FCC SAR EVALUATION REPORT

In accordance with the requirements of
FCC 47 CFR Part 2(2.1093) and
IEEE Std 1528-2013

Product Name : Intelligent Handheld terminal

Brand Name : ioutdoor

Model Name : L5512

Family Model : N/A

Report No. : S24101604908001

FCC ID : 2BKL6-L5512

Prepared for

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TEST RESULT CERTIFICATION

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Product description

Product name ..... Intelligent Handheld terminal

Brand Name ..... ioutdoor

Model and/or type reference L5512

Family Model ..... N/A

Standards ..... FCC 47 CFR Part 2(2.1093)
IEEE Std 1528-2013
Published RF exposure KDB procedures

This device described above has been tested by Shenzhen NTEK. In accordance with the measurement methods and procedures specified in IEEE Std 1528-2013 and KDB 865664 D01. Testing has shown that this device is capable of compliance with localized specific absorption rate (SAR) specified in FCC 47 CFR Part 2(2.1093). The test results in this report apply only to the tested sample of the stated device/equipment. Other similar device/equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

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Test Sample Number S241016049007

Date of Test

Date (s) of performance of tests .. Oct. 28, 2024 ~Nov. 06, 2024

Date of Issue ..... Nov. 18, 2024

Test Result ..... **Pass**

Prepared By	Reviewed By	Approved By
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※ ※ Revision History ※ ※

REV.	DESCRIPTION	ISSUED DATE	REMARK
Rev.1.0	Initial Test Report Release	Nov. 18, 2024	Owen Xiao

TABLE OF CONTENTS

1. General Information 6
   1.1. RF exposure limits 6
   1.2. Statement of Compliance 7
   1.3. EUT Description 7
   1.4. Test specification(s) 9
   1.5. Ambient Condition 9
2. SAR Measurement System 10
   2.1. SATIMO SAR Measurement Set-up Diagram 10
   2.2. Robot 11
   2.3. E-Field Probe 12
      2.3.1. E-Field Probe Calibration 12
   2.4. SAM phantoms 13
      2.4.1. Technical Data 14
   2.5. Device Holder 15
   2.6. Test Equipment List 16
3. SAR Measurement Procedures 18
   3.1. Power Reference 18
   3.2. Area scan & Zoom scan 18
   3.3. Description of interpolation/extrapolation scheme 20
   3.4. Volumetric Scan 20
   3.5. Power Drift 20
4. System Verification Procedure 21
   4.1. Tissue Verification 21
      4.1.1. Tissue Dielectric Parameter Check Results 22
   4.2. System Verification Procedure 23
      4.2.1. System Verification Results 24
5. SAR Measurement variability and uncertainty 25
   5.1. SAR measurement variability 25
   5.2. SAR measurement uncertainty 25
6. RF Exposure Positions 26
   6.1. Ear and handset reference point 26
   6.2. Definition of the cheek position 26
   6.3. Definition of the tilt position 28
   6.4. Body Worn Accessory 28
   6.5. Wireless Router Devices 29
7. RF Output Power 30
   7.1. GSM Conducted Power 30
   7.2. CDMA Conducted Power 30
   7.3. WCDMA Conducted Power 30

7.4. LTE Conducted Power 32
7.5. WLAN & Bluetooth Output Power 46
7.6. NFC 49
8. Antenna Location.....50
9. Stand-alone SAR test exclusion.....50
10. SAR Results 51
10.1. SAR measurement Result.....51
10.1.1. SAR measurement Result of GSM850.....51
10.1.2. SAR measurement Result of GSM1900.....52
10.1.3. SAR measurement Result of WCDMA Band 2.....54
10.1.4. SAR measurement Result of WCDMA Band 4.....55
10.1.5. SAR measurement Result of WCDMA Band 5.....56
10.1.6. SAR measurement Result of CDMA 57
10.1.7. SAR measurement Result of LTE Band 2 58
10.1.8. SAR measurement Result of LTE Band 4 60
10.1.9. SAR measurement Result of LTE Band 5 62
10.1.10. SAR measurement Result of LTE Band 7 64
10.1.11. SAR measurement Result of LTE Band 12 66
10.1.12. SAR measurement Result of LTE Band 17 68
10.1.13. SAR measurement Result of LTE Band 38 70
10.1.14. SAR measurement Result of LTE Band 41 72
10.1.15. SAR measurement Result of WLAN2.4G.....74
10.1.16. SAR measurement Result of WLAN5.2G.....75
10.1.17. SAR measurement Result of WLAN5.3G.....76
10.1.18. SAR measurement Result of WLAN5.6G.....77
10.1.19. SAR measurement Result of WLAN5.8G.....78
10.2. Simultaneous Transmission Analysis.....79
11. Appendix A. Photo documentation 81
12. Appendix B. System Check Plots.....82
13. Appendix C. Plots of High SAR Measurement.....103
14. Appendix D. Calibration Certificate 181

1. General Information

1.1. RF exposure limits

(A).Limits for Occupational/Controlled Exposure (W/kg)

Whole-Body	Partial-Body	Hands, Wrists, Feet and Ankles
0.4	8.0	20.0

(B).Limits for General Population/Uncontrolled Exposure (W/kg)

Whole-Body	Partial-Body	Hands, Wrists, Feet and Ankles
0.08	1.6	4.0

NOTE: ***Whole-Body SAR*** is averaged over the entire body, ***partial-body SAR*** is averaged over any 1 gram of tissue defined as a tissue volume in the shape of a cube. ***SAR for hands, wrists, feet and ankles*** is averaged over any 10 grams of tissue defined as a tissue volume in the shape of a cube.

Occupational/Controlled Environments:

Are defined as locations where there is exposure that may be incurred by people who are aware of the potential for exposure, (i.e. as a result of employment or occupation).

General Population/Uncontrolled Environments:

Are defined as locations where there is the exposure of individuals who have no knowledge or control of their exposure.

NOTE

TRUNK LIMIT

2.0 W/kg AND MEMBER LIMIT 4.0 W/kg

APPLIED TO THIS EUT

1.2. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for L5512 are as follows.

RF Exposure Conditions		Equipment Class -Highest Reported SAR (W/kg)				Max. Reported SAR (W/kg)
		PCE	DTS	NII	DSS	
1-g Body-Worn (Separation distance of 10mm)		1.147	0.104	0.147	0.053	1.147
1-g Hotspot (Separation distance of 10mm)		1.147	0.104	0.147	0.053	
10-g Extremity (Separation distance of 0mm)		3.432	0.191	0.402	0.262	3.432
Max Simultaneous Tx	Body-Worn	1.294	1.251	1.294	1.200	1.294
	Hotspot	1.294	1.251	1.294	1.200	
	Extremity	3.834	3.623	3.834	3.694	3.834

Note: The Max Simultaneous Tx is calculated based on the same configuration and test position.

This device is in compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits (1.6 W/kg for body, 4.0 W/kg for member) specified in FCC 47 CFR Part 2(2.1093), and had been tested in accordance with the measurement methods and procedures specified in IEEE Std 1528-2013 & KDB 865664 D01.

1.3. EUT Description

Device Information	
Product Name	Intelligent Handheld terminal
Brand Name	ioutdoor
Model Name	L5512
Family Model	N/A
Model Difference	N/A
FCC ID	2BKL6-L5512
Device Phase	Identical Prototype
Exposure Category	General population / Uncontrolled environment
Antenna Type	PIFA Antenna
Battery Information	DC 3.85V, 9000mAh, 34.65Wh
HW Version	S559_MB_V1.0
SW Version	L5512A_A02_V1.0_R_20241106
Device Operating Configurations	
Supporting Mode(s)	GSM850/1900,WCDMABand2/4/5,LTEBand2/4/5/7/12/17/38/41, WLAN 2.4G/5G,Bluetooth,NFC
Test Modulation	GSM(GMSK/8PSK),WCDMA(QPSK),LTE(QPSK/16QAM),WLAN(DSSS/OFDM), Bluetooth(GFSK, π/4-DQPSK, 8DPSK),NFC (ASK)

Device Class	B		
Operating Frequency Range(s)	Band	Tx (MHz)	Rx (MHz)
	GSM 850	824-849	869-894
	GSM 1900	1850-1910	1930-1990
	WCDMA Band 2	1850-1910	1930-1990
	WCDMA Band 4	1710-1755	2110-2155
	WCDMA Band 5	824-849	869-894
	LTE Band 2	1850-1910	1930-1990
	LTE Band 4	1710-1755	2110-2155
	LTE Band 5	824-849	869-894
	LTE Band 7	2500-2570	2620-2690
	LTE Band 12	699-716	729-746
	LTE Band 17	704-716	734-746
	LTE Band 38	2570-2620	
	LTE Band 41	2496-2690	
	WLAN 2.4G	2412-2462	
	WLAN 5.2G	5180-5240	
	WLAN 5.3G	5260-5320	
	WLAN 5.6G	5500-5700	
	WLAN 5.8G	5745-5825	
	NFC	13.56	
	Bluetooth	2402-2480	
GPRS Multislot Class(12)	Max Number of Timeslots in Uplink		4
	Max Number of Timeslots in Downlink		4
	Max Total Timeslot		5
EGPRS Multislot Class(12)	Max Number of Timeslots in Uplink		4
	Max Number of Timeslots in Downlink		4
	Max Total Timeslot		5
Power Class	4, tested with power level 5(GSM 850)		
	1, tested with power level 0(GSM 1900)		
	3, tested with power control “all 1”(WCDMA Band 2)		
	3, tested with power control “all 1”(WCDMA Band 4)		
	3, tested with power control “all 1”(WCDMA Band 5)		
	3, tested with power control all Max.(LTE Band 2)		
	3, tested with power control all Max.(LTE Band 4)		
	3, tested with power control all Max.(LTE Band 5)		
	3, tested with power control all Max.(LTE Band 7)		
	3, tested with power control all Max.(LTE Band 12)		
	3, tested with power control all Max.(LTE Band 17)		
	3, tested with power control all Max.(LTE Band 38)		

	3, tested with power control all Max.(LTE Band 41)

1.4. Test specification(s)

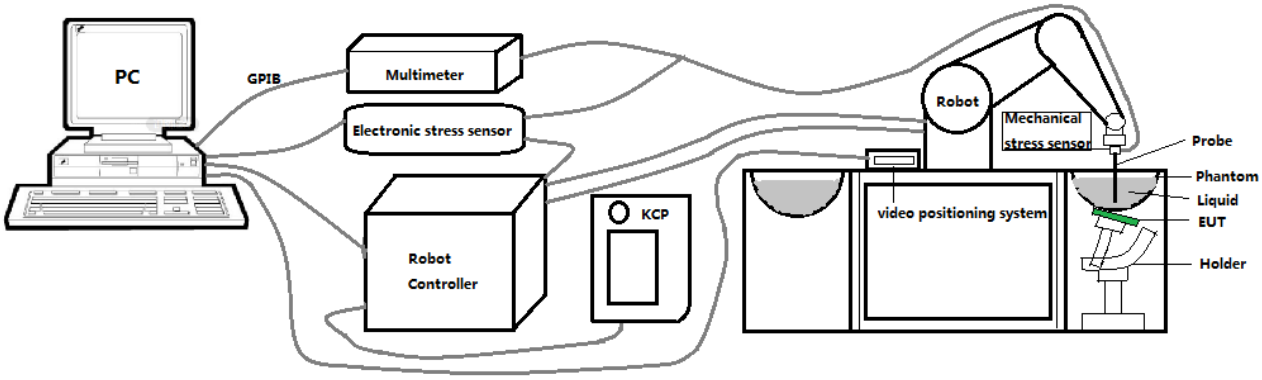
FCC 47 CFR Part 2(2.1093)
IEEE Std 1528-2013
KDB 865664 D01 SAR measurement 100 MHz to 6 GHz
KDB 865664 D02 RF Exposure Reporting
KDB 447498 D01 General RF Exposure Guidance
KDB 248227 D01 802.11 Wi-Fi SAR
KDB 941225 D01 3G SAR Procedures
KDB 941225 D05 SAR for LTE Devices
KDB 941225 D06 Hotspot SAR
KDB 648474 D04 Handset SAR

1.5. Ambient Condition

Ambient temperature	20°C – 24°C
Relative Humidity	30% – 70%

2. SAR Measurement System

2.1. SATIMO SAR Measurement Set-up Diagram



These measurements were performed with the automated near-field scanning system OPENSAR from SATIMO. The system is based on a high precision robot (working range: 901 mm), which positions the probes with a positional repeatability of better than ±0.03 mm. The SAR measurements were conducted with dosimetric probe (manufactured by SATIMO), designed in the classical triangular configuration and optimized for dosimetric evaluation.

The first step of the field measurement is the evaluation of the voltages induced on the probe by the device under test. Probe diode detectors are nonlinear. Below the diode compression point, the output voltage is proportional to the square of the applied E-field; above the diode compression point, it is linear to the applied E-field. The compression point depends on the diode, and a calibration procedure is necessary for each sensor of the probe.

The Keithley multimeter reads the voltage of each sensor and send these three values to the PC. The corresponding E field value is calculated using the probe calibration factors, which are stored in the working directory. This evaluation includes linearization of the diode characteristics. The field calculation is done separately for each sensor. Each component of the E field is displayed on the "Dipole Area Scan Interface" and the total E field is displayed on the "3D Interface"

2.2. Robot

The SATIMO SAR system uses the high precision robots from KUKA. For the 6-axis controller system, the robot controller version (KUKA) from KUKA is used. The KUKA robot series have many features that are important for our application:

- High precision (repeatability ±0.03 mm)
- High reliability (industrial design)
- Jerk-free straight movements
- Low ELF interference (the closed metallic construction shields against motor control fields)

2.3. E-Field Probe

This E-field detection probe is composed of three orthogonal dipoles linked to special Schottky diodes with low detection thresholds. The probe allows the measurement of electric fields in liquids such as the one defined in the IEEE and CENELEC standards.

For the measurements the Specific Dosimetric E-Field Probe 3423-EPGO-426 with following specifications is used

- Dynamic range: 0.01-100 W/kg
- Tip Diameter : 2.5 mm
- Distance between probe tip and sensor center: 1 mm
- Distance between sensor center and the inner phantom surface: 2 mm (repeatability better than ±1 mm).
- Probe linearity: ±0.06 dB
- Axial isotropy: ±0.01 dB
- Hemispherical Isotropy: ±0.01 dB
- Calibration range: 650MHz to 5900MHz for head & body simulating liquid.
- Lower detection limit: 8mW/kg

Angle between probe axis (evaluation axis) and surface normal line: less than 30°.

2.3.1. E-Field Probe Calibration

Each probe needs to be calibrated according to a dosimetric assessment procedure with accuracy better than ±10%. The spherical isotropy shall be evaluated and within ±0.25dB. The sensitivity parameters (Norm X, Norm Y, and Norm Z), the diode compression parameter (DCP) and the conversion factor (Conv F) of the probe are tested. The calibration data can be referred to appendix D of this report.

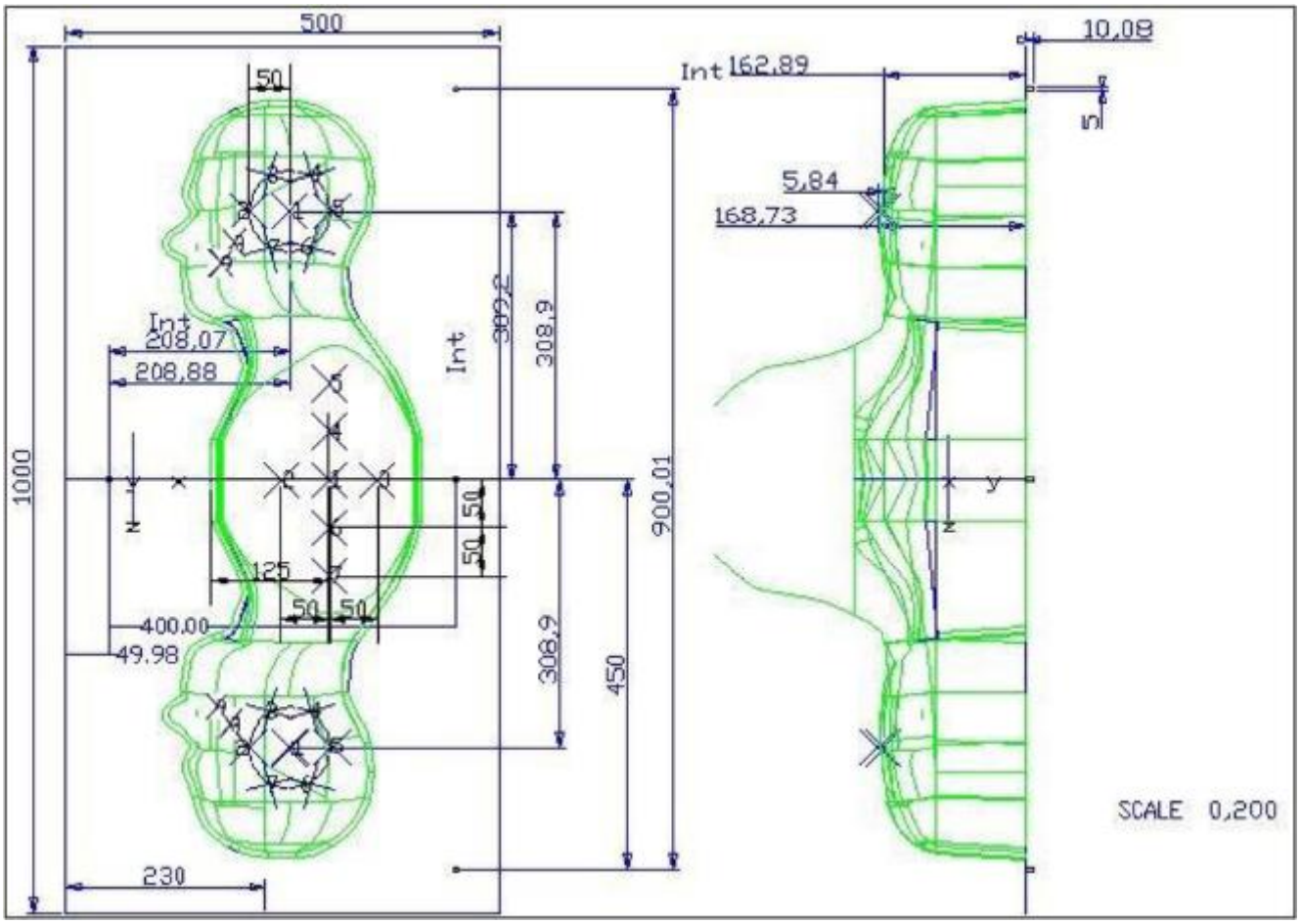
2.4. SAM phantoms

Photo of SAM phantom SN 16/15 SAM119

The SAM phantom is used to measure the SAR relative to people exposed to electro-magnetic field radiated by Mobile Phones.

2.4.1. Technical Data

Serial Number	Shell thickness	Filling volume	Dimensions	Positionner Material	Permittivity	Loss Tangent
SN 16/15 SAM119	2 mm ±0.2 mm	27 liters	Length:1000 mm Width:500 mm Height:200 mm	Gelcoat with fiberglass	3.4	0.02

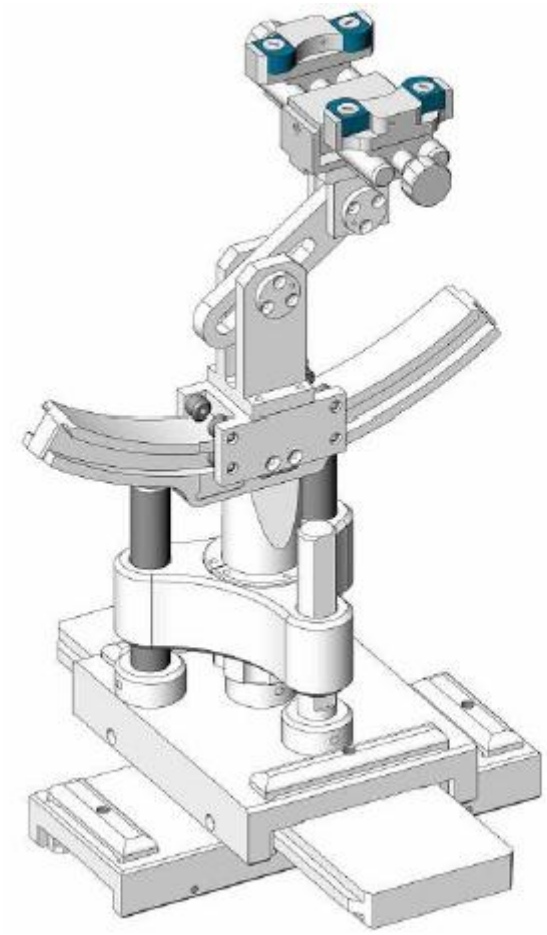


Serial Number	Left Head(mm)		Right Head(mm)		Flat Part(mm)	
SN 16/15 SAM119	2	2.02	2	2.08	1	2.09
	3	2.05	3	2.06	2	2.06
	4	2.07	4	2.07	3	2.08
	5	2.08	5	2.08	4	2.10
	6	2.05	6	2.07	5	2.10
	7	2.05	7	2.05	6	2.07
	8	2.07	8	2.06	7	2.07
	9	2.08	9	2.06	-	-

The test, based on ultrasonic system, allows measuring the thickness with an accuracy of 10 µm.

2.5. Device Holder

The positioning system allows obtaining cheek and tilting position with a very good accuracy. In compliance with CENELEC, the tilt angle uncertainty is lower than 1 degree.



Serial Number	Holder Material	Permittivity	Loss Tangent
SN 16/15 MSH100	Delrin	3.7	0.005

2.6. Test Equipment List

This table gives a complete overview of the SAR measurement equipment.

Devices used during the test described are marked ☒

	Manufacturer	Name of Equipment	Type/Model	Serial Number	Calibration	
					Last Cal.	Due Date
☒	MVG	E FIELD PROBE	SSE2	4024-EPGO-442	Oct.4.2024	Oct.3.2025
☒	MVG	750 MHz Dipole	SID750	SN 03/15 DIP 0G750-355	Feb. 21, 2024	Feb. 20, 2027
☒	MVG	835 MHz Dipole	SID835	SN 03/15 DIP 0G835-347	Feb. 21, 2024	Feb. 20, 2027
☐	MVG	900 MHz Dipole	SID900	SN 03/15 DIP 0G900-348	Feb. 21, 2024	Feb. 20, 2027
☒	MVG	1800 MHz Dipole	SID1800	SN 03/15 DIP 1G800-349	Feb. 21, 2024	Feb. 20, 2027
☒	MVG	1900 MHz Dipole	SID1900	SN 03/15 DIP 1G900-350	Feb. 21, 2024	Feb. 20, 2027
☐	MVG	2000 MHz Dipole	SID2000	SN 03/15 DIP 2G000-351	Feb. 21, 2024	Feb. 20, 2027
☒	MVG	2450 MHz Dipole	SID2450	SN 03/15 DIP 2G450-352	Feb. 21, 2024	Feb. 20, 2027
☒	MVG	2600 MHz Dipole	SID2600	SN 03/15 DIP 2G600-356	Feb. 21, 2024	Feb. 20, 2027
☐	MVG	5000 MHz Dipole	SWG5500	SN 13/14 WGA 33	Feb. 21, 2024	Feb. 20, 2027
☒	MVG	Liquid measurement Kit	SCLMP	SN 21/15 OCPG 72	NCR	NCR
☒	MVG	Power Amplifier	N.A	AMPLISAR_28/14_003	NCR	NCR
☒	KEITHLEY	Millivoltmeter	2000	4072790	NCR	NCR
☒	R&S	Universal radio communication tester	CMU200	105747	Apr. 26, 2024	Apr. 25, 2025
☒	R&S	Wideband radio communication tester	CMW500	103917	Apr. 26, 2024	Apr. 25, 2025
☒	HP	Network Analyzer	8753D	LPS-461	Apr. 26, 2024	Apr. 25, 2025

☒	Agilent	MXG Vector Signal Generator	N5182A	MY47070317	Apr. 25, 2024	Apr. 24, 2025
☒	Agilent	Power meter	E4419B	MY45102538	Apr. 25, 2024	Apr. 24, 2025
☒	Agilent	Power sensor	E9301A	MY41495644	Apr. 25, 2024	Apr. 24, 2025
☒	Agilent	Power sensor	E9301A	US39212148	Apr. 25, 2024	Apr. 24, 2025
☒	MCLI/USA	Directional Coupler	CB11-20	0D2L51502	Apr. 26, 2024	Apr. 25, 2027
☒	N/A	Thermometer	N/A	LES-085	Mar. 27, 2023	Mar. 26, 2026
☒	MVG	SAM Phantom	SSM2	SN 16/15 SAM119	NCR	NCR
☒	MVG	Device Holder	SMPPD	SN 16/15 MSH100	NCR	NCR

Measurement Software

Manufacturer	Software Name	Software Version
SATIMO	OpenSAR	V4_02_31

3. SAR Measurement Procedures

The measurement procedures are as follows:

<Conducted power measurement>

(a) For WWAN power measurement, use base station simulator to configure EUT WWAN transmission in conducted connection with RF cable, at maximum power in each supported wireless interface and frequency band.

