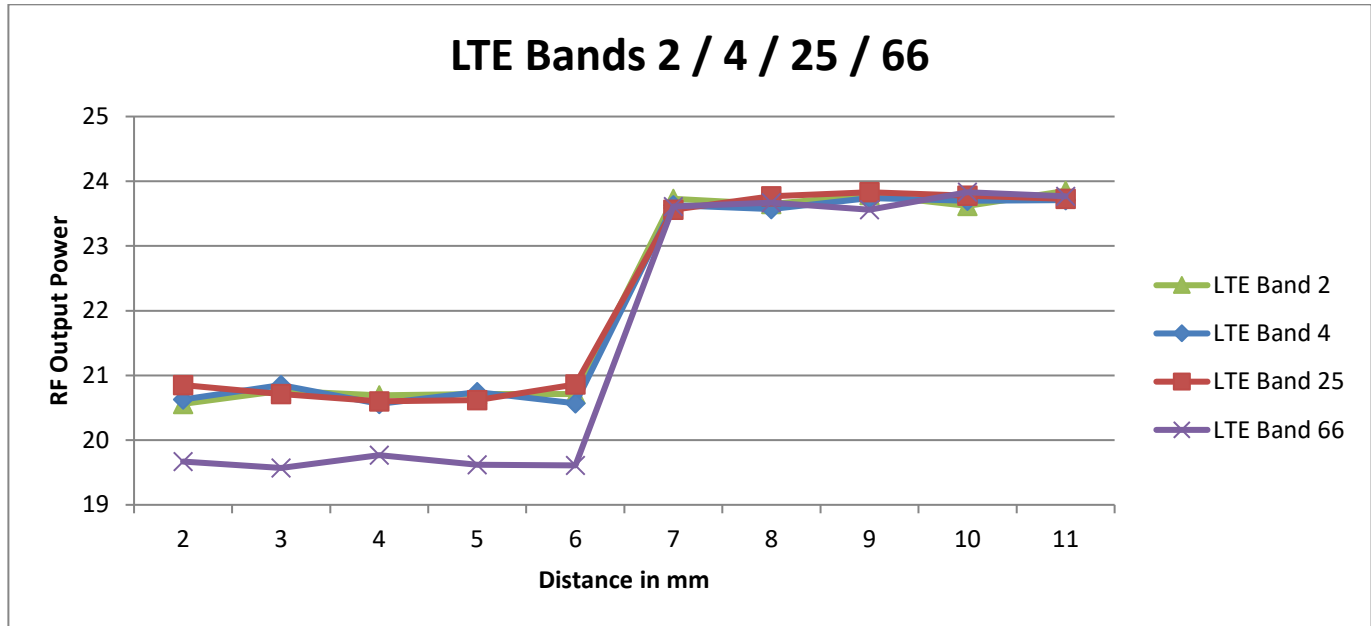
Rear, DUT Moving Away (Release) from the Phantom

Distance to DUT vs. Output Power in dBm										
Distance (mm)	4	5	6	7	8	9	10	11	12	13
LTE Band 2	20.8	20.7	20.7	20.7	20.7	23.7	23.7	23.8	23.7	23.7
LTE Band 4	20.6	20.7	20.6	20.7	20.7	23.8	23.7	23.6	23.8	23.8
LTE Band 25	20.7	20.7	20.7	20.7	20.7	23.8	23.6	23.8	23.6	23.6
LTE Band 66	19.7	19.8	19.7	19.8	19.7	23.8	23.7	23.7	23.7	23.8



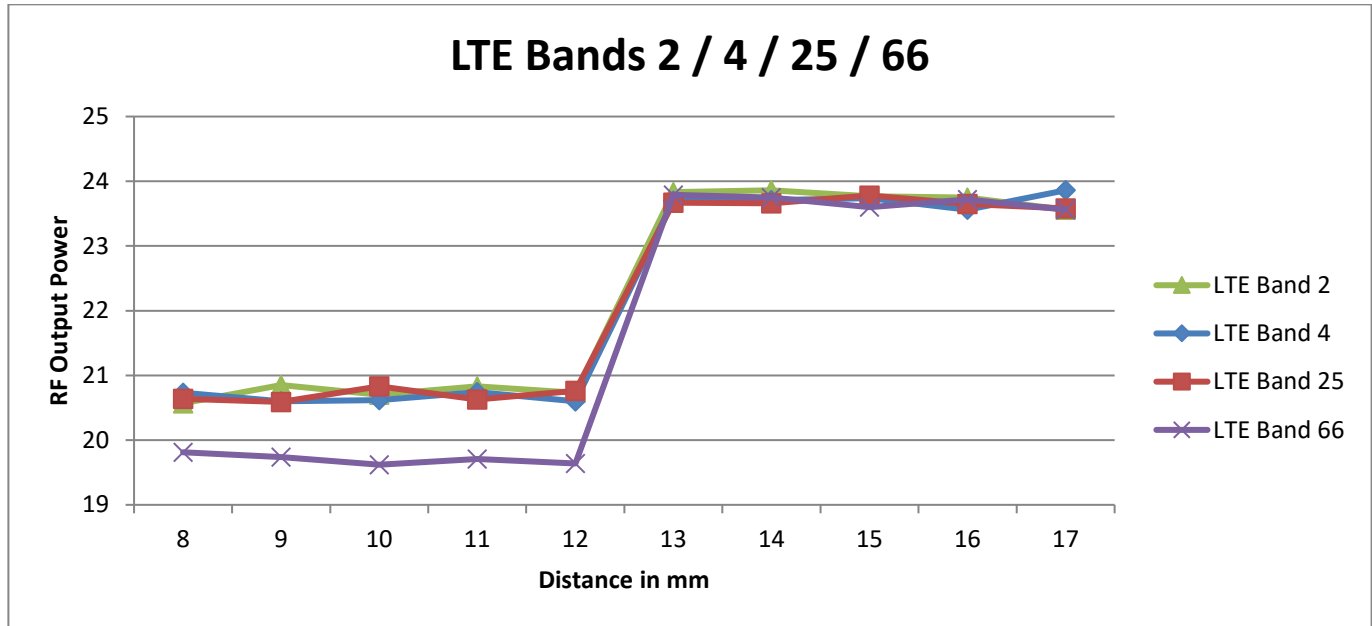
Front, DUT Moving Away (Release) from the Phantom

Distance to DUT vs. Output Power in dBm										
Distance (mm)	2	3	4	5	6	7	8	9	10	11
LTE Band 2	20.6	20.8	20.7	20.7	20.7	23.7	23.7	23.8	23.6	23.9
LTE Band 4	20.6	20.9	20.6	20.7	20.6	23.6	23.6	23.7	23.7	23.7
LTE Band 25	20.9	20.7	20.6	20.6	20.9	23.6	23.8	23.8	23.8	23.7
LTE Band 66	19.7	19.6	19.8	19.6	19.6	23.6	23.7	23.6	23.8	23.8



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

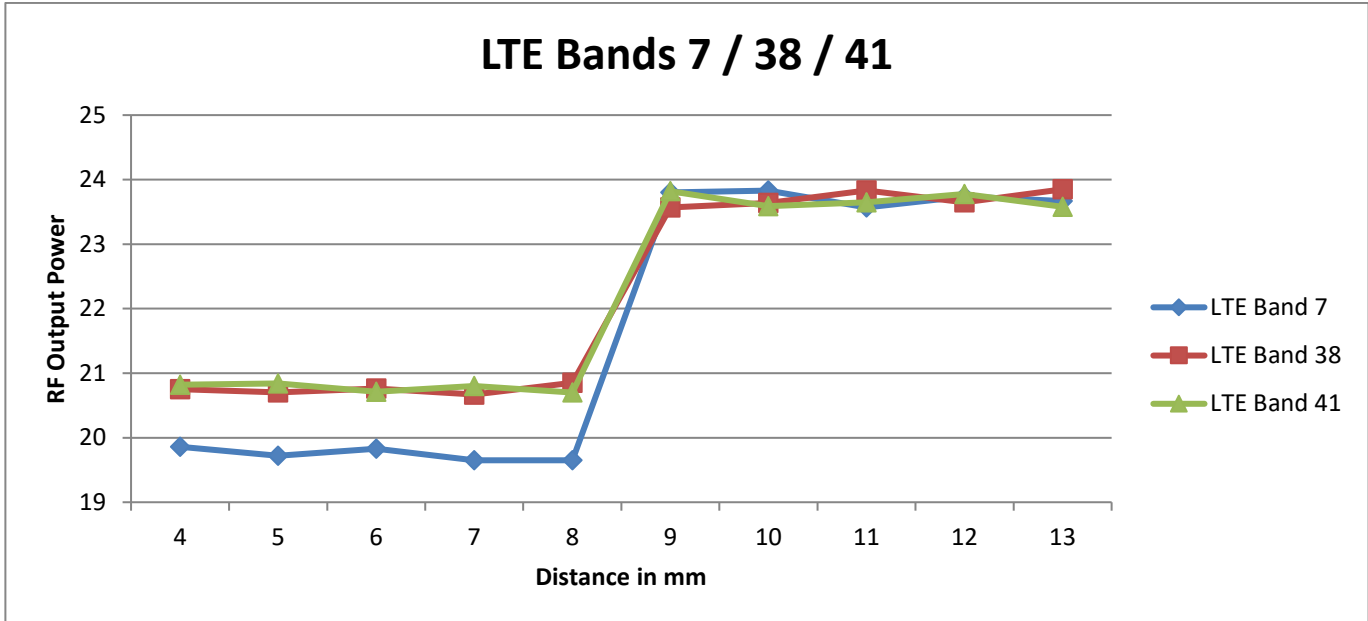
Distance to DUT vs. Output Power in dBm										
Distance (mm)	8	9	10	11	12	13	14	15	16	17
LTE Band 2	20.6	20.9	20.7	20.8	20.7	23.8	23.9	23.8	23.8	23.6
LTE Band 4	20.7	20.6	20.6	20.7	20.6	23.7	23.7	23.7	23.6	23.9
LTE Band 25	20.6	20.6	20.8	20.6	20.8	23.7	23.7	23.8	23.7	23.6
LTE Band 66	19.8	19.7	19.6	19.7	19.6	23.8	23.8	23.6	23.7	23.6



LTE Band 7/38/41 (Main Ant.1-2)

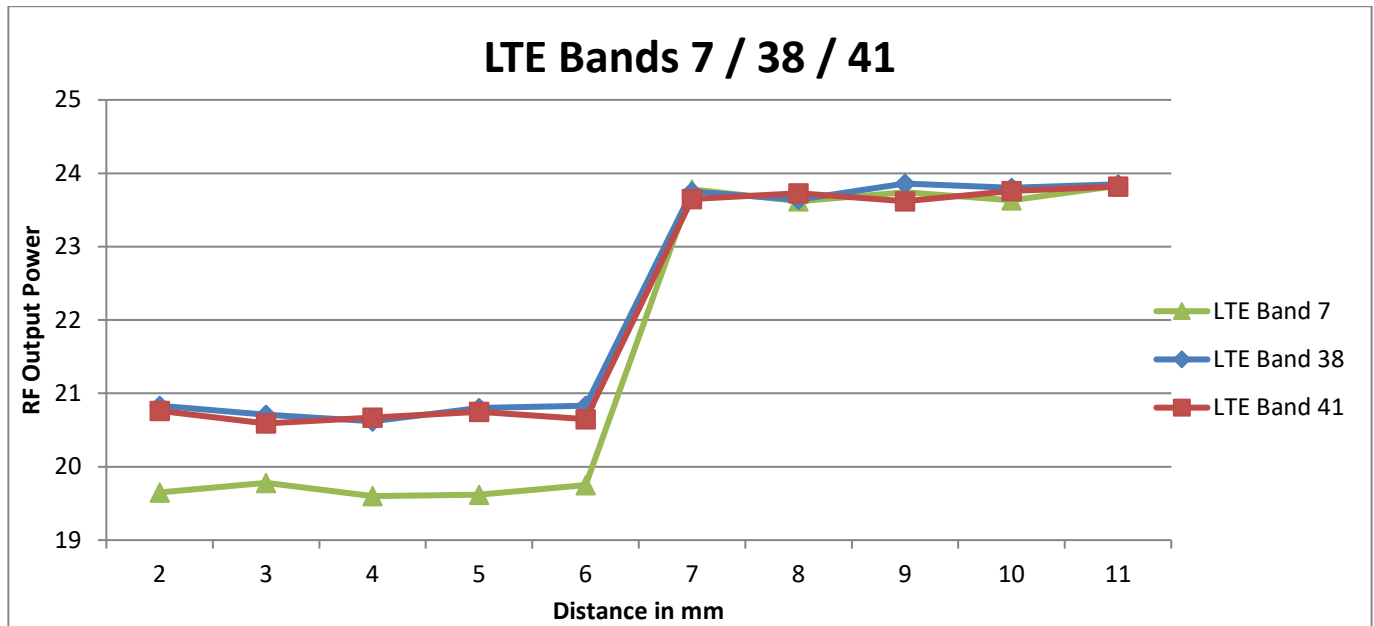
Rear, DUT Moving Away (Release) from the Phantom

Distance to DUT vs. Output Power in dBm										
Distance (mm)	4	5	6	7	8	9	10	11	12	13
LTE Band 7	19.9	19.7	19.8	19.7	19.7	23.8	23.8	23.6	23.7	23.7
LTE Band 38	20.8	20.7	20.8	20.7	20.9	23.6	23.6	23.8	23.7	23.9
LTE Band 41	20.8	20.8	20.7	20.8	20.7	23.8	23.6	23.7	23.8	23.6



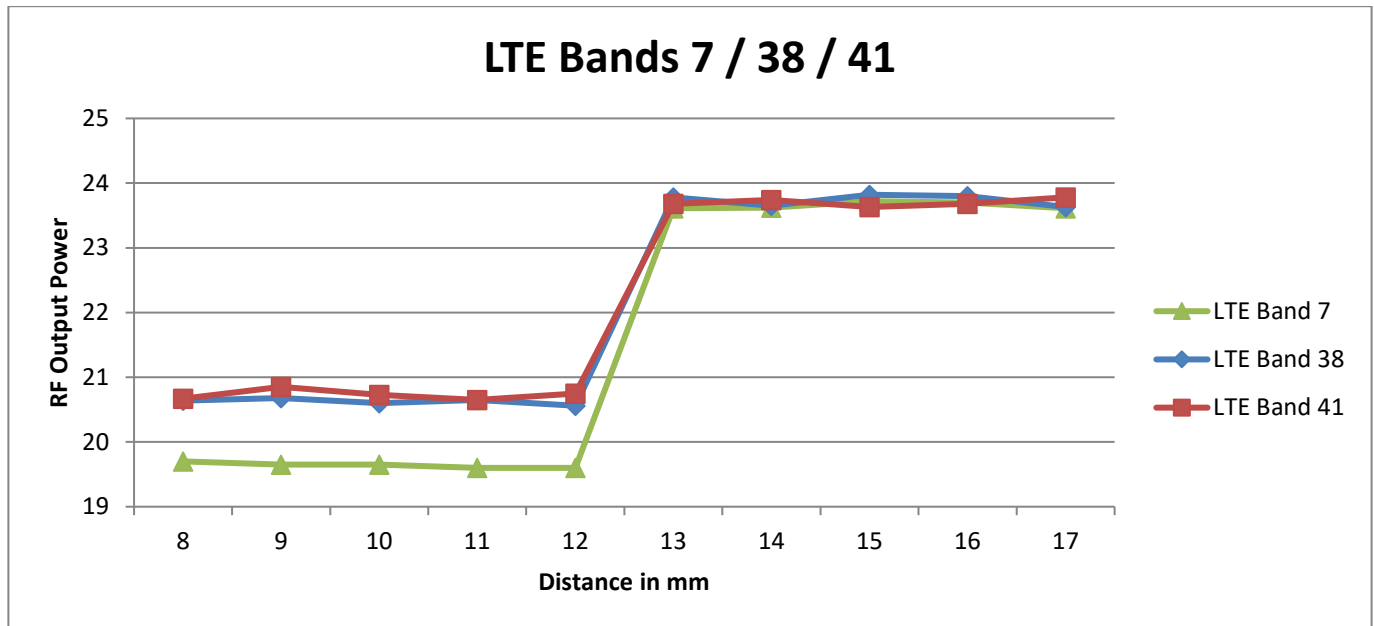
Front, DUT Moving Away (Release) from the Phantom

Distance to DUT vs. Output Power in dBm										
Distance (mm)	2	3	4	5	6	7	8	9	10	11
LTE Band 7	19.7	19.8	19.6	19.6	19.8	23.8	23.6	23.7	23.6	23.8
LTE Band 38	20.8	20.7	20.6	20.8	20.8	23.8	23.6	23.9	23.8	23.9
LTE Band 41	20.8	20.6	20.7	20.8	20.7	23.7	23.7	23.6	23.8	23.8



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 7	19.7	19.7	19.7	19.6	19.6	23.6	23.6	23.7	23.7	23.6
LTE Band 38	20.6	20.7	20.6	20.7	20.6	23.8	23.7	23.8	23.8	23.6
LTE Band 41	20.7	20.9	20.7	20.7	20.8	23.7	23.7	23.6	23.7	23.8



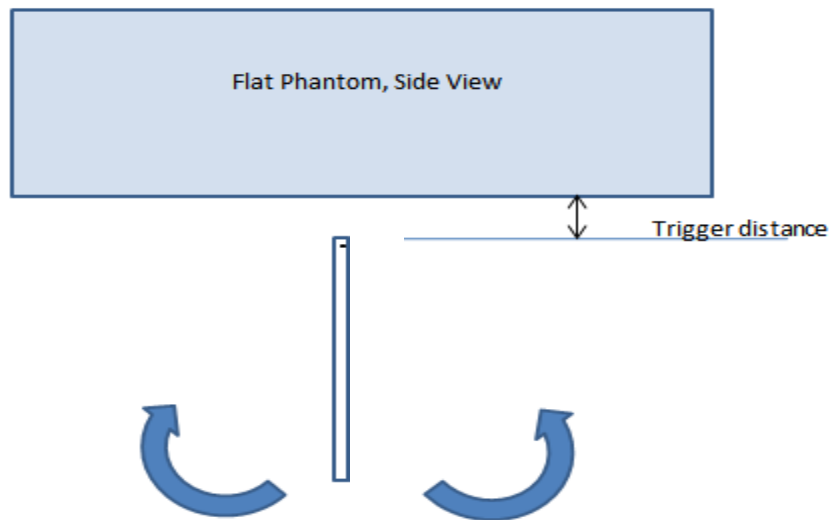
6.8.2 Proximity Sensor Coverage (KDB 616217 §6.3)

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

6.8.3 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	On
1900	12 mm	12 mm	On	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	On

6.8.4 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	Antennaa	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	
	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	
	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	
	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		
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
	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
Phablet-10g	0 mm	Edge 4 (Left)	< 25 mm	Yes			
		Edge 4 (Left)	< 25 mm	Yes			

Notes:

- SAR is not required because the distance from the antenna to the edge is > 25 mm as per KDB 941225 D06 Hot Spot SAR.
- 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.
- 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 $\pm 2^\circ\text{C}$ of the temperature when the tissue parameters are characterized.

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

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

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 ±(%)	
11-8-2018	Body 2600	e'	51.6300	Relative Permittivity (ϵ_r):	51.63	52.51	-1.68	5
		e"	15.0600	Conductivity (σ):	2.18	2.16	0.76	5
	Body 2500	e'	51.9100	Relative Permittivity (ϵ_r):	51.91	52.64	-1.38	5
		e"	14.8000	Conductivity (σ):	2.06	2.02	1.83	5
	Body 2700	e'	51.3200	Relative Permittivity (ϵ_r):	51.32	52.38	-2.03	5
		e"	15.3200	Conductivity (σ):	2.30	2.30	-0.06	5
11-12-2018	Body 2600	e'	53.3600	Relative Permittivity (ϵ_r):	53.36	52.51	1.62	5
		e"	15.2500	Conductivity (σ):	2.20	2.16	2.03	5
	Body 2500	e'	53.6100	Relative Permittivity (ϵ_r):	53.61	52.64	1.85	5
		e"	14.9800	Conductivity (σ):	2.08	2.02	3.07	5
	Body 2700	e'	53.0700	Relative Permittivity (ϵ_r):	53.07	52.38	1.31	5
		e"	15.5300	Conductivity (σ):	2.33	2.30	1.31	5
11-15-2018	Body 2600	e'	51.3900	Relative Permittivity (ϵ_r):	51.39	52.51	-2.13	5
		e"	15.1700	Conductivity (σ):	2.19	2.16	1.49	5
	Body 2500	e'	51.7000	Relative Permittivity (ϵ_r):	51.70	52.64	-1.78	5
		e"	14.9200	Conductivity (σ):	2.07	2.02	2.66	5
	Body 2700	e'	51.0600	Relative Permittivity (ϵ_r):	51.06	52.38	-2.53	5
		e"	15.3600	Conductivity (σ):	2.31	2.30	0.20	5
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 2450	e'	52.8700	Relative Permittivity (ϵ_r):	52.87	52.70	0.32	5
		e"	14.6500	Conductivity (σ):	2.00	1.95	2.35	5
	Body 2400	e'	52.9900	Relative Permittivity (ϵ_r):	52.99	52.77	0.41	5
		e"	14.5300	Conductivity (σ):	1.94	1.90	2.16	5
	Body 2480	e'	52.7900	Relative Permittivity (ϵ_r):	52.79	52.66	0.24	5
		e"	14.7100	Conductivity (σ):	2.03	1.99	1.82	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
11-24-2018	Head 2450	e'	40.0900	Relative Permittivity (ϵ_r):	40.09	39.20	2.27	5
		e"	13.4900	Conductivity (σ):	1.84	1.80	2.10	5
	Head 2400	e'	40.2300	Relative Permittivity (ϵ_r):	40.23	39.30	2.37	5
		e"	13.3600	Conductivity (σ):	1.78	1.75	1.78	5
	Head 2480	e'	40.0000	Relative Permittivity (ϵ_r):	40.00	39.16	2.14	5
		e"	13.5800	Conductivity (σ):	1.87	1.83	2.19	5
11-24-2018	Body 2450	e'	52.0400	Relative Permittivity (ϵ_r):	52.04	52.70	-1.25	5
		e"	14.7800	Conductivity (σ):	2.01	1.95	3.25	5
	Body 2400	e'	52.2100	Relative Permittivity (ϵ_r):	52.21	52.77	-1.07	5
		e"	14.6800	Conductivity (σ):	1.96	1.90	3.21	5
	Body 2480	e'	51.9800	Relative Permittivity (ϵ_r):	51.98	52.66	-1.30	5
		e"	14.8700	Conductivity (σ):	2.05	1.99	2.93	5

SAR 1 Room (Continued)

Date	Freq. (MHz)	Liquid Parameters		Measured	Target	Delta (%)	Limit ±(%)		
11-26-2018	Head 5250	e'	36.8100	Relative Permittivity (ϵ_r):	36.81	35.93	2.44	5	
		e"	15.6800	Conductivity (σ):	4.58	4.70	-2.66	5	
	Head 5260	e'	36.7900	Relative Permittivity (ϵ_r):	36.79	35.92	2.42	5	
		e"	15.6900	Conductivity (σ):	4.59	4.71	-2.62	5	
	Head 5600	e'	36.3000	Relative Permittivity (ϵ_r):	36.30	35.53	2.16	5	
		e"	15.8100	Conductivity (σ):	4.92	5.06	-2.71	5	
	Head 5750	e'	36.1000	Relative Permittivity (ϵ_r):	36.10	35.36	2.08	5	
		e"	15.9000	Conductivity (σ):	5.08	5.21	-2.50	5	
	Head 5825	e'	36.0000	Relative Permittivity (ϵ_r):	36.00	35.30	1.98	5	
		e"	15.9300	Conductivity (σ):	5.16	5.27	-2.10	5	
	11-27-2018	Body 2600	e'	54.7800	Relative Permittivity (ϵ_r):	54.78	52.51	4.32	5
			e"	14.5600	Conductivity (σ):	2.10	2.16	-2.59	5
Body 2500		e'	55.0600	Relative Permittivity (ϵ_r):	55.06	52.64	4.60	5	
		e"	14.4100	Conductivity (σ):	2.00	2.02	-0.85	5	
Body 2700		e'	54.5800	Relative Permittivity (ϵ_r):	54.58	52.38	4.19	5	
		e"	14.7000	Conductivity (σ):	2.21	2.30	-4.10	5	
11-29-2018	Head 2450	e'	39.2100	Relative Permittivity (ϵ_r):	39.21	39.20	0.03	5	
		e"	12.8800	Conductivity (σ):	1.75	1.80	-2.52	5	
	Head 2400	e'	39.3700	Relative Permittivity (ϵ_r):	39.37	39.30	0.19	5	
		e"	12.7700	Conductivity (σ):	1.70	1.75	-2.71	5	
	Head 2480	e'	39.1200	Relative Permittivity (ϵ_r):	39.12	39.16	-0.11	5	
		e"	12.9700	Conductivity (σ):	1.79	1.83	-2.40	5	
11-29-2018	Head 2600	e'	38.7700	Relative Permittivity (ϵ_r):	38.77	39.01	-0.62	5	
		e"	13.2700	Conductivity (σ):	1.92	1.96	-2.23	5	
	Head 2500	e'	39.0600	Relative Permittivity (ϵ_r):	39.06	39.14	-0.20	5	
		e"	13.0200	Conductivity (σ):	1.81	1.85	-2.38	5	
	Head 2700	e'	38.4800	Relative Permittivity (ϵ_r):	38.48	38.88	-1.04	5	
		e"	13.4900	Conductivity (σ):	2.03	2.07	-2.18	5	
11-29-2018	Body 2450	e'	54.5900	Relative Permittivity (ϵ_r):	54.59	52.70	3.59	5	
		e"	14.6300	Conductivity (σ):	1.99	1.95	2.21	5	
	Body 2400	e'	54.6800	Relative Permittivity (ϵ_r):	54.68	52.77	3.61	5	
		e"	14.4800	Conductivity (σ):	1.93	1.90	1.81	5	
	Body 2480	e'	54.5400	Relative Permittivity (ϵ_r):	54.54	52.66	3.57	5	
		e"	14.7400	Conductivity (σ):	2.03	1.99	2.03	5	
11-30-2018	Head 5250	e'	36.0400	Relative Permittivity (ϵ_r):	36.04	35.93	0.30	5	
		e"	16.4900	Conductivity (σ):	4.81	4.70	2.37	5	
	Head 5260	e'	36.0200	Relative Permittivity (ϵ_r):	36.02	35.92	0.27	5	
		e"	16.5000	Conductivity (σ):	4.83	4.71	2.41	5	
	Head 5600	e'	35.4700	Relative Permittivity (ϵ_r):	35.47	35.53	-0.18	5	
		e"	16.6500	Conductivity (σ):	5.18	5.06	2.45	5	
	Head 5750	e'	35.2400	Relative Permittivity (ϵ_r):	35.24	35.36	-0.35	5	
		e"	16.7300	Conductivity (σ):	5.35	5.21	2.59	5	
	Head 5825	e'	35.1200	Relative Permittivity (ϵ_r):	35.12	35.30	-0.51	5	
		e"	16.7600	Conductivity (σ):	5.43	5.27	3.01	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 ±(%)	
11-7-2018	Body 835	e'	53.5800	Relative Permittivity (ϵ_r):	53.58	55.20	-2.93	5
		e"	21.1500	Conductivity (σ):	0.98	0.97	1.23	5
	Body 820	e'	53.7300	Relative Permittivity (ϵ_r):	53.73	55.28	-2.80	5
		e"	21.2200	Conductivity (σ):	0.97	0.97	-0.10	5
	Body 850	e'	53.4500	Relative Permittivity (ϵ_r):	53.45	55.16	-3.10	5
		e"	21.1200	Conductivity (σ):	1.00	0.99	1.12	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 ±(%)	
11-8-2018	Head 835	e'	40.7000	Relative Permittivity (ϵ_r):	40.70	41.50	-1.93	5
		e"	19.0600	Conductivity (σ):	0.88	0.90	-1.67	5
	Head 820	e'	40.8600	Relative Permittivity (ϵ_r):	40.86	41.60	-1.78	5
		e"	19.1000	Conductivity (σ):	0.87	0.90	-3.07	5
	Head 850	e'	40.5400	Relative Permittivity (ϵ_r):	40.54	41.50	-2.31	5
		e"	19.0300	Conductivity (σ):	0.90	0.92	-1.70	5
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

SAR 3 Room (Continued)

Date	Freq. (MHz)	Liquid Parameters		Measured	Target	Delta (%)	Limit ±(%)	
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
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
11-28-2018	Body 835	e'	53.2800	Relative Permittivity (ϵ_r):	53.28	55.20	-3.48	5
		e"	21.1300	Conductivity (σ):	0.98	0.97	1.14	5
	Body 820	e'	53.4400	Relative Permittivity (ϵ_r):	53.44	55.28	-3.32	5
		e"	21.1900	Conductivity (σ):	0.97	0.97	-0.24	5
	Body 850	e'	53.1400	Relative Permittivity (ϵ_r):	53.14	55.16	-3.66	5
		e"	21.0700	Conductivity (σ):	1.00	0.99	0.88	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
12-24-2018	Body 2600	e'	52.9100	Relative Permittivity (ϵ_r):	52.91	52.51	0.76	5
		e"	15.1800	Conductivity (σ):	2.19	2.16	1.56	5
	Body 2500	e'	53.1700	Relative Permittivity (ϵ_r):	53.17	52.64	1.01	5
		e"	14.9900	Conductivity (σ):	2.08	2.02	3.14	5
	Body 2700	e'	52.6600	Relative Permittivity (ϵ_r):	52.66	52.38	0.53	5
		e"	15.4000	Conductivity (σ):	2.31	2.30	0.46	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 ±(%)	
11-7-2018	Body 1900	e'	54.1800	Relative Permittivity (ϵ_r):	54.18	53.30	1.65	5
		e"	14.9200	Conductivity (σ):	1.58	1.52	3.70	5
	Body 1850	e'	54.2200	Relative Permittivity (ϵ_r):	54.22	53.30	1.73	5
		e"	14.8700	Conductivity (σ):	1.53	1.52	0.63	5
	Body 1910	e'	54.1700	Relative Permittivity (ϵ_r):	54.17	53.30	1.63	5
		e"	14.9400	Conductivity (σ):	1.59	1.52	4.39	5
11-10-2018	Body 1900	e'	51.7600	Relative Permittivity (ϵ_r):	51.76	53.30	-2.89	5
		e"	14.8100	Conductivity (σ):	1.56	1.52	2.94	5
	Body 1850	e'	52.0200	Relative Permittivity (ϵ_r):	52.02	53.30	-2.40	5
		e"	14.7700	Conductivity (σ):	1.52	1.52	-0.04	5
	Body 1910	e'	51.6900	Relative Permittivity (ϵ_r):	51.69	53.30	-3.02	5
		e"	14.8200	Conductivity (σ):	1.57	1.52	3.55	5
11-12-2018	Body 1750	e'	54.7700	Relative Permittivity (ϵ_r):	54.77	53.44	2.49	5
		e"	15.1000	Conductivity (σ):	1.47	1.49	-1.13	5
	Body 1710	e'	54.9100	Relative Permittivity (ϵ_r):	54.91	53.54	2.55	5
		e"	15.1200	Conductivity (σ):	1.44	1.46	-1.64	5
	Body 1755	e'	54.7600	Relative Permittivity (ϵ_r):	54.76	53.43	2.49	5
		e"	15.0800	Conductivity (σ):	1.47	1.49	-1.19	5
11-12-2018	Body 1900	e'	54.0900	Relative Permittivity (ϵ_r):	54.09	53.30	1.48	5
		e"	14.8700	Conductivity (σ):	1.57	1.52	3.35	5
	Body 1850	e'	54.3400	Relative Permittivity (ϵ_r):	54.34	53.30	1.95	5
		e"	14.9600	Conductivity (σ):	1.54	1.52	1.24	5
	Body 1910	e'	54.0400	Relative Permittivity (ϵ_r):	54.04	53.30	1.39	5
		e"	14.8500	Conductivity (σ):	1.58	1.52	3.76	5
11-15-2018	Head 1750	e'	39.9300	Relative Permittivity (ϵ_r):	39.93	40.08	-0.39	5
		e"	13.5000	Conductivity (σ):	1.31	1.37	-4.04	5
	Head 1710	e'	40.0500	Relative Permittivity (ϵ_r):	40.05	40.15	-0.24	5
		e"	13.4900	Conductivity (σ):	1.28	1.35	-4.74	5
	Head 1755	e'	39.9200	Relative Permittivity (ϵ_r):	39.92	40.08	-0.39	5
		e"	13.5100	Conductivity (σ):	1.32	1.37	-3.90	5
11-15-2018	Head 1900	e'	39.4300	Relative Permittivity (ϵ_r):	39.43	40.00	-1.43	5
		e"	13.7500	Conductivity (σ):	1.45	1.40	3.76	5
	Head 1850	e'	39.6300	Relative Permittivity (ϵ_r):	39.63	40.00	-0.92	5
		e"	13.6500	Conductivity (σ):	1.40	1.40	0.29	5
	Head 1910	e'	39.3800	Relative Permittivity (ϵ_r):	39.38	40.00	-1.55	5
		e"	13.7700	Conductivity (σ):	1.46	1.40	4.46	5
11-22-2018	Body 1750	e'	55.5300	Relative Permittivity (ϵ_r):	55.53	53.44	3.91	5
		e"	14.7200	Conductivity (σ):	1.43	1.49	-3.62	5
	Body 1710	e'	55.5500	Relative Permittivity (ϵ_r):	55.55	53.54	3.75	5
		e"	14.6900	Conductivity (σ):	1.40	1.46	-4.43	5
	Body 1755	e'	55.5100	Relative Permittivity (ϵ_r):	55.51	53.43	3.90	5
		e"	14.7200	Conductivity (σ):	1.44	1.49	-3.55	5
11-24-2018	Body 5150	e'	47.8700	Relative Permittivity (ϵ_r):	47.87	49.09	-2.48	5
		e"	18.0000	Conductivity (σ):	5.15	5.24	-1.57	5
	Body 5260	e'	47.6800	Relative Permittivity (ϵ_r):	47.68	48.94	-2.57	5
		e"	18.1000	Conductivity (σ):	5.29	5.36	-1.32	5
	Body 5600	e'	47.1900	Relative Permittivity (ϵ_r):	47.19	48.48	-2.66	5
		e"	18.4500	Conductivity (σ):	5.74	5.76	-0.28	5
	Body 5750	e'	46.9300	Relative Permittivity (ϵ_r):	46.93	48.27	-2.79	5
		e"	18.6000	Conductivity (σ):	5.95	5.94	0.18	5
	Body 5825	e'	46.8500	Relative Permittivity (ϵ_r):	46.85	48.20	-2.80	5
		e"	18.7200	Conductivity (σ):	6.06	6.00	1.05	5

SAR 4 Room (Continued)

Date	Freq. (MHz)	Liquid Parameters		Measured	Target	Delta (%)	Limit ±(%)		
11-27-2018	Body 5250	e'	46.9900	Relative Permittivity (ε _r):	46.99	48.95	-4.01	5	
		e"	18.2300	Conductivity (σ):	5.32	5.35	-0.59	5	
	Body 5260	e'	46.9600	Relative Permittivity (ε _r):	46.96	48.94	-4.04	5	
		e"	18.2400	Conductivity (σ):	5.33	5.36	-0.56	5	
	Body 5600	e'	46.4400	Relative Permittivity (ε _r):	46.44	48.48	-4.20	5	
		e"	18.5500	Conductivity (σ):	5.78	5.76	0.26	5	
	Body 5750	e'	46.2000	Relative Permittivity (ε _r):	46.20	48.27	-4.30	5	
		e"	18.7200	Conductivity (σ):	5.99	5.94	0.83	5	
	Body 5825	e'	46.1800	Relative Permittivity (ε _r):	46.18	48.20	-4.19	5	
		e"	18.7800	Conductivity (σ):	6.08	6.00	1.38	5	
	11-30-2018	Body 5250	e'	47.2400	Relative Permittivity (ε _r):	47.24	48.95	-3.50	5
			e"	18.3500	Conductivity (σ):	5.36	5.35	0.07	5
Body 5260		e'	47.2200	Relative Permittivity (ε _r):	47.22	48.94	-3.51	5	
		e"	18.3600	Conductivity (σ):	5.37	5.36	0.10	5	
Body 5600		e'	46.8200	Relative Permittivity (ε _r):	46.82	48.48	-3.42	5	
		e"	18.5700	Conductivity (σ):	5.78	5.76	0.37	5	
Body 5750		e'	46.4000	Relative Permittivity (ε _r):	46.40	48.27	-3.88	5	
		e"	18.8300	Conductivity (σ):	6.02	5.94	1.42	5	
Body 5825		e'	46.2800	Relative Permittivity (ε _r):	46.28	48.20	-3.98	5	
		e"	18.9100	Conductivity (σ):	6.12	6.00	2.08	5	
11-30-2018		Head 1900	e'	38.7500	Relative Permittivity (ε _r):	38.75	40.00	-3.13	5
			e"	13.8100	Conductivity (σ):	1.46	1.40	4.21	5
	Head 1850	e'	38.9400	Relative Permittivity (ε _r):	38.94	40.00	-2.65	5	
		e"	13.6700	Conductivity (σ):	1.41	1.40	0.44	5	
	Head 1910	e'	38.7100	Relative Permittivity (ε _r):	38.71	40.00	-3.23	5	
		e"	13.8300	Conductivity (σ):	1.47	1.40	4.91	5	
12-24-2018	Head 2600	e'	38.1000	Relative Permittivity (ε _r):	38.10	39.01	-2.33	5	
		e"	13.8100	Conductivity (σ):	2.00	1.96	1.75	5	
	Head 2500	e'	38.5300	Relative Permittivity (ε _r):	38.53	39.14	-1.55	5	
		e"	13.5500	Conductivity (σ):	1.88	1.85	1.59	5	
	Head 2700	e'	37.6900	Relative Permittivity (ε _r):	37.69	38.88	-3.07	5	
		e"	14.0200	Conductivity (σ):	2.10	2.07	1.67	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 \pm 0.2 mm (bottom plate) filled with Body or Head simulating liquid of the following parameters.
- The depth of tissue-equivalent liquid in a phantom must be \geq 15.0 cm for SAR measurements \leq 3 GHz and \geq 10.0 cm for measurements $>$ 3 GHz.
- The DASY system with an E-Field Probe was used for the measurements.
- The dipole was mounted on the small tripod so that the dipole feed point was positioned below the center marking of the flat phantom section and the dipole was oriented parallel to the body axis (the long side of the phantom). The standard measuring distance was 10 mm (above 1 GHz) and 15 mm (below 1 GHz) from dipole center to the simulating liquid surface.
- The coarse grid with a grid spacing of 15 mm was aligned with the dipole.
For 5 GHz band - The coarse grid with a grid spacing of 10 mm was aligned with the dipole.
- Special 7x7x7 (below 3 GHz) and/or 8x8x7 (above 3 GHz) fine cube was chosen for the cube.
- Distance between probe sensors and phantom surface was set to 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 $\pm 10\%$	Plot No.	
	Type	Serial #		Zoom Scan to 100 mW	Normalize to 1 W				
11-8-2018	D2600V2	1097	Body	1g	5.52	55.20	54.40	1.47	
				10g	2.38	23.80	24.20	-1.65	
11-12-2018	D2600V2	1097	Body	1g	5.29	52.90	54.40	-2.76	
				10g	2.29	22.90	24.20	-5.37	
11-15-2018	D2600V2	1097	Body	1g	5.07	50.70	54.40	-6.80	1, 2
				10g	2.22	22.20	24.20	-8.26	
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	D2450V2	960	Body	1g	4.71	47.10	49.80	-5.42	3, 4
				10g	2.15	21.50	23.50	-8.51	
11-21-2018	D2600V2	1097	Body	1g	5.19	51.90	54.40	-4.60	
				10g	2.28	22.80	24.20	-5.79	
11-24-2018	D2450V2	960	Head	1g	5.16	51.60	53.60	-3.73	
				10g	2.34	23.40	25.10	-6.77	
11-24-2018	D2450V2	960	Body	1g	4.72	47.20	49.80	-5.22	
				10g	2.21	22.10	23.50	-5.96	
11-26-2018	D5GHzV2 (5250)	1209	Head	1g	7.76	77.60	80.80	-3.96	
				10g	2.19	21.90	23.10	-5.19	
11-26-2018	D5GHzV2 (5600)	1209	Head	1g	7.91	79.10	83.40	-5.16	
				10g	2.21	22.10	23.80	-7.14	
11-26-2018	D5GHzV2 (5750)	1209	Head	1g	7.76	77.60	80.70	-3.84	
				10g	2.19	21.90	22.90	-4.37	
11-27-2018	D2600V2	1097	Body	1g	5.57	55.70	54.40	2.39	
				10g	2.43	24.30	24.20	0.41	
11-29-2018	D2450V2	960	Head	1g	5.19	51.90	53.60	-3.17	
				10g	2.36	23.60	25.10	-5.98	
11-29-2018	D2600V2	1097	Head	1g	5.56	55.60	56.40	-1.42	
				10g	2.49	24.90	25.30	-1.58	
11-29-2018	D2450V2	960	Body	1g	4.77	47.70	49.80	-4.22	
				10g	2.15	21.50	23.50	-8.51	
11-30-2018	D5GHzV2 (5250)	1209	Head	1g	8.09	80.90	80.80	0.12	
				10g	2.30	23.00	23.10	-0.43	
11-30-2018	D5GHzV2 (5600)	1209	Head	1g	8.84	88.40	83.40	6.00	
				10g	2.46	24.60	23.80	3.36	
11-30-2018	D5GHzV2 (5750)	1209	Head	1g	7.83	78.30	80.70	-2.97	
				10g	2.22	22.20	22.90	-3.06	
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				
11-7-2018	D835V2	4d194	Body	1g	1.00	9.97	9.61	3.75	7, 8
				10g	0.66	6.55	6.32	3.64	
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				
11-8-2018	D835V2	4d194	Head	1g	0.95	9.45	9.36	0.96	
				10g	0.62	6.20	6.02	2.99	
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	13, 14
				10g	0.64	6.44	6.02	6.98	
11-28-2018	D835V2	4d194	Body	1g	0.94	9.41	9.61	-2.08	
				10g	0.62	6.19	6.32	-2.06	
12-4-2018	D1900V2	5d199	Body	1g	4.28	42.80	39.60	8.08	15, 16
				10g	2.20	22.00	20.80	5.77	
12-24-2018	D2600V2	1097	Body	1g	5.90	59.00	54.40	8.46	17, 18
				10g	2.57	25.70	24.20	6.20	
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				
11-7-2018	D1900V2	5d199	Body	1g	4.00	40.00	39.60	1.01	
				10g	2.10	21.00	20.80	0.96	
11-10-2018	D1900V2	5d199	Body	1g	3.92	39.20	39.60	-1.01	
				10g	2.03	20.30	20.80	-2.40	
11-12-2018	D1750V2	1125	Body	1g	3.61	36.10	36.80	-1.90	
				10g	1.88	18.80	19.50	-3.59	
11-12-2018	D1900V2	5d199	Body	1g	3.90	39.00	39.60	-1.52	
				10g	1.97	19.70	20.80	-5.29	
11-15-2018	D1750V2	1125	Head	1g	3.69	36.90	36.50	1.10	
				10g	1.94	19.40	19.30	0.52	
11-15-2018	D1900V2	5d199	Head	1g	4.27	42.70	40.40	5.69	
				10g	2.17	21.70	21.10	2.84	
11-22-2018	D1750V2	1125	Body	1g	3.47	34.70	36.80	-5.71	15, 16
				10g	1.85	18.50	19.50	-5.13	
11-24-2018	D5GHzV2 (5250)	1209	Body	1g	8.06	80.60	75.70	6.47	
				10g	2.26	22.60	21.00	7.62	
11-24-2018	D5GHzV2 (5600)	1209	Body	1g	7.79	77.90	79.00	-1.39	
				10g	2.16	21.60	21.90	-1.37	
11-24-2018	D5GHzV2 (5750)	1209	Body	1g	7.97	79.70	75.60	5.42	
				10g	2.22	22.20	20.80	6.73	
11-27-2018	D5GHzV2 (5250)	1209	Body	1g	8.15	81.50	75.70	7.66	17, 18
				10g	2.28	22.80	21.00	8.57	
11-27-2018	D5GHzV2 (5600)	1209	Body	1g	8.40	84.00	79.00	6.33	
				10g	2.32	23.20	21.90	5.94	
11-27-2018	D5GHzV2 (5750)	1209	Body	1g	8.11	81.10	75.60	7.28	
				10g	2.25	22.50	20.80	8.17	
11-30-2018	D5GHzV2 (5250)	1209	Body	1g	7.89	78.90	75.70	4.23	
				10g	2.22	22.20	21.00	5.71	
11-30-2018	D5GHzV2 (5600)	1209	Body	1g	8.02	80.20	79.00	1.52	
				10g	2.22	22.20	21.90	1.37	
11-30-2018	D5GHzV2 (5750)	1209	Body	1g	8.09	80.90	75.60	7.01	
				10g	2.25	22.50	20.80	8.17	
11-30-2018	D1900V2	5d199	Head	1g	4.28	42.80	40.40	5.94	
				10g	2.23	22.30	21.10	5.69	
12-24-2018	D2600V2	1097	Head	1g	5.61	56.10	56.40	-0.53	
				10g	2.38	23.80	25.30	-5.93	

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	33.5	24.5	25.0
			190	836.6	33.5	24.5	
			251	848.8	33.7	24.7	
GPRS (GMSK)	CS1	1	128	824.4	33.6	24.5	25.0
			190	836.6	33.6	24.6	
			251	848.8	33.7	24.7	
		2	128	824.4	30.0	23.9	25.0
			190	836.6	30.0	24.0	
			251	848.8	30.2	24.1	
		3	128	824.4	28.2	23.9	25.5
			190	836.6	28.2	23.9	
			251	848.8	28.4	24.1	
		4	128	824.4	27.1	24.0	25.6
			190	836.6	27.2	24.2	
			251	848.8	27.3	24.2	
EGPRS (8PSK)	MCS5	1	128	824.4	26.6	17.6	18.5
			190	836.6	26.9	17.8	
			251	848.8	26.9	17.9	
		2	128	824.4	24.5	18.5	19.5
			190	836.6	24.8	18.8	
			251	848.8	24.7	18.6	
		3	128	824.4	23.3	19.1	20.0
			190	836.6	23.6	19.4	
			251	848.8	23.8	19.6	
		4	128	824.4	22.1	19.1	20.1
			190	836.6	22.1	19.1	
			251	848.8	22.6	19.6	

Notes:

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

- GMSK (GPRS) mode with 4 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 $\leq 1/4$ dB higher than GMSK GPRS or the adjusted SAR of the highest reported SAR of GMSK GPRS is ≤ 1.2 W/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	29.5	20.5	22.0
			661	1880.0	29.5	20.5	
			810	1909.8	29.4	20.3	
GPRS (GMSK)	CS1	1	512	1850.2	29.5	20.5	22.0
			661	1880.0	29.6	20.6	
			810	1909.8	29.4	20.4	
		2	512	1850.2	25.9	19.9	21.5
			661	1880.0	26.7	20.7	
			810	1909.8	26.1	20.1	
		3	512	1850.2	24.0	19.8	21.7
			661	1880.0	25.2	21.0	
			810	1909.8	24.8	20.5	
		4	512	1850.2	22.6	19.6	21.5
			661	1880.0	23.6	20.6	
			810	1909.8	23.1	20.1	
EGPRS (8PSK)	MCS5	1	512	1850.2	25.0	16.0	17.5
			661	1880.0	25.8	16.8	
			810	1909.8	25.2	16.1	
		2	512	1850.2	23.1	17.1	18.5
			661	1880.0	23.8	17.8	
			810	1909.8	23.4	17.4	
		3	512	1850.2	21.8	17.5	19.0
			661	1880.0	22.6	18.4	
			810	1909.8	22.4	18.1	
		4	512	1850.2	20.3	17.3	19.1
			661	1880.0	21.3	18.3	
			810	1909.8	21.0	18.0	

Notes:

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

- GMSK (GPRS) mode with 1 time slot 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 $\leq 1/4$ dB higher than GMSK GPRS or the adjusted SAR of the highest reported SAR of GMSK GPRS is ≤ 1.2 W/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
	β_c/β_d	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	Subtest	HSDPA	HSDPA	HSDPA	HSDPA
		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			
	β_c	2/15	11/15	15/15	15/15
	β_d	15/15	15/15	8/15	4/15
	Bd (SF)	64			
	β_c/β_d	2/15	11/15	15/8	15/4
	β_{hs}	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			
$A_{hs}=\beta_{hs}/\beta_c$	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
	β_c	11/15	6/15	15/15	2/15	15/15
	β_d	15/15	15/15	9/15	15/15	0
	β_{ec}	209/225	12/15	30/15	2/15	5/15
	β_c/β_d	11/15	6/15	15/9	2/15	-
	β_{hs}	22/15	12/15	30/15	4/15	5/15
	β_{ed}	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				
A _{hs} = β_{hs}/β_c	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	

DC-HSDPA Setup Procedures used to establish the test signals

The following tests were completed according to procedures in section 7.3.13 of 3GPP TS34.108 v9.5.0. A summary of these settings are illustrated below:

Downlink Physical Channels are set as per 3GPP TS34.121-1 v9.0.0 E.5.0

Table E.5.0: Levels for HSDPA connection setup

Parameter During Connection setup	Unit	Value
P-CPICH_Ec/Ior	dB	-10
P-CCPCH and SCH_Ec/Ior	dB	-12
PICH_Ec/Ior	dB	-15
HS-PDSCH	dB	off
HS-SCCH_1	dB	off
DPCH_Ec/Ior	dB	-5
OCNS_Ec/Ior	dB	-3.1

Call is set up as per 3GPP TS34.108 v9.5.0 sub clause 7.3.13

The configurations of the fixed reference channels for HSDPA RF tests are described in 3GPP TS 34.121, annex C for FDD and 3GPP TS 34.122.

