

FCC SAR EVALUATION REPORT

**In accordance with the requirements of
FCC 47 CFR Part 2(2.1093), ANSI/IEEE C95.1-1992 and
IEEE Std 1528-2013**

Product Name : 4G MIFI

Trademark : FIRSTNUM/Stoneoim/VPLUS

Model Name : FIRSTNUM-M4

M4021, FIRSTNUM-G1,
FIRSTNUM-G2, FIRSTNUM-G3,
FIRSTNUM-G4, FIRSTNUM-G5,
FIRSTNUM-G6, FIRSTNUM-G7,
FIRSTNUM-G8, FIRSTNUM-G9,

Family Model : FIRSTNUM-G10, FIRSTNUM-G11,
FIRSTNUM-G12, FIRSTNUM-G13,
FIRSTNUM-G14, FIRSTNUM-G15,
FIRSTNUM-G16, FIRSTNUM-G17,
FIRSTNUM-G18, FIRSTNUM-G19,
FIRSTNUM-G20

FCC ID : 2A954-M4021

Report No. : S24111904902004

Prepared for

Shenzhen Firstnum E-commerce Co., Ltd

611 BUILDING 11, PHASE II, NANSHANYUNGU CHUANGYUAN PARK, NO.2
PINGSHANYI ROAD, PINGSHAN COMMUNITY, TAOYUAN STREET, NANSHAN DISTRICT,
SHENZHEN, China

Prepared by

Shenzhen NTEK Testing Technology Co., Ltd.

No. 24 Xinfu East Road, Xiangshan Community, Xinqiao Street, Baoan District,
Shenzhen, Guangdong, People's Republic of China

Tel. 0755-23200050 Website: <http://www.ntek.org.cn>

TEST RESULT CERTIFICATION**Applicant's name**.....: Shenzhen Firstnum E-commerce Co.,LtdAddress.....: 611 BUILDING 11,PHASE II, NANSHANYUNGU CHUANGYUAN
PARK, NO.2 PINGSHANYIROAD, PINGSHANCOMMUNITY,
TAOYUAN STREET, NANSHAN DISTRICT, SHENZHEN,China**Manufacturer's Name**.....: Shenzhen Firstnum E-commerce Co.,LtdAddress.....: 611 BUILDING 11,PHASE II, NANSHANYUNGU CHUANGYUAN
PARK, NO.2 PINGSHANYIROAD, PINGSHANCOMMUNITY,
TAOYUAN STREET, NANSHAN DISTRICT, SHENZHEN,China**Product description**

Product name.....: 4G MIFI

Trademark: FIRSTNUM/Stoneoim/VPLUS

Model Name: FIRSTNUM-M4

Family Model.....: M4021, FIRSTNUM-G1, FIRSTNUM-G2, FIRSTNUM-G3, FIRSTNUM-G4,
FIRSTNUM-G5, FIRSTNUM-G6, FIRSTNUM-G7, FIRSTNUM-G8,
FIRSTNUM-G9, FIRSTNUM-G10, FIRSTNUM-G11, FIRSTNUM-G12,
FIRSTNUM-G13, FIRSTNUM-G14, FIRSTNUM-G15, FIRSTNUM-G16,
FIRSTNUM-G17, FIRSTNUM-G18, FIRSTNUM-G19, FIRSTNUM-G20

FCC 47 CFR Part 2(2.1093);

Standards.....: ANSI/IEEE C95.1-1992

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) and ANSI/IEEE C95.1-1992. 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..... S241119049003

Date of Test

Date (s) of performance of tests.....: Nov. 02, 2024 ~Dec. 09, 2024

Date of Issue: Dec.24, 2024

Test Result: **Pass**Prepared By: Owen Xiao
Owen Xiao
(Project Engineer)Reviewed By: Aaron Cheng
Aaron Cheng
(Supervisor)Approved By: Alex Li
Alex Li
(Manager)

※ ※ Revision History ※ ※

REV.	DESCRIPTION	ISSUED DATE	REMARK
Rev.1.0	Initial Test Report Release	Dec.24, 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	24
5.1. SAR measurement variability.....	24
5.2. SAR measurement uncertainty	25
6. RF Exposure Positions	26
6.1. Tablet host platform exposure conditions.....	26
7. RF Output Power	27
7.1. GSM Conducted Power	27
7.2. WCDMA Conducted Power	28
7.3. LTE Conducted Power	29
7.4. WLAN & Bluetooth Output Power	45
7.4.1. Output Power Results Of WLAN	45
8. Antenna Location.....	47
9. SAR Results	47
9.1. SAR measurement results.....	47

9.1.1.	SAR measurement Result of GSM850.....	47
9.1.2.	SAR measurement Result of GSM1900.....	48
9.1.3.	SAR measurement Result of WCDMA Band 2.....	48
9.1.4.	SAR measurement Result of WCDMA Band 4.....	49
9.1.5.	SAR measurement Result of WCDMA Band 5.....	50
9.1.6.	SAR measurement Result of LTE Band 2	50
9.1.7.	SAR measurement Result of LTE Band 4	52
9.1.8.	SAR measurement Result of LTE Band 5	53
9.1.9.	SAR measurement Result of LTE Band 7	55
9.1.10.	SAR measurement Result of LTE Band 12	56
9.1.11.	SAR measurement Result of LTE Band 17	57
9.1.12.	SAR measurement Result of LTE Band 41	58
9.1.13.	SAR measurement Result of LTE Band 66	59
9.1.14.	SAR measurement Result of WLAN 2.4G	60
9.1.15.	SAR measurement Result of WLAN 5.2G	61
9.2.	SAR Summation Scenario.....	62
10.	Appendix A. Photo documentation	62
11.	Appendix B. System Check Plots.....	63
12.	Appendix C. Plots of High SAR Measurement.....	79
13.	Appendix D. Calibration Certificate	110

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
1.6 W/kg
APPLIED TO THIS EUT

1.2. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for FIRSTNUM-M4 are as follows.

RF Exposure Conditions		Equipment Class -Highest Reported SAR (W/kg)			
		PCE	DTS	NII	DSS
1-g Body-Worn (Separation distance of 10mm)		0.960	0.111	0.168	N/A
1-g Hotspot (Separation distance of 10mm)		0.960	0.120	0.168	N/A
Max Simultaneous Tx	Body-Worn	1.128	1.032	1.128	N/A
	Hotspot	1.128	1.032	1.128	N/A

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) specified in FCC 47 CFR Part 2(2.1093) and ANSI/IEEE C95.1-1992, 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	4G MIFI
Trade Name	FIRSTNUM/Stoneoim/VPLUS
Model Name	FIRSTNUM-M4
Family Model	M4021, FIRSTNUM-G1, FIRSTNUM-G2, FIRSTNUM-G3, FIRSTNUM-G4, FIRSTNUM-G5, FIRSTNUM-G6, FIRSTNUM-G7, FIRSTNUM-G8, FIRSTNUM-G9, FIRSTNUM-G10, FIRSTNUM-G11, FIRSTNUM-G12, FIRSTNUM-G13, FIRSTNUM-G14, FIRSTNUM-G15, FIRSTNUM-G16, FIRSTNUM-G17, FIRSTNUM-G18, FIRSTNUM-G19, FIRSTNUM-G20
Model Difference	All models are the same circuit and RF module, except for model names.
FCC ID	2A954-M4021
Device Phase	Identical Prototype
Exposure Category	General population / Uncontrolled environment
Antenna	FPC Antenna
Battery	DC 3.7V, 3000mAh, 11.1Wh
Hardware version	CSM91_MB_V1.0
Software version	1.04ME/FN
Device Operating Configurations	
Supporting Mode(s)	GSM 850/1900, WCDMA Band 2/5, LTE Band 2/4/5/7/12/41, WLAN 2.4G/5G

Test Modulation	GSM(GMSK/8PSK), WCDMA(QPSK), LTE(QPSK/16QAM), WLAN(DSSS/OFDM)		
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 41	2555-2655	
	LTE Band 66	1710-1780	2110-2200
	WLAN 2.4G	2412-2462	
	WLAN 5.2G	5180-5240	
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 41)		
	3, tested with power control all Max.(LTE Band 66)		

1.4. Test specification(s)

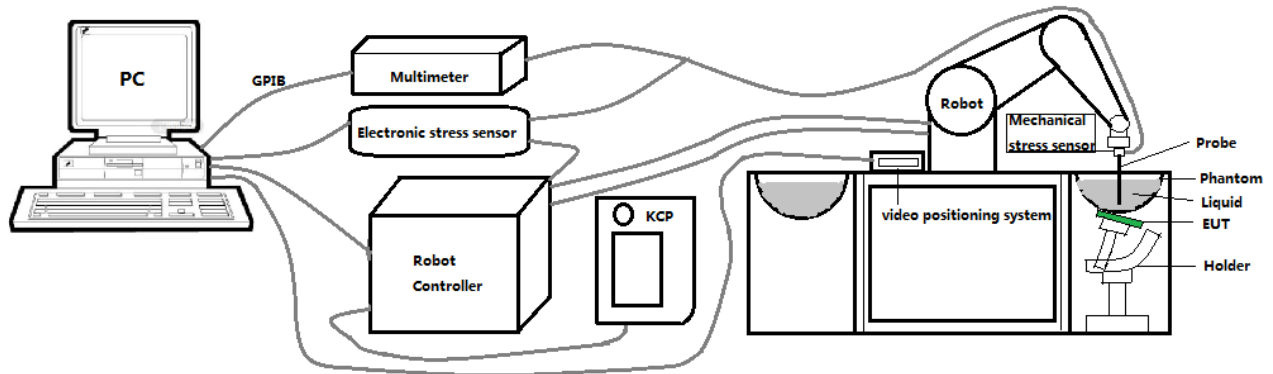
FCC 47 CFR Part 2(2.1093)
ANSI/IEEE C95.1-1992
IEEE Std 1528-2013
KDB 865664 D01 SAR measurement 100 MHz to 6 GHz v01r04;
KDB 865664 D02 RF Exposure Reporting v01r02;
KDB 447498 D01 General RF Exposure Guidance v06;
KDB 248227 D01 802.11 Wi-Fi SAR v02r02;
KDB 941225 D01 3G SAR Procedures v02r01;
KDB 941225 D05 SAR for LTE Devices v01r02;
KDB 941225 D06 Hotspot SAR v02r01

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 SN 08/16 EPGO287 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: ± 0.08 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 $\pm 10\%$. The spherical isotropy shall be evaluated and within ± 0.25 dB. 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

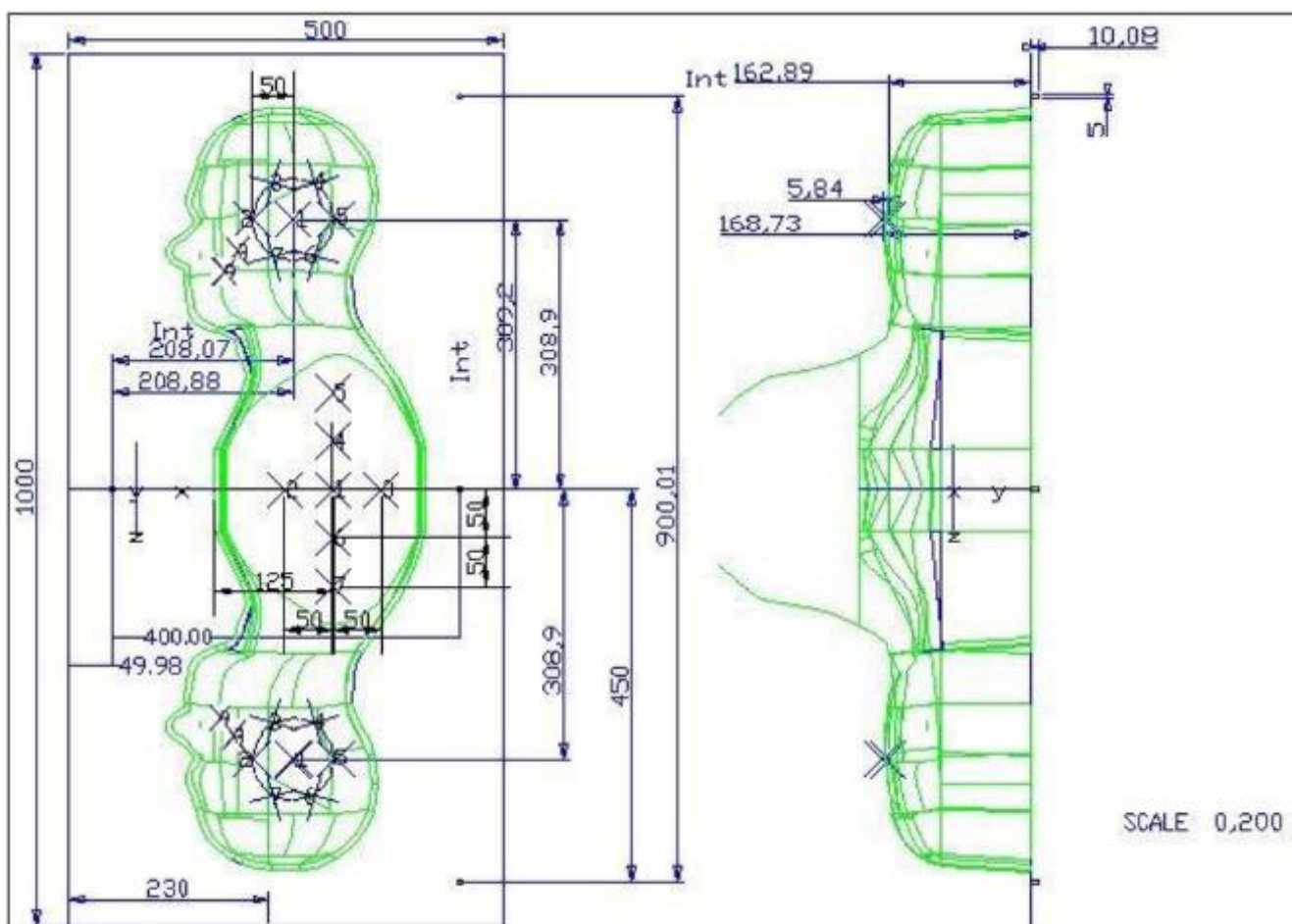
Photo of SAM phantom SN 16/15 SAM119



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

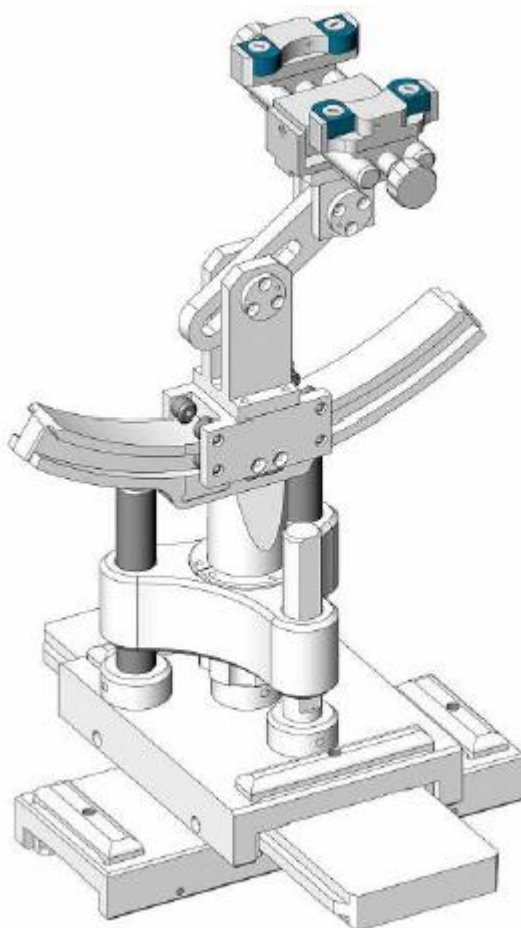


Serial Number	Left Head(mm)		Right Head(mm)		Flat Part(mm)	
SN 16/15 SAM119	2	2.02	2	2.08	1	2.09
	3	2.05	3	2.06	2	2.06
	4	2.07	4	2.07	3	2.08
	5	2.08	5	2.08	4	2.10
	6	2.05	6	2.07	5	2.10
	7	2.05	7	2.05	6	2.07
	8	2.07	8	2.06	7	2.07
	9	2.08	9	2.06	-	-

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	E5071C	LPS-461	Oct. 15, 2024	Oct. 14, 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	May. 30, 2024	May. 29, 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 WLAN/Bluetooth power measurement, use engineering software to configure EUT WLAN/Bluetooth 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 WLAN/Bluetooth output power.

<SAR measurement>

- (a) Use base station simulator to configure EUT WWAN transmission in radiated connection, and engineering software to configure EUT WLAN/Bluetooth 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	$\frac{1}{2} \cdot \delta \cdot \ln(2) \pm 0.5$ mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location			30° ± 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: Δz _{Zoom} (n)		≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm
	graded grid	Δz _{Zoom} (1): between 1 st two points closest to phantom surface	≤ 4 mm	3 – 4 GHz: ≤ 3 mm 4 – 5 GHz: ≤ 2.5 mm 5 – 6 GHz: ≤ 2 mm
		Δz _{Zoom} (n>1): between subsequent points	≤ 1.5 · Δz _{Zoom} (n-1)	
Minimum zoom scan volume	x, y, z		≥ 30 mm	3 – 4 GHz: ≥ 28 mm 4 – 5 GHz: ≥ 25 mm 5 – 6 GHz: ≥ 22 mm
Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details.				
* When zoom scan is required and the <i>reported</i> SAR from the <i>area scan based 1-g SAR estimation</i> 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 $\pm 5\%$, 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	5000
Water	34.40	34.40	34.40	55.36	55.36	71.88	71.88	71.88	65.53
NaCl	0.79	0.79	0.79	0.35	0.35	0.16	0.16	0.16	0.00
1,2-Propanediol	64.81	64.81	64.81	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	17.24
DGBE	0.00	0.00	0.00	13.84	13.84	7.99	7.99	7.99	0.00

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 if the dielectric parameters are within the tolerances of the specified target values. The measured conductivity and relative permittivity should be within $\pm 5\%$ of the target values.

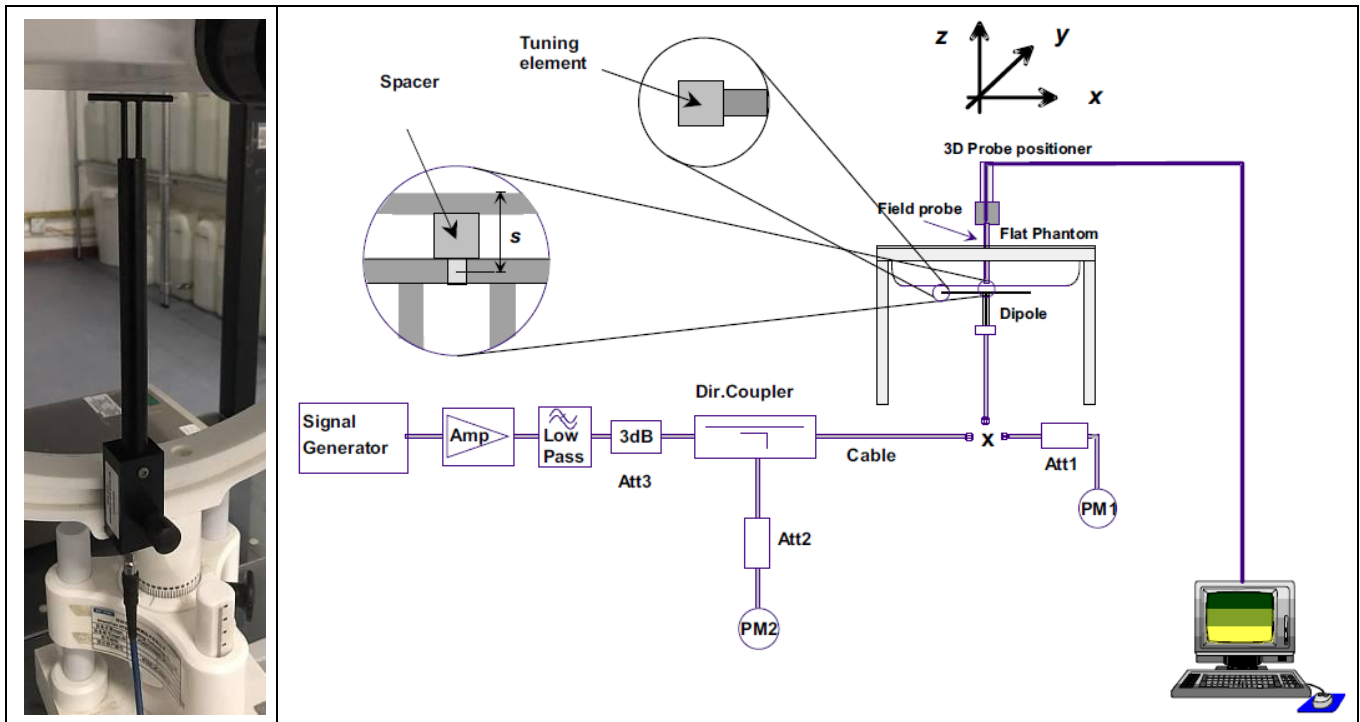
Tissue Type	Measured Frequency (MHz)	Target Tissue		Measured Tissue		Liquid Temp.	Test Date
		$\epsilon_r (\pm 5\%)$	σ (S/m) ($\pm 5\%$)	ϵ_r	σ (S/m)		
Head 750	750	41.96 (39.86~44.06)	0.89 (0.85~0.93)	40.87	0.90	21.0 °C	Nov. 27, 2024
Head 850	835	41.50 (39.43~43.58)	0.90 (0.86~0.95)	41.93	0.91	21.5 °C	Nov. 26, 2024
Head 1800	1800	40.00 (38.00~42.00)	1.40 (1.33~1.47)	38.97	1.37	21.5 °C	Dec. 06, 2024
Head 1900	1900	40.00 (38.00~42.00)	1.40 (1.33~1.47)	38.33	1.44	21.7 °C	Nov. 24, 2024
Head 1900	1900	40.00 (38.00~42.00)	1.40 (1.33~1.47)	38.46	1.46	21.6 °C	Dec. 09, 2024
Head 2450	2450	39.20 (37.24~41.16)	1.80 (1.71~1.89)	37.96	1.80	21.2 °C	Nov. 18, 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)	34.61	4.53	21.9 °C	Nov. 19, 2024
Head 5800	5800	35.30 (33.54~37.07)	5.27 (5.01~5.53)	34.03	5.17	21.4 °C	Nov. 30, 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 $\pm 10\%$. 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) ($\pm 10\%$)		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	0.543	0.367	8.61	5.82	21.0 °C	Nov. 27, 2024
835MHz	9.40 (8.46~10.34)	6.28 (5.65~6.91)	18dBm	0.574	0.376	9.10	5.96	21.5 °C	Nov. 26, 2024
1800MHz	37.06 (33.35~40.77)	20.01 (18.01~22.01)	18dBm	2.273	1.176	36.02	18.64	21.5 °C	Dec. 06, 2024
1900MHz	39.69 (35.72~43.66)	20.92 (18.83~23.01)	18dBm	2.510	1.231	39.78	19.51	21.7 °C	Nov. 24, 2024
1900MHz	39.69 (35.72~43.66)	20.92 (18.83~23.01)	18dBm	2.396	1.181	37.97	18.72	21.6 °C	Dec. 09, 2024
2450MHz	50.05 (45.05~55.06)	23.80 (21.42~26.18)	18dBm	3.347	1.404	53.04	22.25	21.2 °C	Nov. 18, 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)	18dBm	9.747	3.356	154.47	53.19	21.9 °C	Nov. 19, 2024
5800MHz	182.20 (163.98~200.42)	61.32 (55.19~67.45)	20dBm	19.246	6.543	192.46	65.43	21.4 °C	Nov. 30, 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 ($\sim 10\%$ from the 1-g SAR limit).
- 4) Perform a third repeated measurement only if the original, first or second repeated measurement is ≥ 1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20 .

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. Tablet host platform exposure conditions

Refer to KDB616217 D04, when the modular approach is used, transmitters and modules must be initially tested for standalone operations in generic host conditions according to the following minimum test separation distance and antenna installation requirements for incorporation in the tablet platform. The separation distance required for incorporation in qualified hosts is described in KDB 447498; item 5) of section 4.1 and item 1) of section 5.2.2 etc.

- ≤ 5 mm between the antenna and user for both back surface and edge exposure conditions
- the antennas used by the host must have been tested for equipment approval or qualify for SAR test exclusion
- the antenna polarization, physical orientation, rotation and installation configurations used by the host must have been tested for compliance or qualify for test exclusion
- when the *SAR Test Exclusion Threshold* in KDB 447498 applies, a *test separation distance* of 5 mm is required to determine test exclusion for the tablet platform

The antennas embedded in tablets are typically ≤ 5 mm from the outer housing. The required antenna to user test separation distance is a “not to exceed test” distance required to apply the modular approach. Instead of the typical zero gap tablet edge test requirement between the edge of a tablet and the user, when an antenna has been tested at ≤ 5 mm according to the modular approach it can be incorporated into tablets with at least twice the tested distance from the outer housing of the tablet edge; otherwise, the tablet edge zero gap test requirement applies. When the dedicated host approach is applied, the back surface and edges of the tablet should be tested for SAR compliance with the tablet touching the phantom.

