Shenzhen CTA Testing Technology Co., Ltd.

Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community, Fuhai Street, Bao'an District, Shenzhen, China

TEST REPORT

Report Reference No. ..... :	**CTA24011601001**	
FCC ID ..... :	**2BCQ3-GOPAD**	
Compiled by (position+printed name+signature) :	File administrators Zoey Cao	Zoey Cao
Supervised by (position+printed name+signature) :	Project Engineer Amy Wen	Amy Wen
Approved by (position+printed name+signature) :	RF Manager Eric Wang	Eric Wang
Date of issue ..... :	Jan. 16, 2024	
Testing Laboratory Name ..... :	**Shenzhen CTA Testing Technology Co., Ltd.**	
Address ..... :	Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community, Fuhai Street, Bao'an District, Shenzhen, China	
Applicant's name ..... :	**A3 MOBILE SAS**	
Address ..... :	CRA 20 13 58 OFIC 509, BOGOTA, COLOMBIA 110111	
Test specification ..... :		
Standard ..... :	**IEC 62209-2:2010; IEEE 1528:2013; FCC 47 CFR Part 2.1093; ANSI/IEEE C95.1:2005; Reference FCC KDB 447498; KDB 248227; KDB 616217; KDB 941225; KDB 865664**	

Test item description ..... :	**TABLET**
Trade Mark ..... :	FLY
Manufacturer ..... :	Shenzhen Jinhengzhi Technology Co., Ltd.
Model/Type reference ..... :	GOPAD
Listed Models ..... :	GOPADPRO,GOPADTURBO,GOPAD I.A,GOPADNET,LINCETPAD
Rating ..... :	DC 3.8V From battery and DC 5.0V From external circuit
Result ..... :	**PASS**

T E S T R E P O R T

Equipment under Test	:	TABLET
Model /Type	:	GOPAD
Listed Models	:	GOPADPRO,GOPADTURBO,GOPAD I.A,GOPADNET,LINCETPAD
Applicant	:	A3 MOBILE SAS
Address	:	CRA 20 13 58 OFIC 509, BOGOTA, COLOMBIA 110111
Manufacturer	:	Shenzhen Jinhengzhi Technology Co., Ltd.
Address	:	3307, TOWER A, WORLD TRADE PLAZA, FUTIAN, SHENZHEN

Test Result:	**PASS**

The test report merely corresponds to the test sample.

Contents

Version

Version No.	Date	Description
R00	Jan. 16, 2024	Original

1 Statement of Compliance

<Highest SAR Summary>

This device is in compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits (1.6 W/kg) specified in FCC 47 CFR part 2 (2.1093) and ANSI/IEEE C95.1-2005, and had been tested in accordance with the measurement methods and procedures specified in IEEE 1528-2013 The maximum results of Specific Absorption Rate (SAR) found during testing are as follows.

<Highest SAR Summary>

Frequency Band	Highest Reported 1g-SAR(W/Kg)	Simultaneous Reported SAR (W/Kg)
	Body (0mm)	
GSM 850	1.072	1.555
PCS1900	0.789	
WCDMA Band II	1.023	
WCDMA Band V	0.524	
LTE Band 2	1.211	
LTE Band 4	0.616	
LTE Band 5	0.821	
LTE Band 7	1.055	
WLAN2.4G	0.344	
SAR Test Limit (W/Kg)	1.60	
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 (2.1093) and ANSI/IEEE C95.1-2005, and had been tested in accordance with the measurement methods and procedures specified in IEEE 1528-2013

2 General Information

2.1 Client Information

Applicant	:	A3 MOBILE SAS
Address	:	CRA 20 13 58 OFIC 509
Manufacturer	:	Shenzhen Jinhengzhi Technology Co., Ltd.
Address	:	3307, TOWER A, WORLD TRADE PLAZA, FUTIAN, SHENZHEN

2.2 Description of Equipment Under Test (EUT)

Product Name	:	TABLET
Model No.	:	GOPAD
Listed Models	:	GOPADPRO, GOPADTURBO, GOPAD I.A, GOPADNET, LINCETPAD
Trade Mark	:	FLY
Test Power Supply	:	DC 3.80V battery inside
Test Sample No.	:	CTA240116010-1#(Engineering Sample)
Tx Frequency	:	SRD: BT:2402~2480MHz 2.4G WIFI: 2412~2462MHz GSM: GSM850 TX: 824.2~848.8MHz PCS1900 TX: 1850.2~1909.8MHz WCDMA: Band 2: TX: 1852.4~1907.6MHz Band 5: TX: 826.40~846.60MHz LTE: FDD Band 2: TX: 1850~1909MHz FDD Band 4: TX: 1710~1755MHz FDD Band 5: TX: 824~849MHz FDD Band 7: TX: 2500~2570MHz
Type of Modulation	:	BT: GFSK, Π/4DQPSK, 8DPSK 2.4G WIFI: BPSK, QPSK, 16QAM, 64QAM GSM: GMSK, 8PSK WCDMA: QPSK,16QAM LTE: QPSK,16QAM
Category of device	:	Portable device
Remark: The above DUT's information was declared by manufacturer. Please refer to the specifications or 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 (2.1093:2013)
- ANSI/IEEE C95.1:2005
- 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
- KDB 941225 D01 3G SAR Procedures v03r01
- KDB 941225 D05 SAR for LTE Devicesv02r05
- KDB 616217 D04 SAR for laptop and tablets v01r02

2.5 Test Facility

FCC-Registration No.: 517856 Designation Number: CN1318

Shenzhen CTA Testing Technology Co., Ltd. has been listed on the US Federal Communications Commission list of test facilities recognized to perform electromagnetic emissions measurements.

A2LA-Lab Cert. No.: 6534.01

Shenzhen CTA Testing Technology Co., Ltd. has been listed by American Association for Laboratory Accreditation to perform electromagnetic emission measurement.

ISED#: 27890 CAB identifier: CN0127

Shenzhen CTA Testing Technology Co., Ltd. has been listed by Innovation, Science and Economic Development Canada to perform electromagnetic emission measurement.

The 3m-Semi anechoic test site fulfils CISPR 16-1-4 according to ANSI C63.10 and CISPR 16-1-4:2010.

2.6 Environment of Test Site

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

2.7 Test Configuration

The device was controlled by using a base station emulator. Communication between the device and the emulator was established by air link. The distance between the EUT and the antenna of the emulator is

larger than 50 cm and the output power radiated from the emulator antenna is at least 30 dB smaller than the output power of EUT. The EUT was set from the emulator to radiate maximum output power during all tests. For WLAN SAR testing, WLAN engineering testing software installed on the EUT can provide continuous transmitting RF signal.

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:

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

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

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

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

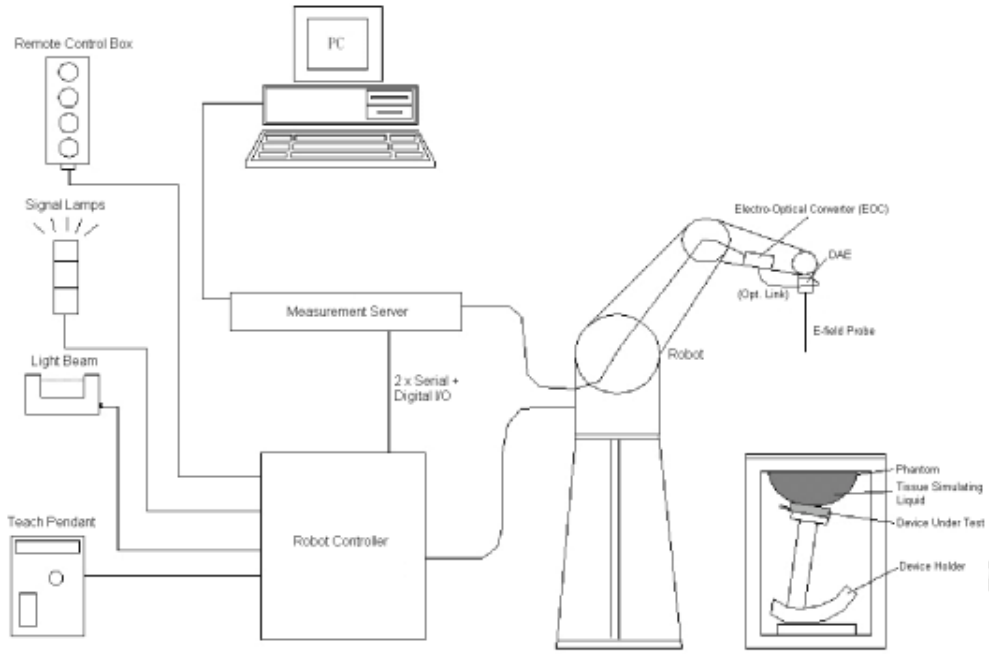
Where: C is the specific head capacity, δT is the temperature rise and δtisthe exposure duration, or related to the electrical field in the tissue by

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

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

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

4 SAR Measurement System



DASY System Configurations

The DASYsystem 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
- DASY software
- Remove control with teach pendant and additional circuitry for robot safety such as warming lamps, etc.
- The SAM twin 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.

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 µW/g to 100 W/kg; Linearity: ± 0.2 dB (noise: typically< 1 µW/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 ± 10%. The spherical isotropy shall be evaluated and within ± 0.25dB. 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 200MOhm; the inputs are symmetrical and floating. Common mode rejection is above 80dB.

Photo of DAE

4.3 Robot

The SPEAG DASY system uses the high precision robots (DASY5: TX60XL) 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.

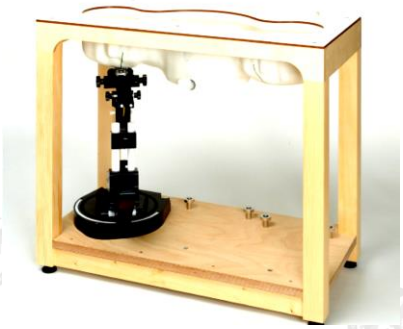
The measurement server performs all the real-time data evaluation for field measurements and surface detection, controls robot movements and handles safety operations.

Photo of Server for DASY5

4.5 Phantom

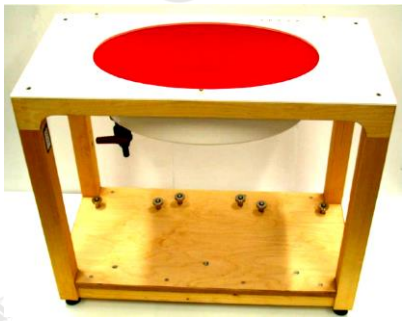
<SAM Twin Phantom>

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	 Photo of SAM Phantom
Measurement Areas	Left Hand, Right Hand, Flat 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%)	 **Photo of ELI4 Phantom**
Filling Volume	Approx. 30 liters	
Dimensions	Major ellipse axis: 600 mm Minor axis:400 mm	

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 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 ±0.5mm would produce a SAR uncertainty of ± 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 ε = 3 and loss tangent δ = 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.

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-lose 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:

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

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 evaluated:

E-field Probes: $\mathbf{E_i = \sqrt{\frac{V_i}{Norm_i \cdot ConvF}}}$

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

with V_i = compensated signal of channel i,(i= x, y, z)
$Norm_i$= sensor sensitivity of channel i, (i= x, y, z), μV/(V/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 iin V/m
H_i= magnetic field strength of channel iin A/m

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

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

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

$$\mathbf{SAR} = \mathbf{E}_{\mathbf{tot}}^{\mathbf{2}} \cdot \frac{\boldsymbol{\sigma}}{\boldsymbol{\rho} \cdot \mathbf{1000}}$$

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	835MHz System Validation Kit	D835V2	484	Aug. 25,2023	Aug. 24,2026
SPEAG	1800MHz System Validation Kit	D1800V2	2d158	Dec. 17,2021	Dec. 16,2024
SPEAG	1900MHz System Validation Kit	D1900V2	5d002	Aug. 25,2023	Aug. 24,2026
SPEAG	2450MHz System Validation Kit	D2450V2	745	Aug. 28,2023	Aug. 27,2026
SPEAG	2600MHz System Validation Kit	D2600V2	1073	Feb. 17,2023	Feb. 16,2026
Rohde & Schwarz	UNIVERSAL RADIO COMMUNICATION TESTER	CMW500	1201.0002K50-104209-JC	Nov.05, 2023	Nov.04, 2024
SPEAG	Data Acquisition Electronics	DAE3	428	Aug.30,2023	Aug.29,2024
SPEAG	Dosimetric E-Field Probe	EX3DV4	7380	June 21,2023	June 20,2024
Agilent	ENA Series Network Analyzer	E5071C	MY46317418	Oct.25, 2023	Oct.24, 2024
SPEAG	DAK	DAK-3.5	1226	NCR	NCR
SPEAG	SAM Twin Phantom	QD000P40CD	1802	NCR	NCR
SPEAG	ELI Phantom	QDOVA004AA	2058	NCR	NCR
AR	Amplifier	ZHL-42W	QA1118004	NCR	NCR
Agilent	Power Meter	N1914A	MY50001102	Oct.25, 2023	Oct.24, 2024
Agilent	Power Sensor	N8481H	MY51240001	Oct.25, 2023	Oct.24, 2024
R&S	Spectrum Analyzer	N9020A	MY51170037	Oct.25, 2023	Oct.24, 2024
Agilent	Signal Generation	N5182A	MY48180656	Oct.25, 2023	Oct.24, 2024
Worken	Directional Coupler	0110A05601O-10	COM5BNW1A2	Oct.25, 2023	Oct.24, 2024

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

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:

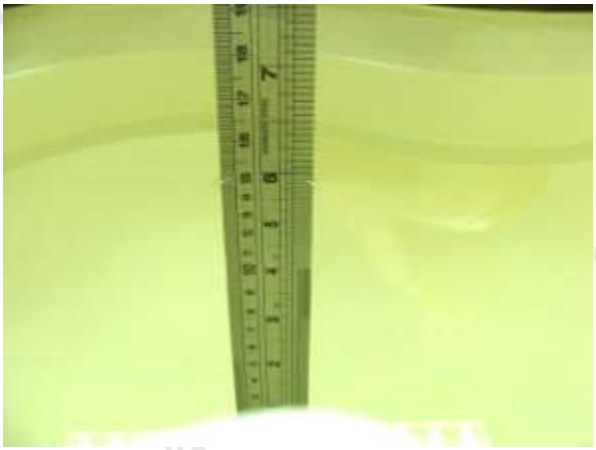


Photo of Liquid Height for Head SAR

Photo of Liquid Height for Body SAR

The following table gives the recipes for tissue simulating liquid.

Frequency (MHz)	Water (%)	Sugar (%)	Cellulose (%)	Salt (%)	Preventol (%)	DGBE (%)	Conductivity (σ)	Permittivity (εr)
For Head								
835	40.3	57.9	0.2	1.4	0.2	0	0.90	41.5
1800,1900,2000	55.2	0	0	0.3	0	44.5	1.40	40.0
2450	55.0	0	0	0	0	45.0	1.80	39.2
2600	54.8	0	0	0.1	0	45.1	1.96	39.0
For Body								
835	50.8	48.2	0	0.9	0.1	0	0.97	55.2
1800,1900,2000	70.2	0	0	0.4	0	29.4	1.52	53.3
2450	68.6	0	0	0	0	31.4	1.95	52.7
2600	65.5	0	0	0	0	31.5	2.16	52.5

The following table shows the measuring results for simulating liquid.

Measured Frequency	Target Tissue		Measured Tissue				Liquid Temp.	Test Data
	ε_r	σ	ε_r	Dev.	σ	Dev.		

(MHz)				(%)		(%)		
835	41.5	0.90	41.903	0.97%	0.909	41.903	22.5	01/09/2024
1750	40.1	1.37	39.057	-2.60%	1.370	39.057	22.7	01/10/2024
1900	40.0	1.40	39.028	-2.43%	1.427	39.028	22.2	01/11/2024
2450	39.2	1.80	40.286	2.77%	1.785	40.286	22.2	01/15/2024
2600	39.0	1.96	37.943	-2.71%	1.939	37.943	22.7	01/12/2024

7 System Verification Procedures

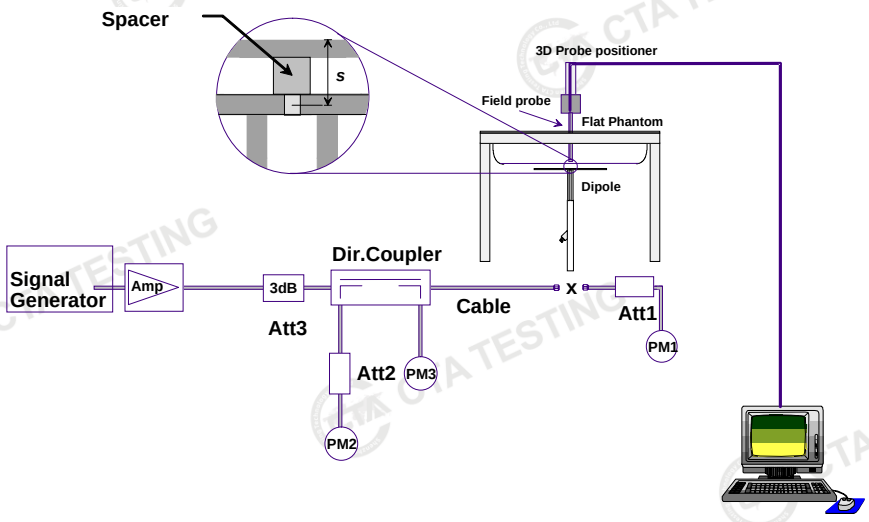
Each DASY system is equipped with one or more system validation kits. These units, together with the predefined measurement procedures within the DASY software, enable the user to conduct the system performance check and system validation. System validation kit includes a dipole, tripod holder to fix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

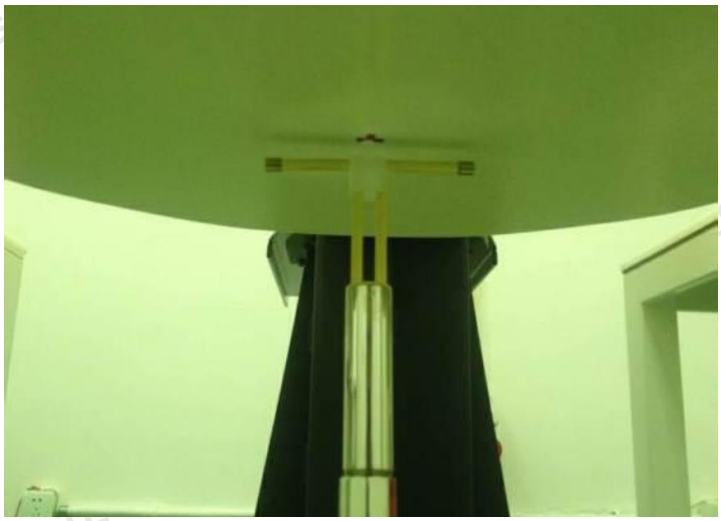


Photo of Dipole Setup

- **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.

