



SAR Test Report

Report No.: SZ26060131S01

Issued for

Launch Tech Co., Ltd.

No.4012, Launch Industrial Park, North Wuhe Rd, Bantian
Street, Longgang District, Shenzhen, Guangdong, 518129,
China (Peoples Republic Of)

Product Name: Automotive Diagnostic Tool

Brand Name: LAUNCH

Model Name: OADD-PD1303A

Series Model(s): X-431 PAD9 ULTRA V2

FCC ID: XUJOADDPD1303A

Test Standard: ANSI/IEEE Std. C95.1
FCC 47 CFR Part 2.1093
IEEE 1528-2013

Max. Report
SAR (10&1g) Body: 0.961 W/kg(1g)

The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of the Shenzhen Morlab Communications Technology Co., Ltd.



TEST REPORT CERTIFICATION

Applicant's name..... : Launch Tech Co., Ltd.

Address..... : No.4012, Launch Industrial Park, North Wuhe Rd, Bantian Street,
Longgang District, Shenzhen, Guangdong, 518129, China
(Peoples Republic Of)

Manufacturer's Name..... : Launch Tech Co., Ltd.

Address..... : No.4012, Launch Industrial Park, North Wuhe Rd, Bantian Street,
Longgang District, Shenzhen, Guangdong, 518129, China
(Peoples Republic Of)

Product description

Product name..... : Automotive Diagnostic Tool

Brand name : LAUNCH

Model name : OADD-PD1303A

Series Model(s):..... X-431 PAD9 ULTRA V2

Standards..... : ANSI/IEEE Std. C95.1
FCC 47 CFR Part 2.1093
IEEE 1528-2013

The device was tested by Shenzhen Morlab Communications Technology Co., Ltd. in accordance with the measurement methods and procedures specified in EN IEC/IEEE 62209-1528 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.

Date of Test..... :

Date (s) of performance of tests..... : 19 Jul. 2026 ~ 21 Jul. 2026

Date of Issue..... : 10 Aug. 2026

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

Edited by : Pang Siyu
Pang Siyu

Approved by : Shen Junsheng
Shen Junsheng

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Revision History

Rev.	Issue Date	Report No.	Effect Page	Contents
00	10 Aug. 2026	SZ26060131S01	ALL	Initial Issue

1. General Information

Environmental evaluation measurements of specific absorption rate (SAR) distributions in emulated human head and body tissues exposed to radio frequency (RF) radiation from wireless portable devices for compliance with the rules and regulations of the ISED.

1.1 EUT Description

Product Name/PMN	Automotive Diagnostic Tool		
Brand Name	LAUNCH		
Model Name/HVIN	OADD-PD1303A, X-431 PAD9 ULTRA V2		
Series Model	X-431 PAD9 ULTRA V2		
Model Difference	The color of the rubber sleeve or shell is different. OADD-PD1303A: red and black rubber sleeve, black shell; X-431 PAD9 ULTRA V2: all black		
Sample number	260105004-4		
Battery	Model: PAD9 V2 Rated Voltage: 7.6V Charge Limit Voltage: 8.7V Capacity: 9360mAh		
Device Category	Portable		
Product stage	Production unit		
RF Exposure Environment	General Population / Uncontrolled		
Hardware Version	V2.0		
Software Version	V2.1.01		
Frequency Range	WLAN802.11b/g/n20/ax20: 2412 MHz ~ 2462 MHz WLAN 802.11n40/ax40: 2422 MHz ~ 2452 MHz WLAN 802.11a/n20/n40/ac20/ac40/ac80: 5150 ~ 5250 MHz WLAN 802.11a/n20/n40/ac20/ac40/ac80: 5250 ~ 5350 MHz WLAN 802.11a/n20/n40/ac20/ac40/ac80: 5470 ~ 5725 MHz WLAN 802.11a/n20/n40/ac20/ac40/ac80: 5725 ~ 5850 MHz BLE: 2402 MHz to 2480 MHz		
Max. Reported SAR(1g): (Limit:1.6 W/kg) Test distance: Body:0mm	Band	Mode	Body Worn (W/kg)
	DTS	(Module 1) 2.4G WLAN Ant A	0.093
	DTS	(Module 1) 2.4G WLAN Ant B	0.081
	DTS	(Module 1) 2.4G WLAN MIMO A+B	0.254
	DTS	(Module 2) 2.4G WLAN Ant C	0.122
	DTS	(Module 2) 2.4G WLAN Ant D	0.115
	DTS	(Module 2) 2.4G WLAN MIMO C+D	0.267
	DSS	(Module 1) BT	0.151
	NII	(Module 1) 5.2G WLAN Ant A	0.303
	NII	(Module 1) 5.2G WLAN Ant B	0.195
	NII	(Module 1) 5.2G WLAN MIMO A+B	0.895
	NII	(Module 2) 5.2G WLAN Ant C	0.480
	NII	(Module 2) 5.2G WLAN Ant D	0.460
	NII	(Module 2) 5.2G WLAN MIMO C+D	0.444

	NII	（Module 1）5.3G WLAN Ant A	0.335
	NII	（Module 1）5.3G WLAN Ant B	0.202
	NII	（Module 1）5.3G WLAN MIMO A+B	0.961
	NII	（Module 2）5.3G WLAN Ant C	0.293
	NII	（Module 2）5.3G WLAN Ant D	0.272
	NII	（Module 2）5.3G WLAN MIMO C+D	0.495
	NII	（Module 1）5.6G WLAN Ant A	0.389
	NII	（Module 1）5.6G WLAN Ant B	0.213
	NII	（Module 1）5.6G WLAN MIMO A+B	0.827
	NII	（Module 2）5.6G WLAN Ant C	0.385
	NII	（Module 2）5.6G WLAN Ant D	0.348
	NII	（Module 2）5.6G WLAN MIMO C+D	0.535
	NII	（Module 1）5.8G WLAN Ant A	0.374
	NII	（Module 1）5.8G WLAN Ant B	0.237
	NII	（Module 1）5.8G WLAN MIMO A+B	0.807
	NII	（Module 2）5.8G WLAN Ant C	0.504
	NII	（Module 2）5.8G WLAN Ant D	0.465
	NII	（Module 2）5.8G WLAN MIMO C+D	0.511
1-g Sum SAR			1.496
Operating Mode:	2.4G WLAN: 802.11b(DSSS):CCK,DQPSK,DBPSK 802.11g(OFDM):BPSK,QPSK,16-QAM,64-QAM 802.11n(OFDM):BPSK,QPSK,16-QAM,64-QAM 802.11ac(OFDM):BPSK,QPSK,16-QAM,64-QAM,256-QAM 802.11ax(OFDM):BPSK,QPSK,16-QAM,64-QAM		
Antenna Specification:	WLAN/BT: FPC Antenna		
Hotspot Mode	Not Support		
DTM Mode	Not Support		
Note: 1. The EUT battery must be fully charged and checked periodically during the test to ascertain uniform power			

1.2 Test Environment

Ambient conditions in the SAR laboratory:

Items	Required
Temperature (°C)	18-25
Humidity (%RH)	30-70

1.3 Test Factory

ShenZhen Morlab Communications Technology Co.,Ltd.

FL.1-3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China

FCC test Firm Registration No.: 226174

IC Registration No.: 7183A

A2LA Certificate No.: 4267.05

2. Test Standards and Limits

No.	Identity	Document Title
1	IEEE Std C95.1, 2019	IEEE Standard for Safety Levels with Respect to Human Exposure to Electric, Magnetic, and Electromagnetic Fields, 0 Hz to 300 GHz. It specifies the maximum exposure limit of 1.6 W/kg as averaged over any 1 gram of tissue for portable devices being used within 20 cm of the user in the uncontrolled environment.
2	FCC 47 CFR Part 2.1093	Radio Frequency Radiation Exposure Evaluation: Portable Devices
3	IEEE 1528-2013	IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques
5	KDB 447498 D01 v06	RF Exposure Procedures and Equipment Authorization Policies for Mobile and Portable Devices
6	KDB 248227 D01v02r02	SAR Measurement Procedures for 802.11 Transmitters
7	KDB 865664 D01v01r04	SAR Measurement 100 MHz to 6 GHz
8	KDB 865664 D02v01r02	RF Exposure Reporting
9	KDB 941225 D06v02r01	SAR Evaluation Procedures For Portable Devices With Wireless Router Capabilities

(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.

Population/Uncontrolled Environments:

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

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).

NOTE GENERAL POPULATION/UNCONTROLLED EXPOSURE PARTIAL BODY LIMIT 1.6 W/kg

3. SAR Measurement System

3.1 Definition of Specific Absorption Rate (SAR)

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.

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:

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

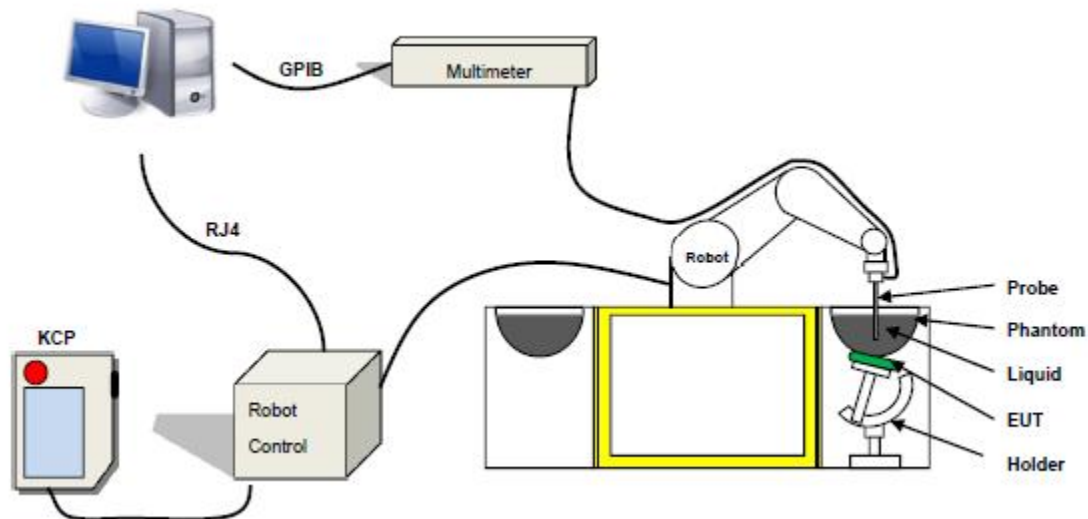
SAR is expressed in units of Watts per kilogram (W/kg) SAR measurement can be related to the electrical field in the tissue by

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

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

3.2 SAR System

MVG SAR System Diagram:



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 Open SAR software computes the results to give a SAR value in a 1g or 10g mass.

3.2.1 Probe

For the measurements the Specific Dosimetric E-Field Probe SN 27/13 EPG193 with following specifications is used

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



Figure 1-MVG COMOSAR Dosimetric E field Dipole

3.2.2 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.

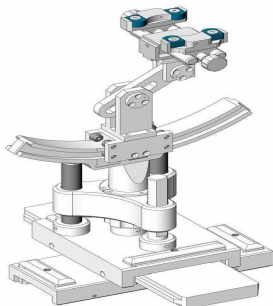
SN 32/14 SAM115



Figure-SN 21/21 ELLI48



3.2.3 Device Holder



The SAR in the phantom is approximately inversely proportional to the square of the distance between the source and the liquid surface. For a source at 5 mm distance, a positioning uncertainty of ± 0.5 mm would produce a SAR uncertainty of ± 20 %. Accurate device positioning is therefore crucial for accurate and repeatable measurements. The positions in which the devices must be measured are defined by the standards.

4. Tissue Simulating Liquids

4. Tissue Simulating Liquids

4.1 Simulating Liquids Parameter Check

The simulating liquids should be checked at the beginning of a series of SAR measurements to determine if the dielectric parameters are within the tolerances of the specified target values

The uncertainty due to the liquid conductivity and permittivity arises from two different sources. The first source of error is the deviation of the liquid conductivity from its target value (max _ 5 %) and the second source of error arises from the measurement procedures used to assess conductivity. The uncertainty shall be assessed using a rectangular probability for 1 g averaging, the maximum weighting coefficient for SAR is 0,5.

IEEE SCC-34/SC-2 RECOMMENDED TISSUE DIELECTRIC PARAMETERS

The head and body tissue dielectric parameters recommended by the IEEE SCC-34/SC-2 have been incorporated in the following table.

Frequency	ϵ_r	σ 10g S/m
300	45.3	0.87
450	43.5	0.87
750	41.9	0.89
835	41.5	0.90
900	41.5	0.97
1450	40.5	1.20
1800 to 2000	40.0	1.40
2100	39.8	1.49
2450	39.2	1.80
2600	39.0	1.96
3000	38.5	2.40
3500	37.9	2.91
4000	37.4	3.43
4500	36.8	3.94
5000	36.2	4.45
5200	36.0	4.66
5400	35.8	4.86
5600	35.5	5.07
5800	35.3	5.27

**LIQUID MEASUREMENT RESULTS**

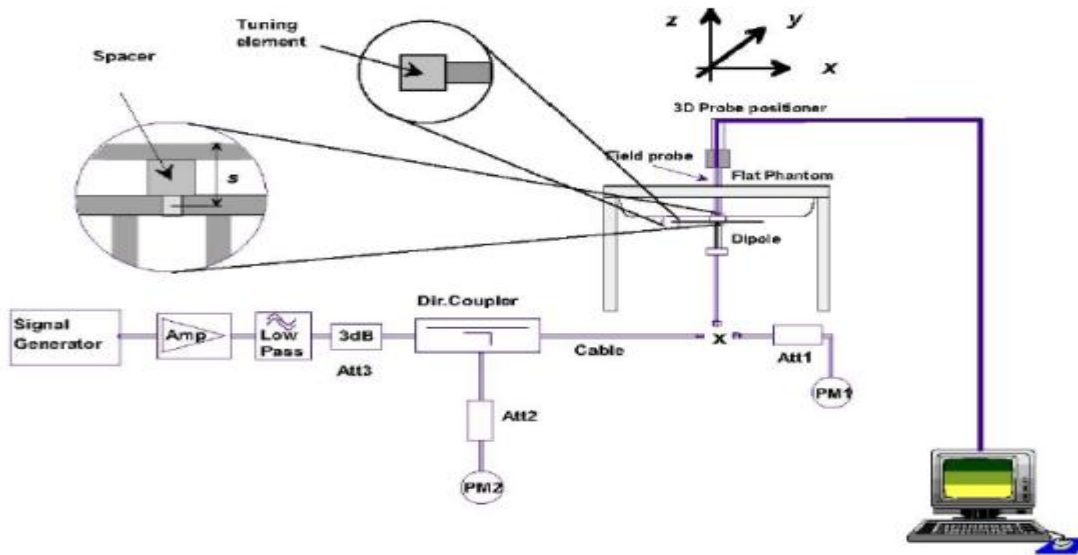
Date	Ambient		Simulating Liquid		Parameters	Target	Measured	Deviation %	Limited %
	Temp. [°C]	Humidity %	Frequency (MHz)	Temp. [°C]					
2026-07-19	23.7	55	2412	23.5	Permittivity	39.27	39.36	0.24	±5
					Conductivity	1.77	1.77	0.21	±5
2026-07-19	23.7	55	2437	23.5	Permittivity	39.22	39.32	0.25	±5
					Conductivity	1.79	1.79	0.09	±5
2026-07-19	23.7	55	2450	23.5	Permittivity	39.20	39.11	-0.23	±5
					Conductivity	1.80	1.78	-1.11	±5
2026-07-19	23.7	55	2462	23.5	Permittivity	39.18	39.28	0.26	±5
					Conductivity	1.81	1.79	-1.14	±5
2026-07-20	23.1	58	5180	22.8	Permittivity	36.02	37.10	3.00	±5
					Conductivity	4.64	4.62	-0.41	±5
2026-07-20	23.1	58	5200	22.8	Permittivity	36.00	35.59	-1.14	±5
					Conductivity	4.66	4.66	0.00	±5
2026-07-19	23.1	58	5230	22.8	Permittivity	35.97	36.72	2.09	±5
					Conductivity	4.69	4.69	-0.03	±5
2026-07-20	23.1	58	5240	22.8	Permittivity	35.96	37.22	3.50	±5
					Conductivity	4.70	4.69	-0.26	±5
2026-07-20	23.1	58	5260	22.8	Permittivity	35.94	35.35	-1.64	±5
					Conductivity	4.72	4.71	-0.28	±5
2026-07-21	22.4	41	5320	22.1	Permittivity	35.88	36.81	2.59	±5
					Conductivity	4.78	4.79	0.21	±5
2026-07-21	22.4	41	5400	22.1	Permittivity	35.80	36.10	0.84	±5
					Conductivity	4.86	4.83	-0.62	±5
2026-07-21	22.4	41	5500	22.1	Permittivity	35.70	35.68	-0.06	±5
					Conductivity	4.96	4.96	0.00	±5
2026-07-21	22.4	41	5700	22.1	Permittivity	35.40	35.45	0.14	±5
					Conductivity	5.17	5.16	-0.10	±5
2026-07-21	22.4	41	5745	22.1	Permittivity	35.36	35.93	1.63	±5
					Conductivity	5.21	5.24	0.53	±5
2026-07-21	22.4	41	5785	22.1	Permittivity	35.32	34.89	-1.20	±5
					Conductivity	5.25	5.24	-0.27	±5
2026-07-21	22.4	41	5800	22.1	Permittivity	35.30	35.42	0.34	±5
					Conductivity	5.27	5.27	0.00	±5

5. SAR System Validation

5.1 Validation System

Each MVG system is equipped with one or more system validation kits. These units, together with the predefined measurement procedures within the MVG software, enable the user to conduct the system performance check and system validation. System kit includes a dipole, and dipole device holder.

The system check verifies that the system operates within its specifications. It's performed daily or before every SAR measurement. The system check uses normal SAR measurement in the flat section of the phantom with a matched dipole at a specified distance. The system validation setup is shown as below.



5.2 Validation Result

Justification for Extended SAR Dipole Calibrations

Date	Frequency (MHz)	Power	SAR _{1g} (W/Kg)	SAR _{10g} (W/Kg)	Drift (%)	1W Target		Difference percentage		Limited %
						SAR _{1g} (W/Kg)	SAR _{10g} (W/Kg)	1g	10g	
2026-07-19	2450	100 mW	5.478	2.371	-1.17	54.70	24.11	0.15%	-1.66%	10
		Normalize to 1 Watt	54.78	23.71						
2026-07-20	5200	10 mW	1.654	0.563	3.94	163.88	57.29	0.93%	-1.73%	10
		Normalize to 1 Watt	165.40	56.30						
2026-07-21	5400	10 mW	1.737	0.577	-2.84	172.23	59.16	0.85%	-2.47%	10
		Normalize to 1 Watt	173.70	57.70						
2026-07-21	5800	10 mW	1.804	0.604	-2.43	188.95	63.45	-4.53%	-4.81%	10
		Normalize to 1 Watt	180.40	60.40						

Note:

(1) We use a CW signal of 20dBm(2450MHz) and 10dBm(5000-6000MHz) for system check, and then all SAR values are normalized to 1W forward power. The result must be within $\pm 10\%$ of target value.

