

TEST REPORT

Reference No...... : WTD26X04116317W008
FCC ID..... : 2BXVZ-PTK01
Applicant..... : Shenzhen Wewins Wireless Co.,Ltd
Address..... : 17F., Mid Wing,Yuehai Building, Nanhai Road,Nanshan, Shenzhen, China
Manufacturer..... : The same as Applicant
Address..... : The same as Applicant
Product Name..... : Petmio S1
Model No...... : PTK01
FCC Part 2.1093
Standards..... : IEEE Std C95.1: 2019
IEEE C95.3: 2021
IEC/IEEE 62209-1528:2020
Date of Receipt sample..... : 2026-05-09
Date of Test..... : 2026-05-15 to 2026-09-14
Date of Issue..... : 2026-09-14
Test Report Form No...... : WTX_Part2_1093W
Test Result..... : **Pass**

Remarks:

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

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Report version

Version No.	Date of issue	Description
Rev.00	2026-09-14	Original
/	/	/

1. General Information

1.1 Product Description for Equipment Under Test (EUT)

General Description of EUT:	
Product Name:	Petmio S1
Brand Name:	/
Model No.:	PTK01
Adding Model(s):	/
Rated Voltage:	Charging port:DC5V Battery:DC3.85V
Battery Capacity:	450mAh
<i>Note: The test data is gathered from a production sample provided by the manufacturer.</i>	

Technical Characteristics of EUT:	
4G	
Support Networks:	LTE Cat-M1, LTE NB-IOT
Support Band:	FDD-LTE Band 2, 4, 5, 12, 13, 17, 25, 26, 66, 85
Uplink Frequency:	FDD-LTE Band 2: Tx: 1850-1910MHz, FDD-LTE Band 4: Tx: 1710-1755MHz, FDD-LTE Band 5: Tx: 824-849MHz, FDD-LTE Band 12: Tx: 699-716MHz, FDD-LTE Band 13: Tx: 777-787MHz, FDD-LTE Band 17: Tx: 704-716MHz FDD-LTE Band 25: Tx: 1850-1915MHz FDD-LTE Band 26(Part 90 segment): Tx: 814-824MHz FDD-LTE Band 26(Part 22 segment): Tx: 824-849MHz FDD-LTE Band 66: Tx: 1710-1780MHz FDD-LTE Band 85: Tx:698-716MHz
Downlink Frequency:	FDD-LTE Band 2: Rx: 1930-1990MHz, FDD-LTE Band 4: Rx: 2110-2155MHz, FDD-LTE Band 5: Rx: 869-894MHz, FDD-LTE Band 12: Rx: 729-746MHz, FDD-LTE Band 13: Rx: 746-756MHz, FDD-LTE Band 17: Rx: 734-746MHz FDD-LTE Band 25: Rx:1930-1995MHz, FDD-LTE Band 26(Part 90 segment): Rx: 859-869MHz, FDD-LTE Band 26(Part 22 segment): Rx: 869-894MHz, FDD-LTE Band 66 : Rx: 2110-2200MHz, FDD-LTE Band 85: Rx: 728-746MHz
RF Output Power(LTE Cat-M1):	FDD-LTE Band 2: 22.79dBm, FDD-LTE Band 4: 22.87dBm,

	FDD-LTE Band 5: 22.52dBm, FDD-LTE Band 12: 23.01dBm, FDD-LTE Band 13: 22.14dBm, FDD-LTE Band 25: 22.79dBm FDD-LTE Band 26(814-824MHz): 23.00dBm, FDD-LTE Band 26(824MHz): 23.06dBm, FDD-LTE Band 26(824-849MHz): 22.52dBm, FDD-LTE Band 66: 22.87dBm FDD-LTE Band 85: 23.01dBm
RF Output Power(LTE NB-IOT):	FDD-LTE Band 2: 22.63dBm, FDD-LTE Band 4: 22.54dBm, FDD-LTE Band 5: 22.44dBm, FDD-LTE Band 12: 22.16dBm, FDD-LTE Band 13: 22.27dBm, FDD-LTE Band 17: 22.16dBm, FDD-LTE Band 25: 22.63dBm FDD-LTE Band 26(814-824MHz): 22.49dBm, FDD-LTE Band 26(824MHz): 22.42dBm, FDD-LTE Band 26(824-849MHz): 22.44dBm, FDD-LTE Band 66: 22.54dBm FDD-LTE Band 85: 22.16dBm
Type of Modulation:	LTE Cat-M1: QPSK, 16QAM LTE NB-IOT: BPSK, QPSK
Antenna Type:	PIFA Antenna
Antenna Gain:	FDD-LTE Band 2: 0.5dBi, FDD-LTE Band 4: -1.2dBi, FDD-LTE Band 5: -3.0dBi, FDD-LTE Band 12: -6.0dBi, FDD-LTE Band 13: -4dBi, FDD-LTE Band 17: -6.0dBi, FDD-LTE Band 25: 0.5dBi, FDD-LTE Band 26(814-824MHz): -3.0dBi, FDD-LTE Band 26(824MHz): -3.0dBi, FDD-LTE Band 26(824-849MHz): -3.0dBi, FDD-LTE Band 66: 0.5dBi FDD-LTE Band 85: -6dBi
Bluetooth	
Bluetooth Version:	Bluetooth V6.0
Frequency Range:	2402-2480MHz
Max. RF Output Power:	6.59dBm(Conducted)
Data Rate:	1Mbps, 2Mbps
Modulation:	GFSK
Quantity of Channels:	40
Channel Separation:	2MHz
Antenna Type:	PIFA Antenna
Antenna Gain:	0.4dBi
WIFI(2.4GHz)	
Support Standards:	802.11b, 802.11g, 802.11n-HT20, 802.11ax-HE20
Frequency Range:	2412-2462MHz for 802.11b/g/n(HT20)/ax20,
RF Output Power:	12.95dBm (Conducted)
Type of Modulation:	DSSS(DBPSK,DQPSK,CCK);

	OFDM(BPSK,QPSK,16QAM,64QAM); OFDMA(BPSK,QPSK,16QAM,64QAM,256QAM,1024QAM)
Quantity of Channels:	11 for 802.11b/g/n20/ax20
Channel Separation:	5MHz
Antenna Type:	PIFA Antenna
Antenna Gain:	0.4dBi
<i>Note: 1. The Antenna Gain is provided by the customer and can affect the validity of results. 2. The LTE Cat-M1, LTE NB-IOT Output power are provided by test report 77535RRF.001A1 & 77535RRF.002A1 & 77535RRF.003A1 & 77535RRF.004A1.</i>	

1.2 Test Standards

The following report is accordance with FCC 47 CFR Part 2.1093, IEEE Std C95.1: 2019, IEEE C95.3: 2021, KDB 447498 D01 v06, KDB 648474 D04 v01r03, KDB 248227 D01 v02r02, KDB 941225 D01 v03r01, KDB 941225 D05 v02r05 , and KDB 865664 D01 v01r04 and KDB 865664 D02 v01r02.

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

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

1.3 Test Methodology

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

1.4 Test Facility

Address of the test laboratory

Laboratory: Waltek Testing Group (Shenzhen) Co., Ltd.

Address: 1/F., Room 101, Building 1, Hongwei Industrial Park, Liuxian 2nd Road,Block 70 Bao'an District, Shenzhen, Guangdong, China

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FCC – Registration No.: 125990

Waltek Testing Group (Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files. The Designation Number is CN5010. Test Firm Registration Number is 125990.

Industry Canada (IC) Registration No.: 11464A

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

2. Summary of Test Results

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

Frequency Band	Body (5mm Gap)	SAR _{1g} Limit (W/kg)
	Maximum SAR _{1g} (W/kg)	
LTE Cat-M1	0.676	1.6
LTE NB-IOT	1.270	1.6
Bluetooth	0.092	1.6
WIFI(2.4GHz)	0.273	1.6
Simultaneous Transmission	1.389	1.6

The device is in compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits (1.6 W/kg) specified in FCC 47 CFR Part 2.1093 and IEEE Std C95.1: 2019 and had been tested in accordance with the measurement methods and procedure specified in KDB 865664 D01 v01r04 and KDB 865664 D02 v01r02.

3. Specific Absorption Rate (SAR)

3.1 Introduction

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

3.2 SAR Definition

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

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

SAR is expressed in units of Watts per kilogram (W/kg)

SAR measurement can be either related to the temperature elevation in tissue by

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

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

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

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

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

4. SAR Measurement System

4.1 The Measurement System

Comosar is a system that is able to determine the SAR distribution inside a phantom of human being according to different standards. The Comosar system consists of the following items:

- Main computer to control all the system
- 6 axis robot
- Data acquisition system
- Miniature E-field probe
- Phone holder
- Head simulating tissue

The following figure shows the system.

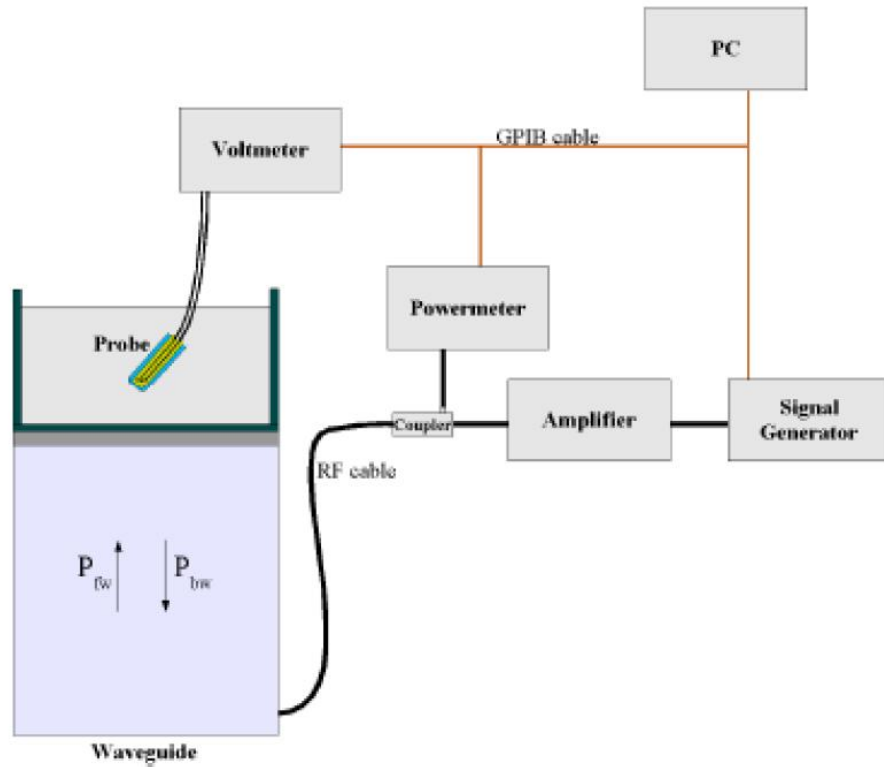


The EUT under test operating at the maximum power level is placed in the phone holder, under the phantom, which is filled with head simulating liquid. The E-Field probe measures the electric field inside the phantom. The OpenSAR software computes the results to give a SAR value in a 1g or 10g mass.

4.2 Probe

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

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



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

Where :

P_{fw} = Forward Power

P_{bw} = Backward Power

a and b = Waveguide dimensions

δ = Skin depth

Keithley configuration:

Rate = Medium; Filter = ON; RDGS = 10; Filter type = Moving Average; Range auto after each calibration, a SAR measurement is performed on a validation dipole and compared with a NPL calibrated probe, to verify it. The calibration factors, CF(N), for the 3 sensors corresponding to dipole 1, dipole 2 and dipole 3 are:

$$CF(N) = SAR(N)/V_{lin}(N) \quad (N=1,2,3)$$

The linearised output voltage $V_{lin}(N)$ is obtained from the displayed output voltage $V(N)$ using

$$V_{lin}(N) = V(N) * (1 + V(N)/DCP(N)) \quad (N=1,2,3)$$

where DCP is the diode compression point in mV.

4.3 Probe Calibration Process

Dosimetric Assessment Procedure

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

Free Space Assessment Procedure

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

Temperature Assessment Procedure

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

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

Where:

- Δt = exposure time (30 seconds),
- C = heat capacity of tissue (brain or muscle),
- ΔT = temperature increase due to RF exposure.

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

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

Where:

σ = simulated tissue conductivity,

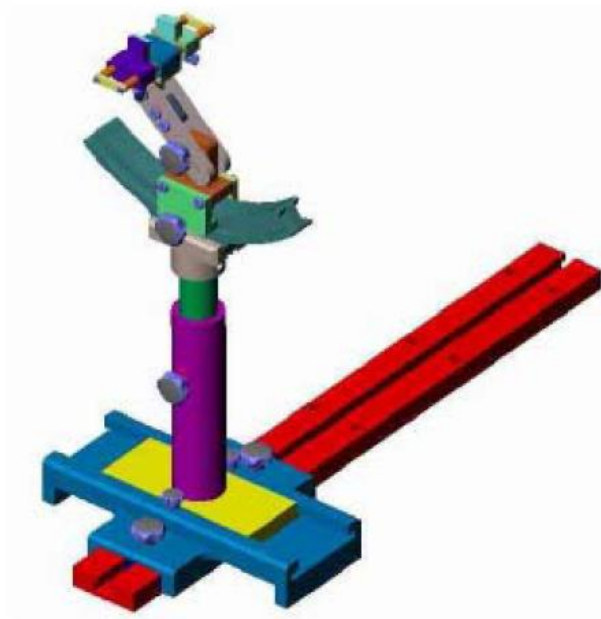
ρ = Tissue density (1.25 g/cm³ for brain tissue)

4.4 Phantom

For the measurements the Specific Anthropomorphic Mannequin (SAM) defined by the IEEE SCC-34/SC2 group is used. The phantom is a polyurethane shell integrated in a wooden table. The thickness of the phantom amounts to 2mm +/- 0.2mm. It enables the dosimetric evaluation of left and right phone usage and includes an additional flat phantom part for the simplified performance check. The phantom set-up includes a cover, which prevents the evaporation of the liquid.

4.5 Device Holder

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



System Material	Permittivity	Loss Tangent
Delrin	3.7	0.005

4.6 Test Equipment List

Fixed asset Number	Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
WTXE1105A1002	E-Field Probe	MVG	SSE2	0725-EPGO-446	2026-03-03	2027-03-02
WTXE1053A1001-001	750MHz Dipole	MVG	SID750	SN 47/21 DIP 0G750-620	2025-10-22	2028-10-21
WTXE1053A1001-002	835MHz Dipole	MVG	SID835	SN 47/12 DIP 0G835-204	2025-10-22	2028-10-21
WTXE1053A1001-003	900MHz Dipole	MVG	SID900	SN 47/12 DIP 0G900-205	2025-10-22	2028-10-21
WTXE1053A1001-004	1800MHz Dipole	MVG	SID1800	SN 47/12 DIP 1G800-206	2025-10-22	2028-10-21
WTXE1053A1001-005	1900MHz Dipole	MVG	SID1900	SN 47/12 DIP 1G900-207	2025-12-31	2028-12-30
WTXE1053A1001-007	2450MHz Dipole	MVG	SID2450	SN 13/15 DIP 2G450-364	2025-12-30	2028-12-29
WTXE1053A1001-011	Dielectric Probe	SATIMO	SCLMP	SN 47/12 OCPG49	2026-02-05	2027-02-04
WTXE1075A1003	Power meter	Keithley	3500	1232959	2026-02-05	2027-02-04
WTXE1075A1002	Power meter	Keithley	3500	1162591	2026-02-05	2027-02-04
WTXE1104A1003	EXG Analog Signal Generator	KEYSIGHT	N5173B	MY61252892	2026-02-06	2027-02-05
WTXE1022A1002	GSM Tester	Rohde & Schwarz	CMU200	114403	2026-02-06	2027-02-05
WTXE1105A1001	Communications Tester	Rohde & Schwarz	CMW500	170903	2026-02-05	2027-02-04
WTXW1105A1137	Vector Network Analvzers	Rohde & Schwarz	ZVB 8	101525	2026-02-06	2027-02-05
WTXE1076A1001	Power Divider	HP	11636B	JC-2017-10-002	2026-02-05	2027-02-04
WTXW1105A1135	RF Attenuator	Pasternack	N-JK	/	2026-02-05	2027-02-04
WTXW1105A1136	RF Attenuator	Pasternack	N-JK	/	2026-02-05	2027-02-04
WTXE1103A1003	Attenuator	Pasternack	PE4007-4	/	2026-02-05	2027-02-04
WTXE1091A1001	UXM 5G Wireless Test Platform	KEYSIGHT	E7515B	MY57450525	2026-02-06	2027-02-05

5. Tissue Simulating Liquids

5.1 Composition of Tissue Simulating Liquid

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



Liquid Height for Head/Body SAR

The Composition of Tissue Simulating Liquid

Frequency (MHz)	Water (%)	Salt (%)	Sugar (%)	HEC (%)	Preventol (%)	DGBE (%)
Head						
750	41.1	1.4	57.0	0.2	0.3	0
835	40.3	1.38	57.9	0.24	0.18	0
900	40.3	1.38	57.9	0.24	0.18	0
1800-2000	55.24	0.31	0	0	0	44.45
2300	55.40	0.08	0	0	0	44.52
2450	55.00	0	0	0	0	45.00
2600	55.242	0.306	0	0	0	44.452
3500	71.6	1.3	10.9	0.7	0.7	14.8
3700	71.7	1.3	10.8	0.6	0.8	14.8

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

5.2 Tissue Dielectric Parameters for Head and Body Phantoms

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

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

5.3 Tissue Calibration Result

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

Calibration Result for Dielectric Parameters of Tissue Simulating Liquid

Head Tissue Simulating Liquid									
Freq. MHz	Temp. (°C)	Conductivity			Permittivity			Limit (%)	Date
		Reading (σ)	Target (σ)	Delta (%)	Reading (ϵ_r)	Target (ϵ_r)	Delta (%)		
750	22.8	0.86	0.89	-3.37	41.14	41.9	-1.81	±5	2026-06-12
835	22.6	0.88	0.90	-2.22	40.81	41.5	-1.66	±5	2026-05-28
900	22.6	0.93	0.97	-4.12	41.08	41.5	-1.01	±5	2026-05-23
1800	22.5	1.38	1.40	-1.43	39.28	40.0	-1.80	±5	2026-07-18
1900	22.5	1.41	1.40	0.71	40.86	40.0	2.15	±5	2026-08-23
2450	22.6	1.77	1.80	-1.67	38.52	39.2	-1.73	±5	2026-07-22
2450	22.6	1.82	1.80	1.11	40.15	39.2	2.42	±5	2026-09-11

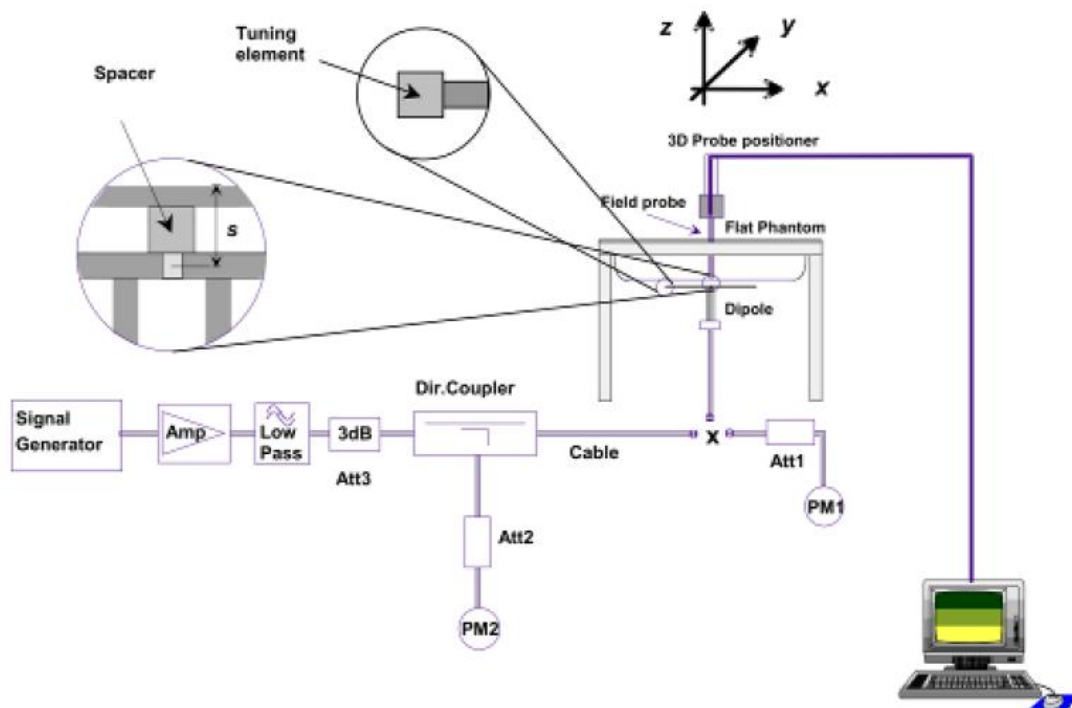
6. SAR Measurement Evaluation

6.1 Purpose of System Performance Check

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

6.2 System Setup

In the simplified setup for system evaluation, the EUT is replaced by a calibrated dipole and the power source is replaced by a continuous wave which comes from a signal generator at frequency 750MHz/835MHz/900MHz/1800MHz/1900MHz/2300MHz/2450MHz/2600MHz/5GHz. The calibrated dipole must be placed beneath the flat phantom section of the SAM twin phantom with the correct distance holder. The distance holder should touch the phantom surface with a light pressure at the reference marking and be oriented parallel to the long side of the phantom.



System Verification Setup Block Diagram



Setup Photo of Dipole Antenna

The output power on 750MHz/835MHz/900MHz dipole port must be calibrated to 24dBm (250mW) before dipole is connected.

The output power on 1800MHz/1900MHz/2300MHz/2450MHz/2600MHz/5GHz dipole port must be calibrated to 20dBm (100mW) before dipole is connected.

6.3 Validation Results

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

Frequency	Power	Targeted SAR _{1g}	Measured SAR _{1g}	Normalized SAR _{1g}	Tolerance	Date
MHz	(mw)	(W/kg)	(W/kg)	(W/kg)	(%)	
750	250	8.54	2.215	8.818	3.26	2026-06-12
835	250	9.49	2.370	9.435	-0.58	2026-05-28
900	250	11.00	2.601	10.355	-5.87	2026-05-23
1800	100	38.50	3.825	38.250	-0.65	2026-07-18
1900	100	39.60	4.123	41.230	4.12	2026-08-23
2450	100	52.20	4.958	49.580	-5.02	2026-07-22
2450	100	52.20	4.790	47.900	-8.24	2026-09-11

Remark: Referring to IEC/IEEE 62209-1528:2020, the system check shall be performed at a test frequency that is within $\pm 10\%$ or ± 100 MHz of the compliance test mid-band frequency, so the 1750 MHz system verification is made of 1800MHz Dipole.

Targeted and Measurement SAR

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

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7. EUT Testing Position

7.1 Body Position

- (a) To position the device parallel to the phantom surface with each side.
- (b) To adjust the device parallel to the flat phantom.
- (c) To adjust the distance between the device surface and the flat phantom to 5mm.

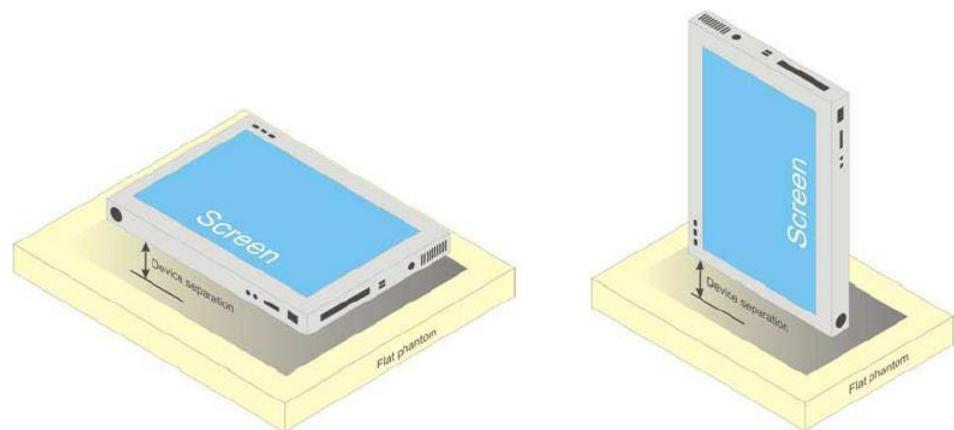


Illustration for Body Position

7.2 EUT Antenna Position

Please refer to the Annex for SAR

7.3 EUT Testing Position

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

Body SAR tests, Test distance: 5mm						
Antennas	Front Side	Back Side	Right Side	Left Side	Top Side	Bottom Side
WWAN	Yes	Yes	Yes	Yes	Yes	Yes
Bluetooth	Yes	Yes	No	Yes	Yes	Yes
WiFi	Yes	Yes	No	Yes	Yes	Yes

Remark:

- 1. Referring to KDB 941225 D06 and KDB 447498 D01 v06, when the overall device length and width are $\leq 9\text{cm} \times 5\text{cm}$, the test separation distances is 5 mm. SAR must be measured for all sides and surfaces with a transmitting antenna located within 25mm from that surface or edge.
- 2. Referring to KDB 648474 D04 Handset SAR v01r03, 10-g extremity SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR $> 1.2 \text{ W/kg}$

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

8. SAR Measurement Procedures

8.1 Measurement Procedures

The measurement procedures are as follows:

- (a) Use base station simulator (if applicable) or engineering software to transmit RF power continuously (continuous Tx) in the highest power channel.
- (b) Keep EUT to radiate maximum output power or 100% factor (if applicable)
- (c) Measure output power through RF cable and power meter.
- (d) Place the EUT in the positions as Annex D demonstrates.
- (e) Set scan area, grid size and other setting on the SATIMO software.
- (f) Measure SAR results for the highest power channel on each testing position.
- (g) Find out the largest SAR result on these testing positions of each band
- (h) Measure SAR results for other channels in worst SAR testing position if the SAR of highest power channel is larger than 0.8 W/kg

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

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

8.2 Spatial Peak SAR Evaluation

The procedure for spatial peak SAR evaluation has been implemented according to the test standard. It can be conducted for 1g and 10g, as well as for user-specific masses. The SATIMO software includes all numerical procedures necessary to evaluate the spatial peak SAR value.

The base for the evaluation is a "cube" measurement. The measured volume must include the 1g and 10g cubes with the highest averaged SAR values. For that purpose, the center of the measured volume is aligned to the interpolated peak SAR value of a previously performed area scan.

The entire evaluation of the spatial peak values is performed within the post-processing engine. The system always gives the maximum values for the 1g and 10g cubes. The algorithm to find the cube with highest averaged SAR is divided into the following stages:

- (a) Extraction of the measured data (grid and values) from the Zoom Scan
- (b) Calculation of the SAR value at every measurement point based on all stored data
- (c) Generation of a high-resolution mesh within the measured volume
- (d) Interpolation of all measured values from the measurement grid to the high-resolution grid
- (e) Extrapolation of the entire 3D field distribution to the phantom surface over the distance from sensor to surface
- (f) Calculation of the averaged SAR within masses of 1g and 10g

8.3 Area & Zoom Scan Procedures

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

8.4 Volume Scan Procedures

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

8.5 SAR Averaged Methods

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

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

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

8.6 Power Drift Monitoring

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

9. SAR Test Result

9.1 Conducted RF Output Power

LTE Cat-M1:

LTE Cat-M1 Band 2 & LTE Cat-M1 Band 25

Note: Refer to Module Report 77535RRF.002A1s, Pages 11, 13, 14 for the Conducted Output Power.

LTE Cat-M1 Band 2. QPSK and 16QAM:

	Channel per BW=(Frequency, MHz)					
	BW = 1.4 MHz	BW = 3 MHz	BW = 5 MHz	BW = 10 MHz	BW = 15 MHz	BW = 20 MHz
Low	18607 (1850.7)	18615 (1851.5)	18625 (1852.5)	18650 (1855)	18675 (1857.5)	18700 (1860)
Middle	18900 (1880)	18900 (1880)	18900 (1880)	18900 (1880)	18900 (1880)	18900 (1880)
High	19193 (1909.3)	19185 (1908.5)	19175 (1907.5)	19150 (1905)	19125 (1902.5)	19100 (1900)

NOTE: LTE Cat-M1 Band 2 is completely included in the LTE Cat-M1 Band 25, so the channels of LTE Cat-M1 Band 25 were tested to give conformity to the assigned block.

LTE Cat-M1 Band 25. QPSK and 16QAM:

	Channel per BW=(Frequency, MHz)					
	BW = 1.4 MHz	BW = 3 MHz	BW = 5 MHz	BW = 10 MHz	BW = 15 MHz	BW = 20 MHz
Low	26047 (1850.7)	26055 (1851.5)	26065 (1852.5)	26090 (1855)	26115 (1857.5)	26140 (1860)
Middle	26365 (1882.5)	26365 (1882.5)	26365 (1882.5)	26365 (1882.5)	26365 (1882.5)	26365 (1882.5)
High	26683 (1914.3)	26675 (1913.5)	26665 (1912.5)	26640 (1910)	26615 (1907.5)	26590 (1905)

1. CONDUCTED AVERAGE POWER:

LTE Cat-M1 Band 25:

Worst-case of RF Power is BW=15 MHz, Middle Channel, 16QAM, RB Size=5, RB Offset=0, Narrowband=0.

BANDWIDTH (MHz)	CHANNEL	FREQUENCY (MHz)	MODULATION	RB SIZE	RB OFFSET	AVERAGE POWER (dBm)
15	Low 26115	1857.5	QPSK	1	0	22.48
				1	2	22.52
				1	5	22.5
				3	0	22.57
				3	1	22.57
				3	3	22.56
				6	0	22.62
			16QAM	1	0	22.51
				1	2	22.52
				1	5	22.53
				3	0	22.65
				3	1	22.67
				3	3	22.67
	Middle 26365	1882.5	QPSK	5	0	22.72
				1	0	22.64
				1	2	22.59
				1	5	22.59
				3	0	22.6
				3	1	22.74
				3	3	22.71
				6	0	22.79
			16QAM	1	0	22.5
				1	2	22.52
				1	5	22.57
				3	0	22.62
				3	1	22.75
				3	3	22.74
				5	0	22.79
	High 26615	1907.5	QPSK	1	0	22.66
				1	2	22.56
				1	5	22.69
				3	0	22.68
				3	1	22.69
				3	3	22.69
				6	0	22.74
			16QAM	1	0	22.58
				1	2	22.54
				1	5	22.52
				3	0	22.67
				3	1	22.7
				3	3	22.7
				5	0	22.77

BW=15 MHz. QPSK:

MAX POWER	QPSK COND. POWER AVG (dBm)	ANTENNA GAIN (dBi)	RAD. POWER AVG EIRP(dBm)	RAD. POWER AVG ERP(dBm)
LOW	22.62	3	25.62	23.47
MIDDLE	22.79	3	25.79	23.64
HIGH	22.74	3	25.74	23.59
MAX:	22.79		25.79	23.64

BW=15 MHz. 16QAM:

MAX POWER	16QAM COND. POWER AVG (dBm)	ANTENNA GAIN (dBi)	RAD. POWER AVG EIRP(dBm)	RAD. POWER AVG ERP(dBm)
LOW	22.72	3	25.72	23.57
MIDDLE	22.79	3	25.79	23.64
HIGH	22.77	3	25.77	23.62
MAX:	22.79		25.79	23.64

LTE Cat-M1 Band 4 & LTE Cat-M1 Band 66

Note: Refer to Module Report 77535RRF.003A1s, Pages 11, 12 for the Conducted Output Power.

