

FCC SAR EVALUATION REPORT

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

Product Name : Tablet

Trademark : CUBOT

Model Name : TAB KINGKONG MINI

TAB KINGKONG S, TAB KINGKONG

Family Model : 2, TAB KINGKONG 3, TAB 70, TAB
80, TAB 90

FCC ID : 2AHZ5-TAB

Report No. : S25052400912001

Prepared for

Shenzhen Huafurui Technology Co., Ltd.

Unit 601-03, 6/F, Block A, Building 1, Ganfeng Technology Building, No.
993 Jiaxian Road, Xiangjiaotang Community, Bantian Street, Longgang
District, Shenzhen, P.R. China

Prepared by

Shenzhen NTEK Testing Technology Co., Ltd.

No. 24 Xinfu East Road, Xiangshan Community, Xinqiao Street,
Baoan District, Shenzhen, Guangdong, People's Republic of China

Tel. 0755-23200050 Website: <http://www.ntek.org.cn>

TEST RESULT CERTIFICATION

Applicant's name.....: Shenzhen Huafurui Technology Co., Ltd.
Unit 601-03, 6/F, Block A, Building 1, Ganfeng Technology Building,
Address.....: No. 993 Jiaxian Road, Xiangjiaotang Community, Bantian Street,
Longgang District, Shenzhen, P.R. China
Manufacturer's Name.....: Shenzhen Huafurui Technology Co., Ltd.
Unit 601-03, 6/F, Block A, Building 1, Ganfeng Technology Building,
Address.....: No. 993 Jiaxian Road, Xiangjiaotang Community, Bantian Street,
Longgang District, Shenzhen, P.R.China

Product description

Product name.....: Tablet
Trademark: CUBOT
Model Name.....: TAB KINGKONG MINI
Family Model.....: TAB KINGKONG S, TAB KINGKONG 2, TAB KINGKONG 3, TAB
70, TAB 80, TAB 90
FCC 47 CFR Part 2(2.1093);
ANSI/IEEE C95.1-1992
Standards.....: IEEE Std 1528-2013;
Published RF exposure KDB procedures

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

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Test Sample Number..... S250524009011

Date of Test

Date (s) of performance of tests.....: Apr. 13, 2024 ~Dec. 09, 2024

Date of Issue.....: Dec.24, 2024

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

Prepared By: Owen Xiao
Owen Xiao
(Project Engineer)

Reviewed By: Aaron Cheng
Aaron Cheng
(Supervisor)

Approved By: Alex Li
Alex Li
(Manager)

※ ※ Revision History ※ ※

REV.	DESCRIPTION	ISSUED DATE	REMARK
Rev.1.0	Initial Test Report Release	Dec.24, 2024	Owen Xiao

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1. General Information

1.1. RF exposure limits

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

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

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

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

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

Occupational/Controlled Environments:

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

General Population/Uncontrolled Environments:

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

NOTE
TRUNK LIMIT
1.6 W/kg
APPLIED TO THIS EUT

1.2. Statement of Compliance

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

RF Exposure Conditions		Equipment Class -Highest Reported SAR (W/kg)			
		PCE	DTS	NII	DSS
1-g Body-Worn (Separation distance of 0mm)		0.875	0.478	0.389	0.265
1-g Hotspot (Separation distance of 0mm)		0.875	0.478	0.389	0.265
Max Simultaneous Tx	Body-Worn	1.353	1.353	1.219	1.140
	Hotspot	1.353	1.353	1.219	1.140

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

1.3. EUT Description

Device Information			
Product Name	Tablet		
Trade Name	CUBOT		
Model Name	TAB KINGKONG MINI		
Family Model	TAB KINGKONG S, TAB KINGKONG 2, TAB KINGKONG 3, TAB 70, TAB 80, TAB 90		
Model Difference	All models are the same circuit and RF module, except for the color.		
FCC ID	2AHZ5-TAB		
Device Phase	Identical Prototype		
Exposure Category	General population / Uncontrolled environment		
Antenna	FPC Antenna		
Battery	DC 3.87V, 10200mAh,39.474Wh		
Hardware version	T30D-UF-V1.2		
Software version	CUBOT_TAB_KINGKONG_MINI_P131_V1.0		
Device Operating Configurations			
Supporting Mode(s)	GSM 850/1900,WCDMA Band 2/4/5, LTE Band 2/4/5/7/12/17/41, WLAN2.4G/5G,Bluetooth		
Test Modulation	GSM(GMSK/8PSK),WCDMA(QPSK), LTE(QPSK/16QAM), WLAN(DSSS/OFDM), Bluetooth(GFSK, $\pi/4$ -DQPSK, 8DPSK)		
Device Class	B		
Operating Frequency	Band	Tx (MHz)	Rx (MHz)

Range(s)	GSM 850	824-849	869-894
	GSM 1900	1850-1910	1930-1990
	WCDMA Band 2	1850-1910	1930-1990
	WCDMA Band 4	1710-1755	2110-2155
	WCDMA Band 5	824-849	869-894
	LTE Band 2	1850-1910	1930-1990
	LTE Band 4	1710-1755	2110-2155
	LTE Band 5	824-849	869-894
	LTE Band 7	2500-2570	2620-2690
	LTE Band 12	699-716	729-746
	LTE Band 17	704-716	734-746
	LTE Band 41	2535-2655	
	WLAN 2.4G	2412-2462	
	WLAN 5.2G	5180-5240	
	WLAN 5.8G	5745-5825	
	Bluetooth	2402-2480	
GPRSMultislot Class(12)	Max Number of Timeslots in Uplink		4
	Max Number of Timeslots in Downlink		4
	Max Total Timeslot		5
EGPRS Multislot Class(12)	Max Number of Timeslots in Uplink		4
	Max Number of Timeslots in Downlink		4
	Max Total Timeslot		5
Power Class	4, tested with power level 5(GSM850)		
	1, tested with power level 0(GSM1900)		
	3, tested with power control "all 1"(WCDMA Band 2)		
	3, tested with power control "all 1"(WCDMA Band 4)		
	3, tested with power control "all 1"(WCDMA Band 5)		
	3, tested with power control all Max.(LTE Band 2)		
	3, tested with power control all Max.(LTE Band 4)		
	3, tested with power control all Max.(LTE Band 5)		
	3, tested with power control all Max.(LTE Band 7)		
	3, tested with power control all Max.(LTE Band 12)		
	3, tested with power control all Max.(LTE Band 17)		
	3, tested with power control all Max.(LTE Band 41)		

1.4. Test specification(s)

FCC 47 CFR Part 2(2.1093)
ANSI/IEEE C95.1-1992
IEEE Std 1528-2013

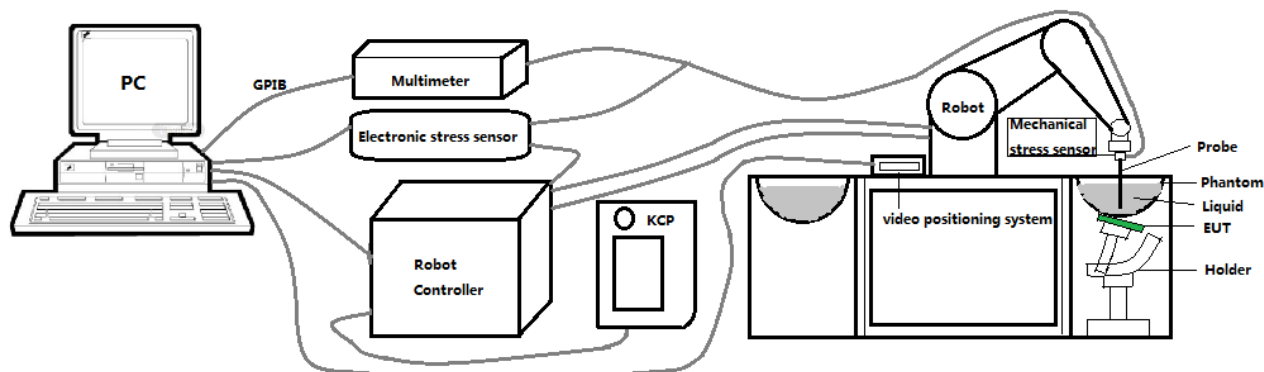
KDB 865664 D01 SAR measurement 100 MHz to 6 GHzv01r04;
KDB 865664 D02 RF Exposure Reportingv01r02;
KDB 447498 D01 General RF Exposure Guidancev06;
KDB 248227 D01 802.11 Wi-Fi SARv02r02;
KDB 941225 D01 3G SAR Proceduresv02r01;
KDB 941225 D05 SAR for LTE Devicesv01r02;
KDB 616217 D04 SAR for laptop and tabletsv01r02

1.5. Ambient Condition

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

2. SAR Measurement System

2.1. SATIMO SAR Measurement Set-up Diagram



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

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

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

2.2. Robot

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



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

2.3. E-Field Probe

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

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



- Dynamic range: 0.01-100 W/kg
 - TipDiameter : 2.5 mm
 - Distance between probe tip and sensor center: 1 mm
 - Distance between sensor center and the inner phantom surface: 2 mm (repeatability better than ± 1 mm).
 - Probe linearity: ± 0.08 dB
 - Axial isotropy: ± 0.01 dB
 - Hemispherical Isotropy: ± 0.01 dB
 - Calibration range: 650MHz to 5900MHz for head & body simulating liquid.
 - Lowerdetection limit: 8mW/kg
- Angle between probe axis (evaluation axis) and surface normal line: less than 30° .

2.3.1. E-Field Probe Calibration

Each probe needs to be calibrated according to a dosimetric assessment procedure with accuracy better than $\pm 10\%$. The spherical isotropy shall be evaluated and within ± 0.25 dB. The sensitivity parameters (NormX, NormY, and NormZ), the diode compression parameter (DCP) and the conversion factor (ConvF) of the probe are tested. The calibration data can be referred to appendix D of this report.

2.4. SAM phantoms

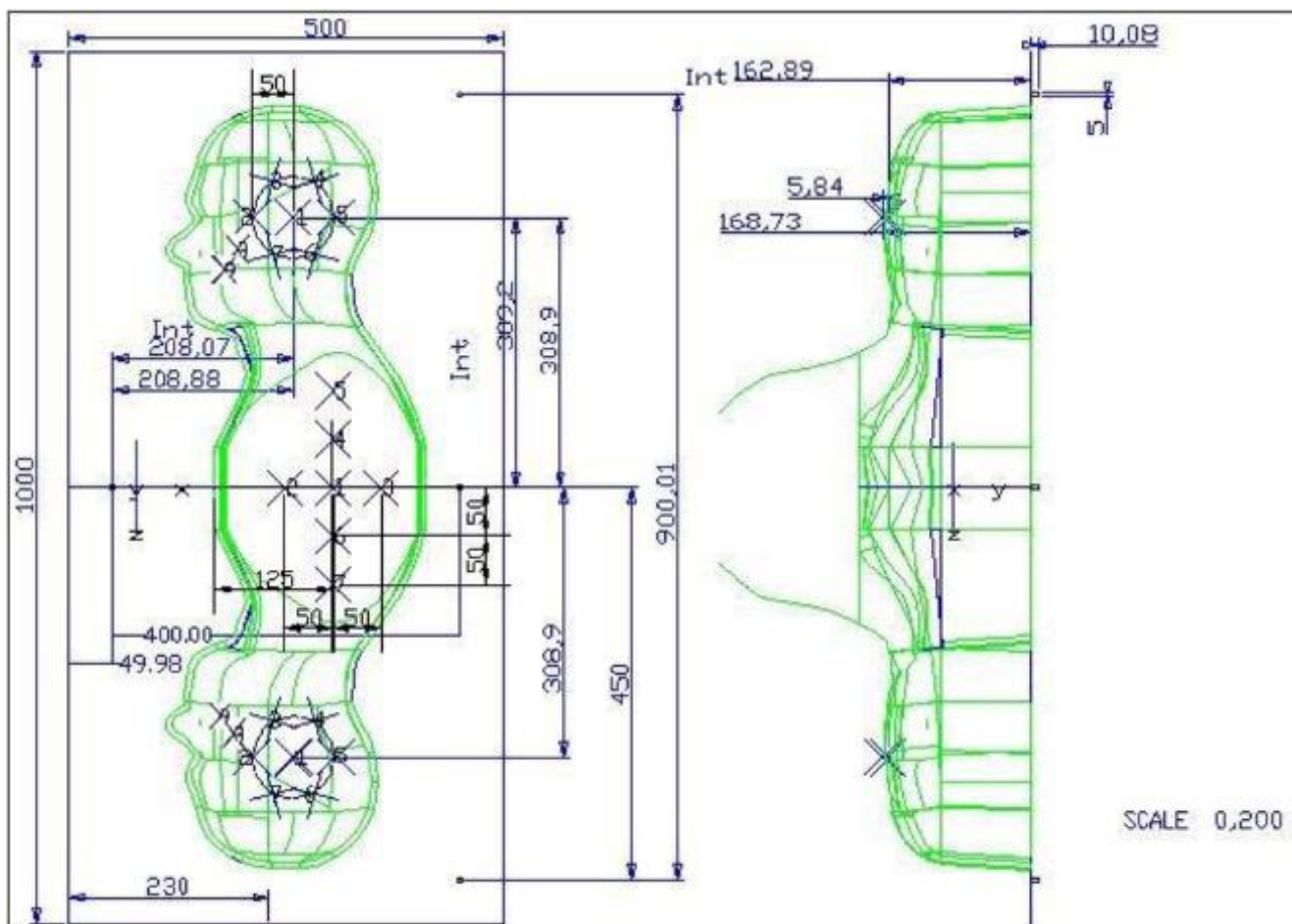
Photo of SAM phantom SN 16/15 SAM119



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

2.4.1. Technical Data

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

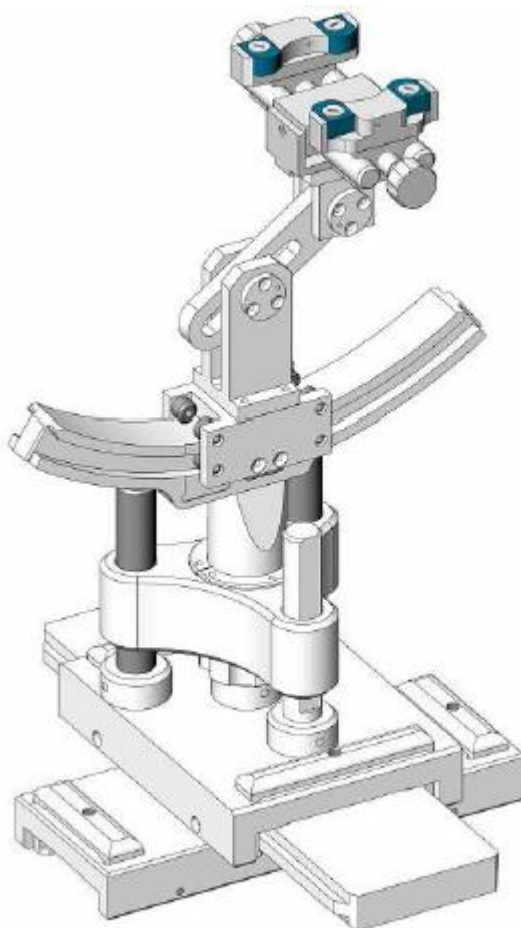


Serial Number	Left Head(mm)		Right Head(mm)		Flat Part(mm)	
SN 16/15 SAM119	2	2.02	2	2.08	1	2.09
	3	2.05	3	2.06	2	2.06
	4	2.07	4	2.07	3	2.08
	5	2.08	5	2.08	4	2.10
	6	2.05	6	2.07	5	2.10
	7	2.05	7	2.05	6	2.07
	8	2.07	8	2.06	7	2.07
	9	2.08	9	2.06	-	-

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

2.5. Device Holder

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



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

2.6. Test Equipment List

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

Devices used during the test described are marked ☒

	Manufacturer	Name of Equipment	Type/Model	Serial Number	Calibration	
					Last Cal.	Due Date
☒	MVG	E FIELD PROBE	SSE2	4024-EPGO-442	Oct.4.2024	Oct.3.2025
☒	MVG	750 MHz Dipole	SID750	SN 03/15 DIP 0G750-355	Feb. 21, 2024	Feb. 20, 2027
☒	MVG	835 MHz Dipole	SID835	SN 03/15 DIP 0G835-347	Feb. 21, 2024	Feb. 20, 2027
☐	MVG	900 MHz Dipole	SID900	SN 03/15 DIP 0G900-348	Feb. 21, 2024	Feb. 20, 2027
☒	MVG	1800 MHz Dipole	SID1800	SN 03/15 DIP 1G800-349	Feb. 21, 2024	Feb. 20, 2027
☒	MVG	1900 MHz Dipole	SID1900	SN 03/15 DIP 1G900-350	Feb. 21, 2024	Feb. 20, 2027
☐	MVG	2000 MHz Dipole	SID2000	SN 03/15 DIP 2G000-351	Feb. 21, 2024	Feb. 20, 2027
☒	MVG	2450 MHz Dipole	SID2450	SN 03/15 DIP 2G450-352	Feb. 21, 2024	Feb. 20, 2027
☒	MVG	2600 MHz Dipole	SID2600	SN 03/15 DIP 2G600-356	Feb. 21, 2024	Feb. 20, 2027
☐	MVG	3500 MHz Dipole	SID3500	SN 09/12 DIP 3G500-360	Oct. 15, 2022	Oct. 14, 2025
☐	MVG	3700 MHz Dipole	SID3700	SN 09/12 DIP 3G/700-361	Oct. 15, 2022	Oct. 14, 2025
☐	MVG	5000 MHz Dipole	SWG5500	SN 13/14 WGA 33	Feb. 21, 2024	Feb. 20, 2027
☒	MVG	Liquid measurement Kit	SCLMP	SN 21/15 OCPG 72	NCR	NCR
☒	MVG	Power Amplifier	N/A	AMPLISAR_28/14_003	NCR	NCR
☒	KEITHLEY	Millivoltmeter	2000	4072790	Nov. 29, 2024	Nov. 28, 2025
☒	R&S	Universal radio communication tester	CMU200	105747	Apr. 17, 2025	Apr. 16, 2026
☒	R&S	Wideband radio communicationtest	CMW500	103917	May. 12, 2025	May. 11, 2026

		er				
☐	Anritsu	4G LTE comprehensive tester	MT8821C	6262192315	July.17 2024	July.16 2025
☐	Anritsu	5G NR comprehensive tester	MT8000A	6262186364	July.17 2024	July.16 2025
☒	HP	Network Analyzer	E5071C	LPS-461	Oct. 15, 2024	Oct. 14, 2025
☒	Agilent	Calibration Kit	85033E	N/A	May. 31, 2024	May. 30, 2027
☒	Agilent	MXG Vector Signal Generator	N5182A	MY47070317	Apr. 17, 2025	Apr. 16, 2026
☒	Agilent	Power sensor	E9301A	LES-413-C	May. 6, 2025	May. 5, 2026
☒	Agilent	Power sensor	E9301A	US39212148	Apr. 17, 2025	Apr. 16, 2026
☒	MCLI/USA	Directional Coupler	CB11-20	0D2L51502	Apr. 26, 2024	Apr. 25, 2027
☒	N/A	Thermometer	N/A	LES-085	Mar. 27, 2023	Mar. 26, 2026
☒	MVG	SAM Phantom	SSM2	SN 16/15 SAM119	NCR	NCR
☒	MVG	Device Holder	SMPPD	SN 16/15 MSH100	NCR	NCR

Measurement Software

Manufacturer	Software Name	Software Version
SATIMO	OpenSAR	V5.3.15.11

3. SAR Measurement Procedures

The measurement procedures are as follows:

<Conducted power measurement>

- (a) For WWAN power measurement, use base station simulator to configure EUT WWAN transmission in conducted connection with RF cable, at maximum power in each supported wireless interface and frequency band.
- (b) Read the WWAN RF power level from the base station simulator.
- (c) For WLAN/Bluetooth power measurement, use engineering software to configure EUT WLAN/Bluetooth continuously transmission, at maximum RF power in each supported wireless interface and frequency band.
- (d) Connect EUT RF port through RF cable to the power meter, and measure WLAN/Bluetooth output power.

<SAR measurement>

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

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

- (a) Power reference measurement
- (b) Area scan
- (c) Zoom scan
- (d) Power drift measurement

3.1. Power Reference

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

3.2. Area scan & Zoom scan

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

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

From the scanned SAR distribution, identify the position of the maximum SAR value, in addition identify the positions of any local maxima with SAR values within 2 dB of the maximum value that will not be within the zoom scan of other peaks; additional peaks shall be measured only when the primary peak is within 2 dB of the SAR compliance limit (e.g., 1 W/kg for 1.6 W/kg 1 g limit, or 1.26 W/kg for 2 W/kg, 10 g limit).

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

			≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface			5 ± 1 mm	$\frac{1}{2} \cdot \delta \cdot \ln(2) \pm 0.5$ mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location			$30^{\circ} \pm 1^{\circ}$	$20^{\circ} \pm 1^{\circ}$
Maximum area scan spatial resolution: Δx_{Area} , Δy_{Area}			≤ 2 GHz: ≤ 15 mm 2 – 3 GHz: ≤ 12 mm	3 – 4 GHz: ≤ 12 mm 4 – 6 GHz: ≤ 10 mm
			When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be $\leq$ the corresponding x or y dimension of the test device with at least one measurement point on the test device.	
Maximum zoom scan spatial resolution: Δx_{Zoom} , Δy_{Zoom}			≤ 2 GHz: ≤ 8 mm 2 – 3 GHz: ≤ 5 mm*	3 – 4 GHz: ≤ 5 mm* 4 – 6 GHz: ≤ 4 mm*
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{Zoom}(n)$		≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm
	graded grid	$\Delta z_{Zoom}(1)$: between 1 st two points closest to phantom surface	≤ 4 mm	3 – 4 GHz: ≤ 3 mm 4 – 5 GHz: ≤ 2.5 mm 5 – 6 GHz: ≤ 2 mm
		$\Delta z_{Zoom}(n>1)$: between subsequent points	$\leq 1.5 \cdot \Delta z_{Zoom}(n-1)$	
Minimum zoom scan volume	x, y, z		≥ 30 mm	3 – 4 GHz: ≥ 28 mm 4 – 5 GHz: ≥ 25 mm 5 – 6 GHz: ≥ 22 mm
Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details.				
* When zoom scan is required and the <i>reported</i> SAR from the <i>area scan based 1-g SAR estimation</i> procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.				

