SAR TEST REPORT

No. I21Z70475-SEM01

For

Samsung Electronics Co., Ltd.

Multi-band GSM/WCDMA/LTE phone with Bluetooth, WLAN

Model Name: SM-A037U

with

Hardware Version: REV1.0

Software Version: A037U.001

FCC ID: ZCASMA037U

Issued Date: 2021-10-27

Note:

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of CTTL.

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REPORT HISTORY

Report Number	Revision	Issue Date	Description
I21Z70475-SEM01	Rev.0	2021-10-27	Initial creation of test report
I21Z70475-SEM01	Rev.0	2021-10-29	Add the trigger coverage area map of SAR senser in Appendix I

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1 Test Laboratory

1.1 Testing Location

Company Name:	CTTL(Shouxiang)
Address:	No. 51 Shouxiang Science Building, Xueyuan Road, Haidian District, Beijing, P. R. China100191

1.2 Testing Environment

Temperature:	18°C~25°C,
Relative humidity:	30%~ 70%
Ground system resistance:	< 0.5 Ω
Ambient noise & Reflection:	< 0.012 W/kg

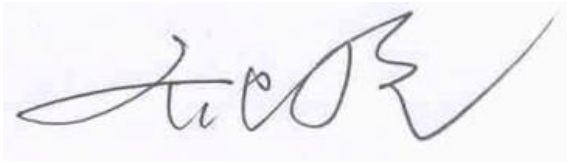
1.3 Project Data

Project Leader:	Qi Dianyuan
Test Engineer:	Lin Xiaojun
Testing Start Date:	September 27, 2021
Testing End Date:	October 19, 2021

1.4 Signature

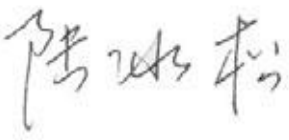
Lin Xiaojun

(Prepared this test report)



Qi Dianyuan

(Reviewed this test report)



Lu Bingsong

Deputy Director of the laboratory

(Approved this test report)

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2 Statement of Compliance

The maximum results of SAR found during testing for Samsung Electronics Co., Ltd. Multi-band GSM/WCDMA/LTE phone with Bluetooth, WLAN SM-A037U are as follows:

Table 2.1: Highest Reported SAR -Standalone(1g)

Mode		Antenna	Highest Reported SAR (1g)				Product Specific 10-g SAR		
			1g SAR Head	1g SAR Hotspot 10mm	1g SAR Body-worn 15mm	1g SAR Body-worn 20mm	0mm	3mm	5mm
GSM	GSM 850	ANT0	0.34	0.5	\	\	\	\	\
	PCS 1900	ANT1	0.83	0.86	0.66	0.43	\	\	\
WCDMA	UMTS FDD 2	ANT1	0.66	0.91	0.86	0.49	1.44	1.64	1.49
	UMTS FDD 4	ANT0	0.39	0.76	1.02	0.62	1.68	0.85	1.31
	UMTS FDD 5	ANT0	0.4	0.82	\	\	\	\	\
LTE	LTE Band 2	ANT1	0.79	0.77	0.96	0.6	1.52	1.67	1.45
	LTE Band 4	ANT0	0.29	0.75	1.13	0.65	2.11	\	2.35
	LTE Band 5	ANT0	0.39	0.82	\	\	\	\	\
	LTE Band 7	ANT0	0.28	0.61	0.39		\	\	\
	LTE Band 12	ANT0	0.35	0.46	\	\	\	\	\
	LTE Band 13	ANT0	0.43	0.79	\	\	\	\	\
	LTE Band 14	ANT0	0.4	0.71	\	\	\	\	\
	LTE Band 25	ANT1	0.74	0.71	1.06	0.62	1.52	1.77	1.61
	LTE Band 26	ANT0	0.33	0.63	\	\	\	\	\
	LTE Band 41-PC3	ANT1	0.48	0.85	0.55	\	1.32	\	0.84
	LTE Band 41-PC2	ANT1	0.57	0.31	0.36	\	\	\	\
	LTE Band 66	ANT0	0.4	0.63	1	0.75	2.14	\	2.33
	LTE Band 71	ANT0	0.3	0.48	\	\	\	\	\

Mode	Antenna	Highest Reported SAR (1g)					Product Specific 10-g SAR
		1g SAR Head	1g SAR Body 10mm	1g SAR Body 13mm	1g SAR Body 15mm	1g SAR Body 20mm	0mm
WLAN 2.4 GHz	ANT2	0.58	0.4	0.22	0.19	0.19	1.27
WLAN 5 GHz		0.32	0.3	0.17	0.59	0.76	0.55
BT		\	\	\	\	\	\

The SAR values found for the Mobile Phone are below the maximum recommended levels of 1.6 W/kg as averaged over any 1g tissue according to the ANSI C95.1-1992.

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For body operation, this device has been tested and meets FCC RF exposure guidelines when used with any accessory that contains no metal and which provides a minimum separation distance of 10 mm for body between this device and the body of the user. Use of other accessories may not ensure compliance with FCC RF exposure guidelines.

The EUT battery must be fully charged and checked periodically during the test to ascertain uniform power output.

The measurement together with the test system set-up is described in annex C. A detailed description of the equipment under test can be found in chapter 4 of this test report. The highest reported SAR value is obtained at the case of **(Table 2.1),** and the values are**:**

Head:0.83 W/kg(1g)

Body:1.13 W/kg(1g)

Table 2.2: Highest Reported SAR -Simultaneous transmission

reported SAR 1g (W/kg)					
Head		LTE Band2	WIFI5G	BT [1]	Cellular+WiFi5G+BT
Tilt	Right	0.79	0.22	0.37	1.38

Body		LTE Band4	WIFI2.4G	Cellular+WiFi2.4G
Rear	15mm	1.13	0.4	1.53

Note:

1. Estimated SAR for Bluetooth (see the section 12.3)
2. The detail for simultaneous transmission consideration is described in chapter 15.

The highest reported SAR for Head, Body, Product Specific 10-g SAR and Simultaneous transmission exposure conditions are 0.83W/kg, 1.13W/kg, 2.35W/kg and 1.53W/kg.

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3 Client Information

3.1 Applicant Information

Company Name:	Samsung Electronics Co., Ltd.
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Telephone:	+1-201-937-4203

3.2 Manufacturer Information

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Address/Post:	Samsung R5, Maetan dong 129, Samsung ro Youngtong gu, Suwon city 443 742, Korea
Contact Person:	Kobe Cho
Contact Email:	ggobi.cho@samsung.com
Telephone:	+82-10-2722-4159

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4 Equipment Under Test (EUT) and Ancillary Equipment (AE)

4.1 About EUT

Description:	Multi-band GSM/WCDMA/LTE phone with Bluetooth, WLAN
Model name:	SM-A037U
Operating mode(s):	GSM850/900/1800/1900, WCDMA850/900/1700/1900/2100, BT, Wi-Fi ,LTE Band 2/4/5/7/12/13/14/25/26//41/66/71
Tested Tx Frequency:	824 – 849 MHz (GSM 850)
	1850 – 1910 MHz (GSM 1900)
	824–849 MHz (WCDMA 850 Band V)
	1710 – 1755 MHz (WCDMA 1700 Band IV)
	1850–1910 MHz (WCDMA1900 Band II)
	1850 – 1910 MHz(LTE Band 2)
	1710 – 1755 MHz (LTE Band 4)
	824 – 849 MHz (LTE Band 5)
	2500 – 2570 MHz(LTE Band 7)
	699 – 716 MHz (LTE Band 12)
	777 –787 MHz (LTE Band 13)
	788 – 798 MHz (LTE Band 14)
	1850 – 1915 MHz (LTE Band 25)
	814 – 849 MHz (LTE Band 26)
	2498.5 – 2687.5 MHz (LTE Band41)
	1710 – 1780 MHz (LTE Band 66)
	663 – 698 MHz (LTE Band 71)
	2402 – 2480 MHz (Bluetooth)
	2412 – 2462 MHz (Wi-Fi 2.4G)
	5150-5825 MHz (Wi-Fi 5G)
Test device Production information:	Production unit
Device type:	Portable device
Antenna type:	Integrated antenna
Hotspot mode:	Support

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4.2 Internal Identification of EUT used during the test

EUT ID*	IMEI	HW	SW Version
EUT1	70475UT01a	REV1.0	A037U.001
EUT2	70475UT07a	REV1.0	A037U.001
EUT3	70475UT22a	REV1.0	A037U.001
EUT4	70475UT24a	REV1.0	A037U.001
EUT5	70475UT26a	REV1.0	A037U.001
EUT6	70475UT28a	REV1.0	A037U.001
EUT7	70475UT11a	REV1.0	A037U.001
EUT8	70475UT12a	REV1.0	A037U.001
EUT9	70475UT14a	REV1.0	A037U.001
EUT10	70475UT23a	REV1.0	A037U.001
EUT11	70475UT25a	REV1.0	A037U.001
EUT12	70475UT27a	REV1.0	A037U.001
EUT13	70475UT29a	REV1.0	A037U.001
EUT14	70475UT30a	REV1.0	A037U.001

*EUT ID: is used to identify the test sample in the lab internally.

Note: It is performed to test SAR with the EUT7-14 and conducted power with the EUT1-6.

4.3 Internal Identification of AE used during the test

AE ID*	Description	Model	SN	Manufacturer
AE1	Battery	WT-S-W1	/	SCUD (Fujian) Electronics Co.,Ltd.
AE2	Battery	SCUD-WT-W1	/	SCUD (Fujian) Electronics Co.,Ltd.
AE3	Headset	EHS61ASFWE	/	Yuenchang

*AE ID: is used to identify the test sample in the lab internally.

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5 TEST METHODOLOGY

5.1 Applicable Limit Regulations

ANSI C95.1–1992:IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz.

It specifies the maximum exposure limit of **1.6 W/kg** as averaged over any 1 gram of tissue for portable devices being used within 20 cm of the user in the uncontrolled environment.

5.2 Applicable Measurement Standards

IEEE 1528–2013: Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques.

KDB447498 D01: General RF Exposure Guidance v06: Mobile and Portable Devices RF Exposure Procedures and Equipment Authorization Policies.

KDB648474 D04 Handset SAR v01r03: SAR Evaluation Considerations for Wireless Handsets.

KDB941225 D01 SAR test for 3G devices v03r01: SAR Measurement Procedures for 3G Devices

KDB941225 D05 SAR for LTE Devices v02r05: SAR Evaluation Considerations for LTE Devices

KDB941225 D06 Hotspot Mode SAR v02r01: SAR Evaluation Procedures for Portable Devices with Wireless Router Capabilities

KDB248227 D01 802.11 Wi-Fi SAR v02r02: SAR GUIDANCE FOR IEEE 802.11 (Wi-Fi) TRANSMITTERS

KDB865664 D01SAR measurement 100 MHz to 6 GHz v01r04: SAR Measurement Requirements for 100 MHz to 6 GHz.

KDB865664 D02RF Exposure Reporting v01r02: RF Exposure Compliance Reporting and Documentation Considerations

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6 Specific Absorption Rate (SAR)

6.1 Introduction

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.

6.2 SAR Definition

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 either related to the temperature elevation in tissue by

$$SAR = c\left(\frac{\delta T}{\delta t}\right)$$

Where: C is the specific head capacity, δT is the temperature rise and δt is the exposure duration, or 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 tissue and E is the RMS electrical field strength.

However for evaluating SAR of low power transmitter, electrical field measurement is typically applied.

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7 Tissue Simulating Liquids

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

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

The below measured tissue parameters were used in the DASY software. The DASY software was used to perform interpolation to determine the dielectric parameters at the SAR test device frequencies. The tissue parameters listed in the SAR test plots may slightly differ from the table above due to significant digit rounding in the software.

7.1 Targets for tissue simulating liquid

Table 7.1: Targets for tissue simulating liquid

Frequency(MHz)	Liquid Type	Conductivity(σ)	±10% Range	Permittivity(ε)	± 10% Range
750	Head	0.89	0.80～0.98	41.94	37.75～46.13
835	Head	0.90	0.81～0.99	41.5	37.35～45.65
1750	Head	1.37	1.26～1.54	40.0	36～44
1900	Head	1.40	1.26～1.54	40.0	36～44
2450	Head	1.80	1.62～1.98	39.2	35.28～43.12
2600	Head	1.96	1.76～2.16	39.01	35.11～42.91
Frequency(MHz)	Liquid Type	Conductivity(σ)	±5% Range	Permittivity(ε)	± 5% Range
5250	Head	4.71	4.47～4.95	35.93	34.13～37.73
5600	Head	5.07	4.82～5.32	35.53	33.8～37.3
5750	Head	5.22	4.96～5.48	35.36	33.59～37.13

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7.2 Dielectric Performance

Table 7.2: Dielectric Performance of Tissue Simulating Liquid

Measurement Date (yyyy-mm-dd)	Type	Frequency	Permittivity ε	Drift (%)	Conductivity σ (S/m)	Drift (%)
2021/9/28	Head	750MHz	44.58	6.29%	0.8893	-0.08%
2021/9/28	Head	835 MHz	44.33	6.82%	0.9135	1.50%
2021/9/29	Head	1750MHz	42.43	5.86%	1.406	2.63%
2021/9/30	Head	1750MHz	42.43	5.86%	1.406	2.63%
2021/10/1	Head	1750MHz	42.01	4.82%	1.392	1.61%
2021/10/2	Head	1750MHz	42.01	4.82%	1.392	1.61%
2021/10/16	Head	1750MHz	43.03	7.36%	1.416	3.36%
2021/9/29	Head	1900 MHz	42.01	5.02%	1.506	7.57%
2021/9/30	Head	1900 MHz	42.01	5.02%	1.506	7.57%
2021/10/1	Head	1900 MHz	41.59	3.98%	1.491	6.50%
2021/10/2	Head	1900 MHz	41.59	3.98%	1.491	6.50%
2021/10/16	Head	1900 MHz	42.78	6.95%	1.5	7.14%
2021/9/27	Head	2450 MHz	41.5	5.87%	1.875	4.17%
2021/9/30	Head	2600 MHz	40.81	4.61%	2.026	3.37%
2021/10/2	Head	2600 MHz	40.41	3.59%	2.005	2.30%
2021/10/16	Head	2600 MHz	41.51	6.41%	2.061	5.15%
2021/10/19	Head	5250 MHz	36.52	1.64%	4.734	0.51%
2021/10/19	Head	5600 MHz	35.86	0.93%	5.128	1.14%
2021/10/19	Head	5750 MHz	35.6	0.68%	5.3	1.53%

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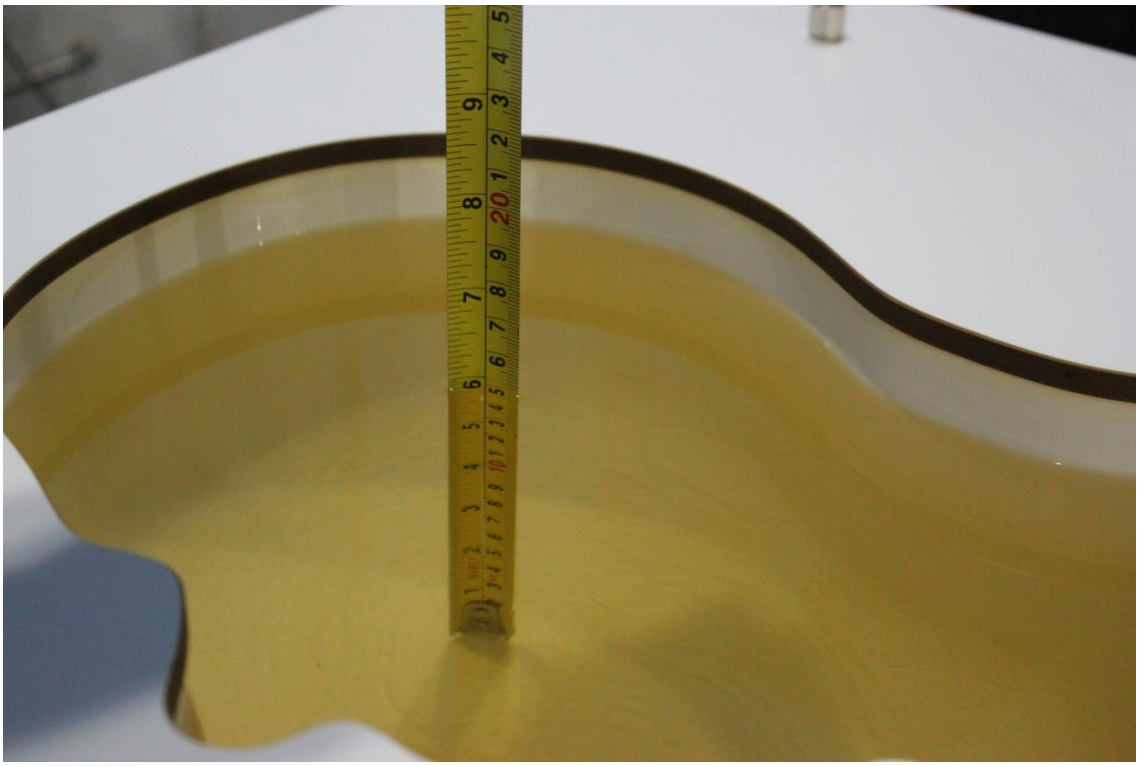
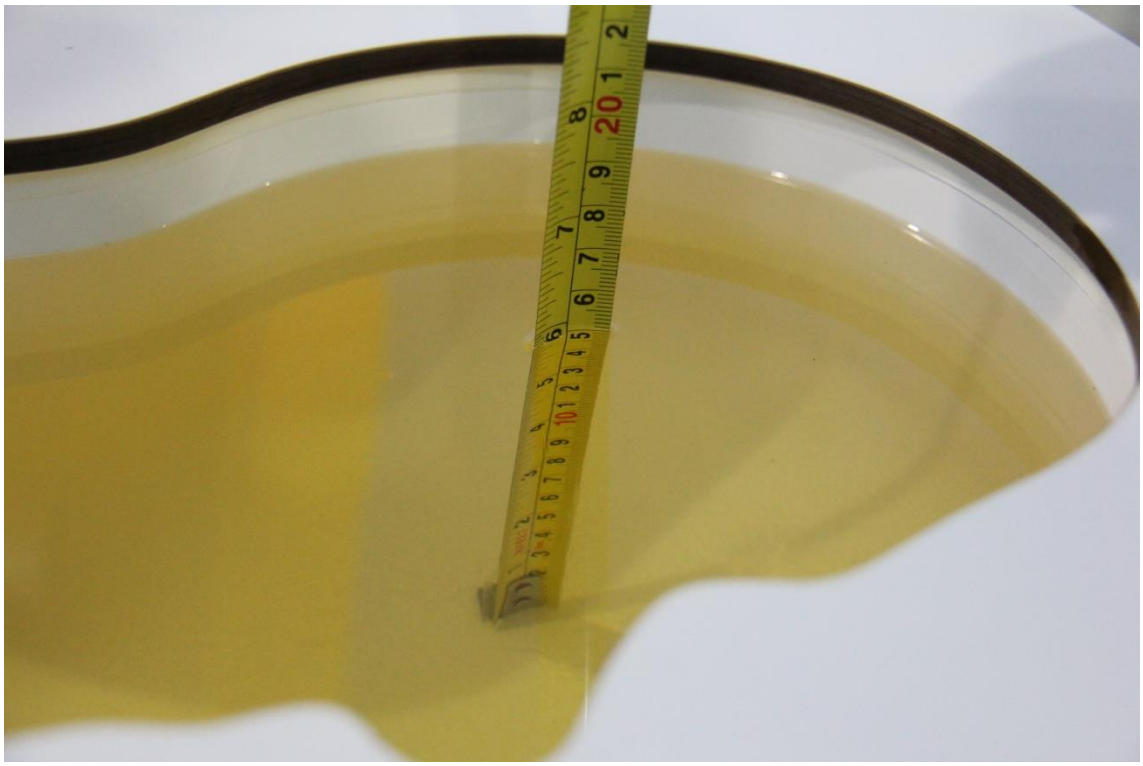


Picture 7-1 Liquid depth in the Head Phantom (750MHz)



Picture 7-2 Liquid depth in the Head Phantom (835 MHz)

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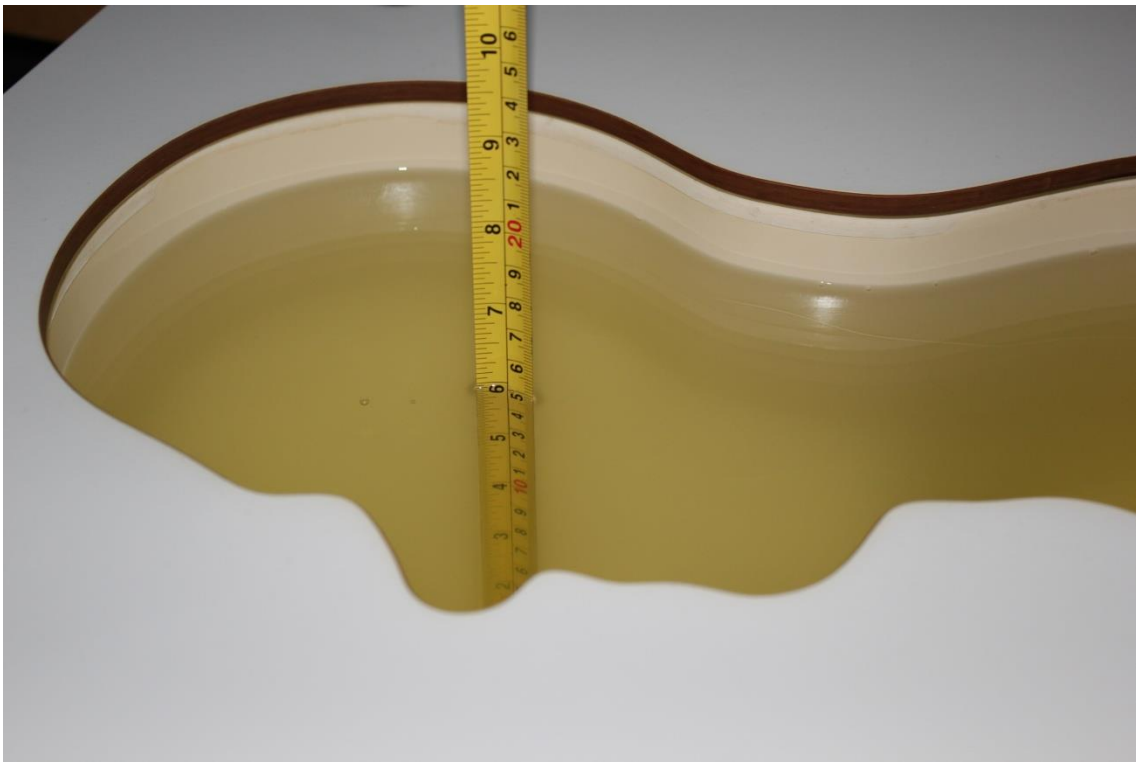
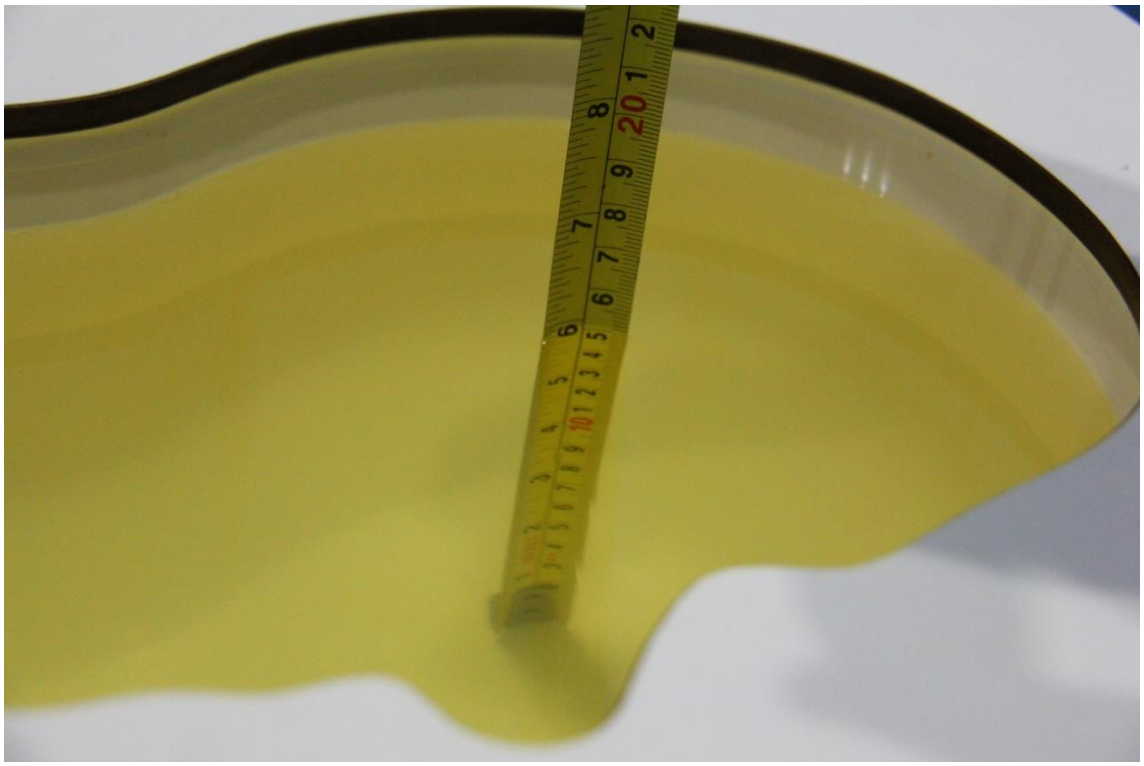


Picture 7-3 Liquid depth in the Head Phantom (1750 MHz)



Picture 7-4 Liquid depth in the Head Phantom (1900 MHz)

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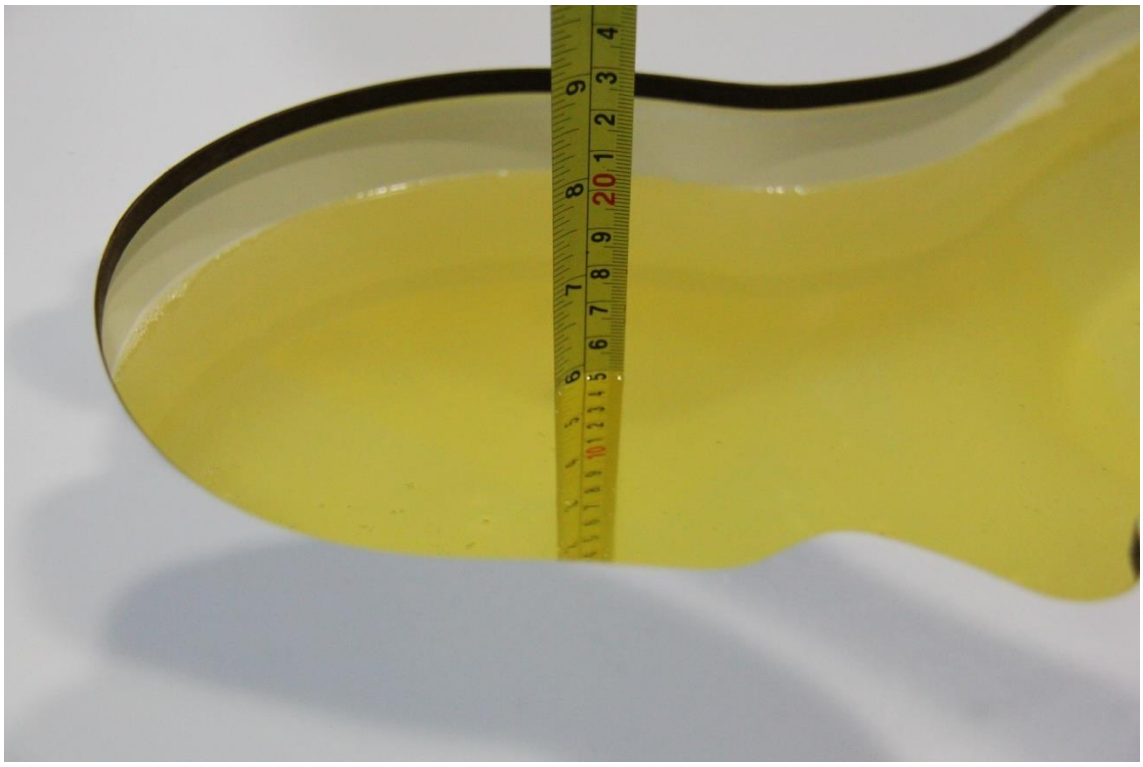

Picture 7-5 Liquid depth in the Head Phantom (2450MHz)

Picture 7-6 Liquid depth in the Head Phantom (2600 MHz)

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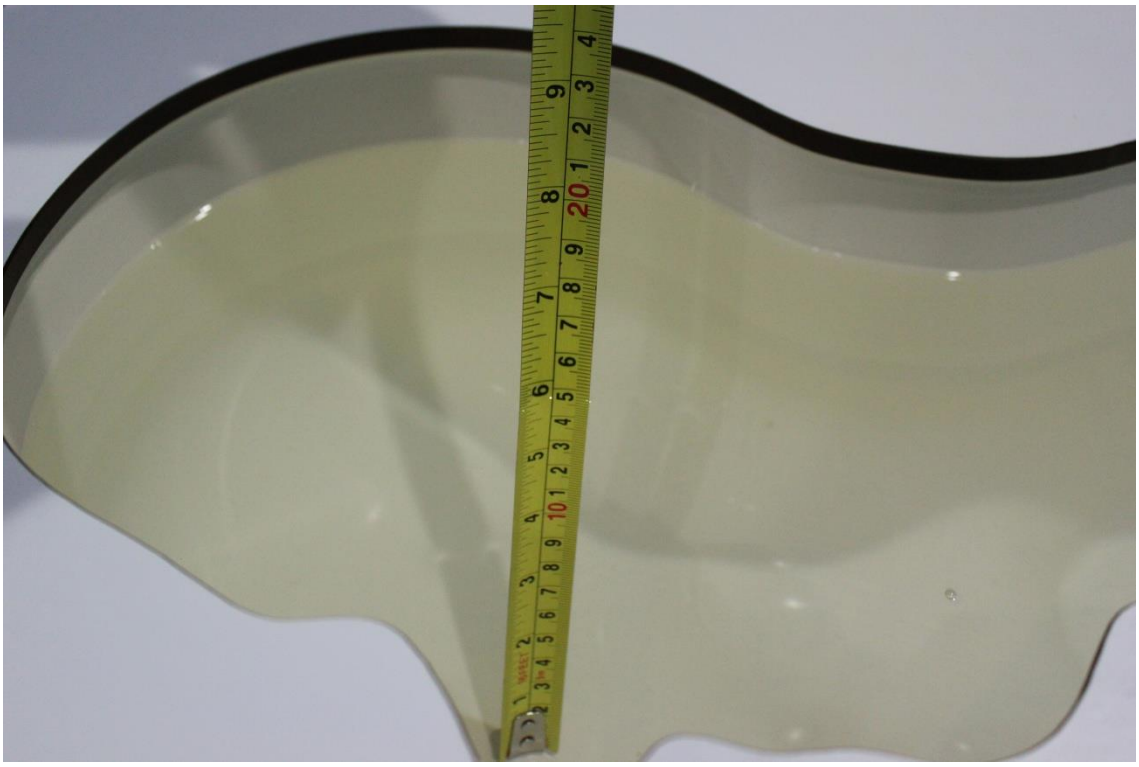

Picture 7-7 Liquid depth in the Head Phantom (5GHz)

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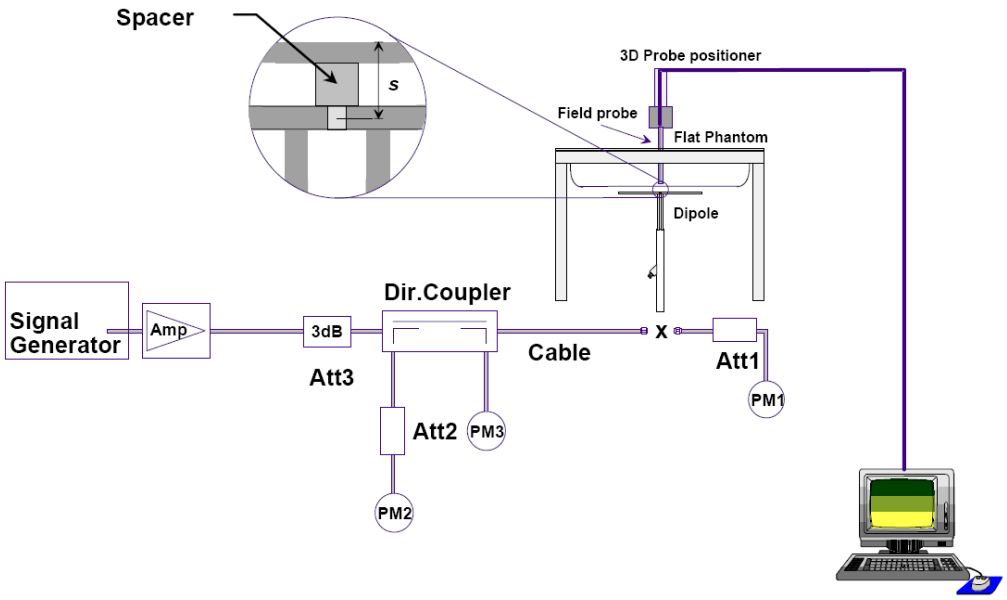
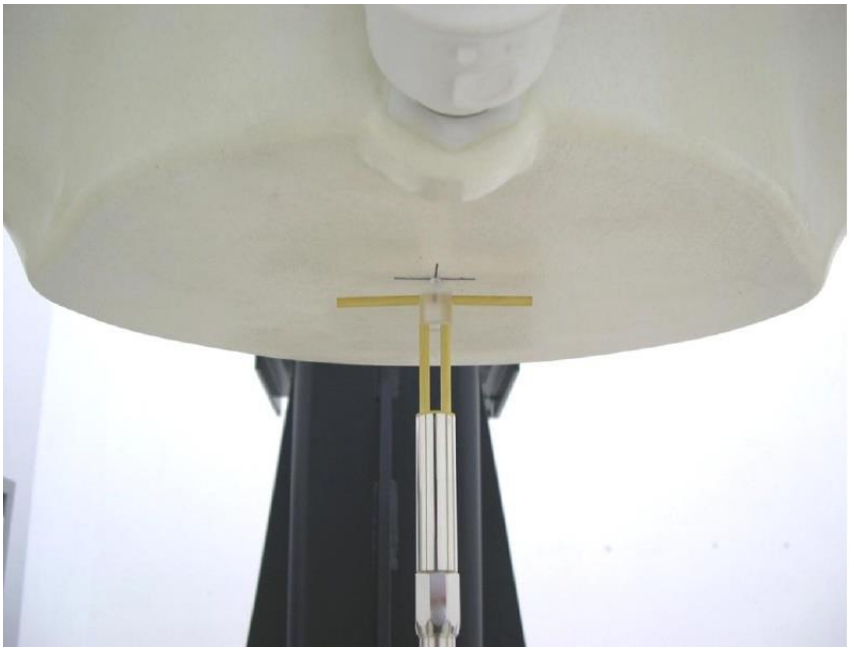
8 System verification

8.1 System Setup

In the simplified setup for system evaluation, the DUT is replaced by a calibrated dipole and the power source is replaced by a continuous wave that comes from a signal generator. The calibrated dipole must be placed beneath the flat phantom section of the SAM twin phantom with the correct distance holder. The distance holder should touch the phantom surface with a light pressure at the reference marking and be oriented parallel to the long side of the phantom. The equipment setup is shown below:



Picture 8.1 System Setup for System Evaluation



Picture 8.2 Photo of Dipole Setup

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8.2 System Verification

SAR system verification is required to confirm measurement accuracy, according to the tissue dielectric media, probe calibration points and other system operating parameters required for measuring the SAR of a test device. The system verification must be performed for each frequency band and within the valid range of each probe calibration point required for testing the device.

Table 8.1: System Verification of Head

Measurement Date (yyyy-mm-dd)	Frequency	Target value (W/kg)	Measured value(W/kg)	Deviation
		1 g Average	1 g Average	1 g Average
2021/9/28	750 MHz	8.68	8.96	3.23%
2021/9/28	835 MHz	9.63	9.32	-3.22%
2021/9/29	1750 MHz	36.9	37.6	1.90%
2021/10/1	1750 MHz	36.9	36.6	-0.81%
2021/10/16	1750 MHz	36.9	37.9	2.76%
2021/9/29	1900 MHz	40.1	40.0	-0.35%
2021/10/1	1900 MHz	40.1	39.9	-0.45%
2021/10/16	1900 MHz	40.1	39.1	-2.44%
2021/9/27	2450 MHz	53.3	56.4	5.82%
2021/10/2	2600 MHz	57.1	58.0	1.58%
2021/10/16	2600 MHz	57.1	59.6	4.38%
2021/10/19	2600 MHz	57.1	57.6	0.88%
2021/10/19	5250 MHz	79.5	77.2	-2.89%
2021/10/19	5600 MHz	83.8	82.9	-1.07%
2021/10/19	5750 MHz	81.0	82.9	2.35%

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9 General Measurement Procedure

9.1 *Power Reference Measurement*

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

9.2 *Area Scan*

The area scan is used as a fast scan in two dimensions to find the area of high field values, before doing a fine measurement around the hot spot. The sophisticated interpolation routines implemented in DASY software can find the maximum found in the scanned area, within a range of the global maximum. The range (in dB0 is specified in the standards for compliance testing. For example, a 2 dB range is required in IEEE standard 1528 and IEC 62209 standards, whereby 3 dB is a requirement when compliance is assessed in accordance with the ARIB standard (Japan), if only one zoom scan follows the area scan, then only the absolute maximum will be taken as reference. For cases where multiple maximums are detected, the number of zoom scans has to be increased accordingly.
Area scan parameters extracted from FCC KDB 865664 D01v01r04 SAR measurement 100 MHz to 6 GHz.

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

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9.3 *Zoom Scan*

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

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

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

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

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

9.4 *Power drift measurement*

The Power Drift Measurement measures the field at the same location as the most recent power reference measurement within the same procedure, and with the same settings. The Power Drift Measurement gives the field difference in dB from the reading conducted within the last Power Reference Measurement. This allows a user to monitor the power drift of the device under test within a batch process. The measurement procedure is the same as 9.1.

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10 Measurement Procedure for different technologies

10.1 GSM/GPRS Measurement Procedures for SAR

GSM / GPRS / EDGE modes is determined by the source-based time-averaged output power including tune-up tolerance. The 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. Other configurations of GSM / GPRS / EDGE are considered as secondary modes. The 3G SAR test reduction procedure is applied, when the maximum output power and tune-up tolerance specified for production units in a secondary mode is ≤ ¼ dB higher than the primary mode, SAR measurement is not required for the secondary mode.

10.2 WCDMA Measurement Procedures for SAR

The following procedures are applicable to WCDMA handsets operating under 3GPP Release99, Release 5 and Release 6. The default test configuration is to measure SAR with an established radio link between the DUT and a communication test set using a 12.2kbps RMC (reference measurement channel) configured in Test Loop Mode 1. SAR is selectively confirmed for other physical channel configurations (DPCCH & $DPDCH_n$), HSDPA and HSPA (HSUPA/HSDPA) modes according to output power, exposure conditions and device operating capabilities. Both uplink and downlink should be configured with the same RMC or AMR, when required. SAR for Release 5 HSDPA and Release 6 HSPA are measured using the applicable FRC (fixed reference channel) and E-DCH reference channel configurations. Maximum output power is verified according to applicable versions of 3GPP TS 34.121 and SAR must be measured according to these maximum output conditions. When Maximum Power Reduction (MPR) is not implemented according to Cubic Metric (CM) requirements for Release 6 HSPA, the following procedures do not apply.

For Release 5 HSDPA Data Devices:

Sub-test	β_c	β_d	β_d （SF）	β_c/β_d	β_{hs}	CM/dB
1	2/15	15/15	64	2/15	4/15	0.0
2	12/15	15/15	64	12/15	24/25	1.0
3	15/15	8/15	64	15/8	30/15	1.5
4	15/15	4/15	64	15/4	30/15	1.5

For Release 6 HSPA Data Devices

Sub-test	β_c	β_d	β_d （SF）	β_c/β_d	β_{hs}	β_{ec}	β_{ed}	β_{ed} （SF）	β_{ed} （codes）	CM (dB)	MPR (dB)	AG Index	E-TFCI
1	11/15	15/15	64	11/15	22/15	209/225	1039/225	4	1	1.5	1.5	20	75
2	6/15	15/15	64	6/15	12/15	12/15	12/15	4	1	1.5	1.5	12	67

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3	15/15	9/15	64	15/9	30/15	30/15	β_{ed1}:47/15 β_{ed2}:47/15	4	2	1.5	1.5	15	92
4	2/15	15/15	64	2/15	4/15	4/15	56/75	4	1	1.5	1.5	17	71
5	15/15	15/15	64	15/15	24/15	30/15	134/15	4	1	1.5	1.5	21	81

Rel.7 Release 7 HSPA+ Data Devices

Table C.11.1.4: **β values for transmitter characteristics tests with HS-DPCCH and E-DCH with 16QAM**

Sub-test	β_c (Note3)	β_d	β_{HS} (Note1)	β_{ec}	β_{ed} (2xSF2) (Note 4)	β_{ed} (2xSF4) (Note 4)	CM (dB) (Note 2)	MPR (dB) (Note 2)	AG Index (Note 4)	E-TFCI (Note 5)	E-TFCI (boost)
1	1	0	30/15	30/15	$\beta_{ed}1$: 30/15 $\beta_{ed}2$: 30/15	$\beta_{ed}3$: 24/15 $\beta_{ed}4$: 24/15	3.5	2.5	14	105	105

Note 1: Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 30/15 with β_{hs} = 30/15 * β_c.
Note 2: CM = 3.5 and the MPR is based on the relative CM difference, MPR = MAX(CM-1,0).
Note 3: DPDCH is not configured, therefore the β_c is set to 1 and β_d = 0 by default.
Note 4: β_{ed} can not be set directly; it is set by Absolute Grant Value.
Note 5: All the sub-tests require the UE to transmit 2SF2+2SF4 16QAM EDCH and they apply for UE using E-DPDCH category 7. E-DCH TTI is set to 2ms TTI and E-DCH table index = 2. To support these E-DCH configurations DPDCH is not allocated. The UE is signalled to use the extrapolation algorithm.

Rel.8 DC-HSDPA (Cat 24)

SAR test exclusion for Rel.8 DC-HSDPA must satisfy the SAR test exclusion requirements of Rel.5 HSDPA. SAR test exclusion for DC-HSDPA devices is determined by power measurements according to the H-Set 12, Fixed Reference Channel (FRC) configuration in Table C.8.1.12 of 3GPP TS 34.121-1. A primary and a secondary serving HS-DSCH Cell are required to perform the power measurement and for the results to qualify for SAR test exclusion.

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

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

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10.3 LTE Measurement Procedures for SAR

SAR tests for LTE are performed with a base station simulator, Rohde & Rchwarz CMW500 or . Anritsu MT8821C Closed loop power control was used so the UE transmits with maximum output power during SAR testing.

It is performed for conducted power and SAR based on the KDB941225 D05.

SAR is evaluated separately according to the following procedures for the different test positions in each exposure condition – head, body, body-worn accessories and other use conditions. The procedures in the following subsections are applied separately to test each LTE frequency band.

1) QPSK with 1 RB allocation

   Start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power among RB offsets at the upper edge, middle and lower edge of each required test channel. When the reported SAR is ≤ 0.8 W/kg, testing of the remaining RB offset configurations and required test channels is not required for 1 RB allocation; 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 50% RB allocation

   The procedures required for 1 RB allocation in 1) are applied to measure the SAR for QPSK with 50% RB allocation.

3) QPSK with 100% RB allocation

   For 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 in 1) and 2) 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.

TDD test:

TDD testing is performed using guidance from FCC KDB 941225 D05 v02r05 and the SAR test guidance provided in April 2013 TCB works hop notes. TDD is tested at the highest duty factor using UL-DL configuration 0 with special subframe configuration 6 and applying the FDD LTE procedures in KDB 941225 D05 v02r05. SAR testing is performed using the extended cyclic prefix listed in 3GPP TS 36.211.

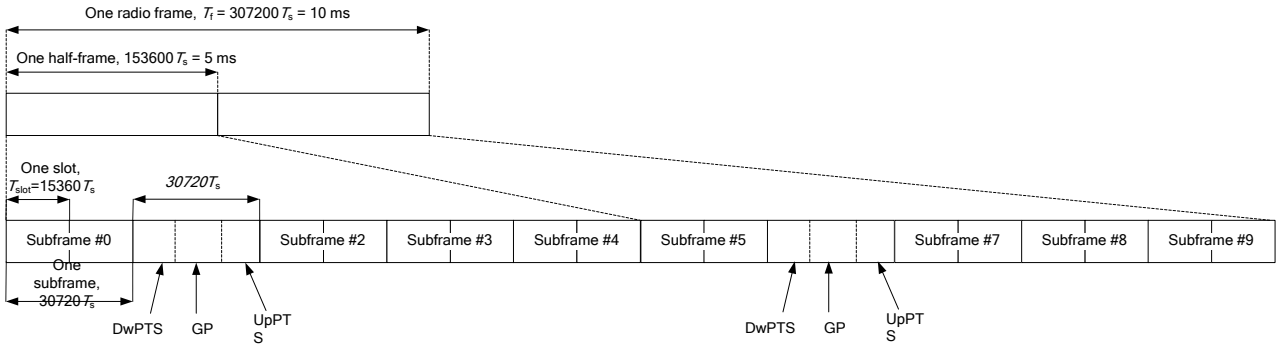

Figure 10.2: Frame structure type 2 (for 5 ms switch-point periodicity)

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Table 10.1: Configuration of special subframe (lengths of DwPTS/GP/UpPTS)

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

Table 10.2: Uplink-downlink configurations

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

Duty factor is calculated by:

Duty factor = uplink frame*6+UpPTS*2/one frame length

= (30720.T_s * 6+5120. T_s*2)/307200.T_s

= 0.633

According to the KDB 447498 D01, SAR should be evaluated at more than 3 frequencies for devices supporting transmit bands wider than 100MHz. Oct.2014 FCC-TCB conference notes (Dec. 2014 rev.) specifies the 5 test channels to use for 3GPP band 38/41 SAR evaluation.

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10.4 Bluetooth & Wi-Fi Measurement Procedures for SAR

Normal network operating configurations are not suitable for measuring the SAR of 802.11 transmitters in general. Unpredictable fluctuations in network traffic and antenna diversity conditions can introduce undesirable variations in SAR results. The SAR for these devices should be measured using chipset based test mode software to ensure that the results are consistent and reliable.

Chipset based test mode software is hardware dependent and generally varies among manufacturers. The device operating parameters established in a test mode for SAR measurements must be identical to those programmed in production units, including output power levels, amplifier gain settings and other RF performance tuning parameters. The test frequencies should correspond to actual channel frequencies defined for domestic use. SAR for devices with switched diversity should be measured with only one antenna transmitting at a time during each SAR measurement, according to a fixed modulation and data rate. The same data pattern should be used for all measurements.

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11 Conducted Output Power

This device uses a power reduction mechanism to reduce output powers in certain use conditions when the device is used close the user's body. When the device's antenna is within a certain distance of the user, the sensor activates and reduces the maximum allowed output power. However, the sensor is not active when the device is moved beyond the sensor triggering distance and the maximum output power is no longer limited. Therefore, it is necessary to test SAR at a distance 1mm less than the smallest distance from the device and SAR phantom to ensure SAR is compliant when the device is allowed to operate at a nonreduced output power level. FCC KDB Publication 616217 D04v01r02 Section 6 was used as a guideline for selecting SAR test distances for this device at these additional test positions. Sensor triggering distance summary data is included in Annex I. The details of test scenarios categorization in the table below

Antenna	Sensor deactive (Product Specific 10-g SAR)	Sensor active (Product Specific 10-g SAR)
ANT0/1	Power Level C1	Power Level B1

Antenna	Sensor deactive (WIFI head scenario)	Sensor active (WIFI Body scenario)
ANT0/1	Power Level D1	Power Level E1

Antenna	Receiver on (head scenario)	Receiver off + Hotspot on (Body/other scenario)	Receiver off (Body/other scenario)
ANT0/1	Power Level A1	Power Level B1	Power Level C1

11.1 GSM Measurement result

During the process of testing, the EUT was controlled via R&S Digital Radio Communication tester (CMW500) to ensure the maximum power transmission and proper modulation. This result contains conducted output power for the EUT. In all cases, the measured peak output power should be greater and within 5% than EMI measurement.