Date	Frequency (MHz)	Power fed onto reference dipole (mW)	Targeted SAR 1g (W/kg)	Measured SAR 1g (W/kg)	Normalized SAR (W/kg)	Deviation (%)
01/09/2024	835	250	9.68	2.34	9.36	-3.31%
01/10/2024	1750	250	39.2	9.61	38.44	-1.94%
01/11/2024	1900	250	40.1	9.69	38.74	-3.39%
01/15/2024	2450	250	52.7	13.03	52.10	-1.14%
01/12/2024	2600	250	56.8	14.30	57.20	0.70%

Target and Measurement SAR after Normalized

8 EUT Testing Position

8.1 Body-Supported Device Configurations

According to KDB 616217 section 4.3, SAR should be separately assessed with each surface and separation distance positioned against the flat phantom that correspond to the intended use as specified by the manufacturer. The antennas in tablets are typically located near the back (bottom) surface and/or along the edges of the devices; therefore, SAR evaluation is required for these configurations. Exposures from antennas through the front (top) surface of the display section of a full-size tablet, away from the edges, are generally limited to the user's hands. Exposures to hands for typical consumer transmitters used in tablets are not expected to exceed the extremity SAR limit; therefore, SAR evaluation for the front surface of tablet display screens are generally not necessary, except for tablets that are designed to require continuous operations with the hand(s) next to the antenna(s).

- To position the device parallel to the phantom surface with either keypad up or down.
- To adjust the device parallel to the flat phantom.
- To adjust the distance between the device surface and the flat phantom to 0 mm.
- When each surface is measurement, the SAR Test Exclusion Threshold in KDB 447498 should be applied.

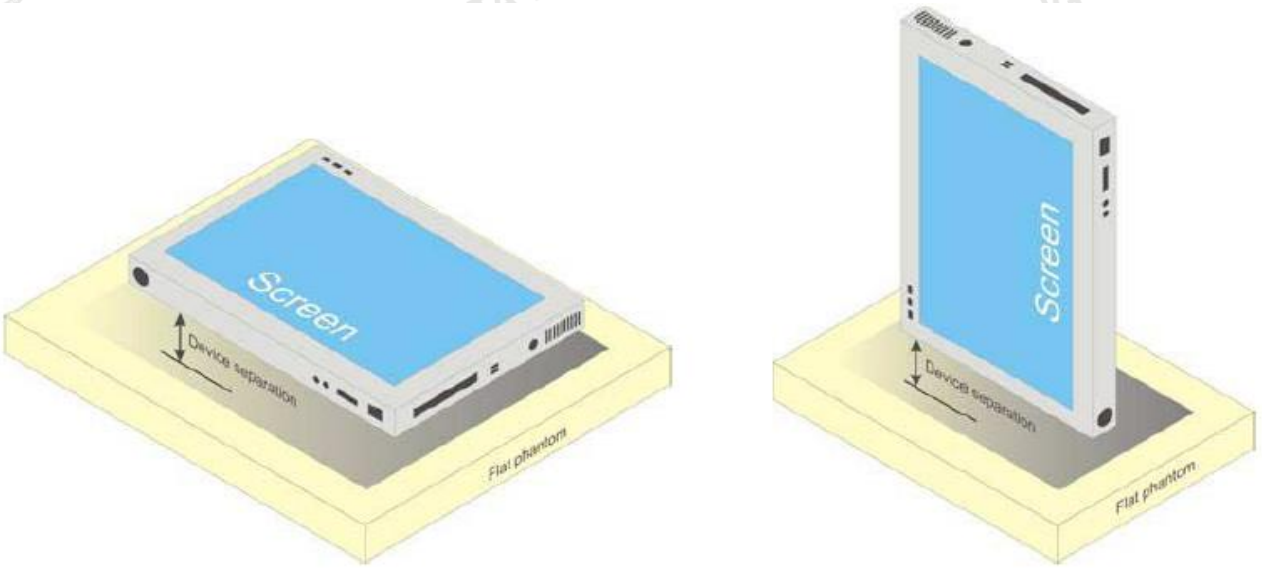


Fig.81 Illustration for Body Position

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 form 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

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 dB0 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.

	≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface	5 ± 1 mm	½·δ·ln(2) ± 0.5 mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location	30° ± 1°	20° ± 1°
Maximum area scan spatial resolution: Δx_{Area}, Δy_{Area}	≤ 2 GHz: ≤ 15 mm 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 ≤ the corresponding x or y dimension of the test device with at least one measurement point on the test device.	

9.4 Zoom Scan Procedures

Zoom scans are used 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 shoes 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: Δx_{Zoom}, Δy_{Zoom}			≤ 2 GHz: ≤ 8 mm 2 – 3 GHz: ≤ 5 mm*	3 – 4 GHz: ≤ 5 mm* 4 – 6 GHz: ≤ 4 mm*
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{Zoom}(n)$		≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm
	graded grid	$\Delta z_{Zoom}(1)$: between 1st two points closest to phantom surface	≤ 4 mm	3 – 4 GHz: ≤ 3 mm 4 – 5 GHz: ≤ 2.5 mm 5 – 6 GHz: ≤ 2 mm
		$\Delta z_{Zoom}(n>1)$: between subsequent points	$\leq 1.5 \cdot \Delta z_{Zoom}(n-1)$	
Minimum zoom scan volume	x, y, z		≥ 30 mm	3 – 4 GHz: ≥ 28 mm 4 – 5 GHz: ≥ 25 mm 5 – 6 GHz: ≥ 22 mm

Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details.

* When zoom scan is required and the *reported* SAR from the *area scan based 1-g SAR estimation* procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.

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.

9.6 Power Drift Monitoring

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

10 TEST CONDITIONS AND RESULTS

10.1 Conducted Power

<GSM Conducted power>

Band GSM850	Tune-up limit (dBm)	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	848.6
GSM(GMSK)	34.0	32.92	33.13	33.13	23.89	24.10	24.10
GPRS (GMSK, 1 Tx slot)	34.0	32.94	33.12	33.18	23.91	24.09	24.15
GPRS (GMSK, 2 Tx slots)	32.0	31.49	31.44	31.42	**25.47**	25.42	25.40
GPRS (GMSK, 3 Tx slots)	30.0	29.57	29.48	29.45	25.31	25.22	25.19
GPRS (GMSK, 4 Tx slots)	28.0	27.36	27.31	27.26	24.35	24.30	24.25
EGPRS (8PSK, 1 Tx slot)	27.5	27.86	26.53	26.30	18.83	17.50	17.27
EGPRS (8PSK, 2 Tx slots)	27.5	26.32	27.22	26.08	20.30	21.20	20.06
EGPRS (8PSK, 3 Tx slots)	26.0	25.95	24.86	24.65	**21.69**	20.60	20.39
EGPRS (8PSK, 4 Tx slots)	23.5	22.58	23.16	22.15	19.57	20.15	19.14
Band PCS1900	Tune-up limit (dBm)	Burst Average Power (dBm)			Frame-Average Power (dBm)		
TX Channel		512	661	810	512	661	810
Frequency (MHz)		1850.2	1880.0	1909.8	1850.2	1880.0	1909.8
GSM(GMSK)	21.0	20.80	20.51	20.51	11.77	11.48	11.48
GPRS (GMSK, 1 Tx slot)	31.0	30.11	30.04	30.08	21.08	21.01	21.05
GPRS (GMSK, 2 Tx slots)	28.5	28.07	27.75	27.55	22.05	21.73	21.53
GPRS (GMSK, 3 Tx slots)	26.5	26.39	26.06	25.81	**22.13**	21.80	21.55
GPRS (GMSK, 4 Tx slots)	24.5	24.15	23.84	23.63	21.14	20.83	20.62
GPRS (8MSK, 1 Tx slot)	27.5	26.07	26.25	26.74	17.04	17.22	17.71
GPRS (8MSK, 2 Tx slots)	27.0	26.01	26.20	25.65	19.99	20.18	19.63
GPRS (8MSK, 3 Tx slots)	25.5	24.50	24.89	24.28	20.24	**20.63**	20.02
GPRS (8MSK, 4 Tx slots)	23.0	21.55	22.33	21.44	18.54	19.32	18.43

Remark: The frame-averaged power is linearly scaled the maximum burst averaged power over 8 time slots.
The calculated method is shown as below:
Frame-averaged power = Maximum burst averaged power (1 Tx Slot) – 9.03 dB
Frame-averaged power = Maximum burst averaged power (2 Tx Slots) – 6.02 dB
Frame-averaged power = Maximum burst averaged power (3 Tx Slots) - 4.26 dB
Frame-averaged power = Maximum burst averaged power (4 Tx Slots) – 3.01 dB

Note:

1. Per KDB 447498 D01, the maximum output power channel is used for SAR testing and for further SAR test reduction
2. For Data mode SAR testing, GPRS and EDGE should be evaluated, therefore the EUT was set in its highest frame-average power.

<WCDMA Conducted Power>

The following tests were conducted according to the test requirements outlines in 3GPP TS 34.121 specification.

A summary of these settings are illustrated below:

HSDPA Setup Configuration:

a. The EUT was connected to Base Station Agilent E5515C referred to the Setup Configuration.
b. The RF path losses were compensated into the measurements.
c. A call was established between EUT and Base Station with following setting:
   i. Set Gain Factors (β_c and β_d) and parameters were set according to each
   ii. Specific sub-test in the following table, C10.1.4, quoted from the TS 34.121
   iii. Set RMC 12.2Kbps + HSDPA mode.
   iv. Set Cell Power = -86 dBm
   v. Set HS-DSCH Configuration Type to FRC (H-set 1, QPSK)
   vi. Select HSDPA Uplink Parameters
   vii. Set Delta ACK, Delta NACK and Delta CQI = 8
   viii. Set Ack-Nack Repetition Factor to 3
   ix. Set CQI Feedback Cycle (k) to 4 ms
   x. Set CQI Repetition Factor to 2
   xi. Power Ctrl Mode = All Up bits
d. The transmitted maximum output power was recorded.

Table C.10.1.4: β values for transmitter characteristics tests with HS-DPCCH

Sub-test	β_c	β_d	β_d *(SF)*	β_c/β_d	β_{HS} *(Note1, Note 2)*	CM (dB) *(Note 3)*	MPR (dB) *(Note 3)*
1	2/15	15/15	64	2/15	4/15	0.0	0.0
2	12/15 *(Note 4)*	15/15 *(Note 4)*	64	12/15 *(Note 4)*	24/15	1.0	0.0
3	15/15	8/15	64	15/8	30/15	1.5	0.5
4	15/15	4/15	64	15/4	30/15	1.5	0.5

Note 1: Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 30/15 with β_{hs} = 30/15 * β_c.

Note 2: For the HS-DPCCH power mask requirement test in clause 5.2C, 5.7A, and the Error Vector Magnitude (EVM) with HS-DPCCH test in clause 5.13.1A, and HSDPA EVM with phase discontinuity in clause 5.13.1AA, Δ_{ACK} and Δ_{NACK} = 30/15 with β_{hs} = 30/15 * β_c, and Δ_{CQI} = 24/15 with β_{hs} = 24/15 * β_c.

Note 3: CM = 1 for β_c/β_d =12/15, β_{hs}/β_c=24/15. For all other combinations of DPDCH, DPCCH and HS-DPCCH the MPR is based on the relative CM difference. This is applicable for only UEs that support HSDPA in release 6 and later releases.

Note 4: For subtest 2 the β_c/β_d ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to β_c = 11/15 and β_d = 15/15.

Setup Configuration

HSUPA Setup Configuration:

a. The EUT was connected to Base Station Agilent E5515C referred to the Setup Configuration.
b. The RF path losses were compensated into the measurements.
c. A call was established between EUT and Base Station with following setting * :
   i. Call Configs = 5.2B, 5.9B, 5.10B, and 5.13.2B with QPSK
   ii. Set the Gain Factors (β_c and β_d) and parameters (AG Index) were set according to each specific sub-test in the following table, C11.1.3, quoted from the TS 34.121
   iii. Set Cell Power = -86 dBm
   iv. Set Channel Type = 12.2k + HSPA
   v. Set UE Target Power
   vi. Power Ctrl Mode= Alternating bits
   vii. Set and observe the E-TFCI
   viii. Confirm that E-TFCI is equal to the target E-TFCI of 75 for sub-test 1, and other subtest's E-TFCI
d. The transmitted maximum output power was recorded.

Table C.11.1.3: β values for transmitter characteristics tests with HS-DPCCH and E-DCH

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{HS} (Note1)	β_{ec}	β_{ed} (Note 5) (Note 6)	β_{ed} (SF)	β_{ed} (Codes)	CM (dB) (Note 2)	MPR (dB) (Note 2)	AG Index (Note 6)	E-TFCI
1	11/15 (Note 3)	15/15 (Note 3)	64	11/15 (Note 3)	22/15	209/225	1309/225	4	1	1.0	0.0	20	75
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67
3	15/15	9/15	64	15/9	30/15	30/15	$\beta_{ed}1$: 47/15 $\beta_{ed}2$: 47/15	4 4	2	2.0	1.0	15	92
4	2/15	15/15	64	2/15	4/15	2/15	56/75	4	1	3.0	2.0	17	71
5	15/15 (Note 4)	15/15 (Note 4)	64	15/15 (Note 4)	30/15	24/15	134/15	4	1	1.0	0.0	21	81

Note 1: Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 30/15 with β_{hs} = 30/15 * β_c .
Note 2: CM = 1 for β_c/β_d =12/15, β_{hs}/β_c=24/15. For all other combinations of DPDCH, DPCCH, HS- DPCCH, E-DPDCH and E-DPCCH the MPR is based on the relative CM difference.
Note 3: For subtest 1 the β_c/β_d ratio of 11/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to β_c = 10/15 and β_d = 15/15.
Note 4: For subtest 5 the β_c/β_d ratio of 15/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to β_c = 14/15 and β_d = 15/15.
Note 5: In case of testing by UE using E-DPDCH Physical Layer category 1, Sub-test 3 is omitted according to TS25.306 Table 5.1g.
Note 6: β_{ed} can not be set directly, it is set by Absolute Grant Value.

Setup Configuration

<WCDMA Conducted Power>

WCDMA	Band II (dBm)				Band V (dBm)			
TX Channel	Tune-up limit	9262	9400	9538	Tune-up limit	4132	4183	4233
Frequency (MHz)	(dBm)	1852.4	1880.0	1907.6	(dBm)	826.4	836.6	846.6
RMC 12.2Kbps	22.0	21.58	21.65	**21.74**	22.0	21.08	**21.85**	20.53
RMC AMR	22.0	21.18	21.08	21.24	22.0	20.68	21.31	21.05
HSDPA Subtest-1	21.5	20.92	21.21	21.10	21.5	21.19	21.32	19.97
HSDPA Subtest-2	21.5	21.20	21.20	21.09	21.5	21.19	21.32	19.94
HSDPA Subtest-3	21.5	20.92	21.22	21.11	21.5	21.20	21.32	19.97
HSDPA Subtest-4	21.5	20.94	21.23	21.12	21.5	21.19	21.27	19.89
HSUPA Subtest-1	21.5	20.76	21.23	21.08	21.5	21.13	21.24	19.87
HSUPA Subtest-2	21.5	20.78	21.21	21.06	21.5	21.10	21.23	19.86
HSUPA Subtest-3	21.5	20.77	21.19	21.05	21.5	21.09	21.24	19.89
HSUPA Subtest-4	21.5	20.76	21.20	21.05	21.5	21.18	21.31	19.95
HSUPA Subtest-5	21.5	20.74	21.09	21.02	21.5	21.08	21.25	19.89

General Note

1. Per KDB 941225 D01 v02, RMC 12.2kbps setting is used to evaluate SAR. If AMR 12.2kbps power is < 0.25dB higher than RMC 12.2kbps, SAR tests with AMR 12.2kbps can be excluded.
2. By design, AMR and HSDPA/HSUPA RF power will not be larger than RMC 12.2kbps, detailed information is included in Tune-up Procure exhibit.
3. It is expected by the manufacturer that MPR for some HSDPA/HSUPA subtests may differ from the specification of 3GPP, according to the chipset implementation in this model. The implementation and expected deviation are detailed in tune-up procedure exhibit.