3.3. Description of interpolation/extrapolation scheme

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

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

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

3.4. Volumetric Scan

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

3.5. Power Drift

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

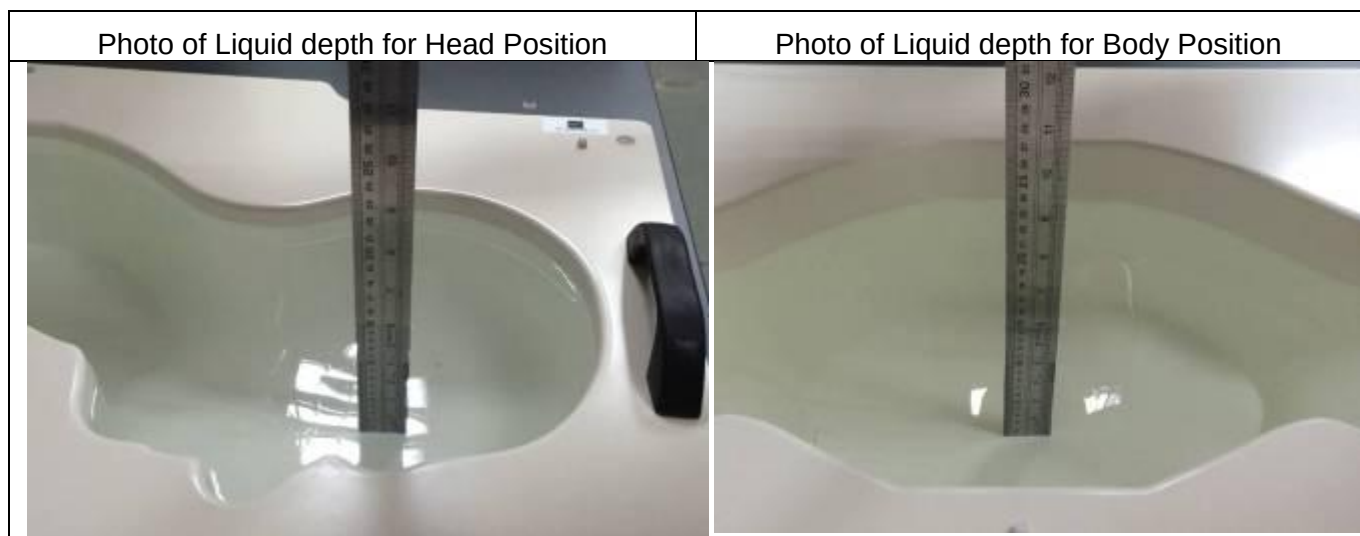
4. System Verification Procedure

4.1. Tissue Verification

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

Ingredients (% of weight)	Head Tissue								
Frequency Band (MHz)	750	835	900	1800	1900	2000	2450	2600	5000
Water	34.40	34.40	34.40	55.36	55.36	71.88	71.88	71.88	65.53
NaCl	0.79	0.79	0.79	0.35	0.35	0.16	0.16	0.16	0.00
1,2-Propanediol	64.81	64.81	64.81	0.00	0.00	0.00	0.00	0.00	0.00
Triton X-100	0.00	0.00	0.00	30.45	30.45	19.97	19.97	19.97	17.24
DGBE	0.00	0.00	0.00	13.84	13.84	7.99	7.99	7.99	0.00

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



4.1.1. Tissue Dielectric Parameter Check Results

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

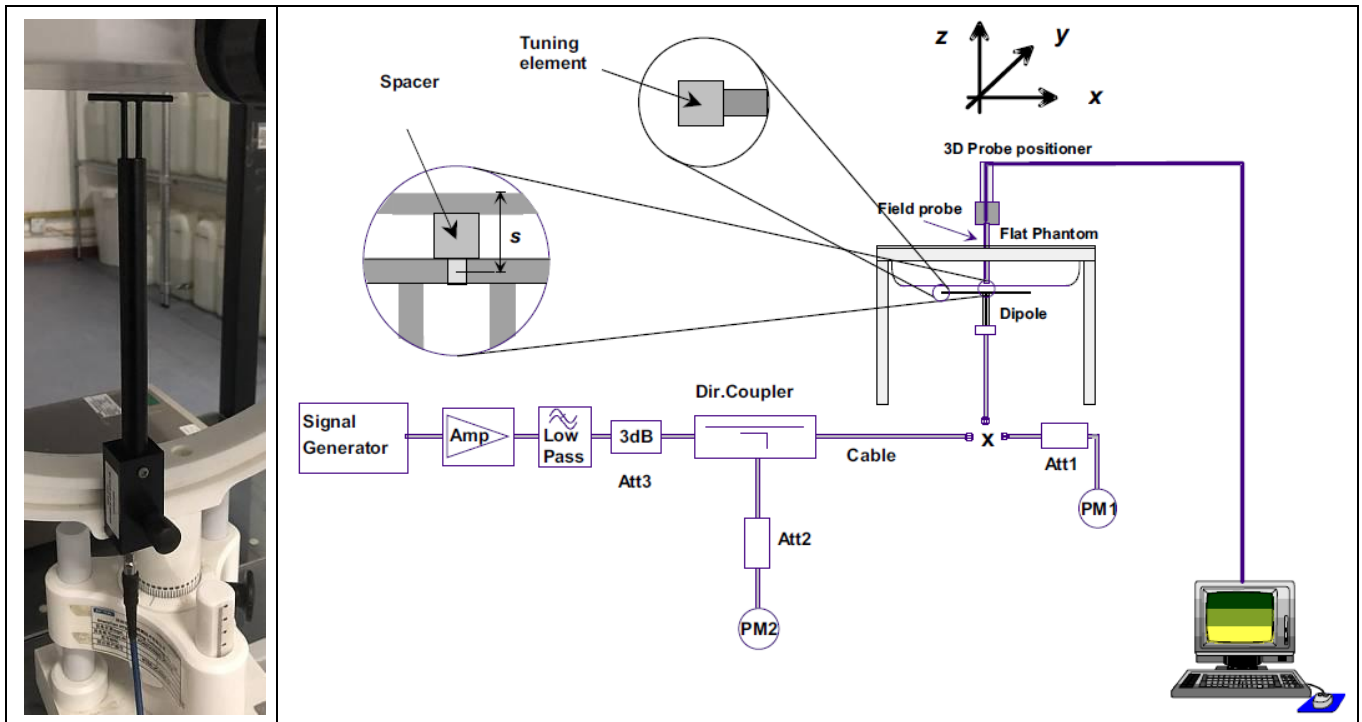
Tissue Type	Measured Frequency (MHz)	Target Tissue		Measured Tissue		Delta(%)		Liquid Temp.	Test Date
		ϵ_r	σ (S/m)	ϵ_r	σ (S/m)	ϵ_r	σ (S/m)		
Head 750	750	41.90	0.89	40.88	0.89	-2.43	0.00	21.5 °C	Jun. 03, 2025
Head 835	835	41.50	0.90	42.32	0.93	1.98	3.33	21.8 °C	Jun. 04, 2025
Head 1800	1800	40.00	1.40	39.06	1.40	-2.35	0.00	21.1 °C	Jun. 05, 2025
Head 1900	1900	40.00	1.40	38.50	1.46	-3.75	4.29	21.4 °C	Jun. 06, 2025
Head 2450	2450	39.20	1.80	38.35	1.83	-2.17	1.67	21.1 °C	Jun. 07, 2025
Head 2600	2600	39.01	1.96	39.40	1.95	1.00	-0.51	21.8 °C	Jun. 08, 2025
Head 5200	5200	36.00	4.66	37.48	4.60	4.11	-1.29	21.3 °C	Jun. 09, 2025
Head 5800	5800	35.30	5.27	36.15	5.17	2.41	-1.90	21.0 °C	Jun. 10, 2025

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

4.2. System Verification Procedure

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

The system verification is shown as below picture:



4.2.1. System Verification Results

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

System Verification	Target SAR (1W)		Measured SAR			Measured SAR		Delta (%)		Liquid Temp.	Test Date
						(Normalized to 1W)					
	1-g (W/Kg)	10-g (W/Kg)	Input Power (mW)	1-g (W/Kg)	10-g (W/Kg)	1-g (W/Kg)	10-g (W/Kg)	1-g (%)	10-g (%)		
750MHz	8.60	5.78	100.00	0.91	0.63	9.14	6.33	6.28	9.52	21.5 °C	Jun. 03, 2025
835MHz	9.40	6.28	100.00	0.97	0.58	9.72	5.83	3.40	-7.17	21.8 °C	Jun. 04, 2025
1800MHz	37.06	20.01	100.00	3.82	1.93	38.21	19.30	3.10	-3.55	21.1 °C	Jun. 05, 2025
1900MHz	39.69	20.92	100.00	4.20	2.07	42.00	20.67	5.82	-1.20	21.4 °C	Jun. 06, 2025
2450MHz	50.05	23.80	100.00	5.38	2.33	53.79	23.30	7.47	-2.10	21.1 °C	Jun. 07, 2025
2600MHz	54.16	24.85	100.00	5.64	2.46	56.38	24.62	4.10	-0.93	21.8 °C	Jun. 08, 2025
5200MHz	162.59	56.21	10.00	1.67	0.57	166.90	56.50	2.65	0.52	21.3 °C	Jun. 09, 2025
5800MHz	182.20	61.32	10.00	1.79	0.60	178.70	59.80	-1.92	-2.48	21.0 °C	Jun. 10, 2025

5. SAR Measurement variability and uncertainty

5.1. SAR measurement variability

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

- 1) Repeated measurement is not required when the original highest measured SAR is < 0.80 W/kg; steps 2) through 4) do not apply.
- 2) When the original highest measured SAR is ≥ 0.80 W/kg, repeat that measurement once.
- 3) Perform a second repeated measurement only if the ratio of largest to smallest SAR for the original and first repeated measurements is > 1.20 or when the original or repeated measurement is ≥ 1.45 W/kg ($\sim 10\%$ from the 1-g SAR limit).
- 4) Perform a third repeated measurement only if the original, first or second repeated measurement is ≥ 1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20 .

5.2. SAR measurement uncertainty

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

6. RF Exposure Positions

6.1. Tablet host platform exposure conditions

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

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

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

7. RF Output Power

7.1. GSM Conducted Power

Band GSM850	Burst-Averaged output Power (dBm)				Frame-Averaged output Power (dBm)			
Tx Channel	Tune-up (dBm)	128	189	251	Tune-up (dBm)	128	189	251
Frequency (MHz)		824.2	836.4	848.8		824.2	836.4	848.8
GSM (GMSK)	32.50	31.83	31.80	32.03	23.47	22.80	22.77	23.00
GPRS(GMSK, 1 TS)	32.00	31.87	31.73	31.92	22.97	22.84	22.70	22.89
GPRS(GMSK, 2 TS)	30.00	29.82	29.88	30.00	23.98	23.80	23.86	23.98
GPRS(GMSK, 3 TS)	28.00	27.84	27.84	27.96	23.74	23.58	23.58	23.70
GPRS(GMSK, 4 TS)	26.00	25.15	25.79	25.96	22.99	22.14	22.78	22.95
Band GSM1900	Burst-Averaged output Power (dBm)				Frame-Averaged output Power (dBm)			
Tx Channel	Tune-up (dBm)	512	661	810	Tune-up (dBm)	512	661	810
Frequency (MHz)		1850.2	1880	1909.8		1850.2	1880	1909.8
GSM (GMSK)	30.00	29.27	29.70	29.53	20.97	20.24	20.67	20.50
GPRS(GMSK, 1 TS)	29.50	29.09	29.28	29.35	20.47	20.06	20.25	20.32
GPRS(GMSK, 2 TS)	27.50	27.16	27.10	27.24	21.48	21.14	21.08	21.22
GPRS(GMSK, 3 TS)	26.00	25.79	25.88	25.80	21.74	21.53	21.62	21.54
GPRS(GMSK, 4 TS)	24.00	23.81	23.92	23.84	20.99	20.80	20.91	20.83

Note: The frame-averaged power is linearly scaled the maximum burst averaged power over 8 time slots. The calculated method are shown as below:

Frame-averaged power = Maximum burst averaged power (1 Tx Slot) - 9.03 dB

Frame-averaged power = Maximum burst averaged power (2 Tx Slots) - 6.02 dB

Frame-averaged power = Maximum burst averaged power (3 Tx Slots) - 4.26 dB

Frame-averaged power = Maximum burst averaged power (4 Tx Slots) - 3.01 dB

7.2. WCDMAConducted Power

WCDMA Band 2		Burst-Averaged output Power (dBm)			
Tx Channel	Tune-up (dBm)	9262	9400	9538	
Frequency (MHz)		1852.4	1880	1907.6	
RMC12.2K	22.00	21.92	21.75	21.62	
HSDPA Sub 1	22.00	21.54	21.86	21.38	
HSDPA Sub 2	22.00	21.60	21.44	21.08	
HSDPA Sub 3	21.50	21.24	21.35	20.78	
HSDPA Sub 4	21.50	21.04	21.07	20.64	
HSUPA Sub 1	22.00	21.84	21.57	21.28	
HSUPA Sub 2	22.00	21.70	21.67	21.40	
HSUPA Sub 3	21.50	21.45	21.25	20.54	
HSUPA Sub 4	22.00	21.87	21.65	21.29	
HSUPA Sub 5	22.00	21.57	21.25	20.91	
WCDMA Band 4		Burst-Averaged output Power (dBm)			
Tx Channel	Tune-up (dBm)	1312	1413	1513	
Frequency (MHz)		1712.4	1732.6	1752.6	
RMC12.2K	22.00	21.87	21.78	21.96	
HSDPA Sub 1	22.00	21.78	21.06	21.30	
HSDPA Sub 2	21.50	21.24	20.78	21.03	
HSDPA Sub 3	21.00	20.83	20.63	20.75	
HSDPA Sub 4	21.00	20.92	20.51	20.68	
HSUPA Sub 1	22.00	21.55	20.99	20.79	
HSUPA Sub 2	21.50	21.47	20.93	20.94	
HSUPA Sub 3	21.50	21.04	20.55	20.49	
HSUPA Sub 4	21.50	21.40	20.88	20.82	
HSUPA Sub 5	21.00	20.84	20.16	20.25	
WCDMA Band 5		Burst-Averaged output Power (dBm)			
Tx Channel	Tune-up (dBm)	4132	4182	4233	
Frequency (MHz)		826.4	836.4	846.6	
RMC12.2K	22.00	21.79	21.76	21.80	
HSDPA Sub 1	22.00	21.58	21.65	21.69	
HSDPA Sub 2	22.00	21.33	21.70	21.42	
HSDPA Sub 3	21.50	20.56	21.46	21.18	
HSDPA Sub 4	21.50	20.99	21.36	21.06	
HSUPA Sub 1	22.00	21.40	21.95	21.76	
HSUPA Sub 2	22.00	21.36	21.94	21.64	

HSUPA Sub 3	22.00	20.83	21.73	21.25
HSUPA Sub 4	22.00	21.27	22.00	21.61
HSUPA Sub 5	22.00	20.69	21.77	21.38

7.3. LTEConducted Power

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		18607/1850.7	18900/1880	19193/1909.3
LTE Band 2	1.4MHz	QPSK	1	0	24.50	23.73	23.96	24.04
			1	2	24.50	23.86	23.97	24.02
			1	5	24.50	23.98	24.08	24.17
			3	0	24.50	24.09	23.77	23.82
			3	1	24.50	24.09	23.82	23.94
			3	2	24.50	24.04	23.79	23.90
		16QAM	6	0	23.50	23.03	22.64	22.76
			1	0	24.00	23.58	22.18	23.44
			1	2	24.00	23.44	22.06	23.34
			1	5	24.00	23.51	22.22	23.31
			3	0	23.50	23.30	22.62	23.02
			3	1	23.50	23.27	22.63	23.07
			3	2	23.50	23.29	22.68	23.09
			6	0	22.00	21.66	21.51	21.46
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		18615/1851.5	18900/1880	19185/1908.5
LTE Band 2	3MHz	QPSK	1	0	24.50	24.03	23.98	23.81
			1	7	24.50	24.12	23.84	23.90
			1	14	24.50	24.17	24.05	23.85
			8	0	23.00	22.93	22.81	22.72
			8	4	23.00	22.98	22.76	22.83
			8	7	23.00	22.96	22.73	22.74
			15	0	23.50	23.08	22.71	22.78
		16QAM	1	0	23.50	22.10	22.73	23.28
			1	7	23.50	22.09	22.79	23.48
			1	14	23.50	22.21	22.76	23.45
			8	0	24.00	22.03	21.79	21.92
			8	4	24.00	23.98	21.81	21.96
			8	7	24.00	23.84	21.78	21.97
			15	0	24.50	24.05	21.75	21.86

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		18625/1852.5	18900/1880	19175/1907.5
LTE Band 2	5MHz	QPSK	1	0	24.50	24.32	23.94	24.00
			1	12	24.50	24.30	23.95	24.19
			1	24	24.50	24.49	23.95	24.11
			12	0	23.00	22.90	22.69	22.63
			12	6	23.00	22.94	22.62	22.72
			12	11	23.00	22.99	22.78	22.80
			25	0	23.00	22.92	22.75	22.67
		16QAM	1	0	23.50	23.00	22.78	22.72
			1	12	23.50	23.01	22.87	22.77
			1	24	23.50	22.90	22.84	22.79
			12	0	22.50	22.07	21.82	21.89
			12	6	22.50	22.01	21.83	21.80
			12	11	22.50	22.11	21.76	21.94
			25	0	22.50	21.92	21.98	22.06
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		18650/1855	18900/1880	19150/1905
LTE Band 2	10MHz	QPSK	1	0	24.50	24.37	23.64	23.64
			1	24	24.50	24.24	23.80	23.92
			1	49	24.50	24.29	24.00	23.92
			25	0	23.50	23.10	22.59	22.63
			25	12	23.50	22.98	22.72	22.62
			25	24	23.50	22.89	22.82	22.76
			50	0	23.00	22.88	22.71	22.69
		16QAM	1	0	23.50	23.13	23.20	23.24
			1	24	23.50	23.07	23.21	23.31
			1	49	23.50	23.06	23.35	23.48
			25	0	22.50	22.25	21.75	21.72
			25	12	22.50	22.21	21.80	21.74
			25	24	22.50	22.13	21.71	21.72
			50	0	22.50	22.01	21.79	21.71
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		18675/1857.5	18900/1880	19125/1902.5
LTE Band 2	15MHz	QPSK	1	0	24.50	24.34	23.64	23.85
			1	37	24.50	24.40	23.84	23.80

				1	74	24.50	24.19	24.05	23.98
				36	0	23.50	23.09	22.72	22.64
				36	18	23.50	-30.96	22.65	22.71
				36	37	23.50	-42.40	22.63	22.69
				75	0	23.00	-42.41	22.68	22.57
			16QAM	1	0	24.00	23.52	23.38	23.31
				1	37	24.00	23.55	23.41	23.25
				1	74	24.00	23.33	23.44	23.41
				36	0	22.50	22.02	21.69	21.72
				36	18	22.50	21.91	21.77	21.72
				36	37	22.50	21.94	21.67	21.73
				75	0	22.50	22.06	21.77	21.87
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)			
			RB Size	RB Offset		18700/1860	18900/1880	19100/1900	
LTE Band 2	20MHz	QPSK	1	0	24.50	24.16	23.97	24.17	
			1	49	24.50	24.22	24.05	24.21	
			1	99	24.50	23.95	24.05	24.34	
			50	0	23.50	23.07	22.62	22.86	
			50	24	23.50	22.95	22.74	22.63	
			50	49	23.50	22.73	22.74	22.76	
			100	0	23.00	23.00	22.67	22.69	
		16QAM	1	0	23.50	23.09	22.16	22.85	
			1	49	23.50	23.02	22.07	23.19	
			1	99	23.50	22.80	22.40	23.43	
			50	0	22.00	22.00	21.69	21.71	
			50	24	22.00	21.99	21.75	21.71	
			50	49	22.00	21.78	21.78	21.68	
			100	0	22.50	22.04	21.80	21.86	

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		19957/1710.7	20175/1732.5	20393/1754.3
LTE Band 4	1.4MHz	QPSK	1	0	24.50	23.84	24.10	24.01
			1	2	24.50	12.70	24.07	23.90
			1	5	24.50	23.86	24.08	23.93
			3	0	24.00	23.81	23.86	23.87
			3	1	24.00	22.73	23.91	23.89
			3	2	24.00	23.55	23.87	23.83

			6	0	24.00	23.60	22.85	22.87
		16QAM	1	0	24.00	23.50	23.87	23.60
			1	2	24.00	23.08	23.90	23.36
			1	5	24.00	23.09	23.94	23.49
			3	0	24.50	23.06	23.15	23.04
			3	1	24.50	21.75	23.12	23.17
			3	2	24.50	24.10	23.04	23.23
			6	0	24.50	24.07	21.61	21.75
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		19965/1711.5	20175/1732.5	20385/1753.5
LTE Band 4	3MHz	QPSK	1	0	24.50	23.87	23.88	23.86
			1	7	24.50	23.94	23.95	24.04
			1	14	24.50	23.79	23.95	23.93
			8	0	23.00	22.87	22.80	22.88
			8	4	23.00	22.93	22.88	22.92
			8	7	23.00	22.74	22.89	22.83
			15	0	23.00	22.89	22.87	22.90
		16QAM	1	0	24.50	24.01	23.89	23.97
			1	7	24.50	24.06	23.90	24.06
			1	14	24.50	23.87	23.82	23.97
			8	0	22.50	22.02	22.00	22.06
			8	4	22.50	22.04	22.01	22.03
			8	7	22.50	22.01	22.00	22.04
			15	0	22.50	21.97	21.95	22.08
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		19975/1712.5	20175/1732.5	20375/1752.5
LTE Band 4	5MHz	QPSK	1	0	24.50	24.23	24.10	24.18
			1	12	24.50	24.09	24.13	24.14
			1	24	24.50	23.86	24.21	24.20
			12	0	23.00	22.91	22.89	22.86
			12	6	23.00	22.87	22.88	22.97
			12	11	23.00	22.75	22.80	22.92
			25	0	23.00	22.75	22.87	22.94
		16QAM	1	0	24.50	24.04	23.51	23.42
			1	12	24.50	23.94	23.50	23.40
			1	24	24.50	23.86	23.41	23.47

			12	0	22.50	22.04	22.08	22.05
			12	6	22.50	21.94	21.91	22.04
			12	11	22.50	21.96	21.96	22.03
			25	0	22.50	21.83	22.13	22.21
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		20000/1715	20175/1732.5	20350/1750
LTE Band 4	10MHz	QPSK	1	0	24.00	23.95	23.82	23.85
			1	24	24.00	23.77	23.86	23.87
			1	49	24.00	23.75	23.95	23.99
			25	0	23.00	22.71	22.86	22.89
			25	12	23.00	22.69	22.85	22.90
			25	24	23.00	22.74	22.85	22.83
			50	0	23.00	22.80	22.89	22.85
		16QAM	1	0	23.50	23.41	23.36	23.43
			1	24	23.50	23.43	23.42	23.35
			1	49	23.50	23.35	23.47	23.38
			25	0	22.50	22.09	22.16	22.17
			25	12	22.50	22.04	22.17	22.22
			25	24	22.50	22.19	22.20	22.19
			50	0	22.50	21.86	21.92	22.02
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		20025/1717.5	20175/1732.5	20325/1747.5
LTE Band 4	15MHz	QPSK	1	0	24.00	23.92	23.77	23.84
			1	37	24.00	23.71	23.89	23.77
			1	74	24.00	23.91	23.96	23.91
			36	0	23.00	22.75	22.93	22.84
			36	18	23.00	22.85	22.79	22.79
			36	37	23.00	22.75	22.94	22.88
			75	0	23.00	22.76	22.79	22.81
		16QAM	1	0	24.50	24.06	23.98	24.16
			1	37	24.50	23.91	23.91	24.10
			1	74	24.50	23.97	23.98	24.16
			36	0	22.00	21.76	21.94	21.90
			36	18	22.00	21.84	21.94	21.86
			36	37	22.00	21.91	21.93	21.92

			75	0	22.50	21.86	21.98	22.13
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		20050/1720	20175/1732.5	20300/1745
LTE Band 4	20MHz	QPSK	1	0	24.50	24.20	24.05	23.84
			1	49	24.50	24.07	23.86	23.89
			1	99	24.50	24.25	23.99	24.01
			50	0	23.50	22.72	22.84	22.76
			50	24	23.50	22.73	22.95	22.82
			50	49	23.50	22.88	23.00	22.88
			100	0	23.00	22.82	22.83	22.91
		16QAM	1	0	24.50	23.91	23.95	23.44
			1	49	24.50	23.80	23.85	23.60
			1	99	24.50	23.93	24.07	23.62
			50	0	22.50	21.78	21.89	21.89
			50	24	22.50	21.89	21.99	21.88
			50	49	22.50	21.93	22.00	22.01
			100	0	22.00	21.95	21.99	21.91

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		20407/824.7	20525/836.5	20643/848.3
LTE Band 5	1.4MHz	QPSK	1	0	24.00	23.16	23.58	23.11
			1	2	24.00	23.19	23.53	23.18
			1	5	24.00	23.17	23.55	23.15
			3	0	23.50	23.34	23.33	23.27
			3	1	23.50	23.35	23.34	23.22
			3	2	23.50	23.32	23.36	23.26
			6	0	22.50	22.31	22.32	22.24
		16QAM	1	0	23.50	22.77	23.42	22.72
			1	2	23.50	22.66	23.39	22.64
			1	5	23.50	22.73	23.33	22.70
			3	0	23.00	22.56	22.60	22.20
			3	1	23.00	22.57	22.65	22.46
			3	2	23.00	22.37	22.61	22.42
			6	0	21.50	21.03	21.14	21.02
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		20415/825.5	20525/836.5	20635/847.5

LTE Band 5	3MHz	QPSK	1	0	24.00	23.57	23.42	23.22
			1	7	24.00	23.42	23.39	23.22
			1	14	24.00	23.45	23.56	23.14
			8	0	23.50	22.26	22.50	22.19
			8	4	23.50	23.33	22.37	22.24
			8	7	23.50	23.17	22.52	22.29
			15	0	23.50	23.21	22.31	22.38
		16QAM	1	0	23.50	21.32	23.47	23.39
			1	7	23.50	21.24	23.31	23.35
			1	14	23.50	21.29	23.35	23.24
			8	0	23.50	21.25	21.50	21.27
			8	4	23.50	23.42	21.53	21.27
			8	7	23.50	23.39	21.55	21.44
			15	0	24.00	23.56	21.44	21.30
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		20425/826.5	20525/836.5	20625/846.5
LTE Band 5	5MHz	QPSK	1	0	24.00	23.34	23.75	23.64
			1	12	24.00	23.36	23.61	23.56
			1	24	24.00	23.37	23.58	23.47
			12	0	22.50	22.23	22.42	22.32
			12	6	22.50	22.09	22.44	22.25
			12	11	22.50	22.14	22.30	22.30
			25	0	22.50	22.32	22.43	22.26
		16QAM	1	0	23.50	23.31	23.46	22.76
			1	12	23.50	23.22	23.44	22.68
			1	24	23.50	23.13	23.36	22.80
			12	0	21.50	21.35	21.43	21.25
			12	6	21.50	21.17	21.42	21.30
			12	11	21.50	21.07	21.36	21.13
			25	0	21.50	21.08	21.35	21.33
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		20450/829	20525/836.5	20600/844
LTE Band 5	10MHz	QPSK	1	0	24.50	24.35	23.43	23.38
			1	24	24.50	24.24	23.32	23.38
			1	49	24.50	24.37	23.34	23.24
			25	0	23.50	23.15	22.35	22.40
			25	12	23.50	23.46	22.37	22.34

		16QAM	25	24	23.50	23.32	22.42	22.36
			50	0	23.50	23.33	22.37	22.40
			1	0	23.50	23.31	23.38	22.85
			1	24	23.50	23.29	23.38	22.72
			1	49	23.50	23.32	23.21	22.69
			25	0	22.00	21.13	21.39	21.59
			25	12	22.00	21.30	21.37	21.41
			25	24	22.00	21.26	21.28	21.41
			50	0	21.50	21.30	21.30	21.22

