FCC SAR Test Report

Report No.	:	**PSU-NQN2412090110SA01**
Applicant	:	**HMD Global Oy**
Address	:	**Bertel Jungin aukio 9, 02600 Espoo, Finland**
Manufacturer	:	**HMD Global Oy**
Address	:	**Bertel Jungin aukio 9, 02600 Espoo, Finland**
Product	:	**Mobile phone**
FCC ID	:	**2AJOTTA-1702**
Brand	:	**HMD**
Model No.	:	**H1702V**
Standards	:	**FCC 47 CFR Part 2 (2.1093) / IEEE C95.1:1992 / IEEE 1528:2013** **KDB 865664 D01 v01r04 / KDB 865664 D02 v01r02 / KDB 248227 D01 v02r02** **KDB 447498 D01 v06 / KDB 648474 D04 v01r03 / KDB 941225 D01 v03r01** **KDB 941225 D05 v02r05 / KDB 941225 D06 v02r01**
Sample Received Date	:	**Jan. 14, 2025**
Date of Testing	:	**Feb. 14, 2025 ~ Mar. 09, 2025**
FCC Designation No.	:	**CN1325** **FCC Site Registration No. : 434559**

CERTIFICATION: The above equipment has been tested by **Huarui 7layers High Technology (Suzhou) Co., Ltd.**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's SAR characteristics under the conditions specified in this report. It should not be reproduced except in full, without the written approval of our laboratory. The client should not use it to claim product certification, approval, or endorsement by A2LA or any government agencies.

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Release Control Record

Report No.	Reason for Change	Date Issued
PSU-NQN2412090110SA01	Initial release	Mar. 27, 2025

1. Summary of Maximum SAR Value

Equipment Class	Mode	Highest Reported Head SAR_{1g} (W/kg)	Highest Reported Body-worn SAR_{1g} (1.0 cm Gap) (W/kg)	Highest Reported Hotspot SAR_{1g} (1.0 cm Gap) (W/kg)	Highest Reported Extremity SAR_{10g} (0 cm Gap) (W/kg)
PCE	GSM850	0.34	0.64	0.64	N/A
	GSM1900	0.19	1.10	1.10	N/A
	WCDMA II	0.32	0.74	0.74	3.10
	WCDMA V	0.31	0.58	0.58	N/A
	LTE 2	1.04	0.78	0.78	2.97
	LTE 5	0.28	0.62	0.62	N/A
	LTE 7	1.06	1.10	0.80	2.37
	LTE 12	0.13	0.28	0.31	N/A
	LTE 13	0.21	0.43	0.43	N/A
	LTE 48	1.04	0.86	0.86	1.61
	LTE 66 / 4	0.97	0.82	0.82	2.91
	NR Band n2	0.95	0.79	0.81	3.02
	NR Band n5	0.22	0.50	0.50	N/A
	NR Band n48	1.14	1.06	1.06	2.74
	NR Band n66	0.98	0.81	0.81	3.03
	NR Band n77	1.20	0.92	1.01	3.16
DTS	WLAN2.4G	0.64	0.23	0.23	N/A
NII	WLAN5.2G	N/A	N/A	0.43	N/A
	WLAN5.3G	0.57	0.26	N/A	0.76
	WLAN5.5G	0.60	0.51	N/A	0.62
	WLAN5.8G	0.56	N/A	0.20	N/A
DSS	BT	0.09	0.01	0.02	N/A
DXX	NFC	N/A	N/A	N/A	N/A

Highest Simultaneous Transmission SAR_{1g}	PCE (W/kg)	DTS (W/kg)	NII (W/kg)	DSS (W/kg)
	1.49	1.49	1.43	1.43

Highest Simultaneous Transmission SAR_{10g}	PCE (W/kg)	DTS (W/kg)	NII (W/kg)	DSS (W/kg)
	3.58	N/A	3.58	N/A

Note:

1. The SAR limit **(Head & Body: SAR_{1g} 1.6 W/kg, Extremity: SAR_{10g} 4.0 W/kg)** for general population / uncontrolled exposure is specified in FCC 47 CFR part 2 (2.1093) and ANSI/IEEE C95.1-1992.

2. Description of Equipment Under Test

EUT Type	Mobile phone
FCC ID	2AJOTTA-1702
Brand Name	HMD
Model Name	H1702V
IMEI Code	Sample1: 356634470023884 / 356634470023892 Sample2: 356634470029006 / 356634470029014
HW Version	V1.0
SW Version	000T_0_310
Tx Frequency Bands (Unit: MHz)	GSM850 : 824.2 ~ 848.8 GSM1900 : 1850.2 ~ 1909.8 WCDMA Band II : 1852.4 ~ 1907.6 WCDMA Band V : 826.4 ~ 846.6 LTE Band 2 : 1850.7 ~ 1909.3 LTE Band 4 : 1710.7 ~ 1754.3 LTE Band 5 : 824.7 ~ 848.3 LTE Band 7 : 2502.5 ~ 2567.5 LTE Band 12 : 699.7 ~ 715.3 LTE Band 13 : 779.5 ~ 784.5 LTE Band 48 : 3552.5 ~ 3697.5 LTE Band 66 : 1710.7 ~ 1779.3 NR Band n2 : 1852.5 ~ 1907.5 NR Band n5 : 826.5 ~ 846.5 NR Band n48 : 3555 ~ 3694.98 NR Band n66 : 1712.5 ~ 1777.5 NR Band n77 : 3452.52 ~ 3547.5, 3702.51 ~ 3977.49 WLAN : 2412 ~ 2462, 5180 ~ 5240, 5260 ~ 5320, 5500 ~ 5700, 5745 ~ 5825 Bluetooth : 2402 ~ 2480 NFC : 13.56
Uplink Modulations	GSM & GPRS & EDGE : GMSK, 8PSK WCDMA : QPSK LTE : QPSK, 16QAM, 64QAM, 256QAM NR : Pi/2 BPSK (DFT-s-OFDM), QPSK (DFT-s-OFDM, CP-OFDM), 16QAM (DFT-s-OFDM, CP-OFDM), 64QAM (DFT-s-OFDM, CP-OFDM), 256QAM (DFT-s-OFDM, CP-OFDM) 802.11b : DSSS 802.11a/g/n/ac : OFDM Bluetooth : GFSK, π/4-DQPSK, 8-DPSK, LE NFC : ASK
Subcarrier Spacing	15 kHz（FDD）/ 30 kHz（TDD）
Uplink Transmission Duty Cycle	For 5GNR TDD PC2 Maximum Duty Cycle is 50%, using FTM (Factory Test Mode) with 50% duty cycle is considered during testing. For 5G NR other bands test, using FTM (Factory Test Mode) with default 100% duty cycle transmission to perform evaluation.
LTE Anchor Band for NR Band n2	LTE Band 5/13/66
LTE Anchor Band for NR Band n5	LTE Band 2/48/66
LTE Anchor Band for NR Band n66	LTE Band 2/5/13
LTE Anchor Band for NR Band n77	LTE Band 2/5/13/66
Maximum Tune-up Conducted Power (Unit: dBm)	Please refer to section 4.5.1 of this report.
Antenna Type	PIFA Antenna
EUT Stage	Identical Prototype

Note:

1. The above EUT information is declared by manufacturer and for more detailed features description please refers to the manufacturer's specifications or User's Manual.
2. This device supports both LTE B4 and B66. Since the supported frequency span for LTE B4 falls completely within the LTE B66, they have the same target power, and share the same transmission path, therefore SAR was only assessed for B66.

3. The difference between sample 1/2 is only the memory size and screen supplier, battery supplier, so sample 2 verifies the worst case of sample 1.
4. For WWAN and WLAN antennas, when the audio is actively routed through the earpiece receiver on head exposure condition, power reduction will be activated to limit the maximum power.
5. This device supports the hotspot power reduction feature, when the hotspot function is activated, power reduction will be activated to limit the maximum power.
6. For WWAN antenna, when the SAR sensor is detected close to the body state, power reduction will be activated to limit the maximum power. Proximity sensor triggering distances please refer to section 4.1 of this report.

SAR test scenarios:

<WWAN Ant1/2/4/5>

Power State	SAR Test Scenarios	Receiver	SAR Sensor	Hotspot	WIFI status
Default Power	N/A	N/A	N/A	N/A	N/A
DSI-2	Standalone & Head	On	Off	Off	Off
DSI-5	Simultaneous & Head	On	Off	Off	On
DSI-3	Standalone & Body-Worn/Extremity	Off	On	Off	Off
DSI-6	Simultaneous & Body-Worn/Extremity	Off	On	Off	On
DSI-7/8	Hotspot	Off	Off	On	On

WWAN Ant 3/8 scenarios:

Power State	SAR Test Scenarios	Receiver	SAR Sensor	Hotspot	WIFI status
Default Power	N/A	N/A	N/A	N/A	N/A
DSI-2	Standalone & Head	On	N/A	Off	Off
DSI-5	Simultaneous & Head	On	N/A	Off	On
DSI-4	Standalone & Body-Worn/Extremity	Off	N/A	Off	Off
	Simultaneous & Body-Worn/Extremity	Off	N/A	Off	On
DSI-7/8	Hotspot	Off	N/A	On	On

<WLAN Ant6/7>

Power State	SAR Test Scenarios	Receiver	SAR Sensor	Hotspot	WWAN status
Default Power	N/A	N/A	N/A	N/A	N/A
DSI-2	Standalone & Head	On	N/A	Off	Off
	Simultaneous & Head	On	N/A	Off	On
DSI-3	Standalone & Body-Worn/Extremity	Off	N/A	Off	Off
	Simultaneous & Body-Worn/Extremity	Off	N/A	Off	On
DSI-4	Hotspot	Off	N/A	On	On

3. SAR Measurement System

3.1Definition of Specific Absorption Rate (SAR)

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

The SAR definition is the time derivative (rate) of the incremental energy (dW) absorbed by (dissipated in) an incremental mass (dm) contained in a volume element (dv) of a given density (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 related to the electrical field in the tissue by

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

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

3.2SPEAG DASY System

DASY system consists of high precision robot, probe alignment sensor, phantom, robot controller, controlled measurement server and near-field probe. The robot includes six axes that can move to the precision position of the DASY5 software defined. The DASY software can define the area that is detected by the probe. The robot is connected to controlled box. Controlled measurement server is connected to the controlled robot box. The DAE includes amplifier, signal multiplexing, AD converter, offset measurement and surface detection. It is connected to the Electro-optical coupler (ECO). The ECO performs the conversion form the optical into digital electric signal of the DAE and transfers data to the PC.