7. RF Output Power

7.1. GSM Conducted Power

Band GSM850	Burst-Averaged output Power (dBm)				Frame-Averaged output Power (dBm)			
Tx Channel	Tune -	128	189	251	Tune -	128	189	251
Frequency (MHz)	up (dBm)	824.2	836.4	848.8	up (dBm)	824.2	836.4	848.8
GPRS(GMSK, 1 TS)	32.00	31.66	31.48	31.54	22.97	22.63	22.45	22.51
GPRS(GMSK, 2 TS)	30.00	29.68	29.53	29.57	23.98	23.66	23.51	23.55
GPRS(GMSK, 3 TS)	28.00	27.77	27.63	27.67	23.74	23.51	23.37	23.41
GPRS(GMSK, 4 TS)	26.00	25.88	25.77	25.78	22.99	22.87	22.76	22.77
EGPRS(8PSK, 1 TS)	25.00	24.74	24.63	24.34	15.97	15.71	15.60	15.31
EGPRS(8PSK, 2 TS)	25.00	24.07	24.13	24.60	18.98	18.05	18.11	18.58
EGPRS(8PSK, 3 TS)	23.50	22.98	23.46	23.01	19.24	18.72	19.20	18.75
EGPRS(8PSK, 4 TS)	21.50	21.04	20.99	20.98	18.49	18.03	17.98	17.97
Band GSM1900	Burst-Averaged output Power (dBm)				Frame-Averaged output Power (dBm)			
Tx Channel	Tune -	512	661	810	Tune -	512	661	810
Frequency (MHz)	up (dBm)	1850.2	1880	1909.8	up (dBm)	1850.2	1880	1909.8
GPRS(GMSK, 1 TS)	30.50	30.16	30.19	30.01	21.47	21.13	21.16	20.98
GPRS(GMSK, 2 TS)	28.50	27.94	28.07	28.08	22.48	21.92	22.05	22.06
GPRS(GMSK, 3 TS)	26.50	26.32	26.45	26.48	22.24	22.06	22.19	22.22
GPRS(GMSK, 4 TS)	24.50	24.32	24.47	24.45	21.49	21.31	21.46	21.44
EGPRS(8PSK, 1 TS)	25.00	24.89	24.68	24.14	15.97	15.86	15.65	15.11
EGPRS(8PSK, 2 TS)	25.50	25.20	24.89	24.20	19.48	19.18	18.87	18.18
EGPRS(8PSK, 3 TS)	24.00	23.56	22.93	22.99	19.74	19.30	18.67	18.73
EGPRS(8PSK, 4 TS)	21.50	21.02	20.79	19.90	18.49	18.01	17.78	16.89

Note: The frame-averaged power is linearly scaled the maximum burst averaged power over 8 time slots. The calculated method are shown as below:

Frame-averaged power = Maximum burst averaged power (1 Tx Slot) - 9.03 dB

Frame-averaged power = Maximum burst averaged power (2 Tx Slots) - 6.02 dB

Frame-averaged power = Maximum burst averaged power (3 Tx Slots) - 4.26 dB

Frame-averaged power = Maximum burst averaged power (4 Tx Slots) - 3.01 dB

7.2. WCDMA Conducted Power

WCDMA Band 2		Burst-Averaged output Power (dBm)			
Tx Channel	Tune-up (dBm)	9262	9400	9538	
Frequency (MHz)		1852.4	1880	1907.6	
RMC12.2K	23.50	23.01	22.88	22.75	
HSDPA Sub 1	23.00	22.57	22.19	22.09	
HSDPA Sub 2	22.50	22.19	21.97	21.71	
HSDPA Sub 3	22.00	21.80	21.69	21.57	
HSDPA Sub 4	22.00	21.70	21.16	21.36	
HSUPA Sub 1	22.50	22.30	22.04	21.97	
HSUPA Sub 2	22.50	22.36	22.05	21.98	
HSUPA Sub 3	22.00	21.87	21.77	21.44	
HSUPA Sub 4	22.50	22.25	22.04	21.89	
HSUPA Sub 5	22.00	21.93	21.93	21.63	
WCDMA Band 4		Burst-Averaged output Power (dBm)			
Tx Channel	Tune-up (dBm)	1312	1413	1513	
Frequency (MHz)		1712.4	1732.6	1752.6	
RMC12.2K	23.00	22.54	22.65	22.81	
HSDPA Sub 1	22.50	21.97	21.59	22.13	
HSDPA Sub 2	22.00	21.62	21.28	21.93	
HSDPA Sub 3	22.00	21.32	21.03	21.55	
HSDPA Sub 4	22.00	21.22	20.94	21.55	
HSUPA Sub 1	22.50	21.90	21.73	22.14	
HSUPA Sub 2	22.50	21.90	21.61	22.13	
HSUPA Sub 3	22.50	21.47	21.24	22.03	
HSUPA Sub 4	22.50	21.87	21.61	22.13	
HSUPA Sub 5	22.00	21.65	21.38	21.88	
WCDMA Band 5		Burst-Averaged output Power (dBm)			
Tx Channel	Tune-up (dBm)	4132	4182	4233	
Frequency (MHz)		826.4	836.4	846.6	
RMC12.2K	23.00	22.53	22.42	22.54	
HSDPA Sub 1	22.50	22.26	22.11	22.09	
HSDPA Sub 2	22.00	21.95	21.86	21.76	
HSDPA Sub 3	22.00	21.37	21.53	21.03	
HSDPA Sub 4	22.00	21.55	21.41	21.14	
HSUPA Sub 1	22.50	22.16	22.13	21.85	

HSUPA Sub 2	22.50	22.18	22.05	22.18
HSUPA Sub 3	22.00	21.73	21.67	21.57
HSUPA Sub 4	22.50	22.21	22.09	22.12
HSUPA Sub 5	22.50	22.06	21.76	21.77

7.3. 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	23.21	23.37	23.14
			1	2	24.00	-18.58	23.46	23.29
			1	5	24.00	-52.76	23.60	23.09
			3	0	23.50	23.18	23.10	22.85
			3	1	23.50	22.79	23.23	22.76
			3	2	23.50	23.26	23.20	22.74
			6	0	22.50	22.40	22.31	22.02
		16QAM	1	0	23.00	22.71	22.85	22.08
			1	2	23.00	22.61	22.92	22.76
			1	5	23.00	22.68	22.87	22.69
			3	0	23.00	22.91	22.72	22.42
			3	1	23.00	22.95	22.65	22.35
			3	2	23.00	22.87	22.72	22.32
			6	0	22.00	21.57	21.44	21.06
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	23.61	23.37	22.96
			1	7	24.00	23.53	23.56	22.96
			1	14	24.00	23.79	23.76	22.88
			8	0	23.00	22.43	22.38	22.06
			8	4	23.00	22.50	22.39	22.02
			8	7	23.00	22.49	22.37	22.03
			15	0	22.50	22.48	22.33	22.07
		16QAM	1	0	23.00	22.59	22.27	22.87
			1	7	23.00	22.65	22.22	22.83
			1	14	23.00	22.64	22.39	22.63
			8	0	22.00	21.90	21.65	21.53
			8	4	22.00	21.93	21.68	21.50
			8	7	22.00	21.91	21.74	21.49

			15	0	22.00	21.85	21.65	21.40
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	23.52	23.53	23.23
			1	12	24.00	23.84	23.54	23.12
			1	24	24.00	23.94	23.54	22.76
			12	0	22.50	22.48	22.38	22.09
			12	6	22.50	22.40	22.30	22.08
			12	11	22.50	22.45	22.34	22.07
			25	0	22.50	22.43	22.33	21.99
		16QAM	1	0	23.00	22.60	22.53	22.19
			1	12	23.00	22.73	22.66	22.18
			1	24	23.00	22.66	22.54	22.08
			12	0	22.00	21.85	21.72	21.45
			12	6	22.00	21.83	21.72	21.39
			12	11	22.00	21.83	21.69	21.43
			25	0	22.00	21.97	21.88	21.40
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	23.50	23.36	23.26	23.21
			1	24	23.50	23.38	23.33	23.26
			1	49	23.50	23.39	23.40	23.10
			25	0	23.00	22.47	22.35	22.12
			25	12	23.00	22.50	22.33	22.16
			25	24	23.00	22.44	22.34	22.09
			50	0	22.50	22.49	22.31	22.14
		16QAM	1	0	23.50	23.31	22.58	23.16
			1	24	23.50	23.44	22.60	23.00
			1	49	23.50	23.32	22.70	22.82
			25	0	22.00	21.74	21.87	21.44
			25	12	22.00	21.73	21.93	21.39
			25	24	22.00	21.73	21.96	21.34
			50	0	22.00	21.73	21.71	21.46
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	15MHz	QPSK	1	0	24.00	23.34	23.31	23.31

Band 2			1	37	24.00	23.63	23.38	23.41
			1	74	24.00	23.65	23.44	23.03
			36	0	22.50	22.48	22.37	22.33
			36	18	22.50	22.49	22.44	22.12
			36	37	22.50	22.49	22.43	22.10
			75	0	22.50	22.40	22.33	22.25
		16QAM	1	0	23.50	23.37	22.67	23.36
			1	37	23.50	23.39	22.59	23.05
			1	74	23.50	23.31	22.79	22.73
			36	0	22.00	21.84	21.71	21.64
			36	18	22.00	21.69	21.79	21.48
			36	37	22.00	21.79	21.76	21.41
			75	0	22.00	21.82	21.67	21.55
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	24.00	23.61	23.60	23.76
			1	49	24.00	23.64	23.59	23.49
			1	99	24.00	23.90	23.72	23.20
			50	0	23.00	22.58	22.28	22.47
			50	24	23.00	22.48	22.36	22.27
			50	49	23.00	22.43	22.47	22.18
			100	0	22.50	22.49	22.45	22.40
		16QAM	1	0	23.00	22.67	22.19	22.52
			1	49	23.00	22.77	22.33	22.24
			1	99	23.00	22.59	22.42	21.96
			50	0	22.00	21.82	21.69	21.78
			50	24	22.00	21.78	21.71	21.61
			50	49	22.00	21.76	21.73	21.50
			100	0	22.00	21.82	21.73	21.73

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	23.03	23.61	23.32
			1	2	24.00	23.08	23.85	23.48
			1	5	24.00	23.04	23.87	23.43
			3	0	23.50	23.20	23.37	23.24
			3	1	23.50	23.24	23.44	23.10

				3	2	23.50	23.24	23.37	23.08
				6	0	23.00	22.34	22.51	22.31
				1	0	24.00	22.65	23.67	22.82
				1	2	24.00	22.57	23.76	22.86
				1	5	24.00	22.59	23.57	22.93
				3	0	23.50	22.86	23.08	23.06
				3	1	23.50	22.74	23.04	23.08
				3	2	23.50	22.70	22.99	23.10
				6	0	22.00	21.51	21.66	21.55
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	23.31	23.35	23.23	
			1	7	24.00	23.34	23.41	23.45	
			1	14	24.00	23.48	23.59	23.50	
			8	0	23.00	22.32	22.60	22.41	
			8	4	23.00	22.31	22.62	22.38	
			8	7	23.00	22.29	22.56	22.39	
			15	0	23.00	22.28	22.58	22.31	
		16QAM	1	0	24.00	23.38	23.57	23.36	
			1	7	24.00	23.34	23.70	23.53	
			1	14	24.00	23.35	23.71	23.30	
			8	0	22.50	21.70	21.99	21.83	
			8	4	22.50	21.64	22.01	21.74	
			8	7	22.50	21.71	22.05	21.84	
			15	0	22.00	21.65	22.00	21.88	
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	23.57	23.73	23.54	
			1	12	24.00	23.54	23.86	23.79	
			1	24	24.00	23.55	23.90	23.77	
			12	0	23.00	22.27	22.61	22.37	
			12	6	23.00	22.31	22.57	22.37	
			12	11	23.00	22.27	22.65	22.37	
			25	0	23.00	22.27	22.55	22.37	
		16QAM	1	0	23.00	22.56	22.84	22.68	
			1	12	23.00	22.52	22.82	22.59	

			1	24	23.00	22.49	22.81	22.63
			12	0	22.00	21.66	21.93	21.75
			12	6	22.00	21.61	21.92	21.78
			12	11	22.00	21.61	21.97	21.67
			25	0	22.00	21.84	21.85	21.86
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	23.28	23.38	23.38
			1	24	24.00	23.55	23.77	23.43
			1	49	24.00	23.55	23.89	23.58
			25	0	23.00	22.25	22.52	22.44
			25	12	23.00	22.23	22.55	22.40
			25	24	23.00	22.21	22.62	22.42
			50	0	23.00	22.25	22.53	22.43
		16QAM	1	0	24.00	22.61	23.43	23.30
			1	24	24.00	22.50	23.62	23.37
			1	49	24.00	22.62	23.71	23.34
			25	0	22.00	21.76	21.81	21.69
			25	12	22.00	21.79	21.90	21.66
			25	24	22.00	21.75	21.85	21.66
			50	0	22.00	21.55	21.87	21.79
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	23.56	23.35	23.45
			1	37	24.00	23.54	23.53	23.33
			1	74	24.00	23.84	23.99	23.23
			36	0	23.00	22.31	22.46	22.49
			36	18	23.00	22.22	22.58	22.41
			36	37	23.00	22.27	22.64	22.41
			75	0	23.00	22.24	22.55	22.47
		16QAM	1	0	24.00	22.49	23.37	23.64
			1	37	24.00	22.69	23.58	23.54
			1	74	24.00	22.81	23.76	23.41
			36	0	22.00	21.64	21.79	21.71
			36	18	22.00	21.65	21.85	21.69

			36	37	22.00	21.66	21.91	21.65
			75	0	22.00	21.53	21.98	21.90
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	23.57	23.40	23.50
			1	49	24.00	23.53	23.58	23.64
			1	99	24.00	23.81	23.73	23.52
			50	0	23.00	22.27	22.44	22.56
			50	24	23.00	22.24	22.60	22.52
			50	49	23.00	22.42	22.58	22.46
			100	0	23.00	22.29	22.46	22.50
		16QAM	1	0	24.00	23.31	22.67	22.65
			1	49	24.00	23.30	22.94	22.89
			1	99	24.00	23.65	23.09	22.99
			50	0	22.00	21.48	21.83	21.94
			50	24	22.00	21.63	21.89	21.80
			50	49	22.00	21.66	21.98	21.74
			100	0	22.00	21.63	21.94	21.86

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	24.00	23.16	23.58	23.57
			1	2	24.00	23.12	23.64	23.55
			1	5	24.00	23.17	23.78	23.57
			3	0	23.50	23.25	23.35	23.32
			3	1	23.50	23.31	23.35	23.25
			3	2	23.50	23.29	23.33	23.24
			6	0	22.50	22.26	22.38	22.29
		16QAM	1	0	23.00	22.50	22.37	22.03
			1	2	23.00	22.34	22.50	22.05
			1	5	23.00	22.46	22.35	22.07
			3	0	23.00	22.60	22.88	22.26
			3	1	23.00	22.62	22.79	22.32
			3	2	23.00	22.54	22.88	22.23
			6	0	21.50	21.11	21.37	21.33
Band	Band	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		

	Width		RB Size	RB Offset	(dBm)	20415/825.5	20525/836.5	20635/847.5
LTE Band 5	3MHz	QPSK	1	0	24.00	23.19	23.30	23.59
			1	7	24.00	23.22	23.51	23.62
			1	14	24.00	23.40	23.57	23.63
			8	0	22.50	22.28	22.47	22.35
			8	4	22.50	22.25	22.49	22.36
			8	7	22.50	22.36	22.38	22.42
			15	0	22.50	22.33	22.48	22.28
		16QAM	1	0	23.50	22.88	23.25	22.14
			1	7	23.50	22.88	23.18	22.18
			1	14	23.50	22.87	23.12	22.09
			8	0	22.00	21.60	21.66	21.47
			8	4	22.00	21.58	21.68	21.45
			8	7	22.00	21.56	21.63	21.52
			15	0	22.00	21.54	21.62	21.45
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	24.00	23.54	23.64	23.60
			1	12	24.00	23.60	23.69	23.58
			1	24	24.00	23.94	23.85	23.57
			12	0	22.50	22.36	22.38	22.29
			12	6	22.50	22.42	22.38	22.40
			12	11	22.50	22.38	22.33	22.37
			25	0	22.50	22.25	22.38	22.29
		16QAM	1	0	23.00	22.33	22.48	22.50
			1	12	23.00	22.46	22.56	22.46
			1	24	23.00	22.38	22.62	22.42
			12	0	22.00	21.52	21.69	21.54
			12	6	22.00	21.61	21.62	21.47
			12	11	22.00	21.46	21.65	21.65
			25	0	22.00	21.74	21.81	21.70
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	24.00	23.49	23.39	23.36
			1	24	24.00	23.61	23.33	23.53
			1	49	24.00	23.89	23.37	23.49

			25	0	22.50	22.32	22.45	22.33
			25	12	22.50	22.46	22.39	22.27
			25	24	22.50	22.41	22.40	22.30
			50	0	22.50	22.31	22.35	22.41
		16QAM	1	0	23.50	22.42	23.19	23.11
			1	24	23.50	22.54	23.19	23.10
			1	49	23.50	22.45	23.03	23.10
			25	0	22.00	21.66	21.57	21.54
			25	12	22.00	21.71	21.55	21.45
			25	24	22.00	21.70	21.47	21.48
			50	0	22.00	21.56	21.65	21.59

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	24.00	23.60	23.42	23.35
			1	12	24.00	23.47	23.48	23.43
			1	24	24.00	23.46	23.56	23.47
			12	0	23.00	22.57	22.52	22.39
			12	6	23.00	22.53	22.50	22.48
			12	11	23.00	22.53	22.52	22.53
			25	0	23.00	22.54	22.51	22.44
		16QAM	1	0	23.00	22.64	22.67	22.59
			1	12	23.00	22.60	22.73	22.59
			1	24	23.00	22.71	22.71	22.59
			12	0	22.00	21.56	21.54	21.42
			12	6	22.00	21.52	21.47	21.46
			12	11	22.00	21.55	21.51	21.49
			25	0	22.00	21.53	21.52	21.47
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	24.00	23.45	23.33	23.26
			1	24	24.00	23.36	23.36	23.32
			1	49	24.00	23.39	23.54	23.51
			25	0	23.00	22.52	22.42	22.33
			25	12	23.00	22.47	22.49	22.33
			25	24	23.00	22.46	22.58	22.44
			50	0	23.00	22.48	22.53	22.42
		16QAM	1	0	23.00	22.70	22.66	22.60

			1	24	23.00	22.73	22.60	22.46
			1	49	23.00	22.63	22.88	22.65
			25	0	22.00	21.57	21.45	21.34
			25	12	22.00	21.50	21.49	21.35
			25	24	22.00	21.43	21.61	21.49
			50	0	22.00	21.49	21.55	21.41
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		20825/2507.5	21100/2535	21375/2562.5
LTE Band 7	15MHz	QPSK	1	0	24.00	23.49	23.40	23.30
			1	37	24.00	23.45	23.56	23.35
			1	74	24.00	23.37	23.58	23.42
			36	0	23.00	22.61	22.47	22.40
			36	18	23.00	22.57	22.58	22.41
			36	37	23.00	22.46	22.66	22.49
			75	0	23.00	22.54	22.56	22.46
		16QAM	1	0	23.00	22.72	22.65	22.51
			1	37	23.00	22.71	22.88	22.56
			1	74	23.00	22.70	22.83	22.65
			36	0	22.00	21.61	21.49	21.37
			36	18	22.00	21.51	21.57	21.38
			36	37	22.00	21.45	21.67	21.48
			75	0	22.00	21.56	21.56	21.46
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	24.00	23.41	23.30	23.45
			1	49	24.00	23.43	23.58	23.29
			1	99	24.00	23.21	23.46	23.47
			50	0	23.00	22.60	22.46	22.50
			50	24	23.00	22.57	22.65	22.45
			50	49	23.00	22.43	22.70	22.49
			100	0	23.00	22.52	22.55	22.51
		16QAM	1	0	23.00	22.81	22.59	22.69
			1	49	23.00	22.63	22.81	22.75
			1	99	23.00	22.57	22.80	22.68
			50	0	22.00	21.62	21.43	21.51
			50	24	22.00	21.55	21.65	21.45
			50	49	22.00	21.46	21.69	21.51

			100	0	22.00	21.56	21.57	21.52
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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	21.98	22.08	21.93
			1	2	22.50	22.02	22.08	22.02
			1	5	22.50	22.00	22.08	21.95
			3	0	22.50	22.11	21.98	22.09
			3	1	22.50	22.12	21.92	22.15
			3	2	22.50	22.08	22.03	22.04
			6	0	21.50	21.07	20.94	21.13
		16QAM	1	0	22.00	21.70	21.13	21.63
			1	2	22.00	21.80	21.14	21.87
			1	5	22.00	21.71	21.25	21.76
			3	0	22.00	21.34	21.27	21.43
			3	1	22.00	21.36	21.42	21.34
			3	2	22.00	21.34	21.28	21.50
			6	0	20.50	19.85	20.08	20.03
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	22.24	22.14	21.97
			1	7	22.50	22.13	22.20	22.12
			1	14	22.50	22.15	22.21	22.17
			8	0	21.50	21.25	21.17	21.19
			8	4	21.50	21.19	21.13	21.06
			8	7	21.50	21.19	21.13	21.21
			15	0	21.50	21.28	21.07	21.13
		16QAM	1	0	22.00	21.81	21.76	21.68
			1	7	22.00	21.75	21.67	21.71
			1	14	22.00	21.68	21.61	21.77
			8	0	20.50	20.36	20.37	20.39
			8	4	20.50	20.36	20.34	20.37
			8	7	20.50	20.35	20.35	20.37
			15	0	20.50	20.42	20.44	20.37
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	5MHz	QPSK	1	0	23.00	22.49	22.10	22.10

Band 12			1	12	23.00	22.55	22.19	22.12
			1	24	23.00	22.48	22.32	22.33
			12	0	21.50	21.16	21.04	21.06
			12	6	21.50	21.15	21.08	21.15
			12	11	21.50	21.24	21.04	21.20
			25	0	21.50	21.26	21.18	21.12
		16QAM	1	0	22.00	21.33	21.71	21.80
			1	12	22.00	21.21	21.79	21.76
			1	24	22.00	21.12	21.66	21.69
			12	0	20.50	20.41	20.26	20.30
			12	6	20.50	20.41	20.23	20.31
			12	11	20.50	20.36	20.16	20.34
			25	0	21.00	20.53	20.26	20.21
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	22.21	22.36	22.36
			1	24	22.50	22.10	22.31	22.38
			1	49	22.50	22.04	22.25	22.46
			25	0	21.50	21.14	21.25	21.24
			25	12	21.50	21.11	21.13	21.16
			25	24	21.50	21.19	21.22	21.24
			50	0	21.50	21.18	21.09	21.12
		16QAM	1	0	22.00	21.93	21.10	21.07
			1	24	22.00	21.66	21.14	21.14
			1	49	22.00	21.76	20.99	21.18
			25	0	21.00	20.36	20.50	20.45
			25	12	21.00	20.31	20.41	20.44
			25	24	21.00	20.22	20.46	20.53
			50	0	20.50	20.26	20.30	20.32

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	23.50	23.40	23.29	23.11
			1	12	23.50	23.20	23.14	23.26
			1	24	23.50	23.26	23.15	23.24
			12	0	22.50	22.38	22.28	22.18
			12	6	22.50	22.27	22.18	22.27

			12	11	22.50	22.27	22.16	22.21
			25	0	22.50	22.37	22.23	22.21
		16QAM	1	0	23.00	22.72	22.67	22.39
			1	12	23.00	22.50	22.32	22.43
			1	24	23.00	22.51	22.41	22.40
			12	0	21.50	21.39	21.29	21.19
			12	6	21.50	21.27	21.21	21.22
			12	11	21.50	21.28	21.18	21.19
			25	0	21.50	21.34	21.24	21.21
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		23780/709	23790/710	23800/711
LTE Band 17	10MHz	QPSK	1	0	23.50	23.36	23.35	23.21
			1	24	23.50	23.26	23.21	23.10
			1	49	23.50	23.28	23.22	23.22
			25	0	22.50	22.38	22.34	22.27
			25	12	22.50	22.24	22.23	22.22
			25	24	22.50	22.27	22.28	22.25
			50	0	22.50	22.30	22.32	22.23
		16QAM	1	0	23.00	22.59	22.58	22.57
			1	24	23.00	22.64	22.56	22.43
			1	49	23.00	22.59	22.48	22.38
			25	0	21.50	21.36	21.34	21.25
			25	12	21.50	21.26	21.24	21.23
			25	24	21.50	21.25	21.24	21.22
			50	0	21.50	21.31	21.30	21.23

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)				
			RB Size	RB Offset		39675/2498.5	40148/2546	40620/2593	41093/2640	41565/2687.5
LTE Band 41	5MHz	QPSK	1	0	24.50	24.35	22.85	24.48	23.63	23.27
			1	12	24.50	24.25	23.79	24.28	23.94	22.88
			1	24	24.50	24.28	24.15	24.29	22.79	22.76
			12	0	24.50	24.35	23.88	24.40	23.49	23.07
			12	6	24.50	24.31	24.30	24.31	23.20	22.88
			12	11	24.50	24.30	23.34	24.29	23.60	22.78
			25	0	24.50	24.33	23.50	24.37	23.81	22.97
		16QAM	1	0	25.00	24.35	23.82	24.54	24.10	23.38
			1	12	25.00	24.27	24.26	24.37	23.75	23.03

