



SAR TEST REPORT

No. I22Z61849-SEM01

For

HMD Global Oy

Smart Phone

Model Name: TA-1515

With

Hardware Version: V1.0

Software Version: 00US_0_060

FCC ID: 2AJOTTA-1515

Issued Date: 2023-1-04

Note:

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**REPORT HISTORY**

Report Number	Revision	Issue Date	Description
I22Z61849-SEM01	Rev.0	2022-12-15	Initial creation of test report
I22Z61849-SEM01	Rev.1	2022-12-29	1、 Update the information for GPRS/EGPRS multislot class on page 9; 2、 update the information for “WCDMA 1900-DSI2”to “WCDMA 1900-DSI3” on page 28; 3、 Add 41C test data on page 81 and page 94.
I22Z61849-SEM01	Rev.2	2023-1-04	Update the information for Second Supply on page 92 and page 97

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1 Test Laboratory

1.1 Testing Location

Company Name:	CTTL(Shouxiang)
Address:	No. 52, Huayuan North Road, Haidian District, Beijing, P. R. China 100191.

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

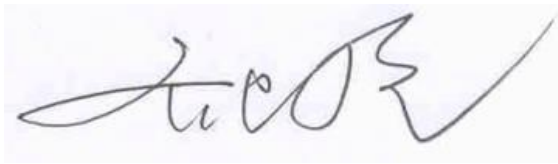
1.3 Project Data

Project Leader:	Qi Dianyuan
Test Engineer:	Lin Xiaojun
Testing Start Date:	November 6,2022
Testing End Date:	November 21,2022

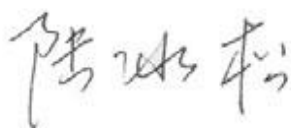
1.4 Signature



Yao Juming
(Prepared this test report)



Qi Dianyuan
(Reviewed this test report)



Lu Bingsong
Deputy Director of the laboratory
(Approved this test report)

2 Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for HMD Global Oy Smart Phone TA-1515 is as follows:

Table 2.1: Highest Reported SAR (1g)

Mode		Highest Reported SAR (1g)			10-g SAR Phablet
		1g SAR Head	1g SAR Hotspot	1g SAR Body-worn	
GSM	GSM850	0.31	0.39	0.34	/
	GSM1900	0.14	1.00	0.49	2.88
WCDMA	UMTS FDD 5	0.28	0.38	0.33	/
	UMTS FDD 4	0.26	1.06	0.98	2.79
	UMTS FDD 2	0.45	0.96	0.78	3.02
LTE	LTE Band 2	0.37	1.31	0.76	2.38
	LTE Band 5	0.33	0.49	0.44	/
	LTE Band 12	0.24	0.46	0.45	/
	LTE Band 13	0.30	0.54	0.49	/
	LTE Band 30	0.16	1.25	0.47	2.84
	LTE Band 41-PC2	<0.01	1.22	0.91	1.72
	LTE Band 41-PC3	0.04	0.99	1.05	1.75
	LTE Band 66	0.24	0.91	0.88	2.69
LTE Band 71	0.26	0.46	0.40	/	
WLAN 2.4GHz		0.97	0.54	0.28	1.09
WLAN 5GHz		1.12	0.84	0.81	1.18
BT		0.11	<0.01	<0.01	0.16

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.

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 10/15 mm 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 of this test report. 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: **1.31 W/kg(1g)**.

Table 2.2: The sum of SAR values for Main antenna + WiFi

	Position	Main antenna	WiFi	BT	Sum
Highest SAR value	Left head, Tilt	0.37 (WCDMA1900)	1.12 (WiFi5G)	0.10 (BT)	1.59

According to the above tables, the highest sum of reported SAR values is **1.59 W/kg (1g)**. The detail for simultaneous transmission consideration is described in chapter 14.

Conclusion:

According to the above tables, the sum of reported SAR values is < 1.6W/kg. So the simultaneous transmission SAR with volume scans is not required.

3 Client Information

3.1 Applicant Information

Company Name:	HMD Global Oy
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Telephone:	+491735287964
Fax	/

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

4.1 About EUT

Description:	Smart Phone
Model name:	TA-1515
Tested Band:	GSM850/1900, WCDMA B2/4/B5 LTE Band2/4/5/12/13/30/41/66/71 BT, Wi-Fi(2.4G), Wi-Fi(5G)
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)
	699 – 716 MHz (LTE Band 12)
	777 –787 MHz (LTE Band 13)
	2305 – 2315 MHz(LTE Band 30)
	2496 – 2690 MHz (LTE Band 41)
	1710 – 1780 MHz (LTE Band 66)
	663 – 698 MHz (LTE Band 71)
2412 – 2462 MHz (Wi-Fi 2.4G)	
5150-5825 MHz (Wi-Fi 5G)	
2400 – 2483.5 MHz (Bluetooth)	
GPRS/EGPRS Multislot Class:	12
Test device production information:	Production unit
Device type:	Portable device
Antenna type:	Integrated antenna
Hotspot mode:	Support

4.2 Internal Identification of EUT used during the test

EUT ID*	IMEI	HW Version	SW Version
EUT1	357433970006070	V1.0	00US_0_060
EUT2	357433970000867	V1.0	00US_0_060
EUT3	357433970006666	V1.0	00US_0_060
EUT4	357433970004158	V1.0	00US_0_060
EUT5	357433970004836	V1.0	00US_0_060

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

Note: It is performed to test SAR with the EUT1~3 and conducted power with the EUT4~5.

4.3 Internal Identification of AE used during the test

AE ID*	Description	Model	SN	Manufacturer
AE1	Battery	TN-BP4000N2	/	Guangdong Fenghua new energy co.,ltd.
AE2	Battery	TN-BP4000N2	/	Dongguan Ganfeng Electronics Co., Ltd

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

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 D01 SAR measurement 100 MHz to 6 GHz v01r04: SAR Measurement Requirements for 100 MHz to 6 GHz.

KDB865664 D02 RF Exposure Reporting v01r02: RF Exposure Compliance Reporting and Documentation Considerations

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 heat 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.

7 Tissue Simulating Liquids

7.1 Targets for tissue simulating liquid

Table 7.1: Targets for tissue simulating liquid

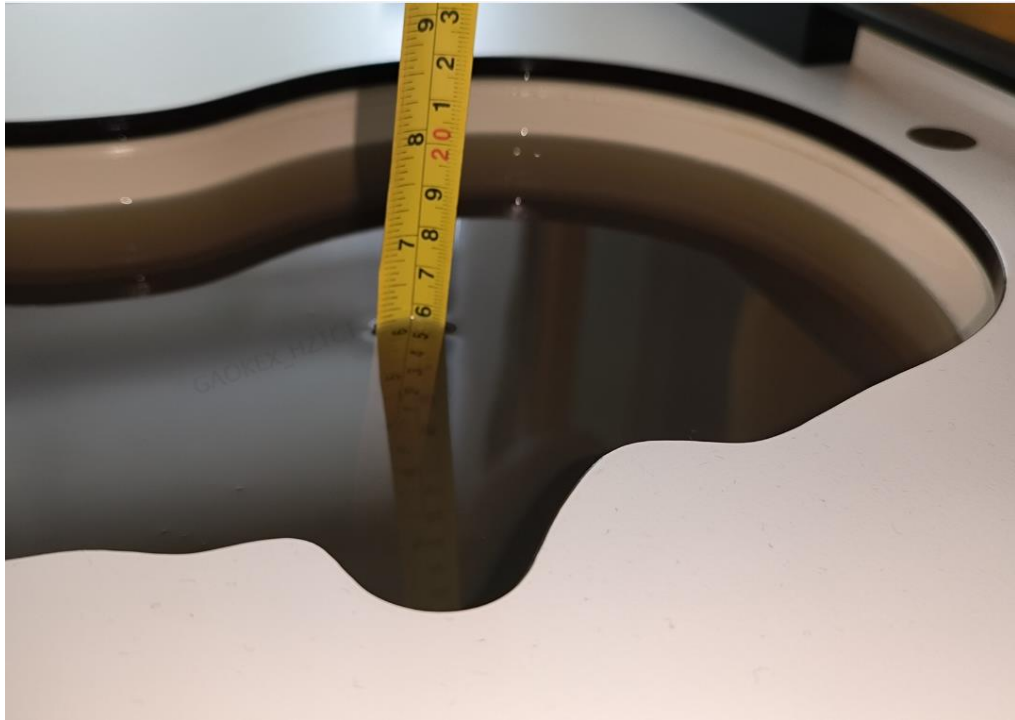
Frequency(MHz)	Liquid Type	Conductivity(σ)	$\pm 5\%$ Range	Permittivity(ϵ)	$\pm 5\%$ Range
750	Head	0.89	0.85~0.93	41.94	39.8~44.0
835	Head	0.90	0.86~0.95	41.5	39.4~43.6
1750	Head	1.37	1.30~1.44	40.08	38.1~42.1
1900	Head	1.40	1.33~1.47	40.0	38.0~42.0
2300	Head	1.67	1.57~1.84	39.47	37.5~41.4
2450	Head	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
5250	Head	5250	Head	4.71	4.47~4.95
5600	Head	5600	Head	5.07	4.82~5.32
5750	Head	5750	Head	5.22	4.96~5.48

7.2 Dielectric Performance

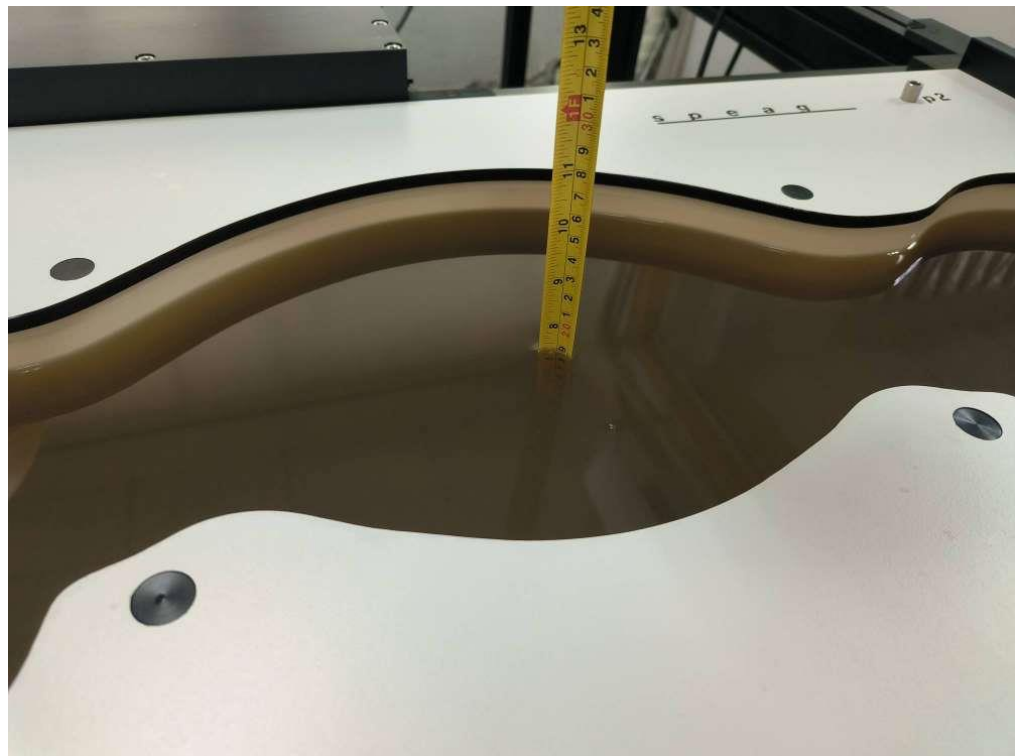
Table 7.2: Dielectric Performance of Tissue Simulating Liquid

Measurement Date (yyyy-mm-dd)	Type	Frequency	Permittivity ϵ	Drift (%)	Conductivity σ (S/m)	Drift (%)
2022/11/6	Head	750 MHz	43.88	4.63%	0.883	-0.79%
2022/11/7	Head	850 MHz	43.67	5.23%	0.914	1.56%
2022/11/10	Head	1750 MHz	41.78	4.24%	1.363	-0.51%
2022/11/11	Head	1900 MHz	41.59	3.98%	1.452	3.71%
2022/11/13	Head	2300 MHz	40.88	3.57%	1.720	2.99%
2022/11/14	Head	2450 MHz	40.67	3.75%	1.839	2.17%
2022/11/17	Head	2600 MHz	40.38	3.51%	1.954	-0.31%
2022/11/19	Head	5250 MHz	35.86	-0.19%	4.521	-4.01%
2022/11/20	Head	5600 MHz	35.31	-0.62%	4.915	-3.06%
2022/11/21	Head	5750 MHz	35.03	-0.93%	5.083	-2.62%

Note: The liquid temperature is 22.0°C



Picture 7-1 Liquid depth in the Head Phantom

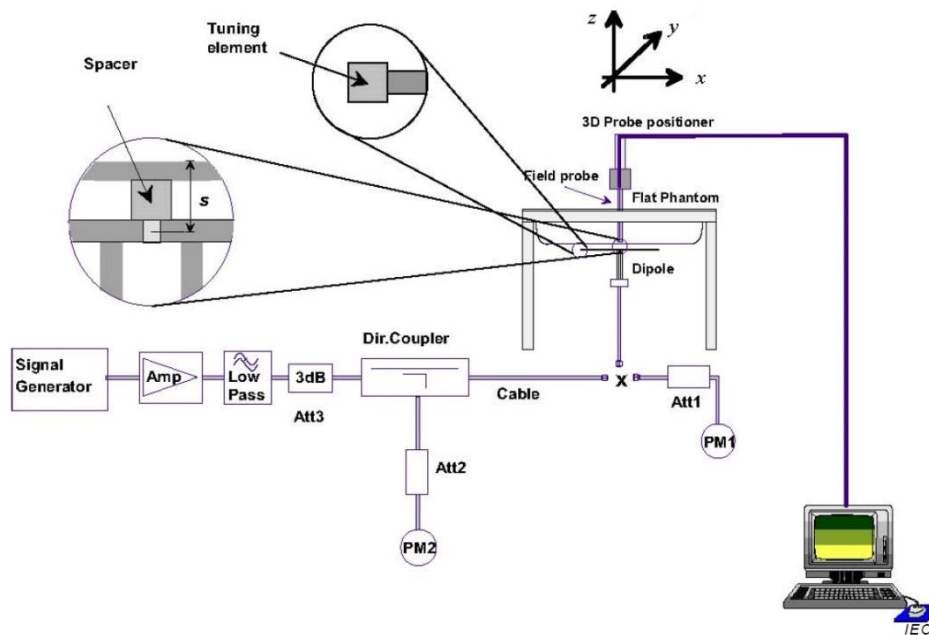


Picture 7-2 Liquid depth in the Flat Phantom

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

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.

The system verification results are required that the area scan estimated 1-g SAR is within 3% of the zoom scan 1-g SAR. The details are presented in annex B.

Table 8.1: System Verification of Head

Measurement Date (yyyy-mm-dd)	Frequency	Target value (W/kg)		Measured value(W/kg)		Deviation	
		10 g Average	1 g Average	10 g Average	1 g Average	10 g Average	1 g Average
2022/11/6	750 MHz	5.64	8.63	5.36	8.20	-4.96%	-4.98%
2022/11/7	850 MHz	6.34	9.73	6.04	9.32	-4.73%	-4.21%
2022/11/10	1750 MHz	19.3	36.8	18.5	35.5	-4.04%	-3.59%
2022/11/11	1900 MHz	20.7	39.7	20.0	38.7	-3.19%	-2.47%
2022/11/13	2450 MHz	24.2	49.6	24.2	50.4	-0.17%	1.61%
2022/11/14	2600 MHz	24.9	52.7	24.6	52.8	-1.20%	0.19%
2022/11/17	5250 MHz	25.2	55.8	24.4	55.2	-3.02%	-1.08%
2022/11/19	5600 MHz	22.3	78.1	20.7	75.3	-7.17%	-3.59%
2022/11/20	5750 MHz	23.7	83.2	22.1	78.9	-6.75%	-5.17%
2022/11/21	2450 MHz	22.8	80.4	22.4	77.1	-1.75%	-4.10%

9 Measurement Procedures

9.1 Tests to be performed

In order to determine the highest value of the peak spatial-average SAR of a handset, all device positions, configurations and operational modes shall be tested for each frequency band according to steps 1 to 3 below. A flowchart of the test process is shown in picture 9.1.

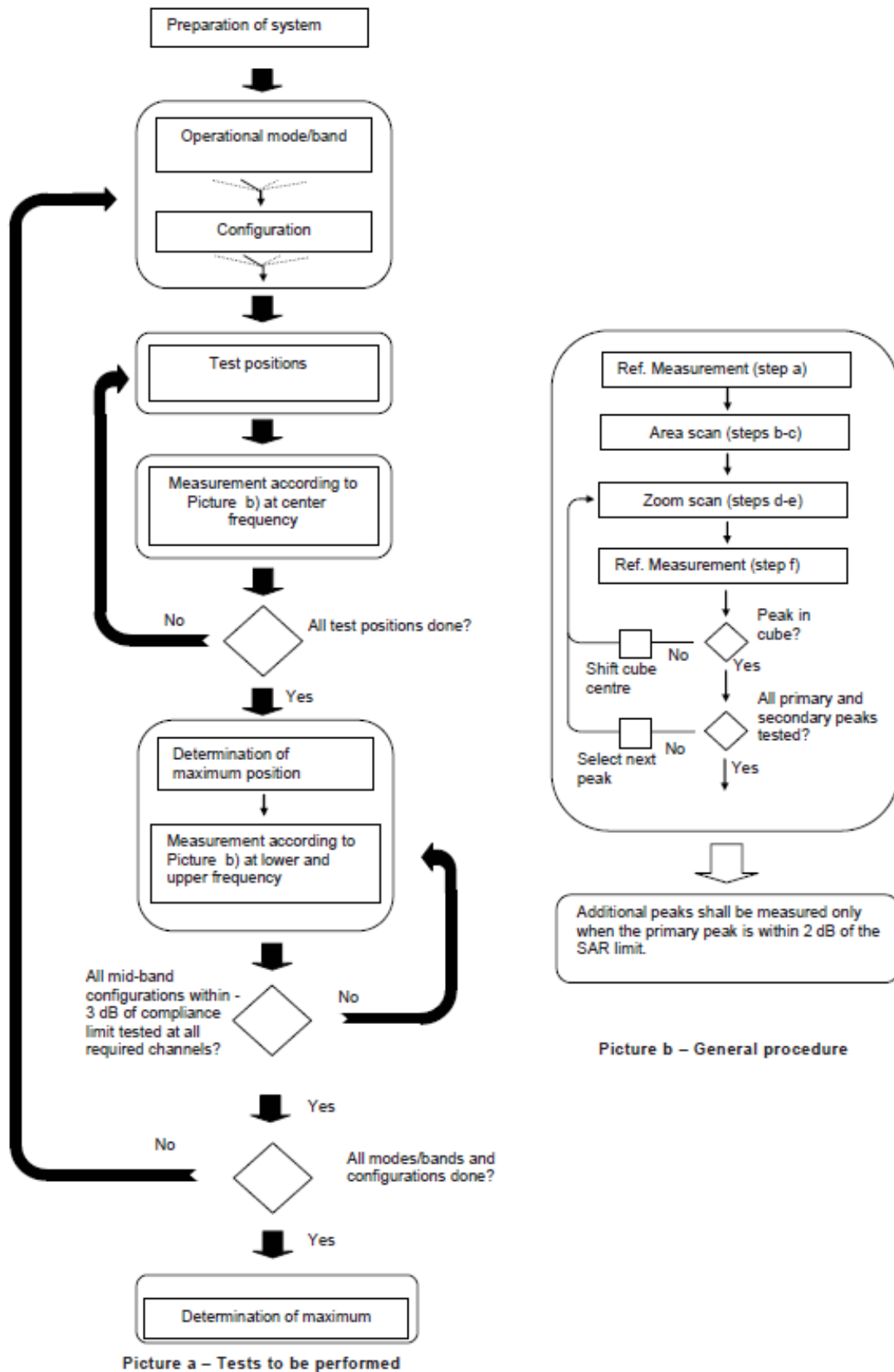
Step 1: The tests described in 9.2 shall be performed at the channel that is closest to the centre of the transmit frequency band (f_c) for:

- a) all device positions (cheek and tilt, for both left and right sides of the SAM phantom, as described in annex D),
- b) all configurations for each device position in a), e.g., antenna extended and retracted, and
- c) all operational modes, e.g., analogue and digital, for each device position in a) and configuration in b) in each frequency band.

If more than three frequencies need to be tested according to 11.1 (i.e., $N_c > 3$), then all frequencies, configurations and modes shall be tested for all of the above test conditions.

Step 2: For the condition providing highest peak spatial-average SAR determined in Step 1, perform all tests described in 9.2 at all other test frequencies, i.e., lowest and highest frequencies. In addition, for all other conditions (device position, configuration and operational mode) where the peak spatial-average SAR value determined in Step 1 is within 3 dB of the applicable SAR limit, it is recommended that all other test frequencies shall be tested as well.

Step 3: Examine all data to determine the highest value of the peak spatial-average SAR found in Steps 1 to 2.



Picture 9-1 Block diagram of the tests to be performed

9.2 General Measurement Procedure

The area and zoom scan resolutions specified in the table below must be applied to the SAR measurements and fully documented in SAR reports to qualify for TCB approval. Probe boundary effect error compensation is required for measurements with the probe tip closer than half a probe tip diameter to the phantom surface. Both the probe tip diameter and sensor offset distance must satisfy measurement protocols; to ensure probe boundary effect errors are minimized and the higher fields closest to the phantom surface can be correctly measured and extrapolated to the phantom surface for computing 1-g SAR. Tolerances of the post-processing algorithms must be verified by the test laboratory for the scan resolutions used in the SAR measurements, according to the reference distribution functions specified in IEEE Std 1528-2003. The results should be documented as part of the system validation records and may be requested to support test results when all the measurement parameters in the following table are not satisfied.

		≤ 3 GHz	> 3 GHz	
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface		5 ± 1 mm	$\frac{1}{2} \cdot \delta \cdot \ln(2) \pm 0.5$ mm	
Maximum probe angle from probe axis to phantom surface normal at the measurement location		$30^\circ \pm 1^\circ$	$20^\circ \pm 1^\circ$	
Maximum area scan spatial resolution: Δx_{Area} , Δy_{Area}		≤ 2 GHz: ≤ 15 mm 2 – 3 GHz: ≤ 12 mm	3 – 4 GHz: ≤ 12 mm 4 – 6 GHz: ≤ 10 mm	
		When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be \leq the corresponding x or y dimension of the test device with at least one measurement point on the test device.		
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 1 st two points closest to phantom surface	≤ 4 mm	3 – 4 GHz: ≤ 3 mm 4 – 5 GHz: ≤ 2.5 mm 5 – 6 GHz: ≤ 2 mm
		$\Delta z_{Zoom}(n>1)$: between subsequent points	$\leq 1.5 \cdot \Delta z_{Zoom}(n-1)$	
Minimum zoom scan volume	x, y, z	≥ 30 mm	3 – 4 GHz: ≥ 28 mm 4 – 5 GHz: ≥ 25 mm 5 – 6 GHz: ≥ 22 mm	
Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details. * When zoom scan is required and the <i>reported</i> SAR from the 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.				

9.3 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
3	15/15	9/15	64	15/9	30/15	30/15	$\beta_{ed1}:47/15$ $\beta_{ed2}:47/15$	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.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.

9.4 SAR Measurement for LTE

SAR tests for LTE are performed with a base station simulator, Rohde & Schwarz CMW500. Closed loop power control was used so the UE transmits with maximum output power during SAR testing. All powers were measured with the CMW 500.

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 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. SAR testing is performed using the extended cyclic prefix listed in 3GPP TS 36.211.

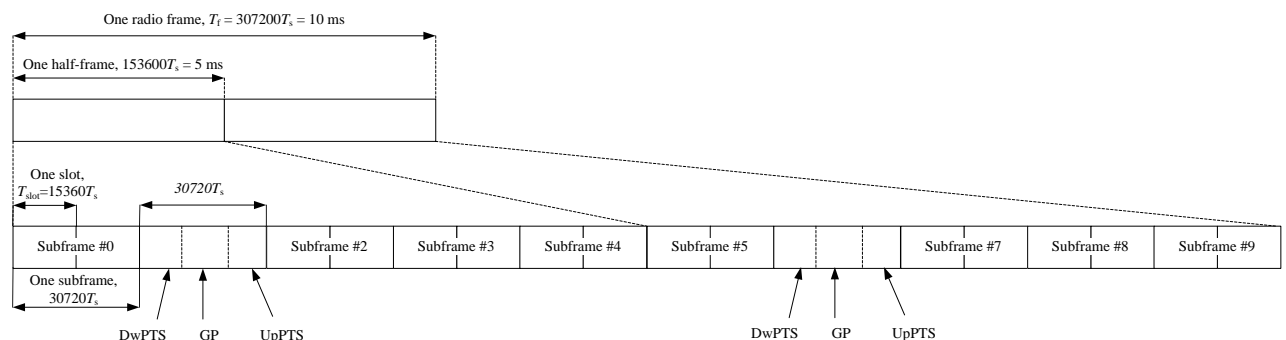


Figure 9.2: Frame structure type 2 (for 5 ms switch-point periodicity)

Table 9.1: 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	$26336 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$	$7680 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$
5	$6592 \cdot T_s$			$20480 \cdot T_s$		
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 9.2: 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:

$$\begin{aligned}
 \text{Duty factor} &= \text{uplink frame} \cdot 6 + \text{UpPTS} \cdot 2 / \text{one frame length} \\
 &= (30720 \cdot T_s \cdot 6 + 5120 \cdot T_s \cdot 2) / 307200 \cdot T_s \\
 &= 0.633
 \end{aligned}$$

9.5 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.

9.6 Power Drift

To control the output power stability during the SAR test, DASY5 system calculates the power drift by measuring the E-field at the same location at the beginning and at the end of the measurement for each test position. These drift values can be found in section 14 labeled as: (Power Drift [dB]). This ensures that the power drift during one measurement is within 5%.

10 Area Scan Based 1-g SAR

10.1 Requirement of KDB

According to the KDB447498 D01, when the implementation is based the specific polynomial fit algorithm as presented at the 29th Bioelectromagnetics Society meeting (2007) and the estimated 1-gSAR is ≤ 1.2 W/kg, a zoom scan measurement is not required provided it is also not needed for any other purpose; for example, if the peak SAR location required for simultaneous transmission SAR test exclusion can be determined accurately by the SAR system or manually to discriminate between distinctive peaks and scattered noisy SAR distributions from area scans.

There must not be any warning or alert messages due to various measurement concerns identified by the SAR system; for example, noise in measurements, peaks too close to scan boundary, peaks are too sharp, spatial resolution and uncertainty issues etc. The SAR system verification must also demonstrate that the area scan estimated 1-g SAR is within 3% of the zoom scan 1-g SAR. When all the SAR results for each exposure condition in a frequency band and wireless mode are based on estimated 1-g SAR, the 1-g SAR for the highest SAR configuration must be determined by a zoom scan.

10.2 Fast SAR Algorithms

The approach is based on the area scan measurement applying a frequency dependent attenuation parameter. This attenuation parameter was empirically determined by analyzing a large number of phones. The MOTOROLA FAST SAR was developed and validated by the MOTOROLA Research Group in Ft. Lauderdale.

In the initial study, an approximation algorithm based on Linear fit was developed. The accuracy of the algorithm has been demonstrated across a broad frequency range (136-2450 MHz) and for both 1- and 10-g averaged SAR using a sample of 264 SAR measurements from 55 wireless handsets. For the sample size studied, the root-mean-squared errors of the algorithm are 1.2% and 5.8% for 1- and 10-g averaged SAR, respectively. The paper describing the algorithm in detail is expected to be published in August 2004 within the Special Issue of Transactions on MTT.

In the second step, the same research group optimized the fitting algorithm to an Polynomial fit whereby the frequency validity was extended to cover the range 30-6000MHz. Details of this study can be found in the BEMS 2007 Proceedings.

Both algorithms are implemented in DASYS software.

11 Conducted Output Power

Head receiver on	Body worn receiver off	Hostpot
DSI 1	DSI 2	DSI 3

11.1 GSM Measurement result

GSM850-DSI1/2/3

GSM 850 Speech (GMSK)	Measured timeslot-averaged output power (dBm)			Tune up	calculation	Source-based time-averaged output power (dBm)		
	251	190	128			251	190	128
1 Txslot	32.37	32.96	32.90	33.50	/	/	/	/
GSM 850 GPRS (GMSK)	Measured timeslot-averaged output power (dBm)			Tune up	calculation	Source-based time-averaged output power (dBm)		
	251	190	128			251	190	128
1 Txslot	32.91	32.89	32.79	33.50	-9.03	23.88	23.86	23.76
2 Txslots	31.87	31.72	31.60	32.50	-6.02	25.85	25.70	25.58
3Txslots	29.82	29.88	29.77	30.50	-4.26	25.56	25.62	25.51
4 Txslots	28.14	28.33	28.26	28.50	-3.01	25.13	25.32	25.25
GSM 850 EGPRS (GMSK)	Measured timeslot-averaged output power (dBm)			Tune up	calculation	Source-based time-averaged output power (dBm)		
	251	190	128			251	190	128
1 Txslot	32.51	32.94	32.88	33.50	-9.03	23.48	23.91	23.85
2 Txslots	31.41	31.46	31.49	32.50	-6.02	25.39	25.44	25.47
3Txslots	29.76	29.72	29.65	30.50	-4.26	25.50	25.46	25.39
4 Txslots	27.99	27.82	27.65	28.50	-3.01	24.98	24.81	24.64
GSM 850 EGPRS (8PSK)	Measured timeslot-averaged output power (dBm)			Tune up	calculation	Source-based time-averaged output power (dBm)		
	251	190	128			251	190	128
1 Txslot	26.76	26.87	26.98	27.50	-9.03	17.73	17.84	17.95
2 Txslots	24.78	24.84	24.94	26.50	-6.02	18.76	18.82	18.92
3Txslots	22.69	22.76	22.84	24.50	-4.26	18.43	18.50	18.58
4 Txslots	21.57	21.64	21.72	22.50	-3.01	18.56	18.63	18.71

GSM1900-DSI/2

GSM 1900 Speech (GMSK)	Measured timeslot-averaged output power (dBm)			Tune up	calculation	Source-based time-averaged output power (dBm)		
	810	661	512			810	661	512
1 Txslot	29.66	29.84	29.93	30.50	/	/	/	/
GSM 1900 GPRS (GMSK)	Measured timeslot-averaged output power (dBm)			Tune up	calculation	Source-based time-averaged output power (dBm)		
	810	661	512			810	661	512
1 Txslot	29.59	29.78	29.91	30.50	-9.03	20.56	20.75	20.88
2 Txslots	28.39	28.55	28.65	29.50	-6.02	22.37	22.53	22.63
3Txslots	27.30	27.42	27.56	28.50	-4.26	23.04	23.16	23.30
4 Txslots	26.55	26.75	26.86	27.50	-3.01	23.54	23.74	23.85
GSM 1900 EGPRS (GMSK)	Measured timeslot-averaged output power (dBm)			Tune up	calculation	Source-based time-averaged output power (dBm)		
	810	661	512			810	661	512
1 Txslot	29.51	29.72	29.92	30.50	-9.03	20.48	20.69	20.89
2 Txslots	28.26	28.54	28.67	29.50	-6.02	22.24	22.52	22.65
3Txslots	27.24	27.43	27.51	28.50	-4.26	22.98	23.17	23.25
4 Txslots	26.49	26.76	26.82	27.50	-3.01	23.48	23.75	23.81
GSM 1900 EGPRS (8PSK)	Measured timeslot-averaged output power (dBm)			Tune up	calculation	Source-based time-averaged output power (dBm)		
	810	661	512			810	661	512
1 Txslot	25.56	25.80	25.89	26.50	-9.03	16.53	16.77	16.86
2 Txslots	24.07	24.24	24.35	25.50	-6.02	18.05	18.22	18.33
3Txslots	23.01	23.17	23.99	24.50	-4.26	18.75	18.91	19.73
4 Txslots	21.93	22.50	22.22	23.50	-3.01	18.92	19.49	19.21

GSM1900-DSI3

GSM 1900 GPRS (GMSK)	Measured timeslot-averaged output power (dBm)			Tune up	calculation	Source-based time-averaged output power (dBm)		
	810	661	512			810	661	512
1 Txslot	28.26	28.44	28.54	29.00	-9.03	19.23	19.41	19.51
2 Txslots	26.69	26.91	26.96	28.00	-6.02	20.67	20.89	20.94
3Txslots	25.61	25.81	25.93	27.00	-4.26	21.35	21.55	21.67
4 Txslots	25.03	25.22	25.35	26.00	-3.01	22.02	22.21	22.34
GSM 1900 EGPRS (GMSK)	Measured timeslot-averaged output power (dBm)			Tune up	calculation	Source-based time-averaged output power (dBm)		
	810	661	512			810	661	512
1 Txslot	28.19	28.37	28.48	29.00	-9.03	19.16	19.34	19.45
2 Txslots	26.67	26.83	26.96	28.00	-6.02	20.65	20.81	20.94
3Txslots	25.60	25.82	25.87	27.00	-4.26	21.34	21.56	21.61
4 Txslots	25.04	25.25	25.30	26.00	-3.01	22.03	22.24	22.29
GSM 1900 EGPRS (8PSK)	Measured timeslot-averaged output power (dBm)			Tune up	calculation	Source-based time-averaged output power (dBm)		
	810	661	512			810	661	512
1 Txslot	24.54	24.69	24.84	25.00	-9.03	15.51	15.66	15.81
2 Txslots	22.46	22.70	22.46	24.00	-6.02	16.44	16.68	16.44
3Txslots	21.51	21.74	21.88	23.00	-4.26	17.25	17.48	17.62
4 Txslots	20.33	20.55	20.70	22.00	-3.01	17.32	17.54	17.69

11.1 WCDMA Measurement result

WCDMA1900-DSI1

Item	band	FDDII result			
	ARFCN	9538 (1907.6MHz)	9400 (1880MHz)	9262 (1852.4MHz)	Tune up
WCDMA	\	24.20	24.54	24.37	25.00
HSUPA	1	22.45	22.55	22.54	23.00
	2	20.48	20.58	20.44	21.00
	3	21.36	21.51	21.47	22.00
	4	20.71	20.65	20.71	21.50
	5	22.66	22.71	22.53	23.00
DC-HSDPA	1	22.45	22.64	22.52	23.00
	2	22.58	22.65	22.48	23.00
	3	22.12	22.16	22.03	22.50
	4	22.07	22.16	22.11	22.50

WCDMA1900-DSI2

Item	band	FDDII result			
	ARFCN	9538 (1907.6MHz)	9400 (1880MHz)	9262 (1852.4MHz)	Tune up
WCDMA	\	22.63	22.54	22.56	23.00
HSUPA	1	20.36	20.52	20.46	21.00
	2	18.46	18.51	18.44	19.00
	3	19.32	19.46	19.44	20.00
	4	18.64	18.58	18.65	19.50
	5	20.56	20.63	20.46	21.00
DC-HSDPA	1	20.41	20.56	20.52	21.00
	2	20.51	20.63	20.40	21.00
	3	20.11	20.16	19.96	20.50
	4	20.02	20.09	20.11	20.50

WCDMA1900-DSI3

Item	band	FDDII result			
	ARFCN	9538 (1907.6MHz)	9400 (1880MHz)	9262 (1852.4MHz)	Tune up
WCDMA	\	21.46	21.53	21.47	22.00
HSUPA	1	19.54	19.53	19.53	20.00
	2	17.51	17.53	17.45	18.00
	3	18.37	18.61	18.56	19.00
	4	17.69	17.71	17.75	18.50
	5	19.62	19.59	19.63	20.00
DC-HSDPA	1	19.48	19.64	19.49	20.00
	2	19.61	19.66	19.53	20.00
	3	19.14	19.15	19.04	19.50

	4	19.02	19.10	19.11	19.50
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WCDMA1700- DSI1

Item	band	FDDIV result			
	ARFCN	1513 (1752.6MHz)	1412 (1732.4MHz)	1312 (1712.4MHz)	Tune up
WCDMA	\	24.46	24.41	24.15	25.00
HSUPA	1	22.73	22.67	22.31	23.00
	2	20.41	20.53	20.52	21.00
	3	21.46	21.75	21.63	22.00
	4	20.53	20.61	20.71	21.50
	5	22.49	22.69	22.53	23.00
DC-HSDPA	1	22.55	22.62	22.44	23.00
	2	22.35	22.56	22.44	23.00
	3	22.13	22.16	22.08	22.50
	4	22.07	22.09	22.12	22.50

WCDMA1700- DSI2

Item	band	FDDIV result			
	ARFCN	1513 (1752.6MHz)	1412 (1732.4MHz)	1312 (1712.4MHz)	Tune up
WCDMA	\	21.72	21.64	21.68	22.50
HSUPA	1	20.13	20.12	19.93	20.50
	2	17.88	17.94	17.98	18.50
	3	18.82	18.93	18.83	19.50
	4	18.14	18.21	18.16	19.00
	5	19.96	20.09	19.98	20.50
DC-HSDPA	1	20.16	20.11	19.94	20.50
	2	19.84	20.02	19.89	20.50
	3	19.38	19.41	19.57	20.00
	4	19.26	19.16	19.25	20.00

WCDMA1700- DSI3

Item	band	FDDIV result			
	ARFCN	1513 (1752.6MHz)	1412 (1732.4MHz)	1312 (1712.4MHz)	Tune up
WCDMA	\	19.68	19.62	19.73	20.50
HSUPA	1	18.32	18.24	18.19	18.50
	2	16.08	16.11	16.12	16.50
	3	16.97	17.17	17.19	17.50
	4	16.01	16.03	16.12	17.00
	5	17.91	18.02	17.97	18.50
DC-HSDPA	1	18.12	18.08	17.91	18.50
	2	17.92	18.16	18.03	18.50

