FCC SAR EVALUATION REPORT

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

Product Name:	POS device
Model No.:	I24T03
Serial Model:	N/A
Brand Name:	N/A
Report No.:	AiTSZ-250411032FW1
FCC ID:	2AYD5-124T03

Prepared for

Imin Technology Pte Ltd

11 Bishan Street 21 #03-05 Singapore 573943

Prepared by

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TEST RESULT CERTIFICATION

Applicant's name	:	Imin Technology Pte Ltd
Address	:	11 Bishan Street 21 #03-05 Singapore 573943
Manufacturer's Name	:	Imin Technology Pte Ltd
Address	:	11 Bishan Street 21 #03-05 Singapore 573943

Product description

Product name	:	POS device
Trademark	:	N/A
Model and/or type reference	:	I24T03
Serial Model	:	N/A
Standards	:	FCC 47 CFR Part 2(2.1093) IEEE Std 1528-2013 Published RF exposure KDB procedures

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

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Date of Test

Date (s) of performance of tests	:	Apr. 16, 2025 ~ Apr. 25, 2025
Date of Issue	:	Apr. 28, 2025
Test Result	:	**Pass**

Reviewed by: Simba Huang

Simba Huang

Approved by: Sean She

Sean She

※ ※ Revision History ※ ※

REV.	DESCRIPTION	ISSUED DATE	REMARK
Rev.1.0	Initial Test Report Release	Apr. 28, 2025	Sean She

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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 as follows.

Band	Max SAR Value Reported(W/kg)	
	1-g Body (Separation distance of 0mm)	Max SAR Summation
GSM850	0.373	Body: 1.283
GSM1900	0.554	
WCDMA Band II	0.544	
WCDMA Band V	0.300	
LTE band 2	0.493	
LTE band 4	0.450	
LTE band 5	0.458	
LTE band 7	0.340	
LTE band 12	0.128	
LTE band 13	0.234	
LTE band 14	0.479	
LTE band 17	0.170	
LTE band 25	0.625	
LTE band 26a	0.368	
LTE band 26b	0.473	
LTE band 41	0.227	
LTE band 66	0.584	
2.4GHz WLAN	0.326	
5.2GHz WLAN	0.621	
5.3GHz WLAN	0.658	
5.6GHz WLAN	0.552	
5.8GHz WLAN	0.516	

NOTE: The Max SAR Summation 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.

Remark: The I24T03 model has 3 versions;
Version A: With a scanning head (Manufacturer: ZEBRA) ;
Version B: With a scanning head (Manufacturer: Newland)
Version C: No scanning head;
The I24T03 has three different optional Basic Dock. All bases have been tested, and the report records the worst mode of the test.

1.3. EUT Description

Device Information			
Product Name	POS device		
Model Name	I24T03		
Family Model	N/A		
Device Phase	Identical Prototype		
Exposure Category	General population / Uncontrolled environment		
Antenna Type	Internal Antenna		
Power rating:	DC 3.89V 10000mAh 38.9Wh Rechargeable Li-ion battery		
Hardware version	N/A		
Software version	N/A		
Device Operating Configurations			
Supporting Mode(s)	GSM 850/1900, WCDMA Band 2/5, LTE Band 2/4/5/7/12/13/14/17/25/26a/26b/41/66, WLAN 2.4G/5.2G/5.3G/5.6G/5.8G, Bluetooth, NFC		
Test Modulation	GSM(GMSK/8PSK), WCDMA(QPSK), LTE(QPSK/16-QAM), WLAN(DSSS/OFDM), Bluetooth(GFSK, π/4DQPSK, 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 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 13	777-787	746-756
	LTE Band 14	758-768	788-798
	LTE Band 17	704-716	734-746
	LTE Band 25	1850-1915	1930-1995
	LTE Band 26a	814-824	859-869
	LTE Band 26b	824-849	869-894
	LTE Band 41	2496-2690	
	LTE Band 66	1710-1780	2110-2200
	WLAN 2.4G	2412-2462	
	WLAN 5.2G	5180-5240	

	WLAN 5.3G	5260-5320
	WLAN 5.6G	5500-5700
	WLAN 5.8G	5745-5825
	Bluetooth	2402-2480
	NFC	13.56
GPRS Multislot Class(12)	Max Number of Timeslots in Uplink	4
	Max Number of Timeslots in Downlink	4
	Max Total Timeslot	5
EGPRS Multislot Class(12)	Max Number of Timeslots in Uplink	4
	Max Number of Timeslots in Downlink	4
	Max Total Timeslot	5
Power Class	4, tested with power level 5(GSM 850)	
	1, tested with power level 0(GSM 1900)	
	3, tested with power control “all 1”(WCDMA Band 2)	
	3, tested with power control “all 1”(WCDMA Band 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 13)	
	3, tested with power control all Max.(LTE Band 14)	
	3, tested with power control all Max.(LTE Band 17)	
	3, tested with power control all Max.(LTE Band 25)	
	3, tested with power control all Max.(LTE Band 26a)	
	3, tested with power control all Max.(LTE Band 26b)	
	3, tested with power control all Max.(LTE Band 41)	
	3, tested with power control all Max.(LTE Band 66)	

1.4. Test specification(s)

FCC 47 CFR Part 2(2.1093)
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

1.5. Ambient Condition

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

1.6. Test Facility

Test Laboratory:
Guangdong Asia Hongke Test Technology Limited
B1/F, Building 11, Junfeng Industrial Park, Chongqing Road, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

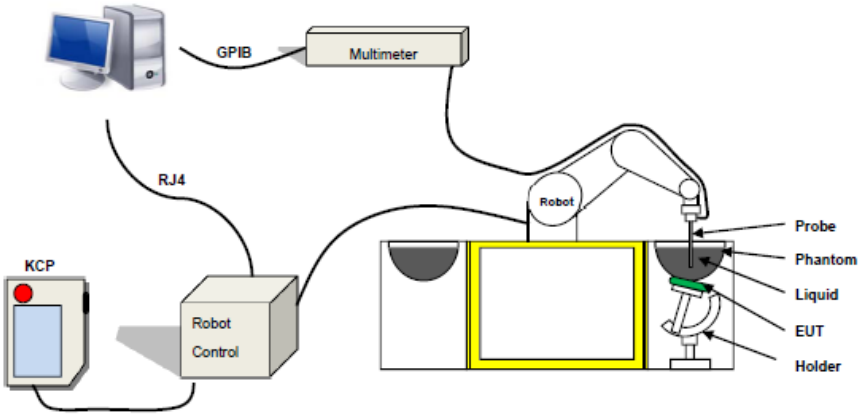
The test facility is recognized, certified or accredited by the following organizations:
FCC-Registration No.: 251906 Designation Number: CN1376
Guangdong Asia Hongke Test Technology Limited has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files.

IC —Registration No.: 31737 CAB identifier: CN0165
The 3m Semi-anechoic chamber of Guangdong Asia Hongke Test Technology Limited has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 31737

A2LA-Lab Cert. No.: 7133.01
Guangdong Asia Hongke Test Technology Limited has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

2. SAR Measurement System

2.1. SATIMO SAR Measurement Set-up Diagram



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

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

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

2.2. Robot

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

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

2.3. 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 EPGO 0523-403 with following specifications is used.

- Probe Length: 330 mm
- Length of Individual Dipoles: 2 mm
- Maximum external diameter: 8 mm
- Probe Tip External Diameter: 2.5 mm
- Distance between dipole/probe extremity: 1 mm
- Dynamic range: 0.01-100 W/kg
- Probe linearity: 3%
- Axial Isotropy: < 0.10 dB
- Spherical Isotropy: < 0.10 dB
- Calibration range: 150 MHz to 6 GHz for head & body simulating liquid.
- Angle between probe axis (evaluation axis) and surface normal line: less than 30°

2.3.1. E-Field Probe Calibration

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

2.4. Phantoms

For the measurements the Elliptical defined by the IEEE SCC-34/SC2 group is used. The phantom is a polyurethane shell integrated in a wooden table. The thickness of the phantom amounts to 2mm +/- 0.2mm. The Elliptical phantom has elliptic shape. The Elliptical phantom provide one reference point on its top part to position the probe tip correctly. The phantom set-up includes a cover, which prevents the evaporation of the liquid.

Elliptical

2.5. Technical Data

Overall thickness	2±0.2mm
Internal Dimensions (Bottom part)	600 mm (L) x 400 mm (W) 170 mm (H)
External Dimensions	1000 mm (L) x 500 mm (W) x 280 mm (H)
Maximum volume	35 L
Material	Fiberglass based
Relative permittivity	3.4
Loss tangent	0.02

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

2.6. Device Holder

The SAR in the phantom is approximately inversely proportional to the square of the distance between the source and the liquid surface.

Material properties: the positioning system is made of PETP. This material offers a low permittivity of 3.2 and low loss, with a loss tangent of 0.005 to minimize the influence of the DUT on measurement results.

Mechanical properties: 2 rows of rail to cover easily the surface of the phantom. The fixing plate is perfectly adapted to larger devices, such as a PC which can be positioned in all configurations.

Accuracy and precision: graduated scale available on each axis. The DUT is fixed with a specific adaptable grip.

2.7. Test Equipment List

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

Devices used during the test described are marked ☒

	Manufacturer	Name of Equipment	Type/Model	Serial Number	Calibration	
					Last Cal.	Due Date
☒	MVG	E FIELD PROBE	SSE2	EPGO 0523-403	Sep. 11, 2024	Sep. 10, 2025
☒	MVG	750 MHz Dipole	SID750	SN 03/15 DIP 0G750-355	Feb. 21, 2024	Feb. 20, 2027
☒	MVG	835 MHz Dipole	SID835	SN 03/15 DIP 0G835-347	Feb. 21, 2024	Feb. 20, 2027
☐	MVG	900 MHz Dipole	SID900	SN 03/15 DI P 0G900-348	Feb. 21, 2024	Feb. 20, 2027
☒	MVG	1800 MHz Dipole	SID1800	SN 03/15 DIP 1G800-349	Feb. 21, 2024	Feb. 20, 2027
☒	MVG	1900 MHz Dipole	SID1900	SN 03/15 DIP 1G900-350	Feb. 21, 2024	Feb. 20, 2027
☐	MVG	2000 MHz Dipole	SID2000	SN 03/15 DIP 2G000-351	Feb. 21, 2024	Feb. 20, 2027
☐	MVG	2300 MHz Dipole	SID2300	SN 03/16 DIP 2G300-358	Feb. 21, 2024	Feb. 20, 2027
☒	MVG	2450 MHz Dipole	SID2450	SN 03/15 DIP 2G450-352	Feb. 21, 2024	Feb. 20, 2027
☒	MVG	2600 MHz Dipole	SID2600	SN 03/15 DIP 2G600-356	Feb. 21, 2024	Feb. 20, 2027
☒	MVG	5000 MHz Dipole	SWG5500	SN 13/14 WGA 33	Feb. 21, 2024	Feb. 20, 2027
☒	MVG	Liquid measurement Kit	SCLMP	SN 21/15 OCPG 72	Jul. 01, 2024	Jun. 30, 2025
☒	MVG	Power Amplifier	N.A	AMPLISAR_28/14_003	NCR	NCR
☒	KEITHLEY	Millivoltmeter	2000	4072790	Jul. 01, 2024	Jun. 30, 2025
☒	R&S	Universal radio communication tester	CMU200	117858	Jul. 01, 2024	Jun. 30, 2025
☒	R&S	Wideband radio communication tester	CMW500	116581	Jul. 01, 2024	Jun. 30, 2025
☒	HP	Network Analyzer	8753D	3410J01136	Jul. 01,	Jun. 30,

					2024	2025
☒	Agilent	PSG Analog Signal Generator	E8257D	MY51110112	Jul. 01, 2024	Jun. 30, 2025
☒	Agilent	Power meter	E4419B	MY45102538	Jul. 01, 2024	Jun. 30, 2025
☒	Agilent	Power meter	E4419B	MY45102140	Jul. 01, 2024	Jun. 30, 2025
☒	Agilent	Power meter	E4419B	MY45102215	Jul. 01, 2024	Jun. 30, 2025
☒	JFW	attenuator	50FPE-006	4360846-494-4	Jul. 01, 2024	Jun. 30, 2025
☒	JFW	attenuator	50FPE-006	4360846-492-1	Jul. 01, 2024	Jun. 30, 2025
☒	JFW	attenuator	50FPE-006	4360846-490-6	Jul. 01, 2024	Jun. 30, 2025
☒	Agilent	Power sensor	E9301A	MY41495644	Jul. 01, 2024	Jun. 30, 2025
☒	Agilent	Power sensor	E9301A	US39212148	Jul. 01, 2024	Jun. 30, 2025
☒	MCLI/USA	Directional Coupler	CB11-20	0D2L51502	Jul. 17, 2024	Jul. 16, 2027
☒	MVG	Elliptical Phantom	SSM2	SN 20/11 ELLI20	NCR	NCR
☒	MVG	Device Holder	SMPPD	SN 24/11 LSH15	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 Wi-Fi/BT power measurement, use engineering software to configure EUT Wi-Fi/BT continuously transmission, at maximum RF power in each supported wireless interface and frequency band.
(d) Connect EUT RF port through RF cable to the power meter, and measure Wi-Fi/BT output power.

<SAR measurement>
(a) Use base station simulator to configure EUT WWAN transmission in radiated connection, and engineering software to configure EUT Wi-Fi/BT continuously transmission, at maximum RF power, in the highest power channel.
(b) Place the EUT in the positions as Appendix A demonstrates.
(c) Set scan area, grid size and other setting on the OPENSAR software.
(d) Measure SAR results for the highest power channel on each testing position.
(e) Find out the largest SAR result on these testing positions of each band.
(f) Measure SAR results for other channels in worst SAR testing position if the reported SAR of highest power channel is larger than 0.8 W/kg.

According to the test standard, the recommended procedure for assessing the peak spatial-average SAR value consists of the following steps:
(a) Power reference measurement
(b) Area scan
(c) Zoom scan
(d) Power drift measurement

3.1. Power Reference

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

3.2. Area scan & Zoom scan

The area scan is a 2D scan to find the hot spot location on the DUT. The zoom scan is a 3D scan

above the hot spot to calculate the 1g and 10g SAR value.

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

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

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

<table>
<tr><td colspan="3"></td><td>≤ 3 GHz</td><td>> 3 GHz</td></tr>
<tr><td colspan="3">Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface</td><td>5 ± 1 mm</td><td>½·δ·ln(2) ± 0.5 mm</td></tr>
<tr><td colspan="3">Maximum probe angle from probe axis to phantom surface normal at the measurement location</td><td>30° ± 1°</td><td>20° ± 1°</td></tr>
<tr><td colspan="3" rowspan="2">Maximum area scan spatial resolution: Δx_{Area}, Δy_{Area}</td><td>≤ 2 GHz: ≤ 15 mm
2 – 3 GHz: ≤ 12 mm</td><td>3 – 4 GHz: ≤ 12 mm
4 – 6 GHz: ≤ 10 mm</td></tr>
<tr><td colspan="2">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.</td></tr>
<tr><td colspan="3">Maximum zoom scan spatial resolution: Δx_{Zoom}, Δy_{Zoom}</td><td>≤ 2 GHz: ≤ 8 mm
2 – 3 GHz: ≤ 5 mm*</td><td>3 – 4 GHz: ≤ 5 mm*
4 – 6 GHz: ≤ 4 mm*</td></tr>
<tr><td rowspan="3">Maximum zoom scan spatial resolution, normal to phantom surface</td><td colspan="2">uniform grid: $\Delta z_{Zoom}(n)$</td><td>≤ 5 mm</td><td>3 – 4 GHz: ≤ 4 mm
4 – 5 GHz: ≤ 3 mm
5 – 6 GHz: ≤ 2 mm</td></tr>
<tr><td rowspan="2">graded grid</td><td>$\Delta z_{Zoom}(1)$: between 1st two points closest to phantom surface</td><td>≤ 4 mm</td><td>3 – 4 GHz: ≤ 3 mm
4 – 5 GHz: ≤ 2.5 mm
5 – 6 GHz: ≤ 2 mm</td></tr>
<tr><td>$\Delta z_{Zoom}(n>1)$: between subsequent points</td><td colspan="2">≤ 1.5·$\Delta z_{Zoom}(n-1)$</td></tr>
<tr><td>Minimum zoom scan volume</td><td colspan="2">x, y, z</td><td>≥ 30 mm</td><td>3 – 4 GHz: ≥ 28 mm
4 – 5 GHz: ≥ 25 mm
5 – 6 GHz: ≥ 22 mm</td></tr>
<tr><td colspan="5">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.</td></tr>
</table>

3.3. Description of interpolation/extrapolation scheme

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

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

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

3.4. Volumetric Scan

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

3.5. Power Drift

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

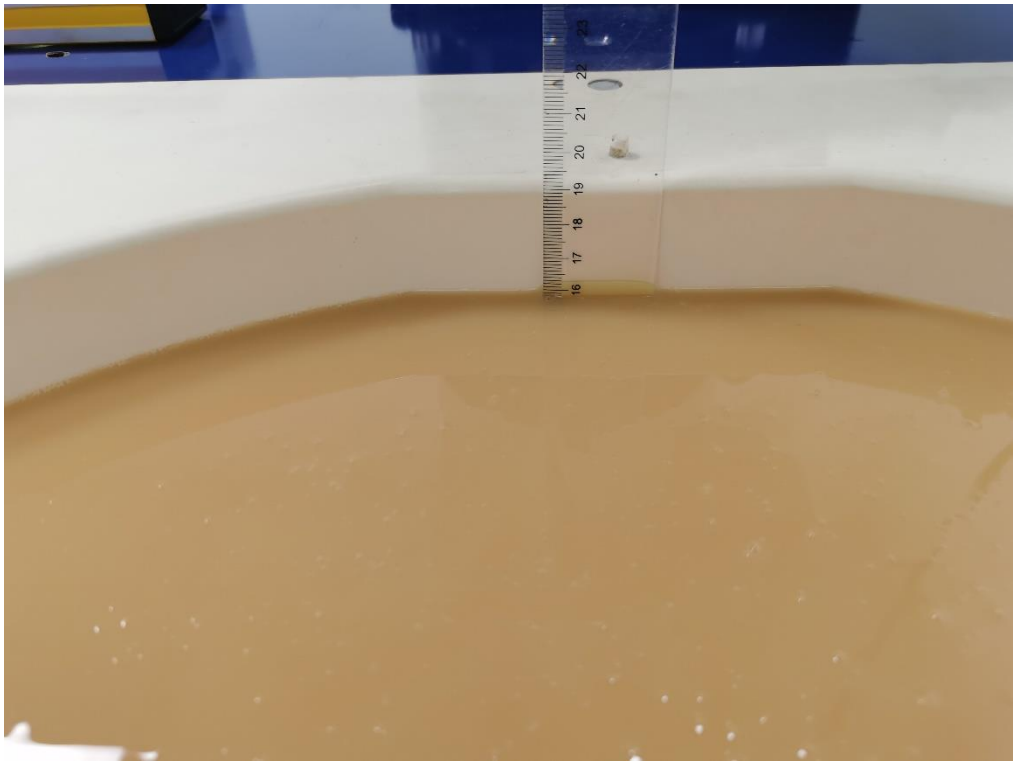
4. System Verification Procedure

4.1. Tissue Verification

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

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

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



4.1.1. Tissue Dielectric Parameter Check Results

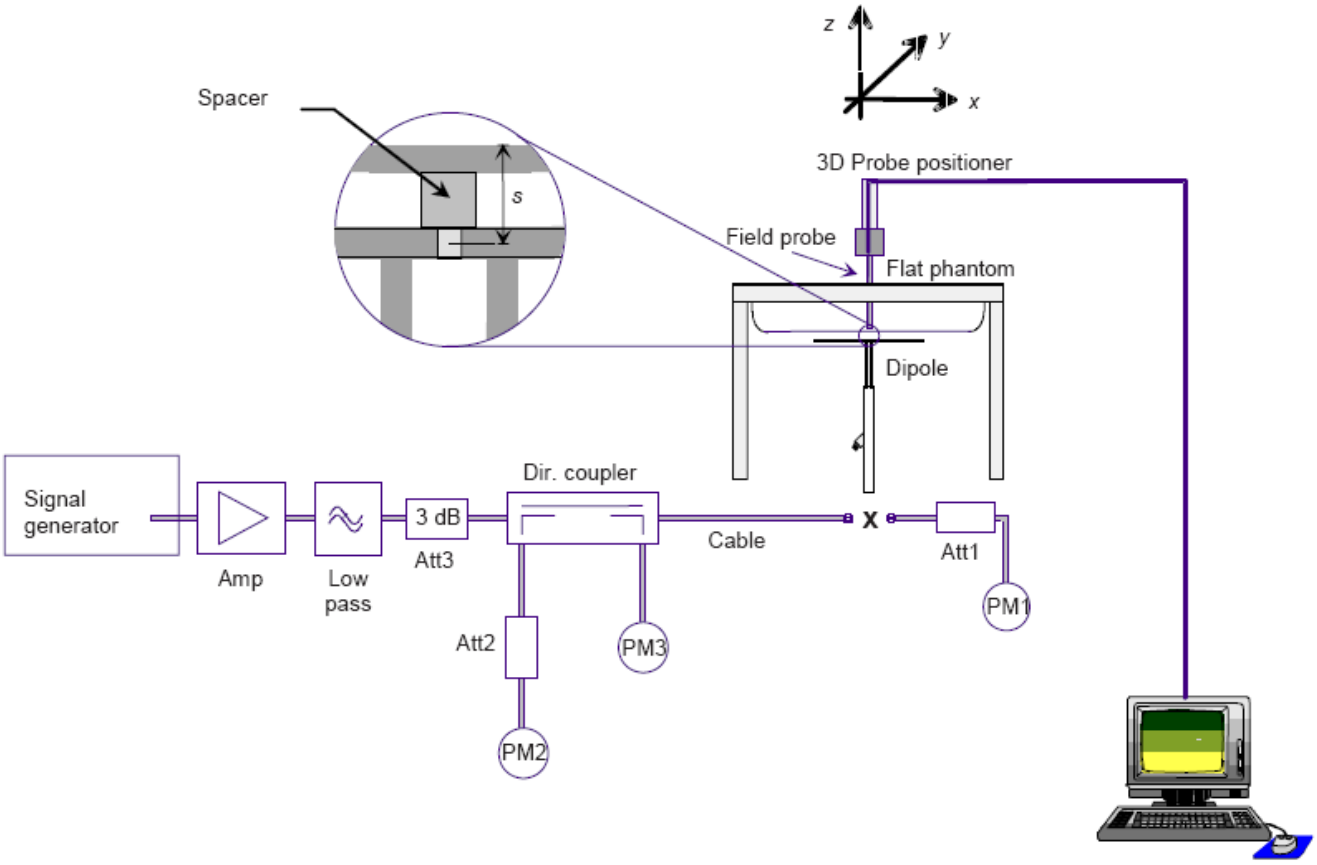
The simulating liquids should be checked at the beginning of a series of SAR measurements to determine of the dielectric parameter are within the tolerances of the specified target values. The measured conductivity and relative permittivity should be within ±5% of the target values.

Tissue Type	Measured Frequency (MHz)	Target Tissue		Measured Tissue		Liquid Temp.	Test Date
		εr (±5%)	σ (S/m) (±5%)	εr	σ (S/m)		
Head 750	750	41.96 (39.86~44.06)	0.89 (0.85~0.93)	42.56	0.91	21.2 °C	Apr. 16, 2025
Head 850	835	41.50 (39.43~43.58)	0.90 (0.86~0.95)	42.01	0.94	21.1 °C	Apr. 17, 2025
Head 1800	1800	40.00 (38.00~42.00)	1.40 (1.33~1.47)	39.61	1.41	21.0 °C	Apr. 18, 2025
Head 1900	1900	40.00 (38.00~42.00)	1.40 (1.33~1.47)	41.42	1.39	21.7 °C	Apr. 19, 2025
Head 2450	2450	39.20 (37.24~41.16)	1.80 (1.71~1.89)	40.41	1.82	21.6 °C	Apr. 20, 2025
Head 2600	2600	39.01 (37.06~40.96)	1.96 (1.86~2.06)	39.43	1.99	21.4 °C	Apr. 21, 2025
Head 5200	5200	36.00 (34.20~37.80)	4.66 (4.43~4.89)	37.40	4.51	21.3 °C	Apr. 22, 2025
Head 5400	5400	35.80 (34.01~37.59)	4.86 (4.62~5.10)	35.10	4.70	21.2 °C	Apr. 23, 2025
Head 5600	5600	35.50 (33.73~37.28)	5.07 (4.82~5.32)	34.20	4.90	21.0 °C	Apr. 24, 2025
Head 5800	5800	35.30 (33.54~37.07)	5.27 (5.01~5.53)	35.30	5.27	21.3 °C	Apr. 25, 2025

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 ±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	Power fed to reference dipole (mW)	Measured SAR Value		Measured SAR (Normalized to 1W)		Target SAR Value (1W)		Deviation (%)		Test Date
		1-g (W/Kg)	10-g (W/Kg)	1-g (W/Kg)	10-g (W/Kg)	1-g (W/Kg)	10-g (W/Kg)	1-g (W/Kg)	10-g (W/Kg)	
750MHz	100	0.930	0.621	9.30	6.21	8.60	5.78	8.14%	7.44%	Apr. 16, 2025
835MHz	100	1.011	0.612	10.11	6.12	9.40	6.28	7.55%	-2.55%	Apr. 17, 2025
1800MHz	100	3.832	2.025	38.32	20.25	37.06	20.01	3.40%	1.20%	Apr. 18, 2025
1900MHz	100	4.154	2.153	41.54	21.53	39.69	20.92	4.66%	2.92%	Apr. 19, 2025
2450MHz	100	5.184	2.359	51.84	23.59	50.05	23.80	3.58%	-0.88%	Apr. 20, 2025
2600MHz	100	5.433	2.523	54.33	25.23	54.16	24.85	0.31%	1.53%	Apr. 21, 2025
5200MHz	100	14.712	5.212	147.12	52.12	162.59	56.21	-9.51%	-7.28%	Apr. 22, 2025
5400MHz	100	14.820	5.532	148.20	55.32	159.81	55.00	-7.26%	0.58%	Apr. 23, 2025
5600MHz	100	16.421	5.602	164.21	56.02	179.15	61.01	-8.34%	-8.18%	Apr. 24, 2025
5800MHz	100	16.421	5.623	164.21	56.23	182.2	61.32	-9.87%	-8.30%	Apr. 25, 2025

5. SAR measurement variabilit

Per KDB865664 D01 SAR measurement 100 MHz to 6 GHz, SAR measurement variability must be assessed for each frequency band, which is determined by the SAR probe calibration point and tissue-equivalent medium used for the device measurements. The additional measurements are repeated after the completion of all measurements requiring the same head or body tissue-equivalent medium in a frequency band. The test device should be returned to ambient conditions (normal room temperature) with the battery fully charged before it is re-mounted on the device holder for the repeated measurement(s) to minimize any unexpected variations in the repeated results.

1) Repeated measurement is not required when the original highest measured SAR is < 0.80 W/kg; steps 2) through 4) do not apply.

2) When the original highest measured SAR is ≥ 0.80 W/kg, repeat that measurement once.

3) Perform a second repeated measurement only if the ratio of largest to smallest SAR for the original and first repeated measurements is > 1.20 or when the original or repeated measurement is ≥ 1.45 W/kg (~ 10% from the 1-g SAR limit).

4) Perform a third repeated measurement only if the original, first or second repeated measurement is ≥1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20.

6. 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.

7. RF Exposure Positions

7.1. Generic device

The SAR evaluation shall be performed for surface of the DUT that are accessible during intended use, as indicated in Figure 7.1. Adjust the distance between the device surface and the flat phantom to 0mm.

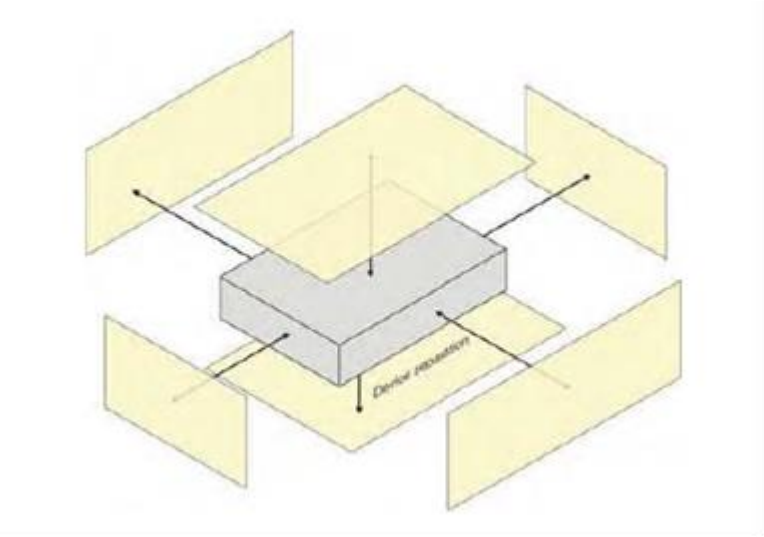


Figure 7.1 – Test positions for generic device

The device is wall-mounted, so there is no need to measure the back side

8. RF Output Power

8.1. GSM Conducted Power

Band GSM850	Burst-Averaged output Power (dBm)				Factor	Frame-Averaged output Power (dBm)			
Tx Channel	Tune-up (dBm)	128	189	251		Tune-up	128	189	251
Frequency (MHz)		824.2	836.4	848.8			824.2	836.4	848.8
GSM (GMSK)	/	/	/	/	/	/	/	/	/
GPRS(GMSK,1 Tx slot)	33.00	32.60	32.61	32.57	-9.03	23.97	23.57	23.58	23.54
GPRS(GMSK,2 Tx slot)	32.50	32.00	32.02	32.02	-6.02	26.48	25.98	26.00	26.00
GPRS(GMSK,3 Tx slot)	30.00	30.00	29.97	29.99	-4.26	25.74	25.74	25.71	25.73
GPRS(GMSK,4 Tx slot)	30.50	30.00	30.01	30.00	-3.01	27.49	26.99	27.00	26.99
EGPRS(8PSK,1 Tx slot)	30.50	29.99	29.97	30.03	-9.03	21.47	20.96	20.94	21.00
EGPRS(8PSK,2 Tx slot)	30.50	30.00	30.01	30.00	-6.02	24.48	23.98	23.99	23.98
EGPRS(8PSK,3 Tx slot)	30.50	29.97	30.01	29.97	-4.26	26.24	25.71	25.75	25.71
EGPRS(8PSK,4 Tx slot)	30.50	29.98	30.00	30.01	-3.01	27.49	26.97	26.99	27.00

Band GSM1900	Burst-Averaged output Power (dBm)				Factor	Frame-Averaged output Power (dBm)			
Tx Channel	Tune-up (dBm)	512	661	810		Tune-up	512	661	810
Frequency (MHz)		1850.2	1880	1909.8			1850.2	1880	1909.8
GSM (GMSK)	/	/	/	/	/	/	/	/	/
GPRS(GMSK,1 Tx slot)	30.00	29.62	29.60	29.63	-9.03	20.97	20.59	20.57	20.60
GPRS(GMSK,2 Tx slot)	30.00	29.49	29.53	29.51	-6.02	23.98	23.47	23.51	23.49
GPRS(GMSK,3 Tx slot)	29.50	28.97	28.99	29.01	-4.26	25.24	24.71	24.73	24.75
GPRS(GMSK,4 Tx slot)	29.50	28.98	29.00	29.01	-3.01	26.49	25.97	25.99	26.00
EGPRS(8PSK,1 Tx slot)	29.50	29.03	29.01	29.02	-9.03	20.47	20.00	19.98	19.99
EGPRS(8PSK,2 Tx slot)	29.50	29.01	29.03	29.02	-6.02	23.48	22.99	23.01	23.00
EGPRS(8PSK,3 Tx slot)	29.50	28.99	28.98	29.03	-4.26	25.24	24.73	24.72	24.77
EGPRS(8PSK,4 Tx slot)	29.50	29.00	28.98	29.01	-3.01	26.49	25.99	25.97	26.00

Note:

Remark: GPRS, CS4 coding scheme. EGPRS, MCS5 coding scheme.
Multi-Slot Class 8, Support Max 4 downlink, 1 uplink, 5 working link
Multi-Slot Class 10, Support Max 4 downlink, 2 uplink, 5 working link
Multi-Slot Class 12, Support Max 4 downlink, 4 uplink, 5 working link

SAR testing was performed on the maximum frame-averaged power mode.

The frame-averaged power is linearly proportion to the slot number configured and it is linearly scaled the maximum

Burst-averaged power based on time slots. The calculated method is shown as below:

Frame-averaged power = Burst averaged power (1 TX Slot) – 9.03 dB

Frame-averaged power = Burst averaged power (2 TX Slots) – 6.02 dB

Frame-averaged power = Burst averaged power (3 TX Slots) - 4.26 dB

Frame-averaged power = Burst averaged power (4 TX Slots) – 3.01 dB

8.2. WCDMA Conducted Power

The following tests were conducted according to the test requirements outlines in 3GPP TS 34.121 specification. A summary of these settings are illustrated below:

1. Release99 Setup Configuration

Mode	Subtest	Rel99
WCDMA General Settings	Loopback Mode	Test Mode 1
	Rel99 RMC	12.2kbps RMC
	Power Control Algorithm	Algorithm1
	βc/βd	8/15

2. HSDPA Setup Configuration

	Mode	HSDPA	HSDPA	HSDPA	HSDPA
	Subtest	1	2	3	4
WCDMA General Settings	Loopback Mode	Test Mode 1			
	Rel99 RMC	12.2kbps RMC			
	HSDPA FRC	H-Set1			
	Power Control Algorithm	Algorithm 1			
	βc	2/15	12/15	15/15	15/15
	βd	15/15	15/15	8/15	4/15
	Bd (SF)	64			
	βc/βd	2/15	12/15	15/8	15/4
	βhs	4/15	24/15	30/15	30/15
HSDPA Specific Settings	D_{ACK}	8			
	D_{NAK}	8			
	DCQI	8			
	Ack-Nack repetition factor	3			
	CQI Feedback (Table 5.2B.4)	4ms			
	CQI Repetition Factor (Table 5.2B.4)	2			
	Ahs =βhs/βc	30/15			

3. HSUPA Setup Configuration

	Mode	HSUPA	HSUPA	HSUPA	HSUPA	HSUPA
	Subtest	1	2	3	4	5
WCDMA General Settings	Loopback Mode	Test Mode 1				
	Rel99 RMC	12.2kbps RMC				
	HSDPA FRC	H-Set1				
	HSUPA Test	HSUPA Loopback				
	Power Control Algorithm	Algorithm1				
	βc	11/15	6/15	15/15	2/15	15/15
	βd	15/15	15/15	9/15	15/15	15/15
	βec	209/225	12/15	30/15	2/15	24/15
	βc/βd	11/15	6/15	15/9	2/15	15/15
	βhs	22/15	12/15	30/15	4/15	30/15
	βed	1309/225	94/75	47/15 47/15	56/75	134/15
	CM (dB)	1.0	3.0	2.0	3.0	1.0
HSDPA Specific Settings	D_{ACK}	8				
	D_{NAK}	8				
	DCQI	8				
	Ack-Nack repetition factor	3				
	CQI Feedback (Table 5.2B.4)	4ms				

	CQI Repetition Factor (Table 5.2B.4)	2				
	Ahs = βhs/βc	30/15				
HSUPA Specific Settings	D E-DPCCH	6	8	8	5	7
	DHARQ	0	0	0	0	0
	AG Index	20	12	15	17	21
	ETFCI (from 34.121 Table C.11.1.3)	75	67	92	71	81
	Associated Max UL Data Rate kbps	242.1	174.9	482.8	205.8	308.9

4. WCDMA Conducted Power Results

Choose the highest output power mode RMC 12.2Kbps for Band V/II at middle channel to test SAR and determine the worst configuration for further high/low channel test.

WCDMA Band II	Burst-Averaged output Power (dBm)			
Tx Channel	Tune-up (dBm)	9262	9400	9538
Frequency (MHz)		1852.4	1880	1907.6
RMC12.2K	24.00	23.62	23.58	23.63
HSDPA Sub 1	24.00	23.45	23.57	23.42
HSDPA Sub 2	23.00	22.61	22.53	22.64
HSDPA Sub 3	23.00	22.68	22.52	22.62
HSDPA Sub 4	23.00	22.54	22.56	22.56
HSUPA Sub 1	23.00	22.68	22.58	22.69
HSUPA Sub 2	23.00	22.55	22.56	22.65
HSUPA Sub 3	23.00	22.51	22.53	22.66
HSUPA Sub 4	23.00	22.56	22.52	22.53
HSUPA Sub 5	23.00	22.55	22.56	22.65

WCDMA Band V	Burst-Averaged output Power (dBm)			
Tx Channel	Tune-up (dBm)	4132	4182	4233
Frequency (MHz)		826.4	836.4	846.6
RMC12.2K	24.00	23.62	23.51	23.63
HSDPA Sub 1	23.50	23.45	23.42	23.45
HSDPA Sub 2	23.00	22.63	22.57	22.52
HSDPA Sub 3	23.00	22.58	22.66	22.64
HSDPA Sub 4	23.00	22.53	22.60	22.63
HSUPA Sub 1	23.00	22.58	22.65	22.68
HSUPA Sub 2	23.00	22.53	22.51	22.54
HSUPA Sub 3	23.00	22.69	22.67	22.64
HSUPA Sub 4	23.00	22.54	22.61	22.67
HSUPA Sub 5	23.00	22.56	22.59	22.57

8.3. LTE Conducted Power

1. The following tests were conducted according to the test requirements outlines in 3GPP TS 36.521-1 specification. A summary of these configurations are illustrated below:

Test Parameters for Channel Bandwidths				
	Downlink Configuration	Uplink Configuration		
Ch BW	N/A for Max UE output power testing	Mod'n	RB allocation	
			FDD	TDD
1.4MHz		QPSK	1	1
1.4MHz		QPSK	5	5
3MHz		QPSK	1	1
3MHz		QPSK	4	4
5MHz		QPSK	1	1
5MHz		QPSK	8	8
10MHz		QPSK	1	1
10MHz		QPSK	12	12
15MHz		QPSK	1	1
15MHz		QPSK	16	16
20MHz		QPSK	1	1
20MHz		QPSK	18	18

Note 1: Test Channel Bandwidths are checked separately for each E-UTRA band, the applicable channel bandwidths are specified in Table 5.4.2.1-1.

Note 2: For E-UTRA bands not applied with Note 2 in Table 6.2.2.3-1:

- The 1 RB allocation shall be tested at RB#0 for low and mid range, RB #max for high range test frequency.
- The RBstart of non-1RB allocation shall be RB #0 for low and mid range, RB# (max +1 - RB allocation) for high range test frequency.

Note 3: For E-UTRA bands applied with Note 2 in Table 6.2.2.3-1:

- If the test channel bandwidth is larger than 4MHz, then the 1 RB allocation shall be tested at both RB #0 and RB #max.
- If the test channel bandwidth is smaller or equal to 4MHz, then the 1 RB allocation shall be tested at RB #0.
- If the test channel bandwidth = (FUL_high - FUL_low) specified by the operating band, then only one frequency range shall be tested and the 1 RB allocation shall be tested at RB #0, RB #$\lceil N_{RB}^{UL}/2 \rceil$ and RB #max.
- For non-1RB allocation, test frequency is middle range, and the RBstart shall be RB #0.