(b) Read the WWAN RF power level from the base station simulator.

(c) For Wi-Fi/BT power measurement, use engineering software to configure EUT Wi-Fi/BT continuously transmission, at maximum RF power in each supported wireless interface and frequency band.

(d) Connect EUT RF port through RF cable to the power meter, and measure Wi-Fi/BT output power.

<SAR measurement>

(a) Use base station simulator to configure EUT WWAN transmission in radiated connection, and engineering software to configure EUT Wi-Fi/BT continuously transmission, at maximum RF power, in the highest power channel.

(b) Place the EUT in the positions as Appendix A demonstrates.

(c) Set scan area, grid size and other setting on the OPENSAR software.

(d) Measure SAR results for the highest power channel on each testing position.

(e) Find out the largest SAR result on these testing positions of each band.

(f) Measure SAR results for other channels in worst SAR testing position if the reported SAR of highest power channel is larger than 0.8 W/kg.

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

(a) Power reference measurement

(b) Area scan

(c) Zoom scan

(d) Power drift measurement

3.1. Power Reference

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

3.2. Area scan & Zoom scan

The area scan is a 2D scan to find the hot spot location on the DUT. The zoom scan is a 3D scan above the hot spot to calculate the 1g and 10g SAR value.

Measurement of the SAR distribution with a grid of 8 to 16 mm * 8 to 16 mm and a constant distance to the inner surface of the phantom. Since the sensors cannot directly measure at the inner phantom surface, the values between the sensors and the inner phantom surface are extrapolated. With these values the area of the maximum SAR is calculated by an interpolation scheme. Around this point, a cube of 30 * 30 *30 mm or 32 * 32 * 32 mm is assessed by measuring 5 or 8 * 5 or 8 * 4 or 5 mm. With these data, the peak spatial-average SAR value can be calculated.

From the scanned SAR distribution, identify the position of the maximum SAR value, in addition identify the positions of any local maxima with SAR values within 2 dB of the maximum value that will not be within the zoom scan of other peaks; additional peaks shall be measured only when the primary peak is within 2 dB of the SAR compliance limit (e.g., 1 W/kg for 1,6 W/kg 1 g limit, or 1,26 W/kg for 2 W/kg, 10 g limit).

Area scan & Zoom scan scan parameters extracted from FCC KDB 865664 D01 SAR measurement 100 MHz to 6 GHz.

			≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface			5 ± 1 mm	½·δ·ln(2) ± 0.5 mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location			30° ± 1°	20° ± 1°
Maximum area scan spatial resolution: Δx_{Area}, Δy_{Area}			≤ 2 GHz: ≤ 15 mm 2 – 3 GHz: ≤ 12 mm	3 – 4 GHz: ≤ 12 mm 4 – 6 GHz: ≤ 10 mm
			When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be ≤ the corresponding x or y dimension of the test device with at least one measurement point on the test device.	
Maximum zoom scan spatial resolution: Δx_{Zoom}, Δy_{Zoom}			≤ 2 GHz: ≤ 8 mm 2 – 3 GHz: ≤ 5 mm*	3 – 4 GHz: ≤ 5 mm* 4 – 6 GHz: ≤ 4 mm*
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{Zoom}(n)$		≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm
	graded grid	$\Delta z_{Zoom}(1)$: between 1st two points closest to phantom surface	≤ 4 mm	3 – 4 GHz: ≤ 3 mm 4 – 5 GHz: ≤ 2.5 mm 5 – 6 GHz: ≤ 2 mm
		$\Delta z_{Zoom}(n>1)$: between subsequent points	$\leq 1.5 \cdot \Delta z_{Zoom}(n-1)$	
Minimum zoom scan volume	x, y, z		≥ 30 mm	3 – 4 GHz: ≥ 28 mm 4 – 5 GHz: ≥ 25 mm 5 – 6 GHz: ≥ 22 mm

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

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

3.3. Description of interpolation/extrapolation scheme

The local SAR inside the phantom is measured using small dipole sensing elements inside a probe body. The probe tip must not be in contact with the phantom surface in order to minimise measurements errors, but the highest local SAR will occur at the surface of the phantom.

An extrapolation is using to determinate this highest local SAR values. The extrapolation is based on a fourth-order least-square polynomial fit of measured data. The local SAR value is then extrapolated from the liquid surface with a 1 mm step.

The measurements have to be performed over a limited time (due to the duration of the battery) so the step of measurement is high. It could vary between 5 and 8 mm. To obtain an accurate assessment of the maximum SAR averaged over 10 grams and 1 gram requires a very fine resolution in the three dimensional scanned data array.

3.4. Volumetric Scan

The volumetric scan consists to a full 3D scan over a specific area. This 3D scan is useful form multi Tx SAR measurement. Indeed, it is possible with OpenSAR to add, point by point, several volumetric scan to calculate the SAR value of the combined measurement as it is define in the standard IEEE1528 and IEC62209.

3.5. Power Drift

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

4. System Verification Procedure

4.1. Tissue Verification

The following tissue formulations are provided for reference only as some of the parameters have not been thoroughly verified. The composition of ingredients may be modified accordingly to achieve the desired target tissue parameters required for routine SAR evaluation.

Ingredients (% of weight)	Head Tissue									
Frequency Band (MHz)	750	835	900	1800	1900	2000	2450	2600	5200	5800
Water	34.40	34.40	34.40	55.36	55.36	57.87	57.87	57.87	65.53	65.53
NaCl	0.79	0.79	0.79	0.35	0.35	0.16	0.16	0.16	0.00	0.00
1,2-Propanediol	64.81	64.81	64.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Triton X-100	0.00	0.00	0.00	30.45	30.45	19.97	19.97	19.97	24.24	24.24
DGBE	0.00	0.00	0.00	13.84	13.84	22.00	22.00	22.00	10.23	10.23

For SAR measurement of the field distribution inside the phantom, the phantom must be filled with homogeneous tissue simulating liquid to a depth of at least 15 cm. For head SAR testing, the liquid depth from the ear reference point (ERP) of the phantom to the liquid top surface is larger than 15 cm.

Photo of Liquid depth for Head Position	Photo of Liquid depth for Body Position

4.1.1. Tissue Dielectric Parameter Check Results

The simulating liquids should be checked at the beginning of a series of SAR measurements to determine of the dielectric parameter are within the tolerances of the specified target values. The measured conductivity and relative permittivity should be within ±5% of the target values.

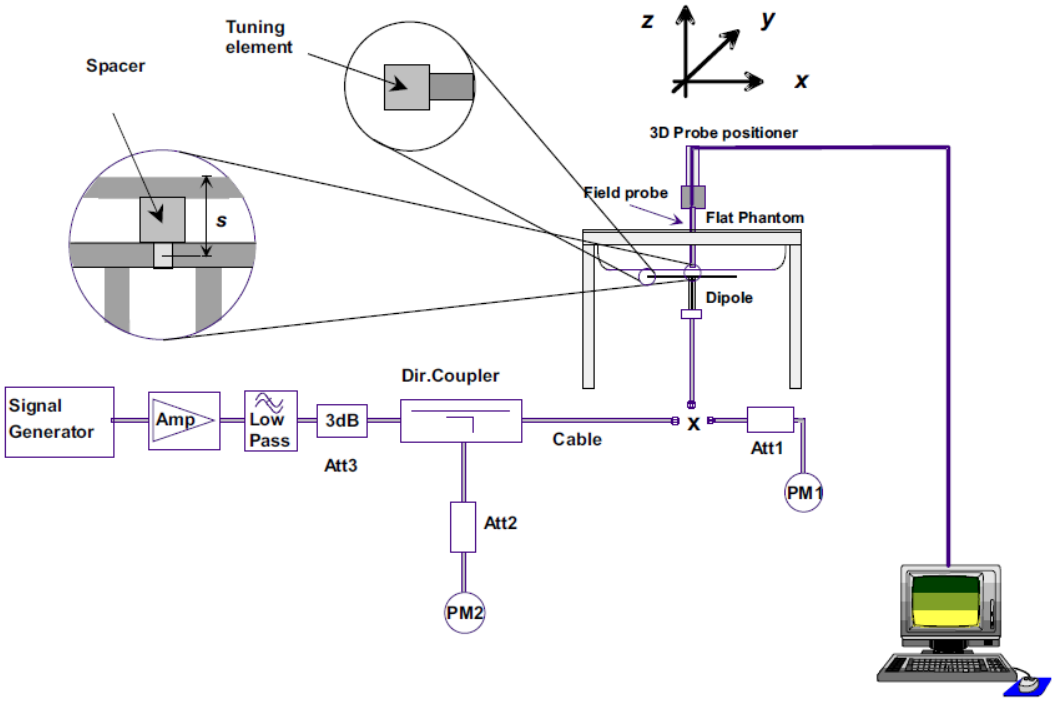
Tissue Type	Measured Frequency (MHz)	Target Tissue		Measured Tissue		Liquid Temp.	Test Date
		εr (±5%)	σ (S/m) (±5%)	εr	σ (S/m)		
Head 750	750	41.96 (39.86~44.06)	0.89 (0.85~0.93)	41.02	0.90	21.9 °C	Oct. 28, 2024
Head 850	835	41.50 (39.43~43.58)	0.90 (0.86~0.95)	42.08	0.92	21.7 °C	Nov. 05, 2024
Head 1800	1800	40.00 (38.00~42.00)	1.40 (1.33~1.47)	39.23	1.40	21.0 °C	Oct. 30, 2024
Head 1900	1900	40.00 (38.00~42.00)	1.40 (1.33~1.47)	38.48	1.46	21.3 °C	Nov. 06, 2024
Head 2450	2450	39.20 (37.24~41.16)	1.80 (1.71~1.89)	37.84	1.78	21.3 °C	Nov. 03, 2024
Head 2600	2600	39.01 (37.06~40.96)	1.96 (1.86~2.06)	39.03	2.00	21.5 °C	Nov. 02, 2024
Head 5200	5200	36.00 (34.20~37.80)	4.66 (4.43~4.89)	36.62	4.52	21.5 °C	Oct. 24, 2024
Head 5400	5400	35.80 (34.01~37.59)	4.86 (4.62~5.10)	35.59	4.72	21.8 °C	Oct. 25, 2024
Head 5600	5600	35.50 (33.73~37.28)	5.07 (4.82~5.32)	34.64	5.01	21.6 °C	Nov. 04, 2024
Head 5800	5800	35.30 (33.54~37.07)	5.27 (5.01~5.53)	35.47	5.14	21.9 °C	Oct. 26, 2024

NOTE: The dielectric parameters of the tissue-equivalent liquid should be measured under similar ambient conditions and within 2 °C of the conditions expected during the SAR evaluation to satisfy protocol requirements.

4.2. System Verification Procedure

The system verification is performed for verifying the accuracy of the complete measurement system and performance of the software. The dipole is connected to the signal source consisting of signal generator and amplifier via a directional coupler, N-connector cable and adaption to SMA. To adjust this power a power meter is used. The power sensor is connected to the cable before the system verification to measure the power at this point and do adjustments at the signal generator. At the outputs of the directional coupler both return loss as well as forward power are controlled during the system verification to make sure that emitted power at the dipole is kept constant. This can also be checked by the power drift measurement after the test (result on plot).

The system verification is shown as below picture:



4.2.1. System Verification Results

Comparing to the original SAR value provided by SATIMO, the verification data should be within its specification of ±10%. Below table shows the target SAR and measured SAR after normalized to 1W input power. The table below indicates the system performance verification can meet the variation criterion and the plots can be referred to Appendix B of this report.

System Verification	Target SAR (1W) (±10%)		Measured SAR			Measured SAR (Normalized to 1W)		Liquid Temp.	Test Date
	1-g (W/Kg)	10-g (W/Kg)	Input Power	1-g (W/Kg)	10-g (W/Kg)	1-g (W/Kg)	10-g (W/Kg)		
750MHz	8.60 (7.74~9.46)	5.78 (5.20~6.36)	18dBm	0.544	0.367	8.62	5.82	21.9 °C	Oct. 28, 2024
835MHz	9.40 (8.46~10.34)	6.28 (5.65~6.91)	18dBm	0.575	0.376	9.11	5.96	21.7 °C	Nov. 05, 2024
1800MHz	37.06 (33.35~40.77)	20.01 (18.01~22.01)	18dBm	2.386	1.239	37.81	19.63	21.0 °C	Oct. 30, 2024
1900MHz	39.69 (35.72~43.66)	20.92 (18.83~23.01)	18dBm	2.511	1.236	39.79	19.59	21.3 °C	Nov. 06, 2024
2450MHz	50.05 (45.05~55.06)	23.80 (21.42~26.18)	18dBm	2.989	1.426	47.37	22.60	21.3 °C	Nov. 03, 2024
2600MHz	54.16 (48.74~59.58)	24.85 (22.37~27.34)	18dBm	3.386	1.538	53.66	24.37	21.5 °C	Nov. 02, 2024
5200MHz	162.59 (146.33~178.85)	56.21 (50.59~61.83)	20dBm	15.218	5.962	152.18	59.62	21.5 °C	Oct. 24, 2024
5400MHz	159.81 (143.83~175.79)	55.00 (49.50~60.50)	20dBm	17.137	5.988	171.37	59.88	21.8 °C	Oct. 25, 2024
5600MHz	179.15 (161.24~197.07)	61.01 (54.91~67.11)	20dBm	16.149	5.604	161.49	56.04	21.6 °C	Nov. 04, 2024
5800MHz	182.20 (163.98~200.42)	61.32 (55.19~67.45)	20dBm	17.515	5.570	175.15	55.70	21.9 °C	Oct. 26, 2024

5. SAR Measurement variability and uncertainty

5.1. SAR measurement variability

Per KDB865664 D01 SAR measurement 100 MHz to 6 GHz, 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. The 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 (~ 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.

5.2. SAR measurement uncertainty

Per KDB865664 D01 SAR Measurement 100 MHz to 6 GHz, when the highest measured 1-g SAR within a frequency band is < 1.5 W/kg, the extensive SAR measurement uncertainty analysis described in IEEE Std 1528-2013 is not required in SAR reports submitted for equipment approval. The equivalent ratio (1.5/1.6) is applied to extremity and occupational exposure conditions.

6. RF Exposure Positions

6.1. Ear and handset reference point

Figure 6.1.1 shows the front, back, and side views of the SAM phantom. The center-of-mouth reference point is labeled “M”, the left ear reference point (ERP) is marked “LE”, and the right ERP is marked “RE”.

Fig 6.1.1 Front, back, and side views of SAM phantom

6.2. Definition of the cheek position

1. Define two imaginary lines on the handset, the vertical centerline and the horizontal line. The vertical centerline passes through two points on the front side of the handset: the midpoint of the width w_t of the handset at the level of the acoustic output (point A in Figure 6.2.1 and Figure 6.2.2), and the midpoint of the width w_b of the bottom of the handset (point B). The horizontal line is perpendicular to the vertical centerline and passes through the center of the acoustic output (see Figure 6.2.1). The two lines intersect at point A. Note that for many handsets, point A coincides with the center of the acoustic output; however, the acoustic output may be located elsewhere on the horizontal line. Also note that the vertical centerline is not necessarily parallel to the front face of the handset (see Figure 6.2.2), especially for clamshell handsets, handsets with flip covers, and other irregularly-shaped handsets.
2. Position the handset close to the surface of the phantom such that point A is on the (virtual) extension of the line passing through points RE and LE on the phantom (see Figure 6.2.3), such that the plane defined by the vertical centerline and the horizontal line of the handset is approximately parallel to the sagittal plane of the phantom.
3. Translate the handset towards the phantom along the line passing through RE and LE until handset point A touches the pinna at the ERP
4. While maintaining the handset in this plane, rotate it around the LE-RE line until the vertical centerline is in the plane normal to the plane containing B-M and N-F lines, i.e., the Reference Plane.
5. Rotate the handset around the vertical centerline until the handset (horizontal line) is parallel to the N-F line.
6. While maintaining the vertical centerline in the Reference Plane, keeping point A on the line

passing through RE and LE, and maintaining the handset contact with the pinna, rotate the handset about the N-F line until any point on the handset is in contact with a phantom point below the pinna on the cheek. See Figure 6.2.3. The actual rotation angles should be documented in the test report.

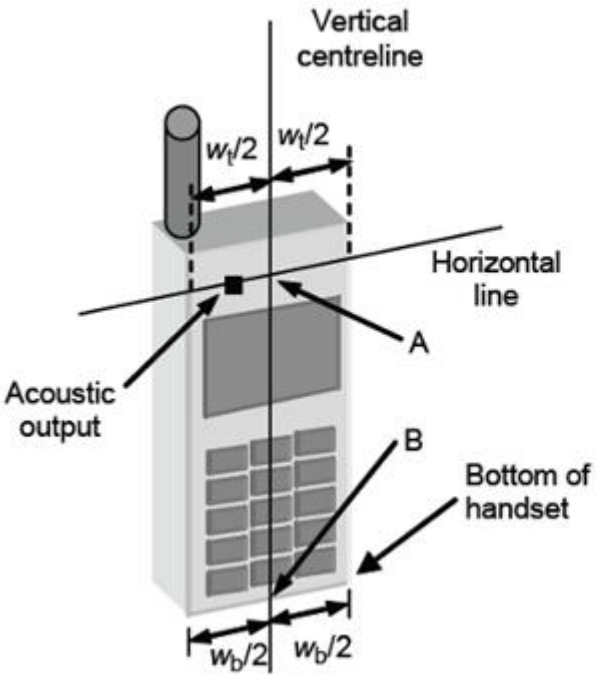


Fig 6.2.1 Handset vertical and horizontal reference lines—“fixed case

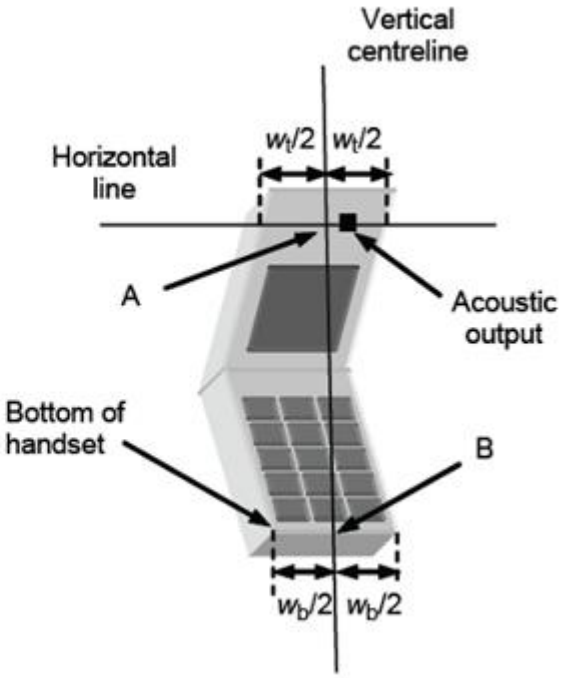


Fig 6.2.2 Handset vertical and horizontal reference lines—“clam-shell case”

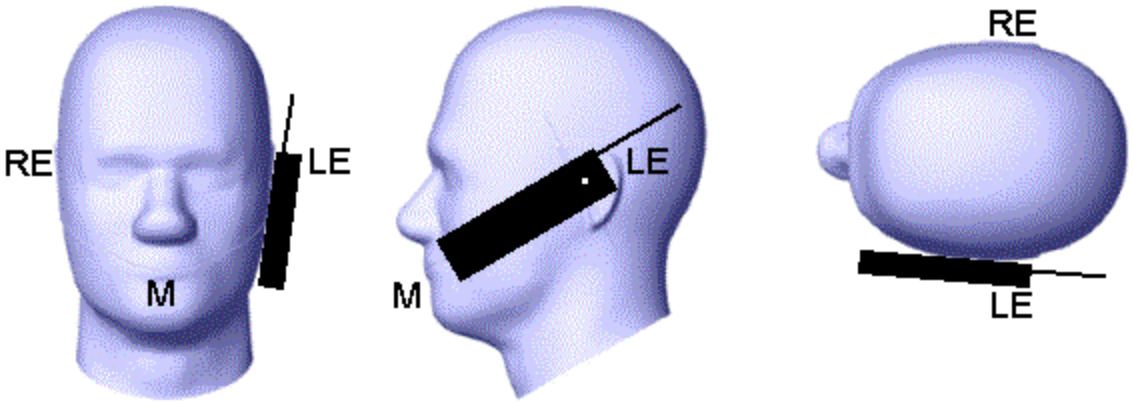


Fig 6.2.3 cheek or touch position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which establish the Reference Plane for handset positioning, are indicated.

6.3. Definition of the tilt position

1. While maintaining the orientation of the handset, retract the handset parallel to the reference plane far enough away from the phantom to enable a rotation of the device by 15 degree.
2. Rotate the Handset around the horizontal line by 15 degree (see Figure 6.3.1).
3. While maintaining the orientation of the handset, move the handset towards the phantom on a line passing through RE and LE until any part of the handset touches the ear. The tilt position is obtained when the contact is on the pinna. If the contact is at any location other than the pinna, e.g., the antenna with the back of the phantom head, the angle of the handset shall be reduced. In this case, the tilt position is obtained if any part of the handset is in contact with the pinna as well as a second part of the handset is in contact with the phantom, e.g., the antenna with the back of the head.

