



中认信通

CHINA CERTIFICATION ICT CO., LTD (DONGGUAN)



SAR TEST REPORT

Applicant: ISMARTU INDIA PRIVATE LIMITED

Address: B 302, Third Floor, Tower B, Advant IT Park, Plot No. 7, Sector 142, Noida, Gautam Buddha Nagar, Uttar Pradesh, India, 201301

FCC ID: 2BN5O-C671L

Product Name: Mobile Phone

Standard(s): 47 CFR Part 2(2.1093)

The above device has been tested and found compliant with the requirement of the relative standards by China Certification ICT Co., Ltd (Dongguan)

Report Number: 2503U31524E-20A2

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SAR TEST RESULTSSUMMARY

Mode		Max. Reported SAR Level(s) (W/kg)	Limit (W/kg)
GSM 850	1g Head SAR	0.51	1.6
	1g Body SAR	0.15	
PCS 1900	1g Head SAR	1.09	
	1g Body SAR	0.36	
WCDMA Band 2	1g Head SAR	0.93	
	1g Body SAR	0.44	
WCDMA Band 4	1g Head SAR	0.64	
	1g Body SAR	0.21	
WCDMA Band 5	1g Head SAR	0.58	
	1g Body SAR	0.14	
LTE Band 2	1g Head SAR	0.79	
	1g Body SAR	0.42	
LTE Band 7	1g Head SAR	0.39	
	1g Body SAR	0.30	
LTE Band 12&17	1g Head SAR	0.74	
	1g Body SAR	0.21	
LTE Band 26&5	1g Head SAR	1.08	
	1g Body SAR	0.19	
LTE Band 38	1g Head SAR	0.91	
	1g Body SAR	0.68	
LTE Band 41	1g Head SAR	0.79	
	1g Body SAR	0.63	
LTE Band 66&4	1g Head SAR	0.76	
	1g Body SAR	0.25	
WIFI 2.4G	1g Head SAR	0.48	
	1g Body SAR	0.09	
WIFI 5.2G	1g Head SAR	0.60	
	1g Body SAR	0.40	
WIFI 5.3G	1g Head SAR	0.52	
	1g Body SAR	0.32	
WIFI 5.6G	1g Head SAR	0.50	
	1g Body SAR	0.33	
WIFI 5.8G	1g Head SAR	0.53	
	1g Body SAR	0.50	

Note: The test data of BT/WIFI, please refer to original report.

Maximum Simultaneous Transmission SAR			
Items		Highest Reported SAR(W/kg)	Limit (W/kg)
Simultaneous	1g Head SAR	1.56	1.6
	1g Body SAR	1.04	
	1g Body SAR	1.04(Hotspot)	
EUT Received Date:	2025/06/24		
Tested Date:	2025/07/10~2025/07/15		
Tested Result:	PASS		

Test Facility

The Test site used by China Certification ICT Co., Ltd (Dongguan) to collect test data is located on the No. 113, Pingkang Road, Dalang Town, Dongguan, Guangdong, China.

The lab has been recognized as the FCC accredited lab under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No. :442868, the FCC Designation No. : CN1314.

Declarations

China Certification ICT Co., Ltd (Dongguan) is not responsible for the authenticity of any test data provided by the applicant. Data included from the applicant that may affect test results are marked with a triangle symbol “▲”. Customer model name, addresses, names, trademarks etc. are not considered data.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

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Each test item follows the test standard(s) without deviation.

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DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
1.0	2503Q32696E-20	Original Report	2025/03/26
2.0	2503Q32696E-20A1	Amended Report	2025/05/07
3.0	2503U31524E-20A2	CIIPC Report	2025/09/02

Note: This is the CIIPC application which was based on the Amended Report 2503Q32696E-20A1. The differences between them as following:

1. There have been changes in the WWAN DIV Antenna and location

Based on the above differences, it will affect the testing results of the WWAN DIV Antenna, so it is necessary to re-evaluate and test the WWAN DIV Antenna; Perform worst-case SAR evaluation testing on the WWAN Main Antenna. Refer to the original report for BT/WIFI test data.

1. GENERAL INFORMATION

1.1 Product Description for Device under Test (EUT)

EUT Name:	Mobile Phone
EUT Model:	C671L
Multiple Models:	NA
Device Type:	Portable
Exposure Category:	Population / Uncontrolled
Antenna Type(s):	Internal Antenna
Body-Worn Accessories:	None
Proximity Sensor:	None
Carrier Aggregation:	Support
Uplink Intra CA Bands:	CA_5B, CA_7C, CA_38C, CA_41C
Operation modes:	GSM Voice, GPRS Data, WCDMA(R99 (Voice+Data), HSUPA/HSDPA), FDD-LTE, TDD-LTE, LTE Carrier Aggregation, WLAN, Bluetooth
Frequency Band:	GSM 850: 824-849 MHz(TX); 869-894 MHz(RX) PCS 1900: 1850-1910 MHz(TX); 1930-1990 MHz(RX) WCDMA Band 2: 1850-1910 MHz(TX); 1930-1990 MHz(RX) WCDMA Band 4: 1710-1755MHz(TX) ; 2110-2155 MHz(RX) WCDMA Band 5: 824-849 MHz(TX); 869-894 MHz(RX) LTE Band 2: 1850-1910 MHz(TX); 1930-1990 MHz(RX) LTE Band 4: 1710-1755MHz(TX) ; 2110-2155 MHz(RX) LTE Band 5: 824-849 MHz(TX); 869-894 MHz(RX) LTE Band 7: 2500-2570 MHz(TX); 2620-2690 MHz(RX) LTE Band 12: 699-716 MHz(TX); 729-746 MHz(RX) LTE Band 17: 704-716 MHz(TX); 734-746 MHz(RX) LTE Band 26: 814-849 MHz(TX); 859-894 MHz(RX) LTE Band 38: 2570-2620 MHz(TX/RX) LTE Band 41: 2535-2655 MHz(TX/RX) LTE Band 66: 1710-1780 MHz(TX) ; 2110-2180 MHz(RX) WLAN 2.4G: 2412-2462 MHz (TX/RX) WLAN 5.2G: 5150 -5250 MHz(TX/RX) WLAN 5.3G: 5250 -5350 MHz(TX/RX) WLAN 5.6G: 5470 -5725MHz(TX/RX) WLAN 5.8G: 5725-5850 MHz(TX/RX) Bluetooth(BDR/EDR): 2402-2480MHz(TX/RX) BLE_1M: 2402-2480MHz(TX/RX) BLE_2M: 2404-2478MHz(TX/RX)
Dimensions (L*W*H):	167mm (L) *77mm (W) *8mm (H)
Rated Input Voltage:	DC3.91V from Rechargeable Battery
Sample Number:	357Q-2
Normal Operation:	Head and Body

1.2 Test Specification, Methods and Procedures

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

KDB 447498 D01 General RF Exposure Guidance v06
KDB 648474 D04 Handset SAR v01r03
KDB865664 D01 SAR Measurement 100 MHz to 6 GHz v01r04
KDB865664 D02 RF Exposure Reporting v01r02
KDB941225 D01 3G SAR Procedures v03r01
KDB 941225 D05 SAR for LTE Devices v02r05
KDB941225 D06 Hotspot Mode v02r01
KDB 248227 D01 802.11 Wi-Fi SAR v02r02

TCB Workshop April 2019: RF Exposure Procedures

1.3 SAR Limits

FCC Limit

EXPOSURE LIMITS	SAR (W/kg)	
	(General Population / Uncontrolled Exposure Environment)	(Occupational / Controlled Exposure Environment)
Spatial Average (averaged over the whole body)	0.08	0.4
Spatial Peak (averaged over any 1 g of tissue)	1.6	8
Spatial Peak (hands/wrists/feet/ankles averaged over 10 g)	4	20

Population/Uncontrolled Environments are defined as locations where there is the exposure of individual who have no knowledge or control of their exposure.

Occupational/Controlled Environments are defined as locations where there is exposure that maybe incurred by people who are aware of the potential for exposure (i.e. as a result of employment or occupation).

General Population/Uncontrolled environments Spatial Peak limit 1.6W/kg (FCC) applied to the EUT.

1.4 FACILITIES

The Test site used by China Certification ICT Co., Ltd (Dongguan) to collect test data is located on the No. 113, Pingkang Road, Dalang Town, Dongguan, Guangdong, China.

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

☒ SAR Lab 1	☐ SAR Lab 2
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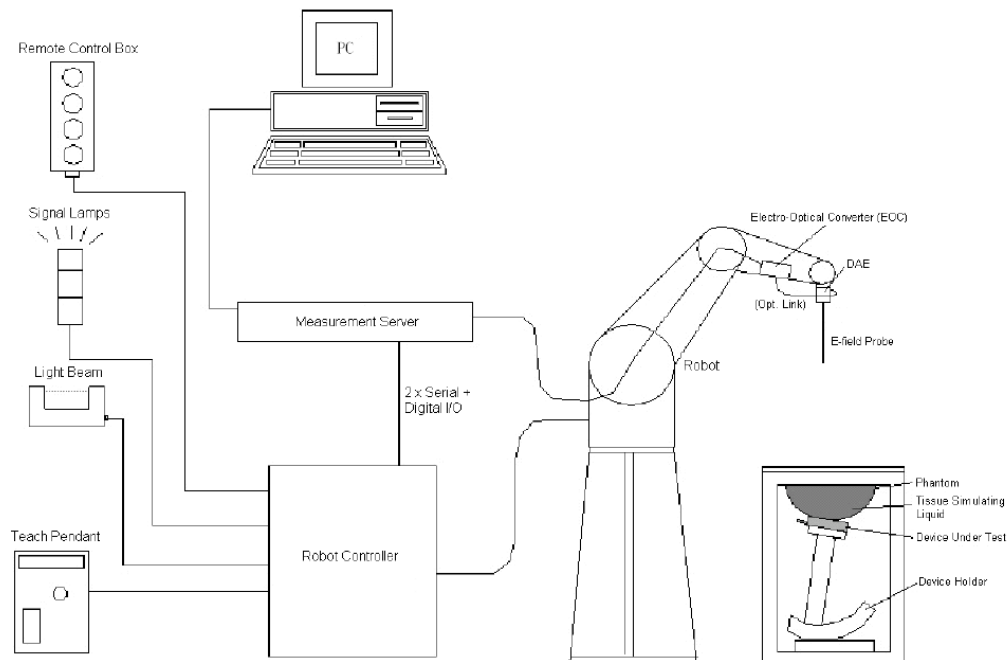
2. SAR MEASUREMENTSYSTEM

These measurements were performed with the automated near-field scanning system DASY5 from Schmid& Partner Engineering AG (SPEAG) which is the Fifth generation of the system shown in the figure hereinafter:



DASY5 System Description

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



- A standard high precision 6-axis robot with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
- An isotropic field probe optimized and calibrated for the targeted measurement.
- A data acquisition electronics (DAE) which performs the signal application, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
- The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital communication to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.
- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.
- A computer running Win7 professional operating system and the DASY52 software.
- Remote control and teach pendant as well as additional circuitry for robot safety such as warning lamps, etc.
- The phantom, the device holder and other accessories according to the targeted measurement.

DASY5 Measurement Server

The DASY5 measurement server is based on a PC/104 CPU board with a 400MHz Intel ULV Celeron, 128MB chip-disk and 128MB RAM. The necessary circuits for communication with the DAE4 (or DAE3) electronics box, as well as the 16 bit AD-converter system for optical detection and digital I/O interface are contained on the DASY5 I/O board, which is directly connected to the PC/104 bus of the CPU board.



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

Data Acquisition Electronics

The data acquisition electronics (DAE4) consist of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converter and a command decoder with a control logic unit. Transmission to the measurement server is accomplished through an optical downlink for data and status information, as well as an optical uplink for commands and the clock.

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

The input impedance of both the DAE4 as well as of the DAE3 box is 200M Ω ; the inputs are symmetrical and floating. Common mode rejection is above 80 dB.

ES3DV3 E-Field Probes

Frequency	10 MHz - 4 GHz Linearity: ± 0.2 dB (30 MHz to 4 GHz)
Directivity	± 0.2 dB in TSL (rotation around probe axis) ± 0.3 dB in TSL (rotation normal to probe axis)
Dynamic Range	5 μ W/g to > 100 mW/g Linearity: ± 0.2 dB (noise: typically < 1 μ W/g)
Dimensions	Overall length: 337 mm (Tip: 20 mm) Tip diameter: 3.9 mm (Body: 12 mm) Typical distance from probe tip to dipole centers: 2.0 mm
Application	General dosimetry up to 4 GHz Dosimetry in strong gradient fields Compliance tests of mobile phones
Compatibility	DASY3, DASY4, DASY52, DASY6, DASY8 SAR, EASY6, EASY4/MRI

SAM Twin Phantom

The SAM twin phantom is a fiberglass shell phantom with 2mm shell thickness (except the ear region, where shell thickness increases to 6 mm). The phantom has three measurement areas:

- _ Left Head
- _ Right Head
- _ Flat phantom

The phantom table for the DASY systems based on the robots have the size of 100 x 50 x 85 cm (L xWx H).

For easy dislocation these tables have fork lift cut outs at the bottom.

The bottom plate contains three pairs of bolts for locking the device holder. The device holder positions are adjusted to the standard measurement positions in the three sections. Only one device holder is necessary if two phantoms are used (e.g., for different liquids)



A white cover is provided to cover the phantom during off-periods to prevent water evaporation and changes in the liquid parameters. Free space scans of devices on top of this phantom cover are possible.

Three reference marks are provided on the phantom counter. These reference marks are used to teach the absolute phantom position relative to the robot.

Robots

The DASY5 system uses the high precision industrial robot. The robot offers the same features important for our application:

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

The above mentioned robots are controlled by the StaubliCS8c robot controllers. All information regarding the use and maintenance of the robot arm and the robot controller is contained on the CDs delivered along with the robot. Paper manuals are available upon request direct from Staubli.

SAR Scan Procedures

Step 1: Power Reference Measurement

The Power Reference Measurement and Power Drift Measurements are for monitoring the power drift of the device under test in the batch process. The minimum distance of probe sensors to surface determines the closest measurement point to phantom surface. The minimum distance of probe sensors to surface is 1.4 mm. This distance cannot be smaller than the distance of sensor calibration points to probe tip as defined in the probe properties.

Step 2: Area Scans

Area scans are defined prior to the measurement process being executed with a user defined variable spacing between each measurement point (integral) allowing low uncertainty measurements to be conducted. Scans defined for FCC applications utilize a 15mm 2 step integral, with 1.5mm interpolation used to locate the peak SAR area used for zoom scan assessments.

Where the system identifies multiple SAR peaks (which are within 25% of peak value) the system will provide the user with the option of assessing each peak location individually for zoom scan averaging.

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

	≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface	5 mm $\pm$ 1 mm	$\frac{1}{2} \cdot \delta \cdot \ln(2)$ mm $\pm$ 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.	

Step 3: Zoom Scan (Cube Scan Averaging)

The averaging zoom scan volume utilized in the DASY5 software is in the shape of a cube and the side dimension of a 1 g or 10 g mass is dependent on the density of the liquid representing the simulated tissue. A density of 1000 kg/m³ is used to represent the head and body tissue density and not the phantom liquid density, in order to be consistent with the definition of the liquid dielectric properties, i.e. the side length of the 1g cube is 5mm, with the side length of the 10g cube is 21.5mm.

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

			≤ 3 GHz	> 3 GHz
Maximum zoom scan spatial resolution: $\Delta x_{\text{Zoom}}, \Delta y_{\text{Zoom}}$			≤ 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: $\Delta z_{\text{Zoom}}(n)$		≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm
	graded grid	$\Delta z_{\text{Zoom}}(1)$: 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
		$\Delta z_{\text{Zoom}}(n>1)$: between subsequent points	$\leq 1.5 \cdot \Delta z_{\text{Zoom}}(n-1)$ mm	
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 IEEE Std 1528-2013 for details.				
* When zoom scan is required and the <i>reported</i> SAR from the <i>area scan based 1-g SAR estimation</i> procedures of KDB Publication 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.				

Step 4: Power Drift Measurement

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

When the cube intersects with the surface of the phantom, it is oriented so that 3 vertices touch the surface of the shell or the center of a face is tangent to the surface. The face of the cube closest to the surface is modified in order to conform to the tangent surface.

The zoom scan integer steps can be user defined so as to reduce uncertainty, but normal practice for typical test applications (including FCC) utilize a physical step of 7 x 7 x 7 (5mmx5mmx5mm) providing a volume of 30 mm in the X & Y & Z axis.

Tissue Dielectric Parameters for Head and Body Phantoms

The head tissue dielectric parameters recommended by the IEEE 1528-2013

Recommended Tissue Dielectric Parameters for Head liquid

Table 3—Target dielectric properties of head tissue-equivalent material in the 300 MHz to 6000 MHz frequency range

Frequency (MHz)	Relative permittivity (ϵ'_r)	Conductivity (σ) (S/m)
300	45.3	0.87
450	43.5	0.87
750	41.9	0.89
835	41.5	0.90
900	41.5	0.97
1450	40.5	1.20
1500	40.4	1.23
1640	40.2	1.31
1750	40.1	1.37
1800	40.0	1.40
1900	40.0	1.40
2000	40.0	1.40
2100	39.8	1.49
2300	39.5	1.67
2450	39.2	1.80
2600	39.0	1.96
3000	38.5	2.40
3500	37.9	2.91
4000	37.4	3.43
4500	36.8	3.94
5000	36.2	4.45
5200	36.0	4.66
5400	35.8	4.86
5600	35.5	5.07
5800	35.3	5.27
6000	35.1	5.48

NOTE—For convenience, permittivity and conductivity values at some frequencies that are not part of the original data from Drossos et al. [B60] or the extension to 5800 MHz are provided (i.e., the values shown in italics). These values were linearly interpolated between the values in this table that are immediately above and below these values, except the values at 6000 MHz that were linearly extrapolated from the values at 3000 MHz and 5800 MHz.

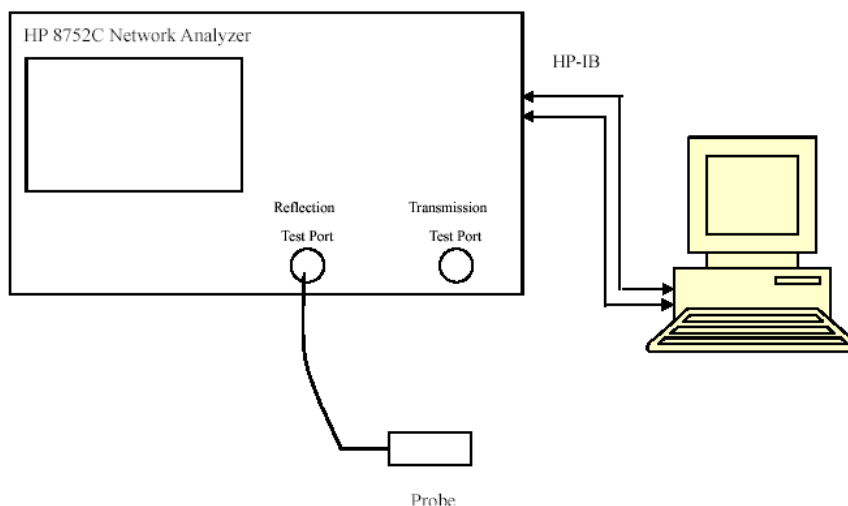
3. EQUIPMENT LIST AND CALIBRATION

3.1 Equipments List & Calibration Information

Equipment	Model	S/N	Calibration Date	Calibration Due Date
DASY5 Test Software	DASY52.10	N/A	NCR	NCR
DASY5 Measurement Server	DASY5 4.5.12	1567	NCR	NCR
Data Acquisition Electronics	DAE4	1354	2024/12/3	2025/12/2
E-Field Probe	ES3DV3	3157	2024/11/22	2025/11/21
Mounting Device	MD4HHTV5	SD 000 H01 KA	NCR	NCR
Twin SAM	Twin SAM V5.0	1412	NCR	NCR
Dipole, 750 MHz	D750V3	1230	2023/3/24	2026/3/23
Dipole, 1750 MHz	D1750V2	1200	2023/3/27	2026/3/26
Dipole, 1900 MHz	D1900V2	5d251	2023/3/27	2026/3/26
Dipole, 2450 MHz	D2450V2	1102	2023/3/27	2026/3/26
Dipole, 2600 MHz	D2600V2	1206	2023/3/27	2026/3/26
Simulated Tissue Liquid Head(500-9500 MHz)	HBBL600-10000V6	220420-2	Each Time	/
Network Analyzer	8753B	2828A00170	2024/10/17	2025/10/16
Dielectric assessment kit	DAK-3.5	1319	NCR	NCR
MXG Vector Signal Generator	N5182B	MY51350144	2024/4/1	2025/3/31
Power Meter	ML2495A	1106009	2024/8/3	2025/8/2
USB Average Power Sensor	U2001H	MY50000432	2024/4/1	2025/3/31
Power Amplifier	ZVE-6W-83+	SN637202210	NCR	NCR
Power Amplifier	ZHL-5W-202-S+	416402204	NCR	NCR
Directional Coupler	441493	520Z	NCR	NCR
Attenuator	6dB, 150W	2754	NCR	NCR
Attenuator	20dB, 100W	LN749	NCR	NCR
Thermometer	DTM3000	3892	2025/3/31	2026/3/30
Thermo-hygrometer	HTC-1	NA	2025/3/31	2026/3/30
Radio Communication Analyzer	MT8820C	6201181458	2024/10/10	2025/10/9
Spectrum Analyzer	FSU26	100147	2025/3/31	2026/3/30