6. SAR Evaluation Procedures

The procedure for assessing the average SAR value consists of the following steps:

The following steps are used for each test position

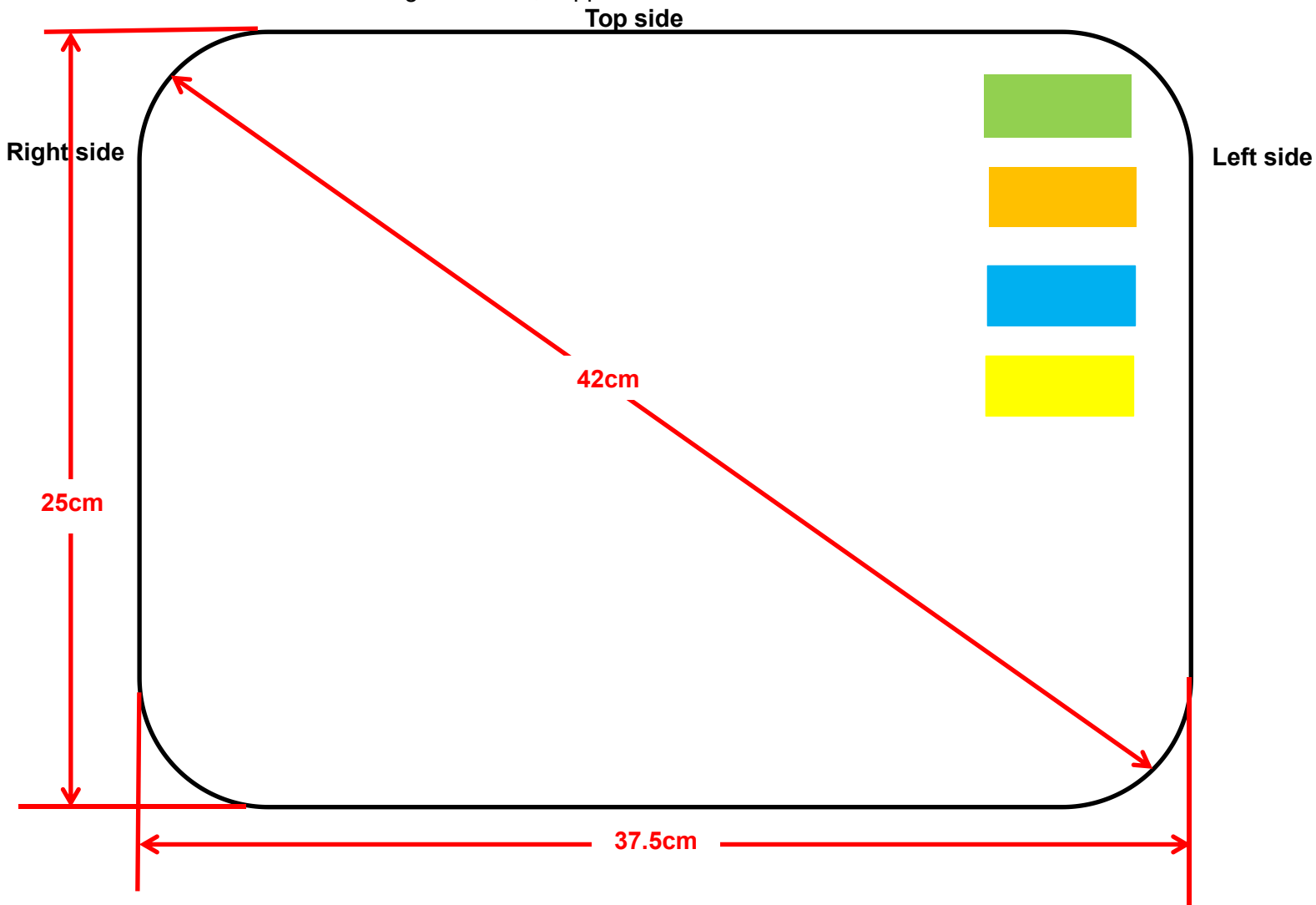
- Establish a call with the maximum output power with a base station simulator. The connection between the mobile and the base station simulator is established via air interface
- Measurement of the local E-field value at a fixed location. This value serves as a reference value for calculating a possible power drift.
- Measurement of the SAR distribution with a grid of 8 to 16mm * 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.

➤ Area Scan& Zoom Scan

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 is performed around the highest E-field value to determine the averaged SAR-distribution over 10 g. Area scan and zoom scan resolution setting follows KDB 865664 D01 quoted below. When the 1-g SAR of the highest peak is within 2 dB of the SAR limit, additional zoom scans are required for other peaks within 2 dB of the highest peak that have not been included in any zoom scan to ensure there is no increase in SAR.

7. EUT Antenna Location Sketch

It is a Automotive Diagnostic Tool, support WLAN/BT mode.



-  WLAN Antenna A
-  WLAN Antenna B
-  WLAN Antenna C
-  WLAN Antenna D

**Bottom side
(Back view)**

Antenna Separation Distance(cm)						
ANT	Back Side	Front Side	Left Side	Right Side	Top Side	Bottom Side
WLAN ANT A	1.27	2.57	2.74	36.2	1.79	22.27
WLAN ANT B	1.27	2.57	1.2	35	5.14	17.35
WLAN ANT C	1.27	2.57	1.2	35	11.45	17.95
WLAN ANT D	1.27	2.57	12	35	11.52	7.48

Note 1: The antenna information refers the manufacturer provide report, applicable only to the tested sample identified in the report.

7.1 SAR test exclusion consider table

NOTICE-DRS0911, Exemption Limits for Routine Evaluation -SAR Evaluation:

Frequency (MHz)	≤ 5 mm (mW)	10 mm (mW)	15 mm (mW)	20 mm (mW)	25 mm (mW)	30 mm (mW)	35 mm (mW)	40 mm (mW)	45 mm (mW)	> 50 mm (mW)
≤ 300	45	116	139	163	189	216	246	280	319	362
450	32	71	87	104	124	147	175	208	248	296
835	21	32	41	54	72	96	129	172	228	298
1900	6	10	18	33	57	92	138	194	257	323
2450	3	7	16	32	56	89	128	170	209	245
3500	2	6	15	29	50	72	94	114	134	158
5800	1	5	13	23	32	41	54	74	102	128

Exposure Position	Wireless Interface	BLE	2.4G WLAN_ANT_A	2.4G WLAN_ANT_B	2.4G WLAN_MIMO_ANT_A	2.4G WLAN_MIMO_ANT_B
	Calculated Frequency (GHz)	2.441	2.437	2.437	2.437	2.437
	Maximum Turn-up power (dBm)	6	19.5	19	21.5	21.5
	Maximum rated power(mW)	3.98	89.13	79.43	141.25	141.25
Back Side	Separation distance (cm)	1.27	1.27	1.27	1.27	1.27
	exclusion threshold(mW)	11.90	11.92	11.92	11.92	11.92
	Testing required?	NO	YES	YES	YES	YES
Front Side	Separation distance (cm)	2.57	2.57	2.57	2.57	2.57
	exclusion threshold(mW)	60.64	60.65	60.65	60.65	60.65
	Testing required?	NO	YES	YES	YES	YES
Left Side	Separation distance (cm)	2.74	2.74	1.2	2.74	1.2
	exclusion threshold(mW)	71.87	71.89	10.66	71.89	10.66
	Testing required?	NO	YES	YES	YES	YES
Right Side	Separation distance (cm)	36.2	36.2	35	36.2	35
	exclusion threshold(mW)	2523.31	2537.49	2449.39	2537.49	2449.39
	Testing required?	NO	NO	NO	NO	NO
Top Side	Separation distance (cm)	1.79	1.79	5.14	1.79	5.14
	exclusion threshold(mW)	25.30	25.31	257.12	25.31	257.12
	Testing required?	NO	YES	NO	YES	NO
Bottom Side	Separation distance (cm)	22.27	22.27	17.35	22.27	17.35
	exclusion threshold(mW)	1501.56	1514.78	1153.56	1514.78	1153.56
	Testing required?	NO	NO	NO	NO	NO

Exposure Position	Wireless Interface	5.2G WLAN_ANT_A	5.2G WLAN_ANT_B	5.2G WLAN_MIMO_ANT_A	5.2G WLAN_MIMO_ANT_B
	Calculated Frequency (GHz)	5.18	5.2	5.23	5.23
	Maximum Turn-up power (dBm)	13	13	14.5	14.5
	Maximum rated power(mW)	19.95	19.95	28.18	28.18
Back Side	Separation distance (cm)	1.27	1.27	1.27	1.27
	exclusion threshold(mW)	9.74	9.72	9.70	9.70
	Testing required?	YES	YES	YES	YES
Front Side	Separation distance (cm)	2.57	2.57	2.57	2.57
	exclusion threshold(mW)	38.57	38.39	38.14	38.14
	Testing required?	NO	NO	NO	NO
Left Side	Separation distance (cm)	2.74	1.2	2.74	1.2
	exclusion threshold(mW)	38.57	8.57	42.21	8.55
	Testing required?	NO	YES	NO	YES
Right Side	Separation distance (cm)	36.2	35	36.2	35
	exclusion threshold(mW)	1724.85	1664.52	1726.91	1665.70
	Testing required?	NO	NO	NO	NO
Top Side	Separation distance (cm)	1.79	5.14	1.79	5.14
	exclusion threshold(mW)	19.96	142.96	19.87	142.58
	Testing required?	NO	NO	YES	NO
Bottom Side	Separation distance (cm)	22.27	17.35	22.27	17.35
	exclusion threshold(mW)	1015.51	765.14	1016.35	765.39
	Testing required?	NO	NO	NO	NO



Exposure Position	Wireless Interface	5.3G WLAN_ANT_A	5.3G WLAN_ANT_B	5.3G WLAN_MIMO_ANT_A	5.3G WLAN_MIMO_ANT_B
	Calculated Frequency (GHz)	5.26	5.3	5.26	5.26
	Maximum Turn-up power (dBm)	12.5	13	14.5	14.5
	Maximum rated power(mW)	17.78	19.95	28.18	28.18
Back Side	Separation distance (cm)	1.27	1.27	1.27	1.27
	exclusion threshold(mW)	9.68	9.65	9.68	9.68
	Testing required?	YES	YES	YES	YES
Front Side	Separation distance (cm)	2.57	2.57	2.57	2.57
	exclusion threshold(mW)	60.68	37.57	60.68	60.68
	Testing required?	NO	NO	NO	NO
Left Side	Separation distance (cm)	2.74	1.2	2.74	1.2
	exclusion threshold(mW)	42.01	8.50	42.01	8.53
	Testing required?	NO	YES	NO	YES
Right Side	Separation distance (cm)	36.2	35	36.2	35
	exclusion threshold(mW)	1728.14	1668.43	1728.14	1666.87
	Testing required?	NO	NO	NO	NO
Top Side	Separation distance (cm)	1.79	5.14	1.79	5.14
	exclusion threshold(mW)	19.81	141.68	19.81	142.19
	Testing required?	NO	NO	YES	NO
Bottom Side	Separation distance (cm)	22.27	17.35	22.27	17.35
	exclusion threshold(mW)	1016.86	765.98	1016.86	765.65
	Testing required?	NO	NO	NO	NO

Exposure Position	Wireless Interface	5.6G WLAN_ANT_A	5.6G WLAN_ANT_B	5.6G WLAN_MIMO_ANT_A	5.6G WLAN_MIMO_ANT_B
	Calculated Frequency (GHz)	5.7	5.7	5.7	5.7
	Maximum Turn-up power (dBm)	13	13.5	15	15
	Maximum rated power(mW)	19.95	22.39	31.62	31.62
Back Side	Separation distance (cm)	1.27	1.27	1.27	1.27
	exclusion threshold(mW)	9.39	9.39	9.39	9.39
	Testing required?	YES	YES	YES	YES
Front Side	Separation distance (cm)	2.57	2.57	2.57	2.57
	exclusion threshold(mW)	34.12	34.12	34.12	34.12
	Testing required?	NO	NO	NO	NO
Left Side	Separation distance (cm)	2.74	1.2	2.74	1.2
	exclusion threshold(mW)	37.37	8.26	37.37	8.26
	Testing required?	NO	YES	NO	YES
Right Side	Separation distance (cm)	36.2	35	36.2	35
	exclusion threshold(mW)	1746.28	1684.09	1746.28	1684.09
	Testing required?	NO	NO	NO	NO
Top Side	Separation distance (cm)	1.79	5.14	1.79	5.14
	exclusion threshold(mW)	18.99	136.56	18.99	136.56
	Testing required?	YES	NO	YES	NO
Bottom Side	Separation distance (cm)	22.27	17.35	22.27	17.35
	exclusion threshold(mW)	1024.34	769.36	1024.34	769.36
	Testing required?	NO	NO	NO	NO

Exposure Position	Wireless Interface	5.8G WLAN_ANT_A	5.8G WLAN_ANT_B	5.8G WLAN_MIMO_ANT_A	5.8G WLAN_MIMO_ANT_B
	Calculated Frequency (GHz)	5.785	5.745	5.785	5.785
	Maximum Turn-up power (dBm)	13	13	14.5	14.5
	Maximum rated power(mW)	19.95	19.95	28.18	28.18
Back Side	Separation distance (cm)	1.27	1.27	1.27	1.27
	exclusion threshold(mW)	9.33	9.36	9.33	9.33
	Testing required?	YES	YES	YES	YES
Front Side	Separation distance (cm)	2.57	2.57	2.57	2.57
	exclusion threshold(mW)	33.39	33.73	33.39	33.39
	Testing required?	NO	NO	NO	NO
Left Side	Separation distance (cm)	2.74	1.2	2.74	1.2
	exclusion threshold(mW)	36.48	8.23	36.48	8.21
	Testing required?	NO	YES	NO	YES
Right Side	Separation distance (cm)	36.2	35	36.2	35
	exclusion threshold(mW)	1749.78	1685.85	1749.78	1687.41
	Testing required?	NO	NO	NO	NO
Top Side	Separation distance (cm)	1.79	5.14	1.79	5.14
	exclusion threshold(mW)	18.83	135.98	18.83	135.47
	Testing required?	YES	NO	YES	NO
Bottom Side	Separation distance (cm)	22.27	17.35	22.27	17.35
	exclusion threshold(mW)	1025.79	769.74	1025.79	770.07
	Testing required?	NO	NO	NO	NO

Exposure Position	Wireless Interface	2.4G WLAN_ANT_ C	2.4G WLAN_ANT_ D	2.4G WLAN_MIMO_ANT _C	2.4G WLAN_MIMO_ANT _D
	Calculated Frequency (GHz)	2.462	2.462	2.462	2.462
	Maximum Turn-up power (dBm)	20.5	21	21	21
	Maximum rated power(mW)	112.20	125.89	125.89	125.89
Back Side	Separation distance (cm)	1.27	1.27	1.27	1.27
	exclusion threshold(m W)	11.85	11.85	11.85	11.85
	Testing required?	YES	YES	YES	YES
Front Side	Separation distance (cm)	2.57	2.57	2.57	2.57
	exclusion threshold(m W)	60.53	60.53	60.53	60.53
	Testing required?	YES	YES	YES	YES
Left Side	Separation distance (cm)	1.2	1.2	1.2	1.2
	exclusion threshold(m W)	10.59	10.59	10.59	10.59
	Testing required?	YES	YES	YES	YES
Right Side	Separation distance (cm)	35	35	35	35
	exclusion threshold(m W)	2395.78	2395.78	2395.78	2395.78
	Testing required?	NO	NO	NO	NO
Top Side	Separation distance (cm)	11.45	17.95	11.45	17.95
	exclusion threshold(m W)	706.64	1172.85	706.64	1172.85
	Testing required?	NO	NO	NO	NO
Bottom Side	Separation distance (cm)	11.52	7.48	11.52	7.48
	exclusion threshold(m W)	711.66	421.89	711.66	421.89
	Testing required?	NO	NO	NO	NO

Exposure Position	Wireless Interface	5.2G WLAN_ANT_C	5.2G WLAN_ANT_D	5.2G WLAN_MIMO_ANT_C	5.2G WLAN_MIMO_ANT_D
	Calculated Frequency (GHz)	5.24	5.18	5.24	5.24
	Maximum Turn-up power (dBm)	13	13	14.5	14.5
	Maximum rated power(mW)	19.95	19.95	28.18	28.18
Back Side	Separation distance (cm)	1.27	1.27	1.27	1.27
	exclusion threshold(m W)	9.69	9.74	9.69	9.69
	Testing required?	YES	YES	YES	YES
Front Side	Separation distance (cm)	2.57	2.57	2.57	2.57
	exclusion threshold(m W)	38.09	38.60	38.09	38.09
	Testing required?	NO	NO	NO	NO
Left Side	Separation distance (cm)	1.2	1.2	1.2	1.2
	exclusion threshold(m W)	8.54	8.58	8.54	8.54
	Testing required?	YES	YES	YES	YES
Right Side	Separation distance (cm)	35	35	35	35
	exclusion threshold(m W)	1666.09	1663.74	1666.09	1666.09
	Testing required?	NO	NO	NO	NO
Top Side	Separation distance (cm)	11.45	17.95	11.45	17.95
	exclusion threshold(m W)	464.42	795.52	464.42	796.09
	Testing required?	NO	NO	NO	NO

Bottom Side	Separation distance (cm)	11.52	7.48	11.52	7.48
	exclusion threshold(m W)	467.99	262.37	467.99	261.85
	Testing required?	NO	NO	NO	NO

Exposure Position	Wireless Interface	5.3G WLAN_ANT_C	5.3G WLAN_ANT_D	5.3G WLAN_MIMO_ANT_C	5.3G WLAN_MIMO_ANT_D
	Calculated Frequency (GHz)	5.32	5.26	5.26	5.26
	Maximum Turn-up power (dBm)	13.5	13	14	14
	Maximum rated power(mW)	22.39	19.95	25.12	25.12
Back Side	Separation distance (cm)	1.27	1.27	1.27	1.27
	exclusion threshold(m W)	9.64	9.68	9.68	9.68
	Testing required?	YES	YES	YES	YES
Front Side	Separation distance (cm)	2.57	2.57	2.57	2.57
	exclusion threshold(m W)	37.40	37.91	37.91	37.91
	Testing required?	NO	NO	NO	NO
Left Side	Separation distance (cm)	1.2	1.2	1.2	1.2
	exclusion threshold(m W)	8.49	8.53	8.53	8.53
	Testing required?	YES	YES	YES	YES
Right Side	Separation distance (cm)	35	35	35	35
	exclusion threshold(m W)	1669.22	1666.87	1666.87	1666.87
	Testing required?	NO	NO	NO	NO

Top Side	Separation distance (cm)	11.45	17.95	11.45	17.95
	exclusion threshold(mW)	464.28	796.28	464.39	796.28
	Testing required?	NO	NO	NO	NO
Bottom Side	Separation distance (cm)	11.52	7.48	11.52	7.48
	exclusion threshold(mW)	467.86	261.67	467.96	261.67
	Testing required?	NO	NO	NO	NO

Exposure Position	Wireless Interface	5.6G WLAN_ANT_C	5.6G WLAN_ANT_D	5.6G WLAN_MIMO_ANT_C	5.6G WLAN_MIMO_ANT_D
	Calculated Frequency (GHz)	5.5	5.7	5.5	5.5
	Maximum Turn-up power (dBm)	13.5	13.5	14.5	14.5
	Maximum rated power(mW)	22.39	22.39	28.18	28.18
Back Side	Separation distance (cm)	1.27	1.27	1.27	1.27
	exclusion threshold(mW)	9.52	9.39	9.52	9.52
	Testing required?	YES	YES	YES	YES
Front Side	Separation distance (cm)	2.57	2.57	2.57	2.57
	exclusion threshold(mW)	35.85	34.12	35.85	35.85
	Testing required?	NO	NO	NO	NO
Left Side	Separation distance (cm)	1.2	1.2	1.2	1.2
	exclusion threshold(mW)	8.38	8.26	8.38	8.38
	Testing required?	YES	YES	YES	YES

Right Side	Separation distance (cm)	35	35	35	35
	exclusion threshold(mW)	1676.26	1684.09	1676.26	1676.26
	Testing required?	NO	NO	NO	NO
Top Side	Separation distance (cm)	11.45	17.95	11.45	17.95
	exclusion threshold(mW)	463.95	800.45	463.95	798.56
	Testing required?	NO	NO	NO	NO
Bottom Side	Separation distance (cm)	11.52	7.48	11.52	7.48
	exclusion threshold(mW)	467.55	257.83	467.55	259.58
	Testing required?	NO	NO	NO	NO

Exposure Position	Wireless Interface	5.8G WLAN_ANT_C	5.8G WLAN_ANT_D	5.8G WLAN_MIMO_ANT_C	5.8G WLAN_MIMO_ANT_D
	Calculated Frequency (GHz)	5.785	5.785	5.785	5.785
	Maximum Turn-up power (dBm)	13.5	14	14.5	14.5
	Maximum rated power(mW)	22.39	25.12	28.18	28.18
Back Side	Separation distance (cm)	1.27	1.27	1.27	1.27
	exclusion threshold(mW)	9.33	9.33	9.33	9.33
	Testing required?	YES	YES	YES	YES
Front Side	Separation distance (cm)	2.57	2.57	2.57	2.57
	exclusion threshold(mW)	33.39	33.39	33.39	33.39
	Testing required?	NO	NO	NO	NO

Left Side	Separation distance (cm)	1.2	1.2	1.2	1.2
	exclusion threshold(mW)	8.21	8.21	8.21	8.21
	Testing required?	YES	YES	YES	YES
Right Side	Separation distance (cm)	35	35	35	35
	exclusion threshold(mW)	1687.41	1687.41	1687.41	1687.41
	Testing required?	NO	NO	NO	NO
Top Side	Separation distance (cm)	11.45	17.95	11.45	17.95
	exclusion threshold(mW)	463.43	801.26	463.43	801.26
	Testing required?	NO	NO	NO	NO
Bottom Side	Separation distance (cm)	11.52	7.48	11.52	7.48
	exclusion threshold(mW)	467.07	257.09	467.07	257.09
	Testing required?	NO	NO	NO	NO

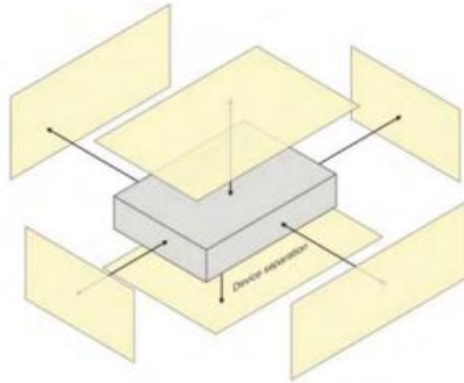
8. EUT Test Position

This EUT was tested in Back Side, Front Side, Left Side and Top Side.