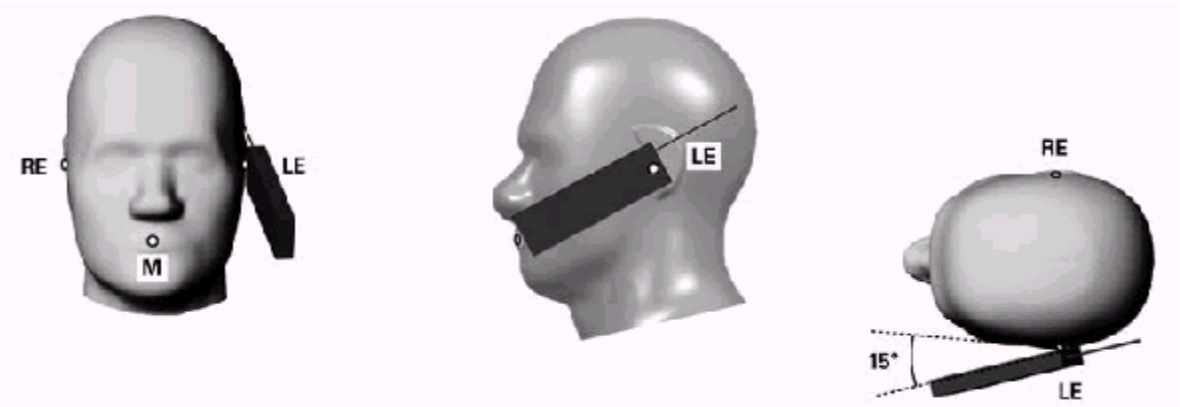


Figure 6.3.1 – Tilt position of the wireless device on the left side of SAM

6.4. Body Worn Accessory

1. Body-worn operating configurations are tested with the belt-clips and holsters attached to the device and positioned against a flat phantom in a normal use configuration (see Figure 6.4.1). Per KDB 648474 D04, body-worn accessory exposure is typically related to voice mode operations when handsets are carried in body-worn accessories. The body-worn accessory procedures in FCC KDB 447498 D01 should be used to test for body-worn accessory SAR compliance, without a headset connected to it. This enables the test results for such configuration to be compatible with that required for hotspot mode when the body-worn accessory test separation distance is greater than or equal to that required for hotspot mode, when applicable. When the reported SAR for body-worn accessory, measured without a headset connected to the handset is < 1.2 W/kg, the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body-worn accessory with a handset attached to the handset.
2. Accessories for body-worn operation configurations are divided into two categories: those that do not contain metallic components and those that do contain metallic components and those that do contain metallic components. When multiple accessories that do not contain metallic components are supplied with the device, the device is tested with only the accessory that dictates the closest spacing to the body. Then multiple accessories that contain metallic components are test with the

device with each accessory. If multiple accessories share an identical metallic component (i.e. the same metallic belt-chip used with different holsters with no other metallic components) only the accessory that dictates the closest spacing to the body is tested.

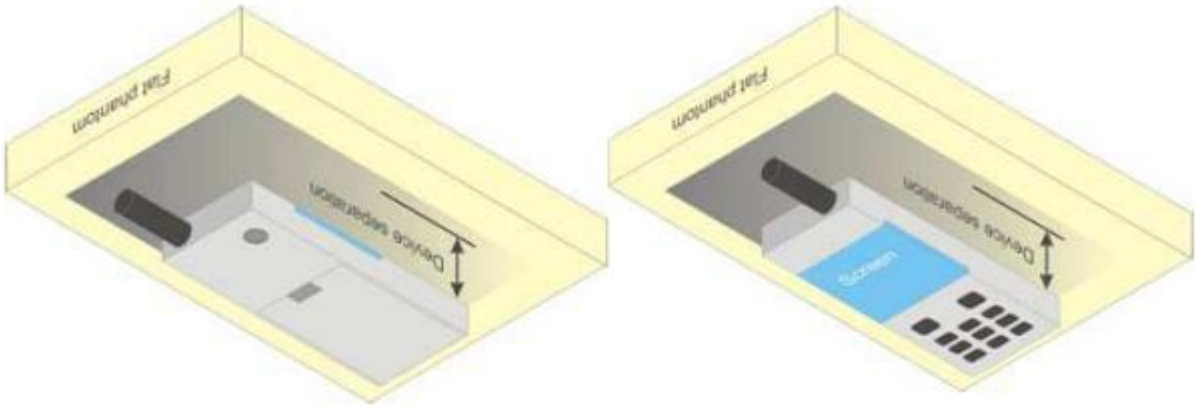


Figure 6.4.1 – Test positions for body-worn devices

6.5. Wireless Router Devices

Some battery-operated handsets have the capability to transmit and receive user through simultaneous transmission of WLAN simultaneously with a separate licensed transmitter. The FCC has provided guidance in FCC KDB Publication 941225 D06 where SAR test considerations for handsets (L x W ≥ 9 cm x 5 cm) are based on a composite test separation distance of 10mm from the front, back and edges of the device containing transmitting antennas within 2.5cm of their edges, determined form general mixed use conditions for this type of devices. Since the hotspot SAR results may overlap with the body-worn accessory SAR requirements, the more conservative configurations can be considered, thus excluding some body-worn accessory SAR tests.

When the user enables the personal wireless router functions for the handset, actual operations include simultaneous transmission of both the WLAN transmitter and another licensed transmitter. Both transmitters often do not transmit at the same transmitting frequency and thus cannot be evaluated for SAR under actual use conditions due to the limitations of the SAR assessment probes. Therefore, SAR must be evaluated for each frequency transmission and mode separately and spatially summed with the WLAN transmitter according to FCC KDB Publication 447498 D01 publication procedures. The “Portable Hotspot” feature on the handset was NOT activated during SAR assessments, to ensure the SAR measurements were evaluated for a single transmission frequency RF signal at a time.

7. RF Output Power

7.1. GSM Conducted Power

Band GSM850	Burst-Averaged output Power (dBm)				Frame-Averaged output Power (dBm)			
Tx Channel	Tune-up	128	189	251	Tune-up	128	189	251
Frequency (MHz)	(dBm)	824.2	836.4	848.8	(dBm)	824.2	836.4	848.8
GSM (GMSK)	31.50	31.26	31.22	31.28	22.47	22.23	22.19	22.25
GPRS(GMSK,1 Tx slot)	31.50	31.27	31.23	31.29	22.47	22.24	22.20	22.26
GPRS(GMSK,2 Tx slot)	31.50	31.05	31.02	31.08	25.48	25.03	25.00	25.06
GPRS(GMSK,3 Tx slot)	30.00	29.92	29.84	29.91	25.74	25.66	25.58	25.65
GPRS(GMSK,4 Tx slot)	29.00	28.88	28.80	28.86	25.99	25.87	25.79	25.85
EGPRS(8PSK,1 Tx slot)	27.50	27.06	26.68	26.74	18.47	18.03	17.65	17.71
EGPRS(8PSK,2 Tx slot)	26.50	26.02	25.72	26.21	20.48	20.00	19.70	20.19
EGPRS(8PSK,3 Tx slot)	24.00	23.73	23.57	23.88	19.74	19.47	19.31	19.62
EGPRS(8PSK,4 Tx slot)	23.00	22.92	22.43	22.95	19.99	19.91	19.42	19.94
Band GSM1900	Burst-Averaged output Power (dBm)				Frame-Averaged output Power (dBm)			
Tx Channel	Tune-up	512	661	810	Tune-up	512	661	810
Frequency (MHz)	(dBm)	1850.2	1880	1909.8	(dBm)	1850.2	1880	1909.8
GSM (GMSK)	30.50	28.52	29.46	30.22	21.47	19.49	20.43	21.19
GPRS(GMSK,1 Tx slot)	30.50	28.75	29.45	30.22	21.47	19.72	20.42	21.19
GPRS(GMSK,2 Tx slot)	29.50	27.87	28.75	29.45	23.48	21.85	22.73	23.43
GPRS(GMSK,3 Tx slot)	28.00	26.21	27.04	27.67	23.74	21.95	22.78	23.41
GPRS(GMSK,4 Tx slot)	27.00	25.11	26.03	26.58	23.99	22.10	23.02	23.57
EGPRS(8PSK,1 Tx slot)	26.50	25.60	25.60	26.13	17.47	16.57	16.57	17.10
EGPRS(8PSK,2 Tx slot)	26.00	24.63	25.00	25.86	19.98	18.61	18.98	19.84
EGPRS(8PSK,3 Tx slot)	24.00	22.67	22.85	23.95	19.74	18.41	18.59	19.69
EGPRS(8PSK,4 Tx slot)	23.00	21.56	21.65	22.88	19.99	18.55	18.64	19.87

7.2. CDMA Conducted Power

Band	Channel	Frequency (MHz)	Tune-up (dBm)	Power (dBm)
CDMA BC0	1013.00	824.70	25.00	24.37
CDMA BC0	384.00	836.52	25.00	24.46
CDMA BC0	777.00	848.31	25.00	24.72

7.3. WCDMA Conducted Power

WCDMA Band 2	Burst-Averaged output Power (dBm)

Tx Channel	Tune-up	9262	9400	9538
Frequency (MHz)	(dBm)	1852.4	1880	1907.6
RMC12.2K	23.50	22.94	23.32	23.38
HSDPA Sub 1	23.00	22.11	22.50	22.57
HSDPA Sub 2	22.50	21.77	22.11	22.03
HSDPA Sub 3	21.00	20.62	20.96	20.94
HSDPA Sub 4	21.50	20.54	20.67	21.06
HSUPA Sub 1	22.50	21.03	22.32	22.33
HSUPA Sub 2	22.50	21.99	22.36	22.33
HSUPA Sub 3	21.50	20.51	21.00	21.10
HSUPA Sub 4	22.50	22.05	22.43	22.46
HSUPA Sub 5	22.00	20.77	21.49	21.80
WCDMA Band 4	Burst-Averaged output Power (dBm)			
Tx Channel	Tune-up	1312	1413	1513
Frequency (MHz)	(dBm)	1712.4	1732.6	1752.6
RMC12.2K	24.00	23.78	23.67	23.49
HSDPA Sub 1	23.00	22.84	22.76	22.51
HSDPA Sub 2	23.00	22.54	22.19	22.17
HSDPA Sub 3	21.50	21.41	20.84	21.06
HSDPA Sub 4	21.50	21.44	20.90	20.80
HSUPA Sub 1	23.00	21.37	22.51	22.34
HSUPA Sub 2	23.00	22.79	22.58	22.42
HSUPA Sub 3	21.50	21.22	21.26	21.15
HSUPA Sub 4	23.00	22.85	22.74	22.56
HSUPA Sub 5	22.50	21.37	22.20	21.87
WCDMA Band 5	Burst-Averaged output Power (dBm)			
Tx Channel	Tune-up	4132	4182	4233
Frequency (MHz)	(dBm)	826.4	836.4	846.6
RMC12.2K	23.50	23.16	23.18	23.07
HSDPA Sub 1	22.50	22.19	22.18	22.10
HSDPA Sub 2	22.00	21.84	21.61	21.52
HSDPA Sub 3	21.00	20.65	20.64	20.08
HSDPA Sub 4	21.00	20.34	20.85	20.49
HSUPA Sub 1	22.50	20.59	22.07	21.92
HSUPA Sub 2	22.50	22.05	22.14	21.96
HSUPA Sub 3	21.50	20.68	21.07	20.60
HSUPA Sub 4	22.50	22.21	22.24	22.14

HSUPA Sub 5	22.00	20.86	21.54	21.30

7.4. LTE Conducted Power

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		18607/1850.7	18900/1880	19193/1909.3
LTE Band 2	1.4MHz	QPSK	1	0	24.00	23.22	23.72	23.75
			1	2	24.00	23.39	23.87	23.90
			1	5	24.00	23.24	23.72	23.70
			3	0	24.00	23.35	23.81	23.83
			3	1	24.00	23.38	23.83	23.82
			3	2	24.00	23.35	23.79	23.80
			6	0	23.00	22.33	22.79	22.82
		16QAM	1	0	23.50	22.47	23.07	22.97
			1	2	23.50	22.57	23.10	23.11
			1	5	23.50	22.57	23.05	23.06
			3	0	23.00	22.32	22.79	22.81
			3	1	23.00	22.41	22.80	22.84
			3	2	23.00	22.32	22.83	22.78
			6	0	22.00	21.43	21.89	21.95
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		18615/1851.5	18900/1880	19185/1908.5
LTE Band 2	3MHz	QPSK	1	0	24.00	23.36	23.87	23.86
			1	7	24.00	23.42	23.85	23.83
			1	14	24.00	23.43	23.81	23.83
			8	0	23.00	22.34	22.83	22.87
			8	4	23.00	22.40	22.87	22.91
			8	7	23.00	22.38	22.83	22.85
			15	0	23.00	22.35	22.81	22.84
		16QAM	1	0	23.50	22.63	23.15	23.04
			1	7	23.50	22.60	23.09	23.17
			1	14	23.50	22.73	23.11	23.15
			8	0	22.00	21.39	21.91	21.90
			8	4	22.00	21.47	21.94	21.95
			8	7	22.00	21.46	21.90	21.90
			15	0	22.00	21.35	21.84	21.87
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		18625/1852.5	18900/1880	19175/1907.5

LTE Band 2	5MHz	QPSK	1	0	24.00	23.26	23.76	23.78
			1	12	24.00	23.43	23.86	23.87
			1	24	24.00	23.35	23.77	23.72
			12	0	23.00	22.32	22.84	22.86
			12	6	23.00	22.46	22.87	22.93
			12	11	23.00	22.45	22.87	22.86
			25	0	23.00	22.41	22.88	22.91
		16QAM	1	0	23.50	22.61	22.95	23.05
			1	12	23.50	22.77	23.07	23.20
			1	24	23.50	22.59	22.96	23.06
			12	0	22.00	21.30	21.86	21.85
			12	6	22.00	21.47	21.89	21.93
			12	11	22.00	21.45	21.88	21.86
			25	0	22.00	21.42	21.88	21.90
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		18650/1855	18900/1880	19150/1905
LTE Band 2	10MHz	QPSK	1	0	24.00	23.36	23.86	23.96
			1	24	24.00	23.58	23.93	23.99
			1	49	24.00	23.56	23.84	23.79
			25	0	23.50	22.36	22.91	23.07
			25	12	23.50	22.52	22.93	22.99
			25	24	23.50	22.61	22.93	22.96
			50	0	23.50	22.50	22.95	23.03
		16QAM	1	0	23.50	22.65	23.08	23.29
			1	24	23.50	22.82	23.16	23.35
			1	49	23.50	22.85	23.05	23.03
			25	0	22.50	21.37	21.94	22.09
			25	12	22.50	21.51	21.95	22.01
			25	24	22.50	21.62	21.94	21.97
			50	0	22.50	21.52	21.97	22.03
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		18675/1857.5	18900/1880	19125/1902.5
LTE Band 2	15MHz	QPSK	1	0	24.00	23.29	23.74	23.95
			1	37	24.00	23.53	23.82	23.92
			1	74	24.00	23.64	23.78	23.75
			36	0	23.50	22.38	22.89	23.11
			36	18	23.50	22.55	22.91	23.00
			36	37	23.50	22.65	22.91	22.94

			75	0	23.50	22.52	22.90	23.02
		16QAM	1	0	23.50	22.52	23.01	23.24
			1	37	23.50	22.87	23.13	23.29
			1	74	23.50	22.91	23.11	23.08
			36	0	22.50	21.37	21.86	22.08
			36	18	22.50	21.53	21.87	21.99
			36	37	22.50	21.60	21.88	21.92
			75	0	22.50	21.51	21.90	22.01
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		18700/1860	18900/1880	19100/1900
LTE Band 2	20MHz	QPSK	1	0	24.50	23.14	23.56	23.83
			1	49	24.50	23.68	23.89	24.06
			1	99	24.50	23.52	23.65	23.60
			50	0	23.50	22.32	22.84	23.06
			50	24	23.50	22.65	22.91	23.03
			50	49	23.50	22.64	22.94	22.87
			100	0	23.00	22.46	22.87	22.97
		16QAM	1	0	23.50	22.49	22.79	23.07
			1	49	23.50	22.86	23.22	23.38
			1	99	23.50	22.74	22.88	22.94
			50	0	22.50	21.32	21.86	22.05
			50	24	22.50	21.62	21.92	22.03
			50	49	22.50	21.66	21.95	21.88
			100	0	22.00	21.44	21.86	21.98

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		19957/1710.7	20175/1732.5	20393/1754.3
LTE Band 4	1.4MHz	QPSK	1	0	24.00	23.33	23.48	23.29
			1	2	24.00	23.49	23.61	23.39
			1	5	24.00	23.34	23.48	23.28
			3	0	24.00	23.42	23.56	23.37
			3	1	24.00	23.46	23.63	23.39
			3	2	24.00	23.42	23.57	23.37
			6	0	23.00	22.40	22.59	22.35
		16QAM	1	0	23.00	22.61	22.81	22.64
			1	2	23.00	22.79	22.98	22.68
			1	5	23.00	22.57	22.75	22.62

			3	0	23.00	22.37	22.60	22.33
			3	1	23.00	22.47	22.58	22.42
			3	2	23.00	22.40	22.55	22.37
			6	0	22.00	21.53	21.67	21.47
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		19965/1711.5	20175/1732.5	20385/1753.5
LTE Band 4	3MHz	QPSK	1	0	24.00	23.38	23.54	23.35
			1	7	24.00	23.37	23.55	23.33
			1	14	24.00	23.38	23.56	23.33
			8	0	23.00	22.41	22.57	22.34
			8	4	23.00	22.45	22.60	22.36
			8	7	23.00	22.41	22.57	22.34
			15	0	23.00	22.40	22.55	22.31
		16QAM	1	0	23.00	22.63	22.80	22.59
			1	7	23.00	22.74	22.90	22.58
			1	14	23.00	22.71	22.86	22.66
			8	0	22.00	21.50	21.65	21.42
			8	4	22.00	21.54	21.67	21.42
			8	7	22.00	21.49	21.65	21.42
			15	0	22.00	21.43	21.57	21.36
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		19975/1712.5	20175/1732.5	20375/1752.5
LTE Band 4	5MHz	QPSK	1	0	24.00	23.31	23.45	23.29
			1	12	24.00	23.40	23.60	23.38
			1	24	24.00	23.32	23.47	23.24
			12	0	23.00	22.38	22.56	22.35
			12	6	23.00	22.46	22.62	22.39
			12	11	23.00	22.42	22.56	22.31
			25	0	23.00	22.42	22.56	22.35
		16QAM	1	0	23.00	22.58	22.66	22.51
			1	12	23.00	22.65	22.94	22.60
			1	24	23.00	22.56	22.73	22.48
			12	0	22.00	21.40	21.53	21.35
			12	6	22.00	21.45	21.59	21.41
			12	11	22.00	21.42	21.54	21.33
			25	0	22.00	21.45	21.58	21.37

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		20000/1715	20175/1732.5	20350/1750
LTE Band 4	10MHz	QPSK	1	0	24.00	23.39	23.53	23.42
			1	24	24.00	23.53	23.65	23.48
			1	49	24.00	23.54	23.54	23.32
			25	0	23.00	22.43	22.58	22.47
			25	12	23.00	22.46	22.60	22.41
			25	24	23.00	22.57	22.58	22.36
			50	0	23.00	22.50	22.57	22.44
		16QAM	1	0	23.00	22.66	22.76	22.75
			1	24	23.00	22.89	22.99	22.73
			1	49	23.00	22.82	22.86	22.66
			25	0	22.00	21.44	21.59	21.51
			25	12	22.00	21.49	21.59	21.44
			25	24	22.00	21.59	21.60	21.39
			50	0	22.00	21.51	21.60	21.45

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		20025/1717.5	20175/1732.5	20325/1747.5
LTE Band 4	15MHz	QPSK	1	0	24.00	23.32	23.44	23.40
			1	37	24.00	23.51	23.57	23.46
			1	74	24.00	23.49	23.49	23.26
			36	0	23.00	22.41	22.57	22.51
			36	18	23.00	22.55	22.60	22.47
			36	37	23.00	22.63	22.57	22.39
			75	0	23.00	22.53	22.57	22.46
		16QAM	1	0	23.00	22.65	22.73	22.64
			1	37	23.00	22.75	22.88	22.66
			1	74	23.00	22.82	22.79	22.50
			36	0	22.00	21.41	21.53	21.48
			36	18	22.00	21.52	21.57	21.46
			36	37	22.00	21.61	21.54	21.37
			75	0	22.00	21.56	21.56	21.47

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		20050/1720	20175/1732.5	20300/1745

LTE Band 4	20MHz	QPSK	1	0	24.00	23.13	23.26	23.25
			1	49	24.00	23.63	23.66	23.53
			1	99	24.00	23.34	23.24	23.09
			50	0	23.00	22.37	22.50	22.59
			50	24	23.00	22.56	22.58	22.48
			50	49	23.00	22.61	22.49	22.33
			100	0	23.00	22.51	22.49	22.47
		16QAM	1	0	23.50	22.46	22.54	22.56
			1	49	23.50	22.82	23.03	22.79
			1	99	23.50	22.57	22.52	22.41
			50	0	22.00	21.38	21.47	21.60
			50	24	22.00	21.59	21.60	21.49
			50	49	22.00	21.64	21.50	21.33
			100	0	22.00	21.50	21.48	21.47

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		20407/824.7	20525/836.5	20643/848.3
LTE Band 5	1.4MHz	QPSK	1	0	23.00	22.73	22.79	22.71
			1	2	23.00	22.82	22.88	22.79
			1	5	23.00	22.73	22.78	22.69
			3	0	23.00	22.81	22.85	22.79
			3	1	23.00	22.83	22.87	22.78
			3	2	23.00	22.81	22.88	22.78
			6	0	22.00	21.79	21.89	21.85
		16QAM	1	0	22.50	21.92	22.03	22.06
			1	2	22.50	22.07	22.07	22.08
			1	5	22.50	21.92	22.09	21.91
			3	0	22.00	21.73	21.88	21.83
			3	1	22.00	21.77	21.89	21.87
			3	2	22.00	21.73	21.85	21.79
			6	0	21.00	20.88	20.93	20.95
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		20415/825.5	20525/836.5	20635/847.5
LTE Band 5	3MHz	QPSK	1	0	23.00	22.81	22.84	22.83
			1	7	23.00	22.81	22.88	22.79
			1	14	23.00	22.82	22.88	22.77
			8	0	22.00	21.80	21.89	21.91
			8	4	22.00	21.84	21.90	21.91

			8	7	22.00	21.80	21.87	21.86
			15	0	22.00	21.80	21.89	21.89
		16QAM	1	0	22.50	22.03	22.14	22.19
			1	7	22.50	21.95	22.08	22.10
			1	14	22.50	22.15	22.12	22.05
			8	0	21.00	20.84	20.87	20.96
			8	4	21.00	20.89	20.96	20.95
			8	7	21.00	20.83	20.93	20.88
			15	0	21.00	20.77	20.86	20.86
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		20425/826.5	20525/836.5	20625/846.5
LTE Band 5	5MHz	QPSK	1	0	23.00	22.70	22.76	22.78
			1	12	23.00	22.86	22.89	22.85
			1	24	23.00	22.70	22.73	22.67
			12	0	22.00	21.77	21.85	21.95
			12	6	22.00	21.85	21.92	21.95
			12	11	22.00	21.82	21.85	21.86
			25	0	22.00	21.79	21.88	21.90
		16QAM	1	0	22.50	21.96	21.97	22.06
			1	12	22.50	22.14	22.04	22.10
			1	24	22.50	22.01	22.09	22.01
			12	0	21.00	20.74	20.82	20.91
			12	6	21.00	20.81	20.90	20.93
			12	11	21.00	20.78	20.81	20.80
			25	0	21.00	20.78	20.83	20.90
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		20450/829	20525/836.5	20600/844
LTE Band 5	10MHz	QPSK	1	0	23.00	22.81	22.83	22.89
			1	24	23.00	22.95	23.00	22.99
			1	49	23.00	22.80	22.82	22.72
			25	0	22.50	21.88	21.91	22.07
			25	12	22.50	21.87	21.93	21.99
			25	24	22.50	21.87	21.95	21.93
			50	0	22.00	21.88	21.90	22.00
		16QAM	1	0	22.50	22.00	22.02	22.20
			1	24	22.50	22.16	22.24	22.28
			1	49	22.50	22.06	22.07	22.12
			25	0	21.50	20.86	20.89	21.06

