SAR EVALUATION REPORT

FCC 47 CFR § 2.1093
IEEE Std 1528-2013

For
Tablet Device

FCC ID: BCGA1550
Model Name: A1550

Report Number: 14U19187-S1B
Issue Date: 7/10/2015

Prepared for
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NVLAP LAB CODE 200065-0

Revision History

Rev.	Date	Revisions	Revised By
--	4/21/2015	Initial Issue	--
A	5/18/2015	Report revised based on Reviewer's comments: 1. Sec.2, 6.2., 6.3, 9., 10., 12.: Updated 2. Appendix C & F: Updated	Kenneth Mak
B	7/10/2015	Report revised: 1. Sec. 6.3., 9.4.: Updated LTE 41 2. Sec 2.: Updated 3. Sec. 9.5.: Updated	Kenneth Mak

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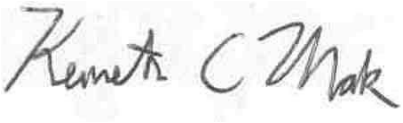
1. Attestation of Test Results

Applicant Name	APPLE INC.			
FCC ID	BCGA1550			
Model Name	A1550			
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)			
General population / Uncontrolled exposure	1.6			
The Highest Reported SAR (W/kg)				
RF Exposure Conditions	**Equipment Class**			
	Licensed	**DTS**	**U-NII**	**DSS (BT)**
Standalone	1.190	1.190	1.190	0.347
Simultaneous TX	1.589	1.589	1.572	1.589
Date Tested	3/9/2015 to 4/2/2015			
Test Results	Pass			

UL Verification Services Inc. 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 Verification Services Inc. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL Verification Services Inc. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Inc. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of any government (NIST Handbook 150, Annex A). This report is written to support regulatory compliance of the applicable standards stated above.

Approved & Released By:	Prepared By:
	
Bobby Bayani Senior Engineer UL Verification Services Inc.	Kenneth Mak Laboratory Engineer UL Verification Services Inc.

2. Test Specification, Methods and Procedures

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

- 248227 D01 SAR meas for 802.11 v02r01
- 447498 D01 General RF Exposure Guidance v05r02
- 447498 D03 Supplement C Cross-Reference v01
- 616217 D04 SAR for laptop and tablets v01r01
- 690783 D01 SAR Listings on Grants v01r03
- 865664 D01 SAR measurement 100 MHz to 6 GHz v01r03
- 865664 D02 RF Exposure Reporting v01r01
- 941225 D01 3G SAR Procedures v03
- 941225 D05 SAR for LTE Devices v02r03
- 941225 D06 Hotspot Mode v02

3. Facilities and Accreditation

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

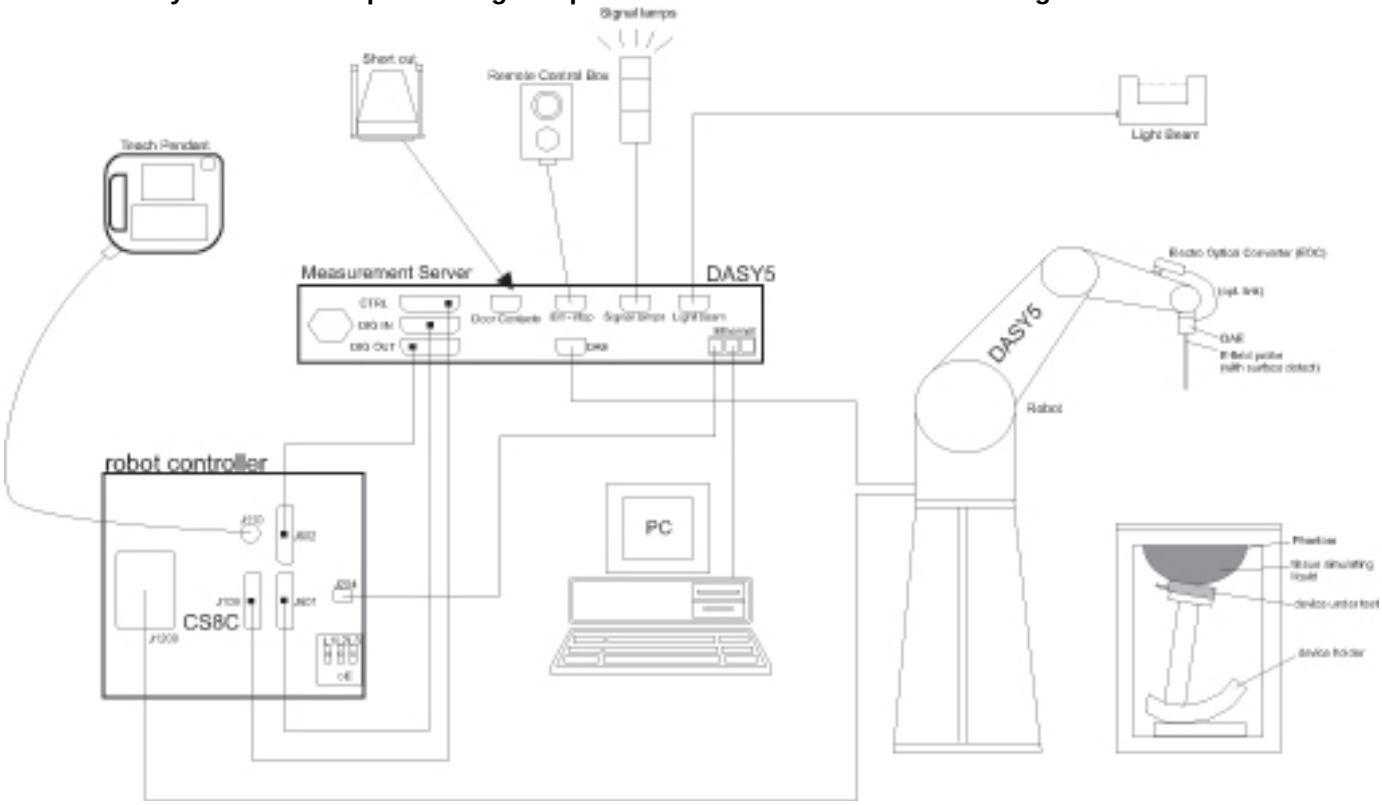
47173 Benicia Street	47266 Benicia Street
SAR Lab A	SAR Lab 1
SAR Lab B	SAR Lab 2
SAR Lab C	SAR Lab 3
SAR Lab D	SAR Lab 4
SAR Lab E	SAR Lab 5
SAR Lab F	
SAR Lab G	
SAR Lab H	

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

4. SAR Measurement System & Test Equipment

4.1. SAR Measurement System

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



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

4.2. SAR Scan Procedures

Step 1: Power Reference Measurement

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

Step 2: Area Scan

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

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

<table>
<tr><td></td><td>≤ 3 GHz</td><td>> 3 GHz</td></tr>
<tr><td>Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface</td><td>5 ± 1 mm</td><td>½·δ·ln(2) ± 0.5 mm</td></tr>
<tr><td>Maximum probe angle from probe axis to phantom surface normal at the measurement location</td><td>30° ± 1°</td><td>20° ± 1°</td></tr>
<tr><td rowspan="2">Maximum area scan spatial resolution: Δx_{Area}, Δy_{Area}</td><td>≤ 2 GHz: ≤ 15 mm
2 – 3 GHz: ≤ 12 mm</td><td>3 – 4 GHz: ≤ 12 mm
4 – 6 GHz: ≤ 10 mm</td></tr>
<tr><td colspan="2">When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be ≤ the corresponding x or y dimension of the test device with at least one measurement point on the test device.</td></tr>
</table>

Step 3: Zoom Scan

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

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

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

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

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

Step 4: Power drift measurement

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

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	8753ES	MY40001647	7/17/2015
Dielectronic Probe kit	SPEAG	DAK-3.5	1087	11/11/2015
Dielectronic Probe kit	SPEAG	DAK-3.5 Short	SM DAK 200 BA	N/A
Thermometer	Traceable Calibration Control Co.	4242	122529162	10/8/2015
Network Analyzer	Agilent	E753ES	MY40000980	4/7/2015
Dielectronic Probe kit	SPEAG	DAK-3.5	1082	9/16/2015
Dielectronic Probe kit	SPEAG	DAK-3.5 Short	SM DAK 200 BA	N/A
Thermometer	Control Company	Traceable	122529163	10/8/2015

System Check

Name of Equipment	Manufacturer	Type/Model	Serial No.	Cal. Due Date
Synthesized Signal Generator	HP	8665B	3744A01084	5/20/2015
Power Meter	Agilent	N1912A	MY53040016	5/5/2015
Power Sensor	Agilent	E9323A	MY53070005	5/1/2015
Power Sensor	Agilent	E9323A	MY53070009	5/28/2015
Amplifier	MITEQ	AMF-4D-00400600-50-30P	1795093	N/A
Directional coupler	Werlatone	C8060-102	2149	N/A
DC Power Supply	AMETEK	XT 15-4	1319A02778	N/A
Synthesized Signal Generator	HP	8665B	3744A01155	3/12/2015
Power Meter	HP	437B	3125U11364	8/27/2015
Power Meter	HP	437B	3125U12345	8/15/2015
Power Sensor	HP	8481A	1926A27048	8/15/2015
Power Sensor	HP	8481A	2702A76223	9/17/2015
Amplifier	MITEQ	AMF-4D-00400600-50-30P	1795092	N/A
Directional coupler	Werlatone	C8060-102	2141	N/A
DC Power Supply	BK PRECISION	1611	215-02292	N/A
Synthesized Signal Generator	Agilent	8665B	3438A00633	7/10/2015
Power Meter	HP	437B	3125U11347	8/27/2015
Power Meter	HP	437B	3125U16345	6/16/2015
Power Sensor	HP	8481A	2702A60780	6/16/2015
Power Sensor	HP	8481A	1926A16917	10/10/2015
Amplifier	MITEQ	AMF-4D-00400600-50-30P	1808938	N/A
Bi-directional coupler	Werlatone, Inc.	C8060-102	2710	N/A
DC Power Supply	HP	6296A	2841A-05955	N/A
E-Field Probe (SAR Lab A)	SPEAG	EX3DV4	3901	1/27/2016
E-Field Probe (SAR Lab B)	SPEAG	EX3DV4	3751	11/14/2015
E-Field Probe (SAR Lab C)	SPEAG	EX3DV4	3885	9/15/2015
E-Field Probe (SAR Lab E)	SPEAG	EX3DV4	3772	2/23/2016
E-Field Probe (SAR Lab F)	SPEAG	EX3DV4	3936	7/24/2015
E-Field Probe (SAR Lab H)	SPEAG	EX3DV4	3871	8/26/2015
Data Acquisition Electronics (SAR Lab A)	SPEAG	DAE4	1357	2/20/2016
Data Acquisition Electronics (SAR Lab B)	SPEAG	DAE3	500	5/15/2015
Data Acquisition Electronics (SAR Lab C)	SPEAG	DAE3	427	1/14/2016
Data Acquisition Electronics (SAR Lab E)	SPEAG	DAE4	1257	9/29/2015
Data Acquisition Electronics (SAR Lab F)	SPEAG	DAE4	1239	4/15/2015
Data Acquisition Electronics (SAR Lab H)	SPEAG	DAE4	1258	5/15/2015

System Check continued

Name of Equipment	Manufacturer	Type/Model	Serial No.	Cal. Due Date
System Validation Dipole	SPEAG	D750V3	1024	5/16/2015
System Validation Dipole	SPEAG	D835V2	4d117	5/16/2015
System Validation Dipole	SPEAG	D1750V2	1050	4/22/2015
System Validation Dipole	SPEAG	D1750V2	1077	9/11/2015
System Validation Dipole	SPEAG	D1900V2	5d140	4/23/2015
System Validation Dipole	SPEAG	D2450V2	706	5/20/2015
System Validation Dipole	SPEAG	D2600V2	1006	9/10/2015
System Validation Dipole	SPEAG	D5GHzV2	1168	12/4/2015
System Validation Dipole	SPEAG	D5GHzV2	1138	9/18/2015

Other

Name of Equipment	Manufacturer	Type/Model	Serial No.	Cal. Due Date
Power Sensor	Agilent	N1921A	MY52270022	12/12/2015
Power Meter	Agilent	N1912A	MY53040015	2/27/2016
Power Sensor	Agilent	N1921A	MY53260001	10/11/2015
Base Station Simulator	R & S	CMW500	135390-ws	7/3/2015

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, the 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

Model A1550 is a tablet with multimedia functions (music, application support, and video), Cellular GSM/GPRS/EGPRS/CDMA2000 1xAdvanced/EVDO Rev. A/EVDO Rev. B/WCDMA/HSPA+/DC-HSPA/LTE FDD & Carrier Aggregation/TDD-LTE radio, IEEE 802.11a/b/g/n/ac radio (MIMO 2x2), Bluetooth radio and NFC	
Device dimension	Overall (Length x Width): 203 mm x 135 mm Overall Diagonal: 235.8 mm Display Diagonal: 201 mm
AirPlay	AirPlay mode enabled devices transfer data directly between each other ☒ AirPlay (Wi-Fi 2.4 GHz) ☒ AirPlay (Wi-Fi 5 GHz)
RF Exposure Condition(s)	Body Exposure with all surfaces and edges

6.2. Wireless Technologies

Wireless technologies	Frequency bands	Operating mode	Duty Cycle used for SAR testing
GSM	850, 1900	GPRS (GMSK) and EGPRS (8PSK)	GPRS 1 Slot: 12.5%; 2 Slots: 25%
	GPRS Multi-Slot Class: ☐ Class 8 - One Up ☒ Class 10 - Two Up ☐ Class 12 - Four Up DTM (Dual Transfer Mode): Not supported		
CDMA2000	BC0, BC1, BC10, and BC15	1xRTT 1xEV-DO Rel. 0 1xEV-DO Rev. A 1xAdvanced 1xEV-DO Rev. B (BC0 only)	1xRTT: 100% 1xEV-DO Rel. 0: 100% 1xEV-DO Rev. B: 100%
	Does this device SV-DO (1xRTT-1xEVDO)? ☐Yes ☒ No		
W-CDMA (UMTS)	Band V, IV, and II	UMTS Rel. 99 (Voice & Data) HSDPA (Rel. 5) HSUPA (Rel. 6) DC-HSDPA (Rel. 8) HSPA+ (Rel. 7)	Rel. 99: 100%
LTE (FDD)	Band 2 / 4 / 5 / 13 / 17 / 25 / 26	QPSK, 16QAM Rel. 10 Carrier Aggregation (1 Uplink and 2 Downlinks)	100%
	Does this device SV-LTE (1xRTT-LTE)? ☐Yes ☒ No		
LTE (TDD)	Band 41	QPSK, 16QAM	63.3%
Wi-Fi	2.4 GHz	802.11b 802.11g 802.11n (HT20)	100%
	5 GHz	802.11a 802.11n (HT20) 802.11n (HT40) 802.11ac (VHT20) 802.11ac (VHT40) 802.11ac (VHT80)	100%
Bluetooth	2.4 GHz	Version 4.1 LE	77.52% (DH5)

6.3. Maximum Output Power

KDB 447498 sec.4.1.(3) 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

Maximum Output Power for Cellular Bands and Bluetooth

RF Air interface	Mode	Maximum Output Power (dBm)	
		Emission Power	Body Power
GSM850	GPRS 1 slot	33.5	25.5
	GPRS 2 slots	32.0	22.5
	EGPRS 1 slot	28.0	25.5
	EGPRS 2 slots	28.0	22.5
GSM1900	GPRS 1 slot	30.5	22.0
	GPRS 2 slots	29.5	19.0
	EGPRS 1 slot	27.0	22.0
	EGPRS 2 slots	27.0	19.0
W-CDMA Band V	R99	25.0	17.3
	HSDPA	25.0	17.3
	HSUPA	25.0	17.3
	DC-HSDPA	25.0	17.3
W-CDMA Band IV	R99	24.5	12.5
	HSDPA	24.5	12.5
	HSUPA	24.5	12.5
	DC-HSDPA	24.5	12.5
W-CDMA Band II	R99	24.0	13.5
	HSDPA	24.0	13.5
	HSUPA	24.0	13.5
	DC-HSDPA	24.0	13.5
CDMA BC0	1xRTT	24.5	17.25
	1xAdvanced	24.5	17.25
	1xEVDO Rel. 0	24.5	17.25
	1xEVDO Rev. A	24.5	17.25
	1xEVDO Rev. B	24.5	17.25
CDMA BC1	1xRTT	24.0	13.5
	1xAdvanced	24.0	13.5
	1xEVDO Rel. 0	24.0	13.5
	1xEVDO Rev. A	24.0	13.5
CDMA BC10	1xRTT	25.0	17.5
	1xAdvanced	25.0	17.5
	1xEVDO Rel. 0	25.0	17.5
	1xEVDO Rev. A	25.0	17.5
CDMA BC15	1xRTT	24.5	12.5
	1xAdvanced	24.5	12.5
	1xEVDO Rel. 0	24.5	12.5
	1xEVDO Rev. A	24.5	12.5
LTE Band 2	QPSK	24.0	14.0
LTE Band 4	QPSK	24.0	14.0
LTE Band 5	QPSK	24.5	17.25
LTE Band 13	QPSK	24.0	18.5
LTE Band 17	QPSK	24.0	19.25
LTE Band 25	QPSK	24.0	13.75
LTE Band 26	QPSK	23.5	17.25
LTE Band 41	QPSK	22.0	14.25
Bluetooth Antenna B		10.5	
Bluetooth Antenna D		8.0	

Maximum Output Power for Wi-Fi 2.4 GHz P_{Cell_OFF} (P_{max})

Band (GHz)	Mode	No. of Transmitters	Ch #	Freq. (MHz)	Maximum Target Power (dBm)		
					Antenna A	Antenna B	Antenna D
2.4	802.11b	1 Tx	1	2412	15.0		
			6	2437	15.0		
			11	2462	15.0		
			12	2467	15.0		
			13	2472	12.5		
			1	2412		16.5	
			6	2437		16.5	
			11	2462		16.5	
			12	2467		16.5	
			13	2472		12.5	
			1	2412			12.5
			6	2437			12.5
			11	2462			12.5
			12	2467			12.5
			13	2472			10.5
	802.11g	1 Tx	1	2412	15.0		
			2	2417	15.0		
			6	2437	15.0		
			10	2457	15.0		
			11	2462	12.5		
			12	2467	10.0		
			13	2472	5.0		
			1	2412		16.5	
			2	2417		16.5	
			6	2437		16.5	
			10	2457		16.5	
			11	2462		12.5	
			12	2467		10.0	
			13	2472		5.0	
			1	2412			12.5
			2	2417			12.5
			6	2437			12.5
			10	2457			12.5
			11	2462			10.5
			12	2467			8.0
			13	2472			3.0

Maximum Output Power for Wi-Fi 2.4 GHz P_{Cell_OFF} (P_{max}) continued

Band (GHz)	Mode	No. of Transmitters	Ch #	Freq. (MHz)	Maximum Target Power (dBm)		
					Antenna A	Antenna B	Antenna D
2.4	802.11g	2 Tx CDD	1	2412	14.0	14.0	
			2	2417	15.0	16.5	
			6	2437	15.0	16.5	
			10	2457	15.0	16.5	
			11	2462	12.0	12.0	
			12	2467	9.0	9.0	
			13	2472	3.0	3.0	
		2 Tx CDD	1	2412	15.0		12.5
			2	2417	15.0		12.5
			6	2437	15.0		12.5
			10	2457	15.0		12.5
			11	2462	12.0		10.0
			12	2467	9.0		7.0
			13	2472	3.0		1.0
	802.11n	1 Tx HT20	1	2412	15.0		
			2	2417	15.0		
			6	2437	15.0		
			10	2457	15.0		
			11	2462	12.5		
			12	2467	10.0		
			13	2472	5.0		
			1	2412		16.5	
			2	2417		16.5	
			6	2437		16.5	
			10	2457		16.5	
			11	2462		12.5	
			12	2467		10.0	
			13	2472		5.0	
			1	2412			12.5
			2	2417			12.5
			6	2437			12.5
			10	2457			12.5
			11	2462			10.5
			12	2467			8.0
			13	2472			3.0

Maximum Output Power for Wi-Fi 2.4 GHz P_{Cell_OFF} (P_{max}) continued

Band (GHz)	Mode	No. of Transmitters	Ch #	Freq. (MHz)	Maximum Target Power (dBm)		
					Antenna A	Antenna B	Antenna D
2.4	802.11n	2 Tx HT20 CDD (Antennas A & B)	1	2412	14.0	14.0	
			2	2417	15.0	16.5	
			6	2437	15.0	16.5	
			10	2457	15.0	16.5	
			11	2462	12.0	12.0	
			12	2467	9.0	9.0	
			13	2472	3.0	3.0	
		2 Tx HT20 CDD (Antennas A & D)	1	2412	15.0		12.5
			2	2417	15.0		12.5
			6	2437	15.0		12.5
			10	2457	15.0		12.5
			11	2462	12.0		10.0
			12	2467	9.0		7.0
			13	2472	3.0		1.0
		2 Tx HT20 STBC (Antennas A & B)	1	2412	14.0	14.0	
			2	2417	15.0	16.5	
			6	2437	15.0	16.5	
			10	2457	15.0	16.5	
			11	2462	12.0	12.0	
			12	2467	9.0	9.0	
			13	2472	3.0	3.0	
		2 Tx HT20 STBC (Antennas A & D)	1	2412	15.0		12.5
			2	2417	15.0		12.5
			6	2437	15.0		12.5
			10	2457	15.0		12.5
			11	2462	12.0		10.0
			12	2467	9.0		7.0
			13	2472	3.0		1.0
		2 Tx HT20 SDM (Antennas A & B)	1	2412	14.0	14.0	
			2	2417	15.0	16.5	
			6	2437	15.0	16.5	
			10	2457	15.0	16.5	
			11	2462	12.0	12.0	
			12	2467	9.0	9.0	
			13	2472	3.0	3.0	
		2 Tx HT20 SDM (Antennas A & D)	1	2412	15.0		12.5
			2	2417	15.0		12.5
			6	2437	15.0		12.5
			10	2457	15.0		12.5
			11	2462	12.0		10.0
			12	2467	9.0		7.0
			13	2472	3.0		1.0

Maximum Output Power for Wi-Fi 2.4 GHz P_{Cell_ON} (P_{low})

Band (GHz)	Mode	No. of Transmitters	Ch #	Freq. (MHz)	Maximum Target Power (dBm)		
					Antenna A	Antenna B	Antenna D
2.4	802.11b	1 Tx	1	2412			7.0
			6	2437			7.0
			11	2462			7.0
			12	2467			7.0
			13	2472			7.0
	802.11g	1 Tx	1	2412			7.0
			2	2417			7.0
			6	2437			7.0
			10	2457			7.0
			11	2462			7.0
			12	2467			7.0
			13	2472			3.0
		2 Tx CDD	1	2412	15.0		7.0
			2	2417	15.0		7.0
			6	2437	15.0		7.0
			10	2457	15.0		7.0
			11	2462	12.0		7.0
			12	2467	9.0		7.0
			13	2472	3.0		1.0

Band (GHz)	Mode	No. of Transmitters	Ch #	Freq. (MHz)	Maximum Target Power (dBm)		
					Antenna A	Antenna B	Antenna D
2.4	802.11n	1 Tx HT20	1	2412			7.0
			2	2417			7.0
			6	2437			7.0
			10	2457			7.0
			11	2462			7.0
			12	2467			7.0
			13	2472			3.0
		2 Tx HT20 CDD	1	2412	15.0		7.0
			2	2417	15.0		7.0
			6	2437	15.0		7.0
			10	2457	15.0		7.0
			11	2462	12.0		7.0
			12	2467	9.0		7.0
			13	2472	3.0		1.0
		2 Tx HT20 STBC	1	2412	15.0		7.0
			2	2417	15.0		7.0
			6	2437	15.0		7.0
			10	2457	15.0		7.0
			11	2462	12.0		7.0
			12	2467	9.0		7.0
			13	2472	3.0		1.0
		2 Tx HT20 SDM	1	2412	15.0		7.0
			2	2417	15.0		7.0
			6	2437	15.0		7.0
			10	2457	15.0		7.0
			11	2462	12.0		7.0
			12	2467	9.0		7.0
			13	2472	3.0		1.0

Notes:

Antenna A and B have no back-off power and are not disabled.

Maximum Output Power for Wi-Fi 5.2 GHz

Band (GHz)	Mode	No. of Transmitters	Ch #	Freq. (MHz)	Maximum Target Power (dBm)	
					Antenna A	Antenna B
5.2	802.11a	1 Tx	36	5180	16.0	
			40	5200	17.0	
			44	5220	17.0	
			48	5240	17.0	
			36	5180		16.0
			40	5200		18.0
			44	5220		18.0
			48	5240		18.0
		2 Tx CDD	36	5180	15.0	15.0
			40	5200	16.0	16.0
			44	5220	16.0	16.0
			48	5240	16.0	16.0
	802.11n	1 Tx HT20	36	5180	16.0	
			40	5200	17.0	
			44	5220	17.0	
			48	5240	17.0	
			36	5180		16.0
			40	5200		18.0
			44	5220		18.0
			48	5240		18.0
		1 Tx HT40	38	5180	14.0	
			46	5230	17.0	
			38	5180		14.0
			46	5230		18.0
		2 Tx HT20 CDD	36	5180	15.0	15.0
			40	5200	16.0	16.0
			44	5220	16.0	16.0
			48	5240	16.0	16.0
		2 Tx HT20 STBC	36	5180	15.0	15.0
			40	5200	17.0	17.0
			44	5220	17.0	17.0
			48	5240	17.0	17.0
		2 Tx HT20 SDM	36	5180	15.0	15.0
			40	5200	17.0	17.0
			44	5220	17.0	17.0
			48	5240	17.0	17.0
		2 Tx HT40 CDD	38	5190	13.0	13.0
			46	5230	16.0	16.0
		2 Tx HT40 STBC	38	5190	13.0	13.0
			46	5230	17.0	18.0
		2 Tx HT40 SDM	38	5190	13.0	13.0
			46	5230	17.0	18.0

Maximum Output Power for Wi-Fi 5.2 GHz continued

Band (GHz)	Mode	No. of Transmitters	Ch #	Freq. (MHz)	Maximum Target Power (dBm)	
					Antenna A	Antenna B
5.2	802.11ac	1 Tx VHT20	36	5180	16.0	
			40	5200	17.0	
			44	5220	17.0	
			48	5240	17.0	
			36	5180		16.0
			40	5200		18.0
			44	5220		18.0
			48	5240		18.0
		1 Tx VHT40	38	5180	14.0	
			46	5230	17.0	
			38	5180		14.0
			46	5230		18.0
		1 Tx VHT80	42	5210	13.0	
			42	5210		13.0
		2 Tx VHT20 CDD	36	5180	15.0	15.0
			40	5200	16.0	16.0
			44	5220	16.0	16.0
			48	5240	16.0	16.0
		2 Tx VHT20 STBC	36	5180	15.0	15.0
			40	5200	17.0	17.0
			44	5220	17.0	17.0
			48	5240	17.0	17.0
		2 Tx VHT20 SDM	36	5180	15.0	15.0
			40	5200	17.0	17.0
			44	5220	17.0	17.0
			48	5240	17.0	17.0
		2 Tx VHT40 CDD	38	5190	13.0	13.0
			46	5230	16.0	16.0
		2 Tx VHT40 STBC	38	5190	13.0	13.0
			46	5230	17.0	18.0
		2 Tx VHT40 SDM	38	5190	13.0	13.0
			46	5230	17.0	18.0
		2 Tx VHT80 CDD	38	5190	12.5	12.5
		2 Tx VHT80 STBC	38	5190	12.5	12.5
		2 Tx VHT80 SDM	38	5190	12.5	12.5

Maximum Output Power for Wi-Fi 5.3 GHz

Band (GHz)	Mode	No. of Transmitters	Ch #	Freq. (MHz)	Maximum Target Power (dBm)	
					Antenna A	Antenna B
5.3	802.11a	1 Tx	52	5260	16.0	
			56	5280	16.0	
			60	5300	16.0	
			64	5320	16.0	
			52	5260		17.0
			56	5280		17.0
			60	5300		17.0
			64	5320		16.5
		2 Tx CDD	52	5260	15.5	15.5
			56	5280	15.5	15.5
			60	5300	15.5	15.5
			64	5320	15.5	15.5
	802.11n	1 Tx HT20	52	5260	16.0	
			56	5280	16.0	
			60	5300	16.0	
			64	5320	16.0	
			52	5260		17.0
			56	5280		17.0
			60	5300		17.0
			64	5320		16.5
		1 Tx HT40	54	5270	16.0	
			62	5310	15.0	
			54	5270		17.0
			62	5310		15.0
		2 Tx HT20 CDD	52	5260	15.5	15.5
			56	5280	15.5	15.5
			60	5300	15.5	15.5
			64	5320	15.5	15.5
		2 Tx HT20 STBC	52	5260	16.0	17.0
			56	5280	16.0	17.0
			60	5300	16.0	17.0
			64	5320	15.5	15.5
		2 Tx HT20 SDM	52	5260	16.0	17.0
			56	5280	16.0	17.0
			60	5300	16.0	17.0
			64	5320	15.5	15.5
		2 Tx HT40 CDD	54	5270	15.5	15.5
			62	5310	13.0	13.0
		2 Tx HT40 STBC	54	5270	16.0	17.0
			62	5310	13.0	13.0
		2 Tx HT40 SDM	54	5270	16.0	17.0
			62	5310	13.0	13.0

Maximum Output Power for Wi-Fi 5.3 GHz continued

Band (GHz)	Mode	No. of Transmitters	Ch #	Freq. (MHz)	Maximum Target Power (dBm)	
					Antenna A	Antenna B
5.3	802.11ac	1 Tx VHT20	52	5260	16.0	
			56	5280	16.0	
			60	5300	16.0	
			64	5320	16.0	
			52	5260		17.0
			56	5280		17.0
			60	5300		17.0
			64	5320		16.5
		1 Tx VHT40	54	5270	16.0	
			62	5310	15.0	
			54	5270		17.0
			62	5310		15.0
		1 Tx VHT80	58	5290	15.0	
			58	5290		15.0
		2 Tx VHT20 CDD	52	5260	15.5	15.5
			56	5280	15.5	15.5
			60	5300	15.5	15.5
			64	5320	15.5	15.5
		2 Tx VHT20 STBC	52	5260	16.0	17.0
			56	5280	16.0	17.0
			60	5300	16.0	17.0
			64	5320	15.5	15.5
		2 Tx VHT20 SDM	52	5260	16.0	17.0
			56	5280	16.0	17.0
			60	5300	16.0	17.0
			64	5320	15.5	15.5
		2 Tx VHT40 CDD	54	5270	15.5	15.5
			62	5310	13.0	13.0
		2 Tx VHT40 STBC	54	5270	16.0	17.0
			62	5310	13.0	13.0
		2 Tx VHT40 SDM	54	5270	16.0	17.0
			62	5310	13.0	13.0
		2 Tx VHT80 CDD	54	5270	12.5	12.5
		2 Tx VHT80 STBC	54	5270	12.5	12.5
		2 Tx VHT80 SDM	54	5270	12.5	12.5

Maximum Output Power for Wi-Fi 5.5 GHz

Band (GHz)	Mode	No. of Transmitters	Ch #	Freq. (MHz)	Maximum Target Power (dBm)	
					Antenna A	Antenna B
5.5	802.11a	1 Tx	100	5500	15.5	
			104	5520	15.5	
			108	5540	15.5	
			112	5560	15.5	
			116	5580	15.5	
			120	5600	15.5	
			124	5620	15.5	
			128	5640	15.5	
			100	5500		15.5
			104	5520		15.5
			108	5540		15.5
			112	5560		15.5
			116	5580		15.5
			120	5600		15.5
			124	5620		15.5
			128	5640		15.5
		2 Tx CDD	100	5500	14.5	14.5
			104	5520	15.0	15.0
			108	5540	15.0	15.0
			112	5560	15.0	15.0
			116	5580	15.0	15.0
			120	5600	15.0	15.0
			124	5620	15.0	15.0
			128	5640	15.0	15.0

Maximum Output Power for Wi-Fi 5.5 GHz continued

Band (GHz)	Mode	No. of Transmitters	Ch #	Freq. (MHz)	Maximum Target Power (dBm)	
					Antenna A	Antenna B
5.5	802.11n	1 Tx HT20	100	5500	15.5	
			104	5520	15.5	
			108	5540	15.5	
			112	5560	15.5	
			116	5580	15.5	
			120	5600	15.5	
			124	5620	15.5	
			128	5640	15.5	
			100	5500		15.5
			104	5520		15.5
			108	5540		15.5
			112	5560		15.5
			116	5580		15.5
			120	5600		15.5
			124	5620		15.5
			128	5640		15.5
		1 Tx HT40	102	5510	14.0	
			110	5550	15.5	
			118	5590	15.5	
			126	5630	15.5	
			102	5510		14.0
			110	5550		15.5
			118	5590		15.5
			126	5630		15.5
		2 Tx HT20 CDD	100	5500	14.5	14.5
			104	5520	15.0	15.0
			108	5540	15.0	15.0
			112	5560	15.0	15.0
			116	5580	15.0	15.0
			120	5600	15.0	15.0
			124	5620	15.0	15.0
			128	5640	15.0	15.0

Maximum Output Power for Wi-Fi 5.5 GHz continued

Band (GHz)	Mode	No. of Transmitters	Ch #	Freq. (MHz)	Maximum Target Power (dBm)	
					Antenna A	Antenna B
5.5	802.11n	2 Tx HT20 STBC	100	5500	14.5	14.5
			104	5520	15.5	15.5
			108	5540	15.5	15.5
			112	5560	15.5	15.5
			116	5580	15.5	15.5
			120	5600	15.5	15.5
			124	5620	15.5	15.5
			128	5640	15.5	15.5
		2 Tx HT20 SDM	100	5500	14.5	14.5
			104	5520	15.5	15.5
			108	5540	15.5	15.5
			112	5560	15.5	15.5
			116	5580	15.5	15.5
			120	5600	15.5	15.5
			124	5620	15.5	15.5
			128	5640	15.5	15.5
		2 Tx HT40 CDD	102	5510	13.0	13.0
			110	5550	15.0	15.0
			118	5590	15.0	15.0
			126	5630	15.0	15.0
		2 Tx HT40 STBC	102	5510	13.0	13.0
			110	5550	15.5	15.5
			118	5590	15.5	15.5
			126	5630	15.5	15.5
		2 Tx HT40 SDM	102	5510	13.0	13.0
			110	5550	15.5	15.5
			118	5590	15.5	15.5
			126	5630	15.5	15.5

Maximum Output Power for Wi-Fi 5.5 GHz continued

Band (GHz)	Mode	No. of Transmitters	Ch #	Freq. (MHz)	Maximum Target Power (dBm)	
					Antenna A	Antenna B
5.5	802.11ac	1 Tx VHT20	100	5500	15.5	
			104	5520	15.5	
			108	5540	15.5	
			112	5560	15.5	
			116	5580	15.5	
			120	5600	15.5	
			124	5620	15.5	
			128	5640	15.5	
			100	5500		15.5
			104	5520		15.5
			108	5540		15.5
			112	5560		15.5
			116	5580		15.5
			120	5600		15.5
			124	5620		15.5
			128	5640		15.5
		1 Tx VHT40	102	5510	14.0	
			110	5550	15.5	
			118	5590	15.5	
			126	5630	15.5	
			102	5510		14.0
			110	5550		15.5
			118	5590		15.5
			126	5630		15.5
		1 Tx VHT80	106	5530	13.0	
			122	5610	15.5	
			106	5530		13.0
			122	5610		15.5

Maximum Output Power for Wi-Fi 5.5 GHz continued

Band (GHz)	Mode	No. of Transmitters	Ch #	Freq. (MHz)	Maximum Target Power (dBm)	
					Antenna A	Antenna B
5.5	802.11ac	2 Tx HT20 CDD	100	5500	14.5	14.5
			104	5520	15.0	15.0
			108	5540	15.0	15.0
			112	5560	15.0	15.0
			116	5580	15.0	15.0
			120	5600	15.0	15.0
			124	5620	15.0	15.0
			128	5640	15.0	15.0
		2 Tx HT20 STBC	100	5500	14.5	14.5
			104	5520	15.5	15.5
			108	5540	15.5	15.5
			112	5560	15.5	15.5
			116	5580	15.5	15.5
			120	5600	15.5	15.5
			124	5620	15.5	15.5
			128	5640	15.5	15.5
		2 Tx HT20 SDM	100	5500	14.5	14.5
			104	5520	15.5	15.5
			108	5540	15.5	15.5
			112	5560	15.5	15.5
			116	5580	15.5	15.5
			120	5600	15.5	15.5
			124	5620	15.5	15.5
			128	5640	15.5	15.5
		2 Tx HT40 CDD	102	5510	13.0	13.0
			110	5550	15.0	15.0
			118	5590	15.0	15.0
			126	5630	15.0	15.0
		2 Tx HT40 STBC	102	5510	13.0	13.0
			110	5550	15.5	15.5
			118	5590	15.5	15.5
			126	5630	15.5	15.5
		2 Tx HT40 SDM	102	5510	13.0	13.0
			110	5550	15.5	15.5
			118	5590	15.5	15.5
			126	5630	15.5	15.5
		2 Tx VHT80 CDD	106	5530	12.0	12.0
			122	5610	15.5	15.5
		2 Tx VHT80 STBC	106	5530	12.0	12.0
			122	5610	15.5	15.5
		2 Tx VHT80 SDM	106	5530	12.0	12.0
			122	5610	15.5	15.5

Maximum Output Power for Wi-Fi 5.8 GHz

Band (GHz)	Mode	No. of Transmitters	Ch #	Freq. (MHz)	Maximum Target Power (dBm)	
					Antenna A	Antenna B
5.8	802.11a	1 Tx	132	5660	15.5	
			136	5680	15.5	
			140	5700	15.0	
			144	5720	15.5	
			149	5745	16.0	
			153	5765	17.0	
			157	5785	17.0	
			161	5805	17.0	
			165	5825	16.0	
			132	5660		15.5
			136	5680		15.5
			140	5700		15.0
			144	5720		15.5
			149	5745		16.0
			153	5765		17.0
			157	5785		17.0
			161	5805		17.0
			165	5825		16.0
		2 Tx CDD	132	5660	15.0	15.0
			136	5680	15.0	15.0
			140	5700	14.0	14.0
			144	5720	15.0	15.0
			149	5745	15.0	15.0
			153	5765	17.0	17.0
			157	5785	17.0	17.0
			161	5805	17.0	17.0
			165	5825	15.0	15.0

Maximum Output Power for Wi-Fi 5.8 GHz continued

Band (GHz)	Mode	No. of Transmitters	Ch #	Freq. (MHz)	Maximum Target Power (dBm)	
					Antenna A	Antenna B
5.8	802.11n	1 Tx HT20	132	5660	15.5	
			136	5680	15.5	
			140	5700	15.0	
			144	5720	15.5	
			149	5745	16.0	
			153	5765	17.0	
			157	5785	17.0	
			161	5805	17.0	
			165	5825	16.0	
			132	5660		15.5
			136	5680		15.5
			140	5700		15.0
			144	5720		15.5
			149	5745		16.0
			153	5765		17.0
			157	5785		17.0
			161	5805		17.0
			165	5825		16.0
		1 Tx HT40	134	5670	15.5	
			142	5710	15.0	
			151	5755	14.5	
			159	5795	16.0	
			134	5670		15.5
			142	5710		15.0
			151	5755		14.5
			159	5795		16.0

Maximum Output Power for Wi-Fi 5.8 GHz continued

Band (GHz)	Mode	No. of Transmitters	Ch #	Freq. (MHz)	Maximum Target Power (dBm)	
					Antenna A	Antenna B
5.8	802.11n	2 Tx HT20 CDD	132	5660	15.0	15.0
			136	5680	15.0	15.0
			140	5700	14.0	14.0
			144	5720	15.0	15.0
			149	5745	15.0	15.0
			153	5765	17.0	17.0
			157	5785	17.0	17.0
			161	5805	17.0	17.0
			165	5825	15.0	15.0
		2 Tx HT20 STBC	132	5660	15.5	15.5
			136	5680	15.5	15.5
			140	5700	14.0	14.0
			144	5720	15.5	15.5
			149	5745	15.0	15.0
			153	5765	17.0	17.0
			157	5785	17.0	17.0
			161	5805	17.0	17.0
			165	5825	15.0	15.0
		2 Tx HT20 SDM	132	5660	15.5	15.5
			136	5680	15.5	15.5
			140	5700	14.0	14.0
			144	5720	15.5	15.5
			149	5745	15.0	15.0
			153	5765	17.0	17.0
			157	5785	17.0	17.0
			161	5805	17.0	17.0
			165	5825	15.0	15.0
		2 Tx HT40 CDD	134	5670	15.0	15.0
			142	5710	14.0	14.0
			151	5755	14.0	14.0
			159	5795	15.0	15.0
		2 Tx HT40 STBC	134	5670	15.0	15.0
			142	5710	14.0	14.0
			151	5755	14.0	14.0
			159	5795	15.0	15.0
		2 Tx HT40 SDM	134	5670	15.0	15.0
			142	5710	14.0	14.0
			151	5755	14.0	14.0
			159	5795	15.0	15.0

Maximum Output Power for Wi-Fi 5.8 GHz continued

Band (GHz)	Mode	No. of Transmitters	Ch #	Freq. (MHz)	Maximum Target Power (dBm)	
					Antenna A	Antenna B
5.8	802.11ac	1 Tx VHT20	132	5660	15.5	
			136	5680	15.5	
			140	5700	15.0	
			144	5720	15.5	
			149	5745	16.0	
			153	5765	17.0	
			157	5785	17.0	
			161	5805	17.0	
			165	5825	16.0	
			132	5660		15.5
			136	5680		15.5
			140	5700		15.0
			144	5720		15.5
			149	5745		16.0
			153	5765		17.0
			157	5785		17.0
			161	5805		17.0
			165	5825		16.0
		1 Tx VHT40	134	5670	15.5	
			142	5710	15.0	
			151	5755	14.5	
			159	5795	16.0	
			134	5670		15.5
			142	5710		15.0
			151	5755		14.5
			159	5795		16.0
		1 Tx VHT80	138	5690	15.5	
			155	5775	14.0	
			138	5690		15.5
			155	5775		14.0
		2 Tx HT20 CDD	132	5660	15.0	15.0
			136	5680	15.0	15.0
			140	5700	14.0	14.0
			144	5720	15.0	15.0
			149	5745	15.0	15.0
			153	5765	17.0	17.0
			157	5785	17.0	17.0
			161	5805	17.0	17.0
			165	5825	15.0	15.0

Maximum Output Power for Wi-Fi 5.8 GHz continued

Band (GHz)	Mode	No. of Transmitters	Ch #	Freq. (MHz)	Maximum Target Power (dBm)	
					Antenna A	Antenna B
5.8	802.11ac	2 Tx HT20 STBC	132	5660	15.5	15.5
			136	5680	15.5	15.5
			140	5700	14.0	14.0
			144	5720	15.5	15.5
			149	5745	15.0	15.0
			153	5765	17.0	17.0
			157	5785	17.0	17.0
			161	5805	17.0	17.0
			165	5825	15.0	15.0
		2 Tx HT20 SDM	132	5660	15.5	15.5
			136	5680	15.5	15.5
			140	5700	14.0	14.0
			144	5720	15.5	15.5
			149	5745	15.0	15.0
			153	5765	17.0	17.0
			157	5785	17.0	17.0
			161	5805	17.0	17.0
			165	5825	15.0	15.0
		2 Tx HT40 CDD	134	5670	15.0	15.0
			142	5710	14.0	14.0
			151	5755	14.0	14.0
			159	5795	15.0	15.0
		2 Tx HT40 STBC	134	5670	15.0	15.0
			142	5710	14.0	14.0
			151	5755	14.0	14.0
			159	5795	15.0	15.0
		2 Tx HT40 SDM	134	5670	15.0	15.0
			142	5710	14.0	14.0
			151	5755	14.0	14.0
			159	5795	15.0	15.0
		2 Tx VHT80 CDD	138	5690	15.5	15.5
			155	5775	13.0	13.0
		2 Tx VHT80 STBC	138	5690	15.5	15.5
			155	5775	13.0	13.0
		2 Tx VHT80 SDM	138	5690	15.5	15.5
			155	5775	13.0	13.0

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 13	Frequency range: 777 - 787 MHz					
		Channel Bandwidth					
		20 MHz	15 MHz	10 MHz	5 MHz	3 MHz	1.4 MHz
	Low				23205/ 779.5		
	Mid			23230/ 782	23230/ 782		
	High				23255/ 784.5		
	Band 17	Frequency range: 704 - 716 MHz					
		Channel Bandwidth					
		20 MHz	15 MHz	10 MHz	5 MHz	3 MHz	1.4 MHz
	Low				23755/ 706.5		
	Mid			23790/ 710	23790/ 710		
	High				23825/ 713.5		

General LTE SAR Test and Reporting Considerations (Continued)

Frequency range, Channel Bandwidth, Numbers and Frequencies

Band 25	Frequency range: 1850 - 1915 MHz					
	Channel Bandwidth					
	20 MHz	15 MHz	10 MHz	5 MHz	3 MHz	1.4 MHz
Low	26140/ 1860	26115/ 1857.5	26090/ 1855	26065/ 1852.5	26055/ 1851.5	26047/ 1850.7
Mid	26365/ 1882.5	26365/ 1882.5	26365/ 1882.5	26365/ 1882.5	26365/ 1882.5	26365/ 1882.5
High	26590/ 1905	26615/ 1907.5	26640/ 1910	26665/ 1912.5	26675/ 1913.5	26683/ 1914.3

Band 26	Frequency range: 814 - 824 MHz					
	Channel Bandwidth					
	20 MHz	15 MHz	10 MHz	5 MHz	3 MHz	1.4 MHz
Low				26715/ 816.5	26705/ 815.5	26697/ 814.7
Mid			26740/ 819	26740/ 819	26740/ 819	26740/ 819
High				26765/ 821.5	26775/ 822.5	26783/ 823.3

Band 41	Frequency range: 2496 - 2690 MHz					
	Channel Bandwidth					
	20 MHz	15 MHz	10 MHz	5 MHz	3 MHz	1.4 MHz
Low	39750/ 2506.0	39725/ 2503.5	39700/ 2501	39675/ 2498.5		
Low-Mid	40185/ 2549.5	40173/ 2548.3	40160/ 2547.0	40148/ 2545.8		
Mid	40620/ 2593.0	40620/ 2593.0	40620/ 2593.0	40620/ 2593.0		
Mid-High	41055/ 2636.5	41068/ 2547.8	41080/ 2639.0	41093/ 2640.3		
High	41490/ 2680.0	41515/ 2682.5	41540/ 2685.0	41565/ 2687.5		

LTE transmitter and antenna implementation

LTE transmits from Antenna C

Maximum power reduction (MPR)

Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 3

Modulation	Channel bandwidth / Transmission bandwidth (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

MPR Built-in by design

A-MPR (additional MPR) was disabled during SAR testing

Spectrum plots for RB configurations

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

6.5. LTE (TDD) Considerations

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

SAR was tested with the highest transmission duty factor (63.33%) using Uplink-downlink configuration 0 and Special subframe configuration 7.

LTE TDD Band 41 supports 3GPP TS 36.211 section 4.2 for Type 2 Frame Structure and Table 4.2-2 for uplink-downlink configurations and Table 4.2-1 for Special subframe configurations.

Table 4.2-1: Configuration of special subframe (lengths of DwPTS/GP/UpPTS).

Special subframe configuration	Normal cyclic prefix in downlink			Extended cyclic prefix in downlink		
	DwPTS	UpPTS		DwPTS	UpPTS	
		Normal cyclic prefix in uplink	Extended cyclic prefix in uplink		Normal cyclic prefix in uplink	Extended cyclic prefix in uplink
0	$6592 \cdot T_s$	$2192 \cdot T_s$	$2560 \cdot T_s$	$7680 \cdot T_s$	$2192 \cdot T_s$	$2560 \cdot T_s$
1	$19760 \cdot T_s$			$20480 \cdot T_s$		
2	$21952 \cdot T_s$			$23040 \cdot T_s$		
3	$24144 \cdot T_s$			$25600 \cdot T_s$		
4	$26336 \cdot T_s$			$7680 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$
5	$6592 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$	$20480 \cdot T_s$		
6	$19760 \cdot T_s$			$23040 \cdot T_s$		
7	$21952 \cdot T_s$			$12800 \cdot T_s$		
8	$24144 \cdot T_s$			-	-	-
9	$13168 \cdot T_s$			-	-	-

Table 4.2-2: Uplink-downlink configurations.

Uplink-downlink configuration	Downlink-to-Uplink Switch-point periodicity	Subframe number									
		0	1	2	3	4	5	6	7	8	9
0	5 ms	D	S	U	U	U	D	S	U	U	U
1	5 ms	D	S	U	U	D	D	S	U	U	D
2	5 ms	D	S	U	D	D	D	S	U	D	D
3	10 ms	D	S	U	U	U	D	D	D	D	D
4	10 ms	D	S	U	U	D	D	D	D	D	D
5	10 ms	D	S	U	D	D	D	D	D	D	D
6	5 ms	D	S	U	U	U	D	S	U	U	D

Calculated Duty Cycle

Uplink-Downlink Configuration	Downlink-to-Uplink Switch-point Periodicity	Subframe Number										Calculated Duty Cycle (%)
		0	1	2	3	4	5	6	7	8	9	
0	5 ms	D	S	U	U	U	D	S	U	U	U	63.33
1	5 ms	D	S	U	U	D	D	S	U	U	D	43.33
2	5 ms	D	S	U	D	D	D	S	U	D	D	23.33
3	10 ms	D	S	U	U	U	D	D	D	D	D	31.67
4	10 ms	D	S	U	U	D	D	D	D	D	D	21.67
5	10 ms	D	S	U	D	D	D	D	D	D	D	11.67
6	5 ms	D	S	U	U	U	D	S	U	U	D	53.33

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

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

6.6. Cellular State Dependent Wi-Fi Power

The following tables illustrate the operation of cellular state dependent Wi-Fi power by comparing Wi-Fi conducted output power levels with cellular inactive and with cellular active.

Wi-Fi SISO

Wi-Fi P_{Cell_OFF} (P_{max})

Cellular Inactive, Wi-Fi P_{Cell_OFF} (P_{max})														
Cellular Configuration		Wi-Fi SISO Configurations												
		Antenna A Tune-up Limit (dBm)					Antenna B Tune-up Limit (dBm)						Antenna D Tune-up Limit (dBm)	
Band	Antenna C Tune-up Limit (dBm)	2.4 GHz	5.2 GHz	5.3 GHz	5.5 GHz	5.8 GHz	2.4 GHz	5.2 GHz	5.3 GHz	5.5 GHz	5.8 GHz	Bluetooth	2.4 GHz	Bluetooth
GSM850	Inactive	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	12.5	8
GSM1900	Inactive	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	12.5	8
W-CDMA Band V	Inactive	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	12.5	8
W-CDMA Band IV	Inactive	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	12.5	8
W-CDMA Band II	Inactive	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	12.5	8
CDMA BC0	Inactive	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	12.5	8
CDMA BC1	Inactive	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	12.5	8
CDMA BC10	Inactive	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	12.5	8
CDMA BC15	Inactive	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	12.5	8
LTE Band 2	Inactive	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	12.5	8
LTE Band 4	Inactive	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	12.5	8
LTE Band 5	Inactive	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	12.5	8
LTE Band 13	Inactive	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	12.5	8
LTE Band 17	Inactive	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	12.5	8
LTE Band 25	Inactive	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	12.5	8
LTE Band 26	Inactive	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	12.5	8
LTE Band 41	Inactive	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	12.5	8

Wi-Fi P_{Cell_ON} (P_{low})

Cellular Active, Wi-Fi P_{Cell_ON} (P_{low})														
Cellular Configuration		Wi-Fi SISO Configurations												
		Antenna A Tune-up Limit (dBm)					Antenna B Tune-up Limit (dBm)						Antenna D Tune-up Limit (dBm)	
Band	Antenna C Tune-up Limit (dBm)	2.4 GHz	5.2 GHz	5.3 GHz	5.5 GHz	5.8 GHz	2.4 GHz	5.2 GHz	5.3 GHz	5.5 GHz	5.8 GHz	Bluetooth	2.4 GHz	Bluetooth
GSM850	22.5	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	7	8
GSM1900	19	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	7	8
W-CDMA Band V	17.3	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	7	8
W-CDMA Band IV	12.5	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	7	8
W-CDMA Band II	13.5	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	7	8
CDMA BC0	17.3	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	7	8
CDMA BC1	13.5	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	7	8
CDMA BC10	17.5	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	7	8
CDMA BC15	12.5	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	7	8
LTE Band 2	14	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	7	8
LTE Band 4	14	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	7	8
LTE Band 5	17.3	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	7	8
LTE Band 13	18.5	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	7	8
LTE Band 17	19.3	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	7	8
LTE Band 25	13.8	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	7	8
LTE Band 26	17.3	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	7	8
LTE Band 41	14.3	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	7	8

Wi-Fi MIMO

Wi-Fi P_{Cell_OFF} (P_{max})

Cellular Inactive, Wi-Fi P_{Cell_OFF} (P_{max})														
Cellular Configuration		Wi-Fi MIMO Configurations												
		Antenna A Tune-up Limit (dBm)					Antenna B Tune-up Limit (dBm)						Antenna D Tune-up Limit (dBm)	
Band	Antenna C Tune-up Limit (dBm)	2.4 GHz	5.2 GHz	5.3 GHz	5.5 GHz	5.8 GHz	2.4 GHz	5.2 GHz	5.3 GHz	5.5 GHz	5.8 GHz	Bluetooth	2.4 GHz	Bluetooth
GSM850	Inactive	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	12.5	8
GSM1900	Inactive	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	12.5	8
W-CDMA Band V	Inactive	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	12.5	8
W-CDMA Band IV	Inactive	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	12.5	8
W-CDMA Band II	Inactive	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	12.5	8
CDMA BC0	Inactive	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	12.5	8
CDMA BC1	Inactive	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	12.5	8
CDMA BC10	Inactive	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	12.5	8
CDMA BC15	Inactive	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	12.5	8
LTE Band 2	Inactive	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	12.5	8
LTE Band 4	Inactive	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	12.5	8
LTE Band 5	Inactive	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	12.5	8
LTE Band 13	Inactive	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	12.5	8
LTE Band 17	Inactive	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	12.5	8
LTE Band 25	Inactive	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	12.5	8
LTE Band 26	Inactive	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	12.5	8
LTE Band 41	Inactive	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	12.5	8

Wi-Fi P_{Cell_ON} (P_{low})

Cellular Active, Wi-Fi P_{Cell_ON} (P_{low})														
Cellular Configuration		Wi-Fi MIMO Configurations												
		Antenna A Tune-up Limit (dBm)					Antenna B Tune-up Limit (dBm)						Antenna D Tune-up Limit (dBm)	
Band	Antenna C Tune-up Limit (dBm)	2.4 GHz	5.2 GHz	5.3 GHz	5.5 GHz	5.8 GHz	2.4 GHz	5.2 GHz	5.3 GHz	5.5 GHz	5.8 GHz	Bluetooth	2.4 GHz	Bluetooth
GSM850	22.5	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	7	8
GSM1900	19	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	7	8
W-CDMA Band V	17.3	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	7	8
W-CDMA Band IV	12.5	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	7	8
W-CDMA Band II	13.5	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	7	8
CDMA BC0	17.3	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	7	8
CDMA BC1	13.5	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	7	8
CDMA BC10	17.5	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	7	8
CDMA BC15	12.5	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	7	8
LTE Band 2	14	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	7	8
LTE Band 4	14	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	7	8
LTE Band 5	17.3	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	7	8
LTE Band 13	18.5	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	7	8
LTE Band 17	19.3	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	7	8
LTE Band 25	13.8	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	7	8
LTE Band 26	17.3	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	7	8
LTE Band 41	14.3	15	17	16	15.5	17	16.5	18	17	15.5	17	10.5	7	8

6.7. Antenna Dimensions and Separation Distances

Refer to separate filing document.