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		20775/2502.5	21100/2535	21425/2567.5
LTE Band 7	5MHz	QPSK	1	0	23.00	21.46	22.73	21.45
			1	12	23.00	22.05	22.74	21.94
			1	24	23.00	21.71	22.72	21.37
			12	0	22.00	21.21	21.46	21.21
			12	6	22.00	21.13	21.55	21.40
			12	11	22.00	21.14	21.41	21.29
			25	0	21.50	21.16	21.39	21.23
		16QAM	1	0	23.00	21.77	22.72	21.01
			1	12	23.00	21.98	22.71	21.64
			1	24	23.00	21.40	22.67	21.08
			12	0	21.00	20.33	20.62	20.67
			12	6	21.00	20.29	20.60	20.72
			12	11	21.00	20.39	20.68	20.57
			25	0	21.00	20.28	20.52	20.59
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		20800/2505	21100/2535	21400/2565
LTE Band 7	10MHz	QPSK	1	0	23.00	22.14	22.43	21.56
			1	24	23.00	21.96	22.62	21.68
			1	49	23.00	21.90	22.60	22.01
			25	0	22.00	21.24	21.40	21.15
			25	12	22.00	21.28	21.49	21.27
			25	24	22.00	21.23	21.52	21.49
			50	0	21.50	21.22	21.45	21.31
		16QAM	1	0	23.00	21.87	22.70	21.12
			1	24	23.00	21.70	22.60	21.34
			1	49	23.00	21.72	22.62	21.70

			25	0	21.00	20.51	20.53	20.65
			25	12	21.00	20.59	20.58	20.68
			25	24	21.00	20.56	20.54	20.68
			50	0	21.00	20.33	20.57	20.65
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		20825/2507.5	21100/2535	21375/2562.5
LTE Band 7	15MHz	QPSK	1	0	23.00	22.16	22.55	21.74
			1	37	23.00	21.68	22.59	21.66
			1	74	23.00	21.36	22.65	21.76
			36	0	22.00	21.29	21.46	21.14
			36	18	22.00	21.30	21.55	21.14
			36	37	22.00	21.11	21.53	21.28
			75	0	21.50	21.17	21.43	21.19
		16QAM	1	0	22.50	21.74	21.89	21.38
			1	37	22.50	21.50	22.03	21.30
			1	74	22.50	21.11	21.85	21.45
			36	0	21.00	20.49	20.76	20.80
			36	18	21.00	20.37	20.79	20.79
			36	37	21.00	20.31	20.70	20.85
			75	0	21.00	20.27	20.59	20.65
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		20850/2510	21100/2535	21350/2560
LTE Band 7	20MHz	QPSK	1	0	23.00	22.17	22.37	22.50
			1	49	23.00	21.48	22.61	21.54
			1	99	23.00	21.86	22.54	22.06
			50	0	22.00	21.21	21.37	21.35
			50	24	22.00	21.20	21.52	21.21
			50	49	22.00	20.94	21.42	21.41
			100	0	21.50	21.21	21.42	21.36
		16QAM	1	0	22.50	22.12	21.89	22.06
			1	49	22.50	21.30	22.10	21.33
			1	99	22.50	21.71	22.10	21.83
			50	0	21.00	20.36	20.58	20.68
			50	24	21.00	20.28	20.66	20.66
			50	49	21.00	20.15	20.54	20.76
			100	0	21.00	20.20	20.53	20.59

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		23017/699.7	23095/707.5	23173/715.3
LTE Band 12	1.4MHz	QPSK	1	0	24.00	23.38	23.83	23.90
			1	2	24.00	23.45	23.97	23.86
			1	5	24.00	23.46	23.94	23.93
			3	0	24.00	23.63	23.83	23.77
			3	1	24.00	23.69	23.79	23.80
			3	2	24.00	23.62	23.84	23.77
			6	0	23.00	22.48	22.48	22.62
		16QAM	1	0	23.50	22.97	22.42	22.64
			1	2	23.50	22.97	22.50	22.66
			1	5	23.50	23.01	22.51	22.51
			3	0	23.00	22.91	22.83	22.85
			3	1	23.00	22.91	22.79	22.90
			3	2	23.00	22.81	22.81	22.86
			6	0	21.50	21.29	21.37	21.44
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		23025/700.5	23095/707.5	23165/714.5
LTE Band 12	3MHz	QPSK	1	0	24.00	23.61	23.59	23.62
			1	7	24.00	23.63	23.77	23.71
			1	14	24.00	23.63	23.85	23.61
			8	0	23.00	22.50	22.73	22.60
			8	4	23.00	22.63	22.61	22.57
			8	7	23.00	22.67	22.74	22.73
			15	0	23.00	22.60	22.57	22.53
		16QAM	1	0	23.50	23.05	23.09	22.98
			1	7	23.50	23.00	22.95	23.09
			1	14	23.50	23.07	22.97	22.99
			8	0	22.00	21.63	21.85	21.55
			8	4	22.00	21.74	21.75	21.66
			8	7	22.00	21.61	21.73	21.66
			15	0	22.00	21.72	21.67	21.62
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		23035/701.5	23095/707.5	23155/713.5
LTE Band 12	5MHz	QPSK	1	0	24.00	23.72	23.56	24.00
			1	12	24.00	23.60	23.84	23.99
			1	24	24.00	23.69	23.74	23.96

			12	0	23.00	22.48	22.64	22.65
			12	6	23.00	22.51	22.54	22.61
			12	11	23.00	22.54	22.53	22.64
			25	0	23.00	22.72	22.58	22.59
		16QAM	1	0	23.50	23.08	23.00	22.75
			1	12	23.50	23.04	22.95	22.60
			1	24	23.50	23.26	23.09	22.77
			12	0	22.00	21.72	21.67	21.72
	12	6	22.00	21.55	21.56	21.65		
	12	11	22.00	21.53	21.55	21.58		
	25	0	21.50	21.38	21.44	21.48		
	Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)	
RB Size				RB Offset	23060/704		23095/707.5	23130/711
LTE Band 12	10MHz	QPSK	1	0	24.00	23.65	23.73	23.65
			1	24	24.00	23.58	23.80	23.66
			1	49	24.00	23.73	23.68	23.78
			25	0	23.50	22.52	22.70	22.61
			25	12	23.50	23.06	22.55	22.62
			25	24	23.50	22.54	22.67	22.67
			50	0	23.50	23.07	22.57	22.66
		16QAM	1	0	23.50	21.58	23.05	23.08
			1	24	23.50	21.61	22.95	22.96
			1	49	23.50	21.48	22.99	22.98
			25	0	24.00	21.73	21.63	21.44
			25	12	24.00	23.73	21.50	21.64
			25	24	24.00	23.80	21.70	21.44
			50	0	24.00	23.68	21.53	21.75

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		23755/706.5	23790/710	23825/713.5
LTE Band 17	5MHz	QPSK	1	0	24.50	23.46	23.95	24.05
			1	12	24.50	23.53	23.91	24.01
			1	24	24.50	23.62	23.87	24.04
			12	0	23.00	22.58	22.48	22.68
			12	6	23.00	22.62	22.71	22.64
			12	11	23.00	22.66	22.64	22.67
			25	0	23.00	22.65	22.72	22.62

		16QAM	1	0	23.50	23.02	22.52	22.74
			1	12	23.50	22.99	22.66	22.57
			1	24	23.50	23.00	22.53	22.53
			12	0	22.00	21.65	21.55	21.77
			12	6	22.00	21.63	21.72	21.72
			12	11	22.00	21.47	21.70	21.55
			25	0	22.00	21.40	21.90	21.76
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		23780/709	23790/710	23800/711
LTE Band 17	10MHz	QPSK	1	0	24.50	23.79	23.66	23.66
			1	24	24.50	23.91	23.68	23.62
			1	49	24.50	24.02	23.76	23.96
			25	0	23.00	22.58	22.57	22.73
			25	12	23.00	22.59	22.74	22.63
			25	24	23.00	22.64	22.56	22.70
			50	0	23.00	22.74	22.65	22.68
		16QAM	1	0	23.00	22.62	22.64	22.53
			1	24	23.00	22.55	22.73	22.72
			1	49	23.00	22.62	22.50	22.60
			25	0	22.00	22.00	21.67	21.73
			25	12	22.00	21.79	21.90	21.97
			25	24	22.00	21.95	21.95	21.71
			50	0	22.00	21.53	21.78	21.67

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)			
			RB Size	RB Offset		40065/2537.5	40350/2566	40640/2593	41215/2652.5
LTE Band 41	5MHz	QPSK	1	0	24.00	22.84	23.16	23.35	23.55
			1	12	24.00	22.8	23.36	23.4	23.65
			1	24	24.00	22.85	23.62	23.34	23.55
			12	0	22.50	21.79	22.43	21.94	22.45
			12	6	22.50	21.77	22	22.08	22.46
			12	11	22.50	21.77	22.44	21.89	22.4
			25	0	22.50	21.77	22.27	21.92	22.45
		16QAM	1	0	22.50	22.18	22.32	22.29	22.16
			1	12	22.50	22.16	22.25	22.34	22.12
			1	24	22.50	22.14	22.2	22.17	22.23
			12	0	22.00	20.94	20.96	21.12	21.53

			12	6	22.00	21	21.08	21.18	21.49
			12	11	22.00	20.92	21.53	21.1	21.62
			25	0	22.00	20.97	21.64	21.22	21.74
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)			
			RB Size	RB Offset		40090/2540	40350/2566	40640/2593	41190/2650
LTE Band 41	10MHz	QPSK	1	0	24.50	23.29	23.86	23.48	24.02
			1	24	24.50	23.25	23.50	23.38	23.94
			1	49	24.50	22.99	23.15	23.21	24.00
			25	0	23.00	21.90	22.56	21.98	22.63
			25	12	23.00	21.80	21.94	22.05	22.63
			25	24	23.00	21.77	22.61	21.94	22.58
			50	0	22.50	21.42	22.06	21.67	22.15
		16QAM	1	0	23.00	22.24	22.90	22.37	22.96
			1	24	23.00	22.15	22.69	22.24	22.91
			1	49	23.00	22.09	22.63	22.23	22.91
			25	0	22.00	21.09	21.77	21.25	21.78
			25	12	22.00	21.01	21.73	21.12	21.80
			25	24	22.00	21.08	21.63	21.21	21.74
			50	0	21.50	20.61	21.00	20.83	21.47
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)			
			RB Size	RB Offset		40115/2542.5	40350/2566	40640/2593	41165/2647.5
LTE Band 41	15MHz	QPSK	1	0	24.50	22.81	23.16	23.58	24.03
			1	37	24.50	22.59	23.32	23.40	23.93
			1	74	24.50	23.01	23.01	23.33	24.01
			36	0	23.00	21.74	22.45	22.11	22.75
			36	18	23.00	21.75	22.44	21.97	22.53
			36	37	23.00	21.66	22.22	21.94	22.54
			75	0	22.50	21.44	21.66	21.58	22.19
		16QAM	1	0	23.50	21.60	21.86	21.79	22.84
			1	37	23.50	21.49	22.23	21.71	23.03
			1	74	23.50	21.49	22.92	21.57	22.90
			36	0	22.00	20.82	21.24	21.16	21.70
			36	18	22.00	20.78	21.35	21.02	21.59
			36	37	22.00	20.80	21.52	20.99	21.61
			75	0	21.50	20.58	21.38	20.71	21.49
Band	Band	Modulation	RB		Tune-up	Channel/Frequency(MHz)			

	Width		Configuration		(dBm)				
			RB Size	RB Offset		40140/2545	40350/2566	40640/2593	41140/2645
LTE Band 41	20MHz	QPSK	1	0	24.00	23.36	23.22	23.54	23.44
			1	49	24.00	23.13	23.11	23.09	23.51
			1	99	24.00	23.18	23.29	23.14	23.53
			50	0	22.50	21.78	22.29	22.07	22.39
			50	24	22.50	21.78	22.22	22.01	22.37
			50	49	22.50	21.81	22.13	21.96	22.47
			100	0	22.00	21.4	21.51	21.52	21.95
		16QAM	1	0	23.00	22.27	22.50	22.5	22.11
			1	49	23.00	22.11	22.21	22.31	22.26
			1	99	23.00	22.24	22.31	22.28	22.21
			50	0	22.00	20.99	21.54	21.26	21.56
			50	24	22.00	21.04	21.12	21.26	21.57
			50	49	22.00	21.04	21.30	21.2	21.52
			100	0	21.50	20.97	21.06	21.27	21.48

7.4. WLAN&BluetoothOutput Power

7.4.1. Output PowerResults Of WLAN

Mode	Channel	Frequency (MHz)	Tune-up (dBm)	Output Power (dBm)
802.11b	1	2412	15.00	14.48
	6	2437	15.00	14.13
	11	2462	15.00	14.52
802.11g	1	2412	16.50	15.57
	6	2437	16.50	15.36
	11	2462	16.50	16.32
802.11n HT20	1	2412	16.50	15.59
	6	2437	16.50	15.76
	11	2462	16.50	16.37
802.11n HT40	3	2422	16.50	15.89
	6	2437	16.50	15.77
	9	2452	16.50	16.20

NOTE: Power measurement results of WLAN2.4G.

Mode	Channel	Frequency (MHz)	Tune-up (dBm)	Output Power (dBm)
802.11a	36	5180	12.50	12.30
	40	5200	12.50	12.09
	48	5240	12.50	11.85
802.11n HT20	36	5180	11.00	10.55
	40	5200	11.00	10.22
	48	5240	11.00	10.04
802.11n HT40	38	5190	11.00	10.92
	46	5230	11.00	10.30
802.11ac VHT20	36	5180	11.00	10.61
	40	5200	11.00	10.34
	48	5240	11.00	10.90
802.11ac VHT40	38	5190	11.00	10.85
	46	5230	11.00	10.25
802.11ac VHT80	42	5210	11.00	10.65

NOTE: Power measurement results of WLAN5.2G.

Mode	Channel	Frequency (MHz)	Tune-up (dBm)	Output Power (dBm)
802.11a	149	5745	12.50	11.93
	157	5785	12.50	12.23
	165	5825	12.50	12.22
802.11n HT20	149	5745	12.50	11.89
	157	5785	12.50	12.41
	165	5825	12.50	12.32
802.11n HT40	151	5755	13.00	12.24
	159	5795	13.00	12.69
802.11ac VHT20	149	5745	12.50	11.99
	157	5785	12.50	12.23
	165	5825	12.50	12.25
802.11ac VHT40	151	5755	13.00	12.51
	159	5795	13.00	12.82
802.11ac VHT80	155	5775	12.50	12.09

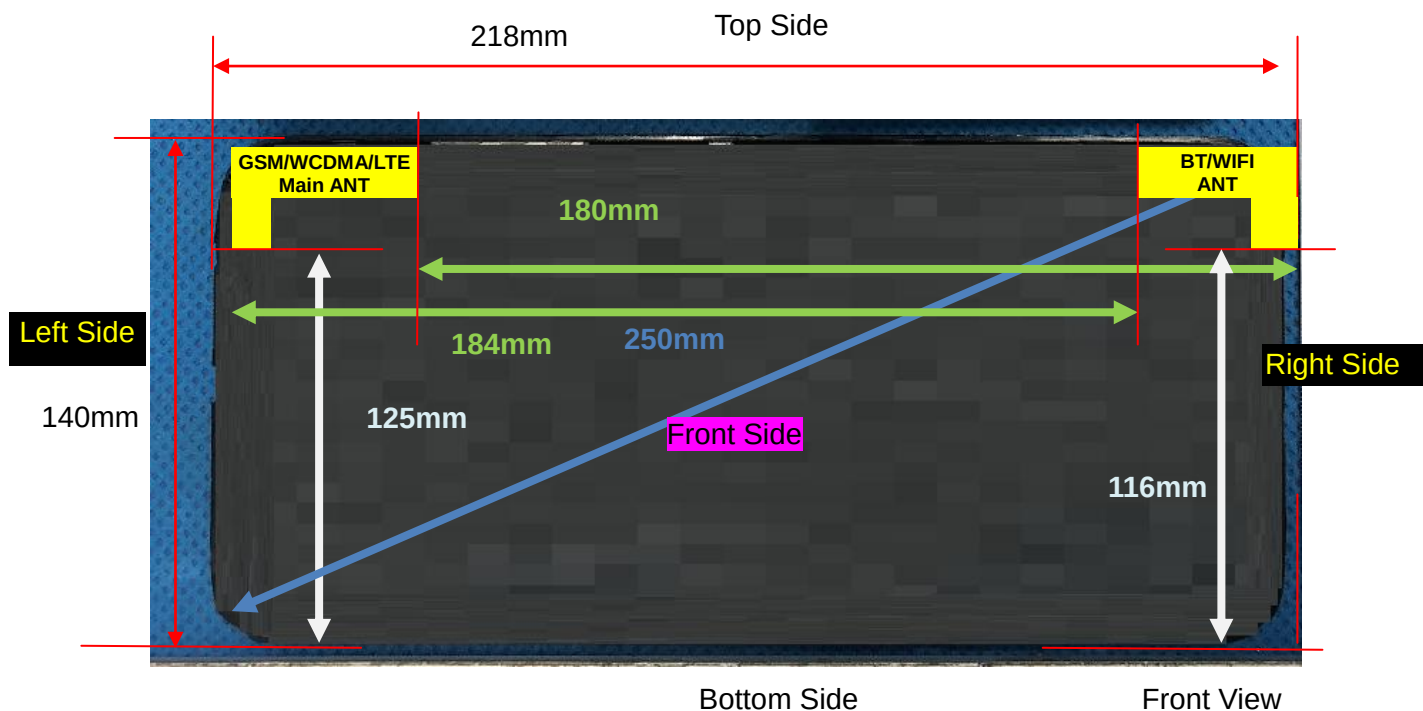
NOTE: Power measurement results of WLAN5.8G.

7.4.2. Output Power Results Of Bluetooth

BR+EDR	Output Power (dBm)				
	Data Rates	Tune-up (dBm)	Channel		
			0CH	39CH	78CH
	1M	7.00	6.45	5.10	5.14
2M	7.00	6..81	6.33	5.96	
3M	8.00	7.02	6.52	6.29	

BLE	Output Power (dBm)				
	Data Rates	Tune-up (dBm)	Channe		
			0CH	19CH	39CH
	1M	3.50	3.09	2.23	2.36
2M	3.00	2.97	2.12	2.25	

8. Antenna Location



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

Distance of the Antenna to the EUT surface/edge						
Antennas	Front Side	Back Side	Left Side	Right Side	Top Side	Bottom Side
WLAN & Bluetooth	5	5	184	5	5	116
WWAN	5	5	5	180	5	125

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

Positions for SAR tests		
Test separation distances ≤ 50 mm		
Exposure Positions	Tune-up Maximum power of WLAN 2.4G	
	17.00dBm	50.12mW
Front Side	Antenna to user(mm)	5
	SAR exclusion threshold (mW)	10.00
	SAR testing required?	YES
Back Side	Antenna to user(mm)	5
	SAR exclusion threshold (mW)	10.00
	SAR testing required?	YES
Right Side	Antenna to user(mm)	5
	SAR exclusion threshold (mW)	10.00
	SAR testing required?	YES
Top Side	Antenna to user(mm)	5

	SAR exclusion threshold (mW)	10.00
	SAR testing required?	YES
Exposure Positions	Tune-up Maximum power of WLAN 5.2G	
	12.50dBm	17.78mW
Front Side	Antenna to user(mm)	5
	SAR exclusion threshold (mW)	7.00
	SAR testing required?	YES
Back Side	Antenna to user(mm)	5
	SAR exclusion threshold (mW)	7.00
	SAR testing required?	YES
Right Side	Antenna to user(mm)	5
	SAR exclusion threshold (mW)	7.00
	SAR testing required?	YES
Top Side	Antenna to user(mm)	5
	SAR exclusion threshold (mW)	7.00
	SAR testing required?	YES
Exposure Positions	Tune-up Maximum power of WLAN 5.8G	
	13.00dBm	19.95mW
Front Side	Antenna to user(mm)	5
	SAR exclusion threshold (mW)	6.00
	SAR testing required?	YES
Back Side	Antenna to user(mm)	5
	SAR exclusion threshold (mW)	6.00
	SAR testing required?	YES
Right Side	Antenna to user(mm)	5
	SAR exclusion threshold (mW)	6.00
	SAR testing required?	YES
Top Side	Antenna to user(mm)	5
	SAR exclusion threshold (mW)	6.00
	SAR testing required?	YES
Exposure Positions	Tune-up Maximum power of GSM 850	
	32.50dBm	1778.28
Front Side	Antenna to user(mm)	5
	SAR exclusion threshold (mW)	16.00
	SAR testing required?	YES
Back Side	Antenna to user(mm)	5
	SAR exclusion threshold (mW)	16.00
	SAR testing required?	YES
Left Side	Antenna to user(mm)	5
	SAR exclusion threshold (mW)	16.00

	SAR testing required?	YES
Top Side	Antenna to user(mm)	5
	SAR exclusion threshold (mW)	16.00
	SAR testing required?	YES
Exposure Positions	Tune-up Maximum power of GSM 1900	
	30.00dBm	1000.00
Front Side	Antenna to user(mm)	5
	SAR exclusion threshold (mW)	11.00
	SAR testing required?	YES
Back Side	Antenna to user(mm)	5
	SAR exclusion threshold (mW)	11.00
	SAR testing required?	YES
Left Side	Antenna to user(mm)	5
	SAR exclusion threshold (mW)	11.00
	SAR testing required?	YES
Top Side	Antenna to user(mm)	5
	SAR exclusion threshold (mW)	11.00
	SAR testing required?	YES
Exposure Positions	Tune-up Maximum power of WCDMA Band 2	
	22.00dBm	158.49mW
Front Side	Antenna to user(mm)	5
	SAR exclusion threshold (mW)	11.00
	SAR testing required?	YES
Back Side	Antenna to user(mm)	5
	SAR exclusion threshold (mW)	11.00
	SAR testing required?	YES
Left Side	Antenna to user(mm)	5
	SAR exclusion threshold (mW)	11.00
	SAR testing required?	YES
Top Side	Antenna to user(mm)	5
	SAR exclusion threshold (mW)	11.00
	SAR testing required?	YES
Exposure Positions	Tune-up Maximum power of WCDMA Band 4	
	22.00dBm	158.49mW
Front Side	Antenna to user(mm)	5
	SAR exclusion threshold (mW)	11.00
	SAR testing required?	YES
Back Side	Antenna to user(mm)	5
	SAR exclusion threshold (mW)	11.00

	SAR testing required?	YES
Left Side	Antenna to user(mm)	5
	SAR exclusion threshold (mW)	11.00
	SAR testing required?	YES
Top Side	Antenna to user(mm)	5
	SAR exclusion threshold (mW)	11.00
	SAR testing required?	YES
Exposure Positions	Tune-up Maximum power of WCDMA Band 5	
	22.00dBm	158.49mW
Front Side	Antenna to user(mm)	5
	SAR exclusion threshold (mW)	16.00
	SAR testing required?	YES
Back Side	Antenna to user(mm)	5
	SAR exclusion threshold (mW)	16.00
	SAR testing required?	YES
Left Side	Antenna to user(mm)	5
	SAR exclusion threshold (mW)	16.00
	SAR testing required?	YES
Top Side	Antenna to user(mm)	5
	SAR exclusion threshold (mW)	16.00
	SAR testing required?	YES
Exposure Positions	Tune-up Maximum power of LTE Band 2	
	24.50dBm	281.84 mW
Front Side	Antenna to user(mm)	5
	SAR exclusion threshold (mW)	11.00
	SAR testing required?	YES
Back Side	Antenna to user(mm)	5
	SAR exclusion threshold (mW)	11.00
	SAR testing required?	YES
Left Side	Antenna to user(mm)	5
	SAR exclusion threshold (mW)	11.00
	SAR testing required?	YES
Top Side	Antenna to user(mm)	5
	SAR exclusion threshold (mW)	11.00
	SAR testing required?	YES
Exposure Positions	Tune-up Maximum power of LTE Band 4	
	24.50dBm	281.84 mW
Front Side	Antenna to user(mm)	5
	SAR exclusion threshold (mW)	12.00
	SAR testing required?	YES

Back Side	Antenna to user(mm)	5
	SAR exclusion threshold (mW)	12.00
	SAR testing required?	YES
LeftSide	Antenna to user(mm)	5
	SAR exclusion threshold (mW)	12.00
	SAR testing required?	YES
Top Side	Antenna to user(mm)	5
	SAR exclusion threshold (mW)	12.00
	SAR testing required?	YES
Exposure Positions	Tune-up Maximum power of LTE Band 5	
	24.50dBm	281.84mW
Front Side	Antenna to user(mm)	5
	SAR exclusion threshold (mW)	16.00
	SAR testing required?	YES
Back Side	Antenna to user(mm)	5
	SAR exclusion threshold (mW)	16.00
	SAR testing required?	YES
Left Side	Antenna to user(mm)	5
	SAR exclusion threshold (mW)	16.00
	SAR testing required?	YES
Top Side	Antenna to user(mm)	5
	SAR exclusion threshold (mW)	16.00
	SAR testing required?	YES
Exposure Positions	Tune-up Maximum power of LTE Band 7	
	23.00dBm	199.53mW
Front Side	Antenna to user(mm)	5
	SAR exclusion threshold (mW)	10.00
	SAR testing required?	YES
Back Side	Antenna to user(mm)	5
	SAR exclusion threshold (mW)	10.00
	SAR testing required?	YES
Left Side	Antenna to user(mm)	5
	SAR exclusion threshold (mW)	10.00
	SAR testing required?	YES
Top Side	Antenna to user(mm)	5
	SAR exclusion threshold (mW)	10.00
	SAR testing required?	YES
Exposure Positions	Tune-up Maximum power of LTE Band 12	
	24.00dBm	251.19mW
Front Side	Antenna to user(mm)	5

	SAR exclusion threshold (mW)	11.00
	SAR testing required?	YES
Back Side	Antenna to user(mm)	5
	SAR exclusion threshold (mW)	11.00
	SAR testing required?	YES
Left Side	Antenna to user(mm)	5
	SAR exclusion threshold (mW)	11.00
	SAR testing required?	YES
Top Side	Antenna to user(mm)	5
	SAR exclusion threshold (mW)	11.00
	SAR testing required?	YES
Exposure Positions	Tune-up Maximum power of LTE Band 17	
	24.50dBm	284.84mW
Front Side	Antenna to user(mm)	5
	SAR exclusion threshold (mW)	11.00
	SAR testing required?	YES
Back Side	Antenna to user(mm)	5
	SAR exclusion threshold (mW)	11.00
	SAR testing required?	YES
Left Side	Antenna to user(mm)	5
	SAR exclusion threshold (mW)	11.00
	SAR testing required?	YES
Top Side	Antenna to user(mm)	5
	SAR exclusion threshold (mW)	11.00
	SAR testing required?	YES
Exposure Positions	Tune-up Maximum power of LTE Band 41	
	24.00dBm	251.19mW
Front Side	Antenna to user(mm)	5
	SAR exclusion threshold (mW)	10.00
	SAR testing required?	YES
Back Side	Antenna to user(mm)	5
	SAR exclusion threshold (mW)	10.00
	SAR testing required?	YES
Left Side	Antenna to user(mm)	5
	SAR exclusion threshold (mW)	10.00
	SAR testing required?	YES
Top Side	Antenna to user(mm)	5
	SAR exclusion threshold (mW)	10.00
	SAR testing required?	YES

NOTE: Refer to section 4.3.1 of KDB 447498 D01.

