FCC SAR EVALUATION REPORT

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

Product Name : Magic Note Pad

Trademark : XPPen

Model Name : MNP1095

Family Model : MNP1091, MNP1092, MNP1093

FCC ID : 2AKDT-MNP1095

Report No. : S24110802912001

Prepared for

XPPEN Technology CO.

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Prepared by

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TEST RESULT CERTIFICATION

Applicant's name .....: XPPEN Technology CO.

Address.....: 15350 Fairfield Ranch Road, Chino Hills, CA, 91709, US

Manufacturer's Name.....: Hanvon Ugee Technology Co., Ltd.

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Product description

Product name.....: Magic Note Pad

Trademark .....: XPPen

Model Name .....: MNP1095

Family Model.....: MNP1091, MNP1092, MNP1093

Standards .....: FCC 47 CFR Part 2(2.1093); ANSI/IEEE C95.1-1992 IEEE Std 1528-2013; Published RF exposure KDB procedures

This device described above has been tested by Shenzhen NTEK. In accordance with the measurement methods and procedures specified in IEEE Std 1528-2013 and KDB 865664 D01. Testing has shown that this device is capable of compliance with localized specific absorption rate (SAR) specified in FCC 47 CFR Part 2(2.1093) and ANSI/IEEE C95.1-1992. The test results in this report apply only to the tested sample of the stated device/equipment. Other similar device/equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

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Test Sample Number S241108029013

Date of Test

Date (s) of performance of tests .....: Dec. 20, 2024 ~ Jan. 01, 2025

Date of Issue .....: Jan. 02, 2025

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

Prepared By	Reviewed By	Approved By
Owen Xiao	Aaron Cheng	Alex Li
Owen Xiao (Project Engineer)	Aaron Cheng (Supervisor)	Alex Li (Manager)

※ ※ Revision History ※ ※

REV.	DESCRIPTION	ISSUED DATE	REMARK
Rev.1.0	Initial Test Report Release	Jan. 02, 2025	Owen Xiao

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1. General Information

1.1. RF exposure limits

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

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

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

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

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

Occupational/Controlled Environments:

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

General Population/Uncontrolled Environments:

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

NOTE

TRUNK LIMIT

1.6 W/kg

APPLIED TO THIS EUT

1.2. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for MNP1095 are as follows.

Band	Max Reported SAR Value(W/kg)
	1-g Body
WLAN 2.4G	1.230
WLAN 5.2G	1.287
WLAN 5.3G	1.170
WLAN 5.6G	1.261
WLAN 5.8G	1.183

Note: The Max Simultaneous Tx is calculated based on the same configuration and test position.
This device is in compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits (1.6 W/kg) specified in FCC 47 CFR Part 2(2.1093) and ANSI/IEEE C95.1-1992, and had been tested in accordance with the measurement methods and procedures specified in IEEE Std 1528-2013 & KDB 865664 D01.

1.3. EUT Description

Device Information			
Product Name	Magic Note Pad		
Trade Name	XPPen		
Model Name	MNP1095		
Family Model	MNP1091, MNP1092, MNP1093		
Model Difference	All models are the same circuit and RF module, except for model names.		
FCC ID	2AKDT-MNP1095		
Device Phase	Identical Prototype		
Exposure Category	General population / Uncontrolled environment		
Antenna	FPC Antenna		
Battery	Rated Capacity: DC 3.85V, 7800mAh, 30.03Wh		
Hardware version	05		
Software version	v1P11-H		
Device Operating Configurations			
Supporting Mode(s)	WLAN 2.4G/5G, Bluetooth		
Test Modulation	WLAN(DSSS/OFDM), Bluetooth(GFSK, π/4-DQPSK, 8DPSK), GPS(BPSK)		
Device Class	B		
Operating Frequency Range(s)	Band	Tx (MHz)	Rx (MHz)
	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

1.4. Test specification(s)

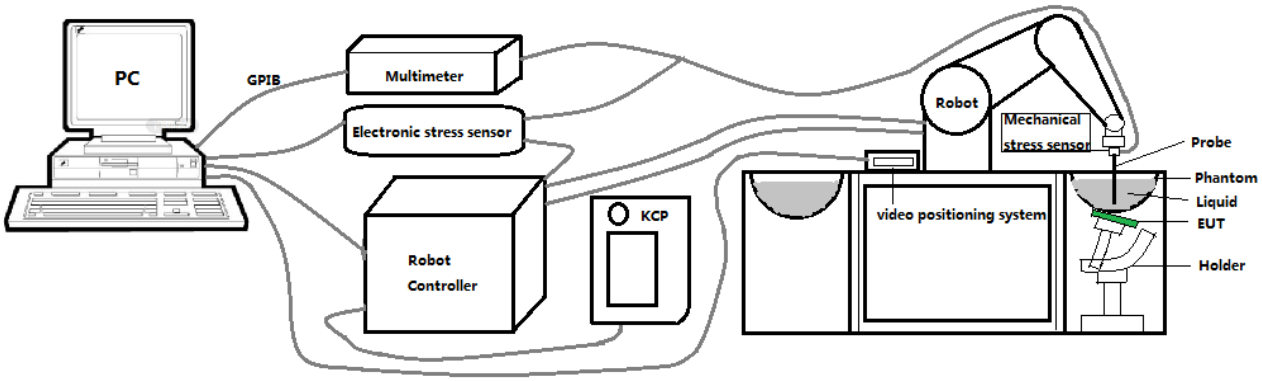
FCC 47 CFR Part 2(2.1093)
ANSI/IEEE C95.1-1992
IEEE Std 1528-2013
KDB 865664 D01 SAR measurement 100 MHz to 6 GHz
KDB 865664 D02 RF Exposure Reporting
KDB 447498 D01 General RF Exposure Guidance
KDB 248227 D01 802.11 Wi-Fi SAR
KDB 616217 D04 SAR for laptop and tablets

1.5. Ambient Condition

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

2. SAR Measurement System

2.1. SATIMO SAR Measurement Set-up Diagram



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

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

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

2.2. Robot

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

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

2.3. E-Field Probe

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

For the measurements the Specific Dosimetric E-Field Probe 4024-EPGO-442 with following specifications is used

- Dynamic range: 0.01-100 W/kg
- Tip Diameter : 2.5 mm
- Distance between probe tip and sensor center: 1 mm
- Distance between sensor center and the inner phantom surface: 2 mm (repeatability better than ±1 mm).
- Probe linearity: ±0.08 dB
- Axial isotropy: ±0.01 dB
- Hemispherical Isotropy: ±0.01 dB
- Calibration range: 650MHz to 5900MHz for head & body simulating liquid.
- Lower detection limit: 8mW/kg

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

2.3.1. E-Field Probe Calibration

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

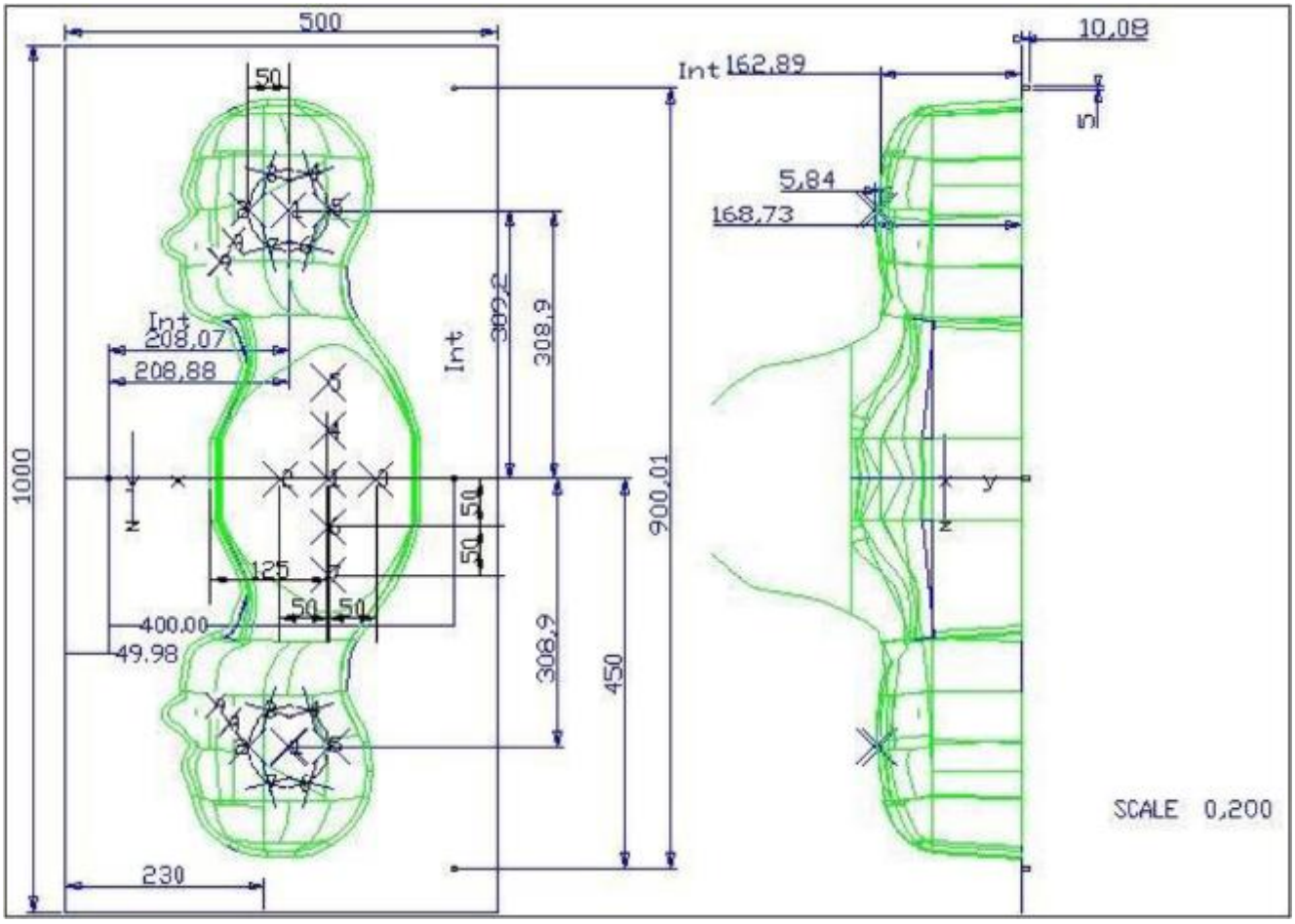
2.4. SAM phantoms

Photo of SAM phantom SN 16/15 SAM119

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

2.4.1. Technical Data

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

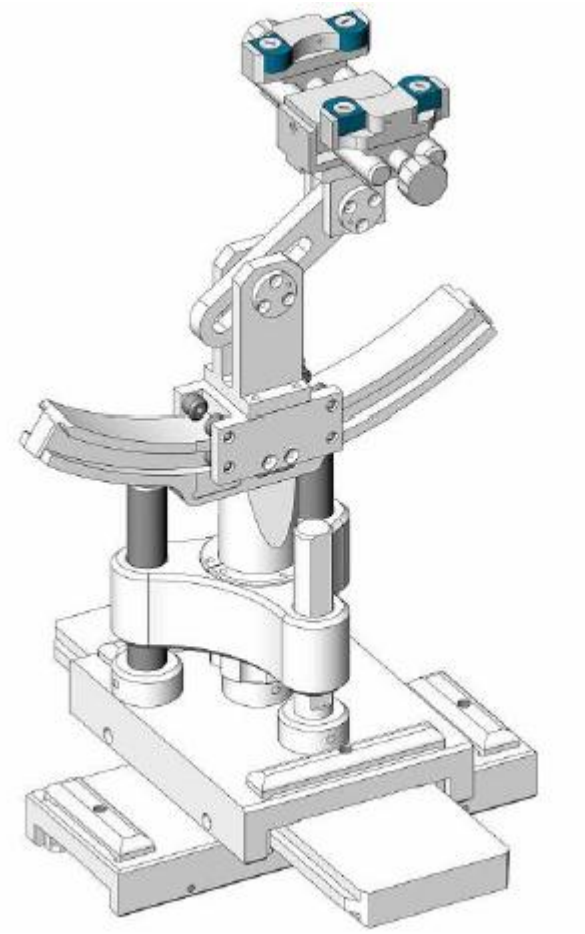


Serial Number	Left Head(mm)		Right Head(mm)		Flat Part(mm)	
SN 16/15 SAM119	2	2.02	2	2.08	1	2.09
	3	2.05	3	2.06	2	2.06
	4	2.07	4	2.07	3	2.08
	5	2.08	5	2.08	4	2.10
	6	2.05	6	2.07	5	2.10
	7	2.05	7	2.05	6	2.07
	8	2.07	8	2.06	7	2.07
	9	2.08	9	2.06	-	-

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

2.5. Device Holder

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



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

2.6. Test Equipment List

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

Devices used during the test described are marked ☒

	Manufacturer	Name of Equipment	Type/Model	Serial Number	Calibration	
					Last Cal.	Due Date
☒	MVG	E FIELD PROBE	SSE2	4024-EPGO-442	Oct.4.2024	Oct.3.2025
☐	MVG	750 MHz Dipole	SID750	SN 03/15 DIP 0G750-355	Feb. 21, 2024	Feb. 20, 2027
☐	MVG	835 MHz Dipole	SID835	SN 03/15 DIP 0G835-347	Feb. 21, 2024	Feb. 20, 2027
☐	MVG	900 MHz Dipole	SID900	SN 03/15 DIP 0G900-348	Feb. 21, 2024	Feb. 20, 2027
☐	MVG	1800 MHz Dipole	SID1800	SN 03/15 DIP 1G800-349	Feb. 21, 2024	Feb. 20, 2027
☐	MVG	1900 MHz Dipole	SID1900	SN 03/15 DIP 1G900-350	Feb. 21, 2024	Feb. 20, 2027
☐	MVG	2000 MHz Dipole	SID2000	SN 03/15 DIP 2G000-351	Feb. 21, 2024	Feb. 20, 2027
☒	MVG	2450 MHz Dipole	SID2450	SN 03/15 DIP 2G450-352	Feb. 21, 2024	Feb. 20, 2027
☐	MVG	2600 MHz Dipole	SID2600	SN 03/15 DIP 2G600-356	Feb. 21, 2024	Feb. 20, 2027
☒	MVG	5000 MHz Dipole	SWG5500	SN 13/14 WGA 33	Feb. 21, 2024	Feb. 20, 2027
☒	MVG	Liquid measurement Kit	SCLMP	SN 21/15 OCPG 72	NCR	NCR
☒	MVG	Power Amplifier	N.A	AMPLISAR_28/14_003	NCR	NCR
☒	KEITHLEY	Millivoltmeter	2000	4072790	NCR	NCR
☒	R&S	Universal radio communication tester	CMU200	105747	Apr. 26, 2024	Apr. 25, 2025
☒	R&S	Wideband radio communication tester	CMW500	103917	Apr. 26, 2024	Apr. 25, 2025
☒	HP	Network Analyzer	E5071C	LPS-461	Oct. 15, 2024	Oct. 14, 2025

☒	Agilent	MXG Vector Signal Generator	N5182A	MY47070317	Apr. 25, 2024	Apr. 24, 2025
☒	Agilent	Power meter	E4419B	MY45102538	Apr. 25, 2024	Apr. 24, 2025
☒	Agilent	Power sensor	E9301A	MY41495644	May. 30, 2024	May. 29, 2025
☒	Agilent	Power sensor	E9301A	US39212148	Apr. 25, 2024	Apr. 24, 2025
☒	MCLI/USA	Directional Coupler	CB11-20	0D2L51502	Apr. 26, 2024	Apr. 25, 2027
☒	N/A	Thermometer	N/A	LES-085	Mar. 27, 2023	Mar. 26, 2026
☒	MVG	SAM Phantom	SSM2	SN 16/15 SAM119	NCR	NCR
☒	MVG	Device Holder	SMPPD	SN 16/15 MSH100	NCR	NCR

Measurement Software

Manufacturer	Software Name	Software Version
SATIMO	OpenSAR	V4_02_31

3. SAR Measurement Procedures

The measurement procedures are as follows:

<Conducted power measurement>

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

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

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

(d) Connect EUT RF port through RF cable to the power meter, and measure WLAN/Bluetooth output power.

<SAR measurement>

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

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

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

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

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

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

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

(a) Power reference measurement

(b) Area scan

(c) Zoom scan

(d) Power drift measurement

3.1. Power Reference

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

3.2. Area scan & Zoom scan

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

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

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

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

<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	5000
Water	34.40	34.40	34.40	55.36	55.36	71.88	71.88	71.88	65.53
NaCl	0.79	0.79	0.79	0.35	0.35	0.16	0.16	0.16	0.00
1,2-Propanediol	64.81	64.81	64.81	0.00	0.00	0.00	0.00	0.00	0.00
Triton X-100	0.00	0.00	0.00	30.45	30.45	19.97	19.97	19.97	17.24
DGBE	0.00	0.00	0.00	13.84	13.84	7.99	7.99	7.99	0.00

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

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

4.1.1. Tissue Dielectric Parameter Check Results

The simulating liquids should be checked at the beginning of a series of SAR measurements to determine 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.

