

FCC SAR Test Report

Report No. : SA170502C07

Applicant : HTC Corporation

Address : 1F, 6-3 Baoqiang Road, Xindian District, New Taipei City, Taiwan

Product : Smartphone

FCC ID : NM8G011A

Model No. : G011A

Standards : FCC 47 CFR Part 2 (2.1093), IEEE C95.1:1992, IEEE Std 1528:2013
KDB 865664 D01 v01r04, KDB 865664 D02 v01r02, KDB 248227 D01 v02r02
KDB 447498 D01 v06, KDB 648474 D04 v01r03, KDB 941225 D01 v03r01
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CERTIFICATION: The above equipment have been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch – Lin Kou Laboratories**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's SAR characteristics under the conditions specified in this report. It should not be reproduced except in full, without the written approval of our laboratory. The client should not use it to claim product certification, approval, or endorsement by TAF or any government agencies.

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Release Control Record

Report No.	Reason for Change	Date Issued
SA170502C07	Initial release	Jul. 13, 2017

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1. Summary of Maximum SAR Value

Equipment Class	Mode	Highest SAR-1g Head (W/kg)	Highest SAR-1g Body-worn Tested at 10 mm (W/kg)	Highest SAR-1g Hotspot Tested at 10 mm (W/kg)
PCE	GSM850	0.74	0.20	0.20
	GSM1900	0.11	0.37	0.37
	WCDMA II	0.16	0.57	0.98
	WCDMA IV	0.22	0.49	0.77
	WCDMA V	0.93	0.23	0.23
	CDMA BC0	0.93	0.23	0.23
	CDMA BC1	0.18	0.74	1.12
	CDMA BC10	0.92	0.23	0.23
	LTE 2	0.18	0.63	1.04
	LTE 4	0.16	0.53	0.70
	LTE 5	0.84	0.16	0.16
	LTE 7	0.77	0.95	0.95
	LTE 12	0.63	0.16	0.16
	LTE 13	0.48	0.17	0.17
	LTE 17	0.66	0.16	0.16
	LTE 25	0.16	0.58	1.14
	LTE 26	0.78	0.18	0.18
	LTE 30	0.49	0.48	0.48
	LTE 41	0.61	0.69	0.69
	LTE 66	0.19	0.49	0.66
DTS	2.4G WLAN	0.85	0.05	0.05
NII	5.2G WLAN	N/A	N/A	0.12
	5.3G WLAN	0.79	0.11	N/A
	5.6G WLAN	0.55	0.11	N/A
	5.8G WLAN	0.69	0.10	0.09
DSS	Bluetooth	N/A	0.00	N/A
DXX	NFC	N/A	N/A	N/A
Highest Simultaneous Transmission SAR		Head	Body-worn	Hotspot
		1.47	1.04	1.14

Note:

- The SAR criteria (**Head & Body: SAR-1g 1.6 W/kg, and Extremity: SAR-10g 4.0 W/kg**) for general population / uncontrolled exposure is specified in FCC 47 CFR part 2 (2.1093) and ANSI/IEEE C95.1-1992.

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2. Description of Equipment Under Test

EUT Type	Smartphone
FCC ID	NM8G011A
Model Name	G011A
HW Version	DVT
EUT Configurations	EUT 1 : EUT + Battery 1 EUT 2 : EUT + Battery 2
Tx Frequency Bands (Unit: MHz)	GSM850 : 824.2 ~ 848.8 GSM1900 : 1850.2 ~ 1909.8 WCDMA Band II : 1852.4 ~ 1907.6 WCDMA Band IV : 1712.4 ~ 1752.6 WCDMA Band V : 826.4 ~ 846.6 CDMA BC0 : 824.7 ~ 848.31 CDMA BC1 : 1851.25 ~ 1908.75 CDMA BC10 : 817.9 ~ 823.1 LTE Band 2 : 1850.7 ~ 1909.3 (BW: 1.4M, 3M, 5M, 10M, 15M, 20M) LTE Band 4 : 1710.7 ~ 1754.3 (BW: 1.4M, 3M, 5M, 10M, 15M, 20M) LTE Band 5 : 824.7 ~ 848.3 (BW: 1.4M, 3M, 5M, 10M) LTE Band 7 : 2502.5 ~ 2567.5 (BW: 5M, 10M, 15M, 20M) LTE Band 12 : 699.7 ~ 715.3 (BW: 1.4M, 3M, 5M, 10M) LTE Band 13 : 779.5 ~ 784.5 (BW: 5M, 10M) LTE Band 17 : 706.5 ~ 713.5 (BW: 5M, 10M) LTE Band 25 : 1850.7 ~ 1914.3 (BW: 1.4M, 3M, 5M, 10M, 15M, 20M) LTE Band 26 : 814.7 ~ 848.3 (BW: 1.4M, 3M, 5M, 10M, 15M) LTE Band 30 : 2307.5 ~ 2312.5 (BW: 5M, 10M) LTE Band 41 : 2498.5 ~ 2687.5 (BW: 5M, 10M, 15M, 20M) LTE Band 66 : 1710.7 ~ 1779.3 (BW: 1.4M, 3M, 5M, 10M, 15M, 20M) WLAN : 2412 ~ 2462, 5180 ~ 5240, 5260 ~ 5320, 5500 ~ 5700, 5745 ~ 5825 Bluetooth : 2402 ~ 2480 NFC : 13.56
Uplink Modulations	GSM & GPRS : GMSK EDGE : 8PSK WCDMA : QPSK CDMA : QPSK LTE : QPSK, 16QAM, 64QAM 802.11b : DSSS 802.11a/g/n/ac : OFDM Bluetooth : GFSK, $\pi/4$ -DQPSK, 8-DPSK NFC : ASK
Maximum Tune-up Conducted Power (Unit: dBm)	Please refer to section 4.6.1 of this report
Antenna Type	Fixed Internal Antenna
EUT Stage	Production Unit

Note:

- The above EUT information is declared by manufacturer and for more detailed features description please refers to the manufacturer's specifications or User's Manual.

3. SAR Measurement System

3.1 Definition of Specific Absorption Rate (SAR)

SAR is related to the rate at which energy is absorbed per unit mass in an object exposed to a radio field. The SAR distribution in a biological body is complicated and is usually carried out by experimental techniques or numerical modeling. The standard recommends limits for two tiers of groups, occupational/controlled and general population/uncontrolled, based on a person's awareness and ability to exercise control over his or her exposure. In general, occupational/controlled exposure limits are higher than the limits for general population/uncontrolled.

The SAR definition is the time derivative (rate) of the incremental energy (dW) absorbed by (dissipated in) an incremental mass (dm) contained in a volume element (dv) of a given density (ρ). The equation description is as below:

$$SAR = \frac{d}{dt} \left(\frac{dW}{dm} \right) = \frac{d}{dt} \left(\frac{dW}{\rho dv} \right)$$

SAR is expressed in units of Watts per kilogram (W/kg)

SAR measurement can be related to the electrical field in the tissue by

$$SAR = \frac{\sigma |E|^2}{\rho}$$

Where: σ is the conductivity of the tissue, ρ is the mass density of the tissue and E is the RMS electrical field strength.

3.2 SPEAG DASY52 System

DASY52 system consists of high precision robot, probe alignment sensor, phantom, robot controller, controlled measurement server and near-field probe. The robot includes six axes that can move to the precision position of the DASY52 software defined. The DASY52 software can define the area that is detected by the probe. The robot is connected to controlled box. Controlled measurement server is connected to the controlled robot box. The DAE includes amplifier, signal multiplexing, AD converter, offset measurement and surface detection. It is connected to the Electro-optical coupler (ECO). The ECO performs the conversion from the optical into digital electric signal of the DAE and transfers data to the PC.

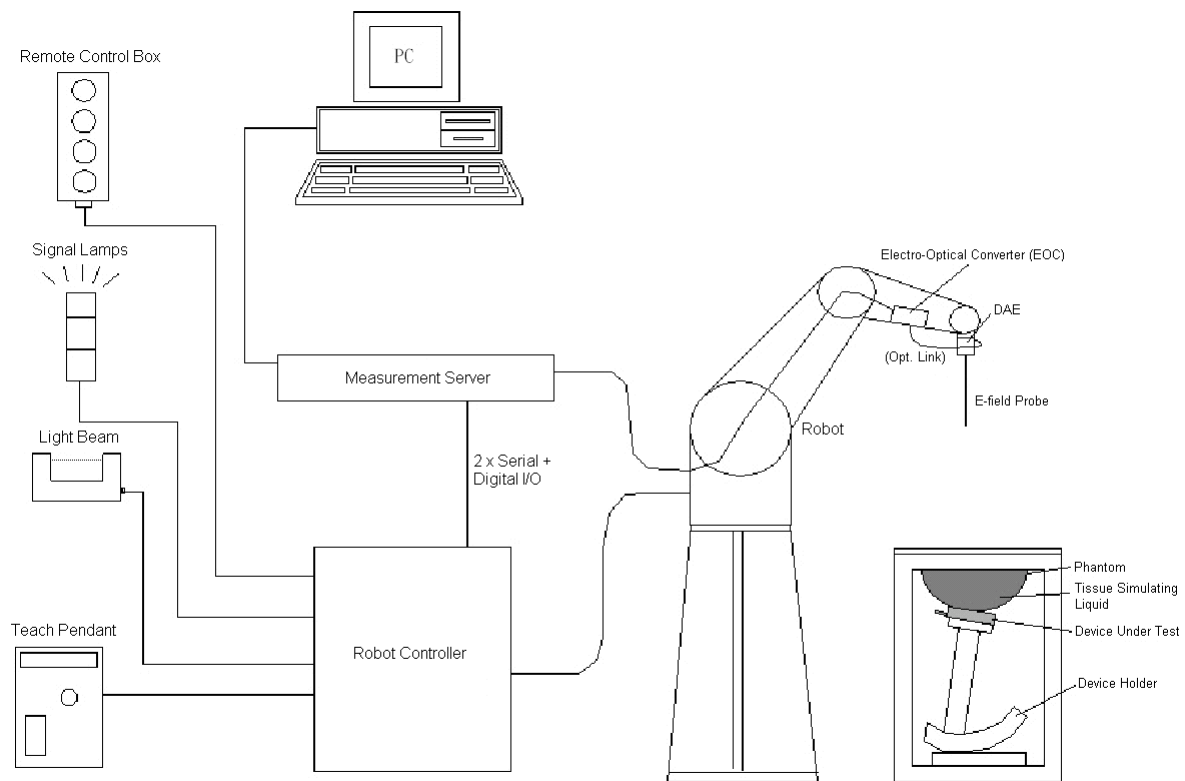


Fig-3.1 SPEAG DASY52 System Setup

3.2.1 Robot

The DASY52 systems use the high precision robots from Stäubli SA (France). For the 6-axis controller system, the robot controller version of CS8c from Stäubli is used. The Stäubli robot series have many features that are important for our application:

- High precision (repeatability ± 0.035 mm)
- High reliability (industrial design)
- Jerk-free straight movements
- Low ELF interference (the closed metallic construction shields against motor control fields)

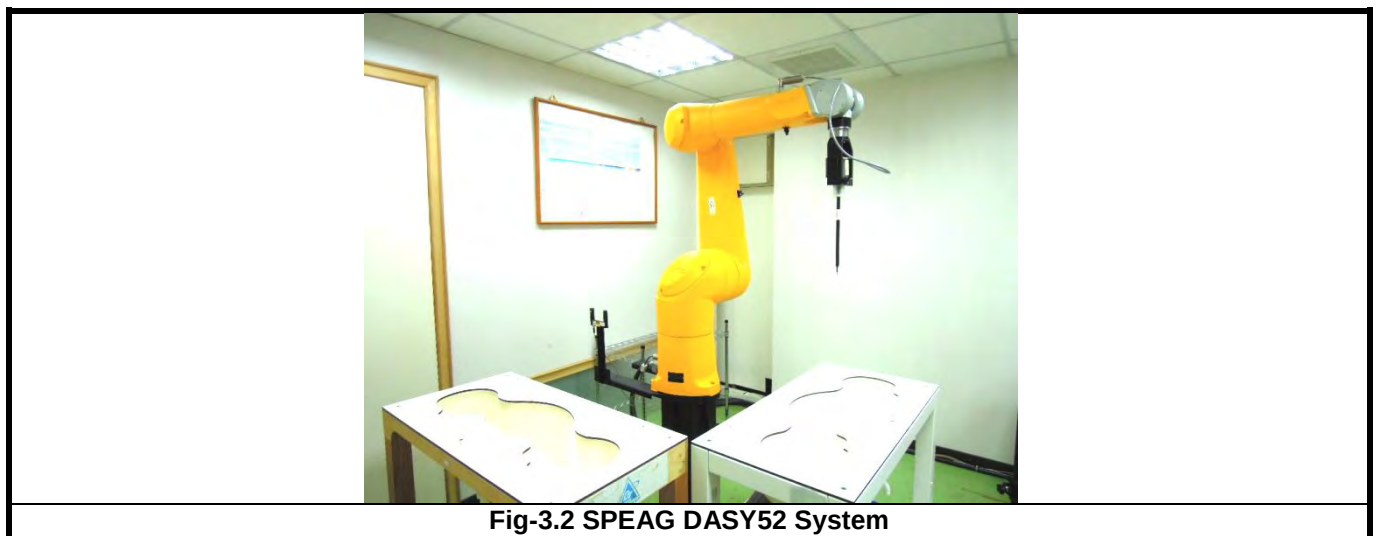


Fig-3.2 SPEAG DASY52 System

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3.2.2 Probes

The SAR measurement is conducted with the dosimetric probe. The probe is specially designed and calibrated for use in liquid with high permittivity. The dosimetric probe has special calibration in liquid at different frequency.

Model	EX3DV4	
Construction	Symmetrical design with triangular core. Built-in shielding against static charges. PEEK enclosure material (resistant to organic solvents, e.g., DGBE).	
Frequency	10 MHz to 6 GHz Linearity: ± 0.2 dB	
Directivity	± 0.3 dB in HSL (rotation around probe axis) ± 0.5 dB in tissue material (rotation normal to probe axis)	
Dynamic Range	10 μ W/g to 100 mW/g Linearity: ± 0.2 dB (noise: typically < 1 μ W/g)	
Dimensions	Overall length: 337 mm (Tip: 20 mm) Tip diameter: 2.5 mm (Body: 12 mm) Typical distance from probe tip to dipole centers: 1 mm	

Model	ES3DV3	
Construction	Symmetrical design with triangular core. Interleaved sensors. Built-in shielding against static charges. PEEK enclosure material (resistant to organic solvents, e.g., DGBE).	
Frequency	10 MHz to 4 GHz Linearity: ± 0.2 dB	
Directivity	± 0.2 dB in HSL (rotation around probe axis) ± 0.3 dB in tissue material (rotation normal to probe axis)	
Dynamic Range	5 μ W/g to 100 mW/g Linearity: ± 0.2 dB	
Dimensions	Overall length: 337 mm (Tip: 20 mm) Tip diameter: 3.9 mm (Body: 12 mm) Distance from probe tip to dipole centers: 2.0 mm	

Model	ET3DV6	
Construction	Symmetrical design with triangular core Built-in optical fiber for surface detection system. Built-in shielding against static charges. PEEK enclosure material (resistant to organic solvents, e.g., DGBE)	
Frequency	10 MHz to 2.3 GHz; Linearity: ± 0.2 dB	
Directivity	± 0.2 dB in TSL (rotation around probe axis) ± 0.4 dB in TSL (rotation normal to probe axis)	
Dynamic Range	5 μ W/g to 100 mW/g; Linearity: ± 0.2 dB	
Dimensions	Overall length: 337 mm (Tip: 16 mm) Tip diameter: 6.8 mm (Body: 12 mm) Distance from probe tip to dipole centers: 2.7 mm	

3.2.3 Data Acquisition Electronics (DAE)

Model	DAE3, DAE4	
Construction	Signal amplifier, multiplexer, A/D converter and control logic. Serial optical link for communication with DASY embedded system (fully remote controlled). Two step probe touch detector for mechanical surface detection and emergency robot stop.	
Measurement Range	-100 to +300 mV (16 bit resolution and two range settings: 4mV, 400mV)	
Input Offset Voltage	$< 5\mu$ V (with auto zero)	
Input Bias Current	< 50 fA	
Dimensions	60 x 60 x 68 mm	

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3.2.4 Phantoms

Model	Twin SAM	
Construction	The shell corresponds to the specifications of the Specific Anthropomorphic Mannequin (SAM) phantom defined in IEEE 1528 and IEC 62209-1. It enables the dosimetric evaluation of left and right hand phone usage as well as body mounted usage at the flat phantom region. A cover prevents evaporation of the liquid. Reference markings on the phantom allow the complete setup of all predefined phantom positions and measurement grids by teaching three points with the robot.	
Material	Vinylester, glass fiber reinforced (VE-GF)	
Shell Thickness	2 ± 0.2 mm (6 ± 0.2 mm at ear point)	
Dimensions	Length: 1000 mm Width: 500 mm Height: adjustable feet	
Filling Volume	approx. 25 liters	

Model	ELI	
Construction	Phantom for compliance testing of handheld and body-mounted wireless devices in the frequency range of 30 MHz to 6 GHz. ELI is fully compatible with the IEC 62209-2 standard and all known tissue simulating liquids. ELI has been optimized regarding its performance and can be integrated into our standard phantom tables. A cover prevents evaporation of the liquid. Reference markings on the phantom allow installation of the complete setup, including all predefined phantom positions and measurement grids, by teaching three points. The phantom is compatible with all SPEAG dosimetric probes and dipoles.	
Material	Vinylester, glass fiber reinforced (VE-GF)	
Shell Thickness	2.0 ± 0.2 mm (bottom plate)	
Dimensions	Major axis: 600 mm Minor axis: 400 mm	
Filling Volume	approx. 30 liters	

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3.2.5 Device Holder

Model	Mounting Device	
Construction	In combination with the Twin SAM Phantom or ELI4, the Mounting Device enables the rotation of the mounted transmitter device in spherical coordinates. Rotation point is the ear opening point. Transmitter devices can be easily and accurately positioned according to IEC, IEEE, FCC or other specifications. The device holder can be locked for positioning at different phantom sections (left head, right head, flat).	
Material	POM	

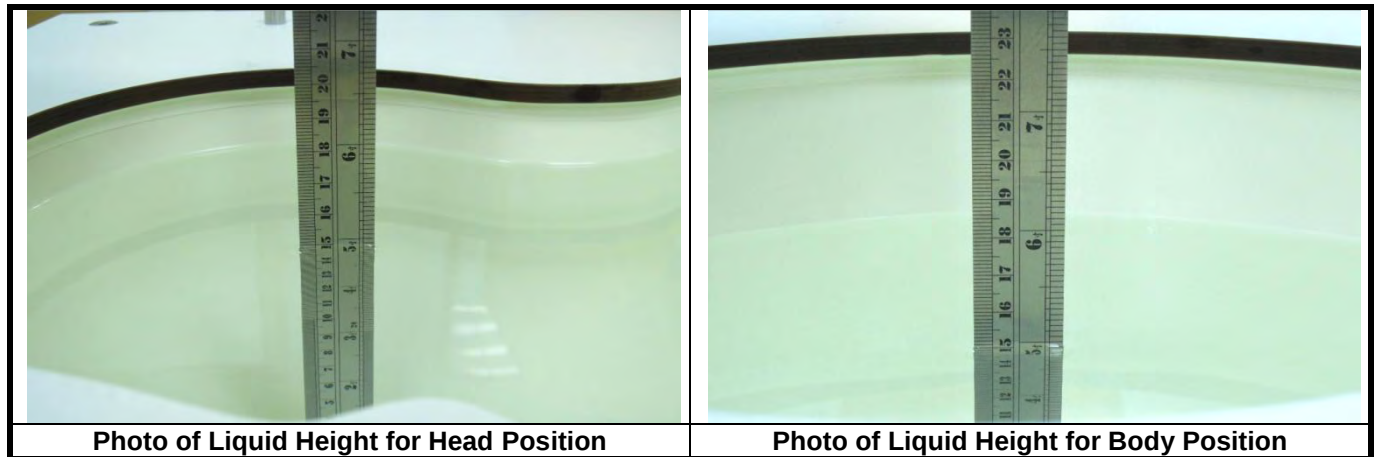
Model	Laptop Extensions Kit	
Construction	Simple but effective and easy-to-use extension for Mounting Device that facilitates the testing of larger devices according to IEC 62209-2 (e.g., laptops, cameras, etc.). It is lightweight and fits easily on the upper part of the Mounting Device in place of the phone positioner.	
Material	POM, Acrylic glass, Foam	

3.2.6 System Validation Dipoles

Model	D-Serial	
Construction	Symmetrical dipole with 1/4 balun. Enables measurement of feed point impedance with NWA. Matched for use near flat phantoms filled with tissue simulating solutions.	
Frequency	750 MHz to 5800 MHz	
Return Loss	> 20 dB	
Power Capability	> 100 W (f < 1GHz), > 40 W (f > 1GHz)	

3.2.7 Tissue Simulating Liquids

For SAR measurement of the field distribution inside the phantom, the phantom must be filled with homogeneous tissue simulating liquid to a depth of at least 15 cm. For head SAR testing, the liquid height from the ear reference point (ERP) of the phantom to the liquid top surface is larger than 15 cm. For body SAR testing, the liquid height from the center of the flat phantom to the liquid top surface is larger than 15 cm. The nominal dielectric values of the tissue simulating liquids in the phantom and the tolerance of 5% are listed in Table-3.1.



The dielectric properties of the head tissue simulating liquids are defined in IEEE 1528, and KDB 865664 D01 Appendix A. For the body tissue simulating liquids, the dielectric properties are defined in KDB 865664 D01 Appendix A. The dielectric properties of the tissue simulating liquids were verified prior to the SAR evaluation using a dielectric assessment kit and a network analyzer.

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Table-3.1 Targets of Tissue Simulating Liquid

Frequency (MHz)	Target Permittivity	Range of $\pm 5\%$	Target Conductivity	Range of $\pm 5\%$
For Head				
750	41.9	39.8 ~ 44.0	0.89	0.85 ~ 0.93
835	41.5	39.4 ~ 43.6	0.90	0.86 ~ 0.95
900	41.5	39.4 ~ 43.6	0.97	0.92 ~ 1.02
1450	40.5	38.5 ~ 42.5	1.20	1.14 ~ 1.26
1640	40.3	38.3 ~ 42.3	1.29	1.23 ~ 1.35
1750	40.1	38.1 ~ 42.1	1.37	1.30 ~ 1.44
1800	40.0	38.0 ~ 42.0	1.40	1.33 ~ 1.47
1900	40.0	38.0 ~ 42.0	1.40	1.33 ~ 1.47
2000	40.0	38.0 ~ 42.0	1.40	1.33 ~ 1.47
2300	39.5	37.5 ~ 41.5	1.67	1.59 ~ 1.75
2450	39.2	37.2 ~ 41.2	1.80	1.71 ~ 1.89
2600	39.0	37.1 ~ 41.0	1.96	1.86 ~ 2.06
3500	37.9	36.0 ~ 39.8	2.91	2.76 ~ 3.06
5200	36.0	34.2 ~ 37.8	4.66	4.43 ~ 4.89
5300	35.9	34.1 ~ 37.7	4.76	4.52 ~ 5.00
5500	35.6	33.8 ~ 37.4	4.96	4.71 ~ 5.21
5600	35.5	33.7 ~ 37.3	5.07	4.82 ~ 5.32
5800	35.3	33.5 ~ 37.1	5.27	5.01 ~ 5.53
For Body				
750	55.5	52.7 ~ 58.3	0.96	0.91 ~ 1.01
835	55.2	52.4 ~ 58.0	0.97	0.92 ~ 1.02
900	55.0	52.3 ~ 57.8	1.05	1.00 ~ 1.10
1450	54.0	51.3 ~ 56.7	1.30	1.24 ~ 1.37
1640	53.8	51.1 ~ 56.5	1.40	1.33 ~ 1.47
1750	53.4	50.7 ~ 56.1	1.49	1.42 ~ 1.56
1800	53.3	50.6 ~ 56.0	1.52	1.44 ~ 1.60
1900	53.3	50.6 ~ 56.0	1.52	1.44 ~ 1.60
2000	53.3	50.6 ~ 56.0	1.52	1.44 ~ 1.60
2300	52.9	50.3 ~ 55.5	1.81	1.72 ~ 1.90
2450	52.7	50.1 ~ 55.3	1.95	1.85 ~ 2.05
2600	52.5	49.9 ~ 55.1	2.16	2.05 ~ 2.27
3500	51.3	48.7 ~ 53.9	3.31	3.14 ~ 3.48
5200	49.0	46.6 ~ 51.5	5.30	5.04 ~ 5.57
5300	48.9	46.5 ~ 51.3	5.42	5.15 ~ 5.69
5500	48.6	46.2 ~ 51.0	5.65	5.37 ~ 5.93
5600	48.5	46.1 ~ 50.9	5.77	5.48 ~ 6.06
5800	48.2	45.8 ~ 50.6	6.00	5.70 ~ 6.30

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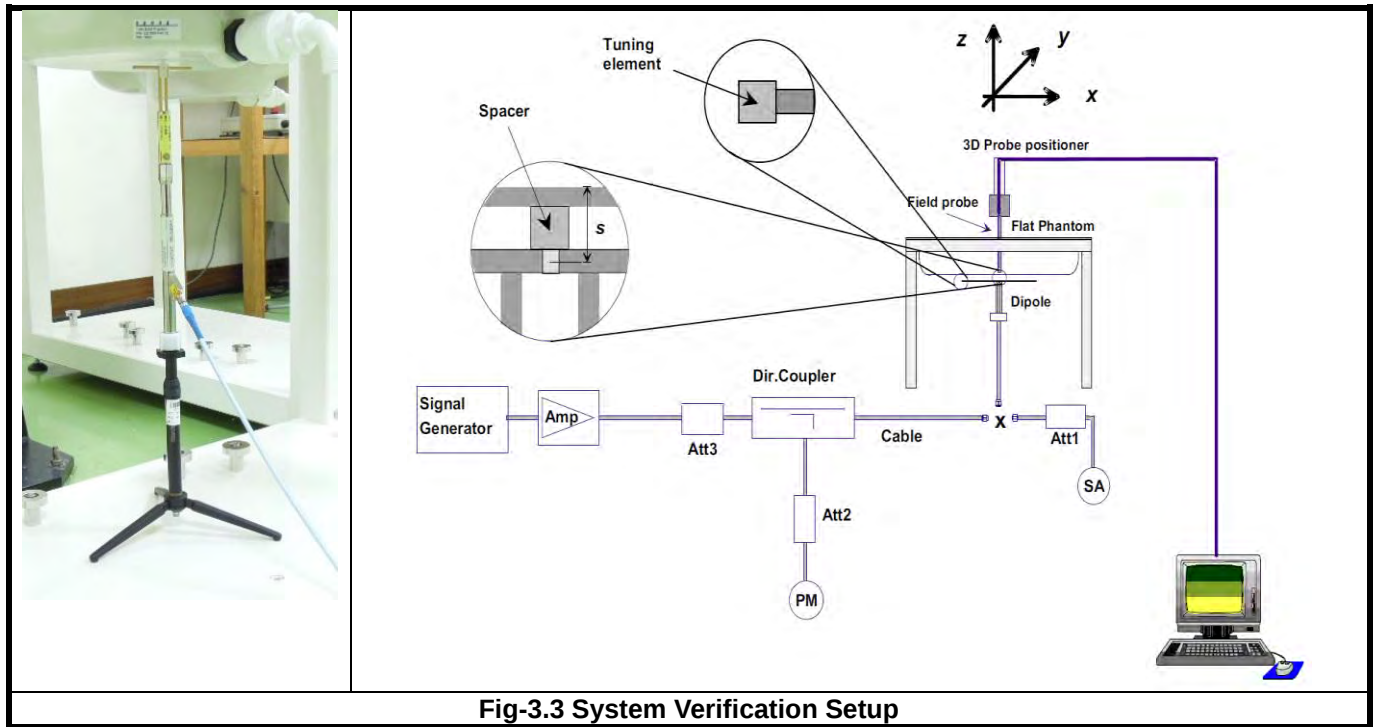
The following table gives the recipes for tissue simulating liquids.

Table-3.2 Recipes of Tissue Simulating Liquid

Tissue Type	Bactericide	DGBE	HEC	NaCl	Sucrose	Triton X-100	Water	Diethylene Glycol Mono-hexylether
H750	0.2	-	0.2	1.5	56.0	-	42.1	-
H835	0.2	-	0.2	1.5	57.0	-	41.1	-
H900	0.2	-	0.2	1.4	58.0	-	40.2	-
H1450	-	43.3	-	0.6	-	-	56.1	-
H1640	-	45.8	-	0.5	-	-	53.7	-
H1750	-	47.0	-	0.4	-	-	52.6	-
H1800	-	44.5	-	0.3	-	-	55.2	-
H1900	-	44.5	-	0.2	-	-	55.3	-
H2000	-	44.5	-	0.1	-	-	55.4	-
H2300	-	44.9	-	0.1	-	-	55.0	-
H2450	-	45.0	-	0.1	-	-	54.9	-
H2600	-	45.1	-	0.1	-	-	54.8	-
H3500	-	8.0	-	0.2	-	20.0	71.8	-
H5G	-	-	-	-	-	17.2	65.5	17.3
B750	0.2	-	0.2	0.8	48.8	-	50.0	-
B835	0.2	-	0.2	0.9	48.5	-	50.2	-
B900	0.2	-	0.2	0.9	48.2	-	50.5	-
B1450	-	34.0	-	0.3	-	-	65.7	-
B1640	-	32.5	-	0.3	-	-	67.2	-
B1750	-	31.0	-	0.2	-	-	68.8	-
B1800	-	29.5	-	0.4	-	-	70.1	-
B1900	-	29.5	-	0.3	-	-	70.2	-
B2000	-	30.0	-	0.2	-	-	69.8	-
B2300	-	31.0	-	0.1	-	-	68.9	-
B2450	-	31.4	-	0.1	-	-	68.5	-
B2600	-	31.8	-	0.1	-	-	68.1	-
B3500	-	28.8	-	0.1	-	-	71.1	-
B5G	-	-	-	-	-	10.7	78.6	10.7

3.3 SAR System Verification

The system check verifies that the system operates within its specifications. It is performed daily or before every SAR measurement. The system check uses normal SAR measurements in the flat section of the phantom with a matched dipole at a specified distance. The system verification setup is shown as below.



The validation dipole is placed beneath the flat phantom with the specific spacer in place. The distance spacer is touch the phantom surface with a light pressure at the reference marking and be oriented parallel to the long side of the phantom. The spectrum analyzer measures the forward power at the location of the system check dipole connector. The signal generator is adjusted for the desired forward power (250 mW is used for 700 MHz to 3 GHz, 100 mW is used for 3.5 GHz to 6 GHz) at the dipole connector and the power meter is read at that level. After connecting the cable to the dipole, the signal generator is readjusted for the same reading at power meter.

After system check testing, the SAR result will be normalized to 1W forward input power and compared with the reference SAR value derived from validation dipole certificate report. The deviation of system check should be within 10 %.

3.4 SAR Measurement Procedure

According to the SAR test standard, the recommended procedure for assessing the peak spatial-average SAR value consists of the following steps:

- Power reference measurement
- Area scan
- Zoom scan
- Power drift measurement

The SAR measurement procedures for each of test conditions are as follows:

- Make EUT to transmit maximum output power
- Measure conducted output power through RF cable
- Place the EUT in the specific position of phantom
- Perform SAR testing steps on the DASY system
- Record the SAR value

3.4.1 Area & Zoom Scan Procedure

First Area Scan is used to locate the approximate location(s) of the local peak SAR value(s). The measurement grid within an Area Scan is defined by the grid extent, grid step size and grid offset. Next, in order to determine the EM field distribution in a three-dimensional spatial extension, Zoom Scan is required. The Zoom Scan is performed around the highest E-field value to determine the averaged SAR-distribution over 10 g. According to KDB 865664 D01, the resolution for Area and Zoom scan is specified in the table below.

Items	<= 2 GHz	2-3 GHz	3-4 GHz	4-5 GHz	5-6 GHz
Area Scan ($\Delta x, \Delta y$)	<= 15 mm	<= 12 mm	<= 12 mm	<= 10 mm	<= 10 mm
Zoom Scan ($\Delta x, \Delta y$)	<= 8 mm	<= 5 mm	<= 5 mm	<= 4 mm	<= 4 mm
Zoom Scan (Δz)	<= 5 mm	<= 5 mm	<= 4 mm	<= 3 mm	<= 2 mm
Zoom Scan Volume	>= 30 mm	>= 30 mm	>= 28 mm	>= 25 mm	>= 22 mm

Note:

When zoom scan is required and report SAR is <= 1.4 W/kg, the zoom scan resolution of $\Delta x / \Delta y$ (2-3GHz: <= 8 mm, 3-4GHz: <= 7 mm, 4-6GHz: <= 5 mm) may be applied.

3.4.2 Volume Scan Procedure

The volume scan is used for assess overlapping SAR distributions for antennas transmitting in different frequency bands. It is equivalent to an oversized zoom scan used in standalone measurements. The measurement volume will be used to enclose all the simultaneous transmitting antennas. For antennas transmitting simultaneously in different frequency bands, the volume scan is measured separately in each frequency band. In order to sum correctly to compute the 1g aggregate SAR, the EUT remain in the same test position for all measurements and all volume scan use the same spatial resolution and grid spacing. When all volume scan were completed, the software, SEMCAD postprocessor can combine and subsequently superpose these measurement data to calculating the multiband SAR.

3.4.3 Power Drift Monitoring

All SAR testing is under the EUT install full charged battery and transmit maximum output power. In DASY measurement software, the power reference measurement and power drift measurement procedures are used for monitoring the power drift of EUT during SAR test. Both these procedures measure the field at a specified reference position before and after the SAR testing. The software will calculate the field difference in dB. If the power drift more than 5%, the SAR will be retested.

3.4.4 Spatial Peak SAR Evaluation

The procedure for spatial peak SAR evaluation has been implemented according to the test standard. It can be conducted for 1g and 10g, as well as for user-specific masses. The DASY software includes all numerical procedures necessary to evaluate the spatial peak SAR value.

The base for the evaluation is a "cube" measurement. The measured volume must include the 1g and 10g cubes with the highest averaged SAR values. For that purpose, the center of the measured volume is aligned to the interpolated peak SAR value of a previously performed area scan.

The entire evaluation of the spatial peak values is performed within the post-processing engine (SEMCAD). The system always gives the maximum values for the 1g and 10g cubes. The algorithm to find the cube with highest averaged SAR is divided into the following stages:

- (a) Extraction of the measured data (grid and values) from the Zoom Scan
- (b) Calculation of the SAR value at every measurement point based on all stored data (A/D values and measurement parameters)
- (c) Generation of a high-resolution mesh within the measured volume
- (d) Interpolation of all measured values from the measurement grid to the high-resolution grid
- (e) Extrapolation of the entire 3-D field distribution to the phantom surface over the distance from sensor to surface
- (f) Calculation of the averaged SAR within masses of 1g and 10g

3.4.5 SAR Averaged Methods

In DASY, the interpolation and extrapolation are both based on the modified Quadratic Shepard's method. The interpolation scheme combines a least-square fitted function method and a weighted average method which are the two basic types of computational interpolation and approximation.

Extrapolation routines are used to obtain SAR values between the lowest measurement points and the inner phantom surface. The extrapolation distance is determined by the surface detection distance and the probe sensor offset. The uncertainty increases with the extrapolation distance. To keep the uncertainty within 1% for the 1 g and 10 g cubes, the extrapolation distance should not be larger than 5 mm.

4. SAR Measurement Evaluation

4.1 EUT Configuration and Setting

<Connections between EUT and System Simulator>

For WWAN SAR testing, the EUT was linked and controlled by base station emulator. Communication between the EUT and the emulator was established by air link. The distance between the EUT and the communicating antenna of the emulator is larger than 50 cm and the output power radiated from the emulator antenna is at least 30 dB smaller than the output power of EUT. The EUT was set from the emulator to radiate maximum output power during SAR testing.

<Considerations Related to GSM / GPRS / EDGE for Setup and Testing>

The maximum multi-slot capability supported by this device is as below.

1. This EUT is class B device
2. This EUT supports GPRS multi-slot class 33 (max. uplink: 4, max. downlink: 5, total timeslots: 6)
3. This EUT supports EDGE multi-slot class 33 (max. uplink: 4, max. downlink: 5, total timeslots: 6)
4. This EUT supports DTM multi-slot class 11 (max. uplink: 3 for 1 CS & 2 PS, max. downlink: 4, total timeslots: 5)

For GSM850 frequency band, the power control level is set to 5 for GSM mode and GPRS (GMSK: CS1), and set to 8 for EDGE (GMSK: MCS1, 8PSK: MCS9). For GSM1900 frequency band, the power control level is set to 0 for GSM mode and GPRS (GMSK: CS1), and set to 2 for EDGE (GMSK: MCS1, 8PSK: MCS9).

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.

<Considerations Related to WCDMA for Setup and Testing>

WCDMA Handsets Head SAR

SAR for next to the ear head exposure is measured using a 12.2 kbps RMC with TPC bits configured to all "1's". The 3G SAR test reduction procedure is applied to AMR configurations with 12.2 kbps RMC as the primary mode.

WCDMA Handsets Body-worn SAR

SAR for body-worn configurations is measured using a 12.2 kbps RMC with TPC bits configured to all "1's". The 3G SAR test reduction procedure is applied to other spreading codes and multiple DPDCH_n configurations supported by the handset with 12.2 kbps RMC as the primary mode.

Handsets with Release 5 HSDPA

The 3G SAR test reduction procedure is applied to HSDPA body-worn configurations with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured for HSDPA using the HSDPA body SAR procedures in the "Release 5 HSDPA Data Devices", for the highest reported SAR body-worn exposure configuration in 12.2 kbps RMC. Handsets with both HSDPA and HSUPA are tested according to Release 6 HSPA test procedures.

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Handsets with Release 6 HSUPA

The 3G SAR test reduction procedure is applied to HSPA (HSUPA/HSDPA with RMC) body-worn configurations with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured for HSPA using the HSPA body SAR procedures in the "Release 6 HSPA Data Devices", for the highest reported body-worn exposure SAR configuration in 12.2 kbps RMC. When VOIP is applicable for next to the ear head exposure in HSPA, the 3G SAR test reduction procedure is applied to HSPA with 12.2 kbps RMC as the primary mode; otherwise, the same HSPA configuration used for body-worn measurements is tested for next to the ear head exposure.

Release 5 HSDPA Data Devices

The 3G SAR test reduction procedure is applied to body SAR with 12.2 kbps RMC as the primary mode. Otherwise, body SAR for HSDPA is measured using an FRC with H-Set 1 in Sub-test 1 and a 12.2 kbps RMC configured in Test Loop Mode 1, for the highest reported SAR configuration in 12.2 kbps RMC without HSDPA. HSDPA is configured according to the applicable UE category of a test device. The number of HS-DSCH / HS-PDSCHs, HARQ processes, minimum inter-TTI interval, transport block sizes and RV coding sequence are defined by the H-set. To maintain a consistent test configuration and stable transmission conditions, QPSK is used in the H-set for SAR testing. HS-DPCCH should be configured with a CQI feedback cycle of 4 ms and a CQI repetition factor of 2 to maintain a constant rate of active CQI slots. DPCCH and DPDCH gain factors (β_c , β_d), and HS-DPCCH power offset parameters (Δ_{ACK} , Δ_{NACK} , Δ_{CQI}) are set according to values indicated in below. The CQI value is determined by the UE category, transport block size, number of HS-PDSCHs and modulation used in the H-set.

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	$\beta_{HS}^{(1)(2)}$	CM ⁽³⁾ (dB)	MPR ⁽³⁾ (dB)
1	2/15	15/15	64	2/15	4/15	0.0	0.0
2	12/15 ⁽⁴⁾	15/15 ⁽⁴⁾	64	12/15 ⁽⁴⁾	24/15	1.0	0.0
3	15/15	8/15	64	15/8	30/15	1.5	0.5
4	15/15	4/15	64	15/4	30/15	1.5	0.5

Note 1: Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 30/15$ with $\beta_{HS} = 30/15 * \beta_c$.

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

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

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

Release 6 HSUPA Data Devices

The 3G SAR test reduction procedure is applied to body SAR with 12.2 kbps RMC as the primary mode. Otherwise, body SAR for HSPA is measured with E-DCH Sub-test 5, using H-Set 1 and QPSK for FRC and a 12.2 kbps RMC configured in Test Loop Mode 1 and power control algorithm 2, according to the highest reported body SAR configuration in 12.2 kbps RMC without HSPA. When VOIP applies to head exposure, the 3G SAR test reduction procedure is applied with 12.2 kbps RMC as the primary mode. Otherwise, the same HSPA configuration used for body SAR measurements are applied to head exposure testing. Due to inner loop power control requirements in HSPA, a communication test set is required for output power and SAR tests. The 12.2 kbps RMC, FRC H-set 1 and E-DCH configurations for HSPA are configured according to the β values indicated in below.

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Sub-test	β_c	β_d	β_d (SF)	β_c / β_d	$\beta_{HS}^{(1)}$	β_{ec}	$\beta_{ed}^{(4)(5)}$	β_{ed} (SF)	β_{ed} (Codes)	CM ⁽²⁾ (dB)	MPR ⁽²⁾⁽⁶⁾ (dB)	AG ⁽⁵⁾ Index	E-TFCI
1	11/15 ⁽³⁾	15/15 ⁽³⁾	64	11/15 ⁽³⁾	22/15	209/225	1309/225	4	1	1.0	0.0	20	75
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67
3	15/15	9/15	64	15/9	30/15	30/15	β_{ed1} : 47/15 β_{ed2} : 47/15	4 4	2	2.0	1.0	15	92
4	2/15	15/15	64	2/15	4/15	2/15	56/75	4	1	3.0	2.0	17	71
5	15/15	0	-	-	5/15	5/15	47/15	4	1	1.0	0.0	12	67

Note 1: For sub-test 1 to 4, Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 30/15$ with $\beta_{HS} = 30/15 * \beta_c$. For sub-test 5, Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 5/15$ with $\beta_{HS} = 5/15 * \beta_c$.
Note 2: CM = 1 for $\beta_c/\beta_d = 12/15$, $\beta_{HS}/\beta_c = 24/15$. For all other combinations of DPDCH, DPCCH, HS-DPCCH, E-DPDCH and E-DPCCH the MPR is based on the relative CM difference.
Note 3: For subtest 1 the β_c/β_d ratio of 11/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 10/15$ and $\beta_d = 15/15$.
Note 4: In case of testing by UE using E-DPDCH Physical Layer category 1, Sub-test 3 is omitted according to TS25.306 Table 5.1g.
Note 5: β_{ed} can not be set directly; it is set by Absolute Grant Value.
Note 6: For subtests 2, 3 and 4, UE may perform E-DPDCH power scaling at max power which could results in slightly smaller MPR values.

<Considerations Related to CDMA for Setup and Testing>

CDMA 1xRTT Handsets Head SAR

SAR for next to the ear head exposure is measured in RC3 with the handset configured to transmit at full rate in SO55. The 3G SAR test reduction procedure is applied to RC1 with RC3 as the primary mode. Otherwise, SAR is required for the channel with maximum measured output in RC1 using the head exposure configuration that results in the highest reported SAR in RC3.

CDMA 1xRTT Handsets Body-worn SAR

Body-worn SAR is measured in RC3 with the handset configured in TDSO/SO32 to transmit at full rate on FCH only with all other code channels disabled. The 3G SAR test reduction procedure is applied to the multiple code channel configuration (FCH + SCH_n), with FCH only as the primary mode. Otherwise, SAR is required for multiple code channel configuration (FCH + SCH_n), with FCH at full rate and SCH₀ enabled at 9600 bps, using the highest reported SAR configuration for FCH only. The 3G SAR test reduction procedure is applied to body-worn SAR in RC1 with RC3 as the primary mode. Otherwise, SAR is required for RC1, with SO55 and full rate, using the highest reported SAR configuration for body-worn exposure in RC3.

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<Considerations Related to LTE for Setup and Testing>

This device contains LTE transmitter which follows 3GPP standards, is category 3, supports both QPSK and QAM modulations, and supported LTE band and channel bandwidth is listed in below. The output power was tested per 3GPP TS 36.521-1 maximum transmit procedures for both QPSK and QAM modulation. The results please refer to section 4.6 of this report.

EUT Supported LTE Band and Channel Bandwidth						
LTE Band	BW 1.4 MHz	BW 3 MHz	BW 5 MHz	BW 10 MHz	BW 15 MHz	BW 20 MHz
2	V	V	V	V	V	V
4	V	V	V	V	V	V
5	V	V	V	V		
7			V	V	V	V
12	V	V	V	V		
13			V	V		
17			V	V		
25	V	V	V	V	V	V
26	V	V	V	V	V	
30			V	V		
41			V	V	V	V
66	V	V	V	V	V	V

The LTE maximum power reduction (MPR) in accordance with 3GPP TS 36.101 is active all times during LTE operation. The allowed MPR for the maximum output power is specified in below.

Modulation	Channel Bandwidth / RB Configurations						LTE MPR Setting (dB)
	BW 1.4 MHz	BW 3 MHz	BW 5 MHz	BW 10 MHz	BW 15 MHz	BW 20 MHz	
QPSK	> 5	> 4	> 8	> 12	> 16	> 18	1
16QAM	<= 5	<= 4	<= 8	<= 12	<= 16	<= 18	1
16QAM	> 5	> 4	> 8	> 12	> 16	> 18	2
64QAM	<= 5	<= 4	<= 8	<= 12	<= 16	<= 18	2
64QAM	> 5	> 4	> 8	> 12	> 16	> 18	3

Note: MPR is according to the standard and implemented in the circuit (mandatory).

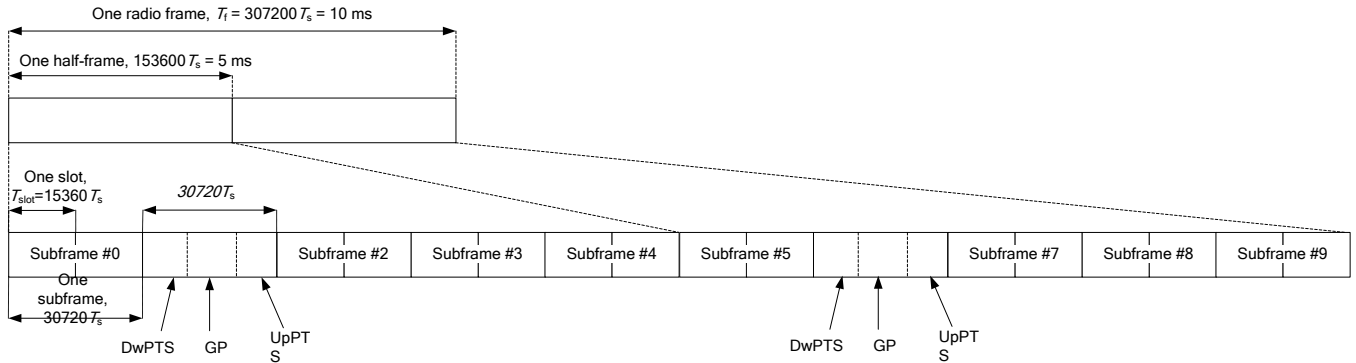
In addition, the device is compliant with additional maximum power reduction (A-MPR) requirements defined in 3GPP TS 36.101 section 6.2.4 that was disabled for all FCC compliance testing.

During LTE SAR testing, the related parameters of operating band, channel bandwidth, uplink channel number, modulation type, and RB was set in base station simulator. When the EUT has registered and communicated to base station simulator, the simulator set to make EUT transmitting the maximum radiated power.

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TDD-LTE Setup Configurations

According to KDB 941225 D05, SAR testing for TDD-LTE device 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 TDD-LTE configurations. The TDD-LTE of this device supports frame structure type 2 defined in 3GPP TS 36.211 section 4.2, and the frame structure configuration can be referred to below.



3GPP TS 36.211 Figure 4.2-1: Frame Structure Type 2

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 • Ts	2192 • Ts	2560 • Ts	7680 • Ts	2192 • Ts	2560 • Ts
1	19760 • Ts			20480 • Ts		
2	21952 • Ts			23040 • Ts		
3	24144 • Ts			25600 • Ts		
4	26336 • Ts			7680 • Ts		
5	6592 • Ts	4384 • Ts	5120 • Ts	20480 • Ts	4384 • Ts	5120 • Ts
6	19760 • Ts			23040 • Ts		
7	21952 • Ts			12800 • Ts		
8	24144 • Ts			-	-	-
9	13168 • Ts			-	-	-

3GPP TS 36.211 Table 4.2-1: Configuration of Special Subframe

Uplink-Downlink Configuration	Downlink-to-Uplink Switch-Point Periodicity	Subframe Number									
		0	1	2	3	4	5	6	7	8	9
0	5 ms	D	S	U	U	U	D	S	U	U	U
1	5 ms	D	S	U	U	D	D	S	U	U	D
2	5 ms	D	S	U	D	D	D	S	U	D	D
3	10 ms	D	S	U	U	U	D	D	D	D	D
4	10 ms	D	S	U	U	D	D	D	D	D	D
5	10 ms	D	S	U	D	D	D	D	D	D	D
6	5 ms	D	S	U	U	U	D	S	U	U	D

3GPP TS 36.211 Table 4.2-2: Uplink-Downlink Configurations

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The variety of different TD-LTE uplink-downlink configurations allows a network operator to allocate the network's capacity between uplink and downlink traffic to meet the needs of the network. The uplink duty cycle of these seven configurations can readily be computed and shown in below.

UL-DL Configuration	0	1	2	3	4	5	6
Highest Duty-Cycle	63.33%	43.33%	23.33%	31.67%	21.67%	11.67%	53.33%

Considering the highest transmission duty cycle, TDD-LTE was tested using Uplink-Downlink Configuration 0 with 6 uplink subframe and 2 special subframe. The special subframe was set to special subframe configuration 7 using extended cyclic prefix uplink. Therefore, SAR testing for TDD-LTE was performed at the maximum output power with highest transmission duty cycle of 63.33%.

LTE Downlink Carrier Aggregation (CA) Setup Configurations

LTE Carrier Aggregation (CA) was defined in 3GPP release 10 and higher. The LTE device in CA mode has one Primary Component Carrier (PCC) and one or more Secondary Component Carriers (SCC). PCC acts as the anchor carrier and can optionally cross-schedule data transmission on SCC. The RRC connection is only handled by one cell, the PCC for downlink and uplink communications. After making a data connection to the PCC, the LTE device adds the SCC on the downlink only. All uplink communications and acknowledgements remain identical to release 8 specifications on the PCC. The combinations of downlink carrier aggregation supported by this device are listed in below.