4. SAR MEASUREMENT SYSTEM VERIFICATION

4.1 Liquid Verification



Liquid Verification Setup Block Diagram

4.2 Liquid Verification Results

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta (%)		Tolerance (%)
		ϵ_r	σ (S/m)	ϵ_r	σ (S/m)	$\Delta\epsilon_r$	$\Delta\sigma$ (S/m)	
704	Simulated Tissue Liquid Head	43.445	0.876	42.15	0.89	3.07	-1.57	± 5
707.5	Simulated Tissue Liquid Head	43.382	0.884	42.13	0.89	2.97	-0.67	± 5
711	Simulated Tissue Liquid Head	43.256	0.888	42.11	0.89	2.72	-0.22	± 5
750	Simulated Tissue Liquid Head	43.055	0.904	41.9	0.89	2.76	1.57	± 5
824.2	Simulated Tissue Liquid Head	42.605	0.923	41.55	0.9	2.54	2.56	± 5
826.4	Simulated Tissue Liquid Head	42.416	0.928	41.54	0.9	2.11	3.11	± 5
836.6	Simulated Tissue Liquid Head	42.256	0.932	41.5	0.9	1.82	3.56	± 5
846.6	Simulated Tissue Liquid Head	42.007	0.937	41.5	0.91	1.22	2.97	± 5
848.8	Simulated Tissue Liquid Head	41.979	0.938	41.5	0.91	1.15	3.08	± 5

*Liquid Verification above was performed on 2025/07/10

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta (%)		Tolerance (%)
		ϵ_r	σ (S/m)	ϵ_r	σ (S/m)	$\Delta\epsilon_r$	$\Delta\sigma$ (S/m)	
750	Simulated Tissue Liquid Head	42.695	0.894	41.9	0.89	1.9	0.45	± 5
821.5	Simulated Tissue Liquid Head	42.358	0.905	41.56	0.9	1.92	0.56	± 5
831.5	Simulated Tissue Liquid Head	42.113	0.914	41.52	0.9	1.43	1.56	± 5
831.6	Simulated Tissue Liquid Head	42.113	0.914	41.52	0.9	1.43	1.56	± 5
841.5	Simulated Tissue Liquid Head	41.895	0.926	41.5	0.91	0.95	1.76	± 5

*Liquid Verification above was performed on 2025/07/11

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta (%)		Tolerance (%)
		ϵ_r	σ (S/m)	ϵ_r	σ (S/m)	$\Delta\epsilon_r$	$\Delta\sigma$ (S/m)	
1712.4	Simulated Tissue Liquid Head	41.166	1.363	40.13	1.35	2.58	0.96	± 5
1720	Simulated Tissue Liquid Head	41.017	1.371	40.13	1.35	2.21	1.56	± 5
1732.6	Simulated Tissue Liquid Head	40.719	1.379	40.12	1.36	1.49	1.4	± 5
1745	Simulated Tissue Liquid Head	40.656	1.386	40.1	1.37	1.39	1.17	± 5
1750	Simulated Tissue Liquid Head	40.608	1.393	40.1	1.37	1.27	1.68	± 5
1752.6	Simulated Tissue Liquid Head	40.566	1.397	40.09	1.37	1.19	1.97	± 5
1770	Simulated Tissue Liquid Head	40.359	1.403	40.06	1.38	0.75	1.67	± 5

*Liquid Verification above was performed on 2025/07/12

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta (%)		Tolerance (%)
		ϵ_r	σ (S/m)	ϵ_r	σ (S/m)	$\Delta\epsilon_r$	$\Delta\sigma$ (S/m)	
1850.2	Simulated Tissue Liquid Head	40.718	1.396	40	1.4	1.8	-0.29	± 5
1852.4	Simulated Tissue Liquid Head	40.685	1.398	40	1.4	1.71	-0.14	± 5
1860	Simulated Tissue Liquid Head	40.515	1.407	40	1.4	1.29	0.5	± 5
1880	Simulated Tissue Liquid Head	40.394	1.415	40	1.4	0.98	1.07	± 5
1900	Simulated Tissue Liquid Head	40.109	1.423	40	1.4	0.27	1.64	± 5
1907.6	Simulated Tissue Liquid Head	39.838	1.431	40	1.4	-0.4	2.21	± 5
1909.8	Simulated Tissue Liquid Head	39.825	1.435	40	1.4	-0.44	2.5	± 5

*Liquid Verification above was performed on 2025/07/13

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta (%)		Tolerance (%)
		ϵ_r	σ (S/m)	ϵ_r	σ (S/m)	$\Delta\epsilon_r$	$\Delta\sigma$ (S/m)	
2450	Simulated Tissue Liquid Head	40.058	1.768	39.2	1.8	2.19	-1.78	± 5
2510	Simulated Tissue Liquid Head	39.831	1.848	39.12	1.86	1.82	-0.65	± 5
2525.1	Simulated Tissue Liquid Head	39.726	1.865	39.1	1.88	1.6	-0.8	± 5
2535	Simulated Tissue Liquid Head	39.595	1.871	39.09	1.89	1.29	-1.01	± 5
2545	Simulated Tissue Liquid Head	39.409	1.885	39.07	1.9	0.87	-0.79	± 5

*Liquid Verification above was performed on 2025/07/14

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta (%)		Tolerance (%)
		ϵ_r	σ (S/m)	ϵ_r	σ (S/m)	$\Delta\epsilon_r$	$\Delta\sigma$ (S/m)	
2560	Simulated Tissue Liquid Head	39.624	1.886	39.05	1.92	1.47	-1.77	± 5
2570	Simulated Tissue Liquid Head	39.568	1.887	39.04	1.93	1.35	-2.23	± 5
2583.1	Simulated Tissue Liquid Head	39.379	1.924	39.02	1.94	0.92	-0.82	± 5
2580	Simulated Tissue Liquid Head	39.365	1.931	39.03	1.94	0.86	-0.46	± 5
2585.1	Simulated Tissue Liquid Head	39.216	1.933	39.02	1.94	0.5	-0.36	± 5
2595	Simulated Tissue Liquid Head	39.047	1.935	39.01	1.95	0.09	-0.77	± 5
2600	Simulated Tissue Liquid Head	38.921	1.979	39	1.96	-0.2	0.97	± 5
2610	Simulated Tissue Liquid Head	38.865	1.991	38.99	1.97	-0.32	1.07	± 5
2645	Simulated Tissue Liquid Head	38.636	2.006	38.94	2.01	-0.78	-0.2	± 5

*Liquid Verification above was performed on 2025/07/15

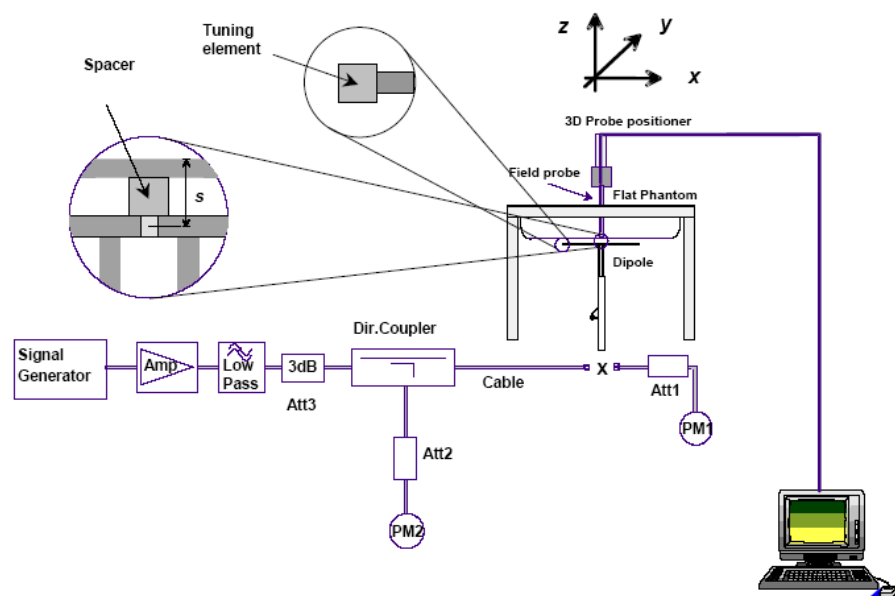
4.3 System Accuracy Verification

Prior to the assessment, the system validation kit was used to test whether the system was operating within its specifications of $\pm 10\%$. The validation results are tabulated below. And also the corresponding SAR plot is attached as well in the SAR plots files.

The spacing distances in the **System Verification Setup Block Diagram** is given by the following:

- $s = 15 \text{ mm} \pm 0,2 \text{ mm}$ for $300 \text{ MHz} \leq f \leq 1\,000 \text{ MHz}$;
- $s = 10 \text{ mm} \pm 0,2 \text{ mm}$ for $1\,000 \text{ MHz} < f \leq 3\,000 \text{ MHz}$;
- $s = 10 \text{ mm} \pm 0,2 \text{ mm}$ for $3\,000 \text{ MHz} < f \leq 6\,000 \text{ MHz}$.

System Verification Setup Block Diagram



4.4 System Accuracy Check Results

Date	Frequency Band (MHz)	Liquid Type	Input Power (mW)	Measured SAR (W/kg)		Normalized to 1W (W/kg)	Target Value (W/Kg)	Delta (%)	Tolerance (%)
2025/07/10	750	Head	100	1g	0.856	8.56	8.49	0.82	± 10
2025/07/11	750	Head	100	1g	0.852	8.52	8.49	0.35	± 10
2025/07/12	1750	Head	100	1g	3.77	37.7	35.8	5.31	± 10
2025/07/13	1900	Head	100	1g	3.98	39.8	38.9	2.31	± 10
2025/07/14	2450	Head	100	1g	5.23	52.3	50.9	2.75	± 10
2025/07/15	2600	Head	100	1g	5.77	57.7	56.0	3.04	± 10

Note: All the SAR values are normalized to 1Watt forward power.

4.5 SAR SYSTEM VALIDATION DATA

System Performance 750 MHz Head was performed on 2025/07/10

DUT: D750V3; Type: 750 MHz; Serial: 1230

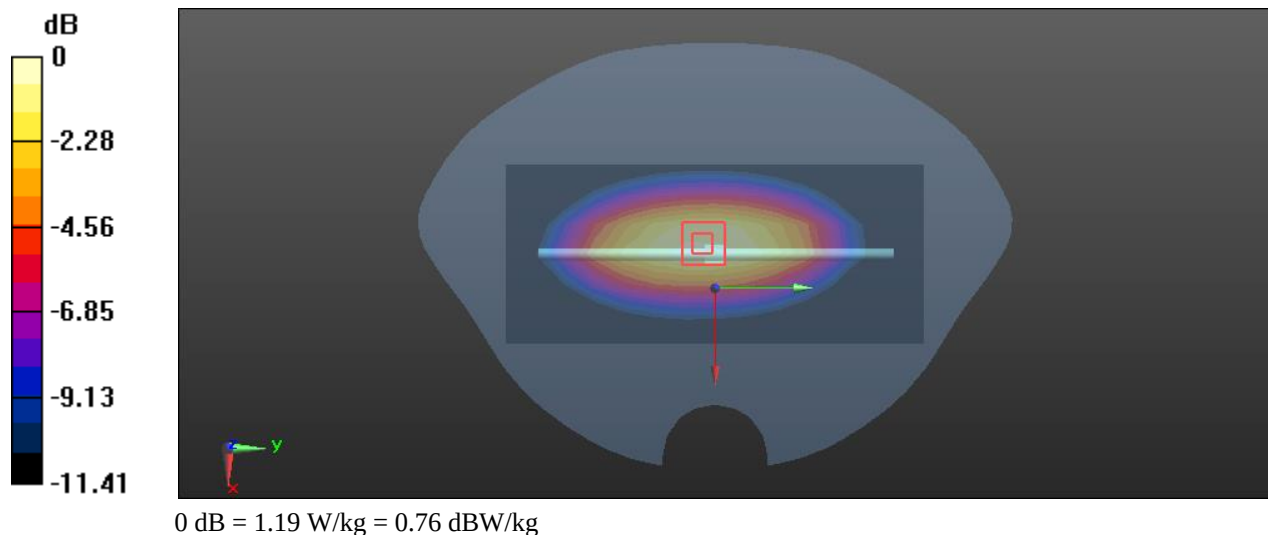
Communication System: CW (0); Frequency: 750 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 750$ MHz; $\sigma = 0.904$ S/m; $\epsilon_r = 43.055$; $\rho = 1000$ kg/m³;
Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3157; ConvF(6.45, 6.45, 6.45) @750 MHz; Calibrated: 2024/11/22
- Sensor-Surface: 3mm (Mechanical Surface Detection);
- Electronics: DAE4 Sn1354; Calibrated: 2024/12/3
- Phantom: Twin SAM; Type: Twin SAM V5.0; Serial: TP:1412
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7470)

Area Scan(7x15x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.09 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 32.50 V/m; Power Drift = -0.15 dB
Peak SAR (extrapolated) = 1.39 W/kg
SAR(1 g) = 0.856 W/kg; SAR(10 g) = 0.556 W/kg
Maximum value of SAR (measured) = 1.19 W/kg



System Performance 750 MHz Head was performed on 2025/07/11**DUT: D750V3; Type: 750 MHz; Serial: 1230**

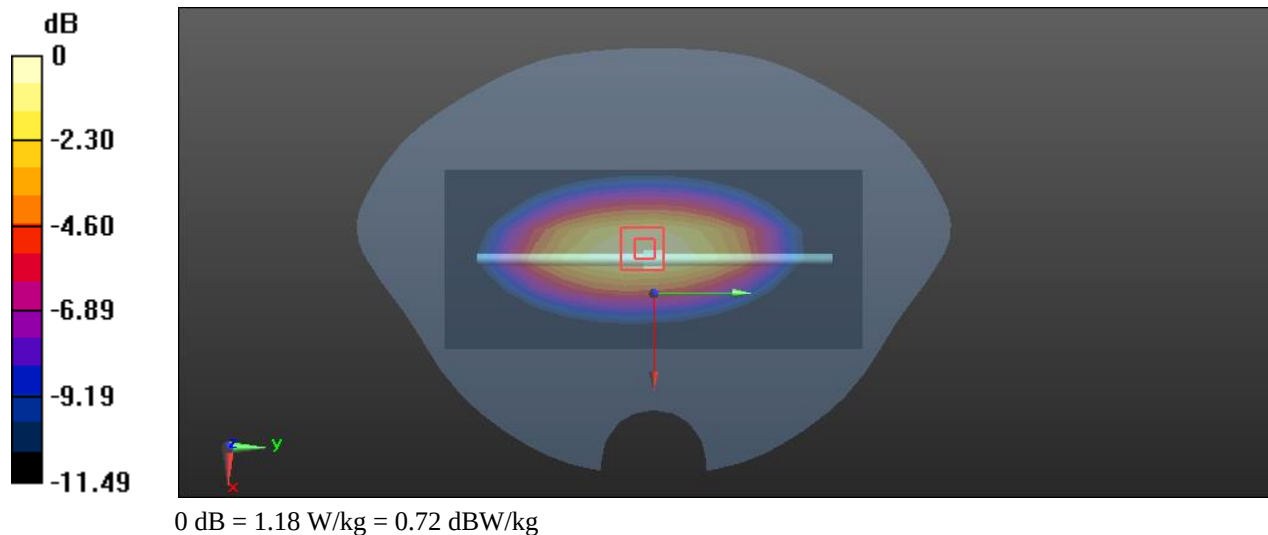
Communication System: CW (0); Frequency: 750 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 750 \text{ MHz}$; $\sigma = 0.894 \text{ S/m}$; $\epsilon_r = 42.695$; $\rho = 1000 \text{ kg/m}^3$;
Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3157; ConvF(6.45, 6.45, 6.45) @750 MHz; Calibrated: 2024/11/22
- Sensor-Surface: 3mm (Mechanical Surface Detection);
- Electronics: DAE4 Sn1354; Calibrated: 2024/12/3
- Phantom: Twin SAM; Type: Twin SAM V5.0; Serial: TP:1412
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7470)

Area Scan(7x15x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
Maximum value of SAR (measured) = 1.06 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
Reference Value = 30.65 V/m ; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 1.37 W/kg
SAR(1 g) = 0.852 W/kg ; SAR(10 g) = 0.554 W/kg
Maximum value of SAR (measured) = 1.18 W/kg



System Performance 1750 MHzHead**DUT: D1750V2; Type: 1750 MHz; Serial: 1200**

Communication System: CW (0); Frequency: 1750 MHz;Duty Cycle: 1:1

Medium parameters used: $f = 1750$ MHz; $\sigma = 1.393$ S/m; $\epsilon_r = 40.608$; $\rho = 1000$ kg/m³;

Phantom section: Flat Section

DASY5 Configuration:

- Probe:ES3DV3 - SN3157; ConvF(5.41, 5.41, 5.41) @1750 MHz; Calibrated: 2024/11/22
- Sensor-Surface: 3mm (Mechanical Surface Detection);
- Electronics: DAE4 Sn1354; Calibrated: 2024/12/3
- Phantom: Twin SAM; Type: Twin SAM V5.0; Serial: TP:1412
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7470)

Area Scan(5x9x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 3.65 W/kg

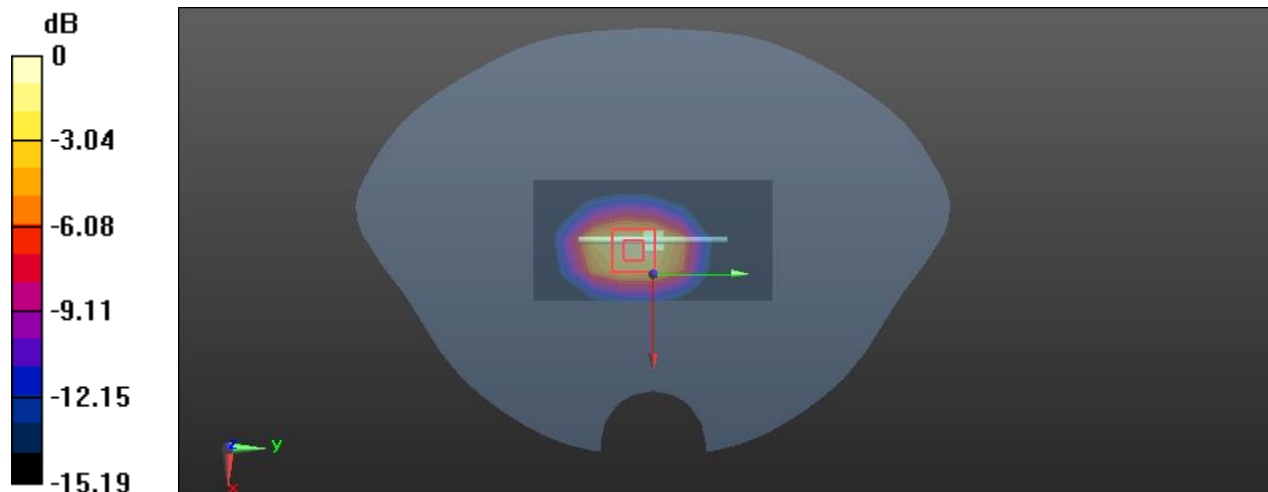
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 50.43 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 6.54 W/kg

SAR(1 g) = 3.77 W/kg; SAR(10 g) = 2.05 W/kg

Maximum value of SAR (measured) = 4.22 W/kg



System Performance 1900 MHzHead**DUT: D1900V2; Type: 1900 MHz; Serial: 5d251**

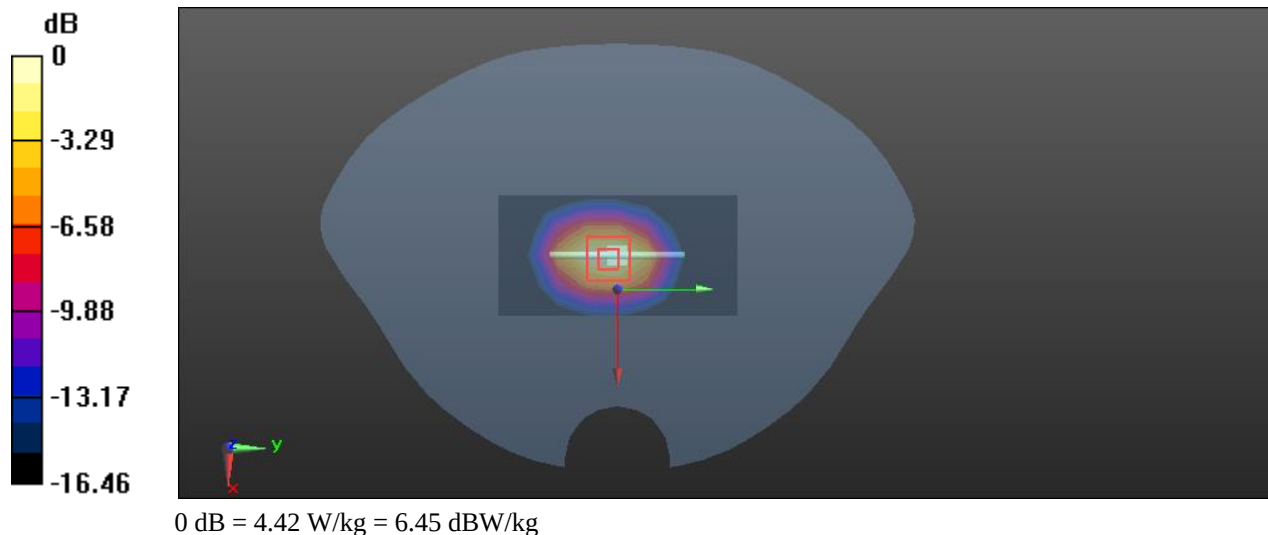
Communication System: CW (0); Frequency: 1900 MHz;Duty Cycle: 1:1

Medium parameters used: $f = 1900 \text{ MHz}$; $\sigma = 1.423 \text{ S/m}$; $\epsilon_r = 40.109$; $\rho = 1000 \text{ kg/m}^3$;

Phantom section: Flat Section

DASY5 Configuration:

- Probe:ES3DV3 - SN3157; ConvF(5.15, 5.15, 5.15) @1900 MHz; Calibrated: 2024/11/22
- Sensor-Surface: 3mm (Mechanical Surface Detection);
- Electronics: DAE4 Sn1354; Calibrated: 2024/12/3
- Phantom: Twin SAM; Type: Twin SAM V5.0; Serial: TP:1412
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7470)

