



TEST REPORT

For SAR

Report No..... : CHTW25100010

Project No : SHT2506047206W

FCC ID : 2A3JW-EM25

Applicant's name : Eitan Medical Ltd.

Address..... : 29 Yad Haruzim St. P.O. Box 8639 Netanya 4250529, Israel

Product Name : Sapphire Connect

Trade Mark..... : Eitan Medical

Model No..... : 15044-000-1029

Listed Model(s) : -

Standard : **FCC 47 CFR Part 2.1093**
ANSI/IEEE Std C95.1-1992
IEEE Std 1528: 2013

Date of receipt of test sample..... : 2025/6/20

Date of testing..... : 2025/9/23- 2025/9/26

Date of issue..... : 2025/10/16

Result..... : **PASS**



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Test Report Form No. : R0066

Test Report Form(s) Originator : Shenzhen Huatongwei International Inspection Co., Ltd.

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1 . Statement of Compliance

Maximum Reported SAR (W/kg @1g)		
Type	Test setting	WWAN
Body	Dist.= 0mm	1.125

Note:

1. This device is in compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits (1.6 W/kg@1g) specified in FCC 47 CFR part 2 (2.1093) and IEEE Std C95.1,
2. This device had been tested in accordance with the measurement methods and procedures specified in IEEE 1528 and FCC KDB publications.

2. Test Standards and Report version

2.1. Test Standards

The tests were performed according to following standards:

[FCC 47 Part 2.1093](#): Radiofrequency radiation exposure evaluation: portable devices.

[ANSI/IEEE Std C95.1-1992](#): IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz

[IEEE Std 1528™-2013](#): IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques.

FCC published RF exposure KDB procedures:

[865664 D01 SAR Measurement 100 MHz to 6 GHz v01r04](#): SAR Measurement Requirements for 100 MHz to 6 GHz

[865664 D02 RF Exposure Reporting v01r02](#): RF Exposure Compliance Reporting and Documentation Considerations

[447498 D04 Interim General RF Exposure Guidance v01](#): Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Policies

[941225 D01 3G SAR Procedures v03r01](#): SAR Measurement Procedures for 3G Devices

[941225 D05 SAR for LTE Devices v02r05](#): SAR Evaluation Considerations for LTE Devices

[TCB workshop](#) April, 2019; Page 19, Tissue Simulating Liquids (TSL)

2.2. Report version

Revision No.	Date of issue	Description
N/A	2025-10-16	Original

3. Summary

3.1. Client Information

Applicant:	Eitan Medical Ltd.
Address:	29 Yad Haruzim St. P.O. Box 8639 Netanya 4250529, Israel
Manufacturer:	Eitan Medical Ltd.
Address:	29 Yad Haruzim St. P.O. Box 8639 Netanya 4250529, Israel

3.2. Product Description

Main unit	
Product Name:	Sapphire Connect
Trade Mark:	Eitan Medical
Model No.:	15044-000-1029
Listed Model(s):	-
Power supply:	DC 3.7V from Battery
Hardware version:	2.2
Software version:	2.0.0
Device Dimension:	Length x Width x Thickness (mm): 148 x 74 x 25
Device Category:	Portable
Product stage:	Production unit
RF Exposure Environment:	General Population/Uncontrolled
HTW test sample No.:	YPHT25060472003
Support SIM card quantity:	☒ Single card ☐ Double card
Ancillary unit	
Battery information: #1	LiPo Battery FT503450P 3.7V 900mAh

Note:

#1: The EUT battery must be fully charged and checked periodically during the test to ascertain uniform power.

3.3. RF Specification Description

GSM				
Operation Band:	☒ GSM850	☒ PCS1900		
Support type:	☒ GSM	☒ GPRS	☒ EGPRS	
Modulation type:	☒ GMSK	☒ 8PSK		
GPRS Multi-Slot Class:	33			
EGPRS Multi-Slot Class:	33			
LTE				
Operation Band:	☒ Band 2	☒ Band 4	☒ Band 5	☒ Band 12
Support type:	☒ Cat M(eMTC)		☒ Cat NB(NB IoT)	

Note: For detailed technical specifications, please refer to the RF report.

3.4. Testing Laboratory Information

Laboratory Name	Shenzhen Huatongwei International Inspection Co., Ltd.	
Laboratory Location	Building 7, Baiwang Idea Factory, No.1051, Songbai Road, Yangguang Community, Xili Subdistrict, Nanshan District, Shenzhen, Guangdong, China	
Contact information:	Tel: 400-963-0755 E-mail: cs@szhtw.com.cn http://www.szhtw.com.cn	
Qualifications	Type	Accreditation Number
	FCC Registration Number	762235
	FCC Designation Number	CN1181

3.5. Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Ambient temperature	18 °C to 25 °C
Ambient humidity	30%RH to 70%RH
Air Pressure	950-1050mbar

4. Equipments Used during the Test

Used	Test Equipment	Manufacturer	Equipment No.	Model No.	Serial No.	Cal. date (YY-MM-DD)	Due date (YY-MM-DD)
●	Data Acquisition Electronics DAEx	SPEAG	HTWE0313-05	DAE4	1549	2025/4/21	2026/4/20
●	E-field Probe	SPEAG	HTWE0313-06	EX3DV4	7494	2025/7/10	2026/7/9
●	Phantoms	SPEAG	HTWE0313-12	ELI V8.0	2078	N/A	N/A
●	Head TSL	-	-	HBBL600-10000	-	N/A	N/A
●	Temperature & humidity	MIAO XIN	HTWE0319	TH20R-EX	-	2025/3/18	2026/3/17
●	Universal Radio Communication Tester	R&S	HTWE0323	CMW500	137681	2025/3/13	2026/3/12
Tissue-equivalent liquids Validation							
●	Dielectric Assessment Kit	SPEAG	HTWE0315-02	DAK-3.5	1267	N/A	N/A
●	Network analyzer	Keysight	HTWE0331	E5071C	MY46733048	2025/8/19	2026/8/18
●	Thermometer	LKM	HTWE0317	DTM3000	3693	2025/3/18	2026/3/17
System Validation							
●	System Validation Dipole	SPEAG	HTWE0314-03	D750V3	1180	2023/12/7	2026/12/6
●	System Validation Dipole	SPEAG	HTWE0314-04	D835V2	4d238	2023/12/8	2026/12/7
●	System Validation Dipole	SPEAG	HTWE0314-05	D1750V2	1164	2023/12/8	2026/12/7
●	System Validation Dipole	SPEAG	HTWE0314-06	D1900V2	5d226	2023/12/7	2026/12/6
●	Signal Generator	R&S	HTWE0276	SMB100A	114360	2025/3/13	2026/3/12
●	Power Viewer for Windows	R&S	N/A	N/A	N/A	N/A	N/A
●	Power sensor	R&S	HTWE0278	NRP18A	101010	2025/3/14	2026/3/13
●	Power sensor	R&S	HTWE0389	NRP18A	101386	2025/3/14	2026/3/13
●	Power Amplifier	BONN	HTWE0336	BLWA 0160-2M	1811887	2024/11/12	2025/11/11
●	Dual Directional Coupler	Mini-Circuits	HTWE0335	ZHDC-10-62-S+	F975001814	2024/11/8	2025/11/7
●	Attenuator	Mini-Circuits	HTWE0333	VAT-3W2+	1819	2024/11/12	2025/11/11
●	Attenuator	Mini-Circuits	HTWE0334	VAT-10W2+	1741	2024/11/12	2025/11/11

Note:

1. The Probe, Dipole and DAE calibration reference to the Appendix E and F.
2. Referring to KDB865664 D01, the dipole calibration interval can be extended to 3 years with justification. The dipole are also not physically damaged or repaired during the interval.

5. Measurement Uncertainty

Per KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz, when the highest measured 1-g SAR within a frequency band is < 1.5 W/kg and the measured 10-g SAR within a frequency band is < 3.75 W/kg.

The expanded SAR measurement uncertainty must be $\leq 30\%$, for a confidence interval of $k = 2$. If these conditions are met, extensive SAR measurement uncertainty analysis described in IEEE Std 1528 is not required in SAR reports submitted for equipment approval.

Therefore, the measurement uncertainty is not required.

6. SAR Measurement System Configuration

6.1. SAR Measurement Set-up

The DASY5 system for performing compliance tests consists of the following items:

A standard high precision 6-axis robot (Stäubli RX family) with controller and software. An arm extension for accommodating the data acquisition electronics (DAE).

A dosimetric probe, i.e. an isotropic E-field probe optimized and calibrated for usage in tissue simulating liquid. The probe is equipped with an optical surface detector system.

A data acquisition electronic (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.

A unit to operate the optical surface detector which is connected to the EOC.

The Electro-Optical Coupler (EOC) performs the conversion from the optical into a digital electric signal of the DAE. The EOC is connected to the DASY5 measurement server.

The DASY5 measurement server, which performs all real-time data evaluation for field measurements and surface detection, controls robot movements and handles safety operation. A computer operating Windows 2003.

DASY5 software and SEMCAD data evaluation software.

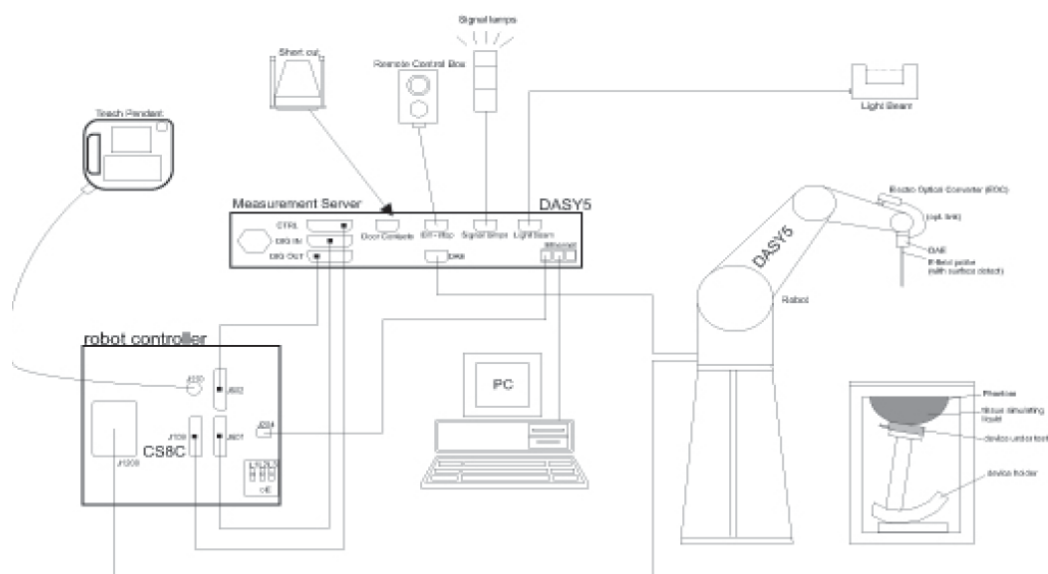
Remote control with teach panel and additional circuitry for robot safety such as warning lamps, etc.

The generic twin phantom enabling the testing of left-hand and right-hand usage.

The device holder for handheld Mobile Phones.

Tissue simulating liquid mixed according to the given recipes.

System validation dipoles allowing to validate the proper functioning of the system.



6.2. DASY5 E-field Probe System

The SAR measurements were conducted with the dosimetric probe EX3DV4 (manufactured by SPEAG), designed in the classical triangular configuration and optimized for dosimetric evaluation.

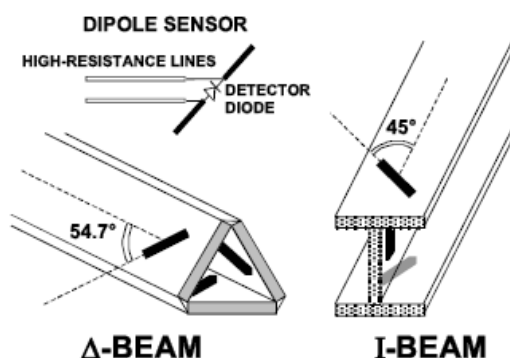
● Probe Specification

Construction	Symmetrical design with triangular core Interleaved sensors Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)
Calibration	ISO/IEC 17025 calibration service available.
Frequency	4 MHz to 10 GHz; Linearity: ± 0.2 dB (30 MHz to 6 GHz)
Directivity	± 0.3 dB in HSL (rotation around probe axis) ± 0.5 dB in tissue material (rotation normal to probe axis)
Dynamic Range	10 μ W/g to > 100 W/kg; Linearity: ± 0.2 dB
Dimensions	Overall length: 337 mm (Tip: 20 mm) Tip diameter: 2.5 mm (Body: 12 mm) Distance from probe tip to dipole centers: 1.0 mm
Application	General dosimetry up to 6 GHz Dosimetry in strong gradient fields Compliance tests of Mobile Phones
Compatibility	DASY3, DASY4, DASY52 SAR and higher, EASY4/MRI

◆ Isotropic E-Field Probe

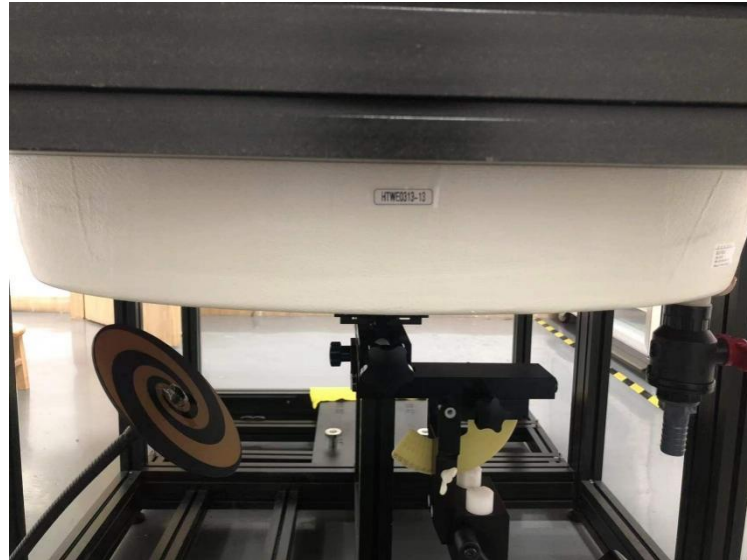
The isotropic E-Field probe has been fully calibrated and assessed for isotropicity, and boundary effect within a controlled environment. Depending on the frequency for which the probe is calibrated the method utilized for calibration will change.