GSM850 Power Level C1

GSM 850	Measured Power (dBm)			Tune up	calculation	Averaged Power (dBm)		
Speech (GMSK)	251	190	128			251	190	128
1 Txslot	32.17	32.24	32.19	33.50	-9.03	23.14	23.21	23.16
GSM 850	Measured Power (dBm)				calculation	Averaged Power (dBm)		
GPRS (GMSK)	251	190	128			251	190	128
1 Txslot	32.14	32.18	32.15	33.50	-9.03	23.11	23.15	23.12
2 Txslots	**30.17**	**30.20**	**30.15**	**31.50**	**-6.02**	**24.15**	**24.18**	**24.13**
3Txslots	28.18	28.20	28.12	29.50	-4.26	23.92	23.94	23.86
4 Txslots	27.25	27.27	27.18	28.50	-3.01	24.24	24.26	24.17
GSM 850	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (GMSK)	251	190	128			251	190	128

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1 Txslot	32.12	32.16	32.13	33.50	-9.03	23.09	23.13	23.10
2 Txslots	**30.16**	**30.18**	**30.13**	**31.50**	**-6.02**	**24.14**	**24.16**	**24.11**
3Txslots	28.16	28.18	28.10	29.50	-4.26	23.90	23.92	23.84
4 Txslots	27.23	27.25	27.16	28.50	-3.01	24.22	24.24	24.15
GSM 850	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (8PSK)	251	190	128			251	190	128
1 Txslot	26.06	25.98	25.91	27.50	-9.03	17.03	16.95	16.88
2 Txslots	24.90	24.87	24.81	26.50	-6.02	18.88	18.85	18.79
3Txslots	22.61	22.97	22.85	24.50	-4.26	18.35	18.71	18.59
4 Txslots	21.69	21.52	21.51	23.50	-3.01	18.68	18.51	18.50

GSM1900 Power Level C1

GSM 1900	Measured Power (dBm)			Tune up	calculation	Averaged Power (dBm)		
Speech (GMSK)	810	661	512			810	661	512
1 Txslot	29.50	29.56	29.53	30.50	-9.03	20.47	20.53	20.50
GSM 1900	Measured Power (dBm)				calculation	Averaged Power (dBm)		
GPRS (GMSK)	251	190	128			251	190	128
1 Txslot	29.52	29.54	29.49	30.50	-9.03	20.49	20.51	20.46
2 Txslots	**28.36**	**28.39**	**28.34**	**29.50**	**-6.02**	**22.34**	**22.37**	**22.32**
3Txslots	26.01	26.01	25.93	27.50	-4.26	21.75	21.75	21.67
4 Txslots	24.94	24.94	24.86	26.50	-3.01	21.93	21.93	21.85
GSM 1900	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (GMSK)	810	661	512			810	661	512
1 Txslot	29.46	29.52	29.47	30.50	-9.03	20.43	20.49	20.44
2 Txslots	**28.32**	**28.36**	**28.32**	**29.50**	**-6.02**	**22.30**	**22.34**	**22.30**
3Txslots	25.98	25.98	25.91	27.50	-4.26	21.72	21.72	21.65
4 Txslots	24.92	24.91	24.85	26.50	-3.01	21.91	21.90	21.84
GSM 1900	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (8PSK)	810	661	512			810	661	512
1 Txslot	25.53	24.95	24.87	26.50	-9.03	16.50	15.92	15.84
2 Txslots	24.07	23.79	23.76	25.50	-6.02	18.05	17.77	17.74
3Txslots	21.68	21.56	21.53	23.50	-4.26	17.42	17.30	17.27
4 Txslots	20.56	20.79	20.66	22.50	-3.01	17.55	17.78	17.65

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11.2 WCDMA Measurement result

WCDMA1900 Power Level C1

Item	band	FDDII result			
	ARFCN	9538 (1907.6MHz)	9400 (1880MHz)	9262 (1852.4MHz)	Tune up
WCDMA	\	22.82	22.86	22.70	23.50
HSUPA	1	19.55	19.48	19.03	20.50
	2	19.19	19.09	19.05	20.50
	3	20.17	20.07	20.03	21.50
	4	18.73	18.62	18.58	20.50
	5	20.16	20.05	20.02	21.50
HSPA+		20.77	20.68	20.58	21.50
DC-HSDPA	1	21.7	21.60	21.56	22.50
	2	21.68	21.58	21.54	22.50
	3	21.14	21.04	21.03	22.50
	4	21.15	21.06	21.04	22.50

WCDMA1900 Power Level A1

Item	band	FDDII result			
	ARFCN	9538 (1907.6MHz)	9400 (1880MHz)	9262 (1852.4MHz)	Tune up
WCDMA	\	13.01	13.05	12.91	14.50
HSUPA	1	9.52	9.41	9.30	10.50
	2	9.42	9.35	9.23	10.50
	3	10.41	10.36	10.24	11.50
	4	8.97	8.90	8.88	10.00
	5	10.39	10.35	10.23	11.50
HSPA+		10.93	10.81	10.88	11.50
DC-HSDPA	1	11.37	11.26	11.32	12.50
	2	11.36	11.27	11.33	12.50
	3	10.85	10.78	10.82	11.50
	4	10.84	10.76	10.80	11.50

WCDMA1900 Power Level B1

Item	band	FDDII result			
	ARFCN	9538 (1907.6MHz)	9400 (1880MHz)	9262 (1852.4MHz)	Tune up
WCDMA	\	19.86	19.74	19.74	21.50
HSUPA	1	16.28	16.25	16.16	17.50
	2	16.3	16.26	16.18	17.50
	3	17.3	17.27	17.18	18.50
	4	15.85	15.74	15.67	17.00
	5	17.27	17.28	17.12	18.50
HSPA+		17.81	17.80	17.62	18.50

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DC-HSDPA	1	18.24	18.12	18.14	19.50
	2	18.23	18.10	18.13	19.50
	3	17.71	17.59	17.63	18.50
	4	17.7	17.60	17.64	18.50

WCDMA1700 Power Level A1/C1

Item	band	FDDIV result			
	ARFCN	1513 (1752.6MHz)	1412 (1732.4MHz)	1312 (1712.4MHz)	Tune up
WCDMA	\	23.87	23.82	23.91	25.00
HSUPA	1	20.88	20.89	20.99	22.00
	2	20.41	20.42	20.53	22.00
	3	21.87	21.92	22.00	23.00
	4	20.37	20.40	20.51	22.00
	5	21.88	21.94	22.02	23.00
HSPA+		22.4	22.41	22.48	23.50
DC-HSDPA	1	22.77	22.85	22.94	23.50
	2	22.75	22.84	22.93	23.50
	3	22.23	22.32	22.41	23.50
	4	22.21	22.34	22.43	23.50

WCDMA1700 Power Level B1

Item	band	FDDIV result			
	ARFCN	1513 (1752.6MHz)	1412 (1732.4MHz)	1312 (1712.4MHz)	Tune up
WCDMA	\	19.22	19.10	19.03	21.00
HSUPA	1	15.56	15.80	15.40	16.50
	2	15.59	15.83	15.45	16.50
	3	16.6	16.82	16.44	17.50
	4	15.11	14.94	14.92	16.00
	5	16.57	16.43	16.39	17.50
HSPA+		17.04	16.97	16.91	18.00
DC-HSDPA	1	17.46	17.36	17.41	18.50
	2	17.44	17.37	17.40	18.50
	3	16.91	16.83	16.86	17.50
	4	16.9	16.84	16.87	17.50

WCDMA850 Power Level A1/B1/C1

Item	band	FDDV result			
	ARFCN	4233 (846.6MHz)	4183 (836.6MHz)	4132 (826.4MHz)	Tune up
WCDMA	\	24.67	24.56	24.51	25.00
HSUPA	1	21.69	21.59	21.53	22.50
	2	21.69	21.57	21.50	22.50
	3	22.7	22.60	22.52	23.50

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	4	21.69	21.58	21.49	22.50
	5	22.71	22.61	22.54	23.50
HSPA+		23.15	23.17	23.11	24.50
DC-HSDPA	**1**	23.67	23.69	23.61	24.50
	2	23.69	23.71	23.62	24.50
	3	23.21	23.22	23.11	24.50
	4	23.19	23.21	23.12	24.50

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11.3 LTE Measurement result

The maximum output power(Tune-up Limit)=Target power+ Tolerance

Band	Mode	Target Power(dBm)	Tolerance(dBm)
LTE Band 2/25 Power Level C1	QPSK	24.5	(+0.5/-1.5)
LTE Band 2/25 Power Level A1	QPSK	16	(+0.5/-1.5)
LTE Band 2/25 Power Level B1	QPSK	20.5	(+0.5/-1.5)
LTE Band 4 Power Level A1/C1	QPSK	24.5	(+0.5/-1.5)
LTE Band4 Power Level B1	QPSK	20.5	(+0.5/-1.5)
LTE Band 5/12/13/14/26/71 Power Level A1/B1/C1	QPSK	25	(+0.5/-1.5)
LTE Band 7 Power Level A1/C1	QPSK	23	(+0.5/-1.5)
LTE Band7 Power Level B1	QPSK	21	(+0.5/-1.5)
LE Band41 PC3 Power Level C1	QPSK	24.5	(+0.5/-1.5)
LE Band41 PC3 Power Level A1	QPSK	17	(+0.5/-1.5)
LE Band41 PC3 Power Level B1	QPSK	22.5	(+0.5/-1.5)
LE Band41 PC2 Power Level C1	QPSK	27.5	(+0.5/-1.5)
LE Band41 PC2 Power Level A1	QPSK	18.5	(+0.5/-1.5)
LE Band41 PC2 Power Level B1	QPSK	24	(+0.5/-1.5)
LTE Band 66 Power Level A1/C1	QPSK	24	(+0.5/-1.5)
LTE Band66 Power Level B1	QPSK	20.5	(+0.5/-1.5)

The following tests were conducted according to the test requirements outlined in section 6.2 of the 3GPP TS36.101 specification. UE Power Class: 3 (23 +/- 2dBm). The allowed Maximum Power Reduction (MPR) for the maximum output power due to higher order modulation and transmit bandwidth configuration (resource blocks) is specified in Table 6.2.3-1 of the 3GPP TS36.101.

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Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1, 2 and 3

Modulation	Channel bandwidth / Transmission bandwidth (N_{RB})						MPR (dB)
	1.4 MHz	3.0 MHz	5 MHz	10 MHz	15 MHz	20 MHz	
QPSK	> 5	> 4	> 8	> 12	> 16	> 18	≤ 1
16 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 1
16 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 2
64 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 2
64 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 3
256 QAM	≥ 1						≤ 5

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LTE B2 Power Level C1

Band 2					
Bandwidth (MHz)	RB allocation RB offset	Frequency (MHz)	Actual output power (dBm)		
			QPSK	16QAM	64QAM
1.4MHz	1RB-High (5)	1909.3	24.41	23.60	22.53
		1880	24.47	23.74	22.61
		1850.7	24.49	23.73	22.67
	1RB-Middle (3)	1909.3	24.52	23.81	22.72
		1880	24.59	23.87	22.74
		1850.7	24.64	23.83	22.79
	1RB-Low (0)	1909.3	24.39	23.66	22.62
		1880	24.43	23.73	22.57
		1850.7	24.50	23.78	22.74
	3RB-High (3)	1909.3	24.50	23.41	22.55
		1880	24.57	23.53	22.64
		1850.7	24.61	23.59	22.69
	3RB-Middle (1)	1909.3	24.56	23.49	22.64
		1880	24.58	23.59	22.74
		1850.7	24.64	23.67	22.80
	3RB-Low (0)	1909.3	24.52	23.49	22.54
		1880	24.57	23.46	22.63
		1850.7	24.61	23.49	22.72
	6RB (0)	1909.3	23.56	22.60	21.55
		1880	23.52	22.61	21.57
		1850.7	23.62	22.72	21.61
3MHz	1RB-High (14)	1908.5	24.49	23.66	22.62
		1880	24.49	23.79	22.63
		1851.5	24.50	23.63	22.69
	1RB-Middle (7)	1908.5	24.61	23.78	22.83
		1880	24.60	23.98	22.82
		1851.5	24.66	23.93	22.84
	1RB-Low (0)	1908.5	24.46	23.66	22.66
		1880	24.52	23.82	22.67
		1851.5	24.59	23.93	22.79
	8RB-High (7)	1908.5	23.48	22.50	21.54
		1880	23.52	22.54	21.58
		1851.5	23.49	22.61	21.57
	8RB-Middle (4)	1908.5	23.51	22.55	21.57
		1880	23.53	22.58	21.61
		1851.5	23.55	22.67	21.64
	8RB-Low (0)	1908.5	23.47	22.52	21.55
		1880	23.51	22.54	21.58
		1851.5	23.55	22.68	21.65
	15RB (0)	1908.5	23.48	22.49	21.54
		1880	23.53	22.52	21.53
		1851.5	23.55	22.58	21.54
5MHz	1RB-High (24)	1907.5	24.42	23.54	22.58
		1880	24.41	23.69	22.52
		1852.5	24.35	23.66	22.50
	1RB-Middle (12)	1907.5	24.62	23.79	22.80
		1880	24.70	23.86	22.79
		1852.5	24.57	23.82	22.77
	1RB-Low (0)	1907.5	24.38	23.62	22.53
		1880	24.43	23.61	22.60

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		1852.5	24.51	23.79	22.77
	12RB-High (13)	1907.5	23.50	22.47	21.51
		1880	23.51	22.48	21.60
		1852.5	23.50	22.47	21.52
	12RB-Middle (6)	1907.5	23.53	22.51	21.57
		1880	23.55	22.53	21.61
		1852.5	23.55	22.60	21.58
	12RB-Low (0)	1907.5	23.55	22.53	21.59
		1880	23.53	22.54	21.57
		1852.5	23.57	22.58	21.60
	25RB (0)	1907.5	23.53	22.52	21.54
		1880	23.54	22.52	21.56
		1852.5	23.52	22.59	21.56
10MHz	1RB-High (49)	1905	24.50	23.70	22.65
		1880	24.51	23.81	22.60
		1855	24.49	23.82	22.77
	1RB-Middle (24)	1905	24.59	23.74	22.77
		1880	24.64	23.86	22.82
		1855	24.55	23.88	22.75
	1RB-Low (0)	1905	24.48	23.71	22.65
		1880	24.58	23.77	22.67
		1855	24.57	23.78	22.81
	25RB-High (25)	1905	23.51	22.53	21.55
		1880	23.60	22.57	21.64
		1855	23.55	22.59	21.60
	25RB-Middle (12)	1905	23.57	22.54	21.58
		1880	23.59	22.61	21.62
		1855	23.53	22.55	21.54
	25RB-Low (0)	1905	23.64	22.63	21.65
		1880	23.64	22.68	21.69
		1855	23.61	22.67	21.65
	50RB (0)	1905	23.57	22.56	21.61
		1880	23.63	22.62	21.62
		1855	23.61	22.66	21.66
15MHz	1RB-High (74)	1902.5	24.39	23.56	22.61
		1880	24.42	23.69	22.63
		1857.5	24.45	23.75	22.63
	1RB-Middle (37)	1902.5	24.45	23.65	22.65
		1880	24.55	23.76	22.72
		1857.5	24.48	23.76	22.74
	1RB-Low (0)	1902.5	24.47	23.77	22.63
		1880	24.51	23.69	22.70
		1857.5	24.53	23.73	22.76
	36RB-High (38)	1902.5	23.51	22.49	21.56
		1880	23.59	22.52	21.59
		1857.5	23.58	22.55	21.58
	36RB-Middle (19)	1902.5	23.57	22.53	21.60
		1880	23.61	22.57	21.63
		1857.5	23.55	22.53	21.56
	36RB-Low (0)	1902.5	23.56	22.52	21.59
		1880	23.64	22.64	21.67
		1857.5	23.57	22.56	21.57
	75RB (0)	1902.5	23.55	22.52	21.55
		1880	23.60	22.58	21.60
		1857.5	23.59	22.62	21.57

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20MHz	1RB-High (99)	1900	24.31	23.55	22.46
		1880	24.30	23.49	22.34
		1860	24.35	23.56	22.50
	1RB-Middle (50)	1900	24.59	23.81	22.72
		1880	24.64	23.83	22.78
		1860	24.66	23.92	22.79
	1RB-Low (0)	1900	24.33	23.60	22.42
		1880	24.42	23.71	22.57
		1860	24.42	23.64	22.67
	50RB-High (50)	1900	23.53	22.48	21.52
		1880	23.58	22.56	21.58
		1860	23.67	22.70	21.73
	50RB-Middle (25)	1900	23.60	22.59	21.62
		1880	23.65	22.62	21.63
		1860	23.60	22.64	21.61
	50RB-Low (0)	1900	23.58	22.53	21.57
		1880	23.66	22.65	21.68
		1860	23.65	22.66	21.64
	100RB (0)	1900	23.56	22.51	21.54
		1880	23.62	22.56	21.63
		1860	23.63	22.63	21.65

LTE B2 Power Level A1

Band 2					
Bandwidth (MHz)	RB allocation RB offset	Frequency (MHz)	Actual output power (dBm)		
			QPSK	16QAM	64QAM
1.4MHz	1RB-High (5)	1909.3	15.75	16.12	15.93
		1880	15.71	15.98	15.93
		1850.7	15.72	16.09	15.94
	1RB-Middle (3)	1909.3	15.87	16.24	16.07
		1880	15.83	16.14	16.07
		1850.7	15.83	16.14	15.93
	1RB-Low (0)	1909.3	15.74	16.10	15.95
		1880	15.70	15.95	15.93
		1850.7	15.74	16.04	16.03
	3RB-High (3)	1909.3	15.82	15.89	15.97
		1880	15.85	15.79	15.96
		1850.7	15.81	15.75	15.93
	3RB-Middle (1)	1909.3	15.90	15.92	16.01
		1880	15.86	15.89	15.96
		1850.7	15.87	15.85	15.96
	3RB-Low (0)	1909.3	15.84	15.91	15.92
		1880	15.80	15.86	15.88
		1850.7	15.81	15.84	15.88
	6RB (0)	1909.3	15.81	15.92	15.80
		1880	15.79	15.89	15.82
		1850.7	15.78	15.92	15.81
3MHz	1RB-High (14)	1908.5	15.77	16.19	16.03
		1880	15.75	16.12	15.99
		1851.5	15.70	15.92	15.95
	1RB-Middle (7)	1908.5	15.83	16.24	16.08
		1880	15.94	16.34	16.08
		1851.5	15.83	16.30	16.14
	1RB-Low (0)	1908.5	15.76	16.18	15.94

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		1880	15.74	16.02	15.91
		1851.5	15.79	16.05	16.05
	8RB-High (7)	1908.5	15.79	15.86	15.85
		1880	15.77	15.86	15.84
		1851.5	15.72	15.80	15.76
	8RB-Middle (4)	1908.5	15.85	15.88	15.87
		1880	15.77	15.86	15.85
		1851.5	15.77	15.87	15.81
	8RB-Low (0)	1908.5	15.78	15.86	15.84
		1880	15.77	15.86	15.83
		1851.5	15.76	15.82	15.84
	15RB (0)	1908.5	15.81	15.83	15.80
		1880	15.76	15.77	15.80
		1851.5	15.71	15.74	15.77
5MHz	1RB-High (24)	1907.5	15.73	16.07	15.90
		1880	15.70	16.09	15.85
		1852.5	15.57	15.86	15.71
	1RB-Middle (12)	1907.5	15.94	16.21	16.11
		1880	15.97	16.27	16.12
		1852.5	15.89	16.21	16.12
	1RB-Low (0)	1907.5	15.67	16.02	15.90
		1880	15.69	16.12	15.86
		1852.5	15.71	16.10	15.92
	12RB-High (13)	1907.5	15.76	15.76	15.84
		1880	15.76	15.73	15.77
		1852.5	15.64	15.67	15.66
	12RB-Middle (6)	1907.5	15.84	15.87	15.91
		1880	15.85	15.83	15.84
		1852.5	15.77	15.77	15.78
	12RB-Low (0)	1907.5	15.86	15.83	15.84
		1880	15.75	15.79	15.76
		1852.5	15.72	15.75	15.77
	25RB (0)	1907.5	15.76	15.82	15.80
		1880	15.79	15.75	15.74
		1852.5	15.73	15.71	15.71
10MHz	1RB-High (49)	1905	15.82	16.09	16.06
		1880	15.74	16.02	16.04
		1855	15.68	15.92	15.93
	1RB-Middle (24)	1905	15.88	16.17	16.11
		1880	15.90	16.26	16.16
		1855	15.77	16.16	15.91
	1RB-Low (0)	1905	15.79	16.17	15.95
		1880	15.84	16.14	15.99
		1855	15.77	16.05	15.94
	25RB-High (25)	1905	15.79	15.81	15.81
		1880	15.79	15.81	15.80
		1855	15.70	15.74	15.76
	25RB-Middle (12)	1905	15.88	15.89	15.87
		1880	15.85	15.89	15.90
		1855	15.72	15.74	15.73
	25RB-Low (0)	1905	15.90	15.91	15.91
		1880	15.86	15.86	15.91
		1855	15.78	15.80	15.83
	50RB (0)	1905	15.81	15.88	15.81
		1880	15.81	15.85	15.85

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		1855	15.76	15.81	15.79
15MHz	1RB-High (74)	1902.5	15.71	15.99	15.89
		1880	15.66	15.94	15.90
		1857.5	15.63	15.94	15.87
	1RB-Middle (37)	1902.5	15.74	16.14	15.92
		1880	15.77	16.09	16.01
		1857.5	15.69	16.03	15.92
	1RB-Low (0)	1902.5	15.73	16.12	15.94
		1880	15.75	16.12	15.98
		1857.5	15.69	16.05	15.92
	36RB-High (38)	1902.5	15.76	15.79	15.81
		1880	15.77	15.74	15.77
		1857.5	15.74	15.73	15.76
	36RB-Middle (19)	1902.5	15.83	15.85	15.86
		1880	15.83	15.82	15.85
		1857.5	15.73	15.71	15.74
	36RB-Low (0)	1902.5	15.82	15.80	15.84
		1880	15.83	15.81	15.85
		1857.5	15.74	15.74	15.73
	75RB (0)	1902.5	15.78	15.81	15.78
		1880	15.81	15.80	15.81
		1857.5	15.73	15.76	15.76
20MHz	1RB-High (99)	1900	15.57	15.82	15.81
		1880	15.49	15.75	15.63
		1860	15.56	15.82	15.75
	1RB-Middle (50)	1900	15.85	16.19	16.09
		1880	15.94	16.14	16.01
		1860	15.79	16.16	15.96
	1RB-Low (0)	1900	15.56	15.79	15.78
		1880	15.60	15.89	15.84
		1860	15.54	15.94	15.70
	50RB-High (50)	1900	15.73	15.72	15.74
		1880	15.77	15.77	15.79
		1860	15.80	15.84	15.83
	50RB-Middle (25)	1900	15.80	15.85	15.85
		1880	15.83	15.85	15.83
		1860	15.74	15.78	15.80
	50RB-Low (0)	1900	15.80	15.84	15.81
		1880	15.92	15.88	15.90
		1860	15.76	15.81	15.79
	100RB (0)	1900	15.79	15.77	15.77
		1880	15.83	15.81	15.84
		1860	15.79	15.81	15.80

LTE B2 Power Level B1

Band 2					
Bandwidth (MHz)	RB allocation RB offset	Frequency (MHz)	Actual output power (dBm)		
			QPSK	16QAM	64QAM
1.4MHz	1RB-High (5)	1909.3	20.26	20.61	20.48
		1880	20.29	20.60	20.51
		1850.7	20.35	20.64	20.54
	1RB-Middle (3)	1909.3	20.38	20.67	20.60
		1880	20.41	20.72	20.59
		1850.7	20.43	20.73	20.62

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	1RB-Low (0)	1909.3	20.27	20.57	20.54
		1880	20.26	20.51	20.48
		1850.7	20.39	20.59	20.63
	3RB-High (3)	1909.3	20.34	20.33	20.53
		1880	20.35	20.40	20.44
		1850.7	20.48	20.40	20.54
	3RB-Middle (1)	1909.3	20.40	20.40	20.52
		1880	20.43	20.43	20.46
		1850.7	20.49	20.39	20.61
	3RB-Low (0)	1909.3	20.37	20.41	20.46
		1880	20.35	20.36	20.44
		1850.7	20.46	20.44	20.56
	6RB (0)	1909.3	20.34	20.47	20.37
		1880	20.40	20.42	20.39
		1850.7	20.41	20.53	20.44
3MHz	1RB-High (14)	1908.5	20.31	20.72	20.53
		1880	20.32	20.70	20.62
		1851.5	20.29	20.66	20.57
	1RB-Middle (7)	1908.5	20.34	20.69	20.59
		1880	20.42	20.67	20.67
		1851.5	20.47	20.75	20.72
	1RB-Low (0)	1908.5	20.31	20.64	20.44
		1880	20.34	20.62	20.49
		1851.5	20.41	20.60	20.64
	8RB-High (7)	1908.5	20.33	20.39	20.40
		1880	20.31	20.45	20.43
		1851.5	20.31	20.39	20.37
	8RB-Middle (4)	1908.5	20.34	20.44	20.37
		1880	20.36	20.44	20.46
		1851.5	20.36	20.45	20.46
	8RB-Low (0)	1908.5	20.32	20.41	20.37
		1880	20.34	20.42	20.40
		1851.5	20.37	20.48	20.42
	15RB (0)	1908.5	20.30	20.34	20.36
		1880	20.31	20.36	20.38
		1851.5	20.32	20.35	20.37
5MHz	1RB-High (24)	1907.5	20.21	20.52	20.47
		1880	20.25	20.56	20.47
		1852.5	20.13	20.54	20.35
	1RB-Middle (12)	1907.5	20.47	20.71	20.60
		1880	20.46	20.74	20.74
		1852.5	20.42	20.67	20.63
	1RB-Low (0)	1907.5	20.20	20.57	20.42
		1880	20.25	20.53	20.48
		1852.5	20.32	20.51	20.53
	12RB-High (13)	1907.5	20.29	20.30	20.32
		1880	20.33	20.28	20.37
		1852.5	20.23	20.23	20.25
	12RB-Middle (6)	1907.5	20.38	20.39	20.42
		1880	20.37	20.37	20.41
		1852.5	20.36	20.36	20.40
	12RB-Low (0)	1907.5	20.33	20.33	20.37
		1880	20.35	20.33	20.35
		1852.5	20.36	20.34	20.40
	25RB (0)	1907.5	20.30	20.34	20.34

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		1880	20.31	20.36	20.37
		1852.5	20.29	20.29	20.34
10MHz	1RB-High (49)	1905	20.31	20.58	20.59
		1880	20.33	20.63	20.59
		1855	20.29	20.72	20.50
	1RB-Middle (24)	1905	20.43	20.77	20.64
		1880	20.47	20.68	20.62
		1855	20.37	20.63	20.55
	1RB-Low (0)	1905	20.30	20.59	20.51
		1880	20.36	20.64	20.56
		1855	20.38	20.82	20.62
	25RB-High (25)	1905	20.31	20.32	20.33
		1880	20.35	20.39	20.37
		1855	20.29	20.33	20.36
	25RB-Middle (12)	1905	20.36	20.40	20.38
		1880	20.42	20.45	20.44
		1855	20.33	20.36	20.33
	25RB-Low (0)	1905	20.43	20.42	20.44
		1880	20.41	20.45	20.45
		1855	20.41	20.40	20.42
	50RB (0)	1905	20.34	20.36	20.37
		1880	20.39	20.39	20.41
		1855	20.35	20.38	20.39
15MHz	1RB-High (74)	1902.5	20.24	20.52	20.44
		1880	20.20	20.58	20.36
		1857.5	20.21	20.47	20.45
	1RB-Middle (37)	1902.5	20.29	20.65	20.43
		1880	20.35	20.72	20.55
		1857.5	20.29	20.48	20.49
	1RB-Low (0)	1902.5	20.26	20.66	20.43
		1880	20.32	20.53	20.53
		1857.5	20.30	20.61	20.50
	36RB-High (38)	1902.5	20.31	20.31	20.36
		1880	20.32	20.34	20.36
		1857.5	20.30	20.25	20.35
	36RB-Middle (19)	1902.5	20.38	20.33	20.38
		1880	20.40	20.38	20.38
		1857.5	20.33	20.30	20.31
	36RB-Low (0)	1902.5	20.32	20.32	20.38
		1880	20.41	20.40	20.40
		1857.5	20.33	20.28	20.32
	75RB (0)	1902.5	20.29	20.34	20.32
		1880	20.37	20.36	20.33
		1857.5	20.33	20.32	20.32
20MHz	1RB-High (99)	1900	20.09	20.47	20.29
		1880	20.04	20.32	20.30
		1860	20.10	20.41	20.32
	1RB-Middle (50)	1900	20.38	20.69	20.55
		1880	20.44	20.67	20.68
		1860	20.38	20.73	20.60
	1RB-Low (0)	1900	20.10	20.39	20.24
		1880	20.17	20.54	20.34
		1860	20.14	20.45	20.31
	50RB-High (50)	1900	20.23	20.28	20.29
		1880	20.31	20.32	20.34

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		1860	20.38	20.42	20.46
	50RB-Middle (25)	1900	20.34	20.38	20.37
		1880	20.40	20.39	20.41
		1860	20.34	20.37	20.36
	50RB-Low (0)	1900	20.33	20.37	20.35
		1880	20.41	20.45	20.42
		1860	20.38	20.40	20.38
	100RB (0)	1900	20.31	20.33	20.35
		1880	20.39	20.39	20.39
		1860	20.38	20.37	20.40

LTE B4 Power Level A1/C1

Band 4					
Bandwidth (MHz)	RB allocation RB offset	Frequency (MHz)	Actual output power (dBm)		
			QPSK	16QAM	64QAM
1.4 MHz	1RB_High	1754.3	24.00	23.30	22.25
		1732.5	23.84	23.10	22.09
		1710.7	23.83	23.08	22.10
	1RB_Middle	1754.3	24.14	23.42	22.31
		1732.5	23.93	23.23	22.08
		1710.7	24.01	23.21	22.22
	1RB_Low	1754.3	23.99	23.24	22.23
		1732.5	23.85	23.13	22.08
		1710.7	23.87	23.14	22.07
	3RB_High	1754.3	24.13	23.03	22.26
		1732.5	23.98	22.96	22.05
		1710.7	23.93	22.97	22.02
	3RB_Middle	1754.3	24.16	23.07	22.30
		1732.5	23.99	22.98	22.09
		1710.7	24.03	22.97	22.12
	3RB_Low	1754.3	24.08	23.04	22.24
		1732.5	23.95	22.83	22.08
		1710.7	24.02	22.96	22.16
	6RB	1754.3	23.13	22.20	21.13
		1732.5	22.95	22.05	20.98
		1710.7	22.98	22.07	21.00
3 MHz	1RB_High	1753.5	24.07	23.25	22.35
		1732.5	23.93	23.21	22.11
		1711.5	23.86	23.07	22.04
	1RB_Middle	1753.5	24.24	23.46	22.43
		1732.5	24.00	23.27	22.20
		1711.5	24.12	23.26	22.23
	1RB_Low	1753.5	24.08	23.33	22.25
		1732.5	23.89	23.17	22.10
		1711.5	23.94	23.13	22.14
	8RB_High	1753.5	23.10	22.19	21.16
		1732.5	22.92	22.00	21.02
		1711.5	22.94	22.00	21.00
	8RB_Middle	1753.5	23.12	22.24	21.21
		1732.5	22.94	22.06	21.07
		1711.5	22.97	22.02	21.00
	8RB_Low	1753.5	23.10	22.18	21.16
		1732.5	22.93	22.07	21.03

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		1711.5	22.97	22.01	21.04
	15RB	1753.5	23.10	22.15	21.13
		1732.5	22.95	21.98	20.96
		1711.5	22.95	22.02	20.99
5 MHz	1RB_High	1752.5	23.99	23.30	22.20
		1732.5	23.81	23.12	22.00
		1712.5	23.75	23.04	22.01
	1RB_Middle	1752.5	24.20	23.55	22.59
		1732.5	24.03	23.20	22.30
		1712.5	24.06	23.25	22.24
	1RB_Low	1752.5	23.98	23.31	22.27
		1732.5	23.81	23.11	22.06
		1712.5	23.87	23.10	22.07
	12RB_High	1752.5	23.14	22.16	21.17
		1732.5	22.94	21.96	21.00
		1712.5	22.94	21.95	21.02
	12RB_Middle	1752.5	23.16	22.20	21.20
		1732.5	23.00	22.04	21.05
		1712.5	23.02	22.02	21.01
	12RB_Low	1752.5	23.15	22.17	21.17
		1732.5	22.97	22.00	21.00
		1712.5	22.96	21.98	20.99
	25RB	1752.5	23.15	22.16	21.14
		1732.5	22.95	22.00	20.98
		1712.5	22.98	21.99	21.01
10MHz	1RB_High	1750	24.09	23.39	22.32
		1732.5	23.94	23.24	22.17
		1715	23.85	23.10	22.07
	1RB_Middle	1750	24.16	23.42	22.39
		1732.5	24.04	23.17	22.24
		1715	24.00	23.20	22.25
	1RB_Low	1750	24.05	23.31	22.26
		1732.5	23.91	23.10	22.05
		1715	23.95	23.20	22.12
	25RB_High	1750	23.18	22.23	21.23
		1732.5	22.99	22.03	21.05
		1715	23.01	22.05	21.08
	25RB_Middle	1750	23.19	22.26	21.23
		1732.5	23.03	22.05	21.05
		1715	23.00	21.99	21.05
	25RB_Low	1750	23.17	22.23	21.16
		1732.5	23.03	22.10	21.11
		1715	23.01	22.03	21.06
	50RB	1750	23.20	22.25	21.24
		1732.5	23.01	22.07	21.05
		1715	23.03	22.07	21.06
15MHz	1RB_High	1747.5	23.98	23.29	22.17
		1732.5	23.88	23.16	22.11
		1717.5	23.81	23.04	22.02
	1RB_Middle	1747.5	24.07	23.29	22.31
		1732.5	23.96	23.27	22.15
		1717.5	23.92	23.17	22.11
	1RB_Low	1747.5	23.90	23.25	22.10
		1732.5	23.84	23.12	21.99
		1717.5	23.86	23.04	22.11

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	36RB_High	1747.5	23.18	22.20	21.23
		1732.5	23.01	22.03	21.08
		1717.5	22.99	22.03	21.02
	36RB_Middle	1747.5	23.17	22.20	21.16
		1732.5	23.03	22.02	21.04
		1717.5	23.01	22.01	21.03
	36RB_Low	1747.5	23.12	22.14	21.18
		1732.5	23.03	22.02	21.08
		1717.5	23.00	22.01	21.02
	75RB	1747.5	23.15	22.18	21.17
		1732.5	23.00	22.02	21.02
		1717.5	23.00	22.02	21.01
20MHz	1RB_High	1745	23.63	22.91	21.85
		1732.5	23.56	22.79	21.78
		1720	23.46	22.68	21.72
	1RB_Middle	1745	23.99	23.25	22.13
		1732.5	23.86	23.07	22.14
		1720	23.86	23.12	22.07
	1RB_Low	1745	23.51	22.74	21.70
		1732.5	23.53	22.76	21.78
		1720	23.53	22.77	21.72
	50RB_High	1745	22.90	21.98	21.02
		1732.5	22.77	21.81	20.82
		1720	22.80	21.84	20.89
	50RB_Middle	1745	22.94	21.97	20.96
		1732.5	22.86	21.90	20.88
		1720	22.85	21.87	20.85
	50RB_Low	1745	22.93	21.97	20.96
		1732.5	22.86	21.87	20.89
		1720	22.82	21.80	20.82
	100RB	1745	22.92	21.95	20.95
		1732.5	22.79	21.82	20.83
		1720	22.78	21.77	20.83

LTE B4 Power Level B1

Band 4					
Bandwidth (MHz)	RB allocation RB offset	Frequency (MHz)	Actual output power (dBm)		
			QPSK	16QAM	64QAM
1.4 MHz	1RB_High	1754.3	19.34	19.73	19.45
		1732.5	19.18	19.43	19.43
		1710.7	19.20	19.48	19.30
	1RB_Middle	1754.3	19.42	19.78	19.63
		1732.5	19.32	19.65	19.47
		1710.7	19.37	19.65	19.50
	1RB_Low	1754.3	19.33	19.61	19.56
		1732.5	19.15	19.44	19.48
		1710.7	19.20	19.58	19.49
	3RB_High	1754.3	19.46	19.46	19.51
		1732.5	19.28	19.24	19.32
		1710.7	19.28	19.27	19.44
	3RB_Middle	1754.3	19.48	19.41	19.53
		1732.5	19.31	19.25	19.43
		1710.7	19.33	19.37	19.45
	3RB_Low	1754.3	19.44	19.40	19.48

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		1732.5	19.26	19.26	19.33
		1710.7	19.30	19.30	19.43
	6RB	1754.3	19.45	19.55	19.38
		1732.5	19.23	19.36	19.27
		1710.7	19.29	19.38	19.26
3 MHz	1RB_High	1753.5	19.38	19.69	19.55
		1732.5	19.23	19.40	19.46
		1711.5	19.19	19.50	19.36
	1RB_Middle	1753.5	19.57	19.89	19.78
		1732.5	19.35	19.64	19.68
		1711.5	19.41	19.71	19.62
	1RB_Low	1753.5	19.40	19.69	19.58
		1732.5	19.23	19.48	19.44
		1711.5	19.27	19.65	19.44
	8RB_High	1753.5	19.42	19.48	19.44
		1732.5	19.25	19.33	19.27
		1711.5	19.23	19.27	19.27
	8RB_Middle	1753.5	19.48	19.53	19.47
		1732.5	19.27	19.39	19.33
		1711.5	19.26	19.33	19.32
	8RB_Low	1753.5	19.42	19.51	19.46
		1732.5	19.26	19.35	19.31
		1711.5	19.27	19.35	19.31
	15RB	1753.5	19.41	19.42	19.43
		1732.5	19.22	19.28	19.26
		1711.5	19.24	19.28	19.25
5 MHz	1RB_High	1752.5	19.31	19.59	19.51
		1732.5	19.15	19.43	19.32
		1712.5	19.09	19.47	19.35
	1RB_Middle	1752.5	19.52	19.81	19.69
		1732.5	19.34	19.57	19.56
		1712.5	19.39	19.66	19.54
	1RB_Low	1752.5	19.30	19.56	19.47
		1732.5	19.13	19.45	19.33
		1712.5	19.19	19.46	19.45
	12RB_High	1752.5	19.39	19.37	19.40
		1732.5	19.19	19.18	19.20
		1712.5	19.21	19.22	19.21
	12RB_Middle	1752.5	19.48	19.48	19.50
		1732.5	19.31	19.29	19.30
		1712.5	19.27	19.28	19.28
	12RB_Low	1752.5	19.44	19.39	19.43
		1732.5	19.25	19.23	19.25
		1712.5	19.24	19.24	19.26
	25RB	1752.5	19.41	19.41	19.42
		1732.5	19.23	19.24	19.24
		1712.5	19.22	19.26	19.26
10MHz	1RB_High	1750	19.40	19.77	19.66
		1732.5	19.27	19.65	19.45
		1715	19.20	19.42	19.35
	1RB_Middle	1750	19.47	19.76	19.65
		1732.5	19.37	19.57	19.54
		1715	19.35	19.64	19.53
	1RB_Low	1750	19.35	19.64	19.56
		1732.5	19.24	19.57	19.43

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		1715	19.29	19.54	19.49
	25RB_High	1750	19.45	19.50	19.49
		1732.5	19.22	19.27	19.22
		1715	19.28	19.29	19.27
	25RB_Middle	1750	19.49	19.50	19.49
		1732.5	19.30	19.33	19.32
		1715	19.26	19.27	19.29
	25RB_Low	1750	19.44	19.48	19.49
		1732.5	19.31	19.32	19.32
		1715	19.28	19.29	19.27
	50RB	1750	19.46	19.51	19.51
		1732.5	19.27	19.28	19.28
		1715	19.27	19.27	19.27
15MHz	1RB_High	1747.5	19.29	19.65	19.52
		1732.5	19.21	19.58	19.46
		1717.5	19.13	19.40	19.29
	1RB_Middle	1747.5	19.41	19.67	19.59
		1732.5	19.30	19.65	19.48
		1717.5	19.27	19.55	19.43
	1RB_Low	1747.5	19.24	19.50	19.49
		1732.5	19.16	19.48	19.35
		1717.5	19.17	19.46	19.32
	36RB_High	1747.5	19.43	19.45	19.46
		1732.5	19.28	19.27	19.29
		1717.5	19.29	19.28	19.29
	36RB_Middle	1747.5	19.44	19.44	19.47
		1732.5	19.33	19.32	19.32
		1717.5	19.31	19.29	19.27
	36RB_Low	1747.5	19.42	19.39	19.40
		1732.5	19.30	19.29	19.31
		1717.5	19.29	19.27	19.29
	75RB	1747.5	19.42	19.45	19.43
		1732.5	19.29	19.25	19.28
		1717.5	19.27	19.26	19.27
20MHz	1RB_High	1745	19.14	19.39	19.27
		1732.5	19.00	19.24	19.28
		1720	18.95	19.33	19.10
	1RB_Middle	1745	19.43	19.70	19.68
		1732.5	19.38	19.65	19.55
		1720	19.32	19.65	19.42
	1RB_Low	1745	18.99	19.33	19.24
		1732.5	19.00	19.36	19.22
		1720	19.00	19.33	19.13
	50RB_High	1745	19.43	19.48	19.46
		1732.5	19.26	19.26	19.25
		1720	19.31	19.28	19.28
	50RB_Middle	1745	19.45	19.45	19.46
		1732.5	19.32	19.35	19.34
		1720	19.29	19.31	19.29
	50RB_Low	1745	19.44	19.47	19.49
		1732.5	19.31	19.36	19.33
		1720	19.25	19.28	19.26
	100RB	1745	19.43	19.42	19.44
		1732.5	19.30	19.29	19.27
		1720	19.26	19.26	19.25

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LTE B5 Power Level A1/B1/C1

Band 5					
Bandwidth (MHz)	RB allocation RB offset	Frequency (MHz)	Actual output power (dBm) QPSK	16QAM	64QAM
1.4MHz	1RB-High (5)	848.3	24.97	24.09	23.09
		836.5	24.86	24.06	22.97
		824.7	24.89	24.02	23.11
	1RB-Middle (3)	848.3	25.11	24.26	23.23
		836.5	24.99	24.16	23.12
		824.7	24.97	24.13	23.11
	1RB-Low (0)	848.3	24.93	24.03	23.16
		836.5	24.85	23.99	23.05
		824.7	24.81	23.95	23.08
	3RB-High (3)	848.3	25.08	24.00	23.10
		836.5	24.99	23.96	23.03
		824.7	24.98	23.83	23.07
	3RB-Middle (1)	848.3	25.12	24.02	23.17
		836.5	25.04	23.94	23.12
		824.7	25.01	23.93	23.09
	3RB-Low (0)	848.3	25.08	24.01	23.10
		836.5	25.00	23.96	23.07
		824.7	24.96	23.81	23.04
	6RB (0)	848.3	24.08	23.15	22.12
		836.5	24.01	23.07	22.06
		824.7	24.03	23.11	22.02
3MHz	1RB-High (14)	847.5	24.97	24.11	23.12
		836.5	24.91	24.03	23.08
		825.5	24.91	24.09	23.12
	1RB-Middle (7)	847.5	25.20	24.24	23.29
		836.5	25.10	24.27	23.20
		825.5	25.10	24.23	23.28
	1RB-Low (0)	847.5	24.98	24.15	23.07
		836.5	24.90	24.10	23.08
		825.5	24.86	24.06	23.04
	8RB-High (7)	847.5	24.04	23.09	22.12
		836.5	23.99	23.01	22.03
		825.5	23.96	23.07	22.09
	8RB-Middle (4)	847.5	24.08	23.14	22.17
		836.5	24.05	23.09	22.07
		825.5	24.00	23.10	22.09
	8RB-Low (0)	847.5	24.05	23.11	22.14
		836.5	23.96	23.04	22.01
		825.5	23.94	23.05	22.04
	15RB (0)	847.5	24.08	23.05	22.06
		836.5	23.97	22.98	22.00
		825.5	23.97	23.03	22.01
5MHz	1RB-High (24)	846.5	24.90	24.06	23.00
		836.5	24.79	23.95	23.01
		826.5	24.81	24.10	23.00
	1RB-Middle (12)	846.5	25.19	24.32	23.29
		836.5	25.04	24.17	23.17
		826.5	25.10	24.27	23.26
	1RB-Low (0)	846.5	24.85	24.14	23.06
		836.5	24.83	24.07	23.06

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		826.5	24.80	23.97	22.97
	12RB-High (13)	846.5	24.04	22.99	22.07
		836.5	23.97	22.95	22.01
		826.5	23.98	23.02	22.05
	12RB-Middle (6)	846.5	24.07	23.02	22.12
		836.5	24.02	22.97	22.06
		826.5	24.04	23.04	22.09
	12RB-Low (0)	846.5	24.05	23.03	22.07
		836.5	23.98	22.96	22.00
		826.5	23.96	22.97	22.01
	25RB (0)	846.5	24.04	23.00	22.05
		836.5	24.01	22.98	22.01
		826.5	24.02	23.04	22.03
10MHz	1RB-High (49)	844	24.92	23.91	22.93
		836.5	24.44	23.62	22.96
		829	24.31	23.85	22.95
	1RB-Middle (24)	844	24.96	23.69	23.10
		836.5	24.45	23.74	23.11
		829	24.42	23.70	23.08
	1RB-Low (0)	844	24.79	23.69	22.88
		836.5	24.37	23.67	22.86
		829	24.31	23.57	22.80
	25RB-High (25)	844	23.96	22.79	21.92
		836.5	23.44	22.50	21.84
		829	23.43	22.58	21.97
	25RB-Middle (12)	844	23.97	22.88	21.97
		836.5	23.42	22.76	21.83
		829	23.39	22.63	21.91
	25RB-Low (0)	844	23.90	22.88	21.98
		836.5	23.42	22.69	21.90
		829	23.44	22.71	21.96
	50RB (0)	844	23.98	22.94	21.97
		836.5	23.43	22.68	21.93
		829	23.46	22.58	21.96

LTE B7 Power Level A1/C1

Band 7					
Bandwidth (MHz)	RB allocation RB offset	Frequency (MHz)	Actual output power (dBm)		
			QPSK	16QAM	64QAM
5MHz	1RB-High (24)	2567.5	22.89	21.75	20.63
		2535	22.47	21.77	20.71
		2502.5	22.33	21.70	20.51
	1RB-Middle (12)	2567.5	23.09	22.02	20.94
		2535	22.76	21.97	20.96
		2502.5	22.64	21.87	20.89
	1RB-Low (0)	2567.5	22.54	21.71	20.79
		2535	22.47	21.79	20.68
		2502.5	22.33	21.58	20.53
	12RB-High (13)	2567.5	21.52	20.55	19.58
		2535	21.61	20.69	19.63
		2502.5	21.47	20.52	19.54
	12RB-Middle (6)	2567.5	21.63	20.66	19.68
		2535	21.66	20.86	19.67
		2502.5	21.50	20.52	19.70

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	12RB-Low (0)	2567.5	21.59	20.62	19.65
		2535	21.57	20.62	20.11
		2502.5	21.44	20.46	19.53
	25RB (0)	2567.5	21.52	20.62	19.62
		2535	21.55	20.69	20.03
		2502.5	21.52	20.50	19.93
10MHz	1RB-High (49)	2565	23.00	21.81	20.80
		2535	22.50	21.85	20.75
		2505	22.37	21.71	20.75
	1RB-Middle (24)	2565	23.12	21.95	21.00
		2535	22.60	21.87	21.29
		2505	22.47	21.74	20.79
	1RB-Low (0)	2565	22.83	21.84	20.90
		2535	22.60	21.95	20.95
		2505	22.45	21.78	20.71
	25RB-High (25)	2565	21.64	20.66	19.66
		2535	21.59	20.67	19.90
		2505	21.53	20.80	19.72
	25RB-Middle (12)	2565	21.67	20.70	19.71
		2535	21.64	20.74	20.17
		2505	21.53	20.94	19.70
	25RB-Low (0)	2565	21.71	20.76	19.76
		2535	21.64	20.69	20.18
		2505	21.54	20.78	19.69
	50RB (0)	2565	21.64	20.69	19.67
		2535	21.63	20.73	20.13
		2505	21.68	20.68	19.87
15MHz	1RB-High (74)	2562.5	22.92	21.64	20.62
		2535	22.76	21.96	21.15
		2507.5	22.33	21.96	20.93
	1RB-Middle (37)	2562.5	23.16	21.96	21.33
		2535	22.78	22.03	21.31
		2507.5	22.46	22.08	21.17
	1RB-Low (0)	2562.5	23.10	21.82	21.06
		2535	22.59	21.95	21.14
		2507.5	22.36	21.78	20.68
	36RB-High (38)	2562.5	22.13	20.62	19.67
		2535	22.12	20.89	20.16
		2507.5	21.47	20.92	20.03
	36RB-Middle (19)	2562.5	22.18	20.70	20.20
		2535	22.09	21.09	20.15
		2507.5	21.67	20.98	20.02
	36RB-Low (0)	2562.5	22.11	20.74	20.24
		2535	21.99	20.98	20.16
		2507.5	21.55	20.92	20.04
	75RB (0)	2562.5	21.97	20.82	19.88
		2535	21.98	21.17	20.18
		2507.5	21.54	21.01	20.02
20MHz	1RB-High (99)	2560	22.50	21.30	20.32
		2535	22.18	21.44	20.58
		2510	21.85	21.20	20.57
	1RB-Middle (50)	2560	23.00	21.75	20.62
		2535	22.71	22.09	21.17
		2510	22.15	21.58	20.85
	1RB-Low (0)	2560	22.47	21.49	20.37

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		2535	22.05	21.33	20.62
		2510	21.88	21.20	20.58
	50RB-High (50)	2560	21.77	20.36	19.34
		2535	21.68	20.83	19.91
		2510	21.15	20.25	19.71
	50RB-Middle (25)	2560	21.79	20.53	19.57
		2535	21.69	20.90	19.89
		2510	21.18	20.30	19.74
	50RB-Low (0)	2560	21.72	20.79	19.53
		2535	21.61	20.79	19.86
		2510	21.14	20.44	19.70
	100RB (0)	2560	21.77	20.74	19.41
		2535	21.68	20.85	19.88
		2510	21.15	20.24	19.72

LTE B7 Power Level B1

Band 7					
Bandwidth (MHz)	RB allocation RB offset	Frequency (MHz)	Actual output power (dBm)		
			QPSK	16QAM	64QAM
5MHz	1RB-High (24)	2567.5	20.76	21.01	20.91
		2535	20.76	21.12	20.97
		2502.5	20.57	21.00	20.83
	1RB-Middle (12)	2567.5	21.00	21.35	21.19
		2535	21.04	21.12	21.21
		2502.5	20.84	21.30	21.16
	1RB-Low (0)	2567.5	20.82	21.04	20.94
		2535	20.79	21.03	20.99
		2502.5	20.64	20.98	20.88
	12RB-High (13)	2567.5	20.87	20.82	20.11
		2535	20.93	20.86	20.15
		2502.5	20.75	20.79	20.05
	12RB-Middle (6)	2567.5	20.93	20.90	20.21
		2535	20.92	20.93	20.17
		2502.5	20.81	20.81	20.09
	12RB-Low (0)	2567.5	20.90	20.89	20.19
		2535	20.92	20.91	20.14
		2502.5	20.74	20.74	20.03
	25RB (0)	2567.5	20.87	20.91	20.16
		2535	20.87	20.90	20.13
		2502.5	20.76	20.78	20.04
10MHz	1RB-High (49)	2565	20.84	21.07	20.98
		2535	20.84	21.15	21.06
		2505	20.66	21.06	20.83
	1RB-Middle (24)	2565	21.02	21.28	21.20
		2535	20.92	21.17	21.20
		2505	20.78	21.18	20.96
	1RB-Low (0)	2565	20.93	21.24	21.06
		2535	20.86	21.11	21.11
		2505	20.70	21.08	20.95
	25RB-High (25)	2565	20.94	20.92	20.18
		2535	20.94	20.92	20.20
		2505	20.80	20.82	20.10
	25RB-Middle (12)	2565	20.99	20.98	20.23
		2535	20.94	20.96	20.21