Area Scan(5x9x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$ Maximum value of SAR (measured) = 4.49 W/kg **Zoom Scan (5x5x7)/Cube 0:** Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$ Reference Value = 57.33 V/m ; Power Drift = -0.15 dB Peak SAR (extrapolated) = 7.23 W/kg **SAR(1 g) = 3.98 W/kg ; SAR(10 g) = 2.09 W/kg** Maximum value of SAR (measured) = 4.42 W/kg 

System Performance 2450 MHzHead**DUT: D2450V2; Type: 2450 MHz; Serial: 1102**

Communication System: CW (0); Frequency: 2450 MHz;Duty Cycle: 1:1

Medium parameters used: $f = 2450$ MHz; $\sigma = 1.768$ S/m; $\epsilon_r = 40.058$; $\rho = 1000$ kg/m³;

Phantom section: Flat Section

DASY5 Configuration:

- Probe:ES3DV3 - SN3157; ConvF(4.75, 4.75, 4.75) @2450 MHz; Calibrated: 2024/11/22
- Sensor-Surface: 3mm (Mechanical Surface Detection);
- Electronics: DAE4 Sn1354; Calibrated: 2024/12/3
- Phantom: Twin SAM; Type: Twin SAM V5.0; Serial: TP:1412
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7470)

Area Scan(5x9x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 5.98 W/kg

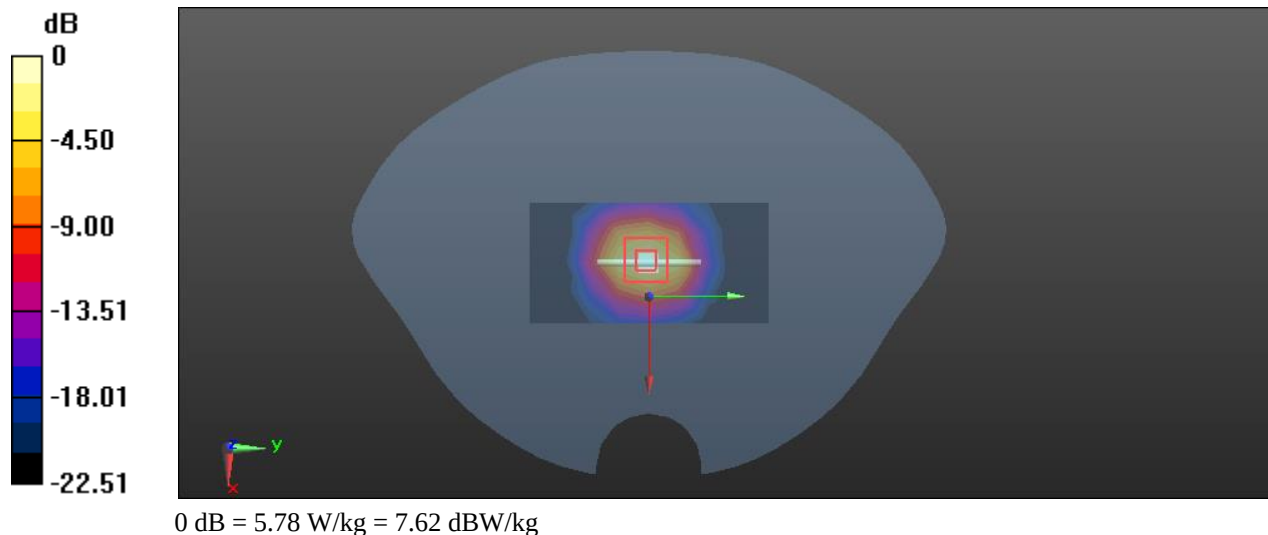
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 57.92 V/m; Power Drift = -0.17 dB

Peak SAR (extrapolated) = 11.1 W/kg

SAR(1 g) = 5.23 W/kg; SAR(10 g) = 2.4 W/kg

Maximum value of SAR (measured) = 5.78 W/kg



System Performance 2600 MHzHead**DUT: D2600V2; Type: 2600 MHz; Serial: 1206**

Communication System: CW (0); Frequency: 2600 MHz;Duty Cycle: 1:1

Medium parameters used: $f = 2600$ MHz; $\sigma = 1.979$ S/m; $\epsilon_r = 38.921$; $\rho = 1000$ kg/m³;

Phantom section: Flat Section

DASY5 Configuration:

- Probe:ES3DV3 - SN3157; ConvF(4.55, 4.55, 4.55) @2600 MHz; Calibrated: 2024/11/22
- Sensor-Surface: 3mm (Mechanical Surface Detection);
- Electronics: DAE4 Sn1354; Calibrated: 2024/12/3
- Phantom: Twin SAM; Type: Twin SAM V5.0; Serial: TP:1412
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7470)

Area Scan(6x8x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 9.16 W/kg

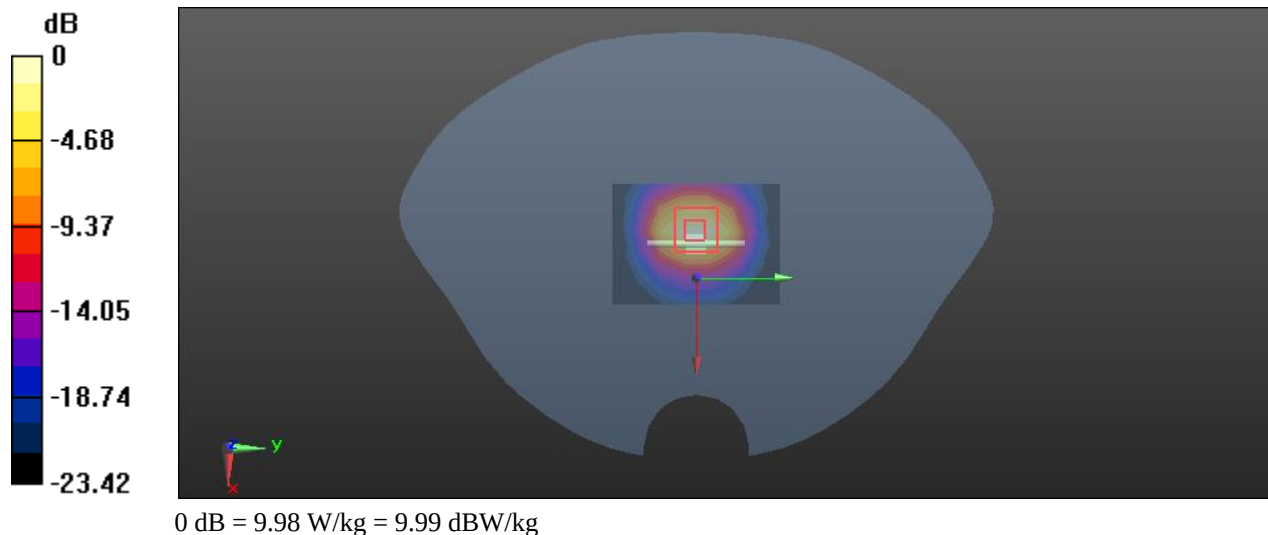
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 47.56 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 12.5 W/kg

SAR(1 g) = 5.77 W/kg; SAR(10 g) = 2.53 W/kg

Maximum value of SAR (measured) = 9.98 W/kg

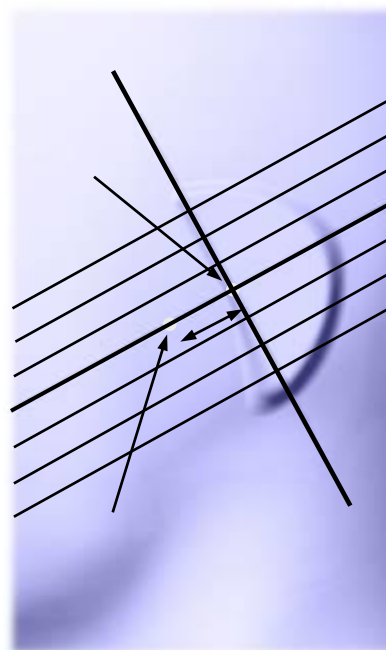
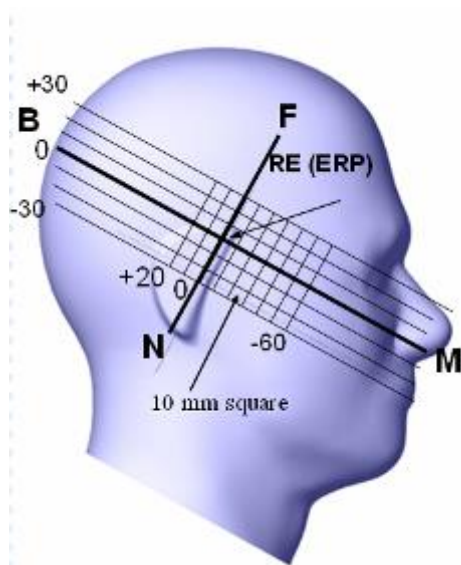


5. EUT TEST STRATEGY AND METHODOLOGY

5.1 Test Positions for Device Operating Next to a Person's Ear

This category includes most wireless handsets with fixed, retractable or internal antennas located toward the top half of the device, with or without a foldout, sliding or similar keypad cover. The handset should have its earpiece located within the upper $\frac{1}{4}$ of the device, either along the centerline or off-centered, as perceived by its users. This type of handset should be positioned in a normal operating position with the “test device reference point” located along the “vertical centerline” on the front of the device aligned to the “ear reference point”. The “test device reference point” should be located at the same level as the center of the earpiece region. The “vertical centerline” should bisect the front surface of the handset at its top and bottom edges. A “ear reference point” is located on the outer surface of the head phantom on each ear spacer. It is located 1.5 cm above the center of the ear canal entrance in the “phantom reference plane” defined by the three lines joining the center of each “ear reference point” (left and right) and the tip of the mouth.

A handset should be initially positioned with the earpiece region pressed against the ear spacer of a head phantom. For the SCC-34/SC-2 head phantom, the device should be positioned parallel to the “N-F” line defined along the base of the ear spacer that contains the “ear reference point”. For interim head phantoms, the device should be positioned parallel to the cheek for maximum RF energy coupling. The “test device reference point” is aligned to the “ear reference point” on the head phantom and the “vertical centerline” is aligned to the “phantom reference plane”. This is called the “initial ear position”. While maintaining these three alignments, the body of the handset is gradually adjusted to each of the following positions for evaluating SAR:



5.2 Cheek/Touch Position

The device is brought toward the mouth of the head phantom by pivoting against the “ear reference point” or along the “N-F” line for the SCC-34/SC-2 head phantom.

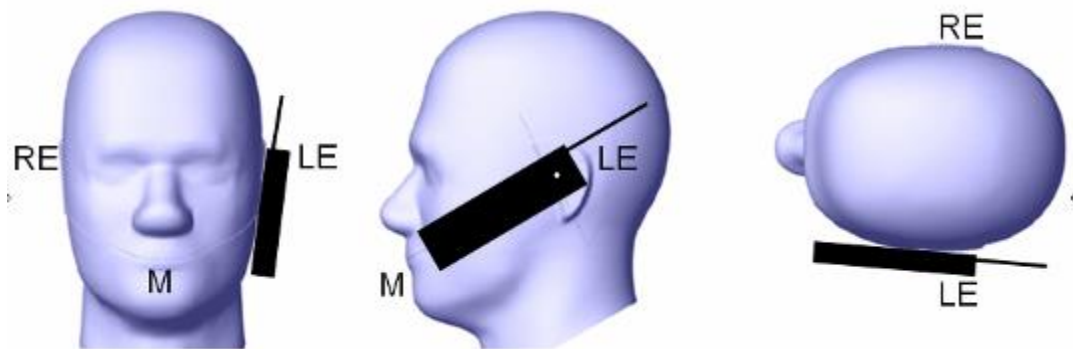
This test position is established:

When any point on the display, keypad or mouthpiece portions of the handset is in contact with the phantom.

(or) When any portion of a foldout, sliding or similar keypad cover opened to its intended self-adjusting normal use position is in contact with the cheek or mouth of the phantom.

For existing head phantoms – when the handset loses contact with the phantom at the pivoting point, rotation should continue until the device touches the cheek of the phantom or breaks its last contact from the ear spacer.

Cheek /Touch Position



5.3 Ear/Tilt Position

With the handset aligned in the “Cheek/Touch Position”:

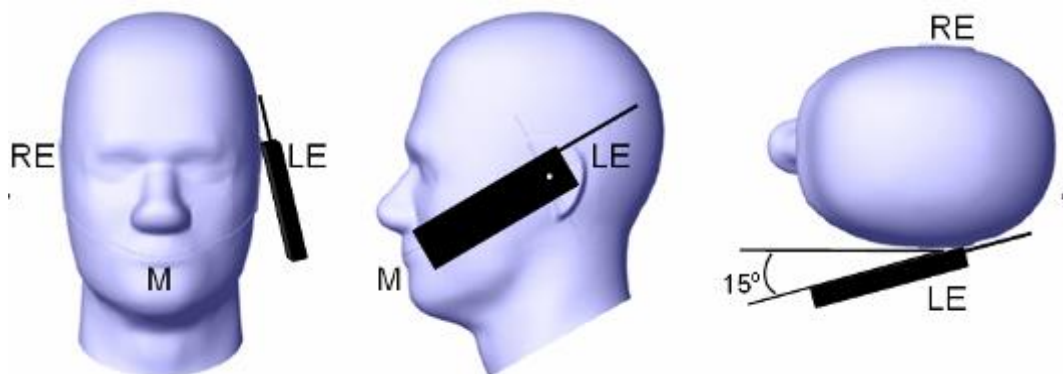
1) If the earpiece of the handset is not in full contact with the phantom’s ear spacer (in the “Cheek/Touch position”) and the peak SAR location for the “Cheek/Touch” position is located at the ear spacer region or corresponds to the earpiece region of the handset, the device should be returned to the “initial ear position” by rotating it away from the mouth until the earpiece is in full contact with the ear spacer.

2) (otherwise) The handset should be moved (translated) away from the cheek perpendicular to the line passes through both “ear reference points” (note: one of these ear reference points may not physically exist on a split head model) for approximate 2-3 cm. While it is in this position, the device handset is tilted away from the mouth with respect to the “test device reference point” until the inside angle between the vertical centerline on the front surface of the Smart phone and the horizontal line passing through the ear reference point is by 15 to 80°. After the tilt, it is then moved (translated) back toward the head perpendicular to the line passes through both “ear reference points” until the device touches the phantom or the ear spacer. If the antenna touches the head first, the positioning process should be repeated with a tilt angle less than 15° so that the device and its antenna would touch the phantom simultaneously. This test position may require a device holder or positioner to achieve the translation and tilting with acceptable positioning repeatability.

If a device is also designed to transmit with its keypad cover closed for operating in the head position, such positions should also be considered in the SAR evaluation. The device should be tested on the left and right side of the head phantom in the “Cheek/Touch” and “Ear/Tilt” positions. When applicable, each configuration should be tested with the antenna in its fully extended and fully retracted positions. These test configurations should be tested at the high, middle and low frequency channels of each operating mode; for example, AMPS, CDMA, and TDMA. If the SAR

measured at the middle channel for each test configuration (left, right, Cheek/Touch, Tilt/Ear, extended and retracted) is at least 2.0 dB lower than the SAR limit, testing at the high and low channels is optional for such test configuration(s). If the transmission band of the test device is less than 10 MHz, testing at the high and low frequency channels is optional.

Ear /Tilt 15° Position



5.4 Test positions for body-worn and other configurations

Body-worn operating configurations should be tested with the belt-clips and holsters attached to the device and positioned against a flat phantom in normal use configurations. Devices with a headset output should be tested with a headset connected to the device. When multiple accessories that do not contain metallic components are supplied with the device, the device may be tested with only the accessory that dictates the closest spacing to the body. When multiple accessories that contain metallic components are supplied with the device, the device must be tested with each accessory that contains a unique metallic component. If multiple accessories share an identical metallic component (e.g., the same metallic belt-clip used with different holsters with no other metallic components), only the accessory that dictates the closest spacing to the body must be tested.

Body-worn accessories may not always be supplied or available as options for some devices that are intended to be authorized for body-worn use. A separation distance of 1.5 cm between the back of the device and a flat phantom is recommended for testing body-worn SAR compliance under such circumstances. Other separation distances may be used, but they should not exceed 2.5 cm. In these cases, the device may use body-worn accessories that provide a separation distance greater than that tested for the device provided however that the accessory contains no metallic components.

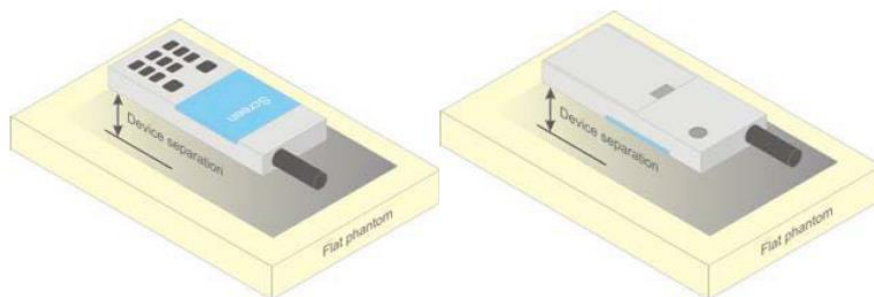


Figure 5 – Test positions for body-worn devices

5.5 Test Distance for SAR Evaluation

In this case the EUT(Equipment Under Test) is set 10mm away from the phantom, the test distance is 10mm(Body).

5.6 SAR Evaluation Procedure

The evaluation was performed with the following procedure:

Step 1: Measurement of the SAR value at a fixed location above the ear point or central position was used as a reference value for assessing the power drop. The SAR at this point is measured at the start of the test and then again at the end of the testing.

Step 2: The SAR distribution at the exposed side of the head was measured at a distance of 4 mm from the inner surface of the shell. The area covered the entire dimension of the head or radiating structures of the EUT, the horizontal grid spacing was 15 mm x 15 mm, and the SAR distribution was determined by integrated grid of 1.5mm x 1.5mm. Based on these data, the area of the maximum absorption was determined by spline interpolation. The first Area Scan covers the entire dimension of the EUT to ensure that the hotspot was correctly identified.

Step 3: Around this point, a volume of 30 mm x 30 mm x 30 mm was assessed by measuring 7x 7 x 7 points. On the basis of this data set, the spatial peak SAR value was evaluated under the following procedure:

1) The data at the surface were extrapolated, since the center of the dipoles is 1.2 mm away from the tip of the probe and the distance between the surface and the lowest measuring point is 1.3 mm. The extrapolation was based on a least square algorithm. A polynomial of the fourth order was calculated through the points in z-axes. This polynomial was then used to evaluate the points between the surface and the probe tip.

2) The maximum Measured value was searched with a straightforward algorithm. Around this maximum the SAR values averaged over the spatial volumes (1 g or 10 g) were computed by the 3D-Spline interpolation algorithm. The 3D-Spline is composed of three one dimensional splines with the "Not a knot"-condition (in x, y and z-directions). The volume was integrated with the trapezoidal-algorithm. One thousand points (10 x 10 x 10) were Measured to calculate the averages.

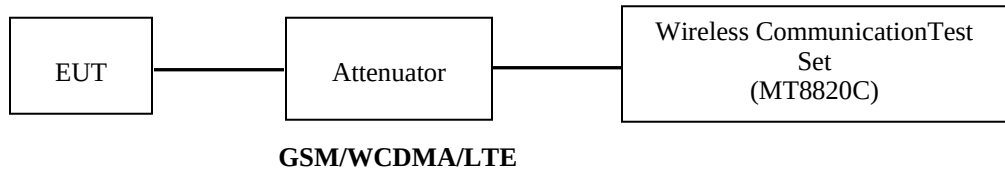
All neighboring volumes were evaluated until no neighboring volume with a higher average value was found.

Step 4: Re-measurement of the SAR value at the same location as in Step 1. If the value changed by more than 5%, the evaluation was repeated.

6. CONDUCTED OUTPUT POWER MEASUREMENT

6.1 Test Procedure

The RF output of the transmitter was connected to the input of the Wireless Communication Test Set through Connector.



6.2 Description of Test Configuration

GSM/GPRS

Function: Menu select > GSM Mobile Station > GSM 850/1900

Press Connection control to choose the different menus

Press RESET > choose all the reset all settings

Connection Press Signal Off to turn off the signal and change settings

Network Support > GSM + GPRS or GSM + EGSM

Main Service > Packet Data

Service selection > Test Mode A – Auto Slot Config.off

MS Signal Press Slot Config Bottom on the right twice to select and change the number of time slots and power setting

- > Slot configuration > Uplink/Gamma

- > 33 dBm for GPRS 850

- > 30 dBm for GPRS 1900

- > 27 dBm for EGPRS 850

- > 26 dBm for EGPRS 1900

BS Signal Enter the same channel number for TCH channel (test channel) and BCCH channel

Frequency Offset > + 0 Hz

Mode > BCCH and TCH

BCCH Level > -85 dBm (May need to adjust if link is not stable)

BCCH Channel > choose desired test channel [Enter the same channel number for TCH channel (test channel) and BCCH channel]

Channel Type > Off

P0 > 4 dB

Slot Config>Unchanged (if already set under MS signal)

TCH > choose desired test channel

Hopping > Off

Main Timeslot > 3

Network Coding Scheme > CS4 (GPRS) and MCS5 (EGPRS)

Bit Stream > 2E9-1 PSR Bit Stream

AF/RF Enter appropriate offsets for Ext. Att. Output and Ext. Att. Input

Connection Press Signal on to turn on the signal and change settings

WCDMA Release 99

The following tests were conducted according to the test requirements outlines in section 5.2 of the 3GPP TS34.121-1 specification. The EUT has a nominal maximum output power of 24dBm (+1.7/-3.7).

WCDMA General Settings	Loopback Mode	Test Mode 1
	Rel99 RMC	12.2kbps RMC
	Power Control Algorithm	Algorithm2
	β_c/β_d	8/15

HSDPA

The following tests were conducted according to the test requirements outlines in section 5.2 of the 3GPP TS34.121-1 specification.