	3	17.26	17.27	17.19	18.00
	4	17.18	17.24	17.22	18.00

WCDMA850-DS1/2/3

Item	band	FDDV result			
	ARFCN	4233 (846.6MHz)	4183 (836.6MHz)	4132 (826.4MHz)	Tune up
WCDMA	\	24.43	24.36	24.23	25.00
HSUPA	1	22.95	22.93	22.74	23.00
	2	20.94	20.92	20.68	21.00
	3	21.98	21.90	21.74	22.00
	4	20.92	20.95	20.93	21.50
	5	22.91	22.92	22.86	23.00
HSPA+	\	22.82	22.90	22.68	23.00
DC-HSDPA	1	22.84	22.89	22.92	23.00
	2	22.39	22.37	22.45	22.50
	3	22.31	22.35	22.33	22.50
	4	24.43	24.36	24.23	25.00

11.2 LTE Measurement result

Maximum Target Power for Production Unit

Band	Tune up (dBm)		
	DSI1	DSI2	DSI3
Band 2	25	23	23
Band 5	25	25	25
Band 12	25	25	25
Band 13	25	25	25
Band 30	24	22	23
Band 41 PC2	25.5	24.5	21.5
Band 41 PC3	24.5	22.5	20.5
Band 4/66	24.5	23	21
Band 71	25	25	25

Maximum Power Reduction (MPR) for LTE

Modulation	Channel bandwidth / Transmission bandwidth configuration [RB]						MPR (dB)
	1.4	3	5	10	15	20	
	MHz	MHz	MHz	MHz	MHz	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	1.5
64 QAM	> 5	> 4	> 8	> 12	> 16	> 18	2.5

LTE Band2-DSI1

BANDWIDTH	Number of RBs	Frequency	QPSK	16QAM	64QAM
1.4M Hz	1RB-High (5)	1909.3 (19193)	24.15	23.52	22.45
		1880 (18900)	24.28	23.57	22.51
		1850.7 (18607)	24.24	23.42	22.17
	1RB-Middle (3)	1909.3 (19193)	24.23	23.69	22.56
		1880 (18900)	24.47	23.77	22.62
		1850.7 (18607)	24.25	23.49	22.62
	1RB-Low (0)	1909.3 (19193)	24.38	23.81	22.62
		1880 (18900)	24.34	23.68	22.49
		1850.7 (18607)	24.30	23.55	22.56
	3RB-High (3)	1909.3 (19193)	24.35	23.27	22.48
		1880 (18900)	24.49	23.32	22.42
		1850.7 (18607)	24.26	23.20	22.37
	3RB-Middle (1)	1909.3 (19193)	24.28	23.32	22.53
		1880 (18900)	24.43	23.42	22.39
		1850.7 (18607)	24.03	23.07	22.48
	3RB-Low (0)	1909.3 (19193)	24.50	23.36	22.46
		1880 (18900)	24.30	23.36	22.40
		1850.7 (18607)	24.10	23.31	22.37
	6RB (0)	1909.3 (19193)	23.21	22.44	21.30
		1880 (18900)	23.42	22.43	21.26
		1850.7 (18607)	23.09	22.29	21.18
3M Hz	1RB-High (14)	1908.5 (19185)	24.64	23.56	22.53
		1880 (18900)	24.25	23.47	22.51
		1851.5 (18615)	24.18	23.62	22.36
	1RB-Middle (7)	1908.5 (19185)	24.35	23.79	22.43
		1880 (18900)	24.38	23.68	22.50
		1851.5 (18615)	24.53	23.48	22.37
	1RB-Low (0)	1908.5 (19185)	24.36	23.54	22.60
		1880 (18900)	24.28	23.75	22.55
		1851.5 (18615)	24.20	23.62	22.36
	8RB-High (7)	1908.5 (19185)	23.32	22.49	21.47
		1880 (18900)	23.31	22.40	21.29
		1851.5 (18615)	23.27	22.29	21.26
	8RB-Middle (4)	1908.5 (19185)	23.37	22.56	21.43
		1880 (18900)	23.36	22.46	21.36
		1851.5 (18615)	23.20	22.31	21.31
	8RB-Low (0)	1908.5 (19185)	23.37	22.45	21.43
		1880 (18900)	23.38	22.37	21.38
		1851.5 (18615)	23.29	22.31	21.30
	15RB (0)	1908.5 (19185)	23.47	22.51	21.33
		1880 (18900)	23.44	22.41	21.34
		1851.5 (18615)	23.29	22.26	21.27

5M Hz	1RB-H igh (24)	1907.5 (19175)	24.09	23.63	22.71
		1880 (18900)	24.35	23.55	22.77
		1852.5 (18625)	24.11	23.43	22.35
	1RB-M iddle (12)	1907.5 (19175)	24.46	23.46	22.52
		1880 (18900)	24.28	23.58	22.57
		1852.5 (18625)	24.15	23.55	22.33
	1RB-Low (0)	1907.5 (19175)	24.38	23.73	22.53
		1880 (18900)	24.49	23.78	22.65
		1852.5 (18625)	24.23	23.54	22.51
	12RB-H igh (13)	1907.5 (19175)	23.49	22.39	21.36
		1880 (18900)	23.42	22.42	21.35
		1852.5 (18625)	23.25	22.33	21.29
	12RB-M iddle (6)	1907.5 (19175)	23.47	22.43	21.47
		1880 (18900)	23.40	22.41	21.43
		1852.5 (18625)	23.22	22.27	21.34
	12RB-Low (0)	1907.5 (19175)	23.44	22.50	21.32
		1880 (18900)	23.41	22.31	21.33
		1852.5 (18625)	23.34	22.31	21.28
	25RB (0)	1907.5 (19175)	23.44	22.39	21.25
		1880 (18900)	23.27	22.18	21.27
		1852.5 (18625)	23.25	22.29	21.27
10M Hz	1RB-H igh (49)	1905 (19150)	24.38	23.65	22.49
		1880 (18900)	24.36	23.71	22.51
		1855 (18650)	24.05	23.32	22.23
	1RB-M iddle (24)	1905 (19150)	24.30	23.51	22.57
		1880 (18900)	24.38	23.60	22.61
		1855 (18650)	24.28	23.44	22.44
	1RB-Low (0)	1905 (19150)	24.44	23.65	22.80
		1880 (18900)	24.56	23.64	22.62
		1855 (18650)	24.41	23.53	22.52
	25RB-H igh (25)	1905 (19150)	23.41	22.39	21.39
		1880 (18900)	23.33	22.32	21.32
		1855 (18650)	23.15	22.18	21.18
	25RB-M iddle (12)	1905 (19150)	23.33	22.39	21.38
		1880 (18900)	23.21	22.31	21.20
		1855 (18650)	23.24	22.28	21.20
	25RB-Low (0)	1905 (19150)	23.39	22.45	21.46
		1880 (18900)	23.18	22.30	21.16
		1855 (18650)	23.22	22.25	21.15
	50RB (0)	1905 (19150)	23.39	22.36	21.30
		1880 (18900)	23.24	22.33	21.24
		1855 (18650)	23.27	22.20	21.23

15M Hz	1RB-H igh (74)	1902.5 (19125)	24.13	23.41	22.69
		1880 (18900)	24.40	23.47	22.18
		1857.5 (18675)	24.30	23.67	22.40
	1RB-M iddle (37)	1902.5 (19125)	24.09	23.36	22.41
		1880 (18900)	24.17	23.57	22.42
		1857.5 (18675)	24.34	23.40	22.32
	1RB-Low (0)	1902.5 (19125)	24.18	23.57	22.56
		1880 (18900)	24.24	23.65	22.64
		1857.5 (18675)	24.18	23.74	22.67
	36RB-H igh (38)	1902.5 (19125)	23.25	22.24	21.37
		1880 (18900)	23.22	22.27	21.28
		1857.5 (18675)	23.17	22.12	21.15
	36RB-M iddle (19)	1902.5 (19125)	23.27	22.41	21.48
		1880 (18900)	23.28	22.40	21.26
		1857.5 (18675)	23.16	22.21	21.16
	36RB-Low (0)	1902.5 (19125)	23.11	22.25	21.35
		1880 (18900)	23.13	22.19	21.17
		1857.5 (18675)	23.27	22.29	21.22
	75RB (0)	1902.5 (19125)	23.24	22.31	21.36
		1880 (18900)	23.15	22.27	21.14
		1857.5 (18675)	23.19	22.15	21.05
20M Hz	1RB-H igh (99)	1900 (19100)	23.86	22.97	22.45
		1880 (18900)	23.91	23.38	22.06
		1860 (18700)	23.83	23.29	21.84
	1RB-M iddle (50)	1900 (19100)	24.21	23.41	22.47
		1880 (18900)	24.40	23.45	22.31
		1860 (18700)	24.30	23.42	22.29
	1RB-Low (0)	1900 (19100)	24.20	23.37	22.27
		1880 (18900)	24.13	23.41	22.45
		1860 (18700)	24.04	23.37	22.24
	50RB-H igh (50)	1900 (19100)	23.13	22.20	21.13
		1880 (18900)	23.23	22.26	21.19
		1860 (18700)	23.16	22.13	21.16
	50RB-M iddle (25)	1900 (19100)	23.32	22.48	21.21
		1880 (18900)	23.32	22.35	21.27
		1860 (18700)	23.31	22.26	21.20
	50RB-Low (0)	1900 (19100)	23.29	22.28	21.30
		1880 (18900)	23.31	22.33	21.14
		1860 (18700)	23.18	22.23	21.26
	100RB (0)	1900 (19100)	23.28	22.23	21.18
		1880 (18900)	23.24	22.24	21.18
		1860 (18700)	23.22	22.16	21.20

LTE Band2-DSI2/3

BANDWIDTH	Number of RBs	Frequency	QPSK	16QAM	64QAM
1.4M Hz	1RB-High (5)	1909.3 (19193)	22.23	21.34	20.58
		1880 (18900)	22.36	21.22	20.67
		1850.7 (18607)	22.29	21.59	20.36
	1RB-Middle (3)	1909.3 (19193)	22.31	21.43	20.37
		1880 (18900)	22.26	21.27	20.74
		1850.7 (18607)	22.32	21.52	20.70
	1RB-Low (0)	1909.3 (19193)	22.23	21.35	20.55
		1880 (18900)	22.37	21.19	20.67
		1850.7 (18607)	22.34	21.51	20.46
	3RB-High (3)	1909.3 (19193)	22.54	21.09	20.54
		1880 (18900)	22.33	21.31	20.43
		1850.7 (18607)	22.26	21.41	20.19
	3RB-Middle (1)	1909.3 (19193)	22.19	21.14	20.47
		1880 (18900)	22.21	21.39	20.75
		1850.7 (18607)	22.13	21.43	20.44
	3RB-Low (0)	1909.3 (19193)	22.15	21.13	20.43
		1880 (18900)	22.05	21.23	20.39
		1850.7 (18607)	22.11	21.38	20.27
	6RB (0)	1909.3 (19193)	21.13	19.82	19.29
		1880 (18900)	21.09	20.32	19.11
		1850.7 (18607)	21.11	20.44	19.11
3M Hz	1RB-High (14)	1908.5 (19185)	22.20	21.54	20.57
		1880 (18900)	22.27	21.42	20.67
		1851.5 (18615)	22.37	21.30	20.57
	1RB-Middle (7)	1908.5 (19185)	22.51	21.60	20.69
		1880 (18900)	22.43	21.47	20.90
		1851.5 (18615)	22.32	21.37	20.30
	1RB-Low (0)	1908.5 (19185)	22.26	21.59	20.64
		1880 (18900)	22.41	21.55	20.80
		1851.5 (18615)	22.30	21.38	20.56
	8RB-High (7)	1908.5 (19185)	21.41	20.20	19.37
		1880 (18900)	21.56	20.33	19.33
		1851.5 (18615)	21.44	20.44	19.34
	8RB-Middle (4)	1908.5 (19185)	21.38	20.25	19.44
		1880 (18900)	21.37	20.44	19.47
		1851.5 (18615)	21.39	20.47	19.40
	8RB-Low (0)	1908.5 (19185)	21.32	20.27	19.48
		1880 (18900)	21.36	20.38	19.45
		1851.5 (18615)	21.39	20.43	19.47
	15RB (0)	1908.5 (19185)	21.37	20.19	19.38
		1880 (18900)	21.36	20.34	19.44
		1851.5 (18615)	21.37	20.37	19.31

5M Hz	1RB-H igh (24)	1907.5 (19175)	22.05	21.16	20.56
		1880 (18900)	22.29	21.58	20.80
		1852.5 (18625)	22.19	21.48	20.55
	1RB-M iddle (12)	1907.5 (19175)	21.95	21.16	20.49
		1880 (18900)	22.14	21.61	20.50
		1852.5 (18625)	22.25	21.54	20.60
	1RB-Low (0)	1907.5 (19175)	22.16	21.27	20.77
		1880 (18900)	22.38	21.71	20.88
		1852.5 (18625)	22.38	21.63	20.63
	12RB-H igh (13)	1907.5 (19175)	21.10	20.03	19.44
		1880 (18900)	21.26	20.28	19.50
		1852.5 (18625)	21.28	20.42	19.42
	12RB-M iddle (6)	1907.5 (19175)	21.10	20.09	19.46
		1880 (18900)	21.26	20.37	19.49
		1852.5 (18625)	21.29	20.44	19.48
	12RB-Low (0)	1907.5 (19175)	21.15	20.12	19.54
		1880 (18900)	21.22	20.28	19.50
		1852.5 (18625)	21.33	20.47	19.51
25RB (0)	1907.5 (19175)	21.10	20.02	19.46	
	1880 (18900)	21.18	20.17	19.37	
	1852.5 (18625)	21.30	20.36	19.37	
10M Hz	1RB-H igh (49)	1905 (19150)	22.32	21.60	20.65
		1880 (18900)	22.43	21.39	20.87
		1855 (18650)	22.39	21.35	20.69
	1RB-M iddle (24)	1905 (19150)	22.28	21.46	20.74
		1880 (18900)	22.47	21.49	20.98
		1855 (18650)	22.41	21.28	20.56
	1RB-Low (0)	1905 (19150)	22.37	21.69	20.63
		1880 (18900)	22.44	21.45	20.73
		1855 (18650)	22.50	21.45	20.88
	25RB-H igh (25)	1905 (19150)	21.21	20.21	19.58
		1880 (18900)	21.36	20.42	19.56
		1855 (18650)	21.25	20.24	19.39
	25RB-M iddle (12)	1905 (19150)	21.16	20.19	19.45
		1880 (18900)	21.26	20.36	19.67
		1855 (18650)	21.30	20.28	19.44
	25RB-Low (0)	1905 (19150)	21.27	20.27	19.61
		1880 (18900)	21.23	20.34	19.48
		1855 (18650)	21.35	20.34	19.43
	50RB (0)	1905 (19150)	21.17	20.17	19.50
		1880 (18900)	21.24	20.27	19.43
		1855 (18650)	21.33	20.27	19.37

15M Hz	1RB-H igh (74)	1902.5 (19125)	22.25	21.69	20.77
		1880 (18900)	22.24	21.23	20.80
		1857.5 (18675)	22.37	21.65	20.80
	1RB-M iddle (37)	1902.5 (19125)	22.19	21.58	20.64
		1880 (18900)	22.18	21.21	20.71
		1857.5 (18675)	22.37	21.64	20.72
	1RB-Low (0)	1902.5 (19125)	22.25	21.71	20.70
		1880 (18900)	22.27	21.32	20.86
		1857.5 (18675)	22.46	21.75	20.91
	36RB-H igh (38)	1902.5 (19125)	21.15	20.14	19.47
		1880 (18900)	21.12	20.15	19.42
		1857.5 (18675)	21.20	20.27	19.40
	36RB-M iddle (19)	1902.5 (19125)	21.23	20.25	19.47
		1880 (18900)	21.20	20.24	19.54
		1857.5 (18675)	21.21	20.27	19.39
	36RB-Low (0)	1902.5 (19125)	21.13	20.11	19.48
		1880 (18900)	21.04	20.14	19.36
		1857.5 (18675)	21.30	20.35	19.21
	75RB (0)	1902.5 (19125)	21.16	20.17	19.43
		1880 (18900)	21.08	20.11	19.29
		1857.5 (18675)	21.19	20.21	19.52
20M Hz	1RB-H igh (99)	1900 (19100)	21.70	21.36	20.42
		1880 (18900)	21.78	21.33	20.40
		1860 (18700)	21.86	21.34	20.59
	1RB-M iddle (50)	1900 (19100)	21.99	21.53	20.84
		1880 (18900)	22.16	21.67	20.68
		1860 (18700)	22.13	21.59	20.56
	1RB-Low (0)	1900 (19100)	21.98	21.59	20.53
		1880 (18900)	22.02	21.54	20.60
		1860 (18700)	22.12	21.65	20.77
	50RB-H igh (50)	1900 (19100)	20.89	20.06	19.41
		1880 (18900)	21.06	20.04	19.38
		1860 (18700)	21.15	20.14	19.36
	50RB-M iddle (25)	1900 (19100)	21.13	20.10	19.45
		1880 (18900)	21.23	20.20	19.50
		1860 (18700)	21.22	20.22	19.31
	50RB-Low (0)	1900 (19100)	21.07	20.13	19.50
		1880 (18900)	21.13	20.20	19.40
		1860 (18700)	21.20	20.19	19.51
	100RB (0)	1900 (19100)	20.99	20.02	19.49
		1880 (18900)	21.14	20.11	19.35
		1860 (18700)	21.14	20.22	19.33

LTE Band5

BANDWIDTH	Number of RBs	Frequency	QPSK	16QAM	64QAM
1.4M Hz	1RB-High (5)	848.3 (20643)	24.16	23.57	22.26
		836.5 (20525)	24.59	23.89	22.45
		824.7 (20407)	24.37	23.55	22.18
	1RB-Middle (3)	848.3 (20643)	23.83	23.51	22.62
		836.5 (20525)	24.13	23.56	22.35
		824.7 (20407)	24.41	23.98	22.60
	1RB-Low (0)	848.3 (20643)	24.18	23.34	22.67
		836.5 (20525)	24.10	23.97	22.58
		824.7 (20407)	24.22	23.35	22.21
	3RB-High (3)	848.3 (20643)	24.66	23.28	22.45
		836.5 (20525)	24.65	23.64	22.43
		824.7 (20407)	24.20	22.91	22.59
	3RB-Middle (1)	848.3 (20643)	24.34	23.27	22.41
		836.5 (20525)	24.60	23.19	22.47
		824.7 (20407)	24.32	23.29	22.56
	3RB-Low (0)	848.3 (20643)	24.29	23.35	22.36
		836.5 (20525)	24.64	23.31	22.44
		824.7 (20407)	24.38	22.95	22.59
	6RB (0)	848.3 (20643)	23.45	22.58	21.40
		836.5 (20525)	23.29	22.29	21.21
		824.7 (20407)	23.32	22.40	21.28
3M Hz	1RB-High (14)	847.5 (20635)	24.66	23.53	22.84
		836.5 (20525)	24.70	24.00	22.54
		825.5 (20415)	23.94	23.63	22.20
	1RB-Middle (7)	847.5 (20635)	24.58	23.65	22.64
		836.5 (20525)	24.20	23.08	22.57
		825.5 (20415)	24.47	23.72	22.84
	1RB-Low (0)	847.5 (20635)	23.99	23.75	22.51
		836.5 (20525)	24.22	23.98	22.43
		825.5 (20415)	24.40	23.27	22.40
	8RB-High (7)	847.5 (20635)	23.49	22.39	21.41
		836.5 (20525)	23.38	22.46	21.42
		825.5 (20415)	23.31	22.40	21.35
	8RB-Middle (4)	847.5 (20635)	23.49	22.54	21.44
		836.5 (20525)	23.35	22.42	21.40
		825.5 (20415)	23.35	22.44	21.39
	8RB-Low (0)	847.5 (20635)	23.45	22.36	21.41
		836.5 (20525)	23.35	22.33	21.38
		825.5 (20415)	23.28	22.37	21.32
	15RB (0)	847.5 (20635)	23.39	22.45	21.41
		836.5 (20525)	23.35	22.36	21.32
		825.5 (20415)	23.33	22.30	21.36

5M H z	1RB-H igh (24)	846.5 (20625)	23.92	23.48	22.51	
		836.5 (20525)	24.74	23.59	22.42	
		826.5 (20425)	24.03	23.73	22.73	
	1RB-M iddle (12)	846.5 (20625)	24.60	23.77	22.24	
		836.5 (20525)	24.26	23.46	22.38	
		826.5 (20425)	24.45	23.71	22.16	
	1RB-Low (0)	846.5 (20625)	24.33	23.89	22.57	
		836.5 (20525)	24.31	23.46	22.43	
		826.5 (20425)	24.47	23.78	22.68	
	12RB-H igh (13)	846.5 (20625)	23.54	22.47	21.45	
		836.5 (20525)	23.45	22.45	21.46	
		826.5 (20425)	23.39	22.43	21.36	
	12RB-M iddle (6)	846.5 (20625)	23.40	22.36	21.40	
		836.5 (20525)	23.43	22.43	21.45	
		826.5 (20425)	23.41	22.36	21.46	
	12RB-Low (0)	846.5 (20625)	23.39	22.35	21.39	
		836.5 (20525)	23.53	22.40	21.45	
		826.5 (20425)	23.39	22.44	21.45	
	25RB (0)	846.5 (20625)	23.50	22.47	21.51	
		836.5 (20525)	23.40	22.39	21.38	
		826.5 (20425)	23.39	22.42	21.32	
	10M H z	1RB-H igh (49)	844 (20600)	24.25	23.38	22.41
			836.5 (20525)	24.34	23.41	22.50
			829 (20450)	24.27	23.48	22.44
1RB-M iddle (24)		844 (20600)	24.41	23.18	22.46	
		836.5 (20525)	24.05	23.12	22.21	
		829 (20450)	23.98	23.47	22.42	
1RB-Low (0)		844 (20600)	24.43	23.41	22.39	
		836.5 (20525)	24.21	23.49	22.42	
		829 (20450)	24.15	23.39	22.49	
25RB-H igh (25)		844 (20600)	23.12	22.26	21.15	
		836.5 (20525)	23.21	22.21	21.28	
		829 (20450)	23.22	22.25	21.20	
25RB-M iddle (12)		844 (20600)	23.27	22.24	21.21	
		836.5 (20525)	23.07	22.09	21.13	
		829 (20450)	23.13	22.16	21.11	
25RB-Low (0)		844 (20600)	23.21	22.20	21.15	
		836.5 (20525)	23.27	22.20	21.14	
		829 (20450)	23.05	22.19	21.03	
50RB (0)		844 (20600)	23.20	22.19	21.16	
		836.5 (20525)	23.17	22.25	21.21	
		829 (20450)	23.21	22.24	21.21	

LTE Band12

BANDWIDTH	Number of RBs	Frequency	QPSK	16QAM	64QAM
1.4M Hz	1RB-High (5)	715.3 (23173)	23.86	22.93	22.10
		707.5 (23095)	23.92	23.20	22.39
		699.7 (23017)	24.14	23.41	22.19
	1RB-Middle (3)	715.3 (23173)	23.84	23.40	22.38
		707.5 (23095)	24.20	22.96	22.28
		699.7 (23017)	24.01	23.33	22.40
	1RB-Low (0)	715.3 (23173)	23.99	23.28	22.25
		707.5 (23095)	23.95	23.28	22.37
		699.7 (23017)	24.10	23.41	22.23
	3RB-High (3)	715.3 (23173)	24.11	23.03	22.15
		707.5 (23095)	23.93	23.06	21.96
		699.7 (23017)	24.07	23.02	22.25
	3RB-Middle (1)	715.3 (23173)	23.85	22.83	22.22
		707.5 (23095)	24.16	23.07	22.31
		699.7 (23017)	24.09	23.16	22.25
	3RB-Low (0)	715.3 (23173)	24.18	22.98	22.17
		707.5 (23095)	23.93	22.92	22.30
		699.7 (23017)	24.02	23.07	22.22
	6RB (0)	715.3 (23173)	22.97	22.19	20.95
		707.5 (23095)	22.97	22.12	21.00
		699.7 (23017)	23.08	22.33	21.15
3M Hz	1RB-High (14)	714.5 (23165)	23.87	23.15	22.88
		707.5 (23095)	23.73	23.08	22.24
		700.5 (23025)	24.21	23.30	22.39
	1RB-Middle (7)	714.5 (23165)	24.04	23.27	22.21
		707.5 (23095)	24.30	23.22	22.39
		700.5 (23025)	23.95	23.38	22.31
	1RB-Low (0)	714.5 (23165)	24.02	23.06	22.78
		707.5 (23095)	23.84	23.39	22.36
		700.5 (23025)	24.11	23.36	22.35
	8RB-High (7)	714.5 (23165)	23.05	22.03	21.58
		707.5 (23095)	22.96	22.02	21.08
		700.5 (23025)	23.02	22.15	21.09
	8RB-Middle (4)	714.5 (23165)	22.98	22.21	21.07
		707.5 (23095)	22.98	22.12	21.08
		700.5 (23025)	23.06	22.21	21.17
	8RB-Low (0)	714.5 (23165)	22.95	22.06	21.05
		707.5 (23095)	22.89	22.03	21.99
		700.5 (23025)	23.17	22.20	21.18
	15RB (0)	714.5 (23165)	23.05	22.14	21.17
		707.5 (23095)	22.98	22.07	21.08
		700.5 (23025)	23.15	22.14	21.15

5M H z	1RB-H igh (24)	713.5 (23155)	24.10	23.00	22.35	
		707.5 (23095)	23.81	23.31	22.31	
		701.5 (23035)	24.26	23.32	22.14	
	1RB-M iddle (12)	713.5 (23155)	23.81	22.90	22.39	
		707.5 (23095)	24.07	23.38	22.08	
		701.5 (23035)	24.02	23.45	22.31	
	1RB-Low (0)	713.5 (23155)	23.83	23.35	22.25	
		707.5 (23095)	24.18	23.10	22.37	
		701.5 (23035)	24.57	23.54	22.32	
	12RB-H igh (13)	713.5 (23155)	22.95	22.13	21.12	
		707.5 (23095)	23.02	22.04	21.11	
		701.5 (23035)	23.12	22.20	21.18	
	12RB-M iddle (6)	713.5 (23155)	23.09	22.13	21.29	
		707.5 (23095)	23.08	22.03	21.09	
		701.5 (23035)	23.14	22.12	21.17	
	12RB-Low (0)	713.5 (23155)	22.97	22.14	21.05	
		707.5 (23095)	23.02	22.07	20.90	
		701.5 (23035)	23.21	22.25	21.22	
	25RB (0)	713.5 (23155)	23.01	22.10	21.08	
		707.5 (23095)	23.08	22.11	21.08	
		701.5 (23035)	23.14	22.12	21.15	
	10M H z	1RB-H igh (49)	711 (23130)	23.99	23.24	22.24
			707.5 (23095)	24.48	23.14	22.40
			704 (23060)	24.17	23.20	22.22
1RB-M iddle (24)		711 (23130)	23.95	23.11	22.13	
		707.5 (23095)	24.10	23.09	22.20	
		704 (23060)	24.26	23.28	22.12	
1RB-Low (0)		711 (23130)	24.17	23.45	22.35	
		707.5 (23095)	24.33	23.44	22.45	
		704 (23060)	24.21	23.49	22.42	
25RB-H igh (25)		711 (23130)	22.92	21.90	20.94	
		707.5 (23095)	22.90	22.16	20.96	
		704 (23060)	23.08	22.06	20.85	
25RB-M iddle (12)		711 (23130)	22.95	22.00	21.04	
		707.5 (23095)	22.91	22.10	21.21	
		704 (23060)	22.86	22.17	20.98	
25RB-Low (0)		711 (23130)	23.19	21.95	20.98	
		707.5 (23095)	22.98	22.12	20.93	
		704 (23060)	23.19	22.22	21.11	
50RB (0)		711 (23130)	22.79	22.15	20.83	
		707.5 (23095)	22.85	21.90	20.93	
		704 (23060)	23.10	22.08	21.13	

LTE Band13

BANDWIDTH	Number of RBs	Frequency	QPSK	16QAM	64QAM
5M H z	1RB-H igh (24)	784.5 (23255)	23.57	23.01	22.46
		782 (23230)	23.51	22.78	22.48
		779.5 (23205)	23.82	22.89	21.83
	1RB-M iddle (12)	784.5 (23255)	23.57	22.78	22.44
		782 (23230)	23.75	22.80	22.48
		779.5 (23205)	23.54	23.24	21.83
	1RB-Low (0)	784.5 (23255)	23.68	22.99	22.49
		782 (23230)	23.54	23.02	22.45
		779.5 (23205)	23.61	22.77	21.78
	12RB-H igh (13)	784.5 (23255)	22.68	21.57	21.43
		782 (23230)	22.62	21.65	21.45
		779.5 (23205)	22.71	21.58	20.68
	12RB-M iddle (6)	784.5 (23255)	22.70	21.60	21.46
		782 (23230)	22.66	21.61	21.48
		779.5 (23205)	22.70	21.76	20.71
	12RB-Low (0)	784.5 (23255)	22.72	21.73	21.42
		782 (23230)	22.63	21.67	21.44
		779.5 (23205)	22.73	21.65	20.72
	25RB (0)	784.5 (23255)	22.62	21.62	21.42
		782 (23230)	22.66	21.70	21.49
		779.5 (23205)	22.78	21.82	20.75
10M H z	1RB-H igh (49)	782 (23230)	23.89	23.10	21.83
	1RB-M iddle (24)	782 (23230)	23.78	23.03	21.78
	1RB-Low (0)	782 (23230)	23.71	22.97	21.95
	25RB-H igh (25)	782 (23230)	22.64	21.61	20.60
	25RB-M iddle (12)	782 (23230)	22.68	21.73	20.62
	25RB-Low (0)	782 (23230)	22.86	21.91	20.93
	50RB (0)	782 (23230)	22.73	21.76	20.79

LTE Band30-DS1

BANDWIDTH	Number of RBs	Frequency	QPSK	16QAM	64QAM
5M H z	1RB-H igh (24)	2312.5 (27735)	23.58	22.89	21.87
		2310 (27710)	23.51	22.58	21.76
		2307.5 (27685)	23.49	22.70	21.52
	1RB-M iddle (12)	2312.5 (27735)	23.43	22.82	21.61
		2310 (27710)	23.62	22.70	21.53
		2307.5 (27685)	23.31	22.80	21.58
	1RB-Low (0)	2312.5 (27735)	23.60	22.82	21.84
		2310 (27710)	23.42	22.71	21.77
		2307.5 (27685)	23.81	22.98	21.74
	12RB-H igh (13)	2312.5 (27735)	22.53	21.52	20.95
		2310 (27710)	22.53	21.54	20.67
		2307.5 (27685)	22.40	21.53	20.24
	12RB-M iddle (6)	2312.5 (27735)	22.53	21.38	20.77
		2310 (27710)	22.52	21.42	20.41
		2307.5 (27685)	22.47	21.52	20.49
	12RB-Low (0)	2312.5 (27735)	22.61	21.61	20.62
		2310 (27710)	22.51	21.55	20.74
		2307.5 (27685)	22.53	21.58	20.53
	25RB (0)	2312.5 (27735)	22.59	21.33	20.82
		2310 (27710)	22.54	21.58	20.37
		2307.5 (27685)	22.52	21.48	20.50
10M H z	1RB-H igh (49)	2310 (27710)	23.93	22.79	21.92
	1RB-M iddle (24)	2310 (27710)	23.78	22.86	21.90
	1RB-Low (0)	2310 (27710)	23.66	23.00	22.02
	25RB-H igh (25)	2310 (27710)	22.58	21.64	20.69
	25RB-M iddle (12)	2310 (27710)	22.60	21.77	20.59
	25RB-Low (0)	2310 (27710)	22.58	21.48	20.81
	50RB (0)	2310 (27710)	22.61	21.51	20.67

LTE Band30-DSI2

BANDWIDTH	Number of RBs	Frequency	QPSK	16QAM	64QAM
5M H z	1RB-H igh (24)	2312.5 (27735)	21.59	20.73	19.58
		2310 (27710)	21.69	20.99	19.55
		2307.5 (27685)	21.57	20.89	19.72
	1RB-M iddle (12)	2312.5 (27735)	21.85	20.69	19.83
		2310 (27710)	21.77	20.78	19.48
		2307.5 (27685)	21.69	20.63	19.49
	1RB-Low (0)	2312.5 (27735)	21.76	20.76	19.76
		2310 (27710)	21.75	20.81	19.89
		2307.5 (27685)	21.50	20.74	19.86
	12RB-H igh (13)	2312.5 (27735)	20.65	19.72	18.71
		2310 (27710)	20.64	19.61	18.47
		2307.5 (27685)	20.57	19.58	18.53
	12RB-M iddle (6)	2312.5 (27735)	20.74	19.74	18.69
		2310 (27710)	20.71	19.60	18.65
		2307.5 (27685)	20.66	19.58	18.53
	12RB-Low (0)	2312.5 (27735)	20.69	19.70	18.75
		2310 (27710)	20.70	19.70	18.65
		2307.5 (27685)	20.55	19.57	18.52
	25RB (0)	2312.5 (27735)	20.66	19.67	18.59
		2310 (27710)	20.73	19.51	18.53
		2307.5 (27685)	20.62	19.50	18.57
10M H z	1RB-H igh (49)	2310 (27710)	21.93	20.83	20.76
	1RB-M iddle (24)	2310 (27710)	21.73	20.97	20.90
	1RB-Low (0)	2310 (27710)	21.92	20.92	20.93
	25RB-H igh (25)	2310 (27710)	20.73	19.74	19.55
	25RB-M iddle (12)	2310 (27710)	20.74	19.76	19.57
	25RB-Low (0)	2310 (27710)	20.72	19.77	19.59
	50RB (0)	2310 (27710)	20.73	19.79	19.50

LTE Band30-DSI3

BANDWIDTH	Number of RBs	Frequency	QPSK	16QAM	64QAM
5M H z	1RB-H igh (24)	2312.5 (27735)	22.50	21.67	20.67
		2310 (27710)	22.49	21.68	19.71
		2307.5 (27685)	22.57	21.84	19.74
	1RB-M iddle (12)	2312.5 (27735)	22.56	21.77	20.55
		2310 (27710)	22.54	21.70	19.69
		2307.5 (27685)	22.51	21.77	19.64
	1RB-Low (0)	2312.5 (27735)	22.68	21.80	20.55
		2310 (27710)	22.62	21.76	20.05
		2307.5 (27685)	22.60	21.89	19.91
	12RB-H igh (13)	2312.5 (27735)	21.53	20.59	18.57
		2310 (27710)	21.54	20.62	18.64
		2307.5 (27685)	21.50	20.71	18.59
	12RB-M iddle (6)	2312.5 (27735)	21.59	20.65	18.55
		2310 (27710)	21.54	20.64	18.61
		2307.5 (27685)	21.50	20.62	18.50
	12RB-Low (0)	2312.5 (27735)	21.59	20.67	18.61
		2310 (27710)	21.55	20.65	18.62
		2307.5 (27685)	21.51	20.65	18.57
	25RB (0)	2312.5 (27735)	21.54	20.52	18.64
		2310 (27710)	21.54	20.59	18.66
		2307.5 (27685)	21.54	20.57	18.57
10M H z	1RB-H igh (49)	2310 (27710)	22.93	21.78	20.91
	1RB-M iddle (24)	2310 (27710)	22.86	21.59	20.85
	1RB-Low (0)	2310 (27710)	22.51	21.76	21.05
	25RB-H igh (25)	2310 (27710)	21.71	20.61	19.60
	25RB-M iddle (12)	2310 (27710)	21.71	20.62	19.62
	25RB-Low (0)	2310 (27710)	21.71	20.59	19.72
	50RB (0)	2310 (27710)	21.62	20.55	19.65

LTE Band41 PC2-DS1

BANDWIDTH	Number of RBs	Frequency	QPSK	16QAM	64QAM
5M Hz	1RB-H igh (24)	2687.5 (41565)	24.78	24.03	22.94
		2640.3 (41093)	24.82	24.10	22.84
		2593 (40620)	24.63	23.88	22.79
		2545.8 (40148)	24.86	24.25	22.99
		2498.5 (39675)	24.48	23.80	22.60
	1RB-M iddle (12)	2687.5 (41565)	24.51	24.06	23.31
		2640.3 (41093)	25.12	24.08	23.27
		2593 (40620)	24.48	24.49	23.05
		2545.8 (40148)	25.08	24.19	23.07
		2498.5 (39675)	24.57	24.08	22.67
	1RB-Low (0)	2687.5 (41565)	24.75	24.12	23.41
		2640.3 (41093)	25.04	24.27	23.04
		2593 (40620)	24.89	24.25	22.96
		2545.8 (40148)	24.87	24.23	22.88
		2498.5 (39675)	24.49	24.09	22.66
	12RB-H igh (13)	2687.5 (41565)	23.79	22.74	21.78
		2640.3 (41093)	23.80	22.89	21.97
		2593 (40620)	23.75	22.78	21.87
		2545.8 (40148)	23.78	22.91	21.85
		2498.5 (39675)	23.40	22.46	21.55
	12RB-M iddle (6)	2687.5 (41565)	23.59	22.72	21.79
		2640.3 (41093)	23.76	22.94	21.88
		2593 (40620)	23.73	22.62	21.88
		2545.8 (40148)	23.91	22.90	21.95
		2498.5 (39675)	23.33	22.40	21.65
	12RB-Low (0)	2687.5 (41565)	23.69	22.81	22.44
		2640.3 (41093)	23.87	23.05	22.01
		2593 (40620)	23.85	22.88	21.90
2545.8 (40148)		23.87	22.93	21.92	
2498.5 (39675)		23.49	22.55	21.59	
25RB (0)	2687.5 (41565)	23.71	22.69	22.39	
	2640.3 (41093)	23.90	22.87	21.85	
	2593 (40620)	23.81	22.82	21.91	
	2545.8 (40148)	23.92	22.89	21.97	
	2498.5 (39675)	23.54	22.54	21.57	