			1	24	25.00	24.30	23.46	24.37	23.86	22.9
			12	0	24.00	23.55	23.68	23.66	23.15	23.08
			12	6	24.00	23.60	23.09	23.68	22.90	22.9
			12	11	24.00	23.69	23.30	23.67	23.00	22.81
			25	0	24.00	23.70	23.50	23.66	23.48	22.97
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)				
			RB Size	RB Offset		39700/2501	40160/2547	40620/2593	41080/2639	41540/2685
LTE Band 41	10MHz	QPSK	1	0	24.50	24.13	23.65	24.19	23.83	23.23
			1	24	24.50	24.26	22.76	24.24	22.81	22.97
			1	49	24.50	24.27	23.81	24.24	22.75	22.71
			25	0	24.50	24.28	24.18	24.25	23.16	23.11
			25	12	24.50	24.32	23.49	24.28	23.56	22.99
			25	24	24.50	24.33	23.85	24.30	23.32	22.87
			50	0	24.50	24.34	23.96	24.30	23.59	23.00
		16QAM	1	0	24.50	24.18	23.23	24.29	22.95	23.36
			1	24	24.50	24.30	23.20	24.34	23.63	23.12
			1	49	24.50	24.33	23.79	24.36	24.15	22.87
			25	0	24.00	23.60	23.58	23.61	23.32	23.10
			25	12	24.00	23.59	23.57	23.66	23.61	22.98
			25	24	24.00	23.66	22.94	23.63	23.29	22.87
			50	0	24.00	23.64	23.18	23.63	23.36	23.01
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)				
			RB Size	RB Offset		39725/2503.5	40173/2548	40620/2593	41068/2638	41515/2682.5
LTE Band 41	15MHz	QPSK	1	0	25.00	24.29	23.18	24.37	24.22	23.59
			1	37	25.00	24.53	23.89	24.42	23.55	23.23
			1	74	25.00	24.44	22.93	24.39	23.55	22.79
			36	0	25.00	24.49	23.40	24.45	24.34	23.44
			36	18	25.00	24.60	23.48	24.46	23.22	23.23
			36	37	25.00	24.59	23.63	24.44	23.19	22.98
			75	0	25.00	24.51	23.94	24.43	23.83	23.21
		16QAM	1	0	25.00	24.32	23.70	24.47	23.73	23.68
			1	37	25.00	24.54	23.27	24.51	23.93	23.36
			1	74	25.00	24.47	23.35	24.48	23.45	22.92
			36	0	24.00	23.62	23.40	23.64	23.43	23.36
			36	18	24.00	23.69	23.55	23.67	23.35	23.17
			36	37	24.00	23.65	23.35	23.65	23.18	22.93

			75	0	24.00	23.67	23.55	23.69	23.53	23.2
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)				
			RB Size	RB Offset		39750/2506	40185/2549.5	40620/2593	39650/2636.5	41490/2680
LTE Band 41	20MHz	QPSK	1	0	24.50	24.16	23.09	24.03	23.54	23.27
			1	49	24.50	24.43	23.99	24.3	23.69	23.22
			1	99	24.50	24.09	24.26	24.2	22.89	22.52
			50	0	24.50	24.37	23.90	24.24	23.75	23.33
			50	24	24.50	24.48	23.47	24.34	23.78	23.21
			50	49	24.50	24.42	23.76	24.34	23.90	22.89
			100	0	24.50	24.38	23.56	24.28	24.21	23.11
		16QAM	1	0	24.50	24.19	24.01	24.14	23.54	23.41
			1	49	24.50	24.47	24.15	24.4	24.38	23.36
			1	99	24.50	24.15	24.01	24.32	22.85	22.69
			50	0	24.00	23.68	23.60	23.72	23.72	23.31
			50	24	24.00	23.76	23.48	23.74	23.29	23.2
			50	49	24.00	23.69	23.18	23.76	23.53	22.9
			100	0	24.00	23.64	23.70	23.71	23.48	23.12

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		131979/1710.7	132322/1745	132665/1779.3
LTE Band 66	1.4MHz	QPSK	1	0	24.00	23.59	23.53	23.50
			1	2	24.00	23.47	23.58	23.48
			1	5	24.00	23.57	23.50	23.55
			3	0	24.00	23.53	23.52	23.52
			3	1	24.00	23.52	23.50	23.49
			3	2	24.00	23.53	23.48	23.49
			6	0	23.00	22.51	22.53	22.53
		16QAM	1	0	23.00	22.71	22.82	22.79
			1	2	23.00	22.80	22.86	22.71
			1	5	23.00	22.81	22.74	22.86
			3	0	23.00	22.54	22.51	22.48
			3	1	23.00	22.53	22.54	22.53
			3	2	23.00	22.47	22.50	22.44
			6	0	22.00	21.65	21.63	21.64
Band	Band	Modulation	RB		Tune-up	Channel/Frequency(MHz)		

	Width		Configuration		(dBm)			
			RB Size	RB Offset		131987/1711.5	132322/1745	132657/1778.5
LTE Band 66	3MHz	QPSK	1	0	24.00	23.45	23.51	23.50
			1	7	24.00	23.57	23.46	23.52
			1	14	24.00	23.61	23.51	23.48
			8	0	23.00	22.51	22.55	22.54
			8	4	23.00	22.57	22.53	22.51
			8	7	23.00	22.59	22.54	22.52
			15	0	23.00	22.56	22.57	22.55
		16QAM	1	0	23.00	22.89	22.68	22.65
			1	7	23.00	22.93	22.70	22.83
			1	14	23.00	22.82	22.87	22.83
			8	0	22.00	21.59	21.61	21.59
			8	4	22.00	21.61	21.58	21.55
			8	7	22.00	21.64	21.60	21.59
			15	0	22.00	21.55	21.58	21.53
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		131997/1712.5	132322/1745	132647/1777.5
LTE Band 66	5MHz	QPSK	1	0	24.00	23.58	23.54	23.53
			1	12	24.00	23.54	23.52	23.49
			1	24	24.00	23.62	23.54	23.53
			12	0	23.00	22.59	22.61	22.53
			12	6	23.00	22.65	22.58	22.55
			12	11	23.00	22.64	22.56	22.56
			25	0	23.00	22.66	22.57	22.59
		16QAM	1	0	23.00	22.83	22.79	22.73
			1	12	23.00	22.89	22.80	22.84
			1	24	23.00	22.90	22.85	22.96
			12	0	22.00	21.62	21.62	21.54
			12	6	22.00	21.67	21.56	21.59
			12	11	22.00	21.63	21.58	21.61
			25	0	22.00	21.64	21.62	21.58
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		132022/1715	132322/1745	132622/1775

LTE Band 66	10MHz	QPSK	1	0	24.00	23.55	23.63	23.35
			1	24	24.00	23.62	23.48	23.36
			1	49	24.00	23.66	23.58	23.56
			25	0	23.00	22.58	22.57	22.45
			25	12	23.00	22.63	22.55	22.45
			25	24	23.00	22.64	22.51	22.51
			50	0	23.00	22.64	22.55	22.49
		16QAM	1	0	23.00	22.87	22.95	22.73
			1	24	23.00	22.76	22.77	22.73
			1	49	23.00	22.95	22.76	22.93
			25	0	22.00	21.58	21.57	21.45
			25	12	22.00	21.64	21.52	21.46
			25	24	22.00	21.65	21.49	21.51
			50	0	22.00	21.64	21.54	21.50
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		132047/1717.5	132322/1745	132597/1772.5
LTE Band 66	15MHz	QPSK	1	0	24.00	23.52	23.59	23.16
			1	37	24.00	23.62	23.57	23.36
			1	74	24.00	23.61	23.47	23.55
			36	0	23.00	22.64	22.58	22.27
			36	18	23.00	22.66	22.55	22.32
			36	37	23.00	22.64	22.53	22.41
			75	0	23.00	22.63	22.56	22.35
		16QAM	1	0	23.00	22.91	22.69	22.55
			1	37	23.00	22.94	22.84	22.55
			1	74	23.00	22.97	22.93	22.65
			36	0	22.00	21.61	21.59	21.23
			36	18	22.00	21.64	21.55	21.32
			36	37	22.00	21.63	21.52	21.37
			75	0	22.00	21.62	21.58	21.36
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		132072/1720	132322/1745	132572/1770
LTE Band 66	20MHz	QPSK	1	0	24.00	23.53	23.56	23.23
			1	49	24.00	23.68	23.57	23.32
			1	99	24.00	23.59	23.45	23.49
			50	0	23.00	22.65	22.63	22.26

			50	24	23.00	22.67	22.60	22.35
			50	49	23.00	22.65	22.52	22.39
			100	0	23.00	22.63	22.59	22.30
		16QAM	1	0	23.00	22.91	22.86	22.65
			1	49	23.00	22.94	22.87	22.60
			1	99	23.00	22.84	22.85	22.72
			50	0	22.00	21.66	21.61	21.23
			50	24	22.00	21.69	21.60	21.34
			50	49	22.00	21.62	21.54	21.38
			100	0	22.00	21.65	21.59	21.31

7.4. WLAN & Bluetooth Output Power

7.4.1. Output Power Results Of WLAN

Mode	Channel	Frequency (MHz)	Tune-up (dBm)	Output Power (dBm)
802.11b	1	2412	16.00	15.77
	6	2437	16.00	15.56
	11	2462	16.00	15.81
802.11g	1	2412	14.00	13.71
	6	2437	14.00	13.56
	11	2462	14.00	13.41
802.11n HT20	1	2412	12.00	11.80
	6	2437	12.00	11.53
	11	2462	12.00	11.40
802.11n HT40	3	2422	12.00	11.40
	6	2437	12.00	11.50
	9	2452	12.00	11.65
802.11ax HT20	1	2412	12.00	11.67
	6	2437	12.00	11.49
	11	2462	12.00	11.45
802.11ax HT40	3	2422	12.00	11.61
	6	2437	12.00	11.56
	9	2452	12.00	11.47

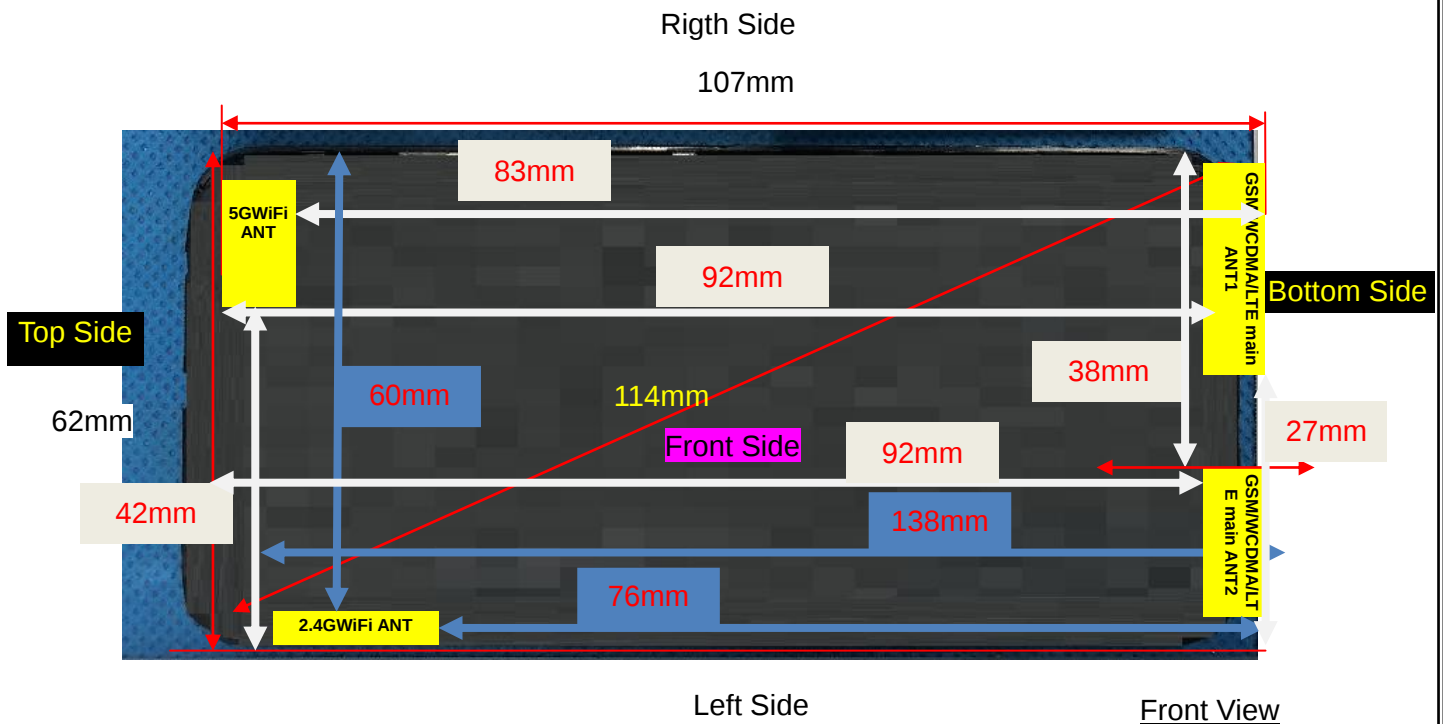
NOTE: Power measurement results of WLAN 2.4G.

Mode	Channel	Frequency (MHz)	Tune-up (dBm)	Output Power (dBm)
802.11a	36	5180	11.50	11.23
	40	5200	11.50	10.93

	48	5240	11.50	9.94
802.11n HT20	36	5180	10.50	10.46
	40	5200	10.50	10.24
	48	5240	10.50	9.87
802.11n HT40	38	5190	11.00	10.28
	46	5230	11.00	10.55
802.11ac VHT20	36	5180	11.00	10.57
	40	5200	11.00	10.14
	48	5240	11.00	9.85
802.11ac VHT40	38	5190	10.50	10.24
	46	5230	10.50	10.1
802.11ac VHT80	42	5210	10.50	10.19

NOTE: Power measurement results of WLAN 5.2G.

8. Antenna Location



9. SAR Results

9.1. SAR measurement results

9.1.1. 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 2TS)	0.486	0.344	0.58	29.53	30.00	0.542	2024/11/26	
Back Side	189/836.4	GPRS(GMSK 2TS)	0.523	0.382	-3.65	29.53	30.00	0.583	2024/11/26	#1

NOTE: Body-Worn SAR test results of GSM850

Test Position of Hotspot with 10mm	Test channel /Freq.	Mode	SAR Value (W/kg)		Power Drift(%)	Conducted Power (dBm)	Tune-up Power (dBm)	Scaled SAR 1-g (W/Kg)	Date	Plot
			1-g	10-g						
Front Side	189/836.4	GPRS(GMSK 2TS)	0.486	0.344	0.58	29.53	30.00	0.542	2024/11/26	
Back	189/836.4	GPRS(GMSK	0.523	0.382	-3.65	29.53	30.00	0.583	2024/11/26	#1

Side		2TS)								
Left Side	189/836.4	GPRS(GMSK 2TS)	0.224	0.159	-0.98	29.53	30.00	0.250	2024/11/26	
Right Side	189/836.4	GPRS(GMSK 2TS)	0.308	0.216	2.52	29.53	30.00	0.343	2024/11/26	
Bottom Side	189/836.4	GPRS(GMSK 2TS)	0.054	0.039	-1.87	29.53	30.00	0.060	2024/11/26	

NOTE: Hotspot SAR test results of GSM850

9.1.2. 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 2TS)	0.214	0.123	3.51	28.07	28.50	0.236	2024/11/24	
Back Side	661/1880	GPRS(GMSK 2TS)	0.670	0.385	1.13	28.07	28.50	0.740	2024/11/24	#2

NOTE: Body-Worn SAR test results of GSM1900

Test Position of Hotspot with 10mm	Test channel /Freq.	Mode	SAR Value (W/kg)		Power Drift(%)	Conducted Power (dBm)	Tune-up Power (dBm)	Scaled SAR 1-g (W/Kg)	Date	Plot
			1-g	10-g						
Front Side	661/1880	GPRS(GMSK 2TS)	0.214	0.123	3.51	28.07	28.50	0.236	2024/11/24	
Back Side	661/1880	GPRS(GMSK 2TS)	0.670	0.385	1.13	28.07	28.50	0.740	2024/11/24	#2
Left Side	661/1880	GPRS(GMSK 2TS)	0.054	0.031	-2.74	28.07	28.50	0.060	2024/11/24	
Right Side	661/1880	GPRS(GMSK 2TS)	0.187	0.105	1.20	28.07	28.50	0.206	2024/11/24	
Bottom Side	661/1880	GPRS(GMSK 2TS)	0.049	0.027	1.04	28.07	28.50	0.054	2024/11/24	

NOTE: Hotspot SAR test results of GSM1900

9.1.3. 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	0.179	0.107	0.15	22.88	23.50	0.206	2024/11/24	
Back Side	9400/1880	RMC12.2K	0.542	0.325	-1.23	22.88	23.50	0.625	2024/11/24	#3

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

Test Position of Hotspot with 10mm	Test channel /Freq.	Mode	SAR Value (W/kg)		Power Drift(%)	Conducted Power (dBm)	Tune-up Power (dBm)	Scaled SAR 1-g (W/Kg)	Date	Plot
			1-g	10-g						
Front Side	9400/1880	RMC12.2K	0.179	0.107	0.15	22.88	23.50	0.206	2024/11/24	
Back Side	9400/1880	RMC12.2K	0.542	0.325	-1.23	22.88	23.50	0.625	2024/11/24	#3
Left Side	9400/1880	RMC12.2K	0.045	0.026	2.19	22.88	23.50	0.052	2024/11/24	
Right Side	9400/1880	RMC12.2K	0.148	0.085	-3.69	22.88	23.50	0.171	2024/11/24	
Bottom Side	9400/1880	RMC12.2K	0.040	0.024	0.45	22.88	23.50	0.046	2024/11/24	

NOTE: Hotspot SAR test results of WCDMA Band 2

9.1.4. 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	0.192	0.109	0.58	22.65	23.00	0.208	2024/11/21	
Back Side	1413/1732.6	RMC12.2K	0.571	0.341	-1.02	22.65	23.00	0.619	2024/11/21	#4

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

Test Position of Hotspot with 10mm	Test channel /Freq.	Mode	SAR Value (W/kg)		Power Drift(%)	Conducted Power (dBm)	Tune-up Power (dBm)	Scaled SAR 1-g (W/Kg)	Date	Plot
			1-g	10-g						
Front	1413/1732.6	RMC12.2K	0.192	0.109	0.58	22.65	23.00	0.208	2024/11/21	

Side										
Back Side	1413/1732.6	RMC12.2K	0.571	0.341	-1.02	22.65	23.00	0.619	2024/11/21	#4
Left Side	1413/1732.6	RMC12.2K	0.049	0.029	-1.58	22.65	23.00	0.053	2024/11/21	
Right Side	1413/1732.6	RMC12.2K	0.151	0.087	-1.57	22.65	23.00	0.164	2024/11/21	
Bottom Side	1413/1732.6	RMC12.2K	0.041	0.023	-0.71	22.65	23.00	0.044	2024/11/21	

NOTE: Hotspot SAR test results of WCDMA Band 4

9.1.5. 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	0.612	0.433	0.87	22.42	23.00	0.699	2024/11/26	
Back Side	4182/836.4	RMC12.2K	0.677	0.504	1.17	22.42	23.00	0.774	2024/11/26	#5

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

Test Position of Hotspot with 10mm	Test channel /Freq.	Mode	SAR Value (W/kg)		Power Drift(%)	Conducted Power (dBm)	Tune-up Power (dBm)	Scaled SAR 1-g (W/Kg)	Date	Plot
			1-g	10-g						
Front Side	4182/836.4	RMC12.2K	0.612	0.433	0.87	22.42	23.00	0.699	2024/11/26	
Back Side	4182/836.4	RMC12.2K	0.677	0.504	1.17	22.42	23.00	0.774	2024/11/26	#5
Left Side	4182/836.4	RMC12.2K	0.272	0.198	0.20	22.42	23.00	0.311	2024/11/26	
Right Side	4182/836.4	RMC12.2K	0.374	0.265	0.10	22.42	23.00	0.427	2024/11/26	
Bottom Side	4182/836.4	RMC12.2K	0.070	0.050	1.37	22.42	23.00	0.080	2024/11/26	

NOTE: Hotspot SAR test results of WCDMA Band 5

9.1.6. SAR measurement Result of LTE Band 2

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

with 10mm								(W/Kg)		
1RB										
Front Side	18900/1880	20M QPSK(1,99)	0.144	0.084	-2.88	23.72	24.00	0.154	2024/11/24	
Back Side	18900/1880	20M QPSK(1,99)	0.447	0.265	-0.03	23.72	24.00	0.477	2024/11/24	#8
50%RB										
Front Side	18900/1880	20M QPSK(50,49)	0.074	0.05	2.11	22.47	23.00	0.084	2024/11/24	
Back Side	18900/1880	20M QPSK(50,49)	0.23	0.145	0.45	22.47	23.00	0.260	2024/11/24	

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

Test Position of Hotspot with 10mm	Test channel /Freq.	Mode	SAR Value (W/kg)		Power Drift(%)	Conducted Power (dBm)	Tune-up Power (dBm)	Scaled SAR 1-g (W/Kg)	Date	Plot
			1-g	10-g						
1RB										
Front Side	18900/1880	20M QPSK(1,99)	0.144	0.084	-2.88	23.72	24.00	0.154	2024/11/24	
Back Side	18900/1880	20M QPSK(1,99)	0.447	0.265	-0.03	23.72	24.00	0.477	2024/11/24	#8
Left Side	18900/1880	20M QPSK(1,99)	0.038	0.022	0.44	23.72	24.00	0.041	2024/11/24	
Right Side	18900/1880	20M QPSK(1,99)	0.125	0.073	0.38	23.72	24.00	0.133	2024/11/24	
Bottom Side	18900/1880	20M QPSK(1,99)	0.034	0.020	-3.04	23.72	24.00	0.036	2024/11/24	
50%RB										
Front Side	18900/1880	20M QPSK(50,49)	0.074	0.05	2.11	22.47	23.00	0.084	2024/11/24	
Back Side	18900/1880	20M QPSK(50,49)	0.23	0.145	0.45	22.47	23.00	0.260	2024/11/24	
Left Side	18900/1880	20M QPSK(50,49)	0.02	0.011	0.73	22.47	23.00	0.023	2024/11/24	
Right Side	18900/1880	20M QPSK(50,49)	0.067	0.039	3.91	22.47	23.00	0.076	2024/11/24	
Bottom Side	18900/1880	20M QPSK(50,49)	0.02	0.01	2.98	22.47	23.00	0.023	2024/11/24	

NOTE: Hotspot SAR test results of LTE Band 2

9.1.7. 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)	Tuned power (dBm)	Scaled SAR 1g (W/Kg)	Date	Plot
			1-g	10-g						
1RB										
Front Side	20175/1732.5	20M QPSK(1,99)	0.195	0.119	3.38	23.73	24.00	0.208	2024/11/21	
Back Side	20175/1732.5	20M QPSK(1,99)	0.574	0.349	2.02	23.73	24.00	0.611	2024/11/21	#9
50%RB										
Front Side	20175/1732.5	20M QPSK(50,24)	0.098	0.068	-0.66	22.60	23.00	0.107	2024/11/21	
Back Side	20175/1732.5	20M QPSK(50,24)	0.287	0.209	2.01	22.60	23.00	0.315	2024/11/21	

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

Test Position of Hotspot with 10mm	Test channel /Freq.	Mode	SAR Value (W/kg)		Power Drift(%)	Conducted Power (dBm)	Tune-up Power (dBm)	Scaled SAR 1-g (W/Kg)	Date	Plot
			1-g	10-g						
1RB										
Front Side	20175/1732.5	20M QPSK(1,99)	0.195	0.119	3.38	23.73	24.00	0.208	2024/11/21	
Back Side	20175/1732.5	20M QPSK(1,99)	0.574	0.349	2.02	23.73	24.00	0.611	2024/11/21	#9
Left Side	20175/1732.5	20M QPSK(1,99)	0.048	0.029	1.71	23.73	24.00	0.051	2024/11/21	
Right Side	20175/1732.5	20M QPSK(1,99)	0.156	0.092	1.71	23.73	24.00	0.166	2024/11/21	
Bottom Side	20175/1732.5	20M QPSK(1,99)	0.042	0.024	2.32	23.73	24.00	0.045	2024/11/21	
50%RB										
Front	20175/1732.5	20M	0.098	0.068	-0.66	22.60	23.00	0.107	2024/11/21	

Side		QPSK(50,24)								
Back Side	20175/1732.5	20M QPSK(50,24)	0.287	0.209	2.01	22.60	23.00	0.315	2024/11/21	
Left Side	20175/1732.5	20M QPSK(50,24)	0.027	0.016	2.74	22.60	23.00	0.030	2024/11/21	
Right Side	20175/1732.5	20M QPSK(50,24)	0.085	0.049	-4.46	22.60	23.00	0.093	2024/11/21	
Bottom Side	20175/1732.5	20M QPSK(50,24)	0.023	0.014	2.93	22.60	23.00	0.025	2024/11/21	

NOTE: Hotspot SAR test results of LTE Band 4

9.1.8. 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
			1-g	10-g						
1RB										
Front Side	20525/836.5	10M QPSK(1,0)	0.755	0.586	1.19	23.39	24.00	0.869	2024/11/26	
Back Side	20525/836.5	10M QPSK(1,0)	0.818	0.602	-1.14	23.39	24.00	0.941	2024/11/26	
Front Side	20525/836.5	10M QPSK(1,0)	0.797	0.596	2.62	23.49	24.00	0.896	2024/11/26	
Front Side	20525/836.5	10M QPSK(1,0)	0.772	0.578	-3.68	23.36	24.00	0.895	2024/11/26	
Front Side	20525/836.5	10M QPSK(1,0)	0.797	0.596	2.62	23.49	24.00	0.896	2024/11/26	
Front Side	20525/836.5	10M QPSK(1,0)	0.772	0.578	-3.68	23.36	24.00	0.895	2024/11/26	
Back Side	20450/829	10M QPSK(1,0)	0.854	0.629	-0.79	23.49	24.00	0.960	2024/11/26	#10
Back Side										
BackSide Repeated	20525/836.5	10M QPSK(1,0)	0.841	0.617	-1.66	23.49	24.00	0.946	2024/11/26	
Front Side	20525/836.5	10M QPSK(1,0)	0.797	0.596	2.62	23.49	24.00	0.896	2024/11/26	