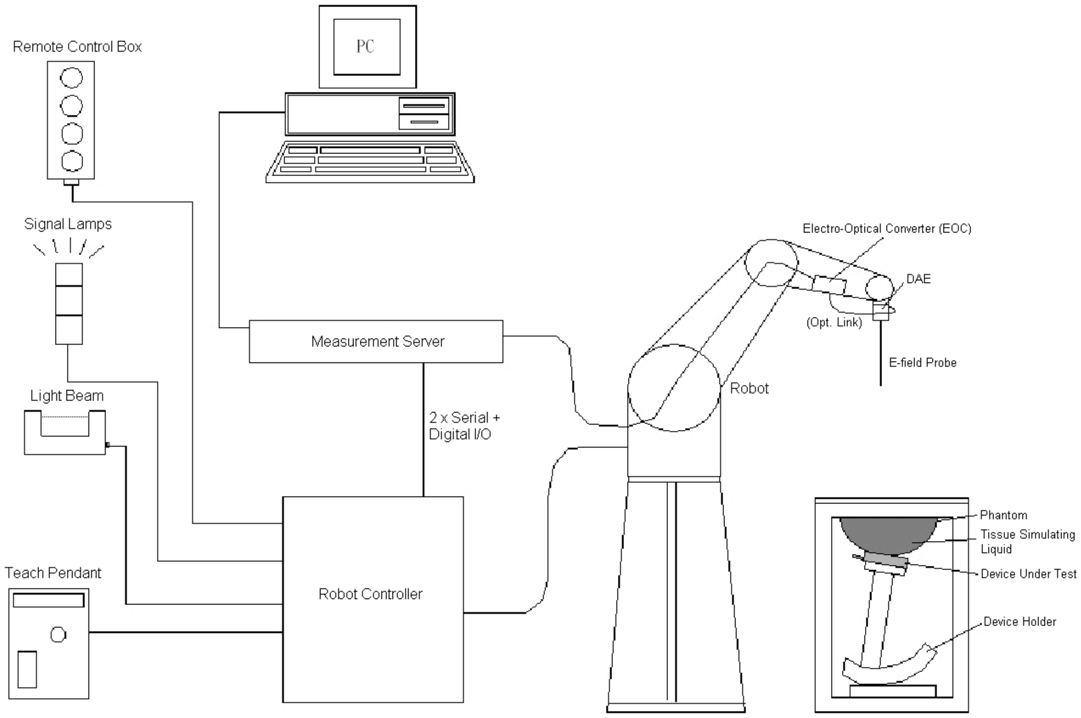


Fig-3.1 DASY System Setup

3.2.1 Robot

The DASY system uses the high precision robots from Stäubli SA (France). For the 6-axis controller system, the robot controller version (DASY6 : CS8c) from Stäubli is used. The Stäubli robot 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)

Fig-3.2 DASY6

3.2.2 Probes

The SAR measurement is conducted with the dosimetric probe. 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.

Model	EX3DV4	
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 mW/g Linearity: ± 0.2 dB (noise: typically < 1 μW/g)	
Dimensions	Overall length: 337 mm (Tip: 20 mm) Tip diameter: 2.5 mm (Body: 12 mm) Typical distance from probe tip to dipole centers: 1 mm	

Model	ES3DV3	
Construction	Symmetrical design with triangular core. Interleaved sensors. Built-in shielding against static charges. PEEK enclosure material (resistant to organic solvents, e.g., DGBE).	
Frequency	10 MHz to 4 GHz Linearity: ± 0.2 dB	
Directivity	± 0.2 dB in HSL (rotation around probe axis) ± 0.3 dB in tissue material (rotation normal to probe axis)	
Dynamic Range	5 μW/g to 100 mW/g Linearity: ± 0.2 dB	
Dimensions	Overall length: 337 mm (Tip: 20 mm) Tip diameter: 3.9 mm (Body: 12 mm) Distance from probe tip to dipole centers: 2.0 mm	

3.2.3 Data Acquisition Electronics (DAE)

Model	DAE3, DAE4
Construction	Signal amplifier, multiplexer, A/D converter and control logic. Serial optical link for communication with DASY embedded system (fully remote controlled). Two step probe touch detector for mechanical surface detection and emergency robot stop.
Measurement Range	-100 to +300 mV (16 bit resolution and two range settings: 4mV, 400mV)
Input Offset Voltage	< 5µV (with auto zero)
Input Bias Current	< 50 fA
Dimensions	60 x 60 x 68 mm

3.2.4 Phantoms

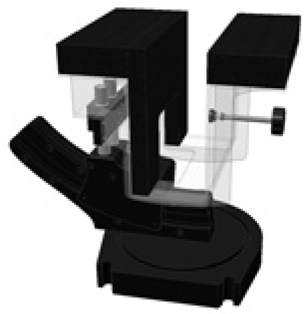
Model	Twin SAM
Construction	The shell corresponds to the specifications of the Specific Anthropomorphic Mannequin (SAM) phantom defined in IEEE 1528 and IEC 62209-1. It enables the dosimetric evaluation of left and right hand phone usage as well as body mounted usage at the flat phantom region. A cover prevents evaporation of the liquid. Reference markings on the phantom allow the complete setup of all predefined phantom positions and measurement grids by teaching three points with the robot.
Material	Vinylester, glass fiber reinforced (VE-GF)
Shell Thickness	2 ± 0.2 mm (6 ± 0.2 mm at ear point)
Dimensions	Length: 1000 mm Width: 500 mm Height: adjustable feet
Filling Volume	approx. 25 liters

Model	ELI
Construction	Phantom for compliance testing of handheld and body-mounted wireless devices in the frequency range of 30 MHz to 6 GHz. ELI is fully compatible with the IEC 62209-2 standard and all known tissue simulating liquids. ELI has been optimized regarding its performance and can be integrated into our standard phantom tables. A cover prevents evaporation of the liquid. Reference markings on the phantom allow installation of the complete setup, including all predefined phantom positions and measurement grids, by teaching three points. The phantom is compatible with all SPEAG dosimetric probes and dipoles.
Material	Vinylester, glass fiber reinforced (VE-GF)
Shell Thickness	2.0 ± 0.2 mm (bottom plate)
Dimensions	Major axis: 600 mm Minor axis: 400 mm
Filling Volume	approx. 30 liters

3.2.5 Device Holder

Model	Mounting Device
Construction	In combination with the Twin SAM Phantom or ELI4, the Mounting Device enables the rotation of the mounted transmitter device in spherical coordinates. Rotation point is the ear opening point. Transmitter devices can be easily and accurately positioned according to IEC, IEEE, FCC or other specifications. The device holder can be locked for positioning at different phantom sections (left head, right head, flat).
Material	POM

Model	Laptop Extensions Kit
Construction	Simple but effective and easy-to-use extension for Mounting Device that facilitates the testing of larger devices according to IEC 62209-2 (e.g., laptops, cameras, etc.). It is lightweight and fits easily on the upper part of the Mounting Device in place of the phone positioner.
Material	POM, Acrylic glass, Foam



3.2.6 System Validation Dipoles

Model	D-Serial
Construction	Symmetrical dipole with l/4 balun. Enables measurement of feed point impedance with NWA. Matched for use near flat phantoms filled with tissue simulating solutions.
Frequency	750 MHz to 5800 MHz
Return Loss	> 20 dB
Power Capability	> 100 W (f < 1GHz), > 40 W (f > 1GHz)

3.2.7 Tissue Simulating Liquids

For SAR measurement of the field distribution inside the phantom, the phantom must be filled with homogeneous tissue simulating liquid to a depth of at least 15 cm. For head SAR testing, the liquid height from the ear reference point (ERP) of the phantom to the liquid top surface is larger than 15 cm. For body SAR testing, the liquid height from the center of the flat phantom to the liquid top surface is larger than 15 cm. The nominal dielectric values of the tissue simulating liquids in the phantom and the tolerance of 5% are listed in Table-3.1.