2. LTE Conducted Power Results

LTE output list

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	23.50	23.37	23.37	23.45
			1	2	23.50	23.44	23.39	23.44
			1	5	23.50	23.39	23.34	23.44
			3	0	24.00	23.49	23.48	23.47
			3	1	24.00	23.46	23.52	23.47
			3	2	24.00	23.45	23.51	23.46
			6	0	23.00	22.54	22.63	22.54
		16QAM	1	0	22.50	22.09	22.29	22.28
			1	2	22.50	22.17	22.31	22.28
			1	5	22.50	22.14	22.29	22.26
			3	0	22.50	22.24	22.37	22.34
			3	1	22.50	22.28	22.31	22.33
			3	2	22.50	22.17	22.32	22.34
			6	0	22.00	21.44	21.61	21.39
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	23.21	23.46	23.32
			1	7	24.00	23.36	23.50	23.43
			1	14	24.00	23.29	23.43	23.37
			8	0	23.00	22.48	22.57	22.59
			8	4	23.00	22.53	22.59	22.57
			8	7	23.00	22.51	22.67	22.56
			15	0	23.00	22.52	22.59	22.55
		16QAM	1	0	22.50	22.18	22.24	22.08
			1	7	22.50	22.36	22.30	22.26
			1	14	22.50	22.37	22.29	22.14
			8	0	22.00	21.47	21.57	21.57
			8	4	22.00	21.50	21.58	21.56
			8	7	22.00	21.48	21.59	21.58
			15	0	22.00	21.52	21.56	21.48
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	23.55	23.61	23.67
			1	12	24.00	23.74	23.73	23.81
			1	24	24.00	23.69	23.65	23.68
			12	0	23.00	22.59	22.71	22.66
			12	6	23.00	22.60	22.78	22.69
			12	11	23.00	22.60	22.63	22.57
			25	0	23.00	22.62	22.78	22.70
		16QAM	1	0	23.00	22.45	22.77	22.50
			1	12	23.00	22.64	22.83	22.70
			1	24	23.00	22.61	22.76	22.61
			12	0	22.00	21.63	21.75	21.71

			12	6	22.00	21.59	21.75	21.71
			12	11	22.00	21.58	21.70	21.55
			25	0	22.00	21.62	21.77	21.71
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	23.46	23.71	23.75
			1	24	24.00	23.48	23.77	23.70
			1	49	24.00	23.62	23.74	23.70
			25	0	23.00	22.51	22.74	22.58
			25	12	23.00	22.57	22.78	22.58
			25	24	23.00	22.58	22.64	22.56
			50	0	23.00	22.70	22.70	22.58
		16QAM	1	0	23.00	22.39	22.55	22.50
			1	24	23.00	22.53	22.59	22.45
			1	49	23.00	22.63	22.64	22.49
			25	0	22.00	21.53	21.82	21.55
			25	12	22.00	21.51	21.78	21.55
			25	24	22.00	21.56	21.67	21.62
			50	0	22.00	21.73	21.71	21.62
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		18675/1857.5	18900/1880	19125/1902.5
LTE Band 2	15MHz	QPSK	1	0	24.00	23.46	23.56	23.66
			1	37	24.00	23.76	23.70	23.69
			1	74	24.00	23.63	23.65	23.56
			36	0	23.00	22.41	22.76	22.42
			36	18	23.00	22.68	22.83	22.45
			36	37	23.00	22.67	22.81	22.42
			75	0	23.00	22.72	22.72	22.66
		16QAM	1	0	23.00	22.51	22.71	22.42
			1	37	23.00	22.71	22.86	22.47
			1	74	23.00	22.68	22.83	22.30
			36	0	23.00	22.39	22.72	22.45
			36	18	23.00	22.71	22.82	22.47
			36	37	23.00	22.69	22.85	22.38
			75	0	22.00	21.72	21.64	21.63
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	23.38	23.55	23.51
			1	49	24.00	23.88	23.70	23.72
			1	99	24.00	23.75	23.58	23.46
			50	0	23.50	22.77	22.63	22.49
			50	24	23.50	22.82	22.65	22.51
			50	49	23.50	23.09	22.58	22.75
			100	0	23.00	22.94	22.59	22.70
		16QAM	1	0	23.00	22.31	22.66	22.35
			1	49	23.00	22.78	22.86	22.55
			1	99	23.00	22.59	22.76	22.33
			50	0	22.50	21.74	21.72	21.57

			50	24	22.50	21.73	21.72	21.54
			50	49	22.50	22.03	21.54	21.76
			100	0	22.00	21.89	21.55	21.66

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		19957/1710.7	20175/1732.5	20393/1754.3
LTE Band 4	1.4MHz	QPSK	1	0	23.00	22.33	22.69	22.70
			1	2	23.00	22.41	22.68	22.68
			1	5	23.00	22.39	22.61	22.66
			3	0	23.00	22.49	22.70	22.81
			3	1	23.00	22.50	22.70	22.82
			3	2	23.00	22.46	22.74	22.82
			6	0	22.00	21.59	21.78	21.88
		16QAM	1	0	22.00	21.27	21.46	21.65
			1	2	22.00	21.39	21.48	21.68
			1	5	22.00	21.26	21.42	21.57
			3	0	22.00	21.36	21.56	21.66
			3	1	22.00	21.34	21.55	21.64
			3	2	22.00	21.30	21.53	21.64
			6	0	21.00	20.60	20.61	20.87
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	23.00	22.24	22.47	22.49
			1	7	23.00	22.41	22.52	22.70
			1	14	23.00	22.36	22.42	22.62
			8	0	22.00	21.48	21.67	21.70
			8	4	22.00	21.46	21.69	21.72
			8	7	22.00	21.52	21.75	21.82
			15	0	22.00	21.52	21.71	21.80
		16QAM	1	0	22.00	21.24	21.50	21.55
			1	7	22.00	21.31	21.56	21.64
			1	14	22.00	21.21	21.44	21.63
			8	0	21.00	20.51	20.70	20.74
			8	4	21.00	20.45	20.68	20.76
			8	7	21.00	20.49	20.71	20.82
			15	0	21.00	20.43	20.69	20.85
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		19975/1712.5	20175/1732.5	20375/1752.5
LTE Band 4	5MHz	QPSK	1	0	23.00	22.54	22.72	22.77
			1	12	23.00	22.80	22.84	22.96
			1	24	23.00	22.68	22.67	22.86
			12	0	22.00	21.56	21.72	21.81
			12	6	22.00	21.55	21.69	21.77
			12	11	22.00	21.69	21.75	21.82
			25	0	22.00	21.58	21.78	21.86
		16QAM	1	0	22.00	21.50	21.81	21.72
			1	12	22.00	21.71	21.89	21.89
			1	24	22.00	21.65	21.78	21.80

			12	0	21.00	20.51	20.72	20.75
			12	6	21.00	20.52	20.73	20.81
			12	11	21.00	20.62	20.74	20.84
			25	0	21.00	20.63	20.72	20.91
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	23.00	22.53	22.89	22.56
			1	24	23.00	22.78	22.84	22.76
			1	49	23.00	22.87	22.73	22.93
			25	0	22.00	21.57	21.73	21.72
			25	12	22.00	21.58	21.75	21.73
			25	24	22.00	21.83	21.72	21.77
			50	0	22.00	21.73	21.74	21.81
		16QAM	1	0	22.00	21.56	21.66	21.62
			1	24	22.00	21.77	21.66	21.79
			1	49	22.00	21.84	21.55	21.96
			25	0	21.00	20.52	20.71	20.77
			25	12	21.00	20.49	20.65	20.74
			25	24	21.00	20.79	20.82	20.85
			50	0	21.00	20.69	20.73	20.78
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	23.00	22.46	22.60	22.40
			1	37	23.00	22.76	22.65	22.64
			1	74	23.00	22.82	22.46	22.79
			36	0	22.00	21.45	21.70	21.44
			36	18	22.00	21.78	21.79	21.71
			36	37	22.00	21.82	21.57	21.85
			75	0	22.00	21.74	21.62	21.73
		16QAM	1	0	22.00	21.38	21.70	21.45
			1	37	22.00	21.85	21.76	21.73
			1	74	22.00	21.80	21.66	21.83
			36	0	22.00	21.42	21.68	21.41
			36	18	22.00	21.77	21.76	21.69
			36	37	22.00	21.78	21.69	21.86
			75	0	21.00	20.66	20.64	20.63
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	23.00	22.34	22.68	22.50
			1	49	23.00	22.91	22.90	22.67
			1	99	23.00	22.79	22.57	22.77
			50	0	22.00	21.52	21.57	21.63
			50	24	22.00	21.51	21.55	21.71
			50	49	22.00	21.96	21.71	21.71
			100	0	22.00	21.78	21.63	21.75
		16QAM	1	0	22.00	21.25	21.77	21.37
			1	49	22.00	21.77	21.95	21.57
			1	99	22.00	21.72	21.68	21.72

			50	0	21.00	20.51	20.52	20.64
			50	24	21.00	20.48	20.53	20.69
			50	49	21.00	20.93	20.67	20.70
			100	0	21.00	20.77	20.61	20.70

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	25.00	24.74	24.79	24.61
			1	2	25.00	24.81	24.79	24.65
			1	5	25.00	24.80	24.72	24.64
			3	0	25.00	24.86	24.79	24.75
			3	1	25.00	24.87	24.80	24.71
			3	2	25.00	24.86	24.71	24.64
			6	0	24.00	23.97	23.84	23.80
		16QAM	1	0	24.00	23.64	23.63	23.46
			1	2	24.00	23.67	23.64	23.61
			1	5	24.00	23.71	23.53	23.45
			3	0	24.00	23.63	23.61	23.45
			3	1	24.00	23.63	23.55	23.47
			3	2	24.00	23.62	23.49	23.39
			6	0	23.00	22.99	22.85	22.81
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		20415/825.5	20525/836.5	20635/847.5
LTE Band 5	3MHz	QPSK	1	0	25.00	24.50	24.53	24.37
			1	7	25.00	24.70	24.60	24.46
			1	14	25.00	24.55	24.56	24.42
			8	0	24.00	23.68	23.61	23.56
			8	4	24.00	23.67	23.59	23.58
			8	7	24.00	23.75	23.63	23.65
			15	0	24.00	23.69	23.61	23.59
		16QAM	1	0	24.00	23.42	23.31	23.34
			1	7	24.00	23.62	23.40	23.41
			1	14	24.00	23.54	23.28	23.38
			8	0	23.00	22.69	22.65	22.62
			8	4	23.00	22.73	22.65	22.59
			8	7	23.00	22.78	22.61	22.66
			15	0	23.00	22.70	22.54	22.64
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	25.50	24.81	24.73	24.63
			1	12	25.50	25.02	24.82	24.81
			1	24	25.50	24.90	24.68	24.72
			12	0	24.00	23.69	23.71	23.66
			12	6	24.00	23.71	23.64	23.60
			12	11	24.00	23.78	23.64	23.72
			25	0	24.00	23.77	23.66	23.64
		16QAM	1	0	24.00	23.74	23.84	23.52
			1	12	24.00	23.93	23.87	23.71
			1	24	24.00	23.76	23.71	23.60

			12	0	23.00	22.76	22.71	22.63
			12	6	23.00	22.67	22.71	22.62
			12	11	23.00	22.77	22.71	22.68
			25	0	23.00	22.77	22.67	22.68
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	25.00	24.77	24.84	24.69
			1	24	25.00	24.94	24.83	24.70
			1	49	25.00	24.85	24.74	24.77
			25	0	24.00	23.79	23.63	23.69
			25	12	24.00	23.79	23.63	23.65
			25	24	24.00	23.77	23.70	23.62
			50	0	24.00	23.80	23.68	23.74
		16QAM	1	0	24.00	23.79	23.57	23.66
			1	24	24.00	23.85	23.60	23.66
			1	49	24.00	23.79	23.48	23.70
			25	0	23.00	22.81	22.65	22.69
			25	12	23.00	22.80	22.70	22.66
			25	24	23.00	22.80	22.71	22.67
			50	0	23.00	22.76	22.72	22.74

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		20775/2502.5	21100/2535	21425/2567.5
LTE Band 7	5MHz	QPSK	1	0	23.00	21.87	21.94	22.28
			1	12	23.00	22.05	22.12	22.55
			1	24	23.00	21.86	22.07	22.45
			12	0	21.50	20.87	21.15	21.42
			12	6	21.50	20.82	21.17	21.41
			12	11	21.50	20.80	20.97	21.27
			25	0	21.50	20.85	21.10	21.41
		16QAM	1	0	21.50	20.85	21.03	21.21
			1	12	21.50	20.87	21.23	21.36
			1	24	21.50	20.76	21.11	21.38
			12	0	21.00	19.87	20.23	20.57
			12	6	21.00	19.85	20.21	20.62
			12	11	21.00	19.80	20.10	20.42
			25	0	21.00	19.93	20.17	20.53
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	22.50	21.66	21.87	22.06
			1	24	22.50	21.58	21.99	22.09
			1	49	22.50	21.56	22.01	22.21
			25	0	21.50	20.64	21.05	21.12
			25	12	21.50	20.69	21.05	21.07
			25	24	21.50	20.56	20.85	21.17
			50	0	21.50	20.67	21.06	21.18
		16QAM	1	0	21.50	20.66	20.76	20.82
			1	24	21.50	20.68	20.90	21.00
			1	49	21.50	20.62	20.82	21.01

			25	0	20.50	19.69	20.16	20.20
			25	12	20.50	19.73	20.16	20.15
			25	24	20.50	19.67	19.99	20.39
			50	0	20.50	19.68	20.15	20.22
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	22.50	21.68	21.58	22.02
			1	37	22.50	21.61	21.86	22.18
			1	74	22.50	21.56	21.90	22.22
			36	0	21.50	20.62	20.89	20.74
			36	18	21.50	20.73	21.12	21.04
			36	37	21.50	20.59	21.01	20.95
			75	0	21.50	20.61	21.05	21.17
		16QAM	1	0	21.50	20.66	20.93	20.79
			1	37	21.50	20.65	21.10	21.11
			1	74	21.50	20.60	21.02	21.00
			36	0	21.50	20.62	20.89	20.72
			36	18	21.50	20.68	21.08	21.06
			36	37	21.50	20.60	21.05	20.97
			75	0	20.50	19.58	20.04	20.18
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	22.50	21.61	21.58	21.76
			1	49	22.50	21.73	22.02	22.10
			1	99	22.50	21.72	21.94	22.12
			50	0	21.50	20.67	21.04	20.82
			50	24	21.50	20.61	21.08	20.84
			50	49	21.50	20.68	20.79	21.31
			100	0	21.50	20.65	20.88	21.13
		16QAM	1	0	21.50	20.54	20.85	20.55
			1	49	21.50	20.66	21.17	21.04
			1	99	21.50	20.60	20.96	20.98
			50	0	21.00	19.71	20.11	19.96
			50	24	21.00	19.65	20.16	19.94
			50	49	21.00	19.71	19.87	20.50
			100	0	20.50	19.70	19.96	20.23

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	24.50	24.32	24.32	24.31
			1	2	24.50	24.34	24.32	24.36
			1	5	24.50	24.31	24.26	24.33
			3	0	24.50	24.35	24.35	24.42
			3	1	24.50	24.35	24.34	24.46
			3	2	24.50	24.34	24.40	24.43
			6	0	24.00	23.44	23.42	23.53
		16QAM	1	0	23.50	23.12	23.07	23.23
			1	2	23.50	23.14	23.09	23.31
			1	5	23.50	23.12	23.02	23.28
			3	0	23.50	23.14	23.17	23.26

			3	1	23.50	23.12	23.17	23.27
			3	2	23.50	23.10	23.09	23.23
			6	0	23.00	22.46	22.44	22.56
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		23025/700.5	23095/707.5	23165/714.5
LTE Band 12	3MHz	QPSK	1	0	24.50	24.13	24.23	24.22
			1	7	24.50	24.26	24.37	24.36
			1	14	24.50	24.09	24.22	24.33
			8	0	24.00	23.29	23.26	23.42
			8	4	24.00	23.31	23.25	23.46
			8	7	24.00	23.32	23.37	23.50
			15	0	23.50	23.33	23.39	23.46
		16QAM	1	0	23.50	23.06	23.09	22.93
			1	7	23.50	23.19	23.19	23.12
			1	14	23.50	23.05	23.00	23.08
			8	0	22.50	22.32	22.29	22.43
			8	4	22.50	22.30	22.27	22.39
			8	7	22.50	22.30	22.36	22.39
			15	0	22.50	22.25	22.27	22.31
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	25.00	24.43	24.43	24.42
			1	12	25.00	24.55	24.52	24.64
			1	24	25.00	24.45	24.45	24.57
			12	0	24.00	23.55	23.37	23.54
			12	6	24.00	23.56	23.35	23.54
			12	11	24.00	23.39	23.55	23.45
			25	0	24.00	23.39	23.46	23.57
		16QAM	1	0	24.00	23.33	23.48	23.34
			1	12	24.00	23.44	23.61	23.58
			1	24	24.00	23.35	23.52	23.46
			12	0	23.00	22.43	22.35	22.54
			12	6	23.00	22.49	22.38	22.52
			12	11	23.00	22.30	22.58	22.44
			25	0	23.00	22.48	22.40	22.59
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	25.00	24.41	24.49	24.58
			1	24	25.00	24.54	24.56	24.54
			1	49	25.00	24.55	24.61	24.67
			25	0	24.00	23.53	23.32	23.22
			25	12	24.00	23.53	23.26	23.25
			25	24	24.00	23.65	23.48	23.37
			50	0	24.00	23.58	23.39	23.33
		16QAM	1	0	24.00	23.41	23.27	23.24
			1	24	24.00	23.48	23.47	23.27
			1	49	24.00	23.54	23.37	23.40
			25	0	23.00	22.49	22.26	22.30
			25	12	23.00	22.51	22.33	22.27
			25	24	23.00	22.62	22.50	22.38

			50	0	23.00	22.64	22.45	22.33

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		23205/779.5	23230/782	23255/784.5
LTE Band 13	5MHz	QPSK	1	0	25.00	24.54	24.51	24.49
			1	12	25.00	24.70	24.64	24.70
			1	24	25.00	24.56	24.53	24.61
			12	0	24.00	23.16	23.55	23.57
			12	6	24.00	23.10	23.51	23.57
			12	11	24.00	23.51	23.50	23.63
			25	0	24.00	23.31	23.47	23.59
		16QAM	1	0	24.00	23.39	23.53	23.35
			1	12	24.00	23.63	23.64	23.58
			1	24	24.00	23.48	23.62	23.53
			12	0	23.00	22.13	22.62	22.59
			12	6	23.00	22.17	22.55	22.60
			12	11	23.00	22.46	22.56	22.69
			25	0	23.00	22.41	22.47	22.68
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		/	23230/782	/
LTE Band 13	10MHz	QPSK	1	0	25.00	/	24.57	/
			1	24	25.00	/	24.60	/
			1	49	25.00	/	24.73	/
			25	0	24.00	/	23.18	/
			25	12	24.00	/	23.17	/
			25	24	24.00	/	23.55	/
			50	0	23.50	/	23.35	/
		16QAM	1	0	24.00	/	23.35	/
			1	24	24.00	/	23.43	/
			1	49	24.00	/	23.57	/
			25	0	23.00	/	22.14	/
			25	12	23.00	/	22.15	/
			25	24	23.00	/	22.63	/
			50	0	22.50	/	22.38	/

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		23305/790.5	23330/793	23355/795.5
LTE Band 14	5MHz	QPSK	1	0	25.00	24.68	24.70	24.76
			1	12	25.00	24.88	24.83	24.86
			1	24	25.00	24.83	24.77	24.78
			12	0	24.00	23.66	23.82	23.74
			12	6	24.00	23.68	23.80	23.72
			12	11	24.00	23.63	23.73	23.70
			25	0	24.00	23.71	23.80	23.72
		16QAM	1	0	24.00	23.57	23.73	23.65
			1	12	24.00	23.82	23.90	23.81
			1	24	24.00	23.71	23.80	23.62
			12	0	23.00	22.72	22.86	22.73
			12	6	23.00	22.67	22.82	22.73

			12	11	23.00	22.64	22.80	22.74
			25	0	23.00	22.76	22.80	22.85
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		/	23330/793	/
LTE Band 14	10MHz	QPSK	1	0	25.00	/	24.71	/
			1	24	25.00	/	24.87	/
			1	49	25.00	/	24.84	/
			25	0	24.00	/	23.79	/
			25	12	24.00	/	23.77	/
			25	24	24.00	/	23.74	/
			50	0	24.00	/	23.80	/
		16QAM	1	0	24.00	/	23.52	/
			1	24	24.00	/	23.67	/
			1	49	24.00	/	23.63	/
			25	0	23.00	/	22.87	/
			25	12	23.00	/	22.80	/
			25	24	23.00	/	22.76	/
			50	0	23.00	/	22.84	/

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	24.50	24.41	24.43
			1	12	25.00	24.62	24.61	24.65
			1	24	25.00	24.51	24.43	24.60
			12	0	24.00	23.46	23.35	23.59
			12	6	24.00	23.44	23.31	23.55
			12	11	24.00	23.61	23.41	23.43
			25	0	24.00	23.51	23.37	23.60
		16QAM	1	0	24.00	23.39	23.52	23.37
			1	12	24.00	23.60	23.63	23.55
			1	24	24.00	23.48	23.48	23.55
			12	0	23.00	22.43	22.36	22.56
			12	6	23.00	22.37	22.34	22.58
			12	11	23.00	22.64	22.44	22.47
			25	0	23.00	22.55	22.38	22.61
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	25.00	24.49	24.45	24.53
			1	24	25.00	24.53	24.61	24.59
			1	49	25.00	24.63	24.68	24.76
			25	0	23.50	23.22	23.19	23.25
			25	12	23.50	23.24	23.25	23.28
			25	24	23.50	23.45	23.32	23.38
			50	0	23.50	23.31	23.29	23.28
		16QAM	1	0	24.00	23.46	23.41	23.25
			1	24	24.00	23.54	23.44	23.32
			1	49	24.00	23.61	23.45	23.44
			25	0	22.50	22.19	22.20	22.28
			25	12	22.50	22.20	22.24	22.27

			25	24	22.50	22.35	22.37	22.42
			50	0	22.50	22.33	22.29	22.32

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		26047/1850.7	26365/1882.5	26683/1914.3
LTE Band 25	1.4MHz	QPSK	1	0	24.00	23.32	23.51	23.47
			1	2	24.00	23.34	23.48	23.42
			1	5	24.00	23.31	23.47	23.41
			3	0	24.00	23.42	23.57	23.45
			3	1	24.00	23.40	23.60	23.48
			3	2	24.00	23.44	23.60	23.51
			6	0	23.00	22.53	22.65	22.56
		16QAM	1	0	22.50	22.18	22.22	22.23
			1	2	22.50	22.23	22.27	22.25
			1	5	22.50	22.19	22.20	22.23
			3	0	22.50	22.25	22.39	22.29
			3	1	22.50	22.22	22.42	22.34
			3	2	22.50	22.22	22.37	22.32
			6	0	22.00	21.52	21.61	21.40
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		26055/1851.5	26365/1882.5	26675/1913.5
LTE Band 25	3MHz	QPSK	1	0	23.50	23.25	23.25	23.21
			1	7	23.50	23.31	23.38	23.37
			1	14	23.50	23.21	23.28	23.27
			8	0	23.00	22.36	22.49	22.44
			8	4	23.00	22.40	22.49	22.41
			8	7	23.00	22.36	22.51	22.39
			15	0	23.00	22.33	22.52	22.47
		16QAM	1	0	22.50	22.01	22.25	22.07
			1	7	22.50	22.13	22.36	22.18
			1	14	22.50	22.02	22.24	22.05
			8	0	22.00	21.32	21.52	21.37
			8	4	22.00	21.31	21.53	21.38
			8	7	22.00	21.31	21.52	21.43
			15	0	22.00	21.31	21.50	21.37
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		26065/1852.5	26365/1882.5	26665/1912.5
LTE Band 25	5MHz	QPSK	1	0	24.00	23.42	23.59	23.50
			1	12	24.00	23.59	23.72	23.67
			1	24	24.00	23.46	23.62	23.49
			12	0	23.00	22.59	22.71	22.62
			12	6	23.00	22.56	22.68	22.67
			12	11	23.00	22.52	22.55	22.45
			25	0	23.00	22.55	22.61	22.59
		16QAM	1	0	23.00	22.47	22.55	22.61
			1	12	23.00	22.71	22.72	22.71
			1	24	23.00	22.58	22.60	22.63
			12	0	22.00	21.59	21.60	21.70

			12	6	22.00	21.59	21.59	21.66
			12	11	22.00	21.56	21.50	21.48
			25	0	22.00	21.58	21.63	21.54
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		26090/1855	26365/1882.5	26640/1910
LTE Band 25	10MHz	QPSK	1	0	24.00	23.49	23.56	23.53
			1	24	24.00	23.60	23.66	23.56
			1	49	24.00	23.64	23.67	23.59
			25	0	23.00	22.58	22.62	22.67
			25	12	23.00	22.56	22.66	22.63
			25	24	23.00	22.55	22.58	22.35
			50	0	23.00	22.61	22.61	22.56
		16QAM	1	0	23.00	22.46	22.41	22.32
			1	24	23.00	22.64	22.54	22.34
			1	49	23.00	22.70	22.54	22.40
			25	0	22.00	21.62	21.75	21.70
			25	12	22.00	21.56	21.67	21.64
			25	24	22.00	21.57	21.60	21.43
			50	0	22.00	21.66	21.62	21.55
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		26115/1857.5	26365/1882.5	26615/1907.5
LTE Band 25	15MHz	QPSK	1	0	24.00	23.42	23.52	23.63
			1	37	24.00	23.71	23.67	23.66
			1	74	24.00	23.69	23.60	23.67
			36	0	23.00	22.49	22.67	22.39
			36	18	23.00	22.77	22.83	22.38
			36	37	23.00	22.74	22.75	22.39
			75	0	23.00	22.72	22.75	22.55
		16QAM	1	0	23.00	22.43	22.67	22.42
			1	37	23.00	22.77	22.80	22.41
			1	74	23.00	22.74	22.74	22.38
			36	0	23.00	22.50	22.69	22.43
			36	18	23.00	22.76	22.79	22.45
			36	37	23.00	22.76	22.77	22.34
			75	0	22.00	21.66	21.72	21.53
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		26140/1860	26365/1882.5	26590/1905
LTE Band 25	20MHz	QPSK	1	0	24.00	23.41	23.49	23.39
			1	49	24.00	23.79	23.69	23.56
			1	99	24.00	23.65	23.54	23.43
			50	0	23.50	22.75	22.69	22.30
			50	24	23.50	22.67	22.67	22.25
			50	49	23.50	23.02	22.56	22.18
			100	0	23.00	22.89	22.58	22.26
		16QAM	1	0	23.00	22.28	22.60	22.23
			1	49	23.00	22.70	22.82	22.39
			1	99	23.00	22.60	22.73	22.24
			50	0	22.00	21.71	21.67	21.34

			50	24	22.00	21.71	21.71	21.34
			50	49	22.00	21.96	21.57	21.22
			100	0	22.00	21.84	21.63	21.30

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		26697/814.7	26740/819	26783/823.3
LTE Band 26a	1.4MHz	QPSK	1	0	24.50	24.20	24.34	24.40
			1	2	24.50	24.21	24.35	24.48
			1	5	24.50	24.18	24.31	24.44
			3	0	24.50	24.21	24.32	24.40
			3	1	24.50	24.22	24.31	24.44
			3	2	24.50	24.22	24.33	24.46
			6	0	24.00	23.36	23.46	23.52
		16QAM	1	0	23.50	23.07	23.13	23.19
			1	2	23.50	23.12	23.18	23.25
			1	5	23.50	23.04	23.12	23.17
			3	0	23.50	23.02	23.06	23.20
			3	1	23.50	22.98	23.09	23.23
			3	2	23.50	22.96	23.10	23.21
			6	0	22.50	22.35	22.43	22.39
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		26705/818.5	26740/819	26775/822.5
LTE Band 26a	3MHz	QPSK	1	0	24.50	24.10	24.17	24.25
			1	7	24.50	24.26	24.31	24.34
			1	14	24.50	24.23	24.23	24.25
			8	0	23.50	23.23	23.34	23.31
			8	4	23.50	23.21	23.36	23.34
			8	7	23.50	23.30	23.38	23.42
			15	0	23.50	23.26	23.38	23.35
		16QAM	1	0	23.50	22.91	22.86	23.14
			1	7	23.50	23.02	23.05	23.24
			1	14	23.50	22.94	22.97	23.21
			8	0	22.50	22.20	22.34	22.42
			8	4	22.50	22.23	22.30	22.41
			8	7	22.50	22.29	22.38	22.42
			15	0	22.50	22.19	22.24	22.44
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		26715/816.5	26740/819	26765/821.5
LTE Band 26a	5MHz	QPSK	1	0	25.00	24.34	24.41	24.48
			1	12	25.00	24.51	24.64	24.72
			1	24	25.00	24.45	24.55	24.59
			12	0	24.00	23.27	23.37	23.39
			12	6	24.00	23.28	23.42	23.37
			12	11	24.00	23.33	23.46	23.52
			25	0	23.50	23.32	23.49	23.45
		16QAM	1	0	24.00	23.29	23.26	23.30
			1	12	24.00	23.48	23.43	23.55
			1	24	24.00	23.43	23.39	23.46
			12	0	23.00	22.30	22.39	22.36
			12	6	23.00	22.31	22.38	22.34

			12	11	23.00	22.36	22.50	22.53
			25	0	23.00	22.34	22.50	22.53
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		/	26740/819	/
LTE Band 26a	10MHz	QPSK	1	0	25.00	/	24.40	/
			1	24	25.00	/	24.58	/
			1	49	25.00	/	24.71	/
			25	0	23.50	/	23.31	/
			25	12	23.50	/	23.36	/
			25	24	23.50	/	23.49	/
			50	0	23.50	/	23.40	/
		16QAM	1	0	23.50	/	23.21	/
			1	24	23.50	/	23.34	/
			1	49	23.50	/	23.43	/
			25	0	23.00	/	22.38	/
			25	12	23.00	/	22.40	/
			25	24	23.00	/	22.55	/
			50	0	22.50	/	22.47	/

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		26797/824.7	26915/836.5	27033/848.3
LTE Band 26b	1.4MHz	QPSK	1	0	24.50	24.42	24.34	24.28
			1	2	24.50	24.41	24.35	24.30
			1	5	24.50	24.39	24.30	24.26
			3	0	24.50	24.44	24.35	24.34
			3	1	24.50	24.42	24.35	24.30
			3	2	24.50	24.40	24.34	24.29
			6	0	24.00	23.56	23.42	23.44
		16QAM	1	0	23.50	23.25	23.09	23.11
			1	2	23.50	23.31	23.13	23.20
			1	5	23.50	23.22	23.08	23.10
			3	0	23.50	23.19	23.12	23.09
			3	1	23.50	23.20	23.12	23.06
			3	2	23.50	23.18	23.09	23.04
			6	0	23.00	22.57	22.31	22.51
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		26805/825.5	26915/836.5	27025/847.5
LTE Band 26b	3MHz	QPSK	1	0	24.50	24.26	24.23	24.12
			1	7	24.50	24.35	24.32	24.24
			1	14	24.50	24.27	24.18	24.14
			8	0	23.50	23.36	23.31	23.28
			8	4	23.50	23.38	23.32	23.33
			8	7	23.50	23.41	23.28	23.34
			15	0	23.50	23.40	23.32	23.28
		16QAM	1	0	23.50	23.17	23.02	23.05
			1	7	23.50	23.26	23.05	23.22
			1	14	23.50	23.20	22.96	23.16
			8	0	22.50	22.44	22.35	22.36

			8	4	22.50	22.42	22.35	22.34
			8	7	22.50	22.44	22.34	22.35
			15	0	22.50	22.47	22.24	22.32
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		26815/826.5	26915/836.5	27015/846.5
LTE Band 26b	5MHz	QPSK	1	0	25.00	24.55	24.42	24.48
			1	12	25.00	24.67	24.52	24.55
			1	24	25.00	24.55	24.38	24.45
			12	0	23.50	23.47	23.37	23.37
			12	6	23.50	23.48	23.36	23.40
			12	11	23.50	23.47	23.39	23.40
			25	0	23.50	23.43	23.35	23.41
		16QAM	1	0	24.00	23.42	23.43	23.29
			1	12	24.00	23.54	23.55	23.40
			1	24	24.00	23.47	23.37	23.33
			12	0	22.50	22.47	22.41	22.41
			12	6	22.50	22.47	22.41	22.34
			12	11	22.50	22.41	22.46	22.39
			25	0	22.50	22.48	22.37	22.45
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		26840/829	26915/836.5	26990/844
LTE Band 26b	10MHz	QPSK	1	0	25.00	24.54	24.62	24.48
			1	24	25.00	24.68	24.54	24.54
			1	49	25.00	24.61	24.48	24.55
			25	0	24.00	23.57	23.38	23.52
			25	12	24.00	23.55	23.36	23.50
			25	24	24.00	23.52	23.40	23.43
			50	0	24.00	23.59	23.41	23.46
		16QAM	1	0	24.00	23.52	23.40	23.42
			1	24	24.00	23.63	23.36	23.45
			1	49	24.00	23.54	23.23	23.46
			25	0	23.00	22.55	22.42	22.54
			25	12	23.00	22.53	22.49	22.50
			25	24	23.00	22.53	22.40	22.50
			50	0	23.00	22.60	22.41	22.45
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		26865/831.5	26915/836.5	26965/841.5
LTE Band 26b	15MHz	QPSK	1	0	25.00	24.46	24.41	24.46
			1	37	25.00	24.56	24.46	24.48
			1	74	25.00	24.38	24.32	24.37
			36	0	24.00	23.38	23.49	23.37
			36	18	24.00	23.56	23.53	23.38
			36	37	24.00	23.33	23.36	23.41
			75	0	24.00	23.54	23.39	23.41
		16QAM	1	0	24.00	23.37	23.51	23.40
			1	37	24.00	23.50	23.53	23.41
			1	74	24.00	23.32	23.39	23.34
			36	0	24.00	23.40	23.50	23.41

			36	18	24.00	23.56	23.51	23.37
			36	37	24.00	23.33	23.35	23.35
			75	0	23.00	22.50	22.42	22.38

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		39675/2498.5	40620/2593	41565/2687.5
LTE Band 41	5MHz	QPSK	1	0	23.50	22.24	22.67	23.16
			1	12	23.50	22.45	22.86	23.34
			1	24	23.50	22.36	22.79	23.18
			12	0	22.50	21.20	21.73	22.18
			12	6	22.50	21.18	21.71	22.18
			12	11	22.50	21.26	21.74	22.19
			25	0	22.50	21.18	21.69	22.19
		16QAM	1	0	22.50	21.12	21.72	22.07
			1	12	22.50	21.31	21.92	22.22
			1	24	22.50	21.23	21.84	22.07
			12	0	21.50	20.09	20.71	21.15
			12	6	21.50	20.10	20.69	21.12
			12	11	21.50	20.18	20.76	21.05
			25	0	21.50	20.17	20.68	21.20
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		39700/2501	40620/2593	41540/2685
LTE Band 41	10MHz	QPSK	1	0	23.50	22.25	22.66	23.17
			1	24	23.50	22.39	22.88	23.21
			1	49	23.50	22.53	22.92	23.20
			25	0	22.50	21.16	21.68	22.18
			25	12	22.50	21.17	21.71	22.18
			25	24	22.50	21.42	21.80	22.15
			50	0	22.50	21.33	21.78	22.20
		16QAM	1	0	22.50	21.03	21.42	22.15
			1	24	22.50	21.19	21.62	22.25
			1	49	22.50	21.39	21.67	22.21
			25	0	21.50	20.15	20.69	21.13
			25	12	21.50	20.16	20.67	21.12
			25	24	21.50	20.41	20.82	21.13
			50	0	21.50	20.30	20.72	21.13
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		39725/2503.5	40620/2593	41515/2682.5
LTE Band 41	15MHz	QPSK	1	0	23.50	22.06	22.53	23.15
			1	37	23.50	22.40	22.89	23.27
			1	74	23.50	22.52	22.92	23.21
			36	0	22.50	21.13	21.28	22.13
			36	18	22.50	21.52	21.62	22.29
			36	37	22.50	21.60	21.70	22.17
			75	0	22.50	21.38	21.73	22.21
		16QAM	1	0	22.50	21.15	21.31	22.11
			1	37	22.50	21.53	21.61	22.29
			1	74	22.50	21.66	21.69	22.17

			36	0	22.50	21.17	21.30	22.13
			36	18	22.50	21.51	21.64	22.27
			36	37	22.50	21.62	21.67	22.18
			75	0	21.50	20.32	20.71	21.12
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		39750/2506	40620/2593	41490/2680
LTE Band 41	20MHz	QPSK	1	0	23.50	22.05	22.34	23.04
			1	49	23.50	22.61	22.84	23.36
			1	99	23.50	22.60	22.84	23.21
			50	0	22.50	21.15	21.56	22.14
			50	24	22.50	21.20	21.55	22.20
			50	49	22.50	21.65	21.79	22.19
			100	0	22.50	21.40	21.66	22.19
		16QAM	1	0	22.50	21.16	21.17	21.93
			1	49	22.50	21.71	21.64	22.20
			1	99	22.50	21.74	21.66	22.03
			50	0	21.50	20.15	20.55	21.13
			50	24	21.50	20.13	20.56	21.12
			50	49	21.50	20.54	20.80	21.10
			100	0	21.50	20.36	20.61	21.12

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		131979/1710.7	132322/1745	132665/1779.3
LTE Band 66	1.4MHz	QPSK	1	0	23.00	22.45	22.56	22.84
			1	2	23.00	22.46	22.56	22.94
			1	5	23.00	22.51	22.55	22.87
			3	0	23.00	22.57	22.62	22.85
			3	1	23.00	22.54	22.61	22.90
			3	2	23.00	22.57	22.60	22.83
			6	0	22.50	21.66	21.65	22.04
		16QAM	1	0	22.00	21.24	21.34	21.61
			1	2	22.00	21.33	21.38	21.64
			1	5	22.00	21.32	21.39	21.60
			3	0	22.00	21.43	21.51	21.63
			3	1	22.00	21.42	21.45	21.66
			3	2	22.00	21.39	21.47	21.58
			6	0	21.00	20.49	20.51	20.93
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		131987/1711.5	132322/1745	132657/1778.5
LTE Band 66	3MHz	QPSK	1	0	23.00	22.34	22.36	22.71
			1	7	23.00	22.48	22.45	22.80
			1	14	23.00	22.42	22.42	22.71
			8	0	22.00	21.59	21.60	21.97
			8	4	22.00	21.60	21.65	21.96
			8	7	22.00	21.64	21.66	21.95
			15	0	22.00	21.63	21.66	21.96
		16QAM	1	0	22.00	21.41	21.37	21.67

			1	7	22.00	21.51	21.50	21.77
			1	14	22.00	21.41	21.48	21.68
			8	0	21.00	20.59	20.61	20.93
			8	4	21.00	20.57	20.63	20.92
			8	7	21.00	20.63	20.71	20.95
			15	0	21.00	20.62	20.68	20.91
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		131997/1712.5	132322/1745	132647/1777.5
LTE Band 66	5MHz	QPSK	1	0	23.50	22.67	22.73	23.01
			1	12	23.50	22.85	22.86	23.10
			1	24	23.50	22.76	22.79	23.05
			12	0	22.50	21.68	21.75	22.05
			12	6	22.50	21.63	21.76	22.01
			12	11	22.50	21.76	21.74	21.95
			25	0	22.50	21.78	21.71	22.01
		16QAM	1	0	22.00	21.63	21.70	21.96
			1	12	22.00	21.77	21.83	22.00
			1	24	22.00	21.70	21.72	21.92
			12	0	21.00	20.60	20.71	20.99
			12	6	21.00	20.66	20.68	20.97
			12	11	21.00	20.68	20.70	20.87
			25	0	21.50	20.74	20.80	21.03
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		132022/1715	132322/1745	132622/1775
LTE Band 66	10MHz	QPSK	1	0	23.50	22.63	22.71	23.04
			1	24	23.50	22.80	22.76	23.07
			1	49	23.50	22.95	22.90	23.06
			25	0	22.50	21.61	21.79	22.04
			25	12	22.50	21.60	21.77	22.04
			25	24	22.50	21.87	21.74	21.92
			50	0	22.50	21.82	21.81	22.08
		16QAM	1	0	22.50	21.72	21.70	22.11
			1	24	22.50	21.82	21.82	22.07
			1	49	22.50	21.95	21.94	22.02
			25	0	21.00	20.64	20.75	20.99
			25	12	21.00	20.61	20.74	20.99
			25	24	21.00	20.80	20.76	20.97
			50	0	21.50	20.77	20.80	21.02
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		132047/1717.5	132322/1745	132597/1772.5
LTE Band 66	15MHz	QPSK	1	0	23.50	22.59	22.66	23.09
			1	37	23.50	22.99	22.81	23.21
			1	74	23.50	23.02	22.88	23.08
			36	0	22.50	21.62	21.72	22.11
			36	18	22.50	21.93	21.89	22.20
			36	37	22.50	21.98	21.98	22.10
			75	0	22.50	21.90	21.94	22.16
		16QAM	1	0	22.50	21.64	21.67	22.11

			1	37	22.50	21.95	21.87	22.26
			1	74	22.50	21.94	21.94	22.05
			36	0	22.50	21.60	21.70	22.12
			36	18	22.50	21.91	21.88	22.21
			36	37	22.50	21.96	21.92	22.04
			75	0	21.50	20.81	20.83	21.10
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		132072/1720	132322/1745	132572/1770
LTE Band 66	20MHz	QPSK	1	0	23.50	22.53	22.68	23.05
			1	49	23.50	23.07	22.93	23.31
			1	99	23.50	22.98	22.99	23.10
			50	0	22.50	21.72	21.92	22.07
			50	24	22.50	21.70	21.87	22.04
			50	49	22.50	22.17	21.85	22.19
			100	0	22.50	22.02	21.90	22.16
		16QAM	1	0	22.50	21.46	21.61	22.00
			1	49	22.50	21.92	21.77	22.16
			1	99	22.50	21.85	21.90	21.95
			50	0	21.50	20.65	20.86	21.05
			50	24	21.50	20.66	20.88	21.02
			50	49	21.50	21.14	20.91	21.15
			100	0	21.50	20.92	20.88	21.08

8.4. Wi-Fi & BT Output Power

Mode	Channel	Frequency (MHz)	Tune-up (dBm)	Output Power (dBm)
802.11b	1	2412	17.00	16.97
	6	2437	17.00	16.49
	11	2462	17.00	16.78
802.11g	1	2412	17.00	16.74
	6	2437	17.00	16.52
	11	2462	17.00	16.11
802.11n HT20	1	2412	16.00	14.53
	6	2437	16.00	15.47
	11	2462	16.00	15.96

Mode	Channel	Frequency (MHz)	Tune-up (dBm)	Output Power (dBm)
802.11a	36	5180	15.50	14.51
	40	5200	15.50	15.23
	48	5240	15.50	15.02
802.11n HT20	36	5180	15.50	14.72
	40	5200	15.50	15.05
	48	5240	15.50	14.80
802.11n HT40	38	5190	15.00	14.53
	46	5230	15.00	13.83
802.11ac VHT20	36	5180	14.50	13.41
	40	5200	14.50	14.09
	48	5240	14.50	13.76
802.11ac VHT40	38	5190	14.00	13.73
	46	5230	14.00	12.88
802.11ac VHT80	42	5210	12.00	11.77

Mode	Channel	Frequency (MHz)	Tune-up (dBm)	Output Power (dBm)
802.11a	52	5260	13.50	13.03
	56	5280	13.00	12.56
	64	5320	12.50	11.18
802.11n HT20	52	5260	14.50	14.10
	56	5280	12.50	12.40
	64	5320	11.00	10.97
802.11n HT40	54	5270	12.50	12.42
	62	5310	11.00	10.61

802.11ac VHT20	52	5260	13.00	12.81
	56	5280	11.50	11.16
	64	5320	9.50	9.48
802.11ac VHT40	54	5270	13.00	12.57
	62	5310	11.00	10.58
802.11ac VHT80	58	5290	10.50	10.21

Mode	Channel	Frequency (MHz)	Tune-up (dBm)	Output Power (dBm)
802.11a	100	5500	13.00	11.41
	120	5600	13.00	12.60
	140	5700	13.00	12.76
802.11n	100	5500	12.00	10.47
	120	5600	12.00	11.67
	140	5700	12.00	11.89
802.11n	102	5510	12.50	10.76
	118	5590	12.50	11.15
	134	5670	12.50	12.31
802.11ac (VHT20)	100	5500	12.50	10.77
	120	5600	12.50	11.77
	140	5700	12.50	12.14
802.11ac (VHT40)	102	5510	12.00	11.47
	118	5590	12.00	10.36
	134	5670	12.00	11.54
802.11ac (VHT80)	106	5530	10.00	9.27
	122	5610	10.00	9.70

Mode	Channel	Frequency (MHz)	Tune-up (dBm)	Output Power (dBm)
802.11a	149	5745	12.00	11.08
	157	5785	12.00	11.94
	165	5825	12.00	11.28
802.11n HT20	149	5745	12.00	11.14
	157	5785	12.00	11.60
	165	5825	12.00	11.02
802.11n HT40	151	5755	11.50	10.82
	159	5795	11.50	11.49
802.11ac	149	5745	12.00	11.05

VHT20	157	5785	12.00	11.81
	165	5825	12.00	11.46
802.11ac VHT40	151	5755	11.50	10.87
	159	5795	11.50	11.07
802.11ac VHT80	155	5775	10.50	10.45

	Output Power (dBm)				
	Channel	Tune-up (dBm)	Data Rates		
			1M	2M	3M
BR+EDR	0CH	2.00	1.36	1.07	0.97
	39CH	4.00	3.34	2.49	2.14
	78CH	2.00	1.97	1.97	1.13

Mode	Channel	Tune-up (dBm)	Output Power (dBm)
BLE1M	CH00	0.00	-0.18
	CH19	1.00	0.96
	CH39	1.00	0.11

8.5. NFC

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

9. Stand-alone SAR test exclusion

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

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

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

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

Mode	Pmax (dBm)	Pmax (mW)	Distance (mm)	f (GHz)	Calculation Result	SAR Exclusion threshold	SAR test exclusion
Bluetooth	4.00	2.51	5	2.480	0.8	3	Yes

NOTE: Standalone SAR test exclusion for Bluetooth.

