

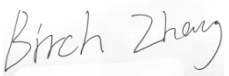


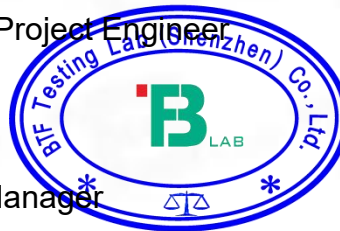
# SAR Test Report

## For

**Applicant Name:** Quanzhou YANTON Electronics Co., Ltd.  
**Address:** YANTON Building, Jinxia Road, Xiamei Town, Nan'an, China  
**EUT Name:** SUPER MINI POC RADIO  
**Brand Name:** YANTON  
**Model Number:** T-X5D  
**Series Model Number:** T-X52

## Issued By

**Company Name:** BTF Testing Lab (Shenzhen) Co., Ltd.  
**Address:** Plant 101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, Guangdong, China  
**Report Number:** BTF260611R00801  
**Test Standards:** FCC 47 CFR§2.1093 IEEE Std. 1528-2013 IEEE C95.1-2019  
**FCC ID:** SV8-X5D  
**Test Conclusion:** Pass  
**Test Date:** 2026-06-17 to 2026-06-23  
**Date of Issue:** 2026-06-29  
**Tested By:**   
Birch Zhang/ Tester  
**Date:** 2026-06-29  
**Prepared By:**   
Amenda Zhong / Project Engineer  
**Date:** 2026-06-29  
**Approved By:**   
Ryan.CJ / EMC Manager  
**Date:** 2026-06-29



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| Revision History |            |                                                                              |
|------------------|------------|------------------------------------------------------------------------------|
| Version          | Issue Date | Revisions Content                                                            |
| R_V0             | 2026-06-29 | Original                                                                     |
|                  |            |                                                                              |
| Note:            |            | Once the revision has been made, then previous versions reports are invalid. |

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## 1. Introduction

### 1.1 Identification of Testing Laboratory

|               |                                                                                                                                                     |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| Company Name: | BTF Testing Lab (Shenzhen) Co., Ltd.                                                                                                                |
| Address:      | Plant 101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, Guangdong, China |
| Phone Number: | +86-0755-23146130                                                                                                                                   |
| Fax Number:   | +86-0755-23146130                                                                                                                                   |

### 1.2 Identification of the Responsible Testing Location

|                         |                                                                                                                                                                                                                                    |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Location:          | BTF Testing Lab (Shenzhen) Co., Ltd.                                                                                                                                                                                               |
| Address:                | Plant 101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, Guangdong, China                                                                                |
| Description:            | All measurement facilities used to collect the measurement data are located at Plant 101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, Guangdong, China |
| FCC Registration Number | 518915                                                                                                                                                                                                                             |
| Designation Number      | CN1409                                                                                                                                                                                                                             |

### 1.3 Laboratory Condition

|                            |                    |
|----------------------------|--------------------|
| Ambient Temperature:       | 21°C to 25°C       |
| Ambient Relative Humidity: | 48% to 59%         |
| Ambient Pressure:          | 100 kPa to 102 kPa |

### 1.4 Announcement

- (1) The test report reference to the report template version v0.
- (2) The test report is invalid if not marked with the signatures of the persons responsible for preparing, reviewing and approving the test report.
- (3) The test report is invalid if there is any evidence and/or falsification.
- (4) This document may not be altered or revised in any way unless done so by BTF and all revisions are duly noted in the revisions section.
- (5) Content of the test report, in part or in full, cannot be used for publicity and/or promotional purposes without prior written approval from the laboratory.
- (6) The laboratory is only responsible for the data released by the laboratory, except for the part provided by the applicant.

## 2. Product Information

### 2.1 Application Information

|               |                                                          |
|---------------|----------------------------------------------------------|
| Company Name: | Quanzhou YANTON Electronics Co., Ltd.                    |
| Address:      | YANTON Building, Jinxia Road, Xiamei Town, Nan'an, China |

### 2.2 Manufacturer Information

|               |                                                          |
|---------------|----------------------------------------------------------|
| Company Name: | Quanzhou YANTON Electronics Co., Ltd.                    |
| Address:      | YANTON Building, Jinxia Road, Xiamei Town, Nan'an, China |

### 2.3 Factory Information

|               |                                                          |
|---------------|----------------------------------------------------------|
| Company Name: | Quanzhou YANTON Electronics Co., Ltd.                    |
| Address:      | YANTON Building, Jinxia Road, Xiamei Town, Nan'an, China |

### 2.4 General Description of Equipment under Test (EUT)

|                                           |                              |
|-------------------------------------------|------------------------------|
| EUT Name                                  | SUPER MINI POC RADIO         |
| Under Test Model Name                     | T-X5D                        |
| Series Model Name                         | T-X52                        |
| Description of Model name differentiation | The appearance is different. |
| Sample No.                                | BTFSN251215005               |
| Software Version                          | V1.0                         |
| Hardware Version                          | YUT-X5-EC800-MB-01 B         |

### 2.5 Equipment under Test Ancillary Equipment

|                       |                      |        |
|-----------------------|----------------------|--------|
| Ancillary Equipment 1 | Rechargeable Battery |        |
|                       | Capacity             | 750mAh |
|                       | Nominal Voltage      | 3.7V   |

### 2.6 Technical Information

|                                   |                                                           |
|-----------------------------------|-----------------------------------------------------------|
| Network and Wireless connectivity | 4G Network FDD LTE Band 2/4/5/7/66<br>Bluetooth BR/EDR+LE |
|-----------------------------------|-----------------------------------------------------------|

The requirement for the following technical information of the EUT was tested in this report:

|                   |                                                     |                                              |                     |
|-------------------|-----------------------------------------------------|----------------------------------------------|---------------------|
| Operating Mode    | LTE, BT                                             |                                              |                     |
| Frequency Range   | LTE Band 2                                          | TX: 1850 ~ 1910 MHz                          | RX: 1930 ~ 1990 MHz |
|                   | LTE Band 4                                          | TX: 1710 ~ 1755 MHz                          | RX: 2110 ~ 2155 MHz |
|                   | LTE Band 5                                          | TX: 824 ~ 849 MHz                            | RX: 869 ~ 894 MHz   |
|                   | LTE Band 7                                          | TX: 2500 ~ 2570 MHz                          | RX: 2620 ~ 2690 MHz |
|                   | LTE Band 66                                         | TX: 1710 ~ 1780 MHz                          | RX: 2110 ~ 2200 MHz |
|                   | Bluetooth                                           | 2402 ~ 2480 MHz                              |                     |
| Antenna Type      | WWAN: Internal antenna<br>BT: Internal antenna      |                                              |                     |
| Hotspot Function  | Not Support                                         |                                              |                     |
| Power Reduction   | Not Support                                         |                                              |                     |
| Exposure Category | General Population/Uncontrolled exposure            |                                              |                     |
| EUT Stage         | Portable Device                                     |                                              |                     |
| Product           | Type                                                |                                              |                     |
|                   | <input checked="" type="checkbox"/> Production unit | <input type="checkbox"/> Identical prototype |                     |

## 3. Summary of Test Results

### 3.1 Test Standards

| No. | Identity                  | Document Title                                                                                                                                                                                                                                                                  |
|-----|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | 47 CFR Part 2.1093        | Radiofrequency radiation exposure evaluation: portable devices                                                                                                                                                                                                                  |
| 2   | IEC/IEEE 62209-1528: 2020 | Measurement procedure for the assessment of specific absorption rate of human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices - Part 1528: Human models, instrumentation, and procedures (Frequency range of 4 MHz to 10 GHz) |
| 3   | IEEE C95.1-2019           | IEEE Standard for Safety Levels with Respect to Human Exposure to Electric, Magnetic, and Electromagnetic Fields, 0 Hz to 300 GHz                                                                                                                                               |
| 4   | KDB 447498 D01            | General RF Exposure Guidance v06                                                                                                                                                                                                                                                |
| 5   | KDB 865664 D01            | SAR measurement 100MHz to 6GHz v01r04                                                                                                                                                                                                                                           |
| 6   | KDB 648474 D04            | Handset SAR v01r03                                                                                                                                                                                                                                                              |
| 7   | KDB 643646 D01            | SAR Test for PTT Radios v01r03                                                                                                                                                                                                                                                  |
| 8   | KDB941225 D05             | SAR for LTE Devices v02r05                                                                                                                                                                                                                                                      |

### 3.2 Device Category and SAR Limit

This device belongs to portable device category because its radiating structure is allowed to be used within 20 centimeters of the body of the user. Limit for General Population/Uncontrolled exposure should be applied for this device, it is 1.6 W/kg as averaged over any 1 gram of tissue.

| Body Position                                                                    | SAR Value (W/Kg)                             |                                      |
|----------------------------------------------------------------------------------|----------------------------------------------|--------------------------------------|
|                                                                                  | General Population/<br>Uncontrolled Exposure | Occupational/<br>Controlled Exposure |
| Whole-Body SAR<br>(averaged over the entire body)                                | 0.08                                         | 0.4                                  |
| Partial-Body SAR<br>(averaged over any 1 gram of tissue)                         | 1.60                                         | 8.0                                  |
| SAR for hands, wrists, feet and ankles<br>(averaged over any 10 grams of tissue) | 4.0                                          | 20.0                                 |

**NOTE:**  
**General Population/Uncontrolled Exposure:** Locations where there is the exposure of individuals who have no knowledge or control of their exposure. General population/uncontrolled exposure limits are applicable to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Members of the general public would come under this category when exposure is not employment-related; for example, in the case of a wireless transmitter that exposes persons in its vicinity.  
**Occupational/Controlled Exposure:** Locations where there is exposure that may be incurred by persons who are aware of the potential for exposure. In general, occupational/controlled exposure limits are applicable to situations in which persons are exposed as a consequence of their employment, who have been made fully aware of the potential for exposure and can exercise control over their exposure. This exposure category is also applicable when the exposure is of a transient nature due to incidental passage through a location where the exposure levels may be higher than the general population/uncontrolled limits, but the exposed person is fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

### 3.3 Test Result Summary

The maximum results of Specific Absorption Rate (SAR) found during test as bellows:

<Highest Reported standalone SAR Summary>

| Frequency Band |                 | Maximum Scaled SAR (W/kg) -1g   | Maximum Scaled SAR (W/kg) -1g                   |
|----------------|-----------------|---------------------------------|-------------------------------------------------|
|                |                 | Front-of-face SAR<br>(25mm gap) | Back Touch +Belt Clip +<br>headset SAR(0mm gap) |
| WWAN           | LTE FDD Band 2  | 0.185                           | <b>0.621</b>                                    |
|                | LTE FDD Band 4  | 0.183                           | 0.541                                           |
|                | LTE FDD Band 5  | 0.072                           | 0.166                                           |
|                | LTE FDD Band 7  | <b>0.195</b>                    | 0.259                                           |
|                | LTE FDD Band 66 | 0.095                           | 0.342                                           |
| Limits (W/kg)  |                 | 1.6                             | 1.6                                             |
| Test Verdict   |                 | Pass                            | Pass                                            |

This device is in compliance with Specific Absorption Rate(SAR) for general population/uncontrolled exposure limits (1.6 W/kg) specified in FCC47 CFR part 2(2.1093) and ANSI/IEEE C95.1-2019, and had been tested in accordance with the measurement methods and procedures specified in IEEE Std. 1528-2013.

<Highest Reported Simultaneous SAR>

| Exposure Position                                           | Simultaneous Configuration | Highest Reported Simultaneous<br>Transmission SAR (W/kg) | Limit<br>(W/kg) | Verdict |
|-------------------------------------------------------------|----------------------------|----------------------------------------------------------|-----------------|---------|
| Front-of-face SAR<br>(Separation 25 mm)                     | LTE Band 7 + BT            | 0.220                                                    | 1.6             | Pass    |
| Back Touch +Belt Clip +<br>headset SAR<br>(Separation 0 mm) | LTE Band 2 + BT            | 0.687                                                    | 1.6             | Pass    |

### 3.4 Test Uncertainty

#### 3.4.1 Measurement uncertainty evaluation for SAR test (450MHz to 6GHz)

| Uncertainty Component                                              | Tol<br>(+-%) | Prob.<br>Dist. | Div.       | Unc.<br>$u(x_i)=a(x_i)/q_i$ | Ci<br>(1g) | Ci<br>(10g) | 1g Ui (+-%) | 10 g Ui<br>(+-%) | Vi veff  |
|--------------------------------------------------------------------|--------------|----------------|------------|-----------------------------|------------|-------------|-------------|------------------|----------|
| Measurement System                                                 |              |                |            |                             |            |             |             |                  |          |
| Probe calibration                                                  | 16           | N (k = 2)      | 2          | 8.00                        | 1          | 1           | 8.00        | 8.00             | $\infty$ |
| Probe calibration drift                                            | 4            | R              | $\sqrt{3}$ | 2.31                        | 1          | 1           | 2.31        | 2.31             | $\infty$ |
| Probe linearity                                                    | 4.7          | R              | $\sqrt{3}$ | 2.71                        | 1          | 1           | 2.71        | 2.71             | $\infty$ |
| detection limit                                                    | 1            | R              | $\sqrt{3}$ | 0.58                        | 1          | 1           | 0.58        | 0.58             | $\infty$ |
| Probe isotropy                                                     | 3.5          | R              | $\sqrt{3}$ | 2.02                        | 0.71       | 0.71        | 1.43        | 1.43             | $\infty$ |
| Hemispherical Isotropy                                             | 5.9          | N              | 1          | 5.90                        | 0.71       | 0.71        | 4.19        | 4.19             | $\infty$ |
| Boundary effect                                                    | 1            | R              | 1.73       | 0.58                        | 1          | 1           | 0.58        | 0.58             | $\infty$ |
| Integration time                                                   | 1.4          | R              | 1.73       | 0.81                        | 1          | 1           | 0.81        | 0.81             | $\infty$ |
| Response time                                                      | 0            | R              | 1.73       | 0.00                        | 1          | 1           | 0.00        | 0.00             | $\infty$ |
| Readout electronics                                                | 0.5          | N              | 1          | 0.50                        | 1          | 1           | 0.50        | 0.50             | $\infty$ |
| RF ambient and noise                                               | 3            | R              | $\sqrt{3}$ | 1.73                        | 1          | 1           | 1.73        | 1.73             | $\infty$ |
| Probe positioning errors                                           | 3.28         | N              | 1          | 3.28                        | 0.33       | 0.33        | 1.08        | 1.08             | $\infty$ |
| Data processing errors                                             | 2.3          | R              | 1          | 1.33                        | 1          | 1           | 1.33        | 1.33             | $\infty$ |
| Conductivity measurement                                           | 4.07         | N              | 1          | 2.35                        | 0.79       | 0.77        | 1.86        | 1.81             | $\infty$ |
| Permittivity measurement                                           | 5.06         | N              | 1          | 2.92                        | 0.23       | 0.26        | 0.67        | 0.76             | $\infty$ |
| Liquid Conductivity - Temperature Uncertainty                      | 2.5          | R              | 1          | 1.44                        | 0.79       | 0.77        | 1.14        | 1.11             | $\infty$ |
| Liquid Permittivity - Temperature Uncertainty                      | 2.5          | R              | $\sqrt{3}$ | 1.44                        | 0.23       | 0.26        | 0.33        | 0.38             | $\infty$ |
| Shell permittivity                                                 | 2.9          | R              | $\sqrt{3}$ | 1.67                        | 0.25       | 0.25        | 0.42        | 0.42             | $\infty$ |
| Repeatability of positioning the DUT or source against the phantom | 2.7          | N              | 1          | 2.70                        | 2          | 2           | 5.40        | 5.40             | $\infty$ |
| Uncertainty in accepted power                                      | 3            | R              | 1          | 3.00                        | 1          | 1           | 3.00        | 3.00             | $\infty$ |
| Effect of operating mode on probe sensitivity                      | 2.3          | R              | $\sqrt{3}$ | 1.33                        | 1          | 1           | 1.33        | 1.33             | $\infty$ |
| Variation in SAR due to drift in output of DUT                     | 2.2          | N              | 1          | 2.20                        | 1          | 1           | 2.20        | 2.20             | $\infty$ |
| Phantom deviation from target ( $\epsilon'$ , $\sigma$ )           | 1.9          | N              | 1          | 1.90                        | 1          | 1           | 1.90        | 1.90             | $\infty$ |
| SAR scaling                                                        | 0            | R              | $\sqrt{3}$ | 0.00                        | 1          | 1           | 0.00        | 0.00             | $\infty$ |
| Combined uncertainty                                               | /            |                |            |                             |            |             | 12.56       | 12.55            |          |
| Expanded Uncertainty (95% Confidence interval)                     | /            |                |            |                             |            |             | 25.11       | 25.11            |          |

\* This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

### 3.4.2 Measurement uncertainty evaluation for system check

| Uncertainty Component                                                    | Tol (+ - %) | Prob. Dist. | Div. | Unc. $u(x_i)=a(x_i)/q_i$ | Ci (1g) | Ci (10 g) | 1g Ui (+ - %) | 10 g Ui (+ - %) | Vi v <sub>eff</sub> |
|--------------------------------------------------------------------------|-------------|-------------|------|--------------------------|---------|-----------|---------------|-----------------|---------------------|
| Measurement System                                                       |             |             |      |                          |         |           |               |                 |                     |
| Probe calibration                                                        | 16          | N (k = 2)   | 2    | 8.00                     | 1       | 1         | 8.00          | 8.00            | ∞                   |
| Probe calibration drift                                                  | 4           | R           | 1.73 | 2.31                     | 1       | 1         | 2.31          | 2.31            | ∞                   |
| Probe linearity                                                          | 4.7         | R           | 1.73 | 2.72                     | 1       | 1         | 2.72          | 2.72            | ∞                   |
| Detection limit                                                          | 1           | R           | 1.73 | 0.58                     | 1       | 1         | 0.58          | 0.58            | ∞                   |
| Axial Isotropy                                                           | 3.5         | R           | 1.73 | 2.02                     | 1       | 1         | 2.02          | 2.02            | ∞                   |
| Hemispherical Isotropy                                                   | 5.9         | R           | 1.73 | 3.41                     | 0.71    | 0.71      | 2.42          | 2.42            | ∞                   |
| Boundary effect                                                          | 1           | R           | 1.73 | 0.58                     | 0.71    | 0.71      | 0.41          | 0.41            | ∞                   |
| Integration time                                                         | 1.4         | R           | 1.73 | 0.81                     | 1       | 1         | 0.81          | 0.81            | ∞                   |
| Response time                                                            | 0           | R           | 1.73 | 0.00                     | 1       | 1         | 0.00          | 0.00            | ∞                   |
| Readout electronics                                                      | 0.5         | N           | 1    | 0.50                     | 1       | 1         | 0.50          | 0.50            | ∞                   |
| Noise                                                                    | 3           | R           | 1.73 | 1.73                     | 1       | 1         | 1.73          | 1.73            | ∞                   |
| Reflections                                                              | 3           | R           | 1.73 | 1.73                     | 1       | 1         | 1.73          | 1.73            | ∞                   |
| Positioner Mechanical Tolerance                                          | 3.28        | R           | 1.73 | 1.90                     | 0.33    | 0.33      | 0.63          | 0.63            | ∞                   |
| Positioning with respect to Phantom Shell                                | 3.28        | R           | 1.73 | 1.90                     | 0.33    | 0.33      | 0.63          | 0.63            | ∞                   |
| Data processing errors                                                   | 2.3         | R           | 1.73 | 1.33                     | 1       | 1         | 1.33          | 1.33            | ∞                   |
| Conductivity measurement                                                 | 4.07        | N           | 1    | 4.07                     | 0.79    | 0.77      | 3.22          | 3.13            | ∞                   |
| Permittivity measurement                                                 | 5.06        | N           | 1    | 5.06                     | 0.23    | 0.26      | 1.16          | 1.32            | ∞                   |
| Liquid Conductivity - Temperature Uncertainty                            | 2.5         | R           | 1.73 | 1.45                     | 0.79    | 0.77      | 1.14          | 1.11            | ∞                   |
| Liquid Permittivity - Temperature Uncertainty                            | 2.5         | R           | 1.73 | 1.45                     | 0.23    | 0.26      | 0.33          | 0.38            | ∞                   |
| Shell permittivity                                                       | 2.9         | R           | 1.73 | 1.68                     | 0.25    | 0.25      | 0.42          | 0.42            | ∞                   |
| Distance between the radiating element of the DUT and the phantom medium | 2.7         | N           | 1    | 2.70                     | 2       | 2         | 5.40          | 5.40            | ∞                   |
| Deviation of experimental antennas                                       | 4.5         | N           | 1.73 | 2.60                     | 1       | 1         | 2.60          | 2.60            | ∞                   |
| Other uncertainty contributions                                          | 2           | R           | 1    | 2.00                     | 1       | 1         | 2.00          | 2.00            | ∞                   |
| Uncertainty in accepted power                                            | 3           | R           | 1.73 | 1.73                     | 1       | 1         | 1.73          | 1.73            | ∞                   |
| Phantom deviation from target ( $\epsilon', \sigma$ )                    | 1.9         | N           | 1    | 1.90                     | 1       | 0.87      | 1.90          | 1.65            | ∞                   |
| $u(\Delta SAR)$                                                          | \           |             |      |                          |         |           | 12.51         | 12.47           |                     |
| Expanded uncertainty (95% confidence interval)                           | \           |             |      |                          |         |           | 25.02         | 24.93           |                     |

## 4. Measurement System

### 4.1 Specific Absorption Rate (SAR) Definition

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

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

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

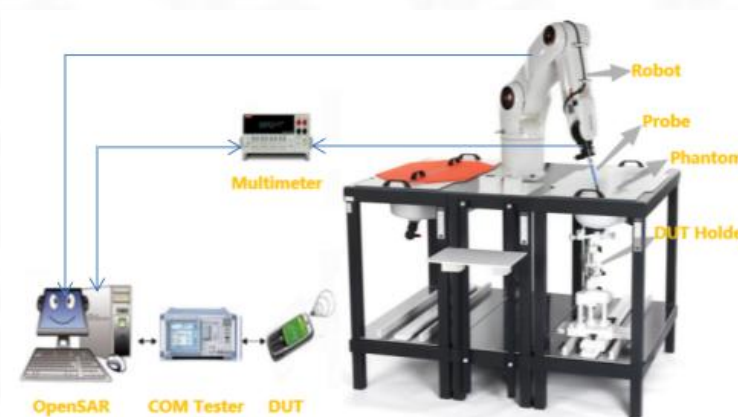
SAR is expressed in units of Watts per kilogram (W/kg) SAR measurement can be related to the electrical field in the tissue by

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

Where:  $\sigma$  is the conductivity of the tissue,  
 $\rho$  is the mass density of the tissue and E is the RMS electrical field strength.

### 4.2 MVG SAR System

#### 4.2.1 SAR system diagram



#### 4.2.2 Robot



A standard high precision 6-axis robot (Denso) with teaches pendant with Scanning System

- It must be able to scan all the volume of the phantom to evaluate the tridimensional distribution of SAR.
- Must be able to set the probe orthogonal of the surface of the phantom ( $\pm 30^\circ$ ).
- Detects stresses on the probe and stop itself if necessary to keep the integrity of the probe.

#### 4.2.3 E-Field Probe

For the measurements the Specific Dosimetric E-Field Probe 0125-EPGO-445 with following specifications is used:

- Probe Length: 330 mm
- Length of Individual Dipoles: 2mm
- Maximum external diameter: 8 mm
- Probe Tip External Diameter: 2.5 mm
- Distance between dipole/probe extremity: 1 mm
- Dynamic range: 0.01-100 W/kg
- Probe linearity: 3%
- Calibration range: 150 to 6000 MHz for head & body simulating liquid
- Axial Isotropy: <0.10 dB
- Spherical Isotropy: <0.10 dB
- Angle between probe axis (evaluation axis) and surface normal line: less than  $30^\circ$ .



#### 4.2.4 Phantoms

##### **SAM Phantom**

For the measurements the Specific Anthropomorphic Mannequin (SAM) defined by the IEEE SCC-34/SC2 group is used. The probe scanning of the E-Field is done in the 2 halves of the normalized head. The normalized shape of the phantom corresponds to the dimensions of 90% of an adult head size. It enables the dosimetric evaluation of left and right-hand phone usage and includes an additional flat phantom part for the simplified body performance check. The phantom set-up includes a cover, which prevents the evaporation of the liquid.



**SAM Phantom**

The thickness of the phantom amounts to  $2\text{ mm} \pm 0.2\text{ mm}$ . The materials for the phantom do not affect the radiation of the device under test (DUT) :  $\epsilon_r' < 5$   
The head is filled with tissue simulating liquid. The hand do not have to be modeled.

#### TWIN SAM phantom

|                   | Mechanical                              | Electrical            |      |
|-------------------|-----------------------------------------|-----------------------|------|
| Overall thickness | $2 \pm 0.2\text{ mm}$ (except ear area) | Relative permittivity | 3.4  |
| Dimensions        | 1000 mm(L) x 500 mm(W) x 200 mm(H)      | Loss tangent          | 0.02 |
| Maximum volume    | 27 L                                    |                       |      |
| Material          | Fiberglass based                        |                       |      |

#### ELLIPTICAL Phantom

The phantom is for Body performance check filled with tissue-equivalent liquid to a depth of at least 150 mm, whose shell material is resistant to damage or reaction with tissue-equivalent liquid chemicals.



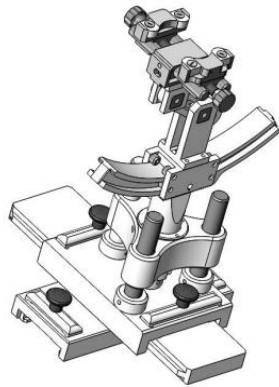
**ELLI Phantom**

The shape of the phantom is an ellipse with length  $600\text{ mm} \pm 5\text{ mm}$  and width  $400\text{ mm} \pm 5\text{ mm}$ .  
The phantom shell is made of low-loss and low-permittivity material, having loss tangent  $\tan \delta \leq 0.05$  and relative permittivity:  
 $\epsilon_r' \leq 5$  for  $f \leq 3\text{ GHz}$   
 $3 \leq \epsilon_r' \leq 5$  for  $f > 3\text{ GHz}$   
The thickness of the bottom-wall of the flat phantom is 2.0 mm with a tolerance of  $\pm 0.2\text{ mm}$ .

#### Technical & mechanical characteristics

|                 |                                 |
|-----------------|---------------------------------|
| Shell thickness | $2\text{ mm} \pm 0.2\text{ mm}$ |
| Filling volume  | 25 L                            |
| Dimensions      | 600 mm x 400 mm x 200 mm        |
| Permittivity    | 4.4                             |
| Loss tangent    | 0.017                           |

#### 4.2.5 Device Holder



| System Material | Permittivity | Loss tangent |
|-----------------|--------------|--------------|
| Delrin          | 3.7          | 0.005        |

(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 |
|-----------------|--------------|--------------|
| PMMA            | 2.9          | 0.028        |

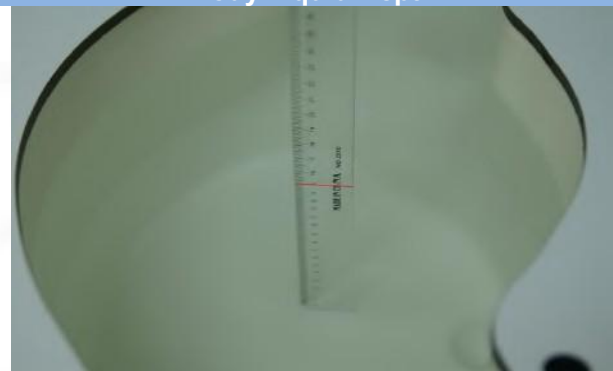
#### 4.2.6 Simulating Liquid

For SAR measurement of the field distribution inside the phantom, the phantom must be filled with homogeneous tissue simulating liquid to a depth of at least 15 cm. For head SAR testing, the liquid 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. The nominal dielectric values of the tissue simulating liquids in the phantom and the tolerance of 5%.

