

FCC SAR Test Report

Report No. : 1812C50250312501

Applicant : Shenzhen Vanpowers Intelligent Technology Co., Ltd

Address : 901A9, No. 6, Kangli City, No. 66, Pingji Avenue, Lilang Community, Nanwan Street, Longgang District, Shenzhen

Product Name : Intelligent Terminal

Report Date : 2025-08-27

Shenzhen Anbotek Compliance Laboratory Limited

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TEST REPORT

Applicant : Shenzhen Vanpowers Intelligent Technology Co., Ltd
Manufacturer : Shenzhen Vanpowers Intelligent Technology Co., Ltd
Product Name : Intelligent Terminal
Model No. : DA35D1C10F
Trade Mark : N/A
Rating(s) : Input: 25-60V= 200mA (with DC 3.7V 1000mAh Battery inside)

**Test Standard(s) : IEEE Std 1528™-2013; FCC 47 CFR Part 2.1093;
ANSI/IEEE C95.1:2019; Reference FCC KDB 447498 D01 v06; KDB
248227 D01 v02r02; KDB 865664 D01**

The device described above is tested by Shenzhen Anbotek Compliance Laboratory Limited to determine the maximum emission levels emanating from the device and the severe levels of the device can endure and its performance criterion. The measurement results are contained in this test report and Shenzhen Anbotek Compliance Laboratory Limited is assumed full of responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT (Equipment Under Test) is technically compliant with the IEEE Std 1528™-2013, FCC 47 CFR Part 2.1093, IEEE Std C95.1-2019 requirements.

This report applies to above tested sample only and shall not be reproduced in part without written approval of Shenzhen Anbotek Compliance Laboratory Limited.

Date of Receipt

2025-07-03

Date of Test

2025-07-10 to 2025-07-13

Prepared By



(Qiangfei Yang)

Approved & Authorized Signer



(Yufan Xie)

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Version

Version No.	Date	Description
R00	2025-08-27	Original

Code:AB-RF-05-b

1. Statement of Compliance

<Highest SAR Summary>

Frequency Band	Highest Reported 1g-SAR(W/Kg)	SAR Test Limit (W/Kg)
	Body-worn (0mm)	
GSM850	0.746	1.6
PCS1900	0.765	
LTE Band 2	0.686	
LTE Band 4	0.899	
LTE Band 5	1.037	
LTE Band 12	0.773	
LTE Band 13	0.847	
LTE Band 25	0.562	
LTE Band 66	0.800	
Test Result	PASS	

This device is in compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits (1.6 W/kg) specified in FCC 47 CFR part 2.1093 and IEEE Std C95.1-2019, and had been tested in accordance with the measurement methods and procedures specified in IEEE Std 1528™-2013.

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2. General Information

2.1. Client Information

Applicant	:	Shenzhen Vanpowers Intelligent Technology Co., Ltd
Address	:	901A9, No. 6, Kangli City, No. 66, Pingji Avenue, Lilang Community, Nanwan Street, Longgang District, Shenzhen
Manufacturer	:	Shenzhen Vanpowers Intelligent Technology Co., Ltd
Address	:	901A9, No. 6, Kangli City, No. 66, Pingji Avenue, Lilang Community, Nanwan Street, Longgang District, Shenzhen
Factory	:	Guangdong Huazhuang Technology Co., Ltd.
Address	:	1 Taoyuan Road, Cunwei Village, Henglin Town, Dongguan City, Guangdong Province

2.2. Description of Equipment Under Test (EUT)

Product Name	:	Intelligent Terminal
Model No.	:	DA35D1C10F
Trade Mark	:	N/A
Test Power Supply	:	with DC 3.7V 1000mAh Battery inside
Test Sample No.	:	1-2-1(Engineering Sample)
Tx Frequency	:	BLE:2402MHz-2480MHz GSM850:824MHz-850MHz PCS1900:1850MHz-1910MHz LTE Bands 2:1850MHz-1910MHz LTE Bands 4:1710MHz-1755MHz LTE Bands 5:824MHz-749MHz LTE Bands 12:699MHz-716MHz LTE Bands 13:777MHz-787MHz LTE Bands 25:1850MHz-1915MHz LTE Bands 66:1710MHz-1780MHz
Type of Modulation	:	BLE:GFSK GSM850/PCS1900:8PSK LTE:QPSK, 16QAM
Category of device	:	Portable device
Remark: The above DUT's information was declared by manufacturer. Please refer to the specifications or		

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user's manual for more detailed description.

2.3. Device Category and SAR Limits

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.

2.4. Applied Standard

The Specific Absorption Rate (SAR) testing specification, method, and procedure for this device is in accordance with the following standards:

- FCC 47 CFR Part 2.1093
- IEEE Std C95.1-2019
- IEEE Std 1528™-2013
- KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz v01r04
- KDB 865664 D02 RF Exposure Reporting v01r02
- KDB 447498 D01 General RF Exposure Guidance v06
- KDB 248227 D01 802.11 Wi-Fi SAR v02r02

2.5. Environment of Test Site

Items	Required	Actual
Temperature (°C)	18-25	22~23
Humidity (%RH)	30-70	55~65

2.6. Test Configuration

For GSM,LTE SAR testing, connect EUT to communication tester and set to the highest power.

2.7. Description of Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

FCC-Registration No.:279531

Shenzhen Anbotek Compliance Laboratory Limited, EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration No. 279531

ISED-Registration No.: 8058A

Shenzhen Anbotek Compliance Laboratory Limited, EMC Laboratory has been registered and fully described in a report filed with the (ISED) Innovation, Science and Economic Development Canada. The acceptance letter from the ISED is maintained in our files. Registration 8058A.

Test Location

Shenzhen Anbotek Compliance Laboratory Limited.

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Sogood Industrial Zone Laboratory & 1/F. of Building D, Sogood Science and Technology Park, Sanwei Community, Hangcheng Subdistrict, Bao'an District, Shenzhen, Guangdong, China.

2.8. Disclaimer

1. The test report is invalid if not marked with the signatures of the persons responsible for preparing and approving the test report.
2. The test report is invalid if there is any evidence and/or falsification.
3. The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein.
4. This document may not be altered or revised in any way unless done so by Anbotek 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.
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The laboratory is only responsible for the data released by the laboratory, except for the part provided by the applicant.

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3. Specific Absorption Rate (SAR)

3.1. Introduction

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

3.2. SAR Definition

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

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

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

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

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

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

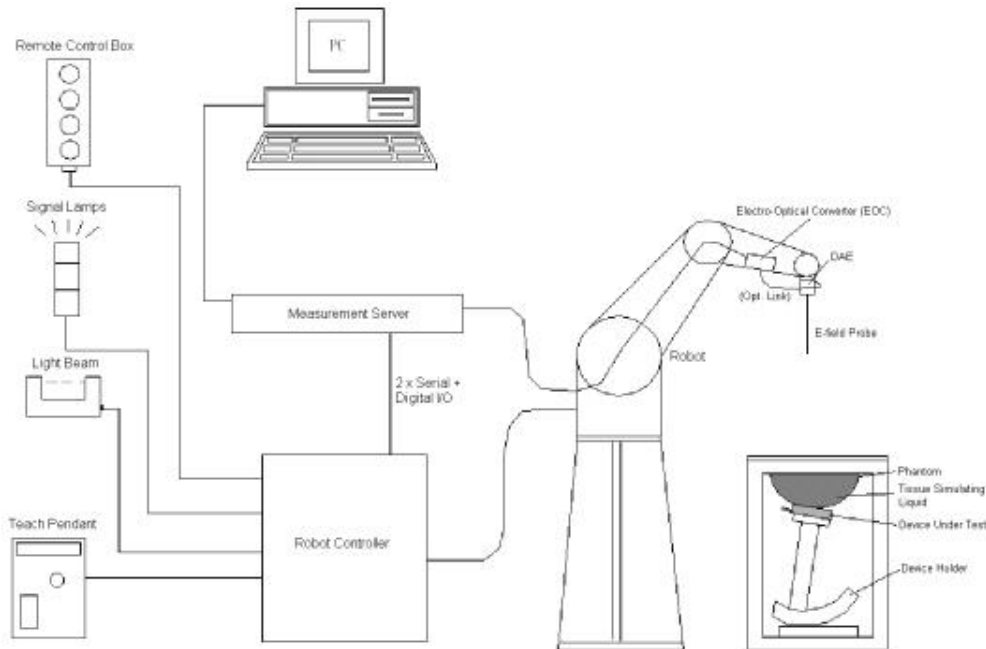
$$SAR = \frac{\sigma |E|^2}{\rho}$$

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

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

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4. SAR Measurement System



DASY System Configurations

The DASYS system for performance compliance tests is illustrated above graphically. This system consists of the following items:

- A standard high precision 6-axis robot with controller, a teach pendant and software
- A data acquisition electronic (DAE) attached to the robot arm extension
- A dosimetric probe equipped with an optical surface detector system
- The electro-optical converter (EOC) performs the conversion between optical and electrical signals
- A measurement server performs the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- A probe alignment unit which improves the accuracy of the probe positioning
- A computer operating Windows XP
- DASYS software
- Remote control with teach pendant and additional circuitry for robot safety such as warning lamps, etc.
- The SAM twin phantom and ELI4 Phantom
- A device holder
- Tissue simulating liquid
- Dipole for evaluating the proper functioning of the system

components are described in details in the following sub-sections.

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4.1. E-Field Probe

The SAR measurement is conducted with the dosimetric probe (manufactured by SPEAG). The probe is specially designed and calibrated for use in liquid with high permittivity. The dosimetric probe has special calibration in liquid at different frequency. This probe has a built in optical surface detection system to prevent from collision with phantom.

➤ E-Field Probe Specification

<EX3DV4 Probe>

Construction	Symmetrical design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)	
Frequency	10 MHz to 6 GHz; Linearity: ± 0.2 dB	
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 (noise: typically < 1 μ W/g)	
Dimensions	Overall length: 330 mm (Tip: 20 mm) Tip diameter: 2.5 mm (Body: 12 mm) Typical distance from probe tip to dipole centers: 1 mm	

Photo of EX3DV4

➤ E-Field Probe Calibration

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

4.2. Data Acquisition Electronics (DAE)

The data acquisition electronics (DAE) consists of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converter and a command decoder and control logic unit. Transmission to the measurement server is accomplished through an optical downlink for data and status information as well as an optical uplink for commands and the clock.

The input impedance of the DAE is 200M Ω ; the inputs are symmetrical and floating. Common mode rejection is above 80dB.

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**Photo of DAE**

4.3. Robot

The SPEAG DASY system uses the high precision robots (DASY5: TX60L) type from Stäubli SA (France). For the 6-axis controllersystem, the robot controller version (DASY5: CS8c) from Stäubli is used. The Stäublirobot series have many features that are important for our application:

- High precision (repeatability ± 0.035 mm)
- High reliability (industrial design)
- Jerk-free straight movements
- Low ELF interference (the closed metallic construction shields against motor control fields)

**Photo of DASY5**

4.4. Measurement Server

The measurement server is based on a PC/104 CPU board with CPU (DASY5: 400 MHz, Intel Celeron), chipdisk (DASY5: 128 MB), RAM (DASY5: 128 MB). The necessary circuits for communication with the DAE electronic box, as well as the 16 bit AD converter system for optical detection and digital I/O interface are contained on the DASY I/O board, which is directly connected to the PC/104 bus of the CPU board.

The measurement server performs all the real-time data evaluation for field measurements and surface detection, controls robot movements and handles safety operations.

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Photo of Server for DASYS5

4.5. Phantom

<SAM Twin Phantom>

Shell Thickness	2 ± 0.2 mm; Center ear point: 6 ± 0.2 mm
Filling Volume	Approx. 25 liters
Dimensions	Length: 1000 mm; Width: 500 mm; Height: adjustable feet
Measurement Areas	Left Hand, Right Hand, Flat Phantom



Photo of SAM Phantom

The bottom plate contains three pair of bolts for locking the device holder. The device holder positions are adjusted to the standard measurement positions in the three sections. A white cover is provided to tap the phantom during off-periods to prevent water evaporation and changes in the liquid parameters. On the phantom top, three reference markers are provided to identify the phantom position with respect to the robot.

<ELI4 Phantom>

Shell Thickness	2 ± 0.2 mm (sagging: <1%)
Filling Volume	Approx. 30 liters
Dimensions	Major ellipse axis: 600 mm Minor axis: 400 mm

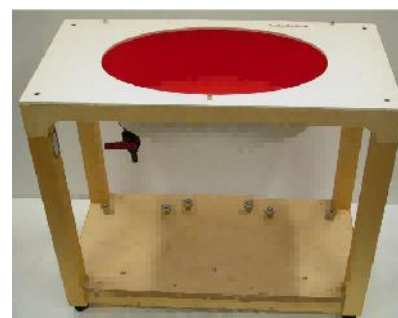


Photo of ELI4 Phantom

The ELI4 phantom is intended for compliance testing of handheld and body-mounted wireless devices in the frequency range of 30 MHz to 6 GHz. ELI4 is fully compatible with standard and

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all known tissue simulating liquids.

4.6. Device Holder

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

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

The DASY device holder is constructed of low-loss POM material having the following dielectric parameters: relative permittivity $\epsilon = 3$ and loss tangent $\delta = 0.02$. The amount of dielectric material has been reduced in the closest vicinity of the device, since measurements have suggested that the influence of the clamp on the test results could thus be lowered.



Device Holder

4.7. Data Storage and Evaluation

➤ Data Storage

The DASY software stores the assessed data from the data acquisition electronics as raw data (in microvolt readings from the probe sensors), together with all the necessary software parameters for the data evaluation (probe calibration data, liquid parameters and device frequency and modulation data) in measurement files. The post-processing 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 erroneous parameter settings. For example, if a measurement has been performed with an incorrect crest factor parameter in the device setup, the parameter can be corrected afterwards and the data can be reevaluated.

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

➤ Data Evaluation

The DASY post-processing software (SEMCAD) 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	Norm _i , a _{i0} , a _{i1} , a _{i2}
	- Conversion factor	ConvF _i
	- Diode compression point	dcp _i
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 DASY components. In the direct measuring mode of the multi-meter 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:

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

with V_i = compensated signal of channel i , ($i = x, y, z$)
 U_i = input signal of channel i , ($i = x, y, z$)
 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

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evaluated:

$$\text{E-field Probes: } E_i = \sqrt{\frac{V_i}{\text{Norm}_i \cdot \text{ConvF}}}$$

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

with V_i = compensated signal of channel i, (i= x, y, z)
 Norm_i = sensor sensitivity of channel i, (i= x, y, z), $\mu\text{V}/(\text{V}/\text{m})^2$ for E-field Probes
 ConvF = sensitivity enhancement in solution
 a_{ij} = sensor sensitivity factors for H-field probes
 f = carrier frequency [GHz]
 E_i = electric field strength of channel i in V/m
 H_i = magnetic field strength of channel i in A/m

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

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

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

$$\text{SAR} = E_{\text{tot}}^2 \cdot \frac{\sigma}{\rho \cdot 1000}$$

with SAR = local specific absorption rate in W/kg
 E_{tot} = total field strength in V/m
 σ = conductivity in [mho/m] or [Siemens/m]
 ρ = equivalent tissue density in g/cm^3

Note that the density is set to 1, to account for actual head tissue density rather than the density of the tissue simulating liquid.