7. RF Exposure Conditions (Test Configurations)

7.1. Standalone SAR Test Exclusion Considerations

Since the *Dedicated Host Approach* is applied, the standalone SAR test exclusion procedure in KDB 447498 § 4.3.1 is applied in conjunction with KDB 616217 § 4.3 to determine the minimum test separation distance:

- When the separation distance from the antenna to an adjacent edge is ≤ 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.
- When the separation distance from the antenna to an adjacent edge is > 5 mm, the actual antenna-to-edge separation distance is applied to determine SAR test exclusion.

7.1.1. SAR Test Exclusion Calculations for WWAN

Antennas < 50mm to adjacent edges

Tx Interface	Frequency (MHz)	Output Power		Separation Distances (mm)						Calculated Threshold Value					
		dBm	mW	Rear	Edge 1	Edge 2	Edge 3	Edge 4	Front	Rear	Edge 1	Edge 2	Edge 3	Edge 4	Front
GPRS 2 Slots	848.8	22.5	44	16	18	23.5	188.7	64.3		8.1 -MEASURE-	8.1 -MEASURE-	17 -EXEMPT-	> 50 mm	> 50 mm	
GPRS 2 Slots	1909.8	19.0	20	16	18	23.5	188.7	64.3		5.5 -MEASURE-	5.5 -MEASURE-	12 -EXEMPT-	> 50 mm	> 50 mm	
W-CDMA V	846.6	17.3	54	16	18	23.5	188.7	64.3		9.9 -MEASURE-	9.9 -MEASURE-	2.1 -EXEMPT-	> 50 mm	> 50 mm	
W-CDMA IV	1752.6	12.5	18	16	18	23.5	188.7	64.3		4.8 -MEASURE-	4.8 -MEASURE-	1 -EXEMPT-	> 50 mm	> 50 mm	
W-CDMA II	1907.6	13.5	22	16	18	23.5	188.7	64.3		6.1 -MEASURE-	6.1 -MEASURE-	13 -EXEMPT-	> 50 mm	> 50 mm	
CDMA BC0	848.31	17.3	54	16	18	23.5	188.7	64.3		9.9 -MEASURE-	9.9 -MEASURE-	2.1 -EXEMPT-	> 50 mm	> 50 mm	
CDMA BC1	1908.75	13.5	22	16	18	23.5	188.7	64.3		6.1 -MEASURE-	6.1 -MEASURE-	13 -EXEMPT-	> 50 mm	> 50 mm	
CDMA BC10	823.1	17.5	56	16	18	23.5	188.7	64.3		10.2 -MEASURE-	10.2 -MEASURE-	2.1 -EXEMPT-	> 50 mm	> 50 mm	
CDMA BC15	1753.75	12.5	18	16	18	23.5	188.7	64.3		4.8 -MEASURE-	4.8 -MEASURE-	1 -EXEMPT-	> 50 mm	> 50 mm	
LTE Band 2	1900	14.0	25	16	18	23.5	188.7	64.3		6.9 -MEASURE-	6.9 -MEASURE-	14 -EXEMPT-	> 50 mm	> 50 mm	
LTE Band 4	1754.3	14.0	25	16	18	23.5	188.7	64.3		6.6 -MEASURE-	6.6 -MEASURE-	14 -EXEMPT-	> 50 mm	> 50 mm	
LTE Band 5	844	17.3	54	16	18	23.5	188.7	64.3		9.9 -MEASURE-	9.9 -MEASURE-	2.1 -EXEMPT-	> 50 mm	> 50 mm	
LTE Band 13	782	18.5	71	16	18	23.5	188.7	64.3		12.6 -MEASURE-	12.6 -MEASURE-	2.6 -EXEMPT-	> 50 mm	> 50 mm	
LTE Band 17	710	19.3	85	16	18	23.5	188.7	64.3		14.3 -MEASURE-	14.3 -MEASURE-	3 -EXEMPT-	> 50 mm	> 50 mm	
LTE Band 25	1905	13.8	24	16	18	23.5	188.7	64.3		6.6 -MEASURE-	6.6 -MEASURE-	14 -EXEMPT-	> 50 mm	> 50 mm	
LTE Band 26	821.3	17.3	54	16	18	23.5	188.7	64.3		9.8 -MEASURE-	9.8 -MEASURE-	2 -EXEMPT-	> 50 mm	> 50 mm	
LTE Band 41	2680	14.3	27	16	18	23.5	188.7	64.3		8.8 -MEASURE-	8.8 -MEASURE-	18 -EXEMPT-	> 50 mm	> 50 mm	

Note(s):

1. According to KDB 447498, if the calculated threshold value is >3 then SAR testing is required.

Antennas > 50mm to adjacent edges

Tx Interface	Frequency (MHz)	Output Power		Separation Distances (mm)						Calculated Threshold Value					
		dBm	mW	Rear	Edge 1	Edge 2	Edge 3	Edge 4	Front	Rear	Edge 1	Edge 2	Edge 3	Edge 4	Front
GPRS 2 Slots	848.8	22.5	44	16	18	23.5	188.7	64.3		< 50 mm	< 50 mm	< 50 mm	947.7 mW -EXEMPT-	243.7 mW -EXEMPT-	
GPRS 2 Slots	1909.8	19.0	20	16	18	23.5	188.7	64.3		< 50 mm	< 50 mm	< 50 mm	1495.5 mW -EXEMPT-	2515 mW -EXEMPT-	
W-CDMA V	846.6	17.3	54	16	18	23.5	188.7	64.3		< 50 mm	< 50 mm	< 50 mm	945.8 mW -EXEMPT-	243.7 mW -EXEMPT-	
W-CDMA IV	1752.6	12.5	18	16	18	23.5	188.7	64.3		< 50 mm	< 50 mm	< 50 mm	1500.3 mW -EXEMPT-	256.3 mW -EXEMPT-	
W-CDMA II	1907.6	13.5	22	16	18	23.5	188.7	64.3		< 50 mm	< 50 mm	< 50 mm	1495.6 mW -EXEMPT-	2516 mW -EXEMPT-	
CDMA BC0	848.31	17.3	54	16	18	23.5	188.7	64.3		< 50 mm	< 50 mm	< 50 mm	947.3 mW -EXEMPT-	243.7 mW -EXEMPT-	
CDMA BC1	1908.75	13.5	22	16	18	23.5	188.7	64.3		< 50 mm	< 50 mm	< 50 mm	1495.6 mW -EXEMPT-	2516 mW -EXEMPT-	
CDMA BC10	823.1	17.5	56	16	18	23.5	188.7	64.3		< 50 mm	< 50 mm	< 50 mm	926.4 mW -EXEMPT-	243.8 mW -EXEMPT-	
CDMA BC15	1753.75	12.5	18	16	18	23.5	188.7	64.3		< 50 mm	< 50 mm	< 50 mm	1500.3 mW -EXEMPT-	256.3 mW -EXEMPT-	
LTE Band 2	1900	14.0	25	16	18	23.5	188.7	64.3		< 50 mm	< 50 mm	< 50 mm	1495.8 mW -EXEMPT-	2518 mW -EXEMPT-	
LTE Band 4	1754.3	14.0	25	16	18	23.5	188.7	64.3		< 50 mm	< 50 mm	< 50 mm	1500.3 mW -EXEMPT-	256.3 mW -EXEMPT-	
LTE Band 5	844	17.3	54	16	18	23.5	188.7	64.3		< 50 mm	< 50 mm	< 50 mm	943.7 mW -EXEMPT-	243.7 mW -EXEMPT-	
LTE Band 13	782	18.5	71	16	18	23.5	188.7	64.3		< 50 mm	< 50 mm	< 50 mm	892.7 mW -EXEMPT-	244.2 mW -EXEMPT-	
LTE Band 17	710	19.3	85	16	18	23.5	188.7	64.3		< 50 mm	< 50 mm	< 50 mm	834.5 mW -EXEMPT-	245.7 mW -EXEMPT-	
LTE Band 25	1905	13.8	24	16	18	23.5	188.7	64.3		< 50 mm	< 50 mm	< 50 mm	1495.7 mW -EXEMPT-	2517 mW -EXEMPT-	
LTE Band 26	8213	17.3	54	16	18	23.5	188.7	64.3		< 50 mm	< 50 mm	< 50 mm	924.9 mW -EXEMPT-	243.8 mW -EXEMPT-	
LTE Band 41	2680	14.3	27	16	18	23.5	188.7	64.3		< 50 mm	< 50 mm	< 50 mm	1478.6 mW -EXEMPT-	234.6 mW -EXEMPT-	

Note(s):

1. According to KDB 447498, if the calculated Power threshold is less than the output power then SAR testing is required.

7.1.2. SAR Test Exclusion Calculations for Wi-Fi P_{Cell_OFF} (P_{max}), SISO Transmit Conditions

Antennas < 50mm to adjacent edges

Tx Interface	Frequency (MHz)	Output Power		Separation Distances (mm)						Calculated Threshold Value					
		dBm	mW	Rear	Edge 1	Edge 2	Edge 3	Edge 4	Front	Rear	Edge 1	Edge 2	Edge 3	Edge 4	Front
Antenna A															
Wi-Fi 2.4 GHz	2462	15.00	32	5.1	190.8	95.4	3.1	7.9		-MEASURE-	0.400	0.400	-MEASURE-	-MEASURE-	
Wi-Fi 5.2 GHz	5240	17.00	50	5.1	190.8	95.4	3.1	7.9		-MEASURE-	0.400	0.400	-MEASURE-	-MEASURE-	
Wi-Fi 5.3 GHz	5320	16.00	40	5.1	190.8	95.4	3.1	7.9		-MEASURE-	0.400	0.400	-MEASURE-	-MEASURE-	
Wi-Fi 5.5 GHz	5700	15.50	35	5.1	190.8	95.4	3.1	7.9		-MEASURE-	0.400	0.400	-MEASURE-	-MEASURE-	
Wi-Fi 5.8 GHz	5825	17.00	50	5.1	190.8	95.4	3.1	7.9		-MEASURE-	0.400	0.400	-MEASURE-	-MEASURE-	
Antenna B															
Wi-Fi 2.4 GHz	2462	16.50	45	5.1	192.2	7.6	3.1	95.4		-MEASURE-	0.400	-MEASURE-	-MEASURE-	0.400	
Wi-Fi 5.2 GHz	5240	18.00	63	5.1	192.2	7.6	3.1	95.4		-MEASURE-	0.400	-MEASURE-	-MEASURE-	0.400	
Wi-Fi 5.3 GHz	5320	17.00	50	5.1	192.2	7.6	3.1	95.4		-MEASURE-	0.400	-MEASURE-	-MEASURE-	0.400	
Wi-Fi 5.5 GHz	5700	15.50	35	5.1	192.2	7.6	3.1	95.4		-MEASURE-	0.400	-MEASURE-	-MEASURE-	0.400	
Wi-Fi 5.8 GHz	5825	17.00	50	5.1	192.2	7.6	3.1	95.4		-MEASURE-	0.400	-MEASURE-	-MEASURE-	0.400	
Bluetooth	2480	10.50	11	5.1	192.2	7.6	3.1	95.4		-MEASURE-	0.400	0.289	-MEASURE-	0.400	
Antenna D															
Wi-Fi 2.4 GHz	2462	12.50	18	16	18	74.4	188.9	23.2		-MEASURE-	-MEASURE-	0.400	0.400	0.164	
Bluetooth	2480	8.00	6	16	18	74.4	188.9	23.2		0.252	0.252	0.400	0.400	0.055	

Note(s):

1. According to KDB 447498, if the calculated threshold value is >3 then SAR testing is required.

Antennas > 50mm to adjacent edges

Tx Interface	Frequency (MHz)	Output Power		Separation Distances (mm)						Calculated Threshold Value					
		dBm	mW	Rear	Edge 1	Edge 2	Edge 3	Edge 4	Front	Rear	Edge 1	Edge 2	Edge 3	Edge 4	Front
Antenna A															
Wi-Fi 2.4 GHz	2462	15.00	32	5.1	190.8	95.4	3.1	7.9		< 50 mm	1503.6 mW -EXEMPT-	549.6 mW -EXEMPT-	< 50 mm	< 50 mm	
Wi-Fi 5.2 GHz	5240	17.00	50	5.1	190.8	95.4	3.1	7.9		< 50 mm	1473.5 mW -EXEMPT-	519.5 mW -EXEMPT-	< 50 mm	< 50 mm	
Wi-Fi 5.3 GHz	5320	16.00	40	5.1	190.8	95.4	3.1	7.9		< 50 mm	1473 mW -EXEMPT-	519 mW -EXEMPT-	< 50 mm	< 50 mm	
Wi-Fi 5.5 GHz	5700	15.50	35	5.1	190.8	95.4	3.1	7.9		< 50 mm	1470.8 mW -EXEMPT-	516.8 mW -EXEMPT-	< 50 mm	< 50 mm	
Wi-Fi 5.8 GHz	5825	17.00	50	5.1	190.8	95.4	3.1	7.9		< 50 mm	1470.2 mW -EXEMPT-	516.2 mW -EXEMPT-	< 50 mm	< 50 mm	
Antenna B															
Wi-Fi 2.4 GHz	2462	16.50	45	5.1	192.2	7.6	3.1	95.4		< 50 mm	1517.6 mW -EXEMPT-	< 50 mm	< 50 mm	549.6 mW -EXEMPT-	
Wi-Fi 5.2 GHz	5240	18.00	63	5.1	192.2	7.6	3.1	95.4		< 50 mm	1487.5 mW -EXEMPT-	< 50 mm	< 50 mm	519.5 mW -EXEMPT-	
Wi-Fi 5.3 GHz	5320	17.00	50	5.1	192.2	7.6	3.1	95.4		< 50 mm	1487 mW -EXEMPT-	< 50 mm	< 50 mm	519 mW -EXEMPT-	
Wi-Fi 5.5 GHz	5700	15.50	35	5.1	192.2	7.6	3.1	95.4		< 50 mm	1484.8 mW -EXEMPT-	< 50 mm	< 50 mm	516.8 mW -EXEMPT-	
Wi-Fi 5.8 GHz	5825	17.00	50	5.1	192.2	7.6	3.1	95.4		< 50 mm	1484.2 mW -EXEMPT-	< 50 mm	< 50 mm	516.2 mW -EXEMPT-	
Bluetooth	2480	10.50	11	5.1	192.2	7.6	3.1	95.4		< 50 mm	1517.3 mW -EXEMPT-	< 50 mm	< 50 mm	549.3 mW -EXEMPT-	
Antenna D															
Wi-Fi 2.4 GHz	2462	12.50	18	16	18	74.4	188.9	23.2		< 50 mm	< 50 mm	339.6 mW -EXEMPT-	1484.6 mW -EXEMPT-	< 50 mm	
Bluetooth	2480	8.00	6	16	18	74.4	188.9	23.2		< 50 mm	< 50 mm	339.3 mW -EXEMPT-	1484.3 mW -EXEMPT-	< 50 mm	

Note(s):

1. According to KDB 447498, if the calculated Power threshold is less than the output power then SAR testing is required.

7.1.3. SAR Test Exclusion Calculations for Wi-Fi P_{Cell_OFF} (P_{max}), MIMO Transmit Conditions

Antennas < 50mm to adjacent edges

Tx Interface	Frequency (MHz)	Output Power		Separation Distances (mm)						Calculated Threshold Value					
		dBm	mW	Rear	Edge 1	Edge 2	Edge 3	Edge 4	Front	Rear	Edge 1	Edge 2	Edge 3	Edge 4	Front
Antenna A															
Wi-Fi 2.4 GHz	2462	15.00	32	5.1	190.8	95.4	3.1	7.9		-MEASURE-	0.400	0.400	-MEASURE-	-MEASURE-	
Wi-Fi 5.2 GHz	5240	17.00	50	5.1	190.8	95.4	3.1	7.9		-MEASURE-	0.400	0.400	-MEASURE-	-MEASURE-	
Wi-Fi 5.3 GHz	5320	16.00	40	5.1	190.8	95.4	3.1	7.9		-MEASURE-	0.400	0.400	-MEASURE-	-MEASURE-	
Wi-Fi 5.5 GHz	5700	15.50	35	5.1	190.8	95.4	3.1	7.9		-MEASURE-	0.400	0.400	-MEASURE-	-MEASURE-	
Wi-Fi 5.8 GHz	5825	17.00	50	5.1	190.8	95.4	3.1	7.9		-MEASURE-	0.400	0.400	-MEASURE-	-MEASURE-	
Antenna B															
Wi-Fi 2.4 GHz	2462	16.50	45	5.1	192.2	7.6	3.1	95.4		-MEASURE-	0.400	-MEASURE-	-MEASURE-	0.400	
Wi-Fi 5.2 GHz	5240	18.00	63	5.1	192.2	7.6	3.1	95.4		-MEASURE-	0.400	-MEASURE-	-MEASURE-	0.400	
Wi-Fi 5.3 GHz	5320	17.00	50	5.1	192.2	7.6	3.1	95.4		-MEASURE-	0.400	-MEASURE-	-MEASURE-	0.400	
Wi-Fi 5.5 GHz	5700	15.50	35	5.1	192.2	7.6	3.1	95.4		-MEASURE-	0.400	-MEASURE-	-MEASURE-	0.400	
Wi-Fi 5.8 GHz	5825	17.00	50	5.1	192.2	7.6	3.1	95.4		-MEASURE-	0.400	-MEASURE-	-MEASURE-	0.400	
Antenna D															
Wi-Fi 2.4 GHz	2462	12.50	18	16	18	74.4	188.9	23.2		-MEASURE-	-MEASURE-	0.400	0.400	0.164	

Note(s):

1. According to KDB 447498, if the calculated threshold value is >3 then SAR testing is required.

Antennas > 50mm to adjacent edges

Tx Interface	Frequency (MHz)	Output Power		Separation Distances (mm)						Calculated Threshold Value					
		dBm	mW	Rear	Edge 1	Edge 2	Edge 3	Edge 4	Front	Rear	Edge 1	Edge 2	Edge 3	Edge 4	Front
Antenna A															
Wi-Fi 2.4 GHz	2462	15.00	32	5.1	190.8	95.4	3.1	7.9		< 50 mm	1503.6 mW -EXEMPT-	549.6 mW -EXEMPT-	< 50 mm	< 50 mm	
Wi-Fi 5.2 GHz	5240	17.00	50	5.1	190.8	95.4	3.1	7.9		< 50 mm	1473.5 mW -EXEMPT-	519.5 mW -EXEMPT-	< 50 mm	< 50 mm	
Wi-Fi 5.3 GHz	5320	16.00	40	5.1	190.8	95.4	3.1	7.9		< 50 mm	1473 mW -EXEMPT-	519 mW -EXEMPT-	< 50 mm	< 50 mm	
Wi-Fi 5.5 GHz	5700	15.50	35	5.1	190.8	95.4	3.1	7.9		< 50 mm	1470.8 mW -EXEMPT-	516.8 mW -EXEMPT-	< 50 mm	< 50 mm	
Wi-Fi 5.8 GHz	5825	17.00	50	5.1	190.8	95.4	3.1	7.9		< 50 mm	1470.2 mW -EXEMPT-	516.2 mW -EXEMPT-	< 50 mm	< 50 mm	
Antenna B															
Wi-Fi 2.4 GHz	2462	16.50	45	5.1	192.2	7.6	3.1	95.4		< 50 mm	1517.6 mW -EXEMPT-	< 50 mm	< 50 mm	549.6 mW -EXEMPT-	
Wi-Fi 5.2 GHz	5240	18.00	63	5.1	192.2	7.6	3.1	95.4		< 50 mm	1487.5 mW -EXEMPT-	< 50 mm	< 50 mm	519.5 mW -EXEMPT-	
Wi-Fi 5.3 GHz	5320	17.00	50	5.1	192.2	7.6	3.1	95.4		< 50 mm	1487 mW -EXEMPT-	< 50 mm	< 50 mm	519 mW -EXEMPT-	
Wi-Fi 5.5 GHz	5700	15.50	35	5.1	192.2	7.6	3.1	95.4		< 50 mm	1484.8 mW -EXEMPT-	< 50 mm	< 50 mm	516.8 mW -EXEMPT-	
Wi-Fi 5.8 GHz	5825	17.00	50	5.1	192.2	7.6	3.1	95.4		< 50 mm	1484.2 mW -EXEMPT-	< 50 mm	< 50 mm	516.2 mW -EXEMPT-	
Antenna D															
Wi-Fi 2.4 GHz	2462	12.50	18	16	18	74.4	188.9	23.2		< 50 mm	< 50 mm	339.6 mW -EXEMPT-	1484.6 mW -EXEMPT-	< 50 mm	

Note(s):

1. According to KDB 447498, if the calculated Power threshold is less than the output power then SAR testing is required.

7.1.4. SAR Test Exclusion Calculations for Wi-Fi P_{Cell_ON} (P_{low}), SISO Transmit Conditions

Antennas < 50mm to adjacent edges

Tx Interface	Frequency (MHz)	Output Power		Separation Distances (mm)						Calculated Threshold Value					
		dBm	mW	Rear	Edge 1	Edge 2	Edge 3	Edge 4	Front	Rear	Edge 1	Edge 2	Edge 3	Edge 4	Front
Antenna A															
Wi-Fi 2.4 GHz	2462	15.00	32	5.1	190.8	95.4	3.1	7.9		-MEASURE-	0.400	0.400	-MEASURE-	-MEASURE-	
Wi-Fi 5.2 GHz	5240	17.00	50	5.1	190.8	95.4	3.1	7.9		-MEASURE-	0.400	0.400	-MEASURE-	-MEASURE-	
Wi-Fi 5.3 GHz	5320	16.00	40	5.1	190.8	95.4	3.1	7.9		-MEASURE-	0.400	0.400	-MEASURE-	-MEASURE-	
Wi-Fi 5.5 GHz	5700	15.50	35	5.1	190.8	95.4	3.1	7.9		-MEASURE-	0.400	0.400	-MEASURE-	-MEASURE-	
Wi-Fi 5.8 GHz	5825	17.00	50	5.1	190.8	95.4	3.1	7.9		-MEASURE-	0.400	0.400	-MEASURE-	-MEASURE-	
Antenna B															
Wi-Fi 2.4 GHz	2462	16.50	45	5.1	192.2	7.6	3.1	95.4		-MEASURE-	0.400	-MEASURE-	-MEASURE-	0.400	
Wi-Fi 5.2 GHz	5240	18.00	63	5.1	192.2	7.6	3.1	95.4		-MEASURE-	0.400	-MEASURE-	-MEASURE-	0.400	
Wi-Fi 5.3 GHz	5320	17.00	50	5.1	192.2	7.6	3.1	95.4		-MEASURE-	0.400	-MEASURE-	-MEASURE-	0.400	
Wi-Fi 5.5 GHz	5700	15.50	35	5.1	192.2	7.6	3.1	95.4		-MEASURE-	0.400	-MEASURE-	-MEASURE-	0.400	
Wi-Fi 5.8 GHz	5825	17.00	50	5.1	192.2	7.6	3.1	95.4		-MEASURE-	0.400	-MEASURE-	-MEASURE-	0.400	
Bluetooth	2480	10.50	11	5.1	192.2	7.6	3.1	95.4		-MEASURE-	0.400	0.289	-MEASURE-	0.400	
Antenna D															
Wi-Fi 2.4 GHz	2462	7.00	5	16	18	74.4	188.9	23.2		0.209	0.209	0.400	0.400	0.045	
Bluetooth	2480	8.00	6	16	18	74.4	188.9	23.2		0.252	0.252	0.400	0.400	0.055	

Note(s):

1. According to KDB 447498, if the calculated threshold value is >3 then SAR testing is required.

Antennas > 50mm to adjacent edges

Tx Interface	Frequency (MHz)	Output Power		Separation Distances (mm)						Calculated Threshold Value					
		dBm	mW	Rear	Edge 1	Edge 2	Edge 3	Edge 4	Front	Rear	Edge 1	Edge 2	Edge 3	Edge 4	Front
Antenna A															
Wi-Fi 2.4 GHz	2462	15.00	32	5.1	190.8	95.4	3.1	7.9		< 50 mm	1503.6 mW -EXEMPT-	549.6 mW -EXEMPT-	< 50 mm	< 50 mm	
Wi-Fi 5.2 GHz	5240	17.00	50	5.1	190.8	95.4	3.1	7.9		< 50 mm	1473.5 mW -EXEMPT-	519.5 mW -EXEMPT-	< 50 mm	< 50 mm	
Wi-Fi 5.3 GHz	5320	16.00	40	5.1	190.8	95.4	3.1	7.9		< 50 mm	1473 mW -EXEMPT-	519 mW -EXEMPT-	< 50 mm	< 50 mm	
Wi-Fi 5.5 GHz	5700	15.50	35	5.1	190.8	95.4	3.1	7.9		< 50 mm	1470.8 mW -EXEMPT-	516.8 mW -EXEMPT-	< 50 mm	< 50 mm	
Wi-Fi 5.8 GHz	5825	17.00	50	5.1	190.8	95.4	3.1	7.9		< 50 mm	1470.2 mW -EXEMPT-	516.2 mW -EXEMPT-	< 50 mm	< 50 mm	
Antenna B															
Wi-Fi 2.4 GHz	2462	16.50	45	5.1	192.2	7.6	3.1	95.4		< 50 mm	1517.6 mW -EXEMPT-	< 50 mm	< 50 mm	549.6 mW -EXEMPT-	
Wi-Fi 5.2 GHz	5240	18.00	63	5.1	192.2	7.6	3.1	95.4		< 50 mm	1487.5 mW -EXEMPT-	< 50 mm	< 50 mm	519.5 mW -EXEMPT-	
Wi-Fi 5.3 GHz	5320	17.00	50	5.1	192.2	7.6	3.1	95.4		< 50 mm	1487 mW -EXEMPT-	< 50 mm	< 50 mm	519 mW -EXEMPT-	
Wi-Fi 5.5 GHz	5700	15.50	35	5.1	192.2	7.6	3.1	95.4		< 50 mm	1484.8 mW -EXEMPT-	< 50 mm	< 50 mm	516.8 mW -EXEMPT-	
Wi-Fi 5.8 GHz	5825	17.00	50	5.1	192.2	7.6	3.1	95.4		< 50 mm	1484.2 mW -EXEMPT-	< 50 mm	< 50 mm	516.2 mW -EXEMPT-	
Bluetooth	2480	10.50	11	5.1	192.2	7.6	3.1	95.4		< 50 mm	1517.3 mW -EXEMPT-	< 50 mm	< 50 mm	549.3 mW -EXEMPT-	
Antenna D															
Wi-Fi 2.4 GHz	2462	7.00	5	16	18	74.4	188.9	23.2		< 50 mm	< 50 mm	339.6 mW -EXEMPT-	1484.6 mW -EXEMPT-	< 50 mm	
Bluetooth	2480	8.00	6	16	18	74.4	188.9	23.2		< 50 mm	< 50 mm	339.3 mW -EXEMPT-	1484.3 mW -EXEMPT-	< 50 mm	

Note(s):

1. According to KDB 447498, if the calculated Power threshold is less than the output power then SAR testing is required.

7.1.5. SAR Test Exclusion Calculations for Wi-Fi P_{Cell_ON} (P_{low}), MIMO Transmit Conditions

Antennas < 50mm to adjacent edges

Tx Interface	Frequency (MHz)	Output Power		Separation Distances (mm)						Calculated Threshold Value					
		dBm	mW	Rear	Edge 1	Edge 2	Edge 3	Edge 4	Front	Rear	Edge 1	Edge 2	Edge 3	Edge 4	Front
Antenna A															
Wi-Fi 2.4 GHz	2462	15.00	32	5.1	190.8	95.4	3.1	7.9		-MEASURE-	0.400	0.400	-MEASURE-	-MEASURE-	
Wi-Fi 5.2 GHz	5240	17.00	50	5.1	190.8	95.4	3.1	7.9		-MEASURE-	0.400	0.400	-MEASURE-	-MEASURE-	
Wi-Fi 5.3 GHz	5320	16.00	40	5.1	190.8	95.4	3.1	7.9		-MEASURE-	0.400	0.400	-MEASURE-	-MEASURE-	
Wi-Fi 5.5 GHz	5700	15.50	35	5.1	190.8	95.4	3.1	7.9		-MEASURE-	0.400	0.400	-MEASURE-	-MEASURE-	
Wi-Fi 5.8 GHz	5825	17.00	50	5.1	190.8	95.4	3.1	7.9		-MEASURE-	0.400	0.400	-MEASURE-	-MEASURE-	
Antenna B															
Wi-Fi 2.4 GHz	2462	16.50	45	5.1	192.2	7.6	3.1	95.4		-MEASURE-	0.400	-MEASURE-	-MEASURE-	0.400	
Wi-Fi 5.2 GHz	5240	18.00	63	5.1	192.2	7.6	3.1	95.4		-MEASURE-	0.400	-MEASURE-	-MEASURE-	0.400	
Wi-Fi 5.3 GHz	5320	17.00	50	5.1	192.2	7.6	3.1	95.4		-MEASURE-	0.400	-MEASURE-	-MEASURE-	0.400	
Wi-Fi 5.5 GHz	5700	15.50	35	5.1	192.2	7.6	3.1	95.4		-MEASURE-	0.400	-MEASURE-	-MEASURE-	0.400	
Wi-Fi 5.8 GHz	5825	17.00	50	5.1	192.2	7.6	3.1	95.4		-MEASURE-	0.400	-MEASURE-	-MEASURE-	0.400	
Antenna D															
Wi-Fi 2.4 GHz	2462	7.00	5	16	18	74.4	188.9	23.2		0.209	0.209	0.400	0.400	0.045	

Note(s):

1. According to KDB 447498, if the calculated threshold value is >3 then SAR testing is required.

Antennas > 50mm to adjacent edges

Tx Interface	Frequency (MHz)	Output Power		Separation Distances (mm)						Calculated Threshold Value					
		dBm	mW	Rear	Edge 1	Edge 2	Edge 3	Edge 4	Front	Rear	Edge 1	Edge 2	Edge 3	Edge 4	Front
Antenna A															
Wi-Fi 2.4 GHz	2462	15.00	32	5.1	190.8	95.4	3.1	7.9		< 50 mm	1503.6 mW -EXEMPT-	549.6 mW -EXEMPT-	< 50 mm	< 50 mm	
Wi-Fi 5.2 GHz	5240	17.00	50	5.1	190.8	95.4	3.1	7.9		< 50 mm	1473.5 mW -EXEMPT-	519.5 mW -EXEMPT-	< 50 mm	< 50 mm	
Wi-Fi 5.3 GHz	5320	16.00	40	5.1	190.8	95.4	3.1	7.9		< 50 mm	1473 mW -EXEMPT-	519 mW -EXEMPT-	< 50 mm	< 50 mm	
Wi-Fi 5.5 GHz	5700	15.50	35	5.1	190.8	95.4	3.1	7.9		< 50 mm	1470.8 mW -EXEMPT-	516.8 mW -EXEMPT-	< 50 mm	< 50 mm	
Wi-Fi 5.8 GHz	5825	17.00	50	5.1	190.8	95.4	3.1	7.9		< 50 mm	1470.2 mW -EXEMPT-	516.2 mW -EXEMPT-	< 50 mm	< 50 mm	
Antenna B															
Wi-Fi 2.4 GHz	2462	16.50	45	5.1	192.2	7.6	3.1	95.4		< 50 mm	1517.6 mW -EXEMPT-	< 50 mm	< 50 mm	549.6 mW -EXEMPT-	
Wi-Fi 5.2 GHz	5240	18.00	63	5.1	192.2	7.6	3.1	95.4		< 50 mm	1487.5 mW -EXEMPT-	< 50 mm	< 50 mm	519.5 mW -EXEMPT-	
Wi-Fi 5.3 GHz	5320	17.00	50	5.1	192.2	7.6	3.1	95.4		< 50 mm	1487 mW -EXEMPT-	< 50 mm	< 50 mm	519 mW -EXEMPT-	
Wi-Fi 5.5 GHz	5700	15.50	35	5.1	192.2	7.6	3.1	95.4		< 50 mm	1484.8 mW -EXEMPT-	< 50 mm	< 50 mm	516.8 mW -EXEMPT-	
Wi-Fi 5.8 GHz	5825	17.00	50	5.1	192.2	7.6	3.1	95.4		< 50 mm	1484.2 mW -EXEMPT-	< 50 mm	< 50 mm	516.2 mW -EXEMPT-	
Antenna D															
Wi-Fi 2.4 GHz	2462	7.00	5	16	18	74.4	188.9	23.2		< 50 mm	< 50 mm	339.6 mW -EXEMPT-	1484.6 mW -EXEMPT-	< 50 mm	

Note(s):

1. According to KDB 447498, if the calculated Power threshold is less than the output power then SAR testing is required.

7.2. Required Test Configurations

The table below identifies the standalone test configurations required for this device according to the findings in Section 7.1:

Test Configurations	Rear	Edge 1	Edge 2	Edge 3	Edge 4
		(Top Edge)	(Right Edge)	(Bottom Edge)	(Left Edge)
GSM850	Yes	Yes	No	No	No
GSM1900	Yes	Yes	No	No	No
W-CDMA Band V	Yes	Yes	No	No	No
W-CDMA Band IV	Yes	Yes	No	No	No
W-CDMA Band II	Yes	Yes	No	No	No
CDMA BC0	Yes	Yes	No	No	No
CDMA BC1	Yes	Yes	No	No	No
CDMA BC10	Yes	Yes	No	No	No
CDMA BC15	Yes	Yes	No	No	No
LTE Band 2	Yes	Yes	No	No	No
LTE Band 4	Yes	Yes	No	No	No
LTE Band 5	Yes	Yes	No	No	No
LTE Band 13	Yes	Yes	No	No	No
LTE Band 17	Yes	Yes	No	No	No
LTE Band 25	Yes	Yes	No	No	No
LTE Band 26	Yes	Yes	No	No	No
LTE Band 41	Yes	Yes	No	No	No
Wi-Fi P_{max}, SISO, 2.4 GHz, Antenna A	Yes	No	No	Yes	Yes
Wi-Fi P_{max}, SISO, 2.4 GHz, Antenna B	Yes	No	Yes	Yes	No
Wi-Fi P_{max}, SISO, 2.4 GHz, Antenna D	Yes	Yes	No	No	No
Wi-Fi P_{max}, SISO, 5 GHz, Antenna A	Yes	No	No	Yes	Yes
Wi-Fi P_{max}, SISO, 5 GHz, Antenna B	Yes	No	Yes	Yes	No
Wi-Fi P_{max}, MIMO, 2.4 GHz, Antenna A + B	Yes	No	Yes	Yes	Yes
Wi-Fi P_{max}, MIMO, 2.4 GHz, Antenna A + D	Yes	Yes	No	Yes	Yes
Wi-Fi P_{max}, MIMO, 5 GHz, Antenna A + B	Yes	No	Yes	Yes	Yes
Wi-Fi P_{low}, SISO, 2.4 GHz, Antenna D	Yes	Yes	No	No	No
Wi-Fi P_{low}, MIMO, 2.4 GHz, Antenna A + D	Yes	No	No	Yes	Yes
Bluetooth, Antenna B	Yes	No	No	Yes	No
Bluetooth, Antenna D	No	No	No	No	No

Note(s):

1. Yes = Testing is required.
2. No = Testing is not required.

8. Dielectric Property Measurements & System Check

8.1. Dielectric Property Measurements

The temperature of the tissue-equivalent medium used during measurement must also be within 18°C to 25°C and within ± 2°C of the temperature when the tissue parameters are characterized.
The dielectric parameters must be measured before the tissue-equivalent medium is used in a series of SAR measurements. The parameters should be re-measured after each 3 – 4 days of use; or earlier if the dielectric parameters can become out of tolerance; for example, when the parameters are marginal at the beginning of the measurement series.
Tissue dielectric parameters were measured at the low, middle and high frequency of each operating frequency range of the test device.

Tissue Dielectric Parameters

FCC KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz

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

IEEE Std 1528-2013

Refer to Table 3 within the IEEE Std 1528-2013

Dielectric Property Measurements Results:

SAR Lab A

Date	Freq. (MHz)	Liquid Parameters			Measured	Target	Delta (%)	Limit ±(%)
3/9/2015	Body 750	e'	54.0400	Relative Permittivity (ϵ_r):	54.04	55.55	-2.71	5
		e''	23.2200	Conductivity (σ):	0.97	0.96	0.55	5
	Body 700	e'	54.3800	Relative Permittivity (ϵ_r):	54.38	55.74	-2.44	5
		e''	23.6700	Conductivity (σ):	0.92	0.96	-3.96	5
	Body 790	e'	53.4400	Relative Permittivity (ϵ_r):	53.44	55.39	-3.52	5
		e''	22.9900	Conductivity (σ):	1.01	0.97	4.52	5
3/10/2015	Body 2600	e'	50.4400	Relative Permittivity (ϵ_r):	50.44	52.51	-3.94	5
		e''	14.9800	Conductivity (σ):	2.17	2.16	0.22	5
	Body 2500	e'	50.7400	Relative Permittivity (ϵ_r):	50.74	52.64	-3.60	5
		e''	14.7000	Conductivity (σ):	2.04	2.02	1.15	5
	Body 2700	e'	50.1400	Relative Permittivity (ϵ_r):	50.14	52.38	-4.29	5
		e''	15.2600	Conductivity (σ):	2.29	2.30	-0.45	5
3/12/2015	Body 2450	e'	51.4000	Relative Permittivity (ϵ_r):	51.40	52.70	-2.47	5
		e''	14.3900	Conductivity (σ):	1.96	1.95	0.53	5
	Body 2410	e'	51.5100	Relative Permittivity (ϵ_r):	51.51	52.76	-2.37	5
		e''	14.2900	Conductivity (σ):	1.91	1.91	0.39	5
	Body 2475	e'	51.3500	Relative Permittivity (ϵ_r):	51.35	52.67	-2.50	5
		e''	14.5600	Conductivity (σ):	2.00	1.99	0.94	5
3/16/2015	Body 2450	e'	52.1700	Relative Permittivity (ϵ_r):	52.17	52.70	-1.01	5
		e''	14.8500	Conductivity (σ):	2.02	1.95	3.74	5
	Body 2410	e'	52.5800	Relative Permittivity (ϵ_r):	52.58	52.76	-0.34	5
		e''	14.6800	Conductivity (σ):	1.97	1.91	3.13	5
	Body 2475	e'	52.4200	Relative Permittivity (ϵ_r):	52.42	52.67	-0.47	5
		e''	14.8600	Conductivity (σ):	2.04	1.99	3.02	5
3/19/2015	Body 2450	e'	51.6400	Relative Permittivity (ϵ_r):	51.64	52.70	-2.01	5
		e''	14.7100	Conductivity (σ):	2.00	1.95	2.76	5
	Body 2410	e'	51.7800	Relative Permittivity (ϵ_r):	51.78	52.76	-1.86	5
		e''	14.6900	Conductivity (σ):	1.97	1.91	3.20	5
	Body 2475	e'	51.5700	Relative Permittivity (ϵ_r):	51.57	52.67	-2.09	5
		e''	14.7200	Conductivity (σ):	2.03	1.99	2.05	5
3/23/2015	Body 2450	e'	51.1800	Relative Permittivity (ϵ_r):	51.18	52.70	-2.88	5
		e''	14.3000	Conductivity (σ):	1.95	1.95	-0.10	5
	Body 2410	e'	51.2600	Relative Permittivity (ϵ_r):	51.26	52.76	-2.84	5
		e''	14.4100	Conductivity (σ):	1.93	1.91	1.23	5
	Body 2475	e'	51.1000	Relative Permittivity (ϵ_r):	51.10	52.67	-2.98	5
		e''	14.3100	Conductivity (σ):	1.97	1.99	-0.80	5
4/2/2015	Body 2450	e'	50.8500	Relative Permittivity (ϵ_r):	50.85	52.70	-3.51	5
		e''	14.3700	Conductivity (σ):	1.96	1.95	0.39	5
	Body 2410	e'	50.8300	Relative Permittivity (ϵ_r):	50.83	52.76	-3.66	5
		e''	14.1800	Conductivity (σ):	1.90	1.91	-0.38	5
	Body 2475	e'	50.6500	Relative Permittivity (ϵ_r):	50.65	52.67	-3.83	5
		e''	14.2500	Conductivity (σ):	1.96	1.99	-1.21	5

SAR Lab B

Date	Freq. (MHz)	Liquid Parameters			Measured	Target	Delta (%)	Limit ±(%)
3/9/2015	Body 835	e'	54.3600	Relative Permittivity (ϵ_r):	54.36	55.20	-1.52	5
		e''	21.8800	Conductivity (σ):	1.02	0.97	4.73	5
	Body 820	e'	54.4800	Relative Permittivity (ϵ_r):	54.48	55.28	-1.44	5
		e''	21.9600	Conductivity (σ):	1.00	0.97	3.39	5
	Body 850	e'	54.2400	Relative Permittivity (ϵ_r):	54.24	55.16	-1.66	5
		e''	21.8000	Conductivity (σ):	1.03	0.99	4.37	5
3/12/2015	Body 835	e'	54.8600	Relative Permittivity (ϵ_r):	54.86	55.20	-0.62	5
		e''	21.3600	Conductivity (σ):	0.99	0.97	2.24	5
	Body 820	e'	54.9800	Relative Permittivity (ϵ_r):	54.98	55.28	-0.54	5
		e''	21.5300	Conductivity (σ):	0.98	0.97	1.36	5
	Body 850	e'	54.7700	Relative Permittivity (ϵ_r):	54.77	55.16	-0.70	5
		e''	21.2100	Conductivity (σ):	1.00	0.99	1.55	5
3/24/2015	Body 835	e'	55.9800	Relative Permittivity (ϵ_r):	55.98	55.20	1.41	5
		e''	21.7200	Conductivity (σ):	1.01	0.97	3.96	5
	Body 820	e'	56.0700	Relative Permittivity (ϵ_r):	56.07	55.28	1.43	5
		e''	21.7800	Conductivity (σ):	0.99	0.97	2.54	5
	Body 850	e'	55.7600	Relative Permittivity (ϵ_r):	55.76	55.16	1.09	5
		e''	21.8200	Conductivity (σ):	1.03	0.99	4.47	5

SAR Lab C

3/16/2015	Body 5180	e'	50.4100	Relative Permittivity (ϵ_r):	50.41	49.05	2.78	5
		e''	18.4400	Conductivity (σ):	5.31	5.27	0.75	5
	Body 5200	e'	50.3200	Relative Permittivity (ϵ_r):	50.32	49.02	2.65	5
		e''	18.4400	Conductivity (σ):	5.33	5.29	0.70	5
	Body 5600	e'	50.0500	Relative Permittivity (ϵ_r):	50.05	48.48	3.24	5
		e''	18.9800	Conductivity (σ):	5.91	5.76	2.59	5
	Body 5800	e'	49.6800	Relative Permittivity (ϵ_r):	49.68	48.20	3.07	5
		e''	18.9700	Conductivity (σ):	6.12	6.00	1.96	5
	Body 5825	e'	49.5700	Relative Permittivity (ϵ_r):	49.57	48.20	2.84	5
		e''	18.9300	Conductivity (σ):	6.13	6.00	2.19	5
3/19/2015	Body 5180	e'	47.6500	Relative Permittivity (ϵ_r):	47.65	49.05	-2.85	5
		e''	18.1400	Conductivity (σ):	5.22	5.27	-0.88	5
	Body 5200	e'	47.5800	Relative Permittivity (ϵ_r):	47.58	49.02	-2.94	5
		e''	18.1600	Conductivity (σ):	5.25	5.29	-0.83	5
	Body 5600	e'	47.1700	Relative Permittivity (ϵ_r):	47.17	48.48	-2.70	5
		e''	18.4000	Conductivity (σ):	5.73	5.76	-0.55	5
	Body 5800	e'	47.0800	Relative Permittivity (ϵ_r):	47.08	48.20	-2.32	5
		e''	18.3600	Conductivity (σ):	5.92	6.00	-1.32	5
	Body 5825	e'	46.9200	Relative Permittivity (ϵ_r):	46.92	48.20	-2.66	5
		e''	18.3400	Conductivity (σ):	5.94	6.00	-1.00	5
3/23/2015	Body 5180	e'	48.1300	Relative Permittivity (ϵ_r):	48.13	49.05	-1.87	5
		e''	18.8000	Conductivity (σ):	5.41	5.27	2.72	5
	Body 5200	e'	48.1100	Relative Permittivity (ϵ_r):	48.11	49.02	-1.86	5
		e''	18.8000	Conductivity (σ):	5.44	5.29	2.66	5
	Body 5600	e'	47.5800	Relative Permittivity (ϵ_r):	47.58	48.48	-1.85	5
		e''	18.9100	Conductivity (σ):	5.89	5.76	2.21	5
	Body 5800	e'	47.4700	Relative Permittivity (ϵ_r):	47.47	48.20	-1.51	5
		e''	19.0000	Conductivity (σ):	6.13	6.00	2.12	5
	Body 5825	e'	47.4700	Relative Permittivity (ϵ_r):	47.47	48.20	-1.51	5
		e''	18.9900	Conductivity (σ):	6.15	6.00	2.51	5

SAR Lab E

3/16/2015	Body 5180	e'	48.1500	Relative Permittivity (ϵ_r):	48.15	49.05	-1.83	5
		e''	18.3500	Conductivity (σ):	5.29	5.27	0.26	5
	Body 5200	e'	48.0500	Relative Permittivity (ϵ_r):	48.05	49.02	-1.98	5
		e''	18.3100	Conductivity (σ):	5.29	5.29	-0.01	5
	Body 5600	e'	47.4200	Relative Permittivity (ϵ_r):	47.42	48.48	-2.18	5
		e''	18.9700	Conductivity (σ):	5.91	5.76	2.53	5
	Body 5800	e'	47.0300	Relative Permittivity (ϵ_r):	47.03	48.20	-2.43	5
		e''	19.1200	Conductivity (σ):	6.17	6.00	2.77	5
	Body 5825	e'	46.9200	Relative Permittivity (ϵ_r):	46.92	48.20	-2.66	5
		e''	19.1200	Conductivity (σ):	6.19	6.00	3.21	5
3/19/2015	Body 5180	e'	47.7300	Relative Permittivity (ϵ_r):	47.73	49.05	-2.68	5
		e''	18.2400	Conductivity (σ):	5.25	5.27	-0.34	5
	Body 5200	e'	47.6200	Relative Permittivity (ϵ_r):	47.62	49.02	-2.86	5
		e''	18.2800	Conductivity (σ):	5.29	5.29	-0.18	5
	Body 5600	e'	47.2100	Relative Permittivity (ϵ_r):	47.21	48.48	-2.62	5
		e''	18.4900	Conductivity (σ):	5.76	5.76	-0.06	5
	Body 5800	e'	47.1800	Relative Permittivity (ϵ_r):	47.18	48.20	-2.12	5
		e''	18.4500	Conductivity (σ):	5.95	6.00	-0.83	5
	Body 5825	e'	47.0800	Relative Permittivity (ϵ_r):	47.08	48.20	-2.32	5
		e''	18.3600	Conductivity (σ):	5.95	6.00	-0.89	5
3/23/2015	Body 5180	e'	48.0600	Relative Permittivity (ϵ_r):	48.06	49.05	-2.01	5
		e''	18.5200	Conductivity (σ):	5.33	5.27	1.19	5
	Body 5200	e'	48.0900	Relative Permittivity (ϵ_r):	48.09	49.02	-1.90	5
		e''	18.5200	Conductivity (σ):	5.35	5.29	1.14	5
	Body 5600	e'	47.5100	Relative Permittivity (ϵ_r):	47.51	48.48	-2.00	5
		e''	18.7800	Conductivity (σ):	5.85	5.76	1.50	5
	Body 5800	e'	47.1000	Relative Permittivity (ϵ_r):	47.10	48.20	-2.28	5
		e''	18.9900	Conductivity (σ):	6.12	6.00	2.07	5
	Body 5825	e'	47.1100	Relative Permittivity (ϵ_r):	47.11	48.20	-2.26	5
		e''	19.0500	Conductivity (σ):	6.17	6.00	2.83	5
3/30/2015	Body 5180	e'	48.0100	Relative Permittivity (ϵ_r):	48.01	49.05	-2.11	5
		e''	18.1600	Conductivity (σ):	5.23	5.27	-0.78	5
	Body 5200	e'	47.8500	Relative Permittivity (ϵ_r):	47.85	49.02	-2.39	5
		e''	18.2500	Conductivity (σ):	5.28	5.29	-0.34	5
	Body 5600	e'	47.2100	Relative Permittivity (ϵ_r):	47.21	48.48	-2.62	5
		e''	18.1200	Conductivity (σ):	5.64	5.76	-2.06	5
	Body 5800	e'	46.8300	Relative Permittivity (ϵ_r):	46.83	48.20	-2.84	5
		e''	18.4500	Conductivity (σ):	5.95	6.00	-0.83	5
	Body 5825	e'	47.0600	Relative Permittivity (ϵ_r):	47.06	48.20	-2.37	5
		e''	18.5400	Conductivity (σ):	6.00	6.00	0.08	5

SAR Lab F

3/9/2015	Body 1750	e'	51.7700	Relative Permittivity (ϵ_r):	51.77	53.44	-3.13	5
		e''	15.3100	Conductivity (σ):	1.49	1.49	0.24	5
	Body 1710	e'	51.8700	Relative Permittivity (ϵ_r):	51.87	53.54	-3.13	5
		e''	15.1800	Conductivity (σ):	1.44	1.46	-1.25	5
	Body 1755	e'	51.7700	Relative Permittivity (ϵ_r):	51.77	53.43	-3.10	5
		e''	15.3100	Conductivity (σ):	1.49	1.49	0.32	5
3/11/2015	Body 1750	e'	51.3500	Relative Permittivity (ϵ_r):	51.35	53.44	-3.91	5
		e''	14.8600	Conductivity (σ):	1.45	1.49	-2.70	5
	Body 1710	e'	51.5000	Relative Permittivity (ϵ_r):	51.50	53.54	-3.82	5
		e''	14.8000	Conductivity (σ):	1.41	1.46	-3.72	5
	Body 1755	e'	51.3300	Relative Permittivity (ϵ_r):	51.33	53.43	-3.93	5
		e''	14.8800	Conductivity (σ):	1.45	1.49	-2.50	5
3/26/2015	Body 5180	e'	48.4100	Relative Permittivity (ϵ_r):	48.41	49.05	-1.30	5
		e''	18.2200	Conductivity (σ):	5.25	5.27	-0.45	5
	Body 5200	e'	48.7600	Relative Permittivity (ϵ_r):	48.76	49.02	-0.53	5
		e''	18.5100	Conductivity (σ):	5.35	5.29	1.08	5
	Body 5600	e'	47.8100	Relative Permittivity (ϵ_r):	47.81	48.48	-1.38	5
		e''	18.7900	Conductivity (σ):	5.85	5.76	1.56	5
	Body 5800	e'	47.3700	Relative Permittivity (ϵ_r):	47.37	48.20	-1.72	5
		e''	18.9300	Conductivity (σ):	6.10	6.00	1.75	5
	Body 5825	e'	47.4500	Relative Permittivity (ϵ_r):	47.45	48.20	-1.56	5
		e''	18.8800	Conductivity (σ):	6.12	6.00	1.92	5

SAR Lab H

Date	Freq. (MHz)	Liquid Parameters			Measured	Target	Delta (%)	Limit ±(%)
3/9/2015	Body 1900	e'	52.0400	Relative Permittivity (ϵ_r):	52.04	53.30	-2.36	5
		e''	14.4500	Conductivity (σ):	1.53	1.52	0.43	5
	Body 1850	e'	52.0800	Relative Permittivity (ϵ_r):	52.08	53.30	-2.29	5
		e''	14.3200	Conductivity (σ):	1.47	1.52	-3.09	5
	Body 1910	e'	52.0100	Relative Permittivity (ϵ_r):	52.01	53.30	-2.42	5
		e''	14.4600	Conductivity (σ):	1.54	1.52	1.03	5
3/16/2015	Body 5180	e'	48.3300	Relative Permittivity (ϵ_r):	48.33	49.05	-1.46	5
		e''	18.6200	Conductivity (σ):	5.36	5.27	1.74	5
	Body 5200	e'	48.2400	Relative Permittivity (ϵ_r):	48.24	49.02	-1.59	5
		e''	18.5500	Conductivity (σ):	5.36	5.29	1.30	5
	Body 5600	e'	47.6800	Relative Permittivity (ϵ_r):	47.68	48.48	-1.65	5
		e''	19.2600	Conductivity (σ):	6.00	5.76	4.10	5
	Body 5800	e'	47.2800	Relative Permittivity (ϵ_r):	47.28	48.20	-1.91	5
		e''	19.3600	Conductivity (σ):	6.24	6.00	4.06	5
	Body 5825	e'	47.1900	Relative Permittivity (ϵ_r):	47.19	48.20	-2.10	5
		e''	19.3400	Conductivity (σ):	6.26	6.00	4.40	5
3/19/2015	Body 5180	e'	48.8600	Relative Permittivity (ϵ_r):	48.86	49.05	-0.38	5
		e''	18.5000	Conductivity (σ):	5.33	5.27	1.08	5
	Body 5200	e'	48.7400	Relative Permittivity (ϵ_r):	48.74	49.02	-0.57	5
		e''	18.5100	Conductivity (σ):	5.35	5.29	1.08	5
	Body 5600	e'	48.2500	Relative Permittivity (ϵ_r):	48.25	48.48	-0.47	5
		e''	18.7600	Conductivity (σ):	5.84	5.76	1.40	5
	Body 5800	e'	48.1300	Relative Permittivity (ϵ_r):	48.13	48.20	-0.15	5
		e''	18.7300	Conductivity (σ):	6.04	6.00	0.67	5
	Body 5825	e'	48.0200	Relative Permittivity (ϵ_r):	48.02	48.20	-0.37	5
		e''	18.6500	Conductivity (σ):	6.04	6.00	0.68	5
3/23/2015	Body 5180	e'	48.9700	Relative Permittivity (ϵ_r):	48.97	49.05	-0.16	5
		e''	18.3700	Conductivity (σ):	5.29	5.27	0.37	5
	Body 5200	e'	48.8600	Relative Permittivity (ϵ_r):	48.86	49.02	-0.33	5
		e''	18.3500	Conductivity (σ):	5.31	5.29	0.21	5
	Body 5600	e'	48.3500	Relative Permittivity (ϵ_r):	48.35	48.48	-0.26	5
		e''	18.6900	Conductivity (σ):	5.82	5.76	1.02	5
	Body 5800	e'	48.0200	Relative Permittivity (ϵ_r):	48.02	48.20	-0.37	5
		e''	18.8600	Conductivity (σ):	6.08	6.00	1.37	5
	Body 5825	e'	47.9900	Relative Permittivity (ϵ_r):	47.99	48.20	-0.44	5
		e''	18.9400	Conductivity (σ):	6.13	6.00	2.24	5
3/30/2015	Body 5180	e'	49.2400	Relative Permittivity (ϵ_r):	49.24	49.05	0.39	5
		e''	18.0900	Conductivity (σ):	5.21	5.27	-1.16	5
	Body 5200	e'	49.1600	Relative Permittivity (ϵ_r):	49.16	49.02	0.29	5
		e''	18.1700	Conductivity (σ):	5.25	5.29	-0.78	5
	Body 5600	e'	48.3700	Relative Permittivity (ϵ_r):	48.37	48.48	-0.22	5
		e''	18.3700	Conductivity (σ):	5.72	5.76	-0.71	5
	Body 5800	e'	47.8800	Relative Permittivity (ϵ_r):	47.88	48.20	-0.66	5
		e''	18.6700	Conductivity (σ):	6.02	6.00	0.35	5
	Body 5825	e'	48.2400	Relative Permittivity (ϵ_r):	48.24	48.20	0.08	5
		e''	18.7200	Conductivity (σ):	6.06	6.00	1.05	5
4/2/2015	Body 5180	e'	47.8400	Relative Permittivity (ϵ_r):	47.84	49.05	-2.46	5
		e''	18.4600	Conductivity (σ):	5.32	5.27	0.86	5
	Body 5200	e'	47.5600	Relative Permittivity (ϵ_r):	47.56	49.02	-2.98	5
		e''	18.7100	Conductivity (σ):	5.41	5.29	2.17	5
	Body 5600	e'	46.8200	Relative Permittivity (ϵ_r):	46.82	48.48	-3.42	5
		e''	18.9900	Conductivity (σ):	5.91	5.76	2.64	5
	Body 5800	e'	46.6500	Relative Permittivity (ϵ_r):	46.65	48.20	-3.22	5
		e''	19.2000	Conductivity (σ):	6.19	6.00	3.20	5
	Body 5825	e'	46.5600	Relative Permittivity (ϵ_r):	46.56	48.20	-3.40	5
		e''	19.2200	Conductivity (σ):	6.23	6.00	3.75	5