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

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

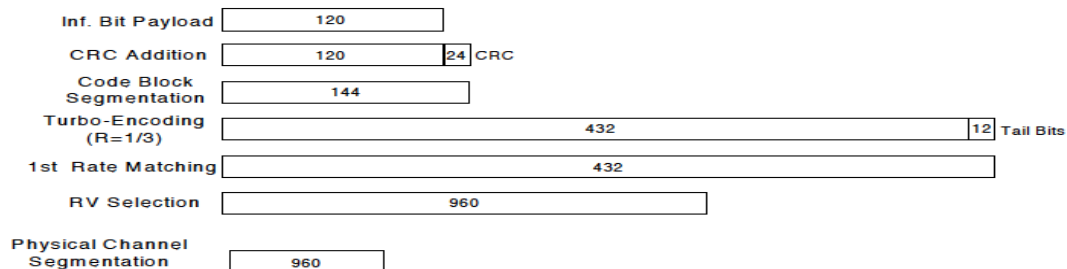


Figure C.8.19: Coding rate for Fixed reference Channel H-Set 12 (QPSK)

The following 4 Sub-tests for HSDPA were completed according to Release 8 procedures in section 5.2 of 3GPP TS34.121. A summary of subtest settings are illustrated below:

	Mode	HSDPA	HSDPA	HSDPA	HSDPA
	Subtest	1	2	3	4
WCDMA General Settings	Loopback Mode	Test Mode 1			
	Rel99 RMC	12.2kbps RMC			
	HSDPA FRC	H-Set 12			
	Power Control Algorithm	Algorithm2			
	β_c	2/15	11/15	15/15	15/15
	β_d	15/15	15/15	8/15	4/15
	β_d (SF)	64			
	β_c/β_d	2/15	11/15	15/8	15/4
	β_{hs}	4/15	24/15	30/15	30/15
MPR (dB)	0	0	0.5	0.5	
HSDPA Specific Settings	DACK	8			
	DNAK	8			
	DCQI	8			
	Ack-Nack Repetition factor	3			
	CQI Feedback	4ms			
	CQI Repetition Factor	2			
	A _{hs} = β_{hs}/β_c	30/15			

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	20.0	20.0
			9400	1880.0		23.7		20.7	
			9538	1907.6		23.5		20.4	
	HSDPA	Subtest 1	9262	1852.4	0	22.5	0	20.0	20.0
			9400	1880.0		23.2		20.6	
			9538	1907.6		23.0		20.4	
		Subtest 2	9262	1852.4	0	22.0	0	20.0	20.0
			9400	1880.0		22.6		20.6	
			9538	1907.6		22.4		20.4	
		Subtest 3	9262	1852.4	0.5	21.6	0	20.0	20.0
			9400	1880.0		22.1		20.6	
			9538	1907.6		21.9		20.4	
		Subtest 4	9262	1852.4	0.5	21.0	0	20.0	20.0
			9400	1880.0		21.7		20.6	
			9538	1907.6		21.5		20.4	
	HSUPA	Subtest 1	9262	1852.4	0	22.0	0	19.1	19.0
			9400	1880.0		22.6		19.6	
			9538	1907.6		22.4		19.4	
		Subtest 2	9262	1852.4	2	20.5	0	19.1	20.1
			9400	1880.0		21.2		19.6	
			9538	1907.6		21.0		19.4	
		Subtest 3	9262	1852.4	1	21.6	0	19.1	19.1
			9400	1880.0		22.1		19.6	
			9538	1907.6		21.9		19.4	
		Subtest 4	9262	1852.4	2	20.5	0	19.0	19.0
			9400	1880.0		21.2		19.6	
			9538	1907.6		21.0		19.4	
		Subtest 5	9262	1852.4	0	21.7	0	20.1	20.1
			9400	1880.0		22.2		20.7	
			9538	1907.6		22.1		20.5	
	DC-HSDPA	Subtest 1	9262	1852.4	0	22.5	0	20.0	20.0
			9400	1880.0		23.2		20.6	
			9538	1907.6		23.0		20.5	
		Subtest 2	9262	1852.4	0	22.0	0	20.0	20.0
			9400	1880.0		22.7		20.7	
			9538	1907.6		22.5		20.4	
		Subtest 3	9262	1852.4	0.5	21.6	0	20.0	20.1
			9400	1880.0		22.3		20.6	
			9538	1907.6		22.0		20.5	
		Subtest 4	9262	1852.4	0.5	21.1	0	20.0	20.0
			9400	1880.0		21.7		20.7	
			9538	1907.6		21.5		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	23.7	N/A	19.8	19.8		
			1413	1732.6		23.6		19.6	19.7		
			1513	1752.6		23.9		20.0	20.0		
	HSDPA	Subtest 1		1312	1712.4	0	23.7	0	19.8	19.8	
				1413	1732.6		23.6		19.6	19.7	
				1513	1752.6		23.9		20.0	20.0	
		Subtest 2			1312	1712.4	0	22.3	0	19.8	19.8
					1413	1732.6		22.8		19.6	19.7
					1513	1752.6		23.9		20.0	20.0
		Subtest 3			1312	1712.4	0.5	22.2	0	19.8	19.8
					1413	1732.6		22.1		19.6	19.6
					1513	1752.6		22.4		20.0	20.0
		Subtest 4			1312	1712.4	0.5	21.3	0	19.8	19.8
					1413	1732.6		22.1		19.6	19.7
					1513	1752.6		22.4		20.0	20.0
	HSUPA	Subtest 1				0	22.3	0	18.8	18.9	
							22.1		18.7	18.7	
							22.4		19.0	19.0	
		Subtest 2				2	21.3	0	19.9	19.9	
							21.1		19.7	19.7	
							21.5		20.0	20.0	
		Subtest 3				1	22.2	0	18.9	18.9	
							22.1		18.8	18.8	
							22.4		19.0	19.1	
		Subtest 4				2	21.3	0	19.9	19.9	
							21.1		19.7	19.7	
							21.5		20.0	20.0	
		Subtest 5				0	23.9	0	19.9	19.9	
							23.7		19.8	19.8	
							24.0		20.0	20.0	
	DC-HSDPA	Subtest 1				0	23.8	0	19.9	19.9	
							23.8		19.9	19.9	
							23.9		20.0	20.0	
		Subtest 2				0	23.9	0	20.0	20.0	
							23.9		19.9	19.9	
							24.0		20.0	20.0	
		Subtest 3				0.5	22.3	0	19.9	19.9	
							21.5		19.9	19.9	
							23.0		20.0	20.0	
		Subtest 4				0.5	21.5	0	19.9	19.9	
							22.3		19.9	19.9	
							22.6		20.0	20.0	

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	24.8	
			4183	836.6		24.6	
			4233	846.6		24.8	
	HSDPA	Subtest 1	4132	826.4	0	23.3	
			4183	836.6		23.1	
			4233	846.6		23.3	
		Subtest 2	4132	826.4	0	23.3	
			4183	836.6		23.1	
			4233	846.6		23.3	
		Subtest 3	4132	826.4	0.5	22.3	
			4183	836.6		22.1	
			4233	846.6		22.3	
		Subtest 4	4132	826.4	0.5	22.3	
			4183	836.6		22.1	
			4233	846.6		22.3	
		HSUPA	Subtest 1	4132	826.4	0	22.4
				4183	836.6		22.1
				4233	846.6		22.3
	Subtest 2		4132	826.4	2	21.3	
			4183	836.6		21.1	
			4233	846.6		21.3	
	Subtest 3		4132	826.4	1	21.3	
			4183	836.6		21.1	
			4233	846.6		21.3	
	Subtest 4		4132	826.4	2	21.3	
			4183	836.6		21.1	
			4233	846.6		21.3	
	Subtest 5		4132	826.4	0	23.4	
			4183	836.6		23.2	
			4233	846.6		23.4	
	DC-HSDPA	Subtest 1	4132	826.4	0	23.3	
			4183	836.6		23.2	
			4233	846.6		23.1	
		Subtest 2	4132	826.4	0	23.3	
			4183	836.6		23.2	
			4233	846.6		23.1	
		Subtest 3	4132	826.4	0.5	21.3	
			4183	836.6		21.2	
			4233	846.6		21.1	
		Subtest 4	4132	826.4	0.5	22.3	
			4183	836.6		22.2	
			4233	846.6		22.1	

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
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	
				10, 15, 20	≥ 50 (NOTE 1)
NS_05	6.6.3.3.1	1	15, 20	Table 6.2.4-18 (NOTE 2)	
			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	6.6.2.2.1 6.6.3.3.13	23	1.4, 3, 5, 10, 15, 20	Table 6.2.4-5	
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	
				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
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	
				Table 6.2.4-16	
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	
				Table 6.2.4-24	
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	23.1	23.4	23.3
			1	49	0	22.9	23.3	22.9
			1	99	0	22.9	23.3	23.0
			50	0	1	21.5	21.9	21.8
			50	24	1	21.4	21.8	21.7
			50	50	1	21.4	21.8	21.6
		16QAM	100	0	1	21.4	21.8	21.7
			1	0	1	22.0	22.4	22.2
			1	49	1	21.6	22.1	22.0
			1	99	1	21.8	22.1	22.0
			50	0	2	20.5	20.9	20.8
			50	24	2	20.4	20.8	20.7
		64QAM	50	50	2	20.4	20.8	20.6
			100	0	2	20.4	20.8	20.6
			1	0	2	21.0	21.3	21.1
			1	49	2	20.8	21.1	21.2
			1	99	2	20.8	21.1	21.2
			50	0	3	19.5	19.9	19.9
LTE Band 2	15	QPSK	50	24	3	19.4	19.8	19.9
			50	50	3	19.3	19.8	19.8
			100	0	3	19.4	19.8	19.9
			1	0	0	23.0	23.4	23.2
			1	37	0	23.0	23.1	23.3
			1	74	0	22.7	23.2	23.0
		16QAM	36	0	1	21.4	21.9	21.7
			36	20	1	21.4	21.8	21.6
			36	39	1	21.3	21.8	21.6
			75	0	1	21.4	21.9	21.7
			1	0	1	21.8	22.2	22.0
			1	37	1	21.9	22.2	22.0
		64QAM	1	74	1	21.6	22.0	21.7
			36	0	2	20.4	20.9	20.7
			36	20	2	20.3	20.8	20.7
			36	39	2	20.3	20.7	20.6
			75	0	2	20.4	20.8	20.6
			1	0	2	20.6	21.0	21.1
64QAM	1	37	2	20.5	21.1	21.2		
	1	74	2	20.4	20.8	20.9		
	36	0	3	19.4	19.8	19.7		
	36	20	3	19.3	19.8	19.6		
	36	39	3	19.3	19.7	19.6		
	75	0	3	19.4	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	22.8	23.4	23.2
			1	25	0	22.8	23.2	23.1
			1	49	0	22.7	23.3	23.0
			25	0	1	21.4	21.8	21.7
			25	12	1	21.3	21.8	21.7
			25	25	1	21.3	21.8	21.6
			50	0	1	21.3	21.8	21.6
		16QAM	1	0	1	21.8	22.4	22.1
			1	25	1	21.7	22.1	21.8
			1	49	1	21.7	22.2	21.9
			25	0	2	20.4	20.9	20.7
			25	12	2	20.3	20.9	20.7
			25	25	2	20.3	20.9	20.6
			50	0	2	20.3	20.8	20.7
		64QAM	1	0	2	20.6	21.0	20.8
			1	25	2	20.5	20.9	20.6
			1	49	2	20.5	21.0	20.6
			25	0	3	19.4	19.9	19.7
			25	12	3	19.3	19.8	19.7
			25	25	3	19.3	19.8	19.6
			50	0	3	19.2	19.8	19.7
Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Meas. Avg Pwr (dBm)		
LTE Band 2	5	QPSK	1	0	0	22.8	23.3	23.1
			1	12	0	22.9	23.2	23.0
			1	24	0	22.8	23.4	23.1
			12	0	1	21.2	21.8	21.6
			12	7	1	21.2	21.8	21.6
			12	13	1	21.2	21.8	21.6
			25	0	1	21.2	21.8	21.6
		16QAM	1	0	1	21.5	22.1	22.0
			1	12	1	21.4	22.2	22.1
			1	24	1	21.5	22.2	21.9
			12	0	2	20.3	20.8	20.6
			12	7	2	20.2	20.9	20.6
			12	13	2	20.3	20.9	20.6
			25	0	2	20.2	20.8	20.6
		64QAM	1	0	2	20.4	21.2	21.1
			1	12	2	20.6	21.2	21.0
			1	24	2	20.4	21.2	21.0
			12	0	3	19.3	19.9	19.7
			12	7	3	19.3	19.8	19.6
			12	13	3	19.2	19.8	19.6
			25	0	3	19.2	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	22.7	23.3	23.1		
			1	8	0	23.0	23.2	23.3		
			1	14	0	22.7	23.3	23.2		
			8	0	1	21.2	21.8	21.6		
			8	4	1	21.2	21.8	21.6		
			8	7	1	21.2	21.8	21.5		
		15	0	1	21.2	21.8	21.6			
		16QAM	1	0	1	21.7	22.4	21.9		
			1	8	1	21.8	22.4	22.0		
			1	14	1	21.7	22.0	21.9		
			8	0	2	20.2	20.9	20.6		
			8	4	2	20.3	20.9	20.6		
			8	7	2	20.2	20.9	20.6		
		64QAM	15	0	2	20.2	20.8	20.6		
			1	0	2	20.2	21.3	20.8		
			1	8	2	20.4	21.2	20.8		
			1	14	2	20.3	21.0	20.9		
			8	0	3	19.2	19.8	19.7		
			8	4	3	19.3	19.8	19.6		
		LTE Band 2	1.4	QPSK	8	7	3	19.3	19.8	19.7
					8	0	3	19.2	19.8	19.5
1	0				0	22.9	23.3	23.2		
1	3				0	22.7	23.3	23.2		
1	5				0	22.8	23.3	23.1		
3	0				0	22.7	23.2	23.0		
3	1			0	22.7	23.3	23.0			
3	3			0	22.7	23.3	23.1			
6	0			1	21.2	21.8	21.6			
16QAM	1			0	1	21.4	22.2	21.8		
	1			3	1	21.1	22.2	21.9		
	1			5	1	21.3	22.2	21.8		
	3			0	1	21.2	21.8	21.6		
	3			1	1	21.3	21.9	21.5		
	3			3	1	21.2	21.8	21.6		
64QAM	6			0	2	20.2	20.8	20.6		
	1			0	2	20.4	21.0	21.1		
	1			3	2	20.2	20.9	21.2		
	1			5	2	20.5	20.8	20.9		
	3			0	2	20.1	20.8	20.7		
	3			1	2	20.1	20.8	20.6		
64QAM	3	3	2	20.2	20.9	20.6				
	6	0	3	19.2	19.9	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		23.4			
			1	49	0		23.1			
			1	99	0		23.3			
			50	0	1		21.8			
			50	24	1		21.8			
			50	50	1		21.8			
		16QAM	100	0	1		21.8			
			1	0	1		22.1			
			1	49	1		21.9			
			1	99	1		22.1			
			50	0	2		20.9			
			50	24	2		20.8			
		64QAM	50	50	2		20.8			
			100	0	2		20.8			
			1	0	2		21.3			
			1	49	2		21.2			
			1	99	2		21.3			
			50	0	3		19.9			
		LTE Band 4	15	QPSK	50	24	3		19.9	
					50	50	3		19.9	
					100	0	3		19.9	
1	0				0	23.2	23.3	23.3		
1	37				0	23.2	23.3	23.3		
1	74				0	23.3	23.3	23.2		
36	0				1	21.9	21.8	22.1		
16QAM	36			20	1	21.9	21.8	22.0		
	36			39	1	21.9	21.8	22.0		
	75			0	1	21.9	21.9	22.1		
	1			0	1	22.3	22.3	22.3		
	1			37	1	22.4	22.2	22.3		
	1			74	1	22.2	22.2	22.2		
	36			0	2	20.9	20.8	21.0		
64QAM	36			20	2	20.9	20.8	21.0		
	36			39	2	20.9	20.8	21.0		
	75			0	2	20.9	20.9	21.0		
	1			0	2	21.1	21.1	21.3		
	1			37	2	21.1	21.2	21.5		
	1			74	2	21.1	21.1	21.2		
	36			0	3	19.9	19.9	20.1		
64QAM	36	20	3	19.8	19.9	20.0				
	36	39	3	19.8	19.8	20.0				
	75	0	3	19.9	19.9	20.1				
	75	0	3	19.9	19.9	20.1				

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	23.3	23.3	23.2
			1	25	0	23.2	23.3	23.2
			1	49	0	23.3	23.3	23.3
			25	0	1	21.9	21.9	22.1
			25	12	1	21.8	21.8	22.0
			25	25	1	21.9	21.8	22.0
			50	0	1	21.9	21.8	22.0
		16QAM	1	0	1	22.0	22.0	22.4
			1	25	1	21.8	21.8	22.2
			1	49	1	22.0	22.0	22.3
			25	0	2	20.9	20.9	21.1
			25	12	2	20.9	20.9	21.0
			25	25	2	20.9	20.9	21.1
			50	0	2	20.9	20.8	21.0
		64QAM	1	0	2	21.1	21.0	21.5
			1	25	2	21.0	20.9	21.3
			1	49	2	21.1	21.1	21.4
			25	0	3	19.9	19.9	20.1
			25	12	3	19.9	19.9	20.1
			25	25	3	19.9	19.9	20.1
			50	0	3	19.9	19.8	20.1
Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Meas. Avg Pwr (dBm)		
LTE Band 4	5	QPSK	1	0	0	23.3	23.3	23.3
			1	12	0	23.3	23.2	23.2
			1	24	0	23.2	23.3	23.3
			12	0	1	21.9	21.8	22.0
			12	7	1	21.9	21.8	22.0
			12	13	1	21.9	21.8	22.0
			25	0	1	21.9	21.8	22.0
		16QAM	1	0	1	22.3	22.2	22.5
			1	12	1	22.3	22.3	22.5
			1	24	1	22.2	22.2	22.4
			12	0	2	20.9	20.8	21.0
			12	7	2	20.9	20.8	21.0
			12	13	2	20.9	20.8	21.0
			25	0	2	20.9	20.8	21.0
		64QAM	1	0	2	21.3	21.3	21.5
			1	12	2	21.1	21.2	21.4
			1	24	2	21.2	21.2	21.4
			12	0	3	19.9	19.8	20.0
			12	7	3	19.9	19.8	20.0
			12	13	3	19.9	19.9	20.0
			25	0	3	19.9	19.8	20.0

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	23.2	23.3	23.3
			1	8	0	23.3	23.1	23.2
			1	14	0	23.3	23.3	23.3
			8	0	1	21.9	21.8	22.1
			8	4	1	21.8	21.8	22.0
			8	7	1	21.9	21.8	22.1
			15	0	1	21.9	21.8	22.1
		16QAM	1	0	1	22.0	22.3	22.4
			1	8	1	22.3	22.2	22.4
			1	14	1	22.1	22.2	22.3
			8	0	2	20.9	20.9	21.1
			8	4	2	20.8	20.8	21.1
			8	7	2	20.9	20.9	21.1
			15	0	2	20.9	20.8	21.1
		64QAM	1	0	2	21.2	21.1	21.2
			1	8	2	21.5	21.2	21.5
			1	14	2	21.2	21.2	21.3
			8	0	3	19.9	19.8	20.0
			8	4	3	19.9	19.8	20.0
			8	7	3	19.9	19.8	20.0
			15	0	3	20.0	19.9	20.0
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	23.2	23.2	23.3
			1	3	0	23.3	23.3	23.2
			1	5	0	23.2	23.3	23.3
			3	0	0	23.2	23.2	23.5
			3	1	0	23.3	23.2	23.5
			3	3	0	23.3	23.3	23.5
			6	0	1	21.8	21.8	22.1
		16QAM	1	0	1	22.3	22.2	22.2
			1	3	1	22.2	22.1	22.0
			1	5	1	22.1	22.2	22.1
			3	0	1	21.9	21.7	22.1
			3	1	1	22.0	21.8	21.9
			3	3	1	21.9	21.7	22.0
			6	0	2	20.8	20.8	21.1
		64QAM	1	0	2	21.0	20.9	21.4
			1	3	2	21.1	20.8	21.5
			1	5	2	21.0	20.8	21.1
			3	0	2	20.9	20.9	21.1
			3	1	2	20.9	21.0	21.1
			3	3	2	20.9	21.0	21.1
			6	0	3	19.8	19.9	20.0

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		24.4	
			1	25	0		24.3	
			1	49	0		24.2	
			25	0	2		21.8	
			25	12	2		21.8	
			25	25	2		21.8	
		50	0	2		21.8		
		16QAM	1	0	2		22.2	
			1	25	2		21.9	
			1	49	2		22.1	
			25	0	3		20.8	
			25	12	3		20.8	
		64QAM	25	25	3		20.8	
			50	0	3		20.8	
			1	0	3		21.1	
			1	25	3		20.9	
			1	49	3		21.0	
			25	0	4		19.9	
25	12		4		19.9			
25	25	4		19.9				
50	0	4		19.9				
Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Meas. Avg Pwr (dBm)		
LTE Band 5	5	QPSK	1	0	0	24.4	24.3	24.4
			1	12	0	24.3	24.4	24.3
			1	24	0	24.4	24.3	24.4
			12	0	2	22.0	21.8	21.9
			12	7	2	22.0	21.8	21.9
			12	13	2	21.9	21.8	21.9
			25	0	2	21.9	21.8	21.9
		16QAM	1	0	2	22.3	22.1	22.4
			1	12	2	22.3	22.2	22.5
			1	24	2	22.3	22.2	22.4
			12	0	3	21.0	20.8	20.9
			12	7	3	20.9	20.8	20.9
		64QAM	12	13	3	21.0	20.8	21.0
			25	0	3	21.0	20.8	20.9
			1	0	3	21.2	20.9	21.1
			1	12	3	20.9	21.0	21.3
			1	24	3	21.2	20.9	21.0
			12	0	4	19.9	19.7	19.9
			12	7	4	20.0	19.8	19.9
			12	13	4	20.0	19.8	19.9
			25	0	4	20.0	19.8	19.9

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	24.3	24.4	24.4		
			1	8	0	24.4	24.4	24.3		
			1	14	0	24.3	24.3	24.4		
			8	0	2	22.0	21.8	21.9		
			8	4	2	21.9	21.8	21.9		
			8	7	2	21.9	21.8	21.9		
		15	0	2	21.9	21.8	21.9			
		16QAM	1	0	2	22.1	22.0	22.2		
			1	8	2	22.1	22.3	22.3		
			1	14	2	22.2	22.0	22.1		
			8	0	3	21.1	20.8	21.0		
			8	4	3	21.0	20.7	21.0		
			8	7	3	21.0	20.8	21.0		
		64QAM	15	0	3	21.0	20.8	20.9		
			1	0	3	21.5	20.9	21.3		
			1	8	3	21.4	21.2	21.0		
			1	14	3	21.6	21.2	21.1		
			8	0	4	20.0	19.8	20.0		
			8	4	4	20.0	19.8	20.0		
		LTE Band 5	1.4	QPSK	8	7	4	20.0	19.8	20.0
					15	0	4	20.0	19.8	19.9
1	0				0	24.4	24.4	24.3		
1	3				0	24.4	24.3	24.4		
1	5				0	24.4	24.3	24.4		
3	0				0	24.4	24.2	24.4		
16QAM	3			1	0	24.4	24.2	24.3		
	3			3	0	24.4	24.3	24.4		
	6			0	2	22.0	21.8	21.8		
	1			0	2	22.6	22.0	22.0		
	1			3	2	22.4	21.9	21.9		
	1			5	2	22.5	21.9	21.8		
64QAM	3			0	2	22.1	21.7	21.9		
	3			1	2	22.2	21.7	21.9		
	3			3	2	22.1	21.7	22.0		
	6	0	3	20.9	20.9	21.1				
	1	0	3	21.4	20.8	21.3				
	1	3	3	21.4	20.9	21.3				
64QAM	1	5	3	21.3	20.9	20.9				
	3	0	3	21.1	20.9	21.1				
	3	1	3	21.2	20.9	21.2				
	3	3	3	21.2	20.8	21.1				
	6	0	4	19.9	19.8	19.9				

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 7 Measured Results

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Meas. Avg Pwr (dBm)		
						2510 MHz	2535 MHz	2560 MHz
LTE Band 7	20	QPSK	1	0	0	23.9	23.7	23.8
			1	49	0	23.7	23.3	23.7
			1	99	0	24.1	23.5	23.8
			50	0	1	22.0	21.7	21.8
			50	24	1	22.0	21.6	21.8
			50	50	1	21.9	21.5	21.8
			100	0	1	22.0	21.6	21.8
		16QAM	1	0	1	22.5	22.0	22.2
			1	49	1	22.3	21.8	22.0
			1	99	1	22.3	21.9	22.0
			50	0	2	21.1	20.7	20.8
			50	24	2	21.0	20.6	20.8
			50	50	2	20.9	20.6	20.7
			100	0	2	21.0	20.6	20.7
		64QAM	1	0	2	21.2	20.9	20.9
			1	49	2	21.0	20.7	20.7
			1	99	2	21.0	20.8	20.9
			50	0	3	20.0	19.6	19.8
			50	24	3	19.9	19.6	19.8
			50	50	3	19.9	19.6	19.7
			100	0	3	19.9	19.5	19.8
Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Meas. Avg Pwr (dBm)		
						2507.5 MHz	2535 MHz	2562.5 MHz
LTE Band 7	15	QPSK	1	0	0	24.0	23.7	23.9
			1	37	0	24.1	23.7	24.0
			1	74	0	23.8	23.5	23.8
			36	0	1	22.0	21.7	21.9
			36	20	1	22.0	21.6	21.8
			36	39	1	21.9	21.6	21.7
			75	0	1	22.0	21.6	21.8
		16QAM	1	0	1	22.3	22.0	22.2
			1	37	1	22.4	22.0	22.2
			1	74	1	22.2	21.8	22.1
			36	0	2	21.0	20.6	20.8
			36	20	2	21.0	20.6	20.8
			36	39	2	20.9	20.6	20.8
			75	0	2	21.0	20.6	20.8
		64QAM	1	0	2	21.3	21.1	21.1
			1	37	2	21.2	21.1	21.2
			1	74	2	21.1	21.0	21.0
			36	0	3	20.0	19.6	19.8
			36	20	3	20.0	19.6	19.8
			36	39	3	20.0	19.6	19.8
			75	0	3	20.0	19.6	19.8

LTE Band 7 Measured Results (continued)

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Meas. Avg Pwr (dBm)		
						2505 MHz	2535 MHz	2565 MHz
LTE Band 7	10	QPSK	1	0	0	24.1	23.6	23.8
			1	25	0	24.1	23.6	23.8
			1	49	0	24.1	23.6	23.8
			25	0	1	22.1	21.6	21.8
			25	12	1	22.1	21.6	21.8
			25	25	1	22.0	21.6	21.8
			50	0	1	22.1	21.6	21.8
		16QAM	1	0	1	22.2	21.8	21.9
			1	25	1	22.0	21.5	21.7
			1	49	1	22.1	21.7	21.9
			25	0	2	21.1	20.6	20.8
			25	12	2	21.1	20.6	20.8
			25	25	2	21.0	20.5	20.8
			50	0	2	21.1	20.6	20.8
		64QAM	1	0	2	21.3	20.7	21.0
			1	25	2	21.2	20.6	20.9
			1	49	2	21.3	20.7	21.0
			25	0	3	20.1	19.6	19.8
			25	12	3	20.1	19.6	19.8
			25	25	3	20.0	19.6	19.7
			50	0	3	20.0	19.6	19.8
Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Meas. Avg Pwr (dBm)		
LTE Band 7	5	QPSK	1	0	0	24.0	23.6	23.8
			1	12	0	24.1	23.6	24.0
			1	24	0	24.1	23.7	23.9
			12	0	1	22.1	21.7	21.8
			12	7	1	22.1	21.6	21.9
			12	13	1	22.1	21.7	21.8
			25	0	1	22.1	21.6	21.8
		16QAM	1	0	1	22.4	22.0	22.2
			1	12	1	22.5	22.2	22.0
			1	24	1	22.4	21.9	22.3
			12	0	2	21.1	20.7	20.8
			12	7	2	21.0	20.7	20.8
			12	13	2	21.0	20.7	20.9
			25	0	2	21.1	20.7	20.9
		64QAM	1	0	2	21.2	21.1	21.2
			1	12	2	21.1	21.0	21.2
			1	24	2	21.3	21.0	21.2
			12	0	3	20.2	19.6	19.9
			12	7	3	20.1	19.6	19.9
			12	13	3	20.2	19.6	19.9
			25	0	3	20.1	19.6	19.8

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		23.7	
			1	25	0		23.6	
			1	49	0		23.6	
			25	0	2		21.7	
			25	12	2		21.6	
			25	25	2		21.6	
			50	0	2		21.6	
		16QAM	1	0	2		21.7	
			1	25	2		21.5	
			1	49	2		21.5	
			25	0	3		20.7	
			25	12	3		20.6	
			25	25	3		20.6	
			50	0	3		20.6	
		64QAM	1	0	3		21.1	
			1	25	3		20.9	
			1	49	3		20.9	
			25	0	4		19.7	
			25	12	4		19.6	
			25	25	4		19.6	
			50	0	4		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	23.6	23.6	23.7
			1	12	0	23.6	23.5	23.7
			1	24	0	23.6	23.6	23.6
			12	0	2	21.6	21.6	21.7
			12	7	2	21.6	21.6	21.7
			12	13	2	21.6	21.6	21.7
			25	0	2	21.6	21.6	21.6
		16QAM	1	0	2	21.9	22.1	22.0
			1	12	2	21.9	22.1	22.1
			1	24	2	21.8	21.9	21.9
			12	0	3	20.6	20.7	20.8
			12	7	3	20.7	20.6	20.7
			12	13	3	20.6	20.6	20.7
			25	0	3	20.6	20.6	20.6
		64QAM	1	0	3	21.1	21.1	21.2
			1	12	3	21.1	20.9	20.5
			1	24	3	21.1	21.0	20.9
			12	0	4	19.6	19.6	19.7
			12	7	4	19.6	19.6	19.7
			12	13	4	19.5	19.7	19.7
			25	0	4	19.6	19.6	19.7

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	23.7	23.7	23.7		
			1	8	0	23.7	23.7	23.6		
			1	14	0	23.7	23.7	23.7		
			8	0	2	21.6	21.6	21.7		
			8	4	2	21.5	21.6	21.7		
			8	7	2	21.6	21.6	21.7		
		15	0	2	21.6	21.6	21.7			
		16QAM	1	0	2	21.7	22.1	22.1		
			1	8	2	22.0	22.3	22.0		
			1	14	2	21.8	22.2	21.9		
			8	0	3	20.7	20.6	20.8		
			8	4	3	20.7	20.6	20.8		
			8	7	3	20.7	20.6	20.8		
		64QAM	15	0	3	20.6	20.7	20.7		
			1	0	3	20.8	20.9	21.2		
			1	8	3	20.9	20.6	20.7		
			1	14	3	20.9	20.9	20.7		
			8	0	4	19.7	19.7	19.7		
			8	4	4	19.7	19.6	19.7		
		LTE Band 12	1.4	QPSK	8	7	4	19.7	19.6	19.7
					15	0	4	19.7	19.7	19.7
16QAM	1				0	0	23.7	23.7	23.7	
	1				3	0	23.6	23.7	23.7	
	1				5	0	23.7	23.7	23.7	
	3				0	0	23.6	23.6	23.7	
	3			1	0	23.6	23.6	23.7		
	3			3	0	23.6	23.6	23.7		
	6			0	2	21.6	21.6	21.6		
	64QAM			1	0	2	22.0	21.9	21.8	
				1	3	2	21.9	21.6	21.5	
				1	5	2	21.7	21.8	21.7	
				3	0	2	21.6	21.6	21.8	
				3	1	2	21.5	21.5	21.7	
				3	3	2	21.5	21.6	21.7	
	16QAM			6	0	3	20.8	20.7	20.8	
				64QAM	1	0	3	20.8	20.7	21.1
					1	3	3	20.6	20.5	21.1
					1	5	3	20.8	20.9	21.0
					3	0	3	20.7	20.6	20.9
3					1	3	20.6	20.6	20.9	
3	3	3	20.8		20.7	20.9				
64QAM	6	0	4	19.7	19.6	19.7				

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		23.8
			1	25	0		23.8
			1	49	0		23.7
			25	0	2		21.8
			25	12	2		21.7
			25	25	2		21.7
			50	0	2		21.8
		16QAM	1	0	2		21.9
			1	25	2		21.8
			1	49	2		21.9
			25	0	3		20.8
			25	12	3		20.8
			25	25	3		20.8
			50	0	3		20.8
		64QAM	1	0	3		21.0
			1	25	3		20.8
			1	49	3		21.0
			25	0	4		19.8
			25	12	4		19.8
			25	25	4		19.7
			50	0	4		19.8
Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Meas. Avg Pwr (dBm)	
LTE Band 13	5	QPSK	1	0	0		23.7
			1	12	0		23.7
			1	24	0		23.7
			12	0	2		21.7
			12	7	2		21.7
			12	13	2		21.7
			25	0	2		21.7
		16QAM	1	0	2		22.2
			1	12	2		22.3
			1	24	2		22.1
			12	0	3		20.7
			12	7	3		20.7
			12	13	3		20.8
			25	0	3		20.7
		64QAM	1	0	3		21.3
			1	12	3		20.9
			1	24	3		21.2
			12	0	4		19.7
			12	7	4		19.7
			12	13	4		19.7
			25	0	4		19.7

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		23.9	
			1	25	0		23.8	
			1	49	0		23.8	
			25	0	2		21.9	
			25	12	2		21.8	
			25	25	2		21.8	
		16QAM	50	0	2		21.9	
			1	0	2		22.2	
			1	25	2		21.8	
			1	49	2		21.9	
			25	0	3		20.9	
			25	12	3		20.8	
		64QAM	25	25	3		20.8	
			50	0	3		20.9	
			1	0	3		21.2	
			1	25	3		20.9	
			1	49	3		21.0	
			25	0	4		19.9	
LTE Band 17	5	QPSK	25	12	4		19.9	
			25	25	4		19.9	
			50	0	4		19.9	
			1	0	0		23.8	
			1	12	0		23.7	
			1	24	0		23.8	
		16QAM	12	0	2		21.8	
			12	7	2		21.8	
			12	13	2		21.8	
			25	0	2		21.8	
			1	0	2		22.3	
			1	12	2		22.3	
		64QAM	1	24	2		22.2	
			12	0	3		20.8	
			12	7	3		20.8	
			12	13	3		20.8	
			25	0	3		20.8	
			1	0	3		21.3	
64QAM	1	12	3		20.9			
	1	24	3		21.1			
	12	0	4		19.8			
	12	7	4		19.8			
	12	13	4		19.8			
	25	0	4		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 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	22.6	22.9	22.8
			1	49	0	22.2	22.6	22.4
			1	99	0	22.4	22.8	22.5
			50	0	1	21.5	21.9	21.7
			50	24	1	21.4	21.8	21.7
			50	50	1	21.4	21.8	21.6
			100	0	1	21.4	21.8	21.6
		16QAM	1	0	1	22.1	22.1	22.1
			1	49	1	21.8	21.9	21.9
			1	99	1	21.8	21.9	21.9
			50	0	2	20.5	20.9	20.7
			50	24	2	20.4	20.8	20.7
			50	50	2	20.3	20.8	20.6
			100	0	2	20.4	20.8	20.6
		64QAM	1	0	2	21.1	21.4	21.1
			1	49	2	20.9	21.2	21.0
			1	99	2	20.8	21.2	20.9
			50	0	3	19.5	19.9	19.7
			50	24	3	19.4	19.8	19.6
			50	50	3	19.3	19.8	19.6
			100	0	3	19.4	19.8	19.6
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	22.4	22.9	22.7
			1	37	0	22.5	23.0	22.7
			1	74	0	22.3	22.7	22.5
			36	0	1	21.4	21.9	21.6
			36	20	1	21.4	21.8	21.6
			36	39	1	21.3	21.8	21.6
			75	0	1	21.4	21.9	21.6
		16QAM	1	0	1	21.8	22.1	22.0
			1	37	1	21.8	22.1	22.0
			1	74	1	21.6	22.0	21.8
			36	0	2	20.4	20.9	20.7
			36	20	2	20.3	20.8	20.6
			36	39	2	20.3	20.8	20.5
			75	0	2	20.4	20.8	20.6
		64QAM	1	0	2	20.6	21.0	21.0
			1	37	2	20.5	21.0	21.1
			1	74	2	20.4	20.8	20.8
			36	0	3	19.4	19.9	19.6
			36	20	3	19.4	19.8	19.6
			36	39	3	19.3	19.8	19.6
			75	0	3	19.4	19.8	19.7

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	22.3	22.8	22.6
			1	25	0	22.2	22.7	22.5
			1	49	0	22.2	22.8	22.5
			25	0	1	21.3	21.8	21.6
			25	12	1	21.2	21.7	21.6
			25	25	1	21.2	21.8	21.5
			50	0	1	21.3	21.8	21.6
		16QAM	1	0	1	21.4	21.8	21.7
			1	25	1	21.2	21.7	21.5
			1	49	1	21.3	21.8	21.7
			25	0	2	20.3	20.8	20.6
			25	12	2	20.2	20.8	20.6
			25	25	2	20.2	20.8	20.6
			50	0	2	20.3	20.8	20.6
		64QAM	1	0	2	20.6	21.0	20.7
			1	25	2	20.3	20.9	20.6
			1	49	2	20.4	20.9	20.8
			25	0	3	19.3	19.8	19.6
			25	12	3	19.3	19.8	19.6
			25	25	3	19.2	19.7	19.5
			50	0	3	19.3	19.8	19.6
Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Meas. Avg Pwr (dBm)		
LTE Band 25	5	QPSK	1	0	0	22.2	22.7	22.5
			1	12	0	22.2	22.6	22.4
			1	24	0	22.2	22.8	22.5
			12	0	1	21.2	21.8	21.5
			12	7	1	21.2	21.7	21.5
			12	13	1	21.2	21.8	21.5
			25	0	1	21.2	21.8	21.5
		16QAM	1	0	1	21.6	22.1	21.9
			1	12	1	21.7	22.1	22.0
			1	24	1	21.5	22.0	21.8
			12	0	2	20.2	20.8	20.6
			12	7	2	20.2	20.8	20.6
			12	13	2	20.2	20.8	20.5
			25	0	2	20.2	20.8	20.5
		64QAM	1	0	2	20.7	21.2	21.0
			1	12	2	20.7	21.1	20.8
			1	24	2	20.6	21.1	20.9
			12	0	3	19.2	19.8	19.5
			12	7	3	19.2	19.8	19.6
			12	13	3	19.2	19.8	19.5
			25	0	3	19.2	19.8	19.5

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	22.2	22.8	22.6
			1	8	0	22.4	23.1	22.9
			1	14	0	22.2	22.8	22.6
			8	0	1	21.2	21.7	21.5
			8	4	1	21.2	21.7	21.5
			8	7	1	21.1	21.7	21.5
			15	0	1	21.2	21.8	21.5
		16QAM	1	0	1	21.6	22.0	22.1
			1	8	1	21.3	22.1	21.8
			1	14	1	21.3	22.0	21.7
			8	0	2	20.2	20.8	20.5
			8	4	2	20.2	20.8	20.5
			8	7	2	20.3	20.8	20.5
			15	0	2	20.2	20.8	20.6
		64QAM	1	0	2	20.4	21.0	20.8
			1	8	2	20.6	21.1	21.3
			1	14	2	20.3	21.1	21.1
			8	0	3	19.2	19.8	19.5
			8	4	3	19.2	19.8	19.5
			8	7	3	19.2	19.8	19.5
			15	0	3	19.3	19.8	19.6
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	22.3	22.8	22.6
			1	3	0	22.2	22.8	22.4
			1	5	0	22.2	22.8	22.5
			3	0	0	22.2	22.7	22.4
			3	1	0	22.2	22.7	22.4
			3	3	0	22.2	22.7	22.5
			6	0	1	21.2	21.7	21.5
		16QAM	1	0	1	21.3	21.9	21.7
			1	3	1	21.1	21.6	21.7
			1	5	1	21.2	21.9	21.6
			3	0	1	21.1	21.8	21.4
			3	1	1	21.1	21.8	21.3
			3	3	1	21.1	21.8	21.5
			6	0	2	20.3	20.8	20.6
		64QAM	1	0	2	20.6	21.0	20.6
			1	3	2	20.4	20.7	20.8
			1	5	2	20.3	21.4	20.6
			3	0	2	20.4	20.8	20.6
			3	1	2	20.4	20.8	20.5
			3	3	2	20.4	20.9	20.6
			6	0	3	19.2	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		23.5	
			1	37	0		23.6	
			1	74	0		23.3	
			36	0	1		22.0	
			36	20	1		21.9	
			36	39	1		21.9	
			75	0	1		22.0	
		16QAM	1	0	1		22.3	
			1	37	1		22.3	
			1	74	1		22.0	
			36	0	2		21.0	
			36	20	2		20.9	
			36	39	2		20.9	
		64QAM	75	0	2		21.0	
			1	0	2		21.2	
			1	37	2		21.0	
			1	74	2		21.0	
			36	0	3		20.0	
			36	20	3		19.9	
			36	39	3		19.9	
		75	0	3		19.9		

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	23.6	23.4	23.4
			1	25	0	23.5	23.4	23.2
			1	49	0	23.5	23.3	23.2
			25	0	1	22.1	22.0	21.9
			25	12	1	22.1	21.9	21.9
			25	25	1	22.1	21.9	21.8
			50	0	1	22.1	21.9	21.9
		16QAM	1	0	1	22.3	22.3	22.3
			1	25	1	22.0	22.0	22.0
			1	49	1	22.2	22.1	22.1
			25	0	2	21.1	21.0	20.9
			25	12	2	21.0	20.9	20.9
			25	25	2	21.0	20.9	20.9
			50	0	2	21.1	21.0	20.9
		64QAM	1	0	2	21.5	21.2	21.3
			1	25	2	21.4	21.0	21.1
			1	49	2	21.5	21.2	21.3
			25	0	3	20.1	20.0	19.9
			25	12	3	20.1	19.9	19.9
			25	25	3	20.0	19.9	19.9
			50	0	3	20.1	19.9	19.9
Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Meas. Avg Pwr (dBm)		
LTE Band 26	5	QPSK	1	0	0	816.5 MHz	831.5 MHz	846.5 MHz
			1	12	0	23.6	23.4	23.4
			1	24	0	23.5	23.3	23.4
			12	0	1	23.6	23.4	23.4
			12	7	1	22.1	21.9	21.9
			12	13	1	22.1	21.9	21.9
			25	0	1	22.1	21.9	21.9
		16QAM	1	0	1	22.5	22.3	22.3
			1	12	1	22.6	22.3	22.4
			1	24	1	22.4	22.2	22.2
			12	0	2	21.1	21.0	21.0
			12	7	2	21.1	20.9	21.0
			12	13	2	21.1	21.0	21.0
			25	0	2	21.1	20.9	20.9
		64QAM	1	0	2	21.6	21.5	21.4
			1	12	2	21.3	21.2	21.2
			1	24	2	21.4	21.3	21.3
			12	0	3	20.1	20.0	20.0
			12	7	3	20.2	19.9	20.0
			12	13	3	20.1	20.0	20.0
			25	0	3	20.1	19.9	19.9

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	23.7	23.5	23.5		
			1	8	0	23.9	23.7	23.7		
			1	14	0	23.7	23.5	23.5		
			8	0	1	22.1	21.9	21.9		
			8	4	1	22.1	21.8	21.9		
			8	7	1	22.1	21.9	21.9		
		16QAM	15	0	1	22.1	21.9	21.9		
			1	0	1	22.5	22.1	22.0		
			1	8	1	22.5	22.6	22.1		
			1	14	1	22.6	22.1	22.1		
			8	0	2	21.2	20.9	21.0		
			8	4	2	21.1	20.9	21.0		
		64QAM	8	7	2	21.2	20.9	21.0		
			15	0	2	21.2	20.9	21.0		
			1	0	2	21.4	21.2	21.2		
			1	8	2	21.8	21.2	21.3		
			1	14	2	21.7	21.0	21.3		
			8	0	3	20.2	19.8	19.9		
		LTE Band 26	1.4	QPSK	8	4	3	20.2	19.8	19.9
					8	7	3	20.2	19.8	19.8
					15	0	3	20.1	19.8	19.9
1	0				0	23.7	23.5	23.6		
1	3				0	23.6	23.4	23.5		
1	5				0	23.6	23.4	23.5		
16QAM	3			0	0	23.6	23.4	23.5		
	3			1	0	23.6	23.3	23.4		
	3			3	0	23.6	23.4	23.4		
	6			0	1	22.1	21.9	21.9		
	1			0	1	22.4	22.3	22.3		
	1			3	1	22.3	22.0	21.8		
64QAM	1			5	1	22.3	22.2	22.2		
	3			0	1	22.1	21.9	22.1		
	3			1	1	22.1	21.8	22.0		
	3			3	1	22.1	21.9	22.0		
	6			0	2	21.2	21.0	21.1		
	1			0	2	22.3	21.2	21.5		
64QAM	1			3	2	20.8	21.0	21.5		
	1			5	2	21.5	21.0	21.3		
	3			0	2	21.2	21.0	21.1		
	3	1	2	21.3	21.0	21.1				
	3	3	2	21.2	21.1	21.1				
	6	0	3	20.2	19.8	20.0				

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	24.0	24.2	24.1		
			1	49	0	24.0	24.0	23.8		
			1	99	0	24.0	24.1	23.9		
			50	0	1	22.1	22.3	22.1		
			50	24	1	22.1	22.3	22.1		
			50	50	1	22.0	22.2	22.0		
		16QAM	100	0	1	22.0	22.2	22.0		
			1	0	1	22.5	22.6	22.5		
			1	49	1	22.3	22.4	22.3		
			1	99	1	22.4	22.6	22.5		
			50	0	2	21.1	21.3	21.1		
			50	24	2	21.1	21.3	21.1		
		64QAM	50	50	2	21.1	21.3	21.1		
			100	0	2	21.0	21.2	21.0		
			1	0	2	21.5	21.5	21.5		
			1	49	2	21.3	21.3	21.4		
			1	99	2	21.4	21.4	21.4		
			50	0	3	20.1	20.3	20.1		
		LTE Band 66	15	QPSK	50	24	3	20.1	20.2	20.1
					50	50	3	20.0	20.2	20.1
					100	0	3	20.0	20.2	20.0
1	0				0	24.0	24.2	24.1		
1	37				0	24.1	24.2	24.2		
1	74				0	24.0	24.1	23.9		
36	0				1	22.1	22.3	22.1		
16QAM	36			20	1	22.0	22.2	22.0		
	36			39	1	22.0	22.2	22.0		
	75			0	1	22.1	22.3	22.1		
	1			0	1	22.4	22.5	22.2		
	1			37	1	22.5	22.5	22.3		
	1			74	1	22.3	22.4	22.1		
	36			0	2	21.1	21.3	21.1		
64QAM	36			20	2	21.0	21.2	21.0		
	36	39	2	21.0	21.2	21.0				
	75	0	2	21.1	21.3	21.1				
	1	0	2	21.3	21.4	21.5				
	1	37	2	21.4	21.5	21.6				
	1	74	2	21.3	21.4	21.4				
	36	0	3	20.1	20.3	20.1				
	36	20	3	20.1	20.3	20.0				
LTE Band 66	15	64QAM	36	39	3	20.0	20.3	20.0		
			75	0	3	20.1	20.3	20.1		
			75	0	3	20.1	20.3	20.1		

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	24.0	24.2	24.0
			1	25	0	23.9	24.1	23.9
			1	49	0	24.0	24.2	23.9
			25	0	1	22.1	22.3	22.0
			25	12	1	22.1	22.2	22.0
			25	25	1	22.1	22.2	22.0
			50	0	1	22.1	22.2	22.0
		16QAM	1	0	1	22.2	22.6	22.1
			1	25	1	22.0	22.3	22.0
			1	49	1	22.2	22.4	22.1
			25	0	2	21.1	21.2	21.0
			25	12	2	21.0	21.2	21.0
			25	25	2	21.0	21.2	21.0
			50	0	2	21.1	21.2	21.0
		64QAM	1	0	2	21.3	21.4	21.4
			1	25	2	21.2	21.3	21.3
			1	49	2	21.3	21.4	21.4
			25	0	3	20.1	20.3	20.0
			25	12	3	20.1	20.3	20.0
			25	25	3	20.0	20.3	20.0
			50	0	3	20.0	20.2	20.0
Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Meas. Avg Pwr (dBm)		
LTE Band 66	5	QPSK	1	0	0	1712.5 MHz	1745 MHz	1777.5 MHz
			1	12	0	24.0	24.2	24.0
			1	24	0	23.9	24.2	23.9
			12	0	1	24.1	24.2	24.0
			12	7	1	22.1	22.2	22.0
			12	13	1	22.1	22.2	22.0
			25	0	1	22.1	22.2	22.0
		16QAM	1	0	1	22.3	22.7	22.5
			1	12	1	22.3	22.7	22.5
			1	24	1	22.2	22.5	22.4
			12	0	2	21.1	21.3	21.0
			12	7	2	21.1	21.2	21.0
			12	13	2	21.1	21.3	21.0
			25	0	2	21.1	21.2	21.0
		64QAM	1	0	2	21.4	21.4	21.2
			1	12	2	21.1	21.2	21.0
			1	24	2	21.4	21.4	21.2
			12	0	3	20.2	20.3	20.0
			12	7	3	20.2	20.3	20.0
			12	13	3	20.2	20.3	19.9
			25	0	3	20.1	20.3	20.0

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	24.0	24.2	24.0
			1	8	0	24.2	24.1	23.7
			1	14	0	24.1	24.2	23.9
			8	0	1	22.1	22.2	22.0
			8	4	1	22.0	22.2	22.0
			8	7	1	22.0	22.2	21.9
			15	0	1	22.0	22.2	22.0
		16QAM	1	0	1	22.2	22.5	22.2
			1	8	1	22.1	22.6	22.2
			1	14	1	22.1	22.5	22.3
			8	0	2	21.2	21.3	21.0
			8	4	2	21.1	21.3	21.0
			8	7	2	21.1	21.3	21.0
			15	0	2	21.1	21.2	21.0
		64QAM	1	0	2	21.4	21.8	21.2
			1	8	2	21.4	21.9	21.1
			1	14	2	21.3	21.7	20.9
			8	0	3	20.0	20.4	20.0
			8	4	3	20.1	20.4	20.0
			8	7	3	20.0	20.3	20.0
			15	0	3	20.0	20.2	19.9
Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Meas. Avg Pwr (dBm)		
LTE Band 66	1.4	QPSK	1	0	0	1710.7 MHz	1745 MHz	1779.3 MHz
			1	3	0	24.1	24.2	24.2
			1	5	0	24.0	24.2	24.1
			3	0	0	24.1	24.2	24.2
			3	1	0	24.0	24.1	24.1
			3	3	0	24.1	24.2	24.1
			6	0	1	22.1	22.2	22.2
		16QAM	1	0	1	22.5	22.8	22.6
			1	3	1	22.4	22.6	22.6
			1	5	1	22.4	22.5	22.6
			3	0	1	22.1	22.2	22.2
			3	1	1	22.3	22.3	22.4
			3	3	1	22.3	22.3	22.4
			6	0	2	21.0	21.1	21.2
		64QAM	1	0	2	21.5	21.4	21.6
			1	3	2	21.7	21.4	21.5
			1	5	2	21.5	21.4	21.5
			3	0	2	21.2	21.3	21.3
			3	1	2	21.3	21.3	21.3
			3	3	2	21.2	21.3	21.3
			6	0	3	20.1	20.3	20.3