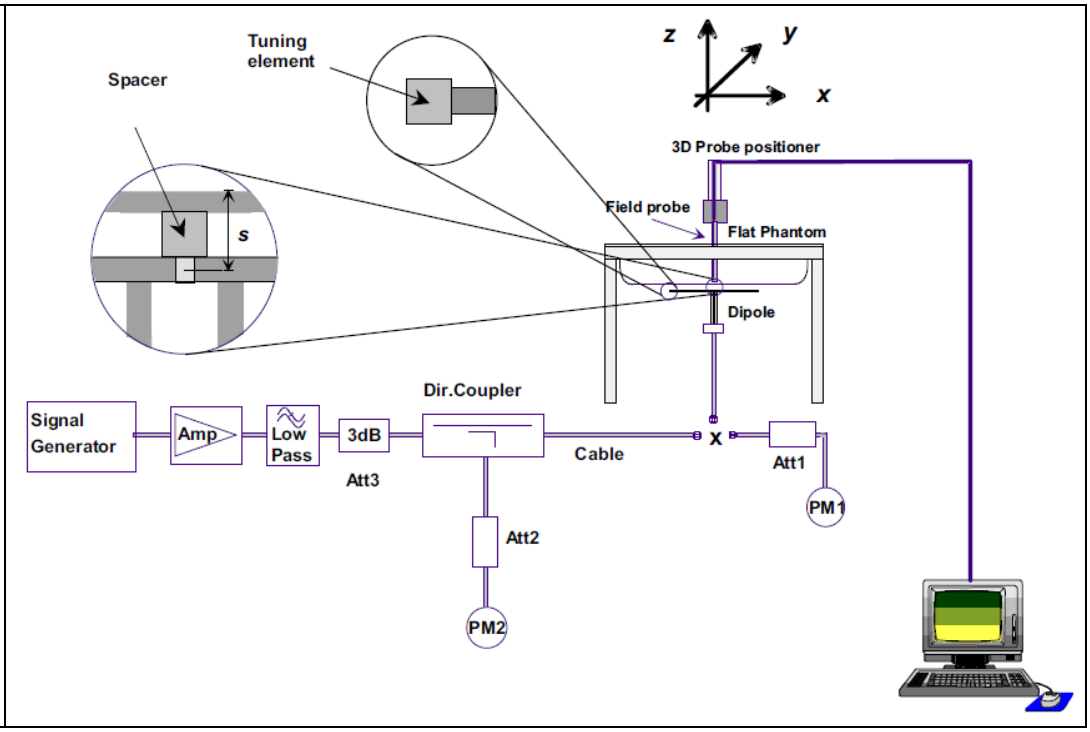
Tissue Type	Measured Frequency (MHz)	Target Tissue		Measured Tissue		Liquid Temp.	Test Date
		εr (±5%)	σ (S/m) (±5%)	εr	σ (S/m)		
Head 2450	2450	39.20 (37.24~41.16)	1.80 (1.71~1.89)	37.814	1.781	21.6 °C	Dec. 28, 2024
Head 5200	5200	36.00 (34.20~37.80)	4.66 (4.43~4.89)	34.652	4.495	21.7 °C	Dec. 20, 2024
Head 5400	5400	35.80 (34.01~37.59)	4.86 (4.62~5.10)	34.329	4.804	21.3 °C	Jan. 01, 2025
Head 5600	5600	35.50 (33.73~37.28)	5.07 (4.82~5.32)	34.403	4.935	22.1 °C	Dec. 31, 2024
Head 5800	5800	35.30 (33.54~37.07)	5.27 (5.01~5.53)	33.904	5.130	22.3 °C	Dec. 26, 2024

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

4.2. System Verification Procedure

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

The system verification is shown as below picture:



4.2.1. System Verification Results

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

System Verification	Target SAR (1W) (±10%)		Measured SAR			Measured SAR (Normalized to 1W)		Liquid Temp.	Test Date
	1-g (W/Kg)	10-g (W/Kg)	Input Power	1-g (W/Kg)	10-g (W/Kg)	1-g (W/Kg)	10-g (W/Kg)		
2450MHz	50.05 (45.05~55.06)	23.80 (21.42~26.18)	20dBm	5.229	2.234	52.29	22.34	21.6 °C	Dec. 28, 2024
5200MHz	162.59 (146.33~178.85)	56.21 (50.59~61.83)	10dBm	1.624	0.598	162.4	59.80	21.7 °C	Dec. 20, 2024
5400MHz	159.81 (143.83~175.79)	55.00 (49.50~60.50)	10dBm	1.623	0.566	162.3	56.60	21.3 °C	Jan. 01, 2025
5600MHz	179.15 (161.24~197.07)	61.01 (54.91~67.11)	10dBm	1.793	0.582	179.3	58.20	22.1 °C	Dec. 31, 2024
5800MHz	182.20 (163.98~200.42)	61.32 (55.19~67.45)	10dBm	1.875	0.572	187.5	57.20	22.3 °C	Dec. 26, 2024

5. SAR Measurement variability and uncertainty

5.1. SAR measurement variability

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

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

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

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

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

measurements is > 1.20.

5.2. SAR measurement uncertainty

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

6. RF Exposure Positions

6.1. Tablet host platform exposure conditions

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

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

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

7. RF Output Power

7.1. WLAN & Bluetooth Output Power

7.1.1. Output Power Results Of WLAN

Mode	Channel	Frequency (MHz)	Tune-up	Output Power (dBm)
802.11b	1	2412	18.00	17.28
	6	2437	18.00	17.52
	11	2462	18.00	17.21
802.11g	1	2412	17.50	16.84
	6	2437	17.50	17.08
	11	2462	17.50	16.70
802.11n (HT20)	1	2412	16.00	15.72
	6	2437	16.00	15.34
	11	2462	16.00	13.85
802.11n (HT40)	3	2422	15.00	14.30
	6	2437	15.00	14.50
	9	2452	15.00	13.80

NOTE: Power measurement results of WLAN 2.4G.

Mode	Channel	Frequency (MHz)	Tune-up	Output Power (dBm)
802.11a	36	5180	17.00	16.52
	40	5200	17.00	16.48
	48	5240	17.00	16.63
802.11n HT20	36	5180	16.50	16.35
	40	5200	16.50	16.24
	48	5240	16.50	16.31
802.11n HT40	38	5190	16.50	14.43
	46	5230	16.50	16.21
802.11ac VHT20	36	5180	16.50	16.32
	40	5200	16.50	16.17
	48	5240	16.50	16.22
802.11ac VHT40	38	5190	16.50	14.23
	46	5230	16.50	16.19
802.11ac VHT80	42	5210	14.00	13.54

NOTE: Power measurement results of WLAN 5.2G.

Mode	Channel	Frequency (MHz)	Tune-up	Output Power (dBm)
802.11a	52	5260	17.00	16.34
	56	5280	17.00	16.55
	64	5320	17.00	14.70
802.11n (HT20)	52	5260	17.00	16.22
	56	5280	17.00	16.57
	64	5320	17.00	15.51
802.11n (HT40)	54	5270	16.50	16.10
	62	5310	16.50	14.13
802.11ac (VHT20)	52	5260	16.50	16.38
	56	5280	16.50	16.49
	64	5320	16.50	15.58
802.11ac (VHT40)	54	5270	16.50	16.48
	62	5310	16.50	14.56
802.11ac (VHT80)	58	5290	14.00	13.63

NOTE: Power measurement results of WLAN 5.3G.

Mode	Channel	Frequency (MHz)	Tune-up	Output Power (dBm)
802.11a	100	5500	16.50	15.78
	120	5600	16.50	16.33
	140	5700	16.50	15.84
802.11n (HT20)	100	5500	16.50	15.75
	120	5600	16.50	16.49
	140	5700	16.50	14.84
802.11n (HT40)	102	5510	16.00	13.17
	118	5590	16.00	15.64
	134	5670	16.00	15.78
802.11ac (VHT20)	100	5500	17.00	15.65
	120	5600	17.00	16.54
	140	5700	17.00	14.84
802.11ac (VHT40)	102	5510	16.50	15.83
	118	5590	16.50	16.37
	134	5670	16.50	16.45
802.11ac (VHT80)	106	5530	14.00	13.66
	122	5610	14.00	12.58

NOTE: Power measurement results of WLAN 5.6G.

Mode	Channel	Frequency (MHz)	Tune-up (dBm)	Output Power (dBm)
802.11a	149	5745	17.50	16.78
	157	5785	17.50	16.88
	165	5825	17.50	17.10
802.11n HT20	149	5745	17.00	16.64
	157	5785	17.00	16.83
	165	5825	17.00	16.84
802.11n HT40	151	5755	17.00	16.60
	159	5795	17.00	16.90
802.11ac VHT20	149	5745	17.00	16.62
	157	5785	17.00	16.76
	165	5825	17.00	16.80
802.11ac VHT40	151	5755	17.50	16.61
	159	5795	17.50	17.01
802.11ac VHT80	155	5775	16.00	15.82

NOTE: Power measurement results of WLAN 5.8G.

P-Sensor Power

Mode	Channel	Frequency (MHz)	Tune-up	Output Power (dBm)
802.11b	1	2412	12.00	11.42
	6	2437	12.00	11.65
	11	2462	12.00	11.35
802.11g	1	2412	11.50	11.35
	6	2437	11.50	11.42
	11	2462	11.50	11.28
802.11n (HT20)	1	2412	11.00	10.58
	6	2437	11.00	10.35
	11	2462	11.00	10.04
802.11n (HT40)	3	2422	10.50	10.35
	6	2437	10.50	10.47
	9	2452	10.50	9.87

NOTE: Power measurement results of WLAN 2.4G.

Mode	Channel	Frequency (MHz)	Tune-up	Output Power (dBm)
802.11a	36	5180	5.00	4.62

	40	5200	5.00	4.51
	48	5240	5.00	4.81
802.11n HT20	36	5180	5.00	4.72
	40	5200	5.00	4.51
	48	5240	5.00	4.56
802.11n HT40	38	5190	4.50	5.28
	46	5230	4.50	5.17
802.11ac VHT20	36	5180	4.50	4.42
	40	5200	4.50	4.18
	48	5240	4.50	4.37
802.11ac VHT40	38	5190	4.50	4.25
	46	5230	4.50	4.36
802.11ac VHT80	42	5210	4.00	3.57

NOTE: Power measurement results of WLAN 5.2G.

Mode	Channel	Frequency (MHz)	Tune-up	Output Power (dBm)
802.11a	52	5260	6.00	5.45
	56	5280	6.00	5.54
	64	5320	6.00	5.72
802.11n (HT20)	52	5260	6.00	5.61
	56	5280	6.00	5.72
	64	5320	6.00	5.58
802.11n (HT40)	54	5270	5.50	4.75
	62	5310	5.50	4.37
802.11ac (VHT20)	52	5260	5.50	5.25
	56	5280	5.50	5.42
	64	5320	5.50	5.08
802.11ac (VHT40)	54	5270	5.50	5.32
	62	5310	5.50	5.18
802.11ac (VHT80)	58	5290	5.00	4.53

NOTE: Power measurement results of WLAN 5.3G.

Mode	Channel	Frequency (MHz)	Tune-up	Output Power (dBm)
802.11a	100	5500	5.00	4.25
	120	5600	5.00	4.67
	140	5700	5.00	4.51

802.11n (HT20)	100	5500	5.00	4.47
	120	5600	5.00	4.75
	140	5700	5.00	4.28
802.11n (HT40)	102	5510	5.00	4.35
	118	5590	5.00	4.55
	134	5670	5.00	4.63
802.11ac (VHT20)	100	5500	5.00	4.52
	120	5600	5.00	4.35
	140	5700	5.00	4.57
802.11ac (VHT40)	102	5510	5.00	4.45
	118	5590	5.00	4.63
	134	5670	5.00	4.75
802.11ac (VHT80)	106	5530	4.00	3.64
	122	5610	4.00	3.51

NOTE: Power measurement results of WLAN 5.6G.

Mode	Channel	Frequency (MHz)	Tune-up	Output Power (dBm)
802.11a	149	5745	6.00	5.57
	157	5785	6.00	5.63
	165	5825	6.00	5.78
802.11n HT20	149	5745	5.00	5.63
	157	5785	5.00	5.82
	165	5825	5.00	5.71
802.11n HT40	151	5755	5.00	4.45
	159	5795	5.00	4.78
802.11ac VHT20	149	5745	4.50	4.05
	157	5785	4.50	4.23
	165	5825	4.50	4.37
802.11ac VHT40	151	5755	4.50	4.22
	159	5795	4.50	4.45
802.11ac VHT80	155	5775	4.50	4.09

NOTE: Power measurement results of WLAN 5.8G.

7.1.2. Output Power Results Of Bluetooth

BR+EDR	Output Power (dBm)		
	Data	Tune-up	Channel

	Rates	(dBm)	0CH	39CH	78CH
	1M	7.5	6.52	5.38	7.30
	2M	6.5	5.75	4.43	6.38
	3M	6.5	5.63	4.43	6.16

BLE	Output Power (dBm)				
	Data Rates	Tune-up (dBm)	Channe		
			0CH	19CH	39CH
	1M	5	4.27	4.78	3.97
	2M	5	4.42	4.86	3.95

7.2. Proximity Sensor Considerations

7.2.1. Proximity sensor triggering distances

WLAN 2.4G 802.11b CH6 Back Side						WLAN 5.2G 802.11a CH40 Back Side						WLAN 5.3G 802.11n(HT20) CH56 Back Side					
Moved toward the phantom			Away from the phantom			Moved toward the phantom			Away from the phantom			Moved toward the phantom			Away from the phantom		
Gap (mm)	P sensor	Index	Gap (mm)	P sensor	Index	Gap (mm)	P sensor	Index	Gap (mm)	P sensor	Index	Gap (mm)	P sensor	Index	Gap (mm)	P sensor	Index
30	Inactive	0	0	Active	1	30	Inactive	0	0	Active	1	30	Inactive	0	0	Active	1
25	Inactive	0	2	Active	1	25	Inactive	0	3	Active	1	25	Inactive	0	2	Active	1
20	Inactive	0	5	Active	1	20	Inactive	0	5	Active	1	20	Inactive	0	5	Active	1
15	Inactive	0	6	Active	1	16	Inactive	0	6	Active	1	15	Inactive	0	6	Active	1
14	Inactive	0	7	Active	1	15	Inactive	0	7	Active	1	14	Inactive	0	7	Active	1
13	Inactive	0	8	Active	1	14	Inactive	0	8	Active	1	13	Inactive	0	8	Active	1
12	Inactive	0	9	Active	1	13	Inactive	0	9	Active	1	12	Inactive	0	9	Active	1
11	Inactive	0	10	Active	1	12	Inactive	0	10	Active	1	11	Inactive	0	10	Active	1
10	Active	1	11	Active	1	11	Active	1	11	Inactive	0	10	Active	1	11	Active	1
9	Active	1	12	Inactive	0	10	Active	1	12	Inactive	0	9	Active	1	12	Inactive	0
8	Active	1	13	Inactive	0	9	Active	1	13	Inactive	0	8	Active	1	13	Inactive	0
7	Active	1	14	Inactive	0	8	Active	1	14	Inactive	0	7	Active	1	14	Inactive	0
6	Active	1	15	Inactive	0	7	Active	1	15	Inactive	0	6	Active	1	15	Inactive	0
5	Active	1	16	Inactive	0	6	Active	1	16	Inactive	0	5	Active	1	16	Inactive	0
2	Active	1	17	Inactive	0	3	Active	1	21	Inactive	0	2	Active	1	17	Inactive	0
0	Active	1	22	Inactive	0	0	Active	1	26	Inactive	0	0	Active	1	22	Inactive	0
/	/	/	27	Inactive	0	/	/	/	31	Inactive	0	/	/	/	27	Inactive	0
/	/	/	32	Inactive	0	/	/	/	36	Inactive	0	/	/	/	32	Inactive	0
/	/	/	37	Inactive	0	/	/	/	41	Inactive	0	/	/	/	37	Inactive	0
/	/	/	42	Inactive	0	/	/	/	46	Inactive	0	/	/	/	42	Inactive	0
/	/	/	47	Inactive	0	/	/	/	51	Inactive	0	/	/	/	47	Inactive	0

/	/	/	52	Inactive	0	/	/	/	56	Inactive	0	/	/	/	52	Inactive	0
/	/	/	57	Inactive	0	/	/	/	61	Inactive	0	/	/	/	57	Inactive	0
/	/	/	62	Inactive	0	/	/	/	66	Inactive	0	/	/	/	62	Inactive	0
/	/	/	67	Inactive	0	/	/	/	71	Inactive	0	/	/	/	67	Inactive	0