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

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

Hotspot with 10mm								(W/Kg)		
1RB										
Front Side	20525/836.5	10M QPSK(1,0)	0.755	0.586	1.19	23.39	24.00	0.869	2024/11/26	
Back Side	20525/836.5	10M QPSK(1,0)	0.818	0.602	-1.14	23.39	24.00	0.941	2024/11/26	
Left Side	20525/836.5	10M QPSK(1,0)	0.341	0.251	-1.10	23.39	24.00	0.392	2024/11/26	
Right Side	20525/836.5	10M QPSK(1,0)	0.425	0.313	0.52	23.39	24.00	0.489	2024/11/26	
Bottom Side	20525/836.5	10M QPSK(1,0)	0.075	0.054	3.74	23.39	24.00	0.086	2024/11/26	
Front Side	20525/836.5	10M QPSK(1,0)	0.797	0.596	2.62	23.49	24.00	0.896	2024/11/26	
Front Side	20525/836.5	10M QPSK(1,0)	0.772	0.578	-3.68	23.36	24.00	0.895	2024/11/26	
Back Side	20450/829	10M QPSK(1,0)	0.854	0.629	-0.79	23.49	24.00	0.960	2024/11/26	#10
Back Side	20600/844	10M QPSK(1,0)	0.812	0.610	-0.98	23.36	24.00	0.941	2024/11/26	
BackSide Repeated	20525/836.5	10M QPSK(1,0)	0.841	0.617	-1.66	23.49	24.00	0.946	2024/11/26	
50%RB										
Front Side	20525/836.5	10M QPSK(25,0)	0.401	0.344	-0.41	22.45	22.50	0.406	2024/11/26	
Back Side	20525/836.5	10M QPSK(25,0)	0.518	0.377	0.59	22.45	22.50	0.524	2024/11/26	
Left Side	20525/836.5	10M QPSK(25,0)	0.185	0.128	0.12	22.45	22.50	0.187	2024/11/26	
Right Side	20525/836.5	10M QPSK(25,0)	0.244	0.158	-3.38	22.45	22.50	0.247	2024/11/26	
Bottom Side	20525/836.5	10M QPSK(25,0)	0.045	0.030	-1.30	22.45	22.50	0.046	2024/11/26	
100%RB										
Back Side	20525/836.5	20M QPSK(100,0)	0.483	0.367	-1.56	23.49	24.00	0.543	2024/11/26	

NOTE: Hotspot SAR test results of LTE Band 5

9.1.9. 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)	0.152	0.074	-2.31	23.58	24.00	0.167	2024/11/25	
Back Side	21100/2535	20M QPSK(1,49)	0.360	0.175	-4.37	23.58	24.00	0.397	2024/11/25	#11
50%RB										
Front Side	21100/2535	20M QPSK(50,49)	0.087	0.044	-0.78	22.70	23.00	0.093	2024/11/25	
Back Side	21100/2535	20M QPSK(50,49)	0.206	0.104	4.95	22.70	23.00	0.221	2024/11/25	

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

Test Position of Hotspot with 10mm	Test channel /Freq.	Mode	SAR Value (W/kg)		Power Drift(%)	Conducted Power (dBm)	Tune-up Power (dBm)	Scaled SAR 1-g (W/Kg)	Date	Plot
			1-g	10-g						
1RB										
Front Side	21100/2535	20M QPSK(1,49)	0.152	0.074	-2.31	23.58	24.00	0.167	2024/11/25	
Back Side	21100/2535	20M QPSK(1,49)	0.360	0.175	-4.37	23.58	24.00	0.397	2024/11/25	#11
Left Side	21100/2535	20M QPSK(1,49)	0.207	0.096	-0.85	23.58	24.00	0.228	2024/11/25	
Right Side	21100/2535	20M QPSK(1,49)	0.031	0.014	1.06	23.58	24.00	0.034	2024/11/25	
Top Side	21100/2535	20M QPSK(1,49)	0.011	0.009	-2.59	23.58	24.00	0.012	2024/11/25	
50%RB										
Front Side	21100/2535	20M QPSK(50,49)	0.087	0.044	-0.78	22.70	23.00	0.093	2024/11/25	
Back Side	21100/2535	20M QPSK(50,49)	0.206	0.104	4.95	22.70	23.00	0.221	2024/11/25	

Left Side	21100/2535	20M QPSK(50,49)	0.107	0.054	-2.52	22.70	23.00	0.115	2024/11/25	
Right Side	21100/2535	20M QPSK(50,49)	0.017	0.008	-2.35	22.70	23.00	0.018	2024/11/25	
Bottom Side	21100/2535	20M QPSK(50,49)	0.006	0.005	-3.35	22.70	23.00	0.006	2024/11/25	

NOTE: Hotspot SAR test results of LTE Band 7

9.1.10. 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(1,0)	0.074	0.053	2.33	22.36	22.50	0.076	2024/11/27	
Back Side	23095/707.5	10M QPSK(1,0)	0.084	0.063	0.09	22.36	22.50	0.087	2024/11/27	#12
50%RB										
Front Side	23095/707.5	10M QPSK(25,0)	0.04	0.031	-4.27	21.25	21.50	0.042	2024/11/27	
Back Side	23095/707.5	10M QPSK(25,0)	0.048	0.035	-0.97	21.25	21.50	0.051	2024/11/27	

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

Test Position of Hotspot with 10mm	Test channel /Freq.	Mode	SAR Value (W/kg)		Power Drift(%)	Conducted Power (dBm)	Tune-up Power (dBm)	Scaled SAR 1-g (W/Kg)	Date	Plot
			1-g	10-g						
1RB										
Front Side	23095/707.5	10M QPSK(1,0)	0.074	0.053	2.33	22.36	22.50	0.076	2024/11/27	
Back Side	23095/707.5	10M QPSK(1,0)	0.084	0.063	0.09	22.36	22.50	0.087	2024/11/27	#12
Left Side	23095/707.5	10M QPSK(1,0)	0.037	0.027	2.27	22.36	22.50	0.038	2024/11/27	
Right Side	23095/707.5	10M QPSK(1,0)	0.054	0.041	0.37	22.36	22.50	0.056	2024/11/27	

Bottom Side	23095/707.5	10M QPSK(1,0)	0.009	0.007	0.17	22.36	22.50	0.009	2024/11/27	
50%RB										
Front Side	23095/707.5	10M QPSK(25,0)	0.04	0.031	-4.27	21.25	21.50	0.042	2024/11/27	
Back Side	23095/707.5	10M QPSK(25,0)	0.048	0.035	-0.97	21.25	21.50	0.051	2024/11/27	
Left Side	23095/707.5	10M QPSK(25,0)	0.02	0.014	3.93	21.25	21.50	0.021	2024/11/27	
Right Side	23095/707.5	10M QPSK(25,0)	0.028	0.024	3.1	21.25	21.50	0.030	2024/11/27	
Bottom Side	23095/707.5	10M QPSK(25,0)	0.005	0.004	4.39	21.25	21.50	0.005	2024/11/27	

NOTE: Hotspot SAR test results of LTE Band 12

9.1.11. 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)	0.057	0.039	0.67	23.35	23.50	0.059	2024/11/27	
Back Side	23790/710	10M QPSK(1,0)	0.064	0.046	2.01	23.35	23.50	0.066	2024/11/27	#13
50%RB										
Front Side	23790/710	10M QPSK(25,0)	0.03	0.021	1.79	22.34	22.50	0.031	2024/11/27	
Back Side	23790/710	10M QPSK(25,0)	0.032	0.026	0.36	22.34	22.50	0.033	2024/11/27	

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

Test Position of Hotspot with 10mm	Test channel /Freq.	Mode	SAR Value (W/kg)		Power Drift(%)	Conducted Power (dBm)	Tune-up Power (dBm)	Scaled SAR 1-g (W/Kg)	Date	Plot
			1-g	10-g						
1RB										
Front	23790/710	10M	0.057	0.039	0.67	23.35	23.50	0.059	2024/11/27	

Side		QPSK(1,0)								
Back Side	23790/710	10M QPSK(1,0)	0.064	0.046	2.01	23.35	23.50	0.066	2024/11/27	#13
Left Side	23790/710	10M QPSK(1,0)	0.030	0.020	1.95	23.35	23.50	0.031	2024/11/27	
Right Side	23790/710	10M QPSK(1,0)	0.036	0.025	1.12	23.35	23.50	0.037	2024/11/27	
Bottom Side	23790/710	10M QPSK(1,0)	0.008	0.006	0.16	23.35	23.50	0.008	2024/11/27	
50%RB										
Front Side	23790/710	10M QPSK(25,0)	0.03	0.021	1.79	22.34	22.50	0.031	2024/11/27	
Back Side	23790/710	10M QPSK(25,0)	0.032	0.026	0.36	22.34	22.50	0.033	2024/11/27	
Left Side	23790/710	10M QPSK(25,0)	0.017	0.012	-4.39	22.34	22.50	0.018	2024/11/27	
Right Side	23790/710	10M QPSK(25,0)	0.021	0.013	-2.8	22.34	22.50	0.022	2024/11/27	
Bottom Side	23790/710	10M QPSK(25,0)	0.005	0.003	0.29	22.34	22.50	0.005	2024/11/27	

NOTE: Hotspot SAR test results of LTE Band 17

9.1.12. 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)	0.244	0.112	-0.38	24.30	24.50	0.255	2024/11/25	
Back Side	40620/2593	20M QPSK(1,49)	0.583	0.276	-1.05	24.30	24.50	0.610	2024/11/25	#14
50%RB										
Front Side	40620/2593	20M QPSK(50,0)	0.130	0.059	-4.44	0.00	0.00	0.130	2024/11/25	
Back Side	40620/2593	20M QPSK(50,0)	0.299	0.157	4.33	0.00	0.00	0.299	2024/11/25	

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

Test Position of Hotspot with 10mm	Test channel /Freq.	Mode	SAR Value (W/kg)		Power Drift(%)	Conducted Power (dBm)	Tune-up Power (dBm)	Scaled SAR 1-g (W/Kg)	Date	Plot
			1-g	10-g						
1RB										
Front Side	40620/2593	20M QPSK(1,49)	0.244	0.112	-0.38	24.30	24.50	0.255	2024/11/25	
Back Side	40620/2593	20M QPSK(1,49)	0.583	0.276	-1.05	24.30	24.50	0.610	2024/11/25	#14
Left Side	40620/2593	20M QPSK(1,49)	0.334	0.157	2.88	24.30	24.50	0.350	2024/11/25	
Right Side	40620/2593	20M QPSK(1,49)	0.048	0.022	-0.26	24.30	24.50	0.050	2024/11/25	
Bottom Side	40620/2593	20M QPSK(1,49)	0.018	0.016	-0.94	24.30	24.50	0.019	2024/11/25	
50%RB										
Front Side	40620/2593	20M QPSK(50,0)	0.130	0.059	-4.44	0.00	0.00	0.130	2024/11/25	
Back Side	40620/2593	20M QPSK(50,0)	0.299	0.157	4.33	0.00	0.00	0.299	2024/11/25	
Left Side	40620/2593	20M QPSK(50,0)	0.171	0.086	-1.35	0.00	0.00	0.171	2024/11/25	
Right Side	40620/2593	20M QPSK(50,0)	0.028	0.011	1.23	0.00	0.00	0.028	2024/11/25	
Bottom Side	40620/2593	20M QPSK(50,0)	0.010	0.009	3.70	0.00	0.00	0.010	2024/11/25	

NOTE: Hotspot SAR test results of LTE Band 41

9.1.13. SAR measurement Result of LTE Band 66

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	132322/1745	20M QPSK(1,49)	0.189	0.111	1.85	23.57	24.00	0.209	2024/11/21	
Back Side	132322/1745	20M QPSK(1,49)	0.545	0.337	0.01	23.57	24.00	0.602	2024/11/21	#15

50%RB										
Front Side	132322/1745	20M QPSK(50,0)	0.098	0.058	-3.83	22.63	23.00	0.107	2024/11/21	
Back Side	132322/1745	20M QPSK(50,0)	0.323	0.175	-3.65	22.63	23.00	0.352	2024/11/21	

NOTE: Body-Worn SAR test results of LTE Band 66

Test Position of Hotspot with 10mm	Test channel /Freq.	Mode	SAR Value (W/kg)		Power Drift(%)	Conducted Power (dBm)	Tune-up Power (dBm)	Scaled SAR 1-g (W/Kg)	Date	Plot
			1-g	10-g						
1RB										
Front Side	132322/1745	20M QPSK(1,49)	0.189	0.111	1.85	23.57	24.00	0.209	2024/11/21	
Back Side	132322/1745	20M QPSK(1,49)	0.545	0.337	0.01	23.57	24.00	0.602	2024/11/21	#15
Left Side	132322/1745	20M QPSK(1,49)	0.045	0.027	2.14	23.57	24.00	0.050	2024/11/21	
Right Side	132322/1745	20M QPSK(1,49)	0.143	0.087	3.40	23.57	24.00	0.158	2024/11/21	
Bottom Side	132322/1745	20M QPSK(1,49)	0.041	0.025	3.55	23.57	24.00	0.045	2024/11/21	
50%RB										
Front Side	132322/1745	20M QPSK(50,0)	0.098	0.058	-3.83	22.63	23.00	0.107	2024/11/21	
Back Side	132322/1745	20M QPSK(50,0)	0.323	0.175	-3.65	22.63	23.00	0.352	2024/11/21	
Left Side	132322/1745	20M QPSK(50,0)	0.024	0.014	1.78	22.63	23.00	0.026	2024/11/21	
Right Side	132322/1745	20M QPSK(50,0)	0.077	0.052	-0.40	22.63	23.00	0.084	2024/11/21	
Bottom Side	132322/1745	20M QPSK(50,0)	0.023	0.015	-4.58	22.63	23.00	0.025	2024/11/21	

NOTE: Hotspot SAR test results of LTE Band 66

9.1.14. SAR measurement Result of WLAN 2.4G

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

with 10mm								(W/Kg)		
Front Side	11/2462	802.11b	0.106	0.058	-3.07	15.81	16.00	0.111	2024/12/12	
Back Side	11/2462	802.11b	0.069	0.037	2.89	15.81	16.00	0.072	2024/12/12	

NOTE: Body-Worn SAR test results of WLAN 2.4G

Test Position of Hotspot with 10mm	Test channel /Freq.	Mode	SAR Value (W/kg)		Power Drift(%)	Conducted Power (dBm)	Tune-up Power (dBm)	Scaled SAR 1-g (W/Kg)	Date	Plot
			1-g	10-g						
Front Side	11/2462	802.11b	0.106	0.058	-3.07	15.81	16.00	0.111	2024/12/12	
Back Side	11/2462	802.11b	0.069	0.037	2.89	15.81	16.00	0.072	2024/12/12	
Left Side	11/2462	802.11b	0.115	0.065	2.35	15.81	16.00	0.120	2024/12/12	#7
Top Side	11/2462	802.11b	0.024	0.013	0.69	15.81	16.00	0.025	2024/12/12	

NOTE: Hotspot SAR test results of WLAN 2.4G

9.1.15. SAR measurement Result of WLAN 5.2G

Test Position of Body-Worn with 10mm	Test channel /Freq	Mode	SAR Value (W/kg)		Power Drift(%)	Conducted Power (dBm)	Tune-up Power (dBm)	Scaled SAR 1-g (W/Kg)	Date	Plot
			1-g	10-g						
Front Side	46/5230	802.11ax VHT40	0.126	0.069	1.24	11.85	12.00	0.130	2024/12/11	
Back Side	46/5230	802.11ax VHT40	0.162	0.094	2.10	11.85	12.00	0.168	2024/12/11	#6

NOTE: Body-Worn SAR test results of WLAN 5.2G

Test Position of Hotspot with 10mm	Test channel /Freq	Mode	SAR Value (W/kg)		Power Drift(%)	Conducted Power (dBm)	Tune-up Power (dBm)	Scaled SAR 1-g (W/Kg)	Date	Plot
			1-g	10-g						
Front Side	46/5230	802.11ax VHT40	0.126	0.069	1.24	11.85	12.00	0.130	2024/12/11	
Back Side	46/5230	802.11ax VHT40	0.162	0.094	2.10	11.85	12.00	0.168	2024/12/11	#6
Right Side	46/5230	802.11ax VHT40	0.102	0.057	0.78	11.85	12.00	0.106	2024/12/11	
Top Side	46/5230	802.11ax	0.108	0.060	2.72	11.85	12.00	0.112	2024/12/11	

VHT40

NOTE: Hotspot SAR test results of WLAN 5.2G

9.2. SAR Summation Scenario

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

- 1) Scalar SAR summation $< 1.6\text{W/kg}$.
- 2) $\text{SPLSR} = (\text{SAR}_1 + \text{SAR}_2)^{1.5} / (\text{min. separation distance, mm})$, 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 $\text{SPLSR} \leq 0.04$, simultaneously transmission SAR measurement is not necessary.

Test Position		Scaled SAR _{MAX}		Σ 1-g SAR (W/Kg)	SPLSR	Remark
		WWAN	DTS			
Hotspot	Front Side	0.895	0.111	1.006	N/A	N/A
	Back Side	0.96	0.072	1.032	N/A	N/A
Body	Front Side	0.895	0.111	1.006	N/A	N/A
	Back Side	0.96	0.072	1.032	N/A	N/A
	Left Side	0.392	N/A	0.392	N/A	N/A
	Right Side	0.489	N/A	0.489	N/A	N/A
	Top Side	N/A	0.025	0.025	N/A	N/A
	Bottom Side	0.086	N/A	0.086	N/A	N/A

Test Position		Scaled SAR _{MAX}		Σ 1-g SAR (W/Kg)	SPLSR	Remark
		WWAN	NII			
Hotspot	Front Side	0.895	0.130	1.025	N/A	N/A
	Back Side	0.96	0.168	1.128	N/A	N/A
Body	Front Side	0.895	0.130	1.025	N/A	N/A
	Back Side	0.96	0.168	1.128	N/A	N/A
	Left Side	0.392	N/A	0.392	N/A	N/A
	Right Side	0.489	0.106	0.595	N/A	N/A
	Top Side	N/A	0.112	0.112	N/A	N/A
	Bottom Side	0.086	N/A	0.086	N/A	N/A

10. Appendix A. Photo documentation

Refer to appendix Test Setup photo---SAR

11. 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 1

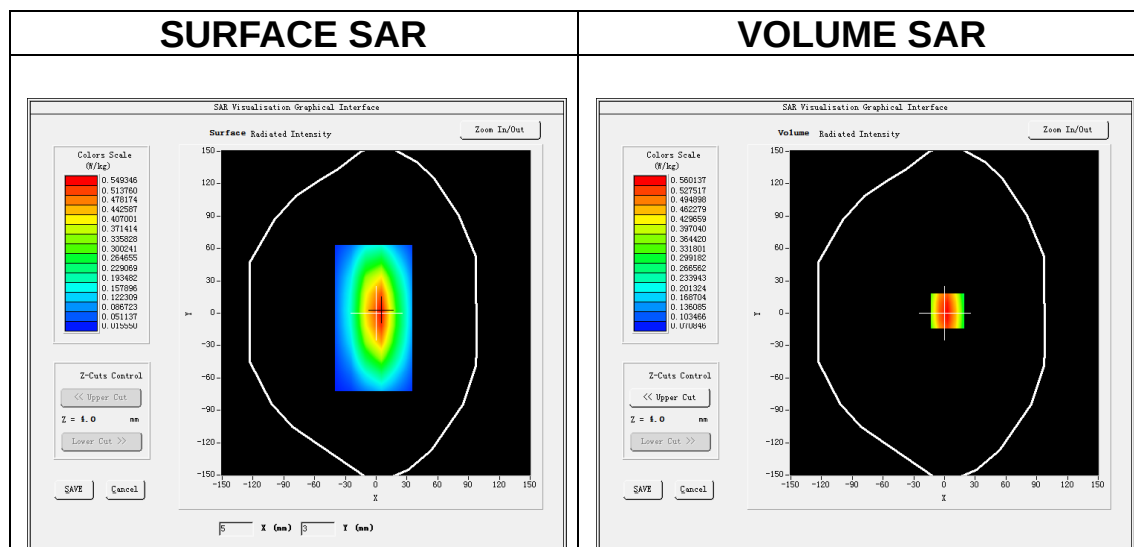
Date of measurement: 27/11/2024

A. Experimental conditions.

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

B. SAR Measurement Results

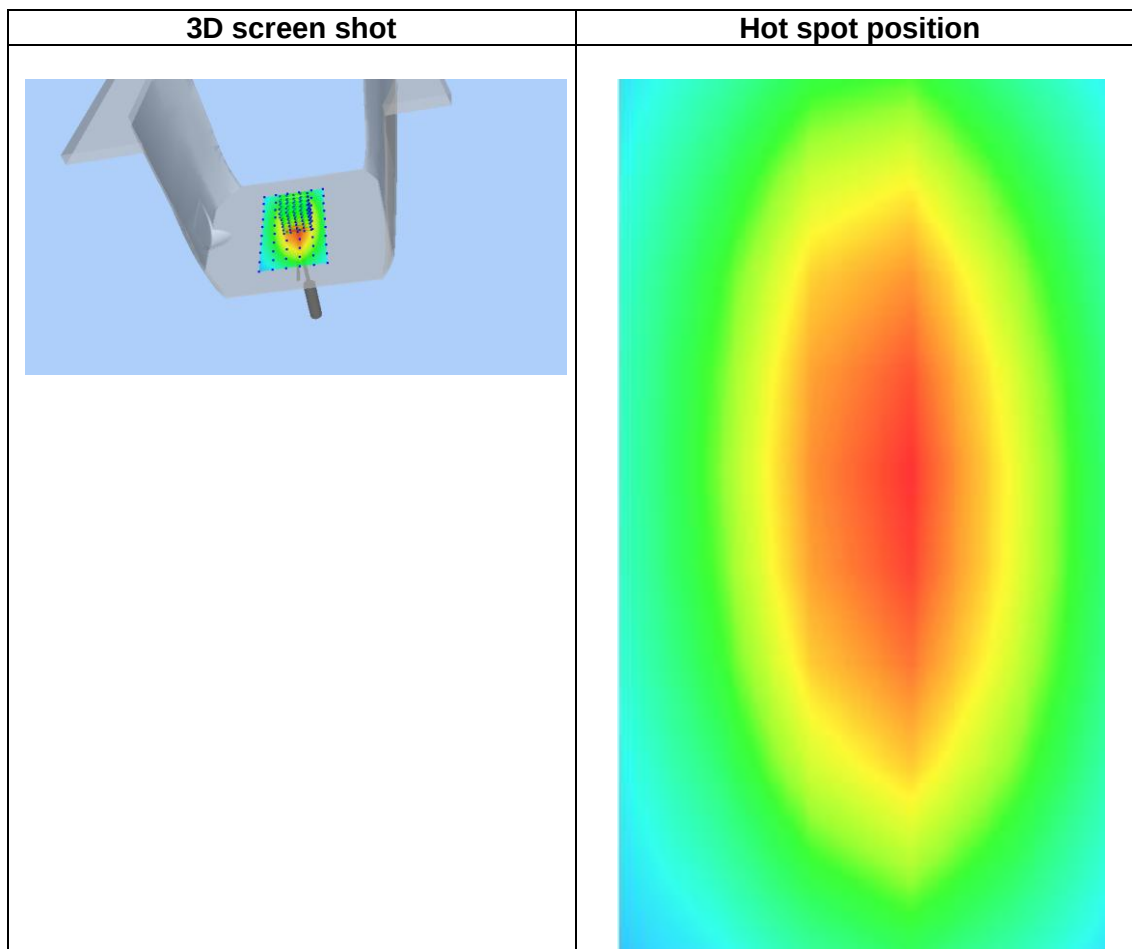
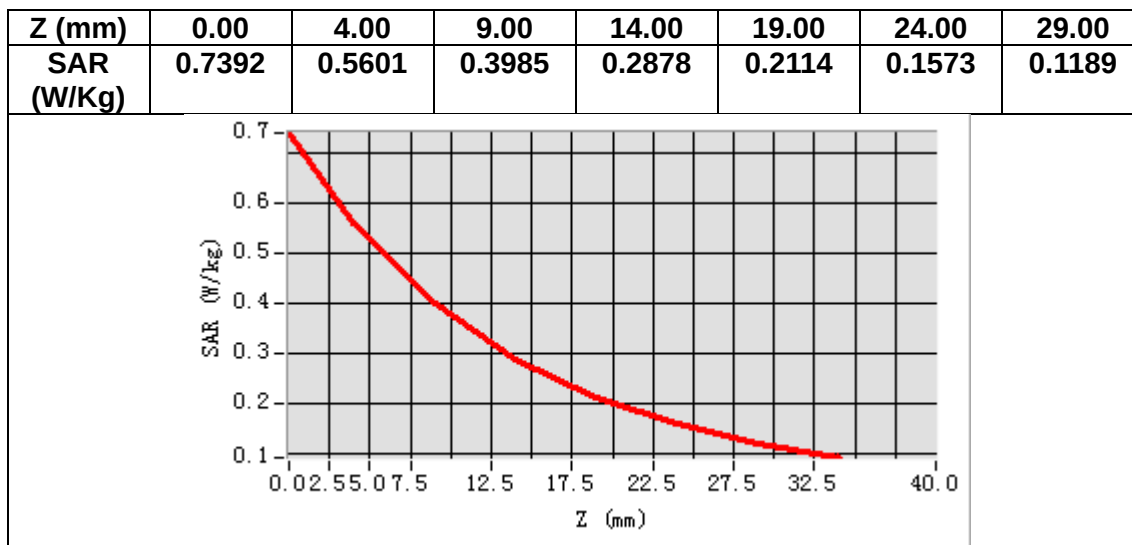
Frequency (MHz)	750.000000
Relative permittivity (real part)	40.869524
Relative permittivity (imaginary part)	21.646004
Conductivity (S/m)	0.901917
Variation (%)	0.310000



Maximum location: X=3.00, Y=2.00

SAR Peak: 0.74 W/kg

SAR 10g (W/Kg)	0.366575
SAR 1g (W/Kg)	0.543400



MEASUREMENT 2

Date of measurement: 26/11/2024

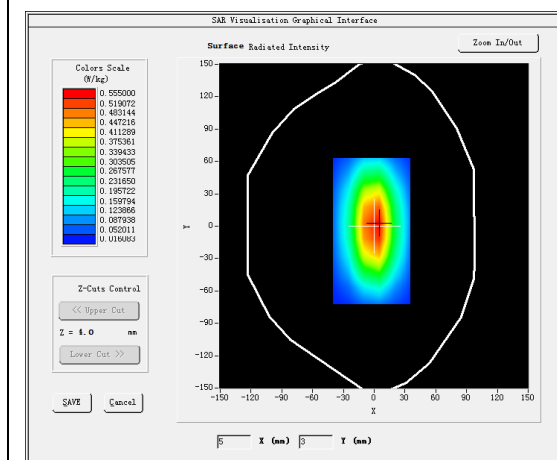
A. Experimental conditions.