LTE Cat-M1 Band 4. QPSK and 16QAM modulations:

Channel per BW=(Frequency, MHz)						
	BW = 1.4 MHz	BW = 3 MHz	BW = 5 MHz	BW = 10 MHz	BW = 15 MHz	BW = 20 MHz
Low	19957 (1710.7)	19965 (1711.5)	19975 (1712.5)	20000 (1715.0)	20025 (1717.5)	20050 (1720.0)
Middle	20175 (1732.5)	20175 (1732.5)	20175 (1732.5)	20175 (1732.5)	20175 (1732.5)	20175 (1732.5)
High	20393 (1754.3)	20385 (1753.5)	20375 (1752.5)	20350 (1750.0)	20325 (1747.5)	20300 (1745.0)

NOTE: LTE Cat-M1 Band 4 is completely included in LTE Cat-M1 Band 66, so the channels of LTE Cat-M1 Band 66 were tested to give conformity to the assigned block.

LTE Cat-M1 Band 66. QPSK and 16QAM modulations:

Channel per BW=(Frequency, MHz)						
	BW = 1.4 MHz	BW = 3 MHz	BW = 5 MHz	BW = 10 MHz	BW = 15 MHz	BW = 20 MHz
Low	131979 (1710.7)	131987 (1711.5)	131997 (1712.5)	132022 (1715.0)	132047 (1717.5)	132072 (1720.0)
Middle	132322 (1745)	132322 (1745)	132322 (1745)	132322 (1745)	132322 (1745)	132322 (1745)
High	132665 (1779.3)	132657 (1778.5)	132647 (1777.5)	132622 (1775)	132597 (1772.5)	132572 (1770)

LTE Cat-M1 Band 66:

Worst-case of RF Power is BW=15 MHz. Low Channel. QPSK. RB Size=6. RB Offset=0. Narrowband=0.

BANDWIDTH (MHz)	CHANNEL	FREQUENCY (MHz)	MODULATION	RB SIZE	RB OFFSET	AVERAGE POWER (dBm)
15	Low 132047	1717.5	QPSK	1	0	22.68
				1	2	22.81
				1	5	22.68
				3	0	22.74
				3	1	22.71
				3	3	22.75
				6	0	22.87
			16QAM	1	0	22.78
				1	2	22.83
				1	5	22.79
				3	0	22.83
				3	1	22.8
				3	3	22.78
				5	0	22.69
	Middle 132322	1745	QPSK	1	0	22.55
				1	2	22.64
				1	5	22.57
				3	0	22.48
				3	1	22.45
				3	3	22.5
				6	0	22.6
			16QAM	1	0	22.5
				1	2	22.53
				1	5	22.4
				3	0	22.67
				3	1	22.66
				3	3	22.6
				5	0	22.5
	High 132597	1772.5	QPSK	1	0	22.71
				1	2	22.83
				1	5	22.69
				3	0	22.8
				3	1	22.66
				3	3	22.8
				6	0	22.7
			16QAM	1	0	22.3
				1	2	22.44
				1	5	22.17
				3	0	22.58
				3	1	22.79
				3	3	22.55
				5	0	22.67

BW=15 MHz. QPSK:

MAX POWER	QPSK COND. POWER AVG (dBm)	ANTENNA GAIN (dBi)	RAD. POWER AVG EIRP (dBm)	RAD. POWER AVG ERP (dBm)
LOW	22.87	3	25.87	23.72
MIDDLE	22.64	3	25.64	23.49
HIGH	22.83	3	25.83	23.68
MAX:	22.87		25.87	23.72

BW=15 MHz. 16QAM:

MAX POWER	16QAM COND. POWER AVG (dBm)	ANTENNA GAIN (dBi)	RAD. POWER AVG EIRP (dBm)	RAD. POWER AVG ERP (dBm)
LOW	22.83	3	25.83	23.68
MIDDLE	22.67	3	25.67	23.52
HIGH	22.79	3	25.79	23.64
MAX:	22.83		25.83	23.68

LTE Cat-M1 Band 5 & LTE Cat-M1 Band 26(824-849MHz)

Note: Refer to Module Report 77535RRF.001A1s, Pages 11 to 15 for the Conducted Output Power.

TEST FREQUENCIES:

LTE Cat-M1 Band 5. QPSK and 16QAM:

Channel (Frequency MHz)			
BW=1.4 MHz	BW=3 MHz	BW=5 MHz	BW=10 MHz
20407 (824.70)	20415 (825.50)	20425 (826.50)	20450 (829.00)
20525 (836.50)	20525 (836.50)	20525 (836.50)	20525 (836.50)
20643 (848.30)	20635 (847.50)	20625 (846.50)	20600 (844.00)

NOTE: The 824-849 MHz band of the LTE Cat-M1 Band 5 is completely included in the LTE Cat-M1 Band 26, so the LTE Cat-M1 Band 26 channels were tested to give conformity to the assigned block.

LTE Cat-M1 Band 26 sub-band 824-849 MHz. QPSK and 16QAM:

	Channel (Frequency MHz)				
	BW=1.4 MHz	BW=3 MHz	BW=5 MHz	BW=10 MHz	BW=15 MHz
Low	26797 (824.70)	26805 (825.50)	26815 (826.50)	26840 (829.00)	26865 (831.50)
Middle	26915 (836.50)	26915 (836.50)	26915 (836.50)	26915 (836.50)	26915 (836.50)
High	27033 (848.30)	27025 (847.50)	27015 (846.50)	26990 (844.00)	26965 (841.50)

1. CONDUCTED AVERAGE POWER:

LTE Cat-M1 Band 26:

Preliminary measurements determined the worst case of RF Power is BW=3 MHz, Middle Channel, QPSK, RB Size=1, RB Offset=0, Narrowband=0.

BANDWIDTH (MHz)	CHANNEL	FREQUENCY (MHz)	MODULATION	RB SIZE	RB OFFSET	AVERAGE POWER (dBm)			
3	Low 26805	825.5	QPSK	1	0	22.07			
				1	2	22.08			
				1	5	22.07			
				3	0	21.36			
				3	1	21.36			
				3	3	21.36			
			16QAM	6	0	20.29			
				1	0	21.1			
				1	2	21.14			
				1	5	21.13			
				3	0	20.25			
				3	1	20.27			
	Middle 26865	831.5	QPSK	3	3	20.3			
				5	0	20.09			
				1	0	21.52			
				1	2	21.53			
				1	5	21.52			
				3	0	20.69			
			16QAM	3	1	20.69			
				3	3	20.71			
				5	0	20.45			
				High 27025	847.5	QPSK	1	0	22.22
							1	2	22.29
							1	5	22.29
	3	0	21.29						
	3	1	21.3						
	3	3	21.27						
	16QAM	6	0			20.24			
		1	0			21.43			
		1	2			21.37			
		1	5			21.35			
		3	0			20.5			
		3	1			20.5			
	3	3	20.51						
	5	0	20.28						

BW=3 MHz. QPSK:

MAX POWER	QPSK COND. POWER AVG (dBm)	ANTENNA GAIN (dBi)	RAD. POWER AVG EIRP (dBm)	RAD. POWER AVG ERP (dBm)
LOW	22.08	2.7	24.78	22.63
MIDDLE	22.52	2.7	25.22	23.07
HIGH	22.29	2.7	24.99	22.84
MAX:	22.52		25.22	23.07

BW=3 MHz. 16QAM:

MAX POWER	16QAM COND. POWER AVG (dBm)	ANTENNA GAIN (dBi)	RAD. POWER AVG EIRP (dBm)	RAD. POWER AVG ERP (dBm)
LOW	21.14	2.7	23.84	21.69
MIDDLE	21.53	2.7	24.23	22.08
HIGH	21.43	2.7	24.13	21.98
MAX:	21.53		24.23	22.08

LTE Cat-M1 Band 12 & LTE Cat-M1 Band 85

Note: Refer to Module Report 77535RRF.003A1s, Pages 12, 22, 23 for the Conducted Output Power.

LTE Cat-M1 Band 12. QPSK and 16QAM modulations:

	Channel (Frequency, MHz)			
	BW = 1.4 MHz	BW = 3 MHz	BW = 5 MHz	BW = 10 MHz
Low	23017 (699.7)	23025 (700.5)	23035 (701.5)	23060 (704.0)
Middle	23095 (707.5)	23095 (707.5)	23095 (707.5)	23095 (707.5)
High	23173 (715.3)	23165 (714.5)	23155 (713.5)	23130 (711.0)

NOTE: LTE Cat-M1 Band 12 is completely included in LTE Cat-M1 Band 85, so the channels of LTE Cat-M1 Band 85 were tested to give conformity to the assigned block, but for the Block Edge test, where only the Low Channel was tested for 85.

LTE Cat-M1 Band 85. QPSK and 16QAM modulations:

	Channel (Frequency)	
	BW = 5 MHz	BW = 10 MHz
Low	134027 (700.5)	134052 (703.0)
Middle	134092 (707)	134092 (707)
High	134157 (713.5)	134132 (711.0)

LTE Cat-M1 Band 85:

Worst-case of RF Power is BW=5 MHz. High Channel. QPSK. RB Size=1. RB Offset=2. Narrowband=1.

BANDWIDTH (MHz)	CHANNEL	FREQUENCY (MHz)	MODULATION	RB SIZE	RB OFFSET	AVERAGE POWER (dBm)
5	Low 134027	700.5	QPSK	1	0	22.81
				1	2	22.87
				1	5	22.74
				3	0	21.76
				3	1	21.73
				3	3	21.88
			16QAM	6	0	22
				1	0	22.57
				1	2	22.56
				1	5	22.57
				3	0	21.53
				3	1	21.58
	Middle 134092	707	QPSK	3	3	21.61
				5	0	20.47
				1	0	22.71
				1	2	22.85
				1	5	22.72
				3	0	21.76
			16QAM	3	1	21.73
				3	3	21.77
				6	0	21.92
				1	0	22.66
				1	2	22.61
				1	5	22.55
	High 134157	713.5	QPSK	3	0	21.51
				3	1	21.58
				3	3	21.63
				5	0	20.44
				1	0	22.8
				1	2	23.01
			16QAM	1	5	22.85
				3	0	22.01
				3	1	21.97
				3	3	21.99
				6	0	21.92
				1	0	22.38
				1	2	22.52
				1	5	22.41
				3	0	21.68
				3	1	21.59
				3	3	21.65
				5	0	20.53

BW=5 MHz. QPSK:

MAX POWER	QPSK COND. POWER AVG (dBm)	ANTENNA GAIN (dBi)	RAD. POWER AVG EIRP (dBm)	RAD. POWER AVG ERP (dBm)
LOW	22.87	1.56	24.43	22.28
MIDDLE	22.85	1.56	24.41	22.26
HIGH	23.01	1.56	24.57	22.42
MAX:	23.01		24.57	22.42

BW=5 MHz. 16QAM:

MAX POWER	16QAM COND. POWER AVG (dBm)	ANTENNA GAIN (dBi)	RAD. POWER AVG EIRP (dBm)	RAD. POWER AVG ERP (dBm)
LOW	22.57	1.56	24.13	21.98
MIDDLE	22.66	1.56	24.22	22.07
HIGH	22.52	1.56	24.08	21.93
MAX:	22.66		24.22	22.07

LTE Cat-M1 Band 13

Note: Refer to Module Report 77535RRF.003A1s, Pages 12, 18, 19 for the Conducted Output Power.

LTE Cat-M1 Band 13. QPSK and 16QAM modulations:

	Channel (Frequency, MHz)	
	BW = 5 MHz	BW = 10 MHz
Low	23205 (779.5)	
Middle	23230 (782.0)	23230 (782.0)
High	23255 (784.5)	

LTE Cat-M1 Band 13:

Worst-case of RF Power is BW=5 MHz. High Channel. QPSK. RB Size=1. RB Offset=0. Narrowband=0.

BANDWIDTH (MHz)	CHANNEL	FREQUENCY (MHz)	MODULATION	RB SIZE	RB OFFSET	AVERAGE POWER (dBm)
5	Low 23205	779.5	QPSK	1	0	22.11
				1	2	22.11
				1	5	22.11
				3	0	21.11
				3	1	21.11
				3	3	21.10
				6	0	21.20
			16QAM	1	0	21.55
				1	2	21.39
				1	5	21.41
				3	0	20.89
				3	1	20.88
				3	3	20.89
				5	0	20.01
	High 23255	784.5	QPSK	1	0	22.14
				1	2	22.13
				1	5	22.14
				3	0	21.23
				3	1	21.24
				3	3	21.22
				6	0	21.25
			16QAM	1	0	22.06
				1	2	22.05
				1	5	22.06
				3	0	20.98
				3	1	20.99
				3	3	21
				5	0	20

BW=5 MHz. QPSK:

MAX POWER	QPSK COND. POWER AVG (dBm)	ANTENNA GAIN (dBi)	RAD. POWER AVG EIRP (dBm)	RAD. POWER AVG ERP (dBm)
LOW	22.11	1.56	23.67	21.52
MIDDLE				
HIGH	22.14	1.56	23.7	21.55
MAX:	22.14		23.7	21.55

BW=5 MHz. 16QAM:

MAX POWER	16QAM COND. POWER AVG (dBm)	ANTENNA GAIN (dBi)	RAD. POWER AVG EIRP (dBm)	RAD. POWER AVG ERP (dBm)
LOW	21.55	1.56	23.11	20.96
MIDDLE				
HIGH	22.06	1.56	23.62	21.47
MAX:	22.06		23.62	21.47

LTE Cat-M1 Band 26(814-824MHz)

Note: Refer to Module Report 77535RRF.004A1s, Pages 11, 13, 14, 15 for the Conducted Output Power.

TEST FREQUENCIES:

LTE Cat-M1 Band 26. Sub-band 814-824 MHz. QPSK and 16QAM:

Channel (Frequency, MHz)					
	BW=1.4 MHz	BW=3 MHz	BW=5 MHz	BW=10 MHz	BW=15 MHz
Low	26697 (814.7)	26705 (815.5)	26715 (816.5)	N/A	N/A
Middle	26740 (819)	26740 (819)	26740 (819)	26740 (819)	N/A
High	26783 (823.3)	26775 (822.5)	26765 (821.5)	N/A	N/A

LTE Cat-M1 Band 26. Cross-rule Channel (824 MHz). QPSK and 16QAM:

Channel (Frequency, MHz)				
BW=1.4 MHz	BW=3 MHz	BW=5 MHz	BW=10 MHz	BW=15 MHz
26790 (824)	26790 (824)	26790 (824)	26790 (824)	26790 (824)

LTE Cat-M1 Band 26. Sub-band 814-824 MHz:

Worst-case of RF Power is BW=5 MHz, High Channel, QPSK, RB Size=1, RB Offset=2, Narrowband=0.

BANDWIDTH (MHz)	CHANNEL	FREQUENCY (MHz)	MODULATION	RB SIZE	RB OFFSET	AVERAGE POWER (dBm)
5	Low 26715	816.5	QPSK	1	0	22.75
				1	2	22.88
				1	5	22.84
				3	0	21.9
				3	1	21.87
				3	3	21.92
				6	0	21.92
			16QAM	1	0	22.55
				1	2	22.68
				1	5	22.67
				3	0	21.65
	High 26765	821.5	QPSK	3	1	21.61
				3	3	21.66
				5	0	20.53
				1	0	22.9
				1	2	23
				1	5	22.9
				3	0	21.86
				3	1	21.84
				3	3	21.88
				6	0	21.94
			16QAM	1	0	22.59
				1	2	22.79
				1	5	22.7
				3	0	21.68
				3	1	21.64
				3	3	21.69
				5	0	20.54

BW=5 MHz. QPSK:

MAX POWER	QPSK COND. POWER AVG (dBm)	ANTENNA GAIN (dBi)	RAD. POWER AVG EIRP(dBm)	RAD. POWER AVG ERP(dBm)
LOW	22.88	2.7	25.58	23.43
HIGH	23	2.7	25.7	23.55
MAX:	23		25.7	23.55

BW=5 MHz. 16QAM:

MAX POWER	16QAM COND. POWER AVG (dBm)	ANTENNA GAIN (dBi)	RAD. POWER AVG EIRP(dBm)	RAD. POWER AVG ERP(dBm)
LOW	22.68	2.7	25.38	23.23
HIGH	22.79	2.7	25.49	23.34
MAX:	22.79		25.49	23.34

LTE Cat-M1 Band 26. Cross-rule Channel 824 MHz:

Worst-case of RF Power is BW=1.4 MHz, Single Channel, QPSK, RB Size=1, RB Offset=2, Narrowband=0.

BANDWIDTH (MHz)	CHANNEL	FREQUENCY (MHz)	MODULATION	RB SIZE	RB OFFSET	AVERAGE POWER (dBm)
1.4	Single 26790	824	QPSK	1	0	22.86
				1	2	23.06
				1	5	22.94
				3	0	21.86
				3	1	21.93
				3	3	21.97
				6	0	21.05
			16QAM	1	0	21.88
				1	2	21.91
				1	5	21.89
				3	0	20.91
				3	1	20.87
				3	3	20.91
				5	0	20.81

BW=10 MHz. QPSK:

MAX POWER	QPSK COND. POWER AVG (dBm)	ANTENNA GAIN (dBi)	RAD. POWER AVG EIRP(dBm)	RAD. POWER AVG ERP(dBm)
MIDDLE	23.06	2.7	25.76	23.61
MAX:	23.06		25.76	23.61

BW=10 MHz. 16QAM:

MAX POWER	16QAM COND. POWER AVG (dBm)	ANTENNA GAIN (dBi)	RAD. POWER AVG EIRP(dBm)	RAD. POWER AVG ERP(dBm)
MIDDLE	21.91	2.7	24.61	22.46
MAX:	21.91		24.61	22.46

Measurement uncertainty (dB) <±1.11

LTE NB-IOT Band 2 & LTE NB-IOT Band 25

Note: Refer to Module Report 77535RRF.002A1s, Pages 52, 54, 53, 55 for the Conducted Output Power.

TEST FREQUENCIES:

LTE Cat NB2 Band 2. Pi/2-BPSK, Pi/4-QPSK, QPSK modulations:

Channel. Number (Frequency, MHz)		
Low	Middle	High
18602 (1850.2)*	18900 (1880)	19198 (1909.8)*
*The outermost channel which is in compliance with Block edge testing.		

NOTE: The LTE Cat NB2 Band 2 is completely included in the LTE Cat NB2 Band 25, so the channels of the LTE Cat NB2 Band 25 were tested to give conformity to the assigned block.

LTE Cat NB2 Band 25. Pi/2-BPSK, Pi/4-QPSK, QPSK modulations:

Channel (Frequency, MHz)		
Low	Middle	High
26042 (1850.2)*	26365 (1882.5)	26688 (1914.8)*
*The outermost channel which is in compliance with Block edge testing.		

1. CONDUCTED AVERAGE POWER

LTE Cat NB2 Band 25:

Worst-case of RF Power is Low Channel, Pi/2-BPSK, BW=15 kHz, Tone Number=1, Tone Offset=0, MSC/TBS:

CHANNEL	FREQUENCY (MHz)	MODULATION	BW	Tone Number	Tone Offset (Start SubCarrier)	MCS / TBS	AVERAGE POWER (dBm)
Low 26042	1850.20 MHz	Pi/2-BPSK	3.75 kHz	1	0	0	22.52
				1	47	0	22.58
			15 kHz	1	0	0	22.63
				1	11	0	22.58
		Pi/4-QPSK	3.75 kHz	1	0	3	22.61
				1	47	3	22.55
			15 kHz	1	0	3	22.61
				1	11	3	22.56
		QPSK	15 kHz	3	0	5	22.32
				3	6	5	22.4
				6	0	5	21.47
				6	6	5	21.42
Middle 26365	1882.50 MHz	Pi/2-BPSK	3.75 kHz	1	0	0	22.42
				1	47	0	22.39
			15 kHz	1	0	0	22.54
				1	11	0	22.48
		Pi/4-QPSK	3.75 kHz	1	0	3	22.55
				1	47	3	22.4
			15 kHz	1	0	3	22.58
				1	11	3	22.51
		QPSK	15 kHz	3	0	5	22.48
				3	6	5	22.6
				6	0	5	21.44
				6	6	5	21.54
High 26688	1914.8 MHz	Pi/2-BPSK	3.75 kHz	1	0	0	22.49
				1	47	0	22.31
			15 kHz	1	0	0	22.61
				1	11	0	22.62
		Pi/4-QPSK	3.75 kHz	1	0	3	22.5
				1	47	3	22.41
			15 kHz	1	0	3	22.57
				1	11	3	22.57
		QPSK	15 kHz	3	0	5	22.51
				3	6	5	22.42
				6	0	5	21.34
				6	6	5	21.62
				12	0	5	20.48

MAX POWER	COND. POWER AVG (dBm)	ANTENNA GAIN (dBi)	RAD. POWER AVG. EIRP (dBm)	RAD. POWER AVG. ERP (dBm)
LOW	22.63	3	25.63	23.48
MIDDLE	22.6	3	25.6	23.45
HIGH	22.62	3	25.62	23.47
MAX:	22.63		25.63	

Measurement uncertainty (dB) <±0.941

LTE NB-IOT Band 4 & LTE NB-IOT Band 66

Note: Refer to Module Report 77535RRF.003A1s, Pages 114, 122 for the Conducted Output Power.

LTE Cat NB2 Band 4. Pi/2-BPSK. Pi/4-QPSK. QPSK modulations:

Channel. Number (Frequency. MHz)		
Low	Middle	High
19952 (1710.2)*	20175 (1732.5)	20398 (1754.8)*
*The outermost channel which is in compliance with Block edge testing.		

NOTE: LTE Cat NB2 Band 4 is completely included in LTE Cat NB2 Band 66, so the channels of LTE Cat NB2 Band 66 were tested to give conformity to the assigned block.

LTE Cat NB2 Band 66. Pi/2-BPSK. Pi/4-QPSK. QPSK modulations:

Channel (Frequency. MHz)		
Low	Middle	High
131974 (1710.2)	132322 (1745)	132670 (1779.8)
*The outermost channel which is in compliance with Block edge testing.		

LTE Cat NB2 Band 66:

Worst-case of RF Power is Low Channel. Pi/2-BPSK. BW=15 kHz. Tone Number=1. Tone Offset=0. MSC/TBS=0

CHANNEL	FREQUENCY (MHz)	MODULATION	BW	Tone Number	Tone Offset (Start SubCarrier)	MSC / TBS	AVERAGE POWER (dBm)
Low 131974	1710.2 MHz	Pi/2-BPSK	3.75 kHz	1	0	0	22.48
				1	47	0	22.42
			15 kHz	1	0	0	22.54
				1	11	0	22.52
		Pi/4-QPSK	3.75 kHz	1	0	3	22.48
				1	47	3	22.42
			15 kHz	1	0	3	22.52
				1	11	3	22.52
		QPSK	15 kHz	3	0	5	22.24
				3	6	5	22.45
				6	0	5	21.68
				6	6	5	21.5
Middle 132322	1745 MHz	Pi/2-BPSK	3.75 kHz	1	0	0	22.34
				1	47	0	22.31
			15 kHz	1	0	0	22.41
				1	11	0	22.39
		Pi/4-QPSK	3.75 kHz	1	0	3	22.4
				1	47	3	22.33
			15 kHz	1	0	3	22.43
				1	11	3	22.4
		QPSK	15 kHz	3	0	5	22.22
				3	6	5	22.29
				6	0	5	21.13
				6	6	5	21.38
High 132670	1779.8 MHz	Pi/2-BPSK	3.75 kHz	1	0	0	22.35
				1	47	0	22.22
			15 kHz	1	0	0	22.38
				1	11	0	22.33
		Pi/4-QPSK	3.75 kHz	1	0	3	22.32
				1	47	3	22.27
			15 kHz	1	0	3	22.29
				1	11	3	22.31
		QPSK	15 kHz	3	0	5	22.02
				3	6	5	22.29
				6	0	5	21.15
				6	6	5	21.14
				12	0	5	20.36

MAX POWER	COND. POWER AVG (dBm)	ANTENNA GAIN (dBi)	RAD. POWER AVG (dBm)	RAD. POWER AVG ERP (dBm)
LOW	22.54	+3.00	25.54	23.39
MIDDLE	22.43	+3.00	25.43	23.28
HIGH	22.38	+3.00	25.38	23.23
MAX:	22.54		25.54	23.39

LTE NB-IOT Band 5 & LTE NB-IOT Band 26(824-849MHz)

Note: Refer to Module Report 77535RRF.001A1s, Pages 49, 52, 53 for the Conducted Output Power.

TEST FREQUENCIES:

LTE Cat NB2 Band 5. $\pi/2$ -BPSK, $\pi/4$ -QPSK, QPSK modulations:

Channel. Number (Frequency, MHz)		
Low	Middle	High
20402 (824.20)*	20525 (836.50)	20648 (848.80)*
*The outermost channel which is in compliance with Block edge testing.		

NOTE: The 824-849 MHz sub-band of the LTE Cat-NB2 Band 5 is completely included in the LTE Cat-NB2 Band 26, so the LTE Cat- NB2 Band 26 channels were tested to give conformity to the assigned block.

LTE Cat NB2 Band 26. $\pi/2$ -BPSK, $\pi/4$ -QPSK, QPSK modulations:

Channel. Number (Frequency, MHz)		
Low	Middle	High
26792 (824.2)*	26915 (836.5)	27038 (848.8)*
*The outermost channel which is in compliance with Block edge testing.		

1. CONDUCTED AVERAGE POWER

LTE Cat NB2 Band 26:

Preliminary measurements determined the worst case of RF Power is Middle Channel, Pi/4-QPSK, BW=15 kHz, Tone Number=1, Tone Offset=0, MSC/TBS=3.

CHANNEL	FREQUENCY (MHz)	MODULATION	BW	Tone Number	Tone Offset (Start SubCarrier)	MCS / TBS	AVERAGE POWER (dBm)
Low 26792	824.2 MHz	Pi/2-BPSK	3.75 kHz	1	0	0	22.3
				1	47	0	22.34
			15 kHz	1	0	0	22.33
				1	11	0	22.34
		Pi/4-QPSK	3.75 kHz	1	0	3	22.41
				1	47	3	22.4
			15 kHz	1	0	3	22.4
				1	11	3	22.38
		QPSK	15 kHz	3	0	5	22.28
				3	6	5	22.34
				6	0	5	21.51
				6	6	5	21.43
				12	0	5	20.42
Middle 26915	836.50 MHz	Pi/2-BPSK	3.75 kHz	1	0	0	22.35
				1	47	0	22.32
			15 kHz	1	0	0	22.39
				1	11	0	22.41
		Pi/4-QPSK	3.75 kHz	1	0	3	22.39
				1	47	3	22.43
			15 kHz	1	0	3	22.44
				1	11	3	22.43
		QPSK	15 kHz	3	0	5	22.3
				3	6	5	22.32
				6	0	5	22.41
				6	6	5	21.47
				12	0	5	20.48
High 27038	848.8 MHz	Pi/2-BPSK	3.75 kHz	1	0	0	22.39
				1	47	0	22.32
			15 kHz	1	0	0	22.41
				1	11	0	22.42
		Pi/4-QPSK	3.75 kHz	1	0	3	22.41
				1	47	3	22.31
			15 kHz	1	0	3	22.39
				1	11	3	22.4
		QPSK	15 kHz	3	0	5	22.28
				3	6	5	22.42
				6	0	5	21.5
				6	6	5	21.44
				12	0	5	20.38

MAX POWER	COND. POWER AVG (dBm)	ANTENNA GAIN (dBi)	RAD. POWER AVG EIRP (dBm)	RAD. POWER AVG ERP (dBm)
LOW	22.41	2.7	25.11	22.96
MIDDLE	22.44	2.7	25.14	22.99
HIGH	22.42	2.7	25.12	22.97
MAX:	22.44		25.14	22.99

LTE NB-IOT Band 12 & LTE NB-IOT Band 17 & LTE NB-IOT Band 85

Note: Refer to Module Report 77535RRF.003A1s, Pages 115, 123 for the Conducted Output Power.

LTE Cat NB2 Band 12. Pi/2-BPSK. Pi/4-QPSK. QPSK modulations:

Channel. Number (Frequency. MHz)		
Low	Middle	High
23012 (699.20)*	23095 (707.5)	23179 (715.8)*
*The outermost channel which is in compliance with Block edge testing.		

NOTE: LTE Cat NB2 Band 12 is completely included in LTE Cat NB2 Band 85, so the channels of LTE Cat NB2 Band 85 were tested to give conformity to the assigned block.

LTE Cat NB2 Band 17. Pi/2-BPSK. Pi/4-QPSK. QPSK modulations:

Channel. Number (Frequency. MHz)		
Low	Middle	High
23732 (704.20)*	23790 (710)	23848 (715.80)*
*The outermost channel which is in compliance with Block edge testing.		

NOTE: LTE Cat NB2 Band 17 is completely included in LTE Cat NB2 Band 85, so the channels of LTE Cat NB2 Band 85 were tested to give conformity to the assigned block.

LTE Cat NB2 Band 85. Pi/2-BPSK. Pi/4-QPSK. QPSK modulations:

Channel (Frequency. MHz)		
Low	Middle	High
134004 (698.2)*	134092 (707)	134180 (715.8)*
*The outermost channel which is in compliance with Block edge testing.		

LTE Cat NB2 Band 85:

Worst-case of RF Power is Low Channel. Pi/4-QPSK. BW=15 kHz. Tone Number=1. Tone Offset=0. MSC/TBS=3.