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		2505	20.79	20.81	20.07
	25RB-Low (0)	2565	20.99	21.00	20.27
		2535	20.95	20.96	20.26
		2505	20.74	20.82	20.07
	50RB (0)	2565	20.95	20.94	20.23
		2535	20.95	20.96	20.24
		2505	20.77	20.79	20.08
15MHz	1RB-High (74)	2562.5	20.74	20.97	20.93
		2535	20.80	21.05	21.01
		2507.5	20.59	21.05	20.89
	1RB-Middle (37)	2562.5	20.97	21.18	21.11
		2535	20.89	21.17	21.13
		2507.5	20.77	21.11	20.98
	1RB-Low (0)	2562.5	20.92	21.19	21.06
		2535	20.80	21.17	21.01
		2507.5	20.69	20.98	20.91
	36RB-High (38)	2562.5	20.96	20.87	20.19
		2535	20.94	20.93	20.20
		2507.5	20.76	20.79	20.03
	36RB-Middle (19)	2562.5	20.98	20.97	20.20
		2535	20.97	20.95	20.21
		2507.5	20.83	20.80	20.07
	36RB-Low (0)	2562.5	21.02	21.00	20.27
		2535	20.97	20.94	20.23
		2507.5	20.81	20.80	20.07
	75RB (0)	2562.5	20.99	20.97	20.18
		2535	20.94	20.96	20.20
		2507.5	20.80	20.84	20.06
20MHz	1RB-High (99)	2560	20.65	20.93	20.87
		2535	20.59	20.82	20.81
		2510	20.46	20.81	20.68
	1RB-Middle (50)	2560	21.04	21.30	21.21
		2535	20.99	21.19	21.27
		2510	20.81	21.13	20.99
	1RB-Low (0)	2560	20.73	21.12	20.89
		2535	20.60	20.94	20.80
		2510	20.52	20.81	20.75
	50RB-High (50)	2560	20.91	20.88	20.12
		2535	20.94	20.94	20.22
		2510	20.79	20.84	20.07
	50RB-Middle (25)	2560	21.00	21.02	20.26
		2535	20.95	20.98	20.22
		2510	20.80	20.85	20.10
	50RB-Low (0)	2560	21.08	21.07	20.34
		2535	20.97	20.95	20.21
		2510	20.77	20.81	20.04
	100RB (0)	2560	20.98	20.99	20.25
		2535	20.95	20.96	20.22
		2510	20.81	20.80	20.07

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LTE B12 Power Level A1/B1/C1

Band 12					
Bandwidth (MHz)	RB allocation RB offset	Frequency (MHz)	Actual output power (dBm) QPSK	16QAM	64QAM
1.4MHz	1RB-High (5)	715.3	24.99	23.66	22.98
		707.5	25.07	24.28	23.24
		699.7	24.68	24.33	23.26
	1RB-Middle (3)	715.3	25.11	23.78	23.10
		707.5	25.19	24.50	23.46
		699.7	24.76	24.24	23.50
	1RB-Low (0)	715.3	25.00	23.72	23.14
		707.5	25.07	24.27	23.23
		699.7	24.70	24.03	23.40
	3RB-High (3)	715.3	25.06	23.44	23.14
		707.5	25.16	24.09	23.25
		699.7	24.74	23.80	23.30
	3RB-Middle (1)	715.3	24.75	23.62	23.15
		707.5	25.26	24.14	23.35
		699.7	24.82	23.84	23.40
	3RB-Low (0)	715.3	24.61	23.59	23.16
		707.5	25.18	24.11	23.31
		699.7	24.76	23.82	23.32
	6RB (0)	715.3	23.69	22.69	22.11
		707.5	24.25	23.31	22.23
		699.7	23.83	22.85	22.26
3MHz	1RB-High (14)	714.5	25.02	23.65	22.80
		707.5	24.63	24.22	23.36
		700.5	24.74	24.43	23.42
	1RB-Middle (7)	714.5	24.77	23.81	23.20
		707.5	24.84	24.35	23.48
		700.5	24.90	24.09	23.49
	1RB-Low (0)	714.5	24.53	23.74	22.74
		707.5	24.65	24.29	23.41
		700.5	24.78	24.03	23.39
	8RB-High (7)	714.5	23.66	22.67	22.04
		707.5	23.70	23.21	22.23
		700.5	23.79	22.85	22.28
	8RB-Middle (4)	714.5	23.70	22.72	22.12
		707.5	23.75	23.29	22.29
		700.5	23.83	22.97	22.34
	8RB-Low (0)	714.5	23.63	22.68	22.15
		707.5	23.73	23.31	22.23
		700.5	23.81	22.90	22.35
	15RB (0)	714.5	23.63	22.63	22.10
		707.5	23.70	23.23	22.22
		700.5	23.81	22.92	22.26
5MHz	1RB-High (24)	713.5	24.44	23.59	22.57
		707.5	24.56	23.81	22.81
		701.5	24.54	23.80	22.75
	1RB-Middle (12)	713.5	24.66	23.87	22.86
		707.5	24.84	24.07	23.00
		701.5	24.90	24.21	23.06
	1RB-Low (0)	713.5	24.51	23.74	22.69
		707.5	24.60	23.88	22.78

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		701.5	24.69	23.95	22.93
	12RB-High (13)	713.5	23.64	22.59	21.65
		707.5	23.73	22.71	21.72
		701.5	23.77	22.75	21.78
	12RB-Middle (6)	713.5	23.71	22.68	21.71
		707.5	23.79	22.77	21.76
		701.5	23.83	22.82	21.84
	12RB-Low (0)	713.5	23.74	22.72	21.73
		707.5	23.71	22.71	21.72
		701.5	23.81	22.79	21.81
	25RB (0)	713.5	23.71	22.68	21.67
		707.5	23.73	22.72	21.70
		701.5	23.80	22.81	21.77
10MHz	1RB-High (49)	711	24.85	23.47	22.62
		707.5	24.67	23.83	23.02
		704	24.43	23.89	23.14
	1RB-Middle (24)	711	25.04	23.82	23.27
		707.5	24.72	24.10	23.23
		704	24.61	24.03	23.29
	1RB-Low (0)	711	25.03	23.69	23.15
		707.5	24.57	23.88	23.19
		704	24.60	23.81	23.30
	25RB-High (25)	711	23.98	22.50	21.80
		707.5	23.64	22.56	21.93
		704	23.71	22.81	22.09
	25RB-Middle (12)	711	24.21	22.79	22.07
		707.5	23.85	22.82	22.06
		704	23.63	23.10	22.11
	25RB-Low (0)	711	24.20	22.97	22.16
		707.5	23.70	23.01	22.09
		704	23.74	22.93	22.16
	50RB (0)	711	24.10	23.03	22.00
		707.5	24.05	22.99	22.03
		704	23.68	23.15	22.13

LTE B13 Power Level A1/B1/C1

Band 13					
Bandwidth (MHz)	RB allocation RB offset (Start RB)	Frequency (MHz)	QPSK Actual output power (dBm)	16QAM Actual output power (dBm)	64QAM Actual output power (dBm)
5 MHz	1RB-High (24)	784.5	24.73	23.50	22.46
		782	24.25	23.45	22.48
		779.5	24.24	23.55	22.55
	1RB-Middle (12)	784.5	24.99	23.85	22.74
		782	24.54	23.78	22.64
		779.5	24.54	23.66	23.12
	1RB-Low (0)	784.5	24.74	23.58	22.48
		782	24.27	23.45	22.41
		779.5	24.26	23.42	22.59
	12RB-High (13)	784.5	23.86	22.42	21.39
		782	23.39	22.35	21.39
		779.5	23.40	22.38	21.39
	12RB-Middle (6)	784.5	23.92	22.48	21.48

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		782	23.47	22.49	21.49
		779.5	23.47	22.43	21.89
	12RB-Low (0)	784.5	23.65	22.40	21.40
		782	23.43	22.41	21.50
		779.5	23.32	22.30	21.75
	25RB-(0)	784.5	23.60	22.42	21.41
		782	23.43	22.43	21.41
		779.5	23.41	22.40	21.40
10 MHz	1RB-High (49)	782	24.43	23.53	22.75
	1RB-Middle (24)	782	24.27	23.56	22.64
	1RB-Low (0)	782	24.20	23.42	22.50
	25RB-High (25)	782	23.29	22.46	21.59
	25RB-Middle (12)	782	23.34	22.69	21.69
	25RB-Low (0)	782	23.29	22.56	21.51
	50RB-(0)	782	23.31	22.77	21.74

LTE B14 Power Level A1/B1/C1

Band 14					
Bandwidth (MHz)	RB allocation RB offset (Start RB)	Frequency (MHz)	QPSK Actual output power (dBm)	16QAM Actual output power (dBm)	64QAM Actual output power (dBm)
5 MHz	1RB-High (24)	795.5	24.70	23.44	22.86
		793	24.22	23.84	22.86
		790.5	24.25	23.87	22.96
	1RB-Middle (12)	795.5	25.06	23.83	23.26
		793	24.49	23.80	23.16
		790.5	24.56	24.15	23.25
	1RB-Low (0)	795.5	24.78	23.57	22.82
		793	24.29	23.66	22.96
		790.5	24.30	23.81	22.98
	12RB-High (13)	795.5	23.67	22.30	21.85
		793	23.36	22.47	21.93
		790.5	23.40	22.79	21.91
	12RB-Middle (6)	795.5	23.59	22.59	22.03
		793	23.54	22.79	22.08
		790.5	23.62	22.93	22.05
	12RB-Low (0)	795.5	23.61	22.60	22.05
		793	23.46	22.82	21.97
		790.5	23.54	22.99	22.01
	25RB-(0)	795.5	23.50	22.69	21.97
		793	23.44	22.91	21.95
		790.5	23.65	22.96	21.96
10 MHz	1RB-High (49)	793	24.06	23.32	22.53
	1RB-Middle (24)	793	24.14	23.42	22.51
	1RB-Low (0)	793	23.98	23.36	22.66
	25RB-High (25)	793	23.01	22.10	21.68
	25RB-Middle (12)	793	23.09	22.16	21.51
	25RB-Low (0)	793	23.15	22.21	21.68
	50RB-(0)	793	23.07	22.15	21.75

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LTE B25 Power Level C1

Band 25					
Bandwidth (MHz)	RB allocation RB offset (Start RB)	Frequency (MHz)	QPSK Actual output power (dBm)	16QAM Actual output power (dBm)	64QAM Actual output power (dBm)
1.4 MHz	1RB High (5)	1914.3	24.42	23.40	22.32
		1882.5	24.09	23.68	22.64
		1850.7	23.96	23.47	22.62
	1RB Middle (3)	1914.3	24.52	23.33	22.65
		1882.5	24.47	23.77	22.75
		1850.7	24.05	23.56	22.73
	1RB Low (0)	1914.3	24.40	23.22	22.57
		1882.5	24.33	23.52	22.67
		1850.7	23.94	23.38	22.69
	3RB High (3)	1914.3	24.51	22.94	22.17
		1882.5	24.47	23.45	22.63
		1850.7	24.05	23.10	22.64
	3RB Middle (1)	1914.3	24.21	22.97	22.62
		1882.5	24.54	23.48	22.69
		1850.7	24.07	23.33	22.67
	3RB Low (0)	1914.3	24.02	23.01	22.53
		1882.5	24.51	23.47	22.63
		1850.7	24.29	23.30	22.68
	6RB (0)	1914.3	23.02	22.10	21.44
		1882.5	23.52	22.63	21.53
		1850.7	23.52	22.66	21.60
3 MHz	1RB High (14)	1913.5	24.51	23.72	22.59
		1882.5	24.57	23.77	22.77
		1851.5	24.49	23.68	22.72
	1RB Middle (7)	1913.5	24.69	23.81	22.73
		1882.5	24.65	23.92	22.92
		1851.5	24.69	23.99	22.93
	1RB Low (0)	1913.5	24.53	23.32	22.68
		1882.5	24.50	23.67	22.73
		1851.5	24.55	23.86	22.75
	8RB High (7)	1913.5	23.52	22.12	21.60
		1882.5	23.59	22.66	21.67
		1851.5	23.55	22.65	21.64
	8RB Middle (4)	1913.5	23.61	22.23	21.68
		1882.5	23.62	22.67	21.72
		1851.5	23.55	22.65	21.64
	8RB Low (0)	1913.5	23.55	22.25	21.63
		1882.5	23.58	22.64	21.67

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		1851.5	23.55	22.65	21.66
	15RB (0)	1913.5	23.56	22.46	21.55
		1882.5	23.61	22.60	21.63
		1851.5	23.55	22.57	21.60
5 MHz	1RB High (24)	1912.5	24.41	23.64	22.54
		1882.5	24.45	23.78	22.64
		1852.5	24.42	23.69	22.64
	1RB Middle (12)	1912.5	24.63	23.72	22.84
		1882.5	24.72	23.99	22.94
		1852.5	24.69	23.96	22.86
	1RB Low (0)	1912.5	24.45	23.36	22.62
		1882.5	24.45	23.64	22.66
		1852.5	24.44	23.71	22.69
	12RB High (13)	1912.5	23.55	22.36	21.58
		1882.5	23.62	22.57	21.66
		1852.5	23.54	22.56	21.60
	12RB Middle (6)	1912.5	23.63	22.48	21.68
		1882.5	23.64	22.60	21.71
		1852.5	23.59	22.63	21.68
	12RB Low (0)	1912.5	23.60	22.32	21.63
		1882.5	23.63	22.58	21.65
		1852.5	23.56	22.57	21.61
	25RB (0)	1912.5	23.59	22.42	21.61
		1882.5	23.64	22.64	21.67
		1852.5	23.57	22.61	21.59
10 MHz	1RB High (49)	1910	24.50	23.78	22.62
		1882.5	24.58	23.78	22.70
		1855	24.53	23.88	22.74
	1RB Middle (24)	1910	24.68	23.88	22.75
		1882.5	24.63	23.82	22.72
		1855	24.59	23.91	22.84
	1RB Low (0)	1910	24.53	23.78	22.63
		1882.5	24.61	23.80	22.71
		1855	24.56	23.84	22.76
	25RB High (25)	1910	23.60	22.57	21.63
		1882.5	23.66	22.62	21.68
		1855	23.60	22.69	21.66
	25RB Middle (12)	1910	23.63	22.62	21.67
		1882.5	23.66	22.62	21.67
		1855	23.58	22.63	21.60
	25RB Low (0)	1910	23.69	22.69	21.71
		1882.5	23.70	22.68	21.72

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		1855	23.59	22.64	21.64
	50RB (0)	1910	23.65	22.62	21.66
		1882.5	23.69	22.67	21.71
		1855	23.63	22.67	21.67
15 MHz	1RB High (74)	1907.5	24.46	23.67	22.55
		1882.5	24.46	23.80	22.70
		1857.5	24.49	23.80	22.63
	1RB Middle (37)	1907.5	24.57	23.77	22.75
		1882.5	24.56	23.83	22.77
		1857.5	24.57	23.81	22.79
	1RB Low (0)	1907.5	24.50	23.71	22.68
		1882.5	24.55	23.74	22.75
		1857.5	24.49	23.80	22.72
	36RB High (38)	1907.5	23.62	22.55	21.63
		1882.5	23.64	22.65	21.63
		1857.5	23.65	22.66	21.70
	36RB Middle (19)	1907.5	23.65	22.61	21.69
		1882.5	23.68	22.64	21.69
		1857.5	23.62	22.61	21.65
	36RB Low (0)	1907.5	23.68	22.65	21.71
		1882.5	23.69	22.65	21.73
		1857.5	23.62	22.61	21.65
	75RB (0)	1907.5	23.66	22.61	21.66
		1882.5	23.67	22.65	21.67
		1857.5	23.62	22.64	21.65
20 MHz	1RB High (99)	1905	24.30	23.57	22.49
		1882.5	24.29	23.63	22.50
		1860	24.38	23.66	22.56
	1RB Middle (50)	1905	24.58	23.81	22.78
		1882.5	24.70	23.85	22.82
		1860	24.68	23.88	22.90
	1RB Low (0)	1905	24.28	23.52	22.42
		1882.5	24.36	23.58	22.57
		1860	24.35	23.54	22.53
	50RB High (50)	1905	23.50	22.48	21.53
		1882.5	23.59	22.60	21.64
		1860	23.69	22.69	21.74
	50RB Middle (25)	1905	23.66	22.65	21.70
		1882.5	23.69	22.69	21.70
		1860	23.67	22.69	21.68
	50RB Low (0)	1905	23.67	22.66	21.68
		1882.5	23.73	22.72	21.75

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		1860	23.65	22.69	21.70
	100RB (0)	1905	23.59	22.57	21.62
		1882.5	23.66	22.62	21.72
		1860	23.68	22.68	21.75

LTE B25 Power Level A1

Band 25					
Bandwidth (MHz)	RB allocation RB offset (Start RB)	Frequency (MHz)	QPSK Actual output power (dBm)	16QAM Actual output power (dBm)	64QAM Actual output power (dBm)
1.4 MHz	1RB High (5)	1914.3	15.79	16.09	15.99
		1882.5	15.78	16.15	16.03
		1850.7	15.77	16.16	16.03
	1RB Middle (3)	1914.3	15.90	16.24	16.09
		1882.5	15.89	16.20	16.13
		1850.7	15.84	16.29	16.15
	1RB Low (0)	1914.3	15.76	16.00	16.02
		1882.5	15.77	16.12	15.92
		1850.7	15.71	15.95	15.94
	3RB High (3)	1914.3	15.86	15.94	15.92
		1882.5	15.86	15.86	16.02
		1850.7	15.85	15.90	16.00
	3RB Middle (1)	1914.3	15.91	15.96	16.01
		1882.5	15.91	15.91	16.06
		1850.7	15.88	15.89	15.99
	3RB Low (0)	1914.3	15.87	15.85	15.95
		1882.5	15.88	15.91	16.00
		1850.7	15.85	15.87	15.95
	6RB (0)	1914.3	15.83	15.99	15.87
		1882.5	15.85	15.92	15.90
		1850.7	15.84	15.98	15.86
3 MHz	1RB High (14)	1913.5	15.86	16.13	16.16
		1882.5	15.90	16.18	16.17
		1851.5	15.84	16.23	16.06
	1RB Middle (7)	1913.5	16.04	16.40	16.37
		1882.5	16.00	16.42	16.28
		1851.5	16.03	16.35	16.33
	1RB Low (0)	1913.5	15.86	16.26	16.12
		1882.5	15.89	16.23	16.08
		1851.5	15.83	16.21	16.13
	8RB High (7)	1913.5	15.90	15.99	15.99
		1882.5	15.94	16.01	15.99

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		1851.5	15.87	15.97	15.93
	8RB Middle (4)	1913.5	15.94	16.04	16.00
		1882.5	15.93	16.03	16.00
		1851.5	15.91	15.98	15.95
	8RB Low (0)	1913.5	15.93	16.02	15.99
		1882.5	15.92	16.01	16.02
		1851.5	15.92	15.99	15.98
	15RB (0)	1913.5	15.89	15.94	15.94
		1882.5	15.92	15.98	15.96
		1851.5	15.86	15.88	15.87
5 MHz	1RB High (24)	1912.5	15.77	16.05	16.04
		1882.5	15.80	16.20	16.01
		1852.5	15.70	15.98	15.95
	1RB Middle (12)	1912.5	16.04	16.27	16.29
		1882.5	16.03	16.30	16.31
		1852.5	16.00	16.35	16.25
	1RB Low (0)	1912.5	15.77	16.12	16.03
		1882.5	15.78	16.07	15.93
		1852.5	15.78	16.16	16.00
	12RB High (13)	1912.5	15.87	15.91	15.91
		1882.5	15.88	15.91	15.94
		1852.5	15.81	15.79	15.85
	12RB Middle (6)	1912.5	15.96	15.99	16.01
		1882.5	15.96	15.94	16.01
		1852.5	15.90	15.92	15.92
	12RB Low (0)	1912.5	15.91	15.92	15.98
		1882.5	15.92	15.92	15.94
		1852.5	15.85	15.84	15.87
	25RB (0)	1912.5	15.88	15.94	15.94
		1882.5	15.91	15.94	15.96
		1852.5	15.82	15.84	15.84
10 MHz	1RB High (49)	1910	15.85	16.17	16.08
		1882.5	15.90	16.25	16.14
		1855	15.84	16.09	16.11
	1RB Middle (24)	1910	15.97	16.25	16.22
		1882.5	15.96	16.34	16.11
		1855	15.91	16.18	16.16
	1RB Low (0)	1910	15.87	16.26	16.02
		1882.5	15.93	16.26	16.11
		1855	15.84	16.23	16.14
	25RB High (25)	1910	15.87	15.91	15.91
		1882.5	15.91	15.93	15.94

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		1855	15.83	15.86	15.88
	25RB Middle (12)	1910	15.98	16.00	15.99
		1882.5	15.93	15.98	15.97
		1855	15.88	15.90	15.91
	25RB Low (0)	1910	15.99	16.04	16.03
		1882.5	15.96	16.00	16.02
		1855	15.87	15.92	15.91
	50RB (0)	1910	15.91	15.95	15.99
		1882.5	15.96	15.96	15.98
		1855	15.88	15.90	15.91
15 MHz	1RB High (74)	1907.5	15.80	16.21	16.01
		1882.5	15.82	16.13	15.99
		1857.5	15.83	16.05	16.08
	1RB Middle (37)	1907.5	15.91	16.24	16.11
		1882.5	15.90	16.21	16.11
		1857.5	15.88	16.22	16.15
	1RB Low (0)	1907.5	15.83	16.25	16.05
		1882.5	15.87	16.30	16.04
		1857.5	15.82	16.06	16.00
	36RB High (38)	1907.5	15.90	15.91	15.94
		1882.5	15.91	15.92	15.94
		1857.5	15.91	15.88	15.93
	36RB Middle (19)	1907.5	15.96	15.96	15.99
		1882.5	15.97	16.00	15.99
		1857.5	15.91	15.91	15.95
	36RB Low (0)	1907.5	16.00	16.00	16.02
		1882.5	16.00	16.00	16.02
		1857.5	15.91	15.89	15.91
	75RB (0)	1907.5	15.94	15.96	15.95
		1882.5	15.94	15.96	15.98
		1857.5	15.90	15.90	15.90
20 MHz	1RB High (99)	1905	15.62	16.02	15.80
		1882.5	15.68	15.93	15.84
		1860	15.63	15.98	15.92
	1RB Middle (50)	1905	15.93	16.35	16.11
		1882.5	16.00	16.24	16.13
		1860	15.96	16.23	16.18
	1RB Low (0)	1905	15.60	16.02	15.87
		1882.5	15.69	16.09	15.86
		1860	15.64	16.03	15.92
	50RB High (50)	1905	15.78	15.83	15.84
		1882.5	15.89	15.91	15.90

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		1860	15.98	16.00	16.02
	50RB Middle (25)	1905	15.92	15.97	15.97
		1882.5	15.95	15.99	15.99
		1860	15.93	15.97	15.98
	50RB Low (0)	1905	15.97	15.99	16.02
		1882.5	16.02	16.05	16.03
		1860	15.95	15.97	16.00
	100RB (0)	1905	15.88	15.90	15.90
		1882.5	15.95	15.95	15.96
		1860	15.97	15.98	15.98

LTE B25 Power Level B1

Band 25					
Bandwidth (MHz)	RB allocation RB offset (Start RB)	Frequency (MHz)	QPSK Actual output power (dBm)	16QAM Actual output power (dBm)	64QAM Actual output power (dBm)
1.4 MHz	1RB High (5)	1914.3	20.28	20.62	20.39
		1882.5	20.31	20.61	20.48
		1850.7	20.29	20.62	20.56
	1RB Middle (3)	1914.3	20.43	20.62	20.57
		1882.5	20.36	20.63	20.53
		1850.7	20.36	20.56	20.53
	1RB Low (0)	1914.3	20.29	20.61	20.45
		1882.5	20.31	20.67	20.44
		1850.7	20.26	20.59	20.43
	3RB High (3)	1914.3	20.41	20.35	20.52
		1882.5	20.40	20.32	20.48
		1850.7	20.38	20.34	20.48
	3RB Middle (1)	1914.3	20.42	20.41	20.51
		1882.5	20.45	20.51	20.50
		1850.7	20.43	20.42	20.51
	3RB Low (0)	1914.3	20.39	20.34	20.45
		1882.5	20.39	20.34	20.46
		1850.7	20.38	20.41	20.44
	6RB (0)	1914.3	20.37	20.47	20.39
		1882.5	20.36	20.47	20.40
		1850.7	20.36	20.49	20.35
3 MHz	1RB High (14)	1913.5	20.36	20.69	20.56
		1882.5	20.42	20.75	20.59
		1851.5	20.31	20.62	20.57
	1RB Middle (7)	1913.5	20.62	20.87	20.68
		1882.5	20.57	20.84	20.72

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		1851.5	20.55	20.87	20.85
	1RB Low (0)	1913.5	20.40	20.64	20.57
		1882.5	20.40	20.66	20.55
		1851.5	20.37	20.71	20.51
	8RB High (7)	1913.5	20.41	20.49	20.44
		1882.5	20.49	20.56	20.52
		1851.5	20.39	20.44	20.41
	8RB Middle (4)	1913.5	20.43	20.48	20.47
		1882.5	20.47	20.53	20.48
		1851.5	20.39	20.48	20.43
	8RB Low (0)	1913.5	20.45	20.47	20.48
		1882.5	20.45	20.51	20.52
		1851.5	20.41	20.48	20.44
	15RB (0)	1913.5	20.42	20.44	20.42
		1882.5	20.46	20.50	20.47
		1851.5	20.38	20.39	20.36
5 MHz	1RB High (24)	1912.5	20.23	20.62	20.40
		1882.5	20.34	20.61	20.46
		1852.5	20.23	20.46	20.41
	1RB Middle (12)	1912.5	20.65	20.90	20.75
		1882.5	20.55	20.96	20.68
		1852.5	20.49	20.81	20.73
	1RB Low (0)	1912.5	20.30	20.63	20.52
		1882.5	20.29	20.70	20.48
		1852.5	20.27	20.52	20.41
	12RB High (13)	1912.5	20.39	20.43	20.41
		1882.5	20.41	20.40	20.42
		1852.5	20.33	20.33	20.36
	12RB Middle (6)	1912.5	20.47	20.48	20.51
		1882.5	20.48	20.50	20.49
		1852.5	20.42	20.42	20.44
	12RB Low (0)	1912.5	20.44	20.47	20.49
		1882.5	20.44	20.41	20.44
		1852.5	20.34	20.36	20.36
	25RB (0)	1912.5	20.41	20.46	20.48
		1882.5	20.45	20.47	20.47
		1852.5	20.33	20.38	20.36
10 MHz	1RB High (49)	1910	20.33	20.60	20.50
		1882.5	20.44	20.81	20.65
		1855	20.37	20.70	20.54
	1RB Middle (24)	1910	20.47	20.84	20.69
		1882.5	20.50	20.71	20.75

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		1855	20.45	20.76	20.59
	1RB Low (0)	1910	20.36	20.67	20.56
		1882.5	20.41	20.65	20.62
		1855	20.37	20.74	20.55
	25RB High (25)	1910	20.40	20.49	20.49
		1882.5	20.41	20.42	20.42
		1855	20.35	20.38	20.39
	25RB Middle (12)	1910	20.49	20.46	20.48
		1882.5	20.46	20.46	20.48
		1855	20.39	20.42	20.39
	25RB Low (0)	1910	20.52	20.53	20.50
		1882.5	20.50	20.52	20.54
		1855	20.41	20.42	20.37
	50RB (0)	1910	20.44	20.46	20.51
		1882.5	20.50	20.49	20.49
		1855	20.42	20.41	20.41
15 MHz	1RB High (74)	1907.5	20.31	20.58	20.45
		1882.5	20.34	20.63	20.55
		1857.5	20.33	20.70	20.55
	1RB Middle (37)	1907.5	20.44	20.74	20.58
		1882.5	20.42	20.70	20.71
		1857.5	20.39	20.61	20.53
	1RB Low (0)	1907.5	20.37	20.62	20.55
		1882.5	20.40	20.63	20.63
		1857.5	20.32	20.55	20.49
	36RB High (38)	1907.5	20.44	20.42	20.43
		1882.5	20.44	20.41	20.45
		1857.5	20.43	20.40	20.44
	36RB Middle (19)	1907.5	20.48	20.46	20.46
		1882.5	20.50	20.48	20.51
		1857.5	20.43	20.40	20.43
	36RB Low (0)	1907.5	20.50	20.49	20.51
		1882.5	20.53	20.48	20.50
		1857.5	20.39	20.39	20.43
	75RB (0)	1907.5	20.45	20.46	20.44
		1882.5	20.46	20.47	20.45
		1857.5	20.41	20.43	20.39
20 MHz	1RB High (99)	1905	20.17	20.53	20.37
		1882.5	20.20	20.54	20.34
		1860	20.11	20.35	20.40
	1RB Middle (50)	1905	20.48	20.69	20.71
		1882.5	20.51	20.77	20.65

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		1860	20.47	20.73	20.69
	1RB Low (0)	1905	20.13	20.45	20.33
		1882.5	20.21	20.57	20.38
		1860	20.12	20.51	20.36
	50RB High (50)	1905	20.33	20.34	20.34
		1882.5	20.38	20.44	20.44
		1860	20.50	20.51	20.51
	50RB Middle (25)	1905	20.45	20.47	20.47
		1882.5	20.48	20.52	20.48
		1860	20.46	20.46	20.47
	50RB Low (0)	1905	20.49	20.51	20.49
		1882.5	20.54	20.57	20.59
		1860	20.44	20.49	20.48
	100RB (0)	1905	20.44	20.43	20.42
		1882.5	20.47	20.48	20.47
		1860	20.49	20.47	20.47

LTE B26 Power Level A1/B1/C1

Band 26					
Bandwidth (MHz)	RB allocation RB offset (Start RB)	Frequency (MHz)	QPSK Actual output power (dBm)	16QAM Actual output power (dBm)	64QAM Actual output power (dBm)
1.4 MHz	1RB High (5)	848.3	25.21	23.88	22.93
		831.5	24.71	23.96	23.01
		814.7	24.65	23.91	23.14
	1RB Middle (3)	848.3	24.85	23.97	23.06
		831.5	24.83	24.05	22.96
		814.7	24.79	24.12	23.08
	1RB Low (0)	848.3	24.72	23.92	22.90
		831.5	24.72	23.92	22.99
		814.7	24.61	23.98	22.88
	3RB High (3)	848.3	24.80	23.83	22.91
		831.5	24.82	23.73	22.98
		814.7	24.77	23.73	22.96
	3RB Middle (1)	848.3	24.87	23.82	22.95
		831.5	24.87	23.85	23.10
		814.7	24.81	23.73	22.95
	3RB Low (0)	848.3	24.81	23.72	22.90
		831.5	24.82	23.77	22.97
		814.7	24.72	23.71	22.90
	6RB (0)	848.3	23.82	22.94	21.83
		831.5	23.80	22.90	22.29
		814.7	23.79	22.96	21.90
3 MHz	1RB High (14)	847.5	25.25	23.96	23.48
		831.5	24.77	24.06	22.98
		815.5	24.29	24.16	23.03
	1RB Middle (7)	847.5	25.39	24.19	23.49
		831.5	24.88	24.14	23.03

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		815.5	24.37	24.09	23.01
	1RB Low (0)	847.5	25.12	23.95	23.49
		831.5	24.76	24.06	22.94
		815.5	24.40	24.17	23.04
	8RB High (7)	847.5	23.80	22.90	21.90
		831.5	23.79	22.87	21.88
		815.5	23.78	22.84	21.86
	8RB Middle (4)	847.5	23.85	22.92	21.88
		831.5	23.83	22.93	21.91
		815.5	23.81	22.94	21.92
	8RB Low (0)	847.5	23.82	22.94	21.90
		831.5	23.80	22.88	21.83
		815.5	23.79	22.82	21.80
	15RB (0)	847.5	23.80	22.87	21.83
		831.5	23.80	22.85	21.83
		815.5	23.80	22.86	21.84
5 MHz	1RB High (24)	846.5	25.14	23.86	22.96
		831.5	24.66	23.86	23.31
		816.5	24.67	23.98	23.41
	1RB Middle (12)	846.5	25.50	24.05	23.39
		831.5	24.84	24.22	23.48
		816.5	24.90	24.18	23.46
	1RB Low (0)	846.5	25.19	24.00	23.13
		831.5	24.66	23.95	22.97
		816.5	24.60	23.85	23.05
	12RB High (13)	846.5	24.10	22.81	21.98
		831.5	23.76	22.78	22.25
		816.5	23.79	22.86	22.37
	12RB Middle (6)	846.5	24.02	22.90	22.41
		831.5	23.85	22.91	22.23
		816.5	23.84	22.91	22.44
	12RB Low (0)	846.5	23.93	22.88	22.38
		831.5	23.74	22.78	22.22
		816.5	23.75	22.82	22.29
	25RB (0)	846.5	24.03	22.91	22.23
		831.5	23.76	22.97	22.34
		816.5	23.82	22.88	22.36
10 MHz	1RB High (49)	844	25.26	24.05	22.94
		831.5	24.75	23.94	23.13
		820	24.72	23.95	23.36
	1RB Middle (24)	844	24.95	24.20	23.19
		831.5	24.84	24.04	23.31
		820	24.88	24.08	23.45
	1RB Low (0)	844	24.77	24.02	23.01
		831.5	24.74	24.11	23.01
		820	24.76	24.04	23.44
	25RB High (25)	844	23.83	22.86	21.85
		831.5	23.83	22.85	22.01
		820	23.81	22.87	22.04
	25RB Middle (12)	844	23.89	22.91	22.32
		831.5	23.81	22.86	22.29
		820	23.88	22.92	22.42
	25RB Low (0)	844	23.90	22.92	22.37
		831.5	23.77	22.79	22.04
		820	23.87	22.93	22.43

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	50RB (0)	844	23.86	22.91	22.05
		831.5	23.78	22.83	22.30
		820	23.83	22.97	22.35
15 MHz	1RB High (74)	841.5	25.20	24.42	23.34
		831.5	25.13	24.44	23.24
		822.5	25.16	24.44	23.41
	1RB Middle (37)	841.5	25.32	24.50	23.50
		831.5	25.28	24.49	23.47
		822.5	25.28	24.42	23.46
	1RB Low (0)	841.5	25.22	24.41	23.38
		831.5	25.18	24.46	23.47
		822.5	25.20	24.43	23.38
	36RB High (38)	841.5	24.37	23.33	22.41
		831.5	24.36	23.31	22.38
		822.5	24.33	23.33	22.37
	36RB Middle (19)	841.5	24.42	23.35	22.43
		831.5	24.34	23.36	22.37
		822.5	24.34	23.34	22.40
	36RB Low (0)	841.5	24.39	23.36	22.44
		831.5	24.32	23.32	22.34
		822.5	24.37	23.36	22.39
	75RB (0)	841.5	24.42	23.38	22.42
		831.5	24.32	23.33	22.33
		822.5	24.35	23.40	22.38

LTE B41 PC3 Power Level C1

Band 41					
Bandwidth (MHz)	RB allocation RB offset	Frequency (MHz)	Actual output power (dBm)		
			QPSK	16QAM	64QAM
5MHz	1RB-High (24)	2687.5	24.29	23.32	21.94
		2640.3	24.37	23.39	21.98
		2593	24.46	23.55	22.10
		2545.8	24.54	23.56	22.10
		2498.5	24.29	23.33	21.88
	1RB-Middle (12)	2687.5	24.41	23.45	22.11
		2640.3	24.48	23.54	22.20
		2593	24.67	23.72	22.36
		2545.8	24.63	23.68	22.30
		2498.5	24.47	23.52	22.09
	1RB-Low (0)	2687.5	24.36	23.37	21.94
		2640.3	24.38	23.42	21.96
		2593	24.59	23.60	22.15
		2545.8	24.50	23.50	22.03
		2498.5	24.35	23.36	21.94
	12RB-High (13)	2687.5	23.45	22.30	21.35
		2640.3	23.49	22.34	21.41
		2593	23.59	22.52	21.53
		2545.8	23.67	22.54	21.63
		2498.5	23.45	22.34	21.42
	12RB-Middle (6)	2687.5	23.48	22.33	21.46
		2640.3	23.55	22.40	21.49
		2593	23.69	22.55	21.65
		2545.8	23.62	22.54	21.65

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		2498.5	23.43	22.30	21.42
	12RB-Low (0)	2687.5	23.47	22.32	21.42
		2640.3	23.45	22.33	21.42
		2593	23.65	22.53	21.59
		2545.8	23.60	22.47	21.57
		2498.5	23.39	22.31	21.38
	25RB (0)	2687.5	23.45	22.39	21.43
		2640.3	23.41	22.42	21.48
		2593	23.57	22.59	21.70
		2545.8	23.61	22.53	21.62
		2498.5	23.40	22.37	21.40
10MHz	1RB-High (49)	2685	24.44	23.42	22.03
		2639	24.48	23.52	22.10
		2593	24.61	23.64	22.18
		2547	24.72	23.72	22.26
		2501	24.44	23.44	21.99
	1RB-Middle (24)	2685	24.62	23.56	22.16
		2639	24.62	23.65	22.20
		2593	24.80	23.80	22.34
		2547	24.81	23.75	22.31
		2501	24.51	23.53	22.07
	1RB-Low (0)	2685	24.56	23.59	22.17
		2639	24.50	23.60	22.13
		2593	24.77	23.79	22.33
		2547	24.63	23.64	22.23
		2501	24.50	23.49	22.02
	25RB-High (25)	2685	23.53	22.50	21.52
		2639	23.51	22.54	21.55
		2593	23.66	22.66	21.67
		2547	23.69	22.64	21.72
		2501	23.44	22.46	21.47
	25RB-Middle (12)	2685	23.53	22.51	21.51
		2639	23.57	22.57	21.55
		2593	23.75	22.73	21.73
		2547	23.77	22.72	21.73
		2501	23.45	22.45	21.50
	25RB-Low (0)	2685	23.50	22.54	21.53
		2639	23.53	22.48	21.52
		2593	23.76	22.76	21.77
		2547	23.65	22.68	21.74
		2501	23.43	22.42	21.45
	50RB (0)	2685	23.31	22.38	21.44
		2639	23.38	22.44	21.51
		2593	23.60	22.64	21.71
		2547	23.47	22.57	21.64
		2501	23.31	22.40	21.46
15MHz	1RB-High (74)	2682.5	24.28	23.27	21.92
		2637.8	24.35	23.42	21.97
		2593	24.46	23.50	22.05
		2548.3	24.61	23.62	22.18
		2503.5	24.25	23.25	21.85
	1RB-Middle (37)	2682.5	24.48	23.53	22.08
		2637.8	24.52	23.54	22.13
		2593	24.67	23.72	22.31
		2548.3	24.68	23.70	22.27

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		2503.5	24.38	23.46	21.99
	1RB-Low (0)	2682.5	24.46	23.48	22.09
		2637.8	24.42	23.47	22.06
		2593	24.68	23.73	22.31
		2548.3	24.52	23.51	22.08
		2503.5	24.33	23.36	21.94
	36RB-High (38)	2682.5	23.54	22.40	21.40
		2637.8	23.50	22.44	21.46
		2593	23.60	22.50	21.58
		2548.3	23.68	22.63	21.66
		2503.5	23.40	22.32	21.38
	36RB-Middle (19)	2682.5	23.51	22.42	21.48
		2637.8	23.47	22.42	21.45
		2593	23.63	22.60	21.63
		2548.3	23.73	22.66	21.63
		2503.5	23.38	22.33	21.35
	36RB-Low (0)	2682.5	23.58	22.46	21.46
		2637.8	23.46	22.42	21.43
		2593	23.72	22.65	21.65
		2548.3	23.67	22.60	21.59
		2503.5	23.37	22.31	21.36
	75RB (0)	2682.5	23.39	22.41	21.46
		2637.8	23.41	22.45	21.49
		2593	23.58	22.61	21.68
		2548.3	23.56	22.57	21.69
		2503.5	23.31	22.39	21.47
20MHz	1RB-High (99)	2680	24.03	23.09	21.64
		2636.5	24.05	23.15	21.72
		2593	24.16	23.22	21.76
		2549.5	24.38	23.41	21.95
		2506	23.99	23.03	21.56
	1RB-Middle (50)	2680	24.45	23.48	22.13
		2636.5	24.46	23.46	22.14
		2593	24.66	23.72	22.24
		2549.5	24.65	23.72	22.20
		2506	24.31	23.38	21.96
	1RB-Low (0)	2680	24.26	23.33	21.90
		2636.5	24.18	23.26	21.83
		2593	24.50	23.53	22.09
		2549.5	24.29	23.29	21.89
		2506	24.12	23.15	21.67
	50RB-High (50)	2680	23.18	22.32	21.35
		2636.5	23.24	22.37	21.38
		2593	23.30	22.45	21.43
		2549.5	23.40	22.47	21.61
		2506	23.20	22.34	21.42
	50RB-Middle (25)	2680	23.28	22.34	21.43
		2636.5	23.28	22.33	21.42
		2593	23.48	22.53	21.65
		2549.5	23.43	22.51	21.59
		2506	23.17	22.30	21.37
	50RB-Low (0)	2680	23.24	22.34	21.41
		2636.5	23.27	22.43	21.39
		2593	23.52	22.62	21.71
		2549.5	23.39	22.49	21.57

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		2506	23.16	22.28	21.32
	100RB (0)	2680	23.31	22.38	21.39
		2636.5	23.35	22.43	21.41
		2593	23.45	22.55	21.55
		2549.5	23.47	22.49	21.54
		2506	23.24	22.37	21.36

LTE B41 PC3 Power Level A1

Band 41					
Bandwidth (MHz)	RB allocation RB offset	Frequency (MHz)	Actual output power (dBm)		
			QPSK	16QAM	64QAM
5MHz	1RB-High (24)	2687.5	17.08	16.69	16.32
		2640.3	16.93	16.47	16.07
		2593	17.04	16.64	16.29
		2545.8	16.89	16.50	16.09
		2498.5	16.68	16.36	16.01
	1RB-Middle (12)	2687.5	17.37	17.00	16.62
		2640.3	17.14	16.76	16.34
		2593	17.33	16.92	16.51
		2545.8	17.01	16.66	16.27
		2498.5	17.03	16.60	16.28
	1RB-Low (0)	2687.5	17.19	16.83	16.45
		2640.3	16.93	16.53	16.16
		2593	17.12	16.74	16.31
		2545.8	16.80	16.38	16.07
		2498.5	16.78	16.43	16.02
	12RB-High (13)	2687.5	16.66	16.57	16.69
		2640.3	16.42	16.37	16.44
		2593	16.60	16.56	16.65
		2545.8	16.28	16.29	16.39
		2498.5	16.25	16.23	16.32
	12RB-Middle (6)	2687.5	16.72	16.75	16.83
		2640.3	16.42	16.41	16.45
		2593	16.69	16.63	16.62
		2545.8	16.39	16.29	16.43
		2498.5	16.35	16.30	16.39
	12RB-Low (0)	2687.5	16.74	16.64	16.75
		2640.3	16.42	16.41	16.45
		2593	16.57	16.60	16.64
		2545.8	16.30	16.29	16.33
		2498.5	16.27	16.23	16.30
	25RB (0)	2687.5	16.65	16.75	16.71
		2640.3	16.44	16.50	16.50
		2593	16.67	16.64	16.67
		2545.8	16.30	16.38	16.38
		2498.5	16.33	16.35	16.38
10MHz	1RB-High (49)	2685	17.16	16.79	16.41
		2639	16.94	16.60	16.13
		2593	17.11	16.78	16.30
		2547	16.96	16.63	16.21
		2501	16.65	16.33	16.02
	1RB-Middle (24)	2685	17.44	16.99	16.57
		2639	17.12	16.68	16.30
		2593	17.22	16.89	16.49

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		2547	17.03	16.57	16.19
		2501	16.82	16.53	16.05
	1RB-Low (0)	2685	17.43	17.06	16.63
		2639	16.95	16.65	16.26
		2593	17.21	16.92	16.45
		2547	16.87	16.51	16.13
		2501	16.84	16.49	16.12
	25RB-High (25)	2685	16.68	16.71	16.74
		2639	16.40	16.41	16.45
		2593	16.62	16.62	16.66
		2547	16.34	16.36	16.43
		2501	16.14	16.19	16.23
	25RB-Middle (12)	2685	16.87	16.85	16.80
		2639	16.48	16.50	16.54
		2593	16.63	16.72	16.74
		2547	16.40	16.43	16.48
		2501	16.31	16.27	16.31
	25RB-Low (0)	2685	16.86	16.84	16.89
		2639	16.48	16.47	16.50
		2593	16.65	16.67	16.72
		2547	16.35	16.38	16.38
		2501	16.33	16.36	16.39
	50RB (0)	2685	16.69	16.75	16.71
		2639	16.39	16.48	16.42
		2593	16.62	16.74	16.68
		2547	16.36	16.38	16.38
		2501	16.31	16.37	16.37
15MHz	1RB-High (74)	2682.5	17.05	16.68	16.24
		2637.8	16.83	16.40	16.05
		2593	16.99	16.60	16.20
		2548.3	16.85	16.49	16.14
		2503.5	16.49	16.09	16.02
	1RB-Middle (37)	2682.5	17.36	16.91	16.51
		2637.8	16.96	16.54	16.17
		2593	17.14	16.76	16.32
		2548.3	16.94	16.56	16.12
		2503.5	16.65	16.32	16.04
	1RB-Low (0)	2682.5	17.39	16.98	16.57
		2637.8	16.90	16.53	16.15
		2593	17.16	16.73	16.35
		2548.3	16.75	16.34	16.05
		2503.5	16.74	16.37	16.03
	36RB-High (38)	2682.5	16.77	16.69	16.74
		2637.8	16.45	16.35	16.42
		2593	16.61	16.53	16.54
		2548.3	16.47	16.37	16.44
		2503.5	16.10	16.07	16.06
	36RB-Middle (19)	2682.5	16.89	16.81	16.84
		2637.8	16.50	16.38	16.43
		2593	16.72	16.60	16.70
		2548.3	16.49	16.42	16.45
		2503.5	16.17	16.12	16.21
	36RB-Low (0)	2682.5	16.90	16.86	16.89
		2637.8	16.47	16.41	16.41
		2593	16.68	16.59	16.64

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		2548.3	16.38	16.31	16.35
		2503.5	16.21	16.18	16.17
	75RB (0)	2682.5	16.79	16.75	16.81
		2637.8	16.42	16.41	16.38
		2593	16.66	16.61	16.61
		2548.3	16.37	16.42	16.37
		2503.5	16.25	16.27	16.24
20MHz	1RB-High (99)	2680	16.80	16.53	16.06
		2636.5	16.71	16.25	16.06
		2593	16.83	16.44	16.00
		2549.5	16.73	16.40	16.02
		2506	16.28	16.14	16.01
	1RB-Middle (50)	2680	17.35	17.03	16.66
		2636.5	17.10	16.63	16.25
		2593	17.22	16.87	16.43
		2549.5	17.07	16.75	16.27
		2506	16.70	16.38	16.06
	1RB-Low (0)	2680	17.20	16.85	16.42
		2636.5	16.87	16.44	16.01
		2593	16.90	16.64	16.15
		2549.5	16.58	16.16	16.03
		2506	16.60	16.23	16.05
	50RB-High (50)	2680	16.62	16.72	16.70
		2636.5	16.44	16.46	16.44
		2593	16.61	16.63	16.65
		2549.5	16.44	16.56	16.51
		2506	16.14	16.24	16.21
	50RB-Middle (25)	2680	16.85	16.89	16.85
		2636.5	16.39	16.50	16.49
		2593	16.63	16.73	16.73
		2549.5	16.47	16.50	16.48
		2506	16.15	16.30	16.29
	50RB-Low (0)	2680	16.90	17.01	16.92
		2636.5	16.47	16.53	16.50
		2593	16.67	16.75	16.71
		2549.5	16.44	16.50	16.49
		2506	16.31	16.37	16.35
	100RB (0)	2680	16.84	16.86	16.88
		2636.5	16.49	16.54	16.53
		2593	16.66	16.70	16.67
		2549.5	16.42	16.51	16.47
		2506	16.21	16.29	16.25

LTE B41 PC3 Power Level B1

Band 41					
Bandwidth (MHz)	RB allocation RB offset	Frequency (MHz)	Actual output power (dBm)		
			QPSK	16QAM	64QAM
5MHz	1RB-High (24)	2687.5	22.38	21.99	21.51
		2640.3	22.20	21.78	21.34
		2593	22.33	21.95	21.52
		2545.8	22.07	21.72	21.32
		2498.5	21.91	21.55	21.12
	1RB-Middle (12)	2687.5	22.61	22.16	21.77
		2640.3	22.44	22.00	21.61

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		2593	22.57	22.14	21.73
		2545.8	22.32	21.94	21.51
		2498.5	22.17	21.81	21.40
	1RB-Low (0)	2687.5	22.47	22.06	21.66
		2640.3	22.24	21.78	21.40
		2593	22.38	21.99	21.57
		2545.8	22.07	21.68	21.26
		2498.5	22.04	21.64	21.19
	12RB-High (13)	2687.5	22.02	21.89	22.01
		2640.3	21.77	21.70	21.79
		2593	21.93	21.89	21.92
		2545.8	21.72	21.71	21.79
		2498.5	21.57	21.52	21.60
	12RB-Middle (6)	2687.5	22.12	22.03	22.09
		2640.3	21.84	21.79	21.84
		2593	21.98	21.90	22.03
		2545.8	21.78	21.71	21.82
		2498.5	21.68	21.61	21.70
	12RB-Low (0)	2687.5	22.08	21.99	22.05
		2640.3	21.74	21.65	21.81
		2593	21.98	21.87	21.97
		2545.8	21.73	21.62	21.73
		2498.5	21.68	21.63	21.71
	25RB (0)	2687.5	22.01	21.99	22.05
		2640.3	21.72	21.79	21.80
		2593	21.96	21.95	22.01
		2545.8	21.73	21.72	21.81
		2498.5	21.59	21.62	21.65
10MHz	1RB-High (49)	2685	22.46	21.99	21.58
		2639	22.27	21.86	21.41
		2593	22.40	22.02	21.57
		2547	22.30	21.87	21.42
		2501	21.94	21.54	21.12
	1RB-Middle (24)	2685	22.71	22.23	21.81
		2639	22.37	21.95	21.54
		2593	22.50	22.15	21.70
		2547	22.26	21.88	21.42
		2501	22.12	21.69	21.21
	1RB-Low (0)	2685	22.75	22.24	21.88
		2639	22.35	21.87	21.48
		2593	22.45	22.08	21.64
		2547	22.17	21.75	21.34
		2501	22.13	21.70	21.28
	25RB-High (25)	2685	22.01	21.98	22.07
		2639	21.81	21.80	21.80
		2593	21.91	21.93	21.99
		2547	21.79	21.81	21.83
		2501	21.49	21.56	21.66
	25RB-Middle (12)	2685	22.10	22.11	22.13
		2639	21.81	21.81	21.80
		2593	21.93	21.97	21.97
		2547	21.74	21.79	21.80
		2501	21.54	21.53	21.63
	25RB-Low (0)	2685	22.15	22.17	22.21
		2639	21.77	21.82	21.87

