TEST REPORT

Reference No......	:	WTX25X05117898W002
FCC ID.....	:	2A8WB-AP6398S
Applicant	:	Shenzhen Mindray Animal Medical Technology Co., Ltd.
Address.....	:	Room 702, Tower 4, YESUN Intelligent Community III, No.1301-88 Guanguang Road, Shenzhen, China
Manufacturer.....		The same as **Applicant**
Address.....		The same as **Applicant**
Product Name	:	Veterinary Digital Detector and Imaging System
Model No......	:	VetiPad M1
Standards	:	FCC Part 2.1093 IEEE Std C95.1: 2019 IEEE C95.3: 2021
Date of Receipt sample	:	2025-05-09
Date of Test.....	:	2025-05-09 to 2025-05-23
Date of Issue	:	2025-05-23
Test Report Form No.	:	WTX_Part2_1093W
Test Result.....	:	**Pass**

Remarks:

The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of approver.

Prepared By:

Waltek Testing Group (Shenzhen) Co., Ltd.

Address: 1/F., Room 101, Building 1, Hongwei Industrial Park, Liuxian 2nd Road,

Block 70 Bao'an District, Shenzhen, Guangdong, China

Tel.: +86-755-33663308 Fax.: +86-755-33663309 Email: sem@waltek.com.cn

Tested by:

Jack Sun

Approved by:

Jason Su

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Report version

Version No.	Date of issue	Description
Rev.00	2025-05-23	Original
/	/	/

1. General Information

1.1 Product Description for Equipment Under Test (EUT)

General Description of EUT	
Product Name:	Veterinary Digital Detector and Imaging System
Trade Name:	/
Model No.:	VetiPad M1
Adding Model(s):	/
Rated Voltage:	Battery: DC 11.1V AC 100-240V~50/60Hz 150VA
Battery Capacity:	3800mAh
Power Adapter Model:	/
Software Version:	N/A
Hardware Version:	N/A
Note: The test data is gathered from a production sample provided by the manufacturer.	

Technical Characteristics of EUT:	
Wi-Fi(5GHz)	
Support Standards:	802.11a, 802.11n-HT20/40, 802.11ac-VHT20/40/80
Frequency Range:	5150-5250MHz, 5725-5850MHz
RF Output Power:	ANT 1: 13.80dBm (Conducted) ANT 2: 14.05dBm (Conducted)
Type of Modulation:	BPSK,QPSK, 16QAM,64QAM & 256QAM
Type of Antenna:	Integral Antenna
Antenna Gain:	ANT 1: 5150-5250MHz:2.25dBi 5725-5850MHz:1.81dBi ANT 2: 5150-5250MHz:2.25dBi 5725-5850MHz:1.81dBi
WIFI(2.4GHz)	
Support Standards:	802.11b, 802.11g, 802.11n-HT20, 802.11n-HT40
Frequency Range:	2412-2462MHz for 11b/g/n(HT20), 2422-2452MHz for 11n(HT40)
Max. RF Output Power:	ANT 1: 13.25dBm (Conducted) ANT 2: 13.26dBm (Conducted)
Type of Modulation:	CCK, OFDM, QPSK, BPSK, 16QAM, 64QAM
Quantity of Channels:	11 for 802.11b/g/n(HT20); 7 for 802.11n(HT40)
Channel Separation:	5MHz
Antenna Type:	Integral Antenna
Antenna Gain:	ANT 1: 1.93dBi ANT 2: 1.93dBi
Note: The Antenna Gain is provided by the customer and can affect the validity of results.	

1.2 Test Standards

The following report is accordance with FCC 47 CFR Part 2.1093, IEEE Std C95.1: 2019, IEEE Std C95.3: 2002 + Rev. 2008, IEC/IEEE 62209-1528:2020, and KDB 865664 D01 v01r04 and KDB 865664 D02 v01r02 and KDB 616217 D04 v01r02 and 248227 D01 802 11 Wi-Fi SAR v02r02.

The objective is to determine compliance with FCC Part 2.1093 of the Federal Communication Commissions rules.

Maintenance of compliance is the responsibility of the manufacturer. Any modification of the product, which is result in lowering the emission, should be checked to ensure compliance has been maintained.

1.3 Test Methodology

All measurements contained in this report were conducted with KDB 865664 D01 v01r04 and KDB 865664 D02 v01r02. The public notice KDB 447498 D01 v06 for Mobile and Portable Devices RF Exposure Procedure also.

1.4 Test Facility

Address of the test laboratory
Laboratory: Waltek Testing Group (Shenzhen) Co., Ltd.
Address: 1/F., Room 101, Building 1, Hongwei Industrial Park, Liuxian 2nd Road, Block 70 Bao'an District, Shenzhen, Guangdong, China

FCC – Registration No.: 125990
Waltek Testing Group (Shenzhen) Co., Ltd. EMC Laboratory 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. The Designation Number is CN5010.Test Firm Registration Number is 125990.

Industry Canada (IC) Registration No.: 11464A
The 3m Semi-anechoic chamber of Waltek Testing Group (Shenzhen) Co., Ltd. has been registered by Certifi cation and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 11464A and the CAB identifier is CN0057.

2. Summary of Test Results

The maximum results of Specific Absorption Rate (SAR) have found during testing are as follows:

Frequency Band	Body (0mm Gap) Maximum SAR_{1g} (W/kg)	SAR_{1g} Limit (W/kg)
WLAN 5GHz_ANT1	0.750	1.6
WLAN 5GHz_ANT2	**0.933**	1.6
WLAN 2.4GHz_ANT1	0.236	1.6
WLAN 2.4GHz_ANT2	0.175	1.6
Simultaneous Transmission	**1.404**	1.6

The 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 2.1093 and IEEE Std C95.1: 2019, and had been tested in accordance with the measurement methods and procedure specified in KDB 865664 D01 v01r04, KDB 865664 D02 v01r02 and IEC/IEEE 62209-1528:2020.

3. Specific Absorption Rate (SAR)

3.1 Introduction

SAR is related to the rate at which energy is absorbed per unit mass in an object exposed to a radio field. The SAR distribution in a biological body is complicated and is usually carried out by experimental techniques or numerical modeling. The standard recommends limits for two tiers of groups, occupational/controlled and general population/uncontrolled, based on a person's awareness and ability to exercise control over his or her exposure. In general, occupational/controlled exposure limits are higher than the limits for general population/uncontrolled.

3.2 SAR Definition

The SAR definition is the time derivative (rate) of the incremental energy (dW) absorbed by (dissipated in) an incremental mass (dm) contained in a volume element (dv) of a given density (ρ). The equation description is as below:

$$\mathbf{SAR} = \frac{\mathbf{d}}{\mathbf{dt}}\left(\frac{\mathbf{dW}}{\mathbf{dm}}\right) = \frac{\mathbf{d}}{\mathbf{dt}}\left(\frac{\mathbf{dW}}{\boldsymbol{\rho}\mathbf{dv}}\right)$$

SAR is expressed in units of Watts per kilogram (W/kg)
SAR measurement can be either related to the temperature elevation in tissue by

$$\mathbf{SAR} = \mathbf{C}\left(\frac{\boldsymbol{\delta}\mathbf{T}}{\boldsymbol{\delta}\mathbf{t}}\right)$$

Where: C is the specific heat capacity, δ T is the temperature rise and δ t is the exposure duration, or related to the
electrical field in the tissue by

$$\mathbf{SAR} = \frac{\boldsymbol{\sigma}|\mathbf{E}|^2}{\boldsymbol{\rho}}$$

Where: σ is the conductivity of the tissue, ρ is the mass density of the tissue and E is the RMS electrical field strength.

However for evaluating SAR of low power transmitter, electrical field measurement is typically applied.

4. SAR Measurement System

4.1 The Measurement System

Comosar is a system that is able to determine the SAR distribution inside a phantom of human being according to different standards. The Comosar system consists of the following items:
- Main computer to control all the system
- 6 axis robot
- Data acquisition system
- Miniature E-field probe
- Phone holder
- Head simulating tissue

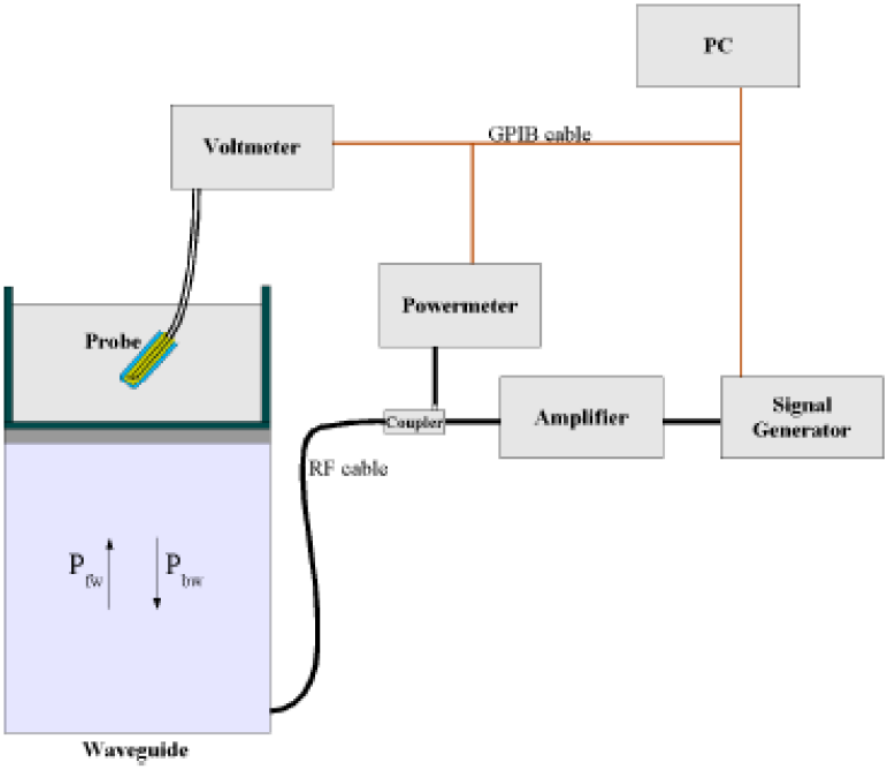
The following figure shows the system.

The EUT under test operating at the maximum power level is placed in the phone holder, under the phantom, which is filled with head simulating liquid. The E-Field probe measures the electric field inside the phantom. The OpenSAR software computes the results to give a SAR value in a 1g or 10g mass.

4.2 Probe

For the measurements the Specific Dosimetric E-Field Probe SSE2 0725-EPGO-446, and refer to the calibration report for probe parameters.

Probe calibration is realized, in compliance with IEC/IEEE 62209-1528:2020, with CALISAR, Antenna proprietary calibration system. The calibration is performed with the IEC/IEEE 62209-1528:2020 annexes technique using reference guide at the five frequencies.



$$SAR = \frac{4\left(P_{fw} - P_{bw}\right)}{ab\delta} \cos^2\left(\pi \frac{y}{a}\right) e^{-(2z/\delta)}$$

Where :

Pfw = Forward Power

Pbw = Backward Power

a and b =Waveguide dimensions

I = Skin depth

Keithley configuration:

Rate = Medium; Filter = ON; RDGS = 10; Filter type = Moving Average; Range auto after each calibration, a SAR measurement is performed on a validation dipole and compared with a NPL calibrated probe, to verify it.

The calibration factors, CF(N), for the 3 sensors corresponding to dipole 1, dipole 2 and dipole 3 are:

CF(N)=SAR(N)/Vlin(N) (N=1,2,3)

The linearised output voltage Vlin(N) is obtained from the displayed output voltage V(N) using

Vlin(N)=V(N)*(1+V(N)/DCP(N)) (N=1,2,3)

where DCP is the diode compression point in mV.

4.3 Probe Calibration Process

Dosimetric Assessment Procedure

Each E-Probe/Probe Amplifier combination has unique calibration parameters. SATIMO Probe calibration procedure is conducted to determine the proper amplifier settings to enter in the probe parameters. The amplifier settings are determined for a given frequency by subjecting the probe to a known E-field density (1 mW/cm2) using an with CALISAR, Antenna proprietary calibration system.

Free Space Assessment Procedure

The free space E-field from amplified probe outputs is determined in a test chamber. This calibration can be performed in a TEM cell if the frequency is below 1 GHz and in a waveguide or other methodologies above 1 GHz for free space. For the free space calibration, the probe is placed in the volumetric center of the cavity and at the proper orientation with the field. The probe is rotated 360 degrees until the three channels show the maximum reading. The power density readings equates to 1mW/cm2.

Temperature Assessment Procedure

E-field temperature correlation calibration is performed in a flat phantom filled with the appropriate simulated head tissue. The E-field in the medium correlates with the temperature rise in the dielectric medium. For temperature correlation calibration a RF transparent thermistor-based temperature probe is used in conjunction with the E-field probe.

$$SAR = C\frac{\Delta T}{\Delta t}$$

Where:

Δt = exposure time (30 seconds),

C = heat capacity of tissue (brain or muscle),

ΔT = temperature increase due to RF exposure.

SAR is proportional to ΔT/Δt, the initial rate of tissue heating, before thermal diffusion takes place. The electric field in the simulated tissue can be used to estimate SAR by equating the thermally derived SAR to that with the E- field component.

$$SAR = \frac{|E|^2 \cdot \sigma}{\rho}$$

Where:

σ = simulated tissue conductivity,

ρ = Tissue density (1.25 g/cm3 for brain tissue)

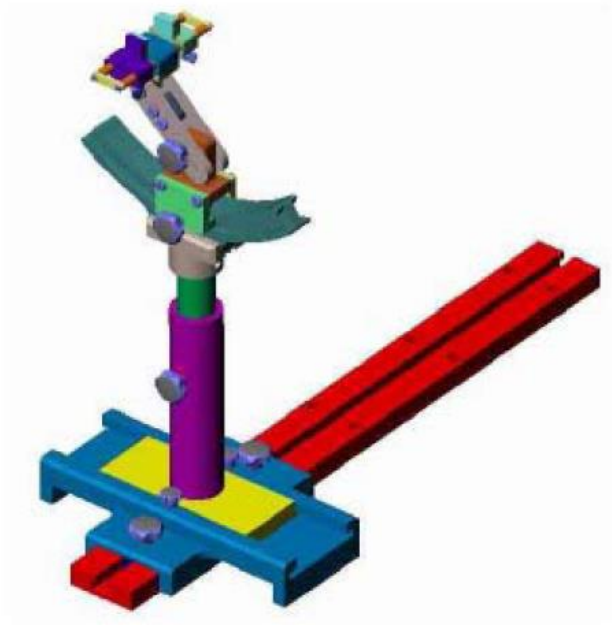
4.4 Phantom

For the measurements the Specific Anthropomorphic Mannequin (SAM) 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. It enables the dosimetric evaluation of left and right phone usage and includes an additional flat phantom part for the simplified performance check. The phantom set-up includes a

cover, which prevents the evaporation of the liquid.

4.5 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°.