LTE CA Configurations and Bandwidth Combination Sets defined for Intra-Band Contiguous CA

Downlink CA Configuration	Component carriers in order of increasing carrier frequency			Maximum Aggregated Bandwidth (MHz)	Bandwidth Combination Set
	Channel bandwidths for carrier-1 (MHz)	Channel bandwidths for carrier-2 (MHz)	Channel bandwidths for carrier-3 (MHz)		
CA_5B	5, 10	10		20	0
	10	5			
	3	5		8	1
	5	3			

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CA_7C	15	15		40	0
	20	20			
	10	20			
	15	15, 20		40	1
	20	10, 15, 20			
	15	10, 15			
CA_41C	20	15, 20		40	2
	10	20			
	15	15, 20			
	20	10, 15, 20		40	0
	5, 10	20			
	15	15, 20			
	20	5, 10, 15, 20		40	1
	10	15, 20			
	15	10, 15, 20			
	20	10, 15, 20		40	2
CA_41D	10	20			
	10	15, 20			
	15	20			
	15	10, 15, 20		60	0
	20	15, 20			
	20	10, 15, 20			
CA_66B	5	5, 10, 15		20	0
	10	5, 10			
	15	5			
CA_66C	5	20		40	0
	10	15, 20			
	15	10, 15, 20			
	20	5, 10, 15, 20			

LTE CA Configurations and Bandwidth Combination Sets defined for Intra-Band Non-Contiguous CA

Downlink CA Configuration	Component Carriers in order of Increasing Carrier Frequency			Maximum Aggregated Bandwidth (MHz)	Bandwidth Combination Set
	Channel Bandwidths for Carrier-1 (MHz)	Channel Bandwidths for Carrier-2 (MHz)	Channel Bandwidths for Carrier-3 (MHz)		
CA_2A-2A	5, 10, 15, 20	5, 10, 15, 20		40	0
CA_4A-4A	5, 10, 15, 20	5, 10, 15, 20		40	0
	5, 10	5, 10		20	1
CA_7A-7A	5	15		40	0
	10	10, 15			
	15	15, 20			
	20	20		40	1
	5, 10, 15, 20	5, 10, 15, 20			
	5, 10, 15, 20	5, 10			
CA_25A-25A	10, 15, 20	10, 15, 20		30	2
	5, 10	5, 10		40	3
	5, 10, 15, 20	5, 10, 15, 20		20	0
CA_41A-41A	5, 10	5, 10		40	1
	10, 15, 20	10, 15, 20		40	0
CA_41A-41C	5, 10, 15, 20	Refer to CA_41C (BCS1)		60	0
	Refer to CA_41C (BCS1)		5, 10, 15, 20		
CA_66A-66A	5, 10, 15, 20	5, 10, 15, 20		40	0
CA_66A-66B	5, 10, 15, 20	Refer to CA_66B (BCS0)		40	0
	Refer to CA_66B (BCS0)		5, 10, 15, 20		
CA_66A-66C	5, 10, 15, 20	Refer to CA_66C (BCS0)		60	0
	Refer to CA_66C (BCS0)		5, 10, 15, 20		

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LTE CA Configurations and Bandwidth Combination Sets defined for Inter-Band CA (Two Bands)

Downlink CA Configuration	LTE Bands	Channel Bandwidths for Carrier (MHz)	Maximum Aggregated Bandwidth (MHz)	Bandwidth Combination Set
CA_2A-4A	2	1.4, 3, 5, 10, 15, 20	40	0
	4	5, 10, 15, 20		
	2	5, 10	20	1
	4	5, 10		
	2	5, 10, 15, 20	40	2
	4	5, 10, 15, 20		
CA_2A-2A-4A	2	Refer to CA_2A-2A (BCS0)	60	0
	4	5, 10, 15, 20		
CA_2A-4A-4A	2	5, 10, 15, 20	60	0
	4	Refer to CA_4A-4A (BCS0)		
CA_2A-5A	2	5, 10, 15, 20	30	0
	5	5, 10		
	2	5, 10	20	1
	5	5, 10		
CA_2A-2A-5A	2	Refer to CA_2A-2A (BCS0)	50	0
	5	5, 10		
CA_2A-7A	2	5, 10, 15, 20	40	0
	7	5, 10, 15, 20		
CA_2A-12A	2	5, 10, 15, 20	30	0
	12	5, 10		
	2	5, 10, 15, 20	30	1
	12	3, 5, 10		
	2	5, 10	20	2
	12	5, 10		
CA_2A-2A-12A	2	Refer to CA_2A-2A (BCS0)	50	0
	12	5, 10		
CA_2A-13A	2	5, 10, 15, 20	30	0
	13	10		
	2	5, 10	20	1
	13	10		
CA_2A-2A-13A	2	Refer to CA_2A-2A (BCS0)	50	0
	13	10		
CA_2A-17A	2	5, 10	20	0
	17	5, 10		
CA_2A-29A	2	5, 10	20	0
	29	3, 5, 10		
	2	5, 10	20	1
	29	5, 10		
	2	5, 10, 15, 20	30	2
	29	5, 10		
CA_2A-30A	2	5, 10, 15, 20	30	0
	30	5, 10		
CA_2A-66A	2	1.4, 3, 5, 10, 15, 20	40	0
	66	5, 10, 15, 20		
	2	5, 10	20	1
	66	5, 10		
	2	5, 10, 15, 20	40	2
	66	5, 10, 15, 20		
CA_2A-66C	2	5, 10, 15, 20	60	0
	66	Refer to CA_66C (BCS0)		
CA_2A-66A-66A	2	5, 10, 15, 20	60	0
	66	Refer to CA_66A-66A (BCS0)		

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CA_4A-5A	4	5, 10	20	0
	5	5, 10		
	4	5, 10, 15, 20	30	1
	5	5, 10		
CA_4A-4A-5A	4	Refer to CA_4A-4A (BCS0)	50	0
	5	5, 10		
CA_4A-7A	4	5, 10	30	0
	7	5, 10, 15, 20		
	4	5, 10, 15, 20	40	1
	7	5, 10, 15, 20		
CA_4A-12A	4	1.4, 3, 5, 10	20	0
	12	5, 10		
	4	1.4, 3, 5, 10, 15, 20	30	1
	12	5, 10		
	4	5, 10, 15, 20	30	2
	12	3, 5, 10		
	4	5, 10	20	3
	12	5, 10		
	4	5, 10, 15, 20	30	4
	12	5, 10		
	4	5, 10, 15	20	5
	12	5		
CA_4A-4A-12A	4	Refer to CA_4A-4A (BCS0)	50	0
	12	5, 10		
CA_4A-13A	4	5, 10, 15, 20	30	0
	13	10		
	4	5, 10	20	1
	13	10		
CA_4A-4A-13A	4	Refer to CA_4A-4A (BCS0)	50	0
	13	10		
CA_4A-17A	4	5, 10	20	0
	17	5, 10		
CA_4A-29A	4	5, 10	20	0
	29	3, 5, 10		
	4	5, 10	20	1
	29	5, 10		
	4	5, 10, 15, 20	30	2
	29	5, 10		
CA_4A-30A	4	5, 10, 15, 20	30	0
	30	5, 10		
CA_5A-7A	5	1.4, 3, 5, 10	30	0
	7	10, 15, 20		
	5	5, 10	30	1
	7	10, 15, 20		
CA_5A-30A	5	5, 10	20	0
	30	5, 10		
CA_5A-66A	5	5, 10	30	0
	66	5, 10, 15, 20		
CA_5A-66A-66A	5	5, 10	50	0
	66	Refer to CA_66A-66A (BCS0)		
CA_5A-66C	5	5, 10	50	0
	66	Refer to CA_66C (BCS0)		
CA_7A-12A	7	5, 10, 15, 20	30	0
	12	5, 10		
CA_12A-30A	12	5, 10	20	0
	30	5, 10		

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CA_12A-66A	12	5, 10	20	0
	66	1.4, 3, 5, 10		
	12	5, 10	30	1
	66	1.4, 3, 5, 10, 15, 20		
	12	3, 5, 10	30	2
	66	5, 10, 15, 20		
	12	5, 10	20	3
	66	5, 10		
	12	5, 10	30	4
	66	5, 10, 15, 20		
	12	5	20	5
	66	5, 10, 15		
CA_12A-66A-66A	12	5, 10	50	0
	66	Refer to CA_66A-66A (BCS0)		
CA_12A-66C	12	5, 10	50	0
	66	Refer to CA_66C (BCS0)		
CA_13A-66A	13	5, 10	30	0
	66	5, 10, 15, 20		
CA_13A-66A-66A	13	5, 10	50	0
	66	Refer to CA_66A-66A (BCS0)		
CA_13A-66C	13	5, 10	50	0
	66	Refer to CA_66C (BCS0)		
CA_29A-30A	29	5, 10	20	0
	30	5, 10		
CA_29A-66A	29	5, 10	30	0
	66	5, 10, 15, 20		
CA_30A-66A	30	5, 10	30	0
	66	5, 10, 15, 20		

LTE CA Configurations and Bandwidth Combination Sets defined for Inter-Band CA (Three Bands)

Downlink CA Configuration	LTE Bands	Channel Bandwidths for Carrier (MHz)	Maximum Aggregated Bandwidth (MHz)	Bandwidth Combination Set
CA_2A-4A-5A	2	5, 10, 15, 20	50	0
	4	5, 10, 15, 20		
	5	5, 10		
CA_2A-4A-7A	2	5, 10, 15, 20	60	0
	4	5, 10, 15, 20		
	7	5, 10, 15, 20		
CA_2A-4A-12A	2	5, 10, 15, 20	50	0
	4	5, 10, 15, 20		
	12	5, 10		
CA_2A-4A-13A	2	5, 10, 15, 20	50	0
	4	5, 10, 15, 20		
	13	10		
CA_2A-4A-29A	2	5, 10, 15, 20	50	0
	4	5, 10, 15, 20		
	29	5, 10		
CA_2A-4A-30A	2	5, 10, 15, 20	50	0
	4	5, 10, 15, 20		
	30	5, 10		
CA_2A-5A-30A	2	5, 10, 15, 20	40	0
	5	5, 10		
	30	5, 10		
CA_2A-5A-66A	2	5, 10, 15, 20	50	0
	5	5, 10		
	66	5, 10, 15, 20		

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CA_2A-12A-30A	2	5, 10, 15, 20	40	0
	12	5, 10		
	30	5, 10		
CA_2A-12A-66A	2	5, 10, 15, 20	50	0
	12	5, 10		
	66	5, 10, 15, 20		
	2	5, 10	40	1
	12	5, 10		
CA_2A-13A-66A	2	5, 10, 15, 20	50	0
	13	5, 10		
	66	5, 10, 15, 20		
CA_2A-29A-30A	2	5, 10, 15, 20	40	0
	29	5, 10		
	30	5, 10		
CA_4A-5A-30A	4	5, 10, 15, 20	40	0
	5	5, 10		
	30	5, 10		
CA_4A-7A-12A	4	5, 10	40	0
	7	5, 10, 15, 20		
	12	5, 10		
	4	5, 10, 15, 20	50	1
	7	5, 10, 15, 20		
	12	5, 10		
CA_4A-12A-30A	4	5, 10, 15, 20	40	0
	12	5, 10		
	30	5, 10		
CA_4A-29A-30A	4	5, 10, 15, 20	40	0
	29	5, 10		
	30	5, 10		

<Considerations Related to WLAN for Setup and Testing>

In general, various vendor specific external test software and chipset based internal test modes are typically used for SAR measurement. These chipset based test mode utilities are generally hardware and manufacturer dependent, and often include substantial flexibility to reconfigure or reprogram a device. A Wi-Fi device must be configured to transmit continuously at the required data rate, channel bandwidth and signal modulation, using the highest transmission duty factor supported by the test mode tools for SAR measurement. The test frequencies established using test mode must correspond to the actual channel frequencies. When 802.11 frame gaps are accounted for in the transmission, a maximum transmission duty factor of 92 - 96% is typically achievable in most test mode configurations. A minimum transmission duty factor of 85% is required to avoid certain hardware and device implementation issues related to wide range SAR scaling. In addition, a periodic transmission duty factor is required for current generation SAR systems to measure SAR correctly. The reported SAR must be scaled to 100% transmission duty factor to determine compliance at the maximum tune-up tolerance limit.

According to KDB 248227 D01, this device has installed WLAN engineering testing software which can provide continuous transmitting RF signal. During WLAN SAR testing, this device was operated to transmit continuously at the maximum transmission duty with specified transmission mode, operating frequency, lowest data rate, and maximum output power.

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Initial Test Configuration

An initial test configuration is determined for OFDM transmission modes in 2.4 GHz and 5 GHz bands according to the channel bandwidth, modulation and data rate combination(s) with the highest maximum output power specified for production units in each standalone and aggregated frequency band. 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.

Subsequent Test Configuration

SAR measurement requirements for the remaining 802.11 transmission mode configurations that have not been tested in the initial test configuration are determined separately for each standalone and aggregated frequency band, in each exposure condition, according to the maximum output power specified for production units. Additional power measurements may be required to determine if SAR measurements are required for subsequent highest output power channels in a subsequent test configuration. When the highest reported SAR for the initial test configuration according to the initial test position or fixed exposure position requirements, is adjusted by the ratio of the subsequent test configuration to initial test configuration specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg, SAR is not required for that subsequent test configuration.

SAR Test Configuration and Channel Selection

When multiple channel bandwidth configurations in a frequency band have the same specified maximum output power, the initial test configuration is using largest channel bandwidth, lowest order modulation, lowest data rate, and lowest order 802.11 mode (i.e., 802.11a is chosen over 802.11n then 802.11ac or 802.11g is chosen over 802.11n). After an initial test configuration is determined, if multiple test channels have the same measured maximum output power, the channel chosen for SAR measurement is determined according to the following.

- 1) The channel closest to mid-band frequency is selected for SAR measurement.
- 2) For channels with equal separation from mid-band frequency; for example, high and low channels or two mid-band channels, the higher frequency (number) channel is selected for SAR measurement.

Test Reduction for U-NII-1 (5.2 GHz) and U-NII-2A (5.3 GHz) Bands

For devices that operate in both U-NII bands using the same transmitter and antenna(s), SAR test reduction is determined according to the following.

- 1) When the same maximum output power is specified for both bands, begin SAR measurement in U-NII-2A band by applying the OFDM SAR requirements. If the highest reported SAR for a test configuration is ≤ 1.2 W/kg, SAR is not required for U-NII-1 band for that configuration (802.11 mode and exposure condition).
- 2) When different maximum output power is specified for the bands, begin SAR measurement in the band with higher specified maximum output power. The highest reported SAR for the tested configuration is adjusted by the ratio of lower to higher specified maximum output power for the two bands. When the adjusted SAR is ≤ 1.2 W/kg, SAR is not required for the band with lower maximum output power in that test configuration.

<Considerations Related to Bluetooth for Setup and Testing>

This device has installed Bluetooth engineering testing software which can provide continuous transmitting RF signal. During Bluetooth SAR testing, this device was operated to transmit continuously at the maximum transmission duty with specified transmission mode, operating frequency, lowest data rate, and maximum output power.

4.2 EUT Testing Position

According to KDB 648474 D04, handsets are tested for SAR compliance in head, body-worn accessory and other use configurations described in the following subsections.

4.2.1 Head Exposure Conditions

Head exposure is limited to next to the ear voice mode operations. Head SAR compliance is tested according to the test positions defined in IEEE Std 1528-2003 using the SAM phantom illustrated as below.

1. Define two imaginary lines on the handset
 - (a) The vertical centerline passes through two points on the front side of the handset - the midpoint of the width w_t of the handset at the level of the acoustic output, and the midpoint of the width w_b of the bottom of the handset.
 - (b) The horizontal line is perpendicular to the vertical centerline and passes through the center of the acoustic output. The horizontal line is also tangential to the face of the handset at point A.
 - (c) The two lines intersect at point A. Note that for many handsets, point A coincides with the center of the acoustic output; however, the acoustic output may be located elsewhere on the horizontal line. Also note that the vertical centerline is not necessarily parallel to the front face of the handset, especially for clamshell handsets, handsets with flip covers, and other irregularly shaped handsets.

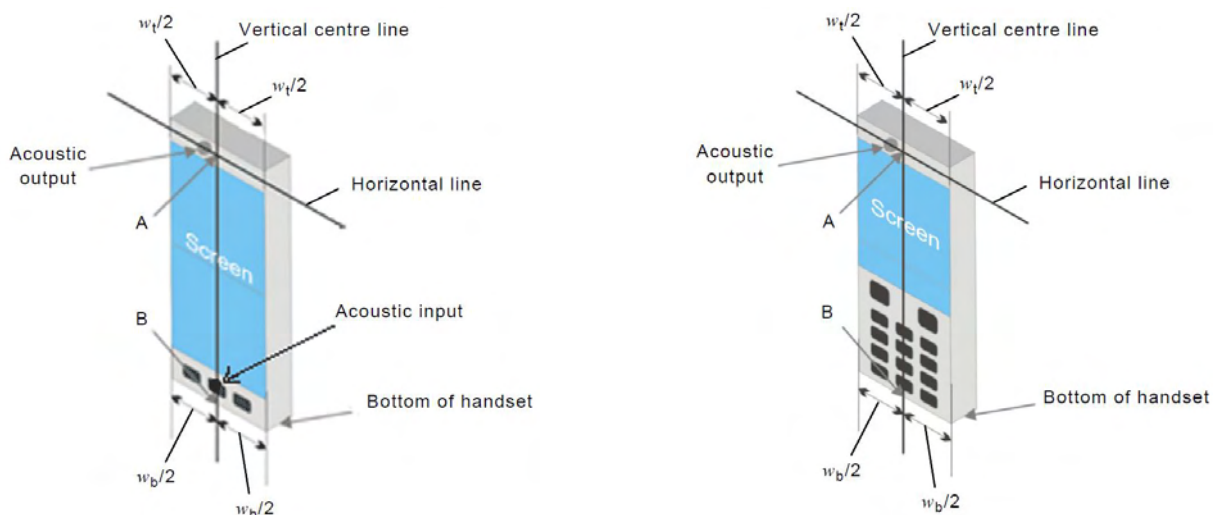


Fig-4.1 Illustration for Handset Vertical and Horizontal Reference Lines

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2. Cheek Position

- (a) To position the device with the vertical center line of the body of the device and the horizontal line crossing the center piece in a plane parallel to the sagittal plane of the phantom. While maintaining the device in this plane, align the vertical center line with the reference plane containing the three ear and mouth reference point (M: Mouth, RE: Right Ear, and LE: Left Ear) and align the center of the ear piece with the line RE-LE.
- (b) To move the device towards the phantom with the ear piece aligned with the line LE-RE until the phone touched the ear. While maintaining the device in the reference plane and maintaining the phone contact with the ear, move the bottom of the phone until any point on the front side is in contact with the cheek of the phantom or until contact with the ear is lost (see Fig-4.2).

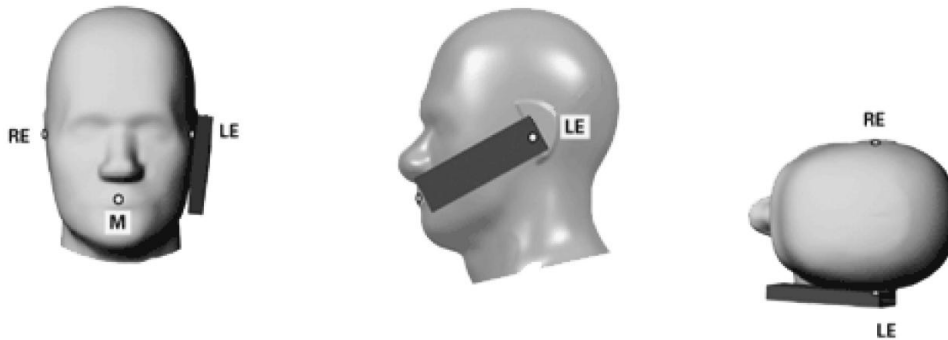


Fig-4.2 Illustration for Cheek Position

3. Tilted Position

- (a) To position the device in the "cheek" position described above.
- (b) While maintaining the device the reference plane described above and pivoting against the ear, moves it outward away from the mouth by an angle of 15 degrees or until contact with the ear is lost (see Fig-4.3).

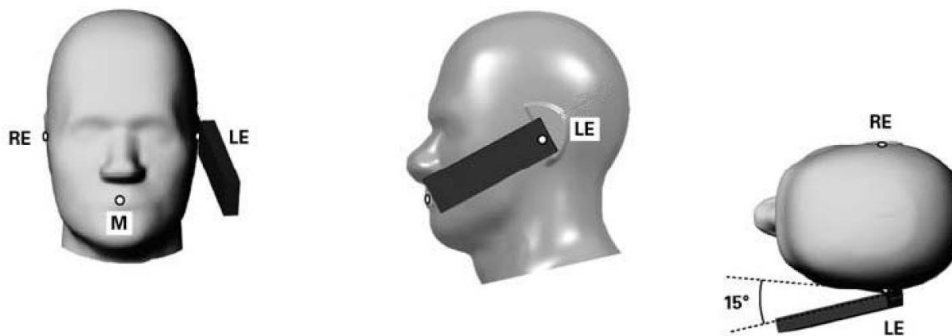


Fig-4.3 Illustration for Tilted Position

4.2.2 Body-worn Accessory Exposure Conditions

Body-worn accessory exposure is typically related to voice mode operations when handsets are carried in body-worn accessories. The body-worn accessory procedures in KDB 447498 D01 are used to test for body-worn accessory SAR compliance, without a headset connected to it. This enables the test results for such configuration to be compatible with that required for hotspot mode when the body-worn accessory test separation distance is greater than or equal to that required for hotspot mode. When the reported SAR for a body-worn accessory, measured without a headset connected to the handset, is $> 1.2 \text{ W/kg}$, the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body-worn accessory with a headset attached to the handset.

Body-worn accessories that do not contain metallic or conductive components may be tested according to worst-case exposure configurations, typically according to the smallest test separation distance required for the group of body-worn accessories with similar operating and exposure characteristics. All body-worn accessories containing metallic components are tested in conjunction with the host device.

Body-worn accessory SAR compliance is based on a single minimum test separation distance for all wireless and operating modes applicable to each body-worn accessory used by the host, and according to the relevant voice and/or data mode transmissions and operations. If a body-worn accessory supports voice only operations in its normal and expected use conditions, testing of data mode for body-worn compliance is not required.

A conservative minimum test separation distance for supporting off-the-shelf body-worn accessories that may be acquired by users of consumer handsets is used to test for body-worn accessory SAR compliance. This distance is determined by the handset manufacturer, according to the requirements of Supplement C 01-01. Devices that are designed to operate on the body of users using lanyards and straps, or without requiring additional body-worn accessories, will be tested using a conservative minimum test separation distance $\leq 5 \text{ mm}$ to support compliance.

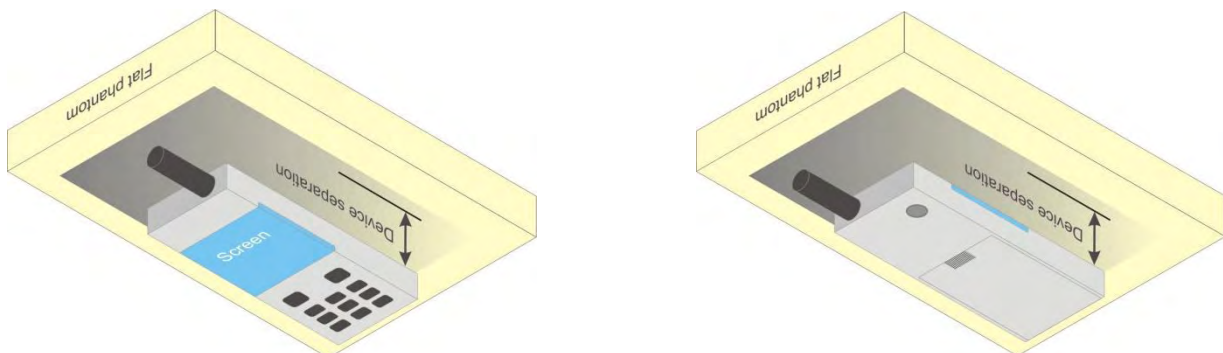
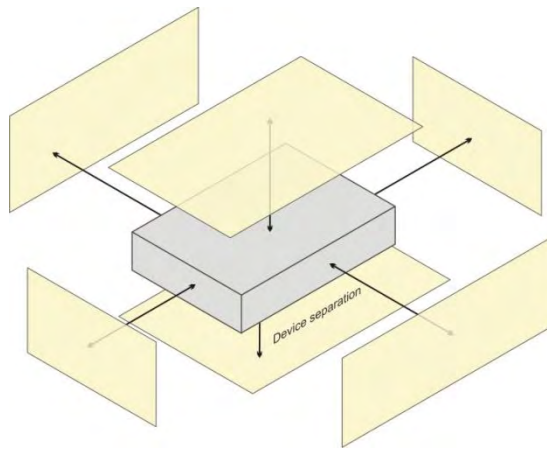


Fig-4.4 Illustration for Body Worn Position

4.2.3 Hotspot Mode Exposure Conditions

For handsets that support hotspot mode operations, with wireless router capabilities and various web browsing functions, the relevant hand and body exposure conditions are tested according to the hotspot SAR procedures in KDB 941225 D06. A test separation distance of 10 mm is required between the phantom and all surfaces and edges with a transmitting antenna located within 25 mm from that surface or edge. When the form factor of a handset is smaller than 9 cm x 5 cm, a test separation distance of 5 mm (instead of 10 mm) is required for testing hotspot mode. When the separation distance required for body-worn accessory testing is larger than or equal to that tested for hotspot mode, in the same wireless mode and for the same surface of the phone, the hotspot mode SAR data may be used to support body-worn accessory SAR compliance for that particular configuration (surface).



Based on the antenna location shown on appendix D of this report, the SAR testing required for hotspot mode is listed as below.

Antenna	Front Face	Rear Face	Left Side	Right Side	Top Side	Bottom Side
WWAN 0	V	V	V	V		V
WWAN 1	V	V	V	V	V	
WWAN 2	V	V		V		V
WWAN 3	V	V	V		V	
BT / WLAN 0	V	V		V	V	
WLAN 1	V	V		V	V	

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4.3 Tissue Verification

The measuring results for tissue simulating liquid are shown as below.

Test Date	Tissue Type	Frequency (MHz)	Liquid Temp. (°C)	Measured Conductivity (σ)	Measured Permittivity (ϵ_r)	Target Conductivity (σ)	Target Permittivity (ϵ_r)	Conductivity Deviation (%)	Permittivity Deviation (%)
Jun. 01, 2017	Head	750	23.5	0.888	41.934	0.89	41.9	-0.22	0.08
Jun. 27, 2017	Head	750	23.2	0.893	42.483	0.89	41.9	0.34	1.39
Jun. 27, 2017	Head	750	23.9	0.885	42.448	0.89	41.9	-0.56	1.31
Jun. 29, 2017	Head	750	23.2	0.900	42.180	0.89	41.9	1.12	0.67
May. 31, 2017	Head	835	23.2	0.918	40.872	0.90	41.5	2.00	-1.51
Jun. 01, 2017	Head	835	23.6	0.909	42.379	0.90	41.5	1.00	2.12
Jun. 01, 2017	Head	835	23.5	0.936	42.937	0.90	41.5	4.00	3.46
Jun. 15, 2017	Head	835	23.4	0.917	40.866	0.90	41.5	1.89	-1.53
Jun. 15, 2017	Head	835	23.3	0.917	40.866	0.90	41.5	1.89	-1.53
Jun. 22, 2017	Head	835	23.4	0.910	40.675	0.90	41.5	1.11	-1.99
Jun. 29, 2017	Head	835	23.2	0.920	42.330	0.90	41.5	2.22	2.00
Jun. 30, 2017	Head	835	23.5	0.924	42.166	0.90	41.5	3.13	1.51
Jun. 01, 2017	Head	1750	23.3	1.321	39.759	1.37	40.1	-3.58	-0.85
Jun. 01, 2017	Head	1750	23.3	1.322	40.412	1.37	40.1	-3.50	0.78
Jun. 09, 2017	Head	1750	23.4	1.322	39.664	1.37	40.1	-3.50	-1.09
Jun. 22, 2017	Head	1750	23.4	1.324	38.935	1.37	40.1	-3.36	-2.91
Jun. 27, 2017	Head	1750	23.2	1.326	40.149	1.37	40.1	-3.21	0.12
May. 31, 2017	Head	1900	23.2	1.457	39.193	1.40	40.0	4.07	-2.02
Jun. 01, 2017	Head	1900	23.3	1.457	39.852	1.40	40.0	4.07	-0.37
Jun. 09, 2017	Head	1900	23.4	1.456	39.099	1.40	40.0	4.00	-2.25
Jun. 15, 2017	Head	1900	23.3	1.456	38.805	1.40	40.0	4.00	-2.99
Jun. 22, 2017	Head	1900	23.4	1.453	38.374	1.40	40.0	3.79	-4.06
Jun. 27, 2017	Head	1900	23.2	1.454	39.605	1.40	40.0	3.86	-0.99
May. 30, 2017	Head	2300	23.2	1.726	39.033	1.67	39.5	3.35	-1.18
Jun. 01, 2017	Head	2300	23.5	1.708	40.355	1.67	39.5	2.28	2.16
Jun. 27, 2017	Head	2300	23.2	1.728	38.853	1.67	39.5	3.47	-1.64
Jun. 05, 2017	Head	2450	23.5	1.875	37.898	1.80	39.2	4.17	-3.32
Jun. 06, 2017	Head	2450	23.5	1.869	38.935	1.80	39.2	3.83	-0.68
Jun. 09, 2017	Head	2450	23.4	1.869	38.983	1.80	39.2	3.83	-0.55
Jun. 12, 2017	Head	2450	23.6	1.864	39.070	1.80	39.2	3.56	-0.33
Jun. 13, 2017	Head	2450	23.3	1.869	37.935	1.80	39.2	3.83	-3.23
Jun. 22, 2017	Head	2450	23.3	1.864	37.884	1.80	39.2	3.56	-3.36
Jun. 27, 2017	Head	2450	23.9	1.870	38.896	1.80	39.2	3.89	-0.78
May. 30, 2017	Head	2600	23.2	2.044	37.989	1.96	39.0	4.29	-2.59
Jun. 01, 2017	Head	2600	23.5	2.034	39.404	1.96	39.0	3.78	1.04
Jun. 09, 2017	Head	2600	23.4	2.029	38.503	1.96	39.0	3.52	-1.27
Jun. 09, 2017	Head	2600	23.4	2.029	38.503	1.96	39.0	3.52	-1.27
Jun. 10, 2017	Head	2600	23.3	2.044	37.989	1.96	39.0	4.29	-2.59
Jun. 22, 2017	Head	2600	23.3	2.013	37.293	1.96	39.0	2.70	-4.38
Jun. 27, 2017	Head	2600	23.2	2.043	37.822	1.96	39.0	4.23	-3.02

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Test Date	Tissue Type	Frequency (MHz)	Liquid Temp. (°C)	Measured Conductivity (σ)	Measured Permittivity (ϵ_r)	Target Conductivity (σ)	Target Permittivity (ϵ_r)	Conductivity Deviation (%)	Permittivity Deviation (%)
Jun. 05, 2017	Head	5250	23.7	4.575	35.034	4.71	35.9	-2.87	-2.41
Jun. 06, 2017	Head	5250	23.5	4.833	35.815	4.71	35.9	2.61	-0.24
Jun. 09, 2017	Head	5250	23.1	4.575	35.034	4.71	35.9	-2.87	-2.41
Jun. 12, 2017	Head	5250	23.9	4.551	35.867	4.71	35.9	-3.38	-0.09
Jun. 13, 2017	Head	5250	23.5	4.660	35.570	4.71	35.9	-1.06	-0.92
Jun. 14, 2017	Head	5250	23.7	4.620	35.679	4.71	35.9	-1.91	-0.62
Jun. 14, 2017	Head	5250	23.5	4.799	35.398	4.71	35.9	1.89	-1.40
Jun. 16, 2017	Head	5250	23.4	4.805	36.763	4.71	35.9	2.02	2.40
Jun. 15, 2017	Head	5250	23.3	4.580	36.321	4.71	35.9	-2.76	1.17
Jun. 29, 2017	Head	5250	23.7	4.633	34.707	4.71	35.9	-1.63	-3.32
Jun. 05, 2017	Head	5600	23.7	4.897	34.600	5.07	35.5	-3.41	-2.54
Jun. 06, 2017	Head	5600	23.5	5.217	35.199	5.07	35.5	2.90	-0.85
Jun. 09, 2017	Head	5600	23.1	4.897	34.600	5.07	35.5	-3.41	-2.54
Jun. 12, 2017	Head	5600	23.9	4.864	35.405	5.07	35.5	-4.06	-0.27
Jun. 13, 2017	Head	5600	23.5	5.030	35.094	5.07	35.5	-0.79	-1.14
Jun. 14, 2017	Head	5600	23.7	4.985	35.157	5.07	35.5	-1.68	-0.97
Jun. 14, 2017	Head	5600	23.5	5.175	34.802	5.07	35.5	2.07	-1.97
Jun. 16, 2017	Head	5600	23.4	5.182	36.105	5.07	35.5	2.21	1.70
Jun. 15, 2017	Head	5600	23.3	4.966	35.967	5.07	35.5	-2.05	1.32
Jun. 29, 2017	Head	5600	23.7	4.967	34.184	5.07	35.5	-2.03	-3.71
Jun. 05, 2017	Head	5800	23.7	5.091	34.355	5.27	35.3	-3.40	-2.68
Jun. 07, 2017	Head	5800	23.3	5.113	35.891	5.27	35.3	-2.98	1.62
Jun. 06, 2017	Head	5800	23.5	5.452	34.841	5.27	35.3	3.45	-1.30
Jun. 09, 2017	Head	5800	23.1	5.091	34.355	5.27	35.3	-3.40	-2.68
Jun. 12, 2017	Head	5800	23.9	5.232	35.510	5.27	35.3	-0.72	0.59
Jun. 13, 2017	Head	5800	23.5	5.244	34.713	5.27	35.3	-0.49	-1.66
Jun. 14, 2017	Head	5800	23.7	5.193	34.837	5.27	35.3	-1.46	-1.31
Jun. 14, 2017	Head	5800	23.5	5.408	34.453	5.27	35.3	2.62	-2.40
Jun. 16, 2017	Head	5800	23.4	5.415	35.658	5.27	35.3	2.75	1.01
Jun. 15, 2017	Head	5800	23.3	5.374	36.384	5.27	35.3	1.97	3.07
Jun. 29, 2017	Head	5800	23.7	5.179	33.888	5.27	35.3	-1.73	-4.00

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Test Date	Tissue Type	Frequency (MHz)	Liquid Temp. (°C)	Measured Conductivity (σ)	Measured Permittivity (ϵ_r)	Target Conductivity (σ)	Target Permittivity (ϵ_r)	Conductivity Deviation (%)	Permittivity Deviation (%)
May. 31, 2017	Body	750	23.2	0.918	55.862	0.96	55.5	-4.37	0.65
May. 31, 2017	Body	750	23.5	0.959	54.477	0.96	55.5	-0.10	-1.84
Jun. 02, 2017	Body	750	23.1	0.962	54.170	0.96	55.5	0.21	-2.40
Jun. 14, 2017	Body	750	23.5	0.969	56.104	0.96	55.5	0.94	1.09
Jun. 16, 2017	Body	750	23.4	0.918	56.223	0.96	55.5	-4.37	1.30
Jun. 30, 2017	Body	750	23.5	0.885	42.410	0.89	41.9	-0.56	1.22
May. 31, 2017	Body	835	23.2	0.997	55.115	0.97	55.2	2.78	-0.15
Jun. 01, 2017	Body	835	23.1	1.002	54.222	0.97	55.2	3.30	-1.77
Jun. 23, 2017	Body	835	23.2	1.005	57.810	0.97	55.2	3.61	4.73
May. 30, 2017	Body	1750	23.2	1.443	53.336	1.49	53.4	-3.15	-0.12
May. 31, 2017	Body	1750	23.2	1.430	51.432	1.49	53.4	-4.03	-3.69
Jun. 07, 2017	Body	1750	23.5	1.444	51.771	1.49	53.4	-3.09	-3.05
Jun. 12, 2017	Body	1750	23.3	1.453	51.268	1.49	53.4	-2.48	-3.99
Jun. 13, 2017	Body	1750	23.6	1.438	51.394	1.49	53.4	-3.49	-3.76
Jun. 23, 2017	Body	1750	23.5	1.457	51.282	1.49	53.4	-2.21	-3.97
Jun. 24, 2017	Body	1750	23.7	1.433	52.806	1.49	53.4	-3.83	-1.11
Jun. 30, 2017	Body	1750	23.7	1.432	51.406	1.49	53.4	-3.89	-3.73
May. 30, 2017	Body	1900	23.3	1.571	53.026	1.52	53.3	3.36	-0.51
May. 31, 2017	Body	1900	23.2	1.563	50.973	1.52	53.3	2.83	-4.37
Jun. 01, 2017	Body	1900	23.4	1.574	51.364	1.52	53.3	3.55	-3.63
Jun. 07, 2017	Body	1900	23.5	1.574	51.364	1.52	53.3	3.55	-3.63
Jun. 12, 2017	Body	1900	23.3	1.586	50.886	1.52	53.3	4.34	-4.53
Jun. 13, 2017	Body	1900	23.6	1.573	50.998	1.52	53.3	3.49	-4.32
Jun. 23, 2017	Body	1900	23.5	1.585	50.894	1.52	53.3	4.28	-4.51
Jun. 24, 2017	Body	1900	23.7	1.562	52.368	1.52	53.3	2.76	-1.75
Jun. 27, 2017	Body	1900	23.9	1.563	50.973	1.52	53.3	2.83	-4.37
Jun. 30, 2017	Body	1900	23.7	1.568	51.003	1.52	53.3	3.16	-4.31
May. 30, 2017	Body	2300	23.5	1.856	51.238	1.81	52.9	2.54	-3.14
Jun. 12, 2017	Body	2300	23.8	1.859	50.942	1.81	52.9	2.71	-3.70
Jun. 16, 2017	Body	2300	23.6	1.878	54.078	1.81	52.9	3.76	2.23
Jun. 05, 2017	Body	2450	23.2	1.997	51.382	1.95	52.7	2.41	-2.50
Jun. 12, 2017	Body	2450	23.8	2.020	50.572	1.95	52.7	3.59	-4.04
Jun. 23, 2017	Body	2450	23.5	2.022	50.925	1.95	52.7	3.69	-3.37
Jun. 30, 2017	Body	2450	23.4	2.012	51.208	1.95	52.7	3.18	-2.83
May. 30, 2017	Body	2600	23.5	2.204	50.214	2.16	52.5	2.04	-4.35
Jun. 02, 2017	Body	2600	23.1	2.169	50.963	2.16	52.5	0.42	-2.93
Jun. 10, 2017	Body	2600	23.2	2.169	51.108	2.16	52.5	0.42	-2.65
Jun. 12, 2017	Body	2600	23.8	2.192	50.137	2.16	52.5	1.48	-4.50
Jun. 14, 2017	Body	2600	23.7	2.169	51.108	2.16	52.5	0.42	-2.65
Jun. 23, 2017	Body	2600	23.5	2.168	50.864	2.16	52.5	0.37	-3.12
Jun. 16, 2017	Body	2600	23.6	2.226	53.274	2.16	52.5	3.06	1.47
Jun. 27, 2017	Body	2600	23.9	2.190	50.373	2.16	52.5	1.39	-4.05
Jun. 05, 2017	Body	5250	23.5	5.499	48.038	5.36	48.9	2.59	-1.76
Jun. 06, 2017	Body	5250	23.4	5.382	49.304	5.36	48.9	0.41	0.83
Jun. 12, 2017	Body	5250	23.4	5.450	47.637	5.36	48.9	1.68	-2.58
Jun. 24, 2017	Body	5250	23.4	5.254	47.081	5.36	48.9	-1.98	-3.72
Jun. 05, 2017	Body	5600	23.5	5.932	47.518	5.77	48.5	2.81	-2.02
Jun. 12, 2017	Body	5600	23.4	5.931	46.959	5.77	48.5	2.79	-3.18
Jun. 24, 2017	Body	5600	23.3	5.615	46.772	5.77	48.5	-2.69	-3.56
Jun. 05, 2017	Body	5800	23.5	6.214	47.198	6.00	48.2	3.57	-2.08
Jun. 12, 2017	Body	5800	23.4	6.222	46.576	6.00	48.2	3.70	-3.37
Jun. 24, 2017	Body	5800	23.4	5.897	46.424	6.00	48.2	-1.72	-3.68
Jul. 03, 2017	Body	5800	23.6	6.171	46.415	6.00	48.2	2.85	-3.70

Note:

The dielectric properties of the tissue simulating liquid must be measured within 24 hours before the SAR testing and within $\pm 5\%$ of the target values. Liquid temperature during the SAR testing must be within $\pm 2^\circ\text{C}$.

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4.4 System Validation

The SAR measurement system was validated according to procedures in KDB 865664 D01. The validation status in tabulated summary is as below.

Test Date	Probe S/N	Calibration Point		Measured Conductivity (σ)	Measured Permittivity (ϵ_r)	Validation for CW			Validation for Modulation		
						Sensitivity Range	Probe Linearity	Probe Isotropy	Modulation Type	Duty Factor	PAR
Jun. 01, 2017	3971	Head	750	0.888	41.934	Pass	Pass	Pass	N/A	N/A	N/A
Jun. 27, 2017	7375	Head	750	0.893	42.483	Pass	Pass	Pass	N/A	N/A	N/A
Jun. 27, 2017	7375	Head	750	0.885	42.448	Pass	Pass	Pass	N/A	N/A	N/A
Jun. 29, 2017	7375	Head	750	0.900	42.180	Pass	Pass	Pass	N/A	N/A	N/A
May. 31, 2017	3971	Head	835	0.918	40.872	Pass	Pass	Pass	N/A	N/A	N/A
Jun. 01, 2017	3971	Head	835	0.909	42.379	Pass	Pass	Pass	N/A	N/A	N/A
Jun. 01, 2017	3971	Head	835	0.936	42.937	Pass	Pass	Pass	N/A	N/A	N/A
Jun. 15, 2017	3971	Head	835	0.917	40.866	Pass	Pass	Pass	N/A	N/A	N/A
Jun. 15, 2017	3864	Head	835	0.917	40.866	Pass	Pass	Pass	N/A	N/A	N/A
Jun. 22, 2017	3971	Head	835	0.910	40.675	Pass	Pass	Pass	N/A	N/A	N/A
Jun. 29, 2017	7375	Head	835	0.920	42.330	Pass	Pass	Pass	GMSK	Pass	N/A
Jun. 30, 2017	3650	Head	835	0.924	42.166	Pass	Pass	Pass	N/A	N/A	N/A
Jun. 01, 2017	3971	Head	1750	1.321	39.759	Pass	Pass	Pass	N/A	N/A	N/A
Jun. 01, 2017	3971	Head	1750	1.322	40.412	Pass	Pass	Pass	N/A	N/A	N/A
Jun. 09, 2017	3898	Head	1750	1.322	39.664	Pass	Pass	Pass	N/A	N/A	N/A
Jun. 22, 2017	3971	Head	1750	1.324	38.935	Pass	Pass	Pass	N/A	N/A	N/A
Jun. 27, 2017	7375	Head	1750	1.326	40.149	Pass	Pass	Pass	N/A	N/A	N/A
May. 31, 2017	3971	Head	1900	1.457	39.193	Pass	Pass	Pass	N/A	N/A	N/A
Jun. 01, 2017	3971	Head	1900	1.457	39.852	Pass	Pass	Pass	N/A	N/A	N/A
Jun. 09, 2017	3898	Head	1900	1.456	39.099	Pass	Pass	Pass	GMSK	Pass	N/A
Jun. 15, 2017	3864	Head	1900	1.456	38.805	Pass	Pass	Pass	N/A	N/A	N/A
Jun. 22, 2017	3971	Head	1900	1.453	38.374	Pass	Pass	Pass	N/A	N/A	N/A
Jun. 27, 2017	7375	Head	1900	1.454	39.605	Pass	Pass	Pass	N/A	N/A	N/A
May. 30, 2017	3650	Head	2300	1.726	39.033	Pass	Pass	Pass	N/A	N/A	N/A
Jun. 01, 2017	3971	Head	2300	1.708	40.355	Pass	Pass	Pass	N/A	N/A	N/A
Jun. 27, 2017	7375	Head	2300	1.728	38.853	Pass	Pass	Pass	N/A	N/A	N/A
Jun. 05, 2017	3971	Head	2450	1.875	37.898	Pass	Pass	Pass	OFDM	N/A	Pass
Jun. 06, 2017	3971	Head	2450	1.869	38.935	Pass	Pass	Pass	OFDM	N/A	Pass
Jun. 09, 2017	7375	Head	2450	1.869	38.983	Pass	Pass	Pass	OFDM	N/A	Pass
Jun. 12, 2017	7375	Head	2450	1.864	39.070	Pass	Pass	Pass	OFDM	N/A	Pass
Jun. 13, 2017	7375	Head	2450	1.869	37.935	Pass	Pass	Pass	OFDM	N/A	Pass
Jun. 22, 2017	3971	Head	2450	1.864	37.884	Pass	Pass	Pass	OFDM	N/A	Pass
Jun. 27, 2017	7375	Head	2450	1.870	38.896	Pass	Pass	Pass	OFDM	N/A	Pass
May. 30, 2017	3650	Head	2600	2.044	37.989	Pass	Pass	Pass	N/A	N/A	N/A
Jun. 01, 2017	3971	Head	2600	2.034	39.404	Pass	Pass	Pass	N/A	N/A	N/A
Jun. 09, 2017	3898	Head	2600	2.029	38.503	Pass	Pass	Pass	N/A	N/A	N/A
Jun. 09, 2017	7375	Head	2600	2.029	38.503	Pass	Pass	Pass	N/A	N/A	N/A
Jun. 10, 2017	3650	Head	2600	2.044	37.989	Pass	Pass	Pass	N/A	N/A	N/A
Jun. 22, 2017	3971	Head	2600	2.013	37.293	Pass	Pass	Pass	N/A	N/A	N/A
Jun. 27, 2017	7375	Head	2600	2.043	37.822	Pass	Pass	Pass	N/A	N/A	N/A

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Test Date	Probe S/N	Calibration Point		Measured Conductivity (σ)	Measured Permittivity (ϵ_r)	Validation for CW			Validation for Modulation		
						Sensitivity Range	Probe Linearity	Probe Isotropy	Modulation Type	Duty Factor	PAR
Jun. 05, 2017	3971	Head	5250	4.575	35.034	Pass	Pass	Pass	OFDM	N/A	Pass
Jun. 06, 2017	3971	Head	5250	4.833	35.815	Pass	Pass	Pass	OFDM	N/A	Pass
Jun. 09, 2017	7375	Head	5250	4.575	35.034	Pass	Pass	Pass	OFDM	N/A	Pass
Jun. 12, 2017	7375	Head	5250	4.551	35.867	Pass	Pass	Pass	OFDM	N/A	Pass
Jun. 13, 2017	7375	Head	5250	4.660	35.570	Pass	Pass	Pass	OFDM	N/A	Pass
Jun. 14, 2017	7375	Head	5250	4.620	35.679	Pass	Pass	Pass	OFDM	N/A	Pass
Jun. 14, 2017	7375	Head	5250	4.799	35.398	Pass	Pass	Pass	OFDM	N/A	Pass
Jun. 16, 2017	7375	Head	5250	4.805	36.763	Pass	Pass	Pass	OFDM	N/A	Pass
Jun. 15, 2017	3971	Head	5250	4.580	36.321	Pass	Pass	Pass	OFDM	N/A	Pass
Jun. 29, 2017	7375	Head	5250	4.633	34.707	Pass	Pass	Pass	OFDM	N/A	Pass
Jun. 05, 2017	3971	Head	5600	4.897	34.600	Pass	Pass	Pass	OFDM	N/A	Pass
Jun. 06, 2017	3971	Head	5600	5.217	35.199	Pass	Pass	Pass	OFDM	N/A	Pass
Jun. 09, 2017	7375	Head	5600	4.897	34.600	Pass	Pass	Pass	OFDM	N/A	Pass
Jun. 12, 2017	7375	Head	5600	4.864	35.405	Pass	Pass	Pass	OFDM	N/A	Pass
Jun. 13, 2017	7375	Head	5600	5.030	35.094	Pass	Pass	Pass	OFDM	N/A	Pass
Jun. 14, 2017	7375	Head	5600	4.985	35.157	Pass	Pass	Pass	OFDM	N/A	Pass
Jun. 14, 2017	7375	Head	5600	5.175	34.802	Pass	Pass	Pass	OFDM	N/A	Pass
Jun. 16, 2017	7375	Head	5600	5.182	36.105	Pass	Pass	Pass	OFDM	N/A	Pass
Jun. 15, 2017	3971	Head	5600	4.966	35.967	Pass	Pass	Pass	OFDM	N/A	Pass
Jun. 29, 2017	7375	Head	5600	4.967	34.184	Pass	Pass	Pass	OFDM	N/A	Pass
Jun. 05, 2017	3971	Head	5800	5.091	34.355	Pass	Pass	Pass	OFDM	N/A	Pass
Jun. 07, 2017	3898	Head	5800	5.113	35.891	Pass	Pass	Pass	OFDM	N/A	Pass
Jun. 06, 2017	3971	Head	5800	5.452	34.841	Pass	Pass	Pass	OFDM	N/A	Pass
Jun. 09, 2017	7375	Head	5800	5.091	34.355	Pass	Pass	Pass	OFDM	N/A	Pass
Jun. 12, 2017	7375	Head	5800	5.232	35.510	Pass	Pass	Pass	OFDM	N/A	Pass
Jun. 13, 2017	7375	Head	5800	5.244	34.713	Pass	Pass	Pass	OFDM	N/A	Pass
Jun. 14, 2017	7375	Head	5800	5.193	34.837	Pass	Pass	Pass	OFDM	N/A	Pass
Jun. 14, 2017	7375	Head	5800	5.408	34.453	Pass	Pass	Pass	OFDM	N/A	Pass
Jun. 16, 2017	7375	Head	5800	5.415	35.658	Pass	Pass	Pass	OFDM	N/A	Pass
Jun. 15, 2017	3971	Head	5800	5.374	36.384	Pass	Pass	Pass	OFDM	N/A	Pass
Jun. 29, 2017	7375	Head	5800	5.179	33.888	Pass	Pass	Pass	OFDM	N/A	Pass

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Test Date	Probe S/N	Calibration Point		Measured Conductivity (σ)	Measured Permittivity (ϵ_r)	Validation for CW			Validation for Modulation		
						Sensitivity Range	Probe Linearity	Probe Isotropy	Modulation Type	Duty Factor	PAR
May. 31, 2017	3971	Body	750	0.918	55.862	Pass	Pass	Pass	N/A	N/A	N/A
May. 31, 2017	3971	Body	750	0.959	54.477	Pass	Pass	Pass	N/A	N/A	N/A
Jun. 02, 2017	3971	Body	750	0.962	54.170	Pass	Pass	Pass	N/A	N/A	N/A
Jun. 14, 2017	7375	Body	750	0.969	56.104	Pass	Pass	Pass	N/A	N/A	N/A
Jun. 16, 2017	7375	Body	750	0.918	56.223	Pass	Pass	Pass	N/A	N/A	N/A
Jun. 30, 2017	7375	Body	750	0.885	42.410	Pass	Pass	Pass	N/A	N/A	N/A
May. 31, 2017	3971	Body	835	0.997	55.115	Pass	Pass	Pass	GMSK	Pass	N/A
Jun. 01, 2017	3971	Body	835	1.002	54.222	Pass	Pass	Pass	N/A	N/A	N/A
Jun. 23, 2017	3971	Body	835	1.005	57.810	Pass	Pass	Pass	N/A	N/A	N/A
May. 30, 2017	917	Body	1750	1.443	53.336	Pass	Pass	Pass	N/A	N/A	N/A
May. 31, 2017	3971	Body	1750	1.430	51.432	Pass	Pass	Pass	N/A	N/A	N/A
Jun. 07, 2017	3971	Body	1750	1.444	51.771	Pass	Pass	Pass	N/A	N/A	N/A
Jun. 12, 2017	7375	Body	1750	1.453	51.268	Pass	Pass	Pass	N/A	N/A	N/A
Jun. 13, 2017	7375	Body	1750	1.438	51.394	Pass	Pass	Pass	N/A	N/A	N/A
Jun. 23, 2017	3971	Body	1750	1.457	51.282	Pass	Pass	Pass	N/A	N/A	N/A
Jun. 24, 2017	3650	Body	1750	1.433	52.806	Pass	Pass	Pass	N/A	N/A	N/A
Jun. 30, 2017	7375	Body	1750	1.432	51.406	Pass	Pass	Pass	N/A	N/A	N/A
May. 30, 2017	3650	Body	1900	1.571	53.026	Pass	Pass	Pass	N/A	N/A	N/A
May. 31, 2017	3971	Body	1900	1.563	50.973	Pass	Pass	Pass	N/A	N/A	N/A
Jun. 01, 2017	3971	Body	1900	1.574	51.364	Pass	Pass	Pass	N/A	N/A	N/A
Jun. 07, 2017	3971	Body	1900	1.574	51.364	Pass	Pass	Pass	N/A	N/A	N/A
Jun. 12, 2017	7375	Body	1900	1.586	50.886	Pass	Pass	Pass	N/A	N/A	N/A
Jun. 13, 2017	7375	Body	1900	1.573	50.998	Pass	Pass	Pass	GMSK	Pass	N/A
Jun. 23, 2017	3971	Body	1900	1.585	50.894	Pass	Pass	Pass	N/A	N/A	N/A
Jun. 24, 2017	3650	Body	1900	1.562	52.368	Pass	Pass	Pass	N/A	N/A	N/A
Jun. 27, 2017	7375	Body	1900	1.563	50.973	Pass	Pass	Pass	N/A	N/A	N/A
Jun. 30, 2017	7375	Body	1900	1.568	51.003	Pass	Pass	Pass	N/A	N/A	N/A
May. 30, 2017	3650	Body	2300	1.856	51.238	Pass	Pass	Pass	N/A	N/A	N/A
Jun. 12, 2017	7375	Body	2300	1.859	50.942	Pass	Pass	Pass	N/A	N/A	N/A
Jun. 16, 2017	7375	Body	2300	1.878	54.078	Pass	Pass	Pass	N/A	N/A	N/A
Jun. 05, 2017	3971	Body	2450	1.997	51.382	Pass	Pass	Pass	OFDM	N/A	Pass
Jun. 12, 2017	7375	Body	2450	2.020	50.572	Pass	Pass	Pass	OFDM	N/A	Pass
Jun. 23, 2017	3971	Body	2450	2.022	50.925	Pass	Pass	Pass	OFDM	N/A	Pass
Jun. 30, 2017	3971	Body	2450	2.012	51.208	Pass	Pass	Pass	OFDM	N/A	Pass
May. 30, 2017	3650	Body	2600	2.204	50.214	Pass	Pass	Pass	N/A	N/A	N/A
Jun. 02, 2017	3971	Body	2600	2.169	50.963	Pass	Pass	Pass	N/A	N/A	N/A
Jun. 10, 2017	3650	Body	2600	2.169	51.108	Pass	Pass	Pass	N/A	N/A	N/A
Jun. 12, 2017	7375	Body	2600	2.192	50.137	Pass	Pass	Pass	N/A	N/A	N/A
Jun. 14, 2017	7375	Body	2600	2.169	51.108	Pass	Pass	Pass	N/A	N/A	N/A
Jun. 23, 2017	3971	Body	2600	2.168	50.864	Pass	Pass	Pass	N/A	N/A	N/A
Jun. 16, 2017	7375	Body	2600	2.226	53.274	Pass	Pass	Pass	N/A	N/A	N/A
Jun. 27, 2017	7375	Body	2600	2.190	50.373	Pass	Pass	Pass	N/A	N/A	N/A
Jun. 05, 2017	3971	Body	5250	5.499	48.038	Pass	Pass	Pass	OFDM	N/A	Pass
Jun. 06, 2017	3971	Body	5250	5.382	49.304	Pass	Pass	Pass	OFDM	N/A	Pass
Jun. 12, 2017	7375	Body	5250	5.450	47.637	Pass	Pass	Pass	OFDM	N/A	Pass
Jun. 24, 2017	3650	Body	5250	5.254	47.081	Pass	Pass	Pass	OFDM	N/A	Pass
Jun. 05, 2017	3971	Body	5600	5.932	47.518	Pass	Pass	Pass	OFDM	N/A	Pass
Jun. 12, 2017	7375	Body	5600	5.931	46.959	Pass	Pass	Pass	OFDM	N/A	Pass
Jun. 24, 2017	3650	Body	5600	5.615	46.772	Pass	Pass	Pass	OFDM	N/A	Pass
Jun. 05, 2017	3971	Body	5800	6.214	47.198	Pass	Pass	Pass	OFDM	N/A	Pass
Jun. 12, 2017	7375	Body	5800	6.222	46.576	Pass	Pass	Pass	OFDM	N/A	Pass
Jun. 24, 2017	3650	Body	5800	5.897	46.424	Pass	Pass	Pass	OFDM	N/A	Pass
Jul. 03, 2017	7375	Body	5800	6.171	46.415	Pass	Pass	Pass	OFDM	N/A	Pass

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4.5 System Verification

The measuring result for system verification is tabulated as below.