	Mode	HSDPA	HSDPA	HSDPA	HSDPA
	Subset	1	2	3	4
WCDMA General Settings	Loopback Mode	Test Mode 1			
	Rel99 RMC	12.2kbps RMC			
	HSDPA FRC	H-Set1			
	Power Control Algorithm	Algorithm2			
	β_c	2/15	12/15	15/15	15/15
	β_d	15/15	15/15	8/15	4/15
	$\beta_d(\text{SF})$	64			
	β_c/β_d	2/15	12/15	15/8	15/4
	β_{hs}	4/15	24/15	30/15	30/15
	MPR(dB)	0	0	0.5	0.5
HSDPA Specific Settings	DACK	8			
	DNAK	8			
	DCQI	8			
	Ack-Nack repetition factor	3			
	CQI Feedback	4ms			
	CQI Repetition Factor	2			
	$A_{hs}=\beta_{hs}/\beta_c$	30/15			

HSUPA

The following tests were conducted according to the test requirements outlines in section 5.2 of the 3GPP TS34.121-1 specification.

	Mode	HSUPA	HSUPA	HSUPA	HSUPA	HSUPA
	Subset	1	2	3	4	5
WCDMA General Settings	Loopback Mode	Test Mode 1				
	Rel99 RMC	12.2kbps RMC				
	HSDPA FRC	H-Set1				
	HSUPA Test	HSUPA Loopback				
	Power Control Algorithm	Algorithm2				
	β_c	11/15	6/15	15/15	2/15	15/15
	β_d	15/15	15/15	9/15	15/15	0
	β_{ec}	209/225	12/15	30/15	2/15	5/15
	β_c/β_d	11/15	6/15	15/9	2/15	-
	β_{hs}	22/15	12/15	30/15	4/15	5/15
	CM(dB)	1.0	3.0	2.0	3.0	1.0
	MPR(dB)	0	2	1	2	0
HSDPA Specific Settings	DACK	8				
	DNAK	8				
	DCQI	8				
	Ack-Nack repetition factor	3				
	CQI Feedback	4ms				
	CQI Repetition Factor	2				
	$A_{hs}=\beta_{hs}/\beta_c$	30/15				
HSUPA Specific Settings	DE-DPCCH	6	8	8	5	7
	DHARQ	0	0	0	0	0
	AG Index	20	12	15	17	21
	ETFCI	75	67	92	71	81
	Associated Max UL Data Rate kbps	242.1	174.9	482.8	205.8	308.9
	Reference E_FCI	E-TFCI 11 E E-TFCI PO 4 E-TFCI 67 E-TFCI PO 18 E-TFCI 71 E-TFCI PO23 E-TFCI 75 E-TFCI PO26 E-TFCI 81 E-TFCI PO 27	E-TFCI 11 E-TFCI PO4 E-TFCI 92 E-TFCI PO 18		E-TFCI 11 E E-TFCI PO 4 E-TFCI 67 E-TFCI PO 18 E-TFCI 71 E-TFCI PO23 E-TFCI 75 E-TFCI PO26 E-TFCI 81 E-TFCI PO 27	

FDD-LTE

For UE Power Class 1 and 3, the allowed Maximum Power Reduction (MPR) for the maximum output power in Table 6.2.2-1 due to higher order modulation and transmit bandwidth configuration (resource blocks) is specified in Table 6.2.3-1.

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

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

For UE Power Class 1 and 3 the specific requirements and identified sub clauses are specified in Table 6.2.4-1 along with the allowed A-MPR values that may be used to meet these requirements. The allowed A-MPR values specified below in Table 6.2.4-1 to 6.2.4-15 are in addition to the allowed MPR requirements specified in sub clause 6.2.3.

Table 6.2.4-1: Additional Maximum Power Reduction (A-MPR)

Network Signalling value	Requirements (subclause)	E-UTRA Band	Channel bandwidth (MHz)	Resources Blocks (N_{RB})	A-MPR (dB)
NS_01	6.6.2.1.1	Table 5.5-1	1.4, 3, 5, 10, 15, 20	Table 5.6-1	N/A
NS_03	6.6.2.2.1	2, 4, 10, 23, 25, 35, 36	3	>5	≤ 1
			5	>6	≤ 1
			10	>6	≤ 1
			15	>8	≤ 1
			20	>10	≤ 1
NS_04	6.6.2.2.2	41	5	>6	≤ 1
NS_05	6.6.3.3.1	1	10, 15, 20	Table 6.2.4-4	≥ 50
NS_06	6.6.2.2.3	12, 13, 14, 17	1.4, 3, 5, 10	Table 5.6-1	N/A
NS_07	6.6.2.2.3 6.6.3.3.2	13	10	Table 6.2.4-2	
NS_08	6.6.3.3.3	19	10, 15	> 44	≤ 3
NS_09	6.6.3.3.4	21	10, 15	> 40	≤ 1
				> 55	≤ 2
NS_10		20	15, 20	Table 6.2.4-3	
NS_11	6.6.2.2.1	23	1.4, 3, 5, 10, 15, 20	Table 6.2.4-5	
NS_12	6.6.3.3.5	26	1.4, 3, 5	Table 6.2.4-6	
NS_13	6.6.3.3.6	26	5	Table 6.2.4-7	
NS_14	6.6.3.3.7	26	10, 15	Table 6.2.4-8	
NS_15	6.6.3.3.8	26	1.4, 3, 5, 10, 15	Table 6.2.4-9 Table 6.2.4-10	
NS_16	6.6.3.3.9	27	3, 5, 10	Table 6.2.4-11, Table 6.2.4-12, Table 6.2.4-13	
NS_17	6.6.3.3.10	28	5, 10	Table 5.6-1	N/A
NS_18	6.6.3.3.11	28	5	≥ 2	≤ 1
			10, 15, 20	≥ 1	≤ 4
NS_19	6.6.3.3.12	44	10, 15, 20	Table 6.2.4-14	
NS_20	6.2.2	23	5, 10, 15, 20	Table 6.2.4-15	
	6.6.2.2.1				
	6.6.3.2				
...					
NS_32	-	-	-	-	-

TDD-LTE

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

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

Special subframe configuration	Normal cyclic prefix in downlink			Extended cyclic prefix in downlink		
	DwPTS	UpPTS		DwPTS	UpPTS	
		Normal cyclic prefix in uplink	Extended cyclic prefix in uplink		Normal cyclic prefix in uplink	Extended cyclic prefix in uplink
0	$6592 \cdot T_s$	$2192 \cdot T_s$	$2560 \cdot T_s$	$7680 \cdot T_s$	$2192 \cdot T_s$	$2560 \cdot T_s$
1	$19760 \cdot T_s$			$20480 \cdot T_s$		
2	$21952 \cdot T_s$			$23040 \cdot T_s$		
3	$24144 \cdot T_s$			$25600 \cdot T_s$		
4	$26336 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$	$7680 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$
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 4.2-2: Uplink-downlink configurations.

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

Calculated Duty Cycle

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

We used configuration 0 for LTE Band 41&38 SAR test, that is 63.33%(1:1.58)for duty cycle.

LTE Up-Link Carrier Aggregation

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

For inter-band carrier aggregation with uplink assigned to one E-UTRA band (Table 5.6A-1), the requirements in subclause 6.2.3 apply.

For inter-band carrier aggregation with one component carrier per operating band and the uplink active in two EUTRA bands, the requirements in subclause 6.2.3 apply for each uplink component carrier.

For intra-band contiguous carrier aggregation the allowed Maximum Power Reduction (MPR) for the maximum output power applicable to the DUT in table below. In case the modulation format is different on different component carriers then the MPR is determined by the rules applied to higher order of those modulations.

Modulation	CA bandwidth Class B and C / Smallest Component Carrier Transmission Bandwidth Configuration				MPR (dB)
	25 RB	50 RB	75 RB	100 RB	
QPSK	> 8 and ≤ 25	> 12 and ≤ 50	> 16 and ≤ 75	> 18 and ≤ 100	≤ 1
QPSK	> 25	> 50	> 75	> 100	≤ 2
16 QAM	≤ 8	≤ 12	≤ 16	≤ 18	≤ 1
16 QAM	> 8 and ≤ 25	> 12 and ≤ 50	> 16 and ≤ 75	> 18 and ≤ 100	≤ 2
16 QAM	> 25	> 50	> 75	> 100	≤ 3
64 QAM	≤ 8 and allocation wholly contained within a single CC	≤ 12 and allocation wholly contained within a single CC	≤ 16 and allocation wholly contained within a single CC	≤ 18 and allocation wholly contained within a single CC	≤ 2
64 QAM	> 8 or allocation extends across two CC's	> 12 or allocation extends across two CC's	> 16 or allocation extends across two CC's	> 18 or allocation extends across two CC's	≤ 3
256 QAM	≥ 1				≤ 5

For PUCCH and SRS transmissions, the allowed MPR is according to that specified for PUSCH WPKD modulation for the corresponding transmission bandwidth.

For intra-band contiguous carrier aggregation bandwidth class C with non-contiguous resource allocation, the allowed Maximum Power Reduction (MPR) for the maximum output power in Table 6.2.2A-1 is specified as follows

$$\text{MPR} = \text{CEIL} \{ \min(M_A, \text{MIM5}), 0.5 \}$$

Where M_A is defined as follows

$$\begin{aligned}
 M_A &= 8.2 && ; 0 \leq A < 0.025 \\
 &9.2 - 40A && ; 0.025 \leq A < 0.05 \\
 &8 - 16A && ; 0.05 \leq A < 0.25 \\
 &4.83 - 3.33A && ; 0.25 \leq A \leq 0.4, \\
 &3.83 - 0.83A && ; 0.4 \leq A \leq 1,
 \end{aligned}$$

and M_{IM5} is defined as follows

$$\begin{aligned}
 M_{IM5} &= 4.5 && ; \Delta_{IM5} < 1.5 * BW_{Channel_CA} \\
 &6.0 && ; 1.5 * BW_{Channel_CA} \leq \Delta_{IM5} < BW_{Channel_CA}/2 + F_{OOB} \\
 &M_A && ; \Delta_{IM5} \geq BW_{Channel_CA}/2 + F_{OOB}
 \end{aligned}$$

Where

$$A = N_{RB_alloc} / N_{RB_agg}.$$

$$\Delta_{IM5} = \max(|F_{C_agg} - (3 * F_{agg_alloc_low} - 2 * F_{agg_alloc_high})|, |F_{C_agg} - (3 * F_{agg_alloc_high} - 2 * F_{agg_alloc_low})|)$$

CEIL{ M_A , 0.5} means rounding upwards to closest 0.5dB, i.e. $MPR \in [3.0, 3.5, 4.0, 4.5, 5.0, 5.5, 6.0, 6.5, 7.0, 7.5, 8.0, 8.5]$.

For intra-band carrier aggregation, the MPR is evaluated per slot and given by the maximum value taken over the transmission(s) on all component carriers within the slot; the maximum MPR over the two slots is then applied for the entire subframe.

For intra-band non-contiguous carrier aggregation with one uplink carrier on the PCC, the requirements in the subclause 6.2.3 apply. For intra-band non-contiguous aggregation with two uplink carriers the MPR is defined for those E-UTRA bands where maximum possible $W_{GAP} \leq 42.2$ MHz as follows

$$MPR = \text{CEIL}\{M_A, 0.5\}$$

Where M_N is defined as follows

$$\begin{aligned}
 M_N &= -0.125N + 18.25 && ; 2 \leq N \leq 50 \\
 &-0.0333 N + 13.67 && ; 50 < N \leq 200
 \end{aligned}$$

Where $N = N_{RB_alloc}$ is the number of allocated resource blocks.

For the UE maximum output power modified by MPR, the power limits specified in subclause 6.2.5A apply.

6.3 Maximum Target Output Power

Mode/Band	Max Target Power(dBm)		
	Channel		
	Low	Middle	High
GSM 850	32	32	32
GPRS 1 TX Slot	32	32	32
GPRS 2 TX Slot	30	30	30
GPRS 3 TX Slot	28	28	28
GPRS 4 TX Slot	26	26	26
PCS 1900	28.5	28.5	28.5
GPRS 1 TX Slot	28.5	28.5	28.5
GPRS 2 TX Slot	26	26	26
GPRS 3 TX Slot	24.5	24.5	24.5
GPRS 4 TX Slot	22.5	22	22
WCDMA Band 2	22.5	22.5	22.5
HSDPA	22	22	22
HSUPA	22	22	22
WCDMA Band 4	22	22	22
HSDPA	21.5	21.5	21.5
HSUPA	21.5	21.5	21.5
WCDMA Band 5	22.5	22.5	22.5
HSDPA	22.5	22.5	22.5
HSUPA	22.5	22.5	22.5
LTE Band 2	22.4	22.4	22.4
LTE Band 4	22.4	22.4	22.4
LTE Band 5	23	23	23
LTE Band 7	21.6	21.6	21.6
LTE Band 12	23.2	23.2	23.2
LTE Band 17	23.2	23.2	23.2
LTE Band 26	23.4	23.4	23.4
LTE Band 38	22.4	22.4	22.4
LTE Band 41	22.4	22.4	22.4
LTE Band 66	22.4	22.4	22.4

Note: The Maximum Target Power for LTE bands corresponds to their maximum power in QPSK modes with maximum bandwidth.

6.4 Test Results:**GSM:**

Band	Channel No.	Frequency (MHz)	RF Output Power (dBm)
GSM 850	128	824.2	31.89
	190	836.6	31.86
	251	848.8	31.69
PCS 1900	512	1850.2	28.37
	661	1880	28.23
	810	1909.8	28.34

GPRS:

Band	Channel No.	Frequency (MHz)	RF Output Power (dBm)			
			1 slot	2 slots	3 slots	4 slots
GSM 850	128	824.2	31.72	29.69	27.73	25.66
	190	836.6	31.78	29.62	27.72	25.62
	251	848.8	31.69	29.84	27.81	25.53
PCS 1900	512	1850.2	28.19	25.87	24.11	22.24
	661	1880	28.32	25.82	24.24	21.86
	810	1909.8	28.24	25.81	24.42	21.85

For SAR, the time based average power is relevant, the difference in between depends on the duty cycle of the TDMA signal.

Number of Time slot	1	2	3	4
Duty Cycle	1:8	1:4	1:2.66	1:2
Time based Ave. power compared to slotted Ave. power	-9 dB	-6 dB	-4.25 dB	-3 dB
Crest Factor	8	4	2.66	2

The time based average power for GSM

Band	Channel No.	Frequency (MHz)	RF Output Power (dBm)
GSM 850	128	824.2	22.89
	190	836.6	22.86
	251	848.8	22.69
PCS 1900	512	1850.2	19.37
	661	1880	19.23
	810	1909.8	19.34

The time based average power for GPRS

Band	Channel No.	Frequency (MHz)	RF Output Power (dBm)			
			1 slot	2 slots	3 slots	4 slots
GSM 850	128	824.2	22.72	23.69	23.48	22.66
	190	836.6	22.78	23.62	23.47	22.62
	251	848.8	22.69	23.84	23.56	22.53
PCS 1900	512	1850.2	19.19	19.87	19.86	19.24
	661	1880	19.32	19.82	19.99	18.86
	810	1909.8	19.24	19.81	20.17	18.85

Note:

1. Radio Communication Analyzer (MT8820C) was used for the measurement of GSM peak and average output power for active timeslots.
- 2 .For GSM voice, 1 timeslot has been activated with power level 5 (850 MHz band) and 0 (1900 MHz band).
- 3 .For GPRS, 1, 2, 3 and 4 timeslots has been activated separately with power level 3(850 MHz band) and 3(1900 MHz band).

WCDMA:**WCDMA Band 2:**

Test Mode	Conducted Average Output Power(dBm)		
	Lowest Channel	Middle Channel	Highest Channel
WCDMA	22.31	22.25	22.39
HSDPA Subset 1	21.65	21.90	21.52
HSDPA Subset 2	21.67	21.86	21.44
HSDPA Subset 3	21.51	21.78	21.31
HSDPA Subset 4	21.47	21.88	21.59
HSUPA Subset 1	21.45	21.73	21.44
HSUPA Subset 2	21.48	21.76	21.65
HSUPA Subset 3	21.64	21.76	21.44
HSUPA Subset 4	21.66	21.82	21.53
HSUPA Subset 5	21.67	21.88	21.59

WCDMA Band 4:

Test Mode	Conducted Average Output Power(dBm)		
	Lowest Channel	Middle Channel	Highest Channel
WCDMA	21.78	21.56	21.52
HSDPA Subset 1	21.01	20.86	20.67
HSDPA Subset 2	21.04	20.78	20.89
HSDPA Subset 3	21.04	20.79	20.84
HSDPA Subset 4	20.92	20.92	20.76
HSUPA Subset 1	21.12	21.03	20.86
HSUPA Subset 2	20.98	20.87	20.73
HSUPA Subset 3	20.96	20.93	20.67
HSUPA Subset 4	20.79	20.95	20.71
HSUPA Subset 5	20.97	20.95	20.78

WCDMA Band 5:

Test Mode	Conducted Average Output Power(dBm)		
	Lowest Channel	Middle Channel	Highest Channel
WCDMA	22.26	22.33	22.24
HSDPA Subset 1	22.11	22.15	22.21
HSDPA Subset 2	22.24	22.12	22.08
HSDPA Subset 3	22.23	22.02	22.31
HSDPA Subset 4	22.26	22.23	22.17
HSUPA Subset 1	22.23	22.21	22.11
HSUPA Subset 2	22.23	22.26	22.09
HSUPA Subset 3	22.28	22.12	22.23
HSUPA Subset 4	22.31	22.2	22.3
HSUPA Subset 5	22.27	22.13	22.28

Note:

1. The default test configuration is to measure SAR with an established radio link between the EUT and a communication test set using a 12.2 kbps RMC (reference measurement Channel) Configured in all 1.
2. KDB 941225 D01-Body SAR is not required for HSDPA/HSUPA when the maximum average output of each RF channel is less than ¼ dB higher than measured 12.2kbps RMC or the maximum SAR for 12.2kbps RMC is < 75% of SAR limit.

LTE Band 2:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
1.4M	QPSK	RB1#0	22.07	21.86	21.88
		RB1#3	22.18	21.7	21.79
		RB1#5	22.19	21.78	21.89
		RB3#0	22	21.85	21.81
		RB3#1	21.76	22	21.64
		RB3#3	22.02	21.84	21.79
		RB6#0	20.97	20.87	20.61
	16QAM	RB1#0	21.96	20.88	21.77
		RB1#3	21.27	21.06	21.87
		RB1#5	21.26	21.07	20.87
		RB3#0	20.31	20.13	20
		RB3#1	20.28	19.97	20
		RB3#3	20.24	20.21	19.88
		RB6#0	19.47	18.86	19.27
3M	QPSK	RB1#0	22.09	21.82	21.74
		RB1#8	21.82	21.8	21.8
		RB1#14	21.9	21.84	21.68
		RB8#0	20.84	20.92	20.5
		RB8#4	21.12	20.86	20.53
		RB8#7	20.99	20.68	20.67
		RB15#0	21.07	20.8	20.59
	16QAM	RB1#0	22	20.99	21.62
		RB1#8	21.97	20.9	21.55
		RB1#14	21.9	20.98	21.67
		RB8#0	19.69	19.21	19.12
		RB8#4	19.66	19.22	19.07
		RB8#7	19.62	19.15	19.29
		RB15#0	19.54	19.1	19.14
5M	QPSK	RB1#0	22.14	21.79	21.76
		RB1#12	22.09	21.71	21.92
		RB1#24	22.22	21.81	21.89
		RB12#0	20.85	20.8	20.61
		RB12#7	21.01	20.7	20.58
		RB12#13	20.93	20.83	20.53
		RB25#0	21.08	20.71	20.68
	16QAM	RB1#0	21.35	21.62	20.96
		RB1#12	21.24	21.58	20.97
		RB1#24	21.18	21.5	20.82
		RB12#0	19.36	19.28	19.15
		RB12#7	19.53	19.2	19.03
		RB12#13	19.37	19.22	19.08
		RB25#0	19.51	19.28	19.14

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
10M	QPSK	RB1#0	21.92	22.02	21.80
		RB1#25	21.90	21.95	21.73
		RB1#49	21.94	21.94	21.74
		RB25#0	21.15	20.79	20.71
		RB25#12	20.89	20.59	20.50
		RB25#25	20.86	20.86	20.65
		RB50#0	20.93	20.79	20.53
	16QAM	RB1#0	22.10	21.73	21.67
		RB1#25	21.82	21.63	21.72
		RB1#49	21.87	21.59	21.67
		RB25#0	19.56	19.26	19.04
		RB25#12	19.39	19.30	19.01
		RB25#25	19.44	19.31	19.04
		RB50#0	19.60	19.28	19.13
15M	QPSK	RB1#0	21.99	21.91	21.78
		RB1#37	21.85	21.86	21.83
		RB1#74	21.97	21.84	21.77
		RB36#0	20.99	20.82	20.65
		RB36#20	21.02	20.70	20.65
		RB36#39	20.81	20.75	20.65
		RB75#0	20.83	20.71	20.66
	16QAM	RB1#0	21.26	22.17	21.67
		RB1#37	21.24	22.19	21.78
		RB1#74	21.21	22.00	21.76
		RB36#0	19.51	19.13	19.11
		RB36#20	19.40	19.16	19.26
		RB36#39	19.47	19.14	19.31
		RB75#0	19.42	19.19	19.37
20M	QPSK	RB1#0	22.05	22.15	21.94
		RB1#49	21.99	22.07	21.80
		RB1#99	22.05	21.93	21.82
		RB50#0	20.92	21.11	20.92
		RB50#24	21.17	21.13	20.89
		RB50#50	21.48	21.79	21.25
		RB100#0	20.89	21.02	20.59
	16QAM	RB1#0	21.37	20.73	20.84
		RB1#49	21.26	20.73	20.70
		RB1#99	21.30	20.76	20.94
		RB50#0	19.41	19.28	19.26
		RB50#24	19.39	19.36	19.19
		RB50#50	19.31	19.29	19.10
		RB100#0	19.35	19.34	19.04

