

FCC SAR EVALUATION REPORT

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

Product Name : Tablet

Trademark : ulefone

Model Name : GQ3121

Family Model : Armor Pad 4 Ultra, Armor Pad 4, Armor Pad 4 Pro, Armor Pad 4E, Armor Pad 4S, Armor Pad 4 Lite, Armor Pad 4 Pro+,Armor Pad 4s, Armor Pad 4s Pro

FCC ID : 2AOWK-3121

Report No. : S24053105103001

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TEST RESULT CERTIFICATION**Applicant's name** Shenzhen Gotron Electronic CO.,LTD.Address..... 7B01, Building A, Block 1, AnhongjiTianyao Plaza, Longhua District,
Shenzhen City, Guangdong Province China**Manufacturer's Name**..... Shenzhen Gotron Electronic CO.,LTD.Address..... 7B01, Building A, Block 1, AnhongjiTianyao Plaza, Longhua District,
Shenzhen City, Guangdong Province China**Product description**

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Armor Pad 4S, Armor Pad 4 Lite, Armor Pad 4 Pro+,Armor Pad 4s,
Armor Pad 4s Pro

FCC 47 CFR Part 2(2.1093);

Standards 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 KDB865664 D01. Testing has shown that this device is capable of compliance with localized specific absorption rate (SAR) specified in FCC 47 CFR Part 2(2.1093). The test results in this report apply only to the tested sample of the stated device/equipment. Other similar device/equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

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Test Sample Number S240531051003

Date of Test

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Test Result **Pass**Prepared By : Jack Li
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※ ※ Revision History ※ ※

REV.	DESCRIPTION	ISSUED DATE	REMARK
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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 GQ3121 are as follows.

RF Exposure Conditions		Equipment Class -Highest Reported SAR (W/kg)				Max. Reported SAR (W/kg)
		PCB	DTS	NII	DSS	
1-g Body (Separation distance of 0mm)		0.885	0.487	0.391	0.110	0.885
Max Simultaneous Tx	Body	1.372	1.372	1.276	0.995	1.372

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 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	Tablet
Trade Name	ulefone
Model Name	GQ3121
Family Model	Armor Pad 4 Ultra, Armor Pad 4, Armor Pad 4 Pro, Armor Pad 4E, Armor Pad 4S, Armor Pad 4 Lite, Armor Pad 4 Pro+, Armor Pad 4s, Armor Pad 4s Pro
Model Difference	All the model are the same circuit and RF module, except the model names
FCC ID	2AOWK-3121
Device Phase	Identical Prototype
Exposure Category	General population / Uncontrolled environment
Antenna	FPC Antenna
Battery	DC 3.85V, 11800mAh, 45.43Wh
Hardware version	N/A
Software version	N/A
Device Operating Configurations	
Supporting Mode(s)	GSM 850/1900, WCDMA Band 2/4/5, LTE Band 2/4/5/7/12/17/41, WLAN 2.4G/5G, Bluetooth, NFC
Test Modulation	GSM(GMSK/8PSK), WCDMA(QPSK), LTE(QPSK/16QAM), WLAN(DSSS/OFDM), Bluetooth(GFSK, $\pi/4$ -DQPSK, 8DPSK), NFC(ASK)
Device Class	B

Operating Frequency Range(s)	Band	Tx (MHz)	Rx (MHz)
	GSM 850	824-849	869-894
	GSM 1900	1850-1910	1930-1990
	WCDMA Band 2	1850-1910	1930-1990
	WCDMA Band 4	1710-1755	2110-2155
	WCDMA Band 5	824-849	869-894
	LTE Band 2	1850-1910	1930-1990
	LTE Band 4	1710-1755	2110-2155
	LTE Band 5	824-849	869-894
	LTE Band 7	2500-2570	2620-2690
	LTE Band 12	699-716	729-746
	LTE Band 17	704-716	734-746
	LTE Band 41	2555-2655	
	WLAN 2.4G	2412-2462	
	WLAN 5.2G	5180-5240	
	WLAN 5.8G	5745-5825	
	NFC	13.56	
	Bluetooth	2402-2480	
GPRSMultislot 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(GSM850)		
	1, tested with power level 0(GSM1900)		
	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)		

1.4. Test specification(s)

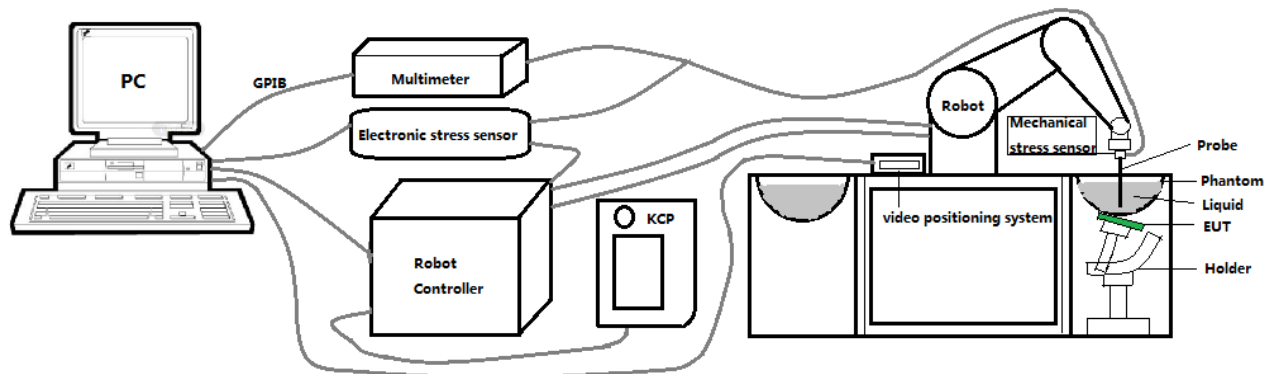
FCC 47 CFR Part 2(2.1093)
IEEE Std 1528-2013
KDB 865664 D01 SAR measurement 100 MHz to 6 GHz
KDB 865664 D02 RF Exposure Reporting
KDB 447498 D01 General RF Exposure Guidance
KDB 248227 D01 802.11 Wi-Fi SAR
KDB 941225 D01 3G SAR Procedures
KDB 941225 D05 SAR for LTE Devices
KDB 616217 D04 SAR for laptop and tablets

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 $\pm 0.03\text{mm}$. 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 robotcontroller version (KUKA) from KUKA is used. The KUKA robot series have many features that are important for our application:



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

2.3. E-Field Probe

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

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



- Dynamic range: 0.01-100 W/kg
 - TipDiameter :2.5 mm
 - Distance between probe tip and sensor center: 1 mm
 - Distance between sensor center and the inner phantom surface: 2 mm (repeatability better than ± 1 mm).
 - Probe linearity: ± 0.06 dB
 - Axial isotropy: ± 0.01 dB
 - Hemispherical Isotropy: ± 0.01 dB
 - Calibration range: 650MHz to 5900MHz for head & body simulating liquid.
 - Lowerdetection 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 (NormX, NormY, and NormZ), the diode compression parameter (DCP) and the conversion factor (ConvF) of the probe are tested. The calibration data can be referred to appendix D of this report.

2.4. SAM phantoms

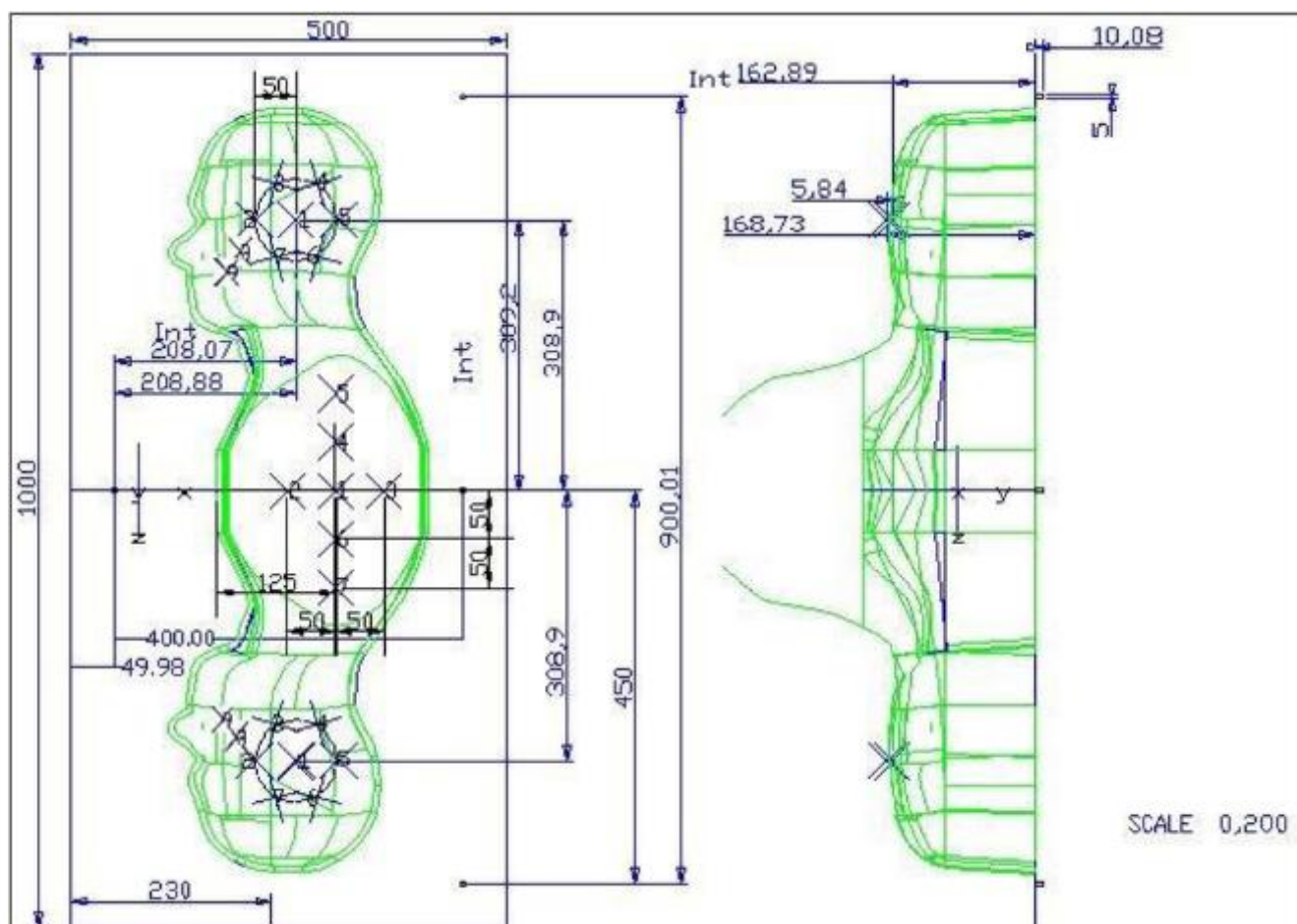
Photo of SAM phantom SN 16/15 SAM119



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

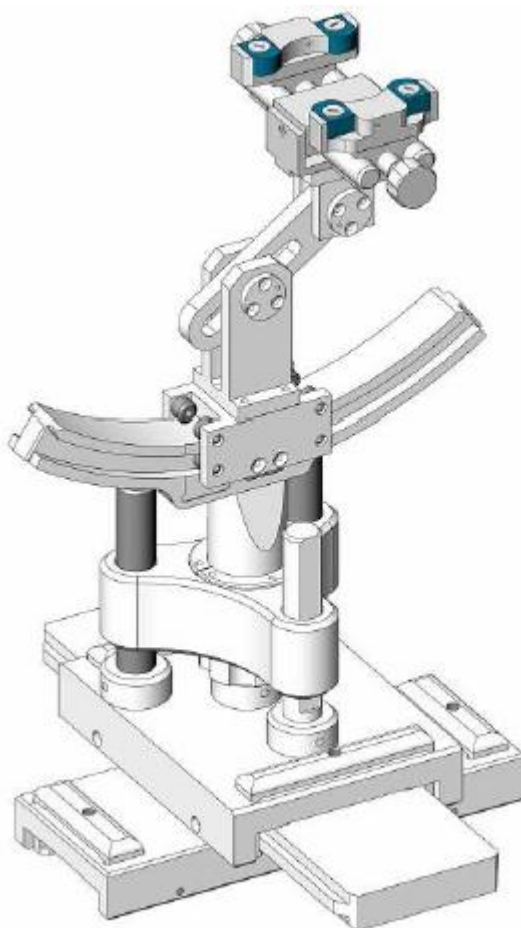


Serial Number	Left Head(mm)		Right Head(mm)		Flat Part(mm)	
SN 16/15 SAM119	2	2.02	2	2.08	1	2.09
	3	2.05	3	2.06	2	2.06
	4	2.07	4	2.07	3	2.08
	5	2.08	5	2.08	4	2.10
	6	2.05	6	2.07	5	2.10
	7	2.05	7	2.05	6	2.07
	8	2.07	8	2.06	7	2.07
	9	2.08	9	2.06	-	-

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/Mode I	Serial Number	Calibration	
					Last Cal.	Due Date
☒	MVG	E FIELD PROBE	SSE2	3423-EPGO-426	Sep. 18,202 3	Sep. 17,202 4
☒	MVG	750 MHz Dipole	SID750	SN 03/15 DIP 0G750-355	Feb. 21,202 4	Feb. 20,202 7
☒	MVG	835 MHz Dipole	SID835	SN 03/15 DIP 0G835-347	Feb. 21,202 4	Feb. 20,202 7
☐	MVG	900 MHz Dipole	SID900	SN 03/15 DIP 0G900-348	Feb. 21,202 4	Feb. 20,202 7
☒	MVG	1800 MHz Dipole	SID1800	SN 03/15 DIP 1G800-349	Feb. 21,202 4	Feb. 20,202 7
☒	MVG	1900 MHz Dipole	SID1900	SN 03/15 DIP 1G900-350	Feb. 21,202 4	Feb. 20,202 7
☐	MVG	2000 MHz Dipole	SID2000	SN 03/15 DIP 2G000-351	Feb. 21,202 4	Feb. 20,202 7
☐	MVG	2300 MHz Dipole	SID2300	SN 03/16 DIP 2G300-358	Feb. 21,202 4	Feb. 20,202 7
☒	MVG	2450 MHz Dipole	SID2450	SN 03/15 DIP 2G450-352	Feb. 21,202 4	Feb. 20,202 7
☒	MVG	2600 MHz Dipole	SID2600	SN 03/15 DIP 2G600-356	Feb. 21,202 4	Feb. 20,202 7
☐	MVG	3500 MHz Dipole	SID3500	SN 09/12 DIP 3G500-360	Oct. 15, 2022	Oct. 14, 2025
☒	MVG	5000 MHz Dipole	SWG5500	SN 13/14 WGA 33	Feb. 21,202	Feb. 20,202

					4	7
☒	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	117858	Apr. 26, 2024	Apr. 25, 2025
☒	R&S	Wideband radio communication tester	CMW500	103917	Apr. 26, 2024	Apr. 25, 2025
☒	HP	Network Analyzer	8753D	3410J01136	Apr. 26, 2024	Apr. 25, 2025
☒	Agilent	MXG Vector Signal Generator	N5182A	MY47070317	Apr. 25, 2024	Apr. 24, 2025
☒	Agilent	Power meter	E4419B	MY45102538	Apr. 25, 2024	Apr. 24, 2025
☒	Agilent	Power sensor	E9301A	MY41495644	Apr. 25, 2024	Apr. 24, 2025
☒	Agilent	Power sensor	E9301A	US39212148	Apr. 25, 2024	Apr. 24, 2025
☒	MCLI/USA	Directional Coupler	CB11-20	0D2L51502	Apr. 26, 2024	Apr. 25, 2027
☒	N/A	Thermometer	N/A	LES-085	Mar. 27, 2023	Mar. 26, 2026
☒	MVG	SAM Phantom	SSM2	SN 16/15 SAM119	NCR	NCR
☒	MVG	Device Holder	SMPPD	SN 16/15 MSH100	NCR	NCR
☒	Shenzhen Tianxu Communication Technology Co., Ltd.	Human Simulating Liquid	Head 750	Head 750	NCR	NCR
☒	Shenzhen Tianxu Communication Technology Co., Ltd.	Human Simulating Liquid	Head 835	Head 835	NCR	NCR
☒	Shenzhen	Human Simulating	Head 1800	Head 1800	NCR	NCR

	Tianxu Communicatio n Technology Co., Ltd.	Liquid				
☒	Shenzhen Tianxu Communicatio n Technology Co., Ltd.	Human Simulating Liquid	Head 1900	Head 1900	NCR	NCR
☒	Shenzhen Tianxu Communicatio n Technology Co., Ltd.	Human Simulating Liquid	Head 2450	Head 2450	NCR	NCR
☒	Shenzhen Tianxu Communicatio n Technology Co., Ltd.	Human Simulating Liquid	Head 2600	Head 2600	NCR	NCR
☒	Shenzhen Tianxu Communicatio n Technology Co., Ltd.	Human Simulating Liquid	Head 5200	Head 5200	NCR	NCR
☒	Shenzhen Tianxu Communicatio n Technology Co., Ltd.	Human Simulating Liquid	Head 5800	Head 5800	NCR	NCR

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 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	$\frac{1}{2} \cdot \delta \cdot \ln(2) \pm 0.5 \text{ mm}$
Maximum probe angle from probe axis to phantom surface normal at the measurement location			30° ± 1°	20° ± 1°
Maximum area scan spatial resolution: $\Delta x_{\text{Area}}, \Delta y_{\text{Area}}$			$\leq 2 \text{ GHz: } \leq 15 \text{ mm}$ $2 - 3 \text{ GHz: } \leq 12 \text{ mm}$	$3 - 4 \text{ GHz: } \leq 12 \text{ mm}$ $4 - 6 \text{ GHz: } \leq 10 \text{ mm}$
			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: $\Delta x_{\text{Zoom}}, \Delta y_{\text{Zoom}}$			$\leq 2 \text{ GHz: } \leq 8 \text{ mm}$ $2 - 3 \text{ GHz: } \leq 5 \text{ mm}^*$	$3 - 4 \text{ GHz: } \leq 5 \text{ mm}^*$ $4 - 6 \text{ GHz: } \leq 4 \text{ mm}^*$
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{\text{Zoom}}(n)$		≤ 5 mm	$3 - 4 \text{ GHz: } \leq 4 \text{ mm}$ $4 - 5 \text{ GHz: } \leq 3 \text{ mm}$ $5 - 6 \text{ GHz: } \leq 2 \text{ mm}$
	graded grid	$\Delta z_{\text{Zoom}}(1)$: between 1 st two points closest to phantom surface	≤ 4 mm	$3 - 4 \text{ GHz: } \leq 3 \text{ mm}$ $4 - 5 \text{ GHz: } \leq 2.5 \text{ mm}$ $5 - 6 \text{ GHz: } \leq 2 \text{ mm}$
		$\Delta z_{\text{Zoom}}(n>1)$: between subsequent points	≤ 1.5 · $\Delta z_{\text{Zoom}}(n-1)$	
Minimum zoom scan volume	x, y, z		≥ 30 mm	$3 - 4 \text{ GHz: } \geq 28 \text{ mm}$ $4 - 5 \text{ GHz: } \geq 25 \text{ mm}$ $5 - 6 \text{ GHz: } \geq 22 \text{ mm}$

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

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

3.3. Description of interpolation/extrapolation scheme

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

An extrapolation is used to determine 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 for 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 defined 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.

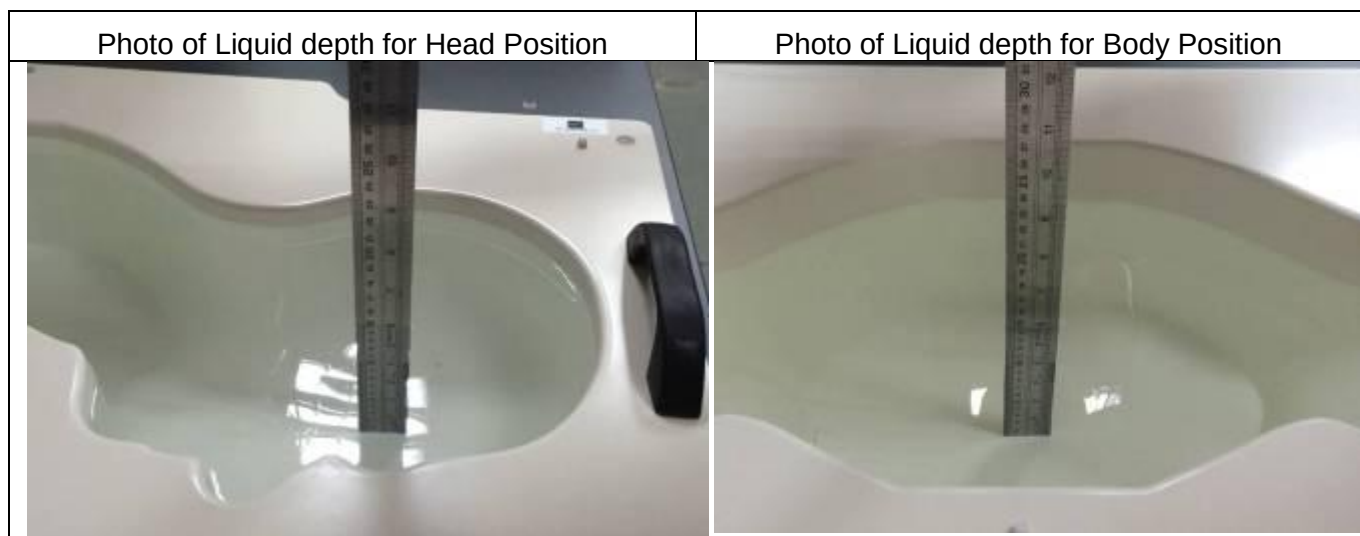
4. System Verification Procedure

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.



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.

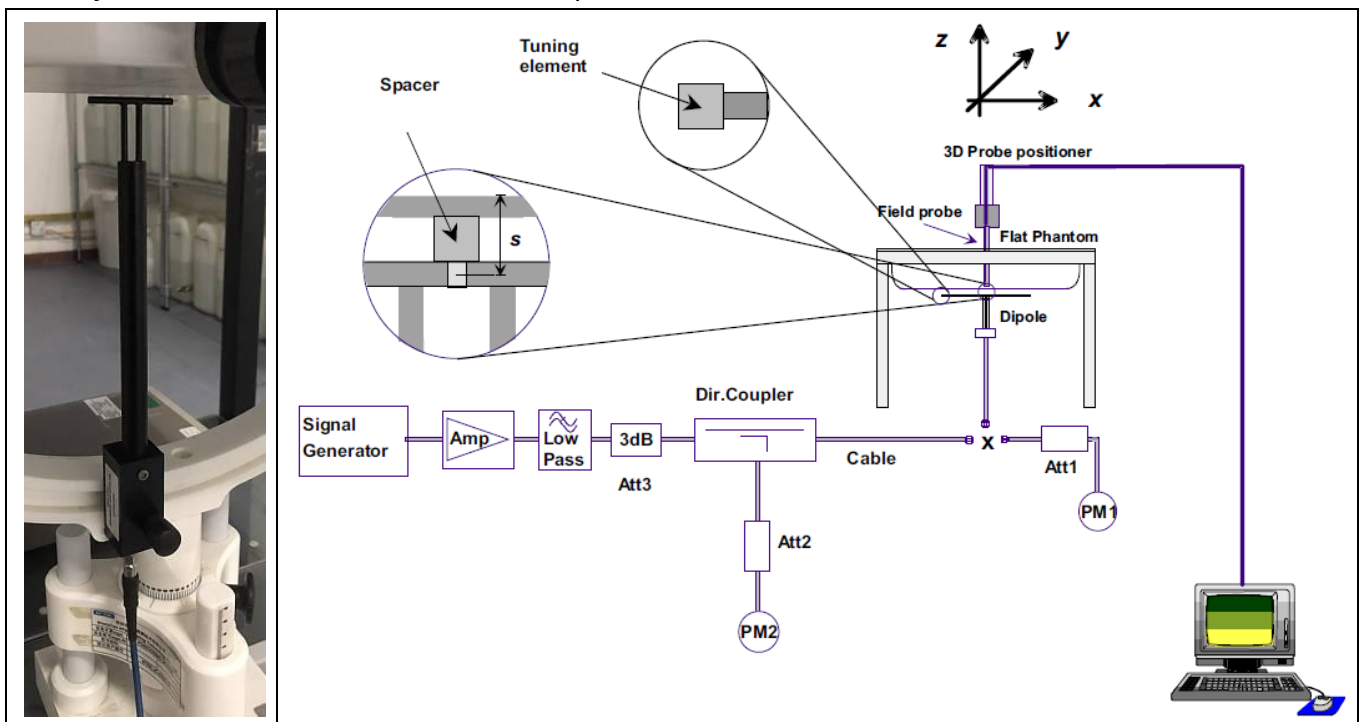
Tissue Type	Measured Frequency (MHz)	Target Tissue		Measured Tissue		Liquid Temp.	Test Date
		$\epsilon_r (\pm 5\%)$	$\sigma \text{ (S/m)} (\pm 5\%)$	ϵ_r	$\sigma \text{ (S/m)}$		
Head 750	750	41.96 (39.86~44.06)	0.89 (0.85~0.93)	40.88	0.90	21.5 °C	Jun. 04, 2024
Head 850	835	41.50 (39.43~43.58)	0.90 (0.86~0.95)	41.66	0.91	21.5 °C	Jun. 21, 2024
Head 1800	1800	40.00 (38.00~42.00)	1.40 (1.33~1.47)	39.23	1.40	21.7 °C	Jun. 14, 2024
Head 1900	1900	40.00 (38.00~42.00)	1.40 (1.33~1.47)	38.78	1.44	21.5 °C	Jun. 03, 2024
Head 2450	2450	39.20 (37.24~41.16)	1.80 (1.71~1.89)	37.72	1.76	21.5 °C	Jun. 05, 2024
Head 2600	2600	39.01 (37.06~40.96)	1.96 (1.86~2.06)	39.03	2.00	21.4 °C	Jun. 18, 2024
Head 5200	5200	36.00 (34.20~37.80)	4.66 (4.43~4.89)	34.87	4.60	21.5 °C	Jun. 07, 2024
Head 5800	5800	35.30 (33.54~37.07)	5.27 (5.01~5.53)	34.30	5.25	21.9 °C	Jun. 06, 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. It is fed with a power of 100mW(below 5GHz) or 100mW(above 5GHz). 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)		Measured SAR		Liquid Temp.	Test Date
	(±10%)		(Normalized to 1W)			
	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)	9.08	5.39	21.5 °C	Jun. 04, 2024
835MHz	9.40 (8.46~10.34)	6.28 (5.65~6.91)	9.55	6.08	21.5 °C	Jun. 04, 2024
1800MHz	37.06 (33.35~40.77)	20.01 (18.01~22.01)	38.86	18.97	21.7 °C	Jun. 14, 2024
1900MHz	39.69 (35.72~43.66)	20.92 (18.83~23.01)	39.97	22.78	21.5 °C	Jun. 03, 2024
2450MHz	50.05 (45.05~55.06)	23.80 (21.42~26.18)	46.27	26.01	21.5 °C	Jun. 05, 2024
2600MHz	54.16 (48.74~59.58)	24.85 (22.37~27.34)	54.92	25.68	21.4 °C	Jun. 18, 2024
5200MHz	162.59 (146.33~178.85)	56.21 (50.59~61.83)	164.86	57.10	21.5 °C	Jun. 07, 2024
5800MHz	182.20 (163.98~200.42)	61.32 (55.19~67.45)	199.93	61.49	21.9 °C	Jun. 06, 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-up (dBm)	128	189	251	Tune-up (dBm)	128	189	251
Frequency (MHz)		824.2	836.4	848.8		824.2	836.4	848.8
GSM (GMSK)	31.00	30.65	30.67	30.54	21.97	21.62	21.64	21.51
GPRS(GMSK, 1 TS)	31.00	30.71	30.73	30.60	21.97	21.68	21.70	21.57
GPRS(GMSK, 2 TS)	30.00	29.74	29.72	29.62	23.98	23.72	23.70	23.60
GPRS(GMSK, 3 TS)	28.00	27.69	27.68	27.58	23.74	23.43	23.42	23.32
GPRS(GMSK, 4 TS)	27.00	26.58	26.57	26.50	23.99	23.57	23.56	23.49
EGPRS(8PSK, 1 TS)	24.50	23.91	23.87	24.22	15.47	14.88	14.84	15.19
EGPRS(8PSK, 2 TS)	24.00	23.63	23.18	23.19	17.98	17.61	17.16	17.17
EGPRS(8PSK, 3 TS)	21.50	21.49	21.21	21.33	17.24	17.23	16.95	17.07
EGPRS(8PSK, 4 TS)	20.50	20.09	20.09	20.37	17.49	17.08	17.08	17.36
Band GSM1900	Burst-Averaged output Power (dBm)				Frame-Averaged output Power (dBm)			
Tx Channel	Tune-up (dBm)	512	661	810	Tune-up (dBm)	512	661	810
Frequency (MHz)		1850.2	1880	1909.8		1850.2	1880	1909.8
GSM (GMSK)	30.00	29.77	29.59	29.22	20.97	20.74	20.56	20.19
GPRS(GMSK, 1 TS)	30.00	29.67	29.51	29.14	20.97	20.64	20.48	20.11
GPRS(GMSK, 2 TS)	29.00	28.70	28.59	28.22	22.98	22.68	22.57	22.20
GPRS(GMSK, 3 TS)	27.00	26.60	26.55	26.31	22.74	22.34	22.29	22.05
GPRS(GMSK, 4 TS)	25.50	25.42	25.45	25.29	22.49	22.41	22.44	22.28
EGPRS(8PSK, 1 TS)	25.50	25.11	25.16	25.16	16.47	16.08	16.13	16.13
EGPRS(8PSK, 2 TS)	24.50	24.00	24.01	24.12	18.48	17.98	17.99	18.10
EGPRS(8PSK, 3 TS)	22.50	21.75	22.27	22.15	18.24	17.49	18.01	17.89
EGPRS(8PSK, 4 TS)	21.00	20.57	20.53	20.17	17.99	17.56	17.52	17.16

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	24.00	23.87	23.91	23.92	
HSDPA Sub 1	23.50	22.97	23.02	22.97	
HSDPA Sub 2	23.00	22.49	22.56	22.46	
HSDPA Sub 3	22.00	21.54	21.51	21.13	
HSDPA Sub 4	22.00	21.27	21.44	21.55	
HSUPA Sub 1	23.00	21.66	22.75	22.81	
HSUPA Sub 2	23.00	22.80	22.81	22.83	
HSUPA Sub 3	22.00	21.19	21.90	21.71	
HSUPA Sub 4	23.00	22.89	22.96	22.93	
HSUPA Sub 5	22.50	21.79	22.28	22.09	
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	24.00	23.93	23.74	23.82	
HSDPA Sub 1	23.00	22.99	22.78	22.87	
HSDPA Sub 2	23.00	22.60	22.34	22.53	
HSDPA Sub 3	22.00	21.63	21.38	21.54	
HSDPA Sub 4	21.50	21.25	21.14	21.28	
HSUPA Sub 1	23.00	22.28	22.83	22.89	
HSUPA Sub 2	23.50	22.44	23.02	23.08	
HSUPA Sub 3	22.00	21.79	21.82	21.78	
HSUPA Sub 4	23.50	23.24	23.03	23.11	
HSUPA Sub 5	23.00	21.85	22.24	22.67	
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	24.50	23.30	24.08	23.66	
HSDPA Sub 1	23.50	22.26	23.02	22.60	
HSDPA Sub 2	23.00	21.79	22.76	22.05	
HSDPA Sub 3	22.00	20.67	21.62	21.28	
HSDPA Sub 4	22.00	20.89	21.66	21.13	
HSUPA Sub 1	23.00	22.70	22.85	22.46	