8.1 Body-worn Position Conditions

Body-worn Position Conditions:

Body-worn accessory exposure is typically related to voice mode operations when handsets are carried in body-worn accessories. The body-worn accessory procedures in KDB Publication 447498 D04 should be used to test for body-worn accessory SAR compliance, without a headset connected to it. When the same wireless transmission configuration is used for testing body-worn accessory and hotspot mode SAR, respectively, in voice and data mode, SAR results for the most conservative *test separation distance* configuration may be used to support both SAR conditions. When the *reported* SAR for a body-worn accessory, measured without a headset connected to the handset, is $> 1.2 \text{ W/kg}$, the highest *reported* SAR configuration for that wireless mode and frequency band should be repeated for the body-worn accessory with a headset attached to the handset.



9. Uncertainty

9.1 Measurement Uncertainty

The following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in IEC/IEEE 62209-1528:2020. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$.

Uncertainty Component	Tol (+-%)	Prob. Dist.	Div.	Ci (1g)	Ci (10g)	1g Ui (+-%)	10g Ui (+-%)	v_i
Measurement System								
Probe calibration	5.72	N	1	1	1	5.72	5.72	∞
Axial Isotropy	0.18	R	$\sqrt{3}$	$\sqrt{0.5}$	$\sqrt{0.5}$	0.07	0.07	∞
Hemispherical Isotropy	1.04	R	$\sqrt{3}$	$\sqrt{0.5}$	$\sqrt{0.5}$	0.42	0.42	∞
Boundary effect	0.8	R	$\sqrt{3}$	1	1	0.46	0.46	∞
Linearity	1.25	R	$\sqrt{3}$	1	1	0.72	0.72	∞
System detection limits	1.20	R	$\sqrt{3}$	1	1	0.69	0.69	∞
Modulation response	3.42	R	$\sqrt{3}$	1	1	3.42	3.42	∞
Readout Electronics	0.26	N	1	1	1	0.26	0.26	∞
Response Time	0.17	R	$\sqrt{3}$	1	1	0.10	0.10	∞
Integration Time	1.43	R	$\sqrt{3}$	1	1	0.83	0.83	∞
RF ambient conditions- Noise	3.51	R	$\sqrt{3}$	1	1	2.03	2.03	∞
RF ambient conditions- reflections	3.15	R	$\sqrt{3}$	1	1	1.82	1.82	∞
Probe positioner mechanical tolerance	1.2	R	$\sqrt{3}$	1	1	0.69	0.69	∞
Probe positioning with respect to phantom shell	1.4	R	$\sqrt{3}$	1	1	0.81	0.81	∞
Post-processing	2.1	R	$\sqrt{3}$	1	1	1.21	1.21	∞
Test sample Related								
Test sample positioning	3.1	N	1	1	1	3.10	3.10	∞
Device holder uncertainty	3.8	N	1	1	1	3.80	3.80	∞
SAR drift measurement	4.5	R	$\sqrt{3}$	1	1	2.60	2.60	∞
SAR scaling	1.8	R	$\sqrt{3}$	1	1	1.04	1.04	∞
Phantom and tissue parameters								
Phantom uncertainty (shape and thickness uncertainty)	3.7	R	$\sqrt{3}$	1	1	2.14	2.14	∞
Uncertainty in SAR correction for deviations in permittivity and conductivity	2.1	N	1	1	0.84	2.10	1.76	∞
Liquid conductivity (temperature uncertainty)	2.4	R	$\sqrt{3}$	0.78	0.71	1.87	1.70	∞
Liquid conductivity (measured)	4.1	N	1	0.78	0.71	0.94	1.07	M
Liquid permittivity (temperature uncertainty)	2.7	R	$\sqrt{3}$	0.23	0.26	2.11	1.92	∞
Liquid permittivity (measured)	4.8	N	1	0.23	0.26	1.10	1.25	M
Combined Standard Uncertainty		RSS				10.37	10.27	
Expanded Uncertainty (95% Confidence interval)		K=2				20.74	20.53	

10. Conducted Power Measurement

10.1 Test Result

Bluetooth

Bluetooth (Module 1)				
	Mode	Channel Number	Frequency (MHz)	ANT_A Conducted Power (dBm)
BR+EDR	1-DH5	0	2402	5.16
		39	2441	5.59
		78	2482	4.35
	2-DH5	0	2402	4.3
		39	2441	4.93
		78	2482	3.77
	3-DH5	0	2402	4.47
		39	2441	5.31
		78	2482	4.1
BLE	1M	0	2402	4.2
		19	2441	5.04
		39	2482	3.74
	2M	0	2402	4.51
		19	2441	4.99
		39	2482	3.66

2.4G WLAN

2.4GWIFI (Module 1)					
Mode	Channel Number	Frequency (MHz)	ANT_A Conducted Power (dBm)	ANT_B Conducted Power (dBm)	ANT_A+B Conducted Power (dBm)
802.11b	1	2412	16.18	15.51	N/A
	7	2437	16.06	15.69	N/A
	11	2462	15.7	15.68	N/A
802.11g	1	2412	19.08	18.2	N/A
	7	2437	19.42	18.7	N/A
	11	2462	18.62	18.07	N/A
802.11 n-HT20	1	2412	18.18	17.24	20.75
	7	2437	18.47	17.66	21.09
	11	2462	17.95	17.16	20.58
802.11 n-HT40	3	2422	16.88	16.85	19.88
	6	2437	15.36	15.21	18.30
	9	2452	15.86	15.59	18.74
802.11ax-HE20	1	2412	16.49	15.14	18.88
	7	2437	16.26	15.58	18.94
	11	2462	16.39	15.24	18.86
802.11ax-HE40	3	2422	16.53	15.55	19.08
	6	2437	16.41	15.92	19.18

	9	2452	16.47	16.07	19.28
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2.4GWIFI (Module 2)					
Mode	Channel Number	Frequency (MHz)	ANT_C Conducted Power (dBm)	ANT_D Conducted Power (dBm)	ANT_C+D Conducted Power (dBm)
802.11b	1	2412	18.9	19.59	N/A
	7	2437	19.25	20.65	N/A
	11	2462	19.6	20.78	N/A
802.11g	1	2412	19.83	19.05	N/A
	7	2437	19.97	19.41	N/A
	11	2462	20.31	19.48	N/A
802.11 n-HT20	1	2412	17.53	16.85	20.21
	7	2437	17.92	17.46	20.71
	11	2462	18.01	17.41	20.73
802.11 n-HT40	3	2422	16.73	16.27	19.52
	6	2437	17.00	16.56	19.80
	9	2452	17.13	16.51	19.84
802.11ax-HE20	1	2412	16.42	15.97	19.21
	7	2437	16.91	16.39	19.67
	11	2462	17.09	16.43	19.78
802.11ax-HE40	3	2422	16.66	16.25	19.47
	6	2437	16.94	16.40	19.69
	9	2452	17.13	16.44	19.81

5.2G WLAN

5.2G WLAN (Module 1)					
Mode	Channel Number	Frequency (MHz)	ANT_A Total Power (dBm)	ANT_B Total Power (dBm)	ANT_A+B Total Power (dBm)
802.11a	36	5180	12.73	11.97	N/A
	40	5200	12.69	12.91	N/A
	48	5240	12.72	11.3	N/A
802.11 n-HT20	36	5180	11.63	7.39	13.02
	40	5200	11.92	8.17	13.45
	48	5240	11.43	9.29	13.50
802.11 n-HT40	38	5190	11.56	7.10	12.89
	46	5230	12.32	9.47	14.14
802.11ac-VHT20	36	5180	10.79	6.47	12.16
	40	5200	11.50	7.34	12.91
	48	5240	11.04	8.21	12.86
802.11ac-VHT40	38	5190	12.09	7.51	13.39
	46	5230	11.97	9.17	13.80
802.11ac-VHT80	42	5210	10.71	7.66	12.46
802.11ac-VHT160	50	5250	8.79	6.35	10.75
802.11ax-HE20	36	5180	11.18	6.64	12.49
	40	5200	11.41	6.95	12.74
	48	5240	10.69	8.17	12.62

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802.11ax-HE40	38	5190	11.38	7.52	12.88
	46	5230	12.46	8.12	13.82
802.11ax-HE80	42	5210	11.45	7.73	12.99
802.11ax-HE160	50	5250	10.01	6.67	11.66

5.2G WLAN (Module 2)					
Mode	Channel Number	Frequency (MHz)	ANT_C Total Power (dBm)	ANT_D Total Power (dBm)	ANT_C+D Total Power (dBm)
802.11a	36	5180	12.25	12.91	N/A
	40	5200	12.22	12.46	N/A
	48	5240	12.68	11.66	N/A
802.11 n-HT20	36	5180	11.87	9.53	13.87
	40	5200	12.23	7.94	13.60
	48	5240	12.80	8.63	14.21
802.11 n-HT40	38	5190	12.42	7.71	13.68
	46	5230	10.53	5.66	11.75
802.11ac-VHT20	36	5180	11.02	8.79	13.06
	40	5200	11.11	7.02	12.54
	48	5240	11.82	7.54	13.20
802.11ac-VHT40	38	5190	11.22	8.18	12.97
	46	5230	11.60	6.72	12.82
802.11ac-VHT80	42	5210	10.49	8.15	12.49
802.11ac-VHT20	36	5180	10.94	8.65	12.95
	40	5200	11.09	6.98	12.51
	48	5240	11.70	7.57	13.12
802.11ac-VHT40	38	5190	11.25	8.08	12.96
	46	5230	11.84	6.76	13.01
802.11ac-VHT80	42	5210	11.86	6.73	13.02

5.3G WLAN

5.3G WLAN (Module 1)					
Mode	Channel Number	Frequency (MHz)	ANT_A Total Power (dBm)	ANT_B Total Power (dBm)	ANT_A+B Total Power (dBm)
802.11a	52	5260	12.32	11.82	N/A
	60	5300	11.47	12.61	N/A
	64	5320	11.62	12.96	N/A
802.11 n-HT20	52	5260	11.84	10.01	14.03
	60	5300	10.12	9.90	13.02
	64	5320	10.52	10.57	13.56
802.11 n-HT40	54	5270	10.67	9.84	13.29
	62	5310	10.66	9.78	13.25
802.11ac-VHT20	52	5260	10.86	8.58	12.88
	60	5300	10.02	9.54	12.80
	64	5320	10.35	11.15	13.78

802.11ac-VHT40	54	5270	10.80	9.27	13.11
	62	5310	9.99	10.31	13.16
802.11ac-VHT80	58	5290	9.51	10.36	12.97
802.11ax-HE20	52	5260	11.21	10.31	13.79
	60	5300	10.00	10.46	13.25
	64	5320	10.75	10.14	13.47
802.11ax-HE40	54	5270	11.25	10.69	13.99
	62	5310	10.36	10.86	13.63
802.11ax-HE80	58	5290	10.70	9.73	13.25

5.3G WLAN (Module 2)					
Mode	Channel Number	Frequency (MHz)	ANT_C Total Power (dBm)	ANT_D Total Power (dBm)	ANT_C+D Total Power (dBm)
802.11a	52	5260	12.93	12.55	N/A
	60	5300	12.99	11.63	N/A
	64	5320	13.13	11.73	N/A
802.11 n-HT20	52	5260	12.04	9.30	13.89
	60	5300	12.07	7.29	13.32
	64	5320	12.31	6.78	13.38
802.11 n-HT40	54	5270	11.04	8.07	12.81
	62	5310	11.33	6.10	12.47
802.11ac-VHT20	52	5260	10.98	8.45	12.91
	60	5300	11.12	6.17	12.33
	64	5320	11.07	5.79	12.20
802.11ac-VHT40	54	5270	11.13	8.10	12.88
	62	5310	11.40	6.22	12.55
802.11ac-VHT80	58	5290	11.17	6.96	12.57
802.11ac-VHT20	52	5260	11.11	8.48	13.00
	60	5300	11.04	6.25	12.28
	64	5320	11.18	5.82	12.29
802.11ac-VHT40	54	5270	11.16	8.14	12.92
	62	5310	11.44	6.25	12.59
802.11ac-VHT80	58	5290	11.78	7.30	13.10

5.6G WLAN

5.6G WLAN (Module 1)					
Mode	Channel Number	Frequency (MHz)	ANT_A Total Power (dBm)	ANT_B Total Power (dBm)	ANT_A+B Total Power (dBm)
802.11a	100	5500	11.03	12.49	N/A
	116	5580	11.28	13.13	N/A
	140	5700	12.71	13.14	N/A
802.11 n-HT20	100	5500	11.17	11.18	14.19
	116	5580	11.35	11.95	14.67
	140	5700	12.28	11.48	14.91

802.11 n-HT40	102	5510	10.59	9.60	13.13
	110	5550	10.48	10.70	13.60
	134	5670	9.99	10.72	13.38
802.11ac-VHT20	100	5500	10.30	10.52	13.42
	116	5580	9.87	10.73	13.33
	140	5700	11.39	10.13	13.82
802.11ac-VHT40	102	5510	10.37	10.22	13.31
	110	5550	9.83	10.57	13.23
	134	5670	10.02	10.78	13.43
802.11ac-VHT80	106	5530	10.46	10.95	13.72
	122	5610	9.63	10.45	13.07
802.11ac-VHT160	114	5570	9.94	9.98	12.97
802.11ax-HE20	100	5500	9.94	10.19	13.08
	116	5580	9.69	10.78	13.28
	140	5700	9.66	10.58	13.15
802.11ax-HE40	102	5510	10.25	10.29	13.28
	110	5550	9.66	10.85	13.31
	134	5670	8.78	10.29	12.61
802.11ax-HE80	106	5530	9.16	9.86	12.53
	122	5610	10.24	10.15	13.21
802.11ax-HE160	114	5570	10.03	10.70	13.39

5.6G WLAN (Module 2)					
Mode	Channel Number	Frequency (MHz)	ANT_C Total Power (dBm)	ANT_D Total Power (dBm)	ANT_C+D Total Power (dBm)
802.11a	100	5500	13.03	11.01	N/A
	116	5580	12.26	11.78	N/A
	140	5700	11.66	13.27	N/A
802.11 n-HT20	100	5500	13.05	7.82	14.19
	116	5580	12.22	8.44	13.74
	140	5700	11.53	10.07	13.87
802.11 n-HT40	102	5510	11.88	7.17	13.14
	110	5550	11.52	8.53	13.29
	134	5670	10.79	9.99	13.42
802.11ac-VHT20	100	5500	11.86	6.71	13.02
	116	5580	10.96	6.57	12.31
	140	5700	10.46	8.63	12.65
802.11ac-VHT40	102	5510	11.88	6.95	13.09
	110	5550	11.73	8.67	13.47
	134	5670	10.85	10.20	13.55
802.11ac-VHT80	106	5530	11.81	7.58	13.20
	122	5610	11.39	7.19	12.79
802.11ax-HE20	100	5500	11.75	6.52	12.89
	116	5580	11.11	6.67	12.44
	140	5700	10.69	8.59	12.78
802.11ax-HE40	102	5510	11.79	7.06	13.05

802.11ax-HE80	110	5550	11.89	8.62	13.57
	134	5670	10.75	10.21	13.50
	106	5530	12.29	7.92	13.64
	122	5610	11.92	7.25	13.19

5.8G WLAN

5.8G WLAN (Module 1)					
Mode	Channel Number	Frequency (MHz)	ANT_A Total Power (dBm)	ANT_B Total Power (dBm)	ANT_A+B Total Power (dBm)
802.11a	149	5745	12.78	12.66	N/A
	157	5785	12.91	12.15	N/A
	165	5825	12.62	12.34	N/A
802.11 n-HT20	149	5745	11.98	10.85	14.46
	157	5785	11.98	10.92	14.49
	165	5825	12.13	10.28	14.31
802.11 n-HT40	151	5755	10.87	9.91	13.43
	159	5795	10.15	9.66	12.92
802.11ac-VHT20	149	5745	10.98	10.59	13.8
	157	5785	11.11	9.68	13.46
	165	5825	10.92	9.63	13.33
802.11ac-VHT40	151	5755	10.56	9.78	13.2
	159	5795	10.74	9.24	13.06
802.11ac-VHT80	155	5775	11.25	8.44	13.08
802.11ax-HE20	149	5745	10.81	10.45	13.64
	157	5785	10.93	10.51	13.74
	165	5825	10.81	9.51	13.22
802.11ax-HE40	151	5755	11.4	9.42	13.53
	159	5795	9.41	9.39	12.41
802.11ax-HE80	155	5775	11.21	9.2	13.33

5.8G WLAN (Module 2)					
Mode	Channel Number	Frequency (MHz)	ANT_C Total Power (dBm)	ANT_D Total Power (dBm)	ANT_C+D Total Power (dBm)
802.11a	149	5745	12.76	13.25	N/A
	157	5785	13.02	13.54	N/A
	165	5825	12.96	13.41	N/A
802.11 n-HT20	149	5745	11.7	10.01	13.95
	157	5785	11.85	10.28	14.15
	165	5825	11.9	10.19	14.14
802.11 n-HT40	151	5755	10.78	9.52	13.21
	159	5795	10.92	10.59	13.77
802.11ac-VHT20	149	5745	10.2	8.06	12.27
	157	5785	10.89	10.52	13.72
	165	5825	10.5	7.99	12.43

802.11ac-VHT40	151	5755	10.71	9.89	13.33
	159	5795	10.88	10.26	13.59
802.11ac-VHT80	155	5775	10.51	11.03	13.79
802.11ax-HE20	149	5745	10.63	8.31	12.63
	157	5785	10.83	10.86	13.86
	165	5825	10.69	8.08	12.59
802.11ax-HE40	151	5755	10.73	9.91	13.35
	159	5795	10.79	10.36	13.59
802.11ax-HE80	155	5775	10.14	10.34	13.25