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
			1	49	0	19.7	20.1	20.0	19.7	20.1	20.0
			1	99	0	19.9	20.3	20.1	19.9	20.3	20.0
			50	0	0	20.0	20.4	20.2	20.0	20.4	20.3
			50	24	0	20.0	20.3	20.2	19.9	20.4	20.2
			50	50	0	19.9	20.3	20.1	19.9	20.3	20.1
			100	0	0	19.9	20.3	20.2	19.9	20.3	20.2
		16QAM	1	0	0	20.6	20.9	20.6	20.5	20.7	20.7
			1	49	0	20.2	20.7	20.3	20.2	20.5	20.5
			1	99	0	20.3	20.8	20.3	20.2	20.5	20.4
			50	0	0	20.0	20.4	20.2	20.0	20.4	20.3
			50	24	0	19.9	20.4	20.2	19.9	20.4	20.2
			50	50	0	19.9	20.3	20.1	19.9	20.3	20.1
			100	0	0	19.9	20.3	20.2	19.9	20.3	20.2
		64QAM	1	0	0	20.4	20.8	20.6	20.3	20.9	20.7
			1	49	0	20.2	20.7	20.4	20.1	20.8	20.4
			1	99	0	20.2	20.6	20.3	20.1	20.7	20.4
			50	0	0	19.5	19.9	19.7	19.5	19.9	19.7
			50	24	0	19.4	19.8	19.6	19.4	19.8	19.7
			50	50	0	19.4	19.8	19.6	19.3	19.8	19.6
			100	0	0	19.4	19.8	19.7	19.4	19.8	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	20.0	20.4	20.3	20.0	20.4	20.2
			1	37	0	20.0	20.5	20.3	20.0	20.4	20.3
			1	74	0	19.8	20.2	20.0	19.8	20.2	20.0
			36	0	0	20.0	20.4	20.2	19.9	20.4	20.3
			36	20	0	19.9	20.3	20.2	19.8	20.3	20.2
			36	39	0	19.9	20.3	20.1	19.8	20.3	20.1
			75	0	0	20.0	20.4	20.2	19.9	20.3	20.2
		16QAM	1	0	0	20.2	20.5	20.6	20.2	20.7	20.5
			1	37	0	20.2	20.5	20.5	20.2	20.7	20.4
			1	74	0	20.0	20.4	20.3	20.0	20.5	20.3
			36	0	0	20.0	20.4	20.2	19.9	20.3	20.3
			36	20	0	19.9	20.3	20.2	19.9	20.3	20.2
			36	39	0	19.9	20.3	20.1	19.7	20.3	20.1
			75	0	0	19.9	20.3	20.2	19.9	20.3	20.2
		64QAM	1	0	0	20.5	20.7	20.5	20.2	20.5	20.4
			1	37	0	20.3	20.7	20.4	20.2	20.5	20.5
			1	74	0	20.2	20.6	20.3	20.1	20.3	20.2
			36	0	0	19.4	19.8	19.7	19.4	19.9	19.7
			36	20	0	19.4	19.8	19.7	19.4	19.8	19.6
			36	39	0	19.4	19.8	19.6	19.3	19.8	19.6
			75	0	0	19.4	19.8	19.6	19.3	19.8	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)		
						1855 MHz	1880 MHz	1905 MHz	1855 MHz	1880 MHz	1905 MHz
						LTE Band 2	10	QPSK	1	0	0
			1	25	0	19.7	20.3	20.1	19.8	20.3	20.0
			1	49	0	19.8	20.3	20.1	19.8	20.3	20.1
			25	0	0	19.8	20.3	20.2	19.8	20.3	20.2
			25	12	0	19.8	20.3	20.1	19.8	20.3	20.1
			25	25	0	19.8	20.3	20.1	19.8	20.3	20.1
			50	0	0	19.8	20.3	20.1	19.8	20.3	20.1
		16QAM	1	0	0	20.0	20.6	20.1	20.1	20.5	20.5
			1	25	0	19.8	20.5	19.9	19.8	20.3	20.2
			1	49	0	19.9	20.6	20.0	19.9	20.5	20.3
			25	0	0	19.8	20.3	20.2	19.8	20.4	20.2
			25	12	0	19.8	20.3	20.1	19.8	20.3	20.2
			25	25	0	19.8	20.3	20.1	19.8	20.3	20.2
			50	0	0	19.8	20.3	20.1	19.8	20.3	20.2
		64QAM	1	0	0	20.1	20.7	20.4	19.9	20.6	20.4
			1	25	0	19.9	20.5	20.2	19.8	20.5	20.3
			1	49	0	20.0	20.6	20.3	19.9	20.5	20.2
			25	0	0	19.4	19.8	19.7	19.3	19.9	19.7
			25	12	0	19.3	19.8	19.6	19.3	19.8	19.7
			25	25	0	19.3	19.8	19.6	19.2	19.8	19.6
			50	0	0	19.3	19.8	19.6	19.3	19.8	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)		
						1852.5 MHz	1880 MHz	1907.5 MHz	1852.5 MHz	1880 MHz	1907.5 MHz
LTE Band 2	5	QPSK	1	0	0	19.7	20.2	20.1	19.8	20.3	20.1
			1	12	0	19.7	20.2	20.1	19.7	20.2	20.2
			1	24	0	19.7	20.3	20.1	19.7	20.3	20.1
			12	0	0	19.8	20.3	20.1	19.8	20.3	20.1
			12	7	0	19.7	20.3	20.1	19.7	20.3	20.1
			12	13	0	19.8	20.3	20.1	19.7	20.3	20.1
			25	0	0	19.8	20.3	20.1	19.7	20.3	20.1
		16QAM	1	0	0	20.2	20.7	20.5	20.2	20.7	20.6
			1	12	0	20.2	20.7	20.6	20.2	20.7	20.6
			1	24	0	20.1	20.6	20.4	20.1	20.7	20.5
			12	0	0	19.8	20.4	20.1	19.8	20.4	20.2
			12	7	0	19.8	20.3	20.1	19.7	20.3	20.1
			12	13	0	19.8	20.3	20.1	19.8	20.3	20.1
			25	0	0	19.8	20.3	20.1	19.8	20.3	20.1
		64QAM	1	0	0	20.2	20.7	20.6	20.2	20.9	20.6
			1	12	0	20.1	20.5	20.3	20.0	20.7	20.4
			1	24	0	20.1	20.7	20.6	20.1	20.7	20.4
			12	0	0	19.2	19.8	19.7	19.2	19.8	19.6
			12	7	0	19.2	19.8	19.6	19.2	19.7	19.6
			12	13	0	19.3	19.8	19.7	19.2	19.7	19.6
			25	0	0	19.3	19.8	19.7	19.2	19.8	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)		
						1851.5 MHz	1880 MHz	1908.5 MHz	1851.5 MHz	1880 MHz	1908.5 MHz
						LTE Band 2	3	QPSK	1	0	0
			1	8	0	19.9	20.6	20.0	20.0	20.5	19.9
			1	14	0	19.8	20.4	20.1	19.7	20.4	20.1
			8	0	0	19.7	20.3	20.1	19.7	20.3	20.1
			8	4	0	19.7	20.2	20.1	19.7	20.3	20.1
			8	7	0	19.7	20.3	20.1	19.7	20.3	20.1
			15	0	0	19.7	20.3	20.1	19.7	20.3	20.1
		16QAM	1	0	0	19.7	20.5	20.6	20.0	20.5	20.4
			1	8	0	19.8	20.5	20.6	20.3	20.6	20.5
			1	14	0	20.0	20.5	20.4	20.1	20.7	20.4
			8	0	0	19.7	20.4	20.2	19.7	20.3	20.2
			8	4	0	19.7	20.4	20.2	19.6	20.3	20.2
			8	7	0	19.7	20.3	20.2	19.7	20.3	20.2
			15	0	0	19.7	20.3	20.1	19.7	20.3	20.1
		64QAM	1	0	0	19.8	20.5	20.4	19.7	20.8	20.6
			1	8	0	19.9	20.7	20.6	19.9	20.6	19.9
			1	14	0	19.9	20.6	20.3	19.8	20.7	20.3
			8	0	0	19.3	19.8	19.6	19.2	19.8	19.6
			8	4	0	19.3	19.8	19.7	19.2	19.8	19.5
			8	7	0	19.3	19.8	19.6	19.2	19.8	19.6
			15	0	0	19.3	19.8	19.7	19.2	19.8	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
			1	3	0	19.7	20.2	20.1	19.7	20.3	20.1
			1	5	0	19.7	20.3	20.1	19.7	20.3	20.1
			3	0	0	19.7	20.3	20.1	19.7	20.3	20.0
			3	1	0	19.7	20.3	20.1	19.6	20.3	20.0
			3	3	0	19.7	20.3	20.0	19.7	20.3	20.1
			6	0	0	19.7	20.3	20.1	19.7	20.3	20.1
		16QAM	1	0	0	19.8	20.7	20.3	19.9	20.4	20.4
			1	3	0	19.6	20.3	20.1	19.8	20.3	20.2
			1	5	0	19.8	20.6	20.2	19.8	20.4	20.4
			3	0	0	19.7	20.3	20.1	19.8	20.3	20.2
			3	1	0	19.7	20.3	20.0	19.7	20.3	20.2
			3	3	0	19.6	20.2	20.1	19.8	20.3	20.2
			6	0	0	19.9	20.4	20.2	19.9	20.4	20.1
		64QAM	1	0	0	20.1	20.5	20.2	20.1	20.5	20.1
			1	3	0	19.9	20.4	20.0	19.9	20.4	20.2
			1	5	0	19.8	20.4	20.0	19.8	20.2	20.3
			3	0	0	19.7	20.4	20.2	19.6	20.4	20.1
			3	1	0	19.7	20.4	20.2	19.7	20.4	20.2
			3	3	0	19.8	20.4	20.2	19.7	20.4	20.1
			6	0	0	19.2	19.8	19.7	19.3	19.8	19.7

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
			1	49	0		20.1			20.0	
			1	99	0		20.3			20.3	
			50	0	0		20.4			20.4	
			50	24	0		20.3			20.3	
			50	50	0		20.3			20.3	
			100	0	0		20.3			20.3	
		16QAM	1	0	0		20.8			20.7	
			1	49	0		20.7			20.5	
			1	99	0		20.8			20.7	
			50	0	0		20.4			20.4	
			50	24	0		20.4			20.3	
			50	50	0		20.3			20.3	
			100	0	0		20.3			20.3	
		64QAM	1	0	0		20.6			20.8	
			1	49	0		20.3			20.6	
			1	99	0		20.5			20.7	
			50	0	0		19.8			19.8	
			50	24	0		19.8			19.8	
			50	50	0		19.8			19.8	
			100	0	0		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)		
						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
			1	37	0	20.5	20.5	20.8	20.5	20.6	20.7
			1	74	0	20.3	20.3	20.4	20.3	20.3	20.5
			36	0	0	20.4	20.3	20.6	20.4	20.3	20.6
			36	20	0	20.3	20.3	20.6	20.3	20.3	20.5
			36	39	0	20.3	20.3	20.6	20.3	20.3	20.5
			75	0	0	20.4	20.4	20.6	20.4	20.4	20.6
		16QAM	1	0	0	20.8	20.7	20.1	20.7	20.8	20.7
			1	37	0	20.5	20.8	20.1	20.7	20.7	20.8
			1	74	0	20.7	20.6	20.5	20.6	20.7	20.7
			36	0	0	20.4	20.3	20.6	20.4	20.3	20.5
			36	20	0	20.3	20.3	20.5	20.4	20.3	20.5
			36	39	0	20.3	20.3	20.6	20.3	20.3	20.5
			75	0	0	20.4	20.3	20.5	20.4	20.4	20.6
		64QAM	1	0	0	20.7	20.6	20.8	20.6	20.5	20.8
			1	37	0	20.6	20.7	20.4	20.5	20.6	20.6
			1	74	0	20.6	20.6	20.7	20.5	20.5	20.6
			36	0	0	19.9	19.8	20.1	19.9	19.9	20.1
			36	20	0	19.9	19.8	20.0	19.8	19.8	20.1
			36	39	0	19.8	19.8	20.0	19.8	19.8	20.0
			75	0	0	19.9	19.9	20.1	19.9	19.8	20.1

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
			1	25	0	20.3	20.3	20.5	20.4	20.3	20.6
			1	49	0	20.3	20.3	20.5	20.4	20.3	20.6
			25	0	0	20.4	20.3	20.6	20.4	20.3	20.6
			25	12	0	20.4	20.3	20.5	20.4	20.3	20.6
			25	25	0	20.3	20.3	20.6	20.4	20.3	20.6
			50	0	0	20.4	20.3	20.6	20.5	20.3	20.6
		16QAM	1	0	0	20.5	20.6	20.6	20.6	20.5	20.6
			1	25	0	20.3	20.4	20.6	20.5	20.4	20.7
			1	49	0	20.5	20.6	20.8	20.6	20.7	20.6
			25	0	0	20.4	20.3	20.6	20.5	20.3	20.6
			25	12	0	20.5	20.3	20.6	20.4	20.3	20.6
			25	25	0	20.4	20.3	20.6	20.5	20.4	20.6
			50	0	0	20.4	20.3	20.6	20.4	20.3	20.6
		64QAM	1	0	0	20.6	20.8	20.8	20.6	20.5	20.8
			1	25	0	20.4	20.7	20.7	20.5	20.4	20.6
			1	49	0	20.7	20.8	20.8	20.7	20.6	20.8
			25	0	0	19.9	19.8	20.1	19.9	19.8	20.1
			25	12	0	19.9	19.8	20.1	19.9	19.8	20.1
			25	25	0	19.9	19.9	20.1	19.9	19.8	20.1
			50	0	0	19.9	19.8	20.1	19.9	19.8	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)		
						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	20.4	20.3	20.5	20.3	20.2	20.6
			1	12	0	20.3	20.2	20.5	20.3	20.2	20.6
			1	24	0	20.4	20.3	20.5	20.4	20.3	20.6
			12	0	0	20.4	20.3	20.5	20.4	20.3	20.6
			12	7	0	20.4	20.3	20.5	20.4	20.3	20.6
			12	13	0	20.3	20.3	20.5	20.4	20.3	20.5
			25	0	0	20.4	20.3	20.5	20.4	20.3	20.6
		16QAM	1	0	0	20.8	20.7	20.5	20.7	20.7	20.8
			1	12	0	20.8	20.8	20.6	20.6	20.6	20.6
			1	24	0	20.7	20.6	20.6	20.6	20.6	20.6
			12	0	0	20.3	20.3	20.6	20.4	20.3	20.6
			12	7	0	20.4	20.3	20.6	20.4	20.3	20.6
			12	13	0	20.4	20.3	20.6	20.4	20.3	20.6
			25	0	0	20.4	20.3	20.6	20.4	20.3	20.6
		64QAM	1	0	0	20.7	20.7	20.6	20.8	20.7	20.8
			1	12	0	20.6	20.7	20.8	20.6	20.7	20.8
			1	24	0	20.7	20.7	20.5	20.8	20.7	20.8
			12	0	0	19.9	19.8	20.1	19.9	19.9	20.1
			12	7	0	19.9	19.8	20.0	19.9	19.8	20.1
			12	13	0	19.9	19.8	20.0	19.9	19.8	20.1
			25	0	0	19.9	19.8	20.1	19.9	19.8	20.1

LTE Band 4 Measured Results (continued)

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Hotspot Back-off			Proximity sensor Back-off				
						Reduced. Meas. Avg Pwr (dBm)			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	20.4	20.4	20.5	20.5	20.3	20.6		
			1	8	0	20.6	20.1	20.8	20.7	20.6	20.8		
			1	14	0	20.5	20.3	20.5	20.5	20.4	20.6		
			8	0	0	20.4	20.3	20.5	20.4	20.3	20.5		
			8	4	0	20.3	20.3	20.5	20.4	20.3	20.5		
			8	7	0	20.3	20.3	20.5	20.4	20.3	20.5		
		16QAM	15	0	0	20.4	20.3	20.5	20.4	20.3	20.6		
			1	0	0	20.4	20.8	20.3	20.7	20.3	20.6		
			1	8	0	20.7	20.6	20.6	20.7	20.4	20.8		
			1	14	0	20.4	20.6	20.8	20.7	20.7	20.8		
			8	0	0	20.4	20.4	20.5	20.4	20.4	20.6		
			8	4	0	20.3	20.4	20.5	20.4	20.4	20.6		
		64QAM	8	7	0	20.4	20.4	20.5	20.4	20.4	20.6		
			15	0	0	20.5	20.4	20.5	20.4	20.3	20.6		
			1	0	0	20.7	20.5	20.7	20.5	20.5	20.6		
			1	8	0	20.6	20.6	20.2	20.7	20.7	20.6		
			1	14	0	20.6	20.6	20.7	20.6	20.7	20.7		
			8	0	0	19.9	19.8	20.1	19.9	19.9	20.1		
		LTE Band 4	1.4	QPSK	8	4	0	19.9	19.8	20.1	19.9	19.9	20.1
					8	7	0	19.9	19.8	20.1	19.9	19.9	20.1
					15	0	0	20.0	19.8	20.1	19.9	19.9	20.1
1	0				0	20.4	20.4	20.6	20.5	20.4	20.6		
1	3				0	20.4	20.3	20.4	20.4	20.3	20.4		
1	5				0	20.4	20.4	20.5	20.4	20.3	20.6		
16QAM	3			0	0	20.3	20.2	20.4	20.3	20.2	20.4		
	3			1	0	20.3	20.2	20.4	20.3	20.2	20.4		
	3			3	0	20.3	20.3	20.4	20.3	20.3	20.4		
	6			0	0	20.4	20.2	20.5	20.4	20.2	20.5		
	1			0	0	20.6	20.6	20.5	20.7	20.7	20.8		
	1			3	0	20.6	20.5	20.6	20.5	20.6	20.7		
64QAM	1			5	0	20.7	20.8	20.8	20.7	20.7	20.7		
	3			0	0	20.4	20.2	20.4	20.4	20.3	20.5		
	3			1	0	20.5	20.4	20.4	20.6	20.5	20.7		
	3			3	0	20.5	20.4	20.4	20.5	20.4	20.6		
	6			0	0	20.3	20.2	20.6	20.3	20.3	20.5		
	1			0	0	20.5	20.3	20.7	20.6	20.5	20.7		
QPSK	1			3	0	20.2	20.3	20.6	20.6	20.5	20.5		
	1			5	0	20.7	20.5	20.5	20.5	20.3	20.5		
	3			0	0	20.4	20.3	20.5	20.3	20.4	20.5		
	3	1	0	20.4	20.3	20.5	20.4	20.4	20.5				
	3	3	0	20.5	20.3	20.6	20.4	20.5	20.5				
	6	0	0	19.9	19.8	20.0	20.0	19.8	20.1				

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 7 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)		
						2510 MHz	2535 MHz	2560 MHz	2510 MHz	2535 MHz	2560 MHz
						LTE Band 7	20	QPSK	1	0	0
			1	49	0	20.0	19.6	19.7	19.9	19.7	19.7
			1	99	0	20.2	19.6	19.8	20.1	19.6	19.8
			50	0	0	20.3	19.8	19.9	20.1	19.7	19.9
			50	24	0	20.0	19.7	19.9	20.0	19.7	19.9
			50	50	0	20.0	19.7	19.9	20.0	19.6	19.8
			100	0	0	20.0	19.7	19.9	20.0	19.7	19.9
		16QAM	1	0	0	20.6	20.3	20.4	20.4	20.0	20.1
			1	49	0	20.1	20.0	20.2	20.1	19.8	19.9
			1	99	0	20.3	20.1	20.3	20.1	19.9	20.1
			50	0	0	20.1	19.7	19.9	20.1	19.7	19.8
			50	24	0	20.0	19.7	19.8	20.0	19.7	19.9
			50	50	0	20.0	19.7	19.8	20.0	19.7	19.8
			100	0	0	20.0	19.7	19.9	20.0	19.7	19.8
		64QAM	1	0	0	20.3	20.2	20.2	20.3	20.2	20.1
			1	49	0	20.0	19.9	19.9	20.1	20.0	19.8
			1	99	0	20.0	20.0	19.9	20.1	20.0	19.8
			50	0	0	20.0	19.7	19.9	20.1	19.7	19.9
			50	24	0	20.0	19.7	19.9	20.0	19.7	19.9
			50	50	0	19.9	19.7	19.9	20.0	19.6	19.8
			100	0	0	20.0	19.6	19.9	20.0	19.6	19.9
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)		
						2507.5 MHz	2535 MHz	2562.5 MHz	2507.5 MHz	2535 MHz	2562.5 MHz
						LTE Band 7	15	QPSK	1	0	0
			1	37	0	20.2	19.6	20.0	20.3	19.6	20.0
			1	74	0	19.9	19.6	19.8	19.9	19.6	19.9
			36	0	0	20.0	19.6	19.9	20.1	19.7	20.0
			36	20	0	20.0	19.7	19.9	20.0	19.7	19.9
			36	39	0	19.9	19.6	19.9	20.0	19.6	19.9
			75	0	0	20.1	19.7	19.9	20.0	19.6	19.9
		16QAM	1	0	0	20.5	20.0	20.2	20.4	20.0	20.3
			1	37	0	20.6	19.9	20.3	20.4	19.9	20.4
			1	74	0	20.3	19.9	20.1	20.3	19.9	20.2
			36	0	0	20.1	19.7	19.9	20.0	19.7	19.9
			36	20	0	20.0	19.6	19.8	20.0	19.6	19.9
			36	39	0	20.0	19.6	19.8	20.0	19.6	19.9
			75	0	0	20.1	19.7	19.8	20.1	19.6	19.9
		64QAM	1	0	0	20.2	20.0	20.3	20.4	20.0	20.3
			1	37	0	20.2	20.0	20.2	20.4	20.0	20.2
			1	74	0	20.0	19.7	20.2	20.2	19.9	20.2
			36	0	0	20.1	19.7	19.8	20.1	19.7	19.9
			36	20	0	20.0	19.7	19.8	20.1	19.7	19.9
			36	39	0	20.0	19.6	19.8	20.0	19.7	19.9
			75	0	0	20.1	19.6	19.8	20.1	19.7	19.9

LTE Band 7 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)		
						2505 MHz	2535 MHz	2565 MHz	2505 MHz	2535 MHz	2565 MHz
						LTE Band 7	10	QPSK	1	0	0
			1	25	0	20.1	19.5	19.8	20.1	19.5	19.8
			1	49	0	20.1	19.6	19.9	20.1	19.6	19.9
			25	0	0	20.2	19.7	19.9	20.1	19.7	19.9
			25	12	0	20.2	19.7	19.9	20.1	19.7	19.9
			25	25	0	20.1	19.7	19.8	20.1	19.7	19.9
			50	0	0	20.1	19.7	19.9	20.1	19.7	19.9
		16QAM	1	0	0	20.6	20.0	20.1	20.4	20.0	20.2
			1	25	0	20.5	19.8	19.9	20.4	19.7	19.9
			1	49	0	20.5	19.9	20.1	20.4	20.0	20.1
			25	0	0	20.2	19.7	19.9	20.2	19.7	19.9
			25	12	0	20.2	19.7	19.9	20.2	19.7	19.9
			25	25	0	20.2	19.7	19.9	20.2	19.7	19.9
			50	0	0	20.1	19.7	19.9	20.1	19.7	19.9
		64QAM	1	0	0	20.4	19.9	20.2	20.4	20.0	20.2
			1	25	0	20.3	19.8	20.0	20.3	19.8	20.0
			1	49	0	20.4	19.9	20.0	20.4	19.9	20.0
			25	0	0	20.2	19.7	19.9	20.2	19.7	19.9
			25	12	0	20.2	19.7	19.9	20.2	19.7	19.9
			25	25	0	20.2	19.7	19.9	20.2	19.7	19.9
			50	0	0	20.1	19.7	19.9	20.1	19.7	19.9
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)		
						2502.5 MHz	2535 MHz	2567.5 MHz	2502.5 MHz	2535 MHz	2567.5 MHz
LTE Band 7	5	QPSK	1	0	0	20.2	19.7	19.8	20.2	19.7	19.8
			1	12	0	20.3	19.9	19.9	20.3	19.7	19.7
			1	24	0	20.1	19.7	19.9	20.1	19.7	19.9
			12	0	0	20.1	19.7	19.9	20.1	19.7	19.9
			12	7	0	20.1	19.7	19.9	20.1	19.6	19.8
			12	13	0	20.1	19.6	19.9	20.1	19.7	19.9
			25	0	0	20.1	19.6	19.8	20.1	19.7	19.9
		16QAM	1	0	0	20.4	19.9	20.4	20.4	19.9	20.3
			1	12	0	20.3	19.9	20.4	20.4	20.0	20.3
			1	24	0	20.5	20.0	20.2	20.4	19.9	20.2
			12	0	0	20.3	19.7	19.9	20.3	19.8	19.9
			12	7	0	20.3	19.7	19.8	20.3	19.7	19.9
			12	13	0	20.3	19.7	19.8	20.3	19.7	19.8
			25	0	0	20.2	19.6	19.9	20.1	19.7	19.8
		64QAM	1	0	0	20.6	19.8	20.1	20.4	19.8	20.0
			1	12	0	20.4	19.9	19.7	20.3	19.7	19.8
			1	24	0	20.4	19.8	20.2	20.4	19.8	20.0
			12	0	0	20.1	19.7	19.9	20.1	19.6	19.9
			12	7	0	20.1	19.6	19.9	20.1	19.6	19.9
			12	13	0	20.2	19.7	19.9	20.1	19.6	19.9
			25	0	0	20.1	19.6	19.9	20.1	19.6	19.9

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
			1	49	0	19.2	19.6	19.3	19.3	19.6	19.4
			1	99	0	19.4	19.8	19.5	19.4	19.8	19.6
			50	0	0	19.5	19.9	19.7	19.5	19.9	19.7
			50	24	0	19.4	19.8	19.7	19.4	19.8	19.7
			50	50	0	19.4	19.8	19.6	19.4	19.8	19.6
			100	0	0	19.4	19.8	19.6	19.4	19.8	19.6
		16QAM	1	0	0	20.1	20.3	20.0	20.1	20.2	20.0
			1	49	0	19.8	20.1	19.7	19.6	19.9	19.8
			1	99	0	19.8	20.2	19.8	19.8	20.0	19.8
			50	0	0	19.5	19.9	19.7	19.5	19.9	19.7
			50	24	0	19.4	19.9	19.6	19.4	19.8	19.6
			50	50	0	19.3	19.8	19.6	19.3	19.8	19.6
			100	0	0	19.4	19.8	19.6	19.4	19.8	19.6
		64QAM	1	0	0	19.8	20.3	20.0	20.1	20.3	20.2
			1	49	0	19.5	20.1	19.8	19.9	20.2	20.0
			1	99	0	19.5	20.1	19.8	19.9	20.2	20.0
			50	0	0	19.4	19.9	19.7	19.5	19.9	19.8
			50	24	0	19.4	19.8	19.7	19.4	19.8	19.7
			50	50	0	19.3	19.8	19.6	19.4	19.8	19.6
			100	0	0	19.4	19.8	19.7	19.4	19.8	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	1882.5 MHz	1907.5 MHz	1857.5 MHz	1882.5 MHz	1907.5 MHz
						LTE Band 25	15	QPSK	1	0	0
			1	37	0	19.5	20.0	19.8	19.5	20.0	19.9
			1	74	0	19.3	19.8	19.5	19.3	19.8	19.6
			36	0	0	19.4	19.9	19.7	19.4	19.9	19.7
			36	20	0	19.4	19.8	19.6	19.4	19.8	19.6
			36	39	0	19.3	19.8	19.6	19.3	19.8	19.6
			75	0	0	19.4	19.9	19.7	19.4	19.9	19.7
		16QAM	1	0	0	19.7	20.2	20.1	19.7	20.2	20.1
			1	37	0	19.6	20.2	20.0	19.7	20.2	20.1
			1	74	0	19.5	20.1	19.9	19.5	20.1	19.9
			36	0	0	19.4	19.9	19.7	19.4	19.9	19.7
			36	20	0	19.3	19.8	19.6	19.4	19.8	19.6
			36	39	0	19.3	19.8	19.6	19.3	19.8	19.6
			75	0	0	19.4	19.8	19.7	19.4	19.8	19.7
		64QAM	1	0	0	19.8	20.0	20.1	19.6	20.2	20.2
			1	37	0	19.6	20.1	20.1	19.6	20.1	20.1
			1	74	0	19.6	19.9	19.8	19.4	20.0	20.0
			36	0	0	19.4	19.9	19.7	19.4	19.9	19.7
			36	20	0	19.4	19.8	19.6	19.4	19.9	19.7
			36	39	0	19.3	19.8	19.6	19.3	19.8	19.6
			75	0	0	19.4	19.8	19.7	19.4	19.9	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)		
						1855 MHz	1882.5 MHz	1910 MHz	1855 MHz	1882.5 MHz	1910 MHz
						LTE Band 25	10	QPSK	1	0	0
			1	25	0	19.3	19.8	19.6	19.3	19.8	19.6
			1	49	0	19.3	19.8	19.6	19.3	19.8	19.6
			25	0	0	19.3	19.8	19.6	19.3	19.8	19.6
			25	12	0	19.3	19.8	19.6	19.3	19.8	19.6
			25	25	0	19.3	19.8	19.6	19.3	19.8	19.6
			50	0	0	19.3	19.8	19.6	19.3	19.8	19.6
		16QAM	1	0	0	19.6	19.9	19.9	19.4	19.9	19.7
			1	25	0	19.3	19.7	19.6	19.2	19.7	19.5
			1	49	0	19.4	19.8	19.8	19.4	19.8	19.7
			25	0	0	19.3	19.8	19.7	19.3	19.8	19.6
			25	12	0	19.3	19.8	19.6	19.3	19.8	19.6
			25	25	0	19.3	19.8	19.6	19.3	19.8	19.5
			50	0	0	19.3	19.8	19.6	19.3	19.8	19.6
		64QAM	1	0	0	19.5	20.2	19.9	19.5	20.0	20.1
			1	25	0	19.3	20.1	19.7	19.3	19.8	19.8
			1	49	0	19.3	20.1	19.8	19.4	19.9	19.9
			25	0	0	19.3	19.9	19.6	19.4	19.8	19.6
			25	12	0	19.3	19.8	19.6	19.3	19.8	19.6
			25	25	0	19.3	19.8	19.6	19.3	19.8	19.6
			50	0	0	19.3	19.8	19.6	19.3	19.8	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)		
						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	19.2	19.8	19.5	19.3	19.8	19.5
			1	12	0	19.1	19.8	19.5	19.2	19.6	19.5
			1	24	0	19.2	19.8	19.5	19.3	19.8	19.6
			12	0	0	19.3	19.8	19.5	19.3	19.8	19.6
			12	7	0	19.2	19.8	19.5	19.3	19.8	19.5
			12	13	0	19.2	19.8	19.6	19.3	19.8	19.6
			25	0	0	19.2	19.8	19.5	19.3	19.8	19.5
		16QAM	1	0	0	19.6	20.2	20.0	19.6	20.3	19.9
			1	12	0	19.6	20.3	20.1	19.7	20.3	20.0
			1	24	0	19.4	20.1	20.0	19.5	20.2	19.8
			12	0	0	19.3	19.8	19.5	19.3	19.9	19.6
			12	7	0	19.2	19.8	19.5	19.3	19.8	19.5
			12	13	0	19.3	19.8	19.6	19.3	19.8	19.6
			25	0	0	19.2	19.8	19.6	19.3	19.8	19.6
		64QAM	1	0	0	19.7	20.2	19.7	19.8	20.1	20.0
			1	12	0	19.7	20.1	19.9	19.6	20.0	19.9
			1	24	0	19.5	20.1	19.8	19.6	20.1	19.9
			12	0	0	19.3	19.8	19.7	19.3	19.8	19.6
			12	7	0	19.3	19.8	19.6	19.3	19.9	19.6
			12	13	0	19.3	19.7	19.6	19.2	19.8	19.7
			25	0	0	19.3	19.8	19.6	19.2	19.8	19.6

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
			1	8	0	19.6	20.1	19.7	19.4	20.1	19.9
			1	14	0	19.2	19.9	19.7	19.3	19.9	19.7
			8	0	0	19.2	19.8	19.5	19.2	19.7	19.6
			8	4	0	19.2	19.7	19.5	19.2	19.8	19.6
			8	7	0	19.2	19.8	19.5	19.2	19.7	19.6
			15	0	0	19.2	19.8	19.5	19.2	19.8	19.6
		16QAM	1	0	0	19.4	19.8	19.5	19.3	19.8	20.0
			1	8	0	19.7	19.9	19.6	19.3	20.0	20.2
			1	14	0	19.5	19.9	19.8	19.5	20.1	20.0
			8	0	0	19.2	19.9	19.6	19.2	19.8	19.5
			8	4	0	19.2	19.8	19.5	19.2	19.8	19.5
			8	7	0	19.2	19.8	19.6	19.2	19.8	19.5
			15	0	0	19.3	19.8	19.5	19.2	19.8	19.6
		64QAM	1	0	0	19.6	20.3	19.9	19.3	19.8	19.7
			1	8	0	19.5	20.3	20.0	19.8	20.0	19.9
			1	14	0	19.6	20.2	20.1	19.7	19.9	19.7
			8	0	0	19.3	19.9	19.6	19.3	19.9	19.6
			8	4	0	19.2	19.8	19.6	19.3	19.9	19.6
			8	7	0	19.3	19.9	19.6	19.3	19.9	19.5
			15	0	0	19.3	19.8	19.6	19.3	19.8	19.5
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
			1	3	0	19.2	19.8	19.6	19.3	19.8	19.6
			1	5	0	19.2	19.8	19.5	19.2	19.9	19.6
			3	0	0	19.1	19.7	19.5	19.2	19.8	19.5
			3	1	0	19.2	19.7	19.5	19.2	19.7	19.5
			3	3	0	19.2	19.8	19.5	19.2	19.8	19.5
			6	0	0	19.2	19.7	19.5	19.2	19.8	19.5
		16QAM	1	0	0	19.5	20.1	19.8	19.4	20.2	19.8
			1	3	0	19.0	19.8	19.3	19.3	19.9	19.4
			1	5	0	19.4	19.8	19.8	19.3	20.1	19.5
			3	0	0	19.3	19.8	19.7	19.3	19.8	19.6
			3	1	0	19.3	19.8	19.6	19.2	19.7	19.5
			3	3	0	19.2	19.8	19.7	19.3	19.7	19.5
			6	0	0	19.3	19.9	19.7	19.3	19.9	19.7
		64QAM	1	0	0	19.4	19.9	19.6	19.7	19.9	19.8
			1	3	0	19.3	19.8	19.7	19.5	19.8	19.5
			1	5	0	19.3	20.0	19.6	19.6	20.0	19.6
			3	0	0	19.3	19.9	19.5	19.3	19.8	19.5
			3	1	0	19.4	19.9	19.6	19.3	19.9	19.5
			3	3	0	19.3	19.9	19.6	19.4	19.9	19.6
			6	0	0	19.2	19.8	19.6	19.3	19.9	19.5

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
			1	49	0	19.9	20.1	19.7	19.9	20.1	19.7
			1	99	0	19.9	20.1	19.9	19.9	20.1	19.9
			50	0	0	20.0	20.2	20.0	20.0	20.2	20.0
			50	24	0	20.0	20.1	20.0	20.0	20.2	20.0
			50	50	0	19.9	20.1	19.9	20.0	20.1	19.9
			100	0	0	20.0	20.1	20.0	20.0	20.1	20.0
		16QAM	1	0	0	20.4	20.6	20.4	20.4	20.5	20.4
			1	49	0	20.0	20.4	20.2	20.2	20.4	20.2
			1	99	0	20.2	20.4	20.3	20.3	20.4	20.3
			50	0	0	20.0	20.2	20.0	20.0	20.2	20.0
			50	24	0	20.0	20.2	19.9	20.0	20.2	19.9
			50	50	0	19.9	20.1	19.9	19.9	20.1	19.9
			100	0	0	19.9	20.2	19.9	19.9	20.2	19.9
		64QAM	1	0	0	20.5	20.5	20.4	20.4	20.3	20.3
			1	49	0	20.4	20.5	20.2	20.2	20.1	20.2
			1	99	0	20.3	20.6	20.3	20.3	20.3	20.2
			50	0	0	20.0	20.2	20.0	20.0	20.2	20.0
			50	24	0	20.0	20.2	20.0	20.0	20.2	20.0
			50	50	0	20.0	20.1	19.9	20.0	20.1	20.0
			100	0	0	19.9	20.1	19.9	19.9	20.1	19.9
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
			1	37	0	20.2	20.0	20.1	20.2	20.0	20.1
			1	74	0	19.9	20.1	19.9	19.9	20.1	19.8
			36	0	0	20.0	20.1	20.0	20.0	20.1	20.0
			36	20	0	20.0	20.1	19.9	20.0	20.1	19.9
			36	39	0	19.9	20.1	19.9	20.0	20.1	19.9
			75	0	0	20.0	20.2	20.0	20.0	20.2	20.0
		16QAM	1	0	0	20.4	20.5	20.3	20.6	20.5	20.2
			1	37	0	20.5	20.6	20.4	20.5	20.5	20.3
			1	74	0	20.3	20.4	20.2	20.4	20.4	20.1
			36	0	0	20.0	20.2	20.0	20.0	20.2	20.0
			36	20	0	20.0	20.2	19.9	20.0	20.1	19.9
			36	39	0	20.0	20.1	19.9	20.0	20.1	19.9
			75	0	0	20.0	20.2	20.0	20.0	20.2	20.0
		64QAM	1	0	0	20.1	20.5	20.3	20.3	20.5	20.4
			1	37	0	20.1	20.5	20.3	20.4	20.5	20.4
			1	74	0	19.9	20.4	20.1	20.2	20.4	20.2
			36	0	0	20.0	20.2	19.9	20.1	20.2	19.9
			36	20	0	20.0	20.2	19.9	20.0	20.2	19.9
			36	39	0	20.0	20.1	19.8	20.0	20.2	19.8
			75	0	0	20.0	20.2	20.0	20.0	20.2	20.0

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
			1	25	0	19.9	20.0	19.9	19.9	20.1	19.9
			1	49	0	20.0	20.1	19.9	19.9	20.1	19.9
			25	0	0	20.0	20.2	19.9	20.0	20.2	20.0
			25	12	0	20.0	20.2	19.9	20.0	20.2	19.9
			25	25	0	20.0	20.2	19.9	20.0	20.2	19.9
			50	0	0	20.0	20.1	19.9	20.0	20.2	19.9
		16QAM	1	0	0	20.2	20.6	20.1	20.5	20.3	20.3
			1	25	0	20.1	20.3	19.9	20.2	20.1	20.2
			1	49	0	20.2	20.6	20.1	20.3	20.3	20.2
			25	0	0	20.1	20.2	20.0	20.1	20.3	20.0
			25	12	0	20.1	20.2	20.0	20.1	20.3	20.0
			25	25	0	20.1	20.2	20.0	20.1	20.3	20.0
			50	0	0	20.0	20.2	19.9	20.0	20.2	19.9
		64QAM	1	0	0	20.4	20.4	20.3	20.2	20.2	20.1
			1	25	0	20.3	20.2	20.0	20.1	20.1	19.9
			1	49	0	20.4	20.3	20.1	20.2	20.3	20.0
			25	0	0	20.1	20.2	20.0	20.1	20.2	20.0
			25	12	0	20.1	20.2	20.0	20.1	20.2	20.0
			25	25	0	20.1	20.2	20.0	20.1	20.2	19.9
			50	0	0	20.0	20.2	19.9	20.0	20.2	19.9
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	20.0	20.1	19.9	20.0	20.1	19.9
			1	12	0	20.1	20.3	19.8	20.0	20.1	20.1
			1	24	0	20.0	20.2	19.9	20.0	20.1	19.9
			12	0	0	20.0	20.1	19.9	20.0	20.1	19.9
			12	7	0	20.0	20.1	19.9	20.0	20.1	19.9
			12	13	0	20.0	20.1	19.9	20.0	20.1	19.9
			25	0	0	20.0	20.1	19.9	20.0	20.1	19.9
		16QAM	1	0	0	20.5	20.3	20.4	20.4	20.5	20.2
			1	12	0	20.2	20.3	20.4	20.4	20.5	20.0
			1	24	0	20.5	20.4	20.2	20.4	20.5	20.3
			12	0	0	20.1	20.2	19.9	20.1	20.1	19.9
			12	7	0	20.1	20.2	19.9	20.1	20.1	20.0
			12	13	0	20.1	20.1	19.9	20.1	20.1	20.0
			25	0	0	20.0	20.2	19.9	20.0	20.1	19.9
		64QAM	1	0	0	20.1	20.4	20.1	20.2	20.3	20.2
			1	12	0	20.2	20.3	20.0	20.2	20.2	19.8
			1	24	0	20.2	20.5	20.0	20.3	20.4	20.1
			12	0	0	19.9	20.2	19.9	20.0	20.1	19.9
			12	7	0	20.0	20.1	19.9	20.0	20.1	19.8
			12	13	0	20.0	20.2	19.9	20.0	20.1	19.9
			25	0	0	20.0	20.1	19.9	20.0	20.1	19.8

LTE Band 66 Measured Results (continued)

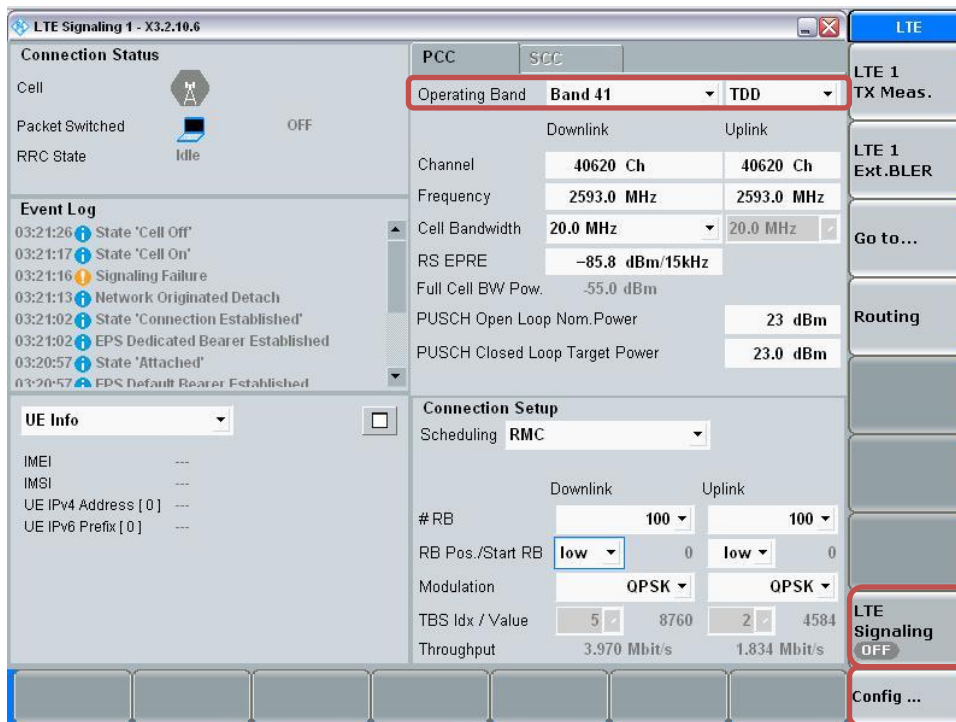
Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Hotspot Back-off Reduced. Meas. Avg Pwr (dBm)			Proximity sensor Back-off Reduced. Meas. Avg Pwr (dBm)		
						1711.5 MHz	1745 MHz	1778.5 MHz	1711.5 MHz	1745 MHz	1778.5 MHz
						LTE Band 66	3	QPSK	1	0	0
			1	8	0	20.4	20.0	20.1	20.4	20.0	20.1
			1	14	0	20.1	20.1	19.9	20.1	20.1	19.9
			8	0	0	20.0	20.1	19.8	20.0	20.1	19.8
			8	4	0	19.9	20.1	19.8	19.9	20.1	19.8
			8	7	0	20.0	20.1	19.8	20.0	20.1	19.8
			15	0	0	20.0	20.1	19.8	20.0	20.1	19.8
		16QAM	1	0	0	20.2	20.5	20.0	20.5	20.4	20.1
			1	8	0	20.7	20.3	20.1	20.5	20.5	20.1
			1	14	0	20.3	20.4	19.9	20.4	20.5	20.0
			8	0	0	20.1	20.2	19.8	20.0	20.2	19.8
			8	4	0	20.0	20.2	19.9	20.0	20.2	19.8
			8	7	0	20.0	20.2	19.8	20.0	20.2	19.8
			15	0	0	20.0	20.1	19.8	20.0	20.1	19.8
		64QAM	1	0	0	20.2	20.4	20.2	20.0	20.5	19.7
			1	8	0	20.5	20.6	19.7	20.3	20.4	19.8
			1	14	0	20.4	20.3	20.1	20.3	20.5	19.8
			8	0	0	20.0	20.1	19.8	20.0	20.1	19.8
			8	4	0	20.0	20.1	19.8	20.0	20.1	19.8
			8	7	0	20.0	20.1	19.8	20.0	20.1	19.8
			15	0	0	20.0	20.1	19.8	20.0	20.1	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)		
						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
			1	3	0	20.0	20.2	20.1	20.0	20.1	20.0
			1	5	0	20.1	20.2	20.2	20.0	20.2	20.1
			3	0	0	20.0	20.0	20.0	19.9	20.1	20.0
			3	1	0	20.0	20.0	20.0	19.8	20.1	20.0
			3	3	0	20.0	20.1	20.0	19.9	20.1	20.0
			6	0	0	20.0	20.1	20.1	20.0	20.1	20.1
		16QAM	1	0	0	20.3	20.6	20.4	20.2	20.4	20.5
			1	3	0	20.2	20.6	20.1	20.1	20.1	20.5
			1	5	0	20.2	20.6	20.3	20.1	20.3	20.4
			3	0	0	20.1	20.2	20.0	20.0	20.1	20.1
			3	1	0	20.1	20.3	20.0	19.8	20.1	20.2
			3	3	0	20.1	20.3	20.0	20.0	20.1	20.2
			6	0	0	20.1	20.1	20.3	20.1	20.2	20.1
		64QAM	1	0	0	20.0	20.6	20.4	20.2	20.5	20.5
			1	3	0	19.9	20.2	20.5	20.3	20.5	20.2
			1	5	0	20.2	20.4	20.3	20.0	20.4	20.5
			3	0	0	19.9	20.0	20.2	20.1	20.3	20.1
			3	1	0	19.9	20.1	20.3	20.1	20.3	20.1
			3	3	0	20.0	20.2	20.3	20.1	20.3	20.2
			6	0	0	20.0	20.2	20.1	20.1	20.1	20.1

LTE Band TDD Measured Results

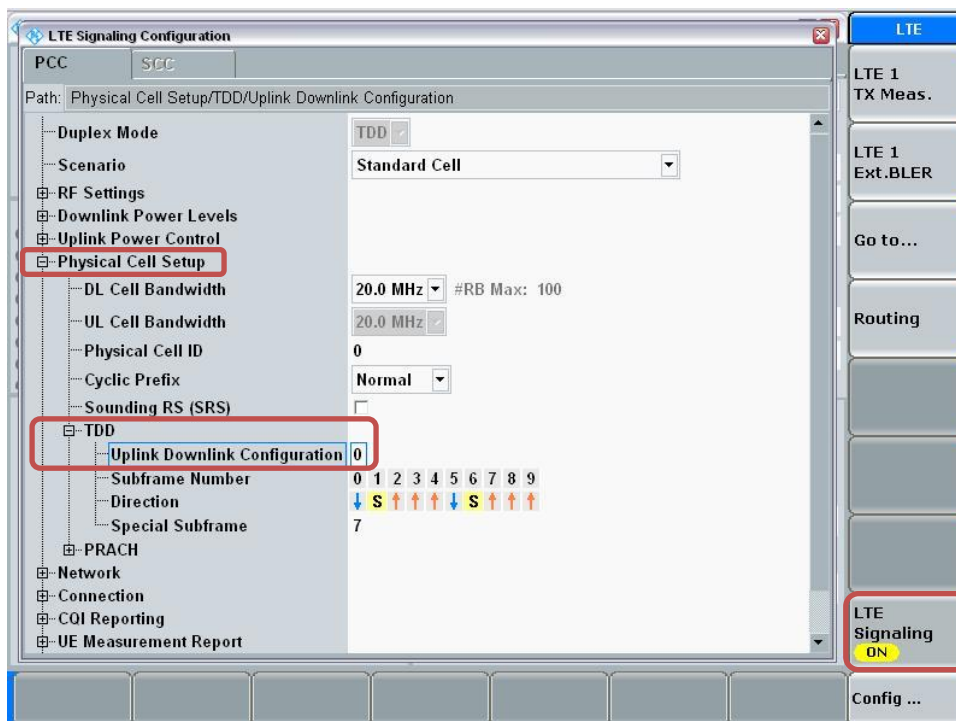
Procedure used to establish SAR test signal for LTE TDD Band

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...”