CHANNEL	FREQUENCY (MHz)	MODULATION	BW	Tone Number	Tone Offset (Start SubCarrier)	MSC / TBS	AVERAGE POWER (dBm)
Low 134004	698.2 MHz	Pi/2-BPSK	3.75 kHz	1	0	0	22.09
				1	47	0	22.09
			15 kHz	1	0	0	22.1
				1	11	0	22.06
		Pi/4-QPSK	3.75 kHz	1	0	3	22.07
				1	47	3	22.09
			15 kHz	1	0	3	22.16
				1	11	3	22.08
		QPSK	15 kHz	3	0	5	22.07
				3	9	5	21.97
				6	0	5	21.08
				6	6	5	21.21
Middle 134092	707 MHz	Pi/2-BPSK	3.75 kHz	1	0	0	21.99
				1	47	0	21.94
			15 kHz	1	0	0	22.04
				1	11	0	22.11
		Pi/4-QPSK	3.75 kHz	1	0	3	22.01
				1	47	3	21.93
			15 kHz	1	0	3	22.13
				1	11	3	22.07
		QPSK	15 kHz	3	0	5	21.64
				3	9	5	21.77
				6	0	5	21.05
				6	6	5	20.9
High 134180	715.8 MHz	Pi/2-BPSK	3.75 kHz	1	0	0	21.97
				1	47	0	22
			15 kHz	1	0	0	22.11
				1	11	0	22.07
		Pi/4-QPSK	3.75 kHz	1	0	3	22.1
				1	47	3	22.02
			15 kHz	1	0	3	22.08
				1	11	3	22.08
		QPSK	15 kHz	3	0	5	21.82
				3	9	5	21.84
				6	0	5	20.87
				6	6	5	20.72
				12	0	5	20.01

MAX POWER	COND. POWER AVG (dBm)	ANTENNA GAIN (dBi)	RAD. POWER AVG (dBm)	RAD. POWER AVG ERP (dBm)
LOW	22.16	+1.56	23.72	21.57
MIDDLE	22.13	+1.56	23.69	21.54
HIGH	22.11	+1.56	23.67	21.52
MAX:	22.16		23.72	21.57

LTE Cat NB2 Band 85:

Worst-case of RF Power is Low Channel. Pi/4-QPSK. BW=15 kHz. Tone Number=1. Tone Offset=0. MSC/TBS=3.

CHANNEL	FREQUENCY (MHz)	MODULATION	BW	Tone Number	Tone Offset (Start SubCarrier)	MSC / TBS	AVERAGE POWER (dBm)
Low 134004	698.2 MHz	Pi/2-BPSK	3.75 kHz	1	0	0	22.09
				1	47	0	22.09
			15 kHz	1	0	0	22.1
				1	11	0	22.06
		Pi/4-QPSK	3.75 kHz	1	0	3	22.07
				1	47	3	22.09
			15 kHz	1	0	3	22.16
				1	11	3	22.08
		QPSK	15 kHz	3	0	5	22.07
				3	9	5	21.97
				6	0	5	21.08
				6	6	5	21.21
				12	0	5	20.14
				12	0	5	20.14
Middle 134092	707 MHz	Pi/2-BPSK	3.75 kHz	1	0	0	21.99
				1	47	0	21.94
			15 kHz	1	0	0	22.04
				1	11	0	22.11
		Pi/4-QPSK	3.75 kHz	1	0	3	22.01
				1	47	3	21.93
			15 kHz	1	0	3	22.13
				1	11	3	22.07
		QPSK	15 kHz	3	0	5	21.64
				3	9	5	21.77
				6	0	5	21.05
				6	6	5	20.9
				12	0	5	19.91
				12	0	5	19.91
High 134180	715.8 MHz	Pi/2-BPSK	3.75 kHz	1	0	0	21.97
				1	47	0	22
			15 kHz	1	0	0	22.11
				1	11	0	22.07
		Pi/4-QPSK	3.75 kHz	1	0	3	22.1
				1	47	3	22.02
			15 kHz	1	0	3	22.08
				1	11	3	22.08
		QPSK	15 kHz	3	0	5	21.82
				3	9	5	21.84
				6	0	5	20.87
				6	6	5	20.72
				12	0	5	20.01
				12	0	5	20.01

LTE NB-IOT Band 13

Note: Refer to Module Report 77535RRF.003A1s, Pages 115, 121 for the Conducted Output Power.

LTE Cat NB2 Band 13. Pi/2-BPSK. Pi/4-QPSK. QPSK modulations:

Channel (Frequency. MHz)		
Low	Middle	High
23182 (777.20)*	23230 (782)	23278 (786.80)*
*The outermost channel which is in compliance with Block edge testing.		

LTE Cat NB2 Band 13:

Worst-case of RF Power is Low Channel. Pi/4-QPSK. BW=3.75 kHz. Tone Number=1. Tone Offset=0. MSC/TBS=3.

CHANNEL	FREQUENCY (MHz)	MODULATION	BW	Tone Number	Tone Offset (Start SubCarrier)	MSC / TBS	AVERAGE POWER (dBm)
Low 23182	777.2 MHz	Pi/2-BPSK	3.75 kHz	1	0	0	22.16
				1	47	0	22.2
			15 kHz	1	0	0	22.15
				1	11	0	22.25
		Pi/4-QPSK	3.75 kHz	1	0	3	22.27
				1	47	3	22.18
			15 kHz	1	0	3	22.19
				1	11	3	22.17
		QPSK	15 kHz	3	0	5	22.19
				3	6	5	22.11
				6	0	5	21.15
				6	6	5	21.26
High 23278	786.8 MHz	Pi/2-BPSK	3.75 kHz	1	0	0	21.17
				1	47	0	22.12
			15 kHz	1	0	0	22.05
				1	11	0	22.17
		Pi/4-QPSK	3.75 kHz	1	0	3	22.17
				1	47	3	21.93
			15 kHz	1	0	3	22.13
				1	11	3	22.12
		QPSK	15 kHz	3	0	5	22.04
				3	6	5	22.01
				6	0	5	20.8
				6	6	5	20.92
				12	0	5	20.06

MAX POWER	COND. POWER AVG (dBm)	ANTENNA GAIN (dBi)	RAD. POWER AVG (dBm)	RAD. POWER AVG ERP (dBm)
LOW	22.27	+1.56	23.83	21.68
HIGH	22.17	+1.56	23.73	21.58
MAX:	22.27		23.83	21.68

LTE NB-IOT Band 26(814-824MHz)

Note: Refer to Module Report 77535RRF.004A1s, Pages 48, 50 for the Conducted Output Power.

TEST FREQUENCIES:

LTE Cat NB2 Band 26. Sub-band 814-824 MHz. Pi/2-BPSK, Pi/4-QPSK, QPSK modulations:

Channel. Number (Frequency, MHz)		
Low	Middle	High
26692 (814.2)	26740 (819)	26788 (823.8)
*The outermost channel which is in compliance with Block Edge testing.		

LTE Cat NB2 Band 26. Cross-rule Channel (824 MHz). Pi/2-BPSK, Pi/4-QPSK, QPSK modulations:

Channel. Number (Frequency, MHz)
Low
26790 (824)

LTE Cat NB2 Band 26. Sub-band 814-824 MHz:

Worst-case of RF Power is High Channel, Pi/2-BPSK, BW=15 kHz, Tone Number=1, Tone Offset=11, MSC/TBS=0.

CHANNEL	FREQUENCY (MHz)	MODULATION	BW	Tone Number	Tone Offset (Start SubCarrier)	MCS / TBS	AVERAGE POWER (dBm)
Low 26692	814.2 MHz	Pi/2-BPSK	3.75 kHz	1	0	0	22.27
				1	47	0	22.21
			15 kHz	1	0	0	22.37
				1	11	0	22.27
		Pi/4-QPSK	3.75 kHz	1	0	3	22.3
				1	47	3	22.18
			15 kHz	1	0	3	22.35
				1	11	3	22.34
		QPSK	15 kHz	3	0	5	22.27
				3	6	5	22.29
				6	0	5	21.14
				6	6	5	21.23
High 26788	823.8 MHz	Pi/2-BPSK	3.75 kHz	1	0	0	22.26
				1	47	0	22.33
			15 kHz	1	0	0	22.49
				1	11	0	22.48
		Pi/4-QPSK	3.75 kHz	1	0	3	22.42
				1	47	3	22.31
			15 kHz	1	0	3	22.46
				1	11	3	22.46
		QPSK	15 kHz	3	0	5	22.24
				3	6	5	22.25
				6	0	5	21.27
				6	6	5	21.37
				12	0	5	20.42

MAX POWER	COND. POWER AVG (dBm)	ANTENNA GAIN (dBi)	RAD. POWER AVG EIRP (dBm)	RAD. POWER AVG ERP (dBm)
LOW	22.37	2.7	25.07	22.92
HIGH	22.49	2.7	25.19	23.04
MAX:	22.49		25.19	23.04

Measurement uncertainty (dB) <±0.941

LTE Cat NB2 Band 26. Cross-rule Channel 824 MHz:

Worst-case of RF Power is Single Channel, Pi/4-QPSK, BW=3.75 kHz, Tone Number=1, Tone Offset=0, MSC/TBS=3.

CHANNEL	FREQUENCY (MHz)	MODULATION	BW	Tone Number	Tone Offset (Start SubCarrier)	MCS / TBS	AVERAGE POWER (dBm)
26790	824 MHz	Pi/2-BPSK	3.75 kHz	1	0	0	22.29
				1	47	0	22.21
			15 kHz	1	0	0	22.37
				1	11	0	22.39
		Pi/4-QPSK	3.75 kHz	1	0	3	22.42
				1	47	3	22.35
			15 kHz	1	0	3	22.37
				1	11	3	22.39
		QPSK	15 kHz	3	0	5	22.27
				3	6	5	22.28
				6	0	5	21.39
				6	6	5	21.43
				12	0	5	20.35

MAX POWER	COND. POWER AVG (dBm)	ANTENNA GAIN (dBi)	RAD. POWER AVG EIRP (dBm)	RAD. POWER AVG ERP (dBm)
SINGLE	22.42	2.7	25.12	22.97
MAX:	22.42		25.12	22.97

Measurement uncertainty (dB) <±0.941

Note: The LTE Cat-M1, LTE NB-IOT Output power are provided by test report 77535RRF.001A1 & 77535RRF.002A1 & 77535RRF.003A1 & 77535RRF.004A1.

Remark:

- Per KDB941225 D05 v02r05, Start with the largest channel bandwidth then measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power among RB offsets at the upper edge, middle, and lower edge of each required test channel. When the reported SAR is ≤ 0.8 W/kg, testing of the remaining RB offset configurations and required test channels is not required for 1 RB allocation; otherwise, SAR is required for the remaining required test channels and only for the RB offset configuration with the highest output power for that channel. 6 When the reported SAR of a required test channel is > 1.45 W/kg, SAR is required for all three RB offset configurations for that required test channel.
- Per KDB941225 D05 v02r05, The procedures required for 1 RB allocation in 5.2.1 are applied to measure

the SAR for QPSK with 50% RB allocation.

3. Per KDB941225 D05 v02r05, For QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations, and

the highest reported SAR for 1 RB and 50% RB allocation in 5.2.1 and 5.2.2 are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.

4. Per KDB941225 D05 v02r05, For each modulation besides QPSK; e.g., 16-QAM, 64-QAM, apply the QPSK procedures in 5.2.1, 5.2.2, and 5.2.3 to determine the QAM configurations that may need SAR measurement. For each configuration identified as required for testing, SAR is required only when the highest maximum output power for the configuration in the higher order modulation is $> \frac{1}{2}$ dB higher than the same configuration in QPSK or when the reported SAR for the QPSK configuration is > 1.45 W/kg.

Bluetooth				
Test Mode	Data Rate	Channel	Frequency (MHz)	Conducted Power (dBm)
LE	1Mbps	CH 00	2402	6.24
		CH 19	2440	6.59
		CH 39	2480	6.12
	2Mbps	CH 00	2402	6.20
		CH 19	2440	6.59
		CH 39	2480	6.07

Note: Refer to WTD26X04116317W005, Page 48 for Bluetooth output power.

Remark:

Bluetooth maximum output power is 6.59dBm, Maximum Tune-Up output power is 7.0dBm. Per KDB 447498 D01 V06, the 1-g 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

Tune-Up Power (dBm)	Max. Power (mW)	Distance (mm)	Frequency (GHz)	Result	Limit
7.0	5.01	5	2.480	1.578	3

The exclusion threshold is $1.578 < 3$, therefore, the RF exposure evaluation is not required.

WLAN(2.4GHz)					
Test Mode	Data Rate	Channel	Frequency (MHz)	Conducted Power (dBm)	Tune-up power (dBm)
802.11b	1Mbps	CH 01	2412	9.24	9.5
		CH 06	2437	8.88	9.0
		CH 11	2462	9.07	9.5
802.11g	6Mbps	CH 01	2412	12.20	12.5
		CH 06	2437	11.85	12.0
		CH 11	2462	11.78	12.0
802.11n-HT20	MCS0	CH 01	2412	12.03	12.5
		CH 06	2437	10.91	11.0
		CH 11	2462	12.05	12.5
802.11ax-HE20	MCS0	CH 01	2412	12.95	13.0
		CH 06	2437	8.54	9.0
		CH 11	2462	12.74	13.0

Note: Refer to WTD26X04116317W006, Page 45 for WLAN(2.4GHz) output power.

Remark:

1. Per KDB 248227 D01 v02r02, for 802.11b DSSS SAR measurements, DSSS SAR procedure applies to fixed exposure test position and initial test position procedure applies to multiple exposure test positions.
2. Per KDB 248227 D01 v02r02, for 802.11b DSSS SAR measurements, when the reported SAR of the highest measured maximum output power channel (see 3.1) for the exposure configuration is ≤ 0.8 W/kg, no further SAR testing is required for 802.11b DSSS in that exposure configuration. When the reported SAR is > 0.8 W/kg, SAR is required for that exposure configuration using the next highest measured output power channel. When any reported SAR is > 1.2 W/kg, SAR is required for the third channel; i.e., all channels require testing.
3. For OFDM modes (802.11g/n), SAR is not required when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and it is ≤ 1.2 W/kg.

9.2 Test Results for Standalone SAR Test

Body SAR

LTE Cat-M1 Band 2–Body SAR Test (Gap: 5mm)								
Plot No.	Mode	Test Position	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR 1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
	16QAM 15MHz 1RB	Back Face	1880	22.79	23.00	1.050	0.333	0.349
	16QAM 15MHz 1RB	Front Face	1880	22.79	23.00	1.050	0.613	0.643
	16QAM 15MHz 1RB	Right Side	1880	22.79	23.00	1.050	0.375	0.394
	16QAM 15MHz 1RB	Left Side	1880	22.79	23.00	1.050	0.172	0.181
	16QAM 15MHz 1RB	Top Side	1880	22.79	23.00	1.050	0.021	0.022
	16QAM 15MHz 1RB	Bottom Side	1880	22.79	23.00	1.050	0.033	0.035
	16QAM 15MHz 1RB	Front Face	1857.5	22.72	23.00	1.067	0.575	0.613
1.	16QAM 15MHz 1RB	Front Face	1905	22.77	23.00	1.054	0.627	0.661
	16QAM 15MHz 50%RB	Back Face	1880	22.79	23.00	1.050	0.312	0.327
	16QAM 15MHz 50%RB	Front Face	1880	22.79	23.00	1.050	0.567	0.595
	16QAM 15MHz 50%RB	Right Side	1880	22.79	23.00	1.050	0.336	0.353
	16QAM 15MHz 50%RB	Left Side	1880	22.79	23.00	1.050	0.132	0.139
	16QAM 15MHz 50%RB	Top Side	1880	22.79	23.00	1.050	0.015	0.016
	16QAM 15MHz 50%RB	Bottom Side	1880	22.79	23.00	1.050	0.023	0.024
	16QAM 15MHz 50%RB	Front Face	1857.5	22.72	23.00	1.067	0.534	0.570
	16QAM 15MHz 50%RB	Front Face	1905	22.77	23.00	1.054	0.607	0.640

LTE Cat-M1 Band 25–Body SAR Test (Gap: 5mm)								
Plot No.	Mode	Test Position	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR 1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
	16QAM 15MHz 1RB	Back Face	1882.5	22.79	23.00	1.050	0.329	0.345
2.	16QAM 15MHz 1RB	Front Face	1882.5	22.79	23.00	1.050	0.644	0.676
	16QAM 15MHz 1RB	Right Side	1882.5	22.79	23.00	1.050	0.036	0.038
	16QAM 15MHz 1RB	Left Side	1882.5	22.79	23.00	1.050	0.019	0.020
	16QAM 15MHz 1RB	Top Side	1882.5	22.79	23.00	1.050	0.241	0.253
	16QAM 15MHz 1RB	Bottom Side	1882.5	22.79	23.00	1.050	0.366	0.384
	16QAM 15MHz 1RB	Front Face	1857.5	22.72	23.00	1.067	0.612	0.653
	16QAM 15MHz 1RB	Front Face	1907.5	22.77	23.00	1.054	0.577	0.608
	16QAM 15MHz 50%RB	Back Face	1882.5	22.79	23.00	1.050	0.303	0.318
	16QAM 15MHz 50%RB	Front Face	1882.5	22.79	23.00	1.050	0.610	0.640
	16QAM 15MHz 50%RB	Right Side	1882.5	22.79	23.00	1.050	0.025	0.026
	16QAM 15MHz 50%RB	Left Side	1882.5	22.79	23.00	1.050	0.011	0.012
	16QAM 15MHz 50%RB	Top Side	1882.5	22.79	23.00	1.050	0.203	0.213
	16QAM 15MHz 50%RB	Bottom Side	1882.5	22.79	23.00	1.050	0.316	0.332
	16QAM 15MHz 50%RB	Front Face	1857.5	22.72	23.00	1.067	0.589	0.628
	16QAM 15MHz 50%RB	Front Face	1907.5	22.77	23.00	1.054	0.534	0.563

LTE Cat-M1 Band 4–Body SAR Test (Gap: 5mm)								
Plot No.	Mode	Test Position	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR 1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
	QPSK 15MHz 1RB	Back Face	1717.5	22.87	23.00	1.030	0.059	0.061
3.	QPSK 15MHz 1RB	Front Face	1717.5	22.87	23.00	1.030	0.134	0.138
	QPSK 15MHz 1RB	Right Side	1717.5	22.87	23.00	1.030	0.030	0.031
	QPSK 15MHz 1RB	Left Side	1717.5	22.87	23.00	1.030	0.017	0.018
	QPSK 15MHz 1RB	Top Side	1717.5	22.87	23.00	1.030	0.091	0.094
	QPSK 15MHz 1RB	Bottom Side	1717.5	22.87	23.00	1.030	0.097	0.100
	QPSK 15MHz 50%RB	Back Face	1717.5	22.87	23.00	1.030	0.042	0.043
	QPSK 15MHz 50%RB	Front Face	1717.5	22.87	23.00	1.030	0.118	0.122
	QPSK 15MHz 50%RB	Right Side	1717.5	22.87	23.00	1.030	0.021	0.022
	QPSK 15MHz 50%RB	Left Side	1717.5	22.87	23.00	1.030	0.010	0.010
	QPSK 15MHz 50%RB	Top Side	1717.5	22.87	23.00	1.030	0.086	0.089
	QPSK 15MHz 50%RB	Bottom Side	1717.5	22.87	23.00	1.030	0.090	0.093

LTE Cat-M1 Band 66–Body SAR Test (Gap: 5mm)								
Plot No.	Mode	Test Position	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR 1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
	QPSK 15MHz 1RB	Back Face	1717.5	22.87	23.00	1.030	0.069	0.071
4.	QPSK 15MHz 1RB	Front Face	1717.5	22.87	23.00	1.030	0.208	0.214
	QPSK 15MHz 1RB	Right Side	1717.5	22.87	23.00	1.030	0.022	0.023
	QPSK 15MHz 1RB	Left Side	1717.5	22.87	23.00	1.030	0.028	0.029
	QPSK 15MHz 1RB	Top Side	1717.5	22.87	23.00	1.030	0.069	0.071
	QPSK 15MHz 1RB	Bottom Side	1717.5	22.87	23.00	1.030	0.106	0.109
	QPSK 15MHz 50%RB	Back Face	1717.5	22.87	23.00	1.030	0.062	0.064
	QPSK 15MHz 50%RB	Front Face	1717.5	22.87	23.00	1.030	0.202	0.208
	QPSK 15MHz 50%RB	Right Side	1717.5	22.87	23.00	1.030	0.016	0.016
	QPSK 15MHz 50%RB	Left Side	1717.5	22.87	23.00	1.030	0.027	0.028
	QPSK 15MHz 50%RB	Top Side	1717.5	22.87	23.00	1.030	0.060	0.062
	QPSK 15MHz 50%RB	Bottom Side	1717.5	22.87	23.00	1.030	0.095	0.098

LTE Cat-M1 Band 5–Body SAR Test (Gap: 5mm)								
Plot No.	Mode	Test Position	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR 1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
	QPSK 3MHz 1RB	Back Face	836.5	22.52	23.00	1.117	0.037	0.041
5.	QPSK 3MHz 1RB	Front Face	836.5	22.52	23.00	1.117	0.087	0.097
	QPSK 3MHz 1RB	Right Side	836.5	22.52	23.00	1.117	0.028	0.031
	QPSK 3MHz 1RB	Left Side	836.5	22.52	23.00	1.117	0.067	0.075
	QPSK 3MHz 1RB	Top Side	836.5	22.52	23.00	1.117	0.064	0.071
	QPSK 3MHz 1RB	Bottom Side	836.5	22.52	23.00	1.117	0.026	0.071
	QPSK 3MHz 50%RB	Back Face	836.5	22.52	23.00	1.117	0.035	0.039
	QPSK 3MHz 50%RB	Front Face	836.5	22.52	23.00	1.117	0.079	0.088
	QPSK 3MHz 50%RB	Right Side	836.5	22.52	23.00	1.117	0.025	0.028
	QPSK 3MHz 50%RB	Left Side	836.5	22.52	23.00	1.117	0.061	0.068
	QPSK 3MHz 50%RB	Top Side	836.5	22.52	23.00	1.117	0.054	0.023
	QPSK 3MHz 50%RB	Bottom Side	836.5	22.52	23.00	1.117	0.035	0.039

LTE Cat-M1 Band 26(824-849MHz)–Body SAR Test (Gap: 5mm)								
Plot No.	Mode	Test Position	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR 1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
	QPSK 3MHz 1RB	Back Face	836.5	22.52	23.00	1.117	0.035	0.039
6.	QPSK 3MHz 1RB	Front Face	836.5	22.52	23.00	1.117	0.095	0.106
	QPSK 3MHz 1RB	Right Side	836.5	22.52	23.00	1.117	0.032	0.036
	QPSK 3MHz 1RB	Left Side	836.5	22.52	23.00	1.117	0.075	0.084
	QPSK 3MHz 1RB	Top Side	836.5	22.52	23.00	1.117	0.055	0.061
	QPSK 3MHz 1RB	Bottom Side	836.5	22.52	23.00	1.117	0.032	0.036
	QPSK 3MHz 50%RB	Back Face	836.5	22.52	23.00	1.117	0.032	0.036
	QPSK 3MHz 50%RB	Front Face	836.5	22.52	23.00	1.117	0.078	0.087
	QPSK 3MHz 50%RB	Right Side	836.5	22.52	23.00	1.117	0.033	0.037
	QPSK 3MHz 50%RB	Left Side	836.5	22.52	23.00	1.117	0.073	0.082
	QPSK 3MHz 50%RB	Top Side	836.5	22.52	23.00	1.117	0.053	0.059
	QPSK 3MHz 50%RB	Bottom Side	836.5	22.52	23.00	1.117	0.030	0.034

LTE Cat-M1 Band 12–Body SAR Test (Gap: 5mm)								
Plot No.	Mode	Test Position	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR 1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
	QPSK 5MHz 1RB	Back Face	713.5	23.01	23.50	1.119	0.012	0.013
7.	QPSK 5MHz 1RB	Front Face	713.5	23.01	23.50	1.119	0.023	0.026
	QPSK 5MHz 1RB	Right Side	713.5	23.01	23.50	1.119	0.006	0.007
	QPSK 5MHz 1RB	Left Side	713.5	23.01	23.50	1.119	0.009	0.010
	QPSK 5MHz 1RB	Top Side	713.5	23.01	23.50	1.119	0.018	0.020
	QPSK 5MHz 1RB	Bottom Side	713.5	23.01	23.50	1.119	0.011	0.012
	QPSK 5MHz 50%RB	Back Face	713.5	23.01	23.50	1.119	0.011	0.012
	QPSK 5MHz 50%RB	Front Face	713.5	23.01	23.50	1.119	0.020	0.022
	QPSK 5MHz 50%RB	Right Side	713.5	23.01	23.50	1.119	0.006	0.007
	QPSK 5MHz 50%RB	Left Side	713.5	23.01	23.50	1.119	0.008	0.009
	QPSK 5MHz 50%RB	Top Side	713.5	23.01	23.50	1.119	0.016	0.018
	QPSK 5MHz 50%RB	Bottom Side	713.5	23.01	23.50	1.119	0.011	0.012

LTE Cat-M1 Band 85–Body SAR Test (Gap: 5mm)								
Plot No.	Mode	Test Position	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR 1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
	QPSK 5MHz 1RB	Back Face	713.5	23.01	23.50	1.119	0.033	0.037
8.	QPSK 5MHz 1RB	Front Face	713.5	23.01	23.50	1.119	0.082	0.093
	QPSK 5MHz 1RB	Right Side	713.5	23.01	23.50	1.119	0.019	0.021
	QPSK 5MHz 1RB	Left Side	713.5	23.01	23.50	1.119	0.063	0.070
	QPSK 5MHz 1RB	Top Side	713.5	23.01	23.50	1.119	0.043	0.048
	QPSK 5MHz 1RB	Bottom Side	713.5	23.01	23.50	1.119	0.014	0.016
	QPSK 5MHz 50%RB	Back Face	713.5	23.01	23.50	1.119	0.032	0.036
	QPSK 5MHz 50%RB	Front Face	713.5	23.01	23.50	1.119	0.038	0.043
	QPSK 5MHz 50%RB	Right Side	713.5	23.01	23.50	1.119	0.073	0.082
	QPSK 5MHz 50%RB	Left Side	713.5	23.01	23.50	1.119	0.019	0.021
	QPSK 5MHz 50%RB	Top Side	713.5	23.01	23.50	1.119	0.053	0.059
	QPSK 5MHz 50%RB	Bottom Side	713.5	23.01	23.50	1.119	0.030	0.034

LTE Cat-M1 Band 13–Body SAR Test (Gap: 5mm)								
Plot No.	Mode	Test Position	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR 1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
	QPSK 5MHz 1RB	Back Face	784.5	22.14	23.00	1.219	0.010	0.012
9.	QPSK 5MHz 1RB	Front Face	784.5	22.14	23.00	1.219	0.020	0.024
	QPSK 5MHz 1RB	Right Side	784.5	22.14	23.00	1.219	0.006	0.007
	QPSK 5MHz 1RB	Left Side	784.5	22.14	23.00	1.219	0.004	0.005
	QPSK 5MHz 1RB	Top Side	784.5	22.14	23.00	1.219	0.009	0.011
	QPSK 5MHz 1RB	Bottom Side	784.5	22.14	23.00	1.219	0.005	0.006
	QPSK 5MHz 50%RB	Back Face	784.5	22.14	23.00	1.219	0.009	0.011
	QPSK 5MHz 50%RB	Front Face	784.5	22.14	23.00	1.219	0.018	0.022
	QPSK 5MHz 50%RB	Right Side	784.5	22.14	23.00	1.219	0.006	0.007
	QPSK 5MHz 50%RB	Left Side	784.5	22.14	23.00	1.219	0.004	0.005
	QPSK 5MHz 50%RB	Top Side	784.5	22.14	23.00	1.219	0.008	0.010
	QPSK 5MHz 50%RB	Bottom Side	784.5	22.14	23.00	1.219	0.007	0.009

LTE Cat-M1 Band 26(814-824MHz)–Body SAR Test (Gap: 5mm)								
Plot No.	Mode	Test Position	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR 1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
	QPSK 5MHz 1RB	Back Face	821.5	23.00	23.50	1.122	0.072	0.081
10.	QPSK 5MHz 1RB	Front Face	821.5	23.00	23.50	1.122	0.126	0.141
	QPSK 5MHz 1RB	Right Side	821.5	23.00	23.50	1.122	0.030	0.034
	QPSK 5MHz 1RB	Left Side	821.5	23.00	23.50	1.122	0.095	0.107
	QPSK 5MHz 1RB	Top Side	821.5	23.00	23.50	1.122	0.041	0.046
	QPSK 5MHz 1RB	Bottom Side	821.5	23.00	23.50	1.122	0.030	0.034
	QPSK 5MHz 50%RB	Back Face	821.5	23.00	23.50	1.122	0.071	0.080
	QPSK 5MHz 50%RB	Front Face	821.5	23.00	23.50	1.122	0.120	0.135
	QPSK 5MHz 50%RB	Right Side	821.5	23.00	23.50	1.122	0.027	0.030
	QPSK 5MHz 50%RB	Left Side	821.5	23.00	23.50	1.122	0.097	0.109
	QPSK 5MHz 50%RB	Top Side	821.5	23.00	23.50	1.122	0.041	0.046
	QPSK 5MHz 50%RB	Bottom Side	821.5	23.00	23.50	1.122	0.028	0.031

LTE Cat-M1 Band 26(824MHz)–Body SAR Test (Gap: 5mm)								
Plot No.	Mode	Test Position	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR 1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
	QPSK 1.4MHz 1RB	Back Face	824	23.06	23.50	1.107	0.063	0.070
11.	QPSK 1.4MHz 1RB	Front Face	824	23.06	23.50	1.107	0.099	0.110
	QPSK 1.4MHz 1RB	Right Side	824	23.06	23.50	1.107	0.031	0.034
	QPSK 1.4MHz 1RB	Left Side	824	23.06	23.50	1.107	0.086	0.095
	QPSK 1.4MHz 1RB	Top Side	824	23.06	23.50	1.107	0.037	0.041
	QPSK 1.4MHz 1RB	Bottom Side	824	23.06	23.50	1.107	0.028	0.031
	QPSK 1.4MHz 50%RB	Back Face	824	23.06	23.50	1.107	0.060	0.066
	QPSK 1.4MHz 50%RB	Front Face	824	23.06	23.50	1.107	0.092	0.102
	QPSK 1.4MHz 50%RB	Right Side	824	23.06	23.50	1.107	0.027	0.030
	QPSK 1.4MHz 50%RB	Left Side	824	23.06	23.50	1.107	0.077	0.085
	QPSK 1.4MHz 50%RB	Top Side	824	23.06	23.50	1.107	0.031	0.034
	QPSK 1.4MHz 50%RB	Bottom Side	824	23.06	23.50	1.107	0.025	0.028