Positions for SAR tests		
Test separation distances > 50 mm		
Exposure Positions	Tune-up Maximum power of WLAN 2.4G	
	17.00dBm	50.12mW
Left Side	Antenna to user(mm)	184
	SAR exclusion threshold (mW)	1436
	SAR testing required?	NO
Bottom Side	Antenna to user(mm)	116
	SAR exclusion threshold (mW)	756
	SAR testing required?	NO
Exposure Positions	Tune-up Maximum power of WLAN 5.2G	
	12.50dBm	17.78mW
Left Side	Antenna to user(mm)	184
	SAR exclusion threshold (mW)	1406
	SAR testing required?	NO
Bottom Side	Antenna to user(mm)	116
	SAR exclusion threshold (mW)	726
	SAR testing required?	NO
Exposure Positions	Tune-up Maximum power of WLAN 5.8G	
	13.00dBm	19.95mW
Left Side	Antenna to user(mm)	184
	SAR exclusion threshold (mW)	1402
	SAR testing required?	NO
Bottom Side	Antenna to user(mm)	116
	SAR exclusion threshold (mW)	722
	SAR testing required?	NO
Exposure Positions	Tune-up Maximum power of GSM 850	
	32.50dBm	1778.28 mW
Right Side	Antenna to user(mm)	180
	SAR exclusion threshold (mW)	888
	SAR testing required?	NO
Bottom Side	Antenna to user(mm)	125
	SAR exclusion threshold (mW)	582
	SAR testing required?	NO
Exposure Positions	Tune-up Maximum power of GSM 1900	
	30.00dBm	1000.00 mW
Right Side	Antenna to user(mm)	180
	SAR exclusion threshold (mW)	1409
	SAR testing required?	NO

Bottom Side	Antenna to user(mm)	125
	SAR exclusion threshold (mW)	859
	SAR testing required?	NO
Exposure Positions	Tune-up Maximum power of WCDMA Band 2	
	22.00dBm	158.49mW
Right Side	Antenna to user(mm)	180
	SAR exclusion threshold (mW)	1409
	SAR testing required?	NO
Bottom Side	Antenna to user(mm)	125
	SAR exclusion threshold (mW)	859
	SAR testing required?	NO
Exposure Positions	Tune-up Maximum power of WCDMA Band 4	
	22.00dBm	158.49mW
Right Side	Antenna to user(mm)	180
	SAR exclusion threshold (mW)	1442
	SAR testing required?	NO
Bottom Side	Antenna to user(mm)	125
	SAR exclusion threshold (mW)	872
	SAR testing required?	NO
Exposure Positions	Tune-up Maximum power of WCDMA Band 5	
	22.00dBm	158.49mW
Right Side	Antenna to user(mm)	180
	SAR exclusion threshold (mW)	888
	SAR testing required?	NO
Bottom Side	Antenna to user(mm)	582
	SAR exclusion threshold (mW)	694
	SAR testing required?	NO
Exposure Positions	Tune-up Maximum power of LTE Band 2	
	24.50dBm	281.84 mW
Right Side	Antenna to user(mm)	180
	SAR exclusion threshold (mW)	1409
	SAR testing required?	NO
Bottom Side	Antenna to user(mm)	125
	SAR exclusion threshold (mW)	859
	SAR testing required?	NO
Exposure Positions	Tune-up Maximum power of LTE Band 4	
	24.50dBm	281.84 mW
Right Side	Antenna to user(mm)	180
	SAR exclusion threshold (mW)	1442
	SAR testing required?	NO

Bottom Side	Antenna to user(mm)	125
	SAR exclusion threshold (mW)	872
	SAR testing required?	NO
Exposure Positions	Tune-up Maximum power of LTE Band 5	
	24.50dBm	281.84mW
Right Side	Antenna to user(mm)	180
	SAR exclusion threshold (mW)	888
	SAR testing required?	NO
Bottom Side	Antenna to user(mm)	125
	SAR exclusion threshold (mW)	582
	SAR testing required?	NO
Exposure Positions	Tune-up Maximum power of LTE Band 7	
	23.00dBm	199.53mW
Right Side	Antenna to user(mm)	180
	SAR exclusion threshold (mW)	1396
	SAR testing required?	NO
Bottom Side	Antenna to user(mm)	125
	SAR exclusion threshold (mW)	846
	SAR testing required?	NO
Exposure Positions	Tune-up Maximum power of LTE Band 12	
	24.00dBm	251.19mW
Right Side	Antenna to user(mm)	180
	SAR exclusion threshold (mW)	948
	SAR testing required?	NO
Bottom Side	Antenna to user(mm)	125
	SAR exclusion threshold (mW)	642
	SAR testing required?	NO
Exposure Positions	Tune-up Maximum power of LTE Band 17	
	24.50dBm	284.84mW
Right Side	Antenna to user(mm)	180
	SAR exclusion threshold (mW)	948
	SAR testing required?	NO
Bottom Side	Antenna to user(mm)	125
	SAR exclusion threshold (mW)	642
	SAR testing required?	NO
Exposure Positions	Tune-up Maximum power of LTE Band 41	
	24.00dBm	251.19mW
Right Side	Antenna to user(mm)	180
	SAR exclusion threshold (mW)	1396
	SAR testing required?	NO

Bottom Side	Antenna to user(mm)	125
	SAR exclusion threshold (mW)	846
	SAR testing required?	NO

NOTE: Refer to section 4.3.1 of KDB 447498 D01.

9. Stand-alone SAR test exclusion

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

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

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

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

Mode	P_{max} (dBm)	P_{max} (mW)	Distance (mm)	f (GHz)	Calculation Result	SAR exclusion threshold (mW)	SAR test exclusion
Bluetooth	8.00	6.31	5	2.480	1.987	3	Yes

NOTE: Standalone SAR test exclusion for Bluetooth.

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

$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] * [\sqrt{f_{\text{(GHz)}}}/x] \text{ W/kg}$ for test separation distances $\leq 50\text{mm}$, where $x = 7.5$ for 1-g SAR and $x = 18.75$ for 10-g SAR.

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

Mode	Position	P_{max} (dBm)	P_{max} (mW)	Distance (mm)	f (GHz)	x	Estimated SAR (W/Kg)
Bluetooth	Body	8.00	6.31	5	2.48	7.5	0.265
Bluetooth	Hotspot	8.00	6.31	5	2.48	7.5	0.265

NOTE: Estimated SAR calculation for Bluetooth

10. SAR Results

10.1. SAR measurement results

10.1.1. SAR measurement Result of GSM850

Test Position of Body-Worn with 0mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date	Plot
			1g	10g						
Front Side	189/836.4	GPRS(GMSK 2TS)	0.516	0.307	-0.63	29.88	30.00	0.530	2025/6/04	1#
Back Side	189/836.4	GPRS(GMSK 2TS)	0.459	0.265	-3.65	29.88	30.00	0.472	2025/6/04	

NOTE: Body-Worn SAR test results of GSM850

Test Position of Hotspot with 0mm	Test channel /Freq.	Mode	SAR Value (W/kg)		Power Drift(%)	Conducted Power (dBm)	Tune-up Power (dBm)	Scaled SAR 1-g (W/Kg)	Date	Plot
			1-g	10-g						
Front Side	189/836.4	GPRS(GMSK 2TS)	0.516	0.307	-0.63	29.88	30.00	0.530	2025/6/04	1#
Back Side	189/836.4	GPRS(GMSK 2TS)	0.459	0.265	-3.65	29.88	30.00	0.472	2025/6/04	
Left Side	189/836.4	GPRS(GMSK 2TS)	0.123	0.073	3.01	29.88	30.00	0.126	2025/6/04	
Right Side	189/836.4	GPRS(GMSK 2TS)	0.005	0.003	-0.86	29.88	30.00	0.005	2025/6/04	
Top Side	189/836.4	GPRS(GMSK 2TS)	0.234	0.132	0.00	29.88	30.00	0.241	2025/6/04	

NOTE: Hotspot SAR test results of GSM850

10.1.2. SAR measurement Result of GSM1900

Test Position of Body-Worn with 0mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date	Plot
			1g	10g						
Front Side	661/1880	GPRS(GMSK 2TS)	0.702	0.415	-0.06	25.88	26.00	0.722	2025/6/06	2#
Back Side	661/1880	GPRS(GMSK 2TS)	0.639	0.370	1.54	25.88	26.00	0.657	2025/6/06	

2TS)

NOTE: Body-Worn SAR test results of GSM1900

Test Position of Hotspot with 0mm	Test channel /Freq.	Mode	SAR Value (W/kg)		Power Drift(%)	Conducted Power (dBm)	Tune-up Power (dBm)	Scaled SAR 1-g (W/Kg)	Date	Plot
			1-g	10-g						
Front Side	661/1880	GPRS(GMSK 2TS)	0.702	0.415	-0.06	25.88	26.00	0.722	2025/6/06	2#
Back Side	661/1880	GPRS(GMSK 2TS)	0.639	0.370	1.54	25.88	26.00	0.657	2025/6/06	
Left Side	661/1880	GPRS(GMSK 2TS)	0.292	0.166	-2.38	25.88	26.00	0.300	2025/6/06	
Right Side	661/1880	GPRS(GMSK 2TS)	0.004	0.002	3.34	25.88	26.00	0.004	2025/6/06	
Top Side	661/1880	GPRS(GMSK 2TS)	0.563	0.333	-3.67	25.88	26.00	0.579	2025/6/06	

NOTE: Hotspot SAR test results of GSM1900

10.1.3. SAR measurement Result of WCDMA Band 2

Test Position of Body-Worn with 0mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date	Plot
			1g	10g						
Front Side	9400/1880	RMC12.2K	0.689	0.411	-0.15	21.75	22.00	0.730	2025/6/06	3#
Back Side	9400/1880	RMC12.2K	0.657	0.388	3.72	21.75	22.00	0.696	2025/6/06	

NOTE: Body-Worn SAR test results of WCDMA Band 2

Test Position of Hotspot with 0mm	Test channel /Freq.	Mode	SAR Value (W/kg)		Power Drift(%)	Conducted Power (dBm)	Tune-up Power (dBm)	Scaled SAR 1-g (W/Kg)	Date	Plot
			1-g	10-g						
Front Side	9400/1880	RMC12.2K	0.689	0.411	-0.15	21.75	22.00	0.730	2025/6/06	3#
Back Side	9400/1880	RMC12.2K	0.657	0.388	3.72	21.75	22.00	0.696	2025/6/06	

Left Side	9400/1880	RMC12.2K	0.276	0.158	1.32	21.75	22.00	0.292	2025/6/06	
Right Side	9400/1880	RMC12.2K	0.004	0.002	0.01	21.75	22.00	0.004	2025/6/06	
Top Side	9400/1880	RMC12.2K	0.540	0.306	-3.32	21.75	22.00	0.572	2025/6/06	

NOTE: Hotspot SAR test results of WCDMA Band 2

10.1.4. SAR measurement Result of WCDMA Band 4

Test Position of Body-Worn with 0mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date	Plot
			1g	10g						
Front Side	1413/1732.6	RMC12.2K	0.673	0.402	0.50	21.78	22.00	0.708	2025/6/05	4#
Back Side	1413/1732.6	RMC12.2K	0.639	0.366	0.89	21.78	22.00	0.672	2025/6/05	

NOTE: Body-Worn SAR test results of WCDMA Band 4

Test Position of Hotspot with 0mm	Test channel /Freq.	Mode	SAR Value (W/kg)		Power Drift(%)	Conducted Power (dBm)	Tune-up Power (dBm)	Scaled SAR 1-g (W/Kg)	Date	Plot
			1-g	10-g						
Front Side	1413/1732.6	RMC12.2K	0.673	0.402	0.50	21.78	22.00	0.708	2025/6/05	4#
Back Side	1413/1732.6	RMC12.2K	0.639	0.366	0.89	21.78	22.00	0.672	2025/6/05	
Left Side	1413/1732.6	RMC12.2K	0.284	0.166	3.35	21.78	22.00	0.299	2025/6/05	
Right Side	1413/1732.6	RMC12.2K	0.003	0.001	-2.08	21.78	22.00	0.003	2025/6/05	
Top Side	1413/1732.6	RMC12.2K	0.525	0.310	-0.18	21.78	22.00	0.552	2025/6/05	

NOTE: Hotspot SAR test results of WCDMA Band 4

10.1.5. SAR measurement Result of WCDMA Band 5

Test Position of Body-Worn with 0mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date	Plot
			1g	10g						
Front Side	4182/836.4	RMC12.2K	0.403	0.241	-1.02	21.76	22.00	0.426	2025/6/04	5#
Back Side	4182/836.4	RMC12.2K	0.374	0.212	-0.65	21.76	22.00	0.395	2025/6/04	

NOTE: Body-Worn SAR test results of WCDMA Band 5

Test Position of Hotspot with 0mm	Test channel /Freq.	Mode	SAR Value (W/kg)		Power Drift(%)	Conducted Power (dBm)	Tune-up Power (dBm)	Scaled SAR 1-g (W/Kg)	Date	Plot
			1-g	10-g						
Front Side	4182/836.4	RMC12.2K	0.403	0.241	-1.02	21.76	22.00	0.426	2025/6/04	5#
Back Side	4182/836.4	RMC12.2K	0.374	0.212	-0.65	21.76	22.00	0.395	2025/6/04	
Left Side	4182/836.4	RMC12.2K	0.092	0.053	1.29	21.76	22.00	0.097	2025/6/04	
Right Side	4182/836.4	RMC12.2K	0.004	0.002	1.09	21.76	22.00	0.004	2025/6/04	
Top Side	4182/836.4	RMC12.2K	0.203	0.117	3.36	21.76	22.00	0.215	2025/6/04	

NOTE: Hotspot SAR test results of WCDMA Band 5

10.1.6. SAR measurement Result of LTE Band 2

Test Position of Body-Worn with 0mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date	Plot
			1-g	10-g						
1RB										
Front Side	18900/1880	20M QPSK(1,49)	0.492	0.297	-0.56	24.05	24.50	0.546	2025/6/06	9#
Back Side	18900/1880	20M QPSK(1,49)	0.477	0.285	-1.08	24.05	24.50	0.529	2025/6/06	
50%RB										
Front Side	18900/1880	20M QPSK(50,0)	0.290	0.150	-4.62	22.74	23.50	0.345	2025/6/06	
Back Side	18900/1880	20M QPSK(50,0)	0.276	0.163	-2.18	22.74	23.50	0.329	2025/6/06	

NOTE: Body-Worn SAR test results of LTE Band 2

Test Position of Hotspot with 0mm	Test channel /Freq.	Mode	SAR Value (W/kg)		Power Drift(%)	Conducted Power (dBm)	Tune-up Power (dBm)	Scaled SAR 1-g (W/Kg)	Date	Plot
			1-g	10-g						
1RB										
Front Side	18900/1880	20M QPSK(1,49)	0.492	0.297	-0.56	24.05	24.50	0.546	2025/6/06	9#
Back Side	18900/1880	20M QPSK(1,49)	0.477	0.285	-1.08	24.05	24.50	0.529	2025/6/06	
Left Side	18900/1880	20M QPSK(1,49)	0.212	0.125	2.20	24.05	24.50	0.235	2025/6/06	
Right Side	18900/1880	20M QPSK(1,49)	0.003	0.001	1.10	24.05	24.50	0.003	2025/6/06	
Top Side	18900/1880	20M QPSK(1,49)	0.375	0.226	1.03	24.05	24.50	0.416	2025/6/06	
50%RB										
Front Side	18900/1880	20M QPSK(50,0)	0.290	0.150	-4.62	22.74	23.50	0.345	2025/6/06	
Back Side	18900/1880	20M QPSK(50,0)	0.276	0.163	-2.18	22.74	23.50	0.329	2025/6/06	
Left Side	18900/1880	20M QPSK(50,0)	0.122	0.068	3.83	22.74	23.50	0.145	2025/6/06	
Right Side	18900/1880	20M QPSK(50,0)	0.002	0.001	-2.53	22.74	23.50	0.002	2025/6/06	
Top Side	18900/1880	20M QPSK(50,0)	0.205	0.123	0.38	22.74	23.50	0.244	2025/6/06	

NOTE: Hotspot SAR test results of LTE Band 2

10.1.7. SAR measurement Result of LTE Band 4

Test Position of Body-Wor n with 0mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Powe r Drift (±5%)	Conducted power (dBm)	Tune- up power (dBm)	Scale d SAR 1g (W/Kg)	Date	Plot
			1-g	10-g						
			1RB							
Front Side	20175/1732.5	20M QPSK(1,49)	0.466	0.284	0.27	24.05	24.50	0.517	2025/6/05	10#

Back Side	20175/1732.5	20M QPSK(1,49)	0.441	0.261	0.15	24.05	24.50	0.489	2025/6/05	
Front Side										
Front Side	20175/1732.5	20M QPSK(50,0)	0.263	0.155	2.88	23.00	23.50	0.295	2025/6/05	
Back Side	20175/1732.5	20M QPSK(50,0)	0.250	0.139	-0.88	23.00	23.50	0.281	2025/6/05	

NOTE: Body-Worn SAR test results of LTE Band 4

Test Position of Hotspot with 0mm	Test channel /Freq.	Mode	SAR Value (W/kg)		Power Drift(%)	Conducted Power (dBm)	Tune-up Power (dBm)	Scaled SAR 1-g (W/Kg)	Date	Plot
			1-g	10-g						
1RB										
Front Side	20175/1732.5	20M QPSK(1,49)	0.466	0.284	0.27	24.05	24.50	0.517	2025/6/05	10#
Back Side	20175/1732.5	20M QPSK(1,49)	0.441	0.261	0.15	24.05	24.50	0.489	2025/6/05	
Left Side	20175/1732.5	20M QPSK(1,49)	0.188	0.113	1.27	24.05	24.50	0.209	2025/6/05	
Right Side	20175/1732.5	20M QPSK(1,49)	0.002	0.000	-0.86	24.05	24.50	0.002	2025/6/05	
Top Side	20175/1732.5	20M QPSK(1,49)	0.383	0.231	1.41	24.05	24.50	0.425	2025/6/05	
50%RB										
Front Side	20175/1732.5	20M QPSK(50,0)	0.263	0.155	2.88	23.00	23.50	0.295	2025/6/05	
Back Side	20175/1732.5	20M QPSK(50,0)	0.250	0.139	-0.88	23.00	23.50	0.281	2025/6/05	
Left Side	20175/1732.5	20M QPSK(50,0)	0.097	0.063	-4.18	23.00	23.50	0.109	2025/6/05	
Right Side	20175/1732.5	20M QPSK(50,0)	0.012	0.006	-2.65	23.00	23.50	0.013	2025/6/05	
Top Side	20175/1732.5	20M QPSK(50,0)	0.214	0.128	0.56	23.00	23.50	0.240	2025/6/05	

NOTE: Hotspot SAR test results of LTE Band 4

10.1.8. SAR measurement Result of LTE Band 5

Test Position of Body-Worn with 0mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date	Plot
			1-g	10-g						
1RB										
Front Side	20525/836.5	10M QPSK(1,24)	0.431	0.258	1.84	23.43	24.50	0.551	2025/6/04	11#
Back Side	20525/836.5	10M QPSK(1,24)	0.408	0.232	2.23	23.43	24.50	0.522	2025/6/04	
50%RB										
Front Side	20525/836.5	10M QPSK(25,0)	0.235	0.133	3.45	22.42	23.50	0.301	2025/6/04	
Back Side	20525/836.5	10M QPSK(25,0)	0.235	0.122	2.60	22.42	23.50	0.301	2025/6/04	

NOTE: Body-Worn SAR test results of LTE Band 5

Test Position of Hotspot with 0mm	Test channel /Freq.	Mode	SAR Value (W/kg)		Power Drift(%)	Conducted Power (dBm)	Tune-up Power (dBm)	Scaled SAR 1-g (W/Kg)	Date	Plot
			1-g	10-g						
1RB										
Front Side	20525/836.5	10M QPSK(1,24)	0.431	0.258	1.84	23.43	24.50	0.551	2025/6/04	11#
Back Side	20525/836.5	10M QPSK(1,24)	0.408	0.232	2.23	23.43	24.50	0.522	2025/6/04	
Left Side	20525/836.5	10M QPSK(1,24)	0.101	0.059	1.56	23.43	24.50	0.129	2025/6/04	
Right Side	20525/836.5	10M QPSK(1,24)	0.005	0.003	-2.93	23.43	24.50	0.006	2025/6/04	
Top Side	20525/836.5	10M QPSK(1,24)	0.216	0.128	-0.48	23.43	24.50	0.276	2025/6/04	
50%RB										
Front Side	20525/836.5	10M QPSK(25,0)	0.235	0.133	3.45	22.42	23.50	0.301	2025/6/04	
Back Side	20525/836.5	10M QPSK(25,0)	0.235	0.122	2.60	22.42	23.50	0.301	2025/6/04	
Left	20525/836.5	10M	0.051	0.030	-1.32	22.42	23.50	0.065	2025/6/04	

Side		QPSK(25,0)								
Right Side	20525/836.5	10M QPSK(25,0)	0.003	0.002	-2.51	22.42	23.50	0.004	2025/6/04	
Top Side	20525/836.5	10M QPSK(25,0)	0.116	0.064	-3.23	22.42	23.50	0.149	2025/6/04	

NOTE: Hotspot SAR test results of LTE Band 5

10.1.9. SAR measurement Result of LTE Band 7

Test Position of Body-Worn with 0mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date	Plot
			1-g	10-g						
1RB										
Front Side	21100/2535	20M QPSK(1,49)	0.767	0.375	1.18	22.61	23.00	0.839	2025/6/08	12#
Back Side	21100/2535	20M QPSK(1,49)	0.410	0.197	2.67	22.61	23.00	0.449	2025/6/08	
Back Side	20850/2510	20M QPSK(1,49)	0.584	0.263	-2.40	21.48	23.00	0.829	2025/6/08	
Back Side	21350/2560	20M QPSK(1,49)	0.593	0.275	1.42	21.54	23.00	0.830	2025/6/08	
Back Repeated	21100/2535	20M QPSK(1,49)	0.751	0.359	-3.41	22.61	23.00	0.822	2025/6/08	
50%RB										
Front Side	21100/2535	20M QPSK(50,0)	0.424	0.222	-4.27	21.52	22.00	0.474	2025/6/08	
Back Side	21100/2535	20M QPSK(50,0)	0.233	0.115	-4.10	21.52	22.00	0.260	2025/6/08	

NOTE: Body-Worn SAR test results of LTE Band 7

Test Position of Hotspot with 0mm	Test channel /Freq.	Mode	SAR Value (W/kg)		Power Drift(%)	Conducted Power (dBm)	Tune-up Power (dBm)	Scaled SAR 1-g (W/Kg)	Date	Plot
			1-g	10-g						
1RB										
Front Side	21100/2535	20M QPSK(1,49)	0.767	0.375	1.18	22.61	23.00	0.839	2025/6/08	12#
Back Side	21100/2535	20M QPSK(1,49)	0.410	0.197	2.67	22.61	23.00	0.449	2025/6/08	