Head Liquid Depth



Body Liquid Depth



The following table gives the recipes for tissue simulating liquid and the theoretical Conductivity/Permittivity.

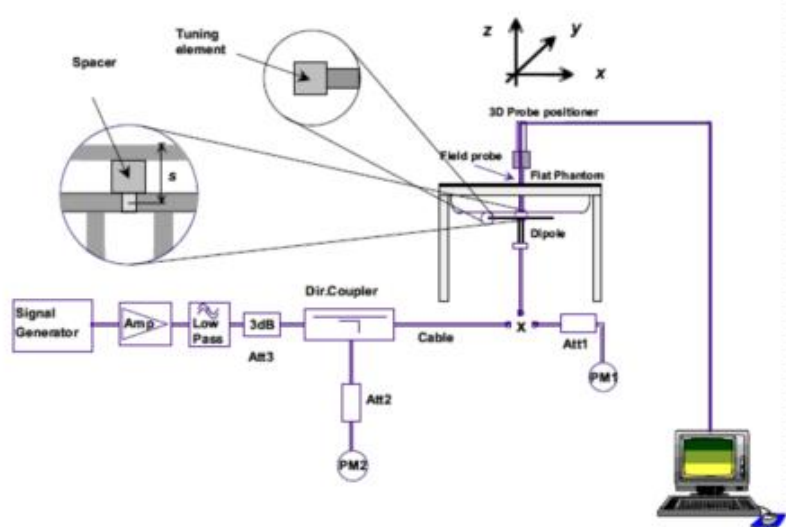
| Head (Reference IEEE1528)           |              |                       |                  |             |                     |             |                         |                   |
|-------------------------------------|--------------|-----------------------|------------------|-------------|---------------------|-------------|-------------------------|-------------------|
| Frequency<br>(MHz)                  | Water<br>(%) | Sugar<br>(%)          | Cellulose<br>(%) | Salt<br>(%) | Preventol<br>(%)    | DGBE<br>(%) | Conductivity<br>σ (S/m) | Permittivity<br>ε |
| 750                                 | 41.1         | 57.0                  | 0.2              | 1.4         | 0.2                 | 0           | 0.89                    | 41.9              |
| 835                                 | 40.3         | 57.9                  | 0.2              | 1.4         | 0.2                 | 0           | 0.90                    | 41.5              |
| 900                                 | 40.3         | 57.9                  | 0.2              | 1.4         | 0.2                 | 0           | 0.97                    | 41.5              |
| 1800, 1900, 2000                    | 55.2         | 0                     | 0                | 0.3         | 0                   | 44.5        | 1.4                     | 40.0              |
| 2450                                | 55.0         | 0                     | 0                | 0.1         | 0                   | 44.9        | 1.80                    | 39.2              |
| 2600                                | 54.9         | 0                     | 0                | 0.1         | 0                   | 45.0        | 1.96                    | 39.0              |
| Frequency<br>(MHz)                  | Water<br>(%) | Hexyl Carbitol<br>(%) |                  |             | Triton X-100<br>(%) |             | Conductivity<br>σ (S/m) | Permittivity<br>ε |
| 5200                                | 62.52        | 17.24                 |                  |             | 17.24               |             | 4.66                    | 36.0              |
| 5800                                | 62.52        | 17.24                 |                  |             | 17.24               |             | 5.27                    | 35.3              |
| Body (From instrument manufacturer) |              |                       |                  |             |                     |             |                         |                   |
| Frequency<br>(MHz)                  | Water<br>(%) | Sugar<br>(%)          | Cellulose<br>(%) | Salt<br>(%) | Preventol<br>(%)    | DGBE<br>(%) | Conductivity<br>σ (S/m) | Permittivity<br>ε |
| 750                                 | 51.7         | 47.2                  | 0                | 0.9         | 0.1                 | 0           | 0.96                    | 55.5              |
| 835                                 | 50.8         | 48.2                  | 0                | 0.9         | 0.1                 | 0           | 0.97                    | 55.2              |
| 900                                 | 50.8         | 48.2                  | 0                | 0.9         | 0.1                 | 0           | 1.05                    | 55.0              |
| 1800, 1900, 2000                    | 70.2         | 0                     | 0                | 0.4         | 0                   | 29.4        | 1.52                    | 53.3              |
| 2450                                | 68.6         | 0                     | 0                | 0.1         | 0                   | 31.3        | 1.95                    | 52.7              |
| 2600                                | 68.2         | 0                     | 0                | 0.1         | 0                   | 31.7        | 2.16                    | 52.5              |
| Frequency(MHz)                      | Water        | DGBE<br>(%)           |                  |             | Salt<br>(%)         |             | Conductivity<br>σ (S/m) | Permittivity<br>ε |
| 5200                                | 78.60        | 21.40                 |                  |             | /                   |             | 5.30                    | 49.00             |
| 5800                                | 78.50        | 21.40                 |                  |             | 0.1                 |             | 6.00                    | 48.20             |

## 5. System Verification

### 5.1 Purpose of System 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. The 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.

### 5.2 System Check Setup



## 6. TEST POSITION CONFIGURATIONS

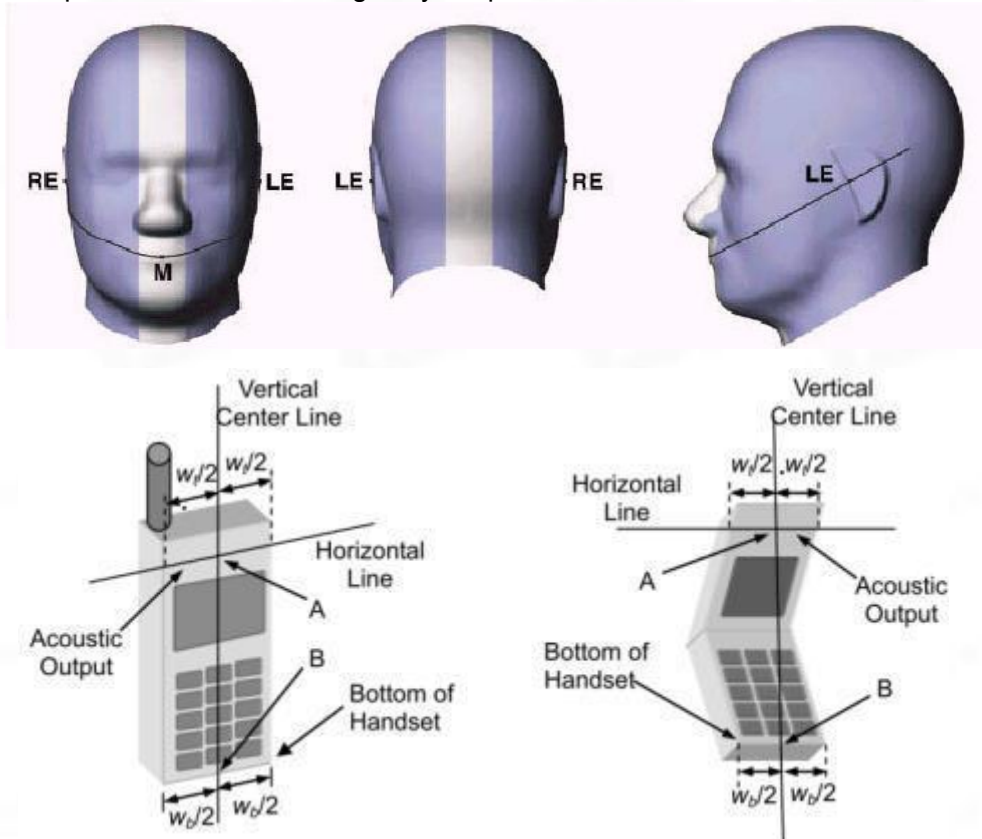
According to KDB 648474 D04 Handset, handsets are tested for SAR compliance in head, body-worn accessory and other use configurations described in the following subsections.

### 6.1 Head Exposure Conditions

Head exposure is limited to next to the ear voice mode operations. Head SAR compliance is tested according to the test positions defined in IEEE Std 1528-2013 using the SAM phantom illustrated as below.

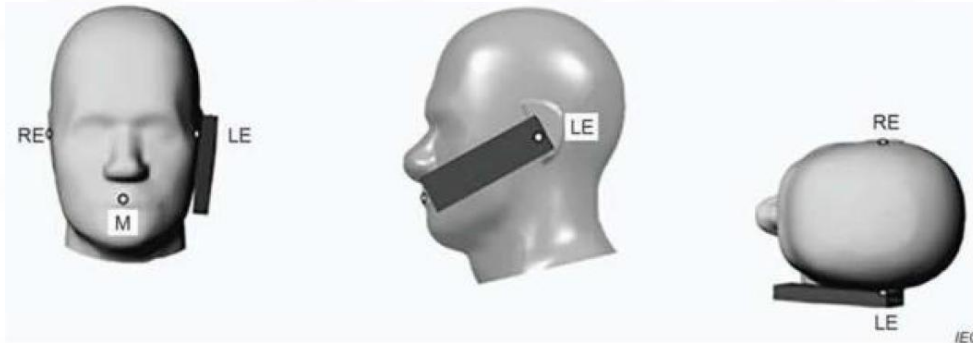
#### 6.1.1 Two Imaginary Lines on the Handset

- The vertical center line passes through two points on the front side of the handset - the midpoint of the width  $w_t$  of the handset at the level of the acoustic output, and the midpoint of the width  $w_b$  of the bottom of the handset.
- The horizontal line is perpendicular to the vertical center line and passes through the center of the acoustic output. The horizontal line is also tangential to the face of the handset at point A.
- The two lines intersect at point A. Note that for many handsets, point A coincides with the center of the acoustic output; however, the acoustic output may be located elsewhere on the horizontal line. Also note that the vertical center line is not necessarily parallel to the front face of the handset, especially for clamshell handsets, handsets with flip covers, and other irregularly shaped handsets.



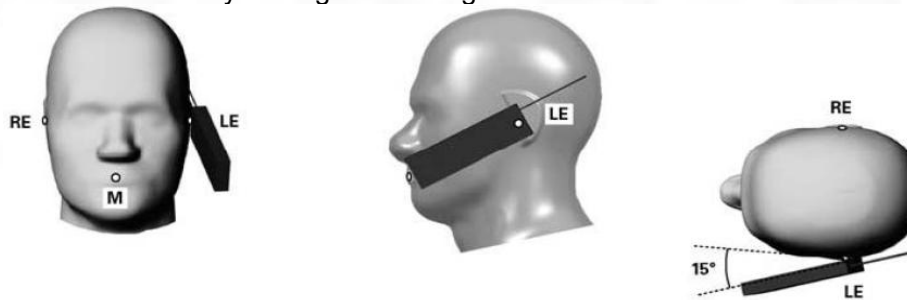
### 6.1.2 Two Imaginary Lines on the Handset

- To position the device with the vertical center line of the body of the device and the horizontal line crossing the center piece in a plane parallel to the sagittal plane of the phantom. While maintaining the device in this plane, align the vertical center line with the reference plane containing the three ear and mouth reference point (M: Mouth, RE: Right Ear, and LE: Left Ear) and align the center of the ear piece with the line RE-LE.
- To move the device towards the phantom with the ear piece aligned with the line LE-RE until the phone touched the ear. While maintaining the device in the reference plane and maintaining the phone contact with the ear, move the bottom of the phone until any point on the front side is in contact with the cheek of the phantom or until contact with the ear is lost.



### 6.1.3 Titled Position

- To position the device in the “cheek” position described above.
- While maintaining the device the reference plane described above and pivoting against the ear, moves it outward away from the mouth by an angle of 15 degrees or until contact with the ear is lost.

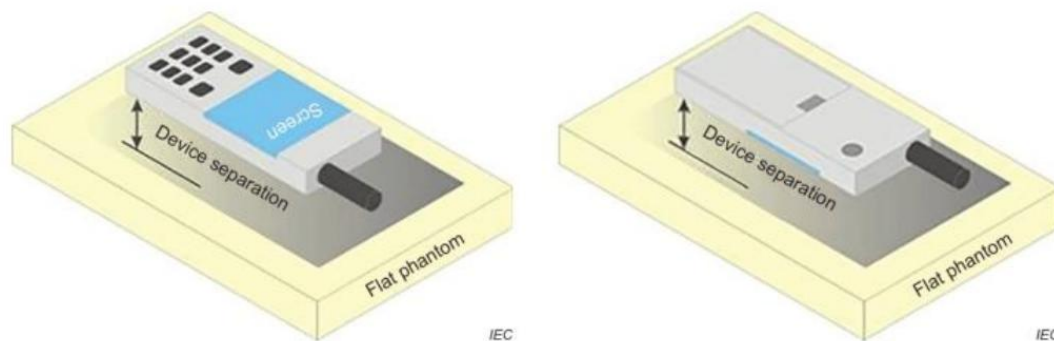


## 6.2 Body-worn Position Conditions

Body-worn accessory exposure is typically related to voice mode operations when handsets are carried in body-worn accessories. The body-worn accessory procedures in KDB 447498 are used to test for body-worn accessory SAR compliance, without a headset connected to it. This enables the test results for such configuration to be compatible with that required for hotspot mode when the body-worn accessory test separation distance is greater than or equal to that required for hotspot mode. When the reported SAR for a body-worn accessory.

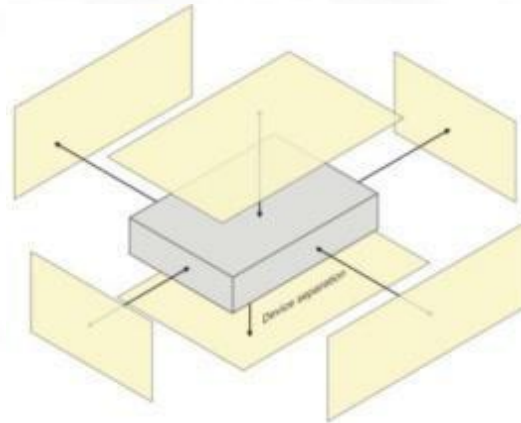
Body-worn accessories that do not contain metallic or conductive components may be tested according to worst-case exposure configurations, typically according to the smallest test separation distance required for the group of body-worn accessories with similar operating and exposure characteristics. All body-worn accessories containing metallic components are tested in conjunction with the host device.

Body-worn accessory SAR compliance is based on a single minimum test separation distance for all wireless and operating modes applicable to each body-worn accessory used by the host, and according to the relevant voice and/or data mode transmissions and operations. If a body-worn accessory supports voice only operations in its normal and expected use conditions, testing of data mode for body-worn compliance is not required. A conservative minimum test separation distance for supporting off-the-shelf body-worn accessories that may be acquired by users of consumer handsets is used to test for body-worn accessory SAR compliance. This distance is determined by the handset manufacturer, according to the requirements of Supplement C 01-01. Devices that are designed to operate on the body of users using lanyards and straps, or without requiring additional body-worn accessories, will be tested using a conservative minimum test separation distance  $\leq 5$  mm to support compliance.



### 6.3 Hotspot Mode Exposure Position Conditions

For handsets that support hotspot mode operations, with wireless router capabilities and various web browsing functions, the relevant hand and body exposure conditions are tested according to the hotspot SAR procedures in KDB 941225. A test separation distance of 10 mm is required between the phantom and all surfaces and edges with a transmitting antenna located within 25 mm from that surface or edge. When the form factor of a handset is smaller than 9 cm x 5 cm, a test separation distance of 5 mm (instead of 10 mm) is required for testing hotspot mode. When the separation distance required for body-worn accessory testing is larger than or equal to that tested for hotspot mode, in the same wireless mode and for the same surface of the phone, the hotspot mode SAR data may be used to support body-worn accessory SAR compliance for that particular configuration (surface).



### 6.4 Product Specific 10g Exposure Consideration

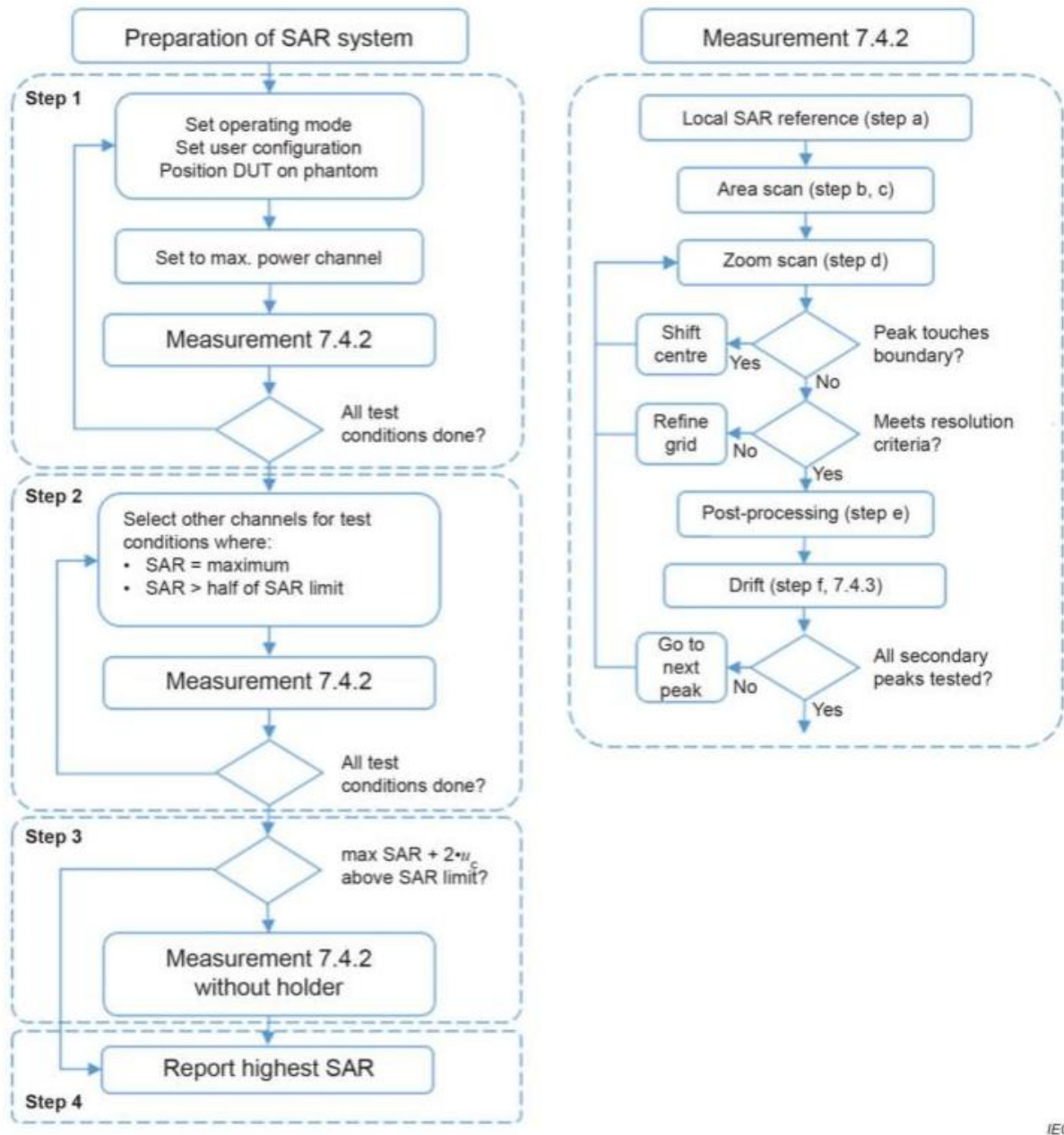
According with FCC KDB 648474 D04, for smart phones with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm that provide similar mobile web access and multimedia support found in mini-tablets or UMPC mini-tablets that support voice calls next to the ear, unless it is confirmed otherwise through KDB inquiries, the following phablet procedures should be applied to evaluate SAR compliance for each applicable wireless modes and frequency band. Devices marketed as phablets, regardless of form factors and operating characteristics must be tested as a phablet to determine SAR compliance;

The UMPC mini-tablet procedures must also be applied to test the SAR of all surfaces and edges with an antenna located at  $\leq 25$  mm from that surface or edge, in direct contact with a flat phantom, for 10-g extremity SAR according to the body-equivalent tissue dielectric parameters in KDB 865664 to address interactive hand use exposure conditions. The UMPC mini-tablet 1-g SAR at 5 mm is not required. When hotspot mode applies, 10-g extremity SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg.

## 7. Measurement Procedure

### 7.1 Measurement Process Diagram

Body SAR



IEC

## 7.2 SAR Scan General Requirement

Probe boundary effect error compensation is required for measurements with the probe tip closer than half a probe tip diameter to the phantom surface. Both the probe tip diameter and sensor offset distance must satisfy measurement protocols; to ensure probe boundary effect errors are minimized and the higher fields closest to the phantom surface can be correctly measured and extrapolated to the phantom surface for computing 1 g SAR. Tolerances of the post-processing algorithms must be verified by the test laboratory for the scan resolutions used in the SAR measurements, according to the reference distribution functions specified in IEEE Std 1528-2013.

|                                                                                                                                                          |                           |                                                                | ≤3GHz                                                                                                                                                                                                                                                             | >3GHz                                  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface                                                   |                           |                                                                | 5±1 mm                                                                                                                                                                                                                                                            | ½ δ·ln(2)±0.5 mm                       |
| Maximum probe angle from probe axis to phantom surface normal at the measurement location                                                                |                           |                                                                | 30°±1°                                                                                                                                                                                                                                                            | 20°±1°                                 |
| Maximum area scan spatial resolution: Δx Area , Δy Area                                                                                                  |                           |                                                                | ≤ 2 GHz: ≤ 15 mm<br>2 – 3 GHz: ≤ 12 mm                                                                                                                                                                                                                            | 3–4 GHz: ≤ 12 mm<br>4 – 6 GHz: ≤ 10 mm |
|                                                                                                                                                          |                           |                                                                | When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be ≤ the corresponding x or y dimension of the test device with at least one measurement point on the test device. |                                        |
| Maximum zoom scan spatial resolution: Δx Zoom , Δy Zoom                                                                                                  |                           |                                                                | ≤ 2 GHz: ≤ 8 mm<br>2–3 GHz: ≤ 5 mm*                                                                                                                                                                                                                               | 3–4 GHz: ≤ 5 mm*<br>4 – 6 GHz: ≤ 4 mm* |
| Maximum zoom scan spatial resolution, normal to phantom surface                                                                                          | uniform grid: Δz Zoom (n) |                                                                | ≤ 5 mm                                                                                                                                                                                                                                                            | 3–4 GHz: ≤ 4 mm                        |
|                                                                                                                                                          |                           |                                                                |                                                                                                                                                                                                                                                                   | 4–5 GHz: ≤ 3 mm                        |
|                                                                                                                                                          |                           |                                                                |                                                                                                                                                                                                                                                                   | 5–6 GHz: ≤ 2 mm                        |
|                                                                                                                                                          | graded grid               | Δz Zoom (1): between 1st two points closest to phantom surface | ≤ 4 mm                                                                                                                                                                                                                                                            | 3–4 GHz: ≤ 3 mm                        |
|                                                                                                                                                          |                           |                                                                |                                                                                                                                                                                                                                                                   | 4–5 GHz: ≤ 2.5 mm                      |
|                                                                                                                                                          |                           |                                                                |                                                                                                                                                                                                                                                                   | 5–6 GHz: ≤ 2 mm                        |
|                                                                                                                                                          |                           | ≤ 1.5·Δz Zoom (n-1)                                            |                                                                                                                                                                                                                                                                   |                                        |
| Minimum zoom scan volume                                                                                                                                 | x, y, z                   |                                                                | ≥30 mm                                                                                                                                                                                                                                                            | 3–4 GHz: ≥ 28 mm                       |
|                                                                                                                                                          |                           |                                                                |                                                                                                                                                                                                                                                                   | 4–5 GHz: ≥ 25 mm                       |
|                                                                                                                                                          |                           |                                                                |                                                                                                                                                                                                                                                                   | 5–6 GHz: ≥ 22 mm                       |
| Note:                                                                                                                                                    |                           |                                                                |                                                                                                                                                                                                                                                                   |                                        |
| 1. δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528- 2011 for details.                 |                           |                                                                |                                                                                                                                                                                                                                                                   |                                        |
| 2. * When zoom scan is required and the reported SAR from the area scan based 1 g SAR estimation procedures of KDB                                       |                           |                                                                |                                                                                                                                                                                                                                                                   |                                        |
| 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz. |                           |                                                                |                                                                                                                                                                                                                                                                   |                                        |

## 7.3 Measurement Procedure

The following steps are used for each test position

- a. Establish a call with the maximum output power with a base station simulator. The connection between the mobile and the base station simulator is established via air interface
- b. Measurement of the local E-field value at a fixed location. This value serves as a reference value for calculating a possible power drift.
- c. Measurement of the SAR distribution with a grid of 8 to 16mm \* 8 to 16 mm and a constant distance to the inner surface of the phantom. Since the sensors cannot directly measure at the inner phantom surface, the values between the sensors and the inner phantom surface are extrapolated. With these values the area of the maximum SAR is calculated by an interpolation scheme.
- d. Around this point, a cube of 30 \* 30 \* 30 mm or 32 \* 32 \* 32 mm is assessed by measuring 5 or 8 \* 5 or 8\*4 or 5 mm. With these data, the peak spatial-average SAR value can be calculated.

## 7.4 Area & Zoom Scan Procedure

First Area Scan is used to locate the approximate location(s) of the local peak SAR value(s). The measurement grid within an Area Scan is defined by the grid extent, grid step size and grid offset. Next, in order to determine the EM field distribution in a three-dimensional spatial extension, Zoom Scan is required. The Zoom Scan is performed around the highest E-field value to determine the averaged SAR-distribution over 10 g.

When the 1 g SAR of the highest peak is within 2 dB of the SAR limit, additional zoom scans are required for other peaks within 2 dB of the highest peak that have not been included in any zoom scan to ensure there is no increase in SAR.