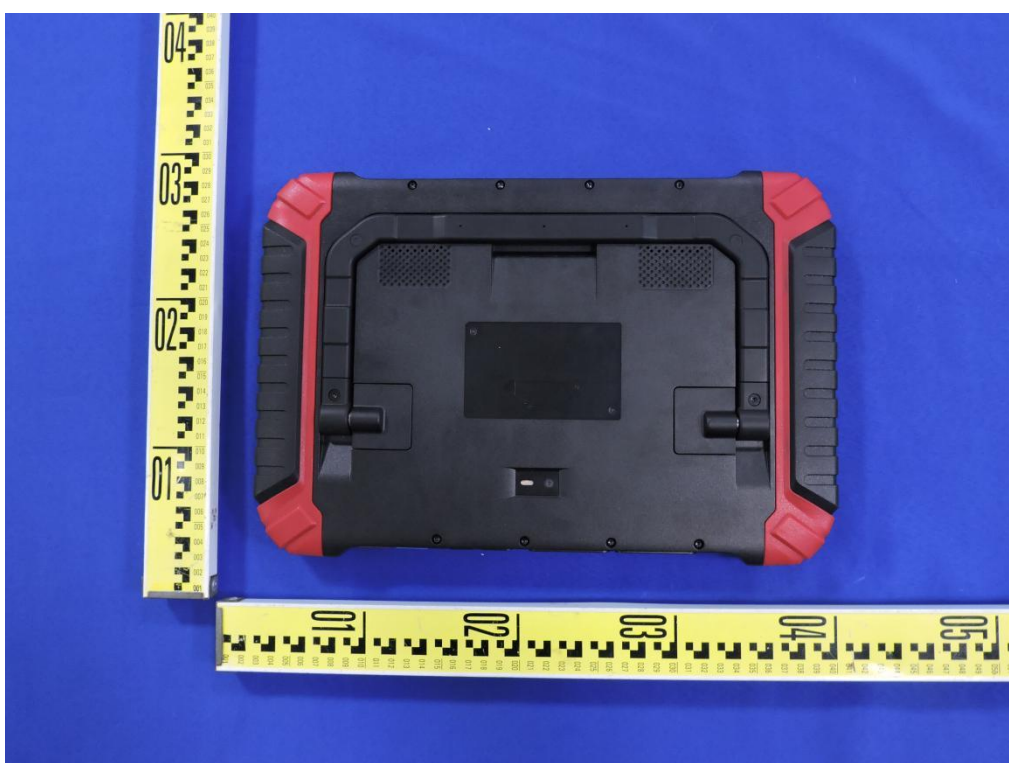
11. EUT and Test Setup Photo

11.1 EUT Photo

Front side



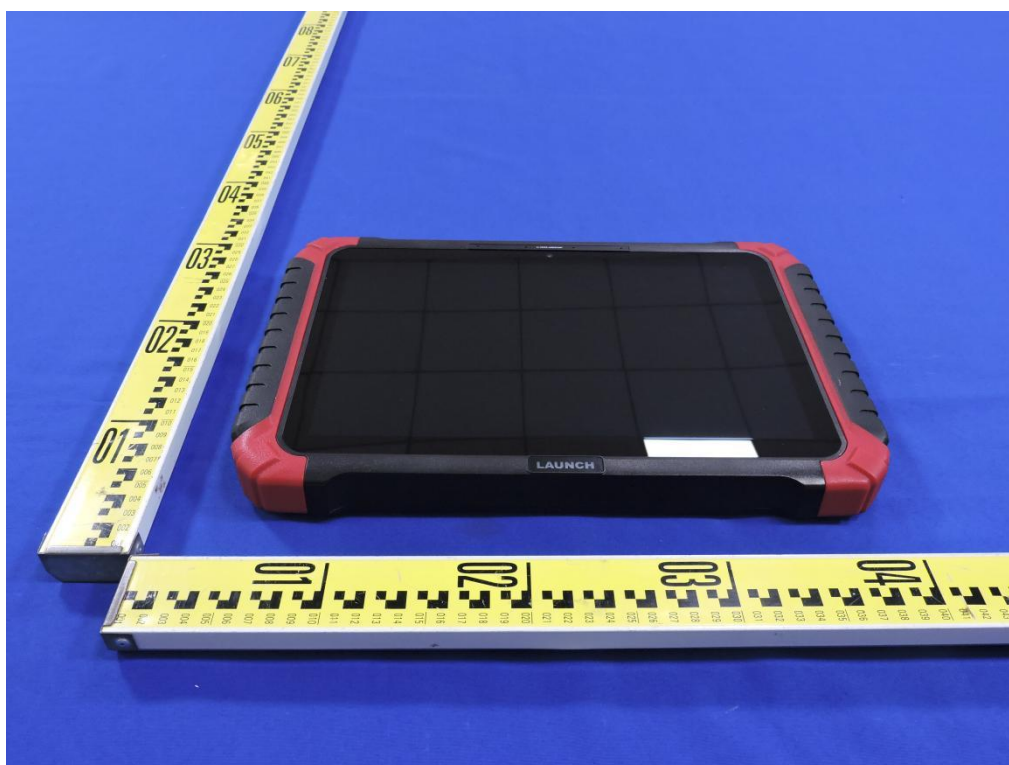
Back side



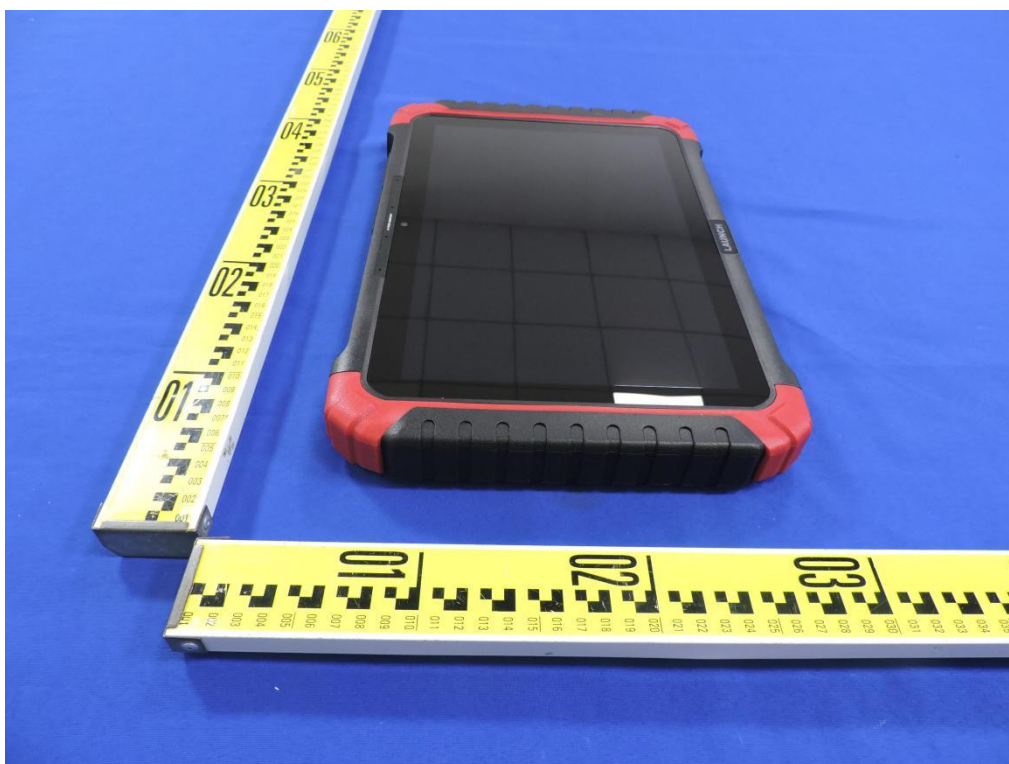
Top side



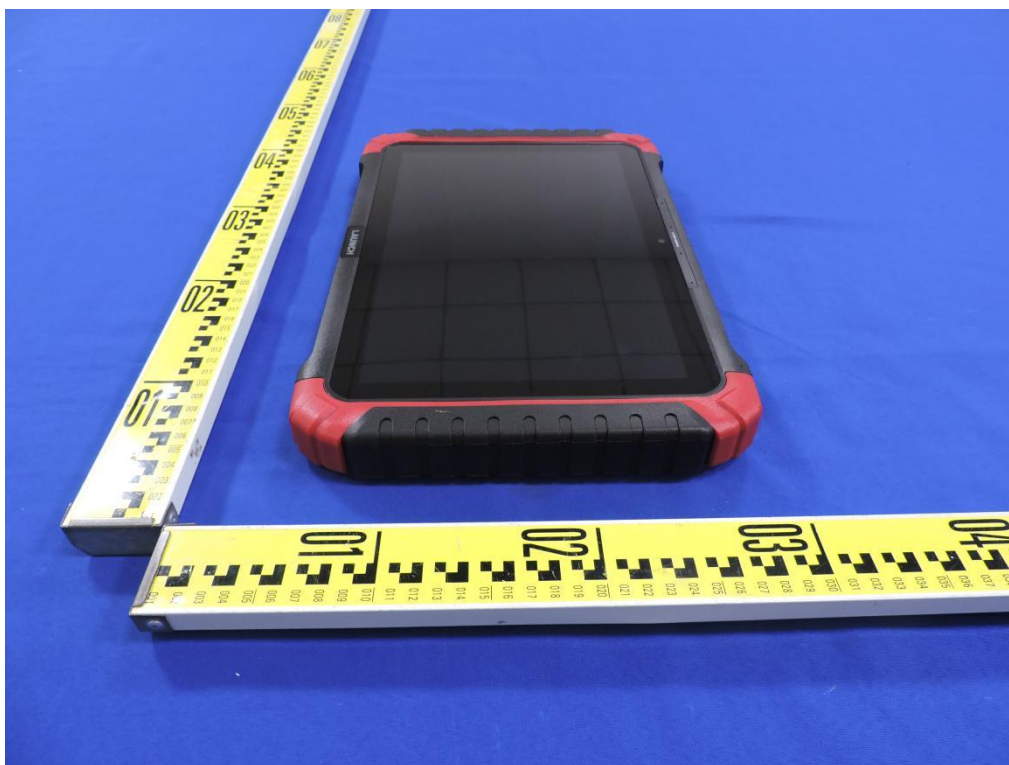
Bottom side



Left side

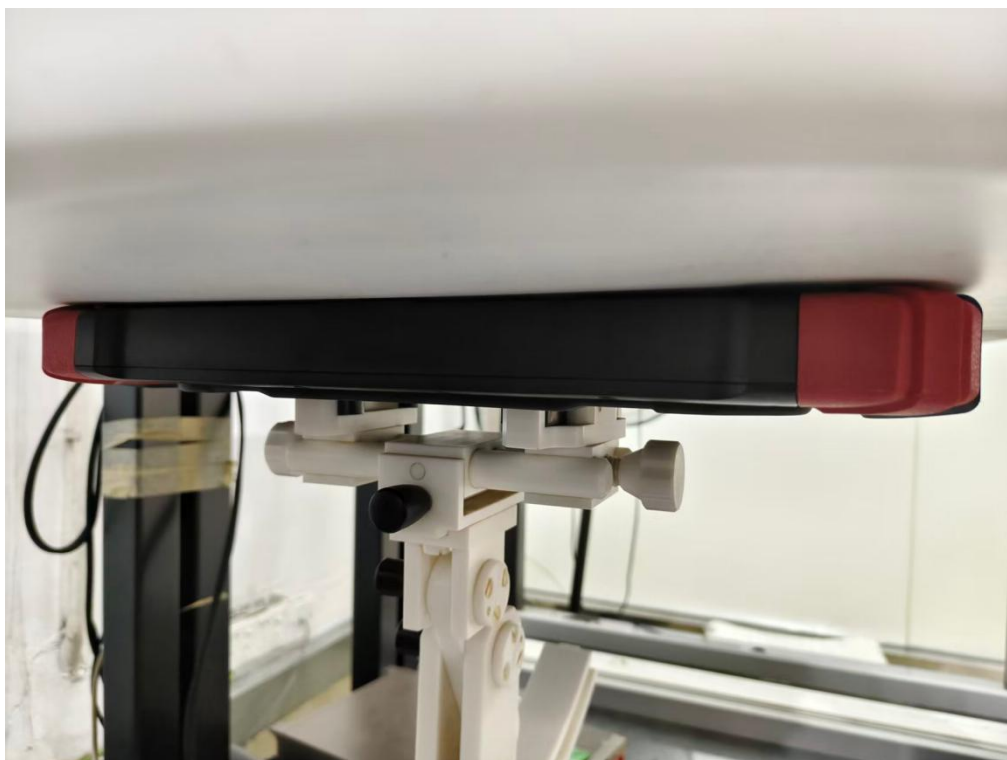


Right side

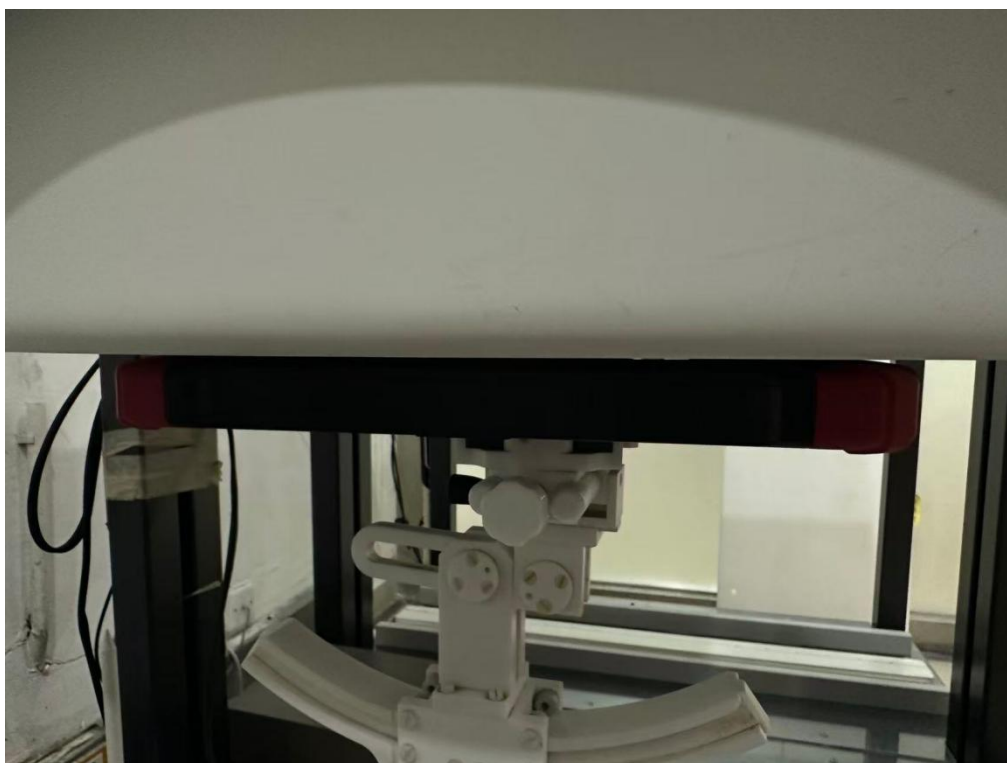


11.2 Setup Photo

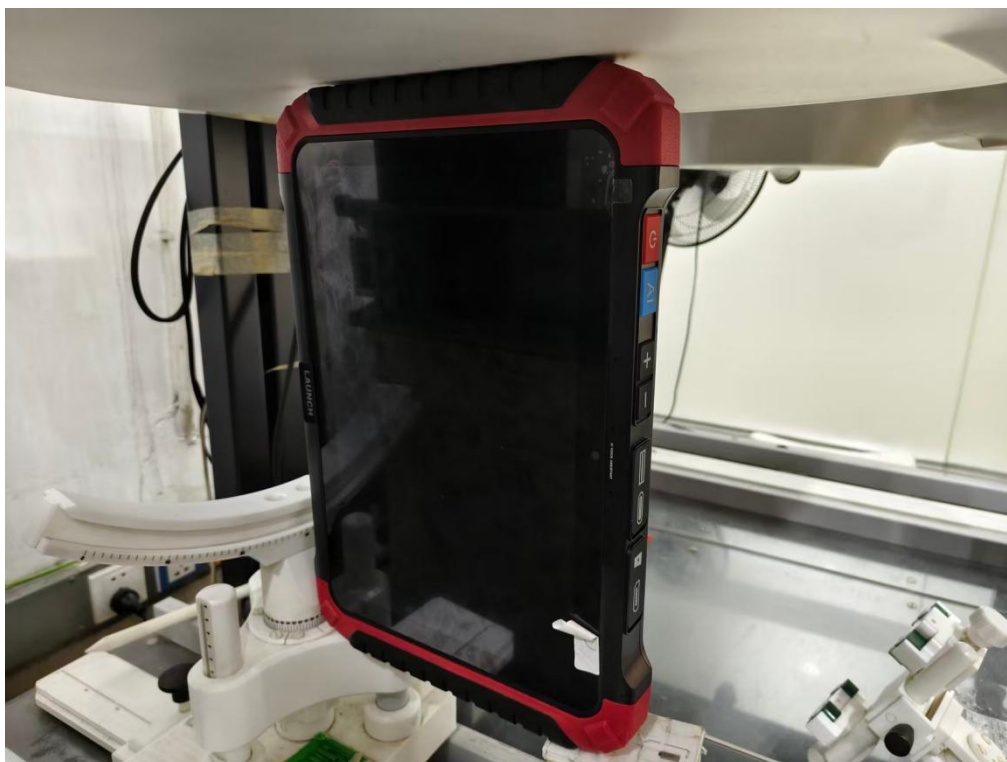
Body Front Side (separation distance is 0mm)



Body Back Side (separation distance is 0mm)



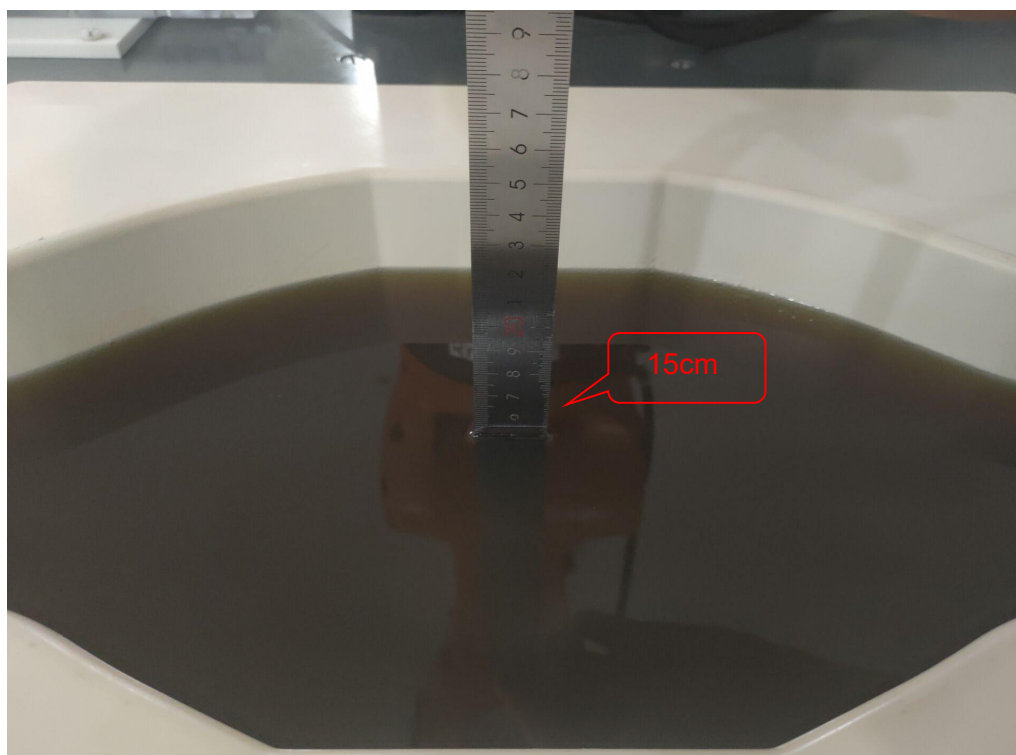
Body Left Side (separation distance is 0mm)