<LTE Conducted Power>

Condition	Band	Channel Bandwidth	Channel	RB Configure	Result (dBm)		Tune-up limit (dBm)	
					QPSK	16QAM	QPSK	16QAM
NTNV	Band2	1.4MHz	18607	1RB#0	24.42	23.18	25.0	24.0
NTNV	Band2	1.4MHz	18607	1RB#2	24.76	23.43	25.0	24.0
NTNV	Band2	1.4MHz	18607	1RB#5	23.90	23.19	25.0	24.0
NTNV	Band2	1.4MHz	18607	3RB#0	24.50	23.55	25.0	24.0
NTNV	Band2	1.4MHz	18607	3RB#1	24.56	23.15	25.0	24.0
NTNV	Band2	1.4MHz	18607	3RB#3	24.46	23.56	25.0	24.0
NTNV	Band2	1.4MHz	18607	6RB#0	23.33	22.40	25.0	24.0
NTNV	Band2	1.4MHz	18900	1RB#0	23.68	22.83	25.0	24.0
NTNV	Band2	1.4MHz	18900	1RB#2	23.97	23.16	25.0	24.0
NTNV	Band2	1.4MHz	18900	1RB#5	23.65	22.83	25.0	24.0
NTNV	Band2	1.4MHz	18900	3RB#0	23.74	23.02	25.0	24.0
NTNV	Band2	1.4MHz	18900	3RB#1	23.84	23.04	25.0	24.0
NTNV	Band2	1.4MHz	18900	3RB#3	23.73	23.12	25.0	24.0
NTNV	Band2	1.4MHz	18900	6RB#0	22.66	21.72	25.0	24.0
NTNV	Band2	1.4MHz	19193	1RB#0	23.26	22.33	25.0	24.0
NTNV	Band2	1.4MHz	19193	1RB#2	23.49	22.55	25.0	24.0
NTNV	Band2	1.4MHz	19193	1RB#5	23.25	22.33	25.0	24.0
NTNV	Band2	1.4MHz	19193	3RB#0	23.26	22.37	25.0	24.0
NTNV	Band2	1.4MHz	19193	3RB#1	23.23	22.36	25.0	24.0
NTNV	Band2	1.4MHz	19193	3RB#3	23.31	22.37	25.0	24.0
NTNV	Band2	1.4MHz	19193	6RB#0	22.29	21.40	25.0	24.0
NTNV	Band2	3MHz	18615	1RB#0	23.99	23.24	25.0	24.0
NTNV	Band2	3MHz	18615	1RB#8	23.98	23.20	25.0	24.0
NTNV	Band2	3MHz	18615	1RB#14	23.96	23.12	25.0	24.0
NTNV	Band2	3MHz	18615	8RB#0	22.96	22.12	25.0	24.0
NTNV	Band2	3MHz	18615	8RB#4	23.03	22.12	25.0	24.0
NTNV	Band2	3MHz	18615	8RB#7	22.97	22.10	25.0	24.0
NTNV	Band2	3MHz	18615	15RB#0	22.91	22.08	25.0	24.0
NTNV	Band2	3MHz	18900	1RB#0	23.67	23.28	25.0	24.0
NTNV	Band2	3MHz	18900	1RB#8	23.64	23.31	25.0	24.0
NTNV	Band2	3MHz	18900	1RB#14	23.59	23.28	25.0	24.0
NTNV	Band2	3MHz	18900	8RB#0	22.70	21.91	25.0	24.0
NTNV	Band2	3MHz	18900	8RB#4	22.71	21.88	25.0	24.0
NTNV	Band2	3MHz	18900	8RB#7	22.64	21.85	25.0	24.0
NTNV	Band2	3MHz	18900	15RB#0	22.63	21.73	25.0	24.0
NTNV	Band2	3MHz	19185	1RB#0	23.28	22.43	25.0	24.0
NTNV	Band2	3MHz	19185	1RB#8	23.25	22.31	25.0	24.0
NTNV	Band2	3MHz	19185	1RB#14	23.29	22.32	25.0	24.0
NTNV	Band2	3MHz	19185	8RB#0	22.29	21.26	25.0	24.0
NTNV	Band2	3MHz	19185	8RB#4	22.29	21.25	25.0	24.0

NTNV	Band2	3MHz	19185	8RB#7	22.23	21.22	25.0	24.0
NTNV	Band2	3MHz	19185	15RB#0	22.22	21.24	25.0	24.0
NTNV	Band2	5MHz	18625	1RB#0	23.90	23.00	25.0	24.0
NTNV	Band2	5MHz	18625	1RB#12	24.02	23.02	25.0	24.0
NTNV	Band2	5MHz	18625	1RB#24	23.86	22.95	25.0	24.0
NTNV	Band2	5MHz	18625	12RB#0	22.94	22.08	25.0	24.0
NTNV	Band2	5MHz	18625	12RB#6	22.92	21.99	25.0	24.0
NTNV	Band2	5MHz	18625	12RB#13	23.00	22.02	25.0	24.0
NTNV	Band2	5MHz	18625	25RB#0	22.97	22.09	25.0	24.0
NTNV	Band2	5MHz	18900	1RB#0	23.69	23.00	25.0	24.0
NTNV	Band2	5MHz	18900	1RB#12	23.79	23.10	25.0	24.0
NTNV	Band2	5MHz	18900	1RB#24	23.58	22.91	25.0	24.0
NTNV	Band2	5MHz	18900	12RB#0	22.65	21.81	25.0	24.0
NTNV	Band2	5MHz	18900	12RB#6	22.65	21.79	25.0	24.0
NTNV	Band2	5MHz	18900	12RB#13	22.61	21.76	25.0	24.0
NTNV	Band2	5MHz	18900	25RB#0	22.68	21.71	25.0	24.0
NTNV	Band2	5MHz	19175	1RB#0	23.19	22.29	25.0	24.0
NTNV	Band2	5MHz	19175	1RB#12	23.30	22.33	25.0	24.0
NTNV	Band2	5MHz	19175	1RB#24	23.13	22.14	25.0	24.0
NTNV	Band2	5MHz	19175	12RB#0	22.27	21.23	25.0	24.0
NTNV	Band2	5MHz	19175	12RB#6	22.25	21.27	25.0	24.0
NTNV	Band2	5MHz	19175	12RB#13	22.20	21.17	25.0	24.0
NTNV	Band2	5MHz	19175	25RB#0	22.27	21.25	25.0	24.0
NTNV	Band2	10MHz	18650	1RB#0	23.94	23.57	25.0	24.0
NTNV	Band2	10MHz	18650	1RB#24	24.13	23.80	25.0	24.0
NTNV	Band2	10MHz	18650	1RB#49	23.91	23.50	25.0	24.0
NTNV	Band2	10MHz	18650	25RB#0	23.05	22.08	25.0	24.0
NTNV	Band2	10MHz	18650	25RB#12	23.03	22.11	25.0	24.0
NTNV	Band2	10MHz	18650	25RB#25	23.10	22.11	25.0	24.0
NTNV	Band2	10MHz	18650	50RB#0	23.07	22.12	25.0	24.0
NTNV	Band2	10MHz	18900	1RB#0	23.73	22.92	25.0	24.0
NTNV	Band2	10MHz	18900	1RB#24	24.01	23.06	25.0	24.0
NTNV	Band2	10MHz	18900	1RB#49	23.63	22.71	25.0	24.0
NTNV	Band2	10MHz	18900	25RB#0	22.79	21.84	25.0	24.0
NTNV	Band2	10MHz	18900	25RB#12	22.79	21.86	25.0	24.0
NTNV	Band2	10MHz	18900	25RB#25	22.72	21.80	25.0	24.0
NTNV	Band2	10MHz	18900	50RB#0	22.79	21.74	25.0	24.0
NTNV	Band2	10MHz	19150	1RB#0	23.40	22.67	25.0	24.0
NTNV	Band2	10MHz	19150	1RB#24	23.65	22.71	25.0	24.0
NTNV	Band2	10MHz	19150	1RB#49	23.14	22.40	25.0	24.0
NTNV	Band2	10MHz	19150	25RB#0	22.44	21.53	25.0	24.0
NTNV	Band2	10MHz	19150	25RB#12	22.42	21.55	25.0	24.0
NTNV	Band2	10MHz	19150	25RB#25	22.38	21.46	25.0	24.0

NTNV	Band2	10MHz	19150	50RB#0	22.36	21.42	25.0	24.0
NTNV	Band2	15MHz	18675	1RB#0	23.90	23.56	25.0	24.0
NTNV	Band2	15MHz	18675	1RB#38	23.99	23.64	25.0	24.0
NTNV	Band2	15MHz	18675	1RB#74	23.85	23.47	25.0	24.0
NTNV	Band2	15MHz	18675	38RB#0	23.00	22.06	25.0	24.0
NTNV	Band2	15MHz	18675	38RB#18	23.00	22.05	25.0	24.0
NTNV	Band2	15MHz	18675	38RB#37	23.08	22.05	25.0	24.0
NTNV	Band2	15MHz	18675	75RB#0	23.03	22.06	25.0	24.0
NTNV	Band2	15MHz	18900	1RB#0	23.69	23.32	25.0	24.0
NTNV	Band2	15MHz	18900	1RB#38	23.67	23.38	25.0	24.0
NTNV	Band2	15MHz	18900	1RB#74	23.44	23.07	25.0	24.0
NTNV	Band2	15MHz	18900	38RB#0	22.74	21.69	25.0	24.0
NTNV	Band2	15MHz	18900	38RB#18	22.75	21.70	25.0	24.0
NTNV	Band2	15MHz	18900	38RB#37	22.75	21.71	25.0	24.0
NTNV	Band2	15MHz	18900	75RB#0	22.68	21.73	25.0	24.0
NTNV	Band2	15MHz	19125	1RB#0	23.45	22.60	25.0	24.0
NTNV	Band2	15MHz	19125	1RB#38	23.44	22.58	25.0	24.0
NTNV	Band2	15MHz	19125	1RB#74	23.19	22.29	25.0	24.0
NTNV	Band2	15MHz	19125	38RB#0	22.48	21.48	25.0	24.0
NTNV	Band2	15MHz	19125	38RB#18	22.46	21.41	25.0	24.0
NTNV	Band2	15MHz	19125	38RB#37	22.45	21.46	25.0	24.0
NTNV	Band2	15MHz	19125	75RB#0	22.44	21.41	25.0	24.0
NTNV	Band2	20MHz	18700	1RB#0	23.71	23.25	25.0	24.0
NTNV	Band2	20MHz	18700	1RB#49	24.21	23.67	25.0	24.0
NTNV	Band2	20MHz	18700	1RB#99	23.62	23.17	25.0	24.0
NTNV	Band2	20MHz	18700	50RB#0	23.01	21.95	25.0	24.0
NTNV	Band2	20MHz	18700	50RB#25	22.97	22.03	25.0	24.0
NTNV	Band2	20MHz	18700	50RB#50	22.95	21.96	25.0	24.0
NTNV	Band2	20MHz	18700	100RB#0	22.93	21.99	25.0	24.0
NTNV	Band2	20MHz	18900	1RB#0	23.65	23.55	25.0	24.0
NTNV	Band2	20MHz	18900	1RB#49	23.97	23.96	25.0	24.0
NTNV	Band2	20MHz	18900	1RB#99	23.33	23.24	25.0	24.0
NTNV	Band2	20MHz	18900	50RB#0	22.83	22.30	25.0	24.0
NTNV	Band2	20MHz	18900	50RB#25	22.84	22.26	25.0	24.0
NTNV	Band2	20MHz	18900	50RB#50	22.62	22.16	25.0	24.0
NTNV	Band2	20MHz	18900	100RB#0	22.70	21.71	25.0	24.0
NTNV	Band2	20MHz	19100	1RB#0	23.95	23.21	25.0	24.0
NTNV	Band2	20MHz	19100	1RB#49	24.18	23.68	25.0	24.0
NTNV	Band2	20MHz	19100	1RB#99	23.49	22.90	25.0	24.0
NTNV	Band2	20MHz	19100	50RB#0	23.24	22.24	25.0	24.0
NTNV	Band2	20MHz	19100	50RB#25	23.22	22.28	25.0	24.0
NTNV	Band2	20MHz	19100	50RB#50	22.93	22.05	25.0	24.0
NTNV	Band2	20MHz	19100	100RB#0	23.02	22.14	25.0	24.0

Condition	Band	Channel Bandwidth	Channel	RB Configure	Result (dBm)		Tune-up limit (dBm)	
					QPSK	16QAM	QPSK	16QAM
NTNV	Band4	1.4MHz	19957	1RB#0	24.34	23.55	25.0	24.0
NTNV	Band4	1.4MHz	19957	1RB#2	24.60	23.77	25.0	24.0
NTNV	Band4	1.4MHz	19957	1RB#5	24.33	23.57	25.0	24.0
NTNV	Band4	1.4MHz	19957	3RB#0	24.43	23.61	25.0	24.0
NTNV	Band4	1.4MHz	19957	3RB#1	24.38	23.62	25.0	24.0
NTNV	Band4	1.4MHz	19957	3RB#3	24.44	23.61	25.0	24.0
NTNV	Band4	1.4MHz	19957	6RB#0	23.35	22.50	25.0	24.0
NTNV	Band4	1.4MHz	20175	1RB#0	24.26	23.52	25.0	24.0
NTNV	Band4	1.4MHz	20175	1RB#2	24.58	23.80	25.0	24.0
NTNV	Band4	1.4MHz	20175	1RB#5	24.21	23.52	25.0	24.0
NTNV	Band4	1.4MHz	20175	3RB#0	24.39	23.84	25.0	24.0
NTNV	Band4	1.4MHz	20175	3RB#1	24.40	23.77	25.0	24.0
NTNV	Band4	1.4MHz	20175	3RB#3	24.38	23.88	25.0	24.0
NTNV	Band4	1.4MHz	20175	6RB#0	23.30	22.41	25.0	24.0
NTNV	Band4	1.4MHz	20393	1RB#0	24.03	23.10	25.0	24.0
NTNV	Band4	1.4MHz	20393	1RB#2	24.37	23.33	25.0	24.0
NTNV	Band4	1.4MHz	20393	1RB#5	24.02	23.11	25.0	24.0
NTNV	Band4	1.4MHz	20393	3RB#0	24.05	23.08	25.0	24.0
NTNV	Band4	1.4MHz	20393	3RB#1	24.08	23.11	25.0	24.0
NTNV	Band4	1.4MHz	20393	3RB#3	24.06	23.11	25.0	24.0
NTNV	Band4	1.4MHz	20393	6RB#0	23.04	22.14	25.0	24.0
NTNV	Band4	3MHz	19965	1RB#0	24.38	23.89	25.0	24.0
NTNV	Band4	3MHz	19965	1RB#8	24.37	23.91	25.0	24.0
NTNV	Band4	3MHz	19965	1RB#14	24.34	23.85	25.0	24.0
NTNV	Band4	3MHz	19965	8RB#0	23.45	22.61	25.0	24.0
NTNV	Band4	3MHz	19965	8RB#4	23.41	22.59	25.0	24.0
NTNV	Band4	3MHz	19965	8RB#7	23.38	22.62	25.0	24.0
NTNV	Band4	3MHz	19965	15RB#0	23.40	22.46	25.0	24.0
NTNV	Band4	3MHz	20175	1RB#0	23.89	23.08	25.0	24.0
NTNV	Band4	3MHz	20175	1RB#8	23.91	23.07	25.0	24.0
NTNV	Band4	3MHz	20175	1RB#14	23.87	23.02	25.0	24.0
NTNV	Band4	3MHz	20175	8RB#0	22.90	21.91	25.0	24.0
NTNV	Band4	3MHz	20175	8RB#4	22.83	21.89	25.0	24.0
NTNV	Band4	3MHz	20175	8RB#7	22.90	21.86	25.0	24.0
NTNV	Band4	3MHz	20175	15RB#0	23.34	21.89	25.0	24.0
NTNV	Band4	3MHz	20385	1RB#0	24.02	23.29	25.0	24.0
NTNV	Band4	3MHz	20385	1RB#8	24.09	23.27	25.0	24.0
NTNV	Band4	3MHz	20385	1RB#14	23.91	23.21	25.0	24.0
NTNV	Band4	3MHz	20385	8RB#0	23.11	22.24	25.0	24.0
NTNV	Band4	3MHz	20385	8RB#4	23.10	22.20	25.0	24.0

NTNV	Band4	3MHz	20385	8RB#7	23.02	22.13	25.0	24.0
NTNV	Band4	3MHz	20385	15RB#0	23.08	22.16	25.0	24.0
NTNV	Band4	5MHz	19975	1RB#0	23.84	23.11	25.0	24.0
NTNV	Band4	5MHz	19975	1RB#12	23.99	22.95	25.0	24.0
NTNV	Band4	5MHz	19975	1RB#24	23.80	22.73	25.0	24.0
NTNV	Band4	5MHz	19975	12RB#0	23.45	22.44	25.0	24.0
NTNV	Band4	5MHz	19975	12RB#6	23.44	22.47	25.0	24.0
NTNV	Band4	5MHz	19975	12RB#13	23.38	22.39	25.0	24.0
NTNV	Band4	5MHz	19975	25RB#0	23.35	21.99	25.0	24.0
NTNV	Band4	5MHz	20175	1RB#0	23.80	23.19	25.0	24.0
NTNV	Band4	5MHz	20175	1RB#12	23.96	23.24	25.0	24.0
NTNV	Band4	5MHz	20175	1RB#24	23.68	23.09	25.0	24.0
NTNV	Band4	5MHz	20175	12RB#0	22.83	21.96	25.0	24.0
NTNV	Band4	5MHz	20175	12RB#6	22.85	21.96	25.0	24.0
NTNV	Band4	5MHz	20175	12RB#13	22.86	21.95	25.0	24.0
NTNV	Band4	5MHz	20175	25RB#0	22.91	21.96	25.0	24.0
NTNV	Band4	5MHz	20375	1RB#0	23.46	23.03	25.0	24.0
NTNV	Band4	5MHz	20375	1RB#12	23.53	23.11	25.0	24.0
NTNV	Band4	5MHz	20375	1RB#24	23.42	23.02	25.0	24.0
NTNV	Band4	5MHz	20375	12RB#0	22.55	22.06	25.0	24.0
NTNV	Band4	5MHz	20375	12RB#6	22.53	22.02	25.0	24.0
NTNV	Band4	5MHz	20375	12RB#13	22.50	22.01	25.0	24.0
NTNV	Band4	5MHz	20375	25RB#0	22.58	21.97	25.0	24.0
NTNV	Band4	10MHz	20000	1RB#0	23.96	23.34	25.0	24.0
NTNV	Band4	10MHz	20000	1RB#24	24.09	23.59	25.0	24.0
NTNV	Band4	10MHz	20000	1RB#49	23.81	23.45	25.0	24.0
NTNV	Band4	10MHz	20000	25RB#0	22.98	22.09	25.0	24.0
NTNV	Band4	10MHz	20000	25RB#12	22.99	22.11	25.0	24.0
NTNV	Band4	10MHz	20000	25RB#25	22.92	22.03	25.0	24.0
NTNV	Band4	10MHz	20000	50RB#0	23.45	22.05	25.0	24.0
NTNV	Band4	10MHz	20175	1RB#0	23.91	23.02	25.0	24.0
NTNV	Band4	10MHz	20175	1RB#24	24.10	23.23	25.0	24.0
NTNV	Band4	10MHz	20175	1RB#49	23.75	23.00	25.0	24.0
NTNV	Band4	10MHz	20175	25RB#0	22.95	22.02	25.0	24.0
NTNV	Band4	10MHz	20175	25RB#12	22.90	22.03	25.0	24.0
NTNV	Band4	10MHz	20175	25RB#25	22.92	22.03	25.0	24.0
NTNV	Band4	10MHz	20175	50RB#0	22.94	22.02	25.0	24.0
NTNV	Band4	10MHz	20350	1RB#0	24.06	23.76	25.0	24.0
NTNV	Band4	10MHz	20350	1RB#24	24.26	23.87	25.0	24.0
NTNV	Band4	10MHz	20350	1RB#49	23.92	23.57	25.0	24.0
NTNV	Band4	10MHz	20350	25RB#0	23.09	22.14	25.0	24.0
NTNV	Band4	10MHz	20350	25RB#12	23.11	22.18	25.0	24.0
NTNV	Band4	10MHz	20350	25RB#25	23.08	22.09	25.0	24.0