The E-Field probe utilizes a triangular sensor arrangement as detailed in the diagram below:



6.3. Phantoms

Phantom for compliance testing of handheld and body-mounted wireless devices in the frequency range of 30 MHz to 6 GHz. ELI is fully compatible with standard and all known tissue-simulating liquids. ELI has been optimized regarding its performance and can be integrated into our standard phantom tables. A cover prevents evaporation of the liquid. Reference markings on the phantom allow installation of the complete setup, including all predefined phantom positions and measurement grids, by teaching three points. The phantom is compatible with all SPEAG dosimetric probes and dipoles.



ELI4 Phantom

6.4. Device Holder

The device was placed in the device holder (illustrated below) that is supplied by SPEAG as an integral part of the DASY system.

The DASY device holder is designed to cope with the different positions given in the standard. It has two scales for device rotation (with respect to the body axis) and device inclination (with respect to the line between the ear reference points). The rotation centers for both scales is the ear reference point (ERP). Thus the device needs no repositioning when changing the angles.



Device holder supplied by SPEAG

7. SAR Test Procedure

7.1. Scanning Procedure

Step 1: Power Reference Measurement

The Power Reference Measurement and Power Drift Measurements are for monitoring the power drift of the device under test in the batch process. Measure the local SAR at a test point within 8 mm of the phantom inner surface that is closest to the DUT. This distance cannot be smaller than the distance of sensor calibration points to probe tip as defined in the probe properties.

Step 2: Area Scan

The Area Scan is used as a fast scan in two dimensions to find the area of high field values, before doing a fine measurement around the hot spot. The sophisticated interpolation routines implemented in DASY software can find the maximum locations even in relatively coarse grids. When an Area Scan has measured all reachable points, it computes the field maximal found in the scanned area, within a range of the global maximum. The range (in dB) is specified in the standards for compliance testing. For example, a 2 dB range is required in IEEE Standard 1528 and IEC 62209 standards, whereby 3 dB is a requirement when compliance is assessed in accordance with the ARIB standard (Japan). If only one Zoom Scan follows the Area Scan, then only the absolute maximum will be taken as reference. For cases where multiple maximums are detected, the number of Zoom Scans has to be increased accordingly.

Area Scan Resolutions per FCC KDB Publication 865664 D01v04

	≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface	5 mm $\pm$ 1 mm	$\frac{1}{2} \cdot \delta \cdot \ln(2)$ mm $\pm$ 0.5 mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location	30° $\pm$ 1°	20° $\pm$ 1°
Maximum area scan spatial resolution: Δx_{Area} , Δy_{Area}	≤ 2 GHz: ≤ 15 mm 2 – 3 GHz: ≤ 12 mm	3 – 4 GHz: ≤ 12 mm 4 – 6 GHz: ≤ 10 mm
	When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be $\leq$ the corresponding x or y dimension of the test device with at least one measurement point on the test device.	

Step 3: Zoom Scan

Zoom Scans are used to assess the peak spatial SAR values within a cubic averaging volume containing 1g and 10g of simulated tissue. The Zoom Scan measures points (refer to table below) within a cube whose base faces are centered on the maxima found in a preceding area scan job within the same procedure. When the measurement is done, the Zoom Scan evaluates the averaged SAR for 1 g and 10 g and displays these values next to the job's label.

Zoom Scan Resolutions per FCC KDB Publication 865664 D01v04

Maximum zoom scan spatial resolution: $\Delta x_{\text{Zoom}}, \Delta y_{\text{Zoom}}$			$\leq 2 \text{ GHz}: \leq 8 \text{ mm}$ $2 - 3 \text{ GHz}: \leq 5 \text{ mm}^*$	$3 - 4 \text{ GHz}: \leq 5 \text{ mm}^*$ $4 - 6 \text{ GHz}: \leq 4 \text{ mm}^*$
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{\text{Zoom}}(n)$		$\leq 5 \text{ mm}$	$3 - 4 \text{ GHz}: \leq 4 \text{ mm}$ $4 - 5 \text{ GHz}: \leq 3 \text{ mm}$ $5 - 6 \text{ GHz}: \leq 2 \text{ mm}$
	graded grid	$\Delta z_{\text{Zoom}}(1)$: between 1 st two points closest to phantom surface	$\leq 4 \text{ mm}$	$3 - 4 \text{ GHz}: \leq 3 \text{ mm}$ $4 - 5 \text{ GHz}: \leq 2.5 \text{ mm}$ $5 - 6 \text{ GHz}: \leq 2 \text{ mm}$
		$\Delta z_{\text{Zoom}}(n>1)$: between subsequent points	$\leq 1.5 \cdot \Delta z_{\text{Zoom}}(n-1) \text{ mm}$	
Minimum zoom scan volume	x, y, z		$\geq 30 \text{ mm}$	$3 - 4 \text{ GHz}: \geq 28 \text{ mm}$ $4 - 5 \text{ GHz}: \geq 25 \text{ mm}$ $5 - 6 \text{ GHz}: \geq 22 \text{ mm}$
Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see IEEE Std 1528-2013 for details.				
* When zoom scan is required and the <i>reported</i> SAR from the <i>area scan based 1-g SAR estimation</i> procedures of KDB Publication 447498 is $\leq 1.4 \text{ W/kg}$, $\leq 8 \text{ mm}$, $\leq 7 \text{ mm}$ and $\leq 5 \text{ mm}$ zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.				

Step 4: Power drift measurement

The Power Drift Measurement measures the field at the same location as the most recent power reference measurement within the same procedure, and with the same settings. The Power Drift Measurement gives the field difference in dB from the reading conducted within the last Power Reference Measurement. This allows a user to monitor the power drift of the device under test within a batch process. The measurement procedure is the same as Step 1. The SAR drift shall be kept within $\pm 5 \%$.

7.2. Data Storage and Evaluation

Data Storage

The DASY5 software stores the acquired data from the data acquisition electronics as raw data (in microvolt readings from the probe sensors),s together with all necessary software parameters for the data evaluation (probe calibration data, liquid parameters and device frequency and modulation data) in measurement files with the extension “.DA4”. The software evaluates the desired unit and format for output each time the data is visualized or exported. This allows verification of the complete software setup even after the measurement and allows correction of incorrect parameter settings. For example, if a measurement has been performed with a wrong crest factor parameter in the device setup, the parameter can be corrected afterwards and the data can be re-evaluated.

The measured data can be visualized or exported in different units or formats, depending on the selected probe type ([V/m], [A/m], [°C], [W/kg], [mW/cm²], [dBrel], etc.). Some of these units are not available in certain situations or show meaningless results, e.g., a SAR output in a lossless media will always be zero. Raw data can also be exported to perform the evaluation with other software packages.

Data Evaluation

The SEMCAD software automatically executes the following procedures to calculate the field units from the microvolt readings at the probe connector. The parameters used in the evaluation are stored in the configuration modules of the software:

Probe parameters:	Sensitivity:	Normi, ai0, ai1, ai2
	Conversion factor:	ConvFi
	Diode compression point:	Dcpi
Device parameters:	Frequency:	f
	Crest factor:	cf
Media parameters:	Conductivity:	σ
	Density:	ρ

These parameters must be set correctly in the software. They can be found in the component documents or they can be imported into the software from the configuration files issued for the DASY5 components. In the direct measuring mode of the multimeter option, the parameters of the actual system setup are used. In the scan visualization and export modes, the parameters stored in the corresponding document files are used.

The first step of the evaluation is a linearization of the filtered input signal to account for the compression characteristics of the detector diode. The compensation depends on the input signal, the diode type and the DC-transmission factor from the diode to the evaluation electronics. If the exciting field is pulsed, the crest factor of the signal must be known to correctly compensate for peak power. The formula for each channel can be given as:

$$V_i = U_i + U_i^2 \cdot \frac{cf}{dcp_i}$$

Vi:	compensated signal of channel (i = x, y, z)
Ui:	input signal of channel (i = x, y, z)
cf:	crest factor of exciting field (DASY parameter)
dcp _i :	diode compression point (DASY parameter)

From the compensated input signals the primary field data for each channel can be evaluated:

$$E - \text{fieldprobes : } E_i = \sqrt{\frac{V_i}{Norm_i \cdot ConvF}}$$

$$H - \text{fieldprobes : } H_i = \sqrt{V_i} \cdot \frac{a_{i0} + a_{i1}f + a_{i2}f^2}{f}$$

Vi:	compensated signal of channel (i = x, y, z)
Normi:	sensor sensitivity of channel (i = x, y, z), [mV/(V/m)²] for E-field Probes
ConvF:	sensitivity enhancement in solution
aij:	sensor sensitivity factors for H-field probes
f:	carrier frequency [GHz]
Ei:	electric field strength of channel i in V/m
Hi:	magnetic field strength of channel i in A/m

The RSS value of the field components gives the total field strength (Hermitian magnitude):

$$E_{tot} = \sqrt{E_x^2 + E_y^2 + E_z^2}$$

The primary field data are used to calculate the derived field units.

$$SAR = E_{tot}^2 \cdot \frac{\sigma}{\rho \cdot 1'000}$$

SAR: local specific absorption rate in W/kg
Etot: total field strength in V/m
 σ : conductivity in [mho/m] or [Siemens/m]
 ρ : equivalent tissue density in g/cm³

Note that the density is normally set to 1 (or 1.06), to account for actual brain density rather than the density of the simulation liquid.

8. Dielectric Property Measurements & System Check

8.1. Tissue Dielectric Parameters

The temperature of the tissue-equivalent medium used during measurement must also be within 18°C to 25°C and within $\pm 2^\circ\text{C}$ of the temperature when the tissue parameters are characterized.

The dielectric parameters must be measured before the tissue-equivalent medium is used in a series of SAR measurements. The parameters should be re-measured after each 3-4 days of use; or earlier if the dielectric parameters can become out of tolerance; for example, when the parameters are marginal at the beginning of the measurement series.

The dielectric constant (ϵ_r) and conductivity (σ) of typical tissue-equivalent media recipes are expected to be within $\pm 5\%$ of the required target values; but for SAR measurement systems that have implemented the SAR error compensation algorithms documented in IEEE Std 1528, to automatically compensate the measured SAR results for deviations between the measured and required tissue dielectric parameters, the tolerance for ϵ_r and σ may be relaxed to $\pm 10\%$. This is limited to frequencies ≤ 3 GHz.

Tissue Dielectric Parameters

FCC KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz

Tissue dielectric parameters for Head		
Target Frequency (MHz)	Head	
	ϵ_r	$\sigma(\text{S/m})$
750	41.9	0.89
835	41.5	0.90
1750	40.1	1.37
1800-2000	40.0	1.40

Measurement Results:

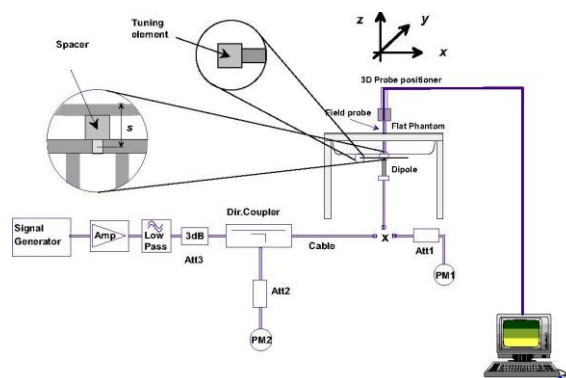
Dielectric performance of Head tissue simulating liquid									
Frequency (MHz)	ϵ_r		$\sigma(\text{S/m})$		Delta (ϵ_r)	Delta (σ)	Limit	Temp ($^\circ\text{C}$)	Date
	Target	Measured	Target	Measured					
750	41.90	42.72	0.890	0.923	1.96%	3.71%	$\pm 5\%$	22.8	2025/9/23
835	41.50	42.48	0.900	0.930	2.36%	3.33%	$\pm 5\%$	22.5	2025/9/24
1750	40.10	40.87	1.370	1.398	1.92%	2.04%	$\pm 5\%$	22.4	2025/9/25
1900	40.00	40.62	1.400	1.438	1.55%	2.71%	$\pm 5\%$	22.6	2025/9/26

8.2. System Check

SAR system verification is required to confirm measurement accuracy, according to the tissue dielectric media, probe calibration points and other system operating parameters required for measuring the SAR of a test device. The system verification must be performed for each frequency band and within the valid range of each probe calibration point required for testing the device. The same SAR probe(s) and tissue-equivalent media combinations used with each specific SAR system for system verification must be used for device testing. When multiple probe calibration points are required to cover substantially large transmission bands, independent system verifications are required for each probe calibration point. A system verification must be performed before each series of SAR measurements using the same probe calibration point and tissue-equivalent medium. Additional system verification should be considered according to the conditions of the tissue-equivalent medium and measured tissue dielectric parameters, typically every three to four days when the liquid parameters are re-measured or sooner when marginal liquid parameters are used at the beginning of a series of measurements.

System Performance Check Measurement Conditions:

- The measurements were performed in the flat section of the TWIN SAM or ELI phantom, shell thickness: 2.0 ± 0.2 mm (bottom plate) filled with Body or Head simulating liquid of the following parameters.
- The depth of tissue-equivalent liquid in a phantom must be ≥ 15.0 cm for SAR measurements ≤ 3 GHz and ≥ 10.0 cm for measurements > 3 GHz.
- The DASY system with an E-Field Probe was used for the measurements.
- The dipole was mounted on the small tripod so that the dipole feed point was positioned below the center marking of the flat phantom section and the dipole was oriented parallel to the body axis (the long side of the phantom). The standard measuring distance was 10 mm (above 1 GHz) and 15 mm (below 1 GHz) from dipole center to the simulating liquid surface.
- The coarse grid with a grid spacing of 15 mm was aligned with the dipole.
For 5 GHz band - The coarse grid with a grid spacing of 10 mm was aligned with the dipole.
- Special 7x7x7 (below 3 GHz) and/or 8x8x8 (above 3 GHz) fine cube was chosen for the cube.
- The results are normalized to 1 W input power.