LTE NB-IOT Band 2–Body SAR Test (Gap: 5mm)								
Plot No.	Mode	Test Position	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR 1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth		MHz					
	Pi/2-BPSK 15kHz	Back Face	1850.2	22.63	23.00	1.089	0.385	0.419
	Pi/2-BPSK 15kHz	Front Face	1850.2	22.63	23.00	1.089	0.557	0.607
	Pi/2-BPSK 15kHz	Right Side	1850.2	22.63	23.00	1.089	0.046	0.050
	Pi/2-BPSK 15kHz	Left Side	1850.2	22.63	23.00	1.089	0.123	0.134
	Pi/2-BPSK 15kHz	Top Side	1850.2	22.63	23.00	1.089	0.271	0.295
	Pi/2-BPSK 15kHz	Bottom Side	1850.2	22.63	23.00	1.089	1.098	1.196
	Pi/2-BPSK 15kHz	Bottom Side	1880	22.60	23.00	1.096	0.970	1.064
12.	Pi/2-BPSK 15kHz	Bottom Side	1909.8	22.62	23.00	1.091	1.115	1.217

LTE NB-IOT Band 25–Body SAR Test (Gap: 5mm)								
Plot No.	Mode	Test Position	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR 1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth		MHz					
	Pi/2-BPSK 15kHz	Back Face	1850.2	22.63	23.00	1.089	0.194	0.211
	Pi/2-BPSK 15kHz	Front Face	1850.2	22.63	23.00	1.089	0.633	0.689
	Pi/2-BPSK 15kHz	Right Side	1850.2	22.63	23.00	1.089	0.048	0.052
	Pi/2-BPSK 15kHz	Left Side	1850.2	22.63	23.00	1.089	0.101	0.110
	Pi/2-BPSK 15kHz	Top Side	1850.2	22.63	23.00	1.089	0.270	0.294
	Pi/2-BPSK 15kHz	Bottom Side	1850.2	22.63	23.00	1.089	1.116	1.215
	Pi/2-BPSK 15kHz	Bottom Side	1882.5	22.60	23.00	1.096	0.940	1.031
13.	Pi/2-BPSK 15kHz	Bottom Side	1914.8	22.62	23.00	1.091	1.164	1.270

LTE NB-IOT Band 4–Body SAR Test (Gap: 5mm)								
Plot No.	Mode	Test Position	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR 1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth		MHz					
	Pi/2-BPSK 15kHz	Back Face	1710.2	22.54	23.00	1.112	0.340	0.378
14.	Pi/2-BPSK 15kHz	Front Face	1710.2	22.54	23.00	1.112	0.651	0.724
	Pi/2-BPSK 15kHz	Right Side	1710.2	22.54	23.00	1.112	0.107	0.119
	Pi/2-BPSK 15kHz	Left Side	1710.2	22.54	23.00	1.112	0.039	0.043
	Pi/2-BPSK 15kHz	Top Side	1710.2	22.54	23.00	1.112	0.537	0.597
	Pi/2-BPSK 15kHz	Bottom Side	1710.2	22.54	23.00	1.112	0.090	0.100

LTE NB-IOT Band 66–Body SAR Test (Gap: 5mm)								
Plot No.	Mode	Test Position	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR 1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth		MHz					
	Pi/2-BPSK 15kHz	Back Face	1710.2	22.54	23.00	1.112	0.189	0.210
	Pi/2-BPSK 15kHz	Front Face	1710.2	22.54	23.00	1.112	0.661	0.735
	Pi/2-BPSK 15kHz	Right Side	1710.2	22.54	23.00	1.112	0.109	0.121
	Pi/2-BPSK 15kHz	Left Side	1710.2	22.54	23.00	1.112	0.029	0.032
	Pi/2-BPSK 15kHz	Top Side	1710.2	22.54	23.00	1.112	0.478	0.531
	Pi/2-BPSK 15kHz	Bottom Side	1710.2	22.54	23.00	1.112	0.071	0.079
	Pi/2-BPSK 15kHz	Front Face	1745	22.43	23.00	1.140	0.561	0.640
15.	Pi/2-BPSK 15kHz	Front Face	1779.8	22.38	23.00	1.153	0.888	1.024

LTE NB-IOT Band 5–Body SAR Test (Gap: 5mm)								
Plot No.	Mode	Test Position	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR 1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth		MHz					
	Pi/4-QPSK, 15kHz	Back Face	836.5	22.44	23.00	1.138	0.058	0.066
16.	Pi/4-QPSK, 15kHz	Front Face	836.5	22.44	23.00	1.138	0.443	0.504
	Pi/4-QPSK, 15kHz	Right Side	836.5	22.44	23.00	1.138	0.029	0.033
	Pi/4-QPSK, 15kHz	Left Side	836.5	22.44	23.00	1.138	0.016	0.018
	Pi/4-QPSK, 15kHz	Top Side	836.5	22.44	23.00	1.138	0.057	0.065
	Pi/4-QPSK, 15kHz	Bottom Side	836.5	22.44	23.00	1.138	0.041	0.047

LTE NB-IOT Band 26 (824-849MHz)–Body SAR Test (Gap: 5mm)								
Plot No.	Mode	Test Position	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR 1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth		MHz					
	Pi/4-QPSK, 15kHz	Back Face	836.5	22.44	23.00	1.138	0.061	0.069
17.	Pi/4-QPSK, 15kHz	Front Face	836.5	22.44	23.00	1.138	0.314	0.357
	Pi/4-QPSK, 15kHz	Right Side	836.5	22.44	23.00	1.138	0.007	0.008
	Pi/4-QPSK, 15kHz	Left Side	836.5	22.44	23.00	1.138	0.008	0.009
	Pi/4-QPSK, 15kHz	Top Side	836.5	22.44	23.00	1.138	0.082	0.093
	Pi/4-QPSK, 15kHz	Bottom Side	836.5	22.44	23.00	1.138	0.052	0.059

LTE NB-IOT Band 12–Body SAR Test (Gap: 5mm)								
Plot No.	Mode	Test Position	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR 1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth		MHz					
	Pi/4-QPSK, 15kHz	Back Face	699.2	22.16	23.00	1.213	0.029	0.035
	Pi/4-QPSK, 15kHz	Front Face	699.2	22.16	23.00	1.213	0.035	0.042
	Pi/4-QPSK, 15kHz	Right Side	699.2	22.16	23.00	1.213	0.005	0.006
	Pi/4-QPSK, 15kHz	Left Side	699.2	22.16	23.00	1.213	0.004	0.005
18.	Pi/4-QPSK, 15kHz	Top Side	699.2	22.16	23.00	1.213	0.052	0.063
	Pi/4-QPSK, 15kHz	Bottom Side	699.2	22.16	23.00	1.213	0.039	0.047

LTE NB-IOT Band 13–Body SAR Test (Gap: 5mm)								
Plot No.	Mode	Test Position	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR 1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth		MHz					
	Pi/4-QPSK, 15kHz	Back Face	777.2	22.27	23.00	1.183	0.037	0.044
19.	Pi/4-QPSK, 15kHz	Front Face	777.2	22.27	23.00	1.183	0.136	0.161
	Pi/4-QPSK, 15kHz	Right Side	777.2	22.27	23.00	1.183	0.007	0.008
	Pi/4-QPSK, 15kHz	Left Side	777.2	22.27	23.00	1.183	0.006	0.007
	Pi/4-QPSK, 15kHz	Top Side	777.2	22.27	23.00	1.183	0.065	0.077
	Pi/4-QPSK, 15kHz	Bottom Side	777.2	22.27	23.00	1.183	0.028	0.033

LTE NB-IOT Band 17–Body SAR Test (Gap: 5mm)								
Plot No.	Mode	Test Position	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR 1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth		MHz					
	Pi/4-QPSK, 15kHz	Back Face	704.2	22.16	23.00	1.213	0.016	0.019
	Pi/4-QPSK, 15kHz	Front Face	704.2	22.16	23.00	1.213	0.031	0.038
	Pi/4-QPSK, 15kHz	Right Side	704.2	22.16	23.00	1.213	0.004	0.005
	Pi/4-QPSK, 15kHz	Left Side	704.2	22.16	23.00	1.213	0.006	0.007
20.	Pi/4-QPSK, 15kHz	Top Side	704.2	22.16	23.00	1.213	0.046	0.056
	Pi/4-QPSK, 15kHz	Bottom Side	704.2	22.16	23.00	1.213	0.013	0.016

LTE NB-IOT Band 85–Body SAR Test (Gap: 5mm)								
Plot No.	Mode	Test Position	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR 1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth		MHz					
	Pi/4-QPSK, 15kHz	Back Face	699.2	22.16	23.00	1.213	0.028	0.034
	Pi/4-QPSK, 15kHz	Front Face	699.2	22.16	23.00	1.213	0.044	0.053
	Pi/4-QPSK, 15kHz	Right Side	699.2	22.16	23.00	1.213	0.005	0.006
	Pi/4-QPSK, 15kHz	Left Side	699.2	22.16	23.00	1.213	0.009	0.011
21.	Pi/4-QPSK, 15kHz	Top Side	699.2	22.16	23.00	1.213	0.077	0.093
	Pi/4-QPSK, 15kHz	Bottom Side	699.2	22.16	23.00	1.213	0.042	0.051

LTE NB-IOT Band 26(814-824MHz)–Body SAR Test (Gap: 5mm)								
Plot No.	Mode	Test Position	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR 1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth		MHz					
	Pi/2-BPSK, 15kHz	Back Face	823.8	22.49	23.00	1.125	0.032	0.036
	Pi/2-BPSK, 15kHz	Front Face	823.8	22.49	23.00	1.125	0.068	0.076
	Pi/2-BPSK, 15kHz	Right Side	823.8	22.49	23.00	1.125	0.010	0.011
	Pi/2-BPSK, 15kHz	Left Side	823.8	22.49	23.00	1.125	0.013	0.015
22.	Pi/2-BPSK, 15kHz	Top Side	823.8	22.49	23.00	1.125	0.094	0.106
	Pi/2-BPSK, 15kHz	Bottom Side	823.8	22.49	23.00	1.125	0.052	0.058

LTE NB-IOT Band 26(824MHz)–Body SAR Test (Gap: 5mm)								
Plot No.	Mode	Test Position	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR 1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth		MHz					
	Pi/4-BPSK, 15kHz	Back Face	824	22.42	23.00	1.143	0.028	0.032
	Pi/4-BPSK, 15kHz	Front Face	824	22.42	23.00	1.143	0.044	0.050
	Pi/4-BPSK, 15kHz	Right Side	824	22.42	23.00	1.143	0.005	0.006
	Pi/4-BPSK, 15kHz	Left Side	824	22.42	23.00	1.143	0.009	0.010
23.	Pi/4-BPSK, 15kHz	Top Side	824	22.42	23.00	1.143	0.081	0.093
	Pi/4-BPSK, 15kHz	Bottom Side	824	22.42	23.00	1.143	0.042	0.048

Bluetooth–Body SAR Test(Gap: 5mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
	LE-1Mbps	Back Face	CH 19	2440	6.59	7.0	1.099	0.063	0.069
24.	LE-1Mbps	Front Face	CH 19	2440	6.59	7.0	1.099	0.084	0.092
	LE-1Mbps	Left Side	CH 19	2440	6.59	7.0	1.099	0.039	0.043
	LE-1Mbps	Top Side	CH 19	2440	6.59	7.0	1.099	0.024	0.026
	LE-1Mbps	Bottom Side	CH 19	2440	6.59	7.0	1.099	0.026	0.029

WLAN(2.4GHz)–Body SAR Test(Gap: 5mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
	802.11b	Back Face	CH 01	2412	9.24	9.5	1.062	0.085	0.090
	802.11b	Front Face	CH 01	2412	9.24	9.5	1.062	0.164	0.174
	802.11b	Left Side	CH 01	2412	9.24	9.5	1.062	0.076	0.081
	802.11b	Top Side	CH 01	2412	9.24	9.5	1.062	0.046	0.049
	802.11b	Bottom Side	CH 01	2412	9.24	9.5	1.062	0.041	0.044
	802.11ax-HE20	Back Face	CH 01	2412	12.95	13.0	1.012	0.140	0.142
25.	802.11ax-HE20	Front Face	CH 01	2412	12.95	13.0	1.012	0.270	0.273
	802.11ax-HE20	Left Side	CH 01	2412	12.95	13.0	1.012	0.131	0.133
	802.11ax-HE20	Top Side	CH 01	2412	12.95	13.0	1.012	0.073	0.074
	802.11ax-HE20	Bottom Side	CH 01	2412	12.95	13.0	1.012	0.064	0.065

Remark: Per KDB 447498 D01 v06, if the highest output channel SAR for each exposure position ≤ 0.8 W/kg other channels SAR tests are not necessary.

Repeated SAR

LTE NB-IOT Band 2–Body SAR Test (Gap: 5mm)							
Mode Modulation, Bandwidth	Test Position	Frequency	SAR1g (W/kg)	Repeated SAR		Ratio	
		MHz		1	2	1	2
Pi/2-BPSK 15kHz	Bottom Side	1850.2	1.098	1.024	/	1.072	/
Pi/2-BPSK 15kHz	Bottom Side	1880	0.970	0.931	/	1.042	/
Pi/2-BPSK 15kHz	Bottom Side	1909.8	1.115	1.082	/	1.030	/

LTE NB-IOT Band 25–Body SAR Test (Gap: 5mm)							
Mode	Test Position	Frequency	SAR1g (W/kg)	Repeated SAR		Ratio	
		MHz		1	2	1	2
Pi/2-BPSK 15kHz	Bottom Side	1850.2	1.116	1.079	/	1.034	/
Pi/2-BPSK 15kHz	Bottom Side	1882.5	0.940	0.911	/	1.032	/
Pi/2-BPSK 15kHz	Bottom Side	1914.8	1.164	1.123	/	1.037	/

LTE NB-IOT –Body SAR Test (Gap: 5mm)							
Mode	Test Position	Frequency	SAR1g (W/kg)	Repeated SAR		Ratio	
		MHz		1	2	1	2
Pi/2-BPSK 15kHz	Front Face	1779.8	0.888	0.841	/	1.056	/

Remark:

- 1) Per KDB 447498 D01 v06, if the highest output channel SAR for each exposure position ≤ 0.8 W/kg other channels SAR tests are not necessary.
- 2) Repeated measurement is not required when the original highest measured SAR is < 0.80 W/kg; steps 2) through 4) do not apply.
- 3) When the original highest measured SAR is ≥ 0.80 W/kg, repeat that measurement once.
- 4) 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).
- 5) Perform a third repeated measurement only if the original, first or second repeated measurement is ≥ 1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20 .

9.3 Simultaneous Multi-band Transmission SAR Analysis

List of Mode for Simultaneous Multi-band Transmission

No.	Configurations	Body SAR
1	LTE Cat-M1 (Data) + Bluetooth(Data)+ WIFI (Data)	Yes
2	LTE NB-IOT (Data) + Bluetooth(Data) + WIFI (Data)	Yes

Remark:

1. According to the KDB 447498 D01 v06, when standalone SAR test exclusion applies to an antenna that transmits simultaneously with other antennas, the standalone SAR must be estimated according to following to determine simultaneous transmission SAR test exclusion:

$(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm}) \cdot [\sqrt{f(\text{GHz})} / x]$
W/kg for test separation distances ≤ 50 mm;

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

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

Body SAR

	WWAN		Bluetooth	WIFI	Summed SAR (W/kg)
Position	Band	Scaled SAR (W/kg)	Scaled SAR (W/kg)	Scaled SAR (W/kg)	
Back	LTE Cat-M1	0.349	0.069	0.142	0.560
Front	LTE Cat-M1	0.676	0.092	0.273	1.041
Right side	LTE Cat-M1	0.394	--	--	0.394
Left side	LTE Cat-M1	0.181	0.043	0.133	0.357
Top side	LTE Cat-M1	0.253	0.026	0.074	0.353
Bottom side	LTE Cat-M1	0.384	0.029	0.065	0.478
Back	LTE NB-IOT	0.419	0.069	0.142	0.630
Front	LTE NB-IOT	1.024	0.092	0.273	1.389
Right side	LTE NB-IOT	0.121	--	--	0.121
Left side	LTE NB-IOT	0.134	0.043	0.133	0.310
Top side	LTE NB-IOT	0.597	0.026	0.074	0.697
Bottom side	LTE NB-IOT	1.270	0.029	0.065	1.364

10. Measurement Uncertainty

10.1 Uncertainty for SAR Test

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

(validation measurement only)								
Corrections to the SAR result								
Phantom deviation from target (ϵ', σ)	8.4.3.1	N	0.05	1	0.05	1	0.05	
SAR scaling	8.4.3.2	R	2.00	$\sqrt{3}$	1.15	1	1.15	
Combined Standard Uncertainty		RSS			10.11		10.11	$V_{\text{eff}}^{\text{C}}$
Expanded uncertainty, U		K=2			20.23		20.23	

Annex A. Plots of System Performance Check

MEASUREMENT 1

Type: Validation measurement
Date of measurement: 2026-06-12
Measurement duration: 15 minutes 50 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.50; Calibrated: 2026-03-03

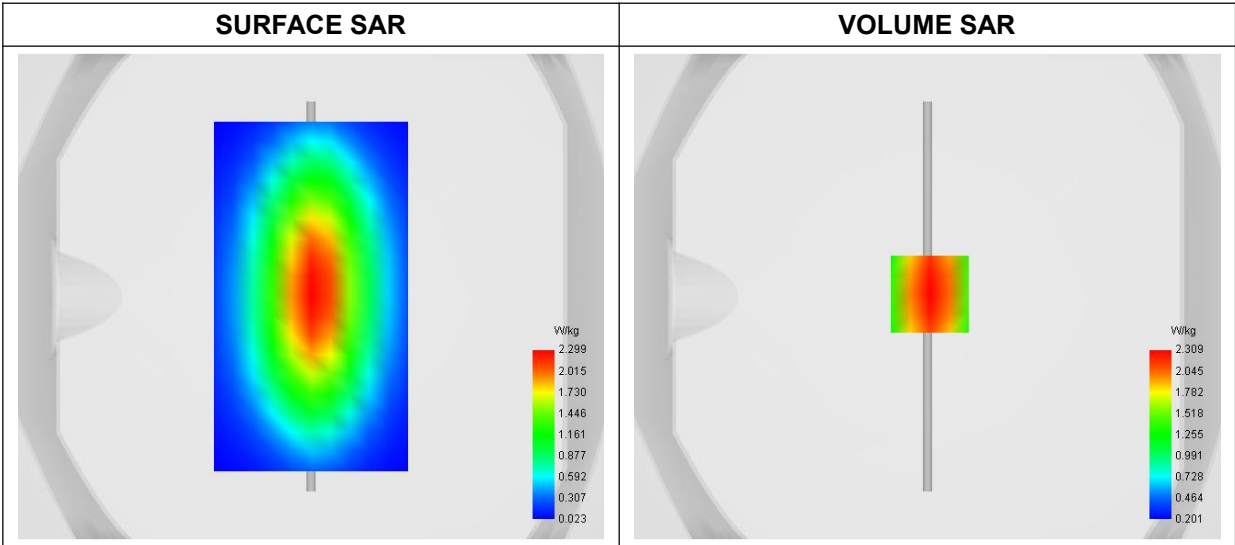
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Dipole
Band	CW750
Signal	CW (Crest factor: 1.0)

B. SAR Measurement Results

Frequency (MHz)	750.000000
Relative Permittivity (real part)	41.143643
Conductivity (S/m)	0.864457
Ambient Temperature	22.8
Liquid Temperature	22.8

C. SAR Surface and Volume



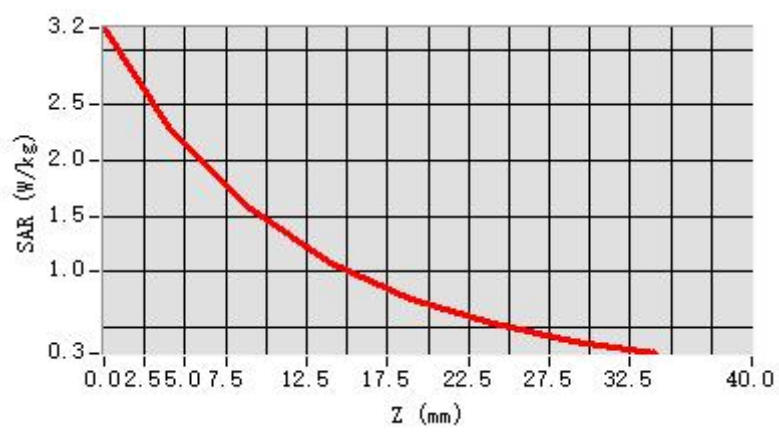
Maximum location: X=1.00, Y=1.00 ; SAR Peak: 3.18 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	1.435
SAR 1g (W/Kg)	2.215
Variation (%)	-0.150
Horizontal validation criteria: minimum distance (mm)	14.74142
Vertical validation criteria: SAR ratio M2/M1 (%)	62.304141

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	3.197	2.309	1.556	1.075	0.754	0.521	0.361



MEASUREMENT 2

Type: Validation measurement
Date of measurement: 2026-05-28
Measurement duration: 15 minutes 50 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.45; Calibrated: 2026-03-03

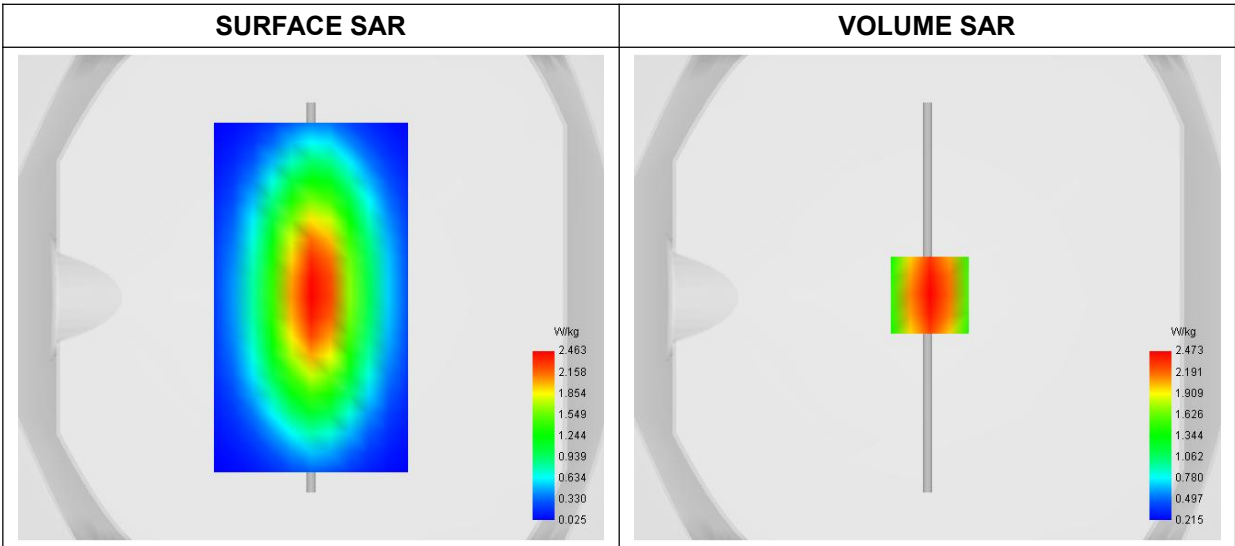
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Dipole
Band	CW835
Signal	CW (Crest factor: 1.0)

B. SAR Measurement Results

Frequency (MHz)	835.000000
Relative Permittivity (real part)	40.813541
Conductivity (S/m)	0.884571
Ambient Temperature	22.6
Liquid Temperature	22.6

C. SAR Surface and Volume



Maximum location: X=1.00, Y=1.00 ; SAR Peak: 3.40 W/kg

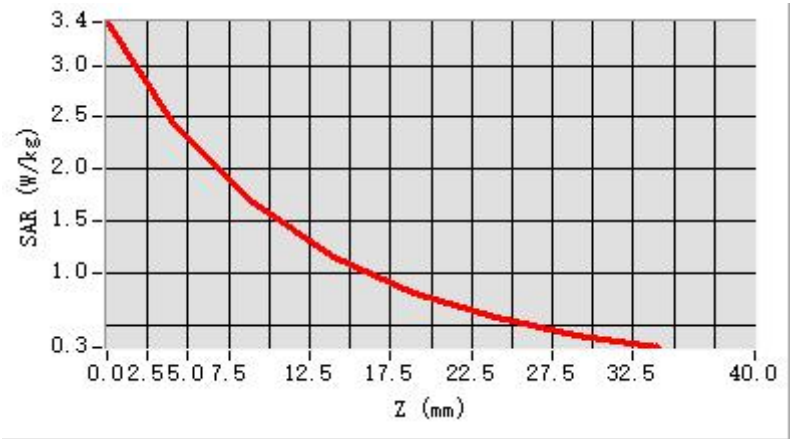
D. SAR 1g & 10g

SAR 10g (W/Kg)	1.536
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SAR 1g (W/Kg)	2.370
Variation (%)	-3.452
Horizontal validation criteria: minimum distance (mm)	15.741421
Vertical validation criteria: SAR ratio M2/M1 (%)	62.723411

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	3.419	2.473	1.669	1.151	0.809	0.559	0.387



MEASUREMENT 3

Type: Validation measurement
Date of measurement: 2026-05-23
Measurement duration: 15 minutes 50 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.45; Calibrated: 2026-03-03

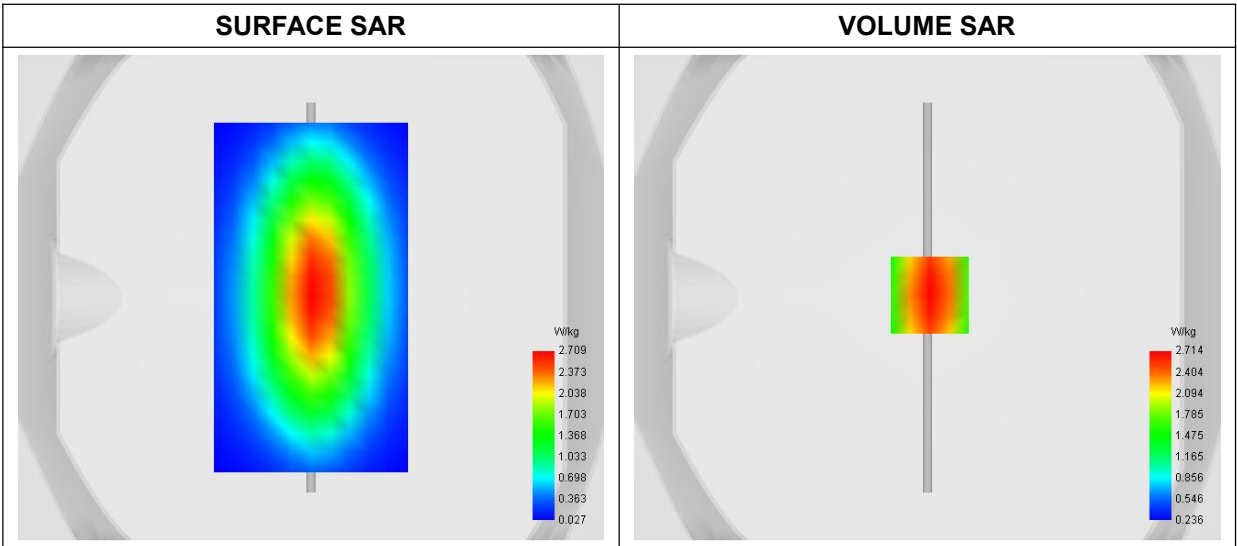
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Dipole
Band	CW900
Signal	CW (Crest factor: 1.0)

B. SAR Measurement Results

Frequency (MHz)	900.000000
Relative Permittivity (real part)	41.083234
Conductivity (S/m)	0.931829
Ambient Temperature	22.6
Liquid Temperature	22.6

C. SAR Surface and Volume



Maximum location: X=1.00, Y=1.00 ; SAR Peak: 3.75 W/kg

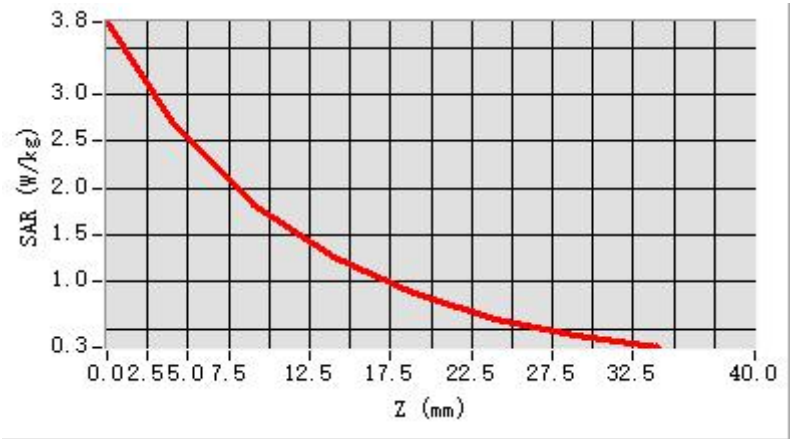
D. SAR 1g & 10g

SAR 10g (W/Kg)	1.683
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SAR 1g (W/Kg)	2.601
Variation (%)	-0.270
Horizontal validation criteria: minimum distance (mm)	15.185213
Vertical validation criteria: SAR ratio M2/M1 (%)	61.034517

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	3.768	2.714	1.826	1.256	0.885	0.612	0.423



MEASUREMENT 4

Type: Validation measurement
Date of measurement: 2026-07-18
Measurement duration: 25 minutes 31 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.24; Calibrated: 2026-03-03