Left Side	21100/2535	20M QPSK(1,49)	0.128	0.061	-2.86	22.61	23.00	0.140	2025/6/08	
Right Side	21100/2535	20M QPSK(1,49)	0.002	0.000	-2.84	22.61	23.00	0.002	2025/6/08	
Top Side	21100/2535	20M QPSK(1,49)	0.529	0.254	0.92	22.61	23.00	0.579	2025/6/08	
Back Side	20850/2510	20M QPSK(1,49)	0.584	0.263	-2.40	21.48	23.00	0.829	2025/6/08	
Back Side	21350/2560	20M QPSK(1,49)	0.593	0.275	1.42	21.54	23.00	0.830	2025/6/08	
Back Repeated	21100/2535	20M QPSK(1,49)	0.751	0.359	-3.41	22.61	23.00	0.822	2025/6/08	
50%RB										
Front Side	21100/2535	20M QPSK(50,0)	0.424	0.222	-4.27	21.52	22.00	0.474	2025/6/08	
Back Side	21100/2535	20M QPSK(50,0)	0.233	0.115	-4.10	21.52	22.00	0.260	2025/6/08	
Left Side	21100/2535	20M QPSK(50,0)	0.075	0.035	4.66	21.52	22.00	0.084	2025/6/08	
Right Side	21100/2535	20M QPSK(50,0)	0.001	0.000	-1.09	21.52	22.00	0.001	2025/6/08	
Top Side	21100/2535	20M QPSK(50,0)	0.299	0.128	4.53	21.52	22.00	0.334	2025/6/08	

NOTE: Hotspot SAR test results of LTE Band 7

10.1.10. SAR measurement Result of LTE Band 12

Test Position of Body-Worn with 0mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date	Plot
			1-g	10-g						
1RB										
Front Side	23095/707.5	10M QPSK(1,24)	0.408	0.189	0.17	23.80	24.00	0.427	2025/6/03	13#
Back Side	23095/707.5	10M QPSK(1,24)	0.366	0.164	-0.79	23.80	24.00	0.383	2025/6/03	
50%RB										
Front Side	23095/707.5	10M QPSK(25,0)	0.228	0.105	2.37	22.70	23.50	0.274	2025/6/03	
Back Side	23095/707.5	10M QPSK(25,0)	0.216	0.092	2.53	22.70	23.50	0.260	2025/6/03	

NOTE: Body-Worn SAR test results of LTE Band 12

Test Position of Hotspot with 0mm	Test channel /Freq.	Mode	SAR Value (W/kg)		Power Drift(%)	Conducted Power (dBm)	Tune-up Power (dBm)	Scaled SAR 1-g (W/Kg)	Date	Plot
			1-g	10-g						
1RB										
Front Side	23095/707.5	10M QPSK(1,24)	0.408	0.189	0.17	23.80	24.00	0.427	2025/6/03	13#
Back Side	23095/707.5	10M QPSK(1,24)	0.366	0.164	-0.79	23.80	24.00	0.383	2025/6/03	
Left Side	23095/707.5	10M QPSK(1,24)	0.097	0.043	3.01	23.80	24.00	0.102	2025/6/03	
Right Side	23095/707.5	10M QPSK(1,24)	0.004	0.002	-2.94	23.80	24.00	0.004	2025/6/03	
Top Side	23095/707.5	10M QPSK(1,24)	0.194	0.085	-0.88	23.80	24.00	0.203	2025/6/03	
50%RB										
Front Side	23095/707.5	10M QPSK(25,0)	0.228	0.105	2.37	22.70	23.50	0.274	2025/6/03	
Back Side	23095/707.5	10M QPSK(25,0)	0.216	0.092	2.53	22.70	23.50	0.260	2025/6/03	
Left Side	23095/707.5	10M QPSK(25,0)	0.052	0.025	-4.28	22.70	23.50	0.063	2025/6/03	
Right Side	23095/707.5	10M QPSK(25,0)	0.002	0.001	-4.10	22.70	23.50	0.002	2025/6/03	
Top Side	23095/707.5	10M QPSK(25,0)	0.104	0.047	-3.31	22.70	23.50	0.125	2025/6/03	

NOTE: Hotspot SAR test results of LTE Band 12

10.1.11. SAR measurement Result of LTE Band 17

Test Position of Body-Worn with 0mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date	Plot
			1-g	10-g						
1RB										
Front Side	23790/710	10M QPSK(1,24)	0.399	0.194	0.82	23.76	24.50	0.473	2025/6/03	14#
Back Side	23790/710	10M QPSK(1,24)	0.366	0.173	-3.33	23.76	24.50	0.434	2025/6/03	

50%RB										
Front Side	23790/710	10M QPSK(25,0)	0.237	0.106	1.54	22.74	23.00	0.252	2025/6/03	
Back Side	23790/710	10M QPSK(25,0)	0.191	0.103	-3.43	22.74	23.00	0.203	2025/6/03	

NOTE: Body-Worn SAR test results of LTE Band 17

Test Position of Hotspot with 0mm	Test channel /Freq.	Mode	SAR Value (W/kg)		Power Drift(%)	Conducted Power (dBm)	Tune-up Power (dBm)	Scaled SAR 1-g (W/Kg)	Date	Plot
			1-g	10-g						
1RB										
Front Side	23790/710	10M QPSK(1,24)	0.399	0.194	0.82	23.76	24.50	0.473	2025/6/03	14#
Back Side	23790/710	10M QPSK(1,24)	0.366	0.173	-3.33	23.76	24.50	0.434	2025/6/03	
Left Side	23790/710	10M QPSK(1,24)	0.090	0.042	-1.53	23.76	24.50	0.107	2025/6/03	
Right Side	23790/710	10M QPSK(1,24)	0.004	0.002	2.64	23.76	24.50	0.005	2025/6/03	
Top Side	23790/710	10M QPSK(1,24)	0.189	0.088	0.08	23.76	24.50	0.224	2025/6/03	
50%RB										
Front Side	23790/710	10M QPSK(25,0)	0.237	0.106	1.54	22.74	23.00	0.252	2025/6/03	
Back Side	23790/710	10M QPSK(25,0)	0.191	0.103	-3.43	22.74	23.00	0.203	2025/6/03	
Left Side	23790/710	10M QPSK(25,0)	0.050	0.022	2.18	22.74	23.00	0.053	2025/6/03	
Right Side	23790/710	10M QPSK(25,0)	0.002	0.001	-2.05	22.74	23.00	0.002	2025/6/03	
Top Side	23790/710	10M QPSK(25,0)	0.106	0.051	0.37	22.74	23.00	0.113	2025/6/03	

NOTE: Hotspot SAR test results of LTE Band 17

10.1.12. SAR measurement Result of LTE Band 41

Test Position of Body-Worn with 0mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date	Plot
			1-g	10-g						
1RB										
Front Side	40620/2593	20M QPSK(1,0)	0.787	0.387	-0.48	23.54	24.00	0.875	2025/6/08	15#
Back Side	40620/2593	20M QPSK(1,0)	0.405	0.199	1.24	23.54	24.00	0.450	2025/6/08	
Back Side	39750/2506	20M QPSK(1,0)	0.624	0.261	-1.63	23.22	24.00	0.747	2025/6/08	
Back Side	41490/2680	20M QPSK(1,0)	0.714	0.276	1.65	23.44	24.00	0.812	2025/6/08	
Back Repeated	40620/2593	20M QPSK(1,0)	0.771	0.354	1.96	23.54	24.00	0.857	2025/6/08	
50%RB										
Front Side	40620/2593	20M QPSK(50,0)	0.427	0.221	-3.89	22.07	22.50	0.471	2025/6/08	
Back Side	40620/2593	20M QPSK(50,0)	0.241	0.108	2.14	22.07	22.50	0.266	2025/6/08	

NOTE: Body-Worn SAR test results of LTE Band 41

Test Position of Hotspot with 0mm	Test channel /Freq.	Mode	SAR Value (W/kg)		Power Drift(%)	Conducted Power (dBm)	Tune-up Power (dBm)	Scaled SAR 1-g (W/Kg)	Date	Plot
			1-g	10-g						
1RB										
Front Side	40620/2593	20M QPSK(1,0)	0.787	0.387	-0.48	23.54	24.00	0.875	2025/6/08	15#
Back Side	40620/2593	20M QPSK(1,0)	0.405	0.199	1.24	23.54	24.00	0.450	2025/6/08	
Left Side	40620/2593	20M QPSK(1,0)	0.133	0.062	-0.37	23.54	24.00	0.148	2025/6/08	
Right Side	40620/2593	20M QPSK(1,0)	0.002	0.000	0.14	23.54	24.00	0.002	2025/6/08	
Top Side	40620/2593	20M QPSK(1,0)	0.529	0.247	-1.32	23.54	24.00	0.588	2025/6/08	

Back Side	39750/2506	20M QPSK(1,0)	0.624	0.261	-1.63	23.22	24.00	0.747	2025/6/08	
Back Side	41490/2680	20M QPSK(1,0)	0.714	0.276	1.65	23.44	24.00	0.812	2025/6/08	
Back Repeated	40620/2593	20M QPSK(1,0)	0.771	0.354	1.96	23.54	24.00	0.857	2025/6/08	
50%RB										
Front Side	40620/2593	20M QPSK(50,0)	0.427	0.221	-3.89	22.07	22.50	0.471	2025/6/08	
Back Side	40620/2593	20M QPSK(50,0)	0.241	0.108	2.14	22.07	22.50	0.266	2025/6/08	
Left Side	40620/2593	20M QPSK(50,0)	0.068	0.031	-1.92	22.07	22.50	0.075	2025/6/08	
Right Side	40620/2593	20M QPSK(50,0)	0.001	0.000	3.68	22.07	22.50	0.001	2025/6/08	
Top Side	40620/2593	20M QPSK(50,0)	0.312	0.130	3.12	22.07	22.50	0.344	2025/6/08	

NOTE: Hotspot SAR test results of LTE Band 41

10.1.13. SAR measurement Result of WLAN 2.4G

Test Position of Body-Worn with 0mm	Test channel /Freq.	Test Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date	Plot
			1-g	10-g						
Front Side	6/2437	802.11b	0.391	0.126	1.42	16.13	17.00	0.478	2025/6/07	8#
Back Side	6/2437	802.11b	0.084	0.027	3.46	16.13	17.00	0.103	2025/6/07	

NOTE: Body-Worn SAR test results of WLAN 2.4G

Test Position of Hotspot with 0mm	Test channel /Freq.	Mode	SAR Value (W/kg)		Power Drift(%)	Conducted Power (dBm)	Tune-up Power (dBm)	Scaled SAR 1-g (W/Kg)	Date	Plot
			1-g	10-g						
Front Side	6/2437	802.11b	0.391	0.126	1.42	16.13	17.00	0.478	2025/6/07	8#
Back Side	6/2437	802.11b	0.084	0.027	3.46	16.13	17.00	0.103	2025/6/07	
Right Side	6/2437	802.11b	0.021	0.007	2.20	16.13	17.00	0.026	2025/6/07	
Top Side	6/2437	802.11b	0.242	0.077	2.81	16.13	17.00	0.296	2025/6/07	

NOTE: Hotspot SAR test results of WLAN 2.4G

10.1.14. SAR measurement Result of WLAN 5.2G

Test Position of Body-Worn with 0mm	Test channel /Freq	Mode	SAR Value (W/kg)		Power Drift(%)	Conducted Power (dBm)	Tune-up Power (dBm)	Scaled SAR 1-g (W/Kg)	Date	Plot
			1-g	10-g						
Front Side	40/5200	802.11a	0.240	0.068	3.83	12.09	12.50	0.264	2025/6/09	
Back Side	40/5200	802.11a	0.354	0.100	1.99	12.09	12.50	0.389	2025/6/09	6#

NOTE: Body-Worn SAR test results of WLAN 5.2G

Test Position of Hotspot with 0mm	Test channel /Freq	Mode	SAR Value (W/kg)		Power Drift(%)	Conducted Power (dBm)	Tune-up Power (dBm)	Scaled SAR 1-g (W/Kg)	Date	Plot
			1-g	10-g						
Front Side	40/5200	802.11a	0.240	0.068	3.83	12.09	12.50	0.264	2025/6/09	
Back Side	40/5200	802.11a	0.354	0.100	1.99	12.09	12.50	0.389	2025/6/09	6#
Right Side	40/5200	802.11a	0.188	0.052	0.56	12.09	12.50	0.207	2025/6/09	
Top Side	40/5200	802.11a	0.152	0.043	1.98	12.09	12.50	0.167	2025/6/09	

NOTE: Hotspot SAR test results of WLAN 5.2G

10.1.15. SAR measurement Result of WLAN 5.8G

Test Position of Body-Worn with 0mm	Test channel /Freq	Mode	SAR Value (W/kg)		Power Drift(%)	Conducted Power (dBm)	Tune-up Power (dBm)	Scaled SAR 1-g (W/Kg)	Date	Plot
			1-g	10-g						
Front Side	159/5795	802.11n HT40	0.216	0.065	2.69	12.69	13.00	0.232	2025/6/10	
Back Side	159/5795	802.11n HT40	0.318	0.097	0.61	12.69	13.00	0.342	2025/6/10	7#

NOTE: Body-Worn SAR test results of WLAN 5.8G

Test Position of Hotspot with 0mm	Test channel /Freq	Mode	SAR Value (W/kg)		Power Drift(%)	Conducted Power (dBm)	Tune-up Power (dBm)	Scaled SAR 1-g (W/Kg)	Date	Plot
			1-g	10-g						

Front Side	159/5795	802.11n HT40	0.216	0.065	2.69	12.69	13.00	0.232	2025/6/10	
Back Side	159/5795	802.11n HT40	0.318	0.097	0.61	12.69	13.00	0.342	2025/6/10	7#
Right Side	159/5795	802.11n HT40	0.160	0.048	0.66	12.69	13.00	0.172	2025/6/10	
Top Side	159/5795	802.11n HT40	0.132	0.039	-1.95	12.69	13.00	0.142	2025/6/10	

NOTE: Hotspot SAR test results of WLAN 5.8G

10.2. SAR Summation Scenario

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

- Scalar SAR summation $< 1.6\text{W/kg}$.
- $\text{SPLSR} = (\text{SAR}_1 + \text{SAR}_2)^{1.5} / (\text{min. separation distance, mm})$, and the peak separation distance is determined from the square root of $[(x_1 - x_2)^2 + (y_1 - y_2)^2 + (z_1 - z_2)^2]$, where (x_1, y_1, z_1) and (x_2, y_2, z_2) are the coordinates of the extrapolated peak SAR locations in the zoom scan. If $\text{SPLSR} \leq 0.04$, simultaneously transmission SAR measurement is not necessary.

Test Position		Scaled SAR _{MAX}		Σ 1-g SAR (W/Kg)	SPLSR	Remark
		WWAN	DTS			
Hotspot	Front Side	0.875	0.478	1.353	N/A	N/A
	Back Side	0.830	0.103	0.933	N/A	N/A
Body	Front Side	0.875	0.478	1.353	N/A	N/A
	Back Side	0.830	0.103	0.933	N/A	N/A
	Left Side	0.300	N/A	0.300	N/A	N/A
	Right Side	0.013	0.026	0.039	N/A	N/A
	Top Side	0.588	0.296	0.884	N/A	N/A
	Bottom Side	N/A	N/A	N/A	N/A	N/A

Test Position		Scaled SAR _{MAX}		Σ 1-g SAR (W/Kg)	SPLSR	Remark
		WWAN	NII			
Hotspot	Front Side	0.875	0.264	1.139	N/A	N/A
	Back Side	0.830	0.389	1.219	N/A	N/A
Body	Front Side	0.875	0.264	1.139	N/A	N/A
	Back Side	0.830	0.389	1.219	N/A	N/A
	Left Side	0.300	N/A	0.300	N/A	N/A
	Right Side	0.013	0.207	0.220	N/A	N/A
	Top Side	0.588	0.167	0.755	N/A	N/A
	Bottom Side	N/A	N/A	N/A	N/A	N/A

Test Position		Scaled SAR _{MAX}		Σ 1-g SAR (W/Kg)	SPLSR	Remark
		WWAN	DSS			
Hotspot	Front Side	0.875	0.265	1.140	N/A	N/A
	Back Side	0.830	0.265	1.095	N/A	N/A
Body	Front Side	0.875	0.265	1.140	N/A	N/A
	Back Side	0.830	0.265	1.095	N/A	N/A
	Left Side	0.300	N/A	0.300	N/A	N/A
	Right Side	0.013	0.265	0.278	N/A	N/A
	Top Side	0.588	0.265	0.853	N/A	N/A
	Bottom Side	N/A	N/A	N/A	N/A	N/A

11. Appendix A. Photo documentation

Refer to appendix Test Setup photo---SAR

12. Appendix B. System Check Plots

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MEASUREMENT 1SystemPerformanceCheck-750MHz
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MEASUREMENT 6 SystemPerformanceCheck-2600MHz
MEASUREMENT 7SystemPerformanceCheck-5200MHz
MEASUREMENT 8SystemPerformanceCheck-5800MHz

1# System check at 750 MHz
Date of measurement: 3/6/2025

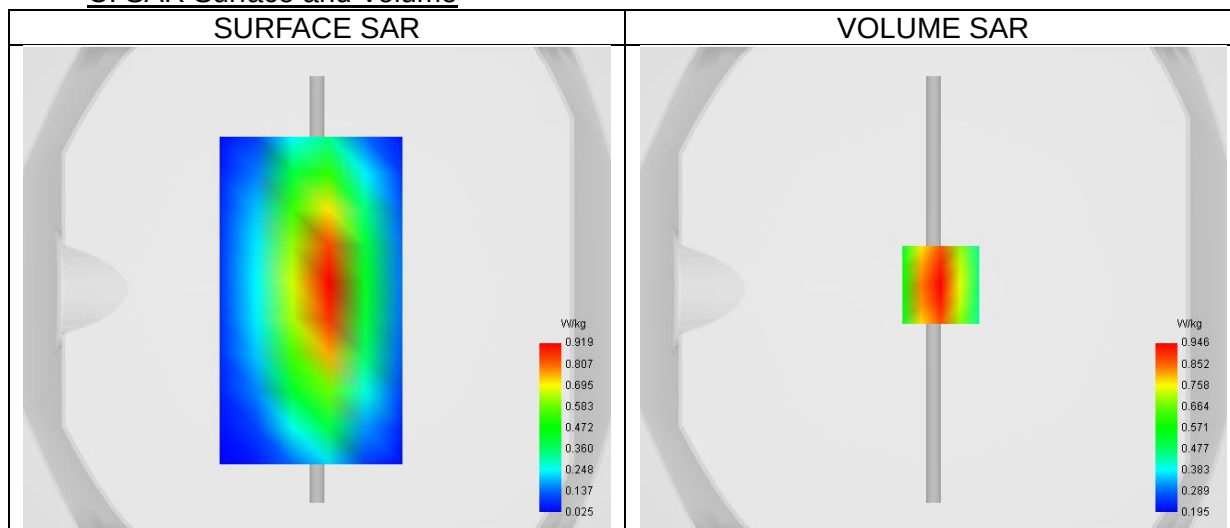
A. Experimental conditions.

Probe	0725-EPGO-448
ConvF	1.39
Area Scan	dx=15mm dy=15mm, Complete
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5.0mm,Complete
Phantom	Validation plane
Device Position	Dipole
Band	CW750
Channels/Frequency	Middle
Signal	CW

B. Permittivity

Middle TX Frequency (MHz)	750.000
Relative permittivity (real part)	40.88
Relative permittivity (imaginary part)	21.35
Conductivity (S/m)	0.89

C. SAR Surface and Volume



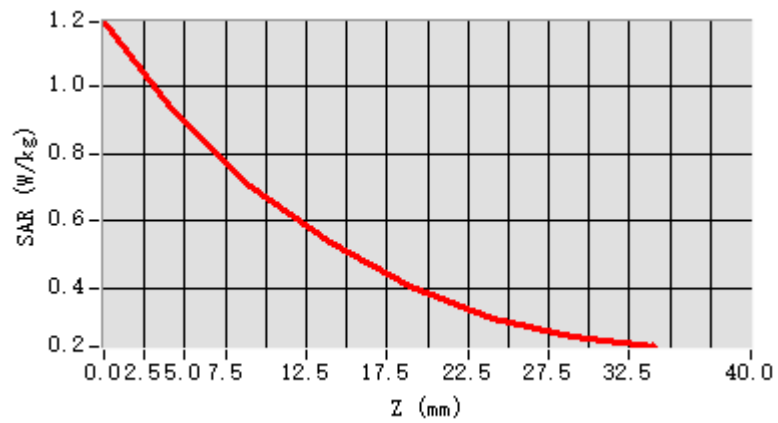
Maximum location: X=3.00, Y=2.00 ; SAR Peak: 1.20 W/kg

D. SAR 1g & 10g

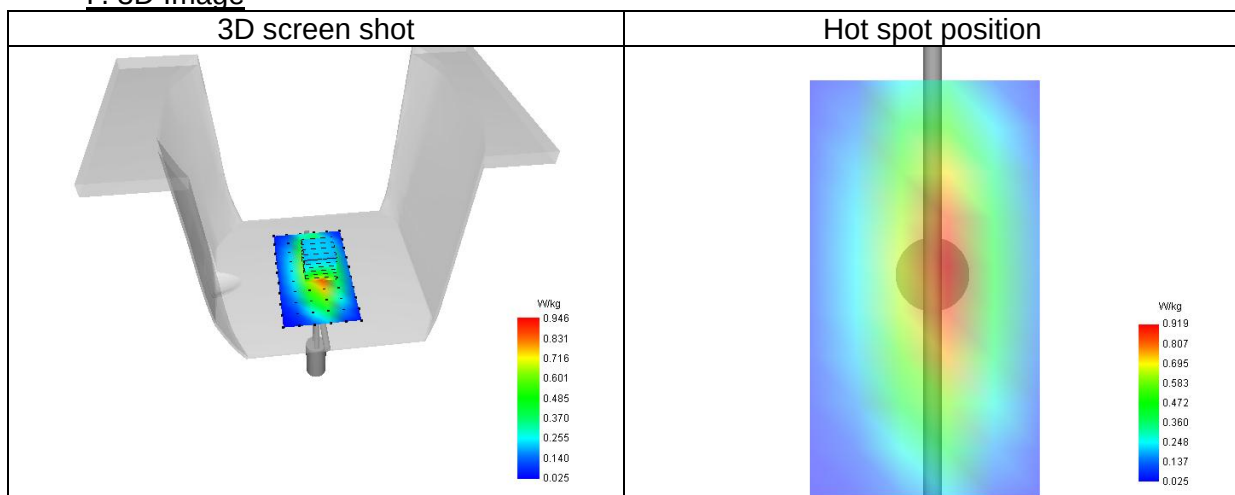
SAR 10g (W/Kg)	0.633
SAR 1g (W/Kg)	0.914
Variation (%)	-0.16
Horizontal validation criteria: minimum distance (mm)	16.00
Vertical validation criteria: SAR ratio M2/M1 (%)	74.54

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	1.193	0.946	0.705	0.534	0.402	0.307	0.253



F. 3D Image



2# System check at 835 MHz
Date of measurement: 4/6/2025

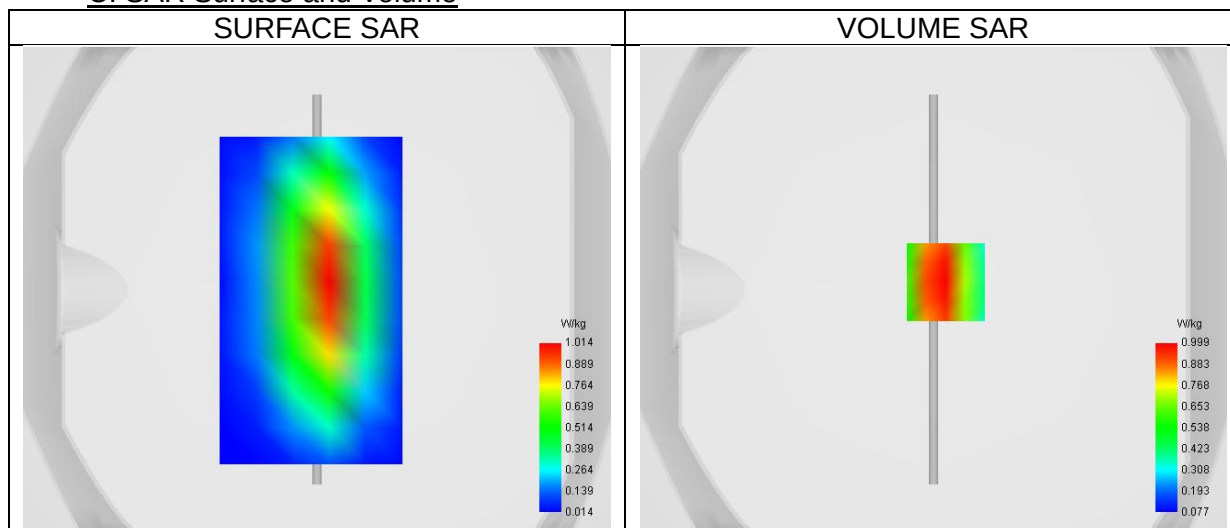
A. Experimental conditions.