System Performance Check Setup



Photo of Dipole Setup

Measurement Results:

Head											
Frequency (MHz)	1g SAR			10g SAR			Delta (1g)	Delta (10g)	Limit	Temp (°C)	Date
	Target 1W	Normalize to 1W	Measured 250mW	Target 1W	Normalize to 1W	Measured 250mW					
750	8.32	8.36	2.09	5.48	5.60	1.40	0.48%	2.19%	±10%	23.3	2025/9/23
835	9.53	9.68	2.42	6.13	6.28	1.57	1.57%	2.45%	±10%	23.7	2025/9/24
1750	36.50	37.96	9.49	19.40	20.24	5.06	4.00%	4.33%	±10%	23.0	2025/9/25
1900	40.80	40.00	10.00	21.10	21.04	5.26	-1.96%	-0.28%	±10%	23.1	2025/9/26

Note:

The 1-g and 10-g SAR measured with a reference dipole, using the required tissue-equivalent medium at the test frequency, must be within ±10% of the manufacturer calibrated dipole SAR target.

Plots of System Performance Check

Test Laboratory: Huatongwei International Inspection Co., Ltd., SAR Lab

Date: 9/23/2025

SystemPerformanceCheck-Head 750MHz

Communication System: UID 0, A-CW (0); Frequency: 750 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 750$ MHz; $\sigma = 0.923$ S/m; $\epsilon_r = 42.724$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 23.3°C; Liquid Temperature: 22.8°C;

DASY Configuration:

- Probe: EX3DV4 - SN7494; ConvF(10.55, 10.55, 10.55) @ 750 MHz; Calibrated: 7/10/2025
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1549; Calibrated: 4/21/2025
- Phantom: ELI V8.0 ; Type: QD OVA 004 AA ; Serial: 2078
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Head/d=15mm, Pin=250mW/Area Scan (6x13x1): Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 2.65 W/kg

Head/d=15mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 60.01 V/m; Power Drift = -0.11 dB

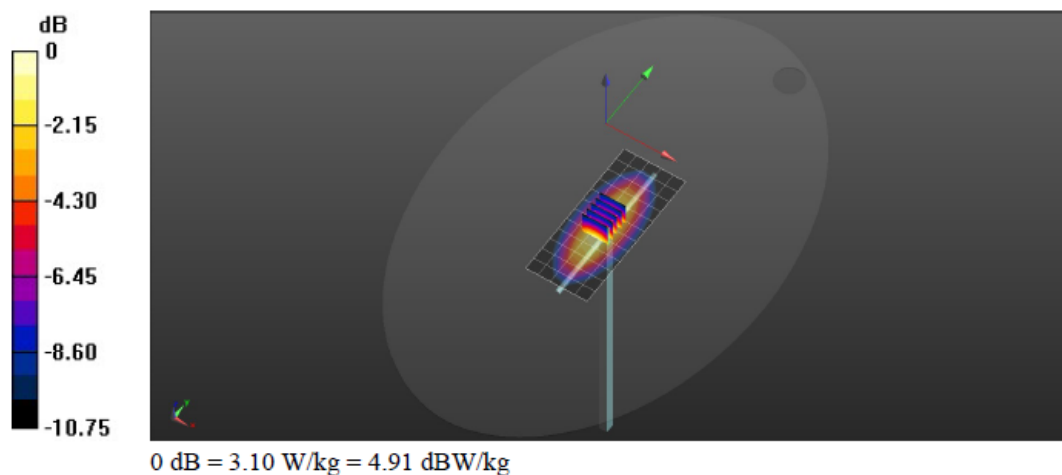
Peak SAR (extrapolated) = 3.55 W/kg

SAR(1 g) = 2.09 W/kg; SAR(10 g) = 1.4 W/kg

Smallest distance from peaks to all points 3 dB below = 18 mm

Ratio of SAR at M2 to SAR at M1 = 60%

Maximum value of SAR (measured) = 3.10 W/kg



Test Laboratory: Huatongwei International Inspection Co., Ltd., SAR Lab

Date: 9/24/2025

System Performance Check-Head 835MHz

Communication System: UID 0, CW (0); Frequency: 835 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.93 \text{ S/m}$; $\epsilon_r = 42.48$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

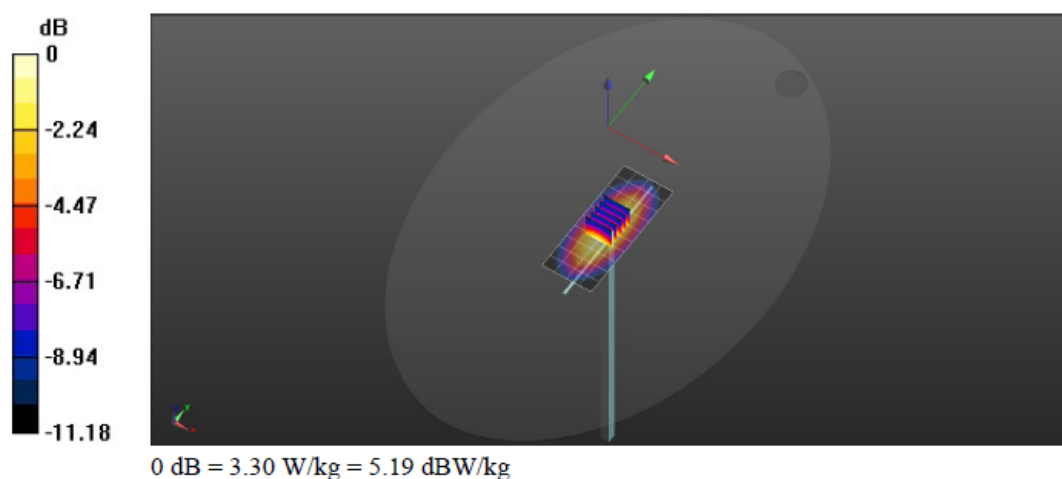
Ambient Temperature: 23.7°C ; Liquid Temperature: 22.5°C ;

DASY Configuration:

- Probe: EX3DV4 - SN7494; ConvF(10.2, 10.2, 10.2) @ 835 MHz; Calibrated: 7/10/2025
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1549; Calibrated: 4/21/2025
- Phantom: ELI V8.0 ; Type: QD OVA 004 AA ; Serial: 2078
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Head/d=15mm, Pin=250mW/Area Scan (5x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
 Maximum value of SAR (measured) = 3.33 W/kg

Head/d=15mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$,
 $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 60.73 V/m ; Power Drift = -0.15 dB Peak SAR (extrapolated) = 3.81 W/kg SAR(1 g) = 2.42 W/kg ; SAR(10 g) = 1.57 W/kg Smallest distance from peaks to all points 3 dB below = 13 mm Ratio of SAR at M2 to SAR at M1 = 68.9% Maximum value of SAR (measured) = 3.30 W/kg 

Test Laboratory: Huatongwei International Inspection Co., Ltd., SAR Lab

Date: 9/25/2025

SystemPerformanceCheck-Head 1750MHz

Communication System: UID 0, CW (0); Frequency: 1750 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1750$ MHz; $\sigma = 1.398$ S/m; $\epsilon_r = 40.866$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 23.0°C; Liquid Temperature: 22.4°C;

DASY Configuration:

- Probe: EX3DV4 - SN7494; ConvF(8.71, 8.71, 8.71) @ 1750 MHz; Calibrated: 7/10/2025
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1549; Calibrated: 4/21/2025
- Phantom: ELI V8.0 ; Type: QD OVA 004 AA ; Serial: 2078
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Head/d=10mm, Pin=250mW/Area Scan (5x7x1): Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 14.4 W/kg

Head/d=10mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 104.5 V/m; Power Drift = -0.07 dB

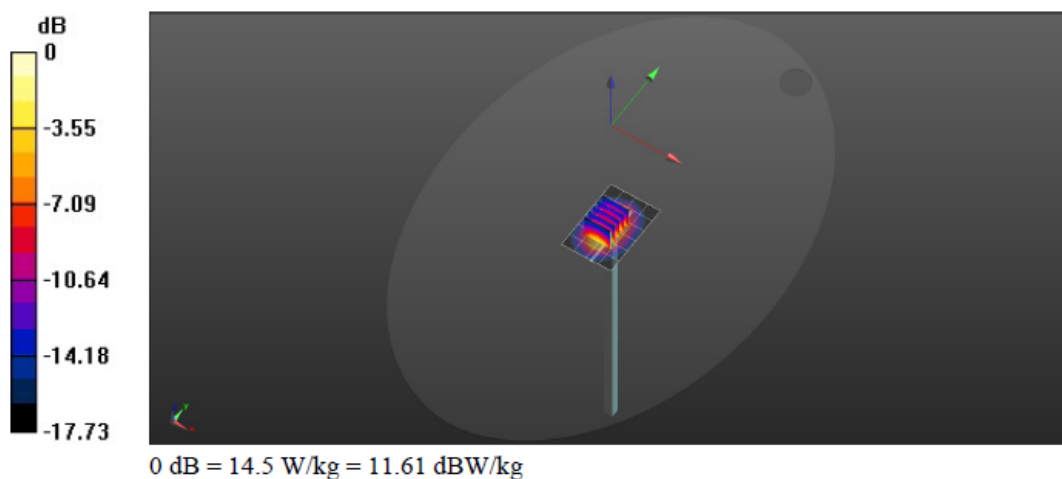
Peak SAR (extrapolated) = 17.7 W/kg

SAR(1 g) = 9.49 W/kg; SAR(10 g) = 5.06 W/kg

Smallest distance from peaks to all points 3 dB below = 17.4 mm

Ratio of SAR at M2 to SAR at M1 = 56.2%

Maximum value of SAR (measured) = 14.5 W/kg



Test Laboratory: Huatongwei International Inspection Co., Ltd., SAR Lab

Date: 9/26/2025

SystemPerformanceCheck-Head 1900MHz

Communication System: UID 0, CW (0); Frequency: 1900 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.438$ S/m; $\epsilon_r = 40.621$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 23.1°C; Liquid Temperature: 22.6°C;

DASY Configuration:

- Probe: EX3DV4 - SN7494; ConvF(8.36, 8.36, 8.36) @ 1900 MHz; Calibrated: 7/10/2025
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1549; Calibrated: 4/21/2025
- Phantom: ELI V8.0 ; Type: QD OVA 004 AA ; Serial: 2078
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Head/d=10mm, Pin=250mW/Area Scan (5x7x1): Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 14.9 W/kg

Head/d=10mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 105.7 V/m; Power Drift = -0.10 dB

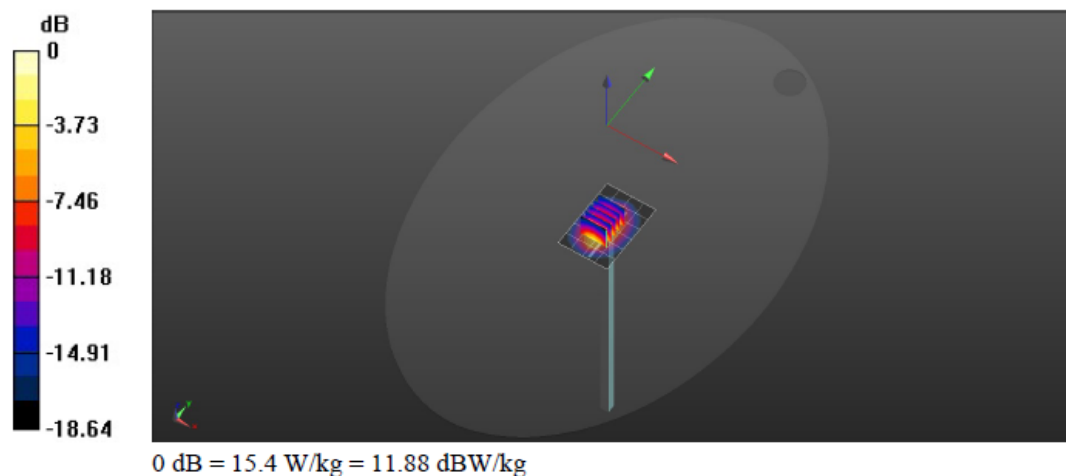
Peak SAR (extrapolated) = 18.3 W/kg

SAR(1 g) = 10 W/kg; SAR(10 g) = 5.26 W/kg

Smallest distance from peaks to all points 3 dB below = 12.3 mm

Ratio of SAR at M2 to SAR at M1 = 55.5%

Maximum value of SAR (measured) = 15.4 W/kg



9. SAR Exposure Limits

SAR assessments have been made in line with the requirements of FCC 47 CFR § 2.1093.

Type Exposure	Limit (W/kg)	
	General Population/ Uncontrolled Exposure Environment	Occupational/ Controlled Exposure Environment
Spatial Average SAR (whole body)	0.08	0.4
Spatial Peak SAR (1g cube tissue for head and trunk)	1.6	8.0
Spatial Peak SAR (10g for limb)	4.0	20.0

Note:

1. *Population/Uncontrolled Environments: are defined as locations where there is the exposure of individual who have no knowledge or control of their exposure.*
2. *Occupational/Controlled Environments: are defined as locations where there is exposure that may be incurred by people who are aware of the potential for exposure (i.e. as a result of employment or occupation).*

10. Conducted Power Measurement Results and Tune-up

Please refer to appendix report

Note:

GSM

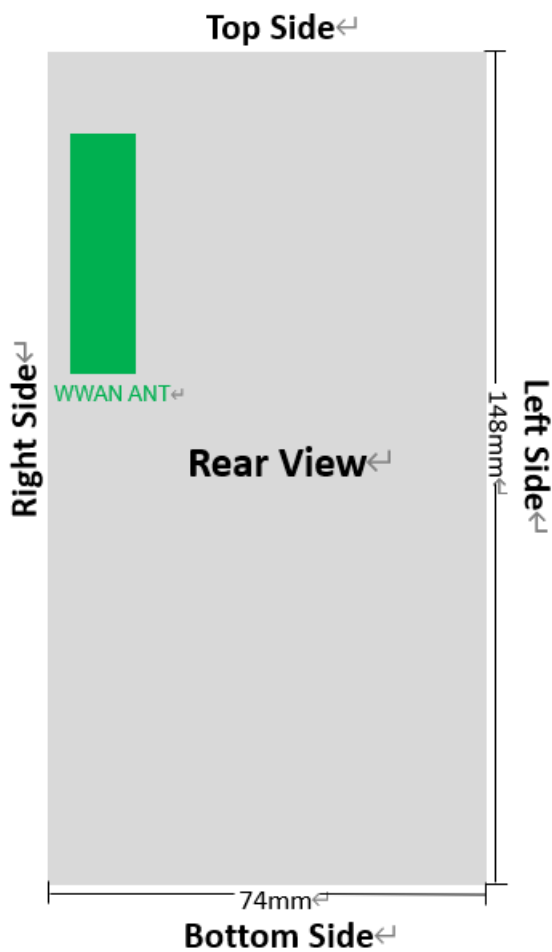
1. Per KDB 447498 D04, the maximum output power channel is used for SAR testing and further SAR test reduction.
2. Per KDB 941225 D01, considering the possibility of e.g. 3rd party VoIP operation for Head and Body-worn SAR test reduction for GSM and GPRS modes is determined by the source-base time-averaged output power including tune-up tolerance. The mode with highest specified time-averaged output power should be tested for SAR compliance in the applicable exposure conditions. For modes with the same specified maximum output power and tolerance, the higher number time-slot configuration should be tested.
3. Per KDB941225 D01, for hotspot SAR test reduction for GPRS modes is determined by the source-based time-averaged output power including tune-up tolerance, For modes with the same specified maximum output power and tolerance, the higher number time-slot configuration should be tested.