10M Hz	1RB-High (49)	2685 (41540)	24.80	24.11	23.89
		2639 (41080)	24.92	24.23	23.72
		2593 (40620)	24.72	24.07	23.87
		2547 (40160)	24.75	24.03	23.66
		2501 (39700)	24.55	23.80	23.92
	1RB-Middle (24)	2685 (41540)	24.61	23.96	23.91
		2639 (41080)	24.77	23.99	23.82
		2593 (40620)	24.65	23.89	23.82
		2547 (40160)	24.71	23.98	24.00
		2501 (39700)	24.10	23.69	23.63
	1RB-Low (0)	2685 (41540)	24.84	23.90	23.81
		2639 (41080)	25.01	24.19	23.82
		2593 (40620)	24.94	24.16	23.71
		2547 (40160)	25.01	24.35	23.68
		2501 (39700)	24.57	23.95	23.49
	25RB-High (25)	2685 (41540)	23.66	22.69	22.71
		2639 (41080)	23.84	22.87	22.86
		2593 (40620)	23.78	22.81	22.76
		2547 (40160)	23.88	22.89	22.91
		2501 (39700)	23.49	22.44	22.48
	25RB-Middle (12)	2685 (41540)	23.62	22.73	22.70
		2639 (41080)	23.81	22.83	22.79
		2593 (40620)	23.84	22.82	22.76
		2547 (40160)	23.88	22.92	22.95
		2501 (39700)	23.48	22.55	22.53
	25RB-Low (0)	2685 (41540)	23.71	22.64	22.58
		2639 (41080)	23.87	22.85	22.75
		2593 (40620)	23.88	22.86	22.75
		2547 (40160)	23.93	22.91	22.82
		2501 (39700)	23.48	22.49	22.43
50RB (0)	2685 (41540)	23.68	22.71	22.61	
	2639 (41080)	23.88	22.97	22.93	
	2593 (40620)	23.80	22.87	22.84	
	2547 (40160)	23.90	22.94	22.87	
	2501 (39700)	23.56	22.53	22.48	

15M Hz	1RB-High (74)	2682.5 (41515)	24.89	24.10	23.96
		2637.8 (41068)	25.01	24.27	23.09
		2593 (40620)	24.94	24.02	22.99
		2548.3 (40173)	24.88	24.34	22.61
		2503.5 (39725)	24.74	24.06	22.53
	1RB-Middle (37)	2682.5 (41515)	24.85	24.05	23.95
		2637.8 (41068)	24.90	24.13	23.13
		2593 (40620)	24.52	24.13	22.55
		2548.3 (40173)	25.01	24.16	22.98
		2503.5 (39725)	24.49	23.98	22.69
	1RB-Low (0)	2682.5 (41515)	24.74	24.05	23.78
		2637.8 (41068)	24.90	24.15	22.73
		2593 (40620)	25.07	24.26	23.04
		2548.3 (40173)	25.05	24.31	23.06
		2503.5 (39725)	24.61	23.91	22.71
	36RB-High (38)	2682.5 (41515)	23.81	22.89	22.84
		2637.8 (41068)	23.96	23.05	22.02
		2593 (40620)	23.91	22.91	21.89
		2548.3 (40173)	23.93	22.98	21.93
		2503.5 (39725)	23.60	22.64	21.64
	36RB-Middle (19)	2682.5 (41515)	23.97	22.85	22.84
		2637.8 (41068)	23.92	23.01	22.04
		2593 (40620)	23.87	22.92	21.93
		2548.3 (40173)	24.03	23.07	22.05
		2503.5 (39725)	23.67	22.65	21.65
36RB-Low (0)	2682.5 (41515)	23.68	22.71	22.71	
	2637.8 (41068)	23.88	22.95	21.90	
	2593 (40620)	23.95	23.04	21.96	
	2548.3 (40173)	23.96	22.97	21.94	
	2503.5 (39725)	23.68	22.65	21.67	
75RB (0)	2682.5 (41515)	23.65	22.82	22.64	
	2637.8 (41068)	23.97	23.01	21.96	
	2593 (40620)	23.99	22.99	21.91	
	2548.3 (40173)	23.93	22.99	21.81	
	2503.5 (39725)	23.62	22.70	21.66	

20M Hz	1RB-High (9)	2680 (41490)	24.79	24.05	23.46
		2636.5 (41055)	24.93	24.25	23.44
		2593 (40620)	24.77	23.97	22.63
		2549.5 (40185)	24.77	24.29	23.08
		2506 (39750)	24.70	23.92	22.91
	1RB-Middle (50)	2680 (41490)	24.84	24.08	23.67
		2636.5 (41055)	25.07	24.22	23.56
		2593 (40620)	24.97	24.18	23.13
		2549.5 (40185)	24.86	24.15	22.91
		2506 (39750)	24.53	23.75	22.63
	1RB-Low (0)	2680 (41490)	24.64	24.02	23.80
		2636.5 (41055)	24.86	24.11	23.91
		2593 (40620)	24.96	24.35	22.94
		2549.5 (40185)	25.01	24.27	22.99
		2506 (39750)	24.54	23.87	22.56
	50RB-High (50)	2680 (41490)	23.86	22.97	22.90
		2636.5 (41055)	24.03	23.07	22.88
		2593 (40620)	23.81	22.91	21.96
		2549.5 (40185)	23.95	23.01	21.81
		2506 (39750)	23.76	22.74	21.85
50RB-Middle (25)	2680 (41490)	23.92	22.88	22.81	
	2636.5 (41055)	24.01	23.01	22.74	
	2593 (40620)	23.92	22.92	21.73	
	2549.5 (40185)	23.91	23.06	22.00	
	2506 (39750)	23.41	22.56	21.52	
50RB-Low (0)	2680 (41490)	23.78	22.84	22.84	
	2636.5 (41055)	23.99	23.04	22.95	
	2593 (40620)	23.93	22.97	21.93	
	2549.5 (40185)	23.92	22.97	21.89	
	2506 (39750)	23.59	22.64	21.54	
100RB (0)	2680 (41490)	23.78	22.83	22.89	
	2636.5 (41055)	24.00	23.09	22.79	
	2593 (40620)	23.87	22.91	21.93	
	2549.5 (40185)	23.99	22.98	21.92	
	2506 (39750)	23.60	22.66	21.67	

LTE Band41 PC2-DSI2

BANDWIDTH	Number of RBs	Frequency	QPSK	16QAM	64QAM
5M Hz	1RB-H igh (24)	2687.5 (41565)	23.63	22.99	21.71
		2640.3 (41093)	23.84	23.14	21.73
		2593 (40620)	23.66	23.04	21.85
		2545.8 (40148)	23.86	23.15	21.89
		2498.5 (39675)	23.48	22.76	21.29
	1RB-M iddle (12)	2687.5 (41565)	23.57	23.21	22.38
		2640.3 (41093)	23.95	23.26	22.09
		2593 (40620)	23.67	23.26	21.99
		2545.8 (40148)	23.96	23.09	22.02
		2498.5 (39675)	23.39	23.14	21.45
	1RB-Low (0)	2687.5 (41565)	23.74	23.13	21.61
		2640.3 (41093)	23.90	23.34	21.94
		2593 (40620)	23.97	23.15	21.85
		2545.8 (40148)	23.92	23.27	21.87
		2498.5 (39675)	23.48	22.90	21.57
	12RB-H igh (13)	2687.5 (41565)	22.70	21.71	20.85
		2640.3 (41093)	22.80	21.84	20.96
		2593 (40620)	22.68	21.74	20.80
		2545.8 (40148)	22.74	21.85	20.88
		2498.5 (39675)	22.40	21.48	20.47
	12RB-M iddle (6)	2687.5 (41565)	22.60	21.66	20.75
		2640.3 (41093)	22.82	21.78	20.93
		2593 (40620)	22.70	21.67	20.82
		2545.8 (40148)	22.79	21.84	20.95
		2498.5 (39675)	22.37	21.43	20.43
	12RB-Low (0)	2687.5 (41565)	22.68	21.81	20.81
		2640.3 (41093)	22.84	22.00	20.94
		2593 (40620)	22.84	21.91	20.89
2545.8 (40148)		22.82	21.96	20.91	
2498.5 (39675)		22.48	21.70	20.55	
25RB (0)	2687.5 (41565)	22.55	21.59	20.68	
	2640.3 (41093)	22.82	21.81	20.96	
	2593 (40620)	22.79	21.79	20.86	
	2545.8 (40148)	22.82	21.81	20.91	
	2498.5 (39675)	22.42	21.45	20.57	

10M Hz	1RB-High (49)	2685 (41540)	23.81	23.11	21.87
		2639 (41080)	23.95	23.20	21.85
		2593 (40620)	23.81	23.13	21.87
		2547 (40160)	23.88	23.19	21.89
		2501 (39700)	23.54	22.87	21.49
	1RB-Middle (24)	2685 (41540)	23.64	22.84	21.70
		2639 (41080)	23.70	22.96	21.80
		2593 (40620)	23.79	23.03	21.78
		2547 (40160)	23.74	22.98	21.80
		2501 (39700)	23.44	22.68	21.46
	1RB-Low (0)	2685 (41540)	23.78	23.13	21.80
		2639 (41080)	23.79	23.15	21.91
		2593 (40620)	23.99	23.24	21.97
		2547 (40160)	23.98	23.32	22.01
		2501 (39700)	23.53	22.87	21.56
	25RB-High (25)	2685 (41540)	22.64	21.64	20.79
		2639 (41080)	22.79	21.82	21.05
		2593 (40620)	22.75	21.75	20.90
		2547 (40160)	22.80	21.78	21.05
		2501 (39700)	22.46	21.42	20.49
	25RB-Middle (12)	2685 (41540)	22.68	21.68	20.80
		2639 (41080)	22.75	21.77	20.96
		2593 (40620)	22.82	21.79	20.89
		2547 (40160)	22.83	21.85	20.99
		2501 (39700)	22.49	21.56	20.59
	25RB-Low (0)	2685 (41540)	22.63	21.65	20.68
		2639 (41080)	22.88	21.81	20.91
		2593 (40620)	22.83	21.89	20.83
		2547 (40160)	22.80	21.83	20.87
		2501 (39700)	22.47	21.43	20.41
50RB (0)	2685 (41540)	22.63	21.71	20.80	
	2639 (41080)	22.82	21.89	20.86	
	2593 (40620)	22.81	21.79	20.79	
	2547 (40160)	22.80	21.86	20.82	
	2501 (39700)	22.52	21.45	20.58	

15M Hz	1RB-High (74)	2682.5 (41515)	23.81	23.20	21.76
		2637.8 (41068)	23.94	23.29	21.99
		2593 (40620)	23.80	23.01	21.74
		2548.3 (40173)	23.88	23.21	22.04
		2503.5 (39725)	23.67	22.99	21.83
	1RB-Middle (37)	2682.5 (41515)	23.88	22.96	21.81
		2637.8 (41068)	24.01	23.11	22.00
		2593 (40620)	23.87	23.16	21.88
		2548.3 (40173)	23.88	23.06	21.93
		2503.5 (39725)	23.48	22.76	21.48
	1RB-Low (0)	2682.5 (41515)	23.68	23.05	22.03
		2637.8 (41068)	23.79	23.03	22.03
		2593 (40620)	24.06	23.28	22.10
		2548.3 (40173)	23.99	23.25	22.05
		2503.5 (39725)	23.78	23.08	21.74
	36RB-High (38)	2682.5 (41515)	22.75	21.88	21.87
		2637.8 (41068)	22.93	21.93	20.91
		2593 (40620)	22.80	21.84	20.82
		2548.3 (40173)	22.91	21.91	20.92
		2503.5 (39725)	22.60	21.58	20.55
	36RB-Middle (19)	2682.5 (41515)	22.82	21.83	21.77
		2637.8 (41068)	22.95	22.04	20.98
		2593 (40620)	22.89	21.87	20.86
		2548.3 (40173)	22.95	21.96	20.95
		2503.5 (39725)	22.60	21.58	20.63
	36RB-Low (0)	2682.5 (41515)	22.62	21.76	21.69
		2637.8 (41068)	22.81	21.91	20.89
		2593 (40620)	22.91	21.95	20.87
		2548.3 (40173)	22.89	21.88	20.85
		2503.5 (39725)	22.61	21.67	20.64
75RB (0)	2682.5 (41515)	22.63	21.82	21.82	
	2637.8 (41068)	22.87	21.96	20.91	
	2593 (40620)	22.87	21.85	20.87	
	2548.3 (40173)	22.90	21.90	20.92	
	2503.5 (39725)	22.61	21.62	20.66	

20M Hz	1RB-High (9)	2680 (41490)	23.78	23.08	21.83
		2636.5 (41055)	23.82	23.27	21.89
		2593 (40620)	23.74	22.97	21.66
		2549.5 (40185)	23.76	23.14	21.78
		2506 (39750)	23.61	22.98	21.68
	1RB-Middle (50)	2680 (41490)	23.80	22.90	21.83
		2636.5 (41055)	23.97	23.16	22.05
		2593 (40620)	23.83	23.19	21.90
		2549.5 (40185)	23.83	23.12	22.14
		2506 (39750)	23.61	22.83	21.61
	1RB-Low (0)	2680 (41490)	23.56	22.99	21.58
		2636.5 (41055)	23.71	23.08	21.78
		2593 (40620)	23.79	23.16	21.94
		2549.5 (40185)	23.81	23.15	21.93
		2506 (39750)	23.48	22.85	21.47
	50RB-High (50)	2680 (41490)	22.83	21.94	20.88
		2636.5 (41055)	22.95	22.03	20.92
		2593 (40620)	22.77	21.86	20.80
		2549.5 (40185)	22.88	21.91	20.89
		2506 (39750)	22.67	21.68	20.66
	50RB-Middle (25)	2680 (41490)	22.77	21.80	20.78
		2636.5 (41055)	22.96	22.03	21.05
		2593 (40620)	22.81	21.85	20.81
		2549.5 (40185)	22.88	21.94	20.91
		2506 (39750)	22.47	21.53	20.56
50RB-Low (0)	2680 (41490)	22.71	21.90	20.85	
	2636.5 (41055)	22.95	22.05	20.99	
	2593 (40620)	22.91	21.94	20.79	
	2549.5 (40185)	22.87	21.85	20.84	
	2506 (39750)	22.56	21.64	20.50	
100RB (0)	2680 (41490)	22.77	21.85	20.77	
	2636.5 (41055)	22.98	22.01	20.95	
	2593 (40620)	22.85	21.86	20.81	
	2549.5 (40185)	22.85	21.86	20.86	
	2506 (39750)	22.57	21.63	20.55	

LTE Band41 PC2-DSI3

BANDWIDTH	Number of RBs	Frequency	QPSK	16QAM	64QAM
5M Hz	1RB-H igh (24)	2687.5 (41565)	20.81	20.03	18.69
		2640.3 (41093)	20.88	20.12	18.85
		2593 (40620)	20.91	20.27	18.85
		2545.8 (40148)	20.80	20.05	18.85
		2498.5 (39675)	20.65	19.89	18.52
	1RB-M iddle (12)	2687.5 (41565)	20.62	20.00	18.73
		2640.3 (41093)	20.83	20.13	18.94
		2593 (40620)	20.91	20.25	18.86
		2545.8 (40148)	20.64	20.07	19.10
		2498.5 (39675)	20.51	19.87	18.67
	1RB-Low (0)	2687.5 (41565)	20.92	20.21	18.82
		2640.3 (41093)	20.95	20.23	18.97
		2593 (40620)	20.96	20.35	18.73
		2545.8 (40148)	20.86	20.04	18.83
		2498.5 (39675)	20.70	19.96	18.55
	12RB-H igh (13)	2687.5 (41565)	19.81	18.88	17.73
		2640.3 (41093)	19.83	18.84	17.86
		2593 (40620)	19.82	18.81	17.88
		2545.8 (40148)	19.76	18.76	17.86
		2498.5 (39675)	19.55	18.57	17.47
	12RB-M iddle (6)	2687.5 (41565)	19.75	18.80	17.71
		2640.3 (41093)	19.83	18.84	18.00
		2593 (40620)	19.83	18.85	17.87
		2545.8 (40148)	19.76	18.85	17.94
		2498.5 (39675)	19.52	18.57	17.52
	12RB-Low (0)	2687.5 (41565)	19.79	18.88	17.72
		2640.3 (41093)	19.90	18.87	17.98
		2593 (40620)	19.88	18.90	18.00
2545.8 (40148)		19.71	18.78	17.94	
2498.5 (39675)		19.65	18.67	17.55	
25RB (0)	2687.5 (41565)	19.73	18.75	17.70	
	2640.3 (41093)	19.86	18.82	17.82	
	2593 (40620)	19.87	18.83	17.87	
	2545.8 (40148)	19.79	18.74	17.98	
	2498.5 (39675)	19.66	18.68	17.61	

10M Hz	1RB-High (49)	2685 (41540)	20.95	20.48	18.82
		2639 (41080)	21.05	20.48	18.78
		2593 (40620)	21.03	20.36	18.71
		2547 (40160)	20.41	20.31	18.82
		2501 (39700)	20.80	20.31	18.63
	1RB-Middle (24)	2685 (41540)	20.54	20.28	18.61
		2639 (41080)	20.47	20.31	18.75
		2593 (40620)	20.63	20.20	18.76
		2547 (40160)	20.57	20.21	18.81
		2501 (39700)	20.62	20.08	18.50
	1RB-Low (0)	2685 (41540)	20.83	20.28	18.87
		2639 (41080)	20.58	20.47	18.85
		2593 (40620)	20.43	20.36	18.91
		2547 (40160)	20.94	20.33	18.98
		2501 (39700)	20.81	20.20	18.61
	25RB-High (25)	2685 (41540)	19.59	18.81	17.73
		2639 (41080)	19.71	18.91	17.83
		2593 (40620)	19.63	18.80	17.82
		2547 (40160)	19.61	18.78	18.02
		2501 (39700)	19.60	18.61	17.47
	25RB-Middle (12)	2685 (41540)	19.66	18.82	17.75
		2639 (41080)	19.71	18.90	17.84
		2593 (40620)	19.59	18.85	17.91
		2547 (40160)	19.64	18.77	17.98
		2501 (39700)	19.69	18.74	17.57
25RB-Low (0)	2685 (41540)	19.61	18.72	17.63	
	2639 (41080)	19.63	18.85	17.76	
	2593 (40620)	19.55	18.84	17.84	
	2547 (40160)	19.72	18.72	17.81	
	2501 (39700)	19.64	18.67	17.47	
50RB (0)	2685 (41540)	19.81	18.82	17.67	
	2639 (41080)	19.76	18.86	17.78	
	2593 (40620)	19.69	18.84	17.82	
	2547 (40160)	19.63	18.77	17.83	
	2501 (39700)	19.65	18.71	17.49	

15M Hz	1RB-High (74)	2682.5 (41515)	21.01	20.38	18.83
		2637.8 (41068)	21.11	20.35	19.13
		2593 (40620)	21.01	20.44	19.00
		2548.3 (40173)	20.87	20.27	19.10
		2503.5 (39725)	20.92	20.19	18.88
	1RB-Middle (37)	2682.5 (41515)	20.94	20.36	18.93
		2637.8 (41068)	21.04	20.33	18.98
		2593 (40620)	20.95	20.48	18.83
		2548.3 (40173)	20.89	20.30	19.01
		2503.5 (39725)	20.74	20.12	18.61
	1RB-Low (0)	2682.5 (41515)	20.75	20.14	18.69
		2637.8 (41068)	20.85	20.15	18.85
		2593 (40620)	21.14	20.41	19.12
		2548.3 (40173)	20.93	20.41	18.99
		2503.5 (39725)	20.91	20.25	18.72
	36RB-High (38)	2682.5 (41515)	19.96	19.01	17.80
		2637.8 (41068)	19.96	18.95	17.91
		2593 (40620)	19.94	18.94	17.79
		2548.3 (40173)	19.83	18.85	17.85
		2503.5 (39725)	19.74	18.70	17.52
	36RB-Middle (19)	2682.5 (41515)	19.97	18.98	17.82
		2637.8 (41068)	20.01	18.95	17.93
		2593 (40620)	19.97	18.98	17.90
		2548.3 (40173)	19.89	18.92	18.06
		2503.5 (39725)	19.83	18.76	17.60
	36RB-Low (0)	2682.5 (41515)	19.74	18.79	17.61
		2637.8 (41068)	19.86	18.82	17.76
		2593 (40620)	19.97	18.99	17.87
		2548.3 (40173)	19.81	18.79	17.86
		2503.5 (39725)	19.81	18.74	17.57
75RB (0)	2682.5 (41515)	19.91	18.89	17.74	
	2637.8 (41068)	19.92	18.89	17.85	
	2593 (40620)	19.97	18.98	17.86	
	2548.3 (40173)	19.80	18.76	17.81	
	2503.5 (39725)	19.74	18.82	17.65	

20M Hz	1RB-High (99)	2680 (41490)	20.62	20.30	19.65
		2636.5 (41055)	21.00	20.40	19.74
		2593 (40620)	20.87	20.25	19.45
		2549.5 (40185)	20.77	20.22	19.56
		2506 (39750)	20.88	20.17	19.44
	1RB-Middle (50)	2680 (41490)	20.66	20.28	19.67
		2636.5 (41055)	21.10	20.43	19.81
		2593 (40620)	20.90	20.19	19.62
		2549.5 (40185)	20.85	20.25	19.70
		2506 (39750)	20.97	20.34	19.49
	1RB-Low (0)	2680 (41490)	20.47	20.06	19.54
		2636.5 (41055)	20.79	20.21	19.64
		2593 (40620)	20.86	20.29	19.73
		2549.5 (40185)	20.81	20.17	19.63
		2506 (39750)	20.93	20.18	19.26
	50RB-High (50)	2680 (41490)	19.68	18.95	18.82
		2636.5 (41055)	19.86	18.95	18.97
		2593 (40620)	19.88	18.88	18.85
		2549.5 (40185)	19.80	18.78	18.92
		2506 (39750)	19.76	18.74	18.64
	50RB-Middle (25)	2680 (41490)	19.60	18.84	18.80
		2636.5 (41055)	19.94	18.97	18.04
		2593 (40620)	19.85	18.93	18.87
		2549.5 (40185)	19.80	18.81	19.00
		2506 (39750)	19.66	18.60	18.46
50RB-Low (0)	2680 (41490)	19.65	18.86	18.80	
	2636.5 (41055)	19.83	18.91	18.92	
	2593 (40620)	19.83	18.95	18.88	
	2549.5 (40185)	19.71	18.67	18.80	
	2506 (39750)	19.72	18.69	18.51	
100RB (0)	2680 (41490)	19.73	18.85	18.90	
	2636.5 (41055)	19.93	18.95	18.07	
	2593 (40620)	19.91	18.88	18.89	
	2549.5 (40185)	19.70	18.68	18.90	
	2506 (39750)	19.72	18.65	18.60	

LTE Band41 PC3-DS1

BANDWIDTH	Number of RBs	Frequency	QPSK	16QAM	64QAM
5M Hz	1RB-H igh (24)	2687.5 (41565)	23.84	23.01	22.51
		2640.3 (41093)	23.92	22.95	22.60
		2593 (40620)	23.85	23.02	22.51
		2545.8 (40148)	23.94	23.13	22.52
		2498.5 (39675)	23.41	22.73	22.73
	1RB-M iddle (12)	2687.5 (41565)	23.99	23.17	22.56
		2640.3 (41093)	24.12	23.19	22.75
		2593 (40620)	23.83	23.30	22.68
		2545.8 (40148)	24.26	23.47	22.84
		2498.5 (39675)	23.53	22.85	22.23
	1RB-Low (0)	2687.5 (41565)	23.71	23.04	22.58
		2640.3 (41093)	23.90	22.99	22.76
		2593 (40620)	23.98	22.95	22.67
		2545.8 (40148)	23.96	23.07	22.70
		2498.5 (39675)	23.25	22.57	22.37
	12RB-H igh (13)	2687.5 (41565)	22.71	21.68	21.68
		2640.3 (41093)	22.89	21.85	21.87
		2593 (40620)	22.78	21.78	21.84
		2545.8 (40148)	23.01	21.84	21.73
		2498.5 (39675)	22.47	21.45	21.35
	12RB-M iddle (6)	2687.5 (41565)	22.75	21.61	21.70
		2640.3 (41093)	22.91	21.87	21.92
		2593 (40620)	22.87	21.78	21.83
		2545.8 (40148)	23.01	21.91	21.91
		2498.5 (39675)	22.42	21.37	21.43
	12RB-Low (0)	2687.5 (41565)	22.73	21.62	21.72
		2640.3 (41093)	22.91	21.87	21.90
		2593 (40620)	22.83	21.75	21.80
2545.8 (40148)		22.88	21.87	21.85	
2498.5 (39675)		22.46	21.51	21.41	
25RB (0)	2687.5 (41565)	22.76	21.73	21.61	
	2640.3 (41093)	22.99	21.91	21.75	
	2593 (40620)	22.87	21.82	21.77	
	2545.8 (40148)	22.86	21.90	21.85	
	2498.5 (39675)	22.40	21.46	21.56	

10M Hz	1RB-High (49)	2685 (41540)	23.98	23.07	22.94
		2639 (41080)	24.10	23.18	22.99
		2593 (40620)	23.97	22.98	22.91
		2547 (40160)	24.05	23.15	22.75
		2501 (39700)	23.70	22.68	22.41
	1RB-Middle (24)	2685 (41540)	23.64	22.89	22.63
		2639 (41080)	23.87	22.95	22.72
		2593 (40620)	23.93	22.97	22.70
		2547 (40160)	23.96	22.99	22.58
		2501 (39700)	23.50	22.66	22.29
	1RB-Low (0)	2685 (41540)	23.92	22.97	22.71
		2639 (41080)	23.86	23.04	22.80
		2593 (40620)	23.88	23.03	22.99
		2547 (40160)	24.05	23.29	22.72
		2501 (39700)	23.49	22.60	22.06
	25RB-High (25)	2685 (41540)	22.79	21.69	21.68
		2639 (41080)	22.98	21.92	21.86
		2593 (40620)	22.91	21.84	21.79
		2547 (40160)	22.96	21.93	21.96
		2501 (39700)	22.57	21.59	21.54
	25RB-Middle (12)	2685 (41540)	22.73	21.81	21.80
		2639 (41080)	22.93	21.99	21.92
		2593 (40620)	23.00	21.91	21.89
		2547 (40160)	23.04	21.96	21.41
		2501 (39700)	22.58	21.65	21.53
25RB-Low (0)	2685 (41540)	22.77	21.72	21.69	
	2639 (41080)	22.93	21.92	21.84	
	2593 (40620)	22.93	21.84	21.84	
	2547 (40160)	22.94	21.92	21.87	
	2501 (39700)	22.55	21.54	21.50	
50RB (0)	2685 (41540)	22.85	21.80	21.74	
	2639 (41080)	22.96	21.90	21.92	
	2593 (40620)	22.89	21.90	21.89	
	2547 (40160)	22.96	21.90	21.93	
	2501 (39700)	22.54	21.60	21.63	

15M Hz	1RB-High (74)	2682.5 (41515)	24.19	23.14	22.95
		2637.8 (41068)	24.19	23.25	22.88
		2593 (40620)	24.00	22.64	22.72
		2548.3 (40173)	24.11	23.27	22.90
		2503.5 (39725)	23.91	22.98	22.51
	1RB-Middle (37)	2682.5 (41515)	23.94	23.07	22.88
		2637.8 (41068)	24.18	23.22	22.79
		2593 (40620)	24.00	23.11	22.83
		2548.3 (40173)	24.15	23.25	22.76
		2503.5 (39725)	23.67	22.78	22.39
	1RB-Low (0)	2682.5 (41515)	23.85	22.89	22.63
		2637.8 (41068)	23.88	22.96	22.71
		2593 (40620)	24.20	23.32	22.64
		2548.3 (40173)	24.10	23.23	22.61
		2503.5 (39725)	23.75	22.84	22.47
	36RB-High (38)	2682.5 (41515)	23.03	21.94	21.93
		2637.8 (41068)	23.12	22.18	21.89
		2593 (40620)	23.07	21.94	21.92
		2548.3 (40173)	23.15	22.16	21.59
		2503.5 (39725)	22.75	21.79	21.68
	36RB-Middle (19)	2682.5 (41515)	22.97	21.87	21.94
		2637.8 (41068)	23.15	22.21	21.63
		2593 (40620)	23.16	21.99	21.98
		2548.3 (40173)	23.27	22.26	21.78
		2503.5 (39725)	22.77	21.78	21.69
36RB-Low (0)	2682.5 (41515)	22.77	21.76	21.74	
	2637.8 (41068)	22.90	22.08	21.99	
	2593 (40620)	23.14	22.04	21.99	
	2548.3 (40173)	23.04	22.06	21.82	
	2503.5 (39725)	22.77	21.72	21.66	
75RB (0)	2682.5 (41515)	22.95	21.94	21.90	
	2637.8 (41068)	23.04	22.03	21.66	
	2593 (40620)	23.12	22.04	21.71	
	2548.3 (40173)	23.01	22.00	21.67	
	2503.5 (39725)	22.77	21.77	21.72	

20M Hz	1RB-High (9)	2680 (41490)	24.19	23.27	22.83
		2636.5 (41055)	24.31	23.31	21.84
		2593 (40620)	24.09	23.21	21.42
		2549.5 (40185)	24.19	23.28	22.09
		2506 (39750)	23.96	23.04	21.27
	1RB-Middle (5)	2680 (41490)	24.33	23.17	22.85
		2636.5 (41055)	24.34	23.33	21.94
		2593 (40620)	24.15	23.27	21.76
		2549.5 (40185)	24.24	23.34	21.80
		2506 (39750)	23.93	23.07	21.63
	1RB-Low (0)	2680 (41490)	24.08	23.04	22.61
		2636.5 (41055)	24.14	23.09	21.72
		2593 (40620)	24.22	23.36	21.99
		2549.5 (40185)	24.16	23.32	21.61
		2506 (39750)	23.69	22.94	21.66
	50RB-High (5)	2680 (41490)	23.25	22.16	21.81
		2636.5 (41055)	23.35	22.37	21.13
		2593 (40620)	23.24	22.08	20.98
		2549.5 (40185)	23.23	22.17	21.07
		2506 (39750)	23.02	21.98	20.86
	50RB-Middle (25)	2680 (41490)	23.16	22.16	21.63
		2636.5 (41055)	23.33	22.35	21.22
		2593 (40620)	23.25	22.18	21.11
		2549.5 (40185)	23.28	22.21	20.70
		2506 (39750)	22.81	21.88	20.68
50RB-Low (0)	2680 (41490)	23.18	22.08	21.52	
	2636.5 (41055)	23.30	22.28	21.16	
	2593 (40620)	23.21	22.15	21.10	
	2549.5 (40185)	23.16	22.08	21.05	
	2506 (39750)	22.89	21.87	20.78	
100RB (0)	2680 (41490)	23.24	22.17	21.38	
	2636.5 (41055)	23.40	22.26	21.23	
	2593 (40620)	23.22	22.15	20.97	
	2549.5 (40185)	23.11	22.14	21.11	
	2506 (39750)	22.85	21.87	20.76	

LTE Band41 PC3-DSI2

BANDWIDTH	Number of RBs	Frequency	QPSK	16QAM	64QAM
5M Hz	1RB-H igh (24)	2687.5 (41565)	21.84	20.82	19.29
		2640.3 (41093)	21.82	20.85	19.43
		2593 (40620)	21.78	20.80	19.26
		2545.8 (40148)	21.87	20.92	19.43
		2498.5 (39675)	21.62	20.45	19.53
	1RB-M iddle (12)	2687.5 (41565)	21.83	21.00	19.35
		2640.3 (41093)	22.02	21.03	19.49
		2593 (40620)	21.85	21.04	19.25
		2545.8 (40148)	21.79	21.19	19.52
		2498.5 (39675)	21.35	20.49	19.12
	1RB-Low (0)	2687.5 (41565)	21.79	20.83	19.39
		2640.3 (41093)	21.95	21.00	19.53
		2593 (40620)	21.90	20.99	19.36
		2545.8 (40148)	21.89	20.93	19.60
		2498.5 (39675)	21.59	20.52	19.11
	12RB-H igh (13)	2687.5 (41565)	20.76	19.67	18.77
		2640.3 (41093)	20.86	19.80	18.83
		2593 (40620)	20.72	19.67	18.72
		2545.8 (40148)	20.76	19.81	18.78
		2498.5 (39675)	20.43	19.35	18.54
	12RB-M iddle (6)	2687.5 (41565)	20.72	19.61	18.70
		2640.3 (41093)	20.83	19.78	18.88
		2593 (40620)	20.78	19.67	18.74
		2545.8 (40148)	20.88	19.79	18.87
		2498.5 (39675)	20.41	19.30	18.42
	12RB-Low (0)	2687.5 (41565)	20.79	19.59	18.70
		2640.3 (41093)	20.88	19.85	18.89
		2593 (40620)	20.83	19.72	18.79
2545.8 (40148)		20.77	19.80	18.85	
2498.5 (39675)		20.44	19.34	18.50	
25RB (0)	2687.5 (41565)	20.66	19.64	18.65	
	2640.3 (41093)	20.90	19.89	18.91	
	2593 (40620)	20.77	19.80	18.77	
	2545.8 (40148)	20.77	19.87	18.82	
	2498.5 (39675)	20.55	19.56	18.56	

10M Hz	1RB-H igh (49)	2685 (41540)	21.83	20.86	19.43
		2639 (41080)	21.98	20.92	19.52
		2593 (40620)	21.89	20.97	19.59
		2547 (40160)	22.13	20.96	19.45
		2501 (39700)	21.73	20.55	19.36
	1RB-M iddle (24)	2685 (41540)	21.86	20.70	19.48
		2639 (41080)	21.88	20.81	19.50
		2593 (40620)	21.81	20.87	19.51
		2547 (40160)	21.93	20.82	19.48
		2501 (39700)	21.54	20.45	19.09
	1RB-Low (0)	2685 (41540)	21.90	20.81	19.51
		2639 (41080)	21.99	21.02	19.49
		2593 (40620)	22.01	21.05	19.70
		2547 (40160)	22.01	21.11	19.74
		2501 (39700)	21.51	20.51	19.03
	25RB-H igh (25)	2685 (41540)	20.74	19.64	18.82
		2639 (41080)	20.89	19.91	18.95
		2593 (40620)	20.78	19.74	18.65
		2547 (40160)	20.82	19.88	18.79
		2501 (39700)	20.48	19.49	18.43
	25RB-M iddle (12)	2685 (41540)	20.78	19.76	18.75
		2639 (41080)	20.91	19.90	18.94
		2593 (40620)	20.80	19.79	18.75
		2547 (40160)	20.87	19.93	18.81
		2501 (39700)	20.49	19.54	18.59
	25RB-Low (0)	2685 (41540)	20.67	19.68	18.71
		2639 (41080)	20.84	19.82	18.87
		2593 (40620)	20.79	19.81	18.82
		2547 (40160)	20.77	19.86	18.79
		2501 (39700)	20.47	19.46	18.48
50RB (0)	2685 (41540)	20.74	19.78	18.70	
	2639 (41080)	20.88	19.91	18.78	
	2593 (40620)	20.82	19.78	18.67	
	2547 (40160)	20.86	19.91	18.83	
	2501 (39700)	20.45	19.61	18.46	

15M Hz	1RB-H igh (74)	2682.5 (41515)	22.05	20.93	19.58
		2637.8 (41068)	22.11	21.05	19.68
		2593 (40620)	21.80	20.92	19.35
		2548.3 (40173)	21.99	20.92	20.12
		2503.5 (39725)	21.86	20.69	19.18
	1RB-M iddle (37)	2682.5 (41515)	21.88	20.88	19.46
		2637.8 (41068)	22.06	20.99	19.69
		2593 (40620)	21.81	20.95	19.33
		2548.3 (40173)	22.09	20.88	19.39
		2503.5 (39725)	21.71	20.52	19.03
	1RB-Low (0)	2682.5 (41515)	21.76	20.77	19.26
		2637.8 (41068)	21.86	20.92	19.51
		2593 (40620)	22.10	21.34	19.70
		2548.3 (40173)	22.09	20.91	19.69
		2503.5 (39725)	21.71	20.69	19.18
	36RB-H igh (38)	2682.5 (41515)	20.87	19.91	18.85
		2637.8 (41068)	21.03	20.07	18.90
		2593 (40620)	20.90	19.76	18.84
		2548.3 (40173)	20.99	20.10	18.89
		2503.5 (39725)	20.64	19.67	18.56
	36RB-M iddle (19)	2682.5 (41515)	20.90	19.90	18.82
		2637.8 (41068)	21.02	20.06	18.94
		2593 (40620)	20.92	19.78	18.97
		2548.3 (40173)	21.01	20.13	18.94
		2503.5 (39725)	20.64	19.65	18.56
36RB-Low (0)	2682.5 (41515)	20.75	19.74	18.63	
	2637.8 (41068)	20.86	19.89	18.83	
	2593 (40620)	20.92	19.80	18.91	
	2548.3 (40173)	20.88	19.88	18.77	
	2503.5 (39725)	20.64	19.65	18.48	
75RB (0)	2682.5 (41515)	20.81	19.79	18.75	
	2637.8 (41068)	20.94	19.91	18.97	
	2593 (40620)	20.88	19.96	18.91	
	2548.3 (40173)	20.92	19.92	18.80	
	2503.5 (39725)	20.58	19.59	18.66	

