SAR EVALUATION REPORT

FCC 47 CFR § 2.1093
IEEE Std 1528-2013

For
Tablet Device

FCC ID: BCGA1709
Model Name: A1709, A1852

Report Number: 16U23818-S1V6
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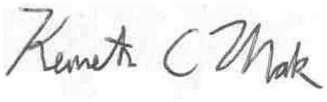
1. Attestation of Test Results

Applicant Name	APPLE, INC.			
FCC ID	BCGA1709			
Model Name	A1709, A1852			
Applicable Standards	FCC 47 CFR § 2.1093 Published RF exposure KDB procedures IEEE Std 1528-2013			
Exposure Category	SAR Limits (W/Kg)			
	Peak spatial-average(1g of tissue)			
General population / Uncontrolled exposure	1.6			
RF Exposure Conditions	Equipment Class - Highest Reported SAR (W/kg)			
	PCB	DTS	NII	DSS
Standalone	1.19	1.19	1.19	1.16
Simultaneous TX	1.44	1.33	1.44	1.44
Date Tested	12/23/2016 to 1/26/2017; 2/21/2017			
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 C. 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 802.11 Wi-Fi SAR v02r02
- 447498 D01 General RF Exposure Guidance v06
- 447498 D03 Supplement C Cross-Reference v01
- 616217 D04 SAR for laptop and tablets v01r02
- 865664 D01 SAR measurement 100 MHz to 6 GHz v01r04
- 865664 D02 RF Exposure Reporting v01r02
- 941225 D01 3G SAR Procedures v03r01
- 941225 D05 SAR for LTE Devices v02r05
- 941225 D05A LTE Rel.10 KDB Inquiry Sheet v01r02
- 941225 D06 Hotspot Mode v02r01

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

- TCB workshop October, 2014; Page 36, RF Exposure Procedures Update (Overlapping LTE Bands)
- TCB workshop October, 2014; Page 37, LTE Considerations (LTE Band 41 Test Channels)

Additional Guidance: Manufacturer KDB inquiry.

- Carrier Aggregation – KDB guidance to identify test cases with uplink carrier aggregation enabled in conjunction with FCC PAG Guidance for the test cases mentioned in Sec. 10.
- Detect Mode – KDB guidance related to SAR testing for proprietary detection mode used to determine proximity to body and set power accordingly for Cellular Transmitters. When the device is held or on the human body, this mechanism will result in the device operating only at the reduced output power values provided in section 6.3.

3. Facilities and Accreditation

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

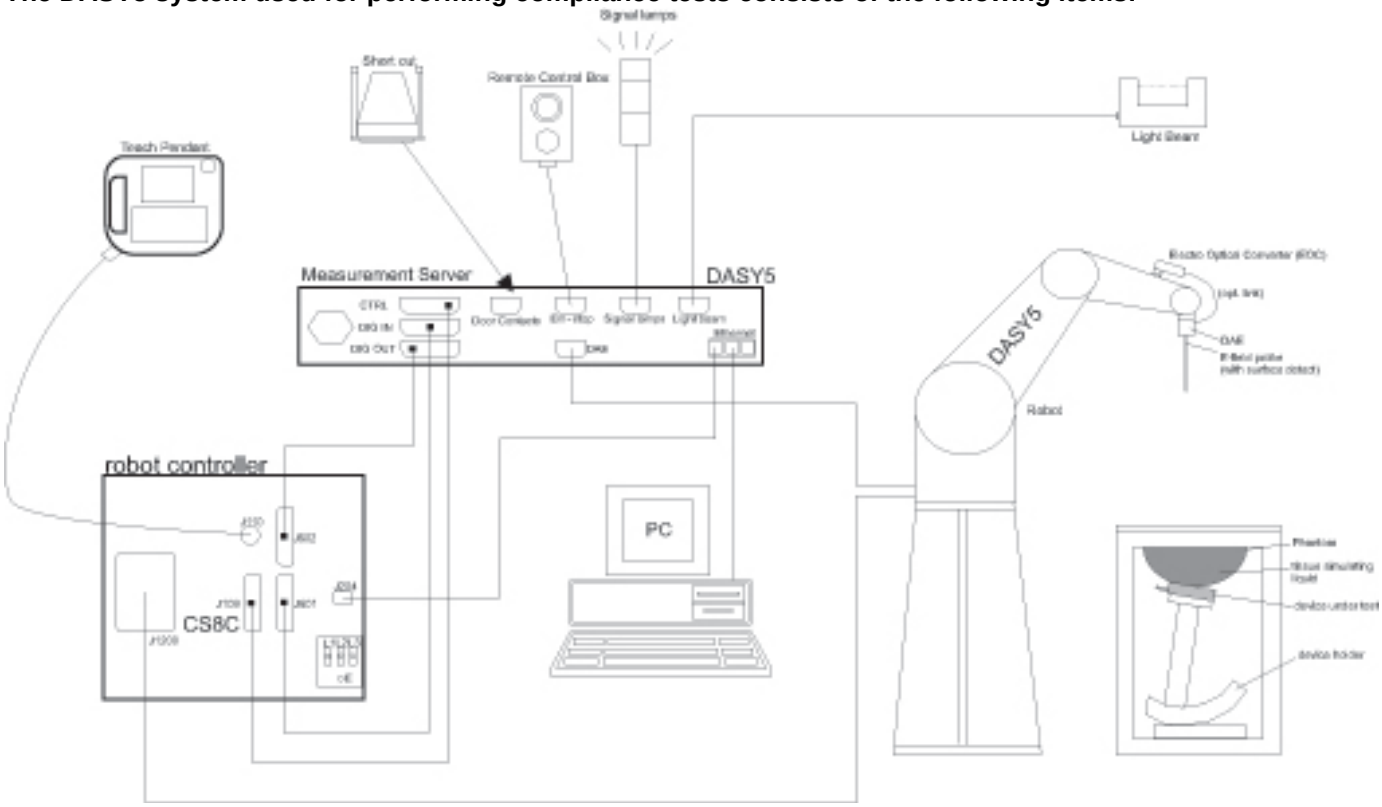
47173 Benicia Street	47266 Benicia Street
SAR Lab A	SAR Lab 1
SAR Lab B	SAR Lab 2
SAR Lab C	SAR Lab 3
SAR Lab D	SAR Lab 4
SAR Lab E	
SAR Lab F	
SAR Lab G	
SAR Lab H	

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

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

Step 3: Zoom Scan

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

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

			≤ 3 GHz	> 3 GHz
Maximum zoom scan spatial resolution: Δx_{Zoom}, Δy_{Zoom}			≤ 2 GHz: ≤ 8 mm 2 – 3 GHz: ≤ 5 mm*	3 – 4 GHz: ≤ 5 mm* 4 – 6 GHz: ≤ 4 mm*
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{Zoom}(n)$		≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm
	graded grid	$\Delta z_{Zoom}(1)$: between 1st two points closest to phantom surface	≤ 4 mm	3 – 4 GHz: ≤ 3 mm 4 – 5 GHz: ≤ 2.5 mm 5 – 6 GHz: ≤ 2 mm
		$\Delta z_{Zoom}(n>1)$: between subsequent points	≤ 1.5·$\Delta z_{Zoom}(n-1)$	
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	MY40000980	4/27/2017
Dielectric Probe kit	SPEAG	DAK-3.5	1103	2/23/2017
Dielectric Probe kit	SPEAG	DAK-3.5	1087	11/8/2017
Shorting block	SPEAG	DAK-3.5 Short	SM DAK 200 BA	N/A
Thermometer	Traceable Calibration Control Co.	4242	140493798	8/9/2017

System Check

Name of Equipment	Manufacturer	Type/Model	Serial No.	Cal. Due Date
Synthesized Signal Generator	Agilent	N5181A	MY50140610	5/9/2017
Power Meter	Keysight	N1912A	MY55196008	5/3/2017
Power Sensor	Agilent	N1912A	MY52200012	10/17/2017
Power Sensor	Agilent	E9323A	MY53070009	6/13/2017
Amplifier	MITEQ	AMF-4D-00400600-50-30P	1795093	N/A
Directional coupler	Werlatone	C8060-102	2149	N/A
DC Power Supply	BK PRECISION	1161	215-02292	N/A
Synthesized Signal Generator	Agilent	N5181A	MY50140630	5/9/2017
Power Meter	Keysight	N1912A	MY55196009	5/3/2017
Power Sensor	Agilent	N1912A	MY53260001	10/17/2017
Power Sensor	Agilent	E9323A	MY53070002	3/22/2017
Amplifier	MITEQ	AMF-4D-00400600-50-30P	1795092	N/A
Directional coupler	Werlatone	C8060-102	2141	N/A
DC Power Supply	HP	6296A	2841A-05955	N/A
Synthesized Signal Generator	HP	8665B	3546A00784	9/2/2017
Power Meter	HP	437B	3125U11347	8/30/2017
Power Meter	HP	437B	3125U09516	9/27/2017
Power Sensor	HP	8481A	1926A16917	10/7/2017
Power Sensor	HP	8481A	2702A76223	9/14/2017
Amplifier	MITEQ	AMF-4D-00400600-50-30P	1808938	N/A
Directional coupler	Werlatone	C8060-102	2710	N/A
DC Power Supply	HP	E3610A	KR24104150	N/A

Lab Equipment

Name of Equipment	Manufacturer	Type/Model	Serial No.	Cal. Due Date
E-Field Probe (SAR Lab A)	SPEAG	EX3DV4	3885	9/20/2017
E-Field Probe (SAR Lab B)	SPEAG	EX3DV4	3991	5/12/2017
E-Field Probe (SAR Lab C)	SPEAG	EX3DV4	3902	5/17/2017
E-Field Probe (SAR Lab D)	SPEAG	EX3DV4	3936	7/26/2017
E-Field Probe (SAR Lab E)	SPEAG	EX3DV4	7335	3/22/2017
E-Field Probe (SAR Lab F)	SPEAG	EX3DV4	3686	8/25/2017
E-Field Probe (SAR Lab G)	SPEAG	EX3DV4	3990	3/22/2017
E-Field Probe (SAR Lab H)	SPEAG	EX3DV4	3929	3/22/2017
Data Acquisition Electronics (SAR Lab A)	SPEAG	DAE4	1439	7/25/2017
Data Acquisition Electronics (SAR Lab B)	SPEAG	DAE4	1257	9/15/2017
Data Acquisition Electronics (SAR Lab C)	SPEAG	DAE3	500	5/19/2017
Data Acquisition Electronics (SAR Lab D)	SPEAG	DAE4	1433	3/17/2017
Data Acquisition Electronics (SAR Lab E)	SPEAG	DAE4	1472	3/24/2017
Data Acquisition Electronics (SAR Lab F)	SPEAG	DAE4	1377	9/14/2017
Data Acquisition Electronics (SAR Lab G)	SPEAG	DAE4	1380	7/25/2017
Data Acquisition Electronics (SAR Lab H)	SPEAG	DAE4	1434	4/15/2017
System Validation Dipole	SPEAG	D750V3	1019	3/16/2017
System Validation Dipole	SPEAG	D835V2	4d002	11/8/2017
System Validation Dipole	SPEAG	D835V2	4d142	9/22/2017
System Validation Dipole	SPEAG	D1750V2	1050	4/13/2017
System Validation Dipole	SPEAG	D1900V2	5d140	4/12/2017
System Validation Dipole	SPEAG	D2300V2	1002	3/18/2017
System Validation Dipole	SPEAG	D2450V2	899	3/15/2017
System Validation Dipole	SPEAG	D2600V2	1006	9/13/2017
System Validation Dipole	SPEAG	D5GHzV2	1003	2/25/2017
System Validation Dipole	SPEAG	D5GHzV2	1138	9/22/2017
System Validation Dipole	SPEAG	D5GHzV2	1168	11/14/2017

Other

Name of Equipment	Manufacturer	Type/Model	Serial No.	Cal. Due Date
Power Meter	Keysight	N1912A	MY55196004	7/8/2017
Power Sensor	Agilent	N1921A	MY53020038	3/22/2017
Power Sensor	Agilent	N1921A	MY53260010	8/23/2017
Power Meter	Keysight	N1912A	My55196007	7/8/2017
Power Sensor	Agilent	N1921A	MY55200002	3/22/2017
Power Sensor	Agilent	N1921A	MY52200012	10/17/2017
Base Station Simulator	R & S	CMW500	134851	3/2/2017
Base Station Simulator	R & S	CMW500	135390	4/13/2017
Base Station Simulator	R & S	CMW500	137875	7/1/2017
Base Station Simulator	R & S	CMW500	134855	5/26/2017
Base Station Simulator	R & S	CMW500	134852	5/26/2017
Base Station Simulator	R & S	CMW500	135393	3/21/2017
Base Station Simulator	R & S	CMW500	147543	4/15/2017
Base Station Simulator	R & S	CMW500	104245	1/28/2017
Base Station Simulator	R & S	CMW500	124593	7/26/2017

Note(s):

1. Equipment was not used after their calibration due date.

5. Measurement Uncertainty

Per KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz, when the highest measured 1-g SAR within a frequency band is < 1.5 W/kg and the measured 10-g SAR within a frequency band is < 3.75 W/kg, the 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 A1709, A1852 is a tablet with multimedia functions (music, application support, and video)

Cellular GSM/GPRS/EGPRS/CDMA2000 1xRTT/1xAdvanced/EVDO Rev.A/WCDMA/HSPA+/DC-HSDPA/LTE FDD/TDD/TD-SCDMA radio

IEEE 802.11a/b/g/n/ac radio (MIMO 2x2) and Bluetooth radio

The device has multiple Wi-Fi / Bluetooth antennas; Wi-Fi transmits out of two antennas, Antenna A and Antenna B, while Bluetooth transmits just out of Antenna A.

There are two suppliers of the Wi-Fi/Bluetooth radio modules to support the production volumes of the device. The two variants are referenced in this report as:

Variant 1 = Wi-Fi/BT module supplier 1

Variant 2 = Wi-Fi/BT module supplier 2

The Wi-Fi/Bluetooth radio modules have the same mechanical outline (e.g., the same package dimension and pin-out layout), use the same on-board antenna matching circuit, have an identical antenna structure, and are built and tested to conform to the same specifications and to operate within the same tolerances.

Complete SAR evaluation is performed on the device with one Wi-Fi/Bluetooth radio module, and then the test is repeated on the device with the other Wi-Fi/Bluetooth module at the highest SAR value.

Both Model A1709 and A1852 have identical PCB layout, design and functionality, except that A1709 supports second electronic-UICC based SIM or “soft SIM” (called eSIM) beside the regular UICC based SIM and A1852 will come with eSIM removed. RF and electromagnetic characteristic are independent of the eSIM element. Both Models have exactly same technology and band support. Model A1709 is used for SAR Testing and that data will be used for both Models.

Device Dimension	Overall (Length x Width): 250.6 mm x 174.1 mm Overall Diagonal: 295.9 mm Display Diagonal: 266.7 mm
Back Cover	☒ The rechargeable battery is not user accessible.
Battery Options	☒ The rechargeable battery is not user accessible.
Wireless Router (Hotspot)	Wi-Fi Hotspot mode permits the device to share its cellular data connection with other Wi-Fi-enabled devices. ☒ Mobile Hotspot (Wi-Fi 2.4 GHz) ☐ Mobile Hotspot (Wi-Fi 5 GHz)
AirPlay	AirPlay mode enabled devices transfer data directly between each other ☒ AirPlay (Wi-Fi 2.4 GHz) ☒ AirPlay (Wi-Fi 5 GHz)

6.2. Wireless Technologies

Wireless technologies	Frequency bands	Operating mode		Duty Cycle used for SAR testing
GSM	850 1900	Voice (GMSK) GPRS (GMSK) EGPRS (8PSK)	GPRS Multi-Slot Class: ☐ Class 8 - 1 Up, 4 Down ☒ Class 10 - 2 Up, 4 Down	GSM Voice: 12.5% (E)GPRS: 1 Slot: 12.5% 2 Slots: 25%
	Does this device support DTM (Dual Transfer Mode)? ☐ Yes ☒ No			
CDMA (CDMA2000)	BC0 BC1 BC10	1xRTT (Voice & Data) 1xEV-DO Rel. 0 1xEV-DO Rev. A 1xAdvanced		100%
	Does this device support SV-DO (1xRTT-1xEVDO)? ☐ Yes ☒ No			
W-CDMA (UMTS)	Band II Band IV Band V	UMTS Rel. 99 (Voice & Data) HSDPA (Rel. 5) HSUPA (Rel. 6) DC-HSDPA (Rel. 8) HSPA+ (Rel. 7)		100%
LTE	FDD Band 2 FDD Band 4 FDD Band 5 FDD Band 7 FDD Band 12 FDD Band 13 FDD Band 17 FDD Band 25 FDD Band 26 FDD Band 27 FDD Band 30 TDD Band 41	QPSK 16QAM ☒ Rel. 11 Carrier Aggregation (2 Uplinks and 3 Downlinks), UE Category 10		100% (FDD) 63.3% (TDD)
	Does this device support SV-LTE (1xRTT-LTE)? ☐ Yes ☒ No			
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%
	Does this device support bands 5.60 ~ 5.65 GHz? ☒ Yes ☐ No			
	Does this device support Band gap channel? ☒ Yes ☐ No			
Bluetooth	2.4 GHz	Version 4.2 LE		77.5% (DH5)

6.3. Nominal and Maximum Output Power from Tune-up Procedure

KDB 447498 sec.4.1 (d) at the maximum rated output power and within the tune-up tolerance range specified for the product, but not more than 2 dB lower than the maximum tune-up tolerance limit.

The selection between max and reduced output power is based on the body-detect mechanism as described in the Manufacturer KDB Inquiry – Detect Mode (It is also fully described in the Operational Description).

RF Air interface	Mode	Max. RF Output Power (dBm)				Reduced RF Output Power (dBm)			
		Antenna C		Antenna D		Antenna C		Antenna D	
		Burst	Frame	Burst	Frame	Burst	Frame	Burst	Frame
GSM850	Voice/GPRS (1 slot)	33.5	24.5	32.0	23.0	27.0	18.0	29.5	20.5
	GPRS 2 slots	32.5	26.5	31.0	25.0	24.0	18.0	26.5	20.5
	EGPRS 1 slot	29.0	20.0	27.0	18.0	27.0	18.0	27.0	18.0
	EGPRS 2 slots	29.0	23.0	27.0	21.0	24.0	18.0	26.5	20.5
GSM1900	Voice/GPRS (1 slot)	30.5	21.5	27.5	18.5	24.3	15.3	23.8	14.8
	GPRS 2 slots	29.5	23.5	26.5	20.5	21.3	15.3	20.8	14.8
	EGPRS 1 slot	28.0	19.0	25.0	16.0	24.3	15.3	23.8	14.8
	EGPRS 2 slots	28.0	22.0	22.6	16.6	21.3	15.3	20.8	14.8

RF Air interface	Mode	Max. RF Output Power (dBm)		Reduced RF Output Power (dBm)	
		Antenna C	Antenna D	Antenna C	Antenna D
W-CDMA Band II	R99	25.5	24.5	14.3	14.0
	HSDPA	25.5	24.5	14.3	14.0
	HSUPA	25.5	24.5	14.3	14.0
	DC-HSDPA	25.5	24.5	14.3	14.0
W-CDMA Band IV	R99	25.5	25.5	14.2	13.8
	HSDPA	25.5	25.5	14.2	13.8
	HSUPA	25.5	25.5	14.2	13.8
	DC-HSDPA	25.5	25.5	14.2	13.8
W-CDMA Band V	R99	25.5	25.0	18.2	20.0
	HSDPA	25.5	25.0	18.2	20.0
	HSUPA	25.5	25.0	18.2	20.0
	DC-HSDPA	25.5	25.0	18.2	20.0
CDMA BC0	1xRTT	24.5	24.0	18.2	20.0
	1xAdvanced	24.5	24.0	18.2	20.0
	1xEVDO Rel. 0	24.5	24.0	18.2	20.0
	1xEVDO Rev. A	24.5	24.0	18.2	20.0
CDMA BC1	1xRTT	26.0	23.5	14.3	14.0
	1xAdvanced	26.0	23.5	14.3	14.0
	1xEVDO Rel. 0	26.0	23.5	14.3	14.0
	1xEVDO Rev. A	26.0	23.5	14.3	14.0
CDMA BC10	1xRTT	26.0	24.0	18.0	20.0
	1xAdvanced	26.0	24.0	18.0	20.0
	1xEVDO Rel. 0	26.0	24.0	18.0	20.0
	1xEVDO Rev. A	26.0	24.0	18.0	20.0
LTE Band 2	QPSK	25.0	22.5	14.5	14.2
LTE Band 4	QPSK	25.0	23.5	14.2	14.0
LTE Band 5	QPSK	25.0	24.0	18.2	20.0
LTE Band 7	QPSK	25.0	23.5	12.2	11.8
LTE Band 12	QPSK	25.0	23.0	19.0	21.0
LTE Band 13	QPSK	24.5	23.0	19.0	21.2
LTE Band 17	QPSK	25.0	23.0	19.0	21.0
LTE Band 25	QPSK	25.0	22.5	14.5	14.2
LTE Band 26	QPSK	25.0	24.0	18.2	20.0
LTE Band 27	QPSK	24.0	22.0	18.0	20.0
LTE Band 30	QPSK	22.3	22.0	13.2	12.3
LTE Band 41	QPSK	23.0	22.0	14.0	14.0
LTE-2CA Band 7	QPSK	23.0	21.0	10.2	9.3
LTE-2CA Band 41	QPSK	21.5	21.0	12.5	13.0

6.3.1. WLAN SISO

Band (GHz)	Mode	No. of Transmitters	Ch #	Freq. (MHz)	Max RF Output Power (dBm)		SAR Test (Yes/No)
					Antenna A	Antenna B	
2.4	802.11b	1 Tx	1	2412	19.0	19.0	Yes
			6	2437	19.0	19.0	
			10	2457	19.0	19.0	
			11	2462	18.5	18.5	
			12	2467	17.5	17.5	
			13	2472	14.5	14.5	
	802.11g	1 Tx	1	2412	14.0	14.0	No
			2	2417	19.0	19.0	
			6	2437	19.0	19.0	
			9	2452	19.0	19.0	
			10	2457	18.0	18.0	
			11	2462	14.0	14.0	
			12	2467	11.5	11.5	
			13	2472	3.0	3.0	
	802.11n	1 Tx HT20	1	2412	14.0	14.0	No
			2	2417	19.0	19.0	
			6	2437	19.0	19.0	
			9	2452	19.0	19.0	
			10	2457	18.0	18.0	
			11	2462	14.0	14.0	
			12	2467	11.5	11.5	
			13	2472	3.0	3.0	

Band (GHz)	Mode	No. of Transmitters	Ch #	Freq. (MHz)	Max RF Output Power (dBm)		SAR Test (Yes/No)
					Antenna A	Antenna B	
5.2	802.11a	1 Tx	36	5180	16.0	16.0	No
			40	5200	16.5	17.0	
			44	5220	16.5	17.0	
			48	5240	16.5	17.0	
	802.11n	1 Tx HT20	36	5180	16.0	16.0	No
			40	5200	16.5	17.0	
			44	5220	16.5	17.0	
			48	5240	16.5	17.0	
		1 Tx HT40	38	5190	14.5	14.5	Yes
			46	5230	16.5	17.0	
	802.11ac	1 Tx VHT20	36	5180	16.0	16.0	No
			40	5200	16.5	17.0	
			44	5220	16.5	17.0	
			48	5240	16.5	17.0	
		1 Tx VHT40	38	5190	14.5	14.5	No
			46	5230	16.5	17.0	
		1 Tx VHT80	42	5210	14.0	14.0	No

Note(s):

2. "Yes" = considered for output power measurement and SAR testing. "No" = SAR test reduction was applied from KDB 248227 guidance, Se. 2.1, b), 1) when the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11 a/g/n/ac mode is used for SAR measurement, on the highest measured output power channel in the initial test configuration, for each frequency band.

Band (GHz)	Mode	No. of Transmitters	Ch #	Freq. (MHz)	Max RF Output Power (dBm)		SAR Test (Yes/No)
					Antenna A	Antenna B	
5.3	802.11a	1 Tx	52	5260	16.5	16.5	No
			56	5280	16.5	16.5	
			60	5300	16.5	16.5	
			64	5320	16.0	16.0	
	802.11n	1 Tx HT20	52	5260	16.5	16.5	No
			56	5280	16.5	16.5	
			60	5300	16.5	16.5	
			64	5320	16.0	16.0	
		1 Tx HT40	54	5270	16.5	16.5	Yes
			62	5310	14.5	14.5	
	802.11ac	1 Tx VHT20	52	5260	16.5	16.5	No
			56	5280	16.5	16.5	
			60	5300	16.5	16.5	
			64	5320	16.0	16.0	
		1 Tx VHT40	54	5270	16.5	16.5	No
			62	5310	14.5	14.5	
		1 Tx VHT80	58	5290	13.0	13.0	No

Note(s):

1. "Yes" = considered for output power measurement and SAR testing. "No" = SAR test reduction was applied from KDB 248227 guidance, Se. 2.1, b), 1) when the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11 a/g/n/ac mode is used for SAR measurement, on the highest measured output power channel in the initial test configuration, for each frequency band.

Band (GHz)	Mode	No. of Transmitters	Ch #	Freq. (MHz)	Max RF Output Power (dBm)		SAR Test (Yes/No)
					Antenna A	Antenna B	
5.5	802.11a	1 Tx	100	5500	15.0	15.0	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	
			132	5660	15.0	15.0	
			136	5680	15.0	15.0	
			140	5700	15.0	15.0	
			144	5720	15.0	15.0	
	802.11n	1 Tx HT20	100	5500	15.0	15.0	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	
			132	5660	15.0	15.0	
			136	5680	15.0	15.0	
			140	5700	15.0	15.0	
			144	5720	15.0	15.0	
		1 Tx HT40	102	5510	14.5	14.5	No
			110	5550	15.0	15.0	
			118	5590	15.0	15.0	
			126	5630	15.0	15.0	
			134	5670	15.0	15.0	
			142	5710	15.0	15.0	
	802.11ac	1 Tx VHT20	100	5500	15.0	15.0	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	
			132	5660	15.0	15.0	
			136	5680	15.0	15.0	
			140	5700	15.0	15.0	
			144	5720	15.0	15.0	
		1 Tx VHT40	102	5510	14.5	14.5	No
			110	5550	15.0	15.0	
			118	5590	15.0	15.0	
			126	5630	15.0	15.0	
			134	5670	15.0	15.0	
			142	5710	15.0	15.0	
		1 Tx VHT80	106	5530	13.5	13.5	Yes
			122	5610	15.0	15.0	
			138	5690	15.0	15.0	

Note(s):

1. "Yes" = considered for output power measurement and SAR testing. "No" = SAR test reduction was applied from KDB 248227 guidance, Se. 2.1, b), 1) when the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11 a/g/n/ac mode is used for SAR measurement, on the highest measured output power channel in the initial test configuration, for each frequency band.

Band (GHz)	Mode	No. of Transmitters	Ch #	Freq. (MHz)	Max RF Output Power (dBm)		SAR Test (Yes/No)
					Antenna A	Antenna B	
5.8	802.11a	1 Tx	149	5745	14.5	15.0	No
			153	5765	14.5	15.0	
			157	5785	14.5	15.0	
			161	5805	14.5	15.0	
			165	5825	14.5	15.0	
	802.11n	1 Tx HT20	149	5745	14.5	15.0	No
			153	5765	14.5	15.0	
			157	5785	14.5	15.0	
			161	5805	14.5	15.0	
			165	5825	14.5	15.0	
		1 Tx HT40	151	5755	14.5	15.0	No
			159	5795	14.5	15.0	
	802.11ac	1 Tx VHT20	149	5745	14.5	15.0	No
			153	5765	14.5	15.0	
			157	5785	14.5	15.0	
			161	5805	14.5	15.0	
			165	5825	14.5	15.0	
		1 Tx VHT40	151	5755	14.5	15.0	No
			159	5795	14.5	15.0	
		1 Tx VHT80	155	5775	14.5	15.0	Yes

Note(s):

1. "Yes" = considered for output power measurement and SAR testing. "No" = SAR test reduction was applied from KDB 248227 guidance, Se. 2.1, b), 1) when the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11 a/g/n/ac mode is used for SAR measurement, on the highest measured output power channel in the initial test configuration, for each frequency band.

6.3.2. WLAN MIMO

Band (GHz)	Mode	No. of Transmitters	Ch #	Freq. (MHz)	Max RF Output Power (dBm)		SAR Test (Yes/No)
					Antenna A	Antenna B	
2.4	802.11g	2 Tx CDD	1	2412	13.5	13.5	Yes
			2	2417	17.0	17.0	
			6	2437	17.0	17.0	
			10	2457	17.0	17.0	
			11	2462	12.5	12.5	
			12	2467	10.5	10.5	
			13	2472	0.0	0.0	
	802.11n	2 Tx HT20 CDD/STBC/ SDM	1	2412	13.5	13.5	No
			2	2417	17.0	17.0	
			6	2437	17.0	17.0	
			10	2457	17.0	17.0	
			11	2462	12.5	12.5	
			12	2467	10.5	10.5	
			13	2472	0.0	0.0	

Band (GHz)	Mode	No. of Transmitters	Ch #	Freq. (MHz)	Max RF Output Power (dBm)		SAR Test (Yes/No)
					Antenna A	Antenna B	
5.2	802.11a	2 Tx CDD	36	5180	15.0	15.0	No
			40	5200	16.5	16.5	
			44	5220	16.5	16.5	
			48	5240	16.5	16.5	
	802.11n	2 Tx HT20 CDD	36	5180	15.0	15.0	No
			40	5200	16.5	16.5	
			44	5220	16.5	16.5	
			48	5240	16.5	16.5	
		2 Tx HT20 STBC/ SDM	36	5180	15.0	15.0	No
			40	5200	16.5	17.0	
			44	5220	16.5	17.0	
			48	5240	16.5	17.0	
		2 Tx HT40 CDD/STBC/SDM	38	5190	13.5	13.5	Yes
			46	5230	16.5	17.0	
	802.11ac	2 Tx VHT20 CDD	36	5180	15.0	15.0	No
			40	5200	16.5	16.5	
			44	5220	16.5	16.5	
			48	5240	16.5	16.5	
		2 Tx VHT20 STBC/ SDM	36	5180	15.0	15.0	No
			40	5200	16.5	17.0	
			44	5220	16.5	17.0	
			48	5240	16.5	17.0	
		2 Tx VHT40 CDD/STBC/SDM	38	5190	13.5	13.5	No
			46	5230	16.5	17.0	
		2 Tx VHT80 CDD/STBC/SDM	42	5210	12.5	12.5	No

Note(s):

1. "Yes" = considered for output power measurement and SAR testing. "No" = SAR test reduction was applied from KDB 248227 guidance, Se. 2.1, b), 1) when the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11 a/g/n/ac mode is used for SAR measurement, on the highest measured output power channel in the initial test configuration, for each frequency band.

Band (GHz)	Mode	No. of Transmitters	Ch #	Freq. (MHz)	Max RF Output Power (dBm)		SAR Test (Yes/No)
					Antenna A	Antenna B	
5.3	802.11a	2 Tx CDD	52	5260	16.5	16.5	No
			56	5280	16.5	16.5	
			60	5300	16.5	16.5	
			64	5320	14.5	14.5	
	802.11n	2 Tx HT20 CDD/STBC/ SDM	52	5260	16.5	16.5	No
			56	5280	16.5	16.5	
			60	5300	16.5	16.5	
			64	5320	14.5	14.5	
		2 Tx HT40 CDD/STBC/SDM	54	5270	16.5	16.5	No
			62	5310	13.0	13.0	
	802.11ac	2 Tx VHT20 CDD/STBC/ SDM	52	5260	16.5	16.5	No
			56	5280	16.5	16.5	
			60	5300	16.5	16.5	
			64	5320	14.5	14.5	
		2 Tx VHT40 CDD/STBC/SDM	54	5270	16.5	16.5	No
			62	5310	13.0	13.0	
		2 Tx VHT80 CDD/STBC/SDM	58	5290	11.5	11.5	No

Note(s):

1. "Yes" = considered for output power measurement and SAR testing. "No" = SAR test reduction was applied from KDB 248227 guidance, Se. 2.1, b), 1) when the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11 a/g/n/ac mode is used for SAR measurement, on the highest measured output power channel in the initial test configuration, for each frequency band.

Band (GHz)	Mode	No. of Transmitters	Ch #	Freq. (MHz)	Max RF Output Power (dBm)		SAR Test (Yes/No)
					Antenna A	Antenna B	
5.5	802.11a	2 Tx CDD	100	5500	15.0	15.0	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	
			132	5660	15.0	15.0	
			136	5680	15.0	15.0	
			140	5700	13.5	13.5	
			144	5720	15.0	15.0	
	802.11n	2 Tx HT20 CDD/STBC/ SDM	100	5500	15.0	15.0	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	
			132	5660	15.0	15.0	
			136	5680	15.0	15.0	
			140	5700	13.5	13.5	
			144	5720	15.0	15.0	
		2 Tx HT40 CDD/STBC/ SDM	102	5510	13.5	13.5	No
			110	5550	15.0	15.0	
			118	5590	15.0	15.0	
			126	5630	15.0	15.0	
			134	5670	14.5	14.5	
			142	5710	15.0	15.0	
	802.11ac	2 Tx VHT20 CDD/STBC/ SDM	100	5500	15.0	15.0	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	
			132	5660	15.0	15.0	
			136	5680	15.0	15.0	
			140	5700	13.5	13.5	
			144	5720	15.0	15.0	
		2 Tx VHT40 CDD/STBC/ SDM	102	5510	13.5	13.5	No
			110	5550	15.0	15.0	
			118	5590	15.0	15.0	
			126	5630	15.0	15.0	
			134	5670	14.5	14.5	
			142	5710	15.0	15.0	
		2 Tx VHT80 CDD/STBC/ SDM	106	5530	12.0	12.0	Yes
			122	5610	15.0	15.0	
			138	5690	15.0	15.0	

Note(s):

1. "Yes" = considered for output power measurement and SAR testing. "No" = SAR test reduction was applied from KDB 248227 guidance, Se. 2.1, b), 1) when the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11 a/g/n/ac mode is used for SAR measurement, on the highest measured output power channel in the initial test configuration, for each frequency band.

Band (GHz)	Mode	No. of Transmitters	Ch #	Freq. (MHz)	Max RF Output Power (dBm)		SAR Test (Yes/No)
					Antenna A	Antenna B	
5.8	802.11a	2 Tx CDD	149	5745	14.5	15.0	No
			153	5765	14.5	15.0	
			157	5785	14.5	15.0	
			161	5805	14.5	15.0	
			165	5825	14.5	15.0	
	802.11n	2 Tx HT20 CDD/STBC/ SDM	149	5745	14.5	15.0	No
			153	5765	14.5	15.0	
			157	5785	14.5	15.0	
			161	5805	14.5	15.0	
			165	5825	14.5	15.0	
		2 Tx HT40 CDD/STBC/SDM	151	5755	14.5	15.0	No
			159	5795	14.5	15.0	
	802.11ac	2 Tx VHT20 CDD/STBC/ SDM	149	5745	14.5	15.0	No
			153	5765	14.5	15.0	
			157	5785	14.5	15.0	
			161	5805	14.5	15.0	
			165	5825	14.5	15.0	
		2 Tx VHT40 CDD/STBC/SDM	151	5755	14.5	15.0	No
			159	5795	14.5	15.0	
		2 Tx VHT80 CDD/STBC/SDM	155	5775	14.5	15.0	Yes

Note(s):

1. "Yes" = considered for output power measurement and SAR testing. "No" = SAR test reduction was applied from KDB 248227 guidance, Se. 2.1, b), 1) when the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11 a/g/n/ac mode is used for SAR measurement, on the highest measured output power channel in the initial test configuration, for each frequency band.

6.3.3. Bluetooth

RF Air Interface	Mode	Max RF Output Power (dBm)	
		Antenna A	
		P_{High}	P_{Low}
Bluetooth	GFSK	20.0	13.5

Note(s):

1. Bluetooth P_{low} is triggered when 5 GHz Wi-Fi is on. Functional description of this mode is provided in technical description documents.

6.4. General LTE SAR Test and Reporting Considerations

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

General LTE SAR Test and Reporting Considerations (Continued)

Frequency range, Channel Bandwidth, Numbers and Frequencies							
	Band 17	Frequency range: 704 - 716 MHz					
		Channel Bandwidth					
		20 MHz	15 MHz	10 MHz	5 MHz	3 MHz	1.4 MHz
	Low				23755/ 706.5		
	Mid			23790/ 710	23790/ 710		
	High				23825/ 713.5		
	Band 25	Frequency range: 1850 - 1915 MHz					
		Channel Bandwidth					
		20 MHz	15 MHz	10 MHz	5 MHz	3 MHz	1.4 MHz
	Low	26140/ 1860	26115/ 1857.5	26090/ 1855	26065/ 1852.5	26055/ 1851.5	26047/ 1850.7
	Mid	26365/ 1882.5	26365/ 1882.5	26365/ 1882.5	26365/ 1882.5	26365/ 1882.5	26365/ 1882.5
	High	26590/ 1905	26615/ 1907.5	26640/ 1910	26665/ 1912.5	26675/ 1913.5	26683/ 1914.3
	Band 26	Frequency range: 814 - 849 MHz					
		Channel Bandwidth					
		20 MHz	15 MHz	10 MHz	5 MHz	3 MHz	1.4 MHz
	Low			26740/ 819	26715/ 816.5	26705/ 815.5	26697/ 814.7
	Mid			26865/ 831.5	26865/ 831.5	26865/ 831.5	26865/ 831.5
	High			26990/ 844	27015/ 846.5	27025/ 847.5	27033/ 848.3
	Band 27	Frequency range: 814 - 824 MHz					
		Channel Bandwidth					
		20 MHz	15 MHz	10 MHz	5 MHz	3 MHz	1.4 MHz
	Low				27135/ 816.5	27125/ 815.5	27117/ 814.7
	Mid			27160/ 819	27160/ 819	27160/ 819	27160/ 819
	High				27185/ 821.5	27195/ 822.5	27203/ 823.3
	Band 30	Frequency range: 2305 - 2315 MHz					
		Channel Bandwidth					
		20 MHz	15 MHz	10 MHz	5 MHz	3 MHz	1.4 MHz
	Low						
	Mid			27710/ 2310	27710/ 2310		
	High						
	Band 41	Frequency range: 2496 - 2690 MHz					
		Channel Bandwidth					
		20 MHz	15 MHz	10 MHz	5 MHz	3 MHz	1.4 MHz
	Low	39750 / 2506.0					
	Low-Mid	40185 / 2549.5					
	Mid	40620 / 2593.0					
	Mid-High	41055 / 2636.5					
	High	41490 / 2680.0					
LTE transmitter and antenna implementation	LTE has two Tx/Rx antennas.						

<table>
<tr><td>Maximum power reduction (MPR)</td><td>
Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 3
<table>
<tr><th rowspan="2">Modulation</th><th colspan="6">Channel bandwidth / Transmission bandwidth (RB)</th><th rowspan="2">MPR (dB)</th></tr>
<tr><th>1.4 MHz</th><th>3.0 MHz</th><th>5 MHz</th><th>10 MHz</th><th>15 MHz</th><th>20 MHz</th></tr>
<tr><td>QPSK</td><td>> 5</td><td>> 4</td><td>> 8</td><td>> 12</td><td>> 16</td><td>> 18</td><td>≤ 1</td></tr>
<tr><td>16 QAM</td><td>≤ 5</td><td>≤ 4</td><td>≤ 8</td><td>≤ 12</td><td>≤ 16</td><td>≤ 18</td><td>≤ 1</td></tr>
<tr><td>16 QAM</td><td>> 5</td><td>> 4</td><td>> 8</td><td>> 12</td><td>> 16</td><td>> 18</td><td>≤ 2</td></tr>
</table>
MPR Built-in by design. The manufacturer MPR values are always within the 3GPP maximum MPR allowance but may not follow the default MPR values.
A-MPR (additional MPR) was disabled during SAR testing.
</td></tr>
<tr><td>Spectrum plots for RB configurations</td><td>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.</td></tr>
</table>

Note(s):

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

6.5. LTE (TDD) Considerations

According to KDB 941225 D05 SAR for LTE Devices v02r02, 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 Bands support 3GPP TS 36.211 section 4.2 for Type 2 Frame Structure and Table 4.2-2 for uplink-downlink configurations and Table 4.2-1 for Special subframe configurations.

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

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

Calculated Duty Cycle

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

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

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

Note(s):
This device supports uplink-downlink configurations 0-6. The configuration with highest duty cycle was used-configuration 0 at 63.3% duty cycle.

7. RF Exposure Conditions (Test Configurations)

WWAN antenna is located near the upper left and right corners of the device. WLAN antennas are located near the lower left and right corners of the device.

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

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.