8.2. System Check

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

System Performance Check Measurement Conditions:

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

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	1024	5/16/2014	750	1g	8.12	8.77
				10g	5.26	5.79
D835V2	4d117	5/16/2014	835	1g	9.23	9.61
				10g	5.98	6.31
D1750V2	1050	4/22/2014	1750	1g	36.6	37.2
				10g	19.4	20.0
D1750V2	1077	9/11/2014	1750	1g	36.5	36.9
				10g	19.4	19.8
D1900V2	5d140	4/23/2014	1900	1g	40.1	40.2
				10g	21.0	21.3
D2450V2	706	5/20/2014	2450	1g	53.0	50.2
				10g	24.5	23.4
D2600V2	1006	9/10/2014	2600	1g	58.6	56.3
				10g	26.1	25.1
D5GHzV2	1138	9/18/2014	5200	1g	81.4	75.4
				10g	23.3	21.0
			5600	1g	85.1	81.9
				10g	24.2	22.6
			5800	1g	80.6	75.2
				10g	23.0	20.8
D5GHzV2	1168	12/4/2014	5200	1g	79.3	76.0
				10g	22.5	21.1
			5600	1g	81.7	82.0
				10g	23.2	22.7
			5800	1g	78.0	76.2
				10g	22.1	21.0

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 Lab A

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			
3/9/2015	D750V3	1024	Body	1g	0.935	9.35	8.77	6.61	1,2
				10g	0.624	6.24	5.79	7.77	
3/10/2015	D2600V2	1006	Body	1g	5.72	57.2	56.3	1.60	3,4
				10g	2.48	24.8	25.1	-1.20	
3/12/2015	D2450V2	706	Body	1g	5.09	50.9	50.2	1.39	
				10g	2.30	23.0	23.4	-1.71	
3/16/2015	D2450V2	706	Body	1g	5.28	52.8	50.2	5.18	
				10g	2.41	24.1	23.4	2.99	
3/19/2015	D2450V2	706	Body	1g	5.30	53.0	50.2	5.58	5,6
				10g	2.42	24.2	23.4	3.42	
3/23/2015	D2450V2	706	Body	1g	5.01	50.1	50.2	-0.20	
				10g	2.29	22.9	23.4	-2.14	
4/2/2015	D2450V2	706	Body	1g	5.24	52.4	50.2	4.38	
				10g	2.39	23.9	23.4	2.14	

SAR Lab B

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			
3/9/2015	D835V2	4d117	Body	1g	0.992	9.92	9.61	3.23	7,8
				10g	0.652	6.52	6.31	3.33	
3/12/2015	D835V2	4d117	Body	1g	0.934	9.34	9.61	-2.81	
				10g	0.614	6.14	6.31	-2.69	
3/24/2015	D835V2	4d117	Body	1g	0.975	9.75	9.61	1.46	
				10g	0.639	6.39	6.31	1.27	

SAR Lab C

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			
3/16/2015	D5GHzV2 (5.2GHz)	1168	Body	1g	7.77	77.7	76.0	2.24	9,10
				10g	2.19	21.9	21.1	3.79	
3/19/2015	D5GHzV2 (5.2GHz)	1138	Body	1g	7.36	73.6	75.4	-2.39	
				10g	2.07	20.7	21.0	-1.43	
3/23/2015	D5GHzV2 (5.2GHz)	1138	Body	1g	7.94	79.4	75.4	5.31	11,12
				10g	2.23	22.3	21.0	6.19	

SAR Lab E

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			
3/16/2015	D5GHzV2 (5.6GHz)	1168	Body	1g	7.95	79.5	82.0	-3.05	13,14
				10g	2.22	22.2	22.7	-2.20	
3/19/2015	D5GHzV2 (5.6GHz)	1138	Body	1g	7.82	78.2	81.9	-4.52	15,16
				10g	2.19	21.9	22.6	-3.10	
3/23/2015	D5GHzV2 (5.6GHz)	1138	Body	1g	8.48	84.80	81.9	3.54	
				10g	2.41	24.10	22.6	6.64	
3/30/2015	D5GHzV2 (5.6GHz)	1138	Body	1g	8.17	81.70	81.9	-0.24	
				10g	2.29	22.90	22.6	1.33	

SAR Lab F

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			
3/9/2015	D1750V2	1050	Body	1g	3.66	36.6	37.2	-1.61	17,18
				10g	1.94	19.4	20.0	-3.00	
3/11/2015	D1750V2	1077	Body	1g	3.86	38.6	36.9	4.61	19,20
				10g	2.04	20.4	19.8	3.03	
3/27/2015	D5GHzV2 (5.6GHz)	1138	Body	1g	8.48	84.8	81.9	3.54	21,22
				10g	2.38	23.8	22.6	5.31	

SAR Lab H

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			
3/9/2015	1900	5d140	Body	1g	3.94	39.4	40.2	-1.99	23,24
				10g	2.07	20.7	21.3	-2.82	
3/16/2015	D5GHzV2 (5.8GHz)	1138	Body	1g	7.88	78.8	75.2	4.79	
				10g	2.21	22.1	20.8	6.25	
3/19/2015	D5GHzV2 (5.8GHz)	1138	Body	1g	7.00	70.0	75.2	-6.91	25,26
				10g	1.95	19.5	20.8	-6.25	
3/23/2015	D5GHzV2 (5.8GHz)	1138	Body	1g	7.04	70.4	75.2	-6.38	
				10g	1.96	19.6	20.8	-5.77	
3/30/2015	D5GHzV2 (5.8GHz)	1138	Body	1g	7.37	73.7	75.2	-1.99	
				10g	2.04	20.4	20.8	-1.92	
4/2/2015	D5GHzV2 (5.2GHz)	1138	Body	1g	7.39	73.9	75.4	-1.99	
				10g	2.06	20.6	21.0	-1.90	

9. Conducted Output Power Measurements

9.1. GSM

GSM850 Measured Results

Band	Mode	Coding Scheme	Time Slots	Ch No.	Freq. (MHz)	Max. Power		Body Power	
						Burst Pwr (dBm)	Frame Pwr (dBm)	Burst Pwr (dBm)	Frame Pwr (dBm)
850	GPRS (GMSK)	CS1	1	128	824.2	33.2	24.2	25.4	16.4
				190	836.6	33.4	24.4	25.4	16.4
				251	848.8	33.5	24.4	25.4	16.4
			2	128	824.2	31.9	25.9	22.5	16.5
				190	836.6	32.0	25.9	22.4	16.4
				251	848.8	31.9	25.9	22.5	16.5
	EGPRS (8PSK)	MCS5	1	128	824.2	27.9	18.9	25.3	16.3
				190	836.6	27.8	18.8	25.3	16.3
				251	848.8	27.9	18.9	25.3	16.3
			2	128	824.2	27.8	21.8	22.4	16.4
				190	836.6	27.8	21.8	22.4	16.4
				251	848.8	27.8	21.8	22.4	16.4

Notes:

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

- GMSK (GPRS) mode with 2 time slots for body power, based on the output power measurements above
- SAR is not required for EGPRS (8PSK) mode because its output power is less than that of GPRS Mode

GSM1900 Measured Results

Band	Mode	Coding Scheme	Time Slots	Ch No.	Freq. (MHz)	Max. Power		Body Power	
						Burst Pwr (dBm)	Frame Pwr (dBm)	Burst Pwr (dBm)	Frame Pwr (dBm)
1900	GPRS (GMSK)	CS1	1	512	1850.2	30.3	21.3	21.8	12.8
				661	1880.0	30.5	21.4	21.9	12.9
				810	1909.8	30.5	21.5	21.9	12.9
			2	512	1850.2	29.2	23.2	18.9	12.9
				661	1880.0	29.4	23.4	18.9	12.9
				810	1909.8	29.5	23.5	19.0	13.0
	EGPRS (8PSK)	MCS5	1	512	1850.2	26.9	17.9	21.8	12.8
				661	1880.0	27.0	18.0	21.9	12.9
				810	1909.8	27.0	18.0	21.9	12.9
			2	512	1850.2	26.8	20.8	18.9	12.9
				661	1880.0	26.9	20.9	18.9	12.9
				810	1909.8	27.0	21.0	18.9	12.9

Notes:

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

- GMSK (GPRS) mode with 2 time slots for body power, based on the output power measurements above
- SAR is not required for EGPRS (8PSK) mode because its output power is less than that of GPRS Mode

9.2. W-CDMA

Release 99 Setup Procedures used to establish the test signals

The following tests were completed according to the test requirements outlined in section 5.2 of the 3GPP TS34.121-1 specification. The DUT supports power Class 3, which has a nominal maximum output power of 24 dBm (+1.7/-3.7).

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

HSDPA Setup Procedures used to establish the test signals

The following 4 Sub-tests were completed according to Release 7 procedures in section 5.2 of 3GPP TS34.121. A summary of these settings are illustrated below:

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

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

The following 5 Sub-tests were completed according to Release 6 procedures in section 5.2 of 3GPP TS34.121. A summary of these settings are illustrated below:

	Mode	HSPA				
	Subtest	1	2	3	4	5
WCDMA General Settings	Loopback Mode	Test Mode 1				
	Rel99 RMC	12.2 kbps RMC				
	HSDPA FRC	H-Set 1				
	HSUPA Test	HSPA				
	Power Control Algorithm	Algorithm 2				Algorithm 1
	βc	11/15	6/15	15/15	2/15	15/15
	βd	15/15	15/15	9/15	15/15	0
	βec	209/225	12/15	30/15	2/15	5/15
	βc/βd	11/15	6/15	15/9	2/15	15/1
	βhs	22/15	12/15	30/15	4/15	5/15
	βed	1309/225	94/75	47/15	56/75	47/15
	CM (dB)	1	3	2	3	1
	MPR (dB)	0	2	1	2	0
HSDPA Specific Settings	DACK	8				0
	DNAK	8				0
	DCQI	8				0
	Ack-Nack repetition factor	3				
	CQI Feedback (Table 5.2B.4)	4ms				
	CQI Repetition Factor (Table 5.2B.4)	2				
	Ahs = βhs/βc	30/15				
HSUPA Specific Settings	E-DPDCCH	6	8	8	5	7
	DHARQ	0	0	0	0	0
	AG Index	20	12	15	17	21
	ETFCI (from 34.121 Table C.11.1.3)	75	67	92	71	81
	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.		

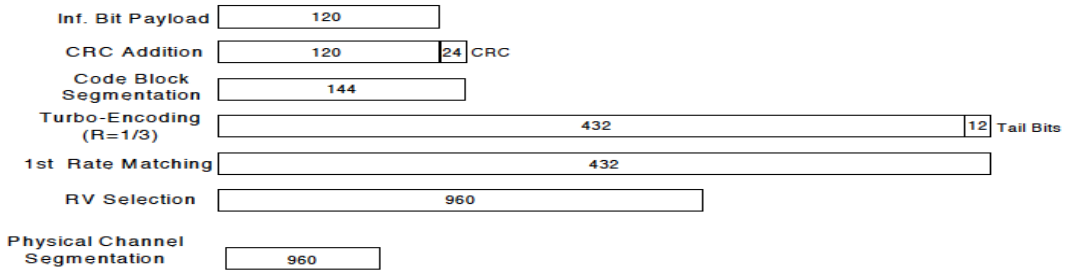


Figure C.8.19: Coding rate for Fixed reference Channel H-Set 12 (QPSK)

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 1			
	Power Control Algorithm	Algorithm2			
	βc	2/15	11/15	15/15	15/15
	βd	15/15	15/15	8/15	4/15
	βd (SF)	64			
	βc/βd	2/15	11/15	15/8	15/4
	βhs	4/15	24/15	30/15	30/15
	MPR (dB)	0	0	0.5	0.5
HSDPA Specific Settings	DACK	8			
	DNAK	8			
	DCQI	8			
	Ack-Nack Repetition factor	3			
	CQI Feedback	4ms			
	CQI Repetition Factor	2			
	Ahs = βhs/ βc	30/15			

HSPA+

Since 16QAM is not used for uplink, the uplink Category and release is same as HSUPA, i.e., CAT 6 Rel 6. Therefore, the RF conducted power is not measured.

Measured Results

Band	Mode		UL Ch No.	Freq. (MHz)	MPR (dB)	Avg Pwr (dBm)	
						Max. Pwr	Body Pwr
W-CDMA Band V	Rel 99	RMC, 12.2 kbps	4132	826.4	N/A	24.9	17.3
			4183	836.6	N/A	24.9	17.3
			4233	846.6	N/A	25.0	17.3
	HSDPA	Subtest 1	4132	826.4	0	24.1	17.3
			4183	836.6	0	24.1	17.3
			4233	846.6	0	24.2	17.2
		Subtest 2	4132	826.4	0	23.6	17.3
			4183	836.6	0	23.6	17.3
			4233	846.6	0	23.8	17.2
		Subtest 3	4132	826.4	0.5	23.7	16.7
			4183	836.6	0.5	23.7	16.8
			4233	846.6	0.5	23.7	16.7
		Subtest 4	4132	826.4	0.5	23.7	16.7
			4183	836.6	0.5	23.7	16.8
			4233	846.6	0.5	23.8	16.8
	HSUPA	Subtest 1	4132	826.4	0	24.0	17.3
			4183	836.6	0	23.9	17.3
			4233	846.6	0	24.0	17.3
		Subtest 2	4132	826.4	2	23.4	16.7
			4183	836.6	2	23.4	16.8
			4233	846.6	2	23.4	16.6
		Subtest 3	4132	826.4	1	23.4	16.8
			4183	836.6	1	23.3	16.7
			4233	846.6	1	23.5	16.7
		Subtest 4	4132	826.4	2	22.5	16.2
			4183	836.6	2	22.4	16.4
			4233	846.6	2	22.3	16.3
		Subtest 5	4132	826.4	0	23.9	17.1
			4183	836.6	0	24.0	17.2
			4233	846.6	0	23.9	17.1
	DC-HSDPA	Subtest 1	4132	826.4	0	23.9	17.2
			4183	836.6	0	23.8	17.3
			4233	846.6	0	23.9	17.3
		Subtest 2	4132	826.4	0	23.8	17.2
			4183	836.6	0	23.7	17.3
			4233	846.6	0	23.8	17.2
		Subtest 3	4132	826.4	0.5	23.3	16.7
			4183	836.6	0.5	23.4	16.8
			4233	846.6	0.5	23.3	16.8
		Subtest 4	4132	826.4	0.5	23.2	16.7
			4183	836.6	0.5	23.1	16.8
			4233	846.6	0.5	23.2	16.8

Band	Mode		UL Ch No.	Freq. (MHz)	MPR (dB)	Avg Pwr (dBm)	
						Max. Pwr	Body Pwr
W-CDMA Band IV	Rel 99	RMC, 12.2 kbps	1312	1712.4	N/A	24.3	12.5
			1413	1732.6	N/A	24.5	12.5
			1513	1752.6	N/A	24.2	12.5
	HSDPA	Subtest 1	1312	1712.4	0	23.5	12.5
			1413	1732.6	0	23.7	12.5
			1513	1752.6	0	23.4	12.4
		Subtest 2	1312	1712.4	0	23.0	12.4
			1413	1732.6	0	23.1	12.5
			1513	1752.6	0	22.9	12.4
		Subtest 3	1312	1712.4	0.5	23.0	11.9
			1413	1732.6	0.5	23.2	12.0
			1513	1752.6	0.5	23.0	12.0
		Subtest 4	1312	1712.4	0.5	23.1	11.9
			1413	1732.6	0.5	23.3	12.0
			1513	1752.6	0.5	23.0	12.0
	HSUPA	Subtest 1	1312	1712.4	0	23.2	12.5
			1413	1732.6	0	23.2	12.5
			1513	1752.6	0	23.1	12.5
		Subtest 2	1312	1712.4	2	22.2	11.6
			1413	1732.6	2	22.2	11.5
			1513	1752.6	2	22.3	11.5
		Subtest 3	1312	1712.4	1	23.0	12.1
			1413	1732.6	1	22.8	12.0
			1513	1752.6	1	22.9	11.9
		Subtest 4	1312	1712.4	2	22.7	12.0
			1413	1732.6	2	22.8	12.1
			1513	1752.6	2	22.6	12.0
		Subtest 5	1312	1712.4	0	23.1	12.3
			1413	1732.6	0	23.0	12.3
			1513	1752.6	0	23.0	12.2
	DC-HSDPA	Subtest 1	1312	1712.4	0	23.4	12.4
			1413	1732.6	0	23.5	12.5
			1513	1752.6	0	23.4	12.5
		Subtest 2	1312	1712.4	0	23.0	12.3
			1413	1732.6	0	23.1	12.3
			1513	1752.6	0	23.0	12.2
		Subtest 3	1312	1712.4	0.5	22.8	11.9
			1413	1732.6	0.5	22.9	11.9
			1513	1752.6	0.5	22.9	12.0
		Subtest 4	1312	1712.4	0.5	23.0	11.8
			1413	1732.6	0.5	22.8	11.9
			1513	1752.6	0.5	23.0	12.0

Band	Mode		UL Ch No.	Freq. (MHz)	MPR (dB)	Avg Pwr (dBm)	
						Max. Pwr	Body Pwr
W-CDMA Band II	Rel 99	RMC, 12.2 kbps	9262	1852.4	N/A	23.8	13.5
			9400	1880.0	N/A	24.0	13.5
			9538	1907.6	N/A	24.0	13.5
	HSDPA	Subtest 1	9262	1852.4	0	23.2	13.5
			9400	1880.0	0	23.3	13.3
			9538	1907.6	0	23.2	13.3
		Subtest 2	9262	1852.4	0	22.7	13.2
			9400	1880.0	0	22.9	13.1
			9538	1907.6	0	22.7	13.2
		Subtest 3	9262	1852.4	0.5	22.7	13.0
			9400	1880.0	0.5	22.8	13.0
			9538	1907.6	0.5	22.7	12.9
		Subtest 4	9262	1852.4	0.5	22.7	12.9
			9400	1880.0	0.5	22.9	13.0
			9538	1907.6	0.5	22.7	13.0
	HSUPA	Subtest 1	9262	1852.4	0	23.1	13.5
			9400	1880.0	0	22.9	13.5
			9538	1907.6	0	22.8	13.5
		Subtest 2	9262	1852.4	2	22.2	12.8
			9400	1880.0	2	22.2	12.9
			9538	1907.6	2	22.4	12.8
		Subtest 3	9262	1852.4	1	22.0	12.6
			9400	1880.0	1	22.0	12.5
			9538	1907.6	1	22.1	12.6
		Subtest 4	9262	1852.4	2	22.0	12.8
			9400	1880.0	2	22.5	12.8
			9538	1907.6	2	22.0	12.8
		Subtest 5	9262	1852.4	0	22.6	12.9
			9400	1880.0	0	22.8	13.0
			9538	1907.6	0	22.7	12.9
	DC-HSDPA	Subtest 1	9262	1852.4	0	23.1	13.4
			9400	1880.0	0	23.2	13.5
			9538	1907.6	0	23.1	13.5
		Subtest 2	9262	1852.4	0	23.1	13.4
			9400	1880.0	0	23.2	13.4
			9538	1907.6	0	23.0	13.4
		Subtest 3	9262	1852.4	0.5	22.7	12.9
			9400	1880.0	0.5	22.8	13.0
			9538	1907.6	0.5	22.7	12.9
		Subtest 4	9262	1852.4	0.5	22.7	12.9
			9400	1880.0	0.5	22.8	13.0
			9538	1907.6	0.5	22.7	13.0

9.3. CDMA

1x Advanced Setup Procedures used to establish the test signals

Call box setup procedure

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

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

Call box setup procedure

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

- 1xEV-DO Signaling Configuration Window

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

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

  - Under Carrier Configuration: RF Pilot

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

    For Three Carriers: Low Channel (1013)

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

  - Under Carrier Configuration: RF Pilot

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

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

Measured Results

Band	Mode		Ch No.	Freq. (MHz)	Max. Pwr (dBm)	Body Pwr (dBm)
BC 0	1xRTT	RC1 SO55 (Loopback)	1013	824.70	24.2	17.25
			384	836.52	24.5	17.25
			777	848.31	24.4	17.20
		RC3 SO55 (Loopback)	1013	824.70	24.2	17.25
			384	836.52	24.4	17.25
			777	848.31	24.4	17.20
		RC3 SO32 (+F-SCH)	1013	824.70	24.2	17.25
			384	836.52	24.4	17.25
			777	848.31	24.4	17.25
	1xAdvanced	Fwd11/Rvs8 SO75 (Loopback)	1013	824.70	24.2	17.25
			384	836.52	24.4	17.25
			777	848.31	24.4	17.25
	1xEVDO Rel. 0	FTAP Rate: 307.2 kbps(2 slot, QPSK) RTAP Rate: 153.6 kbps	1013	824.70	24.5	17.25
			384	836.52	24.5	17.25
			777	848.31	24.5	17.25
	1xEVDO Rev. A	FETAP: 307.2k, QPSK/ ACK RETAP: 4096	1013	824.70	24.5	17.25
			384	836.52	24.5	17.25
			777	848.31	24.5	17.25

Band	Mode	Test Set #	Ch No.	Freq. (MHz)	Max. Pwr (dBm)	Body Pwr (dBm)
BC0	1xEVDO Rev. B	Two Carrier Mini Separation	1013+31	824.70+825.93	21.8	17.25
			384+425	836.52+837.75	21.9	17.25
			736+777	847.08+848.31	21.8	17.25
		Two Carrier Max Separation	1013+156	824.70+829.68	21.9	17.25
			384+550	836.52+841.50	21.9	17.25
			611+777	843.33+848.31	21.9	17.25
		Three Carrier Max Separation	1013+31+72	824.70+825.93+827.16	22.0	17.25
			384+425+466	836.52+837.75+838.98	21.9	17.25
			695+736+777	845.85+847.08+848.31	21.9	17.25

Band	Mode		Ch No.	Freq. (MHz)	Max. Pwr (dBm)	Body Pwr (dBm)
BC 1	1xRTT	RC1 SO55 (Loopback)	25	1851.25	23.8	13.5
			600	1880.00	24.0	13.5
			1175	1908.75	23.8	13.5
		RC3 SO55 (Loopback)	25	1851.25	23.8	13.5
			600	1880.00	23.9	13.5
			1175	1908.75	23.8	13.4
		RC3 SO32 (+F-SCH)	25	1851.25	23.8	13.5
			600	1880.00	23.9	13.5
			1175	1908.75	23.8	13.5
	1xAdvanced	Fwd11/Rvs8 SO75 (Loopback)	25	1851.25	23.8	13.5
			600	1880.00	23.8	13.5
			1175	1908.75	23.8	13.5
	1xEVDO Rel. 0	FTAP Rate: 307.2 kbps(2 slot, QPSK) RTAP Rate: 153.6 kbps	25	1851.25	23.9	13.5
			600	1880.00	24.0	13.5
			1175	1908.75	23.8	13.5
	1xEVDO Rev. A	FETAP: 307.2k, QPSK/ ACK RETAP: 4096	25	1851.25	23.9	13.5
			600	1880.00	24.0	13.5
			1175	1908.75	23.9	13.4

Band	Mode		Ch No.	Freq. (MHz)	Max. Pwr (dBm)	Body Pwr (dBm)
BC 10	1xRTT	RC1 SO55 (Loopback)	476	817.90	24.9	17.5
			580	820.50	24.9	17.5
			670	822.75	25.0	17.5
		RC3 SO55 (Loopback)	476	817.90	24.9	17.5
			580	820.50	24.8	17.5
			670	822.75	24.9	17.5
		RC3 SO32 (+F-SCH)	476	817.90	24.9	17.5
			580	820.50	24.9	17.5
			670	822.75	24.9	17.5
	1xAdvanced	Fwd11/Rvs8 SO75 (Loopback)	476	817.90	24.9	17.5
			580	820.50	24.9	17.5
			670	822.75	25.0	17.5
	1xEVDO Rel. 0	FTAP Rate: 307.2 kbps(2 slot, QPSK) RTAP Rate: 153.6 kbps	476	817.90	24.9	17.5
			580	820.50	24.9	17.5
			670	822.75	25.0	17.5
	1xEVDO Rev. A	FETAP: 307.2k, QPSK/ ACK RETAP: 4096	476	817.90	24.9	17.5
			580	820.50	25.0	17.5
			670	822.75	25.0	17.4

Band	Mode		Ch No.	Freq. (MHz)	Max. Pwr (dBm)	Body Pwr (dBm)
BC 15	1xRTT	RC1 SO55 (Loopback)	25	1711.25	24.4	12.5
			450	1732.50	24.5	12.5
			875	1753.75	24.2	12.5
		RC3 SO55 (Loopback)	25	1711.25	24.4	12.5
			450	1732.50	24.5	12.5
			875	1753.75	24.2	12.5
		RC3 SO32 (+F-SCH)	25	1711.25	24.3	12.4
			450	1732.50	24.5	12.4
			875	1753.75	24.2	12.4
	1xAdvanced	Fwd11/Rvs8 SO75 (Loopback)	25	1711.25	24.4	12.5
			450	1732.50	24.5	12.5
			875	1753.75	24.2	12.5
	1xEVDO Rel. 0	FTAP Rate: 307.2 kbps(2 slot, QPSK) RTAP Rate: 153.6 kbps	25	1711.25	24.3	12.4
			450	1732.50	24.5	12.4
			875	1753.75	24.2	12.5
	1xEVDO Rev. A	FETAP: 307.2k, QPSK/ ACK RETAP: 4096	25	1711.25	24.4	12.4
			450	1732.50	24.5	12.4
			875	1753.75	24.4	12.5

9.4. LTE

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

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

Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 3

Modulation	Channel bandwidth / Transmission bandwidth (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

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 (sub-clause)	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	NA
NS_03	6.6.2.2.1	2, 4,10, 23, 25, 35, 36	3	>5	≤ 1
			5	>6	≤ 1
			10	>6	≤ 1
			15	>8	≤ 1
			20	>10	≤ 1
NS_04	6.6.2.2.2	41	5	>6	≤ 1
			10, 15, 20	See Table 6.2.4-4	
NS_05	6.6.3.3.1	1	10,15,20	≥ 50	≤ 1
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	Table 6.2.4-2
NS_08	6.6.3.3.3	19	10, 15	> 44	≤ 3
NS_09	6.6.3.3.4	21	10, 15	> 40	≤ 1
				> 55	≤ 2
NS_10		20	15, 20	Table 6.2.4-3	Table 6.2.4-3
NS_11	6.6.2.2.1	23[1]	1.4, 3, 5, 10	Table 6.2.4-5	Table 6.2.4-5
..					
NS_32	-	-	-	-	-
Note 1: Applies to the lower block of Band 23, i.e. a carrier placed in the 2000-2010 MHz region.					

LTE Band 2 Measured Results

Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Max. Avg Pwr (dBm)			Target MPR	Body Avg Pwr (dBm)		
						1860 MHz	1880 MHz	1900 MHz		1860 MHz	1880 MHz	1900 MHz
LTE Band 2	20	QPSK	1	0	0	23.9	23.8	23.9	0	14.0	14.0	14.0
			1	49	0	23.8	23.9	23.9	0	14.0	14.0	14.0
			1	99	0	23.9	23.9	24.0	0	14.0	14.0	14.0
			50	0	1	22.9	22.9	22.9	0	14.0	14.0	14.0
			50	24	1	23.0	22.9	23.0	0	14.0	14.0	14.0
			50	49	1	22.9	22.9	23.0	0	14.0	14.0	14.0
			100	0	1	22.9	22.9	22.9	0	14.0	14.0	14.0
		16QAM	1	0	1	22.9	22.9	23.0	0	14.0	14.0	14.0
			1	49	1	22.9	22.9	23.0	0	14.0	14.0	14.0
			1	99	1	23.0	22.9	23.0	0	14.0	14.0	14.0
			50	0	2	21.9	21.9	22.0	0	14.0	14.0	14.0
			50	24	2	21.9	21.9	22.0	0	14.0	14.0	14.0
			50	49	2	21.8	21.9	22.0	0	14.0	14.0	14.0
			100	0	2	22.0	22.0	22.0	0	13.9	14.0	13.9
Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Max. Avg Pwr (dBm)			Target MPR	Body 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	23.9	23.8	23.9	0	14.0	14.0	14.0
			1	36	0	23.8	23.8	23.9	0	14.0	14.0	14.0
			1	74	0	23.8	23.8	23.8	0	14.0	14.0	13.9
			36	0	1	23.0	23.0	22.9	0	14.0	14.0	14.0
			36	18	1	22.9	22.8	22.8	0	14.0	14.0	14.0
			36	37	1	22.9	22.9	23.0	0	13.9	14.0	14.0
			75	0	1	23.0	22.8	22.9	0	14.0	14.0	14.0
		16QAM	1	0	1	22.9	22.8	22.9	0	14.0	14.0	14.0
			1	36	1	22.8	22.9	23.0	0	14.0	14.0	14.0
			1	74	1	22.8	22.8	23.0	0	13.9	14.0	14.0
			36	0	2	22.0	21.9	21.9	0	14.0	14.0	13.9
			36	18	2	21.9	21.9	21.9	0	14.0	14.0	14.0
			36	37	2	21.9	21.9	21.9	0	13.9	14.0	14.0
			75	0	2	21.9	21.9	22.0	0	14.0	14.0	14.0
Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Max. Avg Pwr (dBm)			Target MPR	Body Avg Pwr (dBm)		
						1855 MHz	1880 MHz	1905 MHz		1855 MHz	1880 MHz	1905 MHz
LTE Band 2	10	QPSK	1	0	0	23.8	23.8	23.8	0	14.0	14.0	14.0
			1	24	0	23.8	23.9	23.9	0	14.0	14.0	14.0
			1	49	0	23.9	23.8	23.8	0	14.0	14.0	14.0
			25	0	1	22.9	22.8	23.0	0	14.0	14.0	14.0
			25	12	1	22.9	22.9	22.9	0	14.0	14.0	14.0
			25	24	1	22.9	22.9	22.9	0	14.0	14.0	14.0
			50	0	1	22.9	22.8	22.9	0	14.0	14.0	14.0
		16QAM	1	0	1	23.0	22.9	22.9	0	14.0	14.0	14.0
			1	24	1	23.0	22.9	22.9	0	14.0	14.0	14.0
			1	49	1	22.9	22.9	22.9	0	14.0	14.0	14.0
			25	0	2	22.1	21.9	21.9	0	13.9	14.0	14.0
			25	12	2	22.0	21.8	21.9	0	14.0	14.0	14.0
			25	24	2	22.0	21.9	21.9	0	14.0	14.0	13.9
			50	0	2	21.9	21.8	21.9	0	14.0	14.0	13.9

LTE Band 2 Measured Results (continued)

Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Max. Avg Pwr (dBm)			Target MPR	Body 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	23.8	24.0	23.9	0	14.0	14.0	14.0
			1	12	0	23.9	23.9	23.9	0	14.0	14.0	14.0
			1	24	0	23.8	23.9	23.8	0	14.0	14.0	14.0
			12	0	1	23.0	22.9	22.9	0	14.0	14.0	13.8
			12	7	1	22.9	22.9	22.9	0	14.0	14.0	13.9
			12	13	1	22.9	22.9	22.9	0	14.0	14.0	14.0
			25	0	1	22.9	22.9	22.9	0	14.0	14.0	14.0
		16QAM	1	0	1	23.0	23.0	23.0	0	14.0	13.9	14.0
			1	12	1	23.0	23.0	23.0	0	14.0	14.0	14.0
			1	24	1	23.0	23.0	23.0	0	14.0	14.0	14.0
			12	0	2	21.9	22.0	21.9	0	14.0	14.0	14.0
			12	7	2	21.9	22.0	21.9	0	13.9	14.0	14.0
			12	13	2	21.9	22.0	21.9	0	13.9	14.0	14.0
			25	0	2	22.0	21.9	22.0	0	14.0	14.0	14.0
Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Max. Avg Pwr (dBm)			Target MPR	Body 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	23.9	23.9	23.8	0	14.0	14.0	14.0
			1	8	0	23.9	23.8	23.8	0	14.0	14.0	14.0
			1	14	0	23.9	23.8	23.8	0	14.0	14.0	13.8
			8	0	1	23.0	22.9	22.9	0	14.0	14.0	14.0
			8	4	1	22.9	22.9	22.9	0	14.0	14.0	14.0
			8	7	1	22.9	22.9	22.9	0	14.0	14.0	14.0
			15	0	1	22.9	22.9	22.9	0	14.0	14.0	14.0
		16QAM	1	0	1	23.0	23.0	23.0	0	14.0	14.0	14.0
			1	8	1	23.0	23.0	23.0	0	14.0	14.0	14.0
			1	14	1	22.9	23.0	23.0	0	13.9	14.0	13.9
			8	0	2	22.0	22.0	22.0	0	13.8	14.0	14.0
			8	4	2	22.0	22.0	22.0	0	14.0	13.9	14.0
			8	7	2	22.0	22.0	22.0	0	14.0	13.9	14.0
			15	0	2	21.9	21.9	22.0	0	14.0	13.9	14.0
Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Max. Avg Pwr (dBm)			Target MPR	Body 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	23.9	23.9	23.9	0	14.0	14.0	14.0
			1	3	0	23.9	23.9	23.8	0	14.0	14.0	14.0
			1	5	0	23.9	23.8	23.9	0	14.0	14.0	13.9
			3	0	0	24.0	23.9	23.9	0	14.0	14.0	14.0
			3	1	0	23.9	23.9	23.9	0	14.0	14.0	14.0
			3	3	0	24.0	23.8	23.9	0	13.9	14.0	14.0
			6	0	1	22.9	22.9	23.0	0	14.0	14.0	14.0
		16QAM	1	0	1	23.0	22.9	23.0	0	14.0	14.0	14.0
			1	3	1	22.9	22.8	23.0	0	14.0	13.9	14.0
			1	5	1	22.9	22.9	23.0	0	14.0	14.0	14.0
			3	0	1	23.0	22.8	23.0	0	14.0	14.0	14.0
			3	1	1	23.0	22.9	23.0	0	14.0	14.0	14.0
			3	3	1	23.0	22.9	23.0	0	13.8	14.0	14.0
			6	0	2	22.0	22.0	22.0	0	14.0	14.0	14.0

LTE Band 4 Measured Results

Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Max. Avg Pwr (dBm)			Target MPR	Body 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	24.0	23.9	23.8	0	14.0	14.0	14.0
			1	49	0	23.9	23.9	23.9	0	14.0	14.0	14.0
			1	99	0	23.9	23.8	23.9	0	14.0	14.0	14.0
			50	0	1	23.0	22.9	22.9	0	14.0	14.0	14.0
			50	24	1	23.0	22.9	22.9	0	14.0	14.0	14.0
			50	49	1	23.0	22.9	22.9	0	14.0	14.0	14.0
			100	0	1	22.9	22.9	22.8	0	14.0	14.0	14.0
		16QAM	1	0	1	22.9	22.9	23.0	0	14.0	14.0	14.0
			1	49	1	23.0	22.9	22.9	0	14.0	14.0	14.0
			1	99	1	23.0	22.9	22.8	0	14.0	14.0	14.0
			50	0	2	22.0	21.9	21.8	0	14.0	14.0	14.0
			50	24	2	21.9	21.9	21.8	0	14.0	14.0	14.0
			50	49	2	21.9	21.8	21.9	0	14.0	14.0	14.0
			100	0	2	21.9	21.9	21.8	0	14.0	14.0	14.0
Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Max. Avg Pwr (dBm)			Target MPR	Body 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	23.9	23.8	23.8	0	14.0	14.0	14.0
			1	36	0	23.9	23.9	23.9	0	14.0	14.0	13.9
			1	74	0	23.9	23.8	23.9	0	14.0	14.0	13.9
			36	0	1	23.0	22.9	22.8	0	13.9	14.0	14.0
			36	18	1	23.0	22.9	22.8	0	14.0	14.0	14.0
			36	37	1	23.0	22.9	23.0	0	14.0	14.0	14.0
			75	0	1	23.0	23.0	22.9	0	14.0	13.9	14.0
		16QAM	1	0	1	22.9	22.9	22.9	0	14.0	14.0	14.0
			1	36	1	22.9	22.9	22.9	0	14.0	14.0	13.9
			1	74	1	22.9	22.9	22.9	0	14.0	14.0	13.9
			36	0	2	22.0	21.9	21.8	0	14.0	14.0	14.0
			36	18	2	22.0	21.9	21.9	0	14.0	14.0	14.0
			36	37	2	21.9	21.9	22.0	0	14.0	14.0	14.0
			75	0	2	22.0	22.0	22.0	0	13.9	14.0	14.0
Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Max. Avg Pwr (dBm)			Target MPR	Body 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	23.9	23.8	23.8	0	14.0	14.0	14.0
			1	24	0	23.8	23.9	23.8	0	14.0	14.0	13.8
			1	49	0	23.9	23.9	23.9	0	13.9	14.0	13.9
			25	0	1	23.0	22.9	22.9	0	13.9	14.0	14.0
			25	12	1	22.9	22.9	22.8	0	14.0	14.0	14.0
			25	24	1	22.9	22.9	22.8	0	14.0	14.0	14.0
			50	0	1	22.9	22.9	22.8	0	14.0	14.0	14.0
		16QAM	1	0	1	23.0	22.9	22.9	0	14.0	13.9	14.0
			1	24	1	22.9	22.9	23.0	0	14.0	14.0	14.0
			1	49	1	23.0	22.9	23.0	0	14.0	14.0	14.0
			25	0	2	21.9	21.9	22.0	0	13.9	14.0	14.0
			25	12	2	21.9	21.8	21.9	0	13.9	14.0	13.9
			25	24	2	21.9	21.9	22.0	0	14.0	14.0	14.0
			50	0	2	21.9	21.8	21.9	0	14.0	14.0	14.0

LTE Band 4 Measured Results (continued)

Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Max. Avg Pwr (dBm)			Target MPR	Body 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	23.8	23.8	23.8	0	14.0	14.0	14.0
			1	12	0	23.8	23.8	23.9	0	14.0	14.0	14.0
			1	24	0	23.8	23.8	23.9	0	14.0	14.0	14.0
			12	0	1	22.9	22.9	22.9	0	14.0	14.0	13.9
			12	7	1	22.9	22.9	22.9	0	14.0	13.9	13.9
			12	13	1	22.9	22.8	22.9	0	14.0	14.0	14.0
			25	0	1	22.9	22.9	22.9	0	14.0	14.0	14.0
		16QAM	1	0	1	23.0	23.0	23.0	0	14.0	14.0	14.0
			1	12	1	23.0	23.0	23.0	0	14.0	13.9	14.0
			1	24	1	23.0	23.0	23.0	0	14.0	14.0	14.0
			12	0	2	21.9	21.9	21.9	0	14.0	14.0	14.0
			12	7	2	21.9	21.8	21.9	0	14.0	14.0	14.0
			12	13	2	21.9	21.9	21.9	0	13.9	14.0	14.0
			25	0	2	22.0	22.0	22.0	0	14.0	14.0	14.0
Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Max. Avg Pwr (dBm)			Target MPR	Body 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	23.9	23.9	23.9	0	14.0	14.0	13.9
			1	8	0	23.8	23.8	23.9	0	14.0	14.0	13.9
			1	14	0	23.9	23.8	23.9	0	13.9	14.0	13.9
			8	0	1	22.9	22.9	22.9	0	14.0	14.0	14.0
			8	4	1	22.9	22.9	22.8	0	14.0	14.0	14.0
			8	7	1	22.9	22.9	22.9	0	14.0	14.0	14.0
			15	0	1	23.0	22.9	22.8	0	14.0	14.0	14.0
		16QAM	1	0	1	22.9	22.9	23.0	0	14.0	14.0	14.0
			1	8	1	22.8	22.9	22.9	0	14.0	14.0	14.0
			1	14	1	22.8	22.8	23.0	0	14.0	14.0	14.0
			8	0	2	22.0	21.9	22.0	0	14.0	14.0	14.0
			8	4	2	21.9	21.9	21.9	0	14.0	14.0	14.0
			8	7	2	22.0	21.9	21.9	0	14.0	13.9	14.0
			15	0	2	21.9	21.9	21.9	0	13.8	14.0	14.0
Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Max. Avg Pwr (dBm)			Target MPR	Body Avg Pwr (dBm)		
						1710.7 MHz	1732.5 MHz	1754.3 MHz		1710.7 MHz	1732.5 MHz	1754.3 MHz
LTE Band 4	1.4	QPSK	1	0	0	23.9	23.9	23.9	0	14.0	14.0	14.0
			1	3	0	23.9	23.8	23.8	0	14.0	14.0	14.0
			1	5	0	23.9	23.9	23.9	0	14.0	14.0	14.0
			3	0	0	24.0	23.9	23.9	0	14.0	14.0	14.0
			3	1	0	24.0	23.9	23.9	0	14.0	13.9	14.0
			3	3	0	23.9	23.9	23.9	0	14.0	13.9	14.0
			6	0	1	23.0	22.9	22.9	0	14.0	14.0	14.0
		16QAM	1	0	1	23.0	22.9	22.8	0	14.0	14.0	14.0
			1	3	1	23.0	22.8	22.9	0	14.0	14.0	14.0
			1	5	1	23.0	22.9	22.9	0	14.0	14.0	14.0
			3	0	1	23.0	22.9	22.9	0	14.0	14.0	14.0
			3	1	1	23.0	22.9	22.9	0	14.0	14.0	13.9
			3	3	1	23.0	22.8	22.9	0	13.8	14.0	14.0
			6	0	2	21.9	22.0	22.0	0	13.8	14.0	14.0

LTE Band 5 Measured Results

Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Max. Avg Pwr (dBm)			Target MPR	Body Avg Pwr (dBm)		
						829 MHz	836.5 MHz	844 MHz		829 MHz	836.5 MHz	844 MHz
LTE Band 5	10	QPSK	1	0	0	24.5	24.4	24.4	0	17.25	17.25	17.25
			1	24	0	24.4	24.5	24.5	0	17.25	17.25	17.25
			1	49	0	24.4	24.4	24.5	0	17.25	17.25	17.25
			25	0	1	23.4	23.5	23.4	0	17.25	17.25	17.25
			25	12	1	23.5	23.5	23.4	0	17.25	17.25	17.25
			25	24	1	23.4	23.5	23.5	0	17.25	17.25	17.25
			50	0	1	23.4	23.5	23.4	0	17.25	17.25	17.25
		16QAM	1	0	1	23.4	23.4	23.5	0	17.25	17.25	17.25
			1	24	1	23.5	23.4	23.5	0	17.25	17.25	17.25
			1	49	1	23.4	23.3	23.5	0	17.25	17.25	17.25
			25	0	2	22.6	22.5	22.5	0	17.25	17.25	17.10
			25	12	2	22.5	22.5	22.5	0	17.25	17.25	17.25
			25	24	2	22.5	22.5	22.5	0	17.20	17.25	17.25
			50	0	2	22.5	22.5	22.4	0	17.25	17.25	17.25
Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Max. Avg Pwr (dBm)			Target MPR	Body Avg Pwr (dBm)		
						826.5 MHz	836.5 MHz	846.5 MHz		826.5 MHz	836.5 MHz	846.5 MHz
LTE Band 5	5	QPSK	1	0	0	24.5	24.5	24.4	0	17.25	17.25	17.25
			1	12	0	24.4	24.4	24.4	0	17.25	17.25	17.25
			1	24	0	24.4	24.5	24.4	0	17.25	17.25	17.25
			12	0	1	23.5	23.5	23.5	0	17.20	17.25	17.20
			12	7	1	23.5	23.5	23.5	0	17.25	17.25	17.25
			12	13	1	23.5	23.5	23.5	0	17.25	17.20	17.25
			25	0	1	23.5	23.5	23.5	0	17.25	17.25	17.25
		16QAM	1	0	1	23.5	23.5	23.5	0	17.25	17.25	17.25
			1	12	1	23.5	23.4	23.4	0	17.25	17.25	17.20
			1	24	1	23.4	23.4	23.4	0	17.25	17.20	17.25
			12	0	2	22.5	22.5	22.4	0	17.25	17.25	17.25
			12	7	2	22.5	22.5	22.4	0	17.20	17.25	17.25
			12	13	2	22.5	22.4	22.4	0	17.25	17.25	17.25
			25	0	2	22.4	22.5	22.4	0	17.25	17.25	17.25
Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Max. Avg Pwr (dBm)			Target MPR	Body Avg Pwr (dBm)		
						825.5 MHz	836.5 MHz	847.5 MHz		825.5 MHz	836.5 MHz	847.5 MHz
LTE Band 5	3	QPSK	1	0	0	24.4	24.4	24.5	0	17.20	17.25	17.25
			1	8	0	24.5	24.4	24.4	0	17.20	17.25	17.25
			1	14	0	24.4	24.4	24.4	0	17.25	17.25	17.10
			8	0	1	23.5	23.4	23.5	0	17.25	17.25	17.25
			8	4	1	23.5	23.5	23.5	0	17.25	17.25	17.25
			8	7	1	23.5	23.5	23.5	0	17.25	17.25	17.25
			15	0	1	23.5	23.5	23.4	0	17.25	17.25	17.25
		16QAM	1	0	1	23.4	23.5	23.5	0	17.25	17.20	17.25
			1	8	1	23.5	23.5	23.4	0	17.25	17.25	17.25
			1	14	1	23.5	23.5	23.4	0	17.25	17.25	17.25
			8	0	2	22.5	22.4	22.5	0	17.25	17.25	17.25
			8	4	2	22.4	22.5	22.5	0	17.25	17.25	17.20
			8	7	2	22.5	22.5	22.5	0	17.25	17.20	17.20
			15	0	2	22.5	22.5	22.5	0	17.20	17.25	17.25

LTE Band 5 Measured Results (continued)

Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Max. Avg Pwr (dBm)			Target MPR	Body Avg Pwr (dBm)		
						824.7 MHz	836.5 MHz	848.3 MHz		824.7 MHz	836.5 MHz	848.3 MHz
LTE Band 5	1.4	QPSK	1	0	0	24.4	24.5	24.5	0	17.25	17.25	17.25
			1	3	0	24.4	24.4	24.5	0	17.25	17.25	17.25
			1	5	0	24.5	24.5	24.4	0	17.25	17.25	17.20
			3	0	0	24.4	24.4	24.4	0	17.25	17.25	17.25
			3	1	0	24.4	24.4	24.4	0	17.25	17.25	17.25
			3	3	0	24.5	24.4	24.5	0	17.25	17.25	17.25
			6	0	1	23.5	23.5	23.5	0	17.25	17.25	17.25
		16QAM	1	0	1	23.5	23.4	23.5	0	17.20	17.25	17.25
			1	3	1	23.5	23.5	23.5	0	17.25	17.25	17.25
			1	5	1	23.5	23.4	23.5	0	17.25	17.25	17.25
			3	0	1	23.5	23.5	23.5	0	17.25	17.25	17.25
			3	1	1	23.5	23.5	23.5	0	17.25	17.25	17.25
			3	3	1	23.5	23.5	23.5	0	17.25	17.25	17.25
			6	0	2	22.5	22.6	22.5	0	17.25	17.25	17.25

LTE Band 13 Measured Results

Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Max. Avg Pwr (dBm) 782 MHz	Target MPR	Body Avg Pwr (dBm) 782 MHz
LTE Band 13	10	QPSK	1	0	0	23.9	0	18.5
			1	24	0	23.9	0	18.5
			1	49	0	23.9	0	18.4
			25	0	1	22.9	0	18.4
			25	12	1	22.9	0	18.4
			25	24	1	22.9	0	18.4
			50	0	1	22.9	0	18.4
		16QAM	1	0	1	23.0	0	18.4
			1	24	1	23.0	0	18.3
			1	49	1	22.8	0	18.3
			25	0	2	22.0	0	18.4
			25	12	2	22.0	0	18.4
			25	24	2	21.9	0	18.4
			50	0	2	21.9	0	18.4
Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Max. Avg Pwr (dBm) 782 MHz	Target MPR	Body Avg Pwr (dBm) 782 MHz
LTE Band 13	5	QPSK	1	0	0	24.0	0	18.5
			1	12	0	23.9	0	18.5
			1	24	0	24.0	0	18.5
			12	0	1	22.9	0	18.5
			12	7	1	22.9	0	18.5
			12	13	1	22.9	0	18.5
			25	0	1	22.8	0	18.5
		16QAM	1	0	1	23.0	0	18.4
			1	12	1	23.0	0	18.4
			1	24	1	23.0	0	18.4
			12	0	2	21.8	0	18.5
			12	7	2	21.8	0	18.5
			12	13	2	21.8	0	18.5
			25	0	2	21.9	0	18.5

Note(s):

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

LTE Band 17 Measured Results

Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Max. Avg Pwr (dBm)	Target MPR	Body Avg Pwr (dBm)
						710 MHz		710 MHz
LTE Band 17	10	QPSK	1	0	0	23.9	0	18.8
			1	24	0	23.8	0	18.8
			1	49	0	23.8	0	18.8
			25	0	1	22.8	0	18.8
			25	12	1	22.9	0	18.8
			25	24	1	22.9	0	18.8
			50	0	1	22.9	0	18.8
		16QAM	1	0	1	22.9	0	18.5
			1	24	1	22.9	0	18.5
			1	49	1	23.0	0	18.5
			25	0	2	21.9	0	18.6
			25	12	2	21.9	0	18.6
			25	24	2	21.9	0	18.6
			50	0	2	21.9	0	18.6
Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Max. Avg Pwr (dBm)	Target MPR	Body Avg Pwr (dBm)
						710 MHz		710 MHz
LTE Band 17	5	QPSK	1	0	0	23.8	0	18.7
			1	12	0	23.9	0	18.7
			1	24	0	23.9	0	18.7
			12	0	1	22.9	0	18.7
			12	7	1	22.8	0	18.7
			12	13	1	22.9	0	18.7
			25	0	1	22.8	0	18.7
		16QAM	1	0	1	23.0	0	18.7
			1	12	1	23.0	0	18.7
			1	24	1	23.0	0	18.7
			12	0	2	21.8	0	18.7
			12	7	2	21.9	0	18.7
			12	13	2	22.0	0	18.7
			25	0	2	21.9	0	18.7

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 25 Measured Results

Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Max. Avg Pwr (dBm)			Target MPR	Body 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	24.0	23.9	23.9	0	13.60	13.60	13.75
			1	49	0	23.9	23.9	23.9	0	13.60	13.60	13.75
			1	99	0	23.9	23.9	23.8	0	13.60	13.50	13.75
			50	0	1	23.0	22.9	22.9	0	13.60	13.60	13.75
			50	24	1	22.9	22.8	22.9	0	13.60	13.60	13.75
			50	49	1	22.9	23.0	22.9	0	13.60	13.60	13.75
			100	0	1	23.0	23.0	22.9	0	13.60	13.50	13.75
		16QAM	1	0	1	23.0	22.9	22.9	0	13.75	13.75	13.75
			1	49	1	23.0	22.9	22.9	0	13.75	13.75	13.75
			1	99	1	23.0	22.9	22.9	0	13.75	13.75	13.75
			50	0	2	21.9	21.9	22.0	0	13.75	13.75	13.70
			50	24	2	21.9	21.9	22.0	0	13.75	13.75	13.70
			50	49	2	21.8	21.9	21.9	0	13.75	13.75	13.75
			100	0	2	22.1	22.0	22.0	0	13.70	13.75	13.75
Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Max. Avg Pwr (dBm)			Target MPR	Body 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	23.9	23.8	23.9	0	13.75	13.75	13.75
			1	36	0	23.8	23.8	23.9	0	13.75	13.75	13.75
			1	74	0	23.7	23.8	23.8	0	13.75	13.75	13.75
			36	0	1	23.0	22.9	23.0	0	13.75	13.75	13.75
			36	18	1	23.0	22.9	23.0	0	13.70	13.75	13.75
			36	37	1	22.9	22.9	22.9	0	13.70	13.75	13.75
			75	0	1	23.0	23.0	22.9	0	13.75	13.75	13.75
		16QAM	1	0	1	22.9	23.0	22.9	0	13.75	13.75	13.75
			1	36	1	22.8	22.8	22.8	0	13.75	13.70	13.75
			1	74	1	22.7	22.8	22.8	0	13.75	13.70	13.75
			36	0	2	21.9	21.9	22.0	0	13.75	13.75	13.75
			36	18	2	21.9	21.9	22.0	0	13.75	13.75	13.75
			36	37	2	21.9	21.9	21.9	0	13.75	13.75	13.75
			75	0	2	22.0	21.9	22.0	0	13.75	13.75	13.70
Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Max. Avg Pwr (dBm)			Target MPR	Body 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	24.0	23.8	23.8	0	13.75	13.75	13.75
			1	24	0	23.9	23.8	23.7	0	13.75	13.75	13.75
			1	49	0	23.9	23.9	23.8	0	13.70	13.75	13.75
			25	0	1	22.9	22.9	22.9	0	13.75	13.75	13.75
			25	12	1	22.9	22.9	22.8	0	13.75	13.75	13.75
			25	24	1	22.9	22.9	22.8	0	13.75	13.75	13.75
			50	0	1	23.0	22.8	22.9	0	13.75	13.75	13.75
		16QAM	1	0	1	22.8	22.8	23.0	0	13.75	13.75	13.75
			1	24	1	22.9	22.8	22.9	0	13.60	13.75	13.75
			1	49	1	22.8	22.8	23.0	0	13.70	13.75	13.70
			25	0	2	21.9	21.9	22.1	0	13.75	13.75	13.75
			25	12	2	21.9	21.8	21.9	0	13.75	13.70	13.75
			25	24	2	21.9	22.0	21.9	0	13.75	13.75	13.75
			50	0	2	22.0	21.9	21.9	0	13.75	13.75	13.75

LTE Band 25 Measured Results (continued)

Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Max. Avg Pwr (dBm)			Target MPR	Body 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	23.9	24.0	23.9	0	13.75	13.75	13.75
			1	12	0	23.9	24.0	23.8	0	13.75	13.75	13.75
			1	24	0	24.0	23.9	23.8	0	13.75	13.75	13.75
			12	0	1	23.0	22.9	22.8	0	13.75	13.60	13.70
			12	7	1	23.1	22.9	22.8	0	13.75	13.75	13.75
			12	13	1	23.0	22.9	22.8	0	13.70	13.75	13.75
			25	0	1	23.0	22.9	22.8	0	13.75	13.75	13.75
		16QAM	1	0	1	23.0	23.0	22.9	0	13.75	13.75	13.75
			1	12	1	23.0	23.0	22.8	0	13.75	13.75	13.75
			1	24	1	23.0	23.0	22.9	0	13.75	13.75	13.75
			12	0	2	21.9	21.8	21.9	0	13.75	13.75	13.75
			12	7	2	21.9	21.8	21.9	0	13.75	13.70	13.75
			12	13	2	21.9	21.9	21.8	0	13.70	13.75	13.70
			25	0	2	22.0	21.9	21.8	0	13.75	13.75	13.75
Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Max. Avg Pwr (dBm)			Target MPR	Body 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	23.9	23.8	23.8	0	13.75	13.75	13.70
			1	8	0	23.8	23.9	23.8	0	13.75	13.75	13.75
			1	14	0	23.9	23.9	23.8	0	13.75	13.75	13.75
			8	0	1	23.0	22.9	22.8	0	13.75	13.75	13.75
			8	4	1	22.9	22.9	22.9	0	13.75	13.75	13.75
			8	7	1	22.9	22.9	22.8	0	13.70	13.75	13.75
			15	0	1	23.0	22.8	22.8	0	13.70	13.75	13.75
		16QAM	1	0	1	23.0	23.0	22.9	0	13.75	13.75	13.75
			1	8	1	23.0	23.0	22.8	0	13.75	13.75	13.75
			1	14	1	23.0	23.0	22.9	0	13.75	13.70	13.75
			8	0	2	22.0	22.0	21.9	0	13.75	13.75	13.75
			8	4	2	22.0	21.9	21.9	0	13.75	13.75	13.75
			8	7	2	22.1	22.1	21.8	0	13.70	13.75	13.75
			15	0	2	22.0	21.9	21.9	0	13.75	13.75	13.70
Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Max. Avg Pwr (dBm)			Target MPR	Body 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	24.0	23.8	23.8	0	13.75	13.75	13.75
			1	3	0	23.9	23.8	23.8	0	13.70	13.75	13.75
			1	5	0	23.9	23.9	23.8	0	13.75	13.75	13.75
			3	0	0	23.9	23.9	23.8	0	13.75	13.75	13.70
			3	1	0	23.9	23.8	23.9	0	13.75	13.75	13.75
			3	3	0	23.9	23.9	23.8	0	13.75	13.75	13.70
			6	0	1	23.0	22.9	22.9	0	13.75	13.75	13.75
		16QAM	1	0	1	23.0	23.0	22.9	0	13.75	13.75	13.75
			1	3	1	23.0	23.0	23.0	0	13.75	13.70	13.75
			1	5	1	23.0	23.0	23.0	0	13.75	13.75	13.75
			3	0	1	23.0	23.0	22.9	0	13.75	13.75	13.60
			3	1	1	23.0	22.9	22.8	0	13.75	13.75	13.75
			3	3	1	23.0	23.0	22.8	0	13.70	13.75	13.75
			6	0	2	22.1	21.9	21.8	0	13.70	13.75	13.75

LTE Band 26 Measured Results

Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Max. Avg Pwr (dBm)			Target MPR	Body Avg Pwr (dBm)		
							819 MHz				819 MHz	
LTE Band 26	10	QPSK	1	0	0		23.4		0		17.25	
			1	24	0		23.5		0		17.25	
			1	49	0		23.4		0		17.25	
			25	0	1		22.5		0		17.25	
			25	12	1		22.4		0		17.25	
			25	24	1		22.4		0		17.25	
			50	0	1		22.5		0		17.25	
		16QAM	1	0	1		22.5		0		17.25	
			1	24	1		22.5		0		17.25	
			1	49	1		22.5		0		17.25	
			25	0	2		21.5		0		17.25	
			25	12	2		21.5		0		17.25	
			25	24	2		21.5		0		17.25	
			50	0	2		21.5		0		17.25	

Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Max. Avg Pwr (dBm)			Target MPR	Body Avg Pwr (dBm)		
						816.5 MHz	819 MHz	821.5 MHz		816.5 MHz	819 MHz	821.5 MHz
LTE Band 26	5	QPSK	1	0	0	23.5	23.5	23.5	0	17.25	17.25	17.25
			1	12	0	23.4	23.4	23.4	0	17.25	17.25	17.25
			1	24	0	23.4	23.4	23.4	0	17.25	17.25	17.25
			12	0	1	22.4	22.4	22.5	0	17.25	17.25	17.25
			12	7	1	22.4	22.3	22.5	0	17.25	17.25	17.25
			12	13	1	22.4	22.4	22.4	0	17.25	17.25	17.25
			25	0	1	22.3	22.3	22.5	0	17.25	17.25	17.25
		16QAM	1	0	1	22.4	22.4	22.5	0	17.20	17.20	17.20
			1	12	1	22.3	22.4	22.5	0	17.20	17.20	17.20
			1	24	1	22.3	22.3	22.4	0	17.25	17.25	17.25
			12	0	2	21.5	21.4	21.4	0	17.25	17.25	17.25
			12	7	2	21.4	21.4	21.3	0	17.25	17.25	17.25
			12	13	2	21.5	21.3	21.3	0	17.25	17.25	17.25
			25	0	2	21.4	21.3	21.5	0	17.25	17.25	17.25

LTE Band 26 Measured Results (continued)

Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Max. Avg Pwr (dBm)			Target MPR	Body Avg Pwr (dBm)		
						815.5 MHz	819 MHz	822.5 MHz		815.5 MHz	819 MHz	822.5 MHz
LTE Band 26	3	QPSK	1	0	0	23.5	23.4	23.4	0	17.25	17.25	17.25
			1	8	0	23.3	23.3	23.3	0	17.25	17.25	17.25
			1	14	0	23.4	23.4	23.4	0	17.25	17.25	17.25
			8	0	1	22.5	22.4	22.5	0	17.25	17.25	17.25
			8	4	1	22.4	22.4	22.4	0	17.25	17.25	17.25
			8	7	1	22.4	22.4	22.5	0	17.25	17.25	17.25
			15	0	1	22.4	22.5	22.5	0	17.25	17.25	17.25
		16QAM	1	0	1	22.4	22.4	22.3	0	17.20	17.10	17.10
			1	8	1	22.4	22.3	22.4	0	17.20	17.10	17.10
			1	14	1	22.4	22.4	22.4	0	17.20	17.20	17.10
			8	0	2	21.5	21.5	21.5	0	17.20	17.20	17.10
			8	4	2	21.5	21.5	21.5	0	17.20	17.20	17.10
			8	7	2	21.5	21.5	21.5	0	17.20	17.20	17.10
			15	0	2	21.5	21.5	21.5	0	17.20	17.20	17.10

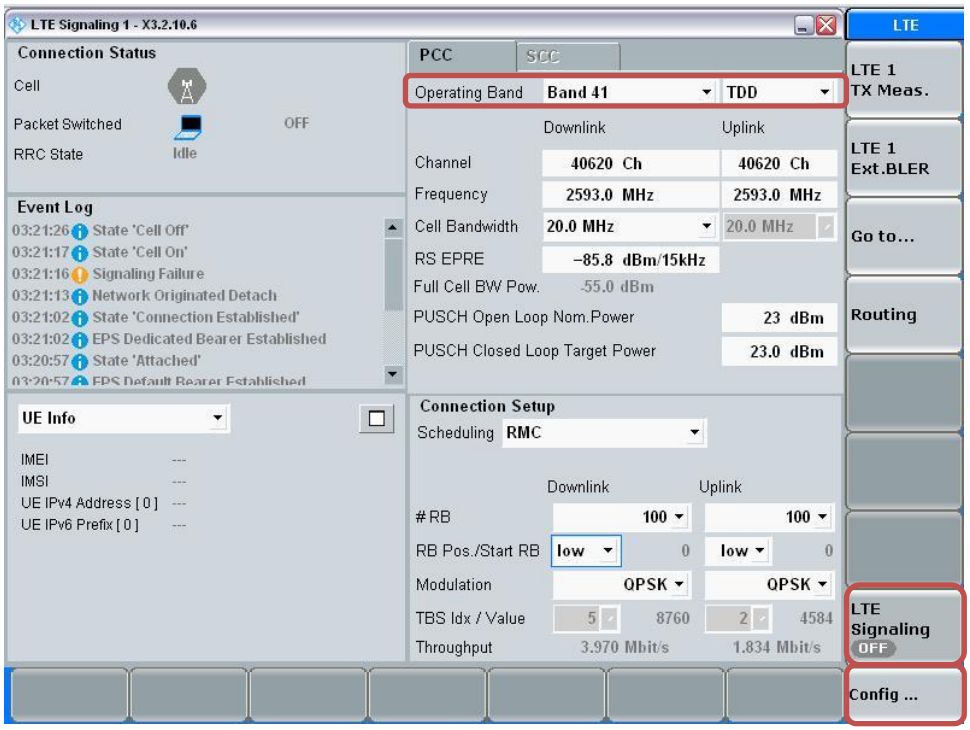
Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Max. Avg Pwr (dBm)			Target MPR	Body Avg Pwr (dBm)		
						814.7 MHz	819 MHz	823.3 MHz		814.7 MHz	819 MHz	823.3 MHz
LTE Band 26	1.4	QPSK	1	0	0	23.5	23.4	23.4	0	17.25	17.25	17.25
			1	3	0	23.4	23.3	23.3	0	17.25	17.25	17.20
			1	5	0	23.3	23.4	23.3	0	17.20	17.25	17.25
			3	0	0	23.5	23.4	23.3	0	17.25	17.25	17.25
			3	1	0	23.4	23.3	23.3	0	17.25	17.25	17.25
			3	3	0	23.4	23.3	23.3	0	17.25	17.25	17.25
			6	0	1	22.5	22.4	22.4	0	17.25	17.20	17.25
		16QAM	1	0	1	22.7	22.4	22.3	0	17.20	17.10	17.10
			1	3	1	22.7	22.5	22.3	0	17.10	17.10	17.20
			1	5	1	22.4	22.4	22.3	0	17.10	17.20	17.20
			3	0	1	22.6	22.4	22.3	0	17.20	17.20	17.20
			3	1	1	22.6	22.3	22.3	0	17.20	17.20	17.20
			3	3	1	22.7	22.3	22.3	0	17.20	17.20	17.20
			6	0	2	21.7	21.5	21.4	0	17.20	17.20	17.20

LTE Band 41 Measured Results

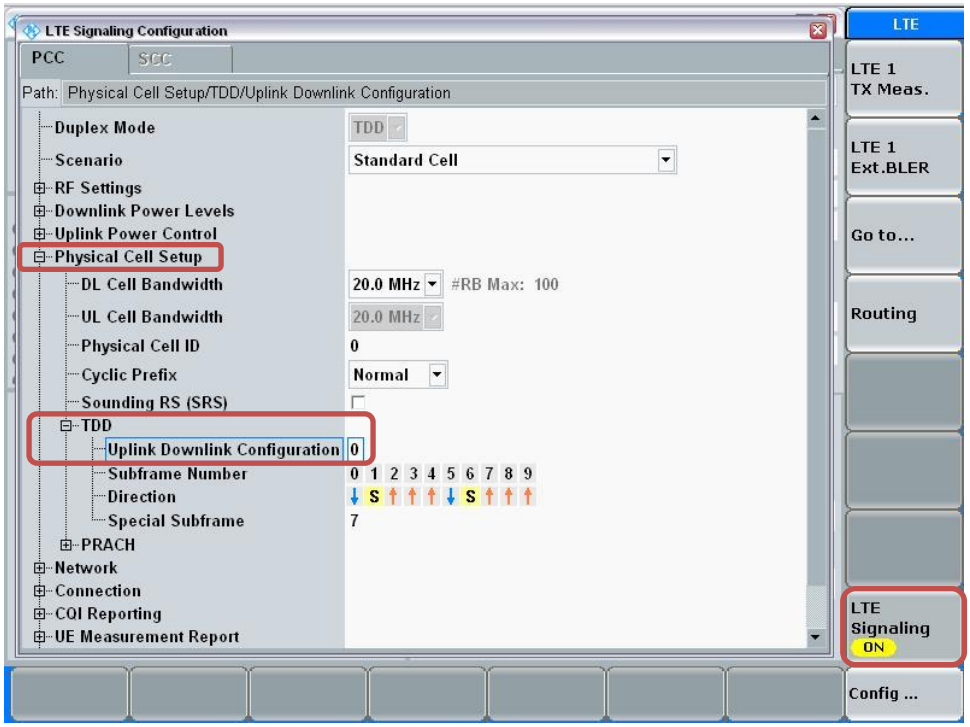
Procedure used to establish SAR test signal for LTE TDD Band 41

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….”

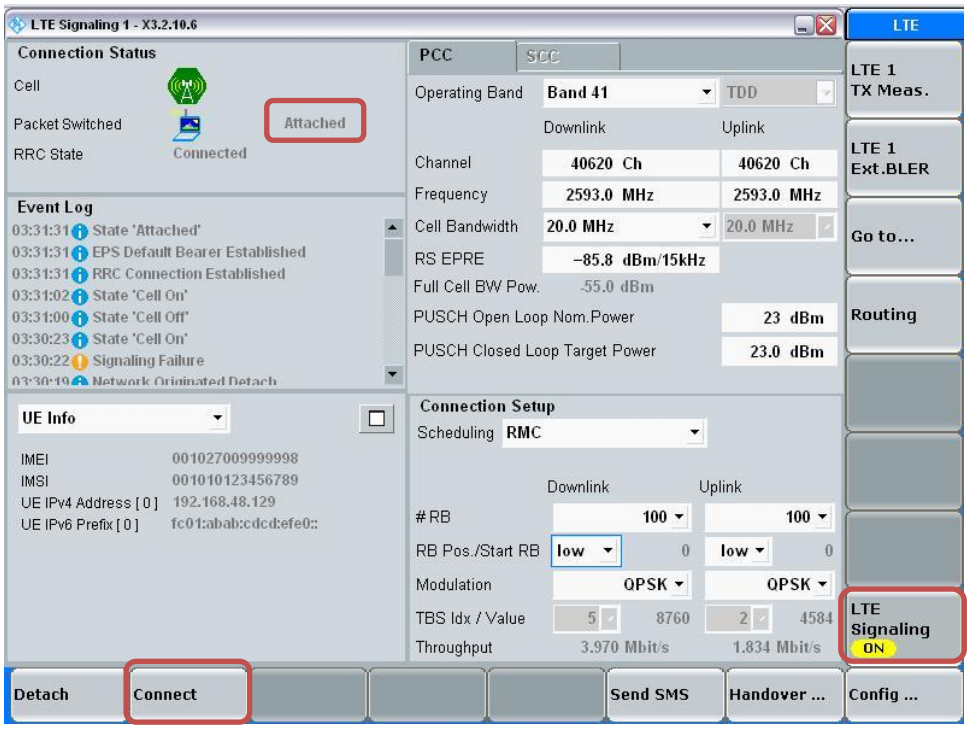


- Go to “Physical Cell Setup”
- Select “TDD” and Set “Uplink Downlink Configuration” to “0”
- Turn the cell on using “ON | OFF” key



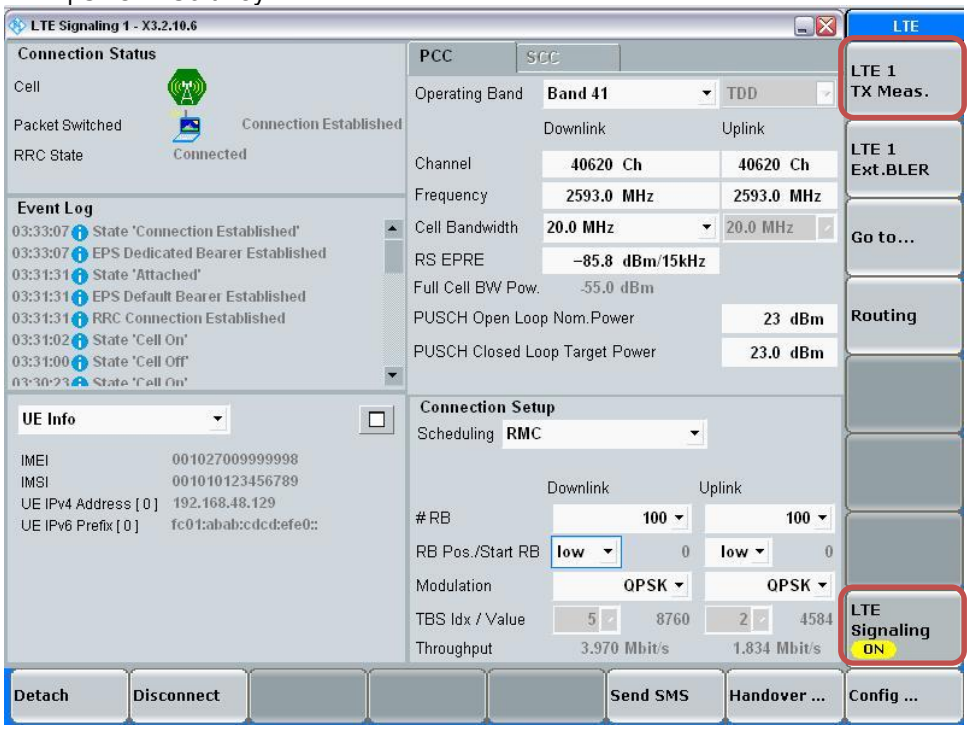
Connect to EUT

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

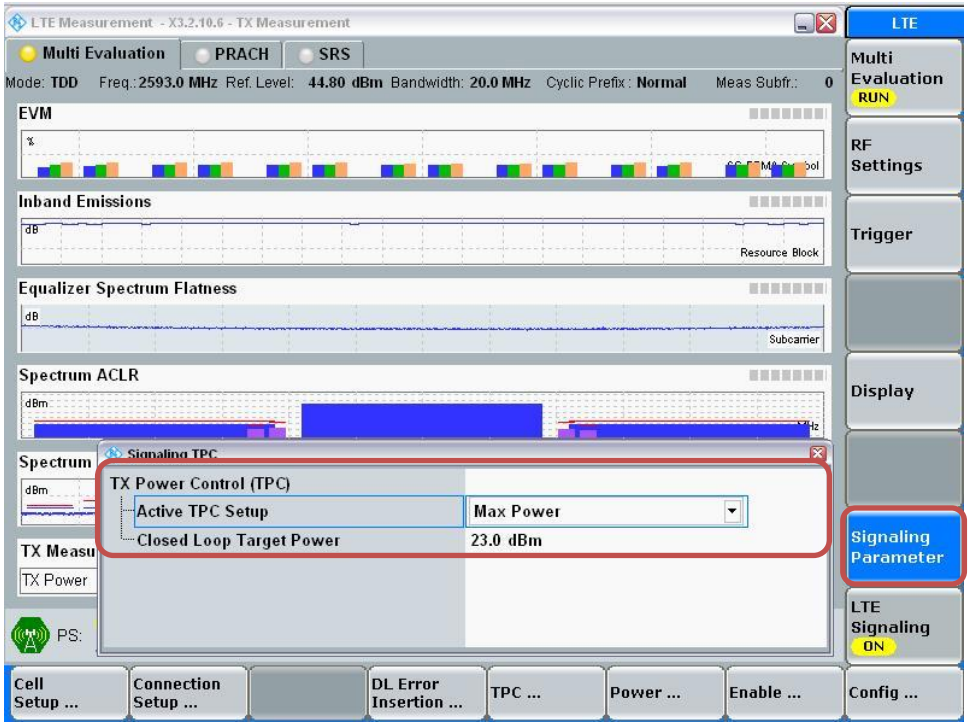


Max Power Setting

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

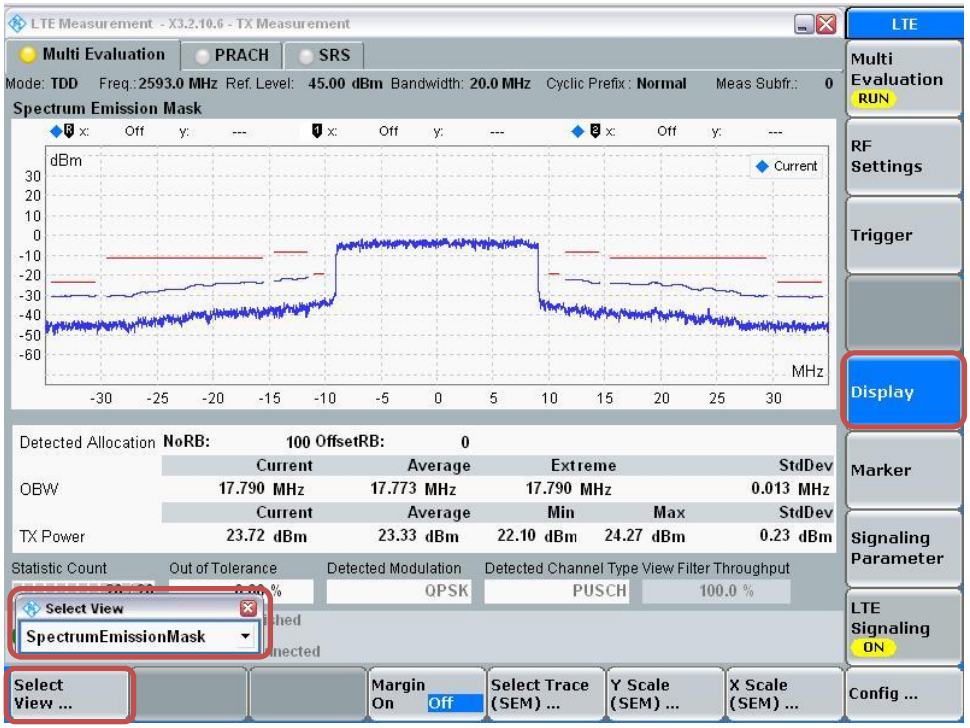


- Select “Signaling Parameter”
- Select “TX Power Control (TPC)” > Select “Active TPC Setup” to “Max Power” > Set “Closed Loop Target Power” to “23 dBm”



View TX Power

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



LTE Band 41 Measured Results

Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Max. Avg Pwr (dBm)					Target MPR	Body Avg Pwr (dBm)				
						2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz		2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz
LTE Band 41	20	QPSK	1	0	0	22.0	21.8	21.8	21.8	21.9	0	14.25	14.25	14.25	14.20	14.25
			1	49	0	22.0	21.7	21.9	21.7	21.9	0	14.20	14.25	14.25	14.20	14.25
			1	99	0	22.0	21.8	21.9	21.8	22.0	0	14.20	14.25	14.25	14.20	14.25
			50	0	1	20.9	20.8	20.9	20.7	20.9	0	14.25	14.25	14.25	14.25	14.20
			50	24	1	20.9	20.8	20.9	20.8	20.9	0	14.25	14.25	14.25	14.25	14.20
			50	49	1	20.9	20.8	20.8	20.8	20.9	0	14.25	14.25	14.25	14.25	14.20
			100	0	1	20.9	20.8	20.9	20.7	20.8	0	14.25	14.25	14.25	14.25	14.20
		16QAM	1	0	1	21.0	20.8	20.8	20.8	20.9	0	14.25	14.25	14.25	14.25	14.25
			1	49	1	21.0	20.9	20.9	20.9	20.8	0	14.25	14.25	14.25	14.25	14.25
			1	99	1	20.9	20.9	20.8	20.8	20.8	0	14.25	14.25	14.25	14.25	14.25
			50	0	2	19.9	19.8	20.0	19.8	20.1	0	14.20	14.25	14.20	14.25	14.20
			50	24	2	19.9	19.9	20.1	19.8	20.0	0	14.25	14.25	14.20	14.25	14.20
			50	49	2	19.9	19.9	19.9	19.9	20.0	0	14.25	14.25	14.25	14.25	14.25
			100	0	2	19.9	19.8	19.9	19.8	20.0	0	14.25	14.25	14.25	14.25	14.25

Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Max. Avg Pwr (dBm)					Target MPR	Body Avg Pwr (dBm)				
						2503.5 MHz	2548.3 MHz	2593 MHz	2637.8 MHz	2682.5 MHz		2503.5 MHz	2548.3 MHz	2593 MHz	2637.8 MHz	2682.5 MHz
LTE Band 41	15	QPSK	1	0	0	21.9	21.9	22.0	21.9	21.9	0	14.25	14.25	14.25	14.25	14.25
			1	36	0	21.9	22.0	21.9	21.9	21.9	0	14.25	14.25	14.25	14.25	14.25
			1	74	0	21.9	22.0	21.9	21.8	22.0	0	14.20	14.25	14.25	14.25	14.25
			36	0	1	20.9	20.8	20.9	20.8	20.9	0	14.25	14.25	14.25	14.25	14.25
			36	18	1	21.0	20.8	20.8	20.9	20.9	0	14.25	14.25	14.25	14.25	14.25
			36	37	1	21.0	20.9	20.9	21.0	20.9	0	14.25	14.20	14.25	14.25	14.25
			75	0	1	21.0	20.9	20.8	20.9	21.0	0	14.25	14.25	14.25	14.25	14.25
		16QAM	1	0	1	21.2	20.8	21.1	20.9	21.2	0	14.25	14.25	14.25	14.25	14.25
			1	36	1	21.1	20.9	21.1	20.8	21.2	0	14.25	14.25	14.25	14.25	14.25
			1	74	1	21.1	20.9	21.1	20.8	21.1	0	14.25	14.25	14.25	14.20	14.25
			36	0	2	19.9	19.7	19.9	19.8	20.0	0	14.25	14.25	14.25	14.25	14.25
			36	18	2	19.9	19.9	19.9	19.9	20.0	0	14.25	14.20	14.25	14.25	14.25
			36	37	2	19.9	20.0	19.9	19.8	20.0	0	14.25	14.25	14.25	14.25	14.25
			75	0	2	20.0	20.0	19.9	20.1	20.0	0	14.25	14.25	14.25	14.25	14.10

Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Max. Avg Pwr (dBm)					Target MPR	Body Avg Pwr (dBm)				
						2501 MHz	2547 MHz	2593 MHz	2639 MHz	2685 MHz		2501 MHz	2547 MHz	2593 MHz	2639 MHz	2685 MHz
LTE Band 41	10	QPSK	1	0	0	21.9	21.8	22.0	21.8	21.8	0	14.25	14.25	14.25	14.25	14.25
			1	24	0	21.9	21.9	22.0	21.9	21.8	0	14.25	14.25	14.25	14.25	14.20
			1	49	0	22.0	21.8	21.9	21.8	21.8	0	14.25	14.25	14.25	14.25	14.25
			25	0	1	21.0	20.9	20.9	21.0	20.8	0	14.25	14.25	14.20	14.25	14.25
			25	12	1	20.9	20.8	21.0	20.9	20.8	0	14.25	14.25	14.20	14.25	14.25
			25	24	1	20.9	20.9	21.0	20.8	20.8	0	14.25	14.25	14.25	14.25	14.25
			50	0	1	21.0	20.8	21.0	20.9	20.8	0	14.25	14.25	14.25	14.25	14.25
		16QAM	1	0	1	21.0	20.9	21.1	20.8	21.0	0	14.25	14.25	14.25	14.25	14.25
			1	24	1	21.0	20.9	21.1	20.8	21.0	0	14.20	14.25	14.25	14.25	14.25
			1	49	1	21.0	20.7	21.1	20.9	21.1	0	14.25	14.25	14.25	14.25	14.25
			25	0	2	20.0	19.9	20.2	19.9	19.9	0	14.25	14.25	14.20	14.25	14.25
			25	12	2	20.0	19.8	20.1	19.9	19.9	0	14.25	14.25	14.25	14.25	14.25
			25	24	2	19.9	19.8	20.2	19.9	19.9	0	14.25	14.25	14.25	14.25	14.25
			50	0	2	20.0	19.9	20.0	19.9	19.8	0	14.10	14.25	14.25	14.25	14.25

LTE Band 41 Measured Results (continued)

Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Max. Avg Pwr (dBm)					Target MPR	Body Avg Pwr (dBm)				
						2498.5 MHz	2545.8 MHz	2593 MHz	2640.3 MHz	2687.5 MHz		2498.5 MHz	2545.8 MHz	2593 MHz	2640.3 MHz	2687.5 MHz
LTE Band 41	5	QPSK	1	0	0	22.0	21.9	22.0	21.8	21.9	0	14.25	14.25	14.25	14.25	14.25
			1	12	0	21.9	21.8	22.0	21.8	21.9	0	14.25	14.25	14.25	14.25	14.25
			1	24	0	21.9	21.8	22.0	21.9	21.9	0	14.25	14.25	14.25	14.25	14.25
			12	0	1	21.0	20.8	21.0	21.0	20.9	0	14.25	14.25	14.25	14.25	14.25
			12	7	1	21.0	20.8	21.0	20.9	21.0	0	14.25	14.25	14.25	14.25	14.25
			12	13	1	21.0	20.7	21.0	21.0	21.0	0	14.25	14.25	14.25	14.25	14.20
			25	0	1	21.0	20.8	21.0	21.0	21.0	0	14.25	14.25	14.20	14.25	14.20
		16QAM	1	0	1	21.1	20.9	21.0	20.8	21.0	0	14.25	14.25	14.25	14.25	14.25
			1	12	1	21.0	20.8	21.0	20.9	21.0	0	14.20	14.25	14.25	14.25	14.25
			1	24	1	21.1	20.9	21.0	20.9	21.1	0	14.20	14.25	14.20	14.25	14.25
			12	0	2	20.0	19.9	20.0	19.8	20.0	0	14.20	14.25	14.25	14.25	14.10
			12	7	2	20.0	19.8	20.0	19.9	20.0	0	14.25	14.25	14.25	14.25	14.25
			12	13	2	20.0	19.9	20.0	19.8	20.0	0	14.25	14.25	14.25	14.25	14.25
			25	0	2	20.0	19.8	20.0	20.0	20.0	0	14.25	14.25	14.25	14.25	14.25

9.5. LTE Rel. 10 Carrier Aggregation

The device supports LTE Advanced Rel-10, Cat 6 and Carrier Aggregation (CA) on downlink only for Inter band. Uplink CA is not supported. Supported bands and bandwidths are provided in Tables 1 and 2.

Table 1

Inter-Band E-UTRA Carrier Aggregation Configurations							
Configuration	**Bands**	**1.4 MHz**	**3 MHz**	**5 MHz**	**10 MHz**	**15 MHz**	**20 MHz**
CA_2A-17A(0)*	2			Yes	Yes		
	17			Yes	Yes		
CA_2A-29A(0)*	2				Yes		
	29				Yes		
CA_4A-5A(1)*	4			Yes	Yes		
	5			Yes	Yes		
CA_4A-13A(0)*	4			Yes	Yes		
	13				Yes		
CA_4A-17A(0)*	4			Yes	Yes		
	17			Yes	Yes		
CA_4A-29A(0)*	4				Yes		
	29				Yes		

* Not all Bandwidth combination sets are supported for CA.

Table 2 provides the results for the combinations selected for measurement from Table 1. For all PCCs, UL power measurements were made for all supported DL bandwidths on the channel/RB combination resulting in the highest output power. For Band 2, UL power measurements were made for all PCC/SCC combinations. For the remaining PCC bands, UL power measurements were made for only one PCC/SCC combination.

For each LTE band, the maximum UL output power is capped in the cellular power table for all channel/bandwidth/RB combinations, which are set in accordance with 3GPP protocols.

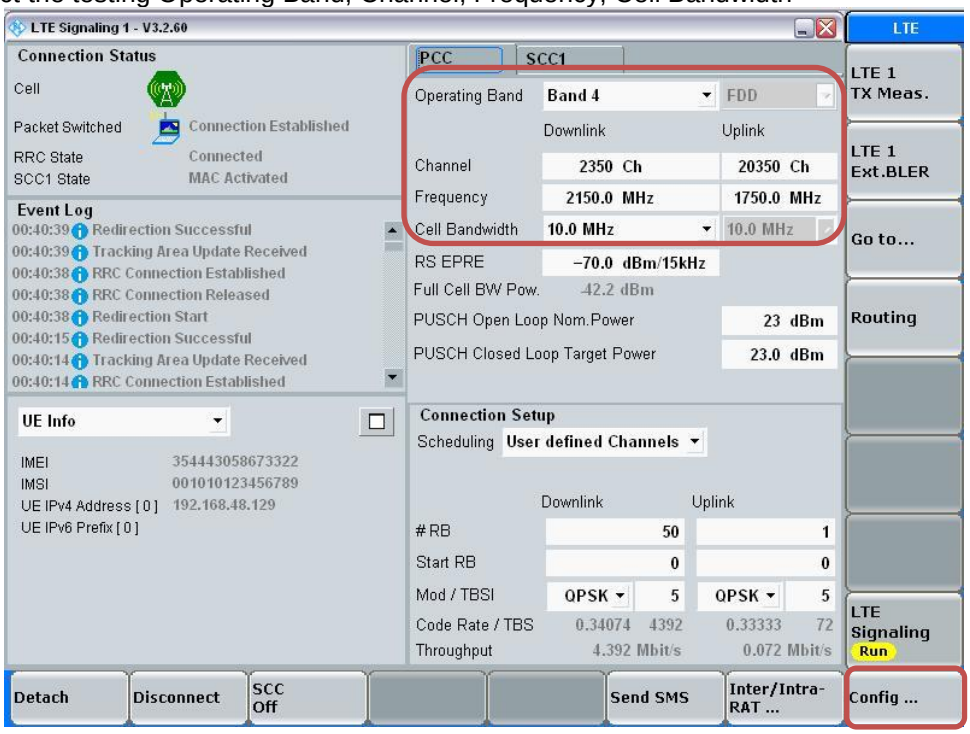
Measurement results are provided in Table 2. Based upon the measurement results, uplink power is not affected by downlink CA and additional SAR measurements are not required

Table 2

PCC Band	SCC Band	PCC BW	PCC DL Freq. MHz	SCC BW	SCC DL Freq. MHz	UL RBs	UL RB Start	UL Freq. MHz	Mod.	UL Power Standalone dBm	UL Power CA dBm	Delta dBm
2	17	5	1960	10	740	1	0	1880	QPSK	24.0	23.9	-0.1
2	17	10	1935	10	739	1	49	1855	QPSK	23.9	23.9	0
2	29	10	1935	10	722	1	49	1855	QPSK	23.9	23.9	0
4	5	5	2152.5	10	889	1	12	1752.5	QPSK	23.9	23.9	0
4	5	10	2115	10	874	1	0	1715	QPSK	23.9	23.9	0
4	13	10	2115	10	751	1	0	1715	QPSK	23.9	23.9	0
4	13	5	2152.5	10	751	1	12	1752.5	QPSK	23.9	23.9	0
4	17	5	2152.5	10	741	1	12	1752.5	QPSK	23.9	23.9	0
4	17	10	2115	10	739	1	0	1715	QPSK	23.9	23.9	0
4	29	10	2115	10	722	1	0	1715	QPSK	23.9	23.9	0

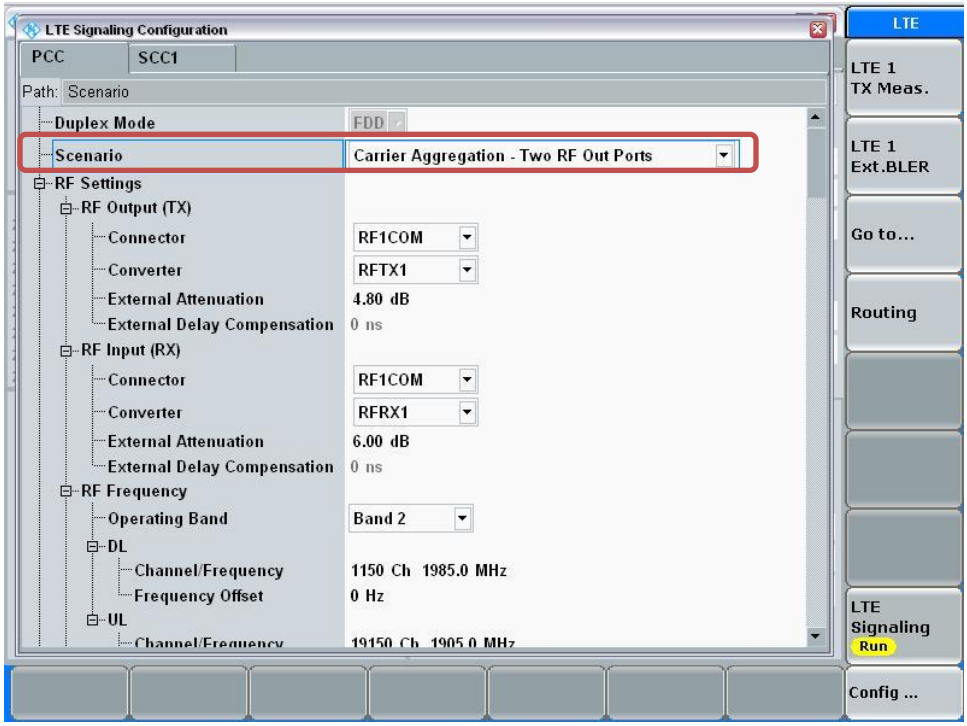
LTE Carrier Aggregation Test Signal Set-up Procedure
(Use normal LTE set-up procedure in addition with the following steps)

Set to CMW-500 with following parameters:

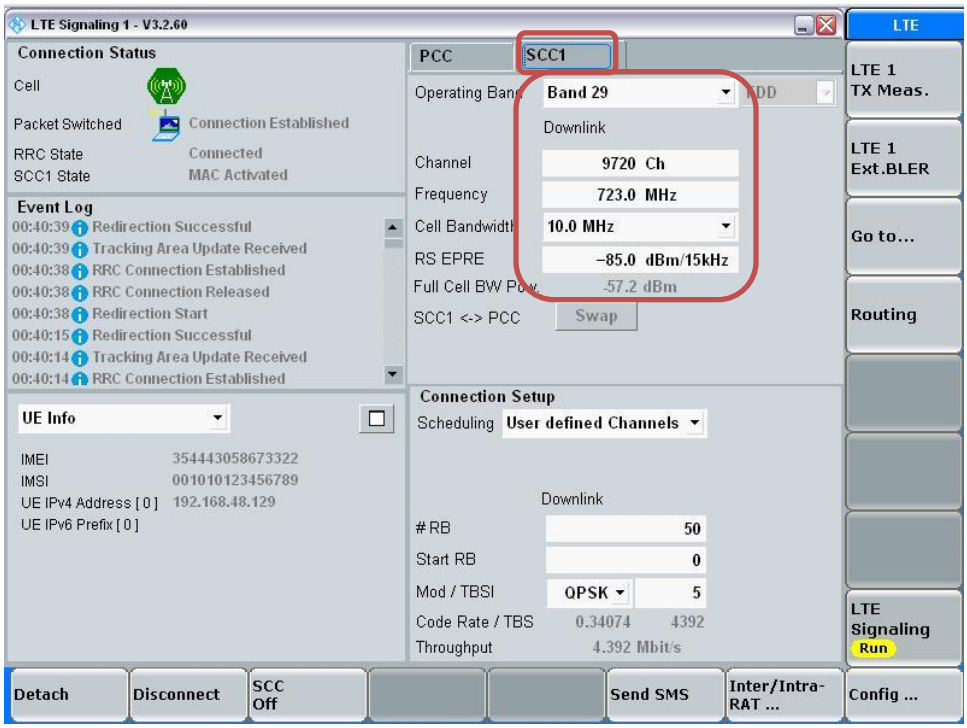
- PCC tab:
  - Select the testing Operating Band, Channel, Frequency, Cell Bandwidth
  - 

- Go to “Config….”

- Go to “Scenario”
- Select “Carrier Aggregation” and Set to “Carrier Aggregation – Two RF Out Ports”
- Select “LTE Signaling” button

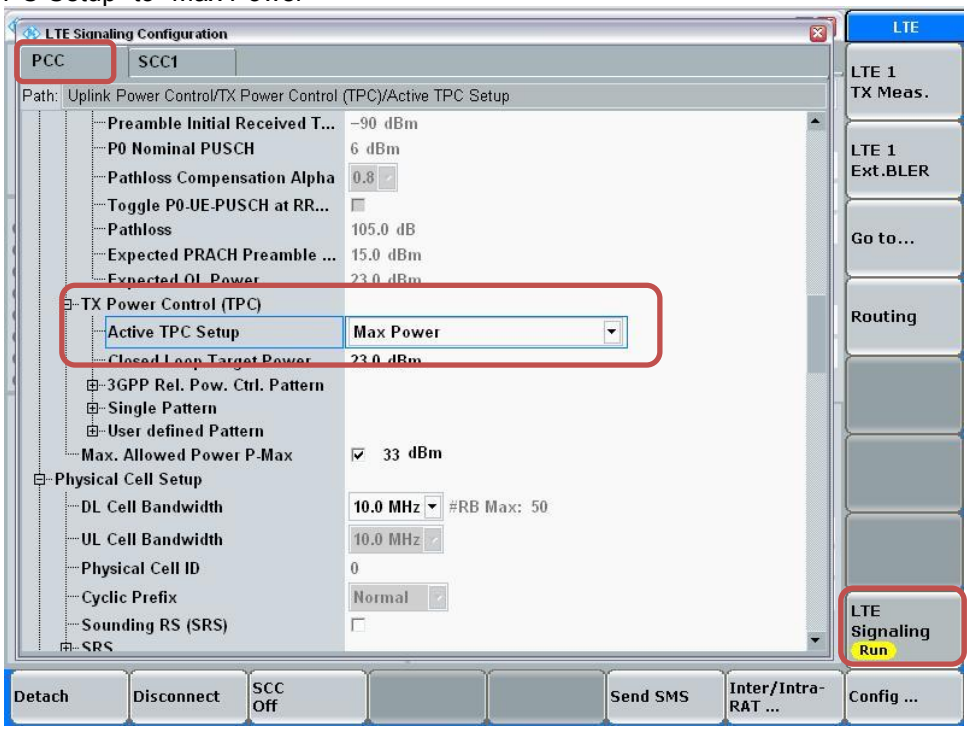


- Select “SCC1” tab
  - Select the testing Operating Band, Channel, Frequency, Cell Bandwidth

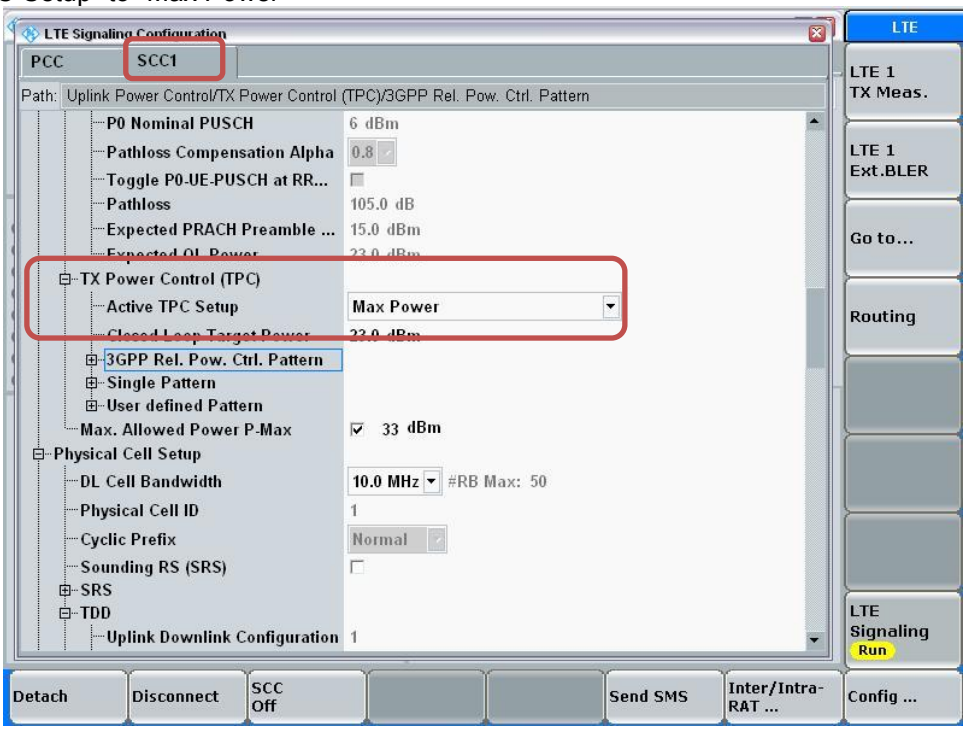


Max Power Setting

- Select “LTE Signaling” button
- Select PCC tab
- Set “Active TPC Setup” to “Max Power”

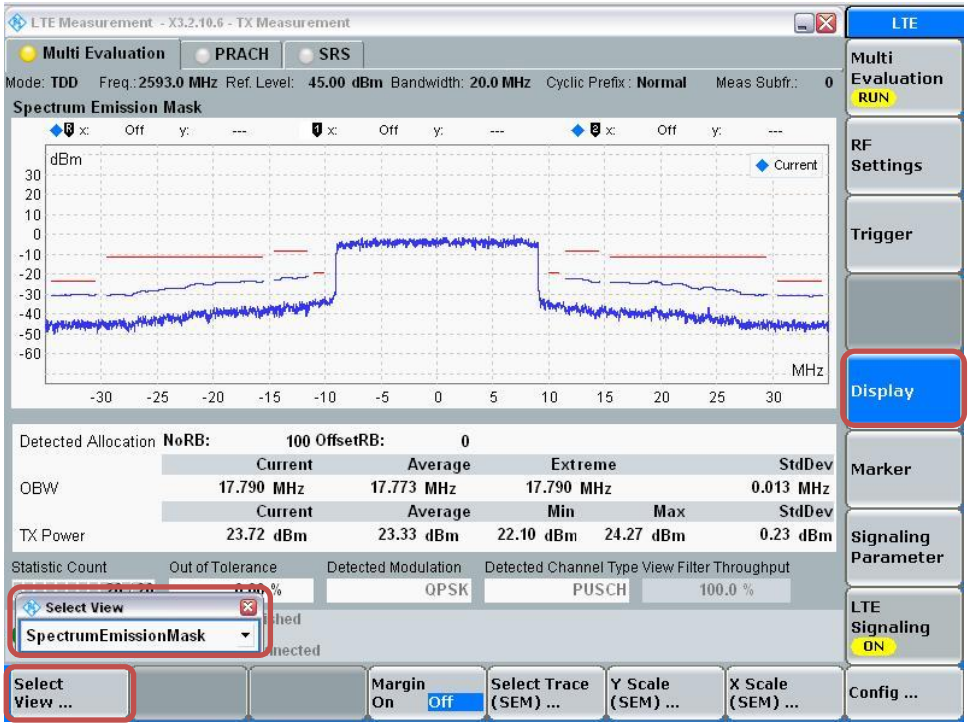


- Select SCC1 tab
- Set “Active TPC Setup” to “Max Power”



View TX Power

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



9.6. Wi-Fi 2.4GHz

For 2.4 GHz band, there are two use cases:

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

Max Power

Band (GHz)	Mode	No. of Transmitters	Ch #	Freq. (MHz)	Average Power (dBm)			SAR Test (Yes/No)
					Antenna A	Antenna B	Antenna D	
2.4	802.11b	1 Tx	1	2412	15.0			Yes
			6	2437	15.0			
			11	2462	15.0			
			12	2467	15.0			
			13	2472	12.5			
			1	2412		16.5		
			6	2437		16.5		
			11	2462		16.5		
			12	2467		16.5		
			13	2472		12.5		
			1	2412			12.5	
			6	2437			12.5	
			11	2462			12.5	
			12	2467			12.5	
			13	2472			10.5	
	802.11g	1 Tx	1	2412	15.0			No
			2	2417	15.0			
			6	2437	15.0			
			10	2457	15.0			
			11	2462	12.5			
			12	2467	10.0			
			13	2472	5.0			
			1	2412		16.5		
			2	2417		16.5		
			6	2437		16.5		
			10	2457		16.5		
			11	2462		12.5		
			12	2467		10.0		
			13	2472		5.0		
			1	2412			12.5	
			2	2417			12.5	
			6	2437			12.5	
			10	2457			12.5	
			11	2462			10.5	
			12	2467			8.0	
			13	2472			3.0	

Max Power continued

Band (GHz)	Mode	No. of Transmitters	Ch #	Freq. (MHz)	Average Power (dBm)			SAR Test (Yes/No)
					Antenna A	Antenna B	Antenna D	
2.4	802.11g	2 Tx CDD	1	2412	14.0	14.0		Yes
			2	2417	15.0	16.5		
			6	2437	15.0	16.5		
			10	2457	15.0	16.5		
			11	2462	12.0	12.0		
			12	2467	9.0	9.0		
			13	2472	3.0	3.0		
		2 Tx CDD	1	2412	15.0		12.5	Yes
			2	2417	15.0		12.5	
			6	2437	15.0		12.5	
			10	2457	15.0		12.5	
			11	2462	12.0		10.0	
			12	2467	9.0		7.0	
			13	2472	3.0		1.0	
	802.11n	1 Tx HT20	1	2412	15.0			No
			2	2417	15.0			
			6	2437	15.0			
			10	2457	15.0			
			11	2462	12.5			
			12	2467	10.0			
			13	2472	5.0			
			1	2412		16.5		
			2	2417		16.5		
			6	2437		16.5		
			10	2457		16.5		
			11	2462		12.5		
			12	2467		10.0		
			13	2472		5.0		
			1	2412			12.5	
			2	2417			12.5	
			6	2437			12.5	
			10	2457			12.5	
			11	2462			10.5	
			12	2467			8.0	
			13	2472			3.0	

Max Power continued

Band (GHz)	Mode	No. of Transmitters	Ch #	Freq. (MHz)	Average Power (dBm)			SAR Test (Yes/No)
					Antenna A	Antenna B	Antenna D	
2.4	802.11n	2 Tx HT20 CDD (Antennas A & B)	1	2412	14.0	14.0		No
			2	2417	15.0	16.5		
			6	2437	15.0	16.5		
			10	2457	15.0	16.5		
			11	2462	12.0	12.0		
			12	2467	9.0	9.0		
			13	2472	3.0	3.0		
		2 Tx HT20 CDD (Antennas A & D)	1	2412	15.0		12.5	No
			2	2417	15.0		12.5	
			6	2437	15.0		12.5	
			10	2457	15.0		12.5	
			11	2462	12.0		10.0	
			12	2467	9.0		7.0	
			13	2472	3.0		1.0	
		2 Tx HT20 STBC (Antennas A & B)	1	2412	14.0	14.0		No
			2	2417	15.0	16.5		
			6	2437	15.0	16.5		
			10	2457	15.0	16.5		
			11	2462	12.0	12.0		
			12	2467	9.0	9.0		
			13	2472	3.0	3.0		
		2 Tx HT20 STBC (Antennas A & D)	1	2412	15.0		12.5	No
			2	2417	15.0		12.5	
			6	2437	15.0		12.5	
			10	2457	15.0		12.5	
			11	2462	12.0		10.0	
			12	2467	9.0		7.0	
			13	2472	3.0		1.0	
		2 Tx HT20 SDM (Antennas A & B)	1	2412	14.0	14.0		No
			2	2417	15.0	16.5		
			6	2437	15.0	16.5		
			10	2457	15.0	16.5		
			11	2462	12.0	12.0		
			12	2467	9.0	9.0		
			13	2472	3.0	3.0		
		2 Tx HT20 SDM (Antennas A & D)	1	2412	15.0		12.5	No
			2	2417	15.0		12.5	
			6	2437	15.0		12.5	
			10	2457	15.0		12.5	
			11	2462	12.0		10.0	
			12	2467	9.0		7.0	
			13	2472	3.0		1.0	

With Power Back-Off

Band (GHz)	Mode	No. of Transmitters	Ch #	Freq. (MHz)	Average Power (dBm)			SAR Test (Yes/No)
					Antenna A	Antenna B	Antenna D	
2.4	802.11b	1 Tx	1	2412			7.0	Yes
			6	2437			7.0	
			11	2462			7.0	
			12	2467			7.0	
			13	2472			7.0	
	802.11g	1 Tx	1	2412			7.0	No
			2	2417			7.0	
			6	2437			7.0	
			10	2457			7.0	
			11	2462			7.0	
			12	2467			7.0	
			13	2472			3.0	
		2 Tx CDD	1	2412	15.0		7.0	Yes
			2	2417	15.0		7.0	
			6	2437	15.0		7.0	
			10	2457	15.0		7.0	
			11	2462	12.0		7.0	
			12	2467	9.0		7.0	
			13	2472	3.0		1.0	
	802.11n	1 Tx HT20	1	2412			7.0	No
			2	2417			7.0	
			6	2437			7.0	
			10	2457			7.0	
			11	2462			7.0	
			12	2467			7.0	
			13	2472			3.0	
		2 Tx HT20 CDD	1	2412	15.0		7.0	No
			2	2417	15.0		7.0	
			6	2437	15.0		7.0	
			10	2457	15.0		7.0	
			11	2462	12.0		7.0	
			12	2467	9.0		7.0	
			13	2472	3.0		1.0	
		2 Tx HT20 STBC	1	2412	15.0		7.0	No
			2	2417	15.0		7.0	
			6	2437	15.0		7.0	
			10	2457	15.0		7.0	
			11	2462	12.0		7.0	
			12	2467	9.0		7.0	
			13	2472	3.0		1.0	
		2 Tx HT20 SDM	1	2412	15.0		7.0	No
			2	2417	15.0		7.0	
			6	2437	15.0		7.0	
			10	2457	15.0		7.0	
			11	2462	12.0		7.0	
			12	2467	9.0		7.0	
			13	2472	3.0		1.0	

Note(s):

1. Antenna A and B have no back-off power and are not disabled.

9.7. Wi-Fi 5GHz

Wi-Fi 5.2 GHz Measured Results

Band (GHz)	Mode	No. of Transmitters	Ch #	Freq. (MHz)	Average Power (dBm)		SAR Test (Yes/No)
					Antenna A	Antenna B	
5.2	802.11a	1 Tx	36	5180	15.9		No
			40	5200	17.0		
			44	5220	17.0		
			48	5240	16.9		
			36	5180		15.9	
			40	5200		17.9	
			44	5220		18.0	
			48	5240		18.0	
		2 Tx CDD	36	5180	15.0	15.0	No
			40	5200	16.0	16.0	
			44	5220	16.0	16.0	
			48	5240	16.0	16.0	
	802.11n	1 Tx HT20	36	5180	16.0		No
			40	5200	17.0		
			44	5220	17.0		
			48	5240	17.0		
			36	5180		16.0	
			40	5200		17.9	
			44	5220		17.9	
			48	5240		18.0	
		1 Tx HT40	38	5180	14.0		Yes
			46	5230	17.0		
			38	5180		14.0	
			46	5230		18.0	
		2 Tx HT20 CDD	36	5180	15.0	15.0	No
			40	5200	15.9	16.0	
			44	5220	15.9	16.0	
			48	5240	15.9	16.0	
		2 Tx HT20 STBC	36	5180	15.0	15.0	No
			40	5200	17.0	17.0	
			44	5220	17.0	17.0	
			48	5240	17.0	17.0	
		2 Tx HT20 SDM	36	5180	15.0	15.0	No
			40	5200	17.0	17.0	
			44	5220	17.0	17.0	
			48	5240	16.9	16.9	
		2 Tx HT40 CDD	38	5190	13.0	13.0	No
			46	5230	16.0	15.8	No
		2 Tx HT40 STBC	38	5190	13.0	13.0	Yes
			46	5230	17.0	18.0	
		2 Tx HT40 SDM	38	5190	13.0	13.0	No
			46	5230	17.0	17.9	