Probe	0725-EPGO-448
ConvF	1.32
Area Scan	dx=15mm dy=15mm, Complete
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5.0mm,Complete
Phantom	Validation plane
Device Position	Dipole
Band	CW835
Signal	CW
Channels/Frequency	Middle

B. Permittivity

Middle TX Frequency (MHz)	835.00
Relative permittivity (real part)	42.32
Relative permittivity (imaginary part)	20.01
Conductivity (S/m)	0.93

C. SAR Surface and Volume



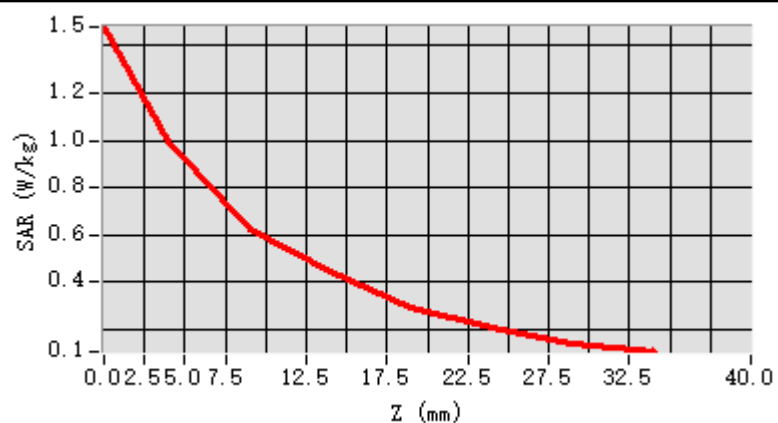
Maximum location: X=5.00, Y=3.00 ; SAR Peak: 1.50 W/kg

D. SAR 1g & 10g

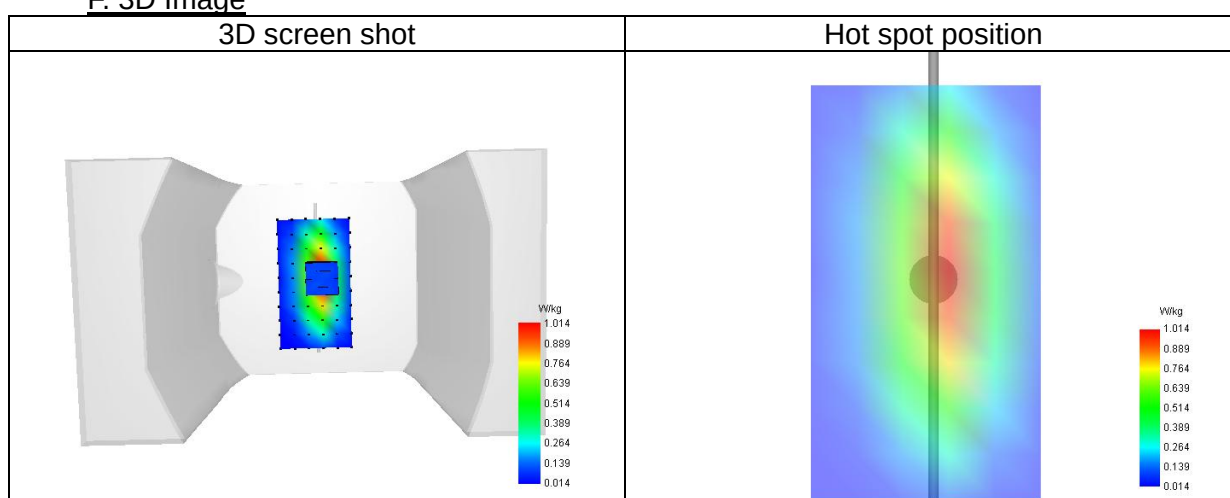
SAR 10g (W/Kg)	0.583
SAR 1g (W/Kg)	0.972
Variation (%)	-0.41
Horizontal validation criteria: minimum distance (mm)	16.00
Vertical validation criteria: SAR ratio M2/M1 (%)	63.76

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	1.479	0.999	0.624	0.442	0.295	0.212	0.143



F. 3D Image



3# System check at 1800 MHz
Date of measurement: 5/6/2025

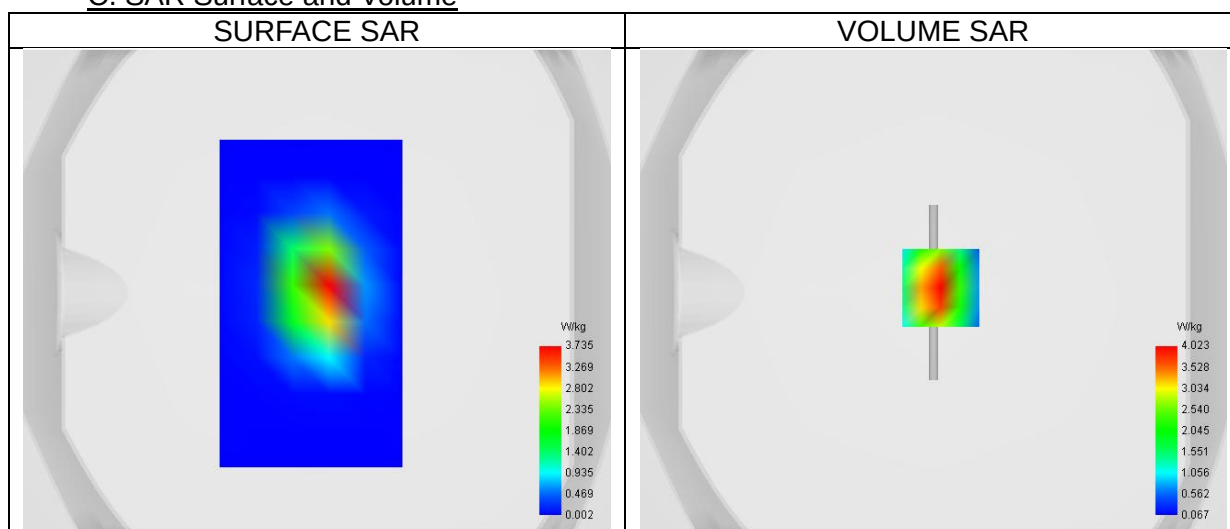
A. Experimental conditions.

Probe	0725-EPGO-448
ConvF	1.50
Area Scan	dx=15mm dy=15mm, Complete
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5.0mm,Complete
Phantom	Validation plane
Device Position	Dipole
Band	CW1800
Signal	CW
Channels/Frequency	Middle

B. Permittivity

Middle TX Frequency (MHz)	1800.00
Relative permittivity (real part)	39.06
Relative permittivity (imaginary part)	14.01
Conductivity (S/m)	1.40

C. SAR Surface and Volume



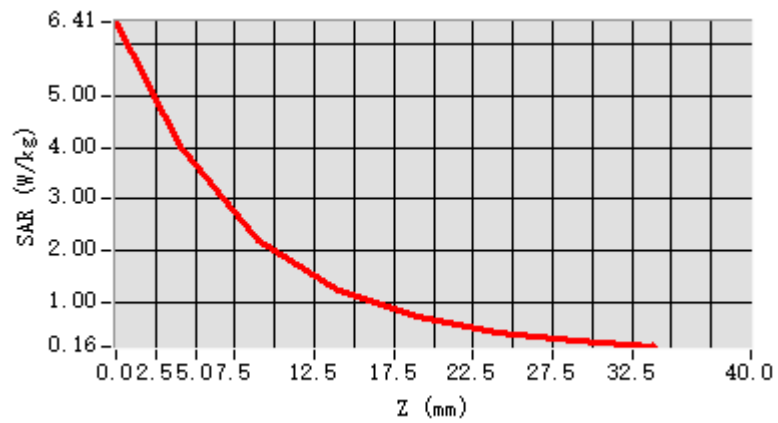
Maximum location: X=3.00, Y=2.00 ; SAR Peak: 6.50 W/kg

D. SAR 1g & 10g

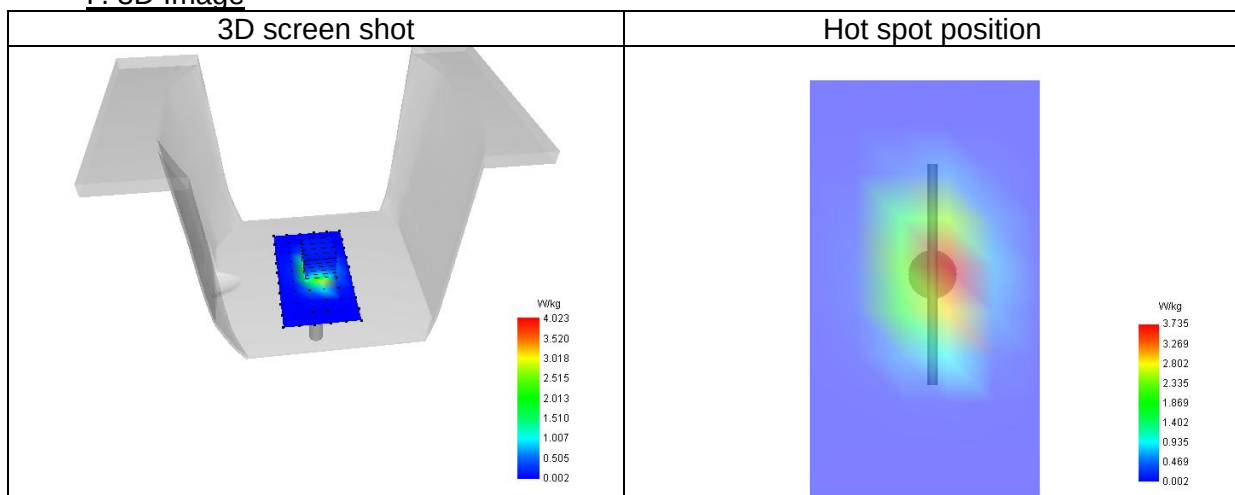
SAR 10g (W/Kg)	1.930
SAR 1g (W/Kg)	3.821
Variation (%)	-0.07
Horizontal validation criteria: minimum distance (mm)	16.00
Vertical validation criteria: SAR ratio M2/M1 (%)	54.62

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	6.415	4.023	2.197	1.261	0.738	0.438	0.265



F. 3D Image



4# System check at 1900 MHz
Date of measurement: 6/6/2025

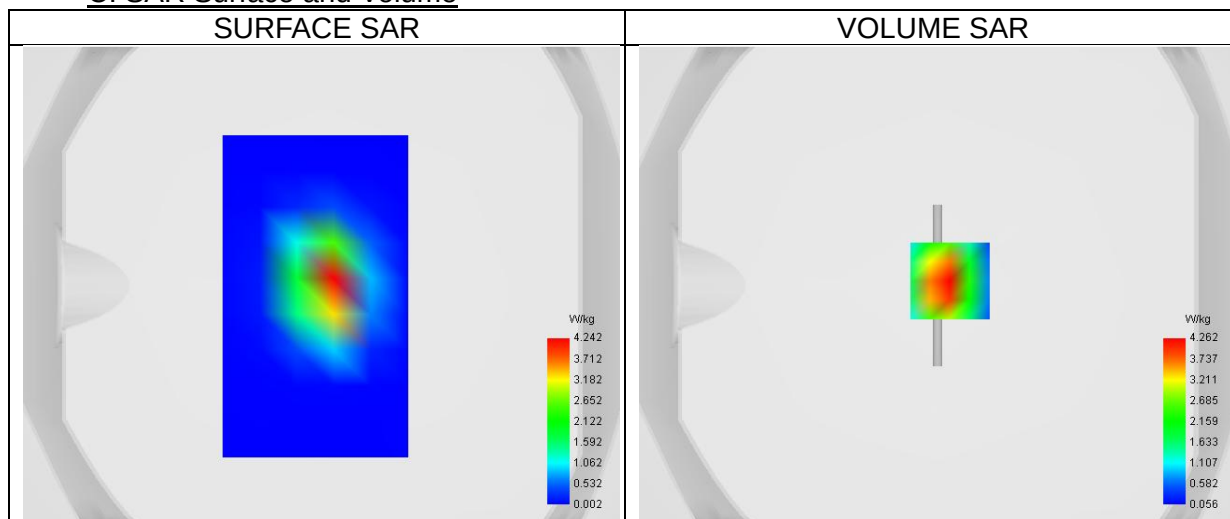
A. Experimental conditions.

Probe	0725-EPGO-448
ConvF	1.58
Area Scan	dx=15mm dy=15mm, Complete
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5.0mm,Complete
Phantom	Validation plane
Device Position	Dipole
Band	CW1900
Signal	CW
Channels/Frequency	Middle

B. Permittivity

Middle TX Frequency (MHz)	1900.00
Relative permittivity (real part)	38.50
Relative permittivity (imaginary part)	13.82
Conductivity (S/m)	1.46

C. SAR Surface and Volume



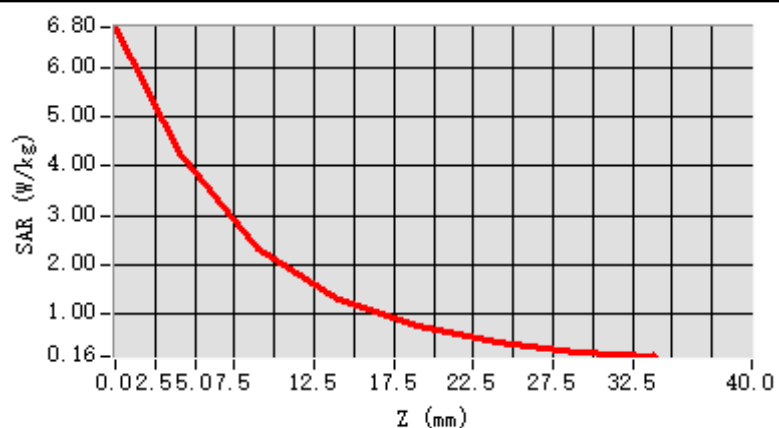
Maximum location: X=5.00, Y=2.00 ; SAR Peak: 6.99 W/kg

D. SAR 1g & 10g

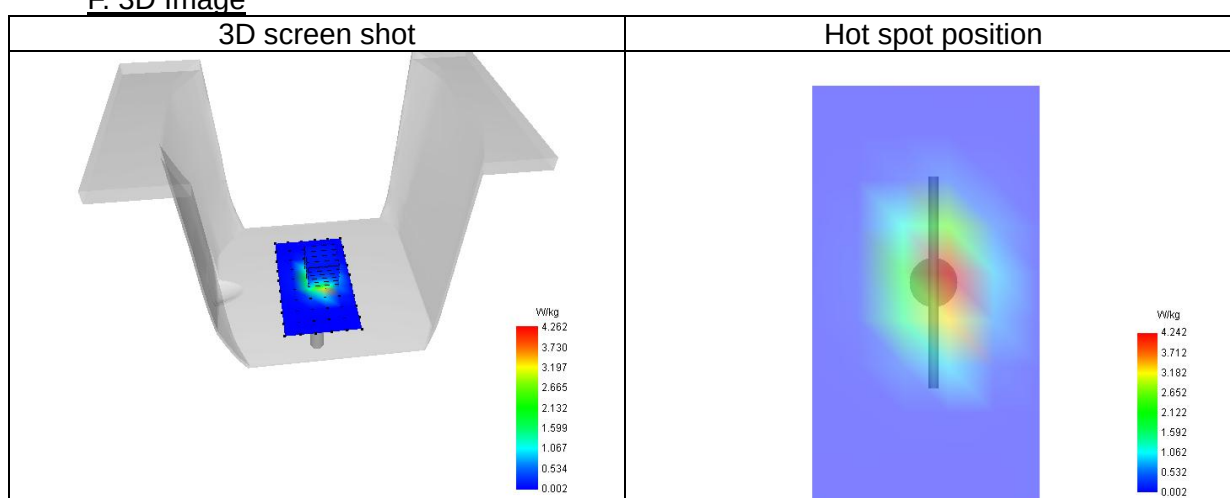
SAR 10g (W/Kg)	2.067
SAR 1g (W/Kg)	4.200
Variation (%)	-0.01
Horizontal validation criteria: minimum distance (mm)	11.31
Vertical validation criteria: SAR ratio M2/M1 (%)	54.41

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	6.801	4.262	2.319	1.315	0.754	0.445	0.260



F. 3D Image



5# System check at 2450 MHz
Date of measurement: 7/6/2025

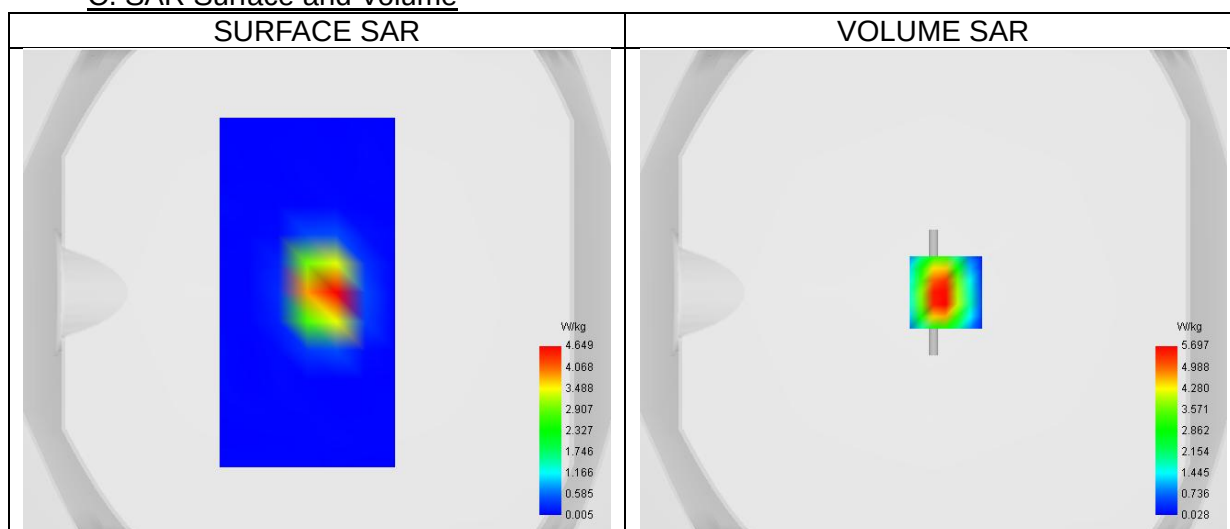
A. Experimental conditions.

Probe	0725-EPGO-448
ConvF	1.63
Area Scan	dx=12mm dy=12mm, Complete
Zoom Scan	7x7x7,dx=5mm dy=5mm dz=5.0mm,Complete
Phantom	Validation plane
Device Position	Dipole
Band	CW2450
Signal	CW
Channels/Frequency	Middle

B. Permittivity

Middle TX Frequency (MHz)	2450.00
Relative permittivity (real part)	38.35
Relative permittivity (imaginary part)	13.42
Conductivity (S/m)	1.83

C. SAR Surface and Volume



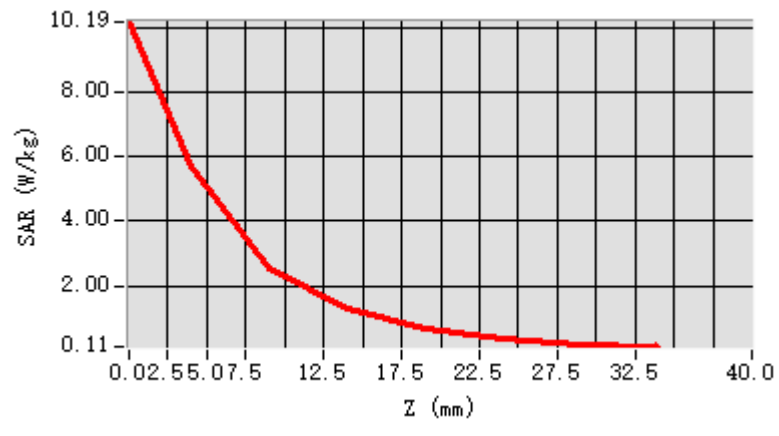
Maximum location: X=5.00, Y=0.00 ; SAR Peak: 10.08 W/kg

D. SAR 1g & 10g

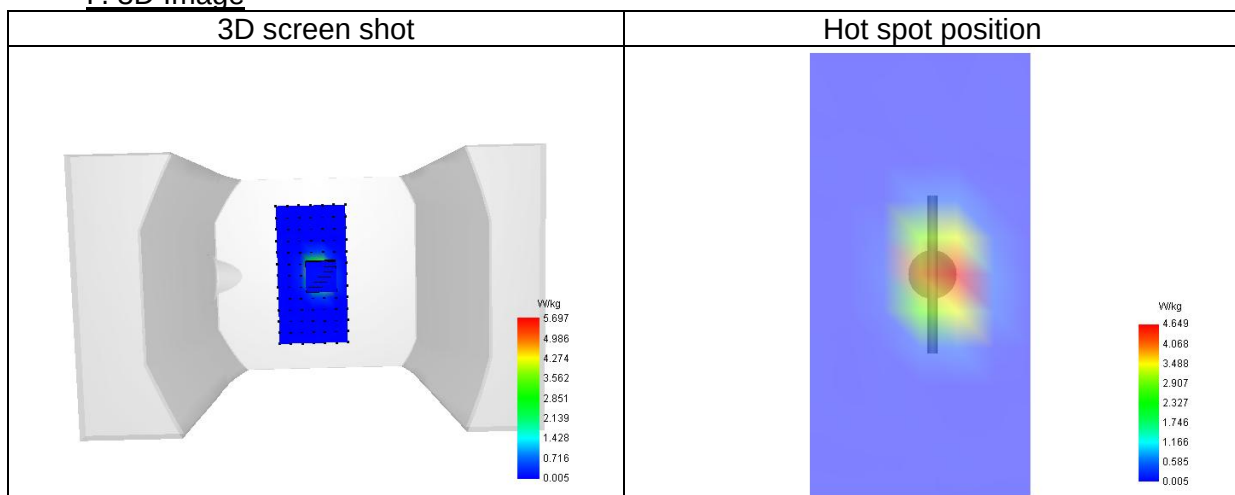
SAR 10g (W/Kg)	2.330
SAR 1g (W/Kg)	5.379
Variation (%)	1.92
Horizontal validation criteria: minimum distance (mm)	10.00
Vertical validation criteria: SAR ratio M2/M1 (%)	49.27

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	10.194	5.697	2.563	1.303	0.649	0.354	0.176



F. 3D Image



6# System check at 2600 MHz
Date of measurement: 8/6/2025

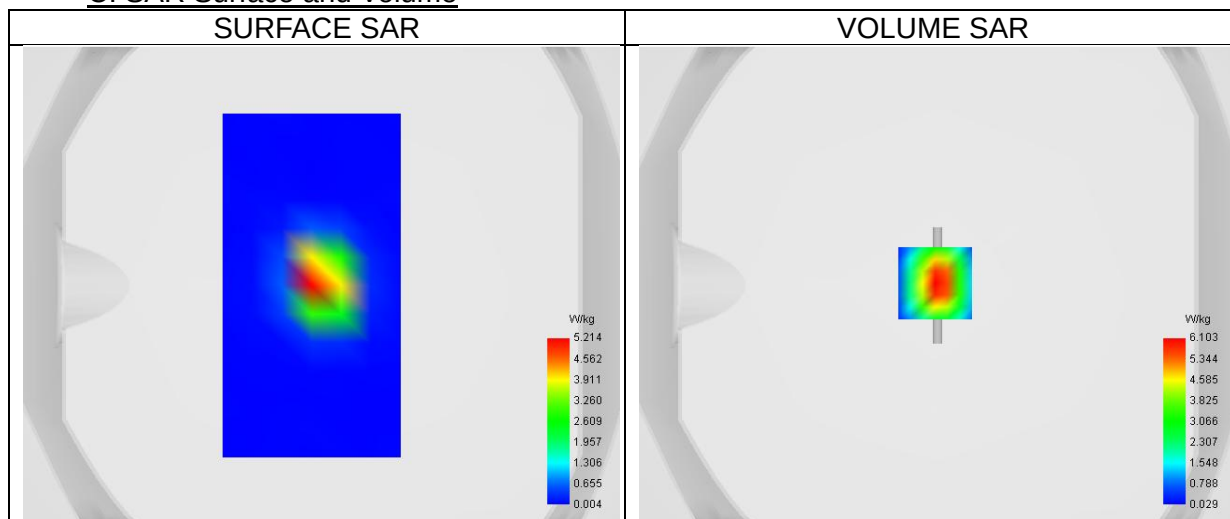
A. Experimental conditions.