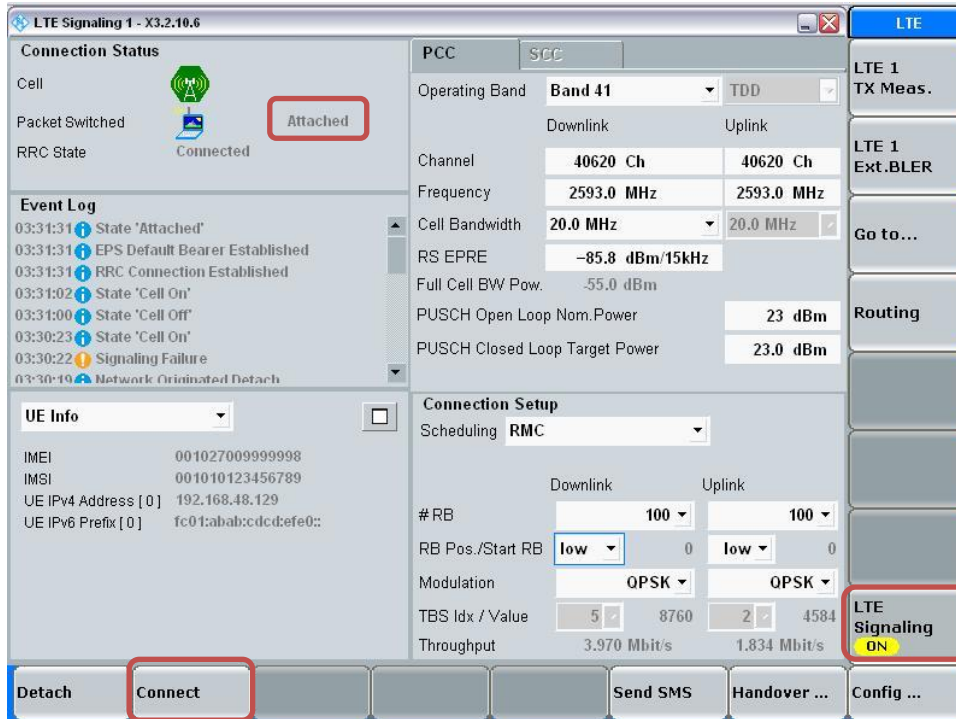


- Go to “Physical Cell Setup”
- Select “TDD” and Set “Uplink Downlink Configuration” to “0”
- Turn the cell on using “ON | OFF” key



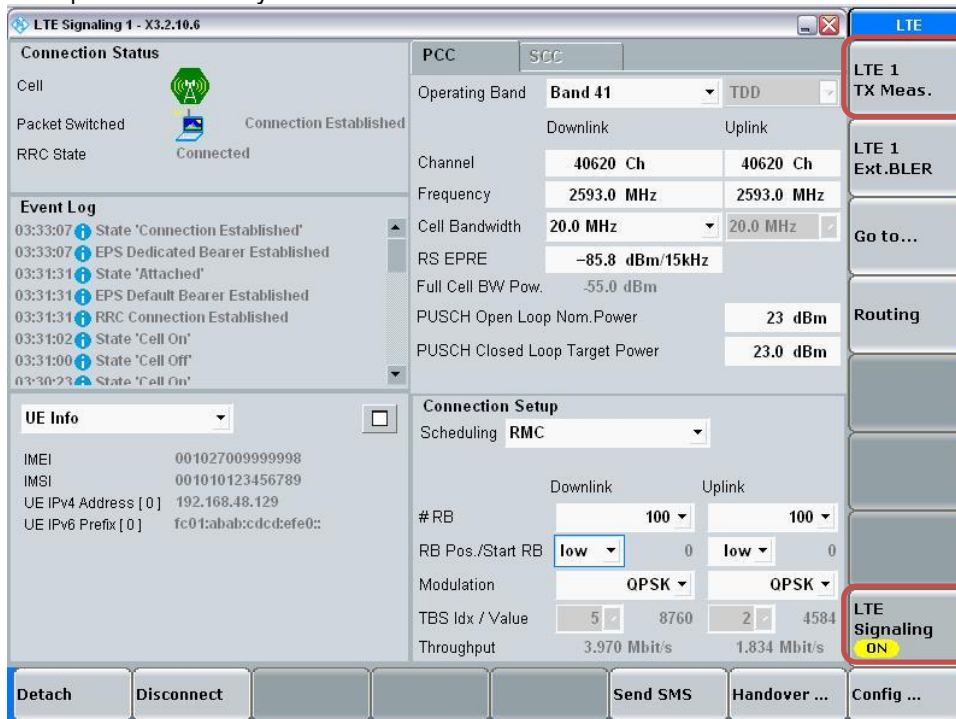
Connect to EUT

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

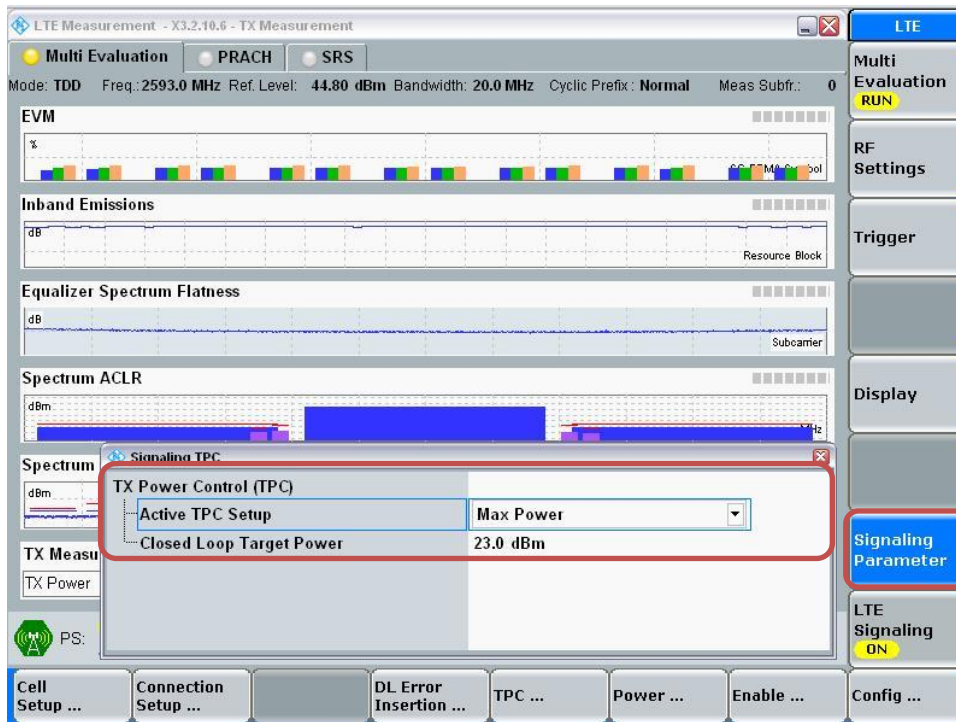


Max Power Setting

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

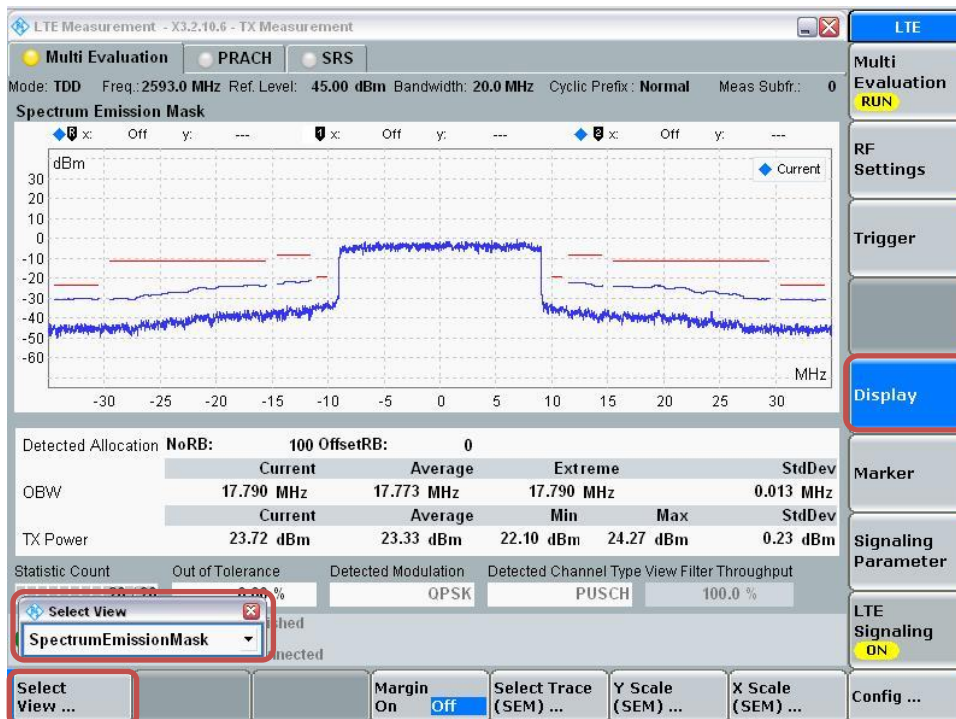


- Select “Signaling Parameter”
- Select “TX Power Control (TPC)” > Select “Active TPC Setup” to “Max Power” > Set “Closed Loop Target Power” to “23 dBm”



View TX Power

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



Max power Results

LTE Band 38 Measured Results

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Meas. Avg Pwr (dBm)		
						2580 MHz	2595 MHz	2610 MHz
LTE Band 38	20	QPSK	1	0	0	22.7	23.0	23.2
			1	49	0	22.8	22.8	23.0
			1	99	0	22.9	22.8	22.9
			50	0	1	21.8	21.9	22.0
			50	24	1	21.7	21.8	22.0
			50	50	1	21.7	21.8	21.9
		16QAM	100	0	1	21.7	21.8	22.0
			1	0	1	21.9	21.9	21.9
			1	49	1	21.7	22.0	21.8
			1	99	1	21.8	21.9	21.7
			50	0	2	20.7	20.9	21.0
			50	24	2	20.7	20.8	21.0
		64QAM	50	50	2	20.7	20.8	20.9
			100	0	2	20.7	20.8	21.0
			1	0	2	21.0	21.0	21.3
			1	49	2	20.9	20.8	20.7
			1	99	2	20.5	20.4	20.7
			50	0	3	19.7	19.8	20.0
LTE Band 38	15	QPSK	50	24	3	19.7	19.8	19.9
			50	50	3	19.7	19.7	19.9
			100	0	3	19.7	19.8	19.9
			1	0	0	22.8	22.9	23.0
			1	37	0	22.6	22.8	22.9
			1	74	0	22.6	22.8	22.9
		16QAM	36	0	1	21.7	21.8	22.0
			36	20	1	21.7	21.8	21.9
			36	39	1	21.7	21.7	21.9
			75	0	1	21.7	21.8	22.0
			1	0	1	22.1	21.9	22.0
			1	37	1	21.4	21.3	21.9
		64QAM	1	74	1	21.7	21.6	22.3
			36	0	2	20.7	20.8	20.9
			36	20	2	20.6	20.7	20.8
			36	39	2	20.6	20.7	20.9
			75	0	2	20.7	20.8	21.0
			1	0	2	20.9	20.9	21.1
64QAM	1	37	2	20.7	20.5	20.5		
	1	74	2	20.5	20.8	20.9		
	36	0	3	19.6	19.7	19.9		
	36	20	3	19.6	19.6	19.8		
	36	39	3	19.5	19.6	19.8		
	75	0	3	19.7	19.8	19.9		

LTE Band 38 Measured Results (continued)

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Meas. Avg Pwr (dBm)		
						2575 MHz	2595 MHz	2615 MHz
LTE Band 38	10	QPSK	1	0	0	22.7	22.8	23.0
			1	25	0	22.6	22.6	22.8
			1	49	0	22.6	22.7	22.8
			25	0	1	21.7	21.8	22.0
			25	12	1	21.7	21.8	21.9
			25	25	1	21.7	21.7	21.9
			50	0	1	21.7	21.8	22.0
		16QAM	1	0	1	21.9	22.0	22.2
			1	25	1	21.7	21.8	22.0
			1	49	1	21.9	21.9	22.1
			25	0	2	20.7	20.8	21.0
			25	12	2	20.7	20.8	21.0
			25	25	2	20.7	20.8	20.9
			50	0	2	20.7	20.8	20.9
		64QAM	1	0	2	20.6	20.8	21.0
			1	25	2	20.4	20.7	20.8
			1	49	2	20.5	20.7	20.9
			25	0	3	19.7	19.8	20.0
			25	12	3	19.7	19.8	20.0
			25	25	3	19.6	19.7	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)		
LTE Band 38	5	QPSK	1	0	0	22.8	22.8	23.0
			1	12	0	22.7	22.7	22.9
			1	24	0	22.7	22.8	23.0
			12	0	1	21.7	21.8	22.0
			12	7	1	21.7	21.7	22.0
			12	13	1	21.7	21.7	22.0
			25	0	1	21.7	21.7	22.0
		16QAM	1	0	1	21.6	21.7	21.9
			1	12	1	21.5	21.5	21.7
			1	24	1	21.6	21.6	21.9
			12	0	2	20.6	20.7	21.0
			12	7	2	20.6	20.7	21.0
			12	13	2	20.6	20.7	21.0
			25	0	2	20.6	20.7	21.0
		64QAM	1	0	2	20.7	20.8	20.9
			1	12	2	20.6	20.6	20.8
			1	24	2	20.6	20.7	20.9
			12	0	3	19.7	19.8	20.0
			12	7	3	19.7	19.8	20.0
			12	13	3	19.7	19.8	20.0
			25	0	3	19.7	19.8	20.0

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
			1	49	0	23.1	22.7	22.8	23.1	23.0
			1	99	0	22.9	22.7	22.8	23.1	22.9
			50	0	1	22.2	21.7	21.9	22.1	22.1
			50	24	1	22.1	21.7	21.8	22.1	22.1
			50	50	1	22.0	21.6	21.8	22.0	22.0
			100	0	1	22.0	21.7	21.8	22.1	22.0
		16QAM	1	0	1	22.2	22.0	21.8	22.2	22.4
			1	49	1	22.3	21.7	22.1	22.4	22.0
			1	99	1	22.1	21.7	21.7	21.9	21.9
			50	0	2	21.0	20.7	20.9	21.1	21.0
			50	24	2	21.0	20.7	20.8	21.1	21.0
			50	50	2	21.0	20.6	20.8	21.0	20.9
			100	0	2	21.0	20.6	20.8	21.0	21.0
		64QAM	1	0	2	21.1	20.6	20.8	21.2	21.4
			1	49	2	21.0	20.5	20.7	21.0	21.3
			1	99	2	20.9	21.0	20.8	21.0	21.0
			50	0	3	20.0	19.7	19.8	20.0	20.0
			50	24	3	20.0	19.6	19.7	20.0	19.9
			50	50	3	20.0	19.6	19.7	19.9	19.9
			100	0	3	20.0	19.6	19.8	20.0	19.9
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
			1	37	0	23.0	22.6	22.9	23.0	23.1
			1	74	0	23.0	22.6	22.7	23.0	22.9
			36	0	1	22.1	21.7	21.9	22.1	22.1
			36	20	1	22.0	21.7	21.8	22.1	22.0
			36	39	1	22.0	21.6	21.8	22.1	22.0
			75	0	1	22.1	21.7	21.9	22.1	22.1
		16QAM	1	0	1	22.0	21.7	22.0	22.2	22.2
			1	37	1	21.8	21.6	21.6	22.0	21.7
			1	74	1	22.1	21.8	21.9	21.8	22.0
			36	0	2	21.0	20.6	20.8	21.0	21.0
			36	20	2	21.0	20.6	20.7	21.0	20.9
			36	39	2	21.0	20.6	20.7	21.0	20.9
			75	0	2	21.1	20.7	20.9	21.1	21.1
		64QAM	1	0	2	21.3	20.9	21.0	21.2	21.2
			1	37	2	21.0	20.8	20.7	21.0	20.9
			1	74	2	21.2	20.1	20.7	20.8	20.9
			36	0	3	20.0	19.6	19.7	20.0	19.9
			36	20	3	19.9	19.5	19.7	20.0	19.9
			36	39	3	19.9	19.5	19.7	20.0	19.9
			75	0	3	20.0	19.7	19.8	20.1	19.9

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	23.1	22.7	22.8	23.1	23.1
			1	25	0	22.9	22.5	22.6	23.0	22.9
			1	49	0	23.0	22.6	22.7	23.0	23.0
			25	0	1	22.1	21.7	21.8	22.1	22.0
			25	12	1	22.0	21.7	21.8	22.1	22.0
			25	25	1	22.0	21.7	21.8	22.0	22.0
			50	0	1	22.0	21.7	21.8	22.0	22.0
		16QAM	1	0	1	22.1	21.8	22.0	22.2	22.2
			1	25	1	21.9	21.7	21.8	22.1	22.0
			1	49	1	22.1	21.7	21.9	22.1	22.1
			25	0	2	21.1	20.7	20.9	21.1	21.0
			25	12	2	21.0	20.7	20.8	21.1	21.0
			25	25	2	21.0	20.7	20.8	21.0	21.0
			50	0	2	21.0	20.7	20.8	21.0	21.0
		64QAM	1	0	2	21.0	20.6	20.7	21.0	21.1
			1	25	2	20.9	20.4	20.5	20.8	21.0
			1	49	2	21.0	20.6	20.6	20.9	21.1
			25	0	3	20.1	19.7	19.8	20.1	20.0
			25	12	3	20.0	19.7	19.8	20.0	20.0
			25	25	3	20.0	19.6	19.8	20.0	20.0
			50	0	3	20.0	19.6	19.7	20.0	20.0
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	23.1	22.7	22.8	23.1	23.1
			1	12	0	23.0	22.6	22.7	23.0	23.0
			1	24	0	23.1	22.7	22.8	23.0	23.0
			12	0	1	22.1	21.7	21.8	22.1	22.0
			12	7	1	22.0	21.7	21.8	22.0	22.0
			12	13	1	22.0	21.7	21.8	22.1	22.0
			25	0	1	22.0	21.7	21.8	22.1	22.0
		16QAM	1	0	1	22.1	21.7	21.8	22.1	22.1
			1	12	1	21.9	21.6	21.6	21.9	22.0
			1	24	1	22.1	21.7	21.6	22.0	22.0
			12	0	2	21.0	20.6	20.7	21.0	21.0
			12	7	2	20.9	20.6	20.7	21.0	20.9
			12	13	2	20.9	20.6	20.7	21.0	20.9
			25	0	2	21.0	20.6	20.7	21.0	21.0
		64QAM	1	0	2	21.1	20.6	20.6	21.0	21.1
			1	12	2	21.0	20.5	20.5	20.8	21.0
			1	24	2	21.1	20.6	20.6	20.9	21.1
			12	0	3	20.0	19.7	19.8	20.1	19.9
			12	7	3	20.0	19.7	19.8	20.1	19.9
			12	13	3	20.0	19.7	19.8	20.1	19.9
			25	0	3	20.0	19.7	19.8	20.0	19.9

Reduced power Results

LTE Band 38 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)		
						2580 MHz	2595 MHz	2610 MHz	2580 MHz	2595 MHz	2610 MHz
						LTE Band 38	20	QPSK	1	0	0
			1	49	0	19.7	19.8	19.9	19.7	19.8	20.0
			1	99	0	19.9	19.7	19.8	19.8	19.7	19.8
			50	0	0	20.3	20.3	20.5	20.3	20.3	20.5
			50	24	0	20.2	20.3	20.5	20.2	20.3	20.4
			50	50	0	20.2	20.2	20.4	20.2	20.3	20.4
			100	0	0	20.2	20.4	20.4	20.2	20.3	20.3
		16QAM	1	0	0	19.8	19.8	20.2	20.0	19.9	19.9
			1	49	0	19.7	19.9	20.1	19.8	19.8	19.7
			1	99	0	19.7	19.9	19.9	19.9	19.8	19.8
			50	0	0	20.2	20.3	20.5	20.2	20.3	20.5
			50	24	0	20.2	20.3	20.4	20.2	20.3	20.5
			50	50	0	20.2	20.2	20.4	20.2	20.3	20.4
			100	0	0	20.2	20.3	20.4	20.2	20.3	20.4
		64QAM	1	0	0	19.8	19.8	20.1	19.8	20.1	20.1
			1	49	0	19.7	19.7	19.7	19.5	19.5	19.8
			1	99	0	19.7	19.6	19.6	19.5	19.9	19.8
			50	0	0	19.7	19.9	19.9	19.7	19.8	19.9
			50	24	0	19.7	19.8	19.9	19.6	19.8	19.9
			50	50	0	19.6	19.8	19.9	19.6	19.7	19.9
			100	0	0	19.6	19.8	19.9	19.7	19.7	19.9
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)		
						2577.5 MHz	2595 MHz	2612.5 MHz	2577.5 MHz	2595 MHz	2612.5 MHz
						LTE Band 38	15	QPSK	1	0	0
			1	37	0	19.6	19.7	19.9	19.6	19.6	19.9
			1	74	0	19.6	19.6	19.8	19.5	19.7	19.8
			36	0	0	20.2	20.3	20.5	20.2	20.3	20.5
			36	20	0	20.2	20.3	20.4	20.2	20.3	20.4
			36	39	0	20.1	20.2	20.4	20.1	20.2	20.4
			75	0	0	20.2	20.3	20.5	20.2	20.3	20.5
		16QAM	1	0	0	20.2	20.3	20.1	20.2	19.9	20.1
			1	37	0	19.9	19.5	19.8	19.5	19.7	20.0
			1	74	0	19.6	19.5	19.9	19.6	20.2	19.9
			36	0	0	20.2	20.3	20.4	20.1	20.3	20.4
			36	20	0	20.2	20.2	20.4	20.1	20.2	20.3
			36	39	0	20.0	20.2	20.4	20.1	20.2	20.4
			75	0	0	20.2	20.3	20.5	20.2	20.3	20.5
		64QAM	1	0	0	19.6	20.1	20.1	19.7	20.0	20.3
			1	37	0	19.5	19.7	19.7	19.7	19.7	19.8
			1	74	0	19.8	20.0	20.3	19.7	20.0	20.0
			36	0	0	19.6	19.7	19.9	19.6	19.7	19.9
			36	20	0	19.6	19.7	19.8	19.6	19.7	19.8
			36	39	0	19.6	19.6	19.8	19.6	19.7	19.8
			75	0	0	19.7	19.8	19.9	19.7	19.8	20.0

LTE Band 38 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)		
						2575 MHz	2595 MHz	2615 MHz	2575 MHz	2595 MHz	2615 MHz
						LTE Band 38	10	QPSK	1	0	0
			1	25	0	19.5	19.6	19.8	19.5	19.6	19.8
			1	49	0	19.5	19.7	19.8	19.5	19.6	19.8
			25	0	0	20.2	20.3	20.5	20.2	20.3	20.5
			25	12	0	20.2	20.2	20.4	20.2	20.3	20.4
			25	25	0	20.1	20.2	20.4	20.1	20.2	20.4
			50	0	0	20.2	20.2	20.5	20.2	20.3	20.4
		16QAM	1	0	0	19.9	19.8	20.1	19.8	19.9	20.1
			1	25	0	19.7	19.6	20.0	19.6	19.8	20.0
			1	49	0	19.8	19.7	20.0	19.7	19.9	20.0
			25	0	0	20.2	20.3	20.5	20.2	20.3	20.5
			25	12	0	20.2	20.2	20.5	20.2	20.3	20.4
			25	25	0	20.2	20.2	20.4	20.2	20.3	20.4
			50	0	0	20.2	20.3	20.4	20.2	20.2	20.4
		64QAM	1	0	0	19.7	19.7	20.0	19.6	19.7	19.9
			1	25	0	19.5	19.5	19.8	19.4	19.5	19.7
			1	49	0	19.7	19.6	19.9	19.5	19.6	19.8
			25	0	0	19.7	19.8	20.0	19.7	19.8	20.0
			25	12	0	19.7	19.8	19.9	19.7	19.7	19.9
			25	25	0	19.6	19.7	19.9	19.6	19.7	19.9
			50	0	0	19.7	19.7	19.9	19.7	19.7	19.9
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)		
						2572.5 MHz	2595 MHz	2617.5 MHz	2572.5 MHz	2595 MHz	2617.5 MHz
LTE Band 38	5	QPSK	1	0	0	19.7	19.8	20.0	19.7	19.8	20.0
			1	12	0	19.6	19.7	19.9	19.6	19.7	19.9
			1	24	0	19.7	19.7	19.9	19.6	19.7	19.9
			12	0	0	20.2	20.2	20.5	20.2	20.2	20.5
			12	7	0	20.2	20.2	20.5	20.2	20.2	20.5
			12	13	0	20.2	20.2	20.5	20.2	20.2	20.5
			25	0	0	20.1	20.2	20.5	20.2	20.2	20.5
		16QAM	1	0	0	19.7	19.7	20.1	19.7	19.7	20.1
			1	12	0	19.5	19.6	20.0	19.6	19.5	20.0
			1	24	0	19.6	19.7	20.1	19.6	19.6	20.1
			12	0	0	20.1	20.1	20.5	20.1	20.2	20.5
			12	7	0	20.1	20.2	20.5	20.1	20.1	20.5
			12	13	0	20.1	20.1	20.5	20.1	20.2	20.5
			25	0	0	20.1	20.2	20.4	20.1	20.2	20.4
		64QAM	1	0	0	19.7	19.8	20.0	19.6	19.7	20.1
			1	12	0	19.5	19.6	19.9	19.5	19.6	20.0
			1	24	0	19.6	19.7	20.0	19.5	19.6	20.1
			12	0	0	19.7	19.8	20.0	19.7	19.8	20.0
			12	7	0	19.7	19.8	20.0	19.7	19.8	20.0
			12	13	0	19.7	19.7	20.0	19.7	19.8	20.0
			25	0	0	19.7	19.7	20.0	19.7	19.7	20.0

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		
																2506 MHz	2549.5 MHz
LTE Band 41	20	QPSK	1	0	0	20.2	19.7	19.9	20.2	20.2	20.2	19.7	19.8	20.2	20.2		
			1	49	0	20.0	19.7	19.8	20.0	20.0	19.9	19.6	19.9	20.0	20.0		
			1	99	0	19.9	19.5	19.7	19.9	19.9	20.0	19.5	19.7	20.0	19.8		
			50	0	0	20.7	20.2	20.4	20.6	20.6	20.7	20.2	20.4	20.6	20.6		
			50	24	0	20.5	20.2	20.3	20.6	20.5	20.5	20.2	20.3	20.6	20.5		
		16QAM	50	50	0	20.5	20.1	20.3	20.5	20.5	20.5	20.1	20.3	20.5	20.5		
			100	0	0	20.5	20.2	20.3	20.6	20.5	20.5	20.2	20.3	20.6	20.5		
			1	0	0	20.3	19.8	19.9	20.0	20.5	20.2	20.0	19.9	20.6	20.1		
			1	49	0	19.9	19.7	20.1	20.2	20.1	20.2	19.7	19.7	20.0	20.0		
			1	99	0	20.0	19.7	19.7	20.2	20.0	19.8	19.8	20.1	20.1	20.3		
		64QAM	50	0	0	20.6	20.2	20.3	20.6	20.5	20.5	20.2	20.4	20.6	20.5		
			50	24	0	20.5	20.1	20.2	20.5	20.5	20.5	20.1	20.3	20.6	20.5		
			50	50	0	20.5	20.1	20.3	20.5	20.4	20.4	20.1	20.3	20.5	20.5		
			100	0	0	20.5	20.1	20.3	20.5	20.5	20.5	20.2	20.3	20.6	20.5		
			1	0	0	20.4	19.7	19.9	20.0	20.3	20.0	19.8	19.8	20.1	20.1		
		64QAM	1	49	0	20.3	19.8	19.6	19.8	19.9	19.9	19.6	19.8	20.0	20.1		
			1	99	0	20.2	19.6	20.0	20.1	20.4	20.0	19.7	19.8	19.9	20.2		
			50	0	0	20.0	19.7	19.8	20.1	20.1	20.0	19.7	19.8	20.1	20.0		
			50	24	0	20.0	19.7	19.7	20.0	20.0	20.0	19.6	19.7	20.0	19.9		
			50	50	0	19.9	19.6	19.7	20.0	20.0	20.0	19.6	19.7	20.0	19.9		
			100	0	0	20.0	19.6	19.7	20.0	20.0	20.0	19.6	19.8	20.0	20.0		
			100	0	0	20.0	19.6	19.7	20.0	20.0	20.0	19.6	19.8	20.0	20.0		
		LTE Band 41	15	QPSK	1	0	0	20.1	19.7	19.9	20.1	20.1	20.1	19.7	19.8	20.2	20.1
					1	37	0	20.0	19.6	19.7	20.1	19.9	20.1	19.6	19.7	20.0	20.0
1	74				0	20.0	19.5	19.7	19.9	19.9	19.9	19.6	19.7	20.0	19.9		
36	0				0	20.6	20.2	20.4	20.6	20.6	20.6	20.2	20.4	20.6	20.6		
36	20				0	20.5	20.2	20.3	20.6	20.5	20.5	20.1	20.3	20.6	20.5		
36	39				0	20.5	20.1	20.3	20.5	20.5	20.5	20.1	20.3	20.5	20.5		
75	0				0	20.6	20.2	20.4	20.6	20.6	20.6	20.2	20.4	20.6	20.6		
16QAM	1			0	0	19.8	19.7	20.0	20.7	20.2	20.3	20.2	19.9	19.8	20.0		
	1			37	0	19.6	19.6	19.7	20.4	19.9	19.9	19.2	19.7	19.9	20.0		
	1			74	0	20.2	19.8	19.8	20.0	20.2	20.2	19.7	19.4	20.1	20.0		
	36			0	0	20.5	20.2	20.3	20.5	20.5	20.5	20.1	20.3	20.5	20.5		
	36			20	0	20.5	20.1	20.2	20.5	20.4	20.5	20.2	20.3	20.5	20.4		
	36			39	0	20.4	20.1	20.2	20.5	20.4	20.5	20.1	20.2	20.5	20.4		
	75			0	0	20.6	20.2	20.4	20.6	20.5	20.6	20.2	20.3	20.6	20.6		
64QAM	1			0	0	20.4	19.8	19.7	20.1	20.1	20.2	19.8	19.8	20.2	20.3		
	1			37	0	19.9	19.6	19.5	19.9	19.9	20.0	19.7	19.8	20.1	19.9		
	1			74	0	20.1	19.8	19.7	19.9	19.8	20.1	19.6	20.0	20.2	19.8		
	36			0	0	19.9	19.5	19.7	20.0	19.9	19.9	19.6	19.7	20.0	19.9		
	36			20	0	19.9	19.6	19.7	20.0	19.9	19.9	19.5	19.7	20.0	19.9		
	36			39	0	19.9	19.5	19.7	19.9	19.9	19.9	19.5	19.6	19.9	19.9		
	75			0	0	20.0	19.7	19.8	20.0	20.0	20.0	19.7	19.8	20.1	20.0		

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		
																2506 MHz	2549.5 MHz
LTE Band 41	10	QPSK	1	0	0	20.1	19.7	19.8	20.0	20.0	20.1	19.6	19.8	20.1	20.1		
			1	25	0	19.9	19.5	19.6	19.9	19.8	19.9	19.9	19.5	19.6	19.9	19.9	
			25	0	0	20.6	20.2	20.3	20.6	20.5	20.6	20.6	20.2	20.3	20.6	20.6	
			25	12	0	20.5	20.2	20.3	20.5	20.5	20.5	20.2	20.3	20.6	20.5		
			25	25	0	20.5	20.1	20.3	20.5	20.5	20.5	20.1	20.3	20.5	20.5		
		16QAM	50	0	0	20.5	20.2	20.3	20.5	20.5	20.5	20.2	20.3	20.5	20.5		
			1	0	0	20.2	19.8	19.8	20.2	20.1	20.2	19.8	19.9	20.2	20.1		
			1	25	0	20.0	19.7	19.7	20.1	19.9	20.0	19.7	19.7	20.1	20.0		
			1	49	0	20.1	19.7	19.8	20.1	19.9	20.1	19.8	19.8	20.1	20.0		
			25	0	0	20.6	20.2	20.3	20.6	20.5	20.6	20.2	20.3	20.6	20.6		
		64QAM	25	12	0	20.5	20.2	20.3	20.5	20.5	20.5	20.2	20.3	20.6	20.5		
			25	25	0	20.5	20.2	20.3	20.5	20.5	20.5	20.1	20.3	20.5	20.5		
			50	0	0	20.5	20.2	20.2	20.5	20.5	20.5	20.2	20.2	20.5	20.5		
			1	0	0	20.0	19.6	19.8	20.0	20.0	19.9	19.7	19.7	20.0	19.9		
			1	25	0	19.8	19.4	19.6	19.8	19.8	19.8	19.5	19.5	19.8	19.7		
		LTE Band 41	5	QPSK	1	49	0	19.8	19.5	19.8	19.8	19.9	19.8	19.6	19.6	19.9	19.8
					25	0	0	20.0	19.7	19.8	20.1	20.0	20.0	19.7	19.8	20.1	20.0
					25	12	0	20.0	19.7	19.7	20.0	20.0	20.0	19.7	19.8	20.1	20.0
					25	25	0	20.0	19.6	19.7	20.0	20.0	20.0	19.6	19.7	20.0	20.0
					50	0	0	20.0	19.6	19.7	20.0	19.9	20.0	19.6	19.7	20.0	20.0
				16QAM	1	0	0	20.0	19.6	19.6	20.1	19.9	19.9	19.7	19.8	20.0	19.9
					1	12	0	19.9	19.5	19.6	19.9	19.8	19.8	19.6	19.6	19.9	19.8
					1	24	0	19.9	19.5	19.6	20.0	19.9	19.9	19.6	19.7	19.9	19.8
					12	0	0	20.5	20.1	20.2	20.5	20.5	20.5	20.1	20.2	20.4	20.4
					12	7	0	20.4	20.0	20.1	20.5	20.5	20.5	20.1	20.2	20.4	20.4
64QAM	12	13	0	20.4	20.0	20.1	20.5	20.5	20.5	20.1	20.2	20.4	20.4				
	25	0	0	20.5	20.1	20.2	20.5	20.5	20.5	20.1	20.2	20.5	20.5				
	1	0	0	20.0	19.6	19.7	20.0	20.1	20.1	19.6	19.7	19.9	20.0				
	1	12	0	19.9	19.5	19.5	19.9	19.9	19.9	19.5	19.6	19.8	19.8				
	1	24	0	20.0	19.5	19.6	20.0	19.9	20.0	19.6	19.6	19.8	19.8				
LTE Band 41		64QAM	12	0	0	20.0	19.7	19.8	20.0	20.0	20.0	19.7	19.8	20.1	20.0		
			12	7	0	20.0	19.7	19.8	20.0	20.0	20.0	19.7	19.8	20.0	20.0		
			12	13	0	19.9	19.7	19.8	20.0	20.0	20.0	19.7	19.7	20.0	20.0		
			25	0	0	20.0	19.7	19.8	20.0	20.0	20.0	19.6	19.7	20.0	20.0		
			25	0	0	20.0	19.7	19.8	20.0	20.0	20.0	19.6	19.7	20.0	20.0		

9.3.1 LTE Rel. 11 Carrier Aggregation

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

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

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

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

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

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

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

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

Where M_A is defined as follows

$$M_A = \begin{array}{ll} 8.2 & ; 0 \leq A < 0.025 \\ 9.2 - 40A & ; 0.025 \leq A < 0.05 \\ 8 - 16A & ; 0.05 \leq A < 0.25 \\ 4.83 - 3.33A & ; 0.25 \leq A \leq 0.4 \\ 3.83 - 0.83A & ; 0.4 \leq A \leq 1 \end{array}$$

and M_{IMS} is defined as follows

$$M_{\text{IMS}} = \begin{array}{ll} 4.5 & ; \Delta_{\text{IMS}} < 1.5 * \text{BW}_{\text{Channel_CA}} \\ 6.0 & ; 1.5 * \text{BW}_{\text{Channel_CA}} \leq \Delta_{\text{IMS}} < \text{BW}_{\text{Channel_CA}}/2 + \Delta f_{\text{00B}} \\ M_A & ; \Delta_{\text{IMS}} \geq \text{BW}_{\text{Channel_CA}}/2 + \Delta f_{\text{00B}} \end{array}$$

Where

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

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

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

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

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

$$\text{MPR} = \text{CEIL} \{ M_N, 0.5 \}$$

Where M_N is defined as follows

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

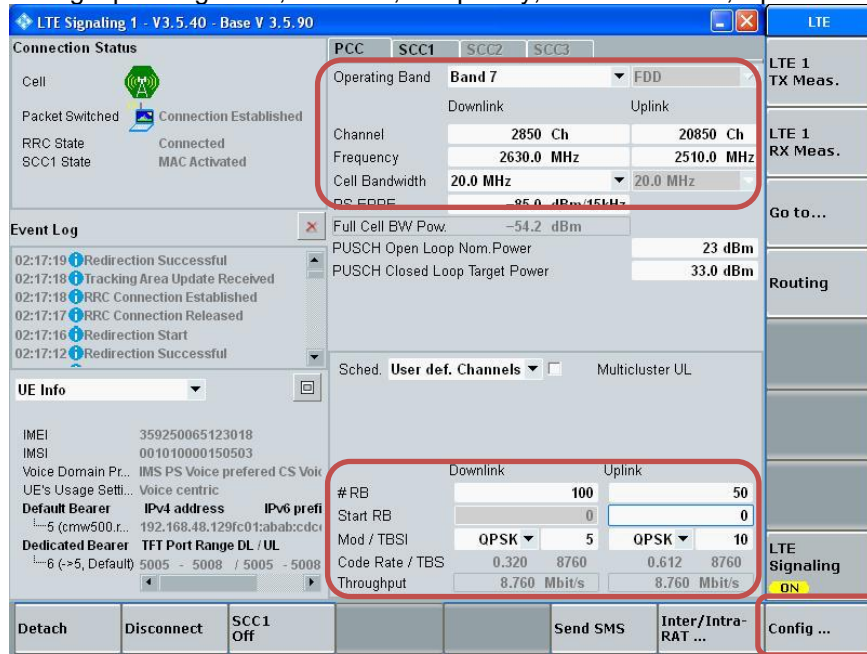
Where $N = N_{\text{RB_alloc}}$ is the number of allocated resource blocks.

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

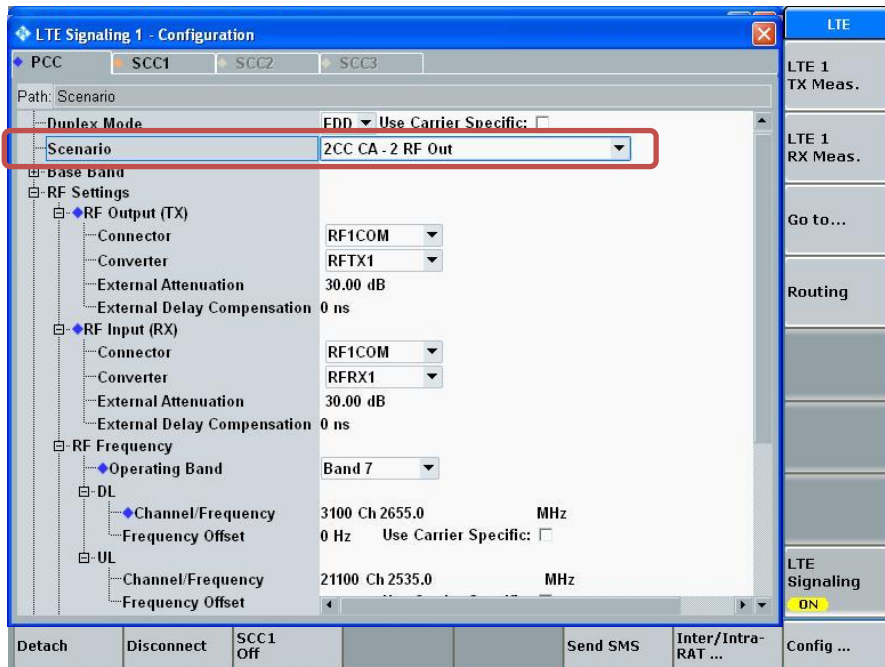
LTE Carrier Aggregation Test Signal Set-up Procedure
 (Use normal LTE set-up procedure in addition with the following steps)

Set to CMW-500 with following parameters:

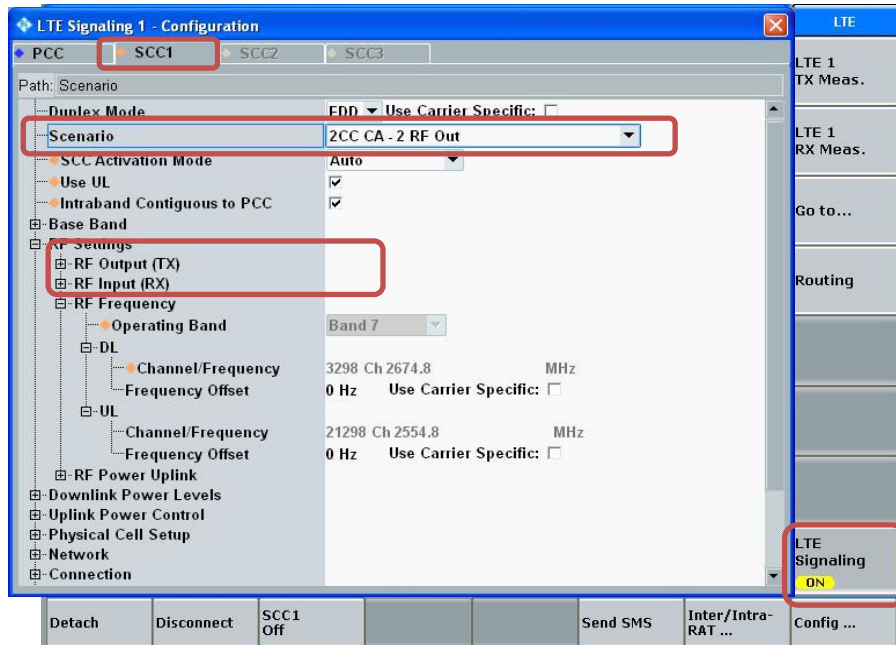
- PCC tab:
 - Select the testing Operating Band, Channel, Frequency, Cell Bandwidth, Uplink RBs



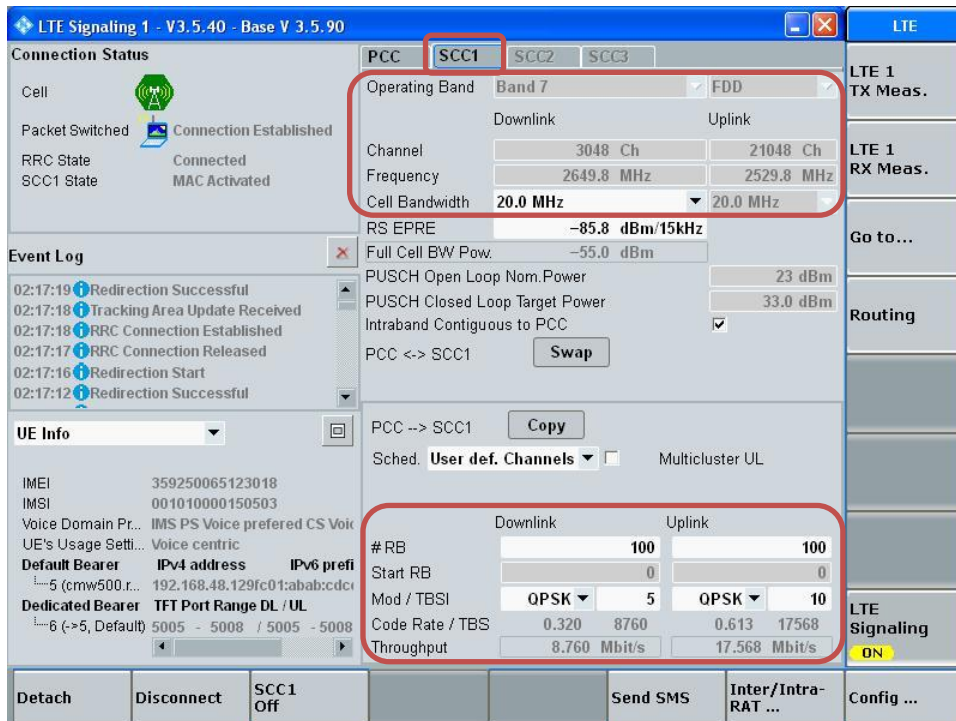
- Go to “Config...”
- Go to “Scenario”
- Set to “2CC CA – 2 RF Out”



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

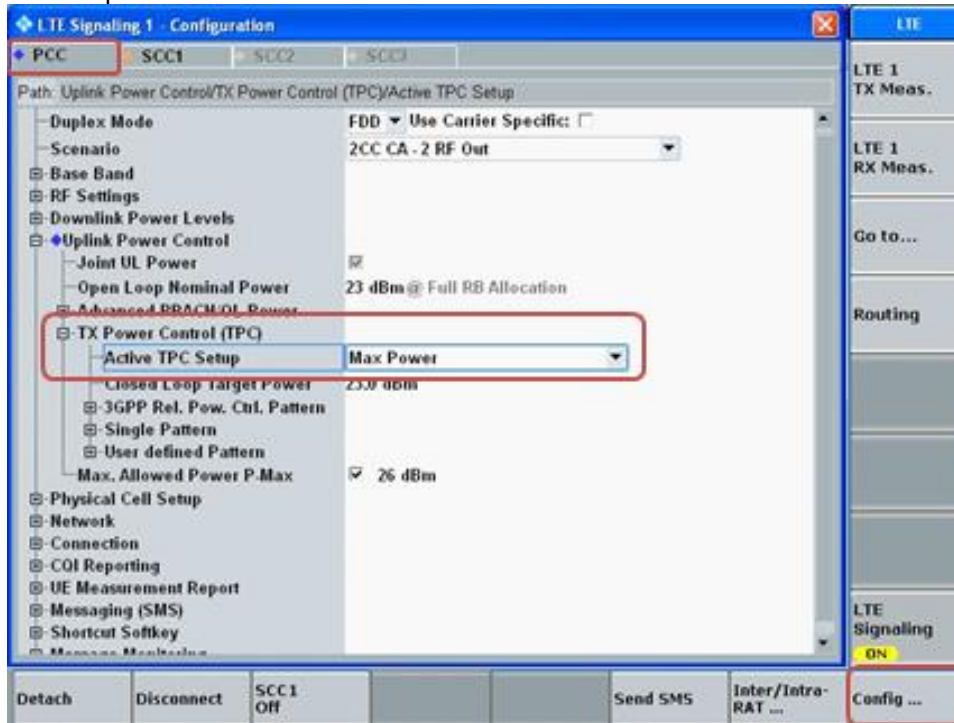


- Select “SCC1” tab
 - Select the testing Cell Bandwidth, Uplink RBs

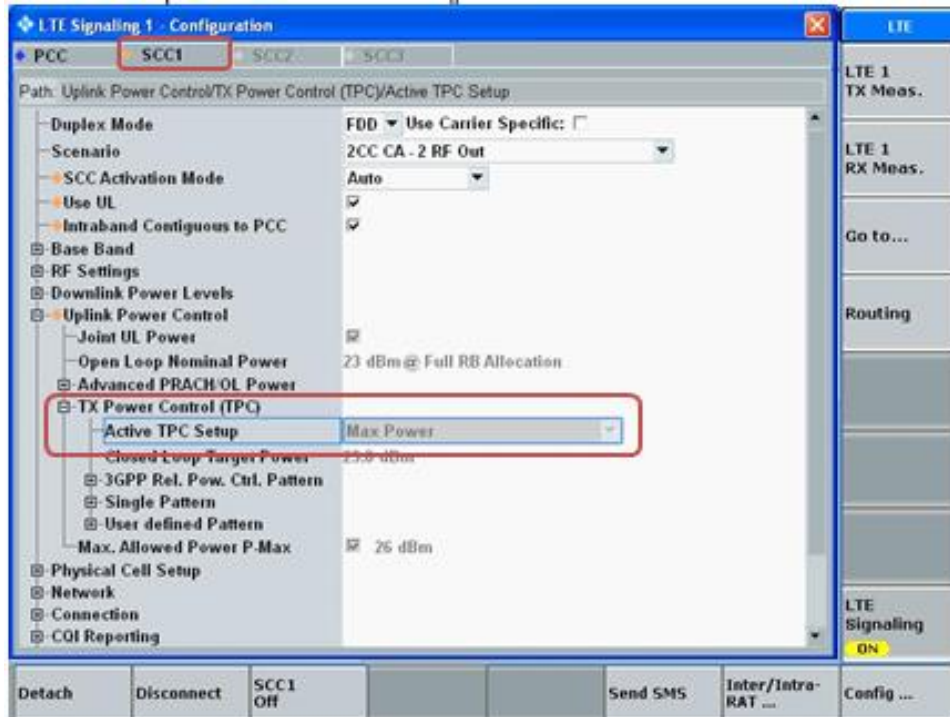


Max Power Setting

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

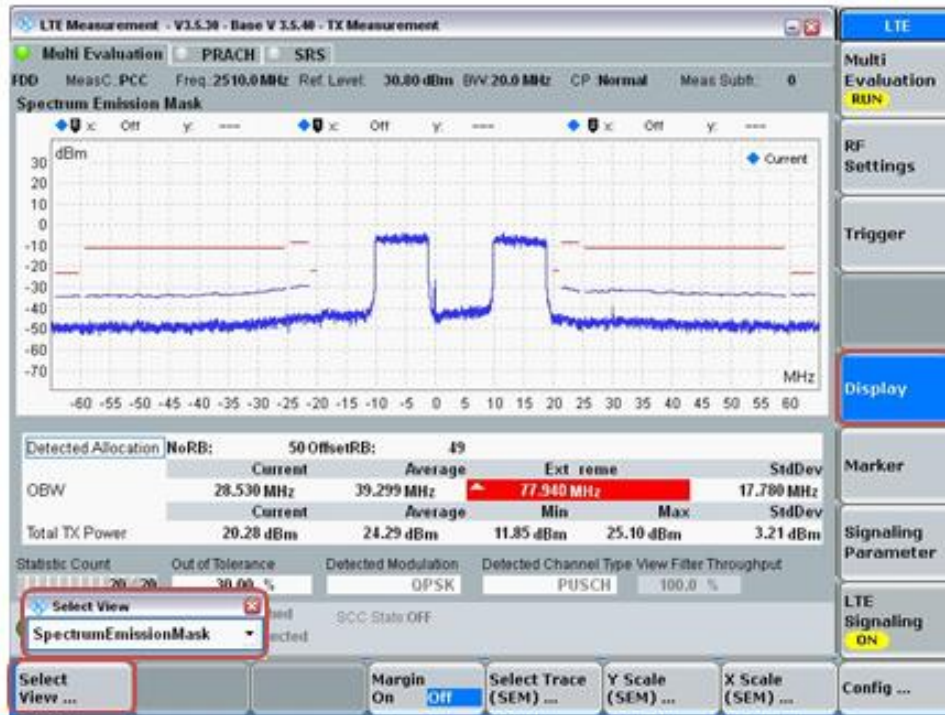


- Select SCC1 tab
- Verify that “Active TPC Setup” is set to “Max Power”



View TX Power

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



LTE Carrier Aggregation Up Link Combinations;

According to the TCB workshop (Nov. 2017), Maximum output power measurement is required for each UL CA configuration for the required test channels described in KDB 941225 D05. The required test channel should be associated with the UL PCC. And the SCC and subsequent CC must use configurations similar to the PCC to establish conservative or worst case equivalent SAR test conditions.

The detail of the UL CA configurations corresponding to the maximum output power conditions specified are mentioned in the power table for the CC combinations, including aggregated BW, RB allocation and offset per CC, modulation, MPR conditions with respect to RB allocation and offsets across the CCs.

LTE-uplink 2CA Band 7 for SAR testing

E-UTRA CA configurations	RF exposure conditions	Bands		DL						UL														LTE Rel.8 Power (dBm)	Delta			
		PCC		SCC		PCC						SCC						PCC+SCC										
		1st	2nd	BW	Freq	Ch	BW	Freq	Ch	Mod	RB	Offset	BW	Freq	Ch	Mod	RB	Offset	BW	Freq	Ch	MPR	Aggregated BW			Tune-Up Limit	CA power (total PCC+SCC)	3GPP Rel.#
CA_7C (0),(1),(2)	Head & Body-worn	7C	7C	20	2630.0	2580	20	2649.8	3048	QPSK	1	99	20	2510.0	20850	QPSK	1	0	20	2529.8	21048	0	40	23.5	23.0	14	24.1	-1.1
					2655.0	3100	20	2635.2	2902			0		2535.0	21100			99		2515.2	20902	0	40	23.5	22.7	14	23.7	-0.9
					2680.0	3350	20	2660.2	3152			0		2560.0	21350			99		2540.2	21152	0	40	23.5	22.9	14	23.8	-0.9
	Hotspot	7C	7C	20	2630.0	2580	20	2649.8	3048	QPSK	1	99	20	2510.0	20850	QPSK	1	0	20	2529.8	21048	0	40	20.0	18.9	14	20.2	-1.3
					2655.0	3100	20	2635.2	2902			0		2535.0	21100			99		2515.2	20902	0	40	20.0	18.5	14	19.8	-1.3
					2680.0	3350	20	2660.2	3152			0		2560.0	21350			99		2540.2	21152	0	40	20.0	18.9	14	19.9	-1.0

Note(s):

Both UL CA SAR is measured at yellow highlight configurations according to standalone SAR configurations. Standalone SAR configurations and output power results are reference to section. 10.9.

LTE-uplink 2CA Band 38 for SAR testing

E-UTRA CA configurations	RF exposure conditions	Bands		DL						UL														LTE Rel.8 Power (dBm)	Delta			
		PCC		SCC		PCC						SCC						PCC+SCC										
		1st	2nd	BW	Freq	Ch	BW	Freq	Ch	Mod	RB	Offset	BW	Freq	Ch	Mod	RB	Offset	BW	Freq	Ch	MPR	Aggregated BW			Tune-Up Limit	CA power (total PCC+SCC)	3GPP Rel.#
CA_38C (0)	Head & Body-worn	38C	38C	20	2580.0	37850	20	2599.8	38048	QPSK	1	99	20	2580.0	37850	QPSK	1	0	20	2599.8	38048	0	40	24.0	22.9	14	22.9	0.0
		38C	38C	20	2610.0	38150	20	2590.2	37952			0		2610.0	38150			99		2590.2	37952	0	40	24.0	23.0	14	23.2	-0.2
	Hotspot	38C	38C	20	2580.0	37850	20	2599.8	38048	QPSK	1	99	20	2580.0	37850	QPSK	1	0	20	2599.8	38048	0	40	21.5	19.8	14	19.9	-0.1
		38C	38C	20	2610.0	38150	20	2590.2	37952			0		2610.0	38150			99		2590.2	37952	0	40	21.5	20.0	14	20.1	-0.1
	Phablet-10g	38C	38C	20	2580.0	37850	20	2599.8	38048	QPSK	1	99	20	2580.0	37850	QPSK	1	0	20	2599.8	38048	0	40	21.5	19.8	14	19.8	0.0
		38C	38C	20	2610.0	38150	20	2590.2	37952			0		2610.0	38150			99		2590.2	37952	0	40	21.5	20.01	14	20.1	-0.1

Note(s):

Both UL CA SAR is measured at yellow highlight configurations according to standalone SAR configurations. Standalone SAR configurations and output power results are reference to section. 10.15.

LTE Carrier Aggregation Down Link Combinations;

The DL CA power measurement conditions for various CC's combinations were determined according LTE DL CA SAR Test Exclusion guidance in TCB workshop note (April 2018). Only yellow highlighted cells need power measurement. The following power measurements were performed with a single carrier uplink; CA for this particular project only supports one (1) uplink and up to four (5) downlinks.