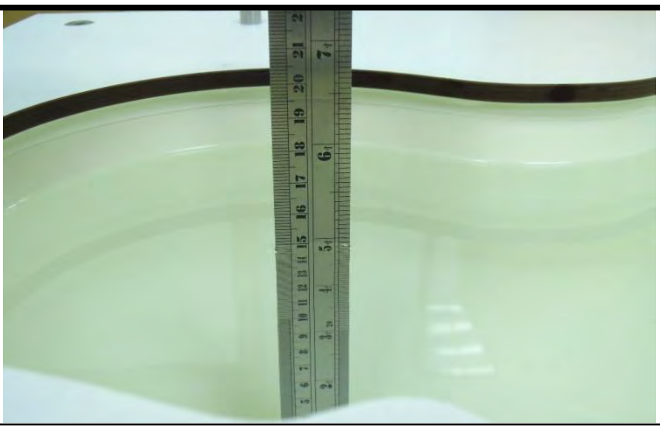
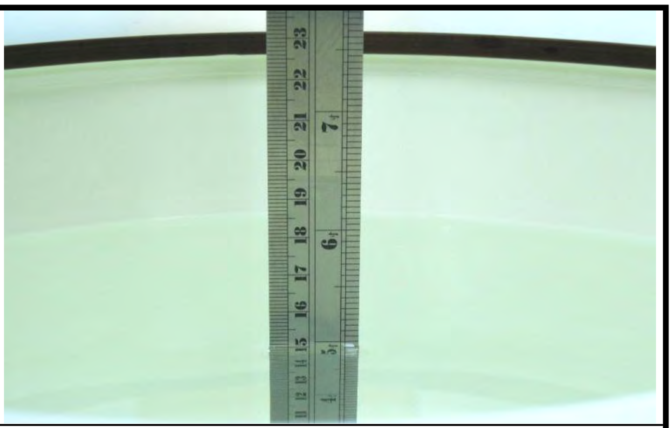
	

Photo of Liquid Height for Head Position	**Photo of Liquid Height for Body Position**

The dielectric properties of the head tissue simulating liquids are defined in IEEE 1528, and KDB 865664 D01 Appendix A. For the body tissue simulating liquids, the dielectric properties are defined in KDB 865664 D01 Appendix A. The dielectric properties of the tissue simulating liquids were verified prior to the SAR evaluation using a dielectric assessment kit and a network analyzer.

Table-3.1 Targets of Tissue Simulating Liquid

Frequency (MHz)	Target Permittivity	Range of ±5%	Target Conductivity	Range of ±5%
For Head				
750	41.9	39.8 ~ 44.0	0.89	0.85 ~ 0.93
835	41.5	39.4 ~ 43.6	0.90	0.86 ~ 0.95
900	41.5	39.4 ~ 43.6	0.97	0.92 ~ 1.02
1450	40.5	38.5 ~ 42.5	1.20	1.14 ~ 1.26
1640	40.3	38.3 ~ 42.3	1.29	1.23 ~ 1.35
1750	40.1	38.1 ~ 42.1	1.37	1.30 ~ 1.44
1800	40.0	38.0 ~ 42.0	1.40	1.33 ~ 1.47
1900	40.0	38.0 ~ 42.0	1.40	1.33 ~ 1.47
2000	40.0	38.0 ~ 42.0	1.40	1.33 ~ 1.47
2300	39.5	37.5 ~ 41.5	1.67	1.59 ~ 1.75
2450	39.2	37.2 ~ 41.2	1.80	1.71 ~ 1.89
2600	39.0	37.1 ~ 41.0	1.96	1.86 ~ 2.06
3500	37.9	36.0 ~ 39.8	2.91	2.76 ~ 3.06
5200	36.0	34.2 ~ 37.8	4.66	4.43 ~ 4.89
5300	35.9	34.1 ~ 37.7	4.76	4.52 ~ 5.00
5500	35.6	33.8 ~ 37.4	4.96	4.71 ~ 5.21
5600	35.5	33.7 ~ 37.3	5.07	4.82 ~ 5.32
5800	35.3	33.5 ~ 37.1	5.27	5.01 ~ 5.53

The following table gives the recipes for tissue simulating liquids.

Table-3.2 Recipes of Tissue Simulating Liquid

Tissue Type	Bactericide	DGBE	HEC	NaCl	Sucrose	Triton X-100	Water	Diethylene Glycol Mono-hexylether
H750	0.2	-	0.2	1.5	56.0	-	42.1	-
H835	0.2	-	0.2	1.5	57.0	-	41.1	-
H900	0.2	-	0.2	1.4	58.0	-	40.2	-
H1450	-	43.3	-	0.6	-	-	56.1	-
H1640	-	45.8	-	0.5	-	-	53.7	-
H1750	-	47.0	-	0.4	-	-	52.6	-
H1800	-	44.5	-	0.3	-	-	55.2	-
H1900	-	44.5	-	0.2	-	-	55.3	-
H2000	-	44.5	-	0.1	-	-	55.4	-
H2300	-	44.9	-	0.1	-	-	55.0	-
H2450	-	45.0	-	0.1	-	-	54.9	-
H2600	-	45.1	-	0.1	-	-	54.8	-
H3500	-	28.0	-	0.2	-	20.0	71.8	-
H5G	-	-	-	-	-	17.2	65.5	17.3

3.3SAR System Verification

The system check verifies that the system operates within its specifications. It is performed daily or before every SAR measurement. The system check uses normal SAR measurements in the flat section of the phantom with a matched dipole at a specified distance. The system verification setup is shown as below.

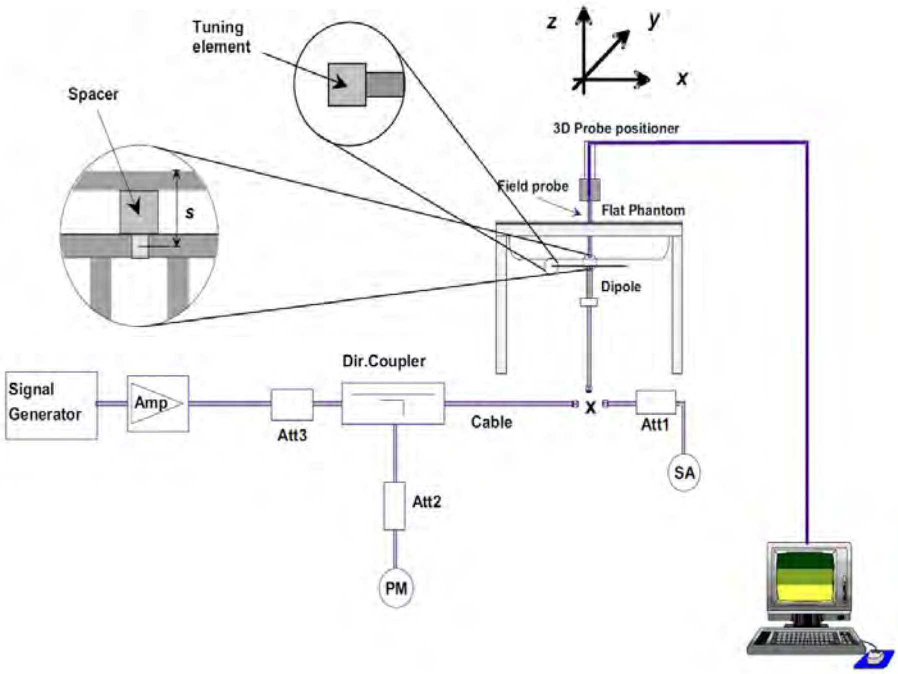


Fig-3.4 System Verification Setup

The validation dipole is placed beneath the flat phantom with the specific spacer in place. The distance spacer is touch the phantom surface with a light pressure at the reference marking and be oriented parallel to the long side of the phantom. The spectrum analyzer measures the forward power at the location of the system check dipole connector. The signal generator is adjusted for the desired forward power (250 mW is used for 700 MHz to 3 GHz, 100 mW is used for 3.5 GHz to 6 GHz) at the dipole connector and the power meter is read at that level. After connecting the cable to the dipole, the signal generator is readjusted for the same reading at power meter.

After system check testing, the SAR result will be normalized to 1W forward input power and compared with the reference SAR value derived from validation dipole certificate report. The deviation of system check should be within 10 %.

3.4SAR Measurement Procedure

According to the SAR 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

The SAR measurement procedures for each of test conditions are as follows:

(a) Make EUT to transmit maximum output power
(b) Measure conducted output power through RF cable
(c) Place the EUT in the specific position of phantom
(d) Perform SAR testing steps on the DASY system
(e) Record the SAR value

3.4.1 Area & Zoom Scan Procedure

First Area Scan is used to locate the approximate location(s) of the local peak SAR value(s). The measurement grid within an Area Scan is defined by the grid extent, grid step size and grid offset. Next, in order to determine the EM field distribution in a three-dimensional spatial extension, Zoom Scan is required. The Zoom Scan is performed around the highest E-field value to determine the averaged SAR-distribution over 10 g. According to KDB 865664 D01, the resolution for Area and Zoom scan is specified in the table below.

Items	<= 2 GHz	2-3 GHz	3-4 GHz	4-5 GHz	5-6 GHz
Area Scan (Δx, Δy)	<= 15 mm	<= 12 mm	<= 12 mm	<= 10 mm	<= 10 mm
Zoom Scan (Δx, Δy)	<= 8 mm	<= 5 mm	<= 5 mm	<= 4 mm	<= 4 mm
Zoom Scan (Δz)	<= 5 mm	<= 5 mm	<= 4 mm	<= 3 mm	<= 2 mm
Zoom Scan Volume	>= 30 mm	>= 30 mm	>= 28 mm	>= 25 mm	>= 22 mm

Note:

When zoom scan is required and report SAR is <= 1.4 W/kg, the zoom scan resolution of Δx / Δy (2-3GHz: <= 8 mm, 3-4GHz: <= 7 mm, 4-6GHz: <= 5 mm) may be applied.

3.4.2 Volume Scan Procedure

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

3.4.3 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.