## 8. Conducted RF Output Power

### 8.1 LTE

#### Band 2

| LTE-FDD Band 2 |            |               |               | Maximum Tune-up(dBm) | Conducted Power(dBm) |                      |           |       |
|----------------|------------|---------------|---------------|----------------------|----------------------|----------------------|-----------|-------|
| Bandwidth      | Modulation | RB allocation | RB offset     |                      | 18607                | 18900                | 19193     |       |
|                |            |               |               |                      | 1850.7MHz            | 1880.0MHz            | 1909.3MHz |       |
| 1.4MHz         | QPSK       | 1             | 0             | 22.50                | 22.15                | 22.16                | 21.68     |       |
|                |            |               | 2             | 22.50                | 22.22                | 22.16                | 21.61     |       |
|                |            |               | 5             | 22.50                | 22.21                | 22.17                | 21.55     |       |
|                |            | 3             | 0             | 22.50                | 22.17                | 22.17                | 21.64     |       |
|                |            |               | 2             | 22.50                | 22.19                | 22.15                | 21.62     |       |
|                |            |               | 3             | 22.50                | 22.26                | 22.14                | 21.61     |       |
|                |            | 6             | 0             | 21.50                | 21.33                | 21.29                | 20.85     |       |
|                |            | 16QAM         | 1             | 0                    | 21.50                | 21.36                | 21.29     | 21.00 |
|                |            |               |               | 2                    | 21.50                | 21.37                | 21.31     | 20.94 |
|                | 5          |               |               | 21.50                | 21.41                | 21.32                | 20.86     |       |
|                | 3          |               | 0             | 21.50                | 21.43                | 21.43                | 20.84     |       |
|                |            |               | 2             | 21.50                | 21.42                | 21.43                | 20.84     |       |
|                |            |               | 3             | 21.50                | 21.43                | 21.49                | 20.78     |       |
|                | 6          |               | 0             | 20.50                | 20.39                | 20.41                | 19.91     |       |
|                | Bandwidth  | Modulation    | RB allocation | RB offset            | Maximum Tune-up(dBm) | 18615                | 18900     | 19185 |
| 1851.5MHz      |            |               |               |                      |                      | 1880.0MHz            | 1908.5MHz |       |
| 3MHz           | QPSK       | 1             | 0             | 22.50                | 22.10                | 22.12                | 21.85     |       |
|                |            |               | 7             | 22.50                | 22.15                | 22.20                | 21.70     |       |
|                |            |               | 14            | 22.50                | 22.08                | 22.09                | 21.46     |       |
|                |            | 8             | 0             | 21.50                | 21.32                | 21.22                | 21.02     |       |
|                |            |               | 4             | 21.50                | 21.29                | 21.22                | 21.01     |       |
|                |            |               | 7             | 21.50                | 21.32                | 21.24                | 20.85     |       |
|                |            | 15            | 0             | 21.50                | 21.47                | 21.23                | 20.95     |       |
|                | 16QAM      | 1             | 0             | 22.00                | 21.82                | 21.38                | 21.06     |       |
|                |            |               | 7             | 22.00                | 21.89                | 21.47                | 20.94     |       |
|                |            |               | 14            | 22.00                | 21.79                | 21.36                | 20.71     |       |
|                |            | 8             | 0             | 21.00                | 20.58                | 20.41                | 20.18     |       |
|                |            |               | 4             | 21.00                | 20.59                | 20.42                | 20.19     |       |
|                |            |               | 7             | 21.00                | 20.64                | 20.44                | 20.04     |       |
|                |            | 15            | 0             | 20.50                | 20.45                | 20.39                | 20.05     |       |
|                |            | Bandwidth     | Modulation    | RB allocation        | RB offset            | Maximum Tune-up(dBm) | 18625     | 18900 |
| 1852.5MHz      | 1880.0MHz  |               |               |                      |                      |                      | 1907.5MHz |       |
| 5MHz           | QPSK       | 1             | 0             | 22.50                | 22.27                | 22.11                | 21.96     |       |
|                |            |               | 13            | 22.50                | 22.29                | 22.22                | 21.85     |       |
|                |            |               | 24            | 22.50                | 22.21                | 22.17                | 21.58     |       |
|                |            | 12            | 0             | 21.50                | 21.39                | 21.27                | 21.01     |       |
|                |            |               | 6             | 21.50                | 21.37                | 21.26                | 21.00     |       |
|                |            |               | 13            | 21.50                | 21.38                | 21.27                | 20.84     |       |
|                |            | 25            | 0             | 21.50                | 21.46                | 21.25                | 21.03     |       |
|                | 16QAM      | 1             | 0             | 22.00                | 21.27                | 21.50                | 21.15     |       |
|                |            |               | 13            | 22.00                | 21.32                | 21.63                | 21.14     |       |
|                |            |               | 24            | 22.00                | 21.29                | 21.54                | 20.86     |       |
|                |            | 12            | 0             | 20.50                | 20.41                | 20.40                | 20.18     |       |
|                |            |               | 6             | 20.50                | 20.41                | 20.40                | 20.19     |       |
|                |            |               | 13            | 20.50                | 20.46                | 20.43                | 19.96     |       |
|                |            | 25            | 0             | 20.50                | 20.49                | 20.35                | 20.13     |       |

| LTE-FDD Band 2 |            |               |           | Maximum Tune-up(dBm) | Conducted Power(dBm) |           |           |
|----------------|------------|---------------|-----------|----------------------|----------------------|-----------|-----------|
| Bandwidth      | Modulation | RB allocation | RB offset |                      | 18650                | 18900     | 19150     |
|                |            |               |           |                      | 1855.0MHz            | 1880.0MHz | 1905.0MHz |
| 10MHz          | QPSK       | 1             | 0         | 22.50                | 22.11                | 21.93     | 21.74     |
|                |            |               | 25        | 22.50                | 22.14                | 22.13     | 21.85     |
|                |            |               | 49        | 22.50                | 22.08                | 22.08     | 21.53     |
|                |            | 25            | 0         | 21.50                | 21.22                | 21.02     | 20.83     |
|                |            |               | 13        | 21.50                | 21.19                | 21.02     | 20.82     |
|                |            |               | 25        | 21.50                | 21.15                | 21.08     | 20.86     |
|                | 50         | 0             | 21.50     | 21.27                | 21.08                | 20.83     |           |
|                | 16QAM      | 1             | 0         | 22.00                | 21.87                | 21.18     | 20.88     |
|                |            |               | 25        | 22.00                | 21.88                | 21.41     | 21.06     |
|                |            |               | 49        | 22.00                | 21.81                | 21.43     | 20.76     |
|                |            | 25            | 0         | 20.50                | 20.34                | 20.15     | 20.08     |
|                |            |               | 13        | 20.50                | 20.35                | 20.17     | 20.10     |
| 25             |            |               | 20.50     | 20.31                | 20.24                | 20.17     |           |
| Bandwidth      | Modulation | RB allocation | RB offset | Maximum Tune-up(dBm) | 18675                | 18900     | 19125     |
|                |            |               |           |                      | 1857.5MHz            | 1880.0MHz | 1902.5MHz |
| 15MHz          | QPSK       | 1             | 0         | 22.50                | 22.25                | 21.98     | 21.97     |
|                |            |               | 38        | 22.50                | 22.25                | 22.27     | 21.96     |
|                |            |               | 74        | 22.50                | 22.19                | 22.26     | 21.66     |
|                |            | 38            | 0         | 21.50                | 21.40                | 21.27     | 20.99     |
|                |            |               | 18        | 21.50                | 21.37                | 21.26     | 20.98     |
|                |            |               | 39        | 21.50                | 21.33                | 21.24     | 20.97     |
|                |            | 75            | 0         | 21.50                | 21.49                | 21.30     | 21.02     |
|                | 16QAM      | 1             | 0         | 22.00                | 21.98                | 21.26     | 21.40     |
|                |            |               | 38        | 22.00                | 21.95                | 21.55     | 21.48     |
|                |            |               | 74        | 22.00                | 21.90                | 21.55     | 21.22     |
| Bandwidth      | Modulation | RB allocation | RB offset | Maximum Tune-up(dBm) | 18700                | 18900     | 19100     |
|                |            |               |           |                      | 1860.0MHz            | 1880.0MHz | 1900.0MHz |
| 20MHz          | QPSK       | 1             | 0         | 22.50                | 22.17                | 21.86     | 21.98     |
|                |            |               | 50        | 22.50                | 22.23                | 22.23     | 21.82     |
|                |            |               | 99        | 22.50                | 21.92                | 22.06     | 21.56     |
|                |            | 50            | 0         | 21.50                | 21.33                | 21.02     | 20.99     |
|                |            |               | 25        | 21.50                | 21.31                | 21.02     | 20.99     |
|                |            |               | 50        | 21.50                | 21.17                | 21.22     | 20.90     |
|                | 100        | 0             | 21.50     | 21.40                | 21.22                | 20.86     |           |
|                | 16QAM      | 1             | 0         | 22.00                | 21.59                | 21.18     | 21.73     |
|                |            |               | 50        | 22.00                | 21.69                | 21.57     | 21.46     |
|                |            |               | 99        | 21.50                | 21.32                | 21.45     | 21.36     |

## Band 4

| LTE-FDD Band 4 |            |               |           | Maximum Tune-up(dBm) | Conducted Power(dBm) |           |           |
|----------------|------------|---------------|-----------|----------------------|----------------------|-----------|-----------|
| Bandwidth      | Modulation | RB allocation | RB offset |                      | 19957                | 20175     | 20393     |
|                |            |               |           |                      | 1710.7MHz            | 1732.5MHz | 1754.3MHz |
| 1.4MHz         | QPSK       | 1             | 0         | 23.50                | 23.39                | 22.77     | 22.28     |
|                |            |               | 2         | 23.50                | 23.36                | 22.80     | 22.27     |
|                |            |               | 5         | 23.50                | 23.38                | 22.77     | 22.20     |
|                |            | 3             | 0         | 23.50                | 23.37                | 22.94     | 22.29     |
|                |            |               | 2         | 23.50                | 23.41                | 22.88     | 22.27     |
|                |            |               | 3         | 23.50                | 23.34                | 22.83     | 22.27     |
|                |            | 6             | 0         | 22.50                | 22.29                | 22.02     | 21.50     |
|                | 16QAM      | 1             | 0         | 22.50                | 22.19                | 21.93     | 21.49     |
|                |            |               | 2         | 22.50                | 22.16                | 21.95     | 21.48     |
|                |            |               | 5         | 22.50                | 22.13                | 21.97     | 21.44     |
|                |            | 3             | 0         | 22.50                | 22.45                | 21.82     | 21.54     |
|                |            |               | 2         | 22.50                | 22.40                | 21.84     | 21.53     |
|                |            |               | 3         | 22.50                | 22.41                | 21.84     | 21.50     |
|                |            | 6             | 0         | 22.00                | 21.61                | 21.07     | 20.57     |
| Bandwidth      | Modulation | RB allocation | RB offset | Maximum Tune-up(dBm) | 19965                | 20175     | 20385     |
|                |            |               |           |                      | 1711.5MHz            | 1732.5MHz | 1753.5MHz |
| 3MHz           | QPSK       | 1             | 0         | 23.00                | 22.58                | 22.36     | 21.97     |
|                |            |               | 7         | 23.00                | 22.51                | 22.47     | 21.95     |
|                |            |               | 14        | 22.50                | 22.26                | 22.36     | 21.72     |
|                |            | 8             | 0         | 22.00                | 21.68                | 21.61     | 21.22     |
|                |            |               | 4         | 22.00                | 21.63                | 21.58     | 21.23     |
|                |            |               | 7         | 22.00                | 21.51                | 21.57     | 21.14     |
|                |            | 15            | 0         | 22.00                | 21.66                | 21.61     | 21.16     |
|                | 16QAM      | 1             | 0         | 22.50                | 22.02                | 21.56     | 21.30     |
|                |            |               | 7         | 22.50                | 22.00                | 21.63     | 21.24     |
|                |            |               | 14        | 22.00                | 21.76                | 21.48     | 21.03     |
|                |            | 8             | 0         | 21.00                | 20.90                | 20.64     | 20.41     |
|                |            |               | 4         | 21.00                | 20.94                | 20.64     | 20.42     |
|                |            |               | 7         | 21.00                | 20.85                | 20.64     | 20.33     |
|                |            | 15            | 0         | 21.00                | 20.75                | 20.70     | 20.33     |
| Bandwidth      | Modulation | RB allocation | RB offset | Maximum Tune-up(dBm) | 19976                | 20175     | 20375     |
|                |            |               |           |                      | 1712.5MHz            | 1732.5MHz | 1752.5MHz |
| 5MHz           | QPSK       | 1             | 0         | 22.50                | 22.28                | 22.18     | 22.11     |
|                |            |               | 13        | 22.50                | 22.14                | 22.37     | 21.95     |
|                |            |               | 24        | 22.50                | 21.78                | 22.32     | 21.72     |
|                |            | 12            | 0         | 21.50                | 21.17                | 21.35     | 21.16     |
|                |            |               | 6         | 21.50                | 21.14                | 21.33     | 21.17     |
|                |            |               | 13        | 21.50                | 20.88                | 21.36     | 20.97     |
|                |            | 25            | 0         | 21.50                | 21.11                | 21.43     | 21.06     |
|                | 16QAM      | 1             | 0         | 22.00                | 21.21                | 21.61     | 21.40     |
|                |            |               | 13        | 22.00                | 20.96                | 21.73     | 21.25     |
|                |            |               | 24        | 22.00                | 20.71                | 21.68     | 20.98     |
|                |            | 12            | 0         | 21.00                | 20.40                | 20.56     | 20.33     |
|                |            |               | 6         | 21.00                | 20.41                | 20.56     | 20.34     |
|                |            |               | 13        | 21.00                | 20.13                | 20.59     | 20.14     |
|                |            | 25            | 0         | 21.00                | 20.31                | 20.61     | 20.27     |

| LTE-FDD Band 4 |            |               |               | Maximum Tune-up(dBm) | Conducted Power(dBm) |           |           |       |
|----------------|------------|---------------|---------------|----------------------|----------------------|-----------|-----------|-------|
| Bandwidth      | Modulation | RB allocation | RB offset     |                      | 20000                | 20175     | 20350     |       |
|                |            |               |               |                      | 1715.0MHz            | 1732.5MHz | 1750.0MHz |       |
| 10MHz          | QPSK       | 1             | 0             | 22.50                | 22.13                | 21.99     | 22.38     |       |
|                |            |               | 25            | 22.50                | 21.69                | 22.29     | 22.05     |       |
|                |            |               | 49            | 22.50                | 21.81                | 22.36     | 21.62     |       |
|                |            | 25            | 0             | 21.50                | 20.86                | 21.07     | 21.20     |       |
|                |            |               | 13            | 21.50                | 20.81                | 21.09     | 21.21     |       |
|                |            |               | 25            | 21.50                | 20.83                | 21.22     | 20.97     |       |
|                | 16QAM      | 50            | 0             | 21.50                | 20.86                | 21.25     | 21.07     |       |
|                |            |               | 1             | 0                    | 22.00                | 21.69     | 21.42     | 21.30 |
|                |            |               |               | 25                   | 22.00                | 21.19     | 21.55     | 21.26 |
|                |            | 25            |               | 49                   | 22.00                | 21.53     | 21.59     | 20.78 |
|                |            |               | 0             | 20.50                | 19.99                | 20.34     | 20.40     |       |
|                |            |               | 13            | 20.50                | 20.01                | 20.34     | 20.42     |       |
| 25             | 20.50      | 19.96         | 20.49         | 20.15                |                      |           |           |       |
| Bandwidth      | Modulation | RB allocation | RB offset     | Maximum Tune-up(dBm) | 20025                | 20175     | 20325     |       |
|                |            |               |               |                      | 1717.5MHz            | 1732.5MHz | 1747.5MHz |       |
| 15MHz          | QPSK       | 1             | 0             | 23.00                | 22.05                | 21.91     | 22.71     |       |
|                |            |               | 38            | 22.50                | 21.85                | 22.37     | 22.22     |       |
|                |            |               | 74            | 23.00                | 21.80                | 22.62     | 21.77     |       |
|                |            | 38            | 0             | 21.50                | 20.99                | 21.43     | 21.22     |       |
|                |            |               | 18            | 21.50                | 20.94                | 21.47     | 21.23     |       |
|                |            |               | 39            | 21.50                | 21.00                | 21.45     | 21.24     |       |
|                | 75         | 0             | 21.50         | 21.06                | 21.47                | 21.22     |           |       |
|                | 16QAM      | 1             | 0             | 22.50                | 21.66                | 21.25     | 22.02     |       |
|                |            |               | 38            | 22.00                | 21.50                | 21.61     | 21.78     |       |
|                |            |               | 74            | 22.00                | 21.57                | 21.84     | 21.37     |       |
| Bandwidth      |            | Modulation    | RB allocation | RB offset            | Maximum Tune-up(dBm) | 20050     | 20175     | 20300 |
|                | 1720.0MHz  |               |               |                      |                      | 1732.5MHz | 1745.0MHz |       |
| 20MHz          | QPSK       | 1             | 0             | 22.50                | 21.95                | 21.69     | 22.32     |       |
|                |            |               | 50            | 22.50                | 21.98                | 22.40     | 22.28     |       |
|                |            |               | 99            | 23.00                | 22.04                | 22.57     | 21.64     |       |
|                |            | 50            | 0             | 22.00                | 20.62                | 21.17     | 21.64     |       |
|                |            |               | 25            | 22.00                | 20.60                | 21.15     | 21.63     |       |
|                |            |               | 50            | 21.50                | 21.00                | 21.42     | 21.17     |       |
|                | 100        | 0             | 22.00         | 21.12                | 21.51                | 21.22     |           |       |
|                |            | 16QAM         | 1             | 0                    | 22.00                | 21.28     | 21.17     | 21.97 |
|                |            |               |               | 50                   | 22.50                | 21.39     | 21.69     | 22.01 |
| 99             | 22.00      |               |               | 21.51                | 21.70                | 21.39     |           |       |

## Band 5

| LTE-FDD Band 5 |            |               |           | Maximum Tune-up(dBm) | Conducted Power(dBm) |          |          |       |
|----------------|------------|---------------|-----------|----------------------|----------------------|----------|----------|-------|
| Bandwidth      | Modulation | RB allocation | RB offset |                      | 20407                | 20525    | 20643    |       |
|                |            |               |           |                      | 824.7MHz             | 836.5MHz | 848.3MHz |       |
| 1.4MHz         | QPSK       | 1             | 0         | 21.00                | 19.36                | 20.77    | 19.87    |       |
|                |            |               | 2         | 21.00                | 19.45                | 20.60    | 19.98    |       |
|                |            |               | 5         | 20.50                | 19.49                | 20.47    | 20.01    |       |
|                |            | 3             | 0         | 21.00                | 19.39                | 20.75    | 19.95    |       |
|                |            |               | 2         | 21.00                | 19.43                | 20.74    | 19.94    |       |
|                |            |               | 3         | 21.00                | 19.52                | 20.54    | 20.00    |       |
|                |            | 6             | 0         | 20.00                | 18.71                | 19.78    | 19.18    |       |
|                |            | 16QAM         | 1         | 0                    | 20.00                | 18.52    | 19.91    | 19.18 |
|                |            |               |           | 2                    | 20.00                | 18.62    | 19.77    | 19.30 |
|                | 5          |               |           | 20.00                | 18.71                | 19.65    | 19.32    |       |
|                | 3          |               | 0         | 20.00                | 18.58                | 19.99    | 19.04    |       |
|                |            |               | 2         | 20.00                | 18.57                | 19.99    | 19.04    |       |
|                |            |               | 3         | 20.00                | 18.71                | 19.88    | 19.13    |       |
|                | 6          | 0             | 19.00     | 17.62                | 18.87                | 18.34    |          |       |
| Bandwidth      | Modulation | RB allocation | RB offset | Maximum Tune-up(dBm) | 20415                | 20525    | 20635    |       |
|                |            |               |           |                      | 825.5MHz             | 836.5MHz | 847.5MHz |       |
| 3MHz           | QPSK       | 1             | 0         | 21.50                | 19.33                | 21.07    | 19.67    |       |
|                |            |               | 7         | 21.00                | 19.65                | 20.60    | 19.91    |       |
|                |            |               | 14        | 20.50                | 19.78                | 20.02    | 19.98    |       |
|                |            | 8             | 0         | 20.00                | 18.68                | 19.93    | 19.06    |       |
|                |            |               | 4         | 20.00                | 18.65                | 19.93    | 19.06    |       |
|                |            |               | 7         | 20.00                | 18.96                | 19.52    | 19.22    |       |
|                |            | 15            | 0         | 20.00                | 18.88                | 19.74    | 19.12    |       |
|                | 16QAM      | 1             | 0         | 21.00                | 18.46                | 20.74    | 18.97    |       |
|                |            |               | 7         | 20.50                | 18.80                | 20.31    | 19.23    |       |
|                |            |               | 14        | 20.00                | 19.03                | 19.74    | 19.28    |       |
|                |            | 8             | 0         | 19.50                | 17.77                | 19.25    | 18.16    |       |
|                |            |               | 4         | 19.50                | 17.77                | 19.26    | 18.17    |       |
|                |            |               | 7         | 19.00                | 18.07                | 18.87    | 18.32    |       |
|                |            | 15            | 0         | 19.00                | 17.91                | 18.92    | 18.18    |       |
| LTE-FDD Band 5 |            |               |           | Maximum Tune-up(dBm) | Conducted Power(dBm) |          |          |       |
| Bandwidth      | Modulation | RB allocation | RB offset |                      | 20425                | 20525    | 20625    |       |
|                |            |               |           |                      | 826.5MHz             | 836.5MHz | 846.5MHz |       |
| 5MHz           | QPSK       | 1             | 0         | 21.50                | 19.38                | 21.36    | 19.41    |       |
|                |            |               | 13        | 21.00                | 19.88                | 20.66    | 19.79    |       |
|                |            |               | 24        | 20.50                | 20.40                | 19.81    | 20.02    |       |
|                |            | 12            | 0         | 20.50                | 18.66                | 20.13    | 18.75    |       |
|                |            |               | 6         | 20.50                | 18.63                | 20.14    | 18.74    |       |
|                |            |               | 13        | 19.50                | 19.38                | 19.23    | 19.09    |       |
|                |            | 25            | 0         | 20.00                | 19.10                | 19.67    | 18.94    |       |
|                | 16QAM      | 1             | 0         | 21.00                | 18.38                | 20.74    | 18.65    |       |
|                |            |               | 13        | 20.50                | 18.96                | 20.06    | 19.07    |       |
|                |            |               | 24        | 20.00                | 19.53                | 19.23    | 19.27    |       |
|                |            | 12            | 0         | 19.50                | 17.77                | 19.27    | 17.85    |       |
|                |            |               | 6         | 19.50                | 17.77                | 19.28    | 17.84    |       |
|                |            |               | 13        | 19.00                | 18.50                | 18.39    | 18.20    |       |
|                |            | 25            | 0         | 19.00                | 18.19                | 18.76    | 18.05    |       |

| Bandwidth | Modulation | RB allocation | RB offset | Maximum Tune-up(dBm) | 20450        | 20525    | 20600    |
|-----------|------------|---------------|-----------|----------------------|--------------|----------|----------|
|           |            |               |           |                      | 829.0MHz     | 836.5MHz | 844.0MHz |
| 10MHz     | QPSK       | 1             | 0         | 21.50                | 19.57        | 21.38    | 19.58    |
|           |            |               | 25        | 21.00                | 20.76        | 20.68    | 19.35    |
|           |            |               | 49        | <b>21.50</b>         | <b>21.44</b> | 19.32    | 19.99    |
|           |            | 25            | 0         | 20.50                | 19.11        | 20.21    | 18.32    |
|           |            |               | 13        | 20.50                | 19.09        | 20.22    | 18.31    |
|           |            |               | 25        | 20.50                | <b>20.30</b> | 18.92    | 18.80    |
|           | 16QAM      | 1             | 0         | 20.00                | 19.82        | 19.62    | 18.60    |
|           |            |               | 0         | 21.50                | 18.63        | 21.09    | 18.83    |
|           |            |               | 25        | 20.50                | 19.88        | 20.41    | 18.64    |
|           |            | 25            | 49        | 21.00                | 20.59        | 19.00    | 19.31    |
|           |            |               | 0         | 19.50                | 18.32        | 19.39    | 17.45    |
|           |            |               | 13        | 19.50                | 18.31        | 19.42    | 17.45    |
|           |            |               | 25        | 20.00                | 19.50        | 18.07    | 17.92    |

## Band 7

| LTE-FDD Band 7 |            |               |           | Maximum Tune-up(dBm) | Conducted Power(dBm) |           |           |
|----------------|------------|---------------|-----------|----------------------|----------------------|-----------|-----------|
| Bandwidth      | Modulation | RB allocation | RB offset |                      | 20775                | 21100     | 21425     |
|                |            |               |           |                      | 2502.5MHz            | 2535.0MHz | 2567.5MHz |
| 5MHz           | QPSK       | 1             | 0         | 23.50                | 23.02                | 20.80     | 21.14     |
|                |            |               | 13        | 23.50                | 23.15                | 20.75     | 21.19     |
|                |            |               | 24        | 23.50                | 23.24                | 21.00     | 21.49     |
|                |            | 12            | 0         | 22.50                | 22.35                | 20.03     | 20.46     |
|                |            |               | 6         | 22.50                | 22.29                | 20.01     | 20.46     |
|                |            |               | 13        | 22.50                | 22.41                | 20.13     | 20.57     |
|                | 25         | 0             | 22.50     | 22.49                | 20.14                | 20.51     |           |
|                | 16QAM      | 1             | 0         | 22.50                | 22.05                | 20.21     | 20.55     |
|                |            |               | 13        | 22.50                | 22.34                | 20.24     | 20.60     |
|                |            |               | 24        | 22.50                | 22.48                | 20.45     | 20.86     |
|                |            | 12            | 0         | 21.50                | 21.46                | 19.26     | 19.70     |
|                |            |               | 6         | 21.50                | 21.46                | 19.27     | 19.71     |
|                |            |               | 13        | 22.00                | 21.59                | 19.42     | 19.80     |
| 25             |            | 0             | 22.00     | 21.58                | 19.28                | 19.75     |           |
| Bandwidth      | Modulation | RB allocation | RB offset | Maximum Tune-up(dBm) | 20800                | 21100     | 21400     |
|                |            |               |           |                      | 2505.0MHz            | 2535.0MHz | 2565.0MHz |
| 10MHz          | QPSK       | 1             | 0         | 23.50                | 23.00                | 20.58     | 21.43     |
|                |            |               | 25        | 23.50                | 23.08                | 20.55     | 20.91     |
|                |            |               | 49        | 23.50                | 23.27                | 21.23     | 21.35     |
|                |            | 25            | 0         | 22.50                | 22.27                | 19.75     | 20.46     |
|                |            |               | 13        | 22.50                | 22.22                | 19.73     | 20.46     |
|                |            |               | 25        | 23.00                | 22.50                | 20.05     | 20.29     |
|                | 50         | 0             | 22.50     | 22.45                | 19.99                | 20.33     |           |
|                | 16QAM      | 1             | 0         | 23.00                | 22.52                | 19.91     | 20.79     |
|                |            |               | 25        | 23.00                | 22.95                | 19.95     | 20.36     |
|                |            |               | 49        | 23.50                | 23.03                | 20.48     | 20.58     |
|                |            | 25            | 0         | 21.50                | 21.42                | 18.96     | 19.72     |
|                |            |               | 13        | 21.50                | 21.41                | 18.98     | 19.75     |
|                |            |               | 25        | 22.00                | 21.71                | 19.34     | 19.63     |

| LTE-FDD Band 7 |            |               |           | Maximum Tune-up(dBm) | Conducted Power(dBm) |           |           |
|----------------|------------|---------------|-----------|----------------------|----------------------|-----------|-----------|
| Bandwidth      | Modulation | RB allocation | RB offset |                      | 20825                | 21100     | 21375     |
|                |            |               |           |                      | 2507.5MHz            | 2535.0MHz | 2562.5MHz |
| 15MHz          | QPSK       | 1             | 0         | 23.50                | 23.04                | 20.77     | 22.17     |
|                |            |               | 38        | 23.50                | 23.34                | 20.59     | 21.10     |
|                |            |               | 74        | 23.50                | 23.13                | 21.51     | 21.34     |
|                |            | 38            | 0         | 23.00                | 22.62                | 20.18     | 20.65     |
|                |            |               | 18        | 23.00                | 22.54                | 20.15     | 20.65     |
|                |            |               | 39        | 22.50                | 22.49                | 20.12     | 20.65     |
|                |            | 75            | 0         | 23.00                | 22.77                | 20.27     | 20.67     |
|                | 16QAM      | 1             | 0         | 23.00                | 22.66                | 20.12     | 21.90     |
|                |            |               | 38        | 23.50                | 23.21                | 19.99     | 20.92     |
|                |            |               | 74        | 23.00                | 22.96                | 20.94     | 20.98     |
| Bandwidth      | Modulation | RB allocation | RB offset | Maximum Tune-up(dBm) | 20850                | 21100     | 21350     |
|                |            |               |           |                      | 2510.0MHz            | 2535.0MHz | 2560.0MHz |
| 20MHz          | QPSK       | 1             | 0         | 23.00                | 22.91                | 20.83     | 22.41     |
|                |            |               | 50        | 23.50                | 23.37                | 20.52     | 21.31     |
|                |            |               | 99        | 22.50                | 22.17                | 21.86     | 21.19     |
|                |            | 50            | 0         | 22.50                | 22.41                | 19.82     | 21.38     |
|                |            |               | 25        | 22.50                | 22.38                | 19.81     | 21.39     |
|                |            |               | 50        | 22.50                | 22.07                | 20.40     | 20.36     |
|                |            | 100           | 0         | 22.50                | 22.21                | 20.23     | 20.90     |
|                | 16QAM      | 1             | 0         | 22.50                | 22.23                | 20.26     | 22.23     |
|                |            |               | 50        | 23.00                | 22.83                | 19.98     | 21.27     |
|                |            |               | 99        | 22.00                | 21.65                | 21.30     | 20.97     |