Test Date	Mode	Frequency (MHz)	1W Target SAR-1g (W/kg)	Measured SAR-1g (W/kg)	Normalized to 1W SAR-1g (W/kg)	Deviation (%)	Dipole S/N	Probe S/N	DAE S/N
Jun. 01, 2017	Head	750	8.24	2.06	8.24	0.00	1013	3971	1431
Jun. 27, 2017	Head	750	8.24	1.98	7.92	-3.88	1013	7375	1277
Jun. 27, 2017	Head	750	8.24	2.16	8.64	4.85	1013	7375	1277
Jun. 29, 2017	Head	750	8.24	2.20	8.80	6.80	1013	7375	1277
May. 31, 2017	Head	835	9.40	2.23	8.92	-5.11	4d121	3971	1431
Jun. 01, 2017	Head	835	9.40	2.34	9.36	-0.43	4d121	3971	1431
Jun. 01, 2017	Head	835	9.40	2.29	9.16	-2.55	4d121	3971	1431
Jun. 15, 2017	Head	835	9.40	2.32	9.28	-1.28	4d121	3971	1431
Jun. 15, 2017	Head	835	9.40	2.31	9.24	-1.70	4d121	3864	579
Jun. 22, 2017	Head	835	9.40	2.27	9.08	-3.40	4d121	3971	1431
Jun. 29, 2017	Head	835	9.40	2.32	9.28	-1.28	4d121	7375	1277
Jun. 30, 2017	Head	835	9.40	2.17	8.68	-7.66	4d121	3650	1277
Jun. 01, 2017	Head	1750	36.90	8.70	34.80	-5.69	1055	3971	1431
Jun. 01, 2017	Head	1750	36.90	9.11	36.44	-1.25	1055	3971	1431
Jun. 09, 2017	Head	1750	36.90	8.82	35.28	-4.39	1055	3898	1485
Jun. 22, 2017	Head	1750	36.90	8.63	34.52	-6.45	1055	3971	1431
Jun. 27, 2017	Head	1750	36.90	9.02	36.08	-2.22	1055	7375	1277
May. 31, 2017	Head	1900	40.20	10.50	42.00	4.48	5d036	3971	1431
Jun. 01, 2017	Head	1900	40.20	10.80	43.20	7.46	5d036	3971	1431
Jun. 09, 2017	Head	1900	40.20	9.74	38.96	-3.08	5d036	3898	1277
Jun. 15, 2017	Head	1745	40.20	10.30	41.20	2.49	1055	3864	579
Jun. 22, 2017	Head	1900	40.20	9.95	39.80	-1.00	5036	3971	1431
Jun. 27, 2017	Head	1900	40.20	9.88	39.52	-1.69	5d036	7375	1277
May. 30, 2017	Head	2300	49.00	12.40	49.60	1.22	1004	3650	917
Jun. 01, 2017	Head	2300	49.00	12.20	48.80	-0.41	1004	3971	1431
Jun. 27, 2017	Head	2300	49.00	12.10	48.40	-1.22	1004	7375	1277
Jun. 05, 2017	Head	2450	52.60	12.90	51.60	-1.90	737	3971	1431
Jun. 06, 2017	Head	2450	52.60	13.40	53.60	1.90	737	3971	1431
Jun. 09, 2017	Head	2450	52.60	13.30	53.20	1.14	737	7375	1277
Jun. 12, 2017	Head	2450	52.60	13.70	54.80	4.18	737	7375	1277
Jun. 13, 2017	Head	2450	52.60	13.50	54.00	2.66	737	7375	1277
Jun. 22, 2017	Head	2450	52.60	13.40	53.60	1.90	737	3971	1431
Jun. 27, 2017	Head	2450	52.60	13.50	54.00	2.66	737	7375	1277
May. 30, 2017	Head	2600	58.10	14.40	57.60	-0.86	1020	3650	917
Jun. 01, 2017	Head	2600	58.10	14.80	59.20	1.89	1020	3971	1431
Jun. 09, 2017	Head	2600	58.10	15.00	60.00	3.27	1020	3898	1277
Jun. 09, 2017	Head	2600	58.10	14.30	57.20	-1.55	1020	7375	1277
Jun. 10, 2017	Head	2600	58.10	14.10	56.40	-2.93	1020	3650	917
Jun. 22, 2017	Head	2600	58.10	14.20	56.80	-2.24	1020	3971	1431
Jun. 27, 2017	Head	2600	58.10	14.60	58.40	0.52	1020	7375	1277

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Test Date	Mode	Frequency (MHz)	1W Target SAR-1g (W/kg)	Measured SAR-1g (W/kg)	Normalized to 1W SAR-1g (W/kg)	Deviation (%)	Dipole S/N	Probe S/N	DAE S/N
Jun. 05, 2017	Head	5250	79.60	7.88	78.80	-1.01	1019	3971	1431
Jun. 06, 2017	Head	5250	79.60	8.35	83.50	4.90	1019	3971	1431
Jun. 09, 2017	Head	5250	79.60	7.88	78.80	-1.01	1019	7375	1277
Jun. 12, 2017	Head	5250	79.60	7.71	77.10	-3.14	1019	7375	1277
Jun. 13, 2017	Head	5250	79.60	7.75	77.50	-2.64	1019	7375	1277
Jun. 14, 2017	Head	5250	79.60	7.83	78.30	-1.63	1019	7375	1277
Jun. 14, 2017	Head	5250	79.60	7.63	76.30	-4.15	1019	7375	1277
Jun. 16, 2017	Head	5250	79.60	8.06	80.60	1.26	1019	7375	1277
Jun. 15, 2017	Head	5250	79.60	7.76	77.60	-2.51	1019	3971	1431
Jun. 29, 2017	Head	5250	79.60	7.85	78.50	-1.38	1019	7375	1277
Jun. 05, 2017	Head	5600	82.40	8.13	81.30	-1.33	1019	3971	1431
Jun. 06, 2017	Head	5600	82.40	8.64	86.40	4.85	1019	3971	1431
Jun. 09, 2017	Head	5600	82.40	8.10	81.00	-1.70	1019	7375	1277
Jun. 12, 2017	Head	5600	82.40	8.05	80.50	-2.31	1019	7375	1277
Jun. 13, 2017	Head	5600	82.40	8.32	83.20	0.97	1019	7375	1277
Jun. 14, 2017	Head	5600	82.40	7.99	79.90	-3.03	1019	7375	1277
Jun. 14, 2017	Head	5600	82.40	8.70	87.00	5.58	1019	7375	1277
Jun. 16, 2017	Head	5600	82.40	8.57	85.70	4.00	1019	7375	1277
Jun. 15, 2017	Head	5600	82.40	8.46	84.60	2.67	1019	3971	1431
Jun. 29, 2017	Head	5600	82.40	7.96	79.60	-3.40	1019	7375	1277
Jun. 05, 2017	Head	5800	79.40	7.84	78.40	-1.26	1019	3971	1431
Jun. 07, 2017	Head	5800	79.40	7.77	77.70	-2.14	1019	3898	1277
Jun. 06, 2017	Head	5800	79.40	8.40	84.00	5.79	1019	3971	1431
Jun. 09, 2017	Head	5800	79.40	7.33	73.30	-7.68	1019	7375	1277
Jun. 12, 2017	Head	5800	79.40	7.72	77.20	-2.77	1019	7375	1277
Jun. 13, 2017	Head	5800	79.40	8.29	82.90	4.41	1019	7375	1277
Jun. 14, 2017	Head	5800	79.40	8.21	82.10	3.40	1019	7375	1277
Jun. 14, 2017	Head	5800	79.40	8.37	83.70	5.42	1019	7375	1277
Jun. 16, 2017	Head	5800	79.40	8.56	85.60	7.81	1019	7375	1277
Jun. 15, 2017	Head	5800	79.40	8.44	84.40	6.30	1019	3971	1431
Jun. 29, 2017	Head	5800	79.40	8.10	81.00	2.02	1019	7375	1277

Test Date	Mode	Frequency (MHz)	1W Target SAR-1g (W/kg)	Measured SAR-1g (W/kg)	Normalized to 1W SAR-1g (W/kg)	Deviation (%)	Dipole S/N	Probe S/N	DAE S/N
May. 31, 2017	Body	750	8.77	2.08	8.32	-5.13	4d121	3971	1431
May. 31, 2017	Body	750	8.77	2.35	9.40	7.18	1013	3971	1431
Jun. 02, 2017	Body	750	8.77	2.18	8.72	-0.57	1013	3971	1431
Jun. 14, 2017	Body	750	8.77	2.15	8.60	-1.94	1013	7375	1277
Jun. 16, 2017	Body	750	8.77	2.13	8.52	-2.85	1013	7375	1277
Jun. 30, 2017	Body	750	8.24	1.94	7.76	-5.83	1013	7375	1277
May. 31, 2017	Body	835	9.57	2.52	10.08	5.33	4d121	3971	1431
Jun. 01, 2017	Body	835	9.57	2.39	9.56	-0.10	4d121	3971	1431
Jun. 23, 2017	Body	835	9.57	2.40	9.60	0.31	4d121	3971	861

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Test Date	Mode	Frequency (MHz)	1W Target SAR-1g (W/kg)	Measured SAR-1g (W/kg)	Normalized to 1W SAR-1g (W/kg)	Deviation (%)	Dipole S/N	Probe S/N	DAE S/N
May. 30, 2017	Body	1750	37.50	9.02	36.08	-3.79	1055	3650	917
May. 31, 2017	Body	1750	37.50	8.79	35.16	-6.24	1055	3971	1431
Jun. 07, 2017	Body	1750	37.50	8.87	35.48	-5.39	1055	3971	1431
Jun. 12, 2017	Body	1750	37.50	9.29	37.16	-0.91	1055	7375	1277
Jun. 13, 2017	Body	1750	37.50	8.64	34.56	-7.84	1055	7375	1277
Jun. 23, 2017	Body	1750	37.50	8.87	35.48	-5.39	1055	3971	861
Jun. 24, 2017	Body	1750	37.50	8.90	35.60	-5.07	1055	3650	917
Jun. 30, 2017	Body	1750	37.50	9.25	37.00	-1.33	1055	7375	1277
May. 30, 2017	Body	1900	40.10	10.30	41.20	2.74	5d036	3650	917
May. 31, 2017	Body	1900	40.10	9.64	38.56	-3.84	5d036	3971	1431
Jun. 01, 2017	Body	1900	40.10	9.76	39.04	-2.64	5d036	3971	1431
Jun. 07, 2017	Body	1900	40.10	9.76	39.04	-2.64	5d036	3971	1431
Jun. 12, 2017	Body	1900	40.10	10.20	40.80	1.75	5d036	7375	1277
Jun. 13, 2017	Body	1900	40.10	9.80	39.20	-2.24	5d036	7375	1277
Jun. 23, 2017	Body	1900	40.10	9.94	39.76	-0.85	5d036	3971	861
Jun. 24, 2017	Body	1900	40.10	10.20	40.80	1.75	5d036	3650	917
Jun. 27, 2017	Body	1900	40.10	9.81	39.24	-2.14	5d036	7375	1277
Jun. 30, 2017	Body	1900	40.10	10.10	40.40	0.75	5d036	7375	1277
May. 30, 2017	Body	2300	48.30	11.80	47.20	-2.28	1004	3650	917
Jun. 12, 2017	Body	2300	48.30	11.89	47.56	-1.53	1004	7375	1277
Jun. 16, 2017	Body	2300	48.30	12.30	49.20	1.86	1004	7375	1277
Jun. 05, 2017	Body	2450	51.10	12.40	49.60	-2.94	737	3971	1431
Jun. 12, 2017	Body	2450	51.10	12.20	48.80	-4.50	737	7375	1277
Jun. 23, 2017	Body	2450	51.10	12.00	48.00	-6.07	737	3971	861
Jun. 30, 2017	Body	2450	51.10	12.40	49.60	-2.94	737	3971	1431
May. 30, 2017	Body	2600	55.70	13.40	53.60	-3.77	1020	3650	917
Jun. 02, 2017	Body	2600	55.70	13.30	53.20	-4.49	1020	3971	1431
Jun. 10, 2017	Body	2600	55.70	13.80	55.20	-0.90	1020	3650	917
Jun. 12, 2017	Body	2600	55.70	13.36	53.44	-4.06	1020	7375	1277
Jun. 14, 2017	Body	2600	55.70	13.20	52.80	-5.21	1020	7375	1277
Jun. 23, 2017	Body	2600	55.70	14.80	59.20	6.28	1020	3971	861
Jun. 16, 2017	Body	2600	55.70	14.50	58.00	4.13	1020	7375	1277
Jun. 27, 2017	Body	2600	55.70	13.60	54.40	-2.33	1020	7375	1277
Jun. 05, 2017	Body	5250	77.60	7.68	76.80	-1.03	1019	3971	1431
Jun. 06, 2017	Body	5250	77.60	7.87	78.70	1.42	1019	1431	3971
Jun. 12, 2017	Body	5250	77.60	7.47	74.70	-3.74	1019	7375	1277
Jun. 24, 2017	Body	5250	77.60	7.72	77.20	-0.52	1019	3650	917
Jun. 05, 2017	Body	5600	79.60	7.84	78.40	-1.51	1019	3971	1431
Jun. 12, 2017	Body	5600	79.60	8.10	81.00	1.76	1019	7375	1277
Jun. 24, 2017	Body	5600	79.60	7.69	76.90	-3.39	1019	3650	917
Jun. 05, 2017	Body	5800	77.30	8.15	81.50	5.43	1019	3971	1431
Jun. 12, 2017	Body	5800	77.30	7.86	78.60	1.68	1019	7375	1277
Jun. 24, 2017	Body	5800	77.30	7.41	74.10	-4.14	1019	3650	917
Jul. 03, 2017	Body	5800	77.30	8.22	82.20	6.34	1019	7375	1277

Note:

Comparing to the reference SAR value provided by SPEAG, the validation data should be within its specification of 10 %. The result indicates the system check can meet the variation criterion and the plots can be referred to Appendix A of this report.

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4.6 Maximum Output Power

4.6.1 Maximum Target Conducted Power

The maximum conducted average power (Unit: dBm) including tune-up tolerance is shown as below.

Mode	Maximum Burst-Averaged Output Power		Maximum Frame-Averaged Output Power	
	GSM850	GSM1900	GSM850	GSM1900
GSM (GMSK, 1Tx-slot)	34.5	31.5	25.5	22.5
GPRS (GMSK, 1Tx-slot)	34.0	31.0	25.0	22.0
GPRS (GMSK, 2Tx-slot)	32.5	30.0	26.5	24.0
GPRS (GMSK, 3Tx-slot)	30.7	28.2	26.4	23.9
GPRS (GMSK, 4Tx-slot)	29.5	27.0	26.5	24.0
EDGE (8PSK, 1Tx-slot)	29.0	27.0	20.0	18.0
EDGE (8PSK, 2Tx-slot)	28.5	27.0	22.5	21.0
EDGE (8PSK, 3Tx-slot)	27.5	25.5	23.2	21.2
EDGE (8PSK, 4Tx-slot)	25.5	24.5	22.5	21.5
DTM (GMSK, 2Tx-slot)	32.5	30.0	26.5	24.0
DTM (GMSK, 3Tx-slot)	30.7	28.2	26.4	23.9
DTM (8PSK, 2Tx-slot)	28.5	27.0	22.5	21.0
DTM (8PSK, 3Tx-slot)	27.5	25.5	23.2	21.2

Note:

- SAR testing was performed on the maximum frame-averaged power mode.
- The frame-averaged power is linearly proportion to the slot number configured and it is linearly scaled the maximum burst-averaged power based on time slots. The calculated method is shown as below:

$$\text{Frame-averaged power} = 10 \times \log (\text{Burst-averaged power mW} \times \text{Slot used} / 8)$$

Mode	WCDMA Band II	WCDMA Band IV	WCDMA Band V
RMC 12.2K	25.0	25.0	25.5
HSDPA / HSUPA	24.5	24.5	24.5

Mode	CDMA BC0	CDMA BC1	CDMA BC10
1xRTT	25.5	25.5	25.5

Mode	LTE 2	LTE 4	LTE 5	LTE 7	LTE 12
Maximum Target Power	25.0	25.0	25.5	24.5	25.0

Mode	LTE 13	LTE 17	LTE 25	LTE 26	LTE 30
Maximum Target Power	25.0	25.0	25.0	25.5	24.5

Mode	LTE 41 (PC3)	LTE 41 (PC2)	LTE 66		
Maximum Target Power	24.0	27.5	24.5		

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<WiFi SISO, Cell OFF>

Ant0, Ant 1: Single chain; Ant0+1: Combined from 2 chains

Mode	2.4G WLAN	5.2G WLAN	5.3G WLAN	5.6G WLAN	5.8G WLAN
802.11b, 1 TX	Ant0 : 20.0 Ant1 : 20.0	N/A	N/A	N/A	N/A
802.11g, 1 TX	Ant0 : 18.5 Ant1 : 18.5	N/A	N/A	N/A	N/A
802.11a, 1 TX	N/A	Ant0 : 19.0 Ant1 : 19.0	Ant0 : 19.0 Ant1 : 19.0	Ant0 : 19.0 Ant1 : 19.0	Ant0 : 19.0 Ant1 : 19.0
802.11n HT20, 1 TX	Ant0 : 18.5 Ant1 : 18.5	Ant0 : 19.0 Ant1 : 19.0	Ant0 : 19.0 Ant1 : 19.0	Ant0 : 19.0 Ant1 : 19.0	Ant0 : 19.0 Ant1 : 19.0
802.11ac VHT20, 1 TX	Ant0 : 18.5 Ant1 : 18.5	N/A	N/A	N/A	N/A
802.11n HT40, 1 TX	N/A	Ant0 : 19.0 Ant1 : 19.0	Ant0 : 19.0 Ant1 : 19.0	Ant0 : 19.0 Ant1 : 19.0	Ant0 : 19.0 Ant1 : 19.0
802.11ac VHT80, 1TX	N/A	Ant0 : 19.0 Ant1 : 19.0	Ant0 : 19.0 Ant1 : 19.0	Ant0 : 19.0 Ant1 : 19.0	Ant0 : 19.0 Ant1 : 19.0

<WiFi MIMO, Cell OFF>

Ant0, Ant 1: Single chain; Ant0+1: Combined from 2 chains

Mode	2.4G WLAN	5.2G WLAN	5.3G WLAN	5.6G WLAN	5.8G WLAN
802.11n HT20, 2 TX	Ant0+1 : 21.5	Ant0+1 : 21.0	Ant0+1 : 21.0	Ant0+1 : 21.0	Ant0+1 : 21.0
802.11ac VHT20, 2 TX	Ant0+1 : 21.5	N/A	N/A	N/A	N/A
802.11n HT40, 2 TX	N/A	Ant0+1 : 21.0	Ant0+1 : 21.0	Ant0+1 : 21.0	Ant0+1 : 21.0
802.11ac VHT80, 2 TX	N/A	Ant0+1 : 19.5	Ant0+1 : 19.5	Ant0+1 : 21.0	Ant0+1 : 21.0

<WiFi SISO, Cell ON>

Ant0, Ant 1: Single chain; Ant0+1: Combined from 2 chains

Mode	2.4G WLAN	5.2G WLAN	5.3G WLAN	5.6G WLAN	5.8G WLAN
802.11b, 1 TX	Ant0 : 19.5 Ant1 : 19.5	N/A	N/A	N/A	N/A
802.11g, 1 TX	Ant0 : 18.5 Ant1 : 18.5	N/A	N/A	N/A	N/A
802.11a, 1 TX	N/A	Ant0 : 18.5 Ant1 : 18.5	Ant0 : 18.5 Ant1 : 18.5	Ant0 : 18.5 Ant1 : 18.5	Ant0 : 18.5 Ant1 : 18.5
802.11n HT20, 1 TX	Ant0 : 18.5 Ant1 : 18.5	Ant0 : 18.5 Ant1 : 18.5	Ant0 : 18.5 Ant1 : 18.5	Ant0 : 18.5 Ant1 : 18.5	Ant0 : 18.5 Ant1 : 18.5
802.11ac VHT20, 1 TX	Ant0 : 18.5 Ant1 : 18.5	N/A	N/A	N/A	N/A
802.11n HT40, 1 TX	N/A	Ant0 : 18.5 Ant1 : 18.5	Ant0 : 18.5 Ant1 : 18.5	Ant0 : 18.5 Ant1 : 18.5	Ant0 : 18.5 Ant1 : 18.5
802.11ac VHT80, 1TX	N/A	Ant0 : 18.5 Ant1 : 18.5	Ant0 : 18.5 Ant1 : 18.5	Ant0 : 18.5 Ant1 : 18.5	Ant0 : 18.5 Ant1 : 18.5

<WiFi MIMO, Cell ON>

Ant0, Ant 1: Single chain; Ant0+1: Combined from 2 chains

Mode	2.4G WLAN	5.2G WLAN	5.3G WLAN	5.6G WLAN	5.8G WLAN
802.11n HT20, 2 TX	Ant0+1:21.5	Ant0+1 : 20.5	Ant0+1 : 20.5	Ant0+1 : 20.5	Ant0+1 : 20.5
802.11ac VHT20, 2 TX	Ant0+1:21.5	N/A	N/A	N/A	N/A
802.11n HT40, 2 TX	N/A	Ant0+1 : 20.5	Ant0+1 : 20.5	Ant0+1 : 20.5	Ant0+1 : 20.5
802.11ac VHT80, 2 TX	N/A	Ant0+1 : 19.5	Ant0+1 : 19.5	Ant0+1 : 20.5	Ant0+1 : 20.5

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Mode	2.4G Bluetooth
Bluetooth DH	11.0

4.6.2 Measured Conducted Power Result

The measuring conducted average power (Unit: dBm) is shown as below.

Band	GSM850			GSM1900		
Channel	128	189	251	512	661	810
Frequency (MHz)	824.2	836.4	848.8	1850.2	1880.0	1909.8
Maximum Burst-Averaged Output Power						
GSM (GMSK, 1Tx-slot)	33.09	33.03	33.23	30.15	30.22	30.19
GPRS (GMSK, 1Tx-slot)	33.04	32.98	33.18	30.11	30.18	30.15
GPRS (GMSK, 2Tx-slot)	31.49	31.43	31.63	29.42	29.49	29.46
GPRS (GMSK, 3Tx-slot)	29.18	29.12	29.32	27.09	27.16	27.13
GPRS (GMSK, 4Tx-slot)	28.25	28.19	28.39	25.76	25.83	25.80
EDGE (8PSK, 1Tx-slot)	27.58	27.52	27.72	25.52	25.59	25.56
EDGE (8PSK, 2Tx-slot)	26.69	26.63	26.83	25.32	25.39	25.36
EDGE (8PSK, 3Tx-slot)	25.83	25.77	25.97	23.71	23.78	23.75
EDGE (8PSK, 4Tx-slot)	23.95	23.89	24.09	22.54	22.61	22.58
DTM (GMSK, 2Tx-slot)	31.35	31.29	31.49	29.38	29.45	29.42
DTM (GMSK, 3Tx-slot)	29.18	29.12	29.32	27.06	27.13	27.10
DTM (8PSK, 2Tx-slot)	26.58	26.53	26.76	25.24	25.31	25.28
DTM (8PSK, 3Tx-slot)	25.78	25.72	25.92	23.70	23.77	23.74

Band	WCDMA Band II			WCDMA Band IV			WCDMA Band V			3GPP MPR (dB)
Channel	9262	9400	9538	1312	1413	1513	4132	4182	4233	
Frequency (MHz)	1852.4	1880.0	1907.6	1712.4	1732.6	1752.6	826.4	836.4	846.6	
RMC 12.2K	23.74	23.78	23.82	23.94	23.92	23.90	23.91	24.00	23.93	-
HSDPA Subtest-1	22.76	22.79	22.90	22.94	22.91	22.89	23.22	23.24	23.19	0
HSDPA Subtest-2	22.65	22.74	22.77	22.91	22.89	22.81	23.14	23.18	23.11	0
HSDPA Subtest-3	22.33	22.36	22.47	22.45	22.38	22.36	22.74	22.78	22.71	0.5
HSDPA Subtest-4	22.31	22.35	22.39	22.38	22.36	22.34	22.71	22.73	22.69	0.5
HSUPA Subtest-1	22.70	22.75	22.79	22.97	22.95	22.94	23.22	23.24	23.20	0
HSUPA Subtest-2	20.59	20.62	20.72	20.92	20.84	20.82	21.21	21.25	21.21	2
HSUPA Subtest-3	21.68	21.75	21.78	21.88	21.86	21.84	22.27	22.30	22.23	1
HSUPA Subtest-4	20.66	20.69	20.79	20.90	20.82	20.81	21.18	21.20	21.16	2
HSUPA Subtest-5	22.70	22.80	22.83	22.92	22.90	22.85	23.17	23.20	23.12	0

Band	CDMA BC0			CDMA BC1			CDMA BC10		
Channel	1013	384	777	25	600	1175	476	580	684
Frequency (MHz)	824.70	836.52	848.31	1851.25	1880.00	1908.75	817.9	820.5	823.1
1xRTT RC1+SO55	24.11	24.08	24.06	24.22	24.33	24.25	24.08	24.16	24.11
1xRTT RC3+SO55	24.20	24.18	24.15	24.26	24.37	24.31	24.13	24.21	24.18
1xRTT RC3+SO32 (FCH)	24.16	24.13	24.08	24.20	24.30	24.21	24.11	24.18	24.13
1xRTT RC3+SO32 (SCH)	23.25	23.15	23.13	22.84	22.95	22.90	22.85	22.92	22.87

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LTE Band 2														
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 18700	Mid CH 18900	High CH 19100	3GPP MPR (dB)	Low CH 18607	Mid CH 18900	High CH 19193	3GPP MPR (dB)	Low CH 18607	Mid CH 18900	High CH 19193	3GPP MPR (dB)
			1860.0 MHz	1880.0 MHz	1900.0 MHz		1850.7 MHz	1880.0 MHz	1909.3 MHz		1850.7 MHz	1880.0 MHz	1909.3 MHz	
20	1	0	23.93	23.81	23.77	0	22.98	22.86	22.81	1	22.10	22.01	21.99	2
	1	50	23.65	23.44	23.37	0	22.66	22.46	22.40	1	21.74	21.54	21.48	2
	1	99	23.52	23.38	23.33	0	22.46	22.39	22.27	1	21.54	21.47	21.35	2
	50	0	22.67	22.57	22.51	1	21.70	21.56	21.46	2	20.78	20.64	20.54	3
	50	25	22.59	22.48	22.42	1	21.58	21.44	21.39	2	20.66	20.52	20.47	3
	50	50	22.47	22.40	22.37	1	21.53	21.35	21.31	2	20.61	20.43	20.39	3
	100	0	22.58	22.47	22.40	1	21.58	21.42	21.38	2	20.66	20.50	20.46	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 18675	Mid CH 18900	High CH 19125	3GPP MPR (dB)	Low CH 18675	Mid CH 18900	High CH 19125	3GPP MPR (dB)	Low CH 18675	Mid CH 18900	High CH 19125	3GPP MPR (dB)
			1857.5 MHz	1880.0 MHz	1902.5 MHz		1857.5 MHz	1880.0 MHz	1902.5 MHz		1857.5 MHz	1880.0 MHz	1902.5 MHz	
15	1	0	23.89	23.77	23.73	0	22.94	22.82	22.77	1	22.04	21.95	21.93	2
	1	37	23.61	23.40	23.33	0	22.62	22.42	22.36	1	21.68	21.48	21.42	2
	1	74	23.48	23.34	23.29	0	22.42	22.35	22.23	1	21.48	21.41	21.29	2
	36	0	22.63	22.53	22.47	1	21.66	21.52	21.42	2	20.72	20.58	20.48	3
	36	19	22.55	22.44	22.38	1	21.54	21.40	21.35	2	20.60	20.46	20.41	3
	36	39	22.43	22.36	22.33	1	21.49	21.31	21.27	2	20.55	20.37	20.33	3
	75	0	22.54	22.43	22.36	1	21.54	21.38	21.34	2	20.60	20.44	20.40	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 18650	Mid CH 18900	High CH 19150	3GPP MPR (dB)	Low CH 18650	Mid CH 18900	High CH 19150	3GPP MPR (dB)	Low CH 18650	Mid CH 18900	High CH 19150	3GPP MPR (dB)
			1855.0 MHz	1880.0 MHz	1905.0 MHz		1855.0 MHz	1880.0 MHz	1905.0 MHz		1855.0 MHz	1880.0 MHz	1905.0 MHz	
10	1	0	23.87	23.75	23.71	0	22.92	22.80	22.75	1	22.01	21.92	21.90	2
	1	24	23.59	23.38	23.31	0	22.60	22.40	22.34	1	21.65	21.45	21.39	2
	1	49	23.46	23.32	23.27	0	22.40	22.33	22.21	1	21.45	21.38	21.26	2
	25	0	22.61	22.51	22.45	1	21.64	21.50	21.40	2	20.69	20.55	20.45	3
	25	12	22.53	22.42	22.36	1	21.52	21.38	21.33	2	20.57	20.43	20.38	3
	25	25	22.41	22.34	22.31	1	21.47	21.29	21.25	2	20.52	20.34	20.30	3
	50	0	22.52	22.41	22.34	1	21.52	21.36	21.32	2	20.57	20.41	20.37	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 18625	Mid CH 18900	High CH 19175	3GPP MPR (dB)	Low CH 18625	Mid CH 18900	High CH 19175	3GPP MPR (dB)	Low CH 18625	Mid CH 18900	High CH 19175	3GPP MPR (dB)
			1852.5 MHz	1880.0 MHz	1907.5 MHz		1852.5 MHz	1880.0 MHz	1907.5 MHz		1852.5 MHz	1880.0 MHz	1907.5 MHz	
5	1	0	23.82	23.70	23.66	0	22.87	22.75	22.70	1	21.94	21.85	21.83	2
	1	12	23.54	23.33	23.26	0	22.55	22.35	22.29	1	21.58	21.38	21.32	2
	1	24	23.41	23.27	23.22	0	22.35	22.28	22.16	1	21.38	21.31	21.19	2
	12	0	22.56	22.46	22.40	1	21.59	21.45	21.35	2	20.62	20.48	20.38	3
	12	6	22.48	22.37	22.31	1	21.47	21.33	21.28	2	20.50	20.36	20.31	3
	12	13	22.36	22.29	22.26	1	21.42	21.24	21.20	2	20.45	20.27	20.23	3
	25	0	22.47	22.36	22.29	1	21.47	21.31	21.27	2	20.50	20.34	20.30	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 18615	Mid CH 18900	High CH 19185	3GPP MPR (dB)	Low CH 18615	Mid CH 18900	High CH 19185	3GPP MPR (dB)	Low CH 18615	Mid CH 18900	High CH 19185	3GPP MPR (dB)
			1851.5 MHz	1880.0 MHz	1908.5 MHz		1851.5 MHz	1880.0 MHz	1908.5 MHz		1851.5 MHz	1880.0 MHz	1908.5 MHz	
3	1	0	23.76	23.64	23.60	0	22.81	22.69	22.64	1	21.89	21.80	21.78	2
	1	7	23.48	23.27	23.20	0	22.49	22.29	22.23	1	21.53	21.33	21.27	2
	1	14	23.35	23.21	23.16	0	22.29	22.22	22.10	1	21.33	21.26	21.14	2
	8	0	22.50	22.40	22.34	1	21.53	21.39	21.29	2	20.57	20.43	20.33	3
	8	3	22.42	22.31	22.25	1	21.41	21.27	21.22	2	20.45	20.31	20.26	3
	8	7	22.30	22.23	22.20	1	21.36	21.18	21.14	2	20.40	20.22	20.18	3
	15	0	22.41	22.30	22.23	1	21.41	21.25	21.21	2	20.45	20.29	20.25	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 18607	Mid CH 18900	High CH 19193	3GPP MPR (dB)	Low CH 18607	Mid CH 18900	High CH 19193	3GPP MPR (dB)	Low CH 18607	Mid CH 18900	High CH 19193	3GPP MPR (dB)
			1850.7 MHz	1880.0 MHz	1909.3 MHz		1850.7 MHz	1880.0 MHz	1909.3 MHz		1850.7 MHz	1880.0 MHz	1909.3 MHz	
1.4	1	0	23.69	23.57	23.53	0	22.74	22.62	22.57	1	21.63	21.59	21.54	2
	1	2	23.41	23.20	23.13	0	22.42	22.22	22.16	1	21.39	21.19	21.13	2
	1	5	23.28	23.14	23.09	0	22.22	22.15	22.03	1	21.19	21.12	21.00	2
	3	0	23.33	23.23	23.17	0	22.36	22.22	22.12	1	21.33	21.19	21.09	2
	3	1	23.25	23.14	23.08	0	22.24	22.10	22.05	1	21.21	21.07	21.02	2
	3	3	23.13	23.06	23.03	0	22.19	22.01	22.03	1	21.16	20.98	21.00	2
	6	0	22.34	22.23	22.16	1	21.34	21.18	21.14	2	20.31	20.15	20.11	3

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LTE Band 4														
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH	Mid CH	High CH	3GPP MPR (dB)	Low CH	Mid CH	High CH	3GPP MPR (dB)	Low CH	Mid CH	High CH	3GPP MPR (dB)
			20050 MHz	20175 MHz	20300 MHz		20050 MHz	20175 MHz	20300 MHz		20050 MHz	20175 MHz	20300 MHz	
20	1	0	24.31	24.36	24.41	0	23.35	23.41	23.46	1	22.37	22.48	22.49	2
	1	50	24.15	24.20	24.29	0	23.18	23.23	23.29	1	22.17	22.22	22.28	2
	1	99	24.07	24.16	24.19	0	23.06	23.19	23.25	1	22.05	22.18	22.24	2
	50	0	23.33	23.38	23.48	1	22.35	22.39	22.47	2	21.34	21.38	21.46	3
	50	25	23.26	23.29	23.38	1	22.21	22.28	22.37	2	21.20	21.27	21.36	3
	50	50	23.21	23.25	23.29	1	22.15	22.21	22.29	2	21.14	21.20	21.28	3
	100	0	23.25	23.28	23.32	1	22.18	22.26	22.33	2	21.17	21.25	21.32	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH	Mid CH	High CH	3GPP MPR (dB)	Low CH	Mid CH	High CH	3GPP MPR (dB)	Low CH	Mid CH	High CH	3GPP MPR (dB)
			20025 MHz	20175 MHz	20325 MHz		20025 MHz	20175 MHz	20325 MHz		20025 MHz	20175 MHz	20325 MHz	
15	1	0	24.30	24.35	24.40	0	23.34	23.40	23.45	1	22.34	22.45	22.46	2
	1	37	24.14	24.19	24.28	0	23.17	23.22	23.28	1	22.14	22.19	22.25	2
	1	74	24.06	24.15	24.18	0	23.05	23.18	23.24	1	22.05	22.15	22.21	2
	36	0	23.32	23.37	23.47	1	22.34	22.38	22.46	2	21.31	21.35	21.43	3
	36	19	23.25	23.28	23.37	1	22.20	22.27	22.36	2	21.17	21.24	21.33	3
	36	39	23.20	23.24	23.28	1	22.14	22.20	22.28	2	21.11	21.17	21.25	3
	75	0	23.24	23.27	23.31	1	22.17	22.25	22.32	2	21.14	21.22	21.29	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH	Mid CH	High CH	3GPP MPR (dB)	Low CH	Mid CH	High CH	3GPP MPR (dB)	Low CH	Mid CH	High CH	3GPP MPR (dB)
			20000 MHz	20175 MHz	20350 MHz		20000 MHz	20175 MHz	20350 MHz		20000 MHz	20175 MHz	20350 MHz	
10	1	0	24.28	24.33	24.38	0	23.32	23.38	23.43	1	22.30	22.41	22.42	2
	1	24	24.12	24.17	24.26	0	23.15	23.20	23.26	1	22.10	22.15	22.21	2
	1	49	24.04	24.13	24.16	0	23.03	23.16	23.22	1	22.03	22.11	22.17	2
	25	0	23.30	23.35	23.45	1	22.32	22.36	22.44	2	21.27	21.31	21.39	3
	25	12	23.23	23.26	23.35	1	22.18	22.25	22.34	2	21.13	21.20	21.29	3
	25	25	23.18	23.22	23.26	1	22.12	22.18	22.26	2	21.07	21.13	21.21	3
	50	0	23.22	23.25	23.29	1	22.15	22.23	22.30	2	21.10	21.18	21.25	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH	Mid CH	High CH	3GPP MPR (dB)	Low CH	Mid CH	High CH	3GPP MPR (dB)	Low CH	Mid CH	High CH	3GPP MPR (dB)
			19975 MHz	20175 MHz	20375 MHz		19975 MHz	20175 MHz	20375 MHz		19975 MHz	20175 MHz	20375 MHz	
5	1	0	24.24	24.29	24.34	0	23.28	23.34	23.39	1	22.25	22.36	22.37	2
	1	12	24.08	24.13	24.22	0	23.11	23.16	23.22	1	22.05	22.10	22.16	2
	1	24	24.00	24.09	24.12	0	22.99	23.12	23.18	1	22.02	22.06	22.12	2
	12	0	23.26	23.31	23.41	1	22.28	22.32	22.40	2	21.22	21.26	21.34	3
	12	6	23.19	23.22	23.31	1	22.14	22.21	22.30	2	21.08	21.15	21.24	3
	12	13	23.14	23.18	23.22	1	22.08	22.14	22.22	2	21.02	21.08	21.16	3
	25	0	23.18	23.21	23.25	1	22.11	22.19	22.26	2	21.05	21.13	21.20	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH	Mid CH	High CH	3GPP MPR (dB)	Low CH	Mid CH	High CH	3GPP MPR (dB)	Low CH	Mid CH	High CH	3GPP MPR (dB)
			19965 MHz	20175 MHz	20385 MHz		19965 MHz	20175 MHz	20385 MHz		19965 MHz	20175 MHz	20385 MHz	
3	1	0	24.19	24.24	24.29	0	23.23	23.29	23.34	1	22.19	22.30	22.31	2
	1	7	24.03	24.08	24.17	0	23.06	23.11	23.17	1	21.99	22.04	22.10	2
	1	14	23.95	24.04	24.07	0	22.94	23.07	23.13	1	21.87	22.00	22.06	2
	8	0	23.21	23.26	23.36	1	22.23	22.27	22.35	2	21.16	21.20	21.28	3
	8	3	23.14	23.17	23.26	1	22.09	22.16	22.25	2	21.02	21.09	21.18	3
	8	7	23.09	23.13	23.17	1	22.03	22.09	22.17	2	20.96	21.02	21.10	3
	15	0	23.13	23.16	23.20	1	22.06	22.14	22.21	2	20.99	21.07	21.14	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH	Mid CH	High CH	3GPP MPR (dB)	Low CH	Mid CH	High CH	3GPP MPR (dB)	Low CH	Mid CH	High CH	3GPP MPR (dB)
			19957 MHz	20175 MHz	20393 MHz		19957 MHz	20175 MHz	20393 MHz		19957 MHz	20175 MHz	20393 MHz	
1.4	1	0	24.13	24.18	24.23	0	23.17	23.23	23.28	1	22.15	22.21	22.26	2
	1	2	23.97	24.02	24.11	0	23.00	23.05	23.11	1	21.98	22.03	22.09	2
	1	5	23.89	23.98	24.01	0	22.88	23.01	23.07	1	21.86	21.99	22.05	2
	3	0	23.15	23.20	23.30	0	22.17	22.21	22.29	1	21.15	21.19	21.27	2
	3	1	23.08	23.11	23.20	0	22.03	22.10	22.19	1	21.01	21.08	21.17	2
	3	3	23.03	23.07	23.11	0	22.01	22.03	22.11	1	20.99	21.01	21.09	2
	6	0	23.07	23.10	23.14	1	22.00	22.08	22.15	2	20.98	21.06	21.13	3

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LTE Band 5														
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 20450	Mid CH 20525	High CH 20600	3GPP MPR (dB)	Low CH 20450	Mid CH 20525	High CH 20600	3GPP MPR (dB)	Low CH 20450	Mid CH 20525	High CH 20600	3GPP MPR (dB)
			829.0 MHz	836.5 MHz	844.0 MHz		829.0 MHz	836.5 MHz	844.0 MHz		829.0 MHz	836.5 MHz	844.0 MHz	
10	1	0	24.50	24.46	24.37	0	23.49	23.44	23.40	1	22.46	22.41	22.37	2
	1	24	24.47	24.44	24.34	0	23.44	23.41	23.34	1	22.41	22.38	22.31	2
	1	49	24.34	24.30	24.23	0	23.43	23.32	23.26	1	22.40	22.29	22.23	2
	25	0	23.50	23.47	23.34	1	22.43	22.48	22.40	2	21.40	21.45	21.37	3
	25	12	23.41	23.33	23.25	1	22.41	22.30	22.23	2	21.38	21.27	21.20	3
	25	25	23.32	23.24	23.19	1	22.23	22.19	22.11	2	21.20	21.16	21.08	3
	50	0	23.48	23.45	23.40	1	22.48	22.45	22.36	2	21.45	21.42	21.33	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 20425	Mid CH 20525	High CH 20625	3GPP MPR (dB)	Low CH 20425	Mid CH 20525	High CH 20625	3GPP MPR (dB)	Low CH 20425	Mid CH 20525	High CH 20625	3GPP MPR (dB)
			826.5 MHz	836.5 MHz	846.5 MHz		826.5 MHz	836.5 MHz	846.5 MHz		826.5 MHz	836.5 MHz	846.5 MHz	
5	1	0	24.48	24.44	24.35	0	23.47	23.42	23.38	1	22.42	22.37	22.33	2
	1	12	24.45	24.42	24.32	0	23.42	23.39	23.32	1	22.37	22.34	22.27	2
	1	24	24.32	24.28	24.21	0	23.41	23.30	23.24	1	22.36	22.25	22.19	2
	12	0	23.48	23.45	23.32	1	22.41	22.46	22.38	2	21.36	21.41	21.33	3
	12	6	23.39	23.31	23.23	1	22.39	22.28	22.21	2	21.34	21.23	21.16	3
	12	13	23.30	23.22	23.17	1	22.21	22.17	22.09	2	21.16	21.12	21.04	3
	25	0	23.46	23.43	23.38	1	22.46	22.43	22.34	2	21.41	21.38	21.29	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 20415	Mid CH 20525	High CH 20635	3GPP MPR (dB)	Low CH 20415	Mid CH 20525	High CH 20635	3GPP MPR (dB)	Low CH 20415	Mid CH 20525	High CH 20635	3GPP MPR (dB)
			825.5 MHz	836.5 MHz	847.5 MHz		825.5 MHz	836.5 MHz	847.5 MHz		825.5 MHz	836.5 MHz	847.5 MHz	
3	1	0	24.45	24.41	24.32	0	23.44	23.39	23.35	1	22.37	22.32	22.28	2
	1	7	24.42	24.39	24.29	0	23.39	23.36	23.29	1	22.32	22.29	22.22	2
	1	14	24.29	24.25	24.18	0	23.38	23.27	23.21	1	22.31	22.20	22.14	2
	8	0	23.45	23.42	23.29	1	22.38	22.43	22.35	2	21.31	21.36	21.28	3
	8	3	23.36	23.28	23.20	1	22.36	22.25	22.18	2	21.29	21.18	21.11	3
	8	7	23.27	23.19	23.14	1	22.18	22.14	22.06	2	21.11	21.07	20.99	3
	15	0	23.43	23.40	23.35	1	22.43	22.40	22.31	2	21.36	21.33	21.24	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 20407	Mid CH 20525	High CH 20643	3GPP MPR (dB)	Low CH 20407	Mid CH 20525	High CH 20643	3GPP MPR (dB)	Low CH 20407	Mid CH 20525	High CH 20643	3GPP MPR (dB)
			824.7 MHz	836.5 MHz	848.3 MHz		824.7 MHz	836.5 MHz	848.3 MHz		824.7 MHz	836.5 MHz	848.3 MHz	
1.4	1	0	24.42	24.38	24.29	0	23.41	23.36	23.32	1	22.35	22.30	22.26	2
	1	2	24.39	24.36	24.26	0	23.36	23.33	23.26	1	22.30	22.27	22.20	2
	1	5	24.26	24.22	24.15	0	23.35	23.24	23.18	1	22.29	22.18	22.12	2
	3	0	24.32	24.29	24.16	0	23.25	23.30	23.22	1	21.29	21.34	21.26	2
	3	1	24.23	24.15	24.07	0	23.23	23.12	23.05	1	21.27	21.16	21.09	2
	3	3	24.14	24.06	24.01	0	23.05	23.01	22.93	1	21.09	21.05	20.97	2
	6	0	24.30	24.27	24.22	1	23.30	23.27	23.18	2	21.34	21.31	21.22	3

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LTE Band 7														
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 20850	Mid CH 21100	High CH 21350	3GPP MPR (dB)	Low CH 20850	Mid CH 21100	High CH 21350	3GPP MPR (dB)	Low CH 20850	Mid CH 21100	High CH 21350	3GPP MPR (dB)
			2510.0 MHz	2535.0 MHz	2560.0 MHz		2510.0 MHz	2535.0 MHz	2560.0 MHz		2510.0 MHz	2535.0 MHz	2560.0 MHz	
20	1	0	23.22	23.66	23.74	0	22.23	22.71	22.79	1	21.27	21.75	21.83	2
	1	50	23.09	23.52	23.65	0	22.14	22.54	22.63	1	21.18	21.58	21.67	2
	1	99	22.97	23.47	23.57	0	21.99	22.49	22.59	1	21.03	21.53	21.63	2
	50	0	22.27	22.67	22.73	1	21.24	21.65	21.77	2	20.28	20.69	20.81	3
	50	25	22.20	22.62	22.70	1	21.13	21.59	21.69	2	20.17	20.63	20.73	3
	50	50	22.16	22.60	22.65	1	21.11	21.56	21.64	2	20.15	20.60	20.68	3
	100	0	22.21	22.65	22.71	1	21.26	21.62	21.71	2	20.30	20.66	20.75	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 20825	Mid CH 21100	High CH 21375	3GPP MPR (dB)	Low CH 20825	Mid CH 21100	High CH 21375	3GPP MPR (dB)	Low CH 20825	Mid CH 21100	High CH 21375	3GPP MPR (dB)
			2507.5 MHz	2535.0 MHz	2562.5 MHz		2507.5 MHz	2535.0 MHz	2562.5 MHz		2507.5 MHz	2535.0 MHz	2562.5 MHz	
15	1	0	23.21	23.65	23.73	0	22.22	22.70	22.78	1	21.23	21.71	21.79	2
	1	37	23.08	23.51	23.64	0	22.13	22.53	22.62	1	21.14	21.54	21.63	2
	1	74	22.96	23.46	23.56	0	21.98	22.48	22.58	1	20.99	21.49	21.59	2
	36	0	22.26	22.66	22.72	1	21.23	21.64	21.76	2	20.24	20.65	20.77	3
	36	19	22.19	22.61	22.69	1	21.12	21.58	21.68	2	20.13	20.59	20.69	3
	36	39	22.15	22.59	22.64	1	21.10	21.55	21.63	2	20.11	20.56	20.64	3
	75	0	22.20	22.64	22.70	1	21.25	21.61	21.70	2	20.26	20.62	20.71	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 20800	Mid CH 21100	High CH 21400	3GPP MPR (dB)	Low CH 20800	Mid CH 21100	High CH 21400	3GPP MPR (dB)	Low CH 20800	Mid CH 21100	High CH 21400	3GPP MPR (dB)
			2505.0 MHz	2535.0 MHz	2565.0 MHz		2505.0 MHz	2535.0 MHz	2565.0 MHz		2505.0 MHz	2535.0 MHz	2565.0 MHz	
10	1	0	23.19	23.63	23.71	0	22.20	22.68	22.76	1	21.20	21.68	21.76	2
	1	24	23.06	23.49	23.62	0	22.11	22.51	22.60	1	21.11	21.51	21.60	2
	1	49	22.94	23.44	23.54	0	21.96	22.46	22.56	1	20.96	21.46	21.56	2
	25	0	22.24	22.64	22.70	1	21.21	21.62	21.74	2	20.21	20.62	20.74	3
	25	12	22.17	22.59	22.67	1	21.10	21.56	21.66	2	20.10	20.56	20.66	3
	25	25	22.13	22.57	22.62	1	21.08	21.53	21.61	2	20.08	20.53	20.61	3
	50	0	22.18	22.62	22.68	1	21.23	21.59	21.68	2	20.23	20.59	20.68	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 20775	Mid CH 21100	High CH 21425	3GPP MPR (dB)	Low CH 20775	Mid CH 21100	High CH 21425	3GPP MPR (dB)	Low CH 20775	Mid CH 21100	High CH 21425	3GPP MPR (dB)
			2502.5 MHz	2535.0 MHz	2567.5 MHz		2502.5 MHz	2535.0 MHz	2567.5 MHz		2502.5 MHz	2535.0 MHz	2567.5 MHz	
5	1	0	23.16	23.60	23.68	0	22.17	22.65	22.73	1	21.16	21.64	21.72	2
	1	12	23.03	23.46	23.59	0	22.08	22.48	22.57	1	21.07	21.47	21.56	2
	1	24	22.91	23.41	23.51	0	21.93	22.43	22.53	1	20.92	21.42	21.52	2
	12	0	22.21	22.61	22.67	1	21.18	21.59	21.71	2	20.17	20.58	20.70	3
	12	6	22.14	22.56	22.64	1	21.07	21.53	21.63	2	20.06	20.52	20.62	3
	12	13	22.10	22.54	22.59	1	21.05	21.50	21.58	2	20.04	20.49	20.57	3
	25	0	22.15	22.59	22.65	1	21.20	21.56	21.65	2	20.19	20.55	20.64	3