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		2593	21.99	21.98	22.00
		2547	21.74	21.77	21.80
		2501	21.58	21.63	21.69
	50RB (0)	2685	22.01	22.08	22.08
		2639	21.74	21.80	21.76
		2593	21.93	22.01	21.96
		2547	21.73	21.80	21.79
		2501	21.50	21.57	21.57
15MHz	1RB-High (74)	2682.5	22.32	21.92	21.50
		2637.8	22.13	21.75	21.26
		2593	22.23	21.89	21.40
		2548.3	22.17	21.78	21.34
		2503.5	21.75	21.34	21.01
	1RB-Middle (37)	2682.5	22.67	22.19	21.79
		2637.8	22.28	21.91	21.47
		2593	22.44	22.00	21.59
		2548.3	22.28	21.84	21.38
		2503.5	22.02	21.58	21.14
	1RB-Low (0)	2682.5	22.71	22.24	21.84
		2637.8	22.21	21.80	21.38
		2593	22.40	21.99	21.55
		2548.3	22.07	21.64	21.21
		2503.5	22.01	21.60	21.14
	36RB-High (38)	2682.5	22.04	22.00	22.04
		2637.8	21.80	21.75	21.77
		2593	21.96	21.86	21.91
		2548.3	21.76	21.73	21.76
		2503.5	21.37	21.37	21.39
	36RB-Middle (19)	2682.5	22.15	22.13	22.10
		2637.8	21.80	21.79	21.84
		2593	21.96	21.91	22.00
		2548.3	21.79	21.77	21.77
		2503.5	21.47	21.42	21.45
	36RB-Low (0)	2682.5	22.22	22.17	22.19
		2637.8	21.79	21.74	21.75
		2593	22.00	21.93	21.94
		2548.3	21.68	21.67	21.69
		2503.5	21.51	21.56	21.52
	75RB (0)	2682.5	22.09	22.04	22.10
		2637.8	21.72	21.78	21.75
		2593	21.93	22.03	22.01
		2548.3	21.68	21.74	21.76
		2503.5	21.46	21.52	21.53
20MHz	1RB-High (99)	2680	22.26	21.79	21.38
		2636.5	22.00	21.60	21.15
		2593	22.19	21.79	21.29
		2549.5	22.23	21.81	21.19
		2506	21.73	21.42	21.02
	1RB-Middle (50)	2680	22.82	22.37	21.98
		2636.5	22.35	22.01	21.48
		2593	22.62	22.14	21.69
		2549.5	22.52	22.13	21.52
		2506	22.20	21.87	21.16
	1RB-Low (0)	2680	22.57	22.17	21.76
		2636.5	22.15	21.71	21.26

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		2593	22.37	21.90	21.37
		2549.5	22.01	21.66	21.04
		2506	22.10	21.71	21.01
	50RB-High (50)	2680	22.05	22.06	22.06
		2636.5	21.75	21.76	21.68
		2593	21.90	21.99	21.89
		2549.5	21.91	21.96	21.76
		2506	21.56	21.66	21.45
	50RB-Middle (25)	2680	22.11	22.18	22.18
		2636.5	21.78	21.85	21.72
		2593	21.99	22.09	21.97
		2549.5	21.85	21.98	21.80
		2506	21.57	21.68	21.43
	50RB-Low (0)	2680	22.21	22.28	22.19
		2636.5	21.86	21.90	21.82
		2593	22.06	22.12	21.99
		2549.5	21.83	21.93	21.72
		2506	21.66	21.74	21.51
	100RB (0)	2680	22.21	22.19	22.10
		2636.5	21.86	21.88	21.73
		2593	22.03	22.08	21.99
		2549.5	21.84	21.94	21.77
		2506	21.65	21.77	21.53

LTE B41 PC2 Power Level C1

Band 41					
Bandwidth (MHz)	RB allocation RB offset	Frequency (MHz)	Actual output power (dBm)		
			QPSK	16QAM	64QAM
5MHz	1RB-High (24)	2687.5	27.22	26.31	25.20
		2640.3	27.21	26.39	25.23
		2593	27.37	26.55	25.36
		2545.8	27.40	26.52	25.35
		2498.5	27.14	26.31	25.11
	1RB-Middle (12)	2687.5	27.36	26.45	25.29
		2640.3	27.33	26.46	25.32
		2593	27.51	26.65	25.45
		2545.8	27.49	26.61	25.44
		2498.5	27.30	26.42	25.23
	1RB-Low (0)	2687.5	27.27	26.39	25.25
		2640.3	27.24	26.37	25.26
		2593	27.46	26.58	25.45
		2545.8	27.36	26.47	25.30
		2498.5	27.22	26.32	25.15
	12RB-High (13)	2687.5	26.38	25.34	24.24
		2640.3	26.36	25.33	24.32
		2593	26.45	25.48	24.48
		2545.8	26.50	25.50	24.40
		2498.5	26.27	25.28	24.24
	12RB-Middle (6)	2687.5	26.43	25.37	24.27
		2640.3	26.38	25.38	24.37
		2593	26.55	25.56	24.54
		2545.8	26.55	25.54	24.45
		2498.5	26.28	25.29	24.26
	12RB-Low (0)	2687.5	26.37	25.36	24.29

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		2640.3	26.33	25.33	24.33
		2593	26.51	25.51	24.53
		2545.8	26.46	25.45	24.38
		2498.5	26.25	25.24	24.23
	25RB (0)	2687.5	26.32	25.36	24.22
		2640.3	26.32	25.37	24.32
		2593	26.45	25.52	24.50
		2545.8	26.42	25.47	24.37
		2498.5	26.21	25.25	24.22
10MHz	1RB-High (49)	2685	27.31	26.41	25.26
		2639	27.32	26.46	25.33
		2593	27.42	26.60	25.42
		2547	27.53	26.65	25.48
		2501	27.22	26.41	25.21
	1RB-Middle (24)	2685	27.46	26.58	25.41
		2639	27.42	26.57	25.42
		2593	27.59	26.78	25.58
		2547	27.60	26.72	25.54
		2501	27.34	26.50	25.29
	1RB-Low (0)	2685	27.44	26.56	25.39
		2639	27.35	26.51	25.35
		2593	27.58	26.77	25.56
		2547	27.45	26.59	25.41
		2501	27.30	26.44	25.22
	25RB-High (25)	2685	26.41	25.42	24.31
		2639	26.39	25.44	24.40
		2593	26.49	25.53	24.55
		2547	26.53	25.53	24.47
		2501	26.30	25.33	24.27
	25RB-Middle (12)	2685	26.44	25.46	24.35
		2639	26.39	25.43	24.39
		2593	26.57	25.60	24.60
		2547	26.56	25.59	24.51
		2501	26.28	25.33	24.29
	25RB-Low (0)	2685	26.45	25.46	24.37
		2639	26.36	25.40	24.36
		2593	26.59	25.63	24.61
		2547	26.52	25.54	24.46
		2501	26.27	25.30	24.27
	50RB (0)	2685	26.48	25.48	24.38
		2639	26.41	25.46	24.38
		2593	26.59	25.61	24.58
		2547	26.57	25.58	24.51
		2501	26.32	25.36	24.25
15MHz	1RB-High (74)	2682.5	27.17	26.28	25.13
		2637.8	27.22	26.36	25.19
		2593	27.27	26.43	25.26
		2548.3	27.42	26.57	25.39
		2503.5	27.08	26.25	25.11
	1RB-Middle (37)	2682.5	27.37	26.47	25.32
		2637.8	27.35	26.51	25.36
		2593	27.48	26.64	25.50
		2548.3	27.50	26.62	25.46
		2503.5	27.20	26.38	25.19
	1RB-Low (0)	2682.5	27.36	26.50	25.32

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		2637.8	27.25	26.41	25.26
		2593	27.51	26.67	25.50
		2548.3	27.32	26.47	25.31
		2503.5	27.15	26.30	25.10
	36RB-High (38)	2682.5	26.43	25.35	24.26
		2637.8	26.38	25.35	24.31
		2593	26.46	25.44	24.43
		2548.3	26.57	25.52	24.45
		2503.5	26.26	25.23	24.19
	36RB-Middle (19)	2682.5	26.47	25.38	24.33
		2637.8	26.39	25.33	24.35
		2593	26.53	25.51	24.54
		2548.3	26.57	25.54	24.45
		2503.5	26.27	25.22	24.22
	36RB-Low (0)	2682.5	26.47	25.41	24.35
		2637.8	26.37	25.33	24.35
		2593	26.60	25.57	24.57
		2548.3	26.52	25.46	24.40
		2503.5	26.24	25.22	24.19
	75RB (0)	2682.5	26.42	25.44	24.34
		2637.8	26.34	25.35	24.33
		2593	26.52	25.53	24.53
		2548.3	26.50	25.55	24.42
		2503.5	26.22	25.28	24.22
20MHz	1RB-High (99)	2680	27.01	26.18	24.98
		2636.5	27.02	26.22	25.04
		2593	27.05	26.23	25.06
		2549.5	27.28	26.44	25.29
		2506	26.87	26.11	24.93
	1RB-Middle (50)	2680	27.47	26.60	25.43
		2636.5	27.43	26.56	25.42
		2593	27.54	26.72	25.57
		2549.5	27.59	26.70	25.55
		2506	27.27	26.46	25.25
	1RB-Low (0)	2680	27.25	26.39	25.24
		2636.5	27.10	26.27	25.13
		2593	27.39	26.57	25.37
		2549.5	27.19	26.31	25.18
		2506	26.97	26.15	24.99
	50RB-High (50)	2680	26.41	25.44	24.31
		2636.5	26.40	25.38	24.34
		2593	26.36	25.40	24.41
		2549.5	26.56	25.56	24.46
		2506	26.27	25.31	24.24
	50RB-Middle (25)	2680	26.47	25.50	24.40
		2636.5	26.39	25.43	24.38
		2593	26.57	25.53	24.56
		2549.5	26.60	25.62	24.53
		2506	26.27	25.30	24.28
	50RB-Low (0)	2680	26.44	25.49	24.38
		2636.5	26.35	25.39	24.39
		2593	26.57	25.55	24.48
		2549.5	26.62	25.66	24.58
		2506	26.22	25.25	24.21
	100RB (0)	2680	26.47	25.49	24.43

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		2636.5	26.37	25.40	24.41
		2593	26.54	25.56	24.55
		2549.5	26.59	25.61	24.54
		2506	26.30	25.32	24.29

LTE B41 PC2 Power Level A1

Band 41					
Bandwidth (MHz)	RB allocation RB offset	Frequency (MHz)	Actual output power (dBm)		
			QPSK	16QAM	64QAM
5MHz	1RB-High (24)	2687.5	18.58	17.98	17.74
		2640.3	18.59	17.94	17.68
		2593	18.69	18.07	17.78
		2545.8	18.63	18.04	17.75
		2498.5	18.63	18.03	17.75
	1RB-Middle (12)	2687.5	18.75	18.13	17.87
		2640.3	18.71	18.07	17.80
		2593	18.85	18.22	17.94
		2545.8	18.75	18.13	17.85
		2498.5	18.73	18.16	17.87
	1RB-Low (0)	2687.5	18.65	18.04	17.77
		2640.3	18.60	17.95	17.68
		2593	18.75	18.14	17.88
		2545.8	18.63	18.02	17.75
		2498.5	18.68	18.07	17.80
	12RB-High (13)	2687.5	17.79	17.79	17.85
		2640.3	17.73	17.73	17.77
		2593	17.85	17.85	17.91
		2545.8	17.78	17.81	17.83
		2498.5	17.76	17.82	17.82
	12RB-Middle (6)	2687.5	17.86	17.85	17.90
		2640.3	17.80	17.77	17.84
		2593	17.91	17.94	17.99
		2545.8	17.85	17.85	17.88
		2498.5	17.84	17.86	17.95
	12RB-Low (0)	2687.5	17.78	17.80	17.81
		2640.3	17.71	17.70	17.73
		2593	17.87	17.87	17.94
		2545.8	17.80	17.77	17.84
		2498.5	17.78	17.82	17.87
	25RB (0)	2687.5	17.79	17.83	17.86
		2640.3	17.71	17.75	17.78
		2593	17.84	17.92	17.95
		2545.8	17.80	17.81	17.86
		2498.5	17.79	17.82	17.86
10MHz	1RB-High (49)	2685	18.66	18.08	17.79
		2639	18.67	18.06	17.77
		2593	18.75	18.14	17.84
		2547	18.78	18.17	17.85
		2501	18.64	18.03	17.73
	1RB-Middle (24)	2685	18.85	18.26	17.96
		2639	18.80	18.18	17.86
		2593	18.94	18.34	18.04
		2547	18.86	18.24	17.96
		2501	18.85	18.25	17.98

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	1RB-Low (0)	2685	18.79	18.21	17.90
		2639	18.74	18.10	17.79
		2593	18.89	18.29	17.98
		2547	18.74	18.14	17.83
		2501	18.76	18.18	17.87
	25RB-High (25)	2685	17.88	17.92	17.93
		2639	17.80	17.81	17.86
		2593	17.87	17.92	17.98
		2547	17.88	17.90	17.95
		2501	17.82	17.87	17.93
	25RB-Middle (12)	2685	17.90	17.91	17.96
		2639	17.81	17.82	17.86
		2593	17.94	17.98	18.03
		2547	17.84	17.88	17.94
		2501	17.79	17.84	17.93
	25RB-Low (0)	2685	17.88	17.90	17.92
		2639	17.78	17.78	17.83
		2593	17.95	18.00	18.08
		2547	17.89	17.91	17.94
		2501	17.84	17.84	17.91
	50RB (0)	2685	17.88	17.95	17.92
		2639	17.80	17.84	17.80
		2593	17.92	17.98	17.97
		2547	17.89	17.98	17.95
		2501	17.81	17.87	17.85
15MHz	1RB-High (74)	2682.5	18.56	17.94	17.68
		2637.8	18.56	17.92	17.64
		2593	18.61	17.99	17.69
		2548.3	18.71	18.07	17.80
		2503.5	18.50	17.92	17.60
	1RB-Middle (37)	2682.5	18.75	18.14	17.87
		2637.8	18.73	18.08	17.80
		2593	18.84	18.22	17.94
		2548.3	18.78	18.14	17.87
		2503.5	18.68	18.08	17.79
	1RB-Low (0)	2682.5	18.72	18.11	17.84
		2637.8	18.61	17.99	17.72
		2593	18.82	18.21	17.90
		2548.3	18.64	18.02	17.71
		2503.5	18.66	18.06	17.77
	36RB-High (38)	2682.5	17.86	17.78	17.80
		2637.8	17.75	17.71	17.71
		2593	17.82	17.77	17.81
		2548.3	17.81	17.79	17.80
		2503.5	17.72	17.69	17.72
	36RB-Middle (19)	2682.5	17.89	17.84	17.83
		2637.8	17.77	17.73	17.73
		2593	17.89	17.88	17.87
		2548.3	17.85	17.79	17.80
		2503.5	17.71	17.77	17.76
	36RB-Low (0)	2682.5	17.88	17.82	17.83
		2637.8	17.78	17.73	17.75
		2593	17.93	17.89	17.93
		2548.3	17.83	17.78	17.80
		2503.5	17.63	17.73	17.75

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	75RB (0)	2682.5	17.85	17.85	17.84
		2637.8	17.75	17.75	17.74
		2593	17.90	17.92	17.90
		2548.3	17.84	17.86	17.84
		2503.5	17.75	17.79	17.80
20MHz	1RB-High (99)	2680	18.42	17.82	17.52
		2636.5	18.40	17.80	17.50
		2593	18.40	17.78	17.51
		2549.5	18.59	17.97	17.67
		2506	18.31	17.71	17.53
	1RB-Middle (50)	2680	18.88	18.26	17.98
		2636.5	18.81	18.17	17.87
		2593	18.95	18.31	18.02
		2549.5	18.88	18.26	17.96
		2506	18.75	18.15	17.84
	1RB-Low (0)	2680	18.61	18.01	17.72
		2636.5	18.48	17.85	17.56
		2593	18.73	18.13	17.82
		2549.5	18.49	17.88	17.55
		2506	18.51	17.91	17.61
	50RB-High (50)	2680	17.94	17.97	17.95
		2636.5	17.81	17.83	17.81
		2593	17.81	17.87	17.82
		2549.5	17.92	17.96	17.92
		2506	17.79	17.83	17.82
	50RB-Middle (25)	2680	17.94	17.97	17.95
		2636.5	17.79	17.84	17.78
		2593	17.92	17.98	17.95
		2549.5	17.87	17.91	17.89
		2506	17.76	17.81	17.80
	50RB-Low (0)	2680	17.95	17.97	17.92
		2636.5	17.84	17.90	17.85
		2593	18.14	18.12	18.06
		2549.5	17.89	17.98	17.92
		2506	17.78	17.91	17.82
	100RB (0)	2680	17.93	17.96	17.93
		2636.5	17.82	17.83	17.82
		2593	17.93	17.95	17.94
		2549.5	17.88	17.99	17.90
		2506	17.78	17.81	17.74

LTE B41 PC2 Power Level B1

Band 41					
Bandwidth (MHz)	RB allocation RB offset	Frequency (MHz)	Actual output power (dBm)		
			QPSK	16QAM	64QAM
5MHz	1RB-High (24)	2687.5	24.12	23.41	23.20
		2640.3	24.06	23.44	23.20
		2593	24.19	23.53	23.29
		2545.8	24.16	23.51	23.26
		2498.5	24.15	23.45	23.19
	1RB-Middle (12)	2687.5	24.27	23.60	23.34
		2640.3	24.22	23.59	23.36
		2593	24.32	23.66	23.40
		2545.8	24.26	23.65	23.36

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		2498.5	24.28	23.64	23.34
	1RB-Low (0)	2687.5	24.18	23.51	23.25
		2640.3	24.10	23.46	23.23
		2593	24.24	23.61	23.35
		2545.8	24.12	23.50	23.23
		2498.5	24.23	23.52	23.27
	12RB-High (13)	2687.5	23.21	23.27	23.34
		2640.3	23.14	23.29	23.32
		2593	23.26	23.38	23.44
		2545.8	23.21	23.34	23.36
		2498.5	23.23	23.35	23.37
	12RB-Middle (6)	2687.5	23.24	23.34	23.38
		2640.3	23.21	23.35	23.41
		2593	23.33	23.45	23.48
		2545.8	23.27	23.42	23.39
		2498.5	23.28	23.38	23.39
	12RB-Low (0)	2687.5	23.21	23.29	23.33
		2640.3	23.15	23.33	23.37
		2593	23.30	23.43	23.43
		2545.8	23.21	23.34	23.35
		2498.5	23.28	23.35	23.38
	25RB (0)	2687.5	23.21	23.31	23.37
		2640.3	23.14	23.32	23.35
		2593	23.27	23.44	23.47
		2545.8	23.23	23.39	23.39
		2498.5	23.24	23.37	23.37
10MHz	1RB-High (49)	2685	24.19	23.52	23.24
		2639	24.14	23.50	23.25
		2593	24.22	23.57	23.32
		2547	24.28	23.64	23.33
		2501	24.16	23.47	23.19
	1RB-Middle (24)	2685	24.36	23.67	23.39
		2639	24.27	23.64	23.36
		2593	24.39	23.72	23.45
		2547	24.35	23.70	23.43
		2501	24.31	23.62	23.32
	1RB-Low (0)	2685	24.31	23.63	23.36
		2639	24.18	23.56	23.30
		2593	24.36	23.70	23.44
		2547	24.23	23.59	23.31
		2501	24.30	23.59	23.32
	25RB-High (25)	2685	23.27	23.36	23.40
		2639	23.17	23.33	23.38
		2593	23.31	23.42	23.51
		2547	23.25	23.41	23.47
		2501	23.18	23.33	23.39
	25RB-Middle (12)	2685	23.28	23.39	23.46
		2639	23.22	23.35	23.38
		2593	23.33	23.46	23.51
		2547	23.25	23.38	23.44
		2501	23.23	23.35	23.37
	25RB-Low (0)	2685	23.30	23.40	23.43
		2639	23.22	23.36	23.37
		2593	23.38	23.51	23.55
		2547	23.23	23.41	23.46

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		2501	23.23	23.38	23.42
	50RB (0)	2685	23.30	23.42	23.38
		2639	23.19	23.33	23.31
		2593	23.35	23.49	23.46
		2547	23.24	23.44	23.41
		2501	23.21	23.37	23.35
15MHz	1RB-High (74)	2682.5	24.12	23.42	23.15
		2637.8	24.07	23.41	23.15
		2593	24.13	23.45	23.21
		2548.3	24.21	23.55	23.26
		2503.5	24.05	23.34	23.07
	1RB-Middle (37)	2682.5	24.30	23.61	23.32
		2637.8	24.22	23.53	23.27
		2593	24.32	23.63	23.37
		2548.3	24.28	23.61	23.34
		2503.5	24.22	23.52	23.24
	1RB-Low (0)	2682.5	24.27	23.58	23.32
		2637.8	24.12	23.46	23.24
		2593	24.33	23.65	23.39
		2548.3	24.16	23.51	23.23
		2503.5	24.20	23.50	23.24
	36RB-High (38)	2682.5	23.28	23.28	23.30
		2637.8	23.17	23.23	23.26
		2593	23.27	23.32	23.34
		2548.3	23.26	23.35	23.35
		2503.5	23.16	23.24	23.24
	36RB-Middle (19)	2682.5	23.29	23.32	23.35
		2637.8	23.16	23.26	23.28
		2593	23.30	23.39	23.39
		2548.3	23.27	23.31	23.34
		2503.5	23.19	23.24	23.27
	36RB-Low (0)	2682.5	23.29	23.32	23.33
		2637.8	23.18	23.27	23.28
		2593	23.38	23.44	23.45
		2548.3	23.23	23.30	23.32
		2503.5	23.22	23.29	23.30
	75RB (0)	2682.5	23.26	23.35	23.34
		2637.8	23.16	23.28	23.27
		2593	23.32	23.42	23.42
		2548.3	23.24	23.38	23.37
		2503.5	23.16	23.29	23.28
20MHz	1RB-High (99)	2680			
		2636.5	23.98	23.27	22.95
		2593	23.92	23.23	22.97
		2549.5	23.91	23.25	22.95
		2506	24.13	23.43	23.15
	1RB-Middle (50)	2680	23.84	23.17	22.87
		2636.5	24.40	23.69	23.43
		2593	24.30	23.60	23.33
		2549.5	24.42	23.73	23.43
		2506	24.39	23.69	23.41
	1RB-Low (0)	2680	24.28	23.60	23.30
		2636.5	24.15	23.47	23.19
		2593	24.00	23.29	23.04
		2549.5	24.26	23.56	23.29

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		2506	24.05	23.32	23.05
	50RB-High (50)	2680	24.07	23.38	23.08
		2636.5	23.31	23.39	23.36
		2593	23.18	23.32	23.29
		2549.5	23.23	23.34	23.30
		2506	23.33	23.48	23.43
	50RB-Middle (25)	2680	23.15	23.28	23.25
		2636.5	23.31	23.48	23.43
		2593	23.18	23.37	23.34
		2549.5	23.35	23.49	23.45
		2506	23.30	23.46	23.40
	50RB-Low (0)	2680	23.18	23.30	23.26
		2636.5	23.31	23.44	23.43
		2593	23.21	23.34	23.32
		2549.5	23.45	23.57	23.52
		2506	23.26	23.41	23.35
	100RB (0)	2680	23.22	23.32	23.28
		2636.5	23.31	23.40	23.38
		2593	23.19	23.31	23.30
		2549.5	23.35	23.45	23.41
		2506	23.27	23.44	23.43

LTE B66 Power Level A1/C1

Band 66					
Bandwidth (MHz)	RB allocation RB offset	Frequency (MHz)	Actual output power (dBm)		
			QPSK	16QAM	64QAM
1.4MHz	1RB-High (5)	1779.3	24.07	22.79	21.80
		1745	23.47	22.87	21.78
		1710.7	23.38	22.74	21.73
	1RB-Middle (3)	1779.3	24.19	22.92	21.91
		1745	23.61	23.00	22.15
		1710.7	23.49	22.87	22.14
	1RB-Low (0)	1779.3	23.97	22.86	21.91
		1745	23.49	22.83	21.77
		1710.7	23.39	22.74	21.83
	3RB-High (3)	1779.3	23.87	22.65	21.78
		1745	23.62	22.60	21.73
		1710.7	23.46	22.51	21.71
	3RB-Middle (1)	1779.3	23.77	22.79	21.84
		1745	23.62	22.67	22.10
		1710.7	23.53	22.47	22.03
	3RB-Low (0)	1779.3	23.67	22.73	21.81
		1745	23.62	22.59	21.74
		1710.7	23.50	22.44	21.86
	6RB (0)	1779.3	22.73	21.83	20.69
		1745	22.69	21.87	20.68
		1710.7	22.51	21.69	20.82
3MHz	1RB-High (14)	1778.5	24.10	23.32	22.35
		1745	24.02	23.27	22.27
		1711.5	23.88	23.05	22.13
	1RB-Middle (7)	1778.5	24.28	23.50	22.44
		1745	24.17	23.41	22.33
		1711.5	24.05	23.38	22.20
	1RB-Low (0)	1778.5	24.13	23.38	22.32

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		1745	24.02	23.28	22.23
		1711.5	23.91	23.10	22.10
	8RB-High (7)	1778.5	23.09	22.21	21.18
		1745	23.04	22.17	21.11
		1711.5	22.93	22.03	20.94
	8RB-Middle (4)	1778.5	23.13	22.22	21.21
		1745	23.09	22.20	21.13
		1711.5	22.93	22.01	21.01
	8RB-Low (0)	1778.5	23.12	22.20	21.19
		1745	23.06	22.15	21.10
		1711.5	22.93	22.03	20.96
	15RB (0)	1778.5	23.14	22.17	21.18
		1745	23.06	22.11	21.04
		1711.5	22.94	21.94	20.98
5MHz	1RB-High (24)	1777.5	23.51	23.29	22.17
		1745	23.44	23.26	22.17
		1712.5	23.46	23.01	22.02
	1RB-Middle (12)	1777.5	23.74	23.34	22.45
		1745	23.76	23.46	22.34
		1712.5	23.72	23.30	22.28
	1RB-Low (0)	1777.5	23.50	23.10	22.23
		1745	23.46	23.22	22.22
		1712.5	23.45	23.10	22.01
	12RB-High (13)	1777.5	22.65	22.14	21.18
		1745	22.59	22.10	21.11
		1712.5	22.82	21.97	20.94
	12RB-Middle (6)	1777.5	22.74	22.20	21.19
		1745	22.67	22.13	21.12
		1712.5	22.92	22.00	20.98
	12RB-Low (0)	1777.5	22.69	22.16	21.23
		1745	22.65	22.09	21.08
		1712.5	22.88	21.94	20.94
	25RB (0)	1777.5	22.68	22.20	21.17
		1745	22.63	22.12	21.12
		1712.5	22.90	22.00	20.97
10MHz	1RB-High (49)	1775	24.03	22.85	21.78
		1745	23.55	22.94	21.75
		1715	23.37	22.71	21.58
	1RB-Middle (24)	1775	23.78	22.99	22.08
		1745	23.70	23.03	22.24
		1715	23.54	22.84	22.14
	1RB-Low (0)	1775	23.65	23.01	21.89
		1745	23.54	22.95	21.88
		1715	23.45	22.75	22.01
	25RB-High (25)	1775	22.74	21.73	21.04
		1745	22.68	21.71	20.79
		1715	22.55	21.59	21.01
	25RB-Middle (12)	1775	22.76	21.75	21.25
		1745	22.69	21.68	21.18
		1715	22.53	21.86	21.02
	25RB-Low (0)	1775	22.80	21.78	21.27
		1745	22.66	21.66	21.14
		1715	22.52	21.56	21.00
	50RB (0)	1775	22.76	21.73	21.11
		1745	22.67	21.68	21.01

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		1715	22.55	21.68	20.94
15MHz	1RB-High (74)	1772.5	23.50	22.89	21.76
		1745	23.45	22.78	21.71
		1717.5	23.32	22.59	21.88
	1RB-Middle (37)	1772.5	23.61	22.89	21.88
		1745	23.53	22.89	22.23
		1717.5	23.37	22.66	22.12
	1RB-Low (0)	1772.5	23.59	22.83	21.93
		1745	23.45	22.68	22.08
		1717.5	23.36	22.61	21.98
	36RB-High (38)	1772.5	22.70	21.69	20.91
		1745	22.62	21.60	21.15
		1717.5	22.50	21.88	20.97
	36RB-Middle (19)	1772.5	22.76	21.74	21.23
		1745	22.63	21.59	21.11
		1717.5	22.56	21.67	20.95
	36RB-Low (0)	1772.5	22.75	21.68	21.24
		1745	22.62	21.61	21.13
		1717.5	22.47	21.95	20.98
	75RB (0)	1772.5	22.69	21.71	21.16
		1745	22.65	21.62	21.15
		1717.5	22.54	21.74	20.99
20MHz	1RB-High (99)	1770	23.85	23.15	22.03
		1745	23.78	23.02	21.97
		1720	23.65	22.90	21.88
	1RB-Middle (50)	1770	24.20	23.49	22.43
		1745	24.11	23.35	22.27
		1720	23.97	23.20	22.15
	1RB-Low (0)	1770	23.87	23.16	22.12
		1745	23.80	23.13	22.00
		1720	23.69	22.89	21.88
	50RB-High (50)	1770	23.07	22.13	21.17
		1745	23.04	22.11	21.11
		1720	22.94	22.00	20.97
	50RB-Middle (25)	1770	23.19	22.25	21.23
		1745	23.06	22.12	21.08
		1720	22.98	21.97	20.99
	50RB-Low (0)	1770	23.15	22.20	21.21
		1745	23.09	22.13	21.19
		1720	22.95	21.93	20.93
	100RB (0)	1770	23.14	22.17	21.20
		1745	23.07	22.12	21.13
		1720	22.93	21.93	20.95

LTE B66 Power Level B1

Band 66					
Bandwidth (MHz)	RB allocation RB offset	Frequency (MHz)	Actual output power (dBm)		
			QPSK	16QAM	64QAM
1.4MHz	1RB-High (5)	1779.3	19.33	19.63	19.52
		1745	19.27	19.62	19.46
		1710.7	19.14	19.48	19.37
	1RB-Middle (3)	1779.3	19.51	19.71	19.61
		1745	19.45	19.78	19.54
		1710.7	19.29	19.61	19.44

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	1RB-Low (0)	1779.3	19.33	19.60	19.50
		1745	19.23	19.61	19.44
		1710.7	19.13	19.36	19.40
	3RB-High (3)	1779.3	19.41	19.43	19.48
		1745	19.37	19.40	19.48
		1710.7	19.25	19.26	19.36
	3RB-Middle (1)	1779.3	19.52	19.48	19.57
		1745	19.42	19.49	19.50
		1710.7	19.30	19.25	19.41
	3RB-Low (0)	1779.3	19.42	19.42	19.49
		1745	19.36	19.42	19.44
		1710.7	19.27	19.24	19.31
	6RB (0)	1779.3	19.38	19.54	19.43
		1745	19.37	19.46	19.36
		1710.7	19.28	19.40	19.22
3MHz	1RB-High (14)	1778.5	19.36	19.70	19.48
		1745	19.29	19.58	19.41
		1711.5	19.19	19.48	19.37
	1RB-Middle (7)	1778.5	19.52	19.86	19.57
		1745	19.44	19.74	19.63
		1711.5	19.35	19.61	19.49
	1RB-Low (0)	1778.5	19.39	19.76	19.56
		1745	19.33	19.58	19.43
		1711.5	19.18	19.51	19.39
	8RB-High (7)	1778.5	19.40	19.42	19.42
		1745	19.34	19.37	19.34
		1711.5	19.21	19.26	19.22
	8RB-Middle (4)	1778.5	19.39	19.44	19.46
		1745	19.34	19.40	19.38
		1711.5	19.25	19.32	19.28
	8RB-Low (0)	1778.5	19.38	19.42	19.41
		1745	19.33	19.40	19.35
		1711.5	19.20	19.29	19.23
	15RB (0)	1778.5	19.33	19.41	19.39
		1745	19.26	19.29	19.32
		1711.5	19.19	19.19	19.18
5MHz	1RB-High (24)	1777.5	19.31	19.55	19.50
		1745	19.25	19.59	19.44
		1712.5	19.10	19.45	19.26
	1RB-Middle (12)	1777.5	19.58	19.75	19.62
		1745	19.42	19.89	19.60
		1712.5	19.41	19.63	19.53
	1RB-Low (0)	1777.5	19.30	19.67	19.44
		1745	19.24	19.60	19.38
		1712.5	19.11	19.47	19.33
	12RB-High (13)	1777.5	19.35	19.39	19.35
		1745	19.32	19.31	19.30
		1712.5	19.20	19.22	19.15
	12RB-Middle (6)	1777.5	19.48	19.48	19.49
		1745	19.40	19.38	19.38
		1712.5	19.26	19.29	19.25
	12RB-Low (0)	1777.5	19.41	19.41	19.44
		1745	19.30	19.34	19.30
		1712.5	19.21	19.20	19.17
	25RB (0)	1777.5	19.37	19.42	19.39

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		1745	19.32	19.34	19.30
		1712.5	19.20	19.20	19.19
10MHz	1RB-High (49)	1775	19.43	19.74	19.54
		1745	19.34	19.65	19.55
		1715	19.19	19.53	19.36
	1RB-Middle (24)	1775	19.56	19.90	19.82
		1745	19.49	19.87	19.64
		1715	19.36	19.55	19.52
	1RB-Low (0)	1775	19.47	19.84	19.66
		1745	19.31	19.71	19.52
		1715	19.26	19.54	19.41
	25RB-High (25)	1775	19.45	19.45	19.44
		1745	19.38	19.38	19.38
		1715	19.24	19.28	19.21
	25RB-Middle (12)	1775	19.50	19.51	19.51
		1745	19.45	19.45	19.44
		1715	19.29	19.31	19.29
	25RB-Low (0)	1775	19.49	19.56	19.51
		1745	19.38	19.41	19.40
		1715	19.27	19.28	19.27
	50RB (0)	1775	19.43	19.48	19.43
		1745	19.36	19.40	19.39
		1715	19.25	19.25	19.27
15MHz	1RB-High (74)	1772.5	19.39	19.67	19.51
		1745	19.29	19.60	19.41
		1717.5	19.17	19.46	19.37
	1RB-Middle (37)	1772.5	19.47	19.74	19.71
		1745	19.40	19.77	19.53
		1717.5	19.25	19.50	19.41
	1RB-Low (0)	1772.5	19.44	19.71	19.60
		1745	19.30	19.56	19.43
		1717.5	19.19	19.48	19.34
	36RB-High (38)	1772.5	19.49	19.44	19.46
		1745	19.41	19.40	19.40
		1717.5	19.26	19.27	19.22
	36RB-Middle (19)	1772.5	19.53	19.50	19.50
		1745	19.41	19.39	19.40
		1717.5	19.29	19.29	19.23
	36RB-Low (0)	1772.5	19.49	19.49	19.49
		1745	19.44	19.41	19.45
		1717.5	19.28	19.25	19.27
	75RB (0)	1772.5	19.47	19.49	19.50
		1745	19.44	19.43	19.36
		1717.5	19.26	19.26	19.22
20MHz	1RB-High (99)	1770	19.31	19.57	19.40
		1745	19.24	19.51	19.32
		1720	19.10	19.41	19.28
	1RB-Middle (50)	1770	19.69	20.02	19.81
		1745	19.50	19.87	19.68
		1720	19.34	19.60	19.48
	1RB-Low (0)	1770	19.32	19.64	19.41
		1745	19.23	19.62	19.35
		1720	19.09	19.41	19.25
	50RB-High (50)	1770	19.50	19.51	19.46
		1745	19.44	19.45	19.43

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		1720	19.33	19.31	19.30
	50RB-Middle (25)	1770	19.61	19.61	19.59
		1745	19.48	19.47	19.46
		1720	19.32	19.33	19.29
	50RB-Low (0)	1770	19.59	19.59	19.59
		1745	19.54	19.55	19.51
		1720	19.30	19.32	19.28
	100RB (0)	1770	19.57	19.56	19.52
		1745	19.52	19.50	19.46
		1720	19.31	19.28	19.27

LTE B71 Power Level A1/B1/C1

Band 71					
Bandwidth (MHz)	RB allocation RB offset (Start RB)	Frequency (MHz)	QPSK Actual output power (dBm)	16QAM Actual output power (dBm)	64QAM Actual output power (dBm)
5 MHz	1RB High (24)	695.5	25.03	24.26	23.24
		680.5	25.02	24.30	23.16
		665.5	24.97	24.25	23.11
	1RB Middle (12)	695.5	25.38	24.46	23.49
		680.5	25.33	24.49	23.47
		665.5	25.16	24.39	23.37
	1RB Low (0)	695.5	25.03	24.21	23.25
		680.5	25.01	24.21	23.24
		665.5	24.75	24.17	23.11
	12RB High (13)	695.5	24.24	23.19	22.24
		680.5	24.23	23.20	22.20
		665.5	24.08	23.19	22.19
	12RB Middle (6)	695.5	24.35	23.29	22.34
		680.5	24.25	23.24	22.22
		665.5	24.25	23.20	22.22
	12RB Low (0)	695.5	24.30	23.24	22.27
		680.5	24.23	23.24	22.17
		665.5	24.11	23.07	22.06
	25RB (0)	695.5	24.32	23.31	22.28
		680.5	24.25	23.23	22.19
		665.5	24.08	23.17	22.13
10 MHz	1RB High (49)	693	23.80	24.42	23.27
		680.5	25.09	24.28	23.34
		668	25.06	24.30	23.25
	1RB Middle (24)	693	23.91	24.43	23.38
		680.5	25.24	24.47	23.44
		668	25.27	24.41	23.37
	1RB Low (0)	693	23.75	24.40	23.31
		680.5	25.05	24.36	23.32

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		668	25.10	24.20	23.20
	25RB High (25)	693	22.89	23.29	22.23
		680.5	24.32	23.28	22.24
		668	24.28	23.23	22.25
	25RB Middle (12)	693	22.88	23.32	22.32
		680.5	24.29	23.27	22.23
		668	24.29	23.27	22.26
	25RB Low (0)	693	22.89	23.40	22.37
		680.5	24.28	23.28	22.29
		668	24.23	23.20	22.18
	50RB (0)	693	22.86	23.32	22.30
		680.5	24.34	23.28	22.25
		668	24.26	23.24	22.17
15 MHz	1RB High (74)	690.5	25.07	24.29	23.19
		680.5	25.03	24.30	23.20
		670.5	24.96	24.17	23.18
	1RB Middle (37)	690.5	25.18	24.47	23.36
		680.5	25.14	24.38	23.31
		670.5	25.08	24.37	23.25
	1RB Low (0)	690.5	25.06	24.41	23.28
		680.5	25.03	24.34	23.29
		670.5	25.02	24.24	23.18
	36RB High (38)	690.5	24.29	23.23	22.25
		680.5	24.26	23.20	22.21
		670.5	24.27	23.20	22.21
	36RB Middle (19)	690.5	24.31	23.23	22.24
		680.5	24.24	23.20	22.24
		670.5	24.24	23.22	22.19
	36RB Low (0)	690.5	24.31	23.24	22.30
		680.5	24.23	23.20	22.19
		670.5	24.20	23.15	22.15
	75RB (0)	690.5	24.30	23.27	22.28
		680.5	24.25	23.22	22.22
		670.5	24.22	23.18	22.16
20 MHz	1RB High (99)	688	24.91	24.15	23.06
		683	24.83	24.06	22.94
		673	24.80	24.01	23.02
	1RB Middle (50)	688	25.26	24.44	23.41
		683	25.17	24.47	23.37
		673	25.15	24.40	23.41
	1RB Low (0)	688	24.90	24.07	23.08
		683	24.87	24.17	23.06

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		673	24.84	24.01	23.12
	50RB High (50)	688	24.20	23.19	22.14
		683	24.19	23.16	22.14
		673	24.17	23.16	22.14
	50RB Middle (25)	688	24.33	23.30	22.28
		683	24.28	23.26	22.25
		673	24.20	23.17	22.16
	50RB Low (0)	688	24.31	23.27	22.26
		683	24.20	23.19	22.19
		673	24.10	23.07	22.06
	100RB (0)	688	24.26	23.19	22.21
		683	24.22	23.16	22.20
		673	24.13	23.11	22.09

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11.4 Wi-Fi and BT Measurement result

When the same transmission mode configurations have the same maximum output power on the same channel for the 802.11 a/n/ac/ax modes, the channel in the lower order/sequence 802.11 mode (i.e. a, n, ac then ax) is selected. Therefore the SAR measurements performed for the 802.11n/ac modes, as the lowest order modulation, cover 802.11ax modes.

When the specified maximum output power is the same for both UNII 1 and UNII 2A, begin SAR measurements in UNII 2A with the channel with the highest measured output power. If the reported SAR for UNII 2A is ≤ 1.2 W/kg, SAR is not required for UNII 1; otherwise treat the remaining bands separately and test them independently for SAR.

According to KDB 248227 D01, simultaneous SAR provisions in KDB 447498 D01 apply to determine simultaneous transmission SAR test exclusion for Wi-Fi MIMO. If the sum of 1-g single transmission chain SAR measurements is<1.6W/kg and/or the MIMO output power is equal or less than a single chain, then no additional SAR measurements for simultaneously at the specified maximum output power of MIMO operation.

When antennas are spatially separated to the extent that SAR distributions do not overlap and can be treated independently, SAR compliance for simultaneous transmission is determined separately for each individual antenna.

The maximum output power for WiFi 2.4G

Mode	Rate	Channel	Freq.	Output Power Tolerance (dBm)		Reduced Power(dBm)			
						Body		Head	
			(MHz)	Setting Power	Maximum	Target	Maximum	Target	Maximum
802.11b	1-11Mbps	1	2412	22	23.5	19.5	20.5	17	18
		6	2437	22	23.5	19.5	20.5	17	18
		11	2462	22	23.5	19.5	20.5	17	18
802.11g	6Mbps	1	2412	20	21.5	19.5	20.5	17	18
		6	2437	20	21.5	19.5	20.5	17	18
		11	2462	20	21.5	19.5	20.5	17	18
	9Mbps	1	2412	19	20.5	/	/	17	18
		6	2437	19	20.5	/	/	17	18
		11	2462	19	20.5	/	/	17	18
	12Mbps	1	2412	19	20.5	/	/	17	18
		6	2437	19	20.5	/	/	17	18
		11	2462	19	20.5	/	/	17	18
	18Mbps	1	2412	19	20.5	/	/	17	18
		6	2437	19	20.5	/	/	17	18
		11	2462	19	20.5	/	/	17	18
	24Mbps	1	2412	18	19.5	/	/	17	18
		6	2437	18	19.5	/	/	17	18
		11	2462	18	19.5	/	/	17	18
	36Mbps	1	2412	18	19.5	/	/	17	18
		6	2437	18	19.5	/	/	17	18

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		11	2462	18	19.5	/	/	17	18
	48Mbps	1	2412	18	19.5	/	/	17	18
		6	2437	18	19.5	/	/	17	18
		11	2462	18	19.5	/	/	17	18
	54Mbps	1	2412	17	18.5	/	/	17	18
		6	2437	17	18.5	/	/	17	18
		11	2462	17	18.5	/	/	17	18
802.11n-20M	11n MCS0	1	2412	20	21.5	19.5	20.5	17	18
		6	2437	20	21.5	19.5	20.5	17	18
		11	2462	20	21.5	19.5	20.5	17	18
	MCS1	1	2412	19	20.5	/	/	17	18
		6	2437	19	20.5	/	/	17	18
		11	2462	19	20.5	/	/	17	18
	MCS2	1	2412	19	20.5	/	/	17	18
		6	2437	19	20.5	/	/	17	18
		11	2462	19	20.5	/	/	17	18
	MCS3	1	2412	19	20.5	/	/	17	18
		6	2437	19	20.5	/	/	17	18
		11	2462	19	20.5	/	/	17	18
	MCS4	1	2412	18	19.5	/	/	17	18
		6	2437	18	19.5	/	/	17	18
		11	2462	18	19.5	/	/	17	18
	MCS5	1	2412	18	19.5	/	/	17	18
		6	2437	18	19.5	/	/	17	18
		11	2462	18	19.5	/	/	17	18
	MCS6	1	2412	18	19.5	/	/	17	18
		6	2437	18	19.5	/	/	17	18
		11	2462	18	19.5	/	/	17	18
	MCS7	1	2412	17	18.5	/	/	17	18
		6	2437	17	18.5	/	/	17	18
		11	2462	17	18.5	/	/	17	18

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The maximum output power for WiFi 5G

Mode	Rate	Channel	Freq.	Output Power Tolerance (dBm)		Reduced Power(dBm)			
						Body		Head	
			(MHz)	Setting Power	Maximum	Setting Power	Maximum	Setting Power	Maximum
802.11a 20M	6Mbps	36-64	5180-5320	20	**20**	14	14	13	13
		100-136,144	5500-5680, 5720	20	**20**	14	14	13	13
		140	5700	17	**17.5**	14	14	13	13
		149-165	5745-5825	20	**21**	14	14.5	13	13.5
	9Mbps	36-64	5180-5320	19	**19**	14	14	13	13
		100-136,144	5500-5680, 5720	19	**20**	14	14	13	13
		140	5700	17	**17.5**	14	14	13	13
		149-165	5745-5825	19	**20.5**	14	14	13	13.5
	12Mbps	36-64	5180-5320	19	**19**	14	14	13	12.5
		100-136,144	5500-5680, 5720	19	**20**	14	14	13	13
		140	5700	17	**17.5**	14	14	13	13
		149-165	5745-5825	19	**20.5**	14	14	13	13
	18Mbps	36-64	5180-5320	19	**19**	14	13.5	13	12
		100-136,144	5500-5680, 5720	19	**20**	14	13.5	13	12.5
		140	5700	17	**17.5**	14	13.5	13	12.5
		149-165	5745-5825	19	**20.5**	14	13.5	13	12.5
	24Mbps	36-64	5180-5320	18	**18**	14	13	13	12
		100-136,144	5500-5680, 5720	18	**19**	14	13.5	13	12
		140	5700	17	**17.5**	14	13.5	13	12
		149-165	5745-5825	18	**20**	14	13.5	13	12.5
	36Mbps	36-64	5180-5320	18	**18**	14	12.5	13	11.5
		100-136,144	5500-5680, 5720	18	**19**	14	13	13	12
		140	5700	17	**17.5**	14	13	13	12
		149-165	5745-5825	18	**19.5**	14	13	13	12
	48Mbps	36-64	5180-5320	18	**17.5**	14	12	13	11.5
		100-136,144	5500-5680, 5720	18	**18.5**	14	12.5	13	11.5
		140	5700	17	**17.5**	14	12.5	13	11.5
		149-165	5745-5825	18	**19.5**	14	12.5	13	11.5
	54Mbps	36-64	5180-5320	17	**16.5**	14	12	13	11
		100-144	5500-5720	17	**17.5**	14	12.5	13	11.5

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		149-165	5745-5825	17	**18**	14	12.5	13	12
802.11n 20M	MCS0	36-64	5180-5320	20	**19.5**	14	14	13	13
		100-136,144	5500-5680, 5720	20	**20**	14	14	13	13
		140	5700	17	**17.5**	14	14	13	13
		149-165	5745-5825	20	**20.5**	14	14.5	13	13.5
	MCS1	36-64	5180-5320	19	**19**	14	14	13	13
		100-136,144	5500-5680, 5720	19	**20**	14	14	13	13
		140	5700	17	**17.5**	14	14	13	13
		149-165	5745-5825	19	**20.5**	14	14	13	13.5
	MCS2	36-64	5180-5320	19	**19**	14	14	13	12.5
		100-136,144	5500-5680, 5720	19	**20**	14	14	13	13
		140	5700	17	**17.5**	14	14	13	13
		149-165	5745-5825	19	**20.5**	14	14	13	13
	MCS3	36-64	5180-5320	19	**19**	14	13.5	13	12
		100-136,144	5500-5680, 5720	19	**20**	14	13.5	13	12.5
		140	5700	17	**17.5**	14	13.5	13	12.5
		149-165	5745-5825	19	**20.5**	14	13.5	13	12.5
	MCS4	36-64	5180-5320	18	**18**	14	13	13	12
		100-136,144	5500-5680, 5720	18	**19**	14	13.5	13	12
		140	5700	17	**17.5**	14	13.5	13	12
		149-165	5745-5825	18	**20**	14	13.5	13	12.5
	MCS5	36-64	5180-5320	18	**18**	14	12.5	13	11.5
		100-136,144	5500-5680, 5720	18	**19**	14	13	13	12
		140	5700	17	**17.5**	14	13	13	12
		149-165	5745-5825	18	**19.5**	14	13	13	12
	MCS6	36-64	5180-5320	18	**17.5**	14	12	13	11.5
		100-136,144	5500-5680, 5720	18	**18.5**	14	12.5	13	11.5
		140	5700	17	**17.5**	14	12.5	13	11.5
		149-165	5745-5825	18	**19.5**	14	12.5	13	11.5
	MCS7	36-64	5180-5320	17	**16.5**	14	12	13	11
		100-144	5500-5720	17	**17.5**	14	12.5	13	11.5
		149-165	5745-5825	17	**18**	14	12.5	13	12

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802.11n 40M	MCS0	36-56	5180-5280	19	**19.5**	14	14	13	13
		60	5300	18	**18.5**	14	14	13	13
		64	5320	19	**19.5**	14	14	13	13
		100-144	5500-5720	19	**20**	14	14	13	13
		149-165	5745-5825	19	**20.5**	14	14.5	13	13.5
	MCS1	36-64	5180-5320	18	**18.5**	14	14	13	13
		100-144	5500-5720	18	**19**	14	14	13	13
		149-165	5745-5825	18	**19.5**	14	14	13	13.5
	MCS2	36-64	5180-5320	18	**18.5**	14	14	13	12.5
		100-144	5500-5720	18	**19**	14	14	13	13
		149-165	5745-5825	18	**19.5**	14	14	13	13
	MCS3	36-64	5180-5320	18	**18.5**	14	13.5	13	12
		100-144	5500-5720	18	**19**	14	13.5	13	12.5
		149-165	5745-5825	18	**19**	14	13.5	13	12.5
	MCS4	36-64	5180-5320	17	**18**	14	13	13	12
		100-144	5500-5720	17	**18**	14	13.5	13	12
		149-165	5745-5825	17	**18.5**	14	13.5	13	12.5
	MCS5	36-64	5180-5320	17	**18**	14	12.5	13	11.5
		100-144	5500-5720	17	**18**	14	13	13	12
		149-165	5745-5825	17	**18.5**	14	13	13	12
	MCS6	36-64	5180-5320	17	**18**	14	12	13	11.5
		100-144	5500-5720	17	**18**	14	12.5	13	11.5
		149-165	5745-5825	17	**18.5**	14	12.5	13	11.5
	MCS7	36-64	5180-5320	16	**17**	14	12	13	11
		100-144	5500-5720	16	**17**	14	12.5	13	11.5
		149-165	5745-5825	16	**17.5**	14	12.5	13	12
802.11ac 20M	MCS0	36-64	5180-5320	20	**19.5**	14	14	13	13
		100-144	5500-5720	20	**20**	14	14	13	13
		140	5700	17	**17.5**	14	14	13	13
		149-165	5745-5825	20	**20.5**	14	14.5	13	13.5
	MCS1	36-64	5180-5320	19	**19**	14	14	13	13
		100-144	5500-5720	19	**20**	14	14	13	13
		140	5700	17	**17.5**	14	14	13	13
		149-165	5745-5825	19	**20.5**	14	14	13	13.5
	MCS2	36-64	5180-5320	19	**19**	14	14	13	12.5
		100-144	5500-5720	19	**20**	14	14	13	13
		140	5700	17	**17.5**	14	14	13	13
		149-165	5745-5825	19	**20.5**	14	14	13	13
	MCS3	36-64	5180-5320	19	**19**	14	13.5	13	12
		100-144	5500-5720	19	**20**	14	13.5	13	12.5