20M Hz	1RB-High (99)	2680 (41490)	21.90	20.94	20.42
		2636.5 (41055)	21.95	20.93	20.47
		2593 (40620)	21.76	20.79	20.47
		2549.5 (40185)	21.92	20.84	20.44
		2506 (39750)	21.71	20.63	20.29
	1RB-Middle (50)	2680 (41490)	21.91	20.95	20.41
		2636.5 (41055)	22.05	21.05	20.70
		2593 (40620)	21.91	20.97	20.52
		2549.5 (40185)	21.96	20.99	20.58
		2506 (39750)	21.74	20.79	20.32
	1RB-Low (0)	2680 (41490)	21.70	20.84	20.39
		2636.5 (41055)	21.82	20.81	20.37
		2593 (40620)	21.86	21.03	20.50
		2549.5 (40185)	21.85	20.89	20.48
		2506 (39750)	21.62	20.64	20.18
	50RB-High (50)	2680 (41490)	20.96	19.94	19.78
		2636.5 (41055)	20.96	20.01	20.00
		2593 (40620)	20.84	19.87	19.80
		2549.5 (40185)	20.92	19.53	19.80
		2506 (39750)	20.69	19.76	19.62
	50RB-Middle (25)	2680 (41490)	20.88	19.84	19.68
		2636.5 (41055)	21.03	20.07	19.71
		2593 (40620)	20.83	19.87	19.83
		2549.5 (40185)	20.91	20.01	19.87
		2506 (39750)	20.53	19.52	19.51
50RB-Low (0)	2680 (41490)	20.91	19.84	19.80	
	2636.5 (41055)	21.00	20.04	19.88	
	2593 (40620)	20.84	19.88	19.86	
	2549.5 (40185)	20.82	19.91	19.80	
	2506 (39750)	20.61	19.61	19.54	
100RB (0)	2680 (41490)	20.89	19.92	19.81	
	2636.5 (41055)	20.97	20.02	19.82	
	2593 (40620)	20.91	19.82	19.86	
	2549.5 (40185)	20.86	19.82	19.85	
	2506 (39750)	20.58	19.68	19.66	

LTE Band41 PC3-DSI3

BANDWIDTH	Number of RBs	Frequency	QPSK	16QAM	64QAM
5M Hz	1RB-H igh (24)	2687.5 (41565)	19.76	18.71	17.19
		2640.3 (41093)	19.95	18.83	17.40
		2593 (40620)	19.73	18.72	17.31
		2545.8 (40148)	20.00	18.88	17.42
		2498.5 (39675)	19.52	18.45	17.05
	1RB-M iddle (12)	2687.5 (41565)	19.94	18.84	17.48
		2640.3 (41093)	19.89	19.04	17.53
		2593 (40620)	19.99	18.97	17.47
		2545.8 (40148)	19.89	18.99	17.58
		2498.5 (39675)	19.41	18.62	17.06
	1RB-Low (0)	2687.5 (41565)	19.71	18.83	17.36
		2640.3 (41093)	19.98	18.99	17.59
		2593 (40620)	19.96	18.84	17.35
		2545.8 (40148)	19.94	18.93	17.72
		2498.5 (39675)	19.58	18.51	17.94
	12RB-H igh (13)	2687.5 (41565)	18.71	17.65	16.70
		2640.3 (41093)	18.81	17.74	16.87
		2593 (40620)	18.73	17.68	16.73
		2545.8 (40148)	18.75	17.78	16.84
		2498.5 (39675)	18.41	17.35	16.36
	12RB-M iddle (6)	2687.5 (41565)	18.70	17.62	16.70
		2640.3 (41093)	18.85	17.78	16.84
		2593 (40620)	18.75	17.70	16.77
		2545.8 (40148)	18.82	17.83	16.88
		2498.5 (39675)	18.39	17.32	16.43
	12RB-Low (0)	2687.5 (41565)	18.72	17.63	16.71
		2640.3 (41093)	18.86	17.81	16.89
		2593 (40620)	18.83	17.67	16.81
2545.8 (40148)		18.75	17.80	16.85	
2498.5 (39675)		18.55	17.39	16.52	
25RB (0)	2687.5 (41565)	18.68	17.66	16.64	
	2640.3 (41093)	18.80	17.86	16.87	
	2593 (40620)	18.70	17.73	16.79	
	2545.8 (40148)	18.77	17.83	16.92	
	2498.5 (39675)	18.48	17.53	16.50	

10M Hz	1RB-High (49)	2685 (41540)	19.89	18.81	17.53
		2639 (41080)	20.04	18.90	17.44
		2593 (40620)	19.81	18.77	17.55
		2547 (40160)	19.90	18.82	17.46
		2501 (39700)	19.69	18.55	17.07
	1RB-Middle (24)	2685 (41540)	19.81	18.66	17.16
		2639 (41080)	19.95	18.82	17.30
		2593 (40620)	19.80	18.78	17.42
		2547 (40160)	19.84	18.76	17.54
		2501 (39700)	19.55	18.55	17.07
	1RB-Low (0)	2685 (41540)	19.97	18.78	17.38
		2639 (41080)	19.95	18.97	17.46
		2593 (40620)	20.09	18.96	17.64
		2547 (40160)	19.96	18.99	17.59
		2501 (39700)	19.55	18.53	17.95
	25RB-High (25)	2685 (41540)	18.68	17.59	16.66
		2639 (41080)	18.80	17.81	16.89
		2593 (40620)	18.75	17.74	16.76
		2547 (40160)	18.77	17.81	16.94
		2501 (39700)	18.40	17.45	16.46
	25RB-Middle (12)	2685 (41540)	18.73	17.73	16.75
		2639 (41080)	18.88	17.86	16.87
		2593 (40620)	18.74	17.82	16.76
		2547 (40160)	18.83	17.87	16.94
		2501 (39700)	18.57	17.52	16.57
25RB-Low (0)	2685 (41540)	18.72	17.69	16.60	
	2639 (41080)	18.80	17.81	16.77	
	2593 (40620)	18.78	17.76	16.77	
	2547 (40160)	18.82	17.80	16.84	
	2501 (39700)	18.51	17.48	16.49	
50RB (0)	2685 (41540)	18.72	17.75	16.63	
	2639 (41080)	18.85	17.87	16.79	
	2593 (40620)	18.71	17.76	16.79	
	2547 (40160)	18.83	17.86	16.79	
	2501 (39700)	18.53	17.56	16.49	

15M Hz	1RB-High (74)	2682.5 (41515)	19.97	18.88	17.83
		2637.8 (41068)	20.07	18.94	17.53
		2593 (40620)	19.86	18.79	17.38
		2548.3 (40173)	20.10	18.84	17.44
		2503.5 (39725)	19.80	18.59	17.13
	1RB-Middle (37)	2682.5 (41515)	19.94	18.85	17.83
		2637.8 (41068)	20.08	18.92	17.46
		2593 (40620)	19.84	18.86	17.57
		2548.3 (40173)	20.06	18.87	17.65
		2503.5 (39725)	19.66	18.56	17.04
	1RB-Low (0)	2682.5 (41515)	19.71	18.71	17.79
		2637.8 (41068)	19.89	18.83	17.45
		2593 (40620)	19.99	19.14	17.62
		2548.3 (40173)	20.08	18.92	17.68
		2503.5 (39725)	19.81	18.67	17.13
	36RB-High (38)	2682.5 (41515)	18.87	17.89	16.76
		2637.8 (41068)	19.02	18.04	16.91
		2593 (40620)	18.83	17.73	16.77
		2548.3 (40173)	18.92	17.99	16.85
		2503.5 (39725)	18.55	17.48	16.54
	36RB-Middle (19)	2682.5 (41515)	18.86	17.86	16.77
		2637.8 (41068)	18.97	18.01	16.96
		2593 (40620)	18.92	17.82	16.82
		2548.3 (40173)	19.06	18.05	17.06
		2503.5 (39725)	18.67	17.47	16.54
	36RB-Low (0)	2682.5 (41515)	18.75	17.71	16.63
		2637.8 (41068)	18.83	17.91	16.74
		2593 (40620)	18.94	17.82	16.84
		2548.3 (40173)	18.82	17.95	16.82
		2503.5 (39725)	18.63	17.50	16.53
75RB (0)	2682.5 (41515)	18.77	17.74	16.72	
	2637.8 (41068)	18.88	17.87	16.91	
	2593 (40620)	18.90	17.91	16.86	
	2548.3 (40173)	18.87	17.98	16.80	
	2503.5 (39725)	18.56	17.61	16.56	

20M Hz	1RB-High (99)	2680 (41490)	19.89	18.86	18.62
		2636.5 (41055)	20.05	18.89	17.41
		2593 (40620)	19.74	18.73	17.26
		2549.5 (40185)	19.98	18.76	17.78
		2506 (39750)	19.75	18.52	17.13
	1RB-Middle (50)	2680 (41490)	19.91	18.86	18.35
		2636.5 (41055)	20.06	19.00	17.67
		2593 (40620)	19.94	18.92	17.55
		2549.5 (40185)	19.99	18.94	17.46
		2506 (39750)	19.83	18.57	17.44
	1RB-Low (0)	2680 (41490)	19.77	18.73	18.24
		2636.5 (41055)	19.86	18.82	17.39
		2593 (40620)	19.87	18.98	17.60
		2549.5 (40185)	19.99	18.91	17.61
		2506 (39750)	19.61	18.42	17.44
	50RB-High (50)	2680 (41490)	18.95	17.90	17.87
		2636.5 (41055)	18.97	18.03	16.94
		2593 (40620)	18.80	17.78	16.80
		2549.5 (40185)	18.88	17.98	16.83
		2506 (39750)	18.68	17.70	16.67
	50RB-Middle (25)	2680 (41490)	18.96	17.81	16.84
		2636.5 (41055)	18.98	18.03	16.93
		2593 (40620)	18.89	17.87	16.82
		2549.5 (40185)	18.92	17.96	16.89
		2506 (39750)	18.69	17.57	16.45
50RB-Low (0)	2680 (41490)	18.86	17.84	16.83	
	2636.5 (41055)	18.97	18.03	16.91	
	2593 (40620)	18.86	17.87	16.84	
	2549.5 (40185)	18.83	17.93	16.82	
	2506 (39750)	18.57	17.62	16.50	
100RB (0)	2680 (41490)	18.88	17.82	16.89	
	2636.5 (41055)	18.98	17.92	16.94	
	2593 (40620)	18.86	17.83	16.86	
	2549.5 (40185)	18.86	17.86	16.85	
	2506 (39750)	18.56	17.55	16.57	

LTE Band66-DS1

BANDWIDTH	Number of RBs	Frequency	QPSK	16QAM	64QAM
1.4M Hz	1RB-High (5)	1779.3 (132665)	23.86	22.94	22.00
		1745 (132322)	23.59	22.95	21.90
		1710.7 (131979)	23.39	22.96	22.01
	1RB-Middle (3)	1779.3 (132665)	23.76	22.98	22.08
		1745 (132322)	23.83	22.98	21.97
		1710.7 (131979)	23.47	22.68	21.63
	1RB-Low (0)	1779.3 (132665)	23.67	23.40	22.03
		1745 (132322)	23.71	23.21	22.04
		1710.7 (131979)	23.48	22.68	21.62
	3RB-High (3)	1779.3 (132665)	24.24	23.27	22.09
		1745 (132322)	23.64	22.64	21.95
		1710.7 (131979)	23.74	22.75	21.63
	3RB-Middle (1)	1779.3 (132665)	23.82	23.34	21.98
		1745 (132322)	23.73	22.85	21.89
		1710.7 (131979)	23.53	22.87	21.62
	3RB-Low (0)	1779.3 (132665)	23.92	22.91	22.04
		1745 (132322)	23.71	22.84	21.89
		1710.7 (131979)	23.76	22.86	21.99
	6RB (0)	1779.3 (132665)	22.87	21.95	20.83
		1745 (132322)	22.77	21.86	20.74
		1710.7 (131979)	22.68	21.80	20.73
3M Hz	1RB-High (14)	1778.5 (132657)	24.16	23.31	21.65
		1745 (132322)	23.94	23.25	22.01
		1711.5 (131987)	23.96	23.30	21.96
	1RB-Middle (7)	1778.5 (132657)	24.03	23.21	22.09
		1745 (132322)	24.13	22.96	22.07
		1711.5 (131987)	23.77	23.20	21.98
	1RB-Low (0)	1778.5 (132657)	24.07	23.17	22.08
		1745 (132322)	23.80	23.02	21.99
		1711.5 (131987)	23.87	22.81	21.73
	8RB-High (7)	1778.5 (132657)	22.74	21.88	20.98
		1745 (132322)	22.86	21.84	20.84
		1711.5 (131987)	22.70	21.74	20.78
	8RB-Middle (4)	1778.5 (132657)	22.92	22.01	21.03
		1745 (132322)	22.82	21.93	20.89
		1711.5 (131987)	22.79	21.90	20.84
	8RB-Low (0)	1778.5 (132657)	22.96	21.96	20.98
		1745 (132322)	22.98	21.95	20.83
		1711.5 (131987)	22.73	21.80	20.82
	15RB (0)	1778.5 (132657)	22.89	22.03	20.88
		1745 (132322)	22.88	21.89	20.83
		1711.5 (131987)	22.76	21.81	20.82

5M H z	1RB-H igh (24)	1777.5 (132647)	24.03	22.75	22.35	
		1745 (132322)	23.88	23.15	22.16	
		1712.5 (131997)	23.67	22.92	21.89	
	1RB-M iddle (12)	1777.5 (132647)	23.77	23.15	22.13	
		1745 (132322)	24.09	23.02	21.95	
		1712.5 (131997)	23.40	23.15	21.68	
	1RB-Low (0)	1777.5 (132647)	23.99	23.23	22.15	
		1745 (132322)	23.88	23.42	22.18	
		1712.5 (131997)	23.79	23.21	22.06	
	12RB-H igh (13)	1777.5 (132647)	22.77	21.81	21.01	
		1745 (132322)	22.95	21.91	21.01	
		1712.5 (131997)	22.69	21.70	20.75	
	12RB-M iddle (6)	1777.5 (132647)	23.09	21.98	20.96	
		1745 (132322)	22.93	21.87	20.91	
		1712.5 (131997)	22.78	21.80	20.84	
	12RB-Low (0)	1777.5 (132647)	23.03	22.04	21.03	
		1745 (132322)	22.92	21.93	20.98	
		1712.5 (131997)	22.82	21.83	20.88	
	25RB (0)	1777.5 (132647)	22.91	22.03	20.95	
		1745 (132322)	22.86	21.89	20.98	
		1712.5 (131997)	22.80	21.84	20.83	
	10M H z	1RB-H igh (49)	1775 (132622)	24.19	23.13	22.45
			1745 (132322)	24.33	23.32	22.04
			1715 (132022)	24.41	23.12	22.44
1RB-M iddle (24)		1775 (132622)	23.93	23.19	22.04	
		1745 (132322)	23.76	22.92	21.92	
		1715 (132022)	23.68	23.09	21.64	
1RB-Low (0)		1775 (132622)	23.60	22.62	21.43	
		1745 (132322)	23.19	22.51	21.38	
		1715 (132022)	23.12	22.46	21.22	
25RB-H igh (25)		1775 (132622)	23.21	22.08	21.32	
		1745 (132322)	22.96	21.97	20.96	
		1715 (132022)	22.79	21.80	20.92	
25RB-M iddle (12)		1775 (132622)	22.97	21.94	20.97	
		1745 (132322)	22.83	21.84	20.93	
		1715 (132022)	22.81	21.71	20.80	
25RB-Low (0)		1775 (132622)	22.87	21.94	20.94	
		1745 (132322)	22.81	21.82	20.96	
		1715 (132022)	22.73	21.74	20.83	
50RB (0)		1775 (132622)	22.92	21.91	20.83	
		1745 (132322)	22.87	21.87	20.88	
		1715 (132022)	22.86	21.76	20.76	

15M Hz	1RB-H igh (74)	1772.5 (132597)	24.12	23.22	22.39
		1745 (132322)	24.03	23.31	22.31
		1717.5 (132047)	24.32	23.32	22.12
	1RB-M iddle (37)	1772.5 (132597)	24.05	23.32	22.33
		1745 (132322)	23.84	23.12	22.33
		1717.5 (132047)	23.90	23.13	21.95
	1RB-Low (0)	1772.5 (132597)	24.23	23.34	22.36
		1745 (132322)	24.46	23.37	22.35
		1717.5 (132047)	24.16	23.46	22.34
	36RB-H igh (38)	1772.5 (132597)	22.85	22.21	21.28
		1745 (132322)	22.86	21.90	20.96
		1717.5 (132047)	23.02	21.95	21.00
	36RB-M iddle (19)	1772.5 (132597)	23.24	22.23	21.12
		1745 (132322)	23.04	21.95	21.05
		1717.5 (132047)	23.06	21.96	21.00
	36RB-Low (0)	1772.5 (132597)	23.21	22.10	21.14
		1745 (132322)	22.94	21.93	20.96
		1717.5 (132047)	23.04	22.07	20.99
	75RB (0)	1772.5 (132597)	23.08	22.13	21.07
		1745 (132322)	22.93	21.92	21.02
		1717.5 (132047)	22.98	22.00	20.91
20M Hz	1RB-H igh (99)	1770 (132572)	24.25	23.48	22.48
		1745 (132322)	24.21	23.42	22.48
		1720 (132072)	24.40	23.45	22.34
	1RB-M iddle (50)	1770 (132572)	24.03	23.35	22.25
		1745 (132322)	24.14	23.13	22.05
		1720 (132072)	24.03	23.42	22.49
	1RB-Low (0)	1770 (132572)	24.06	23.02	22.31
		1745 (132322)	23.69	23.12	21.92
		1720 (132072)	23.76	23.07	22.13
	50RB-H igh (50)	1770 (132572)	23.28	22.22	21.36
		1745 (132322)	23.11	22.12	21.03
		1720 (132072)	23.18	22.23	21.14
	50RB-M iddle (25)	1770 (132572)	23.12	22.25	21.08
		1745 (132322)	23.04	22.16	21.07
		1720 (132072)	23.19	22.16	21.07
	50RB-Low (0)	1770 (132572)	23.06	22.10	21.03
		1745 (132322)	23.01	21.94	20.90
		1720 (132072)	23.07	22.00	21.00
	100RB (0)	1770 (132572)	23.00	22.13	21.04
		1745 (132322)	23.01	21.95	20.95
		1720 (132072)	23.07	22.08	21.10

LTE Band66-DSI2

BANDWIDTH	Number of RBs	Frequency	QPSK	16QAM	64QAM
1.4M Hz	1RB-High (5)	1779.3 (132665)	22.45	21.75	20.48
		1745 (132322)	22.28	21.49	20.35
		1710.7 (131979)	22.22	21.52	20.34
	1RB-Middle (3)	1779.3 (132665)	22.47	21.73	20.68
		1745 (132322)	22.31	21.64	20.61
		1710.7 (131979)	22.21	21.41	20.31
	1RB-Low (0)	1779.3 (132665)	22.42	21.73	20.70
		1745 (132322)	22.44	21.51	20.55
		1710.7 (131979)	22.28	21.43	20.50
	3RB-High (3)	1779.3 (132665)	22.45	21.39	20.42
		1745 (132322)	22.45	21.40	20.40
		1710.7 (131979)	22.37	21.17	20.24
	3RB-Middle (1)	1779.3 (132665)	22.44	21.37	20.52
		1745 (132322)	22.25	21.41	20.49
		1710.7 (131979)	22.31	21.11	20.36
	3RB-Low (0)	1779.3 (132665)	22.47	21.47	20.34
		1745 (132322)	22.32	21.37	20.36
		1710.7 (131979)	22.40	21.18	20.29
	6RB (0)	1779.3 (132665)	21.40	20.36	19.39
		1745 (132322)	21.30	20.34	19.29
		1710.7 (131979)	21.18	20.30	19.18
3M Hz	1RB-High (14)	1778.5 (132657)	22.42	21.57	20.48
		1745 (132322)	22.47	21.79	20.75
		1711.5 (131987)	22.15	21.60	20.60
	1RB-Middle (7)	1778.5 (132657)	22.46	21.82	20.51
		1745 (132322)	22.36	21.79	20.53
		1711.5 (131987)	22.56	21.66	20.65
	1RB-Low (0)	1778.5 (132657)	22.43	21.72	20.63
		1745 (132322)	22.37	21.66	20.44
		1711.5 (131987)	22.24	21.58	20.41
	8RB-High (7)	1778.5 (132657)	21.41	20.43	19.46
		1745 (132322)	21.32	20.40	19.36
		1711.5 (131987)	21.22	20.28	19.34
	8RB-Middle (4)	1778.5 (132657)	21.50	20.52	19.48
		1745 (132322)	21.36	20.30	19.37
		1711.5 (131987)	21.33	20.39	19.34
	8RB-Low (0)	1778.5 (132657)	21.51	20.54	19.37
		1745 (132322)	21.34	20.40	19.45
		1711.5 (131987)	21.13	20.32	19.25
	15RB (0)	1778.5 (132657)	21.44	20.45	19.52
		1745 (132322)	21.34	20.37	19.32
		1711.5 (131987)	21.31	20.32	19.27

5M Hz	1RB-H igh (24)	1777.5 (132647)	22.62	21.68	20.57
		1745 (132322)	22.43	21.77	20.60
		1712.5 (131997)	22.32	21.61	20.42
	1RB-M iddle (12)	1777.5 (132647)	22.58	21.73	20.68
		1745 (132322)	22.22	21.46	20.56
		1712.5 (131997)	22.36	21.63	20.43
	1RB-Low (0)	1777.5 (132647)	22.47	21.68	20.61
		1745 (132322)	22.51	21.76	20.65
		1712.5 (131997)	22.36	21.65	20.39
	12RB-H igh (13)	1777.5 (132647)	21.43	20.47	19.49
		1745 (132322)	21.33	20.34	19.33
		1712.5 (131997)	21.22	20.34	19.27
	12RB-M iddle (6)	1777.5 (132647)	21.50	20.52	19.48
		1745 (132322)	21.39	20.41	19.29
		1712.5 (131997)	21.33	20.33	19.26
	12RB-Low (0)	1777.5 (132647)	21.58	20.56	19.54
		1745 (132322)	21.37	20.39	19.40
		1712.5 (131997)	21.35	20.37	19.38
	25RB (0)	1777.5 (132647)	21.46	20.53	19.51
		1745 (132322)	21.31	20.41	19.41
		1712.5 (131997)	21.32	20.22	19.33
10M Hz	1RB-H igh (49)	1775 (132622)	22.72	21.84	20.22
		1745 (132322)	22.87	21.71	20.87
		1715 (132022)	22.88	21.97	20.93
	1RB-M iddle (24)	1775 (132622)	22.53	21.58	20.52
		1745 (132322)	22.33	21.64	20.45
		1715 (132022)	22.34	21.58	20.50
	1RB-Low (0)	1775 (132622)	21.97	21.13	19.65
		1745 (132322)	21.81	21.17	19.84
		1715 (132022)	21.65	20.99	19.70
	25RB-H igh (25)	1775 (132622)	21.56	20.60	19.48
		1745 (132322)	21.45	20.44	19.44
		1715 (132022)	21.21	20.42	19.42
	25RB-M iddle (12)	1775 (132622)	21.47	20.47	19.44
		1745 (132322)	21.39	20.29	19.39
		1715 (132022)	21.32	20.32	19.29
	25RB-Low (0)	1775 (132622)	21.35	20.41	19.32
		1745 (132322)	21.40	20.29	19.32
		1715 (132022)	21.25	20.28	19.23
	50RB (0)	1775 (132622)	21.44	20.41	19.50
		1745 (132322)	21.34	20.31	19.34
		1715 (132022)	21.28	20.30	19.27

15M Hz	1RB-H igh (74)	1772.5 (132597)	22.69	21.72	20.74
		1745 (132322)	22.62	21.84	20.84
		1717.5 (132047)	22.66	21.92	20.78
	1RB-M iddle (37)	1772.5 (132597)	22.62	21.96	20.76
		1745 (132322)	22.54	21.82	20.63
		1717.5 (132047)	22.45	21.73	20.75
	1RB-Low (0)	1772.5 (132597)	22.86	21.72	20.85
		1745 (132322)	22.60	21.96	20.82
		1717.5 (132047)	22.70	21.81	20.89
	36RB-H igh (38)	1772.5 (132597)	21.56	20.70	19.45
		1745 (132322)	21.50	20.47	19.43
		1717.5 (132047)	21.43	20.54	19.56
	36RB-M iddle (19)	1772.5 (132597)	21.66	20.62	19.68
		1745 (132322)	21.47	20.43	19.41
		1717.5 (132047)	21.45	20.52	19.46
	36RB-Low (0)	1772.5 (132597)	21.69	20.62	19.73
		1745 (132322)	21.49	20.46	19.43
		1717.5 (132047)	21.55	20.54	19.54
75RB (0)	1772.5 (132597)	21.58	20.63	19.69	
	1745 (132322)	21.44	20.50	19.48	
	1717.5 (132047)	21.47	20.44	19.44	
20M Hz	1RB-H igh (99)	1770 (132572)	22.74	21.47	20.98
		1745 (132322)	22.76	21.07	20.07
		1720 (132072)	22.93	21.28	20.18
	1RB-M iddle (50)	1770 (132572)	22.63	21.80	20.67
		1745 (132322)	22.53	21.89	20.95
		1720 (132072)	22.53	21.83	20.92
	1RB-Low (0)	1770 (132572)	22.34	21.78	20.61
		1745 (132322)	22.13	21.56	20.57
		1720 (132072)	22.32	21.65	20.63
	50RB-H igh (50)	1770 (132572)	21.72	20.73	19.61
		1745 (132322)	21.61	20.46	19.41
		1720 (132072)	21.54	20.61	19.56
	50RB-M iddle (25)	1770 (132572)	21.61	20.69	19.54
		1745 (132322)	21.45	20.51	19.46
		1720 (132072)	21.55	20.65	19.59
	50RB-Low (0)	1770 (132572)	21.59	20.54	19.50
		1745 (132322)	21.42	20.38	19.36
		1720 (132072)	21.54	20.52	19.47
	100RB (0)	1770 (132572)	21.52	20.62	19.47
		1745 (132322)	21.49	20.46	19.42
		1720 (132072)	21.52	20.46	19.54

LTE Band66-DSI3

BANDWIDTH	Number of RBs	Frequency	QPSK	16QAM	64QAM	
1.4M Hz	1RB-High (5)	1779.3 (132665)	20.38	19.45	18.58	
		1745 (132322)	20.32	19.45	18.43	
		1710.7 (131979)	20.28	19.48	18.47	
	1RB-Middle (3)	1779.3 (132665)	20.44	19.65	18.46	
		1745 (132322)	20.19	19.60	18.38	
		1710.7 (131979)	20.23	19.55	18.40	
	1RB-Low (0)	1779.3 (132665)	20.38	19.65	18.52	
		1745 (132322)	20.30	19.67	18.47	
		1710.7 (131979)	20.31	19.45	18.52	
	3RB-High (3)	1779.3 (132665)	20.44	19.33	18.52	
		1745 (132322)	20.25	19.35	18.57	
		1710.7 (131979)	20.21	19.18	18.43	
	3RB-Middle (1)	1779.3 (132665)	20.40	19.51	18.56	
		1745 (132322)	20.22	19.26	18.53	
		1710.7 (131979)	20.14	19.21	18.31	
	3RB-Low (0)	1779.3 (132665)	20.38	19.53	18.51	
		1745 (132322)	20.33	19.27	18.38	
		1710.7 (131979)	20.33	19.20	18.30	
	6RB (0)	1779.3 (132665)	19.30	18.40	17.34	
		1745 (132322)	19.27	18.27	17.20	
		1710.7 (131979)	19.13	18.21	17.17	
	3M Hz	1RB-High (14)	1778.5 (132657)	20.34	19.83	18.41
			1745 (132322)	20.20	19.70	18.45
			1711.5 (131987)	20.32	19.52	18.63
1RB-Middle (7)		1778.5 (132657)	20.47	19.62	18.47	
		1745 (132322)	20.23	19.70	18.54	
		1711.5 (131987)	20.64	19.67	18.45	
1RB-Low (0)		1778.5 (132657)	20.53	19.72	18.52	
		1745 (132322)	20.29	19.76	18.44	
		1711.5 (131987)	20.16	19.30	18.27	
8RB-High (7)		1778.5 (132657)	19.40	18.40	17.36	
		1745 (132322)	19.29	18.45	17.32	
		1711.5 (131987)	19.24	18.35	17.29	
8RB-Middle (4)		1778.5 (132657)	19.38	18.47	17.51	
		1745 (132322)	19.31	18.38	17.35	
		1711.5 (131987)	19.28	18.34	17.26	
8RB-Low (0)		1778.5 (132657)	19.38	18.49	17.43	
		1745 (132322)	19.38	18.44	17.30	
		1711.5 (131987)	19.20	18.24	17.29	
15RB (0)		1778.5 (132657)	19.42	18.41	17.82	
		1745 (132322)	19.27	18.29	17.28	
		1711.5 (131987)	19.23	18.33	17.30	

5M Hz	1RB-H igh (24)	1777.5 (132647)	20.52	19.71	18.41	
		1745 (132322)	20.35	19.76	18.52	
		1712.5 (131997)	20.30	19.51	18.38	
	1RB-M iddle (12)	1777.5 (132647)	20.73	19.76	18.66	
		1745 (132322)	20.20	19.47	18.56	
		1712.5 (131997)	20.49	19.75	18.68	
	1RB-Low (0)	1777.5 (132647)	20.46	19.80	18.73	
		1745 (132322)	20.53	19.88	18.74	
		1712.5 (131997)	20.35	19.61	18.60	
	12RB-H igh (13)	1777.5 (132647)	19.34	18.44	17.34	
		1745 (132322)	19.41	18.41	17.40	
		1712.5 (131997)	19.18	18.27	17.16	
	12RB-M iddle (6)	1777.5 (132647)	19.49	18.47	17.52	
		1745 (132322)	19.35	18.36	17.36	
		1712.5 (131997)	19.28	18.34	17.25	
	12RB-Low (0)	1777.5 (132647)	19.53	18.50	17.46	
		1745 (132322)	19.43	18.44	17.42	
		1712.5 (131997)	19.29	18.37	17.35	
	25RB (0)	1777.5 (132647)	19.42	18.53	17.82	
		1745 (132322)	19.27	18.38	17.34	
		1712.5 (131997)	19.28	18.26	17.32	
	10M Hz	1RB-H igh (49)	1775 (132622)	20.88	19.82	18.94
			1745 (132322)	20.78	19.71	18.88
			1715 (132022)	20.74	19.83	18.88
1RB-M iddle (24)		1775 (132622)	20.39	19.68	18.64	
		1745 (132322)	20.26	19.54	18.58	
		1715 (132022)	20.24	19.48	18.39	
1RB-Low (0)		1775 (132622)	19.69	18.96	18.04	
		1745 (132322)	19.80	18.96	17.90	
		1715 (132022)	19.57	18.97	17.84	
25RB-H igh (25)		1775 (132622)	19.44	18.62	17.66	
		1745 (132322)	19.40	18.49	17.32	
		1715 (132022)	19.18	18.35	17.29	
25RB-M iddle (12)		1775 (132622)	19.42	18.50	17.45	
		1745 (132322)	19.34	18.44	17.37	
		1715 (132022)	19.37	18.24	17.37	
25RB-Low (0)		1775 (132622)	19.36	18.34	17.28	
		1745 (132322)	19.34	18.34	17.28	
		1715 (132022)	19.17	18.24	17.27	
50RB (0)		1775 (132622)	19.46	18.44	17.39	
		1745 (132322)	19.37	18.37	17.38	
		1715 (132022)	19.19	18.31	17.22	

15M Hz	1RB-H igh (74)	1772.5 (132597)	20.75	19.91	18.79
		1745 (132322)	20.59	19.82	18.73
		1717.5 (132047)	20.65	19.97	18.81
	1RB-M iddle (37)	1772.5 (132597)	20.44	19.87	18.65
		1745 (132322)	20.51	19.81	18.70
		1717.5 (132047)	20.48	19.69	18.61
	1RB-Low (0)	1772.5 (132597)	20.88	19.76	18.84
		1745 (132322)	20.60	19.73	18.94
		1717.5 (132047)	20.69	19.71	18.81
	36RB-H igh (38)	1772.5 (132597)	19.52	18.58	17.64
		1745 (132322)	19.40	18.37	17.42
		1717.5 (132047)	19.47	18.56	17.52
	36RB-M iddle (19)	1772.5 (132597)	19.57	18.61	17.51
		1745 (132322)	19.48	18.44	17.51
		1717.5 (132047)	19.47	18.44	17.37
	36RB-Low (0)	1772.5 (132597)	19.59	18.64	17.61
		1745 (132322)	19.40	18.47	17.44
		1717.5 (132047)	19.54	18.51	17.46
	75RB (0)	1772.5 (132597)	19.58	18.53	17.57
		1745 (132322)	19.37	18.53	17.43
		1717.5 (132047)	19.40	18.45	17.46
20M Hz	1RB-H igh (99)	1770 (132572)	20.80	19.82	18.92
		1745 (132322)	20.76	19.76	18.98
		1720 (132072)	20.99	19.81	18.83
	1RB-M iddle (50)	1770 (132572)	20.42	19.76	18.62
		1745 (132322)	20.41	19.65	18.69
		1720 (132072)	20.44	19.83	18.97
	1RB-Low (0)	1770 (132572)	20.20	19.51	18.31
		1745 (132322)	20.26	19.50	18.33
		1720 (132072)	20.22	19.52	18.60
	50RB-H igh (50)	1770 (132572)	19.58	18.52	17.33
		1745 (132322)	19.51	18.46	17.44
		1720 (132072)	19.52	18.59	17.60
	50RB-M iddle (25)	1770 (132572)	19.57	18.55	17.42
		1745 (132322)	19.50	18.47	17.41
		1720 (132072)	19.50	18.57	17.48
	50RB-Low (0)	1770 (132572)	19.52	18.48	17.36
		1745 (132322)	19.35	18.40	17.31
		1720 (132072)	19.43	18.45	17.41
	100RB (0)	1770 (132572)	19.60	18.44	17.37
		1745 (132322)	19.58	18.41	17.42
		1720 (132072)	19.47	18.51	17.41

LTE Band71

BANDWIDTH	Number of RBs	Frequency	QPSK	16QAM	64QAM
5M Hz	1RB-H igh (24)	695.5 (133447)	24.13	23.32	22.36
		680.5 (133297)	24.30	23.46	22.51
		665.5 (133147)	24.34	23.26	22.42
	1RB-M iddle (12)	695.5 (133447)	23.91	23.28	22.13
		680.5 (133297)	24.26	23.16	22.40
		665.5 (133147)	24.19	23.45	22.32
	1RB-Low (0)	695.5 (133447)	24.14	23.51	22.18
		680.5 (133297)	24.59	23.31	22.54
		665.5 (133147)	24.28	23.27	22.49
	12RB-H igh (13)	695.5 (133447)	23.04	22.05	21.11
		680.5 (133297)	23.34	22.24	21.32
		665.5 (133147)	23.23	22.22	21.26
	12RB-M iddle (6)	695.5 (133447)	23.02	22.13	21.06
		680.5 (133297)	23.26	22.24	21.34
		665.5 (133147)	23.24	22.35	21.36
	12RB-Low (0)	695.5 (133447)	23.10	22.06	21.13
		680.5 (133297)	23.28	22.30	21.35
		665.5 (133147)	23.35	22.27	21.45
	25RB (0)	695.5 (133447)	23.05	22.02	21.07
		680.5 (133297)	23.27	22.20	21.23
		665.5 (133147)	23.23	22.25	21.30
10M Hz	1RB-H igh (49)	693 (132422)	24.20	23.01	21.97
		680.5 (133297)	24.35	23.01	22.66
		668 (133172)	24.51	23.84	22.65
	1RB-M iddle (24)	693 (132422)	23.63	22.84	21.80
		680.5 (133297)	24.25	23.46	22.40
		668 (133172)	24.19	23.52	22.41
	1RB-Low (0)	693 (132422)	23.04	22.27	21.58
		680.5 (133297)	23.29	22.63	21.66
		668 (133172)	23.35	22.54	21.59
	25RB-H igh (25)	693 (132422)	22.58	21.69	20.73
		680.5 (133297)	23.40	22.39	21.35
		668 (133172)	23.18	22.26	21.32
	25RB-M iddle (12)	693 (132422)	22.64	21.78	20.68
		680.5 (133297)	23.32	22.24	21.30
		668 (133172)	23.23	22.32	21.29
	25RB-Low (0)	693 (132422)	22.47	21.60	20.50
		680.5 (133297)	23.05	22.06	21.11
		668 (133172)	23.13	22.16	21.11
	50RB (0)	693 (132422)	22.69	21.63	20.65
		680.5 (133297)	23.22	22.15	21.20
		668 (133172)	23.21	22.31	21.19

15M Hz	1RB-H igh (74)	690.5 (133397)	23.77	23.28	21.99
		680.5 (133297)	24.31	23.42	22.45
		670.5 (133197)	24.39	23.51	22.74
	1RB-M iddle (37)	690.5 (133397)	24.55	23.34	22.54
		680.5 (133297)	24.39	23.53	22.62
		670.5 (133197)	24.39	23.64	22.69
	1RB-Low (0)	690.5 (133397)	24.26	23.08	22.24
		680.5 (133297)	24.04	23.28	22.33
		670.5 (133197)	24.18	23.48	22.56
	36RB-H igh (38)	690.5 (133397)	23.22	22.18	21.25
		680.5 (133297)	23.32	22.30	21.38
		670.5 (133197)	23.29	22.28	21.34
	36RB-M iddle (19)	690.5 (133397)	23.47	22.43	21.49
		680.5 (133297)	23.49	22.38	21.45
		670.5 (133197)	23.48	22.50	21.38
	36RB-Low (0)	690.5 (133397)	23.34	22.27	21.35
		680.5 (133297)	23.38	22.28	21.34
		670.5 (133197)	23.48	22.50	21.49
	75RB (0)	690.5 (133397)	23.25	22.30	21.26
		680.5 (133297)	23.34	22.32	21.35
		670.5 (133197)	23.48	22.46	21.35
20M Hz	1RB-H igh (99)	688 (133372)	24.27	23.28	22.20
		683 (133322)	24.25	23.38	22.24
		673 (133222)	24.49	23.33	22.32
	1RB-M iddle (50)	688 (133372)	24.45	23.45	22.48
		683 (133322)	24.32	23.45	22.41
		673 (133222)	24.32	23.48	22.45
	1RB-Low (0)	688 (133372)	23.30	22.56	21.54
		683 (133322)	23.31	22.51	21.52
		673 (133222)	23.48	22.84	21.79
	50RB-H igh (50)	688 (133372)	23.20	22.24	21.27
		683 (133322)	23.29	22.30	21.33
		673 (133222)	23.23	22.23	21.17
	50RB-M iddle (25)	688 (133372)	23.33	22.27	21.28
		683 (133322)	23.32	22.33	21.37
		673 (133222)	23.40	22.42	21.47
	50RB-Low (0)	688 (133372)	22.87	21.94	21.03
		683 (133322)	23.07	22.09	21.03
		673 (133222)	23.25	22.11	21.18
	100RB (0)	688 (133372)	23.15	22.00	21.12
		683 (133322)	23.20	22.20	21.14
		673 (133222)	23.22	22.23	21.29