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LTE Band 12														
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 23060	Mid CH 23095	High CH 23130	3GPP MPR (dB)	Low CH 23060	Mid CH 23095	High CH 23130	3GPP MPR (dB)	Low CH 23060	Mid CH 23095	High CH 23130	3GPP MPR (dB)
			704.0 MHz	707.5 MHz	711.0 MHz		704.0 MHz	707.5 MHz	711.0 MHz		704.0 MHz	707.5 MHz	711.0 MHz	
10	1	0	23.89	24.00	23.98	0	22.92	22.99	22.94	1	22.08	22.11	22.09	2
	1	24	23.86	23.95	23.93	0	22.87	22.94	22.95	1	22.07	22.09	22.08	2
	1	49	23.77	23.92	23.87	0	22.74	22.96	22.89	1	22.01	22.05	22.03	2
	25	0	22.93	23.00	22.98	1	21.86	22.00	21.97	2	21.06	21.20	21.17	3
	25	12	22.85	22.98	22.96	1	21.83	21.97	21.93	2	21.03	21.17	21.13	3
	25	25	22.81	22.91	22.88	1	21.78	21.88	21.83	2	21.07	21.08	21.03	3
	50	0	22.91	22.90	23.00	1	21.92	21.98	21.94	2	21.12	21.18	21.14	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 23035	Mid CH 23095	High CH 23155	3GPP MPR (dB)	Low CH 23035	Mid CH 23095	High CH 23155	3GPP MPR (dB)	Low CH 23035	Mid CH 23095	High CH 23155	3GPP MPR (dB)
			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	
5	1	0	23.83	23.95	23.93	0	22.82	23.00	22.96	1	21.97	22.00	21.98	2
	1	12	23.76	23.90	23.86	0	22.75	22.92	22.89	1	21.96	21.98	21.97	2
	1	24	23.71	23.87	23.80	0	22.69	22.85	22.83	1	21.90	21.94	21.92	2
	12	0	22.82	22.91	22.89	1	21.80	21.88	21.86	2	20.95	21.09	21.06	3
	12	6	22.74	22.89	22.86	1	21.68	21.86	21.83	2	20.92	21.06	21.02	3
	12	13	22.70	22.80	22.78	1	21.62	21.77	21.73	2	20.96	20.97	20.92	3
	25	0	22.65	22.79	22.76	1	21.59	21.75	21.66	2	21.01	21.07	21.03	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 23025	Mid CH 23095	High CH 23165	3GPP MPR (dB)	Low CH 23025	Mid CH 23095	High CH 23165	3GPP MPR (dB)	Low CH 23025	Mid CH 23095	High CH 23165	3GPP MPR (dB)
			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	
3	1	0	23.73	23.90	23.87	0	22.78	22.95	22.91	1	21.91	21.94	21.92	2
	1	7	23.68	23.84	23.82	0	22.71	22.88	22.82	1	21.90	21.92	21.91	2
	1	14	23.64	23.78	23.71	0	22.66	22.84	22.80	1	21.84	21.88	21.86	2
	8	0	22.66	22.82	22.79	1	21.71	21.82	21.80	2	20.89	21.03	21.00	3
	8	3	22.61	22.79	22.72	1	21.56	21.80	21.71	2	20.86	21.00	20.96	3
	8	7	22.54	22.70	22.66	1	21.47	21.65	21.62	2	20.90	20.91	20.86	3
	15	0	22.49	22.67	22.62	1	21.45	21.64	21.61	2	20.95	21.01	20.97	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 23017	Mid CH 23095	High CH 23173	3GPP MPR (dB)	Low CH 23017	Mid CH 23095	High CH 23173	3GPP MPR (dB)	Low CH 23017	Mid CH 23095	High CH 23173	3GPP MPR (dB)
			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	
1.4	1	0	23.66	23.85	23.82	0	22.69	22.90	22.86	1	21.80	22.01	21.97	2
	1	2	23.61	23.77	23.73	0	22.60	22.83	22.76	1	21.71	21.94	21.87	2
	1	5	23.48	23.71	23.63	0	22.51	22.78	22.72	1	21.62	21.89	21.83	2
	3	0	23.64	23.82	23.78	0	22.69	22.89	22.85	1	21.80	22.00	21.96	2
	3	1	23.55	23.72	23.69	0	22.60	22.81	22.74	1	21.71	21.92	21.85	2
	3	3	23.46	23.68	23.59	0	22.53	22.75	22.66	1	21.64	21.86	21.77	2
	6	0	22.35	22.54	22.46	1	21.29	21.52	21.45	2	20.40	20.63	20.56	3

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LTE Band 13														
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
				Mid CH 23230		3GPP MPR (dB)		Mid CH 23230		3GPP MPR (dB)		Mid CH 23230		3GPP MPR (dB)
				782.0 MHz				782.0 MHz				782.0 MHz		
10	1	0		24.53		0		23.58		1		22.57		2
	1	24		24.50		0		23.54		1		22.53		2
	1	49		24.41		0		23.44		1		22.46		2
	25	0		23.52		1		22.53		2		21.52		3
	25	12		23.46		1		22.45		2		21.44		3
	25	25		23.33		1		22.31		2		21.30		3
	50	0		23.51		1		22.51		2		21.50		3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 23205	Mid CH 23230	High CH 23255	3GPP MPR (dB)	Low CH 23205	Mid CH 23230	High CH 23255	3GPP MPR (dB)	Low CH 23205	Mid CH 23230	High CH 23255	3GPP MPR (dB)
			779.5 MHz	782.0 MHz	784.5 MHz		779.5 MHz	782.0 MHz	784.5 MHz		779.5 MHz	782.0 MHz	784.5 MHz	
5	1	0	23.87	24.30	23.96	0	22.89	23.33	22.99	1	22.19	22.63	22.29	2
	1	12	23.82	24.26	23.92	0	22.84	23.29	22.95	1	22.14	22.59	22.25	2
	1	24	23.69	24.20	23.83	0	22.78	23.23	22.83	1	22.08	22.53	22.13	2
	12	0	23.23	23.62	23.24	1	22.17	22.62	22.23	2	21.47	21.92	21.53	3
	12	6	23.04	23.52	23.22	1	22.01	22.50	22.13	2	21.31	21.80	21.43	3
	12	13	22.98	23.40	23.06	1	21.92	22.37	21.99	2	21.22	21.67	21.29	3
	25	0	23.02	23.45	23.18	1	21.99	22.42	22.10	2	21.29	21.72	21.40	3

LTE Band 17														
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 23780	Mid CH 23790	High CH 23800	3GPP MPR (dB)	Low CH 23780	Mid CH 23790	High CH 23800	3GPP MPR (dB)	Low CH 23780	Mid CH 23790	High CH 23800	3GPP MPR (dB)
			709.0 MHz	710.0 MHz	711.0 MHz		709.0 MHz	710.0 MHz	711.0 MHz		709.0 MHz	710.0 MHz	711.0 MHz	
10	1	0	23.89	23.99	23.95	0	22.80	22.94	22.89	1	21.88	22.02	21.97	2
	1	24	23.87	23.97	23.92	0	22.78	22.91	22.82	1	21.86	21.99	21.90	2
	1	49	23.90	23.98	23.95	0	22.80	22.93	22.89	1	21.88	22.01	21.97	2
	25	0	22.82	22.91	22.88	1	21.90	22.00	21.96	2	20.98	21.08	21.04	3
	25	12	22.77	22.88	22.84	1	21.82	21.95	21.88	2	20.90	21.03	20.96	3
	25	25	22.73	22.83	22.78	1	21.78	21.90	21.83	2	20.86	20.98	20.91	3
	50	0	22.79	22.89	22.84	1	21.85	21.98	21.92	2	20.93	21.06	21.00	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 23755	Mid CH 23790	High CH 23825	3GPP MPR (dB)	Low CH 23755	Mid CH 23790	High CH 23825	3GPP MPR (dB)	Low CH 23755	Mid CH 23790	High CH 23825	3GPP MPR (dB)
			706.5 MHz	710.0 MHz	713.5 MHz		706.5 MHz	710.0 MHz	713.5 MHz		706.5 MHz	710.0 MHz	713.5 MHz	
5	1	0	23.88	23.98	23.94	0	22.79	22.93	22.88	1	21.85	21.99	21.94	2
	1	12	23.86	23.96	23.91	0	22.77	22.90	22.81	1	21.83	21.96	21.87	2
	1	24	23.89	23.97	23.94	0	22.79	22.92	22.88	1	21.85	21.98	21.94	2
	12	0	22.81	22.90	22.87	1	21.89	21.99	21.95	2	20.95	21.05	21.01	3
	12	6	22.76	22.87	22.83	1	21.81	21.94	21.87	2	20.87	21.00	20.93	3
	12	13	22.72	22.82	22.77	1	21.77	21.89	21.82	2	20.83	20.95	20.88	3
	25	0	22.78	22.88	22.83	1	21.84	21.97	21.91	2	20.90	21.03	20.97	3

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LTE Band 25														
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 26140	Mid CH 26365	High CH 26590	3GPP MPR (dB)	Low CH 26140	Mid CH 26365	High CH 26590	3GPP MPR (dB)	Low CH 26140	Mid CH 26365	High CH 26590	3GPP MPR (dB)
			1860.0 MHz	1882.5 MHz	1905.0 MHz		1860.0 MHz	1882.5 MHz	1905.0 MHz		1860.0 MHz	1882.5 MHz	1905.0 MHz	
20	1	0	23.87	23.82	23.85	0	22.92	22.86	22.90	1	21.86	21.80	21.84	2
	1	50	23.61	23.48	23.51	0	22.58	22.49	22.53	1	21.52	21.43	21.47	2
	1	99	23.49	23.42	23.45	0	22.52	22.43	22.45	1	21.46	21.37	21.39	2
	50	0	22.74	22.63	22.66	1	21.75	21.62	21.66	2	20.69	20.56	20.60	3
	50	25	22.60	22.53	22.56	1	21.57	21.51	21.55	2	20.51	20.45	20.49	3
	50	50	22.49	22.42	22.45	1	21.44	21.37	21.39	2	20.38	20.31	20.33	3
	100	0	22.55	22.50	22.53	1	21.54	21.46	21.51	2	20.48	20.40	20.45	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 26115	Mid CH 26365	High CH 26615	3GPP MPR (dB)	Low CH 26115	Mid CH 26365	High CH 26615	3GPP MPR (dB)	Low CH 26115	Mid CH 26365	High CH 26615	3GPP MPR (dB)
			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	
15	1	0	23.86	23.81	23.84	0	22.91	22.85	22.89	1	21.83	21.77	21.81	2
	1	37	23.60	23.47	23.50	0	22.57	22.48	22.52	1	21.49	21.40	21.44	2
	1	74	23.48	23.41	23.44	0	22.51	22.42	22.44	1	21.43	21.34	21.36	2
	36	0	22.73	22.62	22.65	1	21.74	21.61	21.65	2	20.66	20.53	20.57	3
	36	19	22.59	22.52	22.55	1	21.56	21.50	21.54	2	20.48	20.42	20.46	3
	36	39	22.48	22.41	22.44	1	21.43	21.36	21.38	2	20.35	20.28	20.30	3
	75	0	22.54	22.49	22.52	1	21.53	21.45	21.50	2	20.45	20.37	20.42	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 26090	Mid CH 26365	High CH 26640	3GPP MPR (dB)	Low CH 26090	Mid CH 26365	High CH 26640	3GPP MPR (dB)	Low CH 26090	Mid CH 26365	High CH 26640	3GPP MPR (dB)
			1855.0 MHz	1882.5 MHz	1910.0 MHz		1855.0 MHz	1882.5 MHz	1910.0 MHz		1855.0 MHz	1882.5 MHz	1910.0 MHz	
10	1	0	23.84	23.79	23.82	0	22.89	22.83	22.87	1	21.78	21.72	21.76	2
	1	24	23.58	23.45	23.48	0	22.55	22.46	22.50	1	21.44	21.35	21.39	2
	1	49	23.46	23.39	23.42	0	22.49	22.40	22.42	1	21.38	21.29	21.31	2
	25	0	22.71	22.60	22.63	1	21.72	21.59	21.63	2	20.61	20.48	20.52	3
	25	12	22.57	22.50	22.53	1	21.54	21.48	21.52	2	20.43	20.37	20.41	3
	25	25	22.46	22.39	22.42	1	21.41	21.34	21.36	2	20.30	20.23	20.25	3
	50	0	22.52	22.47	22.50	1	21.51	21.43	21.48	2	20.40	20.32	20.37	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 26065	Mid CH 26365	High CH 26665	3GPP MPR (dB)	Low CH 26065	Mid CH 26365	High CH 26665	3GPP MPR (dB)	Low CH 26065	Mid CH 26365	High CH 26665	3GPP MPR (dB)
			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	
5	1	0	23.81	23.76	23.79	0	22.86	22.80	22.84	1	21.74	21.68	21.72	2
	1	12	23.55	23.42	23.45	0	22.52	22.43	22.47	1	21.40	21.31	21.35	2
	1	24	23.43	23.36	23.39	0	22.46	22.37	22.39	1	21.34	21.25	21.27	2
	12	0	22.68	22.57	22.60	1	21.69	21.56	21.60	2	20.57	20.44	20.48	3
	12	6	22.54	22.47	22.50	1	21.51	21.45	21.49	2	20.39	20.33	20.37	3
	12	13	22.43	22.36	22.39	1	21.38	21.31	21.33	2	20.26	20.19	20.21	3
	25	0	22.49	22.44	22.47	1	21.48	21.40	21.45	2	20.36	20.28	20.33	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 26055	Mid CH 26365	High CH 26675	3GPP MPR (dB)	Low CH 26055	Mid CH 26365	High CH 26675	3GPP MPR (dB)	Low CH 26055	Mid CH 26365	High CH 26675	3GPP MPR (dB)
			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	
3	1	0	23.77	23.72	23.75	0	22.82	22.76	22.80	1	21.71	21.65	21.69	2
	1	7	23.51	23.38	23.41	0	22.48	22.39	22.43	1	21.37	21.28	21.32	2
	1	14	23.39	23.32	23.35	0	22.42	22.33	22.35	1	21.31	21.22	21.24	2
	8	0	22.64	22.53	22.56	1	21.65	21.52	21.56	2	20.54	20.41	20.45	3
	8	3	22.50	22.43	22.46	1	21.47	21.41	21.45	2	20.36	20.30	20.34	3
	8	7	22.39	22.32	22.35	1	21.34	21.27	21.29	2	20.23	20.16	20.18	3
	15	0	22.45	22.40	22.43	1	21.44	21.36	21.41	2	20.33	20.25	20.30	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 26047	Mid CH 26365	High CH 26683	3GPP MPR (dB)	Low CH 26047	Mid CH 26365	High CH 26683	3GPP MPR (dB)	Low CH 26047	Mid CH 26365	High CH 26683	3GPP MPR (dB)
			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	
1.4	1	0	23.72	23.67	23.70	0	22.77	22.71	22.75	1	21.64	21.58	21.62	2
	1	2	23.46	23.33	23.36	0	22.43	22.34	22.38	1	21.30	21.21	21.25	2
	1	5	23.34	23.27	23.30	0	22.37	22.28	22.30	1	21.24	21.15	21.17	2
	3	0	23.49	23.38	23.41	0	22.20	22.07	22.11	1	21.07	20.94	20.98	2
	3	1	23.35	23.28	23.31	0	22.10	22.04	22.08	1	20.97	20.91	20.95	2
	3	3	23.24	23.17	23.20	0	22.08	22.03	22.06	1	20.95	20.90	20.93	2
	6	0	23.30	23.25	23.28	1	21.99	21.91	21.96	2	20.86	20.78	20.83	3

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LTE Band 26														
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH	Mid CH	High CH	3GPP MPR (dB)	Low CH	Mid CH	High CH	3GPP MPR (dB)	Low CH	Mid CH	High CH	3GPP MPR (dB)
			821.5 MHz	831.5 MHz	841.5 MHz		821.5 MHz	831.5 MHz	841.5 MHz		821.5 MHz	831.5 MHz	841.5 MHz	
15	1	0	24.75	24.63	24.71	0	23.79	23.65	23.74	1	22.96	22.82	22.91	2
	1	37	24.65	24.48	24.53	0	23.63	23.49	23.57	1	22.80	22.66	22.74	2
	1	74	24.53	24.40	24.47	0	23.56	23.41	23.47	1	22.73	22.58	22.64	2
	36	0	23.97	23.80	23.89	1	23.00	22.78	22.87	2	22.17	21.95	22.04	3
	36	19	23.89	23.76	23.82	1	22.88	22.73	22.80	2	22.05	21.90	21.97	3
	36	39	23.82	23.68	23.76	1	22.82	22.64	22.75	2	21.99	21.81	21.92	3
	75	0	23.78	23.66	23.72	1	22.74	22.62	22.68	2	21.91	21.79	21.85	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH	Mid CH	High CH	3GPP MPR (dB)	Low CH	Mid CH	High CH	3GPP MPR (dB)	Low CH	Mid CH	High CH	3GPP MPR (dB)
			26740 MHz	26865 MHz	26990 MHz		26740 MHz	26865 MHz	26990 MHz		26740 MHz	26865 MHz	26990 MHz	
10	1	0	24.69	24.57	24.65	0	23.73	23.59	23.68	1	22.88	22.42	22.51	2
	1	24	24.59	24.42	24.47	0	23.57	23.43	23.51	1	22.72	22.26	22.34	2
	1	49	24.47	24.34	24.41	0	23.50	23.35	23.41	1	22.65	22.18	22.24	2
	25	0	23.91	23.74	23.83	1	22.94	22.72	22.81	2	22.09	21.55	21.64	3
	25	12	23.83	23.70	23.76	1	22.82	22.67	22.74	2	21.97	21.50	21.57	3
	25	25	23.76	23.62	23.70	1	22.76	22.58	22.69	2	21.91	21.41	21.52	3
	50	0	23.72	23.60	23.66	1	22.68	22.56	22.62	2	21.83	21.39	21.45	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH	Mid CH	High CH	3GPP MPR (dB)	Low CH	Mid CH	High CH	3GPP MPR (dB)	Low CH	Mid CH	High CH	3GPP MPR (dB)
			26715 MHz	26865 MHz	27015 MHz		26715 MHz	26865 MHz	27015 MHz		26715 MHz	26865 MHz	27015 MHz	
5	1	0	24.66	24.54	24.62	0	23.70	23.56	23.65	1	22.84	22.22	22.31	2
	1	12	24.56	24.39	24.44	0	23.54	23.40	23.48	1	22.68	22.06	22.14	2
	1	24	24.44	24.31	24.38	0	23.47	23.32	23.38	1	22.61	21.98	22.04	2
	12	0	23.88	23.71	23.80	1	22.91	22.69	22.78	2	22.05	21.35	21.44	3
	12	6	23.80	23.67	23.73	1	22.79	22.64	22.71	2	21.93	21.30	21.37	3
	12	13	23.73	23.59	23.67	1	22.73	22.55	22.66	2	21.87	21.21	21.32	3
	25	0	23.69	23.57	23.63	1	22.65	22.53	22.59	2	21.79	21.19	21.25	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH	Mid CH	High CH	3GPP MPR (dB)	Low CH	Mid CH	High CH	3GPP MPR (dB)	Low CH	Mid CH	High CH	3GPP MPR (dB)
			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	
3	1	0	24.64	24.52	24.60	0	23.68	23.54	23.63	1	22.80	22.02	22.11	2
	1	7	24.54	24.37	24.42	0	23.52	23.38	23.46	1	22.64	21.86	21.94	2
	1	14	24.42	24.29	24.36	0	23.45	23.30	23.36	1	22.57	21.78	21.84	2
	8	0	23.86	23.69	23.78	1	22.89	22.67	22.76	2	22.01	21.15	21.24	3
	8	3	23.78	23.65	23.71	1	22.77	22.62	22.69	2	21.89	21.10	21.17	3
	8	7	23.71	23.57	23.65	1	22.71	22.53	22.64	2	21.83	21.01	21.12	3
	15	0	23.67	23.55	23.61	1	22.63	22.51	22.57	2	21.75	20.99	21.05	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH	Mid CH	High CH	3GPP MPR (dB)	Low CH	Mid CH	High CH	3GPP MPR (dB)	Low CH	Mid CH	High CH	3GPP MPR (dB)
			26697 MHz	26865 MHz	27033 MHz		26697 MHz	26865 MHz	27033 MHz		26697 MHz	26865 MHz	27033 MHz	
1.4	1	0	24.59	24.47	24.55	0	23.63	23.49	23.58	1	22.61	20.43	20.52	2
	1	2	24.49	24.32	24.37	0	23.47	23.33	23.41	1	22.45	20.27	20.35	2
	1	5	24.37	24.24	24.31	0	23.40	23.25	23.31	1	22.38	20.19	20.25	2
	3	0	23.81	23.64	23.73	0	22.84	22.62	22.71	1	21.82	19.56	19.65	2
	3	1	23.73	23.60	23.66	0	22.72	22.57	22.64	1	21.70	19.51	19.58	2
	3	3	23.66	23.52	23.60	0	22.66	22.51	22.59	1	21.64	19.45	19.53	2
	6	0	23.62	23.50	23.56	1	22.58	22.46	22.52	2	21.56	19.40	19.46	3

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LTE Band 30														
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
				Mid CH 27710		3GPP MPR (dB)		Mid CH 27710		3GPP MPR (dB)		Mid CH 27710		3GPP MPR (dB)
				2310.0 MHz				2310.0 MHz				2310.0 MHz		
10	1	0		23.94		0		22.99		1		22.10		2
	1	24		23.82		0		22.87		1		21.98		2
	1	49		23.75		0		22.78		1		21.89		2
	25	0		22.93		1		21.93		2		21.04		3
	25	12		22.85		1		21.84		2		20.95		3
	25	25		22.79		1		21.77		2		20.88		3
	50	0		22.87		1		21.87		2		20.98		3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 27685	Mid CH 27710	High CH 27735	3GPP MPR (dB)	Low CH 27685	Mid CH 27710	High CH 27735	3GPP MPR (dB)	Low CH 27685	Mid CH 27710	High CH 27735	3GPP MPR (dB)
			2307.5 MHz	2310.0 MHz	2312.5 MHz		2307.5 MHz	2310.0 MHz	2312.5 MHz		2307.5 MHz	2310.0 MHz	2312.5 MHz	
5	1	0	23.87	23.83	23.80	0	22.92	22.87	22.83	1	21.97	21.92	21.88	2
	1	12	23.83	23.78	23.74	0	22.85	22.80	22.76	1	21.90	21.85	21.81	2
	1	24	23.78	23.70	23.66	0	22.79	22.71	22.66	1	21.84	21.76	21.71	2
	12	0	22.86	22.80	22.78	1	21.92	21.78	21.74	2	20.97	20.83	20.79	3
	12	6	22.81	22.78	22.75	1	21.81	21.75	21.71	2	20.86	20.80	20.76	3
	12	13	22.78	22.75	22.72	1	21.74	21.70	21.67	2	20.79	20.75	20.72	3
	25	0	22.89	22.85	22.80	1	21.88	21.84	21.79	2	20.93	20.89	20.84	3

LTE Band 41 (Power Class 3)																				
BW (MHz)	RB Size	RB Offset	QPSK						16QAM						64QAM					
			L-CH 39750	M-CH 40185	M-CH 40620	M-CH 41055	H-CH 41490	3GPP MPR (dB)	L-CH 39750	M-CH 40185	M-CH 40620	M-CH 41055	H-CH 41490	3GPP MPR (dB)	L-CH 39750	M-CH 40185	M-CH 40620	M-CH 41055	H-CH 41490	3GPP MPR (dB)
			2506.0 MHz	2549.5 MHz	2593.0 MHz	2636.5 MHz	2680.0 MHz		2506.0 MHz	2549.5 MHz	2593.0 MHz	2636.5 MHz	2680.0 MHz		2506.0 MHz	2549.5 MHz	2593.0 MHz	2636.5 MHz	2680.0 MHz	
20	1	0	23.99	23.82	23.93	23.96	23.51	0	22.93	22.76	22.87	22.90	22.45	1	21.83	21.66	21.77	21.80	21.35	2
	1	50	23.79	23.62	23.73	23.76	23.31	0	22.93	22.56	22.67	22.70	22.25	1	21.63	21.46	21.57	21.60	21.15	2
	1	99	23.73	23.56	23.67	23.70	23.25	0	22.93	22.50	22.61	22.64	22.19	1	21.57	21.40	21.51	21.54	21.09	2
	50	0	22.92	22.75	22.86	22.89	22.44	1	22.93	21.69	21.80	21.83	21.38	2	20.76	20.59	20.70	20.73	20.28	3
	50	25	22.87	22.70	22.81	22.84	22.39	1	22.93	21.64	21.75	21.78	21.33	2	20.71	20.54	20.65	20.68	20.23	3
	50	50	22.79	22.62	22.73	22.76	22.31	1	22.93	21.56	21.67	21.70	21.25	2	20.63	20.46	20.57	20.60	20.15	3
	100	0	22.86	22.69	22.80	22.83	22.38	1	22.93	21.63	21.74	21.77	21.32	2	20.70	20.53	20.64	20.67	20.22	3
BW (MHz)	RB Size	RB Offset	QPSK						16QAM						64QAM					
			L-CH 39725	M-CH 40173	M-CH 40620	M-CH 41068	H-CH 41515	3GPP MPR (dB)	L-CH 39725	M-CH 40173	M-CH 40620	M-CH 41068	H-CH 41515	3GPP MPR (dB)	L-CH 39725	M-CH 40173	M-CH 40620	M-CH 41068	H-CH 41515	3GPP MPR (dB)
			2503.5 MHz	2548.3 MHz	2593.0 MHz	2637.8 MHz	2682.5 MHz		2503.5 MHz	2548.3 MHz	2593.0 MHz	2637.8 MHz	2682.5 MHz		2503.5 MHz	2548.3 MHz	2593.0 MHz	2637.8 MHz	2682.5 MHz	
15	1	0	23.93	23.76	23.87	23.90	23.45	0	22.87	22.70	22.81	22.84	22.39	1	21.78	21.61	21.72	21.75	21.30	2
	1	37	23.73	23.56	23.67	23.70	23.25	0	22.67	22.50	22.61	22.64	22.19	1	21.58	21.41	21.52	21.55	21.10	2
	1	74	23.67	23.50	23.61	23.64	23.19	0	22.61	22.44	22.55	22.58	22.13	1	21.52	21.35	21.46	21.49	21.04	2
	36	0	22.86	22.69	22.80	22.83	22.38	1	21.80	21.63	21.74	21.77	21.32	2	20.71	20.54	20.65	20.68	20.23	3
	36	19	22.81	22.64	22.75	22.78	22.33	1	21.75	21.58	21.69	21.72	21.27	2	20.66	20.49	20.60	20.63	20.18	3
	36	39	22.73	22.56	22.67	22.70	22.25	1	21.67	21.50	21.61	21.64	21.19	2	20.58	20.41	20.52	20.55	20.10	3
	75	0	22.80	22.63	22.74	22.77	22.32	1	21.74	21.57	21.68	21.71	21.26	2	20.65	20.48	20.59	20.62	20.17	3
BW (MHz)	RB Size	RB Offset	QPSK						16QAM						64QAM					
			L-CH 39700	M-CH 40160	M-CH 40620	M-CH 41080	H-CH 41540	3GPP MPR (dB)	L-CH 39700	M-CH 40160	M-CH 40620	M-CH 41080	H-CH 41540	3GPP MPR (dB)	L-CH 39700	M-CH 40160	M-CH 40620	M-CH 41080	H-CH 41540	3GPP MPR (dB)
			2501.0 MHz	2547.0 MHz	2593.0 MHz	2639.0 MHz	2685.0 MHz		2501.0 MHz	2547.0 MHz	2593.0 MHz	2639.0 MHz	2685.0 MHz		2501.0 MHz	2547.0 MHz	2593.0 MHz	2639.0 MHz	2685.0 MHz	
10	1	0	23.86	23.69	23.80	23.83	23.38	0	22.80	22.63	22.74	22.77	22.32	1	21.72	21.55	21.66	21.69	21.24	2
	1	24	23.66	23.49	23.60	23.63	23.18	0	22.60	22.43	22.54	22.57	22.12	1	21.52	21.35	21.46	21.49	21.04	2
	1	49	23.60	23.43	23.54	23.57	23.12	0	22.54	22.37	22.48	22.51	22.06	1	21.46	21.29	21.40	21.43	20.98	2
	25	0	22.79	22.62	22.73	22.76	22.31	1	21.73	21.56	21.67	21.70	21.25	2	20.65	20.48	20.59	20.62	20.17	3
	25	12	22.74	22.57	22.68	22.71	22.26	1	21.68	21.51	21.62	21.65	21.20	2	20.60	20.43	20.54	20.57	20.12	3
	25	25	22.66	22.49	22.60	22.63	22.18	1	21.60	21.43	21.54	21.57	21.12	2	20.52	20.35	20.46	20.49	20.04	3
	50	0	22.73	22.56	22.67	22.70	22.25	1	21.67	21.50	21.61	21.64	21.19	2	20.59	20.42	20.53	20.56	20.11	3
BW (MHz)	RB Size	RB Offset	QPSK						16QAM						64QAM					
			L-CH 39675	M-CH 40148	M-CH 40620	M-CH 41093	H-CH 41565	3GPP MPR (dB)	L-CH 39675	M-CH 40148	M-CH 40620	M-CH 41093	H-CH 41565	3GPP MPR (dB)	L-CH 39675	M-CH 40148	M-CH 40620	M-CH 41093	H-CH 41565	3GPP MPR (dB)
			2498.5 MHz	2545.8 MHz	2593.0 MHz	2640.3 MHz	2687.5 MHz		2498.5 MHz	2545.8 MHz	2593.0 MHz	2640.3 MHz	2687.5 MHz		2498.5 MHz	2545.8 MHz	2593.0 MHz	2640.3 MHz	2687.5 MHz	
5	1	0	23.79	23.62	23.73	23.76	23.31	0	22.73	22.56	22.67	22.70	22.25	1	21.63	21.46	21.57	21.60	21.15	2
	1	12	23.59	23.42	23.53	23.56	23.11	0	22.53	22.36	22.47	22.50	22.05	1	21.43	21.26	21.37	21.40	20.95	2
	1	24	23.53	23.36	23.47	23.50	23.05	0	22.47	22.30	22.41	22.44	21.99	1	21.37	21.20	21.31	21.34	20.89	2
	12	0	22.72	22.55	22.66	22.69	22.24	1	21.66	21.49	21.60	21.63	21.18	2	20.56	20.39	20.50	20.53	20.08	3
	12	6	22.67	22.50	22.61	22.64	22.19	1	21.61	21.44	21.55	21.58	21.13	2	20.51	20.34	20.45	20.48	20.03	3
	12	13	22.59	22.42	22.53	22.56	22.11	1	21.53	21.36	21.47	21.50	21.05	2	20.43	20.26	20.37	20.40	19.95	3
	25	0	22.66	22.49	22.60	22.63	22.18	1	21.60	21.43	21.54	21.57	21.12	2	20.50	20.33	20.44	20.47	20.02	3

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LTE Band 41 (Power Class 2)																				
BW (MHz)	RB Size	RB Offset	QPSK					3GPP MPR (dB)	16QAM					3GPP MPR (dB)	64QAM					3GPP MPR (dB)
			L-CH	M-CH	M-CH	M-CH	H-CH		L-CH	M-CH	M-CH	M-CH	H-CH		L-CH	M-CH	M-CH	M-CH	H-CH	
			39750	40185	40620	41055	41490		39750	40185	40620	41055	41490		39750	40185	40620	41055	41490	
20	1	0	2506.0 MHz	2549.5 MHz	2593.0 MHz	2636.5 MHz	2680.0 MHz	0	2506.0 MHz	2549.5 MHz	2593.0 MHz	2636.5 MHz	2680.0 MHz	1	2506.0 MHz	2549.5 MHz	2593.0 MHz	2636.5 MHz	2680.0 MHz	2
	1	50	26.83	26.68	26.75	26.04	26.41	0	25.91	25.72	25.79	25.18	25.40	1	24.83	24.64	24.71	24.10	24.32	2
	1	99	26.71	26.51	26.65	25.88	26.28	0	25.79	25.52	25.68	24.89	25.31	1	24.71	24.44	24.60	23.81	24.23	2
	50	0	25.98	25.80	25.90	25.23	25.67	1	25.01	24.80	24.91	24.22	24.62	2	23.93	23.72	23.83	23.14	23.54	3
	50	25	25.89	25.71	25.85	25.12	25.53	1	24.91	24.72	24.84	24.09	24.48	2	23.83	23.64	23.76	23.01	23.40	3
	50	50	25.82	25.61	25.76	25.08	25.45	1	24.82	24.58	24.74	24.06	24.39	2	23.74	23.50	23.66	22.98	23.31	3
	100	0	25.93	25.77	25.82	25.15	25.51	1	24.88	24.74	24.81	24.13	24.48	2	23.80	23.66	23.73	23.05	23.40	3
BW (MHz)	RB Size	RB Offset	QPSK					3GPP MPR (dB)	16QAM					3GPP MPR (dB)	64QAM					3GPP MPR (dB)
			L-CH	M-CH	M-CH	M-CH	H-CH		L-CH	M-CH	M-CH	M-CH	H-CH		L-CH	M-CH	M-CH	M-CH	H-CH	
			39725	40173	40620	41068	41515		39725	40173	40620	41068	41515		39725	40173	40620	41068	41515	
15	1	0	2503.5 MHz	2548.3 MHz	2593.0 MHz	2637.8 MHz	2682.5 MHz	0	2503.5 MHz	2548.3 MHz	2593.0 MHz	2637.8 MHz	2682.5 MHz	1	2503.5 MHz	2548.3 MHz	2593.0 MHz	2637.8 MHz	2682.5 MHz	2
	1	37	27.04	26.88	26.97	26.24	26.61	0	26.09	25.93	26.02	25.29	25.67	1	24.99	24.83	24.92	24.22	24.58	2
	1	74	26.73	26.56	26.68	25.94	26.32	0	25.80	25.59	25.74	25.00	25.45	1	24.76	24.57	24.64	24.03	24.25	2
	36	0	26.63	26.46	26.56	25.92	26.17	0	25.68	25.46	25.62	24.92	25.29	1	24.64	24.37	24.53	23.74	24.16	2
	36	19	25.93	25.67	25.78	25.11	25.45	1	24.94	24.71	24.81	24.04	24.48	2	23.86	23.65	23.76	23.07	23.47	3
	36	39	25.78	25.65	25.73	24.99	25.34	1	24.85	24.62	24.75	24.00	24.37	2	23.76	23.57	23.69	22.94	23.33	3
	75	0	25.68	25.54	25.63	24.94	25.27	1	24.72	24.52	24.62	23.90	24.18	2	23.67	23.43	23.59	22.91	23.24	3
10	1	0	25.76	25.60	25.70	25.05	25.41	1	24.79	24.57	24.70	23.96	24.41	2	23.73	23.59	23.66	22.98	23.33	3
BW (MHz)	RB Size	RB Offset	QPSK					3GPP MPR (dB)	16QAM					3GPP MPR (dB)	64QAM					3GPP MPR (dB)
			L-CH	M-CH	M-CH	M-CH	H-CH		L-CH	M-CH	M-CH	M-CH	H-CH		L-CH	M-CH	M-CH	M-CH	H-CH	
			39700	40160	40620	41080	41540		39700	40160	40620	41080	41540		39700	40160	40620	41080	41540	
10	1	0	2501.0 MHz	2547.0 MHz	2593.0 MHz	2639.0 MHz	2685.0 MHz	0	2501.0 MHz	2547.0 MHz	2593.0 MHz	2639.0 MHz	2685.0 MHz	1	2501.0 MHz	2547.0 MHz	2593.0 MHz	2639.0 MHz	2685.0 MHz	2
	1	24	26.99	26.83	26.92	26.19	26.56	0	26.04	25.88	25.97	25.22	25.61	1	24.93	24.77	24.86	24.16	24.52	2
	1	49	26.70	26.55	26.62	25.92	26.23	0	25.79	25.51	25.69	24.91	25.34	1	24.70	24.51	24.58	23.97	24.19	2
	25	0	26.58	26.36	26.52	25.73	26.10	0	25.63	25.40	25.54	24.81	25.13	1	24.58	24.31	24.47	23.68	24.10	2
	25	12	25.86	25.63	25.71	24.93	25.30	1	24.88	24.59	24.74	23.98	24.29	2	23.80	23.59	23.70	23.01	23.41	3
	25	25	25.73	25.51	25.65	24.88	25.28	1	24.74	24.53	24.65	23.86	24.26	2	23.70	23.51	23.63	22.88	23.27	3
	50	0	25.65	25.37	25.53	24.81	25.13	1	24.62	24.40	24.52	23.77	24.08	2	23.61	23.37	23.53	22.85	23.18	3
BW (MHz)	RB Size	RB Offset	QPSK					3GPP MPR (dB)	16QAM					3GPP MPR (dB)	64QAM					3GPP MPR (dB)
			L-CH	M-CH	M-CH	M-CH	H-CH		L-CH	M-CH	M-CH	M-CH	H-CH		L-CH	M-CH	M-CH	M-CH	H-CH	
			39675	40148	40620	41093	41565		39675	40148	40620	41093	41565		39675	40148	40620	41093	41565	
5	1	0	2498.5 MHz	2545.8 MHz	2593.0 MHz	2640.3 MHz	2687.5 MHz	0	2498.5 MHz	2545.8 MHz	2593.0 MHz	2640.3 MHz	2687.5 MHz	1	2498.5 MHz	2545.8 MHz	2593.0 MHz	2640.3 MHz	2687.5 MHz	2
	1	12	27.03	26.85	26.96	26.20	26.61	0	26.08	25.89	25.99	25.23	25.63	1	24.89	24.73	24.82	24.12	24.48	2
	1	24	26.80	26.50	26.67	25.93	26.29	0	25.75	25.58	25.69	24.90	25.41	1	24.66	24.47	24.54	23.93	24.15	2
	1	24	26.67	26.46	26.56	25.82	26.10	0	25.61	25.36	25.57	24.84	25.10	1	24.54	24.27	24.43	23.64	24.06	2
	12	0	25.77	25.55	25.67	24.92	25.28	1	24.86	24.59	24.71	23.88	24.23	2	23.76	23.55	23.66	22.97	23.37	3
	12	6	25.72	25.42	25.61	24.80	25.15	1	24.74	24.42	24.62	23.75	24.13	2	23.66	23.47	23.59	22.84	23.23	3
	12	13	25.61	25.29	25.46	24.73	25.01	1	24.57	24.33	24.49	23.69	23.97	2	23.57	23.33	23.49	22.81	23.14	3
5	25	0	25.64	25.45	25.55	24.87	25.26	1	24.67	24.44	24.57	23.82	24.16	2	23.63	23.49	23.56	22.88	23.23	3

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LTE Band 66														
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low Ch	Mid Ch	High Ch	3GPP MPR (dB)	Low Ch	Mid Ch	High Ch	3GPP MPR (dB)	Low Ch	Mid Ch	High Ch	3GPP MPR (dB)
			1720.0 MHz	1745.0 MHz	1770.0 MHz		1720.0 MHz	1745.0 MHz	1770.0 MHz		1720.0 MHz	1745.0 MHz	1770.0 MHz	
20	1	0	23.93	23.88	23.91	0	22.98	22.88	22.95	1	22.06	21.96	22.03	2
	1	50	23.86	23.81	23.83	0	22.91	22.80	22.84	1	21.99	21.88	21.92	2
	1	99	23.83	23.76	23.79	0	22.80	22.75	22.78	1	21.88	21.83	21.86	2
	50	0	23.00	22.91	22.93	1	22.03	21.88	21.92	2	21.11	20.96	21.00	3
	50	25	22.93	22.87	22.89	1	21.90	21.82	21.86	2	20.98	20.90	20.94	3
	50	50	22.87	22.79	22.82	1	21.81	21.74	21.76	2	20.89	20.82	20.84	3
	100	0	22.94	22.89	22.92	1	21.92	21.84	21.88	2	21.00	20.92	20.96	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low Ch	Mid Ch	High Ch	3GPP MPR (dB)	Low Ch	Mid Ch	High Ch	3GPP MPR (dB)	Low Ch	Mid Ch	High Ch	3GPP MPR (dB)
			132047 MHz	132322 MHz	132597 MHz		132047 MHz	132322 MHz	132597 MHz		132047 MHz	132322 MHz	132597 MHz	
15	1	0	23.85	23.80	23.83	0	22.90	22.80	22.87	1	21.99	21.89	21.96	2
	1	37	23.78	23.73	23.75	0	22.83	22.72	22.76	1	21.92	21.81	21.85	2
	1	74	23.75	23.68	23.71	0	22.72	22.67	22.70	1	21.81	21.76	21.79	2
	36	0	22.92	22.83	22.85	1	21.95	21.80	21.84	2	21.04	20.89	20.93	3
	36	19	22.85	22.79	22.81	1	21.82	21.74	21.78	2	20.91	20.83	20.87	3
	36	39	22.79	22.71	22.74	1	21.73	21.66	21.68	2	20.82	20.75	20.77	3
	75	0	22.86	22.81	22.84	1	21.84	21.76	21.80	2	20.93	20.85	20.89	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low Ch	Mid Ch	High Ch	3GPP MPR (dB)	Low Ch	Mid Ch	High Ch	3GPP MPR (dB)	Low Ch	Mid Ch	High Ch	3GPP MPR (dB)
			132022 MHz	132322 MHz	132622 MHz		132022 MHz	132322 MHz	132622 MHz		132022 MHz	132322 MHz	132622 MHz	
10	1	0	23.74	23.69	23.72	0	22.79	22.69	22.76	1	21.91	21.81	21.88	2
	1	24	23.67	23.62	23.64	0	22.72	22.61	22.65	1	21.84	21.73	21.77	2
	1	49	23.64	23.57	23.60	0	22.61	22.56	22.59	1	21.73	21.68	21.71	2
	25	0	22.81	22.72	22.74	1	21.84	21.69	21.73	2	20.96	20.81	20.85	3
	25	12	22.74	22.68	22.70	1	21.71	21.63	21.67	2	20.83	20.75	20.79	3
	25	25	22.68	22.60	22.63	1	21.62	21.55	21.57	2	20.74	20.67	20.69	3
	50	0	22.75	22.70	22.73	1	21.73	21.65	21.69	2	20.85	20.77	20.81	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low Ch	Mid Ch	High Ch	3GPP MPR (dB)	Low Ch	Mid Ch	High Ch	3GPP MPR (dB)	Low Ch	Mid Ch	High Ch	3GPP MPR (dB)
			1712.5 MHz	1745.0 MHz	1777.5 MHz		1712.5 MHz	1745.0 MHz	1777.5 MHz		1712.5 MHz	1745.0 MHz	1777.5 MHz	
5	1	0	23.67	23.62	23.65	0	22.72	22.62	22.69	1	21.86	21.76	21.83	2
	1	12	23.60	23.55	23.57	0	22.65	22.54	22.58	1	21.79	21.68	21.72	2
	1	24	23.57	23.50	23.53	0	22.54	22.49	22.52	1	21.68	21.63	21.66	2
	12	0	22.74	22.65	22.67	1	21.77	21.62	21.66	2	20.91	20.76	20.80	3
	12	6	22.67	22.61	22.63	1	21.64	21.56	21.60	2	20.78	20.70	20.74	3
	12	13	22.61	22.53	22.56	1	21.55	21.48	21.50	2	20.69	20.62	20.64	3
	25	0	22.68	22.63	22.66	1	21.66	21.58	21.62	2	20.80	20.72	20.76	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low Ch	Mid Ch	High Ch	3GPP MPR (dB)	Low Ch	Mid Ch	High Ch	3GPP MPR (dB)	Low Ch	Mid Ch	High Ch	3GPP MPR (dB)
			131987 MHz	132322 MHz	132657 MHz		131987 MHz	132322 MHz	132657 MHz		131987 MHz	132322 MHz	132657 MHz	
3	1	0	23.55	23.50	23.53	0	22.60	22.50	22.57	1	21.76	21.66	21.73	2
	1	7	23.48	23.43	23.45	0	22.53	22.42	22.46	1	21.69	21.58	21.62	2
	1	14	23.45	23.38	23.41	0	22.42	22.37	22.40	1	21.58	21.53	21.56	2
	8	0	22.62	22.53	22.55	1	21.65	21.50	21.54	2	20.81	20.66	20.70	3
	8	3	22.55	22.49	22.51	1	21.52	21.44	21.48	2	20.68	20.60	20.64	3
	8	7	22.49	22.41	22.44	1	21.43	21.36	21.38	2	20.59	20.52	20.54	3
	15	0	22.56	22.51	22.54	1	21.54	21.46	21.50	2	20.70	20.62	20.66	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low Ch	Mid Ch	High Ch	3GPP MPR (dB)	Low Ch	Mid Ch	High Ch	3GPP MPR (dB)	Low Ch	Mid Ch	High Ch	3GPP MPR (dB)
			1710.7 MHz	1745.0 MHz	1779.3 MHz		1710.7 MHz	1745.0 MHz	1779.3 MHz		1710.7 MHz	1745.0 MHz	1779.3 MHz	
1.4	1	0	23.49	23.44	23.47	0	22.54	22.44	22.51	1	21.65	21.55	21.62	2
	1	2	23.42	23.37	23.39	0	22.47	22.36	22.40	1	21.58	21.47	21.51	2
	1	5	23.39	23.32	23.35	0	22.36	22.31	22.34	1	21.47	21.42	21.45	2
	3	0	23.36	23.27	23.29	0	22.39	22.24	22.28	1	21.50	21.35	21.39	2
	3	1	23.29	23.23	23.25	0	22.26	22.18	22.22	1	21.37	21.29	21.33	2
	3	3	23.23	23.15	23.18	0	22.17	22.10	22.12	1	21.28	21.21	21.23	2
	6	0	22.50	22.45	22.48	1	21.48	21.40	21.44	2	20.59	20.51	20.55	3

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<WLAN 2.4G>

Mode	802.11b		
Channel / Frequency (MHz)	1 (2412)	6 (2437)	11 (2462)
Average Power (Ant-0) SISO	19.41	19.36	19.24
Average Power (Ant-1) SISO	19.39	19.27	19.25
Mode	802.11n (HT20)		
Channel / Frequency (MHz)	1 (2412)	6 (2437)	11 (2462)
Average Power (Ant-0) SISO	18.45	18.34	18.33
Average Power (Ant-1) SISO	18.35	18.34	18.28
Average Power (Ant-0 + Ant-1) MIMO	21.18	21.05	21.17

Note: 802.11b support SISO+Diversity

<WLAN 5.2G>

Mode	802.11ac (VHT80)
Channel / Frequency (MHz)	42 (5210)
Average Power (Ant-0) SISO	18.15
Average Power (Ant-1) SISO	18.11
Average Power (Ant-0 + Ant-1) MIMO	19.09

<WLAN 5.3G>

Mode	802.11n (HT40)
Channel / Frequency (MHz)	62 (5310)
Average Power (Ant-0 + Ant-1) MIMO	20.28

Mode	802.11ac (VHT80)
Channel / Frequency (MHz)	58 (5290)
Average Power (Ant-0) SISO	18.16
Average Power (Ant-1) SISO	18.13

<WLAN 5.6G>

Mode	802.11ac (VHT80)
Channel / Frequency (MHz)	106 (5530)
Average Power (Ant-0) SISO	18.47
Average Power (Ant-1) SISO	18.41
Average Power (Ant-0 + Ant-1) MIMO	20.36

<WLAN 5.8G>

Mode	802.11ac (VHT80)
Channel / Frequency (MHz)	155 (5775)
Average Power (Ant-0) SISO	18.34
Average Power (Ant-1) SISO	18.27
Average Power (Ant-0 + Ant-1) MIMO	20.39

<Bluetooth>

Mode	Bluetooth		
Channel / Frequency (MHz)	0 (2402)	39 (2441)	78 (2480)
Average Power	9.26	9.43	9.42

4.7 SAR Testing Results

4.7.1 SAR Test Reduction Considerations

<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 SAR for the mid-band or highest output power channel is:

- (1) ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz
- (2) ≤ 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
- (3) ≤ 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, 3G SAR Measurement Procedures>

The mode tested for SAR is referred to as the primary mode. The equivalent modes considered for SAR test reduction are denoted as secondary modes. Both primary and secondary modes must be in the same frequency band. When the maximum output power and tune-up tolerance specified for production units in a secondary mode is $\leq 1/4$ dB higher than the primary mode or when the highest reported SAR of the primary mode is scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for the secondary mode.

<KDB 941225 D05, SAR Evaluation Considerations for LTE Devices>

(1) QPSK with 1 RB and 50% RB allocation

Start with the largest channel bandwidth and measure SAR, 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 of the remaining RB offset configurations and required test channels is not required; otherwise, SAR is required for the remaining required test channels and only for the RB offset configuration with the highest output power for that channel. When the reported SAR of a required test channel is > 1.45 W/kg, SAR is required for all three RB offset configurations for that required test channel.

(2) QPSK with 100% RB allocation

SAR is not required when the highest maximum output power for 100% RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.

(3) Higher order modulations

SAR is required only when the highest maximum output power for the configuration in the higher order modulation is $> 1/2$ dB higher than the same configuration in QPSK or when the reported SAR for the QPSK configuration is > 1.45 W/kg.

(4) Other channel bandwidth

SAR is required when the highest maximum output power of the smaller channel bandwidth is $> 1/2$ dB higher than the equivalent channel configurations in the largest channel bandwidth configuration or the reported SAR of a configuration for the largest channel bandwidth is > 1.45 W/kg.

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<Power Confirmation for SAR Test Exclusion for LTE Downlink CA>

According to KDB 941225 D05A, the uplink maximum output power below was measured with downlink CA active on the channel with highest measured maximum output power when downlink CA is inactive. The downlink SCC channel was paired with the uplink channel as normal operation. For intra-band contiguous CA, the downlink channel spacing between the component carriers was set to multiple of 300 kHz less than the nominal channel spacing per section 5.4.1A of 3GPP TS36.521. For intra-band non-contiguous CA, the downlink channel spacing between the component carriers was set to maximum separation from PCC and remain fully within the downlink transmission band. For Inter-band CA, the SCC downlink channel was set to near the middle of its transmission band.