LTE Release 10 Carrier Aggregation

Index	2CC	Restriction	Completely Covered by Measurement Supersrt	Reverse
2CC #1	2A-2A			Yes
2CC #2	2C			Yes
2CC #3	2A-4A		3CC #1	Yes
2CC #4	2A-5A		3CC #1	Yes
2CC #5	2A-7A		3CC #4	Yes
2CC #6	2A-12A			Yes
2CC #7	2A-13A		3CC #3	Yes
2CC #8	2A-17A			Yes
2CC #9	2A-66A			Yes
2CC #10	4A-4A		3CC #6	Yes
2CC #11	4A-5A		3CC #1	Yes
2CC #12	4A-7A		3CC #2	Yes
2CC #13	4A-12A		3CC #6	Yes
2CC #14	4A-13A		3CC #3	Yes
2CC #15	4A-17A		3CC #7	Yes
2CC #16	5A-7A		3CC #9	Yes
2CC #17	5A-41A			Yes
2CC #18	7A-7A		3CC #4	Yes
2CC #19	7C		3CC #5	Yes
2CC #20	12A-66A		3CC #12	Yes
2CC #21	38C			Yes
2CC #22	41A-41A			Yes
2CC #23	41C		4CC #2	Yes
2CC #24	66A-66A		4CC #1	Yes
2CC #25	66B			Yes
2CC #26	66C			Yes

Index	3CC	Restriction	Completely Covered by Measurement Supersrt	Reverse
3CC #1	2A-4A-5A			Yes
3CC #2	2A-4A-7A			Yes
3CC #3	2A-4A-13A			Yes
3CC #4	2A-7A-7A			Yes
3CC #5	2A-7C			Yes
3CC #6	4A-4A-12A			Yes
3CC #7	4A-4A-17A			Yes
3CC #8	4A-7C			Yes
3CC #9	5A-7A-7A			Yes
3CC #10	5A-7C			Yes
3CC #11	7A-66A-66A			Yes
3CC #12	12A-66A-66A			Yes
3CC #13	41A-41C			Yes
3CC #14	41D		4CC #3	Yes

Index	4CC	Restriction	Completely Covered by Measurement Supersrt	Reverse
4CC #1	7C-66A-66A			Yes
4CC #2	41C-41C			Yes
4CC #3	41A-41D			Yes

Note:

Only yellow highlight cells need power measurement according to LTE DL CA SAR test Exclusion in TCB workshop (April.2018).

LTE Release 10 Carrier Aggregation with 4x4 MIMO

Index	2CC	Restriction	Completely Covered by Measurement Supersrt	Reverse
2CC #1	2A-[4A]		3CC #1	Yes
2CC #2	2A-[7A]		3CC #4	Yes
2CC #3	2A-[66A]			Yes
2CC #4	[4A]-[4A]			Yes
2CC #5	[4A]-5A		3CC #1	Yes
2CC #6	[4A]-[7A]		3CC #2	Yes
2CC #7	[4A]-12A			Yes
2CC #8	[4A]-13A		3CC #3	Yes
2CC #9	[4A]-17A			Yes
2CC #10	5A-[7A]		3CC #7	Yes
2CC #11	[7A]-[7A]		3CC #7	Yes
2CC #12	[7C]		3CC #8	Yes
2CC #13	12A-[66A]		3CC #10	Yes
2CC #14	[66A]-[66A]		4CC #1	Yes

Index	3CC	Restriction	Completely Covered by Measurement Supersrt	Reverse
3CC #1	2A-[4A]-5A			
3CC #2	2A-[4A]-[7A]			
3CC #3	2A-[4A]-13A			
3CC #4	2A-[7A]-[7A]			
3CC #5	2A-[7C]			
3CC #6	[4A]-[7C]			
3CC #7	5A-[7A]-[7A]			
3CC #8	5A-[7C]			
3CC #9	[7A]-[66A]-[66A]			
3CC #10	12A-[66A]-[66A]			

Index	4CC	Restriction	Completely Covered by Measurement Supersrt	Reverse
4CC#1	[7C]-[66A]-[66A]			

[*] is 4X4 MIMO configuration.

Note:

Only yellow highlight cells need power measurement 4x according to LTE DL CA SAR test Exclusion in TCB workshop (April.2018).

1. Single Carrier 4x4 Downlink MIMO

Power condition	LTE Band	Bandwidth (MHz)	Channel	Frequency (MHz)	Modulation	RB/Offset	LTE Rel 8 Tx. Power [dBm]	4x4 DL MIMO LTE Rel 8 Tx. Power [dBm]	Delta
Max power	Band 4	20	20175	1732.5	QPSK	1/0	23.4	23.3	-0.1
	Band 7	20	20850	2510	QPSK	1/99	24.1	24.0	-0.1
	Band 66	20	132322	1745	QPSK	1/0	24.2	24.2	0.0
Reduced Power (Hotspot back-off)	Band 4	20	20175	1732.5	16QAM	1/0	20.8	20.8	0.0
	Band 7	20	20850	2510	16QAM	1/0	20.6	20.6	0.1
	Band 66	20	132322	1745	16QAM	1/0	20.6	20.6	0.0
Reduced Power (Proximity sensor back-off)	Band 4	20	20175	1732.5	16QAM	1/0	20.8	20.8	0.0
	Band 7	20	20850	2510	16QAM	1/0	20.4	20.4	0.1
	Band 66	20	132322	1745	16QAM	1/0	20.5	20.4	-0.1

Note:

1. According to LTE Test Conditions in TCB workshop (May, 2017), SAR is excluded for LTE downlink 4x4 MIMO operation when uplink output with DL MIMO does not exceed highest uplink output power configuration without DL MIMO by more than a 1/4 dB. And for DL MIMO with carrier aggregation, the same SAR test exclusion procedure is considered.

2. Max power condition

E-UTRA CA configuration (BCS)		Bands				UL				DL									LTE Rel 8 Tx. Power [dBm]	LTE Rel 10 Tx. Power [dBm]	Delta								
		PCC	SCC1	SCC2	SCC3	PCC				SCC1			SCC2			SCC3													
		1st	2nd	3rd	4th	Mode	BW (MHz)	Channel	Freq. (MHz)	RB/Offset	BW (MHz)	Channel	Freq. (MHz)	BW (MHz)	Channel	Freq. (MHz)	BW (MHz)	Channel				Freq. (MHz)	BW (MHz)	Channel	Freq. (MHz)				
2CC	2A-12A	2A	12A			QPSK	20	18900	1880	1/0	20	900	1960	10	5095	737.5							23.4	23.6	0.2				
		12A	2A			QPSK	10	23095	707.5	1/0	10	5095	737.5	20	900	1960							23.7	23.8	0.1				
	2A-17A	2A	17A			QPSK	10	18900	1880	1/0	10	900	1960	10	5790	740							23.4	23.6	0.2				
		17A	2A			QPSK	10	23790	710	1/0	10	740	5790	10	900	1960							23.9	24.0	0.1				
	2A-66A	2A	66A			QPSK	20	18900	1880	1/0	20	900	1960	20	66786	2145							23.4	23.5	0.1				
		66A	2A			QPSK	20	132322	1745	1/0	20	66786	2145	20	900	1960							24.2	24.2	0.0				
	5A-41A	5A	41A			QPSK	10	20525	836.5	1/0	10	2525	881.5	20	40620	2593							24.4	24.5	0.1				
		41A	5A			QPSK	20	39750	2506	1/0	20	39750	2506	10	2525	881.5							23.2	23.2	0.0				
	3CC	2A-4A-5A	2A	4A		5A	QPSK	20	18900	1880	1/0	20	900	1960	20	2132.5	2175	10	2525	881.5	20	900	1960				23.4	23.4	0.0
			4A	5A		2A	QPSK	20	20175	1732.5	1/0	20	2175	2132.5	10	2525	881.5	20	900	1960				23.4	23.3	-0.1			
5A			2A		4A	QPSK	10	20525	836.5	1/0	10	2525	881.5	20	900	1960	20	2175	2132.5				24.4	24.3	-0.1				
2A-4A-7A		2A	4A		7A	QPSK	20	18900	1880	1/0	20	900	1960	20	2132.5	2175	20	3100	2655	20	900	1960				23.4	23.4	0.0	
		4A	7A		2A	QPSK	20	20175	1732.5	1/0	20	2175	2132.5	20	3100	2655	20	900	1960				23.3	23.4	0.1				
		7A	2A		4A	QPSK	20	20850	2510	1/99	20	2850	2630	20	900	1960	20	2175	2132.5				24.1	23.9	-0.2				
2A-4A-13A		2A	4A		13A	QPSK	20	18900	1880	1/0	20	900	1960	20	2132.5	2175	10	5230	751	20	900	1960				23.4	23.4	0.0	
		4A	13A		2A	QPSK	20	20175	1732.5	1/0	20	2175	2132.5	10	5230	751	20	900	1960				23.4	23.3	-0.1				
		13A	2A		4A	QPSK	10	23230	782	1/0	10	5230	751	20	900	1960	20	2175	2132.5				23.8	23.7	-0.1				
2A-7A-7A		2A	7A		7A	QPSK	20	18900	1880	1/0	20	900	1960	20	3100	2655	20	3350	2680	20	900	1960				23.4	23.6	0.1	
		7A	7A		2A	QPSK	20	20850	2510	1/99	20	2850	2630	20	3350	2680	20	900	1960				24.1	24.0	-0.1				
		2A	7C		7C	QPSK	20	18900	1880	1/0	20	900	1960	20	3100	2655	20	3298	2674.8				23.4	23.5	0.1				
2A-7C		7C	7C		2A	QPSK	20	20850	2510	1/99	20	2850	2630	20	3048	2649.8	20	900	1960				24.1	23.9	-0.1				
		4A	4A		12A	QPSK	20	20175	1732.5	1/0	20	2175	2132.5	10	2175	2150	10	5095	737.5				23.4	23.2	-0.2				
		12A	4A		4A	QPSK	10	23095	707.5	1/0	10	5095	737.5	20	2175	2132.5	10	2175	2150				23.7	23.7	0.0				
4A-4A-17A		4A	4A		17A	QPSK	20	20175	1732.5	1/0	20	2175	2132.5	10	2350	2150	10	5790	740				23.4	23.4	0.0				
		17A	4A		4A	QPSK	10	23790	710	1/0	10	740	5790	20	2175	2132.5	10	2350	2150				23.9	23.9	0.0				
		4A	7C		7C	QPSK	20	20175	1732.5	1/0	20	2175	2132.5	20	3100	2655	20	3298	2674.8				23.4	23.5	0.1				
4A-7C		7C	7C		4A	QPSK	20	20850	2510	1/99	20	2850	2630	20	3048	2649.8	20	2175	2132.5				24.1	24.0	-0.1				
		5A	7A		7A	QPSK	10	20525	836.5	1/0	10	2525	881.5	20	3100	2655	20	3350	2680				24.4	24.4	0.0				
		7A	7A		5A	QPSK	20	20850	2510	1/99	20	2850	2630	20	3350	2680	10	2525	881.5				24.1	23.9	-0.2				
5A-7A-7A		5A	7C		7C	QPSK	10	20525	836.5	1/0	10	2525	881.5	20	3100	2655	20	3298	2674.8				24.4	24.4	0.0				
		7C	7C		5A	QPSK	20	20850	2510	1/99	20	2850	2630	20	3048	2649.8	10	2525	881.5				24.1	23.9	-0.1				
		7A	66A		66A	QPSK	20	20850	2510	1/0	20	2850	2630	20	66786	2145	20	67036	2170				24.1	24.0	-0.1				
7A-66A-66A		66A	66A		7A	QPSK	20	132322	1745	1/0	20	66786	2145	20	67036	2170	20	3100	2655				24.2	24.2	0.0				
		12A	66A		66A	QPSK	10	23095	707.5	1/0	10	5095	737.5	20	66786	2145	20	67036	2170				23.7	23.7	0.0				
		66A	66A		12A	QPSK	20	132322	1745	1/0	20	66786	2145	20	67036	2170	10	5095	737.5				24.2	24.3	0.1				
4CC		7C-66A-66A	7C	7C		66A	66A	QPSK	20	20850	2510	1/0	20	2850	2630	20	3048	2649.8	20	66786	2145	20	67036	2170		24.1	24.2	0.1	
			66A	66A		7C	7C	QPSK	20	132322	1745	1/0	20	66786	2145	20	67036	2170	20	3100	2655	20	3298	2674.8		24.2	24.1	0.0	
Intra Non-contiguous		2A-2A	2A	2A				QPSK	20	18900	1880	1/0	20	900	1960	20	1100	1980								23.4	23.1	-0.3	
	41A-41A		41A	41A				QPSK	20	39750	2506	1/0	20	39750	2506	20	41490	2680								23.2	23.2	0.0	
	41A-41C	41A	41C		41C	QPSK	20	39750	2506	1/0	20	39750	2506	20	40620	2593	20	40818	2612.8							23.2	23.2	0.0	
		41C	41C		41A	QPSK	20	39750	2506	1/0	20	39750	2506	20	39948	2525.8	20	40620	2593							23.2	23.2	-0.1	
	41C-41C	41C	41C		41C	QPSK	20	39750	2506	1/0	20	39750	2506	20	39948	2525.8	20	40620	2593	20	40818	2612.8				23.2	23.2	-0.1	
	41A-41D	41A	41D		41D	41D	QPSK	20	39750	2506	1/0	20	39750	2506	20	40620	2593	20	40818	2612.8	20	41016	2632.6				23.2	23.3	0.0
41D		41D		41D	41D	QPSK	20	39750	2506	1/0	20	39750	2506	20	39948	2525.8	20	40146	2545.6	20	40620	2593				23.2	23.2	0.0	
Intra Contiguous	2C	2C	2C				QPSK	20	18900	1880	1/0	20	900	1960	20	1098	1979.8									23.4	23.5	0.1	
		38C	38C		38C	QPSK	20	38150	2610	1/0	20	38150	2610	20	37952	2590.2										23.2	23.2	0.1	
	66B	66B		66B	QPSK	15	132322	1745	1/37	15	66786	2145	5	66879	2154.3											24.2	24.2	0.0	
	66C	66C		66C	QPSK	20	132322	1745	1/0	20	66786	2145	20	66984	2164.8											24.2	24.1	-0.1	

Note:

1_Per KDB 941225 D05A LTE Rel. 10 KDB Inquiry Sheet: SAR is excluded for Carrier Aggregation when measured power does not exceed LTE Release 8 by more than a 1/4 dB.

2_When the same frequency band is used for both contiguous and non-contiguous in DL CA Intra band, power was measured using the configuration with the largest aggregated bandwidth and maximum output power among the contiguous and non-contiguous in DL CA Intra band configurations

3. Reduced power condition

Hotspot back-off

E-UTRA CA configuration (BCS)		Bands				UL					DL					LTE Rel 8 Tx. Power [dBm]	LTE Rel 10 Tx. Power [dBm]	Delta									
		PCC	SCC1	SCC2	SCC3	PCC					PCC		SCC1						SCC2		SCC3						
		1st	2nd	3rd	4th	Mode	BW (MHz)	Channel	Freq. (MHz)	RB/Offset	BW (MHz)	Channel	Freq. (MHz)	BW (MHz)	Channel				Freq. (MHz)	BW (MHz)	Channel	Freq. (MHz)	BW (MHz)	Freq. (MHz)			
2CC	2A-12A	2A	12A			16QAM	20	18900	1880	1/0	20	900	1960	10	5095	737.5						20.9	20.9	-0.1			
	2A-17A	2A	17A			16QAM	20	18900	1880	1/0	20	900	1960	10	5790	740						20.9	20.8	-0.1			
	2A-66A	2A	66A			16QAM	20	18900	1880	1/0	20	900	1960	20	66786	2145						20.9	20.9	0.0			
		66A	2A			16QAM	20	132322	1745	1/0	20	66786	2145	20	900	1960						20.6	20.5	-0.1			
	5A-41A	41A	5A			QPSK	20	39750	2506	50/0	20	39750	2506	10	2525	881.5						20.7	20.6	-0.2			
3CC	2A-4A-5A	2A	4A	5A		16QAM	20	18900	1880	1/0	20	900	1960	20	2175	2132.5	10	2525	881.5		10	2525	881.5		20.9	21.0	0.1
		4A	5A	2A		16QAM	20	20175	1732.5	1/0	20	2175	2132.5	10	2525	881.5	20	900	1960					20.8	20.9	0.0	
		2A	4A	7A		16QAM	20	18900	1880	1/0	20	900	1960	20	2175	2132.5	20	3100	2655					20.9	20.7	-0.2	
	2A-4A-7A	4A	7A	2A		16QAM	20	20175	1732.5	1/0	20	2175	2132.5	20	3100	2655	20	900	1960					20.8	20.8	0.0	
		7A	2A	4A		16QAM	20	20850	2510	1/0	20	2850	2630	20	900	1960	20	2175	2132.5					20.6	20.5	0.0	
		2A	4A	13A		16QAM	20	18900	1880	1/0	20	900	1960	20	2175	2132.5	10	5230	751					20.9	20.9	0.0	
	2A-4A-13A	4A	13A	2A		16QAM	20	20175	1732.5	1/0	20	2175	2132.5	10	5230	751	20	900	1960					20.8	20.8	0.0	
		2A	7A	7A		16QAM	20	18900	1880	1/0	20	900	1960	20	3100	2655	20	3350	2680					20.9	20.7	-0.2	
		7A	7A	2A		16QAM	20	20850	2510	1/0	20	2850	2630	20	3350	2680	20	900	1960					20.6	20.4	-0.1	
	3CC	2A-7A-7A	7A	7C	7C		16QAM	20	18900	1880	1/0	20	900	1960	20	3100	2655	20	3298	2674.8					20.9	20.6	-0.4
			7C	7C	2A		16QAM	20	20850	2510	1/0	20	2850	2630	20	3298	2674.8	20	900	1960					20.6	20.4	-0.1
			4A	4A	12A		16QAM	20	20175	1732.5	1/0	20	2175	2132.5	10	2175	2150	10	5095	737.5					20.8	20.8	-0.1
		4A-4A-12A	4A	4A	17A		16QAM	20	20175	1732.5	1/0	20	2175	2132.5	10	2175	2150	10	5790	740					20.8	20.9	0.0
			4A	7C	7C		16QAM	20	20175	1732.5	1/0	20	2175	2132.5	20	3100	2655	20	3298	2674.8					20.8	20.6	-0.3
			7C	7C	4A		16QAM	20	20850	2510	1/0	20	2850	2630	20	3298	2674.8	20	2175	2132.5					20.6	20.4	-0.1
5A-7A-7A		7A	7A	5A		16QAM	20	20850	2510	1/0	20	2850	2630	20	3350	2680	10	2525	881.5					20.6	20.3	-0.2	
		7C	7C	5A		16QAM	20	20850	2510	1/0	20	2850	2630	20	3298	2674.8	10	2525	881.5					20.6	20.3	-0.2	
		7A	66A	66A		16QAM	20	20850	2510	1/0	20	2850	2630	20	66786	2145	20	67036	2170					20.6	20.4	-0.2	
7A-66A-66A		66A	66A	7A		16QAM	20	132322	1745	1/0	20	66786	2145	20	3100	2655							20.6	20.6	0.0		
		66A	66A	12A		16QAM	20	132322	1745	1/0	20	66786	2145	20	67036	2170	10	5095	737.5					20.6	20.4	-0.1	
		7C	7C	66A	66A	16QAM	20	20850	2510	1/0	20	2850	2630	20	3048	2649.8	20	66786	2145	20	2170			20.6	20.5	0.0	
4CC	7C-66A-66A	66A	66A	7C	7C	16QAM	20	132322	1745	1/0	20	66786	2145	20	67036	2170	20	3100	2655	20	2674.8			20.6	20.5	-0.1	
	2A-2A	2A	2A			16QAM	20	18900	1880	1/0	20	900	1960	20	1100	1980							20.9	20.9	-0.1		
Intra Non-contiguous	41A-41A	41A	41A			QPSK	20	39750	2506	50/0	20	39750	2506	20	41490	2680							20.7	20.7	-0.1		
	41A-41C	41A	41C	41C		QPSK	20	39750	2506	50/0	20	39750	2506	20	40620	2593	20	40818	2612.8					20.7	20.7	0.0	
		41C	41C	41A		QPSK	20	39750	2506	50/0	20	39750	2506	20	39948	2525.8	20	40620	2593					20.7	20.7	0.0	
	41C-41C	41C	41C	41C	41C	QPSK	20	39750	2506	50/0	20	39750	2506	20	39948	2525.8	20	40620	2593	20	2612.8			20.7	20.7	0.0	
	41A-41D	41A	41D	41D	41D	QPSK	20	39750	2506	50/0	20	39750	2506	20	40620	2593	20	40818	2612.8	20	2632.6			20.7	20.7	0.0	
41D	41D	41D	41A		QPSK	20	39750	2506	50/0	20	39750	2506	20	39948	2525.8	20	40146	2545.6	20	2593			20.7	20.7	0.0		
Intra Contiguous	2C	2C	2C			16QAM	20	18900	1880	1/0	20	900	1960	20	1098	1979.8							20.9	20.9	-0.1		
	38C	38C	38C			QPSK	20	38150	2610	50/0	20	38150	2610	20	37952	2590.2							20.5	20.6	0.1		
	66B	66B	66B			16QAM	15	132322	1745	1/37	15	66786	2145	5	66879	2154.3							20.5	20.4	-0.1		
	66C	66C	66C			16QAM	20	132322	1745	1/0	20	66786	2145	20	66984	2164.8							20.6	20.5	-0.1		

Note:

1_Per KDB 941225 D05A LTE Rel. 10 KDB Inquiry Sheet: SAR is excluded for Carrier Aggregation when measured power does not exceed LTE Release 8 by more than a 1/4 dB.

2_When the same frequency band is used for both contiguous and non-contiguous in DL CA Intra band, power was measured using the configuration with the largest aggregated bandwidth and maximum output power among the contiguous and non-contiguous in DL CA Intra band configurations

Proximity sensor back-off

E-UTRA CA configuration (BCS)		Bands				UL					DL										LTE Rel 8 Tx. Power [dBm]	LTE Rel 10 Tx. Power [dBm]	Delta		
		PCC	SCC1	SCC2	SCC3	PCC					PCC			SCC1			SCC2			SCC3					
		1st	2nd	3rd	4th	Mode	BW (MHz)	Channel	Freq. (MHz)	RB/Offset	BW (MHz)	Channel	Freq. (MHz)	BW (MHz)	Channel	Freq. (MHz)	BW (MHz)	Channel	Freq. (MHz)	BW (MHz)				Freq. (MHz)	
2CC	2A-12A	2A	12A			16QAM	20	18900	1880	1/0	20	900	1960	10	5095	737.5						20.9	20.8	-0.1	
	2A-17A	2A	17A			16QAM	20	18900	1880	1/0	20	900	1960	10	5790	740						20.9	20.6	-0.3	
	2A-66A	2A	66A			16QAM	20	18900	1880	1/0	20	900	1960	20	66786	2145						20.9	20.7	-0.2	
		66A	2A			16QAM	20	132322	1745	1/0	20	66786	2145	20	900	1960						20.6	20.6	0.0	
	5A-41A	41A	5A			QPSK	20	39750	2506	50/0	20	39750	2506	10	2525	881.5						20.7	20.5	-0.2	
3CC	2A-4A-5A	2A	4A	5A		16QAM	20	18900	1880	1/0	20	900	1960	20	2132.5	2175	10	2525	881.5		20.9	20.8	-0.1		
		4A	5A	2A		16QAM	20	20175	1732.5	1/0	20	2175	2132.5	10	2525	881.5	20	900	1960		20.8	20.8	0.0		
	2A-4A-7A	2A	4A	7A		16QAM	20	18900	1880	1/0	20	900	1960	20	2175	2132.5	20	3100	2655		20.9	20.8	-0.1		
		4A	7A	2A		16QAM	20	20175	1732.5	1/0	20	2175	2132.5	20	3100	2655	20	900	1960		20.8	20.8	0.0		
		7A	2A	4A		16QAM	20	20850	2510	1/0	20	2850	2630	20	900	1960	20	2175	2132.5		20.4	20.3	-0.1		
	2A-4A-13A	2A	4A	13A		16QAM	20	18900	1880	1/0	20	900	1960	20	2175	2132.5	20	900	1960		20.9	20.8	-0.1		
		4A	13A	2A		16QAM	20	20175	1732.5	1/0	20	2175	2132.5	10	5230	751	20	900	1960		20.8	20.7	-0.1		
	2A-7A-7A	2A	7A	7A		16QAM	20	18900	1880	1/0	20	900	1960	20	3100	2655	20	3350	2680		20.9	20.7	-0.2		
		7A	7A	2A		16QAM	20	20850	2510	1/0	20	2850	2630	20	3350	2680	20	900	1960		20.4	20.2	-0.1		
		2A	7C	7C		16QAM	20	18900	1880	1/0	20	900	1960	20	3100	2655	20	3298	2674.8		20.9	20.7	-0.2		
	2A-7C	7C	7C	2A		16QAM	20	20850	2510	1/0	20	2850	2630	20	3298	2674.8	20	900	1960		20.4	20.3	-0.1		
		2A	7C	7C		16QAM	20	18900	1880	1/0	20	900	1960	20	3100	2655	20	3298	2674.8		20.9	20.7	-0.2		
	4A-4A-12A	4A	4A	12A		16QAM	20	20175	1732.5	1/0	20	2175	2132.5	10	2175	2150	10	5095	737.5		20.8	20.8	0.0		
	4A-4A-17A	4A	4A	17A		16QAM	20	20175	1732.5	1/0	20	2175	2132.5	10	2175	2150	10	5790	740		20.8	20.8	0.0		
	4A-7C	4A	7C	7C		16QAM	20	20175	1732.5	1/0	20	2175	2132.5	20	3100	2655	20	3298	2674.8		20.8	20.6	-0.2		
		7C	7C	4A		16QAM	20	20850	2510	1/0	20	2850	2630	20	3298	2674.8	20	2175	2132.5		20.4	20.4	0.0		
	5A-5A-7A	7A	7A	5A		16QAM	20	20850	2510	1/0	20	2850	2630	20	3350	2680	10	2525	881.5		20.4	20.4	0.0		
	5A-7C	7C	7C	5A		16QAM	20	20850	2510	1/0	20	2850	2630	20	3298	2674.8	10	2525	881.5		20.4	20.3	0.0		
		7A	66A	66A		16QAM	20	20850	2510	1/0	20	2850	2630	20	66786	2145	20	67036	2170		20.4	20.3	0.0		
	7A-66A-66A	66A	66A	7A		16QAM	20	132322	1745	1/0	20	66786	2145	20	67036	2170	20	3100	2655		20.6	20.3	-0.2		
66A		12A	12A		16QAM	20	132322	1745	1/0	20	66786	2145	20	67036	2170	10	5095	737.5		20.6	20.5	-0.1			
4CC	7C-66A-66A	7C	7C	66A	66A	16QAM	20	20850	2510	1/0	20	2850	2630	20	3048	2649.8	20	66786	2145	20	2170	20.4	20.5	0.1	
	66A	66A	7C	7C		16QAM	20	132322	1745	1/0	20	66786	2145	20	67036	2170	20	3100	2655	20	2674.8	20.6	20.4	-0.2	
Intra Non-contiguous	2A-2A	2A	2A			16QAM	20	18900	1880	1/0	20	900	1960	20	1100	1980					20.9	20.8	-0.1		
	41A-41A	41A	41A			QPSK	20	39750	2506	50/0	20	39750	2506	20	41490	2680					20.7	20.6	-0.1		
	41A-41C	41A	41C	41C			QPSK	20	39750	2506	50/0	20	39750	2506	20	40620	2593	20	40818	2612.8		20.7	20.7	0.0	
		41C	41C	41A			QPSK	20	39750	2506	50/0	20	39750	2506	20	39948	2525.8	20	40620	2593		20.7	20.7	0.0	
	41C-41C	41C	41C	41C	41C		QPSK	20	39750	2506	50/0	20	39750	2506	20	39948	2525.8	20	40620	2593	20	2612.8	20.7	20.7	0.0
	41A-41D	41A	41D	41D	41D		QPSK	20	39750	2506	50/0	20	39750	2506	20	40620	2593	20	40818	2612.8	20	2632.6	20.7	20.7	0.0
41D		41D	41D	41A		QPSK	20	39750	2506	50/0	20	39750	2506	20	39948	2525.8	20	40146	2545.6	20	2593	20.7	20.8	0.0	
Intra Contiguous	2C	2C	2C			16QAM	20	18900	1880	1/0	20	900	1960	20	1098	1979.8					20.9	20.8	-0.1		
	38C	38C	38C			QPSK	20	38150	2610	50/0	20	38150	2610	20	37952	2590.2					20.5	20.6	0.1		
	66B	66B	66B			16QAM	15	132322	1745	1/0	15	66786	2145	5	66879	2154.3					20.5	20.6	0.1		
	66C	66C	66C			16QAM	20	132322	1745	1/0	20	66786	2145	20	66984	2164.8					20.6	20.5	-0.1		

Note:

- 1_Per KDB 941225 D05A LTE Rel. 10 KDB Inquiry Sheet: SAR is excluded for Carrier Aggregation when measured power does not exceed LTE Release 8 by more than a 1/4 dB.
- 2_When the same frequency band is used for both contiguous and non-contiguous in DL CA Intra band, power was measured using the configuration with the largest aggregated bandwidth and maximum output power among the contiguous and non-contiguous in DL CA Intra band configurations.

4. Max power condition with 4X4 MIMO

E-UTRA CA configuration (BCS)		Bands				UL					DL									LTE Rel 8 Tx. Power [dBm]	LTE Rel 10 Tx. Power [dBm]	Delta											
		PCC		SCC1	SCC2	SCC3	PCC					SCC1			SCC2			SCC3															
		1st	2nd	3rd	4th	Mode	BW (MHz)	Channel	Freq. (MHz)	RB/Offset	BW (MHz)	Channel	Freq. (MHz)	BW (MHz)	Channel	Freq. (MHz)	BW (MHz)	Channel	Freq. (MHz)				BW (MHz)	Channel	Freq. (MHz)								
2CC	2A-[66A]	2A	[66A]			QPSK	20	18900	1880	1/0	20	900	1960	20	66786	2145								23.4	23.4	0.0							
		[66A]	2A			QPSK	20	132322	1745	1/0	20	66786	2145	20	900	1960									24.2	24.3	0.1						
	[4A]-12A	[4A]	12A			QPSK	20	20175	1732.5	1/0	20	2175	2132.5	10	5095	737.5									23.4	23.4	0.0						
		12A	[4A]			QPSK	10	23095	707.5	1/0	10	5095	737.5	20	2175	2132.5									23.7	23.7	0.0						
	[4A]-17A	[4A]	17A			QPSK	20	20175	1732.5	1/0	20	2175	2132.5	10	5790	740									23.4	23.4	0.0						
		17A	[4A]		QPSK	10	23790	710	1/0	10	5790	740	20	2175	2132.5									23.9	23.9	0.0							
3CC	2A-[4A]-5A	2A	[4A]	5A		QPSK	20	18900	1880	1/0	20	900	1960	20	2175	2132.5	10	2525	881.5							23.4	23.4	0.0					
		[4A]	5A	2A		QPSK	20	20175	1732.5	1/0	20	2175	2132.5	10	2525	881.5	20	900	1960							23.4	23.3	-0.1					
		5A	2A	[4A]		QPSK	10	20525	836.5	1/0	10	2525	881.5	20	900	1960	20	2175	2132.5							24.4	24.4	0.0					
	2A-[4A]-[7A]	2A	[4A]	[7A]		QPSK	20	18900	1880	1/0	20	900	1960	20	2175	2132.5	20	3100	2655								23.4	23.4	0.0				
		[4A]	[7A]	2A		QPSK	20	20175	1732.5	1/0	20	2175	2132.5	20	3100	2655	20	900	1960								23.4	23.3	-0.1				
		[7A]	2A	[4A]		QPSK	20	20850	2510	1/99	20	2850	2630	20	900	1960	20	2175	2132.5								24.1	24.1	0.0				
	2A-[4A]-13A	2A	[4A]	13A		QPSK	20	18900	1880	1/0	20	900	1960	20	2175	2132.5	10	5230	751									23.4	23.4	0.0			
		[4A]	13A	2A		QPSK	20	20175	1732.5	1/0	20	2175	2132.5	10	5230	751	20	900	1960									23.4	23.4	0.0			
		13A	2A	[4A]		QPSK	10	23230	782	1/0	10	5230	751	20	900	1960	20	2175	2132.5								23.8	23.7	-0.1				
	2A-[7A]-[7A]	2A	[7A]	[7A]		QPSK	20	18900	1880	1/0	20	900	1960	20	3100	2655	20	2850	2630									23.4	23.4	-0.1			
		[7A]	[7A]	2A		QPSK	20	20850	2510	1/99	20	2850	2630	20	3350	2680	20	900	1960									24.1	24.1	0.0			
		2A	[7C]	[7C]		QPSK	20	18900	1880	1/0	20	900	1960	20	3100	2655	20	3298	2674.8									23.4	23.3	-0.1			
		[7C]	[7C]	2A		QPSK	20	20850	2510	1/99	20	2850	2630	20	3048	2649.8	20	900	1960									24.1	24.0	0.0			
		[4A]	[7C]	[7C]		QPSK	20	20175	1732.5	1/0	20	2175	2132.5	20	3100	2655	20	3298	2674.8									23.4	23.4	0.0			
		[7C]	[7C]	[4A]		QPSK	20	20850	2510	1/99	20	2850	2630	20	3048	2649.8	20	2175	2132.5									24.1	24.1	0.0			
	5A-[7A]-[7A]	5A	[7A]	[7A]		QPSK	10	20525	836.5	1/0	10	2525	881.5	20	3100	2655	20	2850	2630									24.4	24.3	-0.1			
		[7A]	[7A]	5A		QPSK	20	20850	2510	1/99	20	2850	2630	20	3350	2680	10	2525	881.5									24.1	24.1	0.0			
		5A	[7C]	[7C]		QPSK	10	20525	836.5	1/0	10	2525	881.5	20	3100	2655	20	3298	2674.8									24.4	24.3	-0.1			
		[7C]	[7C]	5A		QPSK	20	20850	2510	1/99	20	2850	2630	20	3048	2649.8	10	2525	881.5									24.1	24.1	0.0			
		[7A]-[66A]-[66A]	[7A]	[66A]	[66A]		QPSK	20	20850	2510	1/99	20	2850	2630	20	66786	2145	20	67036	2170									24.1	24.1	0.0		
		[66A]	[66A]	[7A]		QPSK	20	132322	1745	1/0	20	66786	2145	20	67036	2170	20	3100	2655										24.2	24.2	0.0		
		12A-[66A]-[66A]	12A	[66A]	[66A]		QPSK	10	23095	707.5	1/0	10	5095	737.5	20	66786	2145	20	67036	2170									23.7	23.7	-0.1		
		[66A]	[66A]	12A		QPSK	20	132322	1745	1/0	20	66786	2145	20	67036	2170	10	5095	737.5									24.2	24.1	0.0			
	4CC	[7C]-[66A]-[66A]	[7C]	[7C]	[66A]	[66A]	QPSK	20	20850	2510	1/99	20	2850	2630	20	3048	2649.8	20	66786	2145								20	67036	2170	24.1	23.8	-0.3
			[66A]	[66A]	[7C]	[7C]	QPSK	20	132322	1745	1/0	20	66786	2145	20	67036	2170	20	3100	2655								20	3298	2674.8	24.2	24.1	-0.1
	Intra Non-contiguous	[4A]-[4A]	[4A]	[4A]			QPSK	20	20175	1732.5	1/0	20	2175	2132.5	10	2350	2150											23.4	23.3	-0.1			

Note:

- 1_Per KDB 941225 D05A LTE Rel. 10 KDB Inquiry Sheet: SAR is excluded for Carrier Aggregation when measured power does not exceed LTE Release 8 by more than a 1/4 dB.
- 2_When the same frequency band is used for both contiguous and non-contiguous in DL CA Intra band, power was measured using the configuration with the largest aggregated bandwidth and maximum output power among the contiguous and non-contiguous in DL CA Intra band configurations.

5. Reduced power condition with 4X4 MIMO

Hotspot back-off

E-UTRA CA configuration (BCS)		Bands				UL					DL										LTE Rel 8 Tx. Power [dBm]	LTE Rel 10 Tx. Power [dBm]	Delta				
		PCC	SCC1	SCC2	SCC3	PCC					PCC			SCC1			SCC2			SCC3							
						1st	2nd	3rd	4th	Mode	BW (MHz)	Channel	Freq. (MHz)	RB/Offset	BW (MHz)	Channel	Freq. (MHz)	BW (MHz)	Channel	Freq. (MHz)				BW (MHz)	Channel	Freq. (MHz)	BW (MHz)
2CC	2A-[66A]	2A	[66A]			16QAM	20	18900	1880	1/0	20	900	1960	20	66786	2145								20.9	20.9	0.0	
		[66A]	2A			16QAM	20	132322	1745	1/0	20	66786	2145	20	900	1960								20.6	20.7	0.1	
		[4A]-12A	[4A]	12A		16QAM	20	20175	1732.5	1/0	20	2175	2132.5	10	5095	737.5								20.8	20.9	0.1	
		[4A]-17A	[4A]	17A		16QAM	20	20175	1732.5	1/0	20	2175	2132.5	10	5790	740								20.8	20.8	0.0	
3CC	2A-[4A]-5A	2A	[4A]	5A		16QAM	20	18900	1880	1/0	20	900	1960	20	2175	2132.5	10	2525	881.5					20.9	20.9	0.0	
		[4A]	5A	2A		16QAM	20	20175	1732.5	1/0	20	2175	2132.5	10	2525	881.5	20	900	1960					20.8	20.8	0.0	
	2A-[4A]-[7A]	2A	[4A]	[7A]		16QAM	20	18900	1880	1/0	20	900	1960	20	2175	2132.5	20	3100	2655					20.9	20.9	0.0	
		[4A]	[7A]	2A		16QAM	20	20175	1732.5	1/0	20	2175	2132.5	20	3100	2655	20	900	1960					20.8	20.8	-0.1	
	2A-[4A]-[7A]	[7A]	2A	[4A]		16QAM	20	20850	2510	1/0	20	2850	2630	20	900	1960	20	2175	2132.5					20.6	20.6	0.0	
		2A	[4A]	13A		16QAM	20	18900	1880	1/0	20	900	1960	20	2175	2132.5	10	5230	751					20.9	20.8	-0.1	
	2A-[4A]-13A	[4A]	13A	2A		16QAM	20	20175	1732.5	1/0	20	2175	2132.5	10	5230	751	20	900	1960					20.8	20.9	0.0	
		2A	[7A]	[7A]		16QAM	20	18900	1880	1/0	20	900	1960	20	3100	2655	20	3350	2680					20.9	20.9	0.0	
	2A-[7A]-[7A]	[7A]	[7A]	2A		16QAM	20	20850	2510	1/0	20	2850	2630	20	3350	2680	20	900	1960					20.6	20.6	0.0	
		2A	[7C]	[7C]		16QAM	20	18900	1880	1/0	20	900	1960	20	3100	2655	20	3298	2674.8					20.9	20.9	0.0	
	2A-[7C]	[7C]	[7C]	2A		16QAM	20	20850	2510	1/0	20	2850	2630	20	3048	2649.8	20	900	1960					20.6	20.6	0.0	
		[4A]-[7C]	[4A]	[7C]	[7C]		16QAM	20	20175	1732.5	1/0	20	2175	2132.5	20	3100	2655	20	3298	2674.8					20.8	20.9	0.0
	[4A]-[7C]	[7C]	[7C]	[4A]		16QAM	20	20850	2510	1/0	20	2850	2630	20	3048	2649.8	20	2175	2132.5					20.6	20.6	0.0	
		5A-[7A]-[7A]	[7A]	[7A]	5A		16QAM	20	20850	2510	1/0	20	2850	2630	20	3350	2680	10	2525	881.5					20.6	20.5	0.0
	5A-[7C]	[7C]	[7C]	5A		16QAM	20	20850	2510	1/0	20	2850	2630	20	3048	2649.8	10	2525	881.5					20.6	20.6	0.0	
		[7A]-[66A]-[66A]	[7A]	[66A]	[66A]		16QAM	20	20850	2510	1/0	20	2850	2630	20	66786	2145	20	67036	2170					20.6	20.5	0.0
	[7A]-[66A]-[66A]	[66A]	[66A]	[7A]		16QAM	20	132322	1745	1/0	20	66786	2145	20	67036	2170	20	3100	2655					20.6	20.5	-0.1	
		[66A]	[66A]	12A		16QAM	20	132322	1745	1/0	20	66786	2145	20	67036	2170	10	5095	737.5					20.6	20.5	0.0	
	4CC	[7C]-[66A]-[66A]	[7C]	[7C]	[66A]	[66A]	16QAM	20	20850	2510	1/99	20	2850	2630	20	3048	2649.8	20	66786	2145	20	2170			20.6	20.3	-0.2
			[66A]	[66A]	[7C]	[7C]	16QAM	20	132322	1745	1/0	20	66786	2145	20	67036	2170	20	3100	2655	20	2674.8			20.6	20.5	-0.1
Intra Non-contiguous	[4A]-[4A]	[4A]	[4A]		16QAM	20	20175	1732.5	1/0	20	2175	2132.5	10	2350	2150								20.8	20.8	-0.1		

Note:

- 1_Per KDB 941225 D05A LTE Rel. 10 KDB Inquiry Sheet: SAR is excluded for Carrier Aggregation when measured power does not exceed LTE Release 8 by more than a 1/4 dB.
- 2_When the same frequency band is used for both contiguous and non-contiguous in DL CA Intra band, power was measured using the configuration with the largest aggregated bandwidth and maximum output power among the contiguous and non-contiguous in DL CA Intra band configurations.

Proximity sensor back-off

E-UTRA CA configuration (BCS)		Bands				UL				DL										LTE Rel 8 Tx. Power [dBm]	LTE Rel 10 Tx. Power [dBm]	Delta						
		PCC	SCC1	SCC2	SCC3	PCC				PCC			SCC1			SCC2			SCC3									
		1st	2nd	3rd	4th	Mode	BW (MHz)	Channel	Freq. (MHz)	RB/Offset	BW (MHz)	Channel	Freq. (MHz)	BW (MHz)	Channel	Freq. (MHz)	BW (MHz)	Channel	Freq. (MHz)				BW (MHz)	Freq. (MHz)				
2CC	2A-[66A]	2A	[66A]			16QAM	20	18900	1880	1/0	20	900	1960	20	66786	2145							20.9	20.9	0.0			
		[66A]	2A			16QAM	20	132322	1745	1/0	20	66786	2145	20	900	1960							20.6	20.6	0.0			
	[4A]-12A	[4A]	12A			16QAM	20	20175	1732.5	1/0	20	2175	2132.5	10	5095	737.5							20.8	20.9	0.1			
	[4A]-17A	[4A]	17A			16QAM	20	20175	1732.5	1/0	20	2175	2132.5	10	5790	740							20.8	20.8	0.0			
3CC	2A-[4A]-5A	2A	[4A]	5A		16QAM	20	18900	1880	1/0	20	900	1960	20	2175	2132.5	10	2525	881.5				20.9	20.9	0.0			
		[4A]	5A	2A		16QAM	20	20175	1732.5	1/0	20	2175	2132.5	10	2525	881.5	20	900	1960				20.8	20.8	0.0			
	2A-[4A]-[7A]	2A	[4A]	[7A]		16QAM	20	18900	1880	1/0	20	900	1960	20	900	1960	20	3100	2655				20.9	20.9	0.0			
		[4A]	[7A]	2A		16QAM	20	20175	1732.5	1/0	20	2175	2132.5	20	3100	2655	20	900	1960				20.8	20.8	0.0			
	2A-[4A]-13A	[7A]	2A	[4A]		16QAM	20	20850	2510	1/0	20	2850	2630	20	900	1960	20	2175	2132.5	10	5230	751				20.4	20.4	0.0
		2A	[4A]	13A	2A		16QAM	20	18900	1880	1/0	20	900	1960	20	2175	2132.5	10	5230	751	20	900	1960	20.9	20.9	0.0		
	2A-[7A]-[7A]	[4A]	13A	2A		16QAM	20	20175	1732.5	1/0	20	2175	2132.5	10	5230	751	20	900	1960				20.8	20.9	0.1			
		2A	[7A]	[7A]		16QAM	20	18900	1880	1/0	20	900	1960	20	3100	2655	20	3350	2680				20.9	20.8	-0.1			
	2A-[7C]	[7A]	[7A]	2A		16QAM	20	20850	2510	1/0	20	2850	2630	20	3350	2680	20	900	1960				20.4	20.4	0.0			
		2A	[7C]	[7C]		16QAM	20	18900	1880	1/0	20	900	1960	20	3100	2655	20	3298	2674.8				20.9	20.9	0.0			
	[4A]-[7C]	[7C]	[7C]	2A		16QAM	20	20850	2510	1/0	20	2850	2630	20	3048	2649.8	20	900	1960				20.4	20.3	0.0			
		2A	[7C]	[7C]		16QAM	20	20175	1732.5	1/0	20	2175	2132.5	20	3100	2655	20	3298	2674.8				20.8	20.8	0.0			
	5A-[7A]-[7A]	[7C]	[7C]	[4A]		16QAM	20	20850	2510	1/0	20	2850	2630	20	3048	2649.8	20	2175	2132.5				20.4	20.3	0.0			
		2A	[7C]	[7C]		16QAM	20	20850	2510	1/0	20	2850	2630	20	3350	2680	10	2525	881.5				20.4	20.3	0.0			
	5A-[7C]	[7A]	[7A]	5A		16QAM	20	20850	2510	1/0	20	2850	2630	20	3048	2649.8	10	2525	881.5				20.4	20.4	0.0			
		[7A]	[7C]	[7C]		16QAM	20	20850	2510	1/0	20	2850	2630	20	66786	2145	20	67036	2170				20.4	20.3	0.0			
	[7A]-[66A]-[66A]	[66A]	[66A]	[7A]		16QAM	20	132322	1745	1/0	20	66786	2145	20	67036	2170	20	3100	2655				20.6	20.5	-0.1			
		[66A]	[66A]	12A		16QAM	20	132322	1745	1/0	20	66786	2145	20	67036	2170	10	5095	737.5				20.6	20.5	-0.1			
	12A-[66A]-[66A]	[7C]	[7C]	[66A]	[66A]	16QAM	20	20850	2510	1/0	20	2850	2630	20	3048	2649.8	20	66786	2145	20	2170	2674.8	20.4	20.3	0.0			
		[66A]	[66A]	[7C]	[7C]	16QAM	20	132322	1745	1/0	20	66786	2145	20	67036	2170	20	3100	2655	20	2674.8		20.6	20.5	-0.1			
4CC	[7C]-[66A]-[66A]	[7C]	[7C]	[66A]	[66A]	16QAM	20	20850	2510	1/0	20	2850	2630	20	3048	2649.8	20	66786	2145	20	2170	2674.8	20.4	20.3	0.0			
		[66A]	[66A]	[7C]	[7C]	16QAM	20	132322	1745	1/0	20	66786	2145	20	67036	2170	20	3100	2655	20	2674.8	20.6	20.5	-0.1				
Intra Non-contiguous	[4A]-[4A]	[4A]	[4A]			16QAM	20	20175	1732.5	1/0	20	2175	2132.5	10	2350	2150						20.8	20.8	0.0				

Note:

1_Per KDB 941225 D05A LTE Rel. 10 KDB Inquiry Sheet: SAR is excluded for Carrier Aggregation when measured power does not exceed LTE Release 8 by more than a 1/4 dB.

2_When the same frequency band is used for both contiguous and non-contiguous in DL CA Intra band, power was measured using the configuration with the largest aggregated bandwidth and maximum output power among the contiguous and non-contiguous in DL CA Intra band configurations.

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	18.2	19.0	Yes	15.2	16.0	Yes
			6	2437.0	18.2			15.3		
			11	2462.0	17.6			14.9		
			12	2467.0	2.5			3.5		
			13	2472.0	0.7			1.5		
	802.11g	6 Mbps	1	2412.0	Not Required	16.0	No	15.7	16.0	No
			6	2437.0				16.0		
			11	2462.0				15.0		
			12	2467.0				3.5		
			13	2472.0				1.5		
	802.11n (HT20)	6.5 Mbps	1	2412.0	Not Required	16.0	No	15.4	16.0	No
			6	2437.0				15.9		
			11	2462.0				14.3		
			12	2467.0				3.1		
			13	2472.0				1.5		
	802.11ax (HE20)	7.3 Mbps	1	2412.0	Not Required	16.0	No	15.3	16.0	No
6			2437.0	15.6						
11			2462.0	14.0						
12			2467.0	3.5						
13			2472.0	1.5						
SISO Ant.2	802.11b	1 Mbps	1	2412.0	18.3	19.0	Yes	15.5	16.0	Yes
			6	2437.0	18.3			15.6		
			11	2462.0	18.8			15.4		
			12	2467.0	2.5			3.5		
			13	2472.0	0.8			1.5		
	802.11g	6 Mbps	1	2412.0	Not Required	16.0	No	15.7	16.0	No
			6	2437.0				15.7		
			11	2462.0				15.0		
			12	2467.0				3.5		
			13	2472.0				1.5		
	802.11n (HT20)	6.5 Mbps	1	2412.0	Not Required	16.0	No	15.7	16.0	No
			6	2437.0				15.7		
			11	2462.0				15.0		
			12	2467.0				3.5		
			13	2472.0				1.5		
	802.11ax (HE20)	7.3 Mbps	1	2412.0	Not Required	16.0	No	15.2	16.0	No
6			2437.0	15.1						
11			2462.0	14.0						
12			2467.0	3.5						
13			2472.0	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.