			25	12	21.50	20.84	20.92	20.96
			25	24	21.50	20.86	20.92	20.93
			50	0	21.00	20.87	20.89	21.00

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		20775/2502.5	21100/2535	21425/2567.5
LTE Band 7	5MHz	QPSK	1	0	23.50	23.21	23.12	22.79
			1	12	23.50	23.33	23.24	22.97
			1	24	23.50	23.16	23.09	22.83
			12	0	22.50	22.30	22.25	21.98
			12	6	22.50	22.38	22.30	21.99
			12	11	22.50	22.32	22.23	21.95
			25	0	22.50	22.33	22.25	21.97
		16QAM	1	0	23.00	22.46	22.33	22.07
			1	12	23.00	22.58	22.45	22.19
			1	24	23.00	22.32	22.31	22.08
			12	0	21.50	21.27	21.23	20.95
			12	6	21.50	21.34	21.27	20.97
			12	11	21.50	21.27	21.24	20.90
			25	0	21.50	21.33	21.27	20.95
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		20800/2505	21100/2535	21400/2565
LTE Band 7	10MHz	QPSK	1	0	23.50	23.30	23.30	22.90
			1	24	23.50	23.31	23.33	22.79
			1	49	23.50	23.25	23.08	22.73
			25	0	22.50	22.31	22.29	21.62
			25	12	22.50	22.36	22.22	21.70
			25	24	22.50	22.39	22.04	21.70
			50	0	22.50	22.39	22.30	21.67
		16QAM	1	0	23.00	22.42	22.51	21.86
			1	24	23.00	22.61	22.58	22.01
			1	49	23.00	22.48	22.34	21.78
			25	0	21.50	21.30	21.15	20.55
			25	12	21.50	21.35	21.15	20.67
			25	24	21.50	21.34	21.22	20.57
			50	0	21.50	21.34	21.18	20.65
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB	RB		20825/2507.5	21100/2535	21375/2562.5

			Size	Offset				
LTE Band 7	15MHz	QPSK	1	0	23.50	23.16	23.00	22.71
			1	37	23.50	23.04	22.77	22.42
			1	74	23.50	22.82	22.57	22.31
			36	0	22.00	21.85	21.83	21.49
			36	18	22.00	21.89	21.77	21.45
			36	37	22.00	21.98	21.76	21.39
			75	0	22.00	21.92	21.76	21.44
		16QAM	1	0	22.50	21.94	21.94	21.69
			1	37	22.50	22.09	22.01	21.60
			1	74	22.50	21.92	21.89	21.52
			36	0	21.00	20.75	20.78	20.46
			36	18	21.00	20.87	20.75	20.41
			36	37	21.00	20.84	20.85	20.34
			75	0	21.00	20.91	20.75	20.41
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		20850/2510	21100/2535	21350/2560
LTE Band 7	20MHz	QPSK	1	0	23.00	22.60	22.57	22.40
			1	49	23.00	22.78	22.81	22.45
			1	99	23.00	22.41	22.35	22.16
			50	0	22.00	21.71	21.80	21.49
			50	24	22.00	21.78	21.81	21.49
			50	49	22.00	21.79	21.70	21.35
			100	0	22.00	21.73	21.72	21.40
		16QAM	1	0	22.00	21.81	21.92	21.71
			1	49	22.00	21.99	21.95	21.63
			1	99	22.00	21.65	21.63	21.45
			50	0	21.00	20.70	20.81	20.48
			50	24	21.00	20.78	20.82	20.48
			50	49	21.00	20.77	20.70	20.34
			100	0	21.00	20.72	20.73	20.41

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		23017/699.7	23095/707.5	23173/715.3
LTE Band 12	1.4MHz	QPSK	1	0	22.50	22.31	22.21	22.09
			1	2	22.50	22.43	22.33	22.22
			1	5	22.50	22.28	22.24	22.12
			3	0	22.50	22.40	22.27	22.21

			3	1	22.50	22.42	22.29	22.21
			3	2	22.50	22.39	22.29	22.17
			6	0	21.50	21.39	21.33	21.21
		16QAM	1	0	22.00	21.55	21.45	21.44
			1	2	22.00	21.77	21.62	21.51
			1	5	22.00	21.66	21.46	21.42
			3	0	21.50	21.41	21.26	21.23
			3	1	21.50	21.35	21.35	21.18
			3	2	21.50	21.34	21.25	21.26
			6	0	20.50	20.47	20.45	20.32
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		23025/700.5	23095/707.5	23165/714.5
LTE Band 12	3MHz	QPSK	1	0	22.50	22.41	22.34	22.21
			1	7	22.50	22.35	22.30	22.18
			1	14	22.50	22.34	22.27	22.17
			8	0	21.50	21.38	21.36	21.28
			8	4	21.50	21.42	21.38	21.31
			8	7	21.50	21.37	21.33	21.23
			15	0	21.50	21.37	21.35	21.23
		16QAM	1	0	22.00	21.64	21.69	21.51
			1	7	22.00	21.64	21.63	21.46
			1	14	22.00	21.66	21.63	21.54
			8	0	20.50	20.45	20.39	20.33
			8	4	20.50	20.49	20.43	20.33
			8	7	20.50	20.42	20.36	20.30
			15	0	20.50	20.37	20.31	20.21
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		23035/701.5	23095/707.5	23155/713.5
LTE Band 12	5MHz	QPSK	1	0	22.50	22.31	22.27	22.06
			1	12	22.50	22.36	22.26	22.19
			1	24	22.50	22.24	22.13	22.08
			12	0	21.50	21.31	21.40	21.15
			12	6	21.50	21.44	21.40	21.27
			12	11	21.50	21.32	21.35	21.14
			25	0	21.50	21.33	21.37	21.19
		16QAM	1	0	22.00	21.66	21.54	21.46
			1	12	22.00	21.66	21.56	21.43
			1	24	22.00	21.55	21.38	21.41

			12	0	20.50	20.29	20.34	20.12
			12	6	20.50	20.44	20.36	20.24
			12	11	20.50	20.31	20.28	20.12
			25	0	20.50	20.35	20.31	20.18
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		23060/704	23095/707.5	23130/711
LTE Band 12	10MHz	QPSK	1	0	22.50	22.42	22.33	22.30
			1	24	22.50	22.45	22.42	22.28
			1	49	22.50	22.25	22.18	22.17
			25	0	22.00	21.48	21.56	21.29
			25	12	22.00	21.43	21.41	21.35
			25	24	22.00	21.28	21.51	21.28
			50	0	22.00	21.40	21.53	21.30
		16QAM	1	0	22.00	21.66	21.70	21.64
			1	24	22.00	21.77	21.70	21.63
			1	49	22.00	21.53	21.50	21.34
			25	0	21.00	20.44	20.53	20.27
			25	12	21.00	20.43	20.40	20.35
			25	24	21.00	20.25	20.50	20.30
			50	0	21.00	20.40	20.53	20.26

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		23755/706.5	23790/710	23825/713.5
LTE Band 17	5MHz	QPSK	1	0	23.00	22.53	22.50	22.41
			1	12	23.00	22.59	22.55	22.49
			1	24	23.00	22.48	22.40	22.39
			12	0	22.00	21.72	21.61	21.47
			12	6	22.00	21.68	21.63	21.57
			12	11	22.00	21.66	21.70	21.43
			25	0	22.00	21.69	21.64	21.46
		16QAM	1	0	22.00	21.81	21.76	21.77
			1	12	22.00	21.95	21.87	21.84
			1	24	22.00	21.83	21.65	21.63
			12	0	21.00	20.69	20.57	20.43
			12	6	21.00	20.63	20.61	20.54
			12	11	21.00	20.61	20.64	20.41
			25	0	21.00	20.67	20.63	20.45
Band	Band	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		

	Width		RB Size	RB Offset	(dBm)	23780/709	23790/710	23800/711
LTE Band 17	10MHz	QPSK	1	0	23.00	22.62	22.62	22.61
			1	24	23.00	22.66	22.61	22.57
			1	49	23.00	22.44	22.43	22.48
			25	0	22.00	21.76	21.71	21.61
			25	12	22.00	21.69	21.65	21.61
			25	24	22.00	21.80	21.73	21.58
			50	0	22.00	21.80	21.72	21.61
		16QAM	1	0	22.00	21.90	21.98	21.88
			1	24	22.00	21.97	21.83	22.00
			1	49	22.00	21.76	21.73	21.78
			25	0	21.00	20.75	20.70	20.64
			25	12	21.00	20.69	20.65	20.59
			25	24	21.00	20.85	20.74	20.57
			50	0	21.00	20.78	20.71	20.61

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		37775/2572.5	38000/2595	38225/2617.5
LTE Band 38	5MHz	QPSK	1	0	23.50	23.06	22.99	23.00
			1	12	23.50	23.13	22.99	23.02
			1	24	23.50	23.01	22.95	22.93
			12	0	22.50	22.10	21.94	22.01
			12	6	22.50	22.13	21.94	22.07
			12	11	22.50	22.08	21.99	22.00
			25	0	22.50	22.09	22.00	22.02
		16QAM	1	0	22.50	22.25	22.14	22.13
			1	12	22.50	22.32	22.18	22.20
			1	24	22.50	22.20	22.12	22.11
			12	0	21.50	21.10	20.96	21.01
			12	6	21.50	21.13	20.98	21.05
			12	11	21.50	21.09	20.99	21.02
			25	0	21.50	21.12	21.03	21.06
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		37800/2575	38000/2595	38200/2615
LTE Band 38	10MHz	QPSK	1	0	23.50	23.18	23.02	23.14
			1	24	23.50	23.20	23.05	23.13
			1	49	23.50	23.07	23.02	22.99

			25	0	22.50	22.17	22.02	22.14
			25	12	22.50	22.15	22.05	22.10
			25	24	22.50	22.12	21.97	22.10
			50	0	22.50	22.16	22.04	22.11
		16QAM	1	0	22.50	22.38	22.22	22.34
			1	24	22.50	22.40	22.25	22.32
			1	49	22.50	22.25	22.21	22.18
			25	0	21.50	21.21	21.07	21.17
			25	12	21.50	21.19	21.08	21.12
			25	24	21.50	21.14	21.06	21.12
			50	0	21.50	21.20	21.12	21.15
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		37825/2577.5	38000/2595	38175/2615
LTE Band 38	15MHz	QPSK	1	0	23.50	23.09	22.98	23.07
			1	37	23.50	23.09	22.97	23.08
			1	74	23.50	22.93	22.93	22.87
			36	0	22.50	22.14	21.98	22.14
			36	18	22.50	22.10	22.01	22.10
			36	37	22.50	22.04	22.00	22.02
			75	0	22.50	22.09	21.96	22.09
		16QAM	1	0	22.50	22.29	22.14	22.25
			1	37	22.50	22.28	22.15	22.26
			1	74	22.50	22.11	22.11	22.05
			36	0	21.50	21.10	20.97	21.09
			36	18	21.50	21.08	20.97	21.06
			36	37	21.50	21.03	20.95	20.98
			75	0	21.50	21.11	21.01	21.11
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		37850/2580	38000/2595	38150/2610
LTE Band 38	20MHz	QPSK	1	0	23.50	22.97	22.87	22.90
			1	49	23.50	23.14	23.03	23.17
			1	99	23.50	22.72	22.80	22.71
			50	0	22.50	22.13	21.96	22.14
			50	24	22.50	22.10	22.02	22.14
			50	49	22.50	22.01	21.94	22.02
			100	0	22.50	22.07	21.97	22.08
		16QAM	1	0	22.50	22.16	22.06	22.09
			1	49	22.50	22.33	22.22	22.36

			1	99	22.50	21.92	22.01	21.91
			50	0	21.50	21.19	21.01	21.19
			50	24	21.50	21.13	21.06	21.19
			50	49	21.50	21.05	21.00	21.08
			100	0	21.50	21.11	21.00	21.13

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		39675/2498.5	40620/2593	41565/2687.5
LTE Band 41	5MHz	QPSK	1	0	23.50	22.52	22.97	22.99
			1	12	23.50	22.66	23.10	23.10
			1	24	23.50	22.54	22.95	22.93
			12	0	22.50	21.52	21.99	22.10
			12	6	22.50	21.61	22.03	22.09
			12	11	22.50	21.56	22.01	22.01
			25	0	22.50	21.56	21.99	22.03
		16QAM	1	0	22.50	21.74	22.14	22.15
			1	12	22.50	21.89	22.28	22.31
			1	24	22.50	21.76	22.17	22.13
			12	0	21.50	20.60	21.01	21.12
			12	6	21.50	20.69	21.04	21.12
			12	11	21.50	20.64	21.04	21.06
			25	0	21.50	20.68	21.05	21.14
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		39700/2501	40620/2593	41540/2685
LTE Band 41	10MHz	QPSK	1	0	23.50	22.67	23.10	23.11
			1	24	23.50	22.71	23.17	23.15
			1	49	23.50	22.65	23.06	23.01
			25	0	22.50	21.60	22.09	22.18
			25	12	22.50	21.65	22.06	22.10
			25	24	22.50	21.66	22.03	22.08
			50	0	22.50	21.61	22.10	22.17
		16QAM	1	0	22.50	21.88	22.30	22.32
			1	24	22.50	21.93	22.34	22.36
			1	49	22.50	21.88	22.28	22.22
			25	0	21.50	20.71	21.12	21.23
			25	12	21.50	20.77	21.11	21.20
			25	24	21.50	20.75	21.14	21.13
			50	0	21.50	20.75	21.13	21.22

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		39725/2503.5	40620/2593	41515/2682.5
LTE Band 41	15MHz	QPSK	1	0	23.50	22.58	23.03	22.92
			1	37	23.50	22.64	23.07	22.97
			1	74	23.50	22.52	22.98	22.83
			36	0	22.50	21.59	22.06	22.04
			36	18	22.50	21.60	22.04	22.00
			36	37	22.50	21.57	22.01	21.96
			75	0	22.50	21.55	22.04	21.93
		16QAM	1	0	22.50	21.79	22.24	22.10
			1	37	22.50	21.83	22.25	22.17
			1	74	22.50	21.71	22.18	22.02
			36	0	21.50	20.61	21.03	21.03
			36	18	21.50	20.63	21.00	20.98
			36	37	21.50	20.60	21.03	20.94
			75	0	21.50	20.63	21.08	21.07
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		39750/2506	40620/2593	41490/2680
LTE Band 41	20MHz	QPSK	1	0	23.50	22.42	22.95	22.80
			1	49	23.50	22.72	23.13	23.06
			1	99	23.50	22.27	22.86	22.65
			50	0	22.50	21.55	22.03	22.00
			50	24	22.50	21.58	22.04	22.03
			50	49	22.50	21.64	22.03	21.90
			100	0	22.50	21.57	22.04	21.98
		16QAM	1	0	22.50	21.64	22.14	21.99
			1	49	22.50	21.86	22.34	22.26
			1	99	22.50	21.51	22.07	21.88
			50	0	21.50	20.68	21.09	21.06
			50	24	21.50	20.70	21.10	21.08
			50	49	21.50	20.63	21.10	20.95
			100	0	21.50	20.62	21.10	21.01

7.5. WLAN & Bluetooth Output Power

Mode	Channel	Frequency (MHz)	Tune-up (dBm)	Output Power (dBm)
802.11b	1.00	2412	15.00	14.62
	6.00	2437	15.00	14.05
	11.00	2462	15.00	14.98
802.11g	1.00	2412	14.50	14.35
	6.00	2437	14.50	13.94
	11.00	2462	14.50	13.85
802.11n HT20	1.00	2412	14.00	13.95
	6.00	2437	14.00	13.60
	11.00	2462	14.00	13.34
802.11n HT40	3.00	2422	14.50	14.02
	6.00	2437	14.50	13.97
	9.00	2452	14.50	13.89

NOTE: Power measurement results of WLAN 2.4G.

Mode	Channel	Frequency (MHz)	Tune-up (dBm)	Output Power (dBm)
802.11a	36	5180	13.00	12.53
	40	5200	13.00	11.99
	48	5240	13.00	11.55
802.11n HT20	36	5180	12.00	11.69
	40	5200	12.00	11.83
	48	5240	12.00	11.42
802.11n HT40	38	5190	12.00	11.81
	46	5230	12.00	11.43
802.11ac VHT20	36	5180	12.00	11.45
	40	5200	12.00	11.77
	48	5240	12.00	11.97
802.11ac VHT40	38	5190	12.00	11.53
	46	5230	12.00	11.67
802.11ac VHT80	42	5210	11.50	11.49

NOTE: Power measurement results of WLAN 5.2G.

Mode	Channel	Frequency (MHz)	Tune-up (dBm)	Output Power (dBm)
802.11a	52	5260	11.50	11.41
	56	5280	11.50	10.85
	64	5320	11.50	10.84

802.11n HT20	52	5260	11.50	11.21
	56	5280	11.50	11.00
	64	5320	11.50	10.66
802.11n HT40	54	5270	11.00	10.97
	62	5310	11.00	10.71
802.11ac VHT20	52	5260	11.50	10.61
	56	5280	11.50	11.31
	64	5320	11.50	11.02
802.11ac VHT40	54	5270	11.00	10.73
	62	5310	11.00	10.96
802.11ac VHT80	58	5290	11.00	10.68

NOTE: Power measurement results of WLAN 5.3G.

Mode	Channel	Frequency (MHz)	Tune-up (dBm)	Output Power (dBm)
802.11a	100	5500	12.50	10.66
	120	5600	12.50	12.16
	140	5700	12.50	10.58
802.11n HT20	100	5500	12.00	10.40
	120	5600	12.00	11.93
	140	5700	12.00	10.18
802.11n HT40	102	5510	12.00	10.33
	118	5590	12.00	11.67
802.11ac VHT20	134	5670	12.00	11.08
	100	5500	11.50	10.51
	120	5600	11.50	11.44
802.11ac VHT40	140	5700	11.50	10.54
	102	5510	12.50	12.01
802.11ac VHT80	118	5590	12.50	11.31

NOTE: Power measurement results of WLAN 5.6G.

Mode	Channel	Frequency (MHz)	Tune-up (dBm)	Output Power (dBm)
802.11a	149	5745	9.00	8.65
	157	5785	9.00	7.61
	165	5825	9.00	7.94
802.11n HT20	149	5745	8.50	8.45
	157	5785	8.50	7.50

	165	5825	8.50	7.69
802.11n HT40	151	5755	8.50	8.06
	159	5795	8.50	7.27
802.11ac VHT20	149	5745	8.50	7.25
	157	5785	8.50	8.47
	165	5825	8.50	7.43
802.11ac VHT40	151	5755	8.00	7.75
	159	5795	8.00	7.87
802.11ac VHT80	155	5775	7.50	7.22

NOTE: Power measurement results of WLAN 5.8G.

	Output Power (dBm)				
	Data Rates	Tune-up (dBm)	Channel		
			0CH	39CH	78CH
BR+EDR	1M	1.5	-0.46	1.50	1.40
	2M	4	1.47	3.34	3.16
	3M	4	1.78	3.76	3.73

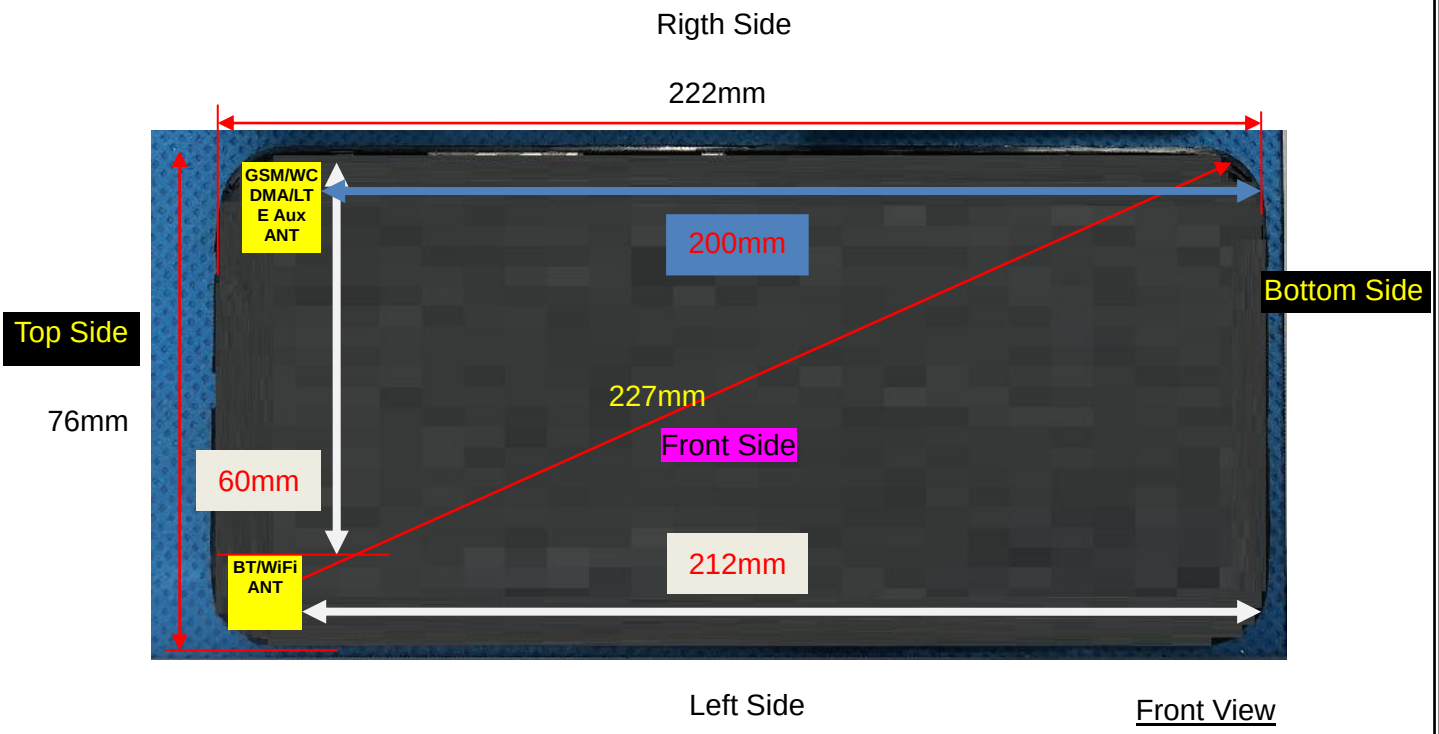
	Channel	Tune-up (dBm)	Output Power (dBm)
BLE	0CH	-1.00	-1.40
	19CH	0.50	0.20
	39CH	0.00	-0.47

NOTE: Power measurement results of Bluetooth.

7.6. NFC

The power is too low, so SAR testing is not necessary.

8. Antenna Location



Note: Since the confidentiality request of EUT，the antenna location example diagram see as above.

Distance of the Antenna to the EUT surface/edge						
Antennas	Front Side	Back Side	Left Side	Right Side	Top Side	Bottom Side
WWAN Main ANT	≤ 25mm	≤ 25mm	>25mm	≤ 25mm	≤ 25mm	>25mm
WLAN & Bluetooth	≤ 25mm	≤ 25mm	≤25mm	>25mm	≤ 25mm	>25mm
Positions for SAR tests						
Antennas	Front Side	Back Side	Left Side	Right Side	Top Side	Bottom Side
WWAN Main ANT	Yes	Yes	NO	Yes	Yes	NO
WLAN & Bluetooth	Yes	Yes	Yes	NO	Yes	NO

9. Stand-alone SAR test exclusion

Refer to FCC KDB 447498D01, the 1-g SAR and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)]·[$\sqrt{f_{(GHZ)}}$] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where:

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

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

Mode	P_{max}	P_{max}	Distance	f	Calculation	SAR Exclusion	SAR test

	(dBm)	(mW)	(mm)	(GHz)	Result	threshold	exclusion
Bluetooth	4.00	2.512	5	2.480	0.791	3	Yes

NOTE: Standalone SAR test exclusion for Bluetooth.