Body Top Side (separation distance is 0mm)



Liquid depth (15 cm)



12. SAR Result Summary

12.1 Body SAR

Band	Model	Test Position	Freq.	SAR (1g) (W/kg)	Power Drift (%)	Max.Turn-up Power (dBm)	Meas.Output Power (dBm)	Scaled SAR (W/Kg)	Meas. No.
2.4G WLAN_ANT_A	802.11b	Front Side	2412	0.066	1.03	16.50	16.18	0.071	/
		Back Side	2412	0.086	-0.02	16.50	16.18	0.093	1
		Left Side	2412	0.070	-0.50	16.50	16.18	0.075	/
		Top Side	2412	0.051	0.88	16.50	16.18	0.055	/
2.4G WLAN_ANT_B	802.11b	Front Side	2462	0.059	-3.19	16.00	15.68	0.064	/
		Back Side	2462	0.075	1.60	16.00	15.68	0.081	2
		Left Side	2462	0.060	2.73	16.00	15.68	0.065	/
2.4G WLAN_MIMO_ANT_A	802.11 n-HT20	Front Side	2437	0.105	3.55	21.50	21.09	0.115	/
		Back Side	2437	0.110	-2.46	21.50	21.09	0.121	3
		Left Side	2437	0.088	1.76	21.50	21.09	0.097	/
		Top Side	2437	0.071	-0.31	21.50	21.09	0.078	/
2.4G WLAN_MIMO_ANT_B	802.11 n-HT20	Front Side	2437	0.112	3.02	21.50	21.09	0.123	/
		Back Side	2437	0.121	0.70	21.50	21.09	0.133	4
		Left Side	2437	0.093	1.93	21.50	21.09	0.102	/
5.2G WLAN_ANT_A	802.11a	Back Side	5180	0.285	1.89	13.00	12.73	0.303	5
5.2G WLAN_ANT_B	802.11a	Back Side	5200	0.191	-3.68	13.00	12.91	0.195	6
		Left Side	5200	0.113	-3.99	13.00	12.91	0.115	/
5.2G WLAN_MIMO_ANT_A	802.11 n-HT40	Back Side	5230	0.439	-0.60	14.50	14.14	0.477	7
5.2G WLAN_MIMO_ANT_B	802.11 n-HT40	Back Side	5230	0.385	0.49	14.50	14.14	0.418	8
		Left Side	5230	0.303	-3.70	14.50	14.14	0.329	/
5.3G WLAN_ANT_A	802.11a	Back Side	5260	0.321	1.31	12.50	12.32	0.335	9
5.3G WLAN_ANT_B	802.11a	Back Side	5320	0.200	-3.65	13.00	12.96	0.202	10
		Left Side	5320	0.156	1.78	13.00	12.96	0.157	/
5.3G WLAN_MIMO_ANT_A	802.11 n-HT20	Back Side	5260	0.435	-3.61	14.50	14.03	0.485	11
5.3G WLAN_MIMO_ANT_B	802.11 n-HT20	Back Side	5260	0.427	-2.26	14.50	14.03	0.476	12
		Left Side	5260	0.381	-3.37	14.50	14.03	0.425	/
5.6G WLAN_ANT_A	802.11a	Back Side	5700	0.364	-0.93	13.00	12.71	0.389	13
5.6G WLAN_ANT_B	802.11a	Back Side	5700	0.196	1.98	13.50	13.14	0.213	14
		Left Side	5700	0.164	0.76	13.50	13.14	0.178	/
5.6G WLAN_MIMO_ANT_A	802.11 n-HT20	Back Side	5700	0.443	-0.69	15.00	14.91	0.452	15
5.6G WLAN_MIMO_ANT_B	802.11 n-HT20	Back Side	5700	0.367	-1.82	15.00	14.91	0.375	16
		Left Side	5700	0.315	-1.98	15.00	14.91	0.322	/
5.8G WLAN_ANT_A	802.11a	Back Side	5785	0.366	1.50	13.00	12.91	0.374	17
5.8G WLAN_ANT_B	802.11a	Back Side	5745	0.219	-0.85	13.00	12.66	0.237	18
		Left Side	5745	0.202	1.41	13.00	12.66	0.218	/
5.8G WLAN_MIMO_ANT_A	802.11 n-HT20	Back Side	5785	0.393	-1.82	14.50	14.49	0.394	19
5.8G WLAN_MIMO_ANT_B	802.11 n-HT20	Back Side	5785	0.412	-1.44	14.50	14.49	0.413	20
		Left Side	5785	0.397	-3.71	14.50	14.49	0.398	/

Band	ANT	Max SAR	2.4G WLAN_ANT_A+B
		(W/Kg)	
2.4G WLAN_ANT_A+B	ANT-A	0.121	0.254
	ANT-B	0.133	
Band	ANT	Max SAR	5.2&5.3G WLAN_ANT_A+B
		(W/Kg)	
5.2G WLAN_ANT_A+B	ANT-A	0.477	0.895
	ANT-B	0.418	
Band	ANT	Max SAR	5.2&5.3G WLAN_ANT_A+B
		(W/Kg)	
5.3G WLAN_ANT_A+B	ANT-A	0.485	0.961
	ANT-B	0.476	
Band	ANT	Max SAR	5.6G WLAN_ANT_A+B
		(W/Kg)	
5.6G WLAN_ANT_A+B	ANT-A	0.452	0.827
	ANT-B	0.375	
Band	ANT	Max SAR	5.8G WLAN_ANT_A+B
		(W/Kg)	
5.8G WLAN_ANT_A+B	ANT-A	0.394	0.807
	ANT-B	0.413	



Band	Model	Test Position	Freq.	SAR (1g) (W/kg)	Power Drift (%)	Max. Turn-up Power (dBm)	Meas. Output Power (dBm)	Scaled SAR (W/Kg)	Meas. No.
2.4G WLAN_ANT_C	802.11b	Front Side	2462	0.087	0.65	20.00	19.60	0.095	/
		Back Side	2462	0.111	3.35	20.00	19.60	0.122	21
		Left Side	2462	0.076	3.64	20.00	19.60	0.083	/
2.4G WLAN_ANT_D	802.11b	Front Side	2462	0.090	0.72	21.00	20.78	0.095	/
		Back Side	2462	0.109	-1.24	21.00	20.78	0.115	22
		Left Side	2462	0.072	0.25	21.00	20.78	0.076	/
2.4G WLAN_MIMO_ANT_C	802.11 n-HT20	Front Side	2462	0.101	0.93	21.00	20.73	0.107	/
		Back Side	2462	0.126	-1.24	21.00	20.73	0.134	23
		Left Side	2462	0.093	-1.51	21.00	20.73	0.099	/
2.4G WLAN_MIMO_ANT_D	802.11 n-HT20	Front Side	2462	0.091	1.30	21.00	20.73	0.097	/
		Back Side	2462	0.125	0.94	21.00	20.73	0.133	24
		Left Side	2462	0.071	-3.33	21.00	20.73	0.076	/
5.2G WLAN_ANT_C	802.11 n-HT20	Back Side	5240	0.458	3.54	13.00	12.80	0.480	25
		Left Side	5240	0.410	-0.66	13.00	12.80	0.429	/
5.2G WLAN_ANT_D	802.11 a	Back Side	5180	0.451	2.48	13.00	12.91	0.460	26
		Left Side	5180	0.392	-0.03	13.00	12.91	0.400	/
5.2G WLAN_MIMO_ANT_C	802.11 n-HT20	Back Side	5240	0.218	3.33	14.50	14.21	0.233	27
		Left Side	5240	0.203	-0.74	14.50	14.21	0.217	/
5.2G WLAN_MIMO_ANT_D	802.11 n-HT20	Back Side	5240	0.197	-0.48	14.50	14.21	0.211	28
		Left Side	5240	0.163	3.19	14.50	14.21	0.174	/
5.3G WLAN_ANT_C	802.11a	Back Side	5320	0.269	-2.38	13.50	13.13	0.293	29
		Left Side	5320	0.242	-2.65	13.50	13.13	0.264	/
5.3G WLAN_ANT_D	802.11a	Back Side	5260	0.245	-1.85	13.00	12.55	0.272	30
		Left Side	5260	0.188	-0.85	13.00	12.55	0.209	/
5.3G WLAN_MIMO_ANT_C	802.11 n-HT20	Back Side	5260	0.232	3.28	14.00	13.89	0.238	31
		Left Side	5260	0.209	1.70	14.00	13.89	0.214	/
5.3G WLAN_MIMO_ANT_D	802.11 n-HT20	Back Side	5260	0.251	-1.23	14.00	13.89	0.257	32
		Left Side	5260	0.230	-1.58	14.00	13.89	0.236	/
5.6G WLAN_ANT_C	802.11 n-HT20	Back Side	5500	0.347	2.78	13.50	13.05	0.385	33
		Left Side	5500	0.313	-2.83	13.50	13.05	0.347	/
5.6G WLAN_ANT_D	802.11a	Back Side	5700	0.330	-3.05	13.50	13.27	0.348	34
		Left Side	5700	0.309	-0.03	13.50	13.27	0.326	/
5.6G WLAN_MIMO_ANT_C	802.11 n-HT20	Back Side	5500	0.265	2.88	14.50	14.19	0.285	35
		Left Side	5500	0.251	2.44	14.50	14.19	0.270	/
5.6G WLAN_MIMO_ANT_D	802.11 n-HT20	Back Side	5500	0.233	-2.75	14.50	14.19	0.250	36
		Left Side	5500	0.195	3.76	14.50	14.19	0.209	/
5.8G WLAN_ANT_C	802.11a	Back Side	5785	0.451	2.89	13.50	13.02	0.504	37
		Left Side	5785	0.401	2.11	13.50	13.02	0.448	/
5.8G WLAN_ANT_D	802.11a	Back Side	5785	0.418	-3.54	14.00	13.54	0.465	38
		Left Side	5785	0.363	3.70	14.00	13.54	0.404	/
5.8G WLAN_MIMO_ANT_C	802.11 n-HT20	Back Side	5785	0.226	-1.89	14.50	14.15	0.245	39
		Left Side	5785	0.210	3.11	14.50	14.15	0.228	/
5.8G WLAN_MIMO_ANT_D	802.11 n-HT20	Back Side	5785	0.245	3.93	14.50	14.15	0.266	40
		Left Side	5785	0.230	0.67	14.50	14.15	0.249	/

Band	ANT	Max SAR	2.4G WLAN_ANT_A+B
		(W/Kg)	
2.4G WLAN_ANT_C+D	ANT-C	0.134	0.267
	ANT-D	0.133	
Band	ANT	Max SAR	5.2&5.3G WLAN_ANT_A+B
		(W/Kg)	
5.2G WLAN_ANT_C+D	ANT-C	0.233	0.444
	ANT-D	0.211	
Band	ANT	Max SAR	5.2&5.3G WLAN_ANT_A+B
		(W/Kg)	
5.3G WLAN_ANT_C+D	ANT-C	0.238	0.495
	ANT-D	0.257	
Band	ANT	Max SAR	5.6G WLAN_ANT_A+B
		(W/Kg)	
5.6G WLAN_ANT_C+D	ANT-C	0.285	0.535
	ANT-D	0.250	
Band	ANT	Max SAR	5.8G WLAN_ANT_A+B
		(W/Kg)	
5.8G WLAN_ANT_C+D	ANT-C	0.245	0.511
	ANT-D	0.266	

Note:

- The test separation of all above table is 0mm.
- Per KDB 447498 D04, the reported SAR is the measured SAR value adjusted for maximum tune-up tolerance.
 - Tune-up scaling Factor = tune-up limit power (mW) / EUT RF power (mW), where tune-up limit is the maximum rated power among all production units.
 - Scaled SAR(W/kg) = Measured SAR (W/kg) * Tune-up Scaling Factor
- When the user enables the personal Wireless router functions for the handsets, actual operations include simultaneous transmission of both the Wi-Fi transmitting frequency and thus cannot be evaluated for SAR under actual use conditions. The "Portable Hotspot" feature on the handset was NOT activated, to ensure the SAR measurements were evaluated for a single transmission frequency RF signal.

12.2 Simultaneous Multi-band Transmission Evaluation

Application Simultaneous Transmission information:

Position	Simultaneous State
Body	1. 2.4G WLAN Ant A+B + 2.4G WLAN Ant C+D/5G WLAN Ant C+D
	2. 5G WLAN Ant A+B +2.4G WLAN Ant C+D/5G WLAN Ant C+D

Estimated SAR		Maximum Average Power		Dis.	Frequency (GHz)	Standalone SAR(1&10g) [W/kg]
		dBm	mW			
BT	Back Side	5.59	3.622	5	2.441	0.151

NOTE:

1. For simultaneous transmission at Limb and Body exposure position, 2 transmitters simultaneous transmission was the worst state.
2. Based upon KDB 447498 D01, BT SAR is excluded as below table.
3. If the test separation distance is <5mm, 5mm is used for excluded SAR calculation.
4. For minimum test separation distance $\leq 50\text{mm}$, Bluetooth standalone SAR is excluded according to $[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm}) \cdot \sqrt{f} (\text{GHz})] \leq 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR
5. The reported SAR summation is calculated based on the same configuration and test position.
6. According to DRS Notice 2016-DRS001, the estimate SAR value is calculated based the following equation:
(maximum power level including tune-up tolerance for transmitter A / maximum power level of exemption at the same frequency and distance) * 0.4 W/kg.

Simultaneous Mode	Position	Mode	Max. 1-g SAR	1-g Sum SAR
			(W/kg)	(W/kg)
2.4G WLAN Ant MIMO A+B + 5G WLAN MIMO Ant C+D	Body	2.4G WLAN	0.961	1.496
		5G WLAN	0.535	

Simultaneous transmission SAR test exclusion is determined for each operating configuration and exposure condition according to the reported standalone SAR of each applicable simultaneous transmitting antenna.

When the sum of SAR 1g of all simultaneously transmitting antennas in an operating mode and exposure condition combination is within the SAR limit (SAR-1g 1.6 W/kg), the simultaneous transmission SAR is not required. When the sum of SAR 1g is greater than the SAR limit (SAR-1g 1.6 W/kg), SAR test exclusion is determined by the SPLSR.

13. Equipment List

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last Calibration	Calibrated Until
SAR Test System	SATIMO	N/A	V5.3.15.11	N/A	N/A
2450MHzDipole	MVG	SID2450	SN 30/14 DIP2G450-335	2026.06.05	2029.06.04
5000MHzDipole	MVG	SID5000	SN 41/12 WAG21	2026.06.05	2029.06.04
E-Field Probe	MVG	SSE2	SN 24/20 EP337	2026.06.15	2027.06.14
E-Field Probe	MVG	SSE2	SN 27/13 EPG193	2026.07.05	2027.07.04
Dielectric Probe Kit	MVG	SCLMP	SN 32/14 OCPG67	2025.09.15	2026.09.14
Antenna	MVG	ANTA3	SN 07/13 ZNTA52	N/A	N/A
Phantom1	MVG	SAM	SN 32/14 SAM115	N/A	N/A
Phantom3	MVG	SAM	SN 21/21 ELLI48	N/A	N/A
Phone holder	MVG	N/A	SN 32/14 MSH97	N/A	N/A
Laptop holder	MVG	N/A	SN 32/14 LSH29	N/A	N/A
Attenuator	Agilent	HXT-10-8-SMA	240327017	2026.02.22	2027.02.21
Directional coupler	Xi'an Xingbo	XBOH-OA08-20dB	211123-4-3	2026.02.22	2027.02.21
Network Analyzer	Agilent	E5071C	MY46520378	2025.09.26	2026.09.25
Multi Meter	Keithley	Multi Meter 2000	4050073	2025.09.22	2026.09.21
Signal Generator	Agilent	N5182A	MY50140530	2025.09.26	2026.09.25
Wireless Communication Test Set	Agilent	8960-E5515C	MY48360751	2025.09.22	2026.09.21
Wireless Communication Test Set	R&S	CMW500	156324	2025.09.25	2026.09.24
Power Amplifier	DESAY	WCS-DLNA50M8G50G1	CSKJLNA231227A	2025.09.29	2026.09.28
Power Meter	R&S	NRP	100510	2025.09.25	2026.09.24
Power Sensor	R&S	NRP-Z11	101919	2025.09.25	2026.09.24
Power Sensor	Keysight	U2021XA	MY56280002	2025.09.25	2026.09.24
Temperature hygrometer	TOPRIE	TP502V4-P	6700000124198	2025.10.09	2026.10.08
Thermograph	Elitech	RC-4	S/N EF7176501537	2025.10.17	2026.10.16

Appendix A. System Validation Plots

System Performance Check Data (2450MHz)

Type: Phone measurement (Complete)

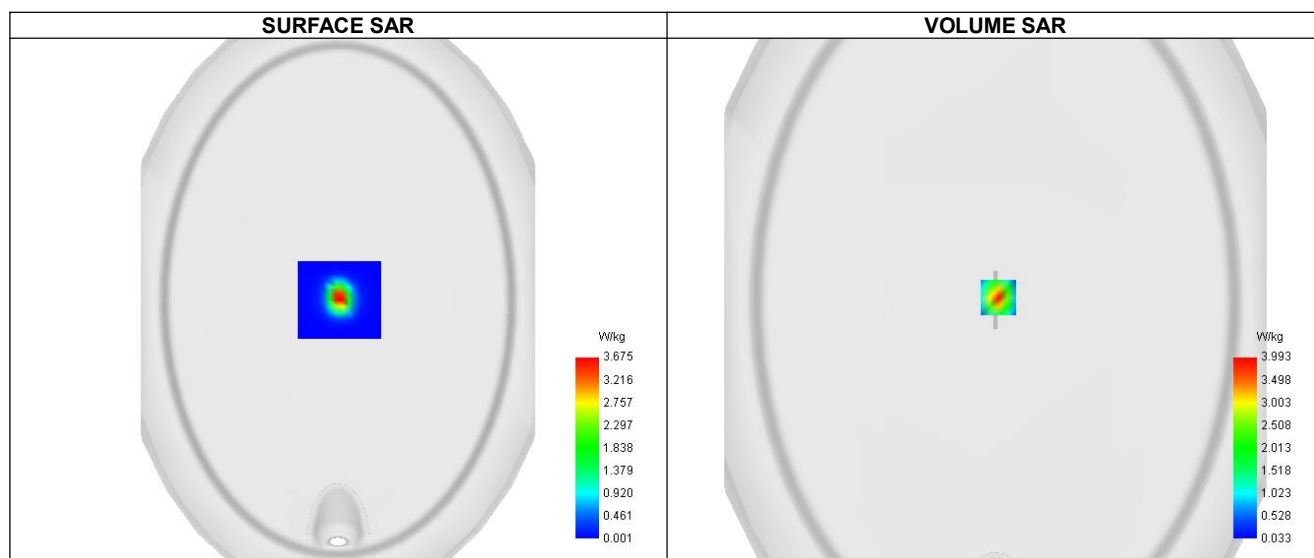
Area scan resolution: dx=8mm, dy=8mm

Zoom scan resolution: dx=5mm, dy=5mm, dz=5mm

Date of measurement: 2026-07-19

Experimental conditions.