The conducted power measurement results of LTE uplink CA are as below :

41C PC2-DSI1

UL LTE CA Class	PCC				SCC				Power	
	CC Bandwidth	channel	RB	RB OFFSET	CC Bandwidth	channel	RB	RB OFFSET	tune up	conducted power (dBm)
CA 41C	20M	39750	1	99	5M	39867	1	0	25.5	24.42
CA 41C	15M	39725	1	74	10M	39845	1	0	25.5	24.13
CA 41C	20M	39750	1	99	10M	39894	1	0	25.5	24.27
CA 41C	20M	39750	1	99	15M	39921	1	0	25.5	24.26
CA 41C	20M	39750	1	99	20M	39948	1	0	25.5	24.3
CA 41C	20M	41490	1	0	5M	41373	1	24	25.5	25.18
CA 41C	15M	41515	1	0	10M	41395	1	49	25.5	24.46
CA 41C	20M	41490	1	0	10M	41346	1	49	25.5	24.72
CA 41C	15M	41515	1	0	15M	41365	1	74	25.5	24.43
CA 41C	20M	41490	1	0	15M	41319	1	74	25.5	24.58
CA 41C	20M	41490	1	0	20M	41292	1	99	25.5	24.44

41C PC2-DSI2

UL LTE CA Class	PCC				SCC				Power	
	CC Bandwidth	channel	RB	RB OFFSET	CC Bandwidth	channel	RB	RB OFFSET	tune up	conducted power (dBm)
CA 41C	20M	39750	1	99	5M	39867	1	0	24.5	23.21
CA 41C	15M	39725	1	74	10M	39845	1	0	24.5	22.92
CA 41C	20M	39750	1	99	10M	39894	1	0	24.5	23.04
CA 41C	20M	39750	1	99	15M	39921	1	0	24.5	22.92
CA 41C	20M	39750	1	99	20M	39948	1	0	24.5	22.98
CA 41C	20M	41490	1	0	5M	41373	1	24	24.5	23.76
CA 41C	15M	41515	1	0	10M	41395	1	49	24.5	23.32
CA 41C	20M	41490	1	0	10M	41346	1	49	24.5	23.42
CA 41C	15M	41515	1	0	15M	41365	1	74	24.5	23.24
CA 41C	20M	41490	1	0	15M	41319	1	74	24.5	23.35
CA 41C	20M	41490	1	0	20M	41292	1	99	24.5	23.44

41C PC2-DSI3

UL LTE CA Class	PCC				SCC				Power	
	CC Bandwidth	channel	RB	RB OFFSET	CC Bandwidth	channel	RB	RB OFFSET	tune up	conducted power (dBm)
CA 41C	20M	39750	1	99	5M	39867	1	0	21.5	20.24
CA 41C	15M	39725	1	74	10M	39845	1	0	21.5	20.08
CA 41C	20M	39750	1	99	10M	39894	1	0	21.5	20.05
CA 41C	20M	39750	1	99	15M	39921	1	0	21.5	20.08
CA 41C	20M	39750	1	99	20M	39948	1	0	21.5	20.12
CA 41C	20M	41490	1	0	5M	41373	1	24	21.5	21.08
CA 41C	15M	41515	1	0	10M	41395	1	49	21.5	20.47
CA 41C	20M	41490	1	0	10M	41346	1	49	21.5	20.73
CA 41C	15M	41515	1	0	15M	41365	1	74	21.5	20.22
CA 41C	20M	41490	1	0	15M	41319	1	74	21.5	20.42
CA 41C	20M	41490	1	0	20M	41292	1	99	21.5	20.12

41C PC3-DSI1

UL LTE CA Class	PCC				SCC				Power	
	CC Bandwidth	channel	RB	RB OFFSET	CC Bandwidth	channel	RB	RB OFFSET	tune up	conducted power (dBm)
CA 41C	20M	39750	1	99	5M	39867	1	0	24.5	23.41
CA 41C	15M	39725	1	74	10M	39845	1	0	24.5	22.93
CA 41C	20M	39750	1	99	10M	39894	1	0	24.5	23.08
CA 41C	20M	39750	1	99	15M	39921	1	0	24.5	23.07
CA 41C	20M	39750	1	99	20M	39948	1	0	24.5	23.19
CA 41C	20M	41490	1	0	5M	41373	1	24	24.5	24.07
CA 41C	15M	41515	1	0	10M	41395	1	49	24.5	23.83
CA 41C	20M	41490	1	0	10M	41346	1	49	24.5	23.94
CA 41C	15M	41515	1	0	15M	41365	1	74	24.5	24.01
CA 41C	20M	41490	1	0	15M	41319	1	74	24.5	23.58
CA 41C	20M	41490	1	0	20M	41292	1	99	24.5	23.39

41C PC3-DSI2

UL LTE CA Class	PCC				SCC				Power	
	CC Bandwidth	channel	RB	RB OFFSET	CC Bandwidth	channel	RB	RB OFFSET	tune up	conducted power (dBm)
CA 41C	20M	39750	1	99	5M	39867	1	0	22.5	21.32
CA 41C	15M	39725	1	74	10M	39845	1	0	22.5	20.93
CA 41C	20M	39750	1	99	10M	39894	1	0	22.5	21.04
CA 41C	20M	39750	1	99	15M	39921	1	0	22.5	20.85
CA 41C	20M	39750	1	99	20M	39948	1	0	22.5	21.1
CA 41C	20M	41490	1	0	5M	41373	1	24	22.5	21.92
CA 41C	15M	41515	1	0	10M	41395	1	49	22.5	21.89
CA 41C	20M	41490	1	0	10M	41346	1	49	22.5	21.86
CA 41C	15M	41515	1	0	15M	41365	1	74	22.5	21.84
CA 41C	20M	41490	1	0	15M	41319	1	74	22.5	21.59
CA 41C	20M	41490	1	0	20M	41292	1	99	22.5	21.31

41C PC3-DSI3

41C										
UL LTE CA Class	PCC				SCC				Power	
	CC Bandwidth	channel	RB	RB OFFSET	CC Bandwidth	channel	RB	RB OFFSET	tune up	conducted power (dBm)
CA 41C	20M	39750	1	99	5M	39867	1	0	20.5	19.19
CA 41C	15M	39725	1	74	10M	39845	1	0	20.5	18.69
CA 41C	20M	39750	1	99	10M	39894	1	0	20.5	18.9
CA 41C	20M	39750	1	99	15M	39921	1	0	20.5	19.03
CA 41C	20M	39750	1	99	20M	39948	1	0	20.5	19.15
CA 41C	20M	41490	1	0	5M	41373	1	24	20.5	20.02
CA 41C	15M	41515	1	0	10M	41395	1	49	20.5	19.84
CA 41C	20M	41490	1	0	10M	41346	1	49	20.5	19.91
CA 41C	15M	41515	1	0	15M	41365	1	74	20.5	19.83
CA 41C	20M	41490	1	0	15M	41319	1	74	20.5	19.56
CA 41C	20M	41490	1	0	20M	41292	1	99	20.5	19.16

11.3 Wi-Fi and BT Measurement result

The maximum output power of BT antenna is 11.35dBm.

The maximum tune up of BT antenna is 13dBm.

Low power for WLAN by Simultaneous transmission.

The average conducted power for Wi-Fi 2.4G is as following:

2.4GHz	
802.11b(dBm)	
Channel\data rate	1Mbps
11(2462MHz)	19.65
6(2437MHz)	19.46
1(2412MHz)	19.19
tune up	20.00
802.11g(dBm)	
Channel\data rate	6Mbps
11(2462MHz)	18.43
6(2437MHz)	18.27
1(2412MHz)	17.91
tune up	19.00
802.11n(dBm)-20MHz	
Channel\data rate	MCS0
11(2462MHz)	18.26
6(2437MHz)	18.11
1(2412MHz)	17.76
tune up	19.00

The average conducted power for Wi-Fi 5G is as following-Normal Power:

5GHz	
802.11a(dBm)	
Channel\data rate	6Mbps
36(5180 MHz)	17.71
40(5200 MHz)	17.90
44(5220 MHz)	18.06
48(5240 MHz)	17.49
tune up	18.50
52(5260 MHz)	17.29
56(5280 MHz)	17.36
60(5300 MHz)	17.31
64(5320 MHz)	17.49
tune up	18.50
100(5500 MHz)	17.12
104(5520 MHz)	17.23
108(5540 MHz)	17.22
112(5560 MHz)	18.10
116(5580 MHz)	18.15
120(5600 MHz)	18.03
124(5620 MHz)	17.50
128(5640 MHz)	17.41
132(5660 MHz)	17.45
136(5680 MHz)	17.64
140(5700 MHz)	17.87
144(5720 MHz)	17.96
tune up	18.50
149(5745 MHz)	17.95
153(5765 MHz)	17.96
157(5785 MHz)	18.08
161(5805 MHz)	18.09
165(5825 MHz)	18.36
tune up	18.50

The average conducted power for Wi-Fi 5G is as following-Low Power:

5GHz	
802.11a(dBm)	
Channel\data rate	6Mbps
36(5180 MHz)	17.02
40(5200 MHz)	16.71
44(5220 MHz)	16.54
48(5240 MHz)	16.14
tune up	17.70
52(5260 MHz)	16.12
56(5280 MHz)	16.19
60(5300 MHz)	16.21
64(5320 MHz)	16.33
tune up	17.70
100(5500 MHz)	16.36
104(5520 MHz)	16.44
108(5540 MHz)	16.49
112(5560 MHz)	16.53
116(5580 MHz)	16.62
120(5600 MHz)	16.11
124(5620 MHz)	16.25
128(5640 MHz)	16.33
132(5660 MHz)	16.32
136(5680 MHz)	16.24
140(5700 MHz)	16.41
144(5720 MHz)	16.43
tune up	17.70
149(5745 MHz)	16.82
153(5765 MHz)	16.81
157(5785 MHz)	16.73
161(5805 MHz)	16.52
165(5825 MHz)	16.98
tune up	17.70

12 Simultaneous TX SAR Considerations

12.1 Transmit Antenna Separation Distances

The detail for transmit antenna separation distances is described in the additional document:

Appendix to test report No.I22Z61849-SEM01

The photos of SAR test

12.2 SAR Measurement Positions

According to the KDB941225 D06 Hot Spot SAR, 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
Main Antenna	< 25mm	< 25mm	< 25mm	< 25mm	> 25mm	< 25mm
WiFi/BT Antenna	< 25mm	< 25mm	< 25mm	> 25mm	< 25mm	> 25mm

13 Evaluation of Simultaneous

Reported SAR 1g (W/kg)																				
State		1														2	3	4	1+2	1+3+4
Head		G8500	G1900	W1900	W1700	W850	LTE B2	LTE B5	LTE B12	LTE B13	LTE B30	LTE B41 PC2	LTE B41 PC3	LTE B66	LTE B71	WiFi 2.4G	WiFi 5G	BT	1+2	1+3+4
Cheek	L	0.31	0.14	0.45	0.16	0.26	0.37	0.33	0.16	0.22	0.16	0.00	0.00	0.17	0.18	0.97	0.85	0.11	1.42	1.41
Tilt	L	0.13	0.09	0.37	0.13	0.18	0.33	0.21	0.11	0.17	0.09	0.00	0.00	0.17	0.10	0.95	1.12	0.10	1.32	1.59
Cheek	R	0.22	0.09	0.37	0.26	0.28	0.34	0.31	0.24	0.30	0.05	0.00	0.04	0.24	0.26	0.47	0.58	0.00	0.84	0.95
Tilt	R	0.11	0.07	0.31	0.11	0.15	0.24	0.20	0.13	0.14	0.10	0.00	0.00	0.16	0.16	0.65	0.88	0.00	0.96	1.19

State		1														2	3	4	1+2	1+3+4
Hotspot		G8500	G1900	W1900	W1700	W850	LTE B2	LTE B5	LTE B12	LTE B13	LTE B30	LTE B41 PC2	LTE B41 PC3	LTE B66	LTE B71	WiFi 2.4G	WiFi 5G	BT	1+2	1+3+4
Front	10mm	0.20	0.55	0.65	0.45	0.23	0.99	0.37	0.32	0.38	0.59	0.49	0.42	0.42	0.33	0.24	0.27	<0.01	1.23	1.26
Rear	10mm	0.39	0.65	0.73	0.71	0.38	1.15	0.49	0.46	0.54	1.25	0.54	0.48	0.73	0.45	0.54	0.84	<0.01	1.79	2.09
Left	10mm	0.18	0.22	0.28	0.09	0.21	0.50	0.19	0.22	0.36	0.29	0.13	0.06	0.11	0.37	0.05	0.06	<0.01	0.55	0.56
Right	10mm	0.21	0.10	0.15	0.13	0.24	0.09	0.32	0.26	0.45	0.08	0.03	0.05	0.13	0.46	0.26	0.41	<0.01	0.72	0.87
Bottom	10mm	0.05	1.00	0.96	1.06	0.05	1.31	0.05	0.08	0.07	1.01	1.22	0.99	0.91	0.09	0.00	0.00	<0.01	1.31	1.31
Top	10mm	/	/	/	/	/	/	/	/	/	/	/	/	/	/	0.34	0.79	<0.01	0.34	0.79

State		1														2	3	4	1+2	1+3+4
rev off		G8500	G1900	W1900	W1700	W850	LTE B2	LTE B5	LTE B12	LTE B13	LTE B30	LTE B41 PC2	LTE B41 PC3	LTE B66	LTE B71	WiFi 2.4G	WiFi 5G	BT	1+2	1+3+4
Front	15mm	0.23	0.39	0.61	0.50	0.28	0.70	0.37	0.36	0.40	0.29	0.59	0.76	0.50	0.32	0.14	0.15	<0.01	0.90	0.91
Rear	15mm	0.34	0.49	0.78	0.98	0.33	0.76	0.44	0.45	0.49	0.47	0.91	1.05	0.88	0.40	0.27	0.81	<0.01	1.32	1.86

State		1							2	3	4	1+2	1+3+4	
limb SAR		G1900	W1900	W1700	LTE B2	LTE B30	LTE B41 PC2	LTE B41 PC3	LTE B66	WiFi 2.4G	WiFi 5G	BT	1+2	1+3+4
Front	0mm	/	1.86	1.56	/	/	/	/	/	0.79	0.46	0.08	2.65	2.40
Rear	0mm	/	3.02	2.39	/	2.84	/	/	/	1.09	1.18	0.16	4.11	4.36
Bottom	0mm	2.88	2.39	2.79	2.38	/	1.72	1.75	2.69	/	/	/	2.88	2.94

Band	Position	SAR (W/kg)	distance	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
LTEB2	Rear 10mm	1.15	168.01	1.69	0.013	Not required
WLAN 2.4G		0.54				
LTEB30	Rear 10mm	1.25	151	1.79	0.016	Not required
WLAN 2.4G		0.54				
LTEB2	Rear 10mm	1.15	161.55	1.99	0.017	Not required
WLAN 5G		0.84				
LTEB2	Rear 10mm	1.15	159.31	1.99	0.018	Not required
BT		0.84				
LTEB30	Rear 10mm	1.25	166.11	2.09	0.018	Not required
WLAN 5G		0.84				
LTEB30	Rear 10mm	1.25	163.99	2.09	0.018	Not required
BT		0.84				

Band	Position	SAR (W/kg)	distance	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
WCDMA1700 WLAN 5G	Rear 15mm	0.98 0.81	151	1.79	0.0159	Not required
WCDMA1700 BT	Rear 15mm	0.98 0.81	148	1.79	0.0162	Not required
LTEB41 PC2 WLAN 5G	Rear 15mm	1.00 0.81	165.77	1.81	0.015	Not required
LTEB41 PC2 BT	Rear 15mm	1.00 0.81	167.34	1.81	0.015	Not required
LTEB41 PC3 WLAN 5G	Rear 15mm	0.98 0.81	165.82	1.79	0.014	Not required
LTEB41 PC3 BT	Rear 15mm	0.98 0.81	167.4	1.79	0.014	Not required
LTEB66 PC3 WLAN 5G	Rear 15mm	0.88 0.81	172.39	1.69	0.013	Not required
LTEB66 PC3 BT	Rear 15mm	0.88 0.81	174.14	1.69	0.013	Not required
WCDMA1900 WLAN 2.4G	Rear 0mm	3.02 1.09	175.74	4.11	0.047	Not required
WCDMA1900 WLAN 5G	Rear 0mm	3.02 1.29	158.91	4.31	0.056	Not required
WCDMA1900 BT	Rear 0mm	3.02 1.29	163.62	4.31	0.055	Not required
LTEB30 WLAN 5G	Rear 0mm	2.84 1.29	147.4	4.13	0.057	Not required
LTEB30 BT	Rear 0mm	2.84 1.29	151.84	4.13	0.055	Not required

Conclusion:

According to the above tables, the sum of reported SAR values is <math>< 1.6\text{W/kg}</math>. So the simultaneous transmission SAR with volume scans is not required.

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

KDB 941225 D05 SAR for LTE Devices:

SAR test reduction is applied using the following criteria:

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

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

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

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

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

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

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

KDB 248227 D01 SAR meas for 802.11:

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

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 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.

Table 15.1: 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<E FDD	1:1
TDD PC3	1:1.58



14.1 SAR results for 2G/3G/4G

Phone2=Mobile phones for Second Supply

Note: The difference between the two suppliers are that the suppliers are different and the part specifications are the same.

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	251	848.8	GSM	Cheek Left	0mm	F.1	32.37	33.50	0.240	0.31	0.190	0.25	0.00
Head	GSM850	190	836.6	GSM	Cheek Left	0mm	\	32.96	33.50	0.208	0.24	0.160	0.18	0.02
Head	GSM850	128	824.2	GSM	Cheek Left	0mm	\	32.90	33.50	0.173	0.20	0.133	0.15	0.19
Head	GSM850	190	836.6	GSM	Tilt Left	0mm	\	32.96	33.50	0.112	0.13	0.089	0.10	0.08
Head	GSM850	190	836.6	GSM	Cheek Right	0mm	\	32.96	33.50	0.197	0.22	0.154	0.17	-0.18
Head	GSM850	190	836.6	GSM	Tilt Right	0mm	\	32.96	33.50	0.098	0.11	0.081	0.09	-0.13
Hotspot	GSM850	190	836.6	GPRS(2TX)	Front	10mm	\	31.72	32.50	0.170	0.20	0.124	0.15	-0.06
Hotspot	GSM850	251	848.8	GPRS(2TX)	Rear	10mm	F.2	31.87	32.50	0.334	0.39	0.215	0.25	0.00
Hotspot	GSM850	190	836.6	GPRS(2TX)	Rear	10mm	\	31.72	32.50	0.249	0.30	0.163	0.20	0.02
Hotspot	GSM850	128	824.2	GPRS(2TX)	Rear	10mm	\	31.60	32.50	0.256	0.31	0.193	0.24	-0.14
Hotspot	GSM850	190	836.6	GPRS(2TX)	Left	10mm	\	31.72	32.50	0.153	0.18	0.103	0.12	0.03
Hotspot	GSM850	190	836.6	GPRS(2TX)	Right	10mm	\	31.72	32.50	0.176	0.21	0.116	0.14	0.17
Hotspot	GSM850	190	836.6	GPRS(2TX)	Bottom	10mm	\	31.72	32.50	0.043	0.05	0.024	0.03	-0.08
Hotspot	GSM850	251	848.8	EGPRS(2TX)	Rear	10mm	\	31.41	32.50	0.271	0.35	0.205	0.26	0.05
Body	GSM850	190	836.6	GPRS(2TX)	Front	15mm	\	31.72	32.50	0.195	0.23	0.148	0.18	0.11
Body	GSM850	251	848.8	GPRS(2TX)	Rear	15mm	F.3	31.87	32.50	0.293	0.34	0.221	0.26	-0.15
Body	GSM850	190	836.6	GPRS(2TX)	Rear	15mm	\	31.72	32.50	0.266	0.32	0.201	0.24	-0.10
Body	GSM850	128	824.2	GPRS(2TX)	Rear	15mm	\	31.60	32.50	0.262	0.32	0.196	0.24	-0.17
Head	GSM1900	810	1909.8	GSM	Cheek Left	0mm	F.4	29.66	30.50	0.112	0.14	0.072	0.09	0.06
Head	GSM1900	661	1880	GSM	Cheek Left	0mm	\	29.84	30.50	0.096	0.11	0.062	0.07	0.01
Head	GSM1900	512	1850.2	GSM	Cheek Left	0mm	\	29.93	30.50	0.084	0.10	0.055	0.06	0.18
Head	GSM1900	661	1880	GSM	Tilt Left	0mm	\	29.84	30.50	0.076	0.09	0.050	0.06	0.19
Head	GSM1900	661	1880	GSM	Cheek Right	0mm	\	29.84	30.50	0.078	0.09	0.051	0.06	-0.17
Head	GSM1900	661	1880	GSM	Tilt Right	0mm	\	29.84	30.50	0.060	0.07	0.040	0.05	0.08
Hotspot	GSM1900	661	1880	GPRS(4TX)	Front	10mm	\	25.22	26.00	0.456	0.55	0.275	0.33	0.03
Hotspot	GSM1900	661	1880	GPRS(4TX)	Rear	10mm	\	25.22	26.00	0.546	0.65	0.295	0.35	-0.14
Hotspot	GSM1900	661	1880	GPRS(4TX)	Left	10mm	\	25.22	26.00	0.187	0.22	0.110	0.13	-0.07
Hotspot	GSM1900	661	1880	GPRS(4TX)	Right	10mm	\	25.22	26.00	0.085	0.10	0.050	0.06	-0.14
Hotspot	GSM1900	810	1909.8	GPRS(4TX)	Bottom	10mm	\	25.03	26.00	0.774	0.97	0.404	0.51	0.08
Hotspot	GSM1900	661	1880	GPRS(4TX)	Bottom	10mm	\	25.22	26.00	0.774	0.93	0.434	0.52	-0.19
Hotspot	GSM1900	512	1850.2	GPRS(4TX)	Bottom	10mm	F.5	25.35	26.00	0.864	1.00	0.456	0.53	-0.05
Hotspot	GSM1900	512	1850.2	EGPRS(4TX)	Rear	10mm	\	25.04	26.00	0.780	0.97	0.439	0.55	0.19
Body	GSM1900	661	1880	GPRS(4TX)	Front	15mm	\	26.75	27.50	0.324	0.39	0.187	0.22	-0.16
Body	GSM1900	810	1880	GPRS(4TX)	Rear	15mm	F.6	26.55	27.50	0.392	0.49	0.214	0.27	-0.08
Body	GSM1900	661	1880	GPRS(4TX)	Rear	15mm	\	26.75	27.50	0.390	0.46	0.211	0.25	-0.02
Body	GSM1900	512	1880	GPRS(4TX)	Rear	15mm	\	26.86	27.50	0.363	0.42	0.195	0.23	-0.01
Head	WCDMA1900	9538	1907.6	RMC	Cheek Left	0mm	\	24.20	25.00	0.381	0.46	0.242	0.29	0.17
Head	WCDMA1900	9400	1880	RMC	Cheek Left	0mm	F.7	24.54	25.00	0.409	0.45	0.262	0.29	0.03
Head	WCDMA1900	9262	1852.4	RMC	Cheek Left	0mm	\	24.37	25.00	0.381	0.44	0.244	0.28	-0.12
Head	WCDMA1900	9400	1880	RMC	Tilt Left	0mm	\	24.54	25.00	0.337	0.37	0.211	0.23	-0.04
Head	WCDMA1900	9400	1880	RMC	Cheek Right	0mm	\	24.54	25.00	0.335	0.37	0.212	0.24	0.12
Head	WCDMA1900	9400	1880	RMC	Tilt Right	0mm	\	24.54	25.00	0.276	0.31	0.179	0.20	-0.01
Hotspot	WCDMA1900	9400	1880	RMC	Front	10mm	\	21.53	22.00	0.581	0.65	0.331	0.37	-0.06
Hotspot	WCDMA1900	9400	1880	RMC	Rear	10mm	\	21.53	22.00	0.652	0.73	0.345	0.38	-0.12
Hotspot	WCDMA1900	9400	1880	RMC	Left	10mm	\	21.53	22.00	0.254	0.28	0.147	0.16	0.00
Hotspot	WCDMA1900	9400	1880	RMC	Right	10mm	\	21.53	22.00	0.134	0.15	0.076	0.08	0.05
Hotspot	WCDMA1900	9538	1907.6	RMC	Bottom	10mm	F.8	21.46	22.00	0.850	0.96	0.451	0.51	-0.09
Hotspot	WCDMA1900	9400	1880	RMC	Bottom	10mm	\	21.53	22.00	0.817	0.91	0.432	0.48	0.10
Hotspot	WCDMA1900	9262	1852.4	RMC	Bottom	10mm	\	21.47	22.00	0.833	0.94	0.444	0.50	-0.12
Body	WCDMA1900	9400	1880	RMC	Front	15mm	\	24.42	25.00	0.534	0.61	0.295	0.34	-0.17
Body	WCDMA1900	9538	1907.6	RMC	Rear	15mm	F.9	24.20	25.00	0.651	0.78	0.336	0.40	0.03
Body	WCDMA1900	9400	1880	RMC	Rear	15mm	\	24.42	25.00	0.583	0.67	0.299	0.34	-0.09
Body	WCDMA1900	9262	1852.4	RMC	Rear	15mm	\	24.37	25.00	0.547	0.63	0.282	0.33	-0.09
Head	WCDMA1700	1413	1732.6	RMC	Cheek Left	0mm	\	24.41	25.00	0.143	0.16	0.098	0.11	0.09
Head	WCDMA1700	1413	1732.6	RMC	Tilt Left	0mm	\	24.41	25.00	0.117	0.13	0.078	0.09	-0.10
Head	WCDMA1700	1513	1752.6	RMC	Cheek Right	0mm	\	24.46	25.00	0.187	0.21	0.122	0.14	-0.05
Head	WCDMA1700	1413	1732.6	RMC	Cheek Right	0mm	\	24.41	25.00	0.196	0.22	0.129	0.15	0.09
Head	WCDMA1700	1312	1712.4	RMC	Cheek Right	0mm	F.10	24.15	25.00	0.216	0.26	0.142	0.17	0.06
Head	WCDMA1700	1413	1732.6	RMC	Tilt Right	0mm	\	24.41	25.00	0.095	0.11	0.065	0.07	-0.07
Hotspot	WCDMA1700	1413	1732.6	RMC	Front	10mm	\	19.62	20.50	0.367	0.45	0.211	0.26	-0.13
Hotspot	WCDMA1700	1413	1732.6	RMC	Rear	10mm	\	19.62	20.50	0.580	0.71	0.310	0.38	0.16
Hotspot	WCDMA1700	1413	1732.6	RMC	Left	10mm	\	19.62	20.50	0.072	0.09	0.044	0.05	0.19
Hotspot	WCDMA1700	1413	1732.6	RMC	Right	10mm	\	19.62	20.50	0.107	0.13	0.061	0.07	0.15
Hotspot	WCDMA1700	1513	1752.6	RMC	Bottom	10mm	\	19.68	20.50	0.764	0.92	0.402	0.49	0.18
Hotspot	WCDMA1700	1413	1732.6	RMC	Bottom	10mm	F.11	19.62	20.50	0.868	1.06	0.458	0.56	-0.03
Hotspot	WCDMA1700	1312	1712.4	RMC	Bottom	10mm	\	19.73	20.50	0.598	0.71	0.209	0.25	-0.04
Body	WCDMA1700	1413	1732.6	RMC	Front	15mm	\	24.41	25.00	0.438	0.50	0.267	0.31	-0.02
Body	WCDMA1700	1513	1752.6	RMC	Rear	15mm	\	24.46	25.00	0.601	0.68	0.351	0.40	-0.07
Body	WCDMA1700	1413	1732.6	RMC	Rear	15mm	\	24.41	25.00	0.729	0.84	0.427	0.49	-0.11
Body	WCDMA1700	1312	1712.4	RMC	Rear	15mm	F.12	24.15	25.00	0.806	0.98	0.470	0.57	-0.12



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	WCDMA 850	4183	836.6	RMC	Cheek Left	0mm	\	24.36	25.00	0.227	0.26	0.181	0.21	-0.02
Head	WCDMA 850	4183	836.6	RMC	Tilt Left	0mm	\	24.36	25.00	0.152	0.18	0.126	0.15	0.04
Head	WCDMA 850	4233	846.6	RMC	Cheek Right	0mm	F.13	24.43	25.00	0.248	0.28	0.198	0.23	0.03
Head	WCDMA 850	4183	836.6	RMC	Cheek Right	0mm	\	24.36	25.00	0.230	0.27	0.188	0.22	0.10
Head	WCDMA 850	4132	826.4	RMC	Cheek Right	0mm	\	24.23	25.00	0.234	0.28	0.187	0.22	0.07
Head	WCDMA 850	4183	836.6	RMC	Tilt Right	0mm	\	24.36	25.00	0.132	0.15	0.109	0.13	-0.17
Hotspot	WCDMA 850	4183	836.6	RMC	Front	10mm	\	24.36	25.00	0.195	0.23	0.126	0.15	0.15
Hotspot	WCDMA 850	4233	846.6	RMC	Rear	10mm	\	24.43	25.00	0.260	0.30	0.170	0.19	-0.06
Hotspot	WCDMA 850	4183	836.6	RMC	Rear	10mm	\	24.36	25.00	0.259	0.30	0.168	0.19	0.03
Hotspot	WCDMA 850	4132	826.4	RMC	Rear	10mm	F.14	24.23	25.00	0.316	0.38	0.204	0.24	-0.12
Hotspot	WCDMA 850	4183	836.6	RMC	Left	10mm	\	24.36	25.00	0.183	0.21	0.108	0.13	0.04
Hotspot	WCDMA 850	4183	836.6	RMC	Right	10mm	\	24.36	25.00	0.208	0.24	0.123	0.14	0.13
Hotspot	WCDMA 850	4183	836.6	RMC	Bottom	10mm	\	24.36	25.00	0.047	0.05	0.025	0.03	-0.07
Body	WCDMA 850	4183	836.6	RMC	Front	15mm	\	24.36	25.00	0.239	0.28	0.179	0.21	-0.02
Body	WCDMA 850	4233	846.6	RMC	Rear	15mm	\	24.43	25.00	0.265	0.30	0.200	0.23	0.19
Body	WCDMA 850	4183	836.6	RMC	Rear	15mm	F.15	24.36	25.00	0.282	0.33	0.214	0.25	-0.08
Body	WCDMA 850	4132	826.4	RMC	Rear	15mm	\	24.23	25.00	0.222	0.27	0.130	0.16	0.11
Head	LTE Band2	18900	1880	1RB-Mid	Cheek Left	0mm	F.16	24.40	25.00	0.321	0.37	0.212	0.24	-0.03
Head	LTE Band2	18900	1880	1RB-Mid	Tilt Left	0mm	\	24.40	25.00	0.290	0.33	0.185	0.21	0.18
Head	LTE Band2	18900	1880	1RB-Mid	Cheek Right	0mm	\	24.40	25.00	0.299	0.34	0.187	0.21	-0.15
Head	LTE Band2	18900	1880	1RB-Mid	Tilt Right	0mm	\	24.40	25.00	0.208	0.24	0.137	0.16	-0.15
Head	LTE Band2	18900	1880	50RB-Mid	Cheek Left	0mm	\	23.32	24.00	0.250	0.29	0.162	0.19	0.02
Head	LTE Band2	18900	1880	50RB-Mid	Tilt Left	0mm	\	23.32	24.00	0.241	0.28	0.154	0.18	-0.10
Head	LTE Band2	18900	1880	50RB-Mid	Cheek Right	0mm	\	23.32	24.00	0.242	0.28	0.155	0.18	-0.11
Head	LTE Band2	18900	1880	50RB-Mid	Tilt Right	0mm	\	23.32	24.00	0.166	0.19	0.109	0.13	0.15
Hotspot	LTE Band2	18900	1880	1RB-Mid	Front	10mm	\	22.16	23.00	0.813	0.99	0.453	0.55	-0.01
Hotspot	LTE Band2	19100	1900	1RB-Mid	Rear	10mm	\	21.99	23.00	0.912	1.15	0.473	0.60	0.02
Hotspot	LTE Band2	18900	1880	1RB-Mid	Rear	10mm	\	22.16	23.00	0.950	1.15	0.491	0.60	-0.12
Hotspot	LTE Band2	18700	1860	1RB-Mid	Rear	10mm	\	22.13	23.00	0.907	1.11	0.468	0.57	-0.06
Hotspot	LTE Band2	18900	1880	1RB-Mid	Left	10mm	\	22.16	23.00	0.412	0.50	0.240	0.29	0.06
Hotspot	LTE Band2	18900	1880	1RB-Mid	Right	10mm	\	22.16	23.00	0.078	0.09	0.043	0.05	0.08
Hotspot	LTE Band2	19100	1900	1RB-Mid	Bottom	10mm	\	21.99	23.00	0.953	1.20	0.519	0.65	0.03
Hotspot	LTE Band2	18900	1880	1RB-Mid	Bottom	10mm	F.17	22.16	23.00	1.080	1.31	0.575	0.70	-0.07
Hotspot	LTE Band2	18700	1860	1RB-Mid	Bottom	10mm	\	22.13	23.00	0.966	1.18	0.527	0.64	0.15
Hotspot	LTE Band2	18900	1880	50RB-Mid	Front	10mm	\	21.23	22.00	0.717	0.86	0.410	0.49	-0.18
Hotspot	LTE Band2	19100	1900	50RB-Mid	Rear	10mm	\	21.13	22.00	0.711	0.87	0.376	0.46	0.15
Hotspot	LTE Band2	18900	1880	50RB-Mid	Rear	10mm	\	21.23	22.00	0.750	0.90	0.397	0.47	0.14
Hotspot	LTE Band2	18700	1860	50RB-Mid	Rear	10mm	\	21.22	22.00	0.724	0.87	0.381	0.46	-0.19
Hotspot	LTE Band2	18900	1880	50RB-Mid	Left	10mm	\	21.23	22.00	0.332	0.40	0.195	0.23	-0.01
Hotspot	LTE Band2	18900	1880	50RB-Mid	Right	10mm	\	21.23	22.00	0.133	0.16	0.076	0.09	0.19
Hotspot	LTE Band2	19100	1900	50RB-Mid	Bottom	10mm	\	21.13	22.00	0.893	1.09	0.448	0.55	0.07
Hotspot	LTE Band2	18900	1880	50RB-Mid	Bottom	10mm	\	21.23	22.00	0.927	1.11	0.473	0.56	0.19
Hotspot	LTE Band2	18700	1860	50RB-Mid	Bottom	10mm	\	21.22	22.00	0.904	1.08	0.455	0.54	0.02
Hotspot	LTE Band2	18900	1880	100RB	Rear	10mm	\	21.14	22.00	0.704	0.86	0.366	0.45	0.15
Hotspot	LTE Band2	18900	1880	100RB	Bottom	10mm	\	21.14	22.00	0.901	1.10	0.452	0.55	0.03
Hotspot	LTE Band2	18900	1880	1RB-Mid	Bottom	10mm	Phone2	22.16	23.00	0.973	1.18	0.524	0.64	0.15
Body	LTE Band2	18900	1880	1RB-Mid	Front	15mm	\	22.16	23.00	0.575	0.70	0.340	0.41	0.08
Body	LTE Band2	18900	1880	1RB-Mid	Rear	15mm	F.18	22.16	23.00	0.623	0.76	0.351	0.43	0.11
Body	LTE Band2	18900	1880	50RB-Mid	Front	15mm	\	21.23	22.00	0.465	0.56	0.272	0.32	0.14
Body	LTE Band2	18900	1880	50RB-Mid	Rear	15mm	\	21.23	22.00	0.506	0.60	0.284	0.34	0.04
Head	LTE Band5	20600	844	1RB-Low	Cheek Left	0mm	F.19	24.43	25.00	0.293	0.33	0.225	0.26	0.01
Head	LTE Band5	20600	844	1RB-Low	Tilt Left	0mm	\	24.43	25.00	0.185	0.21	0.147	0.17	0.01
Head	LTE Band5	20600	844	1RB-Low	Cheek Right	0mm	\	24.43	25.00	0.272	0.31	0.211	0.24	-0.06
Head	LTE Band5	20600	844	1RB-Low	Tilt Right	0mm	\	24.43	25.00	0.174	0.20	0.138	0.16	-0.12
Head	LTE Band5	20600	844	25RB-Mid	Cheek Left	0mm	\	23.27	24.00	0.232	0.27	0.176	0.21	0.17
Head	LTE Band5	20600	844	25RB-Mid	Tilt Left	0mm	\	23.27	24.00	0.121	0.14	0.092	0.11	-0.07
Head	LTE Band5	20600	844	25RB-Mid	Cheek Right	0mm	\	23.27	24.00	0.213	0.25	0.164	0.19	-0.06
Head	LTE Band5	20600	844	25RB-Mid	Tilt Right	0mm	\	23.27	24.00	0.136	0.16	0.109	0.13	0.13
Hotspot	LTE Band5	20600	844	1RB-Low	Front	10mm	\	24.43	25.00	0.322	0.37	0.342	0.39	-0.03
Hotspot	LTE Band5	20600	844	1RB-Low	Rear	10mm	F.20	24.43	25.00	0.433	0.49	0.332	0.38	0.04
Hotspot	LTE Band5	20600	844	1RB-Low	Left	10mm	\	24.43	25.00	0.169	0.19	0.179	0.20	0.05
Hotspot	LTE Band5	20600	844	1RB-Low	Right	10mm	\	24.43	25.00	0.284	0.32	0.302	0.34	-0.11
Hotspot	LTE Band5	20600	844	1RB-Low	Bottom	10mm	\	24.43	25.00	0.041	0.05	0.044	0.05	0.14
Hotspot	LTE Band5	20600	844	25RB-Mid	Front	10mm	\	23.27	24.00	0.239	0.28	0.254	0.30	0.18
Hotspot	LTE Band5	20600	844	25RB-Mid	Rear	10mm	\	23.27	24.00	0.342	0.40	0.364	0.43	0.13
Hotspot	LTE Band5	20600	844	25RB-Mid	Left	10mm	\	23.27	24.00	0.144	0.17	0.154	0.18	-0.06
Hotspot	LTE Band5	20600	844	25RB-Mid	Right	10mm	\	23.27	24.00	0.246	0.29	0.261	0.31	0.19
Hotspot	LTE Band5	20600	844	25RB-Mid	Bottom	10mm	\	23.27	24.00	<0.01	<0.01	<0.01	<0.01	\
Body	LTE Band5	20600	844	1RB-Low	Front	15mm	\	24.43	25.00	0.321	0.37	0.244	0.28	-0.05
Body	LTE Band5	20600	844	1RB-Low	Rear	15mm	F.21	24.43	25.00	0.390	0.44	0.294	0.34	0.02
Body	LTE Band5	20600	844	25RB-Mid	Front	15mm	\	23.27	24.00	0.248	0.29	0.185	0.22	0.17
Body	LTE Band5	20600	844	25RB-Mid	Rear	15mm	\	23.27	24.00	0.309	0.37	0.234	0.28	-0.05