Wi-Fi 5.2 GHz Measured Results continued

Band (GHz)	Mode	No. of Transmitters	Ch #	Freq. (MHz)	Average Power (dBm)		SAR Test (Yes/No)
					Antenna A	Antenna B	
5.2	802.11ac	1 Tx VHT20	36	5180	16.0		No
			40	5200	16.9		
			44	5220	17.0		
			48	5240	16.9		
			36	5180		15.9	
			40	5200		18.0	
			44	5220		18.0	
			48	5240		17.9	
		1 Tx VHT40	38	5180	14.0		No
			46	5230	17.0		
			38	5180		14.0	
			46	5230		18.0	
		1 Tx VHT80	42	5210	13.0		No
			42	5210		13.0	
		2 Tx VHT20 CDD	36	5180	15.0	15.0	No
			40	5200	16.0	16.0	
			44	5220	16.0	16.0	
			48	5240	16.0	16.0	
		2 Tx VHT20 STBC	36	5180	15.0	15.0	No
			40	5200	17.0	17.0	
			44	5220	17.0	17.0	
			48	5240	17.0	17.0	
		2 Tx VHT20 SDM	36	5180	15.0	15.0	No
			40	5200	17.0	17.0	
			44	5220	17.0	17.0	
			48	5240	16.9	17.0	
		2 Tx VHT40 CDD	38	5190	13.0	13.0	No
			46	5230	16.0	16.0	
		2 Tx VHT40 STBC	38	5190	13.0	13.0	No
			46	5230	17.0	17.9	
		2 Tx VHT40 SDM	38	5190	13.0	13.0	No
			46	5230	17.0	18.0	
		2 Tx VHT80 CDD	38	5190	12.5	12.5	No
		2 Tx VHT80 STBC	38	5190	12.3	12.3	No
		2 Tx VHT80 SDM	38	5190	12.4	12.3	No

Wi-Fi 5.3 GHz Measured Results

Band (GHz)	Mode	No. of Transmitters	Ch #	Freq. (MHz)	Average Power (dBm)		SAR Test (Yes/No)
					Antenna A	Antenna B	
5.3	802.11a	1 Tx	52	5260	16.0		No
			56	5280	15.9		
			60	5300	15.9		
			64	5320	16.0		
			52	5260		17.0	
			56	5280		17.0	
			60	5300		17.0	
			64	5320		16.5	
		2 Tx CDD	52	5260	15.5	15.5	No
			56	5280	15.5	15.5	
			60	5300	15.5	15.5	
			64	5320	15.4	15.4	
	802.11n	1 Tx HT20	52	5260	16.0		No
			56	5280	16.0		
			60	5300	15.9		
			64	5320	15.9		
			52	5260		17.0	
			56	5280		17.0	
			60	5300		17.0	
			64	5320		16.5	
		1 Tx HT40	54	5270	16.0		No
			62	5310	15.0		
			54	5270		17.0	
			62	5310		15.0	
		2 Tx HT20 CDD	52	5260	15.5	15.5	No
			56	5280	15.5	15.5	
			60	5300	15.5	15.5	
			64	5320	15.5	15.5	
		2 Tx HT20 STBC	52	5260	16.0	17.0	No
			56	5280	16.0	17.0	
			60	5300	15.9	16.9	
			64	5320	15.5	15.5	
		2 Tx HT20 SDM	52	5260	16.0	17.0	No
			56	5280	16.0	17.0	
			60	5300	16.0	17.0	
			64	5320	15.5	15.5	
		2 Tx HT40 CDD	54	5270	15.5	15.5	No
			62	5310	13.0	13.0	
		2 Tx HT40 STBC	54	5270	16.0	17.0	No
			62	5310	13.0	13.0	
		2 Tx HT40 SDM	54	5270	16.0	17.0	No
			62	5310	13.0	13.0	

Wi-Fi 5.3 GHz Measured Results continued

Band (GHz)	Mode	No. of Transmitters	Ch #	Freq. (MHz)	Average Power (dBm)		SAR Test (Yes/No)
					Antenna A	Antenna B	
5.3	802.11ac	1 Tx VHT20	52	5260	16.0		No
			56	5280	16.0		
			60	5300	16.0		
			64	5320	15.9		
			52	5260		17.0	
			56	5280		17.0	
			60	5300		16.9	
			64	5320		16.5	
		1 Tx VHT40	54	5270	16.0		No
			62	5310	15.0		
			54	5270		17.0	
			62	5310		15.0	
		1 Tx VHT80	58	5290	15.0		No
			58	5290		15.0	
		2 Tx VHT20 CDD	52	5260	15.5	15.5	No
			56	5280	15.5	15.5	
			60	5300	15.5	15.5	
			64	5320	15.5	15.5	
		2 Tx VHT20 STBC	52	5260	16.0	17.0	No
			56	5280	16.0	17.0	
			60	5300	16.0	16.9	
			64	5320	15.5	15.5	
		2 Tx VHT20 SDM	52	5260	16.0	17.0	No
			56	5280	16.0	17.0	
			60	5300	16.0	17.0	
			64	5320	15.5	15.5	
		2 Tx VHT40 CDD	54	5270	15.5	15.5	No
			62	5310	13.0	13.0	
		2 Tx VHT40 STBC	54	5270	16.0	17.0	No
			62	5310	13.0	13.0	
		2 Tx VHT40 SDM	54	5270	16.0	17.0	No
			62	5310	13.0	13.0	
		2 Tx VHT80 CDD	54	5270	12.5	12.5	No
		2 Tx VHT80 STBC	54	5270	12.5	12.5	No
		2 Tx VHT80 SDM	54	5270	12.5	12.5	No

Wi-Fi 5.5 GHz Measured Results

Band (GHz)	Mode	No. of Transmitters	Ch #	Freq. (MHz)	Average Power (dBm)		SAR Test (Yes/No)
					Antenna A	Antenna B	
5.5	802.11a	1 Tx	100	5500	15.5		No
			104	5520	15.5		
			108	5540	15.5		
			112	5560	15.5		
			116	5580	15.5		
			120	5600	15.5		
			124	5620	15.5		
			128	5640	15.5		
			100	5500		15.5	
			104	5520		15.5	
			108	5540		15.5	
			112	5560		15.5	
			116	5580		15.5	
			120	5600		15.5	
			124	5620		15.5	
			128	5640		15.5	
		2 Tx CDD	100	5500	14.5	14.5	No
			104	5520	15.0	15.0	
			108	5540	15.0	15.0	
			112	5560	15.0	15.0	
			116	5580	15.0	15.0	
			120	5600	15.0	15.0	
			124	5620	15.0	15.0	
			128	5640	15.0	15.0	

Wi-Fi 5.5 GHz Measured Results (continued)

Band (GHz)	Mode	No. of Transmitters	Ch #	Freq. (MHz)	Average Power (dBm)		SAR Test (Yes/No)
					Antenna A	Antenna B	
5.5	802.11n	1 Tx HT20	100	5500	15.5		No
			104	5520	15.5		
			108	5540	15.5		
			112	5560	15.5		
			116	5580	15.5		
			120	5600	15.5		
			124	5620	15.3		
			128	5640	15.3		
			100	5500		15.5	
			104	5520		15.5	
			108	5540		15.5	
			112	5560		15.5	
			116	5580		15.5	
			120	5600		15.5	
			124	5620		15.5	
			128	5640		15.5	
		1 Tx HT40	102	5510	14.0		No
			110	5550	15.5		
			118	5590	15.5		
			126	5630	15.5		
			102	5510		14.0	
			110	5550		15.5	
			118	5590		15.5	
			126	5630		15.5	
		2 Tx HT20 CDD	100	5500	14.5	14.5	No
			104	5520	15.0	15.0	
			108	5540	15.0	15.0	
			112	5560	15.0	15.0	
			116	5580	15.0	15.0	
			120	5600	15.0	15.0	
			124	5620	15.0	15.0	
			128	5640	15.0	15.0	

Wi-Fi 5.5 GHz Measured Results (continued)

Band (GHz)	Mode	No. of Transmitters	Ch #	Freq. (MHz)	Average Power (dBm)		SAR Test (Yes/No)
					Antenna A	Antenna B	
5.5	802.11n	2 Tx HT20 STBC	100	5500	14.5	14.5	No
			104	5520	15.5	15.5	
			108	5540	15.5	15.5	
			112	5560	15.5	15.5	
			116	5580	15.5	15.5	
			120	5600	15.5	15.5	
			124	5620	15.5	15.5	
			128	5640	15.5	15.5	
		2 Tx HT20 SDM	100	5500	14.5	14.5	No
			104	5520	15.5	15.5	
			108	5540	15.5	15.5	
			112	5560	15.5	15.5	
			116	5580	15.5	15.5	
			120	5600	15.5	15.5	
			124	5620	15.5	15.5	
			128	5640	15.5	15.5	
		2 Tx HT40 CDD	102	5510	13.0	13.0	No
			110	5550	15.0	15.0	
			118	5590	14.9	14.9	
			126	5630	14.9	14.9	
		2 Tx HT40 STBC	102	5510	13.0	13.0	No
			110	5550	15.5	15.5	
			118	5590	15.5	15.5	
			126	5630	15.5	15.5	
		2 Tx HT40 SDM	102	5510	13.0	13.0	No
			110	5550	15.5	15.5	
			118	5590	15.5	15.5	
			126	5630	15.4	15.4	

Wi-Fi 5.5 GHz Measured Results (continued)

Band (GHz)	Mode	No. of Transmitters	Ch #	Freq. (MHz)	Average Power (dBm)		SAR Test (Yes/No)
					Antenna A	Antenna B	
5.5	802.11ac	1 Tx VHT20	100	5500	15.5		No
			104	5520	15.5		
			108	5540	15.5		
			112	5560	15.5		
			116	5580	15.5		
			120	5600	15.5		
			124	5620	15.5		
			128	5640	15.5		
			100	5500		15.5	
			104	5520		15.5	
			108	5540		15.5	
			112	5560		15.5	
			116	5580		15.5	
			120	5600		15.5	
			124	5620		15.5	
			128	5640		15.4	
		1 Tx VHT40	102	5510	14.0		No
			110	5550	15.5		
			118	5590	15.5		
			126	5630	15.4		
			102	5510		14.0	
			110	5550		15.5	
			118	5590		15.5	
			126	5630		15.5	
		1 Tx VHT80	106	5530	13.0		Yes
			122	5610	15.5		
			106	5530		13.0	
			122	5610		15.0	

Wi-Fi 5.5 GHz Measured Results (continued)

Band (GHz)	Mode	No. of Transmitters	Ch #	Freq. (MHz)	Average Power (dBm)		SAR Test (Yes/No)
					Antenna A	Antenna B	
5.5	802.11ac	2 Tx HT20 CDD	100	5500	14.5	14.5	No
			104	5520	15.0	15.0	
			108	5540	15.0	15.0	
			112	5560	15.0	15.0	
			116	5580	15.0	15.0	
			120	5600	15.0	15.0	
			124	5620	15.0	15.0	
			128	5640	15.0	15.0	
		2 Tx HT20 STBC	100	5500	14.5	14.5	No
			104	5520	15.5	15.5	
			108	5540	15.5	15.5	
			112	5560	15.5	15.5	
			116	5580	15.5	15.5	
			120	5600	15.5	15.5	
			124	5620	15.5	15.5	
			128	5640	15.5	15.5	
		2 Tx HT20 SDM	100	5500	14.5	14.5	No
			104	5520	15.5	15.5	
			108	5540	15.5	15.5	
			112	5560	15.5	15.5	
			116	5580	15.5	15.5	
			120	5600	15.5	15.5	
			124	5620	15.5	15.5	
			128	5640	15.5	15.5	
		2 Tx HT40 CDD	102	5510	13.0	13.0	No
			110	5550	15.0	15.0	
			118	5590	15.0	15.0	
			126	5630	15.0	15.0	
		2 Tx HT40 STBC	102	5510	13.0	13.0	No
			110	5550	15.5	15.5	
			118	5590	15.5	15.5	
			126	5630	15.5	15.5	
		2 Tx HT40 SDM	102	5510	13.0	13.0	No
			110	5550	15.5	15.5	
			118	5590	15.5	15.5	
			126	5630	15.5	15.5	
		2 Tx VHT80 CDD	106	5530	12.0	11.5	Yes
			122	5610	15.5	15.0	
		2 Tx VHT80 STBC	106	5530	12.0	11.5	No
			122	5610	15.5	15.0	
		2 Tx VHT80 SDM	106	5530	12.0	11.5	No
			122	5610	15.5	15.0	

Wi-Fi 5.8 GHz Measured Results

Band (GHz)	Mode	No. of Transmitters	Ch #	Freq. (MHz)	Average Power (dBm)		SAR Test (Yes/No)
					Antenna A	Antenna B	
5.8	802.11a	1 Tx	132	5660	15.5		Yes
			136	5680	15.5		
			140	5700	15.0		
			144	5720	15.5		
			149	5745	16.0		
			153	5765	17.0		
			157	5785	17.0		
			161	5805	17.0		
			165	5825	16.0		
			132	5660		15.5	
			136	5680		15.5	
			140	5700		15.0	
			144	5720		15.5	
			149	5745		16.0	
			153	5765		17.0	
			157	5785		17.0	
			161	5805		17.0	
			165	5825		16.0	
		2 Tx CDD	132	5660	15.0	15.0	Yes
			136	5680	15.0	15.0	
			140	5700	14.0	14.0	
			144	5720	15.0	15.0	
			149	5745	15.0	15.0	
			153	5765	17.0	17.0	
			157	5785	17.0	17.0	
			161	5805	17.0	17.0	
			165	5825	15.0	15.0	

Wi-Fi 5.8 GHz Measured Results continued

Band (GHz)	Mode	No. of Transmitters	Ch #	Freq. (MHz)	Average Power (dBm)		SAR Test (Yes/No)
					Antenna A	Antenna B	
5.8	802.11n	1 Tx HT20	132	5660	15.4		No
			136	5680	15.4		
			140	5700	15.0		
			144	5720	15.5		
			149	5745	16.0		
			153	5765	17.0		
			157	5785	17.0		
			161	5805	17.0		
			165	5825	16.0		
			132	5660		15.4	
			136	5680		15.4	
			140	5700		15.0	
			144	5720		15.5	
			149	5745		16.0	
			153	5765		17.0	
			157	5785		17.0	
			161	5805		17.0	
			165	5825		16.0	
		1 Tx HT40	134	5670	15.5		No
			142	5710	15.0		
			151	5755	14.5		
			159	5795	16.0		
			134	5670		15.5	
			142	5710		15.0	
			151	5755		14.5	
			159	5795		16.0	

Wi-Fi 5.8 GHz Measured Results continued

Band (GHz)	Mode	No. of Transmitters	Ch #	Freq. (MHz)	Average Power (dBm)		SAR Test (Yes/No)
					Antenna A	Antenna B	
5.8	802.11n	2 Tx HT20 CDD	132	5660	15.0	15.0	No
			136	5680	15.0	15.0	
			140	5700	14.0	14.0	
			144	5720	15.0	15.0	
			149	5745	15.0	15.0	
			153	5765	17.0	17.0	
			157	5785	17.0	17.0	
			161	5805	17.0	17.0	
			165	5825	15.0	15.0	
		2 Tx HT20 STBC	132	5660	15.5	15.5	No
			136	5680	15.5	15.5	
			140	5700	14.0	14.0	
			144	5720	15.5	15.5	
			149	5745	15.0	15.0	
			153	5765	17.0	17.0	
			157	5785	17.0	17.0	
			161	5805	17.0	17.0	
			165	5825	15.0	15.0	
		2 Tx HT20 SDM	132	5660	15.5	15.5	No
			136	5680	15.5	15.5	
			140	5700	14.0	14.0	
			144	5720	15.5	15.5	
			149	5745	15.0	15.0	
			153	5765	17.0	17.0	
			157	5785	17.0	17.0	
			161	5805	17.0	17.0	
			165	5825	15.0	15.0	
		2 Tx HT40 CDD	134	5670	14.8	14.8	No
			142	5710	14.0	14.0	
			151	5755	14.0	14.0	
			159	5795	15.0	15.0	
		2 Tx HT40 STBC	134	5670	14.8	14.8	No
			142	5710	14.0	14.0	
			151	5755	14.0	14.0	
			159	5795	15.0	15.0	
		2 Tx HT40 SDM	134	5670	15.0	15.0	No
			142	5710	14.0	14.0	
			151	5755	14.0	14.0	
			159	5795	15.0	15.0	

Wi-Fi 5.8 GHz Measured Results continued

Band (GHz)	Mode	No. of Transmitters	Ch #	Freq. (MHz)	Average Power (dBm)		SAR Test (Yes/No)
					Antenna A	Antenna B	
5.8	802.11ac	1 Tx VHT20	132	5660	15.5		No
			136	5680	15.5		
			140	5700	15.0		
			144	5720	15.5		
			149	5745	16.0		
			153	5765	17.0		
			157	5785	17.0		
			161	5805	17.0		
			165	5825	16.0		
			132	5660		15.4	
			136	5680		15.4	
			140	5700		15.0	
			144	5720		15.5	
			149	5745		16.0	
			153	5765		17.0	
			157	5785		17.0	
			161	5805		17.0	
			165	5825		16.0	
		1 Tx VHT40	134	5670	15.4		No
			142	5710	15.0		
			151	5755	14.5		
			159	5795	16.0		
			134	5670		15.5	
			142	5710		15.0	
			151	5755		14.5	
			159	5795		16.0	
		1 Tx VHT80	138	5690	15.5		No
			155	5775	14.0		
			138	5690		15.5	
			155	5775		14.0	
		2 Tx HT20 CDD	132	5660	15.0	15.0	No
			136	5680	15.0	15.0	
			140	5700	14.0	14.0	
			144	5720	15.0	15.0	
			149	5745	15.0	15.0	
			153	5765	17.0	17.0	
			157	5785	17.0	17.0	
			161	5805	17.0	17.0	
			165	5825	15.0	15.0	

Wi-Fi 5.8 GHz Measured Results continued

Band (GHz)	Mode	No. of Transmitters	Ch #	Freq. (MHz)	Average Power (dBm)		SAR Test (Yes/No)
					Antenna A	Antenna B	
5.8	802.11ac	2 Tx HT20 STBC	132	5660	15.5	15.5	No
			136	5680	15.5	15.5	
			140	5700	14.0	14.0	
			144	5720	15.5	15.5	
			149	5745	15.0	15.0	
			153	5765	17.0	17.0	
			157	5785	17.0	17.0	
			161	5805	17.0	17.0	
			165	5825	15.0	15.0	
		2 Tx HT20 SDM	132	5660	15.5	15.5	No
			136	5680	15.5	15.5	
			140	5700	14.0	14.0	
			144	5720	15.5	15.5	
			149	5745	15.0	15.0	
			153	5765	17.0	17.0	
			157	5785	17.0	17.0	
			161	5805	17.0	17.0	
			165	5825	15.0	15.0	
		2 Tx HT40 CDD	134	5670	15.0	15.0	No
			142	5710	14.0	14.0	
			151	5755	14.0	14.0	
			159	5795	15.0	15.0	
		2 Tx HT40 STBC	134	5670	15.0	15.0	No
			142	5710	14.0	14.0	
			151	5755	14.0	14.0	
			159	5795	15.0	15.0	
		2 Tx HT40 SDM	134	5670	15.0	15.0	No
			142	5710	14.0	14.0	
			151	5755	14.0	14.0	
			159	5795	15.0	15.0	
		2 Tx VHT80 CDD	138	5690	15.5	15.0	No
			155	5775	13.0	13.0	
		2 Tx VHT80 STBC	138	5690	15.5	15.0	No
			155	5775	13.0	13.0	
		2 Tx VHT80 SDM	138	5690	15.5	15.0	No
			155	5775	13.0	13.0	

9.8. Bluetooth

Antenna B

Band (GHz)	Mode	Ch #	Freq. (MHz)	Avg Pwr (dBm)
2.4	V3.0 + BDR, GFSK	0	2402	10.5
		39	2441	10.5
		78	2480	10.3
	V3.0 + EDR, 8-DPSK	0	2402	8.0
		39	2441	7.4
		78	2480	8.0
	V4.0 LE, GFSK	0	2402	8.6
		19	2440	8.8
		39	2480	8.4

Antenna D

Band (GHz)	Mode	Ch #	Freq. (MHz)	Avg Pwr (dBm)
2.4	V3.0 + BDR, GFSK	0	2402	7.0
		39	2441	7.4
		78	2480	7.5
	V3.0 + EDR, 8-DPSK	0	2402	6.3
		39	2441	6.5
		78	2480	5.7
	V4.0 LE, GFSK	0	2402	6.0
		19	2440	5.1
		39	2480	5.7

10. Measured and Reported (Scaled) SAR Results

SAR Test Reduction criteria are as follows:

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 941225 D01 SAR test for 3G devices:

When the maximum output power and tune-up tolerance specified for production units in a secondary mode is ≤ ¼ dB higher than the primary mode or when the highest reported SAR of the primary mode is scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for the secondary mode

KDB 941225 D05 SAR for LTE Devices:

SAR test reduction is applied using the following criteria:

- Start with the largest channel bandwidth and measure SAR for QPSK with 1 RB, and 50% RB allocation, using the RB offset and required test channel combination with the highest maximum output power among RB offsets at the upper edge, middle and lower edge of each required test channel.
- When the reported SAR is > 0.8 W/kg, testing for other Channels is performed at the highest output power level for 1RB, and 50% RB configuration for that channel.
- Testing for 100% RB configuration is performed at the highest output power level for 100% RB configuration across the Low, Mid and High Channel when the highest reported SAR for 1 RB and 50% RB are > 0.8 W/kg. Testing for the remaining required channels is not needed because the reported SAR for 100% RB Allocation < 1.45 W/kg.
- Testing for 16-QAM modulation is not required because the reported SAR for QPSK is < 1.45 W/Kg and its output power is not more than 0.5 dB higher than that of QPSK.
- Testing for the other channel bandwidths is not required because the reported SAR for the highest channel bandwidth is < 1.45 W/Kg and its output power is not more than 0.5 dB higher than that of the highest channel bandwidth.

KDB 248227 D01 SAR meas for 802.11 v02:

Initial Test Position SAR Test Reduction

For both DSSS and OFDM wireless modes, when an *Initial Test Configuration* is found to require SAR measurements, an *Initial Test Position* is established for each applicable exposure configuration (Head, Body, etc.) using either:

- Design implementation details from the manufacturer, or
- Investigative results by the test lab, obtained by performing area scans on the *Initial Test Configuration* for all applicable test positions and identifying the highest measured SAR from the area scan-only measurements.

Complete SAR scans are then performed on the established *Initial Test Position* on each exposure configuration, using the *Initial Test Configuration*. When the reported SAR for this *Initial Test Position* is:

- ≤ 0.4 W/kg, further SAR measurement is not required for the other test positions in the exposure configuration and wireless mode combination within the frequency band or aggregated band.
- > 0.4 W/kg, SAR is repeated using the same wireless mode test configuration tested in the initial test position to measure the subsequent next closest/smallest test separation distance and maximum coupling test position, on the highest maximum output power channel until the reported SAR is ≤ 0.8 W/kg or all required test positions are tested.
- For 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 test positions/configurations on the subsequent next highest measured output power channel(s) until the reported SAR is ≤ 1.2 W/kg or all required test channels are considered.

SAR Test Reduction for OFDM using Initial Test Configuration Procedures

Along with the *Initial Test Position* test reduction guidelines, the following procedures are also applied to streamline SAR measurement requirements when multiple OFDM configurations are supported:

1. When the reported SAR for the highest output power channel in the *Initial Test Configuration* is > 0.8 W/kg, SAR measurement is required for the next highest measured output power channel in the *Initial Test Configuration* until the reported SAR is ≤ 1.2 W/kg or all required channels are tested.
2. For *Subsequent Test Configurations* with output power ≤ 0.5 dB lower than the *Initial Test Configuration*:
   - No further SAR measurement is required for the exposure condition and frequency band or aggregated band combination in the *Subsequent Test Configurations* when the reported SAR from the *Initial Test Configuration* is ≤ 0.8 W/kg.
   - SAR is required in the *Subsequent Test Configurations* for all conditions in the *Initial Test Configuration* and subsequent test positions with reported SAR > 0.8 and ≤ 1.2 W/kg, using the following criteria for test channel selection:
     a. The highest measured output channel in the *Subsequent Test Configurations*, if the measured output power is different among channels.
     b. The channel closest to the center frequency of the larger bandwidth configuration channel- assuming a larger bandwidth configuration was established as the *Initial Test Configuration*- if the output power measured across the channels in the *Subsequent Test Configuration* is the same.
     c. SAR measurement for the subsequent highest powered channel in the *Subsequent Test Configurations* is required only when the reported SAR from the initial measurement in the *Subsequent Test Configuration* is > 1.2 W/kg.

SAR Test Reduction for OFDM using Initial Test Configuration Procedures (continued)

3. For *Subsequent Test Configurations* with output power > 0.5 dB lower than the *Initial Test Configuration*, SAR measurement is not required for exposure condition and frequency band or aggregated band combinations with highest reported SAR ≤ 1.2 W/kg in the *Initial Test Configuration* measurements.
4. When the highest reported SAR for the *Initial Test Configuration* is > 1.2 W/kg, the *Initial Test Configuration* SAR measurement procedure is applied to the *Subsequent Test Configuration*.
    - The highest output power channel for the initial measurement, as well as the number of potentially required test channels, is determined by the channel bandwidth support in the *Subsequent Test Configuration.*
    - Additional output power measurements may be required.
    - The test channel reduction threshold for *Subsequent Test Configuration* is decreased from the usual > 1.2 W/kg to > 0.8 W/kg.
5. Beyond the *Subsequent Test Configuration*, SAR measurement requirements for the remaining transmission modes are determined by applying the *Subsequent Test Configuration* in the following manner:
    - Replace *Subsequent Test Configuration* with *Next Subsequent Test Configuration*.
    - Replace *Initial Test Configuration* with *Preceding Test Configuration*

SAR Test Reduction for Wi-Fi 2.4 GHz

1. 2.4 GHz 802.11b DSSS:
    - When the reported SAR of the highest maximum output channel for the exposure configuration is ≤ 0.8 W/kg, no further testing is required for that exposure configuration for 802.11b DSSS.
    - When the reported SAR is > 0.8 W/kg, SAR is required for the next highest measured output channel in that exposure configuration. When any reported SAR is > 1.2 W/kg, SAR is required for the 3rd channel; i.e., all channels require testing.
2. 2.4 GHz 802.11g/n OFDM:
    - SAR is not required for 802.11g/n OFDM when its specified output power is ≥ 1 dB lower than that specified for 802.11b DSSS and the highest reported SAR for 802.11b DSSS is ≤ 1.2 W/kg.
    - SAR not required for 802.11g/n OFDM when its specified output power is ≤ 0.25 dB higher and < 1 dB lower than that specified 802.11b DSSS and the highest reported SAR for 802.11b DSSS is ≤ 0.8 W/kg.

SAR Test Reduction for Wi-Fi 5 GHz bands

1. 5.15 – 5.25 and 5.25 – 5.35 GHz Bands (UNII Band 1 and UNII Band 2A)
    - With respect to the *Initial Test Configuration* and *Initial Test Position* procedures, SAR is initially measured for:
        a. UNII Band 2A, if the output power specified for both bands is the same or higher on UNII Band 2A.
        b. UNII Band 1, if it has the higher specified output power of the two bands.
    - If the highest reported SAR from the initially measured band is:
        a. ≤ 1.2 W/kg, SAR is not required for the remaining band.
        b. > 1.2 W/kg, and the difference in specified output power is ≤ 1 dB, both bands should be tested independently for SAR; otherwise, the *Initial Test Configuration* and *Initial Test Position* procedures should be applied.

SAR Test Reduction for Wi-Fi 5 GHz bands (continued)

2. 5.470 – 5.725, 5.725 – 5.825 GHz and 5.725 – 5.850 GHz Bands (UNII Band 2C and UNII 3)

- If TDWR restriction does not apply:
    a. The channels in the frequency range of 5.60 – 5.65 GHz should be considered for testing.
- If TWDR restriction does not apply, and the band gap channels between the two bands are supported:
    a. The channels in UNII Band 2C above 5.65 GHz are then grouped with the channels in UNII Band 3.
    b. Evaluation for test requirements is performed independently for each band according to the grouping of channels described above.
- The Initial *Test Configuration* and *Initial Test Position* procedures are then applied independently for each band.
    a. Unlike UNII Band 1 and UNII Band 2A, test reduction or exclusion is not interdependent between UNII Band 2C and UNII Band 3.

10.1. GSM850

Mode	Test Position	Dist. (mm)	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
					Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
GPRS 2 Slots	Rear	0	128	824.2	22.5	22.5	0.898	0.898	0.469	0.469	
			190	836.6	22.5	22.4	1.030	1.054	0.536	0.548	
			251	848.8	22.5	22.5	1.110	1.110	0.579	0.579	1
	Edge 1	0	190	836.6	22.5	22.4	0.457	0.468	0.243	0.249	
	Edge 2	0	190	836.6	22.5	22.4	0.112	0.115	0.060	0.061	

10.2. GSM1900

Mode	Test Position	Dist. (mm)	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
					Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
GPRS 2 Slots	Rear	0	512	1850.2	19.0	18.9	1.140	1.167	0.527	0.539	2
			661	1880.0	19.0	18.9	1.080	1.105	0.497	0.509	
			810	1909.8	19.0	19.0	0.976	0.976	0.446	0.446	
	Edge 1	0	661	1880.0	19.0	18.9	0.688	0.704	0.319	0.326	
	Edge 2	0	661	1880.0	19.0	18.9	0.091	0.093	0.041	0.042	

10.3. W-CDMA Band V

Mode	Test Position	Dist. (mm)	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
					Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
Rel 99 RMC 12.2 kbps	Rear	0	4132	826.4	17.3	17.3	1.110	1.110	0.577	0.577	
			4183	836.6	17.3	17.3	1.190	1.190	0.616	0.616	
			4233	846.6	17.3	17.3	1.190	1.190	0.618	0.618	3
	Edge 1	0	4183	836.6	17.3	17.3	0.580	0.580	0.311	0.311	
	Edge 2	0	4183	836.6	17.3	17.3	0.147	0.147	0.077	0.077	

10.4. W-CDMA Band IV

Mode	Test Position	Dist. (mm)	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
					Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
Rel 99 RMC 12.2 kbps	Rear	0	1312	1712.4	12.5	12.5	0.766	0.766	0.352	0.352	
			1413	1732.6	12.5	12.5	1.080	1.080	0.499	0.499	
			1513	1752.6	12.5	12.5	0.704	0.704	0.323	0.323	
	Edge 1	0	1312	1712.4	12.5	12.5	0.739	0.739	0.350	0.350	
			1413	1732.6	12.5	12.5	1.120	1.120	0.531	0.531	4
			1513	1752.6	12.5	12.5	0.658	0.658	0.309	0.309	
	Edge 2	0	1413	1732.6	12.5	12.5	0.141	0.141	0.069	0.069	

10.5. W-CDMA Band II

Mode	Test Position	Dist. (mm)	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
					Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
Rel 99 RMC 12.2 kbps	Rear	0	9262	1852.4	13.5	13.5	1.100	1.100	0.508	0.508	
			9400	1880.0	13.5	13.5	1.150	1.150	0.527	0.527	5
			9538	1907.6	13.5	13.5	1.080	1.080	0.489	0.489	
	Edge 1	0	9262	1852.4	13.5	13.5	0.817	0.817	0.378	0.378	
			9400	1880.0	13.5	13.5	0.854	0.854	0.395	0.395	
			9538	1907.6	13.5	13.5	0.840	0.840	0.388	0.388	
	Edge 2	0	9400	1880.0	13.5	13.5	0.126	0.126	0.058	0.058	

10.6. CDMA BC0

Mode	Test Position	Dist. (mm)	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
					Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
1xRTT (RC3 SO32)	Rear	0	1013	824.70	17.3	17.3	1.070	1.070	0.556	0.556	
			384	836.52	17.3	17.3	1.140	1.140	0.595	0.595	
			777	848.31	17.3	17.3	1.190	1.190	0.619	0.619	6
	Edge 1	0	384	836.52	17.3	17.3	0.751	0.751	0.392	0.392	
	Edge 2	0	384	836.52	17.3	17.3	0.153	0.153	0.081	0.081	
1xEVDO (Rel. 0)	Rear	0	1013	824.70	17.3	17.3	1.120	1.120	0.586	0.586	
			384	836.52	17.3	17.3	1.180	1.180	0.616	0.616	
			777	848.31	17.3	17.3	1.180	1.180	0.618	0.618	
	Edge 1	0	384	836.52	17.3	17.3	0.750	0.750	0.399	0.399	
	Edge 2	0	384	836.52	17.3	17.3	0.164	0.164	0.087	0.087	
1xEVDO Rev. B Two Carrier	Rear	0	1013+31	824.70+825.93	17.3	17.3	1.070	1.070	0.555	0.555	
			384+425	836.52+837.75	17.3	17.3	1.130	1.130	0.586	0.586	
			736+777	847.08+848.31	17.3	17.3	1.140	1.140	0.596	0.596	
	Edge 1	0	384+425	836.52+837.75	17.3	17.3	0.688	0.688	0.373	0.373	
	Edge 2	0	384+425	836.52+837.75	17.3	17.3	0.152	0.152	0.079	0.079	
1xEVDO Rev. B Three Carrier	Rear	0	1013+31+72	824.70+825.93+827.16	17.3	17.3	1.050	1.050	0.546	0.546	
			384+425+466	836.52+837.75+838.98	17.3	17.3	1.140	1.140	0.593	0.593	
			695+736+777	845.85+847.08+848.31	17.3	17.3	1.150	1.150	0.595	0.595	
	Edge 1	0	384+425+466	836.52+837.75+838.98	17.3	17.3	0.691	0.691	0.374	0.374	
	Edge 2	0	384+425+466	836.52+837.75+838.98	17.3	17.3	0.149	0.149	0.078	0.078	

10.7. CDMA BC1

Mode	Test Position	Dist. (mm)	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
					Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
1xRTT (RC3 SO32)	Rear	0	25	1851.25	13.5	13.5	1.180	1.180	0.544	0.544	7
			600	1880.00	13.5	13.5	1.130	1.130	0.520	0.520	
			1175	1908.75	13.5	13.5	1.170	1.170	0.537	0.537	
	Edge 1	0	25	1851.25	13.5	13.5	0.905	0.905	0.415	0.415	
			600	1880.00	13.5	13.5	0.968	0.968	0.442	0.442	
			1175	1908.75	13.5	13.5	0.958	0.958	0.439	0.439	
	Edge 2	0	600	1880.00	13.5	13.5	0.121	0.121	0.056	0.056	
1xEVDO (Rel. 0)	Rear	0	25	1851.25	13.5	13.5	1.140	1.140	0.524	0.524	
			600	1880.00	13.5	13.5	1.060	1.060	0.485	0.485	
			1175	1908.75	13.5	13.5	1.100	1.100	0.502	0.502	
	Edge 1	0	25	1851.25	13.5	13.5	0.972	0.972	0.446	0.446	
			600	1880.00	13.5	13.5	0.988	0.988	0.454	0.454	
			1175	1908.75	13.5	13.5	0.970	0.970	0.444	0.444	
	Edge 2	0	600	1880.00	13.5	13.5	0.121	0.121	0.057	0.057	

10.8. CDMA BC10

Mode	Test Position	Dist. (mm)	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
					Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
1xRTT (RC3 SO32)	Rear	0	476	817.90	17.5	17.5	1.110	1.110	0.581	0.581	
			580	820.50	17.5	17.5	1.130	1.130	0.591	0.591	
			670	822.75	17.5	17.5	1.170	1.170	0.608	0.608	8
	Edge 1	0	580	820.50	17.5	17.5	0.753	0.753	0.386	0.386	
	Edge 2	0	580	820.50	17.5	17.5	0.142	0.142	0.074	0.074	
1xEVDO (Rel. 0)	Rear	0	476	817.90	17.5	17.5	1.050	1.050	0.552	0.552	
			580	820.50	17.5	17.5	1.080	1.080	0.563	0.563	
			670	822.75	17.5	17.5	1.080	1.080	0.566	0.566	
	Edge 1	0	580	820.50	17.5	17.5	0.741	0.741	0.385	0.385	
	Edge 2	0	580	820.50	17.5	17.5	0.152	0.152	0.078	0.078	

10.9. CDMA BC15

Mode	Test Position	Dist. (mm)	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
					Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
1xRTT (RC3 SO32)	Rear	0	25	1711.25	12.5	12.4	0.767	0.785	0.355	0.363	
			450	1732.50	12.5	12.4	1.110	1.136	0.514	0.526	
			875	1753.75	12.5	12.4	0.706	0.722	0.326	0.334	
	Edge 1	0	25	1711.25	12.5	12.4	0.728	0.745	0.348	0.356	
			450	1732.50	12.5	12.4	1.160	1.187	0.554	0.567	9
			875	1753.75	12.5	12.4	0.600	0.614	0.286	0.293	
	Edge 2	0	450	1732.50	12.5	12.4	0.139	0.142	0.068	0.070	
1xEVDO (Rel. 0)	Rear	0	25	1711.25	12.5	12.4	0.822	0.841	0.378	0.387	
			450	1732.50	12.5	12.4	1.140	1.167	0.522	0.534	
			875	1753.75	12.5	12.5	0.655	0.655	0.301	0.301	
	Edge 1	0	25	1711.25	12.5	12.4	0.901	0.922	0.424	0.434	
			450	1732.50	12.5	12.4	1.120	1.146	0.525	0.537	
			875	1753.75	12.5	12.5	0.679	0.679	0.317	0.317	
	Edge 2	0	450	1732.50	12.5	12.4	0.134	0.137	0.065	0.067	

10.10. LTE Band 2 (20MHz Bandwidth)

Mode	Test Position	Dist. (mm)	Ch #.	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
							Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
QPSK	Rear	0	18700	1860.0	1	49	14.0	14.0	1.170	1.170	0.534	0.534	
					50	24	14.0	14.0	1.170	1.170	0.536	0.536	10
			18900	1880.0	1	49	14.0	14.0	1.150	1.150	0.527	0.527	
					50	24	14.0	14.0	1.150	1.150	0.529	0.529	
					100	0	14.0	14.0	1.150	1.150	0.520	0.520	
			19100	1900.0	1	49	14.0	14.0	1.100	1.100	0.508	0.508	
					50	24	14.0	14.0	1.120	1.120	0.512	0.512	
	Edge 1	0	18700	1860.0	1	49	14.0	14.0	0.786	0.786	0.358	0.358	
					50	24	14.0	14.0	0.791	0.791	0.363	0.363	
			18900	1880.0	1	49	14.0	14.0	0.861	0.861	0.400	0.400	
					50	24	14.0	14.0	0.858	0.858	0.399	0.399	
					100	0	14.0	14.0	0.865	0.865	0.401	0.401	
			19100	1900.0	1	49	14.0	14.0	0.848	0.848	0.389	0.389	
					50	24	14.0	14.0	0.848	0.848	0.385	0.385	
	Edge 2	0	18900	1880.0	1	49	14.0	14.0	0.138	0.138	0.063	0.063	
					50	24	14.0	14.0	0.139	0.139	0.064	0.064	

10.11. LTE Band 4 (20MHz Bandwidth)

Mode	Test Position	Dist. (mm)	Ch #.	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
							Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
QPSK	Rear	0	20050	1720.0	1	49	14.0	14.0	1.140	1.140	0.528	0.528	
					50	24	14.0	14.0	1.120	1.120	0.517	0.517	
			20175	1732.5	1	49	14.0	14.0	1.130	1.130	0.526	0.526	
					50	24	14.0	14.0	1.150	1.150	0.532	0.532	
					100	0	14.0	14.0	1.150	1.150	0.533	0.533	11
			20300	1745.0	1	49	14.0	14.0	1.120	1.120	0.519	0.519	
					50	24	14.0	14.0	1.120	1.120	0.518	0.518	
	Edge 1	0	20050	1720.0	1	49	14.0	14.0	0.972	0.972	0.458	0.458	
					50	24	14.0	14.0	1.020	1.020	0.480	0.480	
			20175	1732.5	1	49	14.0	14.0	1.090	1.090	0.513	0.513	
					50	24	14.0	14.0	1.040	1.040	0.485	0.485	
					100	0	14.0	14.0	1.030	1.030	0.482	0.482	
			20300	1745.0	1	49	14.0	14.0	0.982	0.982	0.462	0.462	
					50	24	14.0	14.0	0.977	0.977	0.458	0.458	
	Edge 2	0	20175	1732.5	1	49	14.0	14.0	0.125	0.125	0.060	0.060	
					50	24	14.0	14.0	0.122	0.122	0.058	0.058	

10.12. LTE Band 5 (10MHz Bandwidth)

Mode	Test Position	Dist. (mm)	Ch #.	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
							Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
QPSK	Rear	0	20450	829.0	1	24	17.25	17.25	1.070	1.070	0.559	0.559	
					25	12	17.25	17.25	1.090	1.090	0.564	0.564	
			20525	836.5	1	24	17.25	17.25	1.110	1.110	0.581	0.581	
					25	12	17.25	17.25	1.150	1.150	0.596	0.596	
					50	0	17.25	17.25	1.130	1.130	0.587	0.587	
			20600	844.0	1	24	17.25	17.25	1.160	1.160	0.606	0.606	
					25	12	17.25	17.25	1.190	1.190	0.616	0.616	12
	Edge 1	0	20525	836.5	1	24	17.25	17.25	0.653	0.653	0.348	0.348	
					25	12	17.25	17.25	0.648	0.648	0.347	0.347	
	Edge 2	0	20525	836.5	1	24	17.25	17.25	0.150	0.150	0.079	0.079	
					25	12	17.25	17.25	0.148	0.148	0.079	0.079	

10.13. LTE Band 13 (10MHz Bandwidth)

Mode	Test Position	Dist. (mm)	Ch #.	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
							Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
QPSK	Rear	0	23230	782.0	1	24	18.5	18.5	1.110	1.110	0.589	0.589	
					25	12	18.5	18.4	1.110	1.136	0.581	0.595	13
					50	0	18.5	18.4	1.100	1.126	0.577	0.590	
	Edge 1	0	23230	782.0	1	24	18.5	18.5	0.595	0.595	0.311	0.311	
					25	12	18.5	18.4	0.595	0.609	0.311	0.318	
	Edge 2	0	23230	782.0	1	24	18.5	18.5	0.126	0.126	0.067	0.067	
					25	12	18.5	18.4	0.122	0.125	0.065	0.066	

10.14. LTE Band 17 (10MHz Bandwidth)

Mode	Test Position	Dist. (mm)	Ch #.	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
							Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
QPSK	Rear	0	23790	710.0	1	24	19.25	18.8	1.010	1.120	0.539	0.598	14
					25	12	19.25	18.8	1.010	1.120	0.536	0.595	
					50	0	19.25	18.8	0.998	1.107	0.527	0.585	
	Edge 1	0	23790	710.0	1	24	19.25	18.8	0.797	0.884	0.444	0.492	
					25	12	19.25	18.8	0.792	0.878	0.443	0.491	
					50	0	19.25	18.8	0.737	0.817	0.420	0.466	
	Edge 2	0	23790	710.0	1	24	19.25	18.8	0.146	0.162	0.078	0.087	
					25	12	19.25	18.8	0.137	0.152	0.074	0.083	

10.15. LTE Band 25 (20MHz Bandwidth)

Mode	Test Position	Dist. (mm)	Ch #.	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
							Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
QPSK	Rear	0	26140	1860.0	1	49	13.75	13.60	1.030	1.066	0.474	0.491	
					50	24	13.75	13.60	1.070	1.108	0.490	0.507	
			26365	1882.5	1	49	13.75	13.60	1.060	1.097	0.488	0.505	
					50	24	13.75	13.60	1.070	1.108	0.490	0.507	
					100	0	13.75	13.50	1.080	1.144	0.493	0.522	
			26590	1905.0	1	49	13.75	13.75	1.190	1.190	0.543	0.543	15
					50	24	13.75	13.75	1.160	1.160	0.530	0.530	
	Edge 1	0	26140	1860.0	1	49	13.75	13.60	0.843	0.873	0.391	0.405	
					50	24	13.75	13.60	0.859	0.889	0.399	0.413	
			26365	1882.5	1	49	13.75	13.60	0.777	0.804	0.359	0.372	
					50	24	13.75	13.60	0.794	0.822	0.365	0.378	
					100	0	13.75	13.50	0.786	0.833	0.363	0.385	
			26590	1905.0	1	49	13.75	13.75	0.793	0.793	0.361	0.361	
					50	24	13.75	13.75	0.804	0.804	0.365	0.365	
	Edge 2	0	26365	1882.5	1	49	13.75	13.60	0.133	0.138	0.062	0.064	
					50	24	13.75	13.60	0.128	0.132	0.058	0.060	

10.16. LTE Band 26 (10MHz Bandwidth)

Mode	Test Position	Dist. (mm)	Ch #.	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
							Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
QPSK	Rear	0	26740	819.0	1	24	17.25	17.25	1.100	1.100	0.572	0.572	
					25	12	17.25	17.25	1.100	1.100	0.573	0.573	
					50	0	17.25	17.25	1.110	1.110	0.575	0.575	16
	Edge 1	0	26740	819.0	1	24	17.25	17.25	0.656	0.656	0.339	0.339	
					25	12	17.25	17.25	0.659	0.659	0.340	0.340	
	Edge 2	0	26740	819.0	1	24	17.25	17.25	0.130	0.130	0.068	0.068	
					25	12	17.25	17.25	0.131	0.131	0.069	0.069	

10.17. LTE Band 41 (20MHz Bandwidth)

Mode	Test Position	Dist. (mm)	Ch #.	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
							Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
QPSK	Rear	0	39750	2506.0	1	0	14.25	14.25	0.722	0.722	0.296	0.296	
					50	0	14.25	14.25	0.768	0.768	0.312	0.312	
			40185	2549.5	1	0	14.25	14.25	0.822	0.822	0.323	0.323	
					50	0	14.25	14.25	0.785	0.785	0.307	0.307	
			40620	2593.0	1	0	14.25	14.25	0.764	0.764	0.294	0.294	
					50	0	14.25	14.25	0.817	0.817	0.319	0.319	
					100	0	14.25	14.25	0.828	0.828	0.312	0.312	
			41055	2636.5	1	0	14.25	14.20	0.815	0.824	0.305	0.309	
					50	0	14.25	14.25	0.863	0.863	0.322	0.322	
			41490	2680.0	1	0	14.25	14.25	0.812	0.812	0.322	0.322	
					50	0	14.25	14.20	0.829	0.839	0.328	0.332	
	Edge 1	0	39750	2506.0	1	0	14.25	14.25	0.907	0.907	0.368	0.368	
					50	0	14.25	14.25	0.929	0.929	0.375	0.375	
			40185	2549.5	1	0	14.25	14.25	1.000	1.000	0.400	0.400	
					50	0	14.25	14.25	1.010	1.010	0.404	0.404	
			40620	2593.0	1	0	14.25	14.25	1.010	1.010	0.402	0.402	
					50	0	14.25	14.25	1.050	1.050	0.416	0.416	
					100	0	14.25	14.25	1.090	1.090	0.426	0.426	
			41055	2636.5	1	0	14.25	14.20	1.110	1.123	0.433	0.438	
					50	0	14.25	14.25	1.140	1.140	0.445	0.445	17
			41490	2680.0	1	0	14.25	14.25	1.070	1.070	0.417	0.417	
					50	0	14.25	14.20	1.120	1.133	0.434	0.439	
	Edge 2	0	40620	2593.0	1	0	14.25	14.25	0.186	0.186	0.070	0.070	
					50	0	14.25	14.25	0.202	0.202	0.077	0.077	

10.18. Wi-Fi (DTS Band)

10.18.1. Wi-Fi 2.4 GHz P_{Cell_OFF} (P_{max})

Band	Mode	No. of Transmitters	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)						Area Scan Max. SAR (W/kg)	SAR (W/kg)											Notes	Plot No.
							Ant. A		Ant. B		Ant. D			Ant. A				Ant. B				Ant. D					
							Tune-up Limit	Measured	Tune-up Limit	Measured	Tune-up Limit	Measured		Measured		Scaled		Measured		Scaled		Measured		Scaled			
														1-g	10-g	1-g	10-g	1-g	10-g	1-g	10-g	1-g	10-g	1-g	10-g		
2.4 GHz	802.11b	1 Tx	0	Rear	6	2437	15.0	15.0					0.155	0.092	0.040	0.092	0.040										
				Edge 3	1	2412	15.0	15.0						0.893	0.294	0.893	0.294										
					6	2437	15.0	15.0					1.870	1.090	0.361	1.090	0.361										
					11	2462	15.0	15.0						1.090	0.363	1.090	0.363										
				Edge 4	6	2437	15.0	15.0					0.183	0.169	0.073	0.169	0.073										
				Rear	6	2437			16.5	16.5			0.118					0.097	0.041	0.097	0.041						
				Edge 2	6	2437			16.5	16.5			0.181					0.158	0.071	0.158	0.071						
				Edge 3	1	2412			16.5	16.5								1.190	0.394	1.190	0.394						18
					6	2437			16.5	16.5			1.580					1.180	0.390	1.180	0.390						
					11	2462			16.5	16.5								1.020	0.338	1.020	0.338						
				Rear	1	2412					12.5	12.5										0.982	0.383	0.982	0.383		
					6	2437					12.5	12.5	1.730									1.090	0.420	1.090	0.420		
					11	2462					12.5	12.5										1.060	0.416	1.060	0.416		
				Edge 1	1	2412					12.5	12.5										0.980	0.390	0.980	0.390		
					6	2437					12.5	12.5	1.360									0.974	0.387	0.974	0.387		
					11	2462					12.5	12.5										1.130	0.446	1.130	0.446		
				Edge 4	6	2437					12.5	12.5	0.192									0.127	0.050	0.127	0.050		

Band	Mode	No. of Transmitters	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)						Area Scan Max. SAR (W/kg)	SAR (W/kg)											Notes	Plot No.
							Ant. A		Ant. B		Ant. D			Ant. A				Ant. B				Ant. D					
							Tune-up Limit	Measured	Tune-up Limit	Measured	Tune-up Limit	Measured		Measured		Scaled		Measured		Scaled		Measured		Scaled			
														1-g	10-g	1-g	10-g	1-g	10-g	1-g	10-g	1-g	10-g	1-g	10-g		
2.4GHz	802.11g	2 Tx CDD	0	Rear	6	2437	15.0	15.0	16.5	16.5			0.118	0.088	0.037	0.088	0.037	0.087	0.038	0.087	0.038						
				Edge 2	6	2437	15.0	15.0	16.5	16.5			0.209					0.186	0.081	0.186	0.081						
				Edge 3	2	2417	15.0	15.0	16.5	16.5				0.965	0.323	0.965	0.323	1.080	0.357	1.080	0.357						
					6	2437	15.0	15.0	16.5	16.5			1.430	1.150	0.384	1.150	0.384	1.160	0.383	1.160	0.383						
					10	2457	15.0	15.0	16.5	16.5				0.938	0.326	0.938	0.326	1.100	0.373	1.100	0.373						
				Edge 4	6	2437	15.0	15.0	16.5	16.5			0.192	0.180	0.078	0.180	0.078										
				Rear	1	2412	15.0	15.0			12.5	12.5		0.090	0.039	0.090	0.039					1.030	0.410	1.030	0.410		
					6	2437	15.0	15.0			12.5	12.5	1.380	0.088	0.038	0.088	0.038					1.060	0.412	1.060	0.412		
					10	2457	15.0	15.0			12.5	12.5		0.074	0.032	0.074	0.032					1.150	0.452	1.150	0.452		
				Edge 1	1	2412	15.0	15.0			12.5	12.5										0.961	0.387	0.961	0.387		
					6	2437	15.0	15.0			12.5	12.5	1.250									0.920	0.369	0.920	0.369		
					10	2457	15.0	15.0			12.5	12.5										1.120	0.446	1.120	0.446		
				Edge 3	1	2412	15.0	15.0			12.5	12.5		0.958	0.317	0.958	0.317										
					6	2437	15.0	15.0			12.5	12.5	1.090	1.120	0.372	1.120	0.372										
					10	2457	15.0	15.0			12.5	12.5		1.070	0.359	1.070	0.359										
				Edge 4	6	2437	15.0	15.0			12.5	12.5	0.186	0.124	0.049	0.124	0.049					0.165	0.073	0.165	0.073		

10.18.2. Wi-Fi 2.4 GHz P_{Cell_ON} (P_{low})

Band	Mode	No. of Transmitters	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)						Area Scan Max. SAR (W/kg)	SAR (W/kg)											Notes	Plot No.
							Ant. A		Ant. B		Ant. D			Ant. A				Ant. B				Ant. D					
							Tune-up Limit	Measured	Tune-up Limit	Measured	Tune-up Limit	Measured		Measured		Scaled		Measured		Scaled		Measured		Scaled			
														1-g	10-g	1-g	10-g	1-g	10-g	1-g	10-g	1-g	10-g	1-g	10-g		
2.4GHz	802.11 b	1 Tx	0	Rear	6	2437					7.0	7.0	0.490									0.295	0.112	0.295	0.112		
				Edge 1	6	2437					7.0	7.0	0.321									0.256	0.099	0.256	0.099		
				Edge 4	6	2437					7.0	7.0	0.043									0.029	0.009	0.029	0.009		
2.4GHz	802.11 g	2 Tx	0	Rear	6	2437	15.0	15.0			7.0	7.0	0.377	0.085	0.038	0.085	0.038					0.291	0.112	0.291	0.112		
				Edge 1	6	2437	15.0	15.0			7.0	7.0	0.377									0.246	0.097	0.246	0.097		
				Edge 3	1	2412	15.0	15.0			7.0	7.0		0.874	0.288	0.874	0.288										
					6	2437	15.0	15.0			7.0	7.0	0.953	1.070	0.355	1.070	0.355										
					10	2457	15.0	15.0			7.0	7.0		1.070	0.355	1.070	0.355										
				Edge 4	6	2437	15.0	15.0			7.0	7.0	0.192	0.165	0.074	0.165	0.074					0.030	0.010	0.030	0.010		

Note(s):

1. Antenna A and B have no back-off power

10.19. Wi-Fi (U-NII Band)

5.2GHz Band

Band	Mode	No. of Transmitters	Position	Ch #	Freq. (MHz)	Power (dBm)				Area Scan Max. SAR (W/kg)	SAR (W/kg)								Notes	Plot No.
						Ant. A		Ant. B			Ant. A				Ant. B					
						Tune-up Limit	Measured	Tune-up Limit	Measured		Measured		Scaled		Measured		Scaled			
											1-g	10-g	1-g	10-g	1-g	10-g	1-g	10-g		
5.2 GHz	802.11n HT40	1 Tx	Rear	38	5180	14.0	14.0													
				46	5230	17.0	17.0			0.262	0.145	0.056	0.145	0.056						
			Edge 1	38	5180	14.0	14.0													
				46	5230	17.0	17.0			0.138	0.054	0.016	0.054	0.016						
			Edge 3	38	5180	14.0	14.0			0.738	0.543	0.156	0.543	0.156						
				46	5230	17.0	17.0			1.410	1.060	0.311	1.060	0.311						
			Edge 4	38	5180	14.0	14.0													
				46	5230	17.0	17.0			0.426	0.236	0.089	0.236	0.089						
		1 Tx	Rear	38	5180			14.0	14.0											
				46	5230			18.0	18.0	0.302					0.175	0.067	0.175	0.067		
			Edge 1	38	5180			14.0	14.0											
				46	5230			18.0	18.0	0.164					0.073	0.020	0.073	0.020		
			Edge 2	38	5180			14.0	14.0											
				46	5230			18.0	18.0	0.308					0.167	0.062	0.167	0.062		
			Edge 3	38	5180			14.0	14.0	0.598					0.319	0.104	0.319	0.104		
				46	5230			18.0	18.0	1.730					0.933	0.300	0.933	0.300		
	802.11n HT40 STBC	2 Tx	Rear	38	5180	13.0	13.0	13.0	13.0											
				46	5230	17.0	17.0	18.0	18.0	0.401	0.198	0.075	0.198	0.075	0.248	0.096	0.248	0.096		
			Edge 2	38	5180	13.0	13.0	13.0	13.0											
				46	5230	17.0	17.0	18.0	18.0	0.399					0.226	0.086	0.226	0.086		
			Edge 3	38	5180	13.0	13.0	13.0	13.0	0.569	0.379	0.114	0.379	0.114	0.264	0.087	0.264	0.087		
				46	5230	17.0	17.0	18.0	18.0	1.830	1.130	0.342	1.130	0.342	0.944	0.307	0.944	0.307		19
			Edge 4	38	5180	13.0	13.0	13.0	13.0											
				46	5230	17.0	17.0	18.0	18.0	0.530	0.322	0.120	0.322	0.120						

5.5GHz Band

Band	Mode	No. of Transmitters	Position	Ch #.	Freq. (MHz)	Power (dBm)				Area Scan Max. SAR (W/kg)	SAR (W/kg)								Notes	Plot No.
						Ant. A		Ant. B			Ant. A				Ant. B					
						Tune-up Limit	Measured	Tune-up Limit	Measured		Measured		Scaled		Measured		Scaled			
											1-g	10-g	1-g	10-g	1-g	10-g	1-g	10-g		
5.5 GHz	802.11ac VHT 80	1 Tx	Rear	106	5530	13.0	13.0													
				122	5610	15.5	15.5			0.16	0.096	0.035	0.096	0.035						
			Edge 1	106	5530	13.0	13.0													
				122	5610	15.5	15.5			0.035	0.021	0.004	0.021	0.004						
			Edge 3	106	5530	13.0	13.0				0.673	0.228	0.673	0.228						
				122	5610	15.5	15.5			1.72	1.190	0.389	1.190	0.389						20
			Edge 4	106	5530	13.0	13.0													
				122	5610	15.5	15.5			0.338	0.166	0.061	0.166	0.061						
		1 Tx	Rear	106	5530			13.0	13.0											
				122	5610			15.5	15.0	0.171					0.098	0.041	0.110	0.046		
			Edge 1	106	5530			13.0	13.0											
				122	5610			15.5	15.0	0.069					0.032	0.008	0.036	0.009		
			Edge 2	106	5530			13.0	13.0											
				122	5610			15.5	15.0	0.175					0.102	0.032	0.114	0.036		
			Edge 3	106	5530			13.0	13.0						0.572	0.190	0.572	0.190		
				122	5610			15.5	15.0	1.70					0.866	0.286	0.972	0.321		
	802.11ac VHT 80 CDD	2 Tx	Rear	106	5530	12.0	12.0	12.0	11.5											
				122	5610	15.5	15.5	15.5	15.0	0.216	0.121	0.050	0.121	0.050	0.093	0.038	0.104	0.043		
			Edge 2	106	5530	12.0	12.0	12.0	11.5											
				122	5610	15.5	15.5	15.5	15.0	0.143					0.083	0.029	0.094	0.032		
			Edge 3	106	5530	12.0	12.0	12.0	11.5		0.542	0.175	0.542	0.175	0.367	0.119	0.412	0.134		
				122	5610	15.5	15.5	15.5	15.0	2.060	1.150	0.370	1.150	0.370	0.739	0.250	0.829	0.281		
			Edge 4	106	5530	12.0	12.0	12.0	11.5											
				122	5610	15.5	15.5	15.5	15.0	0.371	0.206	0.074	0.206	0.074						

5.8GHz Band

Band	Mode	No. of Transmitters	Position	Ch #.	Freq. (MHz)	Power (dBm)				Area Scan Max. SAR (W/kg)	SAR (W/kg)								Notes	Plot No.
						Ant. A		Ant. B			Ant. A				Ant. B					
						Tune-up Limit	Measured	Tune-up Limit	Measured		Measured		Scaled		Measured		Scaled			
											1-g	10-g	1-g	10-g	1-g	10-g	1-g	10-g		
5.8GHz	802.11a	1 Tx	Rear	153	5765	17.0	17.0			0.250	0.125	0.042	0.125	0.042						
			Edge 1	153	5765	17.0	17.0			0.105	0.043	0.011	0.043	0.011						
			Edge 3	132	5660	15.5	15.5				0.663	0.197	0.663	0.197						
				153	5765	17.0	17.0			1.690	0.896	0.288	0.896	0.288						
				161	5805	17.0	17.0				0.949	0.307	0.949	0.307						
			Edge 4	153	5765	17.0	17.0			0.322	0.186	0.062	0.186	0.062						
		1 Tx	Rear	153	5765			17.0	17.0	0.283					0.137	0.052	0.137	0.052		
			Edge 1	153	5765			17.0	17.0	0.136					0.064	0.016	0.064	0.016		
			Edge 2	153	5765			17.0	17.0	0.230					0.107	0.035	0.107	0.035		
			Edge 3	132	5660			15.5	15.5						0.812	0.272	0.812	0.272		
				153	5765			17.0	17.0	2.120					1.120	0.377	1.120	0.377		
				161	5805			17.0	17.0						1.140	0.366	1.140	0.366		
	802.11a CDD	2 Tx	Rear	153	5765	17.0	17.0	17.0	17.0	0.323	0.114	0.044	0.114	0.044	0.170	0.064	0.170	0.064		
			Edge 2	153	5765	17.0	17.0	17.0	17.0	0.222					0.109	0.038	0.109	0.038		
			Edge 3	132	5660	15.0	15.0	15.0	15.0		0.569	0.186	0.569	0.186	0.684	0.229	0.684	0.229		
				153	5765	17.0	17.0	17.0	17.0	2.210	0.916	0.283	0.916	0.283	1.150	0.370	1.150	0.370		21
				161	5805	17.0	17.0	17.0	17.0		0.961	0.301	0.961	0.301	1.060	0.338	1.060	0.338		
			Edge 4	153	5765	17.0	17.0	17.0	17.0	0.286	0.154	0.053	0.154	0.053						

10.20. Bluetooth

Ant. B

RF Exposure Conditions	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
						Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
Body	V3 .0 + BDR GFSK	0	Rear	0	2402	10.5	10.5					
				39	2441	10.5	10.5	0.018	0.018	0.006	0.006	
				78	2480	10.5	10.3					
			Edge 1	0	2402	10.5	10.5					
				39	2441	10.5	10.5	<0.001	<0.001	<0.001	<0.001	
				78	2480	10.5	10.3					
			Edge 2	0	2402	10.5	10.5					
				39	2441	10.5	10.5	0.029	0.029	0.011	0.011	
				78	2480	10.5	10.3					
			Edge 3	0	2402	10.5	10.5					
				39	2441	10.5	10.5	0.252	0.252	0.080	0.080	
				78	2480	10.5	10.3					

Ant. D

RF Exposure Conditions	Mode	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
						Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
Body	V3 .0 + BDR GFSK	0	Rear	0	2402	8.0	7.0					
				39	2441	8.0	7.4					
				78	2480	8.0	7.5	0.309	0.347	0.117	0.131	22
			Edge 1	0	2402	8.0	7.0					
				39	2441	8.0	7.4					
				78	2480	8.0	7.5	0.268	0.301	0.104	0.117	
			Edge 4	0	2402	8.0	7.0					
				39	2441	8.0	7.4					
				78	2480	8.0	7.5	0.021	0.023	0.007	0.008	

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 < 0.80 W/kg; steps 2) through 4) do not apply.
2) When the original highest measured SAR is ≥ 0.80 W/kg, 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 W/kg (~ 10% from the 1-g SAR limit).
4) Perform a third repeated measurement only if the original, first or second repeated measurement is ≥1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20.