3.4.4 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

3.4.5 SAR Averaged Methods

In DASY, the interpolation and extrapolation are both based on the modified Quadratic Shepard's method. The interpolation scheme combines a least-square fitted function method and a weighted average method which are the two basic types of computational interpolation and approximation.

Extrapolation routines are used to obtain SAR values between the lowest measurement points and the inner phantom surface. The extrapolation distance is determined by the surface detection distance and the probe sensor offset. The uncertainty increases with the extrapolation distance. To keep the uncertainty within 1% for the 1 g and 10 g cubes, the extrapolation distance should not be larger than 5 mm.

4. SAR Measurement Evaluation

4.1EUT Configuration and Setting

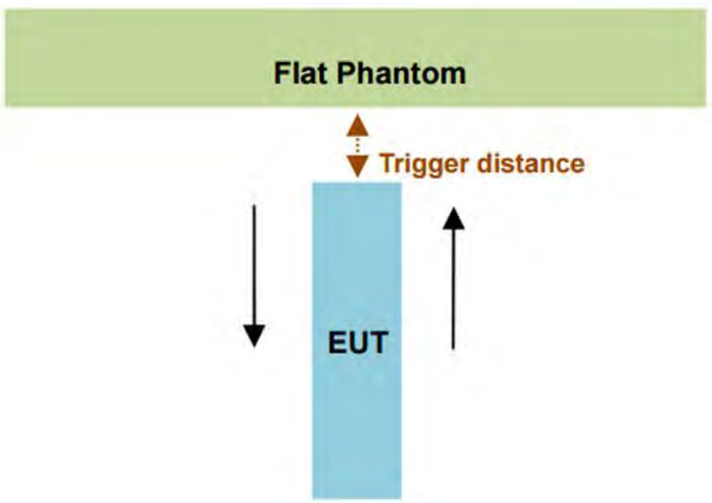
<Connections between EUT and System Simulator>

For WWAN SAR testing, the EUT was linked and controlled by base station emulator (Anritsu MT8821C is used for GSM/WCDMA/LTE). Communication between the EUT and the emulator was established by air link. The distance between the EUT and the communicating 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 SAR testing.

< Proximity Sensor Triggering Distances >

The proximity sensor triggering distance was determined per KDB 616217 section 6.2, and EUT moving further away from the flat phantom and EUT moving toward the flat phantom were both assessed.

In the preliminary triggering distance testing, the tissue-equivalent medium for different frequency bands were used for verification; no other frequency bands tissue-equivalent medium was found to result in shortest triggering than that for 5700MHz, and the tissue-equivalent medium for 5700MHz was used for formal proximity sensor triggering testing.



Summary for trigger distance per position was tabulated in the below table.

Ant 4/5

Ant 4/5(moving toward phantom)											
Position / Distance (mm)	0~14	15	16	17	18	19	20	21	22~23	24	25~50
Front Face	on	on	on	off	off	off	off	off	off	off	off
Rear Face	on	on	on	on	on	on	on	on	on	off	off
Top Side	on	on	on	on	on	on	on	on	on	on	off
Left Side	on	off	off	off	off	off	off	off	off	off	off

Ant 6/7

Ant 6/7(moving toward phantom)											
Position / Distance (mm)	0~12	13	14	15	16	17~19	20	21	22	23	24~50
Front Face	on	on	on	on	off	off	off	off	off	off	off
Rear Face	on	on	on	on	on	on	on	on	on	off	off
Top Side	on	on	on	on	on	on	on	on	on	on	off
Right Side	on	off	off	off	off	off	off	off	off	off	off

Ant 1/2

Ant 6/7(moving toward phantom)											
Position / Distance (mm)	0~15	16	17	18	19	20	21	22	23	24	26~50
Front Face	on	on	off	off	off	off	off	off	off	off	off
Rear Face	on	on	on	on	on	on	on	on	on	on	off
Bottom Side	on	on	on	on	on	on	off	off	off	off	off
Left Side	on	on	on	off	off	off	off	off	off	off	off

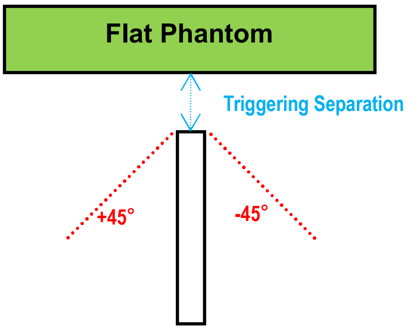
< Proximity Sensor Coverage >

In KDB 616217 section 6.3, if a sensor is spatially offset from the antenna(s), it is necessary to verify sensor triggering for conditions where the antenna is next to the user but the sensor is laterally further away to ensure sensor coverage is sufficient for reducing the power to maintain compliance. For p-sensor coverage testing, the device is moved and "along the direction of maximum antenna and sensor offset".

However, this device uses a capacitive proximity sensor that is same metallic component as the transmitting antenna to facilitate triggering in any condition the user may use the device in proximity of the antenna in the device. Therefore, no further sensor coverage assessments were required.

<Proximity Sensor Tilt Angle Influences>

The proximity sensor tilt angle influence was determined per KDB 616217 for applicable edge. Summary for proximity sensor tilt angle influence is shown in below.



Antenna	Orientation	Separation Distance (mm)	Tilt Angle										
			-45°	-40°	-30°	-20°	-10°	0°	10°	20°	30°	40°	45°
Ant 4/5	Top Side	24	On	On	On	On	On	On	On	On	On	On	On
Ant 6/7	Top Side	23	On	On	On	On	On	On	On	On	On	On	On
Ant 1/2	Bottom Side	20	On	On	On	On	On	On	On	On	On	On	On
Ant 4/5	Left Side	14	On	On	On	On	On	On	On	On	On	On	On
Ant 1/2	Left Side	17	On	On	On	On	On	On	On	On	On	On	On
Ant 6/7	Right Side	12	On	On	On	On	On	On	On	On	On	On	On

<Summary for Proximity Sensor Triggering Test>

According to the procedures noticed in KDB 616217 D04

The conservation triggering distances based on the separation distance for the sensor trigger / not triggered as EUT with power reduction at 0 mm, and EUT without power reduction is shown as below.

Antenna / Test position	Front Face	Rear Face	Left Side	Right Side	Top Side	Bottom Side
WWAN-Ant 4/5	16mm	23mm	14mm	-	24mm	-
WWAN-Ant 6/7	15mm	22mm	-	12mm	23mm	-
WWAN-Ant 1/2	16mm	24mm	17mm	-	-	20mm

Note:

1. The power reduction depends on the proximity sensor input. For a steady SAR test, the power reduction was enabled or disabled manually by engineering software during SAR testing.
2. For verification of compliance of power reduction scheme, additional SAR testing with EUT transmitting at full RF power at a conservative trigger distance -1mm was performed.

<Considerations Related to GSM / GPRS / EDGE for Setup and Testing>

The maximum multi-slot capability supported by this device is as below.

1. This EUT is class B device
2. This EUT supports GPRS multi-slot class 12 (max. uplink: 4, max. downlink: 4, total timeslots: 5)
3. This EUT supports EDGE multi-slot class 12 (max. uplink: 4, max. downlink: 4, total timeslots: 5)

For GSM850 frequency band, the power control level is set to 5 for GSM mode and GPRS (GMSK: CS1), and set to 8 for EDGE (GMSK: MCS1, 8PSK: MCS9). For GSM1900 frequency band, the power control level is set to 0 for GSM mode and GPRS (GMSK: CS1), and set to 2 for EDGE (GMSK: MCS1, 8PSK: MCS9).

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

The frame-averaged power is linearly proportion to the slot number configured and it is linearly scaled the maximum burst-averaged power based on time slots. The calculated method is shown as below:

Frame-averaged power = 10 x log (Burst-averaged power mW x Slot used / 8)

<Considerations Related to WCDMA for Setup and Testing>

WCDMA Handsets Head SAR

SAR for next to the ear head exposure is measured using a 12.2 kbps RMC with TPC bits configured to all “1’s”. The 3G SAR test reduction procedure is applied to AMR configurations with 12.2 kbps RMC as the primary mode.

WCDMA Handsets Body-worn SAR

SAR for body-worn configurations is measured using a 12.2 kbps RMC with TPC bits configured to all “1’s”. The 3G SAR test reduction procedure is applied to other spreading codes and multiple $DPDCH_n$ configurations supported by the handset with 12.2 kbps RMC as the primary mode.

Handsets with Release 5 HSDPA

The 3G SAR test reduction procedure is applied to HSDPA body-worn configurations with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured for HSDPA using the HSDPA body SAR procedures in the “Release 5 HSDPA Data Devices”, for the highest reported SAR body-worn exposure configuration in 12.2 kbps RMC. Handsets with both HSDPA and HSUPA are tested according to Release 6 HSPA test procedures.

Handsets with Release 6 HSUPA

The 3G SAR test reduction procedure is applied to HSPA (HSUPA/HSDPA with RMC) body-worn configurations with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured for HSPA using the HSPA body SAR procedures in the “Release 6 HSPA Data Devices”, for the highest reported body-worn exposure SAR configuration in 12.2 kbps RMC. When VOIP is applicable for next to the ear head exposure in HSPA, the 3G SAR test reduction procedure is applied to HSPA with 12.2 kbps RMC as the primary mode; otherwise, the same HSPA configuration used for body-worn measurements is tested for next to the ear head exposure.