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	LTE Band12	23095	707.5	1RB-High	Cheek Left	0mm	\	24.48	25.00	0.141	0.16	0.112	0.13	0.17
Head	LTE Band12	23095	707.5	1RB-High	Tilt Left	0mm	\	24.48	25.00	0.098	0.11	0.079	0.09	0.04
Head	LTE Band12	23095	707.5	1RB-High	Cheek Right	0mm	F.22	24.48	25.00	0.213	0.24	0.168	0.19	0.06
Head	LTE Band12	23095	707.5	1RB-High	Tilt Right	0mm	\	24.48	25.00	0.119	0.13	0.095	0.11	0.05
Head	LTE Band12	23130	711	25RB-Low	Cheek Left	0mm	\	23.19	24.00	0.113	0.14	0.090	0.11	-0.04
Head	LTE Band12	23130	711	25RB-Low	Tilt Left	0mm	\	23.19	24.00	0.076	0.09	0.062	0.07	0.06
Head	LTE Band12	23130	711	25RB-Low	Cheek Right	0mm	\	23.19	24.00	0.170	0.20	0.135	0.16	0.17
Head	LTE Band12	23130	711	25RB-Low	Tilt Right	0mm	\	23.19	24.00	0.095	0.11	0.076	0.09	0.19
Hotspot	LTE Band12	23095	707.5	1RB-High	Front	10mm	\	24.48	25.00	0.285	0.32	0.221	0.25	-0.14
Hotspot	LTE Band12	23095	707.5	1RB-High	Rear	10mm	F.23	24.48	25.00	0.404	0.46	0.313	0.35	0.03
Hotspot	LTE Band12	23095	707.5	1RB-High	Left	10mm	\	24.48	25.00	0.197	0.22	0.139	0.16	-0.12
Hotspot	LTE Band12	23095	707.5	1RB-High	Right	10mm	\	24.48	25.00	0.231	0.26	0.163	0.18	0.02
Hotspot	LTE Band12	23095	707.5	1RB-High	Bottom	10mm	\	24.48	25.00	0.074	0.08	0.037	0.04	-0.10
Hotspot	LTE Band12	23130	711	25RB-Low	Front	10mm	\	23.19	24.00	0.229	0.28	0.176	0.21	-0.09
Hotspot	LTE Band12	23130	711	25RB-Low	Rear	10mm	\	23.19	24.00	0.326	0.39	0.251	0.30	0.10
Hotspot	LTE Band12	23130	711	25RB-Low	Left	10mm	\	23.19	24.00	0.112	0.13	0.079	0.10	-0.14
Hotspot	LTE Band12	23130	711	25RB-Low	Right	10mm	\	23.19	24.00	0.180	0.22	0.127	0.15	-0.10
Hotspot	LTE Band12	23130	711	25RB-Low	Bottom	10mm	\	23.19	24.00	0.066	0.08	0.029	0.03	-0.12
Body	LTE Band12	23095	707.5	1RB-High	Front	15mm	\	24.48	25.00	0.318	0.36	0.245	0.28	-0.17
Body	LTE Band12	23095	707.5	1RB-High	Rear	15mm	F.24	24.48	25.00	0.401	0.45	0.306	0.34	-0.01
Body	LTE Band12	23130	711	25RB-Low	Front	15mm	\	23.19	24.00	0.251	0.30	0.194	0.23	-0.06
Body	LTE Band12	23130	711	25RB-Low	Rear	15mm	\	23.19	24.00	0.323	0.39	0.247	0.30	0.16
Head	LTE Band13	23230	782	1RB-High	Cheek Left	0mm	\	23.89	25.00	0.174	0.22	0.136	0.18	-0.16
Head	LTE Band13	23230	782	1RB-High	Tilt Left	0mm	\	23.89	25.00	0.128	0.17	0.104	0.13	0.10
Head	LTE Band13	23230	782	1RB-High	Cheek Right	0mm	F.25	23.89	25.00	0.231	0.30	0.181	0.23	0.03
Head	LTE Band13	23230	782	1RB-High	Tilt Right	0mm	\	23.89	25.00	0.110	0.14	0.087	0.11	0.10
Head	LTE Band13	23230	782	25RB-Low	Cheek Left	0mm	\	22.86	24.00	0.139	0.18	0.108	0.14	-0.16
Head	LTE Band13	23230	782	25RB-Low	Tilt Left	0mm	\	22.86	24.00	0.104	0.14	0.083	0.11	0.02
Head	LTE Band13	23230	782	25RB-Low	Cheek Right	0mm	\	22.86	24.00	0.184	0.24	0.144	0.19	-0.01
Head	LTE Band13	23230	782	25RB-Low	Tilt Right	0mm	\	22.86	24.00	0.089	0.12	0.071	0.09	-0.10
Hotspot	LTE Band13	23230	782	1RB-High	Front	10mm	\	23.89	25.00	0.295	0.38	0.224	0.29	0.15
Hotspot	LTE Band13	23230	782	1RB-High	Rear	10mm	F.26	23.89	25.00	0.422	0.54	0.324	0.42	-0.03
Hotspot	LTE Band13	23230	782	1RB-High	Left	10mm	\	23.89	25.00	0.278	0.36	0.200	0.26	0.07
Hotspot	LTE Band13	23230	782	1RB-High	Right	10mm	\	23.89	25.00	0.347	0.45	0.245	0.32	0.07
Hotspot	LTE Band13	23230	782	1RB-High	Bottom	10mm	\	23.89	25.00	0.052	0.07	0.028	0.04	0.00
Hotspot	LTE Band13	23230	782	25RB-Low	Front	10mm	\	22.86	24.00	0.239	0.31	0.183	0.24	0.04
Hotspot	LTE Band13	23230	782	25RB-Low	Rear	10mm	\	22.86	24.00	0.343	0.45	0.263	0.34	-0.06
Hotspot	LTE Band13	23230	782	25RB-Low	Left	10mm	\	22.86	24.00	0.236	0.31	0.166	0.22	-0.18
Hotspot	LTE Band13	23230	782	25RB-Low	Right	10mm	\	22.86	24.00	0.276	0.36	0.196	0.25	-0.11
Hotspot	LTE Band13	23230	782	25RB-Low	Bottom	10mm	\	22.86	24.00	0.041	0.05	0.023	0.03	-0.10
Body	LTE Band13	23230	782	1RB-High	Front	15mm	\	23.89	25.00	0.307	0.40	0.233	0.30	0.10
Body	LTE Band13	23230	782	1RB-High	Rear	15mm	F.27	23.89	25.00	0.378	0.49	0.288	0.37	0.12
Body	LTE Band13	23230	782	25RB-Low	Front	15mm	\	22.86	24.00	0.252	0.33	0.190	0.25	-0.05
Body	LTE Band13	23230	782	25RB-Low	Rear	15mm	\	22.86	24.00	0.305	0.40	0.233	0.30	-0.10
Head	LTE Band30	27710	2310	1RB-High	Cheek Left	0mm	F.28	23.93	24.00	0.157	0.16	0.094	0.10	0.05
Head	LTE Band30	27710	2310	1RB-High	Tilt Left	0mm	\	23.93	24.00	0.088	0.09	0.054	0.05	-0.03
Head	LTE Band30	27710	2310	1RB-High	Cheek Right	0mm	\	23.93	24.00	0.046	0.05	0.029	0.03	0.03
Head	LTE Band30	27710	2310	1RB-High	Tilt Right	0mm	\	23.93	24.00	0.098	0.10	0.060	0.06	-0.16
Head	LTE Band30	27710	2310	25RB-Mid	Cheek Left	0mm	\	22.60	23.00	0.121	0.13	0.071	0.08	-0.05
Head	LTE Band30	27710	2310	25RB-Mid	Tilt Left	0mm	\	22.60	23.00	0.069	0.08	0.042	0.05	-0.17
Head	LTE Band30	27710	2310	25RB-Mid	Cheek Right	0mm	\	22.60	23.00	0.039	0.04	0.023	0.03	-0.10
Head	LTE Band30	27710	2310	25RB-Mid	Tilt Right	0mm	\	22.60	23.00	0.078	0.09	0.047	0.05	-0.10
Hotspot	LTE Band30	27710	2310	1RB-High	Front	10mm	\	22.93	23.00	0.578	0.59	0.268	0.27	-0.16
Hotspot	LTE Band30	27710	2310	1RB-High	Rear	10mm	F.29	22.93	23.00	1.230	1.25	0.541	0.55	0.12
Hotspot	LTE Band30	27710	2310	1RB-High	Left	10mm	\	22.93	23.00	0.290	0.29	0.158	0.16	0.02
Hotspot	LTE Band30	27710	2310	1RB-High	Right	10mm	\	22.93	23.00	0.079	0.08	0.043	0.04	-0.06
Hotspot	LTE Band30	27710	2310	1RB-High	Bottom	10mm	\	22.93	23.00	0.998	1.01	0.428	0.43	0.04
Hotspot	LTE Band30	27710	2310	25RB-Mid	Front	10mm	\	21.71	22.00	0.484	0.52	0.222	0.24	0.10
Hotspot	LTE Band30	27710	2310	25RB-Mid	Rear	10mm	\	21.71	22.00	0.777	0.83	0.347	0.37	0.08
Hotspot	LTE Band30	27710	2310	25RB-Mid	Left	10mm	\	21.71	22.00	0.224	0.24	0.123	0.13	0.12
Hotspot	LTE Band30	27710	2310	25RB-Mid	Right	10mm	\	21.71	22.00	0.061	0.07	0.034	0.04	0.12
Hotspot	LTE Band30	27710	2310	25RB-Mid	Bottom	10mm	\	21.71	22.00	0.777	0.83	0.334	0.36	-0.19
Hotspot	LTE Band30	27710	2310	50RB	Rear	10mm	\	21.62	22.00	0.759	0.83	0.336	0.37	0.06
Hotspot	LTE Band30	27710	2310	50RB	Rear	10mm	\	21.62	22.00	0.762	0.83	0.342	0.37	0.19
Body	LTE Band30	27710	2310	1RB-High	Front	15mm	\	21.93	22.00	0.283	0.29	0.148	0.15	-0.04
Body	LTE Band30	27710	2310	1RB-High	Rear	15mm	F.30	21.93	22.00	0.466	0.47	0.232	0.24	0.18
Body	LTE Band30	27710	2310	25RB-Mid	Front	15mm	\	20.74	21.00	0.225	0.24	0.118	0.13	0.12
Body	LTE Band30	27710	2310	25RB-Mid	Rear	15mm	\	20.74	21.00	0.372	0.39	0.184	0.20	0.09



Head	LTE Band41 PC2	41055	2636.5	1RB-Mid	Cheek Left	0mm	\	25.07	25.50	<0.01	<0.01	<0.01	<0.01	\
Head	LTE Band41 PC2	41055	2636.5	1RB-Mid	Tilt Left	0mm	\	25.07	25.50	<0.01	<0.01	<0.01	<0.01	\
Head	LTE Band41 PC2	41055	2636.5	1RB-Mid	Cheek Right	0mm	\	25.07	25.50	<0.01	<0.01	<0.01	<0.01	\
Head	LTE Band41 PC2	41055	2636.5	1RB-Mid	Tilt Right	0mm	\	25.07	25.50	<0.01	<0.01	<0.01	<0.01	\
Head	LTE Band41 PC2	41055	2636.5	50RB-High	Cheek Left	0mm	\	24.03	24.50	<0.01	<0.01	<0.01	<0.01	\
Head	LTE Band41 PC2	41055	2636.5	50RB-High	Tilt Left	0mm	\	24.03	24.50	<0.01	<0.01	<0.01	<0.01	\
Head	LTE Band41 PC2	41055	2636.5	50RB-High	Cheek Right	0mm	\	24.03	24.50	<0.01	<0.01	<0.01	<0.01	\
Head	LTE Band41 PC2	41055	2636.5	50RB-High	Tilt Right	0mm	\	24.03	24.50	<0.01	<0.01	<0.01	<0.01	\
Hotspot	LTE Band41 PC2	41055	2636.5	1RB-Mid	Front	10mm	\	21.10	22.00	0.376	0.46	0.122	0.15	-0.01
Hotspot	LTE Band41 PC2	41055	2636.5	1RB-Mid	Rear	10mm	\	21.10	22.00	0.438	0.54	0.201	0.25	0.15
Hotspot	LTE Band41 PC2	41055	2636.5	1RB-Mid	Left	10mm	\	21.10	22.00	0.109	0.13	0.056	0.07	0.11
Hotspot	LTE Band41 PC2	41055	2636.5	1RB-Mid	Right	10mm	\	21.10	22.00	0.016	0.02	0.007	0.01	0.17
Hotspot	LTE Band41 PC2	41490	2680	1RB-Mid	Bottom	10mm	\	20.66	22.00	0.881	1.20	0.399	0.54	0.15
Hotspot	LTE Band41 PC2	41055	2636.5	1RB-Mid	Bottom	10mm	F.31	21.10	22.00	0.994	1.22	0.425	0.52	0.04
Hotspot	LTE Band41 PC2	40620	2593	1RB-Mid	Bottom	10mm	\	20.90	22.00	0.943	1.21	0.411	0.53	0.19
Hotspot	LTE Band41 PC2	40185	2549.5	1RB-Mid	Bottom	10mm	\	20.85	22.00	0.932	1.21	0.406	0.53	-0.06
Hotspot	LTE Band41 PC2	39750	2506	1RB-Mid	Bottom	10mm	\	20.97	22.00	0.906	1.15	0.401	0.51	0.14
Hotspot	LTE Band41 PC2	41055	2636.5	50RB-Mid	Front	10mm	\	19.94	21.00	0.383	0.49	0.175	0.22	-0.19
Hotspot	LTE Band41 PC2	41055	2636.5	50RB-Mid	Rear	10mm	\	19.94	21.00	0.402	0.51	0.165	0.21	0.11
Hotspot	LTE Band41 PC2	41055	2636.5	50RB-Mid	Left	10mm	\	19.94	21.00	0.042	0.05	0.023	0.03	-0.03
Hotspot	LTE Band41 PC2	41055	2636.5	50RB-Mid	Right	10mm	\	19.94	21.00	0.023	0.03	0.013	0.02	-0.16
Hotspot	LTE Band41 PC2	41490	2680	50RB-High	Bottom	10mm	\	19.68	21.00	0.744	1.01	0.319	0.43	0.05
Hotspot	LTE Band41 PC2	41055	2636.5	50RB-Mid	Bottom	10mm	\	19.94	21.00	0.847	1.08	0.368	0.47	-0.10
Hotspot	LTE Band41 PC2	40620	2593	50RB-High	Bottom	10mm	\	19.88	21.00	0.769	1.00	0.324	0.42	-0.06
Hotspot	LTE Band41 PC2	40185	2549.5	50RB-High	Bottom	10mm	\	19.80	21.00	0.742	0.98	0.319	0.42	0.15
Hotspot	LTE Band41 PC2	39750	2506	50RB-High	Bottom	10mm	\	19.76	21.00	0.731	0.97	0.315	0.42	-0.08
Hotspot	LTE Band41 PC2	41055	2636.5	100RB	Bottom	10mm	\	19.93	21.00	0.804	1.03	0.351	0.45	0.19
Hotspot	LTE Band41 PC2	41490	2680	1RB-Low	Bottom	10mm	UL CA	21.08	22.00	0.827	1.02	0.361	0.45	0.04
Body	LTE Band41 PC2	41055	2636.5	1RB-Mid	Front	15mm	\	23.97	24.50	0.519	0.59	0.252	0.28	0.04
Body	LTE Band41 PC2	41490	2680	1RB-Mid	Rear	15mm	\	23.80	24.50	0.769	0.90	0.352	0.41	0.01
Body	LTE Band41 PC2	41055	2636.5	1RB-Mid	Rear	15mm	F.32	23.97	24.50	0.807	0.91	0.391	0.44	-0.07
Body	LTE Band41 PC2	40620	2593	1RB-Mid	Rear	15mm	\	23.83	24.50	0.724	0.84	0.339	0.40	0.12
Body	LTE Band41 PC2	40185	2549.5	1RB-Mid	Rear	15mm	\	23.83	24.50	0.711	0.83	0.316	0.37	0.08
Body	LTE Band41 PC2	39750	2506	1RB-Mid	Rear	15mm	\	23.61	24.50	0.709	0.87	0.311	0.38	-0.09
Body	LTE Band41 PC2	41055	2636.5	50RB-Mid	Front	15mm	\	22.96	23.50	0.410	0.46	0.201	0.23	0.05
Body	LTE Band41 PC2	41055	2636.5	50RB-Mid	Rear	15mm	\	22.96	23.50	0.645	0.73	0.305	0.35	-0.14
Body	LTE Band41 PC2	41055	2636.5	100RB	Rear	15mm	\	22.98	23.50	0.633	0.71	0.299	0.34	0.15
Body	LTE Band41 PC2	41490	2680	1RB-Low	Rear	15mm	UL CA	23.76	24.50	0.748	0.89	0.346	0.41	0.09
Head	LTE Band41 PC3	41055	2636.5	1RB-Mid	Cheek Left	0mm	\	24.34	24.50	<0.01	<0.01	<0.01	<0.01	\
Head	LTE Band41 PC3	41055	2636.5	1RB-Mid	Tilt Left	0mm	\	24.34	24.50	<0.01	<0.01	<0.01	<0.01	\
Head	LTE Band41 PC3	41055	2636.5	1RB-Mid	Cheek Right	0mm	F.33	24.34	24.50	0.042	0.04	0.022	0.02	0.00
Head	LTE Band41 PC3	41055	2636.5	1RB-Mid	Tilt Right	0mm	\	24.34	24.50	<0.01	<0.01	<0.01	<0.01	\
Head	LTE Band41 PC3	41055	2636.5	50RB-High	Cheek Left	0mm	\	23.35	23.50	<0.01	<0.01	<0.01	<0.01	\
Head	LTE Band41 PC3	41055	2636.5	50RB-High	Tilt Left	0mm	\	23.35	23.50	<0.01	<0.01	<0.01	<0.01	\
Head	LTE Band41 PC3	41055	2636.5	50RB-High	Cheek Right	0mm	\	23.35	23.50	0.028	0.03	0.015	0.02	-0.09
Head	LTE Band41 PC3	41055	2636.5	50RB-High	Tilt Right	0mm	\	23.35	23.50	<0.01	<0.01	<0.01	<0.01	\
Head	LTE Band41 PC3	41490	2680	1RB-Low	Cheek Right	0mm	UL CA	24.07	24.50	0.027	0.03	0.014	0.02	0.03
Hotspot	LTE Band41 PC3	41055	2636.5	1RB-Mid	Front	10mm	\	20.06	20.50	0.379	0.42	0.132	0.15	0.12
Hotspot	LTE Band41 PC3	41055	2636.5	1RB-Mid	Rear	10mm	\	20.06	20.50	0.431	0.48	0.197	0.22	0.17
Hotspot	LTE Band41 PC3	41055	2636.5	1RB-Mid	Left	10mm	\	20.06	20.50	0.054	0.06	0.032	0.04	-0.14
Hotspot	LTE Band41 PC3	41055	2636.5	1RB-Mid	Right	10mm	\	20.06	20.50	0.044	0.05	0.027	0.03	0.04
Hotspot	LTE Band41 PC3	41490	2680	1RB-Mid	Bottom	10mm	\	19.91	20.50	0.834	0.96	0.341	0.39	0.12
Hotspot	LTE Band41 PC3	41055	2636.5	1RB-Mid	Bottom	10mm	\	20.06	20.50	0.875	0.97	0.378	0.42	-0.03
Hotspot	LTE Band41 PC3	40620	2593	1RB-Mid	Bottom	10mm	\	19.94	20.50	0.844	0.96	0.352	0.40	0.06
Hotspot	LTE Band41 PC3	40185	2549.5	1RB-Mid	Bottom	10mm	\	19.99	20.50	0.821	0.92	0.336	0.38	0.02
Hotspot	LTE Band41 PC3	39750	2506	1RB-Mid	Bottom	10mm	\	19.83	20.50	0.817	0.95	0.331	0.39	0.15
Hotspot	LTE Band41 PC3	41055	2636.5	50RB-Mid	Front	10mm	\	18.98	19.50	0.299	0.34	0.115	0.13	0.06
Hotspot	LTE Band41 PC3	41055	2636.5	50RB-Mid	Rear	10mm	\	18.98	19.50	0.417	0.47	0.186	0.21	0.18
Hotspot	LTE Band41 PC3	41055	2636.5	50RB-Mid	Left	10mm	\	18.98	19.50	0.041	0.05	0.022	0.02	0.07
Hotspot	LTE Band41 PC3	41055	2636.5	50RB-Mid	Right	10mm	\	18.98	19.50	0.031	0.03	0.019	0.02	0.00
Hotspot	LTE Band41 PC3	41490	2680	50RB-Mid	Bottom	10mm	\	18.96	19.50	0.844	0.96	0.353	0.40	0.19
Hotspot	LTE Band41 PC3	41055	2636.5	50RB-Mid	Bottom	10mm	F.34	18.98	19.50	0.882	0.99	0.379	0.43	-0.08
Hotspot	LTE Band41 PC3	40620	2593	50RB-Mid	Bottom	10mm	\	18.89	19.50	0.852	0.98	0.359	0.41	0.15
Hotspot	LTE Band41 PC3	40185	2549.5	50RB-Mid	Bottom	10mm	\	18.92	19.50	0.846	0.97	0.356	0.41	0.18
Hotspot	LTE Band41 PC3	39750	2506	50RB-Mid	Bottom	10mm	\	18.69	19.50	0.819	0.99	0.334	0.40	-0.06
Hotspot	LTE Band41 PC3	41055	2636.5	100RB	Bottom	10mm	\	18.98	19.50	0.852	0.96	0.356	0.40	0.16
Hotspot	LTE Band41 PC3	41490	2680	1RB-Low	Bottom	10mm	UL CA	20.02	20.50	0.781	0.87	0.314	0.35	0.03
Body	LTE Band41 PC3	41055	2636.5	1RB-Mid	Front	15mm	\	22.05	22.50	0.682	0.76	0.318	0.35	0.16
Body	LTE Band41 PC3	41490	2680	1RB-Mid	Rear	15mm	\	21.91	22.50	0.883	1.01	0.418	0.48	0.02
Body	LTE Band41 PC3	41055	2636.5	1RB-Mid	Rear	15mm	F.35	22.05	22.50	0.943	1.05	0.458	0.51	0.09
Body	LTE Band41 PC3	40620	2593	1RB-Mid	Rear	15mm	\	21.91	22.50	0.861	0.99	0.401	0.46	-0.05
Body	LTE Band41 PC3	40185	2549.5	1RB-Mid	Rear	15mm	\	21.96	22.50	0.836	0.95	0.388	0.44	0.16
Body	LTE Band41 PC3	39750	2506	1RB-Mid	Rear	15mm	\	21.74	22.50	0.811	0.97	0.379	0.45	-0.03
Body	LTE Band41 PC3	41055	2636.5	50RB-Mid	Front	15mm	\	21.03	21.50	0.515	0.57	0.251	0.28	0.11
Body	LTE Band41 PC3	41490	2680	50RB-High	Rear	15mm	\	20.96	21.50	0.712	0.81	0.338	0.38	-0.04
Body	LTE Band41 PC3	41055	2636.5	50RB-Mid	Rear	15mm	\	21.03	21.50	0.760	0.85	0.370	0.41	0.03
Body	LTE Band41 PC3	40620	2593	50RB-High	Rear	15mm	\	20.84	21.50	0.694	0.81	0.324	0.38	0.07
Body	LTE Band41 PC3	40185	2549.5	50RB-High	Rear	15mm	\	20.92	21.50	0.674	0.77	0.313	0.36	0.11
Body	LTE Band41 PC3	39750	2506	50RB-High	Rear	15mm	\	20.69	21.50	0.654	0.79	0.306	0.37	-0.18
Body	LTE Band41 PC3	41055	2636.5	100RB	Rear	15mm	\	20.97	21.50	0.737	0.83	0.342	0.39	0.09
Body	LTE Band41 PC3	41490	2680	1RB-Low	Rear	15mm	UL CA	21.92	22.50	0.891	1.02	0.423	0.48	0.04

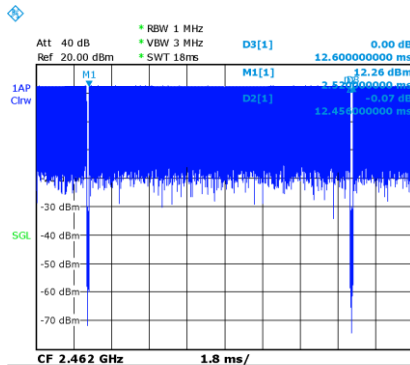


RF Exposure Conditions	Frequency Band	Channel Number	Frequency (MHz)	Mode/RB	Test Position	Distance	Figure No./Note	EUT Measured Power (dBm)	Tune up (dBm)	Measured SAR 1g (W/kg)	Reported SAR 1g (W/kg)	Measured SAR 10g (W/kg)	Reported SAR 10g (W/kg)	Power Drift
Head	LTE Band66	132072	1720	1RB-High	Cheek Left	0mm	\	24.40	24.50	0.166	0.17	0.115	0.12	0.00
Head	LTE Band66	132072	1720	1RB-High	Tilt Left	0mm	\	24.40	24.50	0.169	0.17	0.112	0.11	-0.11
Head	LTE Band66	132072	1720	1RB-High	Cheek Right	0mm	F.36	24.40	24.50	0.235	0.24	0.154	0.16	0.02
Head	LTE Band66	132072	1720	1RB-High	Tilt Right	0mm	\	24.40	24.50	0.160	0.16	0.108	0.11	0.05
Head	LTE Band66	132572	1770	50RB-High	Cheek Left	0mm	\	23.28	23.50	0.138	0.15	0.095	0.10	0.19
Head	LTE Band66	132572	1770	50RB-High	Tilt Left	0mm	\	23.28	23.50	0.136	0.14	0.091	0.10	0.09
Head	LTE Band66	132572	1770	50RB-High	Cheek Right	0mm	\	23.28	23.50	0.197	0.21	0.129	0.14	-0.10
Head	LTE Band66	132572	1770	50RB-High	Tilt Right	0mm	\	23.28	23.50	0.123	0.13	0.083	0.09	0.14
Hotspot	LTE Band66	132072	1720	1RB-High	Front	10mm	\	20.99	21.00	0.423	0.42	0.239	0.24	-0.04
Hotspot	LTE Band66	132072	1720	1RB-High	Rear	10mm	\	20.99	21.00	0.733	0.73	0.386	0.39	-0.15
Hotspot	LTE Band66	132072	1720	1RB-High	Left	10mm	\	20.99	21.00	0.107	0.11	0.064	0.06	0.03
Hotspot	LTE Band66	132072	1720	1RB-High	Right	10mm	\	20.99	21.00	0.125	0.13	0.075	0.08	0.05
Hotspot	LTE Band66	132572	1770	1RB-High	Bottom	10mm	\	20.80	21.00	0.863	0.90	0.442	0.46	0.13
Hotspot	LTE Band66	132322	1745	1RB-High	Bottom	10mm	\	20.76	21.00	0.834	0.88	0.425	0.45	-0.02
Hotspot	LTE Band66	132072	1720	1RB-High	Bottom	10mm	F.37	20.99	21.00	0.905	0.91	0.480	0.48	-0.06
Hotspot	LTE Band66	132572	1770	50RB-High	Front	10mm	\	19.58	20.00	0.325	0.36	0.194	0.21	0.00
Hotspot	LTE Band66	132572	1770	50RB-High	Rear	10mm	\	19.58	20.00	0.645	0.71	0.335	0.37	0.00
Hotspot	LTE Band66	132572	1770	50RB-High	Left	10mm	\	19.58	20.00	0.086	0.09	0.053	0.06	0.11
Hotspot	LTE Band66	132572	1770	50RB-High	Right	10mm	\	19.58	20.00	0.101	0.11	0.061	0.07	0.11
Hotspot	LTE Band66	132572	1770	50RB-High	Bottom	10mm	\	19.58	20.00	0.749	0.83	0.399	0.44	-0.11
Hotspot	LTE Band66	132322	1745	50RB-High	Bottom	10mm	\	19.51	20.00	0.733	0.82	0.389	0.44	0.02
Hotspot	LTE Band66	132072	1720	50RB-High	Bottom	10mm	\	19.52	20.00	0.714	0.80	0.374	0.42	-0.09
Hotspot	LTE Band66	132572	1770	100RB	Bottom	10mm	\	19.60	20.00	0.722	0.79	0.384	0.42	0.15
Body	LTE Band66	132072	1720	1RB-High	Front	15mm	\	22.93	23.00	0.496	0.50	0.306	0.31	-0.06
Body	LTE Band66	132572	1770	1RB-High	Rear	15mm	\	22.74	23.00	0.821	0.87	0.470	0.50	0.03
Body	LTE Band66	132322	1745	1RB-High	Rear	15mm	\	22.76	23.00	0.803	0.85	0.452	0.48	-0.09
Body	LTE Band66	132072	1720	1RB-High	Rear	15mm	F.38	22.93	23.00	0.862	0.88	0.495	0.50	-0.19
Body	LTE Band66	132572	1770	50RB-High	Front	15mm	\	21.72	22.00	0.401	0.43	0.247	0.26	0.19
Body	LTE Band66	132572	1770	50RB-High	Rear	15mm	\	21.72	22.00	0.692	0.74	0.396	0.42	0.08
Body	LTE Band66	132072	1720	100RB	Rear	15mm	F.38	21.52	22.00	0.673	0.75	0.384	0.43	0.06
Head	LTE Band71	133222	673	1RB-High	Cheek Left	0mm	\	24.49	25.00	0.161	0.18	0.127	0.14	0.05
Head	LTE Band71	133222	673	1RB-High	Tilt Left	0mm	\	24.49	25.00	0.091	0.10	0.074	0.08	-0.07
Head	LTE Band71	133222	673	1RB-High	Cheek Right	0mm	F.39	24.49	25.00	0.234	0.26	0.186	0.21	0.03
Head	LTE Band71	133222	673	1RB-High	Tilt Right	0mm	\	24.49	25.00	0.138	0.16	0.111	0.12	-0.11
Head	LTE Band71	133222	673	50RB-Mid	Cheek Left	0mm	\	23.40	24.00	0.130	0.15	0.104	0.12	-0.08
Head	LTE Band71	133222	673	50RB-Mid	Tilt Left	0mm	\	23.40	24.00	0.076	0.09	0.062	0.07	0.18
Head	LTE Band71	133222	673	50RB-Mid	Cheek Right	0mm	\	23.40	24.00	0.189	0.22	0.150	0.17	0.18
Head	LTE Band71	133222	673	50RB-Mid	Tilt Right	0mm	\	23.40	24.00	0.110	0.13	0.089	0.10	0.07
Hotspot	LTE Band71	133222	673	1RB-High	Front	10mm	\	24.49	25.00	0.294	0.33	0.222	0.25	0.00
Hotspot	LTE Band71	133222	673	1RB-High	Rear	10mm	\	24.49	25.00	0.396	0.45	0.285	0.32	0.02
Hotspot	LTE Band71	133222	673	1RB-High	Left	10mm	\	24.49	25.00	0.333	0.37	0.229	0.26	-0.13
Hotspot	LTE Band71	133222	673	1RB-High	Right	10mm	F.40	24.49	25.00	0.411	0.46	0.286	0.32	0.00
Hotspot	LTE Band71	133222	673	1RB-High	Bottom	10mm	\	24.49	25.00	0.084	0.09	0.043	0.05	0.19
Hotspot	LTE Band71	133222	673	50RB-Mid	Front	10mm	\	23.40	24.00	0.226	0.26	0.170	0.20	0.19
Hotspot	LTE Band71	133222	673	50RB-Mid	Rear	10mm	\	23.40	24.00	0.314	0.36	0.239	0.27	-0.16
Hotspot	LTE Band71	133222	673	50RB-Mid	Left	10mm	\	23.40	24.00	0.278	0.32	0.192	0.22	0.03
Hotspot	LTE Band71	133222	673	50RB-Mid	Right	10mm	\	23.40	24.00	0.329	0.38	0.229	0.26	-0.13
Hotspot	LTE Band71	133222	673	50RB-Mid	Bottom	10mm	\	23.40	24.00	0.049	0.06	0.029	0.03	0.03
Body	LTE Band71	133222	673	1RB-High	Front	15mm	\	24.49	25.00	0.285	0.32	0.222	0.25	0.04
Body	LTE Band71	133222	673	1RB-High	Rear	15mm	F.41	24.49	25.00	0.354	0.40	0.275	0.31	0.00
Body	LTE Band71	133222	673	50RB-Mid	Front	15mm	\	23.40	24.00	0.231	0.27	0.179	0.21	0.19
Body	LTE Band71	133222	673	50RB-Mid	Rear	15mm	\	23.40	24.00	0.283	0.32	0.222	0.25	-0.05

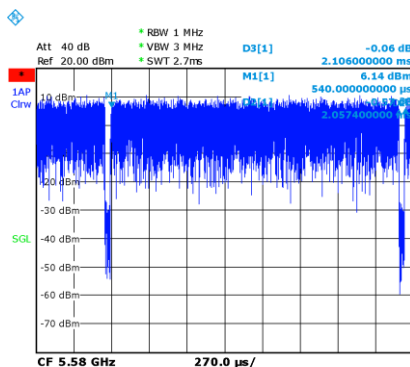
14.2 SAR results for WLAN

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.