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

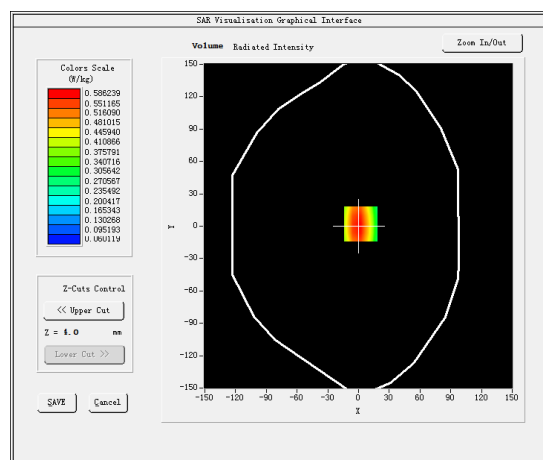
B. SAR Measurement Results

Frequency (MHz)	835.000000
Relative permittivity (real part)	41.934568
Relative permittivity (imaginary part)	19.710231
Conductivity (S/m)	0.914336
Variation (%)	-0.150000

SURFACE SAR



VOLUME SAR

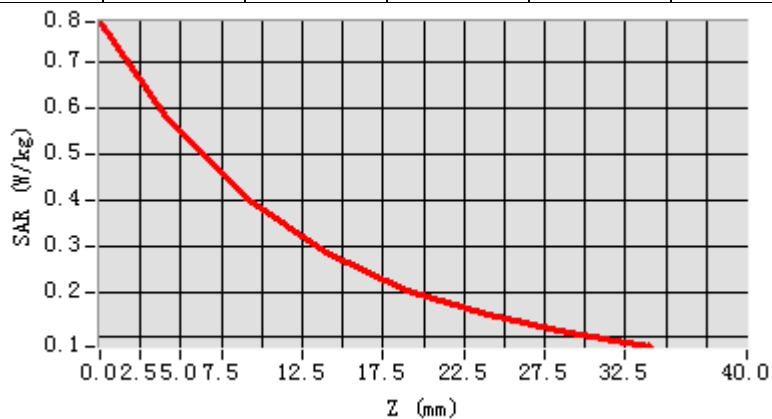


Maximum location: X=2.00, Y=2.00

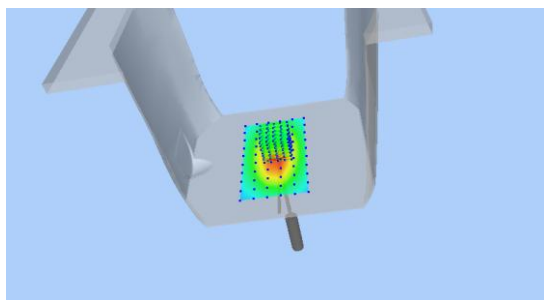
SAR Peak: 0.80 W/kg

SAR 10g (W/Kg)	0.375675
SAR 1g (W/Kg)	0.574430

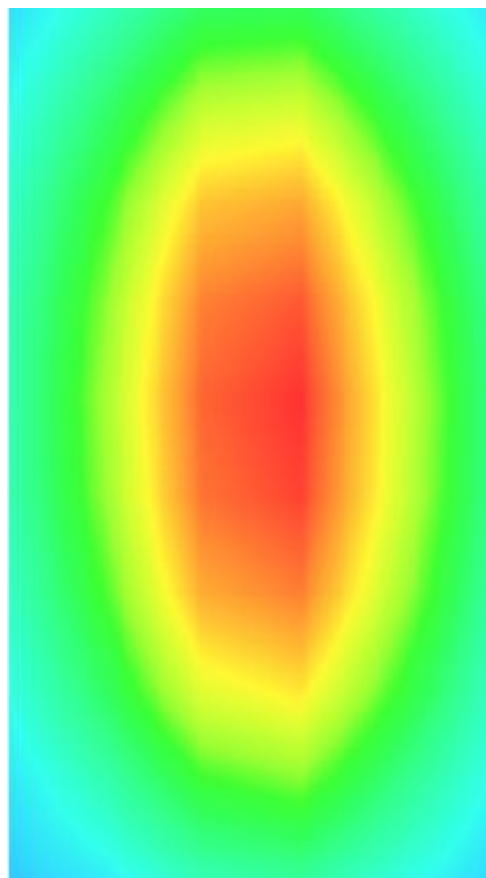
Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.7893	0.5862	0.4057	0.2841	0.2034	0.1486	0.1088



3D screen shot



Hot spot position



MEASUREMENT 3

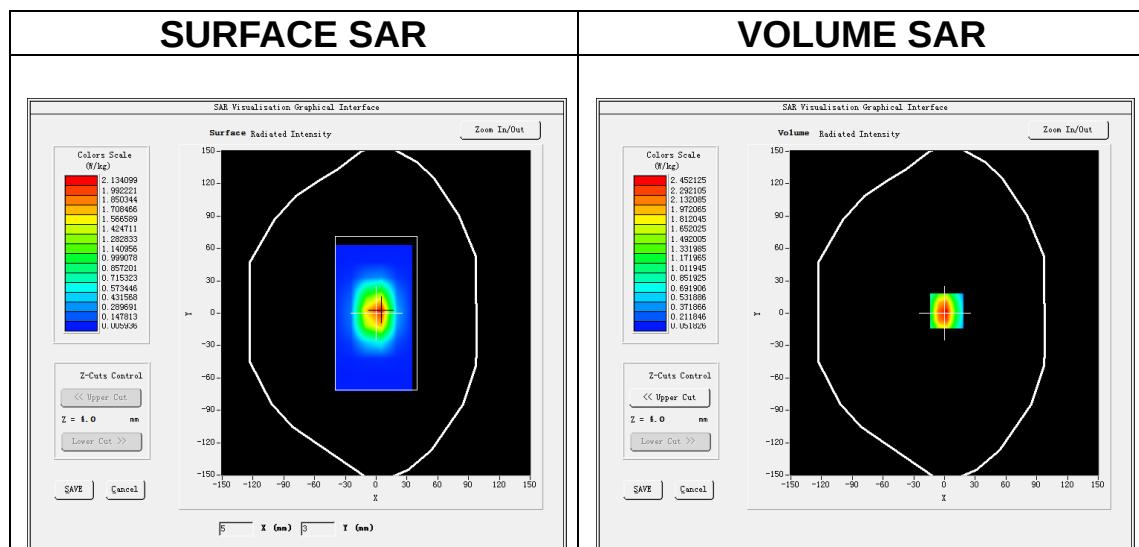
Date of measurement: 21/11/2024

A. Experimental conditions.

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

B. SAR Measurement Results

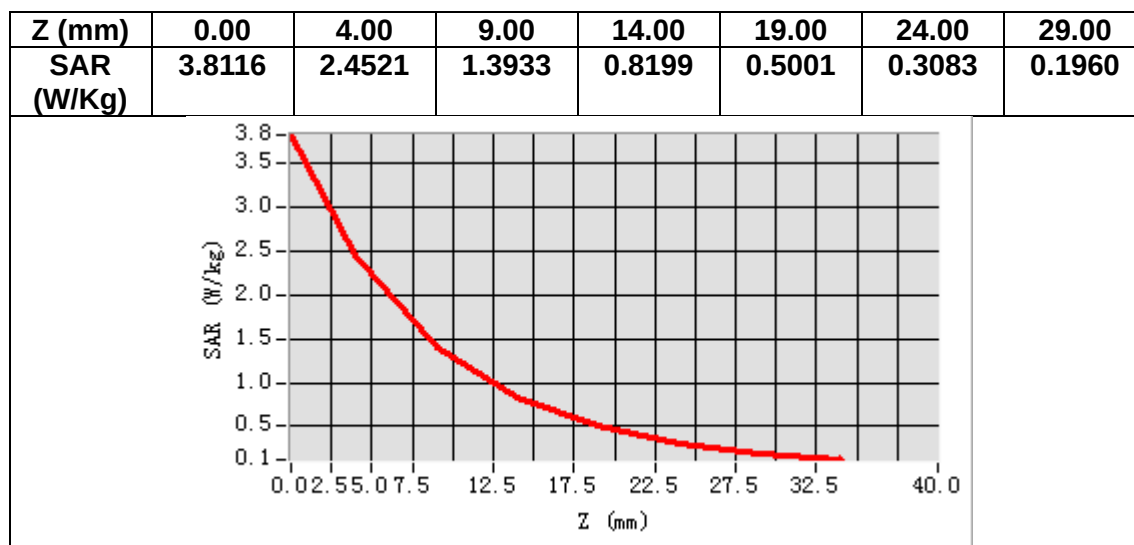
Frequency (MHz)	1800.000000
Relative permittivity (real part)	39.077704
Relative permittivity (imaginary part)	13.865005
Conductivity (S/m)	1.386501
Variation (%)	-0.110000



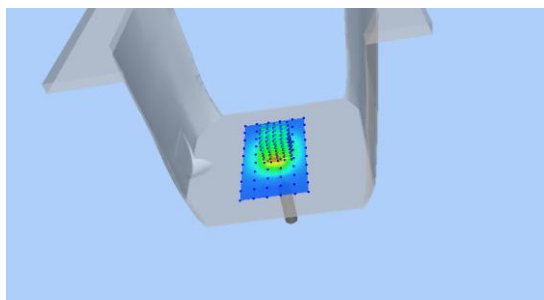
Maximum location: X=2.00, Y=2.00

SAR Peak: 3.95 W/kg

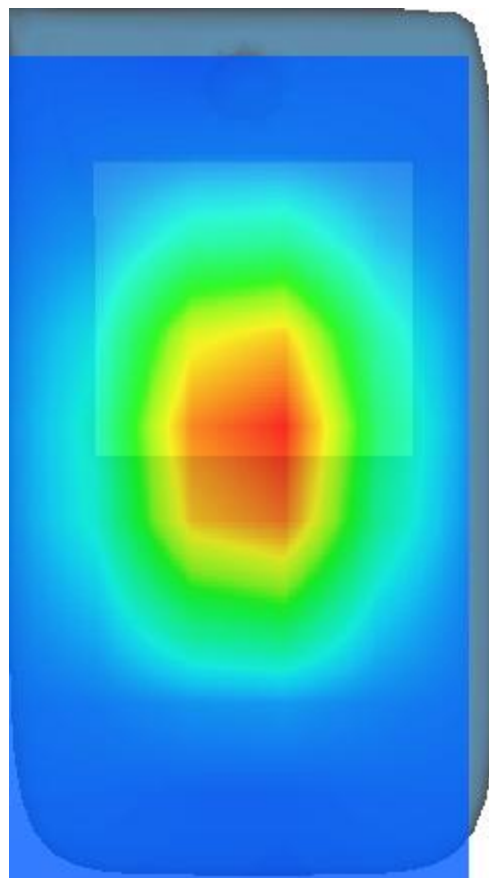
SAR 10g (W/Kg)	1.231630
SAR 1g (W/Kg)	2.380187



3D screen shot



Hot spot position



MEASUREMENT 4

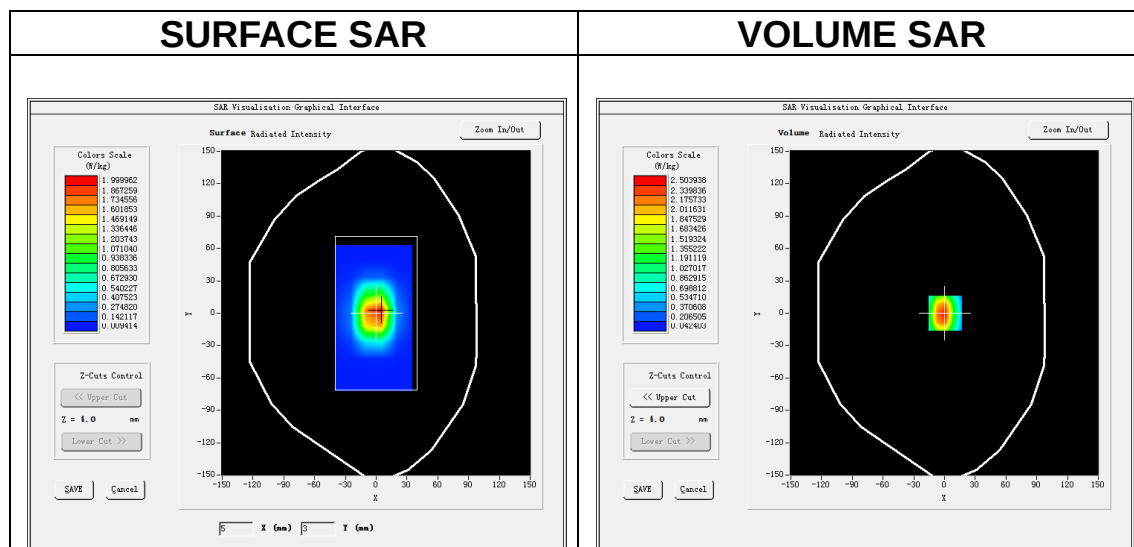
Date of measurement: 24/11/2024

A. Experimental conditions.

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

B. SAR Measurement Results

Frequency (MHz)	1900.000000
Relative permittivity (real part)	38.328712
Relative permittivity (imaginary part)	13.679631
Conductivity (S/m)	1.443961
Variation (%)	-0.190000

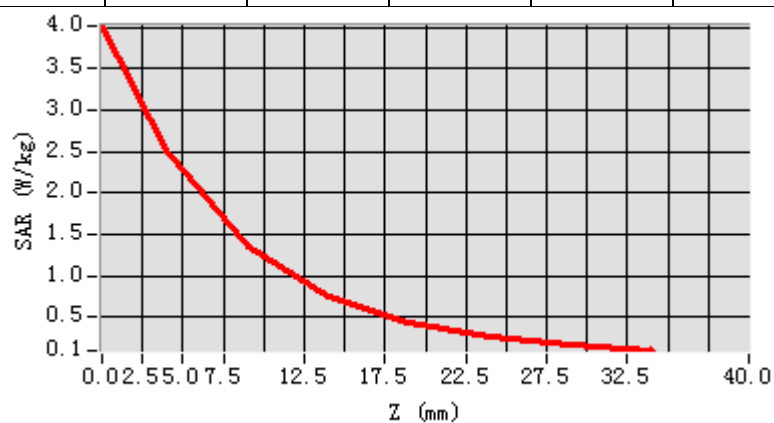


Maximum location: X=1.00, Y=0.00

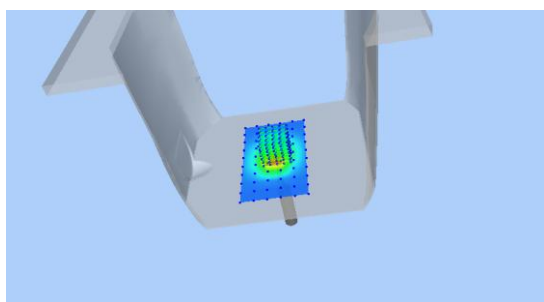
SAR Peak: 4.16 W/kg

SAR 10g (W/Kg)	1.230521
SAR 1g (W/Kg)	2.509710

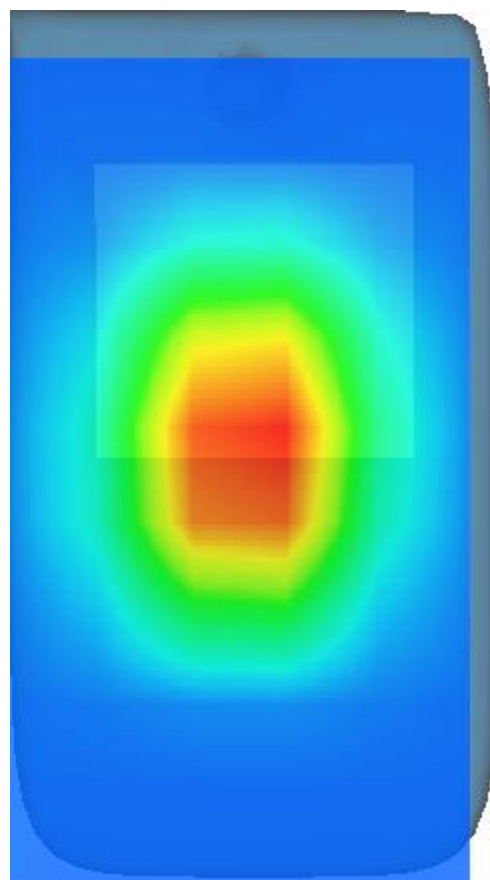
Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	4.0162	2.5039	1.3545	0.7613	0.4450	0.2630	0.1603



3D screen shot



Hot spot position



MEASUREMENT 5

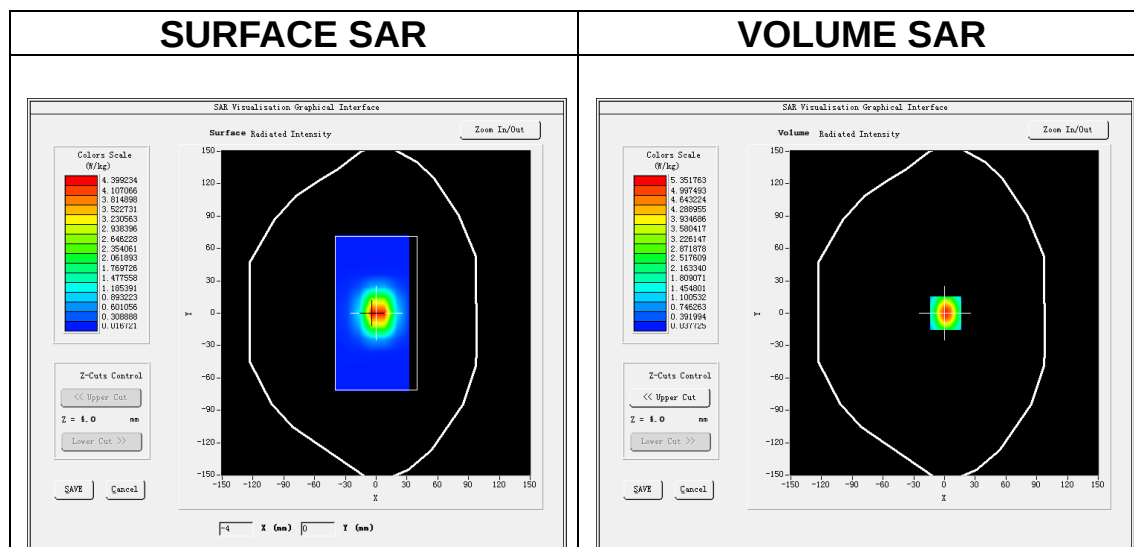
Date of measurement: 12/12/2024

A. Experimental conditions.

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

B. SAR Measurement Results

Frequency (MHz)	2450.000000
Relative permittivity (real part)	37.814490
Relative permittivity (imaginary part)	13.088029
Conductivity (S/m)	1.781426
Variation (%)	-0.120000

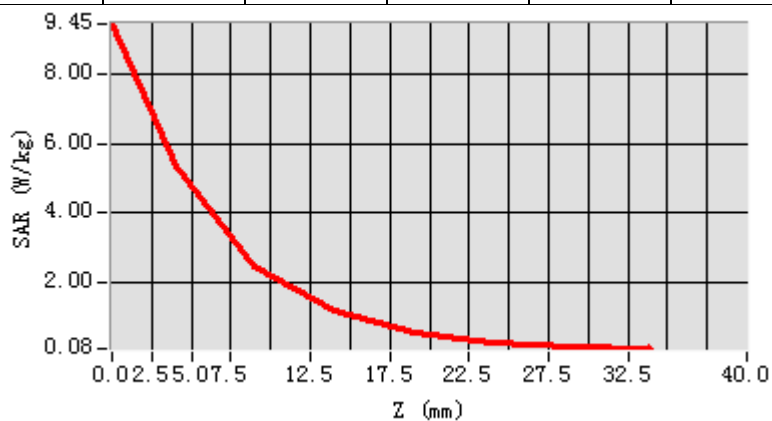


Maximum location: X=1.00, Y=0.00

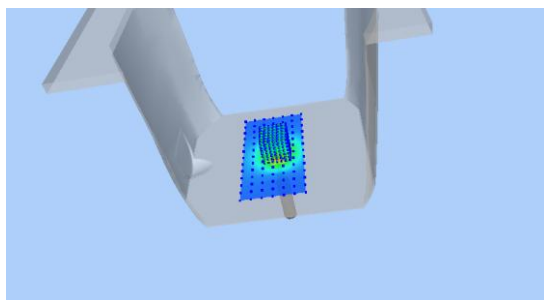
SAR Peak: 9.35 W/kg

SAR 10g (W/Kg)	2.216730
SAR 1g (W/Kg)	4.962190

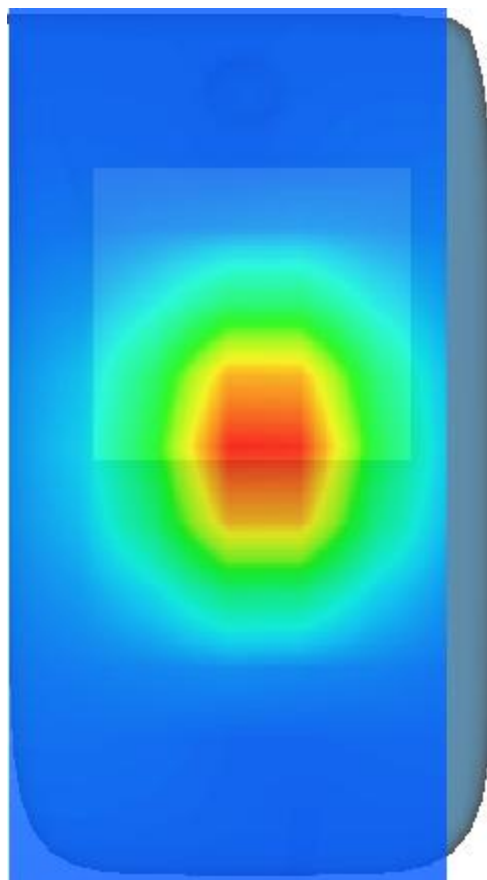
Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	9.4489	5.3518	2.4364	1.1509	0.5548	0.2722	0.1404



3D screen shot



Hot spot position



MEASUREMENT 6

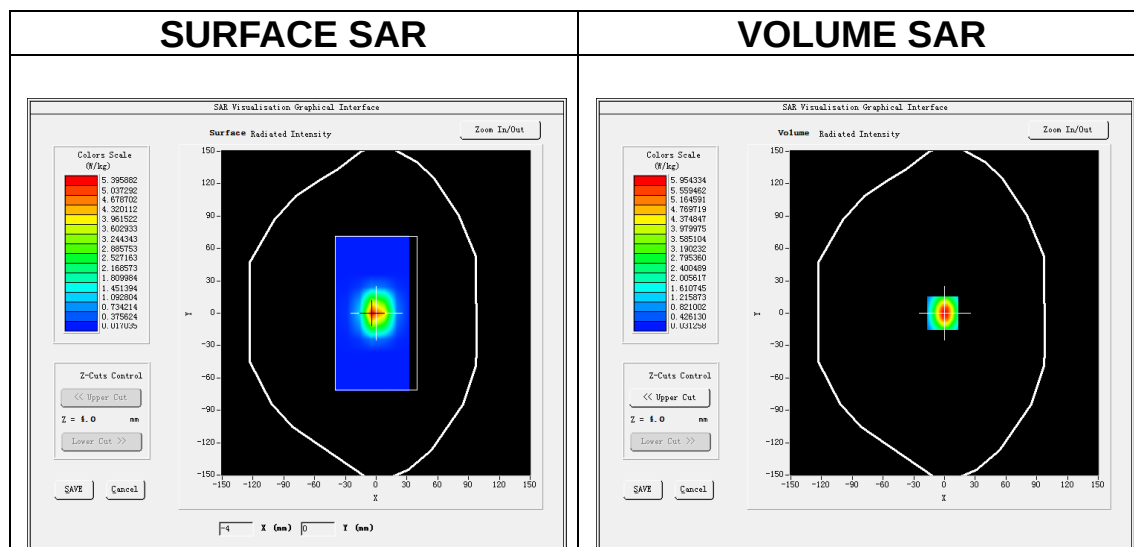
Date of measurement: 25/11/2024

A. Experimental conditions.

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

B. SAR Measurement Results

Frequency (MHz)	2600.000000
Relative permittivity (real part)	38.878441
Relative permittivity (imaginary part)	13.731472
Conductivity (S/m)	1.983435
Variation (%)	-0.680000