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

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

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

Mode	Position	Pmax (dBm)	Pmax (mW)	Distance (mm)	f (GHz)	x	Estimated SAR (W/kg)
Bluetooth	Body	4.00	2.51	5	2.48	7.5	0.105

NOTE: Estimated SAR calculation for Bluetooth

10. SAR Measurement Results

< GSM 850 >

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						
Top Side (Version C)	189/836.4	GPRS(GMSK 4TS)	0.204	0.141	0.11	30.01	30.50	0.228	2025/4/17	
Front Side (Version C)	189/836.4	GPRS(GMSK 4TS)	0.333	0.238	-3.49	30.01	30.50	0.373	2025/4/17	1#
Front Side (Version A)	189/836.4	GPRS(GMSK 4TS)	0.312	0.220	0.12	30.01	30.50	0.349	2025/4/17	
Front Side (Version B)	189/836.4	GPRS(GMSK 4TS)	0.305	0.217	2.05	30.01	30.50	0.341	2025/4/17	
Left Side (Version C)	189/836.4	GPRS(GMSK 4TS)	0.185	0.127	2.13	30.01	30.50	0.207	2025/4/17	
Right Side (Version C)	189/836.4	GPRS(GMSK 4TS)	0.070	0.048	0.06	30.01	30.50	0.078	2025/4/17	
Bottom Side (Version C)	189/836.4	GPRS(GMSK 4TS)	0.140	0.095	-0.87	30.01	30.50	0.157	2025/4/17	

< GSM 1900 >

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						
Top Side (Version C)	661/1880	GPRS(GMSK 4TS)	0.318	0.221	-2.03	29.00	29.50	0.357	2025/4/19	
Front Side (Version C)	661/1880	GPRS(GMSK 4TS)	0.494	0.361	-1.84	29.00	29.50	0.554	2025/4/19	2#
Front Side (Version A)	661/1880	GPRS(GMSK 4TS)	0.471	0.341	2.01	29.00	29.50	0.528	2025/4/19	
Front Side (Version B)	661/1880	GPRS(GMSK 4TS)	0.450	0.312	1.50	29.00	29.50	0.505	2025/4/19	
Left Side (Version C)	661/1880	GPRS(GMSK 4TS)	0.260	0.188	2.21	29.00	29.50	0.292	2025/4/19	
Right Side (Version C)	661/1880	GPRS(GMSK 4TS)	0.100	0.069	3.31	29.00	29.50	0.112	2025/4/19	
Bottom Side (Version C)	661/1880	GPRS(GMSK 4TS)	0.208	0.152	-2.40	29.00	29.50	0.233	2025/4/19	

< 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						
Top Side (Version C)	9400/1880	RMC12.2K	0.318	0.194	0.84	23.58	24.00	0.350	2025/4/19	
Front Side (Version C)	9400/1880	RMC12.2K	0.494	0.318	-0.39	23.58	24.00	0.544	2025/4/19	3#
Front Side (Version A)	9400/1880	RMC12.2K	0.475	0.305	2.01	23.58	24.00	0.523	2025/4/19	
Front Side (Version B)	9400/1880	RMC12.2K	0.452	0.287	1.10	23.58	24.00	0.498	2025/4/19	
Left Side (Version C)	9400/1880	RMC12.2K	0.270	0.174	0.51	23.58	24.00	0.297	2025/4/19	
Right Side (Version C)	9400/1880	RMC12.2K	0.108	0.066	0.74	23.58	24.00	0.119	2025/4/19	
Bottom Side (Version C)	9400/1880	RMC12.2K	0.212	0.136	1.71	23.58	24.00	0.234	2025/4/19	

< 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						
Top Side (Version C)	4182/836.4	RMC12.2K	0.168	0.108	-2.34	23.51	24.00	0.188	2025/4/17	
Front Side (Version C)	4182/836.4	RMC12.2K	0.268	0.175	1.86	23.51	24.00	0.300	2025/4/17	4#
Front Side (Version A)	4182/836.4	RMC12.2K	0.247	0.158	2.54	23.51	24.00	0.277	2025/4/17	
Front Side (Version B)	4182/836.4	RMC12.2K	0.229	0.138	3.62	23.51	24.00	0.256	2025/4/17	
Left Side (Version C)	4182/836.4	RMC12.2K	0.145	0.094	-0.21	23.51	24.00	0.162	2025/4/17	
Right Side (Version C)	4182/836.4	RMC12.2K	0.054	0.035	2.94	23.51	24.00	0.060	2025/4/17	
Bottom Side (Version C)	4182/836.4	RMC12.2K	0.116	0.073	2.46	23.51	24.00	0.130	2025/4/17	

< LTE Band2 >

Test Position of Body with 0mm	Test channel /Freq.	Mode	SAR Value (W/kg)	Power Drift(%)	Conducted Power	Tune-up Power	Scaled SAR	Date	Plot

			1-g	10-g		(dBm)	(dBm)	1-g (W/Kg)		
1RB										
Top Side (Version C)	18900/1880	20M QPSK(1,49)	0.282	0.197	0.96	23.70	24.00	0.302	2025/4/19	
Front Side (Version C)	18900/1880	20M QPSK(1,49)	0.460	0.324	4.49	23.70	24.00	0.493	2025/4/19	10#
Front Side (Version A)	18900/1880	20M QPSK(1,49)	0.450	0.302	2.01	23.70	24.00	0.482	2025/4/19	
Front Side (Version B)	18900/1880	20M QPSK(1,49)	0.421	0.290	1.04	23.70	24.00	0.451	2025/4/19	
Left Side (Version C)	18900/1880	20M QPSK(1,49)	0.255	0.178	-1.26	23.70	24.00	0.273	2025/4/19	
Right Side (Version C)	18900/1880	20M QPSK(1,49)	0.096	0.066	0.91	23.70	24.00	0.103	2025/4/19	
Bottom Side (Version C)	18900/1880	20M QPSK(1,49)	0.196	0.138	0.96	23.70	24.00	0.210	2025/4/19	
50%RB										
Top Side (Version C)	18900/1880	20M QPSK(50,49)	0.168	0.116	3.02	22.58	23.50	0.208	2025/4/19	
Front Side (Version C)	18900/1880	20M QPSK(50,49)	0.264	0.179	3.35	22.58	23.50	0.326	2025/4/19	
Front Side (Version A)	18900/1880	20M QPSK(50,49)	0.247	0.156	2.54	22.58	23.50	0.305	2025/4/19	
Front Side (Version B)	18900/1880	20M QPSK(50,49)	0.228	0.141	1.23	22.58	23.50	0.282	2025/4/19	
Left Side (Version C)	18900/1880	20M QPSK(50,49)	0.133	0.095	-0.45	22.58	23.50	0.164	2025/4/19	
Right Side (Version C)	18900/1880	20M QPSK(50,49)	0.057	0.037	-0.89	22.58	23.50	0.070	2025/4/19	
Bottom Side (Version C)	18900/1880	20M QPSK(50,49)	0.117	0.070	1.26	22.58	23.50	0.145	2025/4/19	

< LTE Band4 >

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										
Top Side (Version C)	20175/1732.5	20M QPSK(1,49)	0.282	0.185	2.07	22.90	23.00	0.289	2025/4/18	

Front Side (Version C)	20175/1732.5	20M QPSK(1,49)	0.440	0.294	3.47	22.90	23.00	0.450	2025/4/18	11#
Front Side (Version A)	20175/1732.5	20M QPSK(1,49)	0.412	0.284	1.20	22.90	23.00	0.422	2025/4/18	
Front Side (Version B)	20175/1732.5	20M QPSK(1,49)	0.400	0.260	2.89	22.90	23.00	0.409	2025/4/18	
Left Side (Version C)	20175/1732.5	20M QPSK(1,49)	0.220	0.147	3.75	22.90	23.00	0.225	2025/4/18	
Right Side (Version C)	20175/1732.5	20M QPSK(1,49)	0.096	0.062	3.55	22.90	23.00	0.098	2025/4/18	
Bottom Side (Version C)	20175/1732.5	20M QPSK(1,49)	0.184	0.120	-1.38	22.90	23.00	0.188	2025/4/18	
50%RB										
Top Side (Version C)	20175/1732.5	20M QPSK(50,49)	0.156	0.098	2.15	21.71	22.00	0.167	2025/4/18	
Front Side (Version C)	20175/1732.5	20M QPSK(50,49)	0.242	0.156	2.55	21.71	22.00	0.259	2025/4/18	
Front Side (Version A)	20175/1732.5	20M QPSK(50,49)	0.221	0.132	4.02	21.71	22.00	0.236	2025/4/18	
Front Side (Version B)	20175/1732.5	20M QPSK(50,49)	0.209	0.112	2.01	21.71	22.00	0.223	2025/4/18	
Left Side (Version C)	20175/1732.5	20M QPSK(50,49)	0.113	0.084	-3.69	21.71	22.00	0.121	2025/4/18	
Right Side (Version C)	20175/1732.5	20M QPSK(50,49)	0.049	0.037	-3.96	21.71	22.00	0.052	2025/4/18	
Bottom Side (Version C)	20175/1732.5	20M QPSK(50,49)	0.095	0.070	1.77	21.71	22.00	0.102	2025/4/18	

< LTE Band5 >

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										
Top Side (Version C)	20525/836.5	10M QPSK(1,24)	0.294	0.183	3.34	24.83	25.00	0.306	2025/4/17	
Front Side (Version C)	20525/836.5	10M QPSK(1,24)	0.440	0.276	-0.71	24.83	25.00	0.458	2025/4/17	12#
Front Side (Version A)	20525/836.5	10M QPSK(1,24)	0.428	0.254	3.36	24.83	25.00	0.445	2025/4/17	
Front Side	20525/836.5	10M	0.411	0.241	2.74	24.83	25.00	0.427	2025/4/17	

(Version B)		QPSK(1,24)								
Left Side (Version C)	20525/836.5	10M QPSK(1,24)	0.225	0.140	3.55	24.83	25.00	0.234	2025/4/17	
Right Side (Version C)	20525/836.5	10M QPSK(1,24)	0.088	0.055	-4.00	24.83	25.00	0.092	2025/4/17	
Bottom Side (Version C)	20525/836.5	10M QPSK(1,24)	0.180	0.112	-2.04	24.83	25.00	0.187	2025/4/17	
50%RB										
Top Side (Version C)	20525/836.5	10M QPSK(25,0)	0.169	0.104	4.19	23.63	24.00	0.184	2025/4/17	
Front Side (Version C)	20525/836.5	10M QPSK(25,0)	0.231	0.154	-1.00	23.63	24.00	0.252	2025/4/17	
Front Side (Version A)	20525/836.5	10M QPSK(25,0)	0.215	0.140	0.21	23.63	24.00	0.234	2025/4/17	
Front Side (Version B)	20525/836.5	10M QPSK(25,0)	0.203	0.125	2.16	23.63	24.00	0.221	2025/4/17	
Left Side (Version C)	20525/836.5	10M QPSK(25,0)	0.133	0.071	2.86	23.63	24.00	0.145	2025/4/17	
Right Side (Version C)	20525/836.5	10M QPSK(25,0)	0.050	0.029	0.98	23.63	24.00	0.054	2025/4/17	
Bottom Side (Version C)	20525/836.5	10M QPSK(25,0)	0.090	0.066	-3.93	23.63	24.00	0.098	2025/4/17	

< LTE Band7 >

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										
Top Side (Version C)	21100/2535	20M QPSK(1,99)	0.204	0.135	3.13	21.94	22.50	0.232	2025/4/21	
Front Side (Version C)	21100/2535	20M QPSK(1,99)	0.299	0.204	-2.24	21.94	22.50	0.340	2025/4/21	13#
Front Side (Version A)	21100/2535	20M QPSK(1,99)	0.268	0.187	1.52	21.94	22.50	0.305	2025/4/21	
Front Side (Version B)	21100/2535	20M QPSK(1,99)	0.256	0.174	2.30	21.94	22.50	0.291	2025/4/21	
Left Side (Version C)	21100/2535	20M QPSK(1,99)	0.165	0.110	0.37	21.94	22.50	0.188	2025/4/21	
Right Side (Version C)	21100/2535	20M QPSK(1,99)	0.062	0.040	-2.51	21.94	22.50	0.071	2025/4/21	

Bottom Side (Version C)	21100/2535	20M QPSK(1,99)	0.128	0.086	-1.14	21.94	22.50	0.146	2025/4/21	
50%RB										
Top Side (Version C)	21100/2535	20M QPSK(50,49)	0.119	0.071	-3.53	20.79	21.50	0.140	2025/4/21	
Front Side (Version C)	21100/2535	20M QPSK(50,49)	0.165	0.114	-3.95	20.79	21.50	0.194	2025/4/21	
Front Side (Version A)	21100/2535	20M QPSK(50,49)	0.150	0.100	2.45	20.79	21.50	0.177	2025/4/21	
Front Side (Version B)	21100/2535	20M QPSK(50,49)	0.139	0.087	1.12	20.79	21.50	0.164	2025/4/21	
Left Side (Version C)	21100/2535	20M QPSK(50,49)	0.095	0.058	-3.63	20.79	21.50	0.112	2025/4/21	
Right Side (Version C)	21100/2535	20M QPSK(50,49)	0.037	0.023	-1.89	20.79	21.50	0.044	2025/4/21	
Bottom Side (Version C)	21100/2535	20M QPSK(50,49)	0.064	0.044	-1.89	20.79	21.50	0.075	2025/4/21	

< LTE Band12 >

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										
Top Side (Version C)	23095/707.5	10M QPSK(1,49)	0.090	0.056	-3.40	24.61	25.00	0.098	2025/4/16	
Front Side (Version C)	23095/707.5	10M QPSK(1,49)	0.117	0.075	-3.44	24.61	25.00	0.128	2025/4/16	14#
Front Side (Version A)	23095/707.5	10M QPSK(1,49)	0.102	0.068	1.54	24.61	25.00	0.112	2025/4/16	
Front Side (Version B)	23095/707.5	10M QPSK(1,49)	0.092	0.060	0.03	24.61	25.00	0.101	2025/4/16	
Left Side (Version C)	23095/707.5	10M QPSK(1,49)	0.080	0.049	3.79	24.61	25.00	0.088	2025/4/16	
Right Side (Version C)	23095/707.5	10M QPSK(1,49)	0.024	0.015	3.12	24.61	25.00	0.026	2025/4/16	
Bottom Side (Version C)	23095/707.5	10M QPSK(1,49)	0.048	0.030	-2.67	24.61	25.00	0.053	2025/4/16	
50%RB										
Top Side (Version C)	23095/707.5	10M QPSK(25,24)	0.048	0.031	-2.75	23.48	24.00	0.054	2025/4/16	

Front Side (Version C)	23095/707.5	10M QPSK(25,24)	0.069	0.039	-3.93	23.48	24.00	0.078	2025/4/16	
Front Side (Version A)	23095/707.5	10M QPSK(25,24)	0.060	0.032	1.14	23.48	24.00	0.068	2025/4/16	
Front Side (Version B)	23095/707.5	10M QPSK(25,24)	0.051	0.025	4.02	23.48	24.00	0.057	2025/4/16	
Left Side (Version C)	23095/707.5	10M QPSK(25,24)	0.046	0.028	-4.90	23.48	24.00	0.052	2025/4/16	
Right Side (Version C)	23095/707.5	10M QPSK(25,24)	0.013	0.009	-3.81	23.48	24.00	0.015	2025/4/16	
Bottom Side (Version C)	23095/707.5	10M QPSK(25,24)	0.025	0.017	3.57	23.48	24.00	0.028	2025/4/16	

< LTE Band13 >

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										
Top Side (Version C)	23230/782	10M QPSK(1,49)	0.150	0.093	1.18	24.73	25.00	0.160	2025/4/16	
Front Side (Version C)	23230/782	10M QPSK(1,49)	0.220	0.137	-1.13	24.73	25.00	0.234	2025/4/16	15#
Front Side (Version A)	23230/782	10M QPSK(1,49)	0.208	0.115	1.54	24.73	25.00	0.221	2025/4/16	
Front Side (Version B)	23230/782	10M QPSK(1,49)	0.197	0.100	4.20	24.73	25.00	0.210	2025/4/16	
Left Side (Version C)	23230/782	10M QPSK(1,49)	0.130	0.079	-3.39	24.73	25.00	0.138	2025/4/16	
Right Side (Version C)	23230/782	10M QPSK(1,49)	0.050	0.030	2.92	24.73	25.00	0.053	2025/4/16	
Bottom Side (Version C)	23230/782	10M QPSK(1,49)	0.096	0.057	-1.70	24.73	25.00	0.102	2025/4/16	
50%RB										
Top Side (Version C)	23230/782	10M QPSK(25,24)	0.088	0.053	3.36	23.55	24.00	0.098	2025/4/16	
Front Side (Version C)	23230/782	10M QPSK(25,24)	0.131	0.073	-3.92	23.55	24.00	0.145	2025/4/16	
Front Side (Version A)	23230/782	10M QPSK(25,24)	0.127	0.060	2.01	23.55	24.00	0.141	2025/4/16	
Front Side	23230/782	10M	0.108	0.052	1.36	23.55	24.00	0.120	2025/4/16	

(Version B)		QPSK(25,24)								
Left Side (Version C)	23230/782	10M QPSK(25,24)	0.071	0.045	-1.62	23.55	24.00	0.079	2025/4/16	
Right Side (Version C)	23230/782	10M QPSK(25,24)	0.030	0.016	-4.71	23.55	24.00	0.033	2025/4/16	
Bottom Side (Version C)	23230/782	10M QPSK(25,24)	0.052	0.031	4.67	23.55	24.00	0.058	2025/4/16	

< LTE Band14 >

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										
Top Side (Version C)	23330/793	10M QPSK(1,24)	0.282	0.166	1.15	24.87	25.00	0.291	2025/4/16	
Front Side (Version C)	23330/793	10M QPSK(1,24)	0.465	0.276	-3.61	24.87	25.00	0.479	2025/4/16	16#
Front Side (Version A)	23330/793	10M QPSK(1,24)	0.441	0.254	2.01	24.87	25.00	0.454	2025/4/16	
Front Side (Version B)	23330/793	10M QPSK(1,24)	0.416	0.230	1.56	24.87	25.00	0.429	2025/4/16	
Left Side (Version C)	23330/793	10M QPSK(1,24)	0.240	0.142	2.55	24.87	25.00	0.247	2025/4/16	
Right Side (Version C)	23330/793	10M QPSK(1,24)	0.102	0.060	3.44	24.87	25.00	0.105	2025/4/16	
Bottom Side (Version C)	23330/793	10M QPSK(1,24)	0.196	0.115	0.11	24.87	25.00	0.202	2025/4/16	
50%RB										
Top Side (Version C)	23330/793	10M QPSK(25,0)	0.154	0.090	3.98	23.79	24.00	0.162	2025/4/16	
Front Side (Version C)	23330/793	10M QPSK(25,0)	0.269	0.151	3.68	23.79	24.00	0.282	2025/4/16	
Front Side (Version A)	23330/793	10M QPSK(25,0)	0.237	0.134	2.01	23.79	24.00	0.249	2025/4/16	
Front Side (Version B)	23330/793	10M QPSK(25,0)	0.210	0.110	1.87	23.79	24.00	0.220	2025/4/16	
Left Side (Version C)	23330/793	10M QPSK(25,0)	0.140	0.076	3.90	23.79	24.00	0.147	2025/4/16	
Right Side (Version C)	23330/793	10M QPSK(25,0)	0.055	0.033	-4.67	23.79	24.00	0.058	2025/4/16	

Bottom Side (Version C)	23330/793	10M QPSK(25,0)	0.103	0.058	3.59	23.79	24.00	0.108	2025/4/16	

< LTE Band17 >

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										
Top Side (Version C)	23790/710	10M QPSK(1,49)	0.108	0.070	3.90	24.68	25.00	0.116	2025/4/16	
Front Side (Version C)	23790/710	10M QPSK(1,49)	0.158	0.106	0.03	24.68	25.00	0.170	2025/4/16	17#
Front Side (Version A)	23790/710	10M QPSK(1,49)	0.132	0.087	1.50	24.68	25.00	0.142	2025/4/16	
Front Side (Version B)	23790/710	10M QPSK(1,49)	0.118	0.079	2.01	24.68	25.00	0.127	2025/4/16	
Left Side (Version C)	23790/710	10M QPSK(1,49)	0.100	0.067	1.80	24.68	25.00	0.108	2025/4/16	
Right Side (Version C)	23790/710	10M QPSK(1,49)	0.040	0.027	1.90	24.68	25.00	0.043	2025/4/16	
Bottom Side (Version C)	23790/710	10M QPSK(1,49)	0.072	0.047	-0.37	24.68	25.00	0.078	2025/4/16	
50%RB										
Top Side (Version C)	23790/710	10M QPSK(25,24)	0.059	0.035	-0.05	23.32	23.50	0.061	2025/4/16	
Front Side (Version C)	23790/710	10M QPSK(25,24)	0.085	0.063	-4.35	23.32	23.50	0.089	2025/4/16	
Front Side (Version A)	23790/710	10M QPSK(25,24)	0.074	0.052	2.54	23.32	23.50	0.077	2025/4/16	
Front Side (Version B)	23790/710	10M QPSK(25,24)	0.069	0.046	3.32	23.32	23.50	0.072	2025/4/16	
Left Side (Version C)	23790/710	10M QPSK(25,24)	0.057	0.035	0.24	23.32	23.50	0.059	2025/4/16	
Right Side (Version C)	23790/710	10M QPSK(25,24)	0.022	0.015	-0.62	23.32	23.50	0.023	2025/4/16	
Bottom Side (Version C)	23790/710	10M QPSK(25,24)	0.038	0.026	2.95	23.32	23.50	0.040	2025/4/16	

< LTE Band25 >

Test Position of Body with 0mm	Test channel /Freq.	Mode	SAR Value (W/kg)	Power Drift(%)	Conducted Power	Tune-up Power	Scaled SAR	Date	Plot

			1-g	10-g		(dBm)	(dBm)	1-g (W/Kg)		
1RB										
Top Side (Version C)	26365/1882.5	20M QPSK(1,49)	0.372	0.239	1.05	23.69	24.00	0.400	2025/4/19	
Front Side (Version C)	26365/1882.5	20M QPSK(1,49)	0.582	0.382	-2.66	23.69	24.00	0.625	2025/4/19	18#
Front Side (Version A)	26365/1882.5	20M QPSK(1,49)	0.562	0.356	3.17	23.69	24.00	0.604	2025/4/19	
Front Side (Version B)	26365/1882.5	20M QPSK(1,49)	0.531	0.330	1.20	23.69	24.00	0.570	2025/4/19	
Left Side (Version C)	26365/1882.5	20M QPSK(1,49)	0.310	0.197	-0.16	23.69	24.00	0.333	2025/4/19	
Right Side (Version C)	26365/1882.5	20M QPSK(1,49)	0.118	0.076	2.24	23.69	24.00	0.127	2025/4/19	
Bottom Side (Version C)	26365/1882.5	20M QPSK(1,49)	0.236	0.152	-3.93	23.69	24.00	0.253	2025/4/19	
50%RB										
Top Side (Version C)	26365/1882.5	20M QPSK(50,0)	0.207	0.132	-0.75	22.69	23.50	0.249	2025/4/19	
Front Side (Version C)	26365/1882.5	20M QPSK(50,0)	0.310	0.212	-4.74	22.69	23.50	0.374	2025/4/19	
Front Side (Version A)	26365/1882.5	20M QPSK(50,0)	0.301	0.190	4.01	22.69	23.50	0.363	2025/4/19	
Front Side (Version B)	26365/1882.5	20M QPSK(50,0)	0.282	0.174	1.23	22.69	23.50	0.340	2025/4/19	
Left Side (Version C)	26365/1882.5	20M QPSK(50,0)	0.171	0.111	1.45	22.69	23.50	0.206	2025/4/19	
Right Side (Version C)	26365/1882.5	20M QPSK(50,0)	0.060	0.040	0.01	22.69	23.50	0.072	2025/4/19	
Bottom Side (Version C)	26365/1882.5	20M QPSK(50,0)	0.132	0.091	-3.58	22.69	23.50	0.159	2025/4/19	

< LTE Band26a >

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										
Top Side (Version C)	26740/819	10M QPSK(1,49)	0.234	0.152	2.73	24.71	25.00	0.250	2025/4/17	

Front Side (Version C)	26740/819	10M QPSK(1,49)	0.344	0.226	-0.57	24.71	25.00	0.368	2025/4/17	20#
Front Side (Version A)	26740/819	10M QPSK(1,49)	0.321	0.210	1.54	24.71	25.00	0.343	2025/4/17	
Front Side (Version B)	26740/819	10M QPSK(1,49)	0.302	0.200	2.01	24.71	25.00	0.323	2025/4/17	
Left Side (Version C)	26740/819	10M QPSK(1,49)	0.180	0.117	0.24	24.71	25.00	0.192	2025/4/17	
Right Side (Version C)	26740/819	10M QPSK(1,49)	0.070	0.045	1.67	24.71	25.00	0.075	2025/4/17	
Bottom Side (Version C)	26740/819	10M QPSK(1,49)	0.140	0.089	-3.58	24.71	25.00	0.150	2025/4/17	
50%RB										
Top Side (Version C)	26740/819	10M QPSK(25,24)	0.137	0.080	-4.95	23.49	23.50	0.137	2025/4/17	
Front Side (Version C)	26740/819	10M QPSK(25,24)	0.196	0.130	-4.91	23.49	23.50	0.196	2025/4/17	
Front Side (Version A)	26740/819	10M QPSK(25,24)	0.174	0.121	0.17	23.49	23.50	0.174	2025/4/17	
Front Side (Version B)	26740/819	10M QPSK(25,24)	0.158	0.109	2.30	23.49	23.50	0.158	2025/4/17	
Left Side (Version C)	26740/819	10M QPSK(25,24)	0.107	0.069	2.68	23.49	23.50	0.107	2025/4/17	
Right Side (Version C)	26740/819	10M QPSK(25,24)	0.037	0.027	1.85	23.49	23.50	0.037	2025/4/17	
Bottom Side (Version C)	26740/819	10M QPSK(25,24)	0.080	0.051	-3.11	23.49	23.50	0.080	2025/4/17	

< LTE Band26b >

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										
Top Side (Version C)	26865/831.5	15M QPSK(1,37)	0.276	0.178	-2.93	24.46	25.00	0.313	2025/4/17	
Front Side (Version C)	26865/831.5	15M QPSK(1,37)	0.418	0.270	1.00	24.46	25.00	0.473	2025/4/17	21#
Front Side (Version A)	26865/831.5	15M QPSK(1,37)	0.400	0.254	1.54	24.46	25.00	0.453	2025/4/17	
Front Side	26865/831.5	15M	0.374	0.237	0.63	24.46	25.00	0.424	2025/4/17	

(Version B)		QPSK(1,37)								
Left Side (Version C)	26865/831.5	15M QPSK(1,37)	0.220	0.139	-3.05	24.46	25.00	0.249	2025/4/17	
Right Side (Version C)	26865/831.5	15M QPSK(1,37)	0.084	0.053	-1.70	24.46	25.00	0.095	2025/4/17	
Bottom Side (Version C)	26865/831.5	15M QPSK(1,37)	0.168	0.109	-1.83	24.46	25.00	0.190	2025/4/17	
50%RB										
Top Side (Version C)	26865/831.5	15M QPSK(36,18)	0.156	0.094	3.70	23.53	24.00	0.174	2025/4/17	
Front Side (Version C)	26865/831.5	15M QPSK(36,18)	0.245	0.149	-4.98	23.53	24.00	0.273	2025/4/17	
Front Side (Version A)	26865/831.5	15M QPSK(36,18)	0.221	0.127	3.02	23.53	24.00	0.246	2025/4/17	
Front Side (Version B)	26865/831.5	15M QPSK(36,18)	0.208	0.110	1.14	23.53	24.00	0.232	2025/4/17	
Left Side (Version C)	26865/831.5	15M QPSK(36,18)	0.112	0.072	1.87	23.53	24.00	0.125	2025/4/17	
Right Side (Version C)	26865/831.5	15M QPSK(36,18)	0.048	0.031	-3.30	23.53	24.00	0.053	2025/4/17	
Bottom Side (Version C)	26865/831.5	15M QPSK(36,18)	0.096	0.063	3.01	23.53	24.00	0.107	2025/4/17	

< LTE Band41 >

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										
Top Side (Version C)	40620/2593	20M QPSK(1,49)	0.126	0.084	3.72	22.84	23.50	0.147	2025/4/21	
Front Side (Version C)	40620/2593	20M QPSK(1,49)	0.195	0.137	2.80	22.84	23.50	0.227	2025/4/21	19#
Front Side (Version A)	40620/2593	20M QPSK(1,49)	0.170	0.115	3.45	22.84	23.50	0.198	2025/4/21	
Front Side (Version B)	40620/2593	20M QPSK(1,49)	0.156	0.102	1.02	22.84	23.50	0.182	2025/4/21	
Left Side (Version C)	40620/2593	20M QPSK(1,49)	0.115	0.081	-2.12	22.84	23.50	0.134	2025/4/21	
Right Side (Version C)	40620/2593	20M QPSK(1,49)	0.046	0.031	-0.90	22.84	23.50	0.054	2025/4/21	

Bottom Side (Version C)	40620/2593	20M QPSK(1,49)	0.084	0.058	1.71	22.84	23.50	0.098	2025/4/21	
50%RB										
Top Side (Version C)	40620/2593	20M QPSK(50,24)	0.073	0.049	-3.08	21.55	22.50	0.091	2025/4/21	
Front Side (Version C)	40620/2593	20M QPSK(50,24)	0.115	0.076	3.31	21.55	22.50	0.143	2025/4/21	
Front Side (Version A)	40620/2593	20M QPSK(50,24)	0.102	0.065	4.02	21.55	22.50	0.127	2025/4/21	
Front Side (Version B)	40620/2593	20M QPSK(50,24)	0.089	0.059	1.63	21.55	22.50	0.111	2025/4/21	
Left Side (Version C)	40620/2593	20M QPSK(50,24)	0.069	0.045	-1.27	21.55	22.50	0.086	2025/4/21	
Right Side (Version C)	40620/2593	20M QPSK(50,24)	0.026	0.016	-2.87	21.55	22.50	0.032	2025/4/21	
Bottom Side (Version C)	40620/2593	20M QPSK(50,24)	0.044	0.034	-1.67	21.55	22.50	0.055	2025/4/21	

< LTE Band66 >

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										
Top Side (Version C)	132322/1745	20M QPSK(1,49)	0.312	0.190	-2.89	22.93	23.50	0.356	2025/4/18	
Front Side (Version C)	132322/1745	20M QPSK(1,49)	0.512	0.325	-0.82	22.93	23.50	0.584	2025/4/18	22#
Front Side (Version A)	132322/1745	20M QPSK(1,49)	0.490	0.302	3.02	22.93	23.50	0.559	2025/4/18	
Front Side (Version B)	132322/1745	20M QPSK(1,49)	0.471	0.287	4.01	22.93	23.50	0.537	2025/4/18	
Left Side (Version C)	132322/1745	20M QPSK(1,49)	0.275	0.173	3.71	22.93	23.50	0.314	2025/4/18	
Right Side (Version C)	132322/1745	20M QPSK(1,49)	0.110	0.066	3.86	22.93	23.50	0.125	2025/4/18	
Bottom Side (Version C)	132322/1745	20M QPSK(1,49)	0.208	0.128	-0.31	22.93	23.50	0.237	2025/4/18	
50%RB										
Top Side (Version C)	132322/1745	20M QPSK(50,49)	0.162	0.095	2.72	21.85	22.50	0.188	2025/4/18	

Front Side (Version C)	132322/1745	20M QPSK(50,49)	0.296	0.191	-4.85	21.85	22.50	0.344	2025/4/18	
Front Side (Version A)	132322/1745	20M QPSK(50,49)	0.268	0.174	1.23	21.85	22.50	0.311	2025/4/18	
Front Side (Version B)	132322/1745	20M QPSK(50,49)	0.241	0.150	2.08	21.85	22.50	0.280	2025/4/18	
Left Side (Version C)	132322/1745	20M QPSK(50,49)	0.156	0.100	2.64	21.85	22.50	0.181	2025/4/18	
Right Side (Version C)	132322/1745	20M QPSK(50,49)	0.064	0.036	-4.70	21.85	22.50	0.074	2025/4/18	
Bottom Side (Version C)	132322/1745	20M QPSK(50,49)	0.118	0.064	-0.13	21.85	22.50	0.137	2025/4/18	

< WLAN 2.4G >

Test Position of Body with 0mm	Test channel /Freq.	Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date	Plot
			1g	10g						
Top Side (Version C)	1/2412	802.11b	0.204	0.123	2.04	16.97	17.00	0.205	2025/4/20	
Front Side (Version C)	1/2412	802.11b	0.324	0.204	-0.38	16.97	17.00	0.326	2025/4/20	9#
Front Side (Version A)	1/2412	802.11b	0.309	0.187	2.05	16.97	17.00	0.311	2025/4/20	
Front Side (Version B)	1/2412	802.11b	0.281	0.156	0.97	16.97	17.00	0.283	2025/4/20	
Left Side (Version C)	1/2412	802.11b	0.074	0.042	-2.47	16.97	17.00	0.075	2025/4/20	
Right Side (Version C)	1/2412	802.11b	0.134	0.083	2.71	16.97	17.00	0.135	2025/4/20	
Bottom Side (Version C)	1/2412	802.11b	0.102	0.065	-0.13	16.97	17.00	0.103	2025/4/20	

< WLAN 5.2G >

Test Position of Body with 0mm	Test channel /Freq.	Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date	Plot
			1g	10g						
Top Side (Version C)	40/5200	802.11a	0.378	0.244	3.65	15.23	15.50	0.402	2025/4/22	
Front Side (Version C)	40/5200	802.11a	0.584	0.388	0.98	15.23	15.50	0.621	2025/4/22	5#

Front Side (Version A)	40/5200	802.11a	0.562	0.365	2.05	15.23	15.50	0.598	2025/4/22	
Front Side (Version B)	40/5200	802.11a	0.531	0.325	1.47	15.23	15.50	0.565	2025/4/22	
Left Side (Version C)	40/5200	802.11a	0.164	0.085	0.58	15.23	15.50	0.175	2025/4/22	
Right Side (Version C)	40/5200	802.11a	0.243	0.142	-3.37	15.23	15.50	0.259	2025/4/22	
Bottom Side (Version C)	40/5200	802.11a	0.189	0.090	-3.78	15.23	15.50	0.201	2025/4/22	

< WLAN 5.3G >

Test Position of Body with 0mm	Test channel /Freq.	Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date	Plot
			1g	10g						
Top Side (Version C)	52/5260	802.11n HT20	0.390	0.242	-2.02	14.10	14.50	0.428	2025/4/23	
Front Side (Version C)	52/5260	802.11n HT20	0.600	0.372	-2.85	14.10	14.50	0.658	2025/4/23	6#
Front Side (Version A)	52/5260	802.11n HT20	0.574	0.350	2.54	14.10	14.50	0.629	2025/4/23	
Front Side (Version B)	52/5260	802.11n HT20	0.536	0.321	3.26	14.10	14.50	0.588	2025/4/23	
Left Side (Version C)	52/5260	802.11n HT20	0.180	0.092	-0.48	14.10	14.50	0.197	2025/4/23	
Right Side (Version C)	52/5260	802.11n HT20	0.268	0.160	-1.91	14.10	14.50	0.294	2025/4/23	
Bottom Side (Version C)	52/5260	802.11n HT20	0.200	0.105	-2.89	14.10	14.50	0.219	2025/4/23	

< WLAN 5.6G >

Test Position of Body with 0mm	Test channel /Freq.	Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date	Plot
			1g	10g						
Top Side (Version C)	140/5700	802.11a	0.336	0.239	3.21	12.76	13.00	0.355	2025/4/24	
Front Side (Version C)	140/5700	802.11a	0.522	0.387	3.98	12.76	13.00	0.552	2025/4/24	7#
Front Side (Version A)	140/5700	802.11a	0.504	0.354	1.12	12.76	13.00	0.533	2025/4/24	

Front Side (Version B)	140/5700	802.11a	0.482	0.321	0.58	12.76	13.00	0.509	2025/4/24	
Left Side (Version C)	140/5700	802.11a	0.152	0.075	1.20	12.76	13.00	0.161	2025/4/24	
Right Side (Version C)	140/5700	802.11a	0.225	0.130	0.10	12.76	13.00	0.238	2025/4/24	
Bottom Side (Version C)	140/5700	802.11a	0.174	0.081	0.47	12.76	13.00	0.184	2025/4/24	

< WLAN 5.8G >

Test Position of Body with 0mm	Test channel /Freq.	Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date	Plot
			1g	10g						
Top Side (Version C)	157/5785	802.11a	0.312	0.222	-0.61	11.94	12.00	0.316	2025/4/25	
Front Side (Version C)	157/5785	802.11a	0.509	0.382	-0.37	11.94	12.00	0.516	2025/4/25	8#
Front Side (Version A)	157/5785	802.11a	0.471	0.362	1.52	11.94	12.00	0.478	2025/4/25	
Front Side (Version B)	157/5785	802.11a	0.450	0.324	3.62	11.94	12.00	0.456	2025/4/25	
Left Side (Version C)	157/5785	802.11a	0.142	0.070	-3.18	11.94	12.00	0.144	2025/4/25	
Right Side (Version C)	157/5785	802.11a	0.208	0.121	0.48	11.94	12.00	0.211	2025/4/25	
Bottom Side (Version C)	157/5785	802.11a	0.167	0.070	-3.00	11.94	12.00	0.169	2025/4/25	

11. Simultaneous Transmission Analysis

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

1) Scalar SAR summation < 1.6W/kg.