LTE Band 4:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
1.4M	QPSK	RB1#0	21.68	21.46	21.38
		RB1#3	21.77	21.53	21.6
		RB1#5	21.74	21.51	21.56
		RB3#0	21.66	21.35	21.39
		RB3#1	21.36	21.55	21.44
		RB3#3	21.61	21.49	21.4
		RB6#0	20.57	20.6	20.56
	16QAM	RB1#0	22.16	21.52	21.77
		RB1#3	22.25	21.37	21.99
		RB1#5	22.16	21.51	21.85
		RB3#0	20.69	20.2	20.29
		RB3#1	20.71	20.24	20.08
		RB3#3	20.61	20.17	20.23
		RB6#0	19.35	19.13	19.01
3M	QPSK	RB1#0	21.63	21.49	21.25
		RB1#8	21.66	21.68	21.34
		RB1#14	21.5	21.51	21.17
		RB8#0	20.51	20.51	20.67
		RB8#4	20.56	20.49	20.68
		RB8#7	20.54	20.61	20.57
		RB15#0	20.61	20.47	20.42
	16QAM	RB1#0	21.32	21.48	21.32
		RB1#8	21.41	21.33	21.3
		RB1#14	21.21	21.56	21.41
		RB8#0	19.63	19.49	19.1
		RB8#4	19.48	19.48	19.16
		RB8#7	19.34	19.46	19.19
		RB15#0	19.54	19.52	19.48
5M	QPSK	RB1#0	21.63	21.36	21.57
		RB1#12	21.61	21.41	21.59
		RB1#24	21.76	21.42	21.53
		RB12#0	20.69	20.66	20.48
		RB12#7	20.75	20.67	20.64
		RB12#13	20.76	20.62	20.67
		RB25#0	20.52	20.55	20.43
	16QAM	RB1#0	21.23	21.81	21.23
		RB1#12	21.26	21.76	21.38
		RB1#24	21.22	21.62	21.21
		RB12#0	19.35	19.42	19.4
		RB12#7	19.32	19.42	19.3
		RB12#13	19.32	19.49	19.27
		RB25#0	19.63	19.53	19.32

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
10M	QPSK	RB1#0	21.47	21.71	21.29
		RB1#25	21.60	21.53	21.21
		RB1#49	21.43	21.58	21.14
		RB25#0	20.64	20.69	20.43
		RB25#12	20.46	20.54	20.43
		RB25#25	20.63	20.66	20.56
		RB50#0	20.70	20.60	20.60
	16QAM	RB1#0	22.01	21.64	21.86
		RB1#25	21.80	21.77	21.92
		RB1#49	21.92	21.61	21.93
		RB25#0	19.54	19.52	19.20
		RB25#12	19.40	19.52	19.06
		RB25#25	19.47	19.45	19.30
		RB50#0	19.58	19.64	19.29
15M	QPSK	RB1#0	21.38	21.56	21.31
		RB1#37	21.37	21.73	21.25
		RB1#74	21.48	21.81	21.49
		RB36#0	20.82	20.66	20.59
		RB36#20	20.75	20.72	20.56
		RB36#39	20.79	20.57	20.49
		RB75#0	20.57	20.71	20.46
	16QAM	RB1#0	22.02	22.23	21.78
		RB1#37	21.79	22.24	21.92
		RB1#74	21.82	22.24	21.87
		RB36#0	19.30	19.53	19.25
		RB36#20	19.51	19.45	19.27
		RB36#39	19.46	19.50	19.48
		RB75#0	19.42	19.37	19.46
20M	QPSK	RB1#0	21.58	21.99	21.49
		RB1#49	21.68	21.96	21.65
		RB1#99	21.43	21.82	21.85
		RB50#0	20.63	20.90	20.76
		RB50#24	20.78	20.93	20.85
		RB50#50	20.76	20.90	20.81
		RB100#0	20.94	20.86	20.52
	16QAM	RB1#0	21.26	21.18	20.40
		RB1#49	21.39	21.09	20.45
		RB1#99	21.31	21.03	20.60
		RB50#0	19.53	19.40	19.33
		RB50#24	19.45	19.43	19.45
		RB50#50	19.42	19.33	19.46
		RB100#0	19.40	19.55	19.27

LTE Band 5:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
1.4M	QPSK	RB1#0	22.44	22.09	22.17
		RB1#3	22.38	22.13	22.24
		RB1#5	22.43	22.34	22.15
		RB3#0	22.26	22.17	22.21
		RB3#1	22.35	22.18	22.37
		RB3#3	22.3	22.26	22.34
		RB6#0	21.2	21.59	21.06
	16QAM	RB1#0	22.87	22.02	22.31
		RB1#3	22.85	22.33	22.2
		RB1#5	22.92	22.49	22.3
		RB3#0	21.37	21.61	20.93
		RB3#1	21.42	21.52	20.79
		RB3#3	21.42	21.48	20.81
		RB6#0	20.14	20.69	19.85
3M	QPSK	RB1#0	22.2	22.49	22.16
		RB1#8	22.38	22.22	21.98
		RB1#14	22.41	22.43	22.18
		RB8#0	21.17	21.13	21.15
		RB8#4	21.27	21.56	21.19
		RB8#7	21.08	21.58	21.22
		RB15#0	21.22	21.68	21.01
	16QAM	RB1#0	22.87	22.09	22.88
		RB1#8	22.82	22.63	22.69
		RB1#14	22.67	22.7	22.61
		RB8#0	20.55	20.73	20.18
		RB8#4	20.6	20.91	20.41
		RB8#7	20.07	20.66	20.17
		RB15#0	20.55	20.66	20.51
5M	QPSK	RB1#0	22.6	22.08	22.33
		RB1#12	22.4	22.16	22.17
		RB1#24	22.41	22.03	22.41
		RB12#0	21.4	21.3	21.57
		RB12#7	21.21	21.78	21.38
		RB12#13	21.19	21.84	21.52
		RB25#0	21.12	21.76	21.4
	16QAM	RB1#0	21.59	22.32	21.94
		RB1#12	21.51	22.91	21.75
		RB1#24	21.64	22.69	21.89
		RB12#0	20.16	20.81	20
		RB12#7	19.95	20.57	20.23
		RB12#13	19.88	20.66	20.31
		RB25#0	20.28	20.86	20.52

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
10M	QPSK	RB1#0	22.4	22.52	22.44
		RB1#25	22.38	22.59	22.36
		RB1#49	22.58	22.64	22.45
		RB25#0	21.24	21.63	21.32
		RB25#12	21.38	21.84	21.46
		RB25#25	21.69	21.77	21.63
		RB50#0	21.6	21.83	21.35
	16QAM	RB1#0	22.12	22.38	22.82
		RB1#25	22.06	22.88	22.71
		RB1#49	22.06	22.29	22.7
		RB25#0	19.99	20.81	20.35
		RB25#12	20.72	20.91	20.02
		RB25#25	20.3	20.35	20.23
		RB50#0	20.77	20.64	20.22

LTE Band 7:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5M	QPSK	RB1#0	21.28	20.91	20.96
		RB1#12	21.34	20.86	21.01
		RB1#24	21.45	20.96	21.02
		RB12#0	20.21	20.01	20.21
		RB12#7	20.22	20.12	20.01
		RB12#13	20.3	20.17	20
		RB25#0	20.38	20.05	20.09
	16QAM	RB1#0	20.2	20.54	20.34
		RB1#12	20.19	20.29	20.29
		RB1#24	20.15	20.54	20.31
		RB12#0	19.13	19.16	19.15
		RB12#7	19.12	19.24	19.05
		RB12#13	19.03	19.32	19.04
		RB25#0	19.63	19.06	19.39
10M	QPSK	RB1#0	21.24	21.29	21.2
		RB1#25	21.17	21.24	21.07
		RB1#49	21.18	21.09	21.26
		RB25#0	20.26	20.21	20.01
		RB25#12	20.15	20.02	19.86
		RB25#25	20.24	20.06	19.98
		RB50#0	20.28	20.07	19.93
	16QAM	RB1#0	20.46	20.57	20.93
		RB1#25	20.59	20.81	20.87
		RB1#49	20.55	20.81	21.02
		RB25#0	19.25	19.28	19.03
		RB25#12	19.24	19.33	19.04
		RB25#25	19.39	19.06	18.95
		RB50#0	19.37	19.27	19.26
15M	QPSK	RB1#0	21.06	21.14	21.14
		RB1#37	21.16	21.25	20.99
		RB1#74	21.11	21.21	21.11
		RB36#0	20.24	19.91	20
		RB36#20	20.01	20	19.88
		RB36#39	20.29	20.12	19.99
		RB75#0	20.17	20.17	20.03
	16QAM	RB1#0	21.08	21.43	20.91
		RB1#37	21.17	21.41	20.95
		RB1#74	21.04	21.46	21.05
		RB36#0	19.12	19.19	19.17
		RB36#20	19.25	19.03	19.27
		RB36#39	19.3	19.04	19.29
		RB75#0	19.33	19.03	19.14

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
20M	QPSK	RB1#0	21.24	21.32	21.35
		RB1#49	21.1	21.15	21.14
		RB1#99	21.17	21.15	21.19
		RB50#0	20.33	20.37	20.11
		RB50#24	20.33	20.1	20.05
		RB50#50	19.97	20.27	20.04
		RB100#0	20.03	19.96	19.99
	16QAM	RB1#0	20.77	20.13	20.48
		RB1#49	20.65	20.14	20.5
		RB1#99	20.53	20.21	20.47
		RB50#0	19.26	19.26	19.06
		RB50#24	19.32	19.13	19.06
		RB50#50	19.28	19.1	19.12
		RB100#0	19.33	19.04	19.07

LTE Band 12:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
1.4M	QPSK	RB1#0	22.6	22.28	22.6
		RB1#3	22.56	22.35	22.51
		RB1#5	22.45	22.33	22.58
		RB3#0	22.21	22.34	22.3
		RB3#1	22.33	22.48	22.62
		RB3#3	22.15	22.5	22.53
		RB6#0	21.68	21.4	21.36
	16QAM	RB1#0	23.01	21.88	22.47
		RB1#3	23.08	22.17	22.72
		RB1#5	23.04	22.08	22.59
		RB3#0	21.56	21.3	21.12
		RB3#1	21.7	21.33	21.31
		RB3#3	21.55	21.2	21.21
		RB6#0	20.29	20.47	20.11
3M	QPSK	RB1#0	22.32	22.3	22.45
		RB1#8	22.21	22.52	22.29
		RB1#14	22.28	22.53	22.29
		RB8#0	21.62	21.55	21.48
		RB8#4	21.45	21.37	21.34
		RB8#7	21.23	21.25	21.51
		RB15#0	21.56	21.32	21.41
	16QAM	RB1#0	22.16	22.26	22.87
		RB1#8	22.04	22.2	22.81
		RB1#14	21.98	22.3	22.9
		RB8#0	20.46	20.82	20.41
		RB8#4	20.71	20.4	20.26
		RB8#7	20.31	20.46	20.48
		RB15#0	20.48	20.25	20.35
5M	QPSK	RB1#0	22.61	22.35	22.58
		RB1#12	22.41	22.44	22.49
		RB1#24	22.65	22.56	22.6
		RB12#0	21.58	21.48	21.41
		RB12#7	21.31	21.41	21.64
		RB12#13	21.39	21.38	21.63
		RB25#0	21.34	21.42	21.41
	16QAM	RB1#0	22.04	22.68	22.12
		RB1#12	21.9	22.67	21.94
		RB1#24	22.26	22.76	22.23
		RB12#0	20.41	20.84	20.69
		RB12#7	20.05	20.4	20.27
		RB12#13	20.01	20.24	20.3
		RB25#0	20.3	20.49	20.53

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
10M	QPSK	RB1#0	22.42	22.51	22.44
		RB1#25	22.46	22.79	22.77
		RB1#49	22.69	22.92	22.82
		RB25#0	21.63	21.58	21.59
		RB25#12	21.61	21.55	21.58
		RB25#25	21.95	21.96	21.86
		RB50#0	21.47	21.48	21.58
	16QAM	RB1#0	22.91	22.78	22.77
		RB1#25	22.69	23.05	22.83
		RB1#49	22.71	22.91	22.92
		RB25#0	20.23	21.02	20.38
		RB25#12	20.82	20.57	20.19
		RB25#25	20.93	20.56	20.39
		RB50#0	21.11	20.49	20.41

LTE Band 17:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5M	QPSK	RB1#0	22.55	22.49	22.54
		RB1#12	22.57	22.45	22.41
		RB1#24	22.62	22.38	22.49
		RB12#0	21.47	21.33	21.41
		RB12#7	21.28	21.32	21.28
		RB12#13	21.58	21.47	21.68
		RB25#0	21.44	21.61	21.4
	16QAM	RB1#0	22.02	22.76	22.21
		RB1#12	22.08	22.76	22.03
		RB1#24	22.32	22.77	22.17
		RB12#0	20.78	20.67	20.8
		RB12#7	20.64	20.42	20.28
		RB12#13	20.34	21.11	20.38
		RB25#0	21.19	20.53	20.52
10M	QPSK	RB1#0	22.4	22.58	22.67
		RB1#25	22.5	22.58	22.62
		RB1#49	22.54	22.64	22.65
		RB25#0	21.19	21.5	21.5
		RB25#12	21.35	21.56	21.62
		RB25#25	21.44	21.48	21.44
		RB50#0	21.46	21.53	21.58
	16QAM	RB1#0	22.88	22.86	22.84
		RB1#25	22.73	22.81	22.95
		RB1#49	22.67	22.82	22.97
		RB25#0	20.84	20.62	20.38
		RB25#12	20.69	20.56	20.19
		RB25#25	20.88	20.99	20.4
		RB50#0	20.67	20.47	20.48

LTE Band 26:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
1.4M	QPSK	RB1#0	22.99	22.72	22.72
		RB1#3	22.81	22.76	22.76
		RB1#5	22.72	22.63	22.52
		RB3#0	22.56	22.75	22.79
		RB3#1	22.68	22.73	22.99
		RB3#3	22.5	22.68	22.79
		RB6#0	22.02	21.55	21.81
	16QAM	RB1#0	23.17	21.83	22.81
		RB1#3	23.12	21.96	22.76
		RB1#5	23.01	22	22.8
		RB3#0	22.04	21.13	21.72
		RB3#1	22.01	21.31	21.59
		RB3#3	22.02	21.12	21.47
		RB6#0	21.04	20.2	20.08
3M	QPSK	RB1#0	23.05	22.78	22.93
		RB1#8	22.8	22.69	22.93
		RB1#14	23.09	22.93	22.87
		RB8#0	22.16	21.58	21.77
		RB8#4	22.2	21.66	21.74
		RB8#7	21.77	21.62	21.89
		RB15#0	22.29	21.7	21.69
	16QAM	RB1#0	22.95	22.43	22.65
		RB1#8	23.16	22.42	22.66
		RB1#14	22.62	22.15	22.57
		RB8#0	20.7	20.44	20.69
		RB8#4	20.97	20.39	20.53
		RB8#7	20.79	20.38	20.24
		RB15#0	20.81	20.4	20.81
5M	QPSK	RB1#0	22.81	23.23	23.14
		RB1#12	23.06	23.04	22.95
		RB1#24	23.04	22.92	23.01
		RB12#0	22.36	21.74	21.94
		RB12#7	21.62	21.59	21.84
		RB12#13	21.7	21.77	21.77
		RB25#0	21.71	21.65	21.74
	16QAM	RB1#0	22.34	22.59	22.69
		RB1#12	21.62	22.58	22.45
		RB1#24	21.72	22.4	22.34
		RB12#0	20.82	20.46	20.47
		RB12#7	20.71	20.22	20.95
		RB12#13	20.99	20.19	20.91
		RB25#0	21.08	20.58	20.98

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
10M	QPSK	RB1#0	22.74	22.86	22.73
		RB1#25	22.77	22.87	22.97
		RB1#49	22.8	22.76	22.82
		RB25#0	21.79	21.91	21.68
		RB25#12	21.91	21.59	21.78
		RB25#25	21.89	21.75	21.6
		RB50#0	22.07	21.61	21.86
	16QAM	RB1#0	22.52	22.67	23.03
		RB1#25	22.31	22.66	22.94
		RB1#49	22.15	22.69	22.8
		RB25#0	21.03	21.01	20.96
		RB25#12	20.88	20.42	20.49
		RB25#25	20.35	20.58	20.88
		RB50#0	20.84	20.39	20.46
15M	QPSK	RB1#0	22.89	22.99	22.85
		RB1#37	22.89	22.73	22.79
		RB1#74	22.93	23.2	23.17
		RB36#0	22.59	22.66	22.42
		RB36#20	22.24	22.23	22.22
		RB36#39	21.97	22.14	22.16
		RB75#0	21.58	21.74	21.69
	16QAM	RB1#0	23.14	22.4	22.58
		RB1#37	23.05	22.14	22.57
		RB1#74	23.17	22.25	22.82
		RB36#0	20.91	20.38	20.99
		RB36#20	20.22	20.39	20.88
		RB36#39	20.4	20.97	20.47
		RB75#0	20.25	20.38	20.88

LTE Band 38:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5M	QPSK	RB1#0	21.29	21.76	21.75
		RB1#12	21.23	21.76	21.63
		RB1#24	21.33	21.62	21.65
		RB12#0	20.99	20.94	21.17
		RB12#7	21	21.12	21.14
		RB12#13	20.93	20.94	21.23
		RB25#0	20.88	20.88	20.98
	16QAM	RB1#0	20.81	21	20.78
		RB1#12	20.74	20.82	20.77
		RB1#24	20.83	20.78	20.8
		RB12#0	18.97	18.51	18.9
		RB12#7	19.03	18.66	18.98
		RB12#13	19.06	18.69	18.97
		RB25#0	18.73	19.02	19.23
10M	QPSK	RB1#0	21.61	21.31	21.53
		RB1#25	21.52	21.51	21.39
		RB1#49	21.68	21.64	21.61
		RB25#0	20.93	20.87	20.94
		RB25#12	20.84	21.07	21.12
		RB25#25	21.1	20.85	21.26
		RB50#0	21.09	20.9	21.02
	16QAM	RB1#0	21.06	22.18	21.34
		RB1#25	21.12	22	21.12
		RB1#49	21.03	22.23	21.63
		RB25#0	18.85	19.1	18.9
		RB25#12	18.9	19.1	18.9
		RB25#25	19.04	19.16	18.92
		RB50#0	18.93	18.94	18.85
15M	QPSK	RB1#0	21.5	21.41	21.54
		RB1#37	21.82	21.37	21.36
		RB1#74	21.69	21.52	21.59
		RB36#0	20.7	21.13	21.16
		RB36#20	20.9	21.09	21.07
		RB36#39	20.84	21.11	20.83
		RB75#0	21.01	21.05	21.17
	16QAM	RB1#0	21.23	21.57	21.32
		RB1#37	21.06	21.6	21.32
		RB1#74	21.13	21.63	21.44
		RB36#0	18.51	18.84	19.14
		RB36#20	18.46	18.89	19.05
		RB36#39	18.65	19.11	19.07
		RB75#0	18.71	18.86	18.99

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
20M	QPSK	RB1#0	21.65	21.84	21.55
		RB1#49	21.62	21.83	21.43
		RB1#99	21.91	22.04	21.69
		RB50#0	21.6	21.9	21.4
		RB50#24	21.36	21.43	21.28
		RB50#50	21.32	21.47	21.29
		RB100#0	20.67	21.32	20.75
	16QAM	RB1#0	20.62	21.94	21.32
		RB1#49	20.76	21.82	21.36
		RB1#99	20.79	21.78	21.44
		RB50#0	18.9	18.59	19.03
		RB50#24	18.69	19.02	19.07
		RB50#50	18.8	18.91	18.9
		RB100#0	18.87	18.97	19.1

LTE Band 41:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	2570 MHz (dBm)	Middle Channel (dBm)	High Channel (dBm)
5M	QPSK	RB1#0	21.73	21.76	21.93	21.78
		RB1#12	21.6	21.71	21.88	21.79
		RB1#24	21.93	21.84	21.71	21.85
		RB12#0	21.22	21.15	21.28	21.15
		RB12#7	21.17	21.23	21.41	21.28
		RB12#13	21.17	21.2	21.24	21.42
		RB25#0	21.09	21.2	21.26	21.20
	16QAM	RB1#0	21.26	21.44	21.8	20.75
		RB1#12	21.4	21.72	22.05	20.71
		RB1#24	21.14	21.35	21.63	20.60
		RB12#0	19.09	19.21	19.17	19.15
		RB12#7	19.11	19.28	19.41	19.29
		RB12#13	19.32	19.4	19.54	19.29
		RB25#0	19.5	19.59	19.45	19.48
10M	QPSK	RB1#0	21.67	21.63	21.59	21.80
		RB1#25	21.57	21.56	21.58	21.76
		RB1#49	21.7	21.73	21.81	21.45
		RB25#0	21.06	21.08	21.1	21.21
		RB25#12	21.3	21.26	21.41	21.11
		RB25#25	21.37	21.18	21.19	21.16
		RB50#0	21.24	21.22	21.17	21.09
	16QAM	RB1#0	22.15	21.8	21.61	20.88
		RB1#25	22.16	22	21.68	20.72
		RB1#49	22.26	22.06	21.66	20.84
		RB25#0	19.22	19.16	19.15	19.35
		RB25#12	19.41	19.4	19.26	19.24
		RB25#25	19.4	19.23	19.33	19.18
		RB50#0	19.5	19.55	19.38	19.26
15M	QPSK	RB1#0	21.66	21.72	21.71	21.85
		RB1#37	21.67	21.57	21.44	21.78
		RB1#74	21.61	21.58	21.78	21.92
		RB36#0	21.2	21.09	21.3	21.13
		RB36#20	21.12	21.2	21.29	21.18
		RB36#39	21.06	21.25	21.31	21.11
		RB75#0	21.22	21.15	21.14	20.94
	16QAM	RB1#0	21.71	21.87	21.88	21.16
		RB1#37	21.74	21.9	21.9	20.96
		RB1#74	21.59	21.78	21.99	20.92
		RB36#0	19.28	19.25	19.35	19.27
		RB36#20	19.18	19.26	19.3	19.22
		RB36#39	19.3	19.41	19.36	19.30
		RB75#0	19.27	19.32	19.25	19.23