SAR Test Exclusion Calculations for WWAN

Antennas < 50mm to adjacent edges

Antenna	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 C																
Cellular	GPRS 2 Slots	848.8	24.00	63	4.01	2.68	42.92	238.09	95.84		116 -MEASURE-	116 -MEASURE-	13 -EXEMPT-	> 50 mm	> 50 mm	
Cellular	GPRS 2 Slots	1909.8	21.30	34	4.01	2.68	42.92	238.09	95.84		9.4 -MEASURE-	9.4 -MEASURE-	11 -EXEMPT-	> 50 mm	> 50 mm	
Cellular	W-CDMA 2	1907.6	14.30	27	4.01	2.68	42.92	238.09	95.84		7.5 -MEASURE-	7.5 -MEASURE-	0.9 -EXEMPT-	> 50 mm	> 50 mm	
Cellular	W-CDMA 4	1752.6	14.20	26	4.01	2.68	42.92	238.09	95.84		6.9 -MEASURE-	6.9 -MEASURE-	0.8 -EXEMPT-	> 50 mm	> 50 mm	
Cellular	W-CDMA 5	846.6	18.20	66	4.01	2.68	42.92	238.09	95.84		12.1 -MEASURE-	12.1 -MEASURE-	14 -EXEMPT-	> 50 mm	> 50 mm	
Cellular	CDMA BC0	848.31	18.20	66	4.01	2.68	42.92	238.09	95.84		12.2 -MEASURE-	12.2 -MEASURE-	14 -EXEMPT-	> 50 mm	> 50 mm	
Cellular	CDMA BC1	1908.75	14.30	27	4.01	2.68	42.92	238.09	95.84		7.5 -MEASURE-	7.5 -MEASURE-	0.9 -EXEMPT-	> 50 mm	> 50 mm	
Cellular	CDMA BC10	823.1	18.00	63	4.01	2.68	42.92	238.09	95.84		114 -MEASURE-	114 -MEASURE-	13 -EXEMPT-	> 50 mm	> 50 mm	
Cellular	LTE Band 2	1900	14.50	28	4.01	2.68	42.92	238.09	95.84		7.7 -MEASURE-	7.7 -MEASURE-	0.9 -EXEMPT-	> 50 mm	> 50 mm	
Cellular	LTE Band 4	1754.3	14.20	26	4.01	2.68	42.92	238.09	95.84		6.9 -MEASURE-	6.9 -MEASURE-	0.8 -EXEMPT-	> 50 mm	> 50 mm	
Cellular	LTE Band 5	844	18.20	66	4.01	2.68	42.92	238.09	95.84		12.1 -MEASURE-	12.1 -MEASURE-	14 -EXEMPT-	> 50 mm	> 50 mm	
Cellular	LTE Band 7	2560	12.20	17	4.01	2.68	42.92	238.09	95.84		5.4 -MEASURE-	5.4 -MEASURE-	0.6 -EXEMPT-	> 50 mm	> 50 mm	
Cellular	LTE Band 12	711	19.00	79	4.01	2.68	42.92	238.09	95.84		13.3 -MEASURE-	13.3 -MEASURE-	15 -EXEMPT-	> 50 mm	> 50 mm	
Cellular	LTE Band 13	782	19.00	79	4.01	2.68	42.92	238.09	95.84		14 -MEASURE-	14 -MEASURE-	16 -EXEMPT-	> 50 mm	> 50 mm	
Cellular	LTE Band 17	710	19.00	79	4.01	2.68	42.92	238.09	95.84		13.3 -MEASURE-	13.3 -MEASURE-	15 -EXEMPT-	> 50 mm	> 50 mm	
Cellular	LTE Band 25	1905	14.50	28	4.01	2.68	42.92	238.09	95.84		7.7 -MEASURE-	7.7 -MEASURE-	0.9 -EXEMPT-	> 50 mm	> 50 mm	
Cellular	LTE Band 26	841.4	18.20	66	4.01	2.68	42.92	238.09	95.84		12.1 -MEASURE-	12.1 -MEASURE-	14 -EXEMPT-	> 50 mm	> 50 mm	
Cellular	LTE Band 27	815.5	18.00	63	4.01	2.68	42.92	238.09	95.84		11.4 -MEASURE-	11.4 -MEASURE-	13 -EXEMPT-	> 50 mm	> 50 mm	
Cellular	LTE Band 30	2310	13.20	21	4.01	2.68	42.92	238.09	95.84		6.4 -MEASURE-	6.4 -MEASURE-	0.7 -EXEMPT-	> 50 mm	> 50 mm	
Cellular	LTE Band 41	2680	14.00	25	4.01	2.68	42.92	238.09	95.84		8.2 -MEASURE-	8.2 -MEASURE-	1 -EXEMPT-	> 50 mm	> 50 mm	
Antenna D																
Cellular	GPRS 2 Slots	848.8	26.50	112	3.5	2.68	95.84	238.09	42.92		20.6 -MEASURE-	20.6 -MEASURE-	> 50 mm	> 50 mm	2 -EXEMPT-	
Cellular	GPRS 2 Slots	1909.8	20.80	30	3.5	2.68	95.84	238.09	42.92		8.3 -MEASURE-	8.3 -MEASURE-	> 50 mm	> 50 mm	1 -EXEMPT-	
Cellular	W-CDMA 2	1907.6	14.00	25	3.5	2.68	95.84	238.09	42.92		6.9 -MEASURE-	6.9 -MEASURE-	> 50 mm	> 50 mm	1 -EXEMPT-	
Cellular	W-CDMA 4	1752.6	13.80	24	3.5	2.68	95.84	238.09	42.92		6.4 -MEASURE-	6.4 -MEASURE-	> 50 mm	> 50 mm	1 -EXEMPT-	
Cellular	W-CDMA 5	846.6	20.00	100	3.5	2.68	95.84	238.09	42.92		18.4 -MEASURE-	18.4 -MEASURE-	> 50 mm	> 50 mm	2 -EXEMPT-	
Cellular	CDMA BC0	848.31	20.00	100	3.5	2.68	95.84	238.09	42.92		18.4 -MEASURE-	18.4 -MEASURE-	> 50 mm	> 50 mm	2 -EXEMPT-	
Cellular	CDMA BC1	1908.75	14.00	25	3.5	2.68	95.84	238.09	42.92		6.9 -MEASURE-	6.9 -MEASURE-	> 50 mm	> 50 mm	1 -EXEMPT-	
Cellular	CDMA BC10	823.1	20.00	100	3.5	2.68	95.84	238.09	42.92		18.1 -MEASURE-	18.1 -MEASURE-	> 50 mm	> 50 mm	2 -EXEMPT-	
Cellular	LTE Band 2	1900	14.20	26	3.5	2.68	95.84	238.09	42.92		7.2 -MEASURE-	7.2 -MEASURE-	> 50 mm	> 50 mm	1 -EXEMPT-	
Cellular	LTE Band 4	1754.3	14.00	25	3.5	2.68	95.84	238.09	42.92		6.6 -MEASURE-	6.6 -MEASURE-	> 50 mm	> 50 mm	1 -EXEMPT-	
Cellular	LTE Band 5	844	20.00	100	3.5	2.68	95.84	238.09	42.92		18.4 -MEASURE-	18.4 -MEASURE-	> 50 mm	> 50 mm	2 -EXEMPT-	
Cellular	LTE Band 7	2560	11.80	15	3.5	2.68	95.84	238.09	42.92		4.8 -MEASURE-	4.8 -MEASURE-	> 50 mm	> 50 mm	1 -EXEMPT-	
Cellular	LTE Band 12	711	21.00	126	3.5	2.68	95.84	238.09	42.92		21.2 -MEASURE-	21.2 -MEASURE-	> 50 mm	> 50 mm	2 -EXEMPT-	
Cellular	LTE Band 13	782	21.20	132	3.5	2.68	95.84	238.09	42.92		23.3 -MEASURE-	23.3 -MEASURE-	> 50 mm	> 50 mm	3 -EXEMPT-	
Cellular	LTE Band 17	710	21.00	126	3.5	2.68	95.84	238.09	42.92		21.2 -MEASURE-	21.2 -MEASURE-	> 50 mm	> 50 mm	2 -EXEMPT-	
Cellular	LTE Band 25	1905	14.20	26	3.5	2.68	95.84	238.09	42.92		7.2 -MEASURE-	7.2 -MEASURE-	> 50 mm	> 50 mm	1 -EXEMPT-	
Cellular	LTE Band 26	841.4	20.00	100	3.5	2.68	95.84	238.09	42.92		18.3 -MEASURE-	18.3 -MEASURE-	> 50 mm	> 50 mm	2 -EXEMPT-	
Cellular	LTE Band 27	815.5	20.00	100	3.5	2.68	95.84	238.09	42.92		18.1 -MEASURE-	18.1 -MEASURE-	> 50 mm	> 50 mm	2 -EXEMPT-	
Cellular	LTE Band 30	2310	12.30	17	3.5	2.68	95.84	238.09	42.92		5.2 -MEASURE-	5.2 -MEASURE-	> 50 mm	> 50 mm	1 -EXEMPT-	
Cellular	LTE Band 41	2680	14.00	25	3.5	2.68	95.84	238.09	42.92		8.2 -MEASURE-	8.2 -MEASURE-	> 50 mm	> 50 mm	1 -EXEMPT-	

Note(s):

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

Antennas > 50mm to adjacent edges

Antenna	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 C																
Cellular	GPRS 2 Slots	848.8	24.00	63	4.01	2.68	42.92	238.09	95.84		< 50 mm	< 50 mm	< 50 mm	1227.2 mW -EXEMPT-	422.2 mW -EXEMPT-	
Cellular	GPRS 2 Slots	1909.8	21.30	34	4.01	2.68	42.92	238.09	95.84		< 50 mm	< 50 mm	< 50 mm	1989.4 mW -EXEMPT-	566.9 mW -EXEMPT-	
Cellular	W-CDMA 2	1907.6	14.30	27	4.01	2.68	42.92	238.09	95.84		< 50 mm	< 50 mm	< 50 mm	1989.5 mW -EXEMPT-	567 mW -EXEMPT-	
Cellular	W-CDMA 4	1752.6	14.20	26	4.01	2.68	42.92	238.09	95.84		< 50 mm	< 50 mm	< 50 mm	1994.2 mW -EXEMPT-	5717 mW -EXEMPT-	
Cellular	W-CDMA 5	846.6	18.20	66	4.01	2.68	42.92	238.09	95.84		< 50 mm	< 50 mm	< 50 mm	1224.6 mW -EXEMPT-	4217 mW -EXEMPT-	
Cellular	CDMA BC0	848.31	18.20	66	4.01	2.68	42.92	238.09	95.84		< 50 mm	< 50 mm	< 50 mm	1226.6 mW -EXEMPT-	422.1mW -EXEMPT-	
Cellular	CDMA BC1	1908.75	14.30	27	4.01	2.68	42.92	238.09	95.84		< 50 mm	< 50 mm	< 50 mm	1989.5 mW -EXEMPT-	567 mW -EXEMPT-	
Cellular	CDMA BC10	823.1	18.00	63	4.01	2.68	42.92	238.09	95.84		< 50 mm	< 50 mm	< 50 mm	1197.4 mW -EXEMPT-	416.9 mW -EXEMPT-	
Cellular	LTE Band 2	1900	14.50	28	4.01	2.68	42.92	238.09	95.84		< 50 mm	< 50 mm	< 50 mm	1989.7 mW -EXEMPT-	567.2 mW -EXEMPT-	
Cellular	LTE Band 4	1754.3	14.20	26	4.01	2.68	42.92	238.09	95.84		< 50 mm	< 50 mm	< 50 mm	1994.2 mW -EXEMPT-	5717 mW -EXEMPT-	
Cellular	LTE Band 5	844	18.20	66	4.01	2.68	42.92	238.09	95.84		< 50 mm	< 50 mm	< 50 mm	1221.6 mW -EXEMPT-	4212 mW -EXEMPT-	
Cellular	LTE Band 7	2560	12.20	17	4.01	2.68	42.92	238.09	95.84		< 50 mm	< 50 mm	< 50 mm	1974.7 mW -EXEMPT-	552.2 mW -EXEMPT-	
Cellular	LTE Band 12	711	19.00	79	4.01	2.68	42.92	238.09	95.84		< 50 mm	< 50 mm	< 50 mm	1069.4 mW -EXEMPT-	395.2 mW -EXEMPT-	
Cellular	LTE Band 13	782	19.00	79	4.01	2.68	42.92	238.09	95.84		< 50 mm	< 50 mm	< 50 mm	1150.2 mW -EXEMPT-	408.6 mW -EXEMPT-	
Cellular	LTE Band 17	710	19.00	79	4.01	2.68	42.92	238.09	95.84		< 50 mm	< 50 mm	< 50 mm	1068.3 mW -EXEMPT-	395 mW -EXEMPT-	
Cellular	LTE Band 25	1905	14.50	28	4.01	2.68	42.92	238.09	95.84		< 50 mm	< 50 mm	< 50 mm	1989.6 mW -EXEMPT-	567.1mW -EXEMPT-	
Cellular	LTE Band 26	841.4	18.20	66	4.01	2.68	42.92	238.09	95.84		< 50 mm	< 50 mm	< 50 mm	1218.6 mW -EXEMPT-	420.7 mW -EXEMPT-	
Cellular	LTE Band 27	815.5	18.00	63	4.01	2.68	42.92	238.09	95.84		< 50 mm	< 50 mm	< 50 mm	1188.7 mW -EXEMPT-	415.3 mW -EXEMPT-	
Cellular	LTE Band 30	2310	13.20	21	4.01	2.68	42.92	238.09	95.84		< 50 mm	< 50 mm	< 50 mm	1979.6 mW -EXEMPT-	557.1mW -EXEMPT-	
Cellular	LTE Band 41	2680	14.00	25	4.01	2.68	42.92	238.09	95.84		< 50 mm	< 50 mm	< 50 mm	1972.5 mW -EXEMPT-	550 mW -EXEMPT-	
Antenna D																
Cellular	GPRS 2 Slots	848.8	26.50	112	3.5	2.68	95.84	238.09	42.92		< 50 mm	< 50 mm	422.2 mW -EXEMPT-	1227.2 mW -EXEMPT-	< 50 mm	
Cellular	GPRS 2 Slots	1909.8	20.80	30	3.5	2.68	95.84	238.09	42.92		< 50 mm	< 50 mm	566.9 mW -EXEMPT-	1989.4 mW -EXEMPT-	< 50 mm	
Cellular	W-CDMA 2	1907.6	14.00	25	3.5	2.68	95.84	238.09	42.92		< 50 mm	< 50 mm	567 mW -EXEMPT-	1989.5 mW -EXEMPT-	< 50 mm	
Cellular	W-CDMA 4	1752.6	13.80	24	3.5	2.68	95.84	238.09	42.92		< 50 mm	< 50 mm	5717 mW -EXEMPT-	1994.2 mW -EXEMPT-	< 50 mm	
Cellular	W-CDMA 5	846.6	20.00	100	3.5	2.68	95.84	238.09	42.92		< 50 mm	< 50 mm	4217 mW -EXEMPT-	1224.6 mW -EXEMPT-	< 50 mm	
Cellular	CDMA BC0	848.31	20.00	100	3.5	2.68	95.84	238.09	42.92		< 50 mm	< 50 mm	422.1mW -EXEMPT-	1226.6 mW -EXEMPT-	< 50 mm	
Cellular	CDMA BC1	1908.75	14.00	25	3.5	2.68	95.84	238.09	42.92		< 50 mm	< 50 mm	567 mW -EXEMPT-	1989.5 mW -EXEMPT-	< 50 mm	
Cellular	CDMA BC10	823.1	20.00	100	3.5	2.68	95.84	238.09	42.92		< 50 mm	< 50 mm	416.9 mW -EXEMPT-	1197.4 mW -EXEMPT-	< 50 mm	
Cellular	LTE Band 2	1900	14.20	26	3.5	2.68	95.84	238.09	42.92		< 50 mm	< 50 mm	567.2 mW -EXEMPT-	1989.7 mW -EXEMPT-	< 50 mm	
Cellular	LTE Band 4	1754.3	14.00	25	3.5	2.68	95.84	238.09	42.92		< 50 mm	< 50 mm	5717 mW -EXEMPT-	1994.2 mW -EXEMPT-	< 50 mm	
Cellular	LTE Band 5	844	20.00	100	3.5	2.68	95.84	238.09	42.92		< 50 mm	< 50 mm	4212 mW -EXEMPT-	1221.6 mW -EXEMPT-	< 50 mm	
Cellular	LTE Band 7	2560	11.80	15	3.5	2.68	95.84	238.09	42.92		< 50 mm	< 50 mm	552.2 mW -EXEMPT-	1974.7 mW -EXEMPT-	< 50 mm	
Cellular	LTE Band 12	711	21.00	126	3.5	2.68	95.84	238.09	42.92		< 50 mm	< 50 mm	395.2 mW -EXEMPT-	1069.4 mW -EXEMPT-	< 50 mm	
Cellular	LTE Band 13	782	21.20	132	3.5	2.68	95.84	238.09	42.92		< 50 mm	< 50 mm	408.6 mW -EXEMPT-	1150.2 mW -EXEMPT-	< 50 mm	
Cellular	LTE Band 17	710	21.00	126	3.5	2.68	95.84	238.09	42.92		< 50 mm	< 50 mm	395 mW -EXEMPT-	1068.3 mW -EXEMPT-	< 50 mm	
Cellular	LTE Band 25	1905	14.20	26	3.5	2.68	95.84	238.09	42.92		< 50 mm	< 50 mm	567.1mW -EXEMPT-	1989.6 mW -EXEMPT-	< 50 mm	
Cellular	LTE Band 26	841.4	20.00	100	3.5	2.68	95.84	238.09	42.92		< 50 mm	< 50 mm	420.7 mW -EXEMPT-	1218.6 mW -EXEMPT-	< 50 mm	
Cellular	LTE Band 27	815.5	20.00	100	3.5	2.68	95.84	238.09	42.92		< 50 mm	< 50 mm	415.3 mW -EXEMPT-	1188.7 mW -EXEMPT-	< 50 mm	
Cellular	LTE Band 30	2310	12.30	17	3.5	2.68	95.84	238.09	42.92		< 50 mm	< 50 mm	557.1mW -EXEMPT-	1979.6 mW -EXEMPT-	< 50 mm	
Cellular	LTE Band 41	2680	14.00	25	3.5	2.68	95.84	238.09	42.92		< 50 mm	< 50 mm	550 mW -EXEMPT-	1972.5 mW -EXEMPT-	< 50 mm	

Note(s):

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

SAR Test Exclusion Calculations for WLAN

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	19.00	79	4.95	240.94	108.29	2.48	8.16		24.8 -MEASURE-	> 50 mm	> 50 mm	24.8 -MEASURE-	15.5 -MEASURE-	
Wi-Fi 5.2 GHz	5240	16.50	45	4.95	240.94	108.29	2.48	8.16		20.6 -MEASURE-	> 50 mm	> 50 mm	20.6 -MEASURE-	12.9 -MEASURE-	
Wi-Fi 5.3 GHz	5320	16.50	45	4.95	240.94	108.29	2.48	8.16		20.8 -MEASURE-	> 50 mm	> 50 mm	20.8 -MEASURE-	13 -MEASURE-	
Wi-Fi 5.5 GHz	5700	15.00	32	4.95	240.94	108.29	2.48	8.16		15.3 -MEASURE-	> 50 mm	> 50 mm	15.3 -MEASURE-	9.5 -MEASURE-	
Wi-Fi 5.8 GHz	5825	14.50	28	4.95	240.94	108.29	2.48	8.16		13.5 -MEASURE-	> 50 mm	> 50 mm	13.5 -MEASURE-	8.4 -MEASURE-	
Bluetooth	2480	20.00	100	4.95	240.94	108.29	2.48	8.16		31.5 -MEASURE-	> 50 mm	> 50 mm	31.5 -MEASURE-	19.7 -MEASURE-	
Antenna B															
Wi-Fi 2.4 GHz	2462	19.00	79	4.95	240.94	8.16	2.48	108.29		24.8 -MEASURE-	> 50 mm	15.5 -MEASURE-	24.8 -MEASURE-	> 50 mm	
Wi-Fi 5.2 GHz	5240	17.00	50	4.95	240.94	8.16	2.48	108.29		22.9 -MEASURE-	> 50 mm	14.3 -MEASURE-	22.9 -MEASURE-	> 50 mm	
Wi-Fi 5.3 GHz	5320	16.50	45	4.95	240.94	8.16	2.48	108.29		20.8 -MEASURE-	> 50 mm	13 -MEASURE-	20.8 -MEASURE-	> 50 mm	
Wi-Fi 5.5 GHz	5700	15.00	32	4.95	240.94	8.16	2.48	108.29		15.3 -MEASURE-	> 50 mm	9.5 -MEASURE-	15.3 -MEASURE-	> 50 mm	
Wi-Fi 5.8 GHz	5825	15.00	32	4.95	240.94	8.16	2.48	108.29		15.4 -MEASURE-	> 50 mm	9.7 -MEASURE-	15.4 -MEASURE-	> 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.
2. With power levels similar to SISO on each chain, MIMO test requirement was determined by the combined requirements of Antenna A and Antenna B SISO.

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	19.00	79	4.95	240.94	108.29	2.48	8.16		< 50 mm	2005 mW -EXEMPT-	678.5 mW -EXEMPT-	< 50 mm	< 50 mm	
Wi-Fi 5.2 GHz	5240	16.50	45	4.95	240.94	108.29	2.48	8.16		< 50 mm	1974.9 mW -EXEMPT-	648.4 mW -EXEMPT-	< 50 mm	< 50 mm	
Wi-Fi 5.3 GHz	5320	16.50	45	4.95	240.94	108.29	2.48	8.16		< 50 mm	1974.4 mW -EXEMPT-	647.9 mW -EXEMPT-	< 50 mm	< 50 mm	
Wi-Fi 5.5 GHz	5700	15.00	32	4.95	240.94	108.29	2.48	8.16		< 50 mm	1972.2 mW -EXEMPT-	645.7 mW -EXEMPT-	< 50 mm	< 50 mm	
Wi-Fi 5.8 GHz	5825	14.50	28	4.95	240.94	108.29	2.48	8.16		< 50 mm	1971.6 mW -EXEMPT-	645.1mW -EXEMPT-	< 50 mm	< 50 mm	
Bluetooth	2480	20.00	100	4.95	240.94	108.29	2.48	8.16		< 50 mm	2004.7 mW -EXEMPT-	678.2 mW -EXEMPT-	< 50 mm	< 50 mm	
Antenna B															
Wi-Fi 2.4 GHz	2462	19.00	79	4.95	240.94	8.16	2.48	108.29		< 50 mm	2005 mW -EXEMPT-	< 50 mm	< 50 mm	678.5 mW -EXEMPT-	
Wi-Fi 5.2 GHz	5240	17.00	50	4.95	240.94	8.16	2.48	108.29		< 50 mm	1974.9 mW -EXEMPT-	< 50 mm	< 50 mm	648.4 mW -EXEMPT-	
Wi-Fi 5.3 GHz	5320	16.50	45	4.95	240.94	8.16	2.48	108.29		< 50 mm	1974.4 mW -EXEMPT-	< 50 mm	< 50 mm	647.9 mW -EXEMPT-	
Wi-Fi 5.5 GHz	5700	15.00	32	4.95	240.94	8.16	2.48	108.29		< 50 mm	1972.2 mW -EXEMPT-	< 50 mm	< 50 mm	645.7 mW -EXEMPT-	
Wi-Fi 5.8 GHz	5825	15.00	32	4.95	240.94	8.16	2.48	108.29		< 50 mm	1971.6 mW -EXEMPT-	< 50 mm	< 50 mm	645.1mW -EXEMPT-	

Note(s):

1. According to KDB 447498, if the calculated Power threshold is less than the output power then SAR testing is required.
2. With power levels similar to SISO on each chain, MIMO test requirement was determined by the combined requirements of Antenna A and Antenna B SISO.

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:

WWAN

Test Configurations	Antenna C					Antenna D				
	Rear	Edge 1 (Top Edge)	Edge 2 (Right Edge)	Edge 3 (Bottom Edge)	Edge 4 (Left Edge)	Rear	Edge 1 (Top Edge)	Edge 2 (Right Edge)	Edge 3 (Bottom Edge)	Edge 4 (Left Edge)
GSM850	Yes	Yes	No	No	No	Yes	Yes	No	No	No
GSM1900	Yes	Yes	No	No	No	Yes	Yes	No	No	No
W-CDMA Band 2	Yes	Yes	No	No	No	Yes	Yes	No	No	No
W-CDMA Band 4	Yes	Yes	No	No	No	Yes	Yes	No	No	No
W-CDMA Band 5	Yes	Yes	No	No	No	Yes	Yes	No	No	No
CDMA BC0	Yes	Yes	No	No	No	Yes	Yes	No	No	No
CDMA BC1	Yes	Yes	No	No	No	Yes	Yes	No	No	No
CDMA BC10	Yes	Yes	No	No	No	Yes	Yes	No	No	No
LTE Band 2	Yes	Yes	No	No	No	Yes	Yes	No	No	No
LTE Band 4	Yes	Yes	No	No	No	Yes	Yes	No	No	No
LTE Band 5	Yes	Yes	No	No	No	Yes	Yes	No	No	No
LTE Band 7	Yes	Yes	No	No	No	Yes	Yes	No	No	No
LTE Band 12	Yes	Yes	No	No	No	Yes	Yes	No	No	No
LTE Band 13	Yes	Yes	No	No	No	Yes	Yes	No	No	No
LTE Band 17	Yes	Yes	No	No	No	Yes	Yes	No	No	No
LTE Band 25	Yes	Yes	No	No	No	Yes	Yes	No	No	No
LTE Band 26	Yes	Yes	No	No	No	Yes	Yes	No	No	No
LTE Band 27	Yes	Yes	No	No	No	Yes	Yes	No	No	No
LTE Band 30	Yes	Yes	No	No	No	Yes	Yes	No	No	No
LTE Band 41	Yes	Yes	No	No	No	Yes	Yes	No	No	No

WLAN

Test Configurations	Rear	Edge 1 (Top Edge)	Edge 2 (Right Edge)	Edge 3 (Bottom Edge)	Edge 4 (Left Edge)
Wi-Fi 2.4 GHz SISO (Antenna A)	Yes	No	No	Yes	Yes
Wi-Fi 2.4 GHz SISO (Antenna B)	Yes	No	Yes	Yes	No
Wi-Fi 2.4 GHz MIMO	Yes	No	Yes	Yes	Yes
Wi-Fi 5 GHz SISO (Antenna A)	Yes	No	No	Yes	Yes
Wi-Fi 5 GHz SISO (Antenna B)	Yes	No	Yes	Yes	No
Wi-Fi 5 GHz MIMO	Yes	No	Yes	Yes	Yes
Bluetooth	Yes	No	No	Yes	Yes

Note(s):

Yes = Testing is required.

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.

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

Tissue Dielectric Parameters

FCC KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz

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

IEEE Std 1528-2013

Refer to Table 3 within the IEEE Std 1528-2013

Dielectric Property Measurements Results:

SAR Lab	Date	Tissue Type	Band (MHz)	Frequency (MHz)	Relative Permittivity (εr)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
A	12/27/2016	5600	Body	5600	46.61	48.48	-3.85	5.95	5.76	3.26
				5500	46.77	48.61	-3.79	5.81	5.64	2.95
				5725	46.41	48.31	-3.93	6.12	5.91	3.66
A	1/9/2017	750	Body	750	53.92	55.55	-2.93	0.97	0.96	0.70
				695	54.52	55.76	-2.22	0.92	0.96	-4.47
				790	53.45	55.39	-3.51	1.01	0.97	4.64
B	1/9/2017	2300	Body	2300	52.54	52.90	-0.69	1.88	1.80	4.30
				2350	52.38	52.84	-0.87	1.93	1.85	4.39
				2400	52.24	52.77	-1.01	1.99	1.90	4.85
B	1/9/2017	2600	Body	2600	51.10	52.51	-2.69	2.24	2.16	3.57
				2495	51.40	52.64	-2.36	2.10	2.01	4.36
				2690	50.84	52.40	-2.97	2.35	2.29	2.61
B	1/12/2017	2600	Body	2600	50.12	52.51	-4.55	2.13	2.16	-1.33
				2495	50.45	52.64	-4.17	2.02	2.01	0.24
				2690	49.88	52.40	-4.80	2.22	2.29	-2.77
B	1/17/2017	2600	Body	2600	51.74	52.51	-1.47	2.10	2.16	-2.58
				2495	51.94	52.64	-1.34	1.98	2.01	-1.50
				2690	51.55	52.40	-1.62	2.21	2.29	-3.38
B	1/23/2017	2600	Body	2600	50.59	52.51	-3.66	2.21	2.16	2.18
				2495	50.92	52.64	-3.27	2.08	2.01	3.27
				2690	50.31	52.40	-3.98	2.32	2.29	1.47
B	2/21/2017	2600	Body	2600	50.51	52.51	-3.81	2.07	2.16	-4.20
				2495	50.93	52.64	-3.25	1.94	2.01	-3.79
				2690	50.19	52.40	-4.21	2.18	2.29	-4.65
C	12/27/2016	5800	Body	5800	46.73	48.20	-3.05	6.14	6.00	2.30
				5700	46.87	48.34	-3.05	6.03	5.88	2.61
				5850	46.60	48.20	-3.32	6.23	6.00	3.77
C	1/9/2017	1900	Body	1900	50.86	53.30	-4.58	1.55	1.52	1.78
				1850	51.07	53.30	-4.18	1.50	1.52	-1.58
				1920	50.79	53.30	-4.71	1.57	1.52	3.16
C	1/12/2017	1900	Body	1900	52.47	53.30	-1.56	1.56	1.52	2.89
				1850	52.62	53.30	-1.28	1.51	1.52	-0.53
				1920	52.41	53.30	-1.67	1.59	1.52	4.41
C	1/17/2017	1900	Body	1900	51.53	53.30	-3.32	1.57	1.52	3.22
				1850	51.71	53.30	-2.98	1.52	1.52	-0.33
				1920	51.47	53.30	-3.43	1.59	1.52	4.80
D	12/27/2016	2450	Body	2450	52.37	52.70	-0.63	1.99	1.95	2.21
				2400	52.53	52.77	-0.46	1.93	1.90	1.42
				2480	52.24	52.66	-0.80	2.03	1.99	1.70
D	1/3/2017	2450	Body	2450	52.60	52.70	-0.19	1.96	1.95	0.51
				2400	52.77	52.77	0.00	1.90	1.90	0.21
				2480	52.51	52.66	-0.29	2.00	1.99	0.29
D	1/9/2017	2450	Body	2450	52.44	52.70	-0.49	1.92	1.95	-1.64
				2400	52.62	52.77	-0.29	1.86	1.90	-1.95
				2480	52.34	52.66	-0.61	1.96	1.99	-1.77
D	1/23/2017	2450	Body	2450	52.14	52.70	-1.06	2.01	1.95	3.28
				2400	52.31	52.77	-0.88	1.95	1.90	2.84
				2480	52.03	52.66	-1.2	2.05	1.99	2.9

SAR Lab	Date	Tissue Type	Band (MHz)	Frequency (MHz)	Relative Permittivity (εr)			Conductivity (σ)		
					Measured	Target	Delta (%)	Measured	Target	Delta (%)
E	12/28/2016	5600	Body	5600	46.89	48.48	-3.28	5.99	5.76	3.89
				5500	47.07	48.61	-3.17	5.85	5.64	3.61
				5725	46.74	48.31	-3.25	6.15	5.91	4.19
E	1/9/2017	835	Body	835	53.06	55.20	-3.88	0.99	0.97	1.65
				805	53.36	55.33	-3.57	0.96	0.97	-1.15
				905	52.29	55.00	-4.93	1.07	1.05	1.28
E	1/12/2017	835	Body	835	53.18	55.20	-3.66	0.99	0.97	2.09
				805	53.54	55.33	-3.24	0.96	0.97	-1.04
				905	52.45	55.00	-4.64	1.06	1.05	0.90
E	1/17/2017	835	Body	835	53.40	55.20	-3.26	0.99	0.97	2.00
				805	53.72	55.33	-2.92	0.96	0.97	-1.10
				905	52.62	55.00	-4.33	1.06	1.05	0.52
E	1/23/2017	835	Body	835	53.75	55.20	-2.63	0.99	0.97	1.86
				805	54.07	55.33	-2.29	0.96	0.97	-1.15
				905	52.98	55.00	-3.67	1.06	1.05	0.33
F	12/27/2016	5200	Body	5200	47.65	49.02	-2.79	5.50	5.29	3.86
				5150	47.76	49.09	-2.70	5.43	5.24	3.74
				5350	47.40	48.82	-2.90	5.71	5.47	4.30
F	1/3/2017	5200	Body	5200	47.08	49.02	-3.96	5.22	5.29	-1.49
				5150	47.12	49.09	-4.01	5.13	5.24	-2.01
				5350	46.86	48.82	-4.01	5.41	5.47	-1.18
F	1/19/2017	835	Body	835	53.48	55.20	-3.12	1.01	0.97	3.92
				805	53.81	55.33	-2.76	0.98	0.97	1.10
				905	52.70	55.00	-4.18	1.08	1.05	2.42
F	1/23/2017	835	Body	835	53.39	55.20	-3.28	1.02	0.97	4.85
				805	53.67	55.33	-3.01	0.99	0.97	2.13
				905	52.69	55.00	-4.20	1.08	1.05	2.99
F	1/24/2017	5200	Body	5200	46.93	49.02	-4.26	5.44	5.29	2.74
				5150	47.00	49.09	-4.25	5.38	5.24	2.76
				5350	46.69	48.82	-4.36	5.63	5.47	2.97
G	1/9/2017	1750	Body	1750	52.44	53.44	-1.87	1.53	1.49	2.75
				1710	52.55	53.54	-1.86	1.49	1.46	1.95
				1755	52.42	53.43	-1.89	1.53	1.49	2.80
H	1/3/2017	5.2	Body	5200	49.09	49.02	0.14	5.29	5.29	-0.07
				5150	49.21	49.09	0.25	5.22	5.24	-0.33
				5350	48.80	48.82	-0.03	5.48	5.47	0.25
H	1/17/2016	835	Body	835	53.65	55.20	-2.81	1.00	0.97	3.40
				805	54.00	55.33	-2.41	0.97	0.97	0.27
				905	52.88	55.00	-3.85	1.07	1.05	1.76
H	1/23/2017	5200	Body	5200	46.92	49.02	-4.28	5.35	5.29	1.06
				5150	47.02	49.09	-4.21	5.28	5.24	0.74
				5350	46.78	48.82	-4.17	5.56	5.47	1.62

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.

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	Date	Tissue Type	Dipole Type _Serial #	Dipole Cal. Due Data	Measured Results for 1g SAR				Measured Results for 10g SAR				Plot No.
					Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	
A	12/27/2016	Body	D5GHzV2 SN:1003 (5.6 GHz)	2/25/2017	8.260	82.60	79.80	3.51	2.270	22.70	22.40	1.34	1,2
A	1/9/2017	Body	D750V3 SN:1019	3/16/2017	0.915	9.15	8.56	6.89	0.608	6.08	5.68	7.04	3,4
B	1/9/2017	Body	D2300V2 SN:1002	3/18/2017	4.990	49.90	47.50	5.05	2.360	23.60	23.10	2.16	5,6
B	1/9/2017	Body	D2600V2 SN:1006	9/13/2017	5.940	59.40	54.20	9.59	2.590	25.90	24.30	6.58	7,8
B	1/12/2017	Body	D2600V2 SN:1006	9/13/2017	5.890	58.90	54.20	8.67	2.580	25.80	24.30	6.17	
B	1/17/2017	Body	D2600V2 SN:1006	9/13/2017	5.570	55.70	54.20	2.77	2.410	24.10	24.30	-0.82	
B	1/23/2017	Body	D2600V2 SN:1006	9/13/2017	5.900	59.00	54.20	8.86	2.570	25.70	24.30	5.76	
B	2/21/2017	Body	D2600V2 SN:1006	9/13/2017	5.530	55.30	54.20	2.03	2.410	24.10	24.30	-0.82	
C	12/27/2016	Body	D5GHzV2 SN:1168 (5.8 GHz)	11/14/2017	7.710	77.10	73.90	4.33	2.130	21.30	20.50	3.90	9,10
C	1/9/2017	Body	D1900V2 SN:5d140	4/12/2017	4.090	40.90	39.30	4.07	2.120	21.20	20.80	1.92	
C	1/12/2017	Body	D1900V2 SN:5d140	4/12/2017	4.150	41.50	39.30	5.60	2.160	21.60	20.80	3.85	
C	1/17/2017	Body	D1900V2 SN:5d140	4/12/2017	4.170	41.70	39.30	6.11	2.160	21.60	20.80	3.85	11,12
D	12/27/2016	Body	D2450V2 SN:899	3/15/2017	5.040	50.40	49.60	1.61	2.280	22.80	23.40	-2.56	
D	1/3/2017	Body	D2450V2 SN:899	3/15/2017	4.740	47.40	49.60	-4.44	2.160	21.60	23.40	-7.69	
D	1/9/2017	Body	D2450V2 SN:899	3/15/2017	4.930	49.30	49.60	-0.60	2.240	22.40	23.40	-4.27	
D	1/23/2017	Body	D2450V2 SN:899	3/15/2017	5.390	53.90	49.60	8.67	2.450	24.50	23.40	4.70	13,14
E	12/28/2016	Body	D5GHzV2 SN:1138 (5.6 GHz)	9/22/2017	7.760	77.60	78.80	-1.52	2.180	21.80	22.00	-0.91	15,16
E	1/9/2017	Body	D835V2 SN:4d142	9/22/2017	1.020	10.20	9.32	9.44	0.673	6.73	6.18	8.90	17,18
E	1/12/2017	Body	D835V2 SN:4d142	9/22/2017	1.010	10.10	9.32	8.37	0.668	6.68	6.18	8.09	
E	1/17/2017	Body	D835V2 SN:4d142	9/22/2017	0.983	9.83	9.32	5.47	0.648	6.48	6.18	4.85	
E	1/23/2017	Body	D835V2 SN:4d142	9/22/2017	1.010	10.10	9.32	8.37	0.666	6.66	6.18	7.77	
F	12/27/2016	Body	D5GHzV2 SN:1168 (5.2 GHz)	11/14/2017	7.520	75.20	73.60	2.17	2.130	21.30	20.50	3.90	19,20
F	1/3/2017	Body	D5GHzV2 SN:1138 (5.2 GHz)	9/22/2017	7.220	72.20	74.20	-2.70	2.050	20.50	20.90	-1.91	21,22
F	1/19/2017	Body	D835V2 SN:4d002	11/8/2017	0.940	9.40	9.55	-1.57	0.619	6.19	6.33	-2.21	
F	1/23/2017	Body	D835V2 SN:4d002	11/8/2017	1.040	10.40	9.55	8.90	0.683	6.83	6.33	7.90	23,24
F	1/24/2017	Body	D5GHzV2 SN:1138 (5.2 GHz)	9/22/2017	7.430	74.30	74.20	0.13	2.100	21.00	20.90	0.48	
G	1/9/2017	Body	D1750V2 SN:1050	4/13/2017	3.810	38.10	36.20	5.25	2.000	20.00	19.30	3.63	25,26
H	1/3/2017	Body	D5GHzV2 SN:1168 (5.2 GHz)	11/14/2017	7.360	73.60	73.60	0.00	2.070	20.70	20.50	0.98	
H	1/17/2017	Body	D835V2 SN:4d002	11/8/2017	1.030	10.30	9.55	7.85	0.675	6.76	6.33	6.79	27,28
H	1/23/2017	Body	D5GHzV2 SN:1168 (5.2 GHz)	11/14/2017	8.020	80.20	73.60	8.97	2.250	22.50	20.50	9.76	29,30

9. Conducted Output Power Measurements

9.1. GSM

Per KDB 941225 D01 3G SAR Procedures:

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

GSM850 Measured Results

Mode	Coding Scheme	Time Slots	Ch No.	Freq. (MHz)	Max. Power				Reduced Power			
					Antenna C		Antenna D		Antenna C		Antenna D	
					Burst (dBm)	Frame (dBm)	Burst (dBm)	Frame (dBm)	Burst (dBm)	Frame (dBm)	Burst (dBm)	Frame (dBm)
GPRS (GMSK)	CS1	1	128	824.2	33.4	24.4	31.9	22.9	27.0	18.0	29.5	20.5
			190	836.6	33.3	24.3	31.8	22.8	26.9	17.9	29.5	20.5
			251	848.8	33.3	24.3	31.6	22.6	26.9	17.9	29.5	20.5
		2	128	824.2	32.5	26.5	31.0	25.0	24.0	18.0	26.5	20.5
			190	836.6	32.4	26.4	30.9	24.9	24.0	18.0	26.5	20.5
			251	848.8	32.3	26.3	30.9	24.9	23.9	17.9	26.5	20.5
EGPRS (8PSK)	MCS5	1	128	824.2	27.8	18.8	26.0	16.9	26.6	17.6	25.2	16.2
			190	836.6	27.9	18.9	25.9	16.9	26.6	17.6	25.2	16.2
			251	848.8	28.0	19.0	26.0	17.0	26.6	17.6	25.2	16.2
		2	128	824.2	27.7	21.7	25.9	19.8	23.9	17.9	25.0	19.0
			190	836.6	27.8	21.8	25.9	19.9	23.8	17.8	25.0	19.0
			251	848.8	27.9	21.9	25.9	19.8	23.8	17.8	25.0	19.0

Notes:

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

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

GSM1900 Measured Results

Mode	Coding Scheme	Time Slots	Ch No.	Freq. (MHz)	Max. Power				Reduced Power			
					Antenna C		Antenna D		Antenna C		Antenna D	
					Burst (dBm)	Frame (dBm)	Burst (dBm)	Frame (dBm)	Burst (dBm)	Frame (dBm)	Burst (dBm)	Frame (dBm)
GPRS (GMSK)	CS1	1	512	1850.2	30.4	21.4	27.5	18.5	24.0	15.0	23.8	14.8
			661	1880.0	30.5	21.5	27.2	18.2	24.0	15.0	23.8	14.8
			810	1909.8	30.3	21.3	27.1	18.1	23.9	14.9	23.7	14.7
		2	512	1850.2	29.3	23.3	26.5	20.5	21.0	15.0	20.8	14.8
			661	1880.0	29.4	23.4	26.4	20.4	21.0	15.0	20.8	14.8
			810	1909.8	29.3	23.3	26.3	20.3	21.0	15.0	20.8	14.8
EGPRS (8PSK)	MCS5	1	512	1850.2	26.8	17.8	23.8	14.8	24.0	15.0	22.6	13.6
			661	1880.0	27.0	18.0	23.9	14.9	24.0	15.0	22.3	13.3
			810	1909.8	26.9	17.9	23.8	14.8	23.9	14.9	22.3	13.3
		2	512	1850.2	26.7	20.7	21.6	15.6	20.9	14.9	20.6	14.6
			661	1880.0	26.8	20.8	21.5	15.5	21.0	15.0	20.6	14.6
			810	1909.8	26.8	20.8	21.5	15.5	20.9	14.9	20.6	14.6

Notes:

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

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

9.2. W-CDMA

Release 99 Setup Procedures used to establish the test signals

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

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

HSDPA Setup Procedures used to establish the test signals

The following 4 Sub-tests were completed according to Release 5 procedures in section 5.2 of 3GPP TS34.121. A summary of these settings are illustrated below:

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

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

The following 5 Sub-tests were completed according to Release 6 procedures in 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.		

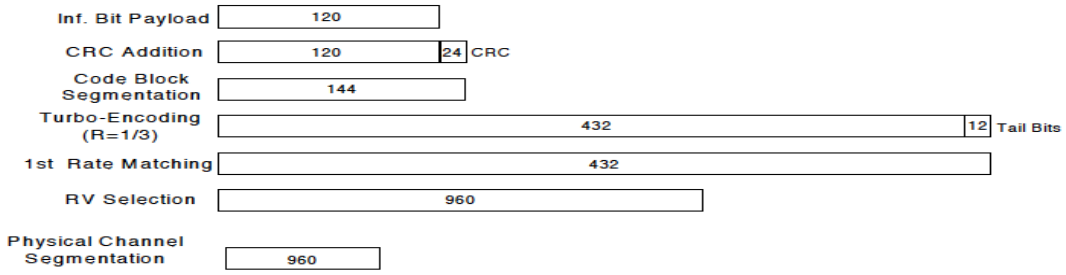


Figure C.8.19: Coding rate for Fixed reference Channel H-Set 12 (QPSK)

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., Rel. 7 Therefore, the RF conducted power is not measured.

W-CDMA Band II Measured Results

Band	Mode		UL Ch No.	Freq. (MHz)	MPR (dB)	Max. Power		Reduced Power	
						Antenna C Pwr (dBm)	Antenna D Pwr (dBm)	Antenna C Pwr (dBm)	Antenna D Pwr (dBm)
W-CDMA Band II	Rel 99	RMC, 12.2 kbps	9262	1852.4	N/A	25.3	24.4	14.3	13.9
			9400	1880.0	N/A	25.4	24.5	14.2	13.9
			9538	1907.6	N/A	25.3	24.4	14.3	14.0
	HSDPA	Subtest 1	9262	1852.4	0.0	24.4	23.5	14.2	13.9
			9400	1880.0	0.0	24.5	23.5	14.2	13.9
			9538	1907.6	0.0	24.5	23.4	14.3	14.0
		Subtest 2	9262	1852.4	0.0	24.4	23.4	14.2	13.9
			9400	1880.0	0.0	24.4	23.5	14.1	13.9
			9538	1907.6	0.0	24.5	23.4	14.1	14.0
		Subtest 3	9262	1852.4	0.5	24.0	23.0	13.6	13.4
			9400	1880.0	0.5	24.0	23.0	13.6	13.4
			9538	1907.6	0.5	24.1	23.1	13.7	13.5
		Subtest 4	9262	1852.4	0.5	24.0	23.0	13.8	13.4
			9400	1880.0	0.5	24.1	23.0	13.6	13.4
			9538	1907.6	0.5	24.0	23.0	13.7	13.5
	HSUPA	Subtest 1	9262	1852.4	0.0	24.5	23.4	14.2	13.9
			9400	1880.0	0.0	24.4	23.4	14.2	14.0
			9538	1907.6	0.0	24.3	23.3	14.1	14.0
		Subtest 2	9262	1852.4	2.0	22.7	21.5	12.2	11.8
			9400	1880.0	2.0	22.5	21.6	12.1	11.9
			9538	1907.6	2.0	22.5	21.6	12.1	12.0
		Subtest 3	9262	1852.4	1.0	22.5	22.5	13.1	12.9
			9400	1880.0	1.0	23.5	22.5	13.2	12.9
			9538	1907.6	1.0	23.5	22.5	13.1	12.9
		Subtest 4	9262	1852.4	2.0	22.6	21.9	12.2	11.9
			9400	1880.0	2.0	22.6	21.7	12.2	11.9
			9538	1907.6	2.0	22.7	21.4	12.1	12.0
		Subtest 5	9262	1852.4	0.0	24.4	23.3	14.1	13.9
			9400	1880.0	0.0	24.4	23.4	14.2	13.8
			9538	1907.6	0.0	24.4	23.3	14.1	13.9
	DC-HSDPA	Subtest 1	9262	1852.4	0.0	24.5	23.5	14.3	13.9
			9400	1880.0	0.0	24.4	23.5	14.2	13.9
			9538	1907.6	0.0	24.4	23.3	14.1	14.0
		Subtest 2	9262	1852.4	0.0	24.3	23.5	14.2	13.9
			9400	1880.0	0.0	24.3	23.4	14.2	13.9
			9538	1907.6	0.0	24.3	23.3	14.1	14.0
		Subtest 3	9262	1852.4	0.5	24.0	23.0	13.8	13.4
			9400	1880.0	0.5	24.0	22.9	13.8	13.4
			9538	1907.6	0.5	24.0	23.0	13.7	13.5
		Subtest 4	9262	1852.4	0.5	23.9	23.0	13.7	13.4
			9400	1880.0	0.5	24.0	22.9	13.8	13.4
			9538	1907.6	0.5	24.0	23.0	13.8	13.5

W-CDMA Band IV Measured Results

Band	Mode		UL Ch No.	Freq. (MHz)	MPR (dB)	Max. Power		Reduced Power	
						Antenna C Pwr (dBm)	Antenna D Pwr (dBm)	Antenna C Pwr (dBm)	Antenna D Pwr (dBm)
W-CDMA Band IV	Rel 99	RMC, 12.2 kbps	1312	1712.4	N/A	25.3	25.2	13.7	13.8
			1413	1732.6	N/A	25.5	25.4	13.8	13.7
			1513	1752.6	N/A	25.4	25.3	13.7	13.7
	HSDPA	Subtest 1	1312	1712.4	0	24.4	24.4	13.6	13.8
			1413	1732.6	0	24.3	24.3	13.7	13.8
			1513	1752.6	0	24.5	24.4	13.7	13.7
		Subtest 2	1312	1712.4	0	24.3	24.3	13.6	13.7
			1413	1732.6	0	24.3	24.3	13.6	13.8
			1513	1752.6	0	24.3	24.4	13.6	13.6
		Subtest 3	1312	1712.4	0.5	24.0	24.0	13.1	13.3
			1413	1732.6	0.5	23.9	23.9	13.2	13.3
			1513	1752.6	0.5	23.9	24.0	13.2	13.2
		Subtest 4	1312	1712.4	0.5	23.9	23.9	13.1	13.3
			1413	1732.6	0.5	23.9	23.9	13.2	13.3
			1513	1752.6	0.5	24.0	24.0	13.2	13.2
	HSUPA	Subtest 1	1312	1712.4	0	24.4	24.3	13.7	13.8
			1413	1732.6	0	24.4	24.4	13.8	13.8
			1513	1752.6	0	24.4	24.3	13.8	13.7
		Subtest 2	1312	1712.4	2	22.5	22.5	11.7	11.8
			1413	1732.6	2	22.5	22.5	11.8	11.8
			1513	1752.6	2	22.5	22.4	11.7	11.7
		Subtest 3	1312	1712.4	1	23.5	23.5	12.7	12.6
			1413	1732.6	1	23.6	23.5	12.7	12.6
			1513	1752.6	1	23.6	23.4	12.8	12.7
		Subtest 4	1312	1712.4	2	22.5	22.4	11.7	11.8
			1413	1732.6	2	22.5	22.5	11.8	11.8
			1513	1752.6	2	22.6	22.5	11.8	11.8
		Subtest 5	1312	1712.4	0	24.4	24.3	13.7	13.7
			1413	1732.6	0	24.3	24.2	13.7	13.7
			1513	1752.6	0	24.4	24.3	13.8	13.8
	DC-HSDPA	Subtest 1	1312	1712.4	0	24.4	24.4	13.8	13.8
			1413	1732.6	0	24.4	24.4	13.8	13.8
			1513	1752.6	0	24.4	24.3	13.8	13.7
		Subtest 2	1312	1712.4	0	24.4	24.3	13.7	13.8
			1413	1732.6	0	24.4	24.3	13.7	13.8
			1513	1752.6	0	24.3	24.3	13.7	13.7
		Subtest 3	1312	1712.4	1	24.0	24.0	13.2	13.3
			1413	1732.6	1	23.9	24.0	13.2	13.3
			1513	1752.6	1	23.9	23.9	13.2	13.2
		Subtest 4	1312	1712.4	1	24.0	24.0	13.3	13.3
			1413	1732.6	1	23.9	24.0	13.3	13.3
			1513	1752.6	1	24.0	23.9	13.3	13.2

W-CDMA Band V Measured Results

Band	Mode		UL Ch No.	Freq. (MHz)	MPR (dB)	Max. Power		Reduced Power	
						Antenna C Pwr (dBm)	Antenna D Pwr (dBm)	Antenna C Pwr (dBm)	Antenna D Pwr (dBm)
W-CDMA Band V	Rel 99	RMC, 12.2 kbps	4132	826.4	N/A	25.5	24.8	18.2	19.8
			4183	836.6	N/A	25.2	25.0	18.2	19.8
			4233	846.6	N/A	25.2	24.9	18.2	19.7
	HSDPA	Subtest 1	4132	826.4	0.0	24.5	24.1	18.2	19.8
			4183	836.6	0.0	24.4	24.2	18.2	19.8
			4233	846.6	0.0	24.4	23.9	18.2	19.7
		Subtest 2	4132	826.4	0.0	24.5	24.0	18.2	19.8
			4183	836.6	0.0	24.4	24.1	18.2	19.8
			4233	846.6	0.0	24.4	23.9	18.2	19.7
		Subtest 3	4132	826.4	0.5	24.0	23.6	17.7	19.3
			4183	836.6	0.5	24.0	23.7	17.7	19.3
			4233	846.6	0.5	24.1	23.5	17.7	19.3
		Subtest 4	4132	826.4	0.5	24.0	23.6	17.7	19.3
			4183	836.6	0.5	24.0	23.7	17.7	19.3
			4233	846.6	0.5	24.1	23.4	17.7	19.3
	HSUPA	Subtest 1	4132	826.4	0.0	24.5	24.1	18.2	19.8
			4183	836.6	0.0	24.4	24.1	18.1	19.8
			4233	846.6	0.0	24.4	24.1	18.2	19.8
		Subtest 2	4132	826.4	2.0	22.7	22.3	16.2	17.8
			4183	836.6	2.0	22.6	22.4	16.1	17.8
			4233	846.6	2.0	22.6	22.4	16.2	17.8
		Subtest 3	4132	826.4	1.0	23.5	23.4	17.2	18.8
			4183	836.6	1.0	23.6	23.4	17.1	18.8
			4233	846.6	1.0	23.6	23.4	17.1	18.8
		Subtest 4	4132	826.4	2.0	22.5	22.5	16.2	17.8
			4183	836.6	2.0	22.6	22.4	16.1	17.8
			4233	846.6	2.0	22.6	22.3	16.2	17.8
		Subtest 5	4132	826.4	0.0	24.4	24.1	18.2	19.8
			4183	836.6	0.0	24.4	24.1	18.1	19.8
			4233	846.6	0.0	24.4	24.0	18.2	19.8
	DC-HSDPA	Subtest 1	4132	826.4	0.0	24.4	24.2	18.1	19.8
			4183	836.6	0.0	24.5	24.1	18.2	19.8
			4233	846.6	0.0	24.4	24.1	18.2	19.8
		Subtest 2	4132	826.4	0.0	24.3	24.0	18.2	19.8
			4183	836.6	0.0	24.4	24.0	18.2	19.8
			4233	846.6	0.0	24.4	23.9	18.1	19.8
		Subtest 3	4132	826.4	0.5	24.0	23.6	17.7	19.3
			4183	836.6	0.5	24.0	23.6	17.7	19.3
			4233	846.6	0.5	24.0	23.5	17.7	19.3
		Subtest 4	4132	826.4	0.5	24.0	23.5	17.6	19.3
			4183	836.6	0.5	23.9	23.4	17.7	19.3
			4233	846.6	0.5	24.0	23.5	17.7	19.3

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.