Power Measurements for Intra-Band Contiguous Downlink CA

CA Combination	PCC								SCC1				Power	
	LTE Band	BW (MHz)	UL Channel	UL Freq. (MHz)	RB Size	RB Offset	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	Tx Power with DL-CA Active (dBm)	Single Carrier Tx Power (dBm)
CA_5B	5	10M	20450	829.0	1	0	2450	874.0	5	10M	2549	883.9	24.36	24.50
CA_7C	7	20M	21350	2560.0	1	0	3350	2680.0	7	20M	3152	2660.2	23.55	23.74
CA_41C	41	20M	39750	2506.0	1	0	39750	2506.0	41	20M	39948	2525.8	23.73	23.99
CA_66B	66	15M	132047	1717.5	1	0	66511	2117.5	66	5M	66609	2127.3	23.76	23.93
CA_66C	66	20M	132072	1720.0	1	0	66536	2120.0	66	20M	66734	2139.8	23.87	23.93

CA Combination	PCC								SCC1				SCC2				Power	
	LTE Band	BW (MHz)	UL Channel	UL Freq. (MHz)	RB Size	RB Offset	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	Tx Power with DL-CA Active (dBm)	Single Carrier Tx Power (dBm)
CA_41D	41	20M	39750	2506.0	1	0	39750	2506.0	41	20M	39948	2525.8	41	20M	40146	2545.6	23.89	23.99

Power Measurements for Intra-Band Non-Contiguous Downlink CA

CA Combination	PCC								SCC1				Power	
	LTE Band	BW (MHz)	UL Channel	UL Freq. (MHz)	RB Size	RB Offset	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	Tx Power with DL-CA Active (dBm)	Single Carrier Tx Power (dBm)
CA_2A_2A	2	20M	18700	1860.0	1	0	700	1940.0	2	20M	1100	1980.0	23.85	23.93
CA_4A_4A	4	20M	20300	1745.0	1	0	2300	2145.0	4	20M	2050	2120.0	24.26	24.41
CA_7A_7A	7	20M	21350	2560.0	1	0	3350	2680.0	7	20M	2850	2630.0	23.57	23.74
CA_25A_25A	25	20M	26140	1860.0	1	0	8140	1940.0	25	20M	8590	1985.0	23.84	23.87
CA_41A_41A	41	20M	39750	2506.0	1	0	39750	2506.0	41	20M	41055	2636.5	23.75	23.99
CA_66A_66A	66	20M	132072	1720.0	1	0	66536	2120.0	66	20M	67036	2170.0	23.91	23.93

CA Combination	PCC								SCC1				SCC2				Power	
	LTE Band	BW (MHz)	UL Channel	UL Freq. (MHz)	RB Size	RB Offset	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	Tx Power with DL-CA Active (dBm)	Single Carrier Tx Power (dBm)
CA_41A_41C	41	20M	39750	2506.0	1	0	39750	2506.0	41	20M	40620	2593.0	41	20M	40818	2612.8	23.95	23.99
CA_66A_66B	66	20M	132572	1770.0	1	0	67036	2170.0	66	15MM	66511	2117.5	66	5M	66609	2127.3	23.89	23.91
CA_66A_66C	66	20M	132572	1770.0	1	0	67036	2170.0	66	20M	66536	2120.0	66	20M	66734	2139.8	23.86	23.91

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Power Measurements for Inter-Band Downlink CA

CA Combination	PCC								SCC1				Power	
	LTE Band	BW (MHz)	UL Channel	UL Freq. (MHz)	RB Size	RB Offset	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	Tx Power with DL-CA Active (dBm)	Single Carrier Tx Power (dBm)
CA_2A_4A	2	20M	18700	1860.0	1	0	700	1940.0	4	20M	2175	2132.5	23.84	23.93
CA_2A_5A	2	20M	18700	1860.0	1	0	700	1940.0	5	10M	2525	881.5	23.85	23.93
CA_2A_7A	2	20M	18700	1860.0	1	0	700	1940.0	7	20M	3100	2655.0	23.83	23.93
CA_2A_12A	2	20M	18700	1860.0	1	0	700	1940.0	12	10M	5095	737.5	23.86	23.93
CA_2A_13A	2	20M	18700	1860.0	1	0	700	1940.0	13	10M	5230	751.0	23.91	23.93
CA_2A_17A	2	10M	18650	1855.0	1	0	650	1935.0	17	10M	5790	740.0	23.84	23.85
CA_2A_29A	2	20M	18700	1860.0	1	0	700	1940.0	29	10M	9715	722.5	23.87	23.93
CA_2A_30A	2	20M	18700	1860.0	1	0	700	1940.0	30	10M	9820	2355.0	23.86	23.93
CA_2A_66A	2	20M	18700	1860.0	1	0	700	1940.0	66	20M	66886	2155.0	23.92	23.93
CA_4A_5A	4	20M	20300	1745.0	1	0	2300	2145.0	5	10M	2525	881.5	24.16	24.41
CA_4A_7A	4	20M	20300	1745.0	1	0	2300	2145.0	7	20M	3100	2655.0	24.12	24.41
CA_4A_12A	4	20M	20300	1745.0	1	0	2300	2145.0	12	10M	5095	737.5	24.17	24.41
CA_4A_13A	4	20M	20300	1745.0	1	0	2300	2145.0	13	10M	5230	751.0	24.19	24.41
CA_4A_17A	4	10M	20350	1750.0	1	0	2350	2150.0	17	10M	5790	740.0	24.17	24.34
CA_4A_29A	4	20M	20300	1745.0	1	0	2300	2145.0	29	10M	9715	722.5	24.17	24.41
CA_4A_30A	4	20M	20300	1745.0	1	0	2300	2145.0	30	10M	9820	2355.0	24.14	24.41
CA_5A_7A	5	10M	20450	829.0	1	0	2450	874.0	7	20M	3100	2655.0	24.35	24.50
CA_5A_30A	5	10M	20450	829.0	1	0	2450	874.0	30	10M	9820	2355.0	24.48	24.50
CA_5A_66A	5	10M	20450	829.0	1	0	2450	874.0	66	20M	66886	2155.0	24.49	24.50
CA_7A_12A	7	20M	21350	2560.0	1	0	3350	2680.0	12	10M	5095	737.5	23.58	23.74
CA_12A_30A	12	10M	23095	707.5	1	0	5095	737.5	30	10M	9820	2355.0	23.98	24.00
CA_12A_66A	12	10M	23095	707.5	1	0	5095	737.5	66	20M	66886	2155.0	23.84	24.00
CA_13A_66A	13	10M	23230	782.0	1	0	5230	751.0	66	20M	66886	2155.0	24.15	24.21
CA_30A_29A	30	10M	27710	2310.0	1	0	9820	2355.0	29	10M	9715	772.5	23.92	23.94
CA_66A_29A	66	20M	132072	1720.0	1	0	66536	2120.0	29	10M	9715	772.5	23.92	23.93
CA_30A_66A	30	10M	27710	2310.0	1	0	9820	2355.0	66	20M	66886	2155.0	23.91	23.94

CA Combination	PCC								SCC1				SCC2				Power	
	LTE Band	BW (MHz)	UL Channel	UL Freq. (MHz)	RB Size	RB Offset	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	Tx Power with DL-CA Active (dBm)	Single Carrier Tx Power (dBm)
CA_2A_2A_4A	2	20M	18700	1860.0	1	0	700	1940.0	2	20M	1100	1980.0	4	20M	2175	2132.5	23.82	23.93
CA_2A_4A_4A	2	20M	18700	1860.0	1	0	700	1940.0	4	20M	2300	2145.0	4	20M	2050	2120.0	23.92	23.93
CA_2A_2A_5A	2	20M	18700	1860.0	1	0	700	1940.0	2	20M	1100	1980.0	5	10M	2525	881.5	23.86	23.93
CA_2A_2A_12A	2	20M	18700	1860.0	1	0	700	1940.0	2	20M	1100	1980.0	12	10M	5095	737.5	23.84	23.93
CA_2A_2A_13A	2	20M	18700	1860.0	1	0	700	1940.0	2	20M	1100	1980.0	13	10M	5230	751.0	23.87	23.93
CA_2A_66C	2	20M	18700	1860.0	1	0	700	1940.0	66	20M	66536	2120.0	66	20M	66734	2139.8	23.92	23.93
CA_2A_66A_66A	2	20M	18700	1860.0	1	0	700	1940.0	66	20M	66536	2120.0	66	20M	67036	2170.0	23.91	23.93
CA_4A_4A_5A	4	20M	20300	1745.0	1	0	2300	2145.0	4	20M	2050	2120.0	5	10M	2525	881.5	24.17	24.41
CA_4A_4A_12A	4	20M	20300	1745.0	1	0	2300	2145.0	4	20M	2050	2120.0	12	10M	5095	737.5	24.15	24.41
CA_4A_4A_13A	4	20M	20300	1745.0	1	0	2300	2145.0	4	20M	2050	2120.0	13	10M	5230	751.0	24.21	24.41
CA_5A_66A_66A	5	10M	20450	829.0	1	0	2450	874.0	66	20M	66536	2120.0	66	20M	67036	2170.0	24.31	24.50
CA_5A_66C	5	10M	20450	829.0	1	0	2450	874.0	66	20M	66536	2120.0	66	20M	66734	2139.8	24.46	24.50
CA_12A_66A_66A	12	10M	23095	707.5	1	0	5095	737.5	66	20M	66536	2120.0	66	20M	67036	2170.0	23.87	24.00
CA_12A_66C	12	10M	23095	707.5	1	0	5095	737.5	66	20M	66536	2120.0	66	20M	66734	2139.8	23.87	24.00
CA_13A_66A_66A	13	10M	23230	782.0	1	0	5230	751.0	66	20M	66536	2120.0	66	20M	67036	2170.0	24.12	24.21
CA_13A_66C	13	10M	23230	782.0	1	0	5230	751.0	66	20M	66536	2120.0	66	20M	66734	2139.8	24.13	24.21
CA_2A_4A_5A	2	20M	18700	1860.0	1	0	700	1940.0	4	20M	2175	2132.5	5	10M	2525	881.5	23.91	23.93
CA_2A_4A_7A	2	20M	18700	1860.0	1	0	700	1940.0	4	20M	2175	2132.5	7	20M	3100	2655.0	23.90	23.93
CA_2A_4A_12A	2	20M	18700	1860.0	1	0	700	1940.0	4	20M	2175	2132.5	12	10M	5095	737.5	23.88	23.93
CA_2A_4A_13A	2	20M	18700	1860.0	1	0	700	1940.0	4	20M	2175	2132.5	13	10M	5230	751.0	23.92	23.93
CA_2A_4A_29A	2	20M	18700	1860.0	1	0	700	1940.0	4	20M	2175	2132.5	29	10M	9715	722.5	23.92	23.93
CA_2A_4A_30A	2	20M	18700	1860.0	1	0	700	1940.0	4	20M	2175	2132.5	30	10M	9820	2355.0	23.87	23.93

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CA Combination	PCC								SCC1				SCC2				Power	
	LTE Band	BW (MHz)	UL Channel	UL Freq. (MHz)	RB Size	RB Offset	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	Tx Power with DL-CA Active (dBm)	Single Carrier Tx Power (dBm)
CA_2A_5A_30A	2	20M	18700	1860.0	1	0	700	1940.0	5	10M	2525	881.5	30	10M	9820	2355.0	23.92	23.93
CA_2A_5A_66A	2	20M	18700	1860.0	1	0	700	1940.0	5	10M	2525	881.5	66	20M	66886	2155.0	23.84	23.93
CA_2A_12A_30A	2	20M	18700	1860.0	1	0	700	1940.0	12	10M	5095	737.5	30	10M	9820	2355.0	23.92	23.93
CA_2A_12A_66A	2	20M	18700	1860.0	1	0	700	1940.0	12	10M	5095	737.5	66	20M	66886	2155.0	23.86	23.93
CA_2A_13A_66A	2	20M	18700	1860.0	1	0	700	1940.0	13	10M	5230	751.0	66	20M	66886	2155.0	23.83	23.93
CA_2A_29A_30A	2	20M	18700	1860.0	1	0	700	1940.0	29	10M	9715	722.5	30	10M	9820	2355.0	23.87	23.93
CA_4A_5A_30A	4	20M	20300	1745.0	1	0	2300	2145.0	5	10M	2525	881.5	30	10M	9820	2355.0	24.16	24.41
CA_4A_7A_12A	4	20M	20300	1745.0	1	0	2300	2145.0	7	20M	3100	2655.0	12	10M	5095	737.5	24.14	24.41
CA_4A_12A_30A	4	20M	20300	1745.0	1	0	2300	2145.0	12	10M	5095	737.5	30	10M	9820	2355.0	24.15	24.41
CA_4A_29A_30A	4	20M	20300	1745.0	1	0	2300	2145.0	29	10M	9715	722.5	30	10M	9820	2355.0	24.14	24.41

Summary for SAR Test Exclusion for LTE Downlink CA

Per power confirmation results in above, the uplink maximum output power with downlink CA active remains within the specified tune-up tolerance and not more than 0.25 dB higher than the maximum output power with downlink CA inactive. According to KDB 941225 D05A, the SAR test exclusion applies to LTE downlink CA operation.

<May 2017 TCB Workshop, SAR Test Exclusion for LTE DL 4x4 MIMO>

Per FCC guidance, SAR testing for LTE DL 4x4 MIMO is not required when the uplink maximum output power with downlink MIMO active remains within the specified tune-up tolerance and not more than 0.25 dB higher than the maximum output power with downlink MIMO inactive. Per power confirmation results, the SAR test exclusion applies to LTE downlink MIMO operation.

CA Combination	PCC									SCC1					SCC2					Power	
	LTE Band	BW (MHz)	UL Channel	UL Freq. (MHz)	RB Size	RB Offset	DL Channel	DL Freq. (MHz)	DL Antenna Configuration	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	DL Antenna Configuration	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	DL Antenna Configuration	Tx Power with DL-CA Active (dBm)	Single Carrier Tx Power (dBm)
CA_41D	41	20M	39750	2506	1	0	39750	2506	2x2 MIMO	41	20M	39948	2525.8	4x4 MIMO	41	20M	40146	2545.6	2x2 MIMO	23.76	23.99
CA_41A_41C	41	20M	39750	2506	1	0	39750	2506	2x2 MIMO	41	20M	40620	2593	4x4 MIMO	41	20M	40818	2612.8	2x2 MIMO	23.73	23.99
CA_66A_66C	66	20M	132072	1720	1	0	66536	2120	2x2 MIMO	66	20M	66536	2120	4x4 MIMO	66	20M	66734	2139.8	2x2 MIMO	23.86	23.93
CA_2A_66C	2	20M	18700	1860	1	0	700	1940	2x2 MIMO	66	20M	66536	2120	4x4 MIMO	66	20M	66734	2139.8	2x2 MIMO	23.84	23.93
CA_5A_66C	5	10M	20450	829	1	0	2450	874	2x2 MIMO	66	20M	66536	2120	4x4 MIMO	66	20M	66734	2139.8	2x2 MIMO	24.25	24.50
CA_12A_66C	12	10M	23095	707.5	1	0	5095	737.5	2x2 MIMO	66	20M	66536	2120	4x4 MIMO	66	20M	67036	2170	2x2 MIMO	23.82	24.00
CA_13A_66C	13	10M	23230	782	1	0	5230	751	2x2 MIMO	66	20M	66536	2120	4x4 MIMO	66	20M	67036	2170	2x2 MIMO	24.11	24.21

<May 2017 TCB Workshop, SAR Test Exclusion for LTE B41 Power Class 2>

Per FCC guidance, the LTE B41 power class 3 is expected to be the dominant use configuration and SAR should be tested as normally required. The LTE B41 power class 2 is tested using the highest SAR test configuration in power class 3 according to the highest time-averaged power for all applicable uplink-downlink configurations in power class 2. Separate SAR testing for power class 2 is not required when the reported SAR and power can be linearly scaled with < 10% discrepancy between power classes and all reported SAR are < 1.4 W/kg.

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	LTE Band 41 Power Class 3	LTE Band 41 Power Class 2
Head Exposure Condition		
Measured Power (dBm)	23.99	27.09
Duty Cycle (%)	63.3%	43.3%
Time-Averaged Power (mW)	159	222
Maximum Measured SAR (W/kg)	0.438	0.558
Deviation from Expected Linearity (%)	-8.78%	
Separate SAR Test Require?	No	
Body-worn & Hotspot Exposure Condition		
Measured Power (dBm)	23.99	27.09
Duty Cycle (%)	63.3%	43.3%
Time-Averaged Power (mW)	159	222
Maximum Measured SAR (W/kg)	0.496	0.627
Deviation from Expected Linearity (%)	-9.49%	
Separate SAR Test Require?	No	

<KDB 248227 D01, SAR Guidance for Wi-Fi Transmitters>

- (1) For handsets operating next to ear, hotspot mode or mini-tablet configurations, the initial test position procedures were applied. The test position with the highest extrapolated peak SAR will be used as the initial test position. When the reported SAR of initial test position is ≤ 0.4 W/kg, SAR testing for remaining test positions is not required. Otherwise, SAR is evaluated at the subsequent highest peak SAR positions until the reported SAR result is ≤ 0.8 W/kg or all test positions are measured.
- (2) For WLAN 2.4 GHz, the highest measured maximum output power channel for DSSS was selected for SAR measurement. When the reported SAR is ≤ 0.8 W/kg, no further SAR testing is required. Otherwise, SAR is evaluated at the next highest measured output power channel. When any reported SAR is > 1.2 W/kg, SAR is required for the third channel. For OFDM modes (802.11g/n), SAR is not required when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and it is ≤ 1.2 W/kg.
- (3) For WLAN 5 GHz, the initial test configuration was selected according to the transmission mode with the highest maximum output power. When the reported SAR of initial test configuration is > 0.8 W/kg, SAR is required for the subsequent highest measured output power channel until the reported SAR result is ≤ 1.2 W/kg or all required channels are measured. For other transmission modes, SAR is not required when the highest reported SAR for initial test configuration is adjusted by the ratio of subsequent test configuration to initial test configuration specified maximum output power and it is ≤ 1.2 W/kg.
- (4) For WLAN MIMO mode, the power-based standalone SAR test exclusion or the sum of SAR provision in KDB 447498 to determine simultaneous transmission SAR test exclusion should be applied. Otherwise, SAR for MIMO mode will be measured with all applicable antennas transmitting simultaneously at the specified maximum output power of MIMO operation.

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4.7.2 SAR Results for Head Exposure Condition

Plot No.	Band	Mode	Test Position	Ch.	EUT Config.	Tx Antenna	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
	GSM850	GPRS12	Right Cheek	251	1	0	29.5	28.39	1.29	-0.06	0.048	0.06
	GSM850	GPRS12	Right Tilted	251	1	0	29.5	28.39	1.29	0.03	0.041	0.05
	GSM850	GPRS12	Left Cheek	251	1	0	29.5	28.39	1.29	-0.01	0.074	0.10
	GSM850	GPRS12	Left Tilted	251	1	0	29.5	28.39	1.29	0.01	0.067	0.09
	GSM850	GPRS12	Right Cheek	251	1	1	29.5	28.39	1.29	0.03	0.566	0.73
	GSM850	GPRS12	Right Tilted	251	1	1	29.5	28.39	1.29	0.03	0.361	0.47
	GSM850	GPRS12	Left Cheek	251	1	1	29.5	28.39	1.29	-0.05	0.371	0.48
	GSM850	GPRS12	Left Tilted	251	1	1	29.5	28.39	1.29	-0.01	0.19	0.25
01	GSM850	GPRS12	Right Cheek	251	2	1	29.5	28.39	1.29	0.04	0.57	0.74
	GSM1900	GPRS12	Right Cheek	661	1	0	27.0	25.83	1.31	-0.11	0.05	0.07
	GSM1900	GPRS12	Right Tilted	661	1	0	27.0	25.83	1.31	0.08	0.047	0.06
02	GSM1900	GPRS12	Left Cheek	661	1	0	27.0	25.83	1.31	-0.04	0.087	0.11
	GSM1900	GPRS12	Left Tilted	661	1	0	27.0	25.83	1.31	0.10	0.019	0.02
	GSM1900	GPRS12	Left Cheek	661	2	0	27.0	25.83	1.31	-0.08	0.08	0.10
	WCDMA II	RMC12.2K	Right Cheek	9538	1	0	25.0	23.82	1.31	-0.04	0.084	0.11
	WCDMA II	RMC12.2K	Right Tilted	9538	1	0	25.0	23.82	1.31	0.13	0.081	0.11
03	WCDMA II	RMC12.2K	Left Cheek	9538	1	0	25.0	23.82	1.31	-0.07	0.125	0.16
	WCDMA II	RMC12.2K	Left Tilted	9538	1	0	25.0	23.82	1.31	0.08	0.063	0.08
	WCDMA II	RMC12.2K	Left Cheek	9538	2	0	25.0	23.82	1.31	-0.01	0.115	0.15
	WCDMA IV	RMC12.2K	Right Cheek	1312	1	0	25.0	23.94	1.28	-0.09	0.091	0.12
	WCDMA IV	RMC12.2K	Right Tilted	1312	1	0	25.0	23.94	1.28	0.15	0.101	0.13
04	WCDMA IV	RMC12.2K	Left Cheek	1312	1	0	25.0	23.94	1.28	-0.01	0.171	0.22
	WCDMA IV	RMC12.2K	Left Tilted	1312	1	0	25.0	23.94	1.28	0.04	0.074	0.09
	WCDMA IV	RMC12.2K	Left Cheek	1312	2	0	25.0	23.94	1.28	-0.07	0.145	0.19
	WCDMA V	RMC12.2K	Right Cheek	4182	1	0	25.5	24.00	1.41	0.00	0.00754	0.01
	WCDMA V	RMC12.2K	Right Tilted	4182	1	0	25.5	24.00	1.41	-0.02	0.00328	0.00
	WCDMA V	RMC12.2K	Left Cheek	4182	1	0	25.5	24.00	1.41	0.06	0.00821	0.01
	WCDMA V	RMC12.2K	Left Tilted	4182	1	0	25.5	24.00	1.41	0.15	0.00932	0.01
05	WCDMA V	RMC12.2K	Right Cheek	4182	1	1	25.5	24.00	1.41	0.02	0.661	0.93
	WCDMA V	RMC12.2K	Right Tilted	4182	1	1	25.5	24.00	1.41	-0.06	0.448	0.63
	WCDMA V	RMC12.2K	Left Cheek	4182	1	1	25.5	24.00	1.41	0.01	0.492	0.69
	WCDMA V	RMC12.2K	Left Tilted	4182	1	1	25.5	24.00	1.41	0.08	0.335	0.47
	WCDMA V	RMC12.2K	Right Cheek	4132	1	1	25.5	23.91	1.44	-0.08	0.644	0.93
	WCDMA V	RMC12.2K	Right Cheek	4233	1	1	25.5	23.93	1.44	0.04	0.621	0.89
	WCDMA V	RMC12.2K	Right Cheek	4182	2	1	25.5	24.00	1.41	0.02	0.658	0.93
	WCDMA V	RMC12.2K	Right Cheek	4132	2	1	25.5	23.91	1.44	-0.08	0.641	0.92
	WCDMA V	RMC12.2K	Right Cheek	4233	2	1	25.5	23.93	1.44	0.04	0.623	0.89

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Plot No.	Band	Mode	Test Position	Ch.	EUT Config.	Tx Antenna	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
	CDMA BC0	RC3+SO55	Right Cheek	1013	1	0	25.5	24.20	1.35	-0.09	0.101	0.14
	CDMA BC0	RC3+SO55	Right Tilted	1013	1	0	25.5	24.20	1.35	0.08	0.109	0.15
	CDMA BC0	RC3+SO55	Left Cheek	1013	1	0	25.5	24.20	1.35	0.11	0.083	0.11
	CDMA BC0	RC3+SO55	Left Tilted	1013	1	0	25.5	24.20	1.35	0.03	0.062	0.08
06	CDMA BC0	RC3+SO55	Right Cheek	1013	1	1	25.5	24.20	1.35	0.04	0.688	0.93
	CDMA BC0	RC3+SO55	Right Tilted	1013	1	1	25.5	24.20	1.35	-0.06	0.334	0.45
	CDMA BC0	RC3+SO55	Left Cheek	1013	1	1	25.5	24.20	1.35	0.02	0.511	0.69
	CDMA BC0	RC3+SO55	Left Tilted	1013	1	1	25.5	24.20	1.35	-0.05	0.323	0.44
	CDMA BC0	RC3+SO55	Right Cheek	384	1	1	25.5	24.18	1.36	-0.08	0.669	0.91
	CDMA BC0	RC3+SO55	Right Cheek	777	1	1	25.5	24.15	1.36	0.06	0.658	0.90
	CDMA BC0	RC3+SO55	Right Cheek	1013	2	1	25.5	24.20	1.35	0.05	0.676	0.91
	CDMA BC0	RC3+SO55	Right Cheek	384	2	1	25.5	24.18	1.36	-0.08	0.642	0.87
	CDMA BC0	RC3+SO55	Right Cheek	777	2	1	25.5	24.15	1.36	0.01	0.618	0.84
	CDMA BC1	RC3+SO55	Right Cheek	600	1	0	25.5	24.37	1.30	-0.03	0.084	0.11
	CDMA BC1	RC3+SO55	Right Tilted	600	1	0	25.5	24.37	1.30	0.02	0.089	0.12
07	CDMA BC1	RC3+SO55	Left Cheek	600	1	0	25.5	24.37	1.30	-0.10	0.142	0.18
	CDMA BC1	RC3+SO55	Left Tilted	600	1	0	25.5	24.37	1.30	0.11	0.053	0.07
	CDMA BC1	RC3+SO55	Left Cheek	600	2	0	25.5	24.37	1.30	-0.09	0.121	0.16
	CDMA BC10	RC3+SO55	Right Cheek	580	1	0	25.5	24.21	1.35	-0.05	0.112	0.15
	CDMA BC10	RC3+SO55	Right Tilted	580	1	0	25.5	24.21	1.35	0.01	0.079	0.11
	CDMA BC10	RC3+SO55	Left Cheek	580	1	0	25.5	24.21	1.35	0.03	0.113	0.15
	CDMA BC10	RC3+SO55	Left Tilted	580	1	0	25.5	24.21	1.35	0.02	0.086	0.12
08	CDMA BC10	RC3+SO55	Right Cheek	580	1	1	25.5	24.21	1.35	0.07	0.684	0.92
	CDMA BC10	RC3+SO55	Right Tilted	580	1	1	25.5	24.21	1.35	-0.08	0.445	0.60
	CDMA BC10	RC3+SO55	Left Cheek	580	1	1	25.5	24.21	1.35	-0.02	0.508	0.68
	CDMA BC10	RC3+SO55	Left Tilted	580	1	1	25.5	24.21	1.35	0.09	0.287	0.39
	CDMA BC10	RC3+SO55	Right Cheek	476	1	1	25.5	24.13	1.37	-0.13	0.661	0.91
	CDMA BC10	RC3+SO55	Right Cheek	684	1	1	25.5	24.18	1.36	0.08	0.658	0.89
	CDMA BC10	RC3+SO55	Right Cheek	580	2	1	25.5	24.21	1.35	0.02	0.669	0.90
	CDMA BC10	RC3+SO55	Right Cheek	476	2	1	25.5	24.13	1.37	-0.08	0.647	0.89
	CDMA BC10	RC3+SO55	Right Cheek	684	2	1	25.5	24.18	1.36	0.09	0.644	0.84

Plot No.	Band	Mode	Test Position	Ch.	EUT Config.	Tx Antenna	RB#	RB Offset	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
	LTE 2	QPSK20M	Right Cheek	18700	1	0	1	0	25.0	23.93	1.28	-0.14	0.067	0.09
	LTE 2	QPSK20M	Right Tilted	18700	1	0	1	0	25.0	23.93	1.28	0.08	0.084	0.11
09	LTE 2	QPSK20M	Left Cheek	18700	1	0	1	0	25.0	23.93	1.28	0.16	0.142	0.18
	LTE 2	QPSK20M	Left Tilted	18700	1	0	1	0	25.0	23.93	1.28	-0.05	0.073	0.09
	LTE 2	QPSK20M	Right Cheek	18700	1	0	50	0	24.0	22.67	1.36	0.14	0.017	0.02
	LTE 2	QPSK20M	Right Tilted	18700	1	0	50	0	24.0	22.67	1.36	0.08	0.016	0.02
	LTE 2	QPSK20M	Left Cheek	18700	1	0	50	0	24.0	22.67	1.36	0.07	0.013	0.02
	LTE 2	QPSK20M	Left Tilted	18700	1	0	50	0	24.0	22.67	1.36	0.17	0.026	0.04
	LTE 2	QPSK20M	Left Cheek	18700	2	0	1	0	25.0	23.93	1.28	0.04	0.132	0.17
	LTE 4	QPSK20M	Right Cheek	20300	1	0	1	0	25.0	24.41	1.15	-0.08	0.094	0.11
	LTE 4	QPSK20M	Right Tilted	20300	1	0	1	0	25.0	24.41	1.15	0.03	0.118	0.14
10	LTE 4	QPSK20M	Left Cheek	20300	1	0	1	0	25.0	24.41	1.15	-0.05	0.137	0.16
	LTE 4	QPSK20M	Left Tilted	20300	1	0	1	0	25.0	24.41	1.15	0.04	0.052	0.06
	LTE 4	QPSK20M	Right Cheek	20300	1	0	50	0	24.0	23.48	1.13	0.07	0.061	0.07
	LTE 4	QPSK20M	Right Tilted	20300	1	0	50	0	24.0	23.48	1.13	-0.11	0.082	0.09
	LTE 4	QPSK20M	Left Cheek	20300	1	0	50	0	24.0	23.48	1.13	0.06	0.099	0.11
	LTE 4	QPSK20M	Left Tilted	20300	1	0	50	0	24.0	23.48	1.13	0.09	0.042	0.05
	LTE 4	QPSK20M	Left Cheek	20300	2	0	1	0	25.0	24.41	1.15	-0.11	0.134	0.15

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Plot No.	Band	Mode	Test Position	Ch.	EUT Config.	Tx Antenna	RB#	RB Offset	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
	LTE 5	QPSK10M	Right Cheek	20450	1	0	1	0	25.5	24.50	1.26	0.07	0.00606	0.01
	LTE 5	QPSK10M	Right Tilted	20450	1	0	1	0	25.5	24.50	1.26	0.06	0.00169	0.00
	LTE 5	QPSK10M	Left Cheek	20450	1	0	1	0	25.5	24.50	1.26	0.04	0.00466	0.01
	LTE 5	QPSK10M	Left Tilted	20450	1	0	1	0	25.5	24.50	1.26	0.02	0.00081	0.00
11	LTE 5	QPSK10M	Right Cheek	20450	1	1	1	0	25.5	24.50	1.26	0.05	0.664	0.84
	LTE 5	QPSK10M	Right Tilted	20450	1	1	1	0	25.5	24.50	1.26	-0.11	0.489	0.62
	LTE 5	QPSK10M	Left Cheek	20450	1	1	1	0	25.5	24.50	1.26	0.04	0.495	0.62
	LTE 5	QPSK10M	Left Tilted	20450	1	1	1	0	25.5	24.50	1.26	0.08	0.345	0.43
	LTE 5	QPSK10M	Right Cheek	20450	1	0	25	0	24.5	23.50	1.26	0.09	0.00584	0.01
	LTE 5	QPSK10M	Right Tilted	20450	1	0	25	0	24.5	23.50	1.26	-0.08	0.00253	0.00
	LTE 5	QPSK10M	Left Cheek	20450	1	0	25	0	24.5	23.50	1.26	0.01	0.00164	0.00
	LTE 5	QPSK10M	Left Tilted	20450	1	0	25	0	24.5	23.50	1.26	0.01	0.00128	0.00
	LTE 5	QPSK10M	Right Cheek	20450	1	1	25	0	24.5	23.50	1.26	0.03	0.576	0.73
	LTE 5	QPSK10M	Right Tilted	20450	1	1	25	0	24.5	23.50	1.26	-0.03	0.411	0.52
	LTE 5	QPSK10M	Left Cheek	20450	1	1	25	0	24.5	23.50	1.26	-0.05	0.502	0.63
	LTE 5	QPSK10M	Left Tilted	20450	1	1	25	0	24.5	23.50	1.26	0.08	0.303	0.38
	LTE 5	QPSK10M	Right Cheek	20525	1	1	1	0	25.5	24.46	1.27	0.03	0.651	0.83
	LTE 5	QPSK10M	Right Cheek	20600	1	1	1	0	25.5	24.37	1.30	0.02	0.633	0.82
	LTE 5	QPSK10M	Right Cheek	20450	1	1	50	0	24.5	23.48	1.26	-0.08	0.554	0.70
	LTE 5	QPSK10M	Right Cheek	20450	2	1	1	0	25.5	24.50	1.26	0.07	0.628	0.79
12	LTE 7	QPSK20M	Right Cheek	21350	1	2	1	0	24.5	23.74	1.19	-0.10	0.647	0.77
	LTE 7	QPSK20M	Right Tilted	21350	1	2	1	0	24.5	23.74	1.19	-0.08	0.124	0.15
	LTE 7	QPSK20M	Left Cheek	21350	1	2	1	0	24.5	23.74	1.19	0.08	0.158	0.19
	LTE 7	QPSK20M	Left Tilted	21350	1	2	1	0	24.5	23.74	1.19	0.13	0.175	0.21
	LTE 7	QPSK20M	Right Cheek	21350	1	3	1	0	24.5	23.74	1.19	-0.06	0.614	0.73
	LTE 7	QPSK20M	Right Tilted	21350	1	3	1	0	24.5	23.74	1.19	0.05	0.228	0.27
	LTE 7	QPSK20M	Left Cheek	21350	1	3	1	0	24.5	23.74	1.19	-0.08	0.351	0.42
	LTE 7	QPSK20M	Left Tilted	21350	1	3	1	0	24.5	23.74	1.19	0.09	0.151	0.18
	LTE 7	QPSK20M	Right Cheek	21350	1	2	50	0	23.5	22.73	1.19	0.11	0.478	0.57
	LTE 7	QPSK20M	Right Tilted	21350	1	2	50	0	23.5	22.73	1.19	0.08	0.091	0.11
	LTE 7	QPSK20M	Left Cheek	21350	1	2	50	0	23.5	22.73	1.19	0.03	0.129	0.15
	LTE 7	QPSK20M	Left Tilted	21350	1	2	50	0	23.5	22.73	1.19	-0.05	0.138	0.16
	LTE 7	QPSK20M	Right Cheek	21350	1	3	50	0	23.5	22.73	1.19	0.02	0.491	0.59
	LTE 7	QPSK20M	Right Tilted	21350	1	3	50	0	23.5	22.73	1.19	0.01	0.147	0.18
	LTE 7	QPSK20M	Left Cheek	21350	1	3	50	0	23.5	22.73	1.19	0.07	0.293	0.35
	LTE 7	QPSK20M	Left Tilted	21350	1	3	50	0	23.5	22.73	1.19	0.05	0.122	0.15
	LTE 7	QPSK20M	Right Cheek	21350	2	2	1	0	24.5	23.74	1.19	-0.14	0.335	0.40
	LTE 12	QPSK10M	Right Cheek	23095	1	0	1	0	25.0	24.00	1.26	0.00	0.032	0.04
	LTE 12	QPSK10M	Right Tilted	23095	1	0	1	0	25.0	24.00	1.26	0.00	0.027	0.03
	LTE 12	QPSK10M	Left Cheek	23095	1	0	1	0	25.0	24.00	1.26	-0.05	0.035	0.04
	LTE 12	QPSK10M	Left Tilted	23095	1	0	1	0	25.0	24.00	1.26	0.00	0.021	0.03
	LTE 12	QPSK10M	Right Cheek	23095	1	1	1	0	25.0	24.00	1.26	0.07	0.369	0.46
	LTE 12	QPSK10M	Right Tilted	23095	1	1	1	0	25.0	24.00	1.26	0.12	0.244	0.31
	LTE 12	QPSK10M	Left Cheek	23095	1	1	1	0	25.0	24.00	1.26	-0.09	0.206	0.26
	LTE 12	QPSK10M	Left Tilted	23095	1	1	1	0	25.0	24.00	1.26	0.03	0.178	0.22
	LTE 12	QPSK10M	Right Cheek	23095	1	0	25	0	24.0	23.00	1.26	0.00	0.022	0.03
	LTE 12	QPSK10M	Right Tilted	23095	1	0	25	0	24.0	23.00	1.26	0.00	0.019	0.02
	LTE 12	QPSK10M	Left Cheek	23095	1	0	25	0	24.0	23.00	1.26	0.00	0.025	0.03
	LTE 12	QPSK10M	Left Tilted	23095	1	0	25	0	24.0	23.00	1.26	0.00	0.015	0.02
	LTE 12	QPSK10M	Right Cheek	23095	1	1	25	0	24.0	23.00	1.26	0.03	0.221	0.28
	LTE 12	QPSK10M	Right Tilted	23095	1	1	25	0	24.0	23.00	1.26	0.08	0.198	0.25
	LTE 12	QPSK10M	Left Cheek	23095	1	1	25	0	24.0	23.00	1.26	0.07	0.173	0.22
	LTE 12	QPSK10M	Left Tilted	23095	1	1	25	0	24.0	23.00	1.26	-0.13	0.154	0.19
13	LTE 12	QPSK10M	Right Cheek	23095	2	1	1	0	25.0	24.00	1.26	0.07	0.499	0.63

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Plot No.	Band	Mode	Test Position	Ch.	EUT Config.	Tx Antenna	RB#	RB Offset	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
	LTE 13	QPSK10M	Right Cheek	23230	1	0	1	0	25.0	24.53	1.11	0.09	0.037	0.04
	LTE 13	QPSK10M	Right Tilted	23230	1	0	1	0	25.0	24.53	1.11	-0.17	0.032	0.04
	LTE 13	QPSK10M	Left Cheek	23230	1	0	1	0	25.0	24.53	1.11	-0.03	0.041	0.05
	LTE 13	QPSK10M	Left Tilted	23230	1	0	1	0	25.0	24.53	1.11	0.01	0.025	0.03
14	LTE 13	QPSK10M	Right Cheek	23230	1	1	1	0	25.0	24.53	1.11	0.15	0.431	0.48
	LTE 13	QPSK10M	Right Tilted	23230	1	1	1	0	25.0	24.53	1.11	-0.08	0.268	0.30
	LTE 13	QPSK10M	Left Cheek	23230	1	1	1	0	25.0	24.53	1.11	0.03	0.345	0.38
	LTE 13	QPSK10M	Left Tilted	23230	1	1	1	0	25.0	24.53	1.11	-0.11	0.238	0.27
	LTE 13	QPSK10M	Right Cheek	23230	1	0	25	0	24.0	23.52	1.12	-0.05	0.033	0.04
	LTE 13	QPSK10M	Right Tilted	23230	1	0	25	0	24.0	23.52	1.12	0.03	0.029	0.03
	LTE 13	QPSK10M	Left Cheek	23230	1	0	25	0	24.0	23.52	1.12	0.01	0.037	0.04
	LTE 13	QPSK10M	Left Tilted	23230	1	0	25	0	24.0	23.52	1.12	-0.08	0.023	0.03
	LTE 13	QPSK10M	Right Cheek	23230	1	1	25	0	24.0	23.52	1.12	0.02	0.371	0.41
	LTE 13	QPSK10M	Right Tilted	23230	1	1	25	0	24.0	23.52	1.12	0.05	0.208	0.23
	LTE 13	QPSK10M	Left Cheek	23230	1	1	25	0	24.0	23.52	1.12	0.02	0.266	0.30
	LTE 13	QPSK10M	Left Tilted	23230	1	1	25	0	24.0	23.52	1.12	0.03	0.194	0.22
	LTE 13	QPSK10M	Right Cheek	23230	2	1	1	0	25.0	24.53	1.11	0.07	0.422	0.47
	LTE 17	QPSK10M	Right Cheek	23790	1	0	1	0	25.0	23.99	1.26	0.09	0.039	0.05
	LTE 17	QPSK10M	Right Tilted	23790	1	0	1	0	25.0	23.99	1.26	0.03	0.030	0.04
	LTE 17	QPSK10M	Left Cheek	23790	1	0	1	0	25.0	23.99	1.26	-0.16	0.035	0.04
	LTE 17	QPSK10M	Left Tilted	23790	1	0	1	0	25.0	23.99	1.26	0.01	0.024	0.03
	LTE 17	QPSK10M	Right Cheek	23790	1	1	1	0	25.0	23.99	1.26	0.08	0.376	0.47
	LTE 17	QPSK10M	Right Tilted	23790	1	1	1	0	25.0	23.99	1.26	0.11	0.245	0.31
	LTE 17	QPSK10M	Left Cheek	23790	1	1	1	0	25.0	23.99	1.26	-0.08	0.255	0.32
	LTE 17	QPSK10M	Left Tilted	23790	1	1	1	0	25.0	23.99	1.26	0.07	0.223	0.28
	LTE 17	QPSK10M	Right Cheek	23790	1	0	25	0	24.0	22.91	1.29	0.15	0.031	0.04
	LTE 17	QPSK10M	Right Tilted	23790	1	0	25	0	24.0	22.91	1.29	0.18	0.024	0.03
	LTE 17	QPSK10M	Left Cheek	23790	1	0	25	0	24.0	22.91	1.29	-0.12	0.028	0.04
	LTE 17	QPSK10M	Left Tilted	23790	1	0	25	0	24.0	22.91	1.29	-0.09	0.019	0.02
	LTE 17	QPSK10M	Right Cheek	23790	1	1	25	0	24.0	22.91	1.29	-0.18	0.305	0.39
	LTE 17	QPSK10M	Right Tilted	23790	1	1	25	0	24.0	22.91	1.29	0.15	0.255	0.33
	LTE 17	QPSK10M	Left Cheek	23790	1	1	25	0	24.0	22.91	1.29	0.16	0.198	0.25
	LTE 17	QPSK10M	Left Tilted	23790	1	1	25	0	24.0	22.91	1.29	0.17	0.187	0.24
15	LTE 17	QPSK10M	Right Cheek	23790	2	1	1	0	25.0	23.99	1.26	0.02	0.523	0.66
	LTE 25	QPSK20M	Right Cheek	26140	1	0	1	0	25.0	23.87	1.30	-0.08	0.073	0.09
	LTE 25	QPSK20M	Right Tilted	26140	1	0	1	0	25.0	23.87	1.30	0.11	0.082	0.11
16	LTE 25	QPSK20M	Left Cheek	26140	1	0	1	0	25.0	23.87	1.30	0.03	0.124	0.16
	LTE 25	QPSK20M	Left Tilted	26140	1	0	1	0	25.0	23.87	1.30	0.13	0.058	0.08
	LTE 25	QPSK20M	Right Cheek	26140	1	0	50	0	24.0	22.74	1.34	-0.05	0.054	0.07
	LTE 25	QPSK20M	Right Tilted	26140	1	0	50	0	24.0	22.74	1.34	0.09	0.056	0.07
	LTE 25	QPSK20M	Left Cheek	26140	1	0	50	0	24.0	22.74	1.34	0.07	0.09	0.12
	LTE 25	QPSK20M	Left Tilted	26140	1	0	50	0	24.0	22.74	1.34	-0.12	0.043	0.06
	LTE 25	QPSK20M	Left Cheek	26140	2	0	1	0	25.0	23.87	1.30	-0.08	0.111	0.14

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Plot No.	Band	Mode	Test Position	Ch.	EUT Config.	Tx Antenna	RB#	RB Offset	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
	LTE 26	QPSK15M	Right Cheek	26765	1	0	1	0	25.5	24.75	1.19	0.01	0.00601	0.01
	LTE 26	QPSK15M	Right Tilted	26765	1	0	1	0	25.5	24.75	1.19	0.02	0.00167	0.00
	LTE 26	QPSK15M	Left Cheek	26765	1	0	1	0	25.5	24.75	1.19	0.02	0.00462	0.01
	LTE 26	QPSK15M	Left Tilted	26765	1	0	1	0	25.5	24.75	1.19	0.09	0.00082	0.00
17	LTE 26	QPSK15M	Right Cheek	26765	1	1	1	0	25.5	24.75	1.19	0.08	0.658	0.78
	LTE 26	QPSK15M	Right Tilted	26765	1	1	1	0	25.5	24.75	1.19	-0.09	0.433	0.51
	LTE 26	QPSK15M	Left Cheek	26765	1	1	1	0	25.5	24.75	1.19	0.03	0.488	0.58
	LTE 26	QPSK15M	Left Tilted	26765	1	1	1	0	25.5	24.75	1.19	0.04	0.335	0.40
	LTE 26	QPSK15M	Right Cheek	26765	1	0	36	0	24.5	23.97	1.13	-0.08	0.00579	0.01
	LTE 26	QPSK15M	Right Tilted	26765	1	0	36	0	24.5	23.97	1.13	-0.09	0.00251	0.00
	LTE 26	QPSK15M	Left Cheek	26765	1	0	36	0	24.5	23.97	1.13	-0.19	0.00163	0.00
	LTE 26	QPSK15M	Left Tilted	26765	1	0	36	0	24.5	23.97	1.13	-0.16	0.00127	0.00
	LTE 26	QPSK15M	Right Cheek	26765	1	1	36	0	24.5	23.97	1.13	0.09	0.571	0.64
	LTE 26	QPSK15M	Right Tilted	26765	1	1	36	0	24.5	23.97	1.13	0.16	0.407	0.46
	LTE 26	QPSK15M	Left Cheek	26765	1	1	36	0	24.5	23.97	1.13	-0.12	0.497	0.56
	LTE 26	QPSK15M	Left Tilted	26765	1	1	36	0	24.5	23.97	1.13	-0.08	0.303	0.34
	LTE 26	QPSK15M	Right Cheek	26765	2	1	1	0	25.5	24.75	1.19	0.04	0.567	0.67
	LTE 30	QPSK10M	Right Cheek	27710	1	2	1	0	24.5	23.94	1.14	-0.08	0.224	0.25
	LTE 30	QPSK10M	Right Tilted	27710	1	2	1	0	24.5	23.94	1.14	0.03	0.079	0.09
	LTE 30	QPSK10M	Left Cheek	27710	1	2	1	0	24.5	23.94	1.14	-0.01	0.12	0.14
	LTE 30	QPSK10M	Left Tilted	27710	1	2	1	0	24.5	23.94	1.14	0.12	0.095	0.11
18	LTE 30	QPSK10M	Right Cheek	27710	1	3	1	0	24.5	23.94	1.14	-0.13	0.435	0.49
	LTE 30	QPSK10M	Right Tilted	27710	1	3	1	0	24.5	23.94	1.14	0.05	0.254	0.29
	LTE 30	QPSK10M	Left Cheek	27710	1	3	1	0	24.5	23.94	1.14	0.03	0.229	0.26
	LTE 30	QPSK10M	Left Tilted	27710	1	3	1	0	24.5	23.94	1.14	-0.07	0.209	0.24
	LTE 30	QPSK10M	Right Cheek	27710	1	2	25	0	23.5	22.93	1.14	0.09	0.211	0.24
	LTE 30	QPSK10M	Right Tilted	27710	1	2	25	0	23.5	22.93	1.14	-0.02	0.08	0.09
	LTE 30	QPSK10M	Left Cheek	27710	1	2	25	0	23.5	22.93	1.14	0.05	0.112	0.13
	LTE 30	QPSK10M	Left Tilted	27710	1	2	25	0	23.5	22.93	1.14	0.09	0.09	0.10
	LTE 30	QPSK10M	Right Cheek	27710	1	3	25	0	23.5	22.93	1.14	-0.06	0.413	0.47
	LTE 30	QPSK10M	Right Tilted	27710	1	3	25	0	23.5	22.93	1.14	-0.11	0.208	0.24
	LTE 30	QPSK10M	Left Cheek	27710	1	3	25	0	23.5	22.93	1.14	0.17	0.184	0.21
	LTE 30	QPSK10M	Left Tilted	27710	1	3	25	0	23.5	22.93	1.14	0.02	0.175	0.20
	LTE 30	QPSK10M	Right Cheek	27710	2	3	1	0	24.5	23.94	1.14	-0.01	0.337	0.38
	LTE 66	QPSK20M	Right Cheek	132072	1	0	1	0	24.5	23.93	1.14	-0.09	0.099	0.11
	LTE 66	QPSK20M	Right Tilted	132072	1	0	1	0	24.5	23.93	1.14	0.07	0.104	0.12
20	LTE 66	QPSK20M	Left Cheek	132072	1	0	1	0	24.5	23.93	1.14	0.05	0.164	0.19
	LTE 66	QPSK20M	Left Tilted	132072	1	0	1	0	24.5	23.93	1.14	0.02	0.067	0.08
	LTE 66	QPSK20M	Right Cheek	132072	1	0	50	0	23.5	23.00	1.12	-0.05	0.071	0.08
	LTE 66	QPSK20M	Right Tilted	132072	1	0	50	0	23.5	23.00	1.12	0.00	0.081	0.09
	LTE 66	QPSK20M	Left Cheek	132072	1	0	50	0	23.5	23.00	1.12	0.01	0.132	0.15
	LTE 66	QPSK20M	Left Tilted	132072	1	0	50	0	23.5	23.00	1.12	0.02	0.054	0.06
	LTE 66	QPSK20M	Left Cheek	132072	2	0	1	0	24.5	23.93	1.14	-0.08	0.151	0.17

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Plot No.	Band	Mode	Test Position	Ch.	EUT Config.	Tx Antenna	Power Class	Uplink Downlink Config.	Special Subframe Config.	RB#	RB Offset	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
	LTE 41	QPSK20M	Right Cheek	39750	1	2	3	0	5	1	0	24.0	23.99	1.00	-0.08	0.438	0.44
	LTE 41	QPSK20M	Right Tilted	39750	1	2	3	0	5	1	0	24.0	23.99	1.00	0.03	0.062	0.06
	LTE 41	QPSK20M	Left Cheek	39750	1	2	3	0	5	1	0	24.0	23.99	1.00	0.13	0.165	0.17
	LTE 41	QPSK20M	Left Tilted	39750	1	2	3	0	5	1	0	24.0	23.99	1.00	-0.01	0.115	0.12
	LTE 41	QPSK20M	Right Cheek	39750	1	3	3	0	5	1	0	24.0	23.99	1.00	-0.14	0.423	0.42
	LTE 41	QPSK20M	Right Tilted	39750	1	3	3	0	5	1	0	24.0	23.99	1.00	-0.16	0.143	0.14
	LTE 41	QPSK20M	Left Cheek	39750	1	3	3	0	5	1	0	24.0	23.99	1.00	-0.09	0.149	0.15
	LTE 41	QPSK20M	Left Tilted	39750	1	3	3	0	5	1	0	24.0	23.99	1.00	0.02	0.142	0.14
	LTE 41	QPSK20M	Right Cheek	39750	1	2	3	0	5	50	0	23.0	22.92	1.02	-0.11	0.455	0.46
	LTE 41	QPSK20M	Right Tilted	39750	1	2	3	0	5	50	0	23.0	22.92	1.02	-0.08	0.061	0.06
	LTE 41	QPSK20M	Left Cheek	39750	1	2	3	0	5	50	0	23.0	22.92	1.02	-0.07	0.169	0.17
	LTE 41	QPSK20M	Left Tilted	39750	1	2	3	0	5	50	0	23.0	22.92	1.02	-0.05	0.112	0.11
	LTE 41	QPSK20M	Right Cheek	39750	1	3	3	0	5	50	0	23.0	22.92	1.02	0.03	0.413	0.42
	LTE 41	QPSK20M	Right Tilted	39750	1	3	3	0	5	50	0	23.0	22.92	1.02	0.12	0.138	0.14
	LTE 41	QPSK20M	Left Cheek	39750	1	3	3	0	5	50	0	23.0	22.92	1.02	0.02	0.136	0.14
	LTE 41	QPSK20M	Left Tilted	39750	1	3	3	0	5	50	0	23.0	22.92	1.02	0.07	0.129	0.13
19	LTE 41	QPSK20M	Right Cheek	39750	1	2	2	1	5	1	0	27.5	27.09	1.10	0.01	0.558	0.61
	LTE 41	QPSK20M	Right Cheek	39750	2	2	2	1	5	1	0	27.5	27.09	1.10	-0.05	0.118	0.13