NTNV	Band4	10MHz	20350	50RB#0	22.64	22.12	25.0	24.0
NTNV	Band4	15MHz	20025	1RB#0	23.84	23.41	25.0	24.0
NTNV	Band4	15MHz	20025	1RB#38	23.82	23.52	25.0	24.0
NTNV	Band4	15MHz	20025	1RB#74	23.69	23.44	25.0	24.0
NTNV	Band4	15MHz	20025	38RB#0	23.42	21.96	25.0	24.0
NTNV	Band4	15MHz	20025	38RB#18	22.94	21.92	25.0	24.0
NTNV	Band4	15MHz	20025	38RB#37	22.91	21.94	25.0	24.0
NTNV	Band4	15MHz	20025	75RB#0	23.40	21.94	25.0	24.0
NTNV	Band4	15MHz	20175	1RB#0	23.82	23.57	25.0	24.0
NTNV	Band4	15MHz	20175	1RB#38	23.75	23.62	25.0	24.0
NTNV	Band4	15MHz	20175	1RB#74	23.66	23.34	25.0	24.0
NTNV	Band4	15MHz	20175	38RB#0	22.88	21.92	25.0	24.0
NTNV	Band4	15MHz	20175	38RB#18	22.85	21.92	25.0	24.0
NTNV	Band4	15MHz	20175	38RB#37	22.92	21.92	25.0	24.0
NTNV	Band4	15MHz	20175	75RB#0	22.85	21.91	25.0	24.0
NTNV	Band4	15MHz	20325	1RB#0	23.71	22.83	25.0	24.0
NTNV	Band4	15MHz	20325	1RB#38	23.75	22.83	25.0	24.0
NTNV	Band4	15MHz	20325	1RB#74	23.54	22.63	25.0	24.0
NTNV	Band4	15MHz	20325	38RB#0	22.69	21.69	25.0	24.0
NTNV	Band4	15MHz	20325	38RB#18	22.69	21.69	25.0	24.0
NTNV	Band4	15MHz	20325	38RB#37	22.68	21.65	25.0	24.0
NTNV	Band4	15MHz	20325	75RB#0	22.68	21.68	25.0	24.0
NTNV	Band4	20MHz	20050	1RB#0	23.75	23.07	25.0	24.0
NTNV	Band4	20MHz	20050	1RB#49	24.09	23.52	25.0	24.0
NTNV	Band4	20MHz	20050	1RB#99	23.59	22.98	25.0	24.0
NTNV	Band4	20MHz	20050	50RB#0	23.06	22.08	25.0	24.0
NTNV	Band4	20MHz	20050	50RB#25	23.04	22.09	25.0	24.0
NTNV	Band4	20MHz	20050	50RB#50	22.86	21.82	25.0	24.0
NTNV	Band4	20MHz	20050	100RB#0	22.90	21.99	25.0	24.0
NTNV	Band4	20MHz	20175	1RB#0	23.80	23.13	25.0	24.0
NTNV	Band4	20MHz	20175	1RB#49	24.28	23.52	25.0	24.0
NTNV	Band4	20MHz	20175	1RB#99	23.62	22.80	25.0	24.0
NTNV	Band4	20MHz	20175	50RB#0	22.85	22.08	25.0	24.0
NTNV	Band4	20MHz	20175	50RB#25	22.97	22.09	25.0	24.0
NTNV	Band4	20MHz	20175	50RB#50	22.94	21.97	25.0	24.0
NTNV	Band4	20MHz	20175	100RB#0	22.95	21.98	25.0	24.0
NTNV	Band4	20MHz	20300	1RB#0	23.58	23.16	25.0	24.0
NTNV	Band4	20MHz	20300	1RB#49	23.99	23.49	25.0	24.0
NTNV	Band4	20MHz	20300	1RB#99	23.34	22.89	25.0	24.0
NTNV	Band4	20MHz	20300	50RB#0	22.73	21.76	25.0	24.0
NTNV	Band4	20MHz	20300	50RB#25	22.77	21.74	25.0	24.0
NTNV	Band4	20MHz	20300	50RB#50	22.65	21.68	25.0	24.0
NTNV	Band4	20MHz	20300	100RB#0	22.76	21.81	25.0	24.0

Condition	Band	Channel Bandwidth	Channel	RB Configure	Result (dBm)		Tune-up limit (dBm)	
					QPSK	16QAM	QPSK	16QAM
NTNV	Band5	1.4MHz	20407	1RB#0	24.04	23.31	25.0	24.0
NTNV	Band5	1.4MHz	20407	1RB#2	24.33	23.59	25.0	24.0
NTNV	Band5	1.4MHz	20407	1RB#5	24.06	23.36	25.0	24.0
NTNV	Band5	1.4MHz	20407	3RB#0	24.14	23.22	25.0	24.0
NTNV	Band5	1.4MHz	20407	3RB#1	24.18	23.22	25.0	24.0
NTNV	Band5	1.4MHz	20407	3RB#3	24.19	23.24	25.0	24.0
NTNV	Band5	1.4MHz	20407	6RB#0	23.15	22.25	25.0	24.0
NTNV	Band5	1.4MHz	20525	1RB#0	24.15	23.30	25.0	24.0
NTNV	Band5	1.4MHz	20525	1RB#2	24.34	23.47	25.0	24.0
NTNV	Band5	1.4MHz	20525	1RB#5	24.05	23.26	25.0	24.0
NTNV	Band5	1.4MHz	20525	3RB#0	24.19	23.41	25.0	24.0
NTNV	Band5	1.4MHz	20525	3RB#1	24.14	23.42	25.0	24.0
NTNV	Band5	1.4MHz	20525	3RB#3	24.15	23.42	25.0	24.0
NTNV	Band5	1.4MHz	20525	6RB#0	23.17	22.22	25.0	24.0
NTNV	Band5	1.4MHz	20643	1RB#0	24.12	23.25	25.0	24.0
NTNV	Band5	1.4MHz	20643	1RB#2	24.42	23.44	25.0	24.0
NTNV	Band5	1.4MHz	20643	1RB#5	24.18	23.17	25.0	24.0
NTNV	Band5	1.4MHz	20643	3RB#0	24.17	23.18	25.0	24.0
NTNV	Band5	1.4MHz	20643	3RB#1	24.12	23.17	25.0	24.0
NTNV	Band5	1.4MHz	20643	3RB#3	24.16	23.25	25.0	24.0
NTNV	Band5	1.4MHz	20643	6RB#0	23.14	22.24	25.0	24.0
NTNV	Band5	3MHz	20415	1RB#0	24.12	23.69	25.0	24.0
NTNV	Band5	3MHz	20415	1RB#8	24.06	23.79	25.0	24.0
NTNV	Band5	3MHz	20415	1RB#14	24.08	23.73	25.0	24.0
NTNV	Band5	3MHz	20415	8RB#0	23.05	22.31	25.0	24.0
NTNV	Band5	3MHz	20415	8RB#4	23.07	22.30	25.0	24.0
NTNV	Band5	3MHz	20415	8RB#7	23.09	22.37	25.0	24.0
NTNV	Band5	3MHz	20415	15RB#0	23.05	22.16	25.0	24.0
NTNV	Band5	3MHz	20525	1RB#0	24.14	23.24	25.0	24.0
NTNV	Band5	3MHz	20525	1RB#8	24.24	23.29	25.0	24.0
NTNV	Band5	3MHz	20525	1RB#14	24.21	23.33	25.0	24.0
NTNV	Band5	3MHz	20525	8RB#0	23.14	22.13	25.0	24.0
NTNV	Band5	3MHz	20525	8RB#4	23.11	22.16	25.0	24.0
NTNV	Band5	3MHz	20525	8RB#7	23.12	22.20	25.0	24.0
NTNV	Band5	3MHz	20525	15RB#0	23.14	22.19	25.0	24.0
NTNV	Band5	3MHz	20635	1RB#0	24.08	23.43	25.0	24.0
NTNV	Band5	3MHz	20635	1RB#8	24.09	23.37	25.0	24.0
NTNV	Band5	3MHz	20635	1RB#14	24.11	23.28	25.0	24.0
NTNV	Band5	3MHz	20635	8RB#0	23.14	22.32	25.0	24.0

NTNV	Band5	3MHz	20635	8RB#4	23.09	22.32	25.0	24.0
NTNV	Band5	3MHz	20635	8RB#7	23.10	22.24	25.0	24.0
NTNV	Band5	3MHz	20635	15RB#0	23.12	22.22	25.0	24.0
NTNV	Band5	5MHz	20425	1RB#0	24.10	23.42	25.0	24.0
NTNV	Band5	5MHz	20425	1RB#12	24.19	23.56	25.0	24.0
NTNV	Band5	5MHz	20425	1RB#24	24.17	23.41	25.0	24.0
NTNV	Band5	5MHz	20425	12RB#0	23.08	22.28	25.0	24.0
NTNV	Band5	5MHz	20425	12RB#6	23.09	22.20	25.0	24.0
NTNV	Band5	5MHz	20425	12RB#13	23.12	22.24	25.0	24.0
NTNV	Band5	5MHz	20425	25RB#0	23.09	22.13	25.0	24.0
NTNV	Band5	5MHz	20525	1RB#0	23.98	23.14	25.0	24.0
NTNV	Band5	5MHz	20525	1RB#12	24.14	23.22	25.0	24.0
NTNV	Band5	5MHz	20525	1RB#24	24.07	23.08	25.0	24.0
NTNV	Band5	5MHz	20525	12RB#0	23.09	22.17	25.0	24.0
NTNV	Band5	5MHz	20525	12RB#6	23.15	22.17	25.0	24.0
NTNV	Band5	5MHz	20525	12RB#13	23.11	22.19	25.0	24.0
NTNV	Band5	5MHz	20525	25RB#0	23.16	22.20	25.0	24.0
NTNV	Band5	5MHz	20625	1RB#0	24.07	23.14	25.0	24.0
NTNV	Band5	5MHz	20625	1RB#12	24.10	23.19	25.0	24.0
NTNV	Band5	5MHz	20625	1RB#24	24.01	23.05	25.0	24.0
NTNV	Band5	5MHz	20625	12RB#0	23.14	22.22	25.0	24.0
NTNV	Band5	5MHz	20625	12RB#6	23.13	22.15	25.0	24.0
NTNV	Band5	5MHz	20625	12RB#13	22.95	22.11	25.0	24.0
NTNV	Band5	5MHz	20625	25RB#0	23.08	22.19	25.0	24.0
NTNV	Band5	10MHz	20450	1RB#0	24.07	23.75	25.0	24.0
NTNV	Band5	10MHz	20450	1RB#24	24.31	23.95	25.0	24.0
NTNV	Band5	10MHz	20450	1RB#49	24.11	23.75	25.0	24.0
NTNV	Band5	10MHz	20450	25RB#0	23.16	22.28	25.0	24.0
NTNV	Band5	10MHz	20450	25RB#12	23.16	22.27	25.0	24.0
NTNV	Band5	10MHz	20450	25RB#25	23.21	22.27	25.0	24.0
NTNV	Band5	10MHz	20450	50RB#0	23.63	22.23	25.0	24.0
NTNV	Band5	10MHz	20525	1RB#0	24.19	23.28	25.0	24.0
NTNV	Band5	10MHz	20525	1RB#24	24.35	23.48	25.0	24.0
NTNV	Band5	10MHz	20525	1RB#49	24.17	23.19	25.0	24.0
NTNV	Band5	10MHz	20525	25RB#0	23.18	22.29	25.0	24.0
NTNV	Band5	10MHz	20525	25RB#12	23.18	22.30	25.0	24.0
NTNV	Band5	10MHz	20525	25RB#25	23.13	22.18	25.0	24.0
NTNV	Band5	10MHz	20525	50RB#0	23.14	22.15	25.0	24.0
NTNV	Band5	10MHz	20600	1RB#0	24.11	23.35	25.0	24.0
NTNV	Band5	10MHz	20600	1RB#24	24.34	23.58	25.0	24.0
NTNV	Band5	10MHz	20600	1RB#49	24.14	23.27	25.0	24.0
NTNV	Band5	10MHz	20600	25RB#0	23.27	22.39	25.0	24.0
NTNV	Band5	10MHz	20600	25RB#12	23.25	22.38	25.0	24.0

NTNV	Band5	10MHz	20600	25RB#25	23.07	22.22	25.0	24.0
NTNV	Band5	10MHz	20600	50RB#0	23.15	22.26	25.0	24.0

Condition	Band	Channel Bandwidth	Channel	RB Configure	Result (dBm)		Tune-up limit (dBm)	
					QPSK	16QAM	QPSK	16QAM
NTNV	Band7	5MHz	20775	1RB#0	19.67	17.97	25.0	24.0
NTNV	Band7	5MHz	20775	1RB#12	19.70	18.08	25.0	24.0
NTNV	Band7	5MHz	20775	1RB#24	19.54	17.97	25.0	24.0
NTNV	Band7	5MHz	20775	12RB#0	18.64	17.56	25.0	24.0
NTNV	Band7	5MHz	20775	12RB#6	18.63	17.56	25.0	24.0
NTNV	Band7	5MHz	20775	12RB#13	18.63	17.62	25.0	24.0
NTNV	Band7	5MHz	20775	25RB#0	18.54	17.72	25.0	24.0
NTNV	Band7	5MHz	21100	1RB#0	19.62	18.64	25.0	24.0
NTNV	Band7	5MHz	21100	1RB#12	19.81	18.81	25.0	24.0
NTNV	Band7	5MHz	21100	1RB#24	19.70	19.13	25.0	24.0
NTNV	Band7	5MHz	21100	12RB#0	18.78	18.10	25.0	24.0
NTNV	Band7	5MHz	21100	12RB#6	18.61	18.10	25.0	24.0
NTNV	Band7	5MHz	21100	12RB#13	19.01	18.14	25.0	24.0
NTNV	Band7	5MHz	21100	25RB#0	18.74	18.09	25.0	24.0
NTNV	Band7	5MHz	21425	1RB#0	19.68	18.48	25.0	24.0
NTNV	Band7	5MHz	21425	1RB#12	19.58	18.36	25.0	24.0
NTNV	Band7	5MHz	21425	1RB#24	19.72	18.37	25.0	24.0
NTNV	Band7	5MHz	21425	12RB#0	18.74	17.95	25.0	24.0
NTNV	Band7	5MHz	21425	12RB#6	18.76	17.81	25.0	24.0
NTNV	Band7	5MHz	21425	12RB#13	18.75	18.05	25.0	24.0
NTNV	Band7	5MHz	21425	25RB#0	18.68	17.74	25.0	24.0
NTNV	Band7	10MHz	20800	1RB#0	19.55	18.73	25.0	24.0
NTNV	Band7	10MHz	20800	1RB#24	19.48	18.82	25.0	24.0
NTNV	Band7	10MHz	20800	1RB#49	19.60	19.03	25.0	24.0
NTNV	Band7	10MHz	20800	25RB#0	18.53	17.59	25.0	24.0
NTNV	Band7	10MHz	20800	25RB#12	18.50	17.58	25.0	24.0
NTNV	Band7	10MHz	20800	25RB#25	18.55	18.21	25.0	24.0
NTNV	Band7	10MHz	20800	50RB#0	17.60	17.69	25.0	24.0
NTNV	Band7	10MHz	21100	1RB#0	19.72	18.98	25.0	24.0
NTNV	Band7	10MHz	21100	1RB#24	19.78	18.96	25.0	24.0
NTNV	Band7	10MHz	21100	1RB#49	19.88	18.88	25.0	24.0
NTNV	Band7	10MHz	21100	25RB#0	18.71	18.20	25.0	24.0
NTNV	Band7	10MHz	21100	25RB#12	18.71	18.31	25.0	24.0
NTNV	Band7	10MHz	21100	25RB#25	19.06	18.23	25.0	24.0
NTNV	Band7	10MHz	21100	50RB#0	18.68	18.19	25.0	24.0
NTNV	Band7	10MHz	21400	1RB#0	19.97	18.65	25.0	24.0
NTNV	Band7	10MHz	21400	1RB#24	19.94	18.74	25.0	24.0
NTNV	Band7	10MHz	21400	1RB#49	19.88	18.73	25.0	24.0
NTNV	Band7	10MHz	21400	25RB#0	18.72	17.97	25.0	24.0
NTNV	Band7	10MHz	21400	25RB#12	18.73	17.99	25.0	24.0
NTNV	Band7	10MHz	21400	25RB#25	18.76	18.03	25.0	24.0

NTNV	Band7	10MHz	21400	50RB#0	18.74	18.24	25.0	24.0
NTNV	Band7	15MHz	20825	1RB#0	19.59	19.10	25.0	24.0
NTNV	Band7	15MHz	20825	1RB#38	19.59	19.11	25.0	24.0
NTNV	Band7	15MHz	20825	1RB#74	19.85	19.35	25.0	24.0
NTNV	Band7	15MHz	20825	38RB#0	18.56	18.07	25.0	24.0
NTNV	Band7	15MHz	20825	38RB#18	18.56	18.08	25.0	24.0
NTNV	Band7	15MHz	20825	38RB#37	18.56	18.08	25.0	24.0
NTNV	Band7	15MHz	20825	75RB#0	18.59	18.05	25.0	24.0
NTNV	Band7	15MHz	21000	1RB#0	19.77	19.08	25.0	24.0
NTNV	Band7	15MHz	21000	1RB#38	19.99	19.22	25.0	24.0
NTNV	Band7	15MHz	21000	1RB#74	19.95	19.26	25.0	24.0
NTNV	Band7	15MHz	21000	38RB#0	18.82	18.13	25.0	24.0
NTNV	Band7	15MHz	21000	38RB#18	18.82	18.14	25.0	24.0
NTNV	Band7	15MHz	21000	38RB#37	18.82	18.14	25.0	24.0
NTNV	Band7	15MHz	21000	75RB#0	18.73	18.11	25.0	24.0
NTNV	Band7	15MHz	21375	1RB#0	19.91	19.57	25.0	24.0
NTNV	Band7	15MHz	21375	1RB#38	19.86	19.50	25.0	24.0
NTNV	Band7	15MHz	21375	1RB#74	19.91	19.50	25.0	24.0
NTNV	Band7	15MHz	21375	38RB#0	18.70	17.91	25.0	24.0
NTNV	Band7	15MHz	21375	38RB#18	18.70	17.93	25.0	24.0
NTNV	Band7	15MHz	21375	38RB#37	18.70	17.92	25.0	24.0
NTNV	Band7	15MHz	21375	75RB#0	18.67	17.98	25.0	24.0
NTNV	Band7	20MHz	20850	1RB#0	19.71	18.57	25.0	24.0
NTNV	Band7	20MHz	20850	1RB#49	19.76	18.64	25.0	24.0
NTNV	Band7	20MHz	20850	1RB#99	19.74	18.41	25.0	24.0
NTNV	Band7	20MHz	20850	50RB#0	18.61	17.83	25.0	24.0
NTNV	Band7	20MHz	20850	50RB#25	18.59	17.82	25.0	24.0
NTNV	Band7	20MHz	20850	50RB#50	18.78	17.86	25.0	24.0
NTNV	Band7	20MHz	20850	100RB#0	18.71	17.98	25.0	24.0
NTNV	Band7	20MHz	21100	1RB#0	20.12	19.50	25.0	24.0
NTNV	Band7	20MHz	21100	1RB#49	20.14	19.20	25.0	24.0
NTNV	Band7	20MHz	21100	1RB#99	20.11	19.23	25.0	24.0
NTNV	Band7	20MHz	21100	50RB#0	18.66	18.35	25.0	24.0
NTNV	Band7	20MHz	21100	50RB#25	18.63	17.88	25.0	24.0
NTNV	Band7	20MHz	21100	50RB#50	18.84	17.83	25.0	24.0
NTNV	Band7	20MHz	21100	100RB#0	18.75	18.45	25.0	24.0
NTNV	Band7	20MHz	21350	1RB#0	20.00	19.52	25.0	24.0
NTNV	Band7	20MHz	21350	1RB#49	20.07	19.67	25.0	24.0
NTNV	Band7	20MHz	21350	1RB#99	20.10	19.68	25.0	24.0
NTNV	Band7	20MHz	21350	50RB#0	18.86	18.17	25.0	24.0
NTNV	Band7	20MHz	21350	50RB#25	18.87	18.20	25.0	24.0
NTNV	Band7	20MHz	21350	50RB#50	18.81	18.49	25.0	24.0
NTNV	Band7	20MHz	21350	100RB#0	18.87	18.34	25.0	24.0