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

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] * [$\sqrt{f_{(GHZ)}}$/x] W/kg for test separation distances ≤ 50mm, where x = 7.5 for 1-g SAR and x = 18.75 for 10-g SAR.

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

Mode	Position	P_{max} (dBm)	P_{max} (mW)	Distance (mm)	f (GHz)	x	Estimated SAR (W/Kg)
Bluetooth	Body	4.00	2.51	10	2.48	7.5	0.053
Bluetooth	Hotspot	4.00	2.51	10	2.48	7.5	0.053
Bluetooth	Extremity	4.00	2.51	5	2.48	7.5	0.262

NOTE: Estimated SAR calculation for Bluetooth

10. SAR Results

10.1. SAR measurement Result

10.1.1. SAR measurement Result of GSM850

Test Position of Body-Worn with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date	Plot
			1g	10g						
Front Side	189/836.4	GPRS(GMSK 4TS)	0.442	0.283	-3.28	28.80	29.00	0.463	2024/11/05	
Back Side	189/836.4	GPRS(GMSK 4TS)	0.483	0.316	-1.72	28.80	29.00	0.506	2024/11/05	1#

NOTE: Body-Worn SAR test results of GSM850

Test Position of Hotspot with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date	Plot
			1-g	10-g						
Front Side	189/836.4	GPRS(GMSK 4TS)	0.442	0.283	-3.28	28.80	29.00	0.463	2024/11/05	

Back Side	189/836.4	GPRS(GMSK 4TS)	0.483	0.316	-1.72	28.80	29.00	0.506	2024/11/05	1#
Left Side	189/836.4	GPRS(GMSK 4TS)	0.110	0.071	-1.28	28.80	29.00	0.115	2024/11/05	
Right Side	189/836.4	GPRS(GMSK 4TS)	0.208	0.129	-3.21	28.80	29.00	0.218	2024/11/05	
Top Side	189/836.4	GPRS(GMSK 4TS)	0.245	0.155	0.01	28.80	29.00	0.257	2024/11/05	

NOTE: Hotspot SAR test results of GSM850

Test Position of Extremity with 0mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 10g (W/Kg)	Date	Plot
			1-g	10-g						
Front Side	189/836.4	GPRS(GMSK 4TS)	2.145	1.339	3.52	28.80	29.00	1.402	2024/11/05	
Back Side	189/836.4	GPRS(GMSK 4TS)	1.633	1.030	-1.95	28.80	29.00	1.079	2024/11/05	
Left Side	189/836.4	GPRS(GMSK 4TS)	0.167	0.101	3.99	28.80	29.00	0.106	2024/11/05	
Right Side	189/836.4	GPRS(GMSK 4TS)	2.214	1.396	0.88	28.80	29.00	1.462	2024/11/05	
Top Side	189/836.4	GPRS(GMSK 4TS)	2.317	1.466	0.79	28.80	29.00	1.535	2024/11/05	#20

NOTE: Extremity SAR test results of GSM850

10.1.2. SAR measurement Result of GSM1900

Test Position of Body-Worn with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date	Plot
			1g	10g						
Front Side	661/1880	GPRS(GMSK 4TS)	0.756	0.457	0.18	26.03	27.00	0.945	2024/11/06	2#
Back Side	661/1880	GPRS(GMSK 4TS)	0.711	0.436	-2.60	26.03	27.00	0.889	2024/11/06	

NOTE: Body-Worn SAR test results of GSM1900

Test	Test	Test Mode	SAR Value	Power	Conducte	Tune-up	Scale	Date	Plot

Position of Hotspot with 10mm	channel /Freq.		(W/kg)		Drift (±5%)	d power (dBm)	power (dBm)	d SAR 1g (W/Kg)		
			1-g	10-g						
Front Side	661/1880	GPRS(GMSK 4TS)	0.756	0.457	0.18	26.03	27.00	0.945	2024/11/06	2#
Back Side	661/1880	GPRS(GMSK 4TS)	0.711	0.436	-2.60	26.03	27.00	0.889	2024/11/06	
Left Side	661/1880	GPRS(GMSK 4TS)	0.146	0.088	3.39	26.03	27.00	0.183	2024/11/06	
Right Side	661/1880	GPRS(GMSK 4TS)	0.592	0.363	1.13	26.03	27.00	0.740	2024/11/06	
Top Side	661/1880	GPRS(GMSK 4TS)	0.638	0.387	-0.19	26.03	27.00	0.798	2024/11/06	
Front Side	512/1850.2	GPRS(GMSK 4TS)	0.742	0.433	2.63	25.11	27.00	1.147	2024/11/04	
Front Side	810/1909.8	GPRS(GMSK 4TS)	0.715	0.457	0.18	26.58	27.00	0.788	2024/11/04	
FrontSide Repeated	661/1880	GPRS(GMSK 4TS)	0.711	0.442	-1.62	25.11	27.00	1.099	2024/11/04	

NOTE: Hotspot SAR test results of GSM1900

Test Position of Extremity with 0mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 10g (W/Kg)	Date	Plot
			1-g	10-g						
Front Side	661/1880	GPRS(GMSK 4TS)	6.086	2.228	0.02	26.03	27.00	2.786	2024/11/06	
Back Side	661/1880	GPRS(GMSK 4TS)	4.696	2.068	-3.61	26.03	27.00	2.586	2024/11/06	
Left Side	661/1880	GPRS(GMSK 4TS)	1.041	0.436	-3.59	26.03	27.00	0.545	2024/11/06	
Right Side	661/1880	GPRS(GMSK 4TS)	4.740	2.067	2.58	26.03	27.00	2.584	2024/11/06	
Top Side	661/1880	GPRS(GMSK 4TS)	6.523	2.745	2.24	26.03	27.00	3.432	2024/11/06	#21
Top Side	512/1850.2	GPRS(GMSK 4TS)	6.152	2.165	-1.63	25.11	27.00	3.345	2024/11/06	

Top Side	810/1909.8	GPRS(GMSK 4TS)	6.263	2.645	-2.67	26.58	27.00	2.914	2024/11/06	

NOTE: Extremity SAR test results of GSM850

10.1.3. SAR measurement Result of WCDMA Band 2

Test Position of Body-Worn with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date	Plot
			1g	10g						
Front Side	9400/1880	RMC12.2K	0.481	0.294	-0.53	23.32	23.50	0.501	2024/11/06	3#
Back Side	9400/1880	RMC12.2K	0.450	0.271	-2.64	23.32	23.50	0.469	2024/11/06	

NOTE: Body-Worn SAR test results of WCDMA Band 2

Test Position of Hotspot with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date	Plot
			1-g	10-g						
Front Side	9400/1880	RMC12.2K	0.481	0.294	-0.53	23.32	23.50	0.501	2024/11/06	3#
Back Side	9400/1880	RMC12.2K	0.450	0.271	-2.64	23.32	23.50	0.469	2024/11/06	
Left Side	9400/1880	RMC12.2K	0.094	0.057	0.94	23.32	23.50	0.098	2024/11/06	
Right Side	9400/1880	RMC12.2K	0.376	0.215	0.54	23.32	23.50	0.392	2024/11/06	
Top Side	9400/1880	RMC12.2K	0.417	0.241	-2.58	23.32	23.50	0.435	2024/11/06	

NOTE: Hotspot SAR test results of WCDMA Band 2

Test Position of Extremity with 0mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 10g (W/Kg)	Date	Plot
			1-g	10-g						
Front Side	9400/1880	RMC12.2K	3.996	1.904	-3.19	23.32	23.50	1.985	2024/11/06	
Back Side	9400/1880	RMC12.2K	2.938	1.458	-1.32	23.32	23.50	1.520	2024/11/06	
Left Side	9400/1880	RMC12.2K	0.653	0.321	3.57	23.32	23.50	0.335	2024/11/06	
Right Side	9400/1880	RMC12.2K	2.950	1.464	2.07	23.32	23.50	1.526	2024/11/06	
Top Side	9400/1880	RMC12.2K	4.588	2.166	-0.29	23.32	23.50	2.258	2024/11/06	#22
Top Side	9262/1852.4	RMC12.2K	4.161	1.879	0.47	22.94	23.50	2.138	2024/11/06	
Top Side	9538/1907.6	RMC12.2K	4.463	1.968	-1.35	23.38	23.50	2.023	2024/11/06	

NOTE: Extremity SAR test results of Band 2

10.1.4. SAR measurement Result of WCDMA Band 4

Test Position of Body-Worn with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date	Plot
			1g	10g						
Front Side	1413/1732.6	RMC12.2K	0.726	0.416	-0.27	23.67	24.00	0.783	2024/10/30	4#
Back Side	1413/1732.6	RMC12.2K	0.669	0.380	-1.50	23.67	24.00	0.722	2024/10/30	

NOTE: Body-Worn SAR test results of WCDMA Band 4

Test Position of Hotspot with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date	Plot
			1-g	10-g						
Front Side	1413/1732.6	RMC12.2K	0.726	0.416	-0.27	23.67	24.00	0.783	2024/10/30	4#
Back Side	1413/1732.6	RMC12.2K	0.669	0.380	-1.50	23.67	24.00	0.722	2024/10/30	
Left Side	1413/1732.6	RMC12.2K	0.136	0.076	3.54	23.67	24.00	0.147	2024/10/30	
Right Side	1413/1732.6	RMC12.2K	0.536	0.295	-3.33	23.67	24.00	0.578	2024/10/30	
Top Side	1413/1732.6	RMC12.2K	0.578	0.328	3.95	23.67	24.00	0.624	2024/10/30	

NOTE: Hotspot SAR test results of WCDMA Band 4

Test Position of Extremity with 0mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 10g (W/Kg)	Date	Plot
			1-g	10-g						

Front Side	1413/1732.6	RMC12.2K	3.983	2.159	-3.35	23.67	24.00	2.329	2024/10/30	
Back Side	1413/1732.6	RMC12.2K	2.912	1.611	-1.00	23.67	24.00	1.738	2024/10/30	
Left Side	1413/1732.6	RMC12.2K	0.649	0.352	-3.20	23.67	24.00	0.380	2024/10/30	
Right Side	1413/1732.6	RMC12.2K	2.920	1.615	1.30	23.67	24.00	1.742	2024/10/30	
Top Side	1413/1732.6	RMC12.2K	4.555	2.429	0.01	23.67	24.00	2.621	2024/10/30	#23
Top Side	1312/1712.4	RMC12.2K	4.623	2.416	-1.35	23.78	24.00	2.542	2024/10/30	
Top Side	1513/1752.6	RMC12.2K	4.365	2.251	-2.47	23.49	24.00	2.531	2024/10/30	

NOTE: Extremity SAR test results of Band 4

10.1.5. SAR measurement Result of WCDMA Band 5

Test Position of Body-Worn with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date	Plot
			1g	10g						
Front Side	4182/836.4	RMC12.2K	0.417	0.267	-3.82	23.18	23.50	0.449	2024/11/05	
Back Side	4182/836.4	RMC12.2K	0.441	0.294	-1.12	23.18	23.50	0.475	2024/11/05	5#

NOTE: Body-Worn SAR test results of WCDMA Band 5

Test Position of Hotspot with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date	Plot
			1-g	10-g						
Front Side	4182/836.4	RMC12.2K	0.417	0.267	-3.82	23.18	23.50	0.449	2024/11/05	
Back Side	4182/836.4	RMC12.2K	0.441	0.294	-1.12	23.18	23.50	0.475	2024/11/05	5#
Left Side	4182/836.4	RMC12.2K	0.108	0.068	3.96	23.18	23.50	0.116	2024/11/05	
Right Side	4182/836.4	RMC12.2K	0.184	0.121	-3.99	23.18	23.50	0.198	2024/11/05	
Top Side	4182/836.4	RMC12.2K	0.235	0.155	3.54	23.18	23.50	0.253	2024/11/05	

NOTE: Hotspot SAR test results of WCDMA Band 5

Test Position of Extremity with 0mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 10g (W/Kg)	Date	Plot
			1-g	10-g						
Front Side	4182/836.4	RMC12.2K	1.807	1.167	-1.69	23.18	23.50	1.256	2024/11/05	
Back Side	4182/836.4	RMC12.2K	1.379	0.928	1.22	23.18	23.50	0.999	2024/11/05	
Left Side	4182/836.4	RMC12.2K	0.141	0.092	1.97	23.18	23.50	0.099	2024/11/05	
Right Side	4182/836.4	RMC12.2K	1.904	1.268	-1.10	23.18	23.50	1.365	2024/11/05	
Top Side	4182/836.4	RMC12.2K	1.967	1.255	-0.61	23.18	23.50	1.351	2024/11/05	#24

NOTE: Extremity SAR test results of Band 5

10.1.6. SAR measurement Result of CDMA

Test Position of Body-Worn with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date	Plot
			1g	10g						
Front Side	384/836.52	1xRTT(RC3, SO32(+F-SCH))	0.366	0.232	3.14	24.46	25.00	0.414	2024/11/05	
Back Side	384/836.52	1xRTT(RC3, SO32(+F-SCH))	0.389	0.260	0.23	24.46	25.00	0.441	2024/11/05	6#

NOTE: Body-Worn SAR test results of CDMA

Test Position of Hotspot with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date	Plot
			1-g	10-g						
Front Side	384/836.52	1xRTT(RC3, SO32(+F-SCH))	0.366	0.232	3.14	24.46	25.00	0.414	2024/11/05	
Back Side	384/836.52	1xRTT(RC3, SO32(+F-SCH))	0.389	0.260	0.23	24.46	25.00	0.441	2024/11/05	6#
Left Side	384/836.52	1xRTT(RC3, SO32(+F-SCH))	0.095	0.062	-1.90	24.46	25.00	0.108	2024/11/05	
Right	384/836.52	1xRTT(RC3,	0.164	0.110	-3.29	24.46	25.00	0.186	2024/11/05	

Side		SO32(+F-SCH))								
Top Side	384/836.52	1xRTT(RC3, SO32(+F-SCH))	0.215	0.138	2.24	24.46	25.00	0.243	2024/11/05	

NOTE: Body-Worn SAR test results of CDMA

Test Position of Extremity with 0mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 10g (W/Kg)	Date	Plot
			1-g	10-g						
Front Side	384/836.52	1xRTT(RC3, SO32(+F-SCH))	1.376	0.869	-1.03	24.46	25.00	0.984	2024/11/05	
Back Side	384/836.52	1xRTT(RC3, SO32(+F-SCH))	1.279	0.850	1.05	24.46	25.00	0.963	2024/11/05	
Left Side	384/836.52	1xRTT(RC3, SO32(+F-SCH))	0.131	0.083	0.72	24.46	25.00	0.094	2024/11/05	
Right Side	384/836.52	1xRTT(RC3, SO32(+F-SCH))	0.650	0.415	3.38	24.46	25.00	0.470	2024/11/05	
Top Side	384/836.52	1xRTT(RC3, SO32(+F-SCH))	1.699	1.096	-0.49	24.46	25.00	1.241	2024/11/05	#25

NOTE: Extremity SAR test results of CDMA

10.1.7. SAR measurement Result of LTE Band 2

Test Position of Body-Worn with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date	Plot
			1g	10g						
1RB										
Front Side	18900/1880	20M QPSK(1,49)	0.559	0.310	-0.47	23.89	24.50	0.643	2024/11/06	12#
Back Side	18900/1880	20M QPSK(1,49)	0.500	0.281	-1.15	23.89	24.50	0.575	2024/11/06	
50%RB										
Front Side	18900/1880	20M QPSK(50,49)	0.502	0.268	-0.17	22.94	23.50	0.571	2024/11/06	
Back Side	18900/1880	20M QPSK(50,49)	0.441	0.258	-3.66	22.94	23.50	0.502	2024/11/06	

NOTE: Body-Worn SAR test results of LTE Band 2

Test Position of Hotspot with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date	Plot
			1-g	10-g						
1RB										
Front Side	18900/1880	20M QPSK(1,49)	0.559	0.310	-0.47	23.89	24.50	0.643	2024/11/06	12#
Back Side	18900/1880	20M QPSK(1,49)	0.500	0.281	-1.15	23.89	24.50	0.575	2024/11/06	
Left Side	18900/1880	20M QPSK(1,49)	0.102	0.056	-1.50	23.89	24.50	0.117	2024/11/06	
Right Side	18900/1880	20M QPSK(1,49)	0.400	0.216	-1.44	23.89	24.50	0.460	2024/11/06	
Top Side	18900/1880	20M QPSK(1,49)	0.468	0.250	-3.33	23.89	24.50	0.539	2024/11/06	
50%RB										
Front Side	18900/1880	20M QPSK(50,49)	0.502	0.268	-0.17	22.94	23.50	0.571	2024/11/06	
Back Side	18900/1880	20M QPSK(50,49)	0.441	0.258	-3.66	22.94	23.50	0.502	2024/11/06	
Left Side	18900/1880	20M QPSK(50,49)	0.096	0.052	2.23	22.94	23.50	0.109	2024/11/06	
Right Side	18900/1880	20M QPSK(50,49)	0.34	0.204	-4.82	22.94	23.50	0.387	2024/11/06	
Bottom Side	18900/1880	20M QPSK(50,49)	0.399	0.22	3.42	22.94	23.50	0.454	2024/11/06	

NOTE: Hotspot SAR test results of LTE Band 2

Test Position of Extremity with 0mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 10g (W/Kg)	Date	Plot
			1-g	10-g						
1RB										
Front Side	18900/1880	20M QPSK(1,49)	3.956	1.862	-0.89	23.89	24.50	2.143	2024/11/06	
Back Side	18900/1880	20M QPSK(1,49)	2.900	1.393	-3.02	23.89	24.50	1.603	2024/11/06	

Left Side	18900/1880	20M QPSK(1,49)	0.647	0.301	-0.29	23.89	24.50	0.346	2024/11/06	
Right Side	18900/1880	20M QPSK(1,49)	2.930	1.351	-2.61	23.89	24.50	1.555	2024/11/06	
Top Side	18900/1880	20M QPSK(1,49)	4.525	2.179	-0.02	23.89	24.50	2.508	2024/11/06	
Top Side	18700/1860	20M QPSK(1,49)	4.412	2.063	-1.36	23.68	24.50	2.492	2024/11/06	
Top Side	19100/1900	20M QPSK(1,49)	4.632	2.231	2.41	24.06	24.50	2.469	2024/11/06	#31
50%RB										
Front Side	18900/1880	20M QPSK(50,49)	3.53	1.657	-4.61	22.94	23.50	1.885	2024/11/06	
Back Side	18900/1880	20M QPSK(50,49)	2.739	1.204	2.67	22.94	23.50	1.370	2024/11/06	
Left Side	18900/1880	20M QPSK(50,49)	0.559	0.277	4.15	22.94	23.50	0.315	2024/11/06	
Right Side	18900/1880	20M QPSK(50,49)	2.515	1.16	-3.64	22.94	23.50	1.320	2024/11/06	
Bottom Side	18900/1880	20M QPSK(50,49)	4.162	1.901	1.78	22.94	23.50	2.163	2024/11/06	

NOTE: Extremity SAR test results of LTE Band 2

10.1.8. SAR measurement Result of LTE Band 4

Test Position of Body-Worn with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date	Plot
			1g	10g						
1RB										
Front Side	20175/1732.5	20M QPSK(1,49)	0.643	0.371	-0.63	23.66	24.00	0.695	2024/10/30	13#
Back Side	20175/1732.5	20M QPSK(1,49)	0.593	0.350	-2.64	23.66	24.00	0.641	2024/10/30	
50%RB										
Front	20175/1732.5	20M	0.555	0.344	-1.42	22.58	23.00	0.611	2024/10/30	

Side		QPSK(50,24)								
Back Side	20175/1732.5	20M QPSK(50,24)	0.548	0.328	3.84	22.58	23.00	0.604	2024/10/30	

NOTE: Body-Worn SAR test results of LTE Band 4

Test Position of Hotspot with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date	Plot
			1-g	10-g						
1RB										
Front Side	20175/1732.5	20M QPSK(1,49)	0.643	0.371	-0.63	23.66	24.00	0.695	2024/10/30	13#
Back Side	20175/1732.5	20M QPSK(1,49)	0.593	0.350	-2.64	23.66	24.00	0.641	2024/10/30	
Left Side	20175/1732.5	20M QPSK(1,49)	0.128	0.073	-2.08	23.66	24.00	0.138	2024/10/30	
Right Side	20175/1732.5	20M QPSK(1,49)	0.480	0.283	0.03	23.66	24.00	0.519	2024/10/30	
Top Side	20175/1732.5	20M QPSK(1,49)	0.527	0.308	0.39	23.66	24.00	0.570	2024/10/30	
50%RB										
Front Side	20175/1732.5	20M QPSK(50,24)	0.555	0.344	-1.42	22.58	23.00	0.611	2024/10/30	
Back Side	20175/1732.5	20M QPSK(50,24)	0.548	0.328	3.84	22.58	23.00	0.604	2024/10/30	
Left Side	20175/1732.5	20M QPSK(50,24)	0.115	0.066	3.74	22.58	23.00	0.127	2024/10/30	
Right Side	20175/1732.5	20M QPSK(50,24)	0.41	0.243	-3.39	22.58	23.00	0.452	2024/10/30	
Bottom Side	20175/1732.5	20M QPSK(50,24)	0.45	0.292	1.87	22.58	23.00	0.496	2024/10/30	
Front Side	20175/1732.5	20M QPSK(50,24)	0.555	0.344	-1.42	22.58	23.00	0.611	2024/10/30	

NOTE: Hotspot SAR test results of LTE Band 4

Test Position of Extremity with 0mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 10g (W/Kg)	Date	Plot
			1-g	10-g						
1RB										

Front Side	20175/1732.5	20M QPSK(1,49)	3.254	1.929	0.16	23.66	24.00	2.086	2024/10/30	
Back Side	20175/1732.5	20M QPSK(1,49)	2.399	1.422	1.85	23.66	24.00	1.538	2024/10/30	
Left Side	20175/1732.5	20M QPSK(1,49)	0.535	0.301	-2.92	23.66	24.00	0.326	2024/10/30	
Right Side	20175/1732.5	20M QPSK(1,49)	2.430	1.368	0.44	23.66	24.00	1.479	2024/10/30	
Top Side	20175/1732.5	20M QPSK(1,49)	3.753	2.031	0.22	23.66	24.00	2.196	2024/10/30	32#
Top Side	20050/1720	20M QPSK(1,49)	3.632	1.963	0.62	23.63	24.00	2.138	2024/10/30	
Top Side	20300/1745	20M QPSK(1,49)	3.584	1.897	-0.42	23.53	24.00	2.114	2024/10/30	
50%RB										
Front Side	20175/1732.5	20M QPSK(50,0)	2.804	1.719	3.13	22.58	23.00	1.894	2024/10/30	
Back Side	20175/1732.5	20M QPSK(50,0)	2.16	1.224	2.09	22.58	23.00	1.348	2024/10/30	
Left Side	20175/1732.5	20M QPSK(50,0)	0.492	0.279	-2.31	22.58	23.00	0.307	2024/10/30	
Right Side	20175/1732.5	20M QPSK(50,0)	2.22	1.257	4.63	22.58	23.00	1.385	2024/10/30	
Bottom Side	20175/1732.5	20M QPSK(50,0)	3.282	1.818	-3.56	22.58	23.00	2.003	2024/10/30	