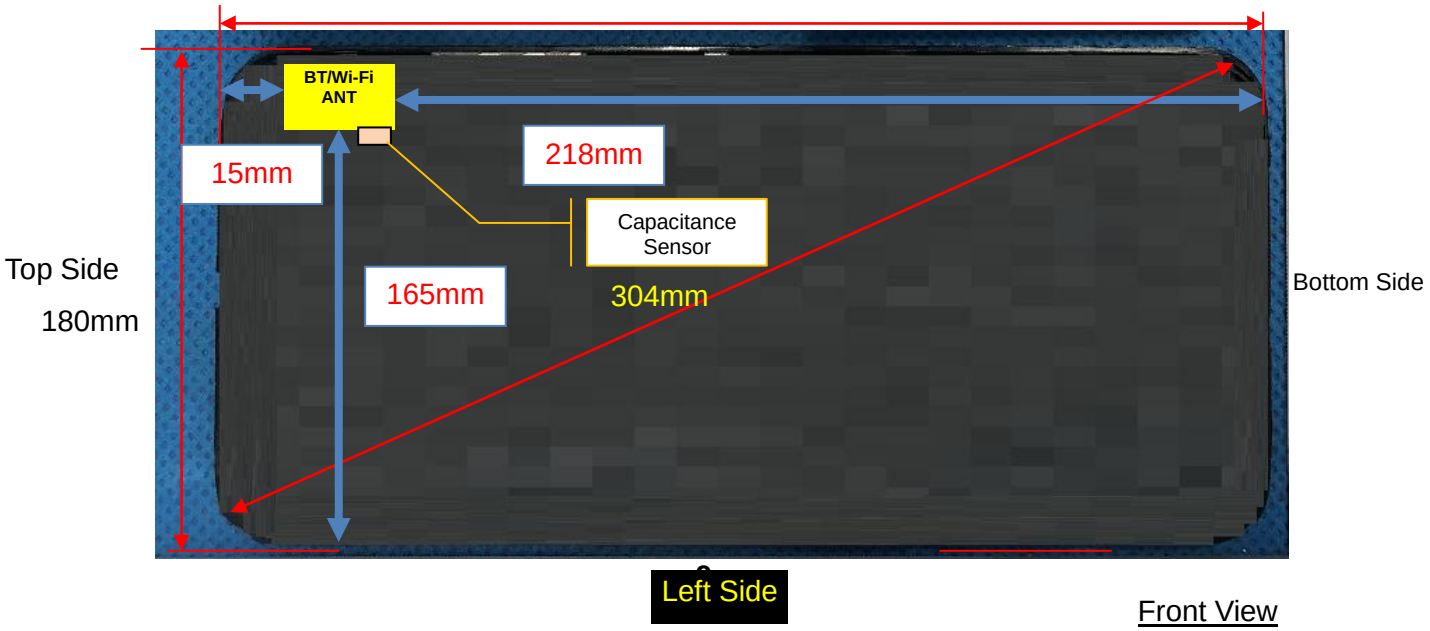
WLAN 5.6G 802.11a CH132 Back Side						WLAN 5.8G 802.11n HT40CH157 Back Side					
Moved toward the phantom			Away from the phantom			Moved toward the phantom			Away from the phantom		
Gap (mm)	P sensor	Index	Gap (mm)	P sensor	Index	Gap (mm)	P sensor	Index	Gap (mm)	P sensor	Index
30	Inactive	0	0	Active	1	30	Inactive	0	0	Active	1
25	Inactive	0	3	Active	1	25	Inactive	0	2	Active	1
20	Inactive	0	5	Active	1	20	Inactive	0	5	Active	1
16	Inactive	0	6	Active	1	15	Inactive	0	6	Active	1
15	Inactive	0	7	Active	1	14	Inactive	0	7	Active	1
14	Inactive	0	8	Active	1	13	Inactive	0	8	Active	1
13	Inactive	0	9	Active	1	12	Inactive	0	9	Active	1
12	Inactive	0	10	Active	1	11	Inactive	0	10	Active	1
11	Active	1	11	Inactive	0	10	Active	1	11	Active	1
10	Active	1	12	Inactive	0	9	Active	1	12	Inactive	0
9	Active	1	13	Inactive	0	8	Active	1	13	Inactive	0
8	Active	1	14	Inactive	0	7	Active	1	14	Inactive	0
7	Active	1	15	Inactive	0	6	Active	1	15	Inactive	0
6	Active	1	16	Inactive	0	5	Active	1	16	Inactive	0
3	Active	1	21	Inactive	0	2	Active	1	17	Inactive	0
0	Active	1	26	Inactive	0	0	Active	1	22	Inactive	0
/	/	/	31	Inactive	0	/	/	/	27	Inactive	0
/	/	/	36	Inactive	0	/	/	/	32	Inactive	0
/	/	/	41	Inactive	0	/	/	/	37	Inactive	0
/	/	/	46	Inactive	0	/	/	/	42	Inactive	0
/	/	/	51	Inactive	0	/	/	/	47	Inactive	0
/	/	/	56	Inactive	0	/	/	/	52	Inactive	0
/	/	/	61	Inactive	0	/	/	/	57	Inactive	0
/	/	/	66	Inactive	0	/	/	/	62	Inactive	0
/	/	/	71	Inactive	0	/	/	/	67	Inactive	0

7.2.2. Proximity sensor coverage range

7.2.3. EUT tilt angle influences to proximity sensor triggering

The sensor of this product only applies to the back, so this procedure is not required ,EUT edges SAR test at 0mm used full power.

8. Antenna Location



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

Distance of the Antenna to the EUT surface/edge					
Antennas	Back Side	Left Side	Right Side	Top Side	Bottom Side
WLAN & Bluetooth	5	165	5	15	218

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

Positions for SAR tests		
Test separation distances ≤ 50 mm		
Exposure Positions	Tune-up Maximum power of WLAN 2.4G	
	18.00 dBm	63.10mW
Back Side	Antenna to user(mm)	5
	SAR exclusion threshold	19.87
	SAR testing required?	YES
Right Side	Antenna to user(mm)	5
	SAR exclusion threshold	19.87
	SAR testing required?	YES
Top Side	Antenna to user(mm)	15
	SAR exclusion threshold	6.62
	SAR testing required?	YES
Exposure Positions	Tune-up Maximum power of WLAN 5.2G	
	17.00 dBm	50.12mW
Back Side	Antenna to user(mm)	5
	SAR exclusion threshold	22.94

	SAR testing required?	YES
Right Side	Antenna to user(mm)	5
	SAR exclusion threshold	22.94
	SAR testing required?	YES
Top Side	Antenna to user(mm)	15
	SAR exclusion threshold	7.65
	SAR testing required?	YES
Exposure Positions	Tune-up Maximum power of WLAN 5.3G	
	17.00 dBm	50.12mW
Back Side	Antenna to user(mm)	5
	SAR exclusion threshold	23.12
	SAR testing required?	YES
Right Side	Antenna to user(mm)	5
	SAR exclusion threshold	23.12
	SAR testing required?	YES
Top Side	Antenna to user(mm)	15
	SAR exclusion threshold	7.71
	SAR testing required?	YES
Exposure Positions	Tune-up Maximum power of WLAN 5.6G	
	17.00 dBm	50.12mW
Back Side	Antenna to user(mm)	5
	SAR exclusion threshold	23.93
	SAR testing required?	YES
Right Side	Antenna to user(mm)	5
	SAR exclusion threshold	23.93
	SAR testing required?	YES
Top Side	Antenna to user(mm)	15
	SAR exclusion threshold	7.98
	SAR testing required?	YES
Exposure Positions	Tune-up Maximum power of WLAN 5.8G	
	18.00 dBm	63.10 mW
Back Side	Antenna to user(mm)	5
	SAR exclusion threshold	27.14
	SAR testing required?	YES
Right Side	Antenna to user(mm)	5
	SAR exclusion threshold	27.14
	SAR testing required?	YES
Top Side	Antenna to user(mm)	15
	SAR exclusion threshold	9.05
	SAR testing required?	YES

NOTE: Refer to section 4.3.1 of KDB 447498 D01.

Positions for SAR tests		
Test separation distances > 50 mm		
Exposure Positions	Tune-up Maximum power of WLAN 2.4G	
	18.00 dBm	63.096 mW
Left Side	Antenna to user(mm)	165
	SAR exclusion threshold(mW)	1246
	SAR testing required?	NO
Bottom Side	Antenna to user(mm)	218
	SAR exclusion threshold(mW)	1776
	SAR testing required?	NO
Exposure Positions	Tune-up Maximum power of WLAN 5.2G	
	17.00 dBm	50.119 mW
Left Side	Antenna to user(mm)	165
	SAR exclusion threshold(mW)	1246
	SAR testing required?	NO
Bottom Side	Antenna to user(mm)	218
	SAR exclusion threshold(mW)	1746
	SAR testing required?	NO
Exposure Positions	Tune-up Maximum power of WLAN 5.3G	
	17.00 dBm	50.119 mW
Left Side	Antenna to user(mm)	165
	SAR exclusion threshold(mW)	1246
	SAR testing required?	NO
Bottom Side	Antenna to user(mm)	218
	SAR exclusion threshold(mW)	1746
	SAR testing required?	NO
Exposure Positions	Tune-up Maximum power of WLAN 5.6G	
	17.00 dBm	50.119 mW
Left Side	Antenna to user(mm)	165
	SAR exclusion threshold(mW)	1215
	SAR testing required?	NO
Bottom Side	Antenna to user(mm)	218
	SAR exclusion threshold(mW)	1745
	SAR testing required?	NO
Exposure Positions	Tune-up Maximum power of WLAN 5.8G	
	17.50 dBm	56.234 mW
Left Side	Antenna to user(mm)	165
	SAR exclusion threshold(mW)	1212
	SAR testing required?	NO
Bottom Side	Antenna to user(mm)	218

	SAR exclusion threshold(mW)	1742
	SAR testing required?	NO

NOTE: Refer to section 4.3.1 of KDB 447498 D01.

10. Stand-alone SAR test exclusion

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

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

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

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

Mode	P_{max} (dBm)	P_{max} (mW)	Distance (mm)	f (GHz)	Calculation Result	SAR Exclusion threshold	SAR test exclusion
Bluetooth	7.50	5.623	5	2.480	1.550	3	Yes

NOTE: Standalone SAR test exclusion for Bluetooth.

11. SAR Results

11.1. SAR measurement results

1. Per KDB 248227 D01v02r02, for 2.4GHz 802.11g/n SAR testing is not required when the highest reported SAR for DSSS isadjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is 1.2 W/kg.
2. Per KDB 248227 D01v02r02,U-NII-1 SAR testing is not required when the U-Nll-2A band highest reported SAR for a test configuration is ≤ 1.2 W/kg, SAR is not required for U-Nll-1 band.
3. For all positions/configurations,when the reported SAR is > 0.8 W/kg, SAR is measured for these positions/configurations on the subsequent next highest measured output power channel(s) until the reported SAR is ≤ 1.2 W/kg or all required test channels are considered.
4. When the reported SAR of the test position is > 0.4 W/kg, SAR is repeated for the 802.11 transmission mode configurationtested in the initial test position to measure the subsequent next closet/smallest test separation distance and maximumcoupling test position on the highest maximum output power channel, until the report SAR is ≤ 0.8 W/kg or allrequired testposition are tested
5. SAR measurement is not required for the PSKand BLE. When the secondary mode is ≤ ¼ dB higher than the primary mode.

11.1.1. SAR measurement Result of WLAN 2.4G
P-Sensor active

Test Position of Hotspot with 9 mm	Test channel /Freq.	Mode	SAR Value (W/kg)		Power Drift(%)	Conducted Power (dBm)	Tune-up Power (dBm)	Scaled SAR 1-g (W/Kg)	Date	Plot
			1-g	10-g						
Back Side	6/2437	802.11b	1.124	0.435	2.86	11.65	12.00	1.218	2024/12/12	#9
Right Side	6/2437	802.11b	0.398	0.089	-1.16	17.63	18.00	0.433	2024/12/12	
Top Side	6/2437	802.11b	0.875	0.361	-0.30	17.63	18.00	0.953	2024/12/12	
Back Side	1/2412	802.11b	1.076	0.421	1.34	11.42	12.00	1.230	2024/12/12	
Back Side	11/2462	802.11b	1.021	0.416	-2.46	11.35	12.00	1.186	2024/12/12	
Top Side	1/2412	802.11b	0.857	0.338	-2.64	17.50	18.00	0.962	2024/12/12	
Top Side	11/2462	802.11b	0.861	0.341	1.74	17.55	18.00	0.955	2024/12/12	
Back Side Repeated	6/2437	802.11b	1.077	0.412	1.88	11.65	12.00	1.167	2024/12/12	

NOTE: Body SAR test results of WLAN 2.4G

P-Sensor Inactive

Test Position of Hotspot with 0 mm	Test channel /Freq.	Mode	SAR Value (W/kg)		Power Drift(%)	Conducted Power (dBm)	Tune-up Power (dBm)	Scaled SAR 1-g (W/Kg)	Date	Plot
			1-g	10-g						
Back Side	6/2437	802.11b	1.059	0.331	1.75	17.63	18.00	1.153	2024/12/12	#10
Back Side	1/2412	802.11b	0.965	0.492	-2.62	17.50	18.00	1.083	2024/12/12	
Back Side	11/2462	802.11b	1.027	0.515	-1.46	17.55	18.00	1.139	2024/12/12	
Back Side Repeated	6/2437	802.11b	1.032	0.521	1.96	17.63	18.00	1.124	2024/12/12	

NOTE: Body SAR test results of WLAN 2.4G

11.1.2. SAR measurement Result of WLAN 5.2G
P-Sensor active

Test Position of Hotspot with 0mm	Test channel /Freq	Mode	SAR Value (W/kg)		Power Drift(%)	Conducted Power (dBm)	Tune-up Power (dBm)	Scaled SAR 1-g (W/Kg)	Date	Plot
			1-g	10-g						
Back Side	40/5200	802.11n HT20	1.150	0.285	0.96	4.51	5.00	1.287	2024/12/11	#1
Right Side	40/5200	802.11a	0.274	0.096	0.88	16.48	17.00	0.309	2024/12/11	
Top Side	40/5200	802.11a	0.814	0.225	3.46	16.48	17.00	0.918	2024/12/11	
Back Side	36/5180	802.11n	1.132	0.274	0.08	4.72	5.00	1.207	2024/12/11	

		HT20								
Back Side	48/5240	802.11n HT20	1.144	0.271	2.41	4.56	5.00	1.266	2024/12/11	
Top Side	36/5180	802.11a	0.796	0.202	3.46	16.52	17.00	0.889	2024/12/11	
Top Side	48/5240	802.11a	0.826	0.241	3.46	16.63	17.00	0.899	2024/12/11	
Back Side Repeated	40/5200	802.11n HT20	1.147	0.281	-1.25	4.51	5.00	1.284	2024/12/11	

NOTE: BodySAR test results of WLAN 5.2G

P-Sensor Inactive

Test Position of Hotspot with 9mm	Test channel /Freq	Mode	SAR Value (W/kg)		Power Drift(%)	Conducted Power (dBm)	Tune-up Power (dBm)	Scaled SAR 1-g (W/Kg)	Date	Plot
			1-g	10-g						
Back Side	40/5200	802.11a	1.034	0.348	1.01	16.48	17.00	1.166	2024/12/11	
Back Side	36/5180	802.11a	1.043	0.352	-3.41	16.52	17.00	1.165	2024/12/11	
Back Side	48/5240	802.11a	1.052	0.359	-1.51	16.63	17.00	1.146	2024/12/11	#5
BackSide Repeated	40/5200	802.11a	1.026	0.321	2.63	16.48	17.00	1.157	2024/12/11	

NOTE: BodySAR test results of WLAN 5.2G

11.1.3. SAR measurement Result of WLAN 5.3G

P-Sensor active

Test Position of Hotspot with 0mm	Test channel /Freq	Mode	SAR Value (W/kg)		Power Drift(%)	Conducted Power (dBm)	Tune-up Power (dBm)	Scaled SAR 1-g (W/Kg)	Date	Plot
			1-g	10-g						
Back Side	56/5280	802.11n HT20	1.097	0.276	1.30	5.72	6.00	1.170	2024/12/19	#2
Right Side	56/5280	802.11n HT20	0.289	0.075	-2.46	16.57	17.00	0.319	2024/12/19	
Top Side	56/5280	802.11n HT20	0.854	0.261	1.98	16.57	17.00	0.943	2024/12/19	
Back Side	52/5260	802.11n HT20	0.995	0.227	-1.51	5.51	6.00	1.114	2024/12/19	
Back Side	64/5320	802.11n HT20	0.974	0.207	-2.57	5.38	6.00	1.123	2024/12/19	
Top Side	52/5260	802.11n HT20	0.846	0.264	2.64	16.22	17.00	1.012	2024/12/19	
Top Side	64/5320	802.11n HT20	0.789	0.188	-1.96	15.51	17.00	1.112	2024/12/19	

BackSide Repeated	64/5320	802.11n HT20	1.085	0.269	1.30	5.72	6.00	1.157	2024/12/19	

NOTE: Body SAR test results of WLAN 5.3G

P-Sensor Inactive

Test Position of Hotspot with 9mm	Test channel /Freq	Mode	SAR Value (W/kg)		Power Drift(%)	Conducted Power (dBm)	Tune-up Power (dBm)	Scaled SAR 1-g (W/Kg)	Date	Plot
			1-g	10-g						
Back Side	56/5280	802.11n (HT20)	1.017	0.398	0.20	16.57	17.00	1.123	2024/12/19	#6
Back Side	52/5260	802.11n (HT20)	0.951	0.327	-2.54	16.22	17.00	1.138	2024/12/19	
Back Side	64/5320	802.11n (HT20)	0.815	0.251	-1.96	15.51	17.00	1.149	2024/12/19	
BackSide Repeated	56/5280	802.11n (HT20)	1.002	0.312	-3.68	16.57	17.00	1.106	2024/12/19	

NOTE: BodySAR test results of WLAN 5.3G

11.1.4. SAR measurement Result of WLAN 5.6G

P-Sensor active

Test Position of Hotspot with 0mm	Test channel /Freq	Mode	SAR Value (W/kg)		Power Drift(%)	Conducted Power (dBm)	Tune-up Power (dBm)	Scaled SAR 1-g (W/Kg)	Date	Plot
			1-g	10-g						
Back Side	118/5590	802.11ac (VHT40)	1.158	0.340	-2.63	4.63	5.00	1.261	2024/12/18	#3
Right Side	120/5600	802.11ac (VHT20)	0.362	0.049	-3.89	16.54	17.00	0.402	2024/12/18	
Top Side	120/5600	802.11ac (VHT20)	0.886	0.247	-2.96	16.54	17.00	0.985	2024/12/18	
Back Side	102/5510	802.11ac (VHT40)	1.063	0.304	-1.48	4.45	5.00	1.207	2024/12/18	
Back Side	134/5670	802.11ac (VHT40)	1.156	0.355	-2.33	4.75	5.00	1.224	2024/12/18	
Top Side	100/5500	802.11ac (VHT20)	0.847	0.209	-2.84	15.65	17.00	1.156	2024/12/18	
Top Side	140/5700	802.11ac (VHT20)	0.759	0.147	-3.75	14.84	17.00	1.248	2024/12/18	
BackSide	118/5590	802.11ac	1.134	0.290	-4.15	4.63	5.00	1.235	2024/12/18	