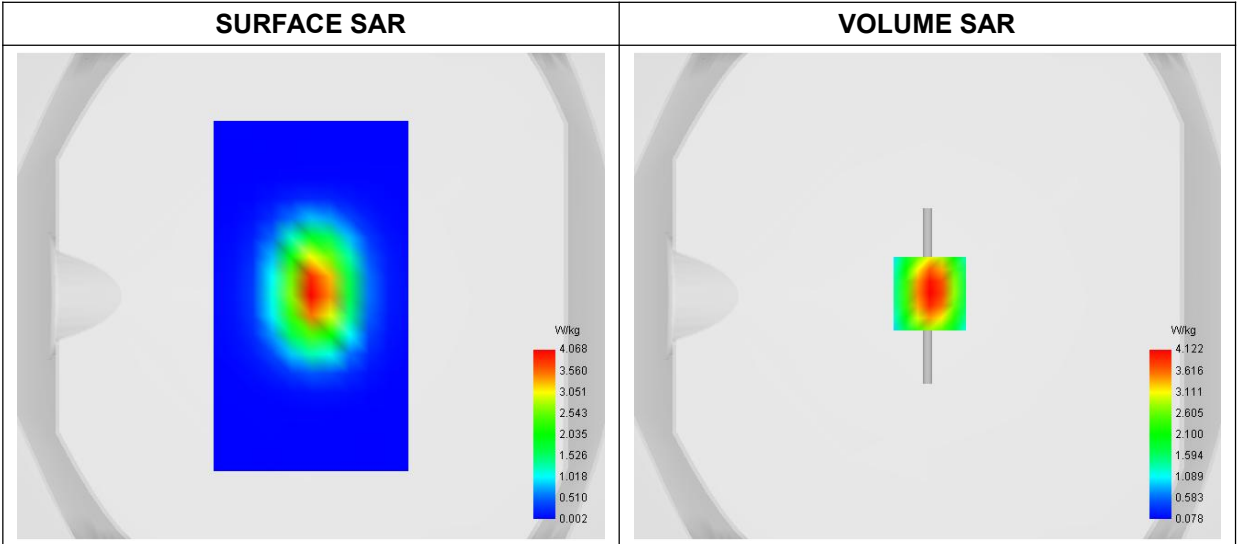
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=5mm dy=5mm dz=4mm
Phantom	Validation plane
Device Position	Dipole
Band	CW1800
Signal	CW (Crest factor: 1.0)

B. SAR Measurement Results

Frequency (MHz)	1800.000000
Relative Permittivity (real part)	39.284586
Conductivity (S/m)	1.383117
Ambient Temperature	22.5
Liquid Temperature	22.5

C. SAR Surface and Volume



Maximum location: X=1.00, Y=1.00 ; SAR Peak: 6.51 W/kg

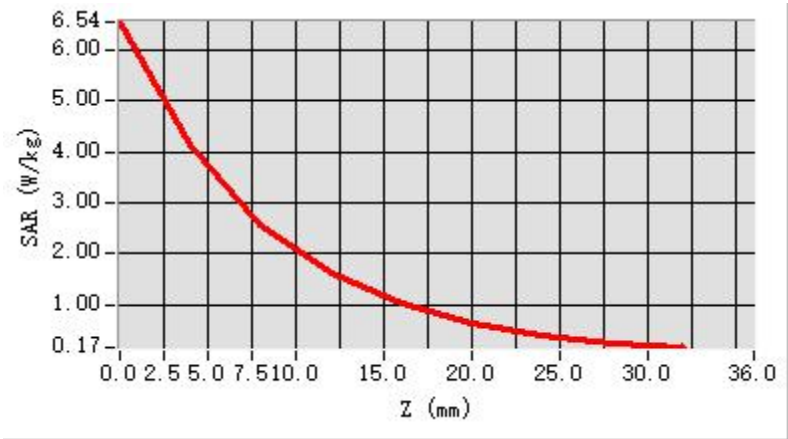
D. SAR 1g & 10g

SAR 10g (W/Kg)	2.000
----------------	-------

SAR 1g (W/Kg)	3.825
Variation (%)	0.390
Horizontal validation criteria: minimum distance (mm)	14.142136
Vertical validation criteria: SAR ratio M2/M1 (%)	62.023045

E. Z Axis Scan

Z (mm)	0.00	4.00	8.00	12.00	16.00	20.00	24.00	28.00
SAR (W/Kg)	6.536	4.122	2.557	1.609	1.028	0.649	0.410	0.259



MEASUREMENT 5

Type: Validation measurement
Date of measurement: 2026-08-23
Measurement duration: 25 minutes 31 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.24; Calibrated: 2026-03-03

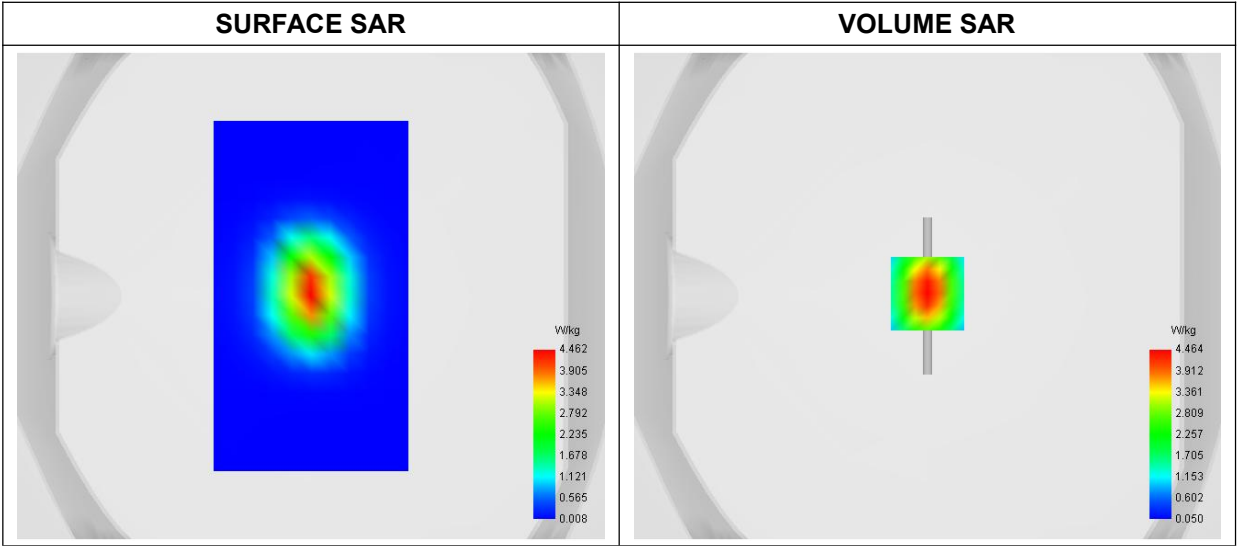
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=5mm dy=5mm dz=4mm
Phantom	Validation plane
Device Position	Dipole
Band	CW1900
Signal	CW (Crest factor: 1.0)

B. SAR Measurement Results

Frequency (MHz)	1900.000000
Relative Permittivity (real part)	40.862324
Conductivity (S/m)	1.413841
Ambient Temperature	22.5
Liquid Temperature	22.5

C. SAR Surface and Volume



Maximum location: X=0.00, Y=1.00 ; SAR Peak: 7.29 W/kg

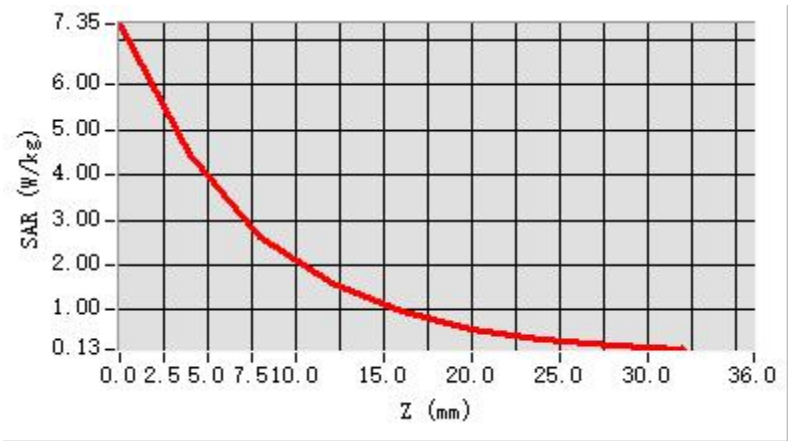
D. SAR 1g & 10g

SAR 10g (W/Kg)	2.040
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SAR 1g (W/Kg)	4.123
Variation (%)	-0.040
Horizontal validation criteria: minimum distance (mm)	14.142136
Vertical validation criteria: SAR ratio M2/M1 (%)	58.933526

E. Z Axis Scan

Z (mm)	0.00	4.00	8.00	12.00	16.00	20.00	24.00	28.00
SAR (W/Kg)	7.347	4.464	2.631	1.585	0.954	0.571	0.342	0.205



MEASUREMENT 6

Type: Validation measurement
Date of measurement: 2026-07-22
Measurement duration: 25 minutes 31 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.73; Calibrated: 2026-03-03

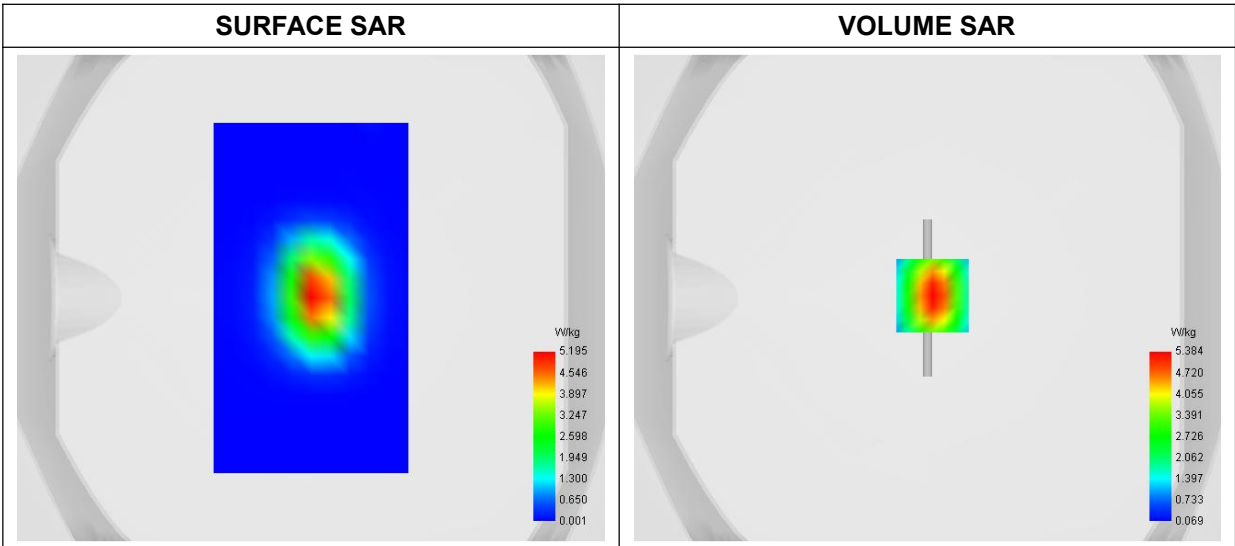
A. Experimental conditions

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

B. SAR Measurement Results

Frequency (MHz)	2450.000000
Relative Permittivity (real part)	38.524383
Conductivity (S/m)	1.772578
Ambient Temperature	22.6
Liquid Temperature	22.6

C. SAR Surface and Volume



Maximum location: X=2.00, Y=1.00 ; SAR Peak: 8.76 W/kg

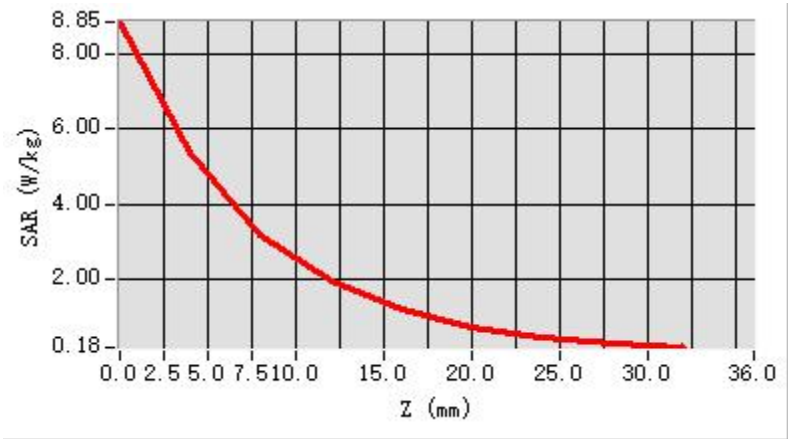
D. SAR 1g & 10g

SAR 10g (W/Kg)	2.448
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SAR 1g (W/Kg)	4.958
Variation (%)	-0.100
Horizontal validation criteria: minimum distance (mm)	14.142136
Vertical validation criteria: SAR ratio M2/M1 (%)	59.248201

E. Z Axis Scan

Z (mm)	0.00	4.00	8.00	12.00	16.00	20.00	24.00	28.00
SAR (W/Kg)	8.849	5.384	3.190	1.951	1.198	0.728	0.443	0.269



MEASUREMENT 7

Type: Validation measurement
Date of measurement: 2026-09-11
Measurement duration: 25 minutes 31 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.20; Calibrated: 2026-03-03

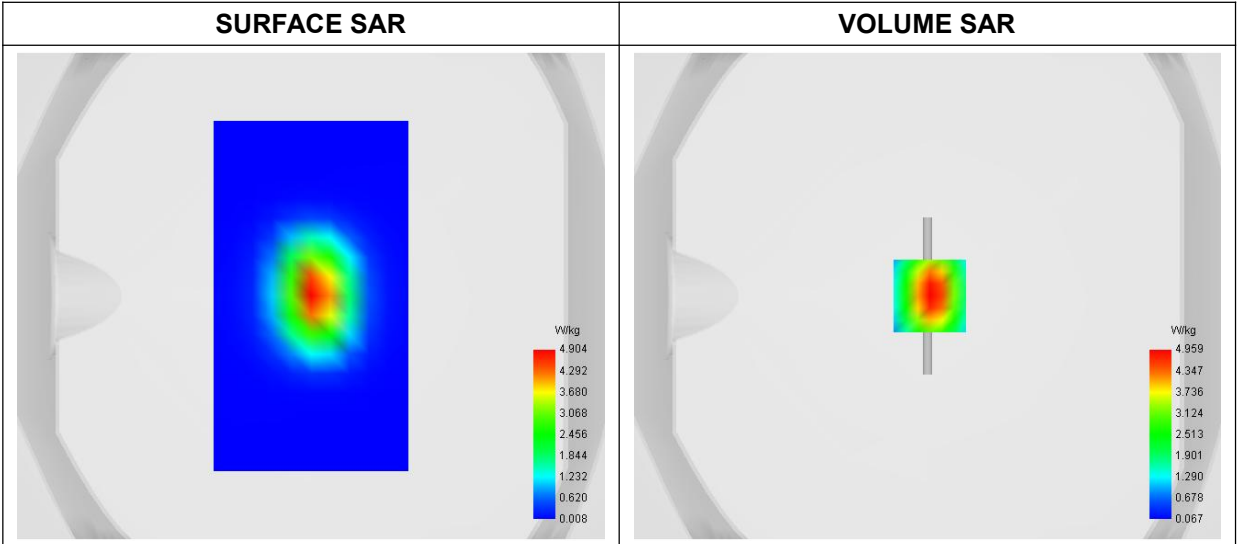
A. Experimental conditions

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

B. SAR Measurement Results

Frequency (MHz)	2450.000000
Relative Permittivity (real part)	40.154127
Conductivity (S/m)	1.824348
Ambient Temperature	22.6
Liquid Temperature	22.6

C. SAR Surface and Volume



Maximum location: X=1.00, Y=0.00 ; SAR Peak: 8.03 W/kg

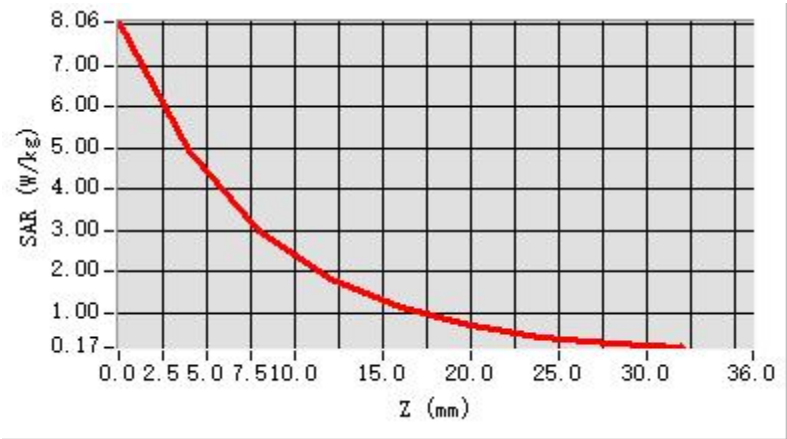
D. SAR 1g & 10g

SAR 10g (W/Kg)	2.392
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SAR 1g (W/Kg)	4.790
Variation (%)	-0.230
Horizontal validation criteria: minimum distance (mm)	14.142136
Vertical validation criteria: SAR ratio M2/M1 (%)	60.006980

E. Z Axis Scan

Z (mm)	0.00	4.00	8.00	12.00	16.00	20.00	24.00	28.00
SAR (W/Kg)	8.061	4.959	2.976	1.828	1.128	0.691	0.423	0.259



Annex B. Plots of SAR Measurement

MEASUREMENT 1

Type: Measurement (Complete)
Date of measurement: 2026-08-23
Measurement duration: 25 minutes 31 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.63; Calibrated: 2026-03-03

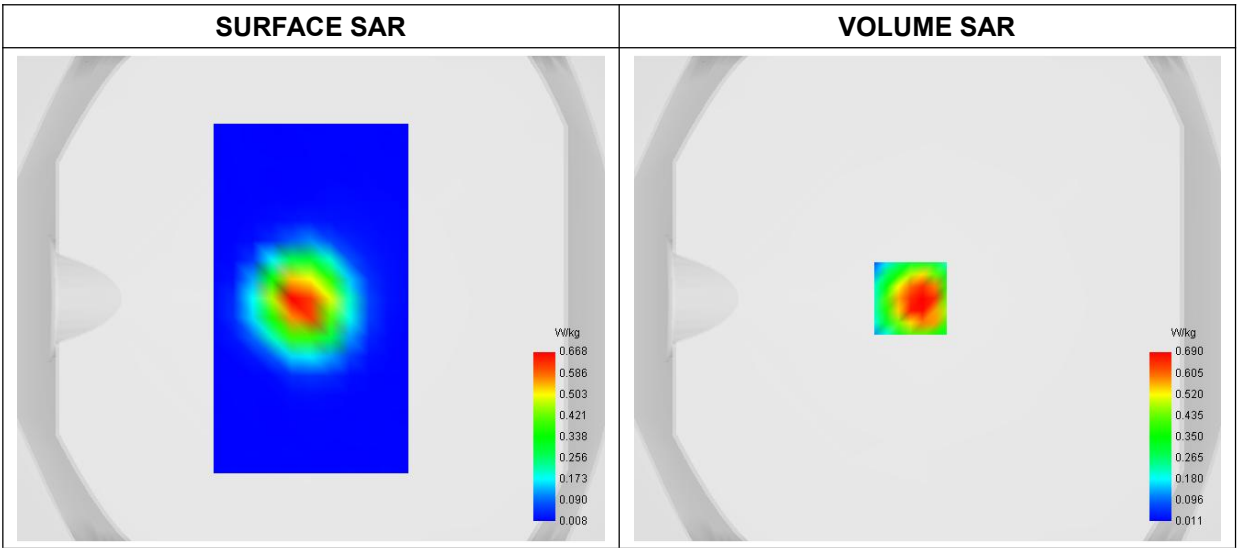
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=5mm dy=5mm dz=4mm
Phantom	Flat Plane
Device Position	Front
Band	LTE Cat-M1 Band 2
Channels	16QAM, 15MHz, 1RB, High
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	1905.000000
Relative Permittivity (real part)	40.862624
Conductivity (S/m)	1.414536
Ambient Temperature	22.5
Liquid Temperature	22.5

C. SAR Surface and Volume



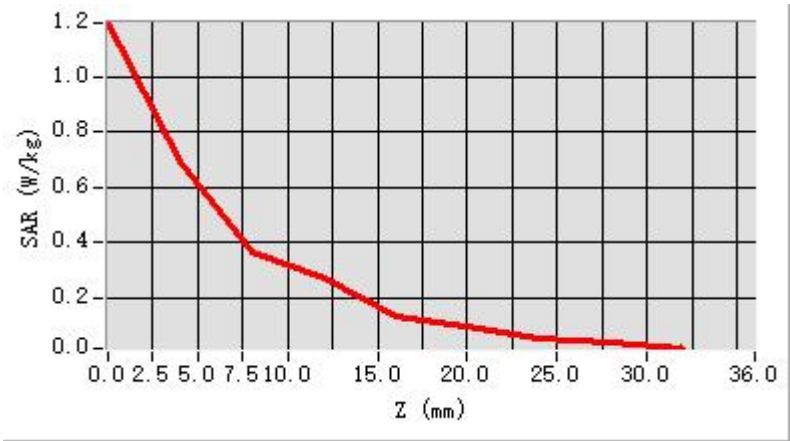
Maximum location: X=-7.00, Y=0.00 ; SAR Peak: 1.18 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.308
SAR 1g (W/Kg)	0.627
Variation (%)	5.000
Horizontal validation criteria: minimum distance (mm)	14.142136
Vertical validation criteria: SAR ratio M2/M1 (%)	65.112485

E. Z Axis Scan

Z (mm)	0.00	4.00	8.00	12.00	16.00	20.00	24.00	28.00
SAR (W/Kg)	1.195	0.690	0.364	0.270	0.134	0.100	0.051	0.038



MEASUREMENT 2

Type: Measurement (Complete)
Date of measurement: 2026-08-23
Measurement duration: 25 minutes 31 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.63; Calibrated: 2026-03-03

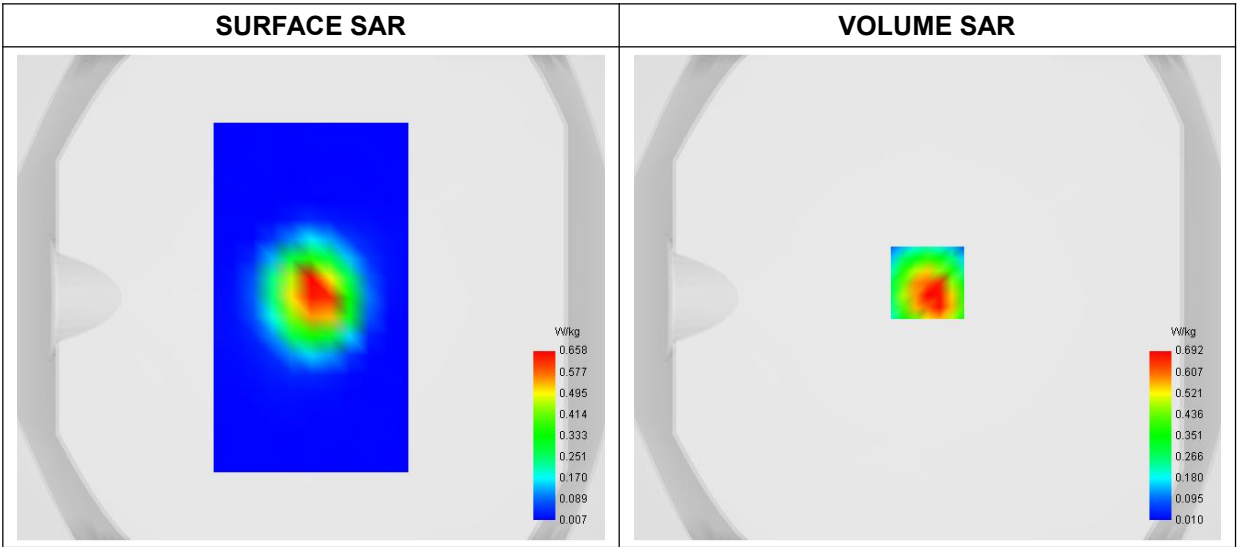
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=5mm dy=5mm dz=4mm
Phantom	Flat Plane
Device Position	Front
Band	LTE Cat-M1 Band 25
Channels	16QAM 15MHz 1RB, Middle
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	1882.500000
Relative Permittivity (real part)	40.863275
Conductivity (S/m)	1.413987
Ambient Temperature	22.5
Liquid Temperature	22.5

C. SAR Surface and Volume



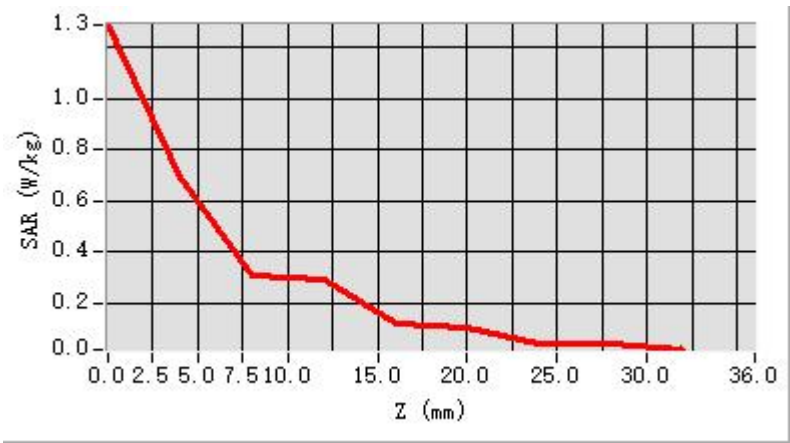
Maximum location: X=0.00, Y=6.00 ; SAR Peak: 1.12 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.320
SAR 1g (W/Kg)	0.644
Variation (%)	-2.490
Horizontal validation criteria: minimum distance (mm)	14.142136
Vertical validation criteria: SAR ratio M2/M1 (%)	64.752601

E. Z Axis Scan

Z (mm)	0.00	4.00	8.00	12.00	16.00	20.00	24.00	28.00
SAR (W/Kg)	1.290	0.692	0.305	0.289	0.117	0.101	0.042	0.039



MEASUREMENT 3

Type: Measurement (Complete)
Date of measurement: 2026-07-18
Measurement duration: 25 minutes 31 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.24; Calibrated: 2026-03-03

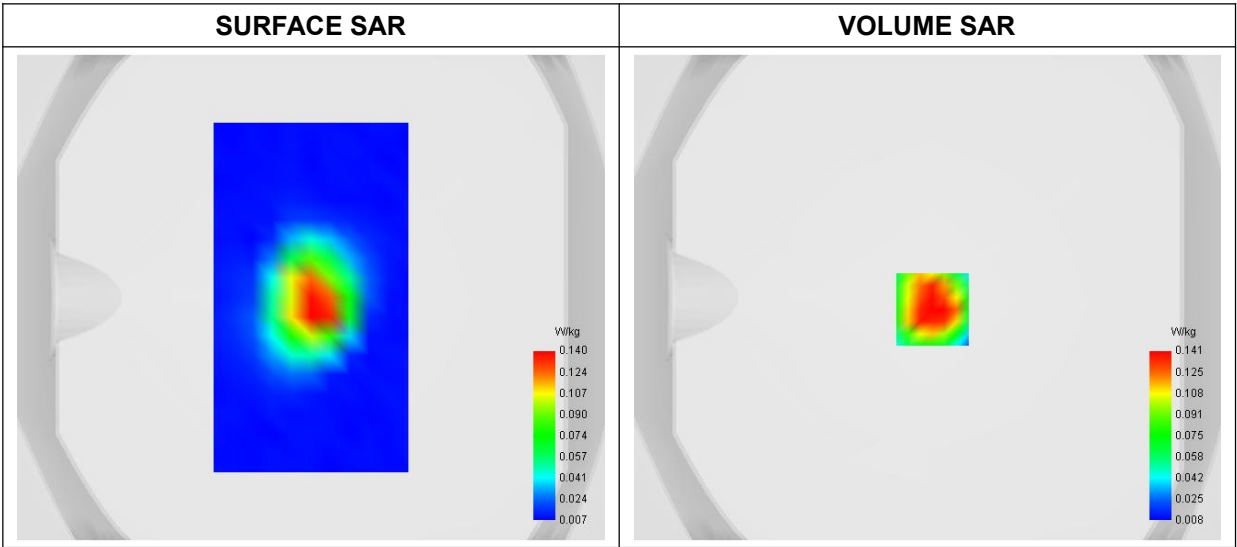
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=5mm dy=5mm dz=4mm
Phantom	Flat Plane
Device Position	Front
Band	LTE Cat-M1 Band 4
Channels	QPSK, 15MHz, 1RB, Low
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	1717.50000
Relative Permittivity (real part)	39.281667
Conductivity (S/m)	1.382182
Ambient Temperature	22.5
Liquid Temperature	22.5

C. SAR Surface and Volume



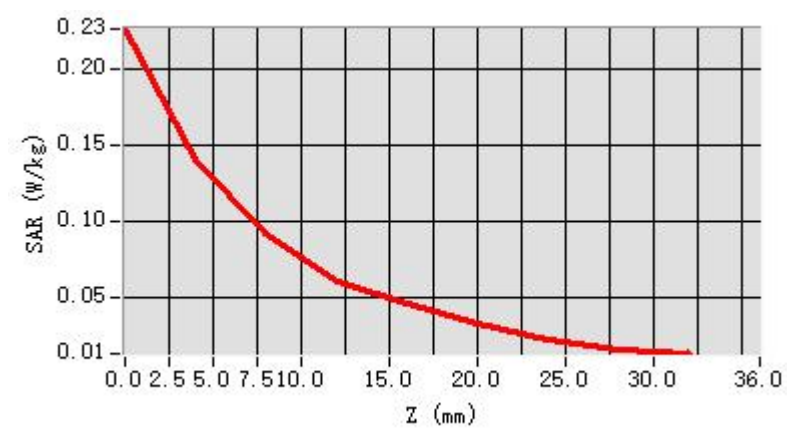
Maximum location: X=2.00, Y=-5.00 ; SAR Peak: 0.24 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.072
SAR 1g (W/Kg)	0.134
Variation (%)	-3.330
Horizontal validation criteria: minimum distance (mm)	15.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	65.122972

E. Z Axis Scan

Z (mm)	0.00	4.00	8.00	12.00	16.00	20.00	24.00	28.00
SAR (W/Kg)	0.227	0.141	0.092	0.060	0.047	0.033	0.023	0.016



MEASUREMENT 4

Type: Measurement (Complete)
Date of measurement: 2026-07-18
Measurement duration: 25 minutes 31 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.24; Calibrated: 2026-03-03