2) SPLSR = $(SAR_1 + SAR_2)^{1.5}$ / (min. separation distance, mm), and the peak separation distance is determined from the square root of $[(x_1-x_2)^2 + (y_1-y_2)^2 + (z_1-z_2)^2]$, where (x_1, y_1, z_1) and (x_2, y_2, z_2) are the coordinates of the extrapolated peak SAR locations in the zoom scan.

If SPLSR ≤ 0.04, simultaneously transmission SAR measurement is not necessary.

No.	Simultaneous Tx	Body-worn	Hotspot
1	WWAN+WLAN	Yes	Yes
2	WWAN+Bluetooth	Yes	Yes

Note：WiFi and Bluetooth use the same antenna and cannot be transmitted at the same time.

Exposure Position		WWAN Band	DTS/DSS/NII Band	Simultaneous Tx SAR(W/Kg)
		SAR(W/Kg)	SAR(W/Kg)	
Body	Front Side	0.625	0.658	1.283
	Back Side	/	/	/
	Left Side	0.333	0.197	0.530
	Right Side	0.127	0.294	0.421
	Top Side	0.400	0.428	0.828
	Bottom Side	0.253	0.219	0.472

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

Appendix A. Photo documentation

Refer to appendix Test Setup photo-SAR

Appendix B. System Check Plots

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

MEASUREMENT 1

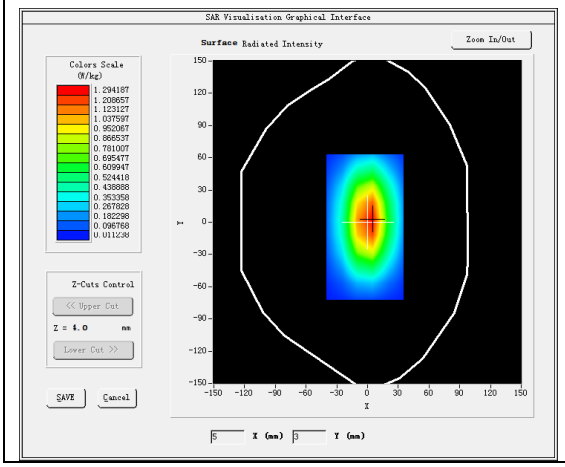
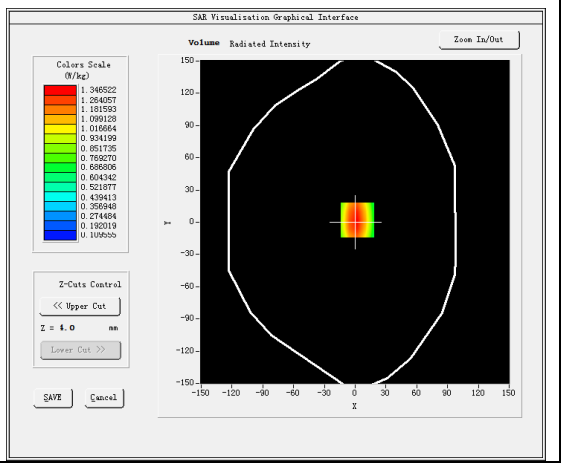
Date of measurement: 16/4/2025

A. Experimental conditions.

Area Scan	dx=15mm dy=15mm, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Dipole
Band	CW750
Channels	Middle
Signal	CW (Crest factor: 1.0)
ConvF	1.65

B. SAR Measurement Results

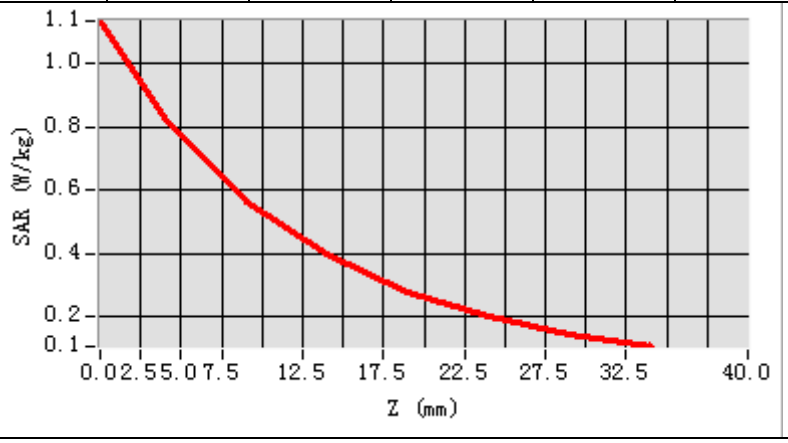
Frequency (MHz)	750.000000
Relative permittivity (real part)	42.562010
Relative permittivity (imaginary part)	19.132740
Conductivity (S/m)	0.912054
Variation (%)	0.210000

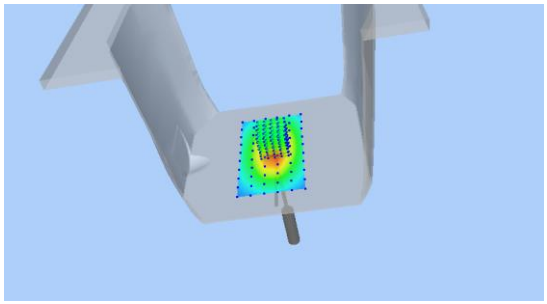
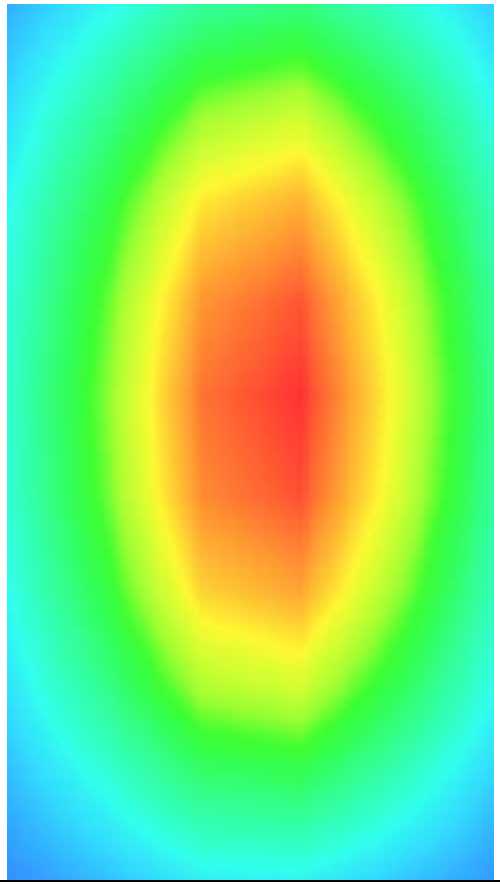
SURFACE SAR	VOLUME SAR
	

Maximum location: X=2.00, Y=2.00
SAR Peak: 1.87 W/kg

SAR 10g (W/Kg)	0.621031
SAR 1g (W/Kg)	0.930125

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	1.1392	0.8317	0.5683	0.3987	0.2835	0.2035	0.1445



3D screen shot	Hot spot position
	

MEASUREMENT 2

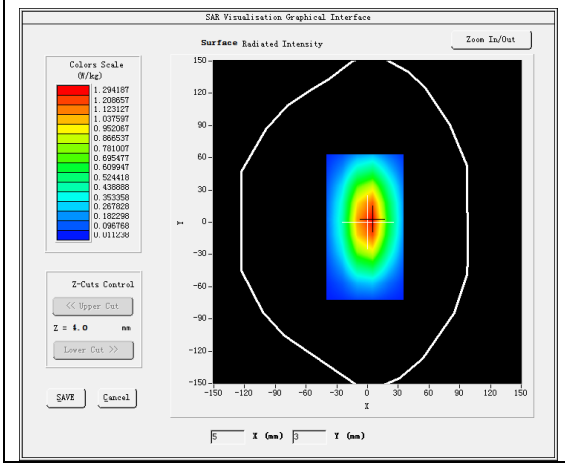
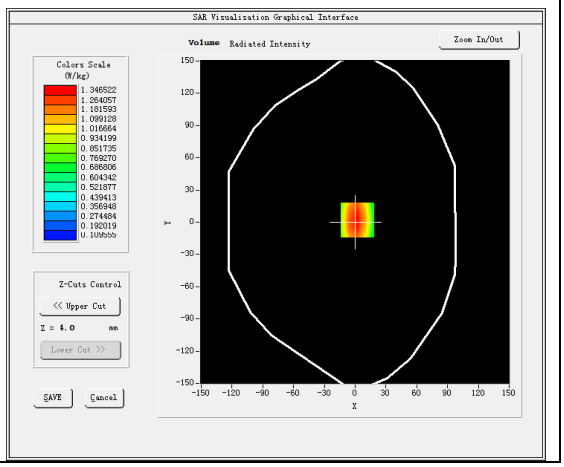
Date of measurement: 17/4/2025

A. Experimental conditions.

Area Scan	dx=15mm dy=15mm, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Dipole
Band	CW835
Channels	Middle
Signal	CW (Crest factor: 1.0)
ConvF	1.66

B. SAR Measurement Results

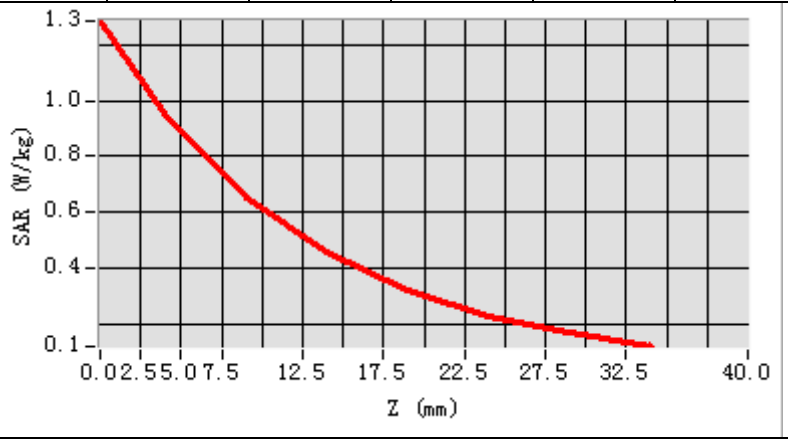
Frequency (MHz)	835.000000
Relative permittivity (real part)	42.012031
Relative permittivity (imaginary part)	19.131021
Conductivity (S/m)	0.941030
Variation (%)	0.310000

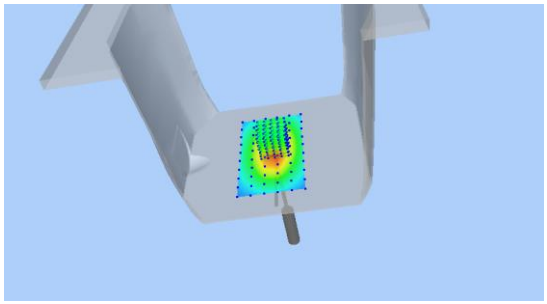
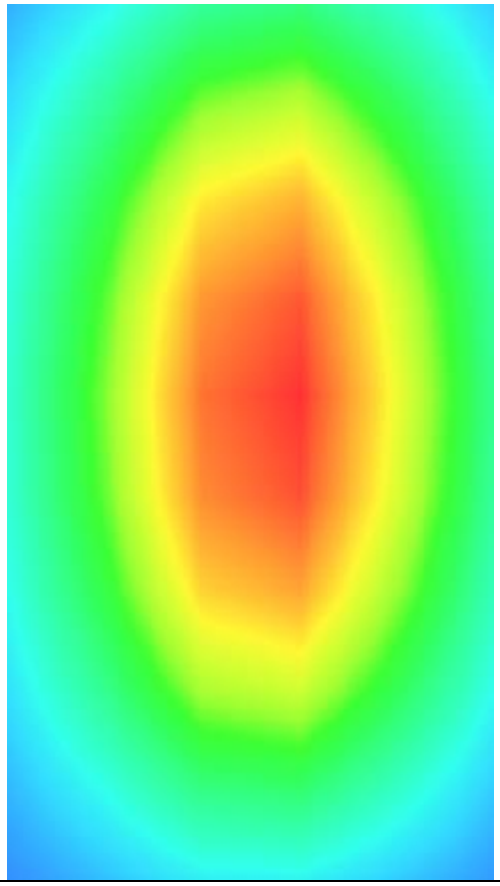
SURFACE SAR	**VOLUME SAR**
	

Maximum location: X=2.00, Y=2.00
SAR Peak: 1.87 W/kg

SAR 10g (W/Kg)	0.612031
SAR 1g (W/Kg)	1.011231

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	1.2821	0.9559	0.6532	0.4562	0.3263	0.2309	0.1726



3D screen shot	Hot spot position
	

MEASUREMENT 3

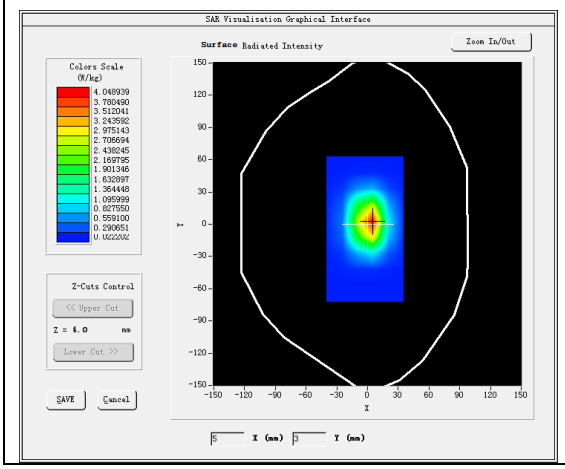
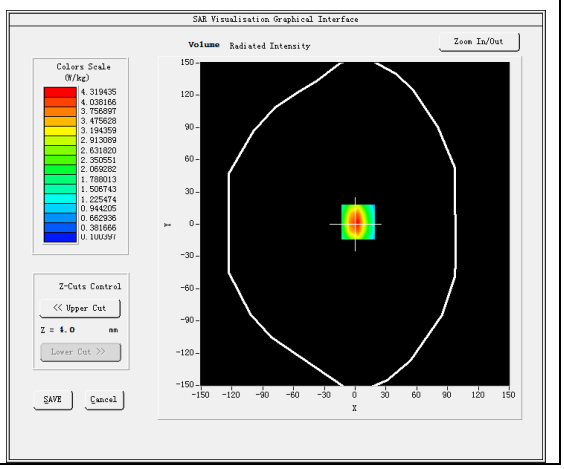
Date of measurement: 18/4/2025

A. Experimental conditions.

Area Scan	dx=15mm dy=15mm, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Dipole
Band	CW1800
Channels	Middle
Signal	CW (Crest factor: 1.0)
ConvF	2.05

B. SAR Measurement Results

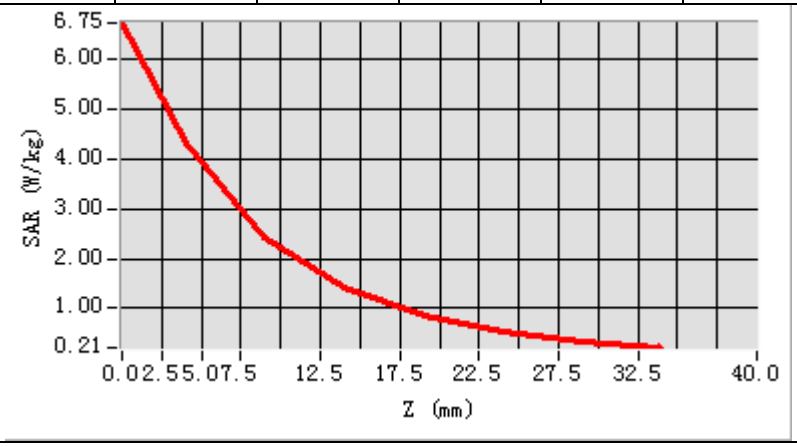
Frequency (MHz)	1800.000000
Relative permittivity (real part)	39.606403
Relative permittivity (imaginary part)	14.067180
Conductivity (S/m)	1.406718
Variation (%)	-0.140000

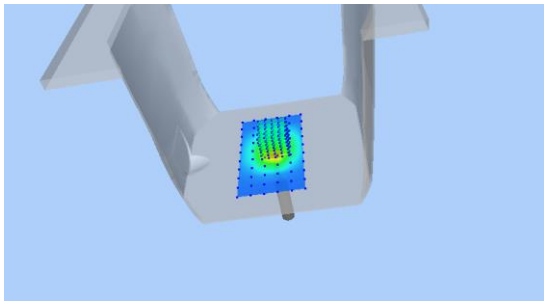
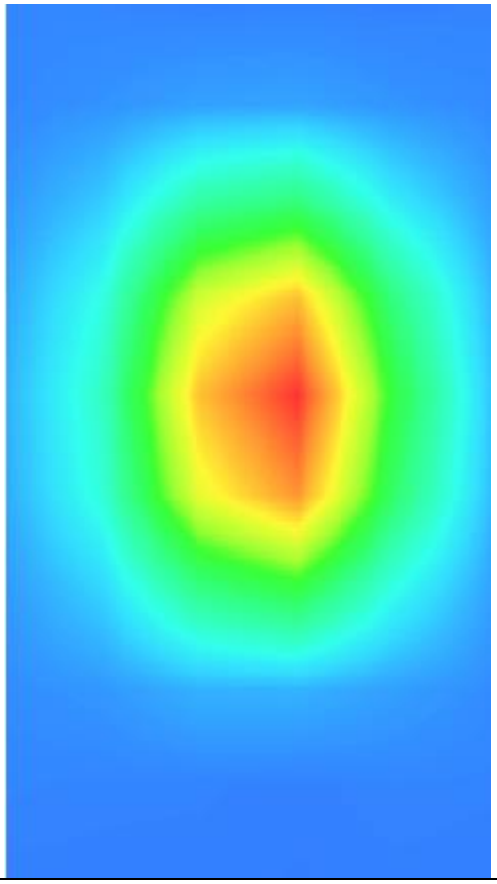
SURFACE SAR	**VOLUME SAR**
	

Maximum location: X=3.00, Y=2.00
SAR Peak: 6.82 W/kg

SAR 10g (W/Kg)	2.024557
SAR 1g (W/Kg)	3.832112

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	6.7448	4.3176	2.4344	1.4222	0.8541	0.5203	0.3261



3D screen shot	Hot spot position
	

MEASUREMENT 4

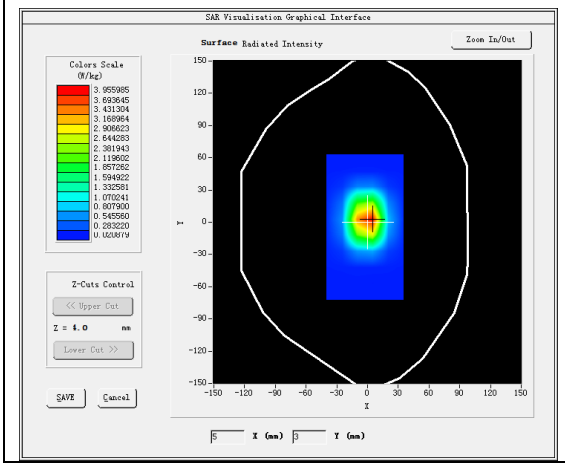
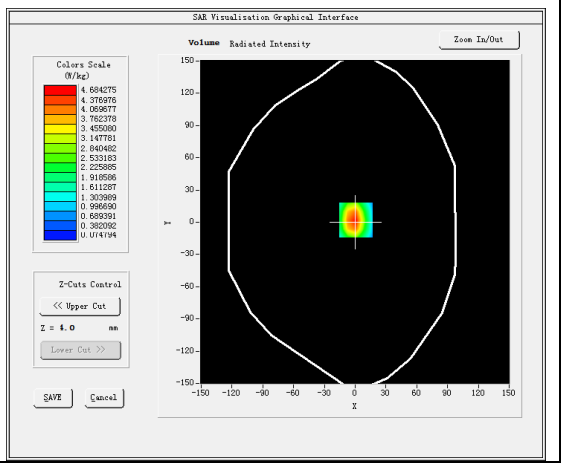
Date of measurement: 19/4/2025

A. Experimental conditions.

Area Scan	dx=15mm dy=15mm, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Dipole
Band	CW1900
Channels	Middle
Signal	CW (Crest factor: 1.0)
ConvF	2.05

B. SAR Measurement Results

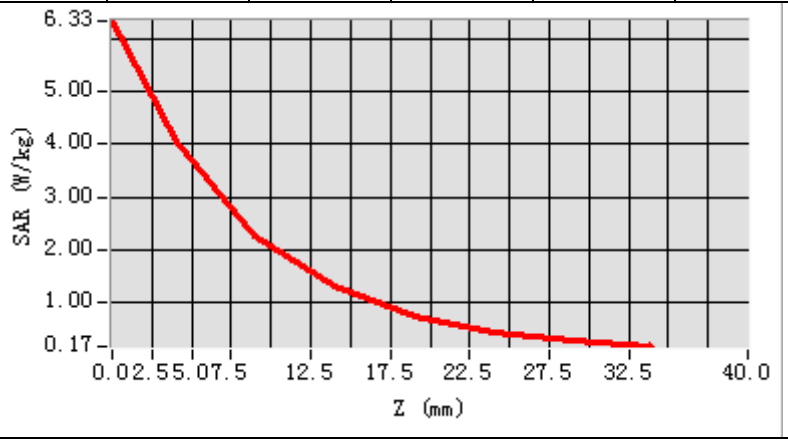
Frequency (MHz)	1900.000000
Relative permittivity (real part)	41.420140
Relative permittivity (imaginary part)	12.570123
Conductivity (S/m)	1.390503
Variation (%)	-0.440000

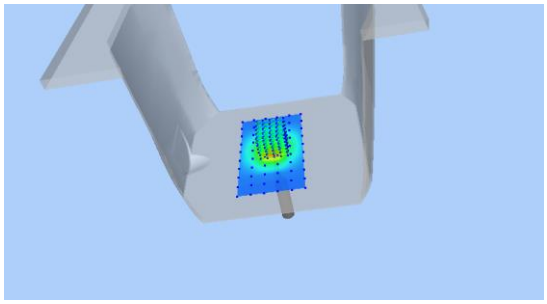
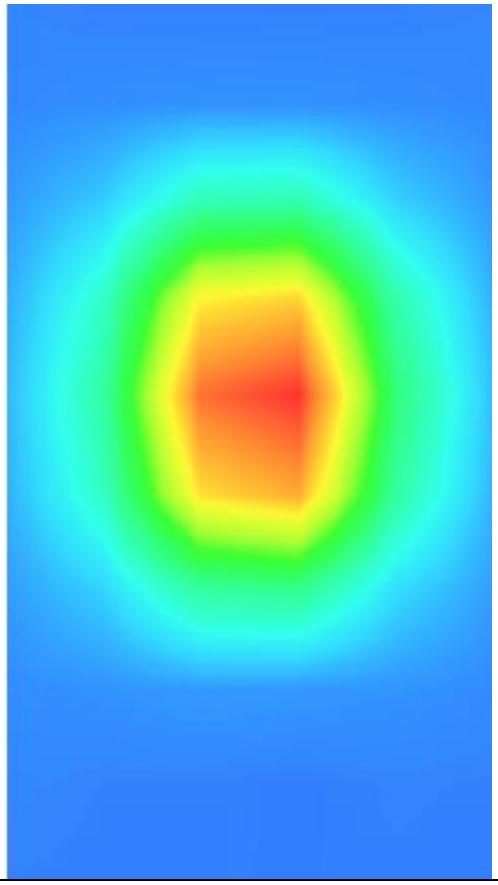
SURFACE SAR	**VOLUME SAR**
	

Maximum location: X=1.00, Y=2.00
SAR Peak: 7.65 W/kg

SAR 10g (W/Kg)	2.153165
SAR 1g (W/Kg)	4.153568

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

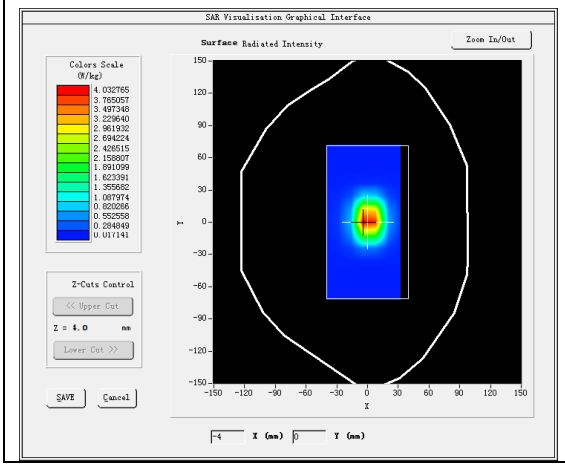
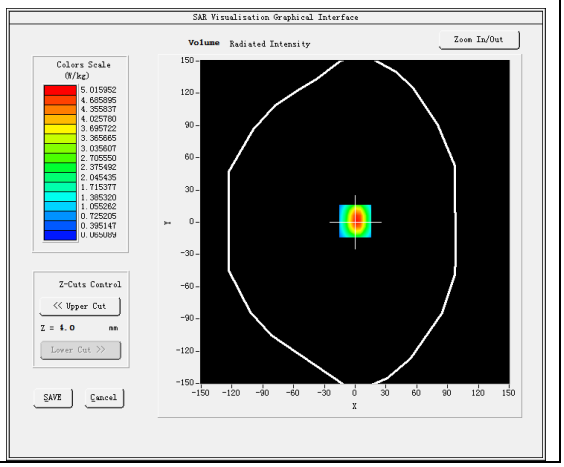
Date of measurement: 20/4/2025

A. Experimental conditions.

Area Scan	dx=12mm dy=12mm, h= 5.00 mm
ZoomScan	7x7x7,dx=5mm dy=5mm dz=5mm
Phantom	Validation plane
Device Position	Dipole
Band	CW2450
Channels	Middle
Signal	CW (Crest factor: 1.0)
ConvF	2.38

B. SAR Measurement Results

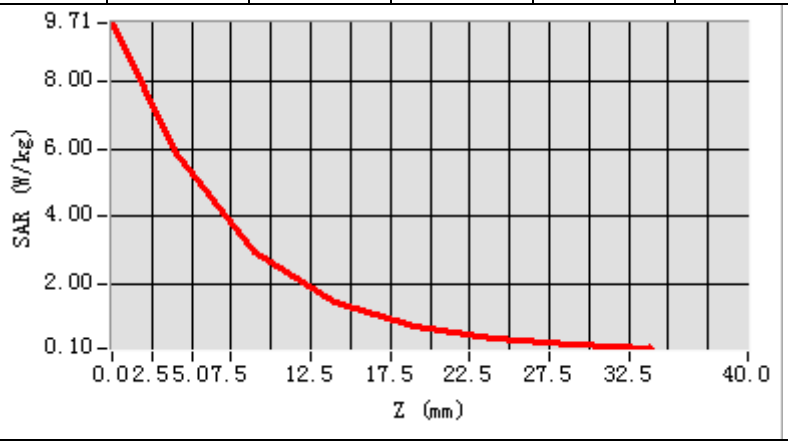
Frequency (MHz)	2450.000000
Relative permittivity (real part)	40.408511
Relative permittivity (imaginary part)	13.399264
Conductivity (S/m)	1.823789
Variation (%)	-1.250000

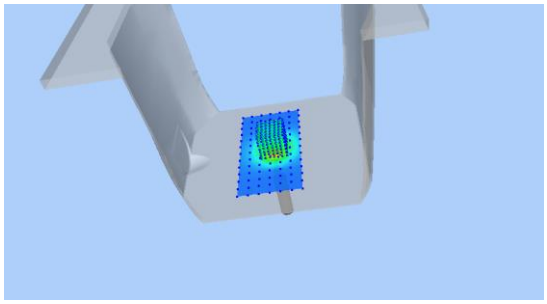
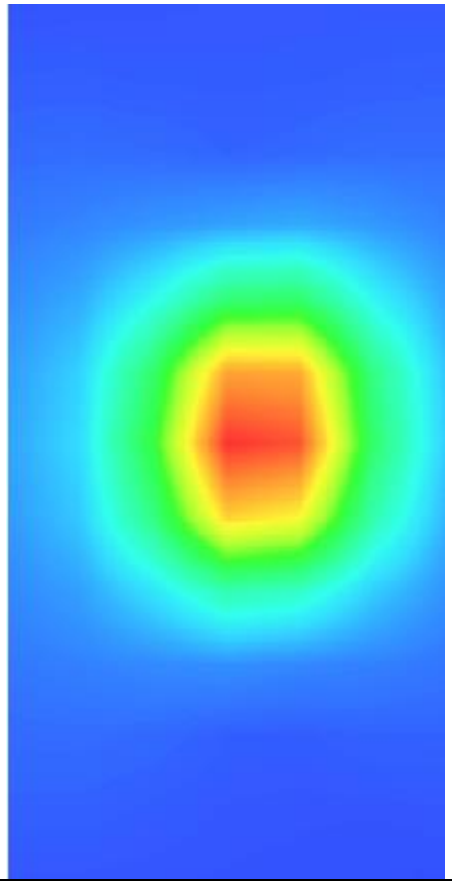
SURFACE SAR	**VOLUME SAR**
	

Maximum location: X=0.00, Y=1.00
SAR Peak: 8.14 W/kg

SAR 10g (W/Kg)	2.359425
SAR 1g (W/Kg)	5.183642

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	9.7199	5.8365	2.9272	1.4664	0.7453	0.3732	0.1948



3D screen shot	Hot spot position
	

MEASUREMENT 6

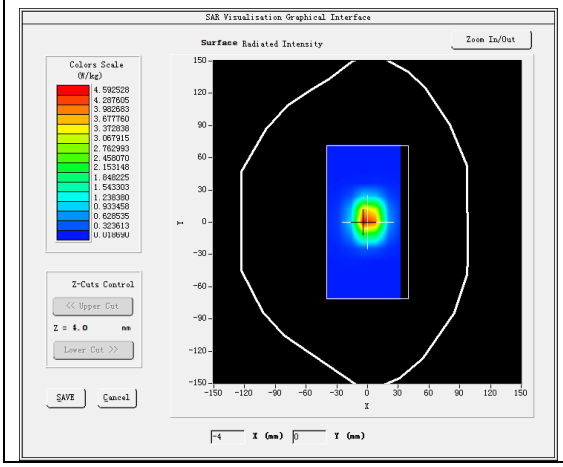
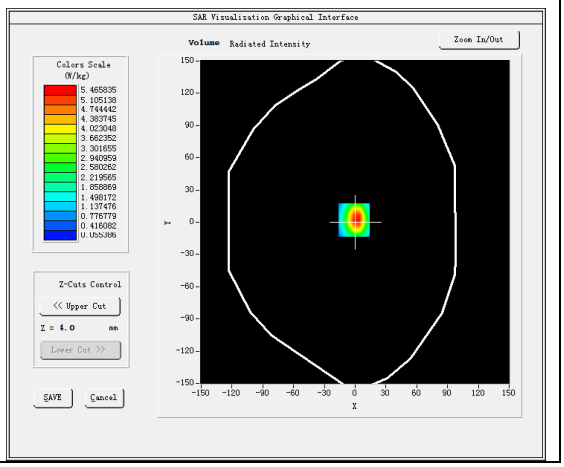
Date of measurement: 21/4/2025

A. Experimental conditions.

Area Scan	dx=12mm dy=12mm, h= 5.00 mm
ZoomScan	7x7x7,dx=5mm dy=5mm dz=5mm
Phantom	Validation plane
Device Position	Dipole
Band	CW2600
Channels	Middle
Signal	CW (Crest factor: 1.0)
ConvF	2.35

B. SAR Measurement Results

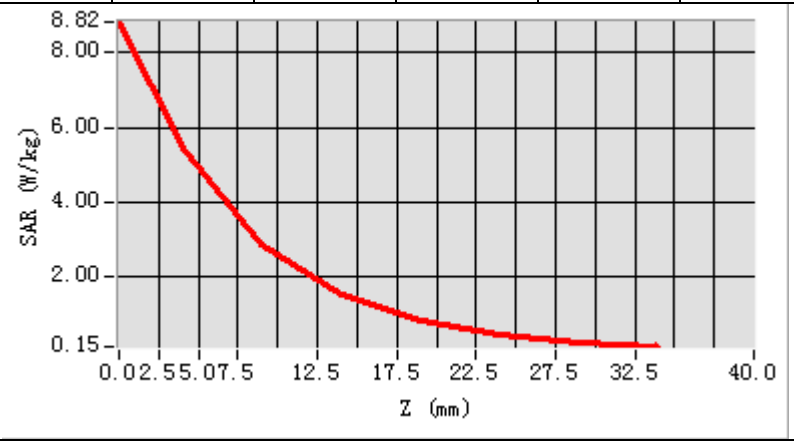
Frequency (MHz)	2600.000000
Relative permittivity (real part)	39.432362
Relative permittivity (imaginary part)	13.768602
Conductivity (S/m)	1.988798
Variation (%)	-3.980000

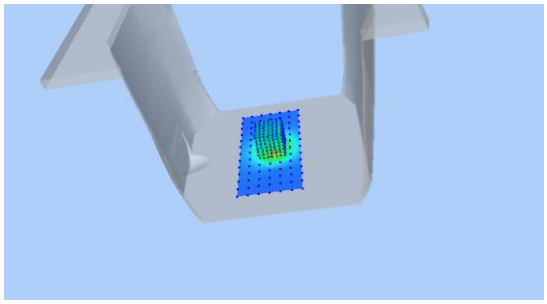
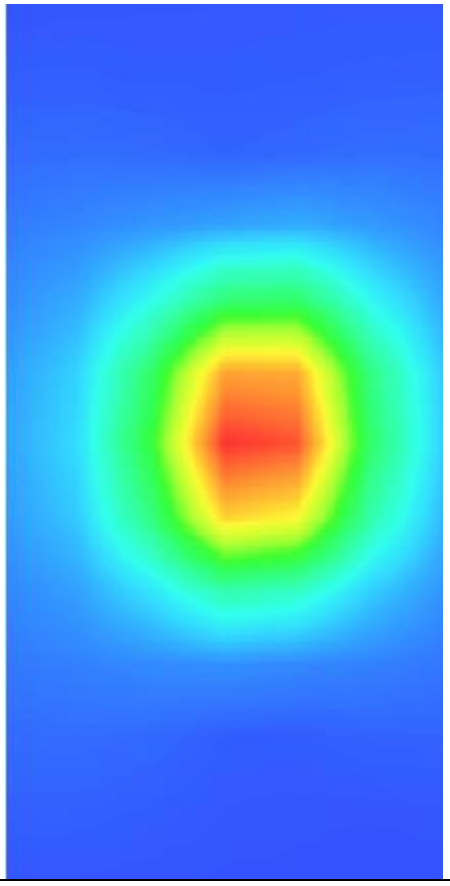
SURFACE SAR	**VOLUME SAR**
	

Maximum location: X=-1.00, Y=2.00
SAR Peak: 9.07 W/kg

SAR 10g (W/Kg)	2.523157
SAR 1g (W/Kg)	5.432595

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	8.8184	5.4635	2.8983	1.5672	0.8594	0.4716	0.2634



3D screen shot	Hot spot position
	

MEASUREMENT 7

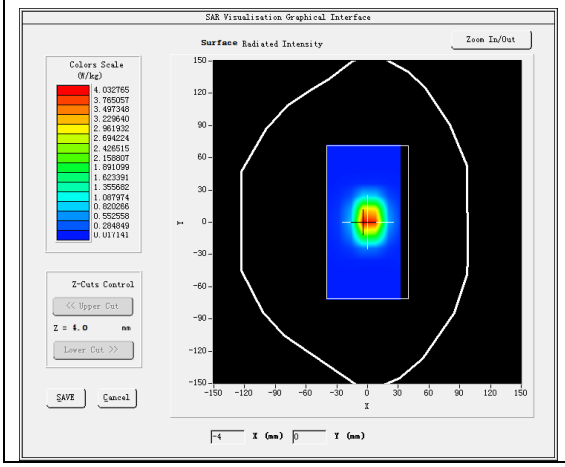
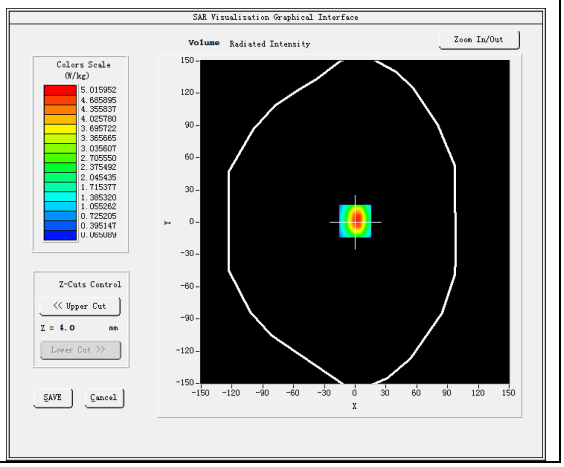
Date of measurement: 22/4/2025

A. Experimental conditions.

Area Scan	dx=10mm dy=10mm, h= 2.00 mm
ZoomScan	7x7x12,dx=4mm dy=4mm dz=2mm
Phantom	Validation plane
Device Position	Dipole
Band	CW5200
Channels	Middle
Signal	CW (Crest factor: 1.0)
ConvF	2.30