5. Test Equipment List

Manufacturer	Name of Equipment	Type/Model	Serial Number	Calibration	
				Last Cal.	Due Date
SPEAG	750MHz System Validation Kit	D750V2	1118	Jun.04,2024	Jun.03,2027
SPEAG	835MHz System Validation Kit	D835V2	4d164	Jun.11,2024	Jun.10,2027
SPEAG	1750MHz System Validation Kit	D1750V2	1107	Jun.11,2024	Jun.10,2027
SPEAG	1900MHz System Validation Kit	D1900V2	5d089	Mar.28,2025	Mar.27,2028
Rohde & Schwarz	UNIVERSAL RADIO COMMUNICATION TESTER	CMW 500	104209	Oct.26, 2024	Oct.25, 2025
SPEAG	Data Acquisition Electronics	DAE4	387	Sep.02, 2024	Sep.01, 2025
SPEAG	Dosimetric E-Field Probe	EX3DV4	7396	May 06,2025	May 05,2026
Agilent	ENA Series Network Analyzer	MS46121A	1618412	Oct.26, 2024	Oct.25, 2025
SPEAG	DAK	DAK-3.5	1256	Oct.26, 2024	Oct.25, 2025
SPEAG	SAM Twin Phantom	QD000P40CD	1802	NCR	NCR
SPEAG	ELI Phantom	QDOVA004AA	2058	NCR	NCR
Mini-Circuits	Amplifier	ZVA-183W-S+	932502132	NCR	NCR
Agilent	Power Meter	N1914A	MY50001102	Oct.26, 2024	Oct.25, 2025
Agilent	Power Sensor	E9323A	US40410647	Jan. 23, 2025	Jan. 22, 2026
Agilent	Power Sensor	E9323A	MY53100007	Jan. 23, 2025	Jan. 22, 2026
CDKMV	Attenuator	6610	6610-1	Oct.20, 2024	Oct.19, 2025
CDKMV	Attenuator	6606	6606-1	Oct.20, 2024	Oct.19, 2025
Agilent	Spectrum Analyzer	N9020A	MY51170037	Oct.26, 2024	Oct.25, 2025
Agilent	Signal Generation	N5182A	MY48180656	Oct.26, 2024	Oct.25, 2025
Worken	Directional Coupler	0110A056010-10	COM5BNW1A2	Oct.26, 2024	Oct.25, 2025

Note:

1. The calibration certificate of DASY can be referred to appendix C of this report.
2. The dipole calibration interval can be extended to 3 years with justification. The dipoles are also not physically damaged, or repaired during the interval.
3. The Insertion Loss calibration of Dual Directional Coupler and Attenuator were characterized via the network analyzer and compensated during system check.
4. The dielectric probe kit was calibrated via the network analyzer, with the specified procedure (calibrated in pure water) and calibration kit (standard) short circuit, before the dielectric measurement. The specific procedure and calibration kit are provided by Agilent.
5. In system check we need to monitor the level on the power meter, and adjust the power amplifier level to have precise power level to the dipole; the measured SAR will be normalized to 1W input power according to the ratio of 1W to the input power to the dipole. For system check, the calibration of the power amplifier is deemed not critically required for correct measurement; the power meter is critical and we do have calibration for it.

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6. Tissue Simulating Liquids

For the measurement of the field distribution inside the SAM phantom with DASY, the phantom must be filled with around 25 liters of homogeneous body tissue simulating liquid. For head SAR testing, the liquid height from the ear reference point (ERP) of the phantom to the liquid top surface is larger than 15 cm, which is shown in Fig. 6.1. For body SAR testing, the liquid height from the center of the flat phantom to the liquid top surface is larger than 15 cm, which is shown as followed:

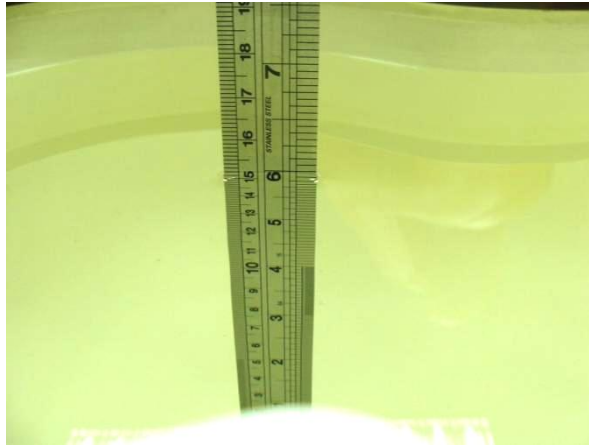


Photo of Liquid Height for Head SAR

The following table shows the measuring results for simulating liquid.

Measured Frequency (MHz)	Measured Tissue		Target Tissue		Dev. (%)		Liquid Temp.	Test Date
	Conductivity (σ)	Permittivity (ϵ_r)	Conductivity Target (σ)	Permittivity Target (ϵ_r)	Delta (σ) (%)	Delta (ϵ_r) (%)		
711	0.79	42.82	0.83	42.60	-4.82	0.52	22.3	2025-07-10
750	0.85	41.78	0.89	41.90	-4.49	-0.29	22.3	2025-07-10
782	0.88	41.75	0.89	41.70	-1.12	0.12	22.3	2025-07-10
824.2	0.91	41.68	0.90	41.60	1.11	0.19	22.4	2025-07-11
829	0.94	41.60	0.93	41.49	1.08	0.27	22.4	2025-07-11
835	0.95	41.56	0.95	41.48	0.00	0.19	22.4	2025-07-11
1732.5	1.31	39.81	1.33	39.60	-1.50	0.53	22.5	2025-07-12
1745	1.35	41.24	1.36	40.12	-0.74	2.79	22.5	2025-07-12

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1750	1.36	41.20	1.37	40.10	-0.73	2.74	22.5	2025-07-12
1850.2	1.42	40.06	1.38	40.04	2.90	0.05	22.2	2025-07-13
1881	1.43	39.95	1.39	40.02	2.88	-0.17	22.2	2025-07-13
1900	1.44	39.85	1.38	40.00	4.35	-0.37	22.2	2025-07-13

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7. System Verification Procedures

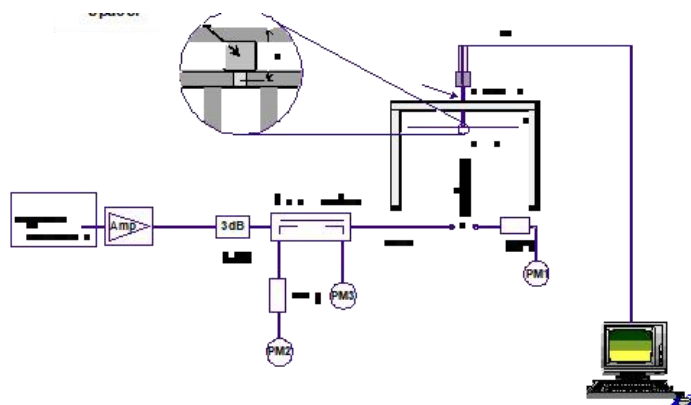
Each DASY system is equipped with one or more system validation kits. These units, together with the predefined measurement procedures within the DASY software, enable the user to conduct the system performance check and system validation. System validation kit includes a dipole, tripod holder to fix it underneath the flat phantom and a corresponding distance holder.

➤ Purpose of System Performance check

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

➤ System Setup

In the simplified setup for system evaluation, the EUT is replaced by a calibrated dipole and the power source is replaced by a continuous wave that comes from a signal generator. The calibrated dipole must be placed beneath the flat phantom section of the SAM twin phantom with the correct distance holder. The distance holder should touch the phantom surface with a light pressure at the reference marking and be oriented parallel to the long side of the phantom. The equipment setup is shown below:



System Setup for System Evaluation

Code:AB-RF-05-b



Photo of Dipole Setup

➤ **Validation Results**

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

Frequency (MHz)	Power fed onto reference dipole (mW)	Targeted SAR 1g(W/kg)	Measured SAR 1g(W/kg)	Normalized SAR 1g(W/kg)	Deviation (%)	Test Date
750	250	8.31	2.16	8.64	3.97	2025-07-10
835	250	9.24	2.45	9.80	6.06	2025-07-11
1750	250	36.9	9.11	36.44	-1.25	2025-07-12
1900	250	42.4	10.02	40.08	-5.47	2025-07-13

Target and Measurement SAR after Normalized

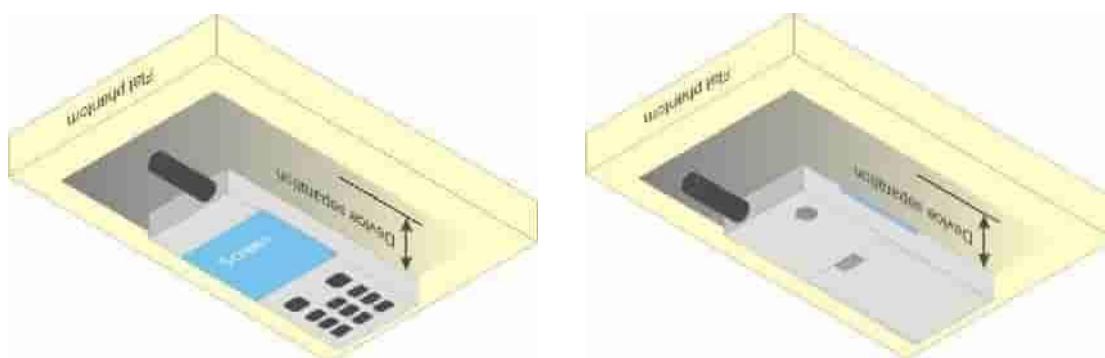
Code:AB-RF-05-b

8. EUT Testing Position

8.1. Body Position

Body-worn operating configurations are tested with the belt-clips and holsters attached to the device and positioned against a flat phantom in a normal use configuration. Per KDB 648474 D04, 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 FCC KDB 447498 D01 v06, 2015 should be 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 applicable. When the reported SAR for body-worn accessory, measured without a headset connected to the handset is $< 1.2 \text{ W/kg}$, the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body-worn accessory with a headset attached to the handset.

Accessories for body-worn operation configurations are divided into two categories: those that do not contain metallic components and those that do contain metallic components and those that do contain metallic components. When multiple accessories that do not contain metallic components are supplied with the device, the device is tested with only the accessory that dictates the closest spacing to the body. Then multiple accessories that contain metallic components are test with the device with each accessory. If multiple accessories share an identical metallic component (i.e. the same metallic belt-clip used with different holsters with no other metallic components) only the accessory that dictates the closest spacing to the body is tested.



Body Worn Position

Code:AB-RF-05-b

9. Measurement Procedures

The measurement procedures are as follows:

- (a) Use base station simulator (if applicable) or engineering software to transmit RF power continuously (continuous Tx) in the middle channel.
- (b) Keep EUT to radiate maximum output power or 100% duty factor (if applicable)
- (c) Measure output power through RF cable and power meter.
- (d) Place the EUT in the positions as setup photos demonstrates.
- (e) Set scan area, grid size and other setting on the DASY software.
- (f) Measure SAR transmitting at the middle channel for all applicable exposure positions.
- (g) Identify the exposure position and device configuration resulting the highest SAR
- (h) Measure SAR at the lowest and highest channels at the worst exposure position and device configuration if applicable.

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

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

9.1. Spatial Peak SAR Evaluation

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

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

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

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

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9.2. 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. The minimum distance of probe sensors to surface determines the closest measurement point to phantom surface. This distance cannot be smaller than the distance of sensor calibration points to probe tip as defined in the probe properties.

9.3. Area Scan Procedures

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 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 parameters extracted from FCC KDB 865664 D01 SAR measurement 100 MHz to 6 GHz.

	$\leq 3 \text{ GHz}$	$> 3 \text{ GHz}$
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface	$5 \pm 1 \text{ mm}$	$\frac{1}{2} \cdot \delta \cdot \ln(2) \pm 0.5 \text{ mm}$
Maximum probe angle from probe axis to phantom surface normal at the measurement location	$30^\circ \pm 1^\circ$	$20^\circ \pm 1^\circ$
Maximum area scan spatial resolution: $\Delta x_{\text{Area}}, \Delta y_{\text{Area}}$	$\leq 2 \text{ GHz: } \leq 15 \text{ mm}$ $2 - 3 \text{ GHz: } \leq 12 \text{ mm}$	$3 - 4 \text{ GHz: } \leq 12 \text{ mm}$ $4 - 6 \text{ GHz: } \leq 10 \text{ mm}$
	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.	

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9.4. Zoom Scan Procedures

Zoom scans are used to assess the peak spatial SAR values within a cubic averaging volume containing 1 gram and 10gram 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 gram and 10 gram and displays these values next to the job's label.

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

			≤ 3 GHz	> 3 GHz
Maximum zoom scan spatial resolution: $\Delta x_{\text{Zoom}}, \Delta y_{\text{Zoom}}$			≤ 2 GHz: ≤ 8 mm 2 – 3 GHz: ≤ 5 mm*	3 – 4 GHz: ≤ 5 mm* 4 – 6 GHz: ≤ 4 mm*
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{\text{Zoom}}(n)$		≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm
	graded grid	$\Delta z_{\text{Zoom}}(1)$: between 1 st two points closest to phantom surface	≤ 4 mm	3 – 4 GHz: ≤ 3 mm 4 – 5 GHz: ≤ 2.5 mm 5 – 6 GHz: ≤ 2 mm
		$\Delta z_{\text{Zoom}}(n>1)$: between subsequent points	$\leq 1.5 \cdot \Delta z_{\text{Zoom}}(n-1)$	
Minimum zoom scan volume	x, y, z		≥ 30 mm	3 – 4 GHz: ≥ 28 mm 4 – 5 GHz: ≥ 25 mm 5 – 6 GHz: ≥ 22 mm
Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details.				
* When zoom scan is required and the <u>reported</u> SAR from the <u>area scan based 1-g SAR estimation</u> procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.				

Code:AB-RF-05-b

9.5. Volume Scan Procedures

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

Code:AB-RF-05-b

10. Output Power

<GSM Conducted power>

Band GSM850	Burst Average Power (dBm)			Frame-Average Power (dBm)		
TX Channel	128	190	251	128	190	251
Frequency (MHz)	824.2	836.6	848.8	824.2	836.6	848.8
EGPRS (8PSK, 1 Tx slot) – CS1	28.55	27.97	28.32	19.15	18.51	18.97
EGPRS (8PSK, 2 Tx slots) – CS1	28.18	27.54	28.00	22.16	21.52	21.98
EGPRS (8PSK, 3 Tx slots) – CS1	26.27	25.66	26.04	22.01	21.40	21.78
EGPRS (8PSK, 4 Tx slots) – CS1	25.64	25.00	25.38	22.63	21.99	22.37
Band GSM1900	Burst Average Power (dBm)			Frame-Average Power (dBm)		
TX Channel	512	668	810	512	668	810
Frequency (MHz)	1850.2	1881.4	1909.8	1850.2	1881.4	1909.8
EGPRS (8PSK, 1 Tx slot) – CS1	26.08	25.87	25.12	17.05	16.84	16.09
EGPRS (8PSK, 2 Tx slots) – CS1	25.31	25.09	24.34	19.29	19.07	18.32
EGPRS (8PSK, 3 Tx slots) – CS1	24.02	23.80	23.05	19.76	19.54	18.79
EGPRS (8PSK, 4 Tx slots) – CS1	23.16	22.93	22.24	20.15	19.92	19.23
Frame-averaged power = Maximum burst averaged power (1 Tx Slot) – 9.03 dB						
Frame-averaged power = Maximum burst averaged power (2 Tx Slots) – 6.02 dB						
Frame-averaged power = Maximum burst averaged power (3 Tx Slots) - 4.26 dB						
Frame-averaged power = Maximum burst averaged power (4 Tx Slots) – 3.01 dB						

Note:

- For Body-worn SAR testing, the mode of highest source-based time-average power among GPRS and EDGE is selected to be tested; therefore GSM900 and GSM1800 band GPRS 4 Tx slots are selected.
- Start tests at middle channel and determine the worst configuration for further high/low channel tests.