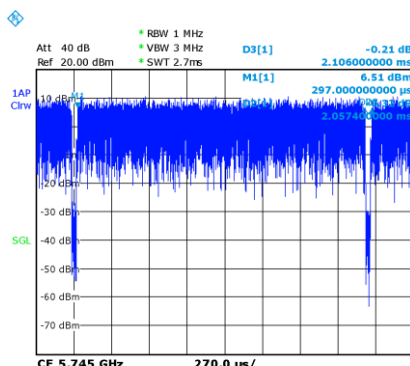
Duty factor plot CH11



CH116



CH165



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	11	2462	11b	Cheek Left	0mm	F.43	19.65	20.00	98%	0.876	0.97	0.435	0.48	-0.06
Head	WLAN 2.4G	6	2437	11b	Cheek Left	0mm	/	19.46	20.00	98%	0.827	0.96	0.374	0.43	0.19
Head	WLAN 2.4G	11	2462	11b	Tilt Left	0mm	/	19.65	20.00	98%	0.856	0.95	0.396	0.44	-0.01
Head	WLAN 2.4G	6	2437	11b	Tilt Left	0mm	/	19.46	20.00	98%	0.811	0.94	0.366	0.42	0.03
Head	WLAN 2.4G	11	2462	11b	Cheek Right	0mm	/	19.65	20.00	98%	0.423	0.47	0.209	0.23	-0.11
Head	WLAN 2.4G	11	2462	11b	Tilt Right	0mm	/	19.65	20.00	98%	0.588	0.65	0.261	0.29	-0.14
Hotspot	WLAN 2.4G	11	2462	11b	Front	10mm	/	19.65	20.00	98%	0.213	0.24	0.109	0.12	-0.19
Hotspot	WLAN 2.4G	11	2462	11b	Rear	10mm	F.44	19.65	20.00	98%	0.486	0.54	0.213	0.24	0.09
Hotspot	WLAN 2.4G	11	2462	11b	Left	10mm	/	19.65	20.00	98%	0.044	0.05	0.023	0.03	-0.16
Hotspot	WLAN 2.4G	11	2462	11b	Right	10mm	/	19.65	20.00	98%	0.234	0.26	0.107	0.12	-0.18
Hotspot	WLAN 2.4G	11	2462	11b	Top	10mm	/	19.65	20.00	98%	0.308	0.34	0.155	0.17	0.04
Body	WLAN 2.4G	11	2462	11b	Front	15mm	/	19.65	20.00	98%	0.126	0.14	0.064	0.07	-0.1
Body	WLAN 2.4G	11	2462	11b	Rear	15mm	F.45	19.65	20.00	98%	0.253	0.28	0.122	0.13	0.14

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	64	5320	11a	Cheek Left	0mm	/	16.33	17.50	98%	0.499	0.67	0.206	0.28	-0.01
Head	WLAN 5G	64	5320	11a	Tilt Left	0mm	/	16.33	17.50	98%	0.764	1.02	0.262	0.35	-0.07
Head	WLAN 5G	60	5300	11a	Tilt Left	0mm	/	16.21	17.50	98%	0.739	1.01	0.243	0.33	0.01
Head	WLAN 5G	64	5320	11a	Cheek Right	0mm	/	16.33	17.50	98%	0.353	0.47	0.097	0.13	0.03
Head	WLAN 5G	64	5320	11a	Tilt Right	0mm	/	16.33	17.50	98%	0.523	0.70	0.144	0.19	-0.17
Head	WLAN 5G	116	5580	11a	Cheek Left	0mm	/	16.62	17.50	98%	0.680	0.85	0.191	0.24	-0.06
Head	WLAN 5G	112	5560	11a	Cheek Left	0mm	/	16.53	17.50	98%	0.624	0.80	0.172	0.22	0.11
Head	WLAN 5G	116	5580	11a	Tilt Left	0mm	/	16.62	17.50	98%	0.898	1.12	0.244	0.30	0.1
Head	WLAN 5G	112	5560	11a	Tilt Left	0mm	/	16.53	17.50	98%	0.834	1.06	0.219	0.28	0.08
Head	WLAN 5G	116	5580	11a	Cheek Right	0mm	/	16.62	17.50	98%	0.466	0.58	0.133	0.17	-0.08
Head	WLAN 5G	116	5580	11a	Tilt Right	0mm	/	16.62	17.50	98%	0.706	0.88	0.200	0.25	0.17
Head	WLAN 5G	112	5560	11a	Tilt Right	0mm	/	16.53	17.50	98%	0.637	0.81	0.179	0.23	0.02
Head	WLAN 5G	165	5825	11a	Cheek Left	0mm	/	16.98	17.50	98%	0.515	0.59	0.147	0.17	-0.15
Head	WLAN 5G	165	5825	11a	Tilt Left	0mm	F.46	16.98	17.50	98%	0.975	1.12	0.242	0.28	0.08
Head	WLAN 5G	149	5745	11a	Tilt Left	0mm	/	16.82	17.50	98%	0.933	1.11	0.225	0.27	0.16
Head	WLAN 5G	165	5825	11a	Cheek Right	0mm	/	16.98	17.50	98%	0.437	0.50	0.122	0.14	-0.13
Head	WLAN 5G	165	5825	11a	Tilt Right	0mm	/	16.98	17.50	98%	0.550	0.63	0.154	0.18	-0.16
Head	WLAN 5G	165	5825	11a	Tilt Left	0mm	Phone2	16.98	17.50	98%	0.931	1.07	0.231	0.27	0.04
Hotspot	WLAN 5G	64	5320	11a	Front	10mm	/	17.49	18.50	98%	0.212	0.27	0.073	0.09	0.07
Hotspot	WLAN 5G	64	5320	11a	Rear	10mm	/	17.49	18.50	98%	0.533	0.69	0.207	0.27	-0.01
Hotspot	WLAN 5G	64	5320	11a	Left	10mm	/	17.49	18.50	98%	0.039	0.05	0.008	0.01	0.18
Hotspot	WLAN 5G	64	5320	11a	Right	10mm	/	17.49	18.50	98%	0.319	0.41	0.130	0.17	0.15
Hotspot	WLAN 5G	64	5320	11a	Top	10mm	/	17.49	18.50	98%	0.617	0.79	0.230	0.30	0.13
Hotspot	WLAN 5G	116	5580	11a	Front	10mm	/	18.15	18.50	98%	0.163	0.18	0.060	0.07	0.03
Hotspot	WLAN 5G	116	5580	11a	Rear	10mm	F.47	18.15	18.50	98%	0.757	0.84	0.289	0.32	0.09
Hotspot	WLAN 5G	112	5560	11a	Rear	10mm	/	18.1	18.50	98%	0.718	0.80	0.258	0.29	0.14
Hotspot	WLAN 5G	116	5580	11a	Left	10mm	/	18.15	18.50	98%	0.053	0.06	0.022	0.02	-0.18
Hotspot	WLAN 5G	116	5580	11a	Right	10mm	/	18.15	18.50	98%	0.293	0.32	0.111	0.12	0.19
Hotspot	WLAN 5G	116	5580	11a	Top	10mm	/	18.15	18.50	98%	0.086	0.10	0.293	0.32	0.1
Hotspot	WLAN 5G	165	5825	11a	Front	10mm	/	18.36	18.50	98%	0.148	0.16	0.053	0.06	-0.15
Hotspot	WLAN 5G	165	5825	11a	Rear	10mm	/	18.36	18.50	98%	0.600	0.63	0.216	0.23	0.08
Hotspot	WLAN 5G	165	5825	11a	Left	10mm	/	18.36	18.50	98%	0.045	0.05	0.009	0.01	-0.08
Hotspot	WLAN 5G	165	5825	11a	Right	10mm	/	18.36	18.50	98%	0.305	0.32	0.097	0.10	0.13
Hotspot	WLAN 5G	165	5825	11a	Top	10mm	/	18.36	18.50	98%	0.591	0.62	0.199	0.21	-0.06
Body	WLAN 5G	64	5320	11a	Front	15mm	/	17.49	18.50	98%	0.118	0.15	0.048	0.06	-0.13
Body	WLAN 5G	64	5320	11a	Rear	15mm	/	17.49	18.50	98%	0.485	0.62	0.192	0.25	0.12
Body	WLAN 5G	116	5580	11a	Front	15mm	/	18.15	18.50	98%	0.102	0.11	0.041	0.05	0
Body	WLAN 5G	116	5580	11a	Rear	15mm	F.48	18.15	18.50	98%	0.729	0.81	0.290	0.32	-0.03
Body	WLAN 5G	112	5560	11a	Rear	15mm	/	18.1	18.50	98%	0.683	0.76	0.267	0.30	0.12
Body	WLAN 5G	165	5825	11a	Front	15mm	/	18.36	18.50	98%	0.106	0.11	0.042	0.04	0.08
Body	WLAN 5G	165	5825	11a	Rear	15mm	/	18.36	18.50	98%	0.541	0.57	0.211	0.22	-0.06

14.3 SAR results for BT

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	BT	39	2441	GFSK	Cheek Left	0mm	F.42	11.35	13.00	0.078	0.11	0.038	0.06	0.05
Head	BT	39	2441	GFSK	Tilt Left	0mm	\	11.35	13.00	0.071	0.10	0.032	0.05	-0.03
Head	BT	39	2441	GFSK	Cheek Right	0mm	\	11.35	13.00	<0.01	<0.01	<0.01	<0.01	\
Head	BT	39	2441	GFSK	Tilt Right	0mm	\	11.35	13.00	<0.01	<0.01	<0.01	<0.01	\
Hotspot	BT	39	2441	GFSK	Front	10mm	\	11.35	13.00	<0.01	<0.01	<0.01	<0.01	\
Hotspot	BT	39	2441	GFSK	Rear	10mm	\	11.35	13.00	<0.01	<0.01	<0.01	<0.01	\
Hotspot	BT	39	2441	GFSK	Left	10mm	\	11.35	13.00	<0.01	<0.01	<0.01	<0.01	\
Hotspot	BT	39	2441	GFSK	Right	10mm	\	11.35	13.00	<0.01	<0.01	<0.01	<0.01	\
Hotspot	BT	39	2441	GFSK	Top	10mm	\	11.35	13.00	<0.01	<0.01	<0.01	<0.01	\
Body	BT	39	2441	GFSK	Front	15mm	\	11.35	13.00	<0.01	<0.01	<0.01	<0.01	\
Body	BT	39	2441	GFSK	Rear	15mm	\	11.35	13.00	<0.01	<0.01	<0.01	<0.01	\

14.4 SAR results 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

RF Exposure Conditions	Frequency Band	Channel Number	Frequency (MHz)	Mode/RB	Test Position	Distance	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
Limb	GSM1900	810	1909.8	GPRS(4TX)	Bottom	0mm	26.49	27.5	5.01	6.32	2.17	2.74	0.16
Limb	GSM1900	661	1880	GPRS(4TX)	Bottom	0mm	26.75	27.5	5.42	6.44	2.42	2.88	-0.19
Limb	GSM1900	512	1850.2	GPRS(4TX)	Bottom	0mm	26.82	27.5	4.93	5.77	2.35	2.75	0.18
Limb	WCDMA1900	9400	1880	RMC	Front	0mm	22.54	23	3.532	3.93	1.67	1.86	0.15
Limb	WCDMA1900	9538	1907.6	RMC	Rear	0mm	22.54	23	6.72	7.47	2.72	3.02	0.01
Limb	WCDMA1900	9400	1880	RMC	Rear	0mm	22.54	23	6.65	7.39	2.63	2.92	0.11
Limb	WCDMA1900	9262	1852.4	RMC	Rear	0mm	22.54	23	6.36	7.07	2.57	2.86	0.19
Limb	WCDMA1900	9538	1907.6	RMC	Bottom	0mm	22.63	23	4.33	4.72	1.91	2.08	-0.10
Limb	WCDMA1900	9400	1880	RMC	Bottom	0mm	22.54	23	4.53	5.04	1.98	2.20	0.15
Limb	WCDMA1900	9262	1852.4	RMC	Bottom	0mm	22.56	23	4.96	5.49	2.16	2.39	0.15
Limb	WCDMA1700	1413	1732.6	RMC	Front	0mm	21.64	22.5	3.12	3.80	1.28	1.56	0.12
Limb	WCDMA1700	1413	1732.6	RMC	Rear	0mm	21.64	22.5	4.64	5.66	1.96	2.39	-0.15
Limb	WCDMA1700	1513	1752.6	RMC	Bottom	0mm	21.71	22.5	5.37	6.44	2.33	2.79	-0.02
Limb	WCDMA1700	1413	1732.6	RMC	Bottom	0mm	21.64	22.5	5.27	6.42	2.28	2.78	-0.16
Limb	WCDMA1700	1312	1712.4	RMC	Bottom	0mm	21.68	22.5	5.19	6.27	2.25	2.72	-0.08
Limb	LTE Band2	19100	1900	1RB-Mid	Bottom	0mm	21.98	23	3.71	4.69	1.54	1.95	0.06
Limb	LTE Band2	18900	1880	1RB-Mid	Bottom	0mm	22.16	23	4.36	5.29	1.96	2.38	-0.18
Limb	LTE Band2	18700	1860	1RB-Mid	Bottom	0mm	22.13	23	3.83	4.68	1.63	1.99	0.09
Limb	LTE Band30	27710	2310	1RB-High	Rear	0mm	21.93	22	7.79	7.92	2.79	2.84	0.04
Limb	LTE Band41 PC2	41055	2636.5	1RB-Mid	Bottom	0mm	23.97	24.5	4.47	5.05	1.52	1.72	-0.03
Limb	LTE Band41 PC2	41055	2636.5	50RB-Mid	Bottom	0mm	22.96	23.5	4.63	5.24	1.34	1.52	-0.15
Limb	LTE Band41 PC3	41055	2636.5	1RB-Mid	Bottom	0mm	22.05	22.5	4.69	5.20	1.58	1.75	0.16
Limb	LTE Band41 PC3	41055	2636.5	50RB-Mid	Bottom	0mm	21.03	21.5	3.43	3.82	1.29	1.44	0.08
Limb	LTE Band66	132072	1720	1RB-High	Bottom	0mm	22.93	23	6.16	6.26	2.65	2.69	-0.08
Limb	LTE Band66	132572	1770	50RB-High	Bottom	0mm	21.72	22	5.54	5.91	2.33	2.49	-0.06

Test Position	Frequency Band	Channel Number	Frequency (MHz)	Mode/RB	Test Position	Distance	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
Limb	WLAN 2.4G	11	2462	11b	Front	0mm	19.65	20	98%	1.8	1.99	0.713	0.79	0.04
Limb	WLAN 2.4G	11	2462	11b	Rear	0mm	19.65	20	98%	2.78	3.07	0.981	1.09	0.04
Limb	WLAN 5G	64	5320	11a	Front	0mm	17.49	18.5	98%	1.36	1.75	0.354	0.46	-0.06
Limb	WLAN 5G	64	5320	11a	Rear	0mm	17.49	18.5	98%	3.46	4.46	0.880	1.13	-0.01
Limb	WLAN 5G	116	5580	11a	Front	0mm	18.15	18.5	98%	1.72	1.90	0.390	0.43	0.15
Limb	WLAN 5G	116	5580	11a	Rear	0mm	18.15	18.5	98%	3.64	4.03	1.070	1.18	0.07
Limb	WLAN 5G	165	5825	11a	Front	0mm	18.36	18.5	98%	1.21	1.28	0.279	0.29	-0.15
Limb	WLAN 5G	165	5825	11a	Rear	0mm	18.36	18.5	98%	3.47	3.66	0.947	1.00	0.19

RF Exposure Conditions	Frequency Band	Channel Number	Frequency (MHz)	Mode/RB	Test Position	Distance	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
Limb	BT	39	2441	GFSK	Front	0mm	11.35	13.00	0.109	0.16	0.053	0.08	0.16
Limb	BT	39	2441	GFSK	Rear	0mm	11.35	13.00	0.302	0.44	0.107	0.16	0.00

15 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; steps 2) through 4) do not apply.
- 2) When the original highest measured SAR is ≥ 0.80 W/kg, repeat that measurement once.
- 3) Perform a second repeated measurement only if the ratio of largest to smallest SAR for the original and first repeated measurements is > 1.20 or when the original or repeated measurement is ≥ 1.45 W/kg ($\sim 10\%$ 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

Table 15.1: SAR Measurement Variability for Body GSM1900 (1g)

Frequency		Mode	Test Position	Original SAR (W/kg)	First Repeated SAR (W/kg)	The Ratio	Second Repeated SAR (W/kg)
Ch.	MHz						
512	1850.2	GPRS(4TX)	Bottom 10mm	0.864	0.841	1.03	/

Table 15.2: SAR Measurement Variability for Body WCDMA1900 (1g)

Frequency		Mode	Test Position	Original SAR (W/kg)	First Repeated SAR (W/kg)	The Ratio	Second Repeated SAR (W/kg)
Ch.	MHz						
9538	1907.6	RMC	Bottom 10mm	0.850	0.837	1.02	/

Table 15.3: SAR Measurement Variability for Body WCDMA1700 (1g)

Frequency		Mode	Test Position	Original SAR (W/kg)	First Repeated SAR (W/kg)	The Ratio	Second Repeated SAR (W/kg)
Ch.	MHz						
1413	1732.6	RMC	Bottom 10mm	0.868	0.844	1.03	/
1312	1712.4	RMC	Rear 15mm	0.806	0.787	1.02	/

Table 15.4: SAR Measurement Variability for Body LTE B2 (1g)

Frequency		Mode	Test Position	Original SAR (W/kg)	First Repeated SAR (W/kg)	The Ratio	Second Repeated SAR (W/kg)
Ch.	MHz						
18900	1800	1RB-Mid	Bottom 10mm	1.08	1.01	1.07	/

Table 15.5: SAR Measurement Variability for Body LTE B30 (1g)

Frequency		Mode	Test Position	Original SAR (W/kg)	First Repeated SAR (W/kg)	The Ratio	Second Repeated SAR (W/kg)
Ch.	MHz						
27710	2310	1RB-High	Rear 10mm	1.23	1.18	1.04	/

Table 15.6: SAR Measurement Variability for Body LTE B41 PC2 (1g)

Frequency		Mode	Test Position	Original SAR (W/kg)	First Repeated SAR (W/kg)	The Ratio	Second Repeated SAR (W/kg)
Ch.	MHz						
41055	2636.5	1RB-Mid	Bottom 10mm	0.994	0.987	1.01	/
41055	2636.5	1RB-Mid	Rear 15mm	0.807	0.786	1.03	/

Table 15.7: SAR Measurement Variability for Body LTE B41 PC3 (1g)

Frequency		Mode	Test Position	Original SAR (W/kg)	First Repeated SAR (W/kg)	The Ratio	Second Repeated SAR (W/kg)
Ch.	MHz						
41055	2636.5	50RB-Mid	Bottom 10mm	0.882	0.869	1.01	/
41055	2636.5	1RB-Mid	Rear 15mm	0.943	0.922	1.02	/

Table 15.8: SAR Measurement Variability for Body LTE B66 (1g)

Frequency		Mode	Test Position	Original SAR (W/kg)	First Repeated SAR (W/kg)	The Ratio	Second Repeated SAR (W/kg)
Ch.	MHz						
132072	1720	1RB-High	Bottom 10mm	0.905	0.877	1.03	/

Table 15.9: SAR Measurement Variability for Head WLAN2.4G (1g)

Frequency		Mode	Test Position	Original SAR (W/kg)	First Repeated SAR (W/kg)	The Ratio	Second Repeated SAR (W/kg)
Ch.	MHz						
11	2462	11b	Cheek Left	0.876	0.851	1.03	/

Table 15.10: SAR Measurement Variability for Head WLAN5G (1g)

Frequency		Mode	Test Position	Original SAR (W/kg)	First Repeated SAR (W/kg)	The Ratio	Second Repeated SAR (W/kg)
Ch.	MHz						
165	5825	11b	Tilt Left	0.975	0.953	1.02	/

16 Measurement Uncertainty

16.1 Measurement Uncertainty for Normal SAR Tests (300MHz~3GHz)

No.	Error Description	Type	Uncertainty value	Probably Distribution	Div.	(Ci) 1g	(Ci) 10g	Std. Unc. (1g)	Std. Unc. (10g)	Degree of freedom
Measurement system										
1	Probe calibration	B	6.0	N	1	1	1	6.0	6.0	∞
2	Isotropy	B	4.7	R	$\sqrt{3}$	0.7	0.7	1.9	1.9	∞
3	Boundary effect	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
4	Linearity	B	4.7	R	$\sqrt{3}$	1	1	2.7	2.7	∞
5	Detection limit	B	1.0	N	1	1	1	0.6	0.6	∞
6	Readout electronics	B	0.3	R	$\sqrt{3}$	1	1	0.3	0.3	∞
7	Response time	B	0.8	R	$\sqrt{3}$	1	1	0.5	0.5	∞
8	Integration time	B	2.6	R	$\sqrt{3}$	1	1	1.5	1.5	∞
9	RF ambient conditions-noise	B	0	R	$\sqrt{3}$	1	1	0	0	∞
10	RF ambient conditions-reflection	B	0	R	$\sqrt{3}$	1	1	0	0	∞
11	Probe positioned mech. restrictions	B	0.4	R	$\sqrt{3}$	1	1	0.2	0.2	∞
12	Probe positioning with respect to phantom shell	B	2.9	R	$\sqrt{3}$	1	1	1.7	1.7	∞
13	Post-processing	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
Test sample related										
14	Test sample positioning	A	3.3	N	1	1	1	3.3	3.3	71
15	Device holder uncertainty	A	3.4	N	1	1	1	3.4	3.4	5
16	Drift of output power	B	5.0	R	$\sqrt{3}$	1	1	2.9	2.9	∞
Phantom and set-up										
17	Phantom uncertainty	B	4.0	R	$\sqrt{3}$	1	1	2.3	2.3	∞
18	Liquid conductivity (target)	B	5.0	R	$\sqrt{3}$	0.64	0.43	1.8	1.2	∞
19	Liquid conductivity (meas.)	A	2.06	N	1	0.64	0.43	1.32	0.89	43
20	Liquid permittivity (target)	B	5.0	R	$\sqrt{3}$	0.6	0.49	1.7	1.4	∞
21	Liquid permittivity (meas.)	A	1.6	N	1	0.6	0.49	1.0	0.8	521

Combined standard uncertainty	$u_c = \sqrt{\sum_{i=1}^{21} c_i^2 u_i^2}$							9.55	9.43	257
Expanded uncertainty (confidence interval of 95 %)	$u_e = 2u_c$							19.1	18.9	

16.2 Measurement Uncertainty for Normal SAR Tests (3~6GHz)

No.	Error Description	Type	Uncertainty value	Probably Distribution	Div.	(Ci) 1g	(Ci) 10g	Std. Unc. (1g)	Std. Unc. (10g)	Degree of freedom
Measurement system										
1	Probe calibration	B	6.55	N	1	1	1	6.55	6.55	∞
2	Isotropy	B	4.7	R	$\sqrt{3}$	0.7	0.7	1.9	1.9	∞
3	Boundary effect	B	2.0	R	$\sqrt{3}$	1	1	1.2	1.2	∞
4	Linearity	B	4.7	R	$\sqrt{3}$	1	1	2.7	2.7	∞
5	Detection limit	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
6	Readout electronics	B	0.3	R	$\sqrt{3}$	1	1	0.3	0.3	∞
7	Response time	B	0.8	R	$\sqrt{3}$	1	1	0.5	0.5	∞
8	Integration time	B	2.6	R	$\sqrt{3}$	1	1	1.5	1.5	∞
9	RF ambient conditions-noise	B	0	R	$\sqrt{3}$	1	1	0	0	∞
10	RFambient conditions-reflection	B	0	R	$\sqrt{3}$	1	1	0	0	∞
11	Probe positioned mech. restrictions	B	0.8	R	$\sqrt{3}$	1	1	0.5	0.5	∞
12	Probe positioning with respect to phantom shell	B	6.7	R	$\sqrt{3}$	1	1	3.9	3.9	∞
13	Post-processing	B	4.0	R	$\sqrt{3}$	1	1	2.3	2.3	∞
Test sample related										
14	Test sample positioning	A	3.3	N	1	1	1	3.3	3.3	71
15	Device holder uncertainty	A	3.4	N	1	1	1	3.4	3.4	5
16	Drift of output power	B	5.0	R	$\sqrt{3}$	1	1	2.9	2.9	∞
Phantom and set-up										
17	Phantom uncertainty	B	4.0	R	$\sqrt{3}$	1	1	2.3	2.3	∞
18	Liquid conductivity (target)	B	5.0	R	$\sqrt{3}$	0.64	0.43	1.8	1.2	∞
19	Liquid conductivity (meas.)	A	2.06	N	1	0.64	0.43	1.32	0.89	43
20	Liquid permittivity (target)	B	5.0	R	$\sqrt{3}$	0.6	0.49	1.7	1.4	∞

21	Liquid permittivity (meas.)	A	1.6	N	1	0.6	0.49	1.0	0.8	521
Combined standard uncertainty		$u_c = \sqrt{\sum_{i=1}^{21} c_i^2 u_i^2}$						10.7	10.6	257
Expanded uncertainty (confidence interval of 95 %)		$u_e = 2u_c$						21.4	21.1	

16.3 Measurement Uncertainty for Fast SAR Tests (300MHz~3GHz)

No.	Error Description	Type	Uncertainty value	Probably Distribution	Div.	(Ci) 1g	(Ci) 10g	Std. Unc. (1g)	Std. Unc. (10g)	Degree of freedom
Measurement system										
1	Probe calibration	B	6.0	N	1	1	1	6.0	6.0	∞
2	Isotropy	B	4.7	R	$\sqrt{3}$	0.7	0.7	1.9	1.9	∞
3	Boundary effect	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
4	Linearity	B	4.7	R	$\sqrt{3}$	1	1	2.7	2.7	∞
5	Detection limit	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
6	Readout electronics	B	0.3	R	$\sqrt{3}$	1	1	0.3	0.3	∞
7	Response time	B	0.8	R	$\sqrt{3}$	1	1	0.5	0.5	∞
8	Integration time	B	2.6	R	$\sqrt{3}$	1	1	1.5	1.5	∞
9	RF ambient conditions-noise	B	0	R	$\sqrt{3}$	1	1	0	0	∞
10	RFambient conditions-reflection	B	0	R	$\sqrt{3}$	1	1	0	0	∞
11	Probe positioned mech. Restrictions	B	0.4	R	$\sqrt{3}$	1	1	0.2	0.2	∞
12	Probe positioning with respect to phantom shell	B	2.9	R	$\sqrt{3}$	1	1	1.7	1.7	∞
13	Post-processing	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
14	Fast SAR z-Approximation	B	7.0	R	$\sqrt{3}$	1	1	4.0	4.0	∞
Test sample related										
15	Test sample positioning	A	3.3	N	1	1	1	3.3	3.3	71
16	Device holder uncertainty	A	3.4	N	1	1	1	3.4	3.4	5
17	Drift of output power	B	5.0	R	$\sqrt{3}$	1	1	2.9	2.9	∞
Phantom and set-up										
18	Phantom uncertainty	B	4.0	R	$\sqrt{3}$	1	1	2.3	2.3	∞
19	Liquid conductivity (target)	B	5.0	R	$\sqrt{3}$	0.64	0.43	1.8	1.2	∞

20	Liquid conductivity (meas.)	A	2.06	N	1	0.64	0.43	1.32	0.89	43
21	Liquid permittivity (target)	B	5.0	R	$\sqrt{3}$	0.6	0.49	1.7	1.4	∞
22	Liquid permittivity (meas.)	A	1.6	N	1	0.6	0.49	1.0	0.8	521
Combined standard uncertainty		$u_c' = \sqrt{\sum_{i=1}^{22} c_i^2 u_i^2}$						10.4	10.3	257
Expanded uncertainty (confidence interval of 95 %)		$u_e = 2u_c$						20.8	20.6	

16.4 Measurement Uncertainty for Fast SAR Tests (3~6GHz)

No.	Error Description	Type	Uncertainty value	Probably Distribution	Div.	(Ci) 1g	(Ci) 10g	Std. Unc. (1g)	Std. Unc. (10g)	Degree of freedom
Measurement system										
1	Probe calibration	B	6.55	N	1	1	1	6.55	6.55	∞
2	Isotropy	B	4.7	R	$\sqrt{3}$	0.7	0.7	1.9	1.9	∞
3	Boundary effect	B	2.0	R	$\sqrt{3}$	1	1	1.2	1.2	∞
4	Linearity	B	4.7	R	$\sqrt{3}$	1	1	2.7	2.7	∞
5	Detection limit	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
6	Readout electronics	B	0.3	R	$\sqrt{3}$	1	1	0.3	0.3	∞
7	Response time	B	0.8	R	$\sqrt{3}$	1	1	0.5	0.5	∞
8	Integration time	B	2.6	R	$\sqrt{3}$	1	1	1.5	1.5	∞
9	RF ambient conditions-noise	B	0	R	$\sqrt{3}$	1	1	0	0	∞
10	RF ambient conditions-reflection	B	0	R	$\sqrt{3}$	1	1	0	0	∞
11	Probe positioned mech. Restrictions	B	0.8	R	$\sqrt{3}$	1	1	0.5	0.5	∞
12	Probe positioning with respect to phantom shell	B	6.7	R	$\sqrt{3}$	1	1	3.9	3.9	∞
13	Post-processing	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
14	Fast SAR z-Approximation	B	14.0	R	$\sqrt{3}$	1	1	8.1	8.1	∞
Test sample related										
15	Test sample positioning	A	3.3	N	1	1	1	3.3	3.3	71
16	Device holder uncertainty	A	3.4	N	1	1	1	3.4	3.4	5

17	Drift of output power	B	5.0	R	$\sqrt{3}$	1	1	2.9	2.9	∞
Phantom and set-up										
18	Phantom uncertainty	B	4.0	R	$\sqrt{3}$	1	1	2.3	2.3	∞
19	Liquid conductivity (target)	B	5.0	R	$\sqrt{3}$	0.64	0.43	1.8	1.2	∞
20	Liquid conductivity (meas.)	A	2.06	N	1	0.64	0.43	1.32	0.89	43
21	Liquid permittivity (target)	B	5.0	R	$\sqrt{3}$	0.6	0.49	1.7	1.4	∞
22	Liquid permittivity (meas.)	A	1.6	N	1	0.6	0.49	1.0	0.8	521
Combined standard uncertainty		$u_c = \sqrt{\sum_{i=1}^{22} c_i^2 u_i^2}$						13.5	13.4	257
Expanded uncertainty (confidence interval of 95 %)		$u_e = 2u_c$						27.0	26.8	

17 MAIN TEST INSTRUMENTS

Table 17.1: List of Main Instruments

No.	Name	Type	Serial Number	Calibration Date	Valid Period
01	Network analyzer	E5071C	MY46110673	January 4, 2022	One year
02	Power sensor	NRP110T	101139	January 13, 2022	One year
03	Power sensor	NRP110T	101159		
04	Signal Generator	E4438C	MY49071430	January 13, 2022	One Year
05	Amplifier	60S1G4	0331848	No Calibration Requested	
06	BTS	CMW500	159890	January 24, 2022	One year
07	BTS	CMW500	129942	February 14 2022	One year
08	DAE	SPEAG DAE4	777	January 07, 2022	One year
09	E-field Probe	SPEAG EX3DV4	7673	July 08, 2022	One year
10	Dipole Validation Kit	SPEAG D750V3	1017	July 20,,2022	One year
11	Dipole Validation Kit	SPEAG D835V2	4d069	July 20,,2022	One year
12	Dipole Validation Kit	SPEAG D1750V2	1003	July 18,,2022	One year
13	Dipole Validation Kit	SPEAG D1900V2	5d101	July 26,2022	One year
14	Dipole Validation Kit	SPEAG D2450V2	853	July 20,2022	One year
15	Dipole Validation Kit	SPEAG D2600V2	1012	July 20,2022	One year
16	Dipole Validation Kit	SPEAG D2300V2	1018	July 20,2022	One year
17	Dipole Validation Kit	SPEAG D5GHzV2	1060	July 5,2022	One year

END OF REPORT BODY

ANNEX A Graph Results

GSM850 Head

Date/Time: 11/7/2022

Electronics: DAE4 Sn777

Medium: H700-6000M

Medium parameters used (interpolated): $f = 848.8$ MHz; $\sigma = 0.921$ S/m; $\epsilon_r = 43.658$; $\rho = 1000$ kg/m³

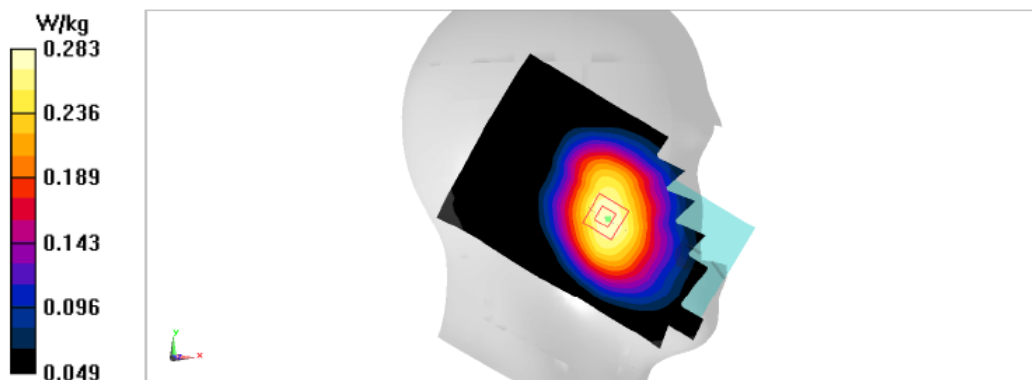
Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: UID 0, GSM 850 GPRS-3 (0) Frequency: 848.8 MHz Duty Cycle: 1:2.66993

Probe: EX3DV4 - SN7673 ConvF(10.34, 10.34, 10.34); Calibrated: 7/8/2022

Area Scan (81x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.287 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.202 V/m; Power Drift = -0.00 dB
Peak SAR (extrapolated) = 0.306 W/kg
SAR(1 g) = 0.240 W/kg; SAR(10 g) = 0.190 W/kg
Maximum value of SAR (measured) = 0.283 W/kg



A. 1

GSM850 Body-10mm

Date/Time: 11/7/2022

Electronics: DAE4 Sn777

Medium: H700-6000M

Medium parameters used (interpolated): $f = 848.8$ MHz; $\sigma = 0.921$ S/m; $\epsilon_r = 43.658$; $\rho = 1000$ kg/m³

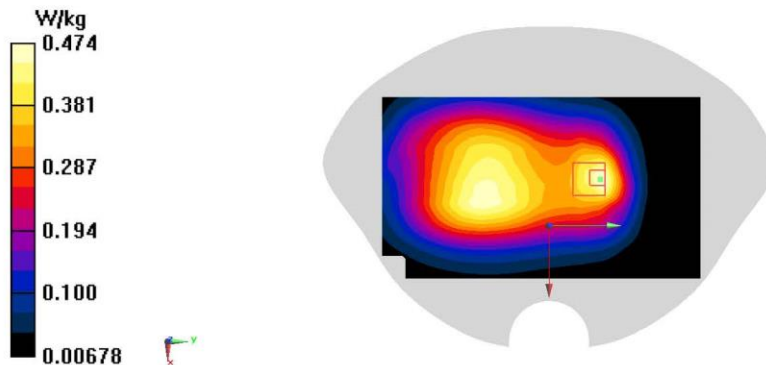
Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: UID 0, GSM 850 Glass 12 (0) Frequency: 848.8 MHz Duty Cycle: 1:1.99986

Probe: EX3DV4 - SN7673 ConvF(10.34, 10.34, 10.34); Calibrated: 7/8/2022

Area Scan (81x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.471 W/kg

Zoom Scan (5x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 17.57 V/m; Power Drift = -0.00 dB
Peak SAR (extrapolated) = 0.563 W/kg
SAR(1 g) = 0.334 W/kg; SAR(10 g) = 0.215 W/kg
Maximum value of SAR (measured) = 0.474 W/kg



A. 2

gsm850 Body-15mm

Date/Time: 11/7/2022

Electronics: DAE4 Sn777

Medium: H700-6000M

Medium parameters used (interpolated): $f = 848.8$ MHz; $\sigma = 0.921$ S/m; $\epsilon_r = 43.658$; $\rho = 1000$ kg/m³

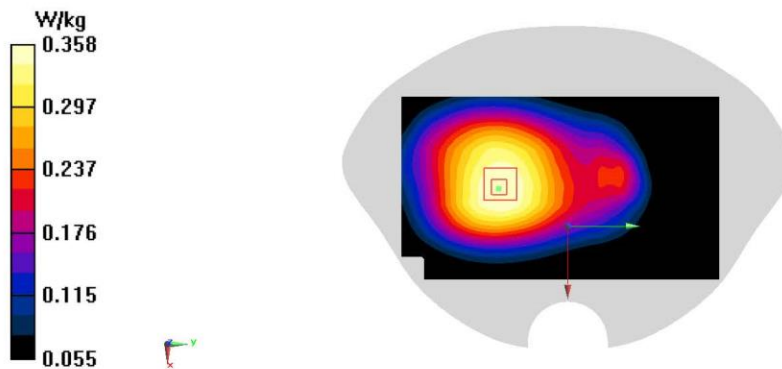
Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: UID 0, GSM 850 Glass 12 (0) Frequency: 848.8 MHz Duty Cycle: 1:1.99986

Probe: EX3DV4 - SN7673 ConvF(10.34, 10.34, 10.34); Calibrated: 7/8/2022

Area Scan (81x141x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm
Maximum value of SAR (interpolated) = 0.363 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm
Reference Value = 14.67 V/m; Power Drift = -0.15 dB
Peak SAR (extrapolated) = 0.396 W/kg
SAR(1 g) = 0.293 W/kg; SAR(10 g) = 0.221 W/kg
Maximum value of SAR (measured) = 0.358 W/kg



A. 3

gsm1900 Head

Date/Time: 11/11/2022

Electronics: DAE4 Sn777

Medium: H700-6000M

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.46$ S/m; $\epsilon_r = 41.562$; $\rho = 1000$ kg/m³

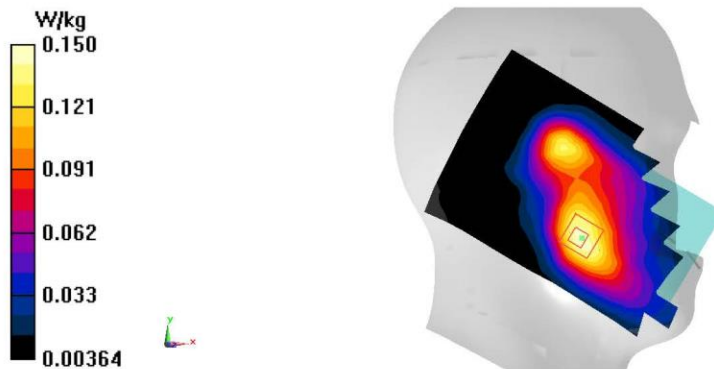
Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: UID 0, GSM 1900 (0) Frequency: 1909.8 MHz Duty Cycle: 1:8.30042

Probe: EX3DV4 - SN7673 ConvF(8.07, 8.07, 8.07); Calibrated: 7/8/2022

Area Scan (81x141x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm
Maximum value of SAR (interpolated) = 0.147 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm
Reference Value = 2.268 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 0.175 W/kg
SAR(1 g) = 0.112 W/kg; SAR(10 g) = 0.072 W/kg
Maximum value of SAR (measured) = 0.150 W/kg



A. 4

GSM1900 Body-10mm

Date/Time: 11/11/2022

Electronics: DAE4 Sn777

Medium: H700-6000M

Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.419$ S/m; $\epsilon_r = 41.657$; $\rho = 1000$ kg/m³

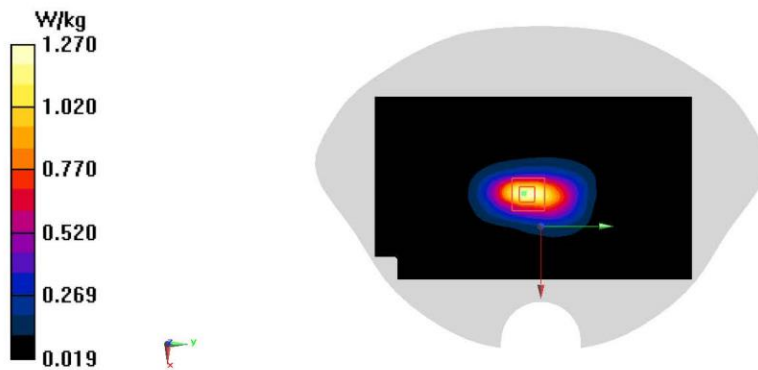
Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: UID 0, GSM 1900 GPRS12 (0) Frequency: 1850.2 MHz Duty Cycle: 1:1.99986