<WLAN Transmission with Cell ON>

Plot No.	Band	Mode	Test Position	Ch.	EUT Config.	Tx Antenna	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
	2.4G WLAN	802.11b	Right Cheek	1	1	0	19.5	19.41	1.02	-0.08	0.07	0.07
	2.4G WLAN	802.11b	Right Tilted	1	1	0	19.5	19.41	1.02	0.03	0.047	0.05
	2.4G WLAN	802.11b	Left Cheek	1	1	0	19.5	19.41	1.02	-0.03	0.391	0.40
	2.4G WLAN	802.11b	Left Tilted	1	1	0	19.5	19.41	1.02	-0.05	0.201	0.21
	2.4G WLAN	802.11b	Right Cheek	1	1	1	19.5	19.39	1.03	0.14	0.235	0.24
	2.4G WLAN	802.11b	Right Tilted	1	1	1	19.5	19.39	1.03	0.02	0.114	0.12
21	2.4G WLAN	802.11b	Left Cheek	1	1	1	19.5	19.39	1.03	-0.11	0.737	0.76
	2.4G WLAN	802.11b	Left Tilted	1	1	1	19.5	19.39	1.03	0.01	0.345	0.35
	2.4G WLAN	802.11n HT20	Right Cheek	1	1	0+1	21.5	21.18	1.08	-0.01	0.212	0.23
	2.4G WLAN	802.11n HT20	Right Tilted	1	1	0+1	21.5	21.18	1.08	0.03	0.077	0.08
	2.4G WLAN	802.11n HT20	Left Cheek	1	1	0+1	21.5	21.18	1.08	-0.12	0.665	0.72
	2.4G WLAN	802.11n HT20	Left Tilted	1	1	0+1	21.5	21.18	1.08	-0.17	0.327	0.35
	2.4G WLAN	802.11n HT20	Left Cheek	1	1	0+1	21.5	20.68	1.21	-0.15	0.528	0.64
	2.4G WLAN	802.11b	Left Cheek	1	2	1	19.5	19.39	1.03	-0.03	0.63	0.65
	5.3G WLAN	802.11ac VH80	Right Cheek	58	1	0	18.5	18.16	1.08	-0.05	0.403	0.44
	5.3G WLAN	802.11ac VH80	Right Tilted	58	1	0	18.5	18.16	1.08	0.09	0.384	0.42
22	5.3G WLAN	802.11ac VH80	Left Cheek	58	1	0	18.5	18.16	1.08	0.13	0.651	0.70
	5.3G WLAN	802.11ac VH80	Left Tilted	58	1	0	18.5	18.16	1.08	-0.03	0.626	0.68
	5.3G WLAN	802.11ac VH80	Right Cheek	58	1	1	18.5	18.13	1.09	-0.09	0.031	0.03
	5.3G WLAN	802.11ac VH80	Right Tilted	58	1	1	18.5	18.13	1.09	0.15	0.015	0.02
	5.3G WLAN	802.11ac VH80	Left Cheek	58	1	1	18.5	18.13	1.09	-0.05	0.069	0.08
	5.3G WLAN	802.11ac VH80	Left Tilted	58	1	1	18.5	18.13	1.09	0.03	0.024	0.03
	5.3G WLAN	802.11n HT40	Right Cheek	62	1	0+1	20.5	20.28	1.05	-0.09	0.365	0.38
	5.3G WLAN	802.11n HT40	Right Tilted	62	1	0+1	20.5	20.28	1.05	0.17	0.362	0.38
	5.3G WLAN	802.11n HT40	Left Cheek	62	1	0+1	20.5	20.28	1.05	-0.07	0.446	0.47
	5.3G WLAN	802.11n HT40	Left Tilted	62	1	0+1	20.5	20.28	1.05	0.03	0.421	0.44
	5.3G WLAN	802.11ac VH80	Left Cheek	58	2	0	18.5	18.16	1.08	0.04	0.387	0.42

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Plot No.	Band	Mode	Test Position	Ch.	EUT Config.	Tx Antenna	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
	5.6G WLAN	802.11ac VH80	Right Cheek	106	1	0	18.5	18.47	1.01	-0.07	0.302	0.30
	5.6G WLAN	802.11ac VH80	Right Tilted	106	1	0	18.5	18.47	1.01	-0.08	0.292	0.29
23	5.6G WLAN	802.11ac VH80	Left Cheek	106	1	0	18.5	18.47	1.01	0.01	0.491	0.49
	5.6G WLAN	802.11ac VH80	Left Tilted	106	1	0	18.5	18.47	1.01	0.14	0.472	0.48
	5.6G WLAN	802.11ac VH80	Right Cheek	106	1	1	18.5	18.41	1.02	-0.03	0.042	0.04
	5.6G WLAN	802.11ac VH80	Right Tilted	106	1	1	18.5	18.41	1.02	0.07	0.021	0.02
	5.6G WLAN	802.11ac VH80	Left Cheek	106	1	1	18.5	18.41	1.02	0.06	0.096	0.10
	5.6G WLAN	802.11ac VH80	Left Tilted	106	1	1	18.5	18.41	1.02	-0.02	0.033	0.03
	5.6G WLAN	802.11ac VH80	Right Cheek	106	1	0+1	20.5	20.36	1.03	-0.09	0.275	0.28
	5.6G WLAN	802.11ac VH80	Right Tilted	106	1	0+1	20.5	20.36	1.03	0.11	0.273	0.28
	5.6G WLAN	802.11ac VH80	Left Cheek	106	1	0+1	20.5	20.36	1.03	-0.17	0.336	0.35
	5.6G WLAN	802.11ac VH80	Left Tilted	106	1	0+1	20.5	20.36	1.03	0.14	0.301	0.31
	5.6G WLAN	802.11ac VH80	Left Cheek	106	2	0	18.5	18.47	1.01	0.09	0.405	0.41
	5.8G WLAN	802.11ac VH80	Right Cheek	155	1	0	18.5	18.34	1.04	-0.02	0.517	0.54
	5.8G WLAN	802.11ac VH80	Right Tilted	155	1	0	18.5	18.34	1.04	0.03	0.552	0.57
	5.8G WLAN	802.11ac VH80	Left Cheek	155	1	0	18.5	18.34	1.04	-0.05	0.596	0.62
	5.8G WLAN	802.11ac VH80	Left Tilted	155	1	0	18.5	18.34	1.04	0.06	0.573	0.59
	5.8G WLAN	802.11ac VH80	Right Cheek	155	1	1	18.5	18.27	1.05	-0.11	0.093	0.10
	5.8G WLAN	802.11ac VH80	Right Tilted	155	1	1	18.5	18.27	1.05	0.08	0.048	0.05
	5.8G WLAN	802.11ac VH80	Left Cheek	155	1	1	18.5	18.27	1.05	0.08	0.215	0.23
	5.8G WLAN	802.11ac VH80	Left Tilted	155	1	1	18.5	18.27	1.05	-0.02	0.075	0.08
	5.8G WLAN	802.11ac VH80	Right Cheek	155	1	0+1	20.5	20.39	1.03	-0.02	0.523	0.54
	5.8G WLAN	802.11ac VH80	Right Tilted	155	1	0+1	20.5	20.39	1.01	-0.09	0.539	0.55
24	5.8G WLAN	802.11ac VH80	Left Cheek	155	1	0+1	20.5	20.39	1.01	-0.12	0.621	0.63
	5.8G WLAN	802.11ac VH80	Left Tilted	155	1	0+1	20.5	20.39	1.03	0.03	0.557	0.57
	5.8G WLAN	802.11ac VH80	Left Cheek	155	2	0+1	20.5	20.39	1.03	-0.09	0.525	0.54

<WLAN Transmission with Cell OFF>

Plot No.	Band	Mode	Test Position	Ch.	EUT Config.	Tx Antenna	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
	2.4G WLAN	802.11b	Right Cheek	1	1	0	20.0	19.41	1.15	-0.08	0.07	0.08
	2.4G WLAN	802.11b	Right Tilted	1	1	0	20.0	19.41	1.15	0.03	0.047	0.05
	2.4G WLAN	802.11b	Left Cheek	1	1	0	20.0	19.41	1.15	-0.03	0.391	0.45
	2.4G WLAN	802.11b	Left Tilted	1	1	0	20.0	19.41	1.15	-0.05	0.201	0.23
	2.4G WLAN	802.11b	Right Cheek	1	1	1	20.0	19.39	1.15	0.14	0.235	0.27
	2.4G WLAN	802.11b	Right Tilted	1	1	1	20.0	19.39	1.15	0.02	0.114	0.13
21	2.4G WLAN	802.11b	Left Cheek	1	1	1	20.0	19.39	1.15	-0.11	0.737	0.85
	2.4G WLAN	802.11b	Left Tilted	1	1	1	20.0	19.39	1.15	0.01	0.345	0.40
	2.4G WLAN	802.11n HT20	Right Cheek	1	1	0+1	21.5	21.18	1.08	-0.01	0.212	0.23
	2.4G WLAN	802.11n HT20	Right Tilted	1	1	0+1	21.5	21.18	1.08	0.03	0.077	0.08
	2.4G WLAN	802.11n HT20	Left Cheek	1	1	0+1	21.5	21.18	1.08	-0.12	0.665	0.72
	2.4G WLAN	802.11n HT20	Left Tilted	1	1	0+1	21.5	21.18	1.08	-0.17	0.327	0.35
	2.4G WLAN	802.11n HT20	Left Cheek	1	1	0+1	21.5	20.68	1.21	-0.15	0.528	0.64
	2.4G WLAN	802.11b	Left Cheek	1	2	1	20.0	19.39	1.15	-0.03	0.63	0.73

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Plot No.	Band	Mode	Test Position	Ch.	EUT Config.	Tx Antenna	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
	5.3G WLAN	802.11ac VH80	Right Cheek	58	1	0	19.0	18.16	1.21	-0.05	0.403	0.49
	5.3G WLAN	802.11ac VH80	Right Tilted	58	1	0	19.0	18.16	1.21	0.09	0.384	0.47
22	5.3G WLAN	802.11ac VH80	Left Cheek	58	1	0	19.0	18.16	1.21	0.13	0.651	0.79
	5.3G WLAN	802.11ac VH80	Left Tilted	58	1	0	19.0	18.16	1.21	-0.03	0.626	0.76
	5.3G WLAN	802.11ac VH80	Right Cheek	58	1	1	19.0	18.13	1.22	-0.09	0.031	0.04
	5.3G WLAN	802.11ac VH80	Right Tilted	58	1	1	19.0	18.13	1.22	0.15	0.015	0.02
	5.3G WLAN	802.11ac VH80	Left Cheek	58	1	1	19.0	18.13	1.22	-0.05	0.069	0.08
	5.3G WLAN	802.11ac VH80	Left Tilted	58	1	1	19.0	18.13	1.22	0.03	0.024	0.03
	5.3G WLAN	802.11n HT40	Right Cheek	62	1	0+1	21.0	20.28	1.18	-0.09	0.365	0.43
	5.3G WLAN	802.11n HT40	Right Tilted	62	1	0+1	21.0	20.28	1.18	0.17	0.362	0.43
	5.3G WLAN	802.11n HT40	Left Cheek	62	1	0+1	21.0	20.28	1.18	-0.07	0.446	0.53
	5.3G WLAN	802.11n HT40	Left Tilted	62	1	0+1	21.0	20.28	1.18	0.03	0.421	0.50
	5.3G WLAN	802.11ac VH80	Left Cheek	58	2	0	19.0	18.16	1.21	0.04	0.387	0.47
	5.6G WLAN	802.11ac VH80	Right Cheek	106	1	0	19.0	18.47	1.13	-0.07	0.302	0.34
	5.6G WLAN	802.11ac VH80	Right Tilted	106	1	0	19.0	18.47	1.13	-0.08	0.292	0.33
23	5.6G WLAN	802.11ac VH80	Left Cheek	106	1	0	19.0	18.47	1.13	0.01	0.491	0.55
	5.6G WLAN	802.11ac VH80	Left Tilted	106	1	0	19.0	18.47	1.13	0.14	0.472	0.53
	5.6G WLAN	802.11ac VH80	Right Cheek	106	1	1	19.0	18.41	1.15	-0.03	0.042	0.05
	5.6G WLAN	802.11ac VH80	Right Tilted	106	1	1	19.0	18.41	1.15	0.07	0.021	0.02
	5.6G WLAN	802.11ac VH80	Left Cheek	106	1	1	19.0	18.41	1.15	0.06	0.096	0.11
	5.6G WLAN	802.11ac VH80	Left Tilted	106	1	1	19.0	18.41	1.15	-0.02	0.033	0.04
	5.6G WLAN	802.11ac VH80	Right Cheek	106	1	0+1	21.0	20.36	1.03	-0.09	0.275	0.28
	5.6G WLAN	802.11ac VH80	Right Tilted	106	1	0+1	21.0	20.36	1.03	0.11	0.273	0.28
	5.6G WLAN	802.11ac VH80	Left Cheek	106	1	0+1	21.0	20.36	1.16	-0.17	0.336	0.39
	5.6G WLAN	802.11ac VH80	Left Tilted	106	1	0+1	21.0	20.36	1.16	0.14	0.301	0.35
	5.6G WLAN	802.11ac VH80	Left Cheek	106	2	0	19.0	18.47	1.13	0.09	0.405	0.46
	5.8G WLAN	802.11ac VH80	Right Cheek	155	1	0	19.0	18.34	1.16	-0.02	0.517	0.60
	5.8G WLAN	802.11ac VH80	Right Tilted	155	1	0	19.0	18.34	1.16	0.03	0.552	0.64
	5.8G WLAN	802.11ac VH80	Left Cheek	155	1	0	19.0	18.34	1.16	-0.05	0.596	0.69
	5.8G WLAN	802.11ac VH80	Left Tilted	155	1	0	19.0	18.34	1.16	0.06	0.573	0.67
	5.8G WLAN	802.11ac VH80	Right Cheek	155	1	1	19.0	18.27	1.18	-0.11	0.093	0.11
	5.8G WLAN	802.11ac VH80	Right Tilted	155	1	1	19.0	18.27	1.18	0.08	0.048	0.06
	5.8G WLAN	802.11ac VH80	Left Cheek	155	1	1	19.0	18.27	1.18	0.08	0.215	0.25
	5.8G WLAN	802.11ac VH80	Left Tilted	155	1	1	19.0	18.27	1.18	-0.02	0.075	0.09
	5.8G WLAN	802.11ac VH80	Right Cheek	155	1	0+1	21.0	20.39	1.15	-0.02	0.523	0.60
	5.8G WLAN	802.11ac VH80	Right Tilted	155	1	0+1	21.0	20.39	1.01	-0.09	0.539	0.55
24	5.8G WLAN	802.11ac VH80	Left Cheek	155	1	0+1	21.0	20.39	1.01	-0.12	0.621	0.63
	5.8G WLAN	802.11ac VH80	Left Tilted	155	1	0+1	21.0	20.39	1.15	0.03	0.557	0.64
	5.8G WLAN	802.11ac VH80	Left Cheek	155	2	0+1	21.0	20.39	1.15	-0.09	0.525	0.60

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4.7.3 SAR Results for Body-worn Exposure Condition (Test Separation Distance is 10 mm)

Plot No.	Band	Mode	Test Position	Ch.	EUT Config.	Tx Antenna	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
	GSM850	GPRS12	Front Face	251	1	0	29.5	28.39	1.29	0.10	0.029	0.04
	GSM850	GPRS12	Rear Face	251	1	0	29.5	28.39	1.29	-0.06	0.032	0.04
	GSM850	GPRS12	Front Face	251	1	1	29.5	28.39	1.29	0.02	0.121	0.16
25	GSM850	GPRS12	Rear Face	251	1	1	29.5	28.39	1.29	-0.19	0.158	0.20
	GSM850	GPRS12	Rear Face	251	2	1	29.5	28.39	1.29	0.12	0.154	0.20
	GSM1900	GPRS12	Front Face	661	1	0	27.0	25.83	1.31	0.15	0.248	0.32
26	GSM1900	GPRS12	Rear Face	661	1	0	27.0	25.83	1.31	-0.12	0.282	0.37
	GSM1900	GPRS12	Rear Face	661	2	0	27.0	25.83	1.31	-0.15	0.18	0.24
	WCDMA II	RMC12.2K	Front Face	9538	1	0	25.0	23.82	1.31	-0.01	0.368	0.48
27	WCDMA II	RMC12.2K	Rear Face	9538	1	0	25.0	23.82	1.31	-0.04	0.434	0.57
	WCDMA II	RMC12.2K	Rear Face	9538	2	0	25.0	23.82	1.31	0.11	0.423	0.56
	WCDMA IV	RMC12.2K	Front Face	1312	1	0	25.0	23.94	1.28	0.01	0.378	0.48
28	WCDMA IV	RMC12.2K	Rear Face	1312	1	0	25.0	23.94	1.28	-0.13	0.385	0.49
	WCDMA IV	RMC12.2K	Rear Face	1312	2	0	25.0	23.94	1.28	0.01	0.375	0.48
	WCDMA V	RMC12.2K	Front Face	4182	1	0	25.5	24.00	1.41	0.10	0.016	0.02
	WCDMA V	RMC12.2K	Rear Face	4182	1	0	25.5	24.00	1.41	0.11	0.022	0.03
	WCDMA V	RMC12.2K	Front Face	4182	1	1	25.5	24.00	1.41	0.07	0.129	0.18
29	WCDMA V	RMC12.2K	Rear Face	4182	1	1	25.5	24.00	1.41	0.00	0.166	0.23
	WCDMA V	RMC12.2K	Rear Face	4182	2	1	25.5	24.00	1.41	0.01	0.128	0.18
	CDMA BC0	RC3+SO32	Front Face	1013	1	0	25.5	24.16	1.36	0.11	0.086	0.12
	CDMA BC0	RC3+SO32	Rear Face	1013	1	0	25.5	24.16	1.36	0.19	0.089	0.12
	CDMA BC0	RC3+SO32	Front Face	1013	1	1	25.5	24.16	1.36	-0.03	0.135	0.18
30	CDMA BC0	RC3+SO32	Rear Face	1013	1	1	25.5	24.16	1.36	-0.09	0.166	0.23
	CDMA BC0	RC3+SO32	Rear Face	1013	2	1	25.5	24.16	1.36	-0.15	0.151	0.21
	CDMA BC1	RC3+SO32	Front Face	600	1	0	25.5	24.30	1.32	-0.08	0.499	0.66
31	CDMA BC1	RC3+SO32	Rear Face	600	1	0	25.5	24.30	1.32	-0.09	0.565	0.74
	CDMA BC1	RC3+SO32	Rear Face	600	2	0	25.5	24.30	1.32	0.01	0.551	0.73
	CDMA BC10	RC3+SO32	Front Face	580	1	0	25.5	24.18	1.36	0.04	0.101	0.14
	CDMA BC10	RC3+SO32	Rear Face	580	1	0	25.5	24.18	1.36	-0.13	0.138	0.19
	CDMA BC10	RC3+SO32	Front Face	580	1	1	25.5	24.18	1.36	0.14	0.156	0.21
32	CDMA BC10	RC3+SO32	Rear Face	580	1	1	25.5	24.18	1.36	0.08	0.172	0.23
	CDMA BC10	RC3+SO32	Rear Face	580	2	1	25.5	24.18	1.36	-0.03	0.161	0.22

Plot No.	Band	Mode	Test Position	Ch.	EUT Config.	Tx Antenna	RB#	RB Offset	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
	LTE 2	QPSK20M	Front Face	18700	1	0	1	0	25.0	23.93	1.28	0.10	0.364	0.47
33	LTE 2	QPSK20M	Rear Face	18700	1	0	1	0	25.0	23.93	1.28	-0.08	0.492	0.63
	LTE 2	QPSK20M	Front Face	18700	1	0	50	0	24.0	22.67	1.36	0.13	0.258	0.35
	LTE 2	QPSK20M	Rear Face	18700	1	0	50	0	24.0	22.67	1.36	0.02	0.299	0.41
	LTE 2	QPSK20M	Rear Face	18700	2	0	1	0	25.0	23.93	1.28	0.01	0.481	0.62
	LTE 4	QPSK20M	Front Face	20300	1	0	1	0	25.0	24.41	1.15	0.07	0.371	0.42
34	LTE 4	QPSK20M	Rear Face	20300	1	0	1	0	25.0	24.41	1.15	-0.14	0.465	0.53
	LTE 4	QPSK20M	Front Face	20300	1	0	50	0	24.0	23.48	1.13	-0.07	0.281	0.32
	LTE 4	QPSK20M	Rear Face	20300	1	0	50	0	24.0	23.48	1.13	0.12	0.316	0.36
	LTE 4	QPSK20M	Rear Face	20300	2	0	1	0	25.0	24.41	1.15	-0.14	0.445	0.51

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Plot No.	Band	Mode	Test Position	Ch.	EUT Config.	Tx Antenna	RB#	RB Offset	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
	LTE 5	QPSK10M	Front Face	20450	1	0	1	0	25.5	24.50	1.26	-0.02	0.013	0.02
	LTE 5	QPSK10M	Rear Face	20450	1	0	1	0	25.5	24.50	1.26	0.02	0.017	0.02
	LTE 5	QPSK10M	Front Face	20450	1	1	1	0	25.5	24.50	1.26	0.02	0.127	0.16
35	LTE 5	QPSK10M	Rear Face	20450	1	1	1	0	25.5	24.50	1.26	-0.12	0.13	0.16
	LTE 5	QPSK10M	Front Face	20450	1	0	25	0	24.5	23.50	1.26	-0.15	0.012	0.02
	LTE 5	QPSK10M	Rear Face	20450	1	0	25	0	24.5	23.50	1.26	0.05	0.014	0.02
	LTE 5	QPSK10M	Front Face	20450	1	1	25	0	24.5	23.50	1.26	0.14	0.103	0.13
	LTE 5	QPSK10M	Rear Face	20450	1	1	25	0	24.5	23.50	1.26	0.12	0.117	0.15
	LTE 5	QPSK10M	Rear Face	20450	2	1	1	0	25.5	24.50	1.26	-0.19	0.117	0.15
	LTE 7	QPSK20M	Front Face	21350	1	2	1	0	24.5	23.74	1.19	-0.07	0.771	0.92
	LTE 7	QPSK20M	Rear Face	21350	1	2	1	0	24.5	23.74	1.19	0.03	0.579	0.69
	LTE 7	QPSK20M	Front Face	21350	1	3	1	0	24.5	23.74	1.19	-0.06	0.125	0.15
	LTE 7	QPSK20M	Rear Face	21350	1	3	1	0	24.5	23.74	1.19	0.03	0.231	0.28
	LTE 7	QPSK20M	Front Face	21350	1	2	50	0	23.5	22.73	1.19	-0.09	0.581	0.69
	LTE 7	QPSK20M	Rear Face	21350	1	2	50	0	23.5	22.73	1.19	0.03	0.429	0.51
	LTE 7	QPSK20M	Front Face	21350	1	3	50	0	23.5	22.73	1.19	-0.09	0.112	0.13
	LTE 7	QPSK20M	Rear Face	21350	1	3	50	0	23.5	22.73	1.19	0.03	0.207	0.25
36	LTE 7	QPSK20M	Front Face	20850	1	2	1	0	24.5	23.22	1.34	-0.11	0.705	0.95
	LTE 7	QPSK20M	Front Face	21100	1	2	1	0	24.5	23.66	1.21	-0.14	0.753	0.91
	LTE 7	QPSK20M	Front Face	21350	1	2	100	0	23.5	22.71	1.20	0.05	0.134	0.16
	LTE 7	QPSK20M	Front Face	20850	2	2	1	0	24.5	23.22	1.34	0.04	0.471	0.63
	LTE 12	QPSK10M	Front Face	23095	1	0	1	0	25.0	24.00	1.26	-0.09	0.089	0.11
	LTE 12	QPSK10M	Rear Face	23095	1	0	1	0	25.0	24.00	1.26	0.10	0.119	0.15
	LTE 12	QPSK10M	Front Face	23095	1	1	1	0	25.0	24.00	1.26	0.03	0.101	0.13
37	LTE 12	QPSK10M	Rear Face	23095	1	1	1	0	25.0	24.00	1.26	0.04	0.129	0.16
	LTE 12	QPSK10M	Front Face	23095	1	0	25	0	24.0	23.00	1.26	-0.06	0.075	0.09
	LTE 12	QPSK10M	Rear Face	23095	1	0	25	0	24.0	23.00	1.26	0.07	0.099	0.13
	LTE 12	QPSK10M	Front Face	23095	1	1	25	0	24.0	23.00	1.26	-0.02	0.091	0.11
	LTE 12	QPSK10M	Rear Face	23095	1	1	25	0	24.0	23.00	1.26	0.03	0.107	0.14
	LTE 12	QPSK10M	Rear Face	23095	2	1	1	0	25.0	24.00	1.26	0.06	0.122	0.15
	LTE 13	QPSK10M	Front Face	23230	1	0	1	0	25.0	24.53	1.11	-0.02	0.03	0.03
	LTE 13	QPSK10M	Rear Face	23230	1	0	1	0	25.0	24.53	1.11	-0.09	0.04	0.04
	LTE 13	QPSK10M	Front Face	23230	1	1	1	0	25.0	24.53	1.11	-0.05	0.122	0.14
38	LTE 13	QPSK10M	Rear Face	23230	1	1	1	0	25.0	24.53	1.11	-0.15	0.149	0.17
	LTE 13	QPSK10M	Front Face	23230	1	0	25	0	24.0	23.52	1.12	0.02	0.025	0.03
	LTE 13	QPSK10M	Rear Face	23230	1	0	25	0	24.0	23.52	1.12	-0.02	0.033	0.04
	LTE 13	QPSK10M	Front Face	23230	1	1	25	0	24.0	23.52	1.12	-0.05	0.118	0.13
	LTE 13	QPSK10M	Rear Face	23230	1	1	25	0	24.0	23.52	1.12	0.03	0.126	0.14
	LTE 13	QPSK10M	Rear Face	23230	2	1	1	0	25.0	24.53	1.11	0.06	0.144	0.16
	LTE 17	QPSK10M	Front Face	23790	1	0	1	0	25.0	23.99	1.26	-0.09	0.084	0.11
	LTE 17	QPSK10M	Rear Face	23790	1	0	1	0	25.0	23.99	1.26	-0.11	0.121	0.15
	LTE 17	QPSK10M	Front Face	23790	1	1	1	0	25.0	23.99	1.26	0.04	0.1	0.13
39	LTE 17	QPSK10M	Rear Face	23790	1	1	1	0	25.0	23.99	1.26	0.02	0.13	0.16
	LTE 17	QPSK10M	Front Face	23790	1	0	25	0	24.0	22.91	1.29	0.02	0.073	0.09
	LTE 17	QPSK10M	Rear Face	23790	1	0	25	0	24.0	22.91	1.29	-0.08	0.096	0.12
	LTE 17	QPSK10M	Front Face	23790	1	1	25	0	24.0	22.91	1.29	0.14	0.085	0.11
	LTE 17	QPSK10M	Rear Face	23790	1	1	25	0	24.0	22.91	1.29	-0.14	0.116	0.15
	LTE 17	QPSK10M	Rear Face	23790	2	1	1	0	25.0	23.99	1.26	-0.11	0.121	0.15

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Plot No.	Band	Mode	Test Position	Ch.	EUT Config.	Tx Antenna	RB#	RB Offset	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
40	LTE 25	QPSK20M	Front Face	26140	1	0	1	0	25.0	23.87	1.30	0.05	0.346	0.45
	LTE 25	QPSK20M	Rear Face	26140	1	0	1	0	25.0	23.87	1.30	-0.15	0.445	0.58
	LTE 25	QPSK20M	Front Face	26140	1	0	50	0	24.0	22.74	1.34	0.13	0.258	0.34
	LTE 25	QPSK20M	Rear Face	26140	1	0	50	0	24.0	22.74	1.34	0.07	0.292	0.39
	LTE 25	QPSK20M	Rear Face	26140	2	0	1	0	25.0	23.87	1.30	0.11	0.432	0.57
41	LTE 26	QOSK15M	Front Face	26765	1	0	1	0	25.5	24.75	1.19	0.07	0.082	0.10
	LTE 26	QOSK15M	Rear Face	26765	1	0	1	0	25.5	24.75	1.19	0.19	0.097	0.12
	LTE 26	QOSK15M	Front Face	26765	1	1	1	0	25.5	24.75	1.19	0.04	0.124	0.15
	LTE 26	QOSK15M	Rear Face	26765	1	1	1	0	25.5	24.75	1.19	-0.09	0.15	0.18
	LTE 26	QOSK15M	Front Face	26765	1	0	36	0	24.5	23.97	1.13	0.02	0.067	0.08
	LTE 26	QOSK15M	Rear Face	26765	1	0	36	0	24.5	23.97	1.13	-0.13	0.071	0.08
	LTE 26	QOSK15M	Front Face	26765	1	1	36	0	24.5	23.97	1.13	0.15	0.109	0.12
	LTE 26	QOSK15M	Rear Face	26765	1	1	36	0	24.5	23.97	1.13	-0.07	0.117	0.13
	LTE 26	QOSK15M	Rear Face	26765	2	1	1	0	25.5	24.75	1.19	0.06	0.136	0.16
42	LTE 30	QPSK10M	Front Face	27710	1	2	1	0	24.5	23.94	1.14	-0.08	0.425	0.48
	LTE 30	QPSK10M	Rear Face	27710	1	2	1	0	24.5	23.94	1.14	0.17	0.324	0.37
	LTE 30	QPSK10M	Front Face	27710	1	3	1	0	24.5	23.94	1.14	0.02	0.111	0.13
	LTE 30	QPSK10M	Rear Face	27710	1	3	1	0	24.5	23.94	1.14	-0.12	0.234	0.27
	LTE 30	QPSK10M	Front Face	27710	1	2	25	0	23.5	22.93	1.14	0.17	0.338	0.39
	LTE 30	QPSK10M	Rear Face	27710	1	2	25	0	23.5	22.93	1.14	0.17	0.237	0.27
	LTE 30	QPSK10M	Front Face	27710	1	3	25	0	23.5	22.93	1.14	0.08	0.093	0.11
	LTE 30	QPSK10M	Rear Face	27710	1	3	25	0	23.5	22.93	1.14	0.15	0.195	0.22
	LTE 30	QPSK10M	Front Face	27710	2	2	1	0	24.5	23.94	1.14	0.01	0.239	0.27
44	LTE 66	QPSK20M	Front Face	132072	1	0	1	0	24.5	23.93	1.14	-0.02	0.381	0.43
	LTE 66	QPSK20M	Rear Face	132072	1	0	1	0	24.5	23.93	1.14	0.10	0.426	0.49
	LTE 66	QPSK20M	Front Face	132072	1	0	50	0	23.5	23.00	1.12	0.19	0.298	0.33
	LTE 66	QPSK20M	Rear Face	132072	1	0	50	0	23.5	23.00	1.12	0.19	0.337	0.38
	LTE 66	QPSK20M	Rear Face	132072	2	0	1	0	24.5	23.93	1.14	0.12	0.416	0.48

Plot No.	Band	Mode	Test Position	Ch.	EUT Config.	Tx Antenna	Power Class	Uplink Downlink Config.	Special Subframe Config.	RB#	RB Offset	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
43	LTE 41	QPSK20M	Front Face	39750	1	2	3	0	5	1	0	24.0	23.99	1.00	-0.06	0.496	0.50
	LTE 41	QPSK20M	Rear Face	39750	1	2	3	0	5	1	0	24.0	23.99	1.00	-0.19	0.478	0.48
	LTE 41	QPSK20M	Front Face	39750	1	3	3	0	5	1	0	24.0	23.99	1.00	0.14	0.081	0.08
	LTE 41	QPSK20M	Rear Face	39750	1	3	3	0	5	1	0	24.0	23.99	1.00	-0.07	0.132	0.13
	LTE 41	QPSK20M	Front Face	39750	1	2	3	0	5	50	0	23.0	22.92	1.02	0.08	0.476	0.48
	LTE 41	QPSK20M	Rear Face	39750	1	2	3	0	5	50	0	23.0	22.92	1.02	0.15	0.304	0.31
	LTE 41	QPSK20M	Front Face	39750	1	3	3	0	5	50	0	23.0	22.92	1.02	-0.12	0.083	0.08
	LTE 41	QPSK20M	Rear Face	39750	1	3	3	0	5	50	0	23.0	22.92	1.02	0.15	0.133	0.14
	LTE 41	QPSK20M	Front Face	39750	1	2	2	1	5	1	0	27.5	27.09	1.10	-0.07	0.627	0.69
43	LTE 41	QPSK20M	Front Face	39750	2	2	2	1	5	1	0	27.5	27.09	1.10	0.06	0.204	0.22

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<WLAN Transmission with Cell ON>

Plot No.	Band	Mode	Test Position	Ch.	EUT Config.	Tx Antenna	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
	2.4G WLAN	802.11b	Front Face	1	1	0	19.5	19.41	1.02	-0.04	0.035	0.04
	2.4G WLAN	802.11b	Rear Face	1	1	0	19.5	19.41	1.02	-0.14	0.033	0.03
	2.4G WLAN	802.11b	Front Face	1	1	1	19.5	19.39	1.03	0.08	0.041	0.04
45	2.4G WLAN	802.11b	Rear Face	1	1	1	19.5	19.39	1.03	-0.14	0.045	0.05
	2.4G WLAN	802.11n HT20	Front Face	1	1	0+1	21.5	21.18	1.08	-0.13	0.039	0.04
	2.4G WLAN	802.11n HT20	Rear Face	1	1	0+1	21.5	21.18	1.08	-0.11	0.041	0.04
	2.4G WLAN	802.11b	Rear Face	1	2	1	19.5	19.39	1.03	0.10	0.04	0.04
	5.3G WLAN	802.11ac VH80	Front Face	58	1	0	18.5	18.16	1.08	-0.02	0.052	0.06
	5.3G WLAN	802.11ac VH80	Rear Face	58	1	0	18.5	18.16	1.08	0.10	0.016	0.02
	5.3G WLAN	802.11ac VH80	Front Face	58	1	1	18.5	18.13	1.09	0.08	0.034	0.04
46	5.3G WLAN	802.11ac VH80	Rear Face	58	1	1	18.5	18.13	1.09	0.05	0.09	0.10
	5.3G WLAN	802.11n HT40	Front Face	62	1	0+1	20.5	20.28	1.05	-0.03	0.053	0.06
	5.3G WLAN	802.11n HT40	Rear Face	62	1	0+1	20.5	20.28	1.05	-0.01	0.029	0.03
	5.3G WLAN	802.11ac VH80	Rear Face	58	2	1	18.5	18.13	1.09	0.14	0.045	0.05
	5.6G WLAN	802.11ac VH80	Front Face	106	1	0	18.5	18.47	1.01	0.04	0.038	0.04
	5.6G WLAN	802.11ac VH80	Rear Face	106	1	0	18.5	18.47	1.01	-0.05	0.026	0.03
	5.6G WLAN	802.11ac VH80	Front Face	106	1	1	18.5	18.41	1.02	0.03	0.058	0.06
47	5.6G WLAN	802.11ac VH80	Rear Face	106	1	1	18.5	18.41	1.02	0.08	0.095	0.10
	5.6G WLAN	802.11ac VH80	Front Face	106	1	0+1	20.5	20.36	1.03	0.12	0.073	0.08
	5.6G WLAN	802.11ac VH80	Rear Face	106	1	0+1	20.5	20.36	1.03	0.17	0.042	0.04
	5.6G WLAN	802.11ac VH80	Rear Face	106	2	1	18.5	18.41	1.02	-0.11	0.084	0.09
48	5.8G WLAN	802.11ac VH80	Front Face	155	1	0	18.5	18.34	1.04	0.08	0.089	0.09
	5.8G WLAN	802.11ac VH80	Rear Face	155	1	0	18.5	18.34	1.04	0.00	0.027	0.03
	5.8G WLAN	802.11ac VH80	Front Face	155	1	1	18.5	18.27	1.05	-0.03	0.00843	0.01
	5.8G WLAN	802.11ac VH80	Rear Face	155	1	1	18.5	18.27	1.05	0.02	0.05	0.05
	5.8G WLAN	802.11ac VH80	Front Face	155	1	0+1	20.5	20.39	1.03	0.04	0.078	0.08
	5.8G WLAN	802.11ac VH80	Rear Face	155	1	0+1	20.5	20.39	1.03	-0.09	0.046	0.05
	5.8G WLAN	802.11ac VH80	Front Face	155	2	0	18.5	18.34	1.04	0.04	0.082	0.09

FCC SAR Test Report

<WLAN Transmission with Cell OFF>

Plot No.	Band	Mode	Test Position	Ch.	EUT Config.	Tx Antenna	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
	2.4G WLAN	802.11b	Front Face	1	1	0	20.0	19.41	1.15	-0.04	0.035	0.04
	2.4G WLAN	802.11b	Rear Face	1	1	0	20.0	19.41	1.15	-0.14	0.033	0.04
	2.4G WLAN	802.11b	Front Face	1	1	1	20.0	19.39	1.15	0.08	0.041	0.05
45	2.4G WLAN	802.11b	Rear Face	1	1	1	20.0	19.39	1.15	-0.14	0.045	0.05
	2.4G WLAN	802.11n HT20	Front Face	1	1	0+1	21.5	21.18	1.08	-0.13	0.039	0.04
	2.4G WLAN	802.11n HT20	Rear Face	1	1	0+1	21.5	21.18	1.08	-0.11	0.041	0.04
	2.4G WLAN	802.11b	Rear Face	1	2	1	20.0	19.39	1.15	0.10	0.04	0.05
	5.3G WLAN	802.11ac VH80	Front Face	58	1	0	19.0	18.16	1.21	-0.02	0.052	0.06
	5.3G WLAN	802.11ac VH80	Rear Face	58	1	0	19.0	18.16	1.21	0.10	0.016	0.02
	5.3G WLAN	802.11ac VH80	Front Face	58	1	1	19.0	18.13	1.22	0.08	0.034	0.04
46	5.3G WLAN	802.11ac VH80	Rear Face	58	1	1	19.0	18.13	1.22	0.05	0.09	0.11
	5.3G WLAN	802.11n HT40	Front Face	62	1	0+1	21.0	20.28	1.18	-0.03	0.053	0.06
	5.3G WLAN	802.11n HT40	Rear Face	62	1	0+1	21.0	20.28	1.18	-0.01	0.029	0.03
	5.3G WLAN	802.11ac VH80	Rear Face	58	2	1	19.0	18.13	1.22	0.14	0.045	0.05
	5.6G WLAN	802.11ac VH80	Front Face	106	1	0	19.0	18.47	1.13	0.04	0.038	0.04
	5.6G WLAN	802.11ac VH80	Rear Face	106	1	0	19.0	18.47	1.13	-0.05	0.026	0.03
	5.6G WLAN	802.11ac VH80	Front Face	106	1	1	19.0	18.41	1.15	0.03	0.058	0.07
47	5.6G WLAN	802.11ac VH80	Rear Face	106	1	1	19.0	18.41	1.15	0.08	0.095	0.11
	5.6G WLAN	802.11ac VH80	Front Face	106	1	0+1	21.0	20.36	1.16	0.12	0.073	0.08
	5.6G WLAN	802.11ac VH80	Rear Face	106	1	0+1	21.0	20.36	1.16	0.17	0.042	0.05
	5.6G WLAN	802.11ac VH80	Rear Face	106	2	1	19.0	18.41	1.15	-0.11	0.084	0.10
48	5.8G WLAN	802.11ac VH80	Front Face	155	1	0	19.0	18.34	1.16	0.08	0.089	0.10
	5.8G WLAN	802.11ac VH80	Rear Face	155	1	0	19.0	18.34	1.16	0.00	0.027	0.03
	5.8G WLAN	802.11ac VH80	Front Face	155	1	1	19.0	18.27	1.18	-0.03	0.00843	0.01
	5.8G WLAN	802.11ac VH80	Rear Face	155	1	1	19.0	18.27	1.18	0.02	0.05	0.06
	5.8G WLAN	802.11ac VH80	Front Face	155	1	0+1	21.0	20.39	1.15	0.04	0.078	0.09
	5.8G WLAN	802.11ac VH80	Rear Face	155	1	0+1	21.0	20.39	1.15	-0.09	0.046	0.05
	5.8G WLAN	802.11ac VH80	Front Face	155	2	0	19.0	18.34	1.16	0.04	0.082	0.10

Plot No.	Band	Test Position	Ch.	EUT Config.	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
	Bluetooth	Front Face	39	1	11.0	9.43	1.44	0.00	< 0.001	0.00
	Bluetooth	Rear Face	39	1	11.0	9.43	1.44	0.00	< 0.001	0.00
	Bluetooth	Front Face	39	2	11.0	9.43	1.44	0.00	< 0.001	0.00

Note: The "< 0.001" means there is no SAR value or the SAR is too low to be measured.

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4.7.4 SAR Results for Hotspot Exposure Condition (Test Separation Distance is 10 mm)

Plot No.	Band	Mode	Test Position	Ch.	EUT Config.	Tx Antenna	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
	GSM850	GPRS12	Front Face	251	1	0	29.5	28.39	1.29	0.10	0.029	0.04
	GSM850	GPRS12	Rear Face	251	1	0	29.5	28.39	1.29	-0.06	0.032	0.04
	GSM850	GPRS12	Left Side	251	1	0	29.5	28.39	1.29	-0.14	0.02	0.03
	GSM850	GPRS12	Right Side	251	1	0	29.5	28.39	1.29	0.04	0.024	0.03
	GSM850	GPRS12	Bottom Side	251	1	0	29.5	28.39	1.29	-0.17	0.011	0.01
	GSM850	GPRS12	Front Face	251	1	1	29.5	28.39	1.29	0.02	0.121	0.16
25	GSM850	GPRS12	Rear Face	251	1	1	29.5	28.39	1.29	-0.19	0.158	0.20
	GSM850	GPRS12	Left Side	251	1	1	29.5	28.39	1.29	0.07	0.097	0.13
	GSM850	GPRS12	Right Side	251	1	1	29.5	28.39	1.29	-0.04	0.121	0.16
	GSM850	GPRS12	Top Side	251	1	1	29.5	28.39	1.29	0.10	0.047	0.06
	GSM850	GPRS12	Rear Face	251	2	1	29.5	28.39	1.29	0.12	0.154	0.20
	GSM1900	GPRS12	Front Face	661	1	0	27.0	25.83	1.31	0.15	0.248	0.32
26	GSM1900	GPRS12	Rear Face	661	1	0	27.0	25.83	1.31	-0.12	0.282	0.37
	GSM1900	GPRS12	Left Side	661	1	0	27.0	25.83	1.31	0.06	0.033	0.04
	GSM1900	GPRS12	Right Side	661	1	0	27.0	25.83	1.31	-0.05	0.046	0.06
	GSM1900	GPRS12	Bottom Side	661	1	0	27.0	25.83	1.31	-0.03	0.186	0.24
	GSM1900	GPRS12	Rear Face	661	2	0	27.0	25.83	1.31	-0.15	0.18	0.24
	WCDMA II	RMC12.2K	Front Face	9538	1	0	25.0	23.82	1.31	-0.01	0.368	0.48
	WCDMA II	RMC12.2K	Rear Face	9538	1	0	25.0	23.82	1.31	-0.04	0.434	0.57
	WCDMA II	RMC12.2K	Left Side	9538	1	0	25.0	23.82	1.31	-0.11	0.054	0.07
	WCDMA II	RMC12.2K	Right Side	9538	1	0	25.0	23.82	1.31	0.05	0.069	0.09
49	WCDMA II	RMC12.2K	Bottom Side	9538	1	0	25.0	23.82	1.31	0.16	0.747	0.98
	WCDMA II	RMC12.2K	Bottom Side	9262	1	0	25.0	23.74	1.34	-0.06	0.697	0.93
	WCDMA II	RMC12.2K	Bottom Side	9400	1	0	25.0	23.78	1.32	-0.10	0.724	0.96
	WCDMA II	RMC12.2K	Bottom Side	9538	2	0	25.0	23.82	1.31	0.15	0.732	0.96
	WCDMA II	RMC12.2K	Bottom Side	9262	2	0	25.0	23.74	1.34	0.13	0.624	0.83
	WCDMA II	RMC12.2K	Bottom Side	9400	2	0	25.0	23.78	1.32	-0.08	0.687	0.91
	WCDMA IV	RMC12.2K	Front Face	1312	1	0	25.0	23.94	1.28	0.01	0.378	0.48
	WCDMA IV	RMC12.2K	Rear Face	1312	1	0	25.0	23.94	1.28	-0.13	0.385	0.49
	WCDMA IV	RMC12.2K	Left Side	1312	1	0	25.0	23.94	1.28	-0.06	0.105	0.13
	WCDMA IV	RMC12.2K	Right Side	1312	1	0	25.0	23.94	1.28	0.15	0.045	0.06
	WCDMA IV	RMC12.2K	Bottom Side	1312	1	0	25.0	23.94	1.28	0.13	0.44	0.56
	WCDMA IV	RMC12.2K	Bottom Side	1413	1	0	25.0	23.92	1.28	-0.06	0.588	0.75
50	WCDMA IV	RMC12.2K	Bottom Side	1513	1	0	25.0	23.90	1.29	0.17	0.599	0.77
	WCDMA IV	RMC12.2K	Bottom Side	1513	2	0	25.0	23.90	1.29	0.07	0.527	0.68
	WCDMA V	RMC12.2K	Front Face	4182	1	0	25.5	24.00	1.41	0.10	0.016	0.02
	WCDMA V	RMC12.2K	Rear Face	4182	1	0	25.5	24.00	1.41	0.11	0.022	0.03
	WCDMA V	RMC12.2K	Left Side	4182	1	0	25.5	24.00	1.41	-0.16	0.013	0.02
	WCDMA V	RMC12.2K	Right Side	4182	1	0	25.5	24.00	1.41	-0.03	0.003	0.00
	WCDMA V	RMC12.2K	Bottom Side	4182	1	0	25.5	24.00	1.41	0.15	0.008	0.01
	WCDMA V	RMC12.2K	Front Face	4182	1	1	25.5	24.00	1.41	0.07	0.129	0.18
29	WCDMA V	RMC12.2K	Rear Face	4182	1	1	25.5	24.00	1.41	0.00	0.166	0.23
	WCDMA V	RMC12.2K	Left Side	4182	1	1	25.5	24.00	1.41	-0.15	0.127	0.18
	WCDMA V	RMC12.2K	Right Side	4182	1	1	25.5	24.00	1.41	0.02	0.026	0.04
	WCDMA V	RMC12.2K	Top Side	4182	1	1	25.5	24.00	1.41	0.08	0.061	0.09
	WCDMA V	RMC12.2K	Rear Face	4182	2	1	25.5	24.00	1.41	0.01	0.128	0.18

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Plot No.	Band	Mode	Test Position	Ch.	EUT Config.	Tx Antenna	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
	CDMA BC0	RC3+SO32	Front Face	1013	1	0	25.5	24.16	1.36	0.11	0.086	0.12
	CDMA BC0	RC3+SO32	Rear Face	1013	1	0	25.5	24.16	1.36	0.19	0.089	0.12
	CDMA BC0	RC3+SO32	Left Side	1013	1	0	25.5	24.16	1.36	0.01	0.053	0.07
	CDMA BC0	RC3+SO32	Right Side	1013	1	0	25.5	24.16	1.36	0.07	0.082	0.11
	CDMA BC0	RC3+SO32	Bottom Side	1013	1	0	25.5	24.16	1.36	0.06	0.045	0.06
	CDMA BC0	RC3+SO32	Front Face	1013	1	1	25.5	24.16	1.36	-0.03	0.135	0.18
30	CDMA BC0	RC3+SO32	Rear Face	1013	1	1	25.5	24.16	1.36	-0.09	0.166	0.23
	CDMA BC0	RC3+SO32	Left Side	1013	1	1	25.5	24.16	1.36	-0.03	0.121	0.16
	CDMA BC0	RC3+SO32	Right Side	1013	1	1	25.5	24.16	1.36	-0.06	0.1	0.14
	CDMA BC0	RC3+SO32	Top Side	1013	1	1	25.5	24.16	1.36	0.04	0.009	0.01
	CDMA BC0	RC3+SO32	Rear Face	1013	2	1	25.5	24.16	1.36	-0.15	0.151	0.21
	CDMA BC1	RC3+SO32	Front Face	600	1	0	25.5	24.30	1.32	-0.08	0.499	0.66
	CDMA BC1	RC3+SO32	Rear Face	600	1	0	25.5	24.30	1.32	-0.09	0.565	0.74
	CDMA BC1	RC3+SO32	Left Side	600	1	0	25.5	24.30	1.32	0.03	0.041	0.05
	CDMA BC1	RC3+SO32	Right Side	600	1	0	25.5	24.30	1.32	-0.04	0.071	0.09
	CDMA BC1	RC3+SO32	Bottom Side	600	1	0	25.5	24.30	1.32	0.11	0.826	1.09
	CDMA BC1	RC3+SO32	Bottom Side	25	1	0	25.5	24.20	1.35	0.08	0.802	1.08
51	CDMA BC1	RC3+SO32	Bottom Side	1175	1	0	25.5	24.21	1.35	0.02	0.833	1.12
	CDMA BC1	RC3+SO32	Bottom Side	1175	2	0	25.5	24.21	1.35	0.12	0.817	1.10
	CDMA BC1	RC3+SO32	Bottom Side	25	2	0	25.5	24.20	1.35	0.04	0.804	1.08
	CDMA BC1	RC3+SO32	Bottom Side	600	2	0	25.5	24.30	1.32	-0.04	0.798	1.05
	CDMA BC1	RC3+SO32	Bottom Side	1175	1	0	25.5	24.21	1.35	0.04	0.812	1.09
	CDMA BC10	RC3+SO32	Front Face	580	1	0	25.5	24.18	1.36	0.04	0.101	0.14
	CDMA BC10	RC3+SO32	Rear Face	580	1	0	25.5	24.18	1.36	-0.13	0.138	0.19
	CDMA BC10	RC3+SO32	Left Side	580	1	0	25.5	24.18	1.36	-0.13	0.091	0.12
	CDMA BC10	RC3+SO32	Right Side	580	1	0	25.5	24.18	1.36	0.02	0.125	0.17
	CDMA BC10	RC3+SO32	Bottom Side	580	1	0	25.5	24.18	1.36	-0.15	0.052	0.07
	CDMA BC10	RC3+SO32	Front Face	580	1	1	25.5	24.18	1.36	0.14	0.156	0.21
32	CDMA BC10	RC3+SO32	Rear Face	580	1	1	25.5	24.18	1.36	0.08	0.172	0.23
	CDMA BC10	RC3+SO32	Left Side	580	1	1	25.5	24.18	1.36	-0.07	0.136	0.18
	CDMA BC10	RC3+SO32	Right Side	580	1	1	25.5	24.18	1.36	0.08	0.101	0.14
	CDMA BC10	RC3+SO32	Top Side	580	1	1	25.5	24.18	1.36	0.01	0.007	0.01
	CDMA BC10	RC3+SO32	Rear Face	580	2	1	25.5	24.18	1.36	-0.03	0.161	0.22

Plot No.	Band	Mode	Test Position	Ch.	EUT Config.	Tx Antenna	RB#	RB Offset	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
	LTE 2	QPSK20M	Front Face	18700	1	0	1	0	25.0	23.93	1.28	0.10	0.364	0.47
	LTE 2	QPSK20M	Rear Face	18700	1	0	1	0	25.0	23.93	1.28	-0.08	0.492	0.63
	LTE 2	QPSK20M	Left Side	18700	1	0	1	0	25.0	23.93	1.28	-0.08	0.051	0.07
	LTE 2	QPSK20M	Right Side	18700	1	0	1	0	25.0	23.93	1.28	0.04	0.077	0.10
	LTE 2	QPSK20M	Bottom Side	18700	1	0	1	0	25.0	23.93	1.28	0.10	0.671	0.86
	LTE 2	QPSK20M	Front Face	18700	1	0	50	0	24.0	22.67	1.36	0.13	0.258	0.35
	LTE 2	QPSK20M	Rear Face	18700	1	0	50	0	24.0	22.67	1.36	0.02	0.299	0.41
	LTE 2	QPSK20M	Left Side	18700	1	0	50	0	24.0	22.67	1.36	-0.01	0.045	0.06
	LTE 2	QPSK20M	Right Side	18700	1	0	50	0	24.0	22.67	1.36	0.19	0.076	0.10
	LTE 2	QPSK20M	Bottom Side	18700	1	0	50	0	24.0	22.67	1.36	0.14	0.468	0.64
	LTE 2	QPSK20M	Bottom Side	18900	1	0	1	0	25.0	23.81	1.32	-0.17	0.644	0.85
	LTE 2	QPSK20M	Bottom Side	19100	1	0	1	0	25.0	23.77	1.33	0.07	0.668	0.89
	LTE 2	QPSK20M	Bottom Side	18700	1	0	100	0	24.0	22.58	1.39	0.03	0.434	0.60
52	LTE 2	QPSK20M	Bottom Side	19100	2	0	1	0	25.0	23.77	1.33	-0.11	0.783	1.04
	LTE 2	QPSK20M	Bottom Side	18700	2	0	1	0	25.0	23.93	1.28	0.08	0.75	0.96
	LTE 2	QPSK20M	Bottom Side	18900	2	0	1	0	25.0	23.57	1.39	-0.05	0.687	0.95
	LTE 2	QPSK20M	Bottom Side	19100	2	0	1	0	25.0	23.77	1.33	-0.08	0.767	1.02