<GSM Conducted Tune-Up Power>

Band GSM850	Frame-Average Power (dBm)			
TX Channel	128	190	251	Tune-Up Power(dBm)
Frequency (MHz)	824.2	836.6	848.8	
EGPRS (8PSK, 1 Tx slot) – CS1	19.15	18.51	18.97	19.50
EGPRS (8PSK, 2 Tx slots) – CS1	22.16	21.52	21.98	22.50
EGPRS (8PSK, 3 Tx slots) – CS1	22.01	21.40	21.78	22.50
EGPRS (8PSK, 4 Tx slots) – CS1	22.63	21.99	22.37	23.00
Band GSM1900	Frame-Average Power (dBm)			
TX Channel	512	668	810	Tune-Up

Code:AB-RF-05-b

Frequency (MHz)	1850.2	1881.4	1909.8	Power(dBm)
EGPRS (8PSK, 1 Tx slot) – CS1	17.05	16.84	16.09	17.50
EGPRS (8PSK, 2 Tx slots) – CS1	19.29	19.07	18.32	19.50
EGPRS (8PSK, 3 Tx slots) – CS1	19.76	19.54	18.79	20.00
EGPRS (8PSK, 4 Tx slots) – CS1	20.15	19.92	19.23	20.50

<LTE Conducted Power>

<Band 2>

Band	Channel Bandwidth	Modulation	Channel	RB Size	RB Start	Result (dBm)	Tune-Up
						QPSK	
Band2	1.4MHz	QPSK	18607	1	1	22.04	22.50
Band2	1.4MHz	QPSK	18607	0	0	22.09	22.50
Band2	1.4MHz	QPSK	18607	1	1	21.15	21.50
Band2	1.4MHz	16QAM	18607	5	5	21.93	22.00
Band2	1.4MHz	16QAM	18607	6	6	21.78	22.00
Band2	1.4MHz	16QAM	18607	0	0	20.88	21.00
Band2	1.4MHz	QPSK	18900	1	1	22.14	22.50
Band2	1.4MHz	QPSK	18900	0	0	22.19	22.50
Band2	1.4MHz	QPSK	18900	1	1	21.04	21.50
Band2	1.4MHz	16QAM	18900	5	5	22.07	22.50
Band2	1.4MHz	16QAM	18900	6	6	21.96	22.00
Band2	1.4MHz	16QAM	18900	0	0	20.73	21.00
Band2	1.4MHz	QPSK	19193	1	1	21.96	22.00
Band2	1.4MHz	QPSK	19193	0	0	21.90	22.00
Band2	1.4MHz	QPSK	19193	1	1	20.84	21.00
Band2	1.4MHz	16QAM	19193	5	5	21.55	22.00
Band2	1.4MHz	16QAM	19193	6	6	21.44	21.50
Band2	1.4MHz	16QAM	19193	0	0	20.84	21.00
Band2	3MHz	QPSK	18615	1	1	21.74	22.00
Band2	3MHz	QPSK	18615	0	0	21.67	22.00
Band2	3MHz	QPSK	18615	1	1	21.11	21.50
Band2	3MHz	16QAM	18615	5	5	21.29	21.50
Band2	3MHz	16QAM	18615	6	6	21.26	21.50
Band2	3MHz	16QAM	18615	0	0	21.10	21.50
Band2	3MHz	QPSK	18900	1	1	21.79	22.00
Band2	3MHz	QPSK	18900	0	0	21.79	22.00
Band2	3MHz	QPSK	18900	1	1	21.33	21.50
Band2	3MHz	16QAM	18900	5	5	21.38	21.50

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Band2	3MHz	16QAM	18900	6	6	21.35	21.50
Band2	3MHz	16QAM	18900	0	0	21.27	21.50
Band2	3MHz	QPSK	19185	1	1	21.73	22.00
Band2	3MHz	QPSK	19185	0	0	21.68	22.00
Band2	3MHz	QPSK	19185	1	1	20.94	21.00
Band2	3MHz	16QAM	19185	5	5	21.33	21.50
Band2	3MHz	16QAM	19185	6	6	21.17	21.50
Band2	3MHz	16QAM	19185	0	0	21.01	21.50
Band2	5MHz	QPSK	18625	1	1	21.84	22.00
Band2	5MHz	QPSK	18625	0	0	21.74	22.00
Band2	5MHz	QPSK	18625	1	1	21.15	21.50
Band2	5MHz	16QAM	18625	5	5	21.42	21.50
Band2	5MHz	16QAM	18625	6	6	21.28	21.50
Band2	5MHz	16QAM	18625	0	0	21.15	21.50
Band2	5MHz	QPSK	18900	1	1	21.92	22.00
Band2	5MHz	QPSK	18900	0	0	21.90	22.00
Band2	5MHz	QPSK	18900	1	1	21.22	21.50
Band2	5MHz	16QAM	18900	5	5	21.63	22.00
Band2	5MHz	16QAM	18900	6	6	21.33	21.50
Band2	5MHz	16QAM	18900	0	0	21.22	21.50
Band2	5MHz	QPSK	19175	1	1	21.75	22.00
Band2	5MHz	QPSK	19175	0	0	21.48	21.50
Band2	5MHz	QPSK	19175	1	1	20.89	21.00
Band2	5MHz	16QAM	19175	5	5	21.41	21.50
Band2	5MHz	16QAM	19175	6	6	21.32	21.50
Band2	5MHz	16QAM	19175	0	0	20.88	21.00
Band2	10MHz	QPSK	18650	1	1	21.76	22.00
Band2	10MHz	QPSK	18650	0	0	21.67	22.00
Band2	10MHz	QPSK	18650	1	1	21.47	21.50
Band2	10MHz	16QAM	18650	5	5	21.36	21.50
Band2	10MHz	16QAM	18650	6	6	21.27	21.50
Band2	10MHz	16QAM	18650	0	0	21.57	22.00
Band2	10MHz	QPSK	18900	1	1	21.95	22.00
Band2	10MHz	QPSK	18900	0	0	21.81	22.00
Band2	10MHz	QPSK	18900	1	1	21.61	22.00
Band2	10MHz	16QAM	18900	5	5	21.61	22.00
Band2	10MHz	16QAM	18900	6	6	21.34	21.50
Band2	10MHz	16QAM	18900	0	0	21.71	22.00
Band2	10MHz	QPSK	19150	1	1	21.76	22.00

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Band2	10MHz	QPSK	19150	0	0	21.49	21.50
Band2	10MHz	QPSK	19150	1	1	21.33	21.50
Band2	10MHz	16QAM	19150	5	5	21.42	21.50
Band2	10MHz	16QAM	19150	6	6	21.29	21.50
Band2	10MHz	16QAM	19150	0	0	21.49	21.50
Band2	15MHz	QPSK	18675	1	1	21.87	22.00
Band2	15MHz	QPSK	18675	0	0	21.78	22.00
Band2	15MHz	QPSK	18675	1	1	21.53	22.00
Band2	15MHz	16QAM	18675	5	5	21.46	21.50
Band2	15MHz	16QAM	18675	6	6	21.26	21.50
Band2	15MHz	16QAM	18675	0	0	21.63	22.00
Band2	15MHz	QPSK	18900	1	1	21.96	22.00
Band2	15MHz	QPSK	18900	0	0	21.85	22.00
Band2	15MHz	QPSK	18900	1	1	21.58	22.00
Band2	15MHz	16QAM	18900	5	5	21.50	21.50
Band2	15MHz	16QAM	18900	6	6	21.23	21.50
Band2	15MHz	16QAM	18900	0	0	21.69	22.00
Band2	15MHz	QPSK	19125	1	1	21.76	22.00
Band2	15MHz	QPSK	19125	0	0	21.71	22.00
Band2	15MHz	QPSK	19125	1	1	21.40	21.50
Band2	15MHz	16QAM	19125	5	5	21.47	21.50
Band2	15MHz	16QAM	19125	6	6	21.23	21.50
Band2	15MHz	16QAM	19125	0	0	21.56	22.00
Band2	20MHz	QPSK	18700	1	1	21.91	22.00
Band2	20MHz	QPSK	18700	0	0	21.83	22.00
Band2	20MHz	QPSK	18700	1	1	21.64	22.00
Band2	20MHz	16QAM	18700	5	5	21.55	22.00
Band2	20MHz	16QAM	18700	6	6	21.31	21.50
Band2	20MHz	16QAM	18700	0	0	21.69	22.00
Band2	20MHz	QPSK	18900	1	1	22.01	22.50
Band2	20MHz	QPSK	18900	0	0	22.00	22.00
Band2	20MHz	QPSK	18900	1	1	21.75	22.00
Band2	20MHz	16QAM	18900	5	5	21.59	22.00
Band2	20MHz	16QAM	18900	6	6	21.43	21.50
Band2	20MHz	16QAM	18900	0	0	21.75	22.00
Band2	20MHz	QPSK	19100	1	1	22.07	22.50
Band2	20MHz	QPSK	19100	0	0	21.72	22.00
Band2	20MHz	QPSK	19100	1	1	21.72	22.00
Band2	20MHz	16QAM	19100	5	5	21.68	22.00

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Band2	20MHz	16QAM	19100	6	6	21.47	21.50
Band2	20MHz	16QAM	19100	0	0	21.72	22.00

<Band 4>

Band	Channel Bandwidth	Modulation	Channel	RB Size	RB Start	Result (dBm)	Tune-Up
						QPSK	
Band4	1.4MHz	QPSK	19957	1	0	22.53	23.00
Band4	1.4MHz	QPSK	19957	1	5	22.06	22.50
Band4	1.4MHz	QPSK	19957	6	0	20.02	20.50
Band4	1.4MHz	16QAM	19957	1	0	21.46	21.50
Band4	1.4MHz	16QAM	19957	1	5	21.09	21.50
Band4	1.4MHz	16QAM	19957	6	0	20.02	20.50
Band4	1.4MHz	QPSK	20175	1	0	22.45	22.50
Band4	1.4MHz	QPSK	20175	1	5	22.19	22.50
Band4	1.4MHz	QPSK	20175	6	0	19.90	20.00
Band4	1.4MHz	16QAM	20175	1	0	20.97	21.00
Band4	1.4MHz	16QAM	20175	1	5	20.82	21.00
Band4	1.4MHz	16QAM	20175	6	0	20.10	20.50
Band4	1.4MHz	QPSK	20393	1	0	22.13	22.50
Band4	1.4MHz	QPSK	20393	1	5	21.94	22.00
Band4	1.4MHz	QPSK	20393	6	0	19.72	20.00
Band4	1.4MHz	16QAM	20393	1	0	20.72	21.00
Band4	1.4MHz	16QAM	20393	1	5	20.45	20.50
Band4	1.4MHz	16QAM	20393	6	0	19.80	20.00
Band4	3MHz	QPSK	19965	1	0	22.22	22.50
Band4	3MHz	QPSK	19965	1	5	22.11	22.50
Band4	3MHz	QPSK	19965	6	0	19.91	20.00
Band4	3MHz	16QAM	19965	1	0	20.85	21.00
Band4	3MHz	16QAM	19965	1	5	20.66	21.00
Band4	3MHz	16QAM	19965	6	0	20.10	20.50
Band4	3MHz	QPSK	20175	1	0	22.45	22.50
Band4	3MHz	QPSK	20175	1	5	22.22	22.50
Band4	3MHz	QPSK	20175	6	0	19.97	20.00
Band4	3MHz	16QAM	20175	1	0	21.06	21.50
Band4	3MHz	16QAM	20175	1	5	20.93	21.00
Band4	3MHz	16QAM	20175	6	0	20.14	20.50
Band4	3MHz	QPSK	20385	1	0	22.11	22.50

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Band4	3MHz	QPSK	20385	1	5	22.02	22.50
Band4	3MHz	QPSK	20385	6	0	19.76	20.00
Band4	3MHz	16QAM	20385	1	0	20.90	21.00
Band4	3MHz	16QAM	20385	1	5	20.48	20.50
Band4	3MHz	16QAM	20385	6	0	19.84	20.00
Band4	5MHz	QPSK	19975	1	0	22.22	22.50
Band4	5MHz	QPSK	19975	1	5	21.96	22.00
Band4	5MHz	QPSK	19975	6	0	20.99	21.00
Band4	5MHz	16QAM	19975	1	0	21.74	22.00
Band4	5MHz	16QAM	19975	1	5	21.63	22.00
Band4	5MHz	16QAM	19975	6	0	20.98	21.00
Band4	5MHz	QPSK	20175	1	0	22.24	22.50
Band4	5MHz	QPSK	20175	1	5	22.18	22.50
Band4	5MHz	QPSK	20175	6	0	21.15	21.50
Band4	5MHz	16QAM	20175	1	0	21.82	22.00
Band4	5MHz	16QAM	20175	1	5	21.67	22.00
Band4	5MHz	16QAM	20175	6	0	21.14	21.50
Band4	5MHz	QPSK	20375	1	0	22.11	22.50
Band4	5MHz	QPSK	20375	1	5	21.87	22.00
Band4	5MHz	QPSK	20375	6	0	20.90	21.00
Band4	5MHz	16QAM	20375	1	0	21.68	22.00
Band4	5MHz	16QAM	20375	1	5	21.57	22.00
Band4	5MHz	16QAM	20375	6	0	20.81	21.00
Band4	10MHz	QPSK	20000	1	0	21.99	22.00
Band4	10MHz	QPSK	20000	1	5	21.86	22.00
Band4	10MHz	QPSK	20000	6	0	20.84	21.00
Band4	10MHz	16QAM	20000	1	0	21.75	22.00
Band4	10MHz	16QAM	20000	1	5	21.60	22.00
Band4	10MHz	16QAM	20000	6	0	20.84	21.00
Band4	10MHz	QPSK	20175	1	0	22.15	22.50
Band4	10MHz	QPSK	20175	1	5	22.08	22.50
Band4	10MHz	QPSK	20175	6	0	20.95	21.00
Band4	10MHz	16QAM	20175	1	0	21.73	22.00
Band4	10MHz	16QAM	20175	1	5	21.65	22.00
Band4	10MHz	16QAM	20175	6	0	20.95	21.00
Band4	10MHz	QPSK	20350	1	0	22.10	22.50
Band4	10MHz	QPSK	20350	1	5	21.90	22.00