NOTE: Extremity SAR test results of LTE Band 4

10.1.9. SAR measurement Result of LTE Band 5

Test Position of Body-Worn with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date	Plot
			1g	10g						
1RB										
Front Side	20525/836.5	10M QPSK(1,24)	0.383	0.242	2.31	23.00	23.00	0.383	2024/11/05	

Back Side	20525/836.5	10M QPSK(1,24)	0.407	0.271	-1.50	23.00	23.00	0.407	2024/11/05	14#
50%RB										
Front Side	20525/836.5	10M QPSK(25,24)	0.345	0.221	0.88	21.95	22.50	0.392	2024/11/05	
Back Side	20525/836.5	10M QPSK(25,24)	0.369	0.249	0.44	21.95	22.50	0.419	2024/11/05	

NOTE: Body-Worn SAR test results of LTE Band 5

Test Position of Hotspot with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date	Plot
			1-g	10-g						
1RB										
Front Side	20525/836.5	10M QPSK(1,24)	0.383	0.242	2.31	23.00	23.00	0.383	2024/11/05	
Back Side	20525/836.5	10M QPSK(1,24)	0.407	0.271	-1.50	23.00	23.00	0.407	2024/11/05	14#
Left Side	20525/836.5	10M QPSK(1,24)	0.097	0.062	0.52	23.00	23.00	0.097	2024/11/05	
Right Side	20525/836.5	10M QPSK(1,24)	0.180	0.115	-3.06	23.00	23.00	0.180	2024/11/05	
Top Side	20525/836.5	10M QPSK(1,24)	0.205	0.134	2.14	23.00	23.00	0.205	2024/11/05	
50%RB										
Front Side	20525/836.5	10M QPSK(25,24)	0.345	0.221	0.88	21.95	22.50	0.392	2024/11/05	
Back Side	20525/836.5	10M QPSK(25,24)	0.369	0.249	0.44	21.95	22.50	0.419	2024/11/05	
Left Side	20525/836.5	10M QPSK(25,24)	0.092	0.057	-4.87	21.95	22.50	0.104	2024/11/05	
Right Side	20525/836.5	10M QPSK(25,24)	0.167	0.101	-1.25	21.95	22.50	0.190	2024/11/05	
Top Side	20525/836.5	10M QPSK(25,24)	0.181	0.124	-0.01	21.95	22.50	0.205	2024/11/05	

NOTE: Hotspot SAR test results of LTE Band 5

Test Position of Extremity with 0mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 10g (W/Kg)	Date	Plot
			1-g	10-g						
1RB										
Front Side	20525/836.5	10M QPSK(1,24)	1.703	1.127	0.53	23.00	23.00	1.127	2024/11/05	
Back Side	20525/836.5	10M QPSK(1,24)	1.300	0.860	4.60	23.00	23.00	0.860	2024/11/05	
Left Side	20525/836.5	10M QPSK(1,24)	0.131	0.087	-1.44	23.00	23.00	0.087	2024/11/05	
Right Side	20525/836.5	10M QPSK(1,24)	1.823	1.182	0.67	23.00	23.00	1.182	2024/11/05	
Top Side	20525/836.5	10M QPSK(1,24)	1.815	1.188	-0.43	23.00	23.00	1.188	2024/11/05	33#
50%RB										
Front Side	20525/836.5	10M QPSK(25,0)	0.934	0.667	1.73	21.95	22.50	0.757	2024/11/05	
Back Side	20525/836.5	10M QPSK(25,0)	0.741	0.467	3.9	21.95	22.50	0.530	2024/11/05	
Left Side	20525/836.5	10M QPSK(25,0)	0.076	0.047	-3.34	21.95	22.50	0.053	2024/11/05	
Right Side	20525/836.5	10M QPSK(25,0)	0.972	0.689	-4.72	21.95	22.50	0.782	2024/11/05	
Bottom Side	20525/836.5	10M QPSK(25,0)	1.025	0.674	2.16	21.95	22.50	0.765	2024/11/05	

NOTE: Extremity SAR test results of LTE Band 5

10.1.10. SAR measurement Result of LTE Band 7

Test Position of Body-Worn with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date	Plot
			1-g	10-g						
1RB										
Front Side	21100/2535	20M QPSK(1,49)	0.570	0.269	0.00	22.81	23.00	0.595	2024/11/02	15#
Back Side	21100/2535	20M	0.490	0.243	-1.03	22.81	23.00	0.512	2024/11/02	

		QPSK(1,49)								
50%RB										
Front Side	21100/2535	20M QPSK(50,24)	0.541	0.231	0.79	21.81	22.00	0.565	2024/11/02	
Back Side	21100/2535	20M QPSK(50,24)	0.431	0.208	1.9	21.81	22.00	0.450	2024/11/02	

NOTE: Body-Worn SAR test results of LTE Band 7

Test Position of Hotspot with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date	Plot
			1-g	10-g						
1RB										
Front Side	21100/2535	20M QPSK(1,49)	0.570	0.269	0.00	22.81	23.00	0.595	2024/11/02	
Back Side	21100/2535	20M QPSK(1,49)	0.490	0.243	-1.03	22.81	23.00	0.512	2024/11/02	15#
Left Side	21100/2535	20M QPSK(1,49)	0.153	0.072	-2.73	22.81	23.00	0.160	2024/11/02	
Right Side	21100/2535	20M QPSK(1,49)	0.150	0.072	-3.76	22.81	23.00	0.157	2024/11/02	
Top Side	21100/2535	20M QPSK(1,49)	0.392	0.187	0.69	22.81	23.00	0.410	2024/11/02	
50%RB										
Front Side	21100/2535	20M QPSK(50,24)	0.541	0.231	0.79	21.81	22.00	0.565	2024/11/02	
Back Side	21100/2535	20M QPSK(50,24)	0.431	0.208	1.9	21.81	22.00	0.450	2024/11/02	
Left Side	21100/2535	20M QPSK(50,24)	0.142	0.067	0.96	21.81	22.00	0.148	2024/11/02	
Right Side	21100/2535	20M QPSK(50,24)	0.132	0.066	3.06	21.81	22.00	0.138	2024/11/02	
Bottom Side	21100/2535	20M QPSK(50,24)	0.348	0.168	-3.21	21.81	22.00	0.364	2024/11/02	

NOTE: Hotspot SAR test results of LTE Band 7

Test Position of Extremity with 0mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 10g (W/Kg)	Date	Plot
			1-g	10-g						
1RB										
Front Side	23095/707.5	10M QPSK(1,24)	1.092	0.648	2.35	22.42	22.50	0.660	2024/10/28	34#
Back Side	23095/707.5	10M QPSK(1,24)	0.802	0.476	0.52	22.42	22.50	0.485	2024/10/28	
Left Side	23095/707.5	10M QPSK(1,24)	0.082	0.047	-1.91	22.42	22.50	0.048	2024/10/28	
Right Side	23095/707.5	10M QPSK(1,24)	1.107	0.644	-0.76	22.42	22.50	0.656	2024/10/28	
Top Side	23095/707.5	10M QPSK(1,24)	1.123	0.647	-0.15	22.42	22.50	0.659	2024/10/28	
50%RB										
Front Side	23095/707.5	10M QPSK(25,0)	1.031	0.592	-1.59	21.56	22.00	0.655	2024/10/28	
Back Side	23095/707.5	10M QPSK(25,0)	0.739	0.438	4.88	21.56	22.00	0.485	2024/10/28	
Left Side	23095/707.5	10M QPSK(25,0)	0.077	0.04	4.82	21.56	22.00	0.044	2024/10/28	
Right Side	23095/707.5	10M QPSK(25,0)	0.994	0.582	-3.49	21.56	22.00	0.644	2024/10/28	
Bottom Side	23095/707.5	10M QPSK(25,0)	0.991	0.614	-1.96	21.56	22.00	0.679	2024/10/28	

NOTE: Extremity SAR test results of LTE Band 7

10.1.11. SAR measurement Result of LTE Band 12

Test Position of Body-Worn with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date	Plot
			1-g	10-g						
1RB										
Front Side	23095/707.5	10M QPSK(1,24)	0.179	0.122	-3.22	22.42	22.50	0.182	2024/10/28	
Back Side	23095/707.5	10M	0.190	0.130	-1.70	22.42	22.50	0.194	2024/10/28	16#

		QPSK(1,24)								
50%RB										
Front Side	23095/707.5	10M QPSK(25,0)	0.167	0.106	-0.94	21.56	22.00	0.185	2024/10/28	
Back Side	23095/707.5	10M QPSK(25,0)	0.162	0.117	0.02	21.56	22.00	0.179	2024/10/28	

NOTE: Body-Worn SAR test results of LTE Band 12

Test Position of Hotspot with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date	Plot
			1-g	10-g						
1RB										
Front Side	23095/707.5	10M QPSK(1,24)	0.179	0.122	-3.22	22.42	22.50	0.182	2024/10/28	
Back Side	23095/707.5	10M QPSK(1,24)	0.190	0.130	-1.70	22.42	22.50	0.194	2024/10/28	16#
Left Side	23095/707.5	10M QPSK(1,24)	0.042	0.028	-1.33	22.42	22.50	0.043	2024/10/28	
Right Side	23095/707.5	10M QPSK(1,24)	0.084	0.055	-2.53	22.42	22.50	0.086	2024/10/28	
Top Side	23095/707.5	10M QPSK(1,24)	0.095	0.062	-0.97	22.42	22.50	0.097	2024/10/28	
50%RB										
Front Side	23095/707.5	10M QPSK(25,0)	0.167	0.106	-0.94	21.56	22.00	0.185	2024/10/28	
Back Side	23095/707.5	10M QPSK(25,0)	0.162	0.117	0.02	21.56	22.00	0.179	2024/10/28	
Left Side	23095/707.5	10M QPSK(25,0)	0.036	0.024	0.81	21.56	22.00	0.040	2024/10/28	
Right Side	23095/707.5	10M QPSK(25,0)	0.076	0.052	-4.25	21.56	22.00	0.084	2024/10/28	
Bottom Side	23095/707.5	10M QPSK(25,0)	0.09	0.055	-2.37	21.56	22.00	0.100	2024/10/28	

NOTE: Hotspot SAR test results of LTE Band 12

Test Position of Extremity with 0mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 10g (W/Kg)	Date	Plot
			1-g	10-g						
1RB										
Front Side	23095/707.5	10M QPSK(1,24)	1.092	0.648	2.35	22.42	22.50	0.660	2024/10/28	35#
Back Side	23095/707.5	10M QPSK(1,24)	0.802	0.476	0.52	22.42	22.50	0.485	2024/10/28	
Left Side	23095/707.5	10M QPSK(1,24)	0.082	0.047	-1.91	22.42	22.50	0.048	2024/10/28	
Right Side	23095/707.5	10M QPSK(1,24)	1.107	0.644	-0.76	22.42	22.50	0.656	2024/10/28	
Top Side	23095/707.5	10M QPSK(1,24)	1.123	0.647	-0.15	22.42	22.50	0.659	2024/10/28	
50%RB										
Front Side	23095/707.5	10M QPSK(25,0)	1.031	0.592	-1.59	21.56	22.00	0.655	2024/10/28	
Back Side	23095/707.5	10M QPSK(25,0)	0.739	0.438	4.88	21.56	22.00	0.485	2024/10/28	
Left Side	23095/707.5	10M QPSK(25,0)	0.077	0.04	4.82	21.56	22.00	0.044	2024/10/28	
Right Side	23095/707.5	10M QPSK(25,0)	0.994	0.582	-3.49	21.56	22.00	0.644	2024/10/28	
Bottom Side	23095/707.5	10M QPSK(25,0)	0.991	0.614	-1.96	21.56	22.00	0.679	2024/10/28	

NOTE: Extremity SAR test results of LTE Band 12

10.1.12. SAR measurement Result of LTE Band 17

Test Position of Body-Worn with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date	Plot
			1-g	10-g						
1RB										
Front Side	23790/710	10M QPSK(1,0)	0.170	0.112	2.29	22.62	23.00	0.186	2024/10/28	
Back Side	23790/710	10M	0.181	0.125	-2.00	22.62	23.00	0.198	2024/10/28	17#

		QPSK(1,0)								
50%RB										
Front Side	23790/710	10M QPSK(25,24)	0.151	0.106	-4.37	21.73	22.00	0.161	2024/10/28	
Back Side	23790/710	10M QPSK(25,24)	0.162	0.114	-1.51	21.73	22.00	0.172	2024/10/28	

NOTE: Body-Worn SAR test results of LTE Band 17

Test Position of Hotspot with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date	Plot
			1-g	10-g						
1RB										
Front Side	23790/710	10M QPSK(1,0)	0.170	0.112	2.29	22.62	23.00	0.186	2024/10/28	
Back Side	23790/710	10M QPSK(1,0)	0.181	0.125	-2.00	22.62	23.00	0.198	2024/10/28	17#
Left Side	23790/710	10M QPSK(1,0)	0.048	0.032	-0.67	22.62	23.00	0.052	2024/10/28	
Right Side	23790/710	10M QPSK(1,0)	0.084	0.057	-0.26	22.62	23.00	0.092	2024/10/28	
Top Side	23790/710	10M QPSK(1,0)	0.095	0.065	2.08	22.62	23.00	0.104	2024/10/28	
50%RB										
Front Side	23790/710	10M QPSK(25,24)	0.151	0.106	-4.37	21.73	22.00	0.161	2024/10/28	
Back Side	23790/710	10M QPSK(25,24)	0.162	0.114	-1.51	21.73	22.00	0.172	2024/10/28	
Left Side	23790/710	10M QPSK(25,24)	0.044	0.03	4.89	21.73	22.00	0.047	2024/10/28	
Right Side	23790/710	10M QPSK(25,24)	0.072	0.052	2.51	21.73	22.00	0.077	2024/10/28	
Bottom Side	23790/710	10M QPSK(25,24)	0.081	0.058	1.19	21.73	22.00	0.086	2024/10/28	

NOTE: Hotspot SAR test results of LTE Band 17

Test Position of Extremity with 0mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 10g (W/Kg)	Date	Plot
			1-g	10-g						
1RB										
Front Side	23790/710	10M QPSK(1,24)	1.040	0.612	-1.44	22.62	23.00	0.668	2024/10/28	
Back Side	23790/710	10M QPSK(1,24)	0.755	0.468	-0.55	22.62	23.00	0.511	2024/10/28	
Left Side	23790/710	10M QPSK(1,24)	0.076	0.047	1.12	22.62	23.00	0.051	2024/10/28	
Right Side	23790/710	10M QPSK(1,24)	1.053	0.646	2.84	22.62	23.00	0.705	2024/10/28	36#
Top Side	23790/710	10M QPSK(1,24)	1.090	0.635	-1.04	22.62	23.00	0.693	2024/10/28	
50%RB										
Front Side	23790/710	10M QPSK(25,0)	0.899	0.565	2.46	21.73	22.00	0.601	2024/10/28	
Back Side	23790/710	10M QPSK(25,0)	0.717	0.412	2.5	21.73	22.00	0.438	2024/10/28	
Left Side	23790/710	10M QPSK(25,0)	0.071	0.041	3.09	21.73	22.00	0.044	2024/10/28	
Right Side	23790/710	10M QPSK(25,0)	0.927	0.576	0.69	21.73	22.00	0.613	2024/10/28	
Bottom Side	23790/710	10M QPSK(25,0)	0.936	0.602	-1.99	21.73	22.00	0.641	2024/10/28	

NOTE: Extremity SAR test results of LTE Band 17

10.1.13. SAR measurement Result of LTE Band 38

Test Position of Body-Worn with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date	Plot
			1-g	10-g						
1RB										
Front Side	38000/2595	20M QPSK(1,49)	0.347	0.167	0.66	23.03	23.50	0.387	2024/11/02	18#
Back Side	38000/2595	20M	0.302	0.148	2.10	23.03	23.50	0.337	2024/11/02	

		QPSK(1,49)								
50%RB										
Front Side	38000/2595	20M QPSK(50,24)	0.313	0.145	-0.8	22.02	22.50	0.350	2024/11/02	
Back Side	38000/2595	20M QPSK(50,24)	0.273	0.132	3.1	22.02	22.50	0.305	2024/11/02	

NOTE: Body-Worn SAR test results of LTE Band 38

Test Position of Hotspot with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date	Plot
			1-g	10-g						
1RB										
Front Side	38000/2595	20M QPSK(1,49)	0.347	0.167	0.66	23.03	23.50	0.387	2024/11/02	18#
Back Side	38000/2595	20M QPSK(1,49)	0.302	0.148	2.10	23.03	23.50	0.337	2024/11/02	
Left Side	38000/2595	20M QPSK(1,49)	0.102	0.049	-1.19	23.03	23.50	0.114	2024/11/02	
Right Side	38000/2595	20M QPSK(1,49)	0.105	0.049	2.49	23.03	23.50	0.117	2024/11/02	
Top Side	38000/2595	20M QPSK(1,49)	0.272	0.133	-3.96	23.03	23.50	0.303	2024/11/02	
50%RB										
Front Side	38000/2595	20M QPSK(50,24)	0.313	0.145	-0.8	22.02	22.50	0.350	2024/11/02	
Back Side	38000/2595	20M QPSK(50,24)	0.273	0.132	3.1	22.02	22.50	0.305	2024/11/02	
Left Side	38000/2595	20M QPSK(50,24)	0.089	0.046	4.71	22.02	22.50	0.099	2024/11/02	
Right Side	38000/2595	20M QPSK(50,24)	0.097	0.042	-3.73	22.02	22.50	0.108	2024/11/02	
Bottom Side	38000/2595	20M QPSK(50,24)	0.25	0.119	0.64	22.02	22.50	0.279	2024/11/02	

NOTE: Hotspot SAR test results of LTE Band 38

Test Position of	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 10g	Date	Plot
			1-g	10-g						

Extremity with 0mm								(W/Kg)		
1RB										
Front Side	38000/2595	20M QPSK(1,0)	2.308	1.312	0.35	23.03	23.50	1.462	2024/11/02	37#
Back Side	38000/2595	20M QPSK(1,0)	2.079	1.170	1.52	23.03	23.50	1.304	2024/11/02	
Left Side	38000/2595	20M QPSK(1,0)	0.630	0.337	0.54	23.03	23.50	0.376	2024/11/02	
Right Side	38000/2595	20M QPSK(1,0)	0.633	0.356	0.84	23.03	23.50	0.397	2024/11/02	
Top Side	38000/2595	20M QPSK(1,0)	1.672	0.941	1.29	23.03	23.50	1.049	2024/11/02	
50%RB										
Front Side	38000/2595	20M QPSK(50,0)	1.966	1.13	1.2	22.02	22.50	1.262	2024/11/02	
Back Side	38000/2595	20M QPSK(50,0)	1.896	1.029	-4.3	22.02	22.50	1.149	2024/11/02	
Left Side	38000/2595	20M QPSK(50,0)	0.567	0.307	-2.75	22.02	22.50	0.343	2024/11/02	
Right Side	38000/2595	20M QPSK(50,0)	0.549	0.305	-4.41	22.02	22.50	0.341	2024/11/02	
Bottom Side	38000/2595	20M QPSK(50,0)	1.443	0.83	0.33	22.02	22.50	0.927	2024/11/02	

NOTE: Extremity SAR test results of LTE Band 38

10.1.14. SAR measurement Result of LTE Band 41

Test Position of Body-Worn with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date	Plot
			1-g	10-g						
1RB										
Front Side	40620/2593	20M QPSK(1,49)	0.344	0.164	0.15	23.13	23.50	0.375	2024/11/02	19#
Back Side	40620/2593	20M QPSK(1,49)	0.286	0.145	0.23	23.13	23.50	0.311	2024/11/02	
50%RB										
Front Side	40620/2593	20M	0.296	0.141	-2.32	22.04	22.50	0.329	2024/11/02	

		QPSK(50,24)								
Back Side	40620/2593	20M QPSK(50,24)	0.263	0.131	2.59	22.04	22.50	0.292	2024/11/02	

NOTE: Body-Worn SAR test results of LTE Band 41

Test Position of Hotspot with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date	Plot
			1-g	10-g						
1RB										
Front Side	40620/2593	20M QPSK(1,49)	0.344	0.164	0.15	23.13	23.50	0.375	2024/11/02	19#
Back Side	40620/2593	20M QPSK(1,49)	0.286	0.145	0.23	23.13	23.50	0.311	2024/11/02	
Left Side	40620/2593	20M QPSK(1,49)	0.087	0.044	0.18	23.13	23.50	0.095	2024/11/02	
Right Side	40620/2593	20M QPSK(1,49)	0.096	0.048	1.07	23.13	23.50	0.105	2024/11/02	
Top Side	40620/2593	20M QPSK(1,49)	0.256	0.125	-3.01	23.13	23.50	0.279	2024/11/02	
50%RB										
Front Side	40620/2593	20M QPSK(50,24)	0.296	0.141	-2.32	22.04	22.50	0.329	2024/11/02	
Back Side	40620/2593	20M QPSK(50,24)	0.263	0.131	2.59	22.04	22.50	0.292	2024/11/02	
Left Side	40620/2593	20M QPSK(50,24)	0.082	0.038	3.58	22.04	22.50	0.091	2024/11/02	
Right Side	40620/2593	20M QPSK(50,24)	0.086	0.042	2.81	22.04	22.50	0.096	2024/11/02	
Bottom Side	40620/2593	20M QPSK(50,24)	0.233	0.111	-4.76	22.04	22.50	0.259	2024/11/02	

NOTE: Hotspot SAR test results of LTE Band 41

Test Position of Extremity with 0mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 10g (W/Kg)	Date	Plot
			1-g	10-g						

1RB										
Front Side	40620/2593	20M QPSK(1,0)	2.501	0.975	-0.61	23.13	23.50	1.062	2024/11/02	38#
Back Side	40620/2593	20M QPSK(1,0)	2.259	0.863	-1.36	23.13	23.50	0.940	2024/11/02	
Left Side	40620/2593	20M QPSK(1,0)	0.684	0.248	-0.52	23.13	23.50	0.270	2024/11/02	
Right Side	40620/2593	20M QPSK(1,0)	0.678	0.259	-1.56	23.13	23.50	0.282	2024/11/02	
Top Side	40620/2593	20M QPSK(1,0)	1.832	0.686	1.59	23.13	23.50	0.747	2024/11/02	
50%RB										
Front Side	40620/2593	20M QPSK(50,0)	1.491	0.55	-4.19	22.04	22.50	0.611	2024/11/02	
Back Side	40620/2593	20M QPSK(50,0)	1.304	0.468	-1.38	22.04	22.50	0.520	2024/11/02	
Left Side	40620/2593	20M QPSK(50,0)	0.398	0.147	-2.47	22.04	22.50	0.163	2024/11/02	
Right Side	40620/2593	20M QPSK(50,0)	0.378	0.143	2.05	22.04	22.50	0.159	2024/11/02	
Bottom Side	40620/2593	20M QPSK(50,0)	0.939	0.362	2.25	22.04	22.50	0.402	2024/11/02	

NOTE: Extremity SAR test results of LTE Band 41

10.1.15. SAR measurement Result of WLAN2.4G

Test Position of Body-Worn with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date	Plot
			1-g	10-g						
Front Side	11/2462	802.11b	0.104	0.052	2.59	14.98	15.00	0.104	2024/11/03	
Back Side	11/2462	802.11b	0.207	0.104	-1.03	14.98	15.00	0.208	2024/11/03	11#