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Plot No.	Band	Mode	Test Position	Ch.	EUT Config.	Tx Antenna	RB#	RB Offset	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
	LTE 4	QPSK20M	Front Face	20300	1	0	1	0	25.0	24.41	1.15	0.07	0.371	0.42
	LTE 4	QPSK20M	Rear Face	20300	1	0	1	0	25.0	24.41	1.15	-0.14	0.465	0.53
	LTE 4	QPSK20M	Left Side	20300	1	0	1	0	25.0	24.41	1.15	0.02	0.421	0.48
	LTE 4	QPSK20M	Right Side	20300	1	0	1	0	25.0	24.41	1.15	-0.08	0.135	0.15
53	LTE 4	QPSK20M	Bottom Side	20300	1	0	1	0	25.0	24.41	1.15	-0.15	0.612	0.70
	LTE 4	QPSK20M	Front Face	20300	1	0	50	0	24.0	23.48	1.13	-0.07	0.281	0.32
	LTE 4	QPSK20M	Rear Face	20300	1	0	50	0	24.0	23.48	1.13	0.12	0.316	0.36
	LTE 4	QPSK20M	Left Side	20300	1	0	50	0	24.0	23.48	1.13	-0.17	0.097	0.11
	LTE 4	QPSK20M	Right Side	20300	1	0	50	0	24.0	23.48	1.13	0.11	0.049	0.06
	LTE 4	QPSK20M	Bottom Side	20300	1	0	50	0	24.0	23.48	1.13	-0.01	0.479	0.54
	LTE 4	QPSK20M	Bottom Side	20300	2	0	1	0	25.0	24.41	1.15	0.08	0.551	0.63
	LTE 5	QPSK10M	Front Face	20450	1	0	1	0	25.5	24.50	1.26	-0.02	0.013	0.02
	LTE 5	QPSK10M	Rear Face	20450	1	0	1	0	25.5	24.50	1.26	0.02	0.017	0.02
	LTE 5	QPSK10M	Left Side	20450	1	0	1	0	25.5	24.50	1.26	-0.08	0.011	0.01
	LTE 5	QPSK10M	Right Side	20450	1	0	1	0	25.5	24.50	1.26	-0.18	0.00244	0.00
	LTE 5	QPSK10M	Bottom Side	20450	1	0	1	0	25.5	24.50	1.26	-0.15	0.00626	0.01
	LTE 5	QPSK10M	Front Face	20450	1	1	1	0	25.5	24.50	1.26	0.02	0.127	0.16
35	LTE 5	QPSK10M	Rear Face	20450	1	1	1	0	25.5	24.50	1.26	-0.12	0.13	0.16
	LTE 5	QPSK10M	Left Side	20450	1	1	1	0	25.5	24.50	1.26	0.13	0.081	0.10
	LTE 5	QPSK10M	Right Side	20450	1	1	1	0	25.5	24.50	1.26	-0.13	0.074	0.09
	LTE 5	QPSK10M	Top Side	20450	1	1	1	0	25.5	24.50	1.26	0.02	0.00459	0.01
	LTE 5	QPSK10M	Front Face	20450	1	0	25	0	24.5	23.50	1.26	-0.15	0.012	0.02
	LTE 5	QPSK10M	Rear Face	20450	1	0	25	0	24.5	23.50	1.26	0.05	0.014	0.02
	LTE 5	QPSK10M	Left Side	20450	1	0	25	0	24.5	23.50	1.26	-0.14	0.0091	0.01
	LTE 5	QPSK10M	Right Side	20450	1	0	25	0	24.5	23.50	1.26	-0.13	0.00206	0.00
	LTE 5	QPSK10M	Bottom Side	20450	1	0	25	0	24.5	23.50	1.26	-0.03	0.00557	0.01
	LTE 5	QPSK10M	Front Face	20450	1	1	25	0	24.5	23.50	1.26	0.14	0.103	0.13
	LTE 5	QPSK10M	Rear Face	20450	1	1	25	0	24.5	23.50	1.26	0.12	0.117	0.15
	LTE 5	QPSK10M	Left Side	20450	1	1	25	0	24.5	23.50	1.26	0.19	0.074	0.09
	LTE 5	QPSK10M	Right Side	20450	1	1	25	0	24.5	23.50	1.26	0.17	0.071	0.09
	LTE 5	QPSK10M	Top Side	20450	1	1	25	0	24.5	23.50	1.26	0.01	0.00316	0.00
	LTE 5	QPSK10M	Rear Face	20450	2	1	1	0	25.5	24.50	1.26	-0.19	0.117	0.15
	LTE 7	QPSK20M	Front Face	21350	1	2	1	0	24.5	23.74	1.19	-0.07	0.771	0.92
	LTE 7	QPSK20M	Rear Face	21350	1	2	1	0	24.5	23.74	1.19	0.03	0.579	0.69
	LTE 7	QPSK20M	Right Side	21350	1	2	1	0	24.5	23.74	1.19	0.01	0.569	0.68
	LTE 7	QPSK20M	Bottom Side	21350	1	2	1	0	24.5	23.74	1.19	-0.03	0.173	0.21
	LTE 7	QPSK20M	Front Face	21350	1	3	1	0	24.5	23.74	1.19	-0.06	0.125	0.15
	LTE 7	QPSK20M	Rear Face	21350	1	3	1	0	24.5	23.74	1.19	0.03	0.231	0.28
	LTE 7	QPSK20M	Left Side	21350	1	3	1	0	24.5	23.74	1.19	-0.17	0.401	0.48
	LTE 7	QPSK20M	Top Side	21350	1	3	1	0	24.5	23.74	1.19	0.00	0.009	0.01
	LTE 7	QPSK20M	Front Face	21350	1	2	50	0	23.5	22.73	1.19	-0.09	0.581	0.69
	LTE 7	QPSK20M	Rear Face	21350	1	2	50	0	23.5	22.73	1.19	0.03	0.429	0.51
	LTE 7	QPSK20M	Right Side	21350	1	2	50	0	23.5	22.73	1.19	-0.05	0.439	0.52
	LTE 7	QPSK20M	Bottom Side	21350	1	2	50	0	23.5	22.73	1.19	0.02	0.15	0.18
	LTE 7	QPSK20M	Front Face	21350	1	3	50	0	23.5	22.73	1.19	-0.09	0.112	0.13
	LTE 7	QPSK20M	Rear Face	21350	1	3	50	0	23.5	22.73	1.19	0.03	0.207	0.25
	LTE 7	QPSK20M	Left Side	21350	1	3	50	0	23.5	22.73	1.19	0.02	0.264	0.32
	LTE 7	QPSK20M	Top Side	21350	1	3	50	0	23.5	22.73	1.19	0.06	0.007	0.01
36	LTE 7	QPSK20M	Front Face	20850	1	2	1	0	24.5	23.22	1.34	-0.11	0.705	0.95
	LTE 7	QPSK20M	Front Face	21100	1	2	1	0	24.5	23.66	1.21	-0.14	0.753	0.91
	LTE 7	QPSK20M	Front Face	21350	1	2	100	0	23.5	22.71	1.20	0.05	0.134	0.16
	LTE 7	QPSK20M	Front Face	20850	2	2	1	0	24.5	23.22	1.34	0.04	0.471	0.63

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Plot No.	Band	Mode	Test Position	Ch.	EUT Config.	Tx Antenna	RB#	RB Offset	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
	LTE 12	QPSK10M	Front Face	23095	1	0	1	0	25.0	24.00	1.26	-0.09	0.089	0.11
	LTE 12	QPSK10M	Rear Face	23095	1	0	1	0	25.0	24.00	1.26	0.10	0.119	0.15
	LTE 12	QPSK10M	Left Side	23095	1	0	1	0	25.0	24.00	1.26	0.03	0.045	0.06
	LTE 12	QPSK10M	Right Side	23095	1	0	1	0	25.0	24.00	1.26	0.00	0.015	0.02
	LTE 12	QPSK10M	Bottom Side	23095	1	0	1	0	25.0	24.00	1.26	0.01	0.009	0.01
	LTE 12	QPSK10M	Front Face	23095	1	1	1	0	25.0	24.00	1.26	0.03	0.101	0.13
37	LTE 12	QPSK10M	Rear Face	23095	1	1	1	0	25.0	24.00	1.26	0.04	0.129	0.16
	LTE 12	QPSK10M	Left Side	23095	1	1	1	0	25.0	24.00	1.26	-0.05	0.06	0.08
	LTE 12	QPSK10M	Right Side	23095	1	1	1	0	25.0	24.00	1.26	0.02	0.023	0.03
	LTE 12	QPSK10M	Top Side	23095	1	1	1	0	25.0	24.00	1.26	0.03	0.018	0.02
	LTE 12	QPSK10M	Front Face	23095	1	0	25	0	24.0	23.00	1.26	-0.06	0.075	0.09
	LTE 12	QPSK10M	Rear Face	23095	1	0	25	0	24.0	23.00	1.26	0.07	0.099	0.13
	LTE 12	QPSK10M	Left Side	23095	1	0	25	0	24.0	23.00	1.26	0.12	0.050	0.06
	LTE 12	QPSK10M	Right Side	23095	1	0	25	0	24.0	23.00	1.26	0.03	0.008	0.01
	LTE 12	QPSK10M	Bottom Side	23095	1	0	25	0	24.0	23.00	1.26	-0.05	0.003	0.00
	LTE 12	QPSK10M	Front Face	23095	1	1	25	0	24.0	23.00	1.26	-0.02	0.091	0.11
	LTE 12	QPSK10M	Rear Face	23095	1	1	25	0	24.0	23.00	1.26	0.03	0.107	0.14
	LTE 12	QPSK10M	Left Side	23095	1	1	25	0	24.0	23.00	1.26	-0.13	0.049	0.06
	LTE 12	QPSK10M	Right Side	23095	1	1	25	0	24.0	23.00	1.26	0.08	0.018	0.02
	LTE 12	QPSK10M	Top Side	23095	1	1	25	0	24.0	23.00	1.26	0.02	0.009	0.01
	LTE 12	QPSK10M	Rear Face	23095	2	1	1	0	25.0	24.00	1.26	0.06	0.122	0.15
	LTE 13	QPSK10M	Front Face	23230	1	0	1	0	25.0	24.53	1.11	-0.02	0.03	0.03
	LTE 13	QPSK10M	Rear Face	23230	1	0	1	0	25.0	24.53	1.11	-0.09	0.04	0.04
	LTE 13	QPSK10M	Left Side	23230	1	0	1	0	25.0	24.53	1.11	-0.13	0.015	0.02
	LTE 13	QPSK10M	Right Side	23230	1	0	1	0	25.0	24.53	1.11	0.05	0.005	0.01
	LTE 13	QPSK10M	Bottom Side	23230	1	0	1	0	25.0	24.53	1.11	0.04	0.003	0.00
	LTE 13	QPSK10M	Front Face	23230	1	1	1	0	25.0	24.53	1.11	-0.05	0.122	0.14
38	LTE 13	QPSK10M	Rear Face	23230	1	1	1	0	25.0	24.53	1.11	-0.15	0.149	0.17
	LTE 13	QPSK10M	Left Side	23230	1	1	1	0	25.0	24.53	1.11	-0.06	0.074	0.08
	LTE 13	QPSK10M	Right Side	23230	1	1	1	0	25.0	24.53	1.11	0.03	0.066	0.07
	LTE 13	QPSK10M	Top Side	23230	1	1	1	0	25.0	24.53	1.11	0.01	0.005	0.01
	LTE 13	QPSK10M	Front Face	23230	1	0	25	0	24.0	23.52	1.12	0.02	0.025	0.03
	LTE 13	QPSK10M	Rear Face	23230	1	0	25	0	24.0	23.52	1.12	-0.02	0.033	0.04
	LTE 13	QPSK10M	Left Side	23230	1	0	25	0	24.0	23.52	1.12	-0.06	0.017	0.02
	LTE 13	QPSK10M	Right Side	23230	1	0	25	0	24.0	23.52	1.12	0.05	0.003	0.00
	LTE 13	QPSK10M	Bottom Side	23230	1	0	25	0	24.0	23.52	1.12	0.05	0.001	0.00
	LTE 13	QPSK10M	Front Face	23230	1	1	25	0	24.0	23.52	1.12	-0.05	0.118	0.13
	LTE 13	QPSK10M	Rear Face	23230	1	1	25	0	24.0	23.52	1.12	0.03	0.126	0.14
	LTE 13	QPSK10M	Left Side	23230	1	1	25	0	24.0	23.52	1.12	0.17	0.063	0.07
	LTE 13	QPSK10M	Right Side	23230	1	1	25	0	24.0	23.52	1.12	0.08	0.056	0.06
	LTE 13	QPSK10M	Top Side	23230	1	1	25	0	24.0	23.52	1.12	0.00	0.002	0.00
	LTE 13	QPSK10M	Rear Face	23230	2	1	1	0	25.0	24.53	1.11	0.06	0.144	0.16

FCC SAR Test Report

Plot No.	Band	Mode	Test Position	Ch.	EUT Config.	Tx Antenna	RB#	RB Offset	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
	LTE 17	QPSK10M	Front Face	23790	1	0	1	0	25.0	23.99	1.26	-0.09	0.084	0.11
	LTE 17	QPSK10M	Rear Face	23790	1	0	1	0	25.0	23.99	1.26	-0.11	0.121	0.15
	LTE 17	QPSK10M	Left Side	23790	1	0	1	0	25.0	23.99	1.26	-0.05	0.061	0.08
	LTE 17	QPSK10M	Right Side	23790	1	0	1	0	25.0	23.99	1.26	0.00	0.025	0.03
	LTE 17	QPSK10M	Bottom Side	23790	1	0	1	0	25.0	23.99	1.26	0.00	0.018	0.02
	LTE 17	QPSK10M	Front Face	23790	1	1	1	0	25.0	23.99	1.26	0.04	0.1	0.13
39	LTE 17	QPSK10M	Rear Face	23790	1	1	1	0	25.0	23.99	1.26	0.02	0.13	0.16
	LTE 17	QPSK10M	Left Side	23790	1	1	1	0	25.0	23.99	1.26	-0.03	0.063	0.08
	LTE 17	QPSK10M	Right Side	23790	1	1	1	0	25.0	23.99	1.26	0.00	0.008	0.01
	LTE 17	QPSK10M	Top Side	23790	1	1	1	0	25.0	23.99	1.26	0.01	0.003	0.00
	LTE 17	QPSK10M	Front Face	23790	1	0	25	0	24.0	22.91	1.29	0.02	0.073	0.09
	LTE 17	QPSK10M	Rear Face	23790	1	0	25	0	24.0	22.91	1.29	-0.08	0.096	0.12
	LTE 17	QPSK10M	Left Side	23790	1	0	25	0	24.0	22.91	1.29	0.13	0.049	0.06
	LTE 17	QPSK10M	Right Side	23790	1	0	25	0	24.0	22.91	1.29	0.01	0.017	0.02
	LTE 17	QPSK10M	Bottom Side	23790	1	0	25	0	24.0	22.91	1.29	0.00	0.008	0.01
	LTE 17	QPSK10M	Front Face	23790	1	1	25	0	24.0	22.91	1.29	0.14	0.085	0.11
	LTE 17	QPSK10M	Rear Face	23790	1	1	25	0	24.0	22.91	1.29	-0.14	0.116	0.15
	LTE 17	QPSK10M	Left Side	23790	1	1	25	0	24.0	22.91	1.29	0.03	0.054	0.07
	LTE 17	QPSK10M	Right Side	23790	1	1	25	0	24.0	22.91	1.29	0.02	0.004	0.01
	LTE 17	QPSK10M	Top Side	23790	1	1	25	0	24.0	22.91	1.29	0.07	0.00974	0.01
	LTE 17	QPSK10M	Rear Face	23790	2	1	1	0	25.0	23.99	1.26	-0.11	0.121	0.15
	LTE 25	QPSK20M	Front Face	26140	1	0	1	0	25.0	23.87	1.30	0.05	0.346	0.45
	LTE 25	QPSK20M	Rear Face	26140	1	0	1	0	25.0	23.87	1.30	-0.15	0.445	0.58
	LTE 25	QPSK20M	Left Side	26140	1	0	1	0	25.0	23.87	1.30	-0.03	0.0576	0.07
	LTE 25	QPSK20M	Right Side	26140	1	0	1	0	25.0	23.87	1.30	-0.04	0.074	0.10
	LTE 25	QPSK20M	Bottom Side	26140	1	0	1	0	25.0	23.87	1.30	-0.09	0.613	0.80
	LTE 25	QPSK20M	Front Face	26140	1	0	50	0	24.0	22.74	1.34	0.13	0.258	0.34
	LTE 25	QPSK20M	Rear Face	26140	1	0	50	0	24.0	22.74	1.34	0.07	0.292	0.39
	LTE 25	QPSK20M	Left Side	26140	1	0	50	0	24.0	22.74	1.34	-0.13	0.0426	0.06
	LTE 25	QPSK20M	Right Side	26140	1	0	50	0	24.0	22.74	1.34	-0.19	0.052	0.07
	LTE 25	QPSK20M	Bottom Side	26140	1	0	50	0	24.0	22.74	1.34	-0.04	0.461	0.62
	LTE 25	QPSK20M	Bottom Side	26365	1	0	1	0	25.0	23.82	1.31	-0.02	0.633	0.83
	LTE 25	QPSK20M	Bottom Side	26590	1	0	1	0	25.0	23.85	1.30	-0.12	0.705	0.92
	LTE 25	QPSK20M	Bottom Side	26140	1	0	100	0	24.0	22.55	1.40	-0.12	0.583	0.81
54	LTE 25	QPSK20M	Bottom Side	26590	2	0	1	0	25.0	23.85	1.30	-0.04	0.875	1.14
	LTE 25	QPSK20M	Bottom Side	26140	2	0	1	0	25.0	23.87	1.30	0.13	0.721	0.94
	LTE 25	QPSK20M	Bottom Side	26365	2	0	1	0	25.0	23.82	1.31	-0.01	0.714	0.94
	LTE 25	QPSK20M	Bottom Side	26590	2	0	1	0	25.0	23.85	1.30	0.09	0.853	1.11
	LTE 26	QOSK15M	Front Face	26765	1	0	1	0	25.5	24.75	1.19	0.07	0.082	0.10
	LTE 26	QOSK15M	Rear Face	26765	1	0	1	0	25.5	24.75	1.19	0.19	0.097	0.12
	LTE 26	QOSK15M	Left Side	26765	1	0	1	0	25.5	24.75	1.19	-0.10	0.052	0.06
	LTE 26	QOSK15M	Right Side	26765	1	0	1	0	25.5	24.75	1.19	0.00	0.083	0.10
	LTE 26	QOSK15M	Bottom Side	26765	1	0	1	0	25.5	24.75	1.19	0.00	0.056	0.07
	LTE 26	QOSK15M	Front Face	26765	1	1	1	0	25.5	24.75	1.19	0.04	0.124	0.15
41	LTE 26	QOSK15M	Rear Face	26765	1	1	1	0	25.5	24.75	1.19	-0.09	0.15	0.18
	LTE 26	QOSK15M	Left Side	26765	1	1	1	0	25.5	24.75	1.19	0.12	0.105	0.12
	LTE 26	QOSK15M	Right Side	26765	1	1	1	0	25.5	24.75	1.19	-0.02	0.073	0.09
	LTE 26	QOSK15M	Top Side	26765	1	1	1	0	25.5	24.75	1.19	0.15	0.00427	0.01
	LTE 26	QOSK15M	Front Face	26765	1	0	36	0	24.5	23.97	1.13	0.02	0.067	0.08
	LTE 26	QOSK15M	Rear Face	26765	1	0	36	0	24.5	23.97	1.13	-0.13	0.071	0.08
	LTE 26	QOSK15M	Left Side	26765	1	0	36	0	24.5	23.97	1.13	-0.12	0.039	0.04
	LTE 26	QOSK15M	Right Side	26765	1	0	36	0	24.5	23.97	1.13	0.07	0.068	0.08
	LTE 26	QOSK15M	Bottom Side	26765	1	0	36	0	24.5	23.97	1.13	0.03	0.037	0.04
	LTE 26	QOSK15M	Front Face	26765	1	1	36	0	24.5	23.97	1.13	0.15	0.109	0.12
	LTE 26	QOSK15M	Rear Face	26765	1	1	36	0	24.5	23.97	1.13	-0.07	0.117	0.13
	LTE 26	QOSK15M	Left Side	26765	1	1	36	0	24.5	23.97	1.13	-0.14	0.128	0.14
	LTE 26	QOSK15M	Right Side	26765	1	1	36	0	24.5	23.97	1.13	-0.18	0.096	0.11
	LTE 26	QOSK15M	Top Side	26765	1	1	36	0	24.5	23.97	1.13	0.04	0.064	0.07
	LTE 26	QOSK15M	Rear Face	26765	2	1	1	0	25.5	24.75	1.19	0.06	0.136	0.16

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Plot No.	Band	Mode	Test Position	Ch.	EUT Config.	Tx Antenna	RB#	RB Offset	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
42	LTE 30	QPSK10M	Front Face	27710	1	2	1	0	24.5	23.94	1.14	-0.08	0.425	0.48
	LTE 30	QPSK10M	Rear Face	27710	1	2	1	0	24.5	23.94	1.14	0.17	0.324	0.37
	LTE 30	QPSK10M	Right Side	27710	1	2	1	0	24.5	23.94	1.14	0.05	0.216	0.25
	LTE 30	QPSK10M	Bottom Side	27710	1	2	1	0	24.5	23.94	1.14	-0.07	0.052	0.06
	LTE 30	QPSK10M	Front Face	27710	1	3	1	0	24.5	23.94	1.14	0.02	0.111	0.13
	LTE 30	QPSK10M	Rear Face	27710	1	3	1	0	24.5	23.94	1.14	-0.12	0.234	0.27
	LTE 30	QPSK10M	Left Side	27710	1	3	1	0	24.5	23.94	1.14	-0.15	0.378	0.43
	LTE 30	QPSK10M	Top Side	27710	1	3	1	0	24.5	23.94	1.14	0.09	0.072	0.08
	LTE 30	QPSK10M	Front Face	27710	1	2	25	0	23.5	22.93	1.14	0.17	0.338	0.39
	LTE 30	QPSK10M	Rear Face	27710	1	2	25	0	23.5	22.93	1.14	0.17	0.237	0.27
	LTE 30	QPSK10M	Right Side	27710	1	2	25	0	23.5	22.93	1.14	-0.07	0.193	0.22
	LTE 30	QPSK10M	Bottom Side	27710	1	2	25	0	23.5	22.93	1.14	-0.02	0.041	0.05
	LTE 30	QPSK10M	Front Face	27710	1	3	25	0	23.5	22.93	1.14	0.08	0.093	0.11
	LTE 30	QPSK10M	Rear Face	27710	1	3	25	0	23.5	22.93	1.14	0.15	0.195	0.22
	LTE 30	QPSK10M	Left Side	27710	1	3	25	0	23.5	22.93	1.14	-0.04	0.264	0.30
	LTE 30	QPSK10M	Top Side	27710	1	3	25	0	23.5	22.93	1.14	-0.07	0.062	0.07
	LTE 30	QPSK10M	Front Face	27710	2	2	1	0	24.5	23.94	1.14	0.01	0.239	0.27
	LTE 66	QPSK20M	Front Face	132072	1	0	1	0	24.5	23.93	1.14	-0.02	0.381	0.43
	LTE 66	QPSK20M	Rear Face	132072	1	0	1	0	24.5	23.93	1.14	0.10	0.426	0.49
	LTE 66	QPSK20M	Left Side	132072	1	0	1	0	24.5	23.93	1.14	0.19	0.431	0.49
	LTE 66	QPSK20M	Right Side	132072	1	0	1	0	24.5	23.93	1.14	-0.07	0.092	0.10
55	LTE 66	QPSK20M	Bottom Side	132072	1	0	1	0	24.5	23.93	1.14	-0.04	0.581	0.66
	LTE 66	QPSK20M	Front Face	132072	1	0	50	0	23.5	23.00	1.12	0.19	0.298	0.33
	LTE 66	QPSK20M	Rear Face	132072	1	0	50	0	23.5	23.00	1.12	0.19	0.337	0.38
	LTE 66	QPSK20M	Left Side	132072	1	0	50	0	23.5	23.00	1.12	0.17	0.078	0.09
	LTE 66	QPSK20M	Right Side	132072	1	0	50	0	23.5	23.00	1.12	0.16	0.047	0.05
	LTE 66	QPSK20M	Bottom Side	132072	1	0	50	0	23.5	23.00	1.12	0.14	0.453	0.51
	LTE 66	QPSK20M	Bottom Side	132072	2	0	1	0	24.5	23.93	1.14	0.04	0.527	0.60

Plot No.	Band	Mode	Test Position	Ch.	EUT Config.	Tx Antenna	Power Class	Uplink Downlink Config.	Special Subframe Config.	RB#	RB Offset	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
	LTE 41	QPSK20M	Front Face	39750	1	2	3	0	5	1	0	24.0	23.99	1.00	-0.06	0.496	0.50
	LTE 41	QPSK20M	Rear Face	39750	1	2	3	0	5	1	0	24.0	23.99	1.00	-0.19	0.478	0.48
	LTE 41	QPSK20M	Right Side	39750	1	2	3	0	5	1	0	24.0	23.99	1.00	0.08	0.368	0.37
	LTE 41	QPSK20M	Bottom Side	39750	1	2	3	0	5	1	0	24.0	23.99	1.00	-0.06	0.134	0.13
	LTE 41	QPSK20M	Front Face	39750	1	3	3	0	5	1	0	24.0	23.99	1.00	0.14	0.081	0.08
	LTE 41	QPSK20M	Rear Face	39750	1	3	3	0	5	1	0	24.0	23.99	1.00	-0.07	0.132	0.13
	LTE 41	QPSK20M	Left Side	39750	1	3	3	0	5	1	0	24.0	23.99	1.00	-0.08	0.319	0.32
	LTE 41	QPSK20M	Top Side	39750	1	3	3	0	5	1	0	24.0	23.99	1.00	-0.14	0.018	0.02
	LTE 41	QPSK20M	Front Face	39750	1	2	3	0	5	50	0	23.0	22.92	1.02	0.08	0.476	0.48
	LTE 41	QPSK20M	Rear Face	39750	1	2	3	0	5	50	0	23.0	22.92	1.02	0.15	0.304	0.31
	LTE 41	QPSK20M	Right Side	39750	1	2	3	0	5	50	0	23.0	22.92	1.02	-0.12	0.356	0.36
	LTE 41	QPSK20M	Bottom Side	39750	1	2	3	0	5	50	0	23.0	22.92	1.02	0.16	0.124	0.13
	LTE 41	QPSK20M	Front Face	39750	1	3	3	0	5	50	0	23.0	22.92	1.02	-0.12	0.083	0.08
	LTE 41	QPSK20M	Rear Face	39750	1	3	3	0	5	50	0	23.0	22.92	1.02	0.15	0.133	0.14
	LTE 41	QPSK20M	Left Side	39750	1	3	3	0	5	50	0	23.0	22.92	1.02	0.05	0.204	0.21
	LTE 41	QPSK20M	Top Side	39750	1	3	3	0	5	50	0	23.0	22.92	1.02	-0.07	0.015	0.02
43	LTE 41	QPSK20M	Front Face	39750	1	2	2	1	5	1	0	27.5	27.09	1.10	-0.07	0.627	0.69
	LTE 41	QPSK20M	Front Face	39750	2	2	2	1	5	1	0	27.5	27.09	1.10	0.06	0.204	0.22

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<WLAN Transmission with Cell ON>

Plot No.	Band	Mode	Test Position	Ch.	EUT Config.	Tx Antenna	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
	2.4G WLAN	802.11b	Front Face	1	1	0	19.5	19.41	1.02	-0.04	0.035	0.04
	2.4G WLAN	802.11b	Rear Face	1	1	0	19.5	19.41	1.02	-0.14	0.033	0.03
	2.4G WLAN	802.11b	Right Side	1	1	0	19.5	19.41	1.02	-0.14	0.037	0.04
	2.4G WLAN	802.11b	Top Side	1	1	0	19.5	19.41	1.02	-0.11	0.00447	0.00
	2.4G WLAN	802.11b	Front Face	1	1	1	19.5	19.39	1.03	0.08	0.041	0.04
45	2.4G WLAN	802.11b	Rear Face	1	1	1	19.5	19.39	1.03	-0.14	0.045	0.05
	2.4G WLAN	802.11b	Right Side	1	1	1	19.5	19.39	1.03	-0.04	0.011	0.01
	2.4G WLAN	802.11b	Top Side	1	1	1	19.5	19.39	1.03	-0.08	0.00516	0.01
	2.4G WLAN	802.11n HT20	Front Face	1	1	0+1	21.5	21.18	1.08	-0.13	0.039	0.04
	2.4G WLAN	802.11n HT20	Rear Face	1	1	0+1	21.5	21.18	1.08	-0.11	0.041	0.04
	2.4G WLAN	802.11n HT20	Right Side	1	1	0+1	21.5	21.18	1.08	0.15	0.035	0.04
	2.4G WLAN	802.11n HT20	Top Side	1	1	0+1	21.5	21.18	1.08	-0.04	0.017	0.02
	2.4G WLAN	802.11b	Rear Face	1	2	1	19.5	19.39	1.03	0.10	0.04	0.04
	5.2G WLAN	802.11ac VH80	Front Face	42	1	0	18.5	18.15	1.08	0.02	0.075	0.08
	5.2G WLAN	802.11ac VH80	Rear Face	42	1	0	18.5	18.15	1.08	-0.18	0.031	0.03
	5.2G WLAN	802.11ac VH80	Right Side	42	1	0	18.5	18.15	1.08	0.01	0.046	0.05
	5.2G WLAN	802.11ac VH80	Top Side	42	1	0	18.5	18.15	1.08	-0.14	0.00689	0.01
	5.2G WLAN	802.11ac VH80	Front Face	42	1	1	18.5	18.11	1.09	0.08	0.011	0.01
56	5.2G WLAN	802.11ac VH80	Rear Face	42	1	1	18.5	18.11	1.09	0.04	0.107	0.12
	5.2G WLAN	802.11ac VH80	Right Side	42	1	1	18.5	18.11	1.09	0.17	0.013	0.01
	5.2G WLAN	802.11ac VH80	Top Side	42	1	1	18.5	18.11	1.09	0.10	0.00724	0.01
	5.2G WLAN	802.11n HT40	Front Face	46	1	0+1	20.5	20.44	1.01	0.08	0.096	0.10
	5.2G WLAN	802.11n HT40	Rear Face	46	1	0+1	20.5	20.44	1.01	0.11	0.054	0.05
	5.2G WLAN	802.11n HT40	Right Side	46	1	0+1	20.5	20.44	1.01	0.03	0.051	0.05
	5.2G WLAN	802.11n HT40	Top Side	46	1	0+1	20.5	20.44	1.01	0.19	0.026	0.03
	5.2G WLAN	802.11ac VH80	Rear Face	42	2	1	18.5	18.11	1.09	-0.16	0.097	0.11
48	5.8G WLAN	802.11ac VH80	Front Face	155	1	0	18.5	18.34	1.04	0.08	0.089	0.09
	5.8G WLAN	802.11ac VH80	Rear Face	155	1	0	18.5	18.34	1.04	0.00	0.027	0.03
	5.8G WLAN	802.11ac VH80	Right Side	155	1	0	18.5	18.34	1.04	0.02	0.038	0.04
	5.8G WLAN	802.11ac VH80	Top Side	155	1	0	18.5	18.34	1.04	-0.07	0.00576	0.01
	5.8G WLAN	802.11ac VH80	Front Face	155	1	1	18.5	18.27	1.05	-0.03	0.00843	0.01
	5.8G WLAN	802.11ac VH80	Rear Face	155	1	1	18.5	18.27	1.05	0.02	0.05	0.05
	5.8G WLAN	802.11ac VH80	Right Side	155	1	1	18.5	18.27	1.05	0.15	0.011	0.01
	5.8G WLAN	802.11ac VH80	Top Side	155	1	1	18.5	18.27	1.05	0.04	0.00571	0.01
	5.8G WLAN	802.11ac VH80	Front Face	155	1	0+1	20.5	20.39	1.03	0.04	0.078	0.08
	5.8G WLAN	802.11ac VH80	Rear Face	155	1	0+1	20.5	20.39	1.03	-0.09	0.046	0.05
	5.8G WLAN	802.11ac VH80	Right Side	155	1	0+1	20.5	20.39	1.03	0.08	0.048	0.05
	5.8G WLAN	802.11ac VH80	Top Side	155	1	0+1	20.5	20.39	1.03	0.18	0.021	0.02
	5.8G WLAN	802.11ac VH80	Front Face	155	2	0	18.5	18.34	1.04	0.04	0.082	0.09

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4.7.5 SAR Measurement Variability

According to KDB 865664 D01, SAR measurement variability was assessed for each frequency band, which is determined by the SAR probe calibration point and tissue-equivalent medium used for the device measurements. When both head and body tissue-equivalent media are required for SAR measurements in a frequency band, the variability measurement procedures should be applied to the tissue medium with the highest measured SAR, using the highest measured SAR configuration for that tissue-equivalent medium. Alternatively, if the highest measured SAR for both head and body tissue-equivalent media are ≤ 1.45 W/kg and the ratio of these highest SAR values, i.e., largest divided by smallest value, is ≤ 1.10 , the highest SAR configuration for either head or body tissue-equivalent medium may be used to perform the repeated measurement. 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.

SAR repeated measurement procedure:

1. When the highest measured SAR is < 0.80 W/kg, repeated measurement is not required.
2. When the highest measured SAR is ≥ 0.80 W/kg, repeat that measurement once.
3. If the ratio of largest to smallest SAR for the original and first repeated measurements is > 1.20 , or when the original or repeated measurement is ≥ 1.45 W/kg, perform a second repeated measurement.
4. If the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20 , and the original, first or second repeated measurement is ≥ 1.5 W/kg, perform a third repeated measurement.

Band	Test Position	Ch.	Original Measured SAR-1g (W/kg)	1st Repeated SAR-1g (W/kg)	L/S Ratio	2nd Repeated SAR-1g (W/kg)	L/S Ratio	3rd Repeated SAR-1g (W/kg)	L/S Ratio
CDMA BC1	Bottom Side	1175	0.833	0.812	1.03	N/A	N/A	N/A	N/A
LTE 25	Bottom Side	26590	0.875	0.853	1.03	N/A	N/A	N/A	N/A

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4.7.6 Simultaneous Multi-band Transmission Evaluation

<Possibilities of Simultaneous Transmission>

The simultaneous transmission possibilities for this device are listed as below.

Simultaneous TX Combination	Capable Transmit Configurations	Head Exposure Condition	Body-worn Exposure Condition	Hotspot Exposure Condition
1	GSM + WLAN 2.4G	Yes	Yes	Yes
2	GSM + WLAN 5G	Yes	Yes	Yes
3	GSM + BT	No	Yes	No
4	GSM + WLAN 2.4G + BT	No	Yes	No
5	GSM + WLAN 5G + BT	No	Yes	No
6	WCDMA + WLAN 2.4G	Yes	Yes	Yes
7	WCDMA + WLAN 5G	Yes	Yes	Yes
8	WCDMA + BT	No	Yes	No
9	WCDMA + WLAN 2.4G + BT	No	Yes	No
10	WCDMA + WLAN 5G + BT	No	Yes	No
11	CDMA + WLAN 2.4G	Yes	Yes	Yes
12	CDMA + WLAN 5G	Yes	Yes	Yes
13	CDMA + BT	No	Yes	No
14	CDMA + WLAN 2.4G + BT	No	Yes	No
15	CDMA + WLAN 5G + BT	No	Yes	No
16	LTE + WLAN 2.4G	Yes	Yes	Yes
17	LTE + WLAN 5G	Yes	Yes	Yes
18	LTE + BT	No	Yes	No
19	LTE + WLAN 2.4G + BT	No	Yes	No
20	LTE + WLAN 5G + BT	No	Yes	No

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<SAR Summation Analysis>

Simultaneous transmission SAR test exclusion is determined for each operating configuration and exposure condition according to the reported standalone SAR of each applicable simultaneous transmitting antenna. When the sum of SAR_{1g} of all simultaneously transmitting antennas in an operating mode and exposure condition combination is within the SAR limit (SAR_{1g} 1.6 W/kg), the simultaneous transmission SAR is not required. When the sum of SAR_{1g} is greater than the SAR limit (SAR_{1g} 1.6 W/kg), SAR test exclusion is determined by the SPLSR.

No.	Conditions (SAR1 + SAR2 + SAR3)	Exposure Condition	Test Position	Max. SAR1	Max. SAR2	Max. SAR3	SAR Summation	SPLSR Analysis
1	GSM850 + WLAN (DTS) + BT (DSS)	Head	Right Cheek	0.74	0.24	-	0.98	Σ SAR < 1.6, Not required
			Right Tilted	0.47	0.12	-	0.59	Σ SAR < 1.6, Not required
			Left Cheek	0.48	0.76	-	1.24	Σ SAR < 1.6, Not required
			Left Tilted	0.25	0.35	-	0.60	Σ SAR < 1.6, Not required
		Body-Worn	Front Face	0.16	0.04	0.00	0.20	Σ SAR < 1.6, Not required
			Rear Face	0.20	0.05	0.00	0.25	Σ SAR < 1.6, Not required
		Hotspot	Front Face	0.16	0.04	-	0.20	Σ SAR < 1.6, Not required
			Rear Face	0.20	0.05	-	0.25	Σ SAR < 1.6, Not required
			Left Side	0.13	-	-	0.13	Σ SAR < 1.6, Not required
			Right Side	0.16	0.04	-	0.20	Σ SAR < 1.6, Not required
			Top Side	0.06	0.02	-	0.08	Σ SAR < 1.6, Not required
			Bottom Side	0.01	-	-	0.01	Σ SAR < 1.6, Not required
2	GSM850 + WLAN (NII) + BT (DSS)	Head	Right Cheek	0.74	0.54	-	1.28	Σ SAR < 1.6, Not required
			Right Tilted	0.47	0.57	-	1.04	Σ SAR < 1.6, Not required
			Left Cheek	0.48	0.70	-	1.18	Σ SAR < 1.6, Not required
			Left Tilted	0.25	0.68	-	0.93	Σ SAR < 1.6, Not required
		Body-Worn	Front Face	0.16	0.09	0.00	0.25	Σ SAR < 1.6, Not required
			Rear Face	0.20	0.10	0.00	0.30	Σ SAR < 1.6, Not required
		Hotspot	Front Face	0.16	0.09	-	0.25	Σ SAR < 1.6, Not required
			Rear Face	0.20	0.12	-	0.32	Σ SAR < 1.6, Not required
			Left Side	0.13	-	-	0.13	Σ SAR < 1.6, Not required
			Right Side	0.16	0.05	-	0.21	Σ SAR < 1.6, Not required
			Top Side	0.06	0.03	-	0.09	Σ SAR < 1.6, Not required
			Bottom Side	0.01	-	-	0.01	Σ SAR < 1.6, Not required

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No.	Conditions (SAR1 + SAR2 + SAR3)	Exposure Condition	Test Position	Max. SAR1	Max. SAR2	Max. SAR3	SAR Summation	SPLSR Analysis
3	GSM1900 + WLAN (DTS) + BT (DSS)	Head	Right Cheek	0.07	0.24	-	0.31	Σ SAR < 1.6, Not required
			Right Tilted	0.06	0.12	-	0.18	Σ SAR < 1.6, Not required
			Left Cheek	0.11	0.76	-	0.87	Σ SAR < 1.6, Not required
			Left Tilted	0.02	0.35	-	0.37	Σ SAR < 1.6, Not required
		Body-Worn	Front Face	0.32	0.04	0.00	0.36	Σ SAR < 1.6, Not required
			Rear Face	0.37	0.05	0.00	0.42	Σ SAR < 1.6, Not required
		Hotspot	Front Face	0.32	0.04	-	0.36	Σ SAR < 1.6, Not required
			Rear Face	0.37	0.05	-	0.42	Σ SAR < 1.6, Not required
			Left Side	0.04	-	-	0.04	Σ SAR < 1.6, Not required
			Right Side	0.06	0.04	-	0.10	Σ SAR < 1.6, Not required
			Top Side	-	0.02	-	0.02	Σ SAR < 1.6, Not required
			Bottom Side	0.24	-	-	0.24	Σ SAR < 1.6, Not required
4	GSM1900 + WLAN (NII) + BT (DSS)	Head	Right Cheek	0.07	0.54	-	0.61	Σ SAR < 1.6, Not required
			Right Tilted	0.06	0.57	-	0.63	Σ SAR < 1.6, Not required
			Left Cheek	0.11	0.70	-	0.81	Σ SAR < 1.6, Not required
			Left Tilted	0.02	0.68	-	0.70	Σ SAR < 1.6, Not required
		Body-Worn	Front Face	0.32	0.09	0.00	0.41	Σ SAR < 1.6, Not required
			Rear Face	0.37	0.10	0.00	0.47	Σ SAR < 1.6, Not required
		Hotspot	Front Face	0.32	0.09	-	0.41	Σ SAR < 1.6, Not required
			Rear Face	0.37	0.12	-	0.49	Σ SAR < 1.6, Not required
			Left Side	0.04	-	-	0.04	Σ SAR < 1.6, Not required
			Right Side	0.06	0.05	-	0.11	Σ SAR < 1.6, Not required
			Top Side	-	0.03	-	0.03	Σ SAR < 1.6, Not required
			Bottom Side	0.24	-	-	0.24	Σ SAR < 1.6, Not required

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No.	Conditions (SAR1 + SAR2 + SAR3)	Exposure Condition	Test Position	Max. SAR1	Max. SAR2	Max. SAR3	SAR Summation	SPLSR Analysis
5	WCDMA II + WLAN (DTS) + BT (DSS)	Head	Right Cheek	0.11	0.24	-	0.35	Σ SAR < 1.6, Not required
			Right Tilted	0.11	0.12	-	0.23	Σ SAR < 1.6, Not required
			Left Cheek	0.16	0.76	-	0.92	Σ SAR < 1.6, Not required
			Left Tilted	0.08	0.35	-	0.43	Σ SAR < 1.6, Not required
		Body-Worn	Front Face	0.48	0.04	0.00	0.52	Σ SAR < 1.6, Not required
			Rear Face	0.57	0.05	0.00	0.62	Σ SAR < 1.6, Not required
		Hotspot	Front Face	0.48	0.04	-	0.52	Σ SAR < 1.6, Not required
			Rear Face	0.57	0.05	-	0.62	Σ SAR < 1.6, Not required
			Left Side	0.07	-	-	0.07	Σ SAR < 1.6, Not required
			Right Side	0.09	0.04	-	0.13	Σ SAR < 1.6, Not required
			Top Side	-	0.02	-	0.02	Σ SAR < 1.6, Not required
			Bottom Side	0.98	-	-	0.98	Σ SAR < 1.6, Not required
6	WCDMA II + WLAN (NII) + BT (DSS)	Head	Right Cheek	0.11	0.54	-	0.65	Σ SAR < 1.6, Not required
			Right Tilted	0.11	0.57	-	0.68	Σ SAR < 1.6, Not required
			Left Cheek	0.16	0.70	-	0.86	Σ SAR < 1.6, Not required
			Left Tilted	0.08	0.68	-	0.76	Σ SAR < 1.6, Not required
		Body-Worn	Front Face	0.48	0.09	0.00	0.57	Σ SAR < 1.6, Not required
			Rear Face	0.57	0.10	0.00	0.67	Σ SAR < 1.6, Not required
		Hotspot	Front Face	0.48	0.09	-	0.57	Σ SAR < 1.6, Not required
			Rear Face	0.57	0.12	-	0.69	Σ SAR < 1.6, Not required
			Left Side	0.07	-	-	0.07	Σ SAR < 1.6, Not required
			Right Side	0.09	0.05	-	0.14	Σ SAR < 1.6, Not required
			Top Side	-	0.03	-	0.03	Σ SAR < 1.6, Not required
			Bottom Side	0.98	-	-	0.98	Σ SAR < 1.6, Not required

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No.	Conditions (SAR1 + SAR2 + SAR3)	Exposure Condition	Test Position	Max. SAR1	Max. SAR2	Max. SAR3	SAR Summation	SPLSR Analysis
7	WCDMA IV + WLAN (DTS) + BT (DSS)	Head	Right Cheek	0.12	0.24	-	0.36	Σ SAR < 1.6, Not required
			Right Tilted	0.13	0.12	-	0.25	Σ SAR < 1.6, Not required
			Left Cheek	0.22	0.76	-	0.98	Σ SAR < 1.6, Not required
			Left Tilted	0.09	0.35	-	0.44	Σ SAR < 1.6, Not required
		Body-Worn	Front Face	0.48	0.04	0.00	0.52	Σ SAR < 1.6, Not required
			Rear Face	0.49	0.05	0.00	0.54	Σ SAR < 1.6, Not required
		Hotspot	Front Face	0.48	0.04	-	0.52	Σ SAR < 1.6, Not required
			Rear Face	0.49	0.05	-	0.54	Σ SAR < 1.6, Not required
			Left Side	0.13	-	-	0.13	Σ SAR < 1.6, Not required
			Right Side	0.06	0.04	-	0.10	Σ SAR < 1.6, Not required
			Top Side	-	0.02	-	0.02	Σ SAR < 1.6, Not required
			Bottom Side	0.77	-	-	0.77	Σ SAR < 1.6, Not required
8	WCDMA IV + WLAN (NII) + BT (DSS)	Head	Right Cheek	0.12	0.54	-	0.66	Σ SAR < 1.6, Not required
			Right Tilted	0.13	0.57	-	0.70	Σ SAR < 1.6, Not required
			Left Cheek	0.22	0.70	-	0.92	Σ SAR < 1.6, Not required
			Left Tilted	0.09	0.68	-	0.77	Σ SAR < 1.6, Not required
		Body-Worn	Front Face	0.48	0.09	0.00	0.57	Σ SAR < 1.6, Not required
			Rear Face	0.49	0.10	0.00	0.59	Σ SAR < 1.6, Not required
		Hotspot	Front Face	0.48	0.09	-	0.57	Σ SAR < 1.6, Not required
			Rear Face	0.49	0.12	-	0.61	Σ SAR < 1.6, Not required
			Left Side	0.13	-	-	0.13	Σ SAR < 1.6, Not required
			Right Side	0.06	0.05	-	0.11	Σ SAR < 1.6, Not required
			Top Side	-	0.03	-	0.03	Σ SAR < 1.6, Not required
			Bottom Side	0.77	-	-	0.77	Σ SAR < 1.6, Not required

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No.	Conditions (SAR1 + SAR2 + SAR3)	Exposure Condition	Test Position	Max. SAR1	Max. SAR2	Max. SAR3	SAR Summation	SPLSR Analysis
9	WCDMA V + WLAN (DTS) + BT (DSS)	Head	Right Cheek	0.93	0.24	-	1.17	Σ SAR < 1.6, Not required
			Right Tilted	0.63	0.12	-	0.75	Σ SAR < 1.6, Not required
			Left Cheek	0.69	0.76	-	1.45	Σ SAR < 1.6, Not required
			Left Tilted	0.47	0.35	-	0.82	Σ SAR < 1.6, Not required
		Body-Worn	Front Face	0.18	0.04	0.00	0.22	Σ SAR < 1.6, Not required
			Rear Face	0.23	0.05	0.00	0.28	Σ SAR < 1.6, Not required
		Hotspot	Front Face	0.18	0.04	-	0.22	Σ SAR < 1.6, Not required
			Rear Face	0.23	0.05	-	0.28	Σ SAR < 1.6, Not required
			Left Side	0.18	-	-	0.18	Σ SAR < 1.6, Not required
			Right Side	0.04	0.04	-	0.08	Σ SAR < 1.6, Not required
			Top Side	0.09	0.02	-	0.11	Σ SAR < 1.6, Not required
			Bottom Side	0.01	-	-	0.01	Σ SAR < 1.6, Not required
10	WCDMA V + WLAN (NII) + BT (DSS)	Head	Right Cheek	0.93	0.54	-	1.47	Σ SAR < 1.6, Not required
			Right Tilted	0.63	0.57	-	1.20	Σ SAR < 1.6, Not required
			Left Cheek	0.69	0.70	-	1.39	Σ SAR < 1.6, Not required
			Left Tilted	0.47	0.68	-	1.15	Σ SAR < 1.6, Not required
		Body-Worn	Front Face	0.18	0.09	0.00	0.27	Σ SAR < 1.6, Not required
			Rear Face	0.23	0.10	0.00	0.33	Σ SAR < 1.6, Not required
		Hotspot	Front Face	0.18	0.09	-	0.27	Σ SAR < 1.6, Not required
			Rear Face	0.23	0.12	-	0.35	Σ SAR < 1.6, Not required
			Left Side	0.18	-	-	0.18	Σ SAR < 1.6, Not required
			Right Side	0.04	0.05	-	0.09	Σ SAR < 1.6, Not required
			Top Side	0.09	0.03	-	0.12	Σ SAR < 1.6, Not required
			Bottom Side	0.01	-	-	0.01	Σ SAR < 1.6, Not required

FCC SAR Test Report

No.	Conditions (SAR1 + SAR2 + SAR3)	Exposure Condition	Test Position	Max. SAR1	Max. SAR2	Max. SAR3	SAR Summation	SPLSR Analysis
11	CDMA BC0 + WLAN (DTS) + BT (DSS)	Head	Right Cheek	0.93	0.24	-	1.17	Σ SAR < 1.6, Not required
			Right Tilted	0.45	0.12	-	0.57	Σ SAR < 1.6, Not required
			Left Cheek	0.69	0.76	-	1.45	Σ SAR < 1.6, Not required
			Left Tilted	0.44	0.35	-	0.79	Σ SAR < 1.6, Not required
		Body-Worn	Front Face	0.18	0.04	0.00	0.22	Σ SAR < 1.6, Not required
			Rear Face	0.23	0.05	0.00	0.28	Σ SAR < 1.6, Not required
		Hotspot	Front Face	0.18	0.04	-	0.22	Σ SAR < 1.6, Not required
			Rear Face	0.23	0.05	-	0.28	Σ SAR < 1.6, Not required
			Left Side	0.16	-	-	0.16	Σ SAR < 1.6, Not required
			Right Side	0.14	0.04	-	0.18	Σ SAR < 1.6, Not required
			Top Side	0.01	0.02	-	0.03	Σ SAR < 1.6, Not required
			Bottom Side	0.06	-	-	0.06	Σ SAR < 1.6, Not required
12	CDMA BC0 + WLAN (NII) + BT (DSS)	Head	Right Cheek	0.93	0.54	-	1.47	Σ SAR < 1.6, Not required
			Right Tilted	0.45	0.57	-	1.02	Σ SAR < 1.6, Not required
			Left Cheek	0.69	0.70	-	1.39	Σ SAR < 1.6, Not required
			Left Tilted	0.44	0.68	-	1.12	Σ SAR < 1.6, Not required
		Body-Worn	Front Face	0.18	0.09	0.00	0.27	Σ SAR < 1.6, Not required
			Rear Face	0.23	0.10	0.00	0.33	Σ SAR < 1.6, Not required
		Hotspot	Front Face	0.18	0.09	-	0.27	Σ SAR < 1.6, Not required
			Rear Face	0.23	0.12	-	0.35	Σ SAR < 1.6, Not required
			Left Side	0.16	-	-	0.16	Σ SAR < 1.6, Not required
			Right Side	0.14	0.05	-	0.19	Σ SAR < 1.6, Not required
			Top Side	0.01	0.03	-	0.04	Σ SAR < 1.6, Not required
			Bottom Side	0.06	-	-	0.06	Σ SAR < 1.6, Not required