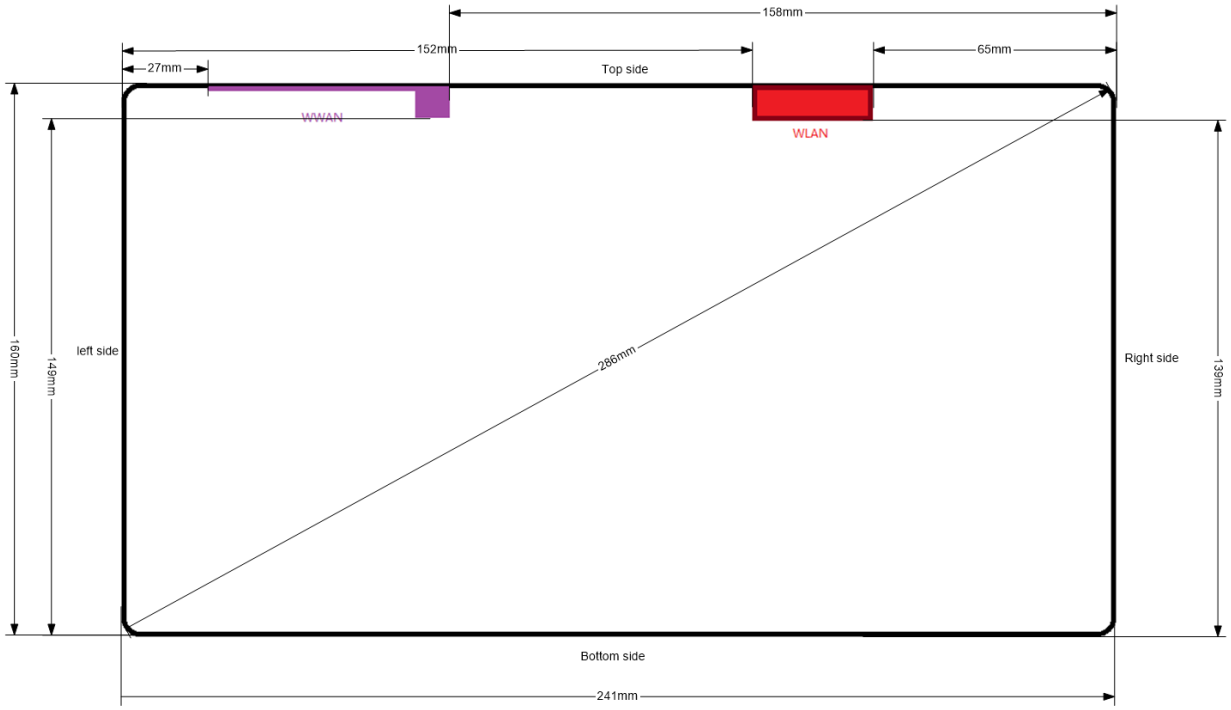
<WLAN 2.4GHz Conducted Power>

Mode	Channel	Frequency (MHz)	Conducted Average Output Power(dBm)	Tune-up limit (dBm)
802.11b	1	2412	15.48	16.0
	6	2437	18.12	19.0
	11	2462	15.23	16
802.11g	1	2412	7.16	9
	6	2437	10.67	11
	11	2462	7.77	9
802.11n(HT20)	1	2412	7.87	9
	6	2437	10.89	11
	11	2462	8.02	9
802.11n(HT40)	3	2422	7.66	9
	6	2437	7.72	9
	9	2452	8.67	9

<Bluetooth Conducted Power>

Mode	Channel	Frequency (MHz)	Conducted Average Output Power(dBm)	Tune-up limit (dBm)
GFSK	0	2402	2.88	4
	39	2441	2.39	4
	78	2480	3.68	4
π/4DQPSK	0	2402	4.71	6
	39	2441	4.11	6
	78	2480	5.09	6
8DPSK	0	2402	5.09	6
	39	2441	4.33	6
	78	2480	5.05	6
BLE1M(GFSK)	00	2402	7.97	8.5
	19	2440	7.03	8.5
	39	2480	8.27	8.5
BLE2M(GFSK)	00	2402	7.81	8.5
	19	2440	6.89	8.5
	39	2480	8.16	8.5

10.2 Transmit Antennas and SAR Measurement Position



Distance of The Antenna to the EUT surface and edge						
Antennas	**Front**	**Back**	**Top Side**	**Bottom Side**	**Left Side**	**Right Side**
WWAN	<5mm	<5mm	<5mm	149mm	27mm	158mm
WLAN	<5mm	<5mm	<5mm	139mm	152mm	65mm

10.3 Standalone SAR Test Exclusion Considerations

General Note:

1 The below table, when the distance is < 50 mm exclusion threshold is "Ratio", when the distance is > 50 mm exclusion threshold is "mW"

2 Maximum power is the source-based time-average power and represents the maximum RF output power among production units

3 Per KDB 447498 D01v06, for larger devices, the test separation distance of adjacent edge configuration is determined by the closest separation between the antenna and the user.

4 Per KDB 447498 D01v06, standalone SAR test exclusion threshold is applied; If the test separation distance is < 5mm, 5mm is used to determine SAR exclusion threshold.

5 Per KDB 447498 D01v06, the 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] ·[√f(GHz)] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR

- f(GHz) is the RF channel transmit frequency in GHz.
- Power and distance are rounded to the nearest mW and mm before calculation.
- The result is rounded to one decimal place for comparison.

6 Per KDB 447498 D01v06, at 100 MHz to 6 GHz and for test separation distances > 50 mm, the SAR test exclusion threshold is determined according to the following:

a) [Threshold at 50 mm in step 1) + (test separation distance - 50 mm)·(f(MHz)/150)] mW, at 100 MHz to 1500 MHz

b) [Threshold at 50 mm in step 1) + (test separation distance - 50 mm)·10] mW at > 1500 MHz and ≤ 6 GHz

The below table, exemption limits for routine evaluation based on frequency and separation distance was according to SAR-based Exemption – §1.1307(b)(3)(i)(B).

Standalone SAR test exclusion considerations								
Wireless Interface	Frequency (MHz)	Configuration	Maximum Average Power		Separation Distance (mm)	Calculation Result	SAR Exclusion Thresholds	Standalone SAR Exclusion
			dBm	mW				
GSM850	836.6	Rear Face	34.00	2511.886	5	459.5	3	no
		Left Edge	34.00	2511.886	27	85.1	3	no
		Right Edge	34.00	2511.886	158	2511.886	766	no
		Top Edge	34.00	2511.886	5	459.5	3	no
		Bottom Edge	34.00	2511.886	149	2511.886	716	no
GSM1900	1880	Rear Face	31.00	1258.925	5	345.2	3	no
		Left Edge	31.00	1258.925	27	63.9	3	no
		Right Edge	31.00	1258.925	158	1258.925	1189	no
		Top Edge	31.00	1258.925	5	345.2	3	no
		Bottom Edge	31.00	1258.925	149	1258.925	1099	no
WCDMA Band II	1880	Rear Face	22.00	158.489	5	43.5	3	no
		Left Edge	22.00	158.489	27	8	3	no
		Right Edge	22.00	158.489	158	158.489	1189	yes

		Top Edge	22.00	158.489	5	43.5	3	no
		Bottom Edge	22.00	158.489	149	158.489	1099	yes
WCDMA Band V	836.6	Rear Face	22.00	158.489	5	29	3	no
		Left Edge	22.00	158.489	27	5.4	3	no
		Right Edge	22.00	158.489	158	158.489	766	yes
		Top Edge	22.00	158.489	5	29	3	no
		Bottom Edge	22.00	158.489	149	158.489	716	yes
LTE band 2	1880	Rear Face	25.00	316.228	5	86.7	3	no
		Left Edge	25.00	316.228	27	16.1	3	no
		Right Edge	25.00	316.228	158	316.228	1189	yes
		Top Edge	25.00	316.228	5	86.7	3	no
		Bottom Edge	25.00	316.228	149	316.228	1099	yes
LTE band 4	1732.5	Rear Face	25.00	316.228	5	83.2	3	no
		Left Edge	25.00	316.228	27	15.4	3	no
		Right Edge	25.00	316.228	158	316.228	1194	yes
		Top Edge	25.00	316.228	5	83.2	3	no
		Bottom Edge	25.00	316.228	149	316.228	1104	yes
LTE band 5	836.5	Rear Face	25.00	316.228	5	57.8	3	no
		Left Edge	25.00	316.228	27	10.7	3	no
		Right Edge	25.00	316.228	158	316.228	766	yes
		Top Edge	25.00	316.228	5	57.8	3	no
		Bottom Edge	25.00	316.228	149	316.228	716	yes
LTE band 7	2535	Rear Face	25.00	316.228	5	100.7	3	no
		Left Edge	25.00	316.228	27	18.6	3	no
		Right Edge	25.00	316.228	158	316.228	1174	yes
		Top Edge	25.00	316.228	5	100.7	3	no
		Bottom Edge	25.00	316.228	149	316.228	1084	yes
2.4GHz WLAN	2450	Rear Face	19.00	79.433	5	24.9	3	no
		Left Edge	19.00	79.433	152	0.8	3	yes
		Right Edge	19.00	79.433	65	79.433	246	yes
		Top Edge	19.00	79.433	5	24.9	3	no
		Bottom Edge	19.00	79.433	139	79.433	986	yes
Bluetooth*	2440	Rear Size	8.50	7.079	5	2.2	3	yes
		Left Size	8.50	7.079	152	0.1	3	yes
		Right Size	8.50	7.079	65	7.079	246	yes
		Top Size	8.50	7.079	5	2.2	3	yes
		Bottom Size	8.50	7.079	139	7.079	986	yes

Remark:

1. *Maximum average power including tune-up tolerance;*
2. *Bluetooth including BLE-Lower Energy Bluetooth and Classical Bluetooth;*
3. *When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion*

4. Per KDB 648474, if overall diagonal dimension of the display section of a tablet lager than 20 cm, no need consider Hotspot mode.

10.4 Estimated SAR

Per KDB447498 requires when the standalone SAR test exclusion of section 4.3.1 is applied to an antenna that transmits simultaneously with other antennas, the standalone SAR must be estimated according to the following to determine simultaneous transmission SAR test exclusion;

● (max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] • [√ f(GHz)/x] W/kg for test separation distances ≤ 50 mm;

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

● 0.4 W/kg for 1-g SAR and 1.0 W/kg for 10-g SAR, when the test separation distances is > 50 mm

Per FCC KD B447498 D01,simultaneous transmission SAR test exclusion may be applied when the sum of the 1-g SAR for all the transmitting antenna in a specific a physical test configuration is ≤1.6 W/Kg.When the sum is greater than the SAR limit,SAR test exclusion is determined by the SAR to peak location separation ratio.

$$\text{Ratio}=\frac{(SAR_1+SAR_2)^{1.5}}{(\text{peak location separation,mm})}<0.04$$

Estimated stand alone SAR					
Communication system	Frequency (MHz)	Configuration	Maximum Power (dBm)	Separation Distance (mm)	Estimated SAR_{1-g} (W/kg)
Bluetooth	2450	Body	8.5	0	0.295
/	/	/	/	/	/

Remark:

1. Maximum average power including tune-up tolerance;
2. When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion
3. Body including Hotspot mode as body use distance is 10mm from manufacturer declaration of user manual.

10.5 SAR Test Results Summary

General Note:

1.Per KDB 447498 D01v05r01, the reported SAR is the measured SAR value adjusted for maximum tune-up tolerance.

Scaling Factor = tune-up limit power (mW) / EUT RF power (mW), where tune-up limit is the maximum rated power among all production units.

Reported SAR(W/kg)= Measured SAR(W/kg) Scaling Factor*

2.Per KDB 447498 D01v05r01, for each exposure position, if the highest output channel reported SAR≤0.8W/kg, other channels SAR testing are not necessary

3.Per KDB 941225 D05, 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 D05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.

5.Per KDB 941225 D05, For QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.

6.Per KDB 941225 D05, 16QAM output power for each RB allocation configuration is > not ½ dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is ≤ 1.45 W/kg; Per KDB 941225 D05, 16QAM SAR testing is not required.

7.Per KDB 941225 D05, Smaller bandwidth output power for each RB allocation configuration is > not ½ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg; Per KDB 941225 D05, smaller bandwidth SAR testing is not required.

8.Per KDB865664 D01, for each frequency band, repeated SAR measurement is required only when the measured SAR is ≥0.8W/Kg; if the deviation among the repeated measurement is ≤20%,and the measured SAR <1.45W/Kg, only one repeated measurement is required.

9.When the user enables the personal Wireless router functions for the handsets, actual operations include simultaneous transmission of both the Wi-Fi transmitting frequency and thus cannot be evaluated for SAR under actual use conditions. The “Portable Hotspot” feature on the handset was
NOT activated, to ensure the SAR measurements were evaluated for a single transmission frequency RF signal.

10.6 SAR Results

SAR Values [GSM 850]

Plot No.	Mode	Test Position	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR_{1g} (W/kg)	Reported SAR_{1g} (W/kg)
Measured / Reported SAR numbers-Body distance 0mm										
	GPRS 2 Tx slots	Front Face	128	824.2	31.49	32.00	1.125	-0.05	0.725	0.815
#1	GPRS 2 Tx slots	Rear Face	128	824.2	31.49	32.00	1.125	-0.10	**0.950**	1.068
	GPRS 2 Tx slots	Left Edge	128	824.2	31.49	32.00	1.125	-0.05	0.325	0.365
	GPRS 2 Tx slots	Right Edge	128	824.2	31.49	32.00	1.125	0.06	0.095	0.107
	GPRS 2 Tx slots	Top Edge	128	824.2	31.49	32.00	1.125	0.03	0.943	1.061
	GPRS 2 Tx slots	Bottom Edge	128	824.2	31.49	32.00	1.125	0.03	0.087	0.098
	GPRS 2 Tx slots	Front Face	190	836.6	31.44	32.00	1.138	-0.07	0.721	0.820
	GPRS 2 Tx slots	Rear Face	190	836.6	31.44	32.00	1.138	-0.08	0.942	**1.072**
	GPRS 2 Tx slots	Top Edge	190	836.6	31.44	32.00	1.138	-0.11	0.935	1.064
	GPRS 2 Tx slots	Front Face	251	848.8	31.42	32.00	1.143	0.05	0.712	0.814
	GPRS 2 Tx slots	Rear Face	251	848.8	31.42	32.00	1.143	-0.04	0.932	1.065
	GPRS 2 Tx slots	Top Edge	251	848.8	31.42	32.00	1.143	0.09	0.924	1.056
	EGPRS 3 Tx slots	Rear Face	128	824.2	25.95	26.00	1.012	0.10	0.766	0.775

SAR Values [PCS 1900]

Plot No.	Mode	Test Position	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR_{1g} (W/kg)	Reported SAR_{1g} (W/kg)
Measured / Reported SAR numbers-Body distance 0mm										
	GPRS 3 Tx slots	Front Face	512	1850.2	26.39	26.50	1.026	0.05	0.543	0.557
	GPRS 3 Tx slots	Rear Face	512	1850.2	26.39	26.50	1.026	-0.03	0.762	0.782
	GPRS 3 Tx slots	Left Edge	512	1850.2	26.39	26.50	1.026	-0.02	0.146	0.150
	GPRS 3 Tx slots	Right Edge	512	1850.2	26.39	26.50	1.026	0.05	0.084	0.086
#2	GPRS 3 Tx slots	Top Edge	512	1850.2	26.39	26.50	1.026	0.05	**0.769**	**0.789**
	GPRS 3 Tx slots	Bottom Edge	512	1850.2	26.39	26.50	1.026	0.06	0.098	0.101
	EGPRS 3 Tx slots	Top Edge	661	1880.0	24.50	25.00	1.122	0.07	0.611	0.686

SAR Values [WCDMA II]

Plot No.	Mode	Test Position	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR_{1g} (W/kg)	Reported SAR_{1g} (W/kg)
Measured / Reported SAR numbers-Body distance 0mm										
	RMC 12.2Kbps	Front Face	9538	1907.6	21.74	22.00	1.062	0.05	0.730	0.775
#3	RMC 12.2Kbps	Rear Face	9538	1907.6	21.74	22.00	1.062	-0.03	**0.964**	**1.023**
	RMC 12.2Kbps	Left Edge	9538	1907.6	21.74	22.00	1.062	0.09	0.172	0.183
	RMC 12.2Kbps	Top Edge	9538	1907.6	21.74	22.00	1.062	-0.11	0.928	0.985
	RMC 12.2Kbps	Rear Face	9262	1852.4	21.58	22.00	1.102	0.05	0.885	0.975
	RMC 12.2Kbps	Top Edge	9262	1852.4	21.58	22.00	1.102	-0.03	0.854	0.941
	RMC 12.2Kbps	Rear Face	9400	1880.0	21.65	22.00	1.084	0.03	0.873	0.946
	RMC 12.2Kbps	Top Edge	9400	1880.0	21.65	22.00	1.084	0.10	0.849	0.920

SAR Values [WCDMA V]

Plot No.	Mode	Test Position	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR_{1g} (W/kg)	Reported SAR_{1g} (W/kg)
Measured / Reported SAR numbers-Body distance 0mm										
	RMC 12.2Kbps	Front Face	4183	836.6	21.85	22.00	1.035	-0.03	0.269	0.278
#4	RMC 12.2Kbps	Rear Face	4183	836.6	21.85	22.00	1.035	-0.15	**0.506**	**0.524**
	RMC 12.2Kbps	Left Edge	4183	836.6	21.85	22.00	1.035	-0.11	0.105	0.109
	RMC 12.2Kbps	Top Edge	4183	836.6	21.85	22.00	1.035	0.05	0.467	0.483

SAR Values [LTE Band 2]