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		140	5700	17	**17.5**	14	13.5	13	12.5
		149-165	5745-5825	19	**20.5**	14	13.5	13	12.5
	MCS4	36-64	5180-5320	18	**18**	14	13	13	12
		100-144	5500-5720	18	**19**	14	13.5	13	12
		140	5700	17	**17.5**	14	13.5	13	12
		149-165	5745-5825	18	**20**	14	13.5	13	12.5
	MCS5	36-64	5180-5320	18	**18**	14	12.5	13	11.5
		100-144	5500-5720	18	**19**	14	13	13	12
		140	5700	17	**17.5**	14	13	13	12
		149-165	5745-5825	18	**19.5**	14	13	13	12
	MCS6	36-64	5180-5320	18	**17.5**	14	12	13	11.5
		100-144	5500-5720	18	**18.5**	14	12.5	13	11.5
		140	5700	17	**17.5**	14	12.5	13	11.5
		149-165	5745-5825	18	**19.5**	14	12.5	13	11.5
	MCS7	36-64	5180-5320	17	**16.5**	14	12	13	11
		100-144	5500-5720	17	**17.5**	14	12.5	13	11.5
		149-165	5745-5825	17	**18**	14	12.5	13	12
	MCS8	36-64	5180-5320	16	**16.5**	14	12	13	11
		100-144	5500-5720	16	**17**	14	12	13	11
		149-165	5745-5825	16	**17.5**	14	12	13	11.5
802.11ac 40M	MCS0	36-56	5180-5280	19	**19.5**	14	14	13	13
		60	5300	18	**18.5**	14	14	13	13
		64	5320	19	**19.5**	14	14	13	13
		100-144	5500-5720	19	**19.5**	14	14	13	13
		149-165	5745-5825	19	**20.5**	14	14.5	13	13.5
	MCS1	36-64	5180-5320	18	**19**	14	14	13	13
		100-144	5500-5720	18	**19**	14	14	13	13
		149-165	5745-5825	18	**19.5**	14	14	13	13.5
	MCS2	36-64	5180-5320	18	**19**	14	14	13	12.5
		100-144	5500-5720	18	**19**	14	14	13	13
		149-165	5745-5825	18	**19.5**	14	14	13	13
	MCS3	36-64	5180-5320	18	**19**	14	13.5	13	12
		100-144	5500-5720	18	**19**	14	13.5	13	12.5
		149-165	5745-5825	18	**19**	14	13.5	13	12.5
	MCS4	36-64	5180-5320	17	**18**	14	13	13	12
		100-144	5500-5720	17	**18**	14	13.5	13	12
		149-165	5745-5825	17	**18.5**	14	13.5	13	12.5
	MCS5	36-64	5180-5320	17	**18**	14	12.5	13	11.5
		100-144	5500-5720	17	**18**	14	13	13	12
		149-165	5745-5825	17	**18.5**	14	13	13	12

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	MCS6	36-64	5180-5320	17	**18**	14	12	13	11.5
		100-144	5500-5720	17	**18**	14	12.5	13	11.5
		149-165	5745-5825	17	**18.5**	14	12.5	13	11.5
	MCS7	36-64	5180-5320	16	**17**	14	12	13	11
		100-144	5500-5720	16	**17**	14	12.5	13	11.5
		149-165	5745-5825	16	**17.5**	14	12.5	13	12
	MCS8	36-64	5180-5320	16	**17**	14	12	13	11
		100-144	5500-5720	16	**17**	14	12	13	11
		149-165	5745-5825	16	**17.5**	14	12	13	11.5
	MCS9	36-64	5180-5320	15	**16**	14	12	13	11
		100-144	5500-5720	15	**16**	14	12	13	11
		149-165	5745-5825	15	**16.5**	14	12	13	11.5
802.11ac 80M	MCS0	36-64	5180-5320	19	**19.5**	14	14	13	13
		100-144	5500-5720	19	**19.5**	14	14	13	13
		149-165	5745-5825	19	**20.5**	14	14.5	13	13.5
	MCS1	36-64	5180-5320	18	**19**	14	14	13	13
		100-144	5500-5720	18	**19**	14	14	13	13
		149-165	5745-5825	18	**19.5**	14	14	13	13.5
	MCS2	36-64	5180-5320	18	**19**	14	14	13	12.5
		100-144	5500-5720	18	**19**	14	14	13	13
		149-165	5745-5825	18	**19.5**	14	14	13	13
	MCS3	36-64	5180-5320	18	**19**	14	13.5	13	12
		100-144	5500-5720	18	**19**	14	13.5	13	12.5
		149-165	5745-5825	18	**19**	14	13.5	13	12.5
	MCS4	36-64	5180-5320	17	**18**	14	13	13	12
		100-144	5500-5720	17	**18**	14	13.5	13	12
		149-165	5745-5825	17	**18.5**	14	13.5	13	12.5
	MCS5	36-64	5180-5320	17	**18**	14	12.5	13	11.5
		100-144	5500-5720	17	**18**	14	13	13	12
		149-165	5745-5825	17	**18.5**	14	13	13	12
	MCS6	36-64	5180-5320	17	**18**	14	12	13	11.5
		100-144	5500-5720	17	**18**	14	12.5	13	11.5
		149-165	5745-5825	17	**18.5**	14	12.5	13	11.5
	MCS7	36-64	5180-5320	16	**17**	14	12	13	11
		100-144	5500-5720	16	**17**	14	12.5	13	11.5
		149-165	5745-5825	16	**17.5**	14	12.5	13	12
	MCS8	36-64	5180-5320	16	**17**	14	12	13	11
		100-144	5500-5720	16	**17**	14	12	13	11
		149-165	5745-5825	16	**17.5**	14	12	13	11.5
	MCS9	36-64	5180-5320	15	**16**	14	12	13	11

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		100-144	5500-5720	15	**16**	14	12	13	11
		149-165	5745-5825	15	**16.5**	14	12	13	11.5

The maximum output power for BT

CH2402: 8dBm [-2dB~~+2dB]

CH2441: 8dBm [-2dB~~+2dB]

CH2480: 8dBm [-2dB~~+2dB]

The average conducted power for Wi-Fi is as following:

2.4G

FCC 2.4G Full Power									
802.11b	Channel\data rate	1Mbps	2Mbps	5.5Mbps	11Mbps				
WLAN2450	11(2462MHz)	21.96	21.72	21.78	21.71				
	6(2437(MHz)	21.94	/	/	/				
	1(2412MHz)	21.69	/	/	/				
	Tune up	**23.50**	**23.50**	**23.50**	**23.50**				
802.11g	Channel\data rate	6Mbps	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps
WLAN2450	11(2462MHz)	19.62	/	/	/	/	/	/	/
	6(2437(MHz)	19.78	/	/	/	/	/	/	/
	1(2412MHz)	19.94	18.83	19.05	18.82	17.89	17.90	17.92	16.99
	Tune up	**21.50**	**20.50**	**20.50**	**20.50**	**19.50**	**19.50**	**19.50**	**18.50**
802.11n-20MHz	Channel\data rate	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
WLAN2450	11(2462MHz)	19.97	/	/	/	/	/	/	/
	6(2437(MHz)	20.21	18.88	19.04	18.99	17.77	17.67	17.86	16.88
	1(2412MHz)	20.08	/	/	/	/	/	/	/
	Tune up	**21.50**	**20.50**	**20.50**	**20.50**	**19.50**	**19.50**	**19.50**	**18.50**

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FCC 2.4G Body Power Level E1									
802.11b	Channel\data rate	1Mbps	2Mbps	5.5Mbps	11Mbps				
WLAN2450	11(2462MHz)	19.27	/	/	/				
	6(2437(MHz)	19.43	19.25	19.11	19.12				
	1(2412MHz)	19.34	/	/	/				
	Tune up	**20.50**	**20.50**	**20.50**	**20.50**				
802.11g	Channel\data rate	6Mbps	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps
WLAN2450	11(2462MHz)	19.17	/	/	/	/	/	/	/
	6(2437(MHz)	19.23	/	/	/	/	/	/	/
	1(2412MHz)	19.41	18.83	19.05	18.82	17.89	17.90	17.92	16.99
	Tune up	**20.50**	**20.50**	**20.50**	**20.50**	**19.50**	**19.50**	**19.50**	**18.50**
802.11n-20MHz	Channel\data rate	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
WLAN2450	11(2462MHz)	19.23	18.86	18.72	18.75	17.68	17.56	17.62	16.78
	6(2437(MHz)	19.17	/	/	/	/	/	/	/
	1(2412MHz)	19.19	/	/	/	/	/	/	/
	Tune up	**20.50**	**20.50**	**20.50**	**20.50**	**19.50**	**19.50**	**19.50**	**18.50**

FCC 2.4G Head Power Level D1									
802.11b	Channel\data rate	1Mbps	2Mbps	5.5Mbps	11Mbps				
WLAN2450	11(2462MHz)	16.56	/	/	/				
	6(2437(MHz)	16.72	/	/	/				
	1(2412MHz)	16.85	16.82	16.84	16.84				
	Tune up	**18.00**	**18.00**	**18.00**	**18.00**				
802.11g	Channel\data rate	6Mbps	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps
WLAN2450	11(2462MHz)	16.67	/	/	/	/	/	/	/
	6(2437(MHz)	16.59	/	/	/	/	/	/	/
	1(2412MHz)	16.87	16.85	16.85	16.63	16.63	16.84	16.86	16.64
	Tune up	**18.00**	**18.00**	**18.00**	**18.00**	**18.00**	**18.00**	**18.00**	**18.00**
802.11n-20MHz	Channel\data rate	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
WLAN2450	11(2462MHz)	16.86	16.83	16.60	16.59	16.57	16.80	16.57	16.58
	6(2437(MHz)	16.50	/	/	/	/	/	/	/
	1(2412MHz)	16.75	/	/	/	/	/	/	/
	Tune up	**18.00**	**18.00**	**18.00**	**18.00**	**18.00**	**18.00**	**18.00**	**18.00**

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5G

802.11a(dBm) full power								
Channel\data rate	6Mbps	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps
36(5180 MHz)	18.34	/	/	/	/	/	/	/
40(5200 MHz)	18.18	/	/	/	/	/	/	/
44(5220 MHz)	18.12	/	/	/	/	/	/	/
48(5240 MHz)	18.37	17.38	17.35	17.30	16.33	16.02	15.94	14.87
52(5260 MHz)	18.68	/	/	/	/	/	/	/
56(5280 MHz)	19.07	/	/	/	/	/	/	/
60(5300 MHz)	19.07	/	/	/	/	/	/	/
64(5320 MHz)	19.09	18.12	18.03	17.93	16.99	16.90	16.71	15.60
Tune Up	**20.00**	**19.00**	**19.00**	**19.00**	**18.00**	**18.00**	**17.50**	**16.50**
100(5500 MHz)	19.25	/	/	/	/	/	/	/
104(5520 MHz)	19.02	/	/	/	/	/	/	/
108(5540 MHz)	18.98	/	/	/	/	/	/	/
112(5560 MHz)	19.12	/	/	/	/	/	/	/
116(5580 MHz)	19.14	/	/	/	/	/	/	/
120(5600 MHz)	19.47	/	/	/	/	/	/	/
124(5620 MHz)	19.56	18.69	18.45	18.47	17.41	17.29	16.94	15.97
128(5640 MHz)	19.43	/	/	/	/	/	/	/
132(5660 MHz)	19.31	/	/	/	/	/	/	/
136(5680 MHz)	18.89	/	/	/	/	/	/	/
140(5700 MHz)	18.65	/	/	/	/	/	/	/
144(5720 MHz)	18.59	/	/	/	/	/	/	/
Tune Up	**20.50**	**20.00**	**20.00**	**20.00**	**19.00**	**19.00**	**18.50**	**17.50**
149(5745 MHz)	19.13	/	/	/	/	/	/	/
153(5765 MHz)	19.61	/	/	/	/	/	/	/
157(5785 MHz)	20.02	/	/	/	/	/	/	/
161(5805 MHz)	20.18	19.18	19.10	19.07	18.12	17.77	17.65	16.70
165(5825 MHz)	20.03	/	/	/	/	/	/	/
Tune Up	**21.00**	**20.50**	**20.50**	**20.50**	**20.00**	**19.50**	**19.50**	**18.00**

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802.11ac(dBm)-80MHz Body Power Level E1										
Channel\data rate	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9
42(5210 MHz)	12.68	12.26	12.06	11.90	11.39	10.99	10.83	10.82	10.51	10.35
58(5290 MHz)	13.27	12.99	12.54	12.30	12.05	11.64	11.23	11.28	11.01	10.96
Tune Up	**14.00**	**14.00**	**14.00**	**13.50**	**13.00**	**12.50**	**12.00**	**12.00**	**12.00**	**12.00**
106(5530 MHz)	12.58	/	/	/	/	/	/	/	/	/
122(5610 MHz)	13.05	12.72	12.53	12.16	11.82	11.47	11.31	11.29	10.93	10.89
138(5690 MHz)	12.56	/	/	/	/	/	/	/	/	/
Tune Up	**14.00**	**14.00**	**14.00**	**13.50**	**13.50**	**13.00**	**12.50**	**12.50**	**12.00**	**12.00**
155(5775 MHz)	13.42	12.91	12.63	12.43	12.10	11.71	11.30	11.31	10.94	10.93
Tune Up	**14.50**	**14.00**	**14.00**	**13.50**	**13.50**	**13.00**	**12.50**	**12.50**	**12.00**	**12.00**

802.11ac(dBm)-80MHz Head Power Level D1										
Channel\data rate	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9
42(5210 MHz)	11.78	11.24	10.99	10.77	10.45	10.10	9.66	9.65	9.34	9.30
58(5290 MHz)	12.24	11.90	11.62	11.18	10.89	10.44	10.23	10.22	9.89	9.86
Tune Up	**13.00**	**13.00**	**12.50**	**12.00**	**12.00**	**11.50**	**11.50**	**11.00**	**11.00**	**11.00**
106(5530 MHz)	11.38	/	/	/	/	/	/	/	/	/
122(5610 MHz)	11.95	11.63	11.36	11.01	10.74	10.36	10.08	10.07	9.63	9.61
138(5690 MHz)	11.55	/	/	/	/	/	/	/	/	/
Tune Up	**13.00**	**13.00**	**13.00**	**12.50**	**12.00**	**12.00**	**11.50**	**11.50**	**11.00**	**11.00**
155(5775 MHz)	12.53	12.24	12.01	11.58	11.28	10.92	10.75	10.74	10.17	10.15
Tune Up	**13.50**	**13.50**	**13.00**	**12.50**	**12.50**	**12.00**	**11.50**	**12.00**	**11.50**	**11.50**

The average conducted power for BT is as following:

BR/EDR									
	GFSK			**EDR2M-4_DQPSK**			**EDR3M-8DPSK**		
	Ch0	**Ch 39**	**Ch 78**	**Ch 0**	**Ch 39**	**Ch 78**	**Ch 0**	**Ch 39**	**Ch 78**
Maximum Transmit Power(<20dBm)	7.41	7.85	7.46	6.58	7.20	6.46	6.39	6.95	6.46
Tune up	**8.00**	**8.00**	**8.00**	**8.00**	**8.00**	**8.00**	**8.00**	**8.00**	**8.00**

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12 Antenna Location

12.1 Transmit Antenna Separation Distances

The detail for transmit antenna separation distances is described in the additional document: Appendix to test report No.I21Z70475-SEM01 The photos of SAR test

12.2 SAR Measurement Positions

According to the KDB941225 D06 Hot Spot SAR v01, the edges with less than 2.5 cm distance to the antennas need to be tested for SAR.

SAR measurement positions						
Mode	Front	Rear	Left edge	Right edge	Top edge	Bottom edge
ANT0	Yes	Yes	Yes	Yes	No	Yes
ANT1	Yes	Yes	Yes	No	Yes	No
ANT2	Yes	Yes	No	Yes	Yes	No

12.3 Standalone SAR Test Exclusion Considerations

Standalone 1-g head or body SAR evaluation by measurement or numerical simulation is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.
The 1-g SAR test exclusion threshold for 100 MHz to 6 GHz at test separation distances≤ 50 mm are determined by:
[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] · [√f(GHz)] ≤ 3.0 for 1-g SAR, where

- f(GHz) is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison

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Standalone SAR test exclusion considerations

Band/Mode	F(GHz)	Position	SAR test exclusion threshold(mW)	RF output power		SAR test exclusion
				dBm	mW	
Bluetooth	2.441	Head	9.60	9.5	8.91	Yes
		Body	19.20	9.5	8.91	Yes
2.4GHz WLAN	2.45	Head	9.58	23.5	223.87	No
		Body	19.17	23.5	223.87	No
5GHz WLAN	5.2	Head	6.58	20	100.00	No
		Body	13.16	20	100.00	No
	5.3	Head	6.52	20	100.00	No
		Body	13.03	20	100.00	No
	5.6	Head	6.34	20.5	112.20	No
		Body	12.68	20.5	112.20	No
	5.8	Head	6.23	21	125.89	No
		Body	12.46	21	125.89	No

When standalone SAR test exclusion applies to an antenna that transmits simultaneously with other antennas, the standalone SAR must be estimated according to following to determine simultaneous transmission SAR test exclusion:
(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance,mm)]·[√f(GHz)/x] W/kg for test separation distances ≤ 50 mm;
where x = 7.5 for 1-g SAR.
When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion

Estimated SAR for Bluetooth

Mode/Band	F (GHz)	Position	Distance (mm)	Upper limit of power*		Estimated$_{1g}$ (W/kg)
				dBm	mW	
Bluetooth	2.441	Head	5	9.5	8.91	0.37
Bluetooth	2.441	Body	10	9.5	8.91	0.18
Bluetooth	2.441	Body	15	9.5	8.91	0.12
Bluetooth	2.441	Body	20	9.5	8.91	0.09

* - Maximum possible output power declared by manufacturer

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13 SAR Test Result

Note:

KDB 447498 D01 General RF Exposure Guidance:

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

For BT/WLAN: Reported SAR(W/kg)= Measured SAR(W/kg)* Duty Cycle scaling factor * Tune-up scaling factor

Testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is:

≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz

≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz

≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz

KDB 648474 D04 Handset SAR:

With headset attached, when the reported SAR for body-worn accessory, measured without a headset connected to the handset, is > 1.2 W/kg, the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body-worn accessory with a headset attached to the handset.

KDB 941225 D01 SAR test for 3G devices:

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

KDB 941225 D05 SAR for LTE Devices:

SAR test reduction is applied using the following criteria:

Start with the largest channel bandwidth and measure SAR for QPSK with 1 RB, and 50% RB allocation, using the RB offset and required test channel combination with the highest maximum output power among RB offsets at the upper edge, middle and lower edge of each required test channel.

When the reported SAR is > 0.8 W/kg, testing for other Channels is performed at the highest output power level for 1RB, and 50% RB configuration for that channel.

Testing for 100% RB configuration is performed at the highest output power level for 100% RB configuration across the Low,Mid and High Channel when the highest reported SAR for 1 RB and 50% RB are > 0.8 W/kg. Testing for the remaining required channels is not needed because the reported SAR for 100% RB Allocation < 1.45 W/kg.

Testing for 16-QAM modulation is not required because the reported SAR for QPSK is < 1.45 W/Kg and its output power is not more than 0.5 dB higher than that of QPSK.

Testing for the other channel bandwidths is not required because the reported SAR for the highest channel bandwidth is <1.45 W/Kg and its output power is not more than 0.5 dB higher than that of the highest channel bandwidth.

For LTE bands that do not support at least three non-overlapping channels in certain channel bandwidths, test the available non-overlapping channels instead. When a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the

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group of overlapping channels should be selected for testing; therefore, the requirement for H, M and L channels may not fully apply.

KDB 248227 D01 SAR meas for 802.11:

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

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

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

When the reported SAR for the initial test position is:

≤ 0.4 W/kg, further SAR measurement is not required for the other test positions in that exposure configuration and wireless mode combination within the frequency band or aggregated band. DSSS and OFDM configurations are considered separately according to the required SAR procedures.

> 0.4 W/kg, SAR is repeated using the same wireless mode test configuration tested in the initial test position to measure the subsequent next closet/smallest test separation distance and maximum coupling test position, on the highest maximum output power channel, until the reported SAR is ≤ 0.8 W/kg or all required test positions are tested.

- For subsequent test positions with equivalent test separation distance or when exposure is dominated by coupling conditions, the position for maximum coupling condition should be tested.
- When it is unclear, all equivalent conditions must be tested.

For all positions/configurations tested using the initial test position and subsequent test positions, when the reported SAR is > 0.8 W/kg, measure the SAR for these positions/configurations on the subsequent next highest measured output power channel(s) until the reported SAR is ≤ 1.2 W/kg or all required test channels are considered.

- The additional power measurements required for this step should be limited to those necessary for identifying subsequent highest output power channels to apply the test reduction.

When the specified maximum output power is the same for both UNII 1 and UNII 2A, begin SAR measurements in UNII 2A with the channel with the highest measured output power. If the reported SAR for UNII 2A is ≤ 1.2 W/kg, SAR is not required for UNII 1; otherwise treat the remaining bands separately and test them independently for SAR.

When the specified maximum output power is different between UNII 1 and UNII 2A, begin SAR

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with the band that has the higher specified maximum output. If the highest reported SAR for the band with the highest specified power is ≤ 1.2 W/kg, testing for the band with the lower specified output power is not required; otherwise test the remaining bands independently for SAR.

Duty Cycle

Mode	Duty Cycle
Speech for GSM	1:8.3
GPRS&EGPRS 1 Slot	1:8.3
GPRS&EGPRS 2 Slot	1:4
GPRS&EGPRS 3 Slot	1:2.67
GPRS&EGPRS 4 Slot	1:2
WCDMA&LTE FDD	1:1
TDD PC3	1:1.58
TDD PC2	1:2.309

Ambient Temperature: 21.5-23.5 ℃ Liquid Temperature: 21.5-23.5 ℃

Note

S: SIM2

S3: Single SIM card slot.

B2: The Battery of SCUD-WT-W1 by SCUD (Fujian) Electronics Co.,Ltd.

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13.1 SAR results for Cellular

Head

RF Exposure Conditions	Frequency Band	Channel Number	Frequency (MHz)	Mode/RB	Test Position	Distance	Figure No./Note	EUT Measured Power (dBm)	Tune up (dBm)	Measured SAR 1g (W/kg)	Reported SAR 1g (W/kg)	Measured SAR 10g (W/kg)	Reported SAR 10g (W/kg)	Power Drift
Head	GSM850	190	836.6	VOIP(2TX)	Cheek Left	0mm	\	30.20	31.5	0.124	**0.17**	0.108	**0.15**	0.06
Head	GSM850	190	836.6	VOIP(2TX)	Tilt Left	0mm	\	30.20	31.5	0.049	**0.07**	0.04	**0.05**	0.07
Head	GSM850	251	848.8	VOIP(2TX)	Cheek Right	0mm	Fig.1	30.17	31.5	0.249	**0.34**	0.197	**0.27**	0.03
Head	GSM850	190	836.6	VOIP(2TX)	Cheek Right	0mm	\	30.20	31.5	0.238	**0.32**	0.211	**0.28**	-0.05
Head	GSM850	128	824.2	VOIP(2TX)	Cheek Right	0mm	\	30.15	31.5	0.212	**0.29**	0.173	**0.24**	-0.16
Head	GSM850	190	836.6	VOIP(2TX)	Tilt Right	0mm	\	30.20	31.5	0.148	**0.20**	0.133	**0.18**	-0.03
Head	GSM850	251	848.8	VOIP(2TX)	Cheek Right	0mm	B2	30.17	31.5	0.139	**0.19**	0.11	**0.15**	-0.01
Head	GSM850	251	848.8	VOIP(2TX)	Cheek Right	0mm	S	30.17	31.5	0.217	**0.29**	0.174	**0.24**	0.01
Head	GSM850	251	848.8	VOIP(2TX)	Cheek Right	0mm	S3	30.17	31.5	0.225	**0.31**	0.181	**0.25**	-0.02
Head	GSM1900	661	1880	VOIP(2TX)	Cheek Left	0mm	\	21.98	23.5	0.387	**0.55**	0.201	**0.29**	0.14
Head	GSM1900	661	1880	VOIP(2TX)	Tilt Left	0mm	\	21.98	23.5	0.328	**0.47**	0.17	**0.24**	0.11
Head	GSM1900	810	1909.8	VOIP(2TX)	Cheek Right	0mm	\	21.97	23.5	0.513	**0.73**	0.246	**0.27**	0.15
Head	GSM1900	661	1880	VOIP(2TX)	Cheek Right	0mm	Fig.2	21.98	23.5	0.583	**0.83**	0.263	**0.28**	-0.13
Head	GSM1900	512	1850.2	VOIP(2TX)	Cheek Right	0mm	\	21.88	23.5	0.493	**0.72**	0.225	**0.24**	0.18
Head	GSM1900	661	1880	VOIP(2TX)	Tilt Right	0mm	\	21.98	23.5	0.527	**0.75**	0.246	**0.27**	-0.10
Head	GSM1900	661	1880	VOIP(2TX)	Cheek Right	0mm	B2	21.98	23.5	0.539	**0.77**	0.263	**0.37**	-0.06
Head	GSM1900	661	1880	VOIP(2TX)	Cheek Right	0mm	S	21.98	23.5	0.546	**0.78**	0.229	**0.33**	0.07
Head	GSM1900	661	1880	VOIP(2TX)	Cheek Right	0mm	S3	21.98	23.5	0.512	**0.73**	0.213	**0.30**	-0.07
Head	WCDMA1900	9400	1880	RMC	Cheek Left	0mm	\	13.05	14.5	0.335	**0.47**	0.169	**0.24**	0.08
Head	WCDMA1900	9400	1880	RMC	Tilt Left	0mm	\	13.05	14.5	0.371	**0.52**	0.178	**0.25**	-0.13
Head	WCDMA1900	9400	1880	RMC	Cheek Right	0mm	\	13.05	14.5	0.431	**0.60**	0.207	**0.29**	0.10
Head	WCDMA1900	9538	1907.6	RMC	Tilt Right	0mm	Fig.3	13.01	14.5	0.467	**0.66**	0.22	**0.31**	-0.03
Head	WCDMA1900	9400	1880	RMC	Tilt Right	0mm	\	13.05	14.5	0.466	**0.65**	0.216	**0.30**	-0.06
Head	WCDMA1900	9262	1852.4	RMC	Tilt Right	0mm	\	12.91	14.5	0.415	**0.60**	0.196	**0.28**	0.06
Head	WCDMA1900	9538	1907.6	RMC	Cheek Left	0mm	B2	13.01	14.5	0.356	**0.50**	0.166	**0.23**	-0.16
Head	WCDMA1900	9538	1907.6	RMC	Cheek Left	0mm	S	13.01	14.5	0.286	**0.40**	0.126	**0.18**	-0.12
Head	WCDMA1900	9538	1907.6	RMC	Cheek Left	0mm	S3	13.01	14.5	0.296	**0.42**	0.106	**0.15**	0.11
Head	WCDMA1700	1412	1732.4	RMC	Cheek Left	0mm	\	23.82	25	0.238	**0.31**	0.159	**0.21**	-0.17
Head	WCDMA1700	1412	1732.4	RMC	Tilt Left	0mm	\	23.82	25	0.152	**0.20**	0.102	**0.13**	-0.09
Head	WCDMA1700	1513	1752.6	RMC	Cheek Right	0mm	Fig.4	23.87	25	0.298	**0.39**	0.197	**0.26**	0.07
Head	WCDMA1700	1412	1732.4	RMC	Cheek Right	0mm	\	23.82	25	0.259	**0.34**	0.171	**0.22**	-0.03
Head	WCDMA1700	1312	1712.4	RMC	Cheek Right	0mm	\	23.91	25	0.195	**0.25**	0.128	**0.16**	-0.03
Head	WCDMA1700	1412	1732.4	RMC	Tilt Right	0mm	\	23.82	25	0.161	**0.21**	0.103	**0.14**	-0.03
Head	WCDMA1700	1513	1752.6	RMC	Cheek Right	0mm	B2	23.87	25	0.202	**0.26**	0.132	**0.17**	0.05
Head	WCDMA1700	1513	1752.6	RMC	Cheek Right	0mm	S	23.87	25	0.142	**0.18**	0.092	**0.12**	-0.15
Head	WCDMA1700	1513	1752.6	RMC	Cheek Right	0mm	S3	23.87	25	0.152	**0.20**	0.102	**0.13**	0.15
Head	WCDMA 850	4183	836.6	RMC	Cheek Left	0mm	\	24.11	25	0.242	**0.30**	0.189	**0.23**	0.08
Head	WCDMA 850	4183	836.6	RMC	Tilt Left	0mm	\	24.11	25	0.13	**0.16**	0.106	**0.13**	0.17
Head	WCDMA 850	4233	846.6	RMC	Cheek Right	0mm	\	24.08	25	0.273	**0.34**	0.213	**0.26**	0.17
Head	WCDMA 850	4183	836.6	RMC	Cheek Right	0mm	Fig.5	24.11	25	0.327	**0.40**	0.257	**0.32**	0.09
Head	WCDMA 850	4132	826.4	RMC	Cheek Right	0mm	\	24.04	25	0.312	**0.39**	0.232	**0.29**	-0.08
Head	WCDMA 850	4183	836.6	RMC	Tilt Right	0mm	\	24.11	25	0.2	**0.25**	0.163	**0.20**	-0.04
Head	WCDMA 850	4183	836.6	RMC	Cheek Right	0mm	B2	24.11	25	0.291	**0.36**	0.228	**0.28**	0.19
Head	WCDMA 850	4183	836.6	RMC	Cheek Right	0mm	S	24.11	25	0.271	**0.33**	0.208	**0.26**	0.18
Head	WCDMA 850	4183	836.6	RMC	Cheek Right	0mm	S3	24.11	25	0.271	**0.33**	0.178	**0.22**	-0.16
Head	LTE Band2	18900	1880	1RB-Middle	Cheek Left	0mm	\	15.94	16.5	0.375	**0.43**	0.189	**0.22**	-0.18
Head	LTE Band2	18900	1880	1RB-Middle	Tilt Left	0mm	\	15.94	16.5	0.386	**0.44**	0.191	**0.22**	0.03
Head	LTE Band2	18900	1880	1RB-Middle	Cheek Right	0mm	\	15.94	16.5	0.531	**0.60**	0.237	**0.27**	0.17
Head	LTE Band2	18900	1880	1RB-Middle	Tilt Right	0mm	Fig.6	15.94	16.5	0.697	**0.79**	0.328	**0.37**	-0.18
Head	LTE Band2	18900	1880	50RB-Low	Cheek Left	0mm	\	15.92	16.5	0.372	**0.43**	0.187	**0.21**	-0.06
Head	LTE Band2	18900	1880	50RB-Low	Tilt Left	0mm	\	15.92	16.5	0.384	**0.44**	0.191	**0.22**	-0.11
Head	LTE Band2	18900	1880	50RB-Low	Cheek Right	0mm	\	15.92	16.5	0.512	**0.59**	0.229	**0.26**	0.17
Head	LTE Band2	18900	1880	50RB-Low	Tilt Right	0mm	\	15.92	16.5	0.668	**0.76**	0.313	**0.36**	-0.11
Head	LTE Band2	18900	1880	1RB-Middle	Tilt Right	0mm	B2	15.94	16.5	0.612	**0.70**	0.274	**0.31**	0.17
Head	LTE Band2	18900	1880	1RB-Middle	Tilt Right	0mm	S	15.94	16.5	0.562	**0.64**	0.204	**0.23**	0.09
Head	LTE Band2	18900	1880	1RB-Middle	Tilt Right	0mm	S3	15.94	16.5	0.592	**0.67**	0.234	**0.27**	-0.07
Head	LTE Band4	20300	1745	1RB-Middle	Cheek Left	0mm	\	23.99	25	0.112	**0.14**	0.076	**0.10**	0.18
Head	LTE Band4	20300	1745	1RB-Middle	Tilt Left	0mm	\	23.99	25	0.162	**0.20**	0.105	**0.13**	-0.06
Head	LTE Band4	20300	1745	1RB-Middle	Cheek Right	0mm	\	23.99	25	0.222	**0.28**	0.135	**0.17**	0.04
Head	LTE Band4	20300	1745	1RB-Middle	Tilt Right	0mm	Fig.7	23.99	25	0.229	**0.29**	0.135	**0.17**	-0.14
Head	LTE Band4	20300	1745	50RB-Middle	Cheek Left	0mm	\	22.94	24	0.088	**0.11**	0.058	**0.07**	-0.09
Head	LTE Band4	20300	1745	50RB-Middle	Tilt Left	0mm	\	22.94	24	0.126	**0.16**	0.082	**0.10**	-0.03
Head	LTE Band4	20300	1745	50RB-Middle	Cheek Right	0mm	\	22.94	24	0.171	**0.22**	0.103	**0.13**	0.17
Head	LTE Band4	20300	1745	50RB-Middle	Tilt Right	0mm	\	22.94	24	0.177	**0.23**	0.103	**0.13**	-0.13
Head	LTE Band4	20300	1745	1RB-Middle	Tilt Right	0mm	B2	23.99	25	0.19	**0.24**	0.107	**0.14**	0.02
Head	LTE Band4	20300	1745	1RB-Middle	Tilt Right	0mm	S	23.99	25	0.17	**0.21**	0.087	**0.11**	0.16
Head	LTE Band4	20300	1745	1RB-Middle	Tilt Right	0mm	S3	23.99	25	0.15	**0.19**	0.087	**0.11**	0.12

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Head	LTE Band5	20600	844	1RB-Middle	Cheek Left	0mm	\	24.96	25.5	0.286	**0.32**	0.221	**0.25**	-0.09
Head	LTE Band5	20600	844	1RB-Middle	Tilt Left	0mm	\	24.96	25.5	0.149	**0.17**	0.12	**0.14**	0.08
Head	LTE Band5	20600	844	1RB-Middle	Cheek Right	0mm	Fig.8	24.96	25.5	0.347	**0.39**	0.272	**0.31**	0.06
Head	LTE Band5	20600	844	1RB-Middle	Tilt Right	0mm	\	24.96	25.5	0.237	**0.27**	0.188	**0.21**	-0.10
Head	LTE Band5	20600	844	25RB-Middle	Cheek Left	0mm	\	23.97	24.5	0.241	**0.27**	0.185	**0.21**	0.04
Head	LTE Band5	20600	844	25RB-Middle	Tilt Left	0mm	\	23.97	24.5	0.118	**0.13**	0.094	**0.11**	-0.11
Head	LTE Band5	20600	844	25RB-Middle	Cheek Right	0mm	\	23.97	24.5	0.269	**0.30**	0.21	**0.24**	-0.04
Head	LTE Band5	20600	844	25RB-Middle	Tilt Right	0mm	\	23.97	24.5	0.18	**0.20**	0.144	**0.16**	-0.14
Head	LTE Band5	20600	844	1RB-Middle	Cheek Right	0mm	B2	24.96	25.5	0.308	**0.35**	0.245	**0.28**	0.07
Head	LTE Band5	20600	844	1RB-Middle	Cheek Right	0mm	S	24.96	25.5	0.248	**0.28**	0.175	**0.20**	0.06
Head	LTE Band5	20600	844	1RB-Middle	Cheek Right	0mm	S3	24.96	25.5	0.258	**0.29**	0.215	**0.24**	-0.08
Head	LTE Band7	21350	2560	1RB-Middle	Cheek Left	0mm	Fig.9	23.00	23.5	0.249	**0.28**	0.134	**0.15**	-0.06
Head	LTE Band7	21350	2560	1RB-Middle	Tilt Left	0mm	\	23.00	23.5	0.152	**0.17**	0.079	**0.09**	0.10
Head	LTE Band7	21350	2560	1RB-Middle	Cheek Right	0mm	\	23.00	23.5	0.114	**0.13**	0.057	**0.06**	0.05
Head	LTE Band7	21350	2560	1RB-Middle	Tilt Right	0mm	\	23.00	23.5	0.093	**0.10**	0.052	**0.06**	0.08
Head	LTE Band7	21350	2560	50RB-High	Cheek Left	0mm	\	21.79	22.5	0.192	**0.23**	0.104	**0.12**	0.01
Head	LTE Band7	21350	2560	50RB-High	Tilt Left	0mm	\	21.79	22.5	0.117	**0.14**	0.059	**0.07**	0.18
Head	LTE Band7	21350	2560	50RB-High	Cheek Right	0mm	\	21.79	22.5	0.085	**0.10**	0.042	**0.05**	0.05
Head	LTE Band7	21350	2560	50RB-High	Tilt Right	0mm	\	21.79	22.5	0.076	**0.09**	0.041	**0.05**	-0.09
Head	LTE Band7	21350	2560	1RB-Middle	Cheek Left	0mm	B2	23.00	23.5	0.195	**0.22**	0.107	**0.12**	0.06
Head	LTE Band7	21350	2560	1RB-Middle	Cheek Left	0mm	S	23.00	23.5	0.125	**0.14**	0.067	**0.08**	-0.06
Head	LTE Band7	21350	2560	1RB-Middle	Cheek Left	0mm	S3	23.00	23.5	0.175	**0.20**	0.087	**0.10**	-0.11
Head	LTE Band12	23130	711	1RB-Mid	Cheek Left	0mm	\	25.04	25.5	0.275	**0.31**	0.222	**0.25**	-0.05
Head	LTE Band12	23130	711	1RB-Mid	Tilt Left	0mm	\	25.04	25.5	0.179	**0.20**	0.145	**0.16**	0.17
Head	LTE Band12	23130	711	1RB-Mid	Cheek Right	0mm	Fig.10	25.04	25.5	0.311	**0.35**	0.249	**0.28**	0.06
Head	LTE Band12	23130	711	1RB-Mid	Tilt Right	0mm	\	25.04	25.5	0.196	**0.22**	0.162	**0.18**	0.07
Head	LTE Band12	23130	711	25RB-Mid	Cheek Left	0mm	\	24.21	24.5	0.215	**0.23**	0.174	**0.19**	0.15
Head	LTE Band12	23130	711	25RB-Mid	Tilt Left	0mm	\	24.21	24.5	0.14	**0.15**	0.114	**0.12**	-0.13
Head	LTE Band12	23130	711	25RB-Mid	Cheek Right	0mm	\	24.21	24.5	0.242	**0.26**	0.193	**0.21**	0.18
Head	LTE Band12	23130	711	25RB-Mid	Tilt Right	0mm	\	24.21	24.5	0.154	**0.16**	0.127	**0.14**	-0.15
Head	LTE Band12	23130	711	1RB-Mid	Cheek Right	0mm	B2	25.04	25.5	0.234	**0.26**	0.189	**0.21**	0.06
Head	LTE Band12	23130	711	1RB-Mid	Cheek Right	0mm	S	25.04	25.5	0.174	**0.19**	0.119	**0.13**	0.04
Head	LTE Band12	23130	711	1RB-Mid	Cheek Right	0mm	S3	25.04	25.5	0.174	**0.19**	0.129	**0.14**	0.00
Head	LTE Band13	23230	782	1RB-Middle	Cheek Left	0mm	\	24.43	25.5	0.246	**0.31**	0.197	**0.25**	-0.12
Head	LTE Band13	23230	782	1RB-Middle	Tilt Left	0mm	\	24.43	25.5	0.209	**0.27**	0.165	**0.21**	-0.13
Head	LTE Band13	23230	782	1RB-Middle	Cheek Right	0mm	Fig.11	24.43	25.5	0.339	**0.43**	0.267	**0.34**	0.09
Head	LTE Band13	23230	782	1RB-Middle	Tilt Right	0mm	\	24.43	25.5	0.254	**0.32**	0.203	**0.26**	0.17
Head	LTE Band13	23230	782	25RB-Mid	Cheek Left	0mm	\	23.34	24.5	0.245	**0.32**	0.195	**0.25**	-0.09
Head	LTE Band13	23230	782	25RB-Mid	Tilt Left	0mm	\	23.34	24.5	0.155	**0.20**	0.125	**0.16**	0.15
Head	LTE Band13	23230	782	25RB-Mid	Cheek Right	0mm	\	23.34	24.5	0.259	**0.34**	0.201	**0.26**	-0.16
Head	LTE Band13	23230	782	25RB-Mid	Tilt Right	0mm	\	23.34	24.5	0.194	**0.25**	0.153	**0.20**	0.02
Head	LTE Band13	23230	782	1RB-Middle	Cheek Right	0mm	B2	24.43	25.5	0.292	**0.37**	0.236	**0.30**	0.01
Head	LTE Band13	23230	782	1RB-Middle	Cheek Right	0mm	S	24.43	25.5	0.222	**0.28**	0.186	**0.24**	-0.01
Head	LTE Band13	23230	782	1RB-Middle	Cheek Right	0mm	S3	24.43	25.5	0.252	**0.32**	0.176	**0.23**	0.07
Head	LTE Band14	23330	793	1RB-Middle	Cheek Left	0mm	\	24.14	25.5	0.252	**0.34**	0.203	**0.28**	-0.18
Head	LTE Band14	23330	793	1RB-Middle	Tilt Left	0mm	\	24.14	25.5	0.172	**0.24**	0.139	**0.19**	-0.12
Head	LTE Band14	23330	793	1RB-Middle	Cheek Right	0mm	Fig.12	24.14	25.5	0.296	**0.40**	0.233	**0.32**	0.05
Head	LTE Band14	23330	793	1RB-Middle	Tilt Right	0mm	\	24.14	25.5	0.23	**0.31**	0.186	**0.25**	-0.17
Head	LTE Band14	23330	793	25RB-Mid	Cheek Left	0mm	\	23.21	24.5	0.195	**0.26**	0.158	**0.21**	0.10
Head	LTE Band14	23330	793	25RB-Mid	Tilt Left	0mm	\	23.21	24.5	0.13	**0.17**	0.106	**0.14**	0.04
Head	LTE Band14	23330	793	25RB-Mid	Cheek Right	0mm	\	23.21	24.5	0.23	**0.31**	0.182	**0.24**	-0.03
Head	LTE Band14	23330	793	25RB-Mid	Tilt Right	0mm	\	23.21	24.5	0.176	**0.24**	0.143	**0.19**	0.08
Head	LTE Band14	23330	793	1RB-Middle	Cheek Right	0mm	B2	24.14	25.5	0.248	**0.34**	0.2	**0.27**	0.06
Head	LTE Band14	23330	793	1RB-Middle	Cheek Right	0mm	S	24.14	25.5	0.188	**0.26**	0.18	**0.25**	-0.04
Head	LTE Band14	23330	793	1RB-Middle	Cheek Right	0mm	S3	24.14	25.5	0.218	**0.30**	0.14	**0.19**	0.05
Head	LTE Band25	26365	1882.5	1RB-Middle	Cheek Left	0mm	\	16.00	16.5	0.382	**0.43**	0.193	**0.22**	-0.11
Head	LTE Band25	26365	1882.5	1RB-Middle	Tilt Left	0mm	\	16.00	16.5	0.458	**0.51**	0.224	**0.25**	-0.07
Head	LTE Band25	26365	1882.5	1RB-Middle	Cheek Right	0mm	\	16.00	16.5	0.509	**0.57**	0.233	**0.26**	-0.10
Head	LTE Band25	26365	1882.5	1RB-Middle	Tilt Right	0mm	Fig.13	16.00	16.5	0.663	**0.74**	0.313	**0.35**	0.16
Head	LTE Band25	26365	1882.5	50RB-Low	Cheek Left	0mm	\	16.02	16.5	0.378	**0.42**	0.19	**0.21**	0.07
Head	LTE Band25	26365	1882.5	50RB-Low	Tilt Left	0mm	\	16.02	16.5	0.45	**0.50**	0.219	**0.24**	0.18
Head	LTE Band25	26365	1882.5	50RB-Low	Cheek Right	0mm	\	16.02	16.5	0.497	**0.56**	0.227	**0.25**	-0.07
Head	LTE Band25	26365	1882.5	50RB-Low	Tilt Right	0mm	\	16.02	16.5	0.646	**0.72**	0.307	**0.34**	0.01
Head	LTE Band25	26365	1882.5	1RB-Middle	Tilt Right	0mm	B2	16.00	16.5	0.66	**0.74**	0.314	**0.35**	0.06
Head	LTE Band25	26365	1882.5	1RB-Middle	Tilt Right	0mm	S	16.00	16.5	0.64	**0.72**	0.274	**0.31**	0.11
Head	LTE Band25	26365	1882.5	1RB-Middle	Tilt Right	0mm	S3	16.00	16.5	0.64	**0.72**	0.274	**0.31**	0.07

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Head	LTE Band26	26965	841.5	1RB-Middle	Cheek Left	0mm	\	25.32	25.5	0.275	**0.29**	0.227	**0.24**	-0.13
Head	LTE Band26	26965	841.5	1RB-Middle	Tilt Left	0mm	\	25.32	25.5	0.159	**0.17**	0.127	**0.13**	0.08
Head	LTE Band26	26965	841.5	1RB-Middle	Cheek Right	0mm	Fig.14	25.32	25.5	0.312	**0.33**	0.247	**0.26**	0.07
Head	LTE Band26	26965	841.5	1RB-Middle	Tilt Right	0mm	\	25.32	25.5	0.212	**0.22**	0.177	**0.18**	0.01
Head	LTE Band26	26965	841.5	36RB-Mid	Cheek Left	0mm	\	24.42	24.5	0.227	**0.23**	0.187	**0.19**	0.10
Head	LTE Band26	26965	841.5	36RB-Mid	Tilt Left	0mm	\	24.42	24.5	0.129	**0.13**	0.106	**0.11**	0.19
Head	LTE Band26	26965	841.5	36RB-Mid	Cheek Right	0mm	\	24.42	24.5	0.266	**0.27**	0.21	**0.21**	0.08
Head	LTE Band26	26965	841.5	36RB-Mid	Tilt Right	0mm	\	24.42	24.5	0.182	**0.19**	0.15	**0.15**	0.14
Head	LTE Band26	26965	841.5	1RB-Middle	Cheek Right	0mm	B2	25.32	25.5	0.307	**0.32**	0.24	**0.25**	-0.04
Head	LTE Band26	26965	841.5	1RB-Middle	Cheek Right	0mm	S	25.32	25.5	0.237	**0.25**	0.21	**0.22**	-0.19
Head	LTE Band26	26965	841.5	1RB-Middle	Cheek Right	0mm	S3	25.32	25.5	0.267	**0.28**	0.2	**0.21**	-0.12
Head	LTE Band41 PC3	41490	2680	1RB-Middle	Cheek Left	0mm	\	17.35	17.5	0.406	**0.42**	0.147	**0.15**	-0.12
Head	LTE Band41 PC3	41490	2680	1RB-Middle	Tilt Left	0mm	\	17.35	17.5	0.437	**0.45**	0.146	**0.15**	0.19
Head	LTE Band41 PC3	41490	2680	1RB-Middle	Cheek Right	0mm	\	17.35	17.5	0.368	**0.38**	0.144	**0.15**	0.03
Head	LTE Band41 PC3	41490	2680	1RB-Middle	Tilt Right	0mm	Fig.15	17.35	17.5	0.466	**0.48**	0.16	**0.17**	-0.13
Head	LTE Band41 PC3	41490	2680	50RB-Low	Cheek Left	0mm	\	16.90	17.5	0.347	**0.40**	0.127	**0.15**	0.04
Head	LTE Band41 PC3	41490	2680	50RB-Low	Tilt Left	0mm	\	16.90	17.5	0.37	**0.42**	0.123	**0.14**	-0.10
Head	LTE Band41 PC3	41490	2680	50RB-Low	Cheek Right	0mm	\	16.90	17.5	0.316	**0.36**	0.124	**0.14**	-0.15
Head	LTE Band41 PC3	41490	2680	50RB-Low	Tilt Right	0mm	\	16.90	17.5	0.397	**0.46**	0.135	**0.16**	-0.08
Head	LTE Band41 PC3	41490	2680	1RB-Middle	Tilt Right	0mm	B2	17.35	17.5	0.431	**0.45**	0.143	**0.15**	-0.11
Head	LTE Band41 PC3	41490	2680	1RB-Middle	Tilt Right	0mm	S	17.35	17.5	0.411	**0.43**	0.083	**0.09**	0.09
Head	LTE Band41 PC3	41490	2680	1RB-Middle	Tilt Right	0mm	S3	17.35	17.5	0.381	**0.39**	0.113	**0.12**	-0.14
Head	LTE Band41 PC2	40620	2593	1RB-Middle	Cheek Left	0mm	\	18.95	19	0.466	**0.47**	0.189	**0.19**	-0.09
Head	LTE Band41 PC2	40620	2593	1RB-Middle	Tilt Left	0mm	\	18.95	19	0.459	**0.46**	0.194	**0.20**	0.07
Head	LTE Band41 PC2	40620	2593	1RB-Middle	Cheek Right	0mm	\	18.95	19	0.472	**0.48**	0.182	**0.18**	0.16
Head	LTE Band41 PC2	40620	2593	1RB-Middle	Tilt Right	0mm	Fig.16	18.95	19	0.567	**0.57**	0.204	**0.21**	-0.03
Head	LTE Band41 PC2	40620	2593	50RB-Low	Cheek Left	0mm	\	18.14	19	0.385	**0.47**	0.157	**0.19**	-0.08
Head	LTE Band41 PC2	40620	2593	50RB-Low	Tilt Left	0mm	\	18.14	19	0.381	**0.46**	0.162	**0.20**	-0.12
Head	LTE Band41 PC2	40620	2593	50RB-Low	Cheek Right	0mm	\	18.14	19	0.391	**0.48**	0.152	**0.19**	0.09
Head	LTE Band41 PC2	40620	2593	50RB-Low	Tilt Right	0mm	\	18.14	19	0.459	**0.56**	0.167	**0.20**	-0.15
Head	LTE Band41 PC2	40620	2593	1RB-Middle	Tilt Right	0mm	B2	18.95	19	0.534	**0.54**	0.171	**0.17**	-0.16
Head	LTE Band41 PC2	40620	2593	1RB-Middle	Tilt Right	0mm	S	18.95	19	0.464	**0.47**	0.101	**0.10**	-0.13
Head	LTE Band41 PC2	40620	2593	1RB-Middle	Tilt Right	0mm	S3	18.95	19	0.464	**0.47**	0.121	**0.12**	0.04
Head	LTE Band66	132572	1770	1RB-Middle	Cheek Left	0mm	\	24.20	25	0.223	**0.27**	0.15	**0.18**	0.14
Head	LTE Band66	132572	1770	1RB-Middle	Tilt Left	0mm	\	24.20	25	0.31	**0.37**	0.194	**0.23**	-0.05
Head	LTE Band66	132572	1770	1RB-Middle	Cheek Right	0mm	Fig.17	24.20	25	0.335	**0.40**	0.222	**0.27**	-0.04
Head	LTE Band66	132572	1770	1RB-Middle	Tilt Right	0mm	\	24.20	25	0.174	**0.21**	0.119	**0.14**	0.02
Head	LTE Band66	132572	1770	50RB-Middle	Cheek Left	0mm	\	23.19	24	0.173	**0.21**	0.116	**0.14**	-0.14
Head	LTE Band66	132572	1770	50RB-Middle	Tilt Left	0mm	\	23.19	24	0.239	**0.29**	0.15	**0.18**	0.02
Head	LTE Band66	132572	1770	50RB-Middle	Cheek Right	0mm	\	23.19	24	0.255	**0.31**	0.169	**0.20**	0.07
Head	LTE Band66	132572	1770	50RB-Middle	Tilt Right	0mm	\	23.19	24	0.13	**0.16**	0.088	**0.11**	-0.16
Head	LTE Band66	132572	1770	1RB-Middle	Cheek Right	0mm	B2	24.20	25	0.252	**0.30**	0.164	**0.20**	0.05
Head	LTE Band66	132572	1770	1RB-Middle	Cheek Right	0mm	S	24.20	25	0.212	**0.25**	0.104	**0.13**	0.18
Head	LTE Band66	132572	1770	1RB-Middle	Cheek Right	0mm	S3	24.20	25	0.192	**0.23**	0.094	**0.11**	-0.15
Head	LTE Band71	133372	688	1RB-Middle	Cheek Left	0mm	\	25.26	25.5	0.25	**0.26**	0.205	**0.22**	0.08
Head	LTE Band71	133372	688	1RB-Middle	Tilt Left	0mm	\	25.26	25.5	0.14	**0.15**	0.118	**0.12**	-0.10
Head	LTE Band71	133372	688	1RB-Middle	Cheek Right	0mm	Fig.18	25.26	25.5	0.285	**0.30**	0.229	**0.24**	0.09
Head	LTE Band71	133372	688	1RB-Middle	Tilt Right	0mm	\	25.26	25.5	0.26	**0.27**	0.215	**0.23**	-0.13
Head	LTE Band71	133372	688	50RB-Middle	Cheek Left	0mm	\	24.33	24.5	0.193	**0.20**	0.158	**0.16**	-0.05
Head	LTE Band71	133372	688	50RB-Middle	Tilt Left	0mm	\	24.33	24.5	0.111	**0.12**	0.093	**0.10**	-0.09
Head	LTE Band71	133372	688	50RB-Middle	Cheek Right	0mm	\	24.33	24.5	0.224	**0.23**	0.181	**0.19**	-0.09
Head	LTE Band71	133372	688	50RB-Middle	Tilt Right	0mm	\	24.33	24.5	0.203	**0.21**	0.168	**0.17**	0.05
Head	LTE Band71	133372	688	1RB-Middle	Cheek Right	0mm	B2	25.26	25.5	0.267	**0.28**	0.217	**0.23**	0.05
Head	LTE Band71	133372	688	1RB-Middle	Cheek Right	0mm	S	25.26	25.5	0.207	**0.22**	0.167	**0.18**	-0.02
Head	LTE Band71	133372	688	1RB-Middle	Cheek Right	0mm	S3	25.26	25.5	0.247	**0.26**	0.167	**0.18**	-0.11