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	15.2	16.0	Yes	13.4	14.0	Yes	
			6	2437.0	15.3			13.3			
			11	2462.0	14.9			12.9			
			12	2467.0	2.5			2.5			3.5
			13	2472.0	0.7			0.7			1.5
	802.11g	6 Mbps	1	2412.0	15.7	16.0	No	13.7	14.0	No	
			6	2437.0	16.0			13.9			
			11	2462.0	14.3			13.3			
			12	2467.0	3.0			3.0			3.5
			13	2472.0	0.9			0.9			1.5
	802.11n (HT20)	6.5 Mbps	1	2412.0	15.4	16.0	No	13.7	14.0	No	
			6	2437.0	15.9			13.9			
			11	2462.0	14.3			13.3			
			12	2467.0	3.1			3.1			3.5
			13	2472.0	1.3			1.3			1.5
	802.11ax (HE20)	7.3 Mbps	1	2412.0	15.3	16.0	No	13.0	14.0	No	
6			2437.0	15.6	13.4						
11			2462.0	13.3	13.3						
12			2467.0	2.4	2.4			3.5			
13			2472.0	0.8	0.8			1.5			
SISO Ant.2	802.11b	1 Mbps	1	2412.0	15.5	16.0	Yes	13.5	14.0	Yes	
			6	2437.0	15.6			13.4			
			11	2462.0	15.4			13.2			
			12	2467.0	2.5			2.5			3.5
			13	2472.0	0.8			0.8			1.5
	802.11g	6 Mbps	1	2412.0	15.7	16.0	No	13.7	14.0	No	
			6	2437.0	15.7			13.4			
			11	2462.0	14.5			13.5			
			12	2467.0	3.0			3.0			3.5
			13	2472.0	1.4			1.4			1.5
	802.11n (HT20)	6.5 Mbps	1	2412.0	15.7	16.0	No	13.6	14.0	No	
			6	2437.0	15.7			13.4			
			11	2462.0	14.5			13.4			
			12	2467.0	2.9			2.9			3.5
			13	2472.0	1.2			1.2			1.5
	802.11ax (HE20)	7.3 Mbps	1	2412.0	15.2	16.0	No	12.8	14.0	No	
6			2437.0	15.1	13.2						
11			2462.0	13.0	13.0						
12			2467.0	2.9	2.9			3.5			
13			2472.0	1.0	1.0			1.5			
MIMO Ant.1	802.11n (HT20)	6.5 Mbps	1	2412.0	15.5	16.0	Yes	13.9	14.0	Yes	
			6	2437.0	16.0			14.0			
			11	2462.0	14.8			13.5			
			12	2467.0	2.9			2.9			3.5
			13	2472.0	1.5			1.5			1.5
	802.11ax (HE20)	7.3 Mbps	1	2412.0	15.9	16.0	No	13.8	14.0	No	
			6	2437.0	15.7			13.9			
			11	2462.0	13.7			13.7			
			12	2467.0	2.7			2.7			3.5
			13	2472.0	0.7			0.7			1.5
MIMO Ant.2	802.11n (HT20)	6.5 Mbps	1	2412.0	15.2	16.0	Yes	13.2	14.0	Yes	
			6	2437.0	15.7			13.6			
			11	2462.0	14.5			12.8			
			12	2467.0	3.2			3.2			3.5
			13	2472.0	1.5			1.5			1.5
	802.11ax (HE20)	7.3 Mbps	1	2412.0	15.6	16.0	No	13.3	14.0	No	
			6	2437.0	15.5			13.7			
			11	2462.0	13.1			13.1			
			12	2467.0	3.0			3.0			3.5
			13	2472.0	0.4			0.4			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	14.2					
		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	14.3	15.0	No	Not Required	13.0	No	
			46	5230.0	14.2						
	802.11ac (VHT80)	29.3 Mbps	42	5210.0	Not Required	14.0	No	12.6	13.0	Yes	
			36	5180.0	Not Required	15.0	No	Not Required	13.0	No	
	40	5200.0									
	44	5220.0									
	48	5240.0									
	802.11ax (HE20)	7.3 Mbps	38	5190.0	13.5	15.0	No	Not Required	13.0	No	
			46	5230.0	13.4						
	802.11ax (HE40)	14.6 Mbps	42	5210.0	Not Required	14.0	No	12.4	13.0	No	
46			5230.0	13.4							
802.11ax (HE80)	30.6 Mbps	42	5210.0	Not Required	14.0	No	12.4	13.0	No		
		46	5230.0	13.4							
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	14.5	15.0	Yes	Not Required	13.0	No	
			62	5310.0	14.5						
	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	14.1	15.0	No	Not Required	13.0	No	
			62	5310.0	14.0						
	802.11ac (VHT80)	29.3 Mbps	58	5290.0	Not Required	14.0	No	12.2	13.0	Yes	
			52	5260.0	Not Required	15.0	No	Not Required	13.0	No	
56	5280.0										
60	5300.0										
64	5320.0										
802.11ax (HE20)	7.3 Mbps	54	5270.0	13.3	15.0	No	Not Required	13.0	No		
		62	5310.0	13.2							
802.11ax (HE40)	14.6 Mbps	58	5290.0	Not Required	14.0	No	12.1	13.0	No		
		52	5260.0	Not Required	14.0	No	12.1	13.0	No		
56	5280.0										
802.11ax (HE80)	30.6 Mbps	58	5290.0	Not Required	14.0	No	12.1	13.0	No		
		52	5260.0	Not Required	14.0	No	12.1	13.0	No		
56	5280.0										

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	15.1	16.0	Yes	Not Required	13.0	No
				120	5600.0	15.1					
				124	5620.0	15.1					
				144	5720.0	15.1					
		802.11n (HT20)	6.5 Mbps	100	5500.0	15.3	16.0	No	Not Required	13.0	No
				120	5600.0	15.1					
				124	5620.0	15.1					
				144	5720.0	15.1					
		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	15.4	16.0	No	Not Required	13.0	No	
			120	5600.0	15.3						
			124	5620.0	15.2						
			144	5720.0	15.2						
	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	12.1	13.0	Yes	
			122	5610.0				11.9			
			138	5690.0				11.9			
	802.11ax (HE20)	7.3 Mbps	100	5500.0	15.0	16.0	No	Not Required	13.0	No	
120			5600.0	15.0							
124			5620.0	14.9							
144			5720.0	15.0							
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	12.0	13.0	No		
		122	5610.0				11.9				
		138	5690.0				11.9				
5.8 (U-NII 3)	802.11a	6 Mbps	149	5745.0	16.2	17.0	Yes	Not Required	13.0	No	
			157	5785.0	16.2						
			165	5825.0	16.1						
	802.11n (HT20)	6.5 Mbps	149	5745.0	16.1	17.0	No	Not Required	13.0	No	
			157	5785.0	16.2						
			165	5825.0	16.0						
	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	16.1	17.0	No	Not Required	13.0	No	
			157	5785.0	16.2						
			165	5825.0	16.0						
	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	11.9	13.0	Yes		
802.11ax (HE20)	7.3 Mbps	149	5745.0	15.7	17.0	No	Not Required	13.0	No		
		157	5785.0	15.8							
		165	5825.0	15.6							
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	11.8	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	14.2	15.0	Yes	Not Required	13.0	No
				46	5230.0	14.2					
		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	14.3	15.0	No	Not Required	13.0	No	
			46	5230.0	14.3						
	802.11ac (VHT80)	29.3 Mbps	42	5210.0	Not Required	14.0	No	12.1	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	13.5	15.0	No	Not Required	13.0	No	
			46	5230.0	13.4						
	802.11ax (HE80)	30.6 Mbps	42	5210.0	Not Required	14.0	No	12.0	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	14.6	15.0	Yes	Not Required	13.0	No	
			62	5310.0	14.6						
	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	14.2	15.0	No	Not Required	13.0	No		
		62	5310.0	14.2							
802.11ac (VHT80)	29.3 Mbps	58	5290.0	Not Required	14.0	No	12.0	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	13.4	15.0	No	Not Required	13.0	No		
		62	5310.0	13.3							
802.11ax (HE80)	30.6 Mbps	58	5290.0	Not Required	14.0	No	11.8	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	15.7	16.0	Yes	Not Required	13.0	No
				120	5600.0	15.6					
				124	5620.0	15.5					
				144	5720.0	15.5					
		802.11n (HT20)	6.5 Mbps	100	5500.0	15.7	16.0	No	Not Required	13.0	No
				120	5600.0	15.6					
				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	15.6	16.0	No	Not Required	13.0	No	
			120	5600.0	15.6						
			124	5620.0	15.6						
			144	5720.0	15.6						
	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	12.4	13.0	Yes	
			122	5610.0				12.3			
			138	5690.0				12.4			
	802.11ax (HE20)	7.3 Mbps	100	5500.0	15.5	16.0	No	Not Required	13.0	No	
120			5600.0	15.5							
124			5620.0	15.5							
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				12.2				
		138	5690.0				12.3				
5.8 (U-NII 3)	802.11a	6 Mbps	149	5745.0	16.7	17.0	Yes	Not Required	13.0	No	
			157	5785.0	16.6						
			165	5825.0	16.5						
	802.11n (HT20)	6.5 Mbps	149	5745.0	16.6	17.0	No	Not Required	13.0	No	
			157	5785.0	16.6						
			165	5825.0	16.4						
	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	16.7	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	12.4	13.0	Yes		
802.11ax (HE20)	7.3 Mbps	149	5745.0	16.5	17.0	No	Not Required	13.0	No		
		157	5785.0	16.4							
		165	5825.0	16.3							
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	12.2	13.0	No		

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	13.2	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	13.1	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	13.5	14.0	Yes	12.2	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	13.3	14.0	No	12.1	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	13.2	14.0	Yes	12.1	13.0	Yes	
			122	5610.0	13.1			11.9			
			138	5690.0	13.1			11.9			
	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	12.0	13.0	No	
			122	5610.0	13.0			11.9			
			138	5690.0	12.9			11.9			
	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	13.1	14.0	Yes	11.9	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	13.0	14.0	No	11.8	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	13.0	14.0	Yes	12.1	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	12.0	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	12.9	14.0	Yes	12.0	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	11.8	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	13.5	14.0	Yes	12.4	13.0	Yes
				122	5610.0	13.4			12.3		
				138	5690.0	13.5			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	13.4	14.0	No	12.3	13.0	No		
		122	5610.0	13.4			12.2				
		138	5690.0	13.4			12.3				
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	12.4	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		

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						
		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	13.6	14.0	Yes	12.3	13.0	Yes
	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	13.2	14.0	No	12.2	13.0	No	
			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								
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	13.3	14.0	Yes	12.0	13.0	Yes		
		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	11.9	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	13.1	14.0	Yes	11.8	13.0	Yes	
			122	5610.0	13.0			11.8			
			138	5690.0	13.0			11.9			
	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	13.0	14.0	No	11.8	13.0	No	
122			5610.0	12.9	11.8						
138			5690.0	12.9	11.8						
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	13.1	14.0	Yes	11.9	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	13.0	14.0	No	11.8	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						
		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	13.7	14.0	Yes	12.1	13.0	Yes
	36			5180.0	Not Required	14.0	No	Not Required	13.0	No	
	40	5200.0									
	44	5220.0									
	48	5240.0									
	802.11ax (HE20)	7.3 Mbps	38	5190.0	Not Required	14.0	No	Not Required	13.0	No	
			46	5230.0							
	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	11.9	13.0	No	
			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	54	5270.0	Not Required	14.0	No	Not Required	13.0	No		
		62	5310.0								
802.11n (HT40)	13.5 Mbps	52	5260.0	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								
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	13.3	14.0	Yes	11.9	13.0	Yes		
		52	5260.0	Not Required	14.0	No	Not Required	13.0	No		
56	5280.0										
60	5300.0										
64	5320.0										
802.11ax (HE20)	7.3 Mbps	54	5270.0	Not Required	14.0	No	Not Required	13.0	No		
		62	5310.0								
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	13.2	14.0	No	11.8	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	13.5	14.0	Yes	12.3	13.0	Yes	
			122	5610.0	13.3			12.2			
			138	5690.0	13.3			12.2			
	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	13.4	14.0	No	12.2	13.0	No	
122			5610.0	13.4	12.1						
138			5690.0	13.3	12.1						
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	13.6	14.0	Yes	12.2	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	12.1	13.0	No		

Note(s):

- 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.
- 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.
- 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

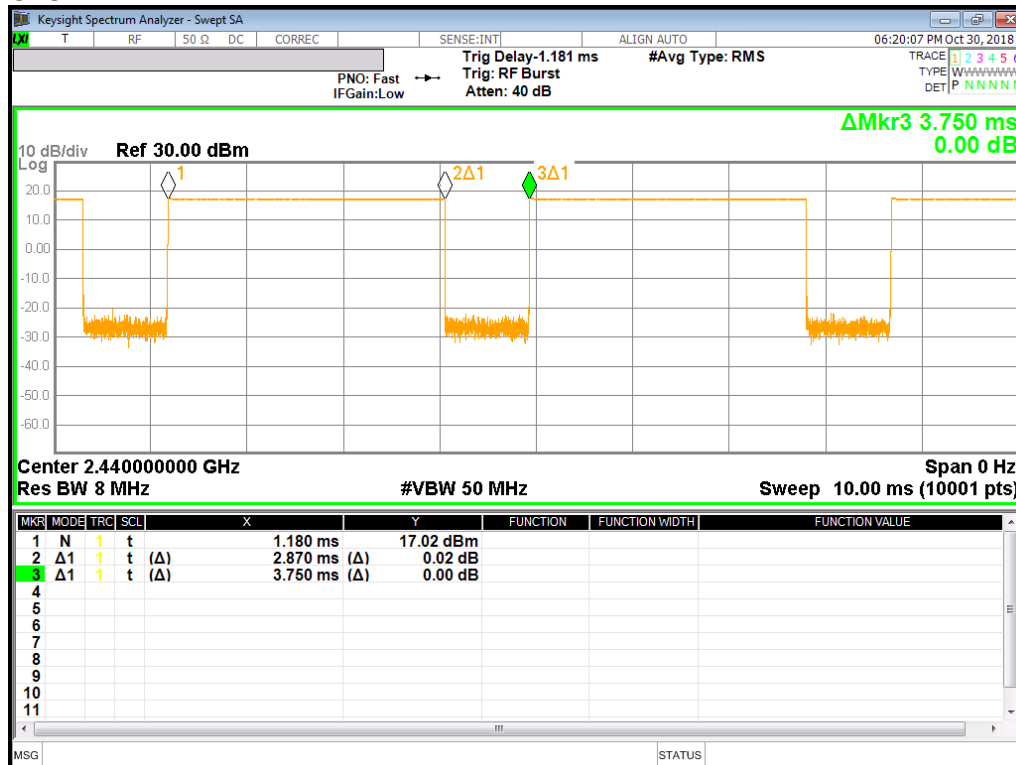
Band (GHz)	Mode	Ch #	Freq. (MHz)	Meas. Avg Pwr (dBm)
2.4	GFSK	0	2402	18.8
		39	2441	19.2
		78	2480	18.1
	EDR, $\pi/4$ DQPSK	0	2402	12.3
		39	2441	12.9
		78	2480	12.1
	EDR, 8-DPSK	0	2402	12.4
		39	2441	13.1
		78	2480	12.0
	LE, GFSK-1M	0	2402	7.2
		19	2440	8.8
		39	2480	7.8
LE, GFSK-2M	0	2402	8.0	
	19	2440	9.3	
	39	2480	8.6	

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

KDB 941225 D05 SAR for LTE Devices:

SAR test reduction is applied using the following criteria:

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

KDB 248227 D01 SAR meas for 802.11:

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

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

- ≤ 0.4 W/kg, further SAR measurement is not required for the other test positions in that exposure configuration and wireless mode combination within the frequency band or aggregated band. DSSS and OFDM configurations are considered separately according to the required SAR procedures.
- > 0.4 W/kg, SAR is repeated using the same wireless mode test configuration tested in the initial test position to measure the subsequent next 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	34.0	33.5	0.156	0.175	
					Left Tilt	190	836.6	34.0	33.5	0.104	0.117	
					Right Touch	190	836.6	34.0	33.5	0.222	0.249	
		GPRS 4 Slot	Off	0	Right Tilt	190	836.6	34.0	33.5	0.111	0.124	
					Left Touch	190	836.6	28.6	27.2	0.186	0.254	
					Left Tilt	190	836.6	28.6	27.2	0.125	0.171	
	Body-worn	GPRS 4 Slot	Off	15	Right Touch	190	836.6	28.6	27.2	0.256	0.350	1
					Right Tilt	190	836.6	28.6	27.2	0.125	0.171	
	Hotspot	Voice	Off	15	Rear	190	836.6	34.0	33.5	0.296	0.332	
					Front	190	836.6	34.0	33.5	0.260	0.292	
					Rear	190	836.6	28.6	27.2	0.373	0.510	2
					Front	190	836.6	28.6	27.2	0.317	0.434	
		GPRS 4 Slot	Off	10	Rear	128	824.4	28.6	27.1	0.561	0.800	
						190	836.6	28.6	27.2	0.733	1.003	
					Front	251	848.8	28.6	27.3	0.776	1.059	3
						190	836.6	28.6	27.2	0.583	0.797	
Edge 2	190	836.6	28.6	27.2	0.248	0.339						
Edge 3	190	836.6	28.6	27.2	0.434	0.594						
Edge 4	190	836.6	28.6	27.2	0.113	0.155						

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	31.0	29.5	0.075	0.105	4
					Left Tilt	661	1880.0	31.0	29.5	0.027	0.038	
					Right Touch	661	1880.0	31.0	29.5	0.050	0.069	
		GPRS 1 Slot	Off	0	Right Tilt	661	1880.0	31.0	29.5	0.030	0.042	
					Left Touch	661	1880.0	31.0	29.6	0.065	0.089	
					Left Tilt	661	1880.0	31.0	29.6	0.028	0.038	
	Body-worn	GPRS 1 Slot	Off	15	Right Touch	661	1880.0	31.0	29.6	0.044	0.061	
					Right Tilt	661	1880.0	31.0	29.6	0.022	0.030	
	Hotspot	Voice	Off	15	Rear	661	1880.0	31.0	29.5	0.241	0.337	5
					Front	661	1880.0	31.0	29.5	0.180	0.252	
					Front	661	1880.0	31.0	29.6	0.174	0.239	
		GPRS 1 Slot	Off	10	Rear	661	1880.0	31.0	29.6	0.439	0.604	
					Front	661	1880.0	31.0	29.6	0.343	0.472	
					Edge 2	661	1880.0	31.0	29.6	0.048	0.066	
	Edge 3	512	1850.2	31.0	29.5	0.730	1.024					
		661	1880.0	31.0	29.6	0.717	0.986					
	Edge 4	810	1909.8	31.0	29.4	0.720	1.045	6				
	661	1880.0	31.0	29.6	0.101	0.139						

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	24.5	23.7	0.179	0.218	7
					Left Tilt	9400	1880.0	24.5	23.7	0.041	0.050	
					Right Touch	9400	1880.0	24.5	23.7	0.113	0.137	
					Right Tilt	9400	1880.0	24.5	23.7	0.068	0.082	
	Bod-worn	Rel 99 RMC	Off	15	Rear	9400	1880.0	24.5	23.7	0.509	0.619	8
					Front	9400	1880.0	24.5	23.7	0.390	0.474	
	Hotspot	Rel 99 RMC	On	10	Rear	9400	1880.0	21.5	20.7	0.478	0.580	
					Front	9400	1880.0	21.5	20.7	0.377	0.458	
					Edge 2	9400	1880.0	21.5	20.7	0.059	0.072	
					Edge 3	9262	1852.4	21.5	20.0	0.732	1.045	9
9400						1880.0	21.5	20.7	0.735	0.892		
Edge 4					9400	1880.0	21.5	20.7	0.131	0.159		
Antenna	RF Exposure Conditions	Mode	PWR Back-off	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		10-g SAR (W/kg)		Plot No.
Main 1-1	Phablet-10g	Rel 99 RMC	Off	7	Rear	9400	1880.0	24.5	23.7	0.808	0.983	
				5	Front	9400	1880.0	24.5	23.7	0.820	0.997	
				0	Edge 2	9400	1880.0	24.5	23.7	0.213	0.259	
				11	Edge 3	9400	1880.0	24.5	23.7	0.646	0.786	
				0	Edge 4	9400	1880.0	24.5	23.7	0.526	0.640	
			On	0	Rear	9400	1880.0	21.5	20.7	1.590	1.922	10
				0	Front	9400	1880.0	21.5	20.7	0.830	1.003	
				0	Edge 3	9400	1880.0	21.5	20.7	1.390	1.680	

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	1413	1732.6	24.5	23.6	0.226	0.280	11		
					Left Tilt	1413	1732.6	24.5	23.6	0.056	0.069			
					Right Touch	1413	1732.6	24.5	23.6	0.178	0.221			
					Right Tilt	1413	1732.6	24.5	23.6	0.069	0.086			
	Bod-worn	Rel 99 RMC	Off	15	Rear	1413	1732.6	24.5	23.6	0.603	0.748	12		
					Front	1413	1732.6	24.5	23.6	0.518	0.642			
	Hotspot	Rel 99 RMC	On	10	Rear	1413	1732.6	20.5	19.6	0.482	0.588			
					Front	1413	1732.6	20.5	19.6	0.366	0.447			
					Edge 2	1413	1732.6	20.5	19.6	0.052	0.064			
					Edge 3	1413	1732.6	20.5	19.6	0.614	0.749	13		
Edge 4					1413	1732.6	20.5	19.6	0.131	0.160				
Antenna	RF Exposure Conditions	Mode	PWR Back-off	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		10-g SAR (W/kg)		Plot No.		
Main 1-1	Phablet-10g	Rel 99 RMC	Off	7	Rear	1413	1732.6	24.5	23.6	0.994	1.233			
					5	Front	1413	1732.6	24.5	23.6	1.090	1.352		
						0	Edge 2	1413	1732.6	24.5	23.6	0.288	0.357	
							Edge 3	1413	1732.6	24.5	23.6	0.699	0.867	
						0	Edge 4	1413	1732.6	24.5	23.6	0.742	0.920	
			On	0	Rear	1413	1732.6	20.5	19.7	1.490	1.804			
					Front	1413	1732.6	20.5	19.7	0.964	1.167			
				Edge 3	1312	1712.4	20.5	19.8	1.840	2.149	14			
					1413	1732.6	20.5	19.7	1.760	2.131				
					1513	1752.6	20.5	20.0	1.640	1.842				

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	25.0	24.6	0.198	0.218	
					Left Tilt	4183	836.6	25.0	24.6	0.126	0.139	
					Right Touch	4183	836.6	25.0	24.6	0.271	0.299	15
					Right Tilt	4183	836.6	25.0	24.6	0.142	0.156	
	Bod-worn	Rel 99 RMC	Off	15	Rear	4183	836.6	25.0	24.6	0.438	0.483	16
					Front	4183	836.6	25.0	24.6	0.381	0.420	
	Hotspot	Rel 99 RMC	Off	10	Rear	4132	826.4	25.0	24.8	0.709	0.747	
						4183	836.6	25.0	24.6	0.848	0.934	17
						4233	846.6	25.0	24.8	0.882	0.925	
					Front	4183	836.6	25.0	24.6	0.654	0.721	
Edge 2					4183	836.6	25.0	24.6	0.290	0.320		
Edge 3					4183	836.6	25.0	24.6	0.514	0.566		
Edge 4	4183	836.6	25.0	24.6	0.121	0.133						

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 offset	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	24.5	23.4	0.151	0.194	18	
								50	0	23.5	21.9	0.106	0.154		
					Left Tilt	18900	1880.0	1	0	24.5	23.4	0.056	0.072		
								50	0	23.5	21.9	0.035	0.050		
					Right Touch	18900	1880.0	1	0	24.5	23.4	0.099	0.127		
								50	0	23.5	21.9	0.066	0.095		
					Right Tilt	18900	1880.0	1	0	24.5	23.4	0.070	0.089		
								50	0	23.5	21.9	0.045	0.066		
	Body-worn	QPSK	Off	15	Rear	18900	1880.0	1	0	24.5	23.4	0.495	0.635	19	
								50	0	23.5	21.9	0.344	0.499		
					Front	18900	1880.0	1	0	24.5	23.4	0.391	0.502		
								50	0	23.5	21.9	0.269	0.390		
	Hotspot	QPSK	On	10	Rear	18900	1880.0	1	0	21.5	20.5	0.484	0.611		
								50	0	21.5	20.4	0.477	0.612		
					Front	18900	1880.0	1	0	21.5	20.5	0.381	0.481		
								50	0	21.5	20.4	0.373	0.478		
					Edge 2	18900	1880.0	1	0	21.5	20.5	0.052	0.065		
								50	0	21.5	20.4	0.053	0.068		
					Edge 3	18700	1860.0	1	0	21.5	20.1	0.770	1.058	20	
								50	0	21.5	20.0	0.755	1.067		
						18900	1880.0	1	0	21.5	20.5	0.747	0.943		
								50	0	21.5	20.4	0.742	0.951		
								100	0	21.5	20.3	0.735	0.960		
								1	0	21.5	20.3	0.758	0.991		
Edge 4					18900	1880.0	50	0	21.5	20.2	0.749	1.005			
							1	0	21.5	20.5	0.119	0.150			
50					0	21.5	20.4	0.117	0.150						
Main 1-1					Phablet -10g	QPSK	Off	7	Rear	18900	1880.0	1	0	24.5	23.4
	50	0	23.5	21.9								0.559	0.810		
	5	Front	18900	1880.0				1	0	24.5	23.4	0.827	1.061		
								50	0	23.5	21.9	0.593	0.859		
	0	Edge 2	18900	1880.0				1	0	24.5	23.4	0.222	0.285		
								50	0	23.5	21.9	0.155	0.225		
	11	Edge 3	18900	1880.0				1	0	24.5	23.4	0.689	0.884		
								50	0	23.5	21.9	0.484	0.701		
	0	Edge 4	18900	1880.0				1	0	24.5	23.4	0.546	0.700		
								50	0	23.5	21.9	0.379	0.549		
	On	0	Rear	18700				1860.0	1	0	21.5	20.1	1.700	2.365	
									50	0	21.5	20.0	1.680	2.373	
				18900			1880.0	1	0	21.5	20.5	1.750	2.203		
								50	0	21.5	20.4	1.750	2.257		
								100	0	21.5	20.3	1.710	2.246		
								1	0	21.5	20.3	1.740	2.280		
		19100	1900.0	50			0	21.5	20.3	1.680	2.232				
				1			0	21.5	20.5	1.010	1.272				
		Front	18900	1880.0			50	0	21.5	20.4	1.000	1.290			
							1	0	21.5	20.5	1.150	1.448			
		Edge 3	18900	1880.0			50	0	21.5	20.4	1.110	1.431			
							1	0	21.5	20.5	1.150	1.448			
	21	Rear	18700	1860.0			1	0	21.5	20.1	1.700	2.365			
							50	0	21.5	20.0	1.680	2.373			
21	Rear	18900	1880.0	1	0	21.5	20.5	1.750	2.203						
				50	0	21.5	20.4	1.750	2.257						
21	Rear	18900	1880.0	100	0	21.5	20.3	1.710	2.246						
				1	0	21.5	20.3	1.740	2.280						
21	Rear	19100	1900.0	50	0	21.5	20.3	1.680	2.232						
				1	0	21.5	20.5	1.010	1.272						
21	Front	18900	1880.0	50	0	21.5	20.4	1.000	1.290						
				1	0	21.5	20.5	1.150	1.448						
21	Edge 3	18900	1880.0	50	0	21.5	20.4	1.110	1.431						
				1	0	21.5	20.5	1.150	1.448						

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 offset	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	24.5	23.4	0.227	0.292	22				
								50	0	23.5	21.8	0.163	0.239					
					Left Tilt	20175	1732.5	1	0	24.5	23.4	0.039	0.050					
								50	0	23.5	21.8	0.028	0.041					
					Right Touch	20175	1732.5	1	0	24.5	23.4	0.134	0.173					
								50	0	23.5	21.8	0.092	0.135					
				Right Tilt	20175	1732.5	1	0	24.5	23.4	0.049	0.064						
							50	0	23.5	21.8	0.031	0.045						
				Body-worn	QPSK	Off	15	Rear	20175	1732.5	1	0	24.5	23.4	0.610	0.786	23	
											50	0	23.5	21.8	0.425	0.623		
								Front	20175	1732.5	1	0	24.5	23.4	0.470	0.605		
											50	0	23.5	21.8	0.332	0.486		
	Hotspot	QPSK	On					10	Rear	20175	1732.5	1	0	21.5	20.3	0.538	0.703	
												50	0	21.5	20.4	0.531	0.692	
				Front	20175	1732.5	1		0	21.5	20.3	0.416	0.544					
							50		0	21.5	20.4	0.433	0.564					
				Edge 2	20175	1732.5	1		0	21.5	20.3	0.059	0.077					
							50		0	21.5	20.4	0.057	0.075					
				Edge 3	20175	1732.5	1		0	21.5	20.3	0.648	0.847	24				
							50		0	21.5	20.4	0.634	0.826					
	Edge 4	20175	1732.5	100	0	21.5	20.3	0.642	0.840									
				1	0	21.5	20.3	0.139	0.182									
	50	0	21.5	20.4	0.136	0.177												
	Main 1-1	Phablet -10g	QPSK	Off	7	Rear	20175	1732.5	1	0	24.5	23.4	0.916	1.180				
50									0	23.5	21.8	0.649	0.951					
5					Front	20175	1732.5	1	0	24.5	23.4	0.788	1.015					
								50	0	23.5	21.8	0.576	0.844					
0					Edge 2	20175	1732.5	1	0	24.5	23.4	0.261	0.336					
								50	0	23.5	21.8	0.183	0.268					
11					Edge 3	20175	1732.5	1	0	24.5	23.4	0.613	0.790					
								50	0	23.5	21.8	0.436	0.639					
0					Edge 4	20175	1732.5	1	0	24.5	23.4	0.660	0.850					
								50	0	23.5	21.8	0.467	0.684					
On					0	Rear	20175	1732.5	1	0	21.5	20.3	1.790	2.337				
									50	0	21.5	20.4	1.800	2.345				
				100	0	21.5	20.3	1.780	2.336									
				0	Front	20175	1732.5	1	0	21.5	20.3	1.120	1.462					
								50	0	21.5	20.4	1.090	1.420					
Edge 3				20175	1732.5	1	0	21.5	20.3	2.270	2.963	25						
						50	0	21.5	20.4	2.260	2.944							
100				0	21.5	20.3	2.220	2.913										

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 offset	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	24.4	0.186	0.214	
								25	0	23.0	21.8	0.108	0.141	
					Left Tilt	20525	836.5	1	0	25.0	24.4	0.135	0.155	
								25	0	23.0	21.8	0.078	0.101	
					Right Touch	20525	836.5	1	0	25.0	24.4	0.245	0.282	26
								25	0	23.0	21.8	0.149	0.194	
					Right Tilt	20525	836.5	1	0	25.0	24.4	0.128	0.147	
								25	0	23.0	21.8	0.077	0.101	
	Body-worn	QPSK	Off	15	Rear	20525	836.5	1	0	25.0	24.4	0.396	0.455	27
								25	0	23.0	21.8	0.228	0.298	
					Front	20525	836.5	1	0	25.0	24.4	0.330	0.379	
								25	0	23.0	21.8	0.190	0.248	
	Hotspot	QPSK	Off	10	Rear	20525	836.5	1	0	25.0	24.4	0.681	0.783	28
								25	0	23.0	21.8	0.397	0.518	
					Front	20525	836.5	1	0	25.0	24.4	0.523	0.601	
								25	0	23.0	21.8	0.332	0.433	
					Edge 2	20525	836.5	1	0	25.0	24.4	0.370	0.425	
								25	0	23.0	21.8	0.209	0.273	
					Edge 3	20525	836.5	1	0	25.0	24.4	0.425	0.489	
								25	0	23.0	21.8	0.245	0.320	
					Edge 4	20525	836.5	1	0	25.0	24.4	0.082	0.095	
								25	0	23.0	21.8	0.049	0.064	

10.9 LTE Band 7 (20MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	PWR Back-off	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		Plot No.				
										Tune-up limit	Meas.	Meas.	Scaled					
Main 1-2	Head	QPSK	Off	0	Left Touch	20850	2510.0	1	99	25.0	24.1	0.057	0.071					
								50	0	24.0	22.0	0.035	0.055					
					Left Tilt	20850	2510.0	1	99	25.0	24.1	0.034	0.043					
								50	0	24.0	22.0	0.020	0.032					
					Right Touch	20850	2510.0	1	99	25.0	24.1	0.041	0.051					
								50	0	24.0	22.0	0.023	0.036					
					Right Tilt	20850	2510.0	1	99	25.0	24.1	0.076	0.094	29				
								50	0	24.0	22.0	0.032	0.051					
					Body-worn	QPSK	Off	15	Rear	20850	2510.0	1	99	25.0	24.1	0.608	0.753	30
												50	0	24.0	22.0	0.385	0.605	
									Front	20850	2510.0	1	99	25.0	24.1	0.358	0.444	
												50	0	24.0	22.0	0.229	0.360	
	Hotspot	QPSK	On	10	Rear	20850	2510.0	1	99	21.0	20.2	0.173	0.208					
								50	0	21.0	20.3	0.164	0.193					
					Front	20850	2510.0	1	99	21.0	20.2	0.118	0.142					
								50	0	21.0	20.3	0.126	0.148					
					Edge 3	20850	2510.0	1	99	21.0	20.2	0.351	0.422	31				
								50	0	21.0	20.3	0.351	0.414					
					Edge 4	20850	2510.0	1	99	21.0	20.2	0.079	0.095					
								50	0	21.0	20.3	0.079	0.093					

10.10 LTE Band 12 (10MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	PWR Back-off	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	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	25.0	23.7	0.101	0.136	
								25	0	23.0	21.7	0.069	0.093	
					Left Tilt	23095	707.5	1	0	25.0	23.7	0.065	0.087	
								25	0	23.0	21.7	0.046	0.063	
					Right Touch	23095	707.5	1	0	25.0	23.7	0.111	0.150	32
								25	0	23.0	21.7	0.071	0.097	
					Right Tilt	23095	707.5	1	0	25.0	23.7	0.065	0.087	
								25	0	23.0	21.7	0.041	0.056	
	Body-worn	QPSK	Off	15	Rear	23095	707.5	1	0	25.0	23.7	0.198	0.267	33
								25	0	23.0	21.7	0.131	0.178	
					Front	23095	707.5	1	0	25.0	23.7	0.163	0.220	
								25	0	23.0	21.7	0.109	0.148	
	Hotspot	QPSK	Off	10	Rear	23095	707.5	1	0	25.0	23.7	0.272	0.367	34
								25	0	23.0	21.7	0.174	0.237	
					Front	23095	707.5	1	0	25.0	23.7	0.210	0.283	
								25	0	23.0	21.7	0.139	0.189	
					Edge 2	23095	707.5	1	0	25.0	23.7	0.122	0.164	
								25	0	23.0	21.7	0.083	0.112	
					Edge 3	23095	707.5	1	0	25.0	23.7	0.128	0.173	
								25	0	23.0	21.7	0.083	0.113	
					Edge 4	23095	707.5	1	0	25.0	23.7	0.108	0.146	
								25	0	23.0	21.7	0.073	0.099	

10.11 LTE Band 13 (10MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	PWR Back-off	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	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	25.0	23.8	0.143	0.189	
								25	0	23.0	21.8	0.088	0.117	
					Left Tilt	23230	782.0	1	0	25.0	23.8	0.101	0.133	
								25	0	23.0	21.8	0.064	0.085	
					Right Touch	23230	782.0	1	0	25.0	23.8	0.181	0.239	35
								25	0	23.0	21.8	0.112	0.148	
					Right Tilt	23230	782.0	1	0	25.0	23.8	0.099	0.130	
								25	0	23.0	21.8	0.062	0.083	
	Body-worn	QPSK	Off	15	Rear	23230	782.0	1	0	25.0	23.8	0.265	0.350	36
								25	0	23.0	21.8	0.170	0.225	
					Front	23230	782.0	1	0	25.0	23.8	0.256	0.338	
								25	0	23.0	21.8	0.163	0.216	
	Hotspot	QPSK	Off	10	Rear	23230	782.0	1	0	25.0	23.8	0.394	0.520	37
								25	0	23.0	21.8	0.253	0.335	
					Front	23230	782.0	1	0	25.0	23.8	0.318	0.419	
								25	0	23.0	21.8	0.202	0.268	
					Edge 2	23230	782.0	1	0	25.0	23.8	0.323	0.426	
								25	0	23.0	21.8	0.203	0.269	
					Edge 3	23230	782.0	1	0	25.0	23.8	0.196	0.259	
								25	0	23.0	21.8	0.125	0.166	
					Edge 4	23230	782.0	1	0	25.0	23.8	0.189	0.249	
								25	0	23.0	21.8	0.116	0.154	

10.12 LTE Band 17 (10MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	PWR Back-off	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	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	25.0	23.9	0.115	0.148	
								25	0	23.0	21.9	0.076	0.098	
					Left Tilt	23790	710.0	1	0	25.0	23.9	0.074	0.095	
								25	0	23.0	21.9	0.049	0.063	
					Right Touch	23790	710.0	1	0	25.0	23.9	0.121	0.156	38
								25	0	23.0	21.9	0.078	0.101	
					Right Tilt	23790	710.0	1	0	25.0	23.9	0.072	0.093	
								25	0	23.0	21.9	0.046	0.059	
	Body-worn	QPSK	Off	15	Rear	23790	710.0	1	0	25.0	23.9	0.217	0.280	39
								25	0	23.0	21.9	0.140	0.181	
					Front	23790	710.0	1	0	25.0	23.9	0.181	0.233	
								25	0	23.0	21.9	0.117	0.151	
	Hotspot	QPSK	Off	10	Rear	23790	710.0	1	0	25.0	23.9	0.287	0.370	40
								25	0	23.0	21.9	0.191	0.246	
					Front	23790	710.0	1	0	25.0	23.9	0.226	0.291	
								25	0	23.0	21.9	0.147	0.190	
					Edge 2	23790	710.0	1	0	25.0	23.9	0.139	0.179	
								25	0	23.0	21.9	0.087	0.112	
					Edge 3	23790	710.0	1	0	25.0	23.9	0.124	0.160	
								25	0	23.0	21.9	0.079	0.102	
Edge 4					23790	710.0	1	0	25.0	23.9	0.128	0.165		
							25	0	23.0	21.9	0.085	0.110		

10.13 LTE Band 25 (20MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	PWR Back-off	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		Plot No.				
										Tune-up limit	Meas.	Meas.	Scaled					
Main 1-1	Head	QPSK	Off	0	Left Touch	26365	1882.5	1	0	24.0	22.9	0.149	0.191	41				
								50	0	23.0	21.9	0.116	0.150					
					Left Tilt	26365	1882.5	1	0	24.0	22.9	0.047	0.060					
								50	0	23.0	21.9	0.033	0.042					
					Right Touch	26365	1882.5	1	0	24.0	22.9	0.089	0.114					
								50	0	23.0	21.9	0.066	0.086					
					Right Tilt	26365	1882.5	1	0	24.0	22.9	0.064	0.082					
								50	0	23.0	21.9	0.049	0.063					
	Body-worn	QPSK	Off	15	Rear	26365	1882.5	1	0	24.0	22.9	0.507	0.651	42				
								50	0	23.0	21.9	0.406	0.525					
					Front	26365	1882.5	1	0	24.0	22.9	0.485	0.623					
								50	0	23.0	21.9	0.383	0.495					
	Hotspot	QPSK	On	10	Rear	26365	1882.5	1	0	21.0	19.9	0.528	0.678					
								50	0	21.0	19.9	0.511	0.661					
					Front	26365	1882.5	1	0	21.0	19.9	0.552	0.709					
								50	0	21.0	19.9	0.520	0.673					
					Edge 2	26365	1882.5	1	0	21.0	19.9	0.057	0.074					
								50	0	21.0	19.9	0.064	0.083					
					Edge 3	26140	1860.0	1	0	21.0	19.6	0.704	0.978					
								50	0	21.0	19.4	0.676	0.974					
						26365	1882.5	1	0	21.0	19.9	0.721	0.933					
								100	0	21.0	19.8	0.703	0.922					
					26590	1905.0	1	0	21.0	19.8	0.745	0.988	43					
							50	0	21.0	19.7	0.720	0.969						
Edge 4					26365	1882.5	1	0	21.0	19.9	0.106	0.136						
							50	0	21.0	19.9	0.101	0.131						
Main 1-1					Phablet -10g	QPSK	Off	7	Rear	26365	1882.5	1	0	24.0	22.9	0.854	1.097	
												50	0	23.0	21.9	0.663	0.857	
	5	Front	26365	1882.5				1	0	24.0	22.9	0.969	1.245					
								50	0	23.0	21.9	0.754	0.975					
	0	Edge 2	26365	1882.5				1	0	24.0	22.9	0.523	0.672					
								50	0	23.0	21.9	0.405	0.524					
	11	Edge 3	26365	1882.5				1	0	24.0	22.9	0.712	0.915					
								50	0	23.0	21.9	0.559	0.723					
	0	Edge 4	26365	1882.5				1	0	24.0	22.9	0.272	0.349					
								50	0	23.0	21.9	0.208	0.269					
	On	0	Rear	26365			1882.5	1	0	21.0	19.9	1.460	1.874					
								50	0	21.0	19.9	1.450	1.876	44				
		0	Front	26365			1882.5	1	0	21.0	19.9	1.050	1.348					
								50	0	21.0	19.9	1.050	1.358					
		0	Edge 3	26365			1882.5	1	0	21.0	19.9	1.300	1.669					
								50	0	21.0	19.9	1.270	1.643					

10.14 LTE Band 26 (15MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	PWR Back-off	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	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	37	24.5	23.6	0.140	0.171	
								36	0	23.5	22.0	0.094	0.134	
					Left Tilt	26865	831.5	1	37	24.5	23.6	0.093	0.113	
								36	0	23.5	22.0	0.065	0.092	
					Right Touch	26865	831.5	1	37	24.5	23.6	0.194	0.237	45
								36	0	23.5	22.0	0.131	0.187	
					Right Tilt	26865	831.5	1	37	24.5	23.6	0.101	0.123	
								36	0	23.5	22.0	0.063	0.090	
	Body-worn	QPSK	Off	15	Rear	26865	831.5	1	37	24.5	23.6	0.315	0.384	
								36	0	23.5	22.0	0.227	0.324	
					Front	26865	831.5	1	37	24.5	23.6	0.316	0.386	46
								36	0	23.5	22.0	0.210	0.299	
	Hotspot	QPSK	Off	10	Rear	26865	831.5	1	37	24.5	23.6	0.548	0.669	47
								36	0	23.5	22.0	0.393	0.560	
					Front	26865	831.5	1	37	24.5	23.6	0.482	0.588	
								36	0	23.5	22.0	0.317	0.452	
					Edge 2	26865	831.5	1	37	24.5	23.6	0.301	0.367	
								36	0	23.5	22.0	0.221	0.315	
					Edge 3	26865	831.5	1	37	24.5	23.6	0.370	0.451	
								36	0	23.5	22.0	0.267	0.381	
					Edge 4	26865	831.5	1	37	24.5	23.6	0.062	0.075	
								36	0	23.5	22.0	0.055	0.078	

10.15 LTE Band 38 (20MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	PWR Back-off	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		Plot No.	
										Tune-up limit	Meas.	Meas.	Scaled		
Main 1-2	Head	QPSK	Off	0	Left Touch	38150	2610.0	1	0	24.5	23.2	0.040	0.055	48	
								50	0	23.5	22.0	0.030	0.042		
					Left Tilt	38150	2610.0	1	0	24.5	23.2	0.017	0.024		
								50	0	23.5	22.0	0.010	0.014		
					Right Touch	38150	2610.0	1	0	24.5	23.2	0.031	0.042		
								50	0	23.5	22.0	0.022	0.031		
					Right Tilt	38150	2610.0	1	0	24.5	23.2	0.031	0.043		
								50	0	23.5	22.0	0.020	0.028		
	Body-worn	QPSK	Off	15	Rear	38150	2610.0	1	0	24.5	23.2	0.408	0.556	49	
								50	0	23.5	22.0	0.311	0.435		
					Front	38150	2610.0	1	0	24.5	23.2	0.312	0.425		
								50	0	23.5	22.0	0.221	0.309		
	Hotspot	QPSK	On	10	Rear	38150	2610.0	1	0	21.5	20.1	0.346	0.478		
								50	0	21.5	20.5	0.360	0.451		
					Front	38150	2610.0	1	0	21.5	20.1	0.218	0.301		
								50	0	21.5	20.5	0.222	0.278		
Edge 3					38150	2610.0	1	0	21.5	20.1	0.521	0.719	50		
							50	0	21.5	20.5	0.540	0.677			
Edge 4					38150	2610.0	1	0	21.5	20.1	0.074	0.103			
							50	0	21.5	20.5	0.063	0.079			
Main 1-2	Phablet -10g	QPSK	Off	7	Rear	38150	2610.0	1	0	24.5	23.2	0.613	0.836		
								50	0	23.5	22.0	0.451	0.631		
				5	Front	38150	2610.0	1	0	24.5	23.2	0.581	0.792		
								50	0	23.5	22.0	0.424	0.593		
				11	Edge 3	38150	2610.0	1	0	24.5	23.2	0.454	0.619		
								50	0	23.5	22.0	0.377	0.527		
				0	Edge 4	38150	2610.0	1	0	24.5	23.2	0.369	0.503		
								50	0	23.5	22.0	0.274	0.383		
				On	0	Rear	38150	2610.0	1	0	21.5	20.1	0.762	1.056	
									50	0	21.5	20.5	0.771	0.970	
			Front		38150	2610.0	1	0	21.5	20.1	0.502	0.695			
							50	0	21.5	20.5	0.569	0.716			
			Edge 3		38150	2610.0	1	0	21.5	20.1	1.050	1.455	51		
							50	0	21.5	20.5	1.120	1.409			

10.16 LTE Band 41 (20MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	PWR Back-off	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		Plot No.
										Tune-up limit	Meas.	Meas.	Scaled	
Main 1-2	Head	QPSK	Off	0	Left Touch	39750	2506.0	1	0	24.5	23.2	0.039	0.052	52
								50	0	23.5	22.2	0.026	0.035	
					Left Tilt	39750	2506.0	1	0	24.5	23.2	0.024	0.032	
								50	0	23.5	22.2	0.015	0.020	
					Right Touch	39750	2506.0	1	0	24.5	23.2	0.032	0.043	
								50	0	23.5	22.2	0.018	0.024	
	Right Tilt	39750	2506.0	1	0	24.5	23.2	0.037	0.049					
				50	0	23.5	22.2	0.020	0.027					
	Body-worn	QPSK	Off	15	Rear	39750	2506.0	1	0	24.5	23.2	0.171	0.229	53
								50	0	23.5	22.2	0.125	0.168	
					Front	39750	2506.0	1	0	24.5	23.2	0.075	0.101	
								50	0	23.5	22.2	0.087	0.117	
	Hotspot	QPSK	On	10	Rear	39750	2506.0	1	0	21.5	20.2	0.220	0.295	
								50	0	21.5	20.7	0.246	0.295	
					Front	39750	2506.0	1	0	21.5	20.2	0.189	0.254	
								50	0	21.5	20.7	0.168	0.202	
					Edge 3	39750	2506.0	1	0	21.5	20.2	0.371	0.498	54
								50	0	21.5	20.7	0.379	0.455	
Edge 4					39750	2506.0	1	0	21.5	20.2	0.087	0.116		
							50	0	21.5	20.7	0.089	0.107		

10.17 LTE Band 66 (20MHz Bandwidth)

Antenna	RF Exposure Conditions	Mode	PWR Back-off	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		Plot No.					
										Tune-up limit	Meas.	Meas.	Scaled						
Main 1-1	Head	QPSK	Off	0	Left Touch	132322	1745.0	1	0	25.0	24.2	0.239	0.289	55					
								50	0	24.0	22.3	0.147	0.219						
					Left Tilt	132322	1745.0	1	0	25.0	24.2	0.060	0.073						
								50	0	24.0	22.3	0.037	0.055						
					Right Touch	132322	1745.0	1	0	25.0	24.2	0.173	0.209						
								50	0	24.0	22.3	0.111	0.165						
					Right Tilt	132322	1745.0	1	0	25.0	24.2	0.067	0.080						
								50	0	24.0	22.3	0.038	0.056						
	Body-worn	QPSK	Off	15	Rear	132322	1745.0	1	0	25.0	24.2	0.653	0.790	56					
								50	0	24.0	22.3	0.411	0.612						
					Front	132322	1745.0	1	0	25.0	24.2	0.549	0.664						
								50	0	24.0	22.3	0.344	0.512						
	Hotspot	QPSK	On	10	Rear	132322	1745.0	1	0	21.0	20.2	0.577	0.696						
								50	0	21.0	20.2	0.558	0.672						
					Front	132322	1745.0	1	0	21.0	20.2	0.447	0.540						
								50	0	21.0	20.2	0.462	0.557						
					Edge 2	132322	1745.0	1	0	21.0	20.2	0.070	0.084						
								50	0	21.0	20.2	0.067	0.081						
					Edge 3	132072	1720.0	1	0	21.0	20.1	0.646	0.803						
								50	0	21.0	20.0	0.631	0.793						
						132322	1745.0	1	0	21.0	20.2	0.724	0.874						
								50	0	21.0	20.2	0.727	0.876						
					132572	1770.0	1	0	21.0	20.0	0.678	0.850	57						
							50	0	21.0	20.0	0.668	0.840							
Edge 4					132322	1745.0	1	0	21.0	20.2	0.162	0.196							
							50	0	21.0	20.2	0.160	0.193							
Main 1-1					Phablet -10g	QPSK	Off	7	Rear	132322	1745.0	1	0	25.0	24.2	1.080	1.307		
												50	0	24.0	22.3	0.688	1.024		
	5	Front	132322	1745.0								1	0	25.0	24.2	1.140	1.380		
												50	0	24.0	22.3	0.737	1.097		
	0	Edge 2	132322	1745.0								1	0	25.0	24.2	0.309	0.374		
												50	0	24.0	22.3	0.196	0.292		
	11	Edge 3	132322	1745.0								1	0	25.0	24.2	0.786	0.951		
												50	0	24.0	22.3	0.502	0.747		
	0	Edge 4	132322	1745.0								1	0	25.0	24.2	0.664	0.804		
												50	0	24.0	22.3	0.421	0.626		
	On	0	Rear	132072								1720.0	1	0	21.0	20.1	1.700	2.102	
													50	0	21.0	20.0	1.680	2.105	
				132322			1745.0	1	0	21.0	20.2	1.840	2.215						
								50	0	21.0	20.2	1.860	2.240						
			132572	1770.0			1	0	21.0	20.0	1.790	2.243							
							50	0	21.0	20.0	1.800	2.264							
			Front	132322			1745.0	1	0	21.0	20.2	1.130	1.360						
								50	0	21.0	20.2	1.110	1.337						
			Edge 3	132072			1720.0	1	0	21.0	20.1	1.960	2.424	58					
								50	0	21.0	20.0	1.920	2.406						
				132322			1745.0	1	0	21.0	20.2	1.860	2.239						
								50	0	21.0	20.2	1.850	2.228						
	132572	1770.0	1	0			21.0	20.0	1.660	2.080									
			50	0			21.0	20.0	1.660	2.088									

10.18 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	6	2437.0	0.124	99.7	16.0	15.3							
						Left Tilt	6	2437.0	0.137	99.7	16.0	15.3							
						Right Touch	6	2437.0	0.520	99.7	16.0	15.3	0.362	0.432		59			
						Right Tilt	6	2437.0	0.332	99.7	16.0	15.3	0.276	0.329	2				
			Body-worn	Off	15	Rear	1	2412.0	0.084	99.7	19.0	18.2	0.063	0.076	1	60			
						Front	1	2412.0	0.062	99.7	19.0	18.2							
			Hotspot	Off	10	Rear	1	2412.0	0.179	99.7	19.0	18.2	0.139	0.166	1	61			
						Front	1	2412.0	0.115	99.7	19.0	18.2							
						Edge 1	1	2412.0	0.139	99.7	19.0	18.2							
						Edge 4	1	2412.0	0.149	99.7	19.0	18.2							
			SISO (WiFi Ant.2)	2.4GHz	802.11b 1 Mbps	Head	On	0	Left Touch	6	2437.0	0.105	99.7	16.0	15.6				
									Left Tilt	6	2437.0	0.138	99.7	16.0	15.6	0.085	0.093	1	
Right Touch	6	2437.0							0.055	99.7	16.0	15.6							
Right Tilt	6	2437.0							0.057	99.7	16.0	15.6							
Body-worn	Off	15				Rear	11	2462.0	0.024	99.7	19.0	18.8	0.019	0.020	1				
						Front	11	2462.0	0.014	99.7	19.0	18.8							
Hotspot	Off	10				Rear	11	2462.0	0.051	99.7	19.0	18.8							
						Front	11	2462.0	0.029	99.7	19.0	18.8							
						Edge 1	11	2462.0	0.081	99.7	19.0	18.8	0.063	0.066	1				
						Edge 4	11	2462.0	0.002	99.7	19.0	18.8							

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.