Frequency Band (MHz)	Air Interface	RF Exposure Conditions	No. of Transmitters	Test Position	Repeated SAR (Yes/No)	Highest Measured SAR (W/kg)	Repeated Measured SAR (W/kg)	Largest to Smallest SAR Ratio
750	LTE Band 13	Standalone	1 Tx	Rear	Yes	1.11	1.05	1.06
	LTE Band 17	Standalone	1 Tx	Rear	No	1.01	N/A	N/A
850	GSM 850	Standalone	1 Tx	Rear	No	1.11	N/A	N/A
	WCDMA Band V	Standalone	1 Tx	Rear	No	1.19	N/A	N/A
	CDMA BC0	Standalone	1 Tx	Rear	Yes	1.19	1.15	1.03
	CDMA BC10	Standalone	1 Tx	Rear	No	1.17	N/A	N/A
	LTE Band 5	Standalone	1 Tx	Rear	No	1.19	N/A	N/A
	LTE Band 26	Standalone	1 Tx	Rear	No	1.15	N/A	N/A
1700	WCDMA Band IV	Standalone	1 Tx	Edge 1	No	1.12	N/A	N/A
	CDMA BC15	Standalone	1 Tx	Edge 1	Yes	1.16	1.14	1.02
	LTE Band 4	Standalone	1 Tx	Rear	No	1.15	N/A	N/A
1900	GSM 1900	Standalone	1 Tx	Rear	No	1.14	N/A	N/A
	WCDMA Band II	Standalone	1 Tx	Rear	No	1.15	N/A	N/A
	CDMA BC1	Standalone	1 Tx	Rear	No	1.17	N/A	N/A
	LTE Band 2	Standalone	1 Tx	Rear	No	1.17	N/A	N/A
	LTE Band 25	Standalone	1 Tx	Rear	Yes	1.19	1.17	1.02
2400	Wi-Fi 802.11b/g/n	Standalone	1 Tx	Edge 3	Yes	1.19	1.17	1.02
	Bluetooth	Standalone	1 Tx	Rear	No	0.339	N/A	N/A
2600	LTE Band 41	Standalone	1 Tx	Edge 1	Yes	1.14	1.12	1.02
5200	Wi-Fi 802.11a/n/ac	Standalone	2 Tx	Edge 3	Yes	1.090	1.08	1.01
5600	Wi-Fi 802.11a/n/ac	Standalone	1 Tx	Edge 3	Yes	1.19	1.19	1.00
5800	Wi-Fi 802.11a/n/ac	Standalone	2 Tx	Edge 3	Yes	1.15	1.15	1.00

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. Simultaneous Transmission SAR Analysis

KDB 447498 D01 General RF Exposure Guidance introduces a new formula for calculating the SAR to Peak Location Ratio (SPLSR) between pairs of simultaneously transmitting antennas:

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

Where:

SAR_1 is the highest measured or estimated SAR for the first of a pair of simultaneous transmitting antennas, in a specific test operating mode and exposure condition

SAR_2 is the highest measured or estimated SAR for the second of a pair of simultaneous transmitting antennas, in the same test operating mode and exposure condition as the first

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

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

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

Simultaneous Transmission Condition

RF Exposure Condition	Item	Capable Transmit Configurations		
Standalone	1	Antenna C WWAN OFF	+ Antenna A Wi-Fi 2.4 GHz SISO	+ Antenna B Bluetooth
	2		+ Antenna A Wi-Fi 2.4 GHz SISO	+ Antenna D Bluetooth
	3		+ Antenna A Wi-Fi 5 GHz SISO	+ Antenna B Bluetooth
	4		+ Antenna A Wi-Fi 5 GHz SISO	+ Antenna D Bluetooth
	5		+ Antenna B Wi-Fi 5 GHz SISO	+ Antenna B Bluetooth
	6		+ Antenna B Wi-Fi 5 GHz SISO	+ Antenna D Bluetooth
	7		+ Antenna A + B Wi-Fi 5 GHz MIMO	+ Antenna B Bluetooth
	8		+ Antenna A + B Wi-Fi 5 GHz MIMO	+ Antenna D Bluetooth
	9	Antenna C WWAN ON	+ Antenna A Wi-Fi 2.4 GHz SISO	
	10		+ Antenna B Wi-Fi 2.4 GHz SISO	
	11		+ Antenna D Wi-Fi 2.4 GHz SISO (P_{Low})	
	12			+ Antenna B Bluetooth
	13			+ Antenna D Bluetooth
	14		+ Antenna A Wi-Fi 2.4 GHz SISO	+ Antenna B Bluetooth
	15		+ Antenna A Wi-Fi 2.4 GHz SISO	+ Antenna D Bluetooth
	16		+ Antenna A Wi-Fi 5 GHz SISO	
	17		+ Antenna B Wi-Fi 5 GHz SISO	
	18		+ Antenna A Wi-Fi 5 GHz SISO	+ Antenna B Bluetooth
	19		+ Antenna A Wi-Fi 5 GHz SISO	+ Antenna D Bluetooth
	20		+ Antenna B Wi-Fi 5 GHz SISO	+ Antenna B Bluetooth
	21		+ Antenna B Wi-Fi 5 GHz SISO	+ Antenna D Bluetooth
	22		+ Antenna A + B Wi-Fi 2.4 GHz MIMO	
	23		+ Antenna A + D Wi-Fi 2.4 GHz MIMO (P_{Low})	
	24		+ Antenna A + B Wi-Fi 5 GHz MIMO	
	25		+ Antenna A + B Wi-Fi 5 GHz MIMO	+ Antenna B Bluetooth
	26		+ Antenna A + B Wi-Fi 5 GHz MIMO	+ Antenna D Bluetooth

Notes:

1. Antenna D is for Wi-Fi 2.4GHz/Bluetooth only.
2. Antenna D uses Wi-Fi P_{low} when cellular antenna is in active transmission.
3. Wi-Fi 2.4GHz Radio on Antenna B and Antenna D cannot transmit simultaneously with Bluetooth Radio.

Estimated SAR for Simultaneous Transmission SAR Analysis

Considerations for SAR estimation

1. When standalone SAR test exclusion applies, standalone SAR must also be estimated to determine simultaneous transmission SAR test exclusion.
2. Dedicated Host Approach criteria for SAR test exclusion is likewise applied to SAR estimation, with certain distinctions between test exclusion and SAR estimation:
   - When the separation distance from the antenna to an adjacent edge is ≤ 5 mm, a distance of 5 mm is applied for SAR estimation; this is the same between test exclusion and SAR estimation calculations.
   - When the separation distance from the antenna to an adjacent edge is > 5 mm but ≤ 50 mm, the actual antenna-to-edge separation distance is applied for SAR estimation.
   - When the minimum test separation distance is > 50 mm, the estimated SAR value is 0.4 W/kg
3. Please refer to Estimated SAR Tables to see which test positions are inherently compliant as they consist of only estimated SAR values for all applicable transmitters and consequently will always have sum of SAR values < 1.2 W/kg. Simultaneous transmission SAR analysis was therefore not performed for these test positions.

Estimated SAR for WWAN

Antenna	Tx Interface	Frequency (MHz)	Output Power		Separation Distances (mm)						Estimated 1-g SAR Value (W/kg)					
			dBm	mW	Rear	Edge 1	Edge 2	Edge 3	Edge 4	Front	Rear	Edge 1	Edge 2	Edge 3	Edge 4	Front
Antenna C																
Cellular	GPRS 2 Slots	848.8	22.5	44	1.6	1.8	23.5	188.7	64.3		-MEASURE-	-MEASURE-	0.225	0.400	0.400	
Cellular	GPRS 2 Slots	1909.8	19.0	20	1.6	1.8	23.5	188.7	64.3		-MEASURE-	-MEASURE-	0.154	0.400	0.400	
Cellular	W-CDMA V	846.6	17.3	54	1.6	1.8	23.5	188.7	64.3		-MEASURE-	-MEASURE-	0.276	0.400	0.400	
Cellular	W-CDMA IV	1752.6	12.5	18	1.6	1.8	23.5	188.7	64.3		-MEASURE-	-MEASURE-	0.132	0.400	0.400	
Cellular	W-CDMA II	1907.6	13.5	22	1.6	1.8	23.5	188.7	64.3		-MEASURE-	-MEASURE-	0.169	0.400	0.400	
Cellular	CDMA BC0	848.31	17.3	54	1.6	1.8	23.5	188.7	64.3		-MEASURE-	-MEASURE-	0.276	0.400	0.400	
Cellular	CDMA BC1	1908.75	13.5	22	1.6	1.8	23.5	188.7	64.3		-MEASURE-	-MEASURE-	0.169	0.400	0.400	
Cellular	CDMA BC10	823.1	17.5	56	1.6	1.8	23.5	188.7	64.3		-MEASURE-	-MEASURE-	0.282	0.400	0.400	
Cellular	CDMA BC15	1753.75	12.5	18	1.6	1.8	23.5	188.7	64.3		-MEASURE-	-MEASURE-	0.132	0.400	0.400	
Cellular	LTE Band 2	1900	14.0	25	1.6	1.8	23.5	188.7	64.3		-MEASURE-	-MEASURE-	0.191	0.400	0.400	
Cellular	LTE Band 4	1754.3	14.0	25	1.6	1.8	23.5	188.7	64.3		-MEASURE-	-MEASURE-	0.184	0.400	0.400	
Cellular	LTE Band 5	844	17.3	54	1.6	1.8	23.5	188.7	64.3		-MEASURE-	-MEASURE-	0.276	0.400	0.400	
Cellular	LTE Band 13	782	18.5	71	1.6	1.8	23.5	188.7	64.3		-MEASURE-	-MEASURE-	0.349	0.400	0.400	
Cellular	LTE Band 17	710	19.3	85	1.6	1.8	23.5	188.7	64.3		-MEASURE-	-MEASURE-	0.398	0.400	0.400	
Cellular	LTE Band 25	1905	13.8	24	1.6	1.8	23.5	188.7	64.3		-MEASURE-	-MEASURE-	0.184	0.400	0.400	
Cellular	LTE Band 26	821.3	17.3	54	1.6	1.8	23.5	188.7	64.3		-MEASURE-	-MEASURE-	0.272	0.400	0.400	
Cellular	LTE Band 41	2680	14.3	27	1.6	1.8	23.5	188.7	64.3		-MEASURE-	-MEASURE-	0.246	0.400	0.400	

Estimated SAR for WLAN

Wi-Fi P_{Cell_OFF} (P_{max}) SISO

Tx Interface	Frequency (MHz)	Output Power		Separation Distances (mm)						Estimated 1-g SAR Value (W/kg)					
		dBm	mW	Rear	Edge 1	Edge 2	Edge 3	Edge 4	Front	Rear	Edge 1	Edge 2	Edge 3	Edge 4	Front
Antenna A															
Wi-Fi 2.4 GHz	2462	15.00	32	5.1	190.8	95.4	3.1	7.9		-MEASURE-	0.400	0.400	-MEASURE-	-MEASURE-	
Wi-Fi 5.2 GHz	5240	17.00	50	5.1	190.8	95.4	3.1	7.9		-MEASURE-	0.400	0.400	-MEASURE-	-MEASURE-	
Wi-Fi 5.3 GHz	5320	16.00	40	5.1	190.8	95.4	3.1	7.9		-MEASURE-	0.400	0.400	-MEASURE-	-MEASURE-	
Wi-Fi 5.5 GHz	5700	15.50	35	5.1	190.8	95.4	3.1	7.9		-MEASURE-	0.400	0.400	-MEASURE-	-MEASURE-	
Wi-Fi 5.8 GHz	5825	17.00	50	5.1	190.8	95.4	3.1	7.9		-MEASURE-	0.400	0.400	-MEASURE-	-MEASURE-	
Antenna B															
Wi-Fi 2.4 GHz	2462	16.50	45	5.1	192.2	7.6	3.1	95.4		-MEASURE-	0.400	-MEASURE-	-MEASURE-	0.400	
Wi-Fi 5.2 GHz	5240	18.00	63	5.1	192.2	7.6	3.1	95.4		-MEASURE-	0.400	-MEASURE-	-MEASURE-	0.400	
Wi-Fi 5.3 GHz	5320	17.00	50	5.1	192.2	7.6	3.1	95.4		-MEASURE-	0.400	-MEASURE-	-MEASURE-	0.400	
Wi-Fi 5.5 GHz	5700	15.50	35	5.1	192.2	7.6	3.1	95.4		-MEASURE-	0.400	-MEASURE-	-MEASURE-	0.400	
Wi-Fi 5.8 GHz	5825	17.00	50	5.1	192.2	7.6	3.1	95.4		-MEASURE-	0.400	-MEASURE-	-MEASURE-	0.400	
Bluetooth	2480	10.50	11	5.1	192.2	7.6	3.1	95.4		-MEASURE-	0.400	0.289	-MEASURE-	0.400	
Antenna D															
Wi-Fi 2.4 GHz	2462	12.50	18	1.6	1.8	74.4	188.9	23.2		-MEASURE-	-MEASURE-	0.400	0.400	0.164	
Bluetooth	2480	8.00	6	1.6	1.8	74.4	188.9	23.2		0.252	0.252	0.400	0.400	0.055	

Wi-Fi P_{Cell_OFF} (P_{max}) MIMO

Tx Interface	Frequency (MHz)	Output Power		Separation Distances (mm)						Estimated 1-g SAR Value (W/kg)					
		dBm	mW	Rear	Edge 1	Edge 2	Edge 3	Edge 4	Front	Rear	Edge 1	Edge 2	Edge 3	Edge 4	Front
Wi-Fi Antenna A															
Wi-Fi 2.4 GHz	2462	15.00	32	5.1	190.8	95.4	3.1	7.9		-MEASURE-	0.400	0.400	-MEASURE-	-MEASURE-	
Wi-Fi 5.2 GHz	5240	17.00	50	5.1	190.8	95.4	3.1	7.9		-MEASURE-	0.400	0.400	-MEASURE-	-MEASURE-	
Wi-Fi 5.3 GHz	5320	16.00	40	5.1	190.8	95.4	3.1	7.9		-MEASURE-	0.400	0.400	-MEASURE-	-MEASURE-	
Wi-Fi 5.5 GHz	5700	16.50	45	5.1	190.8	95.4	3.1	7.9		-MEASURE-	0.400	0.400	-MEASURE-	-MEASURE-	
Wi-Fi 5.8 GHz	5825	17.00	50	5.1	190.8	95.4	3.1	7.9		-MEASURE-	0.400	0.400	-MEASURE-	-MEASURE-	
Wi-Fi Antenna B															
Wi-Fi 2.4 GHz	2462	16.50	45	5.1	192.2	7.6	3.1	95.4		-MEASURE-	0.400	-MEASURE-	-MEASURE-	0.400	
Wi-Fi 5.2 GHz	5240	18.00	63	5.1	192.2	7.6	3.1	95.4		-MEASURE-	0.400	-MEASURE-	-MEASURE-	0.400	
Wi-Fi 5.3 GHz	5320	17.00	50	5.1	192.2	7.6	3.1	95.4		-MEASURE-	0.400	-MEASURE-	-MEASURE-	0.400	
Wi-Fi 5.5 GHz	5700	15.50	35	5.1	192.2	7.6	3.1	95.4		-MEASURE-	0.400	-MEASURE-	-MEASURE-	0.400	
Wi-Fi 5.8 GHz	5825	17.00	50	5.1	192.2	7.6	3.1	95.4		-MEASURE-	0.400	-MEASURE-	-MEASURE-	0.400	
Wi-Fi Antenna D															
Wi-Fi 2.4 GHz	2462	12.50	18	1.6	1.8	74.4	188.9	23.2		-MEASURE-	-MEASURE-	0.400	0.400	0.164	

Wi-Fi P_{Cell_ON} (P_{low}) SISO

Tx Interface	Frequency (MHz)	Output Power		Separation Distances (mm)						Estimated 1-g SAR Value (W/kg)					
		dBm	mW	Rear	Edge 1	Edge 2	Edge 3	Edge 4	Front	Rear	Edge 1	Edge 2	Edge 3	Edge 4	Front
Antenna A															
Wi-Fi 2.4 GHz	2462	15.00	32	5.1	190.8	95.4	3.1	7.9		-MEASURE-	0.400	0.400	-MEASURE-	-MEASURE-	
Wi-Fi 5.2 GHz	5240	17.00	50	5.1	190.8	95.4	3.1	7.9		-MEASURE-	0.400	0.400	-MEASURE-	-MEASURE-	
Wi-Fi 5.3 GHz	5320	16.00	40	5.1	190.8	95.4	3.1	7.9		-MEASURE-	0.400	0.400	-MEASURE-	-MEASURE-	
Wi-Fi 5.5 GHz	5700	16.50	45	5.1	190.8	95.4	3.1	7.9		-MEASURE-	0.400	0.400	-MEASURE-	-MEASURE-	
Wi-Fi 5.8 GHz	5825	17.00	50	5.1	190.8	95.4	3.1	7.9		-MEASURE-	0.400	0.400	-MEASURE-	-MEASURE-	
Antenna B															
Wi-Fi 2.4 GHz	2462	16.50	45	5.1	192.2	7.6	3.1	95.4		-MEASURE-	0.400	-MEASURE-	-MEASURE-	0.400	
Wi-Fi 5.2 GHz	5240	18.00	63	5.1	192.2	7.6	3.1	95.4		-MEASURE-	0.400	-MEASURE-	-MEASURE-	0.400	
Wi-Fi 5.3 GHz	5320	17.00	50	5.1	192.2	7.6	3.1	95.4		-MEASURE-	0.400	-MEASURE-	-MEASURE-	0.400	
Wi-Fi 5.5 GHz	5700	15.50	35	5.1	192.2	7.6	3.1	95.4		-MEASURE-	0.400	-MEASURE-	-MEASURE-	0.400	
Wi-Fi 5.8 GHz	5825	17.00	50	5.1	192.2	7.6	3.1	95.4		-MEASURE-	0.400	-MEASURE-	-MEASURE-	0.400	
Bluetooth	2480	10.50	11	5.1	192.2	7.6	3.1	95.4		-MEASURE-	0.400	0.289	-MEASURE-	0.400	
Antenna D															
Wi-Fi 2.4 GHz	2462	7.00	5	1.6	1.8	74.4	188.9	23.2		0.209	0.209	0.400	0.400	0.045	
Bluetooth	2480	8.00	6	1.6	1.8	74.4	188.9	23.2		0.252	0.252	0.400	0.400	0.055	

Wi-Fi P_{Cell_ON} (P_{low}) MIMO

Tx Interface	Frequency (MHz)	Output Power		Separation Distances (mm)						Estimated 1-g SAR Value (W/kg)					
		dBm	mW	Rear	Edge 1	Edge 2	Edge 3	Edge 4	Front	Rear	Edge 1	Edge 2	Edge 3	Edge 4	Front
Wi-Fi Antenna A															
Wi-Fi 2.4 GHz	2462	15.00	32	5.1	190.8	95.4	3.1	7.9		-MEASURE-	0.400	0.400	-MEASURE-	-MEASURE-	
Wi-Fi 5.2 GHz	5240	17.00	50	5.1	190.8	95.4	3.1	7.9		-MEASURE-	0.400	0.400	-MEASURE-	-MEASURE-	
Wi-Fi 5.3 GHz	5320	16.00	40	5.1	190.8	95.4	3.1	7.9		-MEASURE-	0.400	0.400	-MEASURE-	-MEASURE-	
Wi-Fi 5.5 GHz	5700	16.50	45	5.1	190.8	95.4	3.1	7.9		-MEASURE-	0.400	0.400	-MEASURE-	-MEASURE-	
Wi-Fi 5.8 GHz	5825	17.00	50	5.1	190.8	95.4	3.1	7.9		-MEASURE-	0.400	0.400	-MEASURE-	-MEASURE-	
Wi-Fi Antenna B															
Wi-Fi 2.4 GHz	2462	16.50	45	5.1	192.2	7.6	3.1	95.4		-MEASURE-	0.400	-MEASURE-	-MEASURE-	0.400	
Wi-Fi 5.2 GHz	5240	18.00	63	5.1	192.2	7.6	3.1	95.4		-MEASURE-	0.400	-MEASURE-	-MEASURE-	0.400	
Wi-Fi 5.3 GHz	5320	17.00	50	5.1	192.2	7.6	3.1	95.4		-MEASURE-	0.400	-MEASURE-	-MEASURE-	0.400	
Wi-Fi 5.5 GHz	5700	15.50	35	5.1	192.2	7.6	3.1	95.4		-MEASURE-	0.400	-MEASURE-	-MEASURE-	0.400	
Wi-Fi 5.8 GHz	5825	17.00	50	5.1	192.2	7.6	3.1	95.4		-MEASURE-	0.400	-MEASURE-	-MEASURE-	0.400	
Wi-Fi Antenna D															
Wi-Fi 2.4 GHz	2462	7.00	5	1.6	1.8	74.4	188.9	23.2		0.209	0.209	0.400	0.400	0.045	

12.1. Sum of the SAR for GSM850 & Wi-Fi P_{Cell_ON} (P_{low}) & BT

12.1.1. GSM850 & Wi-Fi 2.4GHz (SISO) & BT

RF Exposure conditions	① WWAN	② Ant. A Wi-Fi 2.4GHz	③ Ant. B Wi-Fi 2.4GHz	④ Ant. D Wi-Fi 2.4GHz P_{Low}	⑤ Ant. B BT	⑥ Ant. D BT	①+② WWAN +Ant. A		①+③ WWAN + Ant. B		①+④ WWAN +Ant. D		①+⑤ WWAN +Ant. B (BT)		①+⑥ WWAN +Ant. D (BT)		①+②+⑤ WWAN +Ant. A +Ant. B (BT)		①+②+⑥ WWAN +Ant. A +Ant. D (BT)	
							∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1.110	0.092	0.097	0.295	0.018	0.347	1.202	No	1.207	No	1.405	No	1.128	No	1.457	No	1.220	No	1.549	No
Edge 1	0.468	0.400	0.400	0.256	0.000	0.301	0.868	No	0.868	No	0.724	No	0.468	No	0.769	No	0.868	No	1.169	No
Edge 2	0.115	0.400	0.158	0.400	0.029	0.400	0.515	No	0.273	No	0.515	No	0.144	No	0.515	No	0.544	No	0.915	No

12.1.2. GSM850 & Wi-Fi 2.4GHz (MIMO)

RF Exposure conditions	① WWAN	② Ant. A +B Wi-Fi 2.4GHz	③ Ant. A +D Wi-Fi 2.4GHz P_{Low}	④ Ant. B BT	⑤ Ant. D BT	①+② WWAN +Ant. A +B		①+③ WWAN +Ant. A +D	
						∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1.110	0.088	0.291	0.018	0.347	1.198	No	1.401	No
Edge 1	0.468	0.400	0.246	0.000	0.301	0.868	No	0.714	No
Edge 2	0.115	0.186	0.400	0.029	0.400	0.301	No	0.515	No

12.1.3. GSM850 & Wi-Fi 5GHz (SISO) & BT

RF Exposure conditions	① WWAN	② Ant. A Wi-Fi 5GHz	③ Ant. B Wi-Fi 5GHz	④ Ant. B BT	⑤ Ant. D BT	①+② WWAN +Ant. A		①+③ WWAN + Ant. B		①+②+④ WWAN +Ant. A + Ant. B (BT)		①+②+⑤ WWAN +Ant. A + Ant. D (BT)		①+③+④ WWAN +Ant. B + Ant. B (BT)		①+③+⑤ WWAN +Ant. B + Ant. D (BT)	
						∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1.110	0.145	0.175	0.018	0.347	1.255	No	1.285	No	1.273	No	1.602	**Yes**	1.303	No	1.632	**Yes**
Edge 1	0.468	0.054	0.073	0.000	0.301	0.522	No	0.541	No	0.522	No	0.823	No	0.541	No	0.842	No
Edge 2	0.115	0.400	0.167	0.029	0.400	0.515	No	0.282	No	0.544	No	0.915	No	0.311	No	0.682	No

12.1.4. GSM850 & Wi-Fi 5GHz (MIMO) & BT

RF Exposure conditions	① WWAN	② Ant. A +B Wi-Fi 5GHz	③ Ant. B BT	④ Ant. D BT	①+② WWAN +Ant. A +B		①+②+③ WWAN +Ant. A +B +Ant. B (BT)		①+②+④ WWAN +Ant. A +B +Ant. D (BT)	
					∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1.110	0.248	0.018	0.347	1.358	No	1.376	No	1.705	**Yes**
Edge 1	0.468	0.400	0.000	0.301	0.868	No	0.868	No	1.169	No
Edge 2	0.115	0.226	0.029	0.400	0.341	No	0.370	No	0.741	No

12.2. Sum of the SAR for GSM1900 & Wi-Fi P_{Cell_ON} (P_{low}) & BT

12.2.1. GSM1900 & Wi-Fi 2.4GHz (SISO) & BT

RF Exposure conditions	① WWAN	② Ant. A Wi-Fi 2.4GHz	③ Ant. B Wi-Fi 2.4GHz	④ Ant. D Wi-Fi 2.4GHz P_{Low}	⑤ Ant. B BT	⑥ Ant. D BT	①+② WWAN +Ant. A		①+③ WWAN + Ant. B		①+④ WWAN +Ant. D		①+⑤ WWAN +Ant. B (BT)		①+⑥ WWAN +Ant. D (BT)		①+②+⑤ WWAN +Ant. A +Ant. B (BT)		①+②+⑥ WWAN +Ant. A +Ant. D (BT)	
							∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1.167	0.092	0.097	0.295	0.018	0.347	1.259	No	1.264	No	1.462	No	1.185	No	1.514	No	1.277	No	1.606	**Yes**
Edge 1	0.704	0.400	0.400	0.256	0.000	0.301	1.104	No	1.104	No	0.960	No	0.704	No	1.005	No	1.104	No	1.405	No
Edge 2	0.093	0.400	0.158	0.400	0.029	0.400	0.493	No	0.251	No	0.493	No	0.122	No	0.493	No	0.522	No	0.893	No

12.2.2. GSM1900 & Wi-Fi 2.4GHz (MIMO)

RF Exposure conditions	① WWAN	② Ant. A +B Wi-Fi 2.4GHz	③ Ant. A +D Wi-Fi 2.4GHz P_{Low}	④ Ant. B BT	⑤ Ant. D BT	①+② WWAN +Ant. A +B		①+③ WWAN +Ant. A +D	
						∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1.167	0.088	0.291	0.018	0.347	1.255	No	1.458	No
Edge 1	0.704	0.400	0.246	0.000	0.301	1.104	No	0.950	No
Edge 2	0.093	0.186	0.400	0.029	0.400	0.279	No	0.493	No

12.2.3. GSM1900 & Wi-Fi 5GHz (SISO) & BT

RF Exposure conditions	① WWAN	② Ant. A Wi-Fi 5GHz	③ Ant. B Wi-Fi 5GHz	④ Ant. B BT	⑤ Ant. D BT	①+② WWAN +Ant. A		①+③ WWAN + Ant. B		①+②+④ WWAN +Ant. A + Ant. B (BT)		①+②+⑤ WWAN +Ant. A + Ant. D (BT)		①+③+④ WWAN +Ant. B + Ant. B (BT)		①+③+⑤ WWAN +Ant. B + Ant. D (BT)	
						∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1.167	0.145	0.175	0.018	0.347	1.312	No	1.342	No	1.330	No	1.659	**Yes**	1.360	No	1.689	**Yes**
Edge 1	0.704	0.054	0.073	0.000	0.301	0.758	No	0.777	No	0.758	No	1.059	No	0.777	No	1.078	No
Edge 2	0.093	0.400	0.167	0.029	0.400	0.493	No	0.260	No	0.522	No	0.893	No	0.289	No	0.660	No

12.2.4. GSM1900 & Wi-Fi 5GHz (MIMO) & BT

RF Exposure conditions	① WWAN	② Ant. A +B Wi-Fi 5GHz	③ Ant. B BT	④ Ant. D BT	①+② WWAN +Ant. A +B		①+②+③ WWAN +Ant. A +B +Ant. B (BT)		①+②+④ WWAN +Ant. A +B +Ant. D (BT)	
					∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1.167	0.248	0.018	0.347	1.415	No	1.433	No	1.762	**Yes**
Edge 1	0.704	0.400	0.000	0.301	1.104	No	1.104	No	1.405	No
Edge 2	0.093	0.226	0.029	0.400	0.319	No	0.348	No	0.719	No

12.3. Sum of the SAR for WCDMA Band V & Wi-Fi P_{Cell_ON} (P_{low}) & BT

12.3.1. WCDMA Band V & Wi-Fi 2.4GHz (SISO) & BT

RF Exposure conditions	① WWAN	② Ant. A Wi-Fi 2.4GHz	③ Ant. B Wi-Fi 2.4GHz	④ Ant. D Wi-Fi 2.4GHz P_{Low}	⑤ Ant. B BT	⑥ Ant. D BT	①+② WWAN +Ant. A		①+③ WWAN + Ant. B		①+④ WWAN +Ant. D		①+⑤ WWAN +Ant. B (BT)		①+⑥ WWAN +Ant. D (BT)		①+②+⑤ WWAN +Ant. A +Ant. B (BT)		①+②+⑥ WWAN +Ant. A +Ant. D (BT)	
							∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1.190	0.092	0.097	0.295	0.018	0.347	1282	No	1287	No	1485	No	1208	No	1537	No	1300	No	1629	**Yes**
Edge 1	0.580	0.400	0.400	0.256	0.000	0.301	0.980	No	0.980	No	0.836	No	0.580	No	0.881	No	0.980	No	1281	No
Edge 2	0.147	0.400	0.158	0.400	0.029	0.400	0.547	No	0.305	No	0.547	No	0.176	No	0.547	No	0.576	No	0.947	No

12.3.2. WCDMA Band V & Wi-Fi 2.4GHz (MIMO)

RF Exposure conditions	① WWAN	② Ant. A +B Wi-Fi 2.4GHz	③ Ant. A +D Wi-Fi 2.4GHz P_{Low}	④ Ant. B BT	⑤ Ant. D BT	①+② WWAN +Ant. A +B		①+③ WWAN +Ant. A +D	
						∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1.190	0.088	0.291	0.018	0.347	1278	No	1481	No
Edge 1	0.580	0.400	0.246	0.000	0.301	0.980	No	0.826	No
Edge 2	0.147	0.186	0.400	0.029	0.400	0.333	No	0.547	No

12.3.3. WCDMA Band V & Wi-Fi 5GHz (SISO) & BT

RF Exposure conditions	① WWAN	② Ant. A Wi-Fi 5GHz	③ Ant. B Wi-Fi 5GHz	④ Ant. B BT	⑤ Ant. D BT	①+② WWAN +Ant. A		①+③ WWAN + Ant. B		①+②+④ WWAN +Ant. A + Ant. B (BT)		①+②+⑤ WWAN +Ant. A + Ant. D (BT)		①+③+④ WWAN +Ant. B + Ant. B (BT)		①+③+⑤ WWAN +Ant. B + Ant. D (BT)	
						∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1.190	0.145	0.175	0.018	0.347	1335	No	1365	No	1353	No	1682	**Yes**	1383	No	1712	**Yes**
Edge 1	0.580	0.054	0.073	0.000	0.301	0.634	No	0.653	No	0.634	No	0.935	No	0.653	No	0.954	No
Edge 2	0.147	0.400	0.167	0.029	0.400	0.547	No	0.314	No	0.576	No	0.947	No	0.343	No	0.714	No

12.3.4. WCDMA Band V & Wi-Fi 5GHz (MIMO) & BT

RF Exposure conditions	① WWAN	② Ant. A +B Wi-Fi 5GHz	③ Ant. B BT	④ Ant. D BT	①+② WWAN +Ant. A +B		①+②+③ WWAN +Ant. A +B +Ant. B (BT)		①+②+④ WWAN +Ant. A +B +Ant. D (BT)	
					∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1.190	0.248	0.018	0.347	1438	No	1456	No	1785	**Yes**
Edge 1	0.580	0.400	0.000	0.301	0.980	No	0.980	No	1281	No
Edge 2	0.147	0.226	0.029	0.400	0.373	No	0.402	No	0.773	No

12.4. Sum of the SAR for WCDMA Band IV & Wi-Fi P_{Cell_ON} (P_{low}) & BT

12.4.1. WCDMA Band IV & Wi-Fi 2.4GHz (SISO) & BT

RF Exposure conditions	① WWAN	② Ant. A Wi-Fi 2.4GHz	③ Ant. B Wi-Fi 2.4GHz	④ Ant. D Wi-Fi 2.4GHz P_{Low}	⑤ Ant. B BT	⑥ Ant. D BT	①+② WWAN +Ant. A		①+③ WWAN + Ant. B		①+④ WWAN +Ant. D		①+⑤ WWAN +Ant. B (BT)		①+⑥ WWAN +Ant. D (BT)		①+②+⑤ WWAN +Ant. A +Ant. B (BT)		①+②+⑥ WWAN +Ant. A +Ant. D (BT)	
							∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1080	0.092	0.097	0.295	0.018	0.347	1.172	No	1.177	No	1.375	No	1.098	No	1.427	No	1.190	No	1.519	No
Edge 1	1.120	0.400	0.400	0.256	0.000	0.301	1.520	No	1.520	No	1.376	No	1.120	No	1.421	No	1.520	No	1.821	**Yes**
Edge 2	0.141	0.400	0.158	0.400	0.029	0.400	0.541	No	0.299	No	0.541	No	0.170	No	0.541	No	0.570	No	0.941	No

12.4.2. WCDMA Band IV & Wi-Fi 2.4GHz (MIMO)

RF Exposure conditions	① WWAN	② Ant. A +B Wi-Fi 2.4GHz	③ Ant. A +D Wi-Fi 2.4GHz P_{Low}	④ Ant. B BT	⑤ Ant. D BT	①+② WWAN +Ant. A +B		①+③ WWAN +Ant. A +D	
						∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1080	0.088	0.291	0.018	0.347	1.168	No	1.371	No
Edge 1	1.120	0.400	0.246	0.400	0.301	1.520	No	1.366	No
Edge 2	0.141	0.186	0.400	0.029	0.400	0.327	No	0.541	No

12.4.3. WCDMA Band IV & Wi-Fi 5GHz (SISO) & BT

RF Exposure conditions	① WWAN	② Ant. A Wi-Fi 5GHz	③ Ant. B Wi-Fi 5GHz	④ Ant. B BT	⑤ Ant. D BT	①+② WWAN +Ant. A		①+③ WWAN + Ant. B		①+②+④ WWAN +Ant. A + Ant. B (BT)		①+②+⑤ WWAN +Ant. A + Ant. D (BT)		①+③+④ WWAN +Ant. B + Ant. B (BT)		①+③+⑤ WWAN +Ant. B + Ant. D (BT)	
						∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1080	0.145	0.175	0.018	0.347	1.225	No	1.255	No	1.243	No	1.572	No	1.273	No	1.602	**Yes**
Edge 1	1.120	0.054	0.073	0.000	0.301	1.174	No	1.193	No	1.174	No	1.475	No	1.193	No	1.494	No
Edge 2	0.141	0.400	0.167	0.029	0.400	0.541	No	0.308	No	0.570	No	0.941	No	0.337	No	0.708	No

12.4.4. WCDMA Band IV & Wi-Fi 5GHz (MIMO) & BT

RF Exposure conditions	① WWAN	② Ant. A +B Wi-Fi 5GHz	③ Ant. B BT	④ Ant. D BT	①+② WWAN +Ant. A +B		①+②+③ WWAN +Ant. A +B +Ant. B (BT)		①+②+④ WWAN +Ant. A +B +Ant. D (BT)	
					∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1080	0.248	0.018	0.347	1.328	No	1.346	No	1.675	**Yes**
Edge 1	1.120	0.400	0.000	0.301	1.520	No	1.520	No	1.821	**Yes**
Edge 2	0.141	0.226	0.029	0.400	0.367	No	0.396	No	0.767	No

12.5. Sum of the SAR for WCDMA Band II & Wi-Fi P_{Cell_ON} (P_{low}) & BT

12.5.1. WCDMA Band II & Wi-Fi 2.4GHz (SISO) & BT

RF Exposure conditions	① WWAN	② Ant. A Wi-Fi 2.4GHz	③ Ant. B Wi-Fi 2.4GHz	④ Ant. D Wi-Fi 2.4GHz P_{Low}	⑤ Ant. B BT	⑥ Ant. D BT	①+② WWAN +Ant. A		①+③ WWAN + Ant. B		①+④ WWAN +Ant. D		①+⑤ WWAN +Ant. B (BT)		①+⑥ WWAN +Ant. D (BT)		①+②+⑤ WWAN +Ant. A +Ant. B (BT)		①+②+⑥ WWAN +Ant. A +Ant. D (BT)	
							∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1.150	0.092	0.097	0.295	0.018	0.347	1.242	No	1.247	No	1.445	No	1.168	No	1.497	No	1.260	No	1.589	No
Edge 1	0.854	0.400	0.400	0.256	0.000	0.301	1.254	No	1.254	No	1.110	No	0.854	No	1.155	No	1.254	No	1.555	No
Edge 2	0.126	0.400	0.158	0.400	0.029	0.400	0.526	No	0.284	No	0.526	No	0.155	No	0.526	No	0.555	No	0.926	No

12.5.2. WCDMA Band II & Wi-Fi 2.4GHz (MIMO)

RF Exposure conditions	① WWAN	② Ant. A +B Wi-Fi 2.4GHz	③ Ant. A +D Wi-Fi 2.4GHz P_{Low}	④ Ant. B BT	⑤ Ant. D BT	①+② WWAN +Ant. A +B		①+③ WWAN +Ant. A +D	
						∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1.150	0.088	0.291	0.018	0.347	1.238	No	1.441	No
Edge 1	0.854	0.400	0.246	0.000	0.301	1.254	No	1.100	No
Edge 2	0.126	0.186	0.400	0.029	0.400	0.312	No	0.526	No

12.5.3. WCDMA Band II & Wi-Fi 5GHz (SISO) & BT

RF Exposure conditions	① WWAN	② Ant. A Wi-Fi 5GHz	③ Ant. B Wi-Fi 5GHz	④ Ant. B BT	⑤ Ant. D BT	①+② WWAN +Ant. A		①+③ WWAN + Ant. B		①+②+④ WWAN +Ant. A + Ant. B (BT)		①+②+⑤ WWAN +Ant. A + Ant. D (BT)		①+③+④ WWAN +Ant. B + Ant. B (BT)		①+③+⑤ WWAN +Ant. B + Ant. D (BT)	
						∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1.150	0.145	0.175	0.018	0.347	1.295	No	1.325	No	1.313	No	1.642	**Yes**	1.343	No	1.672	**Yes**
Edge 1	0.854	0.054	0.073	0.000	0.301	0.908	No	0.927	No	0.908	No	1.209	No	0.927	No	1.228	No
Edge 2	0.126	0.400	0.167	0.029	0.400	0.526	No	0.293	No	0.555	No	0.926	No	0.322	No	0.693	No

12.5.4. WCDMA Band II & Wi-Fi 5GHz (MIMO) & BT

RF Exposure conditions	① WWAN	② Ant. A +B Wi-Fi 5GHz	③ Ant. B BT	④ Ant. D BT	①+② WWAN +Ant. A +B		①+②+③ WWAN +Ant. A +B +Ant. B (BT)		①+②+④ WWAN +Ant. A +B +Ant. D (BT)	
					∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1.150	0.248	0.018	0.347	1.398	No	1.416	No	1.745	**Yes**
Edge 1	0.854	0.400	0.000	0.301	1.254	No	1.254	No	1.555	No
Edge 2	0.126	0.226	0.029	0.400	0.352	No	0.381	No	0.752	No

12.6. Sum of the SAR for CDMA BC0 & Wi-Fi P_{Cell_ON} (P_{low}) & BT

12.6.1. CDMA BC0 & Wi-Fi 2.4GHz (SISO) & BT

RF Exposure conditions	① WWAN	② Ant. A Wi-Fi 2.4GHz	③ Ant. B Wi-Fi 2.4GHz	④ Ant. D Wi-Fi 2.4GHz P_{Low}	⑤ Ant. B BT	⑥ Ant. D BT	①+② WWAN +Ant. A		①+③ WWAN + Ant. B		①+④ WWAN +Ant. D		①+⑤ WWAN +Ant. B (BT)		①+⑥ WWAN +Ant. D (BT)		①+②+⑤ WWAN +Ant. A +Ant. B (BT)		①+②+⑥ WWAN +Ant. A +Ant. D (BT)	
							∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1.190	0.092	0.097	0.295	0.018	0.347	1.282	No	1.287	No	1.485	No	1.208	No	1.537	No	1.300	No	1.629	**Yes**
Edge 1	0.751	0.400	0.400	0.256	0.000	0.301	1.151	No	1.151	No	1.007	No	0.751	No	1.052	No	1.151	No	1.452	No
Edge 2	0.164	0.400	0.158	0.400	0.029	0.400	0.564	No	0.322	No	0.564	No	0.193	No	0.564	No	0.593	No	0.964	No

12.6.2. CDMA BC0 & Wi-Fi 2.4GHz (MIMO)

RF Exposure conditions	① WWAN	② Ant. A +B Wi-Fi 2.4GHz	③ Ant. A +D Wi-Fi 2.4GHz P_{Low}	④ Ant. B BT	⑤ Ant. D BT	①+② WWAN +Ant. A +B		①+③ WWAN +Ant. A +D	
						∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1.190	0.088	0.291	0.018	0.347	1.278	No	1.481	No
Edge 1	0.751	0.400	0.246	0.000	0.301	1.151	No	0.997	No
Edge 2	0.164	0.186	0.400	0.029	0.400	0.350	No	0.564	No

12.6.3. CDMA BC0 & Wi-Fi 5GHz (SISO) & BT

RF Exposure conditions	① WWAN	② Ant. A Wi-Fi 5GHz	③ Ant. B Wi-Fi 5GHz	④ Ant. B BT	⑤ Ant. D BT	①+② WWAN +Ant. A		①+③ WWAN + Ant. B		①+②+④ WWAN +Ant. A + Ant. B (BT)		①+②+⑤ WWAN +Ant. A + Ant. D (BT)		①+③+④ WWAN +Ant. B + Ant. B (BT)		①+③+⑤ WWAN +Ant. B + Ant. D (BT)	
						∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1.190	0.145	0.175	0.018	0.347	1.335	No	1.365	No	1.353	No	1.682	**Yes**	1.383	No	1.712	**Yes**
Edge 1	0.751	0.054	0.073	0.000	0.301	0.805	No	0.824	No	0.805	No	1.106	No	0.824	No	1.125	No
Edge 2	0.164	0.400	0.167	0.029	0.400	0.564	No	0.331	No	0.593	No	0.964	No	0.360	No	0.731	No

12.6.4. CDMA BC0 & Wi-Fi 5GHz (MIMO) & BT

RF Exposure conditions	① WWAN	② Ant. A +B Wi-Fi 5GHz	③ Ant. B BT	④ Ant. D BT	①+② WWAN +Ant. A +B		①+②+③ WWAN +Ant. A +B +Ant. B (BT)		①+②+④ WWAN +Ant. A +B +Ant. D (BT)	
					∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1.190	0.248	0.018	0.347	1.438	No	1.456	No	1.785	**Yes**
Edge 1	0.751	0.400	0.000	0.301	1.151	No	1.151	No	1.452	No
Edge 2	0.164	0.226	0.029	0.400	0.390	No	0.419	No	0.790	No

12.7. Sum of the SAR for CDMA BC1 & Wi-Fi P_{Cell_ON} (P_{low}) & BT

12.7.1. CDMA BC1 & Wi-Fi 2.4GHz (SISO) & BT

RF Exposure conditions	① WWAN	② Ant. A Wi-Fi 2.4GHz	③ Ant. B Wi-Fi 2.4GHz	④ Ant. D Wi-Fi 2.4GHz P_{Low}	⑤ Ant. B BT	⑥ Ant. D BT	①+② WWAN +Ant. A		①+③ WWAN + Ant. B		①+④ WWAN +Ant. D		①+⑤ WWAN +Ant. B (BT)		①+⑥ WWAN +Ant. D (BT)		①+②+⑤ WWAN +Ant. A +Ant. B (BT)		①+②+⑥ WWAN +Ant. A +Ant. D (BT)	
							∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1.180	0.092	0.097	0.295	0.018	0.347	1.272	No	1.277	No	1.475	No	1.198	No	1.527	No	1.290	No	1.619	**Yes**
Edge 1	0.988	0.400	0.400	0.256	0.000	0.301	1.388	No	1.388	No	1.244	No	0.988	No	1.289	No	1.388	No	1.689	**Yes**
Edge 2	0.121	0.400	0.158	0.400	0.029	0.400	0.521	No	0.279	No	0.521	No	0.150	No	0.521	No	0.550	No	0.921	No

12.7.2. CDMA BC1 & Wi-Fi 2.4GHz (MIMO)

RF Exposure conditions	① WWAN	② Ant. A +B Wi-Fi 2.4GHz	③ Ant. A +D Wi-Fi 2.4GHz P_{Low}	④ Ant. B BT	⑤ Ant. D BT	①+② WWAN +Ant. A +B		①+③ WWAN +Ant. A +D	
						∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1.180	0.088	0.291	0.018	0.347	1.268	No	1.471	No
Edge 1	0.988	0.400	0.246	0.000	0.301	1.388	No	1.234	No
Edge 2	0.121	0.186	0.400	0.029	0.400	0.307	No	0.521	No

12.7.3. CDMA BC1 & Wi-Fi 5GHz (SISO) & BT

RF Exposure conditions	① WWAN	② Ant. A Wi-Fi 5GHz	③ Ant. B Wi-Fi 5GHz	④ Ant. B BT	⑤ Ant. D BT	①+② WWAN +Ant. A		①+③ WWAN + Ant. B		①+②+④ WWAN +Ant. A + Ant. B (BT)		①+②+⑤ WWAN +Ant. A + Ant. D (BT)		①+③+④ WWAN +Ant. B + Ant. B (BT)		①+③+⑤ WWAN +Ant. B + Ant. D (BT)	
						∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1.180	0.145	0.175	0.018	0.347	1.325	No	1.355	No	1.343	No	1.672	**Yes**	1.373	No	1.702	**Yes**
Edge 1	0.988	0.054	0.073	0.000	0.301	1.042	No	1.061	No	1.042	No	1.343	No	1.061	No	1.362	No
Edge 2	0.121	0.400	0.167	0.029	0.400	0.521	No	0.288	No	0.550	No	0.921	No	0.317	No	0.688	No

12.7.4. CDMA BC1 & Wi-Fi 5GHz (MIMO) & BT

RF Exposure conditions	① WWAN	② Ant. A +B Wi-Fi 5GHz	③ Ant. B BT	④ Ant. D BT	①+② WWAN +Ant. A +B		①+②+③ WWAN +Ant. A +B +Ant. B (BT)		①+②+④ WWAN +Ant. A +B +Ant. D (BT)	
					∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1.180	0.248	0.018	0.347	1.428	No	1.446	No	1.775	**Yes**
Edge 1	0.988	0.400	0.000	0.301	1.388	No	1.388	No	1.689	**Yes**
Edge 2	0.121	0.226	0.029	0.400	0.347	No	0.376	No	0.747	No

12.8. Sum of the SAR for CDMA BC10 & Wi-Fi P_{Cell_ON} (P_{low}) & BT

12.8.1. CDMA BC10 & Wi-Fi 2.4GHz (SISO) & BT

RF Exposure conditions	① WWAN	② Ant. A Wi-Fi 2.4GHz	③ Ant. B Wi-Fi 2.4GHz	④ Ant. D Wi-Fi 2.4GHz P_{Low}	⑤ Ant. B BT	⑥ Ant. D BT	①+② WWAN +Ant. A		①+③ WWAN + Ant. B		①+④ WWAN +Ant. D		①+⑤ WWAN +Ant. B (BT)		①+⑥ WWAN +Ant. D (BT)		①+②+⑤ WWAN +Ant. A +Ant. B (BT)		①+②+⑥ WWAN +Ant. A +Ant. D (BT)	
							∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1.170	0.092	0.097	0.295	0.018	0.347	1.262	No	1.267	No	1.465	No	1.188	No	1.517	No	1.280	No	1.609	**Yes**
Edge 1	0.753	0.400	0.400	0.256	0.000	0.301	1.153	No	1.153	No	1.009	No	0.753	No	1.054	No	1.153	No	1.454	No
Edge 2	0.152	0.400	0.158	0.400	0.029	0.400	0.552	No	0.310	No	0.552	No	0.181	No	0.552	No	0.581	No	0.952	No