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Body

RF Exposure Conditions	Frequency Band	Channel Number	Frequency (MHz)	Mode/RB	Test Position	Distance	Figure No./Note	EUT Measured Power (dBm)	Tune up (dBm)	Measured SAR 1g (W/kg)	Reported SAR 1g (W/kg)	Measured SAR 10g (W/kg)	Reported SAR 10g (W/kg)	Power Drift
Body	GSM850	190	836.6	GPRS(2TX)	Front	10mm	\	30.20	31.5	0.149	**0.20**	0.091	**0.12**	-0.10
Body	GSM850	251	848.8	GPRS(2TX)	Rear	10mm	\	30.17	31.5	0.305	**0.41**	0.174	**0.24**	-0.06
Body	GSM850	190	836.6	GPRS(2TX)	Rear	10mm	\	30.20	31.5	0.281	**0.38**	0.152	**0.21**	0.18
Body	GSM850	128	824.2	GPRS(2TX)	Rear	10mm	Fig.19	30.15	31.5	0.37	**0.50**	0.217	**0.30**	-0.07
Body	GSM850	190	836.6	GPRS(2TX)	Left	10mm	\	30.20	31.5	0.144	**0.19**	0.102	**0.14**	-0.13
Body	GSM850	190	836.6	GPRS(2TX)	Right	10mm	\	30.20	31.5	0.132	**0.18**	0.09	**0.12**	-0.19
Body	GSM850	190	836.6	GPRS(2TX)	Bottom	10mm	\	30.20	31.5	0.17	**0.23**	0.092	**0.12**	0.19
Body	GSM850	128	824.2	EGPRS(2TX)	Rear	10mm	\	30.13	31.5	0.339	**0.46**	0.178	**0.24**	0.03
Body	GSM850	128	824.2	GPRS(2TX)	Rear	10mm	B2	30.15	31.5	0.239	**0.33**	0.138	**0.19**	-0.02
Body	GSM850	128	824.2	GPRS(2TX)	Rear	10mm	S	30.15	31.5	0.286	**0.39**	0.173	**0.24**	0.01
Body	GSM850	128	824.2	GPRS(2TX)	Rear	10mm	S3	30.15	31.5	0.324	**0.44**	0.183	**0.25**	-0.07
Hotspot	GSM1900	661	1880	GPRS(1TX)	Front	10mm	\	29.71	30.5	0.399	**0.48**	0.237	**0.28**	-0.05
Hotspot	GSM1900	661	1880	GPRS(1TX)	Rear	10mm	\	29.71	30.5	0.495	**0.59**	0.288	**0.35**	-0.03
Hotspot	GSM1900	661	1880	GPRS(1TX)	Left	10mm	\	29.71	30.5	0.513	**0.62**	0.272	**0.33**	0.19
Hotspot	GSM1900	661	1880	GPRS(1TX)	Right	10mm	\	29.71	30.5	0.257	**0.31**	0.135	**0.16**	-0.10
Hotspot	GSM1900	810	1909.8	GPRS(1TX)	Top	10mm	Fig.20	29.60	30.5	0.696	**0.86**	0.375	**0.46**	-0.06
Hotspot	GSM1900	661	1880	GPRS(1TX)	Top	10mm	\	29.71	30.5	0.661	**0.79**	0.351	**0.42**	0.14
Hotspot	GSM1900	512	1850.2	GPRS(1TX)	Top	10mm	\	29.66	30.5	0.589	**0.71**	0.311	**0.38**	0.11
Hotspot	GSM1900	810	1850.2	EGPRS(TX)	Top	10mm	\	29.52	30.5	0.66	**0.83**	0.335	**0.42**	-0.12
Hotspot	GSM1900	810	1909.8	GPRS(1TX)	Top	10mm	B2	29.60	30.5	0.683	**0.84**	0.362	**0.45**	-0.05
Hotspot	GSM1900	810	1909.8	GPRS(1TX)	Top	10mm	S	29.60	30.5	0.653	**0.80**	0.302	**0.37**	0.09
Hotspot	GSM1900	810	1909.8	GPRS(1TX)	Top	10mm	S3	29.60	30.5	0.613	**0.75**	0.312	**0.38**	0.09
Body	GSM1900	661	1880	GPRS(2TX)	Front	15mm	\	28.39	29.5	0.38	**0.49**	0.187	**0.24**	-0.06
Body	GSM1900	810	1909.8	GPRS(2TX)	Rear	15mm	\	28.36	29.5	0.44	**0.57**	0.254	**0.33**	-0.06
Body	GSM1900	661	1880	GPRS(2TX)	Rear	15mm	Fig.21	28.39	29.5	0.514	**0.66**	0.292	**0.38**	0.03
Body	GSM1900	512	1850.2	GPRS(2TX)	Rear	15mm	\	28.34	29.5	0.501	**0.65**	0.284	**0.37**	0.19
Body	GSM1900	661	1880	EGPRS(2TX)	Rear	15mm	\	28.36	29.5	0.449	**0.58**	0.259	**0.34**	-0.15
Body	GSM1900	661	1880	GPRS(2TX)	Rear	15mm	B2	28.39	29.5	0.446	**0.58**	0.25	**0.32**	-0.02
Body	GSM1900	661	1880	GPRS(2TX)	Rear	15mm	S	28.39	29.5	0.406	**0.52**	0.19	**0.25**	0.00
Body	GSM1900	661	1880	GPRS(2TX)	Rear	15mm	S3	28.39	29.5	0.376	**0.49**	0.210	**0.27**	-0.06
Body	GSM1900	661	1880	GPRS(2TX)	Front	20mm	\	28.39	29.5	0.248	**0.32**	0.127	**0.16**	0.18
Body	GSM1900	810	1909.8	GPRS(2TX)	Rear	20mm	\	28.36	29.5	0.281	**0.37**	0.178	**0.23**	-0.05
Body	GSM1900	661	1880	GPRS(2TX)	Rear	20mm	Fig.22	28.39	29.5	0.332	**0.43**	0.199	**0.26**	-0.04
Body	GSM1900	512	1850.2	GPRS(2TX)	Rear	20mm	\	28.34	29.5	0.324	**0.42**	0.186	**0.24**	0.06
Body	GSM1900	661	1880	EGPRS(2TX)	Rear	20mm	\	28.36	29.5	0.291	**0.38**	0.177	**0.23**	0.10
Body	GSM1900	661	1880	GPRS(2TX)	Rear	20mm	B2	28.39	29.5	0.304	**0.39**	0.165	**0.21**	0.05
Body	GSM1900	661	1880	GPRS(2TX)	Rear	20mm	S	28.39	29.5	0.234	**0.30**	0.115	**0.15**	-0.13
Body	GSM1900	661	1880	GPRS(2TX)	Rear	20mm	S3	28.39	29.5	0.254	**0.33**	0.125	**0.16**	0.14
Hotspot	WCDMA1900	9400	1880	RMC	Front	10mm	\	19.74	20.5	0.517	**0.62**	0.299	**0.36**	-0.13
Hotspot	WCDMA1900	9538	1907.6	RMC	Rear	10mm	\	19.86	20.5	0.759	**0.88**	0.41	**0.48**	0.05
Hotspot	WCDMA1900	9400	1880	RMC	Rear	10mm	Fig.23	19.74	20.5	0.763	**0.91**	0.413	**0.49**	-0.18
Hotspot	WCDMA1900	9262	1852.4	RMC	Rear	10mm	\	19.74	20.5	0.638	**0.76**	0.349	**0.42**	0.01
Hotspot	WCDMA1900	9400	1880	RMC	Left	10mm	\	19.74	20.5	0.383	**0.46**	0.206	**0.25**	-0.09
Hotspot	WCDMA1900	9400	1880	RMC	Right	10mm	\	19.74	20.5	0.309	**0.37**	0.164	**0.20**	0.12
Hotspot	WCDMA1900	9400	1880	RMC	Top	10mm	\	19.74	20.5	0.626	**0.75**	0.322	**0.38**	-0.09
Hotspot	WCDMA1900	9400	1880	RMC	Rear	10mm	B2	19.74	20.5	0.487	**0.58**	0.267	**0.32**	-0.04
Hotspot	WCDMA1900	9400	1880	RMC	Rear	10mm	S	19.74	20.5	0.437	**0.52**	0.197	**0.23**	0.08
Hotspot	WCDMA1900	9400	1880	RMC	Rear	10mm	S3	19.74	20.5	0.457	**0.54**	0.217	**0.26**	-0.02
Body	WCDMA1900	9400	1880	RMC	Front	15mm	\	22.86	23.5	0.434	**0.50**	0.267	**0.31**	0.08
Body	WCDMA1900	9538	1907.6	RMC	Rear	15mm	\	22.82	23.5	0.702	**0.82**	0.405	**0.47**	0.05
Body	WCDMA1900	9400	1880	RMC	Rear	15mm	Fig.24	22.86	23.5	0.744	**0.86**	0.43	**0.50**	-0.11
Body	WCDMA1900	9262	1852.4	RMC	Rear	15mm	\	22.70	23.5	0.671	**0.81**	0.389	**0.47**	-0.04
Body	WCDMA1900	9400	1880	RMC	Rear	15mm	B2	22.86	23.5	0.621	**0.72**	0.361	**0.42**	-0.11
Body	WCDMA1900	9400	1880	RMC	Rear	15mm	S	22.86	23.5	0.551	**0.64**	0.311	**0.36**	0.05
Body	WCDMA1900	9400	1880	RMC	Rear	15mm	S3	22.86	23.5	0.571	**0.66**	0.311	**0.36**	-0.15
Body	WCDMA1900	9400	1880	RMC	Front	20mm	\	22.86	23.5	0.232	**0.27**	0.147	**0.17**	-0.03
Body	WCDMA1900	9538	1907.6	RMC	Rear	20mm	\	22.82	23.5	0.386	**0.45**	0.235	**0.27**	0.11
Body	WCDMA1900	9400	1880	RMC	Rear	20mm	Fig.25	22.86	23.5	0.421	**0.49**	0.257	**0.30**	0.09
Body	WCDMA1900	9262	1852.4	RMC	Rear	20mm	\	22.70	23.5	0.388	**0.47**	0.238	**0.29**	0.15
Body	WCDMA1900	9400	1880	RMC	Rear	20mm	B2	22.86	23.5	0.378	**0.44**	0.224	**0.26**	-0.18
Body	WCDMA1900	9400	1880	RMC	Rear	20mm	S	22.86	23.5	0.308	**0.36**	0.204	**0.24**	0.04
Body	WCDMA1900	9400	1880	RMC	Rear	20mm	S3	22.86	23.5	0.358	**0.41**	0.184	**0.21**	-0.05

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Hotspot	WCDMA1700	1412	1732.4	RMC	Front	10mm	\	19.10	21	0.318	**0.49**	0.202	**0.31**	-0.11
Hotspot	WCDMA1700	1513	1752.6	RMC	Rear	10mm	Fig.26	19.22	21	0.505	**0.76**	0.307	**0.46**	0.07
Hotspot	WCDMA1700	1412	1732.4	RMC	Rear	10mm	\	19.10	21	0.481	**0.74**	0.263	**0.41**	0.04
Hotspot	WCDMA1700	1312	1712.4	RMC	Rear	10mm	\	19.03	21	0.453	**0.71**	0.227	**0.36**	-0.02
Hotspot	WCDMA1700	1412	1732.4	RMC	Left	10mm	\	19.10	21	0.111	**0.17**	0.066	**0.10**	0.17
Hotspot	WCDMA1700	1412	1732.4	RMC	Right	10mm	\	19.10	21	0.075	**0.12**	0.047	**0.07**	0.09
Hotspot	WCDMA1700	1412	1732.4	RMC	Bottom	10mm	\	19.10	21	0.421	**0.65**	0.239	**0.37**	-0.06
Hotspot	WCDMA1700	1513	1752.6	RMC	Rear	10mm	B2	19.22	21	0.341	**0.51**	0.209	**0.31**	-0.11
Hotspot	WCDMA1700	1513	1752.6	RMC	Rear	10mm	S	19.22	21	0.321	**0.48**	0.179	**0.27**	-0.19
Hotspot	WCDMA1700	1513	1752.6	RMC	Rear	10mm	S3	19.22	21	0.311	**0.47**	0.149	**0.22**	-0.12
Body	WCDMA1700	1412	1732.4	RMC	Front	15mm	\	23.82	24.5	0.523	**0.61**	0.342	**0.40**	-0.19
Body	WCDMA1700	1513	1752.6	RMC	Rear	15mm	\	23.87	24.5	0.815	**0.94**	0.52	**0.60**	-0.08
Body	WCDMA1700	1412	1732.4	RMC	Rear	15mm	Fig.27	23.82	24.5	0.874	**1.02**	0.553	**0.65**	0.02
Body	WCDMA1700	1312	1712.4	RMC	Rear	15mm	\	23.91	24.5	0.811	**0.93**	0.518	**0.59**	0.01
Body	WCDMA1700	1412	1732.4	RMC	Rear	15mm	B2	23.82	24.5	0.722	**0.84**	0.46	**0.54**	0.00
Body	WCDMA1700	1412	1732.4	RMC	Rear	15mm	S	23.82	24.5	0.672	**0.79**	0.42	**0.49**	0.11
Body	WCDMA1700	1412	1732.4	RMC	Rear	15mm	S3	23.82	24.5	0.682	**0.80**	0.42	**0.49**	0.11
Body	WCDMA1700	1412	1732.4	RMC	Front	20mm	\	23.82	24.5	0.31	**0.36**	0.206	**0.24**	0.10
Body	WCDMA1700	1513	1752.6	RMC	Rear	20mm	\	23.87	24.5	0.489	**0.57**	0.318	**0.37**	-0.05
Body	WCDMA1700	1412	1732.4	RMC	Rear	20mm	Fig.28	23.82	24.5	0.526	**0.62**	0.341	**0.40**	0.08
Body	WCDMA1700	1312	1712.4	RMC	Rear	20mm	\	23.91	24.5	0.484	**0.55**	0.314	**0.36**	-0.06
Body	WCDMA1700	1412	1732.4	RMC	Rear	20mm	B2	23.82	24.5	0.434	**0.51**	0.281	**0.33**	0.08
Body	WCDMA1700	1412	1732.4	RMC	Rear	20mm	S	23.82	24.5	0.404	**0.47**	0.221	**0.26**	-0.12
Body	WCDMA1700	1412	1732.4	RMC	Rear	20mm	S3	23.82	24.5	0.394	**0.46**	0.231	**0.27**	0.16
Body	WCDMA 850	4183	836.6	RMC	Front	10mm	\	24.11	25	0.338	**0.41**	0.205	**0.25**	0.18
Body	WCDMA 850	4233	846.6	RMC	Rear	10mm	Fig.29	24.08	25	0.667	**0.82**	0.378	**0.47**	-0.03
Body	WCDMA 850	4183	836.6	RMC	Rear	10mm	\	24.11	25	0.596	**0.73**	0.339	**0.42**	-0.18
Body	WCDMA 850	4132	826.4	RMC	Rear	10mm	\	24.04	25	0.602	**0.75**	0.349	**0.44**	-0.08
Body	WCDMA 850	4183	836.6	RMC	Left	10mm	\	24.11	25	0.173	**0.21**	0.116	**0.14**	0.02
Body	WCDMA 850	4183	836.6	RMC	Right	10mm	\	24.11	25	0.339	**0.42**	0.229	**0.28**	0.02
Body	WCDMA 850	4183	836.6	RMC	Bottom	10mm	\	24.11	25	0.433	**0.53**	0.224	**0.27**	-0.10
Body	WCDMA 850	4233	846.6	RMC	Rear	10mm	B2	24.08	25	0.544	**0.67**	0.314	**0.39**	-0.08
Body	WCDMA 850	4233	846.6	RMC	Rear	10mm	S	24.08	25	0.474	**0.59**	0.264	**0.33**	-0.09
Body	WCDMA 850	4233	846.6	RMC	Rear	10mm	S3	24.08	25	0.514	**0.64**	0.294	**0.36**	0.17
Hotspot	LTE Band2	18900	1880	1RB-Middle	Front	10mm	\	20.44	21	0.573	**0.65**	0.254	**0.29**	0.17
Hotspot	LTE Band2	18900	1880	1RB-Middle	Rear	10mm	Fig.30	20.44	21	0.673	**0.77**	0.367	**0.42**	0.13
Hotspot	LTE Band2	18900	1880	1RB-Middle	Left	10mm	\	20.44	21	0.553	**0.63**	0.278	**0.32**	0.02
Hotspot	LTE Band2	18900	1880	1RB-Middle	Right	10mm	\	20.44	21	0.3	**0.34**	0.151	**0.17**	0.10
Hotspot	LTE Band2	18900	1880	1RB-Middle	Top	10mm	\	20.44	21	0.518	**0.59**	0.283	**0.32**	-0.08
Hotspot	LTE Band2	18900	1880	50RB-Low	Front	10mm	\	20.41	21	0.539	**0.62**	0.271	**0.31**	0.14
Hotspot	LTE Band2	18900	1880	50RB-Low	Rear	10mm	\	20.41	21	0.651	**0.75**	0.356	**0.41**	0.06
Hotspot	LTE Band2	18900	1880	50RB-Low	Left	10mm	\	20.41	21	0.538	**0.62**	0.272	**0.31**	-0.01
Hotspot	LTE Band2	18900	1880	50RB-Low	Right	10mm	\	20.41	21	0.294	**0.34**	0.149	**0.17**	0.05
Hotspot	LTE Band2	18900	1880	50RB-Low	Top	10mm	\	20.41	21	0.503	**0.58**	0.273	**0.31**	0.18
Hotspot	LTE Band2	18900	1880	1RB-Middle	Rear	10mm	B2	20.44	21	0.667	**0.76**	0.354	**0.40**	0.13
Hotspot	LTE Band2	18900	1880	1RB-Middle	Rear	10mm	S	20.44	21	0.637	**0.72**	0.284	**0.32**	0.04
Hotspot	LTE Band2	18900	1880	1RB-Middle	Rear	10mm	S3	20.44	21	0.617	**0.70**	0.314	**0.36**	0.05
Body	LTE Band2	18700	1860	1RB-Middle	Front	15mm	\	24.66	25	0.569	**0.62**	0.318	**0.34**	0.17
Body	LTE Band2	19100	1900	1RB-Middle	Rear	15mm	\	24.59	25	0.82	**0.90**	0.462	**0.51**	-0.06
Body	LTE Band2	18900	1880	1RB-Middle	Rear	15mm	Fig.31	24.64	25	0.887	**0.96**	0.514	**0.56**	-0.04
Body	LTE Band2	18700	1860	1RB-Middle	Rear	15mm	\	24.66	25	0.829	**0.90**	0.481	**0.52**	0.00
Body	LTE Band2	18700	1860	50RB-High	Front	15mm	\	23.67	24	0.419	**0.45**	0.234	**0.25**	-0.18
Body	LTE Band2	18700	1860	50RB-High	Rear	15mm	\	23.67	24	0.612	**0.66**	0.355	**0.38**	0.10
Body	LTE Band2	18700	1860	100RB	Rear	15mm		23.63	24	0.621	**0.68**	0.354	**0.39**	0.05
Body	LTE Band2	18900	1880	1RB-Middle	Rear	15mm	B2	24.64	25	0.854	**0.93**	0.496	**0.54**	-0.06
Body	LTE Band2	18900	1880	1RB-Middle	Rear	15mm	S	24.64	25	0.824	**0.90**	0.436	**0.47**	-0.16
Body	LTE Band2	18900	1880	1RB-Middle	Rear	15mm	S3	24.64	25	0.794	**0.86**	0.466	**0.51**	-0.19
Body	LTE Band2	18700	1860	1RB-Middle	Front	20mm	\	24.66	25	0.383	**0.41**	0.228	**0.25**	-0.15
Body	LTE Band2	18700	1860	1RB-Middle	Rear	20mm	Fig.32	24.66	25	0.559	**0.60**	0.337	**0.36**	0.00
Body	LTE Band2	18700	1860	50RB-High	Front	20mm	\	23.67	24	0.28	**0.30**	0.159	**0.17**	-0.18
Body	LTE Band2	18700	1860	50RB-High	Rear	20mm	\	23.67	24	0.409	**0.44**	0.253	**0.27**	0.10
Body	LTE Band2	18900	1880	1RB-Middle	Rear	20mm	B2	24.64	25	0.529	**0.57**	0.303	**0.33**	-0.06
Body	LTE Band2	18900	1880	1RB-Middle	Rear	20mm	S	24.64	25	0.489	**0.53**	0.273	**0.30**	-0.04
Body	LTE Band2	18900	1880	1RB-Middle	Rear	20mm	S3	24.64	25	0.469	**0.51**	0.283	**0.31**	-0.05
Hotspot	LTE Band4	20300	1745	1RB-Middle	Front	10mm	\	19.43	21	0.252	**0.36**	0.16	**0.23**	-0.16
Hotspot	LTE Band4	20300	1745	1RB-Middle	Rear	10mm	Fig.33	19.43	21	0.524	**0.75**	0.319	**0.46**	0.18
Hotspot	LTE Band4	20300	1745	1RB-Middle	Left	10mm	\	19.43	21	0.119	**0.17**	0.07	**0.10**	0.15
Hotspot	LTE Band4	20300	1745	1RB-Middle	Right	10mm	\	19.43	21	0.085	**0.12**	0.051	**0.07**	-0.01
Hotspot	LTE Band4	20300	1745	1RB-Middle	Bottom	10mm	\	19.43	21	0.475	**0.68**	0.271	**0.39**	-0.04
Hotspot	LTE Band4	20300	1745	50RB-Middle	Front	10mm	\	19.45	21	0.248	**0.35**	0.158	**0.23**	-0.15
Hotspot	LTE Band4	20300	1745	50RB-Middle	Rear	10mm	\	19.45	21	0.508	**0.73**	0.309	**0.44**	-0.02
Hotspot	LTE Band4	20300	1745	50RB-Middle	Left	10mm	\	19.45	21	0.114	**0.16**	0.067	**0.10**	0.02
Hotspot	LTE Band4	20300	1745	50RB-Middle	Right	10mm	\	19.45	21	0.082	**0.12**	0.05	**0.07**	0.07
Hotspot	LTE Band4	20300	1745	50RB-Middle	Bottom	10mm	\	19.45	21	0.465	**0.66**	0.265	**0.38**	0.04
Hotspot	LTE Band4	20300	1745	1RB-Middle	Rear	10mm	B2	19.43	21	0.499	**0.72**	0.304	**0.44**	0.09
Hotspot	LTE Band4	20300	1745	1RB-Middle	Rear	10mm	S	19.43	21	0.449	**0.64**	0.284	**0.41**	0.15
Hotspot	LTE Band4	20300	1745	1RB-Middle	Rear	10mm	S3	19.43	21	0.459	**0.66**	0.274	**0.39**	-0.07

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Body	LTE Band4	20300	1745	1RB-Middle	Front	15mm	\	23.99	25	0.544	**0.69**	0.357	**0.45**	-0.07
Body	LTE Band4	20300	1745	1RB-Middle	Rear	15mm	Fig.34	23.99	25	0.896	**1.13**	0.567	**0.72**	0.00
Body	LTE Band4	20175	1732.5	1RB-Middle	Rear	15mm	\	23.86	25	0.771	**1.00**	0.466	**0.61**	-0.04
Body	LTE Band4	20050	1720	1RB-Middle	Rear	15mm	\	23.86	25	0.76	**0.99**	0.459	**0.60**	-0.02
Body	LTE Band4	20300	1745	50RB-Middle	Front	15mm	\	22.94	24	0.416	**0.53**	0.274	**0.35**	0.03
Body	LTE Band4	20300	1745	50RB-Middle	Rear	15mm	\	22.94	24	0.613	**0.78**	0.39	**0.50**	-0.09
Body	LTE Band4	20300	1745	100RB	Rear	15mm	\	22.92	24	0.607	**0.78**	0.368	**0.47**	0.10
Body	LTE Band4	20300	1745	1RB-Middle	Rear	15mm	B2	23.99	25	0.798	**1.01**	0.508	**0.64**	-0.08
Body	LTE Band4	20300	1745	1RB-Middle	Rear	15mm	S	23.99	25	0.778	**0.98**	0.458	**0.58**	0.14
Body	LTE Band4	20300	1745	1RB-Middle	Rear	15mm	S3	23.99	25	0.738	**0.93**	0.438	**0.55**	-0.02
Body	LTE Band4	20300	1745	1RB-Middle	Front	20mm	\	23.99	25	0.358	**0.45**	0.237	**0.30**	0.03
Body	LTE Band4	20300	1745	1RB-Middle	Rear	20mm	Fig.35	23.99	25	0.518	**0.65**	0.336	**0.42**	-0.02
Body	LTE Band4	20300	1745	50RB-Middle	Front	20mm	\	22.94	24	0.273	**0.35**	0.182	**0.23**	0.07
Body	LTE Band4	20300	1745	50RB-Middle	Rear	20mm	\	22.94	24	0.403	**0.51**	0.261	**0.33**	-0.03
Body	LTE Band4	20300	1745	1RB-Middle	Rear	20mm	B2	23.99	25	0.459	**0.58**	0.284	**0.36**	0.00
Body	LTE Band4	20300	1745	1RB-Middle	Rear	20mm	S	23.99	25	0.409	**0.52**	0.264	**0.33**	-0.17
Body	LTE Band4	20300	1745	1RB-Middle	Rear	20mm	S3	23.99	25	0.389	**0.49**	0.224	**0.28**	0.17
Body	LTE Band5	20600	844	1RB-Middle	Front	10mm	\	24.96	25.5	0.399	**0.45**	0.237	**0.27**	0.04
Body	LTE Band5	20600	844	1RB-Middle	Rear	10mm	Fig.36	24.96	25.5	0.723	**0.82**	0.411	**0.47**	-0.08
Body	LTE Band5	20600	844	1RB-Middle	Left	10mm	\	24.96	25.5	0.197	**0.22**	0.131	**0.15**	0.00
Body	LTE Band5	20600	844	1RB-Middle	Right	10mm	\	24.96	25.5	0.391	**0.44**	0.263	**0.30**	0.02
Body	LTE Band5	20600	844	1RB-Middle	Bottom	10mm	\	24.96	25.5	0.473	**0.54**	0.259	**0.29**	-0.01
Body	LTE Band5	20600	844	25RB-Middle	Front	10mm	\	23.97	24.5	0.315	**0.36**	0.187	**0.21**	-0.18
Body	LTE Band5	20600	844	25RB-Middle	Rear	10mm	\	23.97	24.5	0.569	**0.64**	0.324	**0.37**	-0.15
Body	LTE Band5	20600	844	25RB-Middle	Left	10mm	\	23.97	24.5	0.153	**0.17**	0.102	**0.12**	0.11
Body	LTE Band5	20600	844	25RB-Middle	Right	10mm	\	23.97	24.5	0.307	**0.35**	0.206	**0.23**	0.02
Body	LTE Band5	20600	844	25RB-Middle	Bottom	10mm	\	23.97	24.5	0.367	**0.41**	0.201	**0.23**	0.04
Body	LTE Band5	20600	844	1RB-Middle	Rear	10mm	B2	24.96	25.5	0.693	**0.78**	0.398	**0.45**	-0.17
Body	LTE Band5	20600	844	1RB-Middle	Rear	10mm	S	24.96	25.5	0.623	**0.71**	0.328	**0.37**	0.07
Body	LTE Band5	20600	844	1RB-Middle	Rear	10mm	S3	24.96	25.5	0.623	**0.71**	0.348	**0.39**	0.07
Hotspot	LTE Band7	21350	2560	1RB-Middle	Front	10mm	\	21.04	21.5	0.183	**0.20**	0.1	**0.11**	0.08
Hotspot	LTE Band7	21350	2560	1RB-Middle	Rear	10mm	\	21.04	21.5	0.365	**0.41**	0.185	**0.21**	-0.02
Hotspot	LTE Band7	21350	2560	1RB-Middle	Left	10mm	\	21.04	21.5	0.142	**0.16**	0.076	**0.08**	-0.10
Hotspot	LTE Band7	21350	2560	1RB-Middle	Right	10mm	\	21.04	21.5	0.075	**0.08**	0.04	**0.04**	0.16
Hotspot	LTE Band7	21350	2560	1RB-Middle	Bottom	10mm	Fig.37	21.04	21.5	0.547	**0.61**	0.283	**0.31**	-0.05
Hotspot	LTE Band7	21350	2560	50RB-Low	Front	10mm	\	21.08	21.5	0.176	**0.19**	0.097	**0.11**	-0.05
Hotspot	LTE Band7	21350	2560	50RB-Low	Rear	10mm	\	21.08	21.5	0.352	**0.39**	0.18	**0.20**	-0.01
Hotspot	LTE Band7	21350	2560	50RB-Low	Left	10mm	\	21.08	21.5	0.137	**0.15**	0.072	**0.08**	0.16
Hotspot	LTE Band7	21350	2560	50RB-Low	Right	10mm	\	21.08	21.5	0.073	**0.08**	0.038	**0.04**	-0.04
Hotspot	LTE Band7	21350	2560	50RB-Low	Bottom	10mm	\	21.08	21.5	0.53	**0.58**	0.274	**0.30**	0.08
Hotspot	LTE Band7	21350	2560	1RB-Middle	Bottom	10mm	B2	21.04	21.5	0.462	**0.51**	0.24	**0.27**	0.04
Hotspot	LTE Band7	21350	2560	1RB-Middle	Bottom	10mm	S	21.04	21.5	0.422	**0.47**	0.2	**0.22**	-0.12
Hotspot	LTE Band7	21350	2560	1RB-Middle	Bottom	10mm	S3	21.04	21.5	0.432	**0.48**	0.19	**0.21**	0.14
Body	LTE Band7	21350	2560	1RB-Middle	Front	15mm	\	23.00	23.5	0.168	**0.19**	0.098	**0.11**	0.15
Body	LTE Band7	21350	2560	1RB-Middle	Rear	15mm	Fig.38	23.00	23.5	0.347	**0.39**	0.192	**0.22**	0.09
Body	LTE Band7	21350	2560	50RB-Middle	Front	15mm	\	21.79	22.5	0.131	**0.15**	0.076	**0.09**	0.17
Body	LTE Band7	21350	2560	50RB-Middle	Rear	15mm	\	21.79	22.5	0.268	**0.32**	0.147	**0.17**	0.09
Body	LTE Band7	21350	2560	1RB-Middle	Rear	15mm	B2	23.00	23.5	0.286	**0.32**	0.158	**0.18**	-0.03
Body	LTE Band7	21350	2560	1RB-Middle	Rear	15mm	S	23.00	23.5	0.246	**0.28**	0.118	**0.13**	-0.18
Body	LTE Band7	21350	2560	1RB-Middle	Rear	15mm	S3	23.00	23.5	0.266	**0.30**	0.128	**0.14**	0.18
Body	LTE Band12	23130	711	1RB-Mid	Front	10mm	\	25.04	25.5	0.25	**0.28**	0.192	**0.21**	-0.14
Body	LTE Band12	23130	711	1RB-Mid	Rear	10mm	\	25.04	25.5	0.382	**0.42**	0.296	**0.33**	0.02
Body	LTE Band12	23130	711	1RB-Mid	Left	10mm	\	25.04	25.5	0.271	**0.30**	0.196	**0.22**	0.12
Body	LTE Band12	23130	711	1RB-Mid	Right	10mm	Fig.39	25.04	25.5	0.416	**0.46**	0.297	**0.33**	-0.14
Body	LTE Band12	23130	711	1RB-Mid	Bottom	10mm	\	25.04	25.5	0.255	**0.28**	0.133	**0.15**	-0.18
Body	LTE Band12	23130	711	25RB-Mid	Front	10mm	\	24.21	24.5	0.194	**0.21**	0.149	**0.16**	0.07
Body	LTE Band12	23130	711	25RB-Mid	Rear	10mm	\	24.21	24.5	0.3	**0.32**	0.233	**0.25**	0.11
Body	LTE Band12	23130	711	25RB-Mid	Left	10mm	\	24.21	24.5	0.212	**0.23**	0.153	**0.16**	0.16
Body	LTE Band12	23130	711	25RB-Mid	Right	10mm	\	24.21	24.5	0.324	**0.35**	0.232	**0.25**	-0.08
Body	LTE Band12	23130	711	25RB-Mid	Bottom	10mm	\	24.21	24.5	0.193	**0.21**	0.101	**0.11**	-0.04
Body	LTE Band12	23130	711	1RB-Mid	Right	10mm	B2	25.04	25.5	0.234	**0.26**	0.163	**0.18**	-0.09
Body	LTE Band12	23130	711	1RB-Mid	Right	10mm	S	25.04	25.5	0.184	**0.20**	0.093	**0.10**	0.15
Body	LTE Band12	23130	711	1RB-Mid	Right	10mm	S3	25.04	25.5	0.174	**0.19**	0.103	**0.11**	0.18
Body	LTE Band13	23230	782	1RB-Middle	Front	10mm	\	24.43	25.5	0.379	**0.48**	0.287	**0.37**	-0.13
Body	LTE Band13	23230	782	1RB-Middle	Rear	10mm	\	24.43	25.5	0.556	**0.71**	0.351	**0.45**	-0.07
Body	LTE Band13	23230	782	1RB-Middle	Left	10mm	\	24.43	25.5	0.355	**0.45**	0.248	**0.32**	0.05
Body	LTE Band13	23230	782	1RB-Middle	Right	10mm	Fig.40	24.43	25.5	0.614	**0.79**	0.434	**0.56**	0.02
Body	LTE Band13	23230	782	1RB-Middle	Bottom	10mm	\	24.43	25.5	0.542	**0.69**	0.277	**0.35**	0.17
Body	LTE Band13	23230	782	25RB-Mid	Front	10mm	\	23.34	24.5	0.293	**0.38**	0.22	**0.29**	0.13
Body	LTE Band13	23230	782	25RB-Mid	Rear	10mm	\	23.34	24.5	0.421	**0.55**	0.266	**0.35**	-0.16
Body	LTE Band13	23230	782	25RB-Mid	Left	10mm	\	23.34	24.5	0.265	**0.35**	0.186	**0.24**	0.11
Body	LTE Band13	23230	782	25RB-Mid	Right	10mm	\	23.34	24.5	0.466	**0.61**	0.326	**0.43**	-0.16
Body	LTE Band13	23230	782	25RB-Mid	Bottom	10mm	\	23.34	24.5	0.359	**0.47**	0.196	**0.26**	-0.07
Body	LTE Band13	23230	782	1RB-Middle	Right	10mm	B2	24.43	25.5	0.413	**0.53**	0.294	**0.38**	-0.02
Body	LTE Band13	23230	782	1RB-Middle	Right	10mm	S	24.43	25.5	0.353	**0.45**	0.274	**0.35**	-0.18
Body	LTE Band13	23230	782	1RB-Middle	Right	10mm	S3	24.43	25.5	0.393	**0.50**	0.254	**0.32**	-0.05

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Body	LTE Band14	23330	793	1RB-Middle	Front	10mm	\	24.14	25.5	0.301	**0.41**	0.201	**0.27**	-0.11
Body	LTE Band14	23330	793	1RB-Middle	Rear	10mm	\	24.14	25.5	0.512	**0.70**	0.321	**0.44**	0.02
Body	LTE Band14	23330	793	1RB-Middle	Left	10mm	\	24.14	25.5	0.257	**0.35**	0.182	**0.25**	0.03
Body	LTE Band14	23330	793	1RB-Middle	Right	10mm	Fig.41	24.14	25.5	0.521	**0.71**	0.366	**0.50**	-0.07
Body	LTE Band14	23330	793	1RB-Middle	Bottom	10mm	\	24.14	25.5	0.365	**0.50**	0.201	**0.27**	-0.19
Body	LTE Band14	23330	793	25RB-Mid	Front	10mm	\	23.21	24.5	0.232	**0.31**	0.154	**0.21**	0.02
Body	LTE Band14	23330	793	25RB-Mid	Rear	10mm	\	23.21	24.5	0.39	**0.52**	0.246	**0.33**	0.12
Body	LTE Band14	23330	793	25RB-Mid	Left	10mm	\	23.21	24.5	0.199	**0.27**	0.142	**0.19**	-0.13
Body	LTE Band14	23330	793	25RB-Mid	Right	10mm	\	23.21	24.5	0.397	**0.53**	0.28	**0.38**	-0.06
Body	LTE Band14	23330	793	25RB-Mid	Bottom	10mm	\	23.21	24.5	0.282	**0.38**	0.156	**0.21**	-0.17
Body	LTE Band14	23330	793	1RB-Middle	Right	10mm	B2	24.14	25.5	0.352	**0.48**	0.25	**0.34**	-0.07
Body	LTE Band14	23330	793	1RB-Middle	Right	10mm	S	24.14	25.5	0.322	**0.44**	0.2	**0.27**	0.15
Body	LTE Band14	23330	793	1RB-Middle	Right	10mm	S3	24.14	25.5	0.332	**0.45**	0.2	**0.27**	0.12
Hotspot	LTE Band25	26365	1882.5	1RB-Middle	Front	10mm	\	20.51	21	0.46	**0.51**	0.249	**0.28**	0.00
Hotspot	LTE Band25	26365	1882.5	1RB-Middle	Rear	10mm	Fig.42	20.51	21	0.631	**0.71**	0.341	**0.38**	0.03
Hotspot	LTE Band25	26365	1882.5	1RB-Middle	Left	10mm	\	20.51	21	0.405	**0.45**	0.2	**0.22**	0.15
Hotspot	LTE Band25	26365	1882.5	1RB-Middle	Right	10mm	\	20.51	21	0.282	**0.32**	0.14	**0.16**	0.19
Hotspot	LTE Band25	26365	1882.5	1RB-Middle	Top	10mm	\	20.51	21	0.528	**0.59**	0.282	**0.32**	-0.09
Hotspot	LTE Band25	26365	1882.5	50RB-Low	Front	10mm	\	20.54	21	0.44	**0.49**	0.237	**0.26**	0.12
Hotspot	LTE Band25	26365	1882.5	50RB-Low	Rear	10mm	\	20.54	21	0.61	**0.68**	0.329	**0.37**	0.15
Hotspot	LTE Band25	26365	1882.5	50RB-Low	Left	10mm	\	20.54	21	0.403	**0.45**	0.201	**0.22**	-0.07
Hotspot	LTE Band25	26365	1882.5	50RB-Low	Right	10mm	\	20.54	21	0.284	**0.32**	0.142	**0.16**	-0.05
Hotspot	LTE Band25	26365	1882.5	50RB-Low	Top	10mm	\	20.54	21	0.517	**0.57**	0.278	**0.31**	-0.01
Hotspot	LTE Band25	26365	1882.5	1RB-Middle	Rear	10mm	B2	20.51	21	0.588	**0.66**	0.324	**0.36**	0.10
Hotspot	LTE Band25	26365	1882.5	1RB-Middle	Rear	10mm	S	20.51	21	0.558	**0.62**	0.274	**0.31**	0.16
Hotspot	LTE Band25	26365	1882.5	1RB-Middle	Rear	10mm	S3	20.51	21	0.548	**0.61**	0.294	**0.33**	0.11
Body	LTE Band25	26365	1882.5	1RB-Middle	Front	15mm	\	24.70	25	0.643	**0.69**	0.369	**0.40**	-0.14
Body	LTE Band25	26590	1905	1RB-Middle	Rear	15mm	Fig.43	24.58	25	0.96	**1.06**	0.565	**0.62**	-0.17
Body	LTE Band25	26365	1882.5	1RB-Middle	Rear	15mm	\	24.70	25	0.907	**0.97**	0.525	**0.56**	0.02
Body	LTE Band25	26140	1860	1RB-Middle	Rear	15mm	\	24.68	25	0.861	**0.93**	0.482	**0.52**	0.00
Body	LTE Band25	26365	1882.5	50RB-Low	Front	15mm	\	23.73	24	0.487	**0.52**	0.28	**0.30**	-0.02
Body	LTE Band25	26365	1882.5	50RB-Low	Rear	15mm	\	23.73	24	0.687	**0.73**	0.397	**0.42**	-0.02
Body	LTE Band25	26140	1860	100RB	Rear	15mm	\	23.68	24	0.662	**0.71**	0.369	**0.40**	-0.03
Body	LTE Band25	26590	1905	1RB-Middle	Rear	15mm	B2	24.58	25	0.925	**1.02**	0.534	**0.59**	-0.06
Body	LTE Band25	26590	1905	1RB-Middle	Rear	15mm	S	24.58	25	0.885	**0.97**	0.514	**0.57**	0.11
Body	LTE Band25	26590	1905	1RB-Middle	Rear	15mm	S3	24.58	25	0.875	**0.96**	0.484	**0.53**	0.10
Body	LTE Band25	26365	1882.5	1RB-Middle	Front	20mm	\	24.70	25	0.414	**0.44**	0.239	**0.26**	0.17
Body	LTE Band25	26365	1882.5	1RB-Middle	Rear	20mm	Fig.44	24.70	25	0.579	**0.62**	0.347	**0.37**	0.05
Body	LTE Band25	26365	1882.5	50RB-Low	Front	20mm	\	23.73	24	0.31	**0.33**	0.184	**0.20**	-0.17
Body	LTE Band25	26365	1882.5	50RB-Low	Rear	20mm	\	23.73	24	0.441	**0.47**	0.263	**0.28**	0.10
Body	LTE Band25	26590	1905	1RB-Middle	Rear	20mm	B2	24.58	25	0.543	**0.60**	0.316	**0.35**	-0.03
Body	LTE Band25	26590	1905	1RB-Middle	Rear	20mm	S	24.58	25	0.523	**0.58**	0.296	**0.33**	0.05
Body	LTE Band25	26590	1905	1RB-Middle	Rear	20mm	S3	24.58	25	0.493	**0.54**	0.266	**0.29**	-0.11
Body	LTE Band26	26965	841.5	1RB-Middle	Front	10mm	\	25.32	25.5	0.339	**0.35**	0.202	**0.21**	0.16
Body	LTE Band26	26965	841.5	1RB-Middle	Rear	10mm	Fig.45	25.32	25.5	0.607	**0.63**	0.346	**0.36**	-0.10
Body	LTE Band26	26965	841.5	1RB-Middle	Left	10mm	\	25.32	25.5	0.166	**0.17**	0.109	**0.11**	-0.06
Body	LTE Band26	26965	841.5	1RB-Middle	Right	10mm	\	25.32	25.5	0.342	**0.36**	0.225	**0.23**	-0.06
Body	LTE Band26	26965	841.5	1RB-Middle	Bottom	10mm	\	25.32	25.5	0.403	**0.42**	0.215	**0.22**	-0.17
Body	LTE Band26	26965	841.5	36RB-Mid	Front	10mm	\	24.42	24.5	0.282	**0.29**	0.169	**0.17**	-0.02
Body	LTE Band26	26965	841.5	36RB-Mid	Rear	10mm	\	24.42	24.5	0.499	**0.51**	0.286	**0.29**	0.01
Body	LTE Band26	26965	841.5	36RB-Mid	Left	10mm	\	24.42	24.5	0.139	**0.14**	0.091	**0.09**	-0.10
Body	LTE Band26	26965	841.5	36RB-Mid	Right	10mm	\	24.42	24.5	0.283	**0.29**	0.186	**0.19**	0.14
Body	LTE Band26	26965	841.5	36RB-Mid	Bottom	10mm	\	24.42	24.5	0.333	**0.34**	0.178	**0.18**	-0.16
Body	LTE Band26	26965	841.5	1RB-Middle	Rear	10mm	B2	25.32	25.5	0.574	**0.60**	0.329	**0.34**	-0.06
Body	LTE Band26	26965	841.5	1RB-Middle	Rear	10mm	S	25.32	25.5	0.554	**0.58**	0.259	**0.27**	0.08
Body	LTE Band26	26965	841.5	1RB-Middle	Rear	10mm	S3	25.32	25.5	0.534	**0.56**	0.289	**0.30**	-0.11
Hotspot	LTE Band41 PC3	41490	2680	1RB-Middle	Front	10mm	\	22.82	23	0.348	**0.36**	0.158	**0.16**	-0.05
Hotspot	LTE Band41 PC3	41490	2680	1RB-Middle	Rear	10mm	\	22.82	23	0.353	**0.37**	0.184	**0.19**	-0.01
Hotspot	LTE Band41 PC3	41490	2680	1RB-Middle	Left	10mm	\	22.82	23	0.136	**0.14**	0.073	**0.08**	0.00
Hotspot	LTE Band41 PC3	41490	2680	1RB-Middle	Right	10mm	\	22.82	23	< 0.01	**< 0.01**	< 0.01	**< 0.01**	\
Hotspot	LTE Band41 PC3	41490	2680	1RB-Middle	Top	10mm	\	22.82	23	0.642	**0.67**	0.311	**0.32**	0.08
Hotspot	LTE Band41 PC3	41055	2636.5	1RB-Middle	Top	10mm	\	22.35	23	0.727	**0.84**	0.331	**0.38**	-0.15
Hotspot	LTE Band41 PC3	40620	2593	1RB-Middle	Top	10mm	Fig.46	22.62	23	0.781	**0.85**	0.366	**0.40**	-0.04
Hotspot	LTE Band41 PC3	40185	2549.5	1RB-Middle	Top	10mm	\	22.52	23	0.689	**0.77**	0.318	**0.36**	0.10
Hotspot	LTE Band41 PC3	39750	2506	1RB-Middle	Top	10mm	\	22.20	23	0.631	**0.76**	0.293	**0.35**	0.04
Hotspot	LTE Band41 PC3	41490	2680	50RB-Low	Front	10mm	\	22.21	23	0.303	**0.36**	0.138	**0.17**	0.09
Hotspot	LTE Band41 PC3	41490	2680	50RB-Low	Rear	10mm	\	22.21	23	0.323	**0.39**	0.167	**0.20**	0.04
Hotspot	LTE Band41 PC3	41490	2680	50RB-Low	Left	10mm	\	22.21	23	0.118	**0.14**	0.064	**0.08**	-0.17
Hotspot	LTE Band41 PC3	41490	2680	50RB-Low	Right	10mm	\	22.21	23	< 0.01	**< 0.01**	< 0.01	**< 0.01**	\
Hotspot	LTE Band41 PC3	41490	2680	50RB-Low	Top	10mm	\	22.21	23	0.569	**0.68**	0.275	**0.33**	-0.04
Hotspot	LTE Band41 PC3	41490	2680	100RB	Top	10mm	\	22.21	23	0.604	**0.72**	0.286	**0.34**	0.05
Hotspot	LTE Band41 PC3	40620	2593	1RB-Middle	Top	10mm	B2	22.82	23	0.752	**0.78**	0.343	**0.36**	0.11
Hotspot	LTE Band41 PC3	40620	2593	1RB-Middle	Top	10mm	S	22.82	23	0.682	**0.71**	0.293	**0.31**	-0.03
Hotspot	LTE Band41 PC3	40620	2593	1RB-Middle	Top	10mm	S3	22.82	23	0.682	**0.71**	0.293	**0.31**	-0.16