System Material	Permittivity	Loss Tangent
Delrin	3.7	0.005

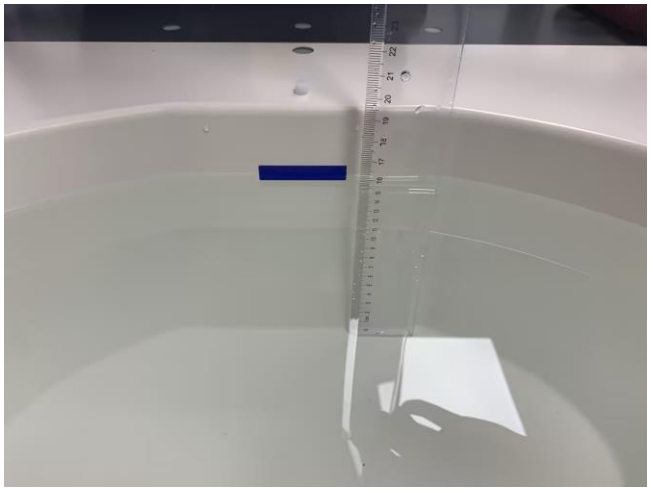
4.6 Test Equipment List

Fixed asset Number	Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
WTXE1105A1002	E-Field Probe	MVG	SSE2	0725-EPGO-446	2025-02-12	2026-02-11
WTXE1053A1001-007	2450MHz Dipole	MVG	SID2450	SN 13/15 DIP 2G450-364	2023-08-20	2026-08-19
WTXE1035A1009	5 GHz Dipole	MVG	SID5000	SN 02/21 DIP 5G000-543	2024-07-11	2027-07-10
WTXE1053A1001-010	Dielectric Probe	SATIMO	SCLMP	SN 47/12 OCPG49	2025-02-23	2026-02-22
WTXE1075A1003	Power meter	Keithley	3500	1232959	2025-02-23	2026-02-22
WTXE1075A1002	Power meter	Keithley	3500	1162591	2025-02-23	2026-02-22
WTXE1104A1003	EXG Analog Signal Generator	KEYSIGHT	N5173B	MY61252892	2025-02-23	2026-02-22
WTXE1022A1002	GSM Tester	Rohde & Schwarz	CMU200	114403	2025-02-23	2026-02-22
WTXE1041A1002	Communications Tester	Rohde & Schwarz	CMW500	148650	2025-02-23	2026-02-22
WTXE1036A1001	Network Analyzer	Rohde & Schwarz	ZVB 8	101353	2024-10-15	2025-10-14
WTXE1076A1001	Power Divider	HP	11636B	JC-2017-10-002	2025-02-23	2026-02-22
WTXE1103A1001	Attenuator	Pasternack	PE4007-4	/	2025-02-23	2026-02-22
WTXE1103A1002	Attenuator	Pasternack	PE4007-4	/	2025-02-23	2026-02-22
WTXE1103A1003	Attenuator	Pasternack	PE4007-4	/	2025-02-23	2026-02-22

5. Tissue Simulating Liquids

5.1 Composition of Tissue Simulating Liquid

For the measurement of the field distribution inside the SAM phantom with SMTIMO, the phantom must be filled with around 25 liters of homogeneous body tissue simulating liquid. For head SAR testing, the liquid height from the ear reference point (ERP) of the phantom to the liquid top surface is larger than 15 cm. For body SAR testing, the liquid height from the center of the flat phantom to the liquid top surface is larger than 15 cm. Please see the following photos for the liquid height.



Liquid Height for Body SAR

The Composition of Tissue Simulating Liquid

Frequency (MHz)	Water (%)	Salt (%)	1,2-Propane diol (%)	HEC (%)	Preventol (%)	DGBE (%)
Head						
2450	55.0	0.1	0	0	0	44.9
2600	54.9	0.1	0	0	0	45.0

Frequency (MHz)	Water (%)	Hexyl Carbitol (%)	Triton X-100 (%)
Head			
5000-6000	65.52	17.24	17.24

5.2 Tissue Dielectric Parameters for Head and Body Phantoms

According to FCC KDBs, IEC/IEEE 62209-1528:2020 standards state that the system validation measurements must be performed using a reference dipole meeting the fore mentioned return loss and mechanical dimension requirements. The validation measurement must be performed against a liquid filled flat phantom, with the phantom constructed as outlined in the fore mentioned standards. Per the standards, the dipole shall be positioned below the bottom of the phantom, with the dipole length centered and parallel to the longest dimension of the flat phantom, with the top surface of the dipole at the described distance from the bottom surface of the phantom.

Target Frequency (MHz)	**Head**		**Body**	
	Conductivity (σ)	**Permittivity** (ε_r)	**Conductivity** (σ)	**Permittivity** (ε_r)
150	0.76	52.3	0.80	61.9
300	0.87	45.3	0.92	58.2
450	0.87	43.5	0.94	56.7
750	0.89	41.9	0.96	55.5
835	0.90	41.5	0.97	55.2
900	0.97	41.5	1.05	55.0
915	0.98	41.5	1.06	55.0
1450	1.20	40.5	1.30	54.0
1610	1.29	40.3	1.40	53.8
1800-2000	1.40	40.0	1.52	53.3
2100	1.49	39.8	1.62	53.2
2300	1.67	39.5	1.81	52.9
2450	**1.80**	**39.2**	**1.95**	**52.7**
2600	1.96	39.0	2.16	52.5
3000	2.40	38.5	2.73	52.0
5200	**4.66**	**36.0**	**5.30**	**49.0**
5400	4.86	35.8	5.53	48.7
5600	5.07	35.5	5.77	48.5
5800	**5.27**	**35.3**	**6.00**	**48.2**

5.3 Tissue Calibration Result

The dielectric parameters of the liquids were verified prior to the SAR evaluation using COMOSAR Dielectric Probe Kit and an Agilent Network Analyzer.

Calibration Result for Dielectric Parameters of Tissue Simulating Liquid

Head Tissue Simulating Liquid									
Freq. MHz	Temp. (℃)	Conductivity			Permittivity			Limit (%)	Date
		Reading (σ)	Target (σ)	Delta (%)	Reading (ε r)	Target (ε r)	Delta (%)		
2450	22.5	1.82	1.80	1.11	40.45	39.2	3.19	±5	2025-05-21
5200	22.5	4.57	4.66	-1.93	36.96	36.0	2.67	±5	2025-05-22
5800	22.5	5.31	5.27	0.76	35.14	35.3	-0.45	±5	2025-05-22
2412	22.5	1.81	1.80	0.56	40.43	39.2	3.14	±5	2025-05-21
2422	22.5	1.82	1.80	1.11	40.44	39.2	3.16	±5	2025-05-21
2437	22.5	1.82	1.80	1.11	40.44	39.2	3.16	±5	2025-05-21
2452	22.5	1.82	1.80	1.11	40.45	39.2	3.19	±5	2025-05-21
2462	22.5	1.82	1.80	1.11	40.46	39.2	3.21	±5	2025-05-21
5190	22.5	4.57	4.66	-1.93	36.96	36.0	2.67	±5	2025-05-22
5210	22.5	4.57	4.66	-1.93	36.96	36.0	2.67	±5	2025-05-22
5230	22.5	4.57	4.66	-1.93	36.97	36.0	2.69	±5	2025-05-22
5775	22.5	5.31	5.27	0.76	35.13	35.3	-0.48	±5	2025-05-22

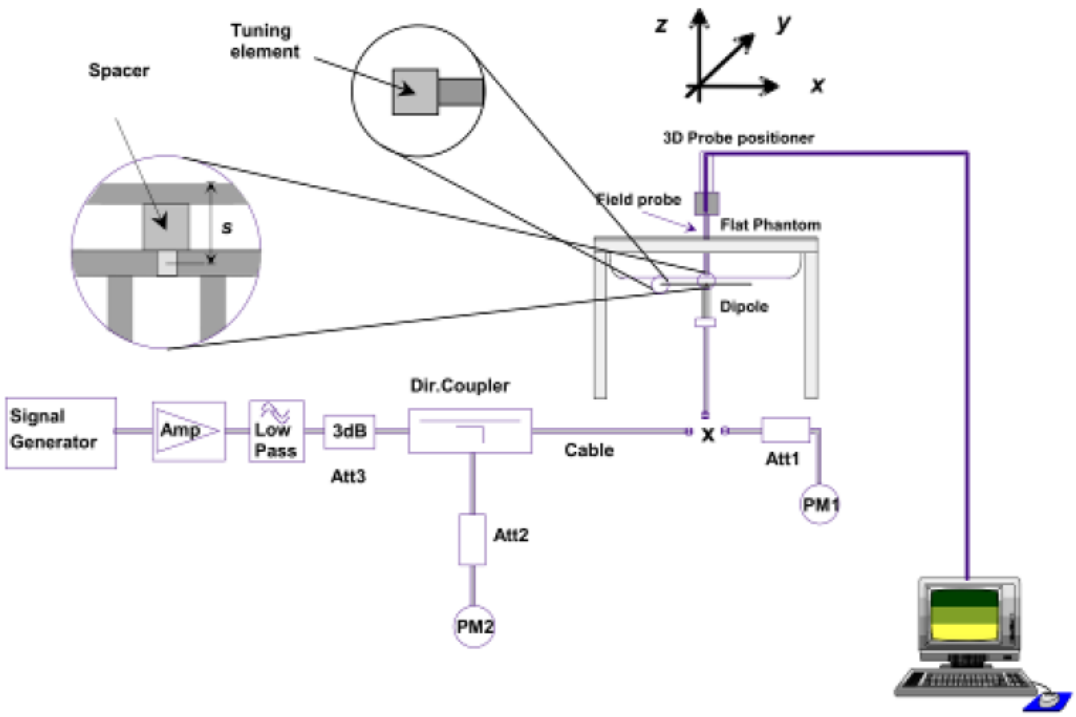
6. SAR Measurement Evaluation

6.1 Purpose of System Performance Check

The system performance check verifies that the system operates within its specifications. System and operator errors can be detected and corrected. It is recommended that the system performance check be performed prior to any usage of the system in order to guarantee reproducible results. The system performance check uses normal SAR measurements in a simplified setup with a well characterized source. This setup was selected to give a high sensitivity to all parameters that might fail or vary over time. The system check does not intend to replace the calibration of the components, but indicates situations where the system uncertainty is exceeded due to drift or failure.

6.2 System Setup

In the simplified setup for system evaluation, the EUT is replaced by a calibrated dipole and the power source is replaced by a continuous wave which comes from a signal generator at frequency 2450MHz and 5000MHz. The calibrated dipole must be placed beneath the flat phantom section of the SAM twin phantom with the correct distance holder. The distance holder should touch the phantom surface with a light pressure at the reference marking and be oriented parallel to the long side of the phantom.



System Verification Setup Block Diagram

Setup Photo of Dipole Antenna

The output power on dipole port must be calibrated to 24 dBm(250 mW) before dipole is connected.

6.3 Validation Results

Comparing to the original SAR value provided by SATIMO, the validation data should be within its specification of 10 %. Table 6.1 shows the target SAR and measured SAR after normalized to 1W input power. The table below indicates the system performance check can meet the variation criterion.

Frequency	Power	Targeted SAR_{1g}	Measured SAR_{1g}	Normalized SAR_{1g}	Tolerance	Date
MHz	(mw)	(W/kg)	(W/kg)	(W/kg)	(%)	
Head						
2450	250	53.76	13.747	54.988	2.28	2025-05-21
5200	250	75.31	18.979	75.916	0.80	2025-05-22
5800	250	78.05	19.008	76.032	-2.59	2025-05-22

Targeted and Measurement SAR

Please refer to Annex A for the plots of system performance check.

7. EUT Testing Position

7.1 Body Position

(a) To position the device parallel to the phantom surface with each side.
(b) To adjust the device parallel to the flat phantom.
(c) To adjust the distance between the device surface and the flat phantom to 0mm.

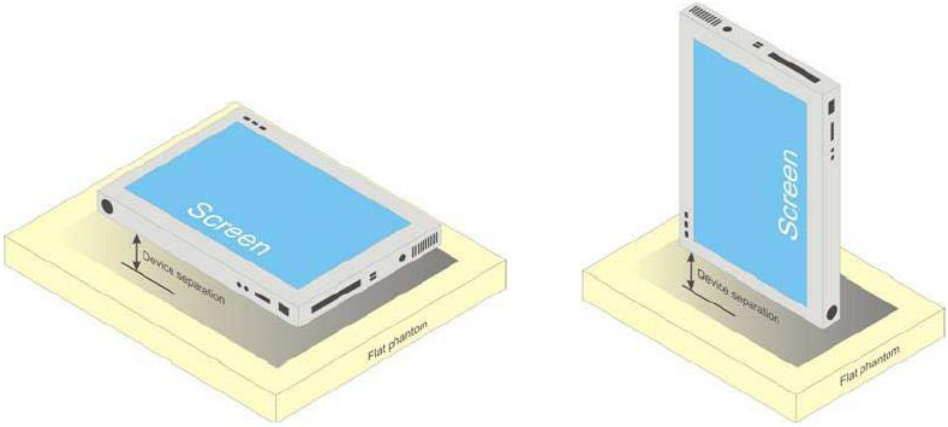
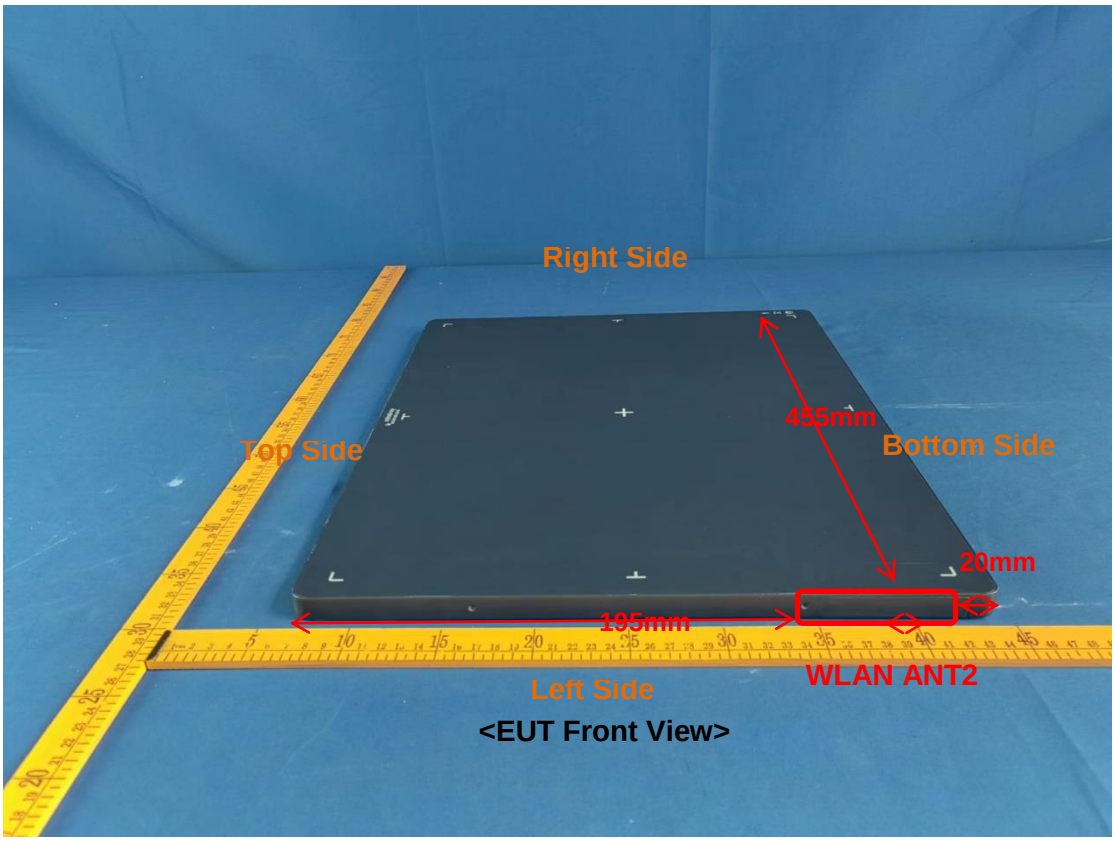