Release 5 HSDPA Data Devices

The 3G SAR test reduction procedure is applied to body SAR with 12.2 kbps RMC as the primary mode. Otherwise, body SAR for HSDPA is measured using an FRC with H-Set 1 in Sub-test 1 and a 12.2 kbps RMC configured in Test Loop Mode 1, for the highest reported SAR configuration in 12.2 kbps RMC without HSDPA. HSDPA is configured according to the applicable UE category of a test device. The number of HS-DSCH / HS-PDSCHs, HARQ processes, minimum inter-TTI interval, transport block sizes and RV coding sequence are defined by the H-set. To maintain a consistent test configuration and stable transmission conditions, QPSK is used in the H-set for SAR testing. HS-DPCCH should be configured with a CQI feedback cycle of 4 ms and a CQI repetition factor of 2 to maintain a constant rate of active CQI slots. DPCCH and DPDCH gain factors (β_c, β_d), and HS-DPCCH power offset parameters (Δ_{ACK}, Δ_{NACK}, Δ_{CQI}) are set according to values indicated in below. The CQI value is determined by the UE category, transport block size, number of HS-PDSCHs and modulation used in the H-set.

Sub-test	β_c	β_d	β_d (SF)	β_c / β_d	β_{hs} (1)	CM (dB)(2)	MPR
1	2 / 15	15 / 15	64	2 / 15	4 / 15	0.0	0
2	12 / 15 (3)	15 / 15 (3)	64	12 / 15 (3)	24 / 15	1.0	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} = 8 ⇔ $A_{hs} = \beta_{hs} / \beta_c = 30 / 15$ ⇔ $\beta_{hs} = 30 / 15 * \beta_c$.
Note 2: CM = 1 for $\beta_c / \beta_d = 12 / 15$, $\beta_{hs} / \beta_c = 24 / 15$.
Note 3: 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 signaled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 11 / 15$ and $\beta_d = 15 / 15$.

Release 6 HSUPA Data Devices

The 3G SAR test reduction procedure is applied to body SAR with 12.2 kbps RMC as the primary mode. Otherwise, body SAR for HSPA is measured with E-DCH Sub-test 5, using H-Set 1 and QPSK for FRC and a 12.2 kbps RMC configured in Test Loop Mode 1 and power control algorithm 2, according to the highest reported body SAR configuration in 12.2 kbps RMC without HSPA. When VOIP applies to head exposure, the 3G SAR test reduction procedure is applied with 12.2 kbps RMC as the primary mode. Otherwise, the same HSPA configuration used for body SAR measurements are applied to head exposure testing. Due to inner loop power control requirements in HSPA, a communication test set is required for output power and SAR tests. The 12.2 kbps RMC, FRC H-set 1 and E-DCH configurations for HSPA are configured according to the β values indicated in below.

Sub-test	β_c	β_d	β_d (SF)	β_c / β_d	β_{hs} (1)	β_{ec}	β_{ed}	β_{ed} (SF)	β_{ed} (codes)	CM (2) (dB)	MPR (dB)	AG (4) Index	E-TFCI
1	11 / 15 (3)	15 / 15 (3)	64	11 / 15 (3)	22 / 15	209 / 225	1039 / 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	β_{ed1}: 47/15 β_{ed2}: 47/15	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 (4)	15 / 15 (4)	64	15 / 15 (4)	30 / 15	24 / 15	134 / 15	4	1	1.0	0.0	21	81

Note 1: Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 8 ⇔ A_{hs} = β_{hs} / β_c = 30 / 15 ⇔ 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 signaled 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 signaled gain factors for the reference TFC (TF1, TF1) to β_c = 14 / 15 and β_d = 15 / 15.
Note 5: Testing UE using E-DPDCH Physical Layer category 1 Sub-test 3 is not required according to TS 25.306 Table 5.1g.
Note 6: β_{ed} cannot be set directly; it is set by Absolute Grant Value.

DC-HSDPA SAR Guidance

The 3G SAR test reduction procedure is applied to DC-HSDPA with 12.2 kbps RMC as the primary mode. Otherwise, when SAR is required for Rel. 5 HSDPA, SAR is required for Rel. 8 DC-HSDPA. Power is measured for DC-HSDPA according to the H-Set 12, FRC configuration in Table C.8.1.12 of 3GPP TS 34.121-1 to determine SAR test reduction. A primary and a secondary serving HS-DSCH Cell are required to perform the power measurement and for the results to be acceptable.

<Considerations Related to LTE for Setup and Testing>

This device contains LTE transmitter which follows 3GPP standards, supports both QPSK 16QAM 64QAM and 256QAM modulations, and supported LTE band and channel bandwidth is listed in below. The output power was tested per 3GPP TS 36.521-1 maximum transmit procedures for both QPSK 16QAM 64QAM and 256QAM modulation. The results please refer to section 4.6 of this report.

EUT Supported LTE Band and Channel Bandwidth						
LTE Band	**BW 1.4 MHz**	**BW 3 MHz**	**BW 5 MHz**	**BW 10 MHz**	**BW 15 MHz**	**BW 20 MHz**
2	V	V	V	V	V	V
4	V	V	V	V	V	V
5	V	V	V	V	-	-
7	-	-	V	V	V	V
12	V	V	V	V	-	-
13	-	-	V	V	-	-
48	-	-	V	V	V	V
66	V	V	V	V	V	V

The LTE maximum power reduction (MPR) in accordance with 3GPP TS 36.101 is active all times during LTE operation. The allowed MPR for the maximum output power is specified in below.

Modulation	Channel Bandwidth / RB Configurations						LTE MPR Setting (dB)
	BW 1.4 MHz	BW 3 MHz	BW 5 MHz	BW 10 MHz	BW 15 MHz	BW 20 MHz	
QPSK	> 5	> 4	> 8	> 12	> 16	> 18	1
16QAM	<= 5	<= 4	<= 8	<= 12	<= 16	<= 18	1
16QAM	> 5	> 4	> 8	> 12	> 16	> 18	2
64QAM	<= 5	<= 4	<= 8	<= 12	<= 16	<= 18	2
64QAM	> 5	> 4	> 8	> 12	> 16	> 18	3
256QAM	>= 1						5

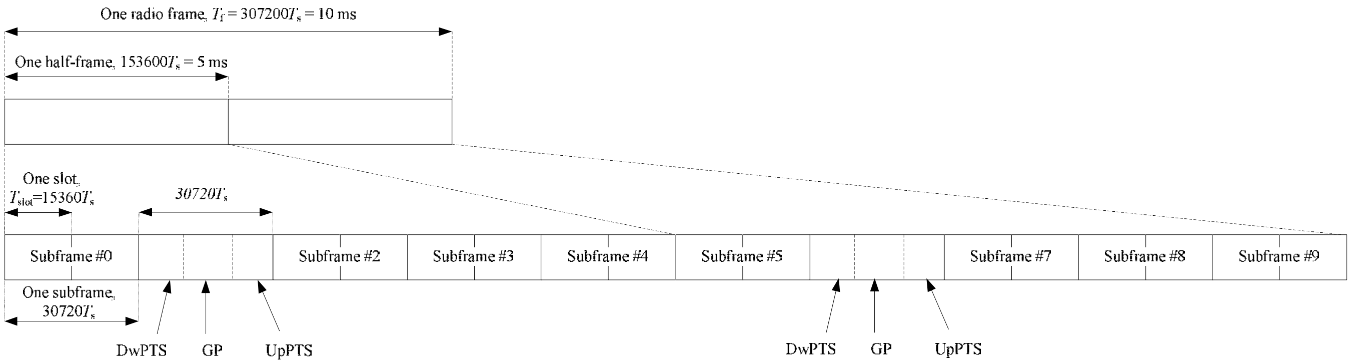
Note: MPR is according to the standard and implemented in the circuit (mandatory).

In addition, the device is compliant with additional maximum power reduction (A-MPR) requirements defined in 3GPP TS 36.101 section 6.2.4 that was disabled for all FCC compliance testing.

During LTE SAR testing, the related parameters of operating band, channel bandwidth, uplink channel number, modulation type, and RB was set in base station simulator. When the EUT has registered and communicated to base station simulator, the simulator set to make EUT transmitting the maximum radiated power.

TDD-LTE Setup Configurations

According to KDB 941225 D05, SAR testing for TDD-LTE device must be tested using a fixed periodic duty factor according to the highest transmission duty factor implemented for the device and supported by the defined 3GPP TDD-LTE configurations. The TDD-LTE of this device supports frame structure type 2 defined in 3GPP TS 36.211 section 4.2, and the frame structure configuration can be referred to below.



3GPP TS 36.211 Figure 4.2-1: Frame Structure Type 2

Special Subframe Configuration	Normal Cyclic Prefix in Downlink			Extended Cyclic Prefix in Downlink		
	DwPTS	UpPTS		DwPTS	UpPTS	
		Normal Cyclic Prefix in Uplink	Extended Cyclic Prefix in Uplink		Normal Cyclic Prefix in Uplink	Extended Cyclic Prefix in Uplink
0	6592·Ts	2192·Ts	2560·Ts	7680·Ts	2192·Ts	2560·Ts
1	19760·Ts			20480·Ts		
2	21952·Ts			23040·Ts		
3	24144·Ts			25600·Ts		
4	26336·Ts			7680·Ts	4384·Ts	5120·Ts
5	6592·Ts	4384·Ts	5120·Ts	20480·Ts		
6	19760·Ts			23040·Ts		
7	21952·Ts			12800·Ts		
8	24144·Ts			-	-	-
9	13168·Ts			-	-	-

3GPP TS 36.211 Table 4.2-1: Configuration of Special Subframe

Uplink-Downlink Configuration	Downlink-to-Uplink Switch-Point Periodicity	Subframe Number									
		0	1	2	3	4	5	6	7	8	9
0	5 ms	D	S	U	U	U	D	S	U	U	U
1	5 ms	D	S	U	U	D	D	S	U	U	D
2	5 ms	D	S	U	D	D	D	S	U	D	D
3	10 ms	D	S	U	U	U	D	D	D	D	D
4	10 ms	D	S	U	U	D	D	D	D	D	D
5	10 ms	D	S	U	D	D	D	D	D	D	D
6	5 ms	D	S	U	U	U	D	S	U	U	D

3GPP TS 36.211 Table 4.2-2: Uplink-Downlink Configurations

The variety of different TD-LTE uplink-downlink configurations allows a network operator to allocate the network's capacity between uplink and downlink traffic to meet the needs of the network. The uplink duty cycle of these seven configurations can readily be computed and shown in below.