Probe: EX3DV4 - SN7673 ConvF(8.07, 8.07, 8.07); Calibrated: 7/8/2022

Area Scan (81x141x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm
Maximum value of SAR (interpolated) = 1.25 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm
Reference Value = 23.40 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 1.53 W/kg
SAR(1 g) = 0.864 W/kg; SAR(10 g) = 0.456 W/kg
Maximum value of SAR (measured) = 1.27 W/kg



A. 5

gsm1900 Body-15mm

Date/Time: 11/11/2022

Electronics: DAE4 Sn777

Medium: H700-6000M

Medium parameters used (interpolated): $f = 1910$ MHz; $\sigma = 1.46$ S/m; $\epsilon_r = 41.562$; $\rho = 1000$ kg/m³

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: UID 0, GSM 1900 Frequency: 1910MHz Duty Cycle: 1:1.99986 Probe:

EX3DV4 - SN7673 ConvF(8.07, 8.07, 8.07); Calibrated: 7/8/2022

Area Scan (81x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.554 W/kg

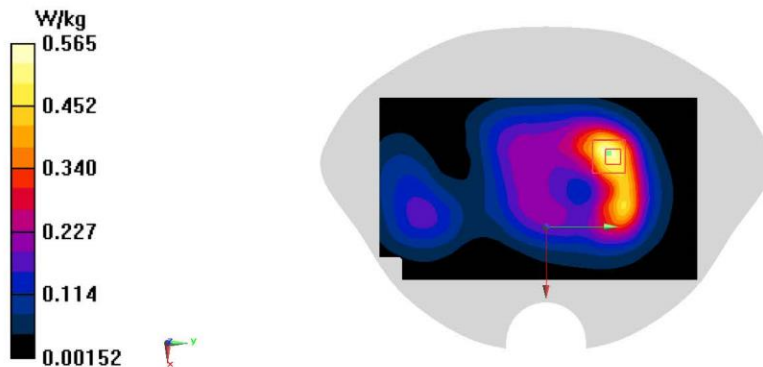
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.50 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 0.699 W/kg

SAR(1 g) = 0.392 W/kg; SAR(10 g) = 0.214 W/kg

Maximum value of SAR (measured) = 0.565 W/kg



A. 6

W1900 Head

Date/Time: 11/11/2022

Electronics: DAE4 Sn777

Medium: H700-6000M

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.437$ S/m; $\epsilon_r = 41.641$; $\rho = 1000$ kg/m³

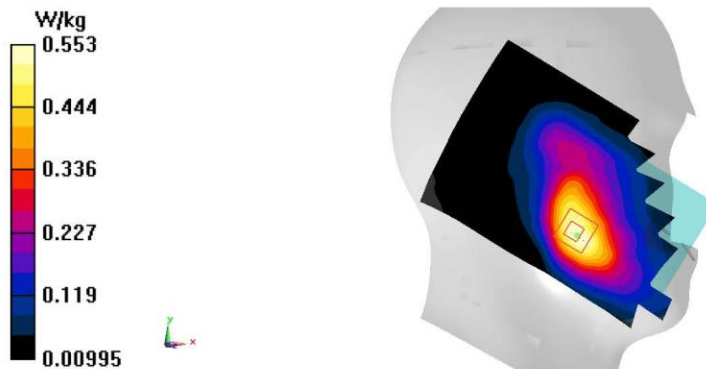
Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: UID 0, WCDMA 1900 (0) Frequency: 1880 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7673 ConvF(8.07, 8.07, 8.07); Calibrated: 7/8/2022

Area Scan (81x141x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm
Maximum value of SAR (interpolated) = 0.556 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm
Reference Value = 4.136 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.639 W/kg
SAR(1 g) = 0.409 W/kg; SAR(10 g) = 0.262 W/kg
Maximum value of SAR (measured) = 0.553 W/kg



A. 7

W1900 Body-10mm

Date/Time: 11/11/2022

Electronics: DAE4 Sn777

Medium: H700-6000M

Medium parameters used (interpolated): $f = 1907.6$ MHz; $\sigma = 1.458$ S/m; $\epsilon_r = 41.568$; $\rho = 1000$ kg/m³

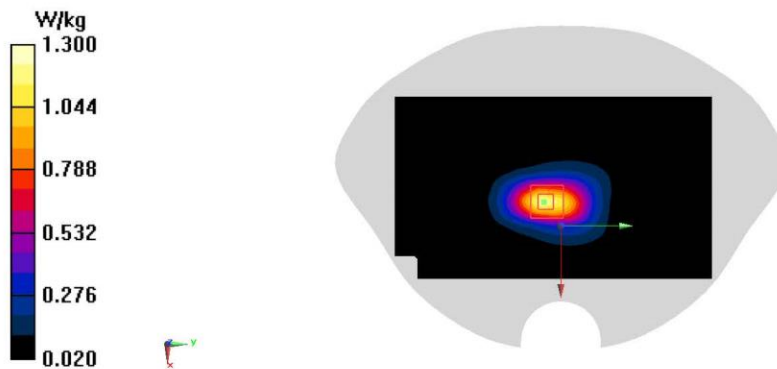
Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: UID 0, WCDMA 1900 (0) Frequency: 1907.6 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7673 ConvF(8.07, 8.07, 8.07); Calibrated: 7/8/2022

Area Scan (81x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.21 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 19.29 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 1.54 W/kg
SAR(1 g) = 0.850 W/kg; SAR(10 g) = 0.451 W/kg
Maximum value of SAR (measured) = 1.30 W/kg



A. 8

WCDMA1900 Body-15mm

Date/Time: 11/11/2022

Electronics: DAE4 Sn777

Medium: H700-6000M

Medium parameters used (interpolated): $f = 1907.6$ MHz; $\sigma = 1.458$ S/m; $\epsilon_r = 41.568$; $\rho = 1000$ kg/m³

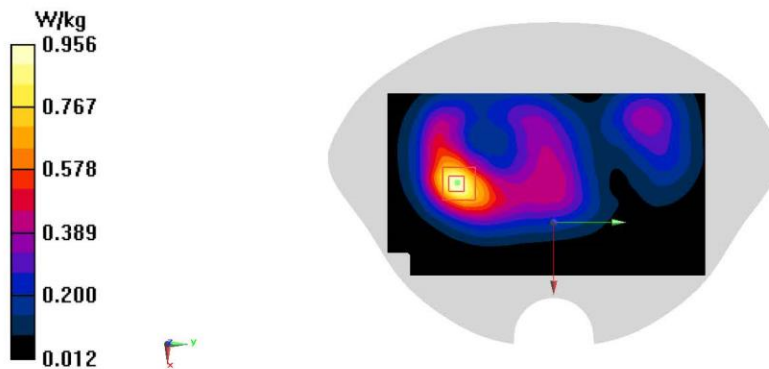
Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: UID 0, WCDMA 1900 (0) Frequency: 1907.6 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7673 ConvF(8.07, 8.07, 8.07); Calibrated: 7/8/2022

Area Scan (81x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.981 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.31 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 1.15 W/kg
SAR(1 g) = 0.651 W/kg; SAR(10 g) = 0.366 W/kg
Maximum value of SAR (measured) = 0.956 W/kg



A. 9

W1700 Head

Date/Time: 11/10/2022

Electronics: DAE4 Sn777

Medium: H700-6000M

Medium parameters used (interpolated): $f = 1712.4$ MHz; $\sigma = 1.338$ S/m; $\epsilon_r = 41.812$; $\rho = 1000$ kg/m³

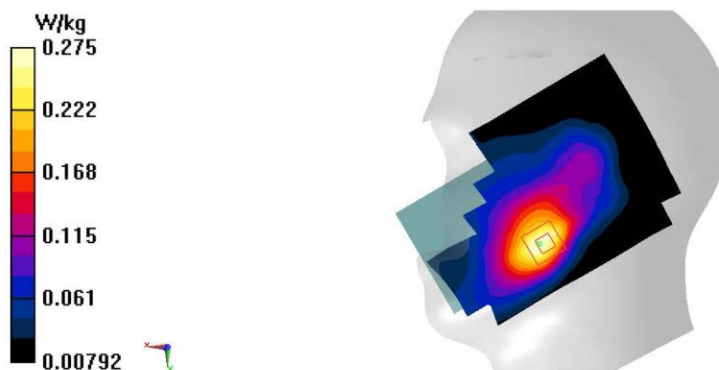
Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: UID 0, WCDMA 1700 Band4 (0) Frequency: 1712.4 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7673 ConvF(8.49, 8.49, 8.49); Calibrated: 7/8/2022

Area Scan (81x141x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm
Maximum value of SAR (interpolated) = 0.283 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm
Reference Value = 5.779 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 0.313 W/kg
SAR(1 g) = 0.216 W/kg; SAR(10 g) = 0.142 W/kg
Maximum value of SAR (measured) = 0.275 W/kg



A. 10

W1700 Body-10mm

Date/Time: 11/10/2022

Electronics: DAE4 Sn777

Medium: H700-6000M

Medium parameters used (interpolated): $f = 1732.6$ MHz; $\sigma = 1.352$ S/m; $\epsilon_r = 41.793$; $\rho = 1000$ kg/m³

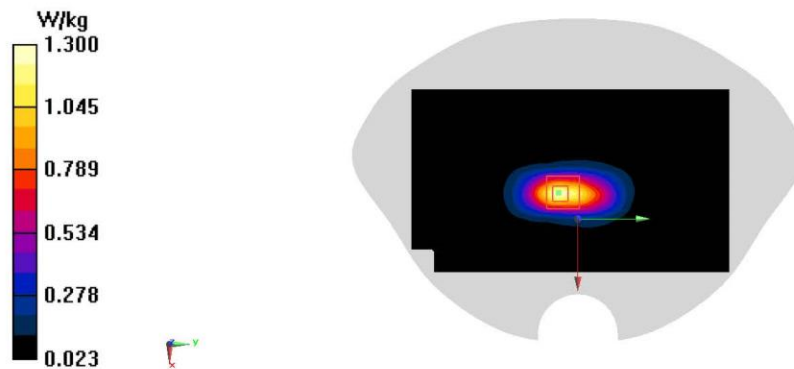
Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: UID 0, WCDMA 1700 Band4 (0) Frequency: 1732.6 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7673 ConvF(8.49, 8.49, 8.49); Calibrated: 7/8/2022

Area Scan (81x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.27 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 20.13 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 1.56 W/kg
SAR(1 g) = 0.868 W/kg; SAR(10 g) = 0.458 W/kg
Maximum value of SAR (measured) = 1.30 W/kg



A. 11

WCDMA1700 Body-15mm

Date/Time: 11/10/2022

Electronics: DAE4 Sn777

Medium: H700-6000M

Medium parameters used (interpolated): $f = 1712.4$ MHz; $\sigma = 1.338$ S/m; $\epsilon_r = 41.812$; $\rho = 1000$ kg/m³

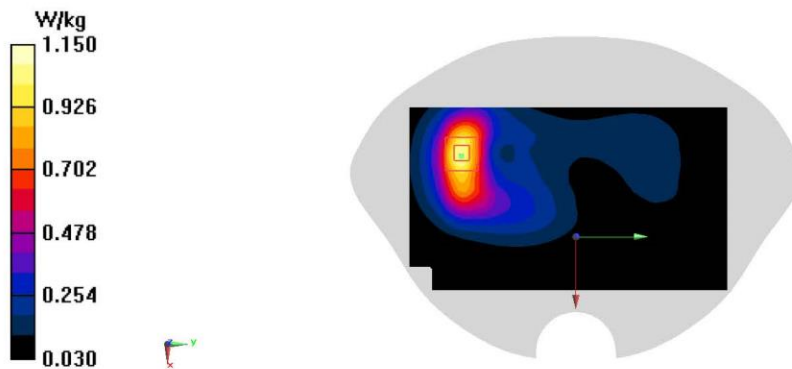
Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: UID 0, WCDMA 1700 Band4 (0) Frequency: 1712.4 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7673 ConvF(8.49, 8.49, 8.49); Calibrated: 7/8/2022

Area Scan (81x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.09 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.132 V/m; Power Drift = -0.12 dB
Peak SAR (extrapolated) = 1.33 W/kg
SAR(1 g) = 0.806 W/kg; SAR(10 g) = 0.470 W/kg
Maximum value of SAR (measured) = 1.15 W/kg



A. 12

W850 Head

Date/Time: 11/7/2022

Electronics: DAE4 Sn777

Medium: H700-6000M

Medium parameters used (interpolated): $f = 846.6$ MHz; $\sigma = 0.92$ S/m; $\epsilon_r = 43.658$; $\rho = 1000$ kg/m³

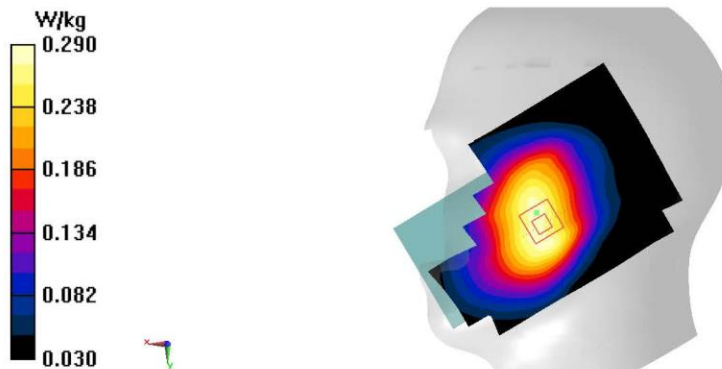
Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: UID 0, WCDMA 850 (0) Frequency: 846.6 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7673 ConvF(10.34, 10.34, 10.34); Calibrated: 7/8/2022

Area Scan (81x141x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm
Maximum value of SAR (interpolated) = 0.283 W/kg

Zoom Scan (6x6x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm
Reference Value = 6.786 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.314 W/kg
SAR(1 g) = 0.248 W/kg; SAR(10 g) = 0.198 W/kg
Maximum value of SAR (measured) = 0.290 W/kg



WCDMA850 Body-10mm

Date/Time: 11/7/2022

Electronics: DAE4 Sn777

Medium: H700-6000M

Medium parameters used (interpolated): $f = 826.4$ MHz; $\sigma = 0.91$ S/m; $\epsilon_r = 43.69$; $\rho = 1000$ kg/m³

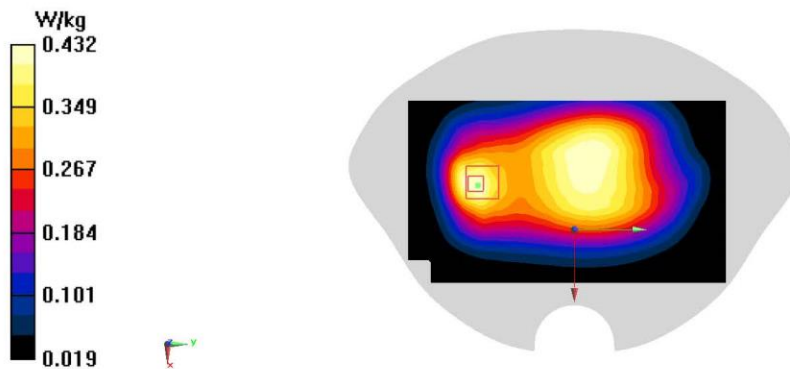
Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: UID 0, WCDMA 850 (0) Frequency: 826.4 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7673 ConvF(10.34, 10.34, 10.34); Calibrated: 7/8/2022

Area Scan (81x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.437 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 19.32 V/m; Power Drift = -0.12 dB
Peak SAR (extrapolated) = 0.519 W/kg
SAR(1 g) = 0.316 W/kg; SAR(10 g) = 0.204 W/kg
Maximum value of SAR (measured) = 0.432 W/kg



A. 14

WCDMA850 Body-15mm

Date/Time: 11/7/2022

Electronics: DAE4 Sn777

Medium: H700-6000M

Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.915$ S/m; $\epsilon_r = 43.664$; $\rho = 1000$ kg/m³

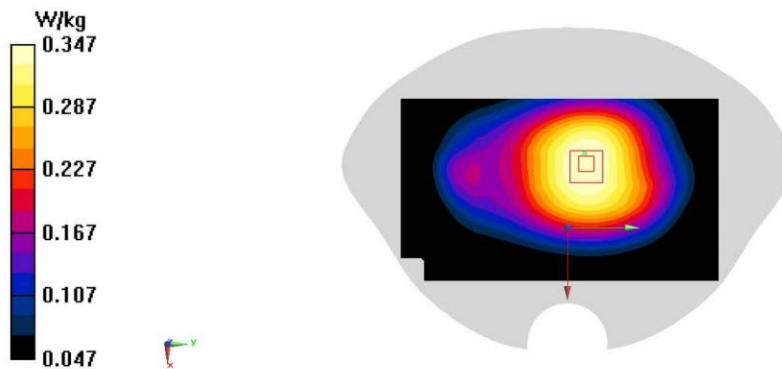
Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: UID 0, WCDMA 850 (0) Frequency: 836.6 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7673 ConvF(10.34, 10.34, 10.34); Calibrated: 7/8/2022

Area Scan (81x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.350 W/kg

Zoom Scan (6x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 17.15 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 0.387 W/kg
SAR(1 g) = 0.282 W/kg; SAR(10 g) = 0.214 W/kg
Maximum value of SAR (measured) = 0.347 W/kg



A. 15

LTE B2 Head

Date/Time: 11/11/2022

Electronics: DAE4 Sn777

Medium: H700-6000M

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.437$ S/m; $\epsilon_r = 41.641$; $\rho = 1000$ kg/m³

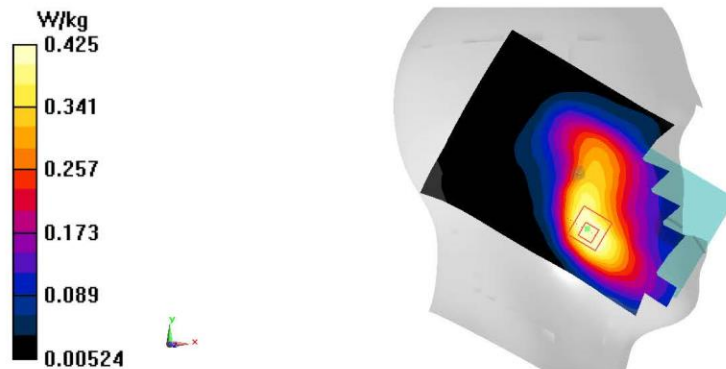
Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: UID 0, LTE Band2(20MB) (0) Frequency: 1880 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7673 ConvF(8.07, 8.07, 8.07); Calibrated: 7/8/2022

Area Scan (81x141x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm
Maximum value of SAR (interpolated) = 0.444 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm
Reference Value = 4.599 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 0.492 W/kg
SAR(1 g) = 0.321 W/kg; SAR(10 g) = 0.212 W/kg
Maximum value of SAR (measured) = 0.425 W/kg



A. 16

LTE B2 Body-10mm

Date/Time: 11/11/2022

Electronics: DAE4 Sn777

Medium: H700-6000M

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.437$ S/m; $\epsilon_r = 41.641$; $\rho = 1000$ kg/m³

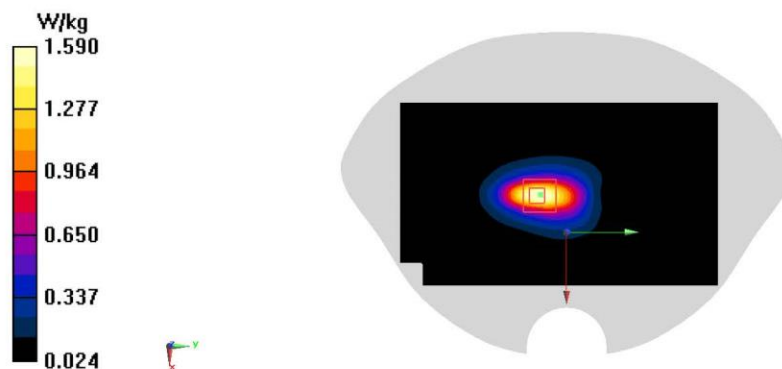
Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: UID 0, LTE Band2(20MB) (0) Frequency: 1880 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7673 ConvF(8.07, 8.07, 8.07); Calibrated: 7/8/2022

Area Scan (81x141x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm
Maximum value of SAR (interpolated) = 1.68 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm
Reference Value = 24.25 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 1.94 W/kg
SAR(1 g) = 1.08 W/kg; SAR(10 g) = 0.575 W/kg
Maximum value of SAR (measured) = 1.59 W/kg



A. 17

LTE B2 Body-15mm

Date/Time: 11/11/2022

Electronics: DAE4 Sn777

Medium: H700-6000M

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.437$ S/m; $\epsilon_r = 41.641$; $\rho = 1000$ kg/m³

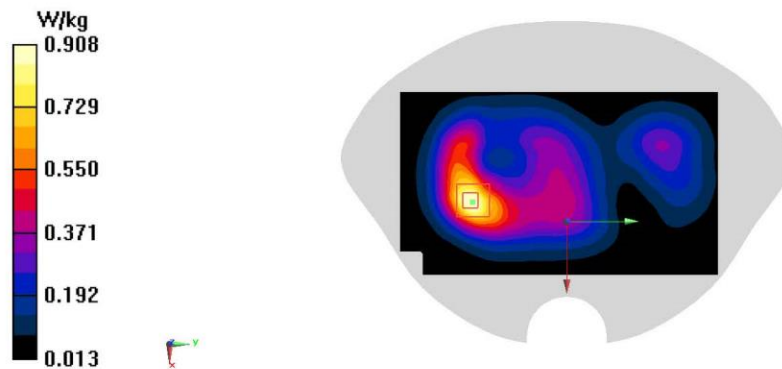
Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: UID 0, LTE Band2(20MB) (0) Frequency: 1880 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7673 ConvF(8.07, 8.07, 8.07); Calibrated: 7/8/2022

Area Scan (81x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.957 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 14.16 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 1.09 W/kg
SAR(1 g) = 0.623 W/kg; SAR(10 g) = 0.351 W/kg
Maximum value of SAR (measured) = 0.908 W/kg



A. 18

LTE B5 Head

Date/Time: 11/7/2022

Electronics: DAE4 Sn777

Medium: H700-6000M

Medium parameters used (interpolated): $f = 844$ MHz; $\sigma = 0.918$ S/m; $\epsilon_r = 43.66$; $\rho = 1000$ kg/m³

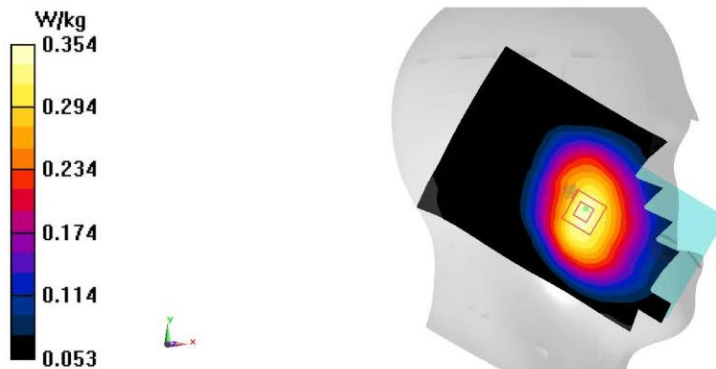
Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: UID 0, LTE Band5 (0) Frequency: 844 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7673 ConvF(10.34, 10.34, 10.34); Calibrated: 7/8/2022

Area Scan (81x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.349 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.170 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.388 W/kg
SAR(1 g) = 0.293 W/kg; SAR(10 g) = 0.225 W/kg
Maximum value of SAR (measured) = 0.354 W/kg



A. 19

LTE B5 Body-10mm

Date/Time: 11/7/2022

Electronics: DAE4 Sn777

Medium: H700-6000M

Medium parameters used (interpolated): $f = 844 \text{ MHz}$; $\sigma = 0.918 \text{ S/m}$; $\epsilon_r = 43.66$; $\rho = 1000 \text{ kg/m}^3$

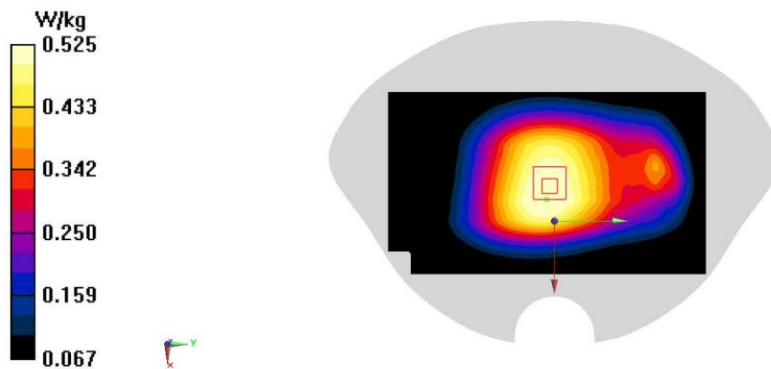
Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: UID 0, LTE Band5 (0) Frequency: 844 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7673 ConvF(10.34, 10.34, 10.34); Calibrated: 7/8/2022

Area Scan (81x141x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.550 W/kg

Zoom Scan (6x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 21.87 V/m; Power Drift = 0.04 dB
 Peak SAR (extrapolated) = 0.578 W/kg
SAR(1 g) = 0.433 W/kg; SAR(10 g) = 0.332 W/kg
 Maximum value of SAR (measured) = 0.525 W/kg



A. 20

LTE B5 Body-15mm

Date/Time: 11/7/2022

Electronics: DAE4 Sn777

Medium: H700-6000M

Medium parameters used (interpolated): $f = 844$ MHz; $\sigma = 0.918$ S/m; $\epsilon_r = 43.66$; $\rho = 1000$ kg/m³

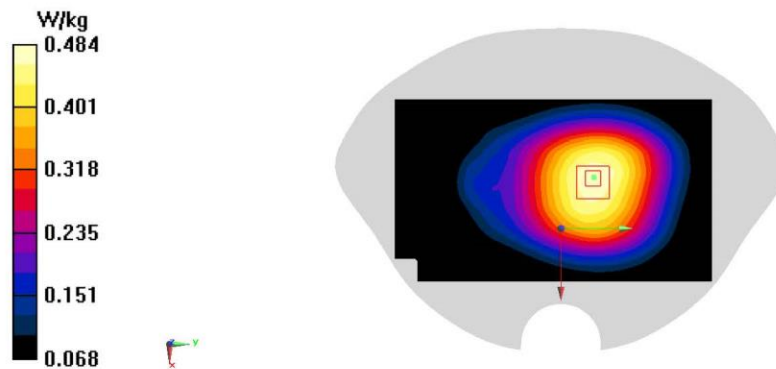
Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: UID 0, LTE Band5 (0) Frequency: 844 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7673 ConvF(10.34, 10.34, 10.34); Calibrated: 7/8/2022

Area Scan (81x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.477 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 19.00 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.538 W/kg
SAR(1 g) = 0.390 W/kg; SAR(10 g) = 0.294 W/kg
Maximum value of SAR (measured) = 0.484 W/kg



A. 21

LTE B12 Head

Date/Time: 11/6/2022

Electronics: DAE4 Sn777

Medium: H700-6000M

Medium parameters used (interpolated): $f = 707.5$ MHz; $\sigma = 0.865$ S/m; $\epsilon_r = 44.042$; $\rho = 1000$ kg/m³

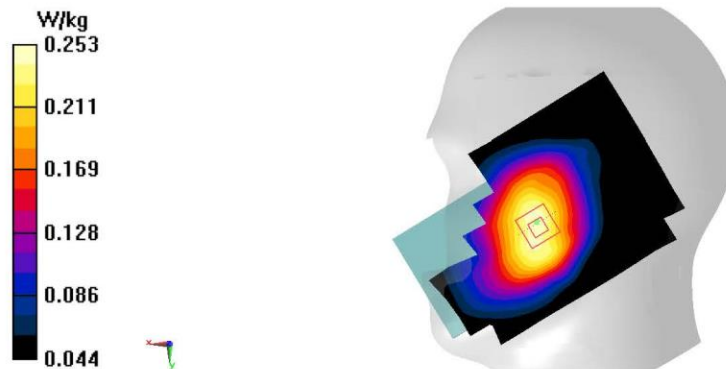
Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: UID 0, LTE Band12 (0) Frequency: 707.5 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7673 ConvF(10.34, 10.34, 10.34); Calibrated: 7/8/2022

Area Scan (81x141x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm
Maximum value of SAR (interpolated) = 0.253 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm
Reference Value = 6.189 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 0.277 W/kg
SAR(1 g) = 0.213 W/kg; SAR(10 g) = 0.168 W/kg
Maximum value of SAR (measured) = 0.253 W/kg



A. 22

LTE B12 Body-10mm

Date/Time: 11/6/2022

Electronics: DAE4 Sn777

Medium: H700-6000M

Medium parameters used (interpolated): $f = 707.5$ MHz; $\sigma = 0.865$ S/m; $\epsilon_r = 44.042$; $\rho = 1000$ kg/m³

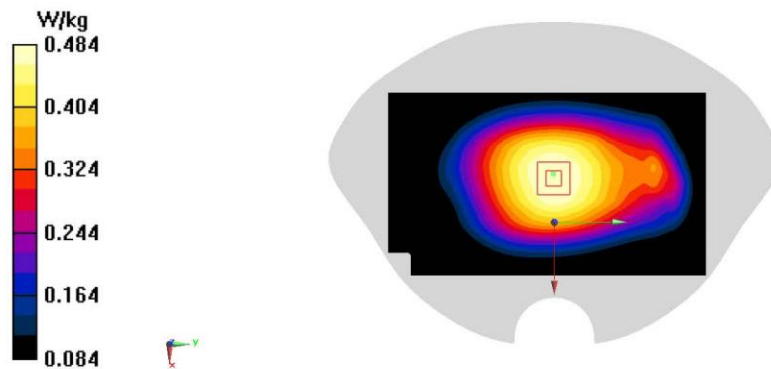
Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: UID 0, LTE Band12 (0) Frequency: 707.5 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7673 ConvF(10.34, 10.34, 10.34); Calibrated: 7/8/2022

Area Scan (81x141x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm
Maximum value of SAR (interpolated) = 0.490 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm
Reference Value = 22.01 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.527 W/kg
SAR(1 g) = 0.404 W/kg; SAR(10 g) = 0.313 W/kg
Maximum value of SAR (measured) = 0.484 W/kg



A. 23

LTE B12 Body-15mm

Date/Time: 11/6/2022

Electronics: DAE4 Sn777

Medium: H700-6000M

Medium parameters used (interpolated): $f = 707.5$ MHz; $\sigma = 0.865$ S/m; $\epsilon_r = 44.042$; $\rho = 1000$ kg/m³

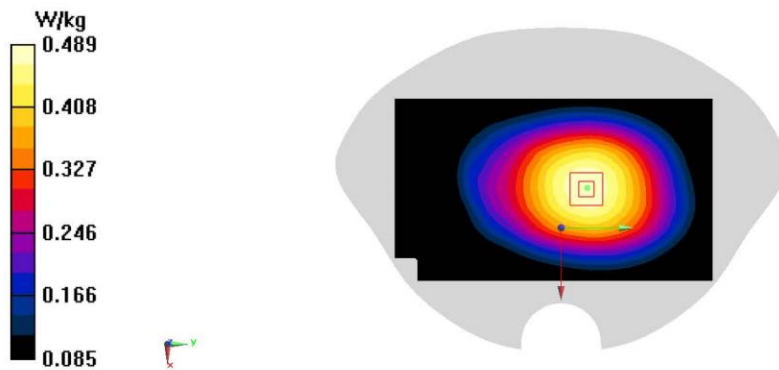
Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: UID 0, LTE Band12 (0) Frequency: 707.5 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7673 ConvF(10.34, 10.34, 10.34); Calibrated: 7/8/2022

Area Scan (81x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.483 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 21.09 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.540 W/kg
SAR(1 g) = 0.401 W/kg; SAR(10 g) = 0.306 W/kg
Maximum value of SAR (measured) = 0.489 W/kg



LTE B13 Head

Date/Time: 11/6/2022

Electronics: DAE4 Sn777

Medium: H700-6000M

Medium parameters used (interpolated): $f = 782$ MHz; $\sigma = 0.891$ S/m; $\epsilon_r = 43.882$; $\rho = 1000$ kg/m³

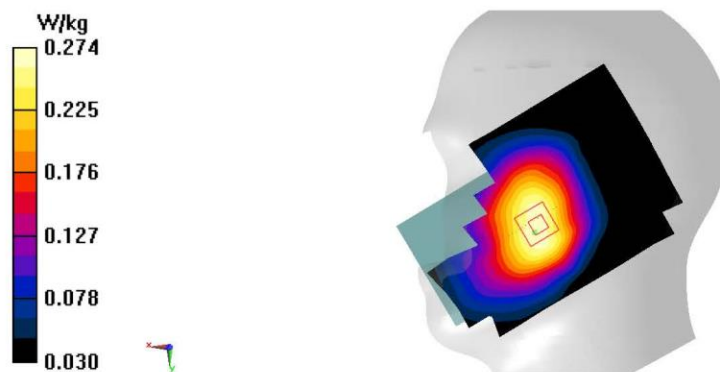
Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: UID 0, LTE Band13 (0) Frequency: 782 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7673 ConvF(10.34, 10.34, 10.34); Calibrated: 7/8/2022

Area Scan (81x141x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm
Maximum value of SAR (interpolated) = 0.271 W/kg

Zoom Scan (6x6x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm
Reference Value = 3.907 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.300 W/kg
SAR(1 g) = 0.231 W/kg; SAR(10 g) = 0.181 W/kg
Maximum value of SAR (measured) = 0.274 W/kg



LTE B13 Body-10mm

Date/Time: 11/6/2022

Electronics: DAE4 Sn777

Medium: H700-6000M

Medium parameters used (interpolated): $f = 782$ MHz; $\sigma = 0.891$ S/m; $\epsilon_r = 43.882$; $\rho = 1000$ kg/m³

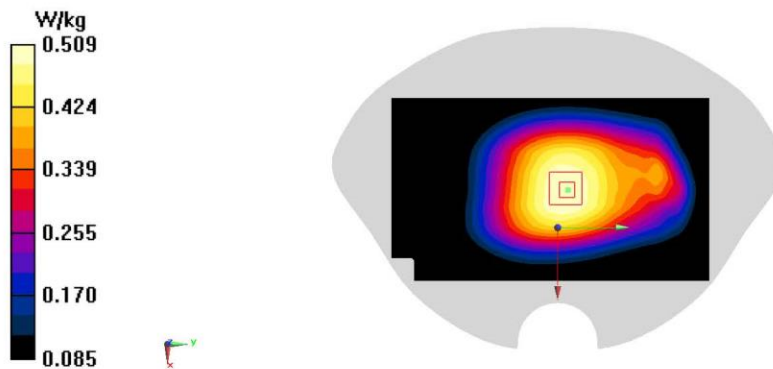
Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: UID 0, LTE Band13 (0) Frequency: 782 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7673 ConvF(10.34, 10.34, 10.34); Calibrated: 7/8/2022

Area Scan (81x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
 Maximum value of SAR (interpolated) = 0.510 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 22.17 V/m; Power Drift = -0.03 dB
 Peak SAR (extrapolated) = 0.560 W/kg
SAR(1 g) = 0.422 W/kg; SAR(10 g) = 0.324 W/kg
 Maximum value of SAR (measured) = 0.509 W/kg



LTE B13 Body-15mm

Date/Time: 11/6/2022

Electronics: DAE4 Sn777

Medium: H700-6000M

Medium parameters used (interpolated): $f = 782$ MHz; $\sigma = 0.891$ S/m; $\epsilon_r = 43.882$; $\rho = 1000$ kg/m³

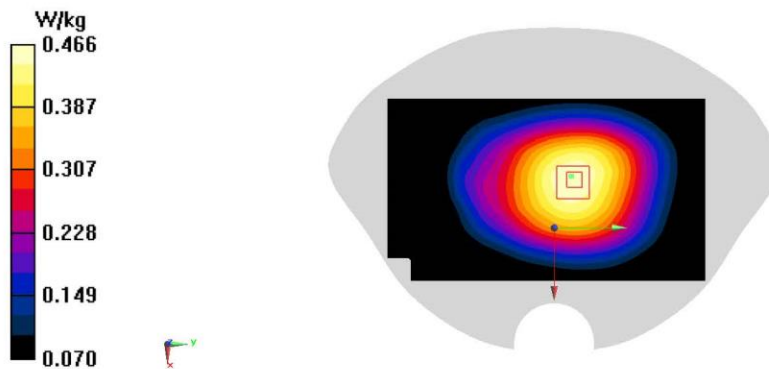
Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: UID 0, LTE Band13 (0) Frequency: 782 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7673 ConvF(10.34, 10.34, 10.34); Calibrated: 7/8/2022

Area Scan (81x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.466 W/kg

Zoom Scan (6x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 20.17 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 0.517 W/kg
SAR(1 g) = 0.378 W/kg; SAR(10 g) = 0.288 W/kg
Maximum value of SAR (measured) = 0.466 W/kg



A. 27

LTE B30 Head

Date/Time: 11/13/2022

Electronics: DAE4 Sn777

Medium: H700-6000M

Medium parameters used: $f = 2310$ MHz; $\sigma = 1.729$ S/m; $\epsilon_r = 40.858$; $\rho = 1000$ kg/m³

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: UID 0, LTE Band30 (0) Frequency: 2310 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7673 ConvF(7.86, 7.86, 7.86); Calibrated: 7/8/2022

Area Scan (101x181x1): Interpolated grid: $dx=1.200$ mm, $dy=1.200$ mm
Maximum value of SAR (interpolated) = 0.217 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm
Reference Value = 2.265 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 0.269 W/kg
SAR(1 g) = 0.157 W/kg; SAR(10 g) = 0.094 W/kg
Maximum value of SAR (measured) = 0.225 W/kg