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Body	LTE Band41 PC3	40620	2593	1RB-Middle	Front	15mm	\	24.66	25	0.306	**0.33**	0.152	**0.16**	0.03
Body	LTE Band41 PC3	40620	2593	1RB-Middle	Rear	15mm	Fig.47	24.66	25	0.504	**0.55**	0.251	**0.27**	0.04
Body	LTE Band41 PC3	40620	2593	50RB-Low	Front	15mm	\	23.52	24	0.227	**0.25**	0.113	**0.13**	0.13
Body	LTE Band41 PC3	40620	2593	50RB-Low	Rear	15mm	\	23.52	24	0.38	**0.42**	0.189	**0.21**	-0.02
Body	LTE Band41 PC3	40620	2593	1RB-Middle	Rear	15mm	B2	24.66	25	0.467	**0.51**	0.218	**0.24**	0.06
Body	LTE Band41 PC3	40620	2593	1RB-Middle	Rear	15mm	S	24.66	25	0.427	**0.46**	0.158	**0.17**	-0.01
Body	LTE Band41 PC3	40620	2593	1RB-Middle	Rear	15mm	S3	24.66	25	0.397	**0.43**	0.198	**0.21**	-0.06
Hotspot	LTE Band41 PC2	40620	2593	1RB-Middle	Front	10mm	\	24.42	24.5	0.141	**0.14**	0.064	**0.07**	0.15
Hotspot	LTE Band41 PC2	40620	2593	1RB-Middle	Rear	10mm	\	24.42	24.5	0.233	**0.24**	0.109	**0.11**	0.05
Hotspot	LTE Band41 PC2	40620	2593	1RB-Middle	Left	10mm	\	24.42	24.5	0.069	**0.07**	0.037	**0.04**	0.09
Hotspot	LTE Band41 PC2	40620	2593	1RB-Middle	Right	10mm	\	24.42	24.5	< 0.01	**< 0.01**	< 0.01	**< 0.01**	\
Hotspot	LTE Band41 PC2	40620	2593	1RB-Middle	Top	10mm	Fig.48	24.42	24.5	0.304	**0.31**	0.143	**0.15**	0.01
Hotspot	LTE Band41 PC2	40620	2593	50RB-Low	Front	10mm	\	23.45	24.5	0.115	**0.15**	0.053	**0.07**	-0.05
Hotspot	LTE Band41 PC2	40620	2593	50RB-Low	Rear	10mm	\	23.45	24.5	0.199	**0.25**	0.093	**0.12**	-0.03
Hotspot	LTE Band41 PC2	40620	2593	50RB-Low	Left	10mm	\	23.45	24.5	0.058	**0.07**	0.03	**0.04**	0.03
Hotspot	LTE Band41 PC2	40620	2593	50RB-Low	Right	10mm	\	23.45	24.5	< 0.01	**< 0.01**	< 0.01	**< 0.01**	\
Hotspot	LTE Band41 PC2	40620	2593	50RB-Low	Top	10mm	\	23.45	24.5	0.212	**0.27**	0.107	**0.14**	0.03
Hotspot	LTE Band41 PC2	40620	2593	1RB-Middle	Top	10mm	B2	24.42	24.5	0.274	**0.28**	0.119	**0.12**	0.09
Hotspot	LTE Band41 PC2	40620	2593	1RB-Middle	Top	10mm	S	24.42	24.5	0.204	**0.21**	0.049	**0.05**	0.13
Hotspot	LTE Band41 PC2	40620	2593	1RB-Middle	Top	10mm	S3	24.42	24.5	0.234	**0.24**	0.089	**0.09**	-0.07
Body	LTE Band41 PC2	40185	2549.5	1RB-Middle	Front	15mm	\	27.59	28	0.168	**0.18**	0.085	**0.09**	-0.10
Body	LTE Band41 PC2	40185	2549.5	1RB-Middle	Rear	15mm	\	27.59	28	0.32	**0.35**	0.161	**0.18**	0.10
Body	LTE Band41 PC2	40185	2549.5	50RB-Low	Front	15mm	\	26.62	27	0.169	**0.18**	0.085	**0.09**	0.18
Body	LTE Band41 PC2	40185	2549.5	50RB-Low	Rear	15mm	Fig.49	26.62	27	0.332	**0.36**	0.166	**0.18**	0.03
Body	LTE Band41 PC2	40185	2549.5	50RB-High	Rear	15mm	B2	26.62	27	0.306	**0.33**	0.146	**0.16**	0.12
Body	LTE Band41 PC2	40185	2549.5	50RB-High	Rear	15mm	S	26.62	27	0.256	**0.28**	0.126	**0.14**	0.08
Body	LTE Band41 PC2	40185	2549.5	50RB-High	Rear	15mm	S3	26.62	27	0.286	**0.31**	0.126	**0.14**	0.06
Hotspot	LTE Band66	132572	1770	1RB-Middle	Front	10mm	\	19.69	21	0.206	**0.28**	0.134	**0.18**	-0.11
Hotspot	LTE Band66	132572	1770	1RB-Middle	Rear	10mm	\	19.69	21	0.466	**0.63**	0.286	**0.39**	0.00
Hotspot	LTE Band66	132572	1770	1RB-Middle	Left	10mm	\	19.69	21	0.123	**0.17**	0.073	**0.10**	-0.16
Hotspot	LTE Band66	132572	1770	1RB-Middle	Right	10mm	\	19.69	21	0.082	**0.11**	0.053	**0.07**	0.04
Hotspot	LTE Band66	132572	1770	1RB-Middle	Bottom	10mm	Fig.50	19.69	21	0.469	**0.63**	0.279	**0.38**	-0.14
Hotspot	LTE Band66	132572	1770	50RB-Middle	Front	10mm	\	19.61	21	0.201	**0.28**	0.132	**0.18**	0.19
Hotspot	LTE Band66	132572	1770	50RB-Middle	Rear	10mm	\	19.61	21	0.457	**0.63**	0.299	**0.41**	-0.14
Hotspot	LTE Band66	132572	1770	50RB-Middle	Left	10mm	\	19.61	21	0.121	**0.17**	0.072	**0.10**	-0.19
Hotspot	LTE Band66	132572	1770	50RB-Middle	Right	10mm	\	19.61	21	0.079	**0.11**	0.051	**0.07**	-0.16
Hotspot	LTE Band66	132572	1770	50RB-Middle	Bottom	10mm	\	19.61	21	0.458	**0.63**	0.274	**0.38**	-0.06
Hotspot	LTE Band66	132572	1770	1RB-Middle	Bottom	10mm	B2	19.69	21	0.44	**0.59**	0.262	**0.35**	0.07
Hotspot	LTE Band66	132572	1770	1RB-Middle	Bottom	10mm	S	19.69	21	0.41	**0.55**	0.232	**0.31**	-0.17
Hotspot	LTE Band66	132572	1770	1RB-Middle	Bottom	10mm	S3	19.69	21	0.41	**0.55**	0.212	**0.29**	-0.19
Body	LTE Band66	132572	1770	1RB-Middle	Front	15mm	\	24.20	24.5	0.382	**0.41**	0.256	**0.27**	-0.06
Body	LTE Band66	132572	1770	1RB-Middle	Rear	15mm	\	24.20	24.5	0.8	**0.86**	0.508	**0.54**	0.12
Body	LTE Band66	132322	1745	1RB-Middle	Rear	15mm	Fig.51	24.11	24.5	0.911	**1.00**	0.574	**0.63**	0.07
Body	LTE Band66	132072	1720	1RB-Middle	Rear	15mm	\	23.97	24.5	0.761	**0.86**	0.463	**0.52**	-0.05
Body	LTE Band66	132572	1770	50RB-Middle	Front	15mm	\	23.19	23.5	0.296	**0.32**	0.198	**0.21**	0.06
Body	LTE Band66	132572	1770	50RB-Middle	Rear	15mm	\	23.19	23.5	0.619	**0.66**	0.394	**0.42**	-0.04
Body	LTE Band66	132572	1770	100RB	Rear	15mm	\	23.14	23.5	0.562	**0.61**	0.34	**0.37**	0.10
Body	LTE Band66	132322	1745	1RB-Middle	Rear	15mm	B2	24.11	23.5	0.811	**0.70**	0.517	**0.45**	-0.14
Body	LTE Band66	132322	1745	1RB-Middle	Rear	15mm	S	24.11	23.5	0.791	**0.69**	0.497	**0.43**	0.14
Body	LTE Band66	132322	1745	1RB-Middle	Rear	15mm	S3	24.11	23.5	0.741	**0.64**	0.497	**0.43**	0.00
Body	LTE Band66	132572	1770	1RB-Middle	Front	20mm	\	24.20	24.5	0.33	**0.35**	0.227	**0.24**	0.15
Body	LTE Band66	132572	1770	1RB-Middle	Rear	20mm	Fig.52	24.20	24.5	0.697	**0.75**	0.447	**0.48**	0.03
Body	LTE Band66	132572	1770	50RB-Middle	Front	20mm	\	23.19	23.5	0.259	**0.28**	0.179	**0.19**	0.09
Body	LTE Band66	132572	1770	50RB-Middle	Rear	20mm	\	23.19	23.5	0.537	**0.58**	0.343	**0.37**	-0.17
Body	LTE Band66	132572	1770	1RB-Middle	Rear	20mm	B2	24.11	24.5	0.679	**0.74**	0.436	**0.48**	-0.13
Body	LTE Band66	132572	1770	1RB-Middle	Rear	20mm	S	24.11	24.5	0.629	**0.69**	0.366	**0.40**	0.06
Body	LTE Band66	132572	1770	1RB-Middle	Rear	20mm	S3	24.11	24.5	0.659	**0.72**	0.416	**0.46**	0.13
Body	LTE Band71	133372	688	1RB-Middle	Front	10mm	\	25.26	25.5	0.273	**0.29**	0.21	**0.22**	0.11
Body	LTE Band71	133372	688	1RB-Middle	Rear	10mm	\	25.26	25.5	0.367	**0.39**	0.282	**0.30**	0.18
Body	LTE Band71	133372	688	1RB-Middle	Left	10mm	\	25.26	25.5	0.306	**0.32**	0.218	**0.23**	-0.09
Body	LTE Band71	133372	688	1RB-Middle	Right	10mm	Fig.53	25.26	25.5	0.453	**0.48**	0.323	**0.34**	-0.04
Body	LTE Band71	133372	688	1RB-Middle	Bottom	10mm	\	25.26	25.5	0.198	**0.21**	0.111	**0.12**	-0.10
Body	LTE Band71	133372	688	50RB-Middle	Front	10mm	\	24.33	24.5	0.212	**0.22**	0.163	**0.17**	-0.10
Body	LTE Band71	133372	688	50RB-Middle	Rear	10mm	\	24.33	24.5	0.289	**0.30**	0.221	**0.23**	-0.19
Body	LTE Band71	133372	688	50RB-Middle	Left	10mm	\	24.33	24.5	0.238	**0.25**	0.169	**0.18**	0.10
Body	LTE Band71	133372	688	50RB-Middle	Right	10mm	\	24.33	24.5	0.355	**0.37**	0.253	**0.26**	0.06
Body	LTE Band71	133372	688	50RB-Middle	Bottom	10mm	\	24.33	24.5	0.153	**0.16**	0.086	**0.09**	0.13
Body	LTE Band71	133372	688	1RB-Middle	Right	10mm	B2	25.26	25.5	0.29	**0.31**	0.209	**0.22**	-0.04
Body	LTE Band71	133372	688	1RB-Middle	Right	10mm	S	25.26	25.5	0.23	**0.24**	0.169	**0.18**	0.17
Body	LTE Band71	133372	688	1RB-Middle	Right	10mm	S3	25.26	25.5	0.27	**0.29**	0.149	**0.16**	-0.01

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13.2 SAR results for WLAN

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

When the same transmission mode configurations have the same maximum output power on the same channel for the 802.11 a/g/n/ac/ax modes, the channel in the lower order/sequence 802.11 mode (i.e. a, g, n ac then ax) is selected.

SAR Test reduction was applied from KDB 248227 guidance, when the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11a/g/n/ac mode is used for SAR measurement, on the highest measured output power channel in the initial test configuration, for each frequency band. Additional output power measurements were not deemed necessary.

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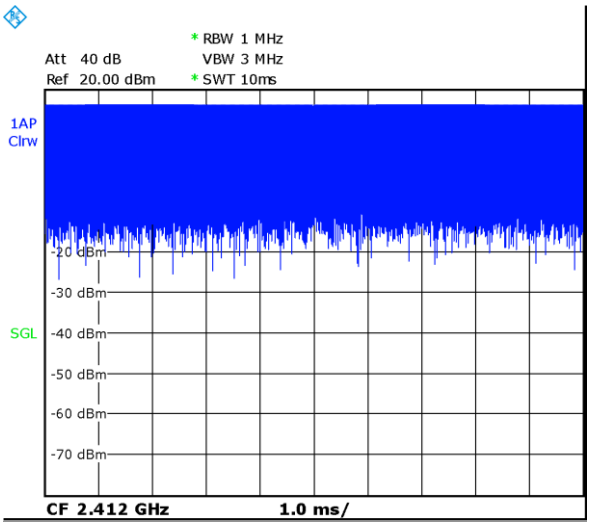
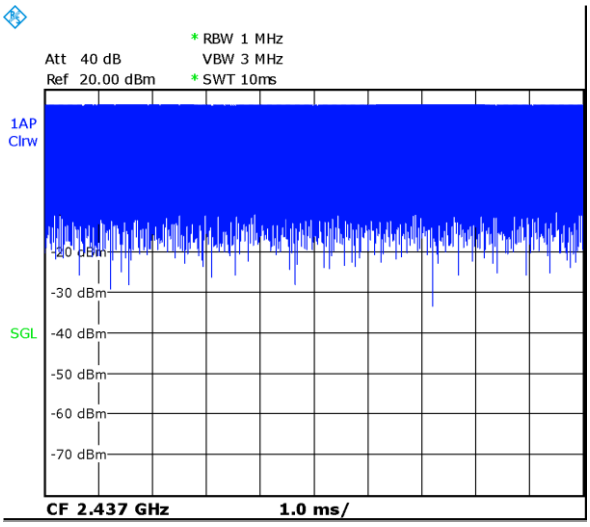
Duty factor plot

CH1



CH6



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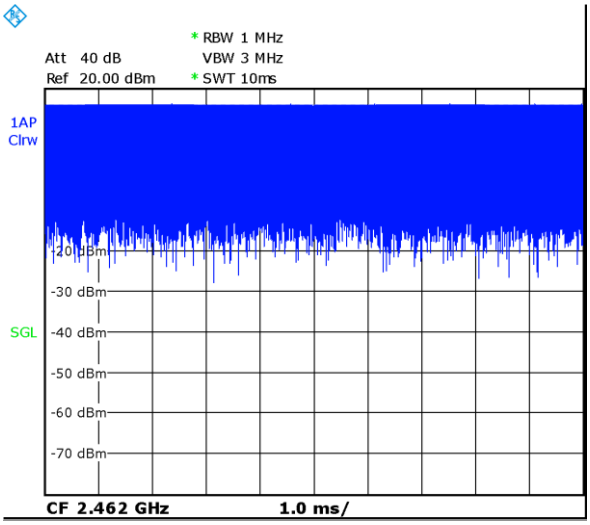
CH11



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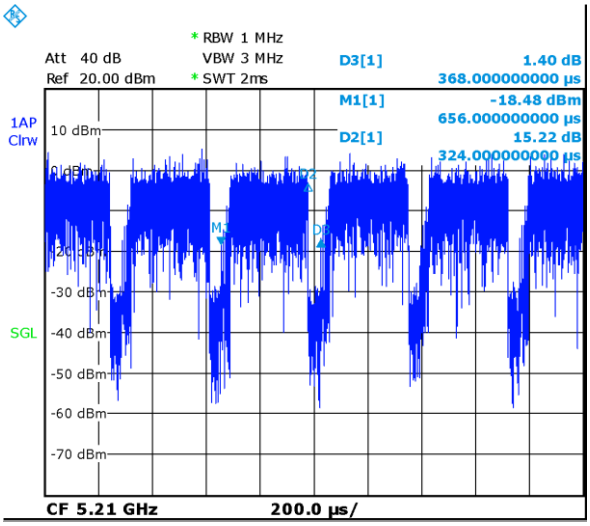

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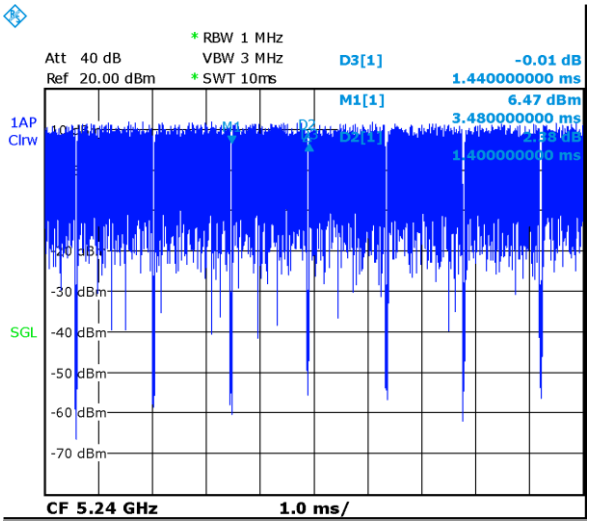

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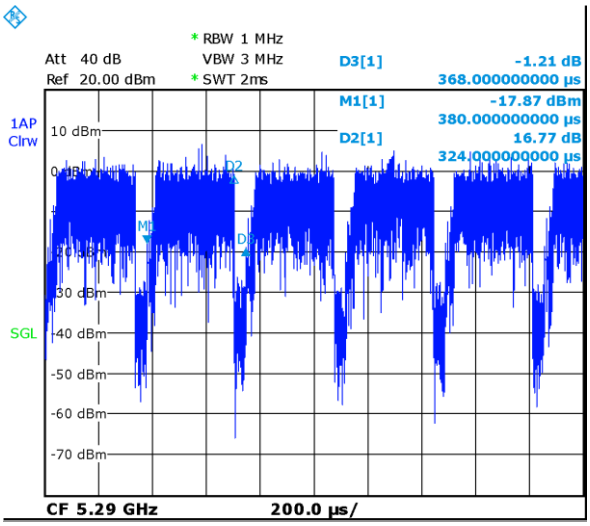
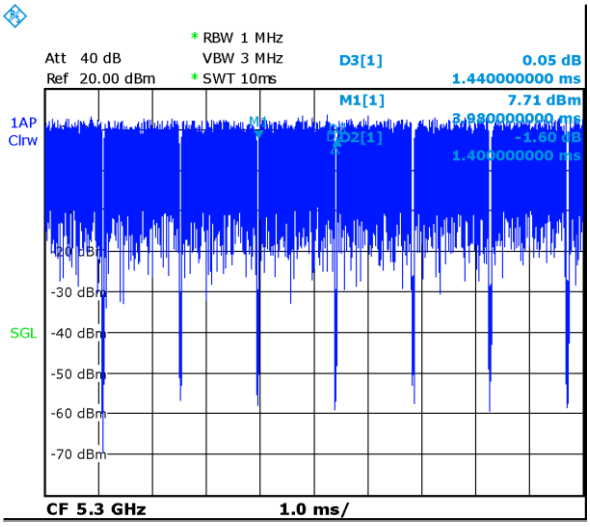
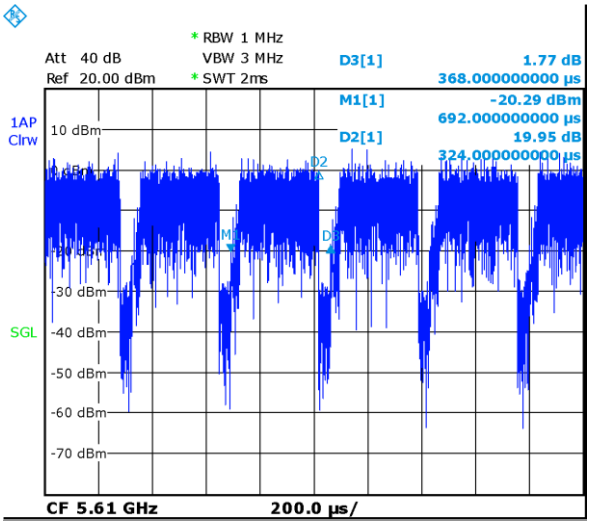
CH58



CH60



CH122



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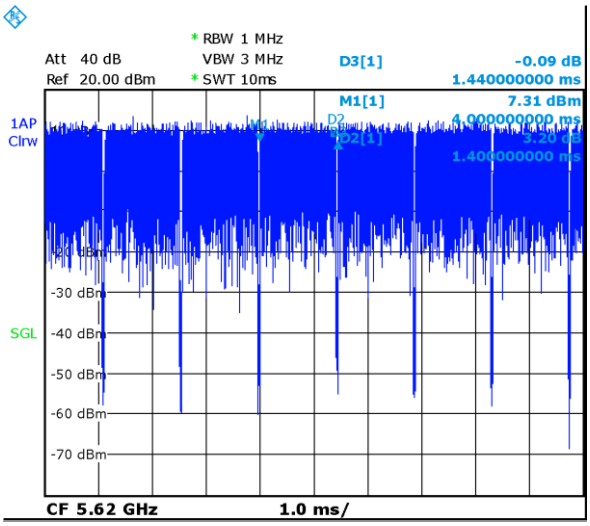
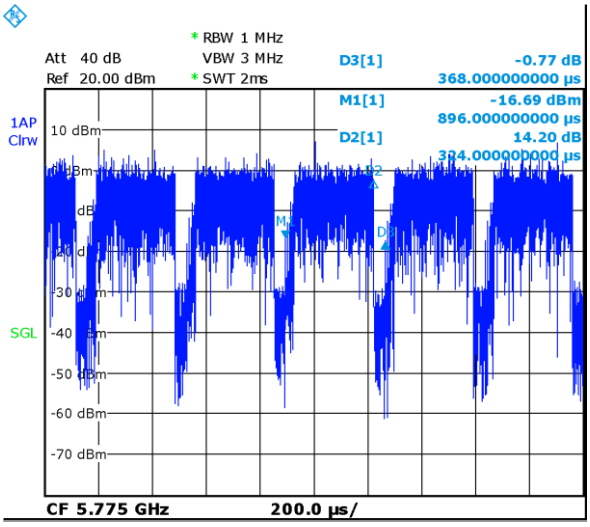
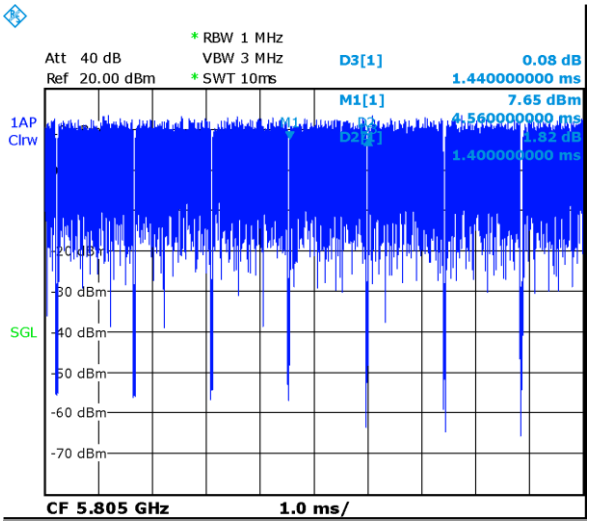
CH124



CH155



CH161



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WLAN 2.4G

Test Position	Frequency Band	Channel Number	Frequency (MHz)	Mode/RB	Test Position	Distance	Figure No./Note	EUT Measured Power (dBm)	Tune up (dBm)	Duty Cycle	Measured SAR 1g (W/kg)	Reported SAR 1g (W/kg)	Measured SAR 10g (W/kg)	Reported SAR 10g (W/kg)	Power Drift
Head	WLAN 2.4G	1	2412	11b	Cheek Left	0mm	Fig.54	16.85	18	100%	0.442	**0.58**	0.224	**0.29**	-0.11
Head	WLAN 2.4G	1	2412	11b	Tilt Left	0mm	\	16.85	18	100%	0.431	**0.56**	0.201	**0.26**	-0.07
Head	WLAN 2.4G	1	2412	11b	Cheek Right	0mm	\	16.85	18	100%	0.311	**0.41**	0.160	**0.21**	0.07
Head	WLAN 2.4G	1	2412	11b	Tilt Right	0mm	\	16.85	18	100%	0.385	**0.50**	0.180	**0.23**	-0.03
Head	WLAN 2.4G	1	2412	11b	Cheek Left	0mm	B2	16.85	18	100%	0.423	**0.55**	0.189	**0.25**	0.08
Body	WLAN 2.4G	11	2462	11b	Front	13mm	\	21.96	23	100%	0.175	**0.22**	0.097	**0.12**	-0.03
Body	WLAN 2.4G	11	2462	11b	Rear	20mm	\	21.96	23	100%	0.146	**0.19**	0.078	**0.10**	0.13
Body	WLAN 2.4G	11	2462	11b	Right	10mm	\	21.96	23	100%	0.173	**0.22**	0.086	**0.11**	-0.17
Body	WLAN 2.4G	11	2462	11b	Top	15mm	\	21.96	23	100%	0.147	**0.19**	0.080	**0.10**	-0.09
Body	WLAN 2.4G	6	2437	11b	Front	10mm	\	19.43	20.5	100%	0.191	**0.24**	0.104	**0.13**	-0.03
Body	WLAN 2.4G	6	2437	11b	Rear	10mm	Fig.55	19.43	20.5	100%	0.313	**0.40**	0.159	**0.20**	0
Body	WLAN 2.4G	6	2437	11b	Top	10mm	\	19.43	20.5	100%	0.191	**0.24**	0.100	**0.13**	-0.02
Body	WLAN 2.4G	6	2437	11b	Rear	10mm	B2	19.43	20.5	100%	0.289	**0.37**	0.132	**0.17**	0.16

WLAN 5G

Test Position	Frequency Band	Channel Number	Frequency (MHz)	Mode/RB	Test Position	Distance	Figure No./Note	EUT Measured Power (dBm)	Tune up (dBm)	Duty Cycle	Measured SAR 1g (W/kg)	Reported SAR 1g (W/kg)	Measured SAR 10g (W/kg)	Reported SAR 10g (W/kg)	Power Drift
Head	WLAN 5G	58	5290	11ac-80M	Cheek Left	0mm	\	12.24	13	88%	0.126	**0.17**	0.046	**0.06**	0.06
Head	WLAN 5G	58	5290	11ac-80M	Tilt Left	0mm	\	12.24	13	88%	0.170	**0.23**	0.058	**0.08**	0.02
Head	WLAN 5G	58	5290	11ac-80M	Cheek Right	0mm	\	12.24	13	88%	0.070	**0.09**	0.027	**0.04**	-0.17
Head	WLAN 5G	58	5290	11ac-80M	Tilt Right	0mm	\	12.24	13	88%	0.087	**0.12**	0.033	**0.04**	0.06
Head	WLAN 5G	122	5610	11ac-80M	Cheek Left	0mm	\	11.95	13	88%	0.155	**0.22**	0.044	**0.06**	0.08
Head	WLAN 5G	122	5610	11ac-80M	Tilt Left	0mm	\	11.95	13	88%	0.213	**0.31**	0.056	**0.08**	0.08
Head	WLAN 5G	122	5610	11ac-80M	Cheek Right	0mm	\	11.95	13	88%	0.092	**0.13**	0.029	**0.04**	-0.06
Head	WLAN 5G	122	5610	11ac-80M	Tilt Right	0mm	\	11.95	13	88%	0.124	**0.18**	0.040	**0.06**	-0.12
Head	WLAN 5G	155	5775	11ac-80M	Cheek Left	0mm	\	12.53	13.5	88%	0.190	**0.27**	0.049	**0.07**	0.02
Head	WLAN 5G	155	5775	11ac-80M	Tilt Left	0mm	Fig.56	12.53	13.5	88%	0.225	**0.32**	0.055	**0.08**	0.03
Head	WLAN 5G	155	5775	11ac-80M	Cheek Right	0mm	\	12.53	13.5	88%	0.113	**0.16**	0.034	**0.05**	-0.15
Head	WLAN 5G	155	5775	11ac-80M	Tilt Right	0mm	\	12.53	13.5	88%	0.152	**0.22**	0.044	**0.06**	0.16
Head	WLAN 5G	155	5775	11ac-80M	Tilt Left	0mm	B2	12.53	13.5	88%	0.212	**0.30**	0.047	**0.07**	0.17
Body	WLAN 5G	60	5300	11a	Front	13mm	\	19.07	20	97%	0.133	**0.17**	0.052	**0.07**	0.13
Body	WLAN 5G	60	5300	11a	Rear	20mm	\	19.07	20	97%	0.513	**0.66**	0.207	**0.26**	0.04
Body	WLAN 5G	60	5300	11a	Right	10mm	\	19.07	20	97%	0.159	**0.20**	0.049	**0.06**	0.08
Body	WLAN 5G	60	5300	11a	Top	15mm	\	19.07	20	97%	0.454	**0.58**	0.178	**0.23**	-0.03
Body	WLAN 5G	124	5620	11a	Front	13mm	\	19.56	20.5	97%	0.107	**0.14**	0.044	**0.06**	-0.14
Body	WLAN 5G	124	5620	11a	Rear	20mm	Fig.57	19.56	20.5	97%	0.594	**0.76**	0.245	**0.31**	0.08
Body	WLAN 5G	124	5620	11a	Right	10mm	\	19.56	20.5	97%	0.101	**0.13**	0.047	**0.06**	-0.02
Body	WLAN 5G	124	5620	11a	Top	15mm	\	19.56	20.5	97%	0.459	**0.59**	0.187	**0.24**	0.16
Body	WLAN 5G	161	5805	11a	Front	13mm	\	20.18	21	97%	0.120	**0.15**	0.045	**0.06**	-0.14
Body	WLAN 5G	161	5805	11a	Rear	20mm	\	20.18	21	97%	0.530	**0.66**	0.219	**0.27**	0.17
Body	WLAN 5G	161	5805	11a	Right	10mm	\	20.18	21	97%	0.152	**0.19**	0.060	**0.07**	-0.12
Body	WLAN 5G	161	5805	11a	Top	15mm	\	20.18	21	97%	0.445	**0.55**	0.172	**0.21**	-0.19
Body	WLAN 5G	58	5290	11ac-80M	Front	10mm	\	13.27	14	88%	0.040	**0.05**	0.016	**0.02**	0.05
Body	WLAN 5G	58	5290	11ac-80M	Rear	10mm	\	13.27	14	88%	0.216	**0.29**	0.078	**0.10**	0.12
Body	WLAN 5G	58	5290	11ac-80M	Top	10mm	\	13.27	14	88%	0.171	**0.23**	0.063	**0.08**	-0.02
Body	WLAN 5G	122	5610	11ac-80M	Front	10mm	\	13.05	14	88%	0.037	**0.05**	0.015	**0.02**	0.04
Body	WLAN 5G	122	5610	11ac-80M	Rear	10mm	\	13.05	14	88%	0.213	**0.30**	0.077	**0.11**	0.12
Body	WLAN 5G	122	5610	11ac-80M	Top	10mm	\	13.05	14	88%	0.185	**0.26**	0.069	**0.10**	0.1
Body	WLAN 5G	155	5775	11ac-80M	Front	10mm	\	13.42	14.5	88%	0.042	**0.06**	0.016	**0.02**	-0.1
Body	WLAN 5G	155	5775	11ac-80M	Rear	10mm	\	13.42	14.5	88%	0.196	**0.29**	0.071	**0.10**	0.15
Body	WLAN 5G	155	5775	11ac-80M	Top	10mm	\	13.42	14.5	88%	0.179	**0.26**	0.065	**0.09**	-0.19
Body	WLAN 5G	122	5610	11ac-80M	Rear	15mm	\	13.05	14	88%	0.164	**0.23**	0.059	**0.08**	0.16
Body	WLAN 5G	124	5620	11a	Rear	20mm	B2	19.56	20.5	97%	0.649	**0.83**	0.248	**0.32**	-0.11

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13.3 SAR Evaluation for Phablet

According to the KDB648474 D04, for smart phones, with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm, that can provide similar mobile web access and multimedia support found in mini-tablets or UMPC mini-tablets and support voice calls next to the ear, unless it is confirmed otherwise through KDB inquiries, the following phablet procedures should be applied to evaluate SAR compliance for each applicable wireless modes and frequency band. Devices marketed as phablets, regardless of form factors and operating characteristics must be tested as a phablet to determine SAR compliance.

1. The normally required head and body-worn accessory SAR test procedures for handsets, including hotspot mode, must be applied.
2. The UMPC mini-tablet procedures must also be applied to test the SAR of all surfaces and edges with an antenna located at ≤ 25 mm from that surface or edge, in direct contact with a flat phantom, for 10-g extremity SAR according to the body-equivalent tissue dielectric parameters in KDB Publication 865664 D01 to address interactive hand use exposure conditions. When hotspot mode applies, 10-g extremity SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg; however, when power reduction applies to hotspot mode the measured SAR must be scaled to the maximum output power, including tolerance, allowed for phablet modes to compare with the 1.2 W/kg SAR test reduction threshold. The normal tablet procedures in KDB Publication 616217 are required when the overall diagonal dimension of the device is > 20.0 cm. Hotspot mode SAR is not required when normal tablet procedures are applied. Extremity 10-g SAR is also not required for the front (top) surface of larger form factor full size tablets. The more conservative normal tablet SAR results can be used to support phablet mode 10-g extremity SAR.
3. The simultaneous transmission operating configurations applicable to voice and data transmissions for both phone and mini-tablet modes must be taken into consideration separately for 1-g and 10-g SAR to determine the simultaneous transmission SAR test exclusion and measurement requirements for the relevant wireless modes and exposure conditions

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10g extremity SAR determination

RF Exposure Conditions	Frequency Band	Channel Number	Frequency (MHz)	Mode/RB	Test Position	Distance	Figure No./Note	EUT Measured Power (dBm)	Hotsopt off Tune up (dBm)	Measured SAR 1g (W/kg)	Adjusted SAR 1g (W/kg)	Test reduction threshold
Body	GSM850	128	824.2	GPRS(2TX)	Rear	10mm	\	30.15	31.5	0.37	**0.50**	
Hotspot	GSM1900	810	1909.8	GPRS(1TX)	Top	10mm	\	29.60	30.5	0.696	**0.86**	
Hotspot	WCDMA1900	9400	1880	RMC	Front	10mm	\	19.74	23.5	0.517	**1.23**	
Hotspot	WCDMA1900	9538	1907.6	RMC	Rear	10mm	\	19.86	23.5	0.759	**1.75**	
Hotspot	WCDMA1900	9400	1880	RMC	Rear	10mm	\	19.74	23.5	0.763	**1.81**	
Hotspot	WCDMA1900	9262	1852.4	RMC	Rear	10mm	\	19.74	23.5	0.638	**1.52**	
Hotspot	WCDMA1900	9400	1880	RMC	Top	10mm	\	19.74	23.5	0.626	**1.49**	
Hotspot	WCDMA1700	1513	1752.6	RMC	Rear	10mm	\	19.22	24.5	0.505	**1.70**	
Hotspot	WCDMA1700	1412	1732.4	RMC	Rear	10mm	\	19.10	24.5	0.481	**1.67**	
Hotspot	WCDMA1700	1312	1712.4	RMC	Rear	10mm	\	19.03	24.5	0.453	**1.60**	
Hotspot	WCDMA1700	1412	1732.4	RMC	Bottom	10mm	\	19.10	24.5	0.421	**1.46**	
Body	WCDMA 850	4233	846.6	RMC	Rear	10mm	\	24.08	25	0.667	**0.82**	
Hotspot	LTE Band2	18900	1880	1RB-Middle	Front	10mm	\	20.44	25	0.573	**1.64**	
Hotspot	LTE Band2	18900	1880	1RB-Middle	Rear	10mm	\	20.44	25	0.673	**1.92**	
Hotspot	LTE Band2	18900	1880	1RB-Middle	Left	10mm	\	20.44	25	0.553	**1.58**	
Hotspot	LTE Band2	18900	1880	1RB-Middle	Top	10mm	\	20.44	25	0.518	**1.48**	
Hotspot	LTE Band2	18900	1880	50RB-Low	Front	10mm	\	20.41	24	0.539	**1.23**	
Hotspot	LTE Band2	18900	1880	50RB-Low	Rear	10mm	\	20.41	24	0.651	**1.49**	
Hotspot	LTE Band2	18900	1880	50RB-Low	Left	10mm	\	20.41	24	0.538	**1.23**	
Hotspot	LTE Band2	18900	1880	50RB-Low	Top	10mm	\	20.41	24	0.503	**1.15**	
Hotspot	LTE Band4	20300	1745	1RB-Middle	Rear	10mm	\	19.43	25	0.524	**1.89**	
Hotspot	LTE Band4	20300	1745	1RB-Middle	Bottom	10mm	\	19.43	25	0.475	**1.71**	
Hotspot	LTE Band4	20300	1745	50RB-Middle	Rear	10mm	\	19.45	24	0.508	**1.45**	
Hotspot	LTE Band4	20300	1745	50RB-Middle	Bottom	10mm	\	19.45	24	0.465	**1.33**	
Body	LTE Band5	20600	844	1RB-Middle	Rear	10mm	\	24.96	25.5	0.723	**0.82**	**1.2W/kg**
Hotspot	LTE Band7	21350	2560	1RB-Middle	Bottom	10mm	\	21.04	23.5	0.547	**0.96**	
Body	LTE Band12	23130	711	1RB-Mid	Right	10mm	\	25.04	25.5	0.416	**0.46**	
Body	LTE Band13	23230	782	1RB-Middle	Right	10mm	\	24.43	25.5	0.614	**0.79**	
Body	LTE Band14	23330	793	1RB-Middle	Right	10mm	\	24.14	25.5	0.521	**0.71**	
Hotspot	LTE Band25	26365	1882.5	1RB-Middle	Front	10mm	\	20.51	25	0.46	**1.29**	
Hotspot	LTE Band25	26365	1882.5	1RB-Middle	Rear	10mm	\	20.51	25	0.631	**1.77**	
Hotspot	LTE Band25	26365	1882.5	1RB-Middle	Left	10mm	\	20.51	25	0.405	**1.14**	
Hotspot	LTE Band25	26365	1882.5	1RB-Middle	Right	10mm	\	20.51	25	0.282	**0.79**	
Hotspot	LTE Band25	26365	1882.5	1RB-Middle	Top	10mm	\	20.51	25	0.528	**1.48**	
Hotspot	LTE Band25	26365	1882.5	50RB-Low	Front	10mm	\	20.54	24	0.44	**0.98**	
Hotspot	LTE Band25	26365	1882.5	50RB-Low	Rear	10mm	\	20.54	24	0.61	**1.35**	
Hotspot	LTE Band25	26365	1882.5	50RB-Low	Left	10mm	\	20.54	24	0.403	**0.89**	
Hotspot	LTE Band25	26365	1882.5	50RB-Low	Right	10mm	\	20.54	24	0.284	**0.63**	
Hotspot	LTE Band25	26365	1882.5	50RB-Low	Top	10mm	\	20.54	24	0.517	**1.15**	
Body	LTE Band26	26965	841.5	1RB-Middle	Rear	10mm	\	25.32	25.5	0.607	**0.63**	
Hotspot	LTE Band41 PC3	41055	2636.5	1RB-Middle	Top	10mm	\	22.35	25	0.747	**1.38**	
Hotspot	LTE Band41 PC3	40620	2593	1RB-Middle	Top	10mm	\	22.62	25	0.781	**1.35**	
Hotspot	LTE Band41 PC3	40185	2549.5	1RB-Middle	Top	10mm	\	22.52	25	0.689	**1.22**	
Hotspot	LTE Band41 PC2	40620	2593	1RB-Middle	Top	10mm	\	24.42	28	0.304	**0.69**	
Hotspot	LTE Band66	132572	1770	1RB-Middle	Rear	10mm	\	19.69	24.5	0.466	**1.41**	
Hotspot	LTE Band66	132572	1770	1RB-Middle	Bottom	10mm	\	19.69	24.5	0.469	**1.42**	
Hotspot	LTE Band66	132572	1770	50RB-Middle	Rear	10mm	\	19.61	23.5	0.457	**1.12**	
Hotspot	LTE Band66	132572	1770	50RB-Middle	Bottom	10mm	\	19.61	23.5	0.458	**1.12**	
Body	LTE Band71	133372	688	1RB-Middle	Right	10mm	\	25.26	25.5	0.453	**0.48**	

According to above evaluation procedure , the 10-g extremity SAR is required for WCDMA1900/1700/,LTE Band2/4/25/41 PC3/66.

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SAR Values for 10g extremity SAR

RF Exposure Conditions	Frequency Band	Channel Number	Frequency (MHz)	Mode/RB	Test Position	Distance	Figure No./Note	EUT Measured Power (dBm)	Tune up (dBm)	Measured SAR 1g (W/kg)	Reported SAR 1g (W/kg)	Measured SAR 10g (W/kg)	Reported SAR 10g (W/kg)	Power Drift
Sensor	WCDMA1900	9400	1880	RMC	Front	0mm	\	19.74	20.5	2.8	**3.34**	1.21	**1.44**	0.07
Sensor	WCDMA1900	9538	1907.6	RMC	Rear	0mm	\	19.86	20.5	2.34	**2.71**	1.14	**1.32**	0.05
Sensor	WCDMA1900	9400	1880	RMC	Rear	0mm	\	19.74	20.5	2.43	**2.89**	1.14	**1.36**	0.09
Sensor	WCDMA1900	9262	1852.4	RMC	Rear	0mm	\	19.74	20.5	2.31	**2.75**	1.16	**1.38**	0.11
Sensor	WCDMA1900	9400	1880	RMC	Top	0mm	\	19.74	20.5	2.24	**2.67**	0.906	**1.08**	0.00
Body	WCDMA1900	9538	1907.6	RMC	Front	3mm	\	23.63	24.5	2.56	**3.13**	1.28	**1.56**	0.16
Body	WCDMA1900	9400	1880	RMC	Front	3mm	\	23.53	24.5	2.76	**3.45**	1.31	**1.64**	0.07
Body	WCDMA1900	9262	1852.4	RMC	Front	3mm	\	23.38	24.5	2.2	**2.85**	1.11	**1.44**	0.13
Body	WCDMA1900	9400	1880	RMC	Rear	5mm	\	23.53	24.5	2.32	**2.90**	1.19	**1.49**	-0.05
Body	WCDMA1900	9400	1880	RMC	Top	5mm	\	23.53	24.5	1.91	**2.39**	0.875	**1.09**	-0.03
Sensor	WCDMA1700	1412	1732.4	RMC	Front	0mm	\	19.10	21	0.991	**1.53**	0.54	**0.84**	0.09
Sensor	WCDMA1700	1513	1752.6	RMC	Rear	0mm	\	19.22	21	2.11	**3.18**	1.04	**1.57**	-0.06
Sensor	WCDMA1700	1412	1732.4	RMC	Rear	0mm	\	19.10	21	2.03	**3.14**	0.997	**1.54**	-0.05
Sensor	WCDMA1700	1312	1712.4	RMC	Rear	0mm	\	19.03	21	2.2	**3.46**	1.07	**1.68**	0.09
Sensor	WCDMA1700	1412	1732.4	RMC	Bottom	0mm	\	19.10	21	1.76	**2.73**	0.849	**1.31**	0.07
Body	WCDMA1700	1412	1732.4	RMC	Front	3mm	\	23.82	24.5	1.23	**1.44**	0.728	**0.85**	-0.11
Body	WCDMA1700	1513	1752.6	RMC	Rear	5mm	\	23.87	24.5	2.02	**2.34**	1.13	**1.31**	0
Body	WCDMA1700	1412	1732.4	RMC	Rear	5mm	\	23.82	24.5	2	**2.34**	1.1	**1.29**	0.07
Body	WCDMA1700	1312	1712.4	RMC	Rear	5mm	\	23.91	24.5	1.98	**2.27**	1.09	**1.25**	-0.17
Body	WCDMA1700	1412	1732.4	RMC	Bottom	5mm	\	23.82	24.5	2.01	**2.35**	1.07	**1.25**	-0.15
Sensor	LTE Band2	18900	1880	1RB-Middle	Front	0mm		20.44	21	3.01	**3.42**	1.34	**1.52**	-0.07
Sensor	LTE Band2	18900	1880	1RB-Middle	Rear	0mm	\	20.44	21	2.47	**2.81**	1.23	**1.40**	-0.18
Sensor	LTE Band2	18900	1880	1RB-Middle	Left	0mm	\	20.44	21	2.95	**3.36**	1.29	**1.47**	0.17
Sensor	LTE Band2	18900	1880	1RB-Middle	Top	0mm	\	20.44	21	2.23	**2.54**	0.918	**1.04**	-0.07
Sensor	LTE Band2	18900	1880	50RB-Low	Front	0mm		20.41	21	2.9	**3.32**	1.29	**1.48**	-0.19
Sensor	LTE Band2	18900	1880	50RB-Low	Rear	0mm	\	20.41	21	2.46	**2.82**	1.23	**1.41**	-0.18
Sensor	LTE Band2	18900	1880	50RB-High	Left	0mm	\	20.41	21	2.26	**2.59**	0.984	**1.13**	-0.09
Sensor	LTE Band2	18900	1880	50RB-Low	Top	0mm	\	20.41	21	2.22	**2.54**	0.916	**1.05**	-0.15
Body	LTE Band2	18700	1860	1RB-Middle	Front	3mm		24.66	25	3.07	**3.32**	1.54	**1.67**	0.06
Body	LTE Band2	18700	1860	1RB-Middle	Rear	5mm	\	24.66	25	2.55	**2.76**	1.34	**1.45**	0.19
Body	LTE Band2	18700	1860	1RB-Middle	Top	5mm	\	24.66	25	2.44	**2.64**	1.17	**1.27**	0.08
Body	LTE Band2	18700	1860	50RB-High	Front	3mm		23.67	24	2.35	**2.54**	1.18	**1.27**	-0.03
Body	LTE Band2	18700	1860	50RB-High	Rear	5mm	\	23.67	24	1.96	**2.11**	1.03	**1.11**	-0.19
Body	LTE Band2	18700	1860	50RB-Low	Top	5mm	\	23.67	24	1.91	**2.06**	0.904	**0.98**	-0.01
Sensor	LTE Band4	20300	1745	1RB-Middle	Rear	0mm	\	19.43	21	2.97	**4.26**	1.47	**2.11**	0.08
Sensor	LTE Band4	20300	1745	1RB-Middle	Bottom	0mm	\	19.43	21	2.61	**3.75**	1.2	**1.72**	0.03
Sensor	LTE Band4	20300	1745	50RB-Middle	Rear	0mm	\	19.45	21	2.89	**4.13**	1.44	**2.06**	-0.16
Sensor	LTE Band4	20300	1745	50RB-Middle	Bottom	0mm	\	19.45	21	2.54	**3.63**	1.17	**1.67**	-0.07
Body	LTE Band4	20300	1745	1RB-Middle	Rear	5mm	Fig.58	23.99	25	3.38	**4.26**	1.86	**2.35**	0.09
Body	LTE Band4	20175	1732.5	1RB-Middle	Rear	5mm	\	23.86	25	3.18	**4.13**	1.79	**2.33**	0.10
Body	LTE Band4	20050	1720	1RB-Middle	Rear	5mm	\	23.86	25	3.16	**4.11**	1.76	**2.29**	-0.03
Body	LTE Band4	20300	1745	1RB-Middle	Bottom	5mm	\	23.99	25	2.87	**3.62**	1.54	**1.94**	-0.11
Body	LTE Band4	20300	1745	50RB-Middle	Rear	5mm	\	22.94	24	2.59	**3.31**	1.42	**1.81**	0.09
Body	LTE Band4	20300	1745	50RB-Middle	Bottom	5mm	\	22.94	24	2.21	**2.82**	1.19	**1.52**	0.02
Body	LTE Band4	20300	1745	100RB	Rear	5mm	\	22.92	24	2.56	**3.28**	1.44	**1.85**	0.11
Sensor	LTE Band25	26365	1882.5	1RB-Middle	Front	0mm	\	20.51	21	3.11	**3.48**	1.36	**1.52**	0.08
Sensor	LTE Band25	26365	1882.5	1RB-Middle	Rear	0mm	\	20.51	21	2.45	**2.74**	1.27	**1.42**	-0.19
Sensor	LTE Band25	26365	1882.5	1RB-Middle	Top	0mm	\	20.51	21	2.48	**2.78**	1.02	**1.14**	-0.03
Sensor	LTE Band25	26365	1882.5	50RB-Low	Front	0mm	\	20.54	21	3.01	**3.35**	1.32	**1.47**	-0.12
Sensor	LTE Band25	26365	1882.5	50RB-Low	Rear	0mm	\	20.54	21	2.43	**2.70**	1.27	**1.41**	-0.13
Sensor	LTE Band25	26365	1882.5	50RB-Low	Top	0mm	\	20.54	21	2.48	**2.76**	1.02	**1.13**	0.04
Body	LTE Band25	26365	1882.5	1RB-Middle	Front	3mm	\	24.70	25	3.31	**3.55**	1.65	**1.77**	0.08
Body	LTE Band25	26365	1882.5	1RB-Middle	Rear	5mm	\	24.70	25	2.93	**3.14**	1.5	**1.61**	0.13
Body	LTE Band25	26365	1882.5	1RB-Middle	Top	5mm	\	24.70	25	2.38	**2.55**	1.17	**1.25**	0.09
Body	LTE Band25	26365	1882.5	50RB-Low	Front	3mm	\	23.73	24	2.58	**2.75**	1.28	**1.36**	0.13
Body	LTE Band25	26365	1882.5	50RB-Low	Rear	5mm	\	23.73	24	2.26	**2.40**	1.16	**1.23**	-0.07
Body	LTE Band25	26365	1882.5	50RB-Low	Top	5mm	\	23.73	24	1.84	**1.96**	0.906	**0.96**	-0.18
Hotspot	LTE Band41 PC3	41055	2636.5	1RB-Middle	Top	0mm	\	22.82	23	3.56	**3.71**	1.2	**1.25**	0.19
Hotspot	LTE Band41 PC3	40620	2593	1RB-Middle	Top	0mm	\	22.82	23	3.76	**3.92**	1.27	**1.32**	0.09
Hotspot	LTE Band41 PC3	40185	2549.5	1RB-Middle	Top	0mm	\	22.82	23	3.32	**3.46**	1.12	**1.17**	-0.17
Hotspot	LTE Band41 PC3	41055	2636.5	1RB-Middle	Top	5mm	\	24.46	25	1.66	**1.88**	0.703	**0.80**	-0.02
Hotspot	LTE Band41 PC3	40620	2593	1RB-Middle	Top	5mm	\	24.66	25	1.68	**1.82**	0.779	**0.84**	0.06
Hotspot	LTE Band41 PC3	40185	2549.5	1RB-Middle	Top	5mm	\	24.65	25	1.45	**1.57**	0.682	**0.74**	0.01
Sensor	LTE Band66	132572	1770	1RB-Middle	Rear	0mm	\	19.69	21	3.19	**4.31**	1.58	**2.14**	0.02
Sensor	LTE Band66	132572	1770	1RB-Middle	Bottom	0mm	\	19.69	21	2.65	**3.58**	1.33	**1.80**	0.14
Sensor	LTE Band66	132572	1770	50RB-Middle	Rear	0mm	\	19.61	21	3.12	**4.30**	1.55	**2.13**	-0.15
Sensor	LTE Band66	132572	1770	50RB-Middle	Bottom	0mm	\	19.61	21	2.59	**3.57**	1.3	**1.79**	0.09
Body	LTE Band66	132572	1770	1RB-Middle	Rear	5mm	\	24.20	25	3.52	**4.23**	1.94	**2.33**	0.10
Body	LTE Band66	132322	1745	1RB-Middle	Rear	5mm	\	24.11	25	3.42	**4.20**	1.88	**2.31**	0.04
Body	LTE Band66	132072	1720	1RB-Middle	Rear	5mm	\	23.97	25	3.34	**4.23**	1.79	**2.27**	-0.06
Body	LTE Band66	132572	1770	1RB-Middle	Bottom	5mm	\	24.20	25	2.99	**3.59**	1.63	**1.96**	0.17
Body	LTE Band66	132572	1770	50RB-Middle	Rear	5mm	\	23.19	24	2.71	**3.27**	1.5	**1.81**	0.08
Body	LTE Band66	132572	1770	50RB-Middle	Bottom	5mm	\	23.19	24	2.37	**2.86**	1.29	**1.55**	-0.17
Body	LTE Band66	132572	1770	100RB	Rear	5mm	\	23.14	24	2.5	**3.05**	1.4	**1.71**	0.05

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14 SAR Measurement Variability

SAR measurement variability must be 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.