UL-DL Configuration	0	1	2	3	4	5	6
Highest Duty-Cycle	63.33%	43.33%	23.33%	31.67%	21.67%	11.67%	53.33%

Considering the highest transmission duty cycle, TDD-LTE was tested using Uplink-Downlink Configuration 0 with 6 uplink subframe and 2 special subframe. The special subframe was set to special subframe configuration 7 using extended cyclic prefix uplink. Therefore, SAR testing for TDD-LTE was performed at the maximum output power with highest transmission duty cycle of 63.33%.

LTE Uplink Carrier Aggregation (Intra-Band) Setup Configurations

EUT Supported Combinations of Uplink Carrier Aggregation
Intra-Band 2CC Uplink CA Operating Bands
CA_5B, CA_66B, CA_66C, CA_48B, CA_48C

Note:

1. UL CA shall be tested based on the worst-case SAR configuration determined from non-CA SAR testing result. The channel BW, channel number, RB allocation, etc. would be selected to allow contiguous CA of PCC and SCC. Uplink output power for UL CA is the total power measured across the PCC and SCC.
2. The UL CA mode power measurements represent the total power across both carriers. Measurements were made for all supported PCC bandwidths using the channel/RB combination resulting in the highest standalone output power at the least MPR (0 dB). SCC were set to use configurations similar to the PCC to establish conservative or worst-case equivalent SAR test conditions (highest maximum output power with MPR of 0 dB and RB allocation setting).
3. PCC RB allocation setting for UL CA has been adjusted based on the worst-case power.
4. According to November 2017 TCB workshop, Uplink CA SAR Test Guidance as follows:
   a) When the maximum output power for UL CA is ≤ standalone LTE mode (without CA)
      • PCC is configured according to the highest standalone SAR configuration tested
      • SCC and subsequent CCs are configured according to procedures used for power measurement and parameters (BW, RB etc.) similar to that used for the PCC
   b) When the Reported SAR for UL CA configuration, described above, is > 1.2W/kg, UL CA is also required for all required test channels(PCC based)
   c) UL CA SAR is also required for standalone SAR configurations > 1.2W/kg when they are scaled to the UL CA power level
5. PCC RB allocation setting for UL CA has been adjusted based on the worst-case power, for detailed UL CA output power measurement results, please refer to Appendix D.

LTE Uplink Carrier Aggregation (Inter-Band) Setup Configurations

LTE Uplink CA	2CC Uplink Carrier Aggregation	
Inter Band	Tx Antenna	
	PCC	SCC
CA_2A_4A	Ant1	Ant5
CA_2A_5A	Ant5	Ant2
CA_2A_13A	Ant5	Ant2
CA_2A_66A	Ant1	Ant5
CA_4A_5A	Ant5	Ant2
CA_4A_13A	Ant5	Ant2
CA_5A_66A	Ant2	Ant5
CA_13A_66A	Ant2	Ant5

Note:

1. According to October 2018 TCB workshop, uplink CA SAR test guidance as follows:
   (a). Provide the single uplink SAR values you have obtained for the relevant SAR configuration and frequency bands that employ inter-band uplink carrier aggregation.

(b). If the single uplink 1g SAR values for each band are both less than 0.8W/kg and the algebraic summation of the 1g SAR values are less than 1.45W/kg no additional measurements need to be performed.

(c). If one on the single uplink 1g SAR values is greater than 0.8W/kg, instead of algebraically summing the 1g SAR values sum up the SAR distributions, like the enlarged zoom scan (volume scan) procedures found in FCC KDB publication 865664 D01 SAR measurement 100MHz to 6GHz V01r04.

(d). If the algebraic sum of the 1g SAR values is > 1.45W/kg additional measurements may have to be made. Submit a KDB inquiry for additional guidance.

2. The single carrier of inter band CA uplink power level is the same as Non-CA standalone LTE power level. In this report, simultaneous transmission compliance was evaluated using standalone LTE SAR mode.

3. The single uplink 1g SAR values for each band are both less than 0.8W/kg and the algebraic summation of the 1g SAR value are less than 1.45W/kg, additional measurements are not required.

Please refer to Appendix F for data details

<Considerations Related to 5G NR for Setup and Testing>

1. The 5G NR supports both SA and NSA modes. The details are as follows:

Mode	Band	Duplex	SCS(KHz)	BW(M)
NSA	5G NR n2	FDD	15	5,10,15,20
	5G NR n5	FDD	15	5,10,15,20
	5G NR n66	FDD	15	5,10,15,20,25,30,40
	5G NR n77	TDD	30	5,10,15,20,30,40,50,60,70,80,90,100
SA	5G NR n2	FDD	15	5,10,15,20
	5G NR n5	FDD	15	5,10,15,20
	5G NR n48	TDD	30	10,20,40
	5G NR n66	FDD	15	5,10,15,20,25,30,40
	5G NR n77	TDD	30	5,10,15,20,30,40,50,60,70,80,90,100

2. For 5G NR test procedure was following step similar FCC KDB 941225 D05:

(1) For DFT-OFDM and CP-OFDM output power measurement reduction, according to 38.101 maximum power reduction for power class2 and 3, the CP-OFDM mode will not higher than DFT-OFDM mode, therefore, similar FCC KB 941225 D05 procedure for other modulation output power for each RB allocation configuration is > not ½ dB higher than the same configuration in DFT-QPSK and the reported SAR for the DFT-QPSK configuration is ≤ 1.45 W/kg; CP-OFDM testing is not required.

(2) For DFT-OFDM output power measurement reduction, according to 38.101 maximum power reduction for power class2 and 3, for 16QAM/64QAM/256QAM and smaller bandwidth output power will spot check largest channel bandwidth worst RB configuration to ensure the 16QAM/64QAM/256QAM and smaller bandwidth output power will not ½ dB higher than the same configuration in the largest supported bandwidth.

(3) SAR testing 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 offset at the upper edge, middle and lower edge of each required test channel.

(4) 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.

(5) 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) PI/2 BPSK/16QAM/64QAM/256QAM output powers according to 3GPP MPR will not ½ dB higher than the same configuration in QPSK, also reported SAR for the QPSK configuration is less than 1.45 W/kg, PI/2 BPSK/16QAM/64QAM/256QAM SAR testing are not required.

(7) Smaller bandwidth output power for each RB allocation configuration for this device will 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, smaller bandwidth SAR testing is not required for this device.

Table 6.2.2.3-1: Maximum power reduction (MPR) for power class 3

Modulation		MPR (dB)		
		Edge RB allocations	Outer RB allocations	Inner RB allocations
DFT-s-OFDM	Pi/2 BPSK	≤ 3.5[1]	≤ 1.2[1]	≤ 0.2[1]
		≤ 0.5[2]		0[2]
	QPSK	≤ 1		0
	16 QAM	≤ 2		≤ 1
	64 QAM	≤ 2.5		
	256 QAM	≤ 4.5		
CP-OFDM	QPSK	≤ 3		≤ 1.5
	16 QAM	≤ 3		≤ 2
	64 QAM	≤ 3.5		
	256 QAM	≤ 6.5		

NOTE 1: Applicable for UE operating in TDD mode with Pi/2 BPSK modulation and UE indicates support for UE capability *powerBoosting-pi2BPSK* and if the IE *powerBoostPi2BPSK* is set to 1 and 40 % or less slots in radio frame are used for UL transmission for bands n40, n41, n77, n78 and n79. The reference power of 0dB MPR is 26dBm.

NOTE 2: Applicable for UE operating in FDD mode, or in TDD mode in bands other than n40, n41, n77, n78 and n79 and if the IE *powerBoostPi2BPSK* is set to 0 and if more than 40% of slots in radio frame are used for UL transmission for bands n40, n41, n77, n78 and n79.

3. NSA and SA mode should perform SAR separately. For the maximum power of NSA mode is the same as SA total power level. So, SA SAR can represent NSA mode SAR.
4. 5G NR NSA mode, the power level is the same as 5G NR SA mode, so 5G NR NSA mode and SA mode power table only show one time.
5. Due to test setup limitations, SAR testing for NR was performed using Factory Test Mode software to establish the connection.

ENDC Combination	Antenna TX	
	LTE TX	NR TX
DC_5A_n2A	Ant2	Ant5
DC_13A_n2A	Ant2	Ant5
DC_66A_n2A	Ant1	Ant5
DC_2A_n5A	Ant5	Ant2
DC_48A_n5A	Ant4	Ant2
DC_66A_n5A	Ant5	Ant2
DC_2A_n66A	Ant1	Ant5
DC_5A_n66A	Ant2	Ant5
DC_13A_n66A	Ant2	Ant5
DC_2A_n77A	Ant1	Ant4
DC_5A_n77A	Ant2	Ant4
DC_13A_n77A	Ant2	Ant4
DC_66A_n77A	Ant1	Ant4

Note: For ENDC Simultaneous SAR analysis is performed using standalone SAR summed together and they are more conservatively for ENDC.