LTE

General:

1. CMW500 base station simulator was used to setup the connection with EUT; the frequency band, channel, bandwidth, RB allocation configuration, modulation type are set in the base station simulator to configure EUT transmitting at maximum power and at different configurations which are requested to be reported to FCC, for conducted power measurement and SAR testing.
2. Per KDB 941225 D05v02r03, when a properly configured base station simulator is used for the SAR and power measurements, spectrum plots for each RB allocation and offset configuration is not required.
3. Per KDB 941225 D05v02r03, start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
4. Per KDB 941225 D05v02r03, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.

11. Antenna Location



12. Measured and Reported SAR Results

Measurement Results:

Please refer to appendix report

Measurement data plots:

Please refer to appendix D

Note:

SAR Test Reduction criteria are as follows:

- Reported SAR(W/kg) for WWAN = Measured SAR * Tune-up Scaling Factor
- Reported SAR(W/kg) for Wi-Fi and Bluetooth = Measured SAR * Tune-up scaling factor * Duty Cycle scaling factor
- Duty Cycle scaling factor = 1 / Duty cycle (%)

KDB 447498 D04 Interim General RF Exposure Guidance v01:

Testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is:

- ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz
- ≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz
- ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz

KDB 941225 D01 SAR test for 3G SAR Test Reduction Procedure:

When the maximum output power and tune-up tolerance specified for production units in a secondary mode is $\leq \frac{1}{4}$ dB higher than the primary mode or when the highest reported SAR of the primary mode is scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for the secondary mode.

GSM Guidance

SAR test reduction for GPRS and EDGE modes is determined by the source-based time-averaged output power specified for production units, including tune-up tolerance. The data mode with highest specified time-averaged output power should be tested for SAR compliance in the applicable exposure conditions. For modes with the same specified maximum output power and tolerance, the higher number time-slot configuration should be tested. Please refer to section 9. for GSM power verification.

SAR is not required for EDGE (8PSK) mode because the maximum output power and tune-up limit is $\leq 1/4$ dB higher than GPRS/EDGE (GMSK) or the adjusted SAR of the highest reported SAR of GPRS/EDGE (GMSK) is ≤ 1.2 W/kg.

KDB 941225 D05 SAR for LTE Devices:

SAR test reduction is applied using the following criteria:

- Start with the largest channel bandwidth and measure SAR for QPSK with 1 RB, and 50% RB allocation, using the RB offset and required test channel combination with the highest maximum output power among RB offsets at the upper edge, middle and lower edge of each required test channel.
- When the reported SAR is > 0.8 W/kg, testing for other Channels is performed at the highest output power level for 1RB, and 50% RB configuration for that channel.
- Testing for 100% RB configuration is performed at the highest output power level for 100% RB configuration across the Low, Mid and High Channel when the highest reported SAR for 1 RB and 50% RB are > 0.8 W/kg. Testing for the remaining required channels is not needed because the reported SAR for 100% RB Allocation < 1.45 W/kg.
- Testing for 16-QAM and 64-QAM modulation is not required because the reported SAR for QPSK is < 1.45 W/Kg and its output power is not more than 0.5 dB higher than that of QPSK.
- Testing for the other channel bandwidths is not required because the reported SAR for the highest channel bandwidth is < 1.45 W/Kg and its output power is not more than 0.5 dB higher than that of the highest channel bandwidth.

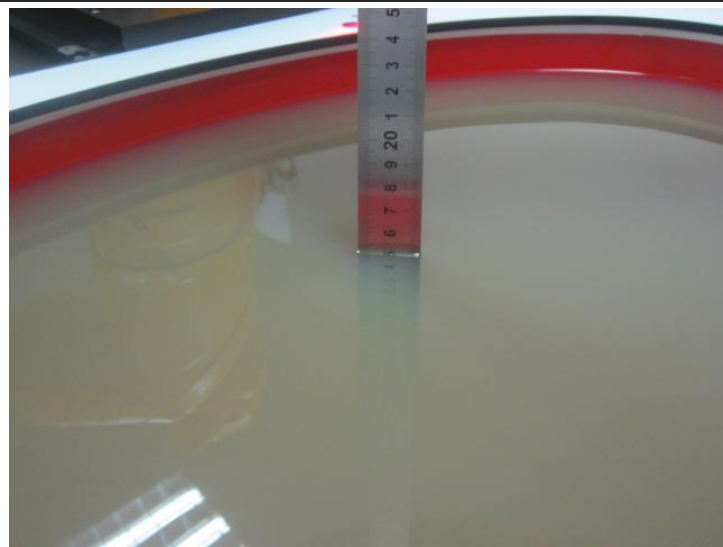
13. SAR Measurement Variability

In accordance with published RF Exposure KDB 865664 D01 SAR measurement 100 MHz to 6 GHz. These additional measurements are repeated after the completion of all measurements requiring the same head or body tissue-equivalent medium in a frequency band. The test device should be returned to ambient conditions (normal room temperature) with the battery fully charged before it is re-mounted on the device holder for the repeated measurement(s) to minimize any unexpected variations in the repeated results.

- 1) Repeated measurement is not required when the original highest measured SAR is <0.8 or 2 W/kg (1-g or 10-g respectively); steps 2) through 4) do not apply.
- 2) When the original highest measured SAR is ≥ 0.8 or 2 W/kg (1-g or 10-g respectively), repeat that measurement once.
- 3) Perform a second repeated measurement only if the ratio of largest to smallest SAR for the original and first repeated measurements is > 1.20 or when the original or repeated measurement is ≥ 1.45 or 3.6 W/kg ($\sim 10\%$ from the 1-g or 10-g respective SAR limit).
- 4) Perform a third repeated measurement only if the original, first, or second repeated measurement is ≥ 1.5 or 3.75 W/kg (1-g or 10-g respectively) and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20 .

Band	Test Position	Frequency		Highest Measured SAR (W/kg)	First Repeated		Second Repeated	
		CH	MHz		Measured SAR(W/kg)	Largest to Smallest SAR Ratio	Measured SAR(W/kg)	Largest to Smallest SAR Ratio
GPRS1900 4Tx slots	Rear 0mm	512	1850.2	1.12	1.09	1.03	N/A	N/A

14. Test Setup Photos



Liquid depth in the ELI phantom



Rear with Backpack(0mm)

15. External and Internal Photos of the EUT

Please reference to the report No.: CHTW25100017

--- End of Report ---

Project No.	SHT2506047206W		
Test sample No.	YPHT25060472003	Model No.	15044-000-1029
Start test date	2025/9/23	Finish date	2025/9/26
Temperature	23.3°C	Humidity	53.1%
Test Engineer	Jiaxing Si	Auditor	<i>Xiaodong Zhu</i>

Appendix clause	Test Item	Result
A	Conducted Power Measurement Results	PASS
B	SAR Measurement Results	PASS

Appendix A:Conducted Power Measurement Results-GSM

GSM850		Burst Average Power (dBm)			Tune-up limit (dBm)	Division Factors	Frame-Average Power (dBm)			Tune-up limit (dBm)
		CH128	CH190	CH251			CH128	CH190	CH251	
		824.2MHz	836.6MHz	848.8MHz			824.2MHz	836.6MHz	848.8MHz	
GSM		32.43	32.38	32.37	32.50	-9.03	23.40	23.35	23.34	23.47
GPRS (GMSK)	1Tx slot	32.40	32.47	32.41	32.50	-9.03	23.37	23.44	23.38	23.47
	2Tx slots	31.80	31.76	31.81	32.00	-6.02	25.78	25.74	25.79	25.98
	3Tx slots	29.59	30.10	30.26	30.50	-4.26	25.33	25.84	26.00	26.24
	4Tx slots	28.84	28.79	28.92	29.00	-3.01	25.83	25.78	25.91	25.99
EGPRS (8PSK)	1Tx slot	26.41	26.24	26.26	26.50	-9.03	17.38	17.21	17.23	17.47
	2Tx slots	26.01	25.93	25.91	26.50	-6.02	19.99	19.91	19.89	20.48
	3Tx slots	24.40	24.22	24.37	24.50	-4.26	20.14	19.96	20.11	20.24
	4Tx slots	23.02	23.01	23.12	23.50	-3.01	20.01	20.00	20.11	20.49

GSM1900		Burst Average Power (dBm)			Tune-up limit (dBm)	Division Factors	Frame-Average Power (dBm)			Tune-up limit (dBm)
		CH512	CH661	CH810			CH512	CH661	CH810	
		1850.2MHz	1880MHz	1909.8MHz			1850.2MHz	1880.0MHz	1909.8MHz	
GSM		30.17	30.00	29.82	30.50	-9.03	21.14	20.97	20.79	21.47
GPRS (GMSK)	1Tx slot	29.97	29.84	29.81	30.00	-9.03	20.94	20.81	20.78	20.97
	2Tx slots	28.38	28.18	28.32	28.50	-6.02	22.36	22.16	22.30	22.48
	3Tx slots	26.77	26.51	26.97	27.00	-4.26	22.51	22.25	22.71	22.74
	4Tx slots	26.48	26.29	25.90	26.50	-3.01	23.47	23.28	22.89	23.49
EGPRS (8PSK)	1Tx slot	25.98	25.71	25.51	26.00	-9.03	16.95	16.68	16.48	16.97
	2Tx slots	24.84	24.65	24.41	25.00	-6.02	18.82	18.63	18.39	18.98
	3Tx slots	23.02	22.82	22.67	23.50	-4.26	18.76	18.56	18.41	19.24
	4Tx slots	21.62	21.55	21.40	22.00	-3.01	18.61	18.54	18.39	18.99

Appendix A:Conducted Power Measurement Results-NB IoT

LTE-FDD Band 2			Conducted Power (dBm)			Tune-up Limit(dBm)
Modulation	Sub-carrier spacing (KHz)	RB offset	Low	Middle	High	
BPSK	3.75	1@0	23.78	23.87	23.95	24.00
		1@47	23.64	23.74	23.86	
	15	1@0	23.65	23.62	23.72	24.00
		1@11	23.58	23.53	23.67	
QPSK	3.75	1@0	23.68	23.75	23.86	24.00
		1@47	23.62	23.79	23.76	
	15	1@0	23.57	23.50	23.66	24.00
		1@11	23.58	23.57	23.64	
	15	12@0	21.25	21.28	21.46	21.50

LTE-FDD Band 4			Conducted Power (dBm)			Tune-up Limit(dBm)
Modulation	Sub-carrier spacing (KHz)	RB offset	Low	Middle	High	
BPSK	3.75	1@0	23.10	23.09	23.57	24.00
		1@47	23.08	23.05	23.52	
	15	1@0	23.20	23.07	23.56	24.00
		1@11	23.16	23.01	23.54	
QPSK	3.75	1@0	23.15	23.07	23.51	24.00
		1@47	23.09	23.03	23.61	
	15	1@0	23.23	23.11	23.55	24.00
		1@11	23.12	23.12	23.51	
	15	12@0	21.04	20.94	20.94	21.50

LTE-FDD Band 5			Conducted Power (dBm)			Tune-up Limit(dBm)
Modulation	Sub-carrier spacing (KHz)	RB offset	Low	Middle	High	
BPSK	3.75	1@0	23.10	23.09	23.57	24.00
		1@47	23.08	23.05	23.52	
	15	1@0	23.20	23.07	23.56	24.00
		1@11	23.16	23.01	23.54	
QPSK	3.75	1@0	23.15	23.07	23.51	24.00
		1@47	23.09	23.03	23.61	
	15	1@0	23.23	23.11	23.55	24.00
		1@11	23.12	23.12	23.51	
	15	12@0	21.04	20.94	20.94	21.50

LTE-FDD Band 12			Conducted Power (dBm)			Tune-up Limit(dBm)
Modulation	Sub-carrier spacing (KHz)	RB offset	Low	Middle	High	
BPSK	3.75	1@0	23.30	23.29	23.21	23.50
		1@47	23.24	23.22	23.23	
	15	1@0	23.44	23.30	23.28	23.50
		1@11	23.38	23.25	23.25	
QPSK	3.75	1@0	23.30	23.30	23.16	23.50
		1@47	23.37	23.24	23.26	
	15	1@0	23.41	23.37	23.31	23.50
		1@11	23.34	23.32	23.32	
	15	12@0	21.34	21.26	21.27	21.50