B. SAR Measurement Results

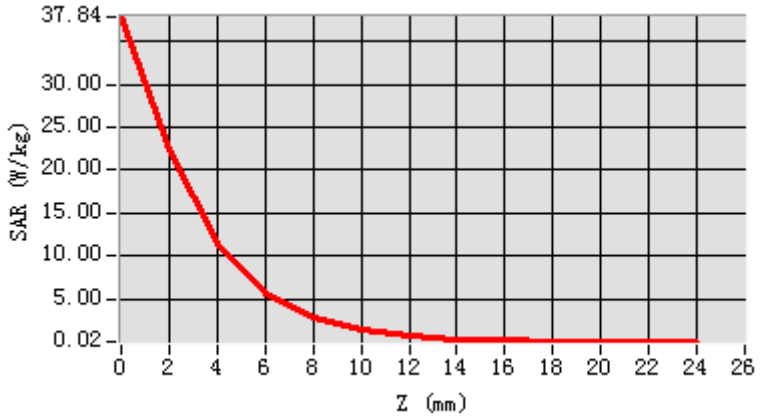
Frequency (MHz)	5200.000000
Relative permittivity (real part)	37.400000
Relative permittivity (imaginary part)	16.129999
Conductivity (S/m)	4.510778
Variation (%)	-4.570000

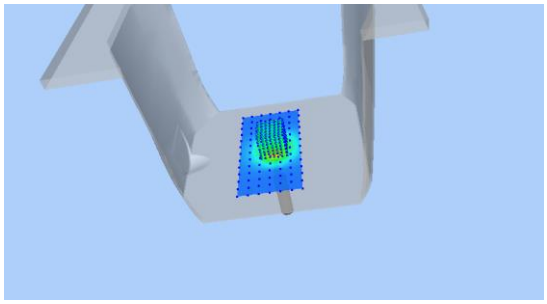
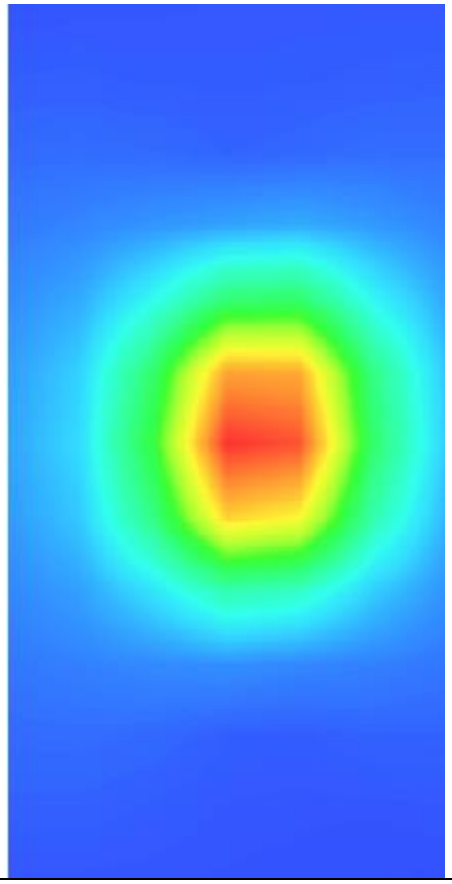
SURFACE SAR	**VOLUME SAR**
	

Maximum location: X=0.00, Y=1.00
SAR Peak: 15.14 W/kg

SAR 10g (W/Kg)	5.212361
SAR 1g (W/Kg)	14.712032

Z (mm)	0.00	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	22.00
SAR (W/Kg)	37.854	22.366	11.328	5.6635	2.8201	1.4084	0.7174	0.3602	0.1802	0.1035	0.0580	0.0366



3D screen shot	Hot spot position
	

MEASUREMENT 8

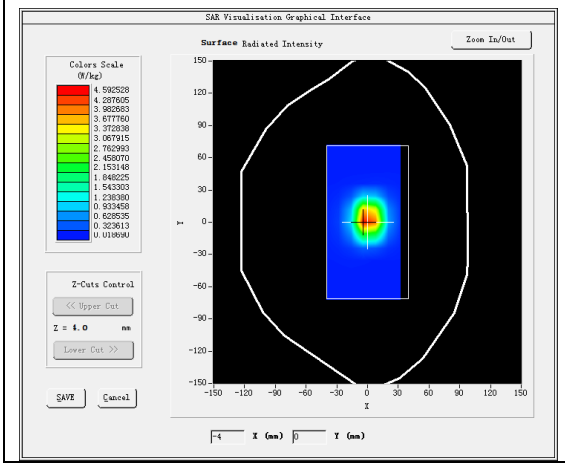
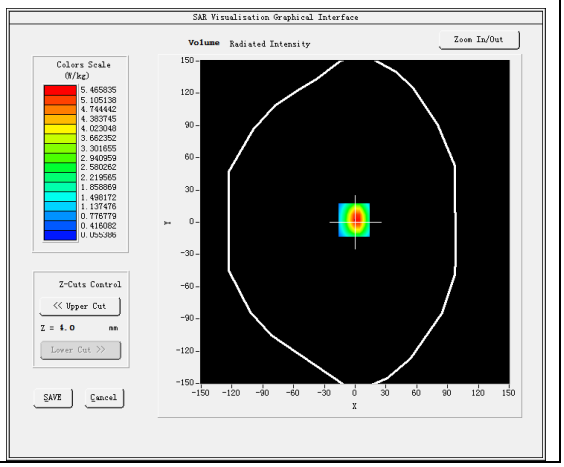
Date of measurement: 23/4/2025

A. Experimental conditions.

Area Scan	dx=10mm dy=10mm, h= 2.00 mm
ZoomScan	7x7x12,dx=4mm dy=4mm dz=2mm
Phantom	Validation plane
Device Position	Dipole
Band	CW5400
Channels	Middle
Signal	CW (Crest factor: 1.0)
ConvF	2.30

B. SAR Measurement Results

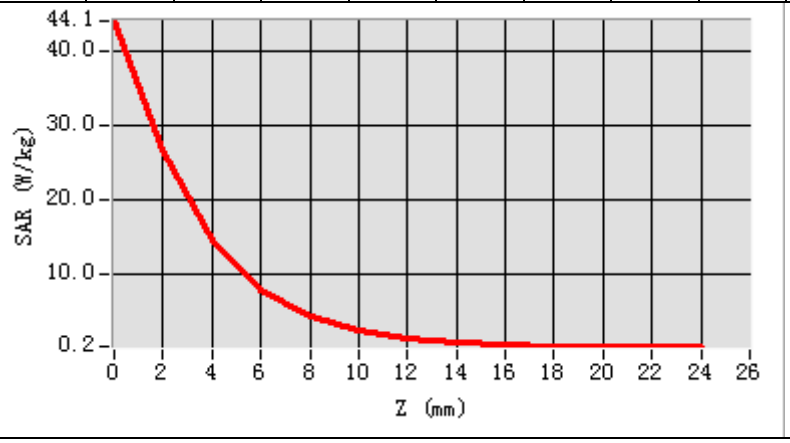
Frequency (MHz)	5400.000000
Relative permittivity (real part)	35.102351
Relative permittivity (imaginary part)	16.341203
Conductivity (S/m)	4.701556
Variation (%)	-2.480000

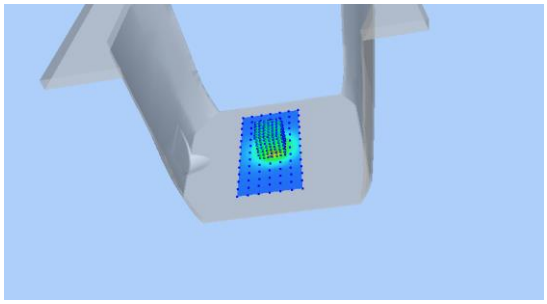
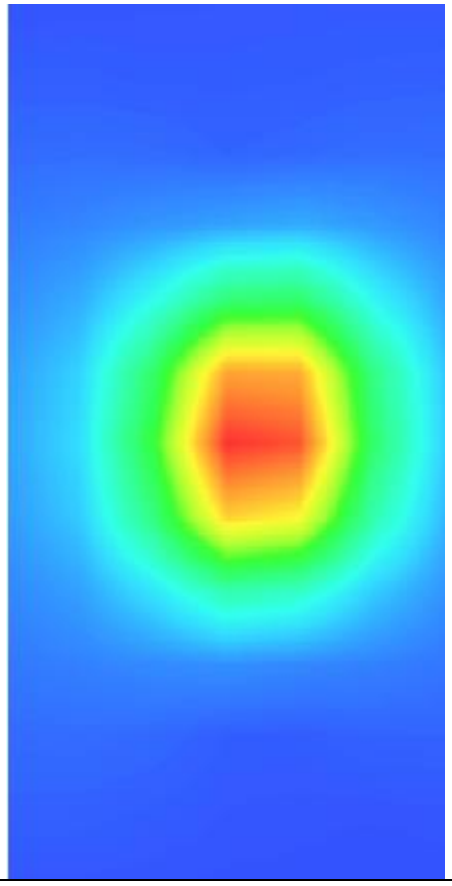
SURFACE SAR	**VOLUME SAR**
	

Maximum location: X=-1.00, Y=2.00
SAR Peak: 17.05 W/kg

SAR 10g (W/Kg)	5.532101
SAR 1g (W/Kg)	14.820035

Z (mm)	0.00	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	22.00
SAR (W/Kg)	44.037	26.881	14.643	7.8116	4.2207	2.3258	1.3296	0.7891	0.5028	0.3797	0.2803	0.2620



3D screen shot	Hot spot position
	

MEASUREMENT 9

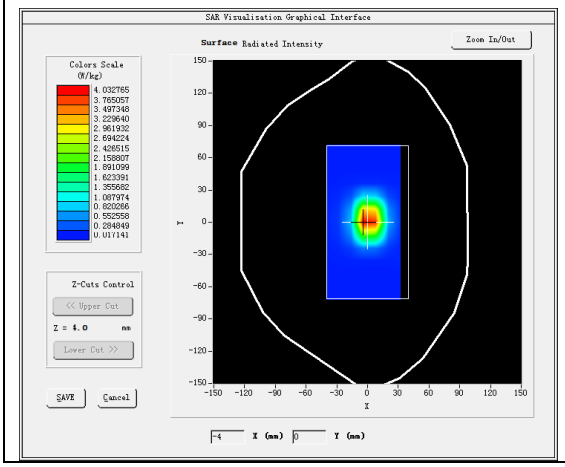
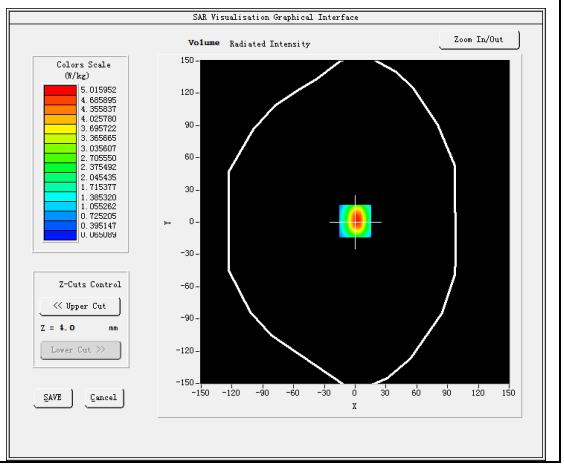
Date of measurement: 24/4/2025

A. Experimental conditions.

Area Scan	dx=10mm dy=10mm, h= 2.00 mm
ZoomScan	7x7x12,dx=4mm dy=4mm dz=2mm
Phantom	Validation plane
Device Position	Dipole
Band	CW5600
Channels	Middle
Signal	CW (Crest factor: 1.0)
ConvF	2.29

B. SAR Measurement Results

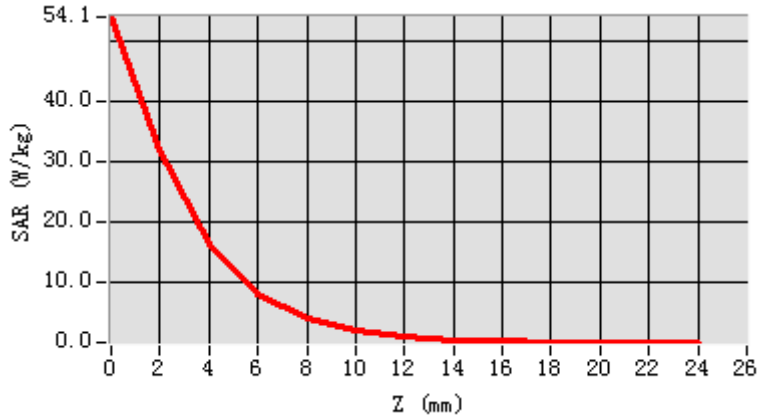
Frequency (MHz)	5600.000000
Relative permittivity (real part)	34.200000
Relative permittivity (imaginary part)	16.120115
Conductivity (S/m)	4.900712
Variation (%)	-4.570000

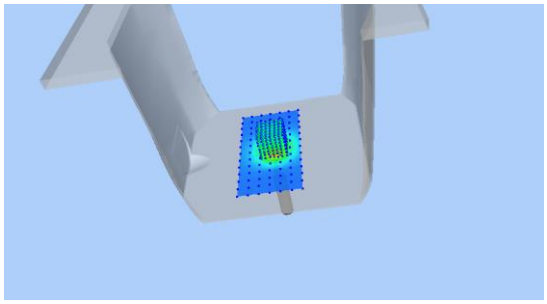
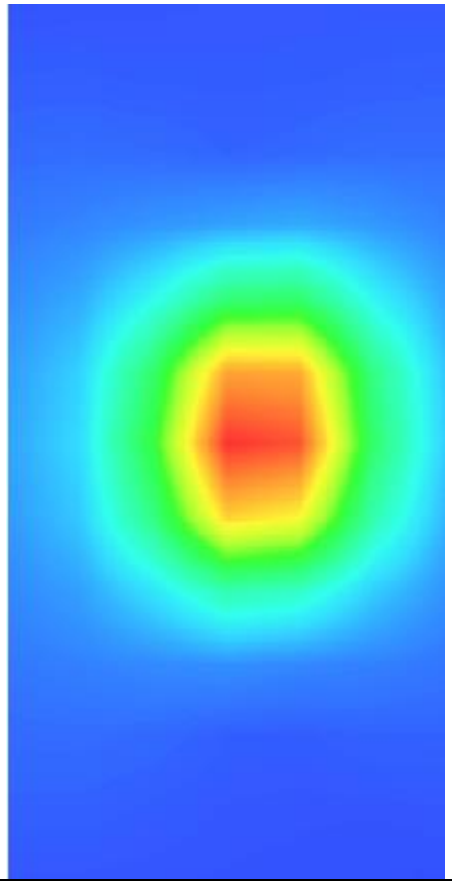
SURFACE SAR	**VOLUME SAR**
	

Maximum location: X=0.00, Y=1.00
SAR Peak: 15.13 W/kg

SAR 10g (W/Kg)	5.602361
SAR 1g (W/Kg)	16.421103

Z (mm)	0.00	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	22.00
SAR (W/Kg)	54.172	31.965	16.304	8.1775	4.0888	3.8165	1.0301	0.4665	0.2727	0.1369	0.0730	0.0587



3D screen shot	Hot spot position
	

MEASUREMENT 10

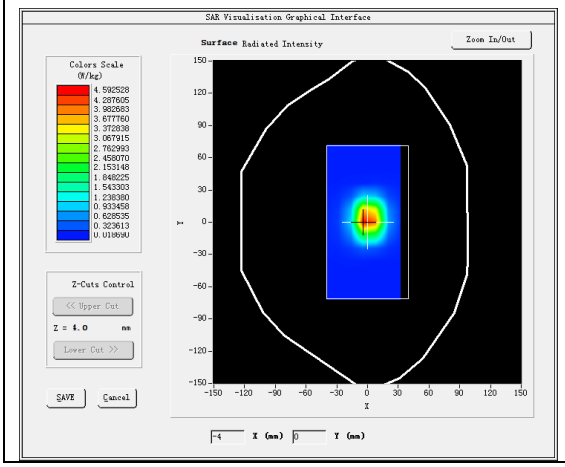
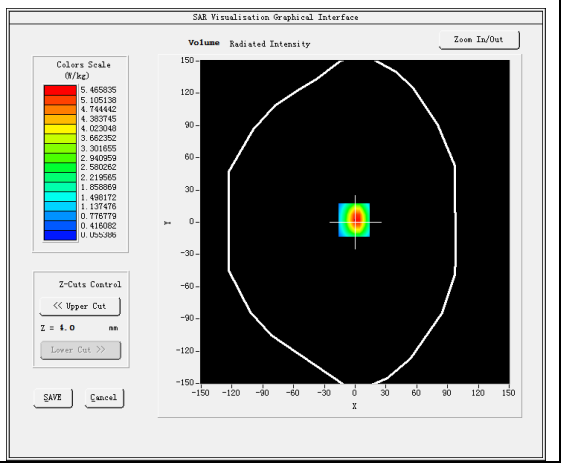
Date of measurement: 25/4/2025

A. Experimental conditions.

Area Scan	dx=10mm dy=10mm, h= 2.00 mm
ZoomScan	7x7x12,dx=4mm dy=4mm dz=2mm
Phantom	Validation plane
Device Position	Dipole
Band	CW5800
Channels	Middle
Signal	CW (Crest factor: 1.0)
ConvF	2.27

B. SAR Measurement Results

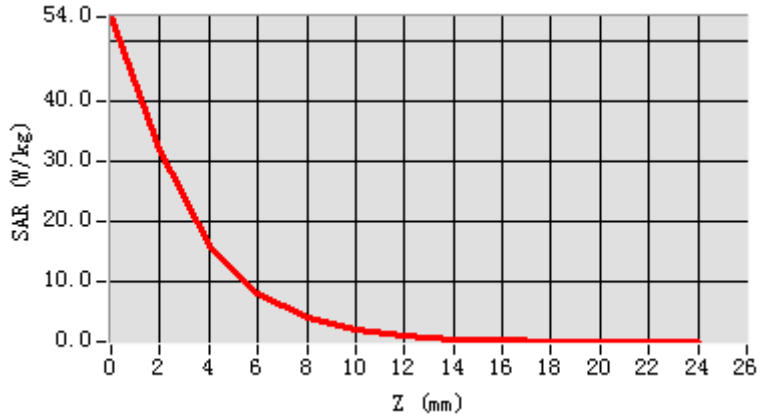
Frequency (MHz)	5800.000000
Relative permittivity (real part)	35.299999
Relative permittivity (imaginary part)	16.360001
Conductivity (S/m)	5.271556
Variation (%)	-2.480000

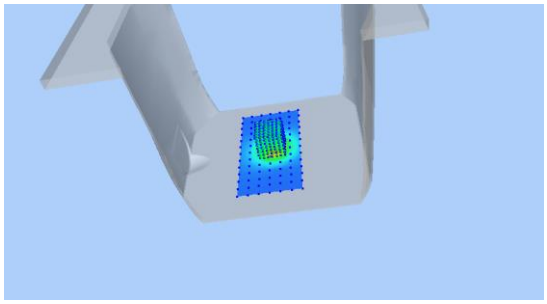
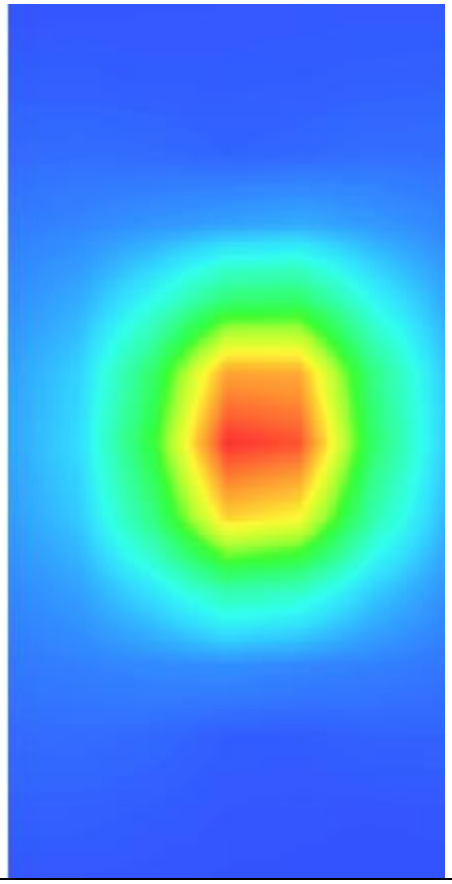
SURFACE SAR	**VOLUME SAR**
	

Maximum location: X=-1.00, Y=2.00
SAR Peak: 17.07 W/kg

SAR 10g (W/Kg)	5.623106
SAR 1g (W/Kg)	16.421035

Z (mm)	0.00	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	22.00
SAR (W/Kg)	54.079	31.947	16.161	8.1718	4.0865	2.0574	1.0333	0.5137	0.2776	0.1540	0.0732	0.0464



3D screen shot	Hot spot position
	

Appendix C. SAR Test Plots

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MEASUREMENT 1

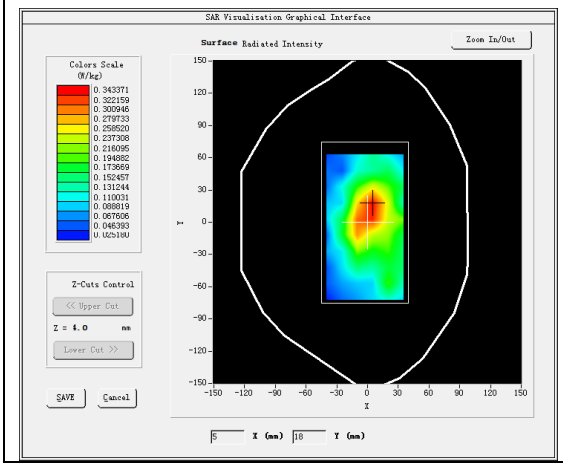
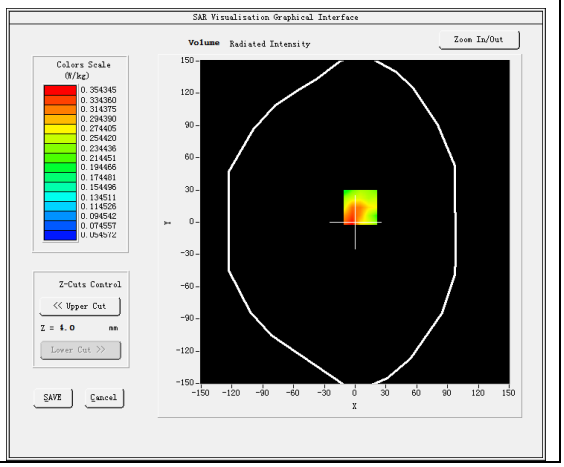
Date of measurement: 17/4/2025

A. Experimental conditions.

Area Scan	dx=15mm dy=15mm, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Body
Band	GSM850
Channels	Middle
Signal	TDMA (Crest factor: 2.0)
ConvF	1.66

B. SAR Measurement Results

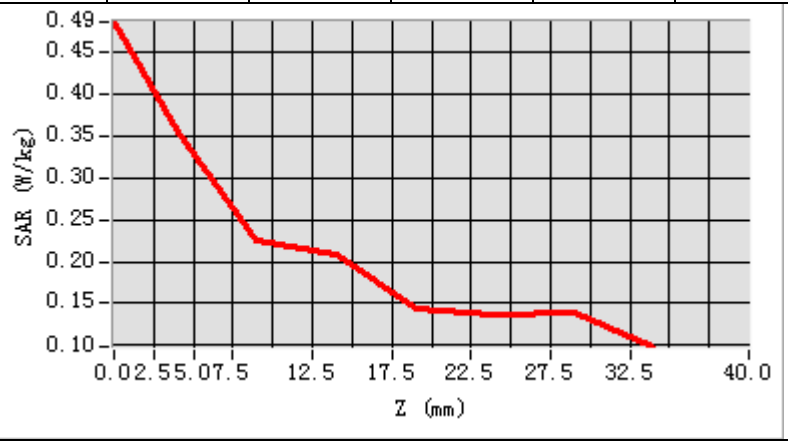
Frequency (MHz)	836.400024
Relative permittivity (real part)	41.500000
Relative permittivity (imaginary part)	19.400000
Conductivity (S/m)	0.901453
Variation (%)	-3.490000

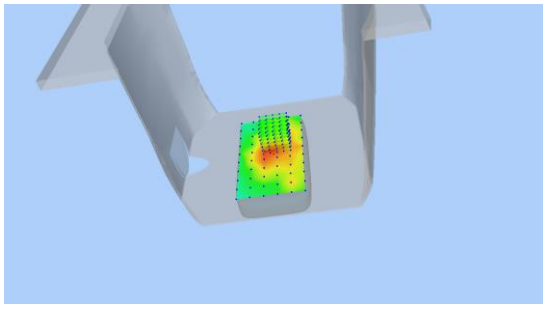
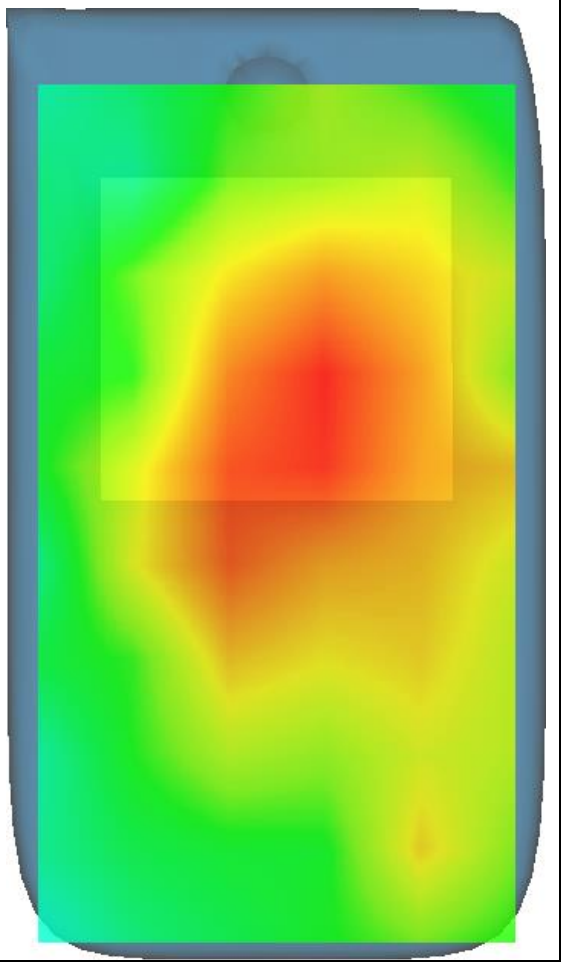
SURFACE SAR	VOLUME SAR
	

Maximum location: X=5.00, Y=14.00
SAR Peak: 0.49 W/kg

SAR 10g (W/Kg)	0.238304
SAR 1g (W/Kg)	0.332916

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.4855	0.3543	0.2256	0.2090	0.1443	0.1363	0.1395



3D screen shot	Hot spot position
	

MEASUREMENT 2

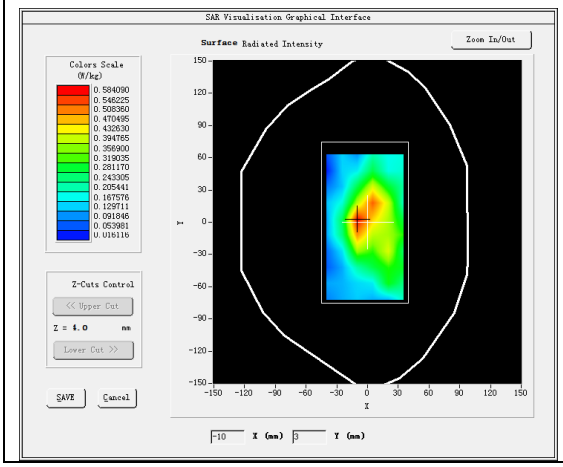
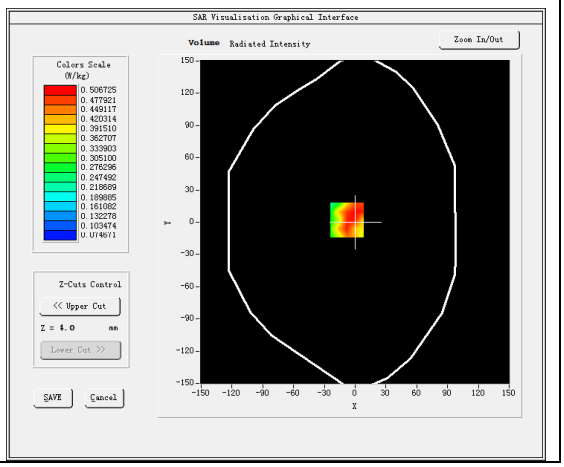
Date of measurement: 19/4/2025

A. Experimental conditions.

Area Scan	dx=15mm dy=15mm, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	Middle
Signal	TDMA (Crest factor: 2.0)
ConvF	2.05

B. SAR Measurement Results

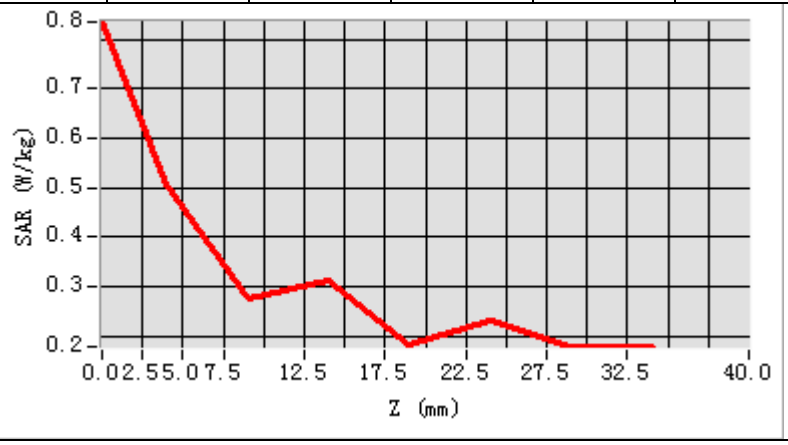
Frequency (MHz)	1880.000000
Relative permittivity (real part)	40.000000
Relative permittivity (imaginary part)	13.408000
Conductivity (S/m)	1.400391
Variation (%)	-1.840000

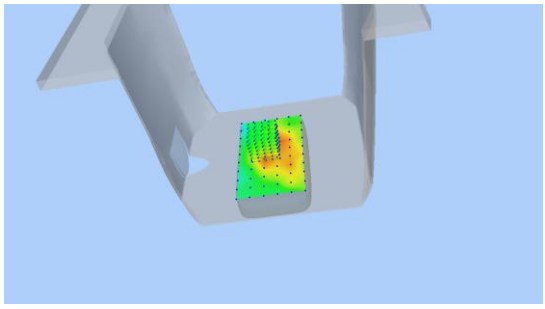
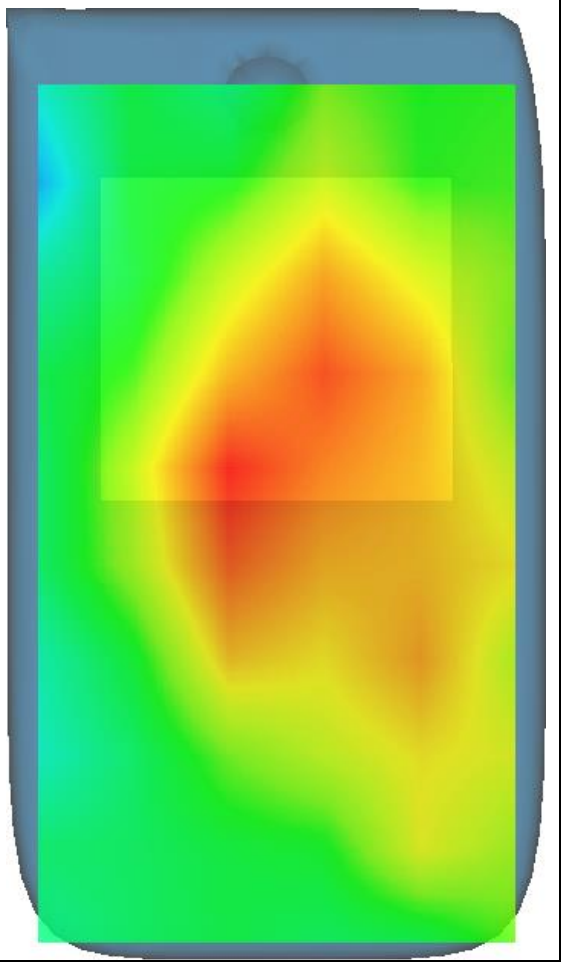
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-8.00, Y=2.00
SAR Peak: 0.76 W/kg

SAR 10g (W/Kg)	0.361073
SAR 1g (W/Kg)	0.494077

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.8345	0.5067	0.2783	0.3146	0.1818	0.2309	0.1798



3D screen shot	Hot spot position
	

MEASUREMENT 3

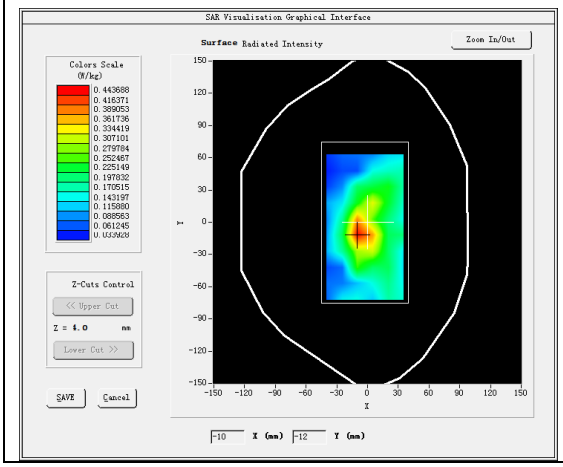
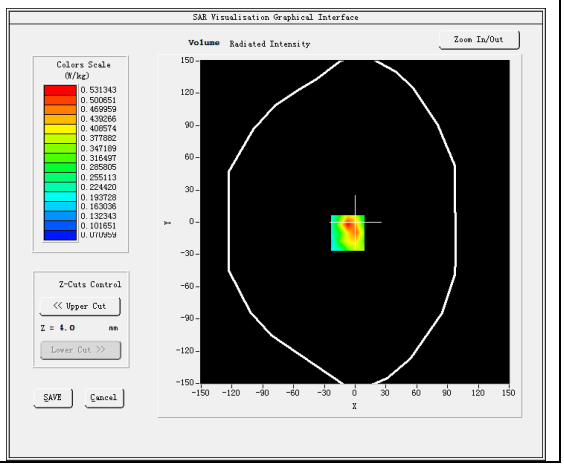
Date of measurement: 19/4/2025

A. Experimental conditions.

Area Scan	dx=15mm dy=15mm, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Body
Band	Band2_WCDMA1900
Channels	Middle
Signal	WCDMA (Crest factor: 1.0)
ConvF	2.05

B. SAR Measurement Results

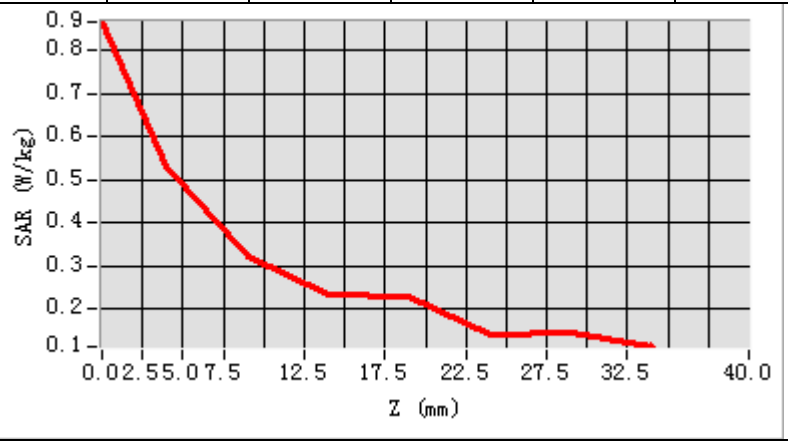
Frequency (MHz)	1880.000000
Relative permittivity (real part)	40.000000
Relative permittivity (imaginary part)	13.408000
Conductivity (S/m)	1.400391
Variation (%)	-0.390000

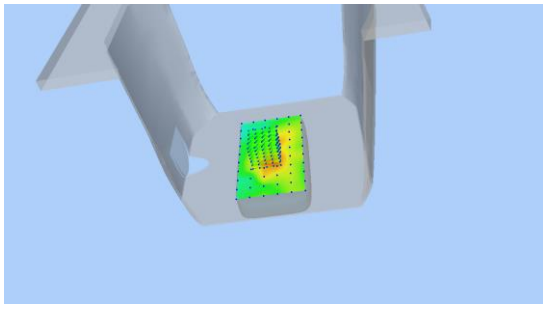
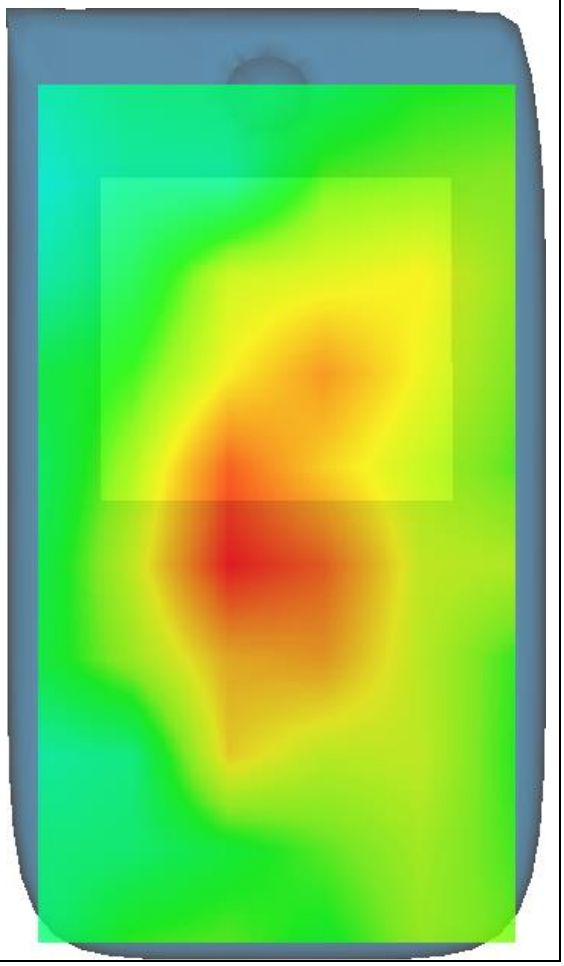
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-7.00, Y=-10.00
SAR Peak: 0.85 W/kg

SAR 10g (W/Kg)	0.317677
SAR 1g (W/Kg)	0.493878

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.8668	0.5313	0.3229	0.2357	0.2318	0.1410	0.1448



3D screen shot	Hot spot position
	

MEASUREMENT 4

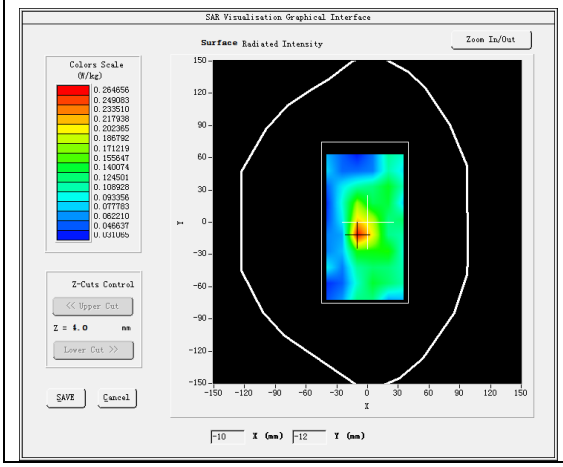
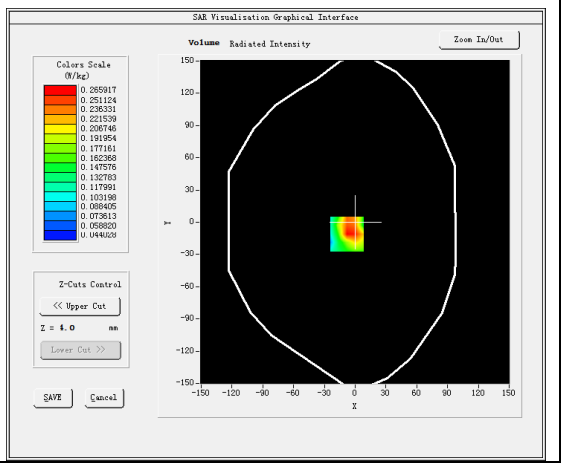
Date of measurement: 17/4/2025