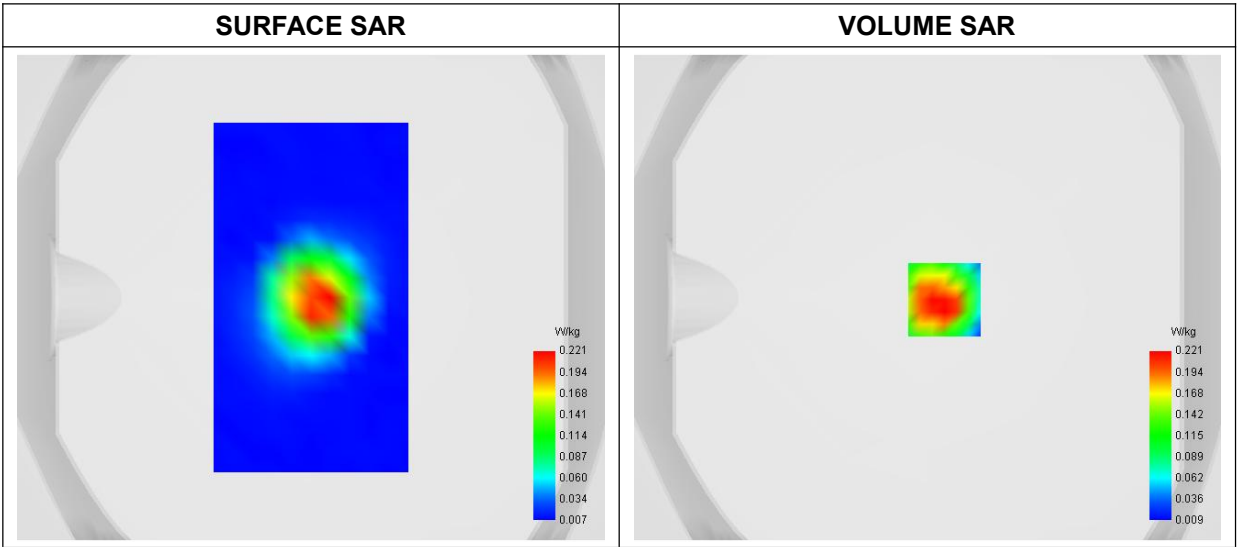
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=5mm dy=5mm dz=4mm
Phantom	Flat Plane
Device Position	Front
Band	LTE Cat-M1 Band 66
Channels	QPSK, 15MHz, 1RB, Low
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	1717.500000
Relative Permittivity (real part)	39.281667
Conductivity (S/m)	1.382182
Ambient Temperature	22.5
Liquid Temperature	22.5

C. SAR Surface and Volume



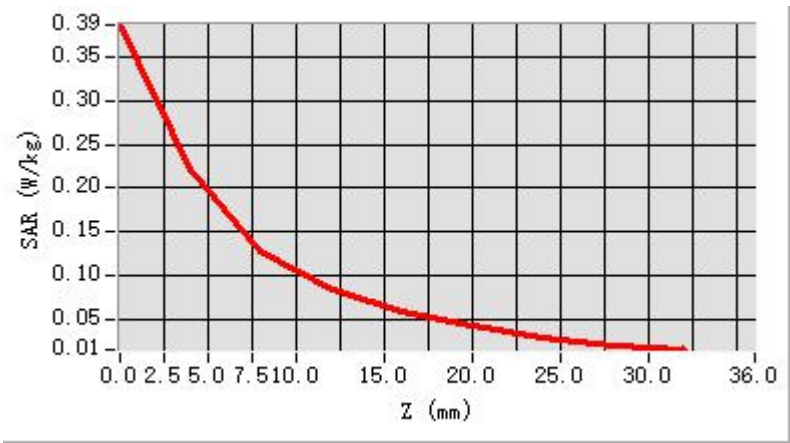
Maximum location: X=7.00, Y=-1.00 ; SAR Peak: 0.37 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.108
SAR 1g (W/Kg)	0.208
Variation (%)	-0.750
Horizontal validation criteria: minimum distance (mm)	11.180340
Vertical validation criteria: SAR ratio M2/M1 (%)	66.471240

E. Z Axis Scan

Z (mm)	0.00	4.00	8.00	12.00	16.00	20.00	24.00	28.00
SAR (W/Kg)	0.387	0.221	0.127	0.083	0.059	0.042	0.028	0.018



MEASUREMENT 5

Type: Measurement (Complete)
Date of measurement: 2026-05-28
Measurement duration: 15 minutes 50 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.45; Calibrated: 2026-03-03

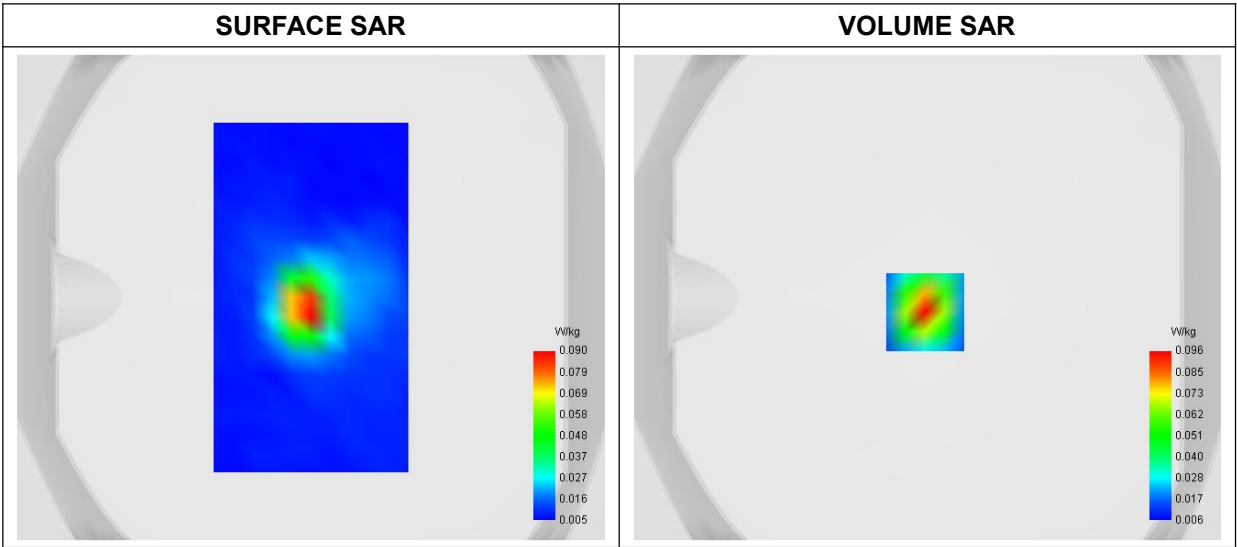
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Flat Plane
Device Position	Front
Band	LTE Cat-M1 Band 5
Channels	QPSK, 3MHz, 1RB, Middle
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	836.500000
Relative Permittivity (real part)	40.810245
Conductivity (S/m)	0.882451
Ambient Temperature	22.6
Liquid Temperature	22.6

C. SAR Surface and Volume



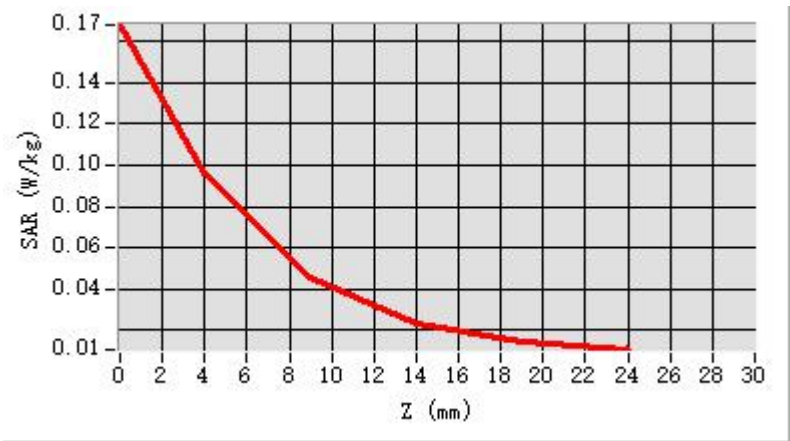
Maximum location: X=-1.00, Y=-6.00 ; SAR Peak: 0.17 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.041
SAR 1g (W/Kg)	0.087
Variation (%)	0.790

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.168	0.096	0.046	0.023	0.014



MEASUREMENT 6

Type: Measurement (Complete)
Date of measurement: 2026-05-28
Measurement duration: 15 minutes 50 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.45; Calibrated: 2026-03-03

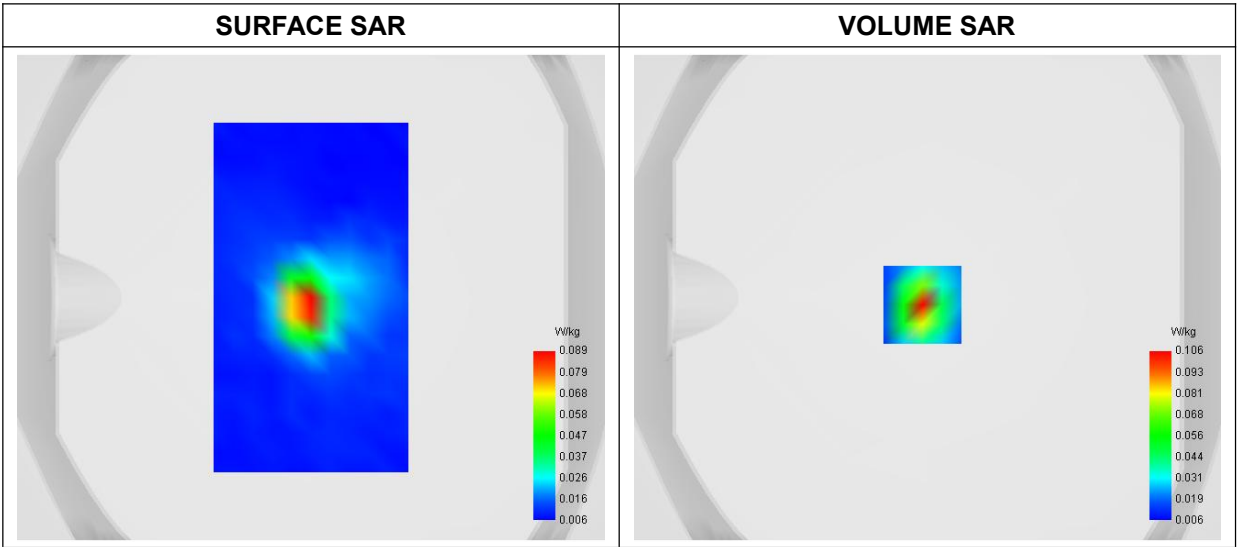
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Flat Plane
Device Position	Front
Band	LTE Cat-M1 Band 26(824-849MHz)
Channels	QPSK, 3MHz, 1RB, Middle
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	836.500000
Relative Permittivity (real part)	40.810245
Conductivity (S/m)	0.882451
Ambient Temperature	22.6
Liquid Temperature	22.6

C. SAR Surface and Volume



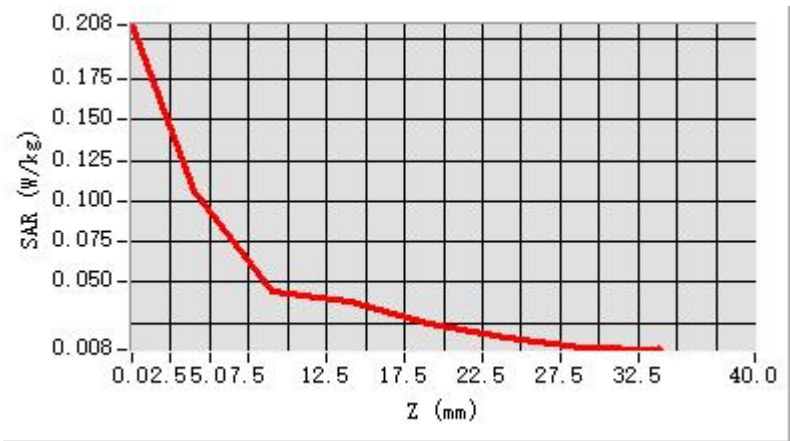
Maximum location: X=-2.00, Y=-3.00 ; SAR Peak: 0.20 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.041
SAR 1g (W/Kg)	0.095
Variation (%)	-1.550
Horizontal validation criteria: minimum distance (mm)	8.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	41.557587

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.208	0.106	0.044	0.038	0.025	0.016	0.010



MEASUREMENT 7

Type: Measurement (Complete)
Date of measurement: 2026-06-12
Measurement duration: 15 minutes 50 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.50; Calibrated: 2026-03-03

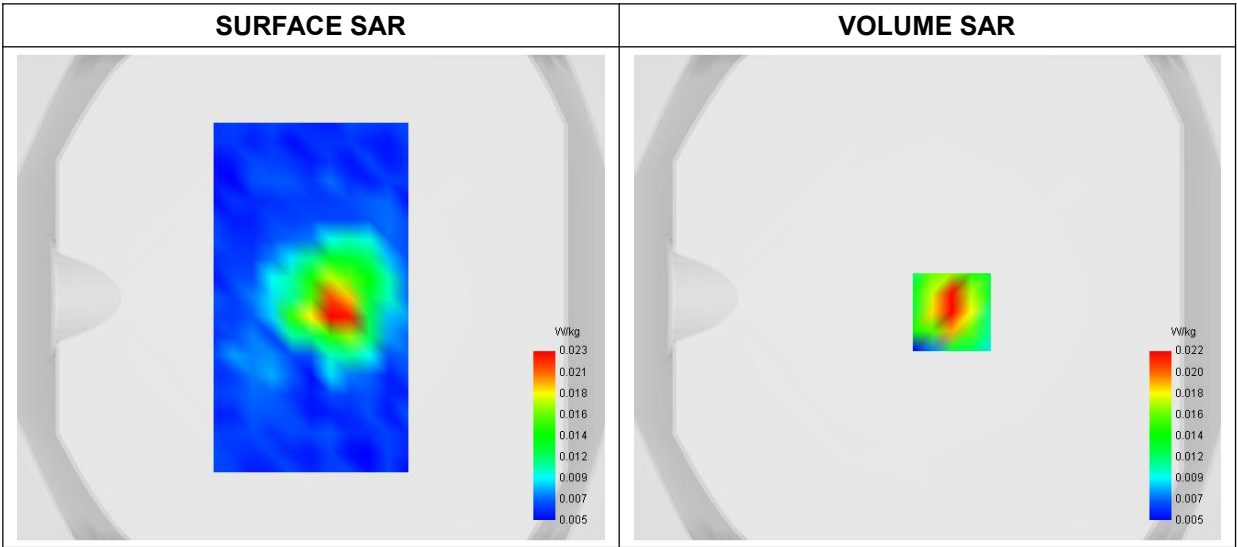
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Flat Plane
Device Position	Front
Band	LTE Cat-M1 Band 12
Channels	QPSK, 5MHz, 1RB, High
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	713.500000
Relative Permittivity (real part)	41.142668
Conductivity (S/m)	0.863696
Ambient Temperature	22.8
Liquid Temperature	22.8

C. SAR Surface and Volume



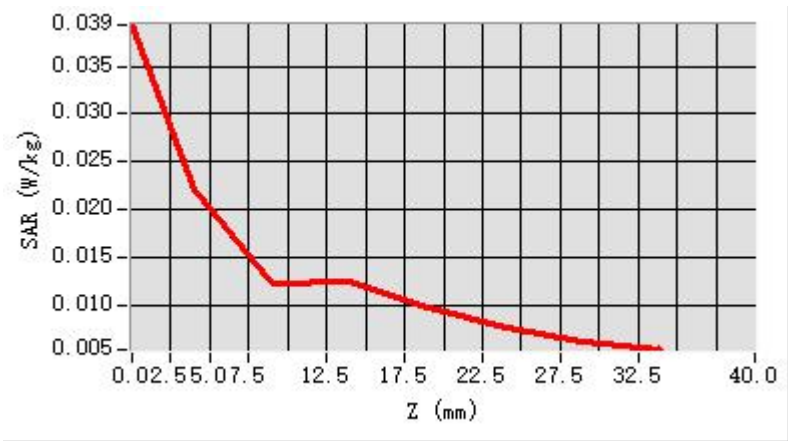
Maximum location: X=10.00, Y=-6.00 ; SAR Peak: 0.04 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.013
SAR 1g (W/Kg)	0.023
Variation (%)	4.879
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	59.285349

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.039	0.022	0.012	0.012	0.010	0.008	0.006



MEASUREMENT 8

Type: Measurement (Complete)
Date of measurement: 2026-06-12
Measurement duration: 15 minutes 50 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.50; Calibrated: 2026-03-03

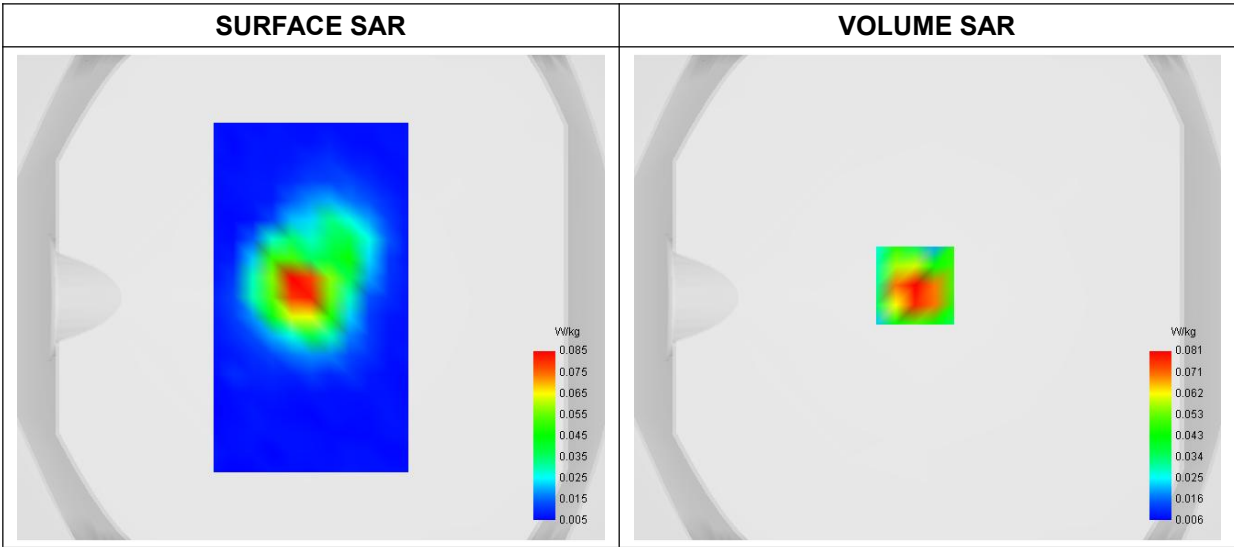
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Flat Plane
Device Position	Front
Band	LTE Cat-M1 Band 85
Channels	QPSK, 5MHz, 1RB, High
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	713.500000
Relative Permittivity (real part)	41.142668
Conductivity (S/m)	0.863696
Ambient Temperature	22.8
Liquid Temperature	22.8

C. SAR Surface and Volume



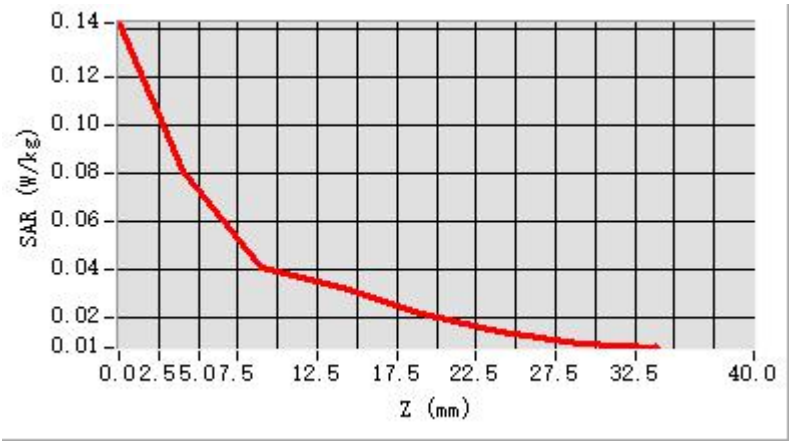
Maximum location: X=-5.00, Y=5.00 ; SAR Peak: 0.15 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.043
SAR 1g (W/Kg)	0.082
Variation (%)	1.060
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	55.569728

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.142	0.081	0.041	0.032	0.021	0.014	0.009



MEASUREMENT 9

Type: Measurement (Complete)
Date of measurement: 2026-06-12
Measurement duration: 15 minutes 50 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.50; Calibrated: 2026-03-03

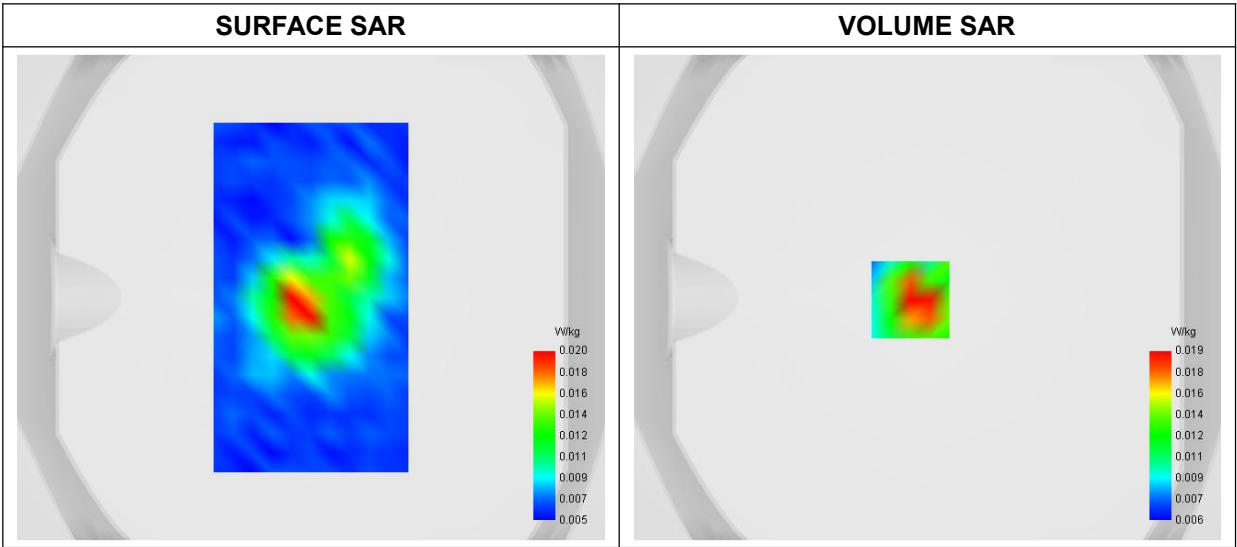
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Flat Plane
Device Position	Front
Band	LTE Cat-M1 Band 13
Channels	QPSK, 5MHz, 1RB, High
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	784.500000
Relative Permittivity (real part)	41.144866
Conductivity (S/m)	0.862696
Ambient Temperature	22.8
Liquid Temperature	22.8

C. SAR Surface and Volume



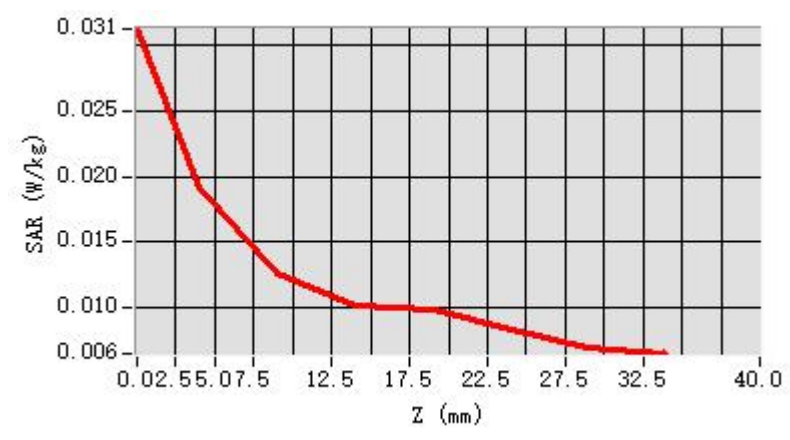
Maximum location: X=-7.00, Y=-1.00 ; SAR Peak: 0.03 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.013
SAR 1g (W/Kg)	0.020
Variation (%)	-2.810
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	69.554194

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.031	0.019	0.013	0.010	0.010	0.008	0.007



MEASUREMENT 10

Type: Measurement (Complete)
Date of measurement: 2026-05-28
Measurement duration: 15 minutes 50 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.45; Calibrated: 2026-03-03

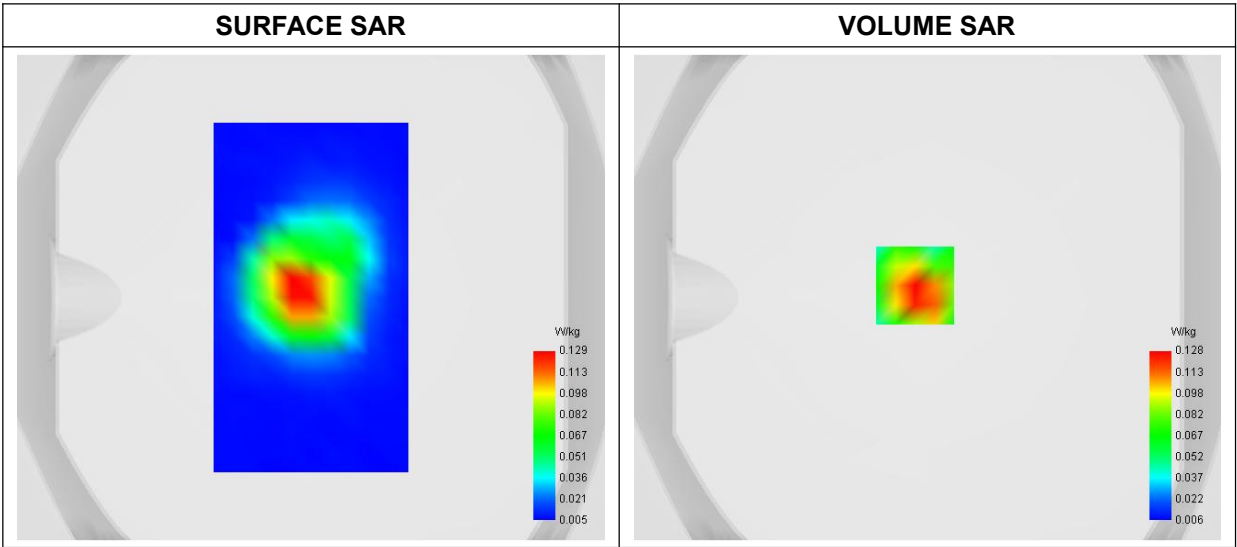
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Flat Plane
Device Position	Front
Band	LTE Cat-M1 Band 26(814-824MHz)
Channels	QPSK, 5MHz, 1RB, Middle
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	821.500000
Relative Permittivity (real part)	40.814866
Conductivity (S/m)	0.883696
Ambient Temperature	22.6
Liquid Temperature	22.6

C. SAR Surface and Volume



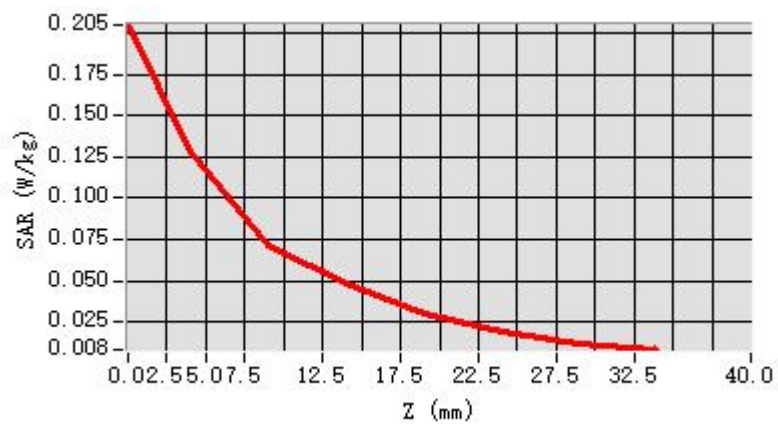
Maximum location: X=-5.00, Y=5.00 ; SAR Peak: 0.20 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.070
SAR 1g (W/Kg)	0.126
Variation (%)	-0.170
Horizontal validation criteria: minimum distance (mm)	17.888544
Vertical validation criteria: SAR ratio M2/M1 (%)	55.899366

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.205	0.128	0.072	0.048	0.030	0.019	0.012



MEASUREMENT 11

Type: Measurement (Complete)
Date of measurement: 2026-05-28
Measurement duration: 15 minutes 50 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.45; Calibrated: 2026-03-03

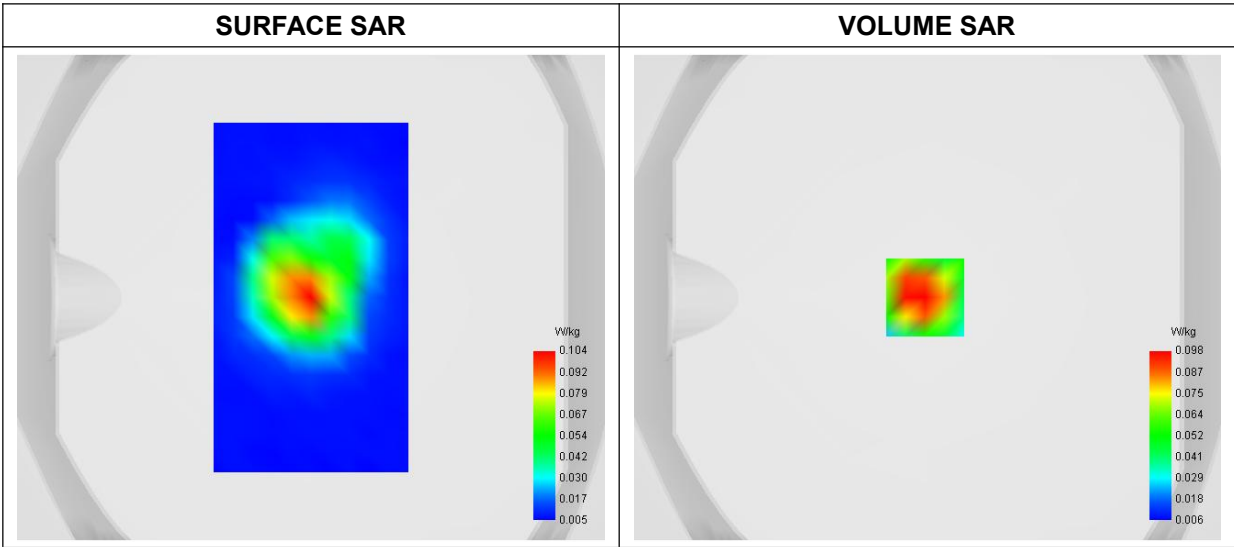
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Flat Plane
Device Position	Front
Band	LTE Cat-M1 Band 26(824MHz)
Channels	QPSK, 1.4MHz, 1RB, Middle
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	824.000000
Relative Permittivity (real part)	40.814596
Conductivity (S/m)	0.884571
Ambient Temperature	22.6
Liquid Temperature	22.6