Illustration for Body Position

7.2 EUT Antenna Position



<EUT Front View>

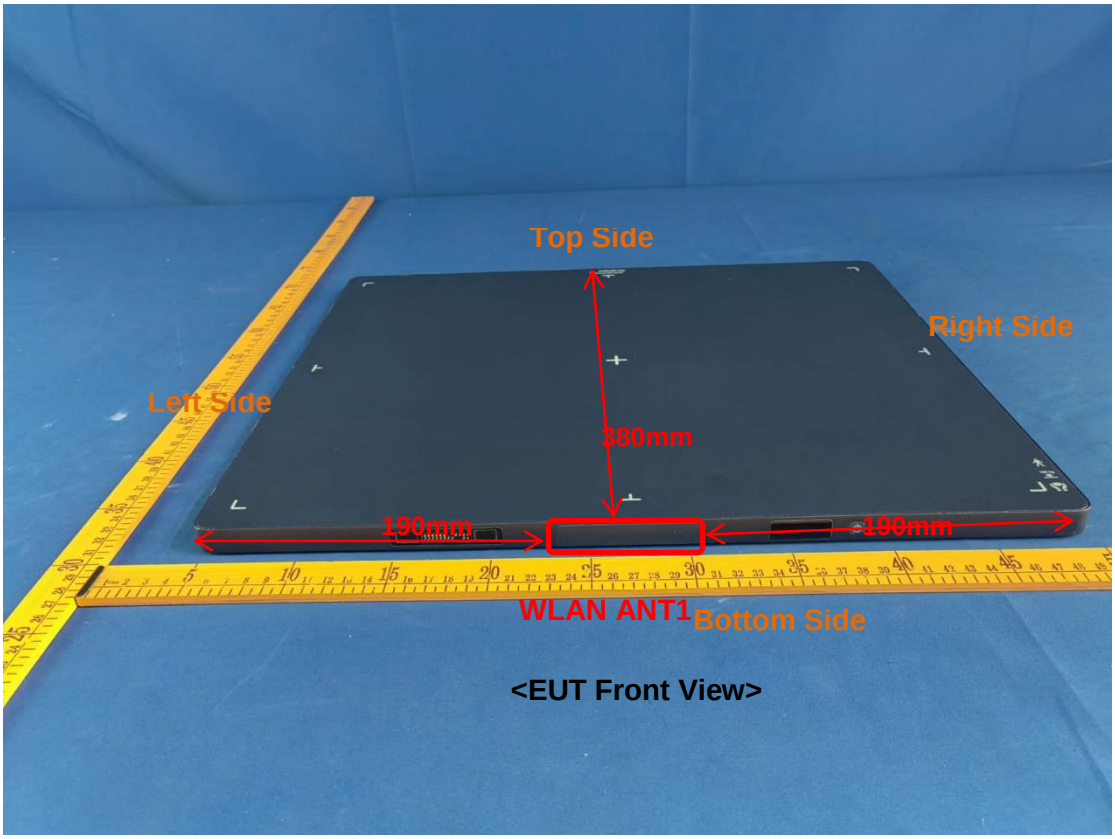


Fig 7.1 Block Diagram for EUT Antenna Position

EUT Size: Long*Width =455mm*380mm

Distance of EUT antenna-to-edge/surface(mm),						
Antennas	**Front**	**Back**	**Right Side**	**Left Side**	**Top Side**	**Bottom Side**
WLAN ANT1	<25	<25	190	190	380	<25
WLAN ANT2	<25	<25	455	<25	195	<25

7.3 EUT Testing Position

Body mode SAR assessments are required for this device. This EUT was tested in different positions for different SAR test modes, more information as below:

Body SAR tests, Test distance: 0mm						
Antennas	**Front**	**Back**	**Right Side**	**Left Side**	**Top Side**	**Bottom Side**
WLAN ANT1	Yes	Yes	No	No	No	Yes
WLAN ANT2	Yes	No	No	Yes	No	Yes

Remark:

1. Referring to KDB 447498 D01 v06, this device is tested in direct contact (no gap) with flat phantom. SAR must be measured for all sides and surfaces with a transmitting antenna located within 25mm from that surface or edge.

Please refer to Annex D for the EUT test setup photos.

8. SAR Measurement Procedures

8.1 Measurement Procedures

The measurement procedures are as follows:
(a) Use base station simulator (if applicable) or engineering software to transmit RF power continuously (continuous Tx) in the highest power channel.
(b) Keep EUT to radiate maximum output power or 100% factor (if applicable)
(c) Measure output power through RF cable and power meter.
(d) Place the EUT in the positions as Annex D demonstrates.
(e) Set scan area, grid size and other setting on the SATIMO software.
(f) Measure SAR results for the highest power channel on each testing position.
(g) Find out the largest SAR result on these testing positions of each band
(h) Measure SAR results for other channels in worst SAR testing position if the 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

8.2 Spatial Peak SAR Evaluation

The procedure for spatial peak SAR evaluation has been implemented according to the test standard. It can be conducted for 1g and 10g, as well as for user-specific masses. The SATIMO software includes all numerical procedures necessary to evaluate the spatial peak SAR value.
The base for the evaluation is a "cube" measurement. The measured volume must include the 1g and 10g cubes with the highest averaged SAR values. For that purpose, the center of the measured volume is aligned to the interpolated peak SAR value of a previously performed area scan.
The entire evaluation of the spatial peak values is performed within the post-processing engine. The system always gives the maximum values for the 1g and 10g cubes. The algorithm to find the cube with highest averaged SAR is divided into the following stages:
(a) Extraction of the measured data (grid and values) from the Zoom Scan
(b) Calculation of the SAR value at every measurement point based on all stored data
(c) Generation of a high-resolution mesh within the measured volume
(d) Interpolation of all measured values form the measurement grid to the high-resolution grid
(e) Extrapolation of the entire 3D field distribution to the phantom surface over the distance from sensor to surface
(f) Calculation of the averaged SAR within masses of 1g and 10g

8.3 Area & Zoom Scan Procedures

First Area Scan is used to locate the approximate location(s) of the local peak SAR value(s). The measurement grid within an Area Scan is defined by the grid extent, grid step size and grid offset. Next, in order to determine the EM field distribution in a three-dimensional spatial extension, Zoom Scan is required. The Zoom Scan measures 5x5x7 points with step size 8, 8 and 5 mm for 300 MHz to 3 GHz, and 8x8x8 points with step size 4, 4 and 2.5 mm for 3 GHz to 6 GHz. The Zoom Scan is performed around the highest E-field value to determine the averaged SAR-distribution over 10 g.

8.4 Volume Scan Procedures

The volume scan is used for assess overlapping SAR distributions for antennas transmitting in different frequency bands. It is equivalent to an oversized zoom scan used in standalone measurements. The measurement volume will be used to enclose all the simultaneous transmitting antennas. For antennas transmitting simultaneously in different frequency bands, the volume scan is measured separately in each frequency band. In order to sum correctly to compute the 1g aggregate SAR, the EUT remain in the same test position for all measurements and all volume scan use the same spatial resolution and grid spacing (step-size is 4, 4 and 2.5 mm). When all volume scan were completed, the software can combine and subsequently superpose these measurement data to calculating the multiband SAR.

8.5 SAR Averaged Methods

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 minimize 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 1mm 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 10g and 1 g requires a very fine resolution in the three dimensional scanned data array.

8.6 Power Drift Monitoring

All SAR testing is under the EUT install full charged battery and transmit maximum output power. In SATIMO 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 dB. If the power drift more than 5%, the SAR will be retested.

9. SAR Test Result

9.1 Conducted RF Output Power

2.4GHz_Ant 1

Operation mode	Channel Frequency (MHz)	Measurements (dBm)	Duty Cycle Factor (dB)	Conducted Output Power (dBm)	Limit
TX 11b	Low-2412	10.96	0.08	11.04	1W/30dBm
	Middle-2437	10.90		10.98	1W/30dBm
	High-2462	10.71		10.79	1W/30dBm
TX 11g	Low-2412	12.15	0.20	12.35	1W/30dBm
	Middle-2437	12.25		12.45	1W/30dBm
	High-2462	11.97		12.17	1W/30dBm
TX 11n HT20	Low-2412	12.91	0.18	13.09	1W/30dBm
	Middle-2437	12.85		13.03	1W/30dBm
	High-2462	12.72		12.90	1W/30dBm
TX 11n HT40	Low-2422	12.94	0.31	**13.25**	1W/30dBm
	Middle-2437	12.85		13.16	1W/30dBm
	High-2452	12.75		13.06	1W/30dBm

2.4GHz_Ant 2

Operation mode	Channel Frequency (MHz)	Measurements (dBm)	Duty Cycle Factor (dB)	Conducted Output Power (dBm)	Limit
TX 11b	Low-2412	10.85	0.08	10.93	1W/30dBm
	Middle-2437	10.86		10.94	1W/30dBm
	High-2462	10.65		10.73	1W/30dBm
TX 11g	Low-2412	12.01	0.20	12.21	1W/30dBm
	Middle-2437	12.17		12.37	1W/30dBm
	High-2462	11.93		12.13	1W/30dBm
TX 11n HT20	Low-2412	12.89	0.18	13.07	1W/30dBm
	Middle-2437	12.87		13.05	1W/30dBm
	High-2462	12.72		12.90	1W/30dBm
TX 11n HT40	Low-2422	12.95	0.31	**13.26**	1W/30dBm
	Middle-2437	12.78		13.09	1W/30dBm
	High-2452	12.75		13.06	1W/30dBm

Band	Operation mode	Channel	Duty Cycle Factor (dB)	Conducted Output Power (dBm)			
				Ant. 1	Ant. 2	SUM	Limit
U-NII-1	802.11a	Low	0.96	12.57	12.63	/	30dBm
		Middle		12.71	12.64	/	30dBm
		High		12.99	12.83	/	30dBm
	802.11n(HT20)	Low	0.96	12.09	12.35	15.23	30dBm
		Middle		12.48	12.41	15.46	30dBm
		High		12.89	12.75	15.83	30dBm
	802.11ac(VHT20)	Low	0.89	12.22	12.14	15.19	30dBm
		Middle		12.38	12.31	15.36	30dBm
		High		12.98	12.56	15.79	30dBm
	802.11n(HT40)	Low	0.96	12.45	12.59	15.53	30dBm
		High		12.95	12.95	**15.96**	30dBm
	802.11ac(VHT40)	Low	0.89	12.56	12.65	15.62	30dBm
		High		12.76	**13.08**	15.93	30dBm
	802.11ac(VHT80)	Middle	0.79	**13.07**	12.53	15.82	30dBm

Band	Operation mode	Channel	Duty Cycle Factor (dB)	Conducted Output Power (dBm)			
				Ant. 1	Ant. 2	SUM	Limit
U-NII-3	802.11a	Low	0.97	12.76	12.51	/	30dBm
		Middle		12.76	13.02	/	30dBm
		High		12.12	12.04	/	30dBm
	802.11n(HT20)	Low	0.97	13.01	12.93	15.98	30dBm
		Middle		12.57	12.43	15.51	30dBm
		High		11.96	11.81	14.90	30dBm
	802.11ac(VHT20)	Low	0.94	12.87	12.80	15.85	30dBm
		Middle		12.68	12.16	15.44	30dBm
		High		12.01	12.19	15.11	30dBm
	802.11n(HT40)	Low	0.97	13.26	13.10	16.19	30dBm
		High		12.68	12.70	15.70	30dBm
	802.11ac(VHT40)	Low	0.93	13.18	13.18	16.19	30dBm
		High		12.68	12.79	15.75	30dBm
	802.11ac(VHT80)	Middle	0.88	**13.80**	**14.05**	**16.94**	30dBm

Remark:

1. The WIFI Output power are provided by Waltek Testing Group Co., Ltd. Dongguan Branch.

2. Per KDB 248227 D01 v02r02, For 802.11b DSSS SAR measurements, DSSS SAR procedure applies to fixed exposure test position and initial test position procedure applies to multiple exposure test positions.

3. Per KDB 248227 D01 v02r02, For 802.11b DSSS SAR measurements ,when the reported SAR of the highest measured maximum output power channel (see 3.1) for the exposure configuration is ≤ 0.8 W/kg, no further SAR testing is required for 802.11b DSSS in that exposure configuration. When the reported SAR is > 0.8 W/kg, SAR is required for that exposure configuration using the next highest measured output power channel. When any reported SAR is > 1.2 W/kg, SAR is required for the third channel; i.e., all channels require testing.

3 .For OFDM modes (802.11g/n), SAR is not required when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and it is <= 1.2W/kg.

9.2 Test Results for Standalone SAR Test

Body SAR

WLAN 2.4GHz_ANT1–Body SAR Test (Gap: 0mm)									
Plot No.	Mode	Test Position	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
	802.11b	Back Face	01	2412	11.04	11.5	1.112	0.155	0.172
	802.11b	Front Face	01	2412	11.04	11.5	1.112	0.091	0.101
1.	802.11b	Bottom Side	01	2412	11.04	11.5	1.112	0.212	**0.236**
	802.11b	Bottom Side	06	2437	10.98	11.5	1.127	0.199	0.224
	802.11b	Bottom Side	11	2462	10.79	11.5	1.178	0.188	0.221
	802.11n-HT40	Back Face	03	2422	13.25	13.5	1.059	0.141	0.149
	802.11n-HT40	Front Face	03	2422	13.25	13.5	1.059	0.085	0.090
	802.11n-HT40	Bottom Side	03	2422	13.25	13.5	1.059	0.171	0.181
	802.11n-HT40	Bottom Side	06	2437	13.16	13.5	1.081	0.166	0.180
	802.11n-HT40	Bottom Side	09	2452	13.06	13.5	1.107	0.159	0.176

U-NII-1_ANT1–Body SAR Test(0mm)									
Plot No.	Mode	Test Position	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
	802.11ac-VHT80	Back Face	42	5210	13.07	13.5	1.104	0.504	0.556
	802.11ac-VHT80	Front Face	42	5210	13.07	13.5	1.104	0.268	0.296
2.	802.11ac-VHT80	Bottom Side	42	5210	13.07	13.5	1.104	0.616	**0.680**

U-NII-3_ANT1–Body SAR Test(0mm)									
Plot No.	Mode	Test Position	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
	802.11ac-VHT80	Back Face	155	5775	13.80	14.0	1.047	0.586	0.614
	802.11ac-VHT80	Front Face	155	5775	13.80	14.0	1.047	0.292	0.306
3.	802.11ac-VHT80	Bottom Side	155	5775	13.80	14.0	1.047	0.716	**0.750**

WLAN 2.4GHz_ANT2–Body SAR Test (Gap: 0mm)									
Plot No.	Mode	Test Position	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
	802.11b	Back Face	06	2437	10.94	11.0	1.014	0.142	0.144
	802.11b	Front Face	06	2437	10.94	11.0	1.014	0.073	0.074
4.	802.11b	Left Side	06	2437	10.94	11.0	1.014	0.173	**0.175**
	802.11b	Bottom Side	06	2437	10.94	11.0	1.014	0.056	0.057
	802.11b	Left Side	01	2412	10.93	11.0	1.016	0.157	0.160
	802.11b	Left Side	11	2462	10.73	11.0	1.064	0.162	0.172
	802.11n-HT40	Back Face	03	2422	13.26	13.5	1.057	0.121	0.128
	802.11n-HT40	Front Face	03	2422	13.26	13.5	1.057	0.068	0.072
	802.11n-HT40	Left Side	03	2422	13.26	13.5	1.057	0.155	0.164
	802.11n-HT40	Bottom Side	03	2422	13.26	13.5	1.057	0.052	0.055
	802.11n-HT40	Left Side	06	2437	13.09	13.5	1.099	0.147	0.162
	802.11n-HT40	Left Side	09	2452	13.06	13.5	1.107	0.132	0.146

U-NII-1_ANT2–Body SAR Test(0mm)									
Plot No.	Mode	Test Position	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
	802.11ac-VHT40	Back Face	46	5230	13.08	13.5	1.102	0.586	0.646
	802.11ac-VHT40	Front Face	46	5230	13.08	13.5	1.102	0.223	0.246
5.	802.11ac-VHT40	Left Side	46	5230	13.08	13.5	1.102	0.748	**0.824**
	802.11ac-VHT40	Bottom Side	46	5230	13.08	13.5	1.102	0.174	0.192
	802.11ac-VHT40	Left Side	38	5190	12.65	13.5	1.216	0.664	0.807

U-NII-3_ANT2–Body SAR Test(0mm)									
Plot No.	Mode	Test Position	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
	802.11ac-VHT80	Back Face	155	5775	14.05	14.5	1.109	0.712	0.790
	802.11ac-VHT80	Front Face	155	5775	14.05	14.5	1.109	0.245	0.272
6.	802.11ac-VHT80	Left Side	155	5775	14.05	14.5	1.109	0.841	**0.933**
	802.11ac-VHT80	Bottom Side	155	5775	14.05	14.5	1.109	0.198	0.220

Repeated SAR

U-NII-3_ANT2–Body SAR Test(0mm)							
Mode	Test Position	Frequency	SAR1g (W/kg)	Repeated SAR		Ratio	
		MHz		1	2	1	2
802.11ac-VHT80	Left Side	5775	0.841	0.829	/	1.014	/

Remark:

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.