Appendix A:Conducted Power Measurement Results-eMTC

LTE-FDD Band 2				Conducted Power (dBm)			Tune-up Limit(dBm)
Band-width (MHz)	Modulation	RB allocation	RB offset	Low	Middle	High	
1.4	QPSK	1	0	23.05	23.09	23.11	24.00
			2	23.16	23.19	23.22	
			5	23.38	23.44	23.50	
		3	0	22.26	22.29	22.32	23.00
			1	22.31	22.35	22.38	
			3	22.42	22.47	22.50	
		6	0	21.13	20.96	21.57	22.00
	16QAM	1	0	22.75	22.69	22.82	24.00
			2	23.18	23.10	23.33	
			5	23.36	23.27	23.58	
		3	0	21.82	21.76	21.88	22.50
			1	21.88	21.83	21.95	
			3	22.04	21.99	22.11	
		5	0	21.11	21.02	21.72	22.00
3	QPSK	1	0	23.44	23.32	23.26	23.50
			2	23.38	23.25	23.19	
			5	23.23	23.11	23.01	
		3	0	22.71	22.60	22.54	23.00
			1	22.55	22.43	22.37	
			3	22.48	22.36	22.31	
		6	0	21.12	20.96	20.91	21.50
	16QAM	1	0	22.05	22.01	21.94	22.50
			2	22.04	22.02	21.96	
			5	22.03	22.00	21.99	
		3	0	21.37	21.33	21.26	21.50
			1	21.21	21.17	21.10	
			3	21.15	21.11	21.04	
		5	0	21.33	21.26	20.88	21.50
5	QPSK	1	0	23.14	23.00	23.26	23.50
			2	23.22	23.20	23.28	
			5	23.26	23.17	23.37	
		3	0	22.19	22.06	22.31	23.00
			1	22.26	22.12	22.37	
			3	22.42	22.29	22.54	
		6	0	22.07	21.93	22.54	23.00
	16QAM	1	0	23.31	23.14	23.33	23.50
			2	23.30	23.14	23.33	
			5	23.33	23.16	23.35	
		3	0	22.35	22.19	22.37	23.00
			1	22.42	22.26	22.44	
			3	22.59	22.42	22.61	
		5	0	21.11	21.03	21.55	22.00

10	QPSK	1	0	23.03	23.07	23.13	23.50
			2	23.12	23.16	23.20	
			5	23.20	23.26	23.30	
		3	0	23.08	23.05	23.15	23.50
			1	23.14	23.20	23.22	
			3	23.34	23.40	23.45	
		6	0	22.44	22.52	22.64	23.00
	16QAM	1	0	23.24	23.23	23.36	24.00
			2	23.32	23.29	23.41	
			5	23.60	23.58	23.64	
		3	0	21.81	21.89	21.96	23.00
			1	22.16	22.20	22.29	
			3	22.38	22.40	22.51	
		5	0	21.44	21.50	21.62	22.00
15	QPSK	1	0	23.08	23.09	23.05	23.50
			2	23.05	23.08	23.03	
			5	23.04	23.06	23.01	
		3	0	22.36	22.37	22.33	22.50
			1	22.20	22.21	22.17	
			3	22.13	22.14	22.10	
		6	0	23.14	23.03	23.01	23.50
	16QAM	1	0	23.22	23.17	23.20	23.50
			2	23.18	23.07	23.12	
			5	23.08	22.91	22.96	
		3	0	22.50	22.45	22.48	22.50
			1	22.34	22.29	22.32	
			3	22.27	22.22	22.25	
		5	0	23.24	23.06	23.15	23.50
20	QPSK	1	0	23.11	23.10	23.08	23.50
			2	23.08	23.05	23.02	
			5	23.05	23.02	23.01	
		3	0	22.39	22.38	22.36	22.50
			1	22.23	22.22	22.20	
			3	22.16	22.15	22.13	
		6	0	23.11	23.00	22.96	23.50
	16QAM	1	0	23.25	23.24	23.20	23.50
			2	23.06	23.02	22.99	
			5	22.68	22.66	22.61	
		3	0	22.53	22.52	22.48	23.00
			1	22.36	22.35	22.32	
			3	22.30	22.29	22.25	
		5	0	23.17	23.08	23.07	23.50

LTE-FDD Band 4				Conducted Power (dBm)			Tune-up Limit(dBm)
Band-width(MHz)	Modulation	RB allocation	RB offset	Low	Middle	High	
1.4	QPSK	1	0	23.48	23.69	23.52	24.00
			2	23.26	23.46	23.38	
			5	23.08	23.24	23.12	
		3	0	22.75	22.95	22.79	23.00
			1	22.59	22.79	22.62	
			3	22.52	22.72	22.55	
		6	0	21.52	21.37	21.41	22.00
	16QAM	1	0	22.74	22.52	22.36	23.00
			2	22.71	22.50	22.39	
			5	22.68	22.49	22.42	
		3	0	22.03	21.82	21.67	22.50
			1	21.87	21.66	21.51	
			3	21.81	21.60	21.44	
		5	0	21.40	21.56	21.13	22.00
3	QPSK	1	0	23.62	23.42	23.32	24.00
			2	23.54	23.43	23.28	
			5	23.44	23.30	23.25	
		3	0	22.89	22.69	22.60	23.00
			1	22.72	22.53	22.43	
			3	22.65	22.46	22.36	
		6	0	21.55	21.36	21.41	22.00
	16QAM	1	0	22.85	22.50	22.72	23.00
			2	22.82	22.64	22.68	
			5	22.78	22.70	22.63	
		3	0	22.14	21.80	22.01	22.50
			1	21.98	21.64	21.85	
			3	21.91	21.58	21.79	
		5	0	21.54	21.24	21.24	22.00
5	QPSK	1	0	23.56	23.43	23.34	24.00
			2	23.49	23.40	23.31	
			5	23.44	23.32	23.27	
		3	0	22.83	22.70	22.62	23.00
			1	22.66	22.54	22.45	
			3	22.59	22.47	22.38	
		6	0	22.54	22.38	22.44	23.00
	16QAM	1	0	23.76	23.15	23.47	24.00
			2	23.64	22.96	23.21	
			5	23.52	22.83	23.11	
		3	0	23.02	22.43	22.74	23.50
			1	22.85	22.27	22.58	
			3	22.79	22.20	22.51	
		5	0	21.42	21.48	21.51	22.00

10	QPSK	1	0	23.66	23.41	23.52	24.00
			2	23.51	23.26	23.45	
			5	23.33	23.12	23.26	
		3	0	23.66	23.40	23.50	24.00
			1	23.48	23.24	23.41	
			3	23.62	23.37	23.54	
		6	0	22.68	22.39	22.41	23.00
	16QAM	1	0	23.37	23.62	23.44	24.00
			2	23.31	23.44	23.25	
			5	23.27	23.36	23.14	
		3	0	22.62	22.17	22.43	23.00
			1	22.60	22.19	22.51	
			3	22.60	22.21	22.55	
		5	0	21.43	21.68	21.36	22.00
15	QPSK	1	0	23.62	23.55	23.32	24.00
			2	23.60	23.50	23.31	
			5	23.59	23.48	23.27	
		3	0	22.89	22.82	22.60	23.00
			1	22.72	22.65	22.43	
			3	22.65	22.58	22.36	
		6	0	23.64	23.54	23.47	24.00
	16QAM	1	0	23.27	23.17	23.13	23.50
			2	23.24	23.17	23.11	
			5	23.22	23.15	23.12	
		3	0	22.55	22.45	22.41	23.00
			1	22.38	22.29	22.25	
			3	22.32	22.22	22.18	
		5	0	23.65	23.58	23.49	24.00
20	QPSK	1	0	23.58	23.57	23.43	24.00
			2	23.56	23.55	23.38	
			5	23.54	23.52	23.31	
		3	0	22.85	22.84	22.70	23.00
			1	22.68	22.67	22.54	
			3	22.61	22.60	22.47	
		6	0	23.55	23.57	23.41	24.00
	16QAM	1	0	23.36	23.17	23.24	23.50
			2	23.27	23.13	23.20	
			5	23.21	23.08	23.16	
		3	0	22.64	22.45	22.52	23.00
			1	22.47	22.29	22.35	
			3	22.40	22.22	22.29	
		5	0	23.61	23.56	23.45	24.00

LTE-FDD Band 5				Conducted Power (dBm)			Tune-up Limit(dBm)
Band-width(MHz)	Modulation	RB allocation	RB offset	Low	Middle	High	
1.4	QPSK	1	0	23.55	23.46	23.84	24.00
			2	23.46	23.37	23.74	
			5	23.50	23.41	23.79	
		3	0	22.82	22.73	23.10	23.50
			1	22.65	22.57	22.93	
			3	22.58	22.50	22.86	
		6	0	22.74	22.65	23.02	23.50
	16QAM	1	0	22.95	22.86	23.23	23.50
			2	22.85	22.77	23.14	
			5	22.90	22.81	23.18	
		3	0	22.23	22.15	22.51	23.00
			1	22.07	21.99	22.34	
			3	22.01	21.92	22.28	
		5	0	22.15	22.07	22.43	22.50
3	QPSK	1	0	23.49	23.40	23.78	24.00
			2	23.40	23.31	23.68	
			5	23.44	23.35	23.73	
		3	0	22.76	22.67	23.04	23.50
			1	22.60	22.51	22.87	
			3	22.53	22.44	22.80	
		6	0	22.68	22.59	22.96	23.00
	16QAM	1	0	22.89	22.80	23.17	23.50
			2	22.80	22.71	23.08	
			5	22.84	22.75	23.12	
		3	0	22.18	22.09	22.45	22.50
			1	22.02	21.93	22.29	
			3	21.95	21.87	22.22	
		5	0	22.10	22.01	22.37	22.50
5	QPSK	1	0	23.51	23.43	23.80	24.00
			2	23.42	23.33	23.71	
			5	23.46	23.37	23.75	
		3	0	22.79	22.70	23.07	23.50
			1	22.62	22.53	22.90	
			3	22.55	22.46	22.83	
		6	0	22.70	22.62	22.98	23.00
	16QAM	1	0	22.91	22.82	23.19	23.50
			2	22.82	22.73	23.10	
			5	22.86	22.78	23.14	
		3	0	22.20	22.12	22.47	22.50
			1	22.04	21.96	22.31	
			3	21.97	21.89	22.24	
		5	0	22.12	22.04	22.39	22.50
10	QPSK	1	0	23.60	23.51	23.89	24.00
			2	23.51	23.42	23.79	
			5	23.55	23.46	23.81	
		3	0	22.87	22.78	23.15	23.50
			1	22.70	22.61	22.98	
			3	22.63	22.55	22.91	
		6	0	22.79	22.70	23.07	23.50
	16QAM	1	0	23.00	22.91	23.28	23.50
			2	22.90	22.82	23.18	
			5	22.95	22.86	23.23	
		3	0	22.28	22.20	22.56	23.00
			1	22.12	22.03	22.39	
			3	22.05	21.97	22.32	
		5	0	22.20	22.12	22.47	22.50

LTE-FDD Band 12				Conducted Power (dBm)			Tune-up Limit(dBm)
Band-width(MHz)	Modulation	RB allocation	RB offset	Low	Middle	High	
1.4	QPSK	1	0	23.00	23.01	23.02	23.50
			2	22.91	22.94	23.02	
			5	22.97	23.00	23.03	
		3	0	22.06	22.07	22.08	22.50
			1	22.12	22.13	22.14	
			3	22.29	22.30	22.31	
		6	0	21.23	21.13	21.14	21.50
	16QAM	1	0	22.41	22.28	22.32	22.50
			2	22.40	22.21	22.28	
			5	22.39	22.11	22.21	
		3	0	21.71	21.59	21.63	22.00
			1	21.56	21.43	21.47	
			3	21.49	21.37	21.40	
		5	0	21.09	20.89	20.98	21.50
3	QPSK	1	0	23.60	23.41	23.34	24.00
			2	23.58	23.38	23.32	
			5	23.52	23.36	23.30	
		3	0	22.87	22.68	22.62	23.00
			1	22.70	22.52	22.45	
			3	22.63	22.45	22.38	
		6	0	21.16	21.08	21.12	21.50
	16QAM	1	0	22.23	22.05	22.17	22.50
			2	22.23	22.03	22.12	
			5	22.16	21.96	22.02	
		3	0	21.54	21.37	21.48	22.00
			1	21.38	21.21	21.33	
			3	21.32	21.15	21.26	
		5	0	21.56	21.45	21.51	22.00
5	QPSK	1	0	23.24	23.18	23.20	23.50
			2	23.22	23.16	23.15	
			5	23.20	23.12	23.14	
		3	0	22.52	22.46	22.48	23.00
			1	22.35	22.30	22.32	
			3	22.29	22.23	22.25	
		6	0	22.26	22.19	22.01	22.50
	16QAM	1	0	23.12	22.98	23.08	23.50
			2	23.08	22.74	22.96	
			5	23.01	22.63	22.83	
		3	0	22.40	22.27	22.36	22.50
			1	22.24	22.10	22.20	
			3	22.17	22.04	22.13	
		5	0	21.58	21.47	20.63	22.00
10	QPSK	1	0	23.23	23.25	23.20	23.50
			2	23.12	23.14	23.10	
			5	23.05	23.07	23.03	
		3	0	23.33	23.18	23.22	23.50
			1	23.28	23.14	23.17	
			3	23.24	23.09	23.16	
		6	0	21.72	21.50	21.66	22.00
	16QAM	1	0	23.02	23.04	23.09	23.50
			2	23.09	23.08	23.12	
			5	23.11	23.16	23.21	
		3	0	22.56	22.72	22.37	23.00
			1	22.31	22.44	22.06	
			3	21.90	21.98	21.81	
		5	0	21.38	21.29	21.17	21.50

Appendix B:SAR Measurement Results-Body

GSM850											
Mode	Test Position	Test Distance(mm)	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
			CH	MHz					(W/kg)	(W/kg)	
GPRS 3Tx slots	Rear	0	128	824.2	29.59	30.50	1.233	-	-	-	-
		0	190	836.6	30.10	30.50	1.096	-	-	-	-
		0	251	848.8	30.26	30.50	1.057	-0.09	0.584	0.617	1

GSM1900											
Mode	Test Position	Test Distance(mm)	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
			CH	MHz					(W/kg)	(W/kg)	
GPRS 4Tx slots	Rear	0	512	1850.2	26.48	26.50	1.005	-0.09	1.120	1.125	2
		0	661	1880.0	26.29	26.50	1.050	-0.05	1.060	1.113	-
		0	810	1909.8	25.90	26.50	1.148	-0.13	0.945	1.085	-