CDMA BC0 Measured Results

Band	Mode		Ch No.	Freq. (MHz)	Max. Power		Reduced Power	
					Antenna C Pwr (dBm)	Antenna D Pwr (dBm)	Antenna C Pwr (dBm)	Antenna D Pwr (dBm)
BC 0	1xRTT	RC1 SO55 (Loopback)	1013	824.7	24.3	23.8	18.2	19.8
			384	836.5	24.4	23.7	18.2	19.8
			777	848.3	24.3	23.9	18.2	19.8
		RC3 SO55 (Loopback)	1013	824.7	24.4	23.9	18.2	19.8
			384	836.5	24.3	23.8	18.2	19.8
			777	848.3	24.3	23.9	18.2	19.8
		RC3 SO32 (+F-SCH)	1013	824.7	24.3	23.7	18.0	19.7
			384	836.5	24.4	23.7	18.2	19.7
			777	848.3	24.2	23.9	18.2	19.6
	1xAdvanced	Fwd11/Rvs8 SO75 (Loopback)	1013	824.7	24.4	23.8	18.2	19.8
			384	836.5	24.4	23.6	18.2	19.8
			777	848.3	24.3	23.9	18.2	19.7
	1xEVDO Rel. 0	FTAP Rate: 307.2 kbps(2 slot, QPSK) RTAP Rate: 153.6 kbps	1013	824.7	24.3	23.8	18.2	19.8
			384	836.5	24.3	23.8	18.2	19.8
			777	848.3	24.4	23.7	18.2	19.8
	1xEVDO Rev. A	FETAP: 307.2k, QPSK/ ACK RETAP: 4096	1013	824.7	24.5	24.0	18.2	19.8
			384	836.5	24.4	23.9	18.1	19.8
			777	848.3	24.5	23.9	18.2	19.7

CDMA BC1 Measured Results

Band	Mode		Ch No.	Freq. (MHz)	Max. Power		Reduced Power	
					Antenna C Pwr (dBm)	Antenna D Pwr (dBm)	Antenna C Pwr (dBm)	Antenna D Pwr (dBm)
BC 1	1xRTT	RC1 SO55 (Loopback)	25	1851.3	25.8	23.3	14.2	14.0
			600	1880.0	25.8	23.3	14.2	13.8
			1175	1908.8	25.8	23.2	14.1	14.0
		RC3 SO55 (Loopback)	25	1851.3	25.8	23.4	14.3	13.8
			600	1880.0	25.9	23.2	14.2	14.0
			1175	1908.8	25.7	23.1	14.1	14.0
		RC3 SO32 (+F-SCH)	25	1851.3	25.8	23.3	14.3	13.9
			600	1880.0	25.8	23.3	14.2	14.0
			1175	1908.8	25.9	23.1	14.2	14.0
	1xAdvanced	Fwd11/Rvs8 SO75 (Loopback)	25	1851.3	25.7	23.2	14.3	14.0
			600	1880.0	25.8	23.2	14.2	13.8
			1175	1908.8	25.8	23.1	14.1	14.0
	1xEVDO Rel. 0	FTAP Rate: 307.2 kbps(2 slot, QPSK) RTAP Rate: 153.6 kbps	25	1851.3	25.7	23.3	14.3	14.0
			600	1880.0	25.8	23.2	14.3	14.0
			1175	1908.8	25.7	23.1	14.3	14.0
	1xEVDO Rev. A	FETAP: 307.2k, QPSK/ ACK RETAP: 4096	25	1851.3	25.9	23.5	14.3	13.9
			600	1880.0	25.8	23.5	14.2	14.0
			1175	1908.8	25.8	23.4	14.1	13.9

CDMA BC10 Measured Results

Band	Mode		Ch No.	Freq. (MHz)	Max. Power		Reduced Power	
					Antenna C Pwr (dBm)	Antenna D Pwr (dBm)	Antenna C Pwr (dBm)	Antenna D Pwr (dBm)
BC 10	1xRTT	RC1 SO55 (Loopback)	476	817.9	25.8	23.7	18.0	19.7
			580	820.5	25.8	23.9	18.0	19.8
			684	823.1	25.8	23.6	18.0	19.8
		RC3 SO55 (Loopback)	476	817.9	25.8	23.6	18.0	19.7
			580	820.5	25.9	23.9	18.0	19.8
			684	823.1	25.8	23.7	18.0	19.8
		RC3 SO32 (+F-SCH)	476	817.9	25.7	23.6	18.0	19.8
			580	820.5	25.7	23.7	18.0	19.7
			684	823.1	25.8	23.7	18.0	19.7
	1xAdvanced	Fwd11/Rvs8 SO75 (Loopback)	476	817.9	25.8	23.6	18.0	19.7
			580	820.5	25.8	23.7	18.0	19.8
			684	823.1	25.9	23.6	18.0	19.8
	1xEVDO Rel. 0	FTAP Rate: 307.2 kbps(2 slot, QPSK) RTAP Rate: 153.6 kbps	476	817.9	25.8	23.8	18.0	19.8
			580	820.5	25.7	23.9	18.0	19.8
			684	823.1	25.8	23.8	18.0	19.8
	1xEVDO Rev. A	FETAP: 307.2k, QPSK/ ACK RETAP: 4096	476	817.9	25.9	23.9	18.0	19.7
			580	820.5	25.8	24.0	18.0	19.8
			684	823.1	25.8	23.8	18.0	19.8

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

SAR for LTE Band 2 (Frequency range: 1850-1910 MHz) is covered by LTE Band 25 (Frequency range: 1850-1915 MHz) due to overlapping frequency range, same maximum tune-up limit and same channel bandwidth.

LTE Band 4 Measured Results

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Power Antenna C			MPR	Max. Power Antenna D			MPR	Reduced Power Antenna C			MPR	Reduced Power Antenna D		
						1720 MHz	1732.5 MHz	1745 MHz		1720 MHz	1732.5 MHz	1745 MHz		1720 MHz	1732.5 MHz	1745 MHz		1720 MHz	1732.5 MHz	1745 MHz
LTE Band 4	20	QPSK	1	0	0	24.6	24.6	24.7	0	23.1	23.5	23.5	0	13.9	13.9	14.0	0	13.9	14.0	14.0
			1	49	0	23.9	24.0	24.0	0	22.6	22.6	22.7	0	14.0	14.0	13.9	0	14.0	14.0	14.0
			1	99	0	24.2	24.3	24.3	0	23.1	23.1	23.2	0	13.8	14.0	13.9	0	13.9	13.9	13.8
			50	0	1	24.2	24.2	24.2	1	21.8	22.0	22.0	0	13.8	13.9	13.9	0	13.9	13.9	13.9
			50	24	1	24.0	24.1	24.1	1	21.7	21.7	21.8	0	13.9	13.9	13.9	0	14.0	13.9	14.0
			50	49	1	24.0	24.2	24.2	1	21.8	21.9	22.0	0	13.8	13.8	13.8	0	13.8	13.8	13.8
			100	0	1	24.2	24.2	24.2	1	21.8	21.9	21.9	0	14.0	14.0	14.0	0	14.0	14.0	14.0
		16QAM	1	0	1	24.2	24.4	24.3	1	22.5	23.0	22.9	0	14.0	14.0	13.9	0	14.0	13.9	14.0
			1	49	1	23.5	23.8	23.6	1	21.9	22.1	22.1	0	13.8	14.0	14.0	0	13.9	13.8	13.9
			1	99	1	23.7	24.0	23.9	1	22.5	22.7	22.5	0	14.0	14.0	14.0	0	13.9	14.0	14.0
			50	0	2	22.4	22.5	22.4	2	20.8	21.0	21.0	0	13.8	13.9	14.0	0	13.8	14.0	13.9
			50	24	2	22.2	22.3	22.3	2	20.7	20.8	20.9	0	13.9	13.8	13.8	0	13.8	13.8	14.0
			50	49	2	22.2	22.4	22.5	2	20.8	20.9	21.0	0	13.8	13.8	13.8	0	13.8	13.9	13.9
			100	0	2	22.4	22.4	22.4	2	20.9	20.9	21.0	0	13.9	13.8	13.8	0	13.8	13.9	13.8

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Power Antenna C			MPR	Max. Power Antenna D			MPR	Reduced Power Antenna C			MPR	Reduced Power Antenna D		
						1717.5 MHz	1732.5 MHz	1747.5 MHz		1717.5 MHz	1732.5 MHz	1747.5 MHz		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	24.3	24.2	24.6	0	23.2	23.4	23.5	0	13.8	13.9	14.0	0	14.0	14.0	14.0
			1	36	0	23.9	24.0	23.7	0	22.8	22.8	22.7	0	13.8	13.9	13.8	0	13.8	13.9	13.9
			1	74	0	24.0	24.2	24.2	0	23.2	23.2	23.2	0	14.0	14.0	13.9	0	13.9	13.8	13.8
			36	0	1	24.0	24.1	24.2	1	22.0	22.2	22.2	0	14.0	14.0	14.0	0	13.9	14.0	13.8
			36	18	1	24.0	24.1	24.1	1	21.9	22.0	22.1	0	13.9	13.8	13.8	0	13.8	13.8	13.9
			36	37	1	24.1	24.1	24.2	1	22.0	22.0	22.1	0	13.9	13.9	13.9	0	13.8	13.9	13.8
			75	0	1	24.0	24.1	24.1	1	22.0	22.0	22.1	0	13.9	13.9	13.9	0	13.9	13.8	14.0
		16QAM	1	0	1	23.9	23.4	23.9	1	22.5	22.2	22.8	0	14.0	13.8	13.9	0	13.9	13.9	14.0
			1	36	1	23.4	23.1	23.6	1	22.2	21.7	22.4	0	13.9	14.0	13.9	0	13.8	13.8	14.0
			1	74	1	23.7	23.3	23.7	1	22.5	22.1	22.6	0	13.9	14.0	14.0	0	14.0	14.0	14.0
			36	0	2	22.2	22.3	22.4	2	21.0	21.2	21.2	0	13.9	14.0	14.0	0	13.9	13.9	13.8
			36	18	2	22.2	22.3	22.3	2	20.9	21.0	21.1	0	13.9	13.8	13.8	0	13.9	13.8	13.8
			36	37	2	22.2	22.3	22.4	2	21.0	21.1	21.2	0	13.8	13.9	13.9	0	13.9	13.8	13.9
			75	0	2	22.2	22.3	22.3	2	21.0	21.1	21.2	0	14.0	13.8	13.8	0	13.9	13.9	13.8

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Power Antenna C			MPR	Max. Power Antenna D			MPR	Reduced Power Antenna C			MPR	Reduced Power Antenna D		
						1715 MHz	1732.5 MHz	1750 MHz		1715 MHz	1732.5 MHz	1750 MHz		1715 MHz	1732.5 MHz	1750 MHz		1715 MHz	1732.5 MHz	1750 MHz
LTE Band 4	10	QPSK	1	0	0	24.2	24.3	24.5	0	23.3	23.4	23.5	0	13.9	14.0	14.0	0	13.9	14.0	13.8
			1	24	0	23.9	24.1	24.1	0	23.0	23.0	23.2	0	13.8	13.8	13.8	0	13.9	13.9	13.8
			1	49	0	24.2	24.3	24.3	0	23.2	23.3	23.3	0	14.0	13.9	14.0	0	13.9	13.9	13.8
			25	0	1	24.1	24.2	24.2	1	22.1	22.2	22.2	0	13.9	14.0	14.0	0	13.8	13.9	13.9
			25	12	1	24.0	24.1	24.2	1	22.1	22.1	22.3	0	13.8	13.9	13.9	0	13.8	13.8	13.9
			25	24	1	24.1	24.2	24.2	1	22.1	22.1	22.3	0	13.9	13.9	13.9	0	13.8	13.8	13.9
			50	0	1	24.1	24.2	24.3	1	22.1	22.2	22.3	0	14.0	13.9	14.0	0	13.8	13.8	13.8
		16QAM	1	0	1	23.4	23.8	23.6	1	22.3	22.3	22.8	0	14.0	14.0	14.0	0	13.8	14.0	14.0
			1	24	1	23.1	23.7	23.3	1	22.0	22.0	22.6	0	13.9	13.8	14.0	0	13.8	14.0	13.9
			1	49	1	23.3	23.8	23.4	1	22.2	22.2	22.7	0	13.9	14.0	13.9	0	13.9	13.9	14.0
			25	0	2	22.3	22.4	22.4	2	21.2	21.3	21.3	0	13.9	13.9	13.9	0	13.8	13.9	13.9
			25	12	2	22.3	22.4	22.5	2	21.1	21.1	21.3	0	13.8	13.8	13.8	0	13.8	13.8	13.9
			25	24	2	22.3	22.5	22.5	2	21.2	21.2	21.3	0	13.9	13.8	13.9	0	13.8	13.8	13.9
			50	0	2	22.3	22.4	22.5	2	21.2	21.2	21.4	0	13.8	13.9	13.9	0	13.8	13.9	13.8

LTE Band 4 Measured Results (continued)

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Power Antenna C			MPR	Max. Power Antenna D			MPR	Reduced Power Antenna C			MPR	Reduced Power Antenna D		
						1712.5 MHz	1732.5 MHz	1752.5 MHz		1712.5 MHz	1732.5 MHz	1752.5 MHz		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	24.0	24.1	24.5	0	23.3	23.3	23.5	0	13.9	13.9	13.8	0	13.9	14.0	13.9
			1	12	0	24.0	24.1	24.1	0	23.2	23.3	23.4	0	13.9	13.9	13.8	0	14.0	13.9	13.8
			1	24	0	24.0	24.1	24.2	0	23.3	23.3	23.4	0	13.9	14.0	13.8	0	14.0	14.0	13.9
			12	0	1	24.0	24.1	24.2	1	22.2	22.3	22.4	0	13.8	13.9	13.8	0	14.0	13.9	13.9
			12	7	1	24.0	24.1	24.2	1	22.2	22.3	22.4	0	13.9	13.9	13.9	0	14.0	14.0	13.9
			12	13	1	24.0	24.1	24.2	1	22.2	22.3	22.4	0	13.9	13.9	13.8	0	14.0	13.9	13.9
			25	0	1	24.0	24.1	24.1	1	22.2	22.2	22.4	0	13.8	13.9	13.8	0	13.9	13.9	13.9
		16QAM	1	0	1	23.4	23.4	23.9	1	22.3	22.5	22.9	0	14.0	13.9	14.0	0	13.8	14.0	14.0
			1	12	1	23.3	23.5	23.8	1	22.3	22.4	22.9	0	14.0	13.9	13.9	0	13.8	13.8	14.0
			1	24	1	23.4	23.5	23.9	1	22.3	22.5	22.9	0	14.0	13.9	14.0	0	13.8	14.0	14.0
			12	0	2	22.3	22.3	22.5	2	21.3	21.3	21.6	0	13.9	13.9	13.9	0	13.9	14.0	13.9
			12	7	2	22.3	22.4	22.5	2	21.3	21.4	21.6	0	13.9	14.0	13.9	0	13.9	14.0	13.9
			12	13	2	22.3	22.4	22.5	2	21.3	21.4	21.6	0	13.9	14.0	14.0	0	13.9	14.0	13.9
			25	0	2	22.2	22.3	22.4	2	21.2	21.3	21.5	0	13.8	13.9	13.9	0	14.0	13.9	13.9

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Power Antenna C			MPR	Max. Power Antenna D			MPR	Reduced Power Antenna C			MPR	Reduced Power Antenna D		
						1711.5 MHz	1732.5 MHz	1753.5 MHz		1711.5 MHz	1732.5 MHz	1753.5 MHz		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	24.1	24.6	0	23.2	23.3	23.4	0	13.8	13.9	13.8	0	13.9	14.0	13.8
			1	8	0	24.0	24.2	24.1	0	23.3	23.3	23.4	0	13.9	13.9	13.8	0	13.9	13.9	13.8
			1	14	0	23.9	24.1	24.1	0	23.2	23.2	23.4	0	13.9	13.9	13.8	0	13.9	14.0	13.8
			8	0	1	24.0	24.1	24.1	1	22.2	22.2	22.4	0	13.8	13.8	13.8	0	13.9	14.0	13.9
			8	4	1	24.0	24.1	24.1	1	22.2	22.2	22.4	0	13.8	13.9	13.8	0	14.0	13.9	13.9
			8	7	1	24.0	24.1	24.2	1	22.2	22.3	22.4	0	13.8	13.9	13.9	0	13.9	13.9	13.8
			15	0	1	24.0	24.1	24.1	1	22.2	22.2	22.4	0	13.8	13.8	13.8	0	13.9	13.9	13.9
		16QAM	1	0	1	23.4	23.9	23.6	1	22.2	22.2	22.7	0	13.8	13.8	14.0	0	13.9	13.9	13.8
			1	8	1	23.5	23.1	23.7	1	22.3	22.2	22.8	0	13.9	13.8	14.0	0	13.9	13.8	13.8
			1	14	1	23.4	24.0	23.6	1	22.2	22.2	22.7	0	13.9	13.8	14.0	0	13.9	13.8	13.8
			8	0	2	22.6	22.5	22.8	2	21.4	21.4	21.3	0	13.8	13.9	13.9	0	13.9	13.9	13.9
			8	4	2	22.6	22.5	22.8	2	21.4	21.4	21.3	0	13.8	13.9	13.9	0	14.0	14.0	13.9
			8	7	2	22.7	22.5	22.9	2	21.4	21.4	21.3	0	13.8	13.9	13.8	0	13.9	13.9	13.9
			15	0	2	22.6	22.6	22.6	2	21.2	21.3	21.4	0	13.8	13.8	13.9	0	13.9	14.0	13.9

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Power Antenna C			MPR	Max. Power Antenna D			MPR	Reduced Power Antenna C			MPR	Reduced Power Antenna D		
						1710.7 MHz	1732.5 MHz	1754.3 MHz		1710.7 MHz	1732.5 MHz	1754.3 MHz		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	24.6	24.0	0	23.1	23.2	23.3	0	13.9	14.0	13.9	0	13.9	14.0	13.9
			1	3	0	24.0	24.0	24.1	0	23.2	23.2	23.3	0	14.0	13.8	13.9	0	14.0	14.0	13.9
			1	5	0	23.9	24.0	24.0	0	23.1	23.2	23.3	0	13.9	14.0	13.8	0	13.9	14.0	13.8
			3	0	0	24.0	24.1	24.1	0	23.2	23.3	23.4	0	14.0	14.0	13.9	0	14.0	14.0	14.0
			3	1	0	24.0	24.2	24.1	0	23.3	23.3	23.4	0	14.0	14.0	14.0	0	14.0	14.0	14.0
			3	3	0	24.0	24.1	24.1	0	23.3	23.3	23.4	0	14.0	14.0	13.9	0	14.0	14.0	13.9
			6	0	1	24.0	24.0	24.0	1	22.1	22.2	22.3	0	14.0	14.0	13.9	0	13.9	14.0	13.9
		16QAM	1	0	1	23.2	23.3	23.7	1	22.2	22.6	22.3	0	14.0	13.8	14.0	0	13.9	13.9	13.8
			1	3	1	23.2	23.4	23.6	1	22.2	22.6	22.4	0	14.0	13.9	14.0	0	14.0	14.0	13.9
			1	5	1	23.2	23.3	23.6	1	22.2	22.5	22.3	0	14.0	13.8	14.0	0	13.9	13.9	13.8
			3	0	1	23.4	23.3	23.5	1	22.3	22.4	22.5	0	13.9	14.0	13.9	0	14.0	13.9	13.9
			3	1	1	23.4	23.4	23.5	1	22.3	22.4	22.5	0	13.9	13.9	13.9	0	14.0	13.9	13.9
			3	3	1	23.4	23.4	23.5	1	22.3	22.4	22.5	0	13.8	14.0	13.9	0	14.0	14.0	13.8
			6	0	2	22.3	22.4	22.2	2	21.3	21.2	21.5	0	14.0	14.0	13.9	0	13.9	13.9	13.9

LTE Band 5 Measured Results

SAR for LTE Band 5 (Frequency range: 824-849 MHz) is covered by LTE Band 26 (Frequency range: 814-849 MHz) due to overlapping frequency range, same maximum tune-up limit and same channel bandwidth.

LTE Band 7 Measured Results

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Power Antenna C			MPR	Max. Power Antenna D			MPR	Reduced Power Antenna C			MPR	Reduced Power Antenna D		
						2510 MHz	2535 MHz	2560 MHz		2510 MHz	2535 MHz	2560 MHz		2510 MHz	2535 MHz	2560 MHz		2510 MHz	2535 MHz	2560 MHz
LTE Band 7	20	QPSK	1	0	0	24.4	24.5	24.5	0	23.5	23.5	23.4	0	12.2	12.2	12.2	0	11.7	11.7	11.7
			1	49	0	24.0	24.1	24.1	0	23.1	23.0	23.2	0	12.2	12.2	12.2	0	11.8	11.7	11.8
			1	99	0	24.0	24.0	24.0	0	23.0	23.0	23.0	0	12.2	12.2	12.2	0	11.6	11.7	11.7
			50	0	1	24.2	24.3	24.2	1	22.4	22.4	22.4	0	12.2	12.1	12.1	0	11.7	11.7	11.7
			50	24	1	24.1	24.1	24.1	1	22.3	22.2	22.3	0	12.2	12.2	12.2	0	11.7	11.7	11.7
			50	49	1	24.0	24.0	24.0	1	22.1	22.1	22.2	0	12.1	12.2	12.2	0	11.7	11.7	11.7
			100	0	1	24.2	24.2	24.2	1	22.3	22.2	22.3	0	12.2	12.2	12.2	0	11.8	11.8	11.8
		16QAM	1	0	1	24.1	24.1	24.1	1	22.9	22.9	22.9	0	12.2	12.2	12.2	0	11.8	11.8	11.7
			1	49	1	23.7	23.9	23.6	1	22.6	22.6	22.5	0	12.1	12.1	12.2	0	11.6	11.8	11.6
			1	99	1	23.5	23.7	23.6	1	22.5	22.6	22.4	0	12.2	12.1	12.2	0	11.9	11.7	11.7
			50	0	2	22.5	22.5	22.5	2	21.4	21.4	21.4	0	12.2	12.1	12.1	0	11.6	11.8	11.8
			50	24	2	22.4	22.4	22.3	2	21.2	21.2	21.3	0	12.1	12.1	12.2	0	11.6	11.6	11.6
			50	49	2	22.2	22.3	22.2	2	21.1	21.1	21.2	0	12.1	12.2	12.2	0	11.7	11.6	11.6
			100	0	2	22.4	22.4	22.3	2	21.3	21.2	21.3	0	12.2	12.2	12.2	0	11.8	11.8	11.8

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Power Antenna C			MPR	Max. Power Antenna D			MPR	Reduced Power Antenna C			MPR	Reduced Power Antenna D		
						2507.5 MHz	2535 MHz	2562.5 MHz		2507.5 MHz	2535 MHz	2562.5 MHz		2507.5 MHz	2535 MHz	2562.5 MHz		2507.5 MHz	2535 MHz	2562.5 MHz
LTE Band 7	15	QPSK	1	0	0	24.3	24.3	24.3	0	23.5	23.5	23.5	0	12.2	12.2	12.1	0	11.6	11.8	11.6
			1	36	0	23.9	23.8	23.7	0	23.1	23.0	23.3	0	12.2	12.1	12.1	0	11.8	11.6	11.6
			1	74	0	23.9	23.9	24.0	0	23.2	23.1	23.1	0	12.1	12.1	12.2	0	11.7	11.6	11.7
			36	0	1	24.3	24.3	24.2	1	22.4	22.4	22.4	0	12.2	12.1	12.1	0	11.8	11.7	11.7
			36	18	1	24.1	24.1	24.1	1	22.3	22.2	22.4	0	12.2	12.1	12.1	0	11.7	11.6	11..7
			36	37	1	24.1	24.0	24.0	1	22.3	22.1	22.3	0	12.1	12.1	12.1	0	11.8	11.7	11.6
			75	0	1	24.1	24.1	24.1	1	22.3	22.2	22.4	0	12.1	12.2	12.2	0	11.7	11.8	11.8
		16QAM	1	0	1	23.9	23.4	23.9	1	22.3	22.8	22.9	0	12.2	12.2	12.2	0	11.8	11.7	11.7
			1	36	1	23.6	23.1	23.6	1	22.1	22.5	22.6	0	12.1	12.2	12.2	0	11.7	11.7	11.8
			1	74	1	23.5	23.0	23.5	1	22.0	22.5	22.5	0	12.1	12.2	12.1	0	11.8	11.6	11.7
			36	0	2	22.4	22.5	22.5	2	21.4	21.3	21.4	0	12.2	12.1	12.1	0	11.7	11.7	11.7
			36	18	2	22.3	22.4	22.4	2	21.3	21.2	21.4	0	12.1	12.1	12.2	0	11.8	11.7	11.7
			36	37	2	22.2	22.3	22.3	2	21.3	21.1	21.3	0	12.1	12.1	12.1	0	11.8	11.6	11.7
			75	0	2	22.3	22.3	22.3	2	21.3	21.3	21.4	0	12.1	12.2	12.1	0	11.8	11.6	11.8

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Power Antenna C			MPR	Max. Power Antenna D			MPR	Reduced Power Antenna C			MPR	Reduced Power Antenna D		
						2505 MHz	2535 MHz	2565 MHz		2505 MHz	2535 MHz	2565 MHz		2505 MHz	2535 MHz	2565 MHz		2505 MHz	2535 MHz	2565 MHz
LTE Band 7	10	QPSK	1	0	0	24.3	24.5	24.3	0	23.4	23.4	23.5	0	12.2	12.1	12.2	0	11.8	11.8	11.7
			1	24	0	24.1	24.1	24.1	0	23.2	23.1	23.2	0	12.2	12.2	12.1	0	11.7	11.6	11.6
			1	49	0	24.1	24.1	24.2	0	23.2	23.1	23.0	0	12.2	12.1	12.2	0	11.7	11.7	11.6
			25	0	1	24.2	24.3	24.3	1	22.2	22.2	22.4	0	12.1	12.2	12.2	0	11.8	11.8	11.8
			25	12	1	24.2	24.2	24.2	1	22.2	22.2	22.4	0	12.1	12.2	12.2	0	11.8	11.7	11.7
			25	24	1	24.2	24.1	24.2	1	22.2	22.1	22.3	0	12.2	12.1	12.1	0	11.7	11.6	11.6
			50	0	1	24.2	24.2	24.2	1	22.3	22.2	22.4	0	12.1	12.1	12.2	0	11.7	11.7	11.7
		16QAM	1	0	1	23.8	23.6	23.4	1	22.7	22.4	22.4	0	12.2	12.2	12.2	0	11.7	11.8	11.7
			1	24	1	23.7	23.4	23.2	1	22.5	22.2	22.2	0	12.2	12.1	12.1	0	11.7	11.6	11.7
			1	49	1	23.7	23.3	23.3	1	22.5	22.2	21.9	0	12.2	12.1	12.1	0	11.7	11.7	11.7
			25	0	2	22.4	22.5	22.4	2	21.2	21.3	21.5	0	12.1	12.2	12.1	0	11.7	11.8	11.7
			25	12	2	22.4	22.5	22.4	2	21.2	21.2	21.4	0	12.2	12.2	12.1	0	11.6	11.7	11.7
			25	24	2	22.4	22.4	22.4	2	21.2	21.2	21.4	0	12.2	12.1	12.1	0	11.6	11.6	11.6
			50	0	2	22.4	22.4	22.4	2	21.2	21.2	21.4	0	12.1	12.1	12.1	0	11.7	11.7	11.7

LTE Band 7 Measured Results (continued)

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Power Antenna C			MPR	Max. Power Antenna D			MPR	Reduced Power Antenna C			MPR	Reduced Power Antenna D		
						2502.5 MHz	2535 MHz	2567.5 MHz		2502.5 MHz	2535 MHz	2567.5 MHz		2502.5 MHz	2535 MHz	2567.5 MHz		2502.5 MHz	2535 MHz	2567.5 MHz
LTE Band 7	5	QPSK	1	0	0	24.5	24.2	24.2	0	23.5	23.5	23.5	0	12.2	12.2	12.1	0	11.8	11.7	11.7
			1	12	0	24.1	24.2	24.2	0	23.4	23.3	23.4	0	12.2	12.1	12.1	0	11.7	11.6	11.7
			1	24	0	24.1	24.1	24.2	0	23.4	23.3	23.3	0	12.2	12.1	12.1	0	11.7	11.7	11.7
			12	0	1	24.1	24.2	24.2	1	22.4	22.4	22.6	0	12.2	12.2	12.1	0	11.8	11.8	11.8
			12	7	1	24.1	24.2	24.2	1	22.4	22.4	22.5	0	12.2	12.1	12.1	0	11.7	11.8	11.7
			12	13	1	24.1	24.1	24.2	1	22.4	22.3	22.5	0	12.2	12.1	12.1	0	11.8	11.8	11.7
			25	0	1	24.1	24.1	24.1	1	22.4	22.3	22.5	0	12.1	12.1	12.1	0	11.7	11.8	11.8
		16QAM	1	0	1	23.5	23.6	23.9	1	22.7	22.9	22.6	0	12.2	12.1	12.2	0	11.7	11.6	11.7
			1	12	1	23.5	23.5	23.9	1	22.5	22.9	22.5	0	12.2	12.1	12.2	0	11.7	11.8	11.6
			1	24	1	23.4	23.5	23.9	1	22.5	22.9	22.5	0	12.2	12.2	12.2	0	11.7	11.7	11.6
			12	0	2	22.4	22.5	22.5	2	21.4	21.6	21.7	0	12.2	12.2	12.2	0	11.8	11.8	11.8
			12	7	2	22.4	22.5	22.6	2	21.4	21.5	21.6	0	12.2	12.2	12.2	0	11.7	11.8	11.8
			12	13	2	22.3	22.5	22.5	2	21.5	21.6	21.6	0	12.2	12.2	12.2	0	11.8	11.7	11.8
			25	0	2	22.3	22.4	22.5	2	21.4	21.5	21.5	0	12.1	12.1	12.1	0	11.7	11.7	11.8

LTE Band 12 Measured Results

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Power Antenna C	MPR	Max. Power Antenna D	MPR	Reduced Power Antenna C	MPR	Reduced Power Antenna D
						707.5 MHz		707.5 MHz		707.5 MHz		707.5 MHz
LTE Band 12	10	QPSK	1	0	0	24.2	0	22.6	0	18.9	0	21.0
			1	24	0	24.2	0	22.7	0	18.9	0	21.0
			1	49	0	24.3	0	22.6	0	18.9	0	21.0
			25	0	1	24.2	1	21.7	0	18.9	0	21.0
			25	12	1	24.3	1	21.8	0	19.0	0	20.9
			25	24	1	24.3	1	21.7	0	19.0	0	21.0
			50	0	1	24.2	1	21.8	0	18.9	0	20.8
		16QAM	1	0	1	23.8	1	21.7	0	19.0	0	21.0
			1	24	1	23.8	1	21.7	0	19.0	0	21.0
			1	49	1	23.8	1	21.6	0	19.0	0	20.9
			25	0	2	22.4	2	20.8	0	18.9	0	20.0
			25	12	2	22.5	2	20.8	0	18.9	0	20.1
			25	24	2	22.5	2	20.7	0	18.9	0	20.0
			50	0	2	22.4	2	20.8	0	18.9	0	20.0

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Power Antenna C			MPR	Max. Power Antenna D			MPR	Reduced Power Antenna C			MPR	Reduced Power Antenna D		
						701.5 MHz	707.5 MHz	713.5 MHz		701.5 MHz	707.5 MHz	713.5 MHz		701.5 MHz	707.5 MHz	713.5 MHz		701.5 MHz	707.5 MHz	713.5 MHz
LTE Band 12	5	QPSK	1	0	0	24.3	24.2	24.6	0	22.8	22.7	22.7	0	19.0	19.0	19.0	0	21.0	21.0	21.0
			1	12	0	24.3	24.2	24.2	0	22.7	22.8	22.6	0	19.0	19.0	19.0	0	21.0	21.0	21.0
			1	24	0	24.3	24.3	24.2	0	22.7	22.8	22.7	0	19.0	19.0	19.0	0	21.0	21.0	21.0
			12	0	1	24.3	24.3	24.3	1	21.8	21.7	21.7	0	19.0	19.0	19.0	0	21.0	21.0	21.0
			12	7	1	24.3	24.3	24.3	1	21.8	21.7	21.7	0	19.0	19.0	19.0	0	21.0	21.0	20.9
			12	13	1	24.2	24.3	24.2	1	21.7	21.6	21.6	0	19.0	19.0	19.0	0	21.0	21.0	20.9
			25	0	1	24.3	24.2	24.2	1	21.7	21.7	21.7	0	19.0	19.0	19.0	0	21.0	21.0	21.0
		16QAM	1	0	1	23.7	24.0	23.6	1	22.3	21.9	21.8	0	18.9	19.0	19.0	0	21.0	21.0	21.0
			1	12	1	23.6	24.0	23.5	1	22.3	21.8	21.7	0	18.9	19.0	19.0	0	20.9	21.0	21.0
			1	24	1	23.7	23.9	23.6	1	22.3	21.8	21.8	0	18.9	19.0	19.0	0	20.9	21.0	21.0
			12	0	2	22.5	22.6	22.5	2	20.9	20.7	20.7	0	18.8	18.9	18.8	0	20.0	20.0	20.0
			12	7	2	22.6	22.6	22.5	2	20.9	20.8	20.7	0	18.8	18.9	18.8	0	20.0	20.0	20.0
			12	13	2	22.5	22.6	22.5	2	20.9	20.6	20.7	0	18.8	18.9	18.8	0	20.0	20.0	20.0
			25	0	2	22.5	22.5	22.4	2	20.8	20.7	20.7	0	18.8	18.9	18.8	0	20.0	20.0	19.9

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Power Antenna C			MPR	Max. Power Antenna D			MPR	Reduced Power Antenna C			MPR	Reduced Power Antenna D		
						700.5 MHz	707.5 MHz	714.5 MHz		700.5 MHz	707.5 MHz	714.5 MHz		700.5 MHz	707.5 MHz	714.5 MHz		700.5 MHz	707.5 MHz	714.5 MHz
LTE Band 12	3	QPSK	1	0	0	24.5	24.3	24.2	0	22.8	22.6	22.6	0	19.0	19.0	19.0	0	21.0	21.0	20.9
			1	8	0	24.3	24.3	24.3	0	22.8	22.8	22.6	0	19.0	19.0	19.0	0	20.9	20.9	20.9
			1	14	0	24.2	24.3	24.2	0	22.7	22.7	22.6	0	19.0	19.0	19.0	0	21.0	21.0	21.0
			8	0	1	24.3	24.2	24.3	1	21.8	21.7	21.6	0	19.0	19.0	19.0	0	21.0	21.0	21.0
			8	4	1	24.3	24.3	24.2	1	21.8	21.7	21.6	0	19.0	19.0	19.0	0	21.0	21.0	20.9
			8	7	1	24.3	24.3	24.3	1	21.8	21.7	21.6	0	19.0	19.0	19.0	0	20.9	21.0	20.9
			15	0	1	24.3	24.2	24.3	1	21.8	21.7	21.7	0	19.0	19.0	18.9	0	20.9	21.0	20.9
		16QAM	1	0	1	23.4	23.9	23.5	1	22.1	21.7	21.5	0	19.0	19.0	19.0	0	20.9	21.0	21.0
			1	8	1	23.5	23.8	23.5	1	22.2	21.8	21.6	0	19.0	19.0	19.0	0	20.8	21.0	21.0
			1	14	1	23.3	23.9	23.4	1	22.1	21.7	21.5	0	19.0	19.0	19.0	0	20.9	21.0	21.0
			8	0	2	22.6	22.3	22.6	2	20.7	20.8	20.7	0	18.9	18.9	18.8	0	20.0	20.0	19.9
			8	4	2	22.6	22.3	22.6	2	20.7	20.9	20.7	0	18.9	18.9	18.8	0	20.0	20.0	19.9
			8	7	2	22.6	22.3	22.6	2	20.6	20.8	20.7	0	18.9	18.9	18.8	0	20.0	20.0	19.9
			15	0	2	22.5	22.4	22.4	2	20.8	20.6	20.7	0	18.8	18.8	18.8	0	20.0	20.0	20.0

LTE Band 12 Measured Results (continued)

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Power Antenna C			MPR	Max. Power Antenna D			MPR	Reduced Power Antenna C			MPR	Reduced Power Antenna D		
						699.7 MHz	707.5 MHz	715.3 MHz		699.7 MHz	707.5 MHz	715.3 MHz		699.7 MHz	707.5 MHz	715.3 MHz		699.7 MHz	707.5 MHz	715.3 MHz
LTE Band 12	1.4	QPSK	1	0	0	24.6	24.1	24.1	0	22.7	22.7	22.5	0	19.0	19.0	19.0	0	21.0	21.0	21.0
			1	2	0	24.2	24.2	24.2	0	22.8	22.7	22.6	0	19.0	19.0	19.0	0	21.0	21.0	21.0
			1	5	0	24.2	24.2	24.1	0	22.7	22.7	22.5	0	19.0	19.0	19.0	0	21.0	20.9	21.0
			3	0	0	24.3	24.2	24.3	0	22.8	22.7	22.7	0	19.0	19.0	19.0	0	21.0	20.9	21.0
			3	1	0	24.3	24.3	24.3	0	22.9	22.7	22.7	0	19.0	19.0	19.0	0	21.0	20.9	20.9
			3	2	0	24.2	24.2	24.3	0	22.8	22.7	22.7	0	19.0	19.0	19.0	0	21.0	20.9	20.9
			6	0	1	24.2	24.2	24.2	1	21.7	21.6	21.6	0	19.0	19.0	19.0	0	20.9	21.0	20.9
		16QAM	1	0	1	22.7	23.0	22.6	1	21.8	22.0	21.6	0	19.0	19.0	19.0	0	20.8	21.0	21.0
			1	2	1	22.8	22.9	22.6	1	21.9	22.1	21.6	0	19.0	19.0	19.0	0	20.9	21.0	21.0
			1	5	1	22.7	22.9	22.6	1	21.8	22.0	21.6	0	19.0	19.0	19.0	0	20.8	21.0	21.0
			3	0	1	22.7	22.8	22.8	1	21.8	21.8	21.8	0	18.9	19.0	18.8	0	21.0	21.0	21.0
			3	1	1	22.7	22.8	22.8	1	21.8	21.8	21.8	0	18.9	19.0	18.8	0	21.0	21.0	21.0
			3	2	1	22.8	22.8	22.8	1	21.8	21.8	21.8	0	18.9	19.0	18.8	0	21.0	21.0	21.0
			6	0	2	21.7	21.5	21.7	2	20.8	20.6	20.7	0	18.8	19.0	18.8	0	20.1	20.1	20.1

Note(s):

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

LTE Band 13 Measured Results

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Power Antenna C	MPR	Max. Power Antenna D	MPR	Reduced Power Antenna C	MPR	Reduced Power Antenna D
						782 MHz		782 MHz		782 MHz		782 MHz
LTE Band 13	10	QPSK	1	0	0	24.2	0	22.8	0	18.9	0	21.2
			1	24	0	23.9	0	22.9	0	18.9	0	21.2
			1	49	0	23.9	0	22.9	0	18.9	0	21.2
			25	0	1	23.5	1	22.0	0	18.9	0	20.6
			25	12	1	23.6	1	22.1	0	19.0	0	20.7
			25	24	1	23.5	1	22.0	0	19.0	0	20.6
			50	0	1	23.7	1	22.1	0	19.0	0	20.7
		16QAM	1	0	1	23.7	1	21.8	0	19.0	0	21.2
			1	24	1	23.5	1	22.0	0	19.0	0	21.1
			1	49	1	23.5	1	21.8	0	19.0	0	21.2
			25	0	2	22.7	2	21.1	0	18.8	0	21.0
			25	12	2	22.7	2	21.1	0	18.8	0	21.0
			25	24	2	22.6	2	21.1	0	18.8	0	21.0
			50	0	2	22.7	2	21.1	0	18.8	0	21.0

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Power Antenna C	MPR	Max. Power Antenna D	MPR	Reduced Power Antenna C	MPR	Reduced Power Antenna D
						782 MHz		782 MHz		782 MHz		782 MHz
LTE Band 13	5	QPSK	1	0	0	24.0	0	22.9	0	19.0	0	21.2
			1	12	0	23.9	0	22.8	0	19.0	0	21.0
			1	24	0	23.9	0	22.9	0	19.0	0	21.1
			12	0	1	23.5	1	21.9	0	19.0	0	20.0
			12	7	1	23.5	1	21.9	0	19.0	0	20.0
			12	13	1	23.5	1	21.9	0	19.0	0	20.0
			25	0	1	23.5	1	21.9	0	19.0	0	20.0
		16QAM	1	0	1	23.7	1	22.4	0	19.0	0	21.1
			1	12	1	23.6	1	22.4	0	19.0	0	21.2
			1	24	1	23.6	1	22.4	0	19.0	0	21.1
			12	0	2	22.6	2	21.1	0	18.8	0	20.0
			12	7	2	22.6	2	21.0	0	18.8	0	20.0
			12	13	2	22.5	2	21.1	0	18.8	0	20.0
			25	0	2	22.5	2	21.0	0	18.8	0	20.0

Note(s):

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

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LTE Band 17 Measured Results

SAR for LTE Band 17 (Frequency range: 704-716 MHz) is covered by LTE Band 12 (Frequency range: 699-716 MHz) due to overlapping frequency range, same maximum tune-up limit and same channel bandwidth.