Repeated		(VHT40)								

NOTE: BodySAR test results of WLAN 5.6G

P-Sensor Inactive

Test Position of Hotspot with 9mm	Test channel /Freq	Mode	SAR Value (W/kg)		Power Drift(%)	Conducted Power (dBm)	Tune-up Power (dBm)	Scaled SAR 1-g (W/Kg)	Date	Plot
			1-g	10-g						
Back Side	120/5600	802.11ac (VHT20)	0.586	0.248	1.98	16.54	17.00	0.651	2024/12/18	#7

NOTE: BodySAR test results of WLAN 5.6G

11.1.5. SAR measurement Result of WLAN 5.8G

P-Sensor active

Test Position of Hotspot with 0mm	Test channel /Freq	Mode	SAR Value (W/kg)		Power Drift(%)	Conducted Power (dBm)	Tune-up Power (dBm)	Scaled SAR 1-g (W/Kg)	Date	Plot
			1-g	10-g						
Back Side	157/5785	802.11a	1.086	0.277	-2.65	5.63	6.00	1.183	2024/12/17	
Right Side	157/5785	802.11a	0.341	0.105	-1.29	16.88	17.50	0.393	2024/12/17	
Top Side	157/5785	802.11a	0.827	0.165	3.42	16.88	17.50	0.954	2024/12/17	
Back Side	149/5745	802.11a	1.036	0.277	2.36	5.57	6.00	1.144	2024/12/17	
Back Side	165/5825	802.11a	1.123	0.302	-1.84	5.78	6.00	1.181	2024/12/17	#4
Top Side	157/5785	802.11a	0.809	0.147	-1.95	16.78	17.50	0.955	2024/12/17	
Top Side	157/5785	802.11a	0.945	0.178	3.41	17.10	17.50	1.036	2024/12/17	
BackSide Repeated	157/5785	802.11a	1.081	0.254	-3.21	5.63	6.00	1.177	2024/12/17	

P-Sensor Inactive

Test Position of Hotspot with 9mm	Test channel /Freq	Mode	SAR Value (W/kg)		Power Drift(%)	Conducted Power (dBm)	Tune-up Power (dBm)	Scaled SAR 1-g (W/Kg)	Date	Plot
			1-g	10-g						
Back Side	157/5785	802.11a	0.625	0.256	-0.22	17.01	17.50	0.700	2024/12/17	#8

NOTE: BodySAR test results of WLAN 5.8G

12. Appendix A. Photo documentation

Refer to appendix Test Setup photo---SAR

13. Appendix B. System Check Plots

Table of contents
MEASUREMENT 1 System Performance Check - 2450MHz
MEASUREMENT 2 System Performance Check - 5200MHz
MEASUREMENT 3 System Performance Check - 5400MHz
MEASUREMENT 4 System Performance Check - 5600MHz
MEASUREMENT 5 System Performance Check - 5800MHz

MEASUREMENT 1

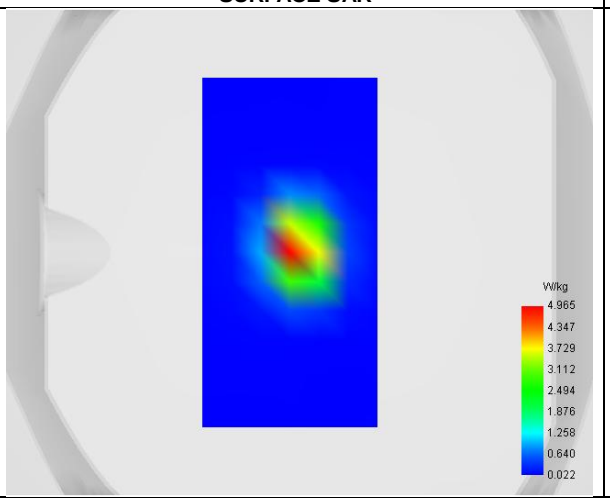
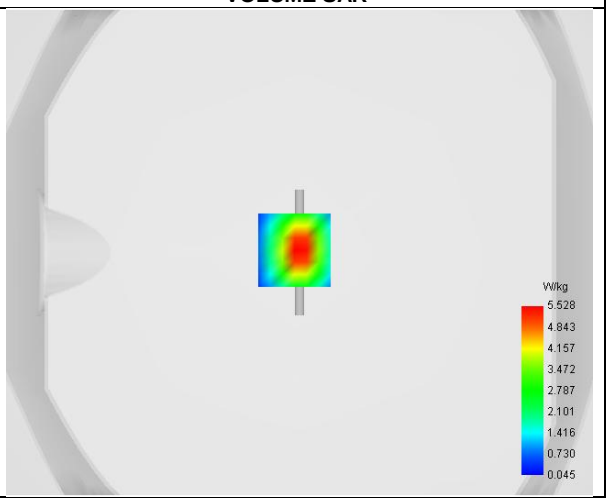
Date of measurement: 28/12/2024

A. Experimental conditions.

Probe	4024-EPGO-442
ConvF	2.74
Area Scan	dx=12mm dy=12mm, Complete
Zoom Scan	7x7x7,dx=5mm dy=5mm dz=5.0mm,Complete
Phantom	Validation plane
Device Position	Dipole
Band	CW2450
Channels/Frequency	Middle
Signal	CW

B. SAR Measurement Results

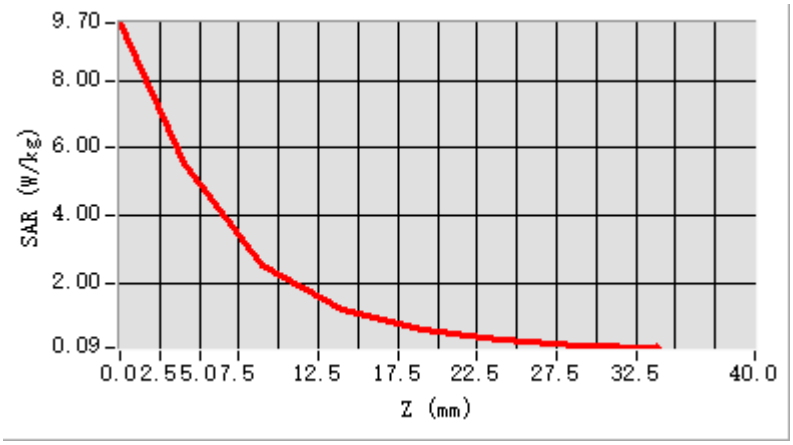
Middle TX Frequency (MHz)	2450.000
Relative permitivity (real part)	37.814
Relative permitivity (imaginary part)	13.088
Conductivity (S/m)	1.781

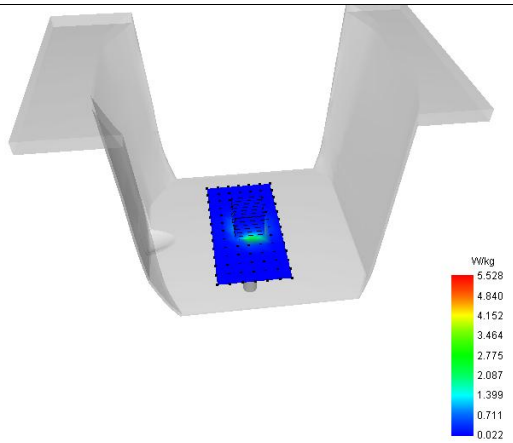
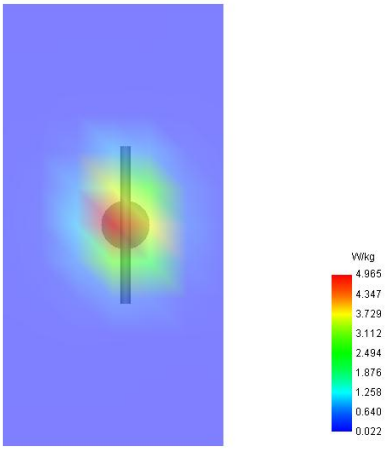
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-2.00, Y=1.00 ; SAR Peak: 9.97 W/kg

SAR 10g (W/Kg)	2.234
SAR 1g (W/Kg)	5.229
Variation (%)	0.920
Horizontal validation criteria: minimum distance (mm)	10.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	46.165816

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	9.699	5.528	2.552	1.224	0.603	0.307	0.160



3D screen shot	Hot spot position
	

MEASUREMENT 2

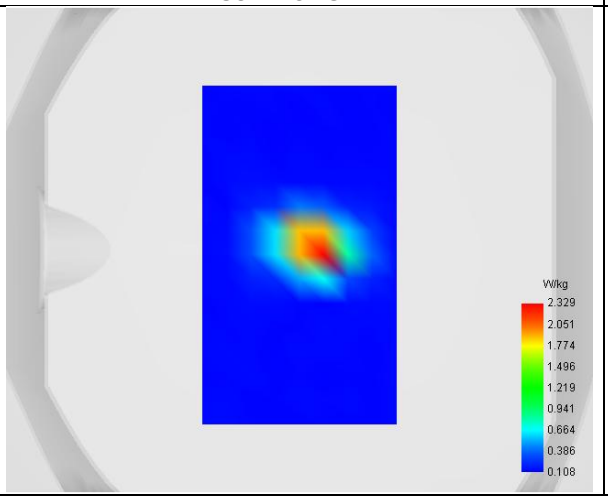
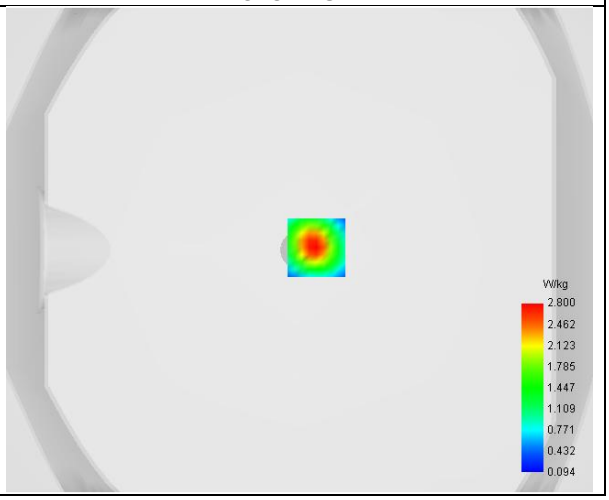
Date of measurement: 20/12/2024

A. Experimental conditions.

Probe	4024-EPGO-442
ConvF	1.89
Area Scan	dx=10mm dy=10mm, Complete
Zoom Scan	9x9x16,dx=3mm dy=3mm dz=1.5mm,Complete
Phantom	Validation plane
Device Position	Body
Band	CW5200
Channels/Frequency	Middle
Signal	CW

B. SAR Measurement Results

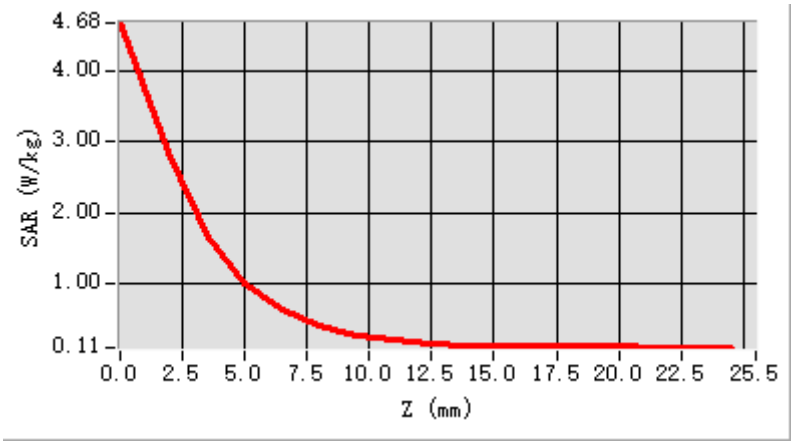
Middle TX Frequency (MHz)	5200.000
Relative permitivity (real part)	34.652
Relative permitivity (imaginary part)	15.561
Conductivity (S/m)	4.495

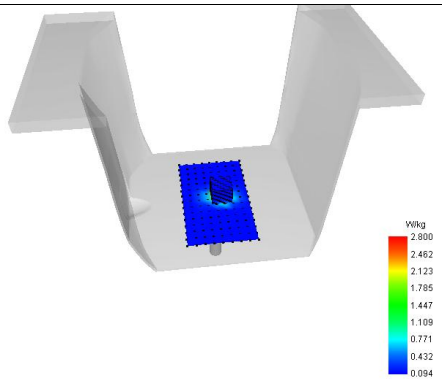
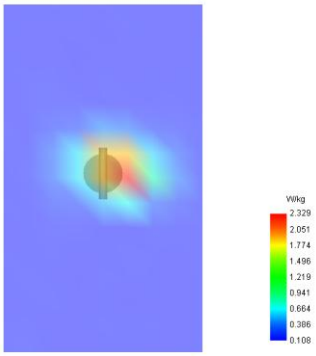
SURFACE SAR	VOLUME SAR
	

Maximum location: X=7.00, Y=1.00 ; SAR Peak: 5.04 W/kg

SAR 10g (W/Kg)	0.598
SAR 1g (W/Kg)	1.624
Variation (%)	2.240
Horizontal validation criteria: minimum distance (mm)	9.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	58.749466

Z (mm)	0.00	2.00	3.50	5.00	6.50	8.00	9.50	11.00	12.50	14.00	15.50	17.00	18.50	20.00	21.50	23.00
SAR (W/Kg)	4.675	2.800	1.645	1.012	0.641	0.412	0.286	0.215	0.178	0.139	0.140	0.130	0.127	0.125	0.108	0.115



3D screen shot	Hot spot position
	

MEASUREMENT 3

ystem check at 5400 MHz
Date of measurement: 1/1/2025

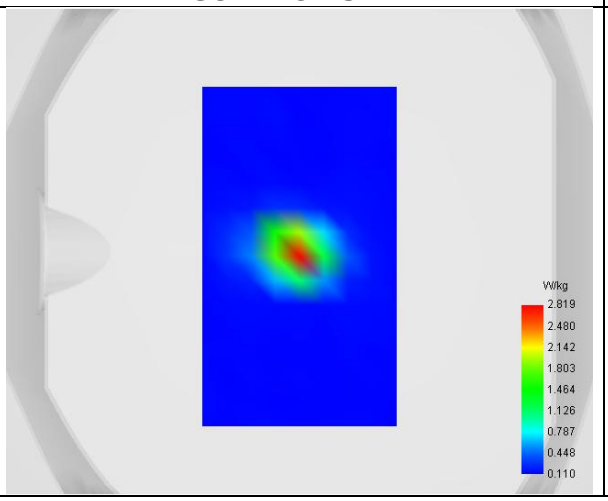
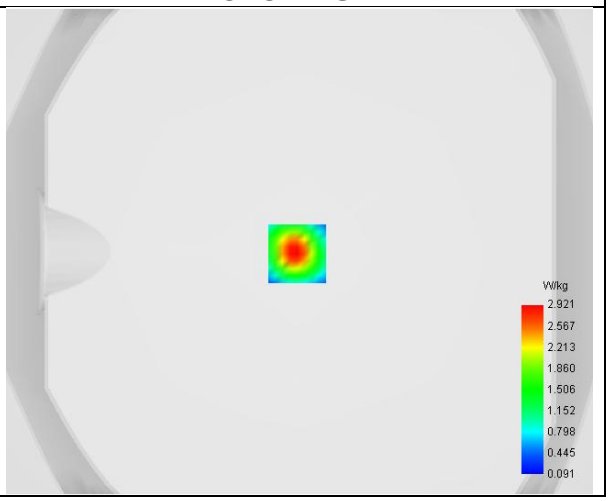
A. Experimental conditions.