Device Position	Validation plane
Band	2450 MHz
Channels	-
Signal	CW
Frequency (MHz)	2450
Relative permittivity	39.11
Conductivity (S/m)	1.78
Probe	SN 24/20 EP337
ConvF	4.22
Crest factor:	1:1



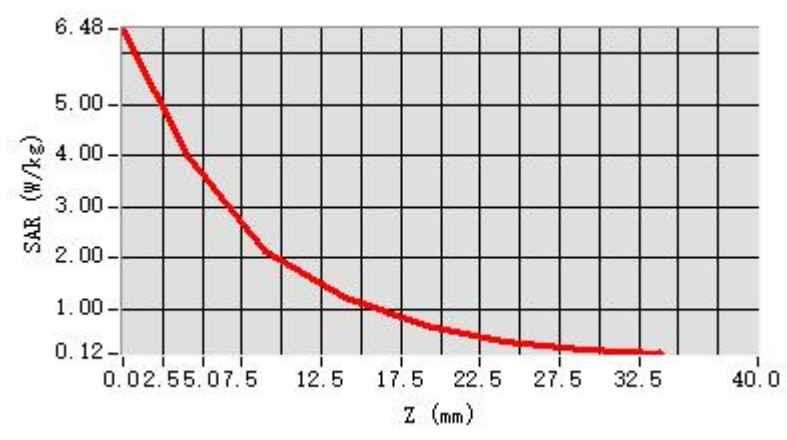
Maximum location: X=3.00, Y=2.00 ; SAR Peak: 6.45 W/kg

D. SAR 1g & 10g

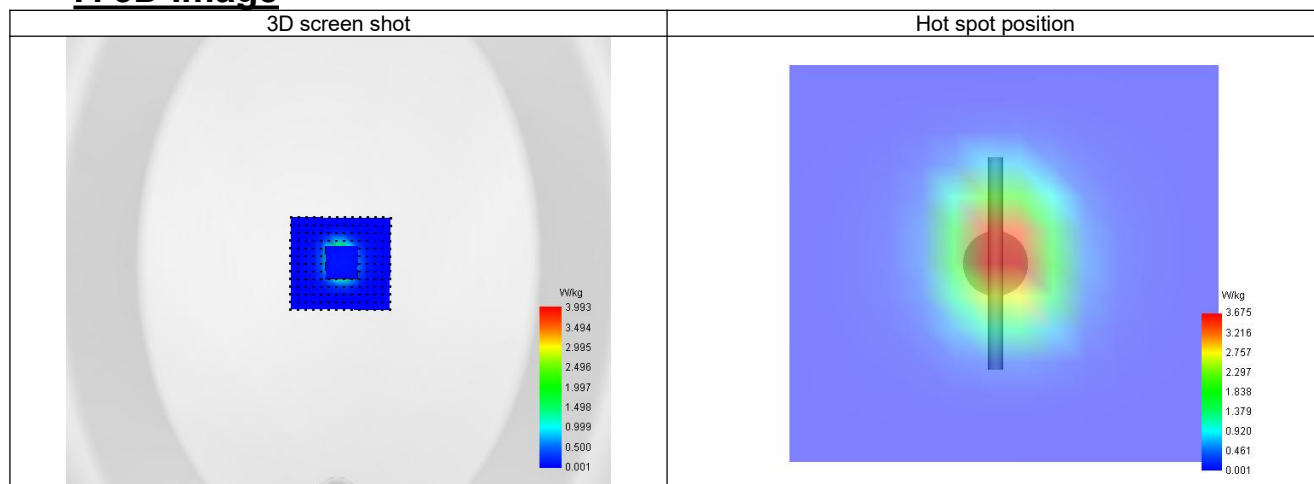
SAR 10g (W/Kg)	5.478
SAR 1g (W/Kg)	2.371
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	52.962272

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	6.481	3.993	2.115	1.201	0.663	0.366	0.202



F. 3D Image



System Performance Check Data (5200MHz)

Type: Phone measurement (Complete)

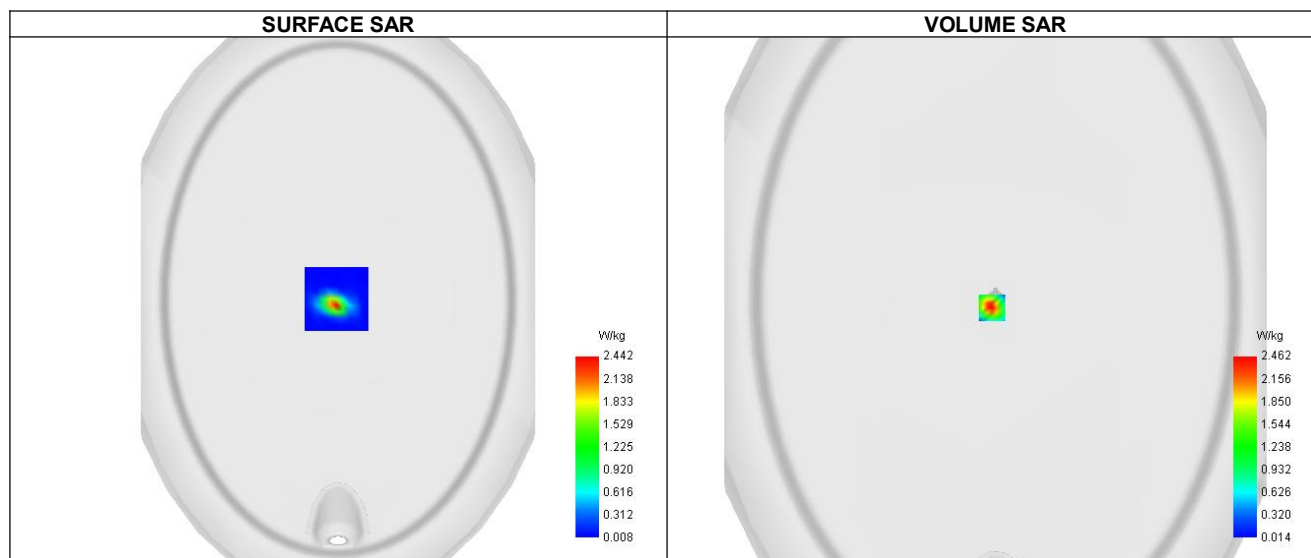
Area scan resolution: dx=8mm, dy=8mm

Zoom scan resolution: dx=4mm, dy=4mm, dz=2mm

Date of measurement: 2026-07-20

Experimental conditions.

Device Position	Validation plane
Band	5200 MHz
Channels	-
Signal	CW
Frequency (MHz)	5200
Relative permittivity	35.59
Conductivity (S/m)	4.66
Probe	SN 27/13 EPG193
ConvF	21.61
Crest factor:	1:1



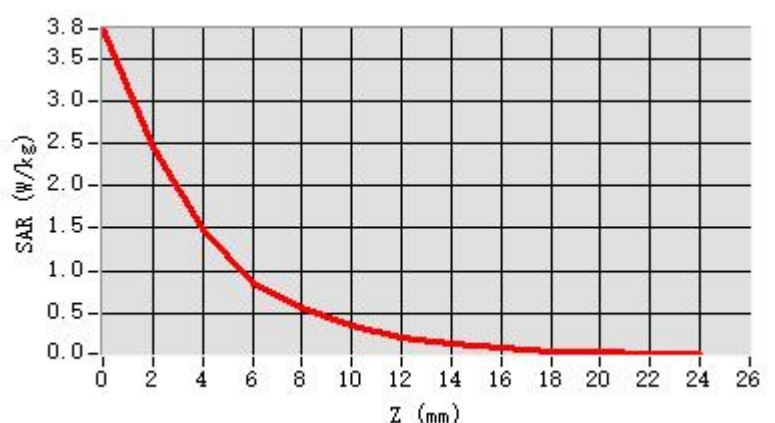
Maximum location: X=-3.00, Y=-8.00 ; SAR Peak: 4.14 W/kg

D. SAR 1g & 10g

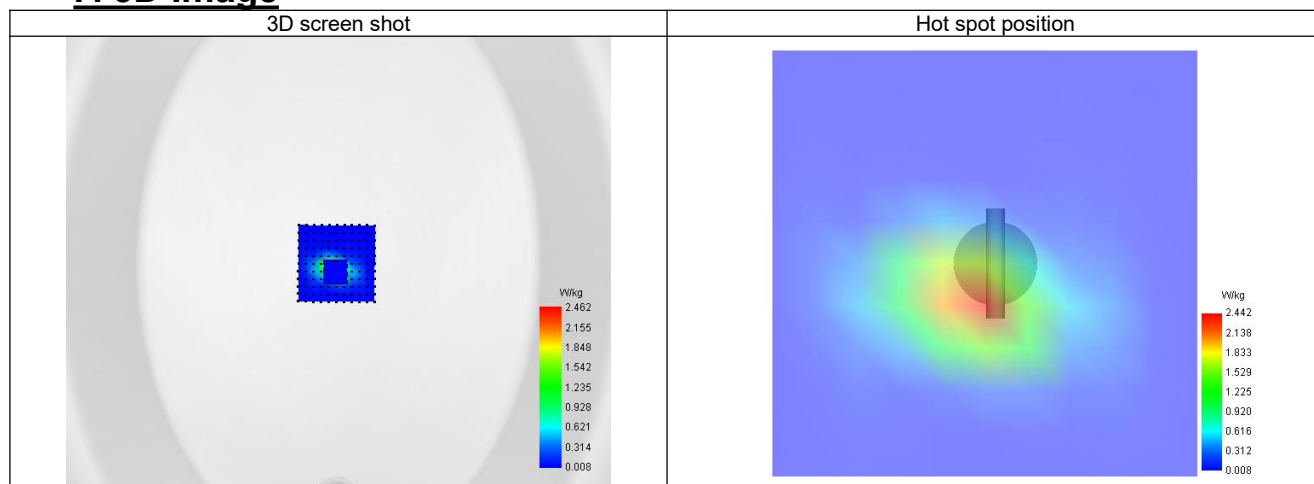
SAR 10g (W/Kg)	1.654
SAR 1g (W/Kg)	0.563
Horizontal validation criteria: minimum distance (mm)	8.944272
Vertical validation criteria: SAR ratio M2/M1 (%)	60.072531

E. Z Axis Scan

Z (mm)	0.00	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	22.00
SAR (W/Kg)	3.848	2.462	1.479	0.853	0.573	0.355	0.220	0.137	0.085	0.053	0.033	0.020



F. 3D Image



System Performance Check Data (5400MHz)

Type: Phone measurement (Complete)

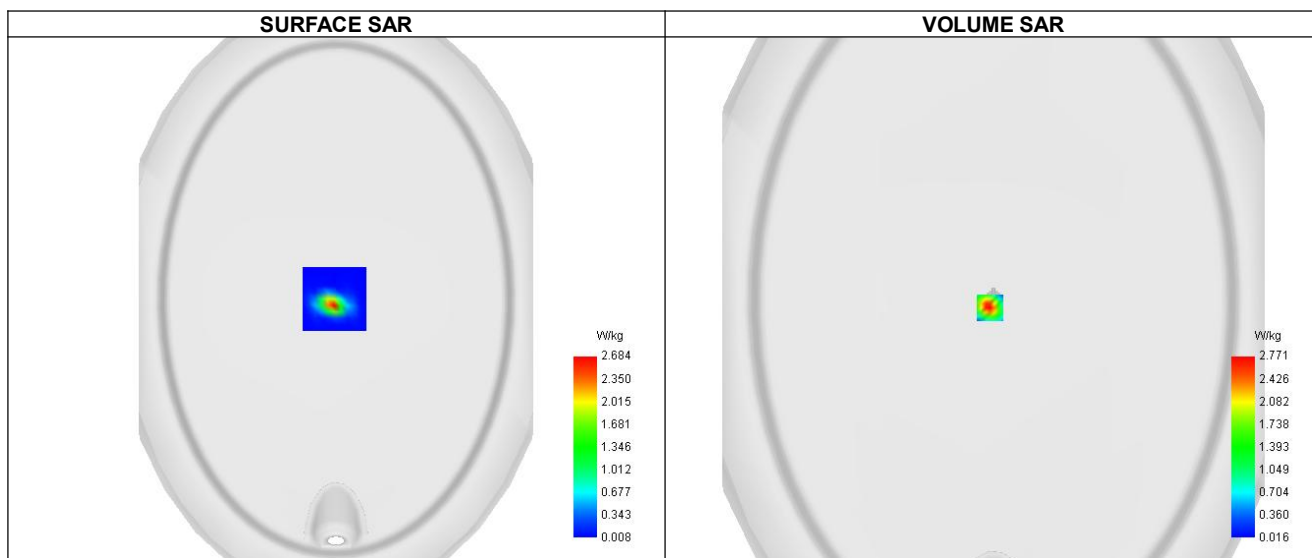
Area scan resolution: dx=8mm, dy=8mm

Zoom scan resolution: dx=4mm, dy=4mm, dz=2mm

Date of measurement: 2026-07-21

Experimental conditions.

Device Position	Validation plane
Band	5400 MHz
Channels	-
Signal	CW
Frequency (MHz)	5400
Relative permittivity	36.10
Conductivity (S/m)	4.83
Probe	SN 27/13 EPG193
ConvF	22.92
Crest factor:	1:1



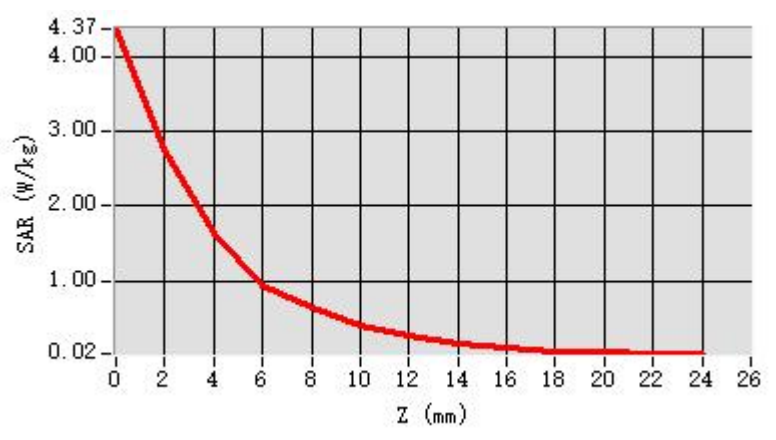
Maximum location: X=-3.00, Y=-8.00 ; SAR Peak: 4.68 W/kg

D. SAR 1g & 10g

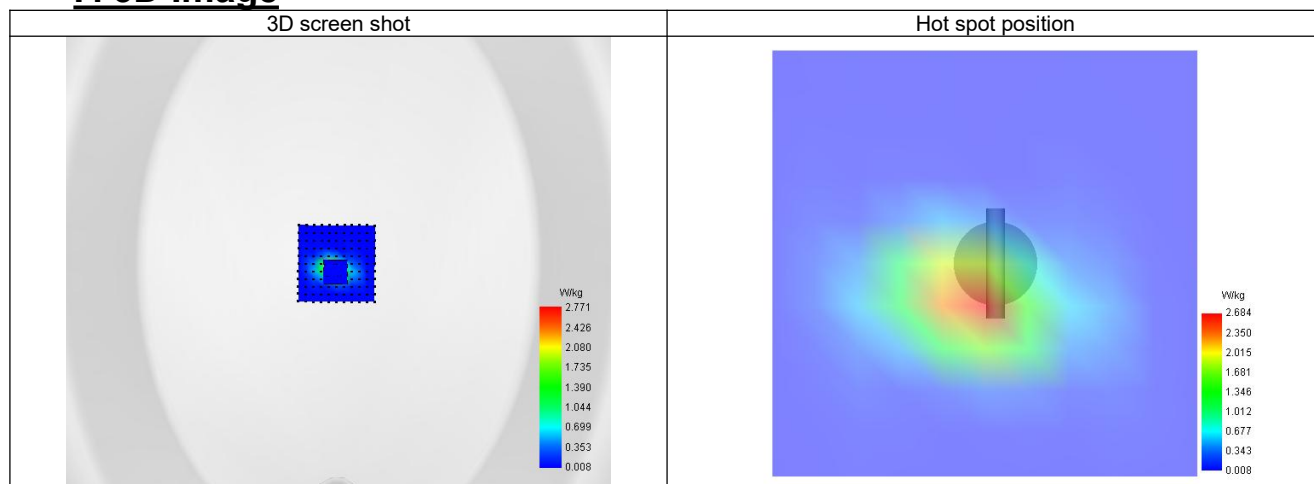
SAR 10g (W/Kg)	0.577
SAR 1g (W/Kg)	1.737
Horizontal validation criteria: minimum distance (mm)	8.944272
Vertical validation criteria: SAR ratio M2/M1 (%)	58.483969

E. Z Axis Scan

Z (mm)	0.00	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	22.00
SAR (W/Kg)	4.366	2.771	1.621	0.932	0.652	0.409	0.256	0.160	0.101	0.063	0.039	0.025



F. 3D Image



System Performance Check Data (5800MHz)

Type: Phone measurement (Complete)

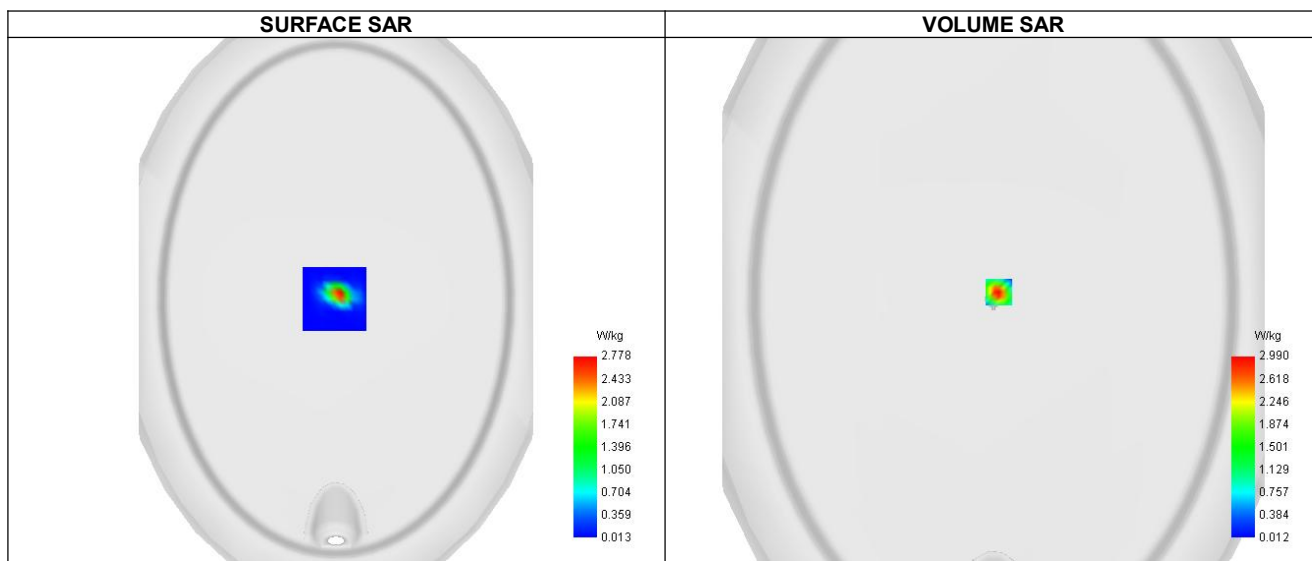
Area scan resolution: dx=8mm, dy=8mm

Zoom scan resolution: dx=4mm, dy=4mm, dz=2mm

Date of measurement: 2026-07-21

Experimental conditions.