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Band4	10MHz	QPSK	20350	6	0	20.77	21.00
Band4	10MHz	16QAM	20350	1	0	21.67	22.00
Band4	10MHz	16QAM	20350	1	5	21.49	21.50
Band4	10MHz	16QAM	20350	6	0	20.76	21.00
Band4	15MHz	QPSK	20025	1	0	22.06	22.50
Band4	15MHz	QPSK	20025	1	5	21.86	22.00
Band4	15MHz	QPSK	20025	6	0	21.78	22.00
Band4	15MHz	16QAM	20025	1	0	21.74	22.00
Band4	15MHz	16QAM	20025	1	5	21.51	22.00
Band4	15MHz	16QAM	20025	6	0	22.02	22.50
Band4	15MHz	QPSK	20175	1	0	22.12	22.50
Band4	15MHz	QPSK	20175	1	5	22.07	22.50
Band4	15MHz	QPSK	20175	6	0	21.99	22.00
Band4	15MHz	16QAM	20175	1	0	21.73	22.00
Band4	15MHz	16QAM	20175	1	5	21.59	22.00
Band4	15MHz	16QAM	20175	6	0	22.02	22.50
Band4	15MHz	QPSK	20325	1	0	22.03	22.50
Band4	15MHz	QPSK	20325	1	5	21.86	22.00
Band4	15MHz	QPSK	20325	6	0	21.74	22.00
Band4	15MHz	16QAM	20325	1	0	21.61	22.00
Band4	15MHz	16QAM	20325	1	5	21.56	22.00
Band4	15MHz	16QAM	20325	6	0	21.83	22.00
Band4	20MHz	QPSK	20050	1	0	21.97	22.00
Band4	20MHz	QPSK	20050	1	5	21.76	22.00
Band4	20MHz	QPSK	20050	6	0	21.68	22.00
Band4	20MHz	16QAM	20050	1	0	21.66	22.00
Band4	20MHz	16QAM	20050	1	5	21.52	22.00
Band4	20MHz	16QAM	20050	6	0	21.94	22.00
Band4	20MHz	QPSK	20175	1	0	22.03	22.50
Band4	20MHz	QPSK	20175	1	5	22.13	22.50
Band4	20MHz	QPSK	20175	6	0	21.86	22.00
Band4	20MHz	16QAM	20175	1	0	21.66	22.00
Band4	20MHz	16QAM	20175	1	5	21.70	22.00
Band4	20MHz	16QAM	20175	6	0	21.91	22.00
Band4	20MHz	QPSK	20300	1	0	22.06	22.50
Band4	20MHz	QPSK	20300	1	5	21.97	22.00
Band4	20MHz	QPSK	20300	6	0	21.89	22.00

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Band4	20MHz	16QAM	20300	1	0	21.69	22.00
Band4	20MHz	16QAM	20300	1	5	21.52	22.00
Band4	20MHz	16QAM	20300	6	0	21.88	22.00

<Band 5>

Band	Channel Bandwidth	Modulation	Channel	RB Size	RB Start	Result (dBm)	Tune-Up
						QPSK	
Band5	1.4MHz	QPSK	20407	1	0	23.37	23.50
Band5	1.4MHz	QPSK	20407	1	5	23.06	23.50
Band5	1.4MHz	QPSK	20407	6	0	21.10	21.50
Band5	1.4MHz	16QAM	20407	1	0	22.28	22.50
Band5	1.4MHz	16QAM	20407	1	5	21.85	22.00
Band5	1.4MHz	16QAM	20407	6	0	21.23	21.50
Band5	1.4MHz	QPSK	20525	1	0	23.49	23.50
Band5	1.4MHz	QPSK	20525	1	5	23.32	23.50
Band5	1.4MHz	QPSK	20525	6	0	21.16	21.50
Band5	1.4MHz	16QAM	20525	1	0	22.11	22.50
Band5	1.4MHz	16QAM	20525	1	5	21.89	22.00
Band5	1.4MHz	16QAM	20525	6	0	21.25	21.50
Band5	1.4MHz	QPSK	20643	1	5	23.55	24.00
Band5	1.4MHz	QPSK	20643	6	0	21.59	22.00
Band5	1.4MHz	16QAM	20643	1	0	22.85	23.00
Band5	1.4MHz	16QAM	20643	1	5	22.66	23.00
Band5	1.4MHz	16QAM	20643	6	0	21.51	22.00
Band5	3MHz	QPSK	20415	1	0	23.66	24.00
Band5	3MHz	QPSK	20415	1	5	23.41	23.50
Band5	3MHz	QPSK	20415	6	0	21.21	21.50
Band5	3MHz	16QAM	20415	1	0	22.16	22.50
Band5	3MHz	16QAM	20415	1	5	21.99	22.00
Band5	3MHz	16QAM	20415	6	0	21.35	21.50
Band5	3MHz	QPSK	20525	1	0	23.48	23.50
Band5	3MHz	QPSK	20525	1	5	23.32	23.50
Band5	3MHz	QPSK	20525	6	0	21.13	21.50
Band5	3MHz	16QAM	20525	1	0	22.09	22.50
Band5	3MHz	16QAM	20525	1	5	21.86	22.00
Band5	3MHz	16QAM	20525	6	0	21.23	21.50
Band5	3MHz	QPSK	20635	1	0	23.81	24.00

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Band5	3MHz	QPSK	20635	1	5	23.73	24.00
Band5	3MHz	QPSK	20635	6	0	21.37	21.50
Band5	3MHz	16QAM	20635	1	0	22.61	23.00
Band5	3MHz	16QAM	20635	1	5	22.21	22.50
Band5	3MHz	16QAM	20635	6	0	21.58	22.00
Band5	5MHz	QPSK	20425	1	0	23.66	24.00
Band5	5MHz	QPSK	20425	1	5	23.40	23.50
Band5	5MHz	QPSK	20425	6	0	22.51	23.00
Band5	5MHz	16QAM	20425	1	0	23.12	23.50
Band5	5MHz	16QAM	20425	1	5	22.91	23.00
Band5	5MHz	16QAM	20425	6	0	22.50	22.50
Band5	5MHz	QPSK	20525	1	0	23.52	24.00
Band5	5MHz	QPSK	20525	1	5	23.34	23.50
Band5	5MHz	QPSK	20525	6	0	22.45	22.50
Band5	5MHz	16QAM	20525	1	0	23.01	23.50
Band5	5MHz	16QAM	20525	1	5	22.84	23.00
Band5	5MHz	16QAM	20525	6	0	22.44	22.50
Band5	5MHz	QPSK	20625	1	5	23.77	24.00
Band5	5MHz	QPSK	20625	6	0	22.87	23.00
Band5	5MHz	16QAM	20625	1	0	23.51	24.00
Band5	5MHz	16QAM	20625	1	5	23.08	23.50
Band5	5MHz	16QAM	20625	6	0	22.75	23.00
Band5	10MHz	QPSK	20450	1	0	23.51	24.00
Band5	10MHz	QPSK	20450	1	5	23.34	23.50
Band5	10MHz	QPSK	20450	6	0	22.21	22.50
Band5	10MHz	16QAM	20450	1	0	22.94	23.00
Band5	10MHz	16QAM	20450	1	5	22.84	23.00
Band5	10MHz	16QAM	20450	6	0	22.31	22.50
Band5	10MHz	QPSK	20525	1	0	23.45	23.50
Band5	10MHz	QPSK	20525	1	5	23.29	23.50
Band5	10MHz	QPSK	20525	6	0	22.06	22.50
Band5	10MHz	16QAM	20525	1	0	22.93	23.00
Band5	10MHz	16QAM	20525	1	5	22.80	23.00
Band5	10MHz	16QAM	20525	6	0	22.32	22.50
Band5	10MHz	QPSK	20600	1	5	23.70	24.00
Band5	10MHz	QPSK	20600	6	0	22.87	23.00
Band5	10MHz	16QAM	20600	1	5	23.05	23.50

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Band5	10MHz	16QAM	20600	6	0	22.74	23.00
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<Band 12>

Band	Channel Bandwidth	Modulation	Channel	RB Size	RB Start	Result (dBm)	Tune-Up
						QPSK	
Band12	1.4MHz	QPSK	23017	1	5	22.90	23.00
Band12	1.4MHz	QPSK	23017	6	0	21.29	21.50
Band12	1.4MHz	16QAM	23017	1	0	22.35	22.50
Band12	1.4MHz	16QAM	23017	1	5	22.32	22.50
Band12	1.4MHz	16QAM	23017	6	0	21.08	21.50
Band12	1.4MHz	QPSK	23095	1	5	23.04	23.50
Band12	1.4MHz	QPSK	23095	6	0	21.50	21.50
Band12	1.4MHz	16QAM	23095	1	0	22.31	22.50
Band12	1.4MHz	16QAM	23095	1	5	22.20	22.50
Band12	1.4MHz	16QAM	23095	6	0	21.36	21.50
Band12	1.4MHz	QPSK	23173	1	0	23.04	23.50
Band12	1.4MHz	QPSK	23173	1	5	22.90	23.00
Band12	1.4MHz	QPSK	23173	6	0	21.41	21.50
Band12	1.4MHz	16QAM	23173	1	0	22.04	22.50
Band12	1.4MHz	16QAM	23173	1	5	21.98	22.00
Band12	1.4MHz	16QAM	23173	6	0	21.34	21.50
Band12	3MHz	QPSK	23025	1	5	22.88	23.00
Band12	3MHz	QPSK	23025	6	0	21.33	21.50
Band12	3MHz	16QAM	23025	1	0	21.95	22.00
Band12	3MHz	16QAM	23025	1	5	21.88	22.00
Band12	3MHz	16QAM	23025	6	0	21.19	21.50
Band12	3MHz	QPSK	23095	6	0	21.50	21.50
Band12	3MHz	16QAM	23095	1	0	22.05	22.50
Band12	3MHz	16QAM	23095	1	5	21.97	22.00
Band12	3MHz	16QAM	23095	6	0	21.30	21.50
Band12	3MHz	QPSK	23165	1	0	23.17	23.50
Band12	3MHz	QPSK	23165	1	5	23.03	23.50
Band12	3MHz	QPSK	23165	6	0	21.46	21.50
Band12	3MHz	16QAM	23165	1	0	22.20	22.50
Band12	3MHz	16QAM	23165	1	5	21.97	22.00
Band12	3MHz	16QAM	23165	6	0	21.29	21.50
Band12	5MHz	QPSK	23035	1	5	23.03	23.50

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Band12	5MHz	QPSK	23035	6	0	22.27	22.50
Band12	5MHz	16QAM	23035	1	5	22.54	23.00
Band12	5MHz	16QAM	23035	6	0	22.12	22.50
Band12	5MHz	QPSK	23095	1	5	23.00	23.00
Band12	5MHz	QPSK	23095	6	0	22.29	22.50
Band12	5MHz	16QAM	23095	1	0	22.58	23.00
Band12	5MHz	16QAM	23095	1	5	22.57	23.00
Band12	5MHz	16QAM	23095	6	0	22.12	22.50
Band12	5MHz	QPSK	23155	1	5	23.03	23.50
Band12	5MHz	QPSK	23155	6	0	22.40	22.50
Band12	5MHz	16QAM	23155	1	0	22.61	23.00
Band12	5MHz	16QAM	23155	1	5	22.61	23.00
Band12	5MHz	16QAM	23155	6	0	22.20	22.50
Band12	10MHz	QPSK	23060	1	5	23.02	23.50
Band12	10MHz	QPSK	23060	6	0	22.23	22.50
Band12	10MHz	16QAM	23060	1	5	22.58	23.00
Band12	10MHz	16QAM	23060	6	0	22.10	22.50
Band12	10MHz	QPSK	23095	1	5	22.96	23.00
Band12	10MHz	QPSK	23095	6	0	22.29	22.50
Band12	10MHz	16QAM	23095	1	0	22.55	23.00
Band12	10MHz	16QAM	23095	1	5	22.60	23.00
Band12	10MHz	16QAM	23095	6	0	22.14	22.50
Band12	10MHz	QPSK	23130	1	0	23.23	23.50
Band12	10MHz	QPSK	23130	1	5	23.06	23.50
Band12	10MHz	QPSK	23130	6	0	22.40	22.50
Band12	10MHz	16QAM	23130	1	0	22.64	23.00
Band12	10MHz	16QAM	23130	1	5	22.58	23.00
Band12	10MHz	16QAM	23130	6	0	22.20	22.50

<Band 13>

Band	Channel Bandwidth	Modulation	Channel	RB Size	RB Start	Result (dBm)	Tune-Up
						QPSK	
Band13	5MHz	QPSK	23205	1	0	22.88	23.00
Band13	5MHz	QPSK	23205	1	5	22.68	23.00
Band13	5MHz	QPSK	23205	6	0	21.58	22.00
Band13	5MHz	16QAM	23205	1	0	22.38	22.50
Band13	5MHz	16QAM	23205	1	5	22.31	22.50

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Band13	5MHz	16QAM	23205	6	0	21.73	22.00
Band13	5MHz	QPSK	23230	1	0	22.92	23.00
Band13	5MHz	QPSK	23230	1	5	22.73	23.00
Band13	5MHz	QPSK	23230	6	0	21.71	22.00
Band13	5MHz	16QAM	23230	1	0	22.38	22.50
Band13	5MHz	16QAM	23230	1	5	22.35	22.50
Band13	5MHz	16QAM	23230	6	0	21.77	22.00
Band13	5MHz	QPSK	23255	1	0	22.66	23.00
Band13	5MHz	QPSK	23255	1	5	22.54	23.00
Band13	5MHz	QPSK	23255	6	0	21.49	21.50
Band13	5MHz	16QAM	23255	1	0	22.21	22.50
Band13	5MHz	16QAM	23255	1	5	22.13	22.50
Band13	5MHz	16QAM	23255	6	0	21.63	22.00
Band13	10MHz	QPSK	23230	1	0	22.88	23.00
Band13	10MHz	QPSK	23230	1	5	22.68	23.00
Band13	10MHz	QPSK	23230	6	0	21.65	22.00
Band13	10MHz	16QAM	23230	1	0	22.44	22.50
Band13	10MHz	16QAM	23230	1	5	22.30	22.50
Band13	10MHz	16QAM	23230	6	0	21.73	22.00

<Band 25>

Band	Channel Bandwidth	Modulation	Channel	RB Size	RB Start	Result (dBm)	Tune-Up
						QPSK	
Band25	1.4MHz	QPSK	26047	1	0	22.18	22.50
Band25	1.4MHz	QPSK	26047	1	5	22.33	22.50
Band25	1.4MHz	QPSK	26047	6	0	21.48	21.50
Band25	1.4MHz	16QAM	26047	1	0	22.02	22.50
Band25	1.4MHz	16QAM	26047	1	5	22.06	22.50
Band25	1.4MHz	16QAM	26047	6	0	21.01	21.50
Band25	1.4MHz	QPSK	26365	1	0	22.17	22.50
Band25	1.4MHz	QPSK	26365	1	5	22.20	22.50
Band25	1.4MHz	QPSK	26365	6	0	21.20	21.50
Band25	1.4MHz	16QAM	26365	1	0	21.91	22.00
Band25	1.4MHz	16QAM	26365	1	5	21.85	22.00
Band25	1.4MHz	16QAM	26365	6	0	21.13	21.50
Band25	1.4MHz	QPSK	26683	1	0	21.90	22.00