9.3 Simultaneous Multi-band Transmission SAR Analysis

List of Mode for Simultaneous Multi-band Transmission

No.	Configurations	Body SAR
1	**WLAN(2.4GHz/5GHz)(Data)ANT1 + WLAN(2.4GHz/5GHz)(Data) ANT2**	Yes

Remark:

1. According to the KDB 447498 D01 v06, 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 ≤ 50 mm;

where x = 7.5 for 1-g SAR, and x = 18.75 for 10-g SAR.

2. The maximum SAR summation is calculated based on the same configuration and test position.

Body SAR

	WLAN(2.4GHz) ANT 1	**WLAN(2.4GHz) ANT 2**	**Summed SAR (W/kg)**
Position	**Scaled SAR (W/kg)**	**Scaled SAR (W/kg)**	
Back	0.172	0.144	**0.316**
Front	0.101	0.074	0.175
Right side	--	--	--
Left side	--	**0.175**	0.175
Top side	--	--	--
Bottom side	**0.236**	0.057	0.293

	WLAN(2.4GHz) ANT 1	**WLAN(5GHz) ANT 2**	**Summed SAR (W/kg)**
Position	**Scaled SAR (W/kg)**	**Scaled SAR (W/kg)**	
Back	0.172	0.790	**0.962**
Front	0.101	0.272	0.373
Right side	--	--	--
Left side	--	**0.933**	0.933
Top side	--	--	--
Bottom side	**0.236**	0.220	0.456

	WLAN(5GHz) ANT 1	WLAN(2.4GHz) ANT 2	Summed SAR (W/kg)
Position	**Scaled SAR (W/kg)**	**Scaled SAR (W/kg)**	
Back	0.614	0.144	0.758
Front	0.306	0.074	0.380
Right side	--	--	--
Left side	--	**0.175**	0.175
Top side	--	--	--
Bottom side	**0.750**	0.057	**0.807**

	WLAN(5GHz) ANT 1	WLAN(5GHz) ANT 2	Summed SAR (W/kg)
Position	**Scaled SAR (W/kg)**	**Scaled SAR (W/kg)**	
Back	0.614	0.790	**1.404**
Front	0.306	0.272	0.578
Right side	--	--	--
Left side	--	**0.933**	0.933
Top side	--	--	--
Bottom side	**0.750**	0.220	0.970

10. Measurement Uncertainty

10.1 Uncertainty for SAR Test

Input quantity X_i (source of uncertainty)	Ref.	Prob. Dist PDF_i	Unc. $a(x_i)$	Div. q_i	$u(x_i) = a(x_i)/q_i$	c_i (1 g; 10 g)	$u(y) = c_i \cdot u(x_i)$	v_i or v_{eff}
Measurement System errors								
Probe calibration	8.4.1.1	N	7.00	2	3.5	1	3.5	∝
Probe calibration drift	8.4.1.2	R	0	√3	0	1	0	∝
Probe linearity and detection limit	8.4.1.3	R	5.00	√3	2.89	1	2.89	∝
Broadband signal	8.4.1.4	R	0	√3	0	1	0	∝
Probe isotropy	8.4.1.5	R	2.50	√3	1.44	1	1.44	∝
Other probe and data acquisition errors	8.4.1.6	N	0.02	1	0.02	1	0.02	∝
RF ambient and noise	8.4.1.7	N	0	1	0	1	0	∝
Probe positioning errors	8.4.1.8	N	1.40	1	1.40	2/™	0.70	
Data processing errors	8.4.1.9	N	0.05	1	0.05	1	0.05	∝
Phantom and device (DUT or validation antenna) errors								
Measurement of phantom conductivity(σ)	8.4.2.1	N	4.00	1	4.00	c_ε, c_σ	4.00	∝
Temperature effects (medium)	8.4.2.2	R	2.50	√3	1.44	c_ε, c_σ	1.44	∝
Shell permittivity	8.4.2.3	R	5.00	√3	2.88	See 8.4.2.3	2.88	∝
Distance between the radiating element of the DUT and the phantom medium	8.4.2.4	N	0.03	1	0.03	2	0.02	∝
Repeatability of positioning the DUT or source against the phantom	8.4.2.5	N	0.05	1	0.05	1	0.05	5
Device holder effects	8.4.2.6	N	5.00	1	5.00	1	5.00	
Effect of operating mode on probe sensitivity	8.4.2.7	R	0	√3	0	1	0	∝
Time-average SAR	8.4.2.8	R	0	√3	0	1	0	∝
Variation in SAR due to drift in output of DUT	8.4.2.9	N	5.00	1	5.00	1	5.00	
Validation antenna uncertainty (validation measurement only)	8.4.2.10	N	0	1	0	1	0	
Uncertainty in accepted power	8.4.2.11	N	0	1	0	1	0	

(validation measurement only)								
Corrections to the SAR result								
Phantom deviation from target (ε′,σ)	8.4.3.1	N	0.05	1	0.05	1	0.05	
SAR scaling	8.4.3.2	R	2.00	√3	1.15	1	1.15	
Combined Standard Uncertainty		RSS			10.11		10.11	ν_{eff}=
Expanded uncertainty, U		K=2			20.23		20.23	

Annex A. Plots of System Performance Check

MEASUREMENT 1

Type: Validation measurement (Fast, 75.00 %)
Date of measurement: 2025-05-21
Measurement duration: 12 minutes 21 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.45; Calibrated: 2025-02-12

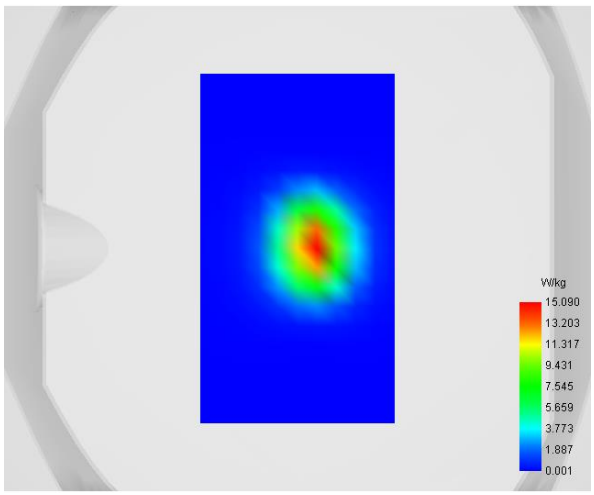
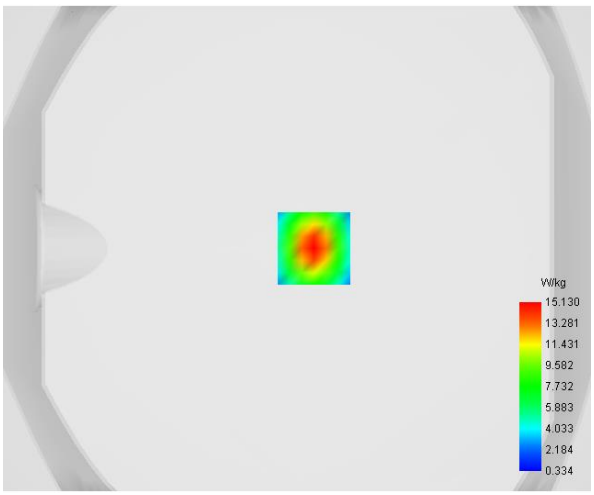
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=5mm dy=5mm dz=4mm
Phantom	Validation plane
Device Position	Dipole
Band	CW2450
Signal	CW (Crest factor: 1.0)

B. SAR Measurement Results

Frequency (MHz)	2450.000000
Relative Permittivity (real part)	40.452895
Conductivity (S/m)	1.821828
Power Variation (%)	-1.458200
Ambient Temperature	22.5
Liquid Temperature	22.5

C. SAR Surface and Volume

SURFACE SAR	VOLUME SAR
	

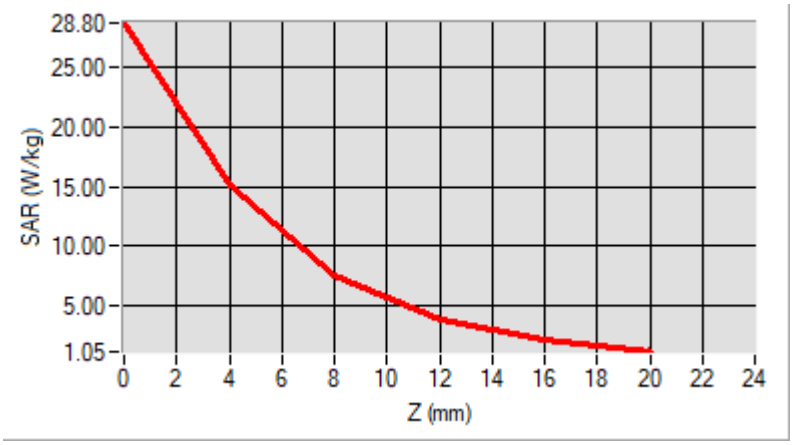
Maximum location: X=7.00, Y=0.00

D. SAR 1g & 10g

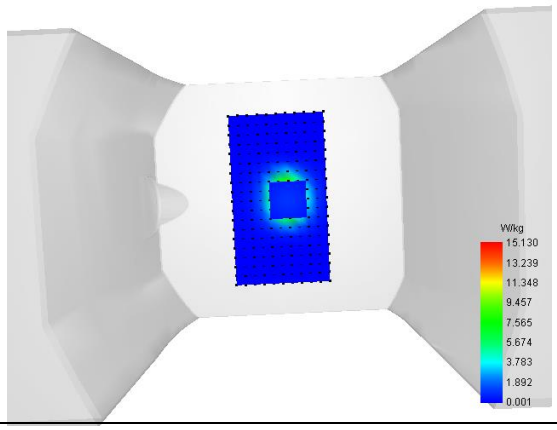
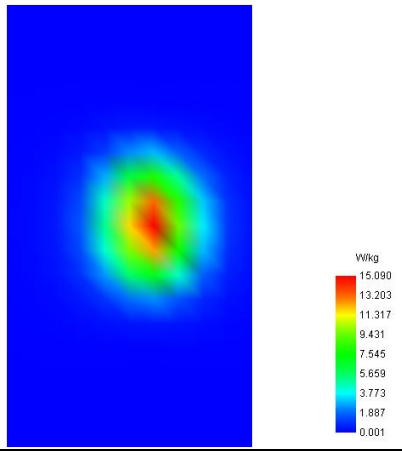
SAR 10g (W/Kg)	**6.149024**
SAR 1g (W/Kg)	**13.746586**

E. Z Axis Scan

Z (mm)	**0.00**	**4.00**	**8.00**	**12.00**	**16.00**
SAR (W/Kg)	**28.7959**	**15.1301**	**7.5430**	**3.7436**	**1.9810**



F. 3D Image

3D screen shot	**Hot spot position**
	

MEASUREMENT 2

Type: Validation measurement (Fast, 75.00 %)
Date of measurement: 2025-05-22
Measurement duration: 12 minutes 21 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.56; Calibrated: 2025-02-12

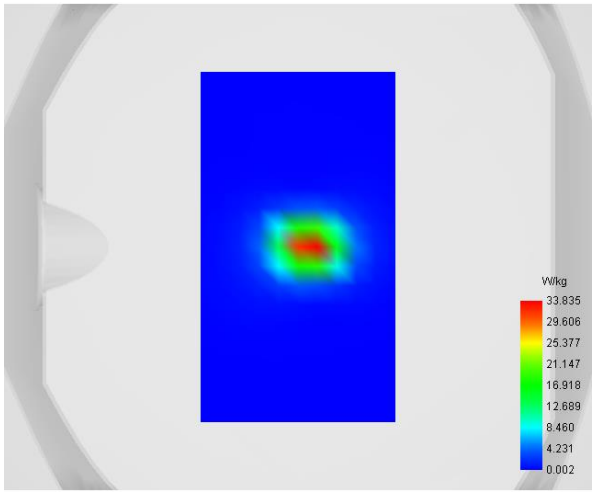
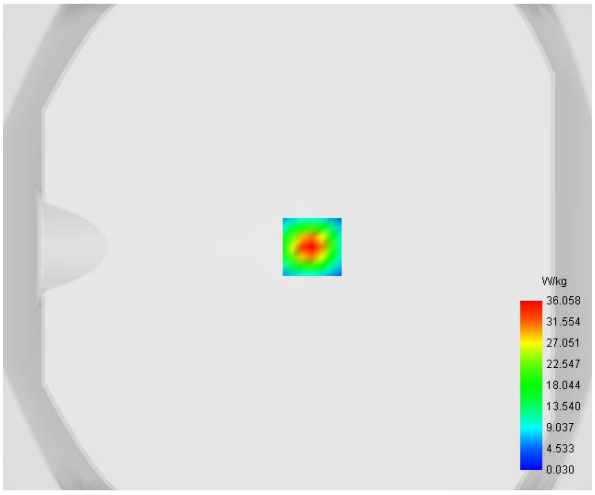
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=4mm dy=4mm dz=2mm
Phantom	Validation plane
Device Position	Dipole
Band	CW5200
Signal	CW (Crest factor: 1.0)

B. SAR Measurement Results

Frequency (MHz)	5200.000000
Relative Permittivity (real part)	36.961547
Conductivity (S/m)	4.574561
Power Variation (%)	2.511400
Ambient Temperature	22.5
Liquid Temperature	22.5