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	2570 MHz (dBm)	Middle Channel (dBm)	High Channel (dBm)
20M	QPSK	RB1#0	21.82	21.82	21.72	21.84
		RB1#49	22.09	22	22.3	22.12
		RB1#99	21.71	21.71	21.81	21.83
		RB50#0	21.31	21.33	21.31	21.46
		RB50#24	21.21	21.17	21.25	21.07
		RB50#50	21.51	21.48	21.68	21.55
		RB100#0	21.3	21.33	21.19	21.09
	16QAM	RB1#0	22.11	21.93	21.57	21.66
		RB1#49	22.21	21.99	21.78	21.69
		RB1#99	22.16	21.85	21.71	21.80
		RB50#0	19.85	19.74	19.87	19.79
		RB50#24	19.79	19.83	19.82	19.77
		RB50#50	19.68	19.81	19.96	19.61
		RB100#0	19.89	19.71	19.67	19.78

LTE Band 66:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
1.4M	QPSK	RB1#0	21.37	21.42	21.98
		RB1#3	21.44	21.39	21.74
		RB1#5	21.49	21.35	21.77
		RB3#0	21.46	21.4	21.6
		RB3#1	21.45	21.36	21.57
		RB3#3	21.32	21.26	21.65
		RB6#0	20.49	20.48	20.89
	16QAM	RB1#0	21.14	21.1	22.22
		RB1#3	21.13	21.08	22.33
		RB1#5	21.04	20.87	22.34
		RB3#0	20.15	19.99	20.66
		RB3#1	20.27	20.07	20.66
		RB3#3	20.17	20	20.68
		RB6#0	19.49	19.17	19.46
3M	QPSK	RB1#0	21.56	21.48	21.42
		RB1#8	21.53	21.48	21.62
		RB1#14	21.42	21.48	21.68
		RB8#0	20.79	20.56	20.81
		RB8#4	20.54	20.7	20.95
		RB8#7	20.63	20.56	20.81
		RB15#0	20.78	20.53	20.89
	16QAM	RB1#0	21.17	21.06	21.93
		RB1#8	21.04	21	22.01
		RB1#14	21.25	21.03	21.89
		RB8#0	19.48	19.39	19.39
		RB8#4	19.54	19.32	19.74
		RB8#7	19.31	19.36	19.65
		RB15#0	19.4	19.15	19.83
5M	QPSK	RB1#0	21.8	21.3	21.71
		RB1#12	21.81	21.48	21.63
		RB1#24	21.66	21.37	21.74
		RB12#0	20.81	20.66	20.79
		RB12#7	20.73	20.8	20.9
		RB12#13	20.76	20.74	20.76
		RB25#0	20.56	20.52	20.76
	16QAM	RB1#0	21.39	21.75	21.16
		RB1#12	21.28	21.79	21.27
		RB1#24	21.08	21.76	21.42
		RB12#0	19.27	19.4	19.45
		RB12#7	19.26	19.28	19.41
		RB12#13	19.25	19.52	19.53
		RB25#0	19.56	19.53	19.52

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
10M	QPSK	RB1#0	21.51	21.57	21.56
		RB1#25	21.40	21.49	21.60
		RB1#49	21.60	21.53	21.83
		RB25#0	20.65	20.63	20.66
		RB25#12	20.69	20.53	20.86
		RB25#25	20.52	20.69	20.67
		RB50#0	20.57	20.58	20.79
	16QAM	RB1#0	21.19	22.19	21.86
		RB1#25	21.17	22.13	22.02
		RB1#49	21.16	22.33	22.30
		RB25#0	19.46	19.29	19.25
		RB25#12	19.64	19.57	19.40
		RB25#25	19.48	19.53	19.30
		RB50#0	19.39	19.26	19.57
15M	QPSK	RB1#0	21.26	21.33	21.64
		RB1#37	21.37	21.39	21.50
		RB1#74	21.33	21.55	21.60
		RB36#0	20.73	20.58	20.77
		RB36#20	20.70	20.52	20.78
		RB36#39	20.64	20.49	20.66
		RB75#0	20.70	20.57	20.88
	16QAM	RB1#0	21.81	22.26	22.00
		RB1#37	21.76	22.26	22.14
		RB1#74	21.85	22.33	22.14
		RB36#0	19.44	19.26	19.60
		RB36#20	19.28	19.50	19.58
		RB36#39	19.23	19.57	19.62
		RB75#0	19.33	19.25	19.38
20M	QPSK	RB1#0	21.63	21.65	21.52
		RB1#49	21.72	21.91	21.94
		RB1#99	21.64	21.85	21.91
		RB50#0	20.79	20.69	20.78
		RB50#24	20.62	20.43	20.80
		RB50#50	20.95	20.98	20.98
		RB100#0	20.55	20.67	20.79
	16QAM	RB1#0	21.32	21.06	20.75
		RB1#49	21.16	21.13	20.76
		RB1#99	21.33	21.31	21.11
		RB50#0	19.49	19.28	19.42
		RB50#24	19.40	19.31	19.61
		RB50#50	19.35	19.24	19.63
		RB100#0	19.39	19.31	19.47

LTE Intra-Band Contiguous Carrier Aggregation:

UL CA shall be tested based on the worst-case SAR configuration determined from non-CA SAR testing result. The channel BW, channel number, RB allocation, etc. would be selected to allow contiguous CA of PCC and SCC. Uplink output power for UL CA is the total power measured across the PCC and SCC.

UL CA power measurements were performed for each antennas at with QPSK modulation based on the worst-case standalone SAR.

The UL CA mode power measurements represent the total power across both carriers. Measurements were made for all supported PCC bandwidths using the channel/RB combination resulting in the highest standalone output power at the least MPR (0 dB). SCCs were set to use configurations similar to the PCC to establish conservative or worst case equivalent SAR test conditions (highest maximum output power with MPR of 0 dB and RB allocation setting).

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

According to April 2015 TCB workshop, SAR test exclusion can be applied for testing overlapping LTE bands as follows.

- The maximum output power, including tolerance, for the smaller band must be $\leq$ the larger band to qualify for the SAR test exclusion.
- The channel bandwidth and other operating parameters for the smaller band must be fully supported by the larger band.

According to November 2017 TCB workshop, Uplink CA SAR Test Guidance as follows:

- When the maximum output power for UL CA is $\leq$ standalone LTE mode (without CA)
 - PCC is configured according to the highest standalone SAR configuration tested
 - SCC and subsequent ccs are configured according to procedures used for power measurement and parameters (BW, RB etc.) similar to that used for the PCC
- When the Reported SAR for UL CA configuration, described above, is > 1.2 W/kg, UL CA SAR is also required for all required test channels (PCC based)
- UL CA SAR is also required for standalone SAR configurations > 1.2 W/kg when they are scaled to the UL CA power level

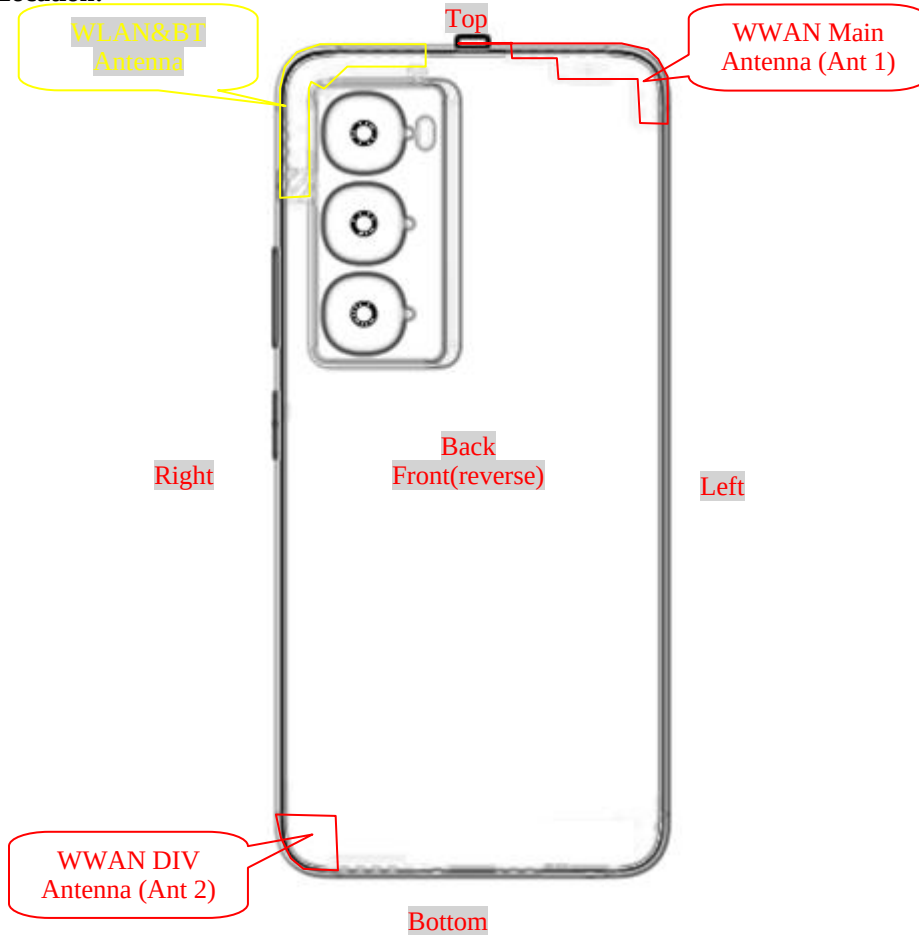
LTE UL Carrier Aggregation Mode Max Target Power (dBm)		LTE Mode (without CA) Max Target Power (dBm)	
CA_5B	22.3	LTE Band 5	23
CA_7C	18.1	LTE Band 7	21.6
CA_38C	22.2	LTE Band 38	22.4
CA_41C	22.2	LTE Band 41	22.4

Band	PCC BW (MHz)	SCC BW (MHz)	PCC ARFCN	PCC Freq.	PCC RB	SCC ARFCN	SCC Freq.	SCC RB	Modulation	PCC Power (dBm)	SCC Power (dBm)	Total Power (dBm)
CA_5B	10.0	10.0	20476	831.6	1@49	20575	841.5	1@0	QPSK	19.22	19.07	22.16
CA_7C	20.0	20.0	21001	2525.1	1@99	21199	2544.9	1@0	QPSK	14.91	14.89	17.91
CA_38C	20.0	20.0	37901	2585.1	1@99	38099	2604.9	1@0	QPSK	19.11	18.96	22.05
CA_41C	20.0	20.0	40521	2583.1	1@99	40719	2602.9	1@0	QPSK	18.84	19.12	21.99

Note: PCC RB allocation setting for UL CA has been adjusted based on the worst-case SAR test.

7. Standalone SAR test exclusion considerations

7.1 Antennas Location:



7.2 Antenna Distance To Edge

Antenna	Antenna Distance To Edge(mm)					
	Back	Front	Left	Right	Top	Bottom
WWAN Main Antenna	< 5	< 5	< 5	34	< 5	152
WWAN DIV Antenna	< 5	< 5	55	< 5	156	< 5
WLAN&BT Antenna	< 5	< 5	46	< 5	< 5	137

Antenna	Description
WWAN Main Antenna(Ant 1)	GSM850, PCS 1900, WCDMA B2/B4/B5, LTE B2/B4/B5/B7/B12/B17/B26/B38/B41/B66
WWAN DIV Antenna(Ant 2)	GSM850, PCS 1900, WCDMA B2/B4/B5, LTE B2/B4/B5/B7/B12/B17/B26/B38/B41/B66
WLAN&BT Antenna	WIFI 2.4G , WIFI 5G, Bluetooth

7.3 Standalone SAR test exclusion considerations

Mode	Frequency (MHz)	Pavg (dBm)	Pavg (mW)	Distance (mm)	Calculated value	Threshold (1-g)	SAR Test Exclusion
WIFI 2.4G	2462	16.5	44.67	0	14.0	3	NO
WIFI 5.2G	5240	14	25.12	0	11.5	3	NO
WIFI 5.3G	5320	15	31.62	0	14.6	3	NO
WIFI 5.6G	5720	9.7	9.33	0	4.5	3	NO
WIFI 5.8G	5825	14.5	28.18	0	13.6	3	NO
Bluetooth	2480	4.5	2.82	0	0.9	3	YES

Note: The WLAN based average power for calculation. and bluetooth based peak output power for calculation.

NOTE:

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

$$\left[\frac{\text{max. power of channel, including tune-up tolerance, mW}}{(\text{min. test separation distance, mm})} \right] \cdot$$

$$[\sqrt{f(\text{GHz})}] \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR, where}$$

1. $f(\text{GHz})$ is the RF channel transmit frequency in GHz.

2. Power and distance are rounded to the nearest mW and mm before calculation.

3. The result is rounded to one decimal place for comparison.

4. When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test Exclusion.

7.4 Standalone SAR estimation:

Mode	Frequency (MHz)	Output Power (dBm)	Output Power (mW)	Distance (mm)	Estimated 1-g (W/kg)
BT Head	2480	4.5	2.82	0	0.12
BT Body	2480	4.5	2.82	10	0.06

Note: The bluetooth based peak power for calculation.

When standalone SAR test exclusion applies to an antenna that transmits simultaneously with other antennas, the standalone SAR must be estimated according to following to determine simultaneous transmission SAR test exclusion:

$$\left[\frac{\text{max. power of channel, including tune-up tolerance, mW}}{(\text{min. test separation distance, mm})} \right] \cdot$$

$$[\sqrt{f(\text{GHz})/x}]$$

W/kg for test separation distances ≤ 50 mm;

where $x = 7.5$ for 1-g SAR.

When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test Exclusion

7.5SAR test exclusion for the EUT edge considerations Result

Mode	Back	Front	Left	Right	Top	Bottom
WWAN Main Antenna(Ant 1)	Required	Required	Required	Exclusion	Required	Exclusion
WWAN DIV Antenna(Ant 2)	Required	Required	Exclusion	Required	Exclusion	Required
WLAN	Required	Required	Exclusion	Required	Required	Exclusion
Bluetooth	Exclusion*	Exclusion*	Exclusion*	Exclusion*	Exclusion*	Exclusion*

Note:

Required: The distance to Edge is less than 25mm, testing is required.

Exclusion*: SAR test exclusion evaluation has been done above.

Exclusion: The distance to Edge is more than 25 mm, testing is not required.

Extremity Exposure Considerations

Per KDB 648474 D04v01r03, this device is considered a “Phablet” since the diagonal dimension is >160mm and < 200mm, when hotspot mode applies, extremity SAR is required only for the surfaces and edges with hotspot mode scaled to the maximum output power (with tolerance is 1g SAR > 1.2W/kg)

Extremity Exposure Condition		
Worst Mode	Hotspot SAR value	Extremity Condition Test
LTE Band 38	0.55W/kg	Exclusion

Note: The test data of BT/WIFI, please refer to original report.

8. SAR MEASUREMENT RESULTS

This page summarizes the results of the performed dosimetric evaluation.

8.1 SAR Test Data

Environmental Conditions

Temperature:	22.5-23.1 °C	22.9-23.7 °C	23.3-23.9 °C	23.1-23.7 °C	21.2-23.4 °C	22.4-23.6 °C
Relative Humidity:	49%	47%	40%	46%	44%	49%
ATM Pressure:	100.6kPa	100.2kPa	100kPa	101.1kPa	99.9kPa	99.7kPa
Test Date:	2025/7/10	2025/7/11	2025/7/12	2025/7/13	2025/7/14	2025/7/15

Testing was performed by Wen Chen, Ken Zong, Aixlee Li.

GSM 850 (ANT1):

EUT Position	Frequency (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)			
					Scaled Factor	Meas. SAR	Scaled SAR	Plot
Head Right Cheek	824.2	GPRS	/	/	/	/	/	/
	836.6	GPRS	29.62	30	1.091	0.397	0.43	1#
	848.8	GPRS	/	/	/	/	/	/
Body Back (10mm)	824.2	GPRS	/	/	/	/	/	/
	836.6	GPRS	29.62	30	1.091	0.117	0.13	2#
	848.8	GPRS	/	/	/	/	/	/

The data above was performed on 2025/07/10.

GSM 850 (ANT2):

EUT Position	Frequency (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)			
					Scaled Factor	Meas. SAR	Scaled SAR	Plot
Head Left Cheek	824.2	GPRS	/	/	/	/	/	/
	836.6	GPRS	29.62	30	1.091	0.017	0.02	/
	848.8	GPRS	/	/	/	/	/	/
Head Left Tilt	824.2	GPRS	/	/	/	/	/	/
	836.6	GPRS	29.62	30	1.091	< 0.01	0.01	/
	848.8	GPRS	/	/	/	/	/	/
Head Right Cheek	824.2	GPRS	/	/	/	/	/	/
	836.6	GPRS	29.62	30	1.091	0.019	0.02	3#
	848.8	GPRS	/	/	/	/	/	/
Head Right Tilt	824.2	GPRS	/	/	/	/	/	/
	836.6	GPRS	29.62	30	1.091	< 0.01	0.01	/
	848.8	GPRS	/	/	/	/	/	/
Body Front (10mm)	824.2	GPRS	/	/	/	/	/	/
	836.6	GPRS	29.62	30	1.091	0.038	0.04	/
	848.8	GPRS	/	/	/	/	/	/
Body Back (10mm)	824.2	GPRS	/	/	/	/	/	/
	836.6	GPRS	29.62	30	1.091	0.069	0.08	4#
	848.8	GPRS	/	/	/	/	/	/
Body Right (10mm)	824.2	GPRS	/	/	/	/	/	/
	836.6	GPRS	29.62	30	1.091	0.026	0.03	/
	848.8	GPRS	/	/	/	/	/	/
Body Bottom (10mm)	824.2	GPRS	/	/	/	/	/	/
	836.6	GPRS	29.62	30	1.091	0.057	0.06	/
	848.8	GPRS	/	/	/	/	/	/

The data above was performed on 2025/07/10.

Note:

1. When the 1-g SAR is $\leq 0.8\text{W/Kg}$, testing for other channels are optional.
2. The EUT transmit and receive through the same GSM antenna while testing SAR.
3. When SAR or MPE is not measured at the maximum power level allowed for production units, the results must be scaled to the maximum tune-up tolerance limit according to the power applied to the individual

channels tested to determine compliance.

4. When the maximum output power variation across the required test channels is > 0.5 dB, instead of the middle channel, the highest output power channel must be used.
5. The Multi-slot Classes of EUT is Class 12 which has maximum 4 Downlink slots and 4 Uplink slots, the maximum active slots is 5, when perform the multiple slots scan, 3DL+2UL is the worst case.
6. The max. time based average power of GSM/GPRS mode was selected to Head and Body SAR testing.

PCS 1900 (ANT1):

EUT Position	Frequency (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)			
					Scaled Factor	Meas. SAR	Scaled SAR	Plot
Head Right Tilt	1850.2	GPRS	24.11	24.5	1.094	0.744	0.81	/
	1880	GPRS	24.24	24.5	1.062	0.928	0.99	/
	1909.8	GPRS	24.42	24.5	1.019	1.06	1.08	5#
Body Top (10mm)	1850.2	GPRS	/	/	/	/	/	/
	1880	GPRS	24.24	24.5	1.062	0.31	0.33	6#
	1909.8	GPRS	/	/	/	/	/	/

PCS 1900 (ANT2):

EUT Position	Frequency (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)			
					Scaled Factor	Meas. SAR	Scaled SAR	Plot
Head Left Cheek	1850.2	GPRS	/	/	/	/	/	/
	1880	GPRS	24.24	24.5	1.062	0.025	0.03	7#
	1909.8	GPRS	/	/	/	/	/	/
Head Left Tilt	1850.2	GPRS	/	/	/	/	/	/
	1880	GPRS	24.24	24.5	1.062	0.019	0.02	/
	1909.8	GPRS	/	/	/	/	/	/
Head Right Cheek	1850.2	GPRS	/	/	/	/	/	/
	1880	GPRS	24.24	24.5	1.062	0.021	0.02	/
	1909.8	GPRS	/	/	/	/	/	/
Head Right Tilt	1850.2	GPRS	/	/	/	/	/	/
	1880	GPRS	24.24	24.5	1.062	0.024	0.03	/
	1909.8	GPRS	/	/	/	/	/	/
Body Front (10mm)	1850.2	GPRS	/	/	/	/	/	/
	1880	GPRS	24.24	24.5	1.062	0.125	0.13	/
	1909.8	GPRS	/	/	/	/	/	/
Body Back (10mm)	1850.2	GPRS	/	/	/	/	/	/
	1880	GPRS	24.24	24.5	1.062	0.33	0.35	8#
	1909.8	GPRS	/	/	/	/	/	/
Body Right (10mm)	1850.2	GPRS	/	/	/	/	/	/
	1880	GPRS	24.24	24.5	1.062	0.058	0.06	/
	1909.8	GPRS	/	/	/	/	/	/
Body Bottom (10mm)	1850.2	GPRS	/	/	/	/	/	/
	1880	GPRS	24.24	24.5	1.062	0.248	0.26	/
	1909.8	GPRS	/	/	/	/	/	/

Note:

1. When the 1-g SAR is $\leq 0.8\text{W/Kg}$, testing for other channels are optional.
2. The EUT transmit and receive through the same GSM antenna while testing SAR.
3. When SAR or MPE is not measured at the maximum power level allowed for production units, the results must be scaled to the maximum tune-up tolerance limit according to the power applied to the individual channels tested to determine compliance.