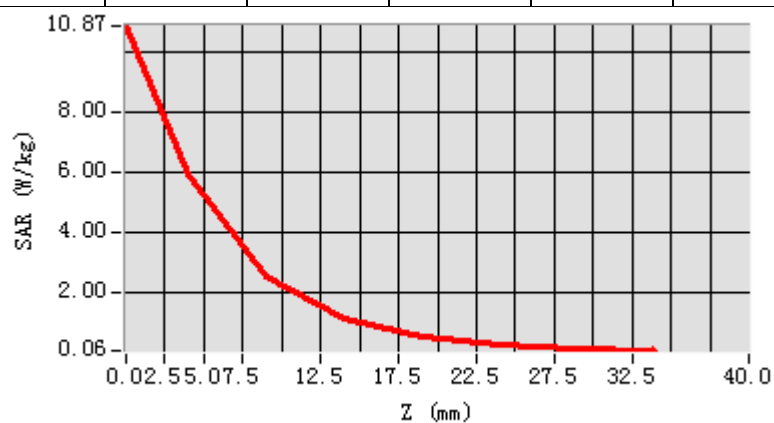


Maximum location: X=-2.00, Y=0.00

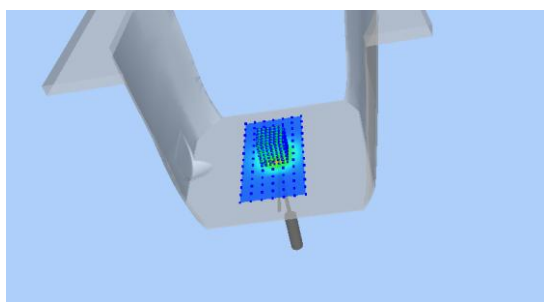
SAR Peak: 11.17 W/kg

SAR 10g (W/Kg)	2.367676
SAR 1g (W/Kg)	5.709248

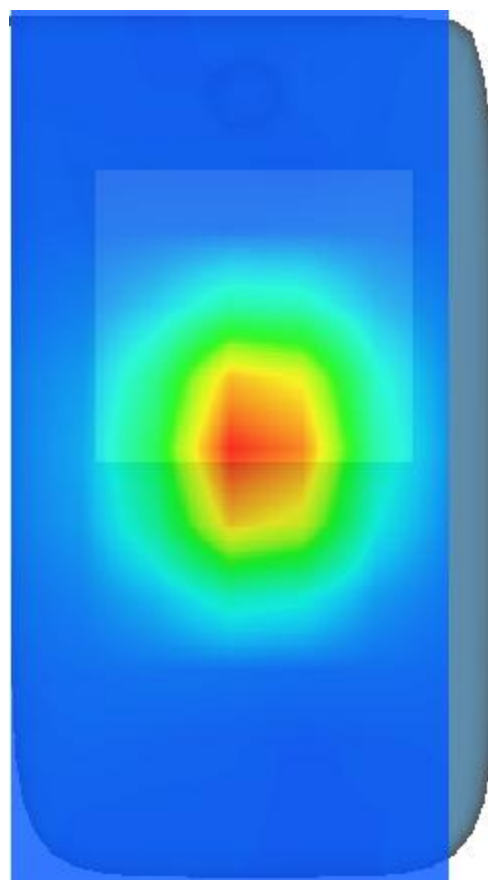
Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	10.8743	5.9543	2.5349	1.1069	0.4993	0.2309	0.1155



3D screen shot



Hot spot position



MEASUREMENT 7

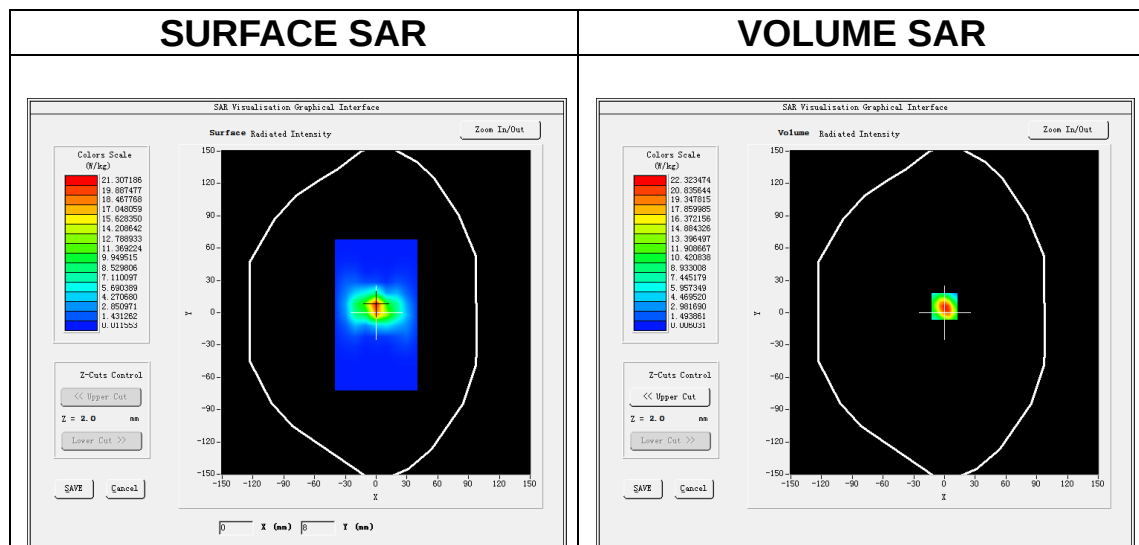
Date of measurement: 11/12/2024

A. Experimental conditions.

<u>Area Scan</u>	<u>dx=10mm dy=10mm, h= 2.00 mm</u>
<u>ZoomScan</u>	<u>7x7x12,dx=4mm dy=4mm dz=2mm</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Dipole</u>
<u>Band</u>	<u>CW5200</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>CW (Crest factor: 1.0)</u>
<u>ConvF</u>	<u>1.89</u>

B. SAR Measurement Results

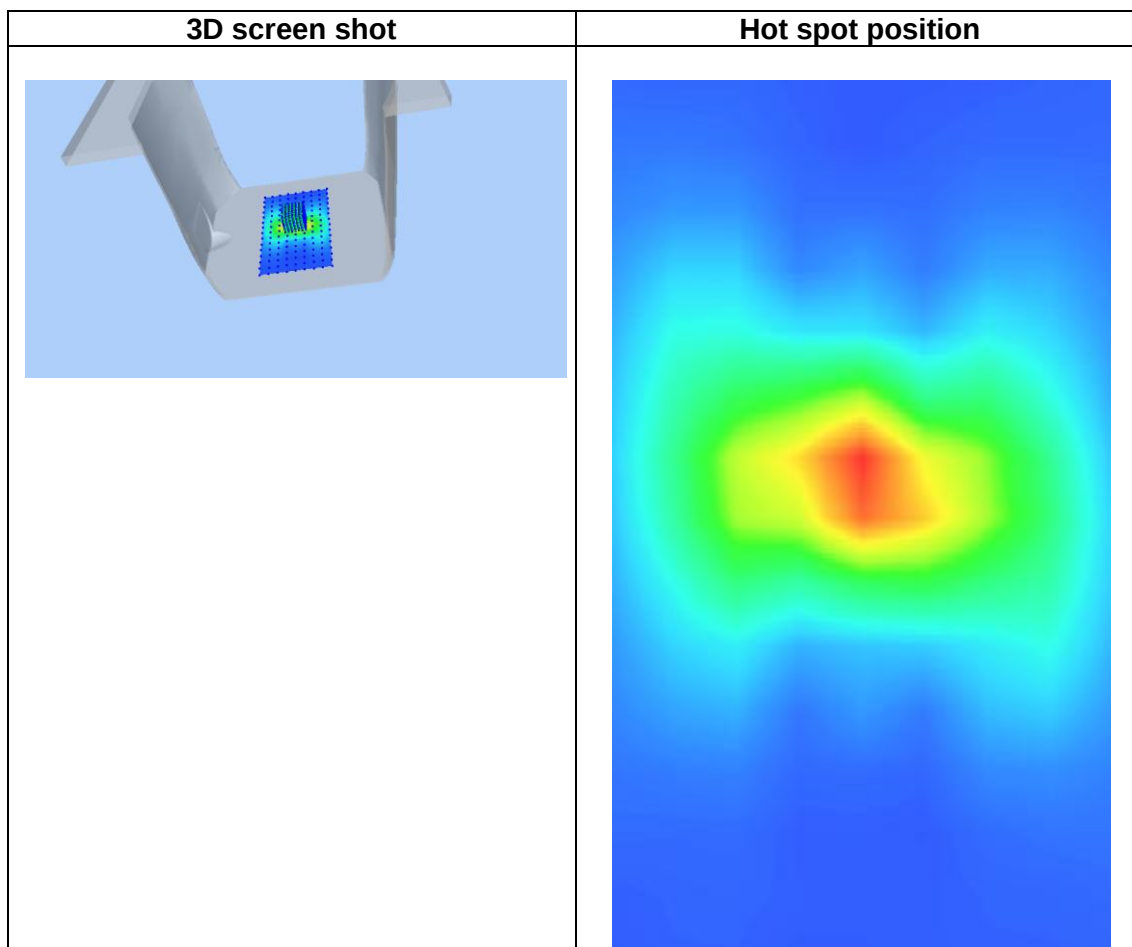
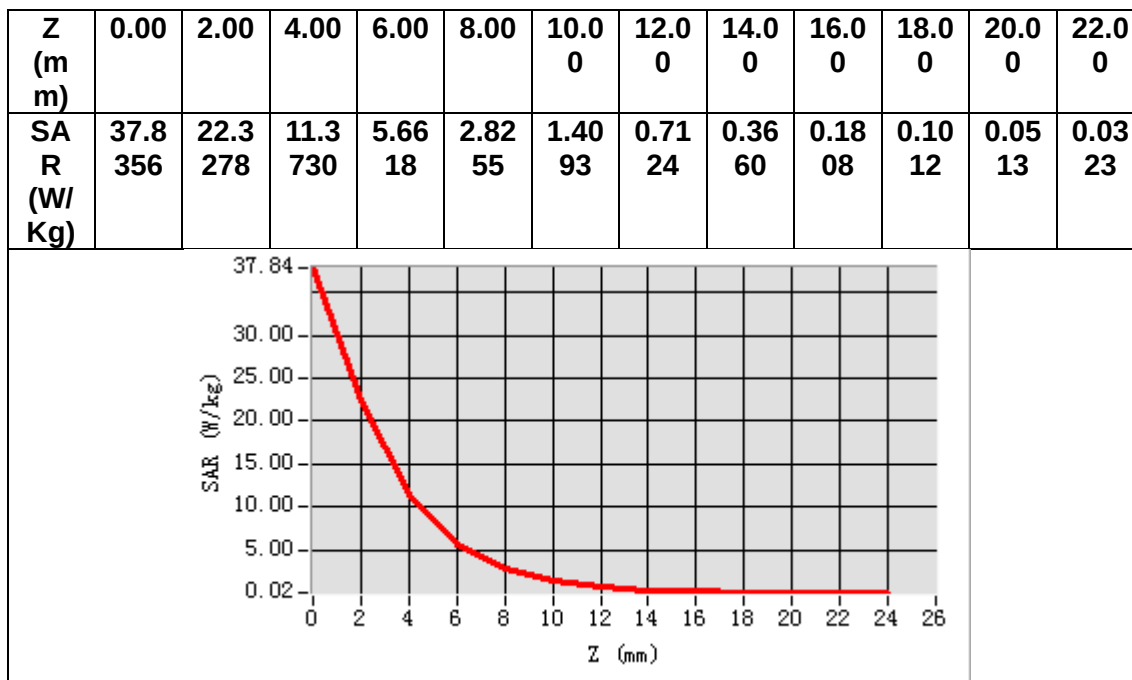
Frequency (MHz)	5200.000000
Relative permittivity (real part)	34.652485
Relative permittivity (imaginary part)	15.561054
Conductivity (S/m)	4.4954156
Variation (%)	1.590000



Maximum location: X=0.00, Y=6.00

SAR Peak: 40.06 W/kg

SAR 10g (W/Kg)	5.450374
SAR 1g (W/Kg)	15.653564



12. Appendix C. Plots of High SAR Measurement

Table of contents
MEASUREMENT 1 GSM 850 Body
MEASUREMENT 2 GSM 1900 Body
MEASUREMENT 3 WCDMA Band 2 Body
MEASUREMENT 4 WCDMA Band 4 Body
MEASUREMENT 5 WCDMA Band 5 Body
MEASUREMENT 6 WLAN 5.2G Body
MEASUREMENT 7 WLAN 2.4G Body
MEASUREMENT 8 LTE Band 2 Body
MEASUREMENT 9 LTE Band 4 Body
MEASUREMENT 10 LTE Band 5 Body
MEASUREMENT 11 LTE Band 7 Body
MEASUREMENT 12 LTE Band 12 Body
MEASUREMENT 13 LTE Band 17 Body
MEASUREMENT 14 LTE Band 41 Body
MEASUREMENT 15 LTE Band 66 Body

MEASUREMENT 1

Date of measurement: 26/11/2024

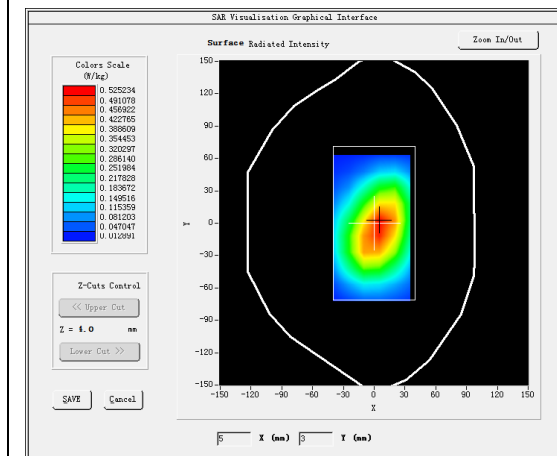
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=15mm dy=15mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>5x5x7,dx=8mm dy=8mm dz=5mm</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Body</u>
<u>Band</u>	<u>GSM850</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>TDMA (Crest factor: 8.0)</u>
<u>ConvF</u>	<u>2.34</u>

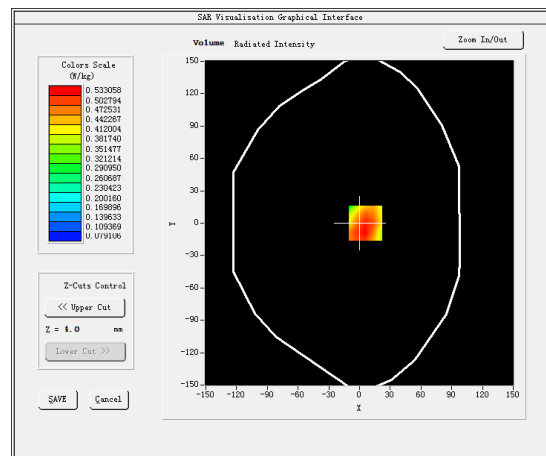
B. SAR Measurement Results

Frequency (MHz)	836.400000
Relative permittivity (real part)	41.850227
Relative permittivity (imaginary part)	19.736071
Conductivity (S/m)	0.917069
Variation (%)	-3.650000

SURFACE SAR



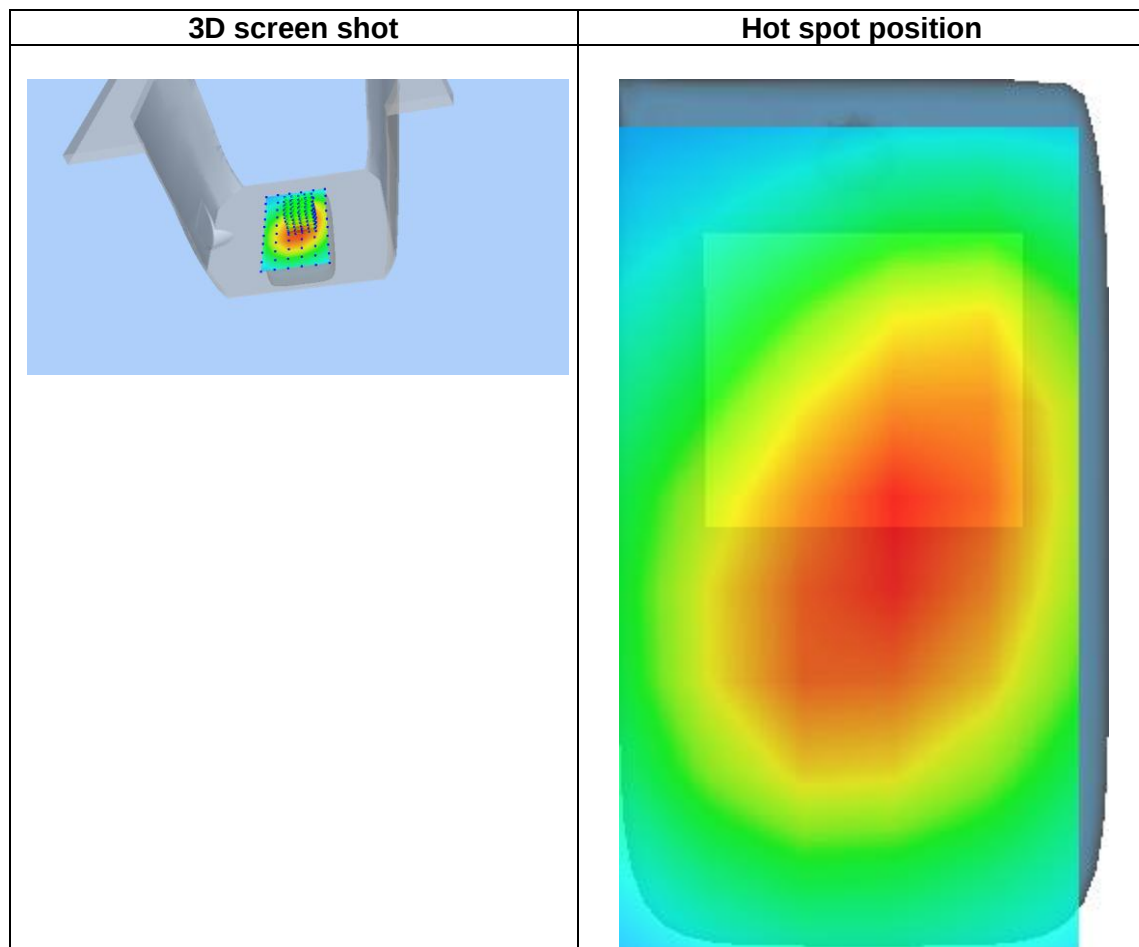
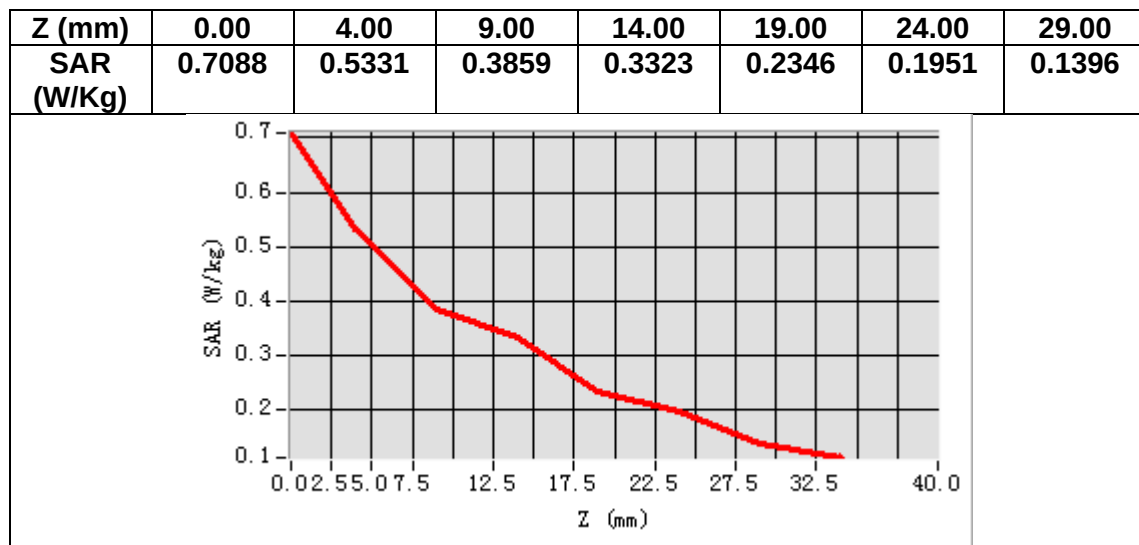
VOLUME SAR



Maximum location: X=6.00, Y=0.00

SAR Peak: 0.67 W/kg

SAR 10g (W/Kg)	0.382093
SAR 1g (W/Kg)	0.522778



MEASUREMENT 2

Date of measurement: 24/11/2024

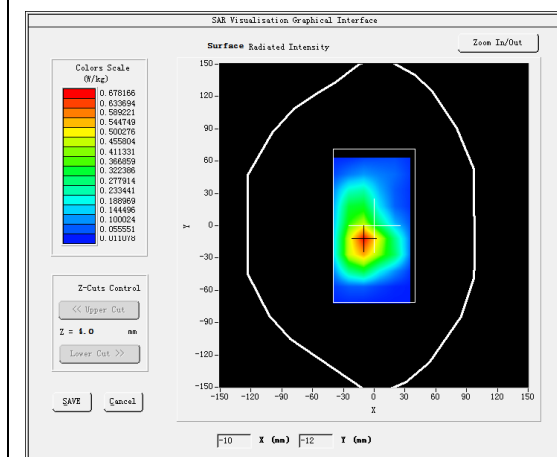
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=15mm dy=15mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>5x5x7,dx=8mm dy=8mm dz=5mm</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Body</u>
<u>Band</u>	<u>GSM1900</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>TDMA (Crest factor: 8.0)</u>
<u>ConvF</u>	<u>2.57</u>

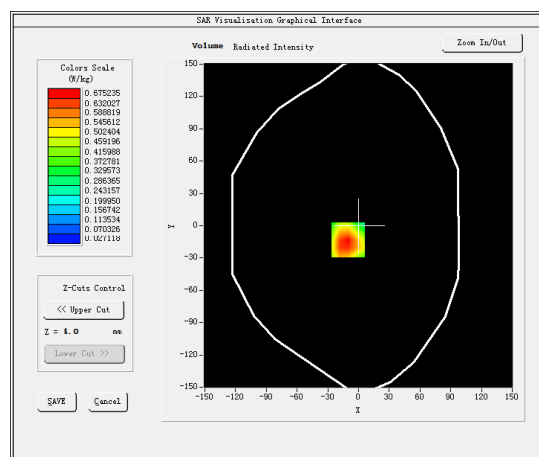
B. SAR Measurement Results

Frequency (MHz)	1880.000000
Relative permittivity (real part)	38.415112
Relative permittivity (imaginary part)	13.697431
Conductivity (S/m)	1.430621
Variation (%)	1.130000

SURFACE SAR



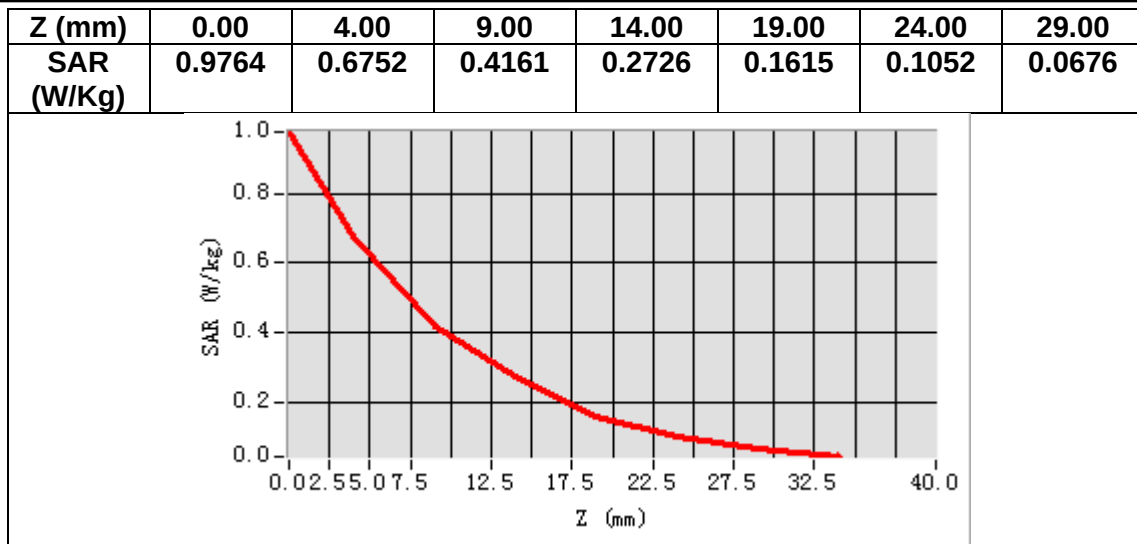
VOLUME SAR



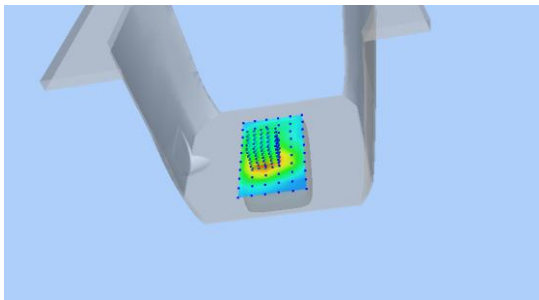
Maximum location: X=-10.00, Y=-13.00

SAR Peak: 1.02 W/kg

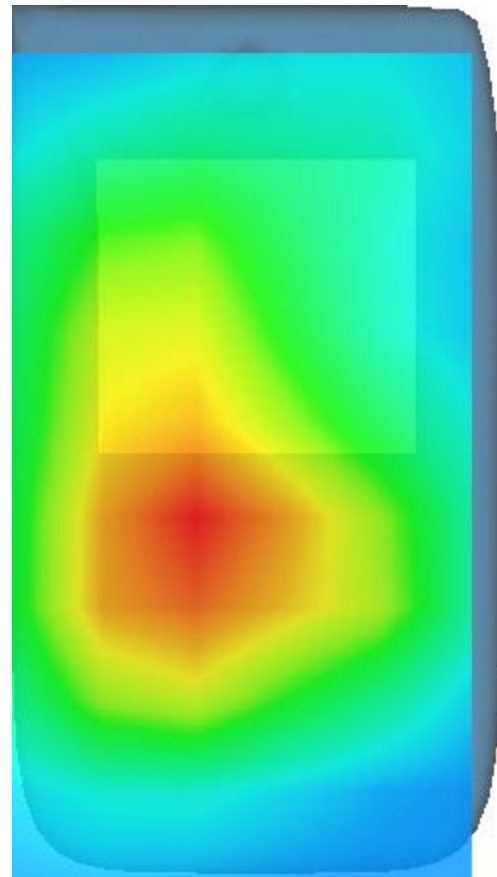
SAR 10g (W/Kg)	0.384883
SAR 1g (W/Kg)	0.670105