<Considerations Related to WLAN for Setup and Testing>

In general, various vendor specific external test software and chipset based internal test modes are typically used for SAR measurement. These chipset based test mode utilities are generally hardware and manufacturer dependent, and often include substantial flexibility to reconfigure or reprogram a device. A Wi-Fi device must be configured to transmit continuously at the required data rate, channel bandwidth and signal modulation, using the highest transmission duty factor supported by the test mode tools for SAR measurement. The test frequencies established using test mode must correspond to the actual channel frequencies. When 802.11 frame gaps are accounted for in the transmission, a maximum transmission duty factor of 92 - 96% is typically achievable in most test mode configurations. A minimum transmission duty factor of 85% is required to avoid certain hardware and device implementation issues related to wide range SAR scaling. In addition, a periodic transmission duty factor is required for current generation SAR systems to measure SAR correctly. The reported SAR must be scaled to 100% transmission duty factor to determine compliance at the maximum tune-up tolerance limit.

According to KDB 248227 D01, this device has installed WLAN engineering testing software which can provide continuous transmitting RF signal. During WLAN SAR testing, this device was operated to transmit continuously at the maximum transmission duty with specified transmission mode, operating frequency, lowest data rate, and maximum output power.

Initial Test Configuration

An initial test configuration is determined for OFDM transmission modes in 2.4 GHz and 5 GHz bands according to the channel bandwidth, modulation and data rate combination(s) with the highest maximum output power specified for production units in each standalone and aggregated frequency band. When the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11a/g/n/ac mode is used for SAR measurement, on the highest measured output power channel in the initial test configuration, for each frequency band.

Subsequent Test Configuration

SAR measurement requirements for the remaining 802.11 transmission mode configurations that have not been tested in the initial test configuration are determined separately for each standalone and aggregated frequency band, in each exposure condition, according to the maximum output power specified for production units. Additional power measurements may be required to determine if SAR measurements are required for subsequent highest output power channels in a subsequent test configuration. When the highest reported SAR for the initial test configuration according to the initial test position or fixed exposure position requirements, is adjusted by the ratio of the subsequent test configuration to initial test configuration specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg, SAR is not required for that subsequent test configuration.

SAR Test Configuration and Channel Selection

When multiple channel bandwidth configurations in a frequency band have the same specified maximum output power, the initial test configuration is using largest channel bandwidth, lowest order modulation, lowest data rate, and lowest order 802.11 mode (i.e., 802.11a is chosen over 802.11n then 802.11ac or 802.11g is chosen over 802.11n). After an initial test configuration is determined, if multiple test channels have the same measured maximum output power, the channel chosen for SAR measurement is determined according to the following.

1) The channel closest to mid-band frequency is selected for SAR measurement.
2) For channels with equal separation from mid-band frequency; for example, high and low channels or two mid-band channels, the higher frequency (number) channel is selected for SAR measurement.

Test Reduction for U-NII-1 (5.2 GHz) and U-NII-2A (5.3 GHz) Bands

For devices that operate in both U-NII bands using the same transmitter and antenna(s), SAR test reduction is determined according to the following.

1) When the same maximum output power is specified for both bands, begin SAR measurement in U-NII-2A band by applying the OFDM SAR requirements. If the highest reported SAR for a test configuration is ≤ 1.2 W/kg, SAR is not required for U-NII-1 band for that configuration (802.11 mode and exposure condition).

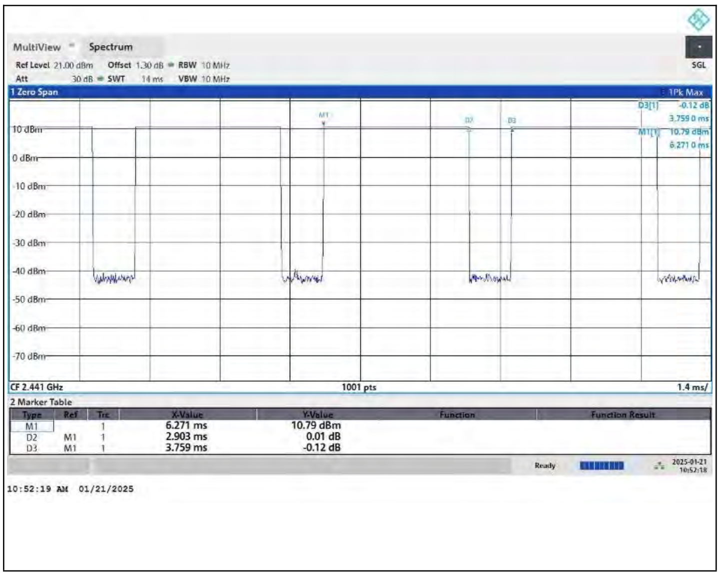
2) When different maximum output power is specified for the bands, begin SAR measurement in the band with higher specified maximum output power. The highest reported SAR for the tested configuration is adjusted by the ratio of lower to higher specified maximum output power for the two bands. When the adjusted SAR is ≤ 1.2 W/kg, SAR is not required for the band with lower maximum output power in that test configuration.

<Considerations Related to Bluetooth for Setup and Testing>

This device has installed Bluetooth engineering testing software which can provide continuous transmitting RF signal. During Bluetooth SAR testing, this device was operated to transmit continuously at the maximum transmission duty with specified transmission mode, operating frequency, lowest data rate, and maximum output power

<BT Duty Cycle of Test Signal>

BT GFSK: Duty cycle = D2/D3=77.23



4.2 EUT Testing Position

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

4.2.1 Head Exposure Conditions

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

1. Define two imaginary lines on the handset

(a) The vertical centerline passes through two points on the front side of the handset - the midpoint of the width w_t of the handset at the level of the acoustic output, and the midpoint of the width w_b of the bottom of the handset.

(b) The horizontal line is perpendicular to the vertical centerline and passes through the center of the acoustic output. The horizontal line is also tangential to the face of the handset at point A.

(c) The two lines intersect at point A. Note that for many handsets, point A coincides with the center of the acoustic output; however, the acoustic output may be located elsewhere on the horizontal line. Also note that the vertical centerline is not necessarily parallel to the front face of the handset, especially for clamshell handsets, handsets with flip covers, and other irregularly shaped handsets.

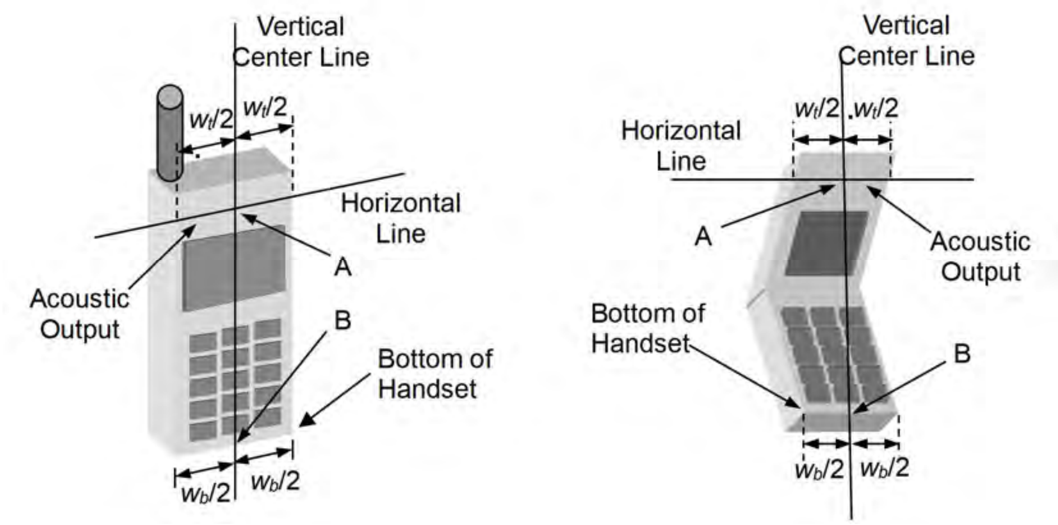


Fig-4.1 Illustration for Handset Vertical and Horizontal Reference Lines

2. Cheek Position

(a) To position the device with the vertical center line of the body of the device and the horizontal line crossing the center piece in a plane parallel to the sagittal plane of the phantom. While maintaining the device in this plane, align the vertical center line with the reference plane containing the three ear and mouth reference point (M: Mouth, RE: Right Ear, and LE: Left Ear) and align the center of the ear piece with the line RE-LE.

(b) To move the device towards the phantom with the ear piece aligned with the line LE-RE until the phone touched the ear. While maintaining the device in the reference plane and maintaining the phone contact with the ear, move the bottom of the phone until any point on the front side is in contact with the cheek of the phantom or until contact with the ear is lost (see Fig-4.2).