Probe	4024-EPGO-442
ConvF	1.97
Area Scan	dx=10mm dy=10mm, Complete
Zoom Scan	9x9x16,dx=3mm dy=3mm dz=1.5mm,Complete
Phantom	Validation plane
Device Position	Body
Band	CW5400
Channels/Frequency	Middle
Signal	CW

B. Permitivity

Middle TX Frequency (MHz)	5400.000
Relative permitivity (real part)	34.329
Relative permitivity (imaginary part)	16.013
Conductivity (S/m)	4.804

C. SAR Surface and Volume

SURFACE SAR	**VOLUME SAR**
	

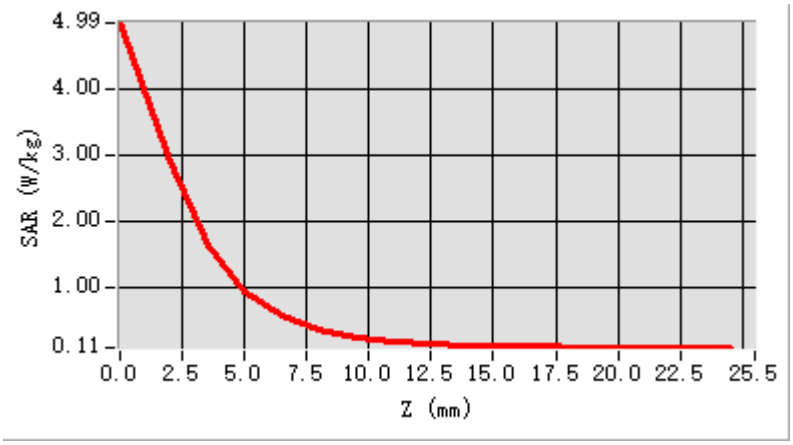
Maximum location: X=-1.00, Y=-1.00 ; SAR Peak: 5.47 W/kg

D. SAR 1g & 10g

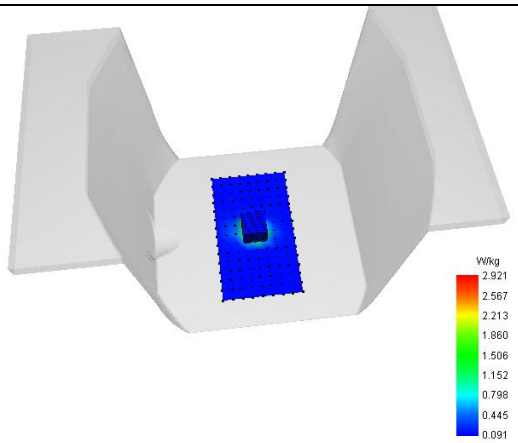
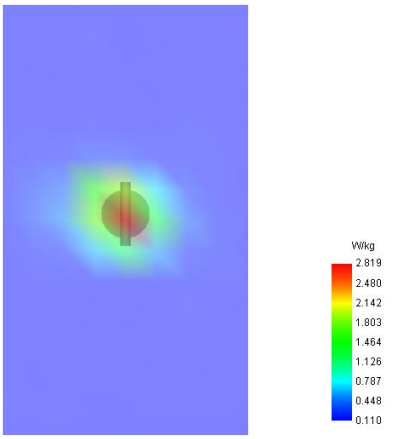
SAR 10g (W/Kg)	0.566
SAR 1g (W/Kg)	1.623
Variation (%)	-2.490
Horizontal validation criteria: minimum distance (mm)	9.486833
Vertical validation criteria: SAR ratio M2/M1 (%)	56.171419

E. Z Axis Scan

Z (mm)	0.00	2.00	3.50	5.00	6.50	8.00	9.50	11.00	12.50	14.00	15.50	17.00	18.50	20.00	21.50	23.00
SAR (W/Kg)	4.985	2.921	1.641	0.964	0.597	0.371	0.251	0.190	0.165	0.145	0.132	0.125	0.122	0.117	0.112	0.109



F. 3D Image

3D screen shot	Hot spot position
	

MEASUREMENT 4

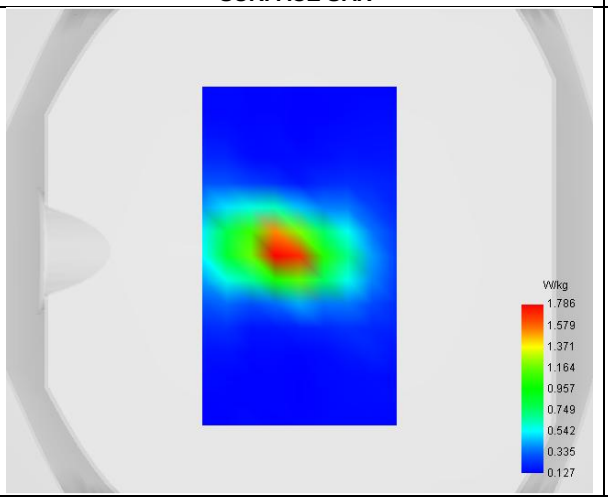
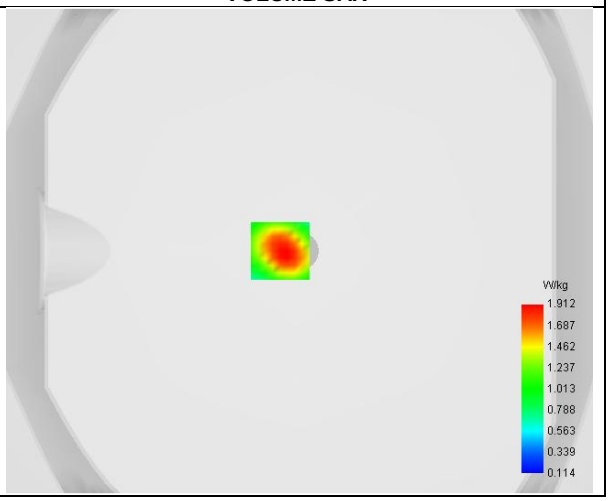
Date of measurement: 31/12/2024

A. Experimental conditions.

Probe	4024-EPGO-442
ConvF	1.88
Area Scan	dx=10mm dy=10mm, Complete
Zoom Scan	9x9x16,dx=3mm dy=3mm dz=1.5mm,Complete
Phantom	Validation plane
Device Position	Body
Band	CW5600
Channels/Frequency	Middle
Signal	CW

B. SAR Measurement Results

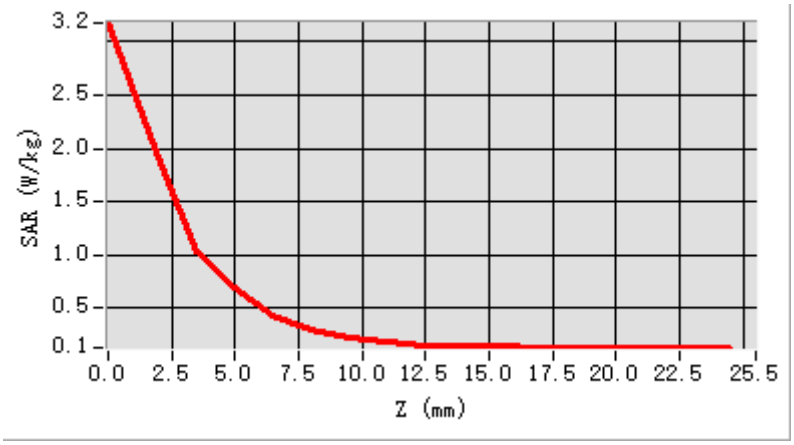
Middle TX Frequency (MHz)	5600.000
Relative permitivity (real part)	34.403
Relative permitivity (imaginary part)	15.864
Conductivity (S/m)	4.935

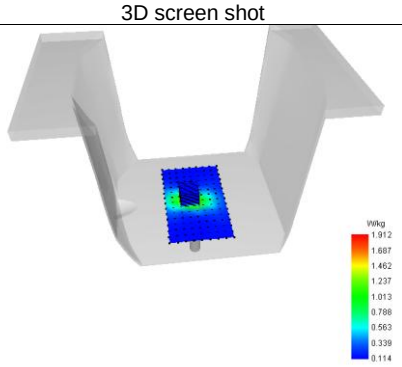
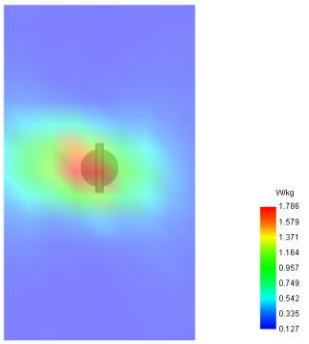
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-8.00, Y=0.00 ; SAR Peak: 3.51 W/kg

SAR 10g (W/Kg)	0.582
SAR 1g (W/Kg)	1.793
Variation (%)	0.110
Horizontal validation criteria: minimum distance (mm)	12.727922
Vertical validation criteria: SAR ratio M2/M1 (%)	57.328743

Z (mm)	0.00	2.00	3.50	5.00	6.50	8.00	9.50	11.00	12.50	14.00	15.50	17.00	18.50	20.00	21.50	23.00
SAR (W/Kg)	3.178	1.912	1.022	0.690	0.425	0.297	0.219	0.184	0.150	0.142	0.137	0.127	0.130	0.129	0.133	0.133



3D screen shot	Hot spot position
	

MEASUREMENT 5

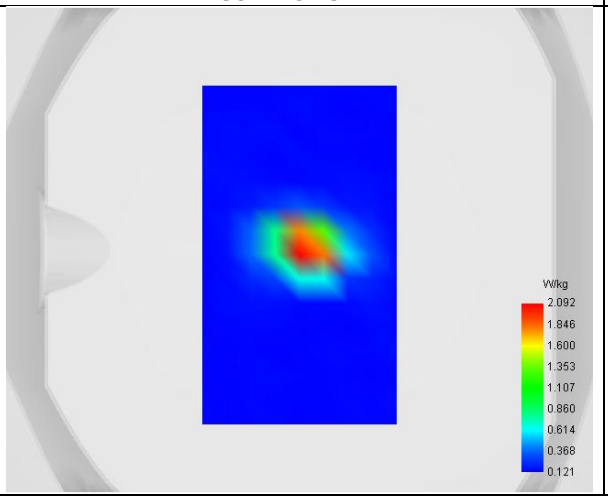
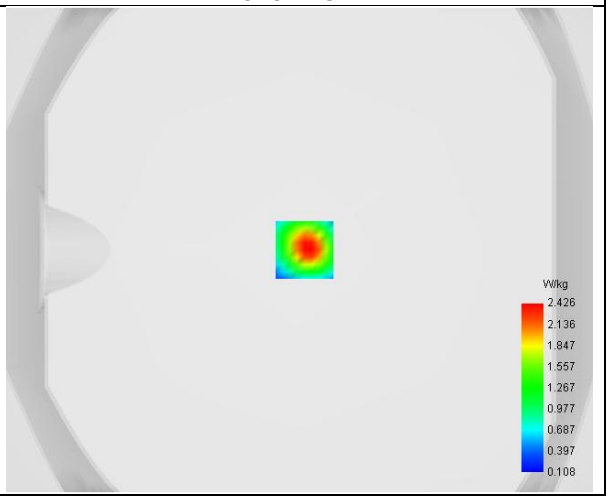
Date of measurement: 26/12/2024

A. Experimental conditions.

Probe	4024-EPGO-442
ConvF	1.90
Area Scan	dx=10mm dy=10mm, Complete
Zoom Scan	9x9x16,dx=3mm dy=3mm dz=1.5mm,Complete
Phantom	Validation plane
Device Position	Dipole
Band	CW5800
Channels/Frequency	Middle
Signal	CW

B. SAR Measurement Results

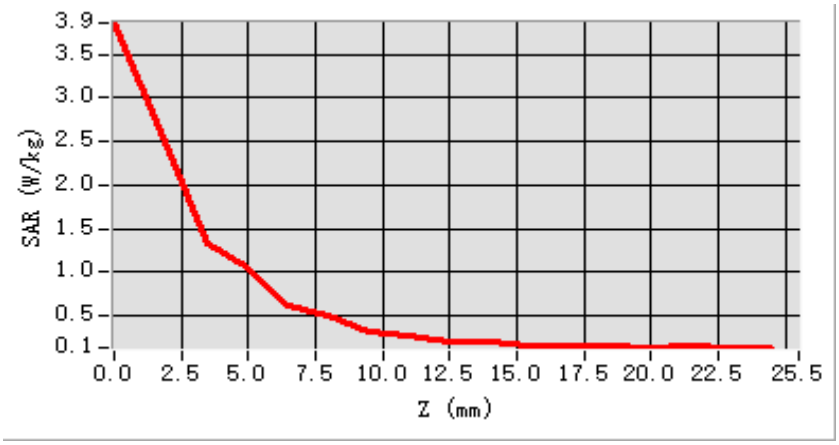
Middle TX Frequency (MHz)	5800.000
Relative permitivity (real part)	33.904
Relative permitivity (imaginary part)	15.920
Conductivity (S/m)	5.130

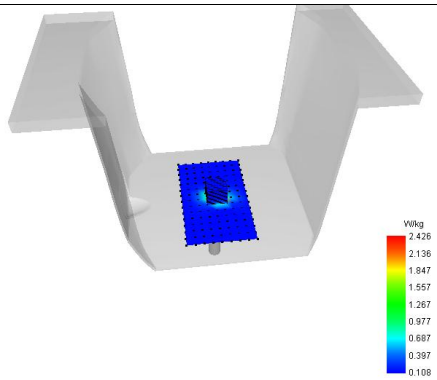
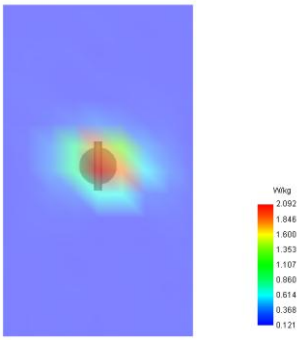
SURFACE SAR	VOLUME SAR
	

Maximum location: X=2.00, Y=0.00 ; SAR Peak: 4.14 W/kg

SAR 10g (W/Kg)	0.572
SAR 1g (W/Kg)	1.875
Variation (%)	0.700
Horizontal validation criteria: minimum distance (mm)	9.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	63.573704

Z (mm)	0.00	2.00	3.50	5.00	6.50	8.00	9.50	11.00	12.50	14.00	15.50	17.00	18.50	20.00	21.50	23.00
SAR (W/Kg)	3.860	2.426	1.319	1.046	0.607	0.499	0.321	0.261	0.210	0.198	0.166	0.153	0.147	0.142	0.145	0.133



3D screen shot	Hot spot position
	

14. Appendix C. Plots of High SAR Measurement

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MEASUREMENT 7 WLAN 5.6G Body P-Sensor Inactive
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MEASUREMENT 1

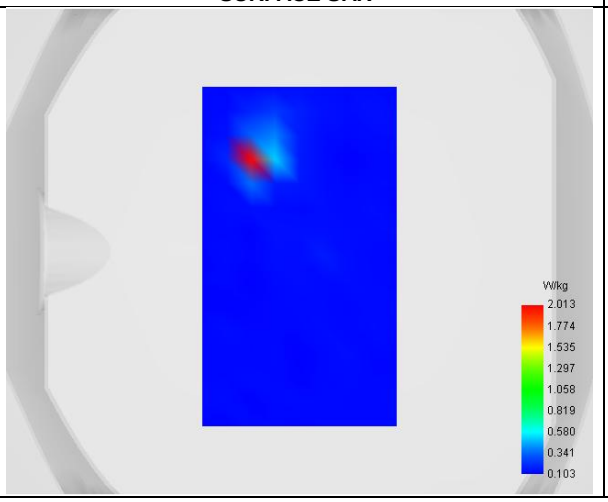
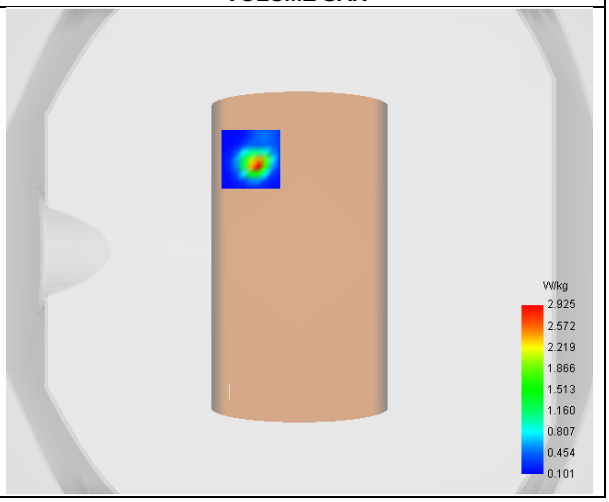
Date of measurement: 26/12/2024

A. Experimental conditions.

Probe	4024-EPGO-442
ConvF	1.89
Area Scan	dx=10mm dy=10mm, Complete
Zoom Scan	9x9x16,dx=3mm dy=3mm dz=1.5mm,Complete
Phantom	Validation plane
Device Position	Body
Band	IEEE802.11aU-NII1
Channels/Frequency	Middle (40)/ frequency 5200.000 Mhz
Signal	IEEE802.11n (Crest factor: 1.0)

B. SAR Measurement Results

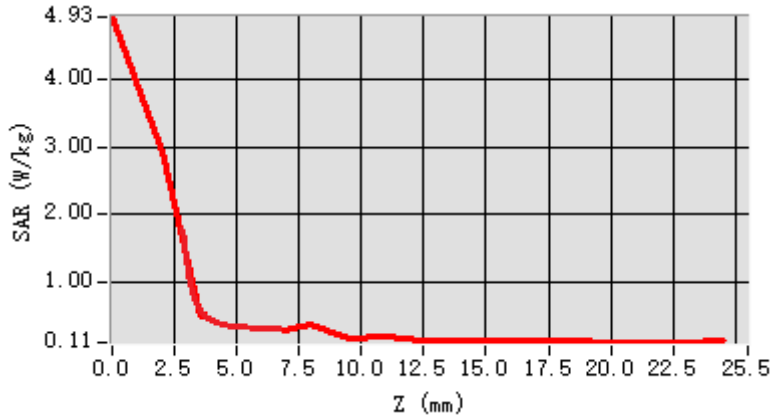
Middle TX Frequency (MHz)	5200.000
Relative permitivity (real part)	34.652
Relative permitivity (imaginary part)	15.561
Conductivity (S/m)	4.495

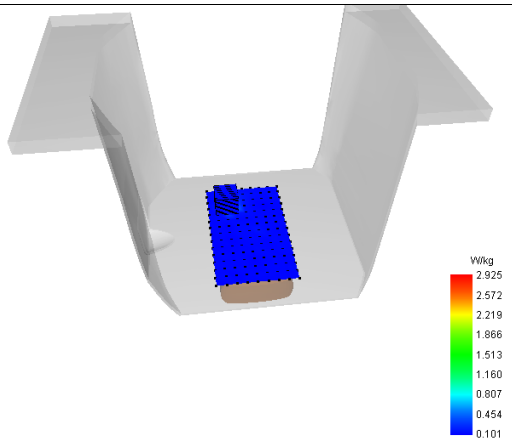
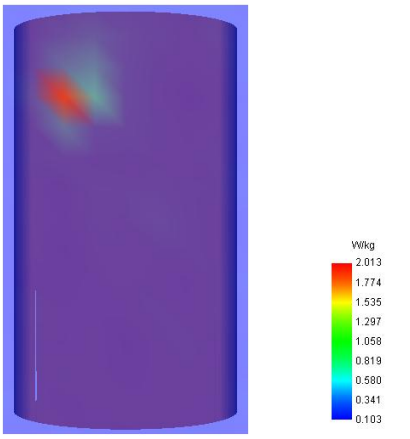
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-20.00, Y=38.00 ; SAR Peak: 5.69 W/kg