LTE Band 2 - NB IoT											
Mode	Test Position	Test Distance(mm)	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
			CH	MHz					(W/kg)	(W/kg)	
BPSK 3.75KHz	Rear	0	18602	1850.2	23.78	24.00	1.052	-	-	-	-
		0	18900	1880.0	23.87	24.00	1.030	-	-	-	-
		0	19198	1909.8	23.95	24.00	1.012	-0.13	0.339	0.343	3
BPSK 15KHz	Rear	0	18602	1850.2	23.65	24.00	1.084	-	-	-	-
		0	18900	1880.0	23.62	24.00	1.091	-	-	-	-
		0	19198	1909.8	23.72	24.00	1.067	-0.07	0.320	0.341	-

LTE Band 4 - NB IoT											
Mode	Test Position	Test Distance(mm)	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
			CH	MHz					(W/kg)	(W/kg)	
BPSK 3.75KHz	Rear	0	19952	1710.2	23.10	24.00	1.230	0.05	0.661	0.813	4
		0	20175	1732.5	23.09	24.00	1.233	-	-	-	-
		0	20398	1754.8	23.57	24.00	1.104	-	-	-	-
BPSK 15KHz	Rear	0	19952	1710.2	23.20	24.00	1.202	-	-	-	-
		0	20175	1732.5	23.07	24.00	1.239	-	-	-	-
		0	20398	1754.8	23.56	24.00	1.107	-0.01	0.578	0.640	-

LTE Band 5 - NB IoT											
Mode	Test Position	Test Distance(mm)	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
			CH	MHz					(W/kg)	(W/kg)	
BPSK 3.75KHz	Rear	0	20402	824.2	23.10	24.00	1.230	-	-	-	-
		0	20525	836.5	23.09	24.00	1.233	-	-	-	-
		0	20648	848.8	23.57	24.00	1.104	-0.04	0.067	0.074	5
BPSK 15KHz	Rear	0	20402	824.2	23.20	24.00	1.202	-	-	-	-
		0	20525	836.5	23.07	24.00	1.239	-	-	-	-
		0	20648	848.8	23.56	24.00	1.107	-0.09	0.065	0.072	-

LTE Band 12 - NB IoT											
Mode	Test Position	Test Distance(mm)	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
			CH	MHz					(W/kg)	(W/kg)	
BPSK 3.75KHz	Rear	0	23012	699.2	23.30	23.50	1.047	-0.03	0.120	0.126	6
		0	23095	707.5	23.29	23.50	1.050	-	-	-	-
		0	23178	715.8	23.21	23.50	1.069	-	-	-	-
BPSK 15KHz	Rear	0	23012	699.2	23.44	23.50	1.014	0.15	0.108	0.110	-
		0	23095	707.5	23.30	23.50	1.047	-	-	-	-
		0	23178	715.8	23.28	23.50	1.052	-	-	-	-

LTE Band 2 - eMTC											
Mode	Test Position	Test Distance(mm)	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
			CH	MHz					(W/kg)	(W/kg)	
20M QPSK 1RB	Rear	0	18700	1860.0	23.11	23.50	1.094	0.05	0.313	0.342	7
		0	18900	1880.0	23.10	23.50	1.096	-	-	-	-
		0	19100	1900.0	23.08	23.50	1.102	-	-	-	-
20M QPSK 3RB	Rear	0	18700	1860.0	22.39	22.50	1.025	-0.08	0.305	0.313	-
		0	18900	1880.0	22.38	22.50	1.027	-	-	-	-
		0	19100	1900.0	22.36	22.50	1.032	-	-	-	-

LTE Band 4 - eMTC											
Mode	Test Position	Test Distance(mm)	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
			CH	MHz					(W/kg)	(W/kg)	
20M QPSK 1RB	Rear	0	20050	1720.0	23.58	24.00	1.102	0.10	0.684	0.753	8
		0	20175	1732.5	23.57	24.00	1.104	-	-	-	-
		0	20300	1745.0	23.43	24.00	1.140	-	-	-	-
20M QPSK 3RB	Rear	0	20050	1720.0	22.85	23.00	1.036	-0.02	0.672	0.696	-
		0	20175	1732.5	22.84	23.00	1.038	-	-	-	-
		0	20300	1745.0	22.70	23.00	1.071	-	-	-	-

LTE Band 5 - eMTC											
Mode	Test Position	Test Distance(mm)	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
			CH	MHz					(W/kg)	(W/kg)	
10M QPSK 1RB	Rear	0	20450	829.0	23.60	24.00	1.096	-	-	-	-
		0	20525	836.5	23.51	24.00	1.119	-	-	-	-
		0	20600	844.0	23.89	24.00	1.026	0.040	0.072	0.074	9
10M QPSK 3RB	Rear	0	20450	829.0	22.87	23.50	1.157	-	-	-	-
		0	20525	836.5	22.78	23.50	1.180	-	-	-	-
		0	20600	844.0	23.15	23.50	1.084	-0.090	0.060	0.065	-

LTE Band 12 - eMTC											
Mode	Test Position	Test Distance(mm)	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
			CH	MHz					(W/kg)	(W/kg)	
10M QPSK 1RB	Rear	0	23060	704.0	23.23	23.50	1.064	-	-	-	-
		0	23095	707.5	23.25	23.50	1.059	0.12	0.122	0.129	10
		0	23130	711.0	23.20	23.50	1.072	-	-	-	-
10M QPSK 3RB	Rear	0	23060	704.0	23.33	23.50	1.040	0.01	0.113	0.118	-
		0	23095	707.5	23.18	23.50	1.076	-	-	-	-
		0	23130	711.0	23.22	23.50	1.067	-	-	-	-

GSM850 Body

Communication System: UID 0, Generic GPRS(TDMA, GMSK, TN 0-1-2) (0); Frequency: 848.8 MHz; Duty Cycle: 1:2.66993

Medium parameters used: $f = 848.8$ MHz; $\sigma = 0.934$ S/m; $\epsilon_r = 42.454$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 23.7°C; Liquid Temperature: 22.5°C;

DASY Configuration:

- Probe: EX3DV4 - SN7494; ConvF(10.2, 10.2, 10.2) @ 848.8 MHz; Calibrated: 7/10/2025
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1549; Calibrated: 4/21/2025
- Phantom: ELI V8.0 ; Type: QD OVA 004 AA ; Serial: 2078
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Rear 0mm/CH251/Area Scan (7x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.708 W/kg

Rear 0mm/CH251/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 21.25 V/m; Power Drift = -0.09 dB

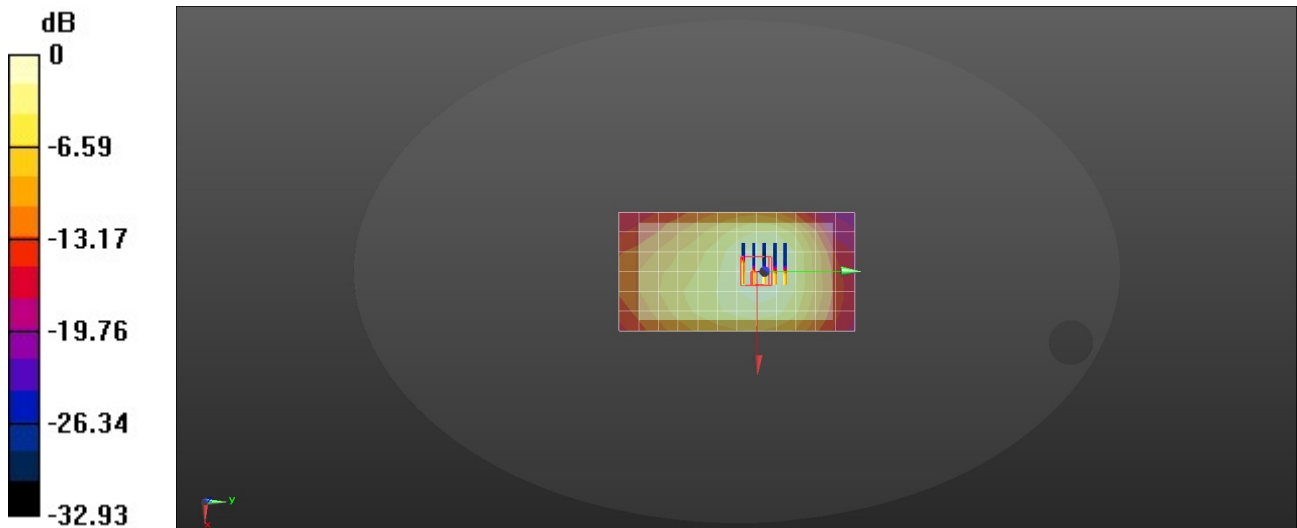
Peak SAR (extrapolated) = 1.72 W/kg

SAR(1 g) = 0.584 W/kg; SAR(10 g) = 0.376 W/kg

Smallest distance from peaks to all points 3 dB below = 9.4 mm

Ratio of SAR at M2 to SAR at M1 = 57.5%

Maximum value of SAR (measured) = 0.712 W/kg



0 dB = 0.712 W/kg = -1.48 dBW/kg

GSM1900 Body

Communication System: UID 0, Generic GPRS(TDMA, GMSK, TN 0-1-2-3) (0); Frequency: 1850.2 MHz; Duty Cycle: 1:2.00447

Medium parameters used: $f = 1850.2$ MHz; $\sigma = 1.413$ S/m; $\epsilon_r = 40.718$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 23.1°C; Liquid Temperature: 22.6°C;

DASY Configuration:

- Probe: EX3DV4 - SN7494; ConvF(8.36, 8.36, 8.36) @ 1850.2 MHz; Calibrated: 7/10/2025
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1549; Calibrated: 4/21/2025
- Phantom: ELI V8.0 ; Type: QD OVA 004 AA ; Serial: 2078
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Rear 0mm/CH512/Area Scan (7x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 1.73 W/kg

Rear 0mm/CH512/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 0.4910 V/m; Power Drift = -0.09 dB

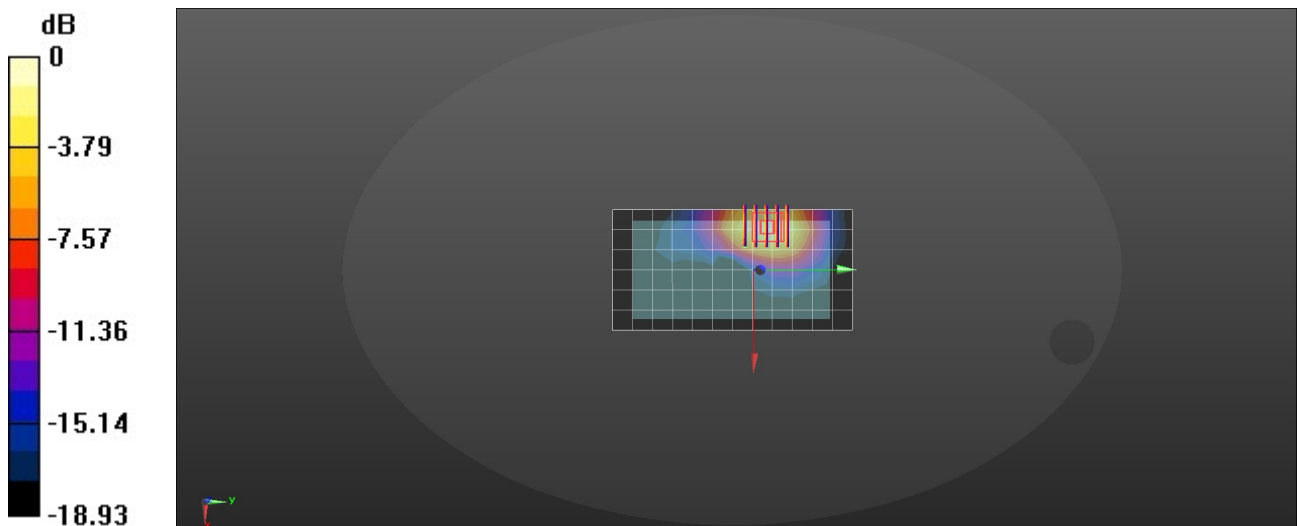
Peak SAR (extrapolated) = 2.15 W/kg

SAR(1 g) = 1.12 W/kg; SAR(10 g) = 0.610 W/kg

Smallest distance from peaks to all points 3 dB below = 12.9 mm

Ratio of SAR at M2 to SAR at M1 = 52.4%

Maximum value of SAR (measured) = 1.72 W/kg



0 dB = 1.72 W/kg = 2.36 dBW/kg

LTE Band 2 - NB IoT Body

Communication System: UID 0, Generic LTE-FDD (0); Frequency: 1909.8 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1909.8$ MHz; $\sigma = 1.443$ S/m; $\epsilon_r = 40.607$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 23.1°C; Liquid Temperature: 22.6°C;

DASY Configuration:

- Probe: EX3DV4 - SN7494; ConvF(8.36, 8.36, 8.36) @ 1909.8 MHz; Calibrated: 7/10/2025
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1549; Calibrated: 4/21/2025
- Phantom: ELI V8.0 ; Type: QD OVA 004 AA ; Serial: 2078
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Rear 0mm/CH19198/Area Scan (7x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.485 W/kg

Rear 0mm/CH19198/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 0.9970 V/m; Power Drift = -0.13 dB