NOTE: Body-worn SAR test results of WLAN2.4G

Test Position of Hotspot with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date	Plot
			1-g	10-g						
Front Side	11/2462	802.11b	0.104	0.052	2.59	14.98	15.00	0.104	2024/11/03	

Back Side	11/2462	802.11b	0.207	0.104	-1.03	14.98	15.00	0.208	2024/11/03	11#
Left Side	11/2462	802.11b	0.137	0.067	1.86	14.98	15.00	0.138	2024/11/03	
Top Side	11/2462	802.11b	0.125	0.061	1.24	14.98	15.00	0.126	2024/11/03	

NOTE: Hotspot SAR test results of WLAN2.4G

Test Position of Extremity with 0mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 10g (W/Kg)	Date	Plot
			1-g	10-g						
Front Side	11/2462	802.11b	0.392	0.171	-3.06	14.98	15.00	0.172	2024/11/03	
Back Side	11/2462	802.11b	0.861	0.375	-0.62	14.98	15.00	0.377	2024/11/03	30#
Left Side	11/2462	802.11b	0.579	0.250	-0.11	14.98	15.00	0.251	2024/11/03	
Top Side	11/2462	802.11b	0.455	0.190	-2.21	14.98	15.00	0.191	2024/11/03	

NOTE: Extremity SAR test results of WLAN 2.4G

10.1.16. SAR measurement Result of WLAN5.2G

Test Position of Body-Worn with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date	Plot
			1-g	10-g						
Front Side	36/5180	802.11a	0.028	0.022	-3.11	12.53	13.00	0.031	2024/10/24	
Back Side	36/5180	802.11a	0.060	0.049	0.35	12.53	13.00	0.067	2024/10/24	

NOTE: Body-worn SAR test results of WLAN5.2G

Test Position of Hotspot with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date	Plot
			1-g	10-g						
Front Side	36/5180	802.11a	0.028	0.022	-3.11	12.53	13.00	0.031	2024/10/24	
Back Side	36/5180	802.11a	0.060	0.049	0.35	12.53	13.00	0.067	2024/10/24	
Left Side	36/5180	802.11a	0.032	0.026	3.01	12.53	13.00	0.036	2024/10/24	
Top Side	36/5180	802.11a	0.064	0.054	2.46	12.53	13.00	0.071	2024/10/24	7#

NOTE: Hotspot SAR test results of WLAN5.2G

Test Position of Extremity with 0mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 10g (W/Kg)	Date	Plot
			1-g	10-g						
Front Side	36/5180	802.11a	0.131	0.049	-3.98	12.53	13.00	0.055	2024/10/24	
Back Side	36/5180	802.11a	0.288	0.109	4.82	12.53	13.00	0.121	2024/10/24	
Left Side	36/5180	802.11a	0.155	0.057	-3.57	12.53	13.00	0.064	2024/10/24	
Top Side	36/5180	802.11a	0.313	0.118	-4.63	12.53	13.00	0.131	2024/10/24	26#

NOTE: Extremity SAR test results of WLAN 5.2G

10.1.17. SAR measurement Result of WLAN5.3G

Test Position of Body-Worn with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date	Plot
			1-g	10-g						
Front Side	56/5280	802.11ac VHT20	0.030	0.018	2.55	11.31	11.50	0.031	2024/10/25	
Back Side	56/5280	802.11ac VHT20	0.051	0.042	1.81	11.31	11.50	0.053	2024/10/25	

NOTE: Body-worn SAR test results of WLAN5.3G

Test Position of Hotspot with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date	Plot
			1-g	10-g						
Front Side	56/5280	802.11ac VHT20	0.030	0.018	2.55	11.31	11.50	0.031	2024/10/25	
Back Side	56/5280	802.11ac VHT20	0.051	0.042	1.81	11.31	11.50	0.053	2024/10/25	
Left Side	56/5280	802.11ac VHT20	0.038	0.026	-1.29	11.31	11.50	0.040	2024/10/25	
Top Side	56/5280	802.11ac VHT20	0.069	0.057	3.88	11.31	11.50	0.072	2024/10/25	8#

NOTE: Body-worn SAR test results of WLAN5.3G

Test Position of	Test channel	Test Mode	SAR Value (W/kg)	Power Drift	Conducted power	Tune-up power	Scaled SAR 10g	Date	Plot

Extremity with 0mm	/Freq.		1-g	10-g	(±5%)	(dBm)	(dBm)	(W/Kg)		
Front Side	56/5280	802.11ac VHT20	0.132	0.049	0.12	11.31	11.50	0.051	2024/10/25	
Back Side	56/5280	802.11ac VHT20	0.284	0.107	1.29	11.31	11.50	0.112	2024/10/25	
Left Side	56/5280	802.11ac VHT20	0.150	0.054	-1.07	11.31	11.50	0.056	2024/10/25	
Top Side	56/5280	802.11ac VHT20	0.383	0.134	-3.63	11.31	11.50	0.140	2024/10/25	27#

NOTE: Extremity SAR test results of WLAN 5.3G

10.1.18. SAR measurement Result of WLAN5.6G

Test Position of Body-Worn with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date	Plot
			1-g	10-g						
Front Side	102/5510	802.11ac (VHT40)	0.103	0.081	-0.52	12.01	12.50	0.115	2024/11/04	
Back Side	102/5510	802.11ac (VHT40)	0.068	0.052	0.43	12.01	12.50	0.076	2024/11/04	

NOTE: Body-worn SAR test results of WLAN5.6G

Test Position of Hotspot with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date	Plot
			1-g	10-g						
Front Side	102/5510	802.11ac (VHT40)	0.103	0.081	-0.52	12.01	12.50	0.115	2024/11/04	
Back Side	102/5510	802.11ac (VHT40)	0.068	0.052	0.43	12.01	12.50	0.076	2024/11/04	
Left Side	102/5510	802.11ac (VHT40)	0.088	0.076	-2.07	12.01	12.50	0.099	2024/11/04	
Top Side	102/5510	802.11ac (VHT40)	0.144	0.088	0.40	12.01	12.50	0.161	2024/11/04	#28

NOTE: Body-worn SAR test results of WLAN5.6G

Test Position of Extremity with 0mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 10g (W/Kg)	Date	Plot
			1-g	10-g						
Front Side	102/5510	802.11ac (VHT40)	0.720	0.283	1.55	12.01	12.50	0.317	2024/11/04	
Back Side	102/5510	802.11ac (VHT40)	0.426	0.169	-1.50	12.01	12.50	0.189	2024/11/04	11#
Left Side	102/5510	802.11ac (VHT40)	0.552	0.215	2.36	12.01	12.50	0.241	2024/11/04	
Top Side	102/5510	802.11ac (VHT40)	1.024	0.288	-3.18	12.01	12.50	0.322	2024/11/04	

NOTE: Extremity SAR test results of WLAN 5.6G

10.1.19. SAR measurement Result of WLAN5.8G

Test Position of Body-Worn with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date	Plot
			1-g	10-g						
Front Side	149/5745	802.11a	0.136	0.083	-1.04	8.65	9.00	0.147	2024/10/26	
Back Side	149/5745	802.11a	0.158	0.101	-0.31	8.65	9.00	0.171	2024/10/26	

NOTE: Body-worn SAR test results of WLAN5.8G

Test Position of Hotspot with 10mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date	Plot
			1-g	10-g						
Front Side	149/5745	802.11a	0.136	0.083	-1.04	8.65	9.00	0.147	2024/10/26	
Back Side	149/5745	802.11a	0.158	0.101	-0.31	8.65	9.00	0.171	2024/10/26	
Left Side	149/5745	802.11a	0.128	0.079	-3.53	8.65	9.00	0.139	2024/10/26	
Top Side	149/5745	802.11a	0.219	0.125	0.98	8.65	9.00	0.237	2024/10/26	10#

NOTE: Body-worn SAR test results of WLAN5.8G

Test Position of Extremity with 0mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 10g (W/Kg)	Date	Plot
			1-g	10-g						

Front Side	149/5745	802.11a	0.736	0.317	0.91	8.65	9.00	0.344	2024/10/26	
Back Side	149/5745	802.11a	0.424	0.188	2.14	8.65	9.00	0.204	2024/10/26	
Left Side	149/5745	802.11a	0.540	0.237	2.29	8.65	9.00	0.257	2024/10/26	
Top Side	149/5745	802.11a	1.366	0.371	-1.68	8.65	9.00	0.402	2024/10/26	29#

NOTE: Extremity SAR test results of WLAN 5.8G

10.2. Simultaneous Transmission Analysis

Per KDB 447498 D01, simultaneous transmission SAR is compliant if,

1) Scalar SAR summation < 1.6W/kg.

2) SPLSR = $(SAR_1 + SAR_2)^{1.5}$ / (min. separation distance, mm), and the peak separation distance is determined from the square root of $[(x_1-x_2)^2 + (y_1-y_2)^2 + (z_1-z_2)^2]$, where (x_1, y_1, z_1) and (x_2, y_2, z_2) are the coordinates of the extrapolated peak SAR locations in the zoom scan. If SPLSR ≤ 0.04, simultaneously transmission SAR measurement is not necessary.

Test Position		Scaled SAR_{MAX}		∑1-g SAR (W/Kg)	SPLSR	Remark
		WWAN	DTS			
Body-Worn	Front Side	1.147	0.104	1.251	N/A	N/A
	Back Side	0.889	0.208	1.097	N/A	N/A
Hotspot	Front Side	1.147	0.104	1.251	N/A	N/A
	Back Side	0.889	0.208	1.097	N/A	N/A
	Left Side	0.183	0.138	0.321	N/A	N/A
	Right Side	0.740	N/A	0.740	N/A	N/A
	Top Side	0.798	0.126	0.924	N/A	N/A
	Bottom Side	N/A	N/A	N/A	N/A	N/A
Extremity	Front Side	3.411	0.172	3.583	N/A	N/A
	Back Side	2.586	0.377	2.963	N/A	N/A
	Left Side	0.545	0.251	0.796	N/A	N/A
	Right Side	2.584	N/A	2.584	N/A	N/A
	Top Side	3.432	0.191	3.623	N/A	N/A
	Bottom Side	N/A	N/A	N/A	N/A	N/A

Test Position		Scaled SAR_{MAX}		∑1-g SAR (W/Kg)	SPLSR	Remark
		WWAN	NII			
Body-Worn	Front Side	1.147	0.147	1.294	N/A	N/A
	Back Side	0.889	0.171	1.06	N/A	N/A
Hotspot	Front Side	1.147	0.147	1.294	N/A	N/A
	Back Side	0.889	0.171	1.06	N/A	N/A
	Left Side	0.183	0.139	0.322	N/A	N/A
	Right Side	0.740	N/A	0.740	N/A	N/A
	Top Side	0.798	0.237	1.035	N/A	N/A
	Bottom Side	N/A	N/A	N/A	N/A	N/A
Extremity	Front Side	3.411	0.344	3.755	N/A	N/A
	Back Side	2.586	0.204	2.79	N/A	N/A
	Left Side	0.545	0.257	0.802	N/A	N/A
	Right Side	2.584	N/A	2.584	N/A	N/A
	Top Side	3.432	0.402	3.834	N/A	N/A
	Bottom Side	N/A	N/A	N/A	N/A	N/A

Test Position		Scaled SAR_{MAX}		∑1-g SAR (W/Kg)	SPLSR	Remark
		WWAN	DSS			
Body-Worn	Front Side	1.147	0.053	1.200	N/A	N/A
	Back Side	0.889	0.053	0.942	N/A	N/A
Hotspot	Front Side	1.147	0.053	1.200	N/A	N/A
	Back Side	0.889	0.053	0.942	N/A	N/A
	Left Side	0.183	0.053	0.236	N/A	N/A
	Right Side	0.740	0.053	0.793	N/A	N/A
	Top Side	0.798	0.053	0.851	N/A	N/A
	Bottom Side	N/A	0.053	1.158	N/A	N/A
Extremity	Front Side	3.411	0.262	3.673	N/A	N/A
	Back Side	2.586	0.262	2.848	N/A	N/A
	Left Side	0.545	0.262	0.807	N/A	N/A
	Right Side	2.584	0.262	2.846	N/A	N/A

	Top Side	3.432	0.262	3.694	N/A	N/A
	Bottom Side	N/A	0.262	0.262	N/A	N/A

11. Appendix A. Photo documentation

Refer to appendix Test Setup photo---SAR

12. Appendix B. System Check Plots

Table of contents
MEASUREMENT 1 System Performance Check - 750MHz
MEASUREMENT 2 System Performance Check - 835MHz
MEASUREMENT 3 System Performance Check - 1800MHz
MEASUREMENT 4 System Performance Check - 1900MHz
MEASUREMENT 5 System Performance Check - 2450MHz
MEASUREMENT 6 System Performance Check - 2600MHz
MEASUREMENT 7 System Performance Check - 5200MHz
MEASUREMENT 8 System Performance Check - 5400MHz
MEASUREMENT 9 System Performance Check - 5600MHz
MEASUREMENT 10 System Performance Check - 5800MHz

MEASUREMENT 1

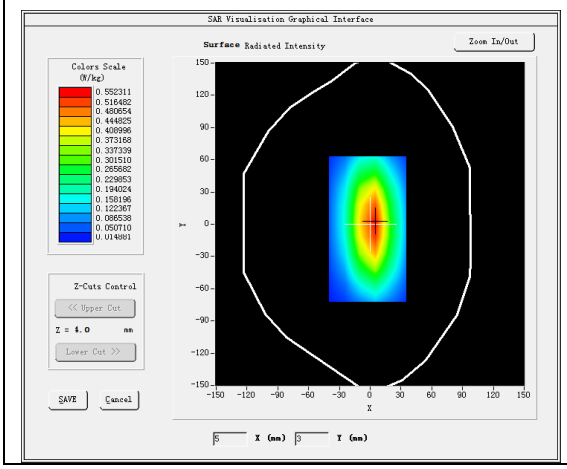
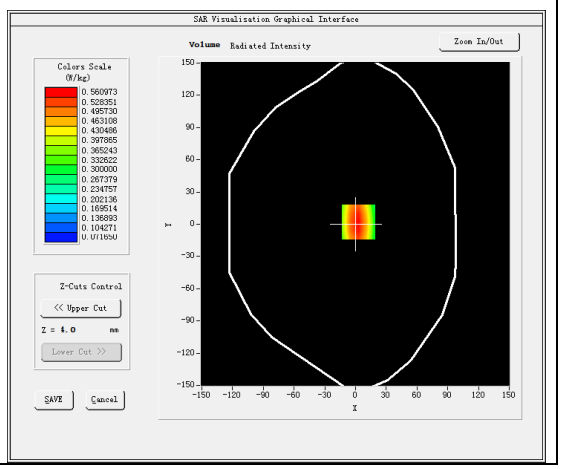
Date of measurement: 28/10/2024

A. Experimental conditions.

Area Scan	dx=15mm dy=15mm, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Dipole
Band	CW750
Channels	Middle
Signal	CW (Crest factor: 1.0)
ConvF	2.42

B. SAR Measurement Results

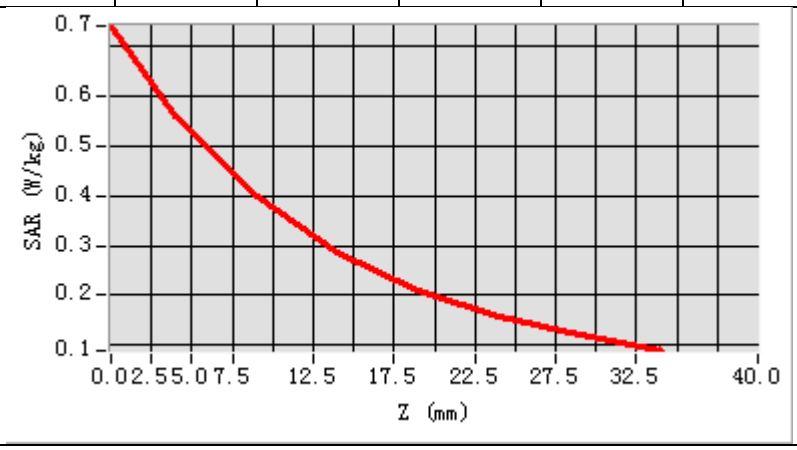
Frequency (MHz)	750.000000
Relative permittivity (real part)	41.017045
Relative permittivity (imaginary part)	21.616004
Conductivity (S/m)	0.900667
Variation (%)	-0.440000

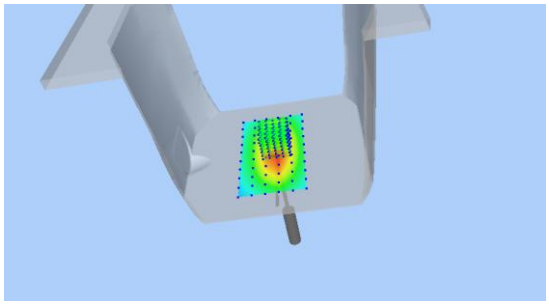
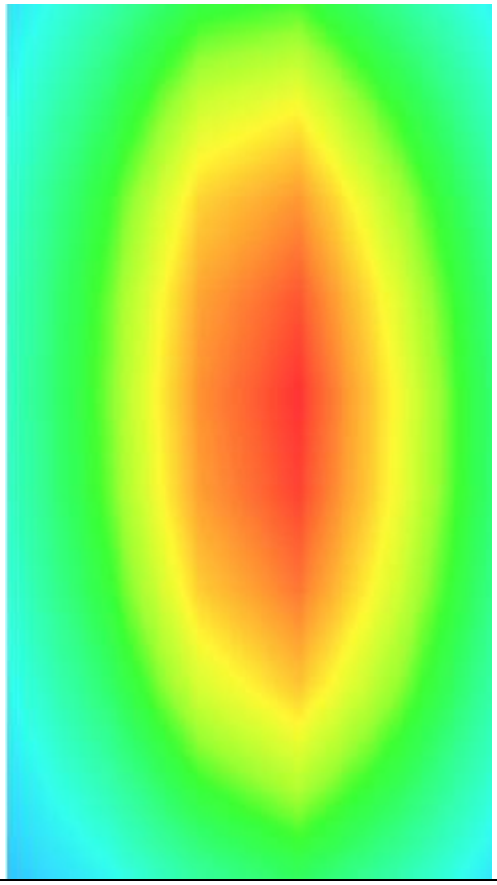
SURFACE SAR	**VOLUME SAR**
	

Maximum location: X=3.00, Y=2.00
SAR Peak: 0.74 W/kg

SAR 10g (W/Kg)	0.366519
SAR 1g (W/Kg)	0.543682

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.7397	0.5610	0.3983	0.2872	0.2110	0.1579	0.1199



3D screen shot	Hot spot position
	

MEASUREMENT 2

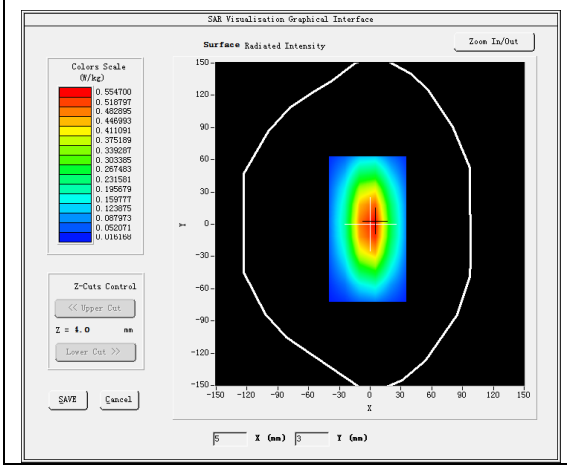
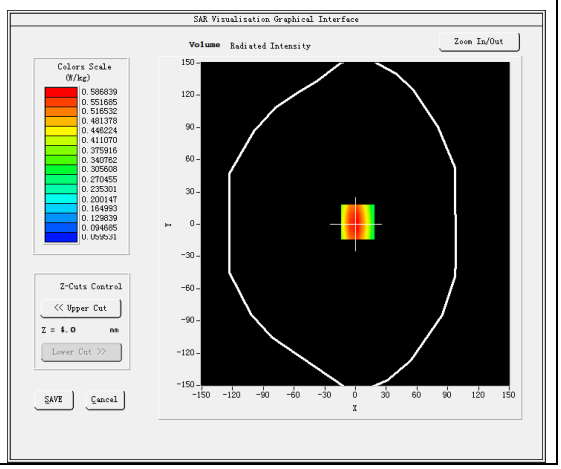
Date of measurement: 5/11/2024

A. Experimental conditions.

Area Scan	dx=15mm dy=15mm, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Dipole
Band	CW835
Channels	Middle
Signal	CW (Crest factor: 1.0)
ConvF	2.34

B. SAR Measurement Results

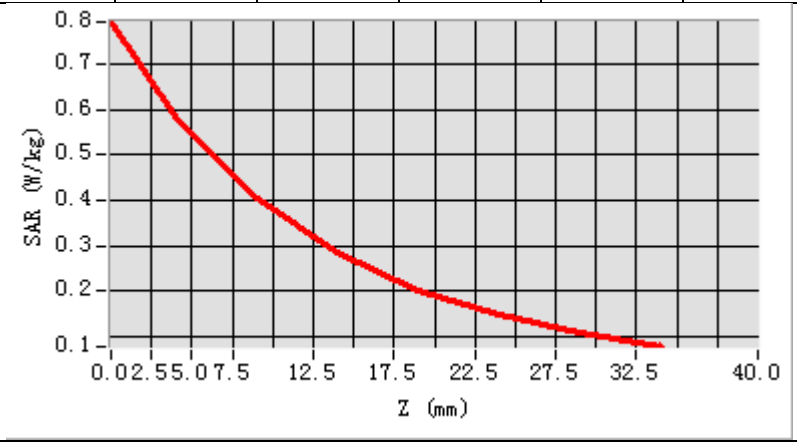
Frequency (MHz)	835.000000
Relative permittivity (real part)	42.082089
Relative permittivity (imaginary part)	19.827689
Conductivity (S/m)	0.919784
Variation (%)	-0.290000

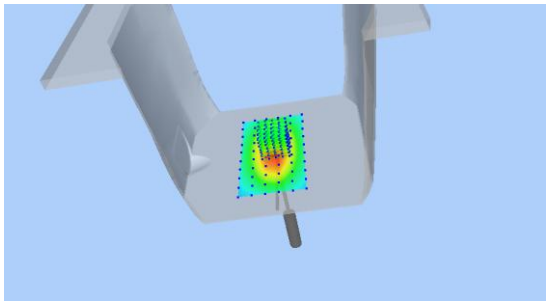
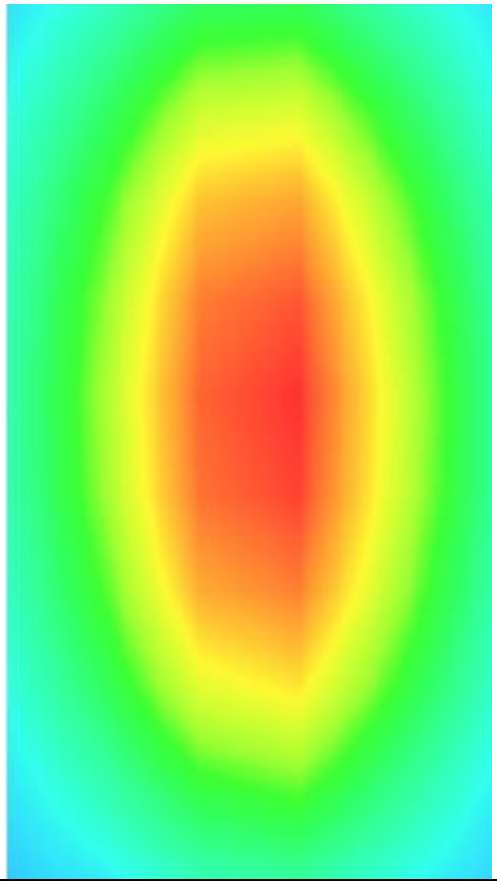
SURFACE SAR	VOLUME SAR
	