SAR 10g (W/Kg)	0.285
SAR 1g (W/Kg)	1.150
Variation (%)	0.960
Horizontal validation criteria: minimum distance (mm)	4.242641
Vertical validation criteria: SAR ratio M2/M1 (%)	54.270059

Z (mm)	0.00	2.00	3.50	5.00	6.50	8.00	9.50	11.00	12.50	14.00	15.50	17.00	18.50	20.00	21.50	23.00
SAR (W/Kg)	4.934	2.925	0.494	0.924	0.253	0.368	0.161	0.186	0.142	0.149	0.128	0.131	0.132	0.119	0.115	0.107



3D screen shot	Hot spot position
	

MEASUREMENT 2

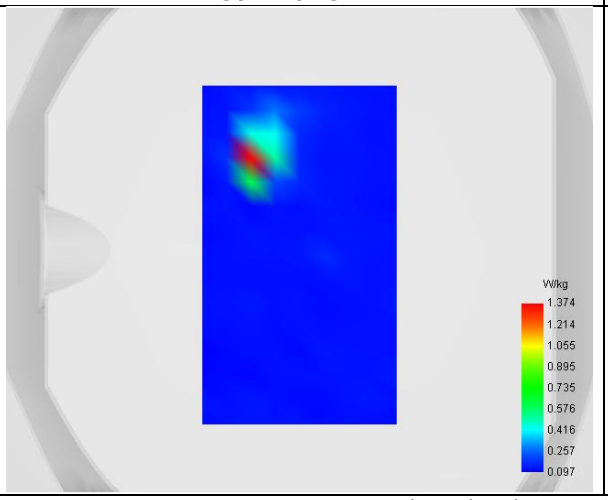
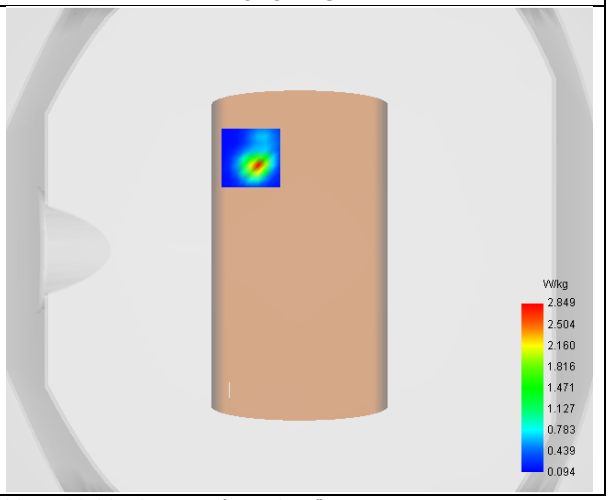
Date of measurement: 27/12/2024

A. Experimental conditions.

Probe	4024-EPGO-442
ConvF	1.89
Area Scan	dx=10mm dy=10mm, Complete
Zoom Scan	9x9x16,dx=3mm dy=3mm dz=1.5mm,Complete
Phantom	Validation plane
Device Position	Body
Band	IEEE802.11aU-NII2
Channels/Frequency	Middle (56)/ frequency 5280.000 Mhz
Signal	IEEE802.11n (Crest factor: 1.0)

B. SAR Measurement Results

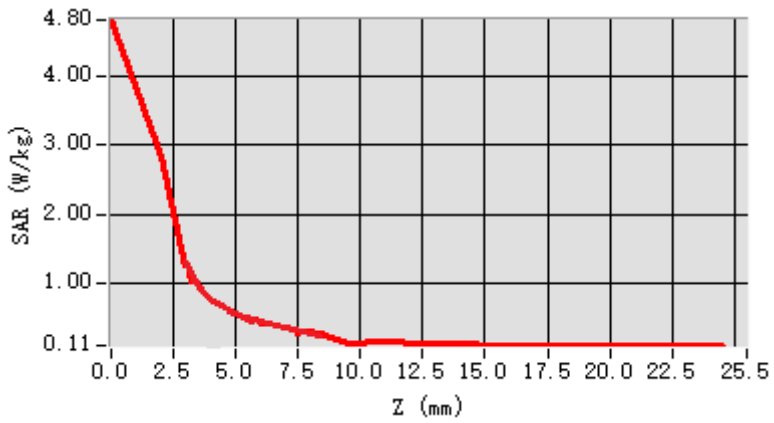
Middle TX Frequency (MHz)	5280.000
Relative permitivity (real part)	34.683
Relative permitivity (imaginary part)	15.765
Conductivity (S/m)	4.624

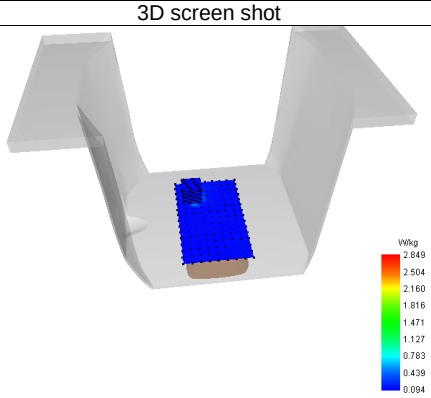
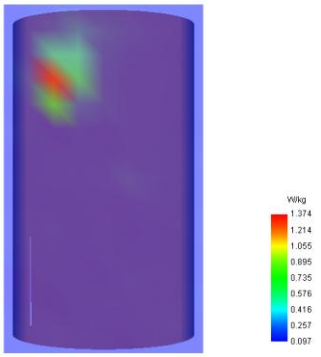
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-20.00, Y=38.00 ; SAR Peak: 5.52 W/kg

SAR 10g (W/Kg)	0.276
SAR 1g (W/Kg)	1.097
Variation (%)	6.300
Horizontal validation criteria: minimum distance (mm)	4.242641
Vertical validation criteria: SAR ratio M2/M1 (%)	53.614967

Z (mm)	0.00	2.00	3.50	5.00	6.50	8.00	9.50	11.00	12.50	14.00	15.50	17.00	18.50	20.00	21.50	23.00
SAR (W/Kg)	4.803	2.849	0.322	0.861	0.197	0.356	0.149	0.184	0.132	0.145	0.126	0.126	0.114	0.127	0.115	0.120



3D screen shot	Hot spot position
	

MEASUREMENT 3

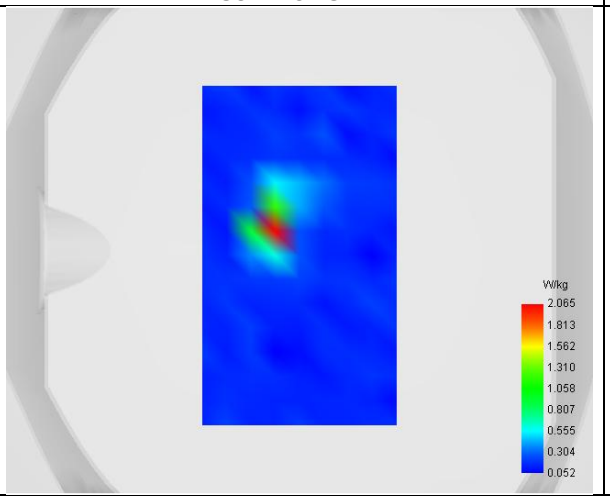
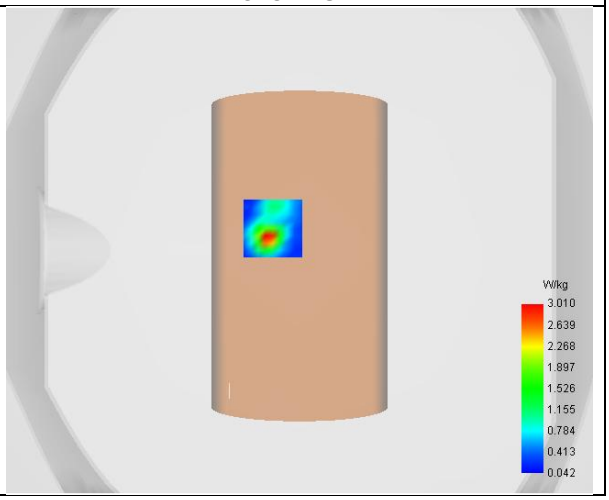
Date of measurement: 27/12/2024

A. Experimental conditions.

Probe	4024-EPGO-442
ConvF	1.88
Area Scan	dx=10mm dy=10mm, Complete
Zoom Scan	9x9x16,dx=3mm dy=3mm dz=1.5mm,Complete
Phantom	Validation plane
Device Position	Body
Band	U-NII-2c
Channels/Frequency	Middle (118)/ frequency 5590.000 Mhz
Signal	IEEE802.11ac (Crest factor: 1.0)

B. SAR Measurement Results

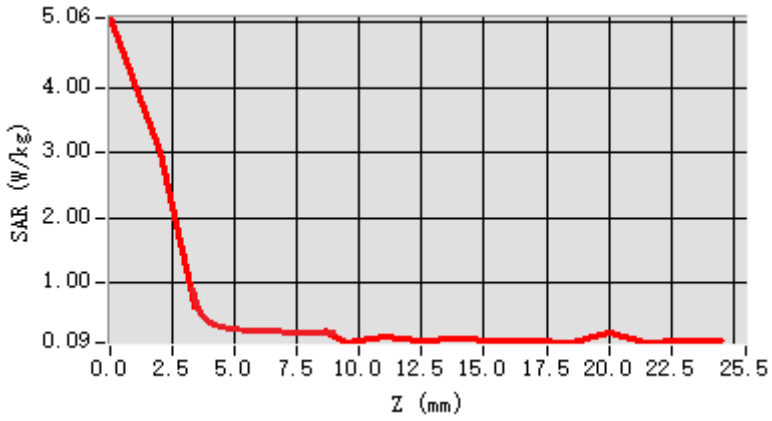
Middle TX Frequency (MHz)	5590.000
Relative permitivity (real part)	34.318
Relative permitivity (imaginary part)	15.670
Conductivity (S/m)	4.866

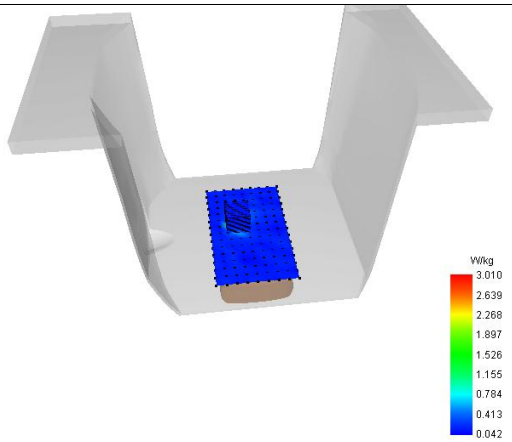
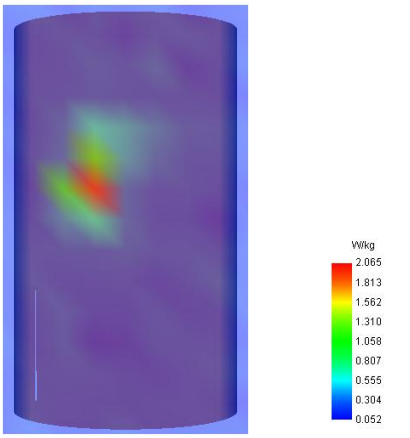
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-11.00, Y=9.00 ; SAR Peak: 6.16 W/kg

SAR 10g (W/Kg)	0.340
SAR 1g (W/Kg)	1.158
Variation (%)	-2.630
Horizontal validation criteria: minimum distance (mm)	6.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	53.986328

Z (mm)	0.00	2.00	3.50	5.00	6.50	8.00	9.50	11.00	12.50	14.00	15.50	17.00	18.50	20.00	21.50	23.00
SAR (W/Kg)	5.062	3.010	0.407	0.880	0.239	0.383	0.101	0.185	0.113	0.160	0.117	0.136	0.105	0.236	0.091	0.134



3D screen shot	Hot spot position
	

MEASUREMENT 4

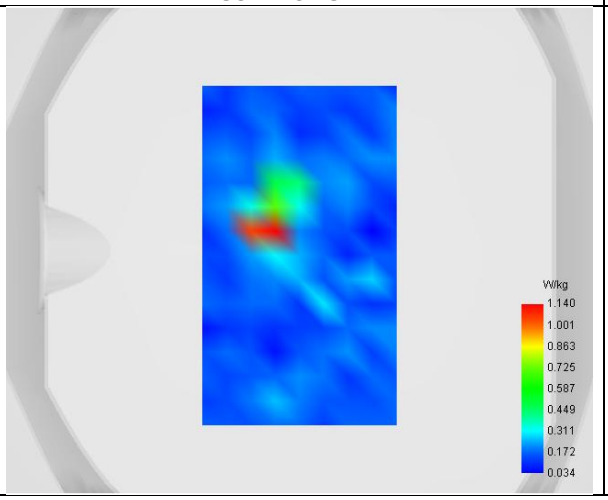
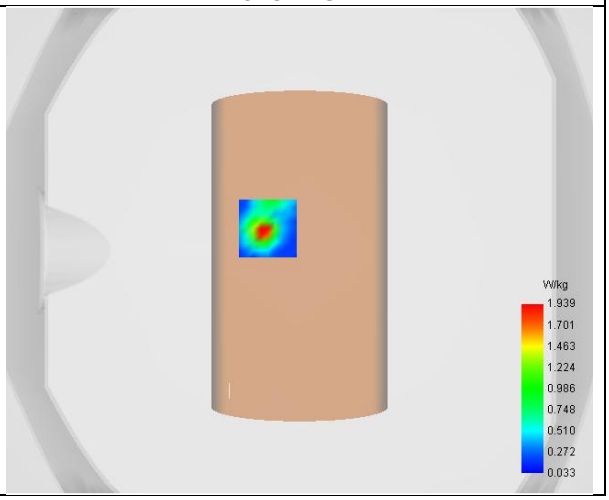
Date of measurement: 27/12/2024

A. Experimental conditions.

Probe	4024-EPGO-442
ConvF	1.90
Area Scan	dx=10mm dy=10mm, Complete
Zoom Scan	9x9x16,dx=3mm dy=3mm dz=1.5mm,Complete
Phantom	Validation plane
Device Position	Body
Band	U-NII-4
Channels/Frequency	High (165)/ frequency 5825.000 Mhz
Signal	IEEE 802.11 a

B. SAR Measurement Results

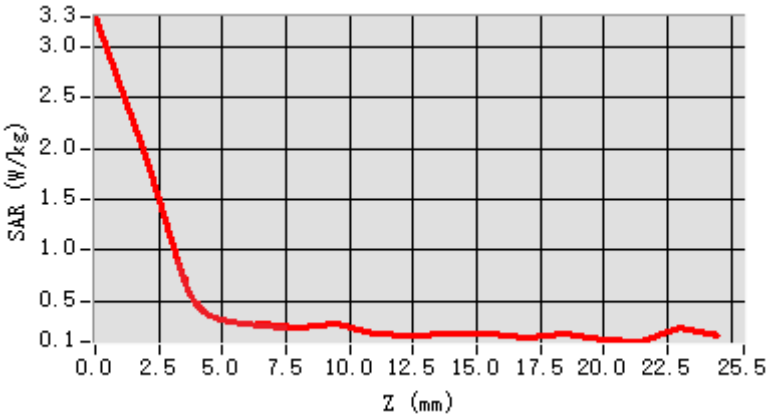
Middle TX Frequency (MHz)	5825.000
Relative permitivity (real part)	33.774
Relative permitivity (imaginary part)	16.114
Conductivity (S/m)	5.268

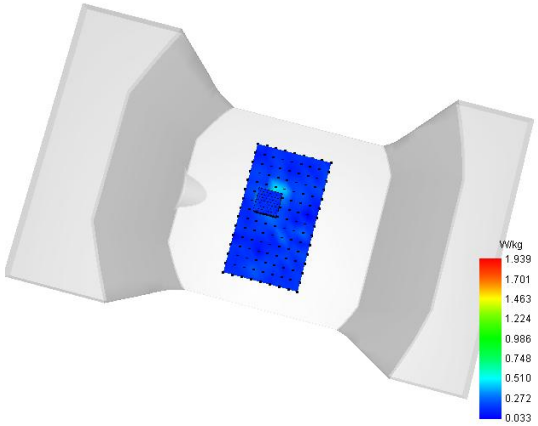
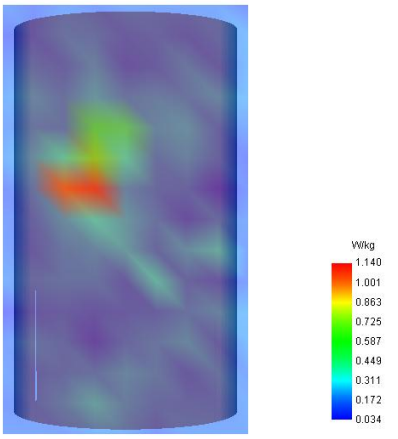
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-13.00, Y=9.00 ; SAR Peak: 3.98 W/kg

SAR 10g (W/Kg)	0.302
SAR 1g (W/Kg)	1.123
Variation (%)	-1.840
Horizontal validation criteria: minimum distance (mm)	6.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	55.866990