## Band 66

| LTE-FDD Band 66 |            |               |           | Maximum Tune-up(dBm) | Conducted Power(dBm) |           |           |
|-----------------|------------|---------------|-----------|----------------------|----------------------|-----------|-----------|
| Bandwidth       | Modulation | RB allocation | RB offset |                      | 131979               | 132322    | 132665    |
|                 |            |               |           |                      | 1710.7MHz            | 1745.0MHz | 1779.3MHz |
| 1.4MHz          | QPSK       | 1             | 0         | 23.50                | 22.78                | 23.03     | 22.52     |
|                 |            |               | 2         | 23.50                | 22.75                | 23.00     | 22.51     |
|                 |            |               | 5         | 23.50                | 22.67                | 23.02     | 22.44     |
|                 |            | 3             | 0         | 23.50                | 22.88                | 23.05     | 22.63     |
|                 |            |               | 2         | 23.50                | 22.83                | 23.04     | 22.60     |
|                 |            |               | 3         | 23.50                | 22.79                | 23.00     | 22.49     |
|                 |            | 6             | 0         | 22.50                | 22.07                | 22.19     | 21.76     |
|                 | 16QAM      | 1             | 0         | 22.50                | 21.89                | 22.25     | 21.82     |
|                 |            |               | 2         | 22.50                | 21.88                | 22.22     | 21.80     |
|                 |            |               | 5         | 22.50                | 21.85                | 22.25     | 21.74     |
|                 |            | 3             | 0         | 22.50                | 21.95                | 22.37     | 21.69     |
|                 |            |               | 2         | 22.50                | 21.94                | 22.37     | 21.69     |
|                 |            |               | 3         | 22.50                | 21.90                | 22.40     | 21.61     |
|                 |            | 6             | 0         | 21.50                | 20.96                | 21.29     | 20.93     |

| Bandwidth | Modulation | RB allocation | RB offset | Maximum Tune-up(dBm) | 131987    | 132322    | 132657    |
|-----------|------------|---------------|-----------|----------------------|-----------|-----------|-----------|
|           |            |               |           |                      | 1711.5MHz | 1745.0MHz | 1778.5MHz |
| 3MHz      | QPSK       | 1             | 0         | 23.50                | 22.67     | 23.07     | 22.86     |
|           |            |               | 7         | 23.50                | 22.55     | 23.09     | 22.65     |
|           |            |               | 14        | 23.50                | 22.26     | 23.02     | 22.45     |
|           |            | 8             | 0         | 22.50                | 21.81     | 22.25     | 21.93     |
|           |            |               | 4         | 22.50                | 21.80     | 22.26     | 21.92     |
|           |            |               | 7         | 22.50                | 21.64     | 22.25     | 21.81     |
|           | 16QAM      | 15            | 0         | 22.50                | 21.79     | 22.21     | 21.87     |
|           |            |               | 0         | 22.50                | 22.38     | 22.47     | 21.99     |
|           |            |               | 7         | 22.50                | 22.29     | 22.42     | 21.87     |
|           |            | 1             | 14        | 22.50                | 22.02     | 22.32     | 21.63     |
|           |            |               | 0         | 21.50                | 21.13     | 21.28     | 21.13     |
|           |            |               | 4         | 21.50                | 21.14     | 21.29     | 21.13     |
|           |            | 8             | 7         | 21.50                | 21.01     | 21.29     | 21.11     |
|           |            |               | 0         | 21.50                | 20.93     | 21.22     | 21.02     |
|           |            |               | 15        | 21.50                | 20.93     | 21.22     | 21.02     |
| Bandwidth | Modulation | RB allocation | RB offset | Maximum Tune-up(dBm) | 131997    | 132322    | 132647    |
|           |            |               |           |                      | 1712.5MHz | 1745.0MHz | 1777.5MHz |
| 5MHz      | QPSK       | 1             | 0         | 23.50                | 23.03     | 23.33     | 23.16     |
|           |            |               | 13        | 23.50                | 22.68     | 23.23     | 23.08     |
|           |            |               | 24        | 23.50                | 22.54     | 23.17     | 22.72     |
|           |            | 12            | 0         | 22.50                | 21.92     | 22.44     | 22.23     |
|           |            |               | 6         | 22.50                | 21.92     | 22.44     | 22.21     |
|           |            |               | 13        | 22.50                | 21.62     | 22.36     | 21.99     |
|           | 16QAM      | 25            | 0         | 22.50                | 21.75     | 22.32     | 22.13     |
|           |            |               | 0         | 23.00                | 22.20     | 22.37     | 22.60     |
|           |            |               | 13        | 22.50                | 21.93     | 22.35     | 22.46     |
|           |            | 1             | 24        | 22.50                | 21.81     | 22.31     | 22.20     |
|           |            |               | 0         | 21.50                | 21.07     | 21.48     | 21.34     |
|           |            |               | 6         | 21.50                | 21.09     | 21.49     | 21.35     |
|           |            | 12            | 13        | 21.50                | 20.85     | 21.44     | 21.20     |
|           |            |               | 0         | 21.50                | 20.93     | 21.43     | 21.26     |
|           |            |               | 25        | 21.50                | 20.93     | 21.43     | 21.26     |
| Bandwidth | Modulation | RB allocation | RB offset | Maximum Tune-up(dBm) | 132022    | 132322    | 132622    |
|           |            |               |           |                      | 1715.0MHz | 1745.0MHz | 1775.0MHz |
| 10MHz     | QPSK       | 1             | 0         | 24.00                | 23.19     | 23.57     | 23.05     |
|           |            |               | 25        | 23.50                | 22.81     | 23.29     | 23.20     |
|           |            |               | 49        | 23.50                | 22.86     | 23.17     | 22.73     |
|           |            | 25            | 0         | 22.50                | 21.87     | 22.49     | 22.25     |
|           |            |               | 13        | 22.50                | 21.92     | 22.49     | 22.23     |
|           |            |               | 25        | 22.50                | 21.92     | 22.30     | 22.06     |
|           | 16QAM      | 50            | 0         | 22.50                | 21.95     | 22.31     | 22.19     |
|           |            |               | 0         | 23.50                | 22.23     | 23.16     | 22.35     |
|           |            |               | 25        | 23.00                | 21.84     | 22.98     | 22.48     |
|           |            | 1             | 49        | 23.00                | 22.03     | 22.85     | 22.08     |
|           |            |               | 0         | 22.00                | 21.02     | 21.58     | 21.37     |
|           |            |               | 13        | 22.00                | 21.05     | 21.58     | 21.37     |
|           |            | 25            | 25        | 21.50                | 21.10     | 21.43     | 21.27     |
|           |            |               | 0         | 22.00                | 21.02     | 21.58     | 21.37     |
|           |            |               | 13        | 22.00                | 21.05     | 21.58     | 21.37     |

| LTE-FDD Band 66 |            |               |           | Maximum Tune-up(dBm) | Conducted Power(dBm) |           |           |
|-----------------|------------|---------------|-----------|----------------------|----------------------|-----------|-----------|
| Bandwidth       | Modulation | RB allocation | RB offset |                      | 132047               | 132322    | 132597    |
|                 |            |               |           |                      | 1717.5MHz            | 1745.0MHz | 1772.5MHz |
| 15MHz           | QPSK       | 1             | 0         | 24.00                | 23.05                | 23.61     | 22.76     |
|                 |            |               | 38        | 23.50                | 22.78                | 23.30     | 23.25     |
|                 |            |               | 74        | 23.50                | 22.82                | 23.04     | 22.86     |
|                 |            | 38            | 0         | 22.50                | 22.03                | 22.29     | 22.32     |
|                 |            |               | 18        | 22.50                | 22.00                | 22.31     | 22.30     |
|                 |            |               | 39        | 22.50                | 21.98                | 22.31     | 22.30     |
|                 | 75         | 0             | 22.50     | 22.14                | 22.27                | 22.35     |           |
|                 | 16QAM      | 1             | 0         | 23.00                | 22.63                | 22.87     | 22.26     |
|                 |            |               | 38        | 23.00                | 22.47                | 22.63     | 22.73     |
|                 |            |               | 74        | 23.00                | 22.56                | 22.36     | 22.41     |
| Bandwidth       | Modulation | RB allocation | RB offset | Maximum Tune-up(dBm) | 132072               | 132322    | 132572    |
|                 |            |               |           |                      | 1720.0MHz            | 1745.0MHz | 1770.0MHz |
| 20MHz           | QPSK       | 1             | 0         | 23.50                | 23.13                | 23.41     | 22.49     |
|                 |            |               | 50        | 23.50                | 23.02                | 23.36     | 23.13     |
|                 |            |               | 99        | 23.50                | 23.16                | 22.88     | 22.83     |
|                 |            | 50            | 0         | 23.00                | 22.01                | 22.61     | 21.85     |
|                 |            |               | 25        | 23.00                | 21.98                | 22.61     | 21.84     |
|                 |            |               | 50        | 22.50                | 22.27                | 22.28     | 22.26     |
|                 | 100        | 0             | 22.50     | 22.29                | 22.28                | 22.25     |           |
|                 | 16QAM      | 1             | 0         | 23.00                | 22.68                | 22.84     | 21.79     |
|                 |            |               | 50        | 23.00                | 22.68                | 22.81     | 22.49     |
|                 |            |               | 99        | 23.00                | 22.89                | 22.30     | 22.28     |

## 8.2 Bluetooth

| EDR | Mode    | Maximum Tune-up(dBm) | Conducted Output Power (dBm) |         |         |
|-----|---------|----------------------|------------------------------|---------|---------|
|     |         |                      | 0                            | 39      | 78      |
|     |         |                      | 2402MHz                      | 2441MHz | 2480MHz |
|     |         |                      | -0.39                        | 0.33    | 0.78    |
|     | GFSK    | 1.00                 |                              |         |         |
|     | π/4QPSK | 2.00                 | 0.50                         | 1.11    | 1.51    |
|     | 8DPSK   | 2.00                 | 0.81                         | 1.57    | 1.92    |
| BLE | Mode    | Maximum Tune-up(dBm) | Conducted Output Power (dBm) |         |         |
|     |         |                      | 0                            | 19      | 39      |
|     |         |                      | 2402MHz                      | 2440MHz | 2480MHz |
|     |         |                      | -0.46                        | 0.35    | 0.74    |
|     | 1Mbps   | 1.00                 |                              |         |         |
|     | 2Mbps   | 1.00                 | -0.35                        | 0.39    | 0.75    |

| Channel | Frequency (GHz) | Max. Tune-up Power (dBm) | Max. Power (mW) | Test distance (mm) | Exclusion thresholds for 1-g SAR(mW) | RF exposure evaluation required |
|---------|-----------------|--------------------------|-----------------|--------------------|--------------------------------------|---------------------------------|
| 78      | 2.480           | 2.00                     | 1.58            | 0                  | 10                                   | No                              |
| 78      | 2.480           | 2.00                     | 1.58            | 25                 | 48                                   | No                              |

### Note

1. Per KDB 447498 D01 General RF Exposure Guidance v06, the 1-g SAR test SAR Test Exclusion Thresholds for 100 MHz – 6 GHz and ≤ 25 mm (Approximate SAR Test Exclusion Power Thresholds at Selected Frequencies and Test Separation Distances are illustrated in the following Table. The equation and threshold in 4.3.1 must be applied to determine SAR test exclusion.) by:

| MHz  | 5  | 10 | 15  | 20  | 25  | mm                                |
|------|----|----|-----|-----|-----|-----------------------------------|
| 150  | 39 | 77 | 116 | 155 | 194 | SAR Test Exclusion Threshold (mW) |
| 300  | 27 | 55 | 82  | 110 | 137 |                                   |
| 450  | 22 | 45 | 67  | 89  | 112 |                                   |
| 835  | 16 | 33 | 49  | 66  | 82  |                                   |
| 900  | 16 | 32 | 47  | 63  | 79  |                                   |
| 1500 | 12 | 24 | 37  | 49  | 61  |                                   |
| 1900 | 11 | 22 | 33  | 44  | 54  |                                   |
| 2450 | 10 | 19 | 29  | 38  | 48  |                                   |
| 3600 | 8  | 16 | 24  | 32  | 40  |                                   |
| 5200 | 7  | 13 | 20  | 26  | 33  |                                   |
| 5400 | 6  | 13 | 19  | 26  | 32  |                                   |
| 5800 | 6  | 12 | 19  | 25  | 31  |                                   |

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

2. Per KDB 248227 D01 v02r02, choose the highest output power channel to test SAR and determine further SAR exclusion.

3. The output power of all data rate were prescan, just the worst case (the lowest data rate) of all mode were shown in report.

## 8.3 SAR Test Exclusion Consideration Table

Per KDB 447498 requires when the standalone SAR test exclusion of section 4.3.1 is applied to an antenna that transmits simultaneously with other antennas, the standalone SAR must be estimated according to the following format to determine simultaneous transmission SAR test exclusion:

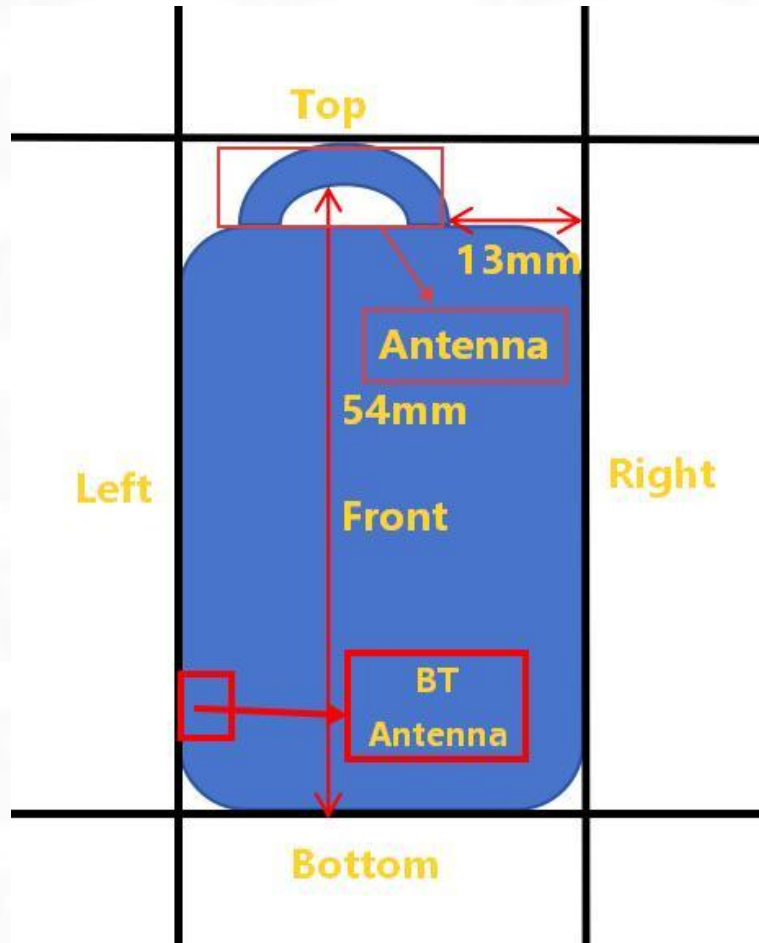
For 100 MHz to 6 GHz and test separation distances ≤ 50 mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following:

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

| Mode | Channel | Frequency (GHz) | Max tune-up power (dBm) | Max. Power (mW) | Exposure Position   | Front-of-face | Back  |
|------|---------|-----------------|-------------------------|-----------------|---------------------|---------------|-------|
|      |         |                 |                         |                 | Test Dist.(mm)      | 25            | 0     |
| BT   | 78      | 2.480           | 2.00                    | 1.58            | Estimated SAR(W/kg) | 0.025         | 0.066 |

## 9. Test Exclusion Consideration

Antenna information:



| Distance of The Antenna to the EUT surface and edge (mm) |                 |                |                |                 |               |                  |
|----------------------------------------------------------|-----------------|----------------|----------------|-----------------|---------------|------------------|
| Antenna                                                  | Front Side (mm) | Back Side (mm) | Left Edge (mm) | Right Edge (mm) | Top Edge (mm) | Bottom Edge (mm) |
| WWAN                                                     | <25             | <25            | <25            | <25             | <25           | 54               |
| BT                                                       | <25             | <25            | <25            | 33              | 58            | <25              |

## 10. Test Result

| Front-of-face(25mm gap)                                                                                                                                                                                                                                                                                                                                                                              |          |            |       |             |                 |                     |                   |                          |                |                            |           |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|------------|-------|-------------|-----------------|---------------------|-------------------|--------------------------|----------------|----------------------------|-----------|
| Mode                                                                                                                                                                                                                                                                                                                                                                                                 | Position | Dist. (mm) | Ch.   | Freq. (MHz) | Power Drift (%) | 1g Meas. SAR (W/kg) | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 50% Duty Factor SAR (W/kg) | Meas. No. |
| LTE Band 2                                                                                                                                                                                                                                                                                                                                                                                           | Front    | 25         | 18900 | 1880.0      | -1.710          | 0.348               | 22.23             | 22.50                    | 1.064          | <b>0.185</b>               | 1#        |
| Back Touch + Belt Clip + headset (0mm gap)                                                                                                                                                                                                                                                                                                                                                           |          |            |       |             |                 |                     |                   |                          |                |                            |           |
| Mode                                                                                                                                                                                                                                                                                                                                                                                                 | Position | Dist. (mm) | Ch.   | Freq. (MHz) | Power Drift (%) | 1g Meas. SAR (W/kg) | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 50% Duty Factor SAR (W/kg) | Meas. No. |
| LTE Band 2                                                                                                                                                                                                                                                                                                                                                                                           | Back     | 0          | 18900 | 1880.0      | 1.100           | 1.168               | 22.23             | 22.50                    | 1.064          | <b>0.621</b>               | 2#        |
| Note:<br>1. The distance of the Front-of-face/Body test is 25mm/0mm respectively.<br>2. Refer to ANNEX C for the detailed test data for each test configuration.<br>3. For a PTT, only simplex communication technology was supported, so the SAR value need to be corrected by Multiplying 50%.<br>4. Passive body-worn and audio accessories generally do not apply to the head SAR of PTT radios. |          |            |       |             |                 |                     |                   |                          |                |                            |           |
| Front-of-face(25mm gap)                                                                                                                                                                                                                                                                                                                                                                              |          |            |       |             |                 |                     |                   |                          |                |                            |           |
| Mode                                                                                                                                                                                                                                                                                                                                                                                                 | Position | Dist. (mm) | Ch.   | Freq. (MHz) | Power Drift (%) | 1g Meas. SAR (W/kg) | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 50% Duty Factor SAR (W/kg) | Meas. No. |
| LTE Band 4                                                                                                                                                                                                                                                                                                                                                                                           | Front    | 25         | 20175 | 1732.5      | 0.850           | 0.332               | 22.57             | 23.00                    | 1.104          | <b>0.183</b>               | 3#        |
| Back Touch + Belt Clip + headset (0mm gap)                                                                                                                                                                                                                                                                                                                                                           |          |            |       |             |                 |                     |                   |                          |                |                            |           |
| Mode                                                                                                                                                                                                                                                                                                                                                                                                 | Position | Dist. (mm) | Ch.   | Freq. (MHz) | Power Drift (%) | 1g Meas. SAR (W/kg) | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 50% Duty Factor SAR (W/kg) | Meas. No. |
| LTE Band 4                                                                                                                                                                                                                                                                                                                                                                                           | Back     | 0          | 20175 | 1732.5      | 0.230           | 0.980               | 22.57             | 23.00                    | 1.104          | <b>0.541</b>               | 4#        |
| Note:<br>1. The distance of the Front-of-face/Body test is 25mm/0mm respectively.<br>2. Refer to ANNEX C for the detailed test data for each test configuration.<br>3. For a PTT, only simplex communication technology was supported, so the SAR value need to be corrected by Multiplying 50%.<br>4. Passive body-worn and audio accessories generally do not apply to the head SAR of PTT radios. |          |            |       |             |                 |                     |                   |                          |                |                            |           |
| Front-of-face(25mm gap)                                                                                                                                                                                                                                                                                                                                                                              |          |            |       |             |                 |                     |                   |                          |                |                            |           |
| Mode                                                                                                                                                                                                                                                                                                                                                                                                 | Position | Dist. (mm) | Ch.   | Freq. (MHz) | Power Drift (%) | 1g Meas. SAR (W/kg) | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 50% Duty Factor SAR (W/kg) | Meas. No. |
| LTE Band 5                                                                                                                                                                                                                                                                                                                                                                                           | Front    | 25         | 20525 | 836.5       | 0.360           | 0.142               | 21.44             | 21.50                    | 1.014          | <b>0.072</b>               | 5#        |
| Back Touch + Belt Clip + headset (0mm gap)                                                                                                                                                                                                                                                                                                                                                           |          |            |       |             |                 |                     |                   |                          |                |                            |           |
| Mode                                                                                                                                                                                                                                                                                                                                                                                                 | Position | Dist. (mm) | Ch.   | Freq. (MHz) | Power Drift (%) | 1g Meas. SAR (W/kg) | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 50% Duty Factor SAR (W/kg) | Meas. No. |
| LTE Band 5                                                                                                                                                                                                                                                                                                                                                                                           | Back     | 0          | 20525 | 836.5       | -3.220          | 0.327               | 21.44             | 21.50                    | 1.014          | <b>0.166</b>               | 6#        |
| Note:<br>1. The distance of the Front-of-face/Body test is 25mm/0mm respectively.<br>2. Refer to ANNEX C for the detailed test data for each test configuration.<br>3. For a PTT, only simplex communication technology was supported, so the SAR value need to be corrected by Multiplying 50%.<br>4. Passive body-worn and audio accessories generally do not apply to the head SAR of PTT radios. |          |            |       |             |                 |                     |                   |                          |                |                            |           |
| Front-of-face(25mm gap)                                                                                                                                                                                                                                                                                                                                                                              |          |            |       |             |                 |                     |                   |                          |                |                            |           |
| Mode                                                                                                                                                                                                                                                                                                                                                                                                 | Position | Dist. (mm) | Ch.   | Freq. (MHz) | Power Drift (%) | 1g Meas. SAR (W/kg) | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 50% Duty Factor SAR (W/kg) | Meas. No. |
| LTE Band 7                                                                                                                                                                                                                                                                                                                                                                                           | Front    | 25         | 20850 | 2510.0      | -2.710          | 0.379               | 23.37             | 23.50                    | 1.030          | <b>0.195</b>               | 7#        |
| Back Touch + Belt Clip + headset (0mm gap)                                                                                                                                                                                                                                                                                                                                                           |          |            |       |             |                 |                     |                   |                          |                |                            |           |
| Mode                                                                                                                                                                                                                                                                                                                                                                                                 | Position | Dist. (mm) | Ch.   | Freq. (MHz) | Power Drift (%) | 1g Meas. SAR (W/kg) | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 50% Duty Factor SAR (W/kg) | Meas. No. |
| LTE Band 7                                                                                                                                                                                                                                                                                                                                                                                           | Back     | 0          | 20850 | 2510.0      | 4.550           | 0.502               | 23.37             | 23.50                    | 1.030          | <b>0.259</b>               | 8#        |
| Note:<br>1. The distance of the Front-of-face/Body test is 25mm/0mm respectively.<br>2. Refer to ANNEX C for the detailed test data for each test configuration.<br>3. For a PTT, only simplex communication technology was supported, so the SAR value need to be corrected by Multiplying 50%.<br>4. Passive body-worn and audio accessories generally do not apply to the head SAR of PTT radios. |          |            |       |             |                 |                     |                   |                          |                |                            |           |

| Front-of-face(25mm gap)                                                                                                                                                                                                                                                                                                                                                                              |          |            |        |             |                 |                     |                   |                          |                |                            |           |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|------------|--------|-------------|-----------------|---------------------|-------------------|--------------------------|----------------|----------------------------|-----------|
| Mode                                                                                                                                                                                                                                                                                                                                                                                                 | Position | Dist. (mm) | Ch.    | Freq. (MHz) | Power Drift (%) | 1g Meas. SAR (W/kg) | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 50% Duty Factor SAR (W/kg) | Meas. No. |
| LTE Band 66                                                                                                                                                                                                                                                                                                                                                                                          | Front    | 25         | 132322 | 1745.0      | -3.300          | 0.187               | 23.41             | 23.50                    | 1.021          | <b>0.095</b>               | 9#        |
| Back Touch + Belt Clip + headset (0mm gap)                                                                                                                                                                                                                                                                                                                                                           |          |            |        |             |                 |                     |                   |                          |                |                            |           |
| Mode                                                                                                                                                                                                                                                                                                                                                                                                 | Position | Dist. (mm) | Ch.    | Freq. (MHz) | Power Drift (%) | 1g Meas. SAR (W/kg) | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 50% Duty Factor SAR (W/kg) | Meas. No. |
| LTE Band 66                                                                                                                                                                                                                                                                                                                                                                                          | Back     | 0          | 132322 | 1745.0      | 3.960           | 0.669               | 23.41             | 23.50                    | 1.021          | <b>0.342</b>               | 10#       |
| Note:<br>1. The distance of the Front-of-face/Body test is 25mm/0mm respectively.<br>2. Refer to ANNEX C for the detailed test data for each test configuration.<br>3. For a PTT, only simplex communication technology was supported, so the SAR value need to be corrected by Multiplying 50%.<br>4. Passive body-worn and audio accessories generally do not apply to the head SAR of PTT radios. |          |            |        |             |                 |                     |                   |                          |                |                            |           |

## 11. Simultaneous Transmission

Simultaneous transmission SAR test exclusion is determined for each operating configuration and exposure condition according to the reported standalone SAR of each applicable simultaneous transmitting antenna. When the sum of SAR 1g of all simultaneously transmitting antennas in an operating mode and exposure condition combination is within the SAR limit (SAR 1g 1.6 W/kg), the simultaneous transmission SAR is not required. When the sum of SAR 1g is greater than the SAR limit (SAR 1g 1.6 W/kg), SAR test exclusion is determined by the SAR to Peak Location Ratio (SPLSR).