LTE Band 25 Measured Results

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Power Antenna C			MPR	Max. Power Antenna D			MPR	Reduced Power Antenna C			MPR	Reduced Power Antenna D		
						1860 MHz	1882.5 MHz	1905 MHz		1860 MHz	1882.5 MHz	1905 MHz		1860 MHz	1882.5 MHz	1905 MHz		1860 MHz	1882.5 MHz	1905 MHz
LTE Band 25	20	QPSK	1	0	0	23.9	24.3	24.1	0	22.4	22.5	22.3	0	14.4	14.4	14.3	0	14.2	14.0	14.1
			1	49	0	24.1	24.2	24.2	0	22.4	22.3	22.3	0	14.5	14.4	14.5	0	14.1	14.1	14.1
			1	99	0	24.0	24.1	23.7	0	22.3	22.2	22.3	0	14.4	14.4	14.3	0	14.0	14.0	14.1
			50	0	1	24.1	24.2	24.0	1	21.4	21.4	21.3	0	14.5	14.4	14.3	0	14.2	14.1	14.2
			50	24	1	24.1	24.3	24.0	1	21.5	21.4	21.3	0	14.5	14.5	14.5	0	14.1	14.2	14.2
			50	49	1	24.1	24.2	23.9	1	21.5	21.3	21.3	0	14.5	14.4	14.3	0	14.2	14.2	14.2
			100	0	1	24.1	24.2	23.9	1	21.5	21.4	21.4	0	14.5	14.5	14.5	0	14.2	14.2	14.2
		16QAM	1	0	1	23.5	24.0	23.5	1	21.8	22.0	21.7	0	14.5	14.5	14.4	0	14.2	14.1	14.1
			1	49	1	23.5	23.8	23.5	1	21.8	21.9	21.6	0	14.4	14.5	14.4	0	14.2	14.2	14.2
			1	99	1	23.4	23.8	23.3	1	21.8	21.8	21.6	0	14.5	14.5	14.3	0	14.0	14.1	14.1
			50	0	2	22.1	22.4	22.2	2	20.4	20.5	20.3	0	14.5	14.5	14.3	0	14.2	14.2	14.2
			50	24	2	22.2	22.5	22.2	2	20.5	20.4	20.3	0	14.5	14.4	14.4	0	14.2	14.0	14.2
			50	49	2	22.3	22.5	22.1	2	20.4	20.3	20.3	0	14.5	14.4	14.4	0	14.2	14.1	14.0
			100	0	2	22.3	22.4	22.1	2	20.4	20.3	20.3	0	14.5	14.4	14.4	0	14.2	14.1	14.2

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Power Antenna C			MPR	Max. Power Antenna D			MPR	Reduced Power Antenna C			MPR	Reduced Power Antenna D		
						1857.5 MHz	1882.5 MHz	1907.5 MHz		1857.5 MHz	1882.5 MHz	1907.5 MHz		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	23.7	24.3	24.0	0	22.4	22.5	22.3	0	14.5	14.3	14.4	0	14.1	14.1	14.1
			1	36	0	23.7	23.9	23.9	0	22.3	22.3	22.2	0	14.4	14.4	14.5	0	14.2	14.2	14.0
			1	74	0	23.7	24.1	23.9	0	22.4	22.4	22.3	0	14.4	14.3	14.3	0	14.1	14.1	14.1
			36	0	1	23.9	24.2	24.1	1	21.5	21.5	21.3	0	14.5	14.4	14.4	0	14.2	14.2	14.0
			36	18	1	23.9	24.1	24.1	1	21.5	21.5	21.4	0	14.4	14.4	14.4	0	14.2	14.2	14.1
			36	37	1	23.9	24.3	24.1	1	21.5	21.4	21.4	0	14.4	14.3	14.5	0	14.2	14.2	14.0
			75	0	1	23.9	24.2	24.1	1	21.4	21.4	21.4	0	14.5	14.5	14.5	0	14.2	14.2	14.0
		16QAM	1	0	1	22.8	23.7	23.6	1	21.3	21.8	21.8	0	14.5	14.5	14.5	0	14.1	14.1	14.1
			1	36	1	22.9	23.6	23.7	1	21.3	21.7	21.7	0	14.4	14.5	14.3	0	14.2	14.2	14.1
			1	74	1	22.8	23.7	23.4	1	21.2	21.6	21.6	0	14.5	14.5	14.4	0	14.0	14.1	14.0
			36	0	2	22.2	22.4	22.3	2	20.4	20.5	20.3	0	14.5	14.4	14.5	0	14.2	14.2	14.1
			36	18	2	22.3	22.5	22.3	2	20.5	20.5	20.4	0	14.5	14.4	14.5	0	14.2	14.2	14.2
			36	37	2	22.3	22.5	22.3	2	20.6	20.4	20.3	0	14.4	14.4	14.5	0	14.2	14.2	14.2
			75	0	2	22.3	22.4	22.4	2	20.4	20.4	20.4	0	14.5	14.5	14.5	0	14.2	14.2	14.2

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Power Antenna C			MPR	Max. Power Antenna D			MPR	Reduced Power Antenna C			MPR	Reduced Power Antenna D		
						1855 MHz	1882.5 MHz	1910 MHz		1855 MHz	1882.5 MHz	1910 MHz		1855 MHz	1882.5 MHz	1910 MHz		1855 MHz	1882.5 MHz	1910 MHz
LTE Band 25	10	QPSK	1	0	0	24.9	24.8	24.7	0	22.5	22.5	22.3	0	14.5	14.3	14.3	0	14.2	14.1	14.2
			1	24	0	24.8	24.8	24.7	0	22.4	22.3	22.2	0	14.4	14.5	14.3	0	14.1	14.1	14.1
			1	49	0	24.8	24.7	24.7	0	22.5	22.3	22.3	0	14.3	14.3	14.5	0	14.0	14.1	14.1
			25	0	1	23.9	23.7	23.7	1	21.5	21.4	21.3	0	14.4	14.3	14.3	0	14.2	14.1	14.2
			25	12	1	23.9	23.7	23.7	1	21.5	21.4	21.3	0	14.4	14.3	14.3	0	14.2	14.1	14.2
			25	24	1	23.8	23.7	23.7	1	21.4	21.3	21.3	0	14.3	14.3	14.3	0	14.1	14.1	14.2
			50	0	1	23.8	23.7	23.7	1	21.5	21.4	21.3	0	14.4	14.3	14.3	0	14.2	14.1	14.2
		16QAM	1	0	1	24.2	24.1	24.1	1	21.5	21.4	21.6	0	14.5	14.3	14.4	0	14.2	14.1	14.2
			1	24	1	23.1	23.0	23.1	1	21.4	21.2	21.6	0	14.5	14.3	14.3	0	14.1	14.0	14.2
			1	49	1	23.1	22.9	23.1	1	21.4	21.2	21.6	0	14.4	14.3	14.3	0	14.0	14.1	14.2
			25	0	2	22.0	21.9	21.9	2	20.5	20.4	20.3	0	14.3	14.3	14.3	0	14.2	14.1	14.2
			25	12	2	22.1	21.9	21.9	2	20.5	20.3	20.3	0	14.3	14.3	14.3	0	14.2	14.1	14.2
			25	24	2	22.0	21.9	21.9	2	20.5	20.3	20.3	0	14.3	14.4	14.3	0	14.1	14.1	14.2
			50	0	2	22.0	21.9	21.9	2	20.5	20.3	20.3	0	14.3	14.4	14.3	0	14.2	14.1	14.2

LTE Band 25 Measured Results (continued)

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Power Antenna C			MPR	Max. Power Antenna D			MPR	Reduced Power Antenna C			MPR	Reduced Power Antenna D		
						1852.5 MHz	1882.5 MHz	1912.5 MHz		1852.5 MHz	1882.5 MHz	1912.5 MHz		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	24.6	24.7	24.8	0	22.5	22.4	22.2	0	14.4	14.3	14.4	0	14.2	14.1	14.2
			1	12	0	24.8	24.7	24.7	0	22.5	22.3	22.2	0	14.4	14.3	14.4	0	14.1	14.0	14.2
			1	24	0	24.8	24.7	24.7	0	22.5	22.3	22.2	0	14.4	14.3	14.4	0	14.1	14.1	14.2
			12	0	1	23.8	23.6	23.7	1	21.4	21.3	21.2	0	14.4	14.3	14.4	0	14.1	14.1	14.2
			12	7	1	23.8	23.7	23.7	1	21.4	21.3	21.2	0	14.3	14.3	14.4	0	14.1	14.1	14.2
			12	13	1	23.8	23.6	23.7	1	21.4	21.2	21.2	0	14.4	14.3	14.4	0	14.1	14.1	14.2
			25	0	1	23.8	23.6	23.7	1	21.4	21.3	21.2	0	14.4	14.4	14.4	0	14.1	14.1	14.2
		16QAM	1	0	1	24.1	23.1	23.1	1	22.0	21.5	21.4	0	14.4	14.3	14.5	0	14.2	14.2	14.1
			1	12	1	23.4	23.1	23.1	1	22.0	21.4	21.4	0	14.4	14.3	14.5	0	14.2	14.1	14.2
			1	24	1	23.4	23.1	23.1	1	21.9	21.4	21.4	0	14.4	14.3	14.4	0	14.2	14.1	14.1
			12	0	2	22.0	21.8	21.9	2	20.5	20.3	20.3	0	14.4	14.4	14.3	0	14.2	14.1	14.2
			12	7	2	22.0	21.9	21.9	2	20.5	20.4	20.3	0	14.4	14.4	14.3	0	14.2	14.0	143.2
			12	13	2	22.0	21.9	21.9	2	20.5	20.3	20.3	0	14.4	14.4	14.3	0	14.2	14.1	14.2
			25	0	2	22.0	21.9	21.9	2	20.5	20.3	20.2	0	14.4	14.3	14.3	0	14.1	14.1	14.2

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Power Antenna C			MPR	Max. Power Antenna D			MPR	Reduced Power Antenna C			MPR	Reduced Power Antenna D		
						1851.5 MHz	1882.5 MHz	1913.5 MHz		1851.5 MHz	1882.5 MHz	1913.5 MHz		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	24.9	24.7	24.7	0	22.5	22.4	22.3	0	14.4	14.3	14.4	0	14.1	14.2	14.1
			1	8	0	24.8	24.8	24.8	0	22.5	22.5	22.4	0	14.4	14.4	14.4	0	14.0	14.0	14.1
			1	14	0	24.8	24.7	24.7	0	22.4	22.4	22.2	0	14.3	14.4	14.3	0	14.0	14.1	14.0
			8	0	1	23.8	23.7	23.7	1	21.5	21.5	21.3	0	14.4	14.3	14.4	0	14.1	14.1	14.2
			8	4	1	23.8	23.7	23.7	1	21.5	21.4	21.3	0	14.3	14.3	14.4	0	14.1	14.1	14.2
			8	7	1	23.8	23.7	23.7	1	21.5	21.4	21.3	0	14.3	14.3	14.4	0	14.0	14.1	14.1
			15	0	1	23.8	23.6	23.7	1	21.5	21.4	21.3	0	14.3	14.3	14.3	0	14.1	14.1	14.1
		16QAM	1	0	1	24.1	24.1	24.1	1	21.4	21.8	21.4	0	14.4	14.5	14.4	0	14.0	14.2	14.2
			1	8	1	23.3	23.2	23.2	1	21.5	21.8	21.4	0	14.4	14.4	14.4	0	14.0	14.1	14.1
			1	14	1	23.1	23.0	23.0	1	21.4	21.8	21.3	0	14.3	14.4	14.4	0	14.0	14.1	14.1
			8	0	2	22.1	22.0	21.9	2	20.6	20.3	20.5	0	14.3	14.3	14.3	0	14.1	14.1	14.2
			8	4	2	22.0	21.9	22.0	2	20.6	20.3	20.5	0	14.3	14.3	14.3	0	14.2	14.1	14.2
			8	7	2	22.1	21.9	21.9	2	20.6	20.3	20.5	0	14.3	14.3	14.3	0	14.1	14.1	14.1
			15	0	2	22.0	21.8	21.9	2	20.5	20.4	20.3	0	14.3	14.3	14.4	0	14.1	14.0	14.2

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Power Antenna C			MPR	Max. Power Antenna D			MPR	Reduced Power Antenna C			MPR	Reduced Power Antenna D		
						1850.7 MHz	1882.5 MHz	1914.3 MHz		1850.7 MHz	1882.5 MHz	1914.3 MHz		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	24.8	24.0	24.0	0	22.4	22.4	22.2	0	14.5	14.4	14.3	0	14.1	14.1	14.1
			1	3	0	24.7	24.6	24.7	0	22.4	22.4	22.3	0	14.5	14.5	14.3	0	14.2	14.1	14.2
			1	5	0	24.7	24.5	24.6	0	22.4	22.3	22.2	0	14.4	14.4	14.3	0	14.1	14.1	14.1
			3	0	0	24.7	24.7	24.7	0	22.5	22.4	22.4	0	14.5	14.4	14.4	0	14.2	14.1	14.1
			3	1	0	24.7	24.7	24.7	0	22.5	22.5	22.4	0	14.4	14.4	14.5	0	14.2	14.2	14.1
			3	3	0	24.7	24.7	24.7	0	22.5	22.5	22.4	0	14.5	14.4	14.4	0	14.2	14.1	14.2
			6	0	1	23.7	23.5	23.6	1	21.4	21.3	21.3	0	14.5	14.3	14.3	0	14.1	14.1	14.1
		16QAM	1	0	1	24.1	23.6	23.5	1	21.5	21.7	21.3	0	14.5	14.4	14.4	0	14.1	14.0	14.1
			1	3	1	23.2	23.0	23.1	1	21.6	21.8	21.3	0	14.4	14.5	14.5	0	14.1	14.1	14.2
			1	5	1	23.1	22.9	23.0	1	21.5	21.6	21.3	0	14.5	14.4	14.4	0	14.0	14.0	14.1
			3	0	1	23.1	22.9	23.0	1	21.5	21.5	21.5	0	14.4	14.5	14.4	0	14.1	14.1	14.2
			3	1	1	23.2	22.9	23.0	1	21.5	21.5	21.5	0	14.5	14.5	14.4	0	14.1	14.1	14.2
			3	3	1	23.2	23.0	23.0	1	21.6	21.5	21.5	0	14.4	14.4	14.3	0	14.1	14.1	14.2
			6	0	2	22.8	22.6	22.7	2	20.6	20.2	20.4	0	14.5	14.4	14.4	0	14.1	14.2	14.1

LTE Band 26 Measured Results

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Power Antenna C			MPR	Max. Power Antenna D			MPR	Reduced Power Antenna C			MPR	Reduced Power Antenna D		
						819 MHz	831.5 MHz	844 MHz		819 MHz	831.5 MHz	844 MHz		819 MHz	831.5 MHz	844 MHz		819 MHz	831.5 MHz	844 MHz
LTE Band 26	10	QPSK	1	0	0	24.6	24.5	24.4	0	24.0	24.0	24.0	0	18.2	18.2	18.2	0	19.8	19.8	19.8
			1	24	0	24.6	24.5	24.3	0	24.0	24.0	24.0	0	18.2	18.2	18.2	0	19.7	19.7	19.7
			1	49	0	24.6	24.4	24.2	0	23.9	23.9	23.9	0	18.2	18.2	18.2	0	19.8	19.8	19.7
			25	0	1	23.7	23.5	23.4	1	23.0	23.0	23.0	0	18.2	18.2	18.2	0	19.8	19.7	19.7
			25	12	1	23.7	23.6	23.4	1	23.0	23.0	23.0	0	18.2	18.2	18.2	0	19.7	19.7	19.7
			25	24	1	23.6	23.5	23.3	1	23.0	23.0	23.0	0	18.2	18.2	18.2	0	19.8	19.8	19.8
			50	0	1	23.8	23.5	23.4	1	23.0	23.0	23.0	0	18.2	18.2	18.2	0	19.7	19.7	19.7
		16QAM	1	0	1	23.6	23.3	23.8	1	23.0	23.0	23.0	0	18.2	18.2	18.2	0	19.8	19.8	19.7
			1	24	1	23.6	23.3	23.7	1	22.9	22.9	22.9	0	18.2	18.2	18.2	0	19.8	19.8	19.6
			1	49	1	23.6	23.2	23.6	1	22.8	22.8	22.8	0	18.2	18.2	18.2	0	19.6	19.8	19.7
			25	0	2	22.7	22.5	22.4	2	22.0	22.0	22.0	0	18.2	18.2	18.2	0	19.7	19.8	19.8
			25	12	2	22.8	22.5	22.4	2	22.0	22.0	22.0	0	18.2	18.2	18.2	0	19.7	19.8	19.8
			25	24	2	22.7	22.4	22.3	2	22.0	22.0	22.0	0	18.2	18.2	18.2	0	19.6	19.8	19.8
			50	0	2	22.8	22.4	22.3	2	22.0	22.0	22.0	0	18.2	18.1	18.2	0	19.7	19.8	19.8
Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Power Antenna C			MPR	Max. Power Antenna D			MPR	Reduced Power Antenna C			MPR	Reduced Power Antenna D		
						816.5 MHz	831.5 MHz	846.5 MHz		816.5 MHz	831.5 MHz	846.5 MHz		816.5 MHz	831.5 MHz	846.5 MHz		816.5 MHz	831.5 MHz	846.5 MHz
LTE Band 26	5	QPSK	1	0	0	24.7	24.7	24.5	0	24.0	23.8	23.7	0	18.2	18.2	18.2	0	19.7	19.8	19.6
			1	12	0	24.7	24.6	24.5	0	23.9	23.7	23.6	0	18.2	18.2	18.2	0	19.7	19.7	19.6
			1	24	0	24.7	24.6	24.5	0	24.0	23.7	23.0	0	18.2	18.2	18.2	0	19.6	19.7	19.6
			12	0	1	23.7	23.7	23.5	1	23.0	22.8	22.6	0	18.2	18.2	18.2	0	19.7	19.8	19.6
			12	7	1	23.7	23.6	23.5	1	23.0	22.8	22.6	0	18.2	18.2	18.2	0	19.6	19.7	19.6
			12	13	1	23.6	23.6	23.5	1	22.9	22.7	22.6	0	18.2	18.2	18.2	0	19.6	19.7	19.7
			25	0	1	23.7	23.6	23.5	1	23.0	22.8	22.6	0	18.2	18.2	18.2	0	19.6	19.7	19.7
		16QAM	1	0	1	23.8	23.8	24.0	1	23.2	23.0	23.2	0	18.2	18.2	18.2	0	19.8	19.7	19.8
			1	12	1	23.8	23.8	24.0	1	23.1	22.9	23.2	0	18.2	18.2	18.2	0	19.7	19.7	19.7
			1	24	1	23.8	23.8	24.0	1	23.1	22.9	22.6	0	18.2	18.2	18.2	0	19.7	19.7	19.6
			12	0	2	22.8	22.7	22.7	2	22.0	21.8	21.8	0	18.1	18.2	18.2	0	19.7	19.7	19.8
			12	7	2	22.8	22.7	22.6	2	22.0	21.8	21.8	0	18.1	18.2	18.2	0	19.6	19.7	19.8
			12	13	2	22.7	22.7	22.7	2	22.0	21.8	21.8	0	18.1	18.2	18.2	0	19.6	19.7	19.8
			25	0	2	22.7	22.6	22.6	2	21.9	21.7	21.6	0	18.1	18.1	18.1	0	19.8	19.8	19.8

LTE Band 26 Measured Results (continued)

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Power Antenna C			MPR	Max. Power Antenna D			MPR	Reduced Power Antenna C			MPR	Reduced Power Antenna D		
						815.5 MHz	831.5 MHz	847.5 MHz		815.5 MHz	831.5 MHz	847.5 MHz		815.5 MHz	831.5 MHz	847.5 MHz		815.5 MHz	831.5 MHz	847.5 MHz
LTE Band 26	3	QPSK	1	0	0	24.7	24.6	24.5	0	23.9	23.8	23.6	0	18.2	18.2	18.2	0	19.8	19.6	19.7
			1	8	0	24.7	24.6	24.5	0	24.0	23.8	23.5	0	18.2	18.2	18.2	0	19.7	19.8	19.7
			1	14	0	24.6	24.5	24.4	0	23.9	23.7	23.0	0	18.2	18.2	18.2	0	19.7	19.6	19.6
			8	0	1	23.7	23.6	23.5	1	23.0	22.8	22.6	1	18.2	18.2	18.2	0	19.8	19.8	19.8
			8	4	1	23.6	23.6	23.5	1	23.0	22.8	22.6	1	18.2	18.2	18.1	0	19.8	19.6	19.7
			8	7	1	23.7	23.6	23.5	1	23.0	22.8	22.6	1	18.2	18.2	18.1	0	19.7	19.7	19.7
			15	0	1	23.6	23.6	23.5	1	22.9	22.8	22.6	1	18.2	18.2	18.2	0	19.8	19.8	19.8
		16QAM	1	0	1	23.7	23.5	23.8	1	23.0	22.7	22.9	1	18.2	18.2	18.2	0	19.8	19.6	19.8
			1	8	1	23.8	23.6	23.9	1	23.1	22.7	22.9	1	18.2	18.2	18.2	0	19.7	19.6	19.7
			1	14	1	23.6	23.5	23.8	1	23.0	22.6	22.4	1	18.2	18.2	18.2	0	19.8	19.6	19.7
			8	0	2	22.9	22.7	22.4	2	22.1	21.9	21.5	2	18.2	18.2	18.1	0	19.6	19.7	19.6
			8	4	2	22.9	22.8	22.4	2	22.2	21.8	21.4	2	18.2	18.2	18.1	0	19.7	19.8	19.6
			8	7	2	22.9	22.8	22.4	2	22.2	21.8	21.5	2	18.2	18.2	18.1	0	19.6	19.7	19.6
			15	0	2	22.6	22.7	22.5	2	21.9	21.8	21.6	2	18.2	18.2	18.2	0	19.6	19.8	19.6

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Power Antenna C			MPR	Max. Power Antenna D			MPR	Reduced Power Antenna C			MPR	Reduced Power Antenna D		
						814.7 MHz	831.5 MHz	848.3 MHz		814.7 MHz	831.5 MHz	848.3 MHz		814.7 MHz	831.5 MHz	848.3 MHz		814.7 MHz	831.5 MHz	848.3 MHz
LTE Band 26	1.4	QPSK	1	0	0	24.5	24.5	24.3	0	23.9	23.6	23.2	0	18.2	18.2	18.2	0	19.7	19.7	19.7
			1	3	0	24.6	24.5	24.4	0	23.9	23.7	23.1	0	18.2	18.2	18.2	0	19.7	19.7	19.7
			1	5	0	24.6	24.5	24.3	0	23.9	23.7	22.8	0	18.2	18.2	18.2	0	19.6	19.6	19.7
			3	0	0	24.6	24.6	24.4	0	24.0	23.7	23.2	0	18.2	18.2	18.2	0	19.8	19.7	19.8
			3	1	0	24.7	24.7	24.5	0	24.0	23.8	23.2	0	18.2	18.2	18.2	0	19.8	19.8	19.8
			3	3	0	24.7	24.6	24.4	0	24.0	23.8	23.1	0	18.2	18.2	18.2	0	19.7	19.7	19.7
			6	0	1	23.6	23.5	23.4	1	22.9	22.7	22.2	1	18.2	18.2	18.2	0	19.7	19.7	19.6
		16QAM	1	0	1	23.6	23.6	23.7	1	22.9	22.8	22.7	1	18.2	18.2	18.2	0	19.8	19.7	19.7
			1	3	1	23.7	23.6	23.8	1	23.0	22.8	22.6	1	18.2	18.2	18.2	0	19.7	19.7	19.7
			1	5	1	23.6	23.6	23.7	1	22.9	22.8	22.3	1	18.2	18.2	18.2	0	19.8	19.6	19.7
			3	0	1	23.8	23.7	23.6	1	23.1	22.8	22.5	1	18.2	18.2	18.2	0	19.7	19.8	19.7
			3	1	1	23.8	23.7	23.6	1	23.1	22.8	22.4	1	18.2	18.2	18.2	0	19.8	19.7	19.8
			3	3	1	23.9	23.7	23.6	1	23.1	22.8	22.3	1	18.2	18.2	18.2	0	19.8	19.7	19.8
			6	0	2	22.8	22.7	22.3	2	22.0	21.8	21.2	2	18.2	18.2	18.2	0	19.7	19.7	19.6

LTE Band 27 Measured Results

SAR for LTE Band 27 (Frequency range: 814 – 824 MHz) is covered by LTE Band 26 (Frequency range: 814 – 849 MHz) due to overlapping frequency range, same or lower maximum tune-up limit and same channel bandwidth.

LTE Band 30 Measured Results

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Power Antenna C	MPR	Max. Power Antenna D	MPR	Reduced Power Antenna C	MPR	Reduced Power Antenna D
						2310 MHz		2310 MHz		2310 MHz		2310 MHz
LTE Band 30	10	QPSK	1	0	0	22.3	0	22.0	0	13.1	0	12.2
			1	24	0	22.1	0	21.7	0	13.1	0	12.2
			1	49	0	22.0	0	21.8	0	13.1	0	12.2
			25	0	1	21.2	1	20.9	0	13.2	0	12.1
			25	12	1	21.2	1	20.8	0	13.2	0	12.3
			25	24	1	21.0	1	20.8	0	13.2	0	12.1
			50	0	1	21.1	1	20.8	0	13.2	0	12.3
		16QAM	1	0	1	21.3	1	21.0	0	13.2	0	12.2
			1	24	1	21.1	1	20.6	0	13.2	0	12.2
			1	49	1	21.0	1	20.8	0	13.2	0	12.2
			25	0	2	20.3	2	20.0	0	13.0	0	12.2
			25	12	2	20.2	2	19.8	0	13.0	0	12.1
			25	24	2	20.0	2	19.8	0	13.0	0	12.1
			50	0	2	20.2	2	19.8	0	13.0	0	12.1

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Power Antenna C	MPR	Max. Power Antenna D	MPR	Reduced Power Antenna C	MPR	Reduced Power Antenna D
						2310 MHz		2310 MHz		2310 MHz		2310 MHz
LTE Band 30	5	QPSK	1	0	0	22.2	0	22.0	0	13.2	0	12.3
			1	12	0	22.1	0	21.8	0	13.2	0	12.2
			1	24	0	22.0	0	21.9	0	13.2	0	12.2
			12	0	1	21.1	1	20.9	0	13.2	0	12.3
			12	7	1	21.1	1	20.8	0	13.2	0	12.2
			12	13	1	21.0	1	20.8	0	13.2	0	12.2
			25	0	1	21.1	1	20.8	0	13.2	0	12.2
		16QAM	1	0	1	21.4	1	21.5	0	13.2	0	12.2
			1	12	1	21.2	1	21.3	0	13.2	0	12.2
			1	24	1	21.2	1	21.4	0	13.2	0	12.2
			12	0	2	20.2	2	20.0	0	13.1	0	12.3
			12	7	2	20.2	2	19.9	0	13.1	0	12.2
			12	13	2	20.1	2	19.9	0	13.1	0	12.2
			25	0	2	20.1	2	19.9	0	13.1	0	12.1

Note(s):

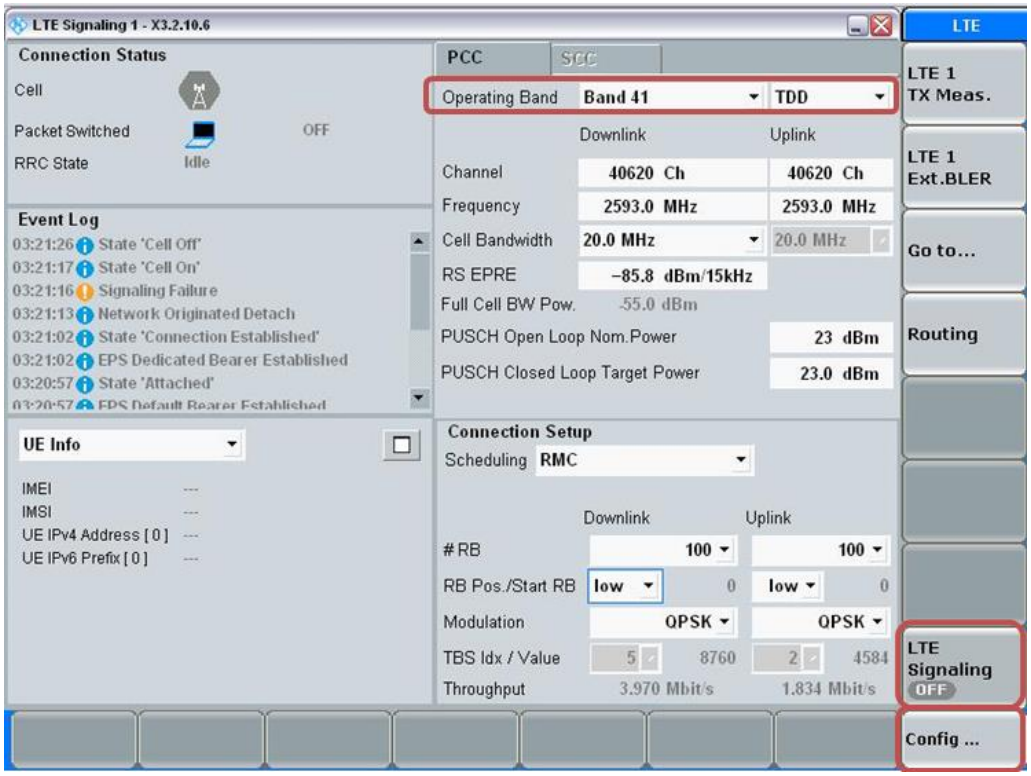
10 MHz Bandwidth does not support at least three non-overlapping channels in certain channel bandwidths. When a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing per KDB 941225 D05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

LTE Band 41 Average Power (dBm) Measured Results

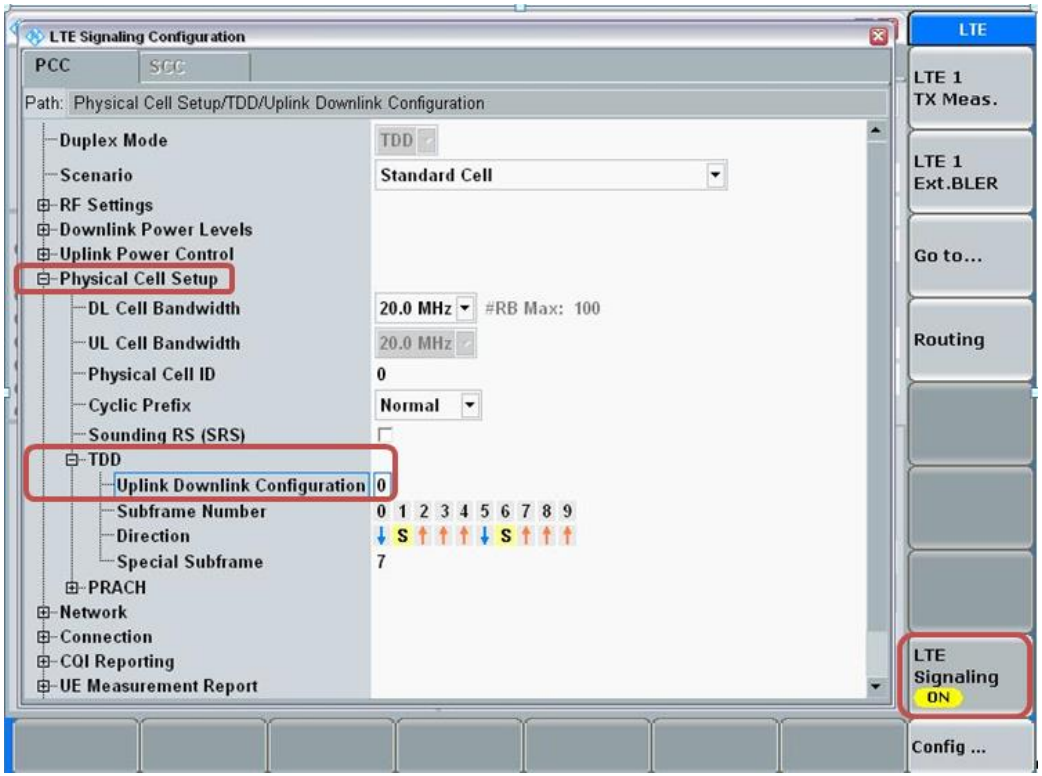
Procedure used to establish SAR test signal for LTE TDD Band 41

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….”

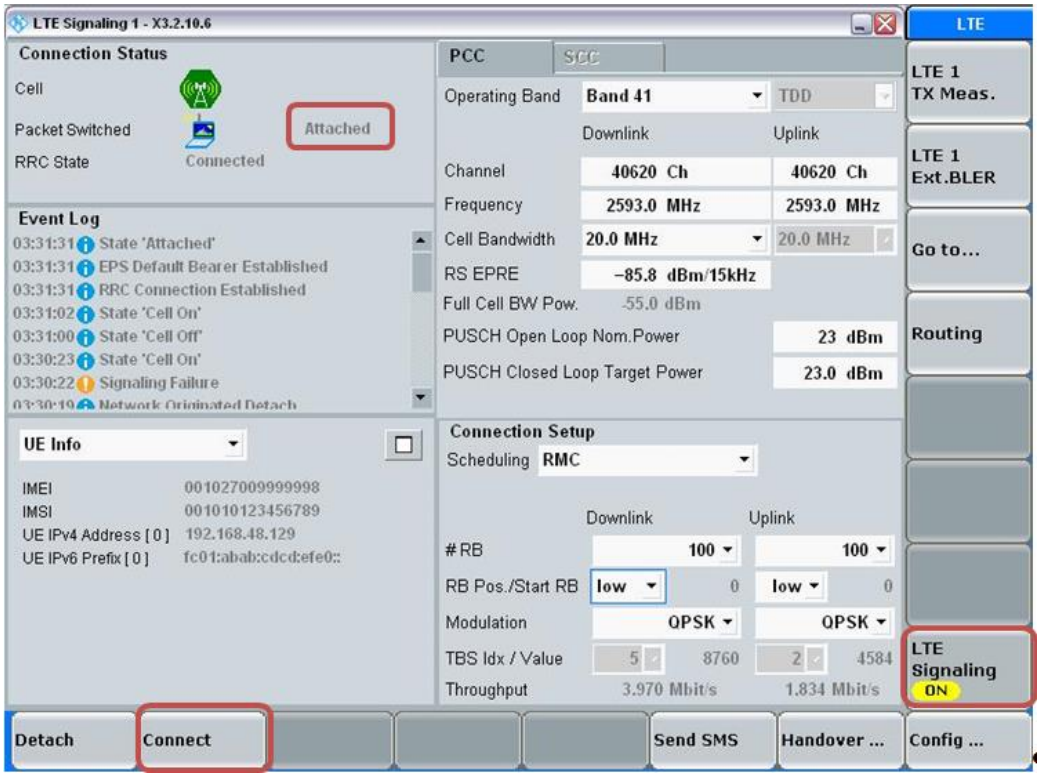


- Go to “Physical Cell Setup”
- Select “TDD” and Set “Uplink Downlink Configuration” to “0”
- Turn the cell on using “ON | OFF” key



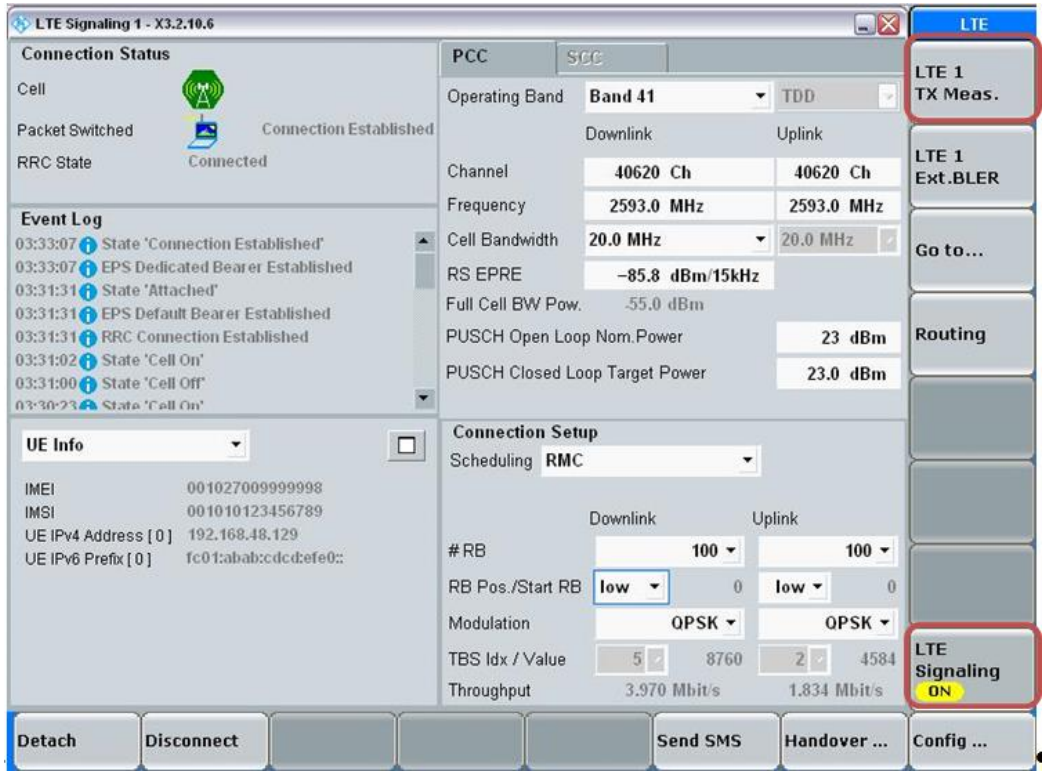
Connect to EUT

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

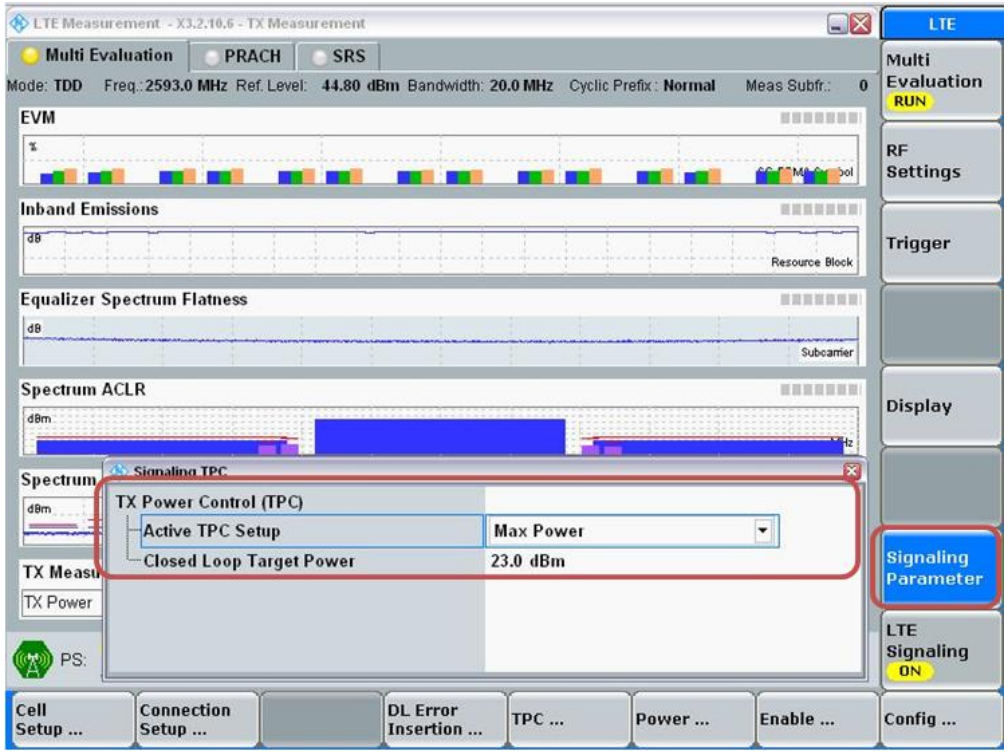


Max Power Setting

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

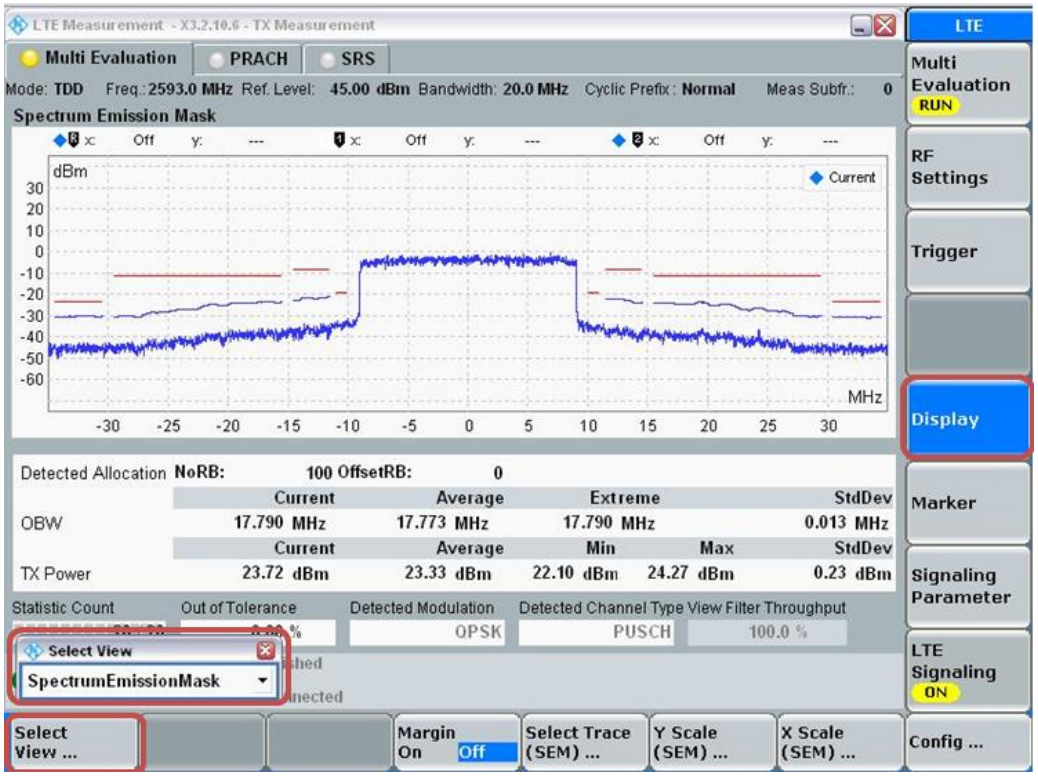


- Select “Signaling Parameter”
- Select “TX Power Control (TPC)” > Select “Active TPC Setup” to “Max Power” > Set “Closed Loop Target Power” to “23 dBm”



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	MPR	Max. Power Antenna C					MPR	Max. Power Antenna D					MPR	Reduced Power Antenna C					MPR	Reduced Power Antenna D				
						2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz		2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz		2506 MHz	2549.5 MHz	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	23.0	23.0	23.0	23.0	23.0	0	22.0	22.0	21.5	21.5	22.0	0	13.5	13.5	13.5	13.5	13.5	0	13.4	13.4	13.4	13.5	13.4
			1	49	0	23.0	23.0	23.0	23.0	23.0	0	22.0	22.0	21.5	21.5	22.0	0	13.5	13.5	13.4	13.5	13.4	0	13.4	13.4	13.5	13.5	13.4
			1	99	0	23.0	23.0	23.0	23.0	23.0	0	22.0	22.0	21.5	21.5	22.0	0	13.5	13.5	13.5	13.5	13.5	0	13.3	13.4	13.4	13.4	13.3
			50	0	1	22.0	22.0	22.0	22.0	22.0	1	21.0	21.0	21.0	21.0	21.0	0	13.5	13.5	13.5	13.5	13.5	0	13.4	13.5	13.5	13.5	13.4
			50	24	1	22.0	22.0	22.0	22.0	22.0	1	21.0	21.0	21.0	21.0	21.0	0	13.4	13.5	13.5	13.4	13.4	0	13.5	13.5	13.5	13.5	13.5
			50	49	1	22.0	22.0	22.0	22.0	22.0	1	21.0	21.0	21.0	21.0	21.0	0	13.5	13.5	13.5	13.5	13.5	0	13.4	13.4	13.4	13.3	13.3
			100	0	1	22.0	22.0	22.0	22.0	22.0	1	21.0	21.0	21.0	21.0	20.9	0	13.5	13.5	13.5	13.5	13.5	0	13.5	13.5	13.5	13.5	13.4
		16QAM	1	0	1	22.0	22.0	22.0	22.0	22.0	1	21.0	21.0	20.1	20.0	20.9	0	13.5	13.5	13.5	13.5	13.5	0	13.4	13.3	13.4	13.5	13.3
			1	49	1	22.0	22.0	22.0	22.0	22.0	1	21.0	21.0	20.1	20.0	20.9	0	13.5	13.5	13.5	13.5	13.5	0	13.3	13.3	13.4	13.3	13.3
			1	99	1	22.0	22.0	22.0	22.0	22.0	1	21.0	21.0	20.1	20.0	20.9	0	13.5	13.5	13.5	13.5	13.5	0	13.3	13.4	13.3	13.4	13.3
			50	0	2	21.0	21.0	21.0	21.0	21.0	2	20.0	20.0	19.0	20.0	19.9	0	13.4	13.4	13.4	13.4	13.5	0	13.3	13.4	13.4	13.3	13.5
			50	24	2	21.0	21.0	21.0	21.0	21.0	2	20.0	20.0	19.0	20.0	19.9	0	13.4	13.4	13.4	13.4	13.5	0	13.3	13.4	13.3	13.4	13.5
			50	49	2	21.0	21.0	21.0	21.0	21.0	2	20.0	20.0	19.0	20.0	19.9	0	13.4	13.4	13.4	13.4	13.5	0	13.4	13.4	13.4	13.3	13.4
			100	0	2	21.0	21.0	21.0	21.0	21.0	2	20.0	19.9	19.0	20.0	19.9	0	13.4	13.4	13.3	13.5	13.5	0	13.4	13.4	13.5	13.4	13.5
Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Power Antenna C					MPR	Max. Power Antenna D					MPR	Reduced Power Antenna C					MPR	Reduced Power Antenna D				
						2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz		2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz		2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz		2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz
LTE Band 41	15	QPSK	1	0	0	23.0	23.0	23.0	23.0	23.0	0	22.0	22.0	21.0	21.0	22.0	0	13.5	13.5	13.5	13.5	13.5	0	13.4	13.3	13.3	13.5	13.4
			1	36	0	23.0	23.0	23.0	23.0	23.0	0	22.0	22.0	21.0	21.0	22.0	0	13.5	13.5	13.5	13.5	13.5	0	13.4	13.5	13.5	13.3	13.3
			1	74	0	23.0	23.0	23.0	23.0	23.0	0	22.0	22.0	21.0	21.0	22.0	0	13.5	13.5	13.5	13.5	13.5	0	13.3	13.3	13.4	13.3	13.3
			36	0	1	22.0	22.0	22.0	22.0	22.0	1	21.0	21.0	21.0	21.0	21.0	0	13.5	13.5	13.4	13.5	13.5	0	13.4	13.4	13.4	13.4	13.5
			36	18	1	22.0	22.0	22.0	22.0	22.0	1	21.0	21.0	21.0	21.0	21.0	0	13.5	13.5	13.4	13.5	13.5	0	13.4	13.3	13.4	13.3	13.5
			36	37	1	22.0	22.0	22.0	22.0	22.0	1	21.0	21.0	21.0	21.0	21.0	0	13.5	13.5	13.4	13.5	13.5	0	13.3	13.3	13.3	13.5	13.4
			75	0	1	22.0	22.0	22.0	22.0	22.0	1	21.0	21.0	21.0	21.0	20.9	0	13.5	13.5	13.3	13.4	13.5	0	13.3	13.3	13.3	13.4	13.5
		16QAM	1	0	1	22.0	22.0	22.0	22.0	22.0	1	21.0	21.0	20.1	20.0	20.9	0	13.5	13.5	13.5	13.5	13.5	0	13.4	13.5	13.4	13.5	13.4
			1	36	1	22.0	22.0	22.0	22.0	22.0	1	21.0	21.0	20.1	20.0	20.9	0	13.5	13.5	13.5	13.5	13.5	0	13.3	13.4	13.5	13.3	13.3
			1	74	1	22.0	22.0	22.0	22.0	22.0	1	21.0	21.0	20.1	20.0	20.9	0	13.5	13.5	13.5	13.5	13.5	0	13.3	13.4	13.4	13.4	13.5
			36	0	2	21.0	21.0	21.0	21.0	21.0	2	20.0	20.0	19.0	20.0	19.9	0	13.5	13.5	13.5	13.4	13.5	0	13.3	13.3	13.3	13.3	13.4
			36	18	2	21.0	21.0	21.0	21.0	21.0	2	20.0	20.0	19.0	20.0	19.9	0	13.5	13.5	13.5	13.4	13.5	0	13.3	13.3	13.4	13.3	13.4
			36	37	2	21.0	21.0	21.0	21.0	21.0	2	20.0	20.0	19.0	20.0	19.9	0	13.5	13.5	13.5	13.4	13.5	0	13.4	13.5	13.5	13.4	13.4
			75	0	2	21.0	21.0	21.0	21.0	21.0	2	20.0	19.9	19.0	20.0	19.9	0	13.5	13.5	13.4	13.3	13.5	0	13.3	13.5	13.5	13.5	13.4
Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Power Antenna C					MPR	Max. Power Antenna D					MPR	Reduced Power Antenna C					MPR	Reduced Power Antenna D				
						2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz		2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz		2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz		2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz
LTE Band 41	10	QPSK	1	0	0	23.0	23.0	23.0	23.0	23.0	0	22.0	22.0	21.0	21.0	22.0	0	13.5	13.5	13.5	13.5	13.5	0	13.5	13.5	13.5	13.4	13.4
			1	24	0	23.0	23.0	23.0	23.0	23.0	0	22.0	22.0	21.0	21.0	22.0	0	13.5	13.5	13.5	13.5	13.5	0	13.3	13.3	13.3	13.5	13.4
			1	49	0	23.0	23.0	23.0	23.0	23.0	0	22.0	22.0	21.0	21.0	22.0	0	13.5	13.5	13.5	13.5	13.5	0	13.3	13.3	13.3	13.5	13.4
			25	0	1	22.0	22.0	22.0	22.0	22.0	1	21.0	21.0	21.0	21.0	21.0	0	13.5	13.4	13.5	13.4	13.5	0	13.5	13.4	13.5	13.4	13.3
			25	12	1	22.0	22.0	22.0	22.0	22.0	1	21.0	21.0	21.0	21.0	21.0	0	13.5	13.4	13.5	13.4	13.5	0	13.5	13.4	13.4	13.3	13.3
			25	24	1	22.0	22.0	22.0	22.0	22.0	1	21.0	21.0	21.0	21.0	21.0	0	13.5	13.4	13.5	13.4	13.5	0	13.4	13.3	13.4	13.3	13.4
			50	0	1	22.0	22.0	22.0	22.0	22.0	1	21.0	21.0	21.0	21.0	20.9	0	13.5	13.3	13.4	13.4	13.5	0	13.4	13.4	13.4	13.3	13.3
		16QAM	1	0	1	22.0	22.0	22.0	22.0	22.0	1	21.0	21.0	20.1	20.0	20.9	0	13.5	13.5	13.5	13.5	13.5	0	13.5	13.4	13.4	13.3	13.3
			1	24	1	22.0	22.0	22.0	22.0	22.0	1	21.0	21.0	20.1	20.0	20.9	0	13.5	13.5	13.5	13.5	13.5	0	13.3	13.3	13.4	13.4	13.3
			1	49	1	22.0	22.0	22.0	22.0	22.0	1	21.0	21.0	20.1	20.0	20.9	0	13.5	13.5	13.5	13.5	13.5	0	13.3	13.5	13.4	13.4	13.3
			25	0	2	21.0	21.0	21.0	21.0	21.0	2	20.0	20.0	19.0	20.0	19.9	0	13.5	13.5	13.4	13.3	13.5	0	13.4	13.4	13.4	13.4	13.3
			25	12	2	21.0	21.0	21.0	21.0	21.0	2	20.0	20.0	19.0	20.0	19.9	0	13.5	13.5	13.4	13.3	13.5	0	13.4	13.4	13.4	13.3	13.3
			25	24	2	21.0	21.0	21.0	21.0	21.0	2	20.0	20.0	19.0	20.0	19.9	0	13.5	13.5	13.4	13.3	13.5	0	13.4	13.3	13.4	13.3	13.4
			50	0	2	21.0	21.0	21.0	21.0	21.0	2	20.0	19.9	19.0	20.0	19.9	0	13.5	13.5	13.4	13.3	13.5	0	13.5	13.4	13.4	13.3	13.3