4. When the maximum output power variation across the required test channels is > 0.5 dB, instead of the middle channel, the highest output power channel must be used.
5. The Multi-slot Classes of EUT is Class 12 which has maximum 4 Downlink slots and 4 Uplink slots, the maximum active slots is 5, when perform the multiple slots scan, 2DL+3UL is the worst case.
6. The max. time based average power of GSM/GPRS mode was selected to Head and Body SAR testing.

WCDMA Band 2 (ANT1):

EUT Position	Frequency (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)			
					Scaled Factor	Meas. SAR	Scaled SAR	Plot
Head Right Tilt	1852.4	RMC	/	/	/	/	/	/
	1880	RMC	22.25	22.5	1.059	0.722	0.76	9#
	1907.6	RMC	/	/	/	/	/	/
Body Top (10mm)	1852.4	RMC	/	/	/	/	/	/
	1880	RMC	22.25	22.5	1.059	0.419	0.44	10#
	1907.6	RMC	/	/	/	/	/	/

WCDMA Band 2 (ANT2):

EUT Position	Frequency (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)			
					Scaled Factor	Meas. SAR	Scaled SAR	Plot
Head Left Cheek	1852.4	RMC	/	/	/	/	/	/
	1880	RMC	22.25	22.5	1.059	0.049	0.05	/
	1907.6	RMC	/	/	/	/	/	/
Head Left Tilt	1852.4	RMC	/	/	/	/	/	/
	1880	RMC	22.25	22.5	1.059	0.07	0.07	/
	1907.6	RMC	/	/	/	/	/	/
Head Right Cheek	1852.4	RMC	/	/	/	/	/	/
	1880	RMC	22.25	22.5	1.059	0.058	0.06	/
	1907.6	RMC	/	/	/	/	/	/
Head Right Tilt	1852.4	RMC	/	/	/	/	/	/
	1880	RMC	22.25	22.5	1.059	0.088	0.09	11#
	1907.6	RMC	/	/	/	/	/	/
Body Front (10mm)	1852.4	RMC	/	/	/	/	/	/
	1880	RMC	22.25	22.5	1.059	0.088	0.09	/
	1907.6	RMC	/	/	/	/	/	/
Body Back (10mm)	1852.4	RMC	/	/	/	/	/	/
	1880	RMC	22.25	22.5	1.059	0.236	0.25	12#
	1907.6	RMC	/	/	/	/	/	/
Body Right (10mm)	1852.4	RMC	/	/	/	/	/	/
	1880	RMC	22.25	22.5	1.059	0.044	0.05	/
	1907.6	RMC	/	/	/	/	/	/
Body Bottom (10mm)	1852.4	RMC	/	/	/	/	/	/
	1880	RMC	22.25	22.5	1.059	0.19	0.20	/
	1907.6	RMC	/	/	/	/	/	/

WCDMA Band 4 (ANT1):

EUT Position	Frequency (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)			
					Scaled Factor	Meas. SAR	Scaled SAR	Plot
Head Right Tilt	1712.4	RMC	/	/	/	/	/	/
	1732.6	RMC	21.56	22	1.107	0.51	0.56	13#
	1752.6	RMC	/	/	/	/	/	/
Body Top (10mm)	1712.4	RMC	/	/	/	/	/	/
	1732.6	RMC	21.56	22	1.107	0.187	0.21	14#
	1752.6	RMC	/	/	/	/	/	/

WCDMA Band 4 (ANT2):

EUT Position	Frequency (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)			
					Scaled Factor	Meas. SAR	Scaled SAR	Plot
Head Left Cheek	1712.4	RMC	/	/	/	/	/	/
	1732.6	RMC	21.56	22	1.107	0.016	0.02	15#
	1752.6	RMC	/	/	/	/	/	/
Head Left Tilt	1712.4	RMC	/	/	/	/	/	/
	1732.6	RMC	21.56	22	1.107	< 0.01	0.01	/
	1752.6	RMC	/	/	/	/	/	/
Head Right Cheek	1712.4	RMC	/	/	/	/	/	/
	1732.6	RMC	21.56	22	1.107	< 0.01	0.01	/
	1752.6	RMC	/	/	/	/	/	/
Head Right Tilt	1712.4	RMC	/	/	/	/	/	/
	1732.6	RMC	21.56	22	1.107	< 0.01	0.01	/
	1752.6	RMC	/	/	/	/	/	/
Body Front (10mm)	1712.4	RMC	/	/	/	/	/	/
	1732.6	RMC	21.56	22	1.107	0.044	0.05	/
	1752.6	RMC	/	/	/	/	/	/
Body Back (10mm)	1712.4	RMC	/	/	/	/	/	/
	1732.6	RMC	21.56	22	1.107	0.16	0.18	16#
	1752.6	RMC	/	/	/	/	/	/
Body Right (10mm)	1712.4	RMC	/	/	/	/	/	/
	1732.6	RMC	21.56	22	1.107	0.019	0.02	/
	1752.6	RMC	/	/	/	/	/	/
Body Bottom (10mm)	1712.4	RMC	/	/	/	/	/	/
	1732.6	RMC	21.56	22	1.107	0.132	0.15	/
	1752.6	RMC	/	/	/	/	/	/

WCDMA Band 5 (ANT1):

EUT Position	Frequency (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)			
					Scaled Factor	Meas. SAR	Scaled SAR	Plot
Head Right Cheek	826.4	RMC	/	/	/	/	/	/
	836.6	RMC	22.33	22.5	1.04	0.386	0.4	17#
	846.6	RMC	/	/	/	/	/	/
Body Back (10mm)	826.4	RMC	/	/	/	/	/	/
	836.6	RMC	22.33	22.5	1.04	0.1	0.10	18#
	846.6	RMC	/	/	/	/	/	/

The data above was performed on 2025/07/10.

WCDMA Band 5 (ANT2):

EUT Position	Frequency (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)			
					Scaled Factor	Meas. SAR	Scaled SAR	Plot
Head Left Cheek	826.4	RMC	/	/	/	/	/	/
	836.6	RMC	22.33	22.5	1.04	< 0.01	0.01	/
	846.6	RMC	/	/	/	/	/	/
Head Left Tilt	826.4	RMC	/	/	/	/	/	/
	836.6	RMC	22.33	22.5	1.04	< 0.01	0.01	/
	846.6	RMC	/	/	/	/	/	/
Head Right Cheek	826.4	RMC	/	/	/	/	/	/
	836.6	RMC	22.33	22.5	1.04	0.016	0.02	19#
	846.6	RMC	/	/	/	/	/	/
Head Right Tilt	826.4	RMC	/	/	/	/	/	/
	836.6	RMC	22.33	22.5	1.04	< 0.01	0.01	/
	846.6	RMC	/	/	/	/	/	/
Body Front (10mm)	826.4	RMC	/	/	/	/	/	/
	836.6	RMC	22.33	22.5	1.04	0.016	0.02	/
	846.6	RMC	/	/	/	/	/	/
Body Back (10mm)	826.4	RMC	/	/	/	/	/	/
	836.6	RMC	22.33	22.5	1.04	0.022	0.02	20#
	846.6	RMC	/	/	/	/	/	/
Body Right (10mm)	826.4	RMC	/	/	/	/	/	/
	836.6	RMC	22.33	22.5	1.04	0.014	0.01	/
	846.6	RMC	/	/	/	/	/	/
Body Bottom (10mm)	826.4	RMC	/	/	/	/	/	/
	836.6	RMC	22.33	22.5	1.04	0.01	0.01	/
	846.6	RMC	/	/	/	/	/	/

The data above was performed on 2025/07/10.

Note:

1. When the 1-g SAR is $\leq 0.8\text{W/Kg}$, testing for other channels are optional.
2. The EUT transmit and receive through the same antenna while testing SAR.
3. The default test configuration is to measure SAR with an established radio link between the EUT and a communication test set using a 12.2 kbps RMC(reference measurement Channel) Configured in all l.
4. KDB 941225 D01-Body SAR is not required for HSDPA/HSUPA when the maximum average output of each RF channel is less than $\frac{1}{4}$ dB higher than measured 12.2kbps RMC or the maximum SAR for 12.2kbps RMC is < 75% of SAR limit.

5. When SAR or MPE is not measured at the maximum power level allowed for production units, the results must be scaled to the maximum tune-up tolerance limit according to the power applied to the individual channels tested to determine compliance.

LTE Band 2 (ANT1):

EUT Position	Frequency (MHz)	Bandwidth (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)			
						Scaled Factor	Meas. SAR	Scaled SAR	Plot
Head Right Tilt	1860	20	1RB	/	/	/	/	/	/
	1880	20	1RB	22.15	22.4	1.059	0.724	0.77	21#
	1900	20	1RB	/	/	/	/	/	/
Body Top (10mm)	1860	20	1RB	/	/	/	/	/	/
	1880	20	1RB	22.15	22.4	1.059	0.337	0.36	22#
	1900	20	1RB	/	/	/	/	/	/

LTE Band 2 (ANT2):

EUT Position	Frequency (MHz)	Bandwidth (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)			
						Scaled Factor	Meas. SAR	Scaled SAR	Plot
Head Left Cheek	1860	20	1RB	/	/	/	/	/	/
	1880	20	1RB	22.15	22.4	1.059	0.017	0.02	/
	1900	20	1RB	/	/	/	/	/	/
	1880	20	50%RB	21.79	22.4	1.151	0.011	0.01	/
Head Left Tilt	1860	20	1RB	/	/	/	/	/	/
	1880	20	1RB	22.15	22.4	1.059	< 0.01	0.01	/
	1900	20	1RB	/	/	/	/	/	/
	1880	20	50%RB	21.79	22.4	1.151	< 0.01	0.01	/
Head Right Cheek	1860	20	1RB	/	/	/	/	/	/
	1880	20	1RB	22.15	22.4	1.059	0.026	0.03	23#
	1900	20	1RB	/	/	/	/	/	/
	1880	20	50%RB	21.79	22.4	1.151	0.018	0.02	/
Head Right Tilt	1860	20	1RB	/	/	/	/	/	/
	1880	20	1RB	22.15	22.4	1.059	< 0.01	0.01	/
	1900	20	1RB	/	/	/	/	/	/
	1880	20	50%RB	21.79	22.4	1.151	< 0.01	0.01	/
Body Front (10mm)	1860	20	1RB	/	/	/	/	/	/
	1880	20	1RB	22.15	22.4	1.059	0.036	0.04	/
	1900	20	1RB	/	/	/	/	/	/
	1880	20	50%RB	21.79	22.4	1.151	0.029	0.03	/
Body Back (10mm)	1860	20	1RB	/	/	/	/	/	/
	1880	20	1RB	22.15	22.4	1.059	0.107	0.11	24#
	1900	20	1RB	/	/	/	/	/	/
	1880	20	50%RB	21.79	22.4	1.151	0.088	0.10	/
Body Right (10mm)	1860	20	1RB	/	/	/	/	/	/
	1880	20	1RB	22.15	22.4	1.059	0.019	0.02	/
	1900	20	1RB	/	/	/	/	/	/
	1880	20	50%RB	21.79	22.4	1.151	0.014	0.02	/
Body Bottom (10mm)	1860	20	1RB	/	/	/	/	/	/
	1880	20	1RB	22.15	22.4	1.059	0.093	0.10	/
	1900	20	1RB	/	/	/	/	/	/
	1880	20	50%RB	21.79	22.4	1.151	0.069	0.08	/

LTE Band 7 (ANT1):

EUT Position	Frequency (MHz)	Bandwidth (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)			
						Scaled Factor	Meas. SAR	Scaled SAR	Plot
Head Right Tilt	2510	20	1RB	/	/	/	/	/	/
	2535	20	1RB	21.32	21.6	1.067	0.301	0.32	25#
	2560	20	1RB	/	/	/	/	/	/
Body Top (10mm)	2510	20	1RB	/	/	/	/	/	/
	2535	20	1RB	21.32	21.6	1.067	0.252	0.27	26#
	2560	20	1RB	/	/	/	/	/	/

LTE Band 7 (ANT2):

EUT Position	Frequency (MHz)	Bandwidth (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)			
						Scaled Factor	Meas. SAR	Scaled SAR	Plot
Head Left Cheek	2510	20	1RB	/	/	/	/	/	/
	2535	20	1RB	21.32	21.6	1.067	< 0.01	0.01	/
	2560	20	1RB	/	/	/	/	/	/
	2535	20	50%RB	20.37	21.6	1.327	< 0.01	0.01	/
Head Left Tilt	2510	20	1RB	/	/	/	/	/	/
	2535	20	1RB	21.32	21.6	1.067	< 0.01	0.01	/
	2560	20	1RB	/	/	/	/	/	/
	2535	20	50%RB	20.37	21.6	1.327	< 0.01	0.01	/
Head Right Cheek	2510	20	1RB	/	/	/	/	/	/
	2535	20	1RB	21.32	21.6	1.067	< 0.01	0.01	/
	2560	20	1RB	/	/	/	/	/	/
	2535	20	50%RB	20.37	21.6	1.327	< 0.01	0.01	/
Head Right Tilt	2510	20	1RB	/	/	/	/	/	/
	2535	20	1RB	21.32	21.6	1.067	< 0.01	0.01	/
	2560	20	1RB	/	/	/	/	/	/
	2535	20	50%RB	20.37	21.6	1.327	< 0.01	0.01	/
Body Front (10mm)	2510	20	1RB	/	/	/	/	/	/
	2535	20	1RB	21.32	21.6	1.067	0.115	0.12	/
	2560	20	1RB	/	/	/	/	/	/
	2535	20	50%RB	20.37	21.6	1.327	0.057	0.08	/
Body Back (10mm)	2510	20	1RB	/	/	/	/	/	/
	2535	20	1RB	21.32	21.6	1.067	0.188	0.2	27#
	2560	20	1RB	/	/	/	/	/	/
	2535	20	50%RB	20.37	21.6	1.327	0.115	0.15	/
Body Right (10mm)	2510	20	1RB	/	/	/	/	/	/
	2535	20	1RB	21.32	21.6	1.067	0.036	0.04	/
	2560	20	1RB	/	/	/	/	/	/
	2535	20	50%RB	20.37	21.6	1.327	0.016	0.02	/
Body Bottom (10mm)	2510	20	1RB	/	/	/	/	/	/
	2535	20	1RB	21.32	21.6	1.067	0.17	0.18	/
	2560	20	1RB	/	/	/	/	/	/
	2535	20	50%RB	20.37	21.6	1.327	0.082	0.11	/

LTE Band 12&17 (ANT1):

EUT Position	Frequency (MHz)	Bandwidth (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)			
						Scaled Factor	Meas. SAR	Scaled SAR	Plot
Head Right Cheek	704	10	1RB	/	/	/	/	/	/
	707.5	10	1RB	22.92	23.2	1.067	0.529	0.56	28#
	711	10	1RB	/	/	/	/	/	/
Body Left (10mm)	704	10	1RB	/	/	/	/	/	/
	707.5	10	1RB	22.92	23.2	1.067	0.199	0.21	29#
	711	10	1RB	/	/	/	/	/	/

The data above was performed on 2025/07/10.

Note: The LTE Band 17 is a subset of LTE Band 12, with the same modulation type, and the rated output power of LTE band 17 is not greater than LTE band 12, so LTE band 17 does not need to be tested.

LTE Band 12&17 (ANT2):

EUT Position	Frequency (MHz)	Bandwidth (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)			
						Scaled Factor	Meas. SAR	Scaled SAR	Plot
Head Left Cheek	704	10	1RB	/	/	/	/	/	/
	707.5	10	1RB	22.92	23.2	1.067	0.016	0.02	30#
	711	10	1RB	/	/	/	/	/	/
	707.5	10	50%RB	21.96	23.2	1.33	0.014	0.02	/
Head Left Tilt	704	10	1RB	/	/	/	/	/	/
	707.5	10	1RB	22.92	23.2	1.067	< 0.01	0.01	/
	711	10	1RB	/	/	/	/	/	/
	707.5	10	50%RB	21.96	23.2	1.33	< 0.01	0.01	/
Head Right Cheek	704	10	1RB	/	/	/	/	/	/
	707.5	10	1RB	22.92	23.2	1.067	0.015	0.02	/
	711	10	1RB	/	/	/	/	/	/
	707.5	10	50%RB	21.96	23.2	1.33	0.014	0.02	/
Head Right Tilt	704	10	1RB	/	/	/	/	/	/
	707.5	10	1RB	22.92	23.2	1.067	< 0.01	0.01	/
	711	10	1RB	/	/	/	/	/	/
	707.5	10	50%RB	21.96	23.2	1.33	< 0.01	0.01	/
Body Front (10mm)	704	10	1RB	/	/	/	/	/	/
	707.5	10	1RB	22.92	23.2	1.067	0.04	0.04	/
	711	10	1RB	/	/	/	/	/	/
	707.5	10	50%RB	21.96	23.2	1.33	0.033	0.04	/
Body Back (10mm)	704	10	1RB	/	/	/	/	/	/
	707.5	10	1RB	22.92	23.2	1.067	0.073	0.08	/
	711	10	1RB	/	/	/	/	/	/
	707.5	10	50%RB	21.96	23.2	1.33	0.059	0.08	/
Body Right (10mm)	704	10	1RB	/	/	/	/	/	/
	707.5	10	1RB	22.92	23.2	1.067	0.079	0.08	/
	711	10	1RB	/	/	/	/	/	/
	707.5	10	50%RB	21.96	23.2	1.33	0.073	0.10	/
Body Bottom (10mm)	704	10	1RB	/	/	/	/	/	/
	707.5	10	1RB	22.92	23.2	1.067	0.095	0.10	31#
	711	10	1RB	/	/	/	/	/	/
	707.5	10	50%RB	21.96	23.2	1.33	0.089	0.12	/

The data above was performed on 2025/07/10.

Note: The LTE Band 17 is a subset of LTE Band 12, with the same modulation type, and the rated output power of LTE band 17 is not greater than LTE band 12, so LTE band 17 does not need to be tested.

LTE Band 26&5 (ANT1):

EUT Position	Frequency (MHz)	Bandwidth (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)			
						Scaled Factor	Meas. SAR	Scaled SAR	Plot
Head Right Cheek	821.5	15	1RB	22.93	23.4	1.114	0.839	0.93	/
	831.5	15	1RB	23.2	23.4	1.047	0.92	0.96	/
	841.5	15	1RB	23.17	23.4	1.054	0.968	1.02	32#
Body Back (10mm)	821.5	15	1RB	/	/	/	/	/	/
	831.5	15	1RB	23.2	23.4	1.047	0.117	0.12	33#
	841.5	15	1RB	/	/	/	/	/	/

The data above was performed on 2025/07/11.

Note: The LTE Band 5 is a subset of LTE Band 26, with the same modulation type, and the rated output power of LTE band 5 is not greater than LTE band 26, so LTE band 5 does not need to be tested.

LTE Band 26&5 (ANT2):

EUT Position	Frequency (MHz)	Bandwidth (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)			
						Scaled Factor	Meas. SAR	Scaled SAR	Plot
Head Left Cheek	821.5	15	1RB	/	/	/	/	/	/
	831.5	15	1RB	23.2	23.4	1.047	< 0.01	0.01	/
	841.5	15	1RB	/	/	/	/	/	/
	831.5	15	50%RB	22.66	23.4	1.186	< 0.01	0.01	/
Head Left Tilt	821.5	15	1RB	/	/	/	/	/	/
	831.5	15	1RB	23.2	23.4	1.047	< 0.01	0.01	/
	841.5	15	1RB	/	/	/	/	/	/
	831.5	15	50%RB	22.66	23.4	1.186	< 0.01	0.01	/
Head Right Cheek	821.5	15	1RB	/	/	/	/	/	/
	831.5	15	1RB	23.2	23.4	1.047	< 0.01	0.01	/
	841.5	15	1RB	/	/	/	/	/	/
	831.5	15	50%RB	22.66	23.4	1.186	< 0.01	0.01	/
Head Right Tilt	821.5	15	1RB	/	/	/	/	/	/
	831.5	15	1RB	23.2	23.4	1.047	< 0.01	0.01	/
	841.5	15	1RB	/	/	/	/	/	/
	831.5	15	50%RB	22.66	23.4	1.186	< 0.01	0.01	/
Body Front (10mm)	821.5	15	1RB	/	/	/	/	/	/
	831.5	15	1RB	23.2	23.4	1.047	< 0.01	0.01	/
	841.5	15	1RB	/	/	/	/	/	/
	831.5	15	50%RB	22.66	23.4	1.186	< 0.01	0.01	/
Body Back (10mm)	821.5	15	1RB	/	/	/	/	/	/
	831.5	15	1RB	23.2	23.4	1.047	0.016	0.02	/
	841.5	15	1RB	/	/	/	/	/	/
	831.5	15	50%RB	22.66	23.4	1.186	0.014	0.02	/
Body Right (10mm)	821.5	15	1RB	/	/	/	/	/	/
	831.5	15	1RB	23.2	23.4	1.047	0.015	0.02	/
	841.5	15	1RB	/	/	/	/	/	/
	831.5	15	50%RB	22.66	23.4	1.186	0.015	0.02	/
Body Bottom (10mm)	821.5	15	1RB	/	/	/	/	/	/
	831.5	15	1RB	23.2	23.4	1.047	0.019	0.02	34#
	841.5	15	1RB	/	/	/	/	/	/
	831.5	15	50%RB	22.66	23.4	1.186	0.017	0.02	/

The data above was performed on 2025/07/11.

Note: The LTE Band 5 is a subset of LTE Band 26, with the same modulation type, and the rated output power of LTE band 5 is not greater than LTE band 26, so LTE band 5 does not need to be tested.