Plot No.	Mode	Test Position	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR_{1g} (W/kg)	Reported SAR_{1g} (W/kg)
Measured / Reported SAR numbers-Body distance 0mm										
	20MHz/1RB#49	Front Face	18700	1860	24.21	25.00	1.199	-0.09	0.772	0.926
#5	20MHz/1RB#49	Rear Face	18700	1860	24.21	25.00	1.199	0.13	**1.010**	**1.211**
	20MHz/1RB#49	Left Edge	18700	1860	24.21	25.00	1.199	0.03	0.116	0.139
	20MHz/1RB#49	Top Edge	18700	1860	24.21	25.00	1.199	-0.07	0.977	1.172
	20MHz/1RB#49	Front Face	18900	1880	23.97	25.00	1.268	0.05	0.704	0.892
	20MHz/1RB#49	Rear Face	18900	1880	23.97	25.00	1.268	-0.05	0.911	1.155
	20MHz/1RB#49	Top Edge	18900	1880	23.97	25.00	1.268	0.01	0.824	1.045
	20MHz/1RB#49	Front Face	19100	1900	24.18	25.00	1.208	-0.11	0.767	0.926
	20MHz/1RB#49	Rear Face	19100	1900	24.18	25.00	1.208	-0.03	0.974	1.176
	20MHz/1RB#49	Top Edge	19100	1900	24.18	25.00	1.208	0.09	0.898	1.085
	20MHz/50RB#0	Front Face	19100	1900	23.24	25.00	1.500	0.07	0.551	0.826
	20MHz/50RB#0	Rear Face	19100	1900	23.24	25.00	1.500	-0.09	0.787	1.180
	20MHz/50RB#0	Left Edge	19100	1900	23.24	25.00	1.500	-0.03	0.108	0.162
	20MHz/50RB#0	Top Edge	19100	1900	23.24	25.00	1.500	0.03	0.755	1.132
	20MHz/50RB#0	Front Face	18700	1860	23.01	25.00	1.581	-0.05	0.482	0.762
	20MHz/50RB#0	Rear Face	18700	1860	23.01	25.00	1.581	0.11	0.715	1.131
	20MHz/50RB#0	Top Edge	18700	1860	23.01	25.00	1.581	0.09	0.684	1.082
	20MHz/50RB#25	Front Face	18900	1880	22.84	25.00	1.644	-0.07	0.466	0.766
	20MHz/50RB#25	Rear Face	18900	1880	22.84	25.00	1.644	-0.04	0.701	1.153

	20MHz/50RB#25	Top Edge	18900	1880	22.84	25.00	1.644	0.03	0.665	1.094

SAR Values [LTE Band 4]

Plot No.	Mode	Test Position	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR_{1g} (W/kg)	Reported SAR_{1g} (W/kg)
Measured / Reported SAR numbers-Body distance 0mm										
	20MHz/1RB#49	Front Face	20175	1732.5	24.28	25.00	1.180	-0.03	0.216	0.255
#6	20MHz/1RB#49	Rear Face	20175	1732.5	24.28	25.00	1.180	-0.02	**0.445**	0.525
	20MHz/1RB#49	Left Edge	20175	1732.5	24.28	25.00	1.180	0.05	0.096	0.113
	20MHz/1RB#49	Top Edge	20175	1732.5	24.28	25.00	1.180	0.01	0.405	0.478
	20MHz/50RB#25	Front Face	20050	1720	23.06	25.00	1.563	0.10	0.163	0.255
	20MHz/50RB#25	Rear Face	20050	1720	23.06	25.00	1.563	0.05	0.394	**0.616**
	20MHz/50RB#25	Left Edge	20050	1720	23.06	25.00	1.563	0.03	0.075	0.117
	20MHz/50RB#25	Top Edge	20050	1720	23.06	25.00	1.563	0.09	0.363	0.567

SAR Values [LTE Band 5]

Plot No.	Mode	Test Position	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR_{1g} (W/kg)	Reported SAR_{1g} (W/kg)
Measured / Reported SAR numbers-Body distance 0mm										
	10MHz/1RB#24	Front Face	20525	836.5	24.35	25.00	1.161	0.03	0.475	0.552
	10MHz/1RB#24	Rear Face	20525	836.5	24.35	25.00	1.161	0.05	0.667	0.775
	10MHz/1RB#24	Left Edge	20525	836.5	24.35	25.00	1.161	0.05	0.086	0.100
#7	10MHz/1RB#24	Top Edge	20525	836.5	24.35	25.00	1.161	0.08	**0.707**	**0.821**
	10MHz/1RB#24	Top Edge	20450	829	24.31	25.00	1.172	-0.09	0.697	0.817
	10MHz/1RB#24	Top Edge	20600	844	24.34	25.00	1.164	0.04	0.701	0.816
	10MHz/25RB#0	Front Face	20600	844	23.27	25.00	1.489	-0.11	0.282	0.420
	10MHz/25RB#0	Rear Face	20600	844	23.27	25.00	1.489	0.03	0.490	0.730
	10MHz/25RB#0	Left Edge	20600	844	23.27	25.00	1.489	0.03	0.072	0.107
	10MHz/25RB#0	Top Edge	20600	844	23.27	25.00	1.489	0.10	0.521	0.776

SAR Values [LTE Band 7]

Plot No.	Mode	Test Position	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR_{1g} (W/kg)	Reported SAR_{1g} (W/kg)

Measured / Reported SAR numbers-Body distance 0mm										
	20MHz/1RB#49	Front Face	21100	2535	20.14	20.50	1.086	0.10	0.670	0.728
#8	20MHz/1RB#49	Rear Face	21100	2535	20.14	20.50	1.086	-0.13	**0.903**	0.981
	20MHz/1RB#49	Left Edge	21100	2535	20.14	20.50	1.086	-0.03	0.109	0.118
	20MHz/1RB#49	Top Edge	21100	2535	20.14	20.50	1.086	0.03	0.870	0.945
	20MHz/1RB#49	Rear Face	20850	2510	19.76	20.50	1.186	-0.05	0.810	0.960
	20MHz/1RB#49	Top Edge	20850	2510	19.76	20.50	1.186	0.07	0.798	0.946
	20MHz/1RB#99	Rear Face	21380	2560	20.10	20.50	1.096	0.11	0.894	0.980
	20MHz/1RB#99	Top Edge	21350	2560	20.10	20.50	1.096	0.09	0.857	0.940
	20MHz/50RB#25	Front Face	21350	2560	18.87	20.50	1.455	-0.11	0.489	0.712
	20MHz/50RB#25	Rear Face	21350	2560	18.87	20.50	1.455	0.09	0.725	**1.055**
	20MHz/50RB#25	Left Edge	21350	2560	18.87	20.50	1.455	-0.11	0.068	0.099
	20MHz/50RB#25	Top Edge	21350	2560	18.87	20.50	1.455	0.05	0.693	1.009
	20MHz/50RB#50	Rear Face	20850	2510	18.78	20.50	1.486	-0.05	0.704	1.046
	20MHz/50RB#50	Top Edge	20850	2510	18.78	20.50	1.486	0.04	0.675	1.003
	20MHz/50RB#50	Rear Face	21100	2535	18.84	20.50	1.466	0.07	0.715	1.048
	20MHz/50RB#50	Top Edge	21100	2535	18.84	20.50	1.466	-0.03	0.681	0.998

SAR Values [WIFI 2.4G]

Plot No.	Mode	Test Position	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR_{1g} (W/kg)	Reported SAR_{1g} (W/kg)
Measured / Reported SAR numbers-Body distance 0mm										
	802.11b	Front Face	06	2437	18.12	19.00	1.225	-0.01	0.155	0.190
#9	802.11b	Rear Face	06	2437	18.12	19.00	1.225	0.03	0.281	0.344
	802.11b	Top Edge	06	2437	18.12	19.00	1.225	0.05	0.274	0.336

Note: Per KDB 248227 D01v02r02, for 2.4GHz 802.11g/n SAR testing is not required when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg.

10.7 SAR Measurement Variability

SAR measurement variability must be assessed for each frequency band, which is determined by the SAR probe calibration point and tissue-equivalent medium used for the device measurements. When both head and body tissue-equivalent media are required for SAR measurements in a frequency band, the variability measurement procedures should be applied to the tissue medium with the highest measured SAR, using the highest measured SAR configuration for that tissue-equivalent medium. The following procedures are applied to determine if repeated measurements are required.

1 Repeated measurement is not required when the original highest measured SAR is < 0.80 W/kg; steps 2) through 4) do not apply.

2 When the original highest measured SAR is ≥ 0.80 W/kg, repeat that measurement once.

3 Perform a third repeated measurement only if the original, first or second repeated measurement is ≥ 1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20.

SAR Measurement Variability

Band	Mode	Test Position	Ch.	Spacing (mm)	Original SAR (W/kg)	First Repeated SAR (W/kg)	The Ratio	Second Repeated SAR (W/kg)
GSM 850	GPRS 2 Tx slots	Rear Face	128	0	0.940	0.950	1.011	--
GSM 850	GPRS 2 Tx slots	Top Edge	128	0	0.943	0.927	1.017	--
GSM 850	GPRS 2 Tx slots	Rear Face	190	0	0.942	0.924	1.019	--
GSM 850	GPRS 2 Tx slots	Top Edge	190	0	0.922	0.935	1.014	--
GSM 850	GPRS 2 Tx slots	Rear Face	251	0	0.932	0.923	1.010	--
GSM 850	GPRS 2 Tx slots	Top Edge	251	0	0.924	0.908	1.018	--
WCDMA II	RMC 12.2Kbps	Rear Face	9538	0	0.964	0.959	1.005	--
WCDMA II	RMC 12.2Kbps	Top Edge	9538	0	0.917	0.928	1.012	--
WCDMA II	RMC 12.2Kbps	Rear Face	9262	0	0.885	0.874	1.013	--
WCDMA II	RMC 12.2Kbps	Top Edge	9262	0	0.854	0.851	1.004	--
WCDMA II	RMC 12.2Kbps	Rear Face	9400	0	0.861	0.873	1.014	--
WCDMA II	RMC 12.2Kbps	Top Edge	9400	0	0.849	0.833	1.019	--
LTE Band 2	20MHz/1RB#49	Rear Face	18700	0	1.010	1.000	1.010	--
LTE Band 2	20MHz/1RB#49	Top Edge	18700	0	0.977	0.954	1.024	--
LTE Band 2	20MHz/1RB#49	Rear Face	18900	0	0.898	0.911	1.014	--
LTE Band 2	20MHz/1RB#49	Top Edge	18900	0	0.824	0.811	1.016	--
LTE Band 2	20MHz/1RB#49	Rear Face	19100	0	0.974	0.957	1.018	--
LTE Band 2	20MHz/1RB#49	Top Edge	19100	0	0.889	0.898	1.010	--
LTE Band 7	20MHz/1RB#49	Rear Face	21100	0	0.903	0.887	1.018	--
LTE Band 7	20MHz/1RB#49	Top Edge	21100	0	0.859	0.870	1.013	--
LTE Band 7	20MHz/1RB#49	Rear Face	20850	0	0.810	0.794	1.020	--
LTE Band 7	20MHz/1RB#99	Rear Face	21380	0	0.894	0.885	1.010	--
LTE Band 7	20MHz/1RB#99	Top Edge	21350	0	0.857	0.827	1.036	--

10.8 Simultaneous Transmission Analysis

10.8.1 Introduction

Application Simultaneous Transmission information:

No.	Simultaneous Transmission Configurations	Tablet
		Body-worn
1	WWAN (2/3/4G) + WLAN 2.4GHz	Yes
2	WWAN (2/3/4G) + Bluetooth	Yes

10.8.2 Evaluation of Simultaneous SAR

Body-worn Simultaneous transmission SAR for WLAN/BT and GSM/WCDMA/ LTE

Exposure Position	1	2	3	1+2 Summed 1g SAR (W/kg)	1+3 Summed 1g SAR (W/kg)	SPLSR
	MAX. WWAN Reported SAR	MAX. WLAN2.4G Reported SAR	Bluetooth			
	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)			
Front Face	0.926	0.190	0.295	1.116	1.221	N/A
Rear Face	1.211	0.344	0.295	1.555	1.506	N/A
Left Edge	0.365	N/A	0.295	0.365	0.660	N/A
Right Edge	0.107	N/A	0.295	0.107	0.402	N/A
Top Edge	1.172	0.336	0.295	1.508	1.467	N/A
Bottom Edge	0.101	N/A	0.295	0.101	0.396	N/A

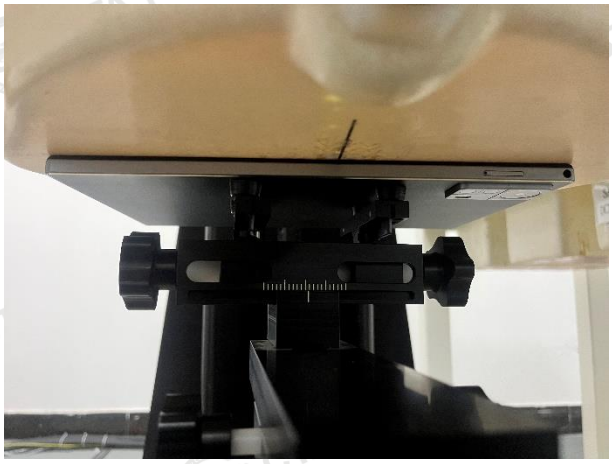
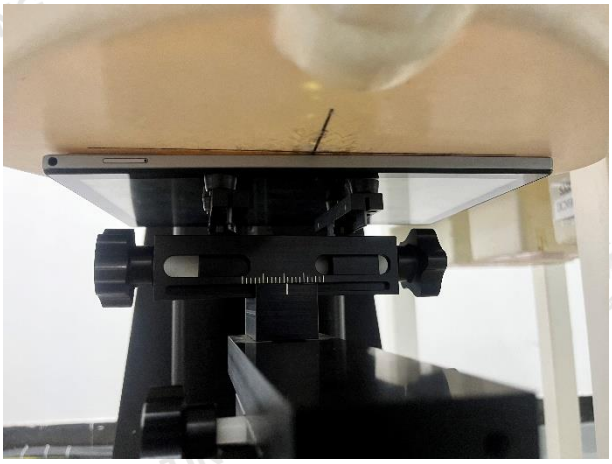
MAX. ΣSAR_{1g} =**1.555** W/kg<1.6 W/kg, so the Simultaneous transmission SAR with volume scan are not required.

11 Measurement Uncertainty

NO	Source	Uncert. ai（%）	Prob. Dist.	Div. k	ci (1g)	ci (10g)	Stand.Uncert. ui (1g)	Stand.Uncert. ui (10g)	*Veff*
1	Repeat	0. 4	N	1	1	1	0. 4	0. 4	9
Instrument									
2	Probe calibration	7	N	2	1	1	3.5	3.5	∞
3	Axial isotropy	4.7	R	$\sqrt{3}$	0.7	0.7	1.9	1.9	∞
4	Hemispherical isotropy	9.4	R	$\sqrt{3}$	0.7	0.7	3.9	3.9	∞
5	Boundary effect	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
6	Linearity	4.7	R	$\sqrt{3}$	1	1	2.7	2.7	∞
7	Detection limits	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
8	Readout electronics	0.3	N	1	1	1	0.3	0.3	∞
9	Response time	0.8	R	$\sqrt{3}$	1	1	0.5	0.5	∞
10	Integration time	2.6	R	$\sqrt{3}$	1	1	1.5	1.5	∞
11	Ambient noise	3.0	R	$\sqrt{3}$	1	1	1.7	1.7	∞
12	Ambient reflections	3.0	R	$\sqrt{3}$	1	1	1.7	1.7	∞
13	Probe positioner mech. restrictions	0.4	R	$\sqrt{3}$	1	1	0.2	0.2	∞
14	Probe positioning with respect to phantom shell	2.9	R	$\sqrt{3}$	1	1	1.7	1.7	∞
15	Max.SAR evaluation	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞

Test sample related									
16	Device positioning	3.8	N	1	1	1	3.8	3.8	99
17	Device holder	5.1	N	1	1	1	5.1	5.1	5
18	Drift of output power	5.0	R	$\frac{1}{\sqrt{3}}$	1	1	2.9	2.9	∞
Phantom and set-up									
19	Phantom uncertainty	4.0	R	$\frac{1}{\sqrt{3}}$	1	1	2.3	2.3	∞
20	Liquid conductivity (target)	5.0	R	$\frac{1}{\sqrt{3}}$	0.64	0.43	1.8	1.2	∞
21	Liquid conductivity (meas)	2.5	N	1	0.64	0.43	1.6	1.2	∞
22	Liquid Permittivity (target)	5.0	R	$\frac{1}{\sqrt{3}}$	0.6	0.49	1.7	1.5	∞
23	Liquid Permittivity (meas)	2.5	N	1	0.6	0.49	1.5	1.2	∞
Combined standard			RSS	$U_c = \sqrt{\sum_{i=1}^{n} C_i^2 U_i^2}$			11.4%	11.3%	236
Expanded uncertainty(P=95%)		$U = k U_c$		,k=2			**22.8%**	**22.6%**	

Appendix A. EUT Photos and Test Setup Photos

	
Front face(0mm)	Rear Face(0mm)
	
Left Edge(0mm)	

Appendix B. Plots of SAR System Check

835MHz System Check

Date: 01/09/2024

DUT: Dipole 835 MHz; Type: D835V2; Serial: 484

Communication System: CW; Frequency: 835 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 835 MHz; σ = 0.909 S/m; ε_r = 41.903; ρ = 1000 kg/m^3

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 – SN7380; ConvF(10.02, 10.02, 10.02); Calibrated: June 21, 2023;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn428; Calibrated: Aug.30,2023;
- Phantom: SAM 1; Type: SAM;
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.10 (7164)

Area Scan (41x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 2.83 W/kg

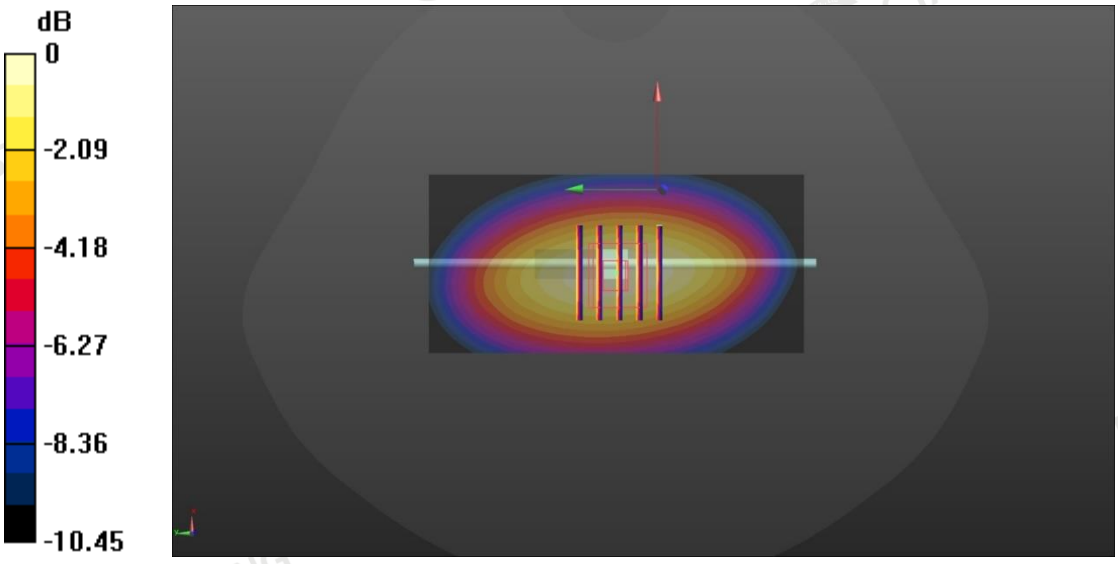
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 54.15 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 3.58 W/kg