Z (mm)	0.00	2.00	3.50	5.00	6.50	8.00	9.50	11.00	12.50	14.00	15.50	17.00	18.50	20.00	21.50	23.00
SAR (W/Kg)	3.300	1.939	0.720	0.672	0.284	0.245	0.282	0.179	0.162	0.180	0.168	0.145	0.182	0.126	0.098	0.231



3D screen shot	Hot spot position
	

MEASUREMENT 5

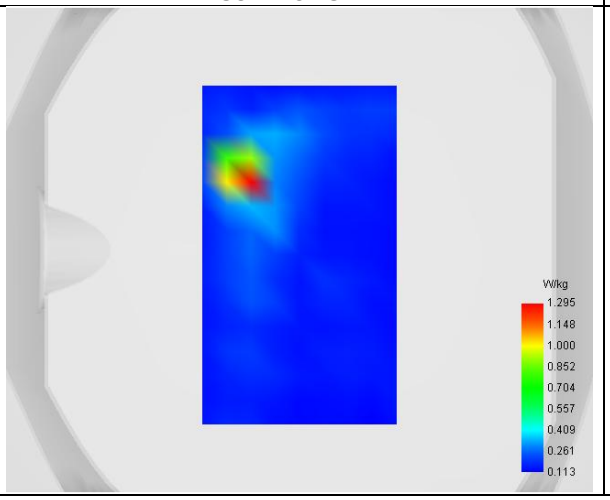
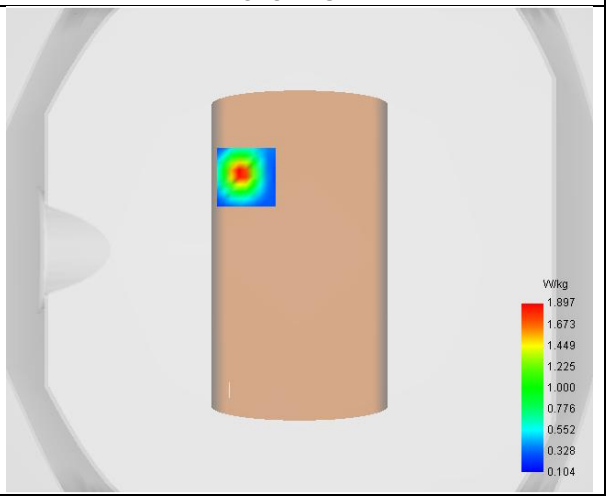
Date of measurement: 27/12/2024

A. Experimental conditions.

Probe	4024-EPGO-442
ConvF	1.89
Area Scan	dx=10mm dy=10mm, Complete
Zoom Scan	9x9x16,dx=3mm dy=3mm dz=1.5mm,Complete
Phantom	Validation plane
Device Position	Body
Band	IEEE802.11aU-NII1
Channels/Frequency	Middle (48)/ frequency 5240.000 Mhz
Signal	IEEE802.11a (Crest factor: 1.0)

B. SAR Measurement Results

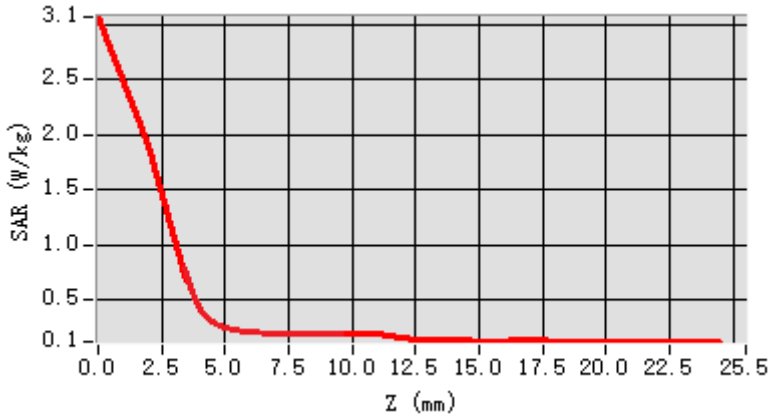
Middle TX Frequency (MHz)	5240.000
Relative permitivity (real part)	34.498
Relative permitivity (imaginary part)	15.572
Conductivity (S/m)	4.533

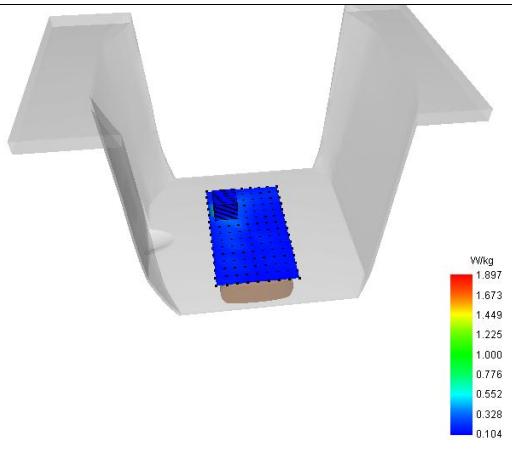
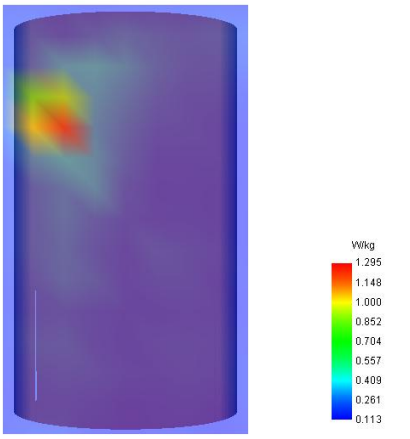
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-22.00, Y=30.00 ; SAR Peak: 3.37 W/kg

SAR 10g (W/Kg)	0.359
SAR 1g (W/Kg)	1.052
Variation (%)	1.750
Horizontal validation criteria: minimum distance (mm)	6.708204
Vertical validation criteria: SAR ratio M2/M1 (%)	61.155774

Z (mm)	0.00	2.00	3.50	5.00	6.50	8.00	9.50	11.00	12.50	14.00	15.50	17.00	18.50	20.00	21.50	23.00
SAR (W/Kg)	3.067	1.897	0.668	0.759	0.333	0.349	0.190	0.204	0.149	0.147	0.133	0.138	0.133	0.127	0.126	0.125



3D screen shot	Hot spot position
	

MEASUREMENT 6

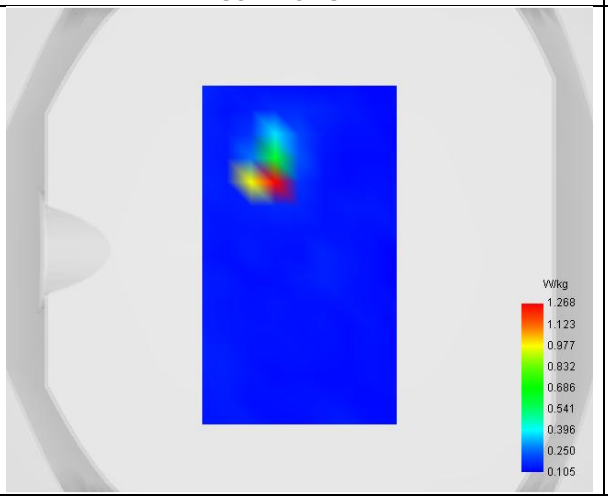
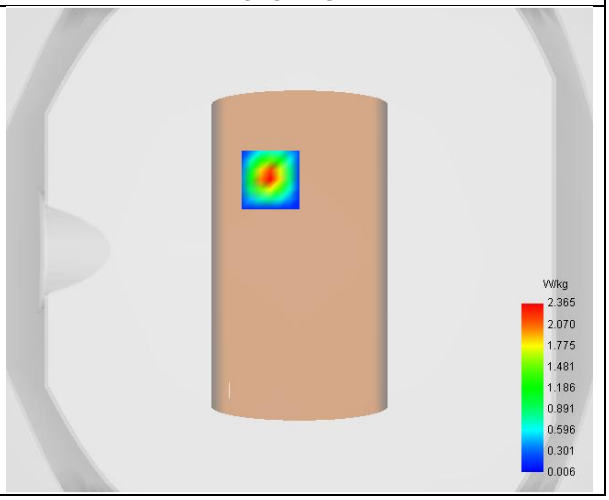
Date of measurement: 27/12/2024

A. Experimental conditions.

Probe	4024-EPGO-442
ConvF	1.89
Area Scan	dx=10mm dy=10mm, Complete
Zoom Scan	7x7x12,dx=4mm dy=4mm dz=5.0mm,Very fast
Phantom	Validation plane
Device Position	Body
Band	IEEE802.11aU-NII2
Channels/Frequency	Middle (56)/ frequency 5280.000 Mhz
Signal	IEEE 802.11n (Crest factor: 1.0)

B. SAR Measurement Results

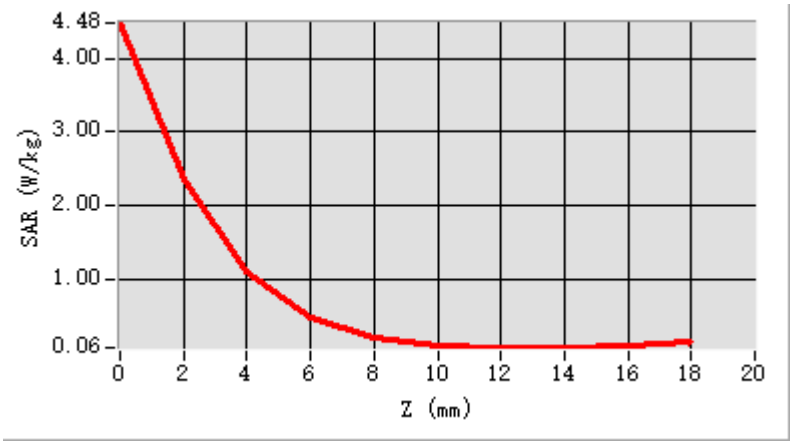
Middle TX Frequency (MHz)	5280.000
Relative permitivity (real part)	34.683
Relative permitivity (imaginary part)	15.765
Conductivity (S/m)	4.624

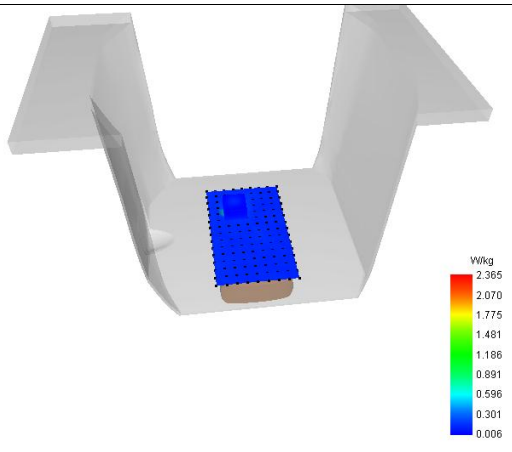
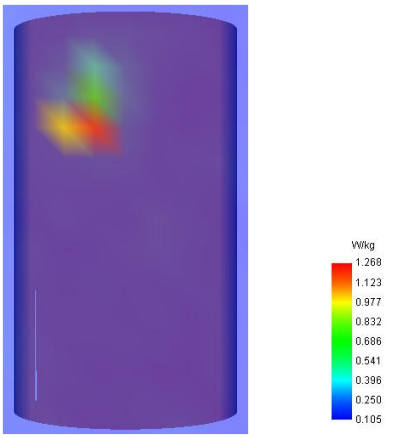
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-12.00, Y=29.00 ; SAR Peak: 4.51 W/kg

SAR 10g (W/Kg)	0.398
SAR 1g (W/Kg)	1.017
Variation (%)	0.200
Horizontal validation criteria: minimum distance (mm)	8.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	larger than edge zoom scan volume

Z (mm)	0.00	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00
SAR (W/Kg)	4.482	2.365	1.106	0.467	0.193	0.090	0.059	0.062	0.087



3D screen shot	Hot spot position
	

MEASUREMENT 7

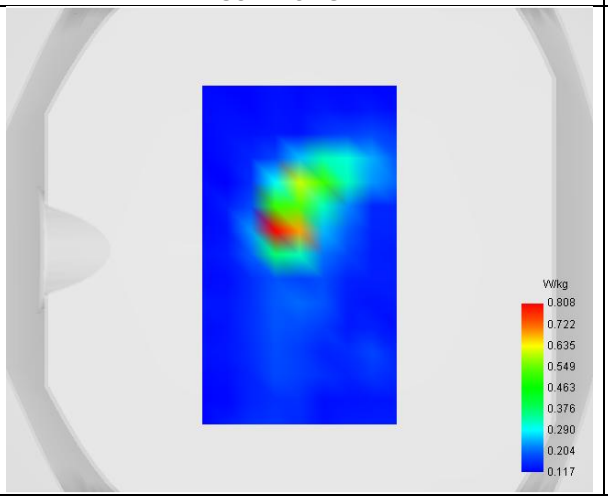
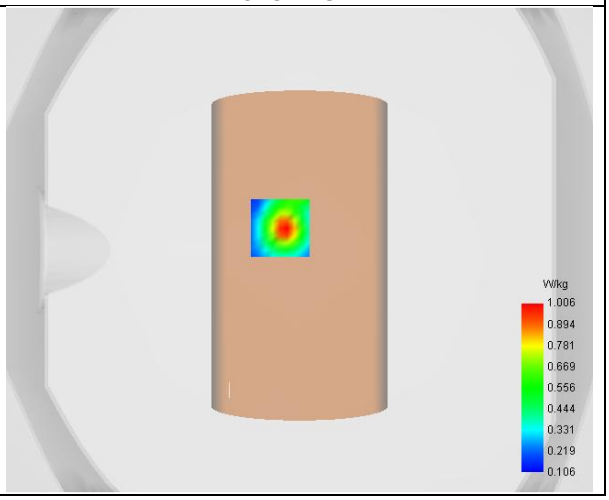
Date of measurement: 27/12/2024

A. Experimental conditions.

Probe	4024-EPGO-442
ConvF	1.88
Area Scan	dx=10mm dy=10mm, Complete
Zoom Scan	9x9x16,dx=3mm dy=3mm dz=1.5mm,Complete
Phantom	Validation plane
Device Position	Body
Band	U-NII-2c
Channels/Frequency	Middle (120)/ frequency 5600.000 Mhz
Signal	IEEE802.11ac (Crest factor: 1.0)

B. SAR Measurement Results

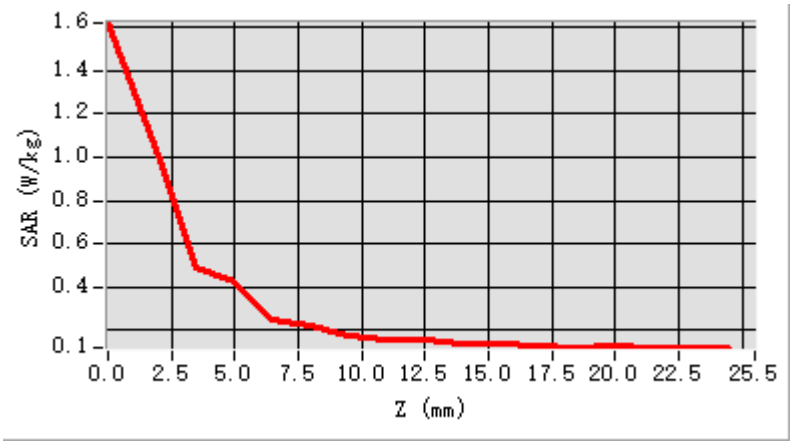
Middle TX Frequency (MHz)	5600.000
Relative permitivity (real part)	34.403
Relative permitivity (imaginary part)	15.864
Conductivity (S/m)	4.935

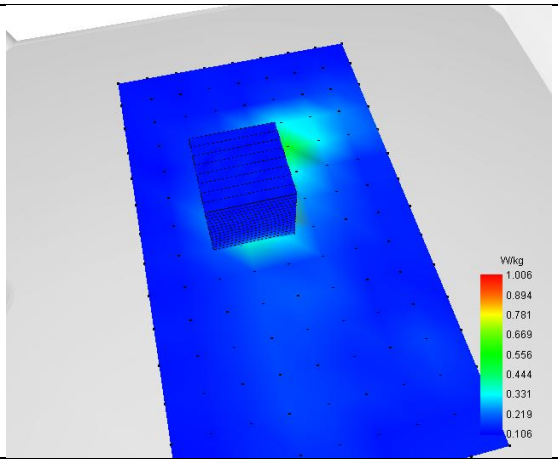
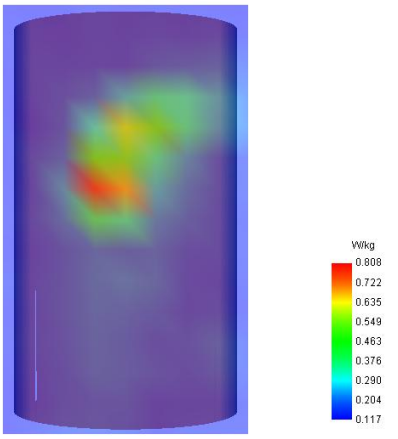
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-8.00, Y=9.00 ; SAR Peak: 1.76 W/kg

SAR 10g (W/Kg)	0.248
SAR 1g (W/Kg)	0.586
Variation (%)	1.980
Horizontal validation criteria: minimum distance (mm)	8.485281
Vertical validation criteria: SAR ratio M2/M1 (%)	61.507515

Z (mm)	0.00	2.00	3.50	5.00	6.50	8.00	9.50	11.00	12.50	14.00	15.50	17.00	18.50	20.00	21.50	23.00
SAR (W/Kg)	1.618	1.006	0.490	0.430	0.247	0.220	0.175	0.155	0.153	0.135	0.136	0.132	0.122	0.128	0.125	0.121