HSUPA Sub 2	23.00	22.21	22.76	22.58
HSUPA Sub 3	22.00	20.49	21.92	21.41
HSUPA Sub 4	23.00	22.23	22.99	22.57
HSUPA Sub 5	22.50	20.65	22.43	21.88

7.3. LTEConducted 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	23.60	23.69	23.87
			1	2	24.00	23.70	23.58	23.82
			1	5	24.00	23.46	23.62	23.90
			3	0	24.00	23.61	23.64	23.91
			3	1	24.00	23.69	23.64	23.94
			3	2	24.00	23.62	23.65	23.94
			6	0	23.00	22.65	22.62	22.88
		16QAM	1	0	23.50	22.72	22.78	23.04
			1	2	23.50	22.80	22.90	23.14
			1	5	23.50	22.73	22.91	23.05
			3	0	23.50	22.76	22.66	22.83
			3	1	23.50	22.73	22.65	23.04
			3	2	23.50	22.62	22.58	23.00
			6	0	22.00	21.67	21.68	22.00
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	23.53	23.55	23.80
			1	7	24.00	23.45	23.62	23.78
			1	14	24.00	23.52	23.64	23.86
			8	0	23.00	22.55	22.64	22.86
			8	4	23.00	22.56	22.63	22.89
			8	7	23.00	22.56	22.60	22.90
			15	0	23.00	22.57	22.63	22.86
		16QAM	1	0	23.50	22.67	22.80	23.01
			1	7	23.50	22.65	22.78	22.98
			1	14	23.50	22.70	22.91	23.14
			8	0	22.00	21.64	21.69	21.92

			8	4	22.00	21.66	21.67	21.93
			8	7	22.00	21.67	21.73	21.91
			15	0	22.00	21.62	21.68	21.91
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	23.56	23.59	23.84
			1	12	24.00	23.50	23.64	23.79
			1	24	24.00	23.48	23.74	23.86
			12	0	23.00	22.66	22.73	22.88
			12	6	23.00	22.65	22.67	22.89
			12	11	23.00	22.60	22.70	22.95
			25	0	23.00	22.66	22.72	22.91
		16QAM	1	0	23.50	22.86	22.83	22.97
			1	12	23.50	22.77	22.78	23.10
			1	24	23.50	22.69	22.87	23.18
			12	0	22.00	21.68	21.73	21.86
			12	6	22.00	21.64	21.67	21.90
			12	11	22.00	21.61	21.66	21.95
			25	0	22.00	21.67	21.72	21.93
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		18650/1855	18900/1880	19150/1905
LTE Band 2	10MHz	QPSK	1	0	24.00	23.55	23.68	23.75
			1	24	24.00	23.47	23.68	23.81
			1	49	24.00	23.56	23.60	23.90
			25	0	23.00	22.64	22.70	22.84
			25	12	23.00	22.57	22.71	22.82
			25	24	23.00	22.56	22.71	22.87
			50	0	23.00	22.60	22.70	22.85
		16QAM	1	0	23.50	22.76	22.93	22.99
			1	24	23.50	22.57	22.90	22.95
			1	49	23.50	22.67	22.90	23.24
			25	0	22.00	21.64	21.68	21.82
			25	12	22.00	21.55	21.69	21.82
			25	24	22.00	21.57	21.68	21.89
			50	0	22.00	21.61	21.70	21.85
Band	Band	Modulation	RB		Tune-up	Channel/Frequency(MHz)		

	Width		Configuration		(dBm)			
			RB Size	RB Offset		18675/1857.5	18900/1880	19125/1902.5
LTE Band 2	15MHz	QPSK	1	0	24.00	23.64	23.59	23.70
			1	37	24.00	23.58	23.73	23.81
			1	74	24.00	23.48	23.68	23.95
			36	0	23.00	22.59	22.66	22.74
			36	18	23.00	22.53	22.67	22.80
			36	37	23.00	22.50	22.65	22.81
			75	0	23.00	22.56	22.68	22.82
		16QAM	1	0	23.50	22.79	22.90	22.92
			1	37	23.50	22.91	22.90	23.10
			1	74	23.50	22.69	22.96	23.22
			36	0	22.00	21.57	21.68	21.75
			36	18	22.00	21.52	21.66	21.79
			36	37	22.00	21.54	21.68	21.84
			75	0	22.00	21.62	21.70	21.86
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	23.59	23.58	23.71
			1	49	24.00	23.47	23.68	23.81
			1	99	24.00	23.55	23.70	23.90
			50	0	23.00	22.65	22.71	22.79
			50	24	23.00	22.58	22.73	22.85
			50	49	23.00	22.54	22.70	22.87
			100	0	23.00	22.58	22.71	22.83
		16QAM	1	0	23.50	22.94	22.95	22.94
			1	49	23.50	22.64	22.94	23.11
			1	99	23.50	22.74	22.78	23.11
			50	0	22.00	21.65	21.69	21.77
			50	24	22.00	21.58	21.74	21.83
			50	49	22.00	21.56	21.71	21.86
			100	0	22.00	21.57	21.66	21.81

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB	RB		19957/1710.	20175/1732.	20393/1754.

			Size	Offset		7	5	3
LTE Band 4	1.4MHz	QPSK	1	0	24.00	23.59	23.48	23.39
			1	2	24.00	23.66	23.47	23.36
			1	5	24.00	23.66	23.45	23.43
			3	0	24.00	23.62	23.45	23.33
			3	1	24.00	23.64	23.45	23.38
			3	2	24.00	23.65	23.49	23.38
		16QAM	6	0	23.00	22.60	22.50	22.37
			1	0	23.00	22.93	22.64	22.56
			1	2	23.00	22.87	22.73	22.60
			1	5	23.00	22.82	22.81	22.66
			3	0	23.00	22.62	22.72	22.40
			3	1	23.00	22.64	22.46	22.43
			3	2	23.00	22.61	22.64	22.45
			6	0	22.00	21.71	21.57	21.49
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	23.64	23.42	23.41
			1	7	24.00	23.57	23.45	23.31
			1	14	24.00	23.58	23.53	23.42
			8	0	23.00	22.59	22.49	22.40
			8	4	23.00	22.59	22.48	22.41
			8	7	23.00	22.56	22.53	22.39
			15	0	23.00	22.57	22.48	22.38
		16QAM	1	0	23.00	22.84	22.58	22.67
			1	7	23.00	22.78	22.70	22.56
			1	14	23.00	22.77	22.56	22.56
			8	0	22.00	21.65	21.58	21.45
			8	4	22.00	21.66	21.55	21.42
			8	7	22.00	21.69	21.56	21.44
			15	0	22.00	21.65	21.57	21.43
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	5MHz	QPSK	1	0	24.00	23.65	23.50	23.42

Band 4			1	12	24.00	23.61	23.52	23.37
			1	24	24.00	23.58	23.52	23.39
			12	0	23.00	22.70	22.57	22.47
			12	6	23.00	22.62	22.59	22.45
			12	11	23.00	22.63	22.60	22.48
			25	0	23.00	22.64	22.58	22.48
		16QAM	1	0	23.00	22.95	22.80	22.68
			1	12	23.00	22.78	22.75	22.64
			1	24	23.00	22.87	22.85	22.74
			12	0	22.00	21.66	21.57	21.45
			12	6	22.00	21.64	21.54	21.44
			12	11	22.00	21.63	21.60	21.47
			25	0	22.00	21.67	21.62	21.49
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	23.70	23.49	23.50
			1	24	24.00	23.48	23.58	23.41
			1	49	24.00	23.54	23.61	23.48
			25	0	23.00	22.63	22.59	22.49
			25	12	23.00	22.60	22.59	22.47
			25	24	23.00	22.58	22.59	22.48
			50	0	23.00	22.62	22.61	22.48
		16QAM	1	0	23.00	22.97	22.82	22.68
			1	24	23.00	22.87	22.77	22.68
			1	49	23.00	22.86	22.78	22.67
			25	0	22.00	21.63	21.58	21.50
			25	12	22.00	21.61	21.56	21.47
			25	24	22.00	21.60	21.58	21.49
			50	0	22.00	21.61	21.59	21.47
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	23.74	23.48	23.52
			1	37	24.00	23.61	23.65	23.48
			1	74	24.00	23.54	23.61	23.47

			36	0	23.00	22.60	22.55	22.52		
			36	18	23.00	22.54	22.56	22.48		
			36	37	23.00	22.55	22.58	22.51		
			75	0	23.00	22.60	22.58	22.51		
		16QAM	1	0	23.00	22.87	22.71	22.88		
			1	37	23.00	22.78	22.86	22.69		
			1	74	23.00	22.80	22.94	22.72		
			36	0	22.00	21.58	21.58	21.50		
			36	18	22.00	21.56	21.55	21.46		
			36	37	22.00	21.58	21.59	21.47		
			75	0	22.00	21.62	21.62	21.53		
		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	23.65	23.43	23.55		
			1	49	24.00	23.56	23.62	23.52		
			1	99	24.00	23.66	23.64	23.49		
			50	0	23.00	22.59	22.64	22.59		
			50	24	23.00	22.62	22.66	22.57		
			50	49	23.00	22.63	22.66	22.58		
			100	0	23.00	22.63	22.61	22.57		
		16QAM	1	0	23.00	22.93	22.59	22.82		
			1	49	23.00	22.74	22.76	22.90		
			1	99	23.00	22.84	22.91	22.68		
			50	0	22.00	21.61	21.60	21.58		
			50	24	22.00	21.59	21.65	21.56		
			50	49	22.00	21.64	21.65	21.56		
			100	0	22.00	21.60	21.62	21.56		

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	23.71	23.63	23.46
			1	2	24.00	23.63	23.53	23.51
			1	5	24.00	23.58	23.57	23.52
			3	0	24.00	23.75	23.53	23.52
			3	1	24.00	23.61	23.55	23.52

				3	2	24.00	23.68	23.59	23.49
				6	0	23.00	22.65	22.54	22.58
			16QAM	1	0	23.00	22.79	22.78	22.72
				1	2	23.00	22.78	22.86	22.69
				1	5	23.00	22.84	22.90	22.75
				3	0	23.00	22.72	22.55	22.58
				3	1	23.00	22.53	22.59	22.68
				3	2	23.00	22.73	22.53	22.47
				6	0	22.00	21.68	21.67	21.65
				Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)
RB Size	RB Offset	20415/825.5	20525/836.5				20635/847.5		
LTE Band 5	3MHz	QPSK	1	0	24.00	23.58	23.56	23.44	
			1	7	24.00	23.46	23.59	23.50	
			1	14	24.00	23.59	23.55	23.48	
			8	0	23.00	22.59	22.55	22.53	
			8	4	23.00	22.58	22.55	22.51	
			8	7	23.00	22.56	22.56	22.48	
			15	0	23.00	22.58	22.59	22.53	
		16QAM	1	0	23.00	22.82	22.83	22.61	
			1	7	23.00	22.72	22.78	22.60	
			1	14	23.00	22.77	22.90	22.57	
			8	0	22.00	21.68	21.63	21.61	
			8	4	22.00	21.65	21.66	21.60	
			8	7	22.00	21.63	21.64	21.55	
			15	0	22.00	21.62	21.62	21.55	
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	23.65	23.60	23.53	
			1	12	24.00	23.61	23.56	23.44	
			1	24	24.00	23.53	23.55	23.48	
			12	0	23.00	22.67	22.63	22.58	
			12	6	23.00	22.66	22.64	22.56	
			12	11	23.00	22.65	22.62	22.56	
			25	0	23.00	22.67	22.63	22.55	
			16QAM	1	0	23.00	22.78	22.78	22.76
		1		12	23.00	22.72	22.85	22.62	

			1	24	23.00	22.71	22.90	22.76
			12	0	22.00	21.70	21.64	21.58
			12	6	22.00	21.68	21.63	21.56
			12	11	22.00	21.70	21.64	21.58
			25	0	22.00	21.67	21.63	21.54
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	23.65	23.61	23.62
			1	24	24.00	23.42	23.53	23.49
			1	49	24.00	23.61	23.58	23.58
			25	0	23.00	22.61	22.61	22.60
			25	12	23.00	22.60	22.62	22.53
			25	24	23.00	22.64	22.59	22.52
			50	0	23.00	22.65	22.61	22.58
		16QAM	1	0	23.00	22.90	22.74	22.95
			1	24	23.00	22.73	22.85	22.77
			1	49	23.00	22.98	22.83	22.76
			25	0	22.00	21.64	21.61	21.58
			25	12	22.00	21.62	21.61	21.53
			25	24	22.00	21.68	21.62	21.53
			50	0	22.00	21.65	21.60	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	24.50	24.29	24.23	24.18
			1	12	24.50	24.17	24.21	24.13
			1	24	24.50	24.14	24.17	23.13
			12	0	23.50	23.28	23.32	22.24
			12	6	23.50	23.32	23.32	22.20
			12	11	23.50	23.28	23.28	22.22
			25	0	23.50	23.29	23.30	22.24
		16QAM	1	0	24.00	23.54	23.42	22.47
			1	12	24.00	23.39	23.48	22.34
			1	24	24.00	23.41	23.31	22.36
			12	0	22.50	22.33	22.30	21.23
			12	6	22.50	22.24	22.26	21.21

			12	11	22.50	22.26	22.31	21.22
			25	0	22.50	22.33	22.29	21.25
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	21.50	21.27	21.33	21.19
			1	24	21.50	21.19	21.25	21.17
			1	49	21.50	21.23	21.27	21.22
			25	0	21.50	21.28	21.30	21.18
			25	12	21.50	21.22	21.24	21.21
			25	24	21.50	21.22	21.29	21.23
			50	0	21.50	21.26	21.32	21.18
		16QAM	1	0	22.00	21.55	21.59	21.42
			1	24	22.00	21.51	21.41	21.29
			1	49	22.00	21.45	21.56	21.48
			25	0	21.50	21.28	21.28	21.17
			25	12	21.50	21.25	21.24	21.17
			25	24	21.50	21.23	21.29	21.23
			50	0	21.50	21.26	21.27	21.17
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	21.50	21.33	21.40	21.22
			1	37	21.50	21.25	21.32	21.18
			1	74	21.50	21.34	21.32	21.24
			36	0	21.50	21.28	21.31	21.17
			36	18	21.50	21.25	21.30	21.17
			36	37	21.50	21.25	21.28	21.23
			75	0	21.50	21.27	21.32	21.21
		16QAM	1	0	22.00	21.57	21.63	21.53
			1	37	22.00	21.59	21.52	21.41
			1	74	22.00	21.50	21.54	21.55
			36	0	21.50	21.31	21.36	21.18
			36	18	21.50	21.27	21.30	21.17
			36	37	21.50	21.29	21.27	21.23
			75	0	21.50	21.31	21.33	21.22
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	21.50	21.28	21.43	21.26
			1	49	21.50	21.28	21.32	21.15
			1	99	21.50	21.33	21.32	21.22
			50	0	21.50	21.32	21.38	21.23
			50	24	21.50	21.31	21.36	21.24
			50	49	21.50	21.32	21.36	21.25
			100	0	21.50	21.32	21.36	21.25
		16QAM	1	0	22.00	21.45	21.58	21.58
			1	49	22.00	21.47	21.53	21.48
			1	99	22.00	21.57	21.66	21.37
			50	0	21.50	21.33	21.38	21.25
			50	24	21.50	21.33	21.35	21.22
			50	49	21.50	21.31	21.32	21.24
			100	0	21.50	21.32	21.33	21.25

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	24.00	23.39	23.47	23.45
			1	2	24.00	23.52	23.50	23.35
			1	5	24.00	23.39	23.50	23.45
			3	0	24.00	23.29	23.51	23.54
			3	1	24.00	23.36	23.55	23.43
			3	2	24.00	23.52	23.49	23.46
			6	0	23.00	22.72	22.52	22.44
		16QAM	1	0	23.00	22.32	22.79	22.64
			1	2	23.00	22.34	22.72	22.72
			1	5	23.00	22.51	22.71	22.62
			3	0	23.00	22.29	22.63	22.48
			3	1	23.00	22.37	22.64	22.45
			3	2	23.00	22.44	22.50	22.57
			6	0	22.50	22.49	21.56	21.53
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	3MHz	QPSK	1	0	24.00	23.57	23.34	23.39

Band 12			1	7	24.00	23.48	23.41	23.46
			1	14	24.00	23.30	23.42	23.39
			8	0	23.00	22.60	22.46	22.53
			8	4	23.00	22.53	22.47	22.49
			8	7	23.00	22.43	22.50	22.42
			15	0	23.00	22.56	22.50	22.45
		16QAM	1	0	23.00	22.72	22.48	22.64
			1	7	23.00	22.62	22.70	22.53
			1	14	23.00	22.65	22.68	22.62
			8	0	22.00	21.66	21.48	21.59
			8	4	22.00	21.58	21.64	21.53
			8	7	22.00	21.54	21.59	21.54
			15	0	22.00	21.61	21.55	21.48
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		23035/701.5	23095/707.5	23155/713.5
LTE Band 12	5MHz	QPSK	1	0	22.00	21.57	20.44	20.53
			1	12	22.00	21.38	20.55	20.48
			1	24	22.00	21.39	20.57	20.46
			12	0	22.00	21.65	20.49	20.53
			12	6	22.00	21.52	20.55	20.49
			12	11	22.00	21.49	20.57	20.46
			25	0	22.00	21.57	20.57	20.53
		16QAM	1	0	22.00	21.89	20.68	20.87
			1	12	22.00	21.67	20.77	20.80
			1	24	22.00	20.65	20.81	20.64
			12	0	21.00	20.61	20.49	20.60
			12	6	21.00	20.53	20.56	20.55
			12	11	21.00	20.48	20.63	20.49
			25	0	21.00	20.57	20.61	20.57
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	21.00	20.64	20.48	20.52
			1	24	21.00	20.49	20.58	20.59
			1	49	21.00	20.56	20.52	20.48
			25	0	21.00	20.61	20.48	20.52
			25	12	21.00	20.48	20.52	20.51

			25	24	21.00	20.58	20.58	20.47
			50	0	21.00	20.59	20.53	20.49
		16QAM	1	0	21.00	20.82	20.78	20.87
			1	24	21.00	20.73	20.90	20.67
			1	49	21.00	20.81	20.85	20.74
			25	0	21.00	20.60	20.44	20.51
			25	12	21.00	20.48	20.50	20.50
			25	24	21.00	20.56	20.57	20.47
			50	0	21.00	20.59	20.51	20.46

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	25.00	24.19	24.52	24.43
			1	12	25.00	24.55	24.38	24.38
			1	24	25.00	24.61	24.42	23.98
			12	0	24.00	23.49	23.53	23.54
			12	6	24.00	23.49	23.47	23.47
			12	11	24.00	23.58	23.49	23.39
			25	0	24.00	23.51	23.51	23.51
		16QAM	1	0	24.00	23.49	23.66	23.53
			1	12	24.00	23.56	23.67	23.47
			1	24	24.00	23.70	23.64	23.36
			12	0	23.00	22.45	22.56	22.54
			12	6	23.00	22.52	22.50	22.45
			12	11	23.00	22.62	22.49	22.42
			25	0	23.00	22.55	22.55	22.50
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	24.50	23.76	23.98	23.38
			1	24	24.50	24.39	24.39	23.47
			1	49	24.50	24.34	24.31	23.28
			25	0	24.00	23.42	23.45	23.46
			25	12	24.00	23.50	23.52	23.50
			25	24	24.00	23.45	23.39	23.42
			50	0	23.50	23.46	23.42	23.44
		16QAM	1	0	24.00	23.53	23.59	23.39

			1	24	24.00	23.54	23.58	23.52
			1	49	24.00	23.65	23.43	22.42
			25	0	23.00	22.50	22.50	22.52
			25	12	23.00	22.45	22.54	22.49
			25	24	23.00	22.48	22.47	22.43
			50	0	22.50	22.43	22.43	22.39

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		40265/2557.5	40740/2605	41215/2652.5
LTE Band 41	5MHz	QPSK	1	0	28.00	27.76	27.26	26.68
			1	12	28.00	27.76	27.15	26.62
			1	24	28.00	27.78	27.17	26.63
			12	0	27.00	26.74	26.38	25.83
			12	6	27.00	26.73	26.33	25.82
			12	11	27.00	26.72	26.31	25.80
			25	0	27.00	26.67	26.33	25.82
		16QAM	1	0	27.00	26.70	26.46	25.91
			1	12	27.00	26.65	26.43	25.86
			1	24	27.00	26.62	26.38	25.85
			12	0	26.00	25.75	25.46	24.92
			12	6	26.00	25.74	25.39	24.88
			12	11	26.00	25.74	25.39	24.90
			25	0	26.00	25.77	25.45	24.93
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		40290/2560	40740/2605	41190/2650
LTE Band 41	10MHz	QPSK	1	0	27.50	27.44	27.26	26.72
			1	24	27.50	27.41	27.13	26.56
			1	49	27.50	27.44	26.95	26.55
			25	0	27.00	26.64	26.36	25.81
			25	12	27.00	26.60	26.28	25.77
			25	24	27.00	26.61	26.23	25.77
			50	0	27.00	26.66	26.32	25.82
		16QAM	1	0	27.00	26.68	26.47	25.91
			1	24	27.00	26.63	26.36	25.82
			1	49	27.00	26.65	26.27	25.80

			25	0	26.00	25.74	25.45	24.91
			25	12	26.00	25.70	25.38	24.85
			25	24	26.00	25.70	25.31	24.87
			50	0	26.00	25.73	25.41	24.90
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		40315/2562.5	40740/2605	41165/2647.5
LTE Band 41	15MHz	QPSK	1	0	27.50	27.41	27.26	26.76
			1	37	27.50	27.43	27.09	26.64
			1	74	27.50	27.34	26.87	26.56
			36	0	27.00	26.70	26.40	25.88
			36	18	27.00	26.66	26.34	25.83
			36	37	27.00	26.66	26.24	25.80
			75	0	27.00	26.66	26.32	25.84
		16QAM	1	0	27.00	26.60	26.40	25.90
			1	37	27.00	26.58	26.35	25.80
			1	74	27.00	26.58	26.16	25.73
			36	0	26.00	25.71	25.41	24.90
			36	18	26.00	25.67	25.35	24.86
			36	37	26.00	25.68	25.27	24.83
			75	0	26.00	25.73	25.39	24.92
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		40340/2565	40740/2605	41140/2645
LTE Band 41	20MHz	QPSK	1	0	27.50	27.26	27.12	26.63
			1	49	27.50	27.27	26.91	26.54
			1	99	27.50	27.20	26.64	26.40
			50	0	27.00	26.69	26.44	25.94
			50	24	27.00	26.69	26.35	25.88
			50	49	27.00	26.65	26.24	25.82
			100	0	27.00	26.66	26.31	25.88
		16QAM	1	0	27.00	26.63	26.42	25.98
			1	49	27.00	26.61	26.33	25.83
			1	99	27.00	26.55	26.12	25.74
			50	0	26.00	25.78	25.51	25.02
			50	24	26.00	25.76	25.42	24.95
			50	49	26.00	25.72	25.29	24.91
			100	0	26.00	25.69	25.35	24.91

7.4. WLAN&BluetoothOutput Power

7.4.1. Output PowerResults Of WLAN

Mode	Channel	Frequency (MHz)	Tune-up (dBm)	Output Power (dBm)
802.11b	1	2412	16.00	15.29
	6	2437	16.00	15.87
	11	2462	16.00	15.47
802.11g	1	2412	14.50	14.14
	6	2437	14.50	14.40
	11	2462	14.50	14.07
802.11n HT20	1	2412	13.00	12.27
	6	2437	13.00	12.74
	11	2462	13.00	12.30
802.11n HT40	3	2422	13.00	12.85
	6	2437	13.00	12.83
	9	2452	13.00	12.50

NOTE: Power measurement results of WLAN2.4G.

Mode	Channel	Frequency (MHz)	Tune-up (dBm)	Output Power (dBm)
802.11a	36	5180	12.00	10.34
	40	5200	12.00	11.64
	48	5240	12.00	11.64
802.11n HT20	36	5180	8.50	8.33
	40	5200	8.50	8.32
	48	5240	8.50	8.35
802.11n HT40	38	5190	8.50	8.39
	46	5230	8.50	8.38
802.11ac VHT20	36	5180	8.50	8.31
	40	5200	8.50	8.42
	48	5240	8.50	8.38
802.11ac VHT40	38	5190	8.50	8.42
	46	5230	8.50	8.39
802.11ac VHT80	42	5210	8.50	8.34

NOTE: Power measurement results of WLAN5.2G.

Mode	Channel	Frequency (MHz)	Tune-up (dBm)	Output Power (dBm)
802.11a	149	5745	9.50	8.42
	157	5785	9.50	8.71
	165	5825	9.50	9.05
802.11n HT20	149	5745	9.00	8.39
	157	5785	9.00	8.65
	165	5825	9.00	8.93
802.11n HT40	151	5755	9.00	8.59
	159	5795	9.00	8.81
802.11ac VHT20	149	5745	9.50	8.43
	157	5785	9.50	8.66
	165	5825	9.50	9.13
802.11ac VHT40	151	5755	9.00	8.64
	159	5795	9.00	8.87
802.11ac VHT80	155	5775	9.50	9.07

NOTE: Power measurement results of WLAN5.8G.

7.4.2. Output Power Results Of Bluetooth

BR+EDR	Output Power (dBm)				
	Channel	Tune-up (dBm)	Data Rates		
			1M	2M	3M
	0CH	8	7.90	7.95	7.83
	39CH	9	8.68	8.38	8.25
	78CH	10	9.60	9.70	9.57

BLE	Channel	Tune-up (dBm)	Output Power (dBm)	
			1M	2M
	0CH	-5.00	-5.11	-4.98
	19CH	-4.00	-4.42	-4.43
	39CH	-4.00	-4.41	-4.30

Positions for SAR tests		
Test separation distances > 50 mm		
Exposure Positions	Tune-up Maximum power of WLAN 2.4G	
	16.00 dBm	39.81 mW
Left Side	Antenna to user(mm)	85
	SAR exclusion threshold(mW)	446
	SAR testing required?	NO
Right Side	Antenna to user(mm)	135
	SAR exclusion threshold(mW)	946
	SAR testing required?	NO
Bottom Side	Antenna to user(mm)	151
	SAR exclusion threshold(mW)	1106
	SAR testing required?	NO

Exposure Positions	Tune-up Maximum power of WLAN 5.2G	
	12.00 dBm	15.85 mW
Left Side	Antenna to user(mm)	85
	SAR exclusion threshold(mW)	416
	SAR testing required?	NO
Right Side	Antenna to user(mm)	135
	SAR exclusion threshold(mW)	916
	SAR testing required?	NO
Bottom Side	Antenna to user(mm)	151
	SAR exclusion threshold(mW)	1076
	SAR testing required?	NO
Exposure Positions	Tune-up Maximum power of WLAN 5.8G	
	9.50 dBm	8.91 mW
Left Side	Antenna to user(mm)	85
	SAR exclusion threshold(mW)	412
	SAR testing required?	NO
Right Side	Antenna to user(mm)	135
	SAR exclusion threshold(mW)	912
	SAR testing required?	NO
Bottom Side	Antenna to user(mm)	151
	SAR exclusion threshold(mW)	1072
	SAR testing required?	NO
Exposure Positions	Tune-up Maximum power of GSM 850	
	23.99 dBm	250.60mW
Left Side	Antenna to user(mm)	228
	SAR exclusion threshold(mW)	1155
	SAR testing required?	NO
Bottom Side	Antenna to user(mm)	151
	SAR exclusion threshold(mW)	726
	SAR testing required?	NO
Exposure Positions	Tune-up Maximum power of GSM 1900	
	22.98 dBm	198.61mW
Left Side	Antenna to user(mm)	228
	SAR exclusion threshold(mW)	1889
	SAR testing required?	NO
Bottom Side	Antenna to user(mm)	151
	SAR exclusion threshold(mW)	1119
	SAR testing required?	NO
Exposure Positions	Tune-up Maximum power of WCDMA Band 2	
	24.00 dBm	251.19 mW
Left Side	Antenna to user(mm)	228

	SAR exclusion threshold(mW)	1889
	SAR testing required?	NO
Bottom Side	Antenna to user(mm)	151
	SAR exclusion threshold(mW)	1119
	SAR testing required?	NO
Exposure Positions	Tune-up Maximum power of WCDMA Band 4	
	24.00 dBm	251.19 mW
Left Side	Antenna to user(mm)	228
	SAR exclusion threshold(mW)	1889
	SAR testing required?	NO
Bottom Side	Antenna to user(mm)	151
	SAR exclusion threshold(mW)	1119
	SAR testing required?	NO
Exposure Positions	Tune-up Maximum power of WCDMA Band 5	
	24.50 dBm	281.84 mW
Left Side	Antenna to user(mm)	228
	SAR exclusion threshold(mW)	1155
	SAR testing required?	NO
Bottom Side	Antenna to user(mm)	151
	SAR exclusion threshold(mW)	726
	SAR testing required?	NO
Exposure Positions	Tune-up Maximum power of LTE Band 2	
	24.00 dBm	251.19 mW
Left Side	Antenna to user(mm)	228
	SAR exclusion threshold(mW)	1889
	SAR testing required?	NO
Bottom Side	Antenna to user(mm)	151
	SAR exclusion threshold(mW)	1119
	SAR testing required?	NO
Exposure Positions	Tune-up Maximum power of LTE Band 4	
	24.00 dBm	251.19 mW
Left Side	Antenna to user(mm)	228
	SAR exclusion threshold(mW)	1889
	SAR testing required?	NO
Bottom Side	Antenna to user(mm)	151
	SAR exclusion threshold(mW)	1119
	SAR testing required?	NO
Exposure Positions	Tune-up Maximum power of LTE Band 5	
	24.00 dBm	251.19 mW
Left Side	Antenna to user(mm)	228
	SAR exclusion threshold(mW)	1155

	SAR testing required?	NO
Bottom Side	Antenna to user(mm)	151
	SAR exclusion threshold(mW)	726
	SAR testing required?	NO
Exposure Positions	Tune-up Maximum power of LTE Band 7	
	21.50 dBm	141.25 mW
Left Side	Antenna to user(mm)	228
	SAR exclusion threshold(mW)	1876
	SAR testing required?	NO
Bottom Side	Antenna to user(mm)	151
	SAR exclusion threshold(mW)	1106
	SAR testing required?	NO
Exposure Positions	Tune-up Maximum power of LTE Band 12	
	21.00 dBm	125.89 mW
Left Side	Antenna to user(mm)	228
	SAR exclusion threshold(mW)	1155
	SAR testing required?	NO
Bottom Side	Antenna to user(mm)	151
	SAR exclusion threshold(mW)	726
	SAR testing required?	NO
Exposure Positions	Tune-up Maximum power of LTE Band 17	
	24.50 dBm	281.84 mW
Left Side	Antenna to user(mm)	228
	SAR exclusion threshold(mW)	1155
	SAR testing required?	NO
Bottom Side	Antenna to user(mm)	151
	SAR exclusion threshold(mW)	726
	SAR testing required?	NO
Exposure Positions	Tune-up Maximum power of LTE Band 41	
	27.50 dBm	562.34 mW
Left Side	Antenna to user(mm)	155
	SAR exclusion threshold(mW)	1143
	SAR testing required?	NO
Right Side	Antenna to user(mm)	90
	SAR exclusion threshold(mW)	491
	SAR testing required?	YES
Bottom Side	Antenna to user(mm)	151
	SAR exclusion threshold(mW)	1106
	SAR testing required?	NO

NOTE: Refer to section 4.3.1 of KDB 447498 D01.