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Band25	1.4MHz	QPSK	26683	1	5	21.90	22.00
Band25	1.4MHz	QPSK	26683	6	0	20.61	21.00
Band25	1.4MHz	16QAM	26683	1	0	21.52	22.00
Band25	1.4MHz	16QAM	26683	1	5	21.44	21.50
Band25	1.4MHz	16QAM	26683	6	0	20.61	21.00
Band25	3MHz	QPSK	26055	1	0	22.25	22.50
Band25	3MHz	QPSK	26055	1	5	22.29	22.50
Band25	3MHz	QPSK	26055	6	0	21.83	22.00
Band25	3MHz	16QAM	26055	1	0	21.76	22.00
Band25	3MHz	16QAM	26055	1	5	21.64	22.00
Band25	3MHz	16QAM	26055	6	0	21.79	22.00
Band25	3MHz	QPSK	26365	1	0	22.21	22.50
Band25	3MHz	QPSK	26365	1	5	22.29	22.50
Band25	3MHz	QPSK	26365	6	0	21.77	22.00
Band25	3MHz	16QAM	26365	1	0	21.76	22.00
Band25	3MHz	16QAM	26365	1	5	21.78	22.00
Band25	3MHz	16QAM	26365	6	0	21.72	22.00
Band25	3MHz	QPSK	26675	1	0	22.03	22.50
Band25	3MHz	QPSK	26675	1	5	22.04	22.50
Band25	3MHz	QPSK	26675	6	0	21.25	21.50
Band25	3MHz	16QAM	26675	1	0	21.64	22.00
Band25	3MHz	16QAM	26675	1	5	21.53	22.00
Band25	3MHz	16QAM	26675	6	0	21.26	21.50
Band25	5MHz	QPSK	26065	1	0	22.32	22.50
Band25	5MHz	QPSK	26065	1	5	22.31	22.50
Band25	5MHz	QPSK	26065	6	0	21.75	22.00
Band25	5MHz	16QAM	26065	1	0	21.88	22.00
Band25	5MHz	16QAM	26065	1	5	21.86	22.00
Band25	5MHz	16QAM	26065	6	0	21.69	22.00
Band25	5MHz	QPSK	26365	1	0	22.33	22.50
Band25	5MHz	QPSK	26365	1	5	22.32	22.50
Band25	5MHz	QPSK	26365	6	0	21.80	22.00
Band25	5MHz	16QAM	26365	1	0	21.91	22.00
Band25	5MHz	16QAM	26365	1	5	21.90	22.00
Band25	5MHz	16QAM	26365	6	0	21.74	22.00
Band25	5MHz	QPSK	26665	1	0	22.04	22.50
Band25	5MHz	QPSK	26665	1	5	21.76	22.00

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Band25	5MHz	QPSK	26665	6	0	21.17	21.50
Band25	5MHz	16QAM	26665	1	0	21.69	22.00
Band25	5MHz	16QAM	26665	1	5	21.56	22.00
Band25	5MHz	16QAM	26665	6	0	21.24	21.50
Band25	10MHz	QPSK	26090	1	0	22.35	22.50
Band25	10MHz	QPSK	26090	1	5	22.28	22.50
Band25	10MHz	QPSK	26090	6	0	22.08	22.50
Band25	10MHz	16QAM	26090	1	0	21.90	22.00
Band25	10MHz	16QAM	26090	1	5	21.76	22.00
Band25	10MHz	16QAM	26090	6	0	22.10	22.50
Band25	10MHz	QPSK	26365	1	0	22.38	22.50
Band25	10MHz	QPSK	26365	1	5	22.28	22.50
Band25	10MHz	QPSK	26365	6	0	22.03	22.50
Band25	10MHz	16QAM	26365	1	0	21.97	22.00
Band25	10MHz	16QAM	26365	1	5	21.83	22.00
Band25	10MHz	16QAM	26365	6	0	22.14	22.50
Band25	10MHz	QPSK	26640	1	0	22.08	22.50
Band25	10MHz	QPSK	26640	1	5	21.93	22.00
Band25	10MHz	QPSK	26640	6	0	21.54	22.00
Band25	10MHz	16QAM	26640	1	0	21.57	22.00
Band25	10MHz	16QAM	26640	1	5	21.32	21.50
Band25	10MHz	16QAM	26640	6	0	21.76	22.00
Band25	15MHz	QPSK	26115	1	0	22.38	22.50
Band25	15MHz	QPSK	26115	1	5	22.30	22.50
Band25	15MHz	QPSK	26115	6	0	22.06	22.50
Band25	15MHz	16QAM	26115	1	0	21.93	22.00
Band25	15MHz	16QAM	26115	1	5	21.80	22.00
Band25	15MHz	16QAM	26115	6	0	22.13	22.50
Band25	15MHz	QPSK	26365	1	0	22.40	22.50
Band25	15MHz	QPSK	26365	1	5	22.31	22.50
Band25	15MHz	QPSK	26365	6	0	22.04	22.50
Band25	15MHz	16QAM	26365	1	0	21.99	22.00
Band25	15MHz	16QAM	26365	1	5	21.87	22.00
Band25	15MHz	16QAM	26365	6	0	22.15	22.50
Band25	15MHz	QPSK	26615	1	0	21.97	22.00
Band25	15MHz	QPSK	26615	1	5	21.74	22.00
Band25	15MHz	QPSK	26615	6	0	21.60	22.00

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Band25	15MHz	16QAM	26615	1	0	21.66	22.00
Band25	15MHz	16QAM	26615	1	5	21.45	21.50
Band25	15MHz	16QAM	26615	6	0	21.76	22.00
Band25	20MHz	QPSK	26140	1	0	22.32	22.50
Band25	20MHz	QPSK	26140	1	5	22.26	22.50
Band25	20MHz	QPSK	26140	6	0	22.08	22.50
Band25	20MHz	16QAM	26140	1	0	21.88	22.00
Band25	20MHz	16QAM	26140	1	5	21.79	22.00
Band25	20MHz	16QAM	26140	6	0	22.13	22.50
Band25	20MHz	QPSK	26365	1	0	22.40	22.50
Band25	20MHz	QPSK	26365	1	5	22.26	22.50
Band25	20MHz	QPSK	26365	6	0	22.09	22.50
Band25	20MHz	16QAM	26365	1	0	22.03	22.50
Band25	20MHz	16QAM	26365	1	5	21.89	22.00
Band25	20MHz	16QAM	26365	6	0	22.20	22.50
Band25	20MHz	QPSK	26590	1	0	21.96	22.00
Band25	20MHz	QPSK	26590	1	5	21.76	22.00
Band25	20MHz	QPSK	26590	6	0	21.61	22.00
Band25	20MHz	16QAM	26590	1	0	21.67	22.00
Band25	20MHz	16QAM	26590	1	5	21.42	21.50
Band25	20MHz	16QAM	26590	6	0	21.77	22.00

<Band 66>

Band	Channel Bandwidth	Modulation	Channel	RB Size	RB Start	Result (dBm)	Tune-Up
						QPSK	
Band66	1.4MHz	QPSK	131979	1	0	22.92	23.00
Band66	1.4MHz	QPSK	131979	1	5	22.73	23.00
Band66	1.4MHz	QPSK	131979	6	0	20.72	21.00
Band66	1.4MHz	16QAM	131979	1	0	22.03	22.50
Band66	1.4MHz	16QAM	131979	1	5	21.76	22.00
Band66	1.4MHz	16QAM	131979	6	0	20.53	21.00
Band66	1.4MHz	QPSK	132322	1	0	22.94	23.00
Band66	1.4MHz	QPSK	132322	1	5	22.76	23.00
Band66	1.4MHz	QPSK	132322	6	0	20.87	21.00
Band66	1.4MHz	16QAM	132322	1	0	21.72	22.00
Band66	1.4MHz	16QAM	132322	1	5	21.61	22.00
Band66	1.4MHz	16QAM	132322	6	0	20.86	21.00

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Band66	1.4MHz	QPSK	132665	1	0	22.50	22.50
Band66	1.4MHz	QPSK	132665	1	5	22.62	23.00
Band66	1.4MHz	QPSK	132665	6	0	21.19	21.50
Band66	1.4MHz	16QAM	132665	1	0	21.85	22.00
Band66	1.4MHz	16QAM	132665	1	5	21.81	22.00
Band66	1.4MHz	16QAM	132665	6	0	21.19	21.50
Band66	3MHz	QPSK	131987	1	0	22.82	23.00
Band66	3MHz	QPSK	131987	1	5	22.64	23.00
Band66	3MHz	QPSK	131987	6	0	20.54	21.00
Band66	3MHz	16QAM	131987	1	0	21.48	21.50
Band66	3MHz	16QAM	131987	1	5	21.22	21.50
Band66	3MHz	16QAM	131987	6	0	20.64	21.00
Band66	3MHz	QPSK	132322	1	0	22.99	23.00
Band66	3MHz	QPSK	132322	1	5	22.86	23.00
Band66	3MHz	QPSK	132322	6	0	20.85	21.00
Band66	3MHz	16QAM	132322	1	0	21.87	22.00
Band66	3MHz	16QAM	132322	1	5	21.60	22.00
Band66	3MHz	16QAM	132322	6	0	20.92	21.00
Band66	3MHz	QPSK	132657	1	0	22.57	23.00
Band66	3MHz	QPSK	132657	1	5	22.58	23.00
Band66	3MHz	QPSK	132657	6	0	21.25	21.50
Band66	3MHz	16QAM	132657	1	0	21.66	22.00
Band66	3MHz	16QAM	132657	1	5	21.63	22.00
Band66	3MHz	16QAM	132657	6	0	21.25	21.50
Band66	5MHz	QPSK	131997	1	0	22.73	23.00
Band66	5MHz	QPSK	131997	1	5	22.62	23.00
Band66	5MHz	QPSK	131997	6	0	21.62	22.00
Band66	5MHz	16QAM	131997	1	0	22.38	22.50
Band66	5MHz	16QAM	131997	1	5	22.25	22.50
Band66	5MHz	16QAM	131997	6	0	21.70	22.00
Band66	5MHz	QPSK	132322	1	0	23.03	23.50
Band66	5MHz	QPSK	132322	1	5	23.02	23.50
Band66	5MHz	QPSK	132322	6	0	22.06	22.50
Band66	5MHz	16QAM	132322	1	0	22.78	23.00
Band66	5MHz	16QAM	132322	1	5	22.72	23.00
Band66	5MHz	16QAM	132322	6	0	22.06	22.50
Band66	5MHz	QPSK	132647	1	0	22.76	23.00

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Band66	5MHz	QPSK	132647	6	0	22.14	22.50
Band66	5MHz	16QAM	132647	6	0	22.14	22.50
Band66	10MHz	QPSK	132022	1	0	22.59	23.00
Band66	10MHz	QPSK	132022	1	5	22.68	23.00
Band66	10MHz	QPSK	132022	6	0	21.69	22.00
Band66	10MHz	16QAM	132022	1	0	22.31	22.50
Band66	10MHz	16QAM	132022	1	5	22.28	22.50
Band66	10MHz	16QAM	132022	6	0	21.53	22.00
Band66	10MHz	QPSK	132322	1	0	22.93	23.00
Band66	10MHz	QPSK	132322	1	5	22.97	23.00
Band66	10MHz	QPSK	132322	6	0	21.92	22.00
Band66	10MHz	16QAM	132322	1	0	22.59	23.00
Band66	10MHz	16QAM	132322	1	5	22.48	22.50
Band66	10MHz	16QAM	132322	6	0	21.85	22.00
Band66	10MHz	QPSK	132622	1	0	22.80	23.00
Band66	10MHz	QPSK	132622	1	5	22.78	23.00
Band66	10MHz	QPSK	132622	6	0	22.16	22.50
Band66	10MHz	16QAM	132622	6	0	22.16	22.50
Band66	15MHz	QPSK	132047	1	0	22.69	23.00
Band66	15MHz	QPSK	132047	1	5	22.60	23.00
Band66	15MHz	QPSK	132047	6	0	22.52	23.00
Band66	15MHz	16QAM	132047	1	0	22.38	22.50
Band66	15MHz	16QAM	132047	1	5	22.17	22.50
Band66	15MHz	16QAM	132047	6	0	22.56	23.00
Band66	15MHz	QPSK	132322	1	0	22.88	23.00
Band66	15MHz	QPSK	132322	1	5	22.98	23.00
Band66	15MHz	QPSK	132322	6	0	22.74	23.00
Band66	15MHz	16QAM	132322	1	0	22.54	23.00
Band66	15MHz	16QAM	132322	1	5	22.49	22.50
Band66	15MHz	16QAM	132322	6	0	22.83	23.00
Band66	15MHz	QPSK	132597	1	0	22.74	23.00
Band66	15MHz	QPSK	132597	1	5	22.74	23.00
Band66	15MHz	QPSK	132597	6	0	22.61	23.00
Band66	15MHz	16QAM	132597	6	0	22.61	23.00
Band66	20MHz	QPSK	132072	1	0	22.65	23.00
Band66	20MHz	QPSK	132072	1	5	22.62	23.00
Band66	20MHz	QPSK	132072	6	0	22.47	22.50

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Band66	20MHz	16QAM	132072	1	0	22.32	22.50
Band66	20MHz	16QAM	132072	1	5	22.24	22.50
Band66	20MHz	16QAM	132072	6	0	22.59	23.00
Band66	20MHz	QPSK	132322	1	0	22.82	23.00
Band66	20MHz	QPSK	132322	1	5	22.76	23.00
Band66	20MHz	QPSK	132322	6	0	22.65	23.00
Band66	20MHz	16QAM	132322	1	0	22.48	22.50
Band66	20MHz	16QAM	132322	1	5	22.42	22.50
Band66	20MHz	16QAM	132322	6	0	22.81	23.00
Band66	20MHz	QPSK	132572	1	0	22.76	23.00
Band66	20MHz	QPSK	132572	1	5	22.77	23.00
Band66	20MHz	QPSK	132572	6	0	22.64	23.00
Band66	20MHz	16QAM	132572	6	0	22.65	23.00

<BLE>

Test Mode	Frequency (MHz)	Conducted Power(dBm)	Maximum Tune-Up(dBm)	Power Setting
BLE 1M	2402	-0.96	0.00	Default
	2440	-1.44	-0.50	Default
	2480	-0.85	0.00	Default
BLE 2M	2402	-0.97	0.00	Default
	2440	-1.45	0.00	Default
	2480	-0.90	0.00	Default

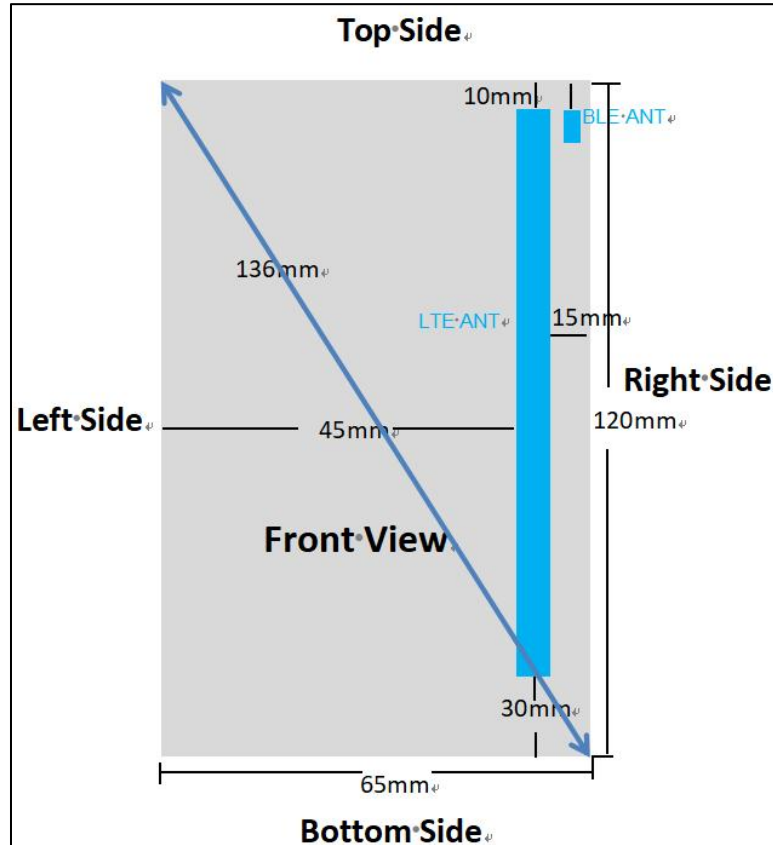
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11. Antenna Location