C. SAR Surface and Volume



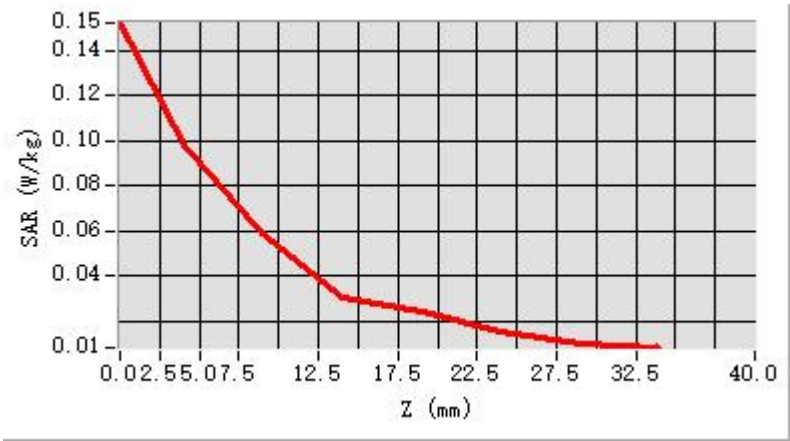
Maximum location: X=-1.00, Y=0.00 ; SAR Peak: 0.17 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.054
SAR 1g (W/Kg)	0.099
Variation (%)	0.860
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	60.398300

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.152	0.098	0.059	0.030	0.024	0.016	0.010



MEASUREMENT 12

Type: Measurement (Complete)
Date of measurement: 2026-08-23
Measurement duration: 25 minutes 31 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.63; Calibrated: 2026-03-03

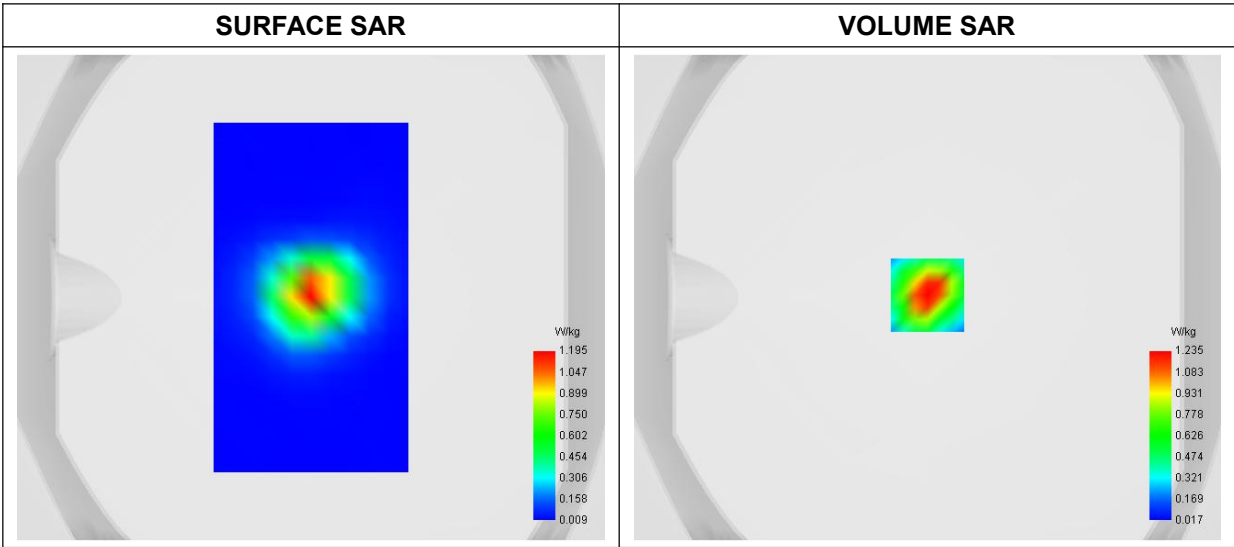
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=5mm dy=5mm dz=4mm
Phantom	Flat Plane
Device Position	Bottom
Band	LTE NB-IOT Band 2
Channels	PI/2-BPSK, 15kHz, High
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	1909.800000
Relative Permittivity (real part)	40.862624
Conductivity (S/m)	1.413695
Ambient Temperature	22.5
Liquid Temperature	22.5

C. SAR Surface and Volume



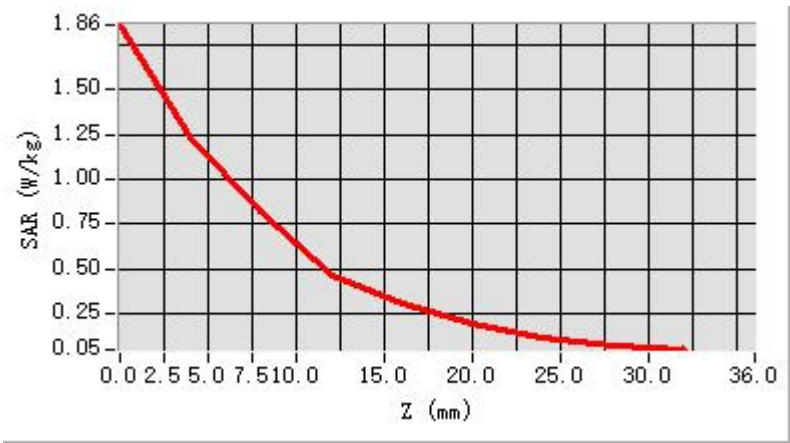
Maximum location: X=0.00, Y=1.00 ; SAR Peak: 2.02 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.544
SAR 1g (W/Kg)	1.115
Variation (%)	-0.130
Horizontal validation criteria: minimum distance (mm)	11.180340
Vertical validation criteria: SAR ratio M2/M1 (%)	66.680733

E. Z Axis Scan

Z (mm)	0.00	4.00	8.00	12.00	16.00	20.00	24.00	28.00
SAR (W/Kg)	1.859	1.235	0.824	0.458	0.306	0.191	0.120	0.075



MEASUREMENT 13

Type: Measurement (Complete)
Date of measurement: 2026-08-23
Measurement duration: 25 minutes 31 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.63; Calibrated: 2026-03-03

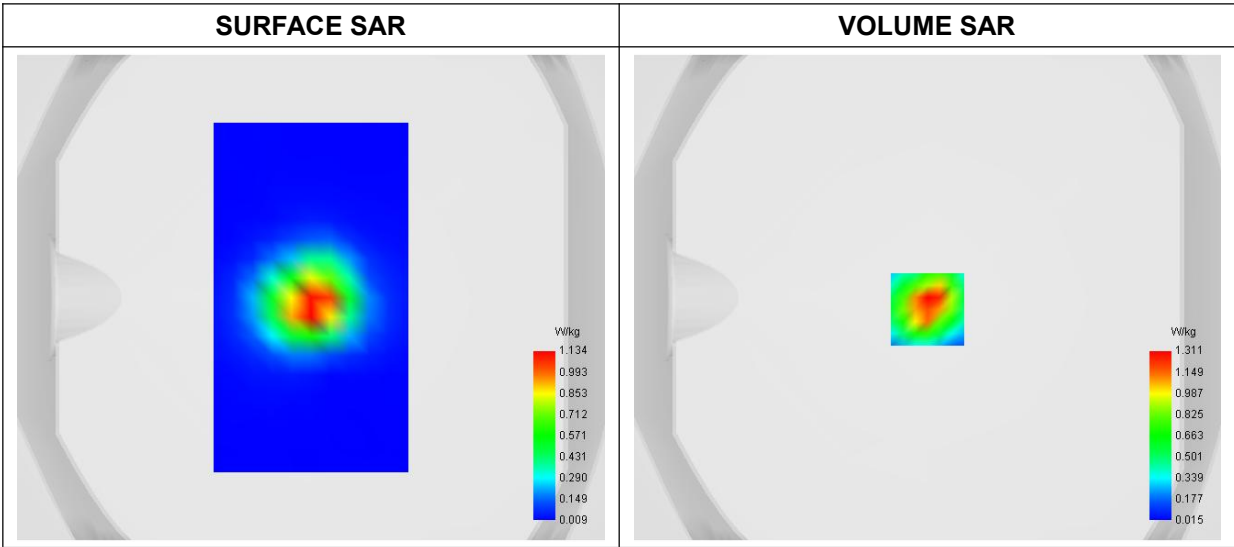
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=5mm dy=5mm dz=4mm
Phantom	Flat Plane
Device Position	Bottom
Band	LTE Cat NB2 Band 25
Channels	Pi/2-BPSK 15kHz, High
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	1914.800000
Relative Permittivity (real part)	40.862275
Conductivity (S/m)	1.413587
Ambient Temperature	22.5
Liquid Temperature	22.5

C. SAR Surface and Volume



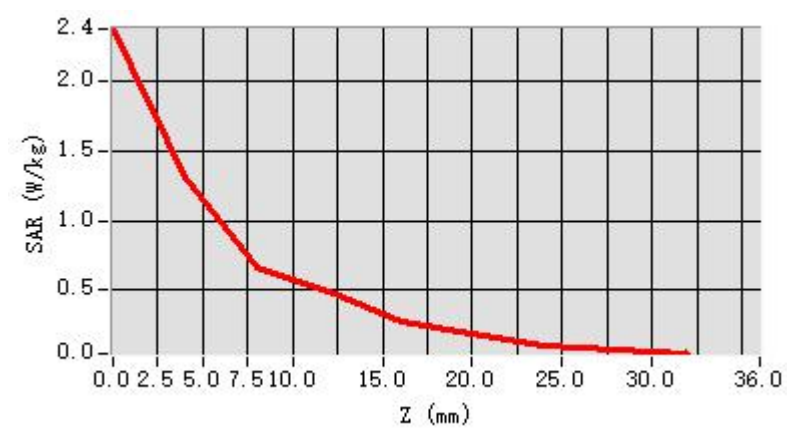
Maximum location: X=0.00, Y=-5.00 ; SAR Peak: 2.20 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.559
SAR 1g (W/Kg)	1.164
Variation (%)	0.680
Horizontal validation criteria: minimum distance (mm)	11.180340
Vertical validation criteria: SAR ratio M2/M1 (%)	57.942850

E. Z Axis Scan

Z (mm)	0.00	4.00	8.00	12.00	16.00	20.00	24.00	28.00
SAR (W/Kg)	2.379	1.311	0.663	0.485	0.269	0.185	0.104	0.070



MEASUREMENT 14

Type: Measurement (Complete)
Date of measurement: 2026-07-18
Measurement duration: 25 minutes 31 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.24; Calibrated: 2026-03-03

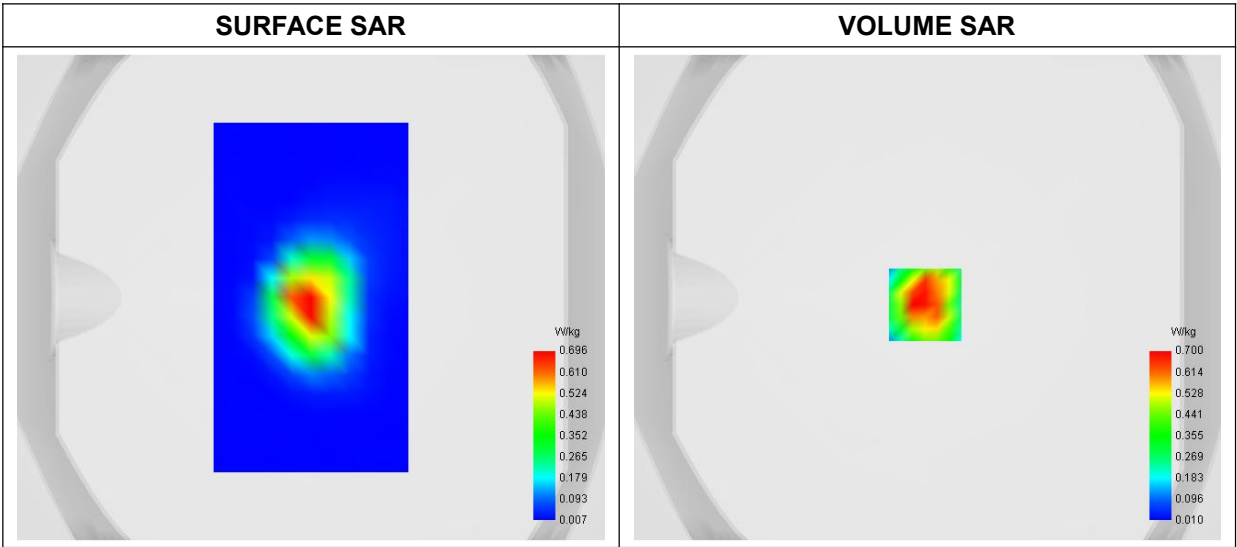
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=5mm dy=5mm dz=4mm
Phantom	Flat Plane
Device Position	Front
Band	LTE NB-IOT Band 4
Channels	Pi/2-BPSK 15kHz, Low
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	1710.200000
Relative Permittivity (real part)	39.281667
Conductivity (S/m)	1.382182
Ambient Temperature	22.5
Liquid Temperature	22.5

C. SAR Surface and Volume



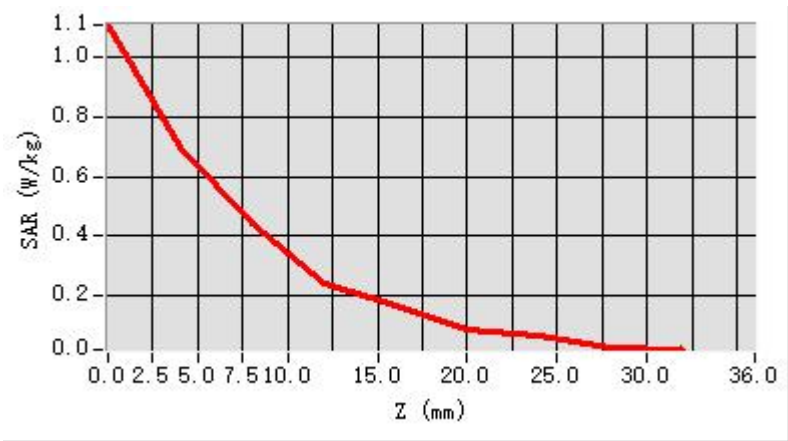
Maximum location: X=-1.00, Y=-3.00 ; SAR Peak: 1.24 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.325
SAR 1g (W/Kg)	0.651
Variation (%)	-2.150
Horizontal validation criteria: minimum distance (mm)	10.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	68.602739

E. Z Axis Scan

Z (mm)	0.00	4.00	8.00	12.00	16.00	20.00	24.00	28.00
SAR (W/Kg)	1.104	0.700	0.445	0.242	0.166	0.087	0.067	0.031



MEASUREMENT 15

Type: Measurement (Complete)
Date of measurement: 2026-07-18
Measurement duration: 25 minutes 31 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.24; Calibrated: 2026-03-03

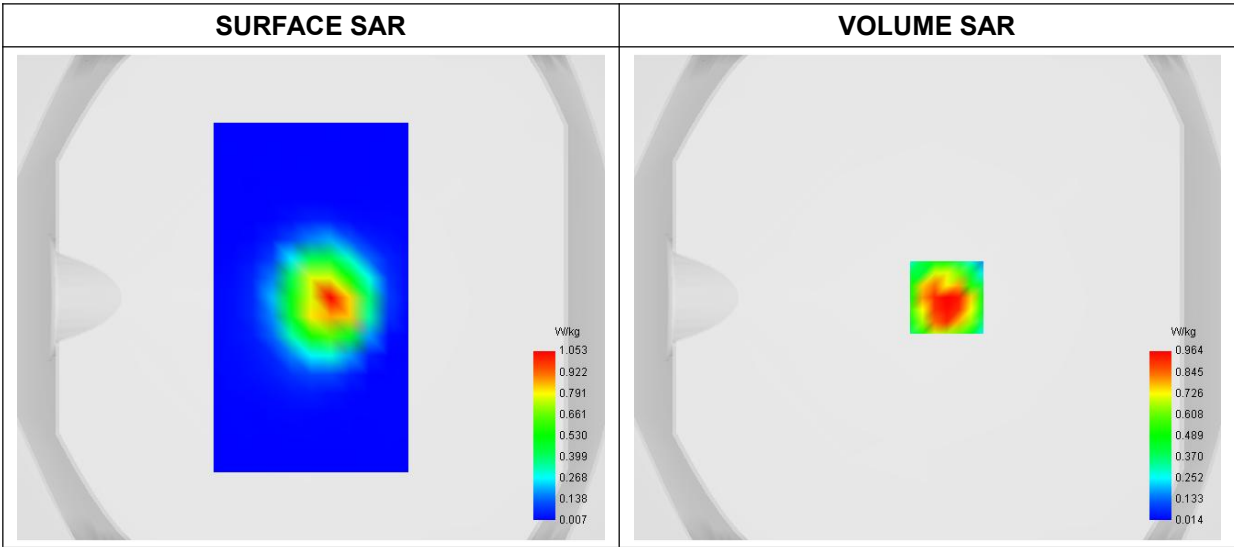
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=5mm dy=5mm dz=4mm
Phantom	Flat Plane
Device Position	Front
Band	LTE NB-IOT Band 66
Channels	Pi/2-BPSK 15kHz, High
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	1779.800000
Relative Permittivity (real part)	39.282567
Conductivity (S/m)	1.382182
Ambient Temperature	22.5
Liquid Temperature	22.5

C. SAR Surface and Volume



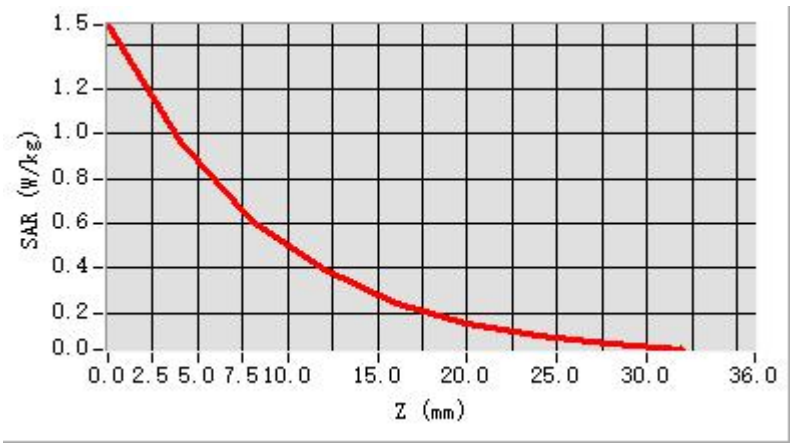
Maximum location: X=8.00, Y=0.00 ; SAR Peak: 1.49 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.482
SAR 1g (W/Kg)	0.888
Variation (%)	0.290
Horizontal validation criteria: minimum distance (mm)	14.142136
Vertical validation criteria: SAR ratio M2/M1 (%)	70.098531

E. Z Axis Scan

Z (mm)	0.00	4.00	8.00	12.00	16.00	20.00	24.00	28.00
SAR (W/Kg)	1.486	0.964	0.607	0.394	0.243	0.153	0.097	0.061



MEASUREMENT 16

Type: Measurement (Complete)
Date of measurement: 2026-05-28
Measurement duration: 15 minutes 50 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.50; Calibrated: 2026-03-03

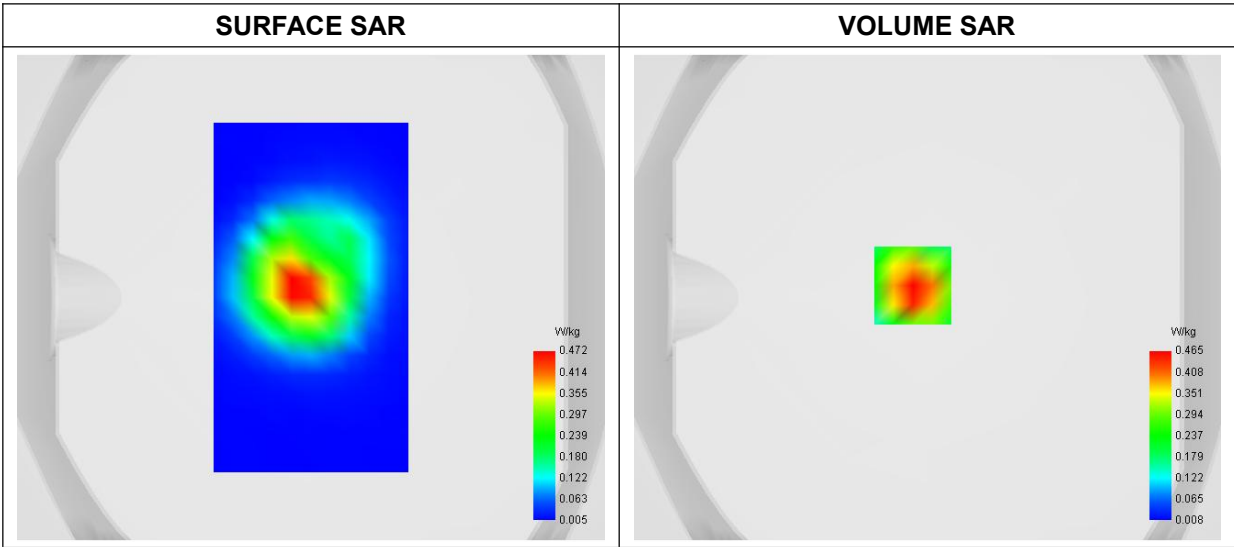
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Flat Plane
Device Position	Front
Band	LTE NB-IOT Band 5
Channels	Pi/4-QPSK,15kHz, Low
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	836.500000
Relative Permittivity (real part)	40.814866
Conductivity (S/m)	0.903696
Ambient Temperature	22.8
Liquid Temperature	22.8

C. SAR Surface and Volume



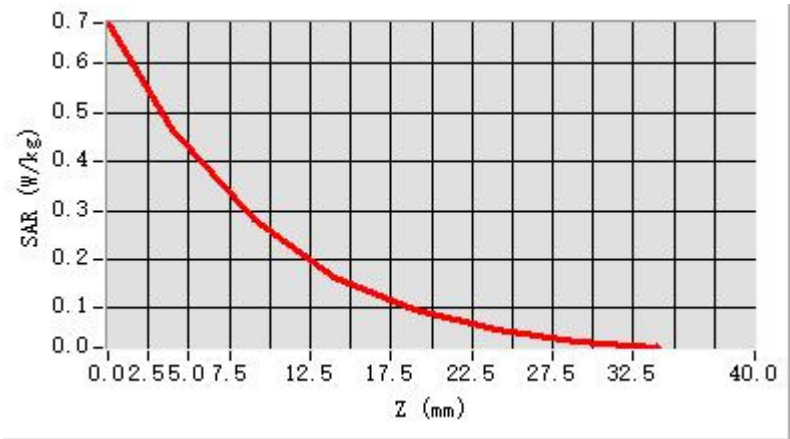
Maximum location: X=-6.00, Y=5.00 ; SAR Peak: 0.70 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.243
SAR 1g (W/Kg)	0.443
Variation (%)	0.470

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.684	0.465	0.280	0.163	0.096	0.057	0.034



MEASUREMENT 17

Type: Measurement (Complete)
Date of measurement: 2026-05-28
Measurement duration: 15 minutes 50 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.50; Calibrated: 2026-03-03

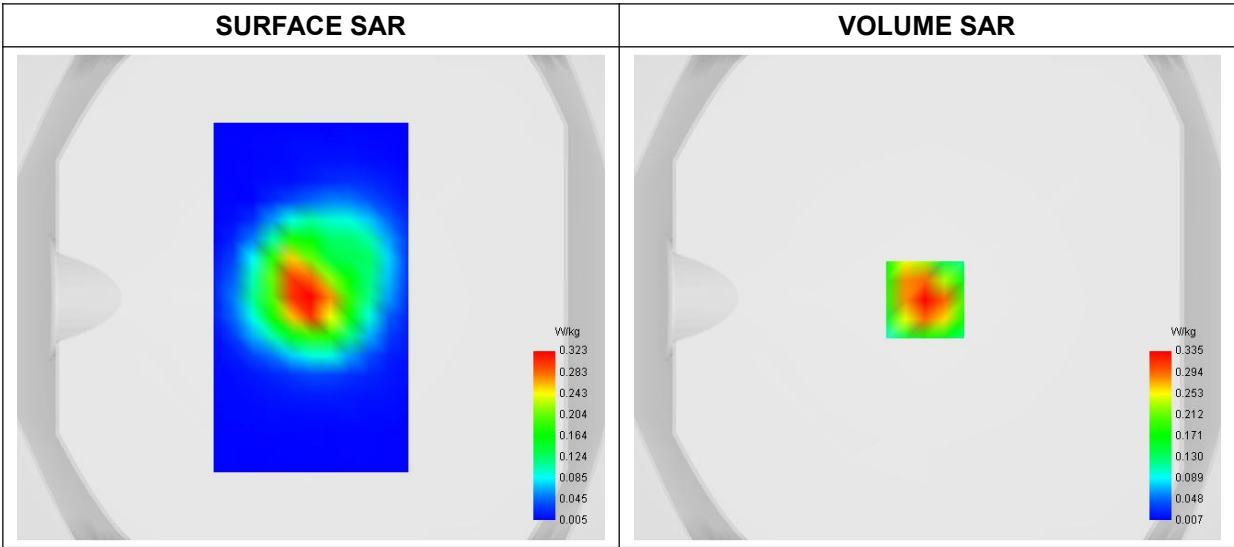
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Flat Plane
Device Position	Front
Band	LTE NB-IOT Band 26(824-849MHz)
Channels	Pi/4-QPSK,15kHz, Low
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	836.500000
Relative Permittivity (real part)	40.810245
Conductivity (S/m)	0.882451
Ambient Temperature	22.6
Liquid Temperature	22.6

C. SAR Surface and Volume



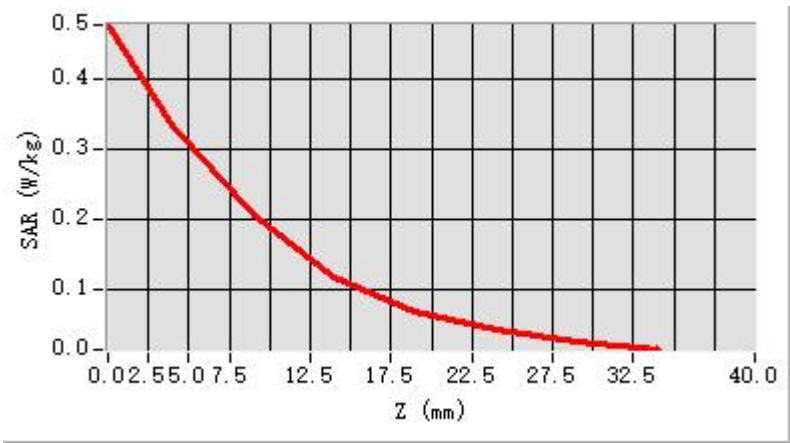
Maximum location: X=-1.00, Y=-1.00 ; SAR Peak: 0.49 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.173
SAR 1g (W/Kg)	0.314
Variation (%)	2.410
Horizontal validation criteria: minimum distance (mm)	17.888544
Vertical validation criteria: SAR ratio M2/M1 (%)	61.815665

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.479	0.335	0.207	0.116	0.069	0.041	0.024



MEASUREMENT 18

Type: Measurement (Complete)
Date of measurement: 2026-06-12
Measurement duration: 15 minutes 50 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.50; Calibrated: 2026-03-03

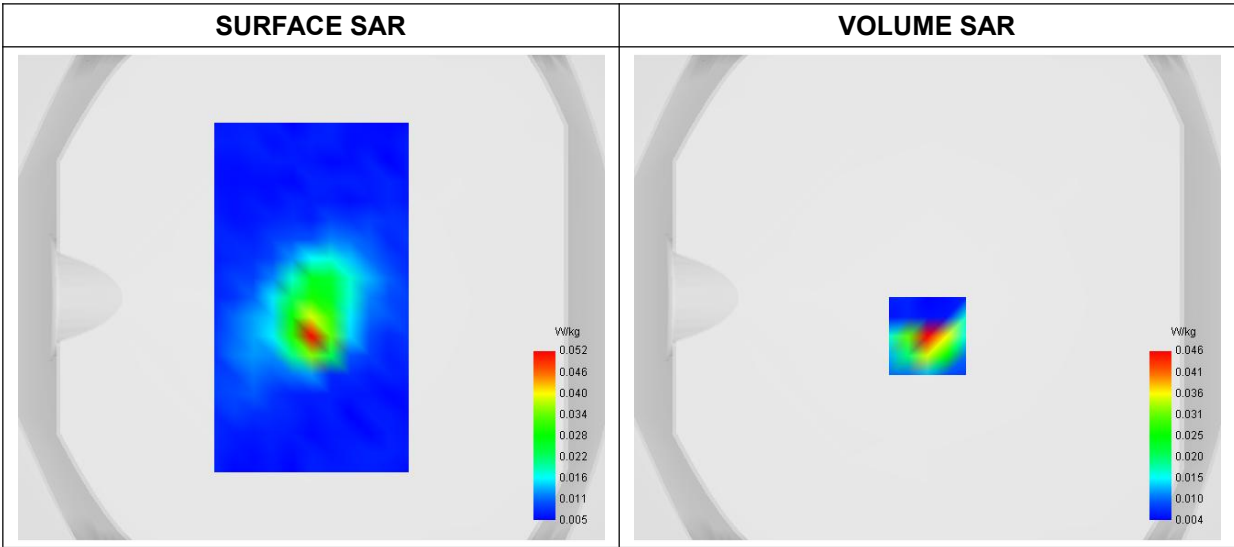
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Flat Plane
Device Position	Top
Band	LTE NB-IOT Band 12
Channels	Pi/4-QPSK,15kHz, Low
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	699.200000
Relative Permittivity (real part)	41.144866
Conductivity (S/m)	0.863696
Ambient Temperature	22.8
Liquid Temperature	22.6