Test Position of Body with	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						

0mm										
Back Side	661/1880	GPRS(GMSK 2TS)	0.222	0.105	-2.92	28.59	29.00	0.244	2024/6/03	
Front Side	661/1880	GPRS(GMSK 2TS)	0.329	0.157	-2.67	28.59	29.00	0.362	2024/6/03	2#
Top Side	661/1880	GPRS(GMSK 2TS)	0.102	0.048	-1.78	28.59	29.00	0.112	2024/6/03	
Right Side	661/1880	GPRS(GMSK 2TS)	0.136	0.063	2.28	28.59	29.00	0.149	2024/6/03	

NOTE: Body SAR test results of GSM1900

10.1.3. SAR measurement Result of WCDMA Band 2

Test Position of Body with 0mm	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						
Back Side	9400/1880	RMC12.2K	0.432	0.198	-3.85	23.91	24.00	0.441	2024/6/03	
Front Side	9400/1880	RMC12.2K	0.711	0.332	-0.40	23.91	24.00	0.726	2024/6/03	3#
Top Side	9400/1880	RMC12.2K	0.225	0.102	2.84	23.91	24.00	0.230	2024/6/03	
Right Side	9400/1880	RMC12.2K	0.304	0.135	0.89	23.91	24.00	0.310	2024/6/03	

NOTE: Body SAR test results of WCDMA Band 2

10.1.4. SAR measurement Result of WCDMA Band 4

Test Position of Body with 0mm	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						
Back Side	1413/1732.6	RMC12.2K	0.432	0.218	1.90	23.74	24.00	0.459	2024/6/14	
Front Side	1413/1732.6	RMC12.2K	0.692	0.353	-0.37	23.74	24.00	0.735	2024/6/14	4#
Top Side	1413/1732.6	RMC12.2K	0.222	0.113	-3.17	23.74	24.00	0.236	2024/6/14	
Right	1413/1732.6	RMC12.2K	0.280	0.143	0.01	23.74	24.00	0.297	2024/6/14	

Side

NOTE: Body SAR test results of WCDMA Band 4

10.1.5. SAR measurement Result of WCDMA Band 5

Test Position of Body with 0mm	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						
Back Side	4182/836.4	RMC12.2K	0.360	0.190	3.13	24.08	24.50	0.397	2024/6/21	
Front Side	4182/836.4	RMC12.2K	0.594	0.320	0.81	24.08	24.50	0.654	2024/6/21	5#
Top Side	4182/836.4	RMC12.2K	0.186	0.095	-2.18	24.08	24.50	0.205	2024/6/21	
Right Side	4182/836.4	RMC12.2K	0.244	0.130	2.74	24.08	24.50	0.269	2024/6/21	

NOTE: Body SAR test results of WCDMA Band 5

10.1.6. SAR measurement Result of LTE Band 2

Test Position of Body with 0mm	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										
Back Side	18900/1880	20M QPSK(1,99)	0.504	0.228	3.29	23.70	24.00	0.540	2024/6/03	
Front Side	18900/1880	20M QPSK(1,99)	0.826	0.394	-0.09	23.70	24.00	0.885	2024/6/03	9#
Top Side	18900/1880	20M QPSK(1,99)	0.258	0.121	1.93	23.70	24.00	0.276	2024/6/03	
Right Side	18900/1880	20M QPSK(1,99)	0.348	0.164	-3.41	23.70	24.00	0.373	2024/6/03	
Front Side	18700/1860	20M QPSK(1,99)	0.778	0.371	0.26	23.55	24.00	0.863	2024/6/03	
Front Side	19100/1900	20M QPSK(1,99)	0.817	0.384	-0.77	23.90	24.00	0.836	2024/6/03	
50%RB										
Back	18900/1880	20M	0.279	0.115	1.71	22.70	23.00	0.299	2024/6/03	

Side		QPSK(50,49)								
Front Side	18900/1880	20M QPSK(50,49)	0.476	0.216	3.25	22.70	23.00	0.510	2024/6/03	
Top Side	18900/1880	20M QPSK(50,49)	0.142	0.063	0.32	22.70	23.00	0.152	2024/6/03	
Right Side	18900/1880	20M QPSK(50,49)	0.192	0.093	-1.41	22.70	23.00	0.206	2024/6/03	
50%RB										
Front Side	18900/1880	20M QPSK(50,49)	0.454	0.204	-2.13	22.71	23.00	0.485	2024/6/03	

NOTE: Body SAR test results of LTE Band 2

10.1.7. SAR measurement Result of LTE Band 4

Test Position of Body with 0mm	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										
Back Side	20175/1732.5	20M QPSK(1,99)	0.270	0.132	-0.02	23.64	24.00	0.293	2024/6/14	
Front Side	20175/1732.5	20M QPSK(1,99)	0.412	0.212	-0.09	23.64	24.00	0.448	2024/6/14	10#
Top Side	20175/1732.5	20M QPSK(1,99)	0.138	0.069	0.36	23.64	24.00	0.150	2024/6/14	
Right Side	20175/1732.5	20M QPSK(1,99)	0.184	0.093	2.22	23.64	24.00	0.200	2024/6/14	
50%RB										
Back Side	20175/1732.5	20M QPSK(50,49)	0.136	0.079	-3.59	22.66	23.00	0.147	2024/6/14	
Front Side	20175/1732.5	20M QPSK(50,49)	0.229	0.115	-2.50	22.66	23.00	0.248	2024/6/14	
Top Side	20175/1732.5	20M QPSK(50,49)	0.073	0.041	-4.34	22.66	23.00	0.079	2024/6/14	
Right Side	20175/1732.5	20M QPSK(50,49)	0.101	0.053	1.99	22.66	23.00	0.109	2024/6/14	

NOTE: Body SAR test results of LTE Band 4

10.1.8. SAR measurement Result of LTE Band 5

Test Position	Test channel /Freq.	Mode	SAR Value (W/kg)	Power Drift(%)	Conducted Power	Tune-up Power	Scaled SAR	Date	Plot
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of Body with 0mm			1-g	10-g		(dBm)	(dBm)	1-g (W/Kg)		
1RB										
Back Side	20525/836.5	10M QPSK(1,0)	0.246	0.130	-3.13	23.61	24.00	0.269	2024/6/21	
Front Side	20525/836.5	10M QPSK(1,0)	0.374	0.202	0.92	23.61	24.00	0.409	2024/6/21	11#
Top Side	20525/836.5	10M QPSK(1,0)	0.126	0.065	-3.74	23.61	24.00	0.138	2024/6/21	
Right Side	20525/836.5	10M QPSK(1,0)	0.164	0.086	2.39	23.61	24.00	0.179	2024/6/21	
50%RB										
Back Side	20525/836.5	10M QPSK(25,24)	0.127	0.078	-3.95	22.59	23.00	0.140	2024/6/21	
Front Side	20525/836.5	10M QPSK(25,24)	0.211	0.108	-0.65	22.59	23.00	0.232	2024/6/21	
Top Side	20525/836.5	10M QPSK(25,24)	0.072	0.037	4.39	22.59	23.00	0.079	2024/6/21	
Right Side	20525/836.5	10M QPSK(25,24)	0.082	0.043	3.90	22.59	23.00	0.090	2024/6/21	

NOTE: Body SAR test results of LTE Band 5

10.1.9. SAR measurement Result of LTE Band 7

Test Position of Body with 0mm	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										
Back Side	21100/2535	20M QPSK(1,0)	0.216	0.084	-2.93	21.43	21.50	0.220	2024/6/18	
Front Side	21100/2535	20M QPSK(1,0)	0.312	0.122	1.83	21.43	21.50	0.317	2024/6/18	12#
Top Side	21100/2535	20M QPSK(1,0)	0.105	0.039	2.88	21.43	21.50	0.107	2024/6/18	
Right Side	21100/2535	20M QPSK(1,0)	0.132	0.052	2.73	21.43	21.50	0.134	2024/6/18	
50%RB										
Back	21100/2535	20M	0.194	0.071	3.50	21.38	21.50	0.199	2024/6/18	

Side		QPSK(50,0)								
Front Side	21100/2535	20M QPSK(50,0)	0.289	0.109	3.97	21.38	21.50	0.297	2024/6/18	
Top Side	21100/2535	20M QPSK(50,0)	0.097	0.036	4.19	21.38	21.50	0.100	2024/6/18	
Right Side	21100/2535	20M QPSK(50,0)	0.115	0.048	4.43	21.38	21.50	0.118	2024/6/18	

NOTE: Body SAR test results of LTE Band 7

10.1.10. SAR measurement Result of LTE Band 12

Test Position of Body with 0mm	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										
Back Side	23095/707.5	10M QPSK(1,0)	0.252	0.131	-3.57	20.48	21.00	0.284	2024/6/04	
Front Side	23095/707.5	10M QPSK(1,0)	0.383	0.207	0.85	20.48	21.00	0.432	2024/6/04	13#
Top Side	23095/707.5	10M QPSK(1,0)	0.126	0.068	2.10	20.48	21.00	0.142	2024/6/04	
Right Side	23095/707.5	10M QPSK(1,0)	0.160	0.086	-1.30	20.48	21.00	0.180	2024/6/04	
50%RB										
Back Side	23095/707.5	10M QPSK(25,0)	0.230	0.115	3.34	20.48	21.00	0.259	2024/6/04	
Front Side	23095/707.5	10M QPSK(25,0)	0.361	0.183	0.74	20.48	21.00	0.407	2024/6/04	
Top Side	23095/707.5	10M QPSK(25,0)	0.119	0.061	-3.08	20.48	21.00	0.134	2024/6/04	
Right Side	23095/707.5	10M QPSK(25,0)	0.141	0.082	1.75	20.48	21.00	0.159	2024/6/04	

NOTE: Body SAR test results of LTE Band 12

10.1.11. SAR measurement Result of LTE Band 17

Test Position of Body with	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						

0mm										
1RB										
Back Side	23790/710	10M QPSK(1,24)	0.234	0.126	0.13	24.39	24.50	0.240	2024/6/04	
Front Side	23790/710	10M QPSK(1,24)	0.359	0.197	0.68	24.39	24.50	0.368	2024/6/04	14#
Top Side	23790/710	10M QPSK(1,24)	0.120	0.065	-0.11	24.39	24.50	0.123	2024/6/04	
Right Side	23790/710	10M QPSK(1,24)	0.120	0.064	0.25	24.39	24.50	0.123	2024/6/04	
50%RB										
Back Side	23790/710	10M QPSK(25,12)	0.130	0.072	-2.36	23.52	24.00	0.145	2024/6/04	
Front Side	23790/710	10M QPSK(25,12)	0.215	0.110	0.72	23.52	24.00	0.240	2024/6/04	
Top Side	23790/710	10M QPSK(25,12)	0.066	0.033	-1.71	23.52	24.00	0.074	2024/6/04	
Right Side	23790/710	10M QPSK(25,12)	0.066	0.036	-1.02	23.52	24.00	0.074	2024/6/04	

NOTE: Body SAR test results of LTE Band 17

10.1.12. SAR measurement Result of LTE Band 41

Test Position of Body with 0mm	Test channel /Freq.	Mode	SAR Value (W/kg)		Power Drift(%)	Conducte d Power (dBm)	Tune-up Power (dBm)	Scaled SAR 1-g (W/Kg)	Date	Plot
			1-g	10-g						
1RB										
Back Side	40620/2593	20M QPSK(1,49)	0.228	0.105	2.78	26.91	27.50	0.261	2024/6/18	
Front Side	40620/2593	20M QPSK(1,49)	0.354	0.166	0.57	26.91	27.50	0.406	2024/6/18	15#
Top Side	40620/2593	20M QPSK(1,49)	0.114	0.052	1.20	26.91	27.50	0.131	2024/6/18	
Right Side	40620/2593	20M QPSK(1,49)	0.120	0.055	0.59	26.91	27.50	0.137	2024/6/18	

50%RB										
Back Side	40620/2593	20M QPSK(50,0)	0.122	0.060	-3.19	26.69	27.00	0.131	2024/6/18	
Front Side	40620/2593	20M QPSK(50,0)	0.198	0.085	0.53	26.69	27.00	0.213	2024/6/18	
Top Side	40620/2593	20M QPSK(50,0)	0.068	0.027	2.09	26.69	27.00	0.073	2024/6/18	
Right Side	40620/2593	20M QPSK(50,0)	0.067	0.029	3.73	26.69	27.00	0.072	2024/6/18	

NOTE: Body SAR test results of LTE Band 41

10.1.13. SAR measurement Result of WLAN 2.4G

Test Position of Body with 0mm	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						
Back Side	6/2437	802.11b	0.294	0.119	0.17	15.87	16.00	0.303	2024/6/05	
Front Side	6/2437	802.11b	0.473	0.196	1.03	15.87	16.00	0.487	2024/6/05	8#
Top Side	6/2437	802.11b	0.144	0.058	3.97	15.87	16.00	0.148	2024/6/05	

NOTE: Body SAR test results of WLAN 2.4G

10.1.14. SAR measurement Result of WLAN 5.2G

Test Position of Body with 0mm	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						
Back Side	40/5200	802.11a	0.216	0.064	0.74	11.64	12.00	0.235	2024/6/07	
Front Side	40/5200	802.11a	0.360	0.111	-1.18	11.64	12.00	0.391	2024/6/07	6#
Top Side	40/5200	802.11a	0.117	0.036	3.07	11.64	12.00	0.127	2024/6/07	

NOTE: Body SAR test results of WLAN 5.2G

10.1.15. SAR measurement Result of WLAN 5.8G

Test Position of Body with 0mm	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						
Back Side	165/5825	802.11acVHT20	0.102	0.041	-1.49	9.13	9.50	0.111	2024/6/06	
Front Side	157/5785	802.11aVHT20	0.135	0.056	-0.40	9.13	9.50	0.147	2024/6/06	7#
Top Side	157/5785	802.11aVHT20	0.051	0.021	2.53	9.13	9.50	0.056	2024/6/06	

NOTE:Body SAR test results of WLAN 5.8G

10.1.16. SAR measurement Result of Bluetooth

Test Position of Body with 0mm	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						
Back Side	78/2480	2DH5	0.066	0.038	-3.76	9.70	10.00	0.071	2024/6/05	
Front Side	78/2480	2DH5	0.103	0.061	-1.05	9.70	10.00	0.110	2024/6/05	16#
Top Side	78/2480	2DH5	0.039	0.022	-0.35	9.70	10.00	0.042	2024/6/05	

NOTE:Body SAR test results of WLAN 5.8G

10.2. 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			
Body	Front Side	0.885	0.487	1.372	N/A	N/A
	Back Side	0.540	0.303	0.843	N/A	N/A

	Left Side	/	/	/	N/A	N/A
	Right Side	0.373	/	0.373	N/A	N/A
	Top Side	0.276	0.148	0.424	N/A	N/A
	Bottom Side	/	/	/	N/A	N/A

Test Position		Scaled SARMAX		Σ 1-g SAR (W/Kg)	SPLSR	Remark
		WWAN	NII			
Body	Front Side	0.885	0.391	1.276	N/A	N/A
	Back Side	0.540	0.235	0.775	N/A	N/A
	Left Side	/	/	/	N/A	N/A
	Right Side	0.373	/	0.373	N/A	N/A
	Top Side	0.276	0.127	0.403	N/A	N/A
	Bottom Side	/	/	/	N/A	N/A

Test Position		Scaled SARMAX		Σ 1-g SAR (W/Kg)	SPLSR	Remark
		WWAN	DSS			
Body	Front Side	0.885	0.110	0.995	N/A	N/A
	Back Side	0.540	0.071	0.611	N/A	N/A
	Left Side	/	/	/	N/A	N/A
	Right Side	0.373	/	0.373	N/A	N/A
	Top Side	0.276	0.042	0.318	N/A	N/A
	Bottom Side	/	/	/	N/A	N/A

11. Appendix A. Photo documentation

Refer to appendix Test Setup photo---SAR

12. Appendix B. System Check Plots

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MEASUREMENT 1

Date of measurement: 4/6/2024

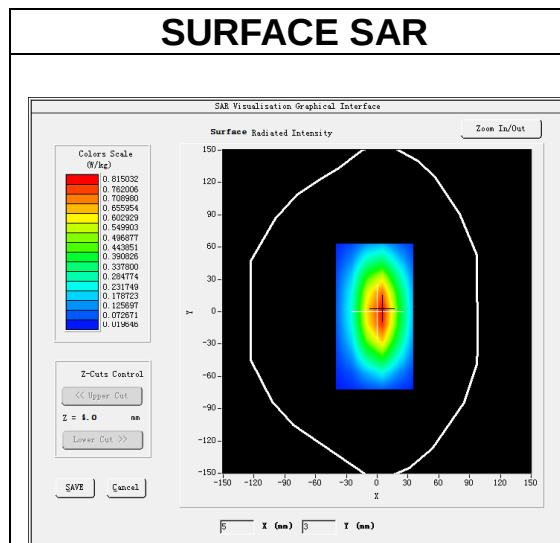
A. Experimental conditions.

<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>1.49</u>

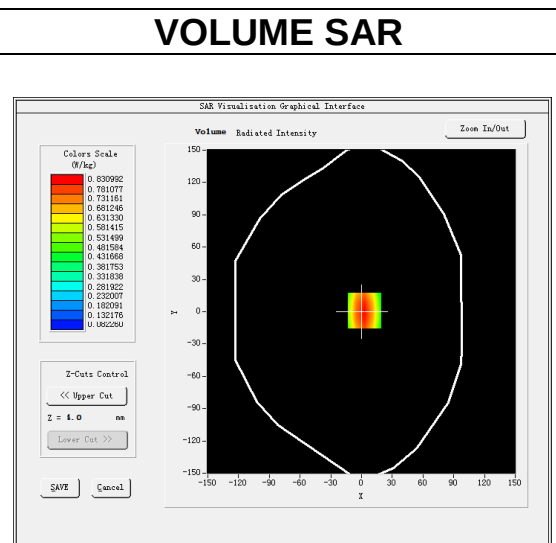
B. SAR Measurement Results

Frequency (MHz)	750.000000
Relative permittivity (real part)	40.884891
Relative permittivity (imaginary part)	21.490463
Conductivity (S/m)	0.895436
Variation (%)	2.730000

SURFACE SAR



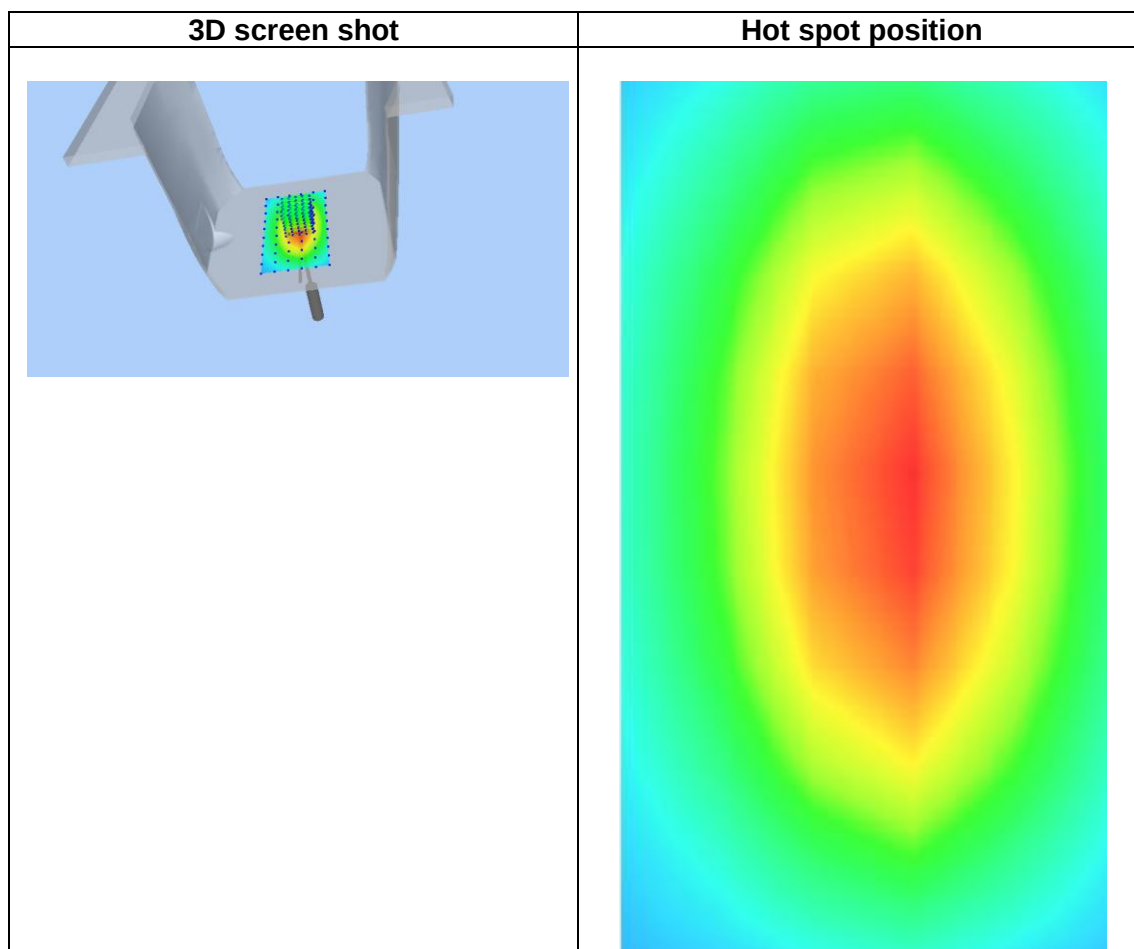
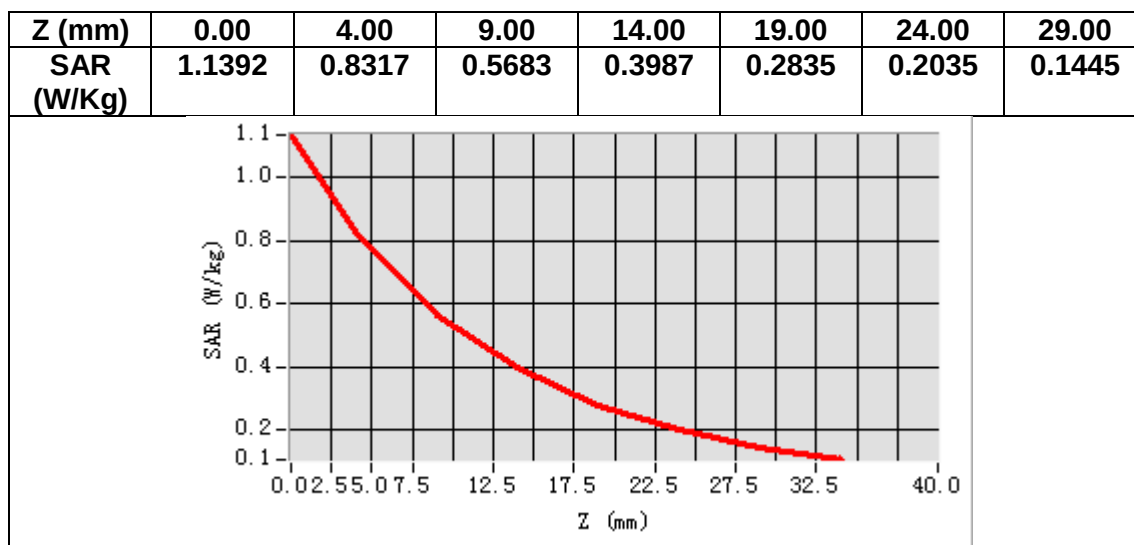
VOLUME SAR



Maximum location: X=3.00, Y=1.00

SAR Peak: 1.13 W/kg

SAR 10g (W/Kg)	0.539332
SAR 1g (W/Kg)	0.908321



MEASUREMENT 2

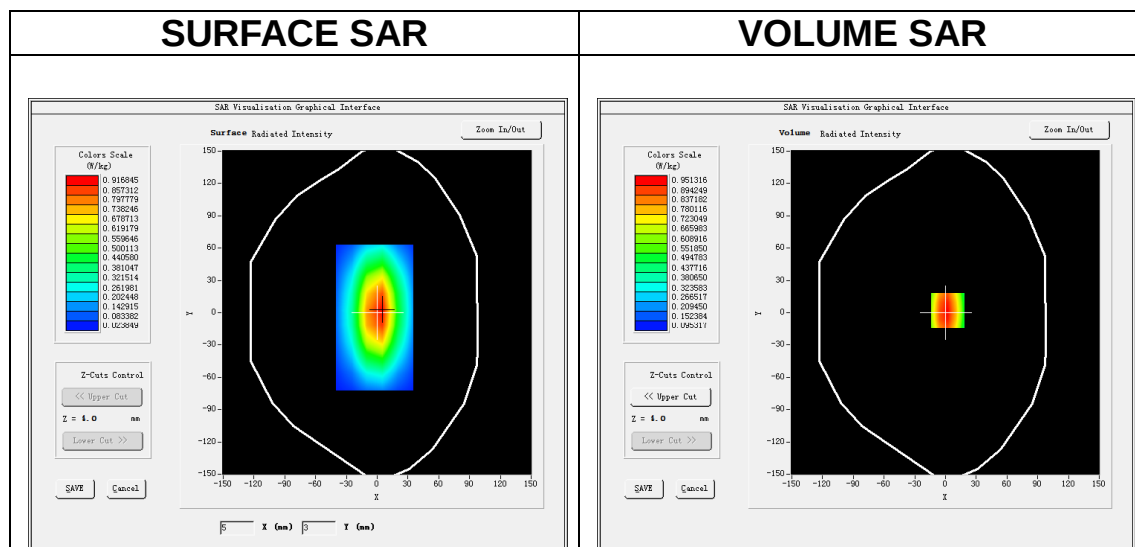
Date of measurement: 21/6/2024

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>2.32</u>

B. SAR Measurement Results

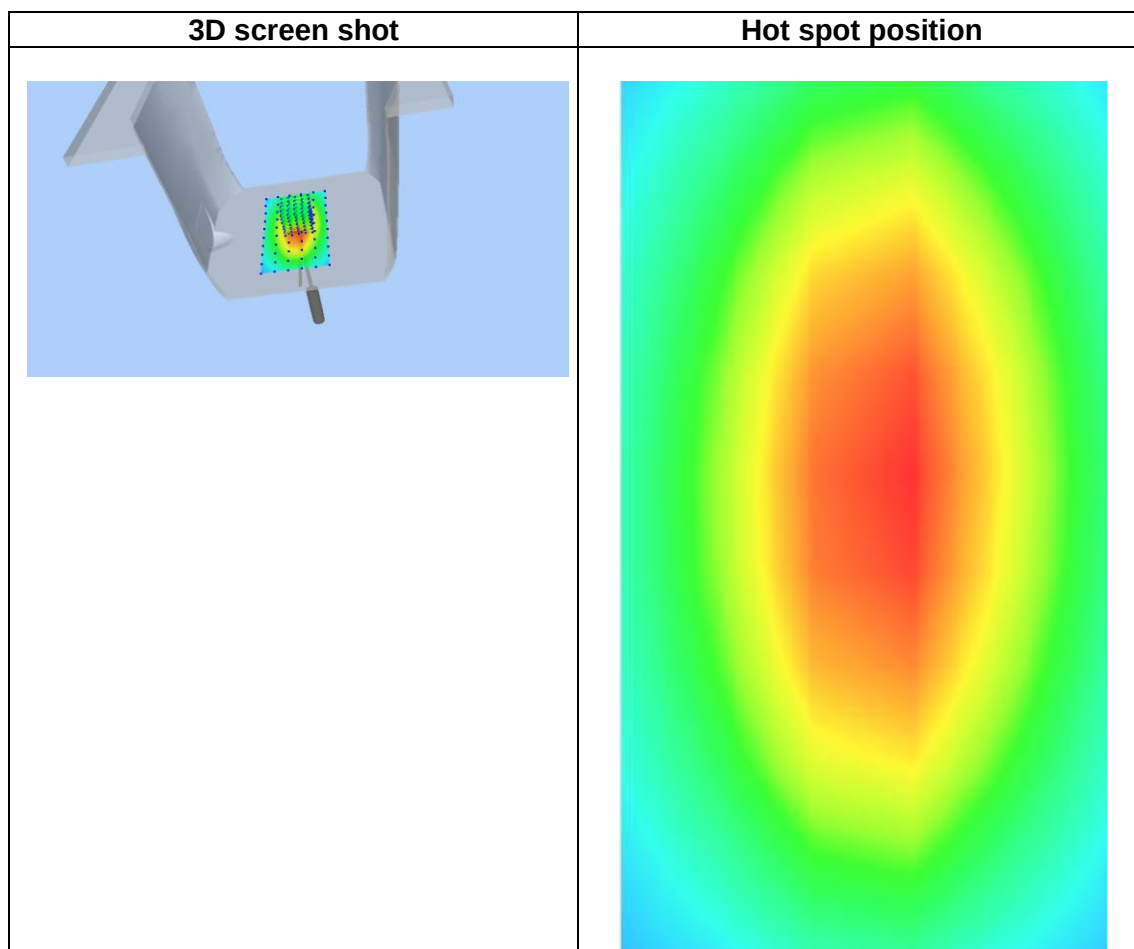
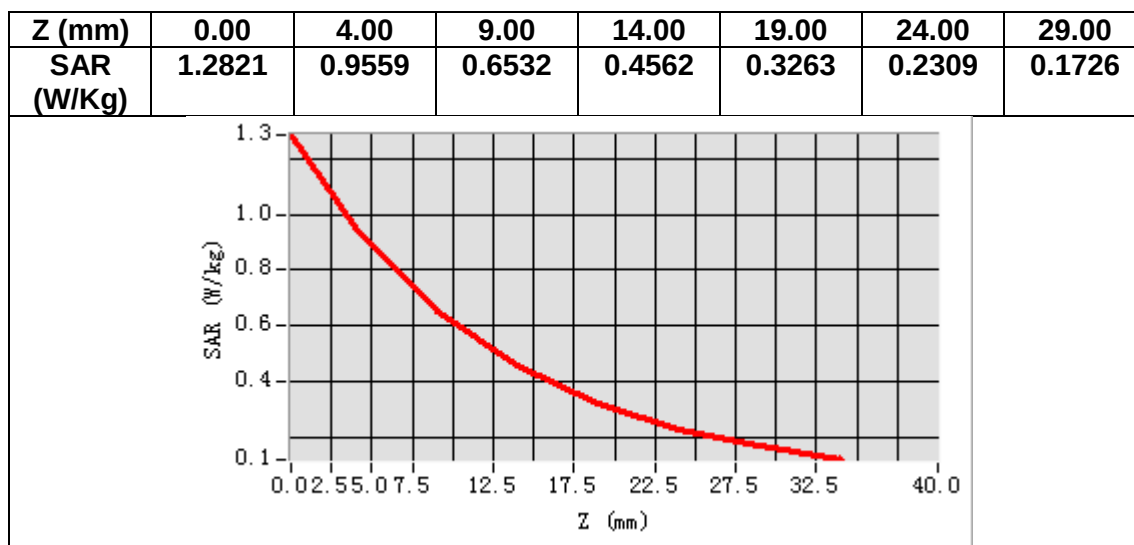
Frequency (MHz)	835.000000
Relative permittivity (real part)	41.660656
Relative permittivity (imaginary part)	19.667403
Conductivity (S/m)	0.912349
Variation (%)	-2.720000



Maximum location: X=2.00, Y=2.00

SAR Peak: 1.29 W/kg

SAR 10g (W/Kg)	0.608333
SAR 1g (W/Kg)	0.955172



MEASUREMENT 3

Date of measurement: 14/6/2024

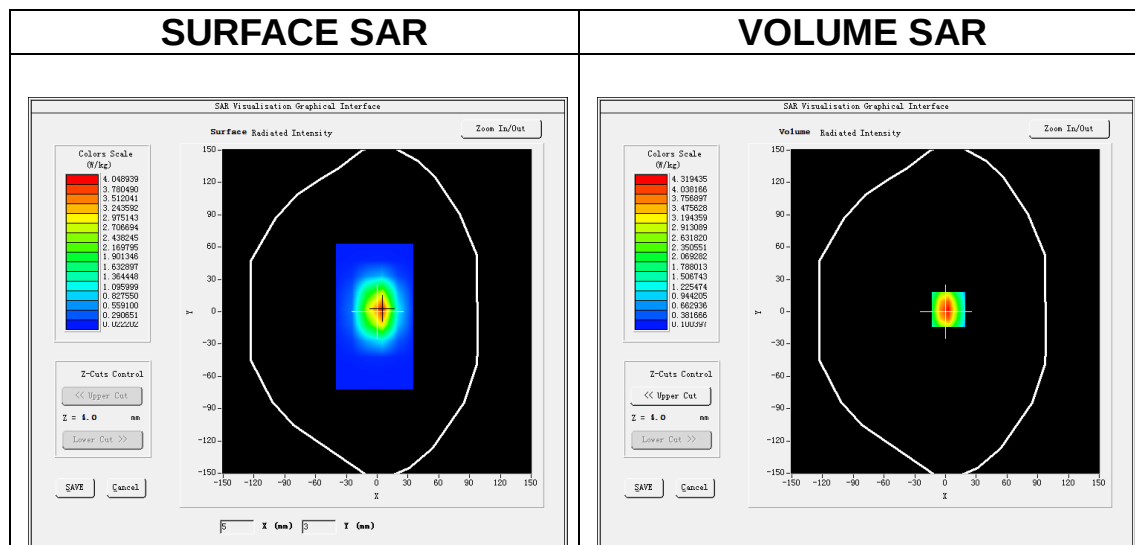
A. Experimental conditions.