### 11.1 Simultaneous Transmission Mode Considerations

Simultaneous transmission SAR test exclusion is determined for each operating configuration and exposure condition according to the reported standalone SAR of each applicable simultaneous transmitting antenna. The device has 2 Tx antennas, WWAN main antenna and BT Antenna. Among that, 2x antennas can always transmit simultaneously. The work mode combination is showed as below table.

Simultaneous Transmission information:

| NO. | Configuration | Front-of-face | Back |
|-----|---------------|---------------|------|
| 1   | WWAN+BT       | Yes           | Yes  |

### 11.1 Sum SAR of Simultaneous Transmission

Front-of-face

| Band               | Test Position | Reported SAR(W/kg) |       | $\Sigma$ SAR (W/kg)<br>WWAN + BT | SPLSR | Remark |
|--------------------|---------------|--------------------|-------|----------------------------------|-------|--------|
|                    |               | WWAN               | BT    |                                  |       |        |
| LTE Band 7 (20MHz) | Front-of-face | 0.195              | 0.025 | <b>0.220</b>                     | N/A   | N/A    |

Back

| Band               | Test Position | Reported SAR(W/kg) |       | $\Sigma$ SAR (W/kg)<br>WWAN + BT | SPLSR | Remark |
|--------------------|---------------|--------------------|-------|----------------------------------|-------|--------|
|                    |               | WWAN               | BT    |                                  |       |        |
| LTE Band 2 (20MHz) | Back          | 0.621              | 0.066 | <b>0.687</b>                     | N/A   | N/A    |

## 12. Test Equipment List

| Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Manufacturer    | Model         | Serial No./Version  | Cal. Date  | Cal. Due   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---------------|---------------------|------------|------------|
| E-Field Probe                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | MVG             | SSE2          | 0125-EPGO-445       | 2026/03/03 | 2027/03/02 |
| 6 1/2 Digital Multimeter                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Keithley        | DMM6500       | 4527164             | 2025/10/20 | 2026/10/19 |
| Wideband Radio Communication Tester                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | ROHDE & SCHWARZ | CMW500        | 161997              | 2025/10/20 | 2026/10/19 |
| MXG Vector Signal Generator                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Agilent         | N5182A        | MY46240163          | 2025/10/20 | 2026/10/19 |
| E-Series Avg. Power Sensor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | KEYSIGHT        | E9300A        | MY55050017          | 2025/04/02 | 2026/04/01 |
| EPM Series Power Meter                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | KEYSIGHT        | E4418B        | MY41293435          | 2025/04/02 | 2026/04/01 |
| Coupler                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | MERRIMAC        | CWM-10R-10.8G | LOT-83391           | 2025/04/02 | 2026/04/01 |
| 835MHz Validation Dipole                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | MVG             | SID835        | 07/22 DIP 0G835-656 | 2025/05/26 | 2028/05/25 |
| 1800MHz Validation Dipole                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | MVG             | SID1800       | 07/22 DIP 1G800-657 | 2025/05/26 | 2028/05/25 |
| 1900MHz Validation Dipole                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | MVG             | SID1900       | 07/22 DIP1G900-658  | 2025/05/26 | 2028/05/25 |
| 2600MHz Validation Dipole                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | MVG             | SID2600       | 07/22 DIP 2G600-663 | 2025/05/26 | 2028/05/25 |
| LIMESAR Dielectric Probe                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | MVG             | SCLMP         | 06/22 OCPG88        | 2026/04/07 | 2027/04/06 |
| ENA Series Network Analyzer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Agilent         | E5071B        | MY42301221          | 2025/10/20 | 2026/10/19 |
| Thermometer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Riters          | DT-232        | 21A11               | 2025/10/20 | 2026/10/19 |
| Antenna network emulator                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | MVG             | ANTA 74       | 07/22 ANTA 74       | N/A        | N/A        |
| SAM Phantom                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | MVG             | SAM           | 07/22 SAM149        | N/A        | N/A        |
| Mobile Phone Positioning System                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | MVG             | MSH 118       | 07/22 MSH 118       | N/A        | N/A        |
| Mechanical Calibration Kit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | PNA             | N/A           | N/A                 | 2025/10/20 | 2026/10/19 |
| Open SAR test software                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | MVG             | N/A           | V5.3.5              | N/A        | N/A        |
| <p>Note: For dipole antennas, BTF has adopted 3 years as calibration intervals, and on annual basis, every measurement dipole has been evaluated and is in compliance with the following criteria:</p> <ol style="list-style-type: none"> <li>1. There is no physical damage on the dipole;</li> <li>2. System validation with specific dipole is within 10% of calibrated value;</li> <li>3. Return-loss in within 20% of calibrated measurement.</li> <li>4. Impedance (real or imaginary parts) in within 5 Ohms of calibrated measurement.</li> </ol> |                 |               |                     |            |            |

## ANNEX A Simulating Liquid Verification Result

The dielectric parameters of the liquids were verified prior to the SAR evaluation using an SCLMP Dielectric Probe Kit.

| Dielectric performance of tissue simulating liquid |              |          |                |          |                        |                    |       |           |           |
|----------------------------------------------------|--------------|----------|----------------|----------|------------------------|--------------------|-------|-----------|-----------|
| Frequency (MHz)                                    | $\epsilon_r$ |          | $\sigma$ (s/m) |          | Delta ( $\epsilon_r$ ) | Delta ( $\sigma$ ) | Limit | Temp (°C) | Date      |
|                                                    | Target       | Measured | Target         | Measured |                        |                    |       |           |           |
| 835                                                | 41.50        | 41.76    | 0.90           | 0.91     | 0.63%                  | 1.11%              | ±5%   | 21.7      | 18/6/2026 |
| 836.5                                              | 41.50        | 41.75    | 0.90           | 0.91     | 0.60%                  | 1.11%              | ±5%   | 21.7      | 18/6/2026 |
| 1732.5                                             | 40.00        | 40.44    | 1.40           | 1.34     | 1.10%                  | -4.29%             | ±5%   | 21.6      | 19/6/2026 |
| 1745                                               | 40.00        | 40.42    | 1.40           | 1.35     | 1.05%                  | -3.57%             | ±5%   | 21.6      | 19/6/2026 |
| 1800                                               | 40.00        | 40.34    | 1.40           | 1.38     | 0.85%                  | -1.43%             | ±5%   | 21.6      | 19/6/2026 |
| 1880                                               | 40.00        | 40.38    | 1.40           | 1.38     | 0.95%                  | -1.43%             | ±5%   | 22.2      | 20/6/2026 |
| 1900                                               | 40.00        | 40.39    | 1.40           | 1.39     | 0.98%                  | -0.71%             | ±5%   | 22.2      | 20/6/2026 |
| 2510                                               | 39.00        | 38.99    | 1.96           | 1.89     | -0.03%                 | -3.57%             | ±5%   | 21.9      | 22/6/2026 |
| 2600                                               | 39.00        | 38.85    | 1.96           | 1.94     | -0.38%                 | -1.02%             | ±5%   | 21.9      | 22/6/2026 |

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

## ANNEX B System Check Result

Comparing to the original SAR value provided by MVG, the validation data should be within its specification of 10 %(for 10 g).

| Frequency (MHz) | Input Power (mW) | 10g SAR (W/Kg) | 1g SAR (W/Kg) | 10g SAR 1W input power normalized (W/Kg) | 1g SAR 1W input power normalized (W/Kg) | 10g SAR Standard target (1W) (W/Kg) | 1g SAR Standard target (1W) (W/Kg) | 10g SAR Deviation | 1g SAR Deviation |
|-----------------|------------------|----------------|---------------|------------------------------------------|-----------------------------------------|-------------------------------------|------------------------------------|-------------------|------------------|
| 835             | 100              | 0.665          | 1.022         | 6.65                                     | 10.22                                   | 6.12                                | 9.46                               | 8.66%             | 8.03%            |
| 1800            | 100              | 2.115          | 4.099         | 21.15                                    | 40.99                                   | 19.83                               | 37.93                              | 6.66%             | 8.07%            |
| 1900            | 100              | 2.178          | 4.134         | 21.78                                    | 41.34                                   | 20.82                               | 40.29                              | 4.61%             | 2.61%            |
| 2600            | 100              | 2.469          | 5.510         | 24.69                                    | 55.10                                   | 24.43                               | 53.76                              | 1.06%             | 2.49%            |

## System Performance Check Data (835 MHz)

### System check at 835 MHz

Date of measurement: 18/6/2026

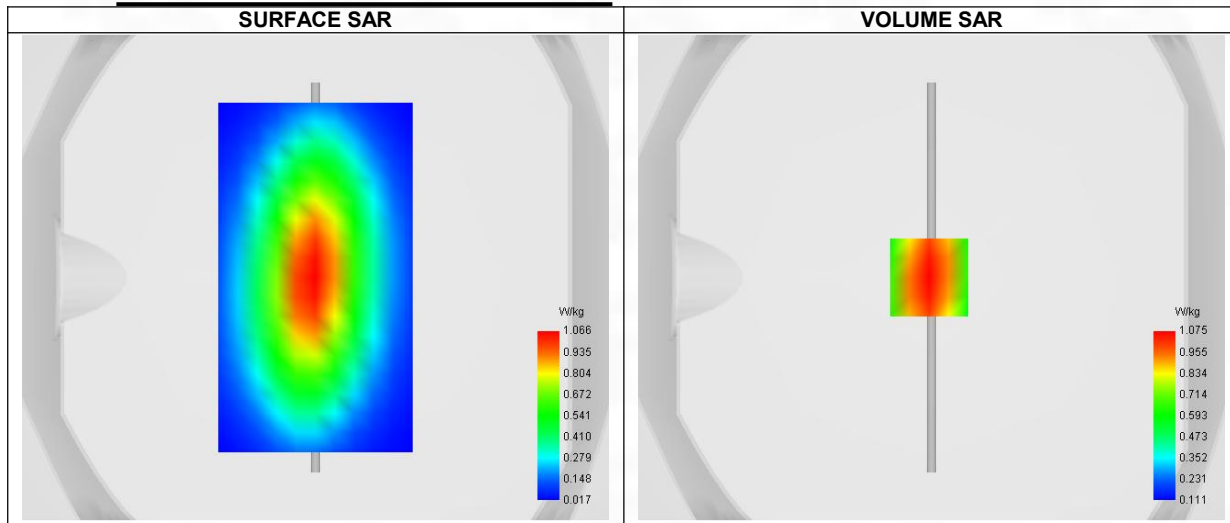
#### A. Experimental conditions.

|                    |                                         |
|--------------------|-----------------------------------------|
| Probe              | 0125-EPGO-445                           |
| ConvF              | 1.15                                    |
| Area Scan          | dx=8mm dy=8mm, Complete                 |
| Zoom Scan          | 5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete |
| Phantom            | Validation plane                        |
| Device Position    | Dipole                                  |
| Band               | CW835                                   |
| Channels/Frequency | Middle                                  |
| Signal             | CW                                      |

#### B. Permittivity

|                                        |         |
|----------------------------------------|---------|
| Middle TX Frequency (MHz)              | 835.000 |
| Relative permittivity (real part)      | 41.756  |
| Relative permittivity (imaginary part) | 19.172  |
| Conductivity (S/m)                     | 0.912   |

#### C. SAR Surface and Volume



Maximum location: X=-1.00, Y=0.00 ; SAR Peak: 1.45 W/kg

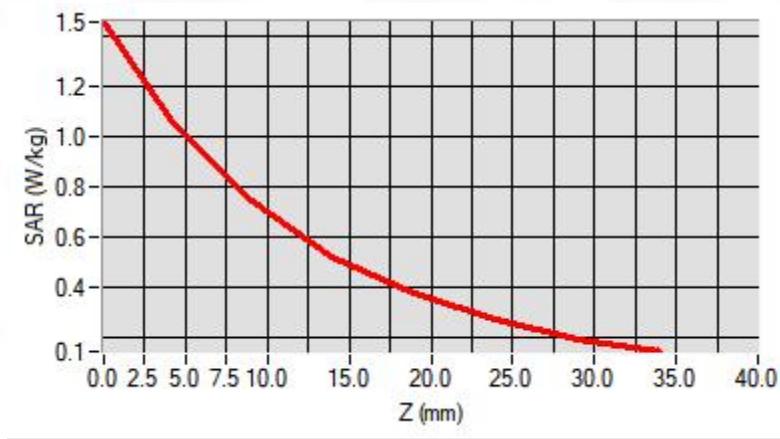
#### D. SAR 1g & 10g

|                                                       |           |
|-------------------------------------------------------|-----------|
| SAR 10g (W/Kg)                                        | 0.665     |
| SAR 1g (W/Kg)                                         | 1.022     |
| Variation (%)                                         | -4.430    |
| Horizontal validation criteria: minimum distance (mm) | 22.627417 |
| Vertical validation criteria: SAR ratio M2/M1 (%)     | 68.833011 |

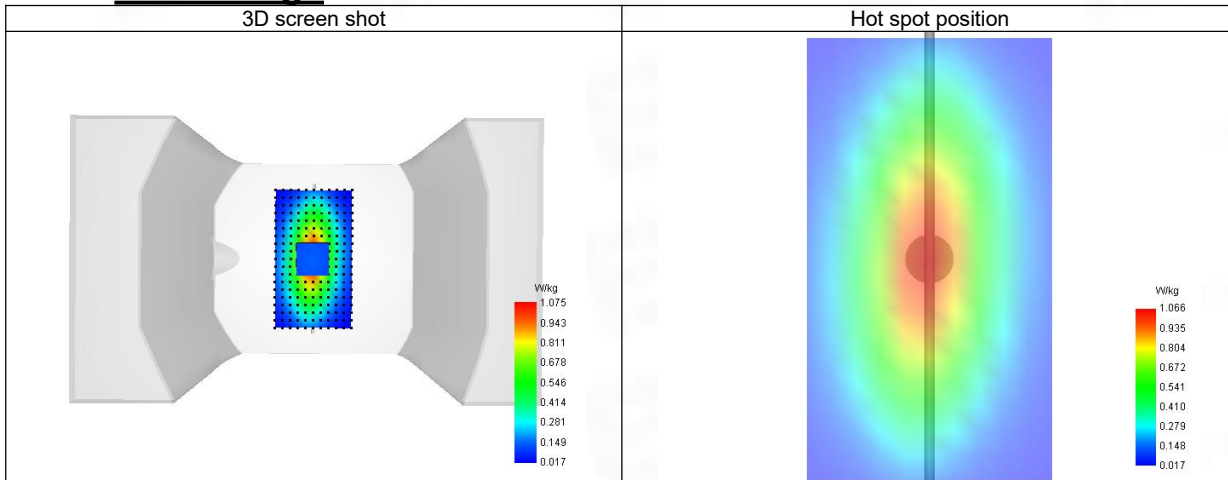
#### E. Z Axis Scan

|        |      |      |      |       |       |       |       |
|--------|------|------|------|-------|-------|-------|-------|
| Z (mm) | 0.00 | 4.00 | 9.00 | 14.00 | 19.00 | 24.00 | 29.00 |
|--------|------|------|------|-------|-------|-------|-------|

|            |       |       |       |       |       |       |       |
|------------|-------|-------|-------|-------|-------|-------|-------|
| SAR (W/Kg) | 1.460 | 1.075 | 0.740 | 0.518 | 0.371 | 0.267 | 0.192 |
|------------|-------|-------|-------|-------|-------|-------|-------|



## F. 3D Image



## System Performance Check Data (1800 MHz)

### System check at 1800 MHz

Date of measurement: 19/5/2026

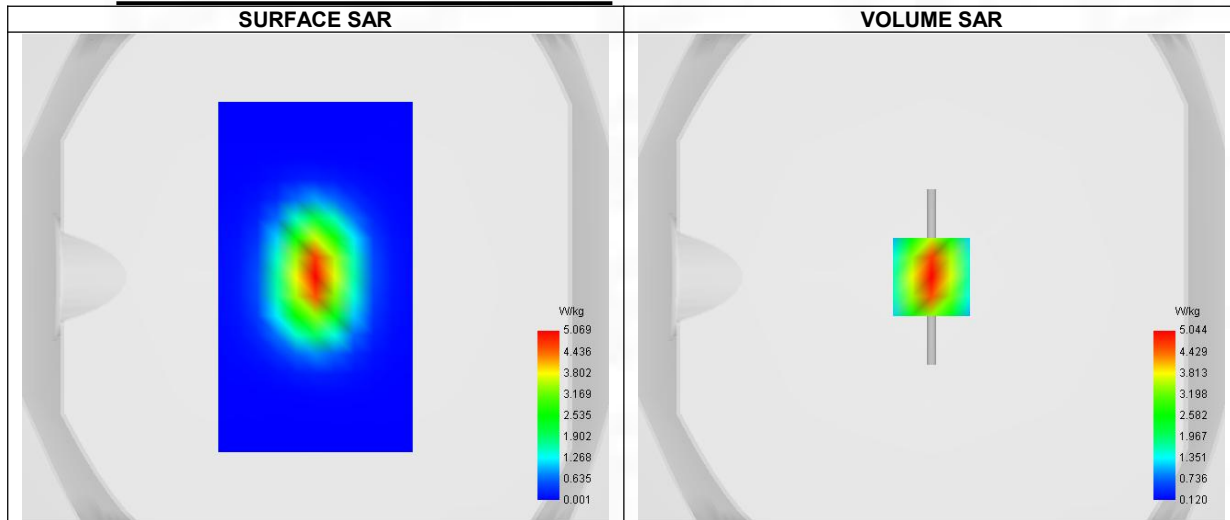
#### A. Experimental conditions.

|                    |                                         |
|--------------------|-----------------------------------------|
| Probe              | 0125-EPGO-445                           |
| ConvF              | 0.88                                    |
| Area Scan          | dx=8mm dy=8mm, Complete                 |
| Zoom Scan          | 5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete |
| Phantom            | Validation plane                        |
| Device Position    | Dipole                                  |
| Band               | CW1800                                  |
| Channels/Frequency | Middle                                  |
| Signal             | CW                                      |

#### B. Permittivity

|                                        |          |
|----------------------------------------|----------|
| Middle TX Frequency (MHz)              | 1800.000 |
| Relative permittivity (real part)      | 40.343   |
| Relative permittivity (imaginary part) | 15.771   |
| Conductivity (S/m)                     | 1.377    |

#### C. SAR Surface and Volume



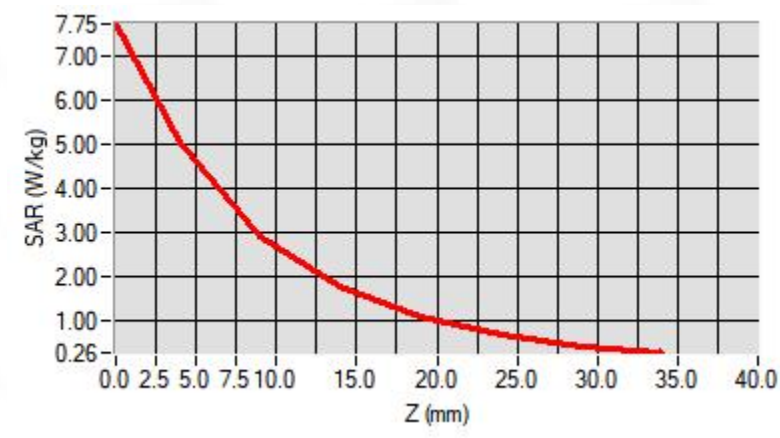
Maximum location: X=0.00, Y=0.00 ; SAR Peak: 7.69 W/kg

#### D. SAR 1g & 10g

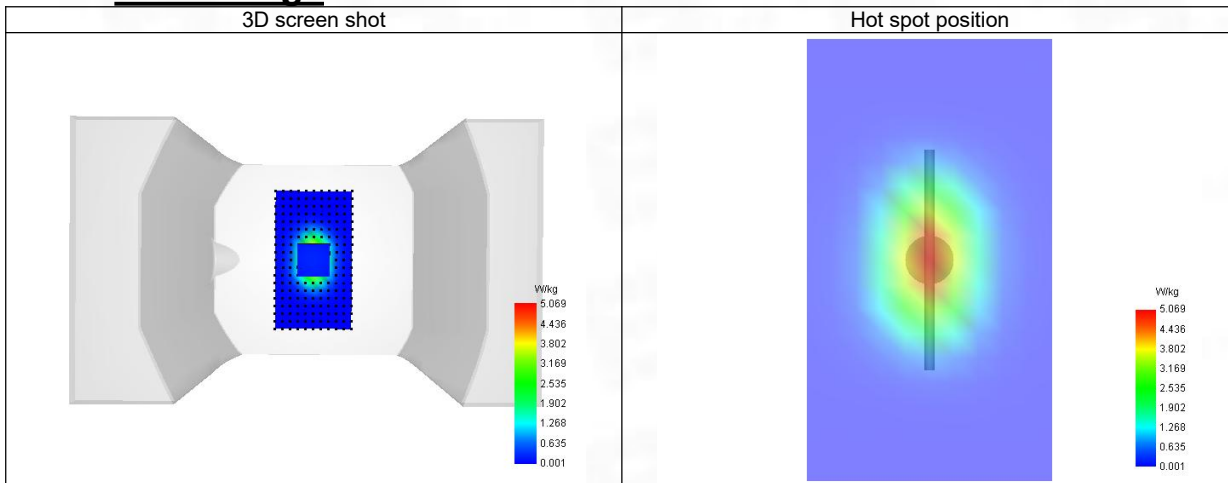
|                                                       |           |
|-------------------------------------------------------|-----------|
| SAR 10g (W/Kg)                                        | 2.115     |
| SAR 1g (W/Kg)                                         | 4.099     |
| Variation (%)                                         | -0.460    |
| Horizontal validation criteria: minimum distance (mm) | 16.000000 |
| Vertical validation criteria: SAR ratio M2/M1 (%)     | 57.859997 |

#### E. Z Axis Scan

|            |       |       |       |       |       |       |       |
|------------|-------|-------|-------|-------|-------|-------|-------|
| Z (mm)     | 0.00  | 4.00  | 9.00  | 14.00 | 19.00 | 24.00 | 29.00 |
| SAR (W/Kg) | 7.748 | 5.044 | 2.919 | 1.751 | 1.075 | 0.657 | 0.409 |



## F. 3D Image



## System Performance Check Data (1900 MHz)

### System check at 1900 MHz

Date of measurement: 20/6/2026

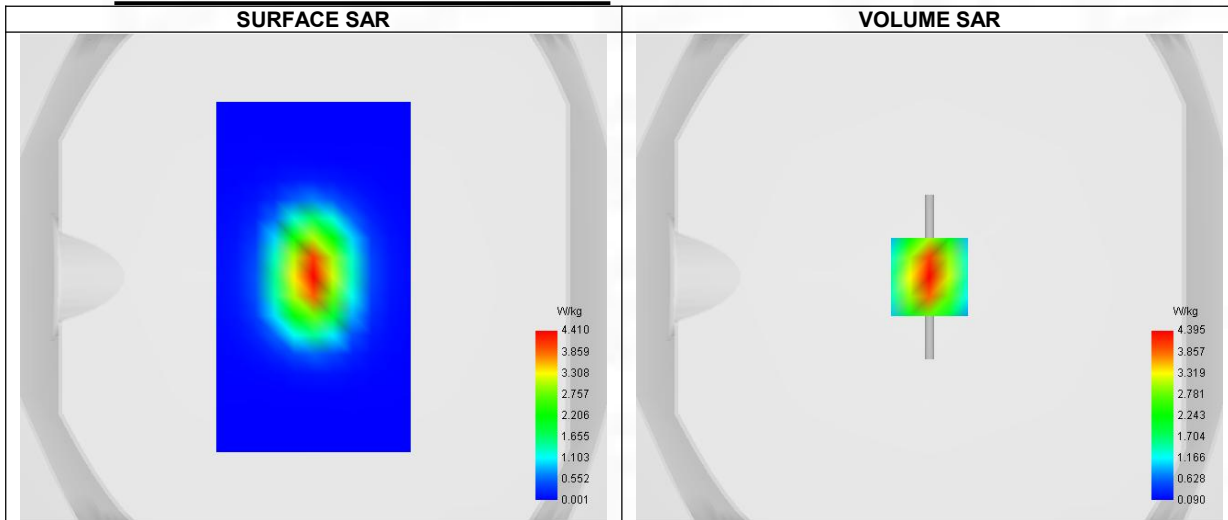
#### A. Experimental conditions.

|                    |                                         |
|--------------------|-----------------------------------------|
| Probe              | 0125-EPGO-445                           |
| ConvF              | 1.27                                    |
| Area Scan          | dx=8mm dy=8mm, Complete                 |
| Zoom Scan          | 5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete |
| Phantom            | Validation plane                        |
| Device Position    | Dipole                                  |
| Band               | CW1900                                  |
| Channels/Frequency | Middle                                  |
| Signal             | CW                                      |

#### B. Permittivity

|                                        |          |
|----------------------------------------|----------|
| Middle TX Frequency (MHz)              | 1900.000 |
| Relative permittivity (real part)      | 40.392   |
| Relative permittivity (imaginary part) | 13.743   |
| Conductivity (S/m)                     | 1.386    |

#### C. SAR Surface and Volume



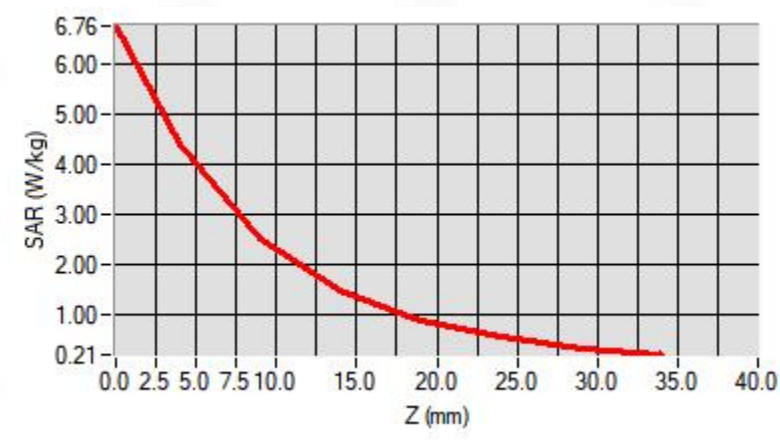
Maximum location: X=0.00, Y=0.00 ; SAR Peak: 6.72 W/kg