3D screen shot



Hot spot position



MEASUREMENT 3

Date of measurement: 24/11/2024

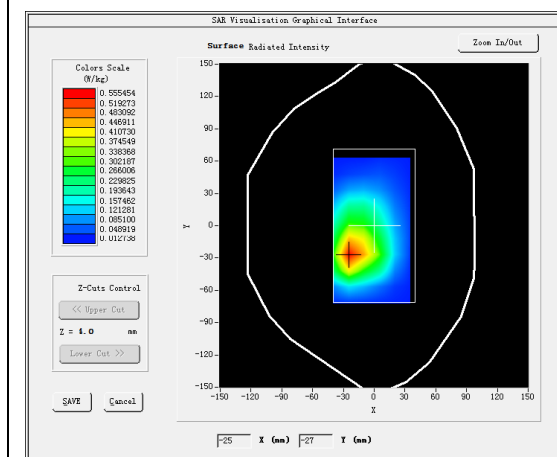
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=15mm dy=15mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>5x5x7,dx=8mm dy=8mm dz=5mm</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Body</u>
<u>Band</u>	<u>Band2 WCDMA1900</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>WCDMA (Crest factor: 1.0)</u>
<u>ConvF</u>	<u>2.57</u>

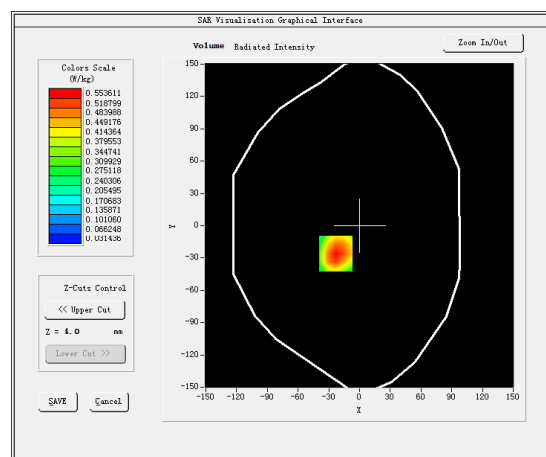
B. SAR Measurement Results

Frequency (MHz)	1880.000000
Relative permittivity (real part)	38.415112
Relative permittivity (imaginary part)	13.697431
Conductivity (S/m)	1.430621
Variation (%)	-1.230000

SURFACE SAR



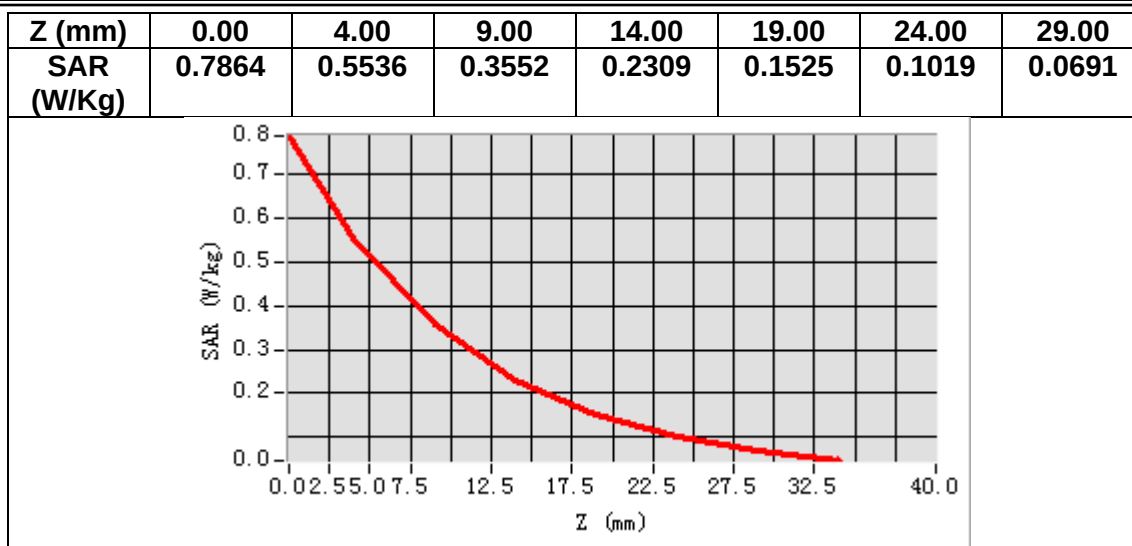
VOLUME SAR



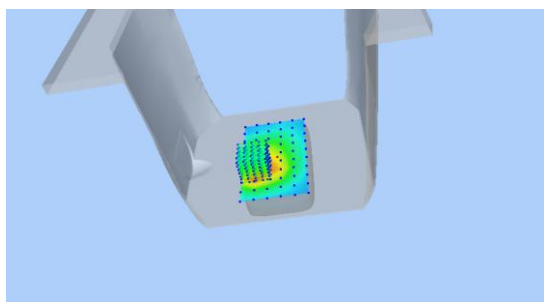
Maximum location: X=-23.00, Y=-26.00

SAR Peak: 0.80 W/kg

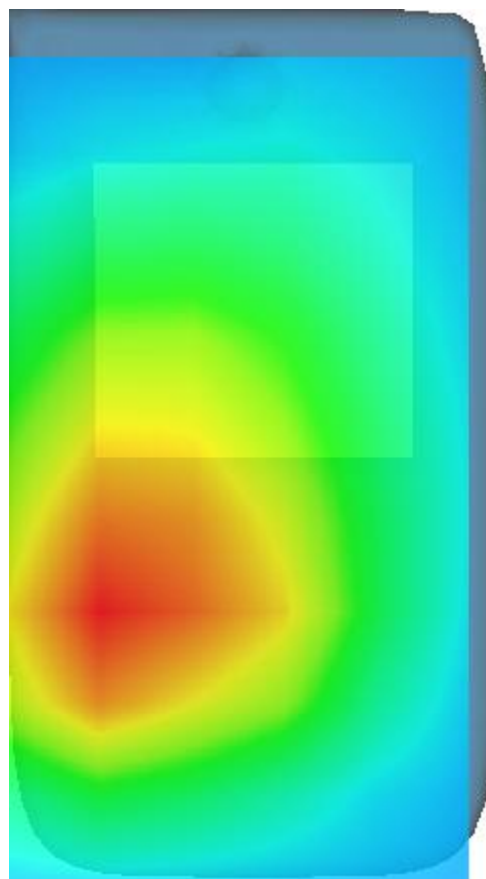
SAR 10g (W/Kg)	0.325150
SAR 1g (W/Kg)	0.541667



3D screen shot



Hot spot position



MEASUREMENT 4

Date of measurement: 21/11/2024

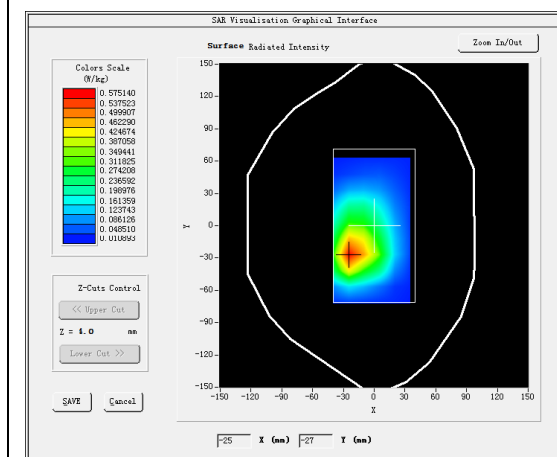
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=15mm dy=15mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>5x5x7,dx=8mm dy=8mm dz=5mm</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Body</u>
<u>Band</u>	<u>Band4 WCDMA1700</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>WCDMA (Crest factor: 1.0)</u>
<u>ConvF</u>	<u>2.51</u>

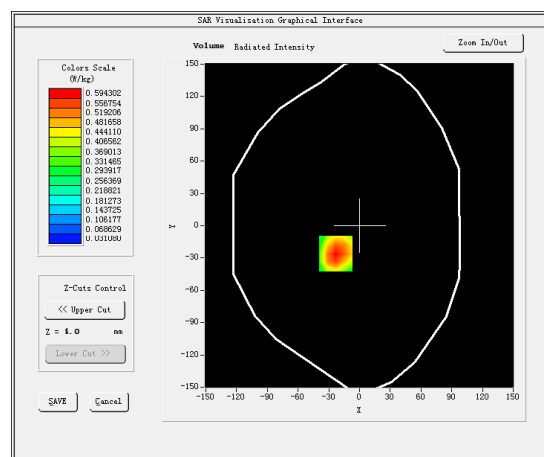
B. SAR Measurement Results

Frequency (MHz)	1732.600000
Relative permittivity (real part)	39.537403
Relative permittivity (imaginary part)	13.817305
Conductivity (S/m)	1.329532
Variation (%)	-1.020000

SURFACE SAR



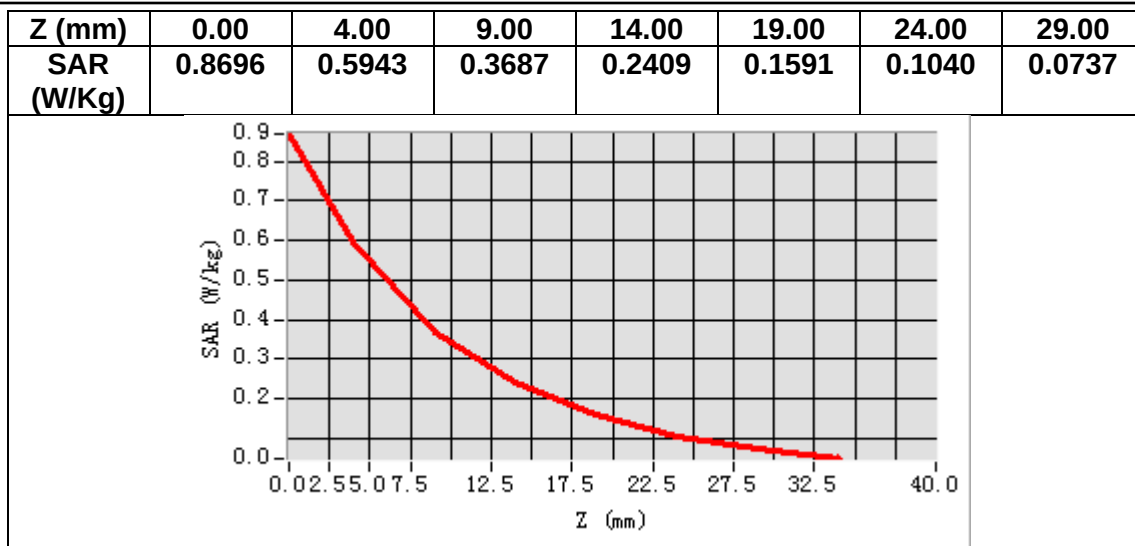
VOLUME SAR



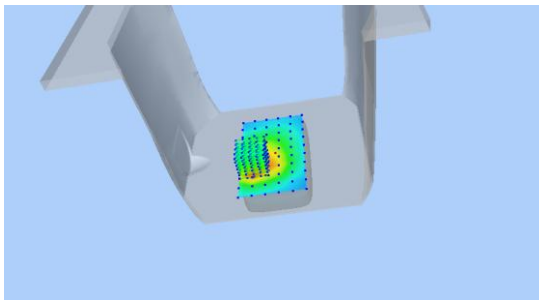
Maximum location: X=-23.00, Y=-26.00

SAR Peak: 0.88 W/kg

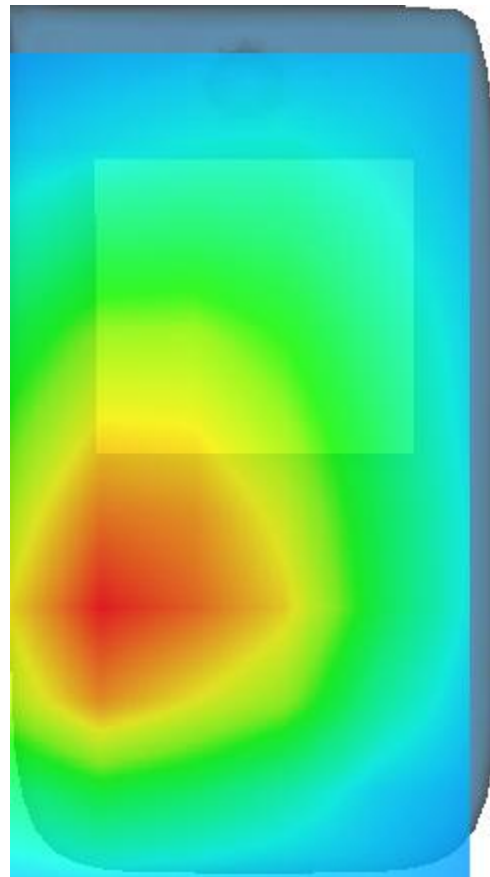
SAR 10g (W/Kg)	0.340673
SAR 1g (W/Kg)	0.571224



3D screen shot



Hot spot position



MEASUREMENT 5

Date of measurement: 26/11/2024

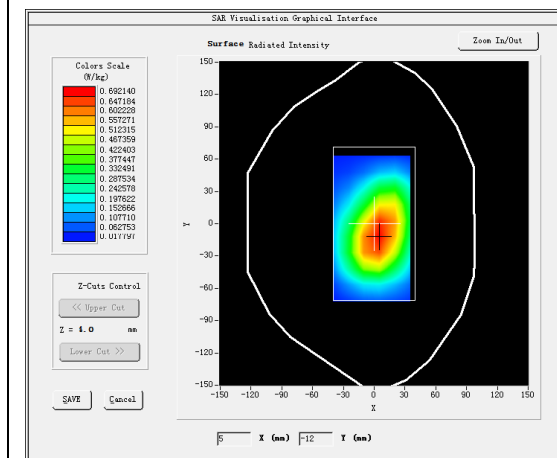
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=15mm dy=15mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>5x5x7,dx=8mm dy=8mm dz=5mm</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Body</u>
<u>Band</u>	<u>Band5 WCDMA850</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>WCDMA (Crest factor: 1.0)</u>
<u>ConvF</u>	<u>2.34</u>

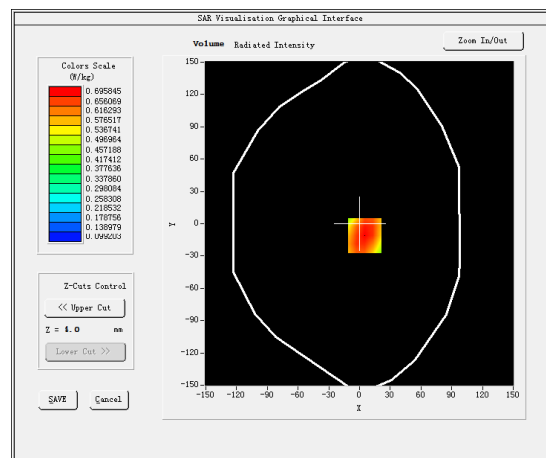
B. SAR Measurement Results

Frequency (MHz)	836.400000
Relative permittivity (real part)	41.850227
Relative permittivity (imaginary part)	19.736071
Conductivity (S/m)	0.917069
Variation (%)	1.170000

SURFACE SAR



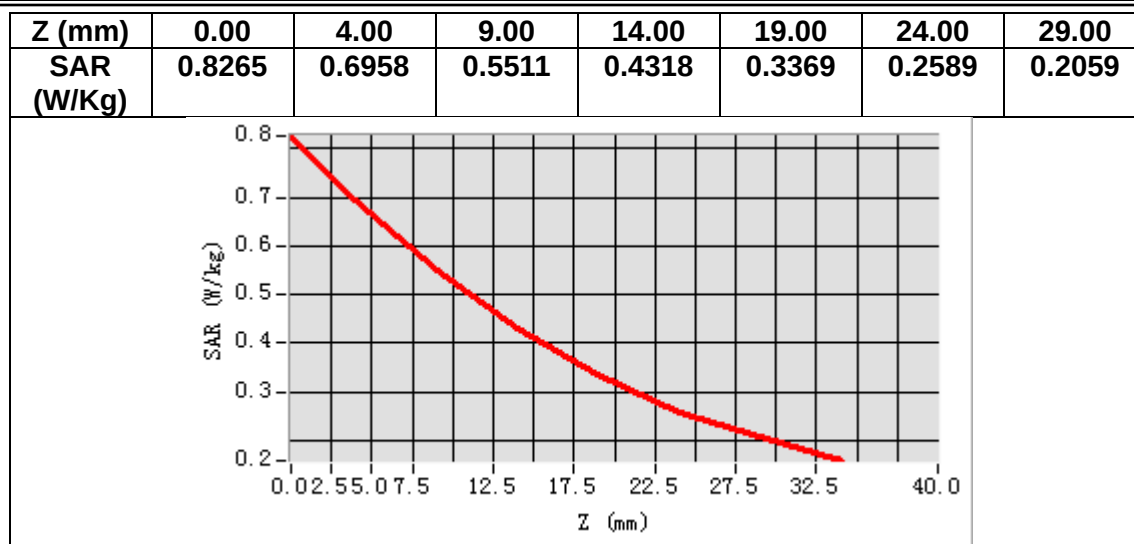
VOLUME SAR



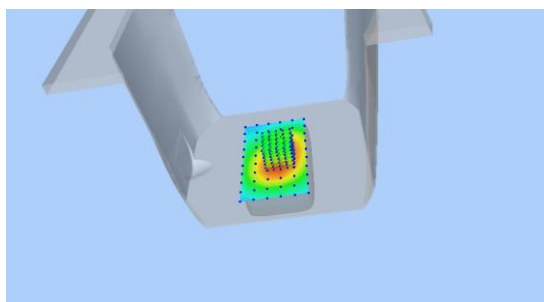
Maximum location: X=5.00, Y=-11.00

SAR Peak: 0.84 W/kg

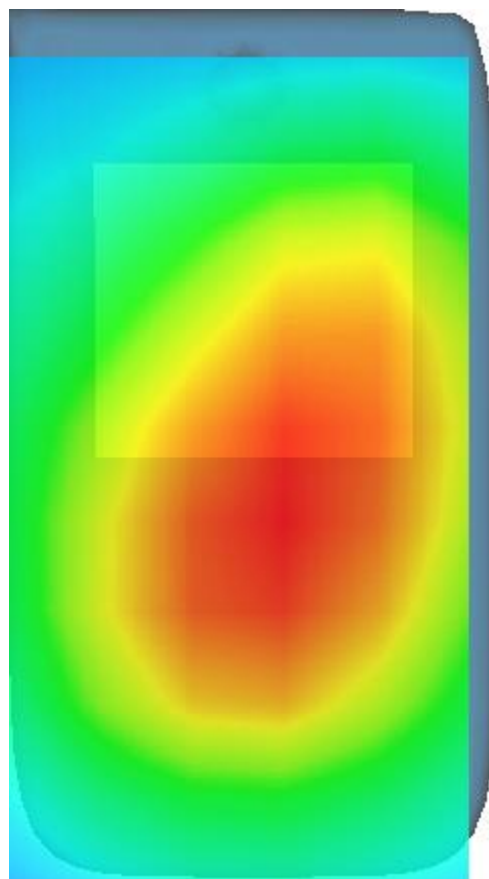
SAR 10g (W/Kg)	0.504076
SAR 1g (W/Kg)	0.677246



3D screen shot



Hot spot position



MEASUREMENT 6

Date of measurement: 11/12/2024

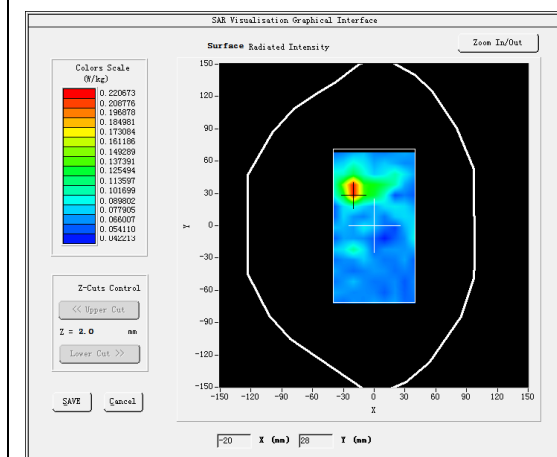
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=10mm dy=10mm, h= 2.00 mm</u>
<u>ZoomScan</u>	<u>7x7x12,dx=4mm dy=4mm dz=2mm</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Body</u>
<u>Band</u>	<u>IEEE 802.11ax U-NII</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>IEEE802.11ax (Crest factor: 1.0)</u>
<u>ConvF</u>	<u>1.89</u>

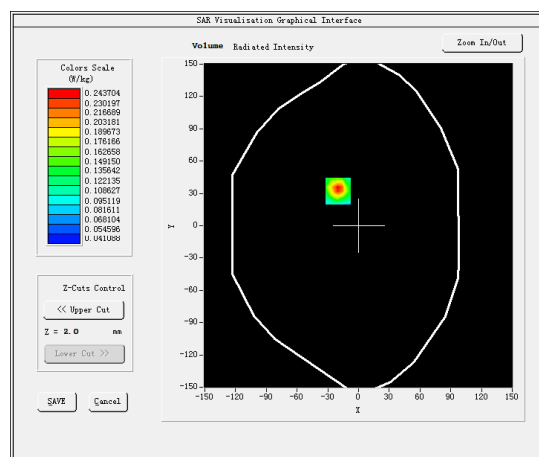
B. SAR Measurement Results

Frequency (MHz)	5230.000000
Relative permittivity (real part)	34.652485
Relative permittivity (imaginary part)	15.561054
Conductivity (S/m)	4.495416
Variation (%)	2.100000

SURFACE SAR



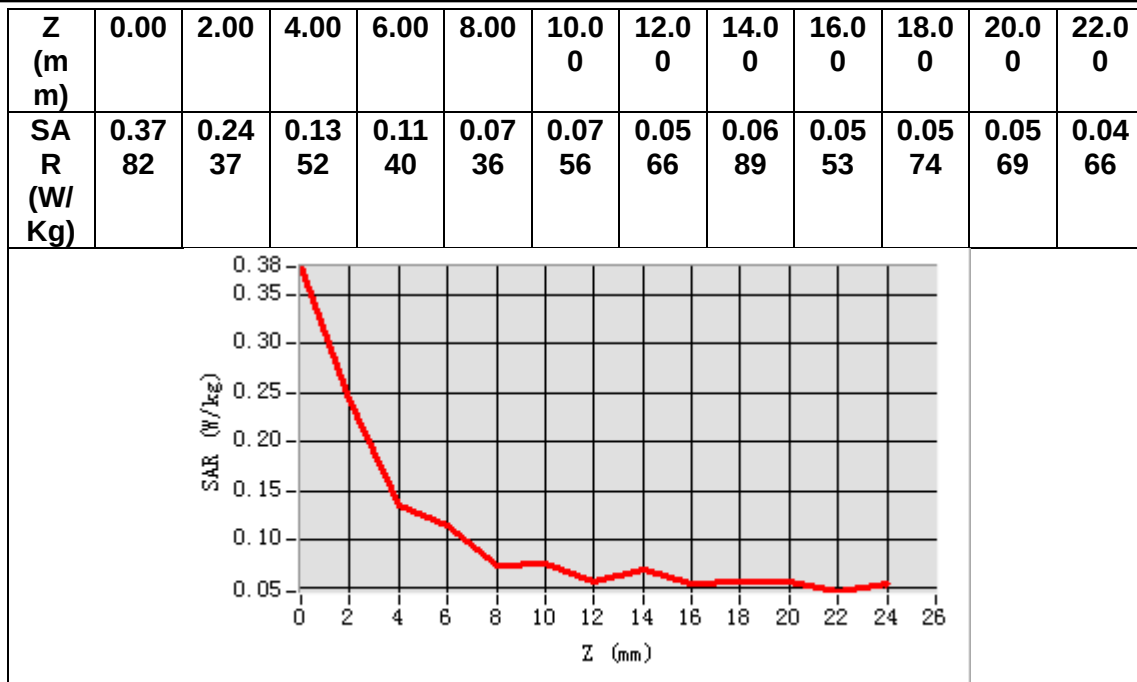
VOLUME SAR



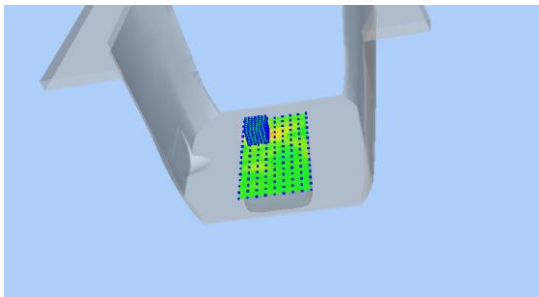
Maximum location: X=-20.00, Y=32.00

SAR Peak: 0.38 W/kg

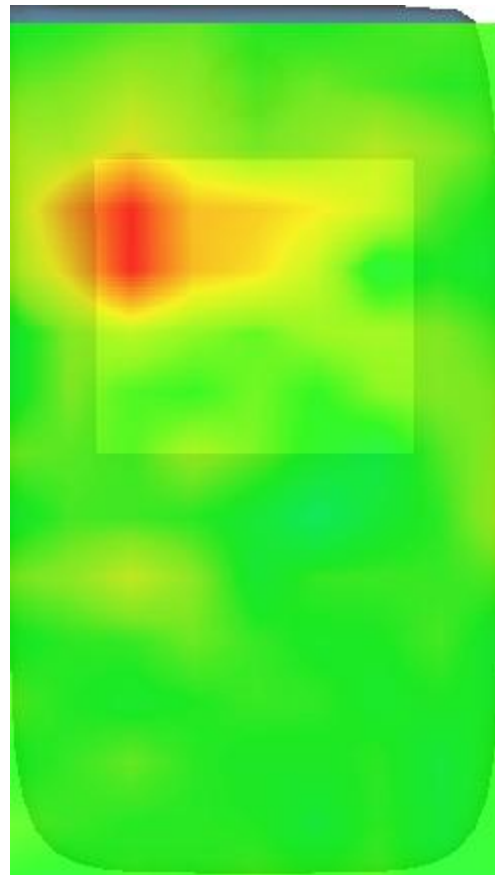
SAR 10g (W/Kg)	0.094090
SAR 1g (W/Kg)	0.162448