<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>2.45</u>

B. SAR Measurement Results

Frequency (MHz)	1800.000000
Relative permittivity (real part)	39.225225
Relative permittivity (imaginary part)	13.982463
Conductivity (S/m)	1.398246
Variation (%)	2.980000

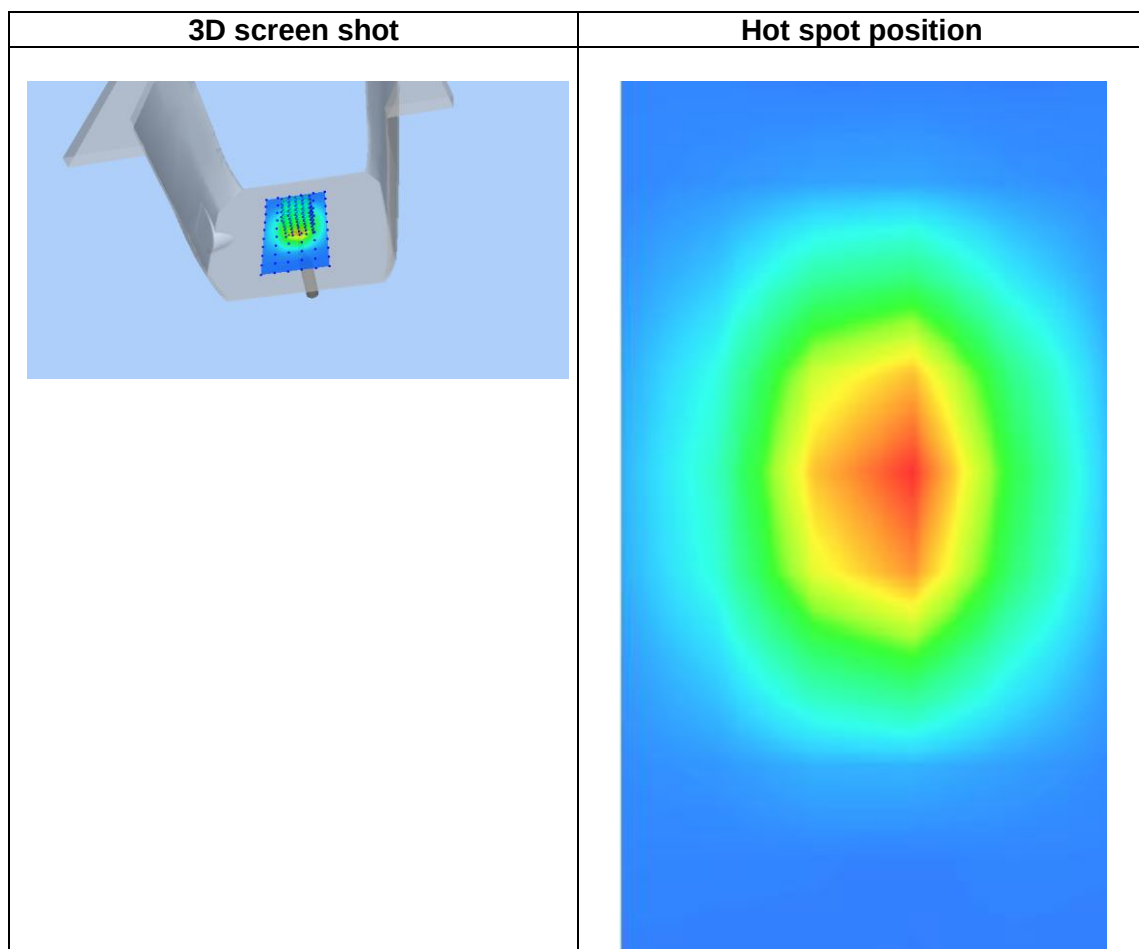
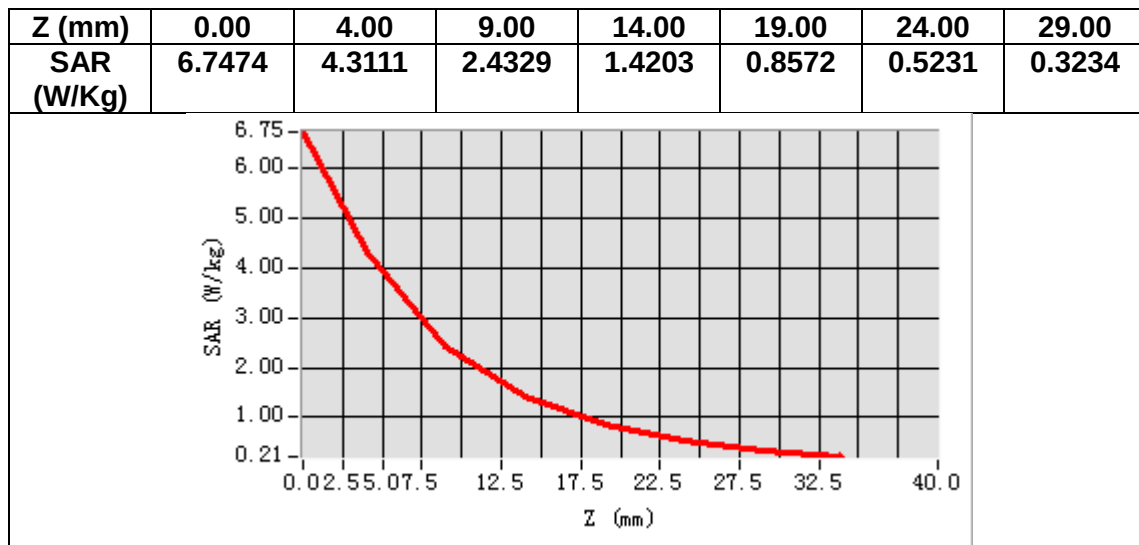
SURFACE SAR



Maximum location: X=3.00, Y=2.00

SAR Peak: 6.82 W/kg

SAR 10g (W/Kg)	1.897307
SAR 1g (W/Kg)	3.886066



MEASUREMENT 4

Date of measurement: 3/6/2024

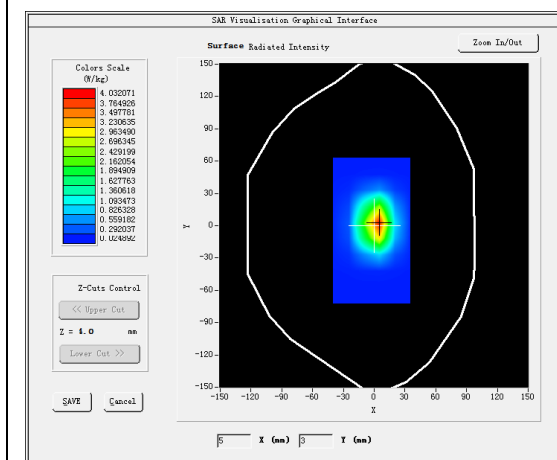
A. Experimental conditions.

<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>2.63</u>

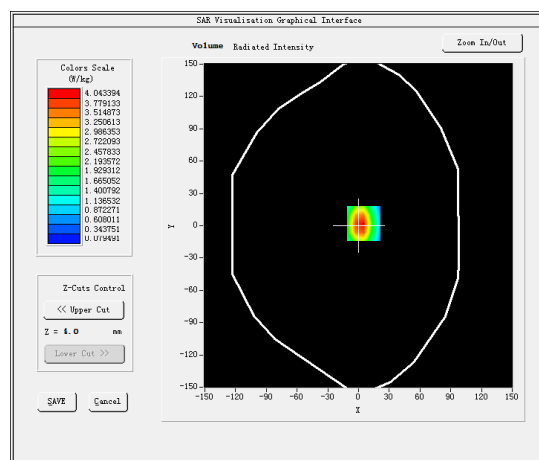
B. SAR Measurement Results

Frequency (MHz)	1900.000000
Relative permittivity (real part)	38.782481
Relative permittivity (imaginary part)	13.626018
Conductivity (S/m)	1.438302
Variation (%)	2.220000

SURFACE SAR



VOLUME SAR

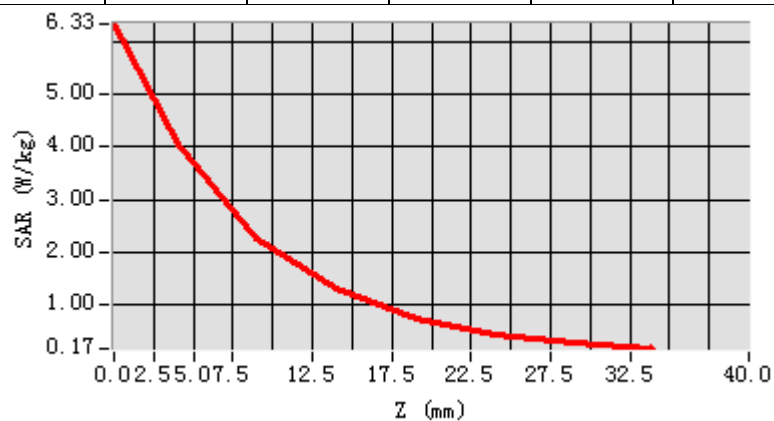


Maximum location: X=5.00, Y=2.00

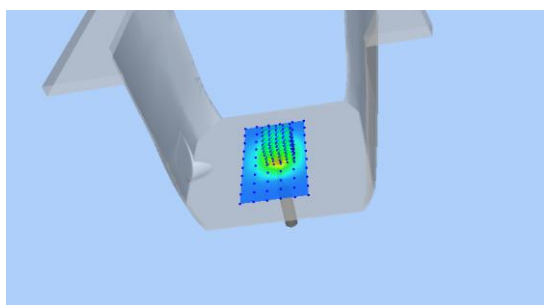
SAR Peak: 6.70 W/kg

SAR 10g (W/Kg)	2.278347
SAR 1g (W/Kg)	3.997221

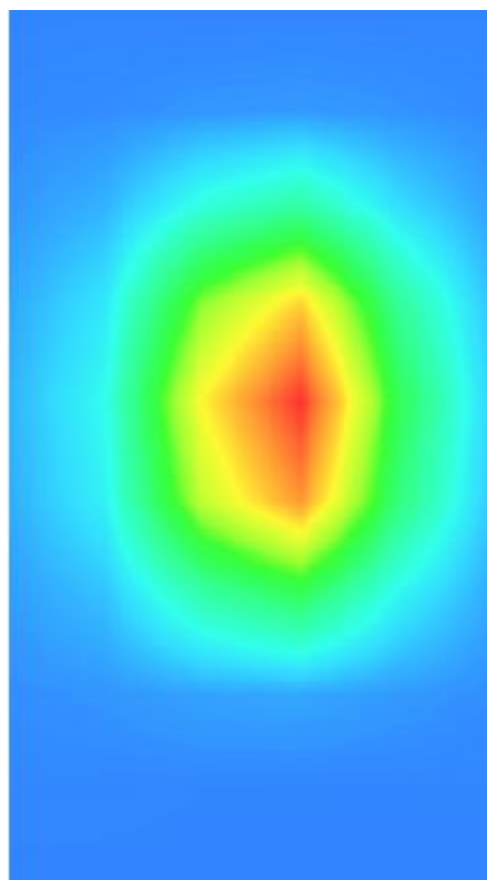
Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	6.3247	4.0419	2.2630	1.3026	0.7618	0.4514	0.2794



3D screen shot



Hot spot position



MEASUREMENT 5

Date of measurement: 5/6/2024

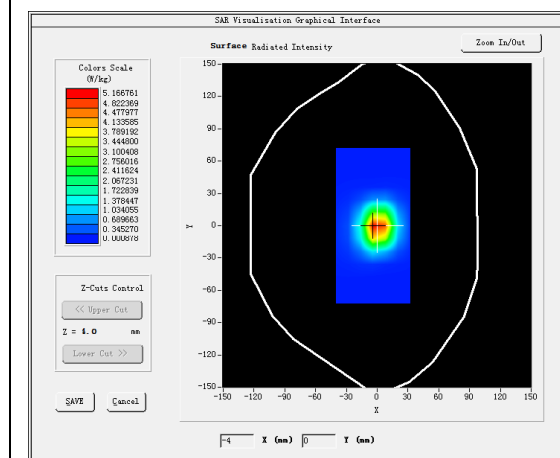
A. Experimental conditions.

<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>1.98</u>

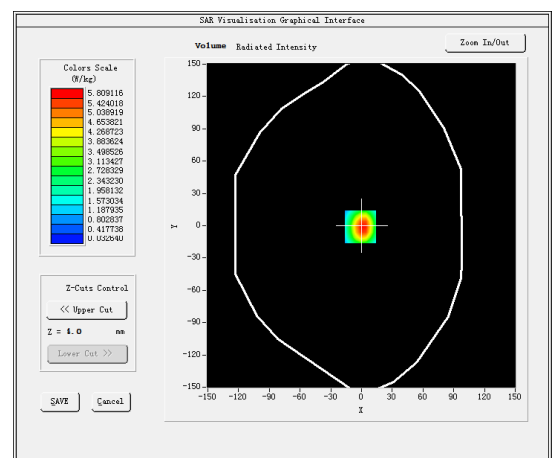
B. SAR Measurement Results

Frequency (MHz)	2450.000000
Relative permittivity (real part)	37.717635
Relative permittivity (imaginary part)	12.931778
Conductivity (S/m)	1.760159
Variation (%)	1.290000

SURFACE SAR



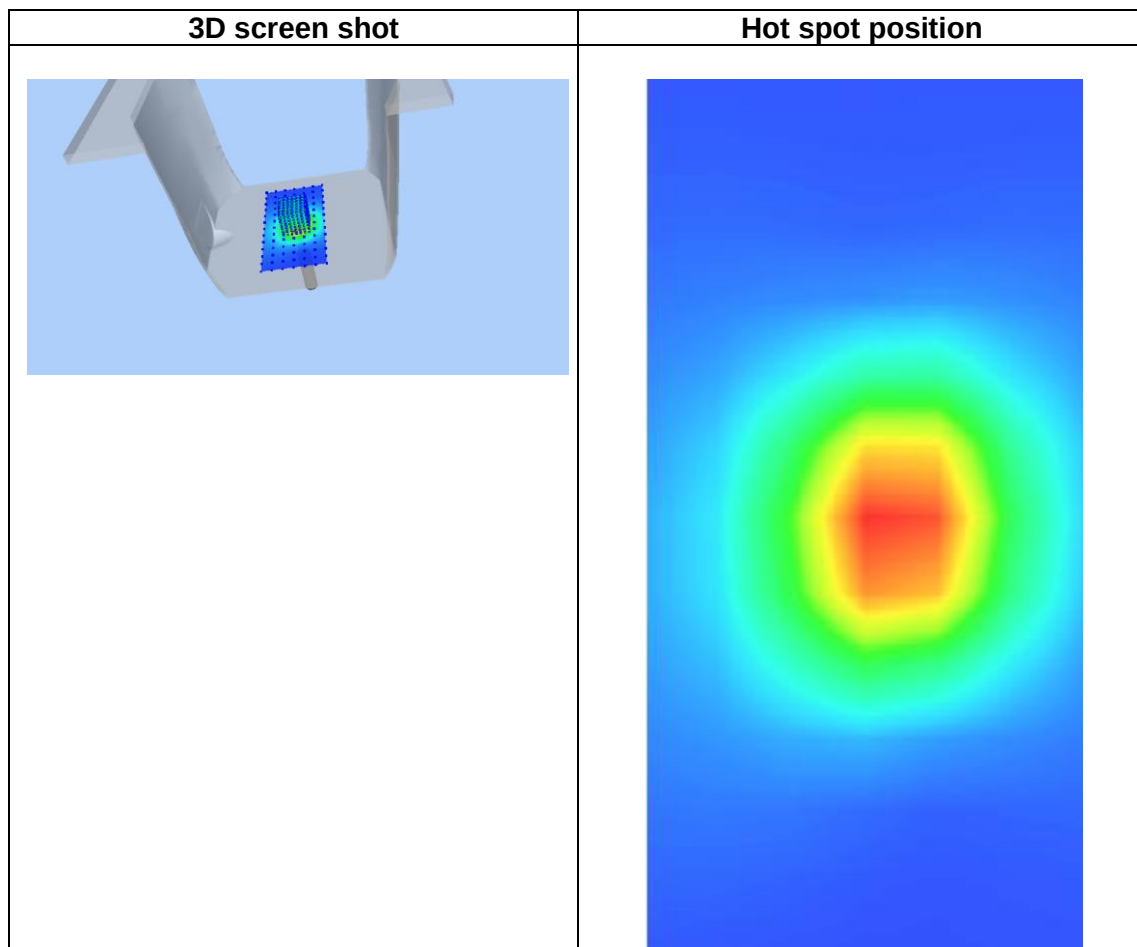
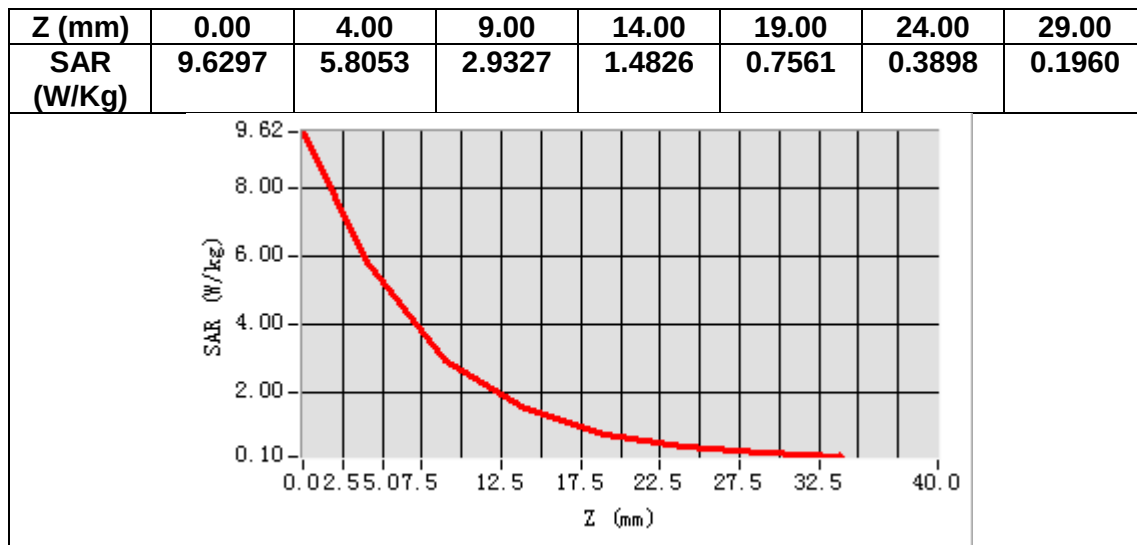
VOLUME SAR



Maximum location: X=-1.00, Y=-1.00

SAR Peak: 9.73 W/kg

SAR 10g (W/Kg)	2.601106
SAR 1g (W/Kg)	4.627340



MEASUREMENT 6

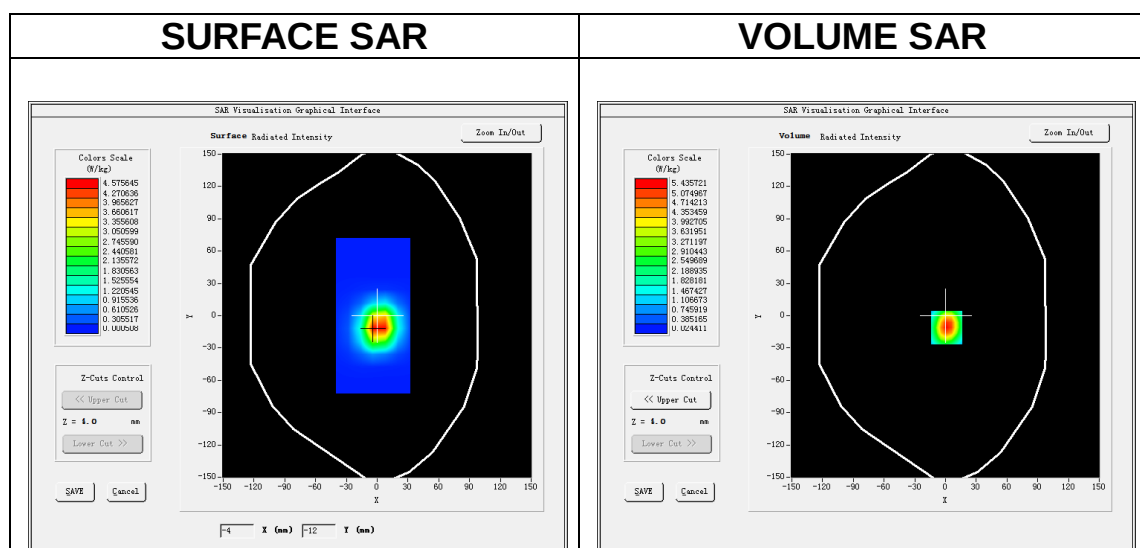
Date of measurement: 18/6/2024

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>1.87</u>

B. SAR Measurement Results

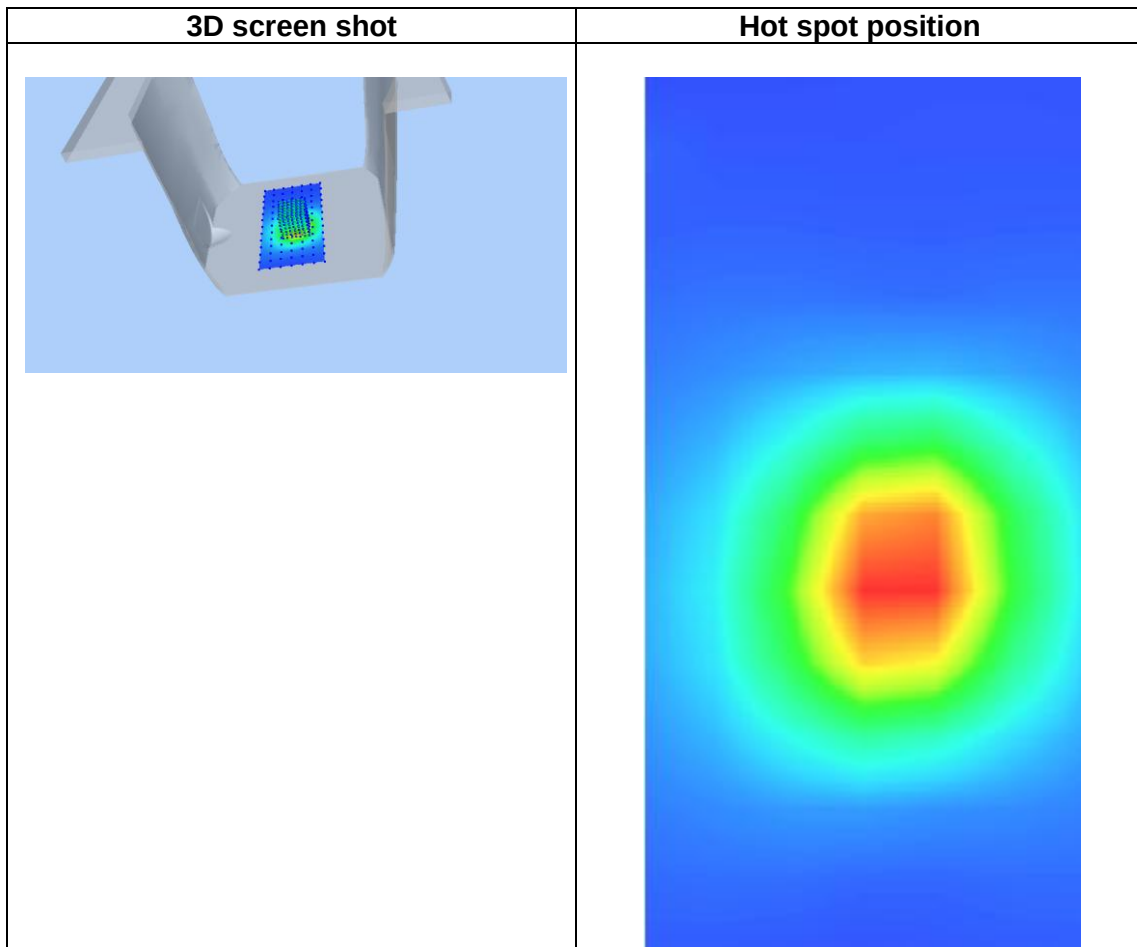
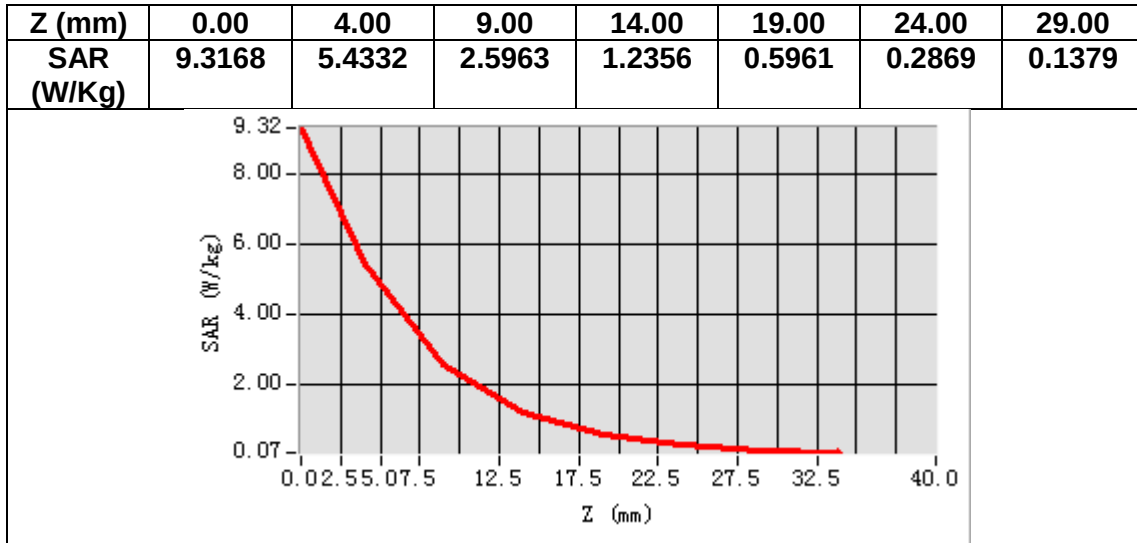
Frequency (MHz)	2600.000000
Relative permittivity (real part)	39.025963
Relative permittivity (imaginary part)	13.848930
Conductivity (S/m)	2.000401
Variation (%)	0.250000



Maximum location: X=1.00, Y=-11.00

SAR Peak: 9.29 W/kg

SAR 10g (W/Kg)	2.568037
SAR 1g (W/Kg)	5.492199



MEASUREMENT 7

Date of measurement: 7/6/2024

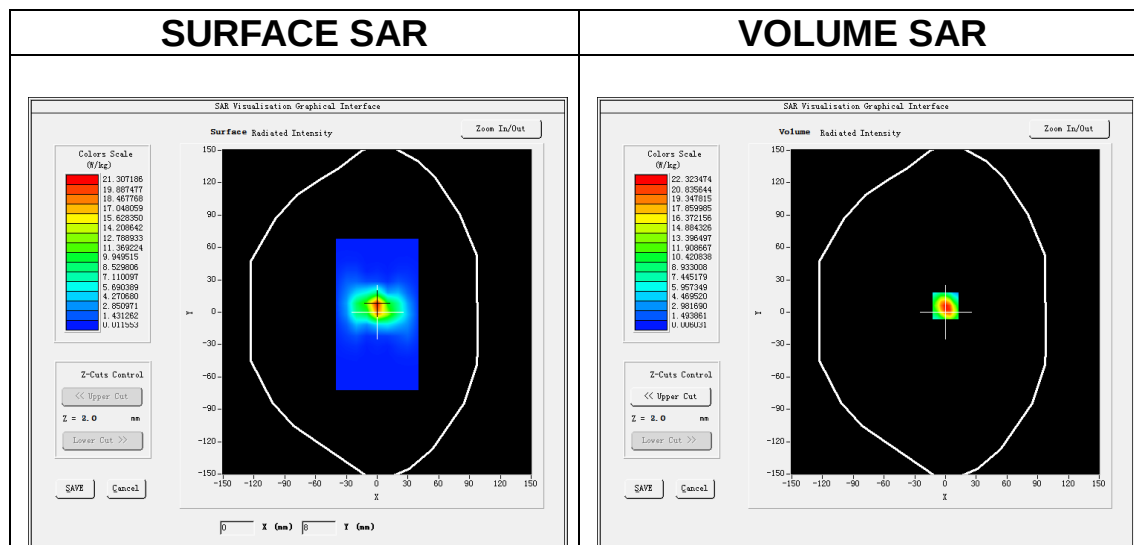
A. Experimental conditions.