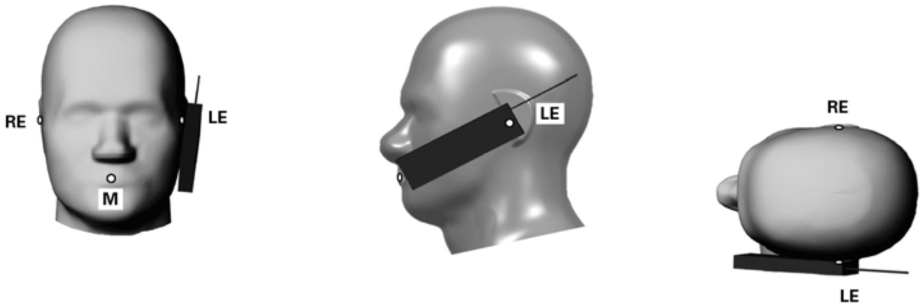


Fig-4.2 Illustration for Cheek Position

3. Tilted Position
(a) To position the device in the “cheek” position described above.
(b) While maintaining the device the reference plane described above and pivoting against the ear, moves it outward away from the mouth by an angle of 15 degrees or until contact with the ear is lost (see Fig-4.3).

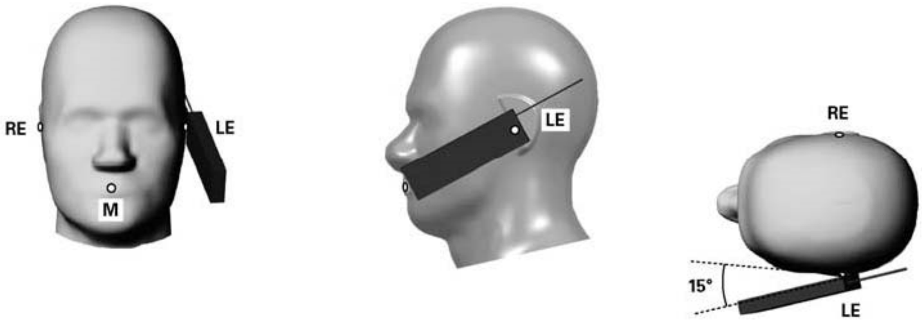


Fig-4.3 Illustration for Tilted Position

4.2.2 Body-worn Accessory Exposure Conditions

Body-worn accessory exposure is typically related to voice mode operations when handsets are carried in body-worn accessories. The body-worn accessory procedures in KDB 447498 D01 are used to test for body-worn accessory SAR compliance, without a headset connected to it. This enables the test results for such configuration to be compatible with that required for hotspot mode when the body-worn accessory test separation distance is greater than or equal to that required for hotspot mode. When the reported SAR for a body-worn accessory, measured without a headset connected to the handset, is > 1.2 W/kg, the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body-worn accessory with a headset attached to the handset.

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

Body-worn accessory SAR compliance is based on a single minimum test separation distance for all wireless and operating modes applicable to each body-worn accessory used by the host, and according to the relevant voice and/or data mode transmissions and operations. If a body-worn accessory supports voice only operations in its normal and expected use conditions, testing of data mode for body-worn compliance is not required.

A conservative minimum test separation distance for supporting off-the-shelf body-worn accessories that may be acquired by users of consumer handsets is used to test for body-worn accessory SAR compliance. This distance is determined by the handset manufacturer, according to the requirements of Supplement C 01-01. Devices that are designed to operate on the body of users using lanyards and straps, or without requiring additional body-worn accessories, will be tested using a conservative minimum test separation distance <= 5 mm to support compliance.

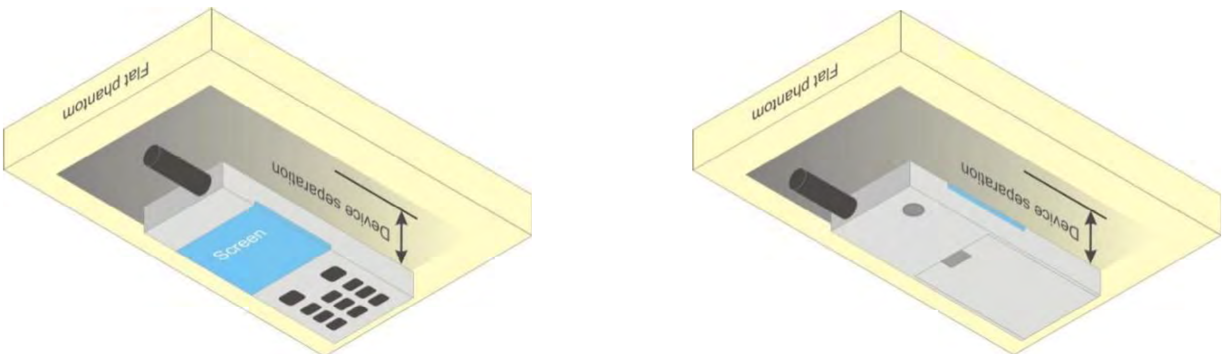
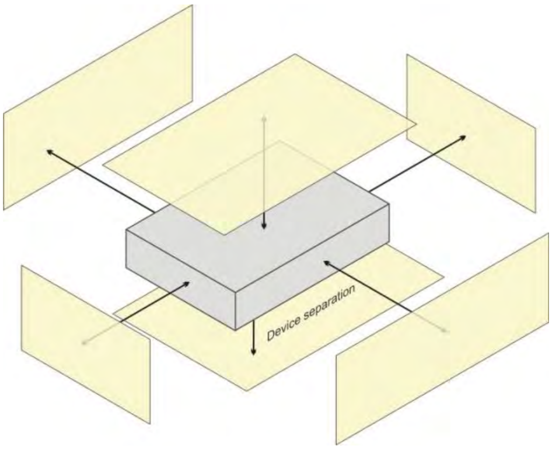


Fig-4.4 Illustration for Body Worn Position

4.2.3 Hotspot Mode Exposure Conditions

For handsets that support hotspot mode operations, with wireless router capabilities and various web browsing functions, the relevant hand and body exposure conditions are tested according to the hotspot SAR procedures in KDB 941225 D06. A test separation distance of 10 mm is required between the phantom and all surfaces and edges with a transmitting antenna located within 25 mm from that surface or edge. When the form factor of a handset is smaller than 9 cm x 5 cm, a test separation distance of 5 mm (instead of 10 mm) is required for testing hotspot mode. When the separation distance required for body-worn accessory testing is larger than or equal to that tested for hotspot mode, in the same wireless mode and for the same surface of the phone, the hotspot mode SAR data may be used to support body-worn accessory SAR compliance for that particular configuration (surface).



Based on the antenna location shown on appendix G of this report, the SAR testing required for hotspot mode is listed as below.

Antenna	Front Face	Rear Face	Left Side	Right Side	Top Side	Bottom Side
Antenna 1	V	V	V	V		V
Antenna 2	V	V	V	V		V
Antenna 3	V	V	V	V	V	
Antenna 4	V	V	V	V	V	
Antenna 5	V	V	V	V	V	
Antenna 6	V	V	V	V	V	
Antenna 7	V	V	V	V	V	
Antenna 8	V	V	V	V	V	

4.2.4 Extremity Exposure Conditions

For smart phones with a display diagonal dimension > 15 cm or an overall diagonal dimension > 16 cm that provide similar mobile web access and multimedia support found in mini-tablets or UMPC mini-tablets that support voice calls next to the ear, the following phablet procedures should be applied to evaluate SAR compliance for each applicable wireless mode and frequency band. Devices marketed as phablets, regardless of form factors and operating characteristics must be tested as a phablet to determine SAR compliance.

1. The normally required head and body-worn accessory SAR test procedures for handsets, including hotspot mode, must be applied.
2. The UMPC mini-tablet procedures must also be applied to test the SAR of all surfaces and edges with an antenna located at <= 25 mm from that surface or edge, in direct contact with a flat phantom, for 10-g extremity SAR according to the body-equivalent tissue dielectric parameters in KDB 865664 to address interactive hand use exposure conditions. The UMPC mini-tablet 1-g SAR at 5 mm is not required. When hotspot mode applies, 10-g extremity SAR is required only for the surfaces and edges with hotspot mode 1-g SAR > 1.2 W/kg. The normal tablet procedures in KDB 616217 are required when the over diagonal dimension of the device is > 20 cm. Hotspot mode SAR is not required when normal tablet procedures are applied. Extremity 10-g SAR is also not required for the front (top) surface of large form factor full size tablets. The more conservative tablet SAR results can be used to support the 10-g extremity SAR for phablet mode.
3. The simultaneous transmission operating configurations applicable to voice and data transmissions for both phone and mini-tablet modes must be taken into consideration separately for 1-g and 10-g SAR to determine the simultaneous transmission SAR test exclusion and measurement requirements for the relevant wireless modes and exposure conditions.

4.2.5 SAR Text Exclusion Evaluations

For NFC：

1. Maximum output power = 2000 mW
2. Duty Cycle = 99%
3. Length of each event = 1 second
4. Events per observation period = 2 times
5. Observation period = 360 seconds

Based on the above data, calculated the time-averaged power: (2000*0.99*1*2)/360 = 11 mW.

According to KDB 447498 D01, the SAR test exclusion condition is based on source-based time-averaged maximum conducted output power, adjusted for tune-up tolerance, and the minimum test separation distance required for the exposure conditions. The SAR exclusion threshold is determined by the following.

Mode	Max. Tune-up Power (mW)	Ant. to Surface (mm)	Exemption limit (mW)	Require SAR Testing?
NFC (13.56MHz)	11	5	442	No

4.3Tissue Verification

The measuring results for tissue simulating liquid are shown as below.

Test Date	Tissue Type	Frequency (MHz)	Liquid Temp. (℃)	Measured Conductivity (σ)	Measured Permittivity (ε_r)	Target Conductivity (σ)	Target Permittivity (ε_r)	Conductivity Deviation (%)	Permittivity Deviation (%