12.8.2. CDMA BC10 & Wi-Fi 2.4GHz (MIMO)

RF Exposure conditions	① WWAN	② Ant. A +B Wi-Fi 2.4GHz	③ Ant. A +D Wi-Fi 2.4GHz P_{Low}	④ Ant. B BT	⑤ Ant. D BT	①+② WWAN +Ant. A +B		①+③ WWAN +Ant. A +D	
						∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1.170	0.088	0.291	0.018	0.347	1.258	No	1.461	No
Edge 1	0.753	0.400	0.246	0.000	0.301	1.153	No	0.999	No
Edge 2	0.152	0.186	0.400	0.029	0.400	0.338	No	0.552	No

12.8.3. CDMA BC10 & Wi-Fi 5GHz (SISO) & BT

RF Exposure conditions	① WWAN	② Ant. A Wi-Fi 5GHz	③ Ant. B Wi-Fi 5GHz	④ Ant. B BT	⑤ Ant. D BT	①+② WWAN +Ant. A		①+③ WWAN + Ant. B		①+②+④ WWAN +Ant. A + Ant. B (BT)		①+②+⑤ WWAN +Ant. A + Ant. D (BT)		①+③+④ WWAN +Ant. B + Ant. B (BT)		①+③+⑤ WWAN +Ant. B + Ant. D (BT)	
						∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1.170	0.145	0.175	0.018	0.347	1.315	No	1.345	No	1.333	No	1.662	**Yes**	1.363	No	1.692	**Yes**
Edge 1	0.753	0.054	0.073	0.000	0.301	0.807	No	0.826	No	0.807	No	1.108	No	0.826	No	1.127	No
Edge 2	0.152	0.400	0.167	0.029	0.400	0.552	No	0.319	No	0.581	No	0.952	No	0.348	No	0.719	No

12.8.4. CDMA BC10 & Wi-Fi 5GHz (MIMO) & BT

RF Exposure conditions	① WWAN	② Ant. A +B Wi-Fi 5GHz	③ Ant. B BT	④ Ant. D BT	①+② WWAN +Ant. A +B		①+②+③ WWAN +Ant. A +B +Ant. B (BT)		①+②+④ WWAN +Ant. A +B +Ant. D (BT)	
					∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1.170	0.248	0.018	0.347	1.418	No	1.436	No	1.765	**Yes**
Edge 1	0.753	0.400	0.000	0.301	1.153	No	1.153	No	1.454	No
Edge 2	0.152	0.226	0.029	0.400	0.378	No	0.407	No	0.778	No

12.9. Sum of the SAR for CDMA BC15 & Wi-Fi P_{Cell_ON} (P_{low}) & BT

12.9.1. CDMA BC15 & Wi-Fi 2.4GHz (SISO) & BT

RF Exposure conditions	① WWAN	② Ant. A Wi-Fi 2.4GHz	③ Ant. B Wi-Fi 2.4GHz	④ Ant. D Wi-Fi 2.4GHz P_{Low}	⑤ Ant. B BT	⑥ Ant. D BT	①+② WWAN +Ant. A		①+③ WWAN + Ant. B		①+④ WWAN +Ant. D		①+⑤ WWAN +Ant. B (BT)		①+⑥ WWAN +Ant. D (BT)		①+②+⑤ WWAN +Ant. A +Ant. B (BT)		①+②+⑥ WWAN +Ant. A +Ant. D (BT)	
							∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1.167	0.092	0.097	0.295	0.018	0.347	1.259	No	1.264	No	1.462	No	1.185	No	1.514	No	1.277	No	1.606	**Yes**
Edge 1	1.187	0.400	0.400	0.256	0.000	0.301	1.587	No	1.587	No	1.443	No	1.187	No	1.488	No	1.587	No	1.888	**Yes**
Edge 2	0.142	0.400	0.158	0.400	0.029	0.400	0.542	No	0.300	No	0.542	No	0.171	No	0.542	No	0.571	No	0.942	No

12.9.2. CDMA BC15 & Wi-Fi 2.4GHz (MIMO)

RF Exposure conditions	① WWAN	② Ant. A +B Wi-Fi 2.4GHz	③ Ant. A +D Wi-Fi 2.4GHz P_{Low}	④ Ant. B BT	⑤ Ant. D BT	①+② WWAN +Ant. A +B		①+③ WWAN +Ant. A +D	
						∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1.167	0.088	0.291	0.018	0.347	1.255	No	1.458	No
Edge 1	1.187	0.400	0.246	0.000	0.301	1.587	No	1.433	No
Edge 2	0.142	0.186	0.400	0.029	0.400	0.328	No	0.542	No

12.9.3. CDMA BC15 & Wi-Fi 5GHz (SISO) & BT

RF Exposure conditions	① WWAN	② Ant. A Wi-Fi 5GHz	③ Ant. B Wi-Fi 5GHz	④ Ant. B BT	⑤ Ant. D BT	①+② WWAN +Ant. A		①+③ WWAN + Ant. B		①+②+④ WWAN +Ant. A + Ant. B (BT)		①+②+⑤ WWAN +Ant. A + Ant. D (BT)		①+③+④ WWAN +Ant. B + Ant. B (BT)		①+③+⑤ WWAN +Ant. B + Ant. D (BT)	
						∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1.167	0.145	0.175	0.018	0.347	1.312	No	1.342	No	1.330	No	1.659	**Yes**	1.360	No	1.689	**Yes**
Edge 1	1.187	0.054	0.073	0.000	0.301	1.241	No	1.260	No	1.241	No	1.542	No	1.187	No	1.561	No
Edge 2	0.142	0.400	0.167	0.029	0.400	0.542	No	0.309	No	0.571	No	0.942	No	0.338	No	0.709	No

12.9.4. CDMA BC15 & Wi-Fi 5GHz (MIMO) & BT

RF Exposure conditions	① WWAN	② Ant. A +B Wi-Fi 5GHz	③ Ant. B BT	④ Ant. D BT	①+② WWAN +Ant. A +B		①+②+③ WWAN +Ant. A +B +Ant. B (BT)		①+②+④ WWAN +Ant. A +B +Ant. D (BT)	
					∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1.167	0.248	0.018	0.347	1.415	No	1.433	No	1.762	**Yes**
Edge 1	1.187	0.400	0.000	0.301	1.587	No	1.587	No	1.888	**Yes**
Edge 2	0.142	0.226	0.029	0.400	0.368	No	0.397	No	0.768	No

12.10. Sum of the SAR for LTE Band 2 & Wi-Fi P_{Cell_ON} (P_{low}) & BT

12.10.1. LTE Band 2 & Wi-Fi 2.4GHz (SISO) & BT

RF Exposure conditions	① WWAN	② Ant. A Wi-Fi 2.4GHz	③ Ant. B Wi-Fi 2.4GHz	④ Ant. D Wi-Fi 2.4GHz P_{Low}	⑤ Ant. B BT	⑥ Ant. D BT	①+② WWAN +Ant. A		①+③ WWAN + Ant. B		①+④ WWAN +Ant. D		①+⑤ WWAN +Ant. B (BT)		①+⑥ WWAN +Ant. D (BT)		①+②+⑤ WWAN +Ant. A +Ant. B (BT)		①+②+⑥ WWAN +Ant. A +Ant. D (BT)	
							∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1.170	0.092	0.097	0.295	0.018	0.347	1.262	No	1.267	No	1.465	No	1.188	No	1.517	No	1.280	No	1.609	**Yes**
Edge 1	0.865	0.400	0.400	0.256	0.000	0.301	1.265	No	1.265	No	1.121	No	0.865	No	1.166	No	1.265	No	1.566	No
Edge 2	0.139	0.400	0.158	0.400	0.029	0.400	0.539	No	0.297	No	0.539	No	0.168	No	0.539	No	0.568	No	0.939	No

12.10.2. LTE Band 2 & Wi-Fi 2.4GHz (MIMO)

RF Exposure conditions	① WWAN	② Ant. A +B Wi-Fi 2.4GHz	③ Ant. A +D Wi-Fi 2.4GHz P_{Low}	④ Ant. B BT	⑤ Ant. D BT	①+② WWAN +Ant. A +B		①+③ WWAN +Ant. A +D	
						∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1.170	0.088	0.291	0.018	0.347	1.258	No	1.461	No
Edge 1	0.865	0.400	0.246	0.000	0.301	1.265	No	1.111	No
Edge 2	0.139	0.186	0.400	0.029	0.400	0.325	No	0.539	No

12.10.3. LTE Band 2 & Wi-Fi 5GHz (SISO) & BT

RF Exposure conditions	① WWAN	② Ant. A Wi-Fi 5GHz	③ Ant. B Wi-Fi 5GHz	④ Ant. B BT	⑤ Ant. D BT	①+② WWAN +Ant. A		①+③ WWAN + Ant. B		①+②+④ WWAN +Ant. A + Ant. B (BT)		①+②+⑤ WWAN +Ant. A + Ant. D (BT)		①+③+④ WWAN +Ant. B + Ant. B (BT)		①+③+⑤ WWAN +Ant. B + Ant. D (BT)	
						∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1.170	0.145	0.175	0.018	0.347	1.315	No	1.345	No	1.333	No	1.662	**Yes**	1.363	No	1.692	**Yes**
Edge 1	0.865	0.054	0.073	0.000	0.301	0.919	No	0.938	No	0.919	No	1.220	No	0.938	No	1.239	No
Edge 2	0.139	0.400	0.167	0.029	0.400	0.539	No	0.306	No	0.568	No	0.939	No	0.335	No	0.706	No

12.10.4. LTE Band 2 & Wi-Fi 5GHz (MIMO) & BT

RF Exposure conditions	① WWAN	② Ant. A +B Wi-Fi 5GHz	③ Ant. B BT	④ Ant. D BT	①+② WWAN +Ant. A +B		①+②+③ WWAN +Ant. A +B +Ant. B (BT)		①+②+④ WWAN +Ant. A +B +Ant. D (BT)	
					∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1.170	0.248	0.018	0.347	1.418	No	1.436	No	1.765	**Yes**
Edge 1	0.865	0.400	0.000	0.301	1.265	No	1.265	No	1.566	No
Edge 2	0.139	0.226	0.029	0.400	0.365	No	0.394	No	0.765	No

12.11. Sum of the SAR for LTE Band 4 & Wi-Fi P_{Cell_ON} (P_{low}) & BT

12.11.1. LTE Band 4 & Wi-Fi 2.4GHz (SISO) & BT

RF Exposure conditions	① WWAN	② Ant. A Wi-Fi 2.4GHz	③ Ant. B Wi-Fi 2.4GHz	④ Ant. D Wi-Fi 2.4GHz P_{Low}	⑤ Ant. B BT	⑥ Ant. D BT	①+② WWAN +Ant. A		①+③ WWAN + Ant. B		①+④ WWAN +Ant. D		①+⑤ WWAN +Ant. B (BT)		①+⑥ WWAN +Ant. D (BT)		①+②+⑤ WWAN +Ant. A +Ant. B (BT)		①+②+⑥ WWAN +Ant. A +Ant. D (BT)	
							∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1.150	0.092	0.097	0.295	0.018	0.347	1.242	No	1.247	No	1.445	No	1.168	No	1.497	No	1.260	No	1.589	No
Edge 1	1.090	0.400	0.400	0.256	0.000	0.301	1.490	No	1.490	No	1.346	No	1.090	No	1.391	No	1.490	No	1.791	**Yes**
Edge 2	0.125	0.400	0.158	0.400	0.029	0.400	0.525	No	0.283	No	0.525	No	0.154	No	0.525	No	0.554	No	0.925	No

12.11.2. LTE Band 4 & Wi-Fi 2.4GHz (MIMO)

RF Exposure conditions	① WWAN	② Ant. A +B Wi-Fi 2.4GHz	③ Ant. A +D Wi-Fi 2.4GHz P_{Low}	④ Ant. B BT	⑤ Ant. D BT	①+② WWAN +Ant. A +B		①+③ WWAN +Ant. A +D	
						∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1.150	0.088	0.291	0.018	0.347	1.238	No	1.441	No
Edge 1	1.090	0.400	0.246	0.000	0.301	1.490	No	1.336	No
Edge 2	0.125	0.186	0.400	0.029	0.400	0.311	No	0.525	No

12.11.3. LTE Band 4 & Wi-Fi 5GHz (SISO) & BT

RF Exposure conditions	① WWAN	② Ant. A Wi-Fi 5GHz	③ Ant. B Wi-Fi 5GHz	④ Ant. B BT	⑤ Ant. D BT	①+② WWAN +Ant. A		①+③ WWAN + Ant. B		①+②+④ WWAN +Ant. A + Ant. B (BT)		①+②+⑤ WWAN +Ant. A + Ant. D (BT)		①+③+④ WWAN +Ant. B + Ant. B (BT)		①+③+⑤ WWAN +Ant. B + Ant. D (BT)	
						∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1.150	0.145	0.175	0.018	0.347	1.295	No	1.325	No	1.313	No	1.642	**Yes**	1.343	No	1.672	**Yes**
Edge 1	1.090	0.054	0.073	0.000	0.301	1.144	No	1.163	No	1.144	No	1.445	No	1.163	No	1.464	No
Edge 2	0.125	0.400	0.167	0.029	0.400	0.525	No	0.292	No	0.554	No	0.925	No	0.321	No	0.692	No

12.11.4. LTE Band 4 & Wi-Fi 5GHz (MIMO) & BT

RF Exposure conditions	① WWAN	② Ant. A +B Wi-Fi 5GHz	③ Ant. B BT	④ Ant. D BT	①+② WWAN +Ant. A +B		①+②+③ WWAN +Ant. A +B +Ant. B (BT)		①+②+④ WWAN +Ant. A +B +Ant. D (BT)	
					∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1.150	0.248	0.018	0.347	1.398	No	1.416	No	1.745	**Yes**
Edge 1	1.090	0.400	0.000	0.301	1.490	No	1.490	No	1.791	**Yes**
Edge 2	0.125	0.226	0.029	0.400	0.351	No	0.380	No	0.751	No

12.12. Sum of the SAR for LTE Band 5 & Wi-Fi P_{Cell_ON} (P_{low}) & BT

12.12.1. LTE Band 5 & Wi-Fi 2.4GHz (SISO) & BT

RF Exposure conditions	① WWAN	② Ant. A Wi-Fi 2.4GHz	③ Ant. B Wi-Fi 2.4GHz	④ Ant. D Wi-Fi 2.4GHz P_{Low}	⑤ Ant. B BT	⑥ Ant. D BT	①+② WWAN +Ant. A		①+③ WWAN + Ant. B		①+④ WWAN +Ant. D		①+⑤ WWAN +Ant. B (BT)		①+⑥ WWAN +Ant. D (BT)		①+②+⑤ WWAN +Ant. A +Ant. B (BT)		①+②+⑥ WWAN +Ant. A +Ant. D (BT)	
							∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1.190	0.092	0.097	0.295	0.018	0.347	1282	No	1287	No	1485	No	1208	No	1537	No	1300	No	1629	**Yes**
Edge 1	0.653	0.400	0.400	0.256	0.000	0.301	1053	No	1053	No	0.909	No	0.653	No	0.954	No	1053	No	1354	No
Edge 2	0.150	0.400	0.158	0.400	0.029	0.400	0.550	No	0.308	No	0.550	No	0.179	No	0.550	No	0.579	No	0.950	No

12.12.2. LTE Band 5 & Wi-Fi 2.4GHz (MIMO)

RF Exposure conditions	① WWAN	② Ant. A +B Wi-Fi 2.4GHz	③ Ant. A +D Wi-Fi 2.4GHz P_{Low}	④ Ant. B BT	⑤ Ant. D BT	①+② WWAN +Ant. A +B		①+③ WWAN +Ant. A +D	
						∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1.190	0.088	0.291	0.018	0.347	1278	No	1481	No
Edge 1	0.653	0.400	0.246	0.000	0.301	1053	No	0.899	No
Edge 2	0.150	0.186	0.400	0.029	0.400	0.336	No	0.550	No

12.12.3. LTE Band 5 & Wi-Fi 5GHz (SISO) & BT

RF Exposure conditions	① WWAN	② Ant. A Wi-Fi 5GHz	③ Ant. B Wi-Fi 5GHz	④ Ant. B BT	⑤ Ant. D BT	①+② WWAN +Ant. A		①+③ WWAN + Ant. B		①+②+④ WWAN +Ant. A + Ant. B (BT)		①+②+⑤ WWAN +Ant. A + Ant. D (BT)		①+③+④ WWAN +Ant. B + Ant. B (BT)		①+③+⑤ WWAN +Ant. B + Ant. D (BT)	
						∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1.190	0.145	0.175	0.018	0.347	1335	No	1365	No	1353	No	1682	**Yes**	1383	No	1712	**Yes**
Edge 1	0.653	0.054	0.073	0.000	0.301	0.707	No	0.726	No	0.707	No	1008	No	0.726	No	1027	No
Edge 2	0.150	0.400	0.167	0.029	0.400	0.550	No	0.317	No	0.579	No	0.950	No	0.346	No	0.717	No

12.12.4. LTE Band 5 & Wi-Fi 5GHz (MIMO) & BT

RF Exposure conditions	① WWAN	② Ant. A +B Wi-Fi 5GHz	③ Ant. B BT	④ Ant. D BT	①+② WWAN +Ant. A +B		①+②+③ WWAN +Ant. A +B +Ant. B (BT)		①+②+④ WWAN +Ant. A +B +Ant. D (BT)	
					∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1.190	0.248	0.018	0.347	1438	No	1456	No	1785	**Yes**
Edge 1	0.653	0.400	0.000	0.301	1053	No	1053	No	1354	No
Edge 2	0.150	0.226	0.029	0.400	0.376	No	0.405	No	0.776	No

12.13. Sum of the SAR for LTE Band 13 & Wi-Fi P_{Cell_ON} (P_{low}) & BT

12.13.1. LTE Band 13 & Wi-Fi 2.4GHz (SISO) & BT

RF Exposure conditions	① WWAN	② Ant. A Wi-Fi 2.4GHz	③ Ant. B Wi-Fi 2.4GHz	④ Ant. D Wi-Fi 2.4GHz P_{Low}	⑤ Ant. B BT	⑥ Ant. D BT	①+② WWAN +Ant. A		①+③ WWAN + Ant. B		①+④ WWAN +Ant. D		①+⑤ WWAN +Ant. B (BT)		①+⑥ WWAN +Ant. D (BT)		①+②+⑤ WWAN +Ant. A +Ant. B (BT)		①+②+⑥ WWAN +Ant. A +Ant. D (BT)	
							∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1.136	0.092	0.097	0.295	0.018	0.347	1.228	No	1.233	No	1.431	No	1.154	No	1.483	No	1.246	No	1.575	No
Edge 1	0.609	0.400	0.400	0.256	0.000	0.301	1.009	No	1.009	No	0.865	No	0.609	No	0.910	No	1.009	No	1.310	No
Edge 2	0.126	0.400	0.158	0.400	0.029	0.400	0.526	No	0.284	No	0.526	No	0.155	No	0.526	No	0.555	No	0.926	No

12.13.2. LTE Band 13 & Wi-Fi 2.4GHz (MIMO)

RF Exposure conditions	① WWAN	② Ant. A +B Wi-Fi 2.4GHz	③ Ant. A +D Wi-Fi 2.4GHz P_{Low}	④ Ant. B BT	⑤ Ant. D BT	①+② WWAN +Ant. A +B		①+③ WWAN +Ant. A +D	
						∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1.136	0.088	0.291	0.018	0.347	1.224	No	1.427	No
Edge 1	0.609	0.400	0.246	0.000	0.301	1.009	No	0.855	No
Edge 2	0.126	0.186	0.400	0.029	0.400	0.312	No	0.526	No

12.13.3. LTE Band 13 & Wi-Fi 5GHz (SISO) & BT

RF Exposure conditions	① WWAN	② Ant. A Wi-Fi 5GHz	③ Ant. B Wi-Fi 5GHz	④ Ant. B BT	⑤ Ant. D BT	①+② WWAN +Ant. A		①+③ WWAN + Ant. B		①+②+④ WWAN +Ant. A + Ant. B (BT)		①+②+⑤ WWAN +Ant. A + Ant. D (BT)		①+③+④ WWAN +Ant. B + Ant. B (BT)		①+③+⑤ WWAN +Ant. B + Ant. D (BT)	
						∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1.136	0.145	0.175	0.018	0.347	1.281	No	1.311	No	1.299	No	1.628	**Yes**	1.329	No	1.658	**Yes**
Edge 1	0.609	0.054	0.073	0.000	0.301	0.663	No	0.682	No	0.663	No	0.964	No	0.682	No	0.983	No
Edge 2	0.126	0.400	0.167	0.029	0.400	0.526	No	0.293	No	0.555	No	0.926	No	0.322	No	0.693	No

12.13.4. LTE Band 13 & Wi-Fi 5GHz (MIMO) & BT

RF Exposure conditions	① WWAN	② Ant. A +B Wi-Fi 5GHz	③ Ant. B BT	④ Ant. D BT	①+② WWAN +Ant. A +B		①+②+③ WWAN +Ant. A +B +Ant. B (BT)		①+②+④ WWAN +Ant. A +B +Ant. D (BT)	
					∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1.136	0.248	0.018	0.347	1.384	No	1.402	No	1.731	**Yes**
Edge 1	0.609	0.400	0.000	0.301	1.009	No	1.009	No	1.310	No
Edge 2	0.126	0.226	0.029	0.400	0.352	No	0.381	No	0.752	No

12.14. Sum of the SAR for LTE Band 17 & Wi-Fi P_{Cell_ON} (P_{low}) & BT

12.14.1. LTE Band 17 & Wi-Fi 2.4GHz (SISO) & BT

RF Exposure conditions	① WWAN	② Ant. A Wi-Fi 2.4GHz	③ Ant. B Wi-Fi 2.4GHz	④ Ant. D Wi-Fi 2.4GHz P_{Low}	⑤ Ant. B BT	⑥ Ant. D BT	①+② WWAN +Ant. A		①+③ WWAN + Ant. B		①+④ WWAN +Ant. D		①+⑤ WWAN +Ant. B (BT)		①+⑥ WWAN +Ant. D (BT)		①+②+⑤ WWAN +Ant. A +Ant. B (BT)		①+②+⑥ WWAN +Ant. A +Ant. D (BT)	
							∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1.120	0.092	0.097	0.295	0.018	0.347	1.212	No	1.217	No	1.415	No	1.138	No	1.467	No	1.230	No	1.559	No
Edge 1	0.884	0.400	0.400	0.256	0.000	0.301	1.284	No	1.284	No	1.140	No	0.884	No	1.185	No	1.284	No	1.585	No
Edge 2	0.162	0.400	0.158	0.400	0.029	0.400	0.562	No	0.320	No	0.562	No	0.191	No	0.562	No	0.591	No	0.962	No

12.14.2. LTE Band 17 & Wi-Fi 2.4GHz (MIMO)

RF Exposure conditions	① WWAN	② Ant. A +B Wi-Fi 2.4GHz	③ Ant. A +D Wi-Fi 2.4GHz P_{Low}	④ Ant. B BT	⑤ Ant. D BT	①+② WWAN +Ant. A +B		①+③ WWAN +Ant. A +D	
						∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1.120	0.088	0.291	0.018	0.347	1.208	No	1.411	No
Edge 1	0.884	0.400	0.246	0.000	0.301	1.284	No	1.130	No
Edge 2	0.162	0.186	0.400	0.029	0.400	0.348	No	0.562	No

12.14.3. LTE Band 17 & Wi-Fi 5GHz (SISO) & BT

RF Exposure conditions	① WWAN	② Ant. A Wi-Fi 5GHz	③ Ant. B Wi-Fi 5GHz	④ Ant. B BT	⑤ Ant. D BT	①+② WWAN +Ant. A		①+③ WWAN + Ant. B		①+②+④ WWAN +Ant. A + Ant. B (BT)		①+②+⑤ WWAN +Ant. A + Ant. D (BT)		①+③+④ WWAN +Ant. B + Ant. B (BT)		①+③+⑤ WWAN +Ant. B + Ant. D (BT)	
						∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1.120	0.145	0.175	0.018	0.347	1.265	No	1.295	No	1.283	No	1.612	**Yes**	1.313	No	1.642	**Yes**
Edge 1	0.884	0.054	0.073	0.000	0.301	0.938	No	0.957	No	0.938	No	1.239	No	0.957	No	1.258	No
Edge 2	0.162	0.400	0.167	0.029	0.400	0.562	No	0.329	No	0.591	No	0.962	No	0.358	No	0.729	No

12.14.4. LTE Band 17 & Wi-Fi 5GHz (MIMO) & BT

RF Exposure conditions	① WWAN	② Ant. A +B Wi-Fi 5GHz	③ Ant. B BT	④ Ant. D BT	①+② WWAN +Ant. A +B		①+②+③ WWAN +Ant. A +B +Ant. B (BT)		①+②+④ WWAN +Ant. A +B +Ant. D (BT)	
					∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1.120	0.248	0.018	0.347	1.368	No	1.386	No	1.715	**Yes**
Edge 1	0.884	0.400	0.000	0.301	1.284	No	1.284	No	1.585	No
Edge 2	0.162	0.226	0.029	0.400	0.388	No	0.417	No	0.788	No

12.15. Sum of the SAR for LTE Band 25 & Wi-Fi P_{Cell_ON} (P_{low}) & BT

12.15.1. LTE Band 25 & Wi-Fi 2.4GHz (SISO) & BT

RF Exposure conditions	① WWAN	② Ant. A Wi-Fi 2.4GHz	③ Ant. B Wi-Fi 2.4GHz	④ Ant. D Wi-Fi 2.4GHz P_{Low}	⑤ Ant. B BT	⑥ Ant. D BT	①+② WWAN +Ant. A		①+③ WWAN + Ant. B		①+④ WWAN +Ant. D		①+⑤ WWAN +Ant. B (BT)		①+⑥ WWAN +Ant. D (BT)		①+②+⑤ WWAN +Ant. A +Ant. B (BT)		①+②+⑥ WWAN +Ant. A +Ant. D (BT)	
							∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1.190	0.092	0.097	0.295	0.018	0.347	1.282	No	1.287	No	1.485	No	1.208	No	1.537	No	1.300	No	1.629	**Yes**
Edge 1	0.889	0.400	0.400	0.256	0.000	0.301	1.289	No	1.289	No	1.145	No	0.889	No	1.190	No	1.289	No	1.590	No
Edge 2	0.138	0.400	0.158	0.400	0.029	0.400	0.538	No	0.296	No	0.538	No	0.167	No	0.538	No	0.567	No	0.938	No

12.15.2. LTE Band 25 & Wi-Fi 2.4GHz (MIMO)

RF Exposure conditions	① WWAN	② Ant. A +B Wi-Fi 2.4GHz	③ Ant. A +D Wi-Fi 2.4GHz P_{Low}	④ Ant. B BT	⑤ Ant. D BT	①+② WWAN +Ant. A +B		①+③ WWAN +Ant. A +D	
						∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1.190	0.088	0.291	0.018	0.347	1.278	No	1.481	No
Edge 1	0.889	0.400	0.246	0.000	0.301	1.289	No	1.135	No
Edge 2	0.138	0.186	0.400	0.029	0.400	0.324	No	0.538	No

12.15.3. LTE Band 25 & Wi-Fi 5GHz (SISO) & BT

RF Exposure conditions	① WWAN	② Ant. A Wi-Fi 5GHz	③ Ant. B Wi-Fi 5GHz	④ Ant. B BT	⑤ Ant. D BT	①+② WWAN +Ant. A		①+③ WWAN + Ant. B		①+②+④ WWAN +Ant. A + Ant. B (BT)		①+②+⑤ WWAN +Ant. A + Ant. D (BT)		①+③+④ WWAN +Ant. B + Ant. B (BT)		①+③+⑤ WWAN +Ant. B + Ant. D (BT)	
						∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1.190	0.145	0.175	0.018	0.347	1.335	No	1.365	No	1.353	No	1.682	**Yes**	1.383	No	1.712	**Yes**
Edge 1	0.889	0.054	0.073	0.000	0.301	0.943	No	0.962	No	0.943	No	1.244	No	0.962	No	1.263	No
Edge 2	0.138	0.400	0.167	0.029	0.400	0.538	No	0.305	No	0.567	No	0.938	No	0.334	No	0.705	No

12.15.4. LTE Band 25 & Wi-Fi 5GHz (MIMO) & BT

RF Exposure conditions	① WWAN	② Ant. A +B Wi-Fi 5GHz	③ Ant. B BT	④ Ant. D BT	①+② WWAN +Ant. A +B		①+②+③ WWAN +Ant. A +B +Ant. B (BT)		①+②+④ WWAN +Ant. A +B +Ant. D (BT)	
					∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1.190	0.248	0.018	0.347	1.438	No	1.456	No	1.785	**Yes**
Edge 1	0.889	0.400	0.000	0.301	1.289	No	1.289	No	1.590	No
Edge 2	0.138	0.226	0.029	0.400	0.364	No	0.393	No	0.764	No

12.16. Sum of the SAR for LTE Band 26 & Wi-Fi P_{Cell_ON} (P_{low}) & BT

12.16.1. LTE Band 26 & Wi-Fi 2.4GHz (SISO) & BT

RF Exposure conditions	① WWAN	② Ant. A Wi-Fi 2.4GHz	③ Ant. B Wi-Fi 2.4GHz	④ Ant. D Wi-Fi 2.4GHz P_{Low}	⑤ Ant. B BT	⑥ Ant. D BT	①+② WWAN +Ant. A		①+③ WWAN + Ant. B		①+④ WWAN +Ant. D		①+⑤ WWAN +Ant. B (BT)		①+⑥ WWAN +Ant. D (BT)		①+②+⑤ WWAN +Ant. A +Ant. B (BT)		①+②+⑥ WWAN +Ant. A +Ant. D (BT)	
							∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1.110	0.092	0.097	0.295	0.018	0.347	1.202	No	1.207	No	1.405	No	1.128	No	1.457	No	1.220	No	1.549	No
Edge 1	0.659	0.400	0.400	0.256	0.000	0.301	1.059	No	1.059	No	0.915	No	0.659	No	0.960	No	1.059	No	1.360	No
Edge 2	0.131	0.400	0.158	0.400	0.029	0.400	0.531	No	0.289	No	0.531	No	0.160	No	0.531	No	0.560	No	0.931	No

12.16.2. LTE Band 26 & Wi-Fi 2.4GHz (MIMO)

RF Exposure conditions	① WWAN	② Ant. A +B Wi-Fi 2.4GHz	③ Ant. A +D Wi-Fi 2.4GHz P_{Low}	④ Ant. B BT	⑤ Ant. D BT	①+② WWAN +Ant. A +B		①+③ WWAN +Ant. A +D	
						∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1.110	0.088	0.291	0.018	0.347	1.198	No	1.401	No
Edge 1	0.659	0.400	0.246	0.000	0.301	1.059	No	0.905	No
Edge 2	0.131	0.186	0.400	0.029	0.400	0.317	No	0.531	No

12.16.3. LTE Band 26 & Wi-Fi 5GHz (SISO) & BT

RF Exposure conditions	① WWAN	② Ant. A Wi-Fi 5GHz	③ Ant. B Wi-Fi 5GHz	④ Ant. B BT	⑤ Ant. D BT	①+② WWAN +Ant. A		①+③ WWAN + Ant. B		①+②+④ WWAN +Ant. A + Ant. B (BT)		①+②+⑤ WWAN +Ant. A + Ant. D (BT)		①+③+④ WWAN +Ant. B + Ant. B (BT)		①+③+⑤ WWAN +Ant. B + Ant. D (BT)	
						∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1.110	0.145	0.175	0.018	0.347	1.255	No	1.285	No	1.273	No	1.602	**Yes**	1.303	No	1.632	**Yes**
Edge 1	0.659	0.054	0.073	0.000	0.301	0.713	No	0.732	No	0.713	No	1.014	No	0.732	No	1.033	No
Edge 2	0.131	0.400	0.167	0.029	0.400	0.531	No	0.298	No	0.560	No	0.931	No	0.327	No	0.698	No

12.16.4. LTE Band 26 & Wi-Fi 5GHz (MIMO) & BT

RF Exposure conditions	① WWAN	② Ant. A +B Wi-Fi 5GHz	③ Ant. B BT	④ Ant. D BT	①+② WWAN +Ant. A +B		①+②+③ WWAN +Ant. A +B +Ant. B (BT)		①+②+④ WWAN +Ant. A +B +Ant. D (BT)	
					∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	1.110	0.248	0.018	0.347	1.358	No	1.376	No	1.705	**Yes**
Edge 1	0.659	0.400	0.000	0.301	1.059	No	1.059	No	1.360	No
Edge 2	0.131	0.226	0.029	0.400	0.357	No	0.386	No	0.757	No

12.17. Sum of the SAR for LTE Band 41 & Wi-Fi P_{Cell_ON} (P_{low}) & BT

12.17.1. LTE Band 41 & Wi-Fi 2.4GHz (SISO) & BT

RF Exposure conditions	① WWAN	② Ant. A Wi-Fi 2.4GHz	③ Ant. B Wi-Fi 2.4GHz	④ Ant. D Wi-Fi 2.4GHz P_{Low}	⑤ Ant. B BT	⑥ Ant. D BT	①+② WWAN +Ant. A		①+③ WWAN + Ant. B		①+④ WWAN +Ant. D		①+⑤ WWAN +Ant. B (BT)		①+⑥ WWAN +Ant. D (BT)		①+②+⑤ WWAN +Ant. A +Ant. B (BT)		①+②+⑥ WWAN +Ant. A +Ant. D (BT)	
							∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	0.863	0.092	0.097	0.295	0.018	0.347	0.955	No	0.960	No	1.158	No	0.881	No	1.210	No	0.973	No	1.302	No
Edge 1	1.140	0.400	0.400	0.256	0.000	0.301	1.540	No	1.540	No	1.396	No	1.140	No	1.441	No	1.540	No	1.841	**Yes**
Edge 2	0.202	0.400	0.158	0.400	0.029	0.400	0.602	No	0.360	No	0.602	No	0.231	No	0.602	No	0.631	No	1.002	No

12.17.2. LTE Band 41 & Wi-Fi 2.4GHz (MIMO)

RF Exposure conditions	① WWAN	② Ant. A +B Wi-Fi 2.4GHz	③ Ant. A +D Wi-Fi 2.4GHz P_{Low}	④ Ant. B BT	⑤ Ant. D BT	①+② WWAN +Ant. A +B		①+③ WWAN +Ant. A +D	
						∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	0.863	0.088	0.291	0.018	0.347	0.951	No	1.154	No
Edge 1	1.140	0.400	0.246	0.000	0.301	1.540	No	1.386	No
Edge 2	0.202	0.186	0.400	0.029	0.400	0.388	No	0.602	No

12.17.3. LTE Band 41 & Wi-Fi 5GHz (SISO) & BT

RF Exposure conditions	① WWAN	② Ant. A Wi-Fi 5GHz	③ Ant. B Wi-Fi 5GHz	④ Ant. B BT	⑤ Ant. D BT	①+② WWAN +Ant. A		①+③ WWAN + Ant. B		①+②+④ WWAN +Ant. A + Ant. B (BT)		①+②+⑤ WWAN +Ant. A + Ant. D (BT)		①+③+④ WWAN +Ant. B + Ant. B (BT)		①+③+⑤ WWAN +Ant. B + Ant. D (BT)	
						∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	0.863	0.145	0.175	0.018	0.347	1.008	No	1.038	No	1.026	No	1.355	No	1.056	No	1.385	No
Edge 1	1.140	0.054	0.073	0.000	0.301	1.194	No	1.213	No	1.194	No	1.495	No	1.213	No	1.514	No
Edge 2	0.202	0.400	0.167	0.029	0.400	0.602	No	0.369	No	0.631	No	1.002	No	0.398	No	0.769	No

12.17.4. LTE Band 41 & Wi-Fi 5GHz (MIMO) & BT

RF Exposure conditions	① WWAN	② Ant. A +B Wi-Fi 5GHz	③ Ant. B BT	④ Ant. D BT	①+② WWAN +Ant. A +B		①+②+③ WWAN +Ant. A +B +Ant. B (BT)		①+②+④ WWAN +Ant. A +B +Ant. D (BT)	
					∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)	∑1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	0.863	0.248	0.018	0.347	1.111	No	1.129	No	1.458	No
Edge 1	1.140	0.400	0.000	0.301	1.540	No	1.540	No	1.841	**Yes**
Edge 2	0.202	0.226	0.029	0.400	0.428	No	0.457	No	0.828	No

12.18. Sum of the SAR for Wi-Fi P_{Cell_OFF} (P_{max}) & BT

12.18.1. Wi-Fi 2.4GHz (SISO) & BT

RF Exposure conditions	① Ant. A Wi-Fi 2.4GHz	② Ant. B BT	③ Ant. D BT	① + ② Ant. A + Ant. B		① + ③ Ant. A + Ant. D	
				∑ 1-g SAR (mW/g)	SPLSR (Yes/ No)	∑ 1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	0.092	0.018	0.347	0.110	No	0.439	No
Edge 3	1.090	0.252	0.400	1.342	No	1.490	No
Edge 4	0.169	0.400	0.023	0.569	No	0.192	No

12.18.2. Wi-Fi 5GHz (SISO) & BT

RF Exposure conditions	① Ant. A Wi-Fi 5GHz	② Ant. B Wi-Fi 5GHz	③ Ant. B BT	④ Ant. D BT	① + ③ Ant. A + Ant. B (BT)		① + ④ Ant. A + Ant. D (BT)		② + ③ Ant. B + Ant. B (BT)		② + ④ Ant. B + Ant. D (BT)	
					∑ 1-g SAR (mW/g)	SPLSR (Yes/ No)	∑ 1-g SAR (mW/g)	SPLSR (Yes/ No)	∑ 1-g SAR (mW/g)	SPLSR (Yes/ No)	∑ 1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	0.145	0.175	0.018	0.347	0.163	No	0.492	No	0.193	No	0.522	No
Edge 1	0.054	0.073	0.000	0.301	0.054	No	0.355	No	0.073	No	0.374	No
Edge 2	0.400	0.167	0.029	0.400	0.429	No	0.800	No	0.196	No	0.567	No
Edge 3	1.190	1.140	0.252	0.400	1.442	No	1.590	No	1.392	No	1.540	No
Edge 4	0.236	0.400	0.400	0.023	0.636	No	0.259	No	0.800	No	0.423	No

12.18.3. Wi-Fi 5GHz (MIMO) & BT

RF Exposure conditions	① Ant. A +B Wi-Fi 5GHz	② Ant. B BT	③ Ant. D BT	① + ② Ant. A +B +Ant. B (BT)		① + ③ Ant. A +B +Ant. D (BT)	
				∑ 1-g SAR (mW/g)	SPLSR (Yes/ No)	∑ 1-g SAR (mW/g)	SPLSR (Yes/ No)
Rear	0.248	0.018	0.347	0.266	No	0.595	No
Edge 1	0.400	0.000	0.301	0.400	No	0.701	No
Edge 2	0.226	0.029	0.400	0.255	No	0.626	No
Edge 3	1.150	0.252	0.400	1.402	No	1.550	No
Edge 4	0.322	0.400	0.023	0.722	No	0.345	No

12.19. SAR to Peak Location Ratio (SPLSR)

12.19.1. GSM850 & Wi-Fi & BT

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.57	-0.0355	0.0965	-0.183	① + ②	220.0
Ant. A	②	0.27	0.048	-0.107	-0.181	① + ③	68.0
Ant. D	③	0.439	0.0322	0.101	-0.178	② + ③	208.6

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.57	-0.0355	0.0965	-0.183	① + ②	203.6
Ant. B	②	0.314	-0.042	-0.107	-0.18	① + ③	68.0
Ant. D	③	0.439	0.0322	0.101	-0.178	② + ③	220.8

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.57	-0.0355	0.0965	-0.183	① + ②	206.6
Ant. A + B	②	0.444	-0.042	-0.11	-0.18	① + ③	68.0
Ant. D	③	0.439	0.0322	0.101	-0.178	② + ③	223.7

The Peak Location Separation Distance is computed by using the
SQRT((X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2)

SAR to Peak Location Separation Ratio (SPLSR)

Simutlaneous Transmission Scenario		Standalone SAR Values						∑ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/ No)
Position	Antenna Combination	Antenna C GSM 850	Antenna A Wi-Fi 5 GHz	Antenna B Wi-Fi 5 GHz	Antenna A + B Wi-Fi 5 GHz	Antenna B Bluetooth	Antenna D Bluetooth				
Rear	Antenna C (GSM 850) Antenna A (Wi-Fi 5 GHz) Antenna D (Bluetooth)	1.110	0.145				0.347	1602			
		1.110	0.145					1255	220.0	0.006	No
		1.110					0.347	1457	68.0	0.026	No
			0.145				0.347	0.492	208.6	0.002	No
Rear	Antenna C (GSM 850) Antenna B (Wi-Fi 5 GHz) Antenna D (Bluetooth)	1.110		0.175			0.347	1632			
		1.110		0.175				1285	203.6	0.007	No
		1.110					0.347	1457	68.0	0.026	No
				0.175			0.347	0.522	220.8	0.002	No
Rear	Antenna C (GSM 850) Antenna A +B (Wi-Fi 5 GHz) Antenna D (Bluetooth)	1.110			0.248		0.347	1705			
		1.110			0.248			1358	206.6	0.008	No
		1.110					0.347	1457	68.0	0.026	No
					0.248		0.347	0.595	223.7	0.002	No

Conclusion:

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

12.19.2. GSM1900 & Wi-Fi & BT

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.56	-0.036	0.0985	-0.18	① + ②	217.4
Ant. A	②	0.131	0.0456	-0.103	-0.178	① + ③	68.3
Ant. D	③	0.439	0.0322	0.101	-0.178	② + ③	204.4

SAR to Peak Location Separation Ratio (SPLSR)

Simutlaneous Transmission Scenario		Standalone SAR Values						∑ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/ No)
Position	Antenna Combination	Antenna C GSM 1900	Antenna A Wi-Fi 2.4 GHz	Antenna B Wi-Fi 2.4 GHz	Antenna D Wi-Fi 2.4 GHz	Antenna B Bluetooth	Antenna D Bluetooth				
Rear	Antenna C (GSM 1900) Antenna A (Wi-Fi 2.4 GHz) Antenna D (Bluetooth)	1.167	0.092				0.347	1.606			
		1.167	0.092					1.259	217.4	0.006	No
		1.167					0.347	1.514	68.3	0.027	No
			0.092				0.347	0.439	204.4	0.001	No

Conclusion:

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

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.56	-0.036	0.0985	-0.18	① + ②	222.0
Ant. A	②	0.27	0.048	-0.107	-0.181	① + ③	68.3
Ant. D	③	0.439	0.0322	0.101	-0.178	② + ③	208.6

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.56	-0.036	0.0985	-0.18	① + ②	205.6
Ant. B	②	0.314	-0.042	-0.107	-0.18	① + ③	68.3
Ant. D	③	0.439	0.0322	0.101	-0.178	② + ③	220.8

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.56	-0.036	0.0985	-0.18	① + ②	208.6
Ant. A + B	②	0.444	-0.042	-0.11	-0.18	① + ③	68.3
Ant. D	③	0.439	0.0322	0.101	-0.178	② + ③	223.7

The Peak Location Separation Distance is computed by using the
SQRT((X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2)

SAR to Peak Location Separation Ratio (SPLSR)

Simutlaneous Transmission Scenario		Standalone SAR Values						∑ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/ No)
Position	Antenna Combination	Antenna C GSM 1900	Antenna A Wi-Fi 5 GHz	Antenna B Wi-Fi 5 GHz	Antenna A + B Wi-Fi 5 GHz	Antenna B Bluetooth	Antenna D Bluetooth				
Rear	Antenna C (GSM 1900) Antenna A (Wi-Fi 5 GHz) Antenna D (Bluetooth)	1.167	0.145				0.347	1.659			
		1.167	0.145					1.312	222.0	0.007	No
		1.167					0.347	1.514	68.3	0.027	No
			0.145				0.347	0.492	208.6	0.002	No
Rear	Antenna C (GSM 1900) Antenna B (Wi-Fi 5 GHz) Antenna D (Bluetooth)	1.167		0.175			0.347	1.689			
		1.167		0.175				1.342	205.6	0.008	No
		1.167					0.347	1.514	68.3	0.027	No
				0.175			0.347	0.522	220.8	0.002	No
Rear	Antenna C (GSM 1900) Antenna A +B (Wi-Fi 5 GHz) Antenna D (Bluetooth)	1.167			0.248		0.347	1.762			
		1.167			0.248			1.415	208.6	0.008	No
		1.167					0.347	1.514	68.3	0.027	No
					0.248		0.347	0.595	223.7	0.002	No

Conclusion:

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

12.19.3. WCDMA Band V & Wi-Fi & BT

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.67	-0.034	0.098	-0.183	① + ②	216.2
Ant. A	②	0.131	0.0456	-0.103	-0.178	① + ③	66.5
Ant. D	③	0.439	0.0322	0.101	-0.178	② + ③	204.4

SAR to Peak Location Separation Ratio (SPLSR)

Simutlaneous Transmission Scenario		Standalone SAR Values						∑ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/ No)
Position	Antenna Combination	Antenna C WCDMA V	Antenna A Wi-Fi 2.4 GHz	Antenna B Wi-Fi 2.4 GHz	Antenna D Wi-Fi 2.4 GHz	Antenna B Bluetooth	Antenna D Bluetooth				
Rear	Antenna C (WCDMA V) Antenna A (Wi-Fi 2.4 GHz) Antenna D (Bluetooth)	1190	0.092				0.347	1629			
		1190	0.092					1282	216.2	0.007	No
		1190					0.347	1537	66.5	0.029	No
			0.092				0.347	0.439	204.4	0.001	No

Conclusion:

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

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.67	-0.034	0.098	-0.183	① + ②	220.8
Ant. A	②	0.27	0.048	-0.107	-0.181	① + ③	66.5
Ant. D	③	0.439	0.0322	0.101	-0.178	② + ③	208.6

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.67	-0.034	0.098	-0.183	① + ②	205.2
Ant. B	②	0.314	-0.042	-0.107	-0.18	① + ③	66.5
Ant. D	③	0.439	0.0322	0.101	-0.178	② + ③	220.8

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.67	-0.034	0.098	-0.183	① + ②	208.2
Ant. A + B	②	0.444	-0.042	-0.11	-0.18	① + ③	66.5
Ant. D	③	0.439	0.0322	0.101	-0.178	② + ③	223.7

The Peak Location Separation Distance is computed by using the
SQRT((X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2)

SAR to Peak Location Separation Ratio (SPLSR)

Simutlaneous Transmission Scenario		Standalone SAR Values						∑ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/ No)
Position	Antenna Combination	Antenna C WCDMA V	Antenna A Wi-Fi 5 GHz	Antenna B Wi-Fi 5 GHz	Antenna A + B Wi-Fi 5 GHz	Antenna B Bluetooth	Antenna D Bluetooth				
Rear	Antenna C (WCDMA V) Antenna A (Wi-Fi 5 GHz) Antenna D (Bluetooth)	1.190	0.145				0.347	1.682			
		1.190	0.145					1.335	220.8	0.007	No
		1.190					0.347	1.537	66.5	0.029	No
			0.145				0.347	0.492	208.6	0.002	No
Rear	Antenna C (WCDMA V) Antenna B (Wi-Fi 5 GHz) Antenna D (Bluetooth)	1.190		0.175			0.347	1.712			
		1.190		0.175				1.365	205.2	0.008	No
		1.190					0.347	1.537	66.5	0.029	No
				0.175			0.347	0.522	220.8	0.002	No
Rear	Antenna C (WCDMA V) Antenna A +B (Wi-Fi 5 GHz) Antenna D (Bluetooth)	1.190			0.248		0.347	1.785			
		1.190			0.248			1.438	208.2	0.008	No
		1.190					0.347	1.537	66.5	0.029	No
					0.248		0.347	0.595	223.7	0.002	No

Conclusion:

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

12.19.4. WCDMA Band IV & Wi-Fi & BT

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.51	-0.031	0.098	-0.183	① + ②	205.3
Ant. B	②	0.314	-0.042	-0.107	-0.18	① + ③	63.5
Ant. D	③	0.439	0.0322	0.101	-0.178	② + ③	220.8

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.51	-0.031	0.098	-0.183	① + ②	208.3
Ant. A + B	②	0.444	-0.042	-0.11	-0.18	① + ③	63.5
Ant. D	③	0.439	0.0322	0.101	-0.178	② + ③	223.7

The Peak Location Separation Distance is computed by using the
SQRT((X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2)

SAR to Peak Location Separation Ratio (SPLSR)

Simutlaneous Transmission Scenario		Standalone SAR Values						∑ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/ No)
Position	Antenna Combination	Antenna C WCDMA IV	Antenna A Wi-Fi 5 GHz	Antenna B Wi-Fi 5 GHz	Antenna A + B Wi-Fi 5 GHz	Antenna B Bluetooth	Antenna D Bluetooth				
Rear	Antenna C (WCDMA IV) Antenna B (Wi-Fi 5 GHz) Antenna D (Bluetooth)	1080		0.175			0.347	1602			
		1080		0.175				1255	205.3	0.007	No
		1080					0.347	1427	63.5	0.027	No
				0.175			0.347	0.522	220.8	0.002	No
Rear	Antenna C (WCDMA IV) Antenna A +B (Wi-Fi 5 GHz) Antenna D (Bluetooth)	1080			0.248		0.347	1675			
		1080			0.248			1328	208.3	0.007	No
		1080					0.347	1427	63.5	0.027	No
					0.248		0.347	0.595	223.7	0.002	No

Conclusion:

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

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.57	-0.0035	0.024	-0.183	① + ②	180.2
Ant. A	②	0.400	-0.0016	-0.0279	-0.3556	① + ⑥	53.2
Ant. D	⑥	0.406	-0.0032	-0.029	-0.179	② + ⑥	176.6

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.57	-0.0035	0.024	-0.183	① + ②	174.1
Ant. A + B	②	0.400	-0.0016	0.0279	-0.357	① + ④	53.2
Ant. D	④	0.406	-0.0032	-0.029	-0.179	② + ④	186.9

The Peak Location Separation Distance is computed by using the
SQRT((X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2)

SAR to Peak Location Separation Ratio (SPLSR)

Simutlaneous Transmission Scenario		Standalone SAR Values						∑ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/ No)
Position	Antenna Combination	Antenna C WCDMA Band IV	Antenna A Wi-Fi 2.4 GHz	Antenna B Wi-Fi 2.4 GHz	Antenna A + B Wi-Fi 5 GHz	Antenna B Bluetooth	Antenna D Bluetooth				
Edge 1	Antenna C (WCDMA Band IV) Antenna A (Wi-Fi 2.4 GHz) Antenna D (Bluetooth)	1120	0.400				0.301	1821			
		1120	0.400					1520	180.2	0.010	No
		1120					0.301	1421	53.2	0.032	No
			0.400				0.301	0.701	176.6	0.003	No
Edge 1	Antenna C (WCDMA Band IV) Antenna A +B (Wi-Fi 5 GHz) Antenna D (Bluetooth)	1120			0.400		0.301	1821			
		1120			0.400			1520	174.1	0.011	No
		1120					0.301	1421	53.2	0.032	No
					0.400		0.301	0.701	186.9	0.003	No

Conclusion:

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

12.19.5. WCDMA Band II & Wi-Fi & BT

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.63	-0.03	0.0955	-0.181	① + ②	217.0
Ant. A	②	0.27	0.048	-0.107	-0.181	① + ③	62.5
Ant. D	③	0.439	0.0322	0.101	-0.178	② + ③	208.6

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.63	-0.03	0.0955	-0.181	① + ②	202.9
Ant. B	②	0.314	-0.042	-0.107	-0.18	① + ③	62.5
Ant. D	③	0.439	0.0322	0.101	-0.178	② + ③	220.8

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.63	-0.03	0.0955	-0.181	① + ②	205.9
Ant. A + B	②	0.444	-0.042	-0.11	-0.18	① + ③	62.5
Ant. D	③	0.439	0.0322	0.101	-0.178	② + ③	223.7

The Peak Location Separation Distance is computed by using the
SQRT((X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2)

SAR to Peak Location Separation Ratio (SPLSR)

Simutlaneous Transmission Scenario		Standalone SAR Values						∑ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/ No)
Position	Antenna Combination	Antenna C WCDMA II	Antenna A Wi-Fi 5 GHz	Antenna B Wi-Fi 5 GHz	Antenna A + B Wi-Fi 5 GHz	Antenna B Bluetooth	Antenna D Bluetooth				
Rear	Antenna C (WCDMA II) Antenna A (Wi-Fi 5 GHz) Antenna D (Bluetooth)	1.150	0.145				0.347	1.642			
		1.150	0.145					1.295	217.0	0.007	No
		1.150					0.347	1.497	62.5	0.029	No
			0.145				0.347	0.492	208.6	0.002	No
Rear	Antenna C (WCDMA II) Antenna B (Wi-Fi 5 GHz) Antenna D (Bluetooth)	1.150		0.175			0.347	1.672			
		1.150		0.175				1.325	202.9	0.008	No
		1.150					0.347	1.497	62.5	0.029	No
				0.175			0.347	0.522	220.8	0.002	No
Rear	Antenna C (WCDMA II) Antenna A +B (Wi-Fi 5 GHz) Antenna D (Bluetooth)	1.150			0.248		0.347	1.745			
		1.150			0.248			1.398	205.9	0.008	No
		1.150					0.347	1.497	62.5	0.029	No
					0.248		0.347	0.595	223.7	0.002	No

Conclusion:

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

12.19.6. CDMA BC0 & Wi-Fi & BT

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.67	-0.0355	0.0965	-0.183	① + ②	215.4
Ant. A	②	0.131	0.0456	-0.103	-0.178	① + ③	68.0
Ant. D	③	0.439	0.0322	0.101	-0.178	② + ③	204.4

SAR to Peak Location Separation Ratio (SPLSR)

Simutlaneous Transmission Scenario		Standalone SAR Values						∑ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/ No)
Position	Antenna Combination	Antenna C CDMA BC0	Antenna A Wi-Fi 2.4 GHz	Antenna B Wi-Fi 2.4 GHz	Antenna D Wi-Fi 2.4 GHz	Antenna B Bluetooth	Antenna D Bluetooth				
Rear	Antenna C (CDMA BC0) Antenna A (Wi-Fi 2.4 GHz) Antenna D (Bluetooth)	1.190	0.092				0.347	1.629			
		1.190	0.092					1.282	215.4	0.007	No
		1.190					0.347	1.537	68.0	0.028	No
			0.092				0.347	0.439	204.4	0.001	No

Conclusion:

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

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.67	-0.0355	0.0965	-0.183	① + ②	220.0
Ant. A	②	0.27	0.048	-0.107	-0.181	① + ③	68.0
Ant. D	③	0.439	0.0322	0.101	-0.178	② + ③	208.6

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.67	-0.0355	0.0965	-0.183	① + ②	203.6
Ant. B	②	0.314	-0.042	-0.107	-0.18	① + ③	68.0
Ant. D	③	0.439	0.0322	0.101	-0.178	② + ③	220.8

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.67	-0.0355	0.0965	-0.183	① + ②	206.6
Ant. A + B	②	0.444	-0.042	-0.11	-0.18	① + ③	68.0
Ant. D	③	0.439	0.0322	0.101	-0.178	② + ③	223.7

The Peak Location Separation Distance is computed by using the
SQRT((X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2)

SAR to Peak Location Separation Ratio (SPLSR)