#### D. SAR 1g & 10g

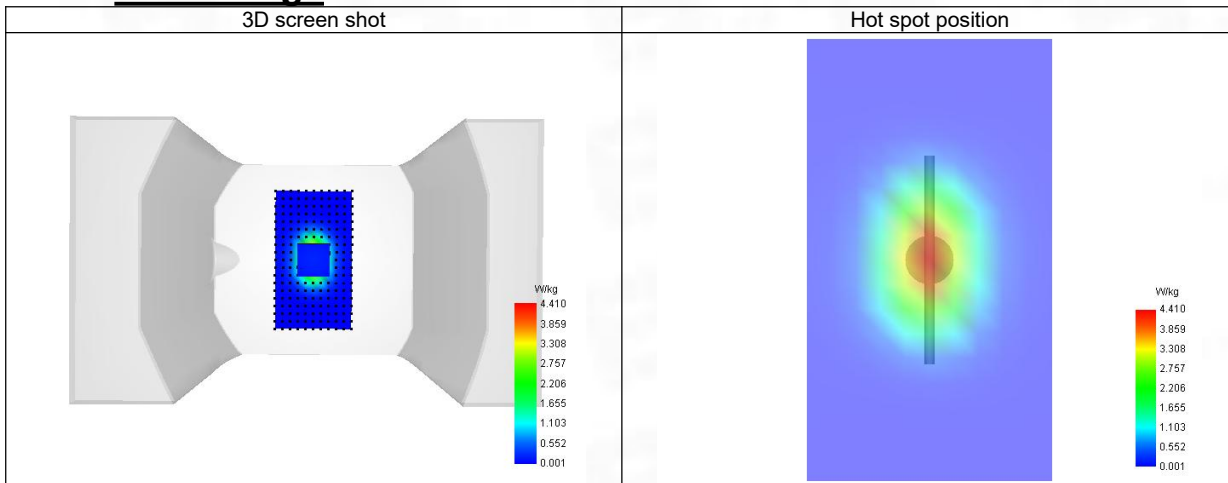
|                                                       |           |
|-------------------------------------------------------|-----------|
| SAR 10g (W/Kg)                                        | 2.178     |
| SAR 1g (W/Kg)                                         | 4.134     |
| Variation (%)                                         | -8.100    |
| Horizontal validation criteria: minimum distance (mm) | 16.000000 |
| Vertical validation criteria: SAR ratio M2/M1 (%)     | 57.522899 |

#### E. Z Axis Scan

|            |       |       |       |       |       |       |       |
|------------|-------|-------|-------|-------|-------|-------|-------|
| Z (mm)     | 0.00  | 4.00  | 9.00  | 14.00 | 19.00 | 24.00 | 29.00 |
| SAR (W/Kg) | 6.764 | 4.395 | 2.528 | 1.499 | 0.905 | 0.550 | 0.336 |



## F. 3D Image



## System Performance Check Data (2600 MHz)

### System check at 2600 MHz

Date of measurement: 22/6/2026

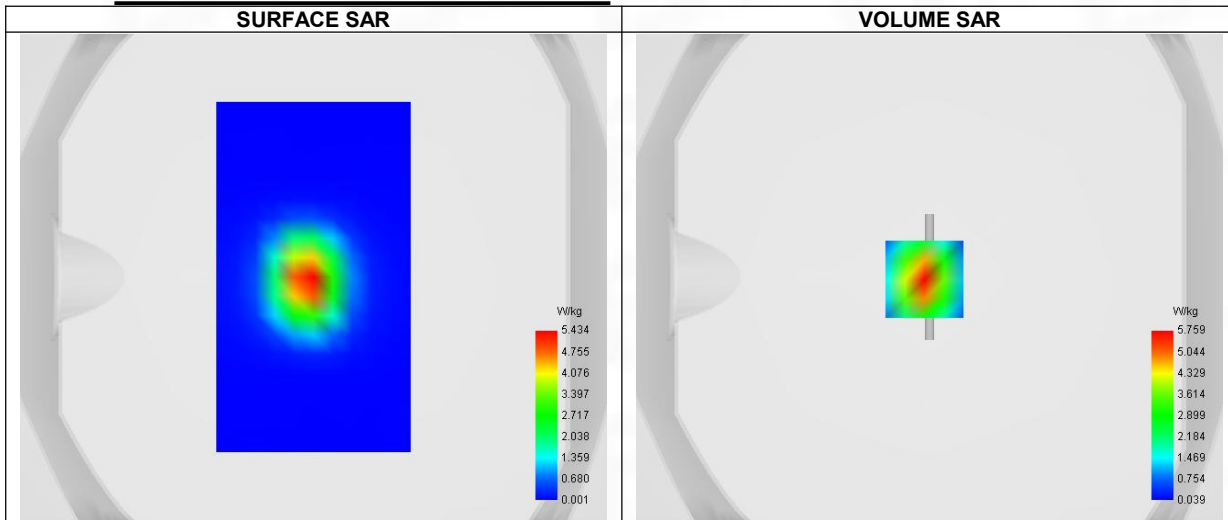
#### A. Experimental conditions.

|                    |                                         |
|--------------------|-----------------------------------------|
| Probe              | 0125-EPGO-445                           |
| ConvF              | 1.26                                    |
| Area Scan          | dx=8mm dy=8mm, Complete                 |
| Zoom Scan          | 5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete |
| Phantom            | Validation plane                        |
| Device Position    | Dipole                                  |
| Band               | CW2600                                  |
| Channels/Frequency | Middle                                  |
| Signal             | CW                                      |

#### B. Permittivity

|                                        |          |
|----------------------------------------|----------|
| Middle TX Frequency (MHz)              | 2600.000 |
| Relative permittivity (real part)      | 38.853   |
| Relative permittivity (imaginary part) | 12.586   |
| Conductivity (S/m)                     | 1.942    |

#### C. SAR Surface and Volume



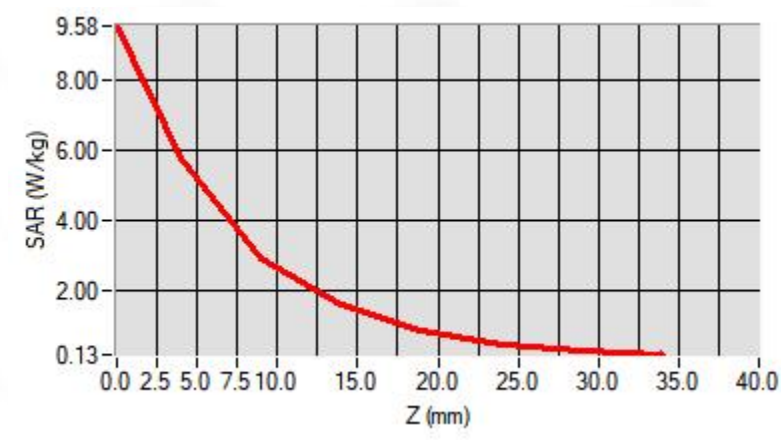
Maximum location: X=-2.00, Y=-1.00 ; SAR Peak: 9.49 W/kg

#### D. SAR 1g & 10g

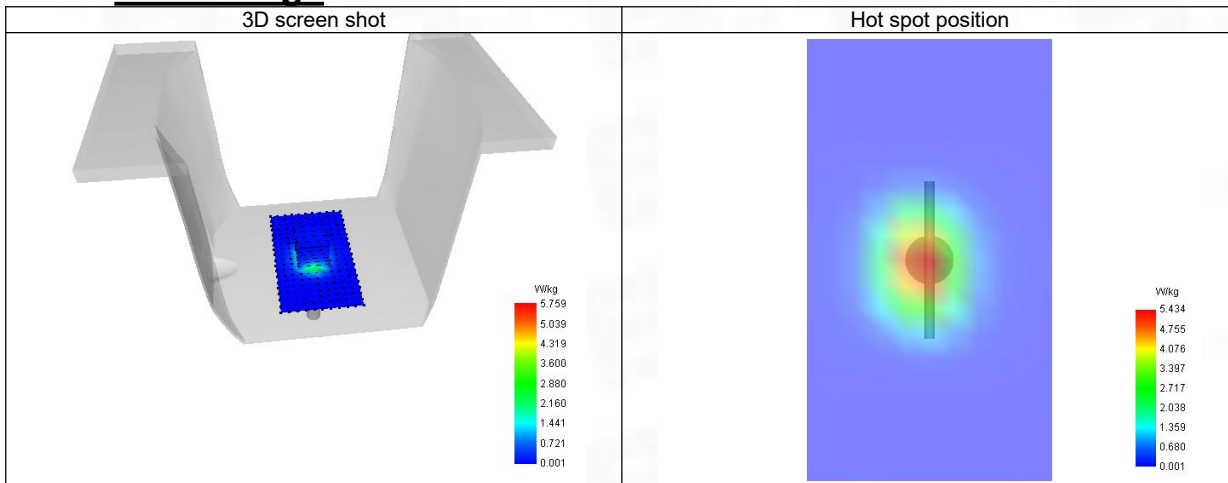
|                                                       |           |
|-------------------------------------------------------|-----------|
| SAR 10g (W/Kg)                                        | 2.469     |
| SAR 1g (W/Kg)                                         | 5.510     |
| Variation (%)                                         | -2.200    |
| Horizontal validation criteria: minimum distance (mm) | 16.000000 |
| Vertical validation criteria: SAR ratio M2/M1 (%)     | 50.659967 |

#### E. Z Axis Scan

|            |       |       |       |       |       |       |       |
|------------|-------|-------|-------|-------|-------|-------|-------|
| Z (mm)     | 0.00  | 4.00  | 9.00  | 14.00 | 19.00 | 24.00 | 29.00 |
| SAR (W/Kg) | 9.582 | 5.759 | 2.917 | 1.548 | 0.826 | 0.442 | 0.241 |



## F. 3D Image



## ANNEX C Test Data

### 1-Body with Front-of-face position in dist. 25mm on Channel 18900 in LTE band 2

#### SAR Measurement at LTE band 2 (Body, Validation Plane)

Date of measurement: 20/6/2026

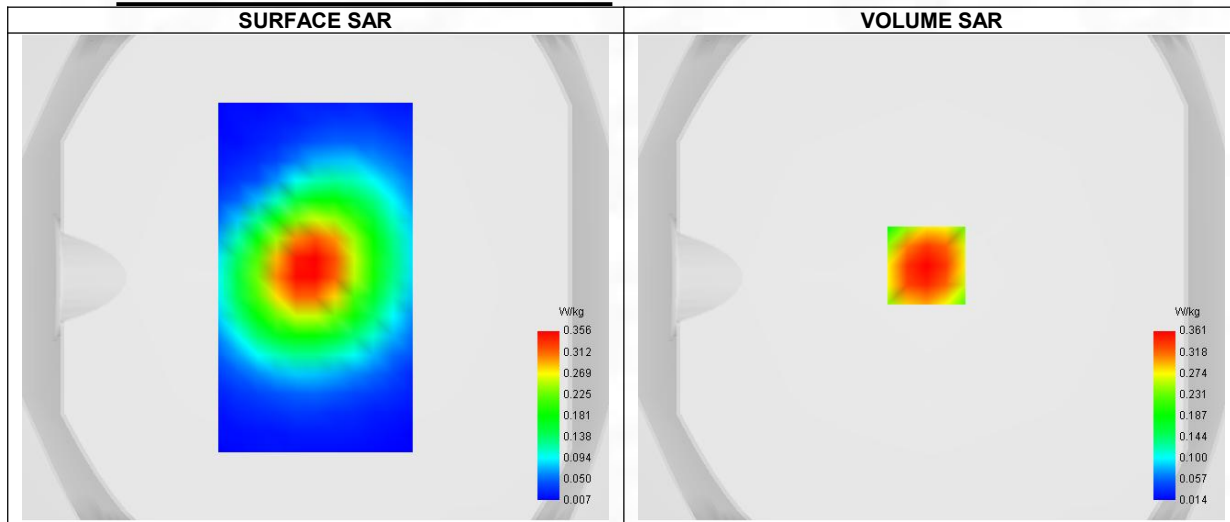
##### A. Experimental conditions.

|                    |                                         |
|--------------------|-----------------------------------------|
| Probe              | 0125-EPGO-445                           |
| ConvF              | 1.27                                    |
| Area Scan          | dx=8mm dy=8mm, Complete                 |
| Zoom Scan          | 5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete |
| Phantom            | Validation plane                        |
| Device Position    | Body                                    |
| Band               | LTE band 2                              |
| Channels/Frequency | Middle (18900)/ frequency 1880.000 Mhz  |
| Signal             | LTE FDD                                 |
| Cell Bandwidth     | 20 Mhz                                  |
| Modulation         | SC-OFDM - QPSK                          |
| RB offset          | 50                                      |
| RB size            | 1                                       |

##### B. Permittivity

|                                        |          |
|----------------------------------------|----------|
| Middle TX Frequency (MHz)              | 1880.000 |
| Relative permittivity (real part)      | 40.382   |
| Relative permittivity (imaginary part) | 14.149   |
| Conductivity (S/m)                     | 1.384    |

##### C. SAR Surface and Volume



Maximum location: X=-2.00, Y=5.00 ; SAR Peak: 0.50 W/kg

##### D. SAR 1g & 10g

|                                                       |           |
|-------------------------------------------------------|-----------|
| SAR 10g (W/Kg)                                        | 0.222     |
| SAR 1g (W/Kg)                                         | 0.348     |
| Variation (%)                                         | -1.710    |
| Horizontal validation criteria: minimum distance (mm) | 22.627417 |
| Vertical validation criteria: SAR ratio M2/M1 (%)     | 66.839885 |

##### E. Z Axis Scan

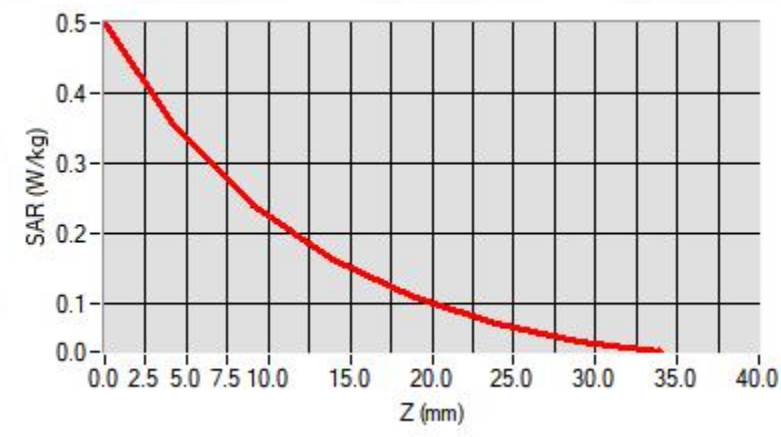
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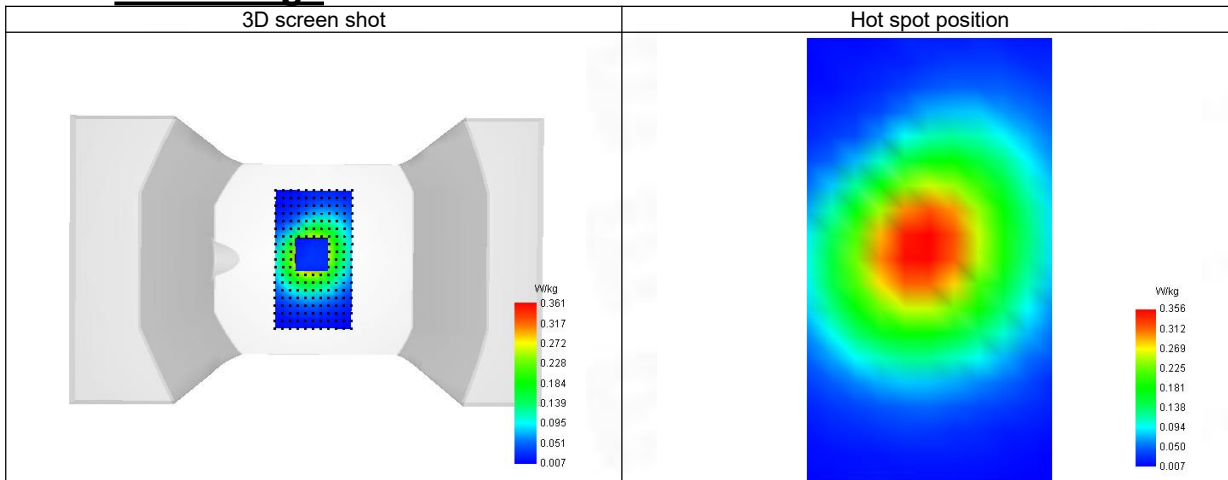
BTF Testing Lab (Shenzhen) Co., Ltd.

Plant 101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, Guangdong, China

|            |       |       |       |       |       |       |       |
|------------|-------|-------|-------|-------|-------|-------|-------|
| Z (mm)     | 0.00  | 4.00  | 9.00  | 14.00 | 19.00 | 24.00 | 29.00 |
| SAR (W/Kg) | 0.500 | 0.361 | 0.241 | 0.164 | 0.109 | 0.073 | 0.045 |



## F. 3D Image



## 2-Body with back position in dist. 0mm on Channel 18900 in LTE band 2

### SAR Measurement at LTE band 2 (Body, Validation Plane)

Date of measurement: 20/6/2026

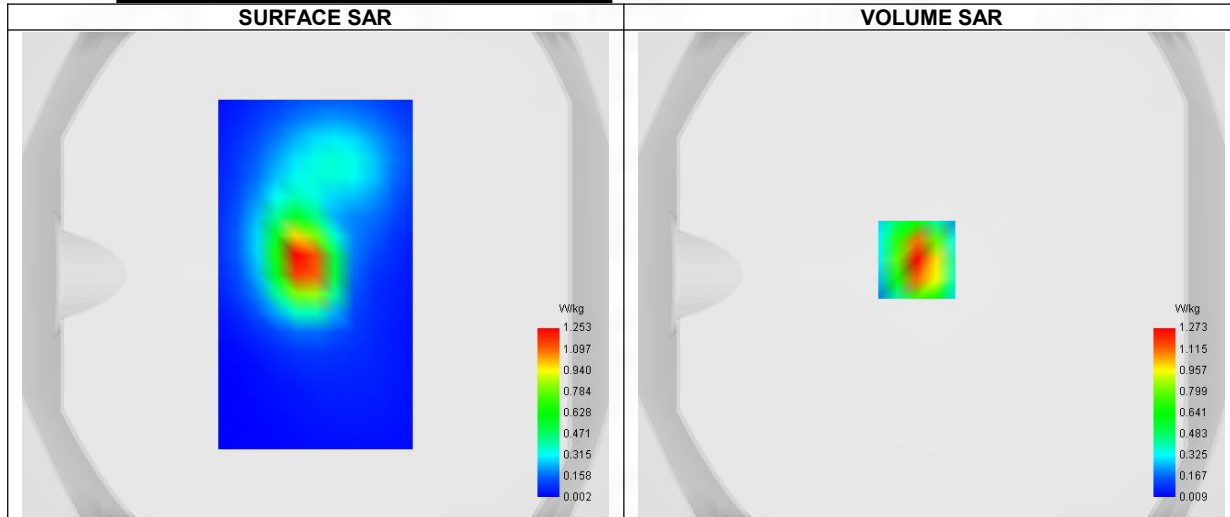
#### A. Experimental conditions.

|                    |                                         |
|--------------------|-----------------------------------------|
| Probe              | 0125-EPGO-445                           |
| ConvF              | 1.27                                    |
| Area Scan          | dx=8mm dy=8mm, Complete                 |
| Zoom Scan          | 5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete |
| Phantom            | Validation plane                        |
| Device Position    | Body                                    |
| Band               | LTE band 2                              |
| Channels/Frequency | Middle (18900)/ frequency 1880.000 Mhz  |
| Signal             | LTE FDD                                 |
| Cell Bandwidth     | 20 Mhz                                  |
| Modulation         | SC-OFDM - QPSK                          |
| RB offset          | 50                                      |
| RB size            | 1                                       |

#### B. Permittivity

|                                        |          |
|----------------------------------------|----------|
| Middle TX Frequency (MHz)              | 1880.000 |
| Relative permittivity (real part)      | 40.382   |
| Relative permittivity (imaginary part) | 14.149   |
| Conductivity (S/m)                     | 1.384    |

#### C. SAR Surface and Volume



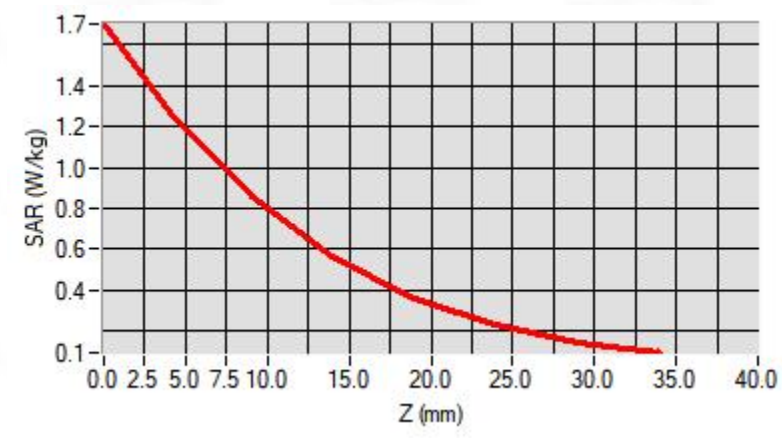
Maximum location: X=-6.00, Y=6.00 ; SAR Peak: 1.76 W/kg

#### D. SAR 1g & 10g

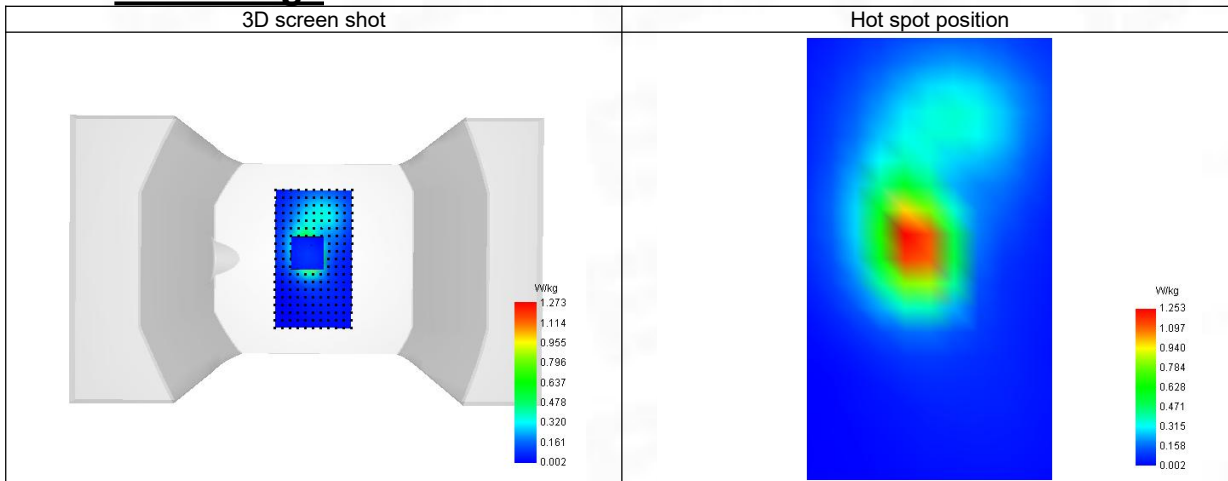
|                                                       |           |
|-------------------------------------------------------|-----------|
| SAR 10g (W/Kg)                                        | 0.637     |
| SAR 1g (W/Kg)                                         | 1.168     |
| Variation (%)                                         | 1.100     |
| Horizontal validation criteria: minimum distance (mm) | 16.000000 |
| Vertical validation criteria: SAR ratio M2/M1 (%)     | 67.304399 |

#### E. Z Axis Scan

|            |       |       |       |       |       |       |       |
|------------|-------|-------|-------|-------|-------|-------|-------|
| Z (mm)     | 0.00  | 4.00  | 9.00  | 14.00 | 19.00 | 24.00 | 29.00 |
| SAR (W/Kg) | 1.703 | 1.273 | 0.857 | 0.562 | 0.353 | 0.225 | 0.143 |



## F. 3D Image



### 3-Body with Front-of-face position in dist. 25mm on Channel 20175 in LTE band 4

## SAR Measurement at LTE band 4 (Body, Validation Plane)

Date of measurement: 19/6/2026

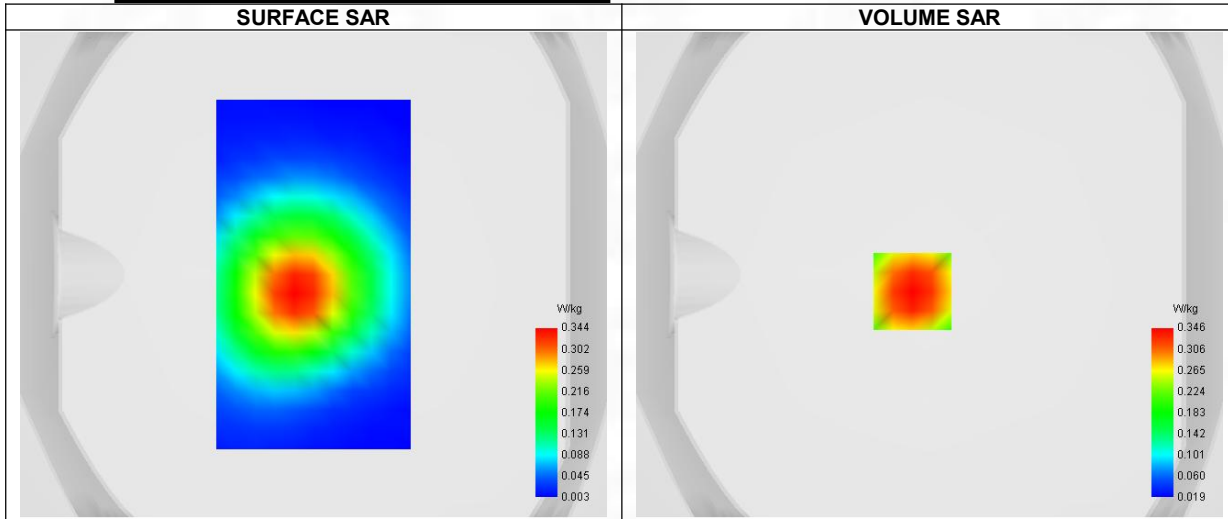
### A. Experimental conditions.

|                    |                                         |
|--------------------|-----------------------------------------|
| Probe              | 0125-EPGO-445                           |
| ConvF              | 0.88                                    |
| Area Scan          | dx=8mm dy=8mm, Complete                 |
| Zoom Scan          | 5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete |
| Phantom            | Validation plane                        |
| Device Position    | Body                                    |
| Band               | LTE band 4                              |
| Channels/Frequency | Middle (20175)/ frequency 1732.500 Mhz  |
| Signal             | LTE FDD                                 |
| Cell Bandwidth     | 20 Mhz                                  |
| Modulation         | SC-OFDM - QPSK                          |
| RB offset          | 99                                      |
| RB size            | 1                                       |

### B. Permittivity

|                                        |          |
|----------------------------------------|----------|
| Middle TX Frequency (MHz)              | 1732.500 |
| Relative permittivity (real part)      | 40.442   |
| Relative permittivity (imaginary part) | 16.009   |
| Conductivity (S/m)                     | 1.344    |