LTE Band 41 Measured Results (continued)

Band	BW (MHz)	Mode	RB Allocation	RB offset	MPR	Max. Power Antenna C					MPR	Max. Power Antenna D					MPR	Reduced Power Antenna C					MPR	Reduced Power Antenna D				
						2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz		2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz		2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz		2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz
LTE Band 41	5	QPSK	1	0	0	23.0	23.0	23.0	23.0	23.0	0	22.0	22.0	21.0	21.0	22.0	0	13.5	13.5	13.5	13.5	13.5	0	13.5	13.5	13.4	13.4	13.4
			1	12	0	23.0	23.0	23.0	23.0	23.0	0	22.0	22.0	21.0	21.0	22.0	0	13.5	13.5	13.5	13.5	13.5	0	13.4	13.4	13.4	13.3	13.4
			1	24	0	23.0	23.0	23.0	23.0	23.0	0	22.0	22.0	21.0	21.0	22.0	0	13.5	13.5	13.5	13.5	13.5	0	13.3	13.4	13.4	13.3	13.4
			12	0	1	22.0	22.0	22.0	22.0	22.0	1	21.0	21.0	21.0	21.0	21.0	0	13.5	13.5	13.4	13.5	13.5	0	13.4	13.3	13.4	13.4	13.3
			12	7	1	22.0	22.0	22.0	22.0	22.0	1	21.0	21.0	21.0	21.0	21.0	0	13.5	13.5	13.4	13.5	13.5	0	13.4	13.3	13.4	13.3	13.3
			12	13	1	22.0	22.0	22.0	22.0	22.0	1	21.0	21.0	21.0	21.0	21.0	0	13.5	13.5	13.4	13.5	13.5	0	13.4	13.3	13.3	13.3	13.4
			25	0	1	22.0	22.0	22.0	22.0	22.0	1	21.0	21.0	21.0	21.0	20.9	0	13.5	13.5	13.4	13.4	13.5	0	13.3	13.3	13.3	13.3	13.4
		16QAM	1	0	1	22.0	22.0	22.0	22.0	22.0	1	21.0	21.0	20.1	20.0	20.9	0	13.5	13.5	13.5	13.5	13.5	0	13.5	13.4	13.5	13.5	13.5
			1	12	1	22.0	22.0	22.0	22.0	22.0	1	21.0	21.0	20.1	20.0	20.9	0	13.5	13.5	13.5	13.5	13.5	0	13.5	13.3	13.4	13.4	13.3
			1	24	1	22.0	22.0	22.0	22.0	22.0	1	21.0	21.0	20.1	20.0	20.9	0	13.5	13.5	13.5	13.5	13.5	0	13.5	13.3	13.5	13.4	13.4
			12	0	2	21.0	21.0	21.0	21.0	21.0	2	20.0	20.0	19.0	20.0	19.9	0	13.4	13.3	13.5	13.4	13.3	0	13.4	13.3	13.5	13.3	13.3
			12	7	2	21.0	21.0	21.0	21.0	21.0	2	20.0	20.0	19.0	20.0	19.9	0	13.4	13.3	13.5	13.4	13.3	0	13.4	13.3	13.5	13.3	13.4
			12	13	2	21.0	21.0	21.0	21.0	21.0	2	20.0	20.0	19.0	20.0	19.9	0	13.4	13.3	13.5	13.4	13.3	0	13.3	13.3	13.5	13.3	13.3
			25	0	2	21.0	21.0	21.0	21.0	21.0	2	20.0	19.9	19.0	20.0	19.9	0	13.4	13.4	13.4	13.4	13.3	0	13.5	13.3	13.4	13.4	13.3

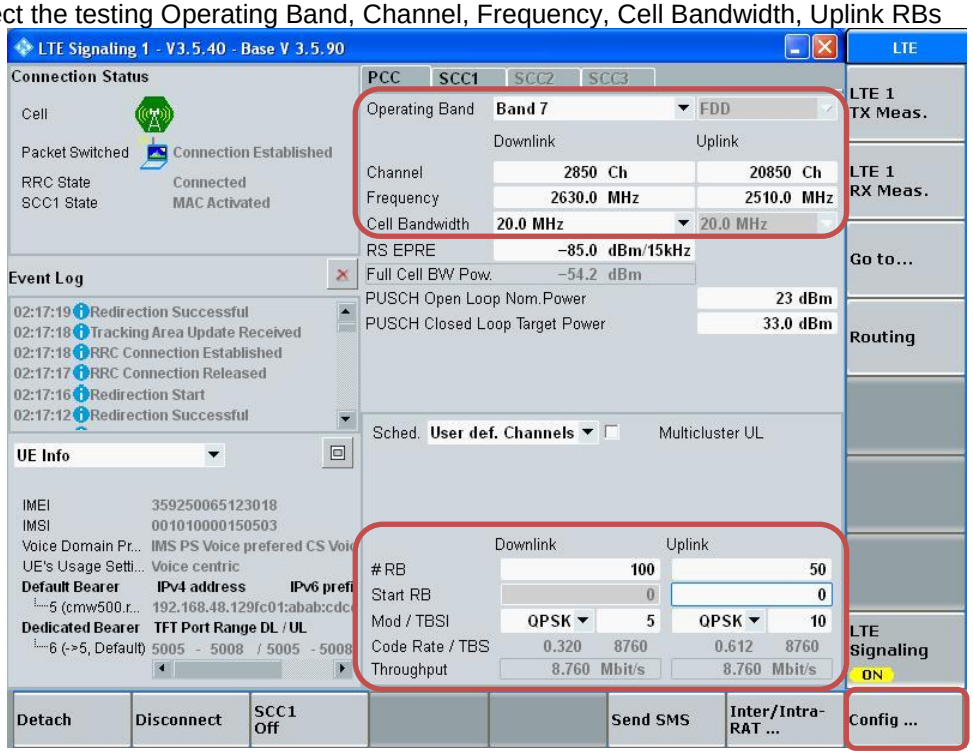
9.5. LTE Rel. 11 Carrier Aggregation

LTE Carrier Aggregation Test Signal Set-up Procedure

(Use normal LTE set-up procedure in addition with the following steps)

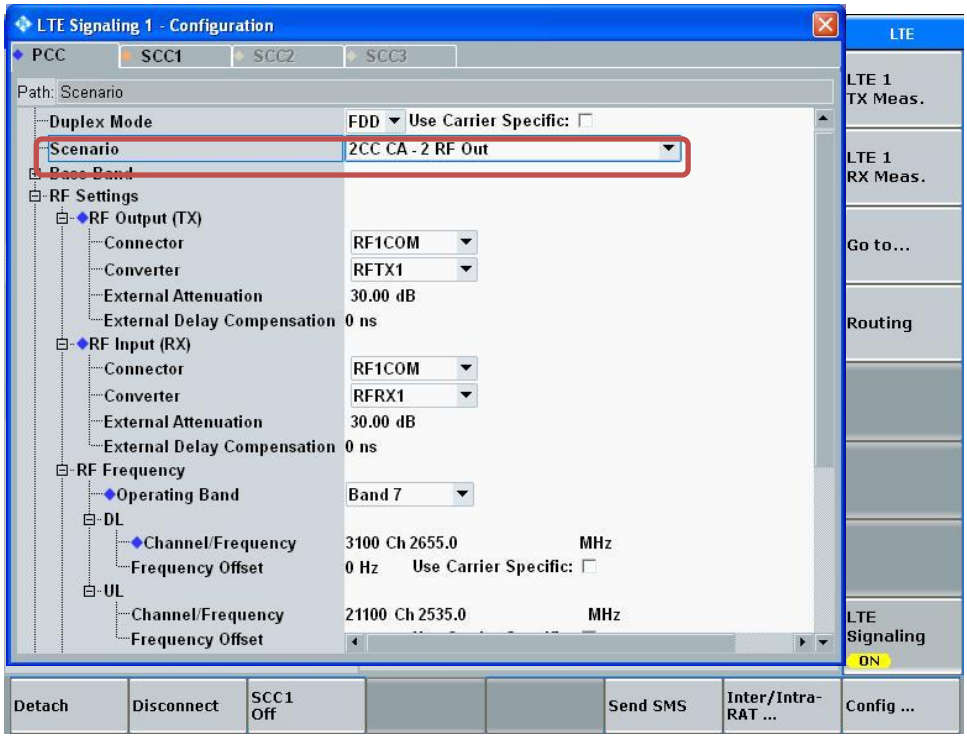
Set to CMW-500 with following parameters:

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

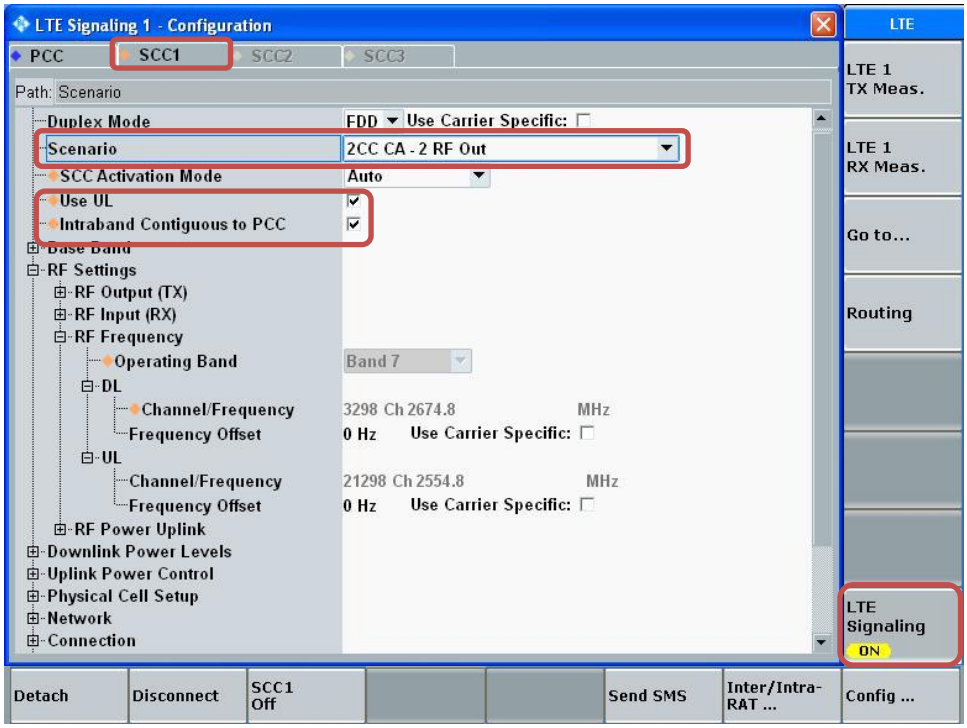


- Go to “Config….”

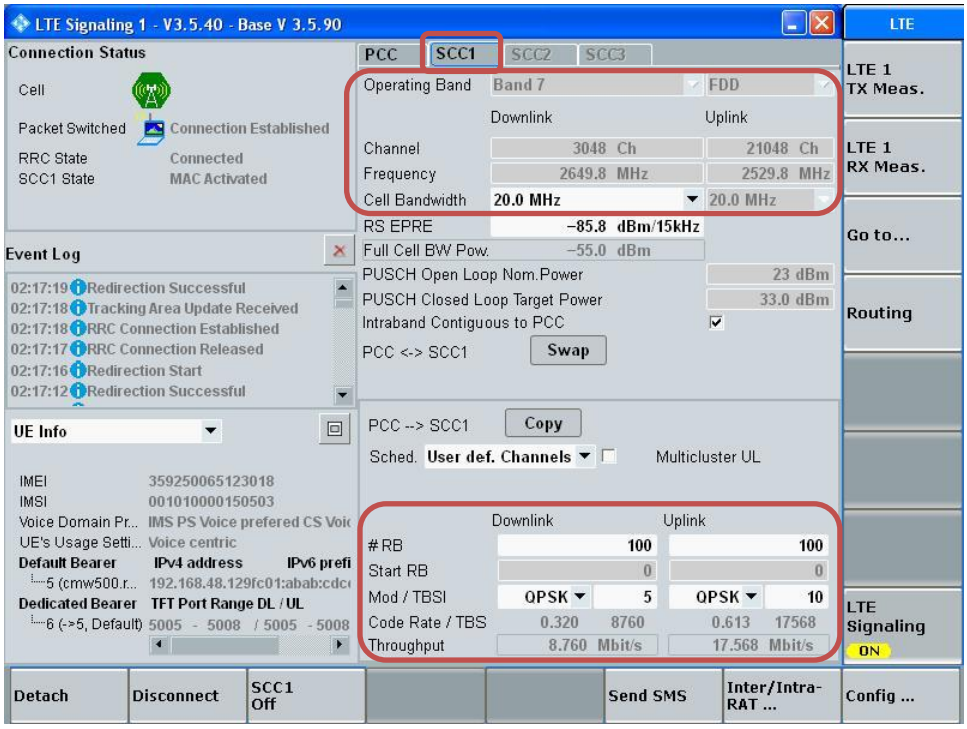
- Go to “Scenario”
- Set to “2CC CA – 2 RF Out”



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

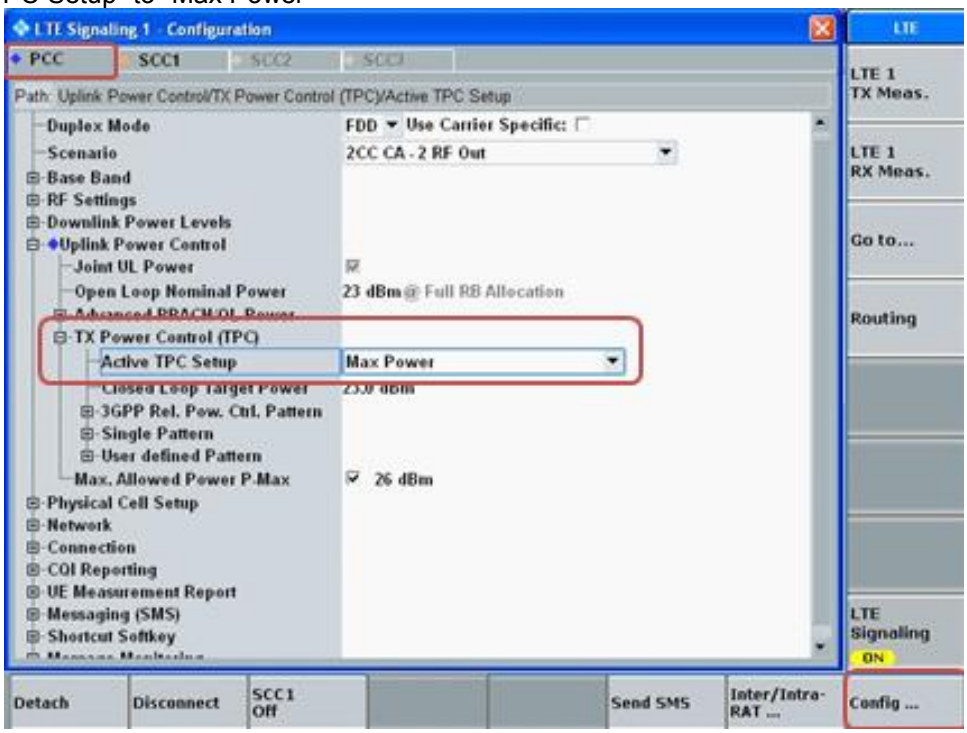


- Select “SCC1” tab
  - Select the testing Cell Bandwidth, Uplink RBs

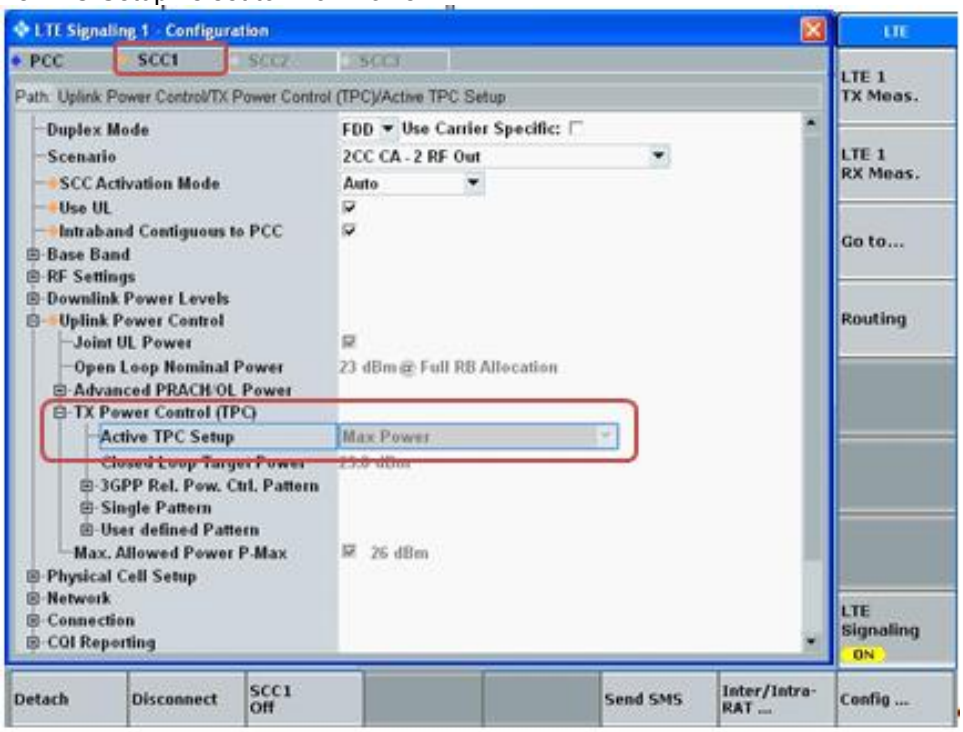


Max Power Setting

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

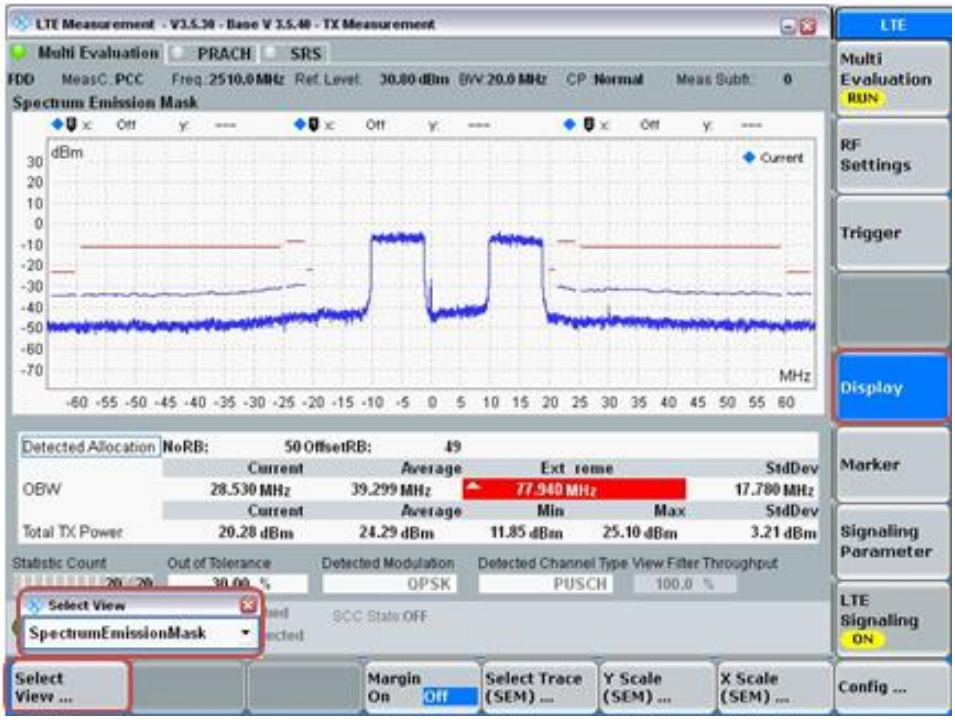


- Select SCC1 tab
- Verify that “Active TPC Setup” is set to “Max Power”



View TX Power

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



LTE Carrier Aggregation: Device supports LTE Advanced Rel-11, UE Category 10 Carrier Aggregation (CA) on downlink for Inter and Intra band. Uplink CA is supported for Intra band only.

2DL & 3DL CA Inter-Band

E-UTRA CA configuration (BCS)	E-UTRA Band	Bandwidth					
		1.4 MHz	3 MHz	5 MHz	10 MHz	15 MHz	20 MHz
CA_2A_4A (0) (1) (2)	2	Yes	Yes	Yes	Yes	Yes	Yes
	4			Yes	Yes	Yes	Yes
	2			Yes	Yes		
	4			Yes	Yes		
	2			Yes	Yes	Yes	Yes
	4			Yes	Yes	Yes	Yes
CA_2A_5A (0)	2			Yes	Yes	Yes	Yes
	5			Yes	Yes		
CA_2A_12A (0) (1)	2			Yes	Yes	Yes	Yes
	12			Yes	Yes		
	2			Yes	Yes	Yes	Yes
	12		Yes	Yes	Yes		
CA_2A_12B (0) (1)	2			Yes	Yes	Yes	Yes
	12	See CA_12B (0)					
CA_2A_2A_12A (0)	2	See CA_2A_2A (0)					
	12			Yes	Yes		
CA_2A_13A (0) (1)	2			Yes	Yes	Yes	Yes
	13				Yes		
	2			Yes	Yes		
	13				Yes		
CA_2A_2A_13A (0)	2	See CA_2A_2A (0)					
	13				Yes		
CA_2A_17A (0)	2			Yes	Yes		
	17			Yes	Yes		
CA_20_29A (0) (1) (2)	2			Yes	Yes		
	29		Yes	Yes	Yes		
	2			Yes	Yes		
	29			Yes	Yes		
	2			Yes	Yes	Yes	Yes
	29			Yes	Yes		
CA_2A_30A (0)	2			Yes	Yes	Yes	Yes
	30			Yes	Yes		
CA_4A_5A (0) (1)	4			Yes	Yes		
	5			Yes	Yes		
	4			Yes	Yes	Yes	Yes
	5			Yes	Yes		
CA_4A_7A (0)	4			Yes	Yes		
	7			Yes	Yes	Yes	Yes
CA_4A_12A (0) (1) (2) (3) (4)	4	Yes	Yes	Yes	Yes		
	12			Yes	Yes		
	4	Yes	Yes	Yes	Yes	Yes	Yes
	12			Yes	Yes		
	4			Yes	Yes	Yes	Yes
	12		Yes	Yes	Yes		
	4			Yes	Yes		
	12			Yes	Yes		
	4			Yes	Yes	Yes	Yes
	12			Yes	Yes		
CA_4A_4A_12A (0)	4	See CA_4A_4A (0)					
	12			Yes	Yes		
CA_4A_12B (0)	4			Yes	Yes	Yes	Yes
	12	See CA_12B (0)					

CA_4A_13A (0) (1)	4			Yes	Yes	Yes	Yes
	13				Yes		
	4			Yes	Yes		
	13				Yes		
CA_4A_4A_13A (0)	4	See CA_4A_4A (0)					
	13				Yes		
CA_4A_17A (0)	4			Yes	Yes		
	17			Yes	Yes		
CA_4A_29A (0) (1) (2)	4			Yes	Yes		
	29		Yes	Yes	Yes		
	4			Yes	Yes		
	29			Yes	Yes		
	4			Yes	Yes	Yes	Yes
	29			Yes	Yes		
CA_4A_30A (0)	4			Yes	Yes	Yes	Yes
	30			Yes	Yes		
CA_5A_7A (0)	5	Yes	Yes	Yes	Yes		
	7				Yes	Yes	Yes
CA_5A_30A (0)	5			Yes	Yes		
	30			Yes	Yes		
CA_12A_30A (0)	12			Yes	Yes		
	30			Yes	Yes		
CA_25A_26A (0)	25		Yes	Yes	Yes	Yes	Yes
	26		Yes	Yes	Yes	Yes	
CA_29A_30A (0)	29			Yes	Yes		
	30			Yes	Yes		
CA_2A_4A_12A (0)	2			Yes	Yes	Yes	Yes
	4			Yes	Yes	Yes	Yes
	12			Yes	Yes		
CA_2A_4A_13A (0)	2			Yes	Yes	Yes	Yes
	4			Yes	Yes	Yes	Yes
	13				Yes		
CA_2A_5A_30A (0)	2			Yes	Yes	Yes	Yes
	5			Yes	Yes		
	30			Yes	Yes		
CA_2A_12A_30A (0)	2			Yes	Yes	Yes	Yes
	12			Yes	Yes		
	30			Yes	Yes		
CA_2A_29A_30A (0)	2			Yes	Yes	Yes	Yes
	29			Yes	Yes		
	30			Yes	Yes		
CA_4A_5A_30A (0)	4			Yes	Yes	Yes	Yes
	5			Yes	Yes		
	30			Yes	Yes		
CA_4A_12A_30A (0)	4			Yes	Yes	Yes	Yes
	12			Yes	Yes		
	30			Yes	Yes		
CA_4A_29A_30A (0)	4			Yes	Yes	Yes	Yes
	29			Yes	Yes		
	30			Yes	Yes		

2DL CA Intra-Band Non-Contiguous

E-UTRA CA configuration (BCS)	Component carriers in order of increasing carrier frequency		
	Carrier 1	Carrier 2	Carrier 3
CA_2A_2A (0)	5, 10, 15, 20	5, 10, 15, 20	
CA_4A_4A (0)	5, 10, 15, 20	5, 10, 15, 20	
CA_7A_7A (0)	5	15	
	10	10, 15	
	15	15, 20	
	20	20	
CA_25A_25A (0) (1)	5, 10	5, 10	
	5, 10, 15, 20	5, 10, 15, 20	
CA_41A_41A (0) (1)	10, 15, 20	10, 15, 20	
	5, 10, 15, 20	5, 10, 15, 20	
CA_41A_41C (0)	5, 10, 15, 20	See CA_41C (1)	
CA_41C_41A (0)	See CA_41C (1)		5, 10, 15, 20

2DL & 3DL CA Intra-Band Contiguous

E-UTRA CA configuration (BCS)	Component carriers in order of increasing carrier frequency		
	Allowed channel bandwidths (MHz)		
	Carrier 1	Carrier 2	Carrier 3
CA_2C (0)	5	20	
	10	15, 20	
	15	10, 15, 20	
	20	5, 10, 15, 20	
CA_7B (0)	15	5	
CA_7C (0) (1)	15	15	
	20	20	
	10	20	
	15	15, 20	
	20	10, 15, 20	
CA_12B (0)	5	5, 10	
CA_41C (0) (1) (2) (3)	10	20	
	15	15, 20	
	20	10, 15, 20	
	5, 10	20	
	15	15, 20	
	20	5, 10, 15, 20	
	10	15, 20	
	15	10, 15, 20	
	20	10, 15, 20	
	10	20	
	20	20	
CA_41D (0)	10	20	15
	10	15, 20	20
	15	20	10, 15
	15	10, 15, 20	20
	20	15, 20	10
	20	10, 15, 20	15, 20

2UL CA Intra-Band Contiguous

E-UTRA CA configuration (BCS)	Component carriers in order of increasing carrier frequency		
	Allowed channel bandwidths (MHz)		
	Carrier 1	Carrier 2	Carrier 3
CA_7C (0) (1)	15	15	
	20	20	
	10	20	
	15	15, 20	
	20	10, 15, 20	
CA_41C (0) (1)	10	20	
	15	15, 20	
	20	10, 15, 20	
	5, 10	20	
	15	15, 20	
	20	5, 10, 15, 20	

Carrier Aggregation Power Measurements:

DL CA power measurements for max RF output power mode were performed on the primary cellular antenna (Antenna C) with QPSK modulation, since it has the highest maximum RF output power.

CA power measurements were made for all supported PCC bandwidths on the channel/RB combination resulting in the highest output power. SCCs were set to the highest BW possible for the combination. For Band 2, CA power measurements were made for all 2DL and 3DL CA combinations. For the remaining PCC bands, UL power measurements were made for only one 2DL and one 3DL CA combination.

The standalone power measurement is the power for the PCC in the non-CA mode (i.e. single carrier power) measured with an average power meter. In all cases the DL CA power is less than or equal to the standalone power.

2DL & 3DL CA Inter-Band

DL (Antenna C)									UL (Antenna C)							
PCC	SCC	TCC	PCC		SCC		TCC		PCC							
Band	Band	Band	BW	Frequency	BW	Frequency	BW	Frequency	Modulation	RB	Offset	Frequency	MPR	Standalone	CA Power	Delta
2	4		1.4	1960	20	2132.5			QPSK	1	3	1880	0	25.0	25.0	0
2	4		3	1960	20	2132.5			QPSK	1	8	1880	0	25.0	25.0	0
2	4		5	1960	20	2132.5			QPSK	1	12	1880	0	25.0	25.0	0
2	4		10	1960	20	2132.5			QPSK	1	24	1880	0	25.0	25.0	0
2	4		15	1960	20	2132.5			QPSK	1	36	1880	0	25.0	25.0	0
2	4		20	1960	20	2132.5			QPSK	1	49	1880	0	25.0	25.0	0
2	5		5	1960	10	881.5			QPSK	1	12	1880	0	25.0	25.0	0
2	5		10	1960	10	881.5			QPSK	1	24	1880	0	25.0	25.0	0
2	5		15	1960	10	881.5			QPSK	1	36	1880	0	25.0	25.0	0
2	5		20	1960	10	881.5			QPSK	1	49	1880	0	25.0	25.0	0
2	12		5	1960	10	737.5			QPSK	1	12	1880	0	25.0	25.0	0
2	12		10	1960	10	737.5			QPSK	1	24	1880	0	25.0	25.0	0
2	12		15	1960	10	737.5			QPSK	1	36	1880	0	25.0	25.0	0
2	12		20	1960	10	737.5			QPSK	1	49	1880	0	25.0	25.0	0
2	13		5	1960	10	751			QPSK	1	12	1880	0	25.0	25.0	0
2	13		10	1960	10	751			QPSK	1	24	1880	0	25.0	25.0	0
2	13		15	1960	10	751			QPSK	1	36	1880	0	25.0	25.0	0
2	13		20	1960	10	751			QPSK	1	49	1880	0	25.0	25.0	0
2	17		5	1960	10	740			QPSK	1	12	1880	0	25.0	25.0	0
2	17		10	1960	10	740			QPSK	1	24	1880	0	25.0	25.0	0
2	29		5	1960	10	722.5			QPSK	1	12	1880	0	25.0	25.0	0
2	29		10	1960	10	722.5			QPSK	1	24	1880	0	25.0	25.0	0
2	29		15	1960	10	722.5			QPSK	1	36	1880	0	25.0	25.0	0
2	29		20	1960	10	722.5			QPSK	1	49	1880	0	25.0	25.0	0
2	30		5	1960	10	2355			QPSK	1	12	1880	0	25.0	25.0	0
2	30		10	1960	10	2355			QPSK	1	24	1880	0	25.0	25.0	0
2	30		15	1960	10	2355			QPSK	1	36	1880	0	25.0	25.0	0
2	30		20	1960	10	2355			QPSK	1	49	1880	0	25.0	25.0	0

DL (Antenna C)									UL (Antenna C)							
PCC	SCC	TCC	PCC		SCC		TCC		PCC							
Band	Band	Band	BW	Frequency	BW	Frequency	BW	Frequency	Modulation	RB	Offset	Frequency	MPR	Standalone	CA Power	Delta
4	2		5	2132.5	20	1960			QPSK	1	12	1732.5	0	25.0	25.0	0
4	2		10	2132.5	20	1960			QPSK	1	24	1732.5	0	25.0	25.0	0
4	2		15	2132.5	20	1960			QPSK	1	36	1732.5	0	25.0	25.0	0
4	2		20	2132.5	20	1960			QPSK	1	49	1732.5	0	25.0	25.0	0
5	2		5	881.5	20	1960			QPSK	1	12	836.5	0	25.0	25.0	0
5	2		10	881.5	20	1960			QPSK	1	24	836.5	0	25.0	25.0	0
7	4		5	2655	10	2132.5			QPSK	1	12	2535	0	25.0	25.0	0
7	4		10	2655	10	2132.5			QPSK	1	24	2535	0	25.0	25.0	0
7	4		15	2655	10	2132.5			QPSK	1	36	2535	0	25.0	25.0	0
7	4		20	2655	10	2132.5			QPSK	1	49	2535	0	25.0	25.0	0
12	2		3	737.5	20	1960			QPSK	1	8	707.5	0	25.0	25.0	0
12	2		5	737.5	20	1960			QPSK	1	12	707.5	0	25.0	25.0	0
12	2		10	737.5	20	1960			QPSK	1	24	707.5	0	25.0	25.0	0
13	2		10	751	20	1960			QPSK	1	24	782	0	24.3	24.3	0
17	2		5	740	10	1960			QPSK	1	12	710	0	25.0	25.0	0
17	2		10	740	10	1960			QPSK	1	24	710	0	25.0	25.0	0
25	26		5	1962.5	10	876.5			QPSK	1	12	1882.5	0	25.0	25.0	0
25	26		10	1962.5	10	876.5			QPSK	1	24	1882.5	0	25.0	25.0	0
25	26		15	1962.5	10	876.5			QPSK	1	36	1882.5	0	25.0	24.9	-0.1
25	26		20	1962.5	10	876.5			QPSK	1	49	1882.5	0	25.0	25.0	0
26	25		5	876.5	20	1962.5			QPSK	1	12	831.5	0	25.0	25.0	0
26	25		10	876.5	20	1962.5			QPSK	1	24	831.5	0	25.0	25.0	0
30	2		5	2355	20	1960			QPSK	1	12	2310	0	22.3	22.3	0
30	2		10	2355	20	1960			QPSK	1	24	2310	0	22.3	22.3	0
2	4	12	5	1960	20	2132.5	10	737.5	QPSK	1	12	1880	0	25.0	25.0	0
2	4	12	10	1960	20	2132.5	10	737.5	QPSK	1	24	1880	0	25.0	24.8	-0.2
2	4	12	15	1960	20	2132.5	10	737.5	QPSK	1	36	1880	0	25.0	25.0	0
2	4	12	20	1960	20	2132.5	10	737.5	QPSK	1	49	1880	0	25.0	25.0	0
2	4	13	5	1960	20	2132.5	10	751	QPSK	1	12	1880	0	25.0	25.0	0
2	4	13	10	1960	20	2132.5	10	751	QPSK	1	24	1880	0	25.0	24.8	-0.2
2	4	13	15	1960	20	2132.5	10	751	QPSK	1	36	1880	0	25.0	24.9	-0.1
2	4	13	20	1960	20	2132.5	10	751	QPSK	1	49	1880	0	25.0	25.0	0
2	5	30	5	1960	10	881.5	10	2355	QPSK	1	12	1880	0	25.0	25.0	0
2	5	30	10	1960	10	881.5	10	2355	QPSK	1	24	1880	0	25.0	24.8	-0.2
2	5	30	15	1960	10	881.5	10	2355	QPSK	1	36	1880	0	25.0	25.0	0
2	5	30	20	1960	10	881.5	10	2355	QPSK	1	49	1880	0	25.0	25.0	0
2	12	30	5	1960	10	737.5	10	2355	QPSK	1	12	1880	0	25.0	25.0	0
2	12	30	10	1960	10	737.5	10	2355	QPSK	1	24	1880	0	25.0	24.8	-0.2
2	12	30	15	1960	10	737.5	10	2355	QPSK	1	36	1880	0	25.0	25.0	0
2	12	30	20	1960	10	737.5	10	2355	QPSK	1	49	1880	0	25.0	25.0	0
2	29	30	5	1960	10	722.5	10	2355	QPSK	1	12	1880	0	25.0	25.0	0
2	29	30	10	1960	10	722.5	10	2355	QPSK	1	24	1880	0	25.0	24.8	-0.2
2	29	30	15	1960	10	722.5	10	2355	QPSK	1	36	1880	0	25.0	25.0	0

DL (Antenna C)									UL (Antenna C)							
PCC	SCC	TCC	PCC		SCC		TCC		PCC							
Band	Band	Band	BW	Frequency	BW	Frequency	BW	Frequency	Modulation	RB	Offset	Frequency	MPR	Standalone	CA Power	Delta
2	29	30	20	1960	10	722.5	10	2355	QPSK	1	49	1880	0	25.0	25.0	0
4	2	12	5	2132.5	20	1960	10	737.5	QPSK	1	12	1732.5	0	25.0	25.0	0
4	2	12	10	2132.5	20	1960	10	737.5	QPSK	1	24	1732.5	0	25.0	25.0	0
4	2	12	15	2132.5	20	1960	10	737.5	QPSK	1	36	1732.5	0	25.0	25.0	0
4	2	12	20	2132.5	20	1960	10	737.5	QPSK	1	49	1732.5	0	25.0	25.0	0
5	2	30	5	881.5	20	1960	10	2355	QPSK	1	12	836.5	0	25.0	25.0	0
5	2	30	10	881.5	20	1960	10	2355	QPSK	1	24	836.5	0	25.0	25.0	0
12	2	4	5	737.5	20	1960	20	2132.5	QPSK	1	12	707.5	0	25.0	24.8	-0.2
12	2	4	10	737.5	20	1960	20	2132.5	QPSK	1	24	707.5	0	25.0	25.0	0
13	2	4	10	751	20	1960	20	2132.5	QPSK	1	24	782	0	24.3	24.1	-0.2
30	2	5	5	2355	20	1960	10	881.5	QPSK	1	12	2310	0	22.3	22.2	-0.1
30	2	5	10	2355	20	1960	10	881.5	QPSK	1	24	2310	0	22.3	22.2	-0.1
12A	2A	2A	5	737.5	20	1960	20	1980	QPSK	1	12	707.5	0	25.0	25.0	0
12A	2A	2A	10	737.5	20	1960	20	1980	QPSK	1	24	707.5	0	25.0	25.0	0
12B	2A	12B	5	731.5	20	1960	10	738.7	QPSK	1	12	701.5	0	25.0	25.0	0
12B	2A	12B	10	734	20	1960	5	741.2	QPSK	1	24	704	0	25.0	24.9	-0.1
13A	2A	2A	10	751	20	1960	20	1980	QPSK	1	24	782	0	24.3	24.3	0
2A	12B	12B	5	1960	5	731.5	10	738.7	QPSK	1	12	1880	0	25.0	25.0	0
2A	12B	12B	10	1960	5	731.5	10	738.7	QPSK	1	24	1880	0	25.0	25.0	0
2A	12B	12B	15	1960	5	731.5	10	738.7	QPSK	1	36	1880	0	25.0	25.0	0
2A	12B	12B	20	1960	5	731.5	10	738.7	QPSK	1	49	1880	0	25.0	25.0	0
2A	2A	12A	5	1960	20	1980	10	737.5	QPSK	1	12	1880	0	25.0	24.9	-0.1
2A	2A	12A	10	1960	20	1980	10	737.5	QPSK	1	24	1880	0	25.0	25.0	0
2A	2A	12A	15	1960	20	1980	10	737.5	QPSK	1	36	1880	0	25.0	24.9	-0.1
2A	2A	12A	20	1960	20	1980	10	737.5	QPSK	1	49	1880	0	25.0	25.0	0
4A	12B	12B	5	2132.5	5	731.5	10	738.7	QPSK	1	12	1732.5	0	25.0	25.0	0
4A	12B	12B	10	2132.5	5	731.5	10	738.7	QPSK	1	24	1732.5	0	25.0	25.0	0
4A	12B	12B	15	2132.5	5	731.5	10	738.7	QPSK	1	36	1732.5	0	25.0	25.0	0
4A	12B	12B	20	2132.5	5	731.5	10	738.7	QPSK	1	49	1732.5	0	25.0	25.0	0
4A	4A	12A	5	2112.5	20	2140	10	737.5	QPSK	1	12	1712.5	0	24.8	24.8	0
4A	4A	12A	10	2115	20	2140	10	737.5	QPSK	1	24	1715	0	25.0	24.9	-0.1
4A	4A	12A	15	2117.5	20	2140	10	737.5	QPSK	1	36	1717.5	0	25.0	25.0	0

2DL CA Intra-Band Non-Contiguous

DL (Antenna C)									UL (Antenna C)							
PCC	SCC	TCC	PCC		SCC		TCC		PCC							
Band	Band	Band	BW	Frequency	BW	Frequency	BW	Frequency	Modulation	RB	Offset	Frequency	MPR	Standalone	CA Power	Delta
2	2		5	1932.5	20	1980			QPSK	1	12	1852.5	0	25.0	25.0	0
2	2		10	1935	20	1980			QPSK	1	24	1855	0	25.0	25.0	0
2	2		15	1937.5	20	1980			QPSK	1	36	1857.5	0	25.0	25.0	0
2	2		20	1940	20	1980			QPSK	1	49	1860	0	25.0	25.0	0
4	4		5	2112.5	20	2145			QPSK	1	12	1712.5	0	25.0	25.0	0
4	4		10	2115	20	2145			QPSK	1	24	1715	0	25.0	25.0	0
4	4		15	2117.5	20	2145			QPSK	1	36	1717.5	0	25.0	25.0	0
4	4		20	2120	20	2145			QPSK	1	49	1720	0	25.0	25.0	0
7	7		5	2622.5	15	2682.5			QPSK	1	12	2502.5	0	24.9	24.9	0
7	7		10	2625	10	2685			QPSK	1	24	2505	0	25.0	25.0	0
7	7		10	2625	15	2682.5			QPSK	1	24	2505	0	25.0	25.0	0
7	7		15	2627.5	15	2682.5			QPSK	1	36	2507.5	0	25.0	25.0	0
7	7		15	2627.5	20	2680			QPSK	1	36	2507.5	0	25.0	25.0	0
7	7		20	2630	20	2680			QPSK	1	49	2510	0	25.0	25.0	0
25	25		5	1932.5	20	1985			QPSK	1	12	1852.5	0	25.0	25.0	0
25	25		10	1935	20	1985			QPSK	1	24	1855	0	25.0	25.0	0
25	25		15	1937.5	20	1985			QPSK	1	36	1857.5	0	25.0	25.0	0
25	25		20	1940	20	1985			QPSK	1	49	1860	0	25.0	25.0	0
41	41		5	2498.5	20	2680			QPSK	1	12	2498.5	0	23.0	23.0	0
41	41		10	2501	20	2680			QPSK	1	24	2501	0	23.0	23.0	0
41	41		15	2503.5	20	2680			QPSK	1	36	2503.5	0	23.0	23.0	0
41	41		20	2506	20	2680			QPSK	1	49	2506	0	23.0	23.0	0
41A	41C	41C	5	2498.5	20	2593	20	2680.0	QPSK	1	12	2498.5	0	23.0	23.0	0
41A	41C	41C	10	2501	20	2593	20	2680.0	QPSK	1	24	2501	0	23.0	23.0	0
41A	41C	41C	15	2503.5	20	2593	20	2680.0	QPSK	1	36	2503.5	0	23.0	23.0	0
41A	41C	41C	20	2506	20	2593	20	2680.0	QPSK	1	49	2506	0	23.0	23.0	0
41C	41C	41A	5	2498.5	20	2593	20	2680.0	QPSK	1	12	2498.5	0	23.0	23.0	0
41C	41C	41A	10	2501	20	2593	20	2680.0	QPSK	1	24	2501	0	23.0	23.0	0
41C	41C	41A	15	2503.5	20	2593	20	2680.0	QPSK	1	36	2503.5	0	23.0	23.0	0
41C	41C	41A	20	2506	20	2593	20	2680.0	QPSK	1	49	2506	0	23.0	23.0	0

2DL & 3DL CA Intra-Band Contiguous

DL (Antenna C)									UL (Antenna C)							
PCC	SCC	TCC	PCC		SCC		TCC		PCC							
Band	Band	Band	BW	Frequency	BW	Frequency	BW	Frequency	Modulation	RB	Offset	Frequency	MPR	Standalone	CA Power	Delta
2C	2C		5	1960	20	1972.5			QPSK	1	12	1880	0	25.0	25.0	0
2C	2C		10	1960	20	1975			QPSK	1	24	1880	0	25.0	25.0	0
2C	2C		15	1960	20	1977.5			QPSK	1	36	1880	0	25.0	24.9	-0.1
2C	2C		20	1960	20	1980			QPSK	1	49	1880	0	25.0	25.0	0
7B	7B		5	2655	15	2665			QPSK	1	12	2535	0	25.0	25.0	0
7B	7B		15	2655	5	2665			QPSK	1	36	2535	0	25.0	25.0	0
7C	7C		10	2655	20	2670			QPSK	1	24	2535	0	25.0	25.0	0
7C	7C		15	2655	20	2672.5			QPSK	1	36	2535	0	25.0	25.0	0
7C	7C		20	2655	20	2675			QPSK	1	49	2535	0	25.0	25.0	0
12B	12B		5	731.5	5	736.3			QPSK	1	12	701.5	0	25.0	25.0	0
12B	12B		5	731.5	10	738.7			QPSK	1	12	701.5	0	25.0	25.0	0
12B	12B		10	738.7	5	731.5			QPSK	1	24	707.5	0	25.0	25.0	0
41C	41C		5	2593	20	2605.5			QPSK	1	12	2593	0	23.0	23.0	0
41C	41C		10	2593	20	2608			QPSK	1	24	2593	0	23.0	23.0	0
41C	41C		15	2593	20	2610.5			QPSK	1	36	2593	0	23.0	23.0	0
41C	41C		20	2593	20	2613			QPSK	1	49	2593	0	23.0	23.0	0
41D	41D	41D	10	2593	20	2608	20	2627.8	QPSK	1	24	2593	0	23.0	23.0	0
41D	41D	41D	15	2593	20	2610.5	20	2630.3	QPSK	1	36	2593	0	23.0	23.0	0
41D	41D	41D	20	2593	20	2612.8	20	2633	QPSK	1	49	2593	0	23.0	23.0	0

UL CA power measurements were performed for both antennas (Antenna C & Antenna D) at max RF output power and Reduced RF output power with QPSK modulation. The tune-up limits are provided in Section 6.3 of this report.

The UL CA mode power measurements represent the total power across both carriers. Measurements were made for all supported PCC bandwidths using the same channel/RB combination resulting in the highest standalone output power at the least MPR (0 dB). SCCs were set to the highest bandwidth possible for the combination because the maximum power ratings are the same across all bandwidths.

The standalone power measurement is the power for the PCC in the non-CA mode (i.e. single carrier power). In all cases the UL CA power is less than or equal to the standalone power, which is in accordance with the tune-up limits in Section 6.3 of this report.