3D screen shot	Hot spot position
	

MEASUREMENT 8

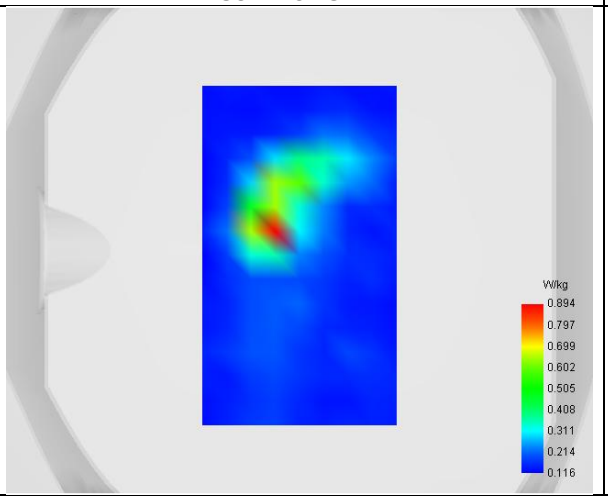
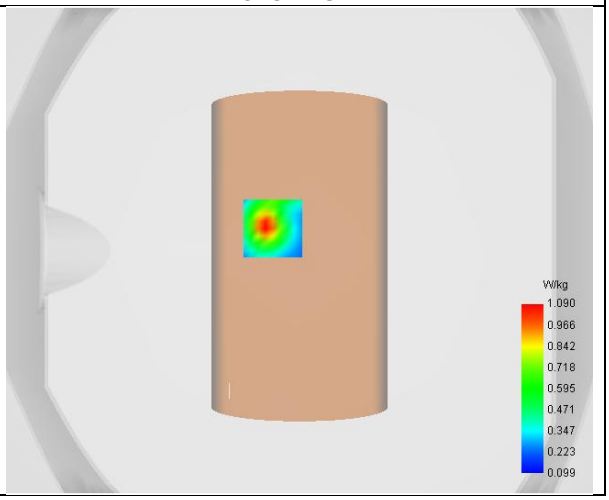
Date of measurement: 27/12/2024

A. Experimental conditions.

Probe	4024-EPGO-442
ConvF	1.90
Area Scan	dx=10mm dy=10mm, Complete
Zoom Scan	9x9x16,dx=3mm dy=3mm dz=1.5mm,Complete
Phantom	Validation plane
Device Position	Body
Band	U-NII-3
Channels/Frequency	Middle (157)/ frequency 5785.000 Mhz
Signal	IEEE 802.11 a

B. SAR Measurement Results

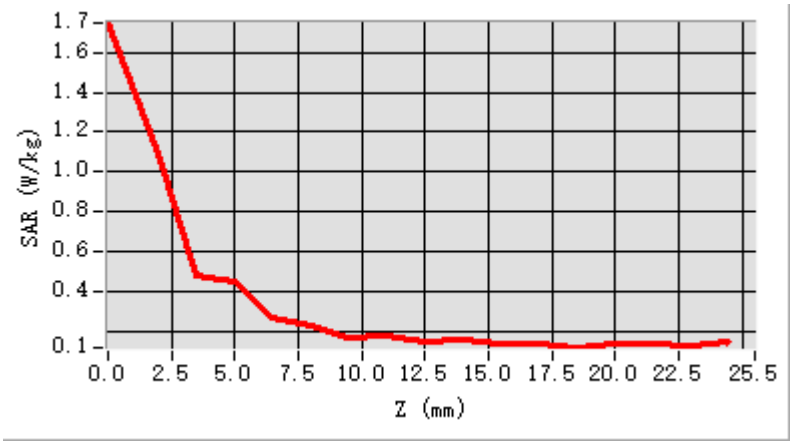
Middle TX Frequency (MHz)	5785.000
Relative permitivity (real part)	35.315
Relative permitivity (imaginary part)	16.355
Conductivity (S/m)	5.256

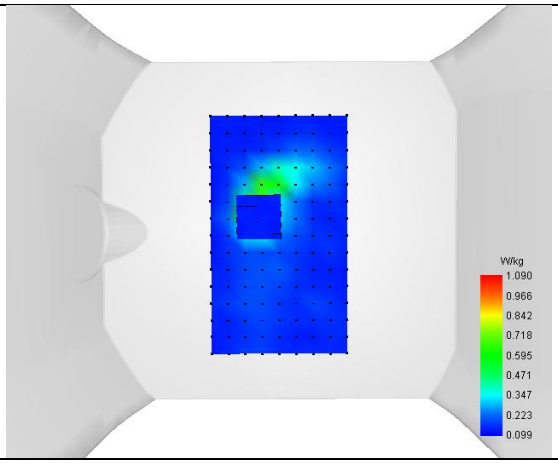
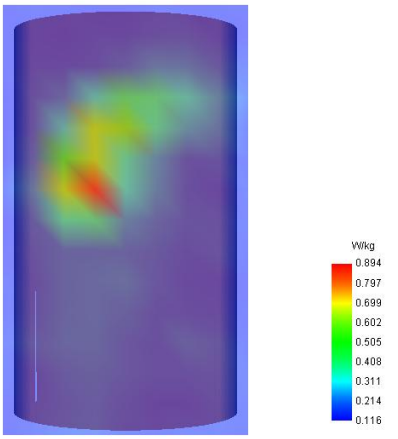
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-11.00, Y=9.00 ; SAR Peak: 1.91 W/kg

SAR 10g (W/Kg)	0.256
SAR 1g (W/Kg)	0.625
Variation (%)	-0.220
Horizontal validation criteria: minimum distance (mm)	8.485281
Vertical validation criteria: SAR ratio M2/M1 (%)	61.626601

Z (mm)	0.00	2.00	3.50	5.00	6.50	8.00	9.50	11.00	12.50	14.00	15.50	17.00	18.50	20.00	21.50	23.00
SAR (W/Kg)	1.749	1.090	0.479	0.451	0.272	0.232	0.169	0.174	0.145	0.159	0.132	0.132	0.116	0.133	0.135	0.130



3D screen shot	Hot spot position
	

MEASUREMENT 9

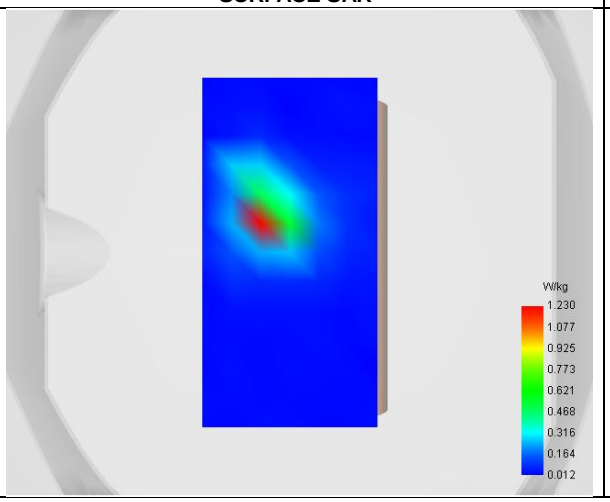
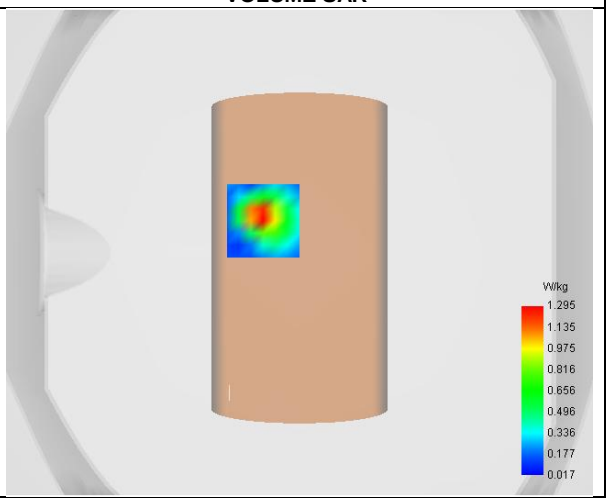
Date of measurement: 27/12/2024

A. Experimental conditions.

Probe	4024-EPGO-442
ConvF	2.74
Area Scan	dx=12mm dy=12mm, Complete
Zoom Scan	7x7x7,dx=5mm dy=5mm dz=5.0mm,Complete
Phantom	Validation plane
Device Position	Body
Band	ISM
Channels/Frequency	Middle (6)/ frequency 2437.000 Mhz
Signal	IEEE 802.11 b

B. SAR Measurement Results

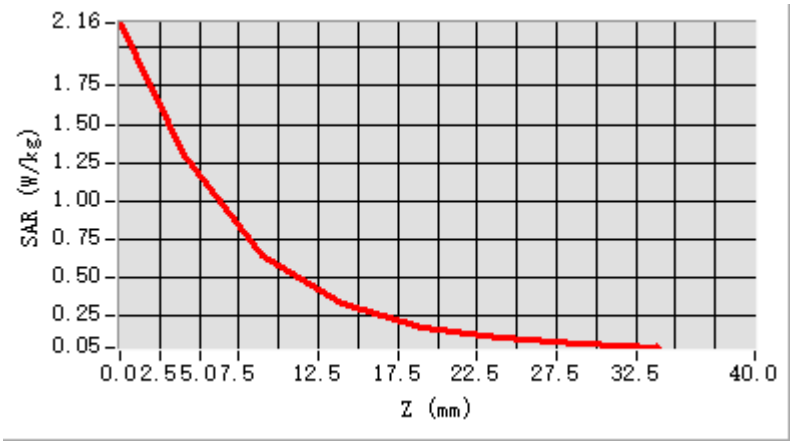
Middle TX Frequency (MHz)	2437.000
Relative permitivity (real part)	37.867
Relative permitivity (imaginary part)	13.007
Conductivity (S/m)	1.761

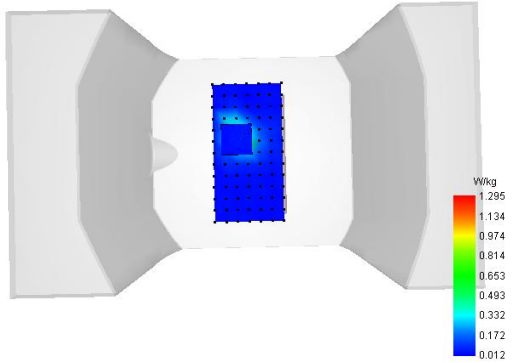
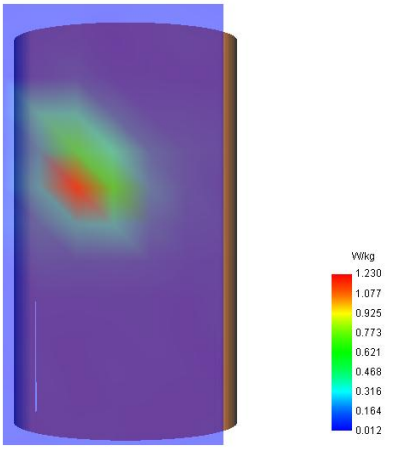
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-15.00, Y=13.00 ; SAR Peak: 2.23 W/kg

SAR 10g (W/Kg)	0.435
SAR 1g (W/Kg)	1.124
Variation (%)	2.860
Horizontal validation criteria: minimum distance (mm)	7.071068
Vertical validation criteria: SAR ratio M2/M1 (%)	50.169649

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	2.160	1.295	0.650	0.335	0.183	0.109	0.074



3D screen shot	Hot spot position
	

MEASUREMENT 10

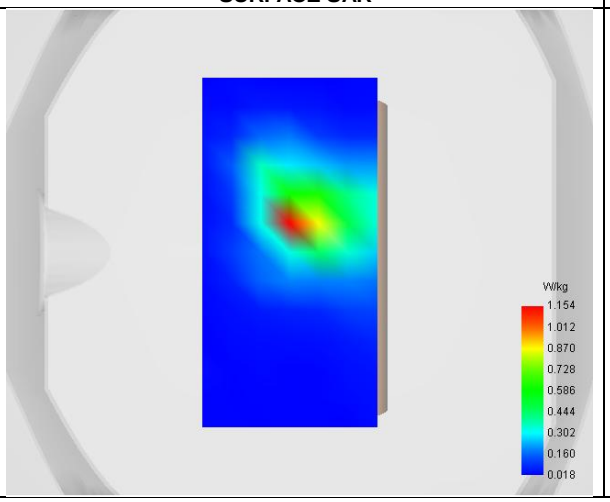
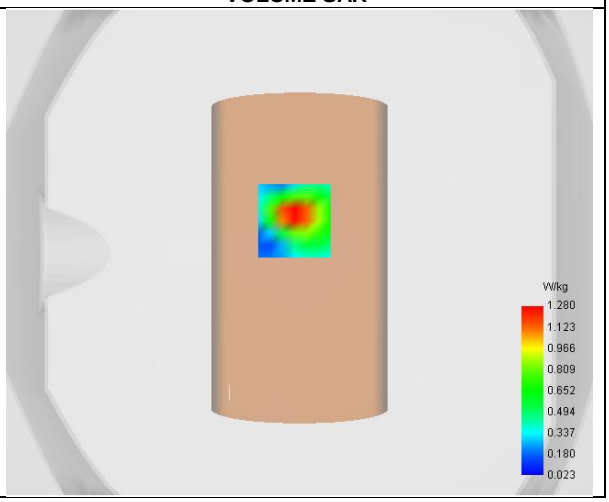
Date of measurement: 27/12/2024

A. Experimental conditions.

Probe	4024-EPGO-442
ConvF	2.74
Area Scan	dx=12mm dy=12mm, Complete
Zoom Scan	7x7x7,dx=5mm dy=5mm dz=5.0mm,Complete
Phantom	Validation plane
Device Position	Body
Band	ISM
Channels/Frequency	Middle (6)/ frequency 2437.000 Mhz
Signal	IEEE 802.11 b

B. SAR Measurement Results

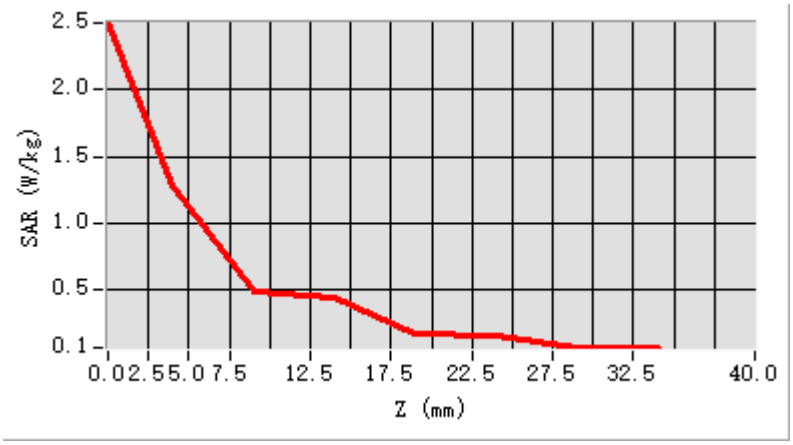
Middle TX Frequency (MHz)	2437.000
Relative permitivity (real part)	37.867
Relative permitivity (imaginary part)	13.007
Conductivity (S/m)	1.761

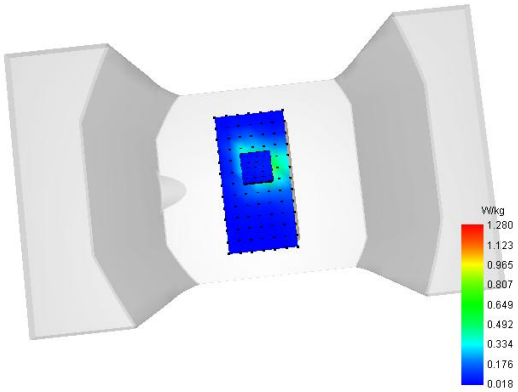
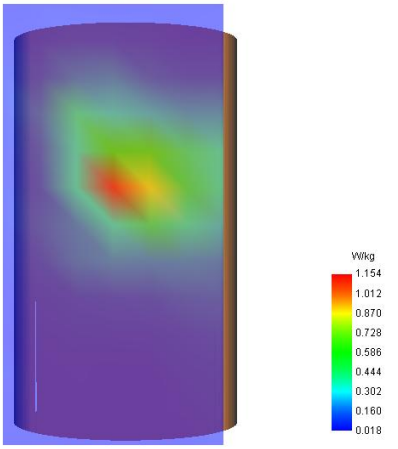
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-2.00, Y=13.00 ; SAR Peak: 2.04 W/kg

SAR 10g (W/Kg)	0.331
SAR 1g (W/Kg)	1.059
Variation (%)	-3.950
Horizontal validation criteria: minimum distance (mm)	10.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	58.775499

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	2.498	1.280	0.489	0.443	0.179	0.153	0.074



3D screen shot	Hot spot position
	

15. Appendix D. Calibration Certificate

Table of contents
E Field Probe - 4024-EPGO-442
2450 MHz Dipole - SN 03/15 DIP 2G450-352
5000-6000 MHz Dipole - SN 13/14 WGA 33

COMOSAR E-Field Probe Calibration Report

Ref : ACR.278.12.24.BES.A

SHENZHEN NTEK TESTING TECHNOLOGY CO., LTD.

BUILDING E, FENDA SCIENCE PARK, SANWEI COMMUNITY, XIXIANG STREET,

BAO'AN DISTRICT, SHENZHEN GUANGDONG, CHINA

MVG COMOSAR DOSIMETRIC E-FIELD PROBE

SERIAL NO.: 4024-EPGO-442

Calibrated at MVG

Z.I. de la pointe du diable

Technopôle Brest Iroise – 295 avenue Alexis de Rochon

29280 PLOUZANE - FRANCE

Calibration date: 10/04/2024

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

Summary:

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