### C. SAR Surface and Volume



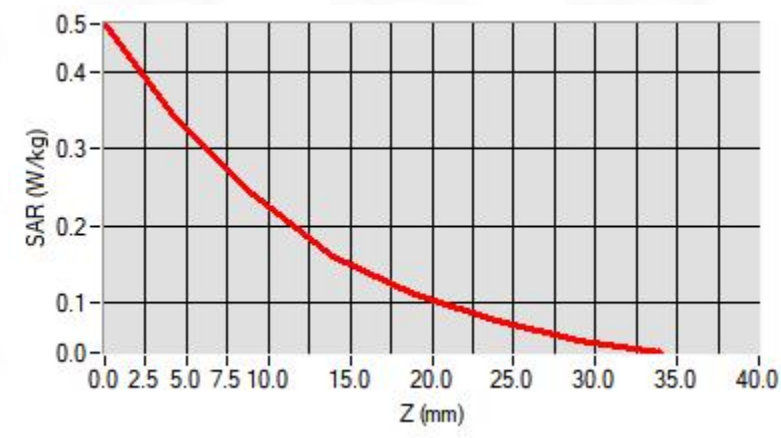
Maximum location: X=-7.00, Y=-7.00 ; SAR Peak: 0.47 W/kg

### D. SAR 1g & 10g

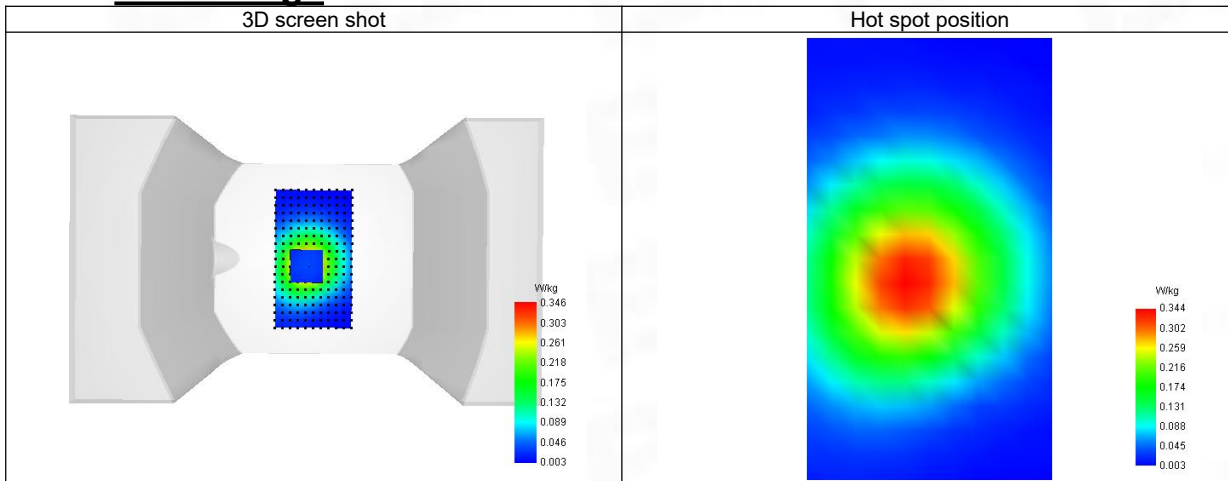
|                                                       |           |
|-------------------------------------------------------|-----------|
| SAR 10g (W/Kg)                                        | 0.216     |
| SAR 1g (W/Kg)                                         | 0.332     |
| Variation (%)                                         | 0.850     |
| Horizontal validation criteria: minimum distance (mm) | 22.627417 |
| Vertical validation criteria: SAR ratio M2/M1 (%)     | 69.152387 |

### E. Z Axis Scan

|            |       |       |       |       |       |       |       |
|------------|-------|-------|-------|-------|-------|-------|-------|
| Z (mm)     | 0.00  | 4.00  | 9.00  | 14.00 | 19.00 | 24.00 | 29.00 |
| SAR (W/Kg) | 0.462 | 0.346 | 0.240 | 0.161 | 0.111 | 0.076 | 0.053 |



## F. 3D Image



## 4-Body with back position in dist. 0mm on Channel 20175 in LTE band 4

### SAR Measurement at LTE band 4 (Body, Validation Plane)

Date of measurement: 19/6/2026

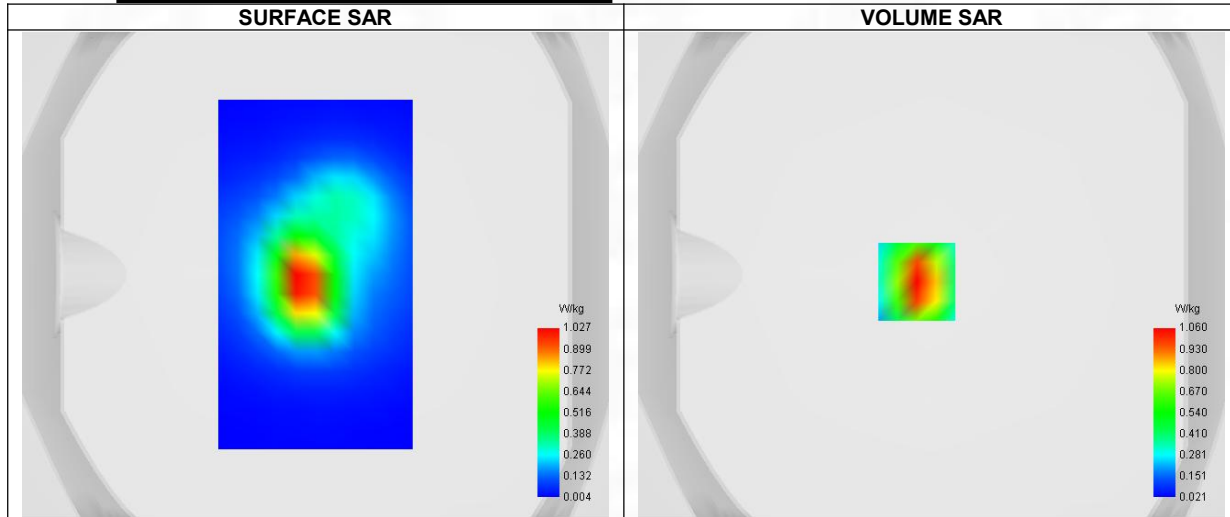
#### A. Experimental conditions.

|                    |                                         |
|--------------------|-----------------------------------------|
| Probe              | 0125-EPGO-445                           |
| ConvF              | 0.88                                    |
| Area Scan          | dx=8mm dy=8mm, Complete                 |
| Zoom Scan          | 5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete |
| Phantom            | Validation plane                        |
| Device Position    | Body                                    |
| Band               | LTE band 4                              |
| Channels/Frequency | Middle (20175)/ frequency 1732.500 Mhz  |
| Signal             | LTE FDD                                 |
| Cell Bandwidth     | 20 Mhz                                  |
| Modulation         | SC-OFDM - QPSK                          |
| RB offset          | 99                                      |
| RB size            | 1                                       |

#### B. Permittivity

|                                        |          |
|----------------------------------------|----------|
| Middle TX Frequency (MHz)              | 1732.500 |
| Relative permittivity (real part)      | 40.442   |
| Relative permittivity (imaginary part) | 16.009   |
| Conductivity (S/m)                     | 1.344    |

#### C. SAR Surface and Volume

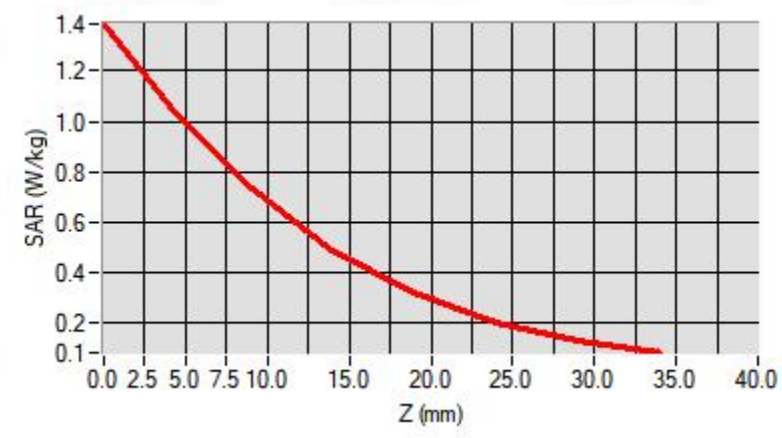


#### D. SAR 1g & 10g

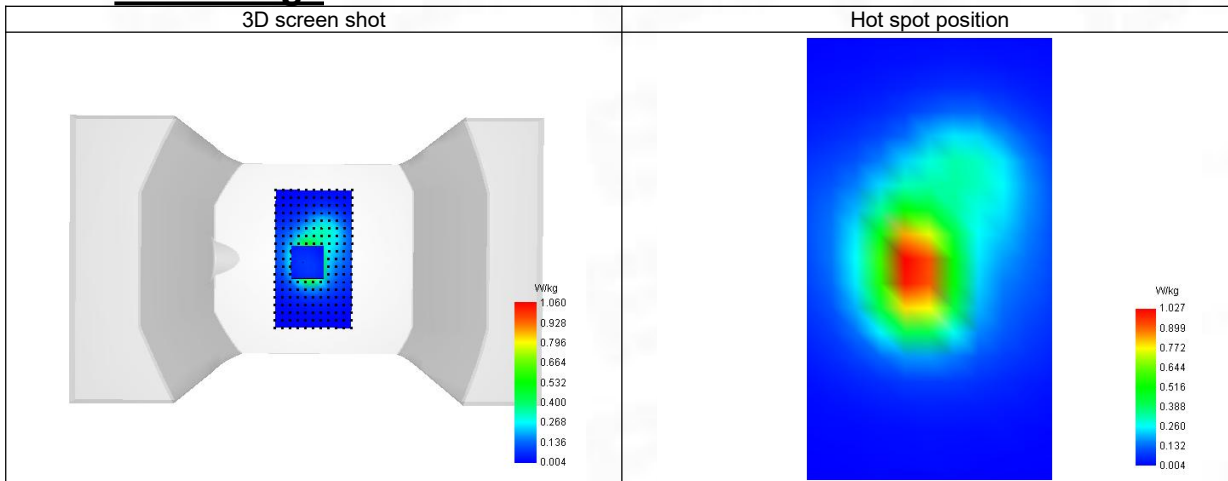
|                                                       |           |
|-------------------------------------------------------|-----------|
| SAR 10g (W/Kg)                                        | 0.565     |
| SAR 1g (W/Kg)                                         | 0.980     |
| Variation (%)                                         | 0.230     |
| Horizontal validation criteria: minimum distance (mm) | 16.000000 |
| Vertical validation criteria: SAR ratio M2/M1 (%)     | 69.573650 |

#### E. Z Axis Scan

|            |       |       |       |       |       |       |       |
|------------|-------|-------|-------|-------|-------|-------|-------|
| Z (mm)     | 0.00  | 4.00  | 9.00  | 14.00 | 19.00 | 24.00 | 29.00 |
| SAR (W/Kg) | 1.386 | 1.060 | 0.738 | 0.489 | 0.323 | 0.208 | 0.133 |



## F. 3D Image



## 5-Body with Front-of-face position in dist. 25mm on Channel 20525 in LTE band 5

### SAR Measurement at LTE band 5 (Body, Validation Plane)

Date of measurement: 18/6/2026

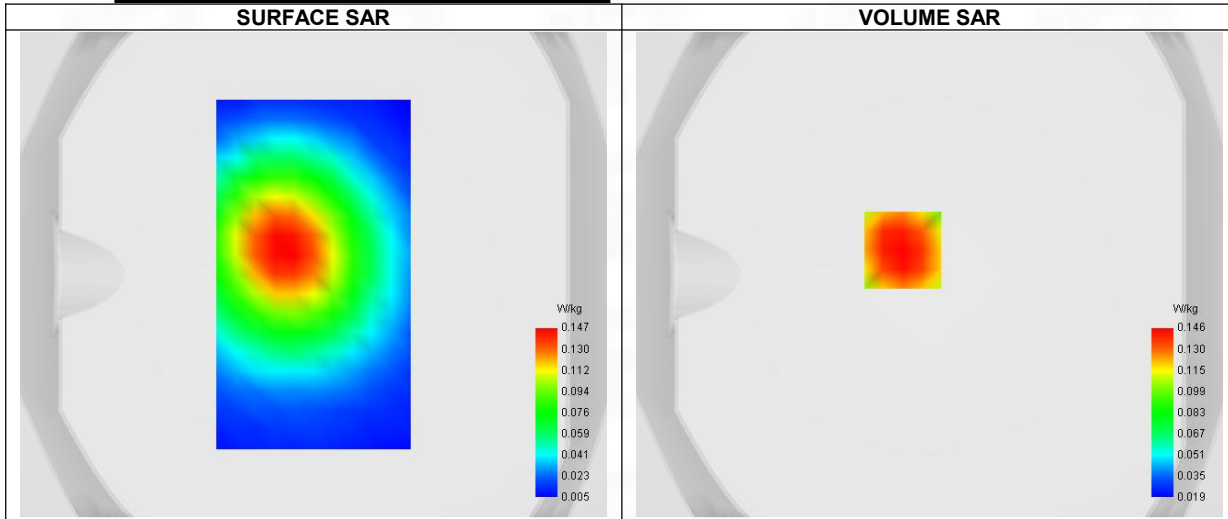
#### A. Experimental conditions.

|                    |                                         |
|--------------------|-----------------------------------------|
| Probe              | 0125-EPGO-445                           |
| ConvF              | 1.15                                    |
| Area Scan          | dx=8mm dy=8mm, Complete                 |
| Zoom Scan          | 5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete |
| Phantom            | Validation plane                        |
| Device Position    | Body                                    |
| Band               | LTE band 5                              |
| Channels/Frequency | Middle (20525)/ frequency 836.500 Mhz   |
| Signal             | LTE FDD                                 |
| Cell Bandwidth     | 10 Mhz                                  |
| Modulation         | SC-OFDM - QPSK                          |
| RB offset          | 0                                       |
| RB size            | 1                                       |

#### B. Permittivity

|                                        |         |
|----------------------------------------|---------|
| Middle TX Frequency (MHz)              | 836.500 |
| Relative permittivity (real part)      | 41.754  |
| Relative permittivity (imaginary part) | 19.167  |
| Conductivity (S/m)                     | 0.913   |

#### C. SAR Surface and Volume



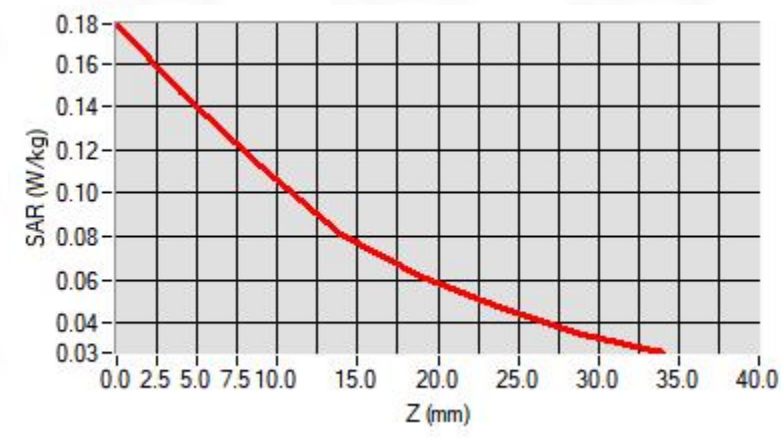
Maximum location: X=-11.00, Y=10.00 ; SAR Peak: 0.19 W/kg

#### D. SAR 1g & 10g

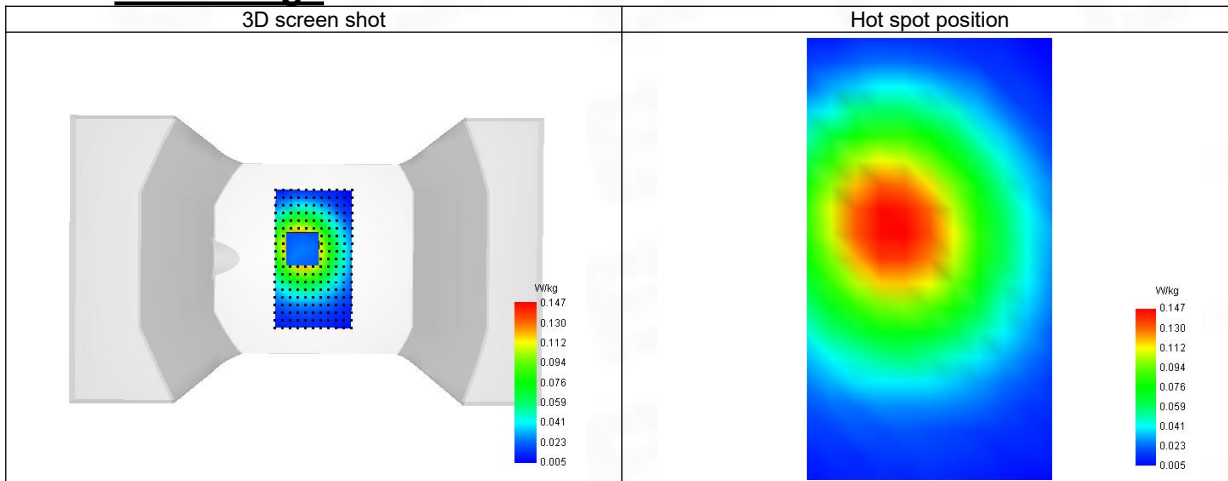
|                                                       |           |
|-------------------------------------------------------|-----------|
| SAR 10g (W/Kg)                                        | 0.100     |
| SAR 1g (W/Kg)                                         | 0.142     |
| Variation (%)                                         | 0.360     |
| Horizontal validation criteria: minimum distance (mm) | 16.000000 |
| Vertical validation criteria: SAR ratio M2/M1 (%)     | 76.733703 |

#### E. Z Axis Scan

|            |       |       |       |       |       |       |       |
|------------|-------|-------|-------|-------|-------|-------|-------|
| Z (mm)     | 0.00  | 4.00  | 9.00  | 14.00 | 19.00 | 24.00 | 29.00 |
| SAR (W/Kg) | 0.178 | 0.146 | 0.112 | 0.081 | 0.061 | 0.046 | 0.034 |



## F. 3D Image



## 6-Body with back position in dist. 0mm on Channel 20525 in LTE band 5

### SAR Measurement at LTE band 5 (Body, Validation Plane)

Date of measurement: 18/6/2026

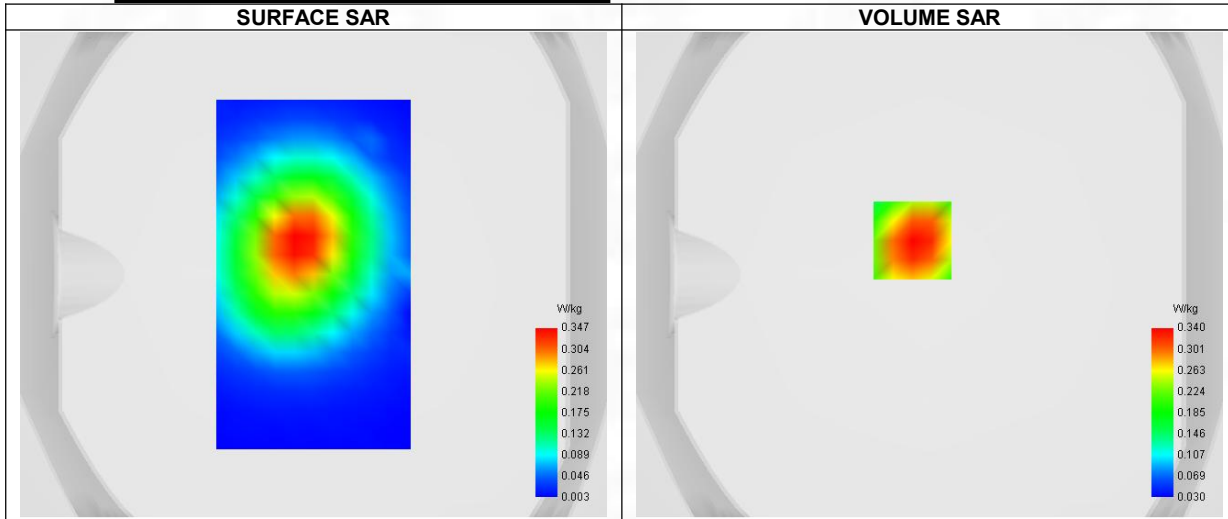
#### A. Experimental conditions.

|                    |                                         |
|--------------------|-----------------------------------------|
| Probe              | 0125-EPGO-445                           |
| ConvF              | 1.15                                    |
| Area Scan          | dx=8mm dy=8mm, Complete                 |
| Zoom Scan          | 5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete |
| Phantom            | Validation plane                        |
| Device Position    | Body                                    |
| Band               | LTE band 5                              |
| Channels/Frequency | Middle (20525)/ frequency 836.500 Mhz   |
| Signal             | LTE FDD                                 |
| Cell Bandwidth     | 10 Mhz                                  |
| Modulation         | SC-OFDM - QPSK                          |
| RB offset          | 0                                       |
| RB size            | 1                                       |

#### B. Permittivity

|                                        |         |
|----------------------------------------|---------|
| Middle TX Frequency (MHz)              | 836.500 |
| Relative permittivity (real part)      | 41.754  |
| Relative permittivity (imaginary part) | 19.167  |
| Conductivity (S/m)                     | 0.913   |

#### C. SAR Surface and Volume



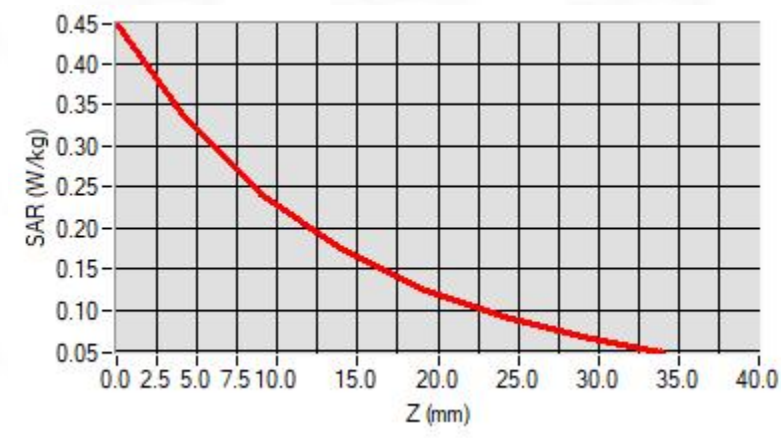
Maximum location: X=-7.00, Y=14.00 ; SAR Peak: 0.45 W/kg

#### D. SAR 1g & 10g

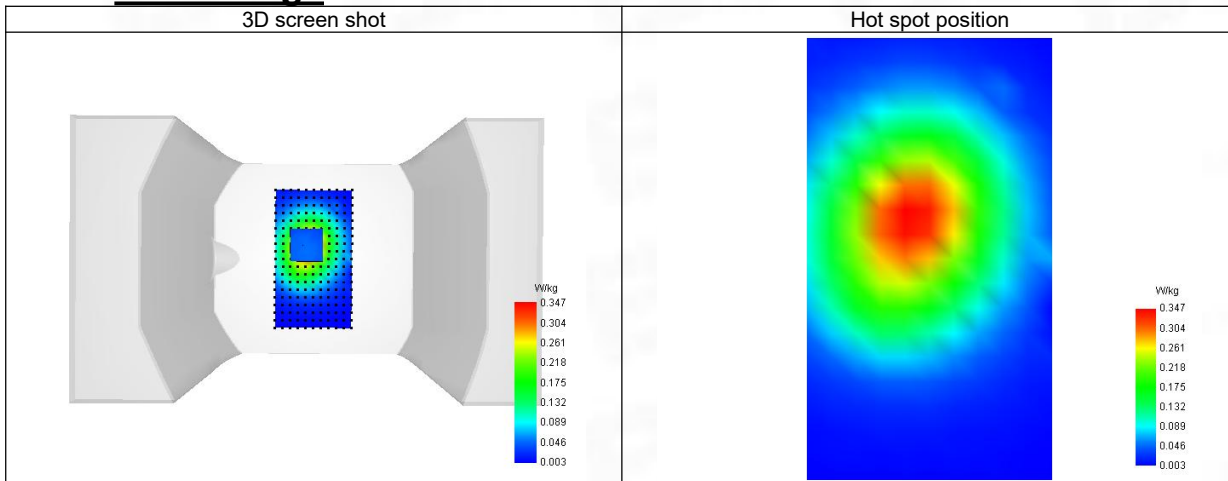
|                                                       |           |
|-------------------------------------------------------|-----------|
| SAR 10g (W/Kg)                                        | 0.220     |
| SAR 1g (W/Kg)                                         | 0.327     |
| Variation (%)                                         | -3.220    |
| Horizontal validation criteria: minimum distance (mm) | 22.627417 |
| Vertical validation criteria: SAR ratio M2/M1 (%)     | 70.837922 |

#### E. Z Axis Scan

|            |       |       |       |       |       |       |       |
|------------|-------|-------|-------|-------|-------|-------|-------|
| Z (mm)     | 0.00  | 4.00  | 9.00  | 14.00 | 19.00 | 24.00 | 29.00 |
| SAR (W/Kg) | 0.448 | 0.340 | 0.241 | 0.175 | 0.126 | 0.092 | 0.067 |



## F. 3D Image



## 7-Body with Front-of-face position in dist. 25mm on Channel 20850 in LTE band 7

### SAR Measurement at LTE band 7 (Body, Validation Plane)

Date of measurement: 22/6/2026

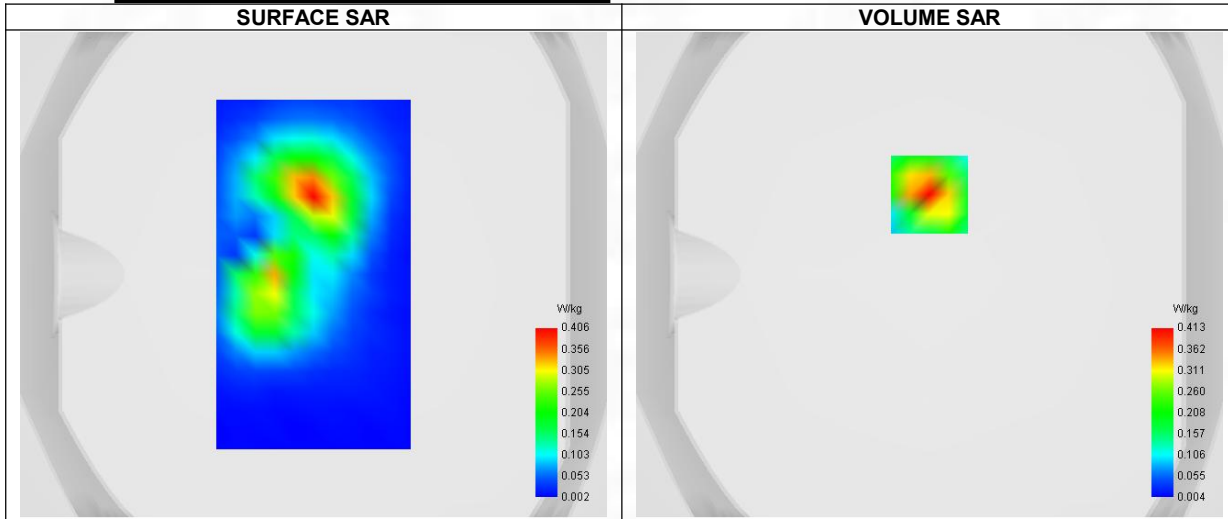
#### A. Experimental conditions.