C. SAR Surface and Volume

SURFACE SAR	VOLUME SAR
	

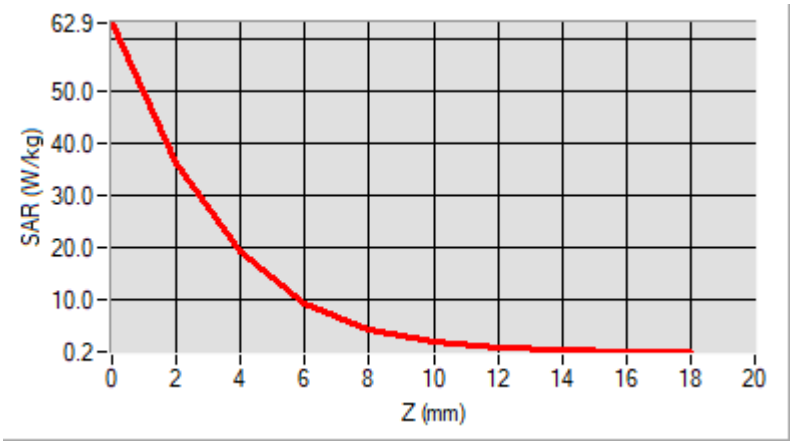
Maximum location: X=6.00, Y=0.00

D. SAR 1g & 10g

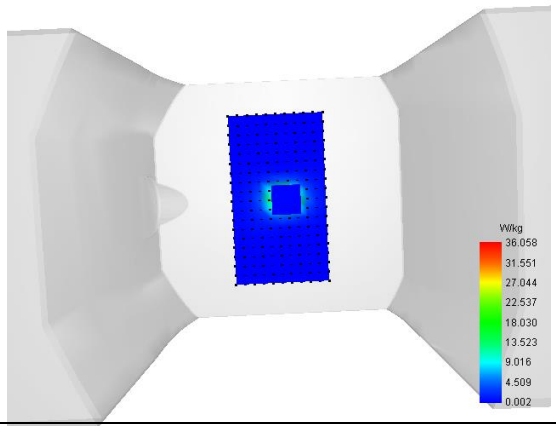
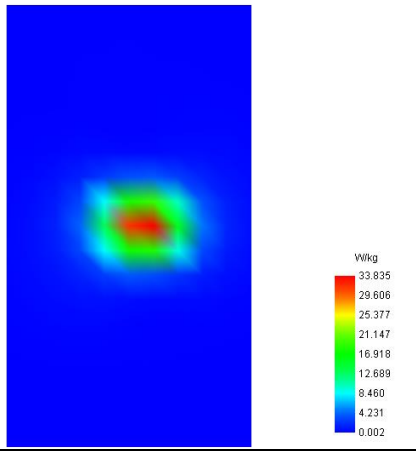
SAR 10g (W/Kg)	**5.463589**
SAR 1g (W/Kg)	**18.979345**

E. Z Axis Scan

Z (mm)	**0.00**	**2.00**	**4.00**	**6.00**	**8.00**	**10.00**	**12.00**	**14.00**	**16.00**
SAR (W/Kg)	**62.9456**	**36.0579**	**19.1617**	**9.4529**	**4.4747**	**2.0809**	**0.9976**	**0.5283**	**0.3243**



F. 3D Image

3D screen shot	**Hot spot position**
	

MEASUREMENT 3

Type: Validation measurement (Fast, 75.00 %)
Date of measurement: 2025-05-22
Measurement duration: 12 minutes 21 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.58; Calibrated: 2025-02-12

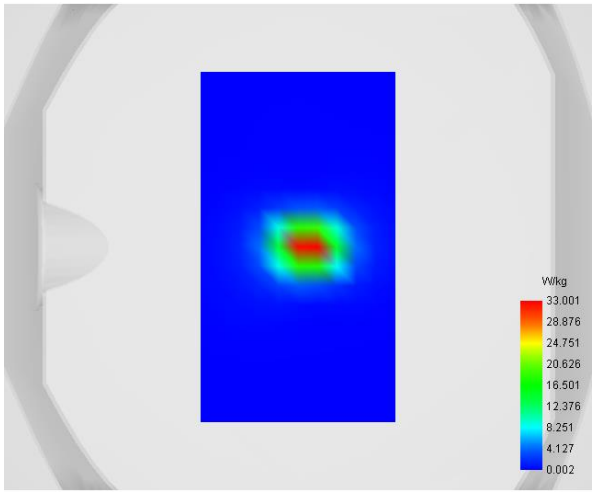
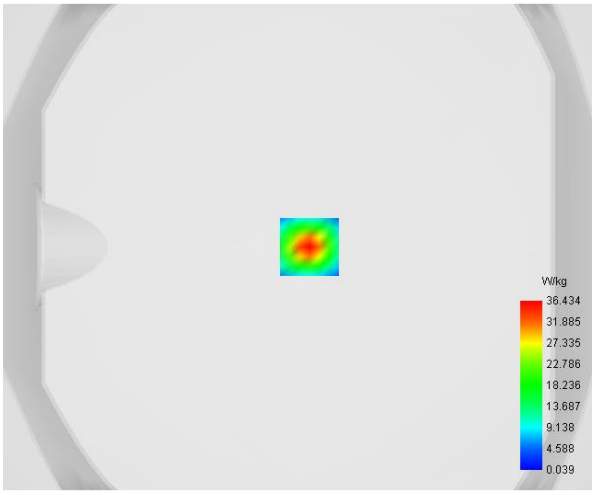
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=4mm dy=4mm dz=2mm
Phantom	Validation plane
Device Position	Dipole
Band	CW5800
Signal	CW (Crest factor: 1.0)

B. SAR Measurement Results

Frequency (MHz)	5800.000000
Relative Permittivity (real part)	35.143471
Conductivity (S/m)	5.314295
Power Variation (%)	-1.471500
Ambient Temperature	22.5
Liquid Temperature	22.5

C. SAR Surface and Volume

SURFACE SAR	VOLUME SAR
	

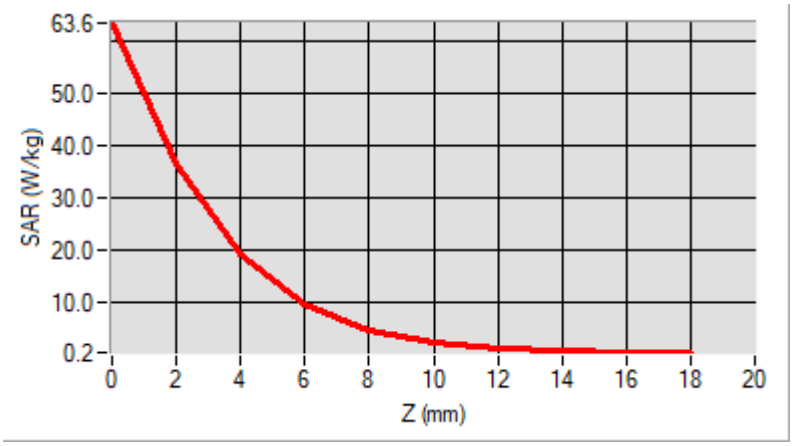
Maximum location: X=5.00, Y=0.00

D. SAR 1g & 10g

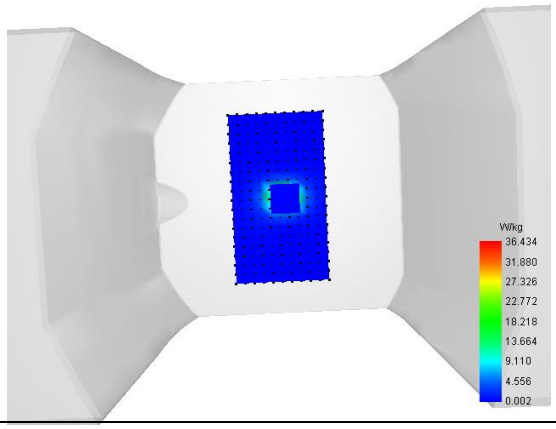
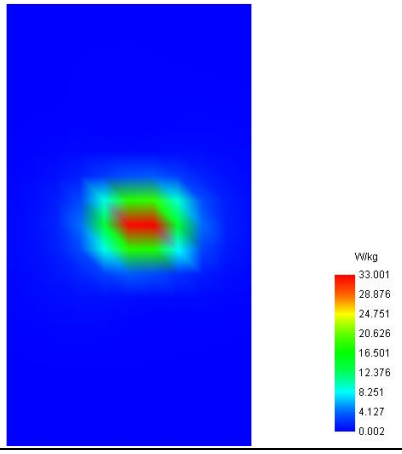
SAR 10g (W/Kg)	**5.462480**
SAR 1g (W/Kg)	**19.007904**

E. Z Axis Scan

Z (mm)	**0.00**	**2.00**	**4.00**	**6.00**	**8.00**	**10.00**	**12.00**	**14.00**	**16.00**
SAR (W/Kg)	**63.6335**	**36.4339**	**19.3475**	**9.5356**	**4.5091**	**2.0948**	**1.0039**	**0.5323**	**0.3279**



F. 3D Image

3D screen shot	**Hot spot position**
	

Annex B. Plots of SAR Measurement

MEASUREMENT 1

Type: Measurement (Complete)
Date of measurement: 2025-05-21
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.45; Calibrated: 2025-02-12

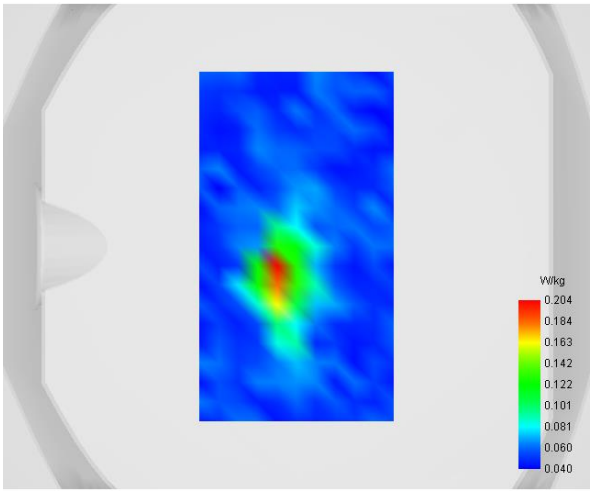
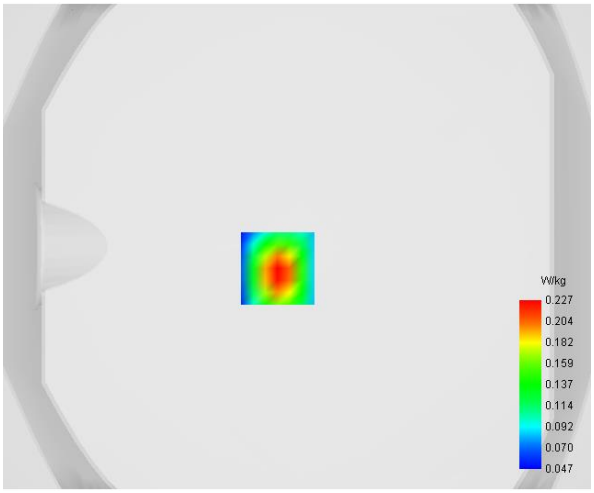
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=5mm dy=5mm dz=4mm
Phantom	Flat Plane
Device Position	Bottom
Band	WLAN 2.4GHz_802.11b -ANT1
Channels	Low
Signal	Duty Cycle: 1:1

B. SAR Measurement Results

Frequency (MHz)	2412.000000
Relative Permittivity (real part)	40.431355
Conductivity (S/m)	1.811472
Power Variation (%)	1.228100
Ambient Temperature	22.5
Liquid Temperature	22.5

C. SAR Surface and Volume

SURFACE SAR	VOLUME SAR
	

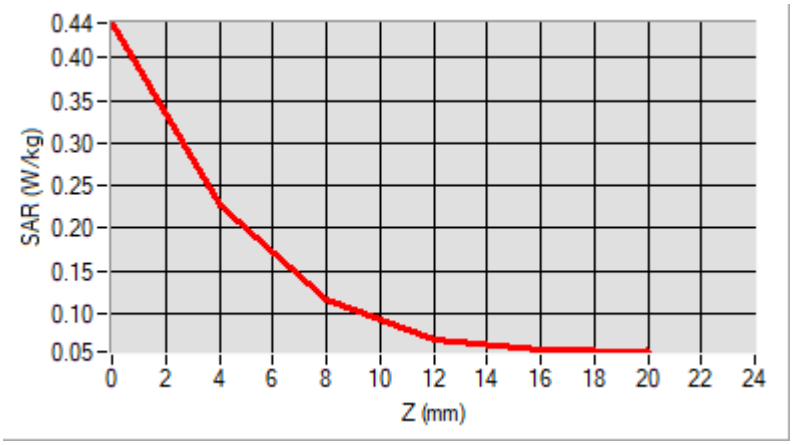
Maximum location: X=-8.00, Y=-9.00

D. SAR 1g & 10g

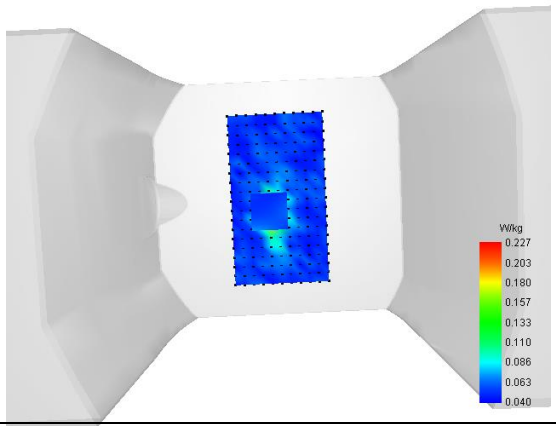
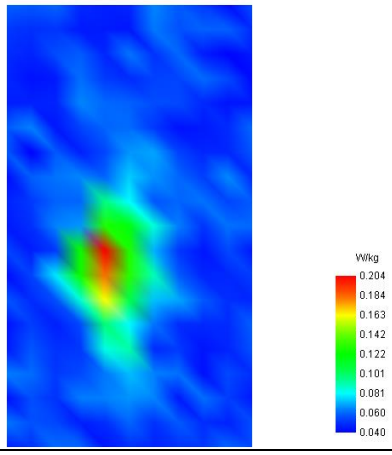
SAR 10g (W/Kg)	**0.114856**
SAR 1g (W/Kg)	**0.212315**

E. Z Axis Scan

Z (mm)	**0.00**	**4.00**	**8.00**	**12.00**	**16.00**
SAR (W/Kg)	**0.4407**	**0.2266**	**0.1166**	**0.0700**	**0.0562**



F. 3D Image

3D screen shot	**Hot spot position**
	

MEASUREMENT 2

Type: Measurement (Complete)
Date of measurement: 2025-05-22
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.56; Calibrated: 2025-02-12