Probe	0725-EPGO-448
ConvF	1.52
Area Scan	dx=12mm dy=12mm, Complete
Zoom Scan	7x7x7,dx=5mm dy=5mm dz=5.0mm,Complete
Phantom	Validation plane
Device Position	Dipole
Band	CW2600
Signal	CW
Channels/Frequency	Middle

B. Permittivity

Middle TX Frequency (MHz)	2600.00
Relative permittivity (real part)	39.40
Relative permittivity (imaginary part)	13.51
Conductivity (S/m)	1.95

C. SAR Surface and Volume



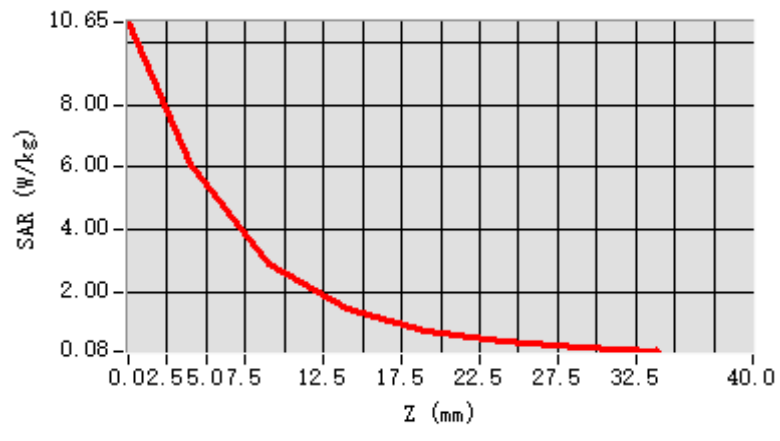
Maximum location: X=-1.00, Y=1.00 ; SAR Peak: 10.66 W/kg

D. SAR 1g & 10g

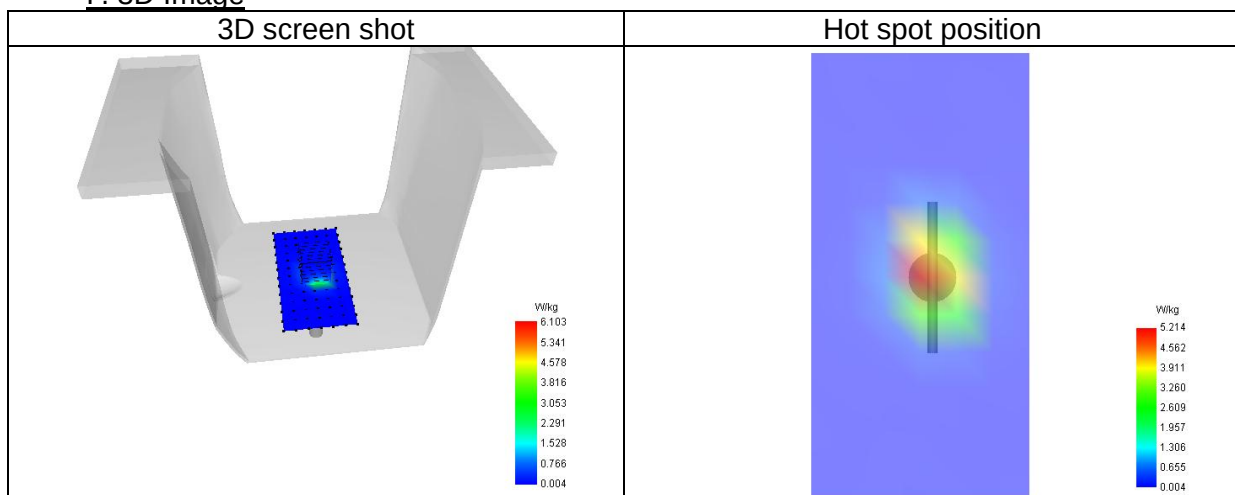
SAR 10g (W/Kg)	2.462
SAR 1g (W/Kg)	5.638
Variation (%)	-1.28
Horizontal validation criteria: minimum distance (mm)	10.00
Vertical validation criteria: SAR ratio M2/M1 (%)	47.00

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	10.645	6.103	2.869	1.465	0.758	0.375	0.189



F. 3D Image



7# System check at 5200 MHz
Date of measurement: 9/6/2025

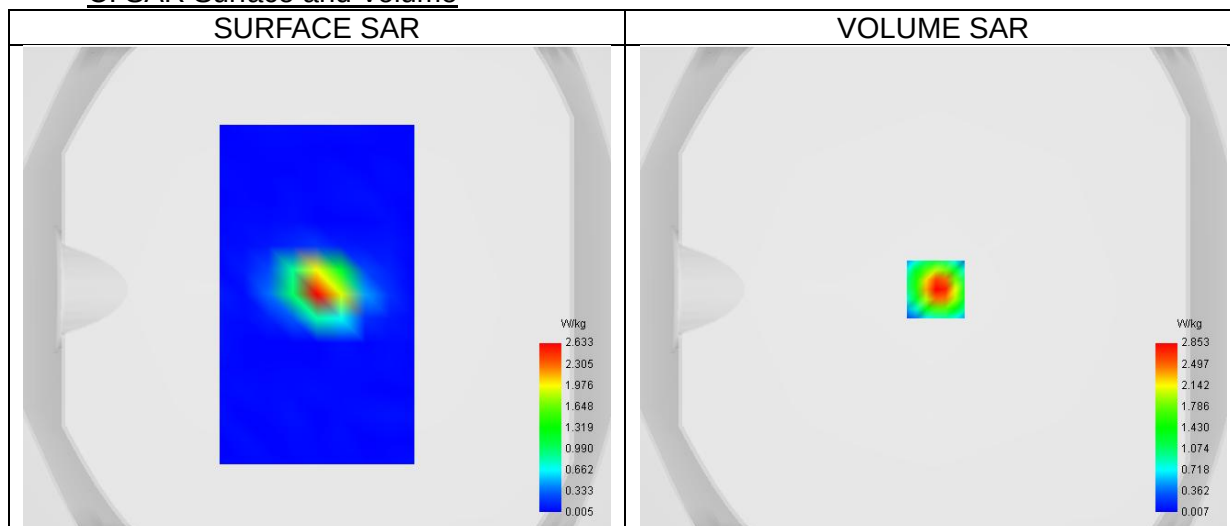
A. Experimental conditions.

Probe	0725-EPGO-448
ConvF	1.37
Area Scan	dx=10mm dy=10mm, Complete
Zoom Scan	7x7x12,dx=4mm dy=4mm dz=2.0mm,Complete
Phantom	Validation plane
Device Position	Dipole
Band	CW5200
Signal	CW
Channels/Frequency	Middle

B. Permittivity

Middle TX Frequency (MHz)	5200.00
Relative permittivity (real part)	37.48
Relative permittivity (imaginary part)	15.93
Conductivity (S/m)	4.60

C. SAR Surface and Volume



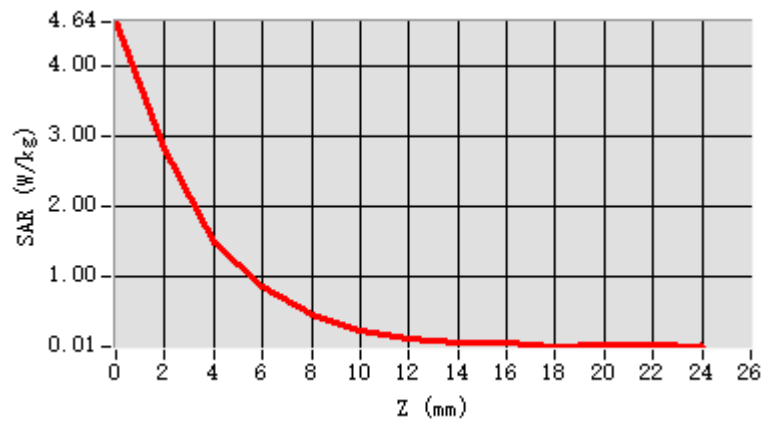
Maximum location: X=1.00, Y=0.00 ; SAR Peak: 5.01 W/kg

D. SAR 1g & 10g

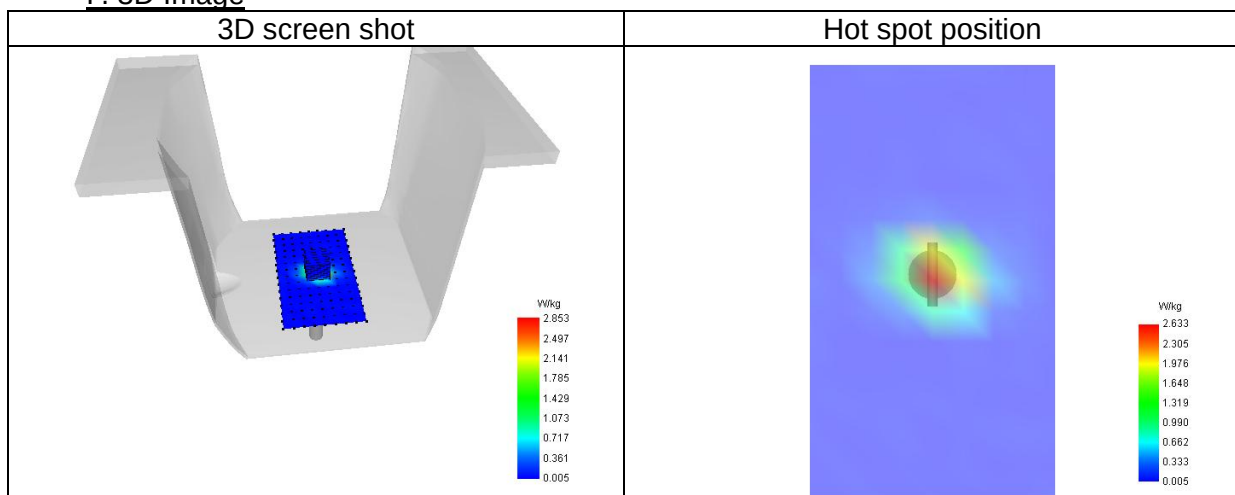
SAR 10g (W/Kg)	0.565
SAR 1g (W/Kg)	1.669
Variation (%)	-0.87
Horizontal validation criteria: minimum distance (mm)	8.94
Vertical validation criteria: SAR ratio M2/M1 (%)	52.85

E. Z Axis Scan

Z (mm)	0.00	2.00	4.00	6.00	8.00	10.0	12.0	14.0	16.0	18.0	20.0	22.0
						0	0	0	0	0	0	0
SAR (W/Kg)	4.64	2.85	1.50	0.86	0.46	0.23	0.12	0.08	0.07	0.02	0.04	0.04
	2	3	8	7	2	6	2	1	3	4	8	3



F. 3D Image



8# System check at 5800 MHz
Date of measurement: 10/6/2025

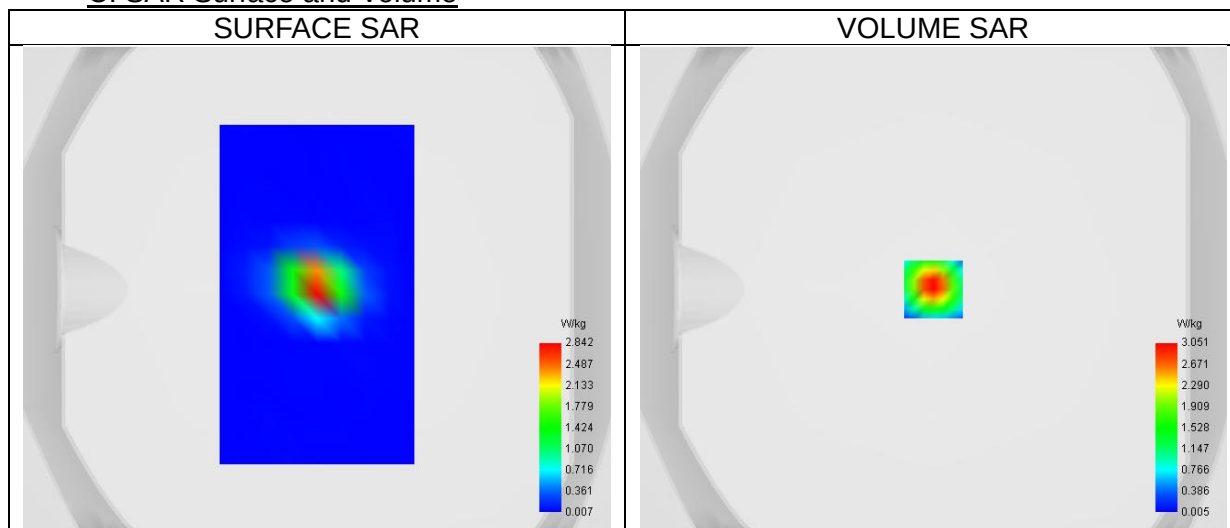
A. Experimental conditions.

Probe	0725-EPGO-448
ConvF	1.35
Area Scan	dx=10mm dy=10mm, Complete
Zoom Scan	7x7x12,dx=4mm dy=4mm dz=2.0mm,Complete
Phantom	Validation plane
Device Position	Dipole
Band	CW5800
Signal	CW
Channels/Frequency	Middle

B. Permittivity

Middle TX Frequency (MHz)	5800.00
Relative permittivity (real part)	36.15
Relative permittivity (imaginary part)	16.05
Conductivity (S/m)	5.17

C. SAR Surface and Volume



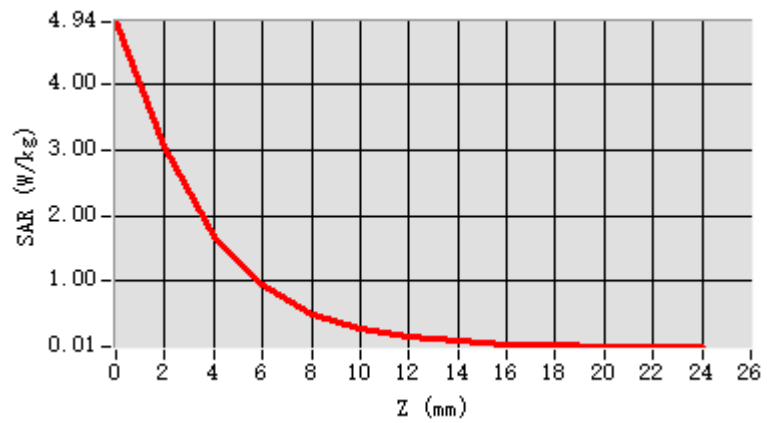
Maximum location: X=0.00, Y=0.00 ; SAR Peak: 5.33 W/kg

D. SAR 1g & 10g

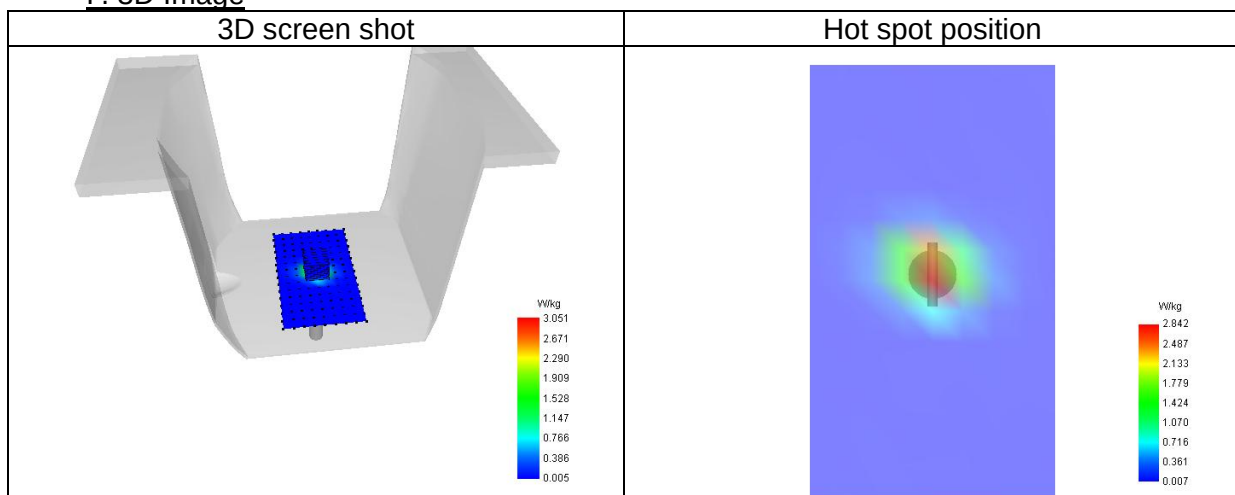
SAR 10g (W/Kg)	0.598
SAR 1g (W/Kg)	1.787
Variation (%)	0.25
Horizontal validation criteria: minimum distance (mm)	8.94
Vertical validation criteria: SAR ratio M2/M1 (%)	54.88

E. Z Axis Scan

Z (mm)	0.00	2.00	4.00	6.00	8.00	10.0	12.0	14.0	16.0	18.0	20.0	22.0
						0	0	0	0	0	0	0
SAR (W/Kg)	4.94	3.05	1.67	0.95	0.50	0.27	0.15	0.08	0.04	0.02	0.01	0.01
	5	1	5	6	9	5	7	6	6	4	1	1



F. 3D Image



13. Appendix C. Plots of High SAR Measurement

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MEASUREMENT 2GSM 1900 Body
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MEASUREMENT 6 WLAN 5.2G Body
MEASUREMENT 7 WLAN 5.8G Body
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MEASUREMENT 14LTE Band 17 Body
MEASUREMENT 15LTE Band 41 Body

1# SAR Measurement at GPRS850 (Body, Validation Plane)

Date of measurement: 4/6/2025

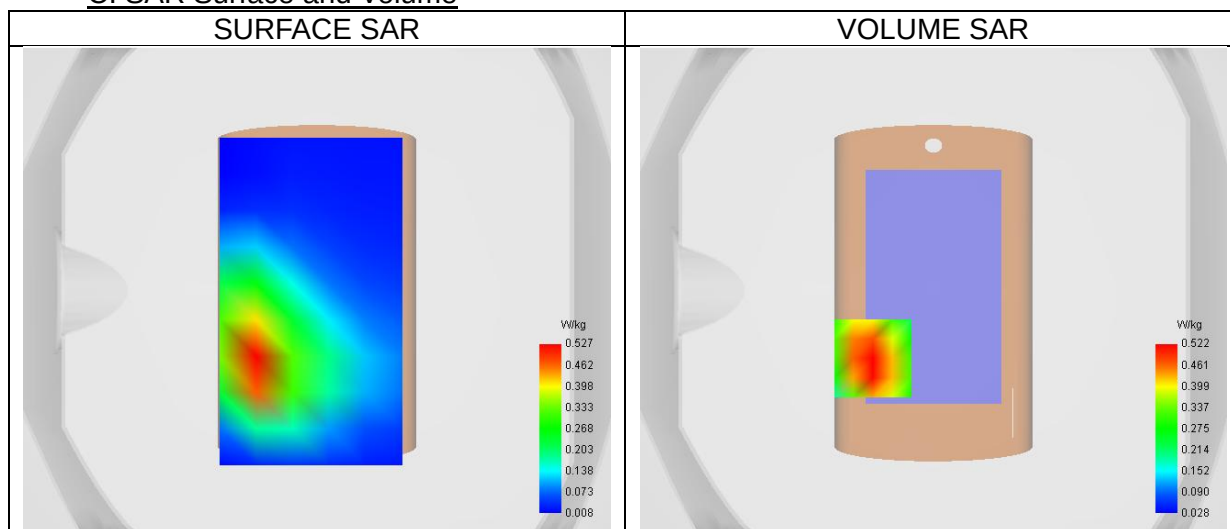
A. Experimental conditions.

Probe	0725-EPGO-448
ConvF	1.32
Area Scan	dx=15mm dy=15mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	GPRS850
Signal	TDMA (GPRS)
Channels/Frequency	Middle (189)/ frequency 836.40 Mhz
Modulation	GMSK (CS-4)
TX-slots	4

B. Permittivity

Middle TX Frequency (MHz)	836.40
Relative permittivity (real part)	42.24
Relative permittivity (imaginary part)	20.04
Conductivity (S/m)	0.93

C. SAR Surface and Volume



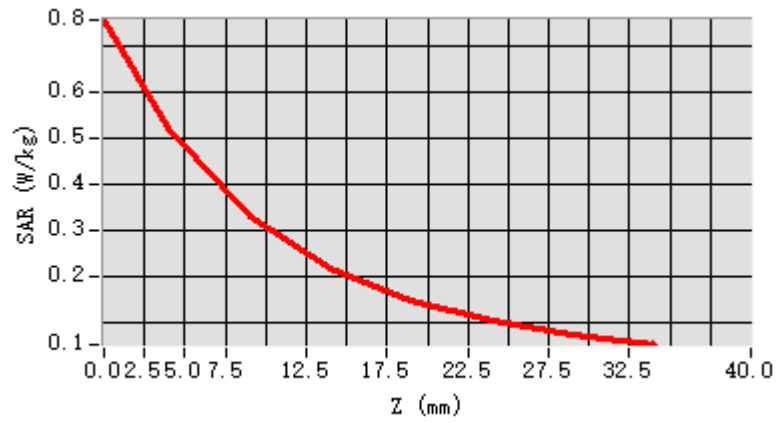
Maximum location: X=-25.00, Y=-28.00 ; SAR Peak: 0.79 W/kg

D. SAR 1g & 10g

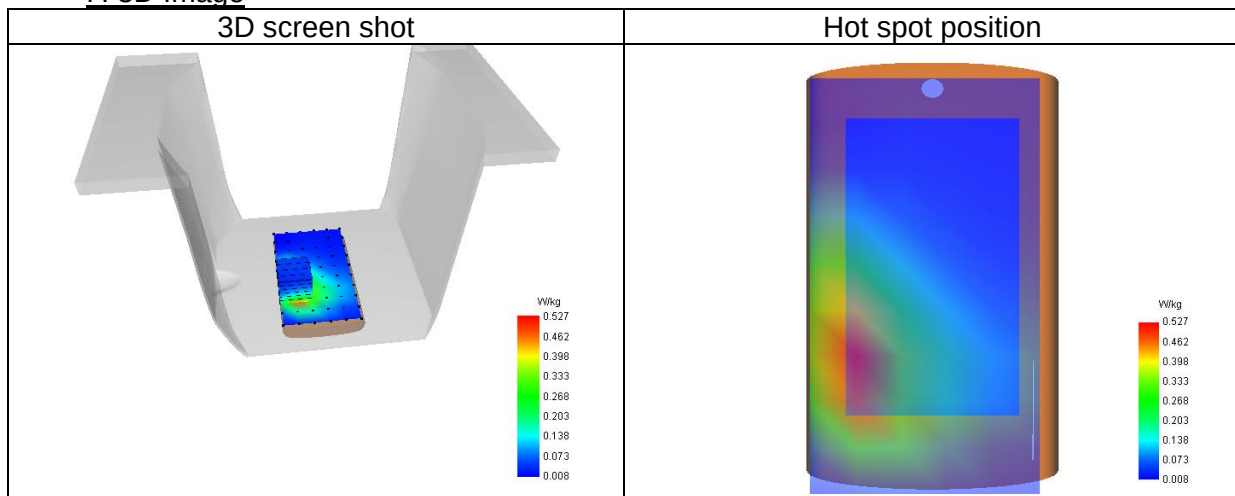
SAR 10g (W/Kg)	0.307
SAR 1g (W/Kg)	0.516
Variation (%)	-0.63
Horizontal validation criteria: minimum distance (mm)	22.63
Vertical validation criteria: SAR ratio M2/M1 (%)	62.96

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.759	0.522	0.329	0.217	0.147	0.101	0.072



F. 3D Image



2# SAR Measurement at GPRS1900 (Body, Validation Plane)

Date of measurement: 6/6/2025

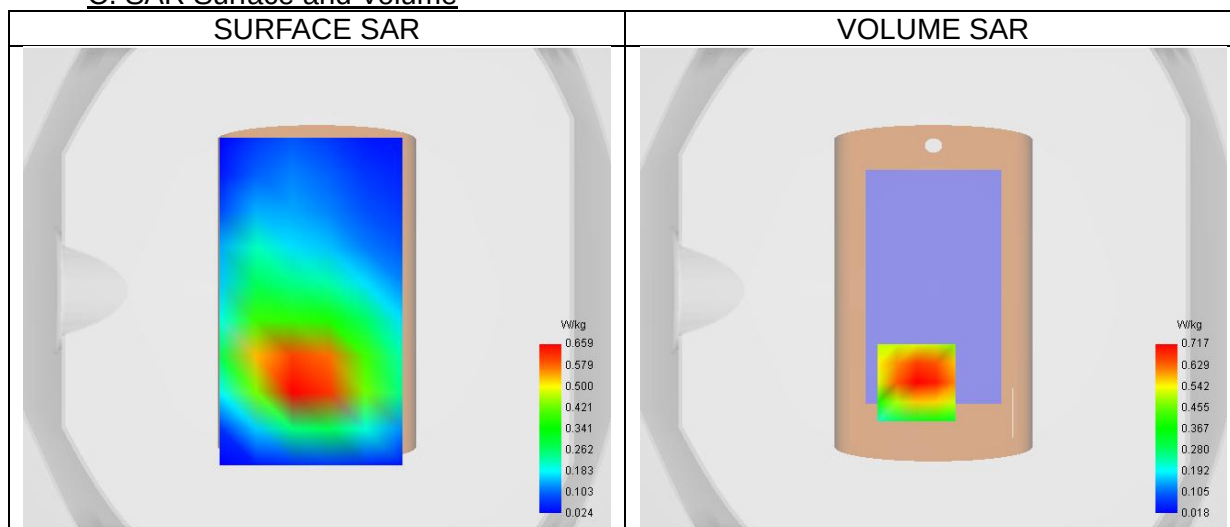
A. Experimental conditions.