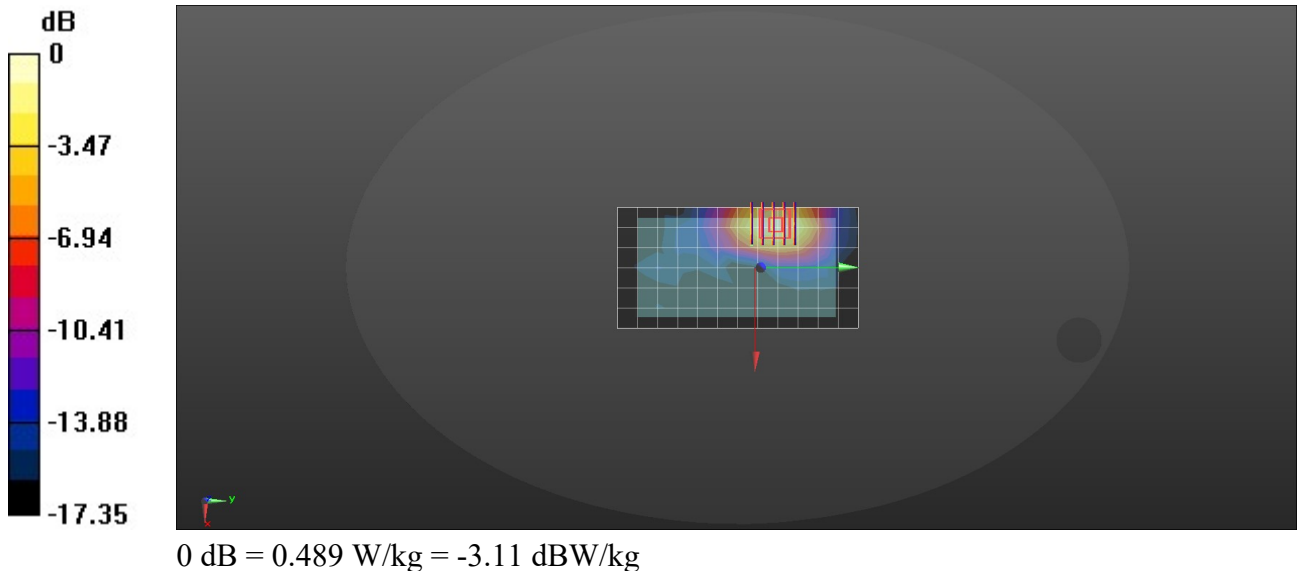
Peak SAR (extrapolated) = 0.611 W/kg

SAR(1 g) = 0.339 W/kg; SAR(10 g) = 0.183 W/kg

Smallest distance from peaks to all points 3 dB below = 10.2 mm

Ratio of SAR at M2 to SAR at M1 = 60.3%

Maximum value of SAR (measured) = 0.489 W/kg



LTE Band 4 - NB IoT Body

Communication System: UID 0, Generic LTE-FDD (0); Frequency: 1710.2 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1710.2$ MHz; $\sigma = 1.378$ S/m; $\epsilon_r = 40.903$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 23.0°C; Liquid Temperature: 22.4°C;

DASY Configuration:

- Probe: EX3DV4 - SN7494; ConvF(8.71, 8.71, 8.71) @ 1710.2 MHz; Calibrated: 7/10/2025
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1549; Calibrated: 4/21/2025
- Phantom: ELI V8.0 ; Type: QD OVA 004 AA ; Serial: 2078
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Rear 0mm/CH19952/Area Scan (7x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 1.02 W/kg

Rear 0mm/CH19952/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.802 V/m; Power Drift = 0.05 dB

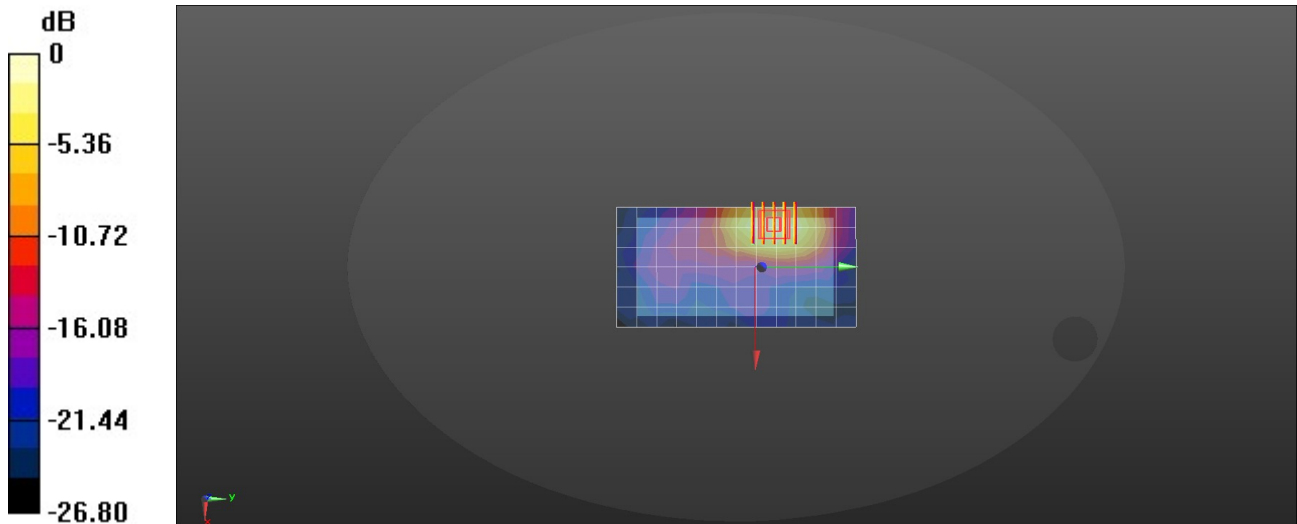
Peak SAR (extrapolated) = 1.26 W/kg

SAR(1 g) = 0.661 W/kg; SAR(10 g) = 0.369 W/kg

Smallest distance from peaks to all points 3 dB below = 11.6 mm

Ratio of SAR at M2 to SAR at M1 = 50.8%

Maximum value of SAR (measured) = 1.02 W/kg



0 dB = 1.02 W/kg = 0.09 dBW/kg

LTE Band 5 - NB IoT Body

Communication System: UID 0, Generic LTE-FDD (0); Frequency: 848.8 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 848.8$ MHz; $\sigma = 0.934$ S/m; $\epsilon_r = 42.454$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 23.7°C; Liquid Temperature: 22.5°C;

DASY Configuration:

- Probe: EX3DV4 - SN7494; ConvF(10.2, 10.2, 10.2) @ 848.8 MHz; Calibrated: 7/10/2025
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1549; Calibrated: 4/21/2025
- Phantom: ELI V8.0 ; Type: QD OVA 004 AA ; Serial: 2078
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Rear 0mm/CH20648/Area Scan (7x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.0967 W/kg

Rear 0mm/CH20648/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.232 V/m; Power Drift = -0.04 dB

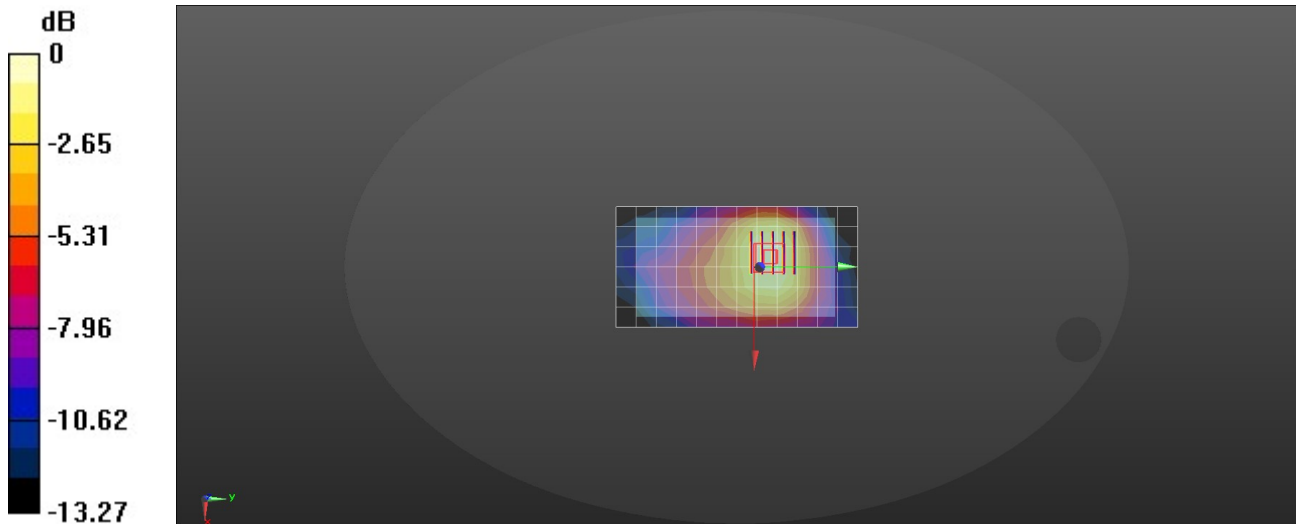
Peak SAR (extrapolated) = 0.125 W/kg

SAR(1 g) = 0.067 W/kg; SAR(10 g) = 0.040 W/kg

Smallest distance from peaks to all points 3 dB below = 18.8 mm

Ratio of SAR at M2 to SAR at M1 = 52.4%

Maximum value of SAR (measured) = 0.103 W/kg



0 dB = 0.103 W/kg = -9.87 dBW/kg

LTE Band 12 - NB IoT Body

Communication System: UID 0, Generic LTE-FDD (0); Frequency: 699.2 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 699.2$ MHz; $\sigma = 0.907$ S/m; $\epsilon_r = 42.858$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 23.3°C; Liquid Temperature: 22.8°C;

DASY Configuration:

- Probe: EX3DV4 - SN7494; ConvF(10.55, 10.55, 10.55) @ 699.2 MHz; Calibrated: 7/10/2025
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1549; Calibrated: 4/21/2025
- Phantom: ELI V8.0 ; Type: QD OVA 004 AA ; Serial: 2078
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Rear 0mm/CH23012/Area Scan (7x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.166 W/kg

Rear 0mm/CH23012/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.365 V/m; Power Drift = -0.03 dB

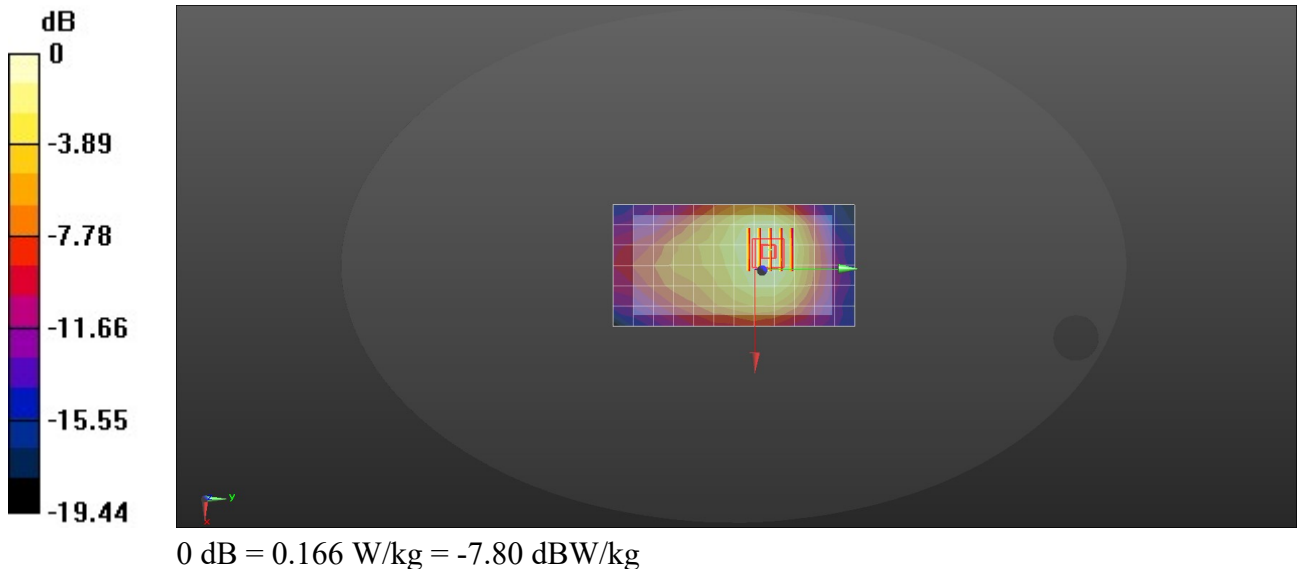
Peak SAR (extrapolated) = 0.213 W/kg

SAR(1 g) = 0.120 W/kg; SAR(10 g) = 0.077 W/kg

Smallest distance from peaks to all points 3 dB below = 19.5 mm

Ratio of SAR at M2 to SAR at M1 = 57.6%

Maximum value of SAR (measured) = 0.174 W/kg



LTE Band 2 - eMTC Body

Communication System: UID 0, Generic LTE-FDD (0); Frequency: 1860 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1860$ MHz; $\sigma = 1.417$ S/m; $\epsilon_r = 40.694$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 23.1°C; Liquid Temperature: 22.6°C;

DASY Configuration:

- Probe: EX3DV4 - SN7494; ConvF(8.36, 8.36, 8.36) @ 1860 MHz; Calibrated: 7/10/2025
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1549; Calibrated: 4/21/2025
- Phantom: ELI V8.0 ; Type: QD OVA 004 AA ; Serial: 2078
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Rear 0mm/CH18700/Area Scan (7x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.469 W/kg

Rear 0mm/CH18700/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 0.9880 V/m; Power Drift = 0.05 dB

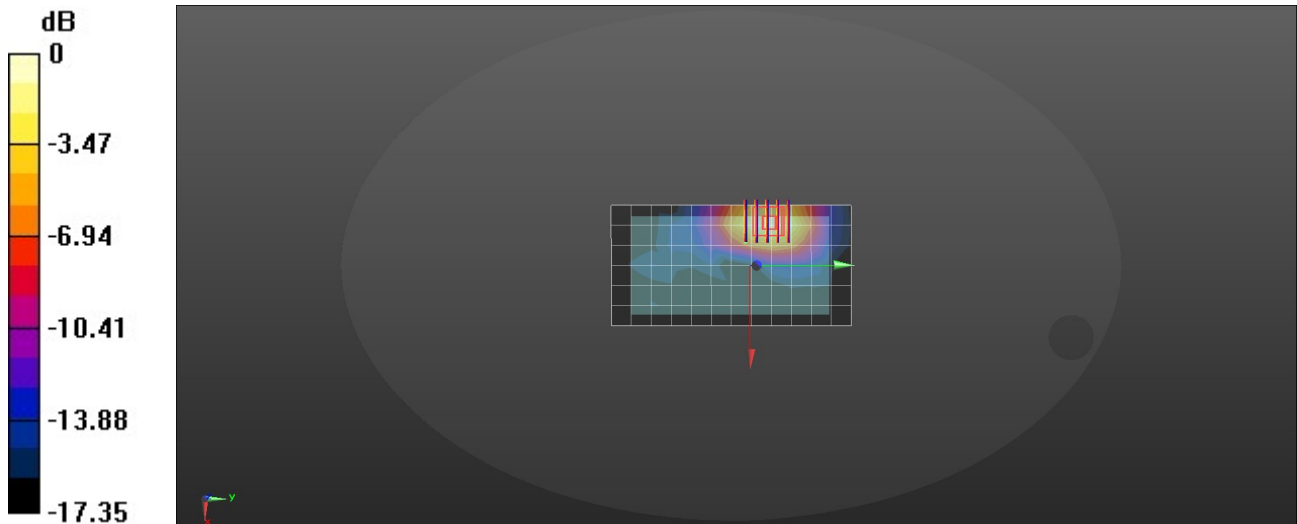
Peak SAR (extrapolated) = 0.591 W/kg

SAR(1 g) = 0.313 W/kg; SAR(10 g) = 0.172 W/kg

Smallest distance from peaks to all points 3 dB below = 12.8 mm

Ratio of SAR at M2 to SAR at M1 = 53.7%

Maximum value of SAR (measured) = 0.473 W/kg



LTE Band 4 - eMTC Body

Communication System: UID 0, Generic LTE-FDD (0); Frequency: 1720 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1720$ MHz; $\sigma = 1.384$ S/m; $\epsilon_r = 40.898$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 23.0°C; Liquid Temperature: 22.4°C;