SAR(1 g) = 2.34 W/kg; SAR(10 g) = 1.56 W/kg

Maximum value of SAR (measured) = 2.84 W/kg



0 dB = 2.84 W/kg = 4.53 dBW/kg

System Performance Check 835MHz 250mW

1750MHz System Check

Date: 01/10/2024

DUT: Dipole 1800 MHz; Type: D1800V2; Serial: 2d158

Communication System: CW; Frequency: 1750 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 1750 MHz; σ = 1.370 S/m; ε_r = 39.057; ρ = 1000 kg/m^3

Phantom section: Flat Section

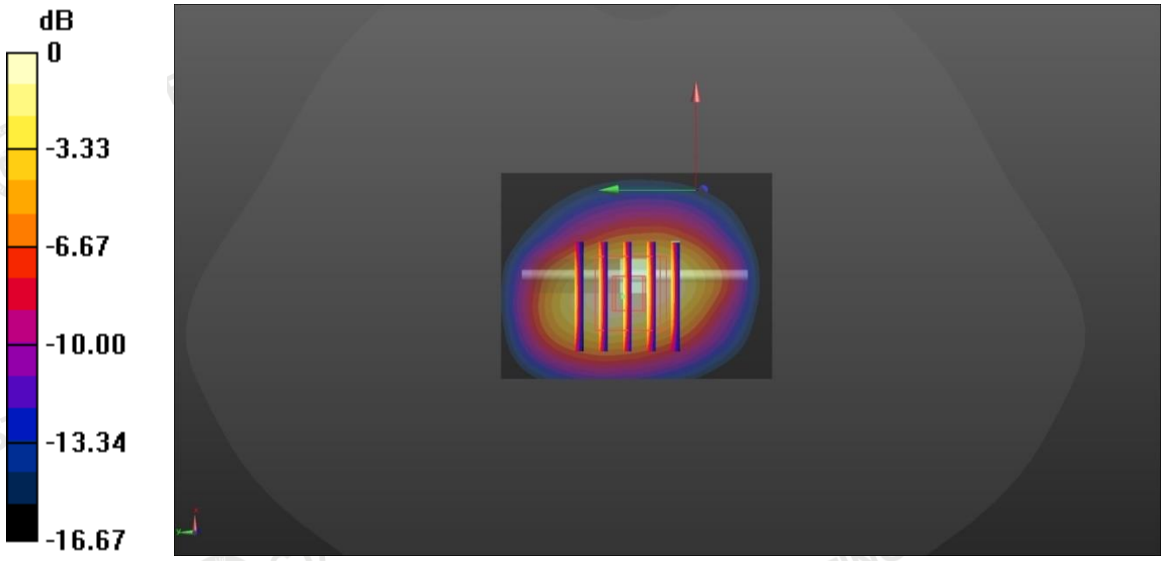
DASY5 Configuration:

- Probe: EX3DV4 - SN7380; ConvF(8.35, 8.35, 8.35); Calibrated: June 21, 2023;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn428; Calibrated: Aug.30,2023;
- Phantom: SAM 1; Type: SAM;
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.10 (7164)

Area Scan (41x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 11.5 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 83.22 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 15.1 W/kg

SAR(1 g) = 9.61 W/kg; SAR(10 g) = 4.75 W/kg
Maximum value of SAR (measured) = 10.9 W/kg



0 dB = 10.9 W/kg = 10.37 dBW/kg

System Performance Check 1750MHz 250mW

1900MHz System Check Date: 01/11/2024

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: 5d002

Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): f = 1900 MHz; σ = 1.427 S/m; εr =39.028; ρ = 1000 kg/m3

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7380; ConvF(8.05, 8.05, 8.05); Calibrated: June 21, 2023;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn428; Calibrated: Aug.30,2023;
- Phantom: SAM 1; Type: SAM;
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.10 (7164)

Area Scan (41x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 13.2 W/kg

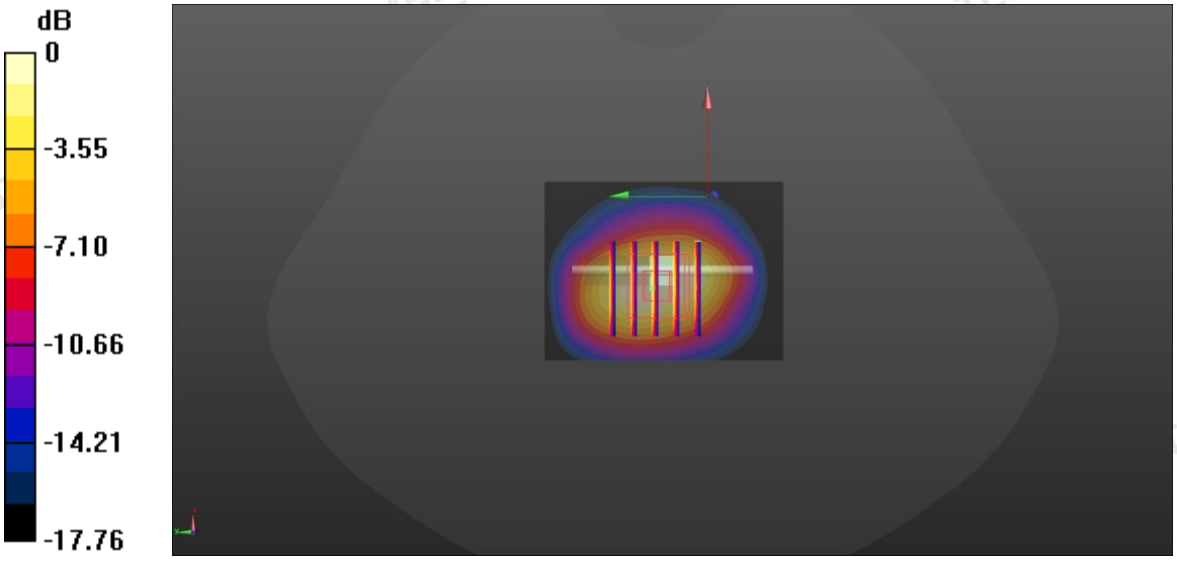
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 86.80 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 17.5 W/kg

SAR(1 g) = 9.69 W/kg; SAR(10 g) = 5.09 W/kg

Maximum value of SAR (measured) = 12.4 W/kg



0 dB = 12.4 W/kg = 10.93 dBW/kg

System Performance Check 1900MHz 250mW

2450MHz System Check

Date: 01/15/2024

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: 745

Communication System: CW; Frequency: 2450 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 2450 MHz; σ = 1.785 S/m; εr = 40.286; ρ = 1000 kg/m3

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 – SN7380; ConvF(7.50, 7.50, 7.50); Calibrated: June 21, 2023;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn428; Calibrated: Aug.30,2023;
- Phantom: SAM 1; Type: SAM;
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.10 (7164)

Area Scan (101x101x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

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

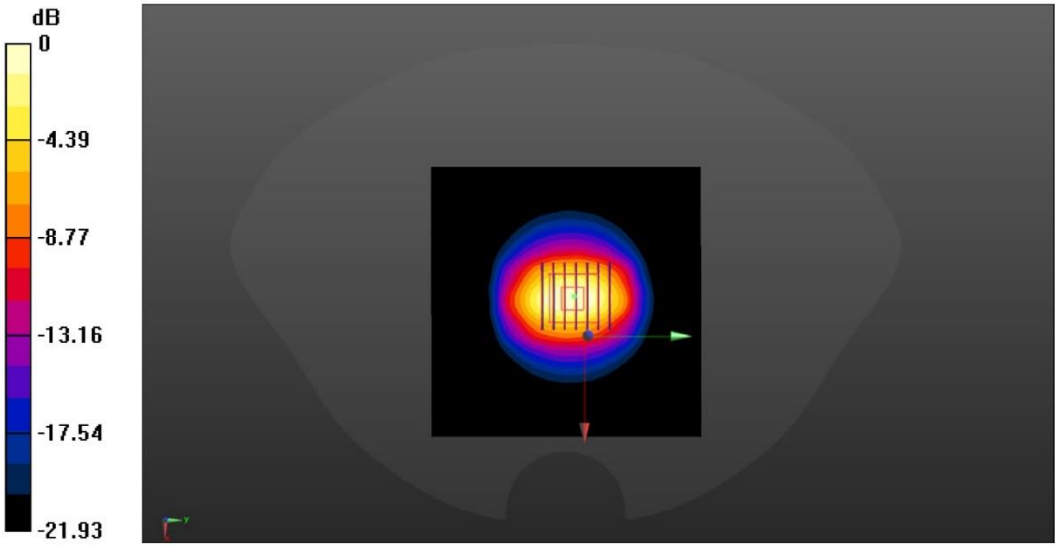
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 88.80 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 28.6 W/kg

SAR(1 g) = 13.03 W/kg; SAR(10 g) = 6.24 W/kg

Maximum value of SAR (measured) = 14.7 W/kg



0 dB = 14.7 W/kg = 11.67 dBW/kg

System Performance Check 2450MHz 250mW

2600MHz System Check Date: 01/12/2024

DUT: Dipole 2600 MHz; Type: D2600V2; Serial: 1073

Communication System: CW; Frequency: 2600 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 2600 MHz; σ = 1.939 S/m; εr = 37.943; ρ = 1000 kg/m3

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 – SN7396; ConvF(7.35, 7.35, 7.35); Calibrated: 05,06.2023;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn428; Calibrated: Aug.30,2023
- Phantom: SAM; Type: QD000P40CD; Serial: TP:1670
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.10 (7164)

Area Scan (41x51x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 25.1 W/kg

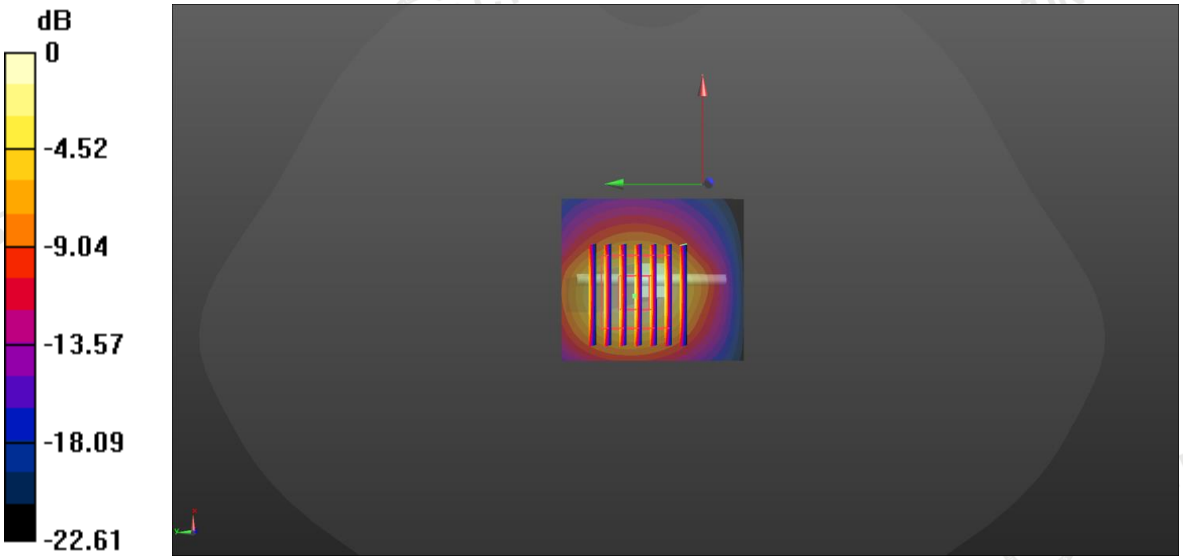
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 102.5 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 30.7 W/kg

SAR(1 g) = 14.30 W/kg; SAR(10 g) = 6.28 W/kg

Maximum value of SAR (measured) = 24.5 W/kg



0 dB = 24.5 W/kg = 13.89 dBW/kg

System Performance Check 2600MHz 250mW

Appendix C. Plots of SAR Test Data

#1

Date: 01/09/2024

GSM 850_GPRS 2 Tx slots _ Rear Face _CH128_0mm

Communication System: UID 0, GSM (0); Frequency: 824.2 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.977 S/m; ε_r = 42.081; ρ = 1000 kg/m^3

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7380; ConvF(10.02, 10.02, 10.02); Calibrated: June 21, 2023;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn428; Calibrated: Aug.30,2023;
- Phantom: SAM 1; Type: SAM;
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.10 (7164)

Area Scan (61x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 1.07 W/kg

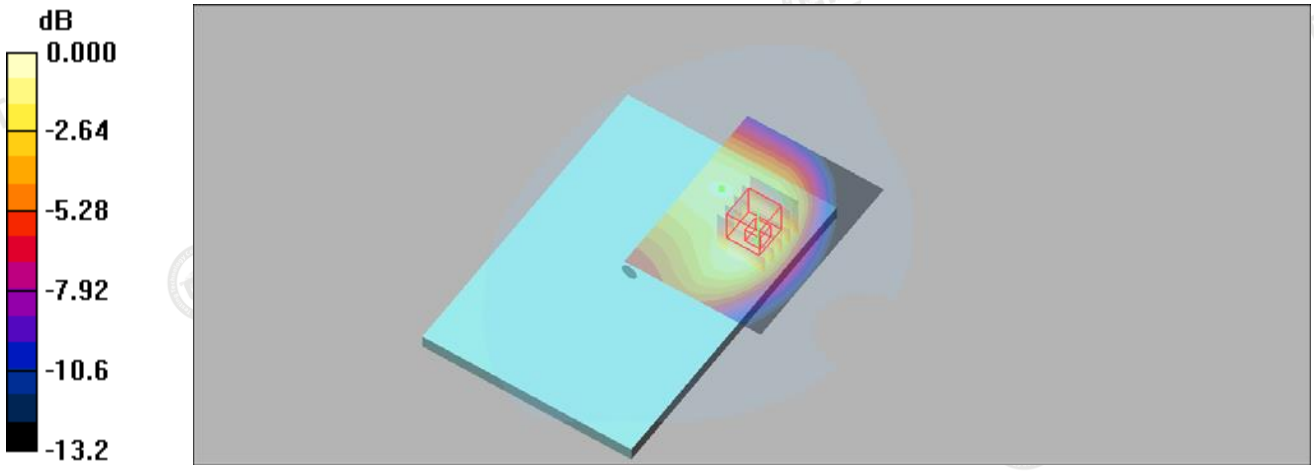
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 29.1 V/m; Power Drift = -0.10 dB

Peak SAR (extrapolated) = 1.66 W/kg

SAR(1 g) = 0.950 W/kg; SAR(10 g) = 0.594 W/kg

Maximum value of SAR (measured) = 1.16 W/kg



0 dB = 1.16 W/kg = 0.64 dBW/kg

#2

Date: 01/11/2024

GSM 1900 _ GPRS 3 Tx slots _Top edge_0mm_CH521

Communication System: UID 0, GSM (0); Frequency: 1850.2 MHz;Duty Cycle: 1:1

Medium parameters used: f = 1850.2 MHz; σ = 1.436 S/m; εr =38.337; ρ = 1000 kg/m3

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7380; ConvF(8.05, 8.05, 8.05); Calibrated: June 21, 2023;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn428; Calibrated: Aug.30,2023;
- Phantom: SAM 1; Type: SAM;
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.10 (7164)

Area Scan (61x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.972 W/kg

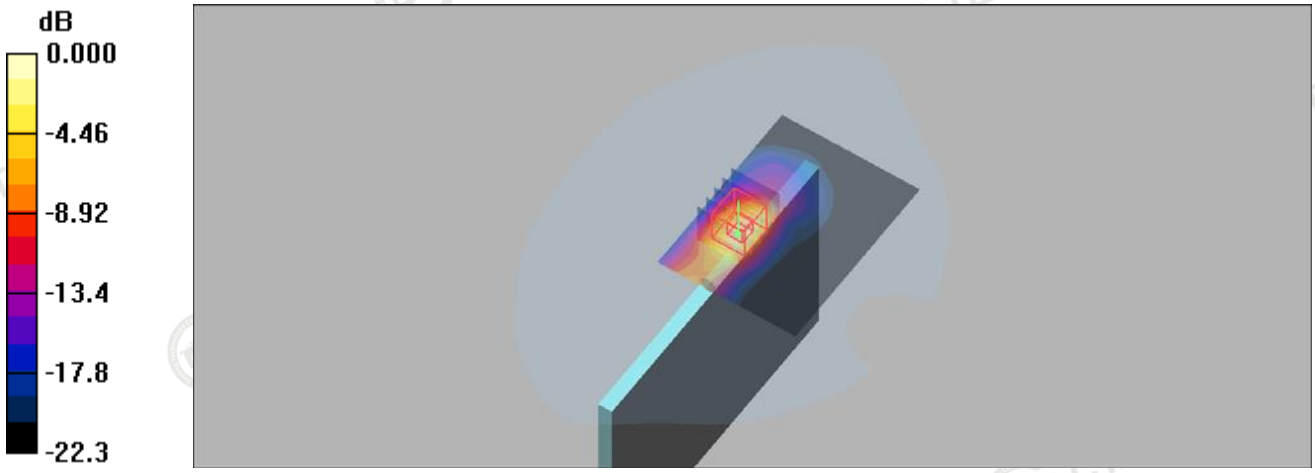
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 22.4 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 1.71 W/kg

SAR(1 g) = 0.769 W/kg; SAR(10 g) = 0.335 W/kg

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



0 dB = 1.05 W/kg = 0.21 dBW/kg

#3

Date: 01/11/2024

WCDMA II_RMC 12.2Kbps_Rear Face_0mm_Ch9538

Communication System: UID 0, Generic WCDMA (0); Frequency: 1907.6 MHz; Duty Cycle: 1:1

Medium parameters used: f = 1907.6 MHz; σ = 1.434 S/m; εr =38.343; ρ = 1000 kg/m3

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7380; ConvF(8.05, 8.05, 8.05); Calibrated: June 21, 2023;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn428; Calibrated: Aug.30,2023;
- Phantom: SAM 1; Type: SAM;
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.10 (7164)