Probe	0725-EPGO-448
ConvF	1.58
Area Scan	dx=15mm dy=15mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	GPRS1900
Signal	TDMA (GPRS)
Channels/Frequency	Middle (661)/ frequency 1880.00 Mhz
Modulation	GMSK (CS-4)
TX-slots	4

B. Permittivity

Middle TX Frequency (MHz)	1880.00
Relative permittivity (real part)	38.59
Relative permittivity (imaginary part)	13.84
Conductivity (S/m)	1.44

C. SAR Surface and Volume



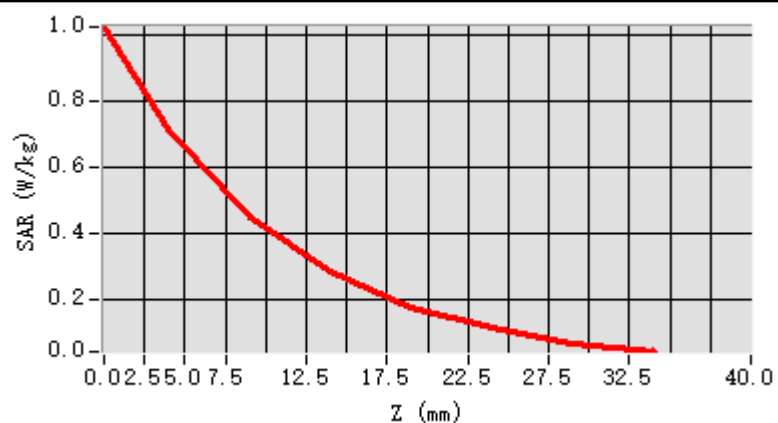
Maximum location: X=-7.00, Y=-38.00 ; SAR Peak: 1.02 W/kg

D. SAR 1g & 10g

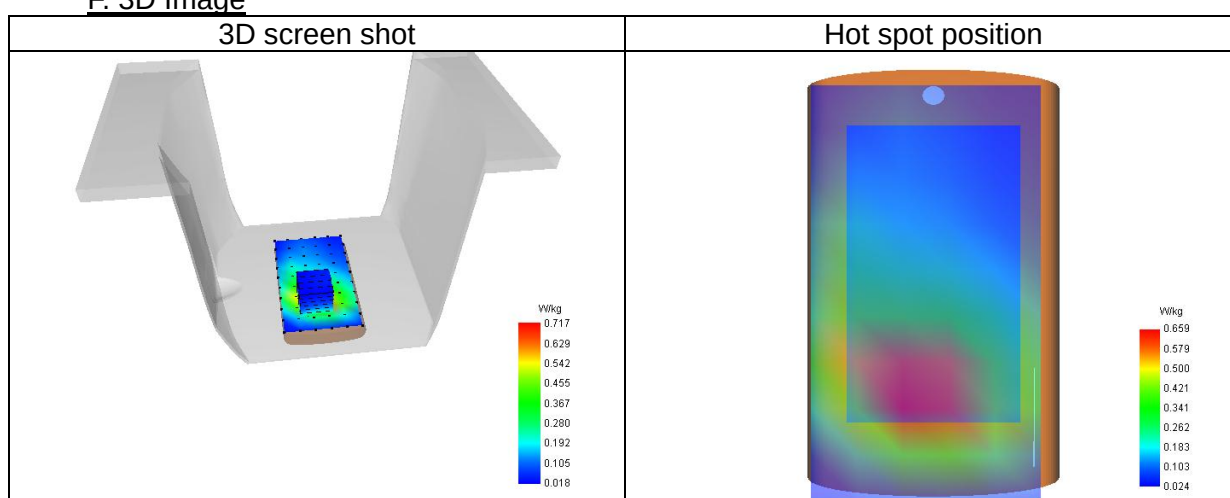
SAR 10g (W/Kg)	0.415
SAR 1g (W/Kg)	0.702
Variation (%)	-0.06
Horizontal validation criteria: minimum distance (mm)	16.00
Vertical validation criteria: SAR ratio M2/M1 (%)	62.74

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	1.026	0.717	0.450	0.279	0.172	0.109	0.065



F. 3D Image



3# SAR Measurement at Band 2 (1900) (Body, Validation Plane)

Date of measurement: 6/6/2025

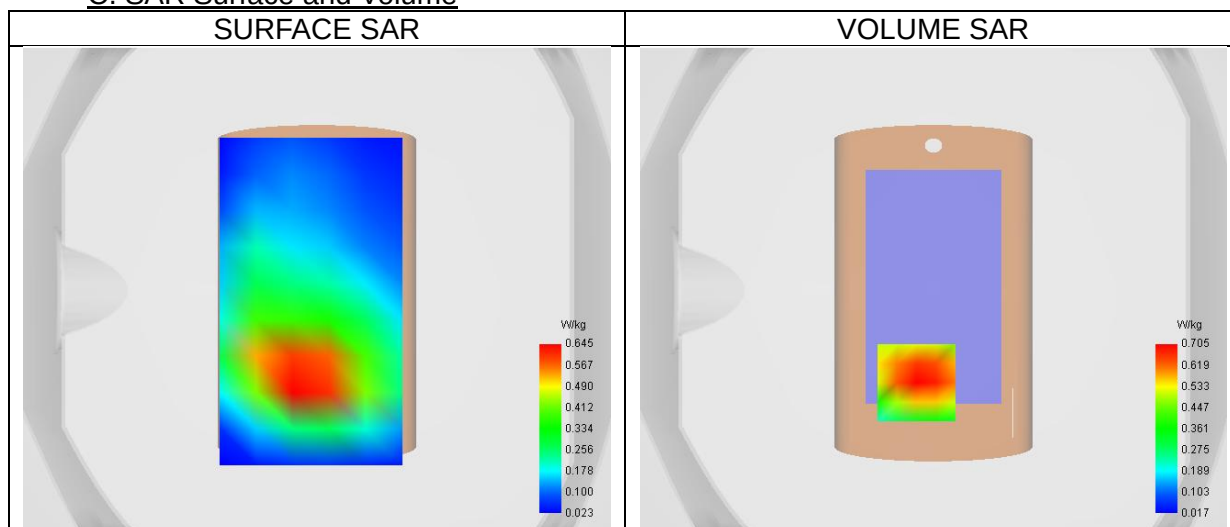
A. Experimental conditions.

Probe	0725-EPGO-448
ConvF	1.58
Area Scan	dx=15mm dy=15mm, Complete
Zoom Scan	5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete
Phantom	Validation plane
Device Position	Body
Band	Band 2 (1900)
Signal	WCDMA
Channels/Frequency	Middle (9400)/ frequency 1880.00 Mhz
Mode	Release 99
Connection Type	RMC, 12.2 kbps

B. Permittivity

Middle TX Frequency (MHz)	1880.00
Relative permittivity (real part)	38.59
Relative permittivity (imaginary part)	13.84
Conductivity (S/m)	1.44

C. SAR Surface and Volume



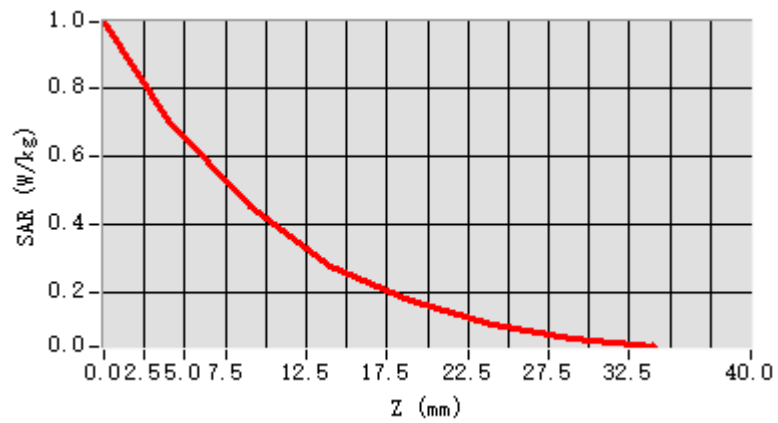
Maximum location: X=-7.00, Y=-38.00 ; SAR Peak: 0.99 W/kg

D. SAR 1g & 10g

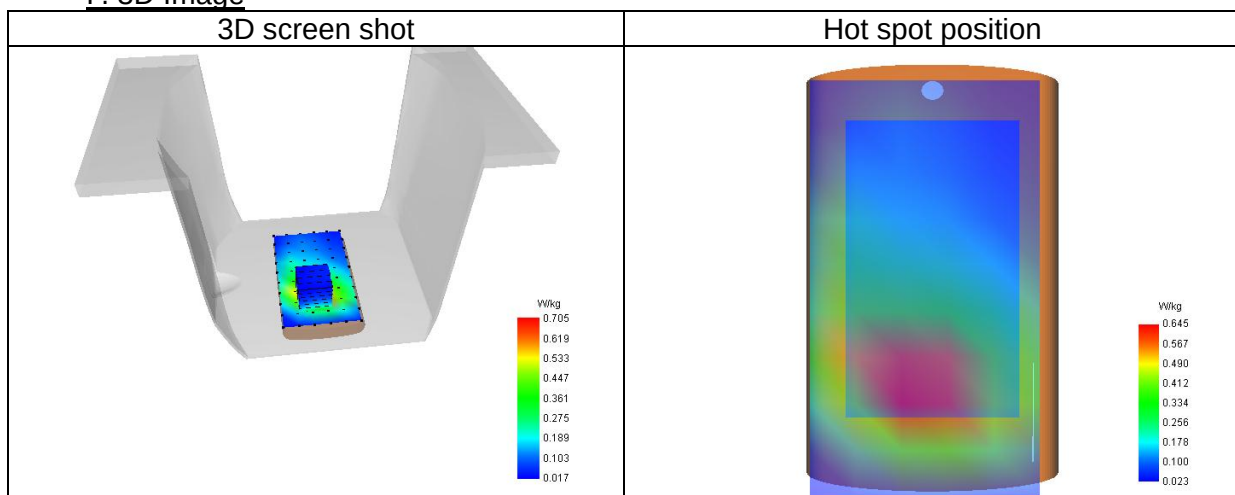
SAR 10g (W/Kg)	0.411
SAR 1g (W/Kg)	0.689
Variation (%)	-0.15
Horizontal validation criteria: minimum distance (mm)	16.00
Vertical validation criteria: SAR ratio M2/M1 (%)	63.88

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.991	0.705	0.450	0.277	0.174	0.104	0.066



F. 3D Image



4# SAR Measurement at Band 4 (1700) (Body, Validation Plane)

Date of measurement: 5/6/2025

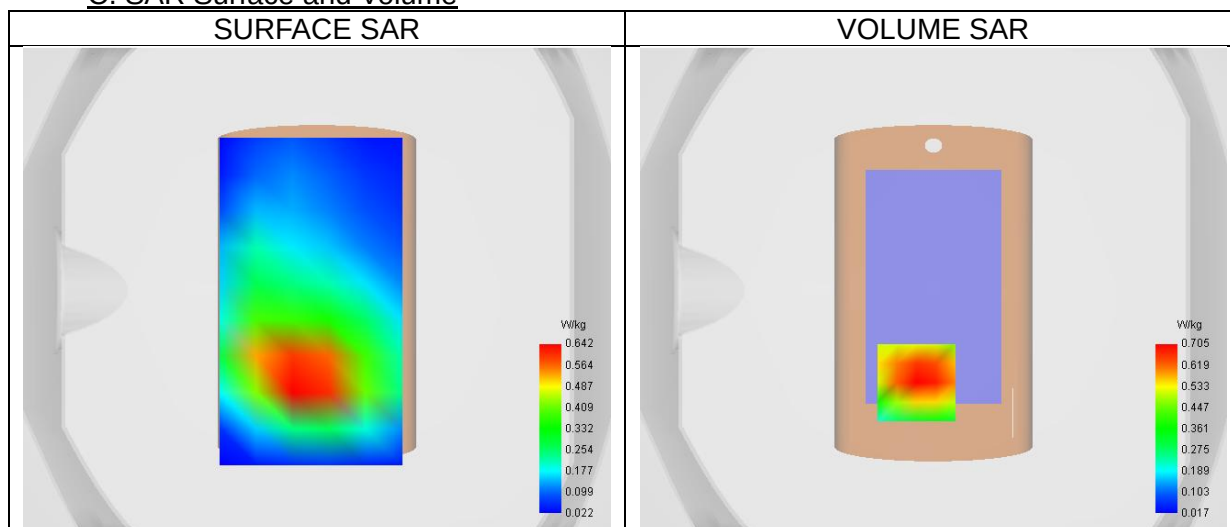
A. Experimental conditions.

Probe	0725-EPGO-448
ConvF	1.50
Area Scan	dx=15mm dy=15mm, Complete
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5.0mm,Complete
Phantom	Validation plane
Device Position	Body
Band	Band 4 (1700)
Signal	WCDMA
Channels/Frequency	Middle (1413)/ frequency 1732.60 Mhz
Mode	Release 99
Connection Type	RMC, 12.2 kbps

B. Permittivity

Middle TX Frequency (MHz)	1732.60
Relative permittivity (real part)	39.52
Relative permittivity (imaginary part)	13.94
Conductivity (S/m)	1.34

C. SAR Surface and Volume



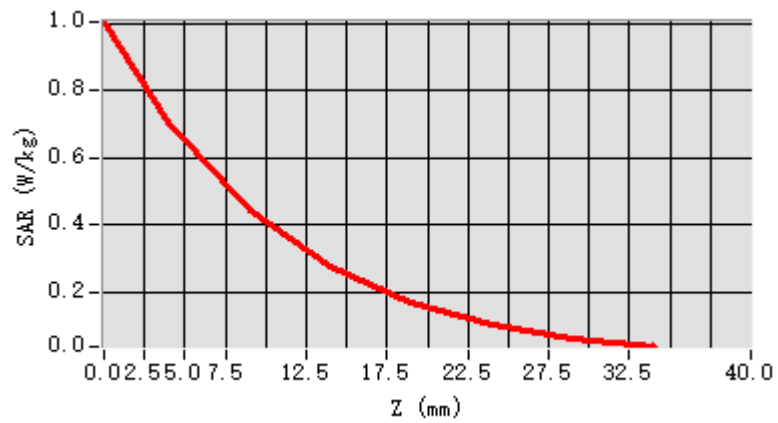
Maximum location: X=-7.00, Y=-38.00 ; SAR Peak: 1.00 W/kg

D. SAR 1g & 10g

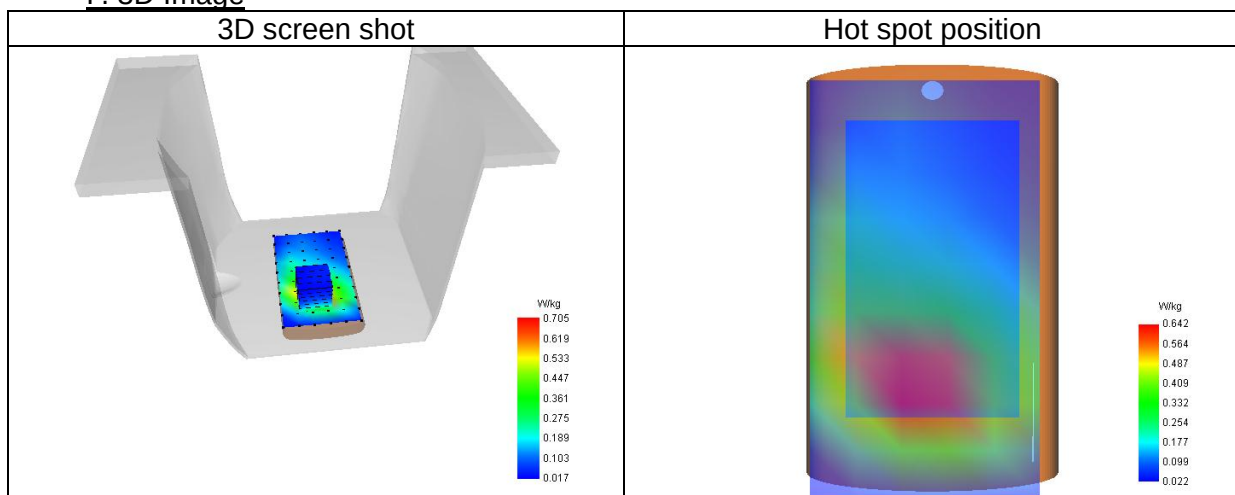
SAR 10g (W/Kg)	0.402
SAR 1g (W/Kg)	0.673
Variation (%)	0.50
Horizontal validation criteria: minimum distance (mm)	16.00
Vertical validation criteria: SAR ratio M2/M1 (%)	62.81

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	1.005	0.705	0.443	0.278	0.169	0.105	0.064



F. 3D Image



5# SAR Measurement at Band 5 (850) (Body, Validation Plane)

Date of measurement: 4/6/2025

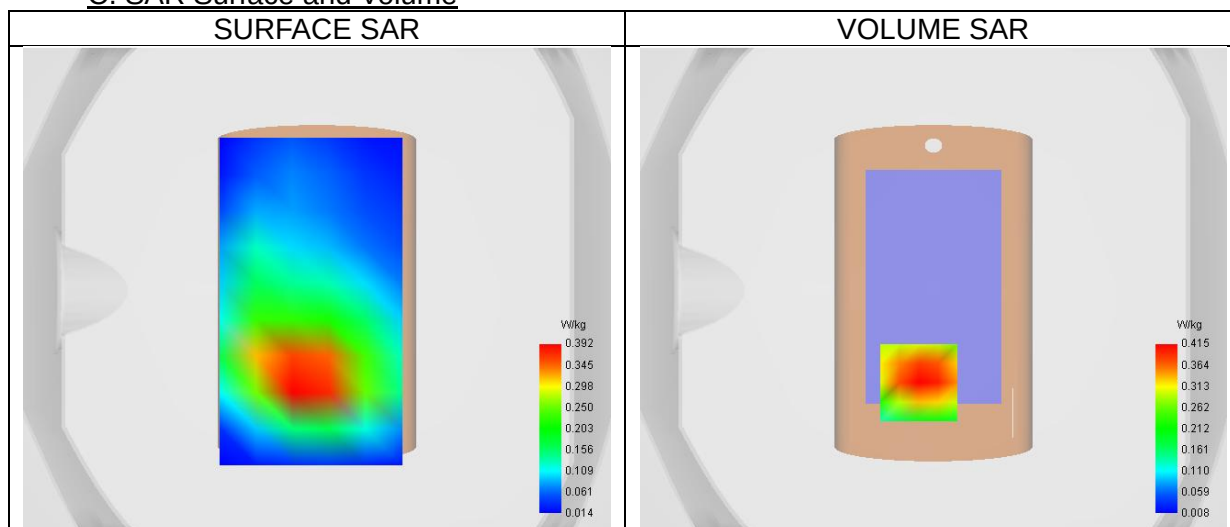
A. Experimental conditions.

Probe	0725-EPGO-448
ConvF	1.32
Area Scan	dx=15mm dy=15mm, Complete
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5.0mm,Complete
Phantom	Validation plane
Device Position	Body
Band	Band 5 (850)
Signal	WCDMA
Channels/Frequency	Middle (4182)/ frequency 836.40 Mhz
Mode	Release 99
Connection Type	RMC, 12.2 kbps

B. Permittivity

Middle TX Frequency (MHz)	836.40
Relative permittivity (real part)	42.24
Relative permittivity (imaginary part)	20.04
Conductivity (S/m)	0.93

C. SAR Surface and Volume



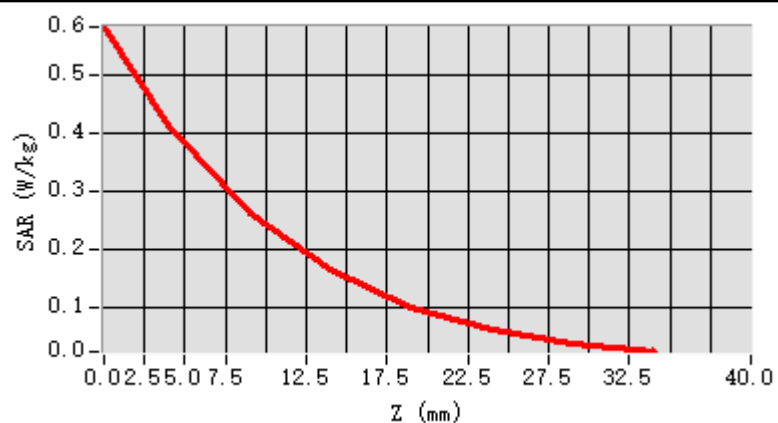
Maximum location: X=-6.00, Y=-38.00 ; SAR Peak: 0.58 W/kg

D. SAR 1g & 10g

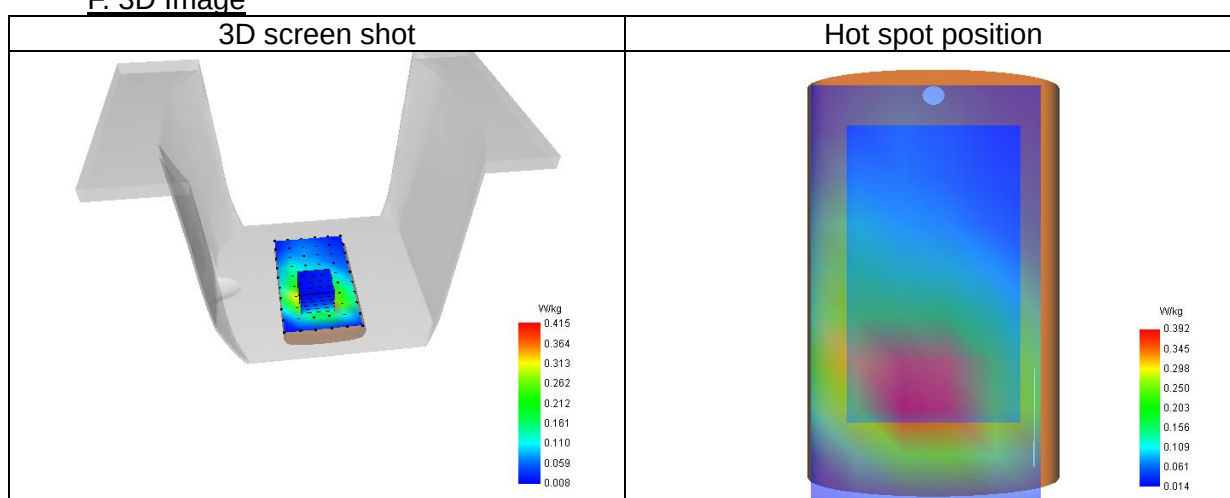
SAR 10g (W/Kg)	0.241
SAR 1g (W/Kg)	0.403
Variation (%)	-1.02
Horizontal validation criteria: minimum distance (mm)	16.00
Vertical validation criteria: SAR ratio M2/M1 (%)	63.69

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.584	0.415	0.264	0.166	0.102	0.062	0.039



F. 3D Image



6# SAR Measurement at U-NII-1 (Body, Validation Plane)

Date of measurement: 9/6/2025

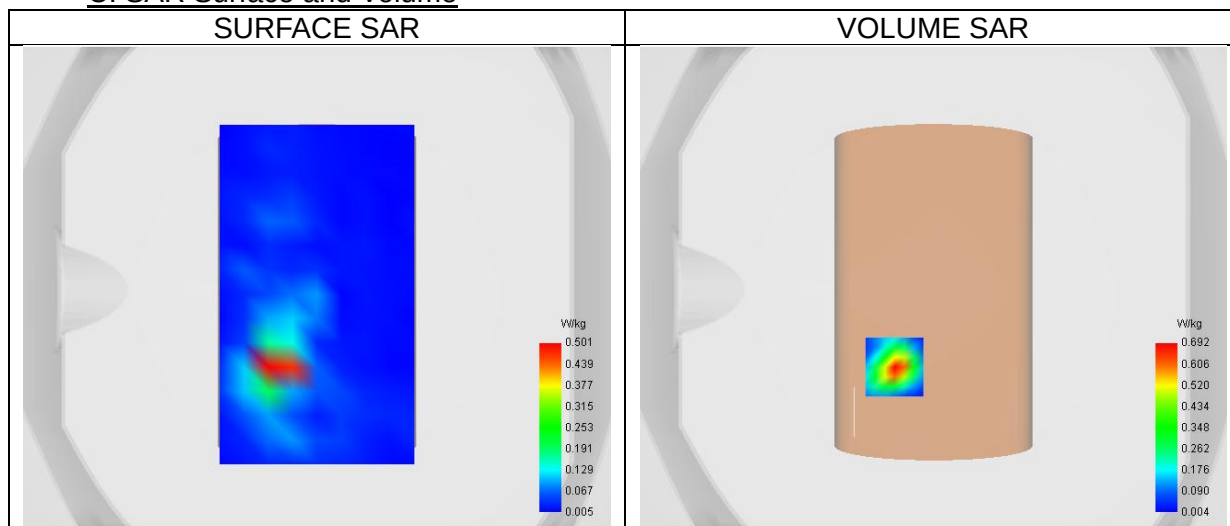
A. Experimental conditions.

Probe	0725-EPGO-448
ConvF	1.37
Area Scan	dx=10mm dy=10mm, Complete
Zoom Scan	7x7x12,dx=4mm dy=4mm dz=2.0mm,Complete
Phantom	Validation plane
Device Position	Body
Band	U-NII-1
Signal	IEEE 802.11 a
Channels/Frequency	Middle (40)/ frequency 5200.00 Mhz

B. Permittivity

Middle TX Frequency (MHz)	5200.00
Relative permittivity (real part)	37.48
Relative permittivity (imaginary part)	15.93
Conductivity (S/m)	4.60

C. SAR Surface and Volume



Maximum location: X=-16.00, Y=-32.00 ; SAR Peak: 1.19 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.100
SAR 1g (W/Kg)	0.354
Variation (%)	1.99
Horizontal validation criteria: minimum distance (mm)	5.66
Vertical validation criteria: SAR ratio M2/M1 (%)	54.07

E. Z Axis Scan

Z (mm)	0.00	2.00	4.00	6.00	8.00	10.0	12.0	14.0	16.0	18.0	20.0	22.0
						0	0	0	0	0	0	0
SAR (W/Kg)	1.14	0.69	0.37	0.19	0.10	0.06	0.03	0.01	0.01	0.01	0.01	0.01
	2	2	4	1	5	0	7	3	5	3	5	6