Device Position	Validation plane
Band	5800 MHz
Channels	-
Signal	CW
Frequency (MHz)	5800
Relative permittivity	35.42
Conductivity (S/m)	5.27
Probe	SN 27/13 EPG193
ConvF	22.42
Crest factor:	1:1



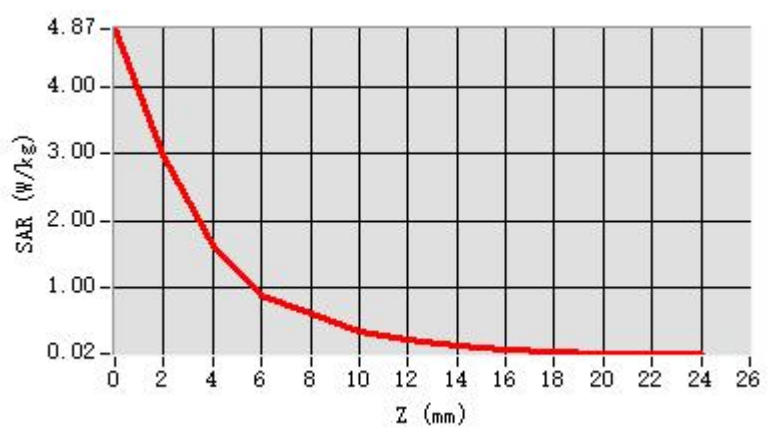
Maximum location: X=5.00, Y=6.00 ; SAR Peak: 5.30 W/kg

D. SAR 1g & 10g

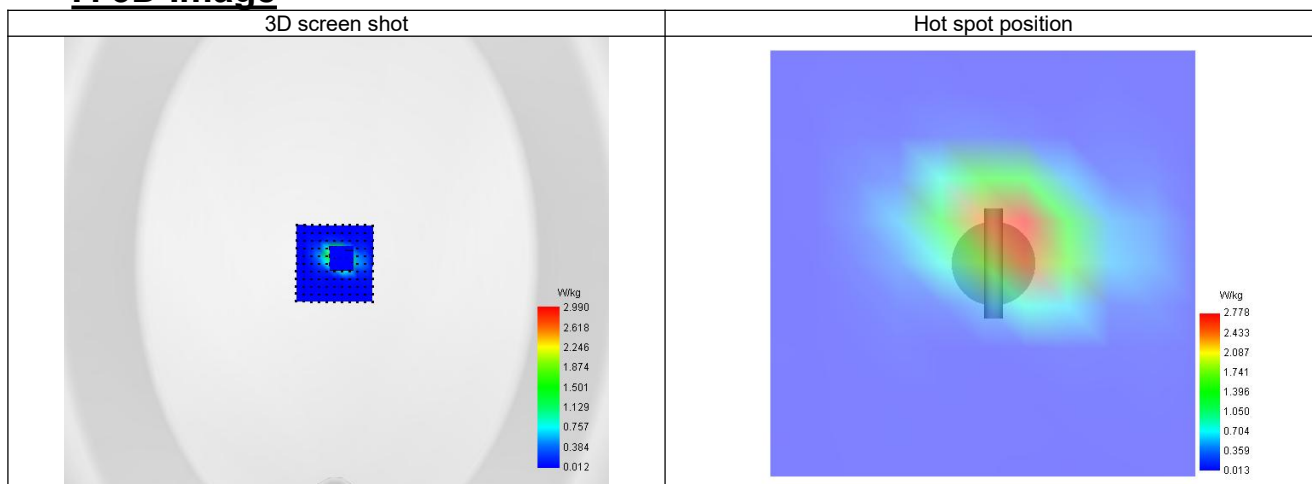
SAR 10g (W/Kg)	0.604
SAR 1g (W/Kg)	1.804
Horizontal validation criteria: minimum distance (mm)	8.944272
Vertical validation criteria: SAR ratio M2/M1 (%)	54.750342

E. Z Axis Scan

Z (mm)	0.00	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	22.00
SAR (W/Kg)	4.873	2.990	1.637	0.878	0.601	0.358	0.213	0.127	0.076	0.045	0.027	0.016



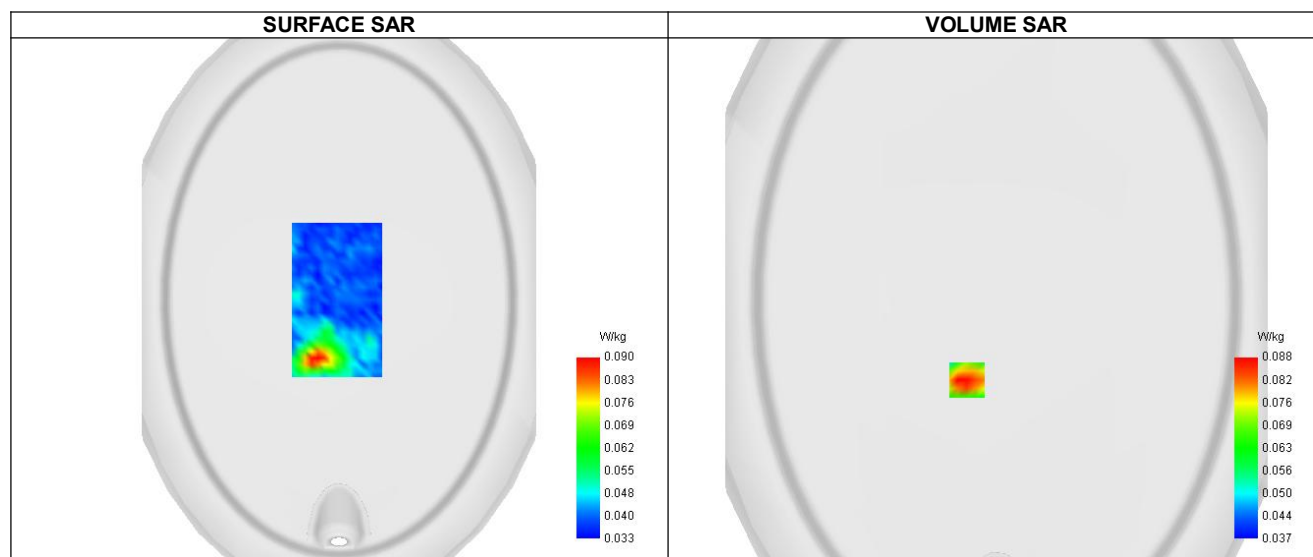
F. 3D Image



Appendix B. SAR Test Plots

Plot 1: DUT: Automotive Diagnostic Tool; EUT Model: OADD-PD1303A

Test Date	2026-07-19
ConvF	4.22
Probe	SN 24/20 EP337
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	7x7x7, dx=5mm dy=5mm dz=5.0mm, Complete
Phantom	Body
Device Position	Back
Band	2.4GHz WLAN Ant A
Signal	802.11b (Crest factor: 1.0)
Frequency (MHz)	2412
Relative permittivity (real part)	39.36
Conductivity (S/m)	1.77



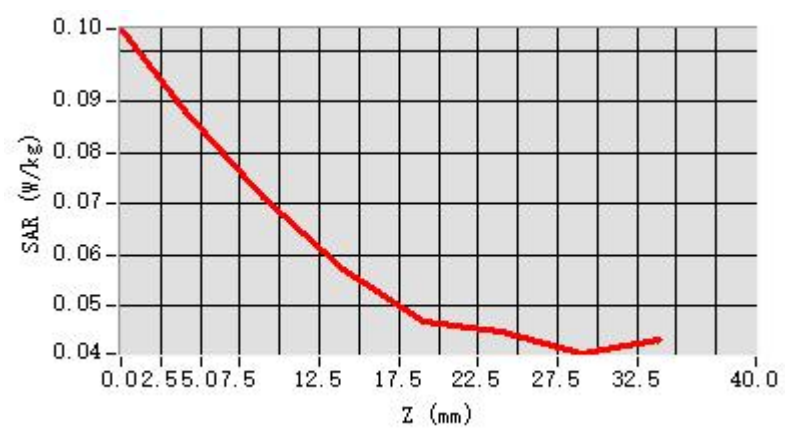
Maximum location: X=-27.00, Y=-72.00 ; SAR Peak: 0.12 W/kg

D. SAR 1g & 10g

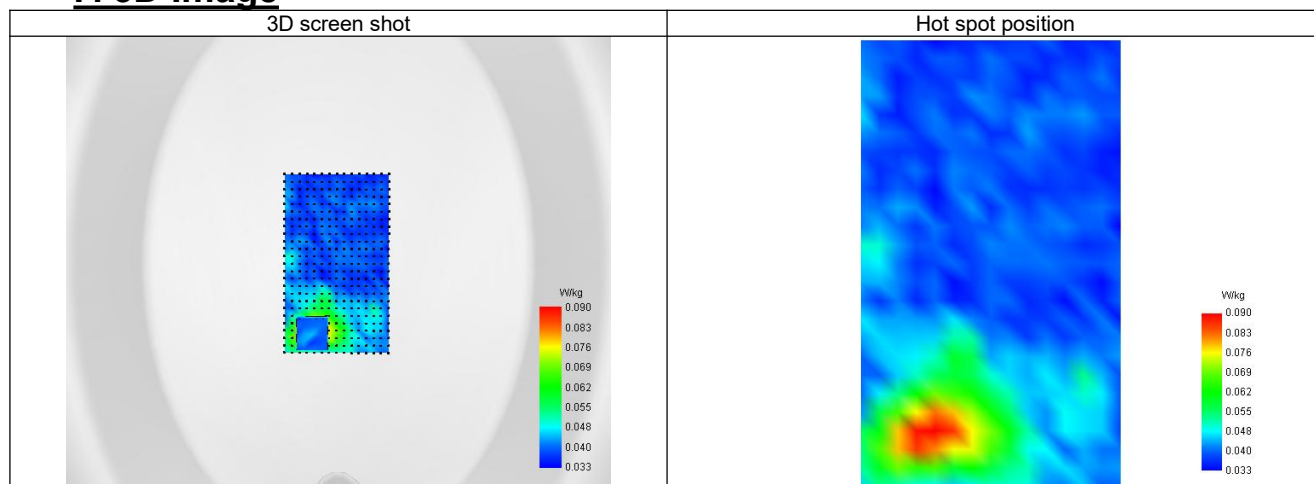
SAR 10g (W/Kg)	0.064
SAR 1g (W/Kg)	0.086
Horizontal validation criteria: minimum distance (mm)	13.655121
Vertical validation criteria: SAR ratio M2/M1 (%)	84.615384

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.104	0.088	0.071	0.057	0.047	0.045	0.041

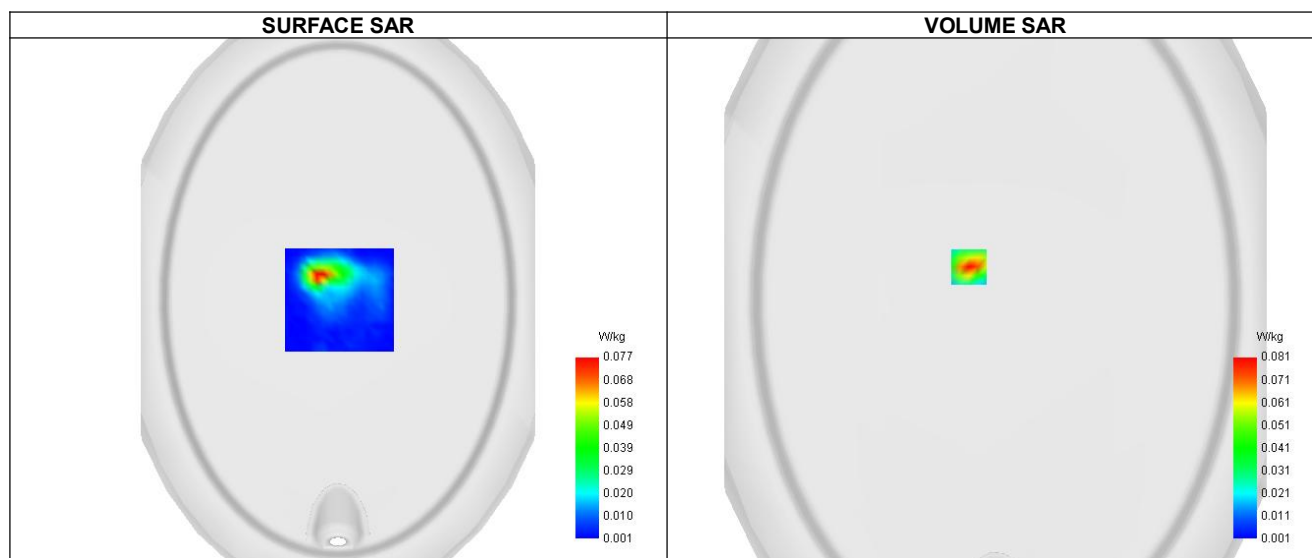


F. 3D Image



Plot 2: DUT: Automotive Diagnostic Tool; EUT Model: OADD-PD1303A

Test Date	2026-07-19
ConvF	4.22
Probe	SN 24/20 EP337
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	7x7x7,dx=5mm dy=5mm dz=5.0mm, Complete
Phantom	Body
Device Position	Back
Band	2.4GHz WLAN Ant B
Signal	802.11b (Crest factor: 1.0)
Frequency (MHz)	2462
Relative permittivity (real part)	39.28
Conductivity (S/m)	1.79



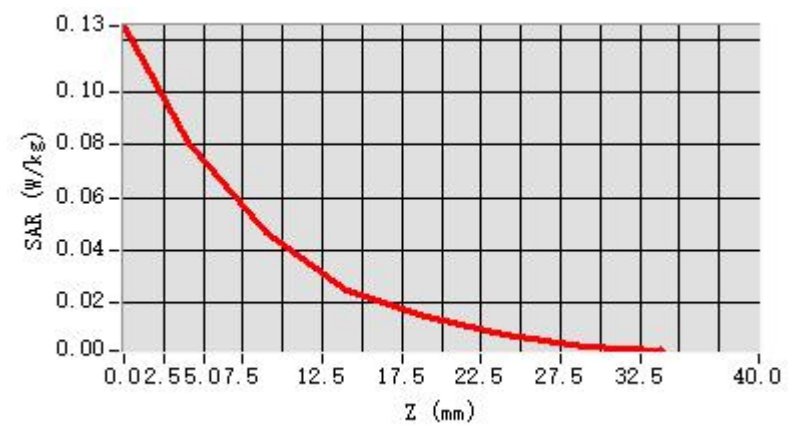
Maximum location: X=-24.00, Y=30.00 ; SAR Peak: 0.13 W/kg

D. SAR 1g & 10g

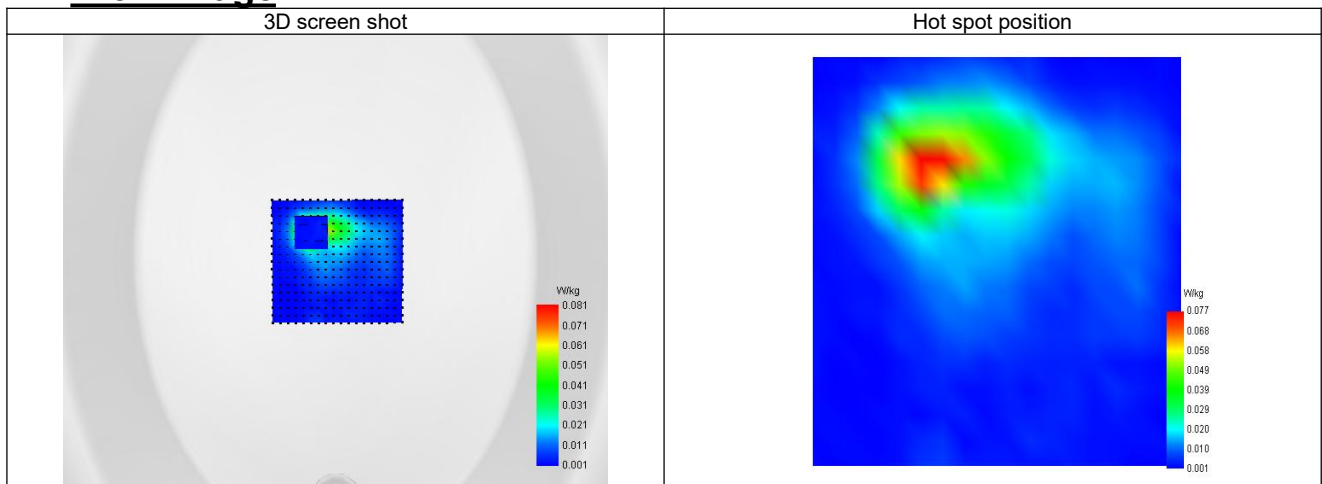
SAR 10g (W/Kg)	0.038
SAR 1g (W/Kg)	0.075
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	57.729243

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.125	0.081	0.047	0.024	0.015	0.008	0.004

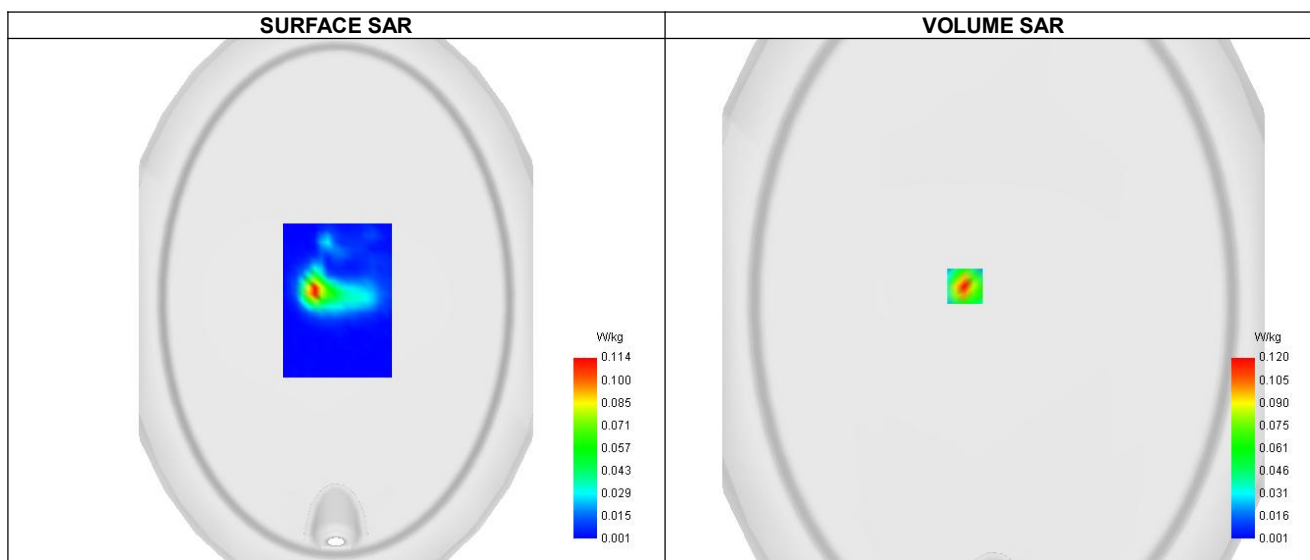


F. 3D Image



Plot 3: DUT: Automotive Diagnostic Tool; EUT Model: OADD-PD1303A

Test Date	2026-07-19
ConvF	4.22
Probe	SN 24/20 EP337
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	7x7x7,dx=5mm dy=5mm dz=5.0mm, Complete
Phantom	Body
Device Position	Back
Band	2.4GHz WLAN MIMO A
Signal	802.11b (Crest factor: 1.0)
Frequency (MHz)	2437
Relative permittivity (real part)	39.32
Conductivity (S/m)	1.79



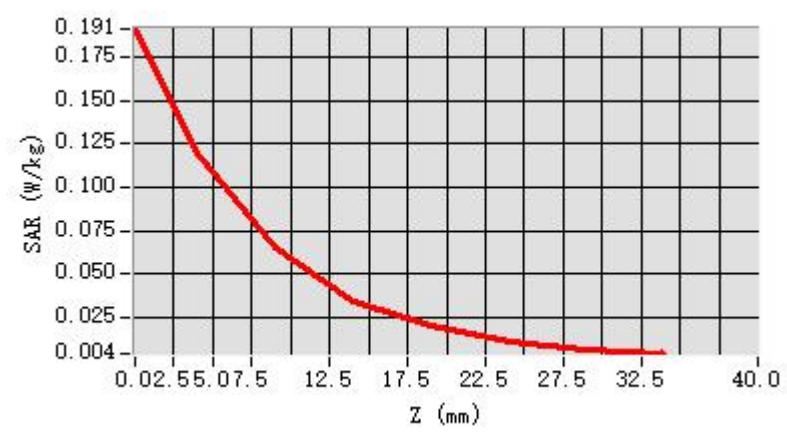
Maximum location: X=-26.00, Y=13.00 ; SAR Peak: 0.19 W/kg