2UL CA Intra-Band Contiguous

Antenna C (Max Power)

DL (Antenna C)						UL (Antenna C)										
PCC	SCC	PCC		SCC		PCC				SCC			PCC Standalone		PCC+SCC	
Band	Band	BW	Frequency	BW	Frequency	Modulation	RB	Offset	Frequency	RB	Offset	Frequency	MPR	Standalone Power	MPR	CA Power (Total PCC+SCC)	Delta
7C	7C	10	2655	20	2669.4	QPSK	1	49	2535	1	0	2549.4	0	24.9	0	22.8	-2.1
7C	7C	15	2655	20	2672.1	QPSK	1	74	2535	1	0	2552.1	0	25.0	0	22.8	-2.2
7C	7C	20	2655	20	2674.8	QPSK	1	99	2535	1	0	2554.8	0	25.0	0	22.7	-2.3
41C	41C	5	2593	20	2604.7	QPSK	1	24	2593	1	0	2604.7	0	22.7	0	21.3	-1.4
41C	41C	10	2593	20	2607.4	QPSK	1	49	2593	1	0	2607.4	0	23.0	0	21.4	-1.6
41C	41C	15	2593	20	2610.1	QPSK	1	74	2593	1	0	2610.1	0	22.9	0	21.4	-1.5
41C	41C	20	2593	20	2612.8	QPSK	1	99	2593	1	0	2612.8	0	22.9	0	21.3	-1.6

Antenna C (Reduced Power)

DL (Antenna C)						UL (Antenna C)										
PCC	SCC	PCC		SCC		PCC				SCC			PCC Standalone		PCC+SCC	
Band	Band	BW	Frequency	BW	Frequency	Modulation	RB	Offset	Frequency	RB	Offset	Frequency	MPR	Standalone Power	MPR	CA Power (Total PCC+SCC)	Delta
7C	7C	10	2655	20	2669.4	QPSK	1	49	2535	1	0	2549.4	0	12.2	0	10.1	-2.1
7C	7C	15	2655	20	2672.1	QPSK	1	74	2535	1	0	2552.1	0	12.2	0	10.0	-2.2
7C	7C	20	2655	20	2674.8	QPSK	1	99	2535	1	0	2554.8	0	12.2	0	9.9	-2.3
41C	41C	5	2593	20	2604.7	QPSK	1	24	2593	1	0	2604.7	0	13.7	0	12.3	-1.4
41C	41C	10	2593	20	2607.4	QPSK	1	49	2593	1	0	2607.4	0	13.9	0	12.4	-1.5
41C	41C	15	2593	20	2610.1	QPSK	1	74	2593	1	0	2610.1	0	13.8	0	12.3	-1.5
41C	41C	20	2593	20	2612.8	QPSK	1	99	2593	1	0	2612.8	0	13.9	0	12.4	-1.5

2UL CA Intra-Band Contiguous (continued)

Antenna D (Max Power)

DL (Antenna D)						UL (Antenna D)											
PCC	SCC	PCC		SCC		PCC				SCC			PCC Standalone		PCC+SCC		
Band	Band	BW	Frequency	BW	Frequency	Modulation	RB	Offset	Frequency	RB	Offset	Frequency	MPR	Standalone Power	MPR	CA Power (Total PCC+SCC)	Delta
7C	7C	10	2655	20	2669.4	QPSK	1	49	2535	1	0	2549.4	0	23.5	0	21.0	-2.5
7C	7C	15	2655	20	2672.1	QPSK	1	74	2535	1	0	2552.1	0	23.5	0	21.0	-2.5
7C	7C	20	2655	20	2674.8	QPSK	1	99	2535	1	0	2554.8	0	23.5	0	20.9	-2.6
41C	41C	5	2593	20	2604.7	QPSK	1	24	2593	1	0	2604.7	0	21.9	0	20.8	-1.1
41C	41C	10	2593	20	2607.4	QPSK	1	49	2593	1	0	2607.4	0	22.0	0	20.9	-1.1
41C	41C	15	2593	20	2610.1	QPSK	1	74	2593	1	0	2610.1	0	21.9	0	21.0	-0.9
41C	41C	20	2593	20	2612.8	QPSK	1	99	2593	1	0	2612.8	0	21.9	0	20.8	-1.1

Antenna D (Reduced Power)

DL (Antenna D)						UL (Antenna D)											
PCC	SCC	PCC		SCC		PCC				SCC			PCC Standalone		PCC+SCC		
Band	Band	BW	Frequency	BW	Frequency	Modulation	RB	Offset	Frequency	RB	Offset	Frequency	MPR	Standalone Power	MPR	CA Power (Total PCC+SCC)	Delta
7C	7C	10	2655	20	2669.4	QPSK	1	49	2535	1	0	2549.4	0	11.8	0	9.2	-2.6
7C	7C	15	2655	20	2672.1	QPSK	1	74	2535	1	0	2552.1	0	11.8	0	9.2	-2.6
7C	7C	20	2655	20	2674.8	QPSK	1	99	2535	1	0	2554.8	0	11.8	0	9.3	-2.5
41C	41C	5	2593	20	2604.7	QPSK	1	24	2593	1	0	2604.7	0	13.8	0	12.8	-1.0
41C	41C	10	2593	20	2607.4	QPSK	1	49	2593	1	0	2607.4	0	14.0	0	12.8	-1.2
41C	41C	15	2593	20	2610.1	QPSK	1	74	2593	1	0	2610.1	0	14.0	0	12.7	-1.3
41C	41C	20	2593	20	2612.8	QPSK	1	99	2593	1	0	2612.8	0	13.9	0	12.8	-1.1

9.6. Wi-Fi SISO

Measured Results

Band (GHz)	Mode	No. of Transmitters	Ch #	Freq. (MHz)	Max. Avg. RF Output Power (dBm)	
					Antenna A	Antenna B
2.4	802.11b	1 Tx	1	2412	19.0	19.0
			6	2437	19.0	19.0
			10	2457	19.0	19.0
Band (GHz)	Mode	No. of Transmitters	Ch #	Freq. (MHz)	Max. Avg. RF Output Power (dBm)	
					Antenna A	Antenna B
5.2	802.11n HT40	1 Tx	38	5190	Not Required	14.5
			46	5230		17.0
Band (GHz)	Mode	No. of Transmitters	Ch #	Freq. (MHz)	Max. Avg. RF Output Power (dBm)	
					Antenna A	Antenna B
5.3	802.11n HT40	1 Tx	54	5270	16.5	Not Required
			62	5310	14.5	
Band (GHz)	Mode	No. of Transmitters	Ch #	Freq. (MHz)	Max. Avg. RF Output Power (dBm)	
					Antenna A	Antenna B
5.5	802.11ac VHT80	1 Tx	106	5530	14.0	14.0
			122	5610	15.0	15.0
			138	5690	15.0	15.0
Band (GHz)	Mode	No. of Transmitters	Ch #	Freq. (MHz)	Max. Avg. RF Output Power (dBm)	
					Antenna A	Antenna B
5.8	802.11ac VHT80	1 Tx	155	5775	14.5	14.5

Note(s):

1. The maximum output power specified for production units are determined for all applicable 802.11 transmission modes in each standalone and aggregated frequency band. Maximum output power is measured for the highest maximum output power configuration(s) in each frequency band according to the default power measurement procedures. For “Not required”, SAR Test reduction was applied from KDB 248227 guidance, Sec. 2.1, b), 1) when the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11a/g/n/ac mode is used for SAR measurement, on the highest measured output power channel in the initial test configuration, for each frequency band. Additional output power measurements were not deemed necessary.

9.7. WLAN MIMO

Measured Results

Band (GHz)	Mode	No. of Transmitters	Ch #	Freq. (MHz)	Max. Avg. RF Output Power (dBm)	
					Antenna A	Antenna B
2.4	802.11g	2 Tx	2	2417	16.9	17.0
			6	2437	17.0	17.0
			10	2457	17.0	17.0
Band (GHz)	Mode	No. of Transmitters	Ch #	Freq. (MHz)	Max. Avg. RF Output Power (dBm)	
					Antenna A	Antenna B
5.2	802.11n HT40 CDD	2 Tx	38	5190	13.5	13.5
			46	5230	16.5	17.0
Band (GHz)	Mode	No. of Transmitters	Ch #	Freq. (MHz)	Max. Avg. RF Output Power (dBm)	
					Antenna A	Antenna B
5.5	802.11ac VHT80 CDD	2 Tx	106	5530	12.0	12.0
			122	5610	15.0	15.0
			138	5690	15.0	15.0
Band (GHz)	Mode	No. of Transmitters	Ch #	Freq. (MHz)	Max. Avg. RF Output Power (dBm)	
					Antenna A	Antenna B
5.8	802.11ac VHT80 CDD	2 Tx	155	5775	14.4	14.5

Note(s):

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

9.8. Bluetooth

P_{High} Average Power Measured Results

Band (GHz)	Mode	Ch #	Freq. (MHz)	Avg Pwr (dBm)
2.4	GFSK	0	2402	19.7
		39	2441	20.0
		78	2480	19.2

P_{Low} Average Power Measured Results

Band (GHz)	Mode	Ch #	Freq. (MHz)	Avg Pwr (dBm)
2.4	GFSK	0	2402	12.2
		39	2441	12.6
		78	2480	12.6

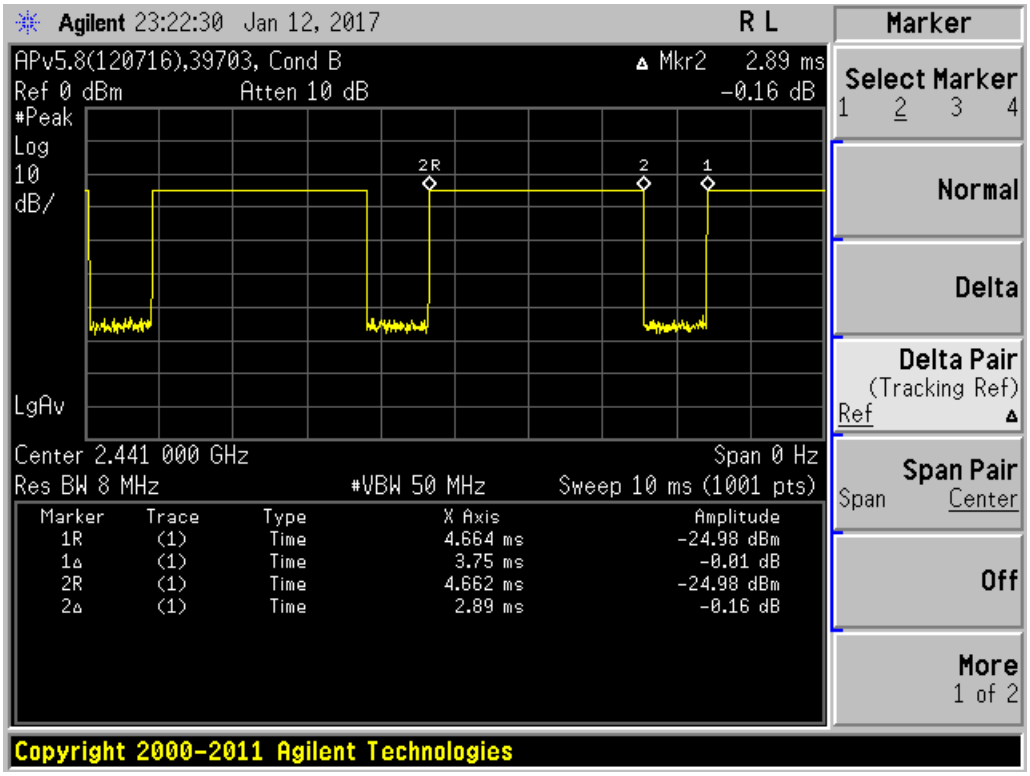
Note(s):

Bluetooth P_{Low} is triggered when 5 GHz Wi-Fi is on. Functional description of this mode is provided in technical description documents.

Duty Factor Measured Results

Mode	Type	T on (ms)	Period (ms)	Duty Cycle	Crest Factor (1/duty cycle)
GFSK	DH1	2.89	3.75	77.07%	1.30
	DH3	2.89	3.75	77.07%	1.30
	DH5	2.89	3.75	77.07%	1.30

GFSK Duty Cycle plots



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

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

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

- For all positions/configurations tested using the *initial test position* and subsequent test positions, when the *reported* SAR is > 0.8 W/kg, measure the SAR for these positions/configurations on the subsequent next highest measured output power channel(s) until the *reported* SAR is ≤ 1.2 W/kg or all required test channels are considered.
  - The additional power measurements required for this step should be limited to those necessary for identifying subsequent highest output power channels to apply the test reduction.
- When the specified maximum output power is the same for both UNII 1 and UNII 2A, begin SAR measurements in UNII 2A with the channel with the highest measured output power. If the reported SAR for UNII 2A is ≤ 1.2 W/kg, SAR is not required for UNII 1; otherwise treat the remaining bands separately and test them independently for SAR.
- When the specified maximum output power is different between UNII 1 and UNII 2A, begin SAR with the band that has the higher specified maximum output. If the highest reported SAR for the band with the highest specified power is ≤ 1.2 W/kg, testing for the band with the lower specified output power is not required; otherwise test the remaining bands independently for SAR.

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

10.1. GSM850

Mode	Antenna	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	
GPRS 2 Slots	C	0	Rear	128	824.2	24.0	24.0	1.130	1.130	0.565	0.565	1
				190	836.6	24.0	24.0	0.974	0.974	0.488	0.488	
				251	848.8	24.0	23.9	0.834	0.853	0.418	0.428	
			Edge 1	190	836.6	24.0	24.0	0.625	0.625	0.317	0.317	
			Edge 2	190	836.6	24.0	24.0	0.066	0.066	0.036	0.036	
			Edge 3	190	836.6	24.0	24.0	0.008	0.008	0.005	0.005	
GPRS 2 Slots	D	0	Rear	128	824.2	26.5	26.5	0.875	0.875	0.409	0.409	
				190	836.6	26.5	26.5	0.900	0.900	0.422	0.422	
				251	848.8	26.5	26.5	0.909	0.909	0.423	0.423	
			Edge 1	190	836.6	26.5	26.5	0.774	0.774	0.396	0.396	
			Edge 3	190	836.6	26.5	26.5	0.024	0.024	0.014	0.014	
			Edge 4	190	836.6	26.5	26.5	0.108	0.108	0.060	0.060	

Note(s):
1. Edge 3 testing was performed so that the measured SAR result can be used in place of the overly conservative estimated SAR value.

10.2. GSM1900

Mode	Antenna	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	
GPRS 2 Slots	C	0	Rear	512	1850.2	21.3	21.0	0.946	1.014	0.447	0.479	
				661	1880.0	21.3	21.0	0.926	0.992	0.438	0.469	
				810	1909.8	21.3	21.0	1.000	1.072	0.472	0.506	2
			Edge 1	512	1850.2	21.3	21.0	0.761	0.815	0.351	0.376	
				661	1880.0	21.3	21.0	0.784	0.840	0.361	0.387	
				810	1909.8	21.3	21.0	0.954	1.022	0.429	0.460	
			Edge 2	661	1880.0	21.3	21.0	0.053	0.056	0.026	0.027	
			Edge 3	661	1880.0	21.3	21.0	-	-	-	-	
GPRS 2 Slots	D	0	Rear	512	1850.2	20.8	20.8	1.010	1.010	0.482	0.482	
				661	1880.0	20.8	20.8	1.030	1.030	0.488	0.488	
				810	1909.8	20.8	20.8	1.040	1.040	0.488	0.488	
			Edge 1	661	1880.0	20.8	20.8	0.746	0.746	0.345	0.345	
			Edge 3	661	1880.0	20.8	20.8	-	-	-	-	
			Edge 4	661	1880.0	20.8	20.8	0.051	0.051	0.026	0.026	

Note(s):
1. Edge 3 testing was performed so that the measured SAR result can be used in place of the overly conservative estimated SAR value.
2. SAR values represented by "-" indicate no SAR peaks were detected during area scans.

10.3. W-CDMA Band II

Mode	Antenna	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	
Rel 99 RMC 12.2 kbps	C	0	Rear	9262	1852.4	14.3	14.3	0.990	0.990	0.471	0.471	
				9400	1880.0	14.3	14.2	0.988	1.011	0.470	0.481	
				9538	1907.6	14.3	14.3	1.000	1.000	0.474	0.474	
			Edge 1	9262	1852.4	14.3	14.3	0.829	0.829	0.378	0.378	
				9400	1880.0	14.3	14.2	0.877	0.897	0.399	0.408	
				9538	1907.6	14.3	14.3	0.919	0.919	0.410	0.410	
			Edge 2	9400	1880.0	14.3	14.2	0.064	0.065	0.030	0.031	
			Edge 3	9400	1880.0	14.3	14.2	-	-	-	-	
Rel 99 RMC 12.2 kbps	D	0	Rear	9262	1852.4	14.0	13.9	1.060	1.085	0.491	0.502	3
				9400	1880.0	14.0	13.9	1.000	1.023	0.463	0.474	
				9538	1907.6	14.0	14.0	1.060	1.060	0.479	0.479	
			Edge 1	9400	1880.0	14.0	13.9	0.685	0.701	0.312	0.319	
			Edge 3	9400	1880.0	14.0	13.9	-	-	-	-	
			Edge 4	9400	1880.0	14.0	13.9	0.061	0.063	0.030	0.031	

Note(s):
1. Edge 3 testing was performed so that the measured SAR result can be used in place of the overly conservative estimated SAR value.
2. SAR values represented by "-" indicate no SAR peaks were detected during area scans.

10.4. W-CDMA Band IV

Mode	Antenna	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	
Rel 99 RMC 12.2 kbps	C	0	Rear	1312	1712.4	14.2	13.7	0.984	1.104	0.446	0.500	
				1413	1732.6	14.2	13.8	1.000	1.096	0.454	0.498	
				1513	1752.6	14.2	13.7	0.979	1.098	0.443	0.497	
			Edge 1	1413	1732.6	14.2	13.8	0.652	0.715	0.303	0.332	
			Edge 2	1413	1732.6	14.2	13.8	0.052	0.057	0.026	0.029	
			Edge 3	1413	1732.6	14.2	13.8	-	-	-	-	
Rel 99 RMC 12.2 kbps	D	0	Rear	1312	1712.4	13.8	13.8	1.040	1.040	0.468	0.468	
				1413	1732.6	13.8	13.7	1.050	1.074	0.472	0.483	
				1513	1752.6	13.8	13.7	1.120	1.146	0.500	0.512	4
			Edge 1	1413	1732.6	13.8	13.7	0.612	0.626	0.280	0.287	
			Edge 3	1413	1732.6	13.8	13.7	-	-	-	-	
			Edge 4	1413	1732.6	13.8	13.7	0.047	0.048	0.022	0.023	

Note(s):
1. Edge 3 testing was performed so that the measured SAR result can be used in place of the overly conservative estimated SAR value.
2. SAR values represented by "-" indicate no SAR peaks were detected during area scans.

10.5. W-CDMA Band V

Mode	Antenna	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	
Rel 99 RMC 12.2 kbps	C	0	Rear	4132	826.4	18.2	18.2	1.190	1.190	0.592	0.592	5
				4183	836.6	18.2	18.2	1.080	1.080	0.533	0.533	
				4233	846.6	18.2	18.2	0.999	0.999	0.494	0.494	
			Edge 1	4183	836.6	18.2	18.2	0.766	0.766	0.392	0.392	
			Edge 2	4183	836.6	18.2	18.2	0.080	0.080	0.043	0.043	
			Edge 3	4183	836.6	18.2	18.2	0.006	0.006	0.004	0.004	
Rel 99 RMC 12.2 kbps	D	0	Rear	4132	826.4	20.0	19.8	0.917	0.960	0.436	0.457	
				4183	836.6	20.0	19.8	0.992	1.039	0.492	0.515	
				4233	846.6	20.0	19.7	0.836	0.896	0.396	0.424	
			Edge 1	4183	836.6	20.0	19.8	0.737	0.772	0.394	0.413	
			Edge 3	4183	836.6	20.0	19.8	0.017	0.018	0.011	0.011	
			Edge 4	4183	836.6	20.0	19.8	0.118	0.124	0.063	0.066	

Note(s):
1. Edge 3 testing was performed so that the measured SAR result can be used in place of the overly conservative estimated SAR value.

10.6. CDMA BC0

Mode	Antenna	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	
1xRTT (RC3 SO32)	C	0	Rear	1013	824.7	18.2	18.0	1.120	1.173	0.563	0.590	6
				384	836.5	18.2	18.2	1.070	1.070	0.540	0.540	
				777	848.3	18.2	18.2	1.040	1.040	0.517	0.517	
			Edge 1	384	836.5	18.2	18.2	0.764	0.764	0.374	0.374	
			Edge 2	384	836.5	18.2	18.2	0.093	0.093	0.049	0.049	
			Edge 3	384	836.5	18.2	18.2	0.016	0.016	0.009	0.009	
1xEVDO (Rel. 0)	C	0	Rear	1013	824.7	18.2	18.2	1.170	1.170	0.582	0.582	
				384	836.5	18.2	18.2	1.100	1.100	0.548	0.548	
				777	848.3	18.2	18.2	1.060	1.060	0.524	0.524	
			Edge 1	384	836.5	18.2	18.2	0.773	0.773	0.387	0.387	
			Edge 2	384	836.5	18.2	18.2	0.084	0.084	0.046	0.046	
			Edge 3	384	836.5	18.2	18.2	0.015	0.015	0.009	0.009	
1xRTT (RC3 SO32)	D	0	Rear	1013	824.7	20.0	19.7	0.870	0.932	0.450	0.482	
				384	836.5	20.0	19.7	0.839	0.899	0.432	0.463	
				777	848.3	20.0	19.6	0.897	0.984	0.464	0.509	
			Edge 1	384	836.5	20.0	19.7	0.604	0.647	0.299	0.320	
			Edge 3	384	836.5	20.0	19.7	0.027	0.029	0.015	0.016	
			Edge 4	384	836.5	20.0	19.7	0.136	0.146	0.074	0.079	
1xEVDO (Rel. 0)	D	0	Rear	1013	824.7	20.0	19.8	0.888	0.930	0.453	0.474	
				384	836.5	20.0	19.8	0.928	0.972	0.473	0.495	
				777	848.3	20.0	19.8	0.847	0.887	0.428	0.448	
			Edge 1	384	836.5	20.0	19.8	0.615	0.644	0.303	0.317	
			Edge 3	384	836.5	20.0	19.8	0.025	0.026	0.014	0.015	
			Edge 4	384	836.5	20.0	19.8	0.137	0.143	0.074	0.077	

Note(s):
1. Edge 3 testing was performed so that the measured SAR result can be used in place of the overly conservative estimated SAR value.

10.7. CDMA BC1

Mode	Antenna	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	
1xRTT (RC3 SO32)	C	0	Rear	25	1851.3	14.3	14.3	1.100	1.100	0.508	0.508	
				600	1880.0	14.3	14.2	1.120	1.146	0.516	0.528	
				1175	1908.8	14.3	14.2	1.120	1.146	0.518	0.530	
			Edge 1	600	1880.0	14.3	14.2	0.638	0.653	0.294	0.301	
			Edge 2	600	1880.0	14.3	14.2	0.044	0.045	0.021	0.022	
			Edge 3	600	1880.0	14.3	14.2	-	-	-	-	
1xEVDO (Rel. 0)	C	0	Rear	25	1851.3	14.3	14.3	1.080	1.080	0.511	0.511	
				600	1880.0	14.3	14.3	1.110	1.110	0.517	0.517	
				1175	1908.8	14.3	14.3	1.130	1.130	0.524	0.524	
			Edge 1	600	1880.0	14.3	14.3	0.765	0.765	0.353	0.353	
			Edge 2	600	1880.0	14.3	14.3	0.059	0.059	0.029	0.029	
			Edge 3	600	1880.0	14.3	14.3	-	-	-	-	
1xRTT (RC3 SO32)	D	0	Rear	25	1851.3	14.0	13.9	1.130	1.156	0.520	0.532	7
				600	1880.0	14.0	14.0	1.030	1.030	0.480	0.480	
				1175	1908.8	14.0	14.0	1.010	1.010	0.468	0.468	
			Edge 1	600	1880.0	14.0	14.0	0.711	0.711	0.321	0.321	
			Edge 3	600	1880.0	14.0	14.0	-	-	-	-	
			Edge 4	600	1880.0	14.0	14.0	0.067	0.067	0.033	0.033	
1xEVDO (Rel. 0)	D	0	Rear	25	1851.3	14.0	14.0	1.100	1.100	0.501	0.501	
				600	1880.0	14.0	14.0	1.080	1.080	0.489	0.489	
				1175	1908.8	14.0	14.0	0.963	0.963	0.433	0.433	
			Edge 1	600	1880.0	14.0	14.0	0.720	0.720	0.326	0.326	
			Edge 3	600	1880.0	14.0	14.0	-	-	-	-	
			Edge 4	600	1880.0	14.0	14.0	0.067	0.067	0.032	0.032	

Note(s):
1. Edge 3 testing was performed so that the measured SAR result can be used in place of the overly conservative estimated SAR value.
2. SAR values represented by "-" indicate no SAR peaks were detected during area scans.

10.8. CDMA BC10

Mode	Antenna	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	
1xRTT (RC3 SO32)	C	0	Rear	476	817.9	18.0	18.0	1.190	1.190	0.591	0.591	8
				580	820.5	18.0	18.0	1.170	1.170	0.586	0.586	
				670	822.8	18.0	18.0	1.140	1.140	0.572	0.572	
			Edge 1	580	820.5	18.0	18.0	0.778	0.778	0.396	0.396	
			Edge 2	580	820.5	18.0	18.0	0.079	0.079	0.042	0.042	
			Edge 3	580	820.5	18.0	18.0	0.008	0.008	0.005	0.005	
1xEVDO (Rel. 0)	C	0	Rear	476	817.9	18.0	18.0	1.150	1.150	0.573	0.573	
				580	820.5	18.0	18.0	1.140	1.140	0.567	0.567	
				670	822.8	18.0	18.0	1.110	1.110	0.552	0.552	
			Edge 1	580	820.5	18.0	18.0	0.798	0.798	0.398	0.398	
			Edge 2	580	820.5	18.0	18.0	0.079	0.079	0.041	0.041	
			Edge 3	580	820.5	18.0	18.0	0.008	0.008	0.005	0.005	
1xRTT (RC3 SO32)	D	0	Rear	476	817.9	20.0	19.8	0.928	0.972	0.464	0.486	
				580	820.5	20.0	19.7	0.927	0.993	0.463	0.496	
				670	822.8	20.0	19.7	0.925	0.991	0.461	0.494	
			Edge 1	580	820.5	20.0	19.7	0.624	0.669	0.320	0.343	
			Edge 3	580	820.5	20.0	19.7	0.020	0.021	0.012	0.013	
			Edge 4	580	820.5	20.0	19.7	0.118	0.126	0.063	0.067	
1xEVDO (Rel. 0)	D	0	Rear	476	817.9	20.0	19.8	0.935	0.979	0.478	0.501	
				580	820.5	20.0	19.8	0.913	0.956	0.467	0.489	
				670	822.8	20.0	19.8	0.938	0.982	0.479	0.502	
			Edge 1	580	820.5	20.0	19.8	0.638	0.668	0.329	0.345	
			Edge 3	580	820.5	20.0	19.8	0.013	0.014	0.008	0.009	
			Edge 4	580	820.5	20.0	19.8	0.120	0.126	0.066	0.069	

Note(s):

1. Edge 3 testing was performed so that the measured SAR result can be used in place of the overly conservative estimated SAR value.

10.9. LTE Band 2 (20MHz Bandwidth)

SAR for LTE Band 2 (Frequency range: 1850 - 1910 MHz) is covered by LTE Band 25 (Frequency range: 1850 - 1915 MHz) due to overlapping frequency range, same maximum tune-up limit and same channel bandwidth.

10.10. LTE Band 4 (20MHz Bandwidth)

Mode	Antenna	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
								Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
QPSK	C	0	Rear	20050	1720.0	1	49	14.2	14.0	1.070	1.120	0.488	0.511	
						50	24	14.2	13.9	1.040	1.114	0.472	0.506	
				20175	1732.5	1	49	14.2	14.0	1.060	1.110	0.480	0.503	
						50	24	14.2	13.9	1.040	1.114	0.471	0.505	
						100	0	14.2	14.0	1.090	1.141	0.496	0.519	
				20300	1745.0	1	49	14.2	13.9	1.080	1.157	0.491	0.526	9
						50	24	14.2	13.9	1.040	1.114	0.470	0.504	
			Edge 1	20175	1732.5	1	49	14.2	14.0	0.687	0.719	0.321	0.336	
						50	24	14.2	13.9	0.667	0.715	0.308	0.330	
			Edge 2	20175	1732.5	1	49	14.2	14.0	0.057	0.060	0.028	0.029	
						50	24	14.2	13.9	0.058	0.062	0.028	0.030	
			Edge 3	20175	1732.5	1	49	14.2	14.0	-	-	-	-	
						50	24	14.2	13.9	-	-	-	-	
QPSK	D	0	Rear	20050	1720.0	1	49	14.0	14.0	1.130	1.130	0.515	0.515	
						50	24	14.0	14.0	1.100	1.100	0.503	0.503	
				20175	1732.5	1	49	14.0	14.0	1.140	1.140	0.517	0.517	
						50	24	14.0	13.9	1.090	1.115	0.497	0.509	
						100	0	14.0	14.0	1.140	1.140	0.507	0.507	
				20300	1745.0	1	49	14.0	14.0	1.150	1.150	0.521	0.521	
						50	24	14.0	14.0	1.100	1.100	0.502	0.502	
			Edge 1	20175	1732.5	1	49	14.0	14.0	0.655	0.655	0.300	0.300	
						50	24	14.0	13.9	0.636	0.651	0.291	0.298	
			Edge 3	20175	1732.5	1	49	14.0	14.0	-	-	-	-	
						50	24	14.0	13.9	-	-	-	-	
			Edge 4	20175	1732.5	1	49	14.0	14.0	0.050	0.050	0.024	0.024	
						50	24	14.0	13.9	0.047	0.048	0.024	0.025	

Note(s):
1. Edge 3 testing was performed so that the measured SAR result can be used in place of the overly conservative estimated SAR value.
2. SAR values represented by "-" indicate no SAR peaks were detected during area scans.
3. For Reduced Power mode, MPR is never triggered regardless of channel, RB, or mode combinations.

10.11. LTE Band 5 (10MHz Bandwidth)

SAR for LTE Band 5 (Frequency range: 824 - 849 MHz) is covered by LTE Band 26 (Frequency range: 814 – 849 MHz) due to overlapping frequency range, same maximum tune-up limit and same channel

10.12. LTE Band 7 (20MHz Bandwidth)

Mode	Antenna	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
								Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
QPSK	C	0	Rear	20850	2510.0	1	49	12.2	12.2	1.130	1.130	0.473	0.473	
						50	24	12.2	12.2	1.120	1.120	0.471	0.471	
				21100	2535.0	1	49	12.2	12.2	1.160	1.160	0.485	0.485	
						50	24	12.2	12.2	1.170	1.170	0.489	0.489	
						100	0	12.2	12.2	1.170	1.170	0.491	0.491	
				21350	2560.0	1	49	12.2	12.2	1.110	1.110	0.470	0.470	
						50	24	12.2	12.2	1.190	1.190	0.499	0.499	
			Edge 1	20850	2510.0	1	49	12.2	12.2	0.918	0.918	0.357	0.357	
						50	24	12.2	12.2	0.929	0.929	0.360	0.360	
				21100	2535.0	1	49	12.2	12.2	0.892	0.892	0.339	0.339	
						50	24	12.2	12.2	0.890	0.890	0.346	0.346	
						100	0	12.2	12.2	0.912	0.912	0.353	0.353	
				21350	2560.0	1	49	12.2	12.2	0.880	0.880	0.339	0.339	
						50	24	12.2	12.2	0.898	0.898	0.347	0.347	
			Edge 2	21100	2535.0	1	49	12.2	12.2	0.112	0.112	0.046	0.046	
						50	24	12.2	12.2	0.113	0.113	0.047	0.047	
			Edge 3	21100	2535.0	1	49	12.2	12.2	-	-	-	-	
						50	24	12.2	12.2	-	-	-	-	
QPSK	D	0	Rear	20850	2510.0	1	49	11.8	11.8	1.190	1.190	0.503	0.503	10
						50	24	11.8	11.7	1.110	1.136	0.465	0.476	
				21100	2535.0	1	49	11.8	11.7	1.140	1.167	0.480	0.491	
						50	24	11.8	11.7	1.160	1.187	0.485	0.496	
						100	0	11.8	11.8	1.190	1.190	0.498	0.498	
				21350	2560.0	1	49	11.8	11.8	1.170	1.170	0.491	0.491	
						50	24	11.8	11.7	1.160	1.187	0.479	0.490	
			Edge 1	21100	2535.0	1	49	11.8	11.7	0.649	0.664	0.255	0.261	
						50	24	11.8	11.7	0.659	0.674	0.258	0.264	
			Edge 3	21100	2535.0	1	49	11.8	11.7	-	-	-	-	
						50	24	11.8	11.7	-	-	-	-	
			Edge 4	21100	2535.0	1	49	11.8	11.7	0.102	0.104	0.045	0.046	
						50	24	11.8	11.7	0.100	0.102	0.043	0.044	

Note(s):
1. Edge 3 testing was performed so that the measured SAR result can be used in place of the overly conservative estimated SAR value.
2. SAR values represented by "-" indicate no SAR peaks were detected during area scans.
3. For Reduced Power mode, MPR is never triggered regardless of channel, RB, or mode combinations.

10.13. LTE Band 12 (10MHz Bandwidth)

Mode	Antenna	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
								Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
QPSK	C	0	Rear	23095	707.5	1	24	19.0	18.9	1.100	1.126	0.554	0.567	
						25	12	19.0	19.0	1.160	1.160	0.579	0.579	
						50	0	19.0	18.9	1.150	1.177	0.573	0.586	11
			Edge 1	23095	707.5	1	24	19.0	18.9	0.663	0.678	0.335	0.343	
						25	12	19.0	19.0	0.692	0.692	0.349	0.349	
			Edge 2	23095	707.5	1	24	19.0	18.9	0.068	0.070	0.035	0.036	
						25	12	19.0	19.0	0.071	0.071	0.037	0.037	
			Edge 3	23095	707.5	1	24	19.0	18.9	0.002	0.002	0.001	0.001	
						25	12	19.0	19.0	0.002	0.002	0.001	0.001	
QPSK	D	0	Rear	23095	707.5	1	24	21.0	21.0	0.986	0.986	0.469	0.469	
						25	12	21.0	20.9	0.942	0.964	0.446	0.456	
						50	0	21.0	20.8	0.943	0.987	0.447	0.468	
			Edge 1	23095	707.5	1	24	21.0	21.0	0.707	0.707	0.378	0.378	
						25	12	21.0	20.9	0.671	0.687	0.357	0.365	
			Edge 3	23095	707.5	1	24	21.0	21.0	0.002	0.002	0.001	0.001	
						25	12	21.0	20.9	0.002	0.002	0.001	0.001	
			Edge 4	23095	707.5	1	24	21.0	21.0	0.076	0.076	0.038	0.038	
						25	12	21.0	20.9	0.074	0.076	0.037	0.038	

Note(s):
1. Edge 3 testing was performed so that the measured SAR result can be used in place of the overly conservative estimated SAR value.
2. For Reduced Power mode, MPR is never triggered regardless of channel, RB, or mode combinations.

10.14. LTE Band 13 (10MHz Bandwidth)

Mode	Antenna	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
								Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
QPSK	C	0	Rear	23230	782.0	1	24	19.0	18.9	0.943	0.965	0.472	0.483	
						25	12	19.0	19.0	0.985	0.985	0.487	0.487	12
						50	0	19.0	19.0	0.945	0.945	0.467	0.467	
			Edge 1	23230	782.0	1	24	19.0	18.9	0.599	0.613	0.287	0.294	
						25	12	19.0	19.0	0.622	0.622	0.297	0.297	
			Edge 2	23230	782.0	1	24	19.0	18.9	0.062	0.063	0.035	0.036	
						25	12	19.0	19.0	0.063	0.063	0.036	0.036	
			Edge 3	23230	782.0	1	24	19.0	18.9	0.005	0.005	0.003	0.003	
						25	12	19.0	19.0	0.005	0.005	0.001	0.001	
QPSK	D	0	Rear	23230	782.0	1	24	21.2	21.2	0.914	0.914	0.444	0.444	
						25	12	21.2	20.7	0.752	0.844	0.363	0.407	
						50	0	21.2	20.7	0.767	0.861	0.370	0.415	
			Edge 1	23230	782.0	1	24	21.2	21.2	0.767	0.767	0.417	0.417	
						25	12	21.2	20.7	0.618	0.693	0.337	0.378	
			Edge 3	23230	782.0	1	24	21.2	21.2	0.017	0.017	0.009	0.009	
						25	12	21.2	20.7	0.014	0.015	0.008	0.008	
			Edge 4	23230	782.0	1	24	21.2	21.2	0.131	0.131	0.073	0.073	
						25	12	21.2	20.7	0.105	0.118	0.058	0.065	

Note(s):
1. Edge 3 testing was performed so that the measured SAR result can be used in place of the overly conservative estimated SAR value.
2. For Reduced Power mode, MPR is never triggered regardless of channel, RB, or mode combinations.

10.15. LTE Band 17 (10MHz Bandwidth)

SAR for LTE Band 17 (Frequency range: 704 – 716 MHz) is covered by LTE Band 12 (Frequency range: 699 – 716 MHz) due to overlapping frequency range, same maximum tune-up limit and same channel bandwidth.

10.16. LTE Band 25 (20MHz Bandwidth)

Mode	Antenna	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
								Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
QPSK	C	0	Rear	26140	1860.0	1	49	14.5	14.5	1.170	1.170	0.542	0.542	
						50	24	14.5	14.5	1.190	1.190	0.548	0.548	13
				26365	1882.5	1	49	14.5	14.4	1.110	1.136	0.516	0.528	
						50	24	14.5	14.5	1.080	1.080	0.509	0.509	
						100	0	14.5	14.5	1.070	1.070	0.504	0.504	
				26590	1905.0	1	49	14.5	14.5	1.190	1.190	0.545	0.545	
						50	24	14.5	14.5	1.190	1.190	0.546	0.546	
			Edge 1	26140	1860.0	1	49	14.5	14.5	0.825	0.825	0.383	0.383	
						50	24	14.5	14.5	0.846	0.846	0.388	0.388	
				26365	1882.5	1	49	14.5	14.4	0.899	0.920	0.411	0.421	
						50	24	14.5	14.5	0.900	0.900	0.410	0.410	
						100	0	14.5	14.5	0.898	0.898	0.412	0.412	
				26590	1905.0	1	49	14.5	14.5	0.898	0.898	0.412	0.412	
						50	24	14.5	14.5	0.911	0.911	0.413	0.413	
			Edge 2	26365	1882.5	1	49	14.5	14.4	0.061	0.063	0.030	0.031	
						50	24	14.5	14.5	0.050	0.050	0.025	0.025	
			Edge 3	26365	1882.5	1	49	14.5	14.4	-	-	-	-	
						50	24	14.5	14.5	-	-	-	-	
QPSK	D	0	Rear	26140	1860.0	1	49	14.2	14.1	1.060	1.085	0.498	0.510	
						50	24	14.2	14.1	1.070	1.095	0.501	0.513	
				26365	1882.5	1	49	14.2	14.1	1.040	1.064	0.484	0.495	
						50	24	14.2	14.2	1.040	1.040	0.488	0.488	
						100	0	14.2	14.2	1.030	1.030	0.480	0.480	
				26590	1905.0	1	49	14.2	14.1	1.010	1.034	0.471	0.482	
						50	24	14.2	14.2	1.020	1.020	0.473	0.473	
			Edge 1	26365	1882.5	1	49	14.2	14.1	0.683	0.699	0.310	0.317	
						50	24	14.2	14.2	0.650	0.650	0.298	0.298	
			Edge 3	26365	1882.5	1	49	14.2	14.1	-	-	-	-	
						50	24	14.2	14.2	-	-	-	-	
			Edge 4	26365	1882.5	1	49	14.2	14.1	0.045	0.046	0.024	0.024	
						50	24	14.2	14.2	0.054	0.054	0.029	0.029	

Note(s):

1. Edge 3 testing was performed so that the measured SAR result can be used in place of the overly conservative estimated SAR value.
2. SAR values represented by "-" indicate no SAR peaks were detected during area scans.
3. For Reduced Power mode, MPR is never triggered regardless of channel, RB, or mode combinations.

10.17. LTE Band 26 (10MHz Bandwidth)

Mode	Antenna	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
								Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
QPSK	C	0	Rear	26765	821.5	1	24	18.2	18.2	1.110	1.110	0.556	0.556	
						25	12	18.2	18.2	1.090	1.090	0.539	0.539	
				26865	831.5	1	24	18.2	18.2	1.050	1.050	0.520	0.520	
						25	12	18.2	18.2	1.080	1.080	0.536	0.536	
						50	0	18.2	18.2	1.100	1.100	0.544	0.544	
				26965	841.5	1	24	18.2	18.2	1.080	1.080	0.535	0.535	
						25	12	18.2	18.2	1.120	1.120	0.553	0.553	14
			Edge 1	26865	831.5	1	24	18.2	18.2	0.704	0.704	0.360	0.360	
						25	12	18.2	18.2	0.734	0.734	0.374	0.374	
			Edge 2	26865	831.5	1	24	18.2	18.2	0.075	0.075	0.039	0.039	
						25	12	18.2	18.2	0.076	0.076	0.039	0.039	
			Edge 3	26865	831.5	1	24	18.2	18.2	0.008	0.008	0.005	0.005	
						25	12	18.2	18.2	0.008	0.008	0.005	0.005	
QPSK	D	0	Rear	26765	821.5	1	24	20.0	19.7	0.872	0.934	0.447	0.479	
						25	12	20.0	19.7	0.894	0.958	0.457	0.490	
				26865	831.5	1	24	20.0	19.7	0.852	0.913	0.436	0.467	
						25	12	20.0	19.7	0.870	0.932	0.443	0.475	
						50	0	20.0	19.7	0.861	0.923	0.439	0.470	
				26965	841.5	1	24	20.0	19.7	0.773	0.828	0.395	0.423	
						25	12	20.0	19.7	0.796	0.853	0.404	0.433	
			Edge 1	26865	831.5	1	24	20.0	19.7	0.616	0.660	0.315	0.338	
						25	12	20.0	19.7	0.627	0.672	0.318	0.341	
			Edge 3	26865	831.5	1	24	20.0	19.7	0.017	0.018	0.011	0.012	
						25	12	20.0	19.7	0.016	0.017	0.010	0.011	
			Edge 4	26865	831.5	1	24	20.0	19.7	0.119	0.128	0.068	0.073	
						25	12	20.0	19.7	0.121	0.130	0.070	0.075	

Note(s):

1. Edge 3 testing was performed so that the measured SAR result can be used in place of the overly conservative estimated SAR value.
2. For Reduced Power mode, MPR is never triggered regardless of channel, RB, or mode combinations.

10.18. LTE Band 27 (10MHz Bandwidth)

SAR for LTE Band 27 (Frequency range: 814 – 824 MHz) is covered by LTE Band 26 (Frequency range: 814 – 849 MHz) due to overlapping frequency range, same or lower maximum tune-up limit and same channel bandwidth.

10.19. LTE Band 30 (10MHz Bandwidth)

Mode	Antenna	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
								Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
QPSK	C	0	Rear	27710	2310.0	1	24	13.2	13.1	1.130	1.156	0.477	0.488	
						25	12	13.2	13.2	1.180	1.180	0.499	0.499	15
						50	0	13.2	13.2	1.140	1.140	0.483	0.483	
			Edge 1	27710	2310.0	1	24	13.2	13.1	1.100	1.126	0.447	0.457	
						25	12	13.2	13.2	1.090	1.090	0.445	0.445	
						50	0	13.2	13.2	1.090	1.090	0.443	0.443	
			Edge 2	27710	2310.0	1	24	13.2	13.1	0.091	0.093	0.039	0.040	
						25	12	13.2	13.2	0.091	0.091	0.039	0.039	
			Edge 3	27710	2310.0	1	24	13.2	13.1	-	-	-	-	
						25	12	13.2	13.2	-	-	-	-	
QPSK	D	0	Rear	27710	2310.0	1	24	12.3	12.2	1.120	1.146	0.473	0.484	
						25	12	12.3	12.3	1.180	1.180	0.494	0.494	
						50	0	12.3	12.3	1.180	1.180	0.497	0.497	
			Edge 1	27710	2310.0	1	24	12.3	12.2	0.854	0.874	0.353	0.361	
						25	12	12.3	12.3	0.869	0.869	0.359	0.359	
						50	0	12.3	12.3	0.863	0.863	0.357	0.357	
			Edge 3	27710	2310.0	1	24	12.3	12.2	-	-	-	-	
						25	12	12.3	12.3	-	-	-	-	
			Edge 4	27710	2310.0	1	24	12.3	12.2	0.021	0.021	0.008	0.009	
						25	12	12.3	12.3	0.020	0.020	0.008	0.008	

Note(s):

1. Edge 3 testing was performed so that the measured SAR result can be used in place of the overly conservative estimated SAR value.
2. SAR values represented by "-" indicate no SAR peaks were detected during area scans.
3. For Reduced Power mode, MPR is never triggered regardless of channel, RB, or mode combinations.

10.20. LTE Band 41 (20MHz Bandwidth)

Mode	Antenna	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	RB Allocation	RB offset	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
								Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
QPSK	C	0	Rear	39750	2506.0	1	49	14.0	13.5	0.827	0.928	0.351	0.394	
						50	24	14.0	13.4	0.808	0.928	0.340	0.390	
				40185	2549.5	1	49	14.0	13.5	0.842	0.945	0.355	0.398	
						50	24	14.0	13.5	0.861	0.966	0.363	0.407	
				40620	2593.0	1	49	14.0	13.4	0.931	1.069	0.386	0.443	
						50	24	14.0	13.5	0.928	1.041	0.386	0.433	
						100	0	14.0	13.5	0.924	1.037	0.389	0.436	
				41055	2636.5	1	49	14.0	13.5	0.924	1.037	0.392	0.440	
						50	24	14.0	13.4	0.885	1.016	0.360	0.413	
				41490	2680.0	1	49	14.0	13.4	0.961	1.103	0.399	0.458	16
						50	24	14.0	13.4	0.950	1.091	0.394	0.452	
			Edge 1	40620	2593.0	1	49	14.0	13.4	0.666	0.765	0.256	0.294	
						50	24	14.0	13.5	0.663	0.744	0.255	0.286	
						100	0	14.0	13.4	0.646	0.742	0.249	0.286	
			Edge 2	40620	2593.0	1	49	14.0	13.4	0.096	0.110	0.040	0.045	
						50	24	14.0	13.5	0.096	0.108	0.039	0.044	
			Edge 3	40620	2593.0	1	49	14.0	13.4	-	-	-	-	
						50	24	14.0	13.5	-	-	-	-	
QPSK	D	0	Rear	39750	2506.0	1	49	14.0	13.4	0.894	1.026	0.376	0.432	
						50	24	14.0	13.5	0.900	1.010	0.377	0.423	
				40185	2549.5	1	49	14.0	13.4	0.896	1.029	0.374	0.429	
						50	24	14.0	13.5	0.916	1.028	0.382	0.429	
				40620	2593.0	1	49	14.0	13.5	0.868	0.974	0.359	0.403	
						50	24	14.0	13.5	0.890	0.999	0.368	0.413	
						100	0	14.0	13.5	0.896	1.005	0.371	0.416	
				41055	2636.5	1	49	14.0	13.5	0.886	0.994	0.359	0.403	
						50	24	14.0	13.5	0.897	1.006	0.362	0.406	
				41490	2680.0	1	49	14.0	13.4	0.892	1.024	0.349	0.401	
						50	24	14.0	13.5	0.932	1.046	0.365	0.410	
			Edge 1	40620	2593.0	1	49	14.0	13.5	0.475	0.533	0.184	0.206	
						50	24	14.0	13.5	0.491	0.551	0.191	0.214	
			Edge 3	40620	2593.0	1	49	14.0	13.5	-	-	-	-	
						50	24	14.0	13.5	-	-	-	-	
			Edge 4	40620	2593.0	1	49	14.0	13.5	0.082	0.092	0.034	0.038	
						50	24	14.0	13.5	0.086	0.096	0.036	0.040	

Note(s):

1. Edge 3 testing was performed so that the measured SAR result can be used in place of the overly conservative estimated SAR value.
2. SAR values represented by "-" indicate no SAR peaks were detected during area scans.
3. For Reduced Power mode, MPR is never triggered regardless of channel, RB, or mode combinations.