DASY Configuration:

- Probe: EX3DV4 - SN7494; ConvF(8.71, 8.71, 8.71) @ 1720 MHz; Calibrated: 7/10/2025
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1549; Calibrated: 4/21/2025
- Phantom: ELI V8.0 ; Type: QD OVA 004 AA ; Serial: 2078
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Rear 0mm/CH20050/Area Scan (7x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 1.02 W/kg

Rear 0mm/CH20050/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.808 V/m; Power Drift = 0.10 dB

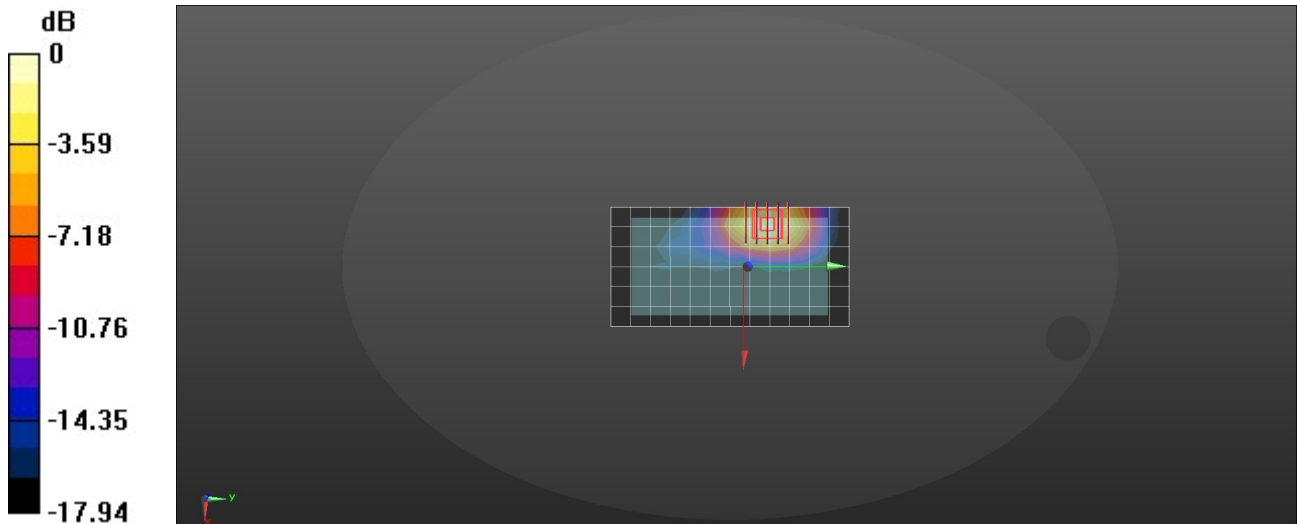
Peak SAR (extrapolated) = 1.27 W/kg

SAR(1 g) = 0.684 W/kg; SAR(10 g) = 0.377 W/kg

Smallest distance from peaks to all points 3 dB below = 12.8 mm

Ratio of SAR at M2 to SAR at M1 = 55.2%

Maximum value of SAR (measured) = 1.03 W/kg



0 dB = 1.03 W/kg = 0.13 dBW/kg

Test Laboratory: Huatongwei International Inspection Co., Ltd., SAR Lab

Date: 9/24/2025

LTE Band 5 - eMTC Body

Communication System: UID 0, Generic LTE-FDD (0); Frequency: 844 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 844 \text{ MHz}$; $\sigma = 0.933 \text{ S/m}$; $\epsilon_r = 42.465$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Ambient Temperature: 23.7°C ; Liquid Temperature: 22.5°C ;

DASY Configuration:

- Probe: EX3DV4 - SN7494; ConvF(10.2, 10.2, 10.2) @ 844 MHz; Calibrated: 7/10/2025
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1549; Calibrated: 4/21/2025
- Phantom: ELI V8.0 ; Type: QD OVA 004 AA ; Serial: 2078
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Rear 0mm/CH20600/Area Scan (7x13x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.0964 W/kg

Rear 0mm/CH20600/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 7.226 V/m ; Power Drift = 0.04 dB

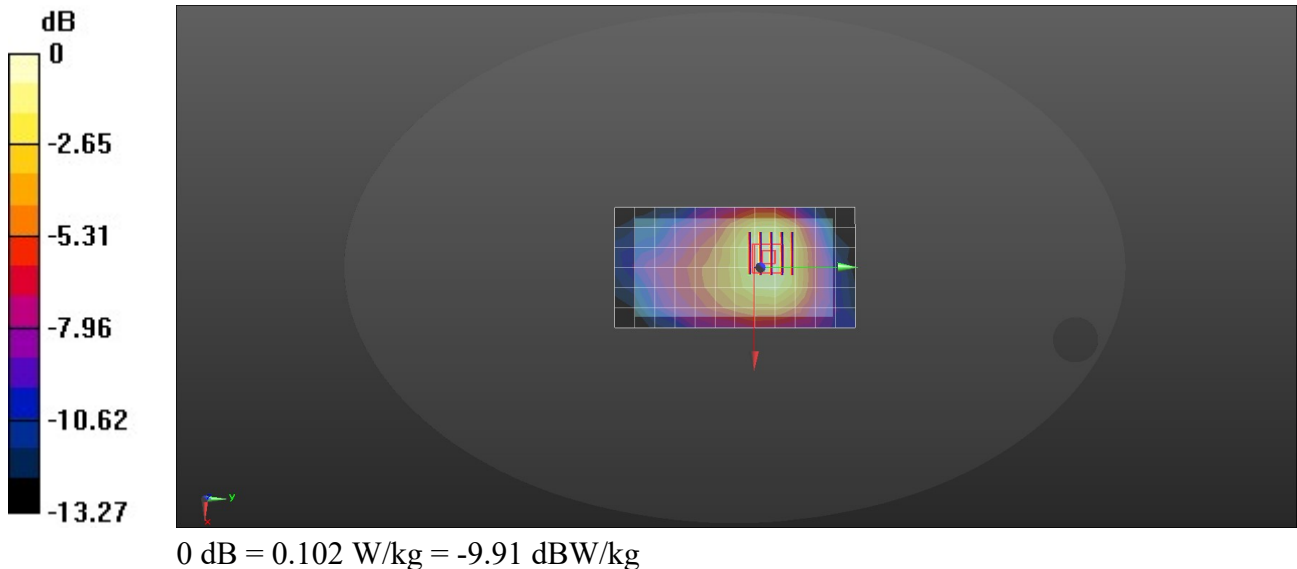
Peak SAR (extrapolated) = 0.125 W/kg

SAR(1 g) = 0.072 W/kg ; SAR(10 g) = 0.046 W/kg

Smallest distance from peaks to all points 3 dB below = 24.9 mm

Ratio of SAR at M2 to SAR at M1 = 57.5%

Maximum value of SAR (measured) = 0.102 W/kg



LTE Band 12 - eMTC Body

Communication System: UID 0, Generic LTE-FDD (0); Frequency: 707.5 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 707.5$ MHz; $\sigma = 0.91$ S/m; $\epsilon_r = 42.835$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 23.3°C; Liquid Temperature: 22.8°C;

DASY Configuration:

- Probe: EX3DV4 - SN7494; ConvF(10.55, 10.55, 10.55) @ 707.5 MHz; Calibrated: 7/10/2025
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1549; Calibrated: 4/21/2025
- Phantom: ELI V8.0 ; Type: QD OVA 004 AA ; Serial: 2078
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Rear 0mm/CH23095/Area Scan (7x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.167 W/kg

Rear 0mm/CH23095/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.378 V/m; Power Drift = 0.12 dB

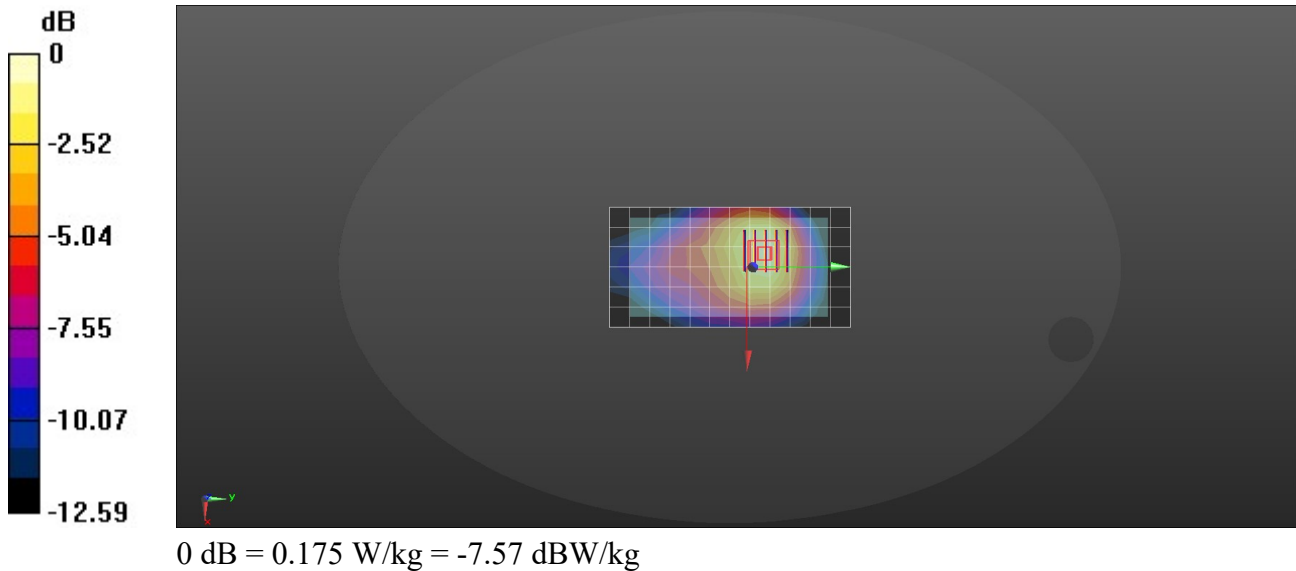
Peak SAR (extrapolated) = 0.214 W/kg

SAR(1 g) = 0.122 W/kg; SAR(10 g) = 0.078 W/kg

Smallest distance from peaks to all points 3 dB below = 19.5 mm

Ratio of SAR at M2 to SAR at M1 = 57.6%

Maximum value of SAR (measured) = 0.175 W/kg



1.1. DAE4 Calibration Certificate



Add: No.52 HuaYuanBei Road, Haidian District, Beijing, 100191, China
Tel: +86-10-62304633-2117
E-mail: emf@caict.ac.cn <http://www.caict.ac.cn>



中国认可
国际互认
校准
CALIBRATION
CNAS L0570

Client : HTW

Certificate No: 25J02Z000261

CALIBRATION CERTIFICATE

Object DAE4 - SN: 1549

Calibration Procedure(s) FF-Z11-002-01
Calibration Procedure for the Data Acquisition Electronics
(DAEx)

Calibration date: April 21, 2025

This calibration Certificate documents the traceability to national standards, which realize the physical units of measurements(SI). The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature(22±3)℃ and humidity<70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date(Calibrated by, Certificate No.)	Scheduled Calibration
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Process Calibrator 753	1971018	11-Jun-24 (CTTL, No.24J02X005147)	Jun-25
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	Name	Function	Signature
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Calibrated by:	Yu Zongying	SAR Test Engineer	
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Reviewed by:	Lin Jun	SAR Test Engineer	
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Approved by:	Qi Dianyuan	SAR Project Leader	
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Issued: April 23, 2025

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.



Add: No.52 HuaYuanBei Road, Haidian District, Beijing, 100191, China
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Glossary:

DAE data acquisition electronics
Connector angle information used in DASY system to align probe sensor X to the robot coordinate system.

Methods Applied and Interpretation of Parameters:

- *DC Voltage Measurement:* Calibration Factor assessed for use in DASY system by comparison with a calibrated instrument traceable to national standards. The figure given corresponds to the full scale range of the voltmeter in the respective range.
- *Connector angle:* The angle of the connector is assessed measuring the angle mechanically by a tool inserted. Uncertainty is not required.
- The report provide only calibration results for DAE, it does not contain other performance test results.



Add: No.52 HuaYuanBei Road, Haidian District, Beijing, 100191, China
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DC Voltage Measurement

A/D - Converter Resolution nominal

High Range: 1LSB = 6.1 μ V, full range = -100...+300 mV

Low Range: 1LSB = 61nV, full range = -1.....+3mV

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

Calibration Factors	X	Y	Z
High Range	406.362 $\pm$ 0.15% (k=2)	406.035 $\pm$ 0.15% (k=2)	406.194 $\pm$ 0.15% (k=2)
Low Range	3.98339 $\pm$ 0.7% (k=2)	3.99051 $\pm$ 0.7% (k=2)	3.99188 $\pm$ 0.7% (k=2)

Connector Angle

Connector Angle to be used in DASY system	18.5° $\pm$ 1 °
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