The following procedures are applied to determine if repeated measurements are required.

1) Repeated measurement is not required when the original highest measured SAR is < 0.80 W/kg; steps2) through 4) do not apply.

2) When the original highest measured SAR is ≥ 0.80 W/kg, repeat that measurement once.

3) Perform a second repeated measurement only if the ratio of largest to smallest SAR for the original and first repeated measurements is > 1.20 or when the original or repeated measurement is ≥ 1.45W/kg (~ 10% from the 1-g SAR limit).

4) Perform a third repeated measurement only if the original, first or second repeated measurement is ≥1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20.

RF Exposure Conditions	Frequency Band	Channel Number	Frequency (MHz)	Mode/RB	Test Position	Distance	Highest Measured SAR(W/kg)	First Repeated sar(W/kg)	The Ratio	Second Repeated sar(W/kg)
Body	WCDMA1700	1513	1752.6	RMC	Rear	15mm	0.815	0.809	1.01	/
Body	WCDMA1700	1412	1732.4	RMC	Rear	15mm	0.874	0.87	1	/
Body	WCDMA1700	1312	1712.4	RMC	Rear	15mm	0.811	0.805	1.01	/
Body	LTE Band2	19100	1900	1RB-Middle	Rear	15mm	0.82	0.814	1.01	/
Body	LTE Band2	18900	1880	1RB-Middle	Rear	15mm	0.887	0.879	1.01	/
Body	LTE Band2	18700	1860	1RB-Middle	Rear	15mm	0.829	0.816	1.02	/
Body	LTE Band4	20300	1745	1RB-Middle	Rear	15mm	0.896	0.888	1.01	/
Body	LTE Band25	26590	1905	1RB-Middle	Rear	15mm	0.96	0.953	1.01	/
Body	LTE Band25	26365	1882.5	1RB-Middle	Rear	15mm	0.907	0.896	1.01	/
Body	LTE Band25	26140	1860	1RB-Middle	Rear	15mm	0.861	0.849	1.01	/
Body	LTE Band66	132572	1770	1RB-Middle	Rear	15mm	0.8	0.792	1.01	/
Body	LTE Band66	132322	1745	1RB-Middle	Rear	15mm	0.911	0.906	1.01	/

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15 Evaluation of Simultaneous

15.1 Introduction

The following procedures adopted from “FCC SAR Considerations for Cell Phones with Multiple Transmitters” are applicable to handsets with built-in unlicensed transmitters such as WLAN and Bluetooth devices which may simultaneously transmit with the licensed transmitter. KDB 447498 D01 provides two procedures for determining simultaneous transmission SAR test exclusion: Sum of SAR and SAR to Peak Location Ratio (SPLSR)

15.1.1 Sum of SAR

To qualify for simultaneous transmission SAR test exclusion based upon Sum of SAR the sum of the reported standalone SARs for all simultaneously transmitting antennas shall be below the applicable standalone SAR limit. If the sum of the SARs is above the applicable limit then simultaneous transmission SAR test exclusion may still apply if the requirements of the SAR to Peak Location Ratio (SPLSR) evaluation are met.

15.1.2 SAR to Peak Location Ratio (SPLSR)

KDB 447498 D01 General RF Exposure Guidance explains how to calculate the SAR to Peak Location Ratio (SPLSR) between pairs of simultaneously transmitting antennas:

$SPLSR = (SAR1 + SAR2)^{1.5} / Ri$

Where:

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

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

Ri is the separation distance between the pair of simultaneous transmitting antennas. When the SAR is measured, for both antennas in the pair, it is determined by the actual x, y and z coordinates in the 1-g SAR for each SAR peak location, based on the extrapolated and interpolated result in the zoom scan measurement, using the formula of

$[(x1-x2)^2 + (y1-y2)^2 + (z1-z2)^2]$

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

$(SAR1 + SAR2)^{1.5} / Ri \leqslant 0.04$

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

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15.2 Simultaneous Transmission Capabilities

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

Capable Transmit Conf igurations	Head	Body	Product Specific 10-g (0mm)
GSM/WCDMA/LTE + Wi-Fi 2.4G	Yes	Yes	Yes
GSM/WCDMA/LTE + Wi-Fi 5G +BT	Yes	Yes	Yes

Note:

1. Wi-Fi 2.4GHz & Bluetooth can transmit simultaneously.
2. Wi-Fi 2.4GHz & Wi-Fi 5GHz cannot transmit simultaneously.
3. WWAN cannot transmit simultaneously.
4. The reported SAR summation is calculated based on the same configuration and test position.
5. For the devices edges with antennas more than 2.5 cm from edge are not required to be evaluated for SAR, we determined the SAR of this edges were less than 0.01. For the convenience of simultaneous transmission calculation, all SAR values less than 0.01 are uniformly written as 0.00

15.3 SAR Simultaneous Transmission Analysis

Simultaneous Transmission Scenario

reported SAR 1g (W/kg)

Head		GSM850	GSM1900	WCDMA 1900	WCDMA 1700	WCDMA 850	LTE Band2	LTE Band4	LTE Band5	LTE Band7	LTE Band12	LTE Band13	LTE Band14	LTE Band25	LTE Band26	LTE Band41 PC3	LTE Band41 PC2	LTE Band66	LTE Band71	2.4G	5G	BT [1]	Cellular+WiFi2.4G	Cellular+WiFi5G+BT
Cheek	L	0.17	0.55	0.47	0.31	0.30	0.43	0.14	0.32	0.28	0.31	0.32	0.34	0.43	0.29	0.42	0.47	0.27	0.26	0.58	0.27	0.37	1.13	1.19
Tilt	L	0.07	0.47	0.52	0.20	0.16	0.44	0.20	0.17	0.17	0.20	0.27	0.24	0.51	0.17	0.45	0.46	0.37	0.15	0.56	0.32	0.37	1.08	1.21
Cheek	R	0.34	0.83	0.60	0.39	0.40	0.60	0.28	0.39	0.13	0.35	0.43	0.40	0.57	0.33	0.38	0.48	0.40	0.30	0.41	0.16	0.37	1.24	1.36
Tilt	R	0.20	0.75	0.66	0.21	0.25	0.79	0.29	0.27	0.10	0.22	0.32	0.31	0.74	0.22	0.48	0.57	0.21	0.27	0.50	0.22	0.37	1.29	1.38

Body		GSM850	GSM1900	WCDMA 1900	WCDMA 1700	WCDMA 850	LTE Band2	LTE Band4	LTE Band5	LTE Band7	LTE Band12	LTE Band13	LTE Band14	LTE Band25	LTE Band26	LTE Band41 PC3	LTE Band41 PC2	LTE Band66	LTE Band71	2.4G	5G	BT [1]	Cellular+WiFi2.4G	Cellular+WiFi5G+BT
Front	10mm	0.20	0.48	0.62	0.49	0.41	0.65	0.36	0.45	0.20	0.28	0.48	0.41	0.51	0.35	0.36	0.15	0.28	0.29	0.24	0.06	0.18	0.89	0.89
Rear	10mm	0.50	0.59	0.91	0.76	0.82	0.77	0.75	0.82	0.41	0.42	0.71	0.70	0.71	0.63	0.39	0.25	0.63	0.39	0.40	0.30	0.18	1.31	1.39
Left	10mm	0.19	0.62	0.46	0.17	0.21	0.63	0.17	0.22	0.16	0.30	0.45	0.35	0.45	0.17	0.14	0.07	0.17	0.32	/	/	0.18	0.63	0.81
Right	10mm	0.18	0.31	0.37	0.12	0.42	0.34	0.12	0.44	0.08	0.46	0.79	0.71	0.32	0.36	0.00	0.00	0.11	0.48	0.22	0.2	0.18	1.01	1.17
Bottom	10mm	0.23	/	/	0.65	0.53	/	0.68	0.54	0.61	0.28	0.69	0.50	/	0.42	/	/	0.63	0.21	/	/	0.18	0.69	0.87
Top	10mm	/	0.86	0.75	/	/	0.59	/	/	/	/	/	/	0.59	/	0.85	0.31	/	/	0.24	0.26	0.18	1.10	1.30

Body		GSM850	GSM1900	WCDMA 1900	WCDMA 1700	WCDMA 850	LTE Band2	LTE Band4	LTE Band5	LTE Band7	LTE Band12	LTE Band13	LTE Band14	LTE Band25	LTE Band26	LTE Band41 PC3	LTE Band41 PC2	LTE Band66	LTE Band71	2.4G	5G	BT [1]	Cellular+WiFi2.4G	Cellular+WiFi5G+BT
Front	15mm	/	0.49	0.50	0.61	/	0.62	0.69	/	0.19	/	/	/	0.69	/	0.33	0.18	0.46	/	0.40	0.17	0.12	1.09	1.14
Rear	15mm	/	0.66	0.86	1.02	/	0.96	1.13	/	0.39	/	/	/	1.06	/	0.55	0.36	1.12	/	0.40	0.23	0.12	1.53	1.48

Body		GSM850	GSM1900	WCDMA 1900	WCDMA 1700	WCDMA 850	LTE Band2	LTE Band4	LTE Band5	LTE Band7	LTE Band12	LTE Band13	LTE Band14	LTE Band25	LTE Band26	LTE Band41 PC3	LTE Band41 PC2	LTE Band66	LTE Band71	2.4G	5G	BT [1]	Cellular+WiFi2.4G	Cellular+WiFi5G+BT
Rear	20mm	/	0.43	0.49	0.62	/	0.60	0.65	/	/	/	/	/	0.62	/	/	/	0.75	/	0.19	0.60	0.09	0.94	1.44

reported SAR 10g (W/kg)

Product Specific		GSM850	GSM1900	WCDMA 1900	WCDMA 1700	WCDMA 850	LTE Band2	LTE Band4	LTE Band5	LTE Band7	LTE Band12	LTE Band13	LTE Band14	LTE Band25	LTE Band26	LTE Band41 PC3	LTE Band41 PC2	LTE Band66	LTE Band71	2.4G	5G	BT	Cellular+WiFi2.4G	Cellular+WiFi5G+BT
Front	0mm	/	/	1.44	0.84	/	1.52	/	/	/	/	/	/	1.52	/	/	/	/	/	0.99	0.14	0.37	2.51	2.03
Rear	0mm	/	/	1.38	1.68	/	1.41	2.11	/	/	/	/	/	1.42	/	/	/	2.14	/	1.27	0.55	0.37	3.41	3.06
Left	0mm	/	/	/	/	/	1.47	/	/	/	/	/	/	/	/	/	/	/	/	/	/	0.37	1.47	1.84
Bottom	0mm	/	/	/	1.31	/	/	1.72	/	/	/	/	/	/	/	/	/	1.80	/	/	/	0.37	1.80	2.17
Top	0mm	/	/	1.08	/	/	1.05	/	/	/	/	/	/	1.14	/	1.32	/	/	/	0.60	0.49	0.37	1.92	2.18

reported SAR 10g (W/kg)

Product Specific		GSM850	GSM1900	WCDMA 1900	WCDMA 1700	WCDMA 850	LTE Band2	LTE Band4	LTE Band5	LTE Band7	LTE Band12	LTE Band13	LTE Band14	LTE Band25	LTE Band26	LTE Band41 PC3	LTE Band41 PC2	LTE Band66	LTE Band71	2.4G	5G	BT	Cellular+WiFi2.4G	Cellular+WiFi5G+BT
Front	5mm	/	/	1.64	0.85	/	1.67	/	/	/	/	/	/	1.77	/	/	/	/	/	0.99	0.14	0.37	2.76	2.28
Rear	5mm	/	/	1.49	1.31	/	1.45	2.35	/	/	/	/	/	1.61	/	/	/	2.33	/	1.27	0.55	0.37	3.62	3.27
Left	5mm	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	0.37	/	0.37
Bottom	5mm	/	/	/	1.25	/	/	1.94	/	/	/	/	/	/	/	/	/	1.96	/	/	/	0.37	1.96	2.33
Top	5mm	/	/	1.09	/	/	1.27	/	/	/	/	/	/	1.25	/	0.84	/	/	/	0.60	0.49	0.37	1.87	2.13

Note:

3. Estimated SAR for Bluetooth (see the section 12.3)

15.4 Conclusion

According to the above tables, the highest simultaneous transmission reported SAR values is **1.53W/kg (1g).** The sum of reported SAR values is<1.6W/kg. So the simultaneous transmission SAR with volume scans is not required.

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16 Measurement Uncertainty

Per KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz, when the highest measured 1-g SAR within a frequency band is < 1.5 W/kg and the measured 10-g SAR within a frequency band is < 3.75 W/kg. The expanded SAR measurement uncertainty must be ≤ 30%, for a confidence interval of k = 2. If these conditions are met, extensive SAR measurement uncertainty analysis described in IEEE Std 1528-2013 is not required in SAR reports submitted for equipment approval.

Therefore, the measurement uncertainty is not required.

17 MAIN TEST INSTRUMENTS

No.	Name	Type	Serial Number	Calibration Date	Valid Period
01	Network analyzer	E5071C	MY46110673	January 14, 2021	One year
02	Power meter	NRP2	106276	May 11, 2021	One year
03	Power sensor	NRP6A	101369		
04	Signal Generator	E4438C	MY49070393	May 14, 2021	One Year
05	Amplifier	60S1G4	0331848	No Calibration Requested	
06	BTS	CMW500	159890	January 25 2021	One year
07	BTS	CMW500	166370	June 25, 2021	One year
08	E-field Probe	SPEAG EX3DV4	7464	December 18,2020	One year
10	DAE	SPEAG DAE4	549	January 08, 2021	One year
11	Dipole Validation Kit	SPEAG D750V3	1017	July 12,,2021	One year
12	Dipole Validation Kit	SPEAG D835V2	4d069	July 12,,2021	One year
13	Dipole Validation Kit	SPEAG D1750V2	1003	July 12, 2021	One year
14	Dipole Validation Kit	SPEAG D1900V2	5d101	July 15,2021	One year
15	Dipole Validation Kit	SPEAG D2450V2	853	July 26,2021	One year
16	Dipole Validation Kit	SPEAG D2600V2	1012	July 26,2021	One year
17	Dipole Validation Kit	SPEAG D5GHzV2	1060	June 22,2021	One year

END OF REPORT BODY

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Appendixes

Refer to separated files for the following appendixes

ANNEX A Graph Results

ANNEX B System Verification Results

ANNEX C SAR Measurement Setup

ANNEX D Position of the wireless device in relation to the phantom

ANNEX E Equivalent Media Recipes

ANNEX F System Validation

ANNEX G Probe Calibration Certificate

ANNEX H Dipole Calibration Certificate

ANNEX I Sensor Triggering Data Summary

ANNEX J Accreditation Certificate

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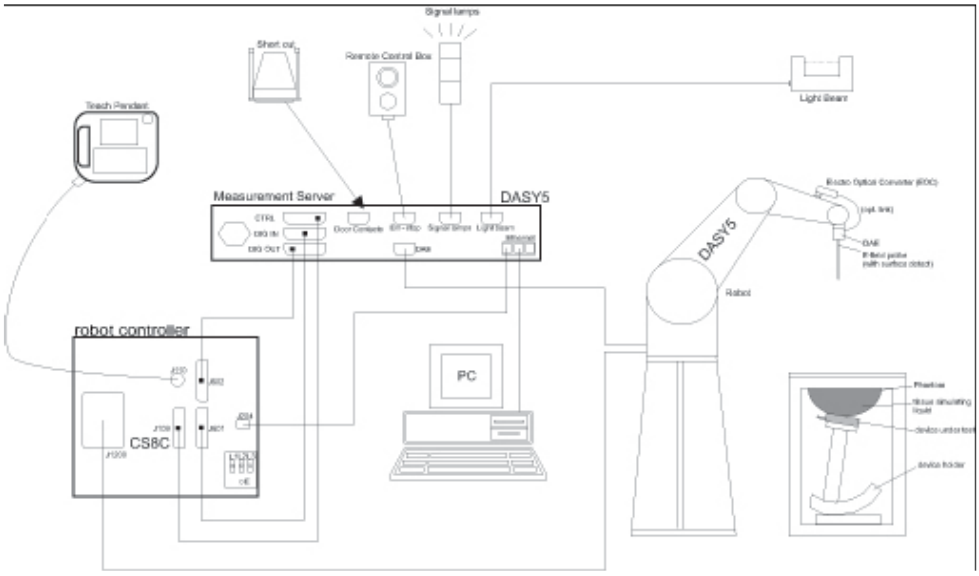
ANNEX C SAR Measurement Setup

C.1 Measurement Set-up

The Dasy5 or DASY6 system for performing compliance tests is illustrated above graphically. This system consists of the following items:



Picture C.1SAR Lab Test Measurement Set-up

- A standard high precision 6-axis robot (StäubliTX=RX family) with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
- An isotropic field probe optimized and calibrated for the targeted measurement.
- A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
- The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital communication to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.
- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.
- A computer running WinXP and the DASY5 or DASY6 software.
- Remote control and teach pendant as well as additional circuitry for robot safety such as
- warning lamps, etc.
- The phantom, the device holder and other accessories according to the targeted measurement.

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C.2 Dasy5 E-field Probe System

The SAR measurements were conducted with the dosimetric probe designed in the classical triangular configuration and optimized for dosimetric evaluation. The probe is constructed using the thick film technique; with printed resistive lines on ceramic substrates. The probe is equipped with an optical multifiber line ending at the front of the probe tip. It is connected to the EOC box on the robot arm and provides an automatic detection of the phantom surface. Half of the fibers are connected to a pulsed infrared transmitter, the other half to a synchronized receiver. As the probe approaches the surface, the reflection from the surface produces a coupling from the transmitting to the receiving fibers. This reflection increases first during the approach, reaches maximum and then decreases. If the probe is flatly touching the surface, the coupling is zero. The distance of the coupling maximum to the surface is independent of the surface reflectivity and largely independent of the surface to probe angle. The DASY5 or DASY6 software reads the reflection durning a software approach and looks for the maximum using 2nd ord curve fitting. The approach is stopped at reaching the maximum.

Probe Specifications:

Model: ES3DV3, EX3DV4
Frequency 10MHz — 6.0GHz(EX3DV4)
Range: 10MHz — 4GHz(ES3DV3)
Calibration: In head and body simulating tissue at Frequencies from 835 up to 5800MHz
Linearity: ± 0.2 dB(30 MHz to 6 GHz) for EX3DV4
± 0.2 dB(30 MHz to 4 GHz) for ES3DV3
DynamicRange: 10 mW/kg — 100W/kg
Probe Length: 330 mm
Probe Tip
Length: 20 mm
Body Diameter: 12 mm
Tip Diameter: 2.5 mm (3.9 mm for ES3DV3)
Tip-Center: 1 mm (2.0mm for ES3DV3)
Application: SAR Dosimetry Testing
Compliance tests ofmobile phones
Dosimetry in strong gradient fields

Picture C.2Near-field Probe

Picture C.3E-field Probe

C.3 E-field Probe Calibration

Each E-Probe/Probe Amplifier combination has unique calibration parameters. A TEM cell calibration procedure is conducted to determine the proper amplifier settings to enter in the probe parameters. The amplifier settings are determined for a given frequency by subjecting the probe to a known E-field density (1 mW/cm^2) using an RF Signal generator, TEM cell, and RF Power Meter.

The free space E-field from amplified probe outputs is determined in a test chamber. This calibration can be performed in a TEM cell if the frequency is below 1 GHz and inn a waveguide or other methodologies above 1 GHz for free space. For the free space calibration, the probe is placed

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in the volumetric center of the cavity and at the proper orientation with the field. The probe is then rotated 360 degrees until the three channels show the maximum reading. The power density readings equates to 1 mW/cm^2.

E-field temperature correlation calibration is performed in a flat phantom filled with the appropriate simulated brain tissue. The E-field in the medium correlates with the temperature rise in the dielectric medium. For temperature correlation calibration a RF transparent thermistor-based temperature probe is used in conjunction with the E-field probe.

$$SAR = C\frac{\Delta T}{\Delta t}$$

Where:

Δt = Exposure time (30 seconds),

C = Heat capacity of tissue (brain or muscle),

ΔT = Temperature increase due to RF exposure.

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

Where:

σ = Simulated tissue conductivity,

ρ = Tissue density (kg/m^3).

C.4 Other Test Equipment

C.4.1 Data Acquisition Electronics(DAE)

The data acquisition electronics consist of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converter and a command decoder with a control logic unit. Transmission to the measurement server is accomplished through an optical downlink for data and status information, as well as an optical uplink for commands and the clock.

The mechanical probe mounting device includes two different sensor systems for frontal and sideways probe contacts. They are used for mechanical surface detection and probe collision detection.

The input impedance of the DAE is 200 MOhm; the inputs are symmetrical and floating. Common mode rejection is above 80 dB.

PictureC.4: DAE

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C.4.2 Robot

The SPEAG DASY system uses the high precision robots (DASY5: RX160L) type from Stäubli SA (France). For the 6-axis controller system, the robot controller version from Stäubli is used. The Stäubli robot series have many features that are important for our application:

- High precision (repeatability 0.02mm)
- High reliability (industrial design)
- Low maintenance costs (virtually maintenance free due to direct drive gears; no belt drives)
- Jerk-free straight movements (brushless synchron motors; no stepper motors)
- Low ELF interference (motor control fields shielded via the closed metallic construction shields)

Picture C.5 DASY 5

C.4.3 Measurement Server

The Measurement server is based on a PC/104 CPU broad with CPU (DASY5: 400 MHz, Intel Celeron), chipdisk (DASY5: 128MB), RAM DASY5: 128MB). The necessary circuits for communication with the DAE electronic box, as well as the 16 bit AD converter system for optical detection and digital I/O interface are contained on the DASY I/O broad, which is directly connected to the PC/104 bus of the CPU broad.

The measurement server performs all real-time data evaluation of field measurements and surface detection, controls robot movements and handles safety operation. The PC operating system cannot interfere with these time critical processes. All connections are supervised by a watchdog, and disconnection of any of the cables to the measurement server will automatically disarm the robot and disable all program-controlled robot movements. Furthermore, the measurement server is equipped with an expansion port which is reserved for future applications. Please note that this expansion port does not have a standardized pinout, and therefore only devices provided by SPEAG can be connected. Devices from any other supplier could seriously damage the measurement server.

Picture C.6 Server for DASY 5

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C.4.4 Device Holder for Phantom

The SAR in the phantom is approximately inversely proportional to the square of the distance between the source and the liquid surface. For a source at 5mm distance, a positioning uncertainty of ±0.5mm would produce a SAR uncertainty of ±20%. Accurate device positioning is therefore crucial for accurate and repeatable measurements. The positions in which the devices must be measured are defined by the standards.

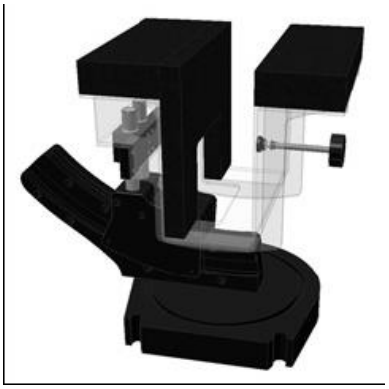
The DASY device holder is designed to cope with the different positions given in the standard. It has two scales for device rotation (with respect to the body axis) and device inclination (with respect to the line between the ear reference points). The rotation centers for both scales are the ear reference point (ERP). Thus the device needs no repositioning when changing the angles.

The DASY device holder is constructed of low-loss POM material having the following dielectric parameters: relative permittivity ε=3 and loss tangent δ =0.02. The amount of dielectric material has been reduced in the closest vicinity of the device, since measurements have suggested that the influence of the clamp on the test results could thus be lowered.

<Laptop Extension Kit>

The extension is lightweight and made of POM, acrylic glass and foam. It fits easily on the upper part of the Mounting Device in place of the phone positioner. The extension is fully compatible with the Twin-SAM and ELI phantoms.

Picture C7-1: Device Holder



Picture C.7-2: Laptop Extension Kit

C.4.5 Phantom

The SAM Twin Phantom V4.0 is constructed of a fiberglass shell integrated in a table. The shape of the shell is based on data from an anatomical study designed to

Represent the 90th percentile of the population. The phantom enables the dissymmetric evaluation of SAR for both left and right handed handset usage, as well as body-worn usage using the flat phantom region. Reference markings on the Phantom allow the complete setup of all predefined phantom positions and measurement grids by manually teaching three points in the robot. The shell phantom has a 2mm shell thickness (except the ear region where shell thickness increases to 6 mm).

Shell Thickness: 2±0. 2 mm
Filling Volume: Approx. 25 liters
Dimensions: 810 x l000 x 500 mm (H x L x W)
Available: Special

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Picture C.8: SAM Twin Phantom

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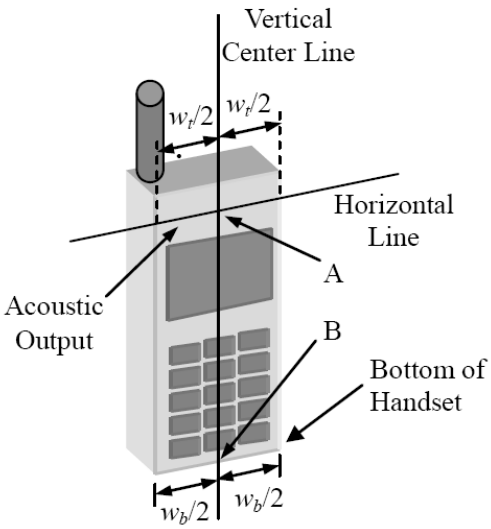
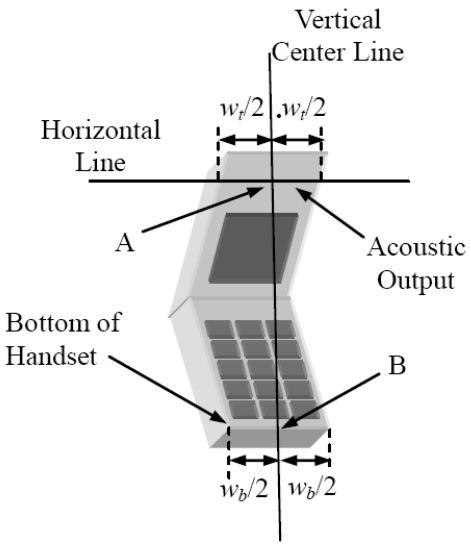
ANNEX D Position of the wireless device in relation to the phantom

D.1 General considerations

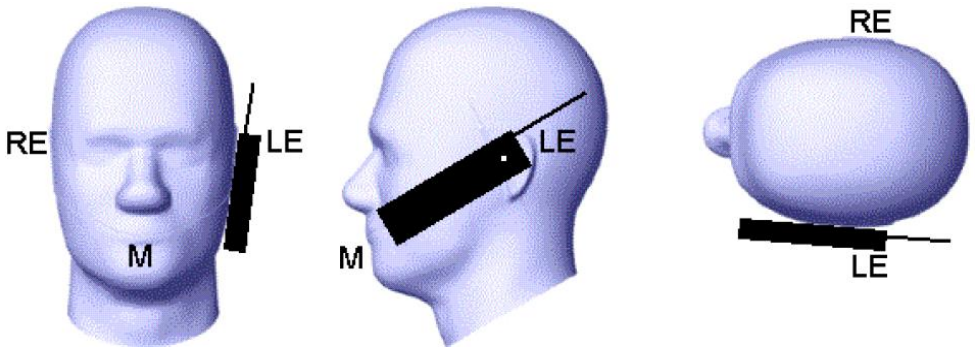
This standard specifies two handset test positions against the head phantom – the “cheek” position and the “tilt” position.





W_t	Width of the handset at the level of the acoustic
W_b	Width of the bottom of the handset
A	Midpoint of the width W_t of the handset at the level of the acoustic output
B	Midpoint of the width W_b of the bottom of the handset

Picture D.1-a Typical “fixed” case handset **Picture D.1-b Typical “clam-shell” case handset**



Picture D.2 Cheek position of the wireless device on the left side of SAM

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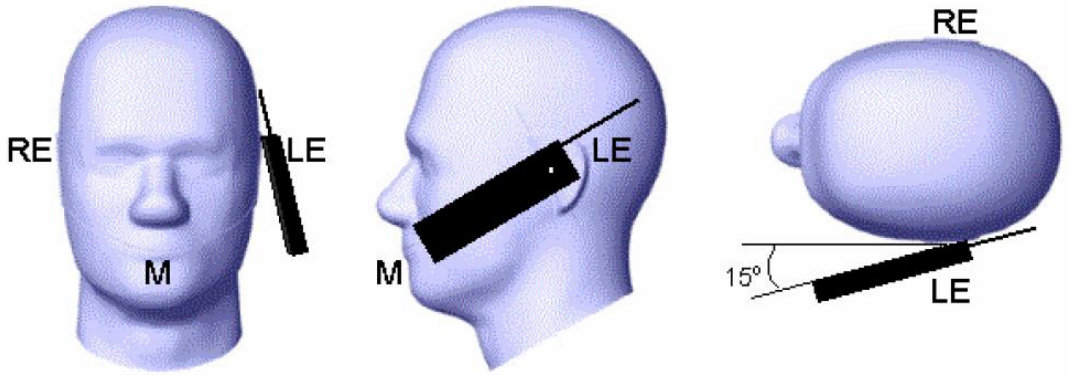
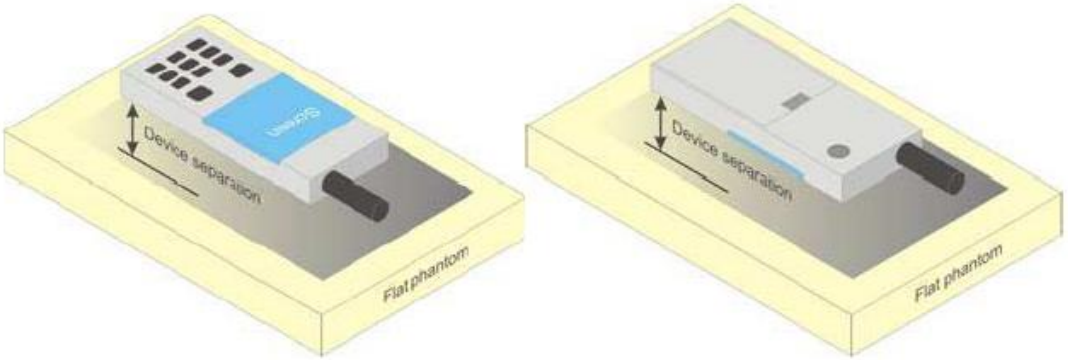


Picture D.3 Tilt position of the wireless device on the left side of SAM

D.2 Body-worn device

A typical example of a body-worn device is a mobile phone, wireless enabled PDA or other battery operated wireless device with the ability to transmit while mounted on a person's body using a carry accessory approved by the wireless device manufacturer.



Picture D.4Test positions for body-worn devices

D.3 Desktop device

A typical example of a desktop device is a wireless enabled desktop computer placed on a table or desk when used.

The DUT shall be positioned at the distance and in the orientation to the phantom that corresponds to the intended use as specified by the manufacturer in the user instructions. For devices that employ an external antenna with variable positions, tests shall be performed for all antenna positions specified. Picture8.5 show positions for desktop device SAR tests. If the intended use is not specified, the device shall be tested directly against the flat phantom.

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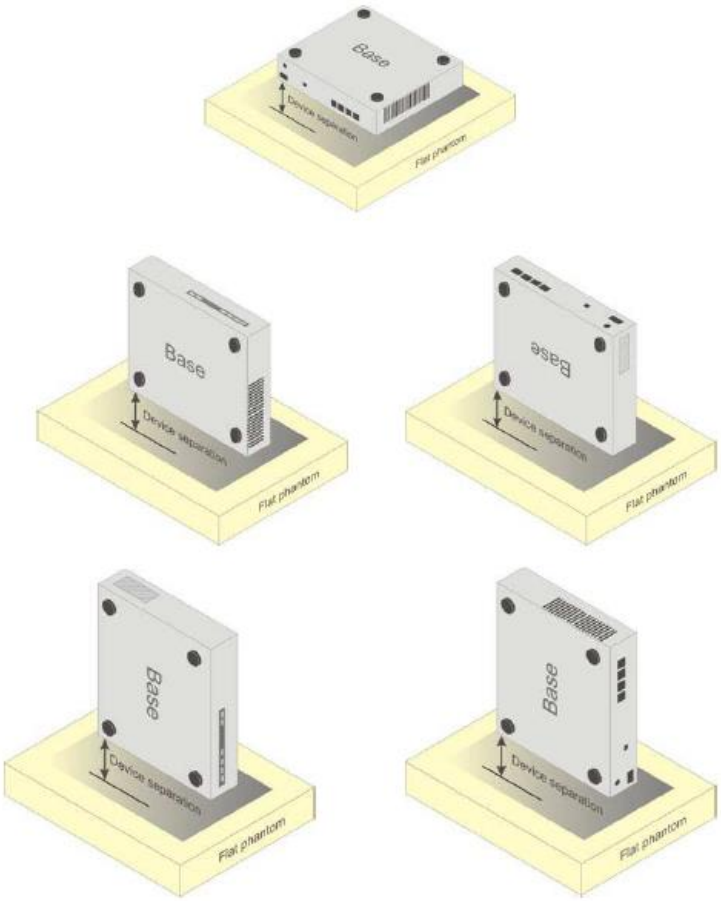
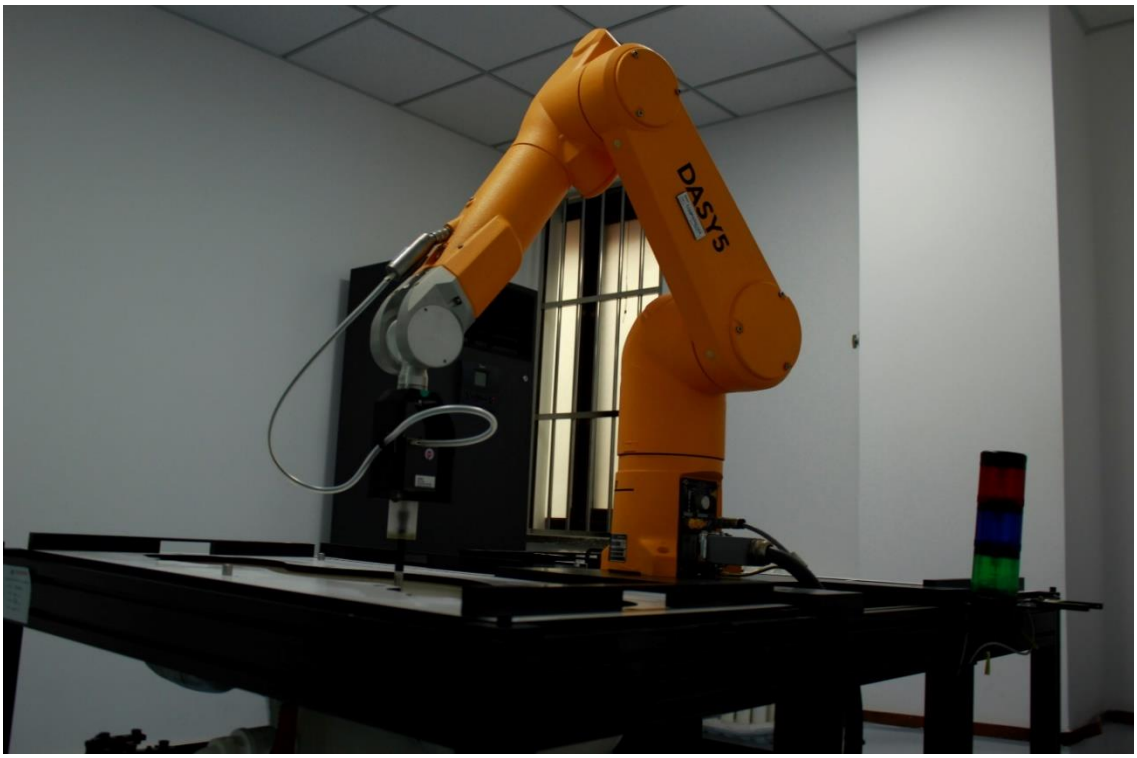


Picture D.5 Test positions for desktop devices

D.3 DUT Setup Photos



Picture D.6

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ANNEX E Equivalent Media Recipes

The liquid used for the frequency range of 800-3000 MHz consisted of water, sugar, salt, preventol, glycol monobutyl and Cellulose. The liquid has been previously proven to be suited for worst-case. The Table E.1 shows the detail solution. It's satisfying the latest tissue dielectric parameters requirements proposed by the IEEE 1528 and IEC 62209.

TableE.1: Composition of the Tissue Equivalent Matter

Frequency (MHz)	835Head	835Body	1900 Head	1900 Body	2450 Head	2450 Body	5800 Head	5800 Body
Ingredients (% by weight)								
Water	41.45	52.5	55.242	69.91	58.79	72.60	65.53	65.53
Sugar	56.0	45.0	\	\	\	\	\	\
Salt	1.45	1.4	0.306	0.13	0.06	0.18	\	\
Preventol	0.1	0.1	\	\	\	\	\	\
Cellulose	1.0	1.0	\	\	\	\	\	\
Glycol Monobutyl	\	\	44.452	29.96	41.15	27.22	\	\
Diethylenglycol monohexylether	\	\	\	\	\	\	17.24	17.24
Triton X-100	\	\	\	\	\	\	17.24	17.24
Dielectric Parameters Target Value	ε=41.5 σ=0.90	ε=55.2 σ=0.97	ε=40.0 σ=1.40	ε=53.3 σ=1.52	ε=39.2 σ=1.80	ε=52.7 σ=1.95	ε=35.3 σ=5.27	ε=48.2 σ=6.00

Note: There are a little adjustment respectively for 750, 1750, 2600, 5200, 5300 and 5600 based on the recipe of closest frequency in table E.1.

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ANNEX F System Validation

The SAR system must be validated against its performance specifications before it is deployed. When SAR probes, system components or software are changed, upgraded or recalibrated, these must be validated with the SAR system(s) that operates with such components.

Table F.1: System Validation for 7464

Probe SN.	Liquid name	Validation date	Frequency point	Status (OK or Not)
7464	Head 750MHz	December.27,2020	750 MHz	OK
7464	Head 850MHz	December.27,2020	835 MHz	OK
7464	Head 900MHz	December.27,2020	900 MHz	OK
7464	Head 1750MHz	December.27,2020	1750 MHz	OK
7464	Head 1810MHz	December.27,2020	1810 MHz	OK
7464	Head 1900MHz	December.28,2020	1900 MHz	OK
7464	Head 2000MHz	December.28,2020	2000 MHz	OK
7464	Head 2100MHz	December.28,2020	2100 MHz	OK
7464	Head 2300MHz	December.28,2020	2300 MHz	OK
7464	Head 2450MHz	December.28,2020	2450 MHz	OK
7464	Head 2600MHz	December.29,2020	2600 MHz	OK
7464	Head 3500MHz	December.29,2020	3500 MHz	OK
7464	Head 3700MHz	December.29,2020	3700 MHz	OK
7464	Head 5200MHz	December.29,2020	5250 MHz	OK
7464	Head 5500MHz	December.29,2020	5600 MHz	OK
7464	Head 5800MHz	December.29,2020	5800 MHz	OK

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ANNEX G Probe Calibration Certificate

Probe 7464 Calibration Certificate

In Collaboration with speag CALIBRATION LABORATORY
Add: No.51 Xueyuan Road, Haidian District, Beijing, 100191, China
Tel: +86-10-62304633-2512 Fax: +86-10-62304633-2504
E-mail: cttl@chinattl.com Http://www.chinattl.cn

中国认可 国际互认 校准 CALIBRATION CNAS L0570

Client CTTL Certificate No: Z20-60472

CALIBRATION CERTIFICATE

Object	EX3DV4 - SN : 7464
Calibration Procedure(s)	FF-Z11-004-02 Calibration Procedures for Dosimetric E-field Probes
Calibration date:	December 18, 2020

This calibration Certificate documents the traceability to national standards, which realize the physical units of measurements(SI). The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature(22±3)℃ and humidity<70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date(Calibrated by, Certificate No.)	Scheduled Calibration
Power Meter NRP2	101919	16-Jun-20(CTTL, No.J20X04344)	Jun-21
Power sensor NRP-Z91	101547	16-Jun-20(CTTL, No.J20X04344)	Jun-21
Power sensor NRP-Z91	101548	16-Jun-20(CTTL, No.J20X04344)	Jun-21
Reference 10dBAttenuator	18N50W-10dB	10-Feb-20(CTTL, No.J20X00525)	Feb-22
Reference 20dBAttenuator	18N50W-20dB	10-Feb-20(CTTL, No.J20X00526)	Feb-22
Reference Probe EX3DV4	SN 7307	29-May-20(SPEAG, No.EX3-7307_May20)	May-21
DAE4	SN 1556	4-Feb-20(SPEAG, No.DAE4-1556_Feb20)	Feb-21

Secondary Standards	ID #	Cal Date(Calibrated by, Certificate No.)	Scheduled Calibration
SignalGenerator MG3700A	6201052605	23-Jun-20(CTTL, No.J20X04343)	Jun-21
Network Analyzer E5071C	MY46110673	10-Feb-20(CTTL, No.J20X00515)	Feb-21

	Name	Function	Signature
Calibrated by:	Yu Zongying	SAR Test Engineer	
Reviewed by:	Lin Hao	SAR Test Engineer	
Approved by:	Qi Dianyuan	SAR Project Leader	

Issued: December 20, 2020

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

Certificate No: Z20-60472 Page 1 of 9

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Glossary:

TSL	tissue simulating liquid
NORMx,y,z	sensitivity in free space
ConvF	sensitivity in TSL / NORMx,y,z
DCP	diode compression point
CF	crest factor (1/duty_cycle) of the RF signal
A,B,C,D	modulation dependent linearization parameters
Polarization Φ	Φ rotation around probe axis
Polarization θ	θ rotation around an axis that is in the plane normal to probe axis (at measurement center), i θ=0 is normal to probe axis
Connector Angle	information used in DASY system to align probe sensor X to the robot coordinate system

Calibration is Performed According to the Following Standards:

a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013

b) IEC 62209-1, "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from hand-held and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016

c) IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010

d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Methods Applied and Interpretation of Parameters:

- *NORMx,y,z:* Assessed for E-field polarization θ=0 (f≤900MHz in TEM-cell; f>1800MHz: waveguide). NORMx,y,z are only intermediate values, i.e., the uncertainties of NORMx,y,z does not effect the E^2-field uncertainty inside TSL (see below ConvF).
- *NORM(f)x,y,z = NORMx,y,z* frequency_response* (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of ConvF.
- *DCPx,y,z:* DCP are numerical linearization parameters assessed based on the data of power sweep (no uncertainty required). DCP does not depend on frequency nor media.
- PAR: PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics.
- *Ax,y,z; Bx,y,z; Cx,y,z;VRx,y,z:*A,B,C are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. VR is the maximum calibration range expressed in RMS voltage across the diode.
- *ConvF and Boundary Effect Parameters:* Assessed in flat phantom using E-field (or Temperature Transfer Standard for f≤800MHz) and inside waveguide using analytical field distributions based on power measurements for f >800MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty valued are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to NORMx,y,z* ConvF whereby the uncertainty corresponds to that given for ConvF. A frequency dependent ConvF is used in DASY version 4.4 and higher which allows extending the validity from±50MHz to±100MHz.
- *Spherical isotropy (3D deviation from isotropy):* in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- *Sensor Offset:* The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.
- *Connector Angle:* The angle is assessed using the information gained by determining the *NORMx* (no uncertainty required).

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DASY/EASY – Parameters of Probe: EX3DV4 – SN:7464

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (*k*=2)
Norm(μV/(V/m)²)[A]	0.47	0.44	0.46	±10.0%
DCP(mV)[B]	100.2	103.5	100.6	

Modulation Calibration Parameters

UID	Communication System Name		A dB	B dB√μV	C	D dB	VR mV	Unc[E] (*k*=2)
0	CW	X	0.0	0.0	1.0	0.00	164.9	±3.3%
		Y	0.0	0.0	1.0		154.1	
		Z	0.0	0.0	1.0		156.0	

The reported uncertainty of measurement is stated as the standard uncertainty of Measurement multiplied by the coverage factor *k*=2, which for a normal distribution Corresponds to a coverage probability of approximately 95%.

[A] The uncertainties of Norm X, Y, Z do not affect the E²-field uncertainty inside TSL (see Page 4).
[B] Numerical linearization parameter: uncertainty not required.
[E] Uncertainly is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

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DASY/EASY – Parameters of Probe: EX3DV4 – SN:7464

Calibration Parameter Determined in Head Tissue Simulating Media

f [MHz][C]	Relative Permittivity [F]	Conductivity (S/m) [F]	ConvF X	ConvF Y	ConvF Z	Alpha[G]	Depth[G] (mm)	Unct. (*k*=2)
750	41.9	0.89	10.43	10.43	10.43	0.40	0.75	±12.1%
900	41.5	0.97	9.79	9.79	9.79	0.17	1.28	±12.1%
1450	40.5	1.20	8.81	8.81	8.81	0.10	1.38	±12.1%
1640	40.3	1.29	8.70	8.70	8.70	0.31	0.88	±12.1%
1750	40.1	1.37	8.60	8.60	8.60	0.27	0.98	±12.1%
1900	40.0	1.40	8.15	8.15	8.15	0.23	1.12	±12.1%
2100	39.8	1.49	8.23	8.23	8.23	0.23	1.11	±12.1%
2300	39.5	1.67	8.12	8.12	8.12	0.61	0.68	±12.1%
2450	39.2	1.80	7.75	7.75	7.75	0.63	0.67	±12.1%
2600	39.0	1.96	7.47	7.47	7.47	0.44	0.89	±12.1%
3300	38.2	2.71	7.25	7.25	7.25	0.38	1.02	±13.3%
3500	37.9	2.91	7.02	7.02	7.02	0.47	0.90	±13.3%
3700	37.7	3.12	6.68	6.68	6.68	0.38	1.07	±13.3%
3900	37.5	3.32	6.68	6.68	6.68	0.35	1.42	±13.3%
4100	37.2	3.53	6.65	6.65	6.65	0.40	1.15	±13.3%
4200	37.1	3.63	6.52	6.52	6.52	0.35	1.35	±13.3%
4400	36.9	3.84	6.41	6.41	6.41	0.30	1.50	±13.3%
4600	36.7	4.04	6.24	6.24	6.24	0.40	1.35	±13.3%
4800	36.4	4.25	6.15	6.15	6.15	0.40	1.45	±13.3%
4950	36.3	4.40	5.85	5.85	5.85	0.40	1.42	±13.3%
5250	35.9	4.71	5.55	5.55	5.55	0.40	1.40	±13.3%
5600	35.5	5.07	4.89	4.89	4.89	0.55	1.22	±13.3%
5750	35.4	5.22	4.99	4.99	4.99	0.55	1.21	±13.3%

[C] Frequency validity above 300 MHz of ±100MHz only applies for DASY v4.4 and higher (Page 2), else it is restricted to ±50MHz. The uncertainty is the RSS of ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Above 5 GHz frequency validity can be extended to ± 110 MHz.

[F] At frequency below 3 GHz, the validity of tissue parameters (ε and σ) can be relaxed to ±10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ε and σ) is restricted to ±5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

[G] Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for the frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

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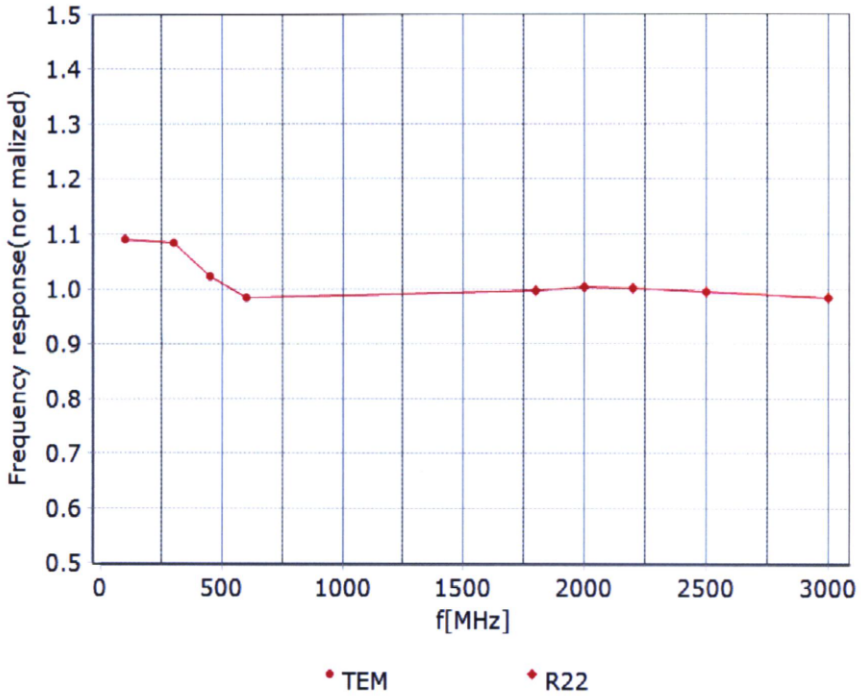
Frequency Response of E-Field
(TEM-Cell: ifi110 EXX, Waveguide: R22)



Uncertainty of Frequency Response of E-field: ±7.4% (*k*=2)

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