<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>2.07</u>

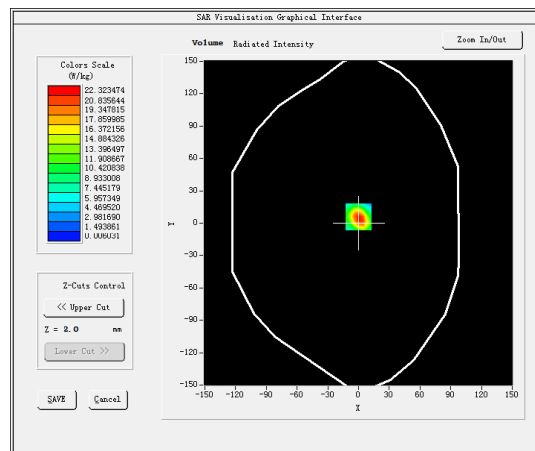
B. SAR Measurement Results

Frequency (MHz)	5200.000000
Relative permittivity (real part)	34.873427
Relative permittivity (imaginary part)	15.913428
Conductivity (S/m)	4.597213
Variation (%)	2.800000

SURFACE SAR



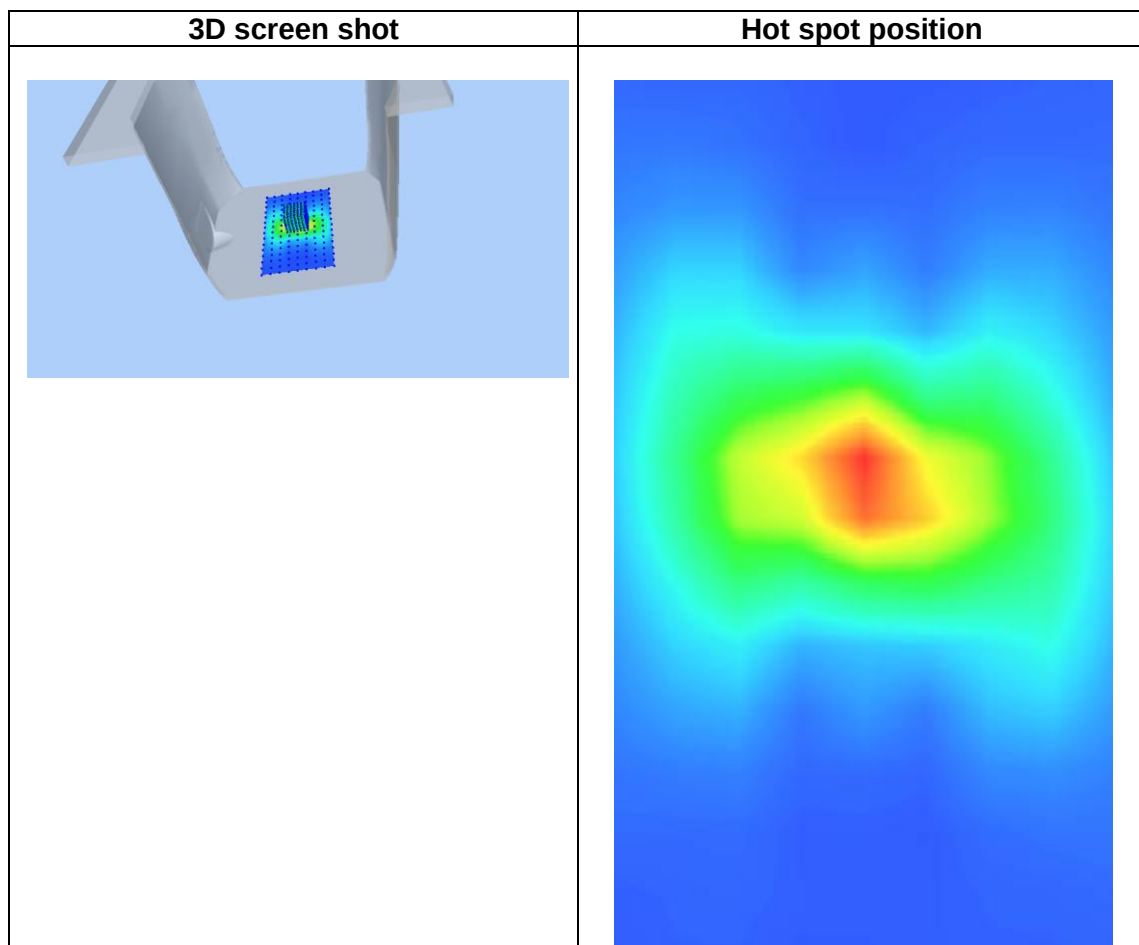
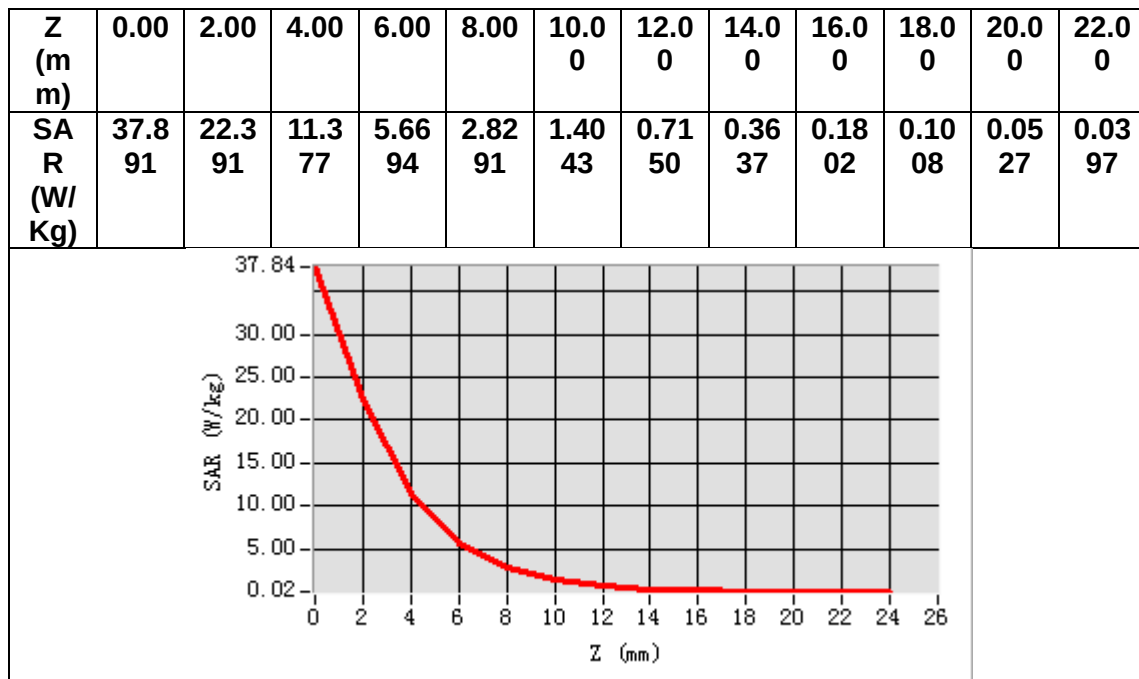
VOLUME SAR



Maximum location: X=0.00, Y=6.00

SAR Peak: 40.06 W/kg

SAR 10g (W/Kg)	5.710162
SAR 1g (W/Kg)	16.486032



MEASUREMENT 8

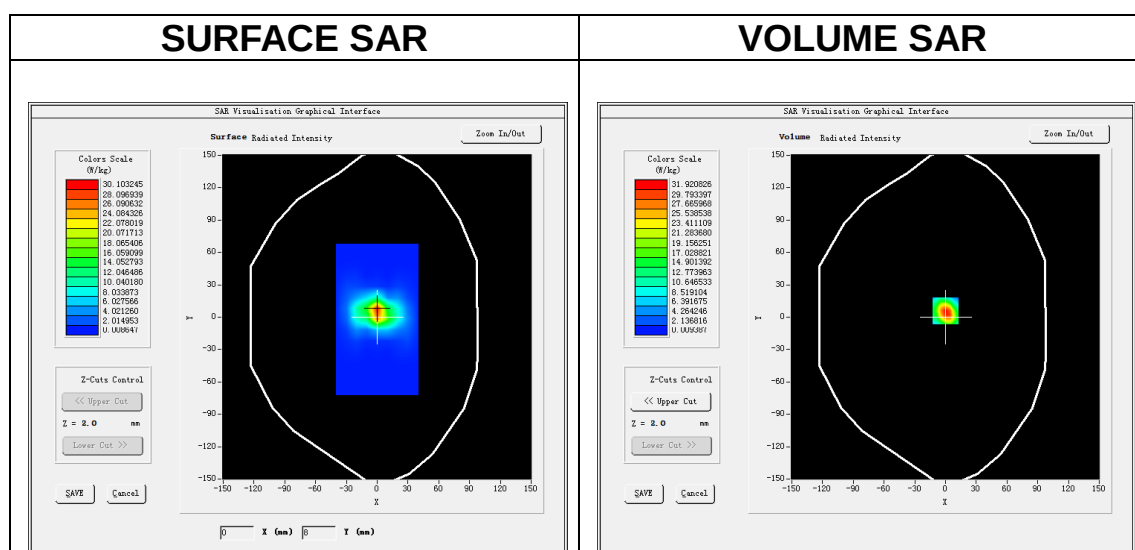
Date of measurement: 6/6/2024

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>CW5800</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>CW (Crest factor: 1.0)</u>
<u>ConvF</u>	<u>2.04</u>

B. SAR Measurement Results

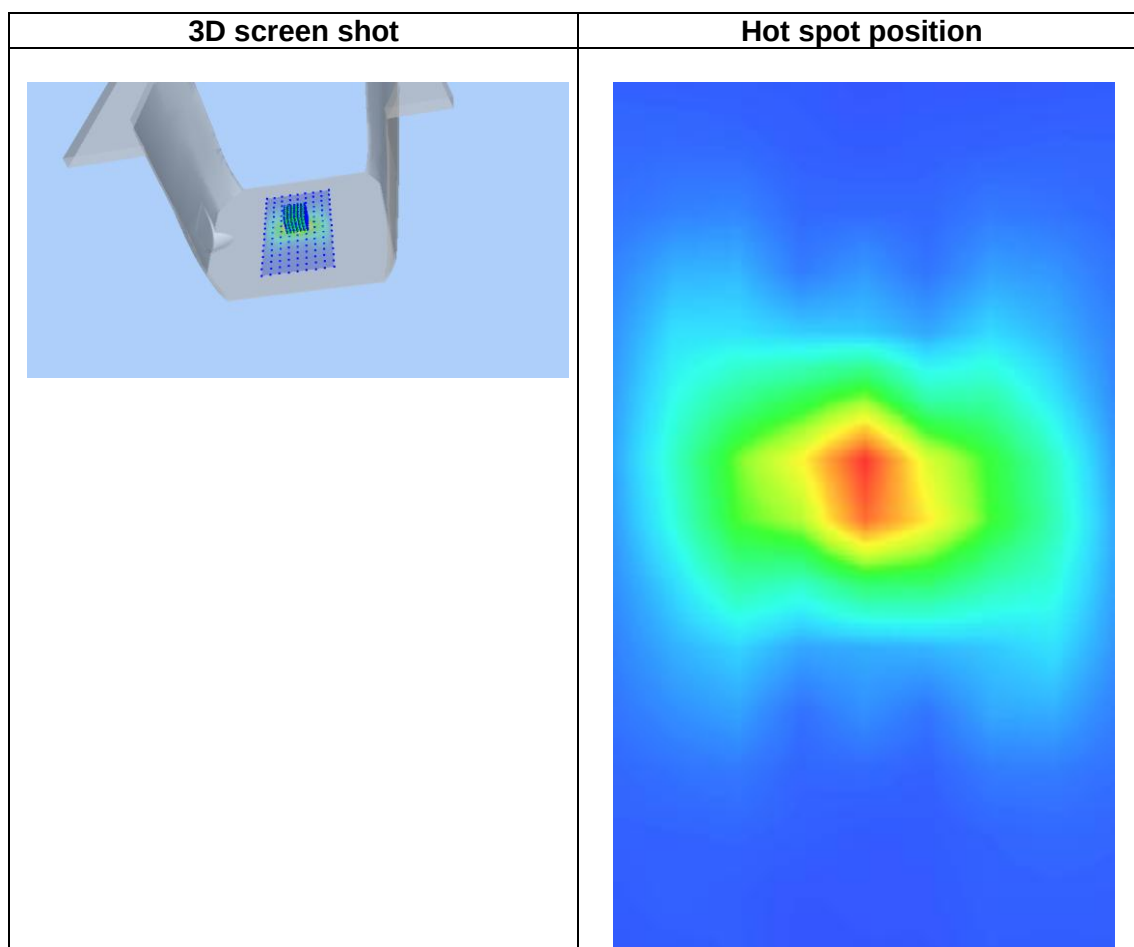
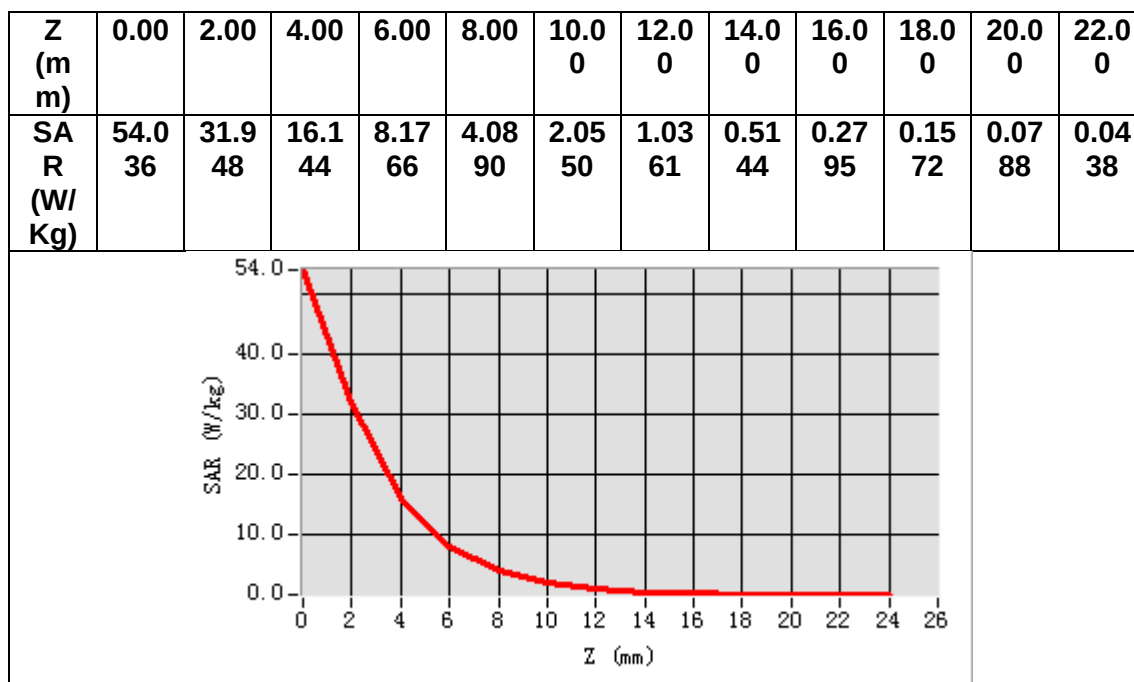
Frequency (MHz)	5800.000000
Relative permittivity (real part)	34.304577
Relative permittivity (imaginary part)	16.300199
Conductivity (S/m)	5.252286
Variation (%)	-0.500000



Maximum location: X=0.00, Y=6.00

SAR Peak: 57.37 W/kg

SAR 10g (W/Kg)	6.149228
SAR 1g (W/Kg)	19.993190



13. Appendix C. Plots of High SAR Measurement

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MEASUREMENT 9LTE Band 2 Body
MEASUREMENT 10LTE Band 4 Body
MEASUREMENT 11 LTE Band 5 Body
MEASUREMENT 12LTE Band 7 Body
MEASUREMENT 13LTE Band 12 Body
MEASUREMENT 14LTE Band 17 Body
MEASUREMENT 15LTE Band 41 Body

MEASUREMENT 1

Date of measurement: 21/6/2024

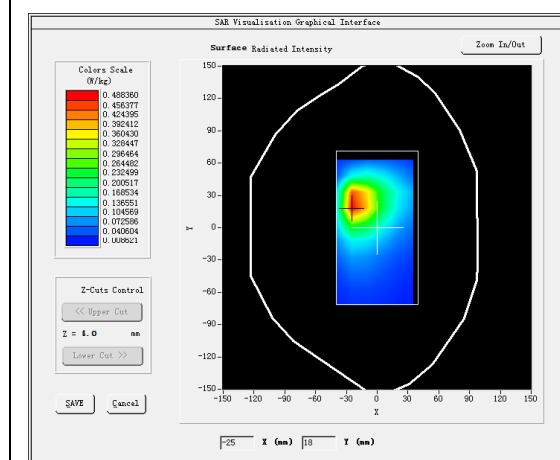
A. Experimental conditions.

<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: 2.0)</u>
<u>ConvF</u>	<u>2.32</u>

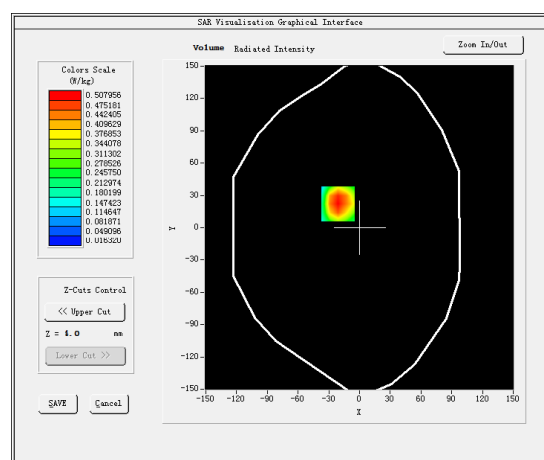
B. SAR Measurement Results

Frequency (MHz)	836.400000
Relative permittivity (real part)	41.669735
Relative permittivity (imaginary part)	19.674603
Conductivity (S/m)	0.914213
Variation (%)	1.830000

SURFACE SAR



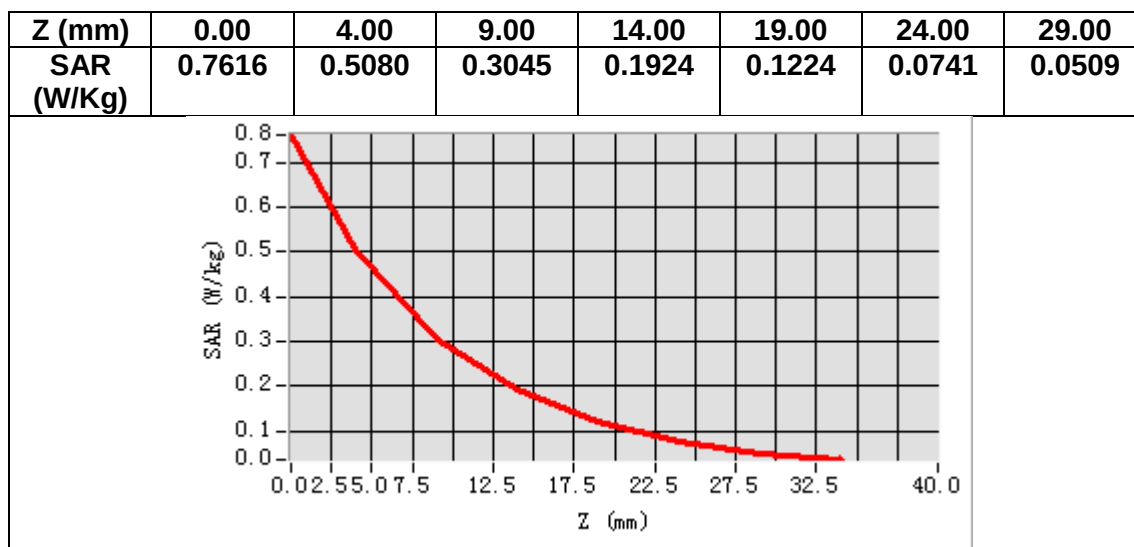
VOLUME SAR



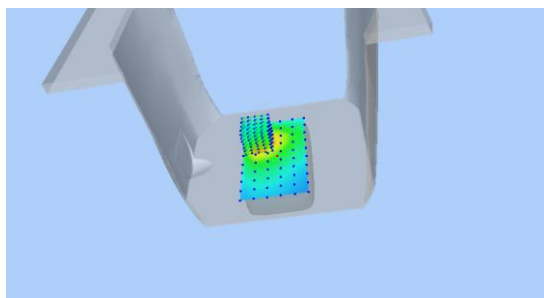
Maximum location: X=-21.00, Y=22.00

SAR Peak: 0.85 W/kg

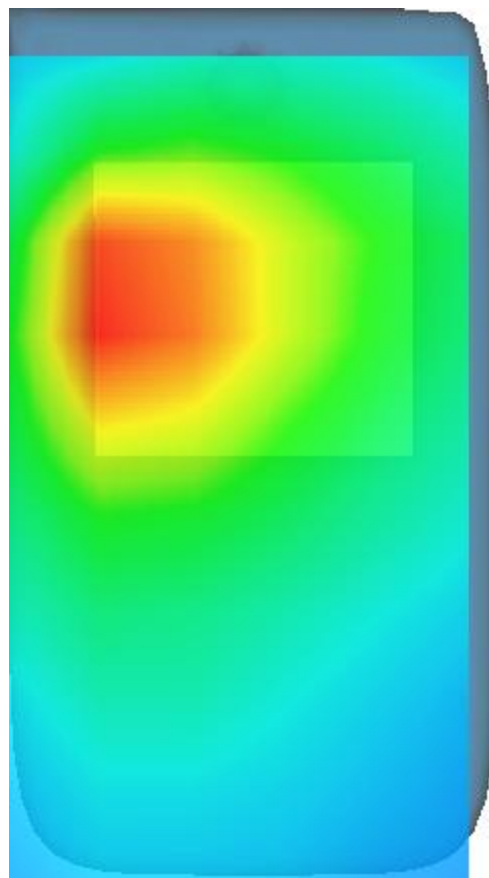
SAR 10g (W/Kg)	0.279689
SAR 1g (W/Kg)	0.502190



3D screen shot



Hot spot position



MEASUREMENT 2

Date of measurement: 3/6/2024

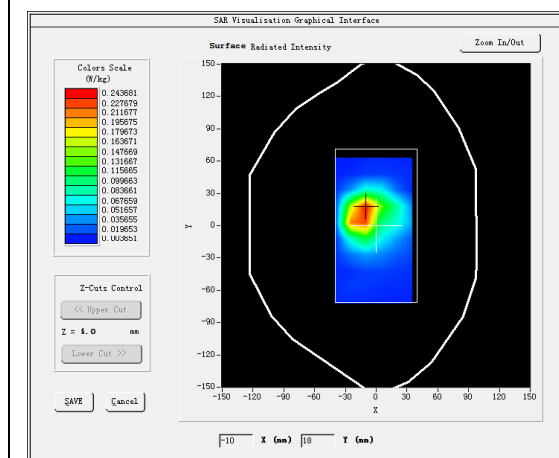
A. Experimental conditions.

<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: 4.0)</u>
<u>ConvF</u>	<u>2.63</u>

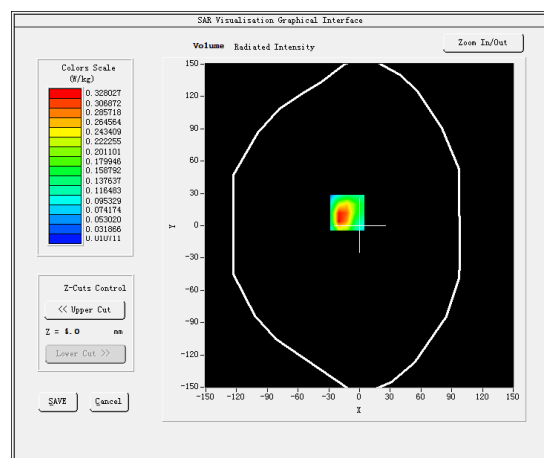
B. SAR Measurement Results

Frequency (MHz)	1880.000000
Relative permittivity (real part)	38.857780
Relative permittivity (imaginary part)	13.673918
Conductivity (S/m)	1.428165
Variation (%)	-2.670000

SURFACE SAR



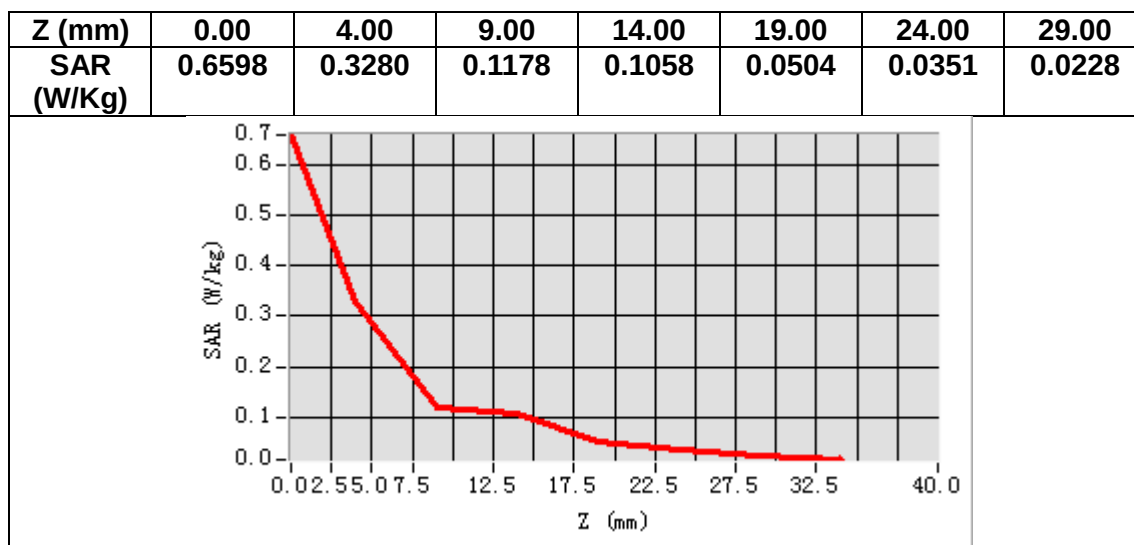
VOLUME SAR



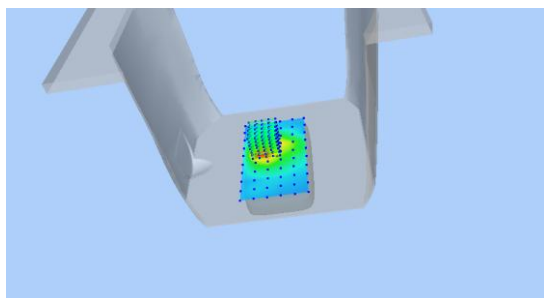
Maximum location: X=-12.00, Y=12.00

SAR Peak: 0.57 W/kg

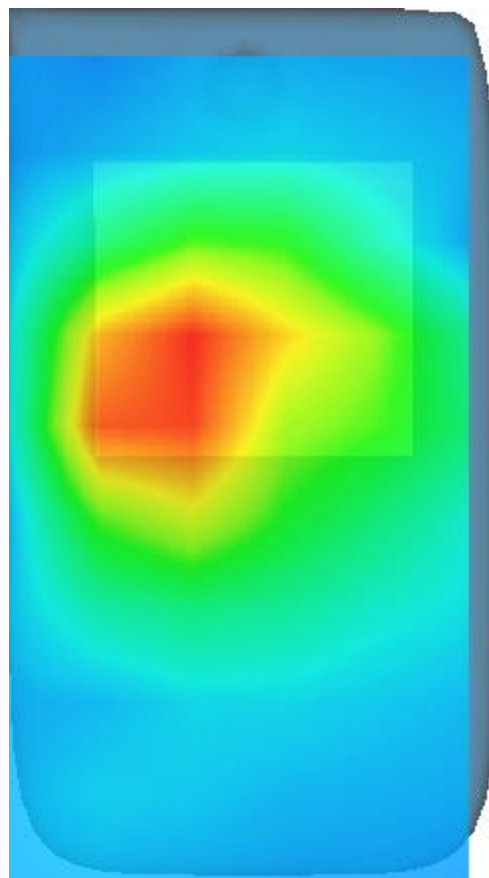
SAR 10g (W/Kg)	0.156832
SAR 1g (W/Kg)	0.328541



3D screen shot



Hot spot position



MEASUREMENT 3

Date of measurement: 3/6/2024

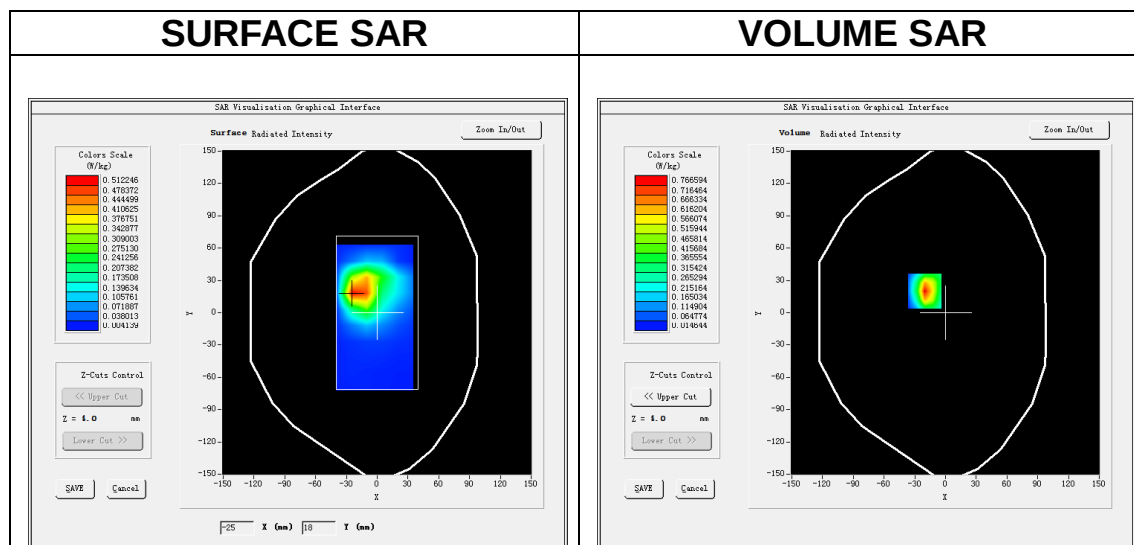
A. Experimental conditions.

<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>2.63</u>

B. SAR Measurement Results

Frequency (MHz)	1880.000000
Relative permittivity (real part)	38.857780
Relative permittivity (imaginary part)	13.673918
Conductivity (S/m)	1.428165
Variation (%)	-0.400000

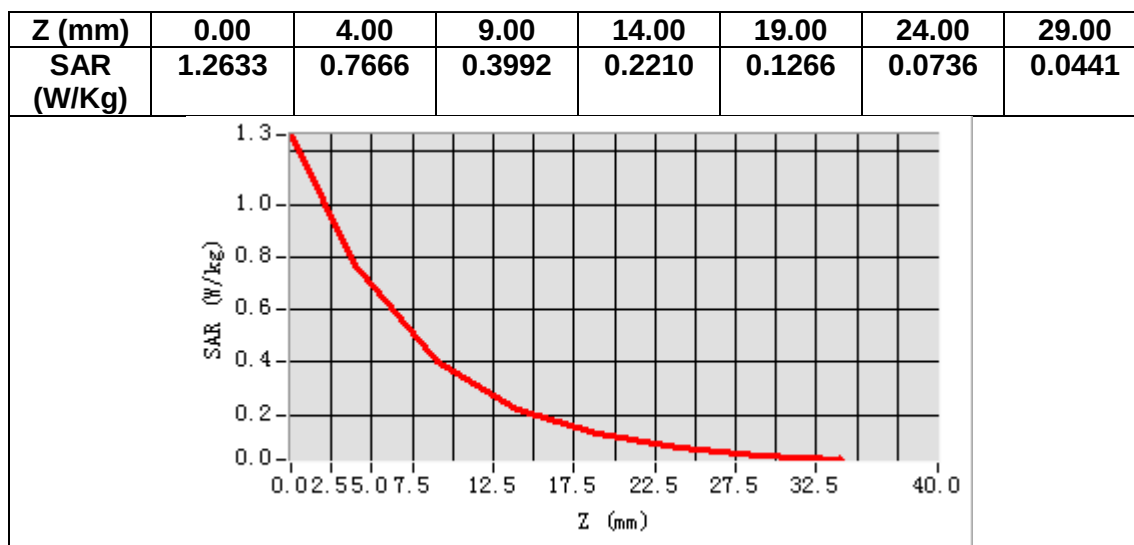
SURFACE SAR



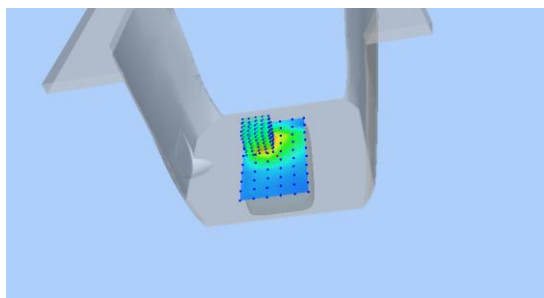
Maximum location: X=-20.00, Y=20.00

SAR Peak: 1.26 W/kg

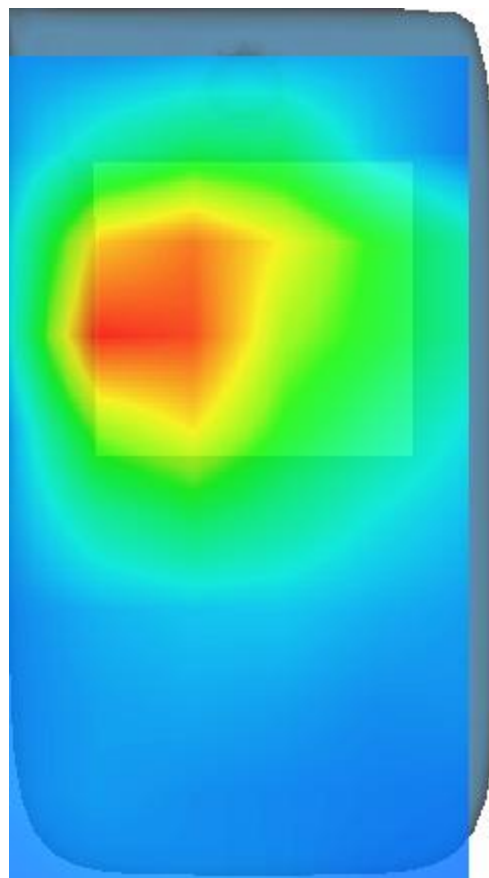
SAR 10g (W/Kg)	0.331782
SAR 1g (W/Kg)	0.711493



3D screen shot



Hot spot position



MEASUREMENT 4

Date of measurement: 14/6/2024

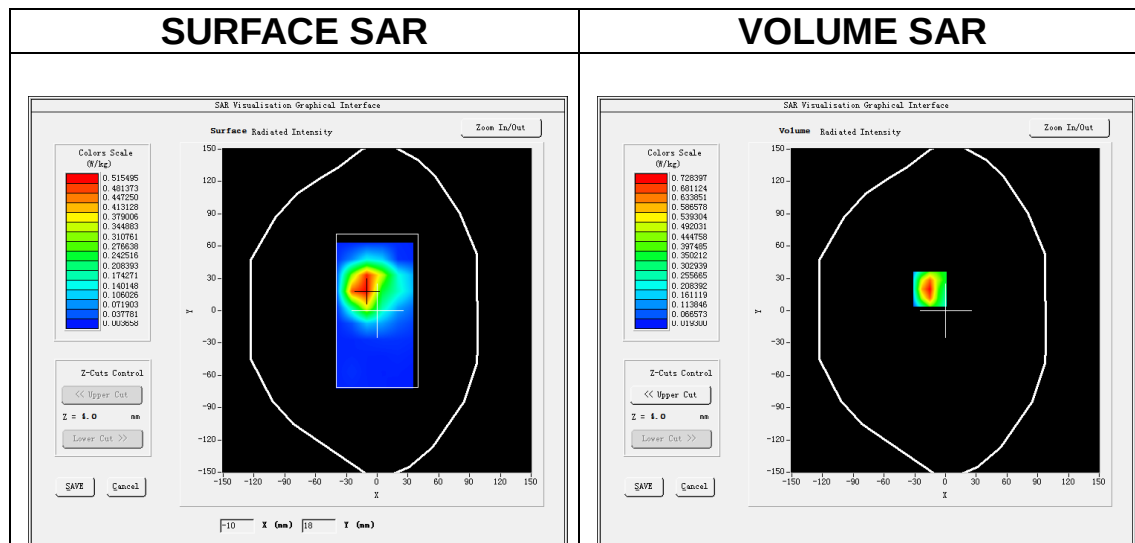
A. Experimental conditions.