|                    |                                         |
|--------------------|-----------------------------------------|
| Probe              | 0125-EPGO-445                           |
| ConvF              | 1.31                                    |
| Area Scan          | dx=8mm dy=8mm, Complete                 |
| Zoom Scan          | 5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete |
| Phantom            | Validation plane                        |
| Device Position    | Body                                    |
| Band               | LTE band 7                              |
| Channels/Frequency | Lower (20850)/ frequency 2510.000 Mhz   |
| Signal             | LTE FDD                                 |
| Cell Bandwidth     | 20 Mhz                                  |
| Modulation         | SC-OFDM - QPSK                          |
| RB offset          | 50                                      |
| RB size            | 1                                       |

#### B. Permittivity

|                                        |          |
|----------------------------------------|----------|
| Middle TX Frequency (MHz)              | 2510.000 |
| Relative permittivity (real part)      | 38.991   |
| Relative permittivity (imaginary part) | 13.186   |
| Conductivity (S/m)                     | 1.891    |

#### C. SAR Surface and Volume



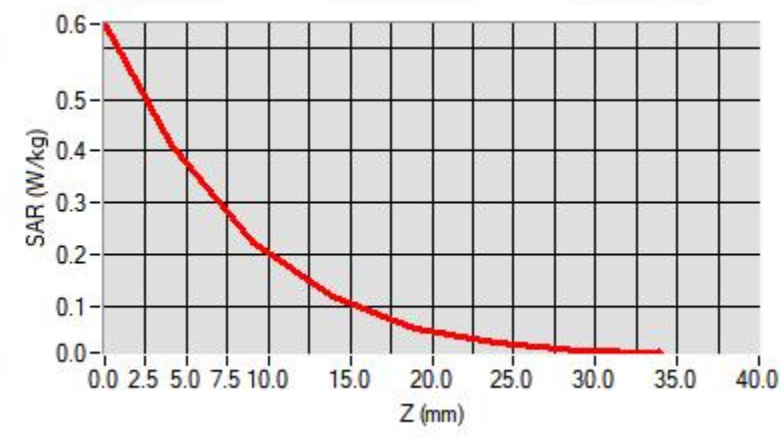
Maximum location: X=0.00, Y=33.00 ; SAR Peak: 0.65 W/kg

#### D. SAR 1g & 10g

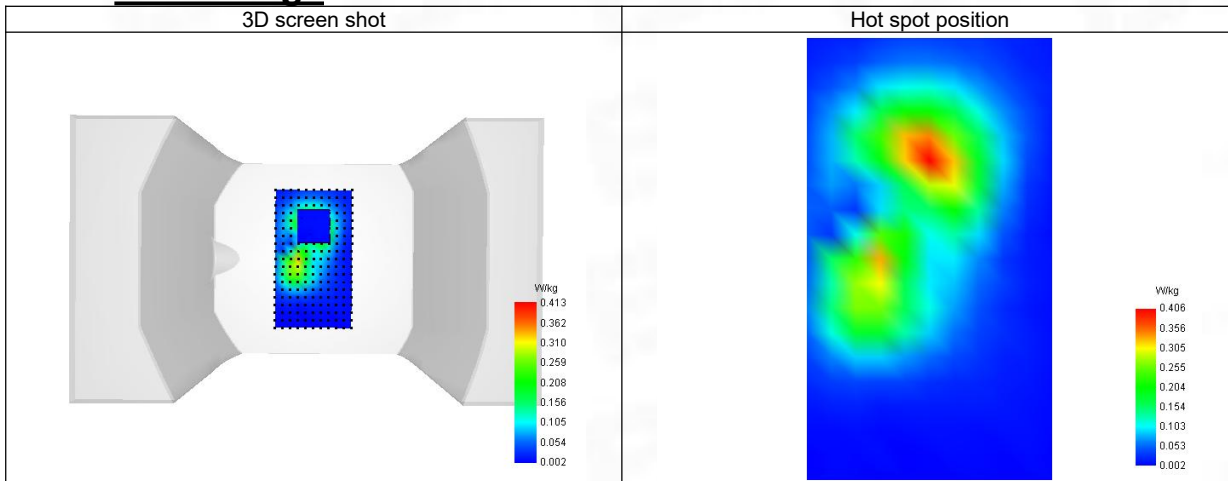
|                                                       |           |
|-------------------------------------------------------|-----------|
| SAR 10g (W/Kg)                                        | 0.189     |
| SAR 1g (W/Kg)                                         | 0.379     |
| Variation (%)                                         | -2.710    |
| Horizontal validation criteria: minimum distance (mm) | 11.313708 |
| Vertical validation criteria: SAR ratio M2/M1 (%)     | 54.066975 |

#### E. Z Axis Scan

|            |       |       |       |       |       |       |       |
|------------|-------|-------|-------|-------|-------|-------|-------|
| Z (mm)     | 0.00  | 4.00  | 9.00  | 14.00 | 19.00 | 24.00 | 29.00 |
| SAR (W/Kg) | 0.646 | 0.413 | 0.223 | 0.117 | 0.056 | 0.028 | 0.015 |



## F. 3D Image



## 8-Body with back position in dist. 0mm on Channel 20850 in LTE band 7

### SAR Measurement at LTE band 7 (Body, Validation Plane)

Date of measurement: 22/6/2026

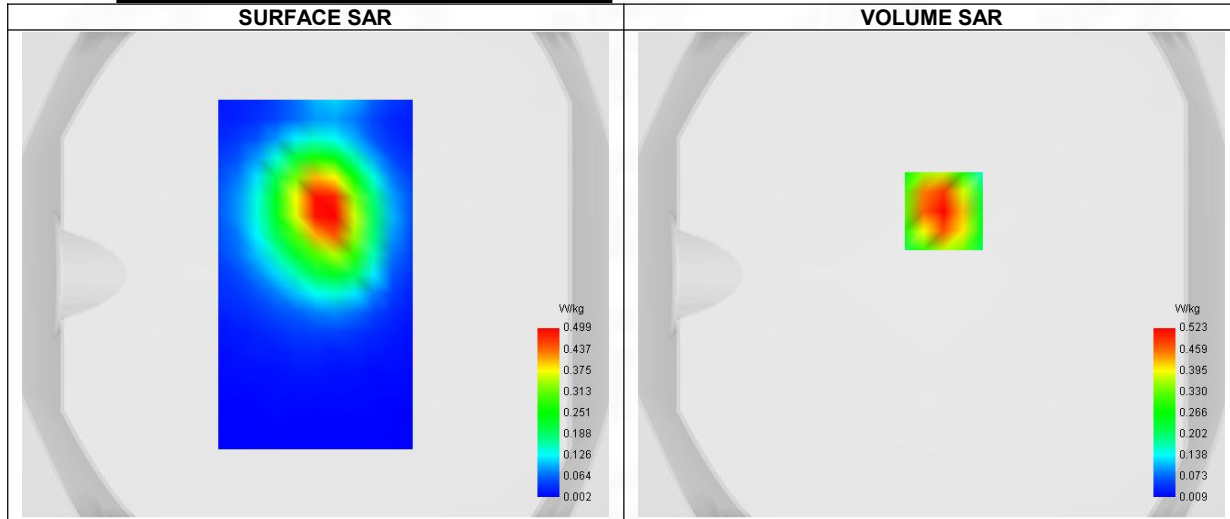
#### A. Experimental conditions.

|                    |                                         |
|--------------------|-----------------------------------------|
| Probe              | 0125-EPGO-445                           |
| ConvF              | 1.31                                    |
| Area Scan          | dx=8mm dy=8mm, Complete                 |
| Zoom Scan          | 5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete |
| Phantom            | Validation plane                        |
| Device Position    | Body                                    |
| Band               | LTE band 7                              |
| Channels/Frequency | Lower (20850)/ frequency 2510.000 Mhz   |
| Signal             | LTE FDD                                 |
| Cell Bandwidth     | 20 Mhz                                  |
| Modulation         | SC-OFDM - QPSK                          |
| RB offset          | 50                                      |
| RB size            | 1                                       |

#### B. Permittivity

|                                        |          |
|----------------------------------------|----------|
| Middle TX Frequency (MHz)              | 2510.000 |
| Relative permittivity (real part)      | 38.991   |
| Relative permittivity (imaginary part) | 13.186   |
| Conductivity (S/m)                     | 1.891    |

#### C. SAR Surface and Volume

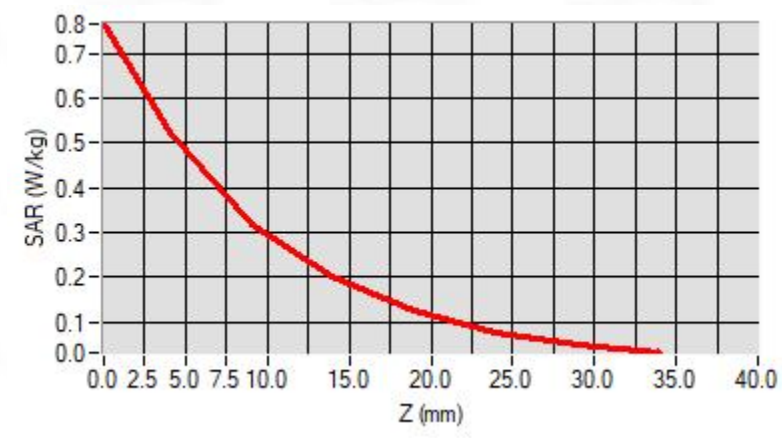


#### D. SAR 1g & 10g

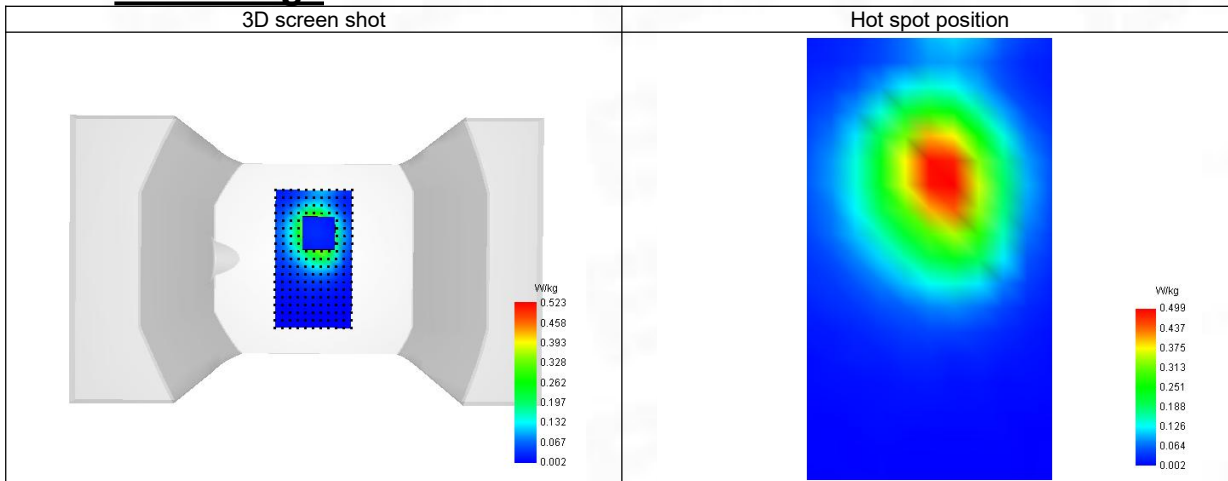
|                                                       |           |
|-------------------------------------------------------|-----------|
| SAR 10g (W/Kg)                                        | 0.288     |
| SAR 1g (W/Kg)                                         | 0.502     |
| Variation (%)                                         | 4.550     |
| Horizontal validation criteria: minimum distance (mm) | 16.000000 |
| Vertical validation criteria: SAR ratio M2/M1 (%)     | 61.247201 |

#### E. Z Axis Scan

|            |       |       |       |       |       |       |       |
|------------|-------|-------|-------|-------|-------|-------|-------|
| Z (mm)     | 0.00  | 4.00  | 9.00  | 14.00 | 19.00 | 24.00 | 29.00 |
| SAR (W/Kg) | 0.766 | 0.523 | 0.320 | 0.202 | 0.125 | 0.079 | 0.050 |



## F. 3D Image



## 9-Body with Front-of-face position in dist. 25mm on Channel 132322 in LTE band 66

### SAR Measurement at LTE band 66 (Body, Validation Plane)

Date of measurement: 19/6/2026

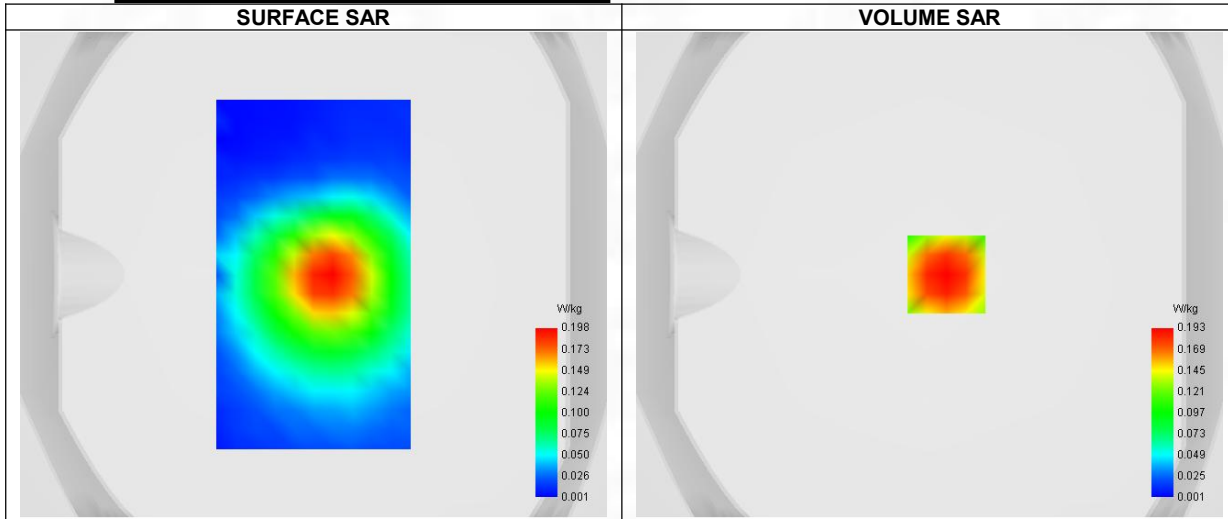
#### A. Experimental conditions.

|                    |                                         |
|--------------------|-----------------------------------------|
| Probe              | 0125-EPGO-445                           |
| ConvF              | 0.88                                    |
| Area Scan          | dx=8mm dy=8mm, Complete                 |
| Zoom Scan          | 5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete |
| Phantom            | Validation plane                        |
| Device Position    | Body                                    |
| Band               | LTE band 66                             |
| Channels/Frequency | Middle (132322)/ frequency 1745.000 Mhz |
| Signal             | LTE FDD                                 |
| Cell Bandwidth     | 20 Mhz                                  |
| Modulation         | SC-OFDM - QPSK                          |
| RB offset          | 0                                       |
| RB size            | 1                                       |

#### B. Permittivity

|                                        |          |
|----------------------------------------|----------|
| Middle TX Frequency (MHz)              | 1745.000 |
| Relative permittivity (real part)      | 40.424   |
| Relative permittivity (imaginary part) | 15.965   |
| Conductivity (S/m)                     | 1.350    |

#### C. SAR Surface and Volume

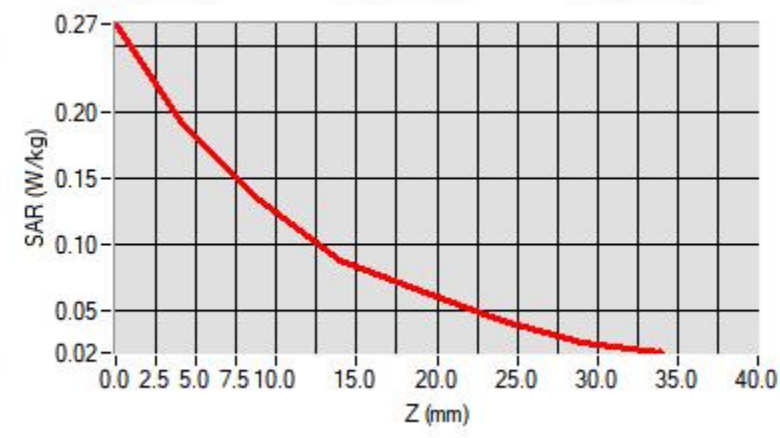


#### D. SAR 1g & 10g

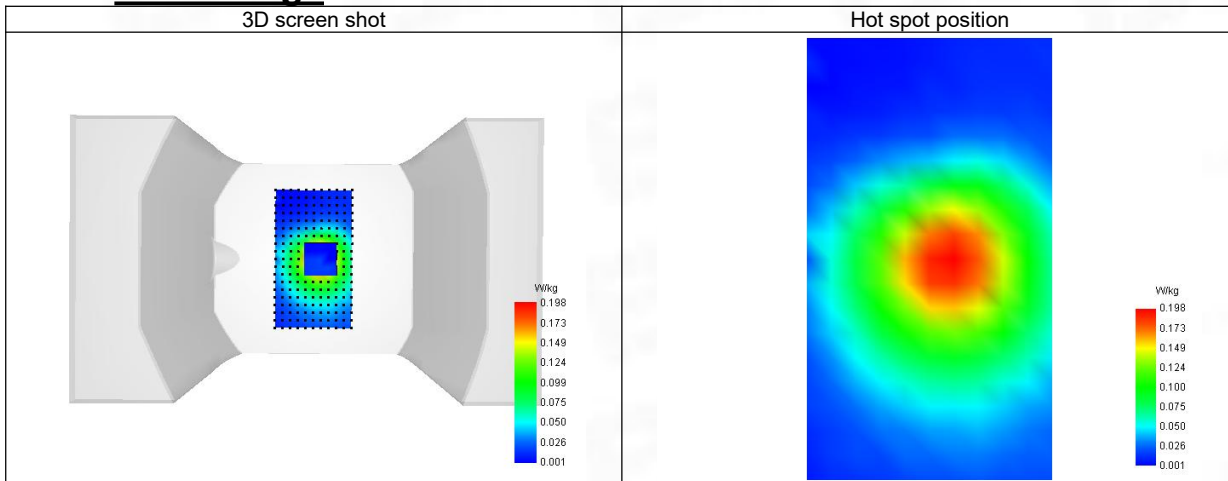
|                                                       |           |
|-------------------------------------------------------|-----------|
| SAR 10g (W/Kg)                                        | 0.121     |
| SAR 1g (W/Kg)                                         | 0.187     |
| Variation (%)                                         | -3.300    |
| Horizontal validation criteria: minimum distance (mm) | 22.627417 |
| Vertical validation criteria: SAR ratio M2/M1 (%)     | 69.163354 |

#### E. Z Axis Scan

|            |       |       |       |       |       |       |       |
|------------|-------|-------|-------|-------|-------|-------|-------|
| Z (mm)     | 0.00  | 4.00  | 9.00  | 14.00 | 19.00 | 24.00 | 29.00 |
| SAR (W/Kg) | 0.266 | 0.193 | 0.133 | 0.088 | 0.065 | 0.042 | 0.026 |



## F. 3D Image



## 10-Body with back position in dist. 0mm on Channel 132322 in LTE band 66

### SAR Measurement at LTE band 66 (Body, Validation Plane)

Date of measurement: 19/6/2026

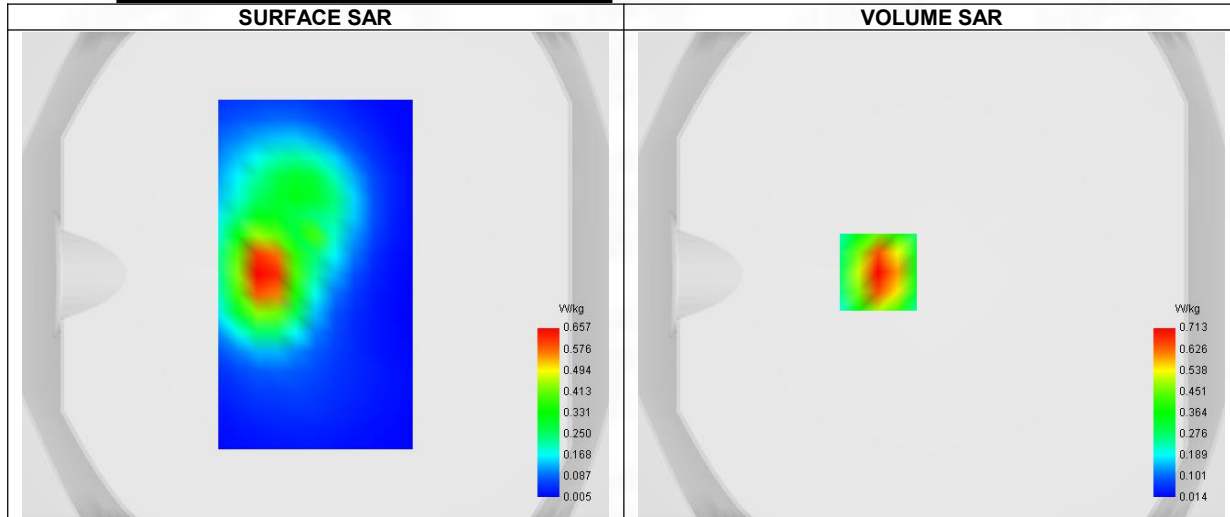
#### A. Experimental conditions.

|                    |                                         |
|--------------------|-----------------------------------------|
| Probe              | 0125-EPGO-445                           |
| ConvF              | 0.88                                    |
| Area Scan          | dx=8mm dy=8mm, Complete                 |
| Zoom Scan          | 5x5x7, dx=8mm dy=8mm dz=5.0mm, Complete |
| Phantom            | Validation plane                        |
| Device Position    | Body                                    |
| Band               | LTE band 66                             |
| Channels/Frequency | Middle (132322)/ frequency 1745.000 Mhz |
| Signal             | LTE FDD                                 |
| Cell Bandwidth     | 20 Mhz                                  |
| Modulation         | SC-OFDM - QPSK                          |
| RB offset          | 0                                       |
| RB size            | 1                                       |

#### B. Permittivity

|                                        |          |
|----------------------------------------|----------|
| Middle TX Frequency (MHz)              | 1745.000 |
| Relative permittivity (real part)      | 40.424   |
| Relative permittivity (imaginary part) | 15.965   |
| Conductivity (S/m)                     | 1.350    |

#### C. SAR Surface and Volume

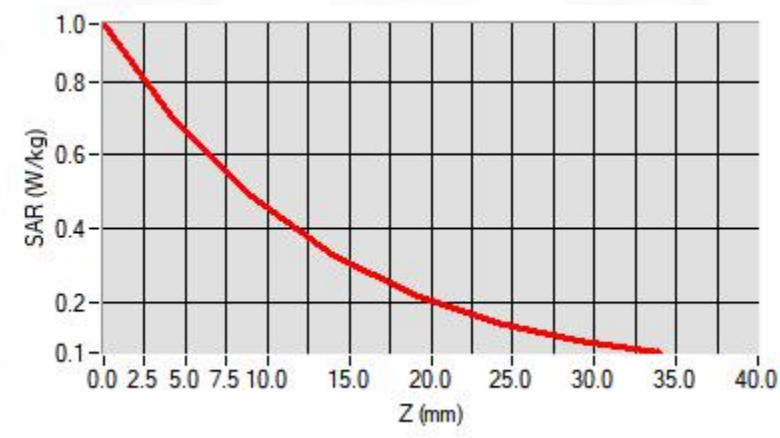


#### D. SAR 1g & 10g

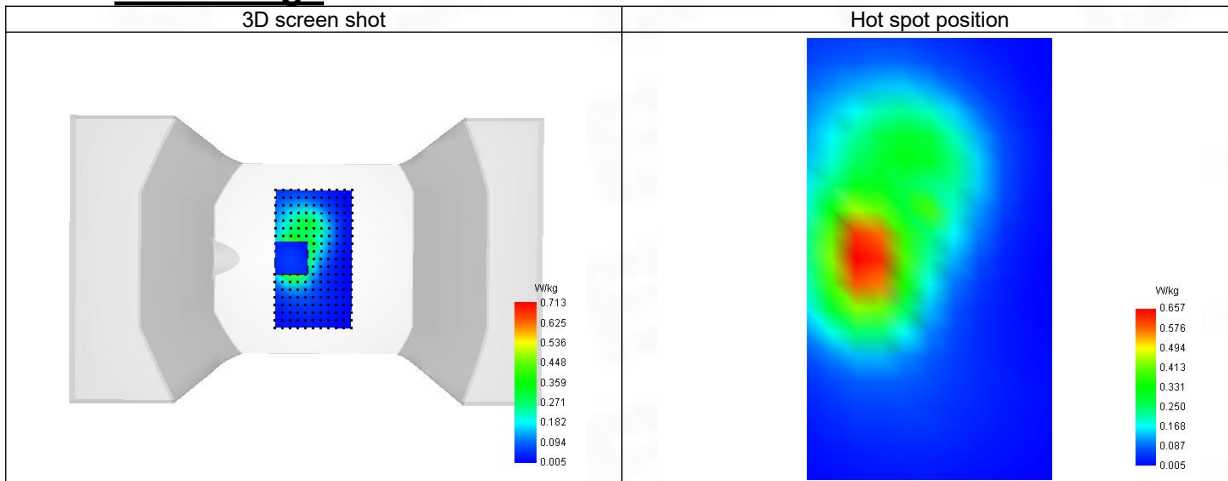
|                                                       |           |
|-------------------------------------------------------|-----------|
| SAR 10g (W/Kg)                                        | 0.395     |
| SAR 1g (W/Kg)                                         | 0.669     |
| Variation (%)                                         | 3.960     |
| Horizontal validation criteria: minimum distance (mm) | 16.000000 |
| Vertical validation criteria: SAR ratio M2/M1 (%)     | 68.412823 |

#### E. Z Axis Scan

|            |       |       |       |       |       |       |       |
|------------|-------|-------|-------|-------|-------|-------|-------|
| Z (mm)     | 0.00  | 4.00  | 9.00  | 14.00 | 19.00 | 24.00 | 29.00 |
| SAR (W/Kg) | 0.957 | 0.713 | 0.488 | 0.332 | 0.220 | 0.147 | 0.095 |

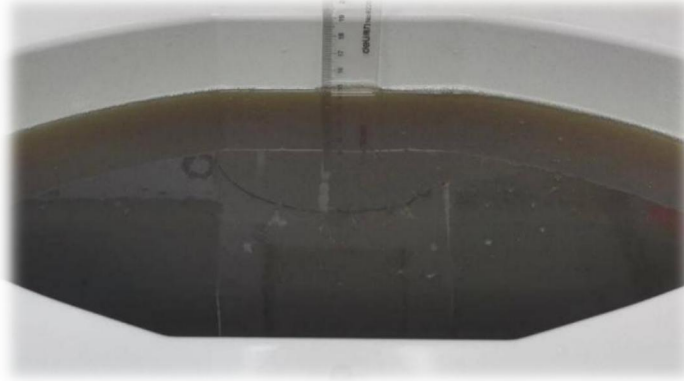


## F. 3D Image



## ANNEX D SAR Test Setup Photos

Reference Photo: simulation liquid depth 15cm



Please refer to the document "ANNEX D SAR Test Setup Photos.pdf".

## ANNEX E EUT External and Internal Photos

Please refer to RF Report.

## ANNEX F Calibration Information

Please refer to the document "Calibration.pdf".



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**--END OF REPORT--**