Distance of The Antenna to the EUT surface and edge						
Antennas	Front	Back	Top Side	Bottom Side	Left Side	Right Side
LTE ANT	<25mm	<25mm	<25mm	>25mm	>25mm	<25mm

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12. SAR Test Results Summary

12.1. SAR Test Results

<GSM>

Band	Test Position	Gap (mm)	Channel	Frequency (MHz)	Conducted Power (dBm)	Tune-Up Limit (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR1g (W/kg)	Reported SAR1g (W/kg)	Plot
GSM850	Front	0	128	824.2	22.63	23.00	1.089	0.04	0.245	0.267	
GSM850	Back	0	128	824.2	22.63	23.00	1.089	-0.05	0.203	0.221	
GSM850	Right	0	128	824.2	22.63	23.00	1.089	0.11	0.426	0.464	
GSM850	Left	0	128	824.2	22.63	23.00	1.089	N/A	N/A	N/A	
GSM850	Top	0	128	824.2	22.63	23.00	1.089	0.15	0.685	0.746	#1
GSM850	Bottom	0	128	824.2	22.63	23.00	1.089	N/A	N/A	N/A	
PCS1900	Front	0	512	1850.2	20.15	20.50	1.084	0.05	0.276	0.299	
PCS1900	Back	0	512	1850.2	20.15	20.50	1.084	-0.03	0.231	0.250	
PCS1900	Right	0	512	1850.2	20.15	20.50	1.084	0.06	0.467	0.506	
PCS1900	Left	0	512	1850.2	20.15	20.50	1.084	N/A	N/A	N/A	
PCS1900	Top	0	512	1850.2	20.15	20.50	1.084	0.16	0.706	0.765	#2
PCS1900	Bottom	0	512	1850.2	20.15	20.50	1.084	N/A	N/A	N/A	

<LTE>

<Band 2,Bandwidth:20MHz,Mode:QPSK>

Band	Test Position	Gap (mm)	Channel	Frequency (MHz)	Conducted Power (dBm)	Tune-Up Limit (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR1g (W/kg)	Reported SAR1g (W/kg)	Plot
Band 2	Front	0	19100	1900	22.07	22.50	1.104	0.18	0.211	0.233	
Band 2	Back	0	19100	1900	22.07	22.50	1.104	0.13	0.189	0.209	
Band 2	Right	0	19100	1900	22.07	22.50	1.104	0.05	0.304	0.336	
Band 2	Left	0	19100	1900	22.07	22.50	1.104	N/A	N/A	N/A	
Band 2	Top	0	19100	1900	22.07	22.50	1.104	-0.02	0.621	0.686	#3
Band 2	Bottom	0	19100	1900	22.07	22.50	1.104	N/A	N/A	N/A	

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<Band 4,Bandwidth:20MHz,Mode:QPSK>

Band	Test Position	Gap (mm)	Channel	Frequency (MHz)	Conducted Power (dBm)	Tune-Up Limit (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR1g (W/kg)	Reported SAR1g (W/kg)	Plot
Band 4	Front	0	20175	1732.5	22.13	22.50	1.089	0.12	0.317	0.345	
Band 4	Back	0	20175	1732.5	22.13	22.50	1.089	-0.15	0.305	0.332	
Band 4	Right	0	20175	1732.5	22.13	22.50	1.089	0.08	0.416	0.453	
Band 4	Left	0	20175	1732.5	22.13	22.50	1.089	N/A	N/A	N/A	
Band 4	Top	0	20175	1732.5	22.13	22.50	1.089	0.04	0.826	0.899	#4
Band 4	Bottom	0	20175	1732.5	22.13	22.50	1.089	N/A	N/A	N/A	

<Band 5,Bandwidth:10MHz,Mode:QPSK>

Band	Test Position	Gap (mm)	Channel	Frequency (MHz)	Conducted Power (dBm)	Tune-Up Limit (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR1g (W/kg)	Reported SAR1g (W/kg)	Plot
Band 5	Front	0	20450	829	23.51	24.00	1.119	0.02	0.364	0.407	
Band 5	Back	0	20450	829	23.51	24.00	1.119	-0.08	0.325	0.364	
Band 5	Right	0	20450	829	23.51	24.00	1.119	0.13	0.463	0.518	
Band 5	Left	0	20450	829	23.51	24.00	1.119	N/A	N/A	N/A	
Band 5	Top	0	20450	829	23.51	24.00	1.119	0.09	0.926	1.037	#5
Band 5	Bottom	0	20450	829	23.51	24.00	1.119	N/A	N/A	N/A	

<Band 12,Bandwidth:10MHz,Mode:QPSK>

Band	Test Position	Gap (mm)	Channel	Frequency (MHz)	Conducted Power (dBm)	Tune-Up Limit (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR1g (W/kg)	Reported SAR1g (W/kg)	Plot
Band 12	Front	0	23130	711	23.23	23.50	1.064	0.08	0.247	0.263	
Band 12	Back	0	23130	711	23.23	23.50	1.064	-0.12	0.205	0.218	
Band 12	Right	0	23130	711	23.23	23.50	1.064	0.06	0.406	0.432	
Band 12	Left	0	23130	711	23.23	23.50	1.064	N/A	N/A	N/A	
Band 12	Top	0	23130	711	23.23	23.50	1.064	0.01	0.726	0.773	#6
Band 12	Bottom	0	23130	711	23.23	23.50	1.064	N/A	N/A	N/A	

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<Band 13,Bandwidth:10MHz,Mode:QPSK>

Band	Test Position	Gap (mm)	Channel	Frequency (MHz)	Conducted Power (dBm)	Tune-Up Limit (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR1g (W/kg)	Reported SAR1g (W/kg)	Plot
Band 13	Front	0	23230	782	22.88	23.00	1.028	0.02	0.328	0.337	
Band 13	Back	0	23230	782	22.88	23.00	1.028	-0.06	0.311	0.320	
Band 13	Right	0	23230	782	22.88	23.00	1.028	0.11	0.503	0.517	
Band 13	Left	0	23230	782	22.88	23.00	1.028	N/A	N/A	N/A	
Band 13	Top	0	23230	782	22.88	23.00	1.028	0.18	0.824	0.847	#7
Band 13	Bottom	0	23230	782	22.88	23.00	1.028	N/A	N/A	N/A	

<Band 25,Bandwidth:20MHz,Mode:QPSK>

Band	Test Position	Gap (mm)	Channel	Frequency (MHz)	Conducted Power (dBm)	Tune-Up Limit (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR1g (W/kg)	Reported SAR1g (W/kg)	Plot
Band 25	Front	0	26350	1881	22.40	22.50	1.023	0.08	0.213	0.218	
Band 25	Back	0	26350	1881	22.40	22.50	1.023	-0.15	0.192	0.196	
Band 25	Right	0	26350	1881	22.40	22.50	1.023	0.04	0.316	0.323	
Band 25	Left	0	26350	1881	22.40	22.50	1.023	N/A	N/A	N/A	
Band 25	Top	0	26350	1881	22.40	22.50	1.023	0.11	0.549	0.562	#8
Band 25	Bottom	0	26350	1881	22.40	22.50	1.023	N/A	N/A	N/A	

<Band 66,Bandwidth:20MHz,Mode:QPSK>

Band	Test Position	Gap (mm)	Channel	Frequency (MHz)	Conducted Power (dBm)	Tune-Up Limit (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR1g (W/kg)	Reported SAR1g (W/kg)	Plot
Band 66	Front	0	132322	1745	22.82	23.00	1.042	0.08	0.304	0.317	
Band 66	Back	0	132322	1745	22.82	23.00	1.042	-0.16	0.268	0.279	
Band 66	Right	0	132322	1745	22.82	23.00	1.042	0.01	0.511	0.533	
Band 66	Left	0	132322	1745	22.82	23.00	1.042	N/A	N/A	N/A	
Band 66	Top	0	132322	1745	22.82	23.00	1.042	0.05	0.768	0.800	#9
Band 66	Bottom	0	132322	1745	22.82	23.00	1.042	N/A	N/A	N/A	

Code:AB-RF-05-b

Shenzhen Anbotek Compliance Laboratory Limited

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Hotline: 400-003-0500 web: www.anbotek.com E-mail: service@anbotek.com

12.2. Repeat SAR

<Band 5,Bandwidth:10MHz,Mode:QPSK>

Band	Test Position	Gap (mm)	Channel	Frequency (MHz)	Conducted Power (dBm)	Tune-Up Limit (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR1g (W/kg)	Reported SAR1g (W/kg)
Band 5	Top	0	20450	829	23.51	24.00	1.119	0.12	0.921	1.031

<Band 4,Bandwidth:20MHz,Mode:QPSK>

Band	Test Position	Gap (mm)	Channel	Frequency (MHz)	Conducted Power (dBm)	Tune-Up Limit (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR1g (W/kg)	Reported SAR1g (W/kg)
Band 4	Top	0	20175	1732.5	22.13	22.50	1.089	0.08	0.818	0.891

<Band 13,Bandwidth:10MHz,Mode:QPSK>

Band	Test Position	Gap (mm)	Channel	Frequency (MHz)	Conducted Power (dBm)	Tune-Up Limit (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR1g (W/kg)	Reported SAR1g (W/kg)
Band 13	Top	0	23230	782	22.88	23.00	1.028	0.15	0.828	0.851

<Band 66,Bandwidth:20MHz,Mode:QPSK>

Band	Test Position	Gap (mm)	Channel	Frequency (MHz)	Conducted Power (dBm)	Tune-Up Limit (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR1g (W/kg)	Reported SAR1g (W/kg)
Band 66	Top	0	132322	1745	22.82	23.00	1.042	0.16	0.759	0.791

Note:Select the test items to repeated testing for over 0.8W/kg, and the difference between the repeated test result and the original result should be kept within 10%

Code:AB-RF-05-b

12.3. Estimate SAR

<BLE>

Band	Mode	Channel	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-Up Limit (mW)	Estimate SAR1g (W/kg)
BLE	1Mbps	39	-0.85	0.00	1.00	0.042

Note:In accordance with Section 4.3.2 of Standard 447498 D01 V06,the standalone SAR value must be estimated according to the following to determine the simultaneous transmission SAR test exclusion criteria:

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

Code:AB-RF-05-b

13. Simultaneous Transmission Analysis

13.1. Simultaneous TX SAR Considerations

No.	Applicable Simultaneous Transmission
1.	LTE+BLE

Note:LTE and BLE are deployed on two separate antennas. Therefore, the maximum SAR value measured from the LTE antenna will be selected for the simultaneous transmission assessment with BLE.
<LTE Band 5+BLE>

Test Position	LTE Band 5 SAR _{1g} (W/Kg)	BLE SAR _{1g} (W/Kg)	MAX. Σ SAR _{1g} (W/Kg)	SAR _{1g} Limit (W/Kg)	Result
Front	1.037	0.042	1.079	1.6	Pass

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14. Measurement Uncertainty

Note:Per KDB 865664 D01 SAR measurement 100MHz to 6GHz, 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 1528-2013 is not required in SAR reports submitted for equipment approval. For this device, the highest measured 1-g SAR is less 1.5W/kg and highest measured 10-g SAR is less 3.75W/kg. Therefore, the measurement uncertainty table is not required in this report.

Code:AB-RF-05-b

Appendix A. Plots of SAR System Check

750MHz System Check

Date:2025-07-10

DUT: Dipole 750MHz D750V2; Type: D750V2; Serial: 1118

Communication System: CW; Frequency:750 MHz

Medium parameters used (interpolated): $f = 750\text{MHz}$; $\sigma = 0.85\text{ S/m}$; $\epsilon_r = 41.78$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

Probe: EX3DV4 - SN7396; ConvF(9.81, 9.81, 9.81); Calibrated: 6/5/2025;

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn387; Calibrated: 2/9/2024;

Phantom: ELI V8.0; Type: QDOVA004AA; Serial:2058;

DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (81x81x1): Interpolated grid: $dx=1.200\text{ mm}$, $dy=1.200\text{ mm}$

Maximum value of SAR (interpolated) = 19.25 W/kg

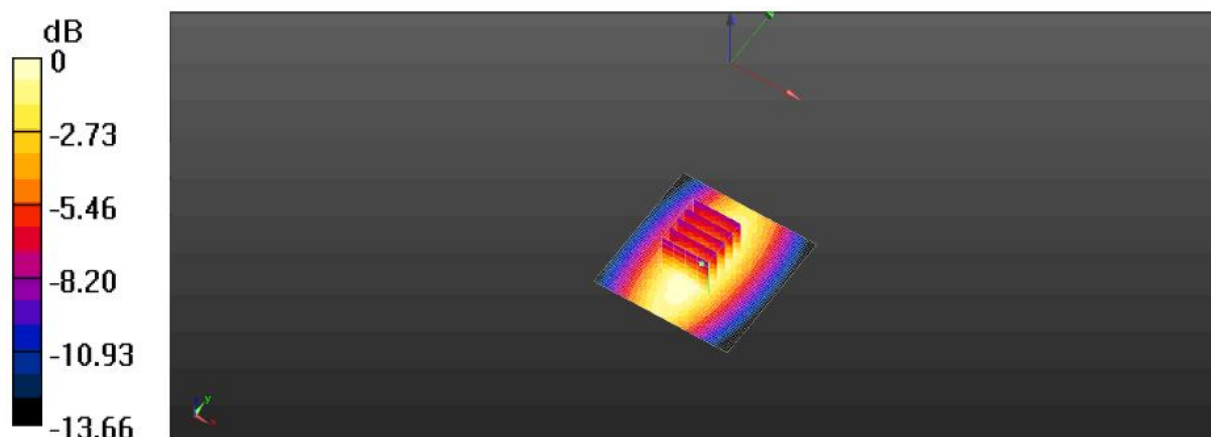
Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 80.425 V/m ; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 26.8 W/kg

SAR(1 g) = 2.16 W/kg ; SAR(10 g) = 1.05 W/kg

Maximum value of SAR (measured) = 10.6 W/kg



Code:AB-RF-05-b

835MHz System Check

Date:2025-07-11

DUT: Dipole 835MHz D835MHzV2; Type: D835MGHzV2; Serial: 4d164

Communication System: CW; Frequency: 835 MHz

Medium parameters used (interpolated): $f = 835\text{MHz}$; $\sigma = 0.95\text{ S/m}$; $\epsilon_r = 41.56$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

Probe: EX3DV4 - SN7396; ConvF(9.72, 9.72, 9.72); Calibrated: 6/5/2025;