<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>2.45</u>

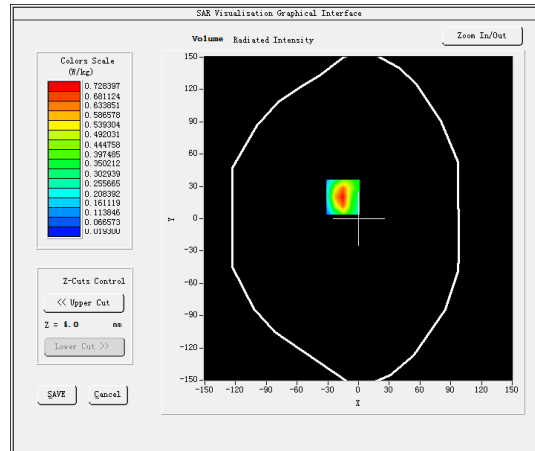
B. SAR Measurement Results

Frequency (MHz)	1732.600000
Relative permittivity (real part)	39.684925
Relative permittivity (imaginary part)	13.934763
Conductivity (S/m)	1.340834
Variation (%)	-0.370000

SURFACE SAR



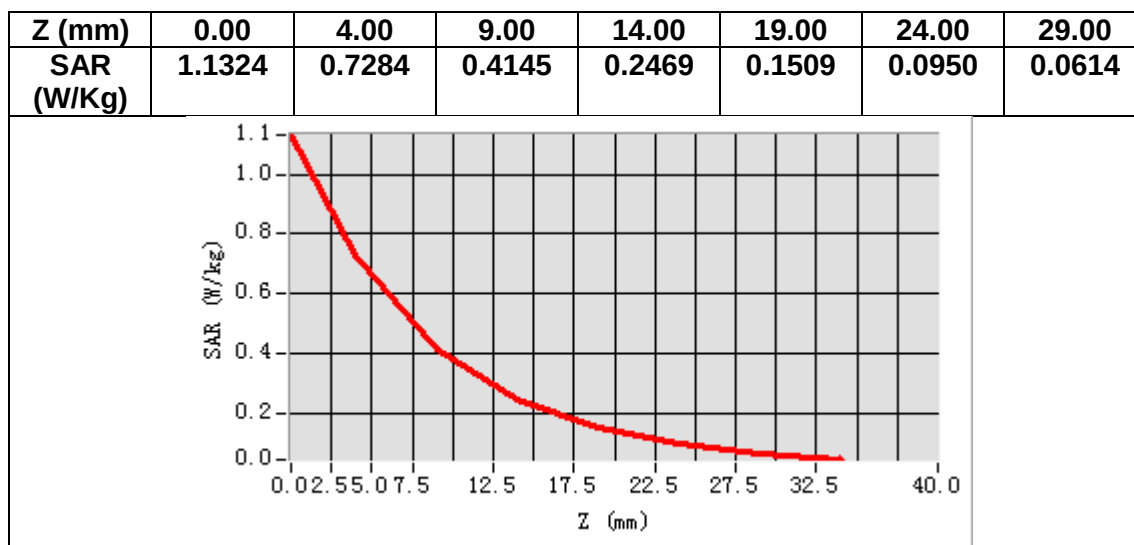
VOLUME SAR



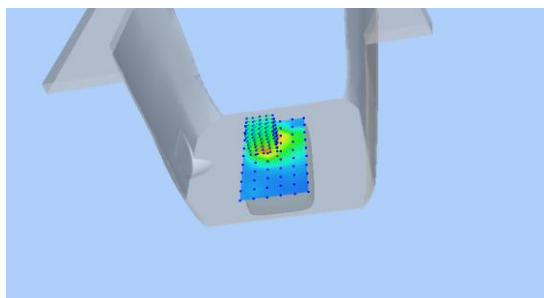
Maximum location: X=-15.00, Y=20.00

SAR Peak: 1.17 W/kg

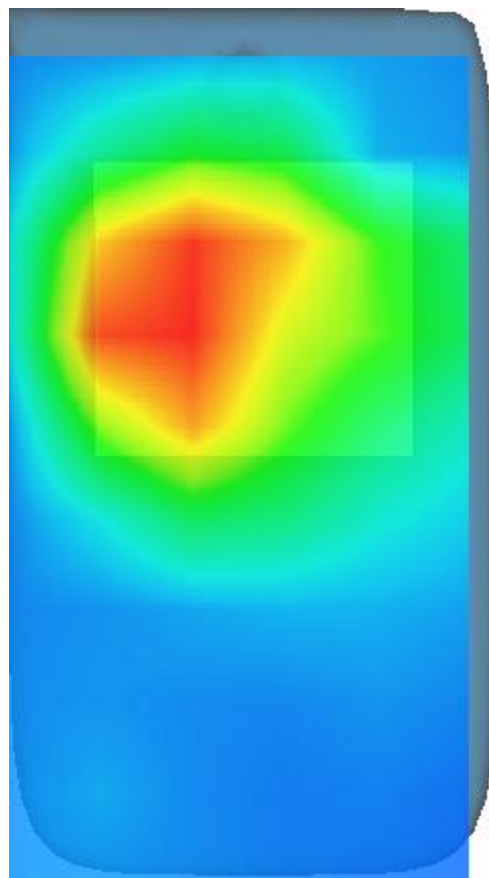
SAR 10g (W/Kg)	0.352506
SAR 1g (W/Kg)	0.691711



3D screen shot



Hot spot position



MEASUREMENT 5

Date of measurement: 21/6/2024

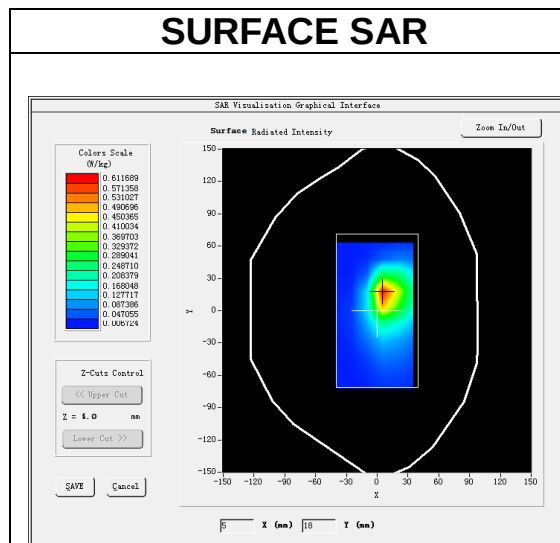
A. Experimental conditions.

<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>2.32</u>

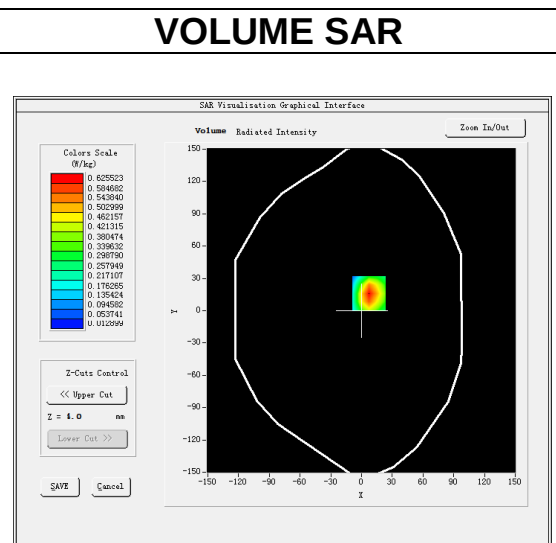
B. SAR Measurement Results

Frequency (MHz)	836.400000
Relative permittivity (real part)	41.669735
Relative permittivity (imaginary part)	19.674603
Conductivity (S/m)	0.914213
Variation (%)	0.810000

SURFACE SAR



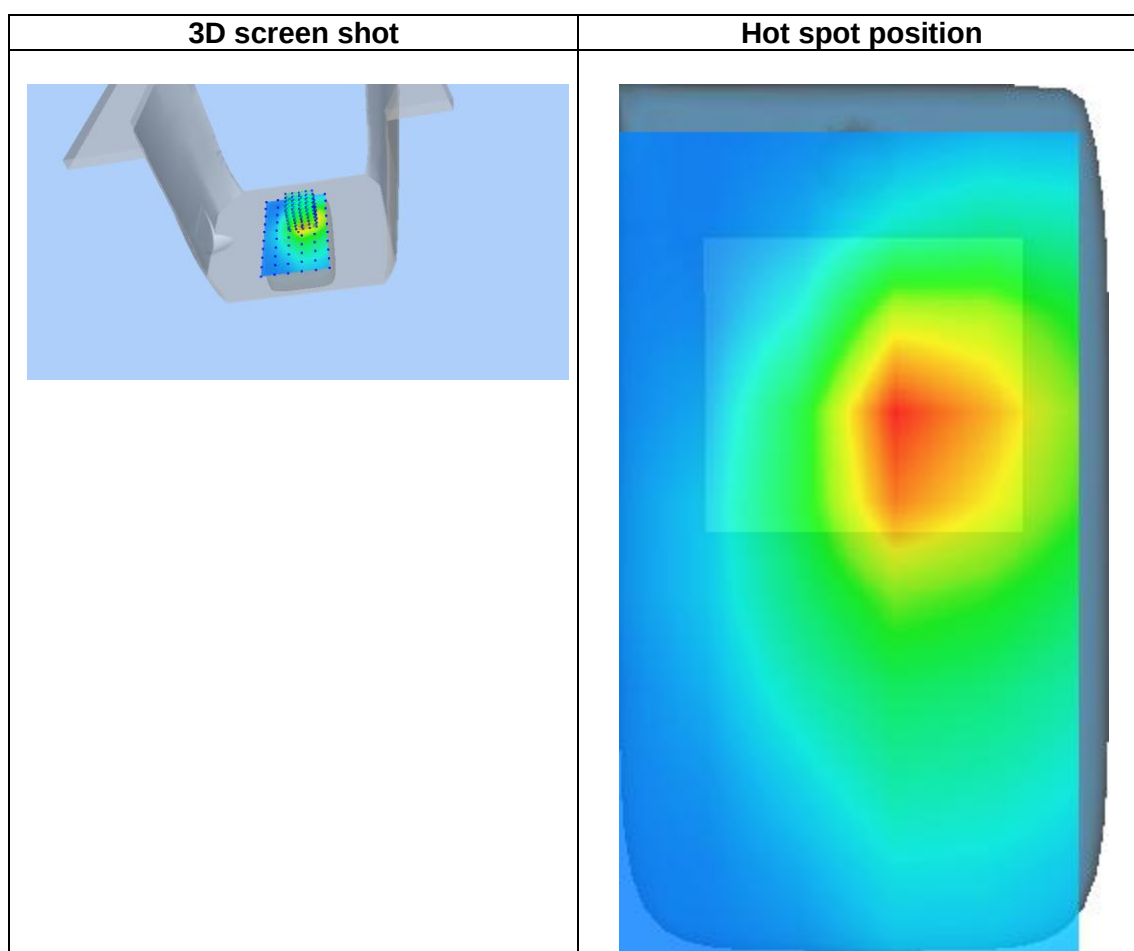
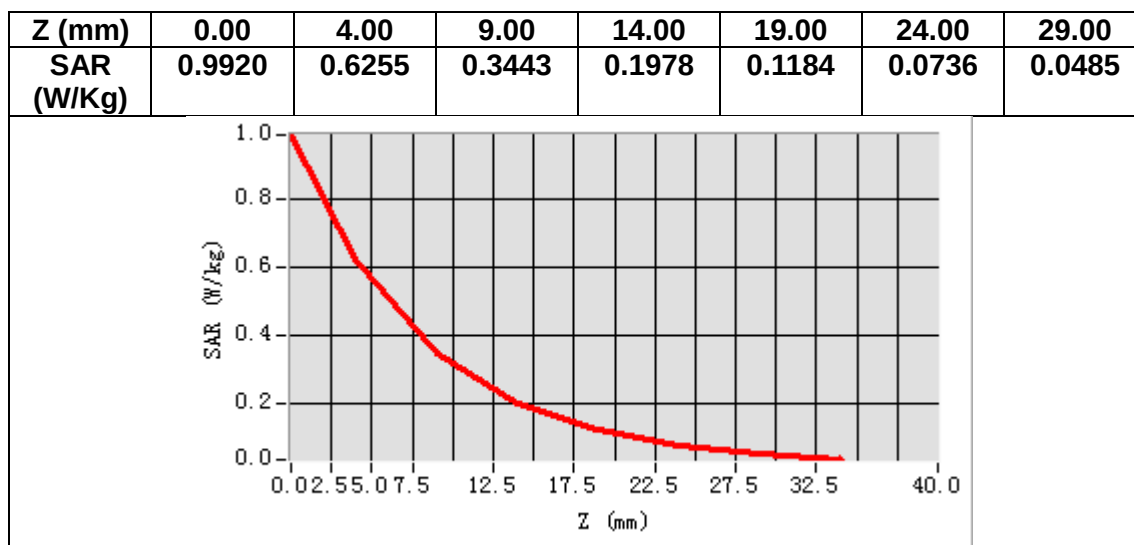
VOLUME SAR



Maximum location: X=7.00, Y=16.00

SAR Peak: 0.99 W/kg

SAR 10g (W/Kg)	0.320343
SAR 1g (W/Kg)	0.594099



MEASUREMENT 6

Date of measurement: 7/6/2024

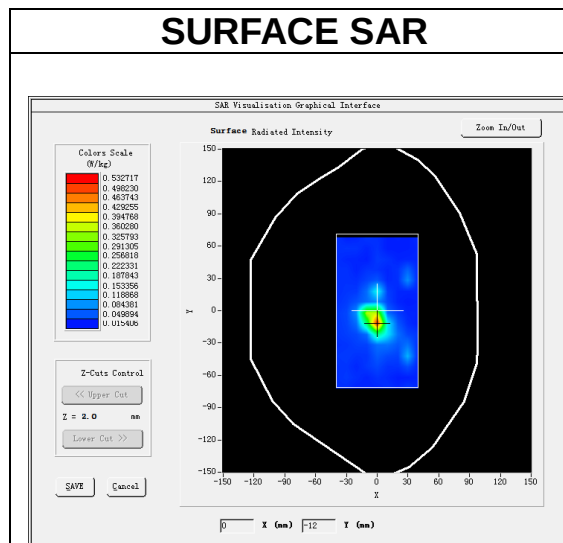
A. Experimental conditions.

<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 802.11a U-NII</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>IEEE802.11a (Crest factor: 1.0)</u>
<u>ConvF</u>	<u>2.07</u>

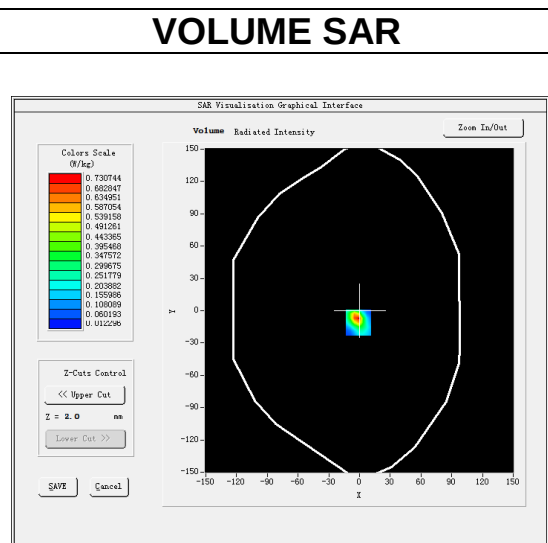
B. SAR Measurement Results

Frequency (MHz)	5200.000000
Relative permittivity (real part)	34.873428
Relative permittivity (imaginary part)	15.913428
Conductivity (S/m)	4.597213
Variation (%)	-1.180000

SURFACE SAR



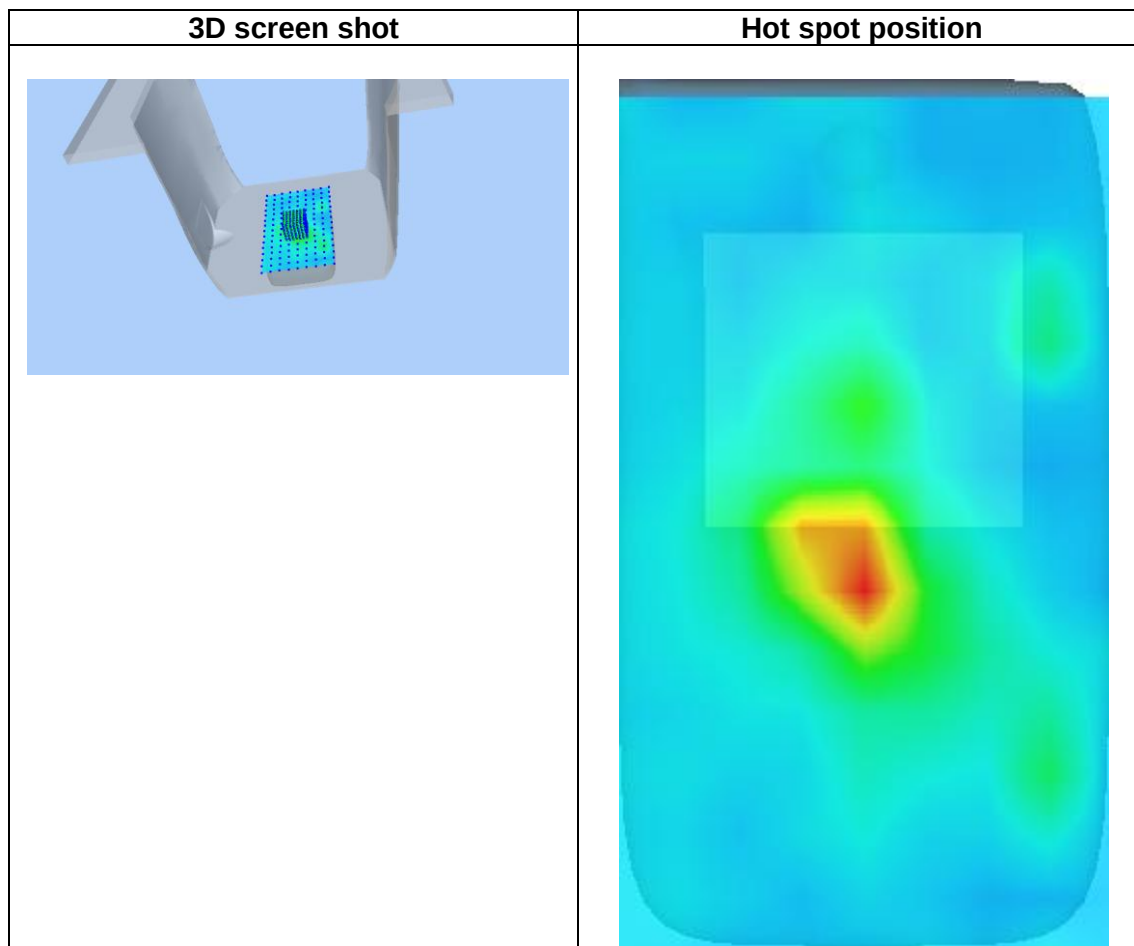
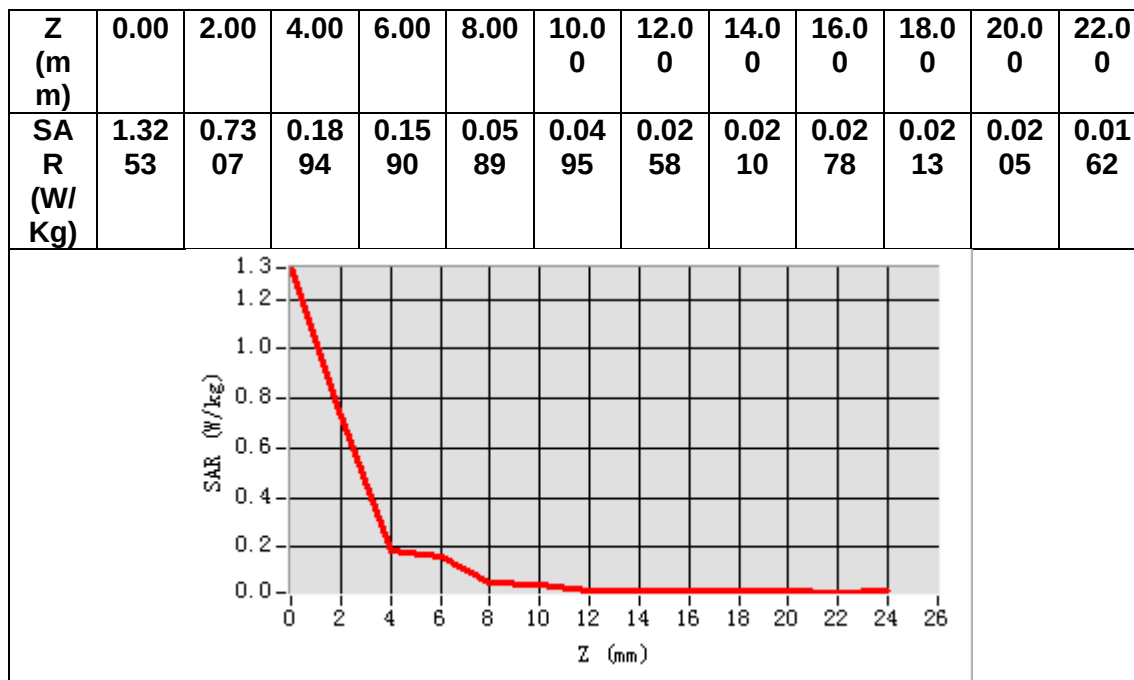
VOLUME SAR



Maximum location: X=-1.00, Y=-11.00

SAR Peak: 1.38 W/kg

SAR 10g (W/Kg)	0.111258
SAR 1g (W/Kg)	0.360420



MEASUREMENT 7

Date of measurement: 6/6/2024

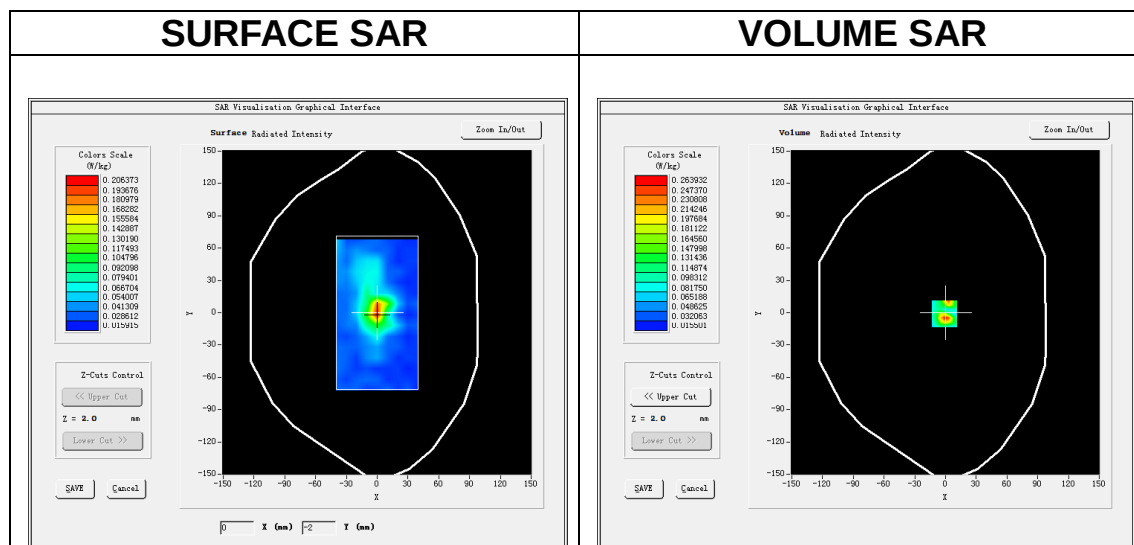
A. Experimental conditions.

<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 802.11ac U-NII</u>
<u>Channels</u>	<u>High</u>
<u>Signal</u>	<u>IEEE802.11ac (Crest factor: 1.0)</u>
<u>ConvF</u>	<u>2.04</u>

B. SAR Measurement Results

Frequency (MHz)	5825.000000
Relative permittivity (real part)	34.238488
Relative permittivity (imaginary part)	16.281130
Conductivity (S/m)	5.268754
Variation (%)	-0.400000

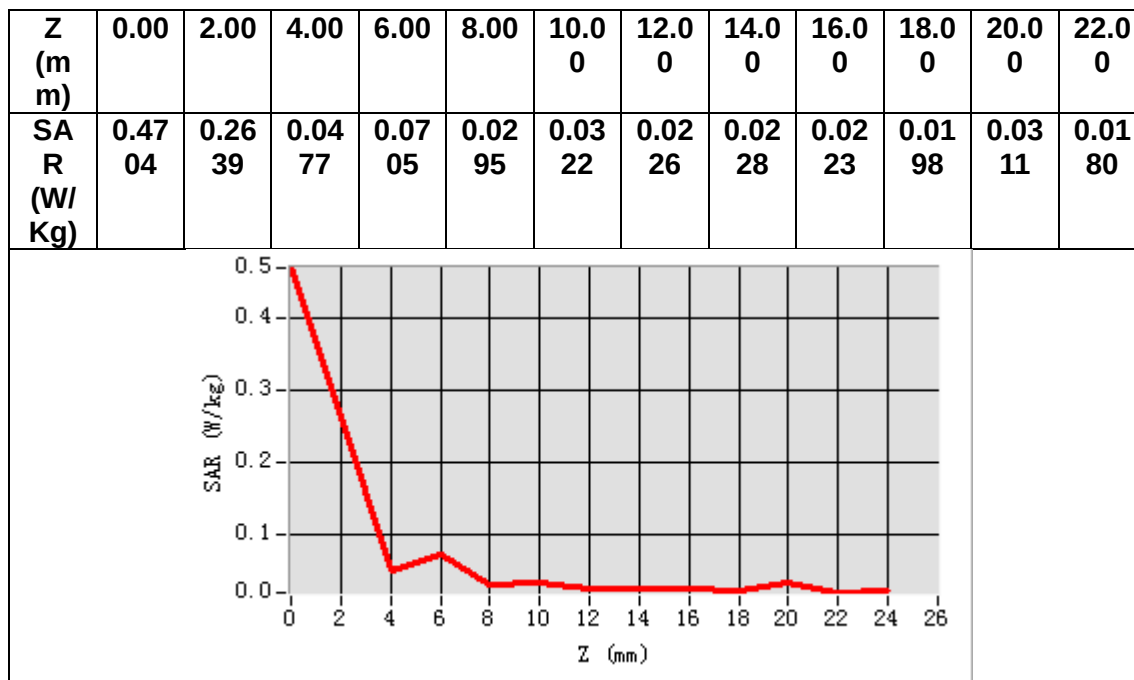
SURFACE SAR



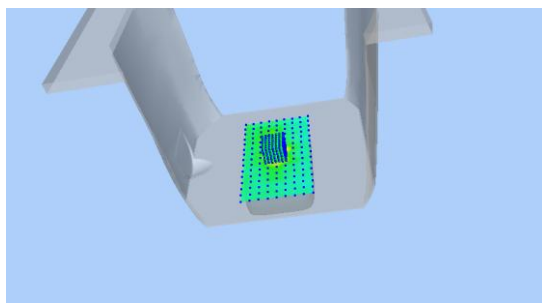
Maximum location: X=-1.00, Y=-1.00

SAR Peak: 0.49 W/kg

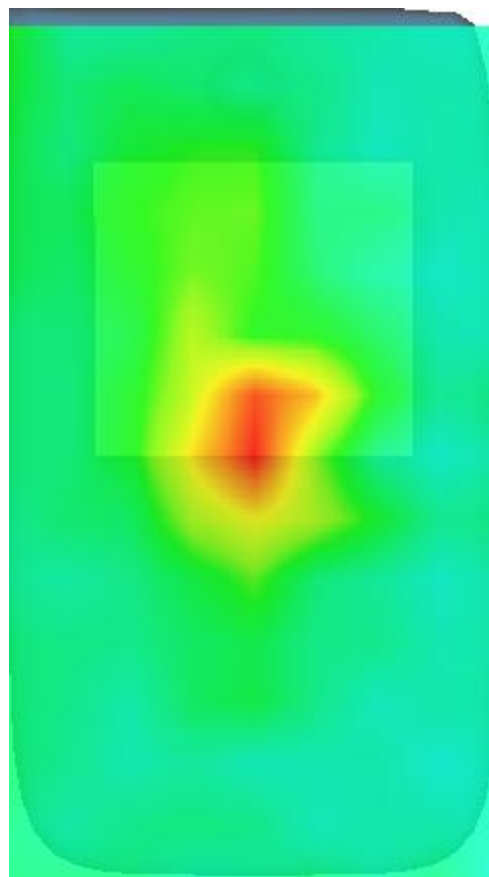
SAR 10g (W/Kg)	0.055515
SAR 1g (W/Kg)	0.134680