10.19 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	1	2412.0	0.057	99.7	14.0	13.4							
						Left Tilt	1	2412.0	0.033	99.7	14.0	13.4							
						Right Touch	1	2412.0	0.242	99.7	14.0	13.4							
						Right Tilt	1	2412.0	0.264	99.7	14.0	13.4	0.173	0.200	1				
			Body-worn	Off	15	Rear	6	2437.0	0.036	99.7	16.0	15.3	0.026	0.031	1				
						Front	6	2437.0	0.030	99.7	16.0	15.3							
			Hotspot	Off	10	Rear	6	2437.0	0.085	99.7	16.0	15.3							
						Front	6	2437.0	0.064	99.7	16.0	15.3							
						Edge 1	6	2437.0	0.067	99.7	16.0	15.3							
						Edge 4	6	2437.0	0.093	99.7	16.0	15.3	0.068	0.081	1				
			SISO (WiFi Ant.2)	2.4GHz	802.11b 1 Mbps	Head	On	0	Left Touch	1	2412.0	0.033	99.7	14.0	13.5				
									Left Tilt	1	2412.0	0.041	99.7	14.0	13.5	0.041	0.047	1	
Right Touch	1	2412.0							0.025	99.7	14.0	13.5							
Right Tilt	1	2412.0							0.028	99.7	14.0	13.5							
Body-worn	Off	15				Rear	6	2437.0	0.012	99.7	16.0	15.6	<0.001	<0.001	1				
						Front	6	2437.0	0.006	99.7	16.0	15.6							
Hotspot	Off	10				Rear	6	2437.0	0.023	99.7	16.0	15.6							
						Front	6	2437.0	0.018	99.7	16.0	15.6							
						Edge 1	6	2437.0	0.039	99.7	16.0	15.6	0.027	0.029	1				
						Edge 4	6	2437.0	0.005	99.7	16.0	15.6							
MIMO (WiFi Ant.1)	2.4GHz	802.11n 6.5 Mbps				Head	On	0	Left Touch	6	2437.0	0.112	98.0	14.0	14.0				
									Left Tilt	6	2437.0	0.134	98.0	14.0	14.0				
			Right Touch	6	2437.0				0.431	98.0	14.0	14.0	0.286	0.292	1	62			
			Right Tilt	6	2437.0				0.431	98.0	14.0	14.0	0.271	0.276					
			Body-worn	Off	15	Rear	6	2437.0	0.044	98.0	16.0	16.0	0.033	0.034	1	63			
						Front	6	2437.0	0.040	98.0	16.0	16.0							
			Hotspot	Off	10	Rear	6	2437.0	0.100	98.0	16.0	16.0							
						Front	6	2437.0	0.084	98.0	16.0	16.0							
						Edge 1	6	2437.0	0.099	98.0	16.0	16.0							
						Edge 4	6	2437.0	0.108	98.0	16.0	16.0	0.081	0.084	1	64			
			MIMO (WiFi Ant.2)	2.4GHz	802.11n 6.5 Mbps	Head	On	0	Left Touch	6	2437.0	0.112	98.0	14.0	14.0				
									Left Tilt	6	2437.0	0.134	98.0	14.0	14.0				
Right Touch	6	2437.0							0.431	98.0	14.0	14.0							
Right Tilt	6	2437.0							0.431	98.0	14.0	14.0							
Body-worn	Off	15				Rear	6	2437.0	0.044	98.0	16.0	15.7							
						Front	6	2437.0	0.040	98.0	16.0	15.7							
Hotspot	Off	10				Rear	6	2437.0	0.100	98.0	16.0	15.7							
						Front	6	2437.0	0.084	98.0	16.0	15.7							
						Edge 1	6	2437.0	0.099	98.0	16.0	15.7							
						Edge 4	6	2437.0	0.108	98.0	16.0	15.7							

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.

10.20 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	0.064	98.1	13.0	12.2						1	65	
						Left Tilt	58	5290.0	0.067	98.1	13.0	12.2								
						Right Touch	58	5290.0	0.131	98.1	13.0	12.2	0.039	0.048						
						Right Tilt	58	5290.0	0.131	98.1	13.0	12.2	0.047	0.057						
		802.11n HT 40 13.5 Mbps	Body-worn	Off	15	Rear	54	5270.0	0.041	98.2	15.0	14.5	0.020	0.023					1	
						Front	54	5270.0	0.004	98.2	15.0	14.5								
			Phablet-10g	Off	0	Rear	54	5270.0	0.817	98.2	15.0	14.5								
						Front	54	5270.0	0.416	98.2	15.0	14.5								
						Edge 1	54	5270.0	0.279	98.2	15.0	14.5								
						Edge 4	54	5270.0	2.267	98.2	15.0	14.5				0.210	0.239		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	0.014	98.1	13.0	12.0						1		
						Left Tilt	58	5290.0	0.021	98.1	13.0	12.0	0.006	0.007						
						Right Touch	58	5290.0	0.019	98.1	13.0	12.0								
						Right Tilt	58	5290.0	0.020	98.1	13.0	12.0								
		802.11n HT 40 13.5 Mbps	Body-worn	Off	15	Rear	62	5310.0	0.136	98.2	15.0	14.6	0.061	0.068				1	66	
						Front	62	5310.0	0.001	98.2	15.0	14.6								
			Phablet-10g	Off	0	Rear	62	5310.0	7.816	98.2	15.0	14.6				0.331	0.372		1	67
						Front	62	5310.0	0.396	98.2	15.0	14.6								
						Edge 1	62	5310.0	0.532	98.2	15.0	14.6								
						Edge 4	62	5310.0	0.091	98.2	15.0	14.6								
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	0.069	98.1	13.0	12.1						1	68	
						Left Tilt	106	5530.0	0.102	98.1	13.0	12.1								
						Right Touch	106	5530.0	0.136	98.1	13.0	12.1								
						Right Tilt	106	5530.0	0.180	98.1	13.0	12.1	0.064	0.081						
		802.11a 6 Mbps	Body-worn	Off	15	Rear	120	5600.0	0.328	98.2	16.0	15.1	0.143	0.179				1		
						Front	120	5600.0	0.032	98.2	16.0	15.1								
			Phablet-10g	Off	0	Rear	120	5600.0	4.711	98.2	16.0	15.1				0.351	0.439		1	
						Front	120	5600.0	1.105	98.2	16.0	15.1								
						Edge 1	120	5600.0	1.799	98.2	16.0	15.1								
						Edge 4	120	5600.0	4.549	98.2	16.0	15.1								
SISO (WiFi Ant.2)	5.5 GHz U-NII 2C	802.11ac VHT 80 29.3 Mbps	Head	On	0	Left Touch	138	5690.0	0.080	98.1	13.0	12.4						1		
						Left Tilt	138	5690.0	0.117	98.1	13.0	12.4	0.040	0.047						
						Right Touch	138	5690.0	0.079	98.1	13.0	12.4								
						Right Tilt	138	5690.0	0.107	98.1	13.0	12.4								
		802.11a 6 Mbps	Body-worn	Off	15	Rear	100	5500.0	0.828	98.2	16.0	15.7	0.379	0.416				69		
						Front	100	5500.0	0.005	98.2	16.0	15.7	<0.001	<0.001				2		
			Phablet-10g	Off	0	Rear	100	5500.0	13.117	98.2	16.0	15.7				1.050	1.154		70	
						Front	100	5500.0	0.615	98.2	16.0	15.7								
						Edge 1	100	5500.0	1.483	98.2	16.0	15.7				0.246	0.270		2	
						Edge 4	100	5500.0	0.526	98.2	16.0	15.7								

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. Wi-Fi Direct only available in hand use 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	Head	On	0	Left Touch	155	5775.0	0.131	98.1	13.0	11.9				
						Left Tilt	155	5775.0	0.143	98.1	13.0	11.9				
						Right Touch	155	5775.0	0.235	98.1	13.0	11.9				
						Right Tilt	155	5775.0	0.267	98.1	13.0	11.9	0.116	0.152	1	71
		802.11a 6 Mbps	Body-worn	Off	15	Rear	157	5785.0	0.521	98.2	17.0	16.2	0.249	0.305	1	
						Front	157	5785.0	0.023	98.2	17.0	16.2				
			Hotspot	Off	10	Rear	149	5745.0	0.953	98.2	17.0	16.2	0.484	0.595		72
						Front	149	5745.0	0.027	98.2	17.0	16.2	0.015	0.019	4	
						Edge 1	149	5745.0	0.329	98.2	17.0	16.2				
						Edge 4	149	5745.0	0.462	98.2	17.0	16.2	0.216	0.266	2	
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	0.063	98.1	13.0	12.4				
						Left Tilt	155	5775.0	0.081	98.1	13.0	12.4	0.042	0.050	1	
						Right Touch	155	5775.0	0.057	98.1	13.0	12.4				
						Right Tilt	155	5775.0	0.071	98.1	13.0	12.4				
		802.11a 6 Mbps	Body-worn	Off	15	Rear	149	5745.0	0.761	98.2	17.0	16.7	0.333	0.368	1	73
						Front	149	5745.0	0.010	98.2	17.0	16.7				
			Hotspot	Off	10	Rear	149	5745.0	1.167	98.2	17.0	16.7	0.512	0.565		
						Front	149	5745.0	0.010	98.2	17.0	16.7	<0.001	<0.001	4	
						Edge 1	149	5745.0	0.282	98.2	17.0	16.7	0.121	0.134	2	
						Edge 4	149	5745.0	0.060	98.2	17.0	16.7				

Note(s):

- 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.
- 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.
- 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).
- Additional testing required in order satisfying FCC simultaneous transmission limit criteria.
- Wi-Fi Direct only available in hand use configuration.

10.21 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	0.061	98.1	14.0	13.5	0.025	0.029				1			
						Front	58	5290.0	0.008	98.1	14.0	13.5									
			Phablet-10g	Off	0	Rear	58	5290.0	1.600	98.1	14.0	13.5									
						Front	58	5290.0	0.554	98.1	14.0	13.5									
						Edge 1	58	5290.0	0.390	98.1	14.0	13.5									
						Edge 4	58	5290.0	2.049	98.1	14.0	13.5				0.187	0.216		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	0.099	98.1	14.0	12.9	0.046	0.060				1	74		
						Front	58	5290.0	0.005	98.1	14.0	12.9									
			Phablet-10g	Off	0	Rear	58	5290.0	4.075	98.1	14.0	12.9				0.229	0.301		1		
						Front	58	5290.0	0.071	98.1	14.0	12.9									
						Edge 1	58	5290.0	0.282	98.1	14.0	12.9									
						Edge 4	58	5290.0	0.040	98.1	14.0	12.9									
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	0.076	98.1	13.0	12.0									
						Left Tilt	58	5290.0	0.080	98.1	13.0	12.0									
						Right Touch	58	5290.0	0.070	98.1	13.0	12.0									
						Right Tilt	58	5290.0	0.084	98.1	13.0	12.0	0.027	0.034				1	75		
		802.11ac VHT 80 13.5 Mbps	Body-worn	Off	15	Rear	58	5290.0	0.117	98.1	14.0	13.3									
						Front	58	5290.0	0.005	98.1	14.0	13.3									
			Phablet-10g	Off	0	Rear	58	5290.0	4.977	98.1	14.0	13.3									
						Front	58	5290.0	0.381	98.1	14.0	13.3									
						Edge 1	58	5290.0	0.457	98.1	14.0	13.3									
						Edge 4	58	5290.0	1.532	98.1	14.0	13.3									
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	0.076	98.1	13.0	11.9									
						Left Tilt	58	5290.0	0.080	98.1	13.0	11.9									
						Right Touch	58	5290.0	0.070	98.1	13.0	11.9									
						Right Tilt	58	5290.0	0.084	98.1	13.0	11.9									
		802.11ac VHT 80 13.5 Mbps	Body-worn	Off	15	Rear	58	5290.0	0.117	98.1	14.0	13.3	0.049	0.059					1		
						Front	58	5290.0	0.005	98.1	14.0	13.3									
			Phablet-10g	Off	0	Rear	58	5290.0	4.977	98.1	14.0	13.3				0.289	0.348		1	76	
						Front	58	5290.0	0.381	98.1	14.0	13.3									
						Edge 1	58	5290.0	0.457	98.1	14.0	13.3									
						Edge 4	58	5290.0	1.532	98.1	14.0	13.3									

Note(s):

- 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.
- 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.
- 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).
- Additional testing required in order satisfying FCC simultaneous transmission limit criteria.
- 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 10.20.
- Wi-Fi Direct only available in hand use 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	106	5530.0	0.192	98.1	14.0	13.2	0.090	0.110				1					
						Front	106	5530.0	0.009	98.1	14.0	13.2											
			Phablet-10g	Off	0	Rear	106	5530.0	3.469	98.1	14.0	13.2				0.262	0.320		1				
						Front	106	5530.0	0.569	98.1	14.0	13.2											
		SISO (WiFi Ant.2)	5.5 GHz U-NII 2C	802.11ac VHT 80 29.3 Mbps	Body-worn	Off	15	Rear	106	5530.0	0.578	98.1	14.0	13.5	0.259	0.294				1			
								Front	106	5530.0	0.009	98.1	14.0	13.5									
					Phablet-10g	Off	0	Rear	106	5530.0	18.590	98.1	14.0	13.5				0.828	0.938		1		
								Front	106	5530.0	0.253	98.1	14.0	13.5									
Edge 1	106			5530.0				1.281	98.1	14.0	13.5												
Edge 4	106			5530.0				0.326	98.1	14.0	13.5												
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	0.190	98.1	13.0	11.9									
								Left Tilt	106	5530.0	0.181	98.1	13.0	11.9									
		Right Touch	106					5530.0	0.243	98.1	13.0	11.9											
		Right Tilt	106					5530.0	0.302	98.1	13.0	11.9	0.114	0.150					1	77			
		802.11ac VHT 80 29.3 Mbps	Body-worn	Off	15	Rear	106	5530.0	0.581	98.1	14.0	13.1											
						Front	106	5530.0	0.010	98.1	14.0	13.1											
						Phablet-10g	Off	0	Rear	106	5530.0	17.869	98.1	14.0	13.1								
									Front	106	5530.0	1.153	98.1	14.0	13.1								
		Edge 1	106	5530.0	1.478				98.1	14.0	13.1												
		Edge 4	106	5530.0	2.523				98.1	14.0	13.1												
		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	0.190	98.1	13.0	12.3									
								Left Tilt	106	5530.0	0.181	98.1	13.0	12.3									
								Right Touch	106	5530.0	0.243	98.1	13.0	12.3									
								Right Tilt	106	5530.0	0.302	98.1	13.0	12.3									
				802.11ac VHT 80 29.3 Mbps	Body-worn	Off	15	Rear	106	5530.0	0.581	98.1	14.0	13.5	0.274	0.311					1	78	
								Front	106	5530.0	0.010	98.1	14.0	13.5									
Phablet-10g	Off							0	Rear	106	5530.0	17.869	98.1	14.0	13.5				0.875	0.992		1	79
									Front	106	5530.0	1.153	98.1	14.0	13.5								
				Edge 1	106	5530.0	1.478		98.1	14.0	13.5												
				Edge 4	106	5530.0	2.523		98.1	14.0	13.5												

Note(s):

- 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.
- 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.
- 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).
- Additional testing required in order satisfying FCC simultaneous transmission limit criteria.
- 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 10.20.
- Wi-Fi Direct only available in hand use 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	0.320	98.1	14.0	13.1	0.136	0.170	1	
						Front	155	5775.0	0.018	98.1	14.0	13.1				
			Hotspot	Off	10	Rear	155	5775.0	0.479	98.1	14.0	13.1	0.227	0.284	1	
		Front				155	5775.0	0.043	98.1	14.0	13.1					
		Edge 1				155	5775.0	0.145	98.1	14.0	13.1					
		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	0.382	98.1	14.0	13.6	0.145	0.161
Front	155							5775.0	0.007	98.1	14.0	13.6				
Hotspot	Off				10	Rear	155	5775.0	0.644	98.1	14.0	13.6	0.250	0.277	1	
				Front		155	5775.0	0.008	98.1	14.0	13.6					
				Edge 1		155	5775.0	0.152	98.1	14.0	13.6					
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	0.152	98.1	13.0	11.9		
		Left Tilt	155					5775.0	0.197	98.1	13.0	11.9				
		Right Touch	155					5775.0	0.295	98.1	13.0	11.9				
		Right Tilt	155					5775.0	0.416	98.1	13.0	11.9	0.149	0.198	1	80
		802.11ac VHT 80 29.3 Mbps	Body-worn	Off	15	Rear	155	5775.0	0.435	98.1	14.0	13.1				
						Front	155	5775.0	0.019	98.1	14.0	13.1				
			Hotspot	Off	10	Rear	155	5775.0	0.624	98.1	14.0	13.1				
						Front	155	5775.0	0.049	98.1	14.0	13.1				
						Edge 1	155	5775.0	0.248	98.1	14.0	13.1				
						Edge 4	155	5775.0	0.221	98.1	14.0	13.1				
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	0.152	98.1	13.0	12.3				
						Left Tilt	155	5775.0	0.197	98.1	13.0	12.3				
						Right Touch	155	5775.0	0.295	98.1	13.0	12.3				
						Right Tilt	155	5775.0	0.416	98.1	13.0	12.3				
		802.11ac VHT 80 29.3 Mbps	Body-worn	Off	15	Rear	155	5775.0	0.435	98.1	14.0	13.6	0.166	0.188	1	81
						Front	155	5775.0	0.019	98.1	14.0	13.6				
			Hotspot	Off	10	Rear	155	5775.0	0.624	98.1	14.0	13.6	0.265	0.300	1	82
						Front	155	5775.0	0.049	98.1	14.0	13.6				
						Edge 1	155	5775.0	0.248	98.1	14.0	13.6				
						Edge 4	155	5775.0	0.221	98.1	14.0	13.6				

Note(s):

- 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.
- 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.
- 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).
- Additional testing required in order satisfying FCC simultaneous transmission limit criteria.
- 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 10.20.
- Wi-Fi Direct only available in hand use configuration.

10.22 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	19.2	0.139	0.218		
					Left Tilt	39	2441.0	76.5	20.0	19.2	0.158	0.247		
					Right Touch	0	2402.0	76.5	20.0	18.8	0.387	0.661		
						39	2441.0	76.5	20.0	19.2	0.568	0.890		
					78	2480.0	76.5	20.0	18.1	0.461	0.925	83		
				Righttt Tilt	39	2441.0	76.5	20.0	19.2	0.450	0.705			
				Body-worn	15	Rear	39	2441.0	76.5	20.0	19.2	0.053	0.083	84
						Front	39	2441.0	76.5	20.0	19.2	0.043	0.067	
				Hotspot	10	Rear	39	2441.0	76.5	20.0	19.2	0.101	0.158	85
						Front	39	2441.0	76.5	20.0	19.2	0.077	0.121	
Edge 1	39	2441.0	76.5			20.0	19.2	0.083	0.130					
Edge 4	39	2441.0	76.5			20.0	19.2	0.093	0.146					

10.23 LTE-uplink 2CA Band 7 (20MHz + 20MHz BW)

Antenna	RF Exposure Conditions	Mode	PWR Back-off	Dist. (mm)	Test Position	PCC UL				SCC UL				Power (dBm)		1-g SAR (W/kg)		Plot No.
						Ch #.	Freq. (MHz)	RB Allocation	RB offset	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Tune-up limit	Meas.	Meas.	Scaled	
Main 1-2	Head	QPSK	Off	0	Right Tilt	20850	2510.0	1	99	21048	2529.8	1	0	23.5	23.0	0.020	0.023	86
	Body-worn	QPSK	Off	15	Rear	20850	2510.0	1	99	21048	2529.8	1	0	23.5	23.0	0.372	0.416	87
	Hotspot	QPSK	On	10	Edge 3	20850	2510.0	1	99	21048	2529.8	1	0	20.0	18.9	0.484	0.625	88

10.24 LTE-uplink 2CA Band 38 (20MHz + 20MHz BW)

Antenna	RF Exposure Conditions	Mode	PWR Back-off	Dist. (mm)	Test Position	PCC UL				SCC UL				Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
						Ch #.	Freq. (MHz)	RB Allocation	RB offset	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
Main 1-2	Head	QPSK	Off	0	Left Touch	38150	2610.0	1	0	37952	2590.2	1	99	24.0	23.0	0.016	0.021		89	
	Body-worn	QPSK	Off	15	Rear	38150	2610.0	1	0	37952	2590.2	1	99	24.0	23.0	0.195	0.247		90	
	Hotspot	QPSK	On	10	Edge 3	38150	2610.0	1	0	37952	2590.2	1	99	21.5	20.0	0.253	0.357		91	
	Phablet-10g	QPSK	On	10	Edge 3	38150	2610.0	1	0	37952	2590.2	1	99	21.5	20.0			0.605	0.853	92

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	0.272	N/A	N/A
	LTE Band 13	Hotspot	Rear	No	0.394	N/A	N/A
	LTE Band 17	Hotspot	Rear	No	0.287	N/A	N/A
835	GSM 850	Hotspot	Rear	No	0.776	N/A	N/A
	WCDMA Band V	Hotspot	Rear	Yes	0.882	0.88	1.00
	LTE Band 5	Hotspot	Rear	No	0.681	N/A	N/A
	LTE Band 26	Hotspot	Rear	No	0.548	N/A	N/A
1750	WCDMA Band IV	Hotspot	Edge 3	No	0.614	N/A	N/A
	LTE Band 4	Hotspot	Edge 3	No	0.648	N/A	N/A
	LTE Band 66	Hotspot	Edge 3	No	0.727	N/A	N/A
1900	GSM 1900	Hotspot	Edge 3	No	0.730	N/A	N/A
	WCDMA Band II	Hotspot	Edge 3	No	0.759	N/A	N/A
	LTE Band 2	Hotspot	Edge 3	No	0.770	N/A	N/A
	LTE Band 25	Hotspot	Edge 3	No	0.758	N/A	N/A
2400	Wi-Fi 802.11b/g/n	Head	Right Touch	No	0.362	N/A	N/A
	Bluetooth	Head	Right Touch	No	0.568	N/A	N/A
2600	LTE Band 7	Body	Rear	No	0.608	N/A	N/A
	LTE Band 38	Hotspot	Edge 3	No	0.540	N/A	N/A
	LTE Band 41	Hotspot	Edge 3	No	0.379	N/A	N/A
5300	Wi-Fi 802.11a/n	Body	Rear	No	0.061	N/A	N/A
5500	Wi-Fi 802.11a/n	Body	Rear	No	0.379	N/A	N/A
5800	Wi-Fi 802.11a/n	Hotspot	Rear	No	0.512	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	No	1.840	N/A	N/A
	LTE Band 4	Phablet-10g	Edge 3	Yes	2.270	2.27	1.00
	LTE Band 66	Phablet-10g	Edge 3	No	1.960	N/A	N/A
1900	WCDMA Band II	Phablet-10g	Rear	No	1.590	N/A	N/A
	LTE Band 2	Phablet-10g	Rear	No	1.750	N/A	N/A
	LTE Band 25	Phablet-10g	Rear	No	1.460	N/A	N/A
2600	LTE Band 38	Phablet-10g	Edge 3	No	1.120	N/A	N/A
5300	Wi-Fi 802.11a/n	Phablet-10g	Rear	No	0.331	N/A	N/A
5500	Wi-Fi 802.11a/n	Phablet-10g	Rear	No	1.050	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).

All highest SAR level is not over 1.2 or 3.0 W/kg (1-g or 10-g respectively) in All bands.

Please refer to Section 10. **So DUT Holder perturbations verification are not required.**

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.2
	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.2
	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.2
	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.2
	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.2
	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.2
	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 w with Bluetooth Radio.
5. DTS Radio cannot transmit simultaneously w with Bluetooth Radio.
6. DTS Radio can only transmit simultaneously w ith U-NII Radio in RSDB scenarios.
7. DTS and UNII Radio can operating both SISO and MIMO modes.
8. 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:

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

Where:

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

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

R_i 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:

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

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

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

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 SPLSR 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 SPLSR 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)						Σ 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	0.350	0.432	0.093	0.152	0.050	0.925	0.782	0.443	0.875	0.502	0.400	0.552	1.275	1.427	1.325	1.477	
Body/Worn (1g-SAR)	All position	0.510	0.076	0.020	0.305	0.416	0.083	0.586	0.530	0.606	0.815	0.926	1.231	0.593	0.898	1.009	1.314	
Hotspot (1-g SAR)	Rear	1.059	0.166	0.066	0.595	0.565	0.158	1.225	1.125	1.291	1.654	1.624	2.219	1.217	1.812	1.782	2.377	
	Front	0.797	0.166	0.066	0.019	0.001	0.121	0.963	0.863	1.029	0.816	0.798	0.817	0.918	0.937	0.919	0.938	
	Edge 1		0.166	0.066	0.595	0.134	0.130											
	Edge 2	0.339																
	Edge 3	0.594																
	Edge 4	0.155	0.166	0.066	0.266	0.565	0.146	0.321	0.221	0.387	0.421	0.720	0.986	0.301	0.567	0.866	1.132	

SAR to Peak Location Separation Ratio (SPLSR)

RF Exposure	Test Position	Standalone SAR (W/kg)						Σ 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	1.059			0.595	0.565	0.158	(1)+(4)+(5)+(6)	2.377				
		1.059			0.595			(1)+(4)	1.654	145.9	0.01	No	
		1.059				0.565			(1)+(5)	1.624	147.2	0.01	No
		1.059					0.158		(1)+(6)	1.217	156.4	0.01	No
					0.595	0.565			(4)+(5)	1.160	18.8	0.07	Yes
					0.595		0.158		(4)+(6)	0.753	12.4	0.05	Yes
						0.565	0.158		(5)+(6)	0.723	17.3	0.04	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)						Σ 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	0.089	0.432	0.093	0.152	0.050	0.925	0.521	0.182	0.614	0.241	0.139	0.291	1.014	1.166	1.064	1.216	
Body/Worn (1g-SAR)	All position	0.309	0.076	0.020	0.305	0.416	0.083	0.385	0.329	0.405	0.614	0.725	1.030	0.392	0.697	0.808	1.113	
Hotspot (1-g SAR)	Rear	0.604	0.166	0.066	0.595	0.565	0.158	0.770	0.670	0.836	1.199	1.169	1.764	0.762	1.357	1.327	1.922	
	Front	0.472	0.166	0.066	0.019	0.001	0.121	0.638	0.538	0.704	0.491	0.473	0.492	0.593	0.612	0.594	0.613	
	Edge 1		0.166	0.066	0.595	0.134	0.130											
	Edge 2	0.066																
	Edge 3	1.045																
	Edge 4	0.139	0.166	0.066	0.266	0.565	0.146	0.305	0.205	0.371	0.405	0.704	0.970	0.285	0.551	0.850	1.116	

SAR to Peak Location Separation Ratio (SPLSR)

RF Exposure	Test Position	Standalone SAR (W/kg)						Σ 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	0.604			0.595	0.565	0.158	(1)+(4)+(5)+(6)	1.922				
		0.604			0.595			(1)+(4)	1.199	142.2	0.01	No	
		0.604				0.565			(1)+(5)	1.169	142.5	0.01	No
		0.604					0.158		(1)+(6)	0.762	152.4	0.00	No
					0.595	0.565			(4)+(5)	1.160	18.8	0.07	Yes
					0.595		0.158		(4)+(6)	0.753	12.4	0.05	Yes
						0.565	0.158		(5)+(6)	0.723	17.3	0.04	No

Note(s):

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

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

RF Exposure	Test Position	Standalone SAR (W/kg)						Σ 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	0.218	0.432	0.093	0.152	0.050	0.925	0.650	0.311	0.743	0.370	0.268	0.420	1.143	1.295	1.193	1.345	
Body-Worn (1g-SAR)	All position	0.619	0.076	0.020	0.305	0.416	0.083	0.695	0.639	0.715	0.924	1.035	1.340	0.702	1.007	1.118	1.423	
Hotspot (1-g SAR)	Rear	0.580	0.166	0.066	0.595	0.565	0.158	0.746	0.646	0.812	1.175	1.145	1.740	0.738	1.333	1.303	1.898	
	Front	0.458	0.166	0.066	0.019	0.001	0.121	0.624	0.524	0.690	0.477	0.459	0.478	0.579	0.598	0.580	0.599	
	Edge 1	0.166	0.066	0.066	0.595	0.134	0.130											
	Edge 2	0.072																
	Edge 3	1.045																
Phablet-10g	Rear	1.922			0.439	1.154					2.361	3.076	3.515					
	Front	1.003			0.439	1.154				1.442	2.157	2.596						
	Edge 1				0.439	0.270												
	Edge 2	0.259																
	Edge 3	1.680																
	Edge 4	0.159	0.166	0.066	0.266	0.565	0.146	0.325	0.225	0.391	0.425	0.724	0.990	0.305	0.571	0.870	1.136	
	Edge 4																	
	Edge 4				0.439	1.154				1.079	1.794	2.233						

SAR to Peak Location Separation Ratio (SPLSR)

RF Exposure	Test Position	Standalone SAR (W/kg)						Σ 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	0.580			0.595	0.565	0.158	(1)+(4)+(5)+(6)	1.898				3
		0.580			0.595			(1)+(4)	1.175	142.6	0.01	No	
		0.580				0.565		(1)+(5)	1.145	144.0	0.01	No	
		0.580					0.158	(1)+(6)	0.738	153.1	0.00	No	
					0.595	0.565		(4)+(5)	1.160	18.8	0.07	Yes	
					0.595		0.158	(4)+(6)	0.753	12.4	0.05	Yes	
						0.565	0.158	(5)+(6)	0.723	17.3	0.04	No	

Note(s):

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

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

RF Exposure	Test Position	Standalone SAR (W/kg)						Σ 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	0.280	0.432	0.093	0.152	0.050	0.925	0.712	0.373	0.805	0.432	0.330	0.482	1.205	1.357	1.255	1.407	
Body-Worn (1g-SAR)	All position	0.748	0.076	0.020	0.305	0.416	0.083	0.824	0.768	0.844	1.053	1.164	1.469	0.831	1.136	1.247	1.552	
Hotspot (1-g SAR)	Rear	0.588	0.166	0.066	0.595	0.565	0.158	0.754	0.654	0.820	1.183	1.153	1.748	0.746	1.341	1.311	1.906	
	Front	0.447	0.166	0.066	0.019	0.001	0.121	0.613	0.513	0.679	0.466	0.448	0.467	0.568	0.587	0.569	0.588	
	Edge 1	0.166	0.066	0.066	0.595	0.134	0.130											
	Edge 2	0.064																
	Edge 3	0.749																
Phablet-10g	Rear	1.804			0.439	1.154					2.243	2.958	3.397					
	Front	1.352			0.439	1.154				1.791	2.506	2.945						
	Edge 1				0.439	0.270												
	Edge 2	0.357																
	Edge 3	2.149																
	Edge 4	0.920			0.439	1.154				1.359	2.074	2.513						

SAR to Peak Location Separation Ratio (SPLSR)

RF Exposure	Test Position	Standalone SAR (W/kg)						Σ 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	0.588			0.595	0.565	0.158	(1)+(4)+(5)+(6)	1.906				4
		0.588			0.595			(1)+(4)	1.183	140.1	0.01	No	
		0.588				0.565		(1)+(5)	1.153	140.7	0.01	No	
		0.588					0.158	(1)+(6)	0.746	150.4	0.00	No	
					0.595	0.565		(4)+(5)	1.160	18.8	0.07	Yes	
					0.595		0.158	(4)+(6)	0.753	12.4	0.05	Yes	
						0.565	0.158	(5)+(6)	0.723	17.3	0.04	No	

Note(s):

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

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

RF Exposure	Test Position	Standalone SAR (W/kg)						Σ 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	0.299	0.432	0.093	0.152	0.050	0.925	0.731	0.392	0.824	0.451	0.349	0.501	1.224	1.376	1.274	1.426
Body-Worn (1g-SAR)	All position	0.483	0.076	0.020	0.305	0.416	0.083	0.559	0.503	0.579	0.788	0.899	1.204	0.566	0.871	0.982	1.287
Hotspot (1-g SAR)	Rear	0.934	0.166	0.066	0.595	0.565	0.158	1.100	1.000	1.166	1.529	1.499	2.094	1.092	1.687	1.657	2.252
	Front	0.721	0.166	0.066	0.019	0.001	0.121	0.887	0.787	0.953	0.740	0.722	0.741	0.842	0.861	0.843	0.862
	Edge 1	0.166	0.066	0.595	0.134	0.130											
	Edge 2	0.320															
	Edge 3	0.566															
	Edge 4	0.133	0.166	0.066	0.266	0.565	0.146	0.299	0.199	0.365	0.399	0.698	0.964	0.279	0.545	0.844	1.110

SAR to Peak Location Separation Ratio (SPLSR)

RF Exposure	Test Position	Standalone SAR (W/kg)						Σ 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	0.934			0.595	0.565	0.158	(1)+(4)+(5)+(6)	2.252				
		0.934			0.595			(1)+(4)	1.529	140.3	0.01	No	
		0.934				0.565			(1)+(5)	1.499	142.6	0.01	No
		0.934					0.158		(1)+(6)	1.092	151.0	0.01	No
					0.595	0.565			(4)+(5)	1.160	18.8	0.07	Yes
					0.595		0.158		(4)+(6)	0.753	12.4	0.05	Yes
						0.565	0.158		(5)+(6)	0.723	17.3	0.04	No

Note(s):

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

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

RF Exposure	Test Position	Standalone SAR (W/kg)						Σ 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	0.194	0.432	0.093	0.152	0.050	0.925	0.626	0.287	0.719	0.346	0.244	0.396	1.119	1.271	1.169	1.321
Body-Worn (1g-SAR)	All position	0.635	0.076	0.020	0.305	0.416	0.083	0.711	0.655	0.731	0.940	1.051	1.356	0.718	1.023	1.134	1.439
Hotspot (1-g SAR)	Rear	0.612	0.166	0.066	0.595	0.565	0.158	0.778	0.678	0.844	1.207	1.177	1.772	0.770	1.365	1.335	1.930
	Front	0.481	0.166	0.066	0.019	0.001	0.121	0.647	0.547	0.713	0.500	0.482	0.501	0.602	0.621	0.603	0.622
	Edge 1	0.166	0.066	0.595	0.134	0.130											
	Edge 2	0.068															
	Edge 3	1.067															
	Edge 4	0.150	0.166	0.066	0.266	0.565	0.146	0.316	0.216	0.382	0.416	0.715	0.981	0.296	0.562	0.861	1.127
Phablet-10g	Rear	2.373			0.439	1.154					2.812	3.527	3.966				
	Front	1.290			0.439	1.154				1.729	2.444	2.883					
	Edge 1				0.439	0.270											
	Edge 2	0.285															
	Edge 3	1.448															
	Edge 4	0.700			0.439	1.154					1.139	1.854	2.293				

SAR to Peak Location Separation Ratio (SPLSR)

RF Exposure	Test Position	Standalone SAR (W/kg)						Σ 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	0.612			0.595	0.565	0.158	(1)+(4)+(5)+(6)	1.930				
		0.612			0.595			(1)+(4)	1.207	143.5	0.01	No	
		0.612				0.565			(1)+(5)	1.177	144.1	0.01	No
		0.612					0.158		(1)+(6)	0.770	153.7	0.00	No
					0.595	0.565			(4)+(5)	1.160	18.8	0.07	Yes
					0.595		0.158		(4)+(6)	0.753	12.4	0.05	Yes
						0.565	0.158		(5)+(6)	0.723	17.3	0.04	No

Note(s):

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

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

RF Exposure	Test Position	Standalone SAR (W/kg)						Σ 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	0.292	0.432	0.093	0.152	0.050	0.925	0.724	0.385	0.817	0.444	0.342	0.494	1.217	1.369	1.267	1.419
Body-Worn (1g-SAR)	All position	0.786	0.076	0.020	0.305	0.416	0.083	0.862	0.806	0.882	1.091	1.202	1.507	0.869	1.174	1.285	1.590
Hotspot (1-g SAR)	Rear	0.703	0.166	0.066	0.595	0.565	0.158	0.869	0.769	0.935	1.298	1.268	1.863	0.861	1.456	1.426	2.021
	Front	0.564	0.166	0.066	0.019	0.001	0.121	0.730	0.630	0.796	0.583	0.565	0.584	0.685	0.704	0.686	0.705
	Edge 1	0.166	0.066	0.066	0.595	0.134	0.130										
	Edge 2	0.077															
	Edge 3	0.847															
Phablet-10g	Edge 4	0.182	0.166	0.066	0.266	0.565	0.146	0.348	0.248	0.414	0.448	0.747	1.013	0.328	0.594	0.893	1.159
	Rear	2.345			0.439	1.154					2.784	3.499	3.938				
	Front	1.462			0.439	1.154				1.901	2.616	3.055					
	Edge 1				0.439	0.270											
	Edge 2	0.340															
	Edge 3	2.963															
	Edge 4	0.861			0.439	1.154				1.300	2.015	2.454					

SAR to Peak Location Separation Ratio (SPLSR)

RF Exposure	Test Position	Standalone SAR (W/kg)						Σ 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	0.703			0.595	0.565	0.158	(1)+(4)+(5)+(6)	2.021				
		0.703			0.595			(1)+(4)	1.298	139.8	0.01	No	
		0.703				0.565			(1)+(5)	1.268	140.7	0.01	No
		0.703					0.158		(1)+(6)	0.861	150.2	0.01	No
					0.595	0.565			(4)+(5)	1.160	18.8	0.07	Yes
					0.595		0.158		(4)+(6)	0.753	12.4	0.05	Yes
						0.565	0.158		(5)+(6)	0.723	17.3	0.04	No

Note(s):

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

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

RF Exposure	Test Position	Standalone SAR (W/kg)						Σ 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	0.282	0.432	0.093	0.152	0.050	0.925	0.714	0.375	0.807	0.434	0.332	0.484	1.207	1.359	1.257	1.409
Body-Worn (1g-SAR)	All position	0.455	0.076	0.020	0.305	0.416	0.083	0.531	0.475	0.551	0.760	0.871	1.176	0.538	0.843	0.954	1.259
Hotspot (1-g SAR)	Rear	0.783	0.166	0.066	0.595	0.565	0.158	0.949	0.849	1.015	1.378	1.348	1.943	0.941	1.536	1.506	2.101
	Front	0.601	0.166	0.066	0.019	0.001	0.121	0.767	0.667	0.833	0.620	0.602	0.722	0.741	0.723	0.742	
	Edge 1	0.166	0.066	0.066	0.595	0.134	0.130										
	Edge 2	0.425															
	Edge 3	0.489															
	Edge 4	0.095	0.166	0.066	0.266	0.565	0.146	0.261	0.161	0.327	0.361	0.660	0.926	0.241	0.507	0.806	1.072

SAR to Peak Location Separation Ratio (SPLSR)

RF Exposure	Test Position	Standalone SAR (W/kg)						Σ 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	0.783			0.595	0.565	0.158	(1)+(4)+(5)+(6)	2.101				
		0.783			0.595			(1)+(4)	1.378	144.1	0.01	No	
		0.783				0.565			(1)+(5)	1.348	145.6	0.01	No
		0.783					0.158		(1)+(6)	0.941	154.7	0.01	No
					0.595	0.565			(4)+(5)	1.160	18.8	0.07	Yes
					0.595		0.158		(4)+(6)	0.753	12.4	0.05	Yes
						0.565	0.158		(5)+(6)	0.723	17.3	0.04	No

Note(s):

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

13.9 Sum of the SAR for LTE Band 7 & Wi-Fi & BT

RF Exposure	Test Position	Standalone SAR (W/kg)						Σ SAR (W/kg)										
		WWAN	DTS Ant.1	DTS Ant.2	UNII Ant.1	UNII Ant.2	BT	WWAN + DTS Ant.1	WWAN + DTS Ant.2	WWAN + DTS Ant.1 + DTS Ant.2	WWAN + U-NII Ant.1	WWAN + U-NII Ant.2	WWAN + U-NII Ant.1 + U-NII Ant.2	WWAN + BT	WWAN + UNII Ant.1 + BT	WWAN + UNII Ant.2 + BT	WWAN + UNII Ant.1 + UNII Ant.2 + BT	
		(1)	(2)	(3)	(4)	(5)	(6)	(1+2)	(1+3)	(1+2+3)	(1+4)	(1+5)	(1+4+5)	(1+6)	(1+4+6)	(1+5+6)	(1+4+5+6)	
Head (1g-SAR)	All position	0.094	0.432	0.093	0.152	0.050	0.925	0.526	0.187	0.619	0.246	0.144	0.296	1.019	1.171	1.069	1.221	
Body/Worn (1g-SAR)	All position	0.753	0.076	0.020	0.305	0.416	0.083	0.829	0.773	0.849	1.058	1.169	1.474	0.836	1.141	1.252	1.557	
Hotspot (1-g SAR)	Rear	0.208	0.166	0.066	0.595	0.565	0.158	0.374	0.274	0.440	0.803	0.773	1.368	0.366	0.961	0.931	1.526	
	Front	0.148	0.166	0.066	0.019	0.001	0.121	0.314	0.214	0.380	0.167	0.149	0.168	0.269	0.288	0.270	0.289	
	Edge 1		0.166	0.066	0.595	0.134	0.130											
	Edge 2																	
	Edge 3	0.625																
Edge 4	0.095	0.166	0.066	0.266	0.565	0.146	0.261	0.161	0.327	0.361	0.660	0.926	0.241	0.507	0.806	1.072		

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

RF Exposure	Test Position	Standalone SAR (W/kg)						Σ SAR (W/kg)										
		WWAN	DTS Ant.1	DTS Ant.2	UNII Ant.1	UNII Ant.2	BT	WWAN + DTS Ant.1	WWAN + DTS Ant.2	WWAN + DTS Ant.1 + DTS Ant.2	WWAN + U-NII Ant.1	WWAN + U-NII Ant.2	WWAN + U-NII Ant.1 + U-NII Ant.2	WWAN + BT	WWAN + UNII Ant.1 + BT	WWAN + UNII Ant.2 + BT	WWAN + UNII Ant.1 + UNII Ant.2 + BT	
		(1)	(2)	(3)	(4)	(5)	(6)	(1+2)	(1+3)	(1+2+3)	(1+4)	(1+5)	(1+4+5)	(1+6)	(1+4+6)	(1+5+6)	(1+4+5+6)	
Head (1g-SAR)	All position	0.150	0.432	0.093	0.152	0.050	0.925	0.582	0.243	0.675	0.302	0.200	0.352	1.075	1.227	1.125	1.277	
Body/Worn (1g-SAR)	All position	0.267	0.076	0.020	0.305	0.416	0.083	0.343	0.287	0.363	0.572	0.683	0.988	0.350	0.655	0.766	1.071	
Hotspot (1-g SAR)	Rear	0.367	0.166	0.066	0.595	0.565	0.158	0.533	0.433	0.599	0.962	0.932	1.527	0.525	1.120	1.090	1.685	
	Front	0.283	0.166	0.066	0.019	0.001	0.121	0.449	0.349	0.515	0.302	0.284	0.303	0.404	0.423	0.405	0.424	
	Edge 1		0.166	0.066	0.595	0.134	0.130											
	Edge 2	0.164																
	Edge 3	0.173																
Edge 4	0.146	0.166	0.066	0.266	0.565	0.146	0.312	0.212	0.378	0.412	0.711	0.977	0.292	0.558	0.857	1.123		

SAR to Peak Location Separation Ratio (SPLSR)

RF Exposure	Test Position	Standalone SAR (W/kg)						Σ SAR (W/kg)	Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/No)	Figure	
		WWAN	DTS Ant.1	DTS Ant.2	UNII Ant.1	UNII Ant.2	BT						
Hotspot (1-g SAR)	Rear	0.367			0.595	0.565	0.158	(1+4+5+6)	1.685			9	
		0.367			0.595			(1+4)	0.962	140.2	0.01		No
		0.367				0.565		(1+5)	0.932	142.9	0.01		No
		0.367					0.158	(1+6)	0.525	151.0	0.00		No
					0.595	0.565		(4+5)	1.160	18.8	0.07		Yes
					0.595		0.158	(4+6)	0.753	12.4	0.05		Yes
						0.565	0.158	(5+6)	0.723	17.3	0.04		No

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

RF Exposure	Test Position	Standalone SAR (W/kg)						Σ SAR (W/kg)										
		WWAN	DTS Ant.1	DTS Ant.2	UNII Ant.1	UNII Ant.2	BT	WWAN + DTS Ant.1	WWAN + DTS Ant.2	WWAN + DTS Ant.1 + DTS Ant.2	WWAN + U-NII Ant.1	WWAN + U-NII Ant.2	WWAN + U-NII Ant.1 + U-NII Ant.2	WWAN + BT	WWAN + UNII Ant.1 + BT	WWAN + UNII Ant.2 + BT	WWAN + UNII Ant.1 + UNII Ant.2 + BT	
		(1)	(2)	(3)	(4)	(5)	(6)	(1+2)	(1+3)	(1+2+3)	(1+4)	(1+5)	(1+4+5)	(1+6)	(1+4+6)	(1+5+6)	(1+4+5+6)	
Head (1g-SAR)	All position	0.239	0.432	0.093	0.152	0.050	0.925	0.671	0.332	0.764	0.391	0.289	0.441	1.164	1.316	1.214	1.366	
Body/Worn (1g-SAR)	All position	0.350	0.076	0.020	0.305	0.416	0.083	0.426	0.370	0.446	0.655	0.766	1.071	0.433	0.738	0.849	1.154	
Hotspot (1-g SAR)	Rear	0.520	0.166	0.066	0.595	0.565	0.158	0.686	0.586	0.752	1.115	1.085	1.680	0.678	1.273	1.243	1.838	
	Front	0.419	0.166	0.066	0.019	0.001	0.121	0.585	0.485	0.651	0.438	0.420	0.439	0.540	0.559	0.541	0.560	
	Edge 1		0.166	0.066	0.595	0.134	0.130											
	Edge 2	0.426																
	Edge 3	0.259																
Edge 4	0.249	0.166	0.066	0.266	0.565	0.146	0.415	0.315	0.481	0.515	0.814	1.080	0.395	0.661	0.960	1.226		

SAR to Peak Location Separation Ratio (SPLSR)

RF Exposure	Test Position	Standalone SAR (W/kg)						Σ SAR (W/kg)	Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/No)	Figure	
		WWAN	DTS Ant.1	DTS Ant.2	UNII Ant.1	UNII Ant.2	BT						
Hotspot (1-g SAR)	Rear	0.520			0.595	0.565	0.158	(1+4+5+6)	1.838			10	
		0.520			0.595			(1+4)	1.115	144.3	0.01		No
		0.520				0.565		(1+5)	1.085	145.7	0.01		No
		0.520					0.158	(1+6)	0.678	154.8	0.00		No
					0.595	0.565		(4+5)	1.160	18.8	0.07		Yes
					0.595		0.158	(4+6)	0.753	12.4	0.05		Yes
						0.565	0.158	(5+6)	0.723	17.3	0.04		No

Note(s):

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

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

RF Exposure	Test Position	Standalone SAR (W/kg)						Σ 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	0.156	0.432	0.093	0.152	0.050	0.925	0.588	0.249	0.681	0.308	0.206	0.358	1.081	1.233	1.131	1.283
Body-Worn (1g-SAR)	All position	0.280	0.076	0.020	0.305	0.416	0.083	0.356	0.300	0.376	0.585	0.696	1.001	0.363	0.668	0.779	1.084
Hotspot (1-g SAR)	Rear	0.370	0.166	0.066	0.595	0.565	0.158	0.536	0.436	0.602	0.965	0.935	1.530	0.528	1.123	1.093	1.688
	Front	0.291	0.166	0.066	0.019	0.001	0.121	0.457	0.357	0.523	0.310	0.292	0.311	0.412	0.431	0.413	0.432
	Edge 1	0.166	0.066	0.595	0.134	0.130											
	Edge 2	0.179															
	Edge 3	0.160															
	Edge 4	0.165	0.166	0.066	0.266	0.565	0.146	0.331	0.231	0.397	0.431	0.730	0.996	0.311	0.577	0.876	1.142

SAR to Peak Location Separation Ratio (SPLSR)

RF Exposure	Test Position	Standalone SAR (W/kg)						Σ 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	0.370			0.595	0.565	0.158	1.688				11
		0.370			0.595			0.965	140.4	0.01	No	
		0.370				0.565		0.935	142.9	0.01	No	
		0.370					0.158	0.528	151.1	0.00	No	
					0.595	0.565		0.965	18.8	0.07	Yes	
					0.595		0.158	0.753	12.4	0.05	Yes	
				0.565	0.158	0.723	17.3	0.04	No			

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

RF Exposure	Test Position	Standalone SAR (W/kg)						Σ 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	0.191	0.432	0.093	0.152	0.050	0.925	0.623	0.284	0.716	0.343	0.241	0.393	1.116	1.268	1.166	1.318
Body-Worn (1g-SAR)	All position	0.651	0.076	0.020	0.305	0.416	0.083	0.727	0.671	0.747	0.956	1.067	1.372	0.734	1.039	1.150	1.455
Hotspot (1-g SAR)	Rear	0.678	0.166	0.066	0.595	0.565	0.158	0.844	0.744	0.910	1.273	1.243	1.838	0.836	1.431	1.401	1.996
	Front	0.709	0.166	0.066	0.019	0.001	0.121	0.875	0.775	0.941	0.728	0.710	0.729	0.830	0.849	0.831	0.850
	Edge 1	0.166	0.066	0.595	0.134	0.130											
	Edge 2	0.083															
	Edge 3	0.988															
	Edge 4	0.136	0.166	0.066	0.266	0.565	0.146	0.302	0.202	0.368	0.402	0.701	0.967	0.282	0.548	0.847	1.113
Phablet-10g	Rear	1.876			0.439	1.154					2.315	3.030	3.469				
	Front	1.358			0.439	1.154				1.797	2.512	2.951					
	Edge 1				0.439	0.270											
	Edge 2	0.672															
	Edge 3	1.669															
	Edge 4	0.349			0.439	1.154					0.788	1.503	1.942				

SAR to Peak Location Separation Ratio (SPLSR)

RF Exposure	Test Position	Standalone SAR (W/kg)						Σ 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	0.678			0.595	0.565	0.158	1.996				12
		0.678			0.595			1.273	136.3	0.01	No	
		0.678				0.565		1.243	137.6	0.01	No	
		0.678					0.158	0.836	146.8	0.01	No	
					0.595	0.565		0.965	18.8	0.07	Yes	
					0.595		0.158	0.753	12.4	0.05	Yes	
				0.565	0.158	0.723	17.3	0.04	No			

Note(s):

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

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

RF Exposure	Test Position	Standalone SAR (W/kg)						Σ 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	0.237	0.432	0.093	0.152	0.050	0.925	0.669	0.330	0.762	0.389	0.287	0.439	1.162	1.314	1.212	1.364	
Body-Worn (1g-SAR)	All position	0.386	0.076	0.020	0.305	0.416	0.083	0.462	0.406	0.482	0.691	0.802	1.107	0.469	0.774	0.885	1.190	
Hotspot (1g-SAR)	Rear	0.669	0.166	0.066	0.595	0.565	0.158	0.835	0.735	0.901	1.264	1.234	1.829	0.827	1.422	1.392	1.987	
	Front	0.588	0.166	0.066	0.019	0.001	0.121	0.754	0.654	0.820	0.607	0.589	0.608	0.709	0.728	0.710	0.729	
	Edge 1		0.166	0.066	0.595	0.134	0.130											
	Edge 2	0.367																
	Edge 3	0.451																
Edge 4	0.078	0.166	0.066	0.266	0.565	0.146	0.244	0.144	0.310	0.344	0.643	0.909	0.224	0.490	0.789	1.055		

SAR to Peak Location Separation Ratio (SPLSR)

RF Exposure	Test Position	Standalone SAR (W/kg)						Σ 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 (1g-SAR)	Rear				0.595	0.565	0.158	0.1+4+5+6	1.987				13	
					0.595			0+4	1.264	141.9	0.01	No		
						0.565			0+5	1.234	144.1	0.01		No
							0.158		0+6	0.827	152.7	0.00		No
					0.595	0.565			4+5	1.160	18.8	0.07		Yes
					0.595		0.158		4+6	0.753	12.4	0.05		Yes
						0.565	0.158		5+6	0.723	17.3	0.04		No

Note(s):

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

13.15 Sum of the SAR for LTE Band 38 & Wi-Fi & BT

RF Exposure	Test Position	Standalone SAR (W/kg)						Σ 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	0.055	0.432	0.093	0.152	0.050	0.925	0.487	0.148	0.580	0.207	0.105	0.257	0.980	1.132	1.030	1.182	
Body-Worn (1g-SAR)	All position	0.556	0.076	0.020	0.305	0.416	0.083	0.632	0.576	0.652	0.861	0.972	1.277	0.639	0.944	1.055	1.360	
Hotspot (1g-SAR)	Rear	0.478	0.166	0.066	0.595	0.565	0.158	0.644	0.544	0.710	1.073	1.043	1.638	0.636	1.231	1.201	1.796	
	Front	0.301	0.166	0.066	0.019	0.001	0.121	0.467	0.367	0.533	0.320	0.302	0.321	0.422	0.441	0.423	0.442	
	Edge 1		0.166	0.066	0.595	0.134	0.130											
	Edge 2																	
	Edge 3	0.719																
Edge 4	0.103	0.166	0.066	0.266	0.565	0.146	0.269	0.169	0.335	0.369	0.668	0.934	0.249	0.515	0.814	1.080		
Phablet-10g	Rear	1.056			0.439	1.154					1.495	2.210	2.649					
	Front	0.792			0.439	1.154				1.231	1.946	2.385						
	Edge 1				0.439	0.270												
	Edge 2																	
	Edge 3	0.619																
Edge 4	0.503			0.439	1.154					0.942	1.657	2.096						

SAR to Peak Location Separation Ratio (SPLSR)

RF Exposure	Test Position	Standalone SAR (W/kg)						Σ 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 (1g-SAR)	Rear				0.595	0.565	0.158	0+4+5+6	1.796				14	
					0.595			0+4	1.073	142.9	0.01	No		
						0.565			0+5	1.043	142.5	0.01		No
							0.158		0+6	0.636	152.8	0.00		No
					0.595	0.565			4+5	1.160	18.8	0.07		Yes
					0.595		0.158		4+6	0.753	12.4	0.05		Yes
						0.565	0.158		5+6	0.723	17.3	0.04		No

Note(s):

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

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

RF Exposure	Test Position	Standalone SAR (W/kg)						Σ 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	0.052	0.432	0.093	0.152	0.050	0.925	0.484	0.145	0.577	0.204	0.102	0.254	0.977	1.129	1.027	1.179	
Body-Worn (1g-SAR)	All position	0.229	0.076	0.020	0.305	0.416	0.083	0.305	0.249	0.325	0.534	0.645	0.950	0.312	0.617	0.728	1.033	
Hotspot (1-g SAR)	Rear	0.295	0.166	0.066	0.595	0.565	0.158	0.461	0.361	0.527	0.890	0.860	1.455	0.453	1.048	1.018	1.613	
	Front	0.254	0.166	0.066	0.019	0.001	0.121	0.420	0.320	0.486	0.273	0.255	0.274	0.375	0.394	0.376	0.395	
	Edge 1		0.166	0.066	0.595	0.134	0.130											
	Edge 2																	
	Edge 3	0.498																
	Edge 4	0.116	0.166	0.066	0.266	0.565	0.146	0.282	0.182	0.348	0.382	0.681	0.947	0.262	0.528	0.827	1.093	

SAR to Peak Location Separation Ratio (SPLSR)

RF Exposure	Test Position	Standalone SAR (W/kg)						Σ 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	0.295			0.595	0.565	0.158	(1)+(4)+(5)+(6)	1.613			15	
		0.295			0.595			(1)+(4)	0.890	118.3	0.01		No
		0.295				0.565		(1)+(5)	0.860	116.5	0.01		No
		0.295					0.158	(1)+(6)	0.453	127.7	0.00		No
					0.595	0.565		(4)+(5)	1.160	18.8	0.07		Yes
					0.595		0.158	(4)+(6)	0.753	12.4	0.05		Yes
				0.565	0.158	(5)+(6)	0.723	17.3	0.04	No			

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

RF Exposure	Test Position	Standalone SAR (W/kg)						Σ 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	0.289	0.432	0.093	0.152	0.050	0.925	0.721	0.382	0.814	0.441	0.339	0.491	1.214	1.366	1.264	1.416	
Body-Worn (1g-SAR)	All position	0.790	0.076	0.020	0.305	0.416	0.083	0.866	0.810	0.886	1.095	1.206	1.511	0.873	1.178	1.289	1.594	
Hotspot (1-g SAR)	Rear	0.696	0.166	0.066	0.595	0.565	0.158	0.862	0.762	0.928	1.291	1.261	1.856	0.854	1.449	1.419	2.014	
	Front	0.557	0.166	0.066	0.019	0.001	0.121	0.723	0.623	0.789	0.576	0.558	0.577	0.678	0.697	0.679	0.698	
	Edge 1		0.166	0.066	0.595	0.134	0.130											
	Edge 2	0.084																
	Edge 3	0.880																
	Edge 4	0.196	0.166	0.066	0.266	0.565	0.146	0.362	0.262	0.428	0.462	0.761	1.027	0.342	0.608	0.907	1.173	
Phablet-10g	Rear	2.265			0.439	1.154				2.704	3.419	3.858						
	Front	1.380			0.439	1.154			1.819	2.534	2.973							
	Edge 1				0.439	0.270												
	Edge 2	0.374																
	Edge 3	2.424																
	Edge 4	0.804			0.439	1.154				1.243	1.958	2.397						

SAR to Peak Location Separation Ratio (SPLSR)

RF Exposure	Test Position	Standalone SAR (W/kg)						Σ 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	0.696			0.595	0.565	0.158	(1)+(4)+(5)+(6)	2.014			16	
		0.696			0.595			(1)+(4)	1.291	138.4	0.01		No
		0.696				0.565		(1)+(5)	1.261	139.2	0.01		No
		0.696					0.158	(1)+(6)	0.854	148.8	0.01		No
					0.595	0.565		(4)+(5)	1.160	18.8	0.07		Yes
					0.595		0.158	(4)+(6)	0.753	12.4	0.05		Yes
				0.565	0.158	(5)+(6)	0.723	17.3	0.04	No			

Note(s):

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

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

RF Exposure	Test Position	Standalone SAR (W/kg)							Σ 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	0.350	0.200	0.047	0.152	0.050	0.292	0.198	0.549	0.600	0.702	0.447	0.748	0.595	0.794	0.692	0.840
Body-Worn (1g-SAR)	All position	0.790	0.031	0.001	0.170	0.294	0.034	0.344	0.961	1.115	0.991	1.085	1.165	1.135	0.994	1.118	1.168
Hotspot (1g-SAR)	All position	1.067	0.081	0.029	0.284	0.277	0.084	0.334	1.380	1.425	1.432	1.373	1.482	1.430	1.435	1.428	1.485
Phablet (10g-SAR)	Rear	2.373			0.320	0.938		1.097	2.693	3.311	2.693	3.311	3.470	3.470	2.693	3.311	3.470
	Front	1.462			0.320	0.938		1.097	1.782	2.400	1.782	2.400	2.559	2.559	1.782	2.400	2.559
	Edge 1				0.320	0.938		1.097									
	Edge 2	0.672															
	Edge 3	2.963															
	Edge 4	0.920			0.320	0.938		1.097	1.240	1.858	1.240	1.858	2.017	2.017	1.240	1.858	2.017

13.19 Volume Scan Results

Configuration	Bands	Test position	Original Measured SAR (W/kg)	Volume scan Results	Multi-Band Combined factor	Multi-Band Combined Results
UNII Ant.1 + UNII Ant.2	UNII Ant.1	Rear	0.484	0.390	1.230	0.631
	UNII Ant.2	Rear	0.512	0.415	1.104	
UNII Ant.1 + BT	UNII Ant.1	Rear	0.484	0.390	1.230	0.582
	BT	Rear	0.101	0.090	1.566	

Note(s):

Multi-Band Combined factor is the compensation value of power and duty.