10.21. LTE-2CA Band 7 (20MHz + 20MHz BW)

RF Exposure Conditions	Mode	Dist. (mm)	Test Position	PCC				SCC				Power (dBm)			1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
				Ch #.	Freq. (MHz)	RB Allocation	RB offset	Ch #.	Freq. (MHz)	RB Allocation	RB offset	MPR	Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
QPSK	C	0	Rear	21350	2560.0	50	24	21152	2540.2	100	0	0	10.2	9.5	0.567	0.666	0.234	0.275	17
QPSK	D	0	Rear	20850	2510.0	1	49	21048	2529.8	100	0	0	9.3	8.6	0.525	0.617	0.221	0.260	

Notes:

1. From FCC PAG Guidance and Manufacturer KDB inquiry - Carrier Aggregation: PCC was determined and selected closest to the worst case SAR configuration from standalone reported SAR result. SCC was determined and selected closest to the next highest worst case SAR configuration from standalone SAR result. Channels utilized allow both selections to have contiguous CA. Output power was measured and verified for these test cases.
2. For Reduced Power mode, MPR is never triggered regardless of channel, RB, or mode combinations.

10.22. LTE-2CA Band 41 (20MHz + 20MHz BW)

RF Exposure Conditions	Mode	Dist. (mm)	Test Position	PCC				SCC				Power (dBm)			1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
				Ch #.	Freq. (MHz)	RB Allocation	RB offset	Ch #.	Freq. (MHz)	RB Allocation	RB offset	MPR	Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
QPSK	C	0	Rear	41490	2680.0	1	49	41292	2660.2	1	49	0	12.5	12.3	0.694	0.727	0.284	0.297	
QPSK	D	0	Rear	41490	2680.0	50	24	41292	2660.2	1	49	0	13.0	12.8	0.717	0.751	0.289	0.303	18

Notes:

1. From FCC PAG Guidance and Manufacturer KDB inquiry - Carrier Aggregation: PCC was determined and selected closest to the worst case SAR configuration from standalone reported SAR result. SCC was determined and selected closest to the next highest worst case SAR configuration from standalone SAR result. Channels utilized allow both selections to have contiguous CA. Output power was measured and verified for these test cases.
2. For Reduced Power mode, MPR is never triggered regardless of channel, RB, or mode combinations.

10.23. Wi-Fi (DTS Band)

Variant 1

Band	No. of Transmitters	Mode	Dist. (mm)	Position	Ch #.	Freq. (MHz)	Power (dBm)				SAR (W/kg)								Plots
							Antenna A		Antenna B		Antenna A				Antenna 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	
2.4 GHz	1 Tx	802.11b	0	Rear	6	2437	19.0	19.0			0.135	0.062	0.135	0.062					
				Edge 1	6	2437	19.0	19.0			0.013	0.005	0.013	0.005					
				Edge 3	6	2437	19.0	19.0			1.190	0.415	1.190	0.415					19
					10	2457	19.0	19.0			1.000	0.352	1.000	0.352					
				Edge 4	6	2437	19.0	19.0			0.220	0.095	0.220	0.095					
2.4 GHz	1 Tx	802.11b	0	Rear	6	2437			19.0	19.0					0.124	0.057	0.124	0.057	
				Edge 1	6	2437			19.0	19.0					0.014	0.005	0.014	0.005	
				Edge 2	6	2437			19.0	19.0					0.163	0.066	0.163	0.066	
				Edge 3	6	2437			19.0	19.0					0.867	0.307	0.867	0.307	
					10	2457			19.0	19.0					1.020	0.365	1.020	0.365	
2.4 GHz	2 Tx	802.11g CDD	0	Rear	6	2437	17.0	17.0	17.0	17.0	0.082	0.038	0.082	0.038	0.070	0.032	0.070	0.032	
				Edge 1	6	2437	17.0	17.0	17.0	17.0	0.026	0.010	0.026	0.010	0.016	0.006	0.016	0.006	
				Edge 2	6	2437	17.0	17.0	17.0	17.0	-	-	-	-	0.102	0.040	0.102	0.040	
				Edge 3	6	2437	17.0	17.0	17.0	17.0	0.721	0.254	0.721	0.254	0.585	0.204	0.585	0.204	
				Edge 4	6	2437	17.0	17.0	17.0	17.0	0.121	0.051	0.121	0.051	-	-	-	-	

Variant 2 Spot Check

Band	No. of Transmitters	Mode	Dist. (mm)	Position	Ch #.	Freq. (MHz)	Power (dBm)				SAR (W/kg)								Plots
							Antenna A		Antenna B		Antenna A				Antenna 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	
2.4 GHz	1 Tx	802.11b	0	Edge 3	6	2437	19.0	18.7			0.978	0.343	1.048	0.368					

Note(s):

1. Edge 1 testing was performed so that the measured SAR result can be used in place of the overly conservative estimated SAR value.
2. SAR values represented by "-" indicate the absence of a secondary peak within 2 dB of the maximum peak and therefore no detectable secondary zoom scan.

10.24. Wi-Fi (U-NII-1 & U-NII-2A Band)

Variant 1

Band	No. of Transmitters	Mode	Dist. (mm)	Position	Ch #.	Freq. (MHz)	Power (dBm)				SAR (W/kg)								Plots
							Antenna A		Antenna B		Antenna A				Antenna 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	
5.3 GHz	1 Tx	802.11n HT40	0	Rear	54	5270	16.5	16.5			0.194	0.075	0.194	0.075					
				Edge 1	54	5270	16.5	16.5			0.010	0.002	0.010	0.002					
				Edge 3	54	5270	16.5	16.5			1.100	0.350	1.100	0.350					
					62	5310	14.5	14.5			0.741	0.222	0.741	0.222					
				Edge 4	54	5270	16.5	16.5			0.253	0.083	0.253	0.083					
5.2 GHz	1 Tx	802.11n HT40	0	Rear	46	5230			17.0	17.0					0.202	0.071	0.202	0.071	
				Edge 1	46	5230			17.0	17.0					-	-	-	-	
				Edge 2	46	5230			17.0	17.0					0.305	0.106	0.305	0.106	
				Edge 3	38	5180			14.5	14.5					0.520	0.164	0.520	0.164	
					46	5230			17.0	17.0					1.040	0.347	1.040	0.347	
5.2 GHz	2 Tx	802.11n HT40 CDD	0	Rear	46	5230	16.5	16.5	17.0	17.0	0.206	0.070	0.206	0.070	0.127	0.046	0.127	0.046	
				Edge 1	46	5230	16.5	16.5	17.0	17.0	0.031	0.004	0.031	0.004	0.035	0.009	0.035	0.009	
				Edge 2	46	5230	16.5	16.5	17.0	17.0	-	-	-	-	0.234	0.075	0.234	0.075	
				Edge 3	38	5180	13.5	13.5	13.5	13.5	0.482	0.151	0.482	0.151	0.402	0.121	0.402	0.121	
					46	5230	16.5	16.5	17.0	17.0	1.130	0.349	1.130	0.349	1.190	0.368	1.190	0.368	20
				Edge 4	46	5230	16.5	16.5	17.0	17.0	0.297	0.094	0.297	0.094	-	-	-	-	

Variant 2 Spot Check

Band	No. of Transmitters	Mode	Dist. (mm)	Position	Ch #.	Freq. (MHz)	Power (dBm)				SAR (W/kg)								Plots
							Antenna A		Antenna B		Antenna A				Antenna 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	2 Tx	802.11n HT40	0	Edge 3	46	5230	16.5	16.5	17.0	16.9	1.040	0.334	1.040	0.334	1.010	0.307	1.034	0.314	

Note(s):

1. Edge 1 testing was performed so that the measured SAR result can be used in place of the overly conservative estimated SAR value.
2. SAR values represented by "-" indicate the absence of a secondary peak within 2 dB of the maximum peak and therefore no detectable secondary zoom scan.

10.25. Wi-Fi (U-NII-2C Band)

Variant 1

Band	No. of Transmitters	Mode	Dist. (mm)	Position	Ch #.	Freq. (MHz)	Power (dBm)				SAR (W/kg)								Plots
							Antenna A		Antenna B		Antenna A				Antenna 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	1 Tx	802.11ac VHT80	0	Rear	122	5610	15.0	15.0			0.142	0.055	0.142	0.055					
				Edge 1	122	5610	15.0	15.0			0.048	0.013	0.048	0.013					
				Edge 3	122	5610	15.0	15.0			1.090	0.350	1.090	0.350					
					138	5690	15.0	15.0			1.130	0.373	1.130	0.373					
				Edge 4	122	5610	15.0	15.0			0.212	0.070	0.212	0.070					
5.5 GHz	1 Tx	802.11ac VHT80	0	Rear	122	5610			15.0	15.0					0.150	0.057	0.150	0.057	
				Edge 1	122	5610			15.0	15.0					0.032	0.009	0.032	0.009	
				Edge 2	122	5610			15.0	15.0					0.168	0.062	0.168	0.062	
				Edge 3	122	5610			15.0	15.0					1.120	0.369	1.120	0.369	
					138	5690			15.0	15.0					1.190	0.370	1.190	0.370	21
5.5 GHz	2 Tx	802.11ac VHT80 CDD	0	Rear	122	5610	15.0	15.0	15.0	15.0	0.142	0.061	0.142	0.061	0.122	0.047	0.122	0.047	
				Edge 1	122	5610	15.0	15.0	15.0	15.0	0.043	0.017	0.043	0.017	0.060	0.016	0.060	0.016	
				Edge 2	122	5610	15.0	15.0	15.0	15.0	-	-	-	-	0.161	0.062	0.161	0.062	
				Edge 3	122	5610	15.0	15.0	15.0	15.0	1.170	0.377	1.170	0.377	1.120	0.364	1.120	0.364	
					138	5690	15.0	15.0	15.0	15.0	1.140	0.359	1.140	0.359	1.140	0.363	1.140	0.363	
				Edge 4	122	5610	15.0	15.0	15.0	15.0	0.261	0.091	0.261	0.091	-	-	-	-	

Variant 2 Spot Check

Band	No. of Transmitters	Mode	Dist. (mm)	Position	Ch #.	Freq. (MHz)	Power (dBm)				SAR (W/kg)								Plots
							Antenna A		Antenna B		Antenna A				Antenna 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	1Tx	802.11ac VHT80	0	Edge 3	138	5690			15.0	15.0					1.060	0.338	1.060	0.338	

Note(s):

1. Edge 1 testing was performed so that the measured SAR result can be used in place of the overly conservative estimated SAR value.
2. SAR values represented by "-" indicate the absence of a secondary peak within 2 dB of the maximum peak and therefore no detectable secondary zoom scan.

10.26. Wi-Fi (U-NII-3 Band)

Variant 1

Band	No. of Transmitters	Mode	Dist. (mm)	Position	Ch #.	Freq. (MHz)	Power (dBm)				SAR (W/kg)								Plots
							Antenna A		Antenna B		Antenna A				Antenna 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	
5.8 GHz	1 Tx	802.11ac HT80	0	Rear	155	5775	14.5	14.5			0.103	0.004	0.103	0.004					
				Edge 1	155	5775	14.5	14.5			0.035	0.010	0.035	0.010					
				Edge 3	155	5775	14.5	14.5			1.120	0.366	1.120	0.366					
				Edge 4	155	5775	14.5	14.5			0.162	0.052	0.162	0.052					
5.8 GHz	1 Tx	802.11ac HT80	0	Rear	155	5775			15.0	14.5					0.120	0.046	0.135	0.052	
				Edge 1	155	5775			15.0	14.5					0.034	0.009	0.038	0.010	
				Edge 2	155	5775			15.0	14.5					0.129	0.046	0.145	0.052	
				Edge 3	155	5775			15.0	14.5					0.980	0.317	1.100	0.356	
5.8 GHz	2 Tx	802.11ac VHT 80 CDD	0	Rear	155	5775	14.5	14.4	15.0	14.5	0.112	0.042	0.115	0.043	0.094	0.037	0.106	0.041	
				Edge 1	155	5775	14.5	14.4	15.0	14.5	0.031	0.010	0.032	0.010	0.036	0.010	0.041	0.011	
				Edge 2	155	5775	14.5	14.4	15.0	14.5	-	-	-	-	0.140	0.046	0.157	0.052	
				Edge 3	155	5775	14.5	14.4	15.0	14.5	1.120	0.362	1.146	0.370	0.945	0.305	1.060	0.342	22
				Edge 4	155	5775	14.5	14.4	15.0	14.5	0.156	0.052	0.160	0.053	-	-	-	-	

Variant 2 Spot Check

Band	No. of Transmitters	Mode	Dist. (mm)	Position	Ch #.	Freq. (MHz)	Power (dBm)				SAR (W/kg)								Plots
							Antenna A		Antenna B		Antenna A				Antenna 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	
5.8 GHz	1Tx	802.11ac HT80	0	Edge 3	155	5775	14.5	14.2			0.962	0.312	1.031	0.334					

Note(s):

1. Edge 1 testing was performed so that the measured SAR result can be used in place of the overly conservative estimated SAR value.
2. SAR values represented by "-" indicate the absence of a secondary peak within 2 dB of the maximum peak and therefore no detectable secondary zoom scan.

10.27. Bluetooth (P_{High})

Variant 1

Band	No. of Transmitters	Mode	Dist. (mm)	Position	Ch #.	Freq. (MHz)	Power (dBm)		SAR (W/kg)				Plots
							Tune-up Limit	Measured	Measured		Scaled		
									1-g	10-g	1-g	10-g	
Bluetooth	1 Tx	GFSK	0	Rear	39	2441	20.0	20.0	0.166	0.076	0.166	0.076	
				Edge 1	39	2441	20.0	20.0	0.036	0.014	0.036	0.014	
				Edge 3	0	2402	20.0	19.7	0.919	0.320	0.985	0.343	
					39	2441	20.0	20.0	1.160	0.413	1.160	0.413	23
					78	2480	20.0	19.2	0.718	0.256	0.863	0.308	
				Edge 4	39	2441	20.0	20.0	0.205	0.086	0.205	0.086	

Variant 2 Spot Check

Band	No. of Transmitters	Mode	Dist. (mm)	Position	Ch #.	Freq. (MHz)	Power (dBm)		SAR (W/kg)				Plots
							Tune-up Limit	Measured	Measured		Scaled		
									1-g	10-g	1-g	10-g	
Bluetooth	1 Tx	GMFK	0	Edge 3	39	2441	20.0	19.1	0.856	0.306	1.053	0.376	

Note(s):

1. Edge 1 testing was performed so that the measured SAR result can be used in place of the overly conservative estimated SAR value.
2. SAR values represented by "-" indicate the absence of a secondary peak within 2 dB of the maximum peak and therefore no detectable secondary zoom scan.

10.28. Bluetooth (P_{Low})

Variant 1

Band	No. of Transmitters	Mode	Dist. (mm)	Position	Ch #.	Freq. (MHz)	Power (dBm)		SAR (W/kg)				Plots
							Tune-up Limit	Measured	Measured		Scaled		
									1-g	10-g	1-g	10-g	
Bluetooth	1 Tx	GFSK	0	Rear	39	2441	13.5	12.6	0.027	0.011	0.033	0.014	
				Edge 1	39	2441	13.5	12.6	-	-	-	-	
				Edge 3	39	2441	13.5	12.6	0.180	0.062	0.221	0.076	
				Edge 4	39	2441	13.5	12.6	0.027	0.009	0.033	0.011	

Note(s):

1. Edge 1 testing was performed so that the measured SAR result can be used in place of the overly conservative estimated SAR value.
2. SAR values represented by "-" indicate the absence of a secondary peak within 2 dB of the maximum peak and therefore no detectable secondary zoom scan.
3. Bluetooh P_{Low} is triggered when 5GHz Wi-Fi is on. Functional description of this mode is provided in technical description documents.

11. SAR Measurement Variability

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

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

Frequency Band (MHz)	Air Interface	RF Exposure Conditions	Test Position	Repeated SAR (Yes/No)	Highest Measured SAR (W/kg)	First Repeated		Second Repeated		Third Repeated
						Measured SAR (W/kg)	Largest to Smallest SAR Ratio	Measured SAR (W/kg)	Largest to Smallest SAR Ratio	Measured SAR (W/kg)
700	LTE Band 12	Standalone	Rear	Yes	1.160	1.150	1.01	N/A	N/A	
	LTE Band 13	Standalone	Rear	No	0.985	N/A	N/A			
850	GSM 850	Standalone	Rear	No	1.130	N/A	N/A			
	CDMA BC0	Standalone	Rear	No	1.170	N/A	N/A			
	CDMA BC10	Standalone	Rear	No	1.190	N/A	N/A			
	WCDMA Band V	Standalone	Rear	Yes	1.190	1.150	1.03	N/A	N/A	
	LTE Band 26	Standalone	Rear	No	1.120	N/A	N/A			
1900	GSM 1900	Standalone	Rear	No	1.040	N/A	N/A			
	CDMA BC1	Standalone	Rear	No	1.130	N/A	N/A			
	WCDMA Band II	Standalone	Rear	No	1.060	N/A	N/A			
	LTE Band 25	Standalone	Rear	Yes	1.190	1.130	1.05	N/A	N/A	
1700	LTE Band 4	Standalone	Rear	Yes	1.150	1.140	1.01	N/A	N/A	
	WCDMA Band IV	Standalone	Rear	No	1.120	N/A	N/A			
2300	LTE Band 30	Standalone	Rear	Yes	1.180	1.140	1.04	N/A	N/A	
2400	Wi-Fi 802.11b/g/n	Standalone	Edge 3	Yes	1.190	1.170	1.02	N/A	N/A	
	BT	Standalone	Edge 3	No	1.160	N/A	N/A			
2600	LTE Band 7	Standalone	Rear	Yes	1.190	1.150	1.03	N/A	N/A	
	LTE Band 41	Standalone	Rear	No	0.961	N/A	N/A			
5200	Wi-Fi 802.11a/n/ac	Standalone	Edge 3	Yes	1.190	1.080	1.10	N/A	N/A	
5300	Wi-Fi 802.11a/n/ac	Standalone	Edge 3	Yes	1.100	1.09	1.01	N/A	N/A	
5500	Wi-Fi 802.11a/n/ac	Standalone	Edge 3	Yes	1.190	1.13	1.05	N/A	N/A	
5800	Wi-Fi 802.11a/n/ac	Standalone	Edge 3	Yes	1.120	1.07	1.05	N/A	N/A	

Note(s):

Second Repeated Measurement is not required since the ratio of the largest to smallest SAR for the original and first repeated measurement is not > 1.20 or 3 (1-g or 10-g respectively).

12. Simultaneous Transmission SAR Analysis

According to KDB 447498 D01, when the sum of SAR exceeds the limit for a combination of simultaneously transmitting antennas, SAR test exclusion is determined by the SAR to peak location separation ratio (SPLSR) between pairs of antennas within the combination. SPLSR is determined by $(SAR_1 + SAR_2)^{1.5} / Ri$, where SAR_1 and SAR_2 are the highest reported or estimated SAR values for each antenna, and ***Ri*** is the separation distance between the SAR peak locations. SAR peak locations and ***Ri*** are to be determined differently depending on the SAR values involved- measured or estimated- and all coordinates must be clearly identified in the report.

To qualify for SAR test exclusion by way of SPLSR, each antenna in the combination must be evaluated one pair at a time, and the SPLSR for all pairs must be ≤ 0.04 and 0.10, respectively, for 1-g and 10-g SAR evaluation.

Simultaneous Transmission Conditions

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

Notes:

1. Wi-Fi 2.4GHz cannot transmit simultaneously with Bluetooth Radio.
2. Conditions 9, 10 and 11 are covered by conditions 12, 13 and 14, respectively.
3. Condition 8 is covered by conditions 12, 13 and 14.
4. Conditions 20, 21 and 22 are covered by conditions 23, 24 and 25, respectively.
5. Condition 19 is covered by conditions 23, 24 and 25.
6. Antenna C Hotspot Mode is covered by conditions 4, 5, and 6.
7. Antenna D Hotspot Mode is covered by conditions 15, 16, and 17.

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.
4. For conditions where the estimated SAR is overly conservative for certain conditions, the test lab may choose to perform standalone SAR measurements and use the measured SAR to determine simultaneous transmission SAR test exclusion.

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	24.00	63	4.01	2.68	42.92	238.09	95.84		-MEASURE-	-MEASURE-	0.180	0.400	0.400	
Cellular	GPRS 2 Slots	1909.8	21.30	34	4.01	2.68	42.92	238.09	95.84		-MEASURE-	-MEASURE-	0.146	0.400	0.400	
Cellular	W-CDMA 2	1907.6	14.30	27	4.01	2.68	42.92	238.09	95.84		-MEASURE-	-MEASURE-	0.116	0.400	0.400	
Cellular	W-CDMA 4	1752.6	14.20	26	4.01	2.68	42.92	238.09	95.84		-MEASURE-	-MEASURE-	0.107	0.400	0.400	
Cellular	W-CDMA 5	846.6	18.20	66	4.01	2.68	42.92	238.09	95.84		-MEASURE-	-MEASURE-	0.188	0.400	0.400	
Cellular	CDMA BC0	848.31	18.20	66	4.01	2.68	42.92	238.09	95.84		-MEASURE-	-MEASURE-	0.188	0.400	0.400	
Cellular	CDMA BC1	1908.75	14.30	27	4.01	2.68	42.92	238.09	95.84		-MEASURE-	-MEASURE-	0.116	0.400	0.400	
Cellular	CDMA BC10	823.1	18.00	63	4.01	2.68	42.92	238.09	95.84		-MEASURE-	-MEASURE-	0.177	0.400	0.400	
Cellular	LTE Band 2	1900	14.50	28	4.01	2.68	42.92	238.09	95.84		-MEASURE-	-MEASURE-	0.120	0.400	0.400	
Cellular	LTE Band 4	1754.3	14.20	26	4.01	2.68	42.92	238.09	95.84		-MEASURE-	-MEASURE-	0.107	0.400	0.400	
Cellular	LTE Band 5	844	18.20	66	4.01	2.68	42.92	238.09	95.84		-MEASURE-	-MEASURE-	0.188	0.400	0.400	
Cellular	LTE Band 7	2560	12.20	17	4.01	2.68	42.92	238.09	95.84		-MEASURE-	-MEASURE-	0.084	0.400	0.400	
Cellular	LTE Band 12	711	19.00	79	4.01	2.68	42.92	238.09	95.84		-MEASURE-	-MEASURE-	0.207	0.400	0.400	
Cellular	LTE Band 13	782	19.00	79	4.01	2.68	42.92	238.09	95.84		-MEASURE-	-MEASURE-	0.217	0.400	0.400	
Cellular	LTE Band 17	710	19.00	79	4.01	2.68	42.92	238.09	95.84		-MEASURE-	-MEASURE-	0.206	0.400	0.400	
Cellular	LTE Band 25	1905	14.50	28	4.01	2.68	42.92	238.09	95.84		-MEASURE-	-MEASURE-	0.120	0.400	0.400	
Cellular	LTE Band 26	841.4	18.20	66	4.01	2.68	42.92	238.09	95.84		-MEASURE-	-MEASURE-	0.188	0.400	0.400	
Cellular	LTE Band 27	815.5	18.00	63	4.01	2.68	42.92	238.09	95.84		-MEASURE-	-MEASURE-	0.176	0.400	0.400	
Cellular	LTE Band 30	2310	13.20	21	4.01	2.68	42.92	238.09	95.84		-MEASURE-	-MEASURE-	0.099	0.400	0.400	
Cellular	LTE Band 41	2680	14.00	25	4.01	2.68	42.92	238.09	95.84		-MEASURE-	-MEASURE-	0.127	0.400	0.400	
Antenna D																
Cellular	GPRS 2 Slots	848.8	26.50	112	3.5	2.68	95.84	238.09	42.92		-MEASURE-	-MEASURE-	0.400	0.400	0.320	
Cellular	GPRS 2 Slots	1909.8	20.80	30	3.5	2.68	95.84	238.09	42.92		-MEASURE-	-MEASURE-	0.400	0.400	0.129	
Cellular	W-CDMA 2	1907.6	14.00	25	3.5	2.68	95.84	238.09	42.92		-MEASURE-	-MEASURE-	0.400	0.400	0.107	
Cellular	W-CDMA 4	1752.6	13.80	24	3.5	2.68	95.84	238.09	42.92		-MEASURE-	-MEASURE-	0.400	0.400	0.099	
Cellular	W-CDMA 5	846.6	20.00	100	3.5	2.68	95.84	238.09	42.92		-MEASURE-	-MEASURE-	0.400	0.400	0.285	
Cellular	CDMA BC0	848.31	20.00	100	3.5	2.68	95.84	238.09	42.92		-MEASURE-	-MEASURE-	0.400	0.400	0.286	
Cellular	CDMA BC1	1908.75	14.00	25	3.5	2.68	95.84	238.09	42.92		-MEASURE-	-MEASURE-	0.400	0.400	0.107	
Cellular	CDMA BC10	823.1	20.00	100	3.5	2.68	95.84	238.09	42.92		-MEASURE-	-MEASURE-	0.400	0.400	0.281	
Cellular	LTE Band 2	1900	14.20	26	3.5	2.68	95.84	238.09	42.92		-MEASURE-	-MEASURE-	0.400	0.400	0.111	
Cellular	LTE Band 4	1754.3	14.00	25	3.5	2.68	95.84	238.09	42.92		-MEASURE-	-MEASURE-	0.400	0.400	0.103	
Cellular	LTE Band 5	844	20.00	100	3.5	2.68	95.84	238.09	42.92		-MEASURE-	-MEASURE-	0.400	0.400	0.285	
Cellular	LTE Band 7	2560	11.80	15	3.5	2.68	95.84	238.09	42.92		-MEASURE-	-MEASURE-	0.400	0.400	0.074	
Cellular	LTE Band 12	711	21.00	126	3.5	2.68	95.84	238.09	42.92		-MEASURE-	-MEASURE-	0.400	0.400	0.329	
Cellular	LTE Band 13	782	21.20	132	3.5	2.68	95.84	238.09	42.92		-MEASURE-	-MEASURE-	0.400	0.400	0.362	
Cellular	LTE Band 17	710	21.00	126	3.5	2.68	95.84	238.09	42.92		-MEASURE-	-MEASURE-	0.400	0.400	0.329	
Cellular	LTE Band 25	1905	14.20	26	3.5	2.68	95.84	238.09	42.92		-MEASURE-	-MEASURE-	0.400	0.400	0.111	
Cellular	LTE Band 26	841.4	20.00	100	3.5	2.68	95.84	238.09	42.92		-MEASURE-	-MEASURE-	0.400	0.400	0.284	
Cellular	LTE Band 27	815.5	20.00	100	3.5	2.68	95.84	238.09	42.92		-MEASURE-	-MEASURE-	0.400	0.400	0.280	
Cellular	LTE Band 30	2310	12.30	17	3.5	2.68	95.84	238.09	42.92		-MEASURE-	-MEASURE-	0.400	0.400	0.080	
Cellular	LTE Band 41	2680	14.00	25	3.5	2.68	95.84	238.09	42.92		-MEASURE-	-MEASURE-	0.400	0.400	0.127	

Estimated SAR for WLAN

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	19.00	79	4.95	240.94	108.29	2.48	8.16		-MEASURE-	0.400	0.400	-MEASURE-	-MEASURE-	
Wi-Fi 5.2 GHz	5240	16.50	45	4.95	240.94	108.29	2.48	8.16		-MEASURE-	0.400	0.400	-MEASURE-	-MEASURE-	
Wi-Fi 5.3 GHz	5320	16.50	45	4.95	240.94	108.29	2.48	8.16		-MEASURE-	0.400	0.400	-MEASURE-	-MEASURE-	
Wi-Fi 5.5 GHz	5700	15.00	32	4.95	240.94	108.29	2.48	8.16		-MEASURE-	0.400	0.400	-MEASURE-	-MEASURE-	
Wi-Fi 5.8 GHz	5825	14.50	28	4.95	240.94	108.29	2.48	8.16		-MEASURE-	0.400	0.400	-MEASURE-	-MEASURE-	
Bluetooth	2480	20.00	100	4.95	240.94	108.29	2.48	8.16		-MEASURE-	0.400	0.400	-MEASURE-	-MEASURE-	
Antenna B															
Wi-Fi 2.4 GHz	2462	19.00	79	4.95	240.94	8.16	2.48	108.29		-MEASURE-	0.400	-MEASURE-	-MEASURE-	0.400	
Wi-Fi 5.2 GHz	5240	17.00	50	4.95	240.94	8.16	2.48	108.29		-MEASURE-	0.400	-MEASURE-	-MEASURE-	0.400	
Wi-Fi 5.3 GHz	5320	16.50	45	4.95	240.94	8.16	2.48	108.29		-MEASURE-	0.400	-MEASURE-	-MEASURE-	0.400	
Wi-Fi 5.5 GHz	5700	15.00	32	4.95	240.94	8.16	2.48	108.29		-MEASURE-	0.400	-MEASURE-	-MEASURE-	0.400	
Wi-Fi 5.8 GHz	5825	15.00	32	4.95	240.94	8.16	2.48	108.29		-MEASURE-	0.400	-MEASURE-	-MEASURE-	0.400	

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

RF Exposure Condition	Test Position	Standalone SAR (W/kg)				∑1-g SAR (W/g		
		(E)	(F)	(G)	(H)	(E) + (H)	(F) + (H)	(G) + (H)
		U-NII Ant. A	U-NII Ant. B	U-NII MIMO	BT P-low	U-NII + BT Ant. A + P-low	U-NII + BT Ant. B + P-low	U-NII + BT MIMO + P-low
Body	Rear	0.194	0.202	0.206	0.033	0.227	0.235	0.239
	Edge 2	0.400	0.305	0.234	0.400	0.800	0.705	0.634
	Edge 3	1.130	1.190	1.190	0.221	1.351	1.411	1.411
	Edge 4	0.253	0.400	0.297	0.033	0.286	0.433	0.330

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.

12.2. Sum of the SAR for GSM850 (Antenna C), Wi-Fi and BT

RF Exposure Condition	Test Position	Standalone SAR (W/kg)									∑1-g SAR (W/g						
		(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(A)+(B)	(A)+(C)	(A)+(D)	(A)+(H)	(A)+(E)+(I)	(A)+(F)+(I)	(A)+(G)+(I)
		WWAN Ant.C	DTS Ant.A	DTS Ant.B	DTS MIMO	U-NII Ant.A	U-NII Ant.B	U-NII MIMO	BT P-high	BT P-low	WWAN+DTS Ant.C+Ant.A	WWAN+DTS Ant.C+Ant.B	WWAN+DTS Ant.C+MIMO	WWAN+BT Ant.C+P-high	WWAN+U-NII+BT Ant.C+Ant.A+P-low	WWAN+U-NII+BT Ant.C+Ant.B+P-low	WWAN+U-NII+BT Ant.C+MIMO+P-low
Body	Rear	1.130	0.135	0.124	0.082	0.194	0.202	0.206	0.166	0.033	1.265	1.254	1.212	1.296	1.357	1.365	1.369
	Edge 1	0.625	0.013	0.014	0.026	0.048	0.038	0.060	0.036	0.000	0.638	0.639	0.651	0.661	0.673	0.663	0.685
	Edge 2	0.066	0.400	0.163	0.102	0.400	0.305	0.234	0.400	0.400	0.466	0.229	0.168	0.466	0.866	0.771	0.700
	Edge 3	0.008	1.190	1.020	0.721	1.130	1.190	1.190	1.160	0.221	1.198	1.028	0.729	1.168	1.360	1.420	1.420
	Edge 4	0.400	0.220	0.400	0.121	0.253	0.400	0.297	0.205	0.033	0.620	0.800	0.521	0.605	0.686	0.833	0.730

12.3. Sum of the SAR for GSM850 (Antenna D), Wi-Fi and BT

RF Exposure Condition	Test Position	Standalone SAR (W/kg)									∑1-g SAR (W/g						
		(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(A)+(B)	(A)+(C)	(A)+(D)	(A)+(H)	(A)+(E)+(I)	(A)+(F)+(I)	(A)+(G)+(I)
		WWAN Ant.D	DTS Ant.A	DTS Ant.B	DTS MIMO	U-NII Ant.A	U-NII Ant.B	U-NII MIMO	BT P-high	BT P-low	WWAN+DTS Ant.D+Ant.A	WWAN+DTS Ant.D+Ant.B	WWAN+DTS Ant.D+MIMO	WWAN+BT Ant.D+P-high	WWAN+U-NII+BT Ant.D+Ant.A+P-low	WWAN+U-NII+BT Ant.D+Ant.B+P-low	WWAN+U-NII+BT Ant.D+MIMO+P-low
Body	Rear	0.909	0.135	0.124	0.082	0.194	0.202	0.206	0.166	0.033	1.044	1.033	0.991	1.075	1.136	1.144	1.148
	Edge 1	0.774	0.013	0.014	0.026	0.048	0.038	0.060	0.036	0.000	0.787	0.788	0.800	0.810	0.822	0.812	0.834
	Edge 2	0.000	0.400	0.163	0.102	0.400	0.305	0.234	0.400	0.400	0.400	0.163	0.102	0.400	0.800	0.705	0.634
	Edge 3	0.024	1.190	1.020	0.721	1.130	1.190	1.190	1.160	0.221	1.214	1.044	0.745	1.184	1.375	1.435	1.435
	Edge 4	0.108	0.220	0.400	0.121	0.253	0.400	0.297	0.205	0.033	0.328	0.508	0.229	0.313	0.394	0.541	0.438

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.

12.4. Sum of the SAR for GSM1900 (Antenna C), Wi-Fi and BT

RF Exposure Condition	Test Position	Standalone SAR (W/kg)									∑1-g SAR (W/g						
		(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(A) + (B)	(A) + (C)	(A) + (D)	(A) + (H)	(A) + (E) + (I)	(A) + (F) + (I)	(A) + (G) + (I)
		WWAN Ant. C	DTS Ant. A	DTS Ant. B	DTS MIMO	U-NII Ant. A	U-NII Ant. B	U-NII MIMO	BT P-high	BT P-low	WWAN + DTS Ant. C + Ant. A	WWAN + DTS Ant. C + Ant. B	WWAN + DTS Ant. C + MIMO	WWAN + BT Ant. C + P-high	WWAN + U-NII + BT Ant. C + Ant. A + P-low	WWAN + U-NII + BT Ant. C + Ant. B + P-low	WWAN + U-NII + BT Ant. C + MIMO + P-low
Body	Rear	1.072	0.135	0.124	0.082	0.194	0.202	0.206	0.166	0.033	1.207	1.196	1.154	1.238	1.299	1.307	1.311
	Edge 1	1.022	0.013	0.014	0.026	0.048	0.038	0.060	0.036	0.000	1.035	1.036	1.048	1.058	1.070	1.060	1.082
	Edge 2	0.056	0.400	0.163	0.102	0.400	0.305	0.234	0.400	0.400	0.456	0.219	0.158	0.456	0.856	0.761	0.690
	Edge 3	0.000	1.190	1.020	0.721	1.130	1.190	1.190	1.160	0.221	1.190	1.020	0.721	1.160	1.351	1.411	1.411
	Edge 4	0.000	0.220	0.400	0.121	0.253	0.400	0.297	0.205	0.033	0.220	0.400	0.121	0.205	0.286	0.433	0.330

12.5. Sum of the SAR for GSM1900 (Antenna D), Wi-Fi and BT

RF Exposure Condition	Test Position	Standalone SAR (W/kg)									∑1-g SAR (W/g						
		(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(A) + (B)	(A) + (C)	(A) + (D)	(A) + (H)	(A) + (E) + (I)	(A) + (F) + (I)	(A) + (G) + (I)
		WWAN Ant. D	DTS Ant. A	DTS Ant. B	DTS MIMO	U-NII Ant. A	U-NII Ant. B	U-NII MIMO	BT P-high	BT P-low	WWAN + DTS Ant. D + Ant. A	WWAN + DTS Ant. D + Ant. B	WWAN + DTS Ant. D + MIMO	WWAN + BT Ant. D + P-high	WWAN + U-NII + BT Ant. D + Ant. A + P-low	WWAN + U-NII + BT Ant. D + Ant. B + P-low	WWAN + U-NII + BT Ant. D + MIMO + P-low
Body	Rear	1.040	0.135	0.124	0.082	0.194	0.202	0.206	0.166	0.033	1.175	1.164	1.122	1.206	1.267	1.275	1.279
	Edge 1	0.746	0.013	0.014	0.026	0.048	0.038	0.060	0.036	0.000	0.759	0.760	0.772	0.782	0.794	0.784	0.806
	Edge 2	0.000	0.400	0.163	0.102	0.400	0.305	0.234	0.400	0.400	0.400	0.163	0.102	0.400	0.800	0.705	0.634
	Edge 3	0.000	1.190	1.020	0.721	1.130	1.190	1.190	1.160	0.221	1.190	1.020	0.721	1.160	1.351	1.411	1.411
	Edge 4	0.051	0.220	0.400	0.121	0.253	0.400	0.297	0.205	0.033	0.271	0.451	0.172	0.256	0.337	0.484	0.381

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.

12.6. Sum of the SAR for W-CDMA Band II (Antenna C), Wi-Fi and BT

RF Exposure Condition	Test Position	Standalone SAR (W/kg)									∑1-g SAR (W/g						
		(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(A) + (B)	(A) + (C)	(A) + (D)	(A) + (H)	(A) + (E) + (I)	(A) + (F) + (I)	(A) + (G) + (I)
		WWAN Ant. C	DTS Ant. A	DTS Ant. B	DTS MIMO	U-NII Ant. A	U-NII Ant. B	U-NII MIMO	BT P-high	BT P-low	WWAN + DTS Ant. C + Ant. A	WWAN + DTS Ant. C + Ant. B	WWAN + DTS Ant. C + MIMO	WWAN + BT Ant. C + P-high	WWAN + U-NII + BT Ant. C + Ant. A + P-low	WWAN + U-NII + BT Ant. C + Ant. B + P-low	WWAN + U-NII + BT Ant. C + MIMO + P-low
Body	Rear	1.011	0.135	0.124	0.082	0.194	0.202	0.206	0.166	0.033	1.146	1.135	1.093	1.177	1.238	1.246	1.250
	Edge 1	0.919	0.013	0.014	0.026	0.048	0.038	0.060	0.036	0.000	0.932	0.933	0.945	0.955	0.967	0.957	0.979
	Edge 2	0.065	0.400	0.163	0.102	0.400	0.305	0.234	0.400	0.400	0.465	0.228	0.167	0.465	0.865	0.770	0.699
	Edge 3	0.000	1.190	1.020	0.721	1.130	1.190	1.190	1.160	0.221	1.190	1.020	0.721	1.160	1.351	1.411	1.411
	Edge 4	0.000	0.220	0.400	0.121	0.253	0.400	0.297	0.205	0.033	0.220	0.400	0.121	0.205	0.286	0.433	0.330

12.7. Sum of the SAR for W-CDMA Band II (Antenna D), Wi-Fi and BT

RF Exposure Condition	Test Position	Standalone SAR (W/kg)									∑1-g SAR (W/g						
		(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(A) + (B)	(A) + (C)	(A) + (D)	(A) + (H)	(A) + (E) + (I)	(A) + (F) + (I)	(A) + (G) + (I)
		WWAN Ant. D	DTS Ant. A	DTS Ant. B	DTS MIMO	U-NII Ant. A	U-NII Ant. B	U-NII MIMO	BT P-high	BT P-low	WWAN + DTS Ant. D + Ant. A	WWAN + DTS Ant. D + Ant. B	WWAN + DTS Ant. D + MIMO	WWAN + BT Ant. D + P-high	WWAN + U-NII + BT Ant. D + Ant. A + P-low	WWAN + U-NII + BT Ant. D + Ant. B + P-low	WWAN + U-NII + BT Ant. D + MIMO + P-low
Body	Rear	1.085	0.135	0.124	0.082	0.194	0.202	0.206	0.166	0.033	1.220	1.209	1.167	1.251	1.312	1.320	1.324
	Edge 1	0.701	0.013	0.014	0.026	0.048	0.038	0.060	0.036	0.000	0.714	0.715	0.727	0.737	0.749	0.739	0.761
	Edge 2	0.000	0.400	0.163	0.102	0.400	0.305	0.234	0.400	0.400	0.400	0.163	0.102	0.400	0.800	0.705	0.634
	Edge 3	0.000	1.190	1.020	0.721	1.130	1.190	1.190	1.160	0.221	1.190	1.020	0.721	1.160	1.351	1.411	1.411
	Edge 4	0.063	0.220	0.400	0.121	0.253	0.400	0.297	0.205	0.033	0.283	0.463	0.184	0.268	0.349	0.496	0.393

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.

12.8. Sum of the SAR for W-CDMA Band IV (Antenna C), Wi-Fi and BT

RF Exposure Condition	Test Position	Standalone SAR (W/kg)									∑1-g SAR (W/g						
		(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(A) + (B)	(A) + (C)	(A) + (D)	(A) + (H)	(A) + (E) + (I)	(A) + (F) + (I)	(A) + (G) + (I)
		WWAN Ant. C	DTS Ant. A	DTS Ant. B	DTS MIMO	U-NII Ant. A	U-NII Ant. B	U-NII MIMO	BT P-high	BT P-low	WWAN + DTS Ant. C + Ant. A	WWAN + DTS Ant. C + Ant. B	WWAN + DTS Ant. C + MIMO	WWAN + BT Ant. C + P-high	WWAN + U-NII + BT Ant. C + Ant. A + P-low	WWAN + U-NII + BT Ant. C + Ant. B + P-low	WWAN + U-NII + BT Ant. C + MIMO + P-low
Body	Rear	1.104	0.135	0.124	0.082	0.194	0.202	0.206	0.166	0.033	1.239	1.228	1.186	1.270	1.331	1.339	1.343
	Edge 1	0.715	0.013	0.014	0.026	0.048	0.038	0.060	0.036	0.000	0.728	0.729	0.741	0.751	0.763	0.753	0.775
	Edge 2	0.057	0.400	0.163	0.102	0.400	0.305	0.234	0.400	0.400	0.457	0.220	0.159	0.457	0.857	0.762	0.691
	Edge 3	0.000	1.190	1.020	0.721	1.130	1.190	1.190	1.160	0.221	1.190	1.020	0.721	1.160	1.351	1.411	1.411
	Edge 4	0.000	0.220	0.400	0.121	0.253	0.400	0.297	0.205	0.033	0.220	0.400	0.121	0.205	0.286	0.433	0.330

12.9. Sum of the SAR for W-CDMA Band IV (Antenna D), Wi-Fi and BT

RF Exposure Condition	Test Position	Standalone SAR (W/kg)									∑1-g SAR (W/g						
		(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(A) + (B)	(A) + (C)	(A) + (D)	(A) + (H)	(A) + (E) + (I)	(A) + (F) + (I)	(A) + (G) + (I)
		WWAN Ant. D	DTS Ant. A	DTS Ant. B	DTS MIMO	U-NII Ant. A	U-NII Ant. B	U-NII MIMO	BT P-high	BT P-low	WWAN + DTS Ant. D + Ant. A	WWAN + DTS Ant. D + Ant. B	WWAN + DTS Ant. D + MIMO	WWAN + BT Ant. D + P-high	WWAN + U-NII + BT Ant. D + Ant. A + P-low	WWAN + U-NII + BT Ant. D + Ant. B + P-low	WWAN + U-NII + BT Ant. D + MIMO + P-low
Body	Rear	1.146	0.135	0.124	0.082	0.194	0.202	0.206	0.166	0.033	1.281	1.270	1.228	1.312	1.373	1.381	1.385
	Edge 1	0.626	0.013	0.014	0.026	0.048	0.038	0.060	0.036	0.000	0.639	0.640	0.652	0.662	0.674	0.664	0.686
	Edge 2	0.000	0.400	0.163	0.102	0.400	0.305	0.234	0.400	0.400	0.400	0.163	0.102	0.400	0.800	0.705	0.634
	Edge 3	0.000	1.190	1.020	0.721	1.130	1.190	1.190	1.160	0.221	1.190	1.020	0.721	1.160	1.351	1.411	1.411
	Edge 4	0.048	0.220	0.400	0.121	0.253	0.400	0.297	0.205	0.033	0.268	0.448	0.169	0.253	0.334	0.481	0.378

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.

12.10. Sum of the SAR for W-CDMA Band V (Antenna C), Wi-Fi and BT

RF Exposure Condition	Test Position	Standalone SAR (W/kg)									∑1-g SAR (W/g						
		(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(A) + (B)	(A) + (C)	(A) + (D)	(A) + (H)	(A) + (E) + (I)	(A) + (F) + (I)	(A) + (G) + (I)
		WWAN Ant. C	DTS Ant. A	DTS Ant. B	DTS MIMO	U-NII Ant. A	U-NII Ant. B	U-NII MIMO	BT P-high	BT P-low	WWAN + DTS Ant. C + Ant. A	WWAN + DTS Ant. C + Ant. B	WWAN + DTS Ant. C + MIMO	WWAN + BT Ant. C + P-high	WWAN + U-NII + BT Ant. C + Ant. A + P-low	WWAN + U-NII + BT Ant. C + Ant. B + P-low	WWAN + U-NII + BT Ant. C + MIMO + P-low
Body	Rear	1.190	0.135	0.124	0.082	0.194	0.202	0.206	0.166	0.033	1.325	1.314	1.272	1.356	1.417	1.425	1.429
	Edge 1	0.766	0.013	0.014	0.026	0.048	0.038	0.060	0.036	0.000	0.779	0.780	0.792	0.802	0.814	0.804	0.826
	Edge 2	0.080	0.400	0.163	0.102	0.400	0.305	0.234	0.400	0.400	0.480	0.243	0.182	0.480	0.880	0.785	0.714
	Edge 3	0.006	1.190	1.020	0.721	1.130	1.190	1.190	1.160	0.221	1.196	1.026	0.727	1.166	1.357	1.417	1.417
	Edge 4	0.000	0.220	0.400	0.121	0.253	0.400	0.297	0.205	0.033	0.220	0.400	0.121	0.205	0.286	0.433	0.330

12.11. Sum of the SAR for W-CDMA Band V (Antenna D), Wi-Fi and BT

RF Exposure Condition	Test Position	Standalone SAR (W/kg)									∑1-g SAR (W/g						
		(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(A) + (B)	(A) + (C)	(A) + (D)	(A) + (H)	(A) + (E) + (I)	(A) + (F) + (I)	(A) + (G) + (I)
		WWAN Ant. D	DTS Ant. A	DTS Ant. B	DTS MIMO	U-NII Ant. A	U-NII Ant. B	U-NII MIMO	BT P-high	BT P-low	WWAN + DTS Ant. D + Ant. A	WWAN + DTS Ant. D + Ant. B	WWAN + DTS Ant. D + MIMO	WWAN + BT Ant. D + P-high	WWAN + U-NII + BT Ant. D + Ant. A + P-low	WWAN + U-NII + BT Ant. D + Ant. B + P-low	WWAN + U-NII + BT Ant. D + MIMO + P-low
Body	Rear	1.039	0.135	0.124	0.082	0.194	0.202	0.206	0.166	0.033	1.174	1.163	1.121	1.205	1.266	1.274	1.278
	Edge 1	0.772	0.013	0.014	0.026	0.048	0.038	0.060	0.036	0.000	0.785	0.786	0.798	0.808	0.820	0.810	0.832
	Edge 2	0.000	0.400	0.163	0.102	0.400	0.305	0.234	0.400	0.400	0.400	0.163	0.102	0.400	0.800	0.705	0.634
	Edge 3	0.018	1.190	1.020	0.721	1.130	1.190	1.190	1.160	0.221	1.208	1.038	0.739	1.178	1.370	1.430	1.430
	Edge 4	0.124	0.220	0.400	0.121	0.253	0.400	0.297	0.205	0.033	0.344	0.524	0.245	0.329	0.410	0.557	0.454

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.