3D screen shot



Hot spot position



MEASUREMENT 8

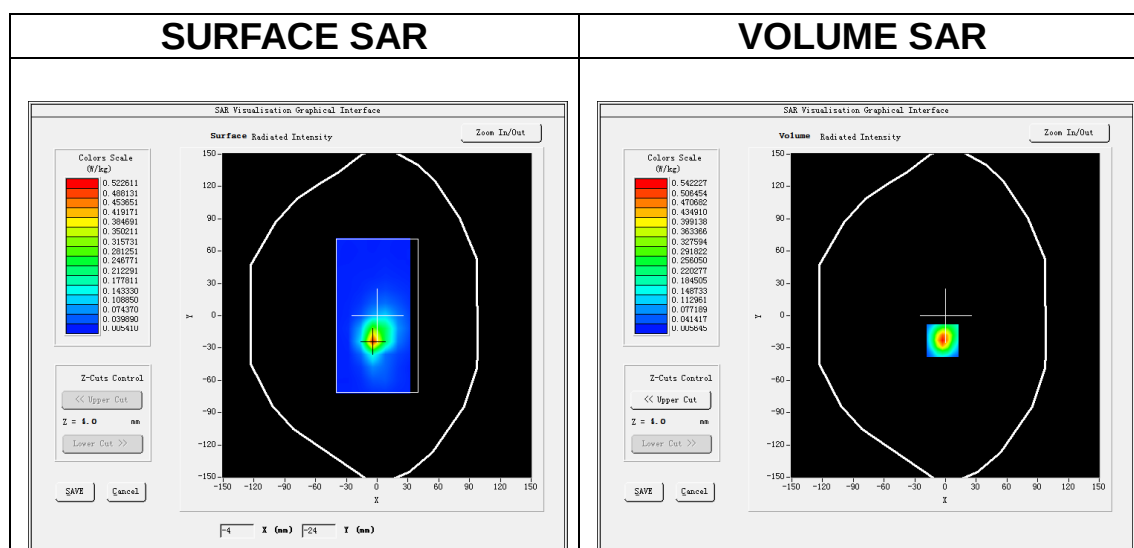
Date of measurement: 5/6/2024

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>Middle</u>
<u>Signal</u>	<u>IEEE802.11b (Crest factor: 1.0)</u>
<u>ConvF</u>	<u>2.85</u>

B. SAR Measurement Results

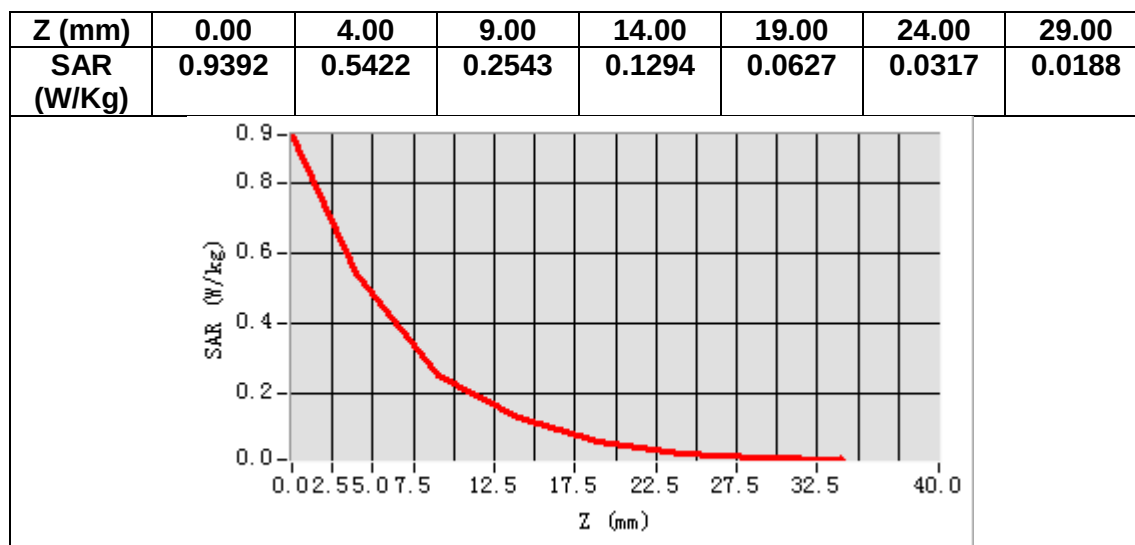
Frequency (MHz)	2437.000000
Relative permittivity (real part)	37.769733
Relative permittivity (imaginary part)	12.850278
Conductivity (S/m)	1.739785
Variation (%)	1.030000



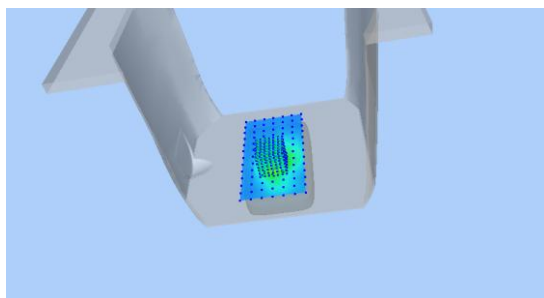
Maximum location: X=-3.00, Y=-23.00

SAR Peak: 0.93 W/kg

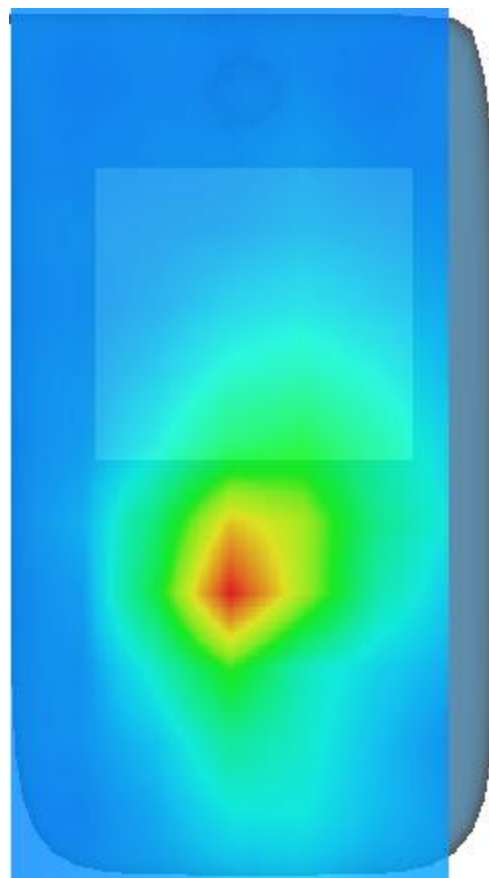
SAR 10g (W/Kg)	0.195996
SAR 1g (W/Kg)	0.472836



3D screen shot



Hot spot position



MEASUREMENT 9

Date of measurement: 3/6/2024

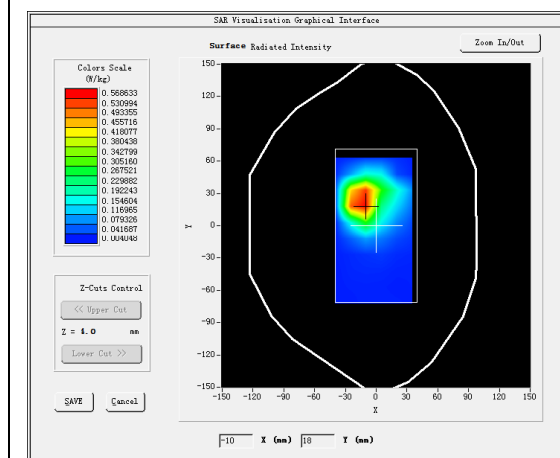
A. Experimental conditions.

<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>2.63</u>

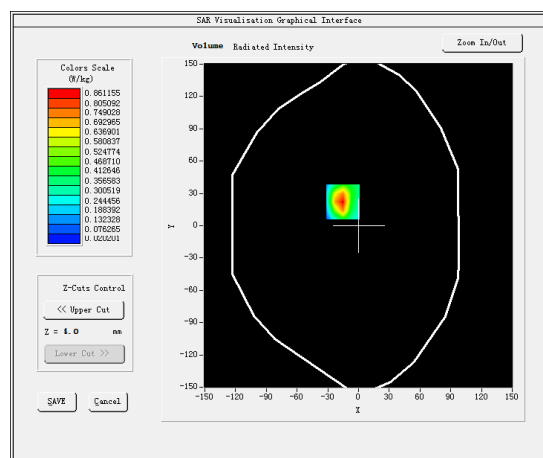
B. SAR Measurement Results

Frequency (MHz)	1880.000000
Relative permittivity (real part)	38.857780
Relative permittivity (imaginary part)	13.673918
Conductivity (S/m)	1.428165
Variation (%)	-0.090000

SURFACE SAR



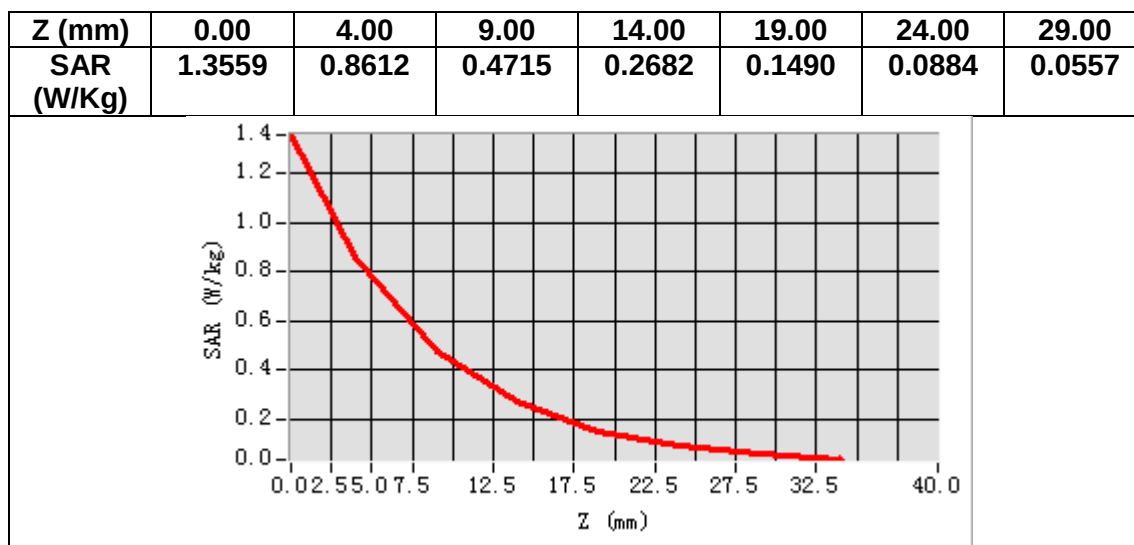
VOLUME SAR



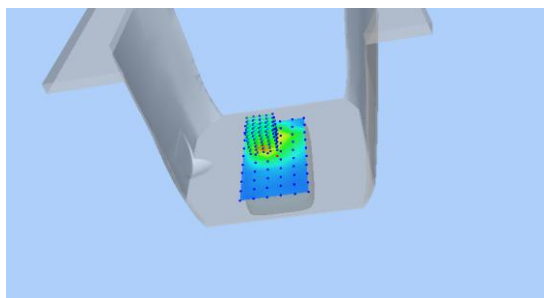
Maximum location: X=-15.00, Y=22.00

SAR Peak: 1.41 W/kg

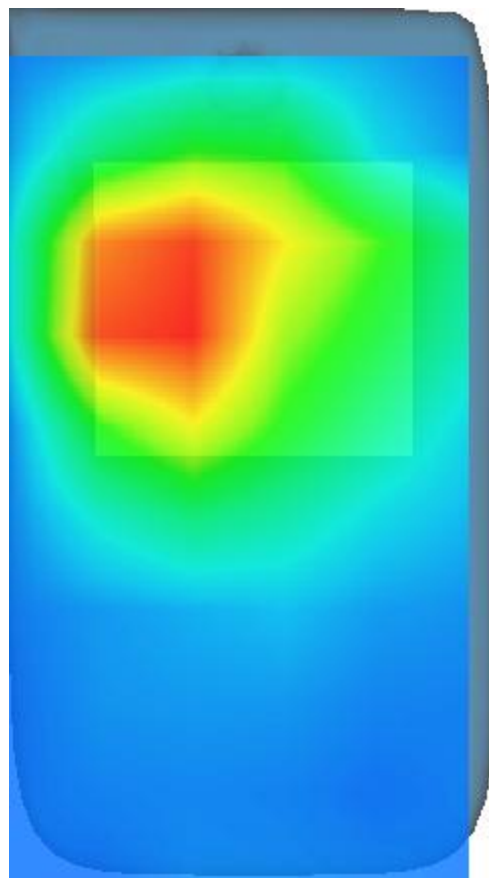
SAR 10g (W/Kg)	0.393810
SAR 1g (W/Kg)	0.826096



3D screen shot



Hot spot position



MEASUREMENT 10

Date of measurement: 14/6/2024

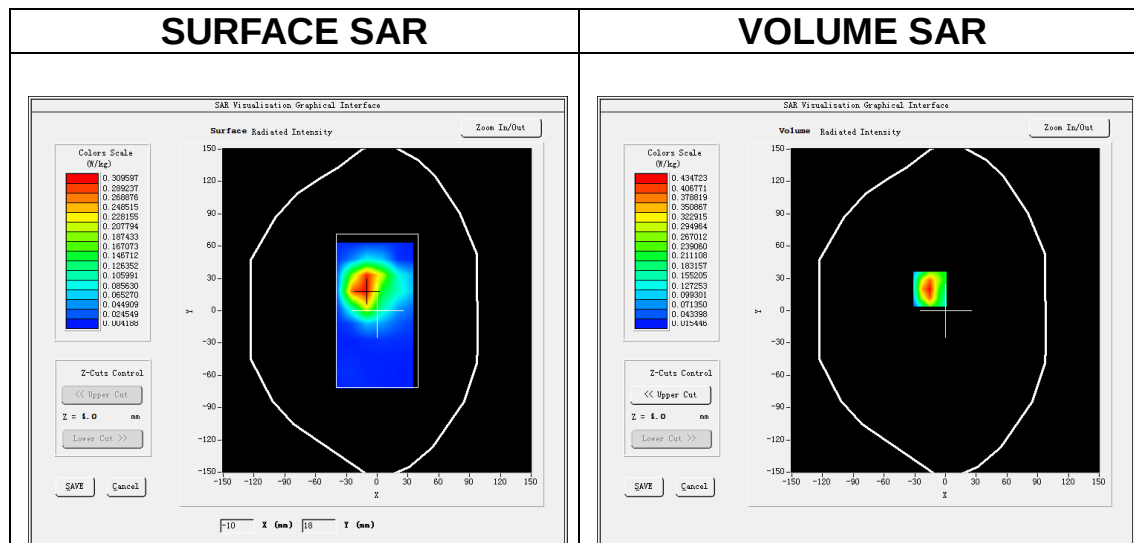
A. Experimental conditions.

<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>2.45</u>

B. SAR Measurement Results

Frequency (MHz)	1732.500000
Relative permittivity (real part)	39.692825
Relative permittivity (imaginary part)	13.919613
Conductivity (S/m)	1.339763
Variation (%)	-0.090000

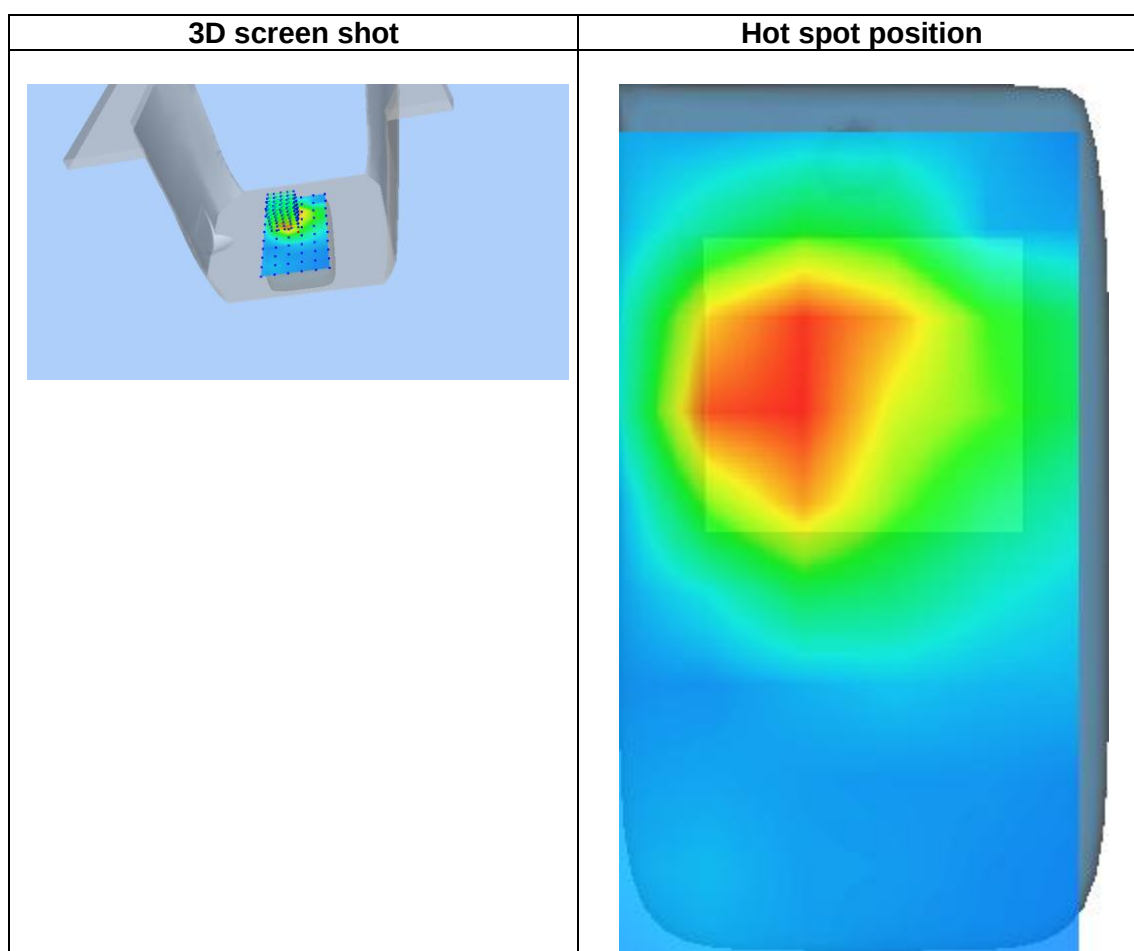
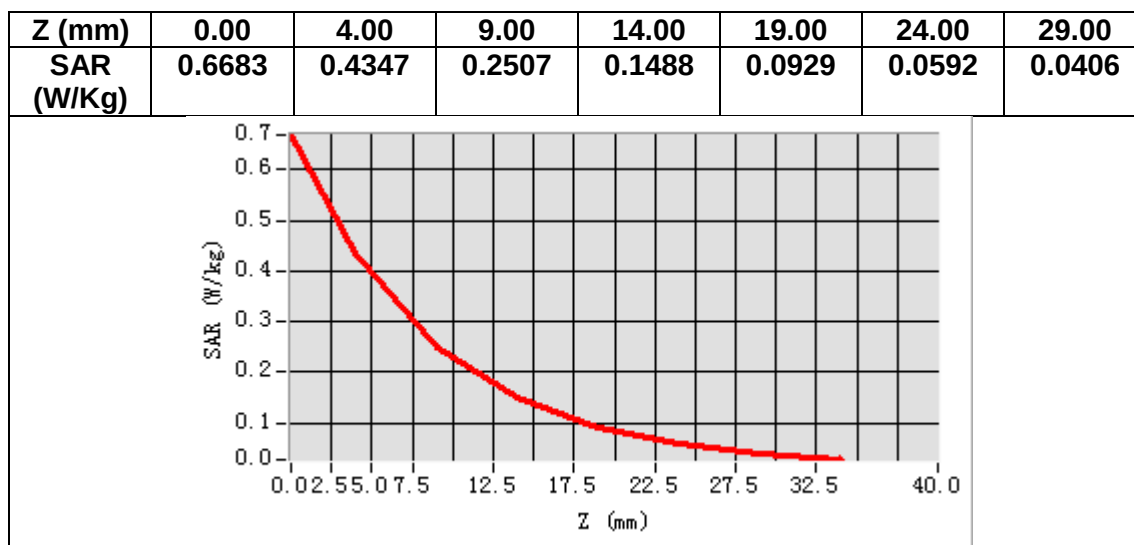
SURFACE SAR



Maximum location: X=-15.00, Y=20.00

SAR Peak: 0.69 W/kg

SAR 10g (W/Kg)	0.211919
SAR 1g (W/Kg)	0.411647



MEASUREMENT 11

Date of measurement: 21/6/2024

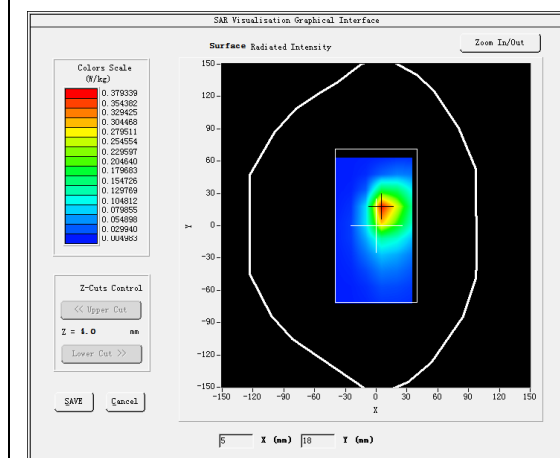
A. Experimental conditions.

<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>Middle</u>
<u>Signal</u>	<u>LTE (Crest factor: 1.0)</u>
<u>ConvF</u>	<u>2.32</u>

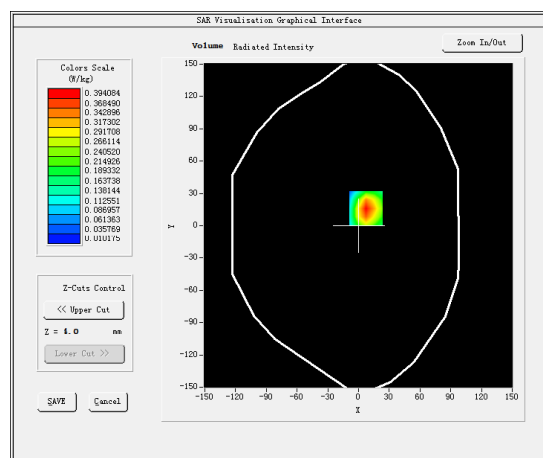
B. SAR Measurement Results

Frequency (MHz)	836.500000
Relative permittivity (real part)	41.672005
Relative permittivity (imaginary part)	19.676403
Conductivity (S/m)	0.914406
Variation (%)	0.920000

SURFACE SAR



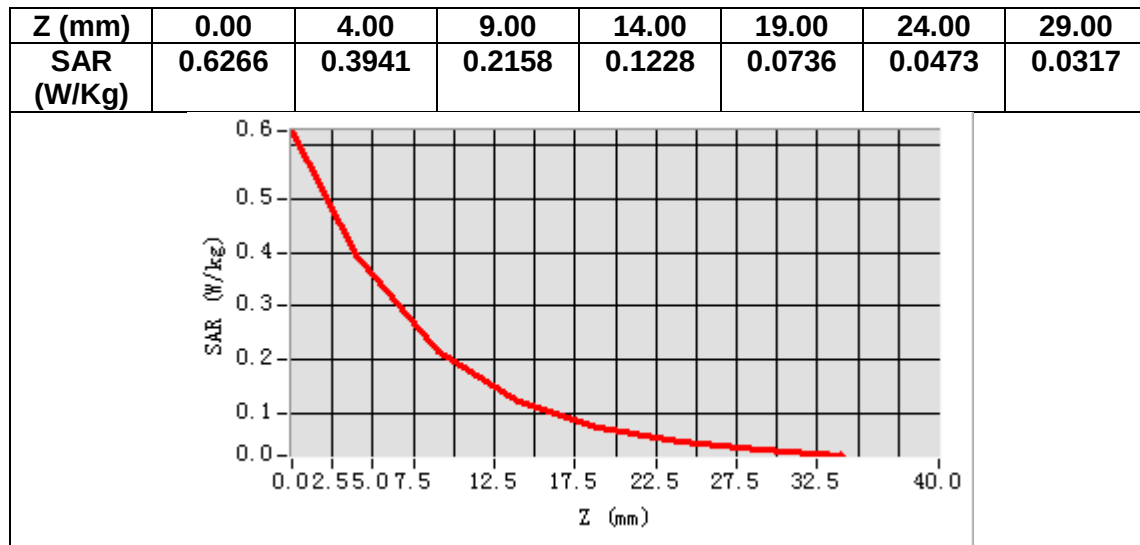
VOLUME SAR



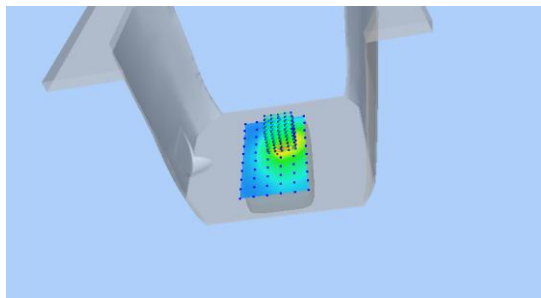
Maximum location: X=7.00, Y=16.00

SAR Peak: 0.62 W/kg

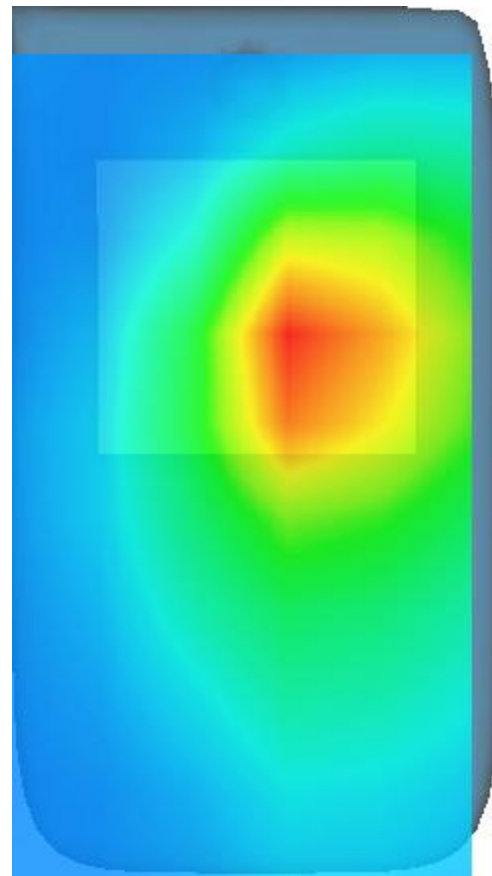
SAR 10g (W/Kg)	0.201785
SAR 1g (W/Kg)	0.374427



3D screen shot



Hot spot position



MEASUREMENT 12

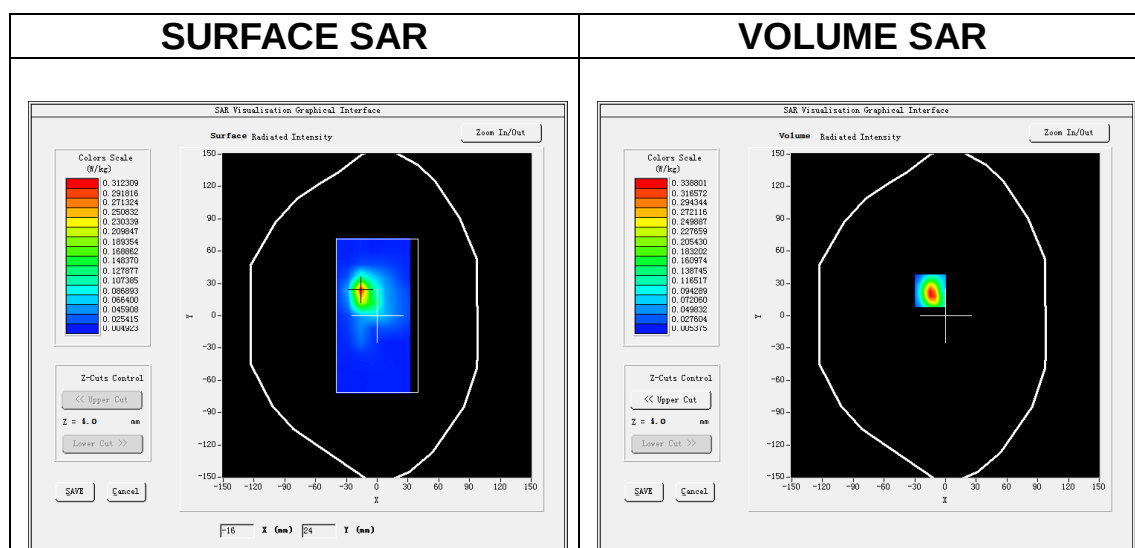
Date of measurement: 18/6/2024

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>LTE band 7</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>LTE (Crest factor: 1.0)</u>
<u>ConvF</u>	<u>2.65</u>

B. SAR Measurement Results

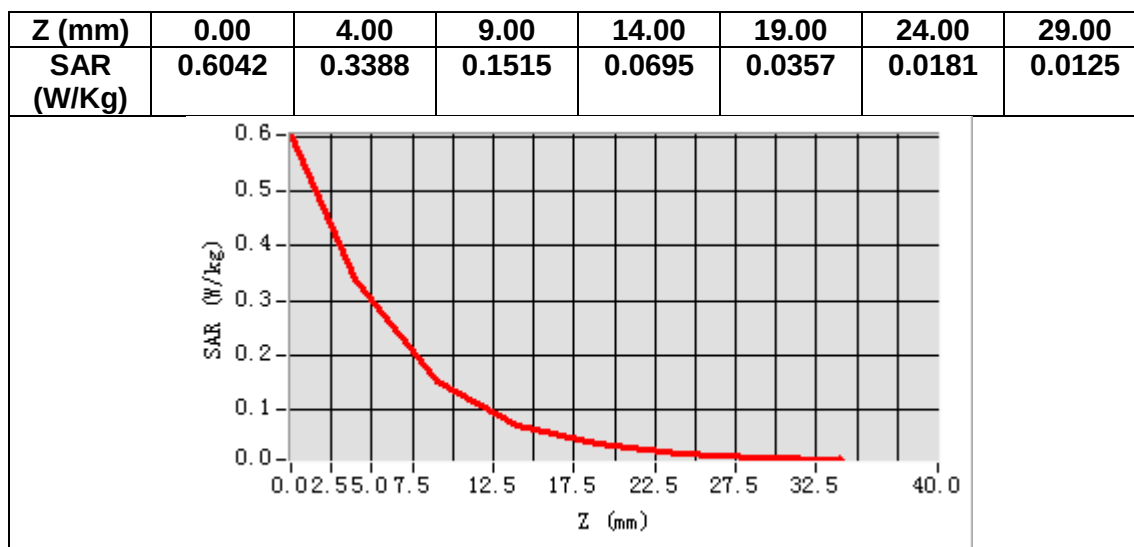
Frequency (MHz)	2535.000000
Relative permittivity (real part)	39.361263
Relative permittivity (imaginary part)	13.716830
Conductivity (S/m)	1.931787
Variation (%)	1.830000



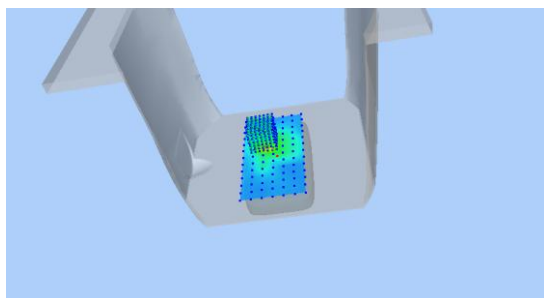
Maximum location: X=-15.00, Y=23.00

SAR Peak: 0.63 W/kg

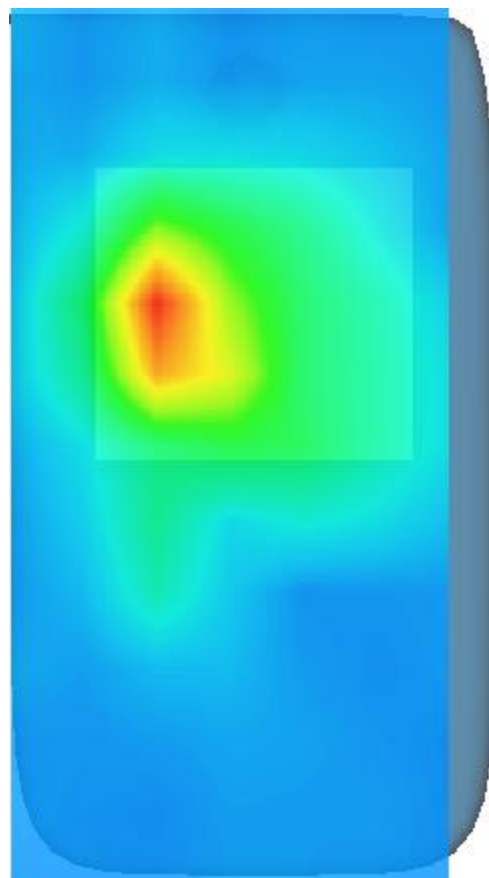
SAR 10g (W/Kg)	0.121734
SAR 1g (W/Kg)	0.311753



3D screen shot



Hot spot position



MEASUREMENT 13

Date of measurement: 4/6/2024

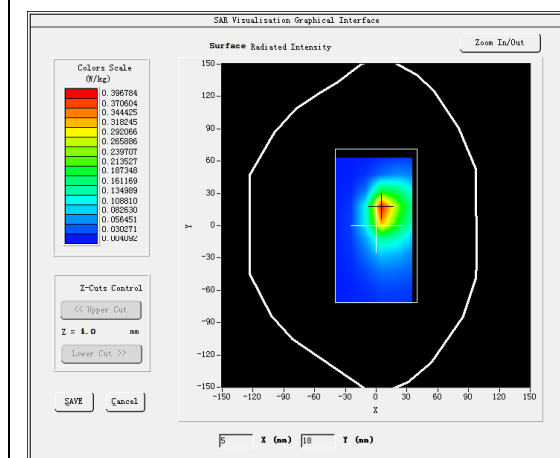
A. Experimental conditions.