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn387; Calibrated: 2/9/2024;

Phantom: ELI V8.0; Type: QDOVA004AA; Serial:2058;

ASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (41x81x1): Interpolated grid: $dx=1.200\text{ mm}$, $dy=1.200\text{ mm}$

Maximum value of SAR (interpolated) = 14.8 W/kg

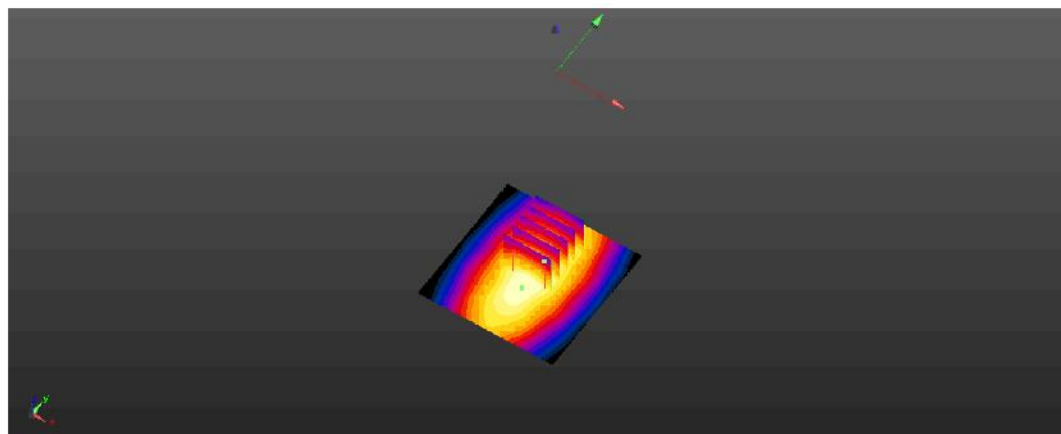
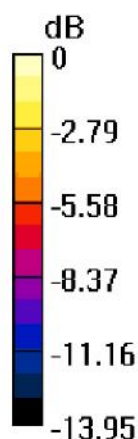
Zoom Scan (8x8x8)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=4\text{mm}$

Reference Value = 20.451 V/m ; Power Drift = 0.68 dB

Peak SAR (extrapolated) = 26.0 W/kg

SAR(1 g) = 2.45 W/kg ; SAR(10 g) = 1.22 W/kg

Maximum value of SAR (measured) = 11.5 W/kg



Code:AB-RF-05-b

1750MHz System Check

Date:2025-07-12

DUT: Dipole D1750MHz D1750MHzV2; Type: D1750MHzV2; Serial: 1107

Communication System: CW; Frequency: 1750 MHz

Medium parameters used (interpolated): $f = 1750\text{MHz}$; $\sigma = 1.36\text{ S/m}$; $\epsilon_r = 41.20$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

Probe: EX3DV4 - SN7396; ConvF(8.63, 8.63, 8.63); Calibrated: 6/5/2025;

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn387; Calibrated: 2/9/2024;

Phantom: ELI V8.0; Type: QDOVA004AA; Serial:2058;

ASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (41x81x1): Interpolated grid: $dx=1.200\text{ mm}$, $dy=1.200\text{ mm}$

Maximum value of SAR (interpolated) = 16.8W/kg

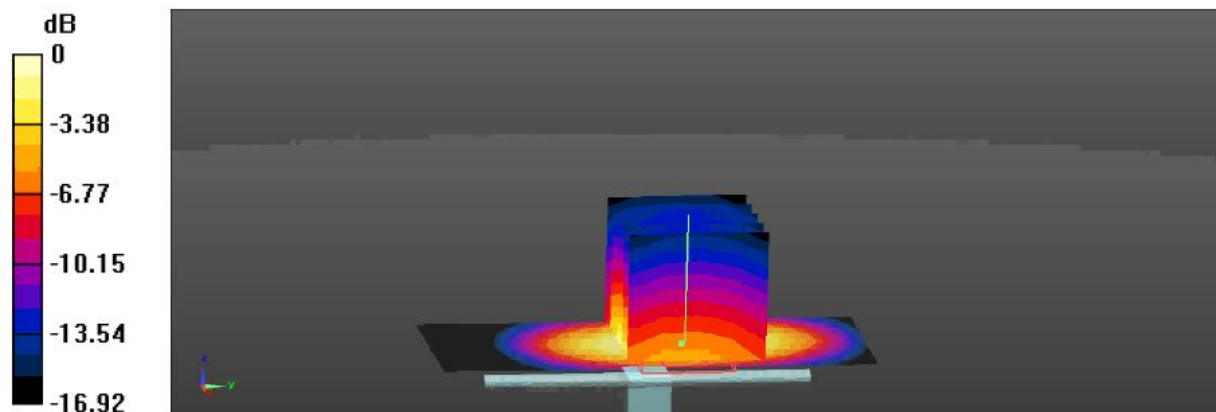
Zoom Scan (8x8x8)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=4\text{mm}$

Reference Value = 16.25 V/m ; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 36.2 W/kg

SAR(1 g) = 9.11 W/kg ; SAR(10 g) = 4.63 W/kg

Maximum value of SAR (measured) = 11.8 W/kg



Code:AB-RF-05-b

1900MHz System Check

Date:2025-07-13

DUT: Dipole D1900MHz D1900MHzV2; Type: D1900MHzV2; Serial: 5d089

Communication System: CW; Frequency: 1900 MHz

Medium parameters used (interpolated): $f = 1900\text{MHz}$; $\sigma = 1.44\text{ S/m}$; $\epsilon_r = 39.85$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

Probe: EX3DV4 - SN7396; ConvF(8.63, 8.63, 8.63); Calibrated: 6/5/2025;

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn387; Calibrated: 2/9/2024;

Phantom: ELI V8.0; Type: QDOVA004AA; Serial:2058;

ASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (41x81x1): Interpolated grid: $dx=1.200\text{ mm}$, $dy=1.200\text{ mm}$

Maximum value of SAR (interpolated) = 15.8W/kg

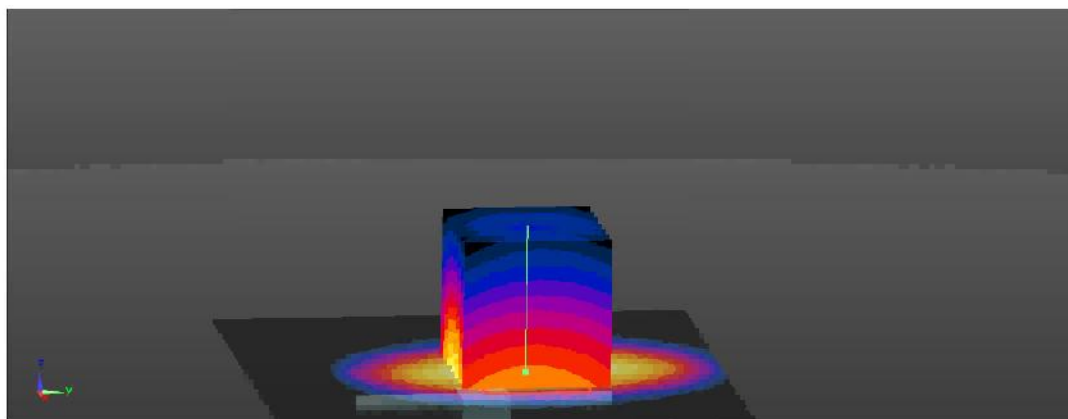
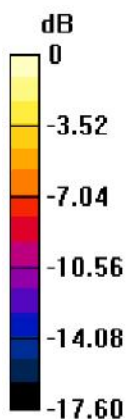
Zoom Scan (8x8x8)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=4\text{mm}$

Reference Value = 17.25 V/m ; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 15.6 W/kg

SAR(1 g) = 10.02 W/kg ; SAR(10 g) = 4.83 W/kg

Maximum value of SAR (measured) = 12.8 W/kg



Code:AB-RF-05-b

Appendix B. Plots of SAR Test Data

#1

Date:2025-07-11

GSM850-Ch128-Body Top

Communication System: UID 0; Frequency:824.2 MHz

Medium parameters used (interpolated): $f = 824.2$ MHz; $\sigma = 0.91$ S/m; $\epsilon_r = 41.68$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

Probe: EX3DV4 - SN7396; ConvF(9.72, 9.72, 9.72); Calibrated: 6/5/2025;

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn387; Calibrated: 2/9/2024

Phantom: ELI V8.0; Type: QDOVA004AA; Serial:2058;

DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (151x201x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm

Maximum value of SAR (interpolated) = 1.56 W/kg

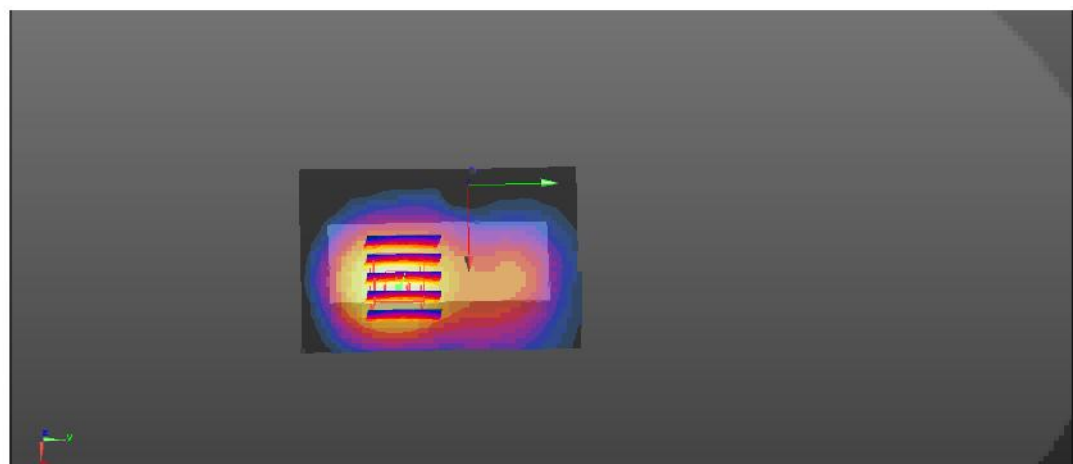
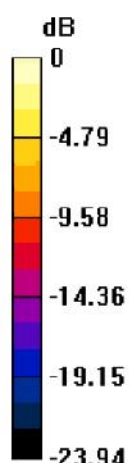
Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 1.325 V/m; Power Drift = 0.15 dB

Peak SAR (extrapolated) = 1.67 W/kg

SAR(1 g) = 0.685 W/kg; SAR(10 g) = 0.334 W/kg

Maximum value of SAR (measured) = 0.859 W/kg



Code:AB-RF-05-b

#2

Date:2025-07-13

PCS1900-Ch512-Body Top

Communication System: UID 0; Frequency: 1850.2 MHz

Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.42$ S/m; $\epsilon_r = 40.06$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

Probe: EX3DV4 - SN7396; ConvF(8.12, 8.12, 8.12); Calibrated: 6/5/2025;

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn387; Calibrated: 2/9/2024

Phantom: ELI V8.0; Type: QDOVA004AA; Serial:2058;

DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (151x201x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm

Maximum value of SAR (interpolated) = 1.58 W/kg

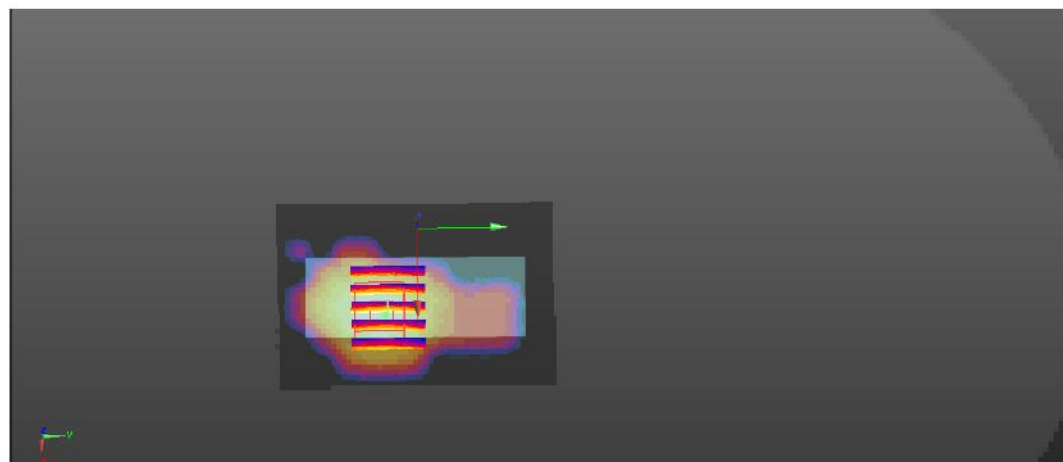
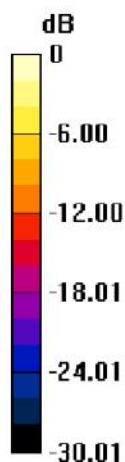
Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 0.826 V/m; Power Drift = 0.16 dB

Peak SAR (extrapolated) = 1.66 W/kg

SAR(1 g) = 0.706 W/kg; SAR(10 g) = 0.325 W/kg

Maximum value of SAR (measured) = 0.885 W/kg



Code:AB-RF-05-b

#3

Date:2025-07-13

LTE-Band2-Ch19100-Body Top

Communication System: UID 0; Frequency: 1900 MHz

Medium parameters used (interpolated): $f = 1900$ MHz; $\sigma = 1.44$ S/m; $\epsilon_r = 39.85$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

Probe: EX3DV4 - SN7396; ConvF(8.12, 8.12, 8.12); Calibrated: 6/5/2025;

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn387; Calibrated: 2/9/2024

Phantom: ELI V8.0; Type: QDOVA004AA; Serial:2058;

DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (111x181x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm

Maximum value of SAR (interpolated) = 5.28 W/kg

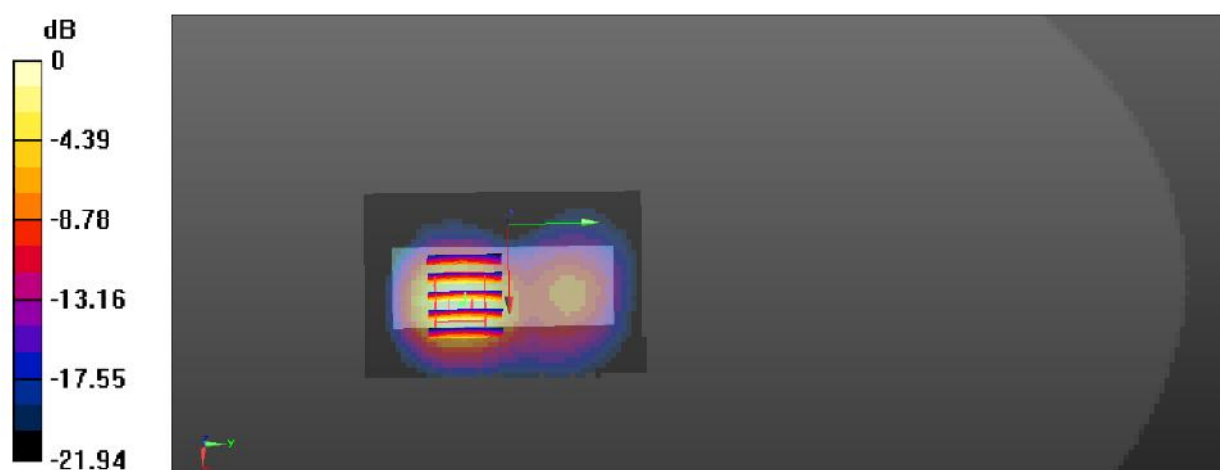
Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 1.466 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 5.58 W/kg