A. Experimental conditions.

Area Scan	dx=15mm dy=15mm, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Body
Band	Band5_WCDMA850
Channels	Middle
Signal	WCDMA (Crest factor: 1.0)
ConvF	1.66

B. SAR Measurement Results

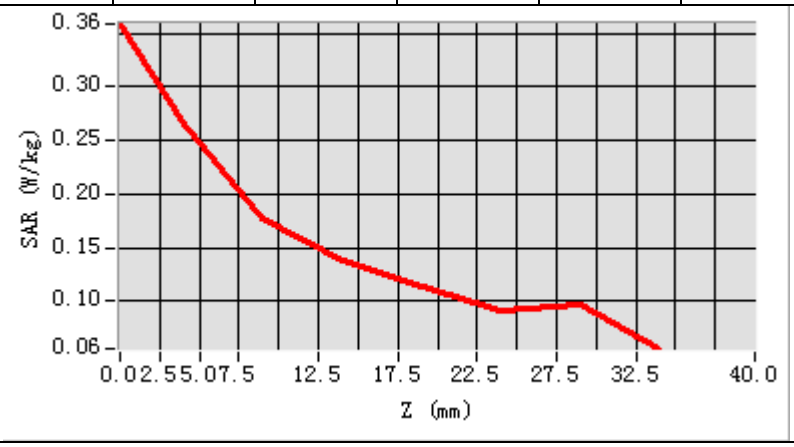
Frequency (MHz)	836.400024
Relative permittivity (real part)	41.500000
Relative permittivity (imaginary part)	19.400000
Conductivity (S/m)	0.901453
Variation (%)	1.860000

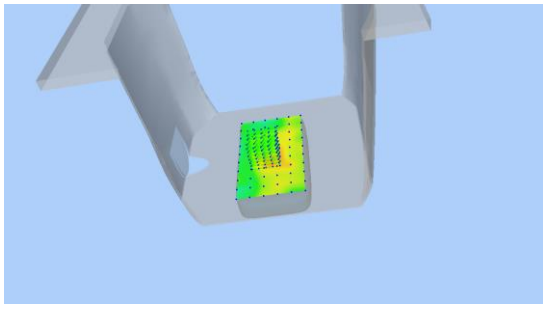
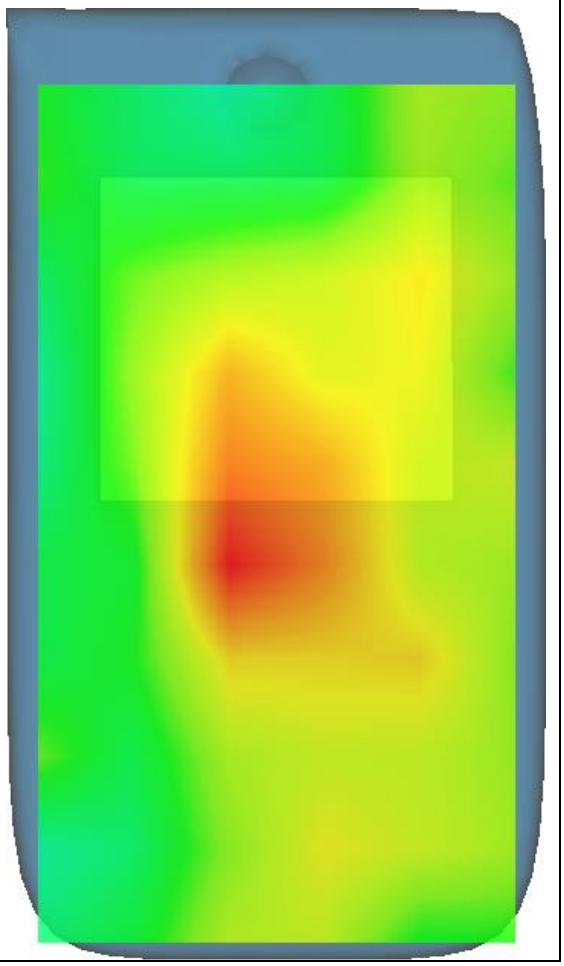
SURFACE SAR	**VOLUME SAR**
	

Maximum location: X=-8.00, Y=-11.00
SAR Peak: 0.43 W/kg

SAR 10g (W/Kg)	0.174973
SAR 1g (W/Kg)	0.267577

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.3589	0.2659	0.1768	0.1374	0.1141	0.0910	0.0974



3D screen shot	Hot spot position
	

MEASUREMENT 5

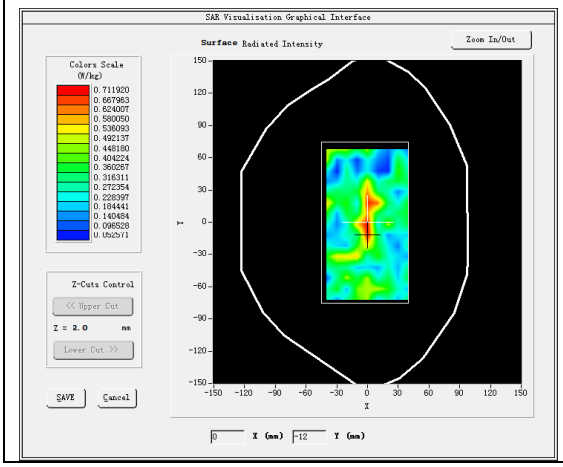
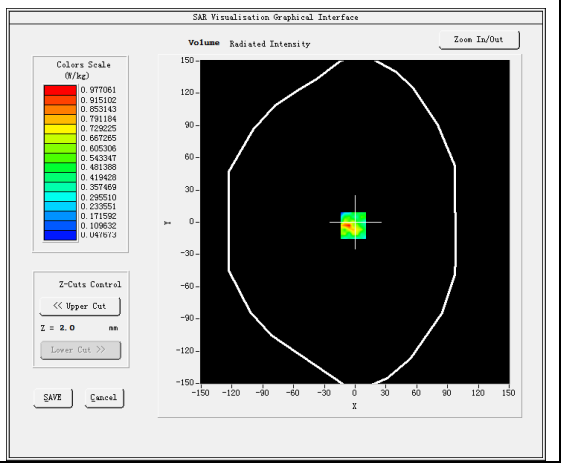
Date of measurement: 22/4/2025

A. Experimental conditions.

Area Scan	dx=10mm dy=10mm, h= 2.00 mm
ZoomScan	7x7x12,dx=4mm dy=4mm dz=2mm
Phantom	Validation plane
Device Position	Body
Band	IEEE 802.11a U-NII
Channels	Middle
Signal	IEEE802.a (Crest factor: 1.0)
ConvF	2.30

B. SAR Measurement Results

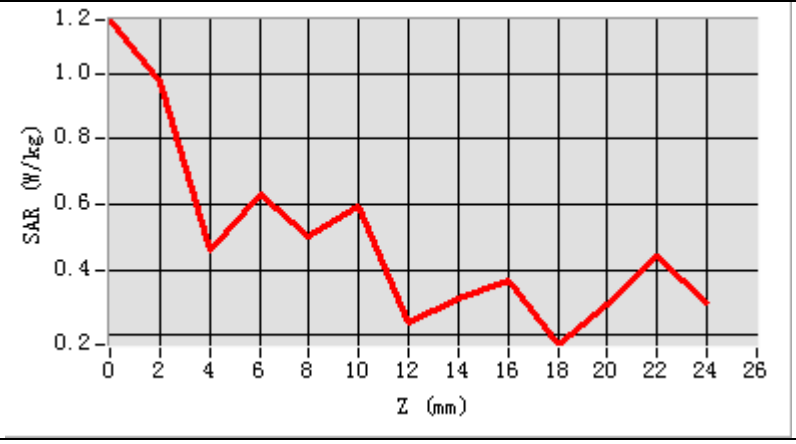
Frequency (MHz)	5200.000000
Relative permittivity (real part)	37.400000
Relative permittivity (imaginary part)	16.129999
Conductivity (S/m)	4.510778
Variation (%)	0.980000

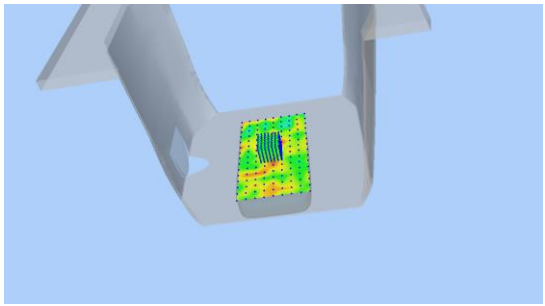
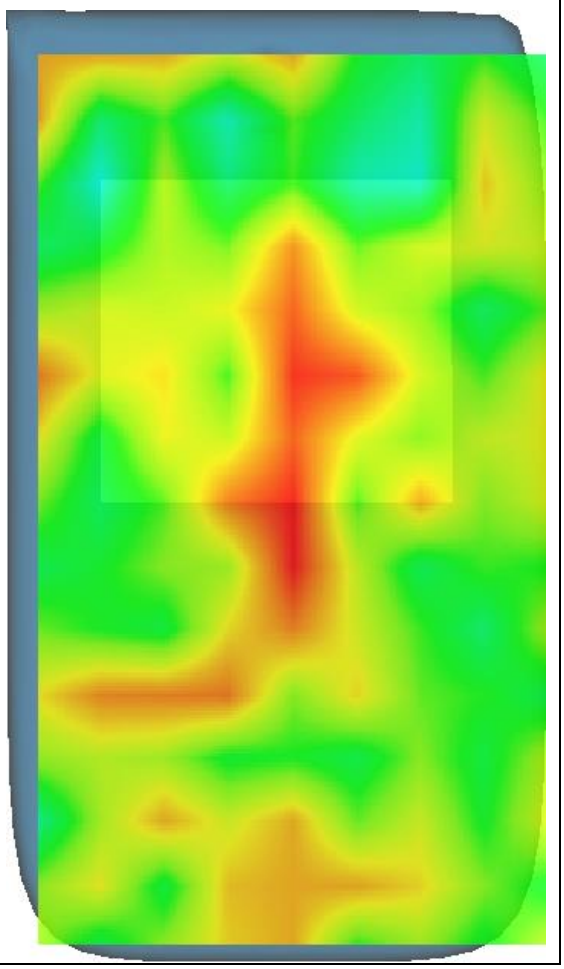
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-2.00, Y=-3.00
SAR Peak: 1.34 W/kg

SAR 10g (W/Kg)	0.388362
SAR 1g (W/Kg)	0.583555

Z (mm)	0.00	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	22.00
SAR (W/Kg)	1.1640	0.9771	0.4567	0.6321	0.5036	0.5956	0.2387	0.3131	0.3670	0.1713	0.2934	0.4415



3D screen shot	Hot spot position
	

MEASUREMENT 6

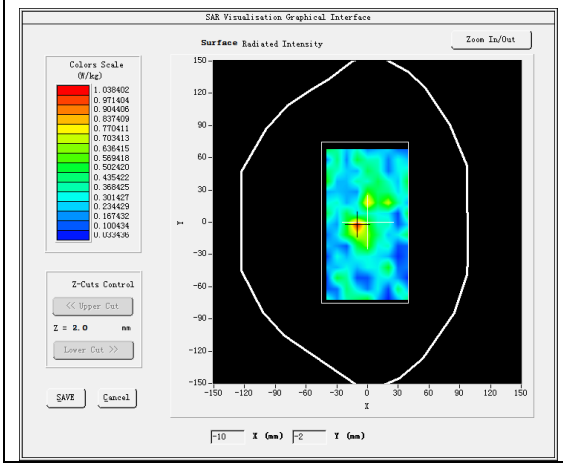
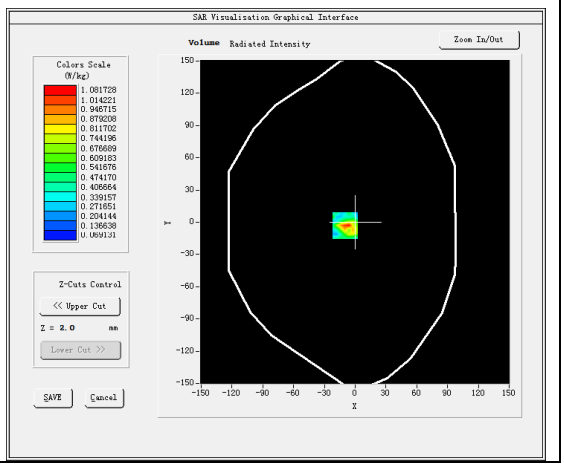
Date of measurement: 23/4/2025

A. Experimental conditions.

Area Scan	dx=10mm dy=10mm, h= 2.00 mm
ZoomScan	7x7x12,dx=4mm dy=4mm dz=2mm
Phantom	Validation plane
Device Position	Body
Band	IEEE 802.11n U-NII
Channels	Low
Signal	IEEE802.n (Crest factor: 1.0)
ConvF	2.30

B. SAR Measurement Results

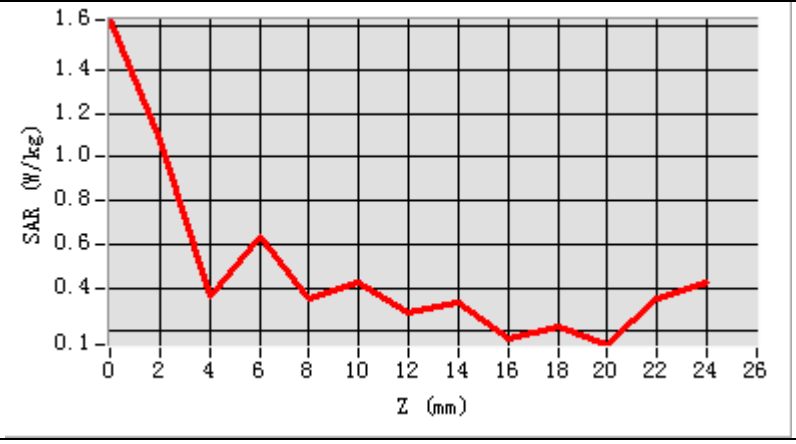
Frequency (MHz)	5260.000000
Relative permittivity (real part)	35.809987
Relative permittivity (imaginary part)	16.145001
Conductivity (S/m)	4.717928
Variation (%)	-2.850000

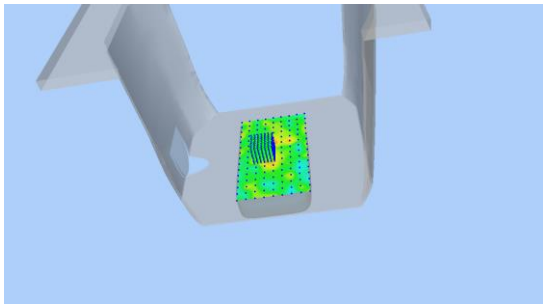
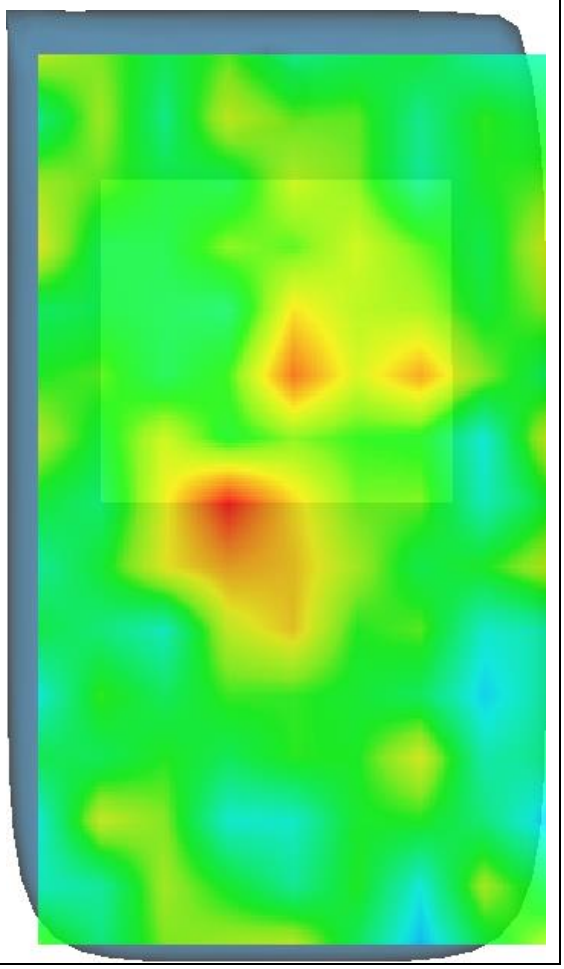
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-10.00, Y=-3.00
SAR Peak: 1.67 W/kg

SAR 10g (W/Kg)	0.372259
SAR 1g (W/Kg)	0.600432

Z (mm)	0.00	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	22.00
SAR (W/Kg)	1.6292	1.0817	0.3643	0.6383	0.3539	0.4200	0.2823	0.3355	0.1640	0.2196	0.1393	0.3479



3D screen shot	Hot spot position
	

MEASUREMENT 7

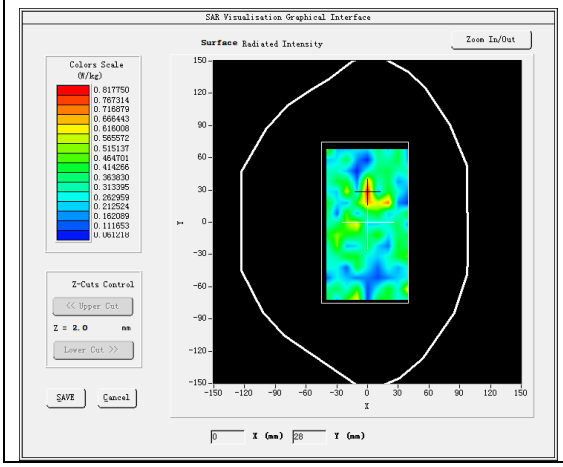
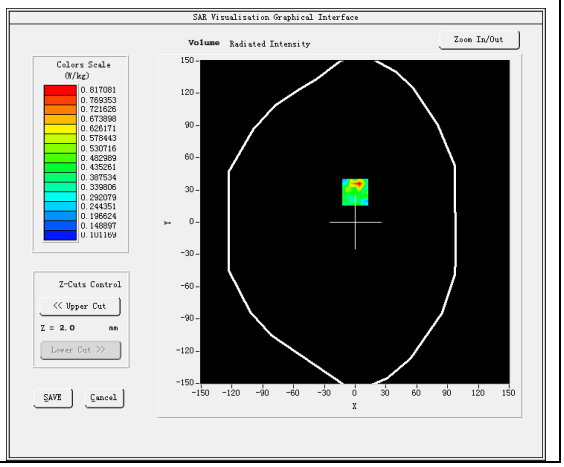
Date of measurement: 24/4/2025

A. Experimental conditions.

Area Scan	dx=10mm dy=10mm, h= 2.00 mm
ZoomScan	7x7x12,dx=4mm dy=4mm dz=2mm
Phantom	Validation plane
Device Position	Body
Band	IEEE 802.11a U-NII
Channels	High
Signal	IEEE802.a (Crest factor: 1.0)
ConvF	2.29

B. SAR Measurement Results

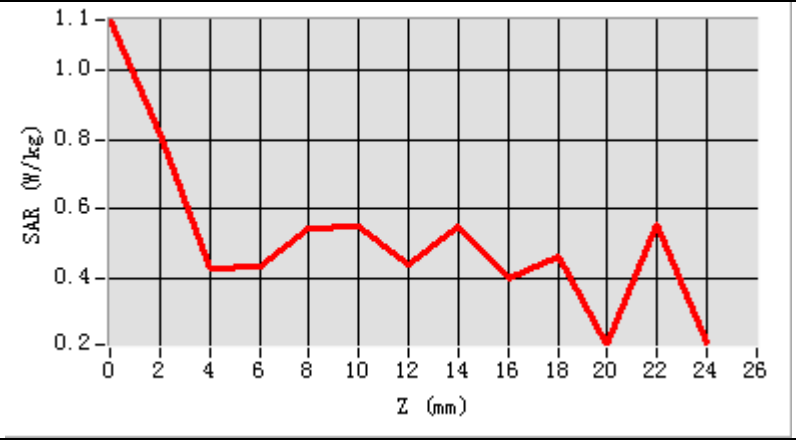
Frequency (MHz)	5700.000000
Relative permittivity (real part)	35.600000
Relative permittivity (imaginary part)	16.299888
Conductivity (S/m)	5.161631
Variation (%)	3.980000

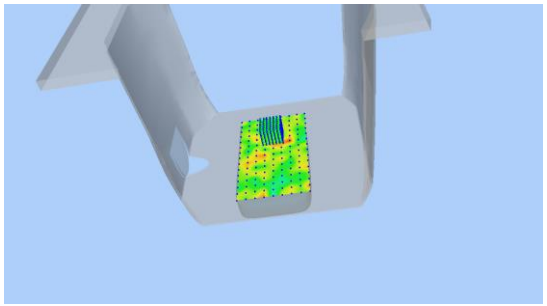
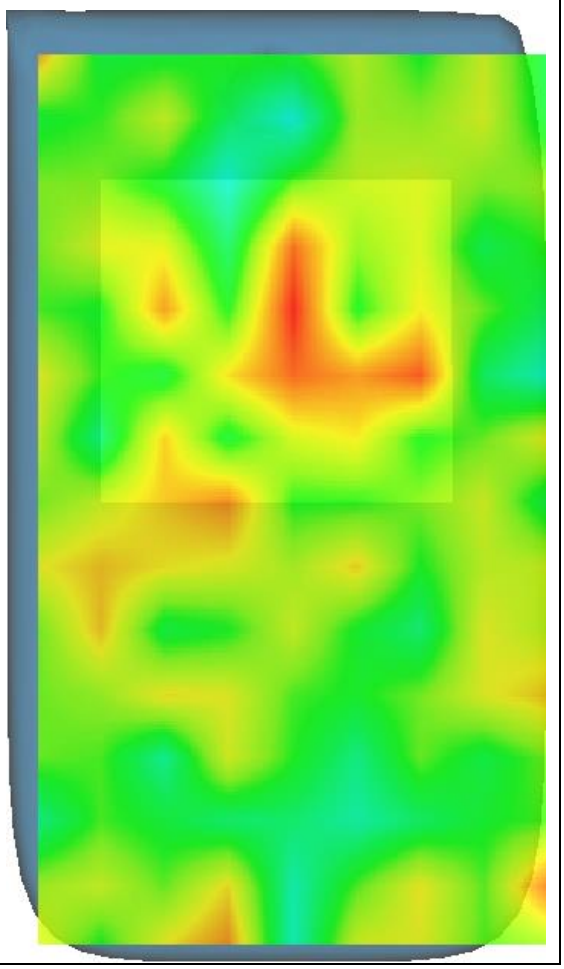
SURFACE SAR	VOLUME SAR
	

Maximum location: X=0.00, Y=28.00
SAR Peak: 1.41 W/kg

SAR 10g (W/Kg)	0.386908
SAR 1g (W/Kg)	0.521545

Z (mm)	0.00	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	22.00
SAR (W/Kg)	1.1436	0.8171	0.4308	0.4346	0.5460	0.5494	0.4394	0.5487	0.3980	0.4604	0.2088	0.5552



3D screen shot	Hot spot position
	

MEASUREMENT 8

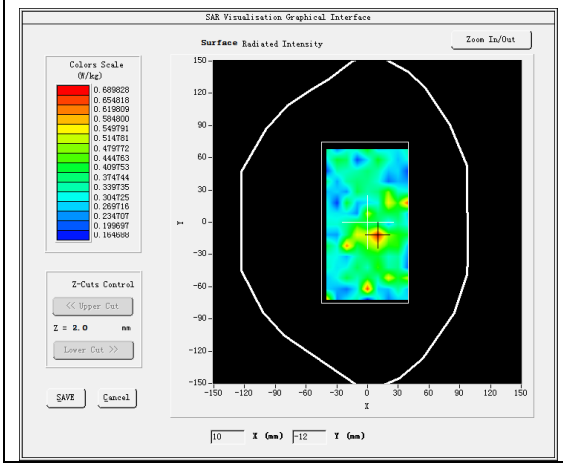
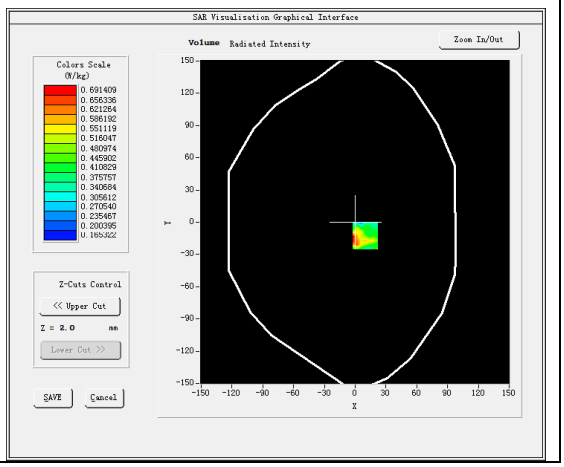
Date of measurement: 25/4/2025

A. Experimental conditions.

Area Scan	dx=10mm dy=10mm, h= 2.00 mm
ZoomScan	7x7x12,dx=4mm dy=4mm dz=2mm
Phantom	Validation plane
Device Position	Body
Band	IEEE 802.11a U-NII
Channels	Middle
Signal	IEEE802.a (Crest factor: 1.0)
ConvF	2.27

B. SAR Measurement Results

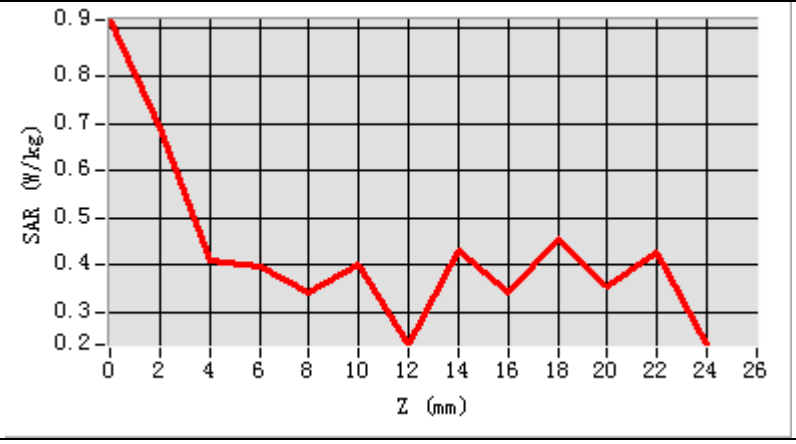
Frequency (MHz)	5785.000000
Relative permittivity (real part)	35.314999
Relative permittivity (imaginary part)	16.355499
Conductivity (S/m)	5.256476
Variation (%)	-0.370000

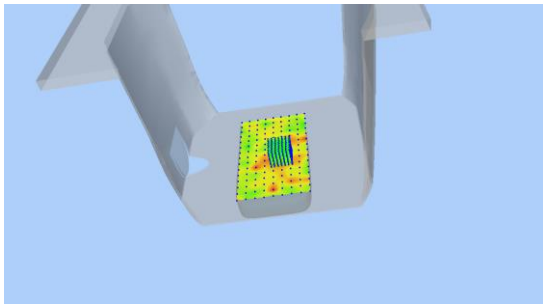
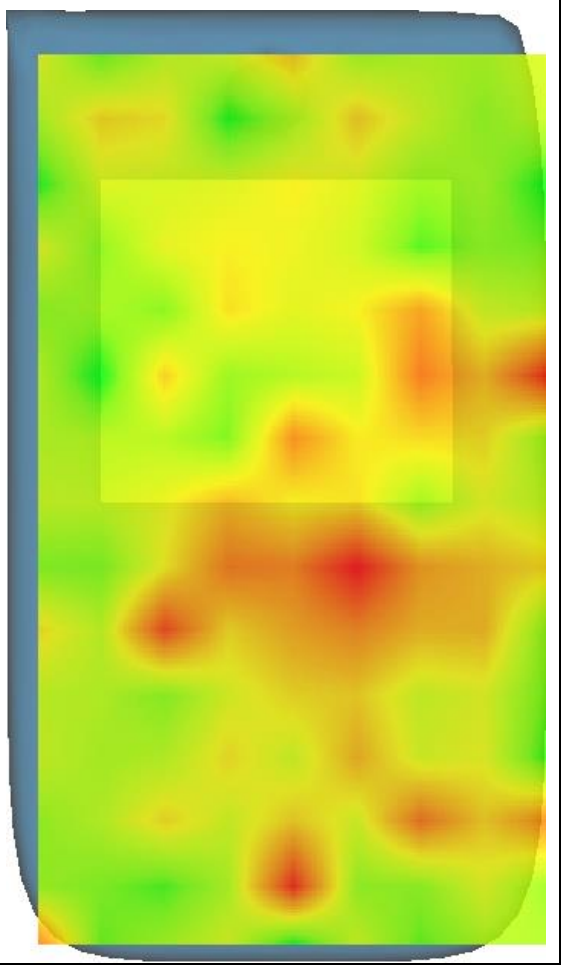
SURFACE SAR	VOLUME SAR
	

Maximum location: X=10.00, Y=-13.00
SAR Peak: 1.09 W/kg

SAR 10g (W/Kg)	0.382055
SAR 1g (W/Kg)	0.509095

Z (mm)	0.00	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	22.00
SAR (W/Kg)	0.9188	0.6914	0.4106	0.3952	0.3399	0.4020	0.2315	0.4310	0.3412	0.4541	0.3536	0.4280



3D screen shot	Hot spot position
	

MEASUREMENT 9

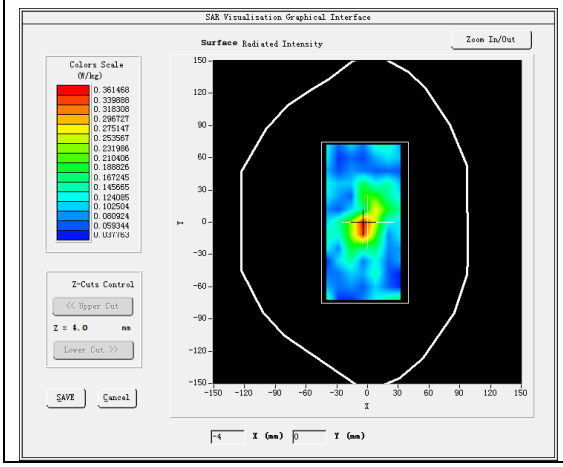
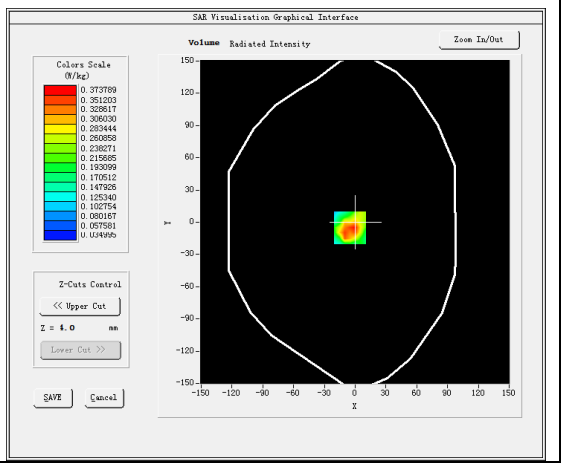
Date of measurement: 20/4/2025

A. Experimental conditions.

Area Scan	dx=12mm dy=12mm, h= 5.00 mm
ZoomScan	7x7x7,dx=5mm dy=5mm dz=5mm
Phantom	Validation plane
Device Position	Body
Band	IEEE 802.11b ISM
Channels	Low
Signal	IEEE802.b (Crest factor: 1.0)
ConvF	2.38

B. SAR Measurement Results

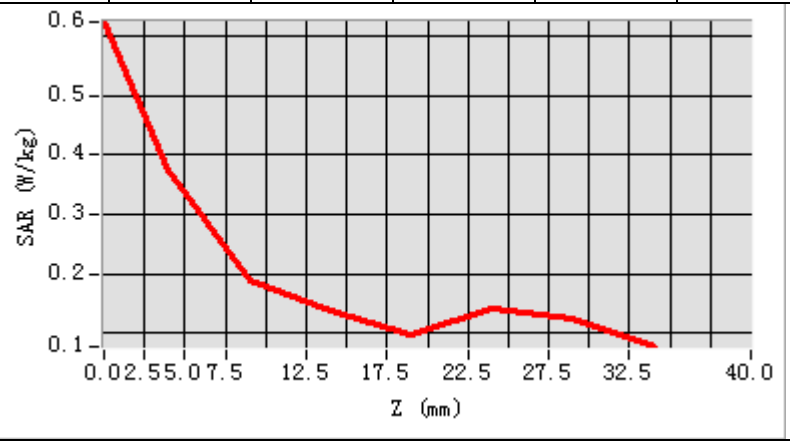
Frequency (MHz)	2412.000000
Relative permittivity (real part)	39.224002
Relative permittivity (imaginary part)	13.205000
Conductivity (S/m)	1.769470
Variation (%)	-0.380000

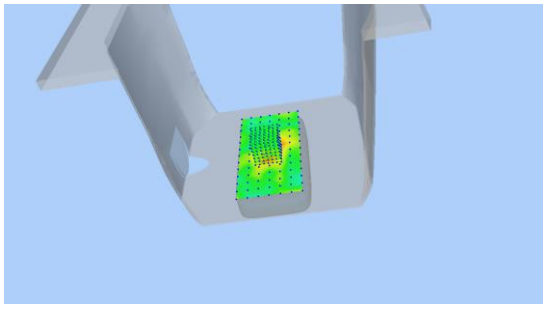
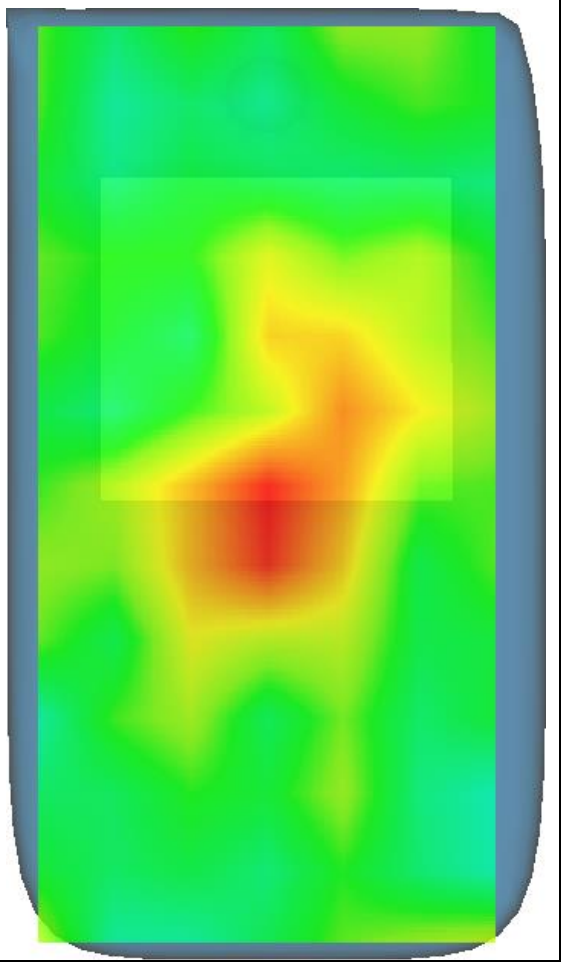
SURFACE SAR	**VOLUME SAR**
	

Maximum location: X=-5.00, Y=-5.00
SAR Peak: 0.61 W/kg

SAR 10g (W/Kg)	0.203516
SAR 1g (W/Kg)	0.324062

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.6232	0.3738	0.1888	0.1396	0.0998	0.1413	0.1248



3D screen shot	Hot spot position
	

MEASUREMENT 10

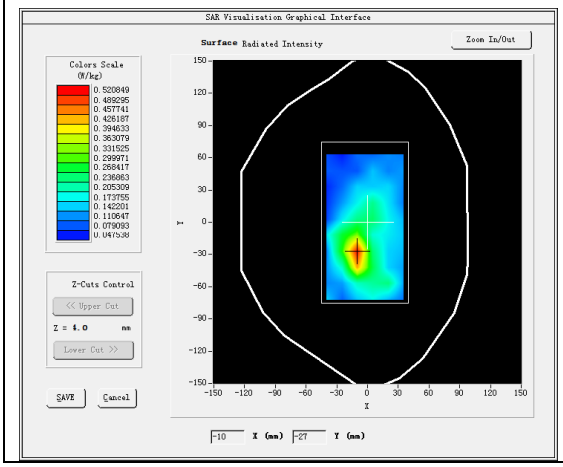
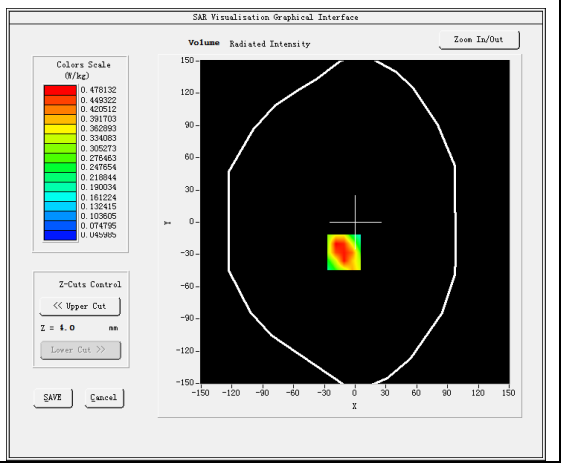
Date of measurement: 19/4/2025

A. Experimental conditions.

Area Scan	dx=15mm dy=15mm, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Body
Band	LTE band 2
Channels	Middle
Signal	LTE (Crest factor: 1.0)
ConvF	2.05

B. SAR Measurement Results

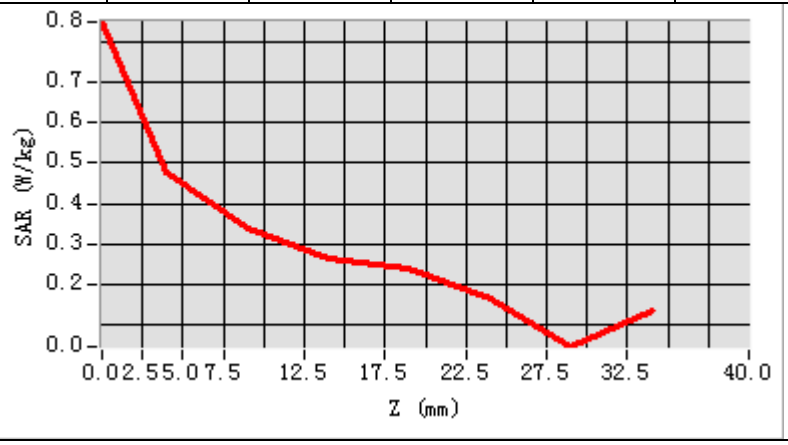
Frequency (MHz)	1879.500000
Relative permittivity (real part)	40.000000
Relative permittivity (imaginary part)	13.411700
Conductivity (S/m)	1.400405
Variation (%)	4.490000