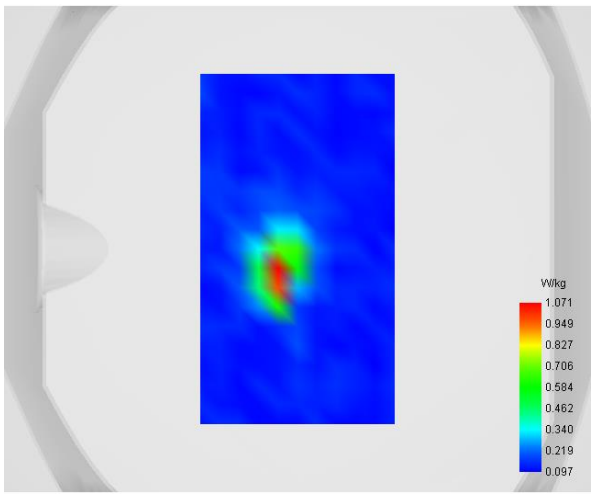
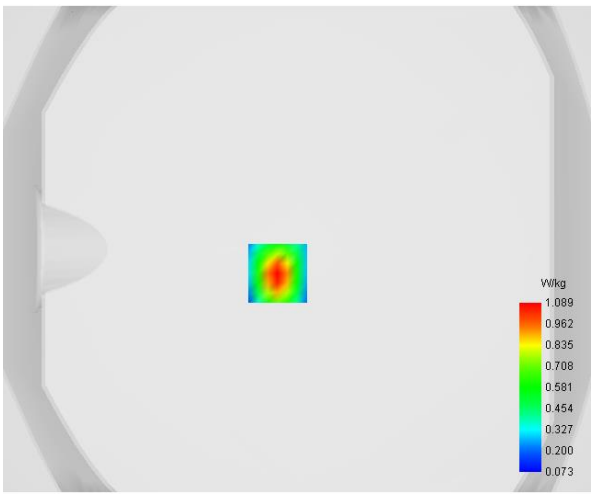
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=4mm dy=4mm dz=2mm
Phantom	Flat Plane
Device Position	Bottom
Band	U-NII-1_802.11ac-VHT80-ANT1
Channels	Middle
Signal	Duty Cycle: 1:1

B. SAR Measurement Results

Frequency (MHz)	5210.000000
Relative Permittivity (real part)	36.964229
Conductivity (S/m)	4.572412
Power Variation (%)	1.123200
Ambient Temperature	22.5
Liquid Temperature	22.5

C. SAR Surface and Volume

SURFACE SAR	VOLUME SAR
	

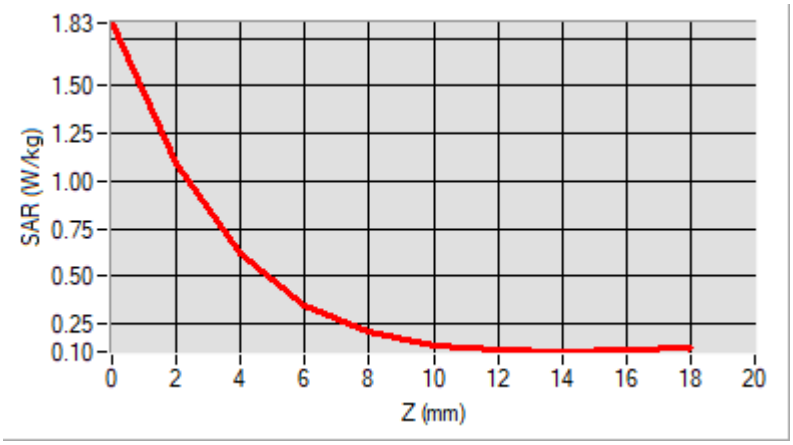
Maximum location: X=-8.00, Y=-10.00

D. SAR 1g & 10g

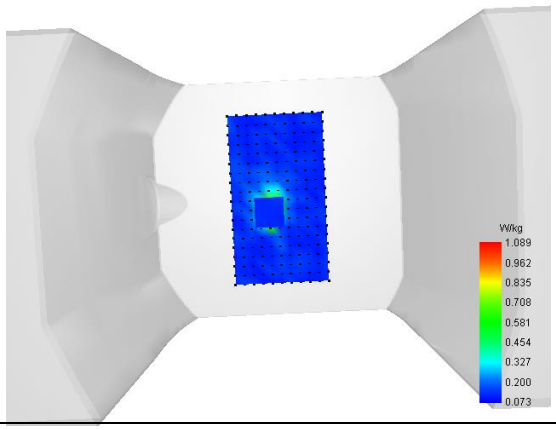
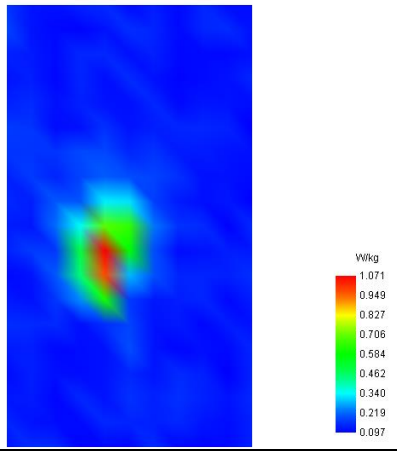
SAR 10g (W/Kg)	**0.258243**
SAR 1g (W/Kg)	**0.615850**

E. Z Axis Scan

Z (mm)	**0.00**	**2.00**	**4.00**	**6.00**	**8.00**	**10.00**	**12.00**	**14.00**	**16.00**
SAR (W/Kg)	**1.8313**	**1.0892**	**0.6189**	**0.3469**	**0.2061**	**0.1377**	**0.1090**	**0.1027**	**0.1100**



F. 3D Image

3D screen shot	**Hot spot position**
	

MEASUREMENT 3

Type: Measurement (Complete)
Date of measurement: 2025-05-22
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.58; Calibrated: 2025-02-12

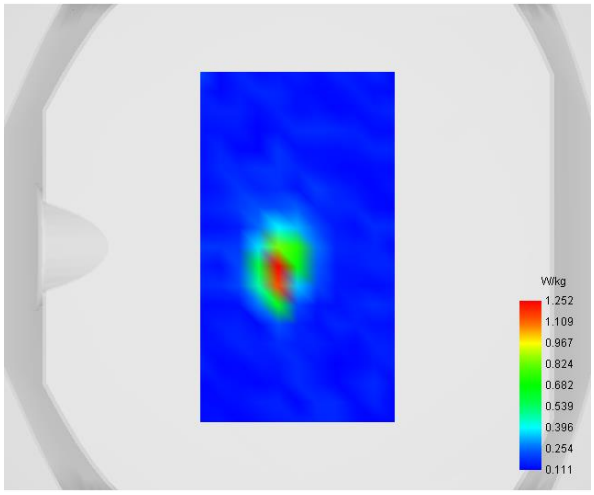
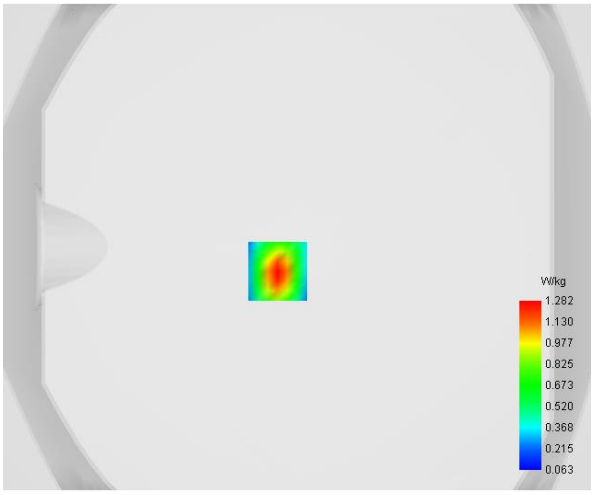
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=4mm dy=4mm dz=2mm
Phantom	Flat Plane
Device Position	Bottom
Band	U-NII-3_802.11ac-VHT80–ANT1
Channels	Middle
Signal	Duty Cycle: 1:1

B. SAR Measurement Results

Frequency (MHz)	5775.000000
Relative Permittivity (real part)	35.134845
Conductivity (S/m)	5.314619
Power Variation (%)	2.049800
Ambient Temperature	22.5
Liquid Temperature	22.5

C. SAR Surface and Volume

SURFACE SAR	VOLUME SAR
	

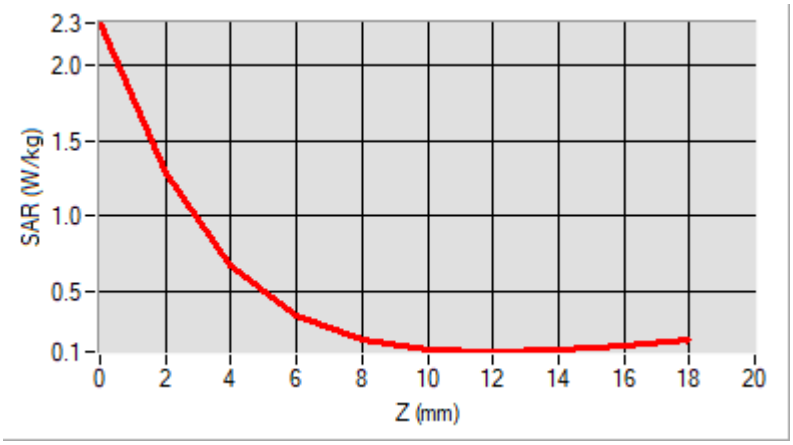
Maximum location: X=-8.00, Y=-10.00

D. SAR 1g & 10g

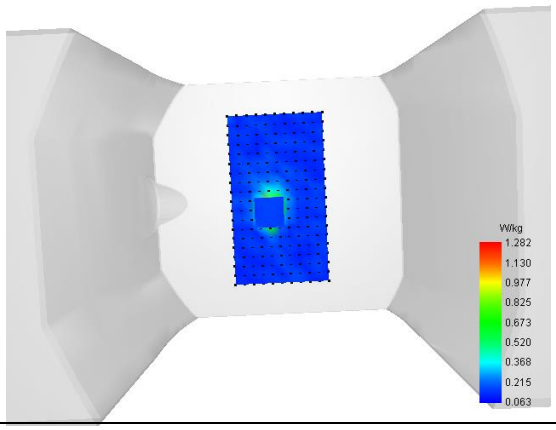
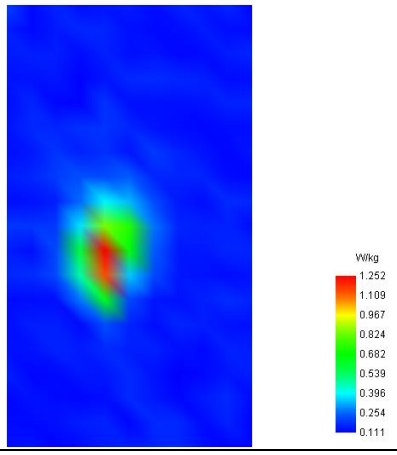
SAR 10g (W/Kg)	**0.292144**
SAR 1g (W/Kg)	**0.716214**

E. Z Axis Scan

Z (mm)	**0.00**	**2.00**	**4.00**	**6.00**	**8.00**	**10.00**	**12.00**	**14.00**	**16.00**
SAR (W/Kg)	**2.2793**	**1.2822**	**0.6703**	**0.3397**	**0.1842**	**0.1184**	**0.0985**	**0.1054**	**0.1318**



F. 3D Image

3D screen shot	**Hot spot position**
	

MEASUREMENT 4

Type: Measurement (Complete)
Date of measurement: 2025-05-21
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.45; Calibrated: 2025-02-12

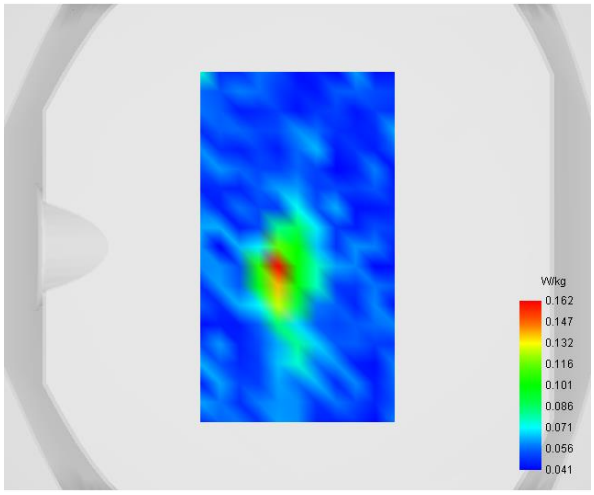
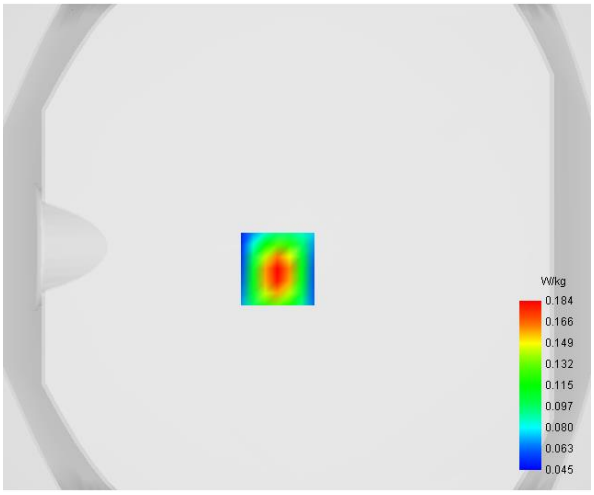
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=5mm dy=5mm dz=4mm
Phantom	Flat Plane
Device Position	Left
Band	WLAN 2.4GHz_802.11b -ANT2
Channels	Middle
Signal	Duty Cycle: 1:1

B. SAR Measurement Results

Frequency (MHz)	2437.000000
Relative Permittivity (real part)	40.441351
Conductivity (S/m)	1.821289
Power Variation (%)	-2.717100
Ambient Temperature	22.5
Liquid Temperature	22.5

C. SAR Surface and Volume

SURFACE SAR	VOLUME SAR
	

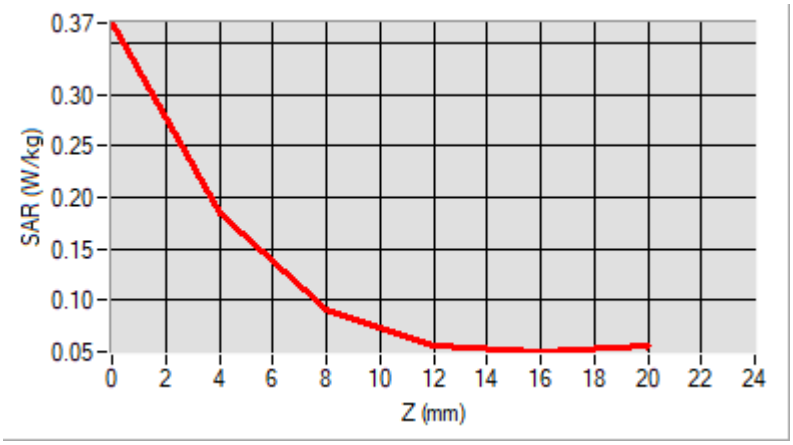
Maximum location: X=-8.00, Y=-9.00

D. SAR 1g & 10g

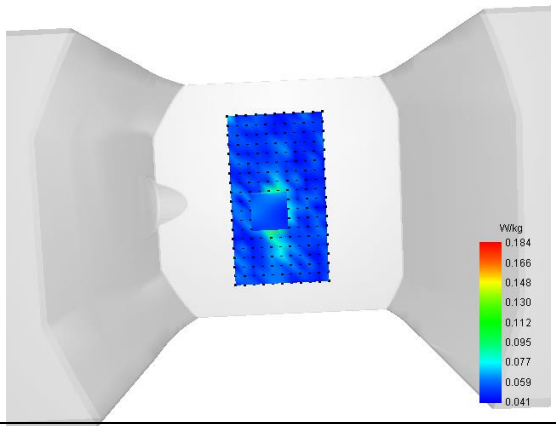
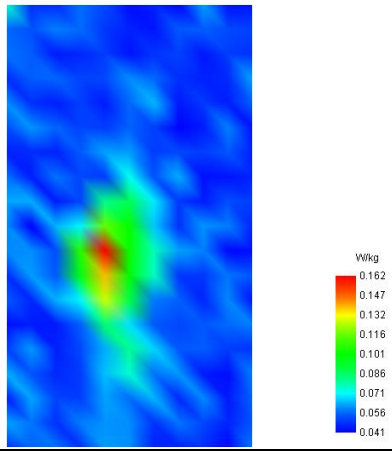
SAR 10g (W/Kg)	**0.097765**
SAR 1g (W/Kg)	**0.173024**