<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 12</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>LTE (Crest factor: 1.0)</u>
<u>ConvF</u>	<u>2.37</u>

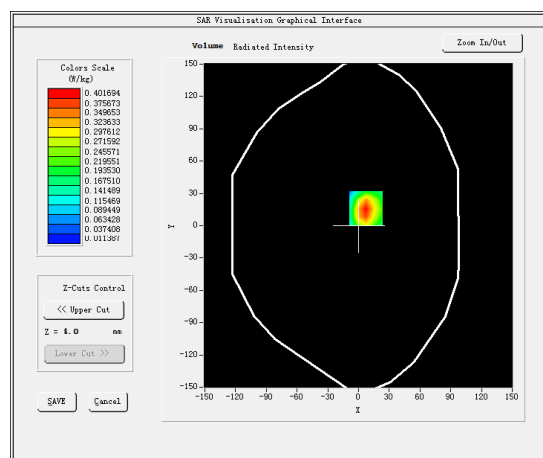
B. SAR Measurement Results

Frequency (MHz)	707.500000
Relative permittivity (real part)	41.559696
Relative permittivity (imaginary part)	21.927753
Conductivity (S/m)	0.861883
Variation (%)	0.850000

SURFACE SAR



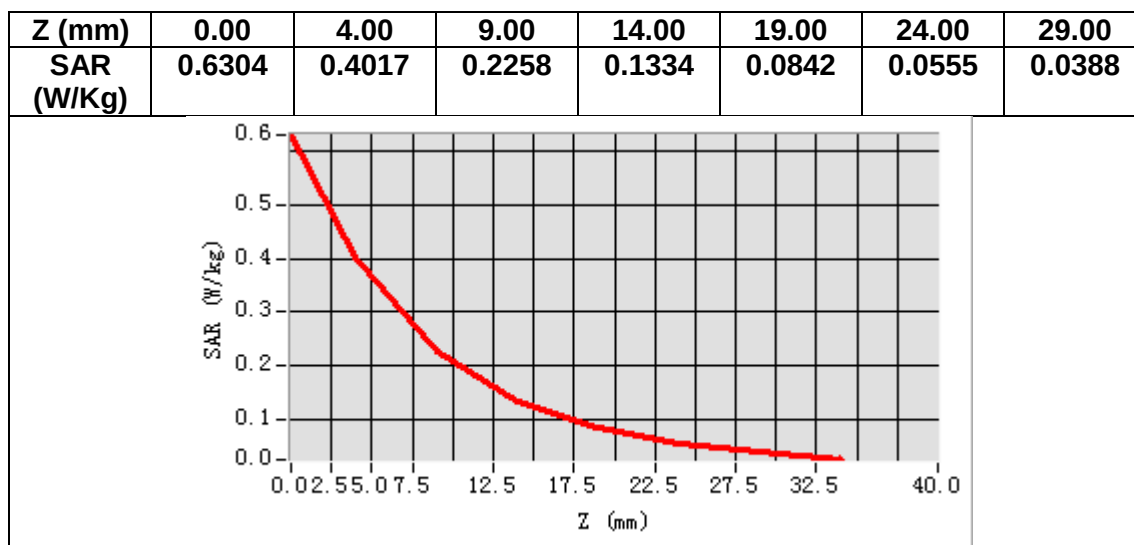
VOLUME SAR



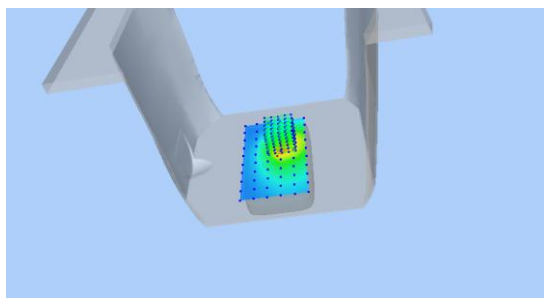
Maximum location: X=7.00, Y=16.00

SAR Peak: 0.65 W/kg

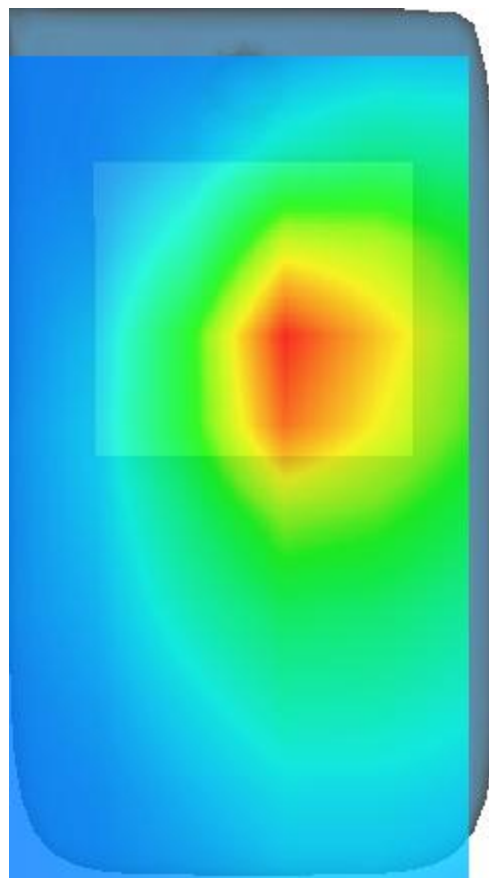
SAR 10g (W/Kg)	0.207342
SAR 1g (W/Kg)	0.383248



3D screen shot



Hot spot position



MEASUREMENT 14

Date of measurement: 4/6/2024

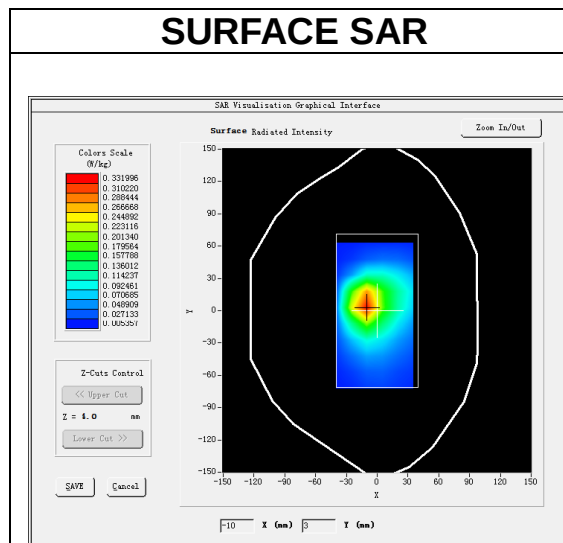
A. Experimental conditions.

<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 17</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>LTE (Crest factor: 1.0)</u>
<u>ConvF</u>	<u>2.37</u>

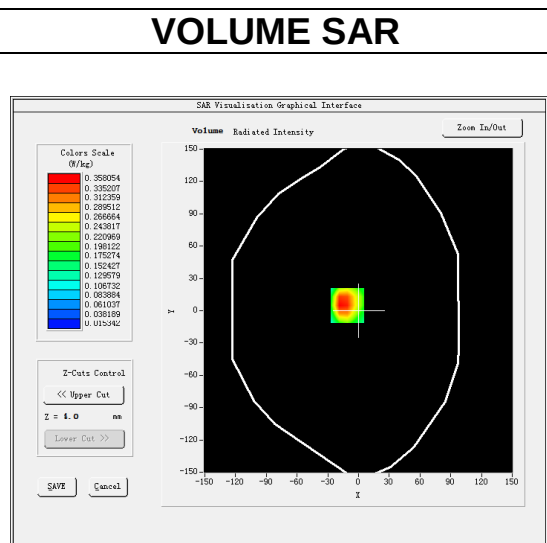
B. SAR Measurement Results

Frequency (MHz)	710.000000
Relative permittivity (real part)	41.412189
Relative permittivity (imaginary part)	21.742662
Conductivity (S/m)	0.857627
Variation (%)	0.680000

SURFACE SAR



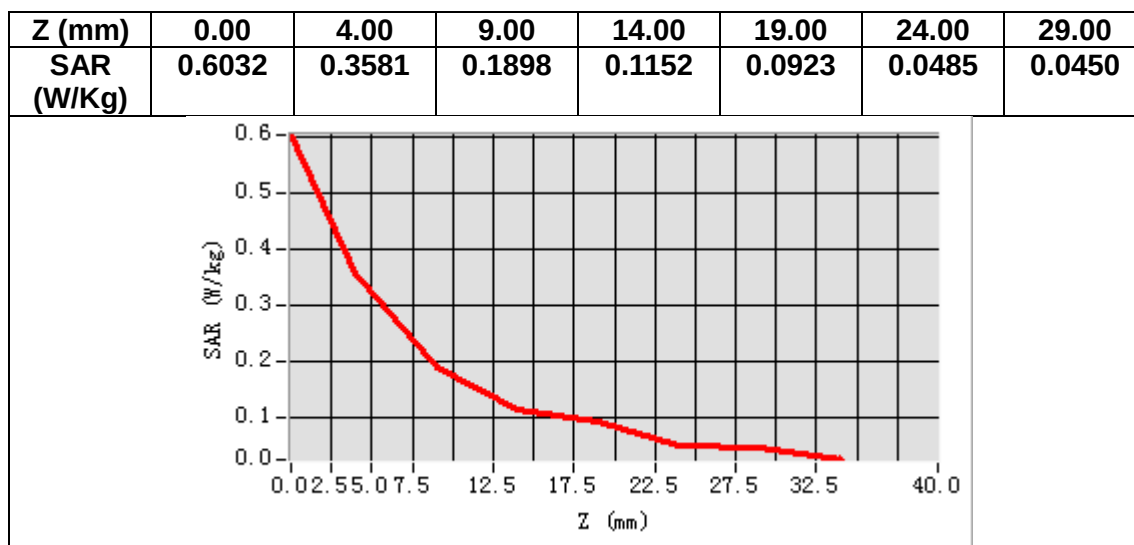
VOLUME SAR



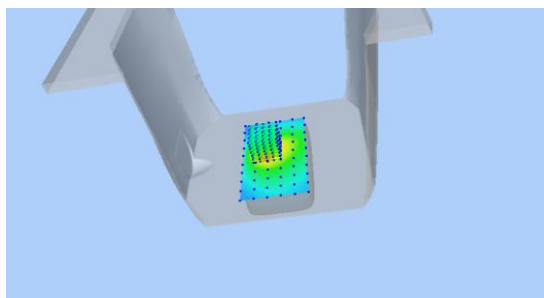
Maximum location: X=-11.00, Y=5.00

SAR Peak: 0.62 W/kg

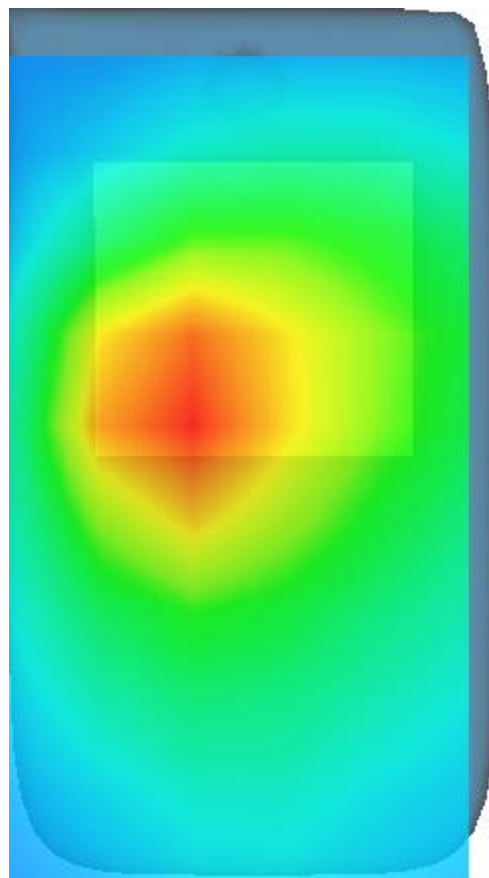
SAR 10g (W/Kg)	0.196760
SAR 1g (W/Kg)	0.358529



3D screen shot



Hot spot position



MEASUREMENT 15

Date of measurement: 18/6/2024

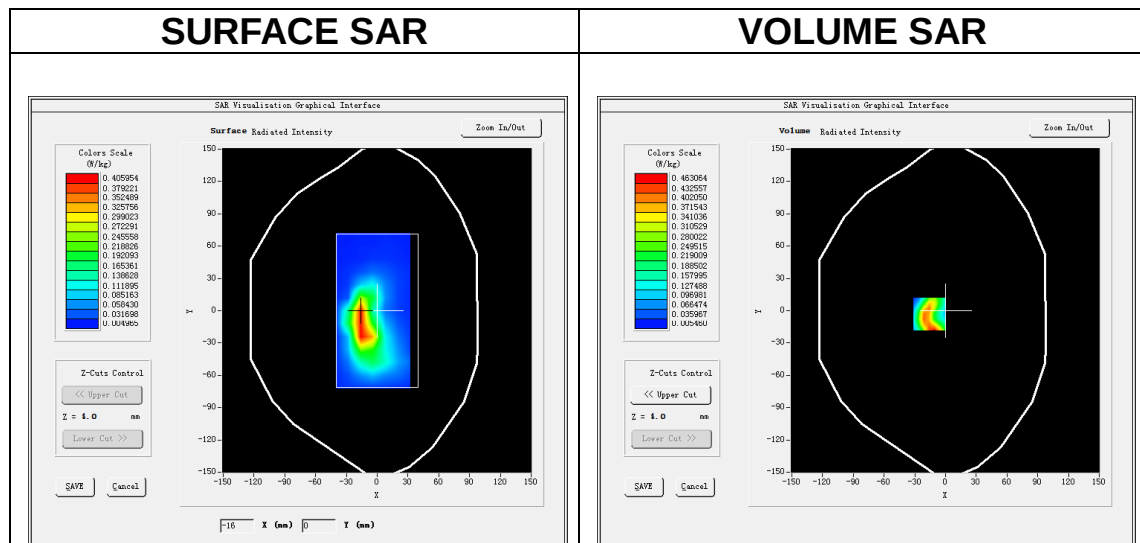
A. Experimental conditions.

<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>LTE band 41</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>LTE (Crest factor: 1.6)</u>
<u>ConvF</u>	<u>2.65</u>

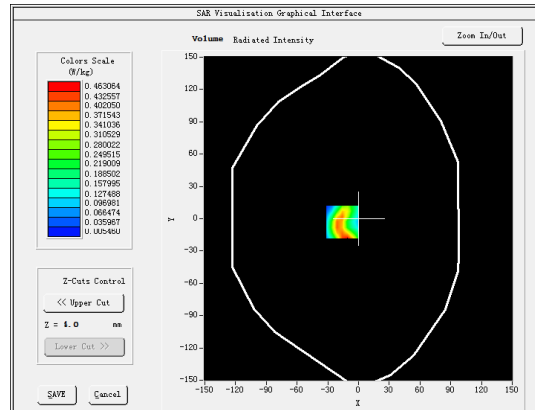
B. SAR Measurement Results

Frequency (MHz)	2593.000000
Relative permittivity (real part)	39.079762
Relative permittivity (imaginary part)	13.880430
Conductivity (S/m)	1.999553
Variation (%)	0.570000

SURFACE SAR



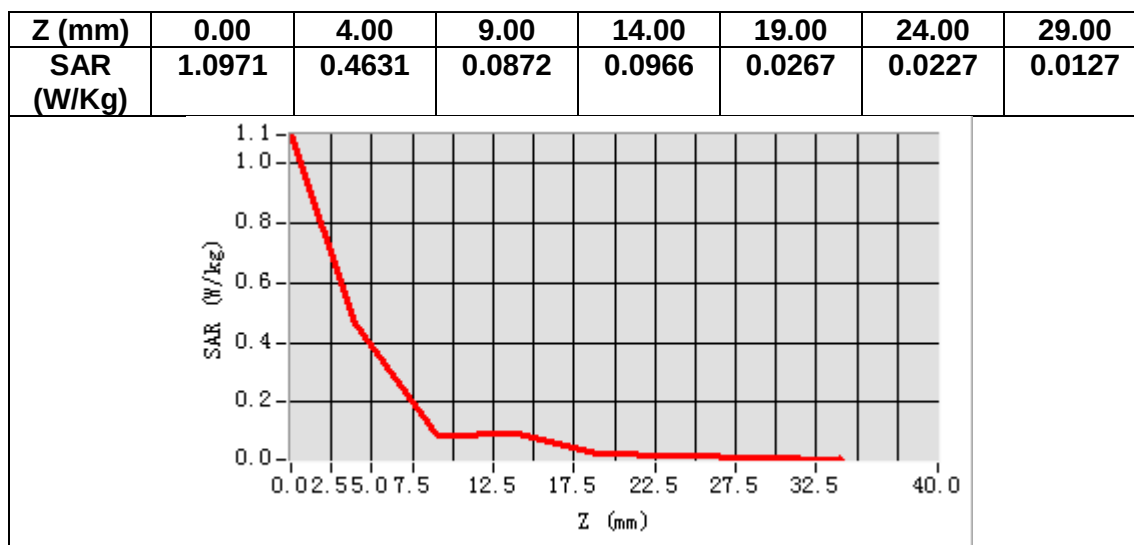
VOLUME SAR



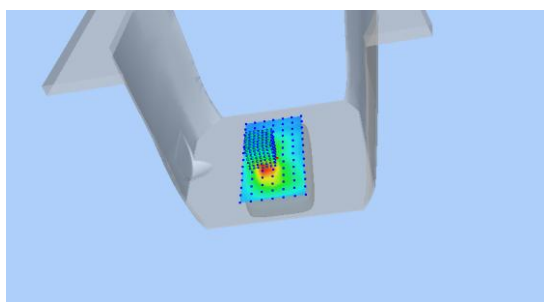
Maximum location: X=-16.00, Y=-3.00

SAR Peak: 0.82 W/kg

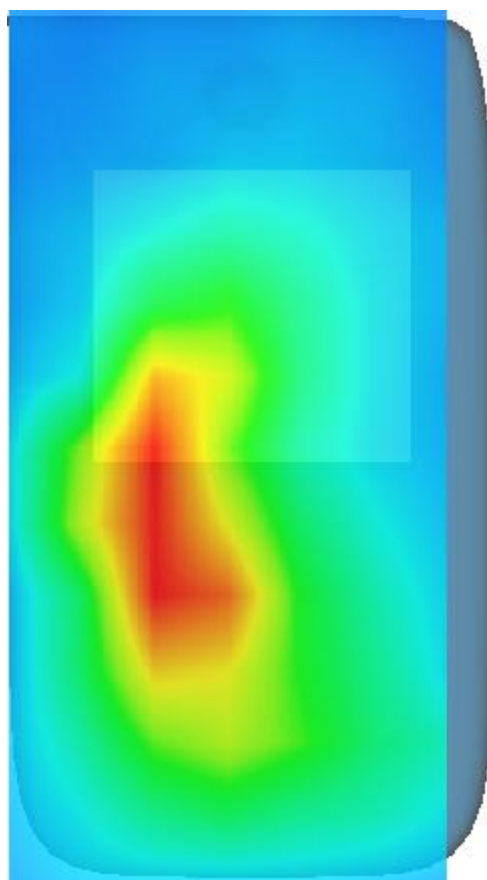
SAR 10g (W/Kg)	0.165855
SAR 1g (W/Kg)	0.354196



3D screen shot



Hot spot position



MEASUREMENT 16

Date of measurement: 24/3/2024

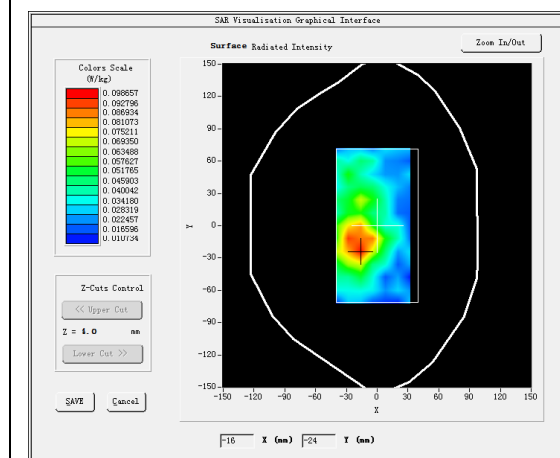
A. Experimental conditions.

<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>Bluetooth</u>
<u>Channels</u>	<u>High</u>
<u>Signal</u>	<u>Bluetooth (Crest factor: 1.0)</u>
<u>ConvF</u>	<u>2.85</u>

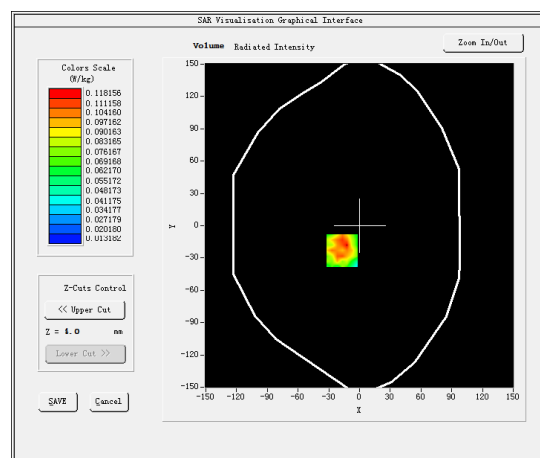
B. SAR Measurement Results

Frequency (MHz)	2480.000000
Relative permittivity (real part)	37.618235
Relative permittivity (imaginary part)	13.076978
Conductivity (S/m)	1.801718
Variation (%)	-1.050000

SURFACE SAR



VOLUME SAR

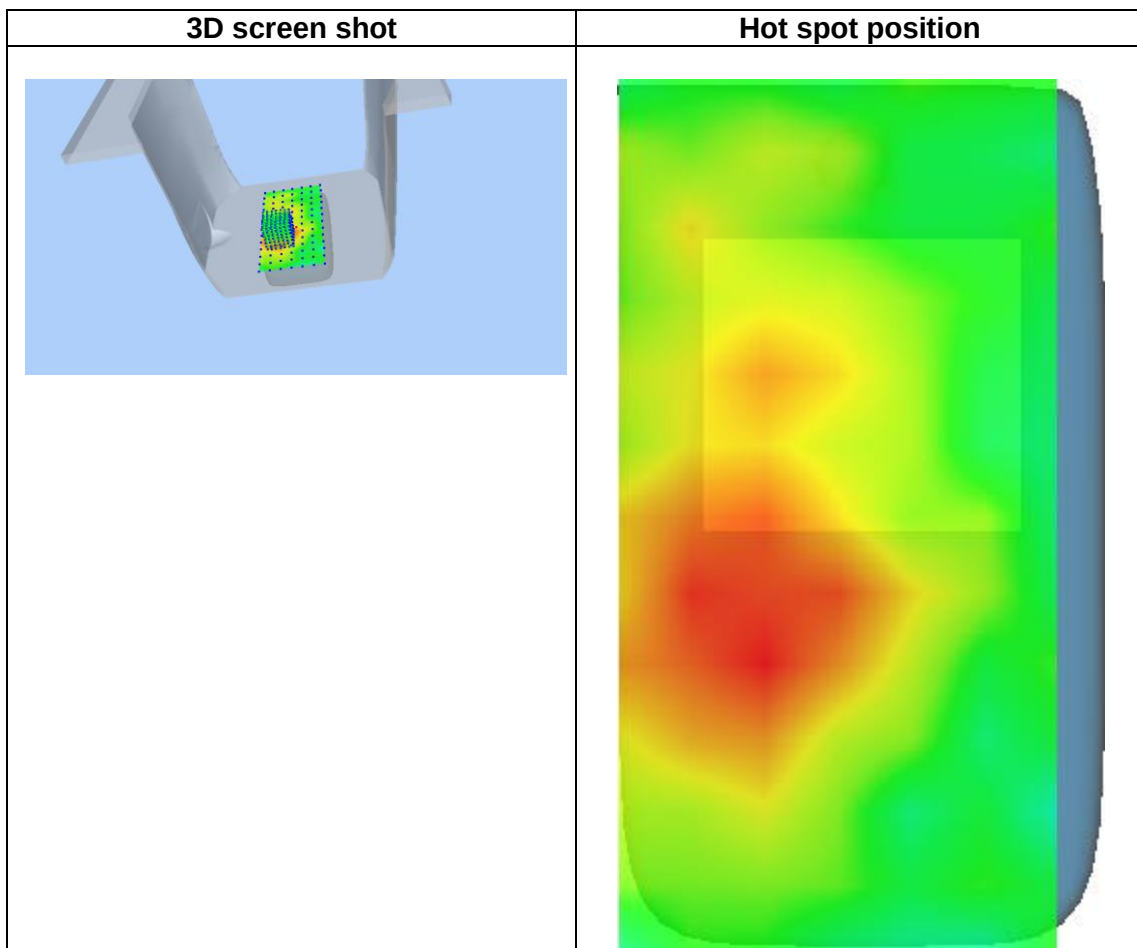
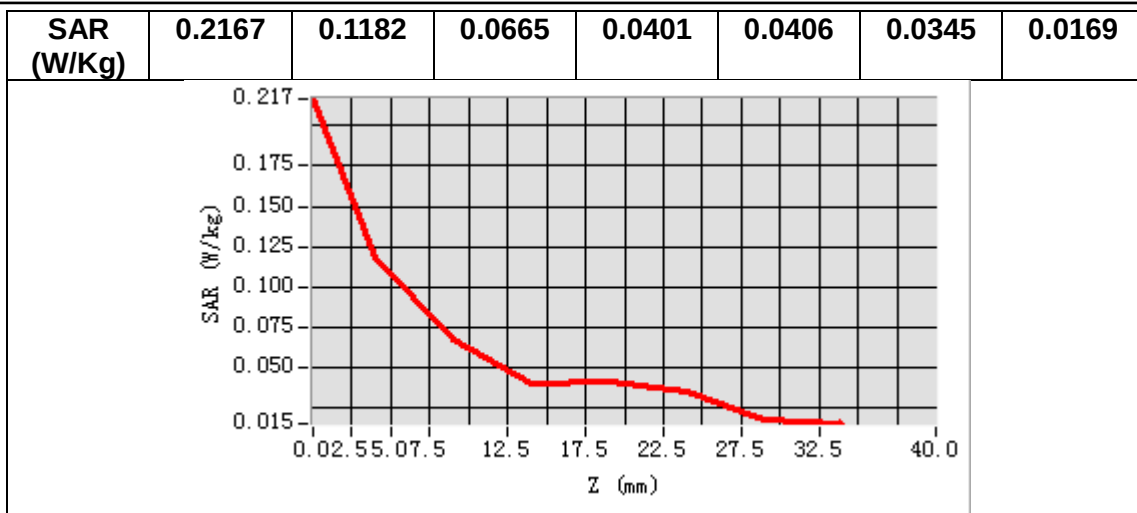


Maximum location: X=-17.00, Y=-23.00

SAR Peak: 0.21 W/kg

SAR 10g (W/Kg)	0.061597
SAR 1g (W/Kg)	0.102601

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
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14. Appendix D. Calibration Certificate

Table of contents
E Field Probe - 3423-EPGO-426
750 MHz Dipole - SN 03/15 DIP 0G750-355
835 MHz Dipole - SN 03/15 DIP 0G835-347
1800 MHz Dipole - SN 03/15 DIP 1G800-349
1900 MHz Dipole - SN 03/15 DIP 1G900-350
2450 MHz Dipole - SN 03/15 DIP 2G450-352
2600 MHz Dipole - SN 03/15 DIP 2G600-356
5000-6000 MHz Dipole - SN 13/14WGA 33



COMOSAR E-Field Probe Calibration Report

Ref : ACR.261.11.23.BES.A

SHENZHEN NTEK TESTING TECHNOLOGY CO., LTD.

BUILDING E, FENDA SCIENCE PARK, SANWEI
COMMUNITY, XIXIANG STREET,
BAO'AN DISTRICT, SHENZHEN GUANGDONG, CHINA
MVG COMOSAR DOSIMETRIC E-FIELD PROBE
SERIAL NO.: 3423-EPGO-426

Calibrated at MVG

Z.I. de la pointe du diable

Technopôle Brest Iroise – 295 avenue Alexis de Rochon
29280 PLOUZANE - FRANCE

Calibration date: 09/18/2023



Accreditations #2-6789
Scope available on www.cofrac.fr

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Summary:

This document presents the method and results from an accredited COMOSAR Dosimetric E-Field Probe calibration performed at MVG, using the CALIPROBE test bench, for use with a MVG COMOSAR system only. The test results covered by accreditation are traceable to the International System of Units (SI).



COMOSAR E-FIELD PROBE CALIBRATION REPORT

Ref: ACR.261.11.23.BES.A

	Name	Function	Date	Signature
Prepared by :	Cyrille ONNEE	Measurement Responsible	9/18/2023	
Checked & approved by:	Jérôme Luc	Technical Manager	9/18/2023	
Authorized by:	Yann Toutain	Laboratory Director	9/19/2023	

Yann
Toutain ID

Signature
numérique de
Yann Toutain ID
Date: 2023.09.19
09:08:14 +02'00'

	Customer Name
Distribution :	SHENZHEN NTEK TESTING TECHNOLOGY CO., LTD.

Issue	Name	Date	Modifications
A	Cyrille ONNEE	9/18/2023	Initial release



COMOSAR E-FIELD PROBE CALIBRATION REPORT

Ref: ACR.261.11.23.BES.A

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