Conclusion:

Simultaneous transmission SAR measurement (Volume Scan) is required at (UNII Ant.1 + UNII Ant.2), (UNII Ant.1 + BT) because the SPLSR is > 1-g 0.04 (10-g 0.10) according to SPLSR calculation. And The Volume scan results is not over SAR limit.

Figure (1)

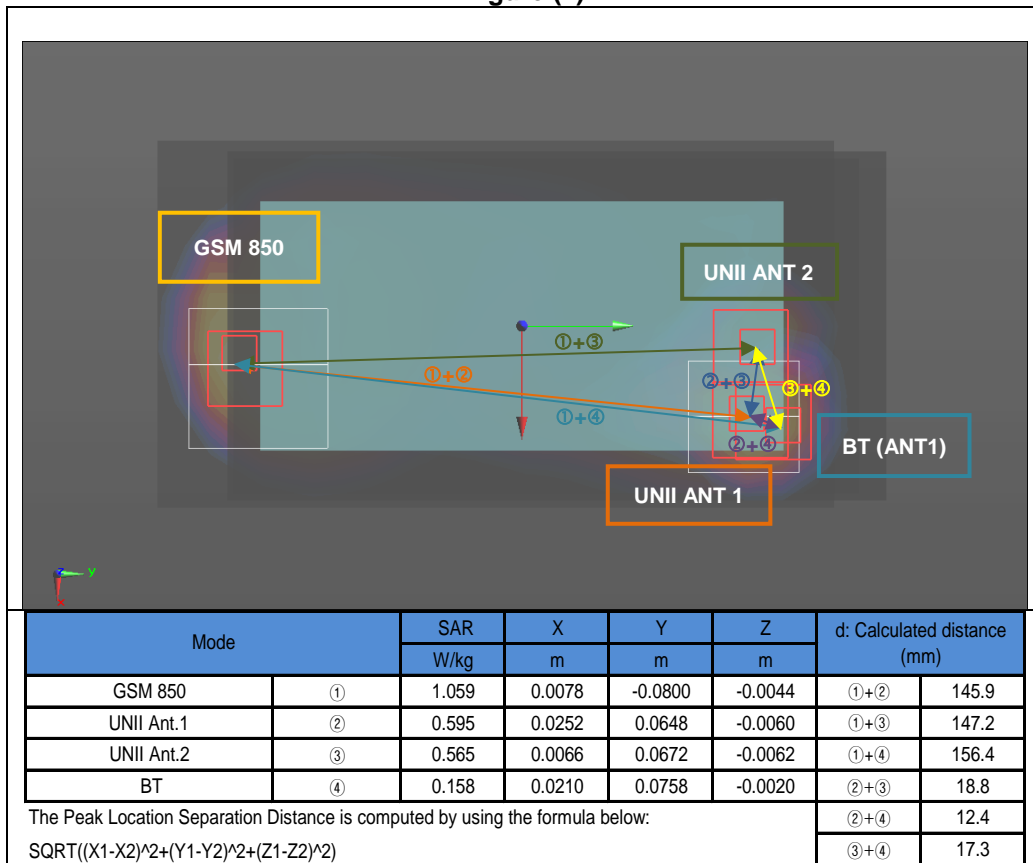


Figure (2)

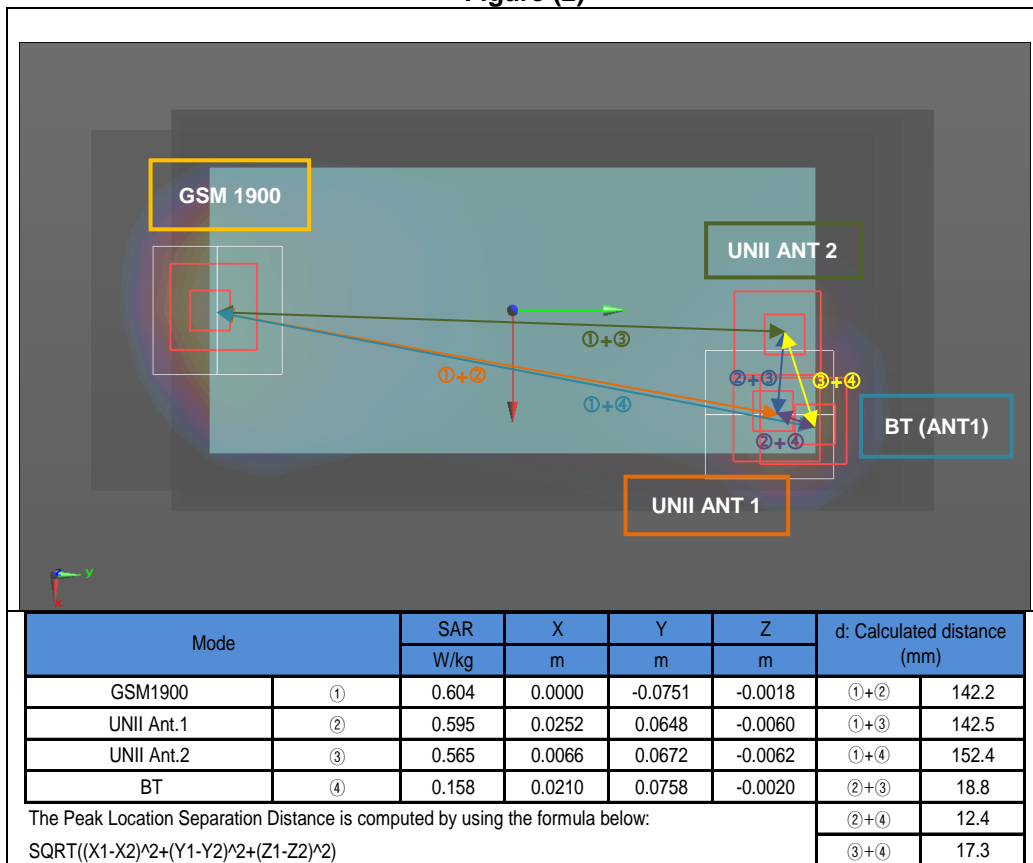


Figure (3)

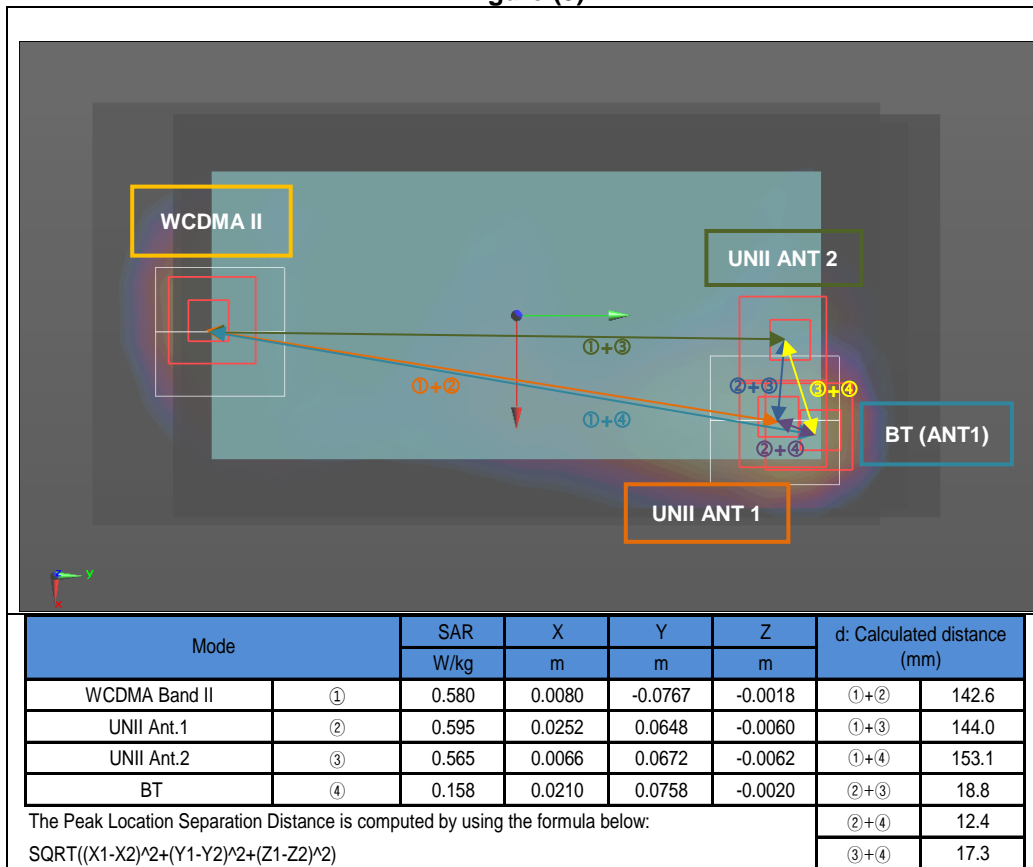


Figure (4)

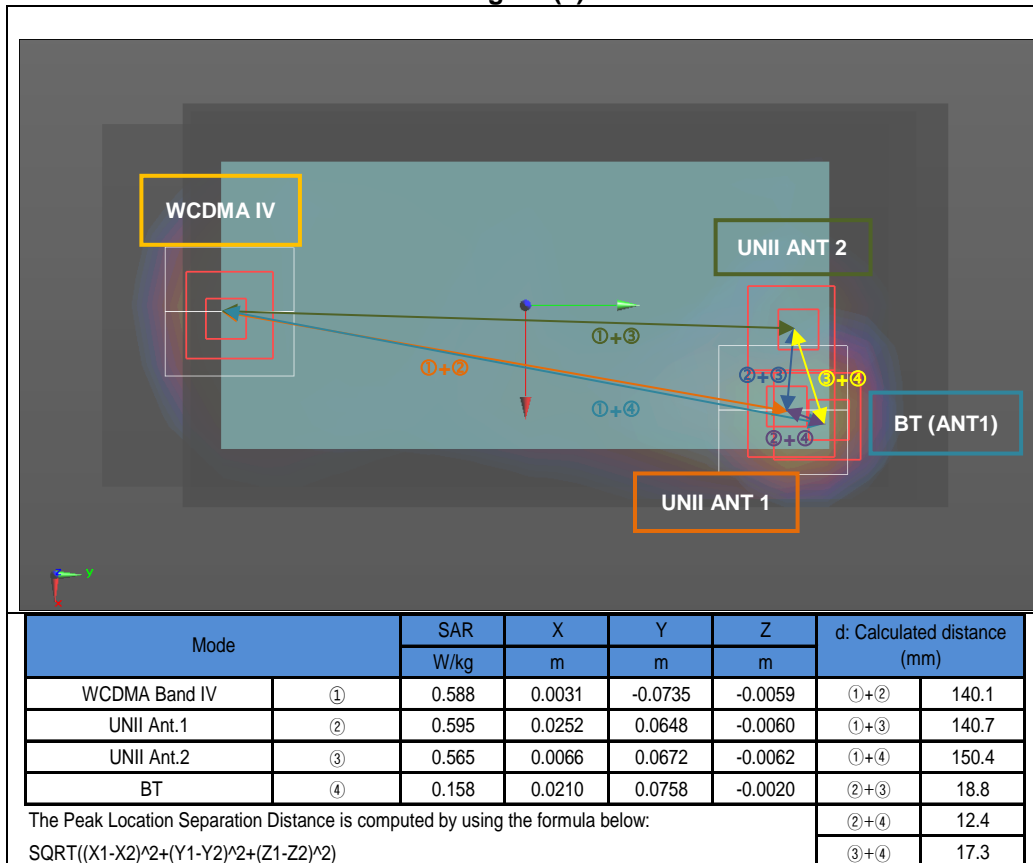


Figure (5)

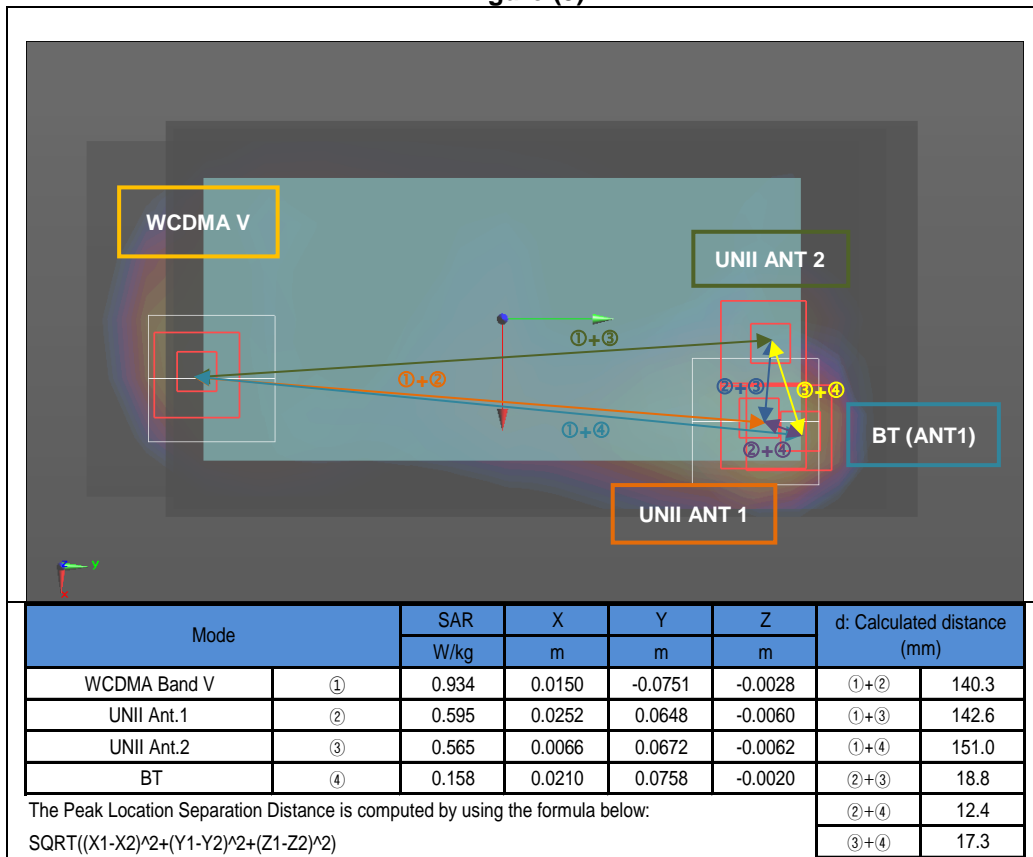


Figure (6)

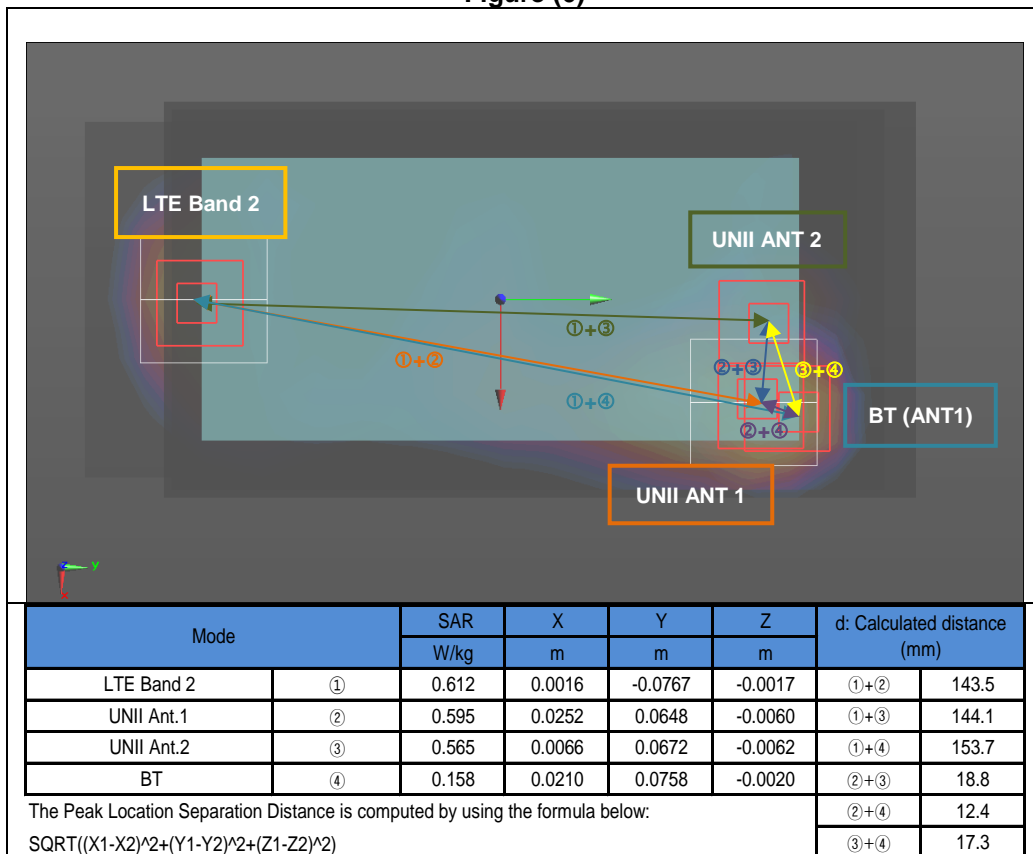


Figure (7)

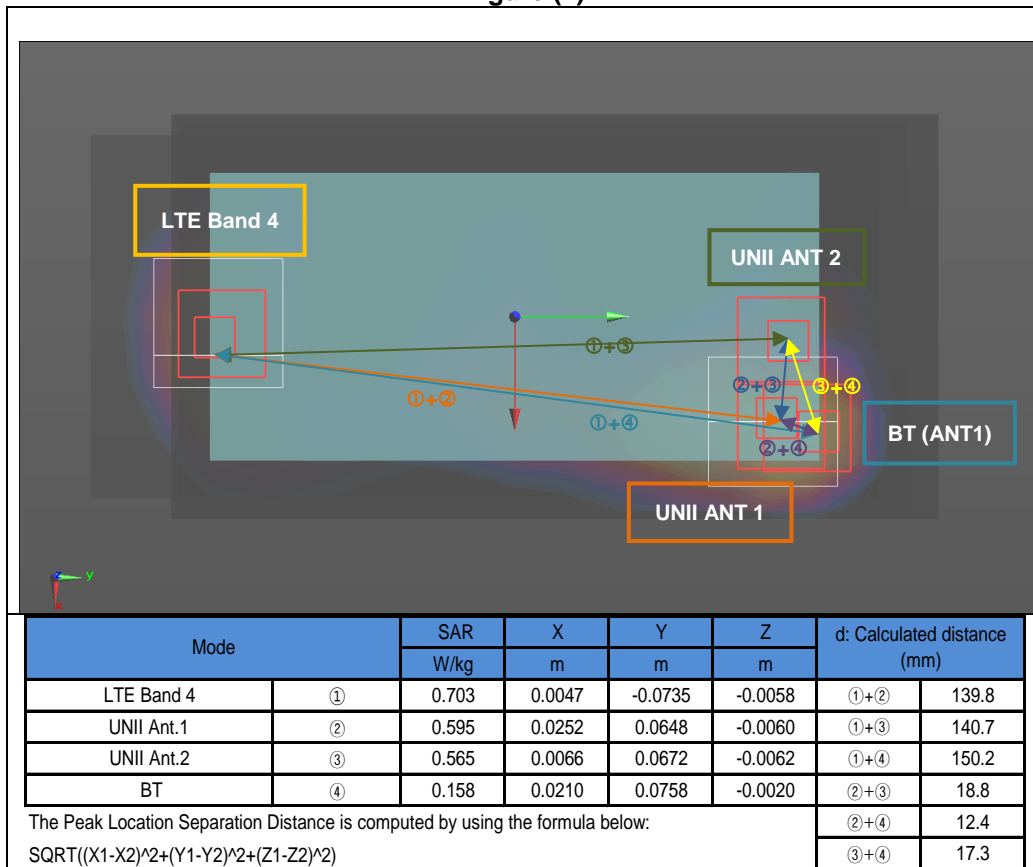


Figure (8)

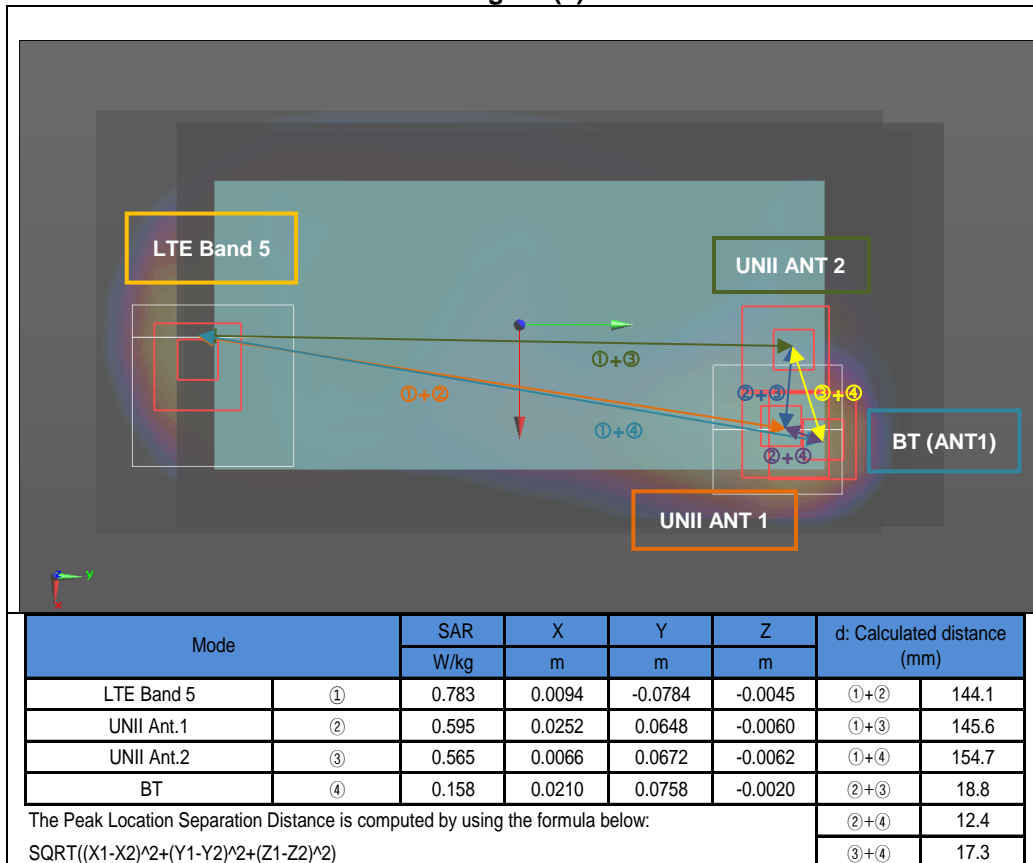


Figure (9)

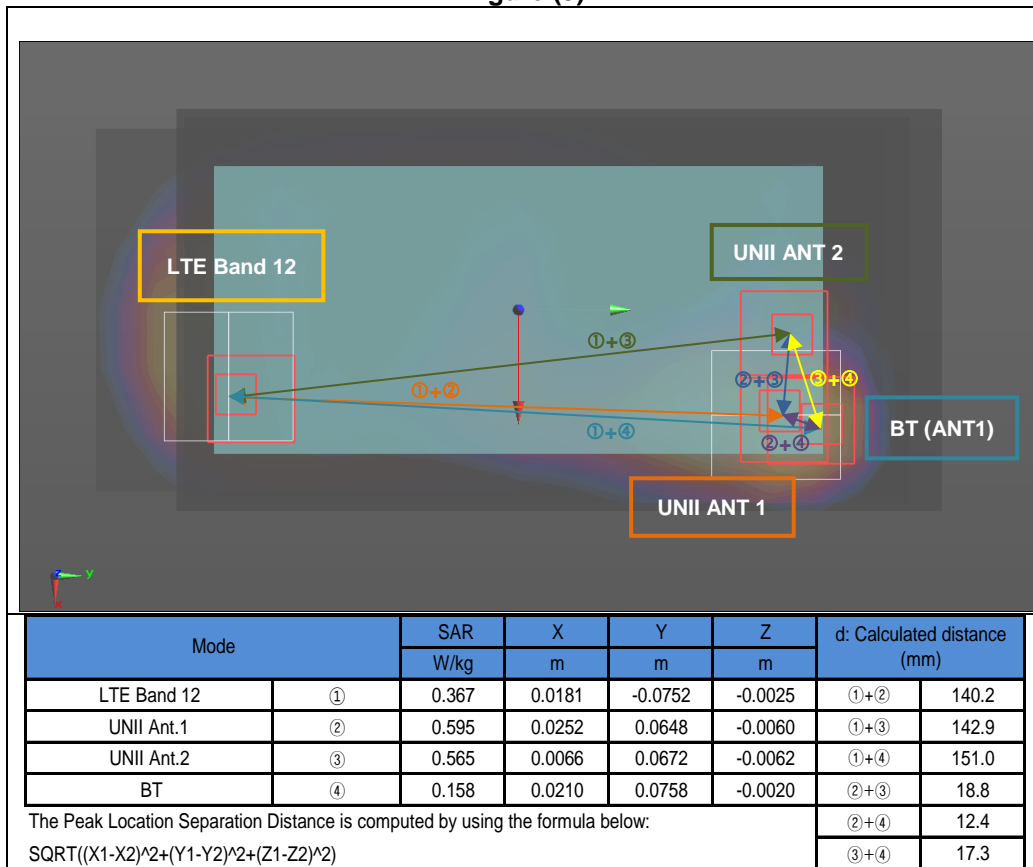


Figure (10)

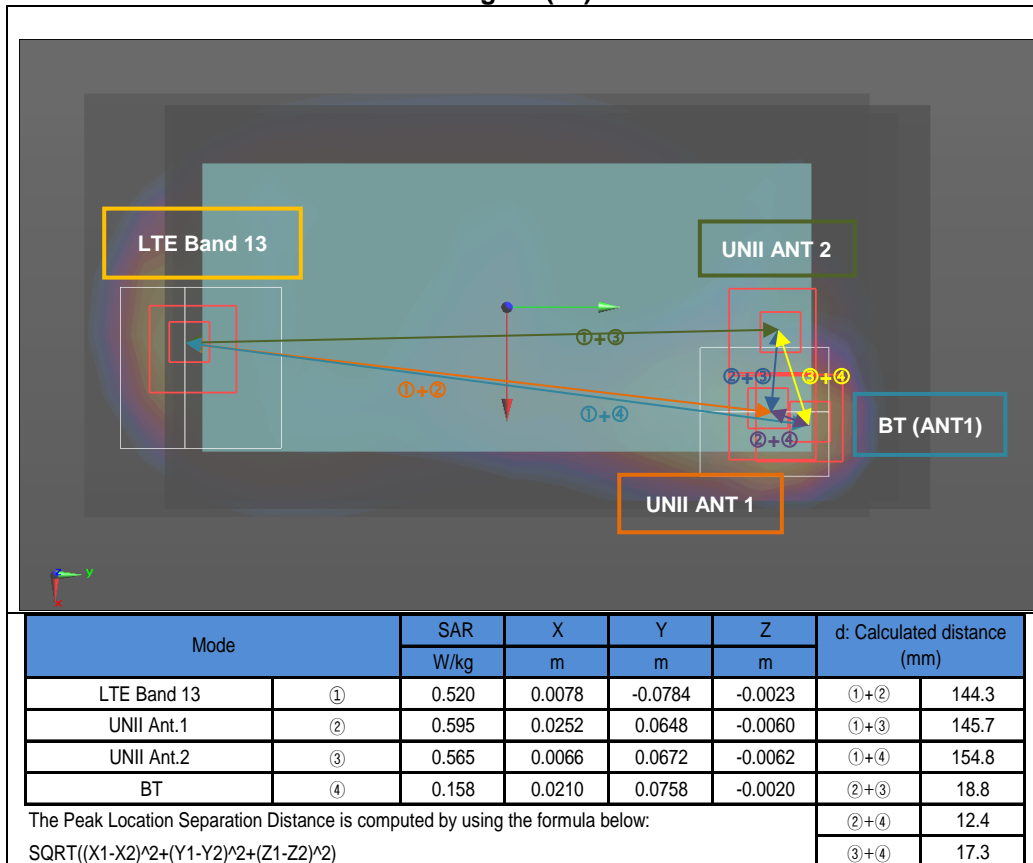


Figure (11)

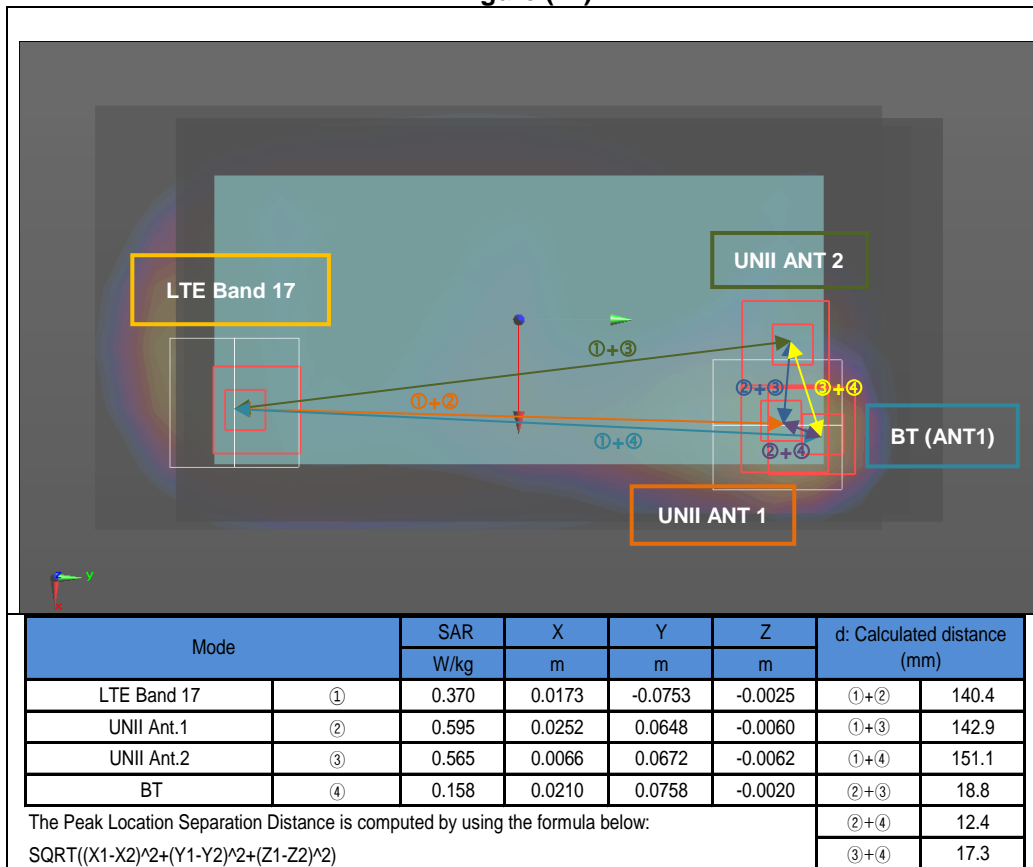


Figure (12)

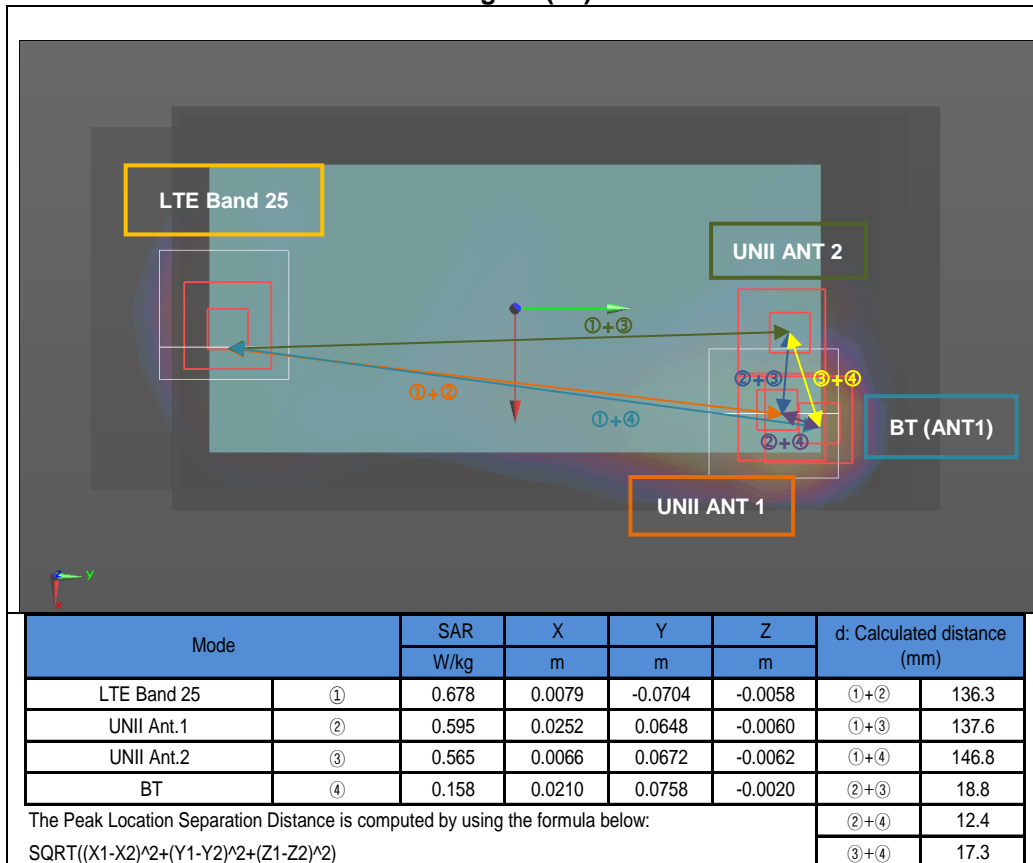


Figure (13)

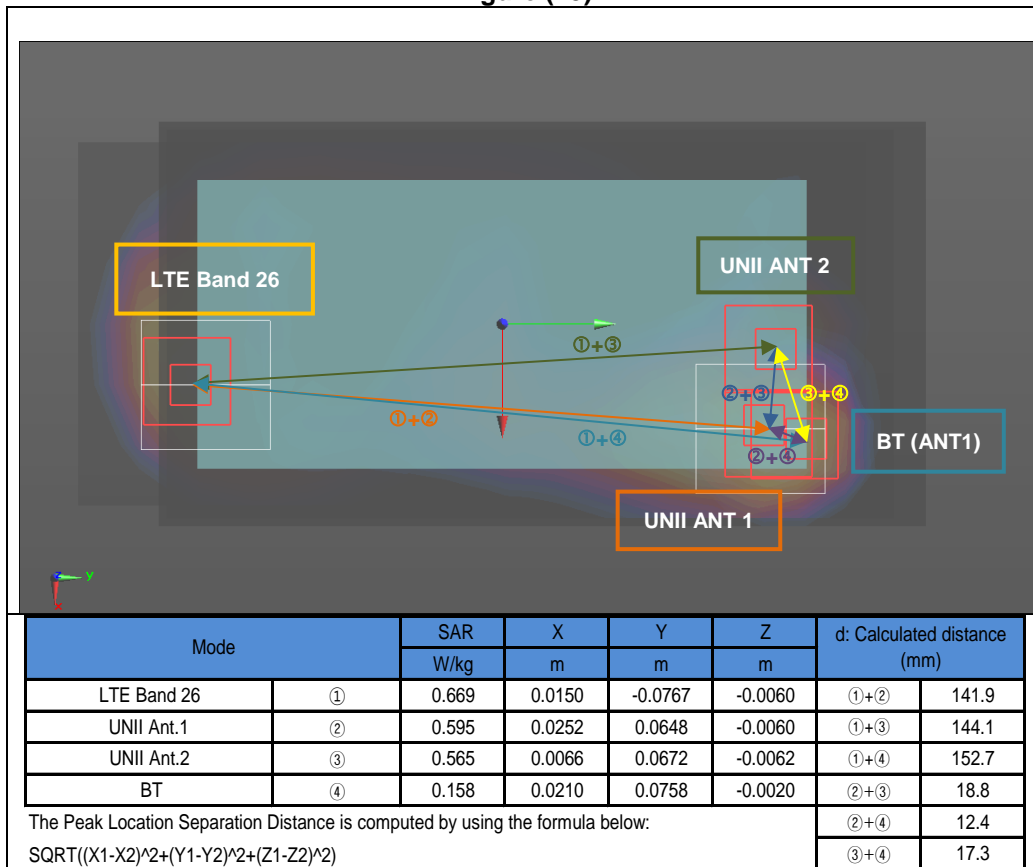


Figure (14)

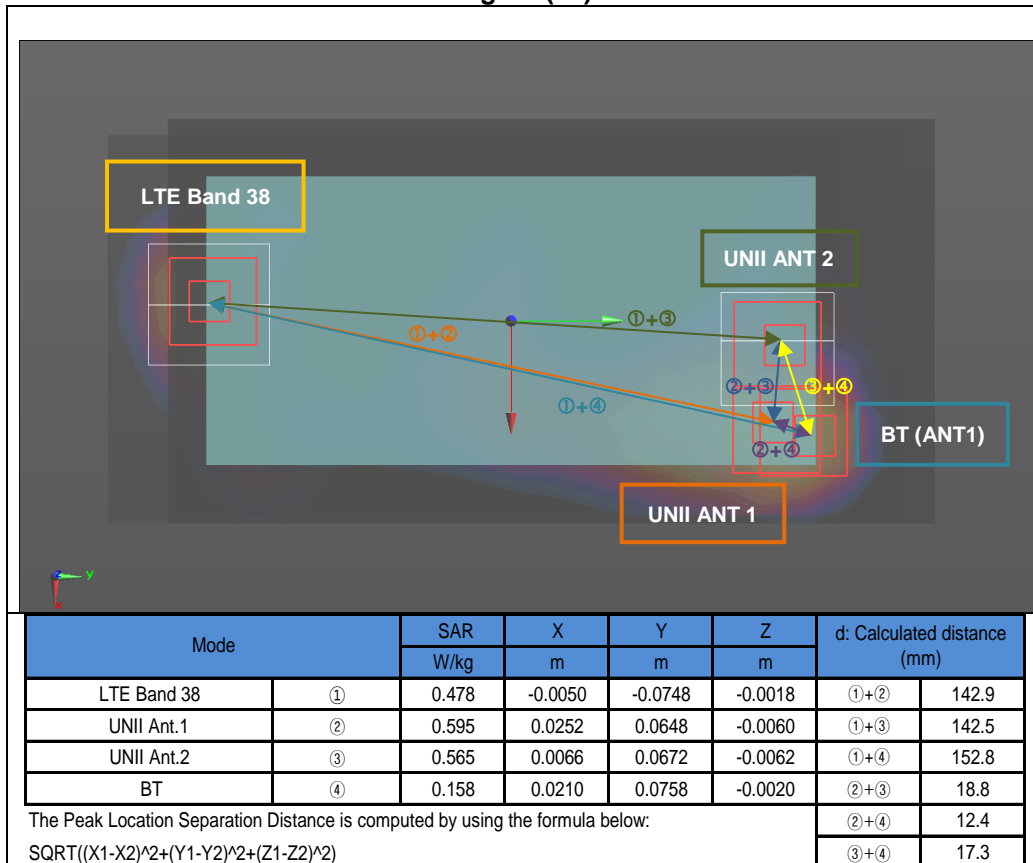


Figure (15)

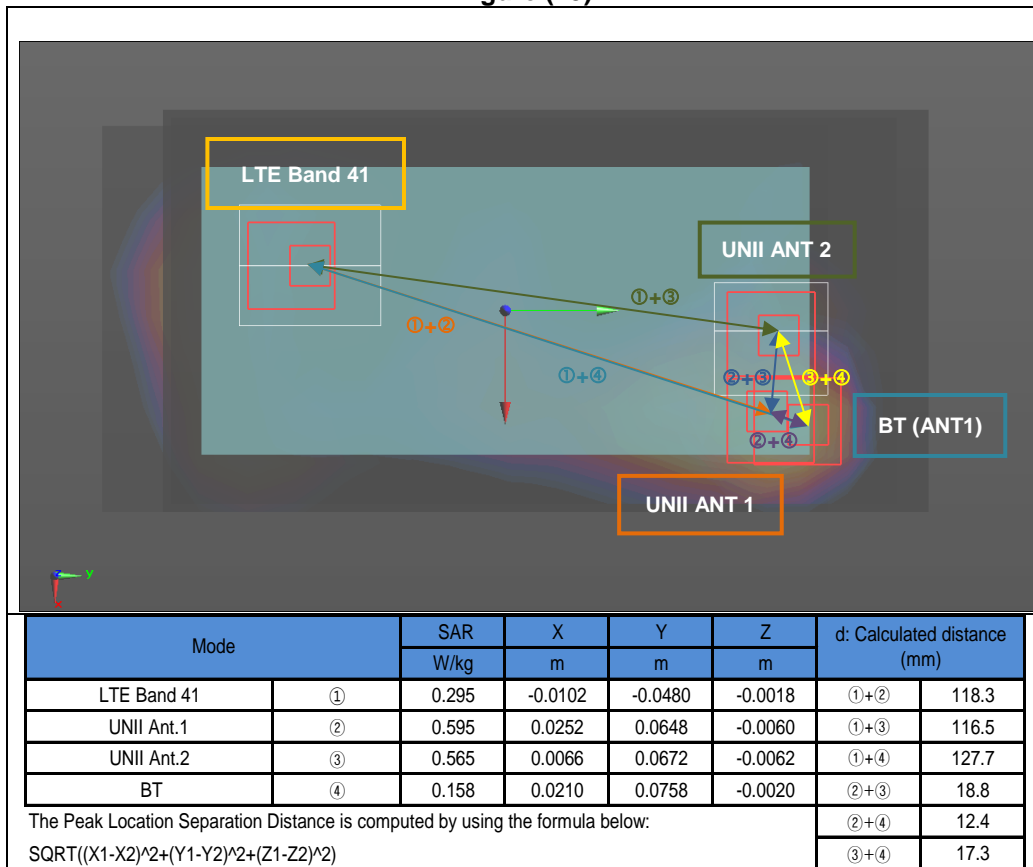
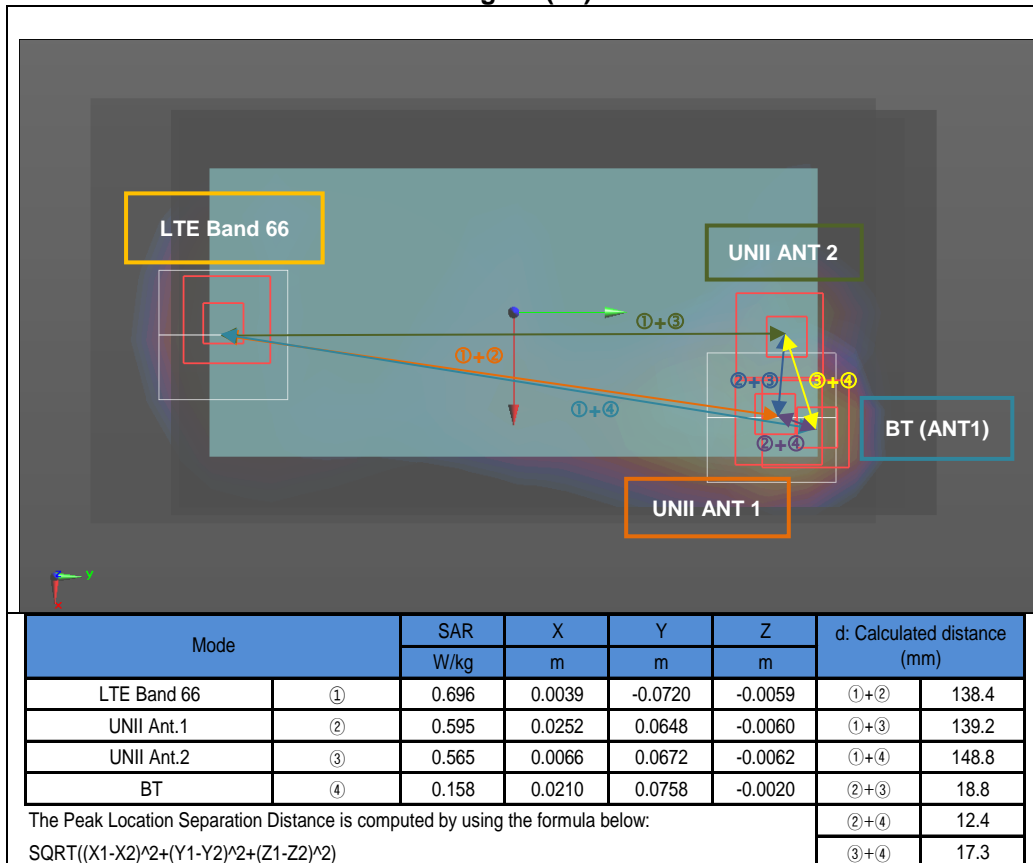


Figure (16)



Appendixes

Refer to separated files for the following appendixes.

4788725460-S1V5 FCC Report SAR_App A_Photos & Ant. Locations

4788725460-S1V5 FCC Report SAR_App B_Highest SAR Test Plots

4788725460-S1V5 FCC Report SAR_App C_System Check Plots

4788725460-S1V5 FCC Report SAR_App D_SAR Tissue Ingredients

4788725460-S1V5 FCC Report SAR_App E_Probe Cal. Certificates

4788725460-S1V5 FCC Report SAR_App F_Dipole Cal. Certificates

4788725460-S1V5 FCC Report SAR_App G_Volume scan results

END OF REPORT