LTE Band 38 (ANT1):

EUT Position	Frequency (MHz)	Bandwidth (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)			
						Scaled Factor	Meas. SAR	Scaled SAR	Plot
Head Right Tilt	2580	20	1RB	/	/	/	/	/	/
	2595	20	1RB	22.04	22.4	1.086	0.716	0.78	35#
	2610	20	1RB	/	/	/	/	/	/
Body Top (10mm)	2580	20	1RB	/	/	/	/	/	/
	2595	20	1RB	22.04	22.4	1.086	0.509	0.55	36#
	2610	20	1RB	/	/	/	/	/	/

LTE Band 38 (ANT2):

EUT Position	Frequency (MHz)	Bandwidth (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)			
						Scaled Factor	Meas. SAR	Scaled SAR	Plot
Head Left Cheek	2580	20	1RB	/	/	/	/	/	/
	2595	20	1RB	22.04	22.4	1.086	0.059	0.06	37#
	2610	20	1RB	/	/	/	/	/	/
	2595	20	50%RB	21.9	22.4	1.122	0.057	0.06	/
Head Left Tilt	2580	20	1RB	/	/	/	/	/	/
	2595	20	1RB	22.04	22.4	1.086	0.026	0.03	/
	2610	20	1RB	/	/	/	/	/	/
	2595	20	50%RB	21.9	22.4	1.122	0.023	0.03	/
Head Right Cheek	2580	20	1RB	/	/	/	/	/	/
	2595	20	1RB	22.04	22.4	1.086	0.027	0.03	/
	2610	20	1RB	/	/	/	/	/	/
	2595	20	50%RB	21.9	22.4	1.122	0.023	0.03	/
Head Right Tilt	2580	20	1RB	/	/	/	/	/	/
	2595	20	1RB	22.04	22.4	1.086	< 0.01	0.01	/
	2610	20	1RB	/	/	/	/	/	/
	2595	20	50%RB	21.9	22.4	1.122	< 0.01	0.01	/
Body Front (10mm)	2580	20	1RB	/	/	/	/	/	/
	2595	20	1RB	22.04	22.4	1.086	0.124	0.13	/
	2610	20	1RB	/	/	/	/	/	/
	2595	20	50%RB	21.9	22.4	1.122	0.1	0.11	/
Body Back (10mm)	2580	20	1RB	/	/	/	/	/	/
	2595	20	1RB	22.04	22.4	1.086	0.297	0.32	/
	2610	20	1RB	/	/	/	/	/	/
	2595	20	50%RB	21.9	22.4	1.122	0.241	0.27	/
Body Right (10mm)	2580	20	1RB	/	/	/	/	/	/
	2595	20	1RB	22.04	22.4	1.086	0.055	0.06	/
	2610	20	1RB	/	/	/	/	/	/
	2595	20	50%RB	21.9	22.4	1.122	0.045	0.05	/
Body Bottom (10mm)	2580	20	1RB	/	/	/	/	/	/
	2595	20	1RB	22.04	22.4	1.086	0.304	0.33	38#
	2610	20	1RB	/	/	/	/	/	/
	2595	20	50%RB	21.9	22.4	1.122	0.271	0.30	/

LTE Band 41 (ANT1):

EUT Position	Frequency (MHz)	Bandwidth (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)			
						Scaled Factor	Meas. SAR	Scaled SAR	Plot
Head Right Tilt	2545	20	1RB	/	/	/	/	/	/
	2570	20	1RB	/	/	/	/	/	/
	2595	20	1RB	22.3	22.4	1.023	0.695	0.71	39#
	2645	20	1RB	/	/	/	/	/	/
Body Top (10mm)	2545	20	1RB	/	/	/	/	/	/
	2570	20	1RB	/	/	/	/	/	/
	2595	20	1RB	22.3	22.4	1.023	0.511	0.52	40#
	2645	20	1RB	/	/	/	/	/	/

Note:

1. The frequency range of LTE Band 41 is 2535~ 2655MHz. Per KDB 447498 D01, according to the following formula Calculate N_c .

2. KDB procedures the following should be applied to determine the number of required test channels. The test channels should be evenly spread across the transmission frequency band of each wireless mode.

$$N_c = \text{Round}\{[100(f_{\text{high}} - f_{\text{low}})/f_c]^{0.5} \times (f_c/100)^{0.2}\},$$

where

- N_c is the number of test channels, rounded to nearest integer,
- f_{high} and f_{low} are the highest and lowest channel frequencies within the transmission band,
- f_c is the mid-band channel frequency,
- all frequencies are in MHz.

3. The power class 3 used for LTE Band 41 SAR testing.

LTE Band 41 (ANT2):

EUT Position	Frequency (MHz)	Bandwidth (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)			
						Scaled Factor	Meas. SAR	Scaled SAR	Plot
Head Left Cheek	2545	20	1RB	/	/	/	/	/	/
	2570	20	1RB	/	/	/	/	/	/
	2595	20	1RB	22.3	22.4	1.023	0.06	0.06	41#
	2645	20	1RB	/	/	/	/	/	/
	2595	20	50%RB	21.68	22.4	1.18	0.055	0.06	/
Head Left Tilt	2545	20	1RB	/	/	/	/	/	/
	2570	20	1RB	/	/	/	/	/	/
	2595	20	1RB	22.3	22.4	1.023	0.026	0.03	/
	2645	20	1RB	/	/	/	/	/	/
	2595	20	50%RB	21.68	22.4	1.18	0.023	0.03	/
Head Right Cheek	2545	20	1RB	/	/	/	/	/	/
	2570	20	1RB	/	/	/	/	/	/
	2595	20	1RB	22.3	22.4	1.023	0.026	0.03	/
	2645	20	1RB	/	/	/	/	/	/
	2595	20	50%RB	21.68	22.4	1.18	0.024	0.03	/
Head Right Tilt	2545	20	1RB	/	/	/	/	/	/
	2570	20	1RB	/	/	/	/	/	/
	2595	20	1RB	22.3	22.4	1.023	< 0.01	0.01	/
	2645	20	1RB	/	/	/	/	/	/
	2595	20	50%RB	21.68	22.4	1.18	< 0.01	0.01	/
Body Front (10mm)	2545	20	1RB	/	/	/	/	/	/
	2570	20	1RB	/	/	/	/	/	/
	2595	20	1RB	22.3	22.4	1.023	0.114	0.12	/
	2645	20	1RB	/	/	/	/	/	/
	2595	20	50%RB	21.68	22.4	1.18	0.099	0.12	/
Body Back (10mm)	2545	20	1RB	/	/	/	/	/	/
	2570	20	1RB	/	/	/	/	/	/
	2595	20	1RB	22.3	22.4	1.023	0.271	0.28	/
	2645	20	1RB	/	/	/	/	/	/
	2595	20	50%RB	21.68	22.4	1.18	0.231	0.27	/
Body Right (10mm)	2545	20	1RB	/	/	/	/	/	/
	2570	20	1RB	/	/	/	/	/	/
	2595	20	1RB	22.3	22.4	1.023	0.049	0.05	/
	2645	20	1RB	/	/	/	/	/	/
	2595	20	50%RB	21.68	22.4	1.18	0.042	0.05	/
Body Bottom (10mm)	2545	20	1RB	/	/	/	/	/	/
	2570	20	1RB	/	/	/	/	/	/
	2595	20	1RB	22.3	22.4	1.023	0.299	0.31	/
	2645	20	1RB	/	/	/	/	/	/
	2595	20	50%RB	21.68	22.4	1.18	0.28	0.33	42#

Note:

1.The frequency range of LTE Band 41 is 2535~ 2655MHz. Per KDB 447498 D01, according to the following formula Calculate N_c is 4.

2.KDB procedures the following should be applied to determine the number of required test channels. The test channels should be evenly spread across the transmission frequency band of each wireless mode.

$$N_c = \text{Round}\{[100(f_{\text{high}} - f_{\text{low}})/f_c]^{0.5} \times (f_c/100)^{0.2}\},$$

where

- N_c is the number of test channels, rounded to nearest integer,
- f_{high} and f_{low} are the highest and lowest channel frequencies within the transmission band,
- f_c is the mid-band channel frequency,
- all frequencies are in MHz.

3. The power class 3 used for LTE Band 41 SAR testing.

LTE Band 66 (ANT1):

EUT Position	Frequency (MHz)	Bandwidth (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)			
						Scaled Factor	Meas. SAR	Scaled SAR	Plot
Head Right Cheek	1720	20	1RB	/	/	/	/	/	/
	1745	20	1RB	21.91	22.4	1.119	0.535	0.6	43#
	1770	20	1RB	/	/	/	/	/	/
Body Top (10mm)	1720	20	1RB	/	/	/	/	/	/
	1745	20	1RB	21.91	22.4	1.119	0.175	0.2	44#
	1770	20	1RB	/	/	/	/	/	/

LTE Band 66 (ANT2):

EUT Position	Frequency (MHz)	Bandwidth (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)			
						Scaled Factor	Meas. SAR	Scaled SAR	Plot
Head Left Cheek	1720	20	1RB	/	/	/	/	/	/
	1745	20	1RB	21.91	22.4	1.119	< 0.01	0.01	/
	1770	20	1RB	/	/	/	/	/	/
	1745	20	50%RB	20.98	22.4	1.387	< 0.01	0.01	/
Head Left Tilt	1720	20	1RB	/	/	/	/	/	/
	1745	20	1RB	21.91	22.4	1.119	< 0.01	0.01	/
	1770	20	1RB	/	/	/	/	/	/
	1745	20	50%RB	20.98	22.4	1.387	< 0.01	0.01	/
Head Right Cheek	1720	20	1RB	/	/	/	/	/	/
	1745	20	1RB	21.91	22.4	1.119	< 0.01	0.01	/
	1770	20	1RB	/	/	/	/	/	/
	1745	20	50%RB	20.98	22.4	1.387	< 0.01	0.01	/
Head Right Tilt	1720	20	1RB	/	/	/	/	/	/
	1745	20	1RB	21.91	22.4	1.119	< 0.01	0.01	/
	1770	20	1RB	/	/	/	/	/	/
	1745	20	50%RB	20.98	22.4	1.387	< 0.01	0.01	/
Body Front (10mm)	1720	20	1RB	/	/	/	/	/	/
	1745	20	1RB	21.91	22.4	1.119	0.015	0.02	/
	1770	20	1RB	/	/	/	/	/	/
	1745	20	50%RB	20.98	22.4	1.387	0.013	0.02	/
Body Back (10mm)	1720	20	1RB	/	/	/	/	/	/
	1745	20	1RB	21.91	22.4	1.119	0.077	0.09	45#
	1770	20	1RB	/	/	/	/	/	/
	1745	20	50%RB	20.98	22.4	1.387	0.066	0.09	/
Body Right (10mm)	1720	20	1RB	/	/	/	/	/	/
	1745	20	1RB	21.91	22.4	1.119	< 0.01	0.01	/
	1770	20	1RB	/	/	/	/	/	/
	1745	20	50%RB	20.98	22.4	1.387	< 0.01	0.01	/
Body Bottom (10mm)	1720	20	1RB	/	/	/	/	/	/
	1745	20	1RB	21.91	22.4	1.119	0.051	0.06	/
	1770	20	1RB	/	/	/	/	/	/
	1745	20	50%RB	20.98	22.4	1.387	0.05	0.07	/

Note:

1. When the 1-g SAR is $\leq 0.8 \text{ W/Kg}$, testing for other channels are optional.
2. SAR for LTE band exposure configurations is measured according to the procedures of KDB 941225 D05 SAR for LTE Devices v02r05.
3. KDB941225D05-SAR for higher order modulation is required only when the highest maximum output power for the configuration in the higher order modulation is $> 0.5 \text{ dB}$ higher than the same configuration in QPSK or when the reported SAR for the QPSK configuration is $> 1.45 \text{ W/kg}$
4. KDB941225D05-For QPSK with 100% RB allocation, when the reported SAR measured for the Highest output power channel is $< 1.45 \text{ W/kg}$, tests for the remaining required test channels are optional.
5. KDB941225D05- 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 are $\leq 0.8 \text{ W/kg}$.
6. KDB941225D05- 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 offset the upper edge, middle and lower edge of each required test channel.
7. KDB941225D05- other channel bandwidths SAR test is required when the highest maximum output power of a configuration requiring testing in the smaller hannel bandwidth is $> 0.5 \text{ dB}$ higher than the equivalent channel configurations in the largest channel bandwidth configuration or the reported SAR of a configuration for the largest channel bandwidth is $> 1.45 \text{ W/kg}$.

9. Measurement Variability

In accordance with published RF Exposure KDB procedure 865664 D01 SAR measurement 100 MHz to 6 GHz v01. These additional measurements are repeated after the completion of all measurements requiring the same head or body tissue-equivalent medium in a frequency band. The test device should be returned to ambient conditions (normal room temperature) with the battery fully charged before it is re-mounted on the device holder for the repeated measurement(s) to minimize any unexpected variations in the repeated results

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

Note: The same procedures should be adapted for measurements according to extremity and occupational exposure limits by applying a factor of 2.5 for extremity exposure and a factor of 5 for occupational exposure to the corresponding SAR thresholds.

The Highest Measured SAR Configuration in Each Frequency Band

Head

SAR probe calibration point	Frequency Band	Freq.(MHz)	EUT Position	Meas. SAR (W/kg)		Largest to Smallest SAR Ratio
				Original	Repeated	
750MHz	LTE Band 26&5	841.5	Head Right Cheek	0.968	0.916	1.01
1900MHz	PCS 1900	1909.8	Head Right Tilt	1.06	1.03	1.03

Body

SAR probe calibration point	Frequency Band	Freq.(MHz)	EUT Position	Meas. SAR (W/kg)		Largest to Smallest SAR Ratio
				Original	Repeated	
/	/	/	/	/	/	/

Note:

1. Second Repeated Measurement is not required since the ratio of the largest to smallest SAR for the original and first repeated measurement is not > 1.20 .
2. The measured SAR results **do not** have to be scaled to the maximum tune-up tolerance to determine if repeated measurements are required.
3. 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.

10. DUT HOLDER PERTURBATIONS

In accordance with TCB workshop October 2016:

- 1) SAR perturbation due to test device holders, depending on antenna locations, buttons locations on phones or device, form factor (e.g. dongles etc.), the measured SAR could be influenced by the relative positions of the test device and its holder
- 2) SAR measurement standards have included protocols to evaluate this with a flat phantom, with and without the device holder
- 3) When the highest reported SAR of an antenna is $> 1.2 \text{ W/kg}$, holder perturbation verification is required for each antenna, using the highest SAR configuration among all applicable frequency bands in the same exact device and holder positions used for head and body SAR measurements; i.e. same device/button locations in the holder

Per IEEE 1528: 2013/Annex E/E.4.1.1: Device holder perturbation tolerance for a specific test device: Type B
When it is unknown if a device holder perturbs the fields of a test device, the SAR uncertainty shall be assessed with a flat phantom (see Clause 5) by comparing the SAR with and without the device holder according to the following tests:

The SAR tolerance for device holder disturbance is computed using Equation (E.21) and entered in the corresponding row of the appropriate uncertainty table with an assumed rectangular probability distribution and $\nu = \infty$ degrees of freedom:

$$SAR_{\text{tolerance}} [\%] = 100 \times \left(\frac{SAR_{\text{w/holder}} - SAR_{\text{w/o holder}}}{SAR_{\text{w/o holder}}} \right) \quad (\text{E.21})$$

The Highest Measured SAR Configuration among all applicable Frequency Band

Frequency Band	Freq.(MHz)	EUT Position	Meas. SAR (W/kg)		The Device holder perturbation uncertainty
			With holder	Without holder	
/	/	/	/	/	/

11. SAR SIMULTANEOUS TRANSMISSION DESCRIPTION

11.1 Simultaneous Transmission:

Description of Simultaneous Transmit Capabilities		
Transmitter Combination	Simultaneous?	Hotspot?
WWAN(GSM/WCDMA/LTE)Antenna + WLAN 2.4G	√	√
WWAN(GSM/WCDMA/LTE)Antenna + WLAN 5G	√	√
WWAN(GSM/WCDMA/LTE) Antenna + Bluetooth	√	×
WLAN 2.4G +Bluetooth	×	×
WLAN 5G +Bluetooth	×	×

Note: In a WWAN antenna, only a single antenna in one band operates at a time, WLAN 5.3G/5.6G do not support hotspots.

11.2 Simultaneous SAR test exclusion considerations:

Mode(SAR1+SAR2)	Position	Reported SAR(W/kg)		ΣSAR < 1.6W/kg
		SAR1	SAR2	
WWAN(GSM/WCDMA/LTE) Antenna + Bluetooth	Head Left Cheek	0.71	0.12	0.83
	Head Left Tilt	0.72	0.12	0.84
	Head Right Cheek	1.08	0.12	1.20
	Head Right Tilt	1.09	0.12	1.21
	Body Front	0.24	0.06	0.30
	Body Back	0.50	0.06	0.56
WWAN(GSM/WCDMA/LTE)Antenna + WLAN 2.4G	Head Left Cheek	0.71	0.46	1.17
	Head Left Tilt	0.72	0.48	1.20
	Head Right Cheek	1.08	0.29	1.37
	Head Right Tilt	1.09	0.26	1.35
WWAN(GSM/WCDMA/LTE)Antenna + WLAN 5G	Head Left Cheek	0.71	0.36	1.07
	Head Left Tilt	0.72	0.60	1.32
	Head Right Cheek	1.08	0.34	1.42
	Head Right Tilt	1.09	0.47	1.56
WWAN(GSM/WCDMA/LTE)Antenna + WLAN 2.4G (Hotspot)	Body Front	0.24	0.06	0.30
	Body Back	0.50	0.09	0.59
	Body Left	0.2	NA	0.20
	Body Right	0.1	0.04	0.14
	Body Top	0.68	0.09	0.77
	Body Bottom	0.36	NA	0.36

Mode(SAR1+SAR2)	Position	Reported SAR(W/kg)		Σ SAR < 1.6W/kg
		SAR1	SAR2	
WWAN(GSM/WCDMA/LTE)Antenna + WLAN 5.2G (Hotspot)	Body Front	0.24	0.07	0.31
	Body Back	0.50	0.40	0.90
	Body Left	0.2	NA	0.20
	Body Right	0.1	0.09	0.19
	Body Top	0.68	0.36	1.04
	Body Bottom	0.36	NA	0.36
WWAN(GSM/WCDMA/LTE)Antenna + WLAN 5.3G	Body Front	0.24	0.07	0.31
	Body Back	0.50	0.32	0.82
	Body Left	0.2	NA	0.20
	Body Right	0.1	0.07	0.17
	Body Top	0.68	0.23	0.91
	Body Bottom	0.36	NA	0.36
WWAN(GSM/WCDMA/LTE)Antenna + WLAN 5.6G	Body Front	0.24	0.12	0.36
	Body Back	0.50	0.33	0.83
	Body Left	0.2	NA	0.20
	Body Right	0.1	0.12	0.22
	Body Top	0.68	0.27	0.95
	Body Bottom	0.36	NA	0.36
WWAN(GSM/WCDMA/LTE)Antenna + WLAN 5.8G (Hotspot)	Body Front	0.24	0.08	0.32
	Body Back	0.50	0.50	1.00
	Body Left	0.2	NA	0.20
	Body Right	0.1	0.30	0.40
	Body Top	0.68	0.35	1.03
	Body Bottom	0.36	NA	0.36

Note: The test data of BT/WIFI and WWAN (GSM/WCDMA/LTE) ANT 1(excluding the worst position of the body/head for each frequency band), reference the data from the original report.

Conclusion:

Sum of SAR: Σ SAR ≤ 1.6 W/kg therefore simultaneous transmission SAR with Volume Scans is **not required**.

12. SAR Plots

Please Refer to the Attachment.

APPENDIX A MEASUREMENT UNCERTAINTY

The uncertainty budget has been determined for the measurement system and is given in the following Table.

Measurement uncertainty evaluation for IEEE1528-2013 SAR test

Source of uncertainty	Tolerance/ uncertainty ± %	Probability distribution	Divisor	ci (1 g)	ci (10 g)	Standard uncertainty ± %, (1 g)	Standard uncertainty ± %, (10 g)
Measurement system							
Probe calibration	6.55	N	1	1	1	6.3	6.3
Axial Isotropy	4.7	R	$\sqrt{3}$	1	1	2.7	2.7
Hemispherical Isotropy	9.6	R	$\sqrt{3}$	0	0	0.0	0.0
Boundary effect	1.0	R	$\sqrt{3}$	1	1	0.6	0.6
Linearity	4.7	R	$\sqrt{3}$	1	1	2.7	2.7
Detection limits	1.0	R	$\sqrt{3}$	1	1	0.6	0.6
Readout electronics	0.3	N	1	1	1	0.3	0.3
Response time	0.0	R	$\sqrt{3}$	1	1	0.0	0.0
Integration time	0.0	R	$\sqrt{3}$	1	1	0.0	0.0
RF ambient conditions – noise	1.0	R	$\sqrt{3}$	1	1	0.6	0.6
RF ambient conditions– reflections	1.0	R	$\sqrt{3}$	1	1	0.6	0.6
Probe positioner mech. Restrictions	0.8	R	$\sqrt{3}$	1	1	0.5	0.5
Probe positioning with respect to phantom shell	6.7	R	$\sqrt{3}$	1	1	3.9	3.9
Post-processing	2.0	R	$\sqrt{3}$	1	1	1.2	1.2
Test sample related							
Test sample positioning	2.8	N	1	1	1	2.8	2.8
Device holder uncertainty	6.3	N	1	1	1	6.3	6.3
Drift of output power	5.0	R	$\sqrt{3}$	1	1	2.9	2.9
Phantom and set-up							
Phantom uncertainty (shape and thickness tolerances)	4.0	R	$\sqrt{3}$	1	1	2.3	2.3
Liquid conductivity target)	5.0	R	$\sqrt{3}$	0.64	0.43	1.8	1.2
Liquid conductivity meas.)	2.5	N	1	0.64	0.43	1.6	1.1
Liquid permittivity target)	5.0	R	$\sqrt{3}$	0.6	0.49	1.7	1.4
Liquid permittivity meas.)	2.5	N	1	0.6	0.49	1.5	1.2
Combined standard uncertainty		RSS				12.2	12.0
Expanded uncertainty 95 % confidence interval)						24.1	23.7

APPENDIX B EUT TEST POSITION PHOTOS

Please Refer to the Attachment.

APPENDIX C CALIBRATION CERTIFICATES

Please Refer to the Attachment.

******* END OF REPORT *******