FCC SAR Test Report

No.	Conditions (SAR1 + SAR2 + SAR3)	Exposure Condition	Test Position	Max. SAR1	Max. SAR2	Max. SAR3	SAR Summation	SPLSR Analysis
13	CDMA BC1 + WLAN (DTS) + BT (DSS)	Head	Right Cheek	0.11	0.24	-	0.35	Σ SAR < 1.6, Not required
			Right Tilted	0.12	0.12	-	0.24	Σ SAR < 1.6, Not required
			Left Cheek	0.18	0.76	-	0.94	Σ SAR < 1.6, Not required
			Left Tilted	0.07	0.35	-	0.42	Σ SAR < 1.6, Not required
		Body-Worn	Front Face	0.66	0.04	0.00	0.70	Σ SAR < 1.6, Not required
			Rear Face	0.74	0.05	0.00	0.79	Σ SAR < 1.6, Not required
		Hotspot	Front Face	0.66	0.04	-	0.70	Σ SAR < 1.6, Not required
			Rear Face	0.74	0.05	-	0.79	Σ SAR < 1.6, Not required
			Left Side	0.05	-	-	0.05	Σ SAR < 1.6, Not required
			Right Side	0.09	0.04	-	0.13	Σ SAR < 1.6, Not required
			Top Side	-	0.02	-	0.02	Σ SAR < 1.6, Not required
			Bottom Side	1.12	-	-	1.12	Σ SAR < 1.6, Not required
14	CDMA BC1 + WLAN (NII) + BT (DSS)	Head	Right Cheek	0.11	0.54	-	0.65	Σ SAR < 1.6, Not required
			Right Tilted	0.12	0.57	-	0.69	Σ SAR < 1.6, Not required
			Left Cheek	0.18	0.70	-	0.88	Σ SAR < 1.6, Not required
			Left Tilted	0.07	0.68	-	0.75	Σ SAR < 1.6, Not required
		Body-Worn	Front Face	0.66	0.09	0.00	0.75	Σ SAR < 1.6, Not required
			Rear Face	0.74	0.10	0.00	0.84	Σ SAR < 1.6, Not required
		Hotspot	Front Face	0.66	0.09	-	0.75	Σ SAR < 1.6, Not required
			Rear Face	0.74	0.12	-	0.86	Σ SAR < 1.6, Not required
			Left Side	0.05	-	-	0.05	Σ SAR < 1.6, Not required
			Right Side	0.09	0.05	-	0.14	Σ SAR < 1.6, Not required
			Top Side	-	0.03	-	0.03	Σ SAR < 1.6, Not required
			Bottom Side	1.12	-	-	1.12	Σ SAR < 1.6, Not required

FCC SAR Test Report

No.	Conditions (SAR1 + SAR2 + SAR3)	Exposure Condition	Test Position	Max. SAR1	Max. SAR2	Max. SAR3	SAR Summation	SPLSR Analysis
15	CDMA BC10 + WLAN (DTS) + BT (DSS)	Head	Right Cheek	0.92	0.24	-	1.16	Σ SAR < 1.6, Not required
			Right Tilted	0.60	0.12	-	0.72	Σ SAR < 1.6, Not required
			Left Cheek	0.68	0.76	-	1.44	Σ SAR < 1.6, Not required
			Left Tilted	0.39	0.35	-	0.74	Σ SAR < 1.6, Not required
		Body-Worn	Front Face	0.21	0.04	0.00	0.25	Σ SAR < 1.6, Not required
			Rear Face	0.23	0.05	0.00	0.28	Σ SAR < 1.6, Not required
		Hotspot	Front Face	0.21	0.04	-	0.25	Σ SAR < 1.6, Not required
			Rear Face	0.23	0.05	-	0.28	Σ SAR < 1.6, Not required
			Left Side	0.18	-	-	0.18	Σ SAR < 1.6, Not required
			Right Side	0.17	0.04	-	0.21	Σ SAR < 1.6, Not required
			Top Side	0.01	0.02	-	0.03	Σ SAR < 1.6, Not required
			Bottom Side	0.07	-	-	0.07	Σ SAR < 1.6, Not required
16	CDMA BC10 + WLAN (NII) + BT (DSS)	Head	Right Cheek	0.92	0.54	-	1.46	Σ SAR < 1.6, Not required
			Right Tilted	0.60	0.57	-	1.17	Σ SAR < 1.6, Not required
			Left Cheek	0.68	0.70	-	1.38	Σ SAR < 1.6, Not required
			Left Tilted	0.39	0.68	-	1.07	Σ SAR < 1.6, Not required
		Body-Worn	Front Face	0.21	0.09	0.00	0.30	Σ SAR < 1.6, Not required
			Rear Face	0.23	0.10	0.00	0.33	Σ SAR < 1.6, Not required
		Hotspot	Front Face	0.21	0.09	-	0.30	Σ SAR < 1.6, Not required
			Rear Face	0.23	0.12	-	0.35	Σ SAR < 1.6, Not required
			Left Side	0.18	-	-	0.18	Σ SAR < 1.6, Not required
			Right Side	0.17	0.05	-	0.22	Σ SAR < 1.6, Not required
			Top Side	0.01	0.03	-	0.04	Σ SAR < 1.6, Not required
			Bottom Side	0.07	-	-	0.07	Σ SAR < 1.6, Not required

FCC SAR Test Report

No.	Conditions (SAR1 + SAR2 + SAR3)	Exposure Condition	Test Position	Max. SAR1	Max. SAR2	Max. SAR3	SAR Summation	SPLSR Analysis
17	LTE 2 + WLAN (DTS) + BT (DSS)	Head	Right Cheek	0.09	0.24	-	0.33	Σ SAR < 1.6, Not required
			Right Tilted	0.11	0.12	-	0.23	Σ SAR < 1.6, Not required
			Left Cheek	0.18	0.76	-	0.94	Σ SAR < 1.6, Not required
			Left Tilted	0.09	0.35	-	0.44	Σ SAR < 1.6, Not required
		Body-Worn	Front Face	0.47	0.04	0.00	0.51	Σ SAR < 1.6, Not required
			Rear Face	0.63	0.05	0.00	0.68	Σ SAR < 1.6, Not required
		Hotspot	Front Face	0.47	0.04	-	0.51	Σ SAR < 1.6, Not required
			Rear Face	0.63	0.05	-	0.68	Σ SAR < 1.6, Not required
			Left Side	0.07	-	-	0.07	Σ SAR < 1.6, Not required
			Right Side	0.10	0.04	-	0.14	Σ SAR < 1.6, Not required
			Top Side	-	0.02	-	0.02	Σ SAR < 1.6, Not required
			Bottom Side	1.04	-	-	1.04	Σ SAR < 1.6, Not required
18	LTE 2 + WLAN (NII) + BT (DSS)	Head	Right Cheek	0.09	0.54	-	0.63	Σ SAR < 1.6, Not required
			Right Tilted	0.11	0.57	-	0.68	Σ SAR < 1.6, Not required
			Left Cheek	0.18	0.70	-	0.88	Σ SAR < 1.6, Not required
			Left Tilted	0.09	0.68	-	0.77	Σ SAR < 1.6, Not required
		Body-Worn	Front Face	0.47	0.09	0.00	0.56	Σ SAR < 1.6, Not required
			Rear Face	0.63	0.10	0.00	0.73	Σ SAR < 1.6, Not required
		Hotspot	Front Face	0.47	0.09	-	0.56	Σ SAR < 1.6, Not required
			Rear Face	0.63	0.12	-	0.75	Σ SAR < 1.6, Not required
			Left Side	0.07	-	-	0.07	Σ SAR < 1.6, Not required
			Right Side	0.10	0.05	-	0.15	Σ SAR < 1.6, Not required
			Top Side	-	0.03	-	0.03	Σ SAR < 1.6, Not required
			Bottom Side	1.04	-	-	1.04	Σ SAR < 1.6, Not required

FCC SAR Test Report

No.	Conditions (SAR1 + SAR2 + SAR3)	Exposure Condition	Test Position	Max. SAR1	Max. SAR2	Max. SAR3	SAR Summation	SPLSR Analysis
19	LTE 4 + WLAN (DTS) + BT (DSS)	Head	Right Cheek	0.11	0.24	-	0.35	Σ SAR < 1.6, Not required
			Right Tilted	0.14	0.12	-	0.26	Σ SAR < 1.6, Not required
			Left Cheek	0.16	0.76	-	0.92	Σ SAR < 1.6, Not required
			Left Tilted	0.06	0.35	-	0.41	Σ SAR < 1.6, Not required
		Body-Worn	Front Face	0.42	0.04	0.00	0.46	Σ SAR < 1.6, Not required
			Rear Face	0.53	0.05	0.00	0.58	Σ SAR < 1.6, Not required
		Hotspot	Front Face	0.42	0.04	-	0.46	Σ SAR < 1.6, Not required
			Rear Face	0.53	0.05	-	0.58	Σ SAR < 1.6, Not required
			Left Side	0.48	-	-	0.48	Σ SAR < 1.6, Not required
			Right Side	0.15	0.04	-	0.19	Σ SAR < 1.6, Not required
			Top Side	-	0.02	-	0.02	Σ SAR < 1.6, Not required
			Bottom Side	0.70	-	-	0.70	Σ SAR < 1.6, Not required
20	LTE 4 + WLAN (NII) + BT (DSS)	Head	Right Cheek	0.11	0.54	-	0.65	Σ SAR < 1.6, Not required
			Right Tilted	0.14	0.57	-	0.71	Σ SAR < 1.6, Not required
			Left Cheek	0.16	0.70	-	0.86	Σ SAR < 1.6, Not required
			Left Tilted	0.06	0.68	-	0.74	Σ SAR < 1.6, Not required
		Body-Worn	Front Face	0.42	0.09	0.00	0.51	Σ SAR < 1.6, Not required
			Rear Face	0.53	0.10	0.00	0.63	Σ SAR < 1.6, Not required
		Hotspot	Front Face	0.42	0.09	-	0.51	Σ SAR < 1.6, Not required
			Rear Face	0.53	0.12	-	0.65	Σ SAR < 1.6, Not required
			Left Side	0.48	-	-	0.48	Σ SAR < 1.6, Not required
			Right Side	0.15	0.05	-	0.20	Σ SAR < 1.6, Not required
			Top Side	-	0.03	-	0.03	Σ SAR < 1.6, Not required
			Bottom Side	0.70	-	-	0.70	Σ SAR < 1.6, Not required

FCC SAR Test Report

No.	Conditions (SAR1 + SAR2 + SAR3)	Exposure Condition	Test Position	Max. SAR1	Max. SAR2	Max. SAR3	SAR Summation	SPLSR Analysis
21	LTE 5 + WLAN (DTS) + BT (DSS)	Head	Right Cheek	0.84	0.24	-	1.08	Σ SAR < 1.6, Not required
			Right Tilted	0.62	0.12	-	0.74	Σ SAR < 1.6, Not required
			Left Cheek	0.63	0.76	-	1.39	Σ SAR < 1.6, Not required
			Left Tilted	0.43	0.35	-	0.78	Σ SAR < 1.6, Not required
		Body-Worn	Front Face	0.16	0.04	0.00	0.20	Σ SAR < 1.6, Not required
			Rear Face	0.16	0.05	0.00	0.21	Σ SAR < 1.6, Not required
		Hotspot	Front Face	0.16	0.04	-	0.20	Σ SAR < 1.6, Not required
			Rear Face	0.16	0.05	-	0.21	Σ SAR < 1.6, Not required
			Left Side	0.10	-	-	0.10	Σ SAR < 1.6, Not required
			Right Side	0.09	0.04	-	0.13	Σ SAR < 1.6, Not required
			Top Side	0.01	0.02	-	0.03	Σ SAR < 1.6, Not required
			Bottom Side	0.01	-	-	0.01	Σ SAR < 1.6, Not required
22	LTE 5 + WLAN (NII) + BT (DSS)	Head	Right Cheek	0.84	0.54	-	1.38	Σ SAR < 1.6, Not required
			Right Tilted	0.62	0.57	-	1.19	Σ SAR < 1.6, Not required
			Left Cheek	0.63	0.70	-	1.33	Σ SAR < 1.6, Not required
			Left Tilted	0.43	0.68	-	1.11	Σ SAR < 1.6, Not required
		Body-Worn	Front Face	0.16	0.09	0.00	0.25	Σ SAR < 1.6, Not required
			Rear Face	0.16	0.10	0.00	0.26	Σ SAR < 1.6, Not required
		Hotspot	Front Face	0.16	0.09	-	0.25	Σ SAR < 1.6, Not required
			Rear Face	0.16	0.12	-	0.28	Σ SAR < 1.6, Not required
			Left Side	0.10	-	-	0.10	Σ SAR < 1.6, Not required
			Right Side	0.09	0.05	-	0.14	Σ SAR < 1.6, Not required
			Top Side	0.01	0.03	-	0.04	Σ SAR < 1.6, Not required
			Bottom Side	0.01	-	-	0.01	Σ SAR < 1.6, Not required

FCC SAR Test Report

No.	Conditions (SAR1 + SAR2 + SAR3)	Exposure Condition	Test Position	Max. SAR1	Max. SAR2	Max. SAR3	SAR Summation	SPLSR Analysis
23	LTE 7 + WLAN (DTS) + BT (DSS)	Head	Right Cheek	0.77	0.24	-	1.01	Σ SAR < 1.6, Not required
			Right Tilted	0.27	0.12	-	0.39	Σ SAR < 1.6, Not required
			Left Cheek	0.42	0.76	-	1.18	Σ SAR < 1.6, Not required
			Left Tilted	0.21	0.35	-	0.56	Σ SAR < 1.6, Not required
		Body-Worn	Front Face	0.95	0.04	0.00	0.99	Σ SAR < 1.6, Not required
			Rear Face	0.69	0.05	0.00	0.74	Σ SAR < 1.6, Not required
		Hotspot	Front Face	0.95	0.04	-	0.99	Σ SAR < 1.6, Not required
			Rear Face	0.69	0.05	-	0.74	Σ SAR < 1.6, Not required
			Left Side	0.48	-	-	0.48	Σ SAR < 1.6, Not required
			Right Side	0.68	0.04	-	0.72	Σ SAR < 1.6, Not required
			Top Side	0.01	0.02	-	0.03	Σ SAR < 1.6, Not required
			Bottom Side	0.21	-	-	0.21	Σ SAR < 1.6, Not required
24	LTE 7 + WLAN (NII) + BT (DSS)	Head	Right Cheek	0.77	0.54	-	1.31	Σ SAR < 1.6, Not required
			Right Tilted	0.27	0.57	-	0.84	Σ SAR < 1.6, Not required
			Left Cheek	0.42	0.70	-	1.12	Σ SAR < 1.6, Not required
			Left Tilted	0.21	0.68	-	0.89	Σ SAR < 1.6, Not required
		Body-Worn	Front Face	0.95	0.09	0.00	1.04	Σ SAR < 1.6, Not required
			Rear Face	0.69	0.10	0.00	0.79	Σ SAR < 1.6, Not required
		Hotspot	Front Face	0.95	0.09	-	1.04	Σ SAR < 1.6, Not required
			Rear Face	0.69	0.12	-	0.81	Σ SAR < 1.6, Not required
			Left Side	0.48	-	-	0.48	Σ SAR < 1.6, Not required
			Right Side	0.68	0.05	-	0.73	Σ SAR < 1.6, Not required
			Top Side	0.01	0.03	-	0.04	Σ SAR < 1.6, Not required
			Bottom Side	0.21	-	-	0.21	Σ SAR < 1.6, Not required

FCC SAR Test Report

No.	Conditions (SAR1 + SAR2 + SAR3)	Exposure Condition	Test Position	Max. SAR1	Max. SAR2	Max. SAR3	SAR Summation	SPLSR Analysis
25	LTE 12 + WLAN (DTS) + BT (DSS)	Head	Right Cheek	0.63	0.24	-	0.87	Σ SAR < 1.6, Not required
			Right Tilted	0.31	0.12	-	0.43	Σ SAR < 1.6, Not required
			Left Cheek	0.26	0.76	-	1.02	Σ SAR < 1.6, Not required
			Left Tilted	0.22	0.35	-	0.57	Σ SAR < 1.6, Not required
		Body-Worn	Front Face	0.13	0.04	0.00	0.17	Σ SAR < 1.6, Not required
			Rear Face	0.16	0.05	0.00	0.21	Σ SAR < 1.6, Not required
		Hotspot	Front Face	0.13	0.04	-	0.17	Σ SAR < 1.6, Not required
			Rear Face	0.16	0.05	-	0.21	Σ SAR < 1.6, Not required
			Left Side	0.08	-	-	0.08	Σ SAR < 1.6, Not required
			Right Side	0.03	0.04	-	0.07	Σ SAR < 1.6, Not required
			Top Side	0.02	0.02	-	0.04	Σ SAR < 1.6, Not required
			Bottom Side	0.01	-	-	0.01	Σ SAR < 1.6, Not required
26	LTE 12 + WLAN (NII) + BT (DSS)	Head	Right Cheek	0.63	0.54	-	1.17	Σ SAR < 1.6, Not required
			Right Tilted	0.31	0.57	-	0.88	Σ SAR < 1.6, Not required
			Left Cheek	0.26	0.70	-	0.96	Σ SAR < 1.6, Not required
			Left Tilted	0.22	0.68	-	0.90	Σ SAR < 1.6, Not required
		Body-Worn	Front Face	0.13	0.09	0.00	0.22	Σ SAR < 1.6, Not required
			Rear Face	0.16	0.10	0.00	0.26	Σ SAR < 1.6, Not required
		Hotspot	Front Face	0.13	0.09	-	0.22	Σ SAR < 1.6, Not required
			Rear Face	0.16	0.12	-	0.28	Σ SAR < 1.6, Not required
			Left Side	0.08	-	-	0.08	Σ SAR < 1.6, Not required
			Right Side	0.03	0.05	-	0.08	Σ SAR < 1.6, Not required
			Top Side	0.02	0.03	-	0.05	Σ SAR < 1.6, Not required
			Bottom Side	0.01	-	-	0.01	Σ SAR < 1.6, Not required

FCC SAR Test Report

No.	Conditions (SAR1 + SAR2 + SAR3)	Exposure Condition	Test Position	Max. SAR1	Max. SAR2	Max. SAR3	SAR Summation	SPLSR Analysis
27	LTE 13 + WLAN (DTS) + BT (DSS)	Head	Right Cheek	0.48	0.24	-	0.72	Σ SAR < 1.6, Not required
			Right Tilted	0.30	0.12	-	0.42	Σ SAR < 1.6, Not required
			Left Cheek	0.38	0.76	-	1.14	Σ SAR < 1.6, Not required
			Left Tilted	0.27	0.35	-	0.62	Σ SAR < 1.6, Not required
		Body-Worn	Front Face	0.14	0.04	0.00	0.18	Σ SAR < 1.6, Not required
			Rear Face	0.17	0.05	0.00	0.22	Σ SAR < 1.6, Not required
		Hotspot	Front Face	0.14	0.04	-	0.18	Σ SAR < 1.6, Not required
			Rear Face	0.17	0.05	-	0.22	Σ SAR < 1.6, Not required
			Left Side	0.08	-	-	0.08	Σ SAR < 1.6, Not required
			Right Side	0.07	0.04	-	0.11	Σ SAR < 1.6, Not required
			Top Side	0.01	0.02	-	0.03	Σ SAR < 1.6, Not required
			Bottom Side	0.00	-	-	0.00	Σ SAR < 1.6, Not required
28	LTE 13 + WLAN (NII) + BT (DSS)	Head	Right Cheek	0.48	0.54	-	1.02	Σ SAR < 1.6, Not required
			Right Tilted	0.30	0.57	-	0.87	Σ SAR < 1.6, Not required
			Left Cheek	0.38	0.70	-	1.08	Σ SAR < 1.6, Not required
			Left Tilted	0.27	0.68	-	0.95	Σ SAR < 1.6, Not required
		Body-Worn	Front Face	0.14	0.09	0.00	0.23	Σ SAR < 1.6, Not required
			Rear Face	0.17	0.10	0.00	0.27	Σ SAR < 1.6, Not required
		Hotspot	Front Face	0.14	0.09	-	0.23	Σ SAR < 1.6, Not required
			Rear Face	0.17	0.12	-	0.29	Σ SAR < 1.6, Not required
			Left Side	0.08	-	-	0.08	Σ SAR < 1.6, Not required
			Right Side	0.07	0.05	-	0.12	Σ SAR < 1.6, Not required
			Top Side	0.01	0.03	-	0.04	Σ SAR < 1.6, Not required
			Bottom Side	0.00	-	-	0.00	Σ SAR < 1.6, Not required

FCC SAR Test Report

No.	Conditions (SAR1 + SAR2 + SAR3)	Exposure Condition	Test Position	Max. SAR1	Max. SAR2	Max. SAR3	SAR Summation	SPLSR Analysis
29	LTE 17 + WLAN (DTS) + BT (DSS)	Head	Right Cheek	0.66	0.24	-	0.90	Σ SAR < 1.6, Not required
			Right Tilted	0.33	0.12	-	0.45	Σ SAR < 1.6, Not required
			Left Cheek	0.32	0.76	-	1.08	Σ SAR < 1.6, Not required
			Left Tilted	0.28	0.35	-	0.63	Σ SAR < 1.6, Not required
		Body-Worn	Front Face	0.13	0.04	0.00	0.17	Σ SAR < 1.6, Not required
			Rear Face	0.16	0.05	0.00	0.21	Σ SAR < 1.6, Not required
		Hotspot	Front Face	0.13	0.04	-	0.17	Σ SAR < 1.6, Not required
			Rear Face	0.16	0.05	-	0.21	Σ SAR < 1.6, Not required
			Left Side	0.08	-	-	0.08	Σ SAR < 1.6, Not required
			Right Side	0.03	0.04	-	0.07	Σ SAR < 1.6, Not required
			Top Side	0.01	0.02	-	0.03	Σ SAR < 1.6, Not required
			Bottom Side	0.02	-	-	0.02	Σ SAR < 1.6, Not required
30	LTE 17 + WLAN (NII) + BT (DSS)	Head	Right Cheek	0.66	0.54	-	1.20	Σ SAR < 1.6, Not required
			Right Tilted	0.33	0.57	-	0.90	Σ SAR < 1.6, Not required
			Left Cheek	0.32	0.70	-	1.02	Σ SAR < 1.6, Not required
			Left Tilted	0.28	0.68	-	0.96	Σ SAR < 1.6, Not required
		Body-Worn	Front Face	0.13	0.09	0.00	0.22	Σ SAR < 1.6, Not required
			Rear Face	0.16	0.10	0.00	0.26	Σ SAR < 1.6, Not required
		Hotspot	Front Face	0.13	0.09	-	0.22	Σ SAR < 1.6, Not required
			Rear Face	0.16	0.12	-	0.28	Σ SAR < 1.6, Not required
			Left Side	0.08	-	-	0.08	Σ SAR < 1.6, Not required
			Right Side	0.03	0.05	-	0.08	Σ SAR < 1.6, Not required
			Top Side	0.01	0.03	-	0.04	Σ SAR < 1.6, Not required
			Bottom Side	0.02	-	-	0.02	Σ SAR < 1.6, Not required

FCC SAR Test Report

No.	Conditions (SAR1 + SAR2 + SAR3)	Exposure Condition	Test Position	Max. SAR1	Max. SAR2	Max. SAR3	SAR Summation	SPLSR Analysis
31	LTE 25 + WLAN (DTS) + BT (DSS)	Head	Right Cheek	0.09	0.24	-	0.33	Σ SAR < 1.6, Not required
			Right Tilted	0.11	0.12	-	0.23	Σ SAR < 1.6, Not required
			Left Cheek	0.16	0.76	-	0.92	Σ SAR < 1.6, Not required
			Left Tilted	0.08	0.35	-	0.43	Σ SAR < 1.6, Not required
		Body-Worn	Front Face	0.45	0.04	0.00	0.49	Σ SAR < 1.6, Not required
			Rear Face	0.58	0.05	0.00	0.63	Σ SAR < 1.6, Not required
		Hotspot	Front Face	0.45	0.04	-	0.49	Σ SAR < 1.6, Not required
			Rear Face	0.58	0.05	-	0.63	Σ SAR < 1.6, Not required
			Left Side	0.07	-	-	0.07	Σ SAR < 1.6, Not required
			Right Side	0.10	0.04	-	0.14	Σ SAR < 1.6, Not required
			Top Side	-	0.02	-	0.02	Σ SAR < 1.6, Not required
			Bottom Side	1.14	-	-	1.14	Σ SAR < 1.6, Not required
32	LTE 25 + WLAN (NII) + BT (DSS)	Head	Right Cheek	0.09	0.54	-	0.63	Σ SAR < 1.6, Not required
			Right Tilted	0.11	0.57	-	0.68	Σ SAR < 1.6, Not required
			Left Cheek	0.16	0.70	-	0.86	Σ SAR < 1.6, Not required
			Left Tilted	0.08	0.68	-	0.76	Σ SAR < 1.6, Not required
		Body-Worn	Front Face	0.45	0.09	0.00	0.54	Σ SAR < 1.6, Not required
			Rear Face	0.58	0.10	0.00	0.68	Σ SAR < 1.6, Not required
		Hotspot	Front Face	0.45	0.09	-	0.54	Σ SAR < 1.6, Not required
			Rear Face	0.58	0.12	-	0.70	Σ SAR < 1.6, Not required
			Left Side	0.07	-	-	0.07	Σ SAR < 1.6, Not required
			Right Side	0.10	0.05	-	0.15	Σ SAR < 1.6, Not required
			Top Side	-	0.03	-	0.03	Σ SAR < 1.6, Not required
			Bottom Side	1.14	-	-	1.14	Σ SAR < 1.6, Not required

FCC SAR Test Report

No.	Conditions (SAR1 + SAR2 + SAR3)	Exposure Condition	Test Position	Max. SAR1	Max. SAR2	Max. SAR3	SAR Summation	SPLSR Analysis
33	LTE 26 + WLAN (DTS) + BT (DSS)	Head	Right Cheek	0.78	0.24	-	1.02	Σ SAR < 1.6, Not required
			Right Tilted	0.51	0.12	-	0.63	Σ SAR < 1.6, Not required
			Left Cheek	0.58	0.76	-	1.34	Σ SAR < 1.6, Not required
			Left Tilted	0.40	0.35	-	0.75	Σ SAR < 1.6, Not required
		Body-Worn	Front Face	0.15	0.04	0.00	0.19	Σ SAR < 1.6, Not required
			Rear Face	0.18	0.05	0.00	0.23	Σ SAR < 1.6, Not required
		Hotspot	Front Face	0.15	0.04	-	0.19	Σ SAR < 1.6, Not required
			Rear Face	0.18	0.05	-	0.23	Σ SAR < 1.6, Not required
			Left Side	0.14	-	-	0.14	Σ SAR < 1.6, Not required
			Right Side	0.11	0.04	-	0.15	Σ SAR < 1.6, Not required
			Top Side	0.07	0.02	-	0.09	Σ SAR < 1.6, Not required
			Bottom Side	0.07	-	-	0.07	Σ SAR < 1.6, Not required
34	LTE 26 + WLAN (NII) + BT (DSS)	Head	Right Cheek	0.78	0.54	-	1.32	Σ SAR < 1.6, Not required
			Right Tilted	0.51	0.57	-	1.08	Σ SAR < 1.6, Not required
			Left Cheek	0.58	0.70	-	1.28	Σ SAR < 1.6, Not required
			Left Tilted	0.40	0.68	-	1.08	Σ SAR < 1.6, Not required
		Body-Worn	Front Face	0.15	0.09	0.00	0.24	Σ SAR < 1.6, Not required
			Rear Face	0.18	0.10	0.00	0.28	Σ SAR < 1.6, Not required
		Hotspot	Front Face	0.15	0.09	-	0.24	Σ SAR < 1.6, Not required
			Rear Face	0.18	0.12	-	0.30	Σ SAR < 1.6, Not required
			Left Side	0.14	-	-	0.14	Σ SAR < 1.6, Not required
			Right Side	0.11	0.05	-	0.16	Σ SAR < 1.6, Not required
			Top Side	0.07	0.03	-	0.10	Σ SAR < 1.6, Not required
			Bottom Side	0.07	-	-	0.07	Σ SAR < 1.6, Not required

FCC SAR Test Report

No.	Conditions (SAR1 + SAR2 + SAR3)	Exposure Condition	Test Position	Max. SAR1	Max. SAR2	Max. SAR3	SAR Summation	SPLSR Analysis
35	LTE 30 + WLAN (DTS) + BT (DSS)	Head	Right Cheek	0.49	0.24	-	0.73	Σ SAR < 1.6, Not required
			Right Tilted	0.29	0.12	-	0.41	Σ SAR < 1.6, Not required
			Left Cheek	0.26	0.76	-	1.02	Σ SAR < 1.6, Not required
			Left Tilted	0.24	0.35	-	0.59	Σ SAR < 1.6, Not required
		Body-Worn	Front Face	0.48	0.04	0.00	0.52	Σ SAR < 1.6, Not required
			Rear Face	0.37	0.05	0.00	0.42	Σ SAR < 1.6, Not required
		Hotspot	Front Face	0.48	0.04	-	0.52	Σ SAR < 1.6, Not required
			Rear Face	0.37	0.05	-	0.42	Σ SAR < 1.6, Not required
			Left Side	0.43	-	-	0.43	Σ SAR < 1.6, Not required
			Right Side	0.25	0.04	-	0.29	Σ SAR < 1.6, Not required
			Top Side	0.08	0.02	-	0.10	Σ SAR < 1.6, Not required
			Bottom Side	0.06	-	-	0.06	Σ SAR < 1.6, Not required
36	LTE 30 + WLAN (NII) + BT (DSS)	Head	Right Cheek	0.49	0.54	-	1.03	Σ SAR < 1.6, Not required
			Right Tilted	0.29	0.57	-	0.86	Σ SAR < 1.6, Not required
			Left Cheek	0.26	0.70	-	0.96	Σ SAR < 1.6, Not required
			Left Tilted	0.24	0.68	-	0.92	Σ SAR < 1.6, Not required
		Body-Worn	Front Face	0.48	0.09	0.00	0.57	Σ SAR < 1.6, Not required
			Rear Face	0.37	0.10	0.00	0.47	Σ SAR < 1.6, Not required
		Hotspot	Front Face	0.48	0.09	-	0.57	Σ SAR < 1.6, Not required
			Rear Face	0.37	0.12	-	0.49	Σ SAR < 1.6, Not required
			Left Side	0.43	-	-	0.43	Σ SAR < 1.6, Not required
			Right Side	0.25	0.05	-	0.30	Σ SAR < 1.6, Not required
			Top Side	0.08	0.03	-	0.11	Σ SAR < 1.6, Not required
			Bottom Side	0.06	-	-	0.06	Σ SAR < 1.6, Not required

FCC SAR Test Report

No.	Conditions (SAR1 + SAR2 + SAR3)	Exposure Condition	Test Position	Max. SAR1	Max. SAR2	Max. SAR3	SAR Summation	SPLSR Analysis
37	LTE 41 + WLAN (DTS) + BT (DSS)	Head	Right Cheek	0.61	0.24	-	0.85	Σ SAR < 1.6, Not required
			Right Tilted	0.14	0.12	-	0.26	Σ SAR < 1.6, Not required
			Left Cheek	0.17	0.76	-	0.93	Σ SAR < 1.6, Not required
			Left Tilted	0.14	0.35	-	0.49	Σ SAR < 1.6, Not required
		Body-Worn	Front Face	0.69	0.04	0.00	0.73	Σ SAR < 1.6, Not required
			Rear Face	0.48	0.05	0.00	0.53	Σ SAR < 1.6, Not required
		Hotspot	Front Face	0.69	0.04	-	0.73	Σ SAR < 1.6, Not required
			Rear Face	0.48	0.05	-	0.53	Σ SAR < 1.6, Not required
			Left Side	0.32	-	-	0.32	Σ SAR < 1.6, Not required
			Right Side	0.37	0.04	-	0.41	Σ SAR < 1.6, Not required
			Top Side	0.02	0.02	-	0.04	Σ SAR < 1.6, Not required
			Bottom Side	0.13	-	-	0.13	Σ SAR < 1.6, Not required
38	LTE 41 + WLAN (NII) + BT (DSS)	Head	Right Cheek	0.61	0.54	-	1.15	Σ SAR < 1.6, Not required
			Right Tilted	0.14	0.57	-	0.71	Σ SAR < 1.6, Not required
			Left Cheek	0.17	0.70	-	0.87	Σ SAR < 1.6, Not required
			Left Tilted	0.14	0.68	-	0.82	Σ SAR < 1.6, Not required
		Body-Worn	Front Face	0.69	0.09	0.00	0.78	Σ SAR < 1.6, Not required
			Rear Face	0.48	0.10	0.00	0.58	Σ SAR < 1.6, Not required
		Hotspot	Front Face	0.69	0.09	-	0.78	Σ SAR < 1.6, Not required
			Rear Face	0.48	0.12	-	0.60	Σ SAR < 1.6, Not required
			Left Side	0.32	-	-	0.32	Σ SAR < 1.6, Not required
			Right Side	0.37	0.05	-	0.42	Σ SAR < 1.6, Not required
			Top Side	0.02	0.03	-	0.05	Σ SAR < 1.6, Not required
			Bottom Side	0.13	-	-	0.13	Σ SAR < 1.6, Not required

FCC SAR Test Report

No.	Conditions (SAR1 + SAR2 + SAR3)	Exposure Condition	Test Position	Max. SAR1	Max. SAR2	Max. SAR3	SAR Summation	SPLSR Analysis
39	LTE 66 + WLAN (DTS) + BT (DSS)	Head	Right Cheek	0.11	0.24	-	0.35	Σ SAR < 1.6, Not required
			Right Tilted	0.12	0.12	-	0.24	Σ SAR < 1.6, Not required
			Left Cheek	0.19	0.76	-	0.95	Σ SAR < 1.6, Not required
			Left Tilted	0.08	0.35	-	0.43	Σ SAR < 1.6, Not required
		Body-Worn	Front Face	0.43	0.04	0.00	0.47	Σ SAR < 1.6, Not required
			Rear Face	0.49	0.05	0.00	0.54	Σ SAR < 1.6, Not required
		Hotspot	Front Face	0.43	0.04	-	0.47	Σ SAR < 1.6, Not required
			Rear Face	0.49	0.05	-	0.54	Σ SAR < 1.6, Not required
			Left Side	0.49	-	-	0.49	Σ SAR < 1.6, Not required
			Right Side	0.10	0.04	-	0.14	Σ SAR < 1.6, Not required
			Top Side	-	0.02	-	0.02	Σ SAR < 1.6, Not required
			Bottom Side	0.66	-	-	0.66	Σ SAR < 1.6, Not required
40	LTE 66 + WLAN (NII) + BT (DSS)	Head	Right Cheek	0.11	0.54	-	0.65	Σ SAR < 1.6, Not required
			Right Tilted	0.12	0.57	-	0.69	Σ SAR < 1.6, Not required
			Left Cheek	0.19	0.70	-	0.89	Σ SAR < 1.6, Not required
			Left Tilted	0.08	0.68	-	0.76	Σ SAR < 1.6, Not required
		Body-Worn	Front Face	0.43	0.09	0.00	0.52	Σ SAR < 1.6, Not required
			Rear Face	0.49	0.10	0.00	0.59	Σ SAR < 1.6, Not required
		Hotspot	Front Face	0.43	0.09	-	0.52	Σ SAR < 1.6, Not required
			Rear Face	0.49	0.12	-	0.61	Σ SAR < 1.6, Not required
			Left Side	0.49	-	-	0.49	Σ SAR < 1.6, Not required
			Right Side	0.10	0.05	-	0.15	Σ SAR < 1.6, Not required
			Top Side	-	0.03	-	0.03	Σ SAR < 1.6, Not required
			Bottom Side	0.66	-	-	0.66	Σ SAR < 1.6, Not required

Test Engineer : Kevin Yao, and Eli Hsu

5. Calibration of Test Equipment

Equipment	Manufacturer	Model	SN	Cal. Date	Cal. Interval
System Validation Dipole	SPEAG	D750V3	1013	Aug. 30, 2016	1 Year
System Validation Dipole	SPEAG	D835V2	4d121	Aug. 25, 2016	1 Year
System Validation Dipole	SPEAG	D1750V2	1055	Aug. 31, 2016	1 Year
System Validation Dipole	SPEAG	D1900V2	5d036	Jan. 23, 2017	1 Year
System Validation Dipole	SPEAG	D2300V2	1004	Jan. 25, 2017	1 Year
System Validation Dipole	SPEAG	D2450V2	737	Aug. 26, 2016	1 Year
System Validation Dipole	SPEAG	D2600V2	1020	Aug. 26, 2016	1 Year
System Validation Dipole	SPEAG	D5GHzV2	1019	Aug. 23, 2016	1 Year
Dosimetric E-Field Probe	SPEAG	EX3DV4	3650	Jul. 25, 2016	1 Year
Dosimetric E-Field Probe	SPEAG	EX3DV4	3864	Jul. 25, 2016	1 Year
Dosimetric E-Field Probe	SPEAG	EX3DV4	3971	Mar. 24, 2017	1 Year
Dosimetric E-Field Probe	SPEAG	ET3DV6	3898	Jul. 11, 2016	1 Year
Dosimetric E-Field Probe	SPEAG	EX3DV4	7375	Dec. 08, 2016	1 Year
Data Acquisition Electronics	SPEAG	DAE3	579	Sep. 05, 2016	1 Year
Data Acquisition Electronics	SPEAG	DAE4	861	May. 22, 2017	1 Year
Data Acquisition Electronics	SPEAG	DAE4	1431	Mar. 20, 2017	1 Year
Data Acquisition Electronics	SPEAG	DAE4	1277	Jul. 22, 2016	1 Year
Data Acquisition Electronics	SPEAG	DAE4	1485	Dec. 15, 2016	1 Year
Data Acquisition Electronics	SPEAG	DAE4	917	Jan. 06, 2017	1 Year
Wireless Communication Test Set	Agilent	E5515C	MY50266628	Dec. 12, 2016	1 Year
Radio Communication Analyzer	Anritsu	MT8820C	6201300638	Jul. 14, 2016	1 Year
Universal Radio Communication Tester	R&S	CMW500	151084	Oct. 18, 2016	1 Year
Spectrum Analyzer	R&S	FSL6	102006	Mar. 27, 2017	1 Year
Vector Signal Generator	Anritsu	MG3710A	6201599977	Mar. 27, 2017	1 Year
Power Meter	Anritsu	ML2495A	1218009	Jul. 06, 2016	1 Year
Power Sensor	Anritsu	MA2411B	1207252	Jul. 06, 2016	1 Year
Thermometer	YFE	YF-160A	130504591	Mar. 24, 2017	1 Year
Power Amplifier	AR	5S1G4	0339656	Sep. 21, 2016	1 Year
Power Amplifier	mini-circuits	ZVE-8G	05770420A	Sep. 21, 2016	1 Year
Attenuator	MTJ	MTJ6011-03	N/A	Sep. 21, 2016	1 Year
Attenuator	Woken	00800A1G01L-10	N/A	Sep. 21, 2016	1 Year
Directional Coupler	Woken	0110A05602O-10	11122702	Sep. 21, 2016	1 Year
Dielectric Assessment Kit	SPEAG	DAK-3.5	1151	Aug. 25, 2016	1 Year
Twin SAM Phantom	SPEAG	QD 000 P40 CD	1654	N/A	N/A
Twin SAM Phantom	SPEAG	QD000 P40 CA	1202	N/A	N/A
Twin SAM Phantom	SPEAG	QD 000 P40 CB	1485	N/A	N/A
Twin SAM Phantom	SPEAG	QD 000 P40 CD	1652	N/A	N/A
Twin SAM Phantom	SPEAG	QD 000 P40 CD	1653	N/A	N/A
Twin SAM Phantom	SPEAG	QD 000 P40 CD	1822	N/A	N/A
Twin SAM Phantom	SPEAG	QD 000 P40 CD	1823	N/A	N/A
Twin SAM Phantom	SPEAG	QD 000 P40 CB	1496	N/A	N/A

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6. Measurement Uncertainty

Source of Uncertainty	Uncertainty (± %)	Probability Distribution	Divisor	Ci (1g)	Ci (10g)	Standard Uncertainty (± %, 1g)	Standard Uncertainty (± %, 10g)	Vi
Measurement System								
Probe Calibration	6.0	Normal	1	1	1	6.0	6.0	∞
Axial Isotropy	4.7	Rectangular	√3	√0.5	√0.5	1.9	1.9	∞
Hemispherical Isotropy	9.6	Rectangular	√3	√0.5	√0.5	3.9	3.9	∞
Boundary Effect	1.0	Rectangular	√3	1	1	0.6	0.6	∞
Linearity	4.7	Rectangular	√3	1	1	2.7	2.7	∞
Detection Limits	0.25	Rectangular	√3	1	1	0.14	0.14	∞
Probe Modulation Response	3.5	Rectangular	√3	1	1	2.0	2.0	∞
Readout Electronics	0.3	Normal	1	1	1	0.3	0.3	∞
Response Time	0.0	Rectangular	√3	1	1	0.0	0.0	∞
Integration Time	1.7	Rectangular	√3	1	1	1.0	1.0	∞
RF Ambient Conditions – Noise	3.0	Rectangular	√3	1	1	1.7	1.7	∞
RF Ambient Conditions – Reflections	3.0	Rectangular	√3	1	1	1.7	1.7	∞
Probe Positioner Mechanical Tolerance	0.4	Rectangular	√3	1	1	0.2	0.2	∞
Probe Positioning with Respect to Phantom	2.9	Rectangular	√3	1	1	1.7	1.7	∞
Post-processing	2.0	Rectangular	√3	1	1	1.2	1.2	∞
Test Sample Related								
Test Sample Positioning	3.9 / 2.06	Normal	1	1	1	3.9	2.1	35
Device Holder Uncertainty	2.9 / 4.1	Normal	1	1	1	2.9	4.1	11
Power Drift of Measurement	5.0	Rectangular	√3	1	1	2.9	2.9	∞
Power Scaling	0.0	Rectangular	√3	1	1	0.0	0.0	∞
Phantom and Setup								
Phantom Uncertainty (Shape and Thickness Tolerances)	6.1	Rectangular	√3	1	1	3.5	3.5	∞
Liquid Conductivity (Temperature Uncertainty)	3.24	Rectangular	√3	0.78	0.71	1.5	1.3	∞
Liquid Conductivity (Measured)	2.88	Normal	1	0.78	0.71	2.2	2.0	43
Liquid Permittivity (Temperature Uncertainty)	1.13	Rectangular	√3	0.23	0.26	0.2	0.2	∞
Liquid Permittivity (Measured)	2.50	Normal	1	0.23	0.26	0.6	0.7	54
Combined Standard Uncertainty						± 11.4 %	± 11.2 %	
Expanded Uncertainty (K=2)						± 22.8 %	± 22.4 %	

Head SAR Uncertainty Budget for Frequency Range of 300 MHz to 3 GHz

FCC SAR Test Report

Source of Uncertainty	Uncertainty (± %)	Probability Distribution	Divisor	Ci (1g)	Ci (10g)	Standard Uncertainty (± %, 1g)	Standard Uncertainty (± %, 10g)	Vi
Measurement System								
Probe Calibration	6.55	Normal	1	1	1	6.55	6.55	∞
Axial Isotropy	4.7	Rectangular	√3	0.7	0.7	1.9	1.9	∞
Hemispherical Isotropy	9.6	Rectangular	√3	0.7	0.7	3.9	3.9	∞
Boundary Effect	2.0	Rectangular	√3	1	1	1.2	1.2	∞
Linearity	4.7	Rectangular	√3	1	1	2.7	2.7	∞
Detection Limits	0.25	Rectangular	√3	1	1	0.14	0.14	∞
Probe Modulation Response	3.5	Rectangular	√3	1	1	2.0	2.0	∞
Readout Electronics	0.3	Normal	1	1	1	0.3	0.3	∞
Response Time	0.0	Rectangular	√3	1	1	0.0	0.0	∞
Integration Time	1.7	Rectangular	√3	1	1	1.0	1.0	∞
RF Ambient Conditions – Noise	3.0	Rectangular	√3	1	1	1.7	1.7	∞
RF Ambient Conditions – Reflections	3.0	Rectangular	√3	1	1	1.7	1.7	∞
Probe Positioner Mechanical Tolerance	0.4	Rectangular	√3	1	1	0.2	0.2	∞
Probe Positioning with Respect to Phantom	6.7	Rectangular	√3	1	1	3.9	3.9	∞
Post-processing	4.0	Rectangular	√3	1	1	2.3	2.3	∞
Test Sample Related								
Test Sample Positioning	3.9 / 2.06	Normal	1	1	1	3.9	2.1	35
Device Holder Uncertainty	2.9 / 4.1	Normal	1	1	1	2.9	4.1	11
Power Drift of Measurement	5.0	Rectangular	√3	1	1	2.9	2.9	∞
Power Scaling	0.0	Rectangular	√3	1	1	0.0	0.0	∞
Phantom and Setup								
Phantom Uncertainty (Shape and Thickness Tolerances)	6.6	Rectangular	√3	1	1	3.8	3.8	∞
Liquid Conductivity (Temperature Uncertainty)	3.24	Rectangular	√3	0.78	0.71	1.5	1.3	∞
Liquid Conductivity (Measured)	2.88	Normal	1	0.78	0.71	2.2	2.0	43
Liquid Permittivity (Temperature Uncertainty)	1.13	Rectangular	√3	0.23	0.26	0.2	0.2	∞
Liquid Permittivity (Measured)	2.50	Normal	1	0.23	0.26	0.6	0.7	54
Combined Standard Uncertainty						± 12.5 %	± 12.3 %	
Expanded Uncertainty (K=2)						± 25.0 %	± 24.6 %	

Head SAR Uncertainty Budget for Frequency Range of 3 GHz to 6 GHz

FCC SAR Test Report

Source of Uncertainty	Uncertainty (± %)	Probability Distribution	Divisor	Ci (1g)	Ci (10g)	Standard Uncertainty (± %, 1g)	Standard Uncertainty (± %, 10g)	Vi
Measurement System								
Probe Calibration	6.0	Normal	1	1	1	6.0	6.0	∞
Axial Isotropy	4.7	Rectangular	√3	√0.5	√0.5	1.9	1.9	∞
Hemispherical Isotropy	9.6	Rectangular	√3	√0.5	√0.5	3.9	3.9	∞
Boundary Effect	1.0	Rectangular	√3	1	1	0.6	0.6	∞
Linearity	4.7	Rectangular	√3	1	1	2.7	2.7	∞
Detection Limits	0.25	Rectangular	√3	1	1	0.14	0.14	∞
Probe Modulation Response	3.5	Rectangular	√3	1	1	2.0	2.0	∞
Readout Electronics	0.3	Normal	1	1	1	0.3	0.3	∞
Response Time	0.0	Rectangular	√3	1	1	0.0	0.0	∞
Integration Time	1.7	Rectangular	√3	1	1	1.0	1.0	∞
RF Ambient Conditions – Noise	3.0	Rectangular	√3	1	1	1.7	1.7	∞
RF Ambient Conditions – Reflections	3.0	Rectangular	√3	1	1	1.7	1.7	∞
Probe Positioner Mechanical Tolerance	0.4	Rectangular	√3	1	1	0.2	0.2	∞
Probe Positioning with Respect to Phantom	2.9	Rectangular	√3	1	1	1.7	1.7	∞
Post-processing	2.0	Rectangular	√3	1	1	1.2	1.2	∞
Test Sample Related								
Test Sample Positioning	4.38 / 1.35	Normal	1	1	1	4.4	1.4	29
Device Holder Uncertainty	2.9 / 4.1	Normal	1	1	1	2.9	4.1	11
Power Drift of Measurement	5.0	Rectangular	√3	1	1	2.9	2.9	∞
Power Scaling	0.0	Rectangular	√3	1	1	0.0	0.0	∞
Phantom and Setup								
Phantom Uncertainty (Shape and Thickness Tolerances)	7.2	Rectangular	√3	1	1	4.2	4.2	∞
Liquid Conductivity (Temperature Uncertainty)	3.24	Rectangular	√3	0.78	0.71	1.5	1.3	∞
Liquid Conductivity (Measured)	2.88	Normal	1	0.78	0.71	2.2	2.0	43
Liquid Permittivity (Temperature Uncertainty)	1.13	Rectangular	√3	0.23	0.26	0.2	0.2	∞
Liquid Permittivity (Measured)	2.50	Normal	1	0.23	0.26	0.6	0.7	54
Combined Standard Uncertainty						± 11.8 %	± 11.3 %	
Expanded Uncertainty (K=2)						± 23.6 %	± 22.6 %	

Body SAR Uncertainty Budget for Frequency Range of 300 MHz to 3 GHz

FCC SAR Test Report

Source of Uncertainty	Uncertainty (± %)	Probability Distribution	Divisor	Ci (1g)	Ci (10g)	Standard Uncertainty (± %, 1g)	Standard Uncertainty (± %, 10g)	Vi
Measurement System								
Probe Calibration	6.55	Normal	1	1	1	6.55	6.55	∞
Axial Isotropy	4.7	Rectangular	√3	0.7	0.7	1.9	1.9	∞
Hemispherical Isotropy	9.6	Rectangular	√3	0.7	0.7	3.9	3.9	∞
Boundary Effect	2.0	Rectangular	√3	1	1	1.2	1.2	∞
Linearity	4.7	Rectangular	√3	1	1	2.7	2.7	∞
Detection Limits	0.25	Rectangular	√3	1	1	0.14	0.14	∞
Probe Modulation Response	3.5	Rectangular	√3	1	1	2.0	2.0	∞
Readout Electronics	0.3	Normal	1	1	1	0.3	0.3	∞
Response Time	0.0	Rectangular	√3	1	1	0.0	0.0	∞
Integration Time	1.7	Rectangular	√3	1	1	1.0	1.0	∞
RF Ambient Conditions – Noise	3.0	Rectangular	√3	1	1	1.7	1.7	∞
RF Ambient Conditions – Reflections	3.0	Rectangular	√3	1	1	1.7	1.7	∞
Probe Positioner Mechanical Tolerance	0.4	Rectangular	√3	1	1	0.2	0.2	∞
Probe Positioning with Respect to Phantom	6.7	Rectangular	√3	1	1	3.9	3.9	∞
Post-processing	4.0	Rectangular	√3	1	1	2.3	2.3	∞
Test Sample Related								
Test Sample Positioning	4.38 / 1.35	Normal	1	1	1	4.4	1.4	29
Device Holder Uncertainty	2.9 / 4.1	Normal	1	1	1	2.9	4.1	11
Power Drift of Measurement	5.0	Rectangular	√3	1	1	2.9	2.9	∞
Power Scaling	0.0	Rectangular	√3	1	1	0.0	0.0	∞
Phantom and Setup								
Phantom Uncertainty (Shape and Thickness Tolerances)	7.6	Rectangular	√3	1	1	4.4	4.4	∞
Liquid Conductivity (Temperature Uncertainty)	3.24	Rectangular	√3	0.78	0.71	1.5	1.3	∞
Liquid Conductivity (Measured)	2.88	Normal	1	0.78	0.71	2.2	2.0	43
Liquid Permittivity (Temperature Uncertainty)	1.13	Rectangular	√3	0.23	0.26	0.2	0.2	∞
Liquid Permittivity (Measured)	2.50	Normal	1	0.23	0.26	0.6	0.7	54
Combined Standard Uncertainty						± 12.8 %	± 12.4 %	
Expanded Uncertainty (K=2)						± 25.6 %	± 24.8 %	

Body SAR Uncertainty Budget for Frequency Range of 3 GHz to 6 GHz

FCC SAR Test Report

7. Information on the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

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The road map of all our labs can be found in our web site also.

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