C. SAR Surface and Volume



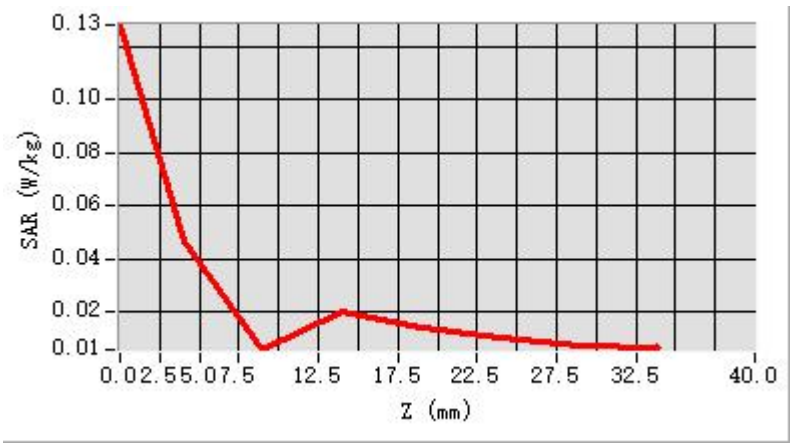
Maximum location: X=0.00, Y=-16.00 ; SAR Peak: 0.13 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.019
SAR 1g (W/Kg)	0.052
Variation (%)	-4.230
Horizontal validation criteria: minimum distance (mm)	8.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	41.538700

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.128	0.046	0.006	0.020	0.015	0.010	0.007



MEASUREMENT 19

Type: Measurement (Complete)
Date of measurement: 2026-06-12
Measurement duration: 15 minutes 50 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.50; Calibrated: 2026-03-03

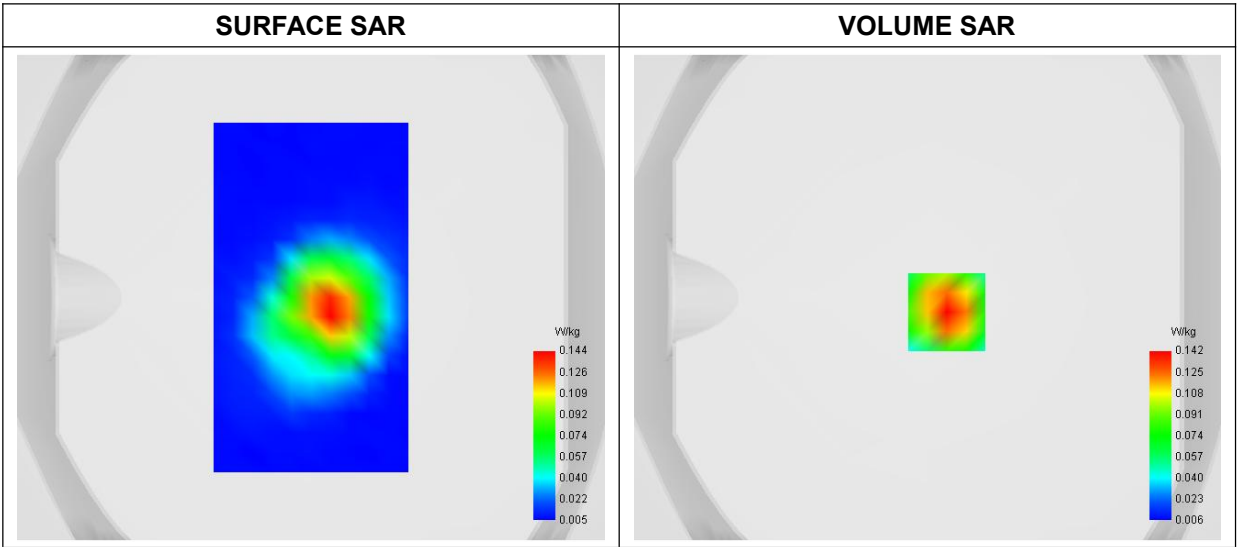
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Flat Plane
Device Position	Back
Band	LTE NB-IOT Band 13
Channels	Pi/4-QPSK,15kHz, Low
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	777.200000
Relative Permittivity (real part)	41.142695
Conductivity (S/m)	0.861145
Ambient Temperature	22.8
Liquid Temperature	22.8

C. SAR Surface and Volume



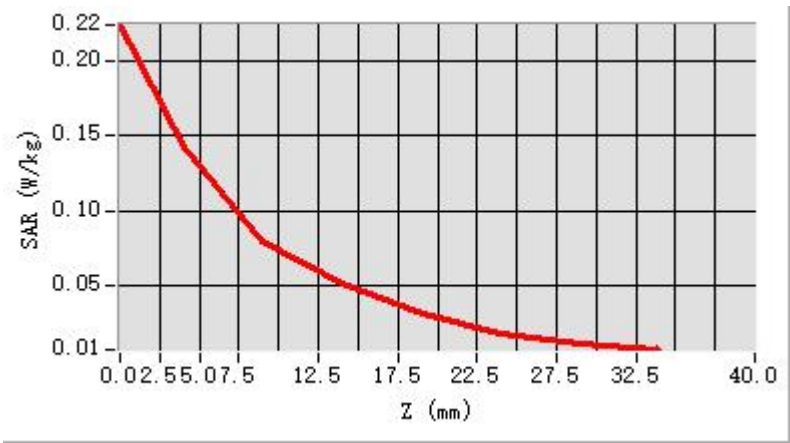
Maximum location: X=8.00, Y=-6.00 ; SAR Peak: 0.23 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.075
SAR 1g (W/Kg)	0.136
Variation (%)	-0.040
Horizontal validation criteria: minimum distance (mm)	17.888544
Vertical validation criteria: SAR ratio M2/M1 (%)	56.437394

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.223	0.142	0.080	0.051	0.031	0.019	0.011



MEASUREMENT 20

Type: Measurement (Complete)
Date of measurement: 2026-06-12
Measurement duration: 25 minutes 31 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.50; Calibrated: 2026-03-03

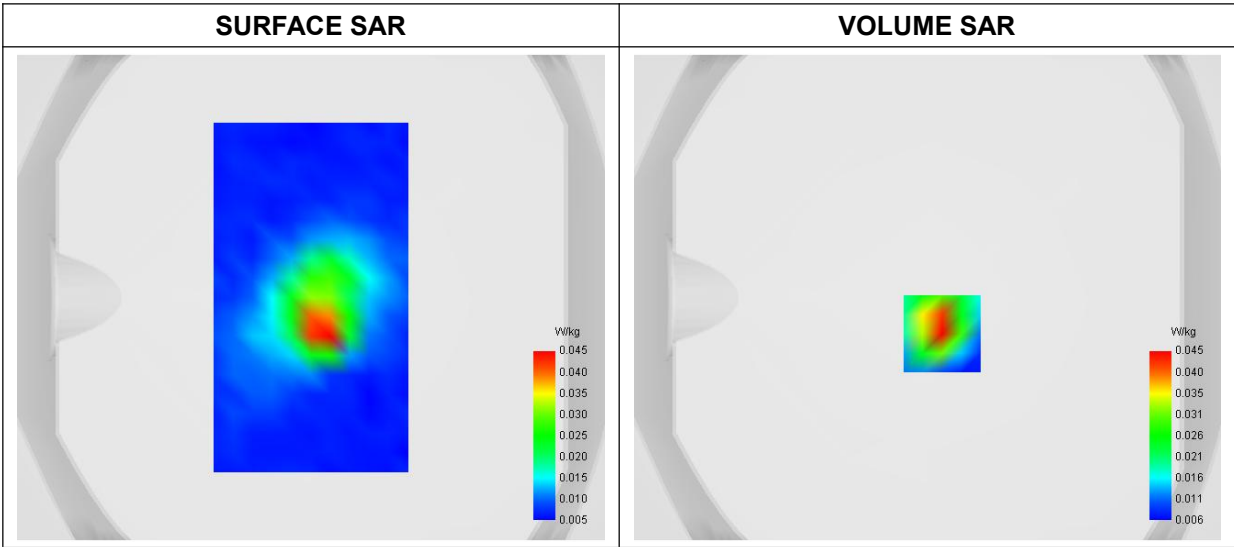
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Flat Plane
Device Position	Top
Band	LTE NB-IOT Band 17
Channels	Pi/4-QPSK,15kHz, Low
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	704.200000
Relative Permittivity (real part)	41.144534
Conductivity (S/m)	0.862458
Ambient Temperature	22.8
Liquid Temperature	22.8

C. SAR Surface and Volume



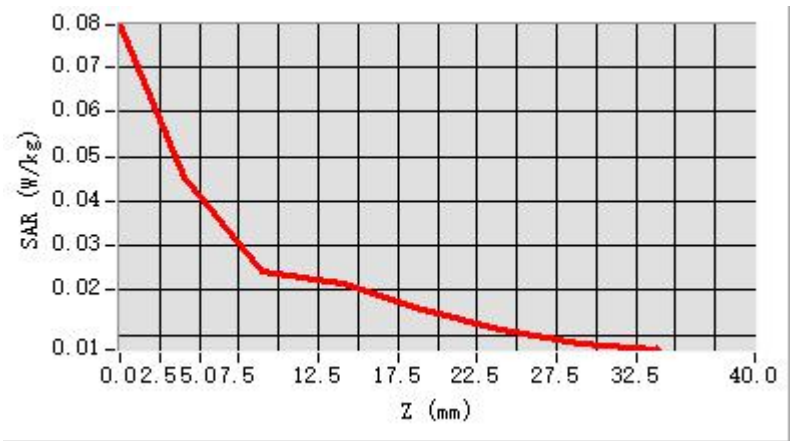
Maximum location: X=6.00, Y=-15.00 ; SAR Peak: 0.08 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.024
SAR 1g (W/Kg)	0.046
Variation (%)	-1.820
Horizontal validation criteria: minimum distance (mm)	11.313708
Vertical validation criteria: SAR ratio M2/M1 (%)	53.203607

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.080	0.045	0.024	0.021	0.016	0.011	0.008



MEASUREMENT 21

Type: Measurement (Complete)
Date of measurement: 2026-06-12
Measurement duration: 15 minutes 50 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.50; Calibrated: 2026-03-03

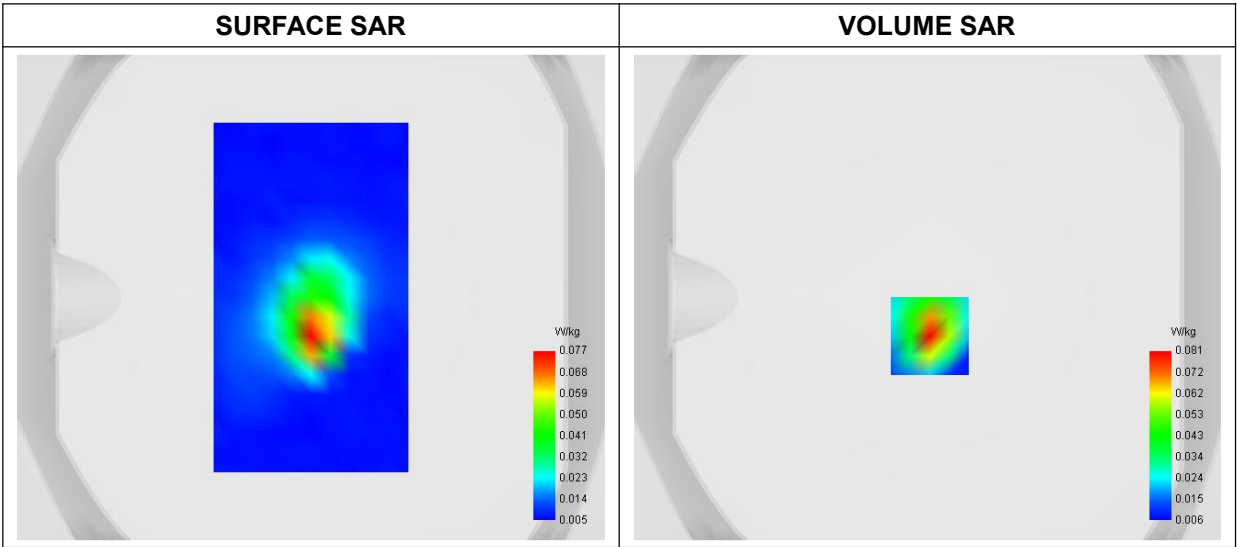
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Flat Plane
Device Position	Top
Band	LTE NB-IOT Band 85
Channels	QPSK, 5MHz, 1RB, Low
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	699.200000
Relative Permittivity (real part)	41.142668
Conductivity (S/m)	0.863696
Ambient Temperature	22.8
Liquid Temperature	22.8

C. SAR Surface and Volume



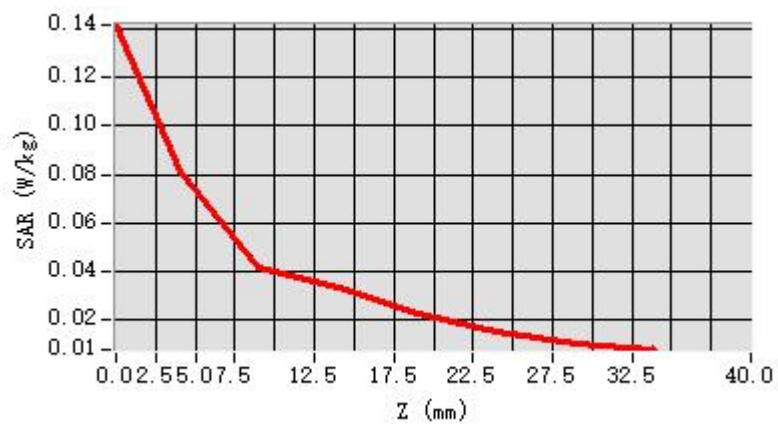
Maximum location: X=1.00, Y=-16.00 ; SAR Peak: 0.14 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.038
SAR 1g (W/Kg)	0.077
Variation (%)	-1.320
Horizontal validation criteria: minimum distance (mm)	11.313708
Vertical validation criteria: SAR ratio M2/M1 (%)	51.586257

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.142	0.081	0.042	0.033	0.022	0.015	0.010



MEASUREMENT 22

Type: Measurement (Complete)
Date of measurement: 2026-05-28
Measurement duration: 15 minutes 50 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.45; Calibrated: 2026-03-03

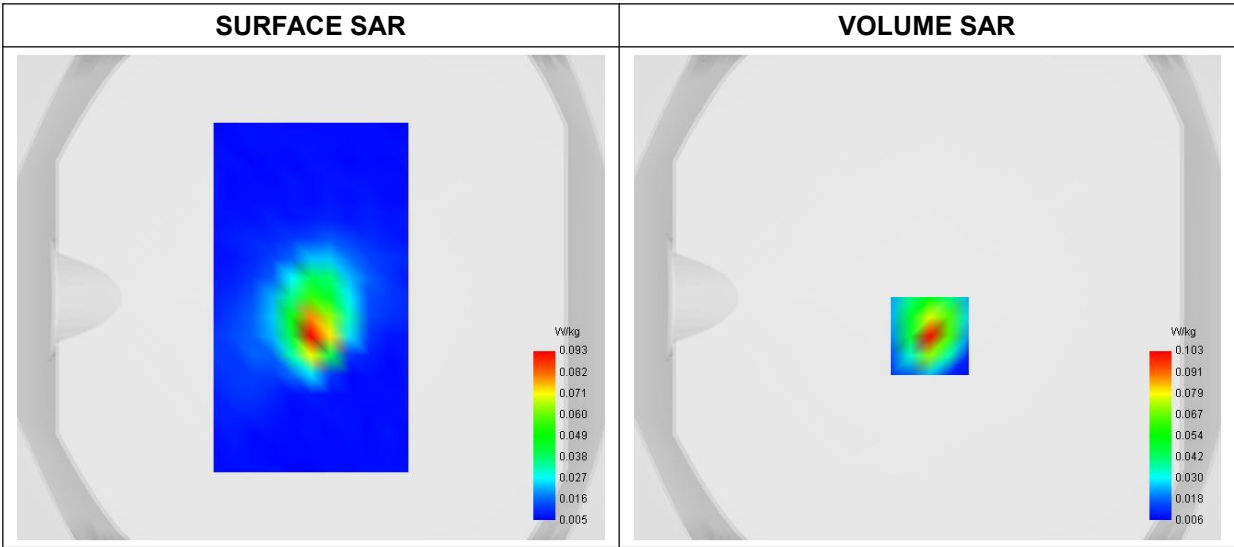
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Flat Plane
Device Position	Top
Band	LTE Cat NB2 Band 26(814-824MHz)
Channels	Pi/2-BPSK,15kHz, High
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	823.800000
Relative Permittivity (real part)	40.814125
Conductivity (S/m)	0.884145
Ambient Temperature	22.6
Liquid Temperature	22.6

C. SAR Surface and Volume



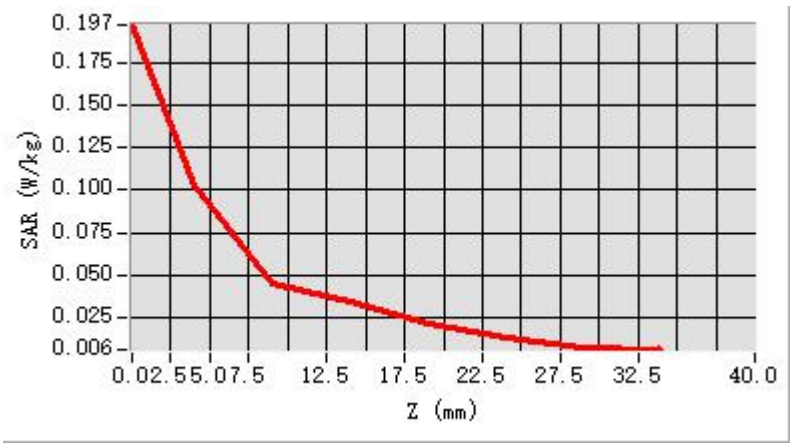
Maximum location: X=1.00, Y=-16.00 ; SAR Peak: 0.19 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.042
SAR 1g (W/Kg)	0.094
Variation (%)	-2.580
Horizontal validation criteria: minimum distance (mm)	8.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	43.314643

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.197	0.103	0.045	0.035	0.021	0.013	0.008



MEASUREMENT 23

Type: Measurement (Complete)
Date of measurement: 2026-05-28
Measurement duration: 15 minutes 50 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.45; Calibrated: 2026-03-03

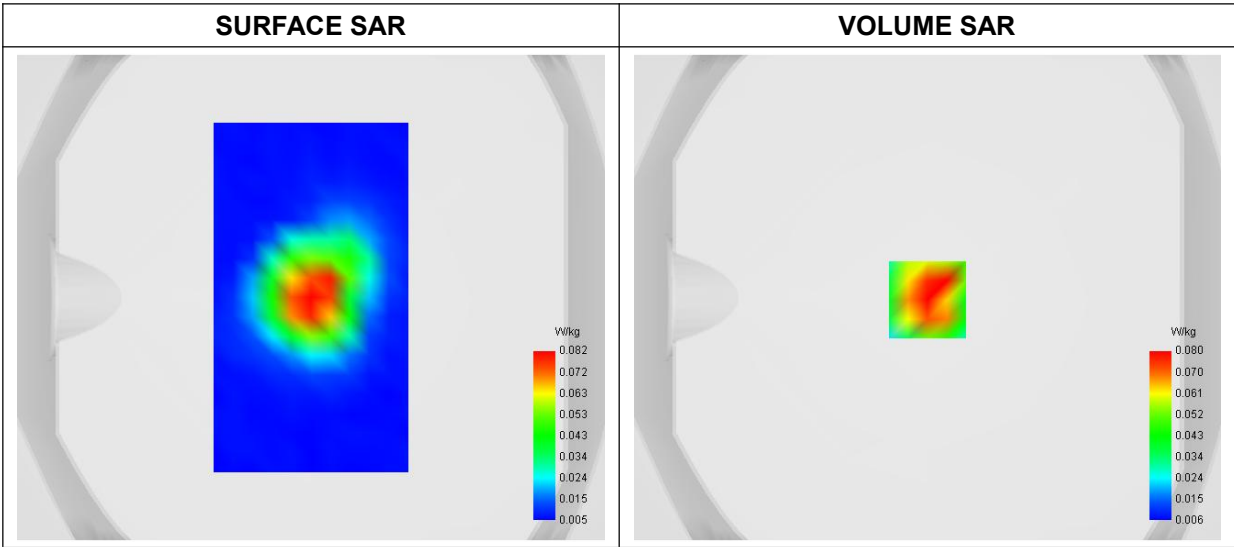
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Flat Plane
Device Position	Top
Band	LTE Cat NB2 Band 26(824MHz)
Channels	Pi/4-BPSK,15kHz, High
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	824.000000
Relative Permittivity (real part)	40.814596
Conductivity (S/m)	0.884571
Ambient Temperature	22.6
Liquid Temperature	22.6

C. SAR Surface and Volume



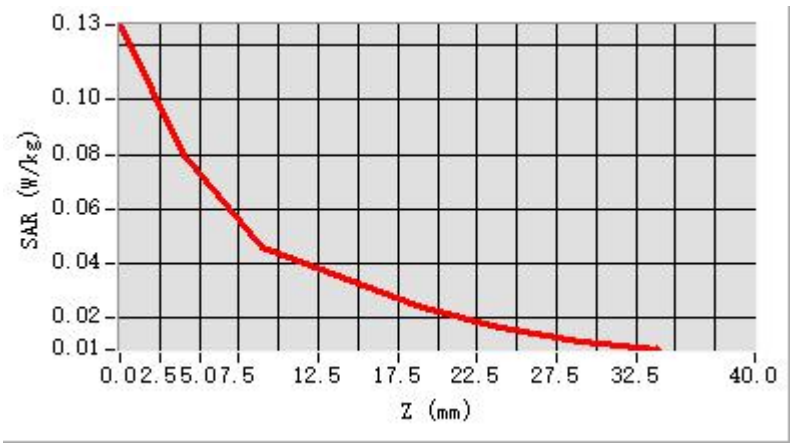
Maximum location: X=0.00, Y=-1.00 ; SAR Peak: 0.15 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.043
SAR 1g (W/Kg)	0.081
Variation (%)	-0.890
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	60.107218

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.128	0.080	0.046	0.035	0.024	0.016	0.011



MEASUREMENT 24

Type: Measurement (Complete)
Date of measurement: 2026-07-22
Measurement duration: 15 minutes 50 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.73; Calibrated: 2026-03-03

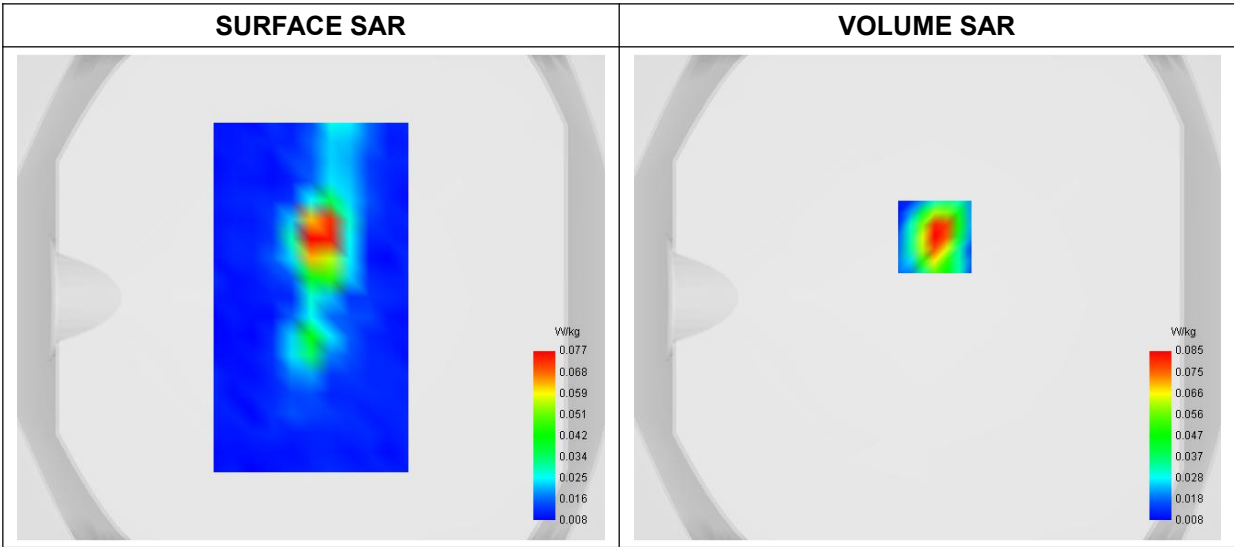
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=5mm dy=5mm dz=4mm
Phantom	Flat Plane
Device Position	Front
Band	Bluetooth_ LE-1Mbps
Channels	Middle
Signal	Duty Cycle: 1:1

B. SAR Measurement Results

Frequency (MHz)	2440.000000
Relative Permittivity (real part)	38.520839
Conductivity (S/m)	1.771254
Ambient Temperature	22.6
Liquid Temperature	22.6

C. SAR Surface and Volume



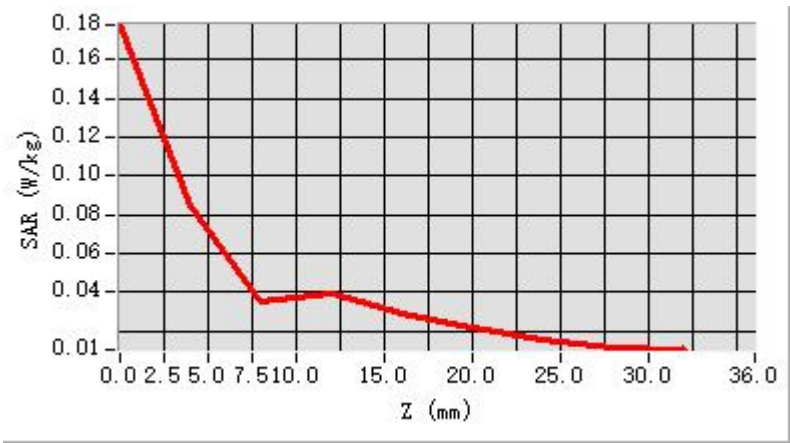
Maximum location: X=3.00, Y=25.00 ; SAR Peak: 0.18 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.036
SAR 1g (W/Kg)	0.084
Variation (%)	2.340
Horizontal validation criteria: minimum distance (mm)	10.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	42.185552

E. Z Axis Scan

Z (mm)	0.00	4.00	8.00	12.00	16.00	20.00	24.00	28.00
SAR (W/Kg)	0.178	0.085	0.035	0.039	0.029	0.021	0.016	0.012



MEASUREMENT 25

Type: Validation measurement
Date of measurement: 2026-09-11
Measurement duration: 25 minutes 31 seconds
E-field Probe: SSE2 - 0725-EPGO-446; ConvF: 1.20; Calibrated: 2026-03-03

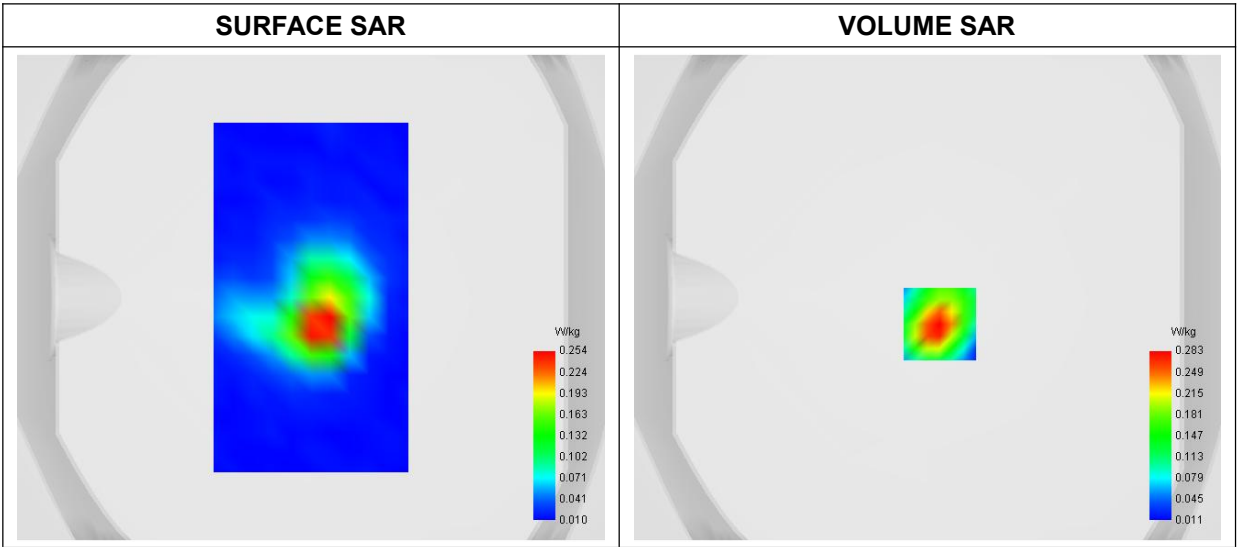
A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=5mm dy=5mm dz=4mm
Phantom	Flat Plane
Device Position	Back
Band	WiFi_802.11ax-HE20
Channels	Low
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	2412.000000
Relative Permittivity (real part)	40.154969
Conductivity (S/m)	1.822129
Ambient Temperature	22.6
Liquid Temperature	22.6

C. SAR Surface and Volume



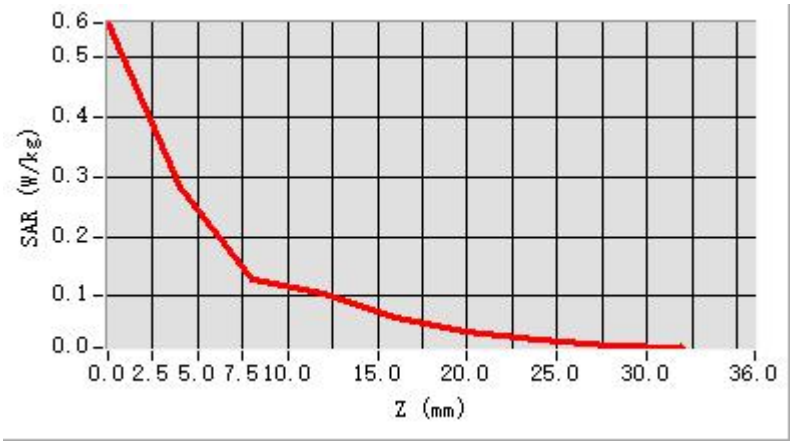
Maximum location: X=5.00, Y=-11.00 ; SAR Peak: 0.54 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.122
SAR 1g (W/Kg)	0.270
Variation (%)	-1.690
Horizontal validation criteria: minimum distance (mm)	11.180340
Vertical validation criteria: SAR ratio M2/M1 (%)	47.299326

E. Z Axis Scan

Z (mm)	0.00	4.00	8.00	12.00	16.00	20.00	24.00	28.00
SAR (W/Kg)	0.557	0.283	0.129	0.104	0.066	0.042	0.027	0.017



Annex C. EUT Photos

Please refer to the Annex for SAR

Annex D. Test Setup Photos

Please refer to the Annex for SAR

Annex E. Calibration Certificate

Please refer to the exhibit for the calibration certificate

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