Area Scan (61x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 1.22 W/kg

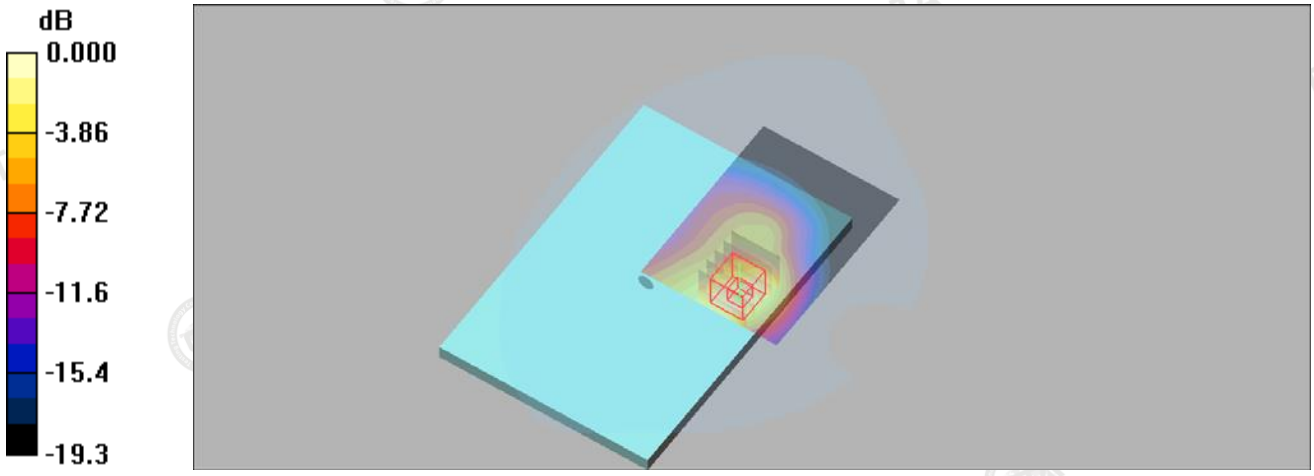
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.8 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 1.92 W/kg

SAR(1 g) = 0.964 W/kg; SAR(10 g) = 0.499 W/kg

Maximum value of SAR (measured) = 1.23 W/kg



0 dB = 1.23 W/kg = 0.90 dBW/kg

#4

Date: 01/09/2024

WCDMA V_RMC 12.2Kbps_ Rear Face_0mm_Ch4183

Communication System: UID 0, Generic WCDMA (0); Frequency: 836.6 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): f = 836.6MHz; σ = 0.931 S/m; ε_r = 42.194; ρ = 1000 kg/m^3

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7380; ConvF(8.35, 8.35, 8.35); Calibrated: June 21, 2023;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn428; Calibrated: Aug.30,2023;
- Phantom: SAM 1; Type: SAM;
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.10 (7164)

Area Scan (61x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

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

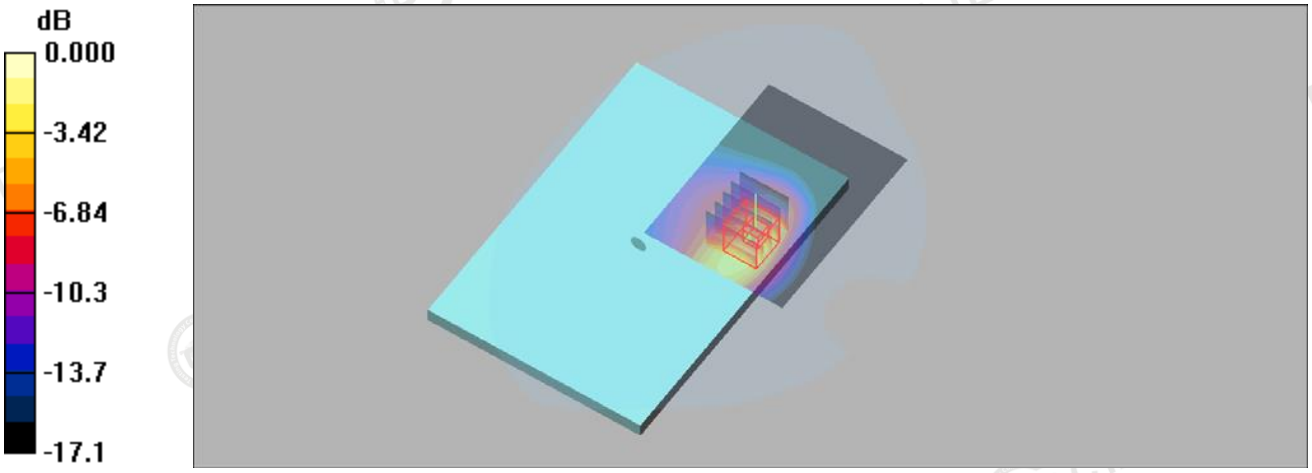
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.6 V/m; Power Drift = -0.15 dB

Peak SAR (extrapolated) = 1.38 W/kg

SAR(1 g) = 0.506 W/kg; SAR(10 g) = 0.239 W/kg

Maximum value of SAR (measured) = 0.731 W/kg



0 dB = 0.731 W/kg = -1.36 dBW/kg

#5

Date: 01/11/2024

LTE Band 2_20M_QPSK_1RB#49_ Rear Face _0mm_Ch18700

Communication System: UID 0, Generic LTE (0); Frequency: 1860 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1860 MHz; σ = 1.383 S/m; ε_r = 38.547; ρ = 1000 kg/m^3
Phantom section: Flat Section

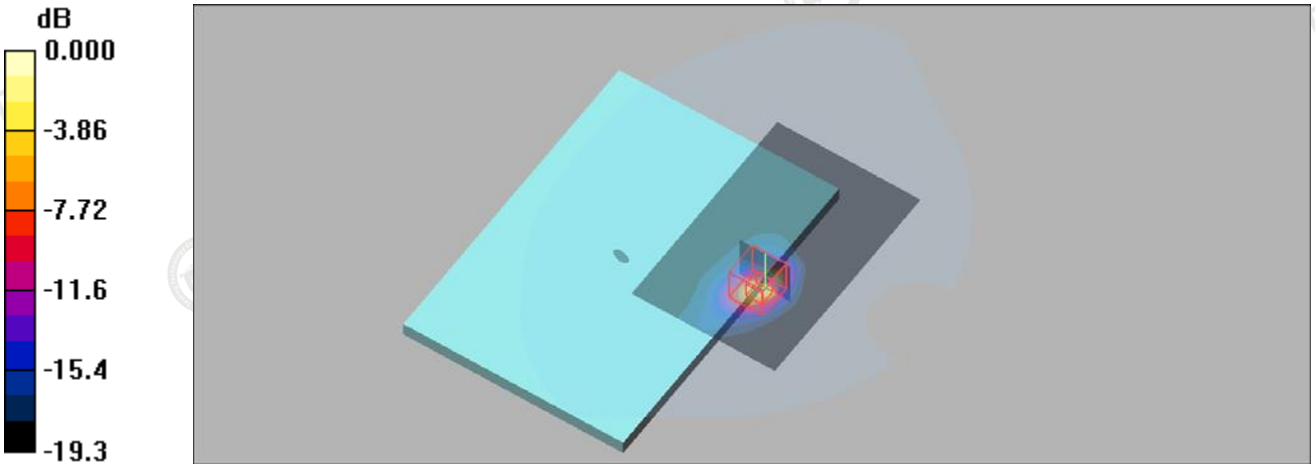
DASY5 Configuration:

- Probe: EX3DV4 - SN7380; ConvF(8.35, 8.35, 8.35); Calibrated: June 21, 2023;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn428; Calibrated: Aug.30,2023;
- Phantom: SAM 1; Type: SAM;
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.10 (7164)

Area Scan (61x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.32 W/Kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 7.92 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 2.54W/kg

SAR(1 g) = 1.01 W/Kg; SAR(10 g) = 0.430 W/Kg
Maximum value of SAR (measured) = 1.48 W/Kg



0 dB = 1.48 W/kg = 1.70 dBW/kg

#6

Date: 01/10/2024

LTE Band 4_20M_QPSK_1RB#49_ Rear Face _0mm_Ch20175

Communication System: UID 0, Generic LTE (0); Frequency: 1732.5 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.405 S/m; ε_r = 39.627; ρ = 1000 kg/m^3
Phantom section: Flat Section

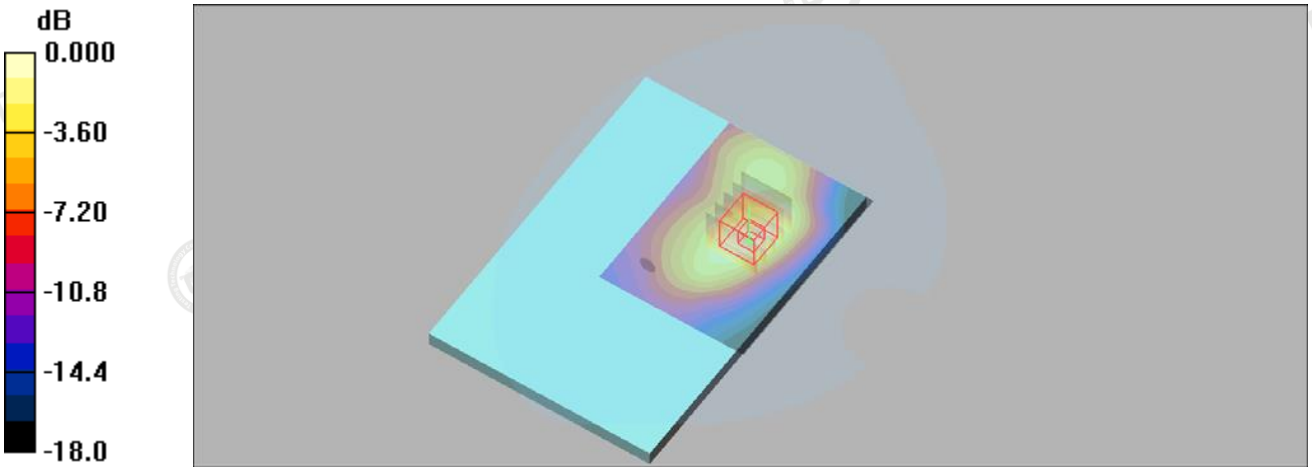
DASY5 Configuration:

- Probe: EX3DV4 - SN7380; ConvF(8.35, 8.35, 8.35); Calibrated: June 21, 2023;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn428; Calibrated: Aug.30,2023;
- Phantom: SAM 1; Type: SAM;
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.10 (7164)

Area Scan (61x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.531 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.3 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.807 W/kg

SAR(1 g) = 0.445 W/Kg; SAR(10 g) = 0.241 W/Kg
Maximum value of SAR (measured) = 0.565 W/Kg



0 dB = 0.565 W/kg = -2.48 dBW/kg

#7
Date: 01/09/2024

LTE Band 5_10M_QPSK_1RB#24_Top edge_0mm_Ch20525

Communication System: UID 0, Generic LTE (0); Frequency: 836.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.5 MHz; σ = 0.924 S/m; ε_r = 42.267; ρ = 1000 kg/m^3
Phantom section: Flat Section

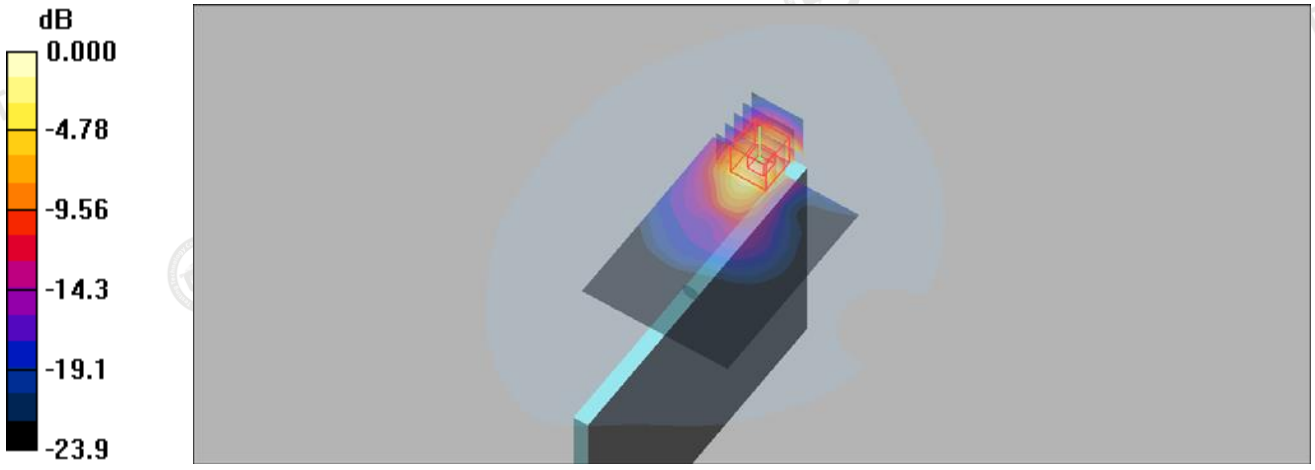
DASY5 Configuration:

- Probe: EX3DV4 - SN7380; ConvF(10.02, 10.02, 10.02); Calibrated: June 21, 2023;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn428; Calibrated: Aug.30,2023;
- Phantom: SAM 1; Type: SAM;
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.10 (7164)

Area Scan (61x81x1)): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.767 W/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.15 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 1.44 W/kg

SAR(1 g) = 0.707 W/g; SAR(10 g) = 0.329 W/g
Maximum value of SAR (measured) = 0.921 W/g



0 dB = 0.921 W/kg = -0.36 dBW/kg

#8

Date: 01/12/2024

LTE Band 7_20M_QPSK_1RB#49_Rear Face_0mm_Ch21100

Communication System: UID 0, Generic LTE (0); Frequency: 2535 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2535 MHz; σ = 1.829 S/m; εr = 39.788; ρ = 1000 kg/m3
Phantom section: Flat Section

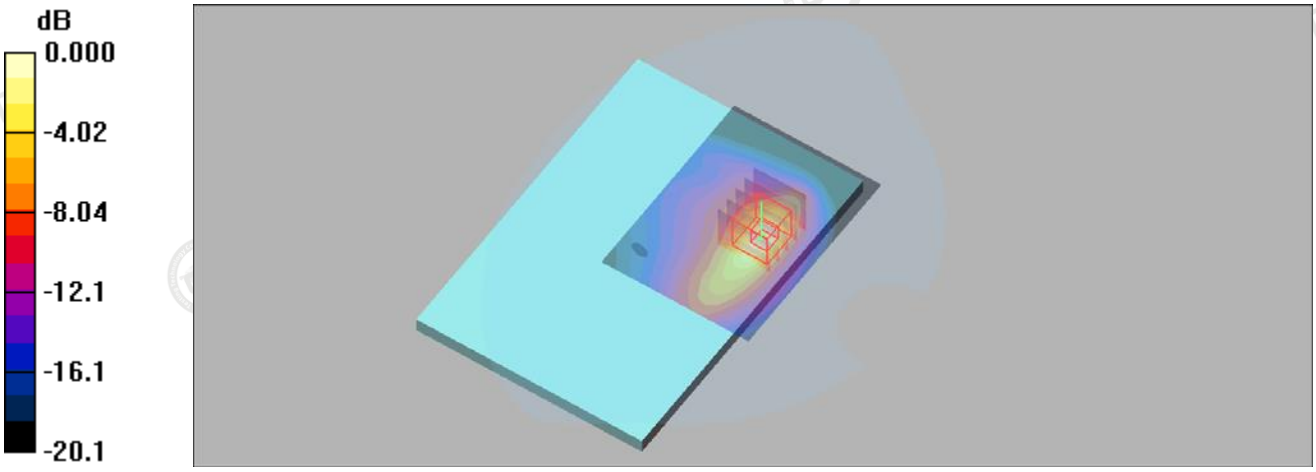
DASY5 Configuration:

- Probe: EX3DV4 – SN7380; ConvF(7.35, 7.35, 7.35); Calibrated: June 21, 2023;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn428; Calibrated: Aug.30,2023;
- Phantom: SAM 1; Type: SAM;
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.10 (7164)

Area Scan (61x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 1.52 W/Kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 15.9 V/m; Power Drift = -0.13 dB
Peak SAR (extrapolated) = 3.35 W/kg

SAR(1 g) = 0.903 W/kg; SAR(10 g) = 0.360 W/kg
Maximum value of SAR (measured) = 1.41 W/kg



0 dB = 1.41 W/kg = 1.49 dBW/kg

#9

Date: 01/15/2024

WLAN2.4GHz_802.11b 1Mbps_Rear Face_0mm_Ch06

Communication System: UID 0, Generic LTE (0); Frequency: 2437 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2437 MHz; σ = 1.715 S/m; εr = 40.207; ρ = 1000 kg/m3
Phantom section: Flat Section

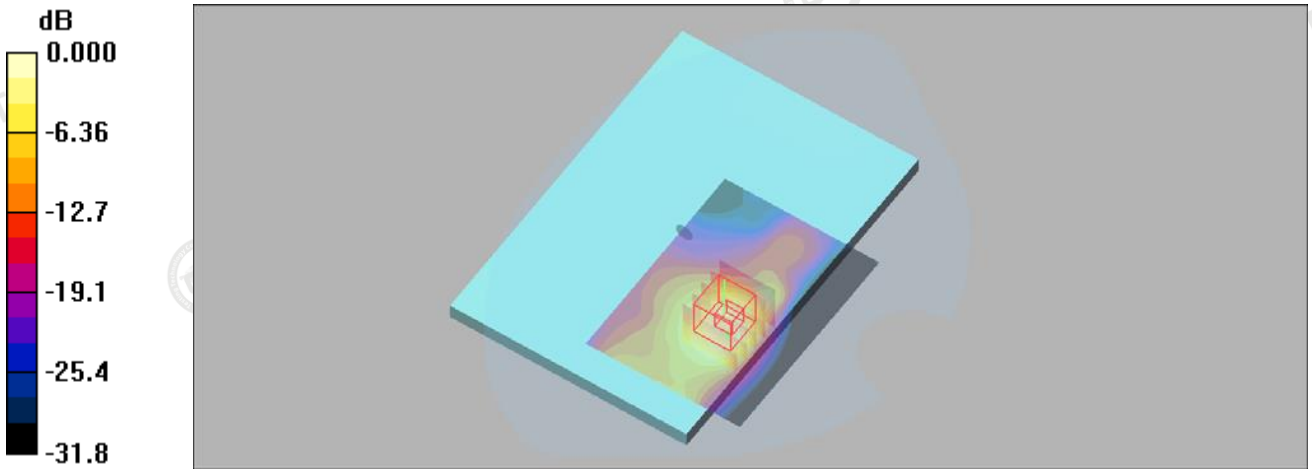
DASY5 Configuration:

- Probe: EX3DV4 - SN7380; ConvF(7.50, 7.50, 7.50); Calibrated: June 21, 2023;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn428; Calibrated: Aug.30,2023;
- Phantom: SAM 1; Type: SAM;
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.10 (7164)

Area Scan (61x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.765 W/Kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.84V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.700 W/kg

SAR(1 g) = 0.281 W/Kg; SAR(10 g) = 0.121 W/Kg
Maximum value of SAR (measured) = 0.357 W/Kg



0 dB = 0.357 W/kg = -4.47 dBW/kg