3D screen shot



Hot spot position



MEASUREMENT 7

Date of measurement: 12/12/2024

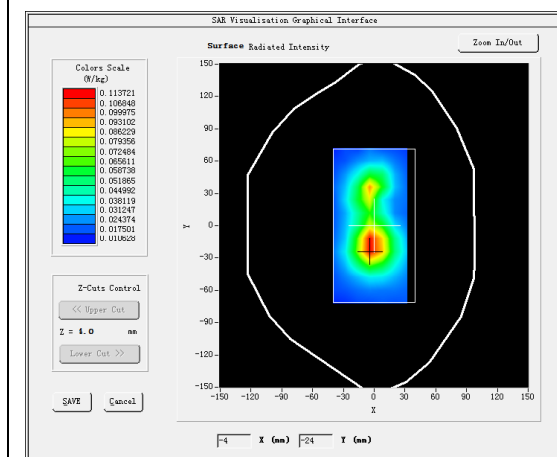
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=12mm dy=12mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>7x7x7,dx=5mm dy=5mm dz=5mm</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Body</u>
<u>Band</u>	<u>IEEE 802.11b ISM</u>
<u>Channels</u>	<u>High</u>
<u>Signal</u>	<u>IEEE802.11b (Crest factor: 1.0)</u>
<u>ConvF</u>	<u>2.74</u>

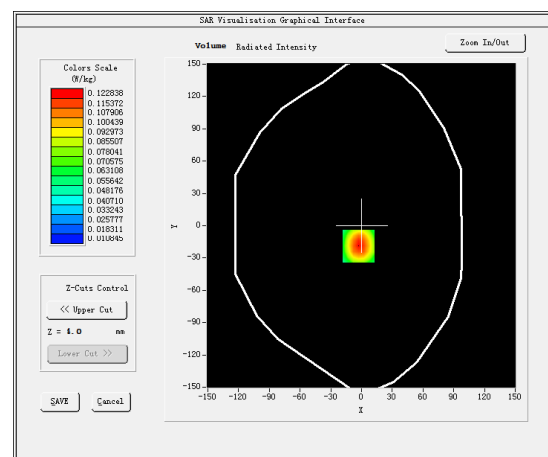
B. SAR Measurement Results

Frequency (MHz)	2462.000000
Relative permittivity (real part)	37.866589
Relative permittivity (imaginary part)	13.006529
Conductivity (S/m)	1.760940
Variation (%)	2.350000

SURFACE SAR



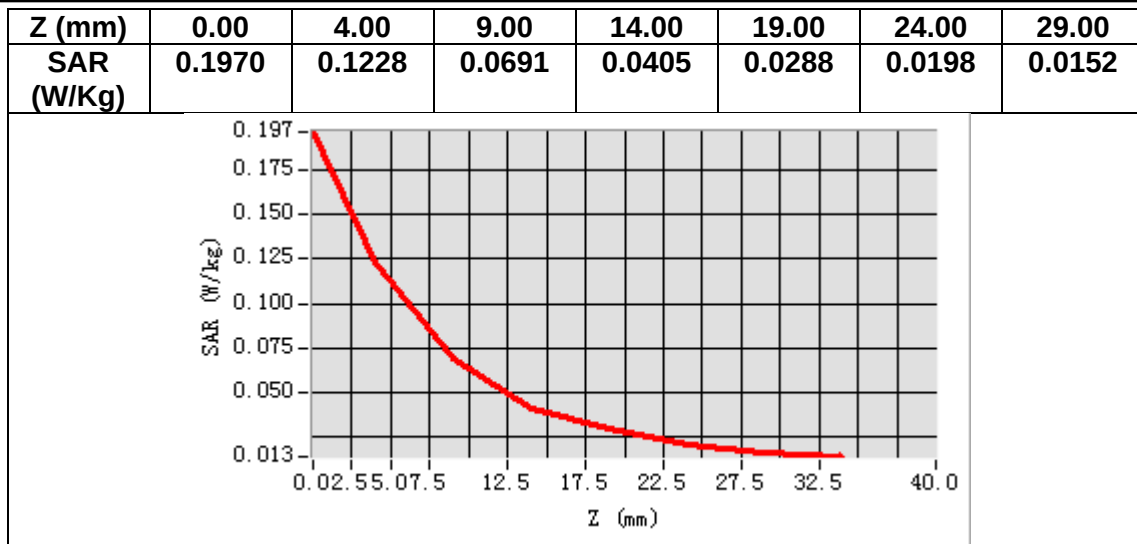
VOLUME SAR



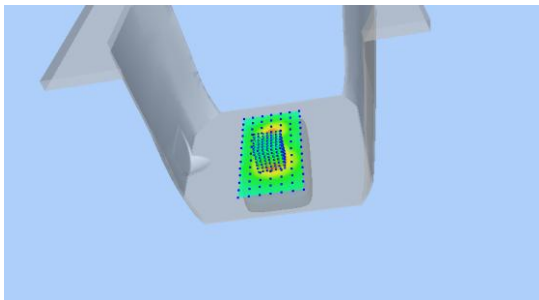
Maximum location: X=-3.00, Y=-19.00

SAR Peak: 0.19 W/kg

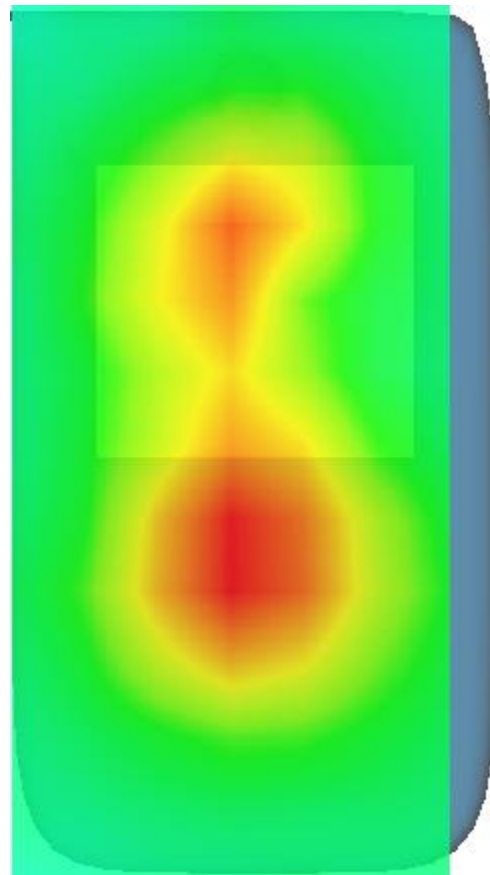
SAR 10g (W/Kg)	0.064831
SAR 1g (W/Kg)	0.114749



3D screen shot



Hot spot position



MEASUREMENT 8

Date of measurement: 24/11/2024

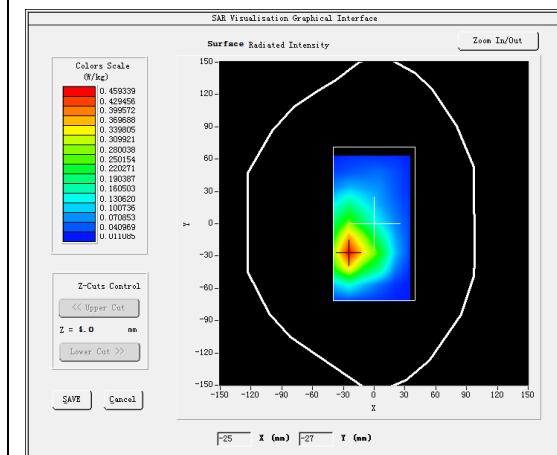
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=15mm dy=15mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>5x5x7,dx=8mm dy=8mm dz=5mm</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Body</u>
<u>Band</u>	<u>LTE band 2</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>LTE (Crest factor: 1.0)</u>
<u>ConvF</u>	<u>2.57</u>

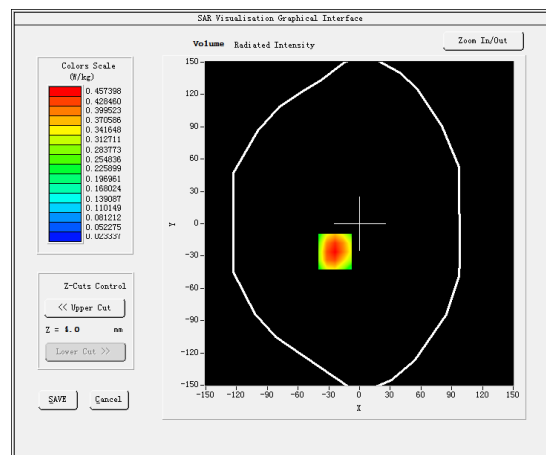
B. SAR Measurement Results

Frequency (MHz)	1880.000000
Relative permittivity (real part)	38.415112
Relative permittivity (imaginary part)	13.697431
Conductivity (S/m)	1.430621
Variation (%)	-0.030000

SURFACE SAR



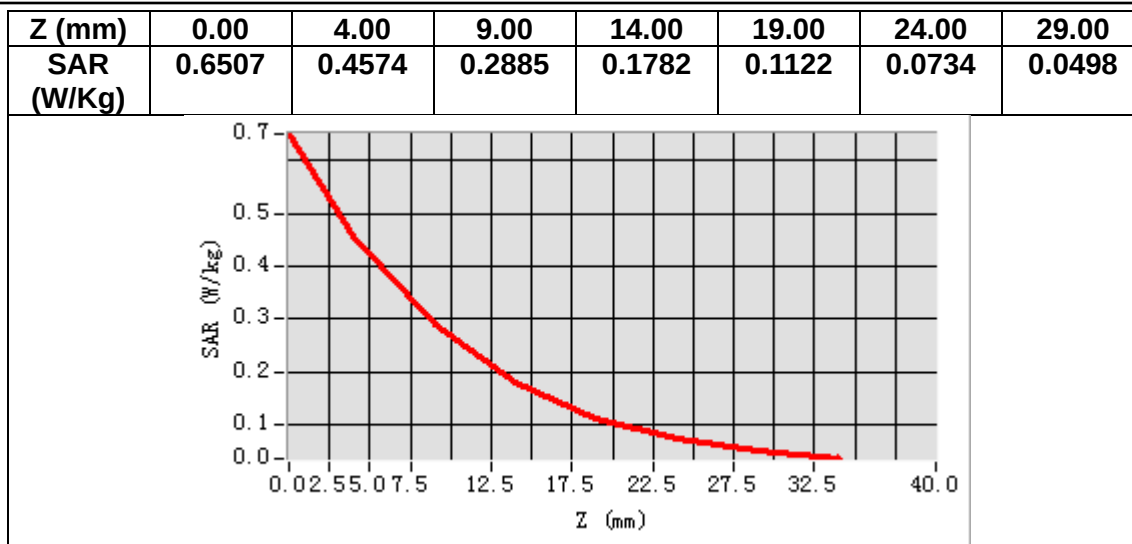
VOLUME SAR



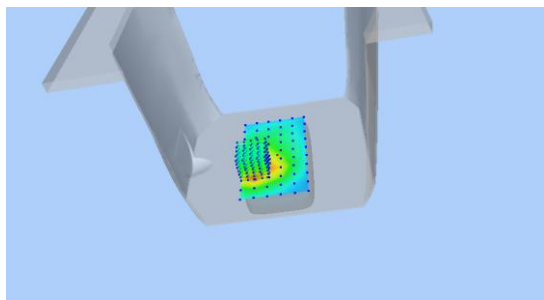
Maximum location: X=-24.00, Y=-26.00

SAR Peak: 0.66 W/kg

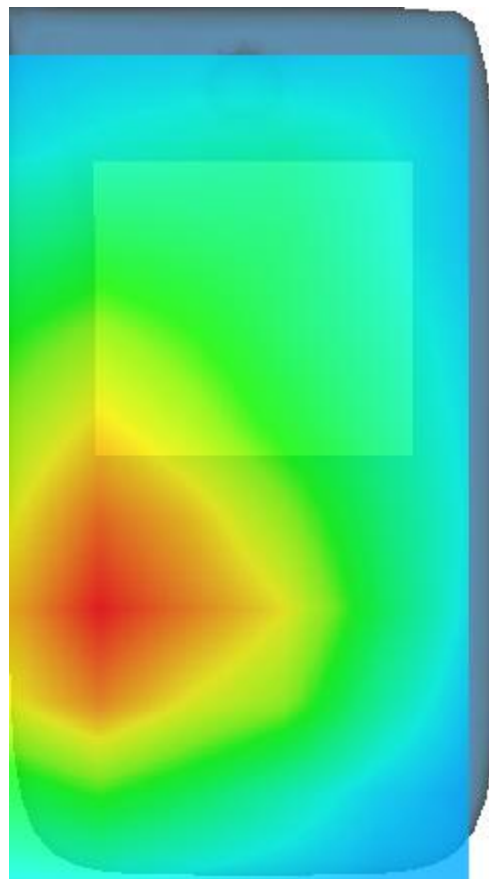
SAR 10g (W/Kg)	0.264855
SAR 1g (W/Kg)	0.446676



3D screen shot



Hot spot position



MEASUREMENT 9

Date of measurement: 21/11/2024

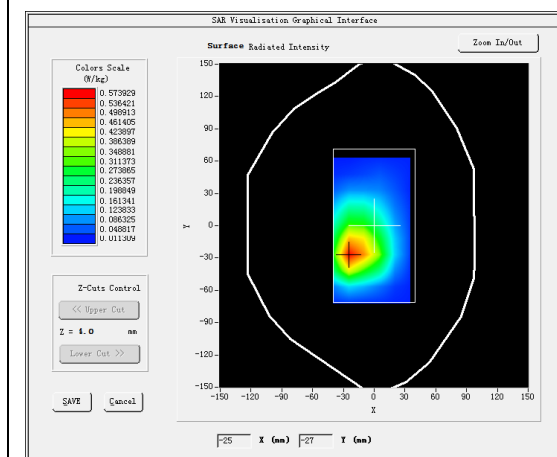
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=15mm dy=15mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>5x5x7,dx=8mm dy=8mm dz=5mm</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Body</u>
<u>Band</u>	<u>LTE band 4</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>LTE (Crest factor: 1.0)</u>
<u>ConvF</u>	<u>2.51</u>

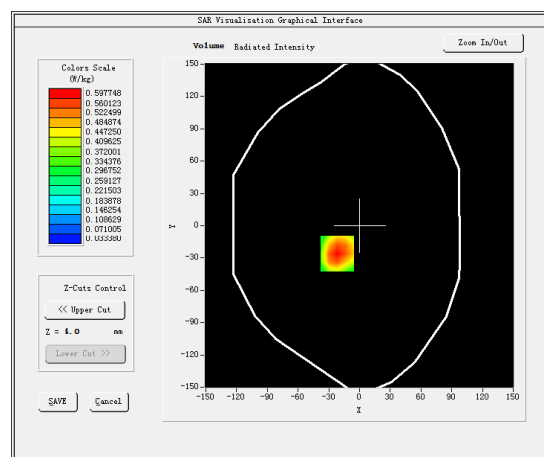
B. SAR Measurement Results

Frequency (MHz)	1732.500000
Relative permittivity (real part)	39.545303
Relative permittivity (imaginary part)	13.802155
Conductivity (S/m)	1.328457
Variation (%)	2.020000

SURFACE SAR



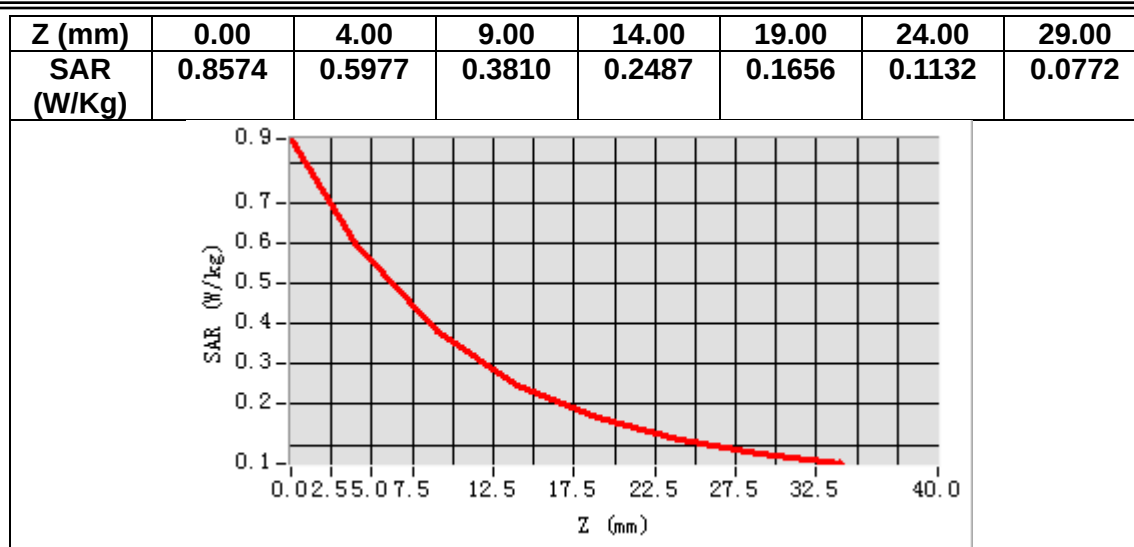
VOLUME SAR



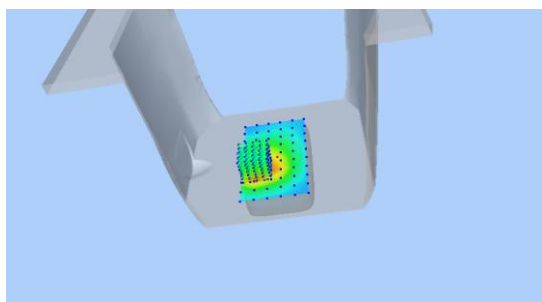
Maximum location: X=-22.00, Y=-26.00

SAR Peak: 0.87 W/kg

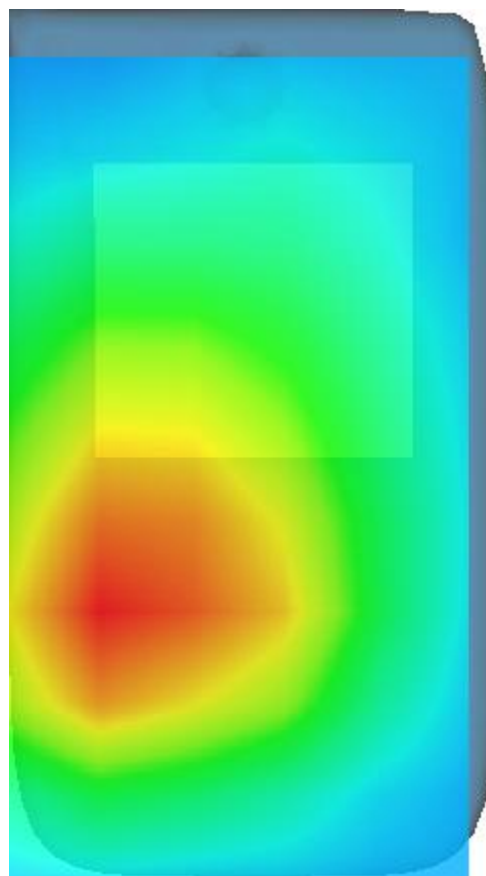
SAR 10g (W/Kg)	0.348908
SAR 1g (W/Kg)	0.573592



3D screen shot



Hot spot position



MEASUREMENT 10

Date of measurement: 26/11/2024

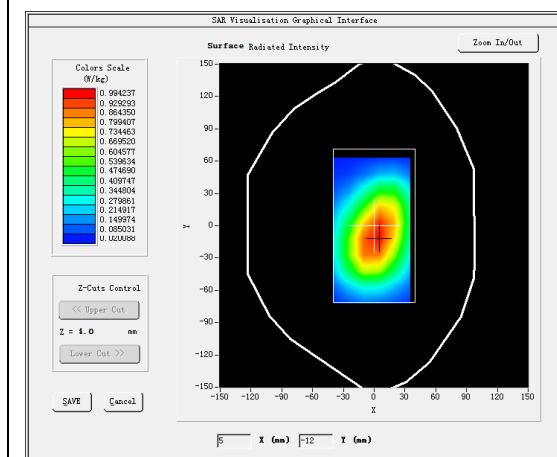
A. Experimental conditions.

<u>Area Scan</u>	<u>dx=15mm dy=15mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>5x5x7, dx=8mm dy=8mm dz=5mm</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Body</u>
<u>Band</u>	<u>LTE band 5</u>
<u>Channels</u>	<u>Low</u>
<u>Signal</u>	<u>LTE (Crest factor: 1.0)</u>
<u>ConvF</u>	<u>2.34</u>

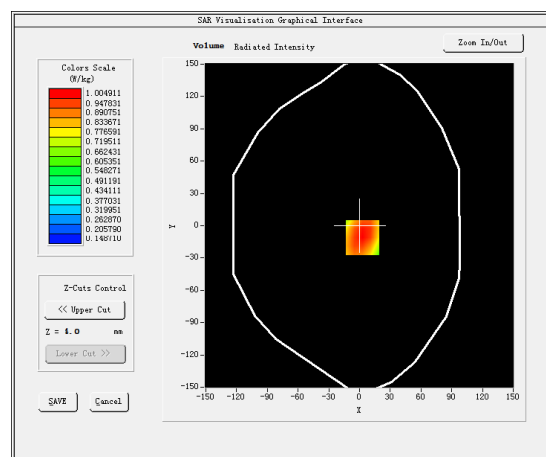
B. SAR Measurement Results

Frequency (MHz)	829.000000
Relative permittivity (real part)	41.952168
Relative permittivity (imaginary part)	19.725831
Conductivity (S/m)	0.908484
Variation (%)	-0.790000

SURFACE SAR



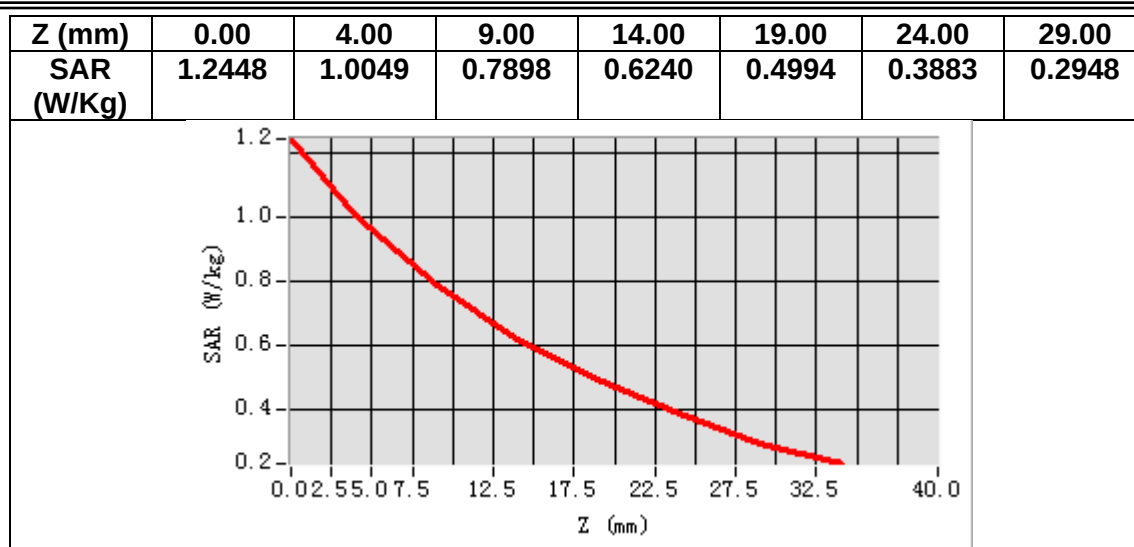
VOLUME SAR



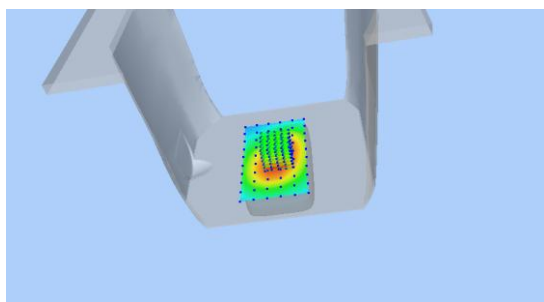
Maximum location: X=3.00, Y=-11.00

SAR Peak: 1.25 W/kg

SAR 10g (W/Kg)	0.629193
SAR 1g (W/Kg)	0.854413



3D screen shot



Hot spot position