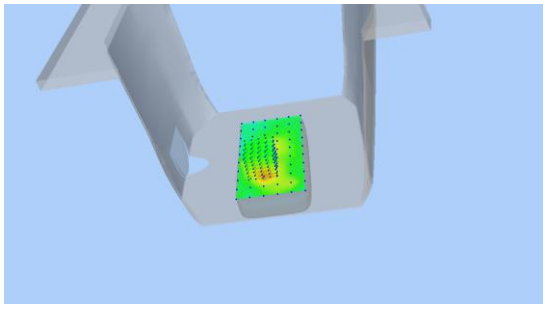
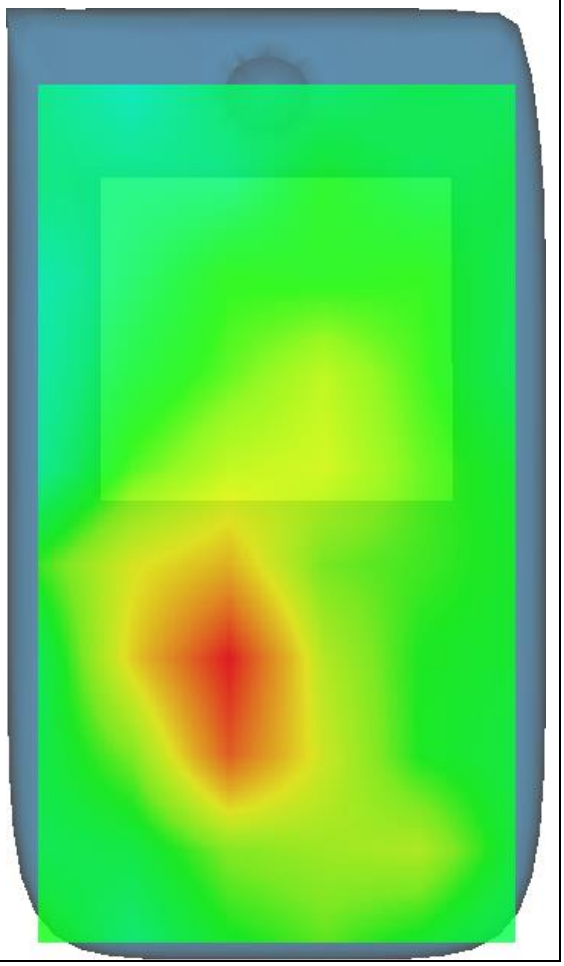
SURFACE SAR	**VOLUME SAR**
	

Maximum location: X=-11.00, Y=-28.00
SAR Peak: 0.65 W/kg

SAR 10g (W/Kg)	0.324439
SAR 1g (W/Kg)	0.459738

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.8495	0.4781	0.3370	0.2649	0.2408	0.1643	0.0460



3D screen shot	Hot spot position
	

MEASUREMENT 11

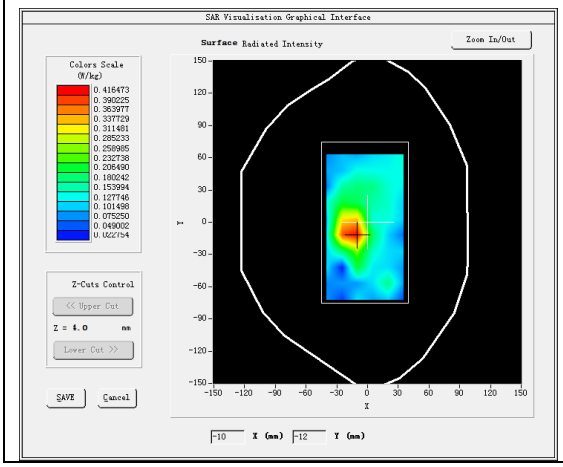
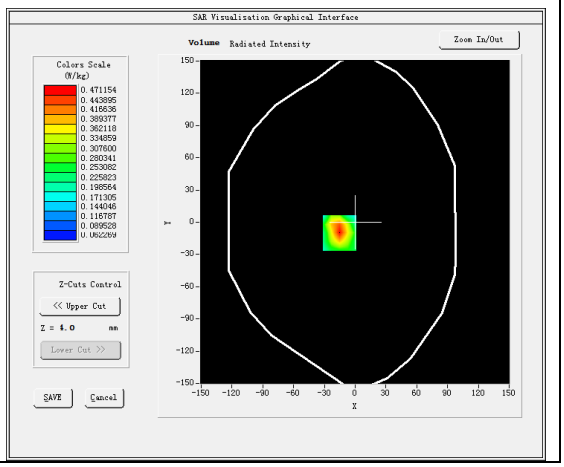
Date of measurement: 18/4/2025

A. Experimental conditions.

Area Scan	dx=15mm dy=15mm, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Body
Band	LTE band 4
Channels	Middle
Signal	LTE (Crest factor: 1.0)
ConvF	2.05

B. SAR Measurement Results

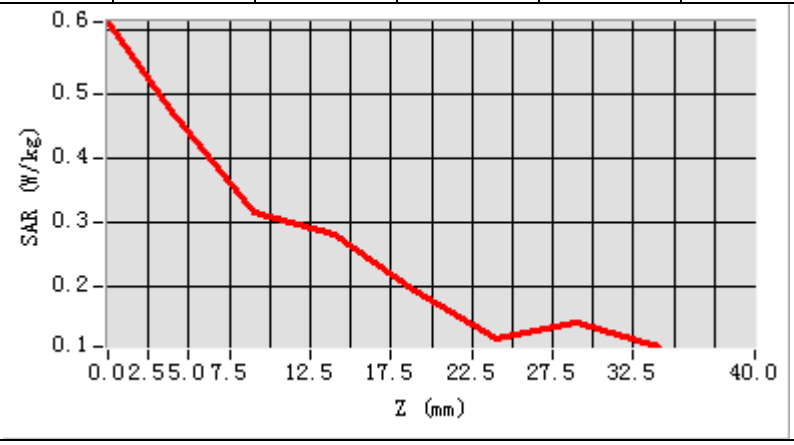
Frequency (MHz)	1732.500000
Relative permittivity (real part)	40.115910
Relative permittivity (imaginary part)	14.136136
Conductivity (S/m)	1.360603
Variation (%)	3.470000

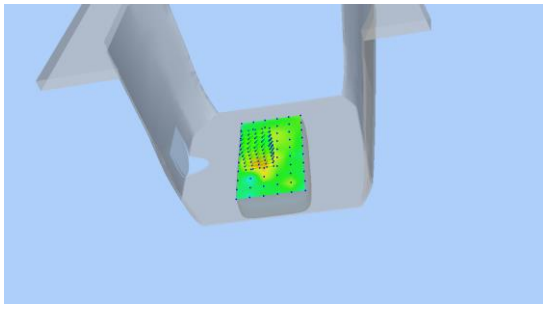
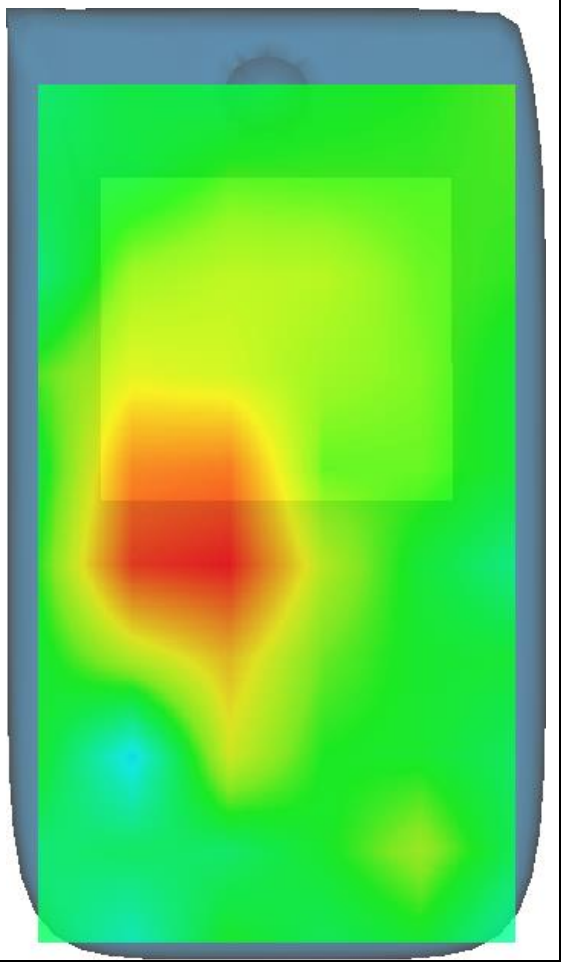
SURFACE SAR	**VOLUME SAR**
	

Maximum location: X=-15.00, Y=-10.00
SAR Peak: 0.64 W/kg

SAR 10g (W/Kg)	0.294367
SAR 1g (W/Kg)	0.439584

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.6127	0.4712	0.3159	0.2820	0.1955	0.1211	0.1459



3D screen shot	Hot spot position
	

MEASUREMENT 12

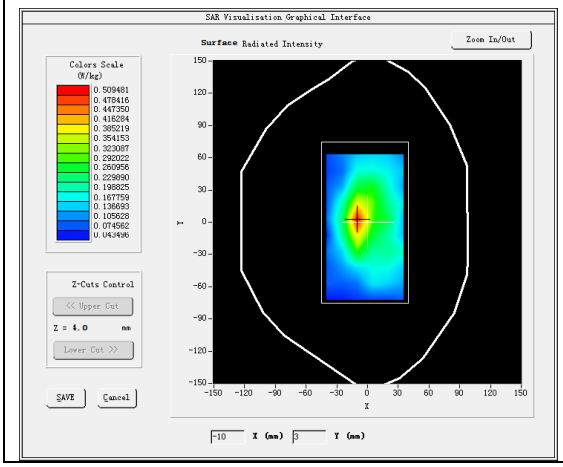
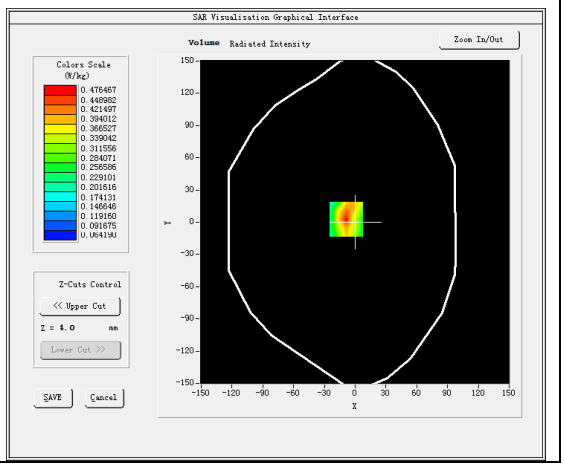
Date of measurement: 17/4/2025

A. Experimental conditions.

Area Scan	dx=15mm dy=15mm, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Body
Band	LTE band 5
Channels	Middle
Signal	LTE (Crest factor: 1.0)
ConvF	1.66

B. SAR Measurement Results

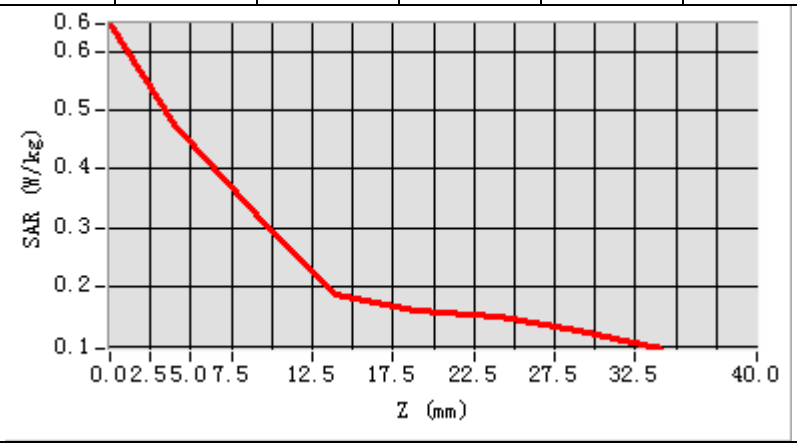
Frequency (MHz)	836.500000
Relative permittivity (real part)	41.500000
Relative permittivity (imaginary part)	19.400000
Conductivity (S/m)	0.901561
Variation (%)	-0.710000

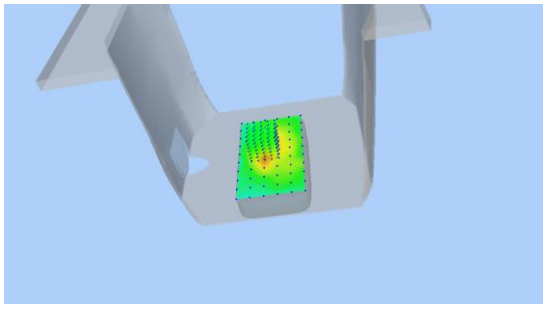
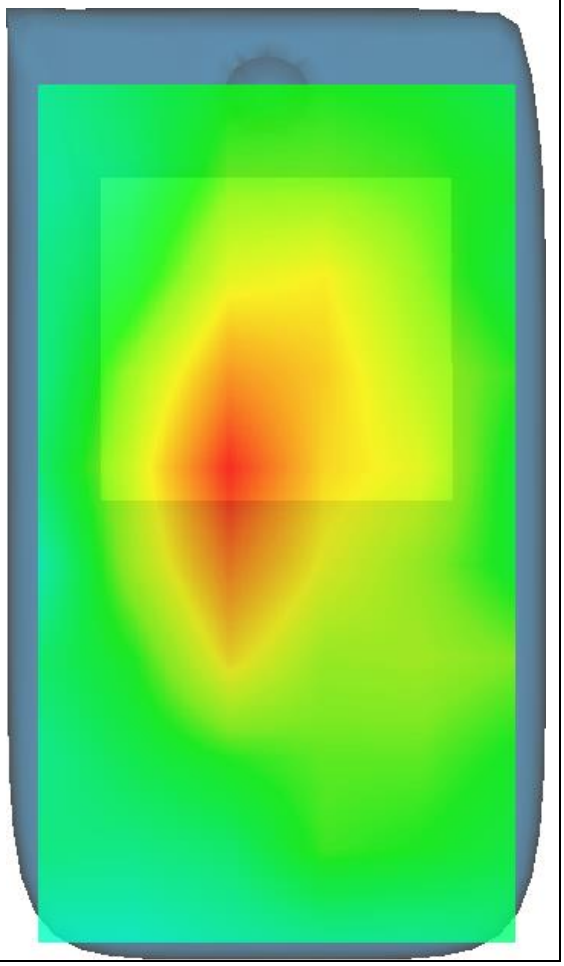
SURFACE SAR	**VOLUME SAR**
	

Maximum location: X=-9.00, Y=3.00
SAR Peak: 0.69 W/kg

SAR 10g (W/Kg)	0.276043
SAR 1g (W/Kg)	0.440355

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.6461	0.4765	0.3251	0.1864	0.1587	0.1491	0.1281



3D screen shot	Hot spot position
	

MEASUREMENT 13

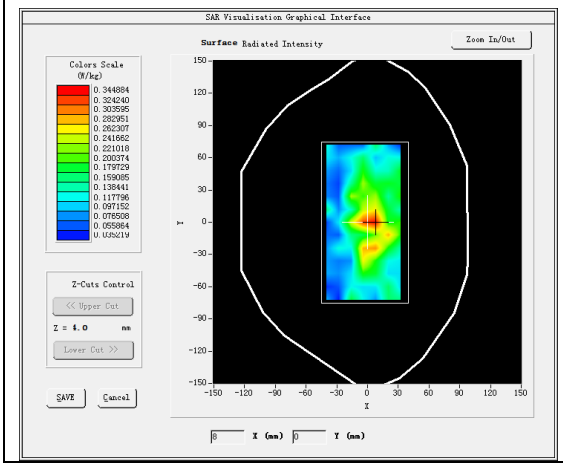
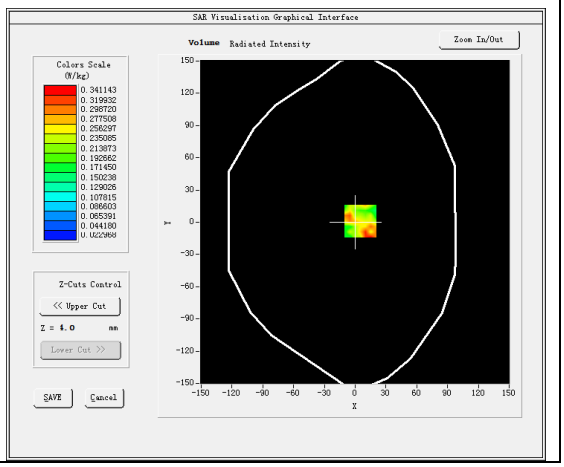
Date of measurement: 21/4/2025

A. Experimental conditions.

Area Scan	dx=12mm dy=12mm, h= 5.00 mm
ZoomScan	7x7x7,dx=5mm dy=5mm dz=5mm
Phantom	Validation plane
Device Position	Body
Band	LTE band 7
Channels	Middle
Signal	LTE (Crest factor: 1.0)
ConvF	2.35

B. SAR Measurement Results

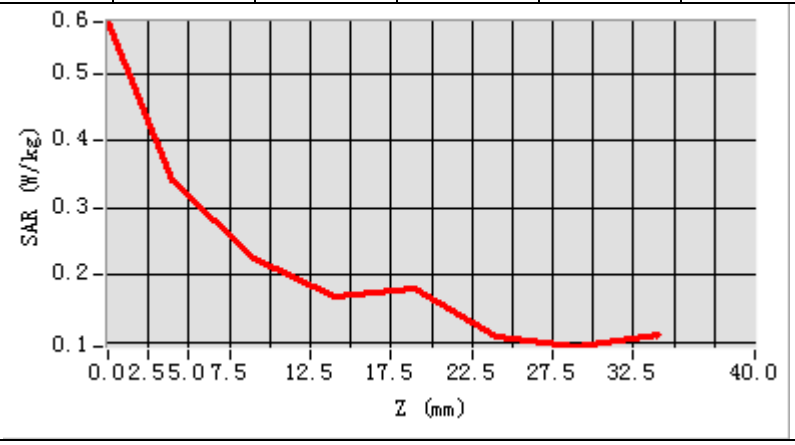
Frequency (MHz)	2535.000000
Relative permittivity (real part)	39.086666
Relative permittivity (imaginary part)	13.418333
Conductivity (S/m)	1.889749
Variation (%)	-2.240000

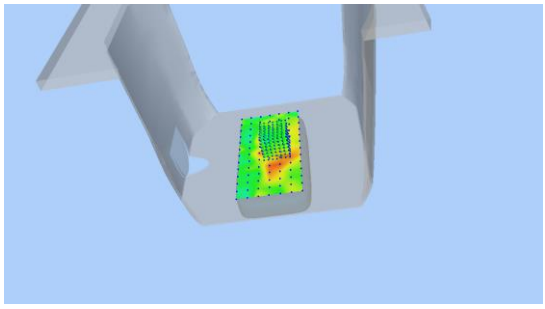
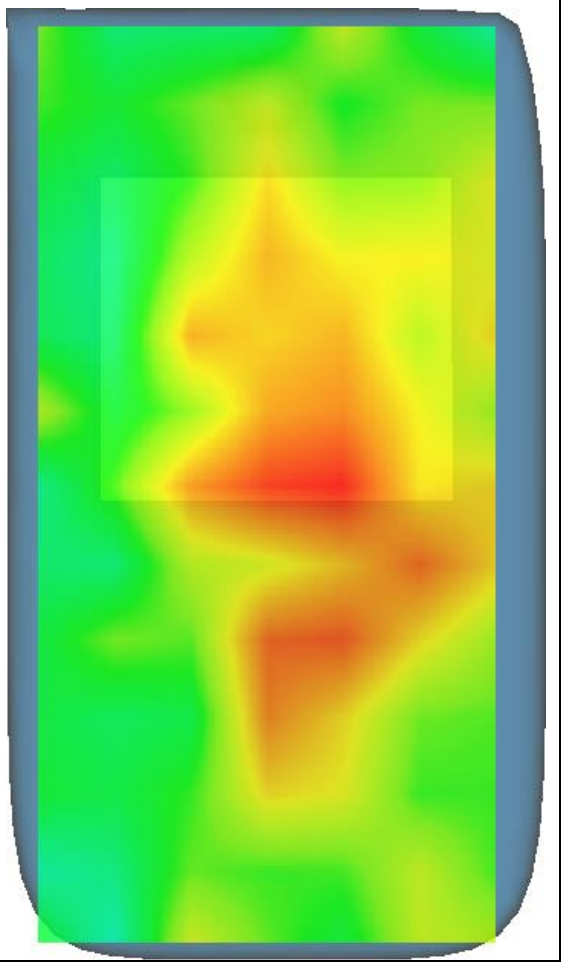
SURFACE SAR	**VOLUME SAR**
	

Maximum location: X=5.00, Y=1.00
SAR Peak: 0.64 W/kg

SAR 10g (W/Kg)	0.204324
SAR 1g (W/Kg)	0.298888

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.5776	0.3411	0.2256	0.1685	0.1793	0.1076	0.0928



3D screen shot	Hot spot position
	

MEASUREMENT 14

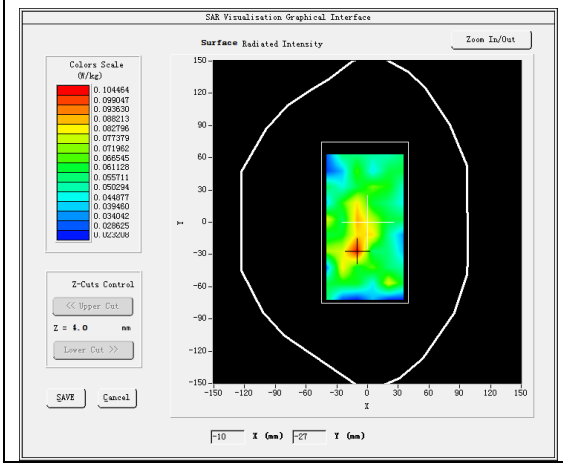
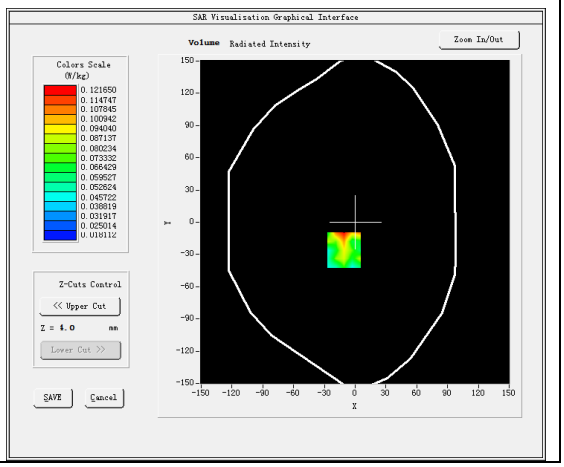
Date of measurement: 16/4/2025

A. Experimental conditions.

Area Scan	dx=15mm dy=15mm, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Body
Band	LTE band 12
Channels	Middle
Signal	LTE (Crest factor: 1.0)
ConvF	1.65

B. SAR Measurement Results

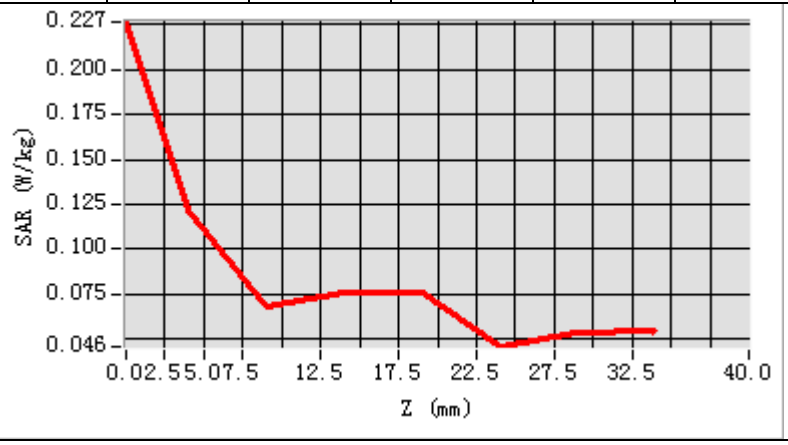
Frequency (MHz)	707.500000
Relative permittivity (real part)	42.126667
Relative permittivity (imaginary part)	23.264000
Conductivity (S/m)	0.914404
Variation (%)	-3.440001

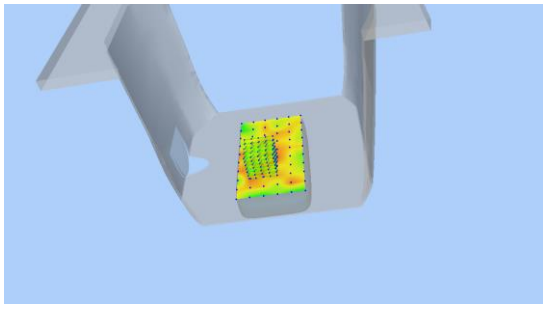
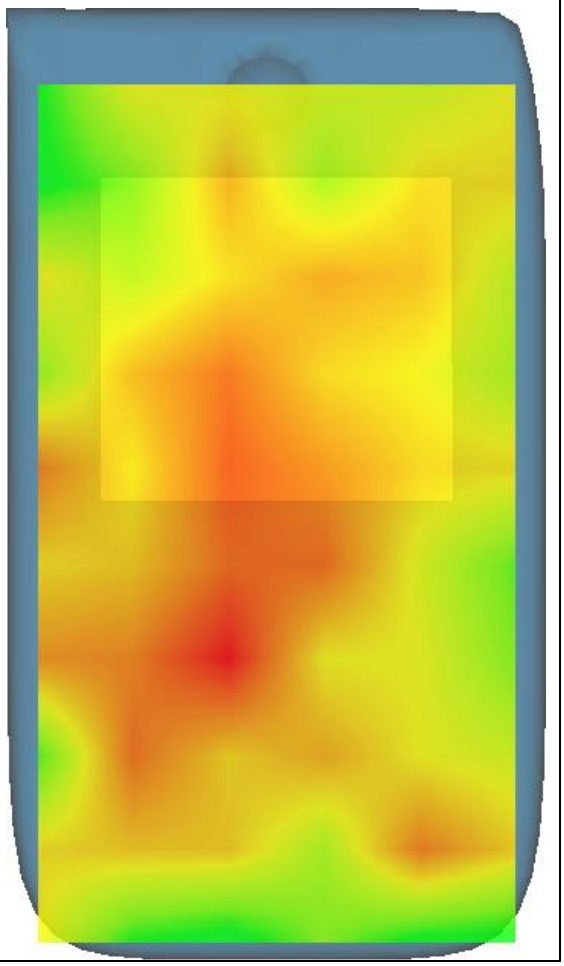
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-11.00, Y=-26.00
SAR Peak: 0.27 W/kg

SAR 10g (W/Kg)	0.074734
SAR 1g (W/Kg)	0.116568

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.2265	0.1216	0.0685	0.0762	0.0757	0.0457	0.0532



3D screen shot	Hot spot position
	

MEASUREMENT 15

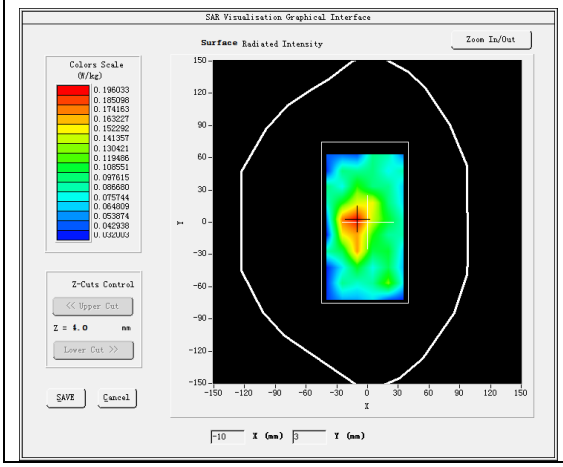
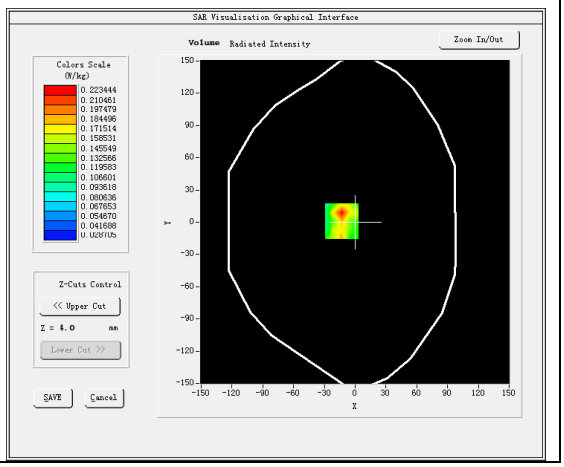
Date of measurement: 16/4/2025

A. Experimental conditions.

Area Scan	dx=15mm dy=15mm, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Body
Band	LTE band 13
Channels	Middle
Signal	LTE (Crest factor: 1.0)
ConvF	1.65

B. SAR Measurement Results

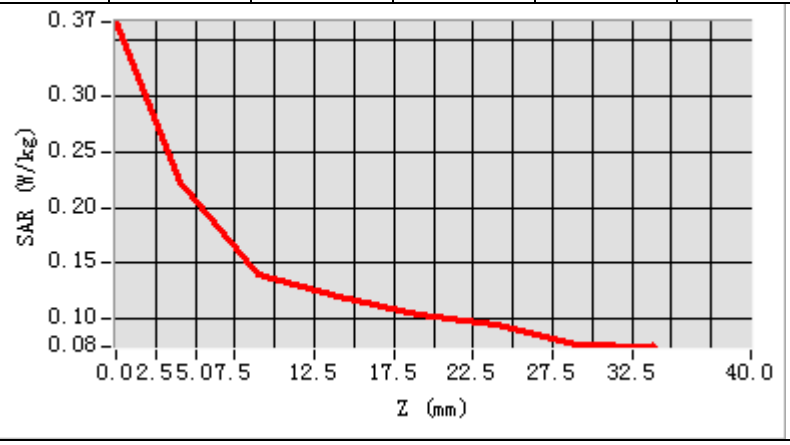
Frequency (MHz)	781.500000
Relative permittivity (real part)	41.751766
Relative permittivity (imaginary part)	20.633648
Conductivity (S/m)	0.895844
Variation (%)	-1.130000

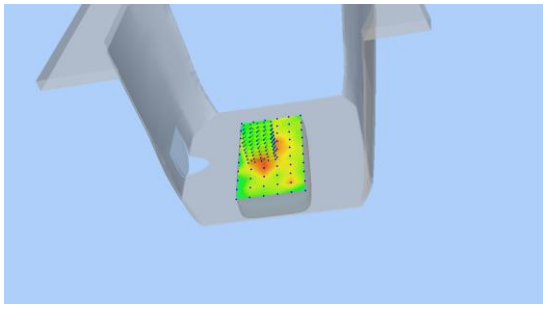
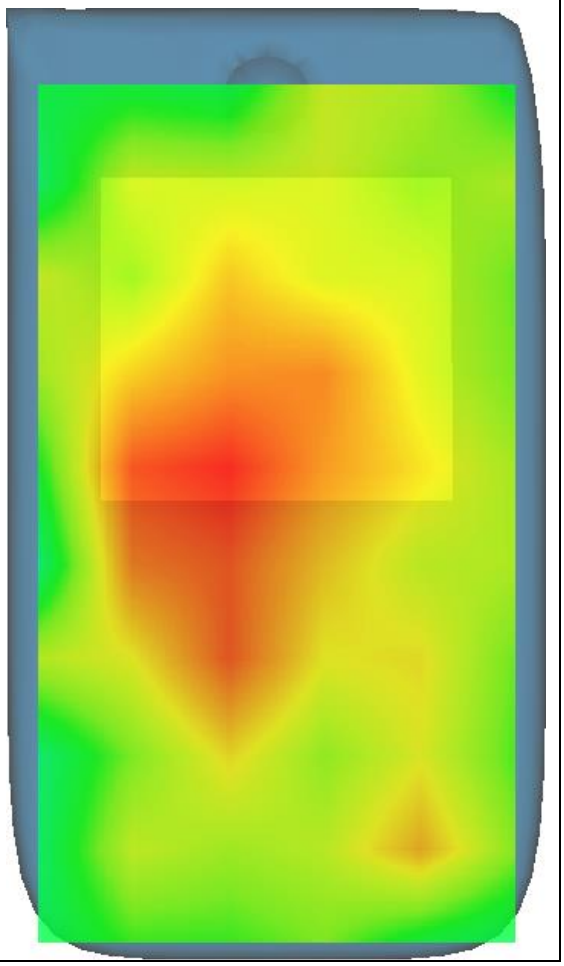
SURFACE SAR	**VOLUME SAR**
	

Maximum location: X=-13.00, Y=1.00
SAR Peak: 0.43 W/kg

SAR 10g (W/Kg)	0.136808
SAR 1g (W/Kg)	0.219639

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.3668	0.2234	0.1402	0.1208	0.1043	0.0954	0.0770



3D screen shot	Hot spot position
	

MEASUREMENT 16

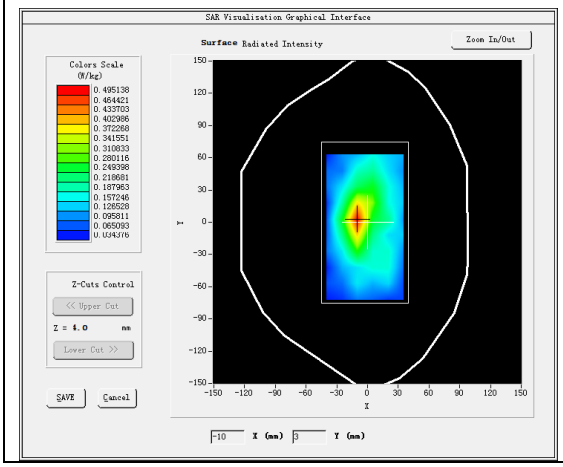
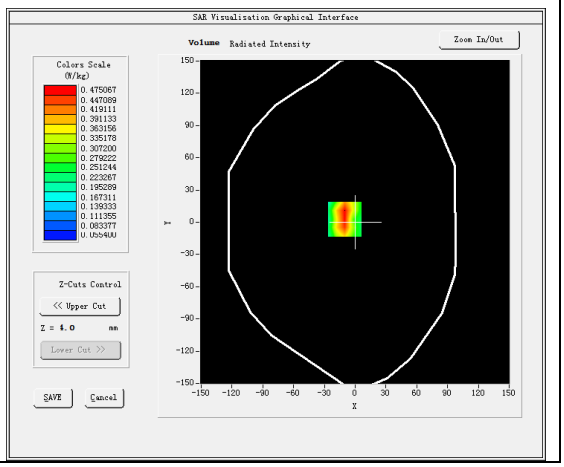
Date of measurement: 16/4/2025

A. Experimental conditions.

Area Scan	dx=15mm dy=15mm, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Body
Band	LTE band 14
Channels	Middle
Signal	LTE (Crest factor: 1.0)
ConvF	1.65

B. SAR Measurement Results

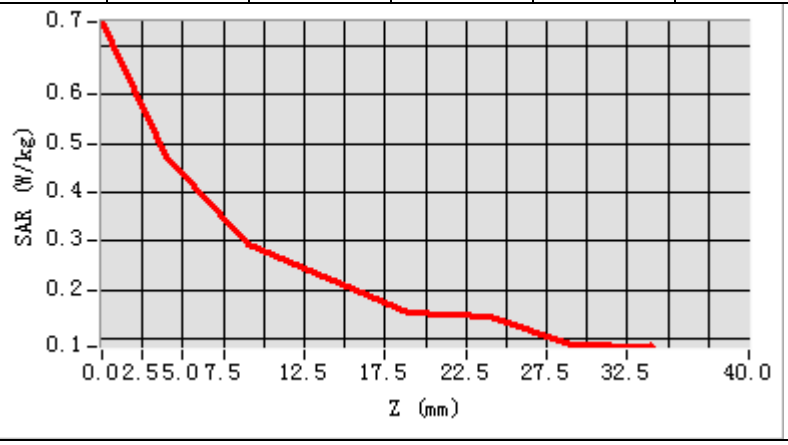
Frequency (MHz)	792.500000
Relative permittivity (real part)	41.700001
Relative permittivity (imaginary part)	20.379999
Conductivity (S/m)	0.897286
Variation (%)	-3.610000

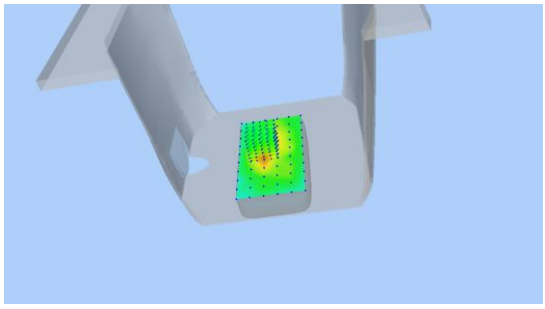
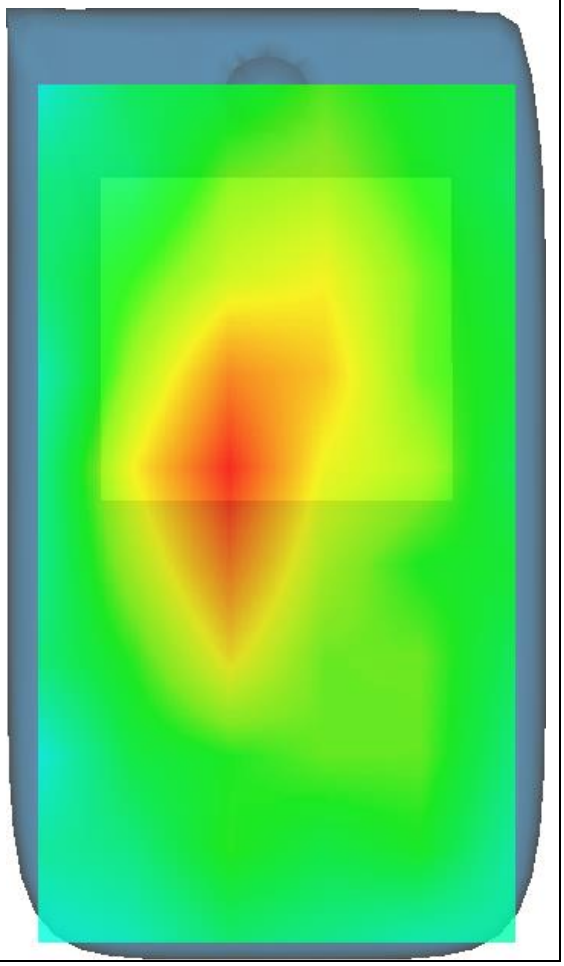
SURFACE SAR	**VOLUME SAR**
	

Maximum location: X=-10.00, Y=3.00
SAR Peak: 0.77 W/kg

SAR 10g (W/Kg)	0.276286
SAR 1g (W/Kg)	0.464545

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.7485	0.4751	0.2942	0.2218	0.1550	0.1470	0.0860



3D screen shot	Hot spot position
	

MEASUREMENT 17

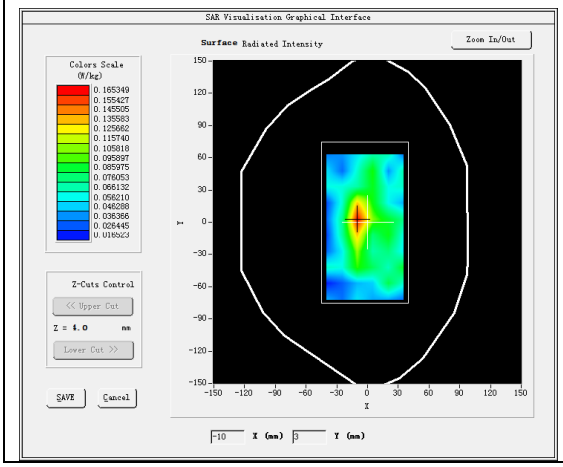
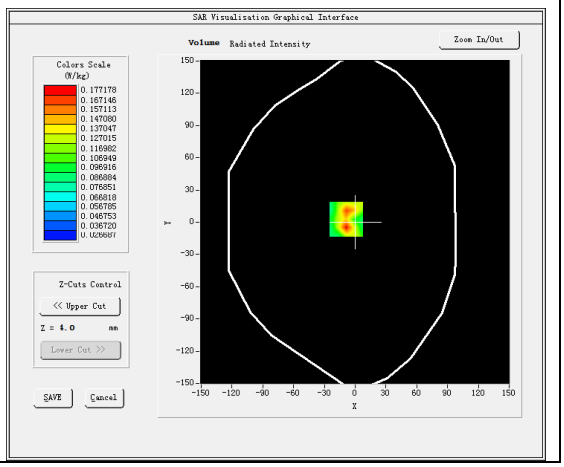
Date of measurement: 16/4/2025