E. Z Axis Scan

Z (mm)	**0.00**	**4.00**	**8.00**	**12.00**	**16.00**
SAR (W/Kg)	**0.3694**	**0.1837**	**0.0920**	**0.0566**	**0.0502**



F. 3D Image

3D screen shot	**Hot spot position**
	

MEASUREMENT 5

Type: Measurement (Complete)
Date of measurement: 2025-05-22
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.56; Calibrated: 2025-02-12

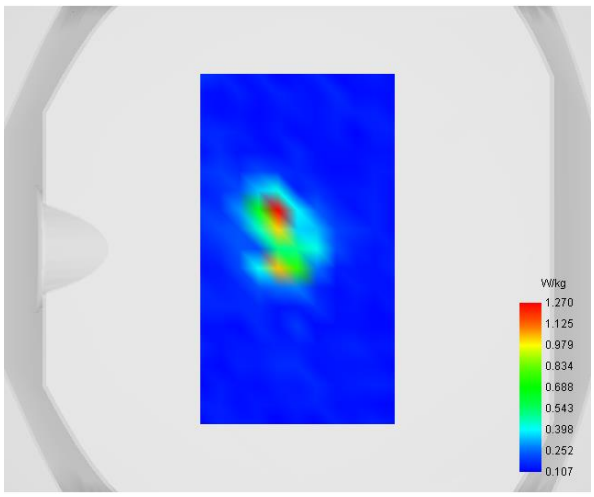
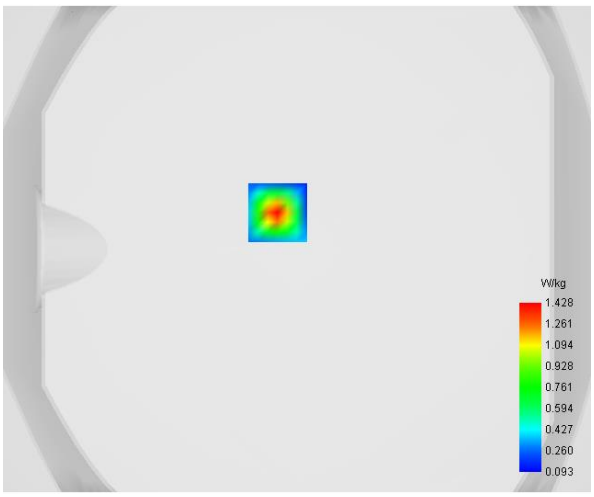
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=4mm dy=4mm dz=2mm
Phantom	Flat Plane
Device Position	Left
Band	U-NII-1_802.11ac-VHT40–ANT2
Channels	Middle
Signal	Duty Cycle: 1:1

B. SAR Measurement Results

Frequency (MHz)	5230.000000
Relative Permittivity (real part)	36.974291
Conductivity (S/m)	4.571241
Power Variation (%)	2.727100
Ambient Temperature	22.5
Liquid Temperature	22.5

C. SAR Surface and Volume

SURFACE SAR	VOLUME SAR
	

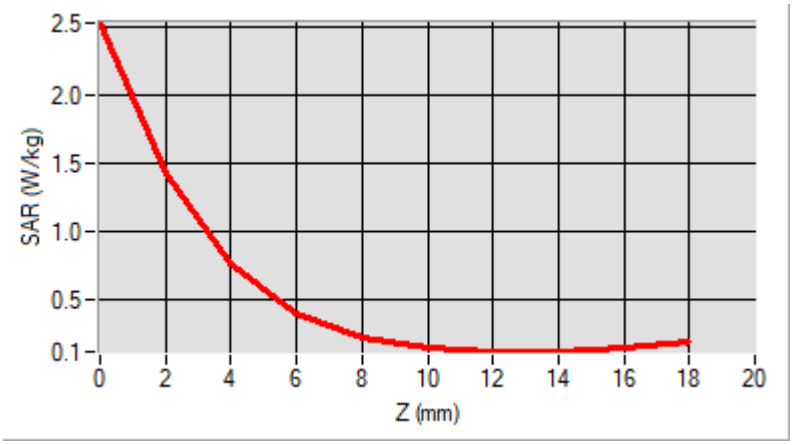
Maximum location: X=-8.00, Y=15.00

D. SAR 1g & 10g

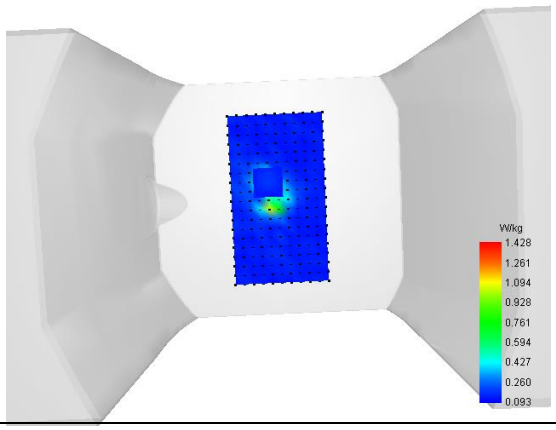
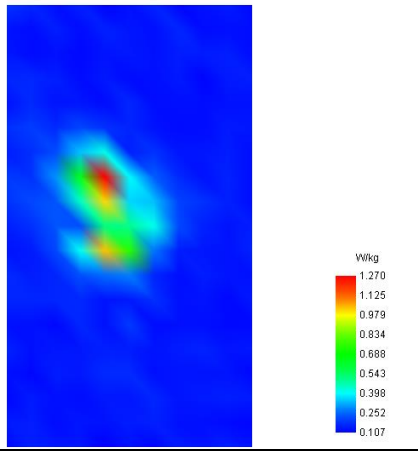
SAR 10g (W/Kg)	**0.286298**
SAR 1g (W/Kg)	**0.748431**

E. Z Axis Scan

Z (mm)	**0.00**	**2.00**	**4.00**	**6.00**	**8.00**	**10.00**	**12.00**	**14.00**	**16.00**
SAR (W/Kg)	**2.5236**	**1.4282**	**0.7538**	**0.3867**	**0.2122**	**0.1373**	**0.1137**	**0.1200**	**0.1476**



F. 3D Image

3D screen shot	**Hot spot position**
	

MEASUREMENT 6

Type: Measurement (Complete)
Date of measurement: 2025-05-22
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.58; Calibrated: 2025-02-12

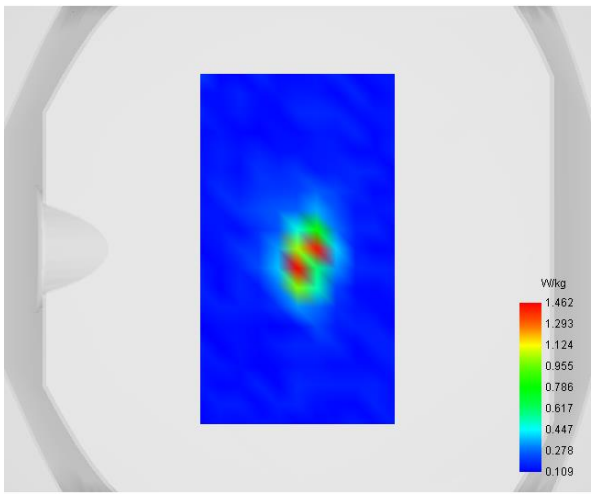
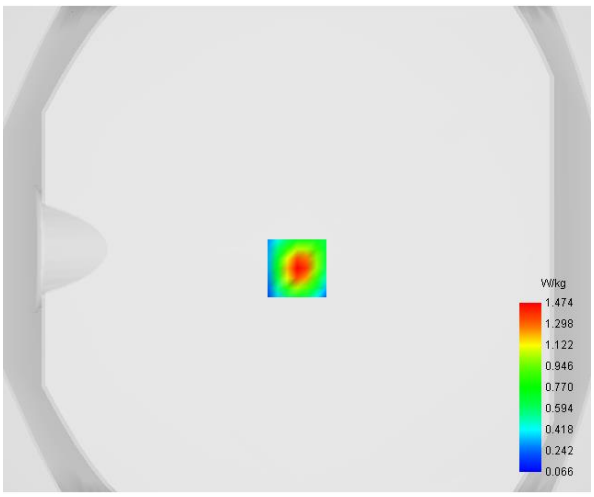
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=4mm dy=4mm dz=2mm
Phantom	Flat Plane
Device Position	Left
Band	U-NII-3_802.11ac-VHT80–ANT2
Channels	Middle
Signal	Duty Cycle: 1:1

B. SAR Measurement Results

Frequency (MHz)	5775.000000
Relative Permittivity (real part)	35.134845
Conductivity (S/m)	5.314619
Power Variation (%)	1.230200
Ambient Temperature	22.5
Liquid Temperature	22.5

C. SAR Surface and Volume

SURFACE SAR	VOLUME SAR
	

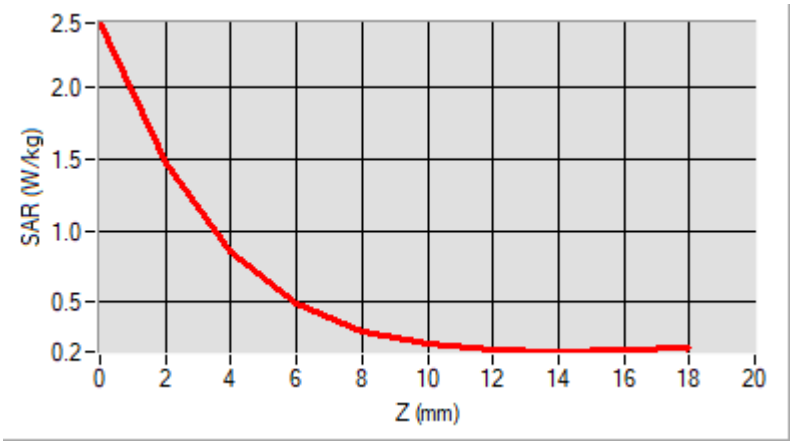
Maximum location: X=0.00, Y=-8.00

D. SAR 1g & 10g

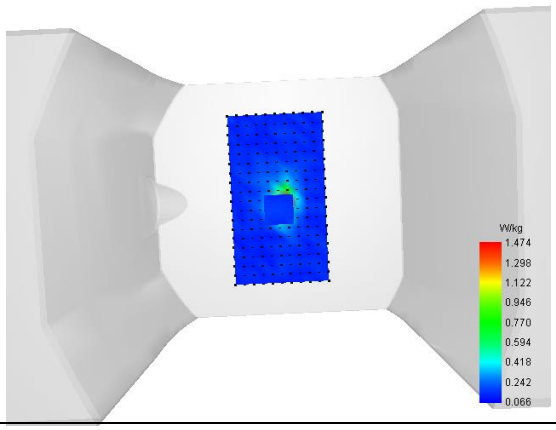
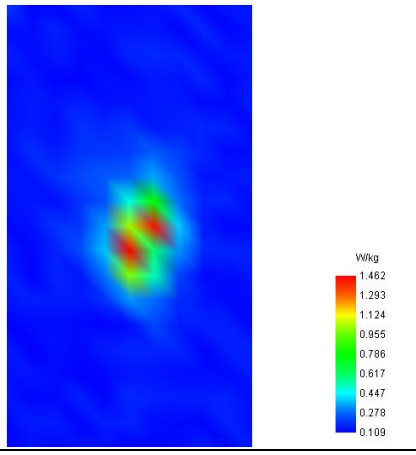
SAR 10g (W/Kg)	**0.341330**
SAR 1g (W/Kg)	**0.841476**

E. Z Axis Scan

Z (mm)	**0.00**	**2.00**	**4.00**	**6.00**	**8.00**	**10.00**	**12.00**	**14.00**	**16.00**
SAR (W/Kg)	**2.4516**	**1.4735**	**0.8504**	**0.4865**	**0.2957**	**0.2019**	**0.1617**	**0.1524**	**0.1619**