12.12. Sum of the SAR for CDMA BC 0 (Antenna C), Wi-Fi and BT

RF Exposure Condition	Test Position	Standalone SAR (W/kg)									∑1-g SAR (W/g						
		(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(A) + (B)	(A) + (C)	(A) + (D)	(A) + (H)	(A) + (E) + (I)	(A) + (F) + (I)	(A) + (G) + (I)
		WWAN Ant. C	DTS Ant. A	DTS Ant. B	DTS MIMO	U-NII Ant. A	U-NII Ant. B	U-NII MIMO	BT P-high	BT P-low	WWAN + DTS Ant. C + Ant. A	WWAN + DTS Ant. C + Ant. B	WWAN + DTS Ant. C + MIMO	WWAN + BT Ant. C + P-high	WWAN + U-NII + BT Ant. C + Ant. A + P-low	WWAN + U-NII + BT Ant. C + Ant. B + P-low	WWAN + U-NII + BT Ant. C + MIMO + P-low
Body	Rear	1.173	0.135	0.124	0.082	0.194	0.202	0.206	0.166	0.033	1.308	1.297	1.255	1.339	1.400	1.408	1.412
	Edge 1	0.773	0.013	0.014	0.026	0.048	0.038	0.060	0.036	0.000	0.786	0.787	0.799	0.809	0.821	0.811	0.833
	Edge 2	0.093	0.400	0.163	0.102	0.400	0.305	0.234	0.400	0.400	0.493	0.256	0.195	0.493	0.893	0.798	0.727
	Edge 3	0.016	1.190	1.020	0.721	1.130	1.190	1.190	1.160	0.221	1.206	1.036	0.737	1.176	1.367	1.427	1.427
	Edge 4	0.000	0.220	0.400	0.121	0.253	0.400	0.297	0.205	0.033	0.220	0.400	0.121	0.205	0.286	0.433	0.330

12.13. Sum of the SAR for CDMA BC 0 (Antenna D), Wi-Fi and BT

RF Exposure Condition	Test Position	Standalone SAR (W/kg)									∑1-g SAR (W/g						
		(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(A) + (B)	(A) + (C)	(A) + (D)	(A) + (H)	(A) + (E) + (I)	(A) + (F) + (I)	(A) + (G) + (I)
		WWAN Ant. D	DTS Ant. A	DTS Ant. B	DTS MIMO	U-NII Ant. A	U-NII Ant. B	U-NII MIMO	BT P-high	BT P-low	WWAN + DTS Ant. D + Ant. A	WWAN + DTS Ant. D + Ant. B	WWAN + DTS Ant. D + MIMO	WWAN + BT Ant. D + P-high	WWAN + U-NII + BT Ant. D + Ant. A + P-low	WWAN + U-NII + BT Ant. D + Ant. B + P-low	WWAN + U-NII + BT Ant. D + MIMO + P-low
Body	Rear	0.984	0.135	0.124	0.082	0.194	0.202	0.206	0.166	0.033	1.119	1.108	1.066	1.150	1.211	1.219	1.223
	Edge 1	0.647	0.013	0.014	0.026	0.048	0.038	0.060	0.036	0.000	0.660	0.661	0.673	0.683	0.695	0.685	0.707
	Edge 2	0.000	0.400	0.163	0.102	0.400	0.305	0.234	0.400	0.400	0.400	0.163	0.102	0.400	0.800	0.705	0.634
	Edge 3	0.029	1.190	1.020	0.721	1.130	1.190	1.190	1.160	0.221	1.219	1.049	0.750	1.189	1.380	1.440	1.440
	Edge 4	0.146	0.220	0.400	0.121	0.253	0.400	0.297	0.205	0.033	0.366	0.546	0.267	0.351	0.432	0.579	0.476

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.

12.14. Sum of the SAR for CDMA BC 1 (Antenna C), Wi-Fi and BT

RF Exposure Condition	Test Position	Standalone SAR (W/kg)									∑1-g SAR (W/g						
		(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(A) + (B)	(A) + (C)	(A) + (D)	(A) + (H)	(A) + (E) + (I)	(A) + (F) + (I)	(A) + (G) + (I)
		WWAN Ant. C	DTS Ant. A	DTS Ant. B	DTS MIMO	U-NII Ant. A	U-NII Ant. B	U-NII MIMO	BT P-high	BT P-low	WWAN + DTS Ant. C + Ant. A	WWAN + DTS Ant. C + Ant. B	WWAN + DTS Ant. C + MIMO	WWAN + BT Ant. C + P-high	WWAN + U-NII + BT Ant. C + Ant. A + P-low	WWAN + U-NII + BT Ant. C + Ant. B + P-low	WWAN + U-NII + BT Ant. C + MIMO + P-low
Body	Rear	1.146	0.135	0.124	0.082	0.194	0.202	0.206	0.166	0.033	1.281	1.270	1.228	1.312	1.373	1.381	1.385
	Edge 1	0.765	0.013	0.014	0.026	0.048	0.038	0.060	0.036	0.000	0.778	0.779	0.791	0.801	0.813	0.803	0.825
	Edge 2	0.059	0.400	0.163	0.102	0.400	0.305	0.234	0.400	0.400	0.459	0.222	0.161	0.459	0.859	0.764	0.693
	Edge 3	0.000	1.190	1.020	0.721	1.130	1.190	1.190	1.160	0.221	1.190	1.020	0.721	1.160	1.351	1.411	1.411
	Edge 4	0.000	0.220	0.400	0.121	0.253	0.400	0.297	0.205	0.033	0.220	0.400	0.121	0.205	0.286	0.433	0.330

12.15. Sum of the SAR for CDMA BC 1 (Antenna D), Wi-Fi and BT

RF Exposure Condition	Test Position	Standalone SAR (W/kg)									∑1-g SAR (W/g						
		(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(A) + (B)	(A) + (C)	(A) + (D)	(A) + (H)	(A) + (E) + (I)	(A) + (F) + (I)	(A) + (G) + (I)
		WWAN Ant. D	DTS Ant. A	DTS Ant. B	DTS MIMO	U-NII Ant. A	U-NII Ant. B	U-NII MIMO	BT P-high	BT P-low	WWAN + DTS Ant. D + Ant. A	WWAN + DTS Ant. D + Ant. B	WWAN + DTS Ant. D + MIMO	WWAN + BT Ant. D + P-high	WWAN + U-NII + BT Ant. D + Ant. A + P-low	WWAN + U-NII + BT Ant. D + Ant. B + P-low	WWAN + U-NII + BT Ant. D + MIMO + P-low
Body	Rear	1.156	0.135	0.124	0.082	0.194	0.202	0.206	0.166	0.033	1.291	1.280	1.238	1.322	1.384	1.392	1.396
	Edge 1	0.720	0.013	0.014	0.026	0.048	0.038	0.060	0.036	0.000	0.733	0.734	0.746	0.756	0.768	0.758	0.780
	Edge 2	0.000	0.400	0.163	0.102	0.400	0.305	0.234	0.400	0.400	0.400	0.163	0.102	0.400	0.800	0.705	0.634
	Edge 3	0.000	1.190	1.020	0.721	1.130	1.190	1.190	1.160	0.221	1.190	1.020	0.721	1.160	1.351	1.411	1.411
	Edge 4	0.067	0.220	0.400	0.121	0.253	0.400	0.297	0.205	0.033	0.287	0.467	0.188	0.272	0.353	0.500	0.397

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.

12.16. Sum of the SAR for CDMA BC 10 (Antenna C), Wi-Fi and BT

RF Exposure Condition	Test Position	Standalone SAR (W/kg)									∑1-g SAR (W/g						
		(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(A) + (B)	(A) + (C)	(A) + (D)	(A) + (H)	(A) + (E) + (I)	(A) + (F) + (I)	(A) + (G) + (I)
		WWAN Ant. C	DTS Ant. A	DTS Ant. B	DTS MIMO	U-NII Ant. A	U-NII Ant. B	U-NII MIMO	BT P-high	BT P-low	WWAN + DTS Ant. C + Ant. A	WWAN + DTS Ant. C + Ant. B	WWAN + DTS Ant. C + MIMO	WWAN + BT Ant. C + P-high	WWAN + U-NII + BT Ant. C + Ant. A + P-low	WWAN + U-NII + BT Ant. C + Ant. B + P-low	WWAN + U-NII + BT Ant. C + MIMO + P-low
Body	Rear	1.190	0.135	0.124	0.082	0.194	0.202	0.206	0.166	0.033	1.325	1.314	1.272	1.356	1.417	1.425	1.429
	Edge 1	0.798	0.013	0.014	0.026	0.048	0.038	0.060	0.036	0.000	0.811	0.812	0.824	0.834	0.846	0.836	0.858
	Edge 2	0.079	0.400	0.163	0.102	0.400	0.305	0.234	0.400	0.400	0.479	0.242	0.181	0.479	0.879	0.784	0.713
	Edge 3	0.008	1.190	1.020	0.721	1.130	1.190	1.190	1.160	0.221	1.198	1.028	0.729	1.168	1.359	1.419	1.419
	Edge 4	0.000	0.220	0.400	0.121	0.253	0.400	0.297	0.205	0.033	0.220	0.400	0.121	0.205	0.286	0.433	0.330

12.17. Sum of the SAR for CDMA BC 10 (Antenna D), Wi-Fi and BT

RF Exposure Condition	Test Position	Standalone SAR (W/kg)									∑1-g SAR (W/g						
		(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(A) + (B)	(A) + (C)	(A) + (D)	(A) + (H)	(A) + (E) + (I)	(A) + (F) + (I)	(A) + (G) + (I)
		WWAN Ant. D	DTS Ant. A	DTS Ant. B	DTS MIMO	U-NII Ant. A	U-NII Ant. B	U-NII MIMO	BT P-high	BT P-low	WWAN + DTS Ant. D + Ant. A	WWAN + DTS Ant. D + Ant. B	WWAN + DTS Ant. D + MIMO	WWAN + BT Ant. D + P-high	WWAN + U-NII + BT Ant. D + Ant. A + P-low	WWAN + U-NII + BT Ant. D + Ant. B + P-low	WWAN + U-NII + BT Ant. D + MIMO + P-low
Body	Rear	0.993	0.135	0.124	0.082	0.194	0.202	0.206	0.166	0.033	1.128	1.117	1.075	1.159	1.221	1.229	1.233
	Edge 1	0.669	0.013	0.014	0.026	0.048	0.038	0.060	0.036	0.000	0.682	0.683	0.695	0.705	0.717	0.707	0.729
	Edge 2	0.000	0.400	0.163	0.102	0.400	0.305	0.234	0.400	0.400	0.400	0.163	0.102	0.400	0.800	0.705	0.634
	Edge 3	0.021	1.190	1.020	0.721	1.130	1.190	1.190	1.160	0.221	1.211	1.041	0.742	1.181	1.373	1.433	1.433
	Edge 4	0.126	0.220	0.400	0.121	0.253	0.400	0.297	0.205	0.033	0.346	0.526	0.247	0.331	0.413	0.560	0.457

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.

12.18. Sum of the SAR for LTE Band 2 (Antenna C), Wi-Fi and BT

SAR for LTE Band 2 (Frequency range: 1850-1910 MHz) is covered by LTE Band 25 (Frequency range: 1850-1915 MHz) due to overlapping frequency range, same maximum tune-up limit and same channel bandwidth.

12.19. Sum of the SAR for LTE Band 2 (Antenna D), Wi-Fi and BT

SAR for LTE Band 2 (Frequency range: 1850-1910 MHz) is covered by LTE Band 25 (Frequency range: 1850-1915 MHz) due to overlapping frequency range, same maximum tune-up limit and same channel bandwidth.

12.20. Sum of the SAR for LTE Band 4 (Antenna C), Wi-Fi and BT

RF Exposure Condition	Test Position	Standalone SAR (W/kg)									∑1-g SAR (W/g						
		(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(A) + (B)	(A) + (C)	(A) + (D)	(A) + (H)	(A) + (E) + (I)	(A) + (F) + (I)	(A) + (G) + (I)
		WWAN Ant. C	DTS Ant. A	DTS Ant. B	DTS MIMO	U-NII Ant. A	U-NII Ant. B	U-NII MIMO	BT P-high	BT P-low	WWAN + DTS Ant. C + Ant. A	WWAN + DTS Ant. C + Ant. B	WWAN + DTS Ant. C + MIMO	WWAN + BT Ant. C + P-high	WWAN + U-NII + BT Ant. C + Ant. A + P-low	WWAN + U-NII + BT Ant. C + Ant. B + P-low	WWAN + U-NII + BT Ant. C + MIMO + P-low
Body	Rear	1.157	0.135	0.124	0.082	0.194	0.202	0.206	0.166	0.033	1.292	1.281	1.239	1.323	1.384	1.392	1.396
	Edge 1	0.719	0.013	0.014	0.026	0.048	0.038	0.060	0.036	0.000	0.732	0.733	0.745	0.755	0.767	0.757	0.779
	Edge 2	0.062	0.400	0.163	0.102	0.400	0.305	0.234	0.400	0.400	0.462	0.225	0.164	0.462	0.862	0.767	0.696
	Edge 3	0.000	1.190	1.020	0.721	1.130	1.190	1.190	1.160	0.221	1.190	1.020	0.721	1.160	1.351	1.411	1.411
	Edge 4	0.000	0.220	0.400	0.121	0.253	0.400	0.297	0.205	0.033	0.220	0.400	0.121	0.205	0.286	0.433	0.330

12.21. Sum of the SAR for LTE Band 4 (Antenna D), Wi-Fi and BT

RF Exposure Condition	Test Position	Standalone SAR (W/kg)									∑1-g SAR (W/g						
		(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(A) + (B)	(A) + (C)	(A) + (D)	(A) + (H)	(A) + (E) + (I)	(A) + (F) + (I)	(A) + (G) + (I)
		WWAN Ant. D	DTS Ant. A	DTS Ant. B	DTS MIMO	U-NII Ant. A	U-NII Ant. B	U-NII MIMO	BT P-high	BT P-low	WWAN + DTS Ant. D + Ant. A	WWAN + DTS Ant. D + Ant. B	WWAN + DTS Ant. D + MIMO	WWAN + BT Ant. D + P-high	WWAN + U-NII + BT Ant. D + Ant. A + P-low	WWAN + U-NII + BT Ant. D + Ant. B + P-low	WWAN + U-NII + BT Ant. D + MIMO + P-low
Body	Rear	1.150	0.135	0.124	0.082	0.194	0.202	0.206	0.166	0.033	1.285	1.274	1.232	1.316	1.377	1.385	1.389
	Edge 1	0.655	0.013	0.014	0.026	0.048	0.038	0.060	0.036	0.000	0.668	0.669	0.681	0.691	0.703	0.693	0.715
	Edge 2	0.000	0.400	0.163	0.102	0.400	0.305	0.234	0.400	0.400	0.400	0.163	0.102	0.400	0.800	0.705	0.634
	Edge 3	0.000	1.190	1.020	0.721	1.130	1.190	1.190	1.160	0.221	1.190	1.020	0.721	1.160	1.351	1.411	1.411
	Edge 4	0.050	0.220	0.400	0.121	0.253	0.400	0.297	0.205	0.033	0.270	0.450	0.171	0.255	0.336	0.483	0.380

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.

12.22. Sum of the SAR for LTE Band 5 (Antenna C), Wi-Fi and BT

SAR for LTE Band 5 (Frequency range: 824 - 849 MHz) is covered by LTE Band 26 (Frequency range: 814 – 849 MHz) due to overlapping frequency range, same maximum tune-up limit and same channel

12.23. Sum of the SAR for LTE Band 5 (Antenna D), Wi-Fi and BT

SAR for LTE Band 5 (Frequency range: 824 - 849 MHz) is covered by LTE Band 26 (Frequency range: 814 – 849 MHz) due to overlapping frequency range, same maximum tune-up limit and same channel

12.24. Sum of the SAR for LTE Band 7 (Antenna C), Wi-Fi and BT

RF Exposure Condition	Test Position	Standalone SAR (W/kg)									∑1-g SAR (W/g						
		(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(A) + (B)	(A) + (C)	(A) + (D)	(A) + (H)	(A) + (E) + (I)	(A) + (F) + (I)	(A) + (G) + (I)
		WWAN Ant. C	DTS Ant. A	DTS Ant. B	DTS MIMO	U-NII Ant. A	U-NII Ant. B	U-NII MIMO	BT P-high	BT P-low	WWAN + DTS Ant. C + Ant. A	WWAN + DTS Ant. C + Ant. B	WWAN + DTS Ant. C + MIMO	WWAN + BT Ant. C + P-high	WWAN + U-NII + BT Ant. C + Ant. A + P-low	WWAN + U-NII + BT Ant. C + Ant. B + P-low	WWAN + U-NII + BT Ant. C + MIMO + P-low
Body	Rear	1.190	0.135	0.124	0.082	0.194	0.202	0.206	0.166	0.033	1.325	1.314	1.272	1.356	1.417	1.425	1.429
	Edge 1	0.929	0.013	0.014	0.026	0.048	0.038	0.060	0.036	0.000	0.942	0.943	0.955	0.965	0.977	0.967	0.989
	Edge 2	0.113	0.400	0.163	0.102	0.400	0.305	0.234	0.400	0.400	0.513	0.276	0.215	0.513	0.913	0.818	0.747
	Edge 3	0.000	1.190	1.020	0.721	1.130	1.190	1.190	1.160	0.221	1.190	1.020	0.721	1.160	1.351	1.411	1.411
	Edge 4	0.000	0.220	0.400	0.121	0.253	0.400	0.297	0.205	0.033	0.220	0.400	0.121	0.205	0.286	0.433	0.330

12.25. Sum of the SAR for LTE Band 7 (Antenna D), Wi-Fi and BT

RF Exposure Condition	Test Position	Standalone SAR (W/kg)									∑1-g SAR (W/g						
		(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(A) + (B)	(A) + (C)	(A) + (D)	(A) + (H)	(A) + (E) + (I)	(A) + (F) + (I)	(A) + (G) + (I)
		WWAN Ant. D	DTS Ant. A	DTS Ant. B	DTS MIMO	U-NII Ant. A	U-NII Ant. B	U-NII MIMO	BT P-high	BT P-low	WWAN + DTS Ant. D + Ant. A	WWAN + DTS Ant. D + Ant. B	WWAN + DTS Ant. D + MIMO	WWAN + BT Ant. D + P-high	WWAN + U-NII + BT Ant. D + Ant. A + P-low	WWAN + U-NII + BT Ant. D + Ant. B + P-low	WWAN + U-NII + BT Ant. D + MIMO + P-low
Body	Rear	1.190	0.135	0.124	0.082	0.194	0.202	0.206	0.166	0.033	1.325	1.314	1.272	1.356	1.417	1.425	1.429
	Edge 1	0.674	0.013	0.014	0.026	0.048	0.038	0.060	0.036	0.000	0.687	0.688	0.700	0.710	0.722	0.712	0.734
	Edge 2	0.000	0.400	0.163	0.102	0.400	0.305	0.234	0.400	0.400	0.400	0.163	0.102	0.400	0.800	0.705	0.634
	Edge 3	0.000	1.190	1.020	0.721	1.130	1.190	1.190	1.160	0.221	1.190	1.020	0.721	1.160	1.351	1.411	1.411
	Edge 4	0.104	0.220	0.400	0.121	0.253	0.400	0.297	0.205	0.033	0.324	0.504	0.225	0.309	0.390	0.537	0.434

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.

12.26. Sum of the SAR for LTE Band 12 (Antenna C), Wi-Fi and BT

RF Exposure Condition	Test Position	Standalone SAR (W/kg)									∑1-g SAR (W/g						
		(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(A) + (B)	(A) + (C)	(A) + (D)	(A) + (H)	(A) + (E) + (I)	(A) + (F) + (I)	(A) + (G) + (I)
		WWAN Ant. C	DTS Ant. A	DTS Ant. B	DTS MIMO	U-NII Ant. A	U-NII Ant. B	U-NII MIMO	BT P-high	BT P-low	WWAN + DTS Ant. C + Ant. A	WWAN + DTS Ant. C + Ant. B	WWAN + DTS Ant. C + MIMO	WWAN + BT Ant. C + P-high	WWAN + U-NII + BT Ant. C + Ant. A + P-low	WWAN + U-NII + BT Ant. C + Ant. B + P-low	WWAN + U-NII + BT Ant. C + MIMO + P-low
Body	Rear	1.177	0.135	0.124	0.082	0.194	0.202	0.206	0.166	0.033	1.312	1.301	1.259	1.343	1.404	1.412	1.416
	Edge 1	0.692	0.013	0.014	0.026	0.048	0.038	0.060	0.036	0.000	0.705	0.706	0.718	0.728	0.740	0.730	0.752
	Edge 2	0.071	0.400	0.163	0.102	0.400	0.305	0.234	0.400	0.400	0.471	0.234	0.173	0.471	0.871	0.776	0.705
	Edge 3	0.002	1.190	1.020	0.721	1.130	1.190	1.190	1.160	0.221	1.192	1.022	0.723	1.162	1.354	1.414	1.414
	Edge 4	0.000	0.220	0.400	0.121	0.253	0.400	0.297	0.205	0.033	0.220	0.400	0.121	0.205	0.286	0.433	0.330

12.27. Sum of the SAR for LTE Band 12 (Antenna D), Wi-Fi and BT

RF Exposure Condition	Test Position	Standalone SAR (W/kg)									∑1-g SAR (W/g						
		(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(A) + (B)	(A) + (C)	(A) + (D)	(A) + (H)	(A) + (E) + (I)	(A) + (F) + (I)	(A) + (G) + (I)
		WWAN Ant. D	DTS Ant. A	DTS Ant. B	DTS MIMO	U-NII Ant. A	U-NII Ant. B	U-NII MIMO	BT P-high	BT P-low	WWAN + DTS Ant. D + Ant. A	WWAN + DTS Ant. D + Ant. B	WWAN + DTS Ant. D + MIMO	WWAN + BT Ant. D + P-high	WWAN + U-NII + BT Ant. D + Ant. A + P-low	WWAN + U-NII + BT Ant. D + Ant. B + P-low	WWAN + U-NII + BT Ant. D + MIMO + P-low
Body	Rear	0.987	0.135	0.124	0.082	0.194	0.202	0.206	0.166	0.033	1.122	1.111	1.069	1.153	1.215	1.223	1.227
	Edge 1	0.707	0.013	0.014	0.026	0.048	0.038	0.060	0.036	0.000	0.720	0.721	0.733	0.743	0.755	0.745	0.767
	Edge 2	0.000	0.400	0.163	0.102	0.400	0.305	0.234	0.400	0.400	0.400	0.163	0.102	0.400	0.800	0.705	0.634
	Edge 3	0.002	1.190	1.020	0.721	1.130	1.190	1.190	1.160	0.221	1.192	1.022	0.723	1.162	1.353	1.413	1.413
	Edge 4	0.076	0.220	0.400	0.121	0.253	0.400	0.297	0.205	0.033	0.296	0.476	0.197	0.281	0.362	0.509	0.406

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.

12.28. Sum of the SAR for LTE Band 13 (Antenna C), Wi-Fi and BT

RF Exposure Condition	Test Position	Standalone SAR (W/kg)									∑1-g SAR (W/g						
		(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(A) + (B)	(A) + (C)	(A) + (D)	(A) + (H)	(A) + (E) + (I)	(A) + (F) + (I)	(A) + (G) + (I)
		WWAN Ant. C	DTS Ant. A	DTS Ant. B	DTS MIMO	U-NII Ant. A	U-NII Ant. B	U-NII MIMO	BT P-high	BT P-low	WWAN + DTS Ant. C + Ant. A	WWAN + DTS Ant. C + Ant. B	WWAN + DTS Ant. C + MIMO	WWAN + BT Ant. C + P-high	WWAN + U-NII + BT Ant. C + Ant. A + P-low	WWAN + U-NII + BT Ant. C + Ant. B + P-low	WWAN + U-NII + BT Ant. C + MIMO + P-low
Body	Rear	0.985	0.135	0.124	0.082	0.194	0.202	0.206	0.166	0.033	1.120	1.109	1.067	1.151	1.212	1.220	1.224
	Edge 1	0.622	0.013	0.014	0.026	0.048	0.038	0.060	0.036	0.000	0.635	0.636	0.648	0.658	0.670	0.660	0.682
	Edge 2	0.063	0.400	0.163	0.102	0.400	0.305	0.234	0.400	0.400	0.463	0.226	0.165	0.463	0.863	0.768	0.697
	Edge 3	0.005	1.190	1.020	0.721	1.130	1.190	1.190	1.160	0.221	1.195	1.025	0.726	1.165	1.357	1.417	1.417
	Edge 4	0.000	0.220	0.400	0.121	0.253	0.400	0.297	0.205	0.033	0.220	0.400	0.121	0.205	0.286	0.433	0.330

12.29. Sum of the SAR for LTE Band 13 (Antenna D), Wi-Fi and BT

RF Exposure Condition	Test Position	Standalone SAR (W/kg)									∑1-g SAR (W/g						
		(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(A) + (B)	(A) + (C)	(A) + (D)	(A) + (H)	(A) + (E) + (I)	(A) + (F) + (I)	(A) + (G) + (I)
		WWAN Ant. D	DTS Ant. A	DTS Ant. B	DTS MIMO	U-NII Ant. A	U-NII Ant. B	U-NII MIMO	BT P-high	BT P-low	WWAN + DTS Ant. D + Ant. A	WWAN + DTS Ant. D + Ant. B	WWAN + DTS Ant. D + MIMO	WWAN + BT Ant. D + P-high	WWAN + U-NII + BT Ant. D + Ant. A + P-low	WWAN + U-NII + BT Ant. D + Ant. B + P-low	WWAN + U-NII + BT Ant. D + MIMO + P-low
Body	Rear	0.914	0.135	0.124	0.082	0.194	0.202	0.206	0.166	0.033	1.049	1.038	0.996	1.080	1.141	1.149	1.153
	Edge 1	0.767	0.013	0.014	0.026	0.048	0.038	0.060	0.036	0.000	0.780	0.781	0.793	0.803	0.815	0.805	0.827
	Edge 2	0.000	0.400	0.163	0.102	0.400	0.305	0.234	0.400	0.400	0.400	0.163	0.102	0.400	0.800	0.705	0.634
	Edge 3	0.017	1.190	1.020	0.721	1.130	1.190	1.190	1.160	0.221	1.207	1.037	0.738	1.177	1.368	1.428	1.428
	Edge 4	0.131	0.220	0.400	0.121	0.253	0.400	0.297	0.205	0.033	0.351	0.531	0.252	0.336	0.417	0.564	0.461

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.

12.30. Sum of the SAR for LTE Band 17 (Antenna C), Wi-Fi and BT

SAR for LTE Band 17 (Frequency range: 704 – 716 MHz) is covered by LTE Band 12 (Frequency range:699 – 716 MHz) due to overlapping frequency range, same maximum tune-up limit and same channel bandwidth.

12.31. Sum of the SAR for LTE Band 17 (Antenna D), Wi-Fi and BT

SAR for LTE Band 17 (Frequency range: 704 – 716 MHz) is covered by LTE Band 12 (Frequency range:699 – 716 MHz) due to overlapping frequency range, same maximum tune-up limit and same channel bandwidth.

12.32. Sum of the SAR for LTE Band 25 (Antenna C), Wi-Fi and BT

RF Exposure Condition	Test Position	Standalone SAR (W/kg)									∑1-g SAR (W/g						
		(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(A) + (B)	(A) + (C)	(A) + (D)	(A) + (H)	(A) + (E) + (I)	(A) + (F) + (I)	(A) + (G) + (I)
		WWAN Ant. C	DTS Ant. A	DTS Ant. B	DTS MIMO	U-NII Ant. A	U-NII Ant. B	U-NII MIMO	BT P-high	BT P-low	WWAN + DTS Ant. C + Ant. A	WWAN + DTS Ant. C + Ant. B	WWAN + DTS Ant. C + MIMO	WWAN + BT Ant. C + P-high	WWAN + U-NII + BT Ant. C + Ant. A + P-low	WWAN + U-NII + BT Ant. C + Ant. B + P-low	WWAN + U-NII + BT Ant. C + MIMO + P-low
Body	Rear	1.190	0.135	0.124	0.082	0.194	0.202	0.206	0.166	0.033	1.325	1.314	1.272	1.356	1.417	1.425	1.429
	Edge 1	0.920	0.013	0.014	0.026	0.048	0.038	0.060	0.036	0.000	0.933	0.934	0.946	0.956	0.968	0.958	0.980
	Edge 2	0.063	0.400	0.163	0.102	0.400	0.305	0.234	0.400	0.400	0.463	0.226	0.165	0.463	0.863	0.768	0.697
	Edge 3	0.000	1.190	1.020	0.721	1.130	1.190	1.190	1.160	0.221	1.190	1.020	0.721	1.160	1.351	1.411	1.411
	Edge 4	0.000	0.220	0.400	0.121	0.253	0.400	0.297	0.205	0.033	0.220	0.400	0.121	0.205	0.286	0.433	0.330

12.33. Sum of the SAR for LTE Band 25 (Antenna D), Wi-Fi and BT

RF Exposure Condition	Test Position	Standalone SAR (W/kg)									∑1-g SAR (W/g						
		(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(A) + (B)	(A) + (C)	(A) + (D)	(A) + (H)	(A) + (E) + (I)	(A) + (F) + (I)	(A) + (G) + (I)
		WWAN Ant. D	DTS Ant. A	DTS Ant. B	DTS MIMO	U-NII Ant. A	U-NII Ant. B	U-NII MIMO	BT P-high	BT P-low	WWAN + DTS Ant. D + Ant. A	WWAN + DTS Ant. D + Ant. B	WWAN + DTS Ant. D + MIMO	WWAN + BT Ant. D + P-high	WWAN + U-NII + BT Ant. D + Ant. A + P-low	WWAN + U-NII + BT Ant. D + Ant. B + P-low	WWAN + U-NII + BT Ant. D + MIMO + P-low
Body	Rear	1.095	0.135	0.124	0.082	0.194	0.202	0.206	0.166	0.033	1.230	1.219	1.177	1.261	1.322	1.330	1.334
	Edge 1	0.699	0.013	0.014	0.026	0.048	0.038	0.060	0.036	0.000	0.712	0.713	0.725	0.735	0.747	0.737	0.759
	Edge 2	0.000	0.400	0.163	0.102	0.400	0.305	0.234	0.400	0.400	0.400	0.163	0.102	0.400	0.800	0.705	0.634
	Edge 3	0.000	1.190	1.020	0.721	1.130	1.190	1.190	1.160	0.221	1.190	1.020	0.721	1.160	1.351	1.411	1.411
	Edge 4	0.054	0.220	0.400	0.121	0.253	0.400	0.297	0.205	0.033	0.274	0.454	0.175	0.259	0.341	0.488	0.385

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.

12.34. Sum of the SAR for LTE Band 26 (Antenna C), Wi-Fi and BT

RF Exposure Condition	Test Position	Standalone SAR (W/kg)									∑1-g SAR (W/g						
		(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(A) + (B)	(A) + (C)	(A) + (D)	(A) + (H)	(A) + (E) + (I)	(A) + (F) + (I)	(A) + (G) + (I)
		WWAN Ant. C	DTS Ant. A	DTS Ant. B	DTS MIMO	U-NII Ant. A	U-NII Ant. B	U-NII MIMO	BT P-high	BT P-low	WWAN + DTS Ant. C + Ant. A	WWAN + DTS Ant. C + Ant. B	WWAN + DTS Ant. C + MIMO	WWAN + BT Ant. C + P-high	WWAN + U-NII + BT Ant. C + Ant. A + P-low	WWAN + U-NII + BT Ant. C + Ant. B + P-low	WWAN + U-NII + BT Ant. C + MIMO + P-low
Body	Rear	1.120	0.135	0.124	0.082	0.194	0.202	0.206	0.166	0.033	1.255	1.244	1.202	1.286	1.347	1.355	1.359
	Edge 1	0.734	0.013	0.014	0.026	0.048	0.038	0.060	0.036	0.000	0.747	0.748	0.760	0.770	0.782	0.772	0.794
	Edge 2	0.076	0.400	0.163	0.102	0.400	0.305	0.234	0.400	0.400	0.476	0.239	0.178	0.476	0.876	0.781	0.710
	Edge 3	0.008	1.190	1.020	0.721	1.130	1.190	1.190	1.160	0.221	1.198	1.028	0.729	1.168	1.359	1.419	1.419
	Edge 4	0.000	0.220	0.400	0.121	0.253	0.400	0.297	0.205	0.033	0.220	0.400	0.121	0.205	0.286	0.433	0.330

12.35. Sum of the SAR for LTE Band 26 (Antenna D), Wi-Fi and BT

RF Exposure Condition	Test Position	Standalone SAR (W/kg)									∑1-g SAR (W/g						
		(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(A) + (B)	(A) + (C)	(A) + (D)	(A) + (H)	(A) + (E) + (I)	(A) + (F) + (I)	(A) + (G) + (I)
		WWAN Ant. D	DTS Ant. A	DTS Ant. B	DTS MIMO	U-NII Ant. A	U-NII Ant. B	U-NII MIMO	BT P-high	BT P-low	WWAN + DTS Ant. D + Ant. A	WWAN + DTS Ant. D + Ant. B	WWAN + DTS Ant. D + MIMO	WWAN + BT Ant. D + P-high	WWAN + U-NII + BT Ant. D + Ant. A + P-low	WWAN + U-NII + BT Ant. D + Ant. B + P-low	WWAN + U-NII + BT Ant. D + MIMO + P-low
Body	Rear	0.958	0.135	0.124	0.082	0.194	0.202	0.206	0.166	0.033	1.093	1.082	1.040	1.124	1.185	1.193	1.197
	Edge 1	0.672	0.013	0.014	0.026	0.048	0.038	0.060	0.036	0.000	0.685	0.686	0.698	0.708	0.720	0.710	0.732
	Edge 2	0.000	0.400	0.163	0.102	0.400	0.305	0.234	0.400	0.400	0.400	0.163	0.102	0.400	0.800	0.705	0.634
	Edge 3	0.018	1.190	1.020	0.721	1.130	1.190	1.190	1.160	0.221	1.208	1.038	0.739	1.178	1.370	1.430	1.430
	Edge 4	0.130	0.220	0.400	0.121	0.253	0.400	0.297	0.205	0.033	0.350	0.530	0.251	0.335	0.416	0.563	0.460

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.

12.36. Sum of the SAR for LTE Band 27 (Antenna C), Wi-Fi and BT

SAR for LTE Band 27 (Frequency range: 814 – 824 MHz) is covered by LTE Band 26 (Frequency range: 814 – 849 MHz) due to overlapping frequency range, same maximum tune-up limit and same channel bandwidth.

12.37. Sum of the SAR for LTE Band 27 (Antenna D), Wi-Fi and BT

SAR for LTE Band 27 (Frequency range: 814 – 824 MHz) is covered by LTE Band 26 (Frequency range: 814 – 849 MHz) due to overlapping frequency range, same maximum tune-up limit and same channel bandwidth.

12.38. Sum of the SAR for LTE Band 30 (Antenna C), Wi-Fi and BT

RF Exposure Condition	Test Position	Standalone SAR (W/kg)									∑1-g SAR (W/g						
		(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(A)+(B)	(A)+(C)	(A)+(D)	(A)+(H)	(A)+(E)+(I)	(A)+(F)+(I)	(A)+(G)+(I)
		WWAN Ant.C	DTS Ant.A	DTS Ant.B	DTS MIMO	U-NII Ant.A	U-NII Ant.B	U-NII MIMO	BT P-high	BT P-low	WWAN+DTS Ant.C+Ant.A	WWAN+DTS Ant.C+Ant.B	WWAN+DTS Ant.C+MIMO	WWAN+BT Ant.C+P-high	WWAN+U-NII+BT Ant.C+Ant.A+P-low	WWAN+U-NII+BT Ant.C+Ant.B+P-low	WWAN+U-NII+BT Ant.C+MIMO+P-low
Body	Rear	1.180	0.135	0.124	0.082	0.194	0.202	0.206	0.166	0.033	1.315	1.304	1.262	1.346	1.407	1.415	1.419
	Edge 1	1.126	0.013	0.014	0.026	0.048	0.038	0.060	0.036	0.000	1.139	1.140	1.152	1.162	1.174	1.164	1.186
	Edge 2	0.093	0.400	0.163	0.102	0.400	0.305	0.234	0.400	0.400	0.493	0.256	0.195	0.493	0.893	0.798	0.727
	Edge 3	0.000	1.190	1.020	0.721	1.130	1.190	1.190	1.160	0.221	1.190	1.020	0.721	1.160	1.351	1.411	1.411
	Edge 4	0.000	0.220	0.400	0.121	0.253	0.400	0.297	0.205	0.033	0.220	0.400	0.121	0.205	0.286	0.433	0.330

12.39. Sum of the SAR for LTE Band 30 (Antenna D), Wi-Fi and BT

RF Exposure Condition	Test Position	Standalone SAR (W/kg)									∑1-g SAR (W/g						
		(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(A)+(B)	(A)+(C)	(A)+(D)	(A)+(H)	(A)+(E)+(I)	(A)+(F)+(I)	(A)+(G)+(I)
		WWAN Ant.D	DTS Ant.A	DTS Ant.B	DTS MIMO	U-NII Ant.A	U-NII Ant.B	U-NII MIMO	BT P-high	BT P-low	WWAN+DTS Ant.D+Ant.A	WWAN+DTS Ant.D+Ant.B	WWAN+DTS Ant.D+MIMO	WWAN+BT Ant.D+P-high	WWAN+U-NII+BT Ant.D+Ant.A+P-low	WWAN+U-NII+BT Ant.D+Ant.B+P-low	WWAN+U-NII+BT Ant.D+MIMO+P-low
Body	Rear	1.180	0.135	0.124	0.082	0.194	0.202	0.206	0.166	0.033	1.315	1.304	1.262	1.346	1.407	1.415	1.419
	Edge 1	0.874	0.013	0.014	0.026	0.048	0.038	0.060	0.036	0.000	0.887	0.888	0.900	0.910	0.922	0.912	0.934
	Edge 2	0.000	0.400	0.163	0.102	0.400	0.305	0.234	0.400	0.400	0.400	0.163	0.102	0.400	0.800	0.705	0.634
	Edge 3	0.000	1.190	1.020	0.721	1.130	1.190	1.190	1.160	0.221	1.190	1.020	0.721	1.160	1.351	1.411	1.411
	Edge 4	0.021	0.220	0.400	0.121	0.253	0.400	0.297	0.205	0.033	0.241	0.421	0.142	0.226	0.307	0.454	0.351

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.

12.40. Sum of the SAR for LTE Band 41 (Antenna C), Wi-Fi and BT

RF Exposure Condition	Test Position	Standalone SAR (W/kg)									∑1-g SAR (W/g						
		(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(A) + (B)	(A) + (C)	(A) + (D)	(A) + (H)	(A) + (E) + (I)	(A) + (F) + (I)	(A) + (G) + (I)
		WWAN Ant. C	DTS Ant. A	DTS Ant. B	DTS MIMO	U-NII Ant. A	U-NII Ant. B	U-NII MIMO	BT P-high	BT P-low	WWAN + DTS Ant. C + Ant. A	WWAN + DTS Ant. C + Ant. B	WWAN + DTS Ant. C + MIMO	WWAN + BT Ant. C + P-high	WWAN + U-NII + BT Ant. C + Ant. A + P-low	WWAN + U-NII + BT Ant. C + Ant. B + P-low	WWAN + U-NII + BT Ant. C + MIMO + P-low
Body	Rear	1.103	0.135	0.124	0.082	0.194	0.202	0.206	0.166	0.033	1.238	1.227	1.185	1.269	1.331	1.339	1.343
	Edge 1	0.820	0.013	0.014	0.026	0.048	0.038	0.060	0.036	0.000	0.833	0.834	0.846	0.856	0.868	0.858	0.880
	Edge 2	0.110	0.400	0.163	0.102	0.400	0.305	0.234	0.400	0.400	0.510	0.273	0.212	0.510	0.910	0.815	0.744
	Edge 3	0.000	1.190	1.020	0.721	1.130	1.190	1.190	1.160	0.221	1.190	1.020	0.721	1.160	1.351	1.411	1.411
	Edge 4	0.000	0.220	0.400	0.121	0.253	0.400	0.297	0.205	0.033	0.220	0.400	0.121	0.205	0.286	0.433	0.330

12.41. Sum of the SAR for LTE Band 41 (Antenna D), Wi-Fi and BT

RF Exposure Condition	Test Position	Standalone SAR (W/kg)									∑1-g SAR (W/g						
		(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(A) + (B)	(A) + (C)	(A) + (D)	(A) + (H)	(A) + (E) + (I)	(A) + (F) + (I)	(A) + (G) + (I)
		WWAN Ant. D	DTS Ant. A	DTS Ant. B	DTS MIMO	U-NII Ant. A	U-NII Ant. B	U-NII MIMO	BT P-high	BT P-low	WWAN + DTS Ant. D + Ant. A	WWAN + DTS Ant. D + Ant. B	WWAN + DTS Ant. D + MIMO	WWAN + BT Ant. D + P-high	WWAN + U-NII + BT Ant. D + Ant. A + P-low	WWAN + U-NII + BT Ant. D + Ant. B + P-low	WWAN + U-NII + BT Ant. D + MIMO + P-low
Body	Rear	1.046	0.135	0.124	0.082	0.194	0.202	0.206	0.166	0.033	1.181	1.170	1.128	1.212	1.273	1.281	1.285
	Edge 1	0.551	0.013	0.014	0.026	0.048	0.038	0.060	0.036	0.000	0.564	0.565	0.577	0.587	0.599	0.589	0.611
	Edge 2	0.000	0.400	0.163	0.102	0.400	0.305	0.234	0.400	0.400	0.400	0.163	0.102	0.400	0.800	0.705	0.634
	Edge 3	0.000	1.190	1.020	0.721	1.130	1.190	1.190	1.160	0.221	1.190	1.020	0.721	1.160	1.351	1.411	1.411
	Edge 4	0.096	0.220	0.400	0.121	0.253	0.400	0.297	0.205	0.033	0.316	0.496	0.217	0.301	0.383	0.530	0.427

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.

12.42. Sum of the SAR for LTE-2CA Band 7 (Antenna C), Wi-Fi and BT

RF Exposure Condition	Test Position	Standalone SAR (W/kg)									∑ 10-g SAR (W/g						
		(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(A) + (B)	(A) + (C)	(A) + (D)	(A) + (H)	(A) + (E) + (I)	(A) + (F) + (I)	(A) + (G) + (I)
		WWAN Ant. C	DTS Ant. A	DTS Ant. B	DTS MIMO	U-NII Ant. A	U-NII Ant. B	U-NII MIMO	BT P-high	BT P-low	WWAN + DTS Ant. C + Ant. A	WWAN + DTS Ant. C + Ant. B	WWAN + DTS Ant. C + MIMO	WWAN + BT Ant. C + P-high	WWAN + U-NII + BT Ant. C + Ant. A + P-low	WWAN + U-NII + BT Ant. C + Ant. B + P-low	WWAN + U-NII + BT Ant. C + MIMO + P-low
Body	Rear	0.666	0.135	0.124	0.082	0.194	0.202	0.206	0.166	0.033	0.801	0.790	0.748	0.832	0.893	0.901	0.905

12.43. Sum of the SAR for LTE-2CA Band 7 (Antenna D), Wi-Fi and BT

RF Exposure Condition	Test Position	Standalone SAR (W/kg)									∑ 10-g SAR (W/g						
		(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(A) + (B)	(A) + (C)	(A) + (D)	(A) + (H)	(A) + (E) + (I)	(A) + (F) + (I)	(A) + (G) + (I)
		WWAN Ant. D	DTS Ant. A	DTS Ant. B	DTS MIMO	U-NII Ant. A	U-NII Ant. B	U-NII MIMO	BT P-high	BT P-low	WWAN + DTS Ant. D + Ant. A	WWAN + DTS Ant. D + Ant. B	WWAN + DTS Ant. D + MIMO	WWAN + BT Ant. D + P-high	WWAN + U-NII + BT Ant. D + Ant. A + P-low	WWAN + U-NII + BT Ant. D + Ant. B + P-low	WWAN + U-NII + BT Ant. D + MIMO + P-low
Body	Rear	0.617	0.135	0.124	0.082	0.194	0.202	0.206	0.166	0.033	0.752	0.741	0.699	0.783	0.844	0.852	0.856

12.44. Sum of the SAR for LTE-2CA Band 41 (Antenna C), Wi-Fi and BT

RF Exposure Condition	Test Position	Standalone SAR (W/kg)									∑ 10-g SAR (W/g						
		(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(A) + (B)	(A) + (C)	(A) + (D)	(A) + (H)	(A) + (E) + (I)	(A) + (F) + (I)	(A) + (G) + (I)
		WWAN Ant. C	DTS Ant. A	DTS Ant. B	DTS MIMO	U-NII Ant. A	U-NII Ant. B	U-NII MIMO	BT P-high	BT P-low	WWAN + DTS Ant. C + Ant. A	WWAN + DTS Ant. C + Ant. B	WWAN + DTS Ant. C + MIMO	WWAN + BT Ant. C + P-high	WWAN + U-NII + BT Ant. C + Ant. A + P-low	WWAN + U-NII + BT Ant. C + Ant. B + P-low	WWAN + U-NII + BT Ant. C + MIMO + P-low
Body	Rear	0.727	0.135	0.124	0.082	0.194	0.202	0.206	0.166	0.033	0.862	0.851	0.809	0.893	0.954	0.962	0.966

12.45. Sum of the SAR for LTE-2CA Band 41 (Antenna D), Wi-Fi and BT

RF Exposure Condition	Test Position	Standalone SAR (W/kg)									∑ 10-g SAR (W/g						
		(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(A) + (B)	(A) + (C)	(A) + (D)	(A) + (H)	(A) + (E) + (I)	(A) + (F) + (I)	(A) + (G) + (I)
		WWAN Ant. D	DTS Ant. A	DTS Ant. B	DTS MIMO	U-NII Ant. A	U-NII Ant. B	U-NII MIMO	BT P-high	BT P-low	WWAN + DTS Ant. D + Ant. A	WWAN + DTS Ant. D + Ant. B	WWAN + DTS Ant. D + MIMO	WWAN + BT Ant. D + P-high	WWAN + U-NII + BT Ant. D + Ant. A + P-low	WWAN + U-NII + BT Ant. D + Ant. B + P-low	WWAN + U-NII + BT Ant. D + MIMO + P-low
Body	Rear	0.751	0.135	0.124	0.082	0.194	0.202	0.206	0.166	0.033	0.886	0.875	0.833	0.917	0.978	0.986	0.990

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.

Appendixes

Refer to separated files for the following appendixes.

16U23818-S1V1 SAR_App A Setup Photos

16U23818-S1V1 SAR_App B System Check Plots

16U23818-S1V2 SAR_App C Highest Test Plots

16U23818-S1V1 SAR_App D Tissue Ingredients

16U23818-S1V1 SAR_App E Probe Cal. Certificates

16U23818-S1V1 SAR_App F Dipole Cal. Certificates

END OF REPORT