D. SAR 1g & 10g

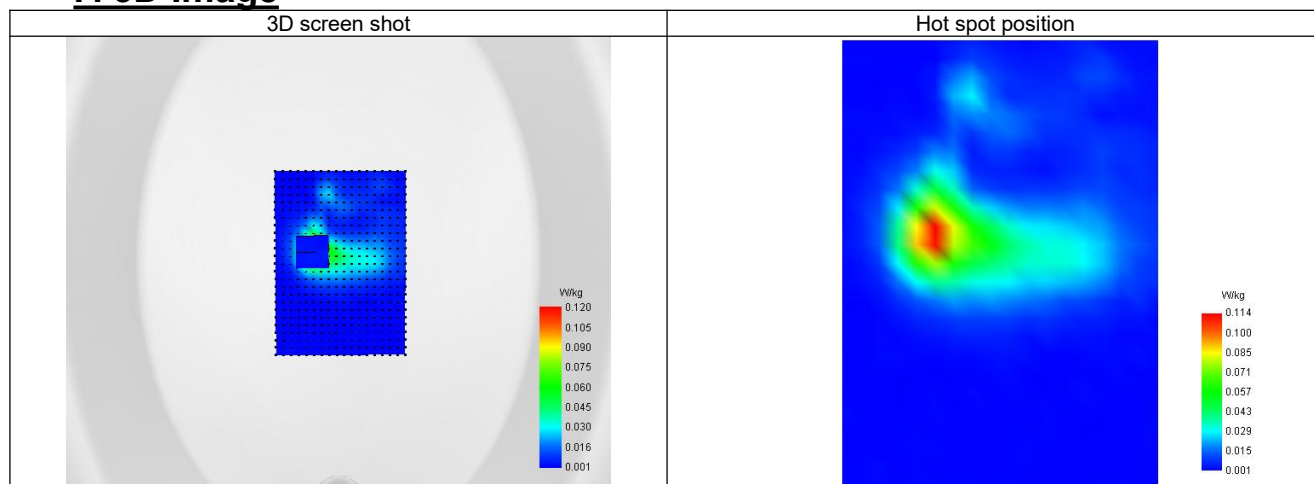
SAR 10g (W/Kg)	0.054
SAR 1g (W/Kg)	0.110
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	54.865705

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.191	0.120	0.066	0.034	0.020	0.011	0.006

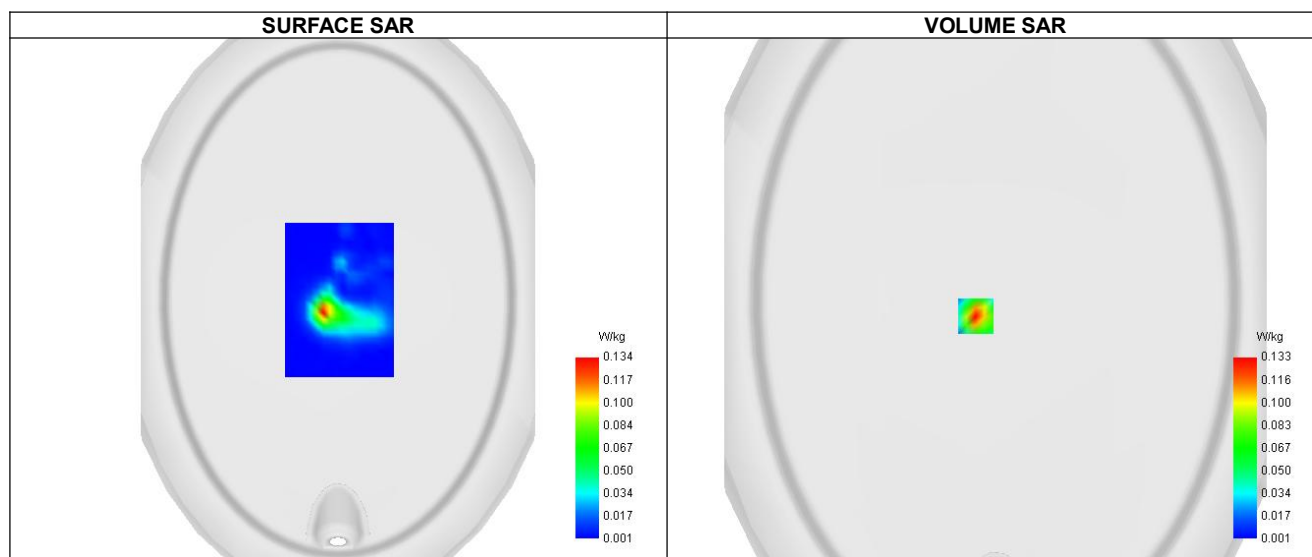


F. 3D Image



Plot 4: DUT: Automotive Diagnostic Tool; EUT Model: OADD-PD1303A

Test Date	2026-07-19
ConvF	4.22
Probe	SN 24/20 EP337
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	7x7x7,dx=5mm dy=5mm dz=5.0mm, Complete
Phantom	Body
Device Position	Back
Band	2.4GHz WLAN MIMO B
Signal	802.11b (Crest factor: 1.0)
Frequency (MHz)	2437
Relative permittivity (real part)	39.32
Conductivity (S/m)	1.79



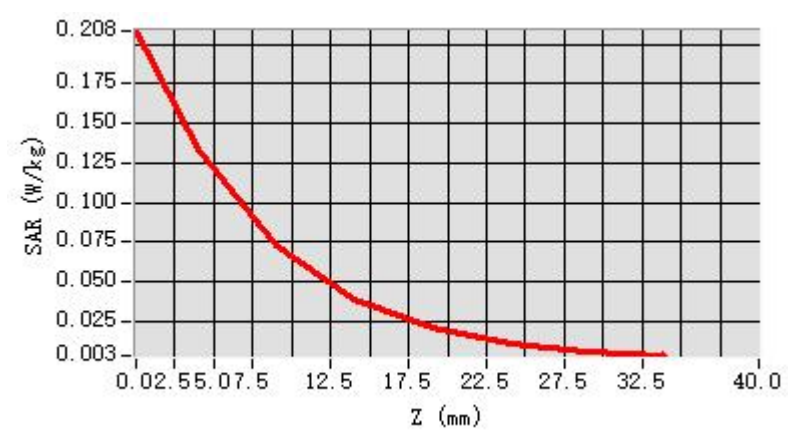
Maximum location: X=-18.00, Y=-15.00 ; SAR Peak: 0.21 W/kg

D. SAR 1g & 10g

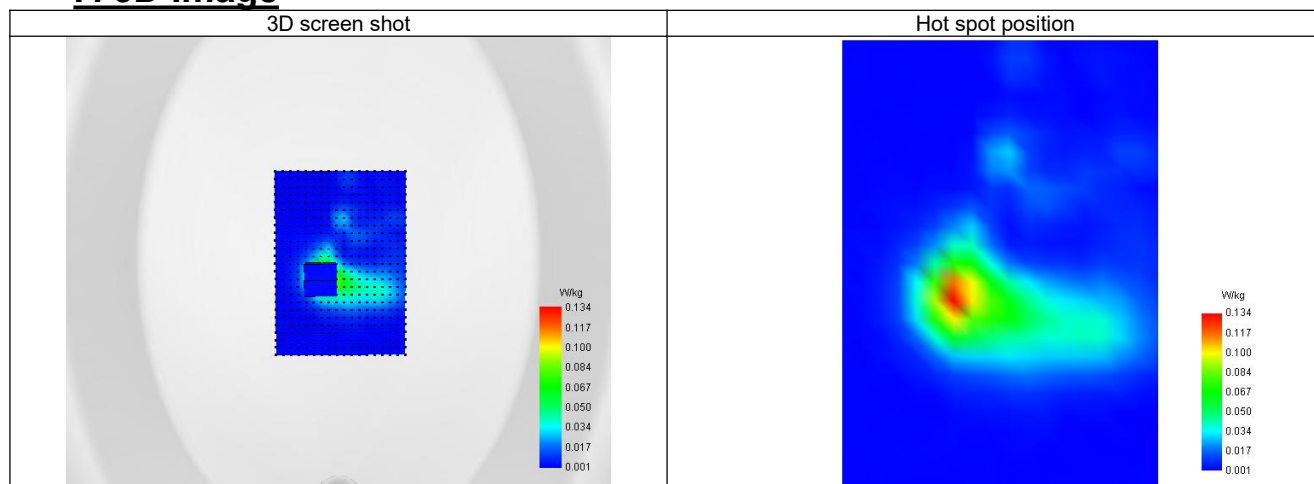
SAR 10g (W/Kg)	0.059
SAR 1g (W/Kg)	0.121
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	54.939023

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.208	0.133	0.073	0.039	0.021	0.011	0.006

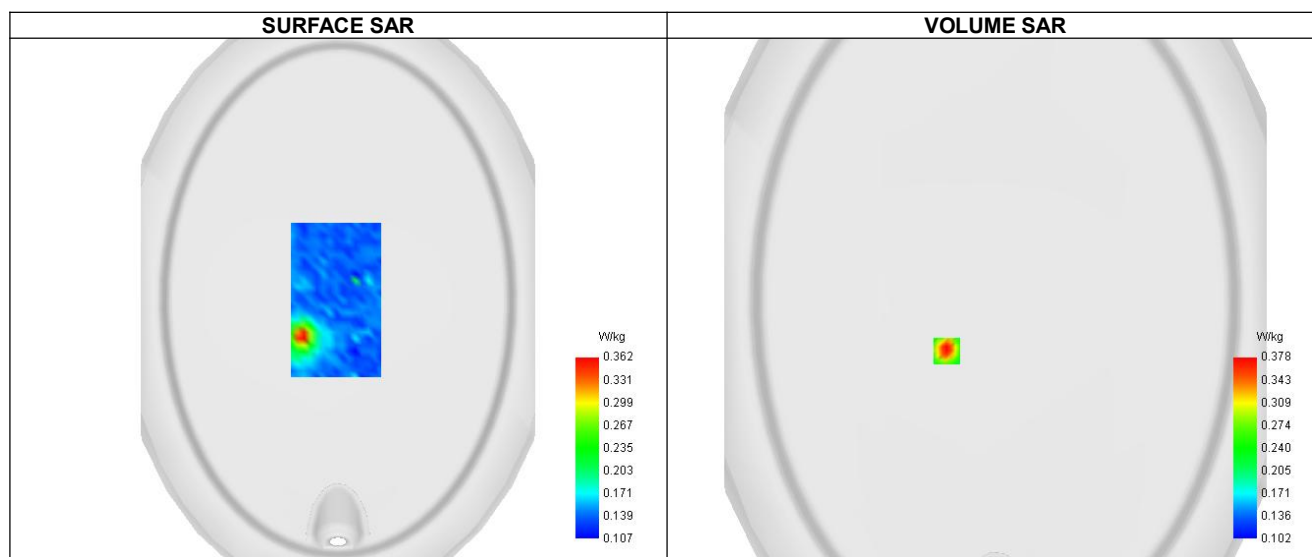


F. 3D Image



Plot 5: DUT: Automotive Diagnostic Tool; EUT Model: OADD-PD1303A

Test Date	2026-07-20
ConvF	21.61
Probe	SN 27/13 EPG193
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	7x7x12,dx=4mm dy=4mm dz=2.0mm, Complete
Phantom	Body
Device Position	Back
Band	5.2GHz WLAN Ant A
Signal	802.11a (Crest factor: 1.0)
Frequency (MHz)	5180
Relative permittivity (real part)	37.10
Conductivity (S/m)	4.62



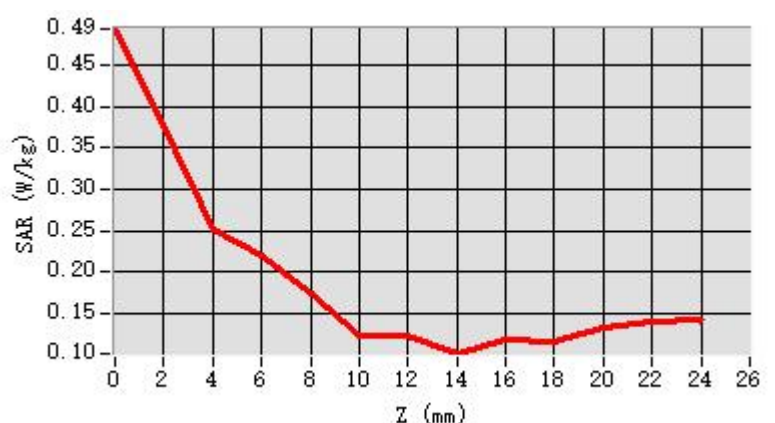
Maximum location: X=-44.00, Y=-46.00 ; SAR Peak: 0.60 W/kg

D. SAR 1g & 10g

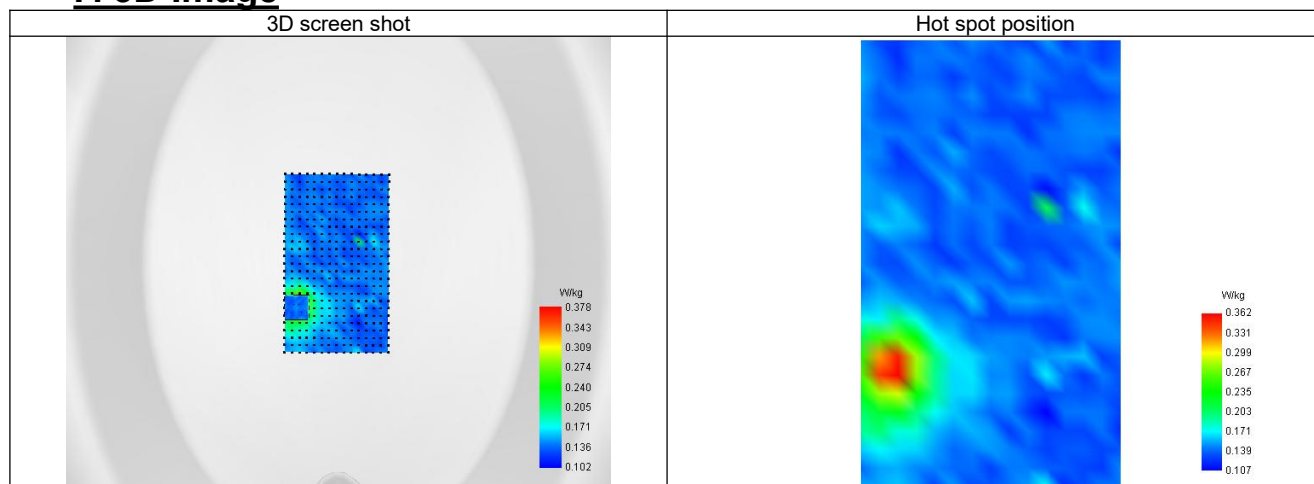
SAR 10g (W/Kg)	0.175
SAR 1g (W/Kg)	0.285
Horizontal validation criteria: minimum distance (mm)	9.663112
Vertical validation criteria: SAR ratio M2/M1 (%)	76.673427

E. Z Axis Scan

Z (mm)	0.00	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	22.00	24.00
SAR (W/Kg)	0.493	0.378	0.251	0.220	0.174	0.124	0.124	0.102	0.119	0.116	0.133	0.140	0.140

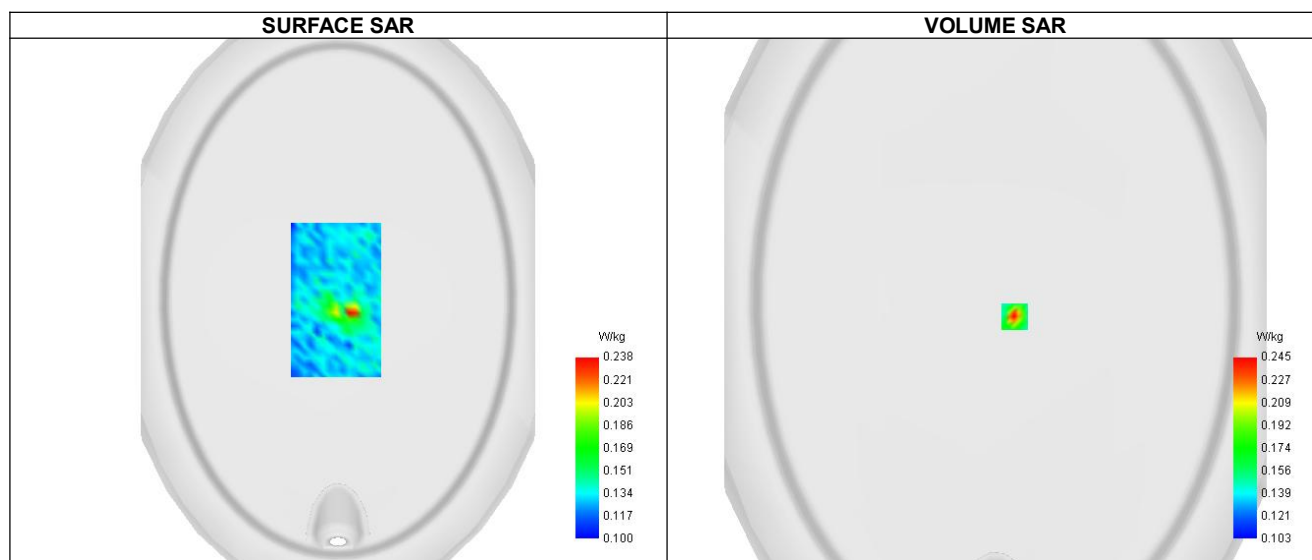


F. 3D Image



Plot 6: DUT: Automotive Diagnostic Tool; EUT Model: OADD-PD1303A

Test Date	2026-07-20
ConvF	21.61
Probe	SN 27/13 EPG193
Area Scan	dx=8mm dy=8mm, Complete
Zoom Scan	7x7x12,dx=4mm dy=4mm dz=2.0mm, Complete
Phantom	Body
Device Position	Back
Band	5.2GHz WLAN Ant B
Signal	802.11a (Crest factor: 1.0)
Frequency (MHz)	5200
Relative permittivity (real part)	35.59
Conductivity (S/m)	4.66



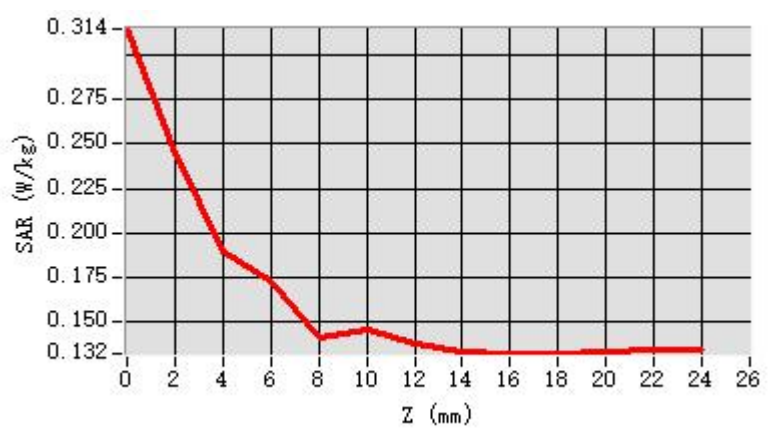
Maximum location: X=17.00, Y=-15.00 ; SAR Peak: 0.32 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.118
SAR 1g (W/Kg)	0.191
Horizontal validation criteria: minimum distance (mm)	11.236692
Vertical validation criteria: SAR ratio M2/M1 (%)	78.025477

E. Z Axis Scan

Z (mm)	0.00	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	22.00
SAR (W/Kg)	0.314	0.245	0.190	0.173	0.141	0.146	0.138	0.133	0.132	0.133	0.134	0.135



F. 3D Image