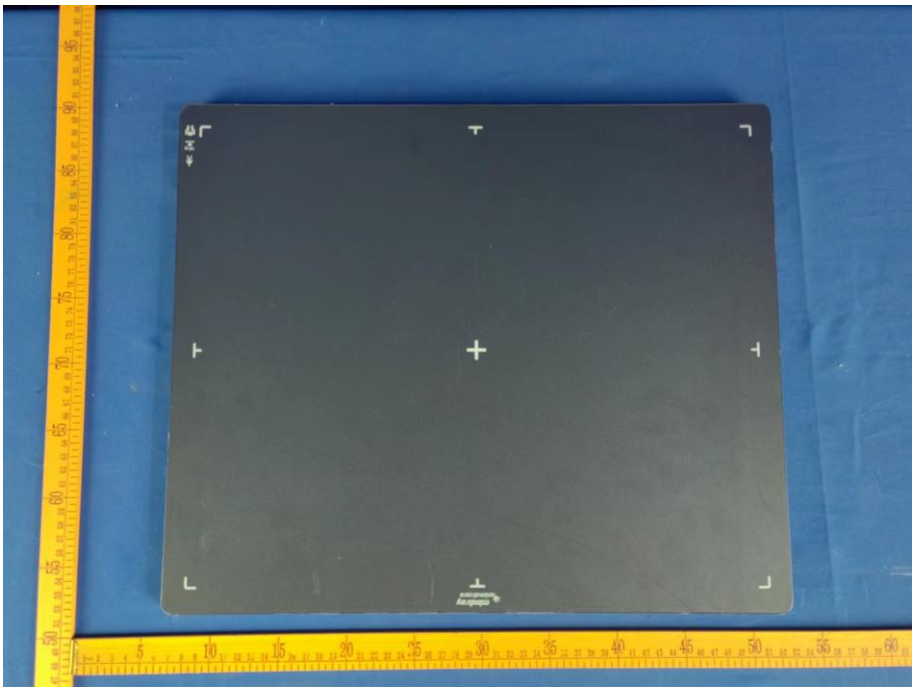


F. 3D Image

3D screen shot	**Hot spot position**
	

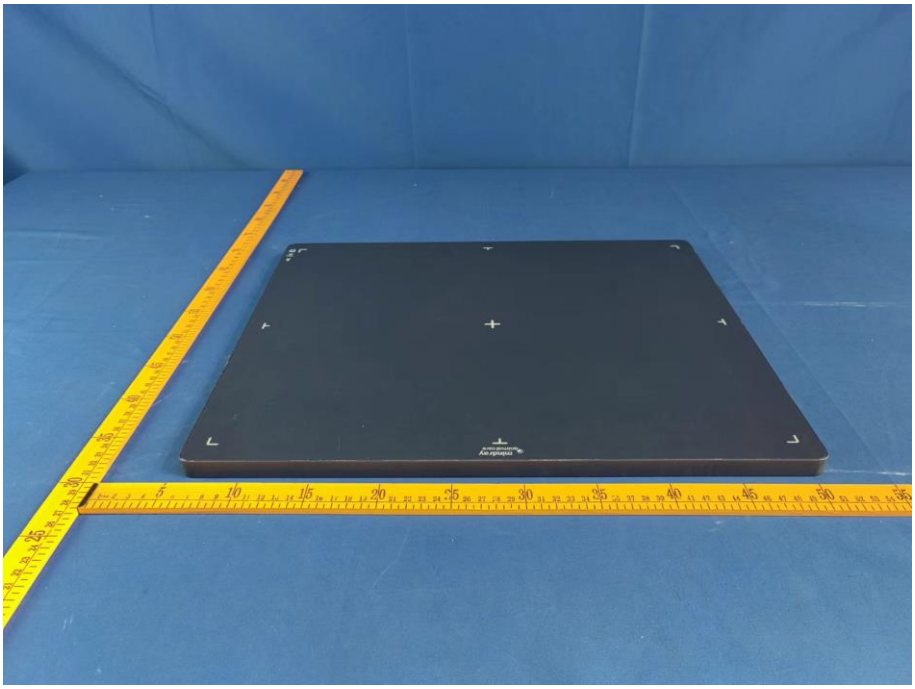
Annex C. EUT Photos

EUT View 1

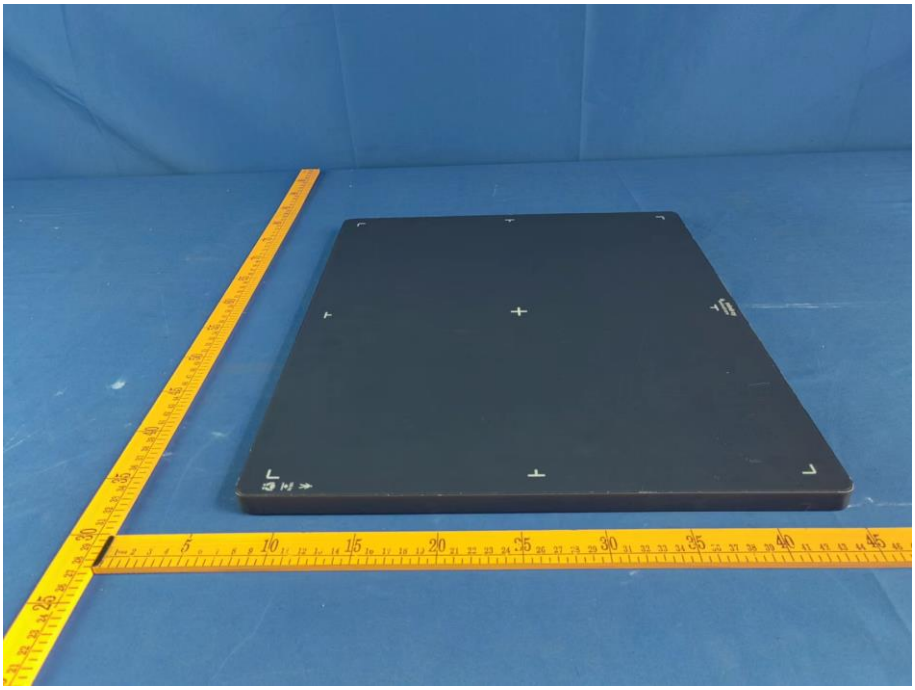


EUT View 2

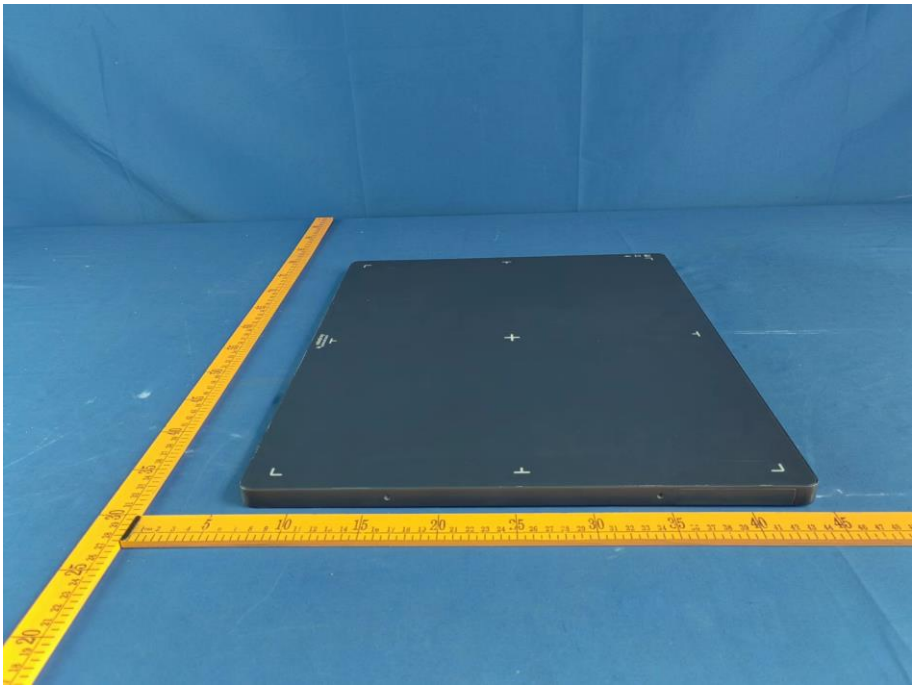
EUT View 3



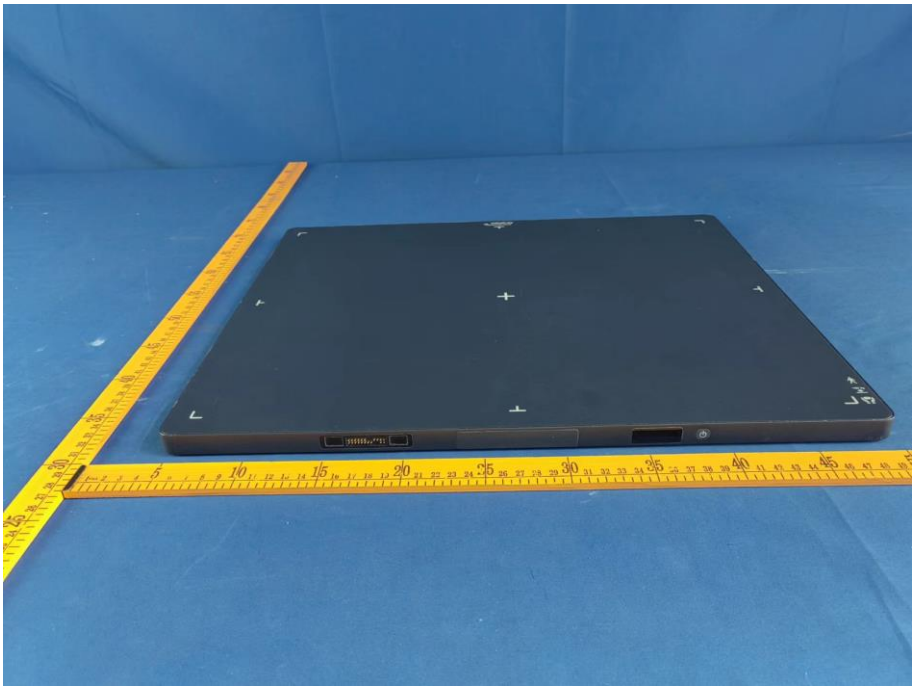
EUT View 4



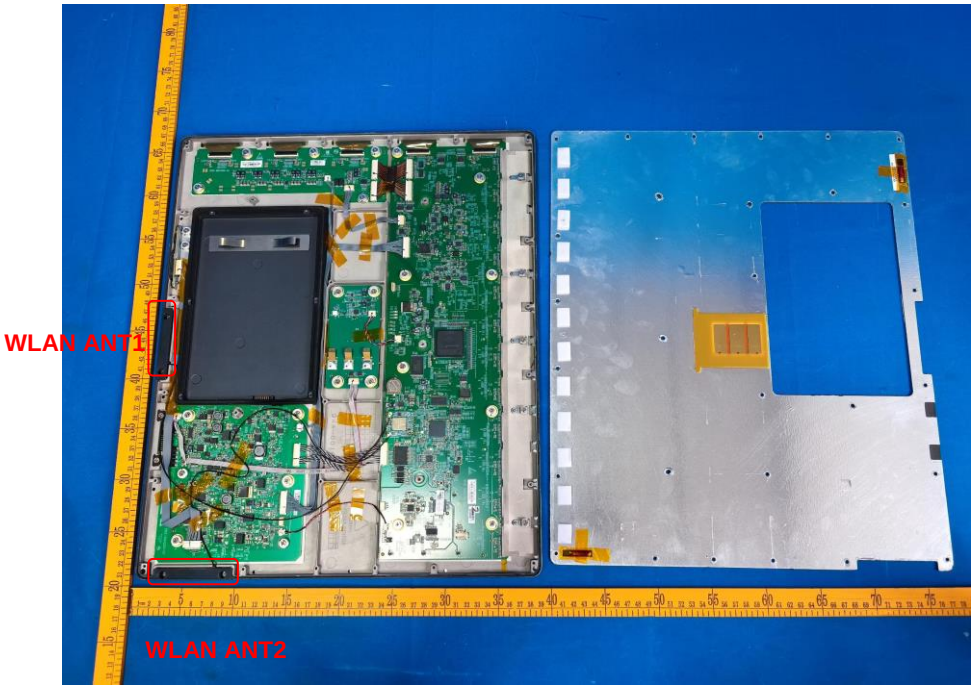
EUT View 5



EUT View 6



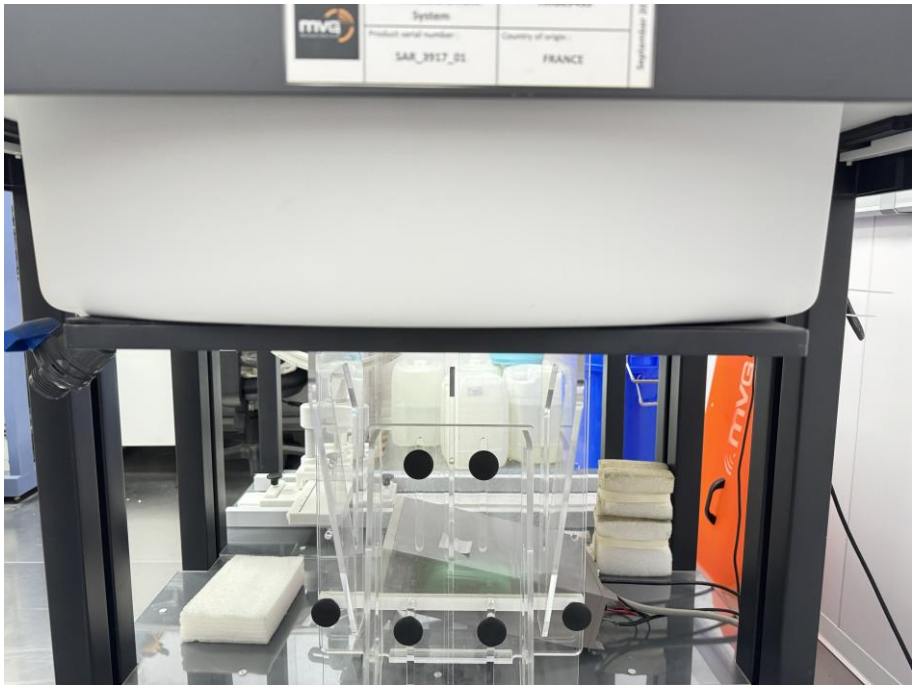
Antenna View



Annex D. Test Setup Photos

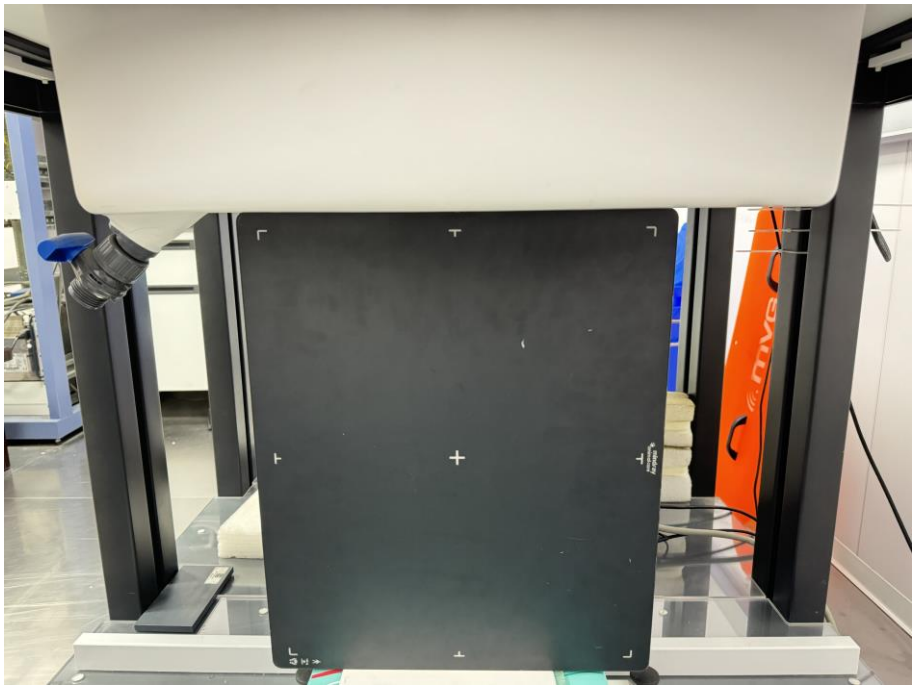
Body mode Exposure Conditions
Test distance: 0mm

Body Back

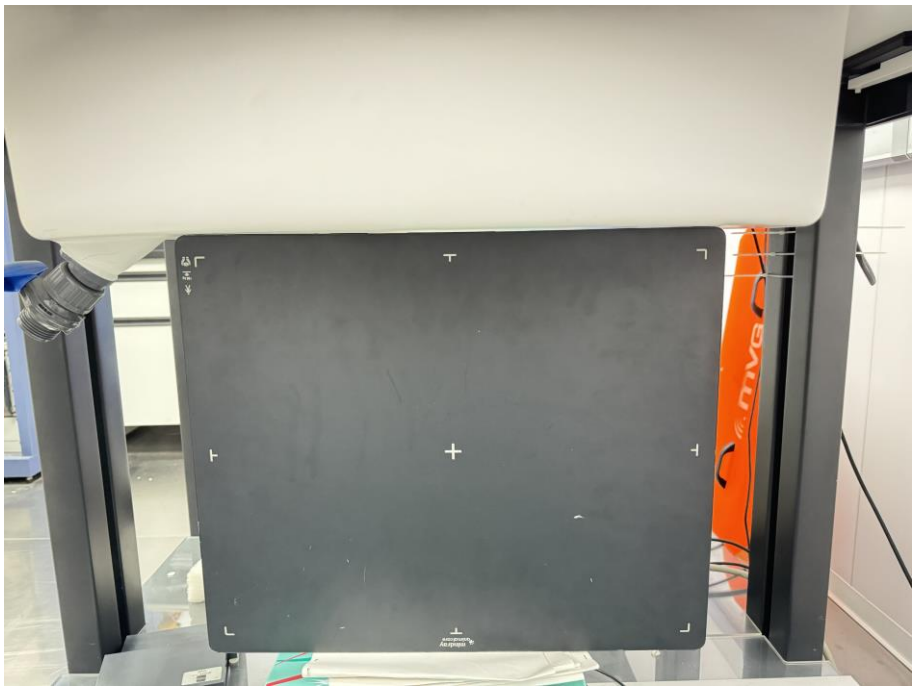


Body Font

Body Left



Body Bottom



Annex E. Calibration Certificate

Please refer to the exhibit for the calibration certificate

******* END OF REPORT *******