Maximum location: X=2.00, Y=2.00
SAR Peak: 0.80 W/kg

SAR 10g (W/Kg)	0.375866
SAR 1g (W/Kg)	0.574581

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.7931	0.5868	0.4045	0.2847	0.2035	0.1487	0.1091



3D screen shot	Hot spot position
	

MEASUREMENT 3

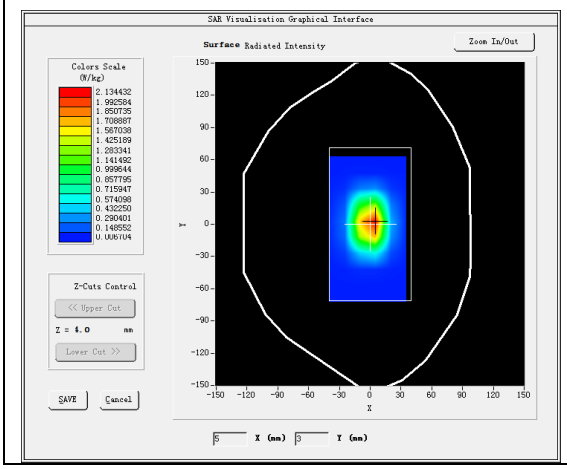
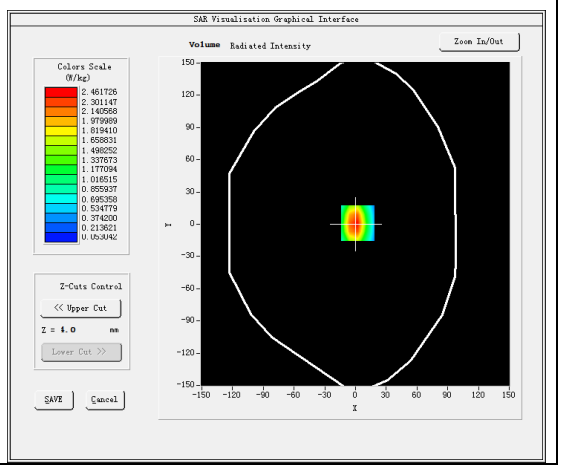
Date of measurement: 30/10/2024

A. Experimental conditions.

Area Scan	dx=15mm dy=15mm, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Dipole
Band	CW1800
Channels	Middle
Signal	CW (Crest factor: 1.0)
ConvF	2.51

B. SAR Measurement Results

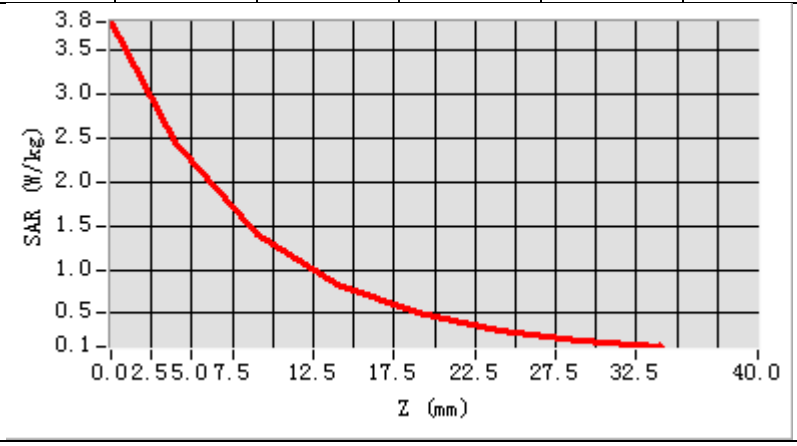
Frequency (MHz)	1800.000000
Relative permittivity (real part)	39.225225
Relative permittivity (imaginary part)	13.982463
Conductivity (S/m)	1.398246
Variation (%)	-0.280000

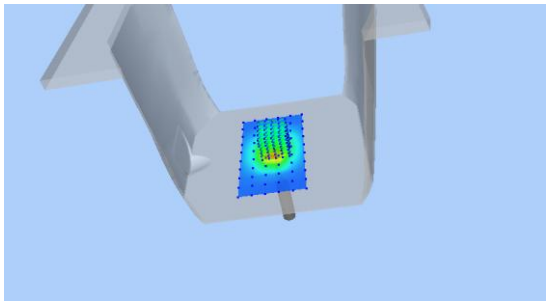
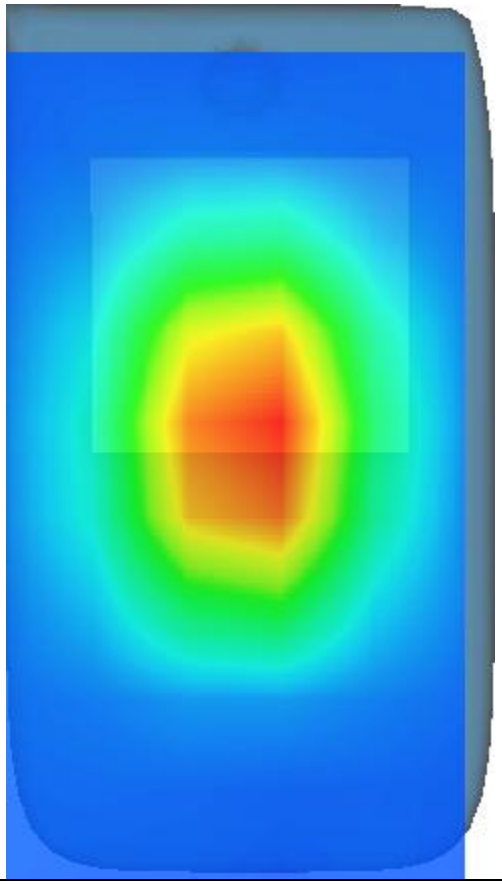
SURFACE SAR	**VOLUME SAR**
	

Maximum location: X=2.00, Y=1.00
SAR Peak: 3.95 W/kg

SAR 10g (W/Kg)	1.238802
SAR 1g (W/Kg)	2.386329

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	3.8200	2.4617	1.4020	0.8260	0.5042	0.3104	0.1967



3D screen shot	Hot spot position
	

MEASUREMENT 4

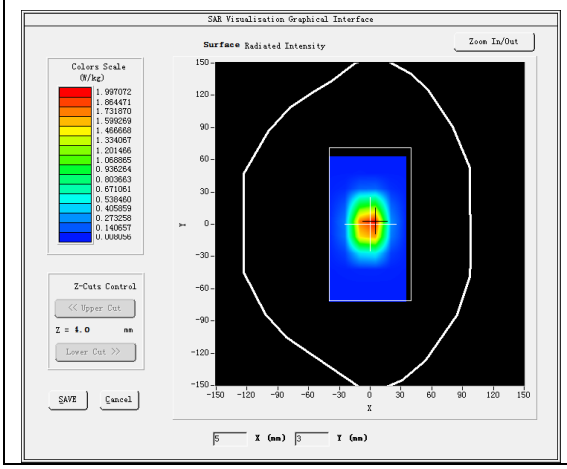
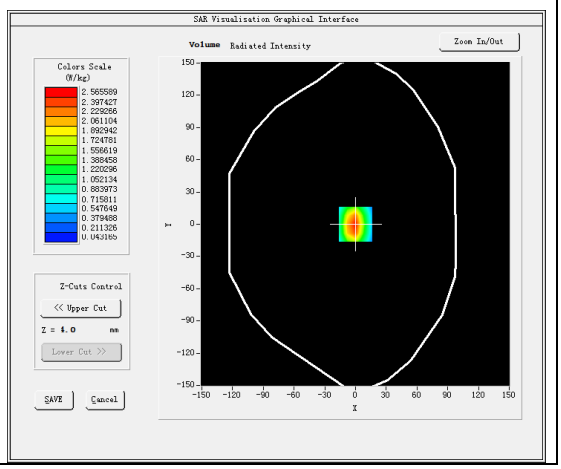
Date of measurement: 6/11/2024

A. Experimental conditions.

Area Scan	dx=15mm dy=15mm, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Dipole
Band	CW1900
Channels	Middle
Signal	CW (Crest factor: 1.0)
ConvF	2.57

B. SAR Measurement Results

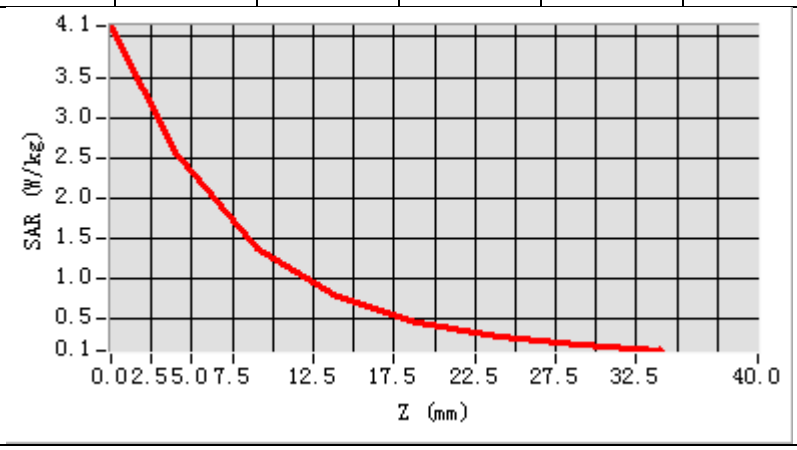
Frequency (MHz)	1900.000000
Relative permittivity (real part)	38.476233
Relative permittivity (imaginary part)	13.797089
Conductivity (S/m)	1.456359
Variation (%)	-0.450000

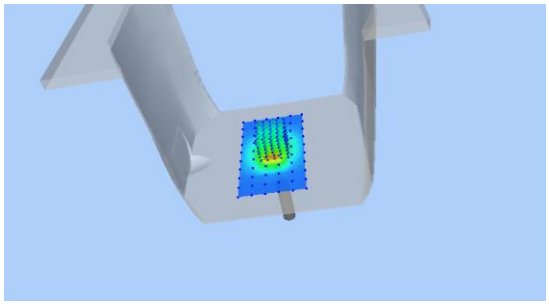
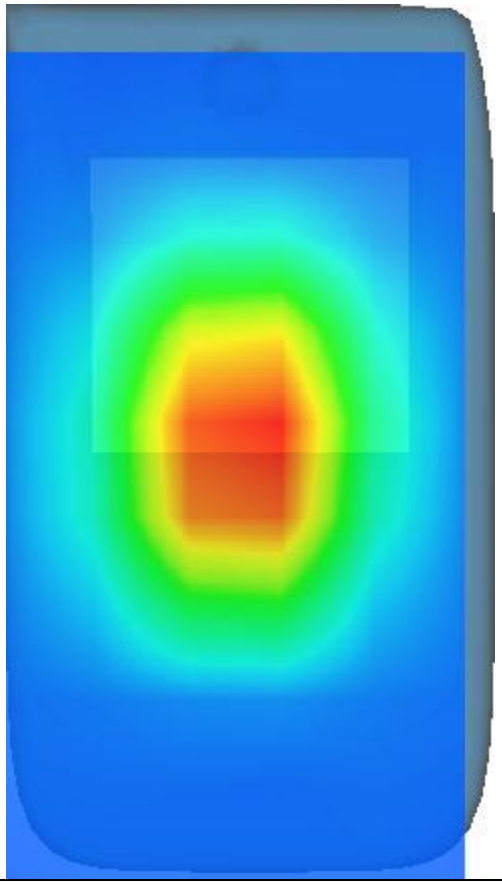
SURFACE SAR	**VOLUME SAR**
	

Maximum location: X=0.00, Y=0.00
SAR Peak: 4.16 W/kg

SAR 10g (W/Kg)	1.235526
SAR 1g (W/Kg)	2.510543

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	4.1361	2.5656	1.3787	0.7727	0.4513	0.2662	0.1622



3D screen shot	Hot spot position
	

MEASUREMENT 5

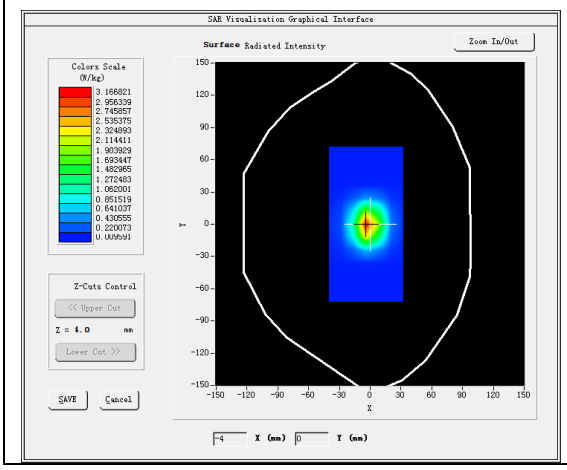
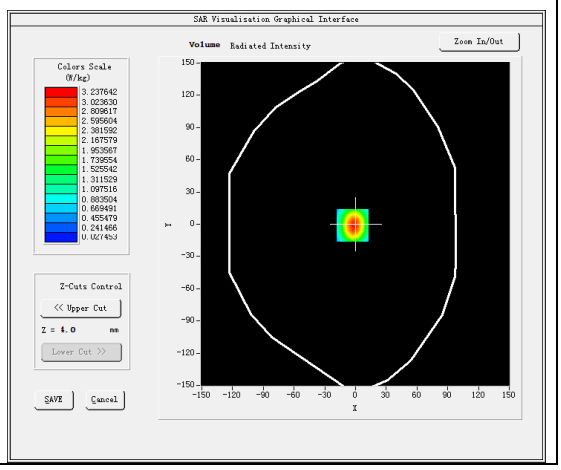
Date of measurement: 3/11/2024

A. Experimental conditions.

Area Scan	dx=12mm dy=12mm, h= 5.00 mm
ZoomScan	7x7x7,dx=5mm dy=5mm dz=5mm
Phantom	Validation plane
Device Position	Dipole
Band	CW2450
Channels	Middle
Signal	CW (Crest factor: 1.0)
ConvF	2.74

B. SAR Measurement Results

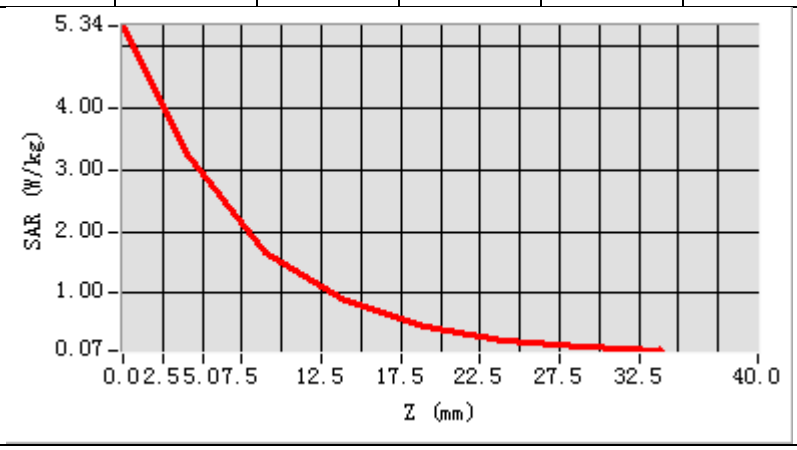
Frequency (MHz)	2450.000000
Relative permittivity (real part)	37.838986
Relative permittivity (imaginary part)	13.085579
Conductivity (S/m)	1.781093
Variation (%)	3.070000

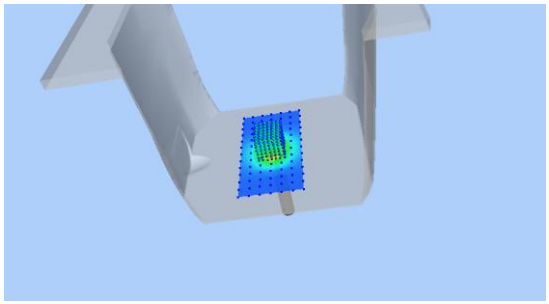
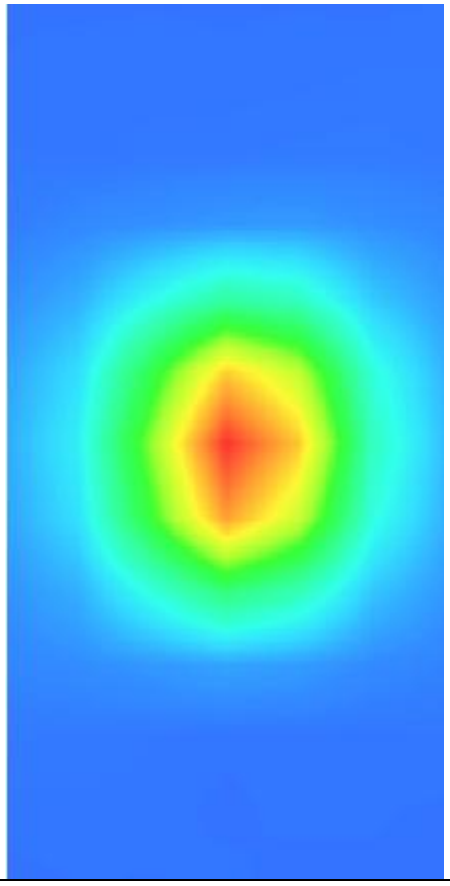
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-3.00, Y=-1.00
SAR Peak: 5.31 W/kg

SAR 10g (W/Kg)	1.426298
SAR 1g (W/Kg)	2.989339

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	5.3357	3.2376	1.6533	0.8643	0.4478	0.2325	0.1245



3D screen shot	Hot spot position
	

MEASUREMENT 6

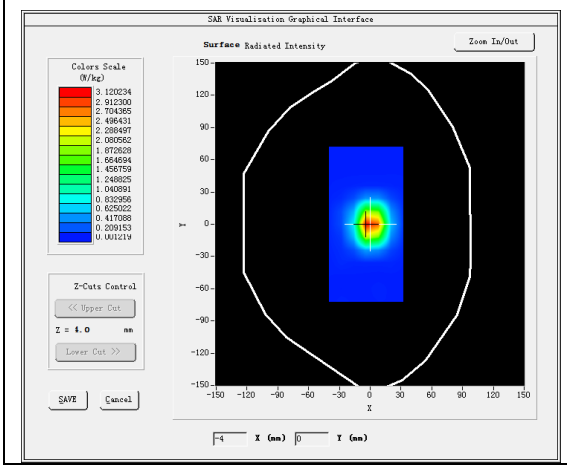
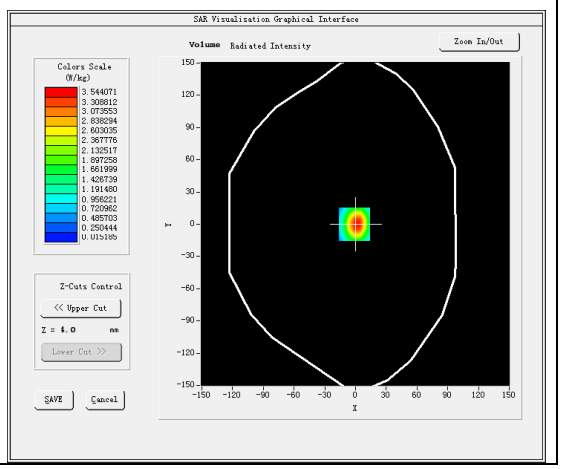
Date of measurement: 2/11/2024

A. Experimental conditions.

Area Scan	dx=12mm dy=12mm, h= 5.00 mm
ZoomScan	7x7x7,dx=5mm dy=5mm dz=5mm
Phantom	Validation plane
Device Position	Dipole
Band	CW2600
Channels	Middle
Signal	CW (Crest factor: 1.0)
ConvF	2.51

B. SAR Measurement Results

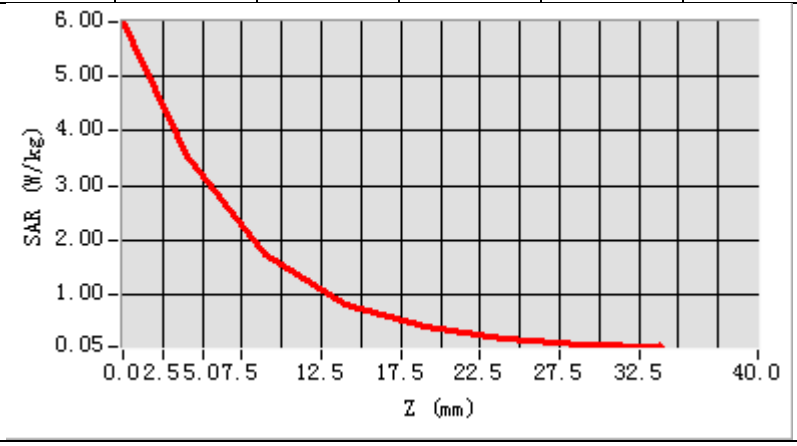
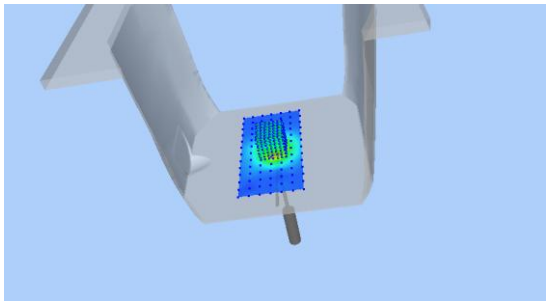
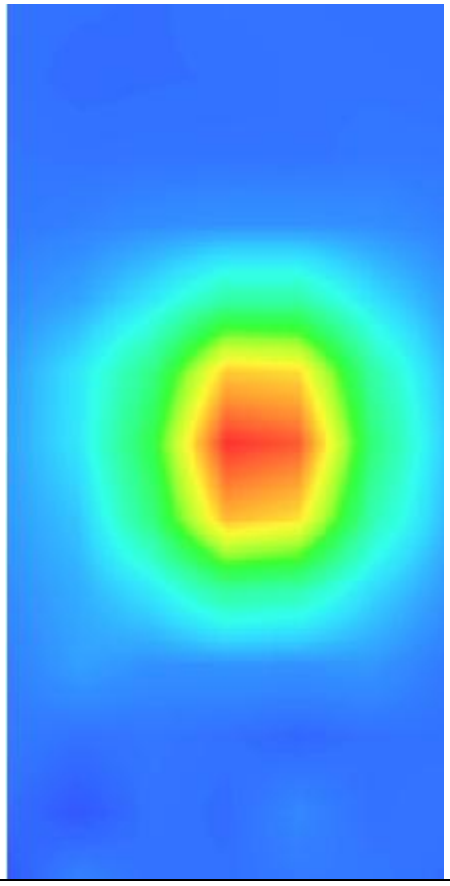
Frequency (MHz)	2600.000000
Relative permittivity (real part)	39.025963
Relative permittivity (imaginary part)	13.848930
Conductivity (S/m)	2.000401
Variation (%)	0.520000

SURFACE SAR	**VOLUME SAR**
	

Maximum location: X=-1.00, Y=0.00
SAR Peak: 6.08 W/kg

SAR 10g (W/Kg)	1.538222
SAR 1g (W/Kg)	3.386007

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	5.9985	3.5441	1.7218	0.8347	0.3998	0.1933	0.0928



3D screen shot	Hot spot position