Simutlaneous Transmission Scenario		Standalone SAR Values						∑ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/ No)
Position	Antenna Combination	Antenna C CDMA BC0	Antenna A Wi-Fi 5 GHz	Antenna B Wi-Fi 5 GHz	Antenna A + B Wi-Fi 5 GHz	Antenna B Bluetooth	Antenna D Bluetooth				
Rear	Antenna C (CDMA BC0) Antenna A (Wi-Fi 5 GHz) Antenna D (Bluetooth)	1.190	0.145				0.347	1.682			
		1.190	0.145					1.335	220.0	0.007	No
		1.190					0.347	1.537	68.0	0.028	No
			0.145				0.347	0.492	208.6	0.002	No
Rear	Antenna C (CDMA BC0) Antenna B (Wi-Fi 5 GHz) Antenna D (Bluetooth)	1.190		0.175			0.347	1.712			
		1.190		0.175				1.365	203.6	0.008	No
		1.190					0.347	1.537	68.0	0.028	No
				0.175			0.347	0.522	220.8	0.002	No
Rear	Antenna C (CDMA BC0) Antenna A +B (Wi-Fi 5 GHz) Antenna D (Bluetooth)	1.190			0.248		0.347	1.785			
		1.190			0.248			1.438	206.6	0.008	No
		1.190					0.347	1.537	68.0	0.028	No
					0.248		0.347	0.595	223.7	0.002	No

Conclusion:

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

12.19.7. CDMA BC1 & Wi-Fi & BT

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.61	-0.036	0.0935	-0.18	① + ②	212.8
Ant. A	②	0.131	0.0456	-0.103	-0.178	① + ③	68.6
Ant. D	③	0.439	0.0322	0.101	-0.178	② + ③	204.4

SAR to Peak Location Separation Ratio (SPLSR)

Simutlaneous Transmission Scenario		Standalone SAR Values						∑ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/ No)
Position	Antenna Combination	Antenna C CDMA BC1	Antenna A Wi-Fi 2.4 GHz	Antenna B Wi-Fi 2.4 GHz	Antenna D Wi-Fi 2.4 GHz	Antenna B Bluetooth	Antenna D Bluetooth				
Rear	Antenna C (CDMA BC1) Antenna A (Wi-Fi 2.4 GHz) Antenna D (Bluetooth)	1180	0.092				0.347	1619			
		1180	0.092					1272	212.8	0.007	No
		1180					0.347	1527	68.6	0.028	No
			0.092				0.347	0.439	204.4	0.001	No

Conclusion:

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

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.61	-0.036	0.0935	-0.18	① + ②	217.4
Ant. A	②	0.27	0.048	-0.107	-0.181	① + ③	68.6
Ant. D	③	0.439	0.0322	0.101	-0.178	② + ③	208.6

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.61	-0.036	0.0935	-0.18	① + ②	200.6
Ant. B	②	0.314	-0.042	-0.107	-0.18	① + ③	68.6
Ant. D	③	0.439	0.0322	0.101	-0.178	② + ③	220.8

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.61	-0.036	0.0935	-0.18	① + ②	203.6
Ant. A + B	②	0.444	-0.042	-0.11	-0.18	① + ③	68.6
Ant. D	③	0.439	0.0322	0.101	-0.178	② + ③	223.7

The Peak Location Separation Distance is computed by using the
SQRT((X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2)

SAR to Peak Location Separation Ratio (SPLSR)

Simutlaneous Transmission Scenario		Standalone SAR Values						∑ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/ No)
Position	Antenna Combination	Antenna C CDMA BC1	Antenna A Wi-Fi 5 GHz	Antenna B Wi-Fi 5 GHz	Antenna A + B Wi-Fi 5 GHz	Antenna B Bluetooth	Antenna D Bluetooth				
Rear	Antenna C (CDMA BC1) Antenna A (Wi-Fi 5 GHz) Antenna D (Bluetooth)	1.180	0.145				0.347	1.672			
		1.180	0.145					1.325	217.4	0.007	No
		1.180					0.347	1.527	68.6	0.028	No
			0.145				0.347	0.492	208.6	0.002	No
Rear	Antenna C (CDMA BC1) Antenna B (Wi-Fi 5 GHz) Antenna D (Bluetooth)	1.180		0.175			0.347	1.702			
		1.180		0.175				1.355	200.6	0.008	No
		1.180					0.347	1.527	68.6	0.028	No
				0.175			0.347	0.522	220.8	0.002	No
Rear	Antenna C (CDMA BC1) Antenna A +B (Wi-Fi 5 GHz) Antenna D (Bluetooth)	1.180			0.248		0.347	1.775			
		1.180			0.248			1.428	203.6	0.008	No
		1.180					0.347	1.527	68.6	0.028	No
					0.248		0.347	0.595	223.7	0.002	No

Conclusion:

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

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.43	-0.002	0.027	-0.183	① + ②	181.1
Ant. A	②	0.400	-0.0016	-0.0279	-0.3556	① + ⑥	56.2
Ant. D	⑥	0.406	-0.0032	-0.029	-0.179	② + ⑥	176.6

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.43	-0.002	0.027	-0.183	① + ②	174.0
Ant. A + B	②	0.400	-0.0016	0.0279	-0.357	① + ⑭	56.2
Ant. D	⑭	0.406	-0.0032	-0.029	-0.179	② + ⑭	186.9

The Peak Location Separation Distance is computed by using the
SQRT((X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2)

SAR to Peak Location Separation Ratio (SPLSR)

Simutlaneous Transmission Scenario		Standalone SAR Values						∑ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/ No)
Position	Antenna Combination	Antenna C CDMA BC1	Antenna A Wi-Fi 2.4 GHz	Antenna B Wi-Fi 2.4 GHz	Antenna A + B Wi-Fi 5 GHz	Antenna B Bluetooth	Antenna D Bluetooth				
Edge 1	Antenna C (CDMA BC1) Antenna A (Wi-Fi 2.4 GHz) Antenna D (Bluetooth)	0.988	0.400				0.301	1689			
		0.988	0.400					1388	1811	0.009	No
		0.988					0.301	1289	56.2	0.026	No
			0.400				0.301	0.701	176.6	0.003	No
Edge 1	Antenna C (CDMA BC1) Antenna A +B (Wi-Fi 5 GHz) Antenna D (Bluetooth)	0.988			0.400		0.301	1689			
		0.988			0.400			1388	174.0	0.009	No
		0.988					0.301	1289	56.2	0.026	No
					0.400		0.301	0.701	186.9	0.003	No

Conclusion:

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

12.19.8. CDMA BC10 & Wi-Fi & BT

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.68	-0.0355	0.098	-0.183	① + ②	216.8
Ant. A	②	0.131	0.0456	-0.103	-0.178	① + ③	68.0
Ant. D	③	0.439	0.0322	0.101	-0.178	② + ③	204.4

SAR to Peak Location Separation Ratio (SPLSR)

Simutlaneous Transmission Scenario		Standalone SAR Values						∑ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/ No)
Position	Antenna Combination	Antenna C CDMA BC10	Antenna A Wi-Fi 2.4 GHz	Antenna B Wi-Fi 2.4 GHz	Antenna D Wi-Fi 2.4 GHz	Antenna B Bluetooth	Antenna D Bluetooth				
Rear	Antenna C (CDMA BC10) Antenna A (Wi-Fi 2.4 GHz) Antenna D (Bluetooth)	1.170	0.092				0.347	1.609			
		1.170	0.092					1.262	216.8	0.007	No
		1.170					0.347	1.517	68.0	0.027	No
			0.092				0.347	0.439	204.4	0.001	No

Conclusion:

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

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.68	-0.0355	0.098	-0.183	① + ②	221.4
Ant. A	②	0.27	0.048	-0.107	-0.181	① + ③	68.0
Ant. D	③	0.439	0.0322	0.101	-0.178	② + ③	208.6

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.68	-0.0355	0.098	-0.183	① + ②	205.1
Ant. B	②	0.314	-0.042	-0.107	-0.18	① + ③	68.0
Ant. D	③	0.439	0.0322	0.101	-0.178	② + ③	220.8

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.68	-0.0355	0.098	-0.183	① + ②	208.1
Ant. A + B	②	0.444	-0.042	-0.11	-0.18	① + ③	68.0
Ant. D	③	0.439	0.0322	0.101	-0.178	② + ③	223.7

The Peak Location Separation Distance is computed by using the
SQRT((X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2)

SAR to Peak Location Separation Ratio (SPLSR)

Simutlaneous Transmission Scenario		Standalone SAR Values						∑ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/ No)
Position	Antenna Combination	Antenna C CDMA BC10	Antenna A Wi-Fi 5 GHz	Antenna B Wi-Fi 5 GHz	Antenna A + B Wi-Fi 5 GHz	Antenna B Bluetooth	Antenna D Bluetooth				
Rear	Antenna C (CDMA BC10) Antenna A (Wi-Fi 5 GHz) Antenna D (Bluetooth)	1.170	0.145				0.347	1.662			
		1.170	0.145					1.315	22.14	0.007	No
		1.170					0.347	1.517	68.0	0.027	No
			0.145				0.347	0.492	208.6	0.002	No
Rear	Antenna C (CDMA BC10) Antenna B (Wi-Fi 5 GHz) Antenna D (Bluetooth)	1.170		0.175			0.347	1.692			
		1.170		0.175				1.345	205.1	0.008	No
		1.170					0.347	1.517	68.0	0.027	No
				0.175			0.347	0.522	220.8	0.002	No
Rear	Antenna C (CDMA BC10) Antenna A +B (Wi-Fi 5 GHz) Antenna D (Bluetooth)	1.170			0.248		0.347	1.765			
		1.170			0.248			1.418	208.1	0.008	No
		1.170					0.347	1.517	68.0	0.027	No
					0.248		0.347	0.595	223.7	0.002	No

Conclusion:

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

12.19.9. CDMA BC15 & Wi-Fi & BT

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.46	-0.0295	0.0965	-0.182	① + ②	213.2
Ant. A	②	0.131	0.0456	-0.103	-0.178	① + ③	62.0
Ant. D	③	0.439	0.0322	0.101	-0.178	② + ③	204.4

SAR to Peak Location Separation Ratio (SPLSR)

Simutlaneous Transmission Scenario		Standalone SAR Values						∑ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/ No)
Position	Antenna Combination	Antenna C CDMA BC15	Antenna A Wi-Fi 2.4 GHz	Antenna B Wi-Fi 2.4 GHz	Antenna D Wi-Fi 2.4 GHz	Antenna B Bluetooth	Antenna D Bluetooth				
Rear	Antenna C (CDMA BC15) Antenna A (Wi-Fi 2.4 GHz) Antenna D (Bluetooth)	1.167	0.092				0.347	1.606			
		1.167	0.092					1.259	213.2	0.007	No
		1.167					0.347	1.514	62.0	0.030	No
			0.092				0.347	0.439	204.4	0.001	No

Conclusion:

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

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.46	-0.0295	0.0965	-0.182	① + ②	217.8
Ant. A	②	0.27	0.048	-0.107	-0.181	① + ③	62.0
Ant. D	③	0.439	0.0322	0.101	-0.178	② + ③	208.6

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.46	-0.0295	0.0965	-0.182	① + ②	203.9
Ant. B	②	0.314	-0.042	-0.107	-0.18	① + ③	62.0
Ant. D	③	0.439	0.0322	0.101	-0.178	② + ③	220.8

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.46	-0.0295	0.0965	-0.182	① + ②	206.9
Ant. A + B	②	0.444	-0.042	-0.11	-0.18	① + ③	62.0
Ant. D	③	0.439	0.0322	0.101	-0.178	② + ③	223.7

The Peak Location Separation Distance is computed by using the
SQRT((X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2)

SAR to Peak Location Separation Ratio (SPLSR)

Simutlaneous Transmission Scenario		Standalone SAR Values						∑ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/ No)
Position	Antenna Combination	Antenna C CDMA BC15	Antenna A Wi-Fi 5 GHz	Antenna B Wi-Fi 5 GHz	Antenna A + B Wi-Fi 5 GHz	Antenna B Bluetooth	Antenna D Bluetooth				
Rear	Antenna C (CDMA BC15) Antenna A (Wi-Fi 5 GHz) Antenna D (Bluetooth)	1.167	0.145				0.347	1.659			
		1.167	0.145					1.312	217.8	0.007	No
		1.167					0.347	1.514	62.0	0.030	No
			0.145				0.347	0.492	208.6	0.002	No
Rear	Antenna C (CDMA BC15) Antenna B (Wi-Fi 5 GHz) Antenna D (Bluetooth)	1.167		0.175			0.347	1.689			
		1.167		0.175				1.342	203.9	0.008	No
		1.167					0.347	1.514	62.0	0.030	No
				0.175			0.347	0.522	220.8	0.002	No
Rear	Antenna C (CDMA BC15) Antenna A +B (Wi-Fi 5 GHz) Antenna D (Bluetooth)	1.167			0.248		0.347	1.762			
		1.167			0.248			1.415	206.9	0.008	No
		1.167					0.347	1.514	62.0	0.030	No
					0.248		0.347	0.595	223.7	0.002	No

Conclusion:

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

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.64	-0.005	0.0255	-0.184	① + ②	179.7
Ant. A	②	0.400	-0.0016	-0.0279	-0.3556	① + ⑥	54.8
Ant. D	⑥	0.406	-0.0032	-0.029	-0.179	② + ⑥	176.6

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.64	-0.005	0.0255	-0.184	① + ②	173.1
Ant. A + B	②	0.400	-0.0016	0.0279	-0.357	① + ④	54.8
Ant. D	④	0.406	-0.0032	-0.029	-0.179	② + ④	186.9

The Peak Location Separation Distance is computed by using the
SQRT((X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2)

SAR to Peak Location Separation Ratio (SPLSR)

Simutlaneous Transmission Scenario		Standalone SAR Values						∑ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/ No)
Position	Antenna Combination	Antenna C CDMA BC15	Antenna A Wi-Fi 2.4 GHz	Antenna B Wi-Fi 2.4 GHz	Antenna A + B Wi-Fi 5 GHz	Antenna B Bluetooth	Antenna D Bluetooth				
Edge 1	Antenna C (CDMA BC15) Antenna A (Wi-Fi 2.4 GHz) Antenna D (Bluetooth)	1.187	0.400				0.301	1.888			
		1.187	0.400					1.587	181.1	0.011	No
		1.187					0.301	1.488	56.2	0.032	No
			0.400				0.301	0.701	176.6	0.003	No
Edge 1	Antenna C (CDMA BC15) Antenna A + B (Wi-Fi 5 GHz) Antenna D (Bluetooth)	1.187			0.400		0.301	1.888			
		1.187			0.400			1.587	174.0	0.011	No
		1.187					0.301	1.488	56.2	0.032	No
					0.400		0.301	0.701	186.9	0.003	No

Conclusion:

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

12.19.10. LTE Band 2 & Wi-Fi & BT

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.62	-0.0355	0.095	-0.181	① + ②	214.0
Ant. A	②	0.131	0.0456	-0.103	-0.178	① + ③	68.0
Ant. D	③	0.439	0.0322	0.101	-0.178	② + ③	204.4

SAR to Peak Location Separation Ratio (SPLSR)

Simutlaneous Transmission Scenario		Standalone SAR Values						∑ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/ No)
Position	Antenna Combination	Antenna C LTE Band 2	Antenna A Wi-Fi 2.4 GHz	Antenna B Wi-Fi 2.4 GHz	Antenna D Wi-Fi 2.4 GHz	Antenna B Bluetooth	Antenna D Bluetooth				
Rear	Antenna C (LTE Band 2) Antenna A (Wi-Fi 2.4 GHz) Antenna D (Bluetooth)	1170	0.092				0.347	1609			
		1170	0.092					1262	214.0	0.007	No
		1170					0.347	1517	68.0	0.027	No
			0.092				0.347	0.439	204.4	0.001	No

Conclusion:

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

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.62	-0.0355	0.095	-0.181	① + ②	218.6
Ant. A	②	0.27	0.048	-0.107	-0.181	① + ③	68.0
Ant. D	③	0.439	0.0322	0.101	-0.178	② + ③	208.6

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.62	-0.0355	0.095	-0.181	① + ②	202.1
Ant. B	②	0.314	-0.042	-0.107	-0.18	① + ③	68.0
Ant. D	③	0.439	0.0322	0.101	-0.178	② + ③	220.8

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.62	-0.0355	0.095	-0.181	① + ②	205.1
Ant. A + B	②	0.444	-0.042	-0.11	-0.18	① + ③	68.0
Ant. D	③	0.439	0.0322	0.101	-0.178	② + ③	223.7

The Peak Location Separation Distance is computed by using the
SQRT((X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2)

SAR to Peak Location Separation Ratio (SPLSR)

Simutlaneous Transmission Scenario		Standalone SAR Values						∑ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/ No)
Position	Antenna Combination	Antenna C LTE Band 2	Antenna A Wi-Fi 5 GHz	Antenna B Wi-Fi 5 GHz	Antenna A + B Wi-Fi 5 GHz	Antenna B Bluetooth	Antenna D Bluetooth				
Rear	Antenna C (LTE Band 2) Antenna A (Wi-Fi 5 GHz) Antenna D (Bluetooth)	1.170	0.145				0.347	1.662			
		1.170	0.145					1.315	218.6	0.007	No
		1.170					0.347	1.517	68.0	0.027	No
			0.145				0.347	0.492	208.6	0.002	No
Rear	Antenna C (LTE Band 2) Antenna B (Wi-Fi 5 GHz) Antenna D (Bluetooth)	1.170		0.175			0.347	1.692			
		1.170		0.175				1.345	202.1	0.008	No
		1.170					0.347	1.517	68.0	0.027	No
				0.175			0.347	0.522	220.8	0.002	No
Rear	Antenna C (LTE Band 2) Antenna A +B (Wi-Fi 5 GHz) Antenna D (Bluetooth)	1.170			0.248		0.347	1.765			
		1.170			0.248			1.418	205.1	0.008	No
		1.170					0.347	1.517	68.0	0.027	No
					0.248		0.347	0.595	223.7	0.002	No

Conclusion:

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

12.19.11. LTE Band 4 & Wi-Fi & BT

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.52	-0.0375	0.092	-0.181	① + ②	216.6
Ant. A	②	0.27	0.048	-0.107	-0.181	① + ③	70.3
Ant. D	③	0.439	0.0322	0.101	-0.178	② + ③	208.6

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.52	-0.0375	0.092	-0.181	① + ②	199.1
Ant. B	②	0.314	-0.042	-0.107	-0.18	① + ③	70.3
Ant. D	③	0.439	0.0322	0.101	-0.178	② + ③	220.8

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.52	-0.0375	0.092	-0.181	① + ②	202.1
Ant. A + B	②	0.444	-0.042	-0.11	-0.18	① + ③	70.3
Ant. D	③	0.439	0.0322	0.101	-0.178	② + ③	223.7

The Peak Location Separation Distance is computed by using the
SQRT((X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2)

SAR to Peak Location Separation Ratio (SPLSR)

Simutlaneous Transmission Scenario		Standalone SAR Values						∑ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/ No)
Position	Antenna Combination	Antenna C LTE Band 4	Antenna A Wi-Fi 5 GHz	Antenna B Wi-Fi 5 GHz	Antenna A + B Wi-Fi 5 GHz	Antenna B Bluetooth	Antenna D Bluetooth				
Rear	Antenna C (LTE Band 4) Antenna A (Wi-Fi 5 GHz) Antenna D (Bluetooth)	1.150	0.145				0.347	1.642			
		1.150	0.145					1.295	216.6	0.007	No
		1.150					0.347	1.497	70.3	0.026	No
			0.145				0.347	0.492	208.6	0.002	No
Rear	Antenna C (LTE Band 4) Antenna B (Wi-Fi 5 GHz) Antenna D (Bluetooth)	1.150		0.175			0.347	1.672			
		1.150		0.175				1.325	199.1	0.008	No
		1.150					0.347	1.497	70.3	0.026	No
				0.175			0.347	0.522	220.8	0.002	No
Rear	Antenna C (LTE Band 4) Antenna A +B (Wi-Fi 5 GHz) Antenna D (Bluetooth)	1.150			0.248		0.347	1.745			
		1.150			0.248			1.398	202.1	0.008	No
		1.150					0.347	1.497	70.3	0.026	No
					0.248		0.347	0.595	223.7	0.002	No

Conclusion:

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

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.55	-0.005	0.024	-0.183	① + ②	180.3
Ant. A	②	0.400	-0.0016	-0.0279	-0.3556	① + ⑥	53.2
Ant. D	⑥	0.406	-0.0032	-0.029	-0.179	② + ⑥	176.6

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.55	-0.005	0.024	-0.183	① + ②	174.1
Ant. A + B	②	0.400	-0.0016	0.0279	-0.357	① + ④	53.2
Ant. D	④	0.406	-0.0032	-0.029	-0.179	② + ④	186.9

The Peak Location Separation Distance is computed by using the
SQRT((X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2)

SAR to Peak Location Separation Ratio (SPLSR)

Simutlaneous Transmission Scenario		Standalone SAR Values						∑ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/ No)
Position	Antenna Combination	Antenna C LTE Band 4	Antenna A Wi-Fi 2.4 GHz	Antenna B Wi-Fi 2.4 GHz	Antenna A + B Wi-Fi 5 GHz	Antenna B Bluetooth	Antenna D Bluetooth				
Edge 1	Antenna C (LTE Band 4) Antenna A (Wi-Fi 2.4 GHz) Antenna D (Bluetooth)	1090	0.400				0.301	1791			
		1090	0.400					1490	180.3	0.010	No
		1090					0.301	1391	53.2	0.031	No
			0.400				0.301	0.701	176.6	0.003	No
Edge 1	Antenna C (LTE Band 4) Antenna A +B (Wi-Fi 5 GHz) Antenna D (Bluetooth)	1090			0.400		0.301	1791			
		1090			0.400			1490	174.1	0.010	No
		1090					0.301	1391	53.2	0.031	No
					0.400		0.301	0.701	186.9	0.003	No

Conclusion:

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

12.19.12. LTE Band 5 & Wi-Fi & BT

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.7	-0.0355	0.0965	-0.183	① + ②	215.4
Ant. A	②	0.131	0.0456	-0.103	-0.178	① + ③	68.0
Ant. D	③	0.439	0.0322	0.101	-0.178	② + ③	204.4

SAR to Peak Location Separation Ratio (SPLSR)

Simutlaneous Transmission Scenario		Standalone SAR Values						∑ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/ No)
Position	Antenna Combination	Antenna C LTE Band 5	Antenna A Wi-Fi 2.4 GHz	Antenna B Wi-Fi 2.4 GHz	Antenna D Wi-Fi 2.4 GHz	Antenna B Bluetooth	Antenna D Bluetooth				
Rear	Antenna C (LTE Band 5) Antenna A (Wi-Fi 2.4 GHz) Antenna D (Bluetooth)	1190	0.092				0.347	1629			
		1190	0.092					1282	215.4	0.007	No
		1190					0.347	1537	68.0	0.028	No
			0.092				0.347	0.439	204.4	0.001	No

Conclusion:

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

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.7	-0.0355	0.0965	-0.183	① + ②	220.0
Ant. A	②	0.27	0.048	-0.107	-0.181	① + ③	68.0
Ant. D	③	0.439	0.0322	0.101	-0.178	② + ③	208.6

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.7	-0.0355	0.0965	-0.183	① + ②	203.6
Ant. B	②	0.314	-0.042	-0.107	-0.18	① + ③	68.0
Ant. D	③	0.439	0.0322	0.101	-0.178	② + ③	220.8

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.7	-0.0355	0.0965	-0.183	① + ②	206.6
Ant. A + B	②	0.444	-0.042	-0.11	-0.18	① + ③	68.0
Ant. D	③	0.439	0.0322	0.101	-0.178	② + ③	223.7

The Peak Location Separation Distance is computed by using the
SQRT((X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2)

SAR to Peak Location Separation Ratio (SPLSR)

Simutlaneous Transmission Scenario		Standalone SAR Values						∑ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/ No)
Position	Antenna Combination	Antenna C LTE Band 5	Antenna A Wi-Fi 5 GHz	Antenna B Wi-Fi 5 GHz	Antenna A + B Wi-Fi 5 GHz	Antenna B Bluetooth	Antenna D Bluetooth				
Rear	Antenna C (LTE Band 5) Antenna A (Wi-Fi 5 GHz) Antenna D (Bluetooth)	1.190	0.145				0.347	1.682			
		1.190	0.145					1.335	220.0	0.007	No
		1.190					0.347	1.537	68.0	0.028	No
			0.145				0.347	0.492	208.6	0.002	No
Rear	Antenna C (LTE Band 5) Antenna B (Wi-Fi 5 GHz) Antenna D (Bluetooth)	1.190		0.175			0.347	1.712			
		1.190		0.175				1.365	203.6	0.008	No
		1.190					0.347	1.537	68.0	0.028	No
				0.175			0.347	0.522	220.8	0.002	No
Rear	Antenna C (LTE Band 5) Antenna A +B (Wi-Fi 5 GHz) Antenna D (Bluetooth)	1.190			0.248		0.347	1.785			
		1.190			0.248			1.438	206.6	0.008	No
		1.190					0.347	1.537	68.0	0.028	No
					0.248		0.347	0.595	223.7	0.002	No

Conclusion:

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

12.19.13. LTE Band 13 & Wi-Fi & BT

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.58	-0.0265	0.1	-0.182	① + ②	220.0
Ant. A	②	0.27	0.048	-0.107	-0.181	① + ③	58.8
Ant. D	③	0.439	0.0322	0.101	-0.178	② + ③	208.6

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.58	-0.0265	0.1	-0.182	① + ②	207.6
Ant. B	②	0.314	-0.042	-0.107	-0.18	① + ③	58.8
Ant. D	③	0.439	0.0322	0.101	-0.178	② + ③	220.8

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.58	-0.0265	0.1	-0.182	① + ②	210.6
Ant. A + B	②	0.444	-0.042	-0.11	-0.18	① + ③	58.8
Ant. D	③	0.439	0.0322	0.101	-0.178	② + ③	223.7

The Peak Location Separation Distance is computed by using the
SQRT((X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2)

SAR to Peak Location Separation Ratio (SPLSR)

Simutlaneous Transmission Scenario		Standalone SAR Values						∑ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/ No)
Position	Antenna Combination	Antenna C LTE Band 13	Antenna A Wi-Fi 5 GHz	Antenna B Wi-Fi 5 GHz	Antenna A + B Wi-Fi 5 GHz	Antenna B Bluetooth	Antenna D Bluetooth				
Rear	Antenna C (LTE Band 13) Antenna A (Wi-Fi 5 GHz) Antenna D (Bluetooth)	1.136	0.145				0.347	1.628			
		1.136	0.145					1.281	220.0	0.007	No
		1.136					0.347	1.483	58.8	0.031	No
			0.145				0.347	0.492	208.6	0.002	No
Rear	Antenna C (LTE Band 13) Antenna B (Wi-Fi 5 GHz) Antenna D (Bluetooth)	1.136		0.175			0.347	1.658			
		1.136		0.175				1.311	207.6	0.007	No
		1.136					0.347	1.483	58.8	0.031	No
				0.175			0.347	0.522	220.8	0.002	No
Rear	Antenna C (LTE Band 13) Antenna A +B (Wi-Fi 5 GHz) Antenna D (Bluetooth)	1.136			0.248		0.347	1.731			
		1.136			0.248			1.384	210.6	0.008	No
		1.136					0.347	1.483	58.8	0.031	No
					0.248		0.347	0.595	223.7	0.002	No

Conclusion:

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

12.19.14. LTE Band 17 & Wi-Fi & BT

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.45	-0.032	0.0985	-0.182	① + ②	220.5
Ant. A	②	0.27	0.048	-0.107	-0.181	① + ③	64.4
Ant. D	③	0.439	0.0322	0.101	-0.178	② + ③	208.6

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.45	-0.032	0.0985	-0.182	① + ②	205.8
Ant. B	②	0.314	-0.042	-0.107	-0.18	① + ③	64.4
Ant. D	③	0.439	0.0322	0.101	-0.178	② + ③	220.8

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.45	-0.032	0.0985	-0.182	① + ②	208.7
Ant. A + B	②	0.444	-0.042	-0.11	-0.18	① + ③	64.4
Ant. D	③	0.439	0.0322	0.101	-0.178	② + ③	223.7

The Peak Location Separation Distance is computed by using the
SQRT((X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2)

SAR to Peak Location Separation Ratio (SPLSR)

Simutlaneous Transmission Scenario		Standalone SAR Values						∑ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/ No)
Position	Antenna Combination	Antenna C LTE Band 17	Antenna A Wi-Fi 5 GHz	Antenna B Wi-Fi 5 GHz	Antenna A + B Wi-Fi 5 GHz	Antenna B Bluetooth	Antenna D Bluetooth				
Rear	Antenna C (LTE Band 17) + Antenna A (Wi-Fi 5 GHz) + Antenna D (Bluetooth)	1.120	0.145				0.347	1.612			
		1.120	0.145					1.265	220.5	0.006	No
		1.120					0.347	1.467	64.4	0.028	No
			0.145				0.347	0.492	208.6	0.002	No
Rear	Antenna C (LTE Band 17) + Antenna B (Wi-Fi 5 GHz) + Antenna D (Bluetooth)	1.120		0.175			0.347	1.642			
		1.120		0.175				1.295	205.8	0.007	No
		1.120					0.347	1.467	64.4	0.028	No
				0.175			0.347	0.522	220.8	0.002	No
Rear	Antenna C (LTE Band 17) + Antenna A +B (Wi-Fi 5 GHz) + Antenna D (Bluetooth)	1.120			0.248		0.347	1.715			
		1.120			0.248			1.368	208.7	0.008	No
		1.120					0.347	1.467	64.4	0.028	No
					0.248		0.347	0.595	223.7	0.002	No

Conclusion:

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

12.19.15. LTE Band 25 & Wi-Fi & BT

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.64	-0.0325	0.0935	-0.181	① + ②	211.5
Ant. A	②	0.131	0.0456	-0.103	-0.178	① + ③	65.2
Ant. D	③	0.439	0.0322	0.101	-0.178	② + ③	204.4

SAR to Peak Location Separation Ratio (SPLSR)

Simutlaneous Transmission Scenario		Standalone SAR Values						∑ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/ No)
Position	Antenna Combination	Antenna C LTE Band 25	Antenna A Wi-Fi 2.4 GHz	Antenna B Wi-Fi 2.4 GHz	Antenna D Wi-Fi 2.4 GHz	Antenna B Bluetooth	Antenna D Bluetooth				
Rear	Antenna C (LTE Band 25) / Antenna A (Wi-Fi 2.4 GHz) / Antenna D (Bluetooth)	1190	0.092				0.347	1629			
		1190	0.092					1282	2115	0.007	No
		1190					0.347	1537	65.2	0.029	No
			0.092				0.347	0.439	204.4	0.001	No

Conclusion:

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

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.64	-0.0325	0.0935	-0.181	① + ②	216.1
Ant. A	②	0.27	0.048	-0.107	-0.181	① + ③	65.2
Ant. D	③	0.439	0.0322	0.101	-0.178	② + ③	208.6

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.64	-0.0325	0.0935	-0.181	① + ②	200.7
Ant. B	②	0.314	-0.042	-0.107	-0.18	① + ③	65.2
Ant. D	③	0.439	0.0322	0.101	-0.178	② + ③	220.8

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.64	-0.0325	0.0935	-0.181	① + ②	203.7
Ant. A + B	②	0.444	-0.042	-0.11	-0.18	① + ③	65.2
Ant. D	③	0.439	0.0322	0.101	-0.178	② + ③	223.7

The Peak Location Separation Distance is computed by using the
SQRT((X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2)

SAR to Peak Location Separation Ratio (SPLSR)

Simutlaneous Transmission Scenario		Standalone SAR Values						∑ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/ No)
Position	Antenna Combination	Antenna C LTE Band 25	Antenna A Wi-Fi 5 GHz	Antenna B Wi-Fi 5 GHz	Antenna A + B Wi-Fi 5 GHz	Antenna B Bluetooth	Antenna D Bluetooth				
Rear	Antenna C (LTE Band 25) Antenna A (Wi-Fi 5 GHz) Antenna D (Bluetooth)	1.190	0.145				0.347	1.682			
		1.190	0.145					1.335	216.1	0.007	No
		1.190					0.347	1.537	65.2	0.029	No
			0.145				0.347	0.492	208.6	0.002	No
Rear	Antenna C (LTE Band 25) Antenna B (Wi-Fi 5 GHz) Antenna D (Bluetooth)	1.190		0.175			0.347	1.712			
		1.190		0.175				1.365	200.7	0.008	No
		1.190					0.347	1.537	65.2	0.029	No
				0.175			0.347	0.522	220.8	0.002	No
Rear	Antenna C (LTE Band 25) Antenna A +B (Wi-Fi 5 GHz) Antenna D (Bluetooth)	1.190			0.248		0.347	1.785			
		1.190			0.248			1.438	203.7	0.008	No
		1.190					0.347	1.537	65.2	0.029	No
					0.248		0.347	0.595	223.7	0.002	No

Conclusion:

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

12.19.16. LTE Band 26 & Wi-Fi & BT

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.59	-0.0355	0.098	-0.182	① + ②	221.4
Ant. A	②	0.27	0.048	-0.107	-0.181	① + ③	67.9
Ant. D	③	0.439	0.0322	0.101	-0.178	② + ③	208.6

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.59	-0.0355	0.098	-0.182	① + ②	205.1
Ant. B	②	0.314	-0.042	-0.107	-0.18	① + ③	67.9
Ant. D	③	0.439	0.0322	0.101	-0.178	② + ③	220.8

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.59	-0.0355	0.098	-0.182	① + ②	208.1
Ant. A + B	②	0.444	-0.042	-0.11	-0.18	① + ③	67.9
Ant. D	③	0.439	0.0322	0.101	-0.178	② + ③	223.7

The Peak Location Separation Distance is computed by using the
SQRT((X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2)

SAR to Peak Location Separation Ratio (SPLSR)

Simutlaneous Transmission Scenario		Standalone SAR Values						∑ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/ No)
Position	Antenna Combination	Antenna C LTE Band 26	Antenna A Wi-Fi 5 GHz	Antenna B Wi-Fi 5 GHz	Antenna A + B Wi-Fi 5 GHz	Antenna B Bluetooth	Antenna D Bluetooth				
Rear	Antenna C (LTE Band 26) Antenna A (Wi-Fi 5 GHz) Antenna D (Bluetooth)	1.110	0.145				0.347	1602			
		1.110	0.145					1255	2214	0.006	No
		1.110					0.347	1457	67.9	0.026	No
			0.145				0.347	0.492	208.6	0.002	No
Rear	Antenna C (LTE Band 26) Antenna B (Wi-Fi 5 GHz) Antenna D (Bluetooth)	1.110		0.175			0.347	1632			
		1.110		0.175				1285	205.1	0.007	No
		1.110					0.347	1457	67.9	0.026	No
		1.110		0.175			0.347	1632	220.8	0.009	No
Rear	Antenna C (LTE Band 26) Antenna A +B (Wi-Fi 5 GHz) Antenna D (Bluetooth)	1.110			0.248		0.347	1705			
		1.110			0.248			1358	208.1	0.008	No
		1.110					0.347	1457	67.9	0.026	No
					0.248		0.347	0.595	223.7	0.002	No

Conclusion:

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

12.19.17. LTE Band 41 & Wi-Fi & BT

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.71	-0.0032	0.0286	-0.18	① + ②	184.5
Ant. A	②	0.400	-0.0016	-0.0279	-0.3556	① + ⑥	57.6
Ant. D	⑥	0.406	-0.0032	-0.029	-0.179	② + ⑥	176.6

Mode		Peak SAR	X	Y	Z	d: Calculated distance (mm)	
		mW/g	m	m	m		
WWAN	①	1.71	-0.0032	0.0286	-0.18	① + ②	177.0
Ant. A + B	②	0.400	-0.0016	0.0279	-0.357	① + ⑭	57.6
Ant. D	⑭	0.406	-0.0032	-0.029	-0.179	② + ⑭	186.9

The Peak Location Separation Distance is computed by using the
SQRT((X1-X2)^2+(Y1-Y2)^2+(Z1-Z2)^2)

SAR to Peak Location Separation Ratio (SPLSR)

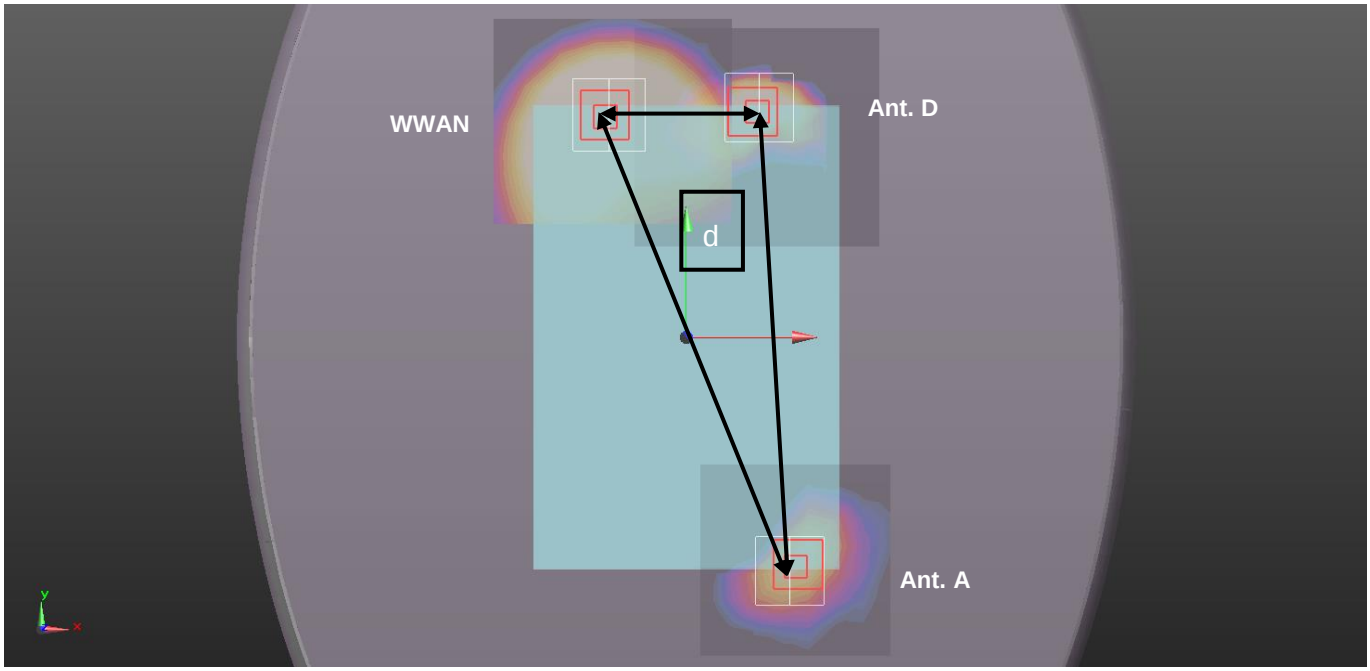
Simutlaneous Transmission Scenario		Standalone SAR Values						∑ 1-g SAR (mW/g)	Calculated distance (mm)	SPLSR (≤ 0.04)	Volume Scan (Yes/ No)
Position	Antenna Combination	Antenna C LTE Band 41	Antenna A Wi-Fi 2.4 GHz	Antenna B Wi-Fi 2.4 GHz	Antenna A + B Wi-Fi 5 GHz	Antenna B Bluetooth	Antenna D Bluetooth				
Edge 1	Antenna C (LTE Band 41) Antenna A (Wi-Fi 2.4 GHz) Antenna D (Bluetooth)	1140	0.400				0.301	1841			
		1140	0.400					1540	184.5	0.010	No
		1140					0.301	1441	57.6	0.030	No
			0.400				0.301	0.701	176.6	0.003	No
Edge 1	Antenna C (LTE Band 41) Antenna A +B (Wi-Fi 5 GHz) Antenna D (Bluetooth)	1140			0.400		0.301	1841			
		1140			0.400			1540	177.0	0.011	No
		1140					0.301	1441	57.6	0.030	No
					0.400		0.301	0.701	186.9	0.003	No

Conclusion:

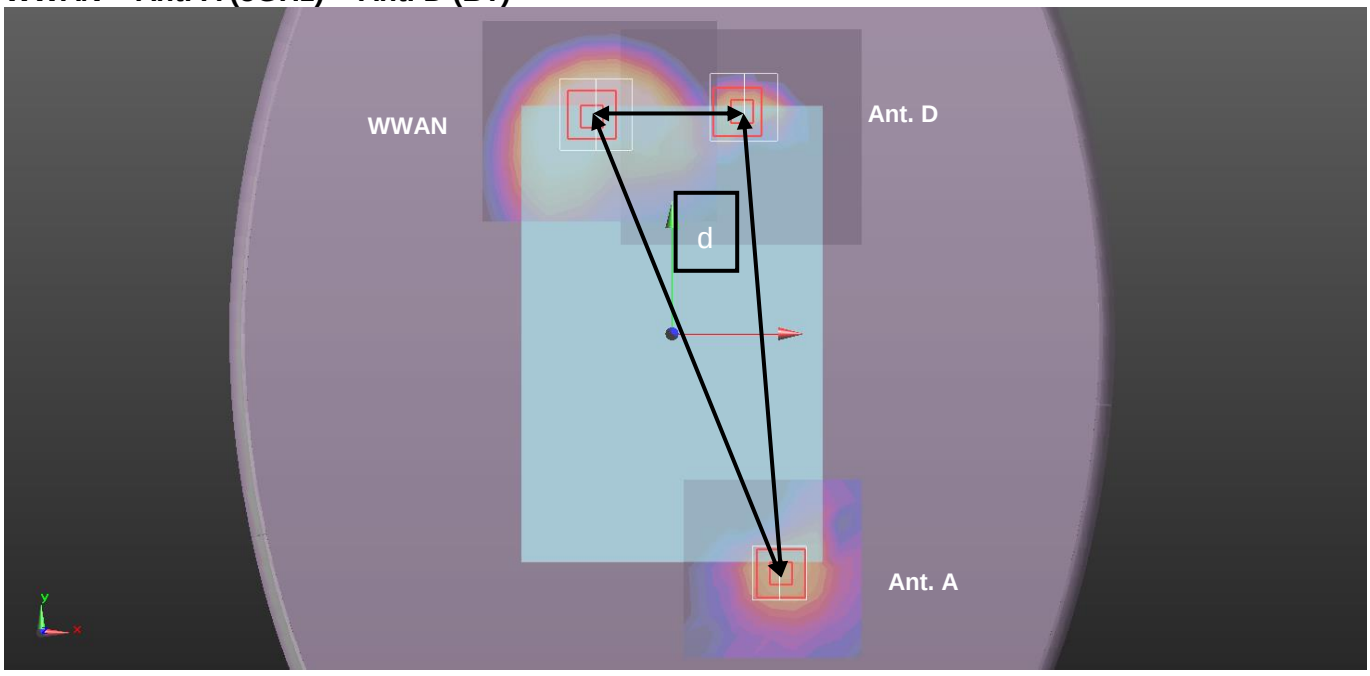
Simultaneous transmission SAR measurement (Volume Scan) is not required because the either sum of the 1-g SAR is < 1.6 W/kg or the SPLSR is < 0.04 for all circumstances that require SPLSR calculation.

12.19.1. SAR to Peak Location Ratio (SPLSR) Illustrations

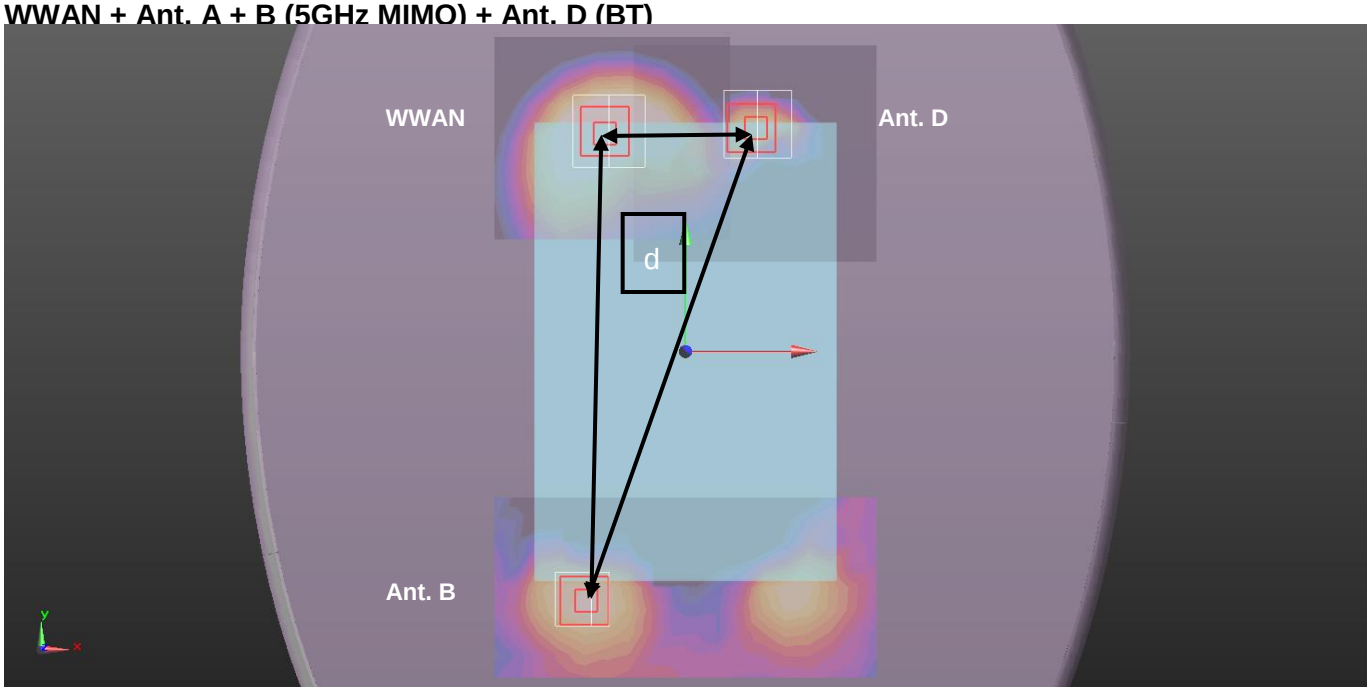
WWAN + Ant. A (2.4GHz) + Ant. D (BT)



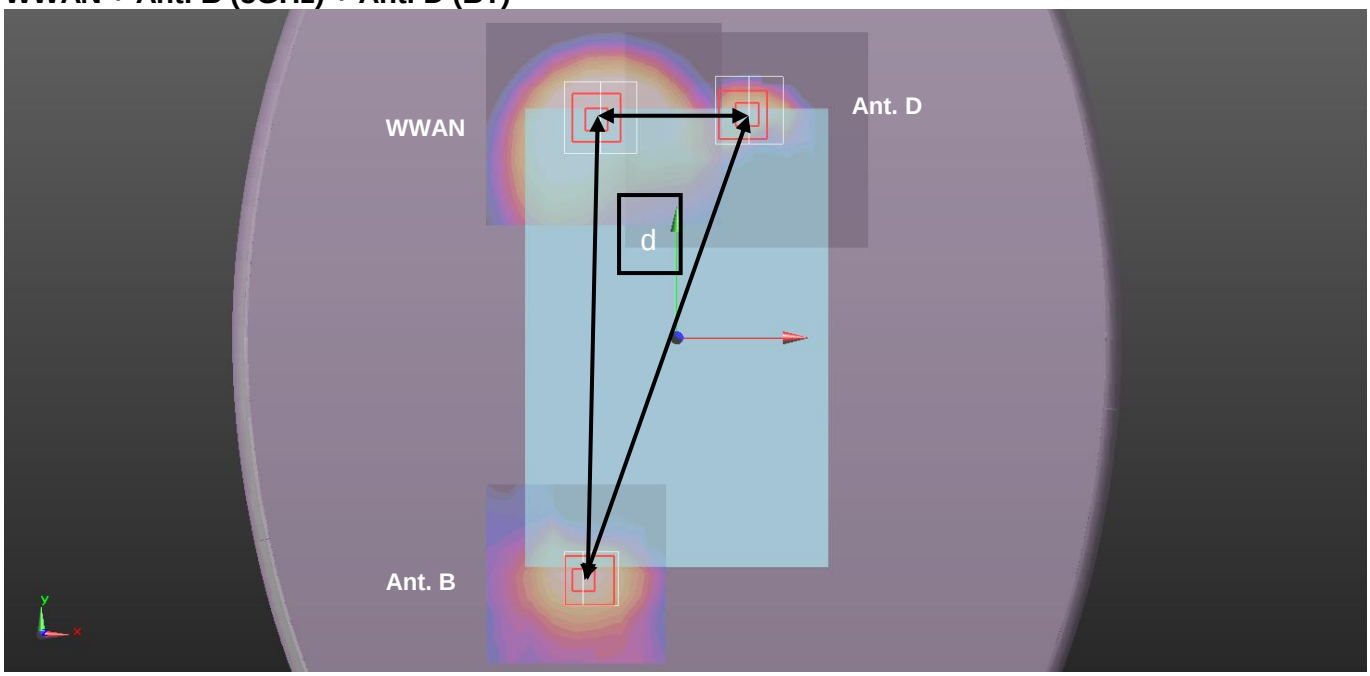
WWAN + Ant. A (5GHz) + Ant. D (BT)



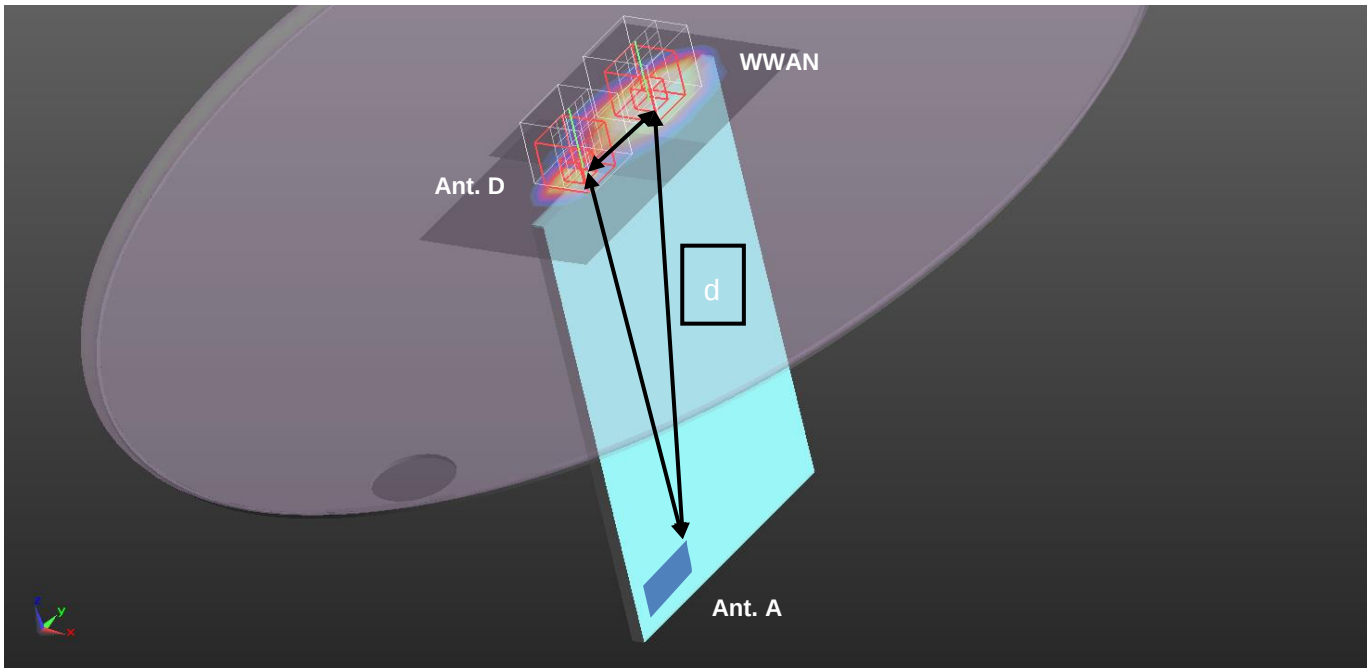
WWAN + Ant. A + B (5GHz MIMO) + Ant. D (BT)



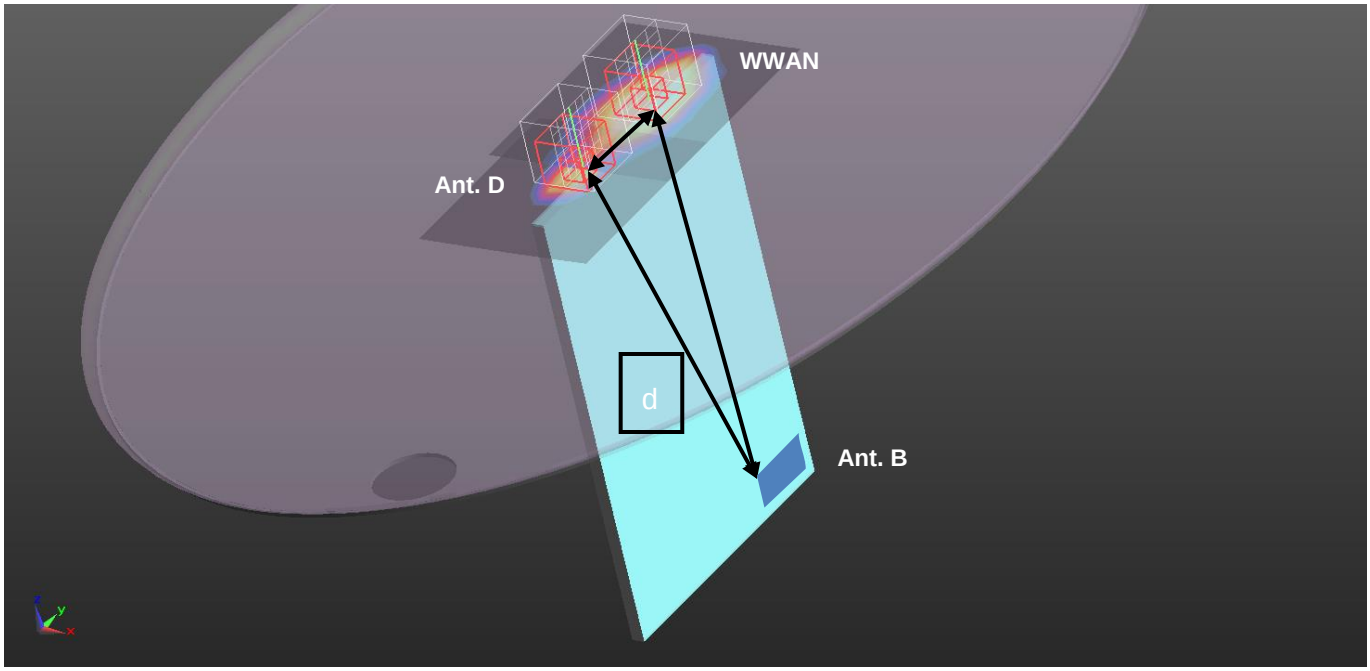
WWAN + Ant. B (5GHz) + Ant. D (BT)



WWAN + Ant. A (2.4GHz) + Ant. D (BT)



WWAN + Ant. A + B (5GHz MIMO) + Ant. D (BT)



Appendixes

Refer to separated files for the following appendixes.

A_14U19187v0 SAR Photos

B_14U19187v0 SAR System Check Plots

C_14U19187v1 SAR Highest Test Plots

D_14U19187v0 SAR Tissue Ingredients

E_14U19187v0 SAR Probe Cal. Certificates

F_14U19187v1 SAR Dipole Cal. Certificates

END OF REPORT