SAR(1 g) = 0.621 W/kg; SAR(10 g) = 0.283 W/kg

Maximum value of SAR (measured) = 0.951 W/kg



Code:AB-RF-05-b

#4

Date:2025-07-12

LTE-Band4-Ch20175-Body Top

Communication System: UID 0; Frequency: 1732.5 MHz

Medium parameters used (interpolated): $f = 1732.5$ MHz; $\sigma = 1.31$ S/m; $\epsilon_r = 39.81$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

Probe: EX3DV4 - SN7396; ConvF(8.63, 8.63, 8.63); Calibrated: 6/5/2025;

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn387; Calibrated: 2/9/2024

Phantom: ELI V8.0; Type: QDOVA004AA; Serial:2058;

DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (111x181x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm

Maximum value of SAR (interpolated) = 0.856 W/kg

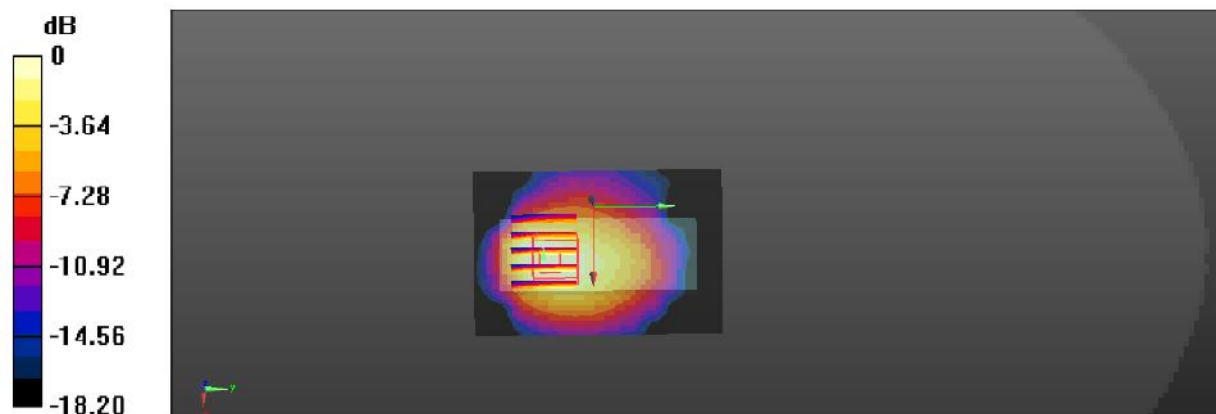
Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 1.490 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 0.915 W/kg

SAR(1 g) = 0.826 W/kg; SAR(10 g) = 0.387 W/kg

Maximum value of SAR (measured) = 0.945 W/kg



Code:AB-RF-05-b

#5

Date:2025-07-11

LTE-Band5-Ch20450-Body Top

Communication System: UID 0; Frequency: 829 MHz

Medium parameters used (interpolated): $f = 829$ MHz; $\sigma = 0.94$ S/m; $\epsilon_r = 41.60$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

Probe: EX3DV4 - SN7396; ConvF(9.72, 9.72, 9.72); Calibrated: 6/5/2025;

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn387; Calibrated: 2/9/2024

Phantom: ELI V8.0; Type: QDOVA004AA; Serial:2058;

DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (111x181x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm

Maximum value of SAR (interpolated) = 0.859 W/kg

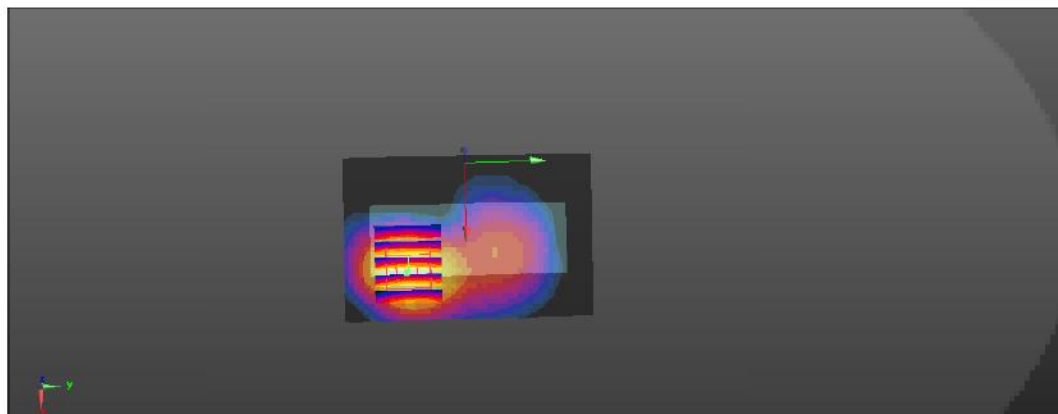
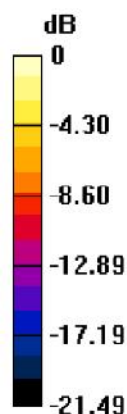
Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 1.132 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 0.926 W/kg

SAR(1 g) = 0.926 W/kg; SAR(10 g) = 0.433 W/kg

Maximum value of SAR (measured) = 1.25W/kg



Code:AB-RF-05-b

#6

Date:2025-07-10

LTE-Band12-Ch23130-Body Top

Communication System: UID 0; Frequency: 711 MHz

Medium parameters used (interpolated): $f = 711$ MHz; $\sigma = 0.79$ S/m; $\epsilon_r = 42.82$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

Probe: EX3DV4 - SN7396; ConvF(9.81, 9.81, 9.81); Calibrated: 6/5/2025;

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn387; Calibrated: 2/9/2024

Phantom: ELI V8.0; Type: QDOVA004AA; Serial:2058;

DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (111x181x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm

Maximum value of SAR (interpolated) = 4.56 W/kg

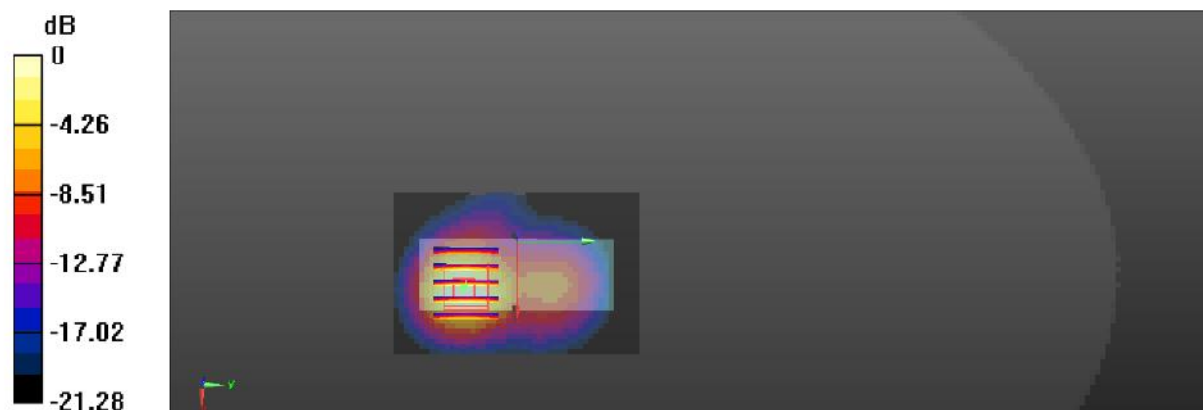
Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 2.379 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 4.57 W/kg

SAR(1 g) = 0.726 W/kg; SAR(10 g) = 0.293 W/kg

Maximum value of SAR (measured) = 0.928 W/kg



Code:AB-RF-05-b

#7

Date:2025-07-10

LTE-Band13-Ch23230-Body Top

Communication System: UID 0; Frequency: 782 MHz

Medium parameters used (interpolated): $f = 782 \text{ MHz}$; $\sigma = 0.88 \text{ S/m}$; $\epsilon_r = 41.75$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

Probe: EX3DV4 - SN7396; ConvF(9.81, 9.81, 9.81); Calibrated: 6/5/2025;

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn387; Calibrated: 2/9/2024

Phantom: ELI V8.0; Type: QDOVA004AA; Serial:2058;

DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (111x181x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Maximum value of SAR (interpolated) = 2.59 W/kg

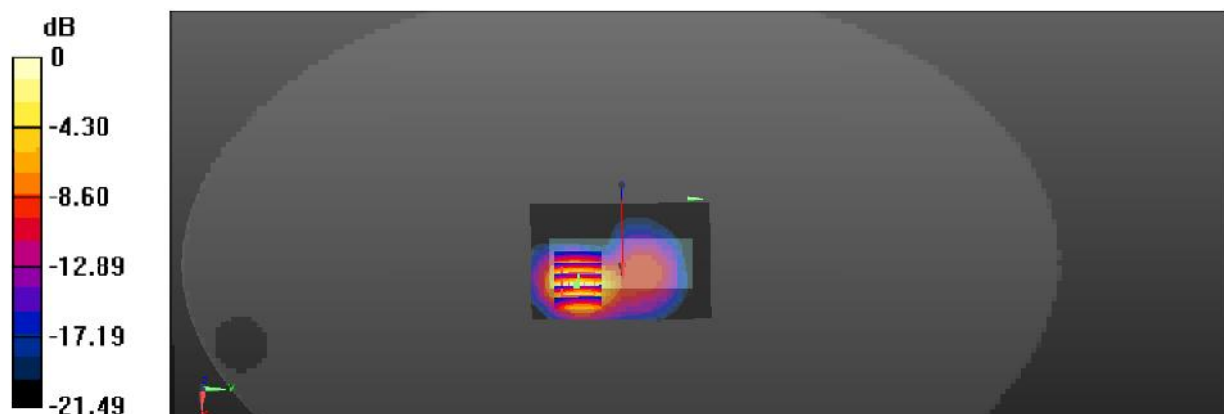
Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 2.548 V/m ; Power Drift = 0.18 dB

Peak SAR (extrapolated) = 2.67 W/kg

SAR(1 g) = 0.824 W/kg ; SAR(10 g) = 0.426 W/kg

Maximum value of SAR (measured) = 1.05 W/kg



Code:AB-RF-05-b

#8

Date:2025-07-13

LTE-Band25-Ch26350-BodyTop

Communication System: UID 0; Frequency: 1881 MHz

Medium parameters used (interpolated): $f = 1881$ MHz; $\sigma = 1.43$ S/m; $\epsilon_r = 39.35$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

Probe: EX3DV4 - SN7396; ConvF(8.12, 8.12, 8.12); Calibrated: 6/5/2025;

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn387; Calibrated: 2/9/2024

Phantom: ELI V8.0; Type: QDOVA004AA; Serial:2058;

DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (111x181x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm

Maximum value of SAR (interpolated) = 2.59 W/kg

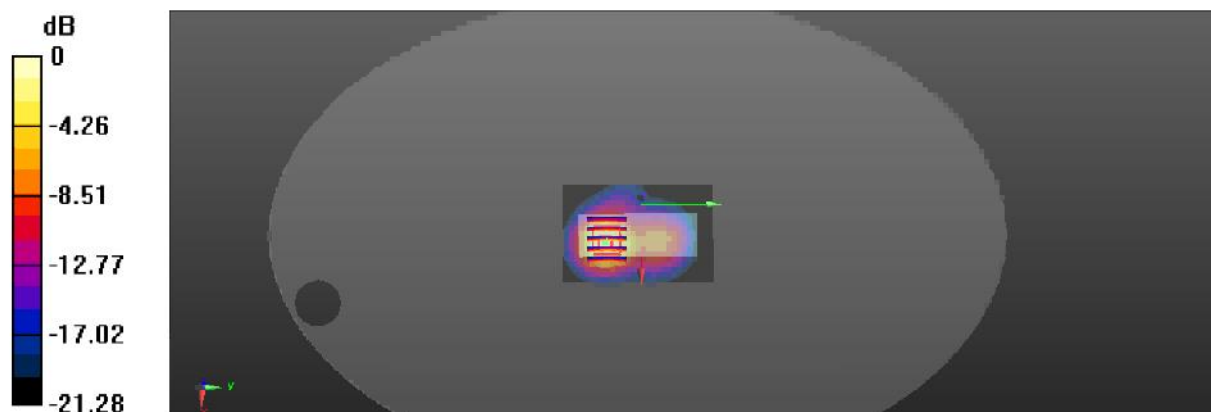
Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 2.548 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 2.67 W/kg

SAR(1 g) = 0.549 W/kg; SAR(10 g) = 0.221 W/kg

Maximum value of SAR (measured) = 0.726 W/kg



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#9

Date:2025-07-12

LTE-Band66-Ch132322-Body Top

Communication System: UID 0; Frequency: 1745 MHz

Medium parameters used (interpolated): $f = 1745$ MHz; $\sigma = 1.35$ S/m; $\epsilon_r = 41.24$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

Probe: EX3DV4 - SN7396; ConvF(8.63, 8.63, 8.63); Calibrated: 6/5/2025;

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn387; Calibrated: 2/9/2024

Phantom: ELI V8.0; Type: QDOVA004AA; Serial:2058;

DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (111x181x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm

Maximum value of SAR (interpolated) = 5.86 W/kg

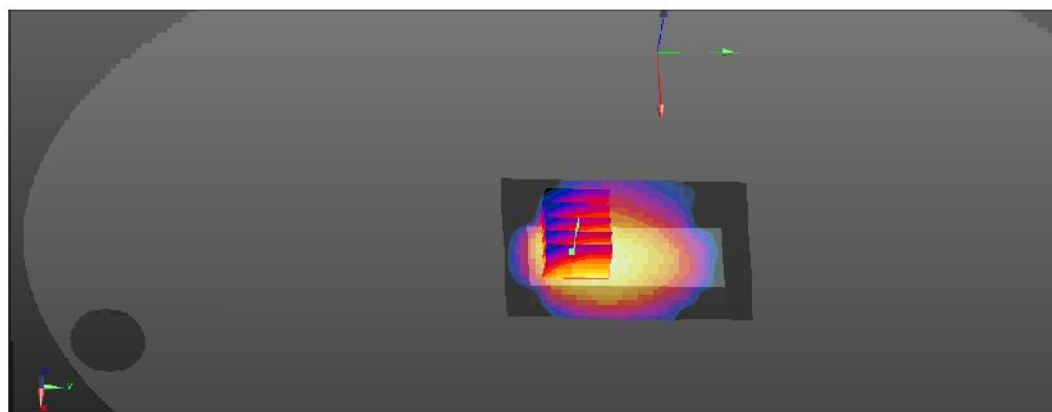
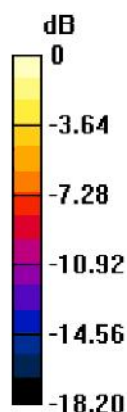
Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 3.546 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 5.94 W/kg

SAR(1 g) = 0.768 W/kg; SAR(10 g) = 0.316 W/kg

Maximum value of SAR (measured) = 0.926 W/kg



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Appendix C. DASY System Calibration Certificate

The calibration certificate is attached.

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

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