A. Experimental conditions.

Area Scan	dx=15mm dy=15mm, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Body
Band	LTE band 17
Channels	Middle
Signal	LTE (Crest factor: 1.0)
ConvF	1.65

B. SAR Measurement Results

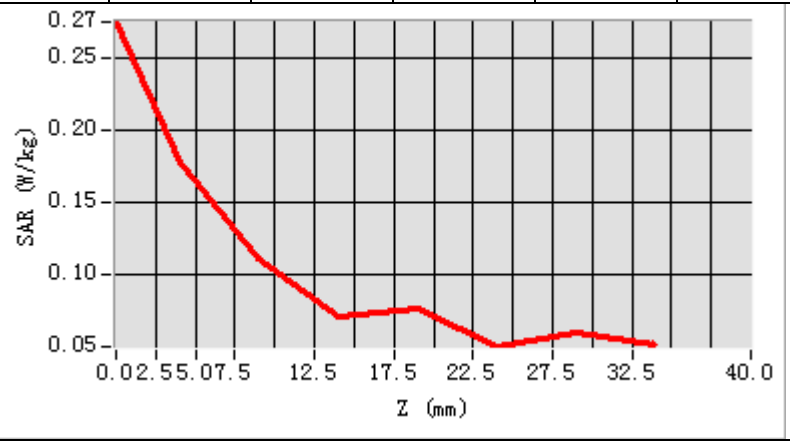
Frequency (MHz)	710.000000
Relative permittivity (real part)	42.113335
Relative permittivity (imaginary part)	23.152000
Conductivity (S/m)	0.913218
Variation (%)	0.030000

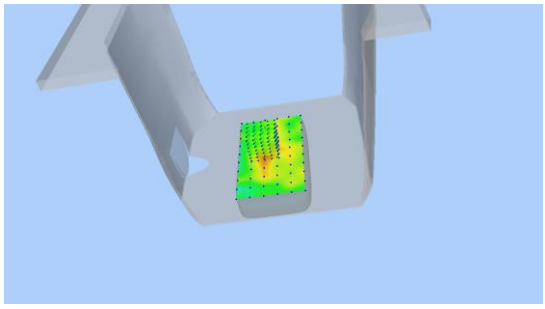
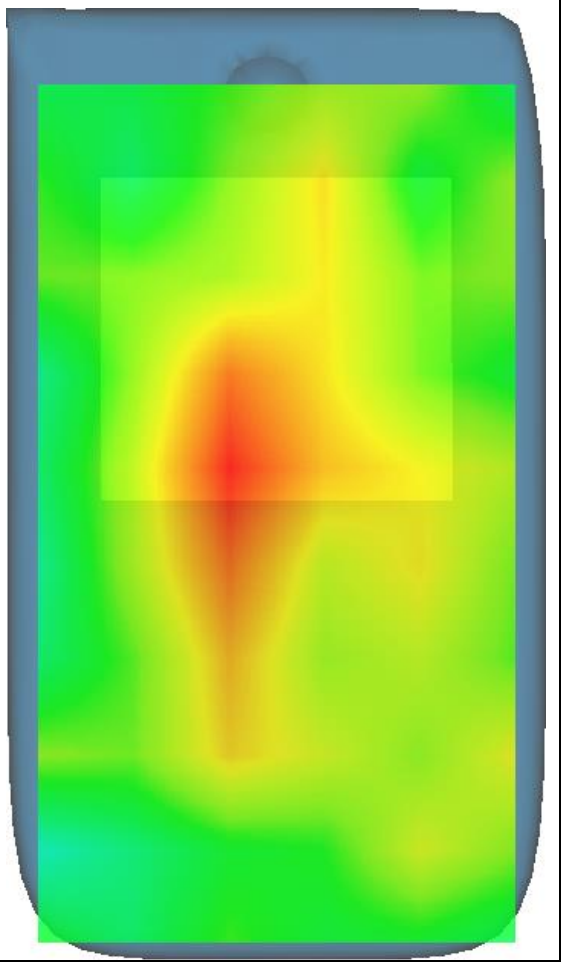
SURFACE SAR	**VOLUME SAR**
	

Maximum location: X=-9.00, Y=3.00
SAR Peak: 0.27 W/kg

SAR 10g (W/Kg)	0.105787
SAR 1g (W/Kg)	0.158006

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.2744	0.1772	0.1117	0.0711	0.0770	0.0510	0.0606



3D screen shot	Hot spot position
	

MEASUREMENT 18

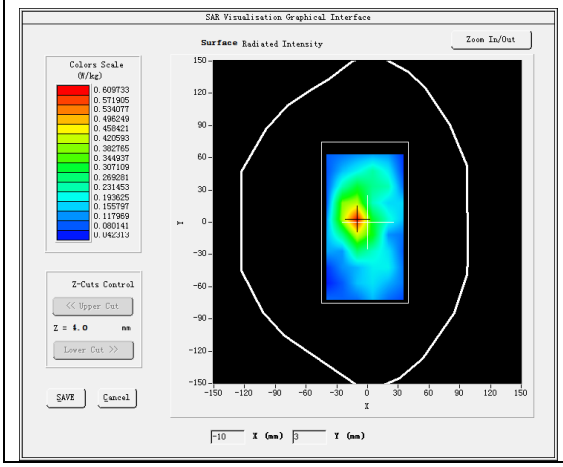
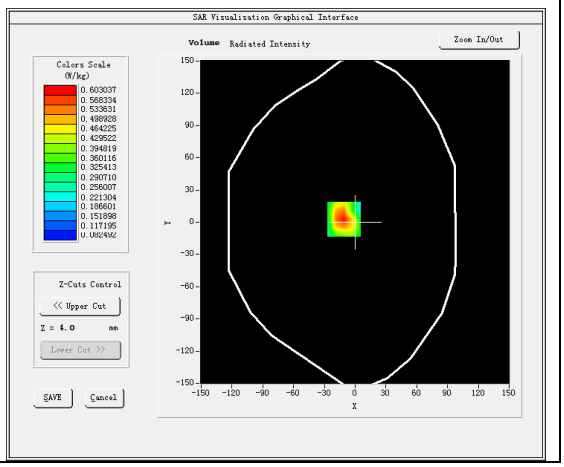
Date of measurement: 19/4/2025

A. Experimental conditions.

Area Scan	dx=15mm dy=15mm, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Body
Band	LTE band 25
Channels	Middle
Signal	LTE (Crest factor: 1.0)
ConvF	2.05

B. SAR Measurement Results

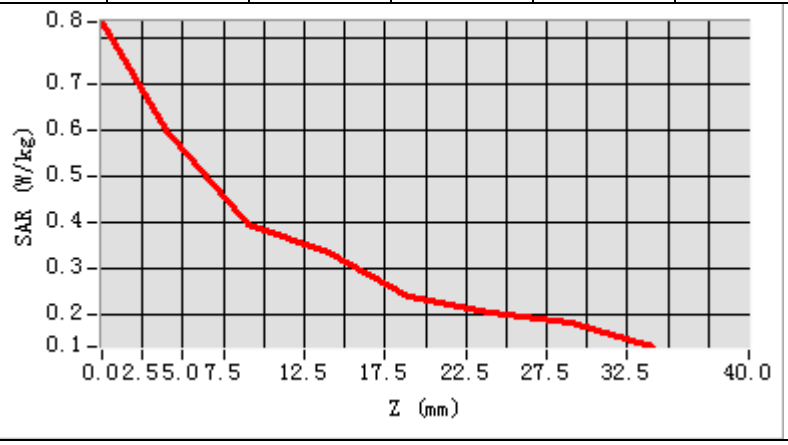
Frequency (MHz)	1882.500000
Relative permittivity (real part)	40.000000
Relative permittivity (imaginary part)	13.393200
Conductivity (S/m)	1.400706
Variation (%)	-2.660000

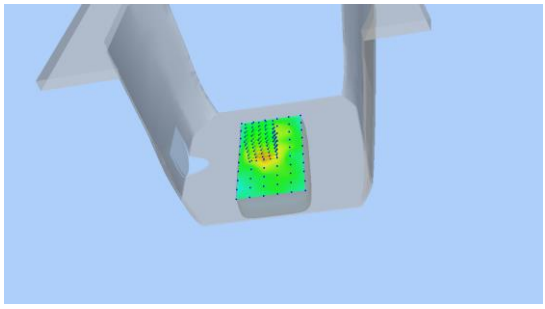
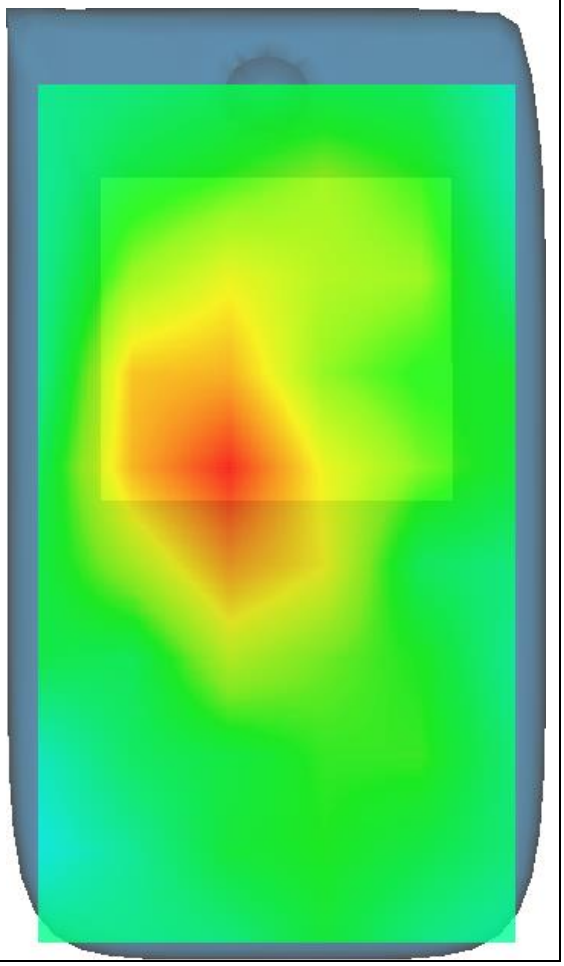
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-11.00, Y=3.00
SAR Peak: 0.85 W/kg

SAR 10g (W/Kg)	0.382346
SAR 1g (W/Kg)	0.582050

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.8364	0.6030	0.3981	0.3354	0.2411	0.2038	0.1840



3D screen shot	Hot spot position
	

MEASUREMENT 19

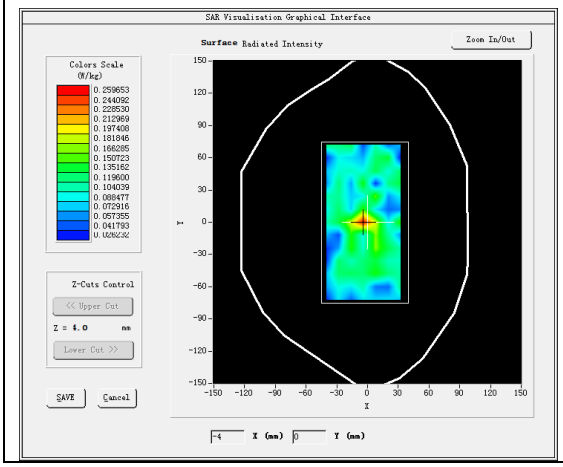
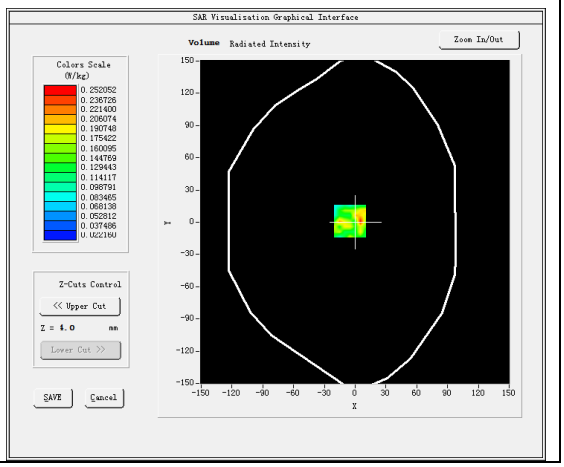
Date of measurement: 21/4/2025

A. Experimental conditions.

Area Scan	dx=12mm dy=12mm, h= 5.00 mm
ZoomScan	7x7x7,dx=5mm dy=5mm dz=5mm
Phantom	Validation plane
Device Position	Body
Band	LTE band 41
Channels	Middle
Signal	LTE (Crest factor: 1.0)
ConvF	2.35

B. SAR Measurement Results

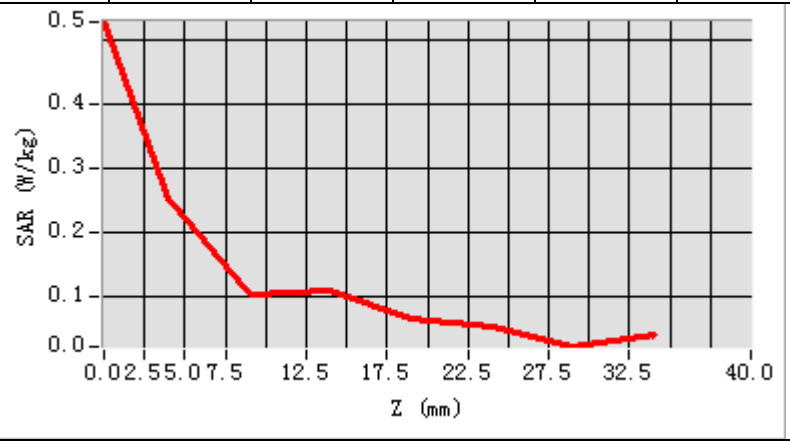
Frequency (MHz)	2593.000000
Relative permittivity (real part)	39.009335
Relative permittivity (imaginary part)	13.553667
Conductivity (S/m)	1.952481
Variation (%)	2.800000

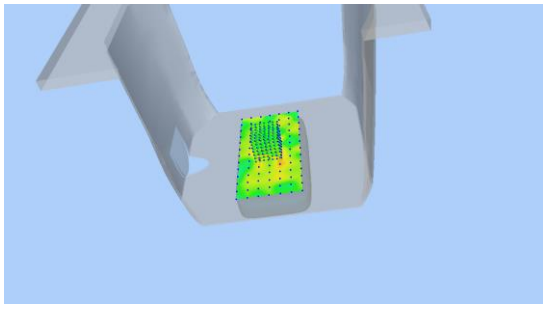
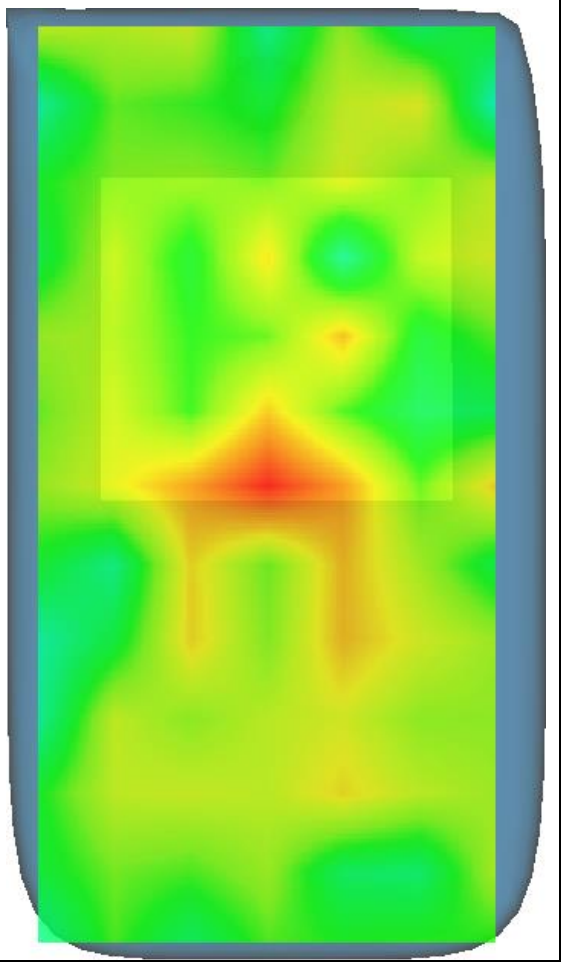
SURFACE SAR	**VOLUME SAR**
	

Maximum location: X=-5.00, Y=1.00
SAR Peak: 0.45 W/kg

SAR 10g (W/Kg)	0.136579
SAR 1g (W/Kg)	0.195356

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.5265	0.2521	0.1022	0.1088	0.0647	0.0529	0.0222



3D screen shot	Hot spot position
	

MEASUREMENT 20

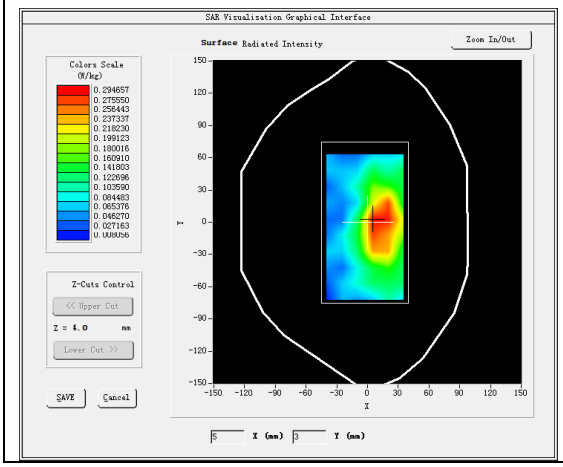
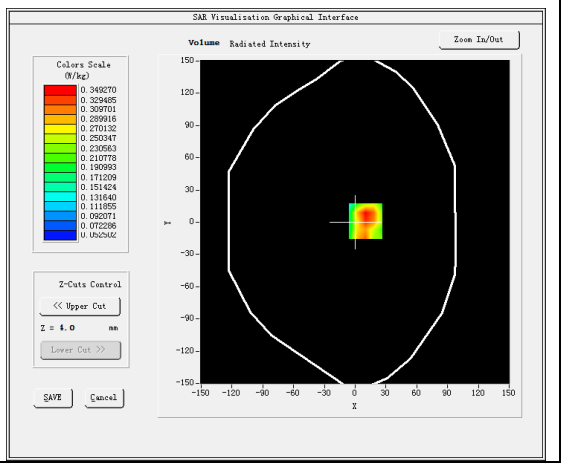
Date of measurement: 17/4/2025

A. Experimental conditions.

Area Scan	dx=15mm dy=15mm, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Body
Band	CUSTOM (LTEBand26A)
Channels	Middle
Signal	(Crest factor: 1.0)
ConvF	1.66

B. SAR Measurement Results

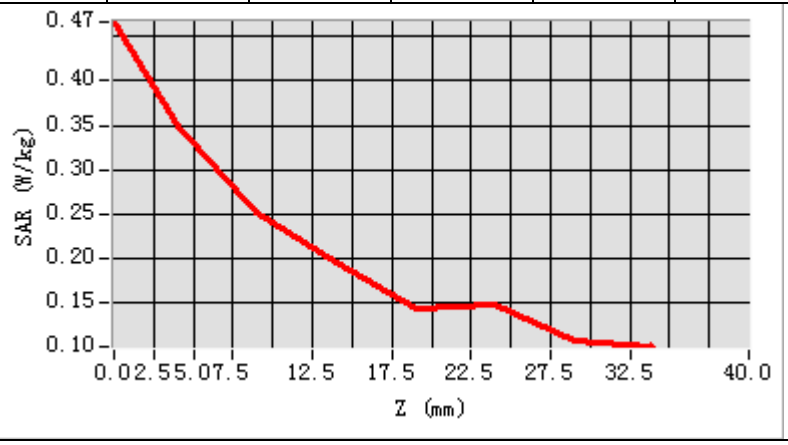
Frequency (MHz)	819.000000
Relative permittivity (real part)	41.575294
Relative permittivity (imaginary part)	19.768942
Conductivity (S/m)	0.899487
Variation (%)	-0.570000

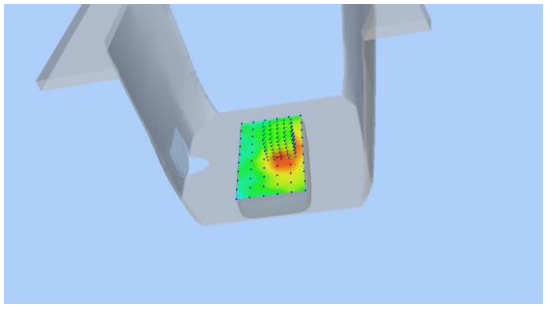
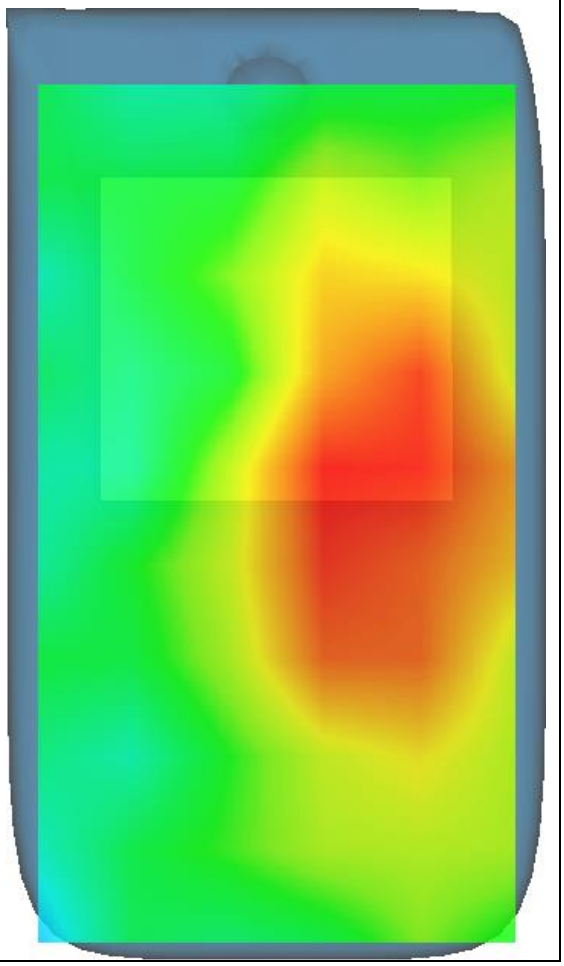
SURFACE SAR	**VOLUME SAR**
	

Maximum location: X=10.00, Y=1.00
SAR Peak: 0.53 W/kg

SAR 10g (W/Kg)	0.225537
SAR 1g (W/Kg)	0.344097

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.4667	0.3493	0.2526	0.1958	0.1437	0.1479	0.1073



3D screen shot	Hot spot position
	

MEASUREMENT 21

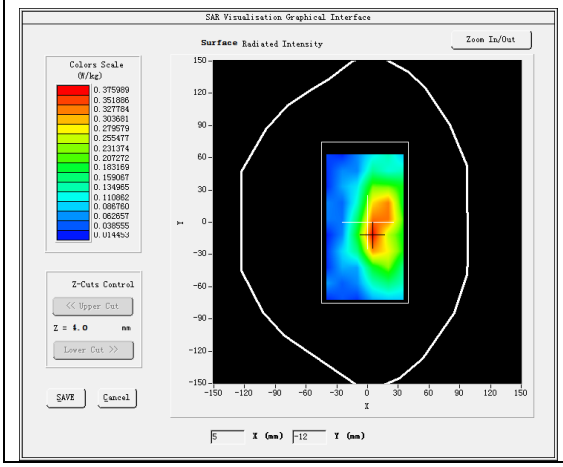
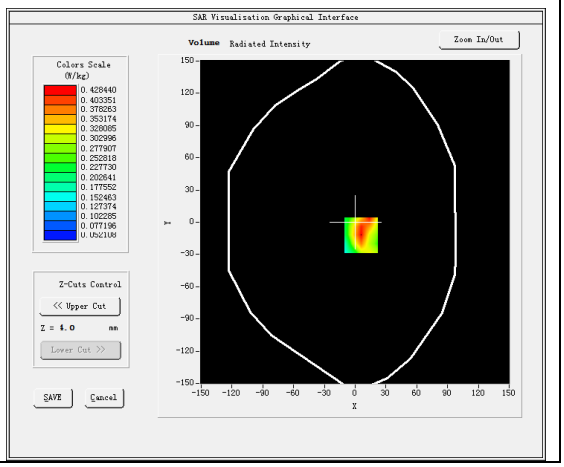
Date of measurement: 17/4/2025

A. Experimental conditions.

Area Scan	dx=15mm dy=15mm, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Body
Band	CUSTOM (LTEBand26B)
Channels	Middle
Signal	(Crest factor: 1.0)
ConvF	1.66

B. SAR Measurement Results

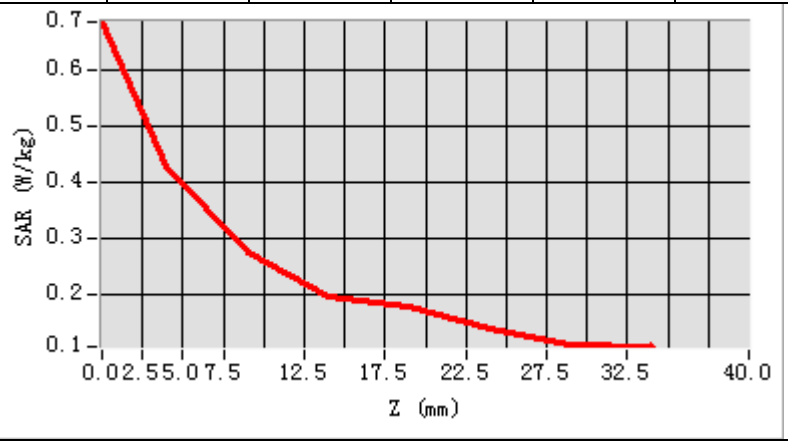
Frequency (MHz)	831.500000
Relative permittivity (real part)	41.516472
Relative permittivity (imaginary part)	19.480705
Conductivity (S/m)	0.899900
Variation (%)	1.000000

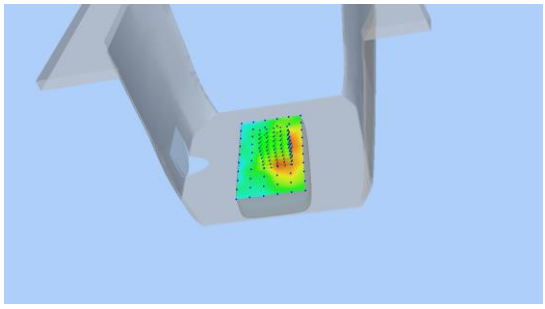
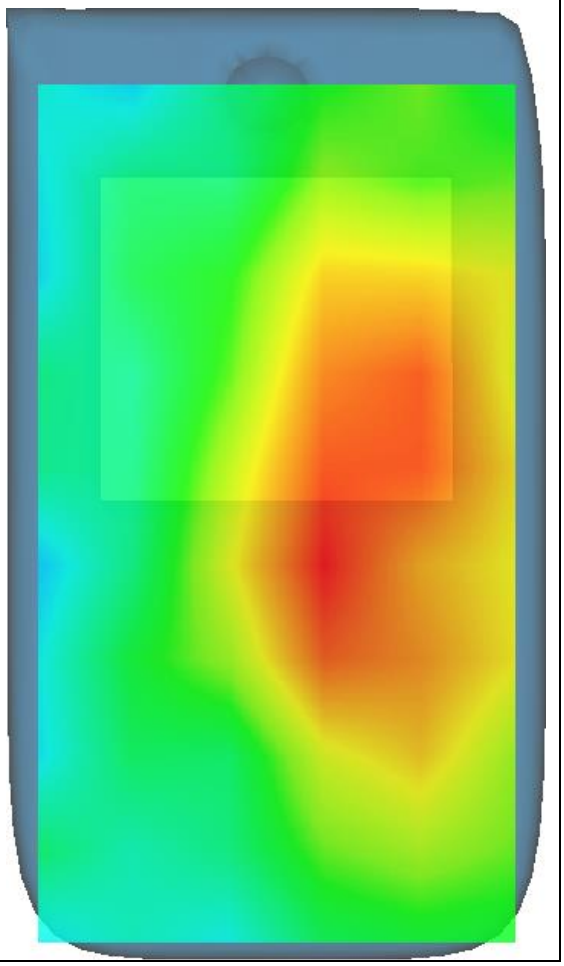
SURFACE SAR	**VOLUME SAR**
	

Maximum location: X=6.00, Y=-12.00
SAR Peak: 0.71 W/kg

SAR 10g (W/Kg)	0.269811
SAR 1g (W/Kg)	0.418032

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.6851	0.4284	0.2727	0.1954	0.1777	0.1369	0.1103



3D screen shot	Hot spot position
	

MEASUREMENT 22

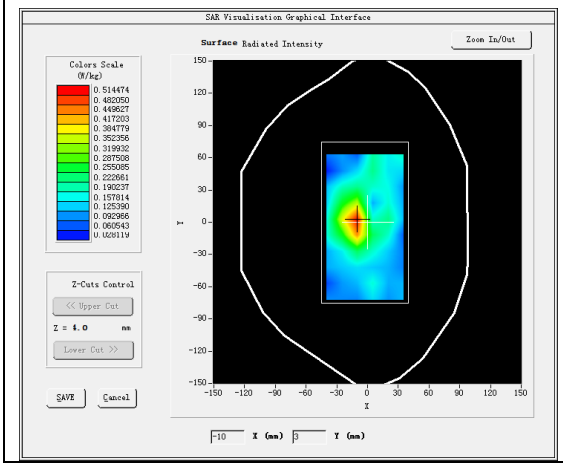
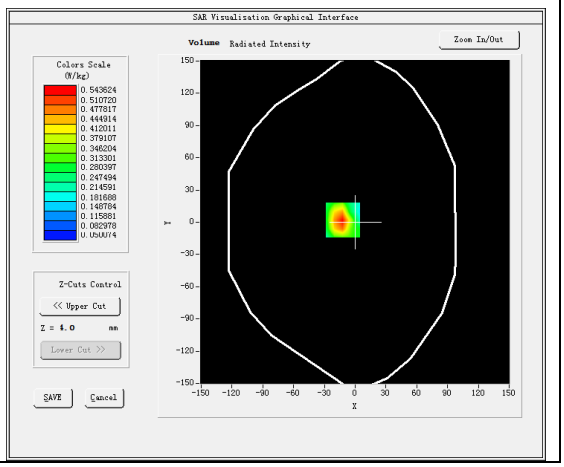
Date of measurement: 18/4/2025

A. Experimental conditions.

Area Scan	dx=15mm dy=15mm, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Body
Band	CUSTOM (LTEBand66)
Channels	Middle
Signal	(Crest factor: 1.0)
ConvF	2.09

B. SAR Measurement Results

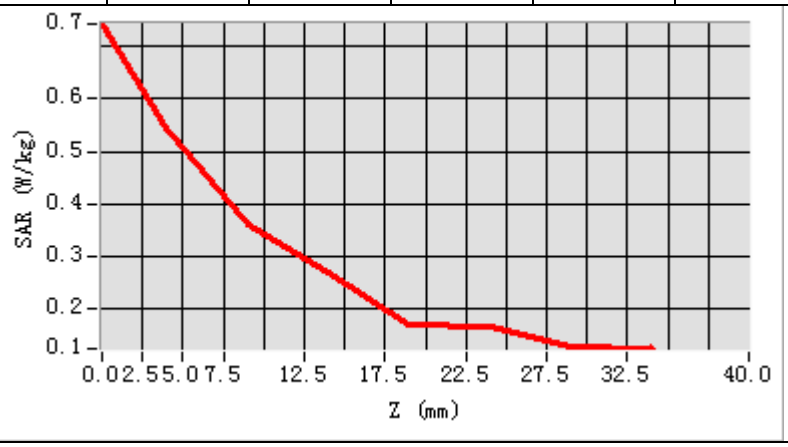
Frequency (MHz)	1745.000000
Relative permittivity (real part)	40.104546
Relative permittivity (imaginary part)	14.103182
Conductivity (S/m)	1.367225
Variation (%)	-0.820000

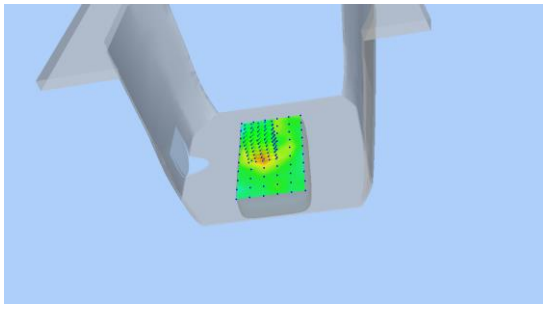
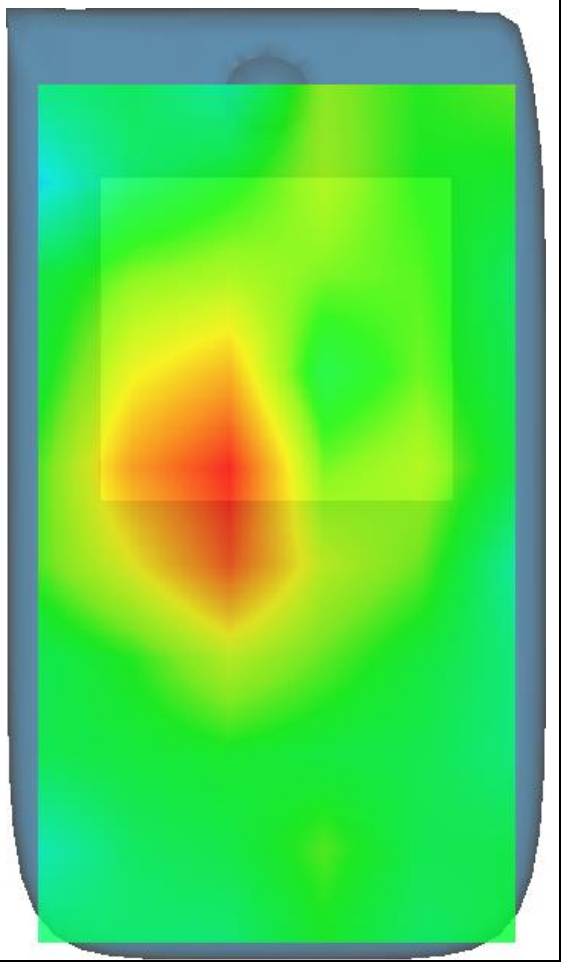
SURFACE SAR	**VOLUME SAR**
	

Maximum location: X=-12.00, Y=2.00
SAR Peak: 0.79 W/kg

SAR 10g (W/Kg)	0.325442
SAR 1g (W/Kg)	0.511758

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.7413	0.5436	0.3619	0.2713	0.1709	0.1685	0.1303



3D screen shot	Hot spot position
	

Appendix D. Calibration Certificate

Table of contents
E Field Probe - EPGO0523-403
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 03/14 WGA33

COMOSAR E-Field Probe Calibration Report

Ref : ACR.307.3.24.BES.A

GUANGDONG ASIA HONGKE TEST TECHNOLOGY CO., LTD
NO.1/F,BUILDING B1, JUNFENG INDUSTRIAL PARK, CHONGQING ROAD, HEPING COMMUNITY, FUHAIHAI STREET, BAO'AN DISTRICT,SHENZHEN, GUANGDONG 518055, P.R.CHINA

MVG COMOSAR DOSIMETRIC E-FIELD PROBE
SERIAL NO.: SN 39/21 EPGO0523-403

Calibrated at MVG
Z.I. de la pointe du diable
Technopôle Brest Iroise – 295 avenue Alexis de Rochon
29280 PLOUZANE - FRANCE

Calibration date: 09/11/2024

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

Summary:

This document presents the method and results from an accredited COMOSAR 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).

	Name	*Function*	*Date*	*Signature*
Prepared by :	Jérôme Le Gall	Measurement Responsible	09/10/2024	
Checked by :	Jérôme Luc	Technical Manager	09/10/2024	
Approved by :	Yann Toutain	Laboratory Director	09/11/2024	Yann TOUTAIN

	Customer Name
Distribution :	Shenzhen Asia Hongke

Issue	*Name*	*Date*	*Modifications*
A	Jérôme Luc	9/11/2024	Initial release

TABLE OF CONTENTS

1 DEVICE UNDER TEST

Device Under Test	
Device Type	COMOSAR DOSIMETRIC E FIELD PROBE
Manufacturer	MVG
Model	SSE2
Serial Number	SN 39/21 EPGO0523-403
Product Condition (new / used)	New
Frequency Range of Probe	0.15 GHz-6GHz
Resistance of Three Dipoles at Connector	Dipole 1: R1=0.199 MΩ Dipole 2: R2=0.218 MΩ Dipole 3: R3=0.210 MΩ

2 PRODUCT DESCRIPTION

2.1 GENERAL INFORMATION

MVG's COMOSAR E field Probes are built in accordance to the IEC/IEEE 62209-1528 and FCC KDB865664 D01 standards.

Figure 1 – *MVG COMOSAR Dosimetric E field Probe*

Probe Length	330 mm
Length of Individual Dipoles	2 mm
Maximum external diameter	8 mm
Probe Tip External Diameter	2.5 mm
Distance between dipoles / probe extremity	1 mm

3 MEASUREMENT METHOD

The IEC/IEEE 62209-1528 and FCC KDB865664 D01 standards provide recommended practices for the probe calibrations, including the performance characteristics of interest and methods by which to assess their affect. All calibrations / measurements performed meet the fore mentioned standards.

3.1 LINEARITY

The evaluation of the linearity was done in free space using the waveguide, performing a power sweep to cover the SAR range 0.01W/kg to 100W/kg.

3.2 SENSITIVITY

The sensitivity factors of the three dipoles were determined using a two step calibration method (air and tissue simulating liquid) using waveguides as outlined in the standards.

3.3 LOWER DETECTION LIMIT

The lower detection limit was assessed using the same measurement set up as used for the linearity measurement. The required lower detection limit is 10 mW/kg.

3.4 ISOTROPY

The axial isotropy was evaluated by exposing the probe to a reference wave from a standard dipole with the dipole mounted under the flat phantom in the test configuration suggested for system validations and checks. The probe was rotated along its main axis from 0 to 360 degrees in 15-degree steps. The hemispherical isotropy is determined by inserting the probe in a thin plastic box filled with tissue-equivalent liquid, with the plastic box illuminated with the fields from a half wave dipole. The dipole is rotated about its axis (0°–180°) in 15° increments. At each step the probe is rotated about its axis (0°–360°).

3.1 BOUNDARY EFFECT

The boundary effect is defined as the deviation between the SAR measured data and the expected exponential decay in the liquid when the probe is oriented normal to the interface. To evaluate this effect, the liquid filled flat phantom is exposed to fields from either a reference dipole or waveguide. With the probe normal to the phantom surface, the peak spatial average SAR is measured and compared to the analytical value at the surface.

The boundary effect uncertainty can be estimated according to the following uncertainty approximation formula based on linear and exponential extrapolations between the surface and $d_{be} + d_{step}$ along lines that are approximately normal to the surface:

$$\mathrm{SAR}_{\mathrm{uncertainty}}[\%] = \delta \mathrm{SAR}_{be} \frac{(d_{be} + d_{step})^2}{2d_{step}} \frac{\left(e^{-d_{be}/(\delta/2)}\right)}{\delta/2} \quad \text{for } (d_{be} + d_{step}) < 10 \text{ mm}$$

where

$\mathrm{SAR}_{\mathrm{uncertainty}}$	is the uncertainty in percent of the probe boundary effect
d_{be}	is the distance between the surface and the closest *zoom-scan* measurement point, in millimetre
Δ_{step}	is the separation distance between the first and second measurement points that are closest to the phantom surface, in millimetre, assuming the boundary effect at the second location is negligible
δ	is the minimum penetration depth in millimetres of the head tissue-equivalent liquids defined in this standard, i.e., $\delta \approx$ 14 mm at 3 GHz;
$\Delta \mathrm{SAR}_{be}$	in percent of SAR is the deviation between the measured SAR value, at the distance d_{be} from the boundary, and the analytical SAR value.

The measured worst case boundary effect SARuncertainty[%] for scanning distances larger than 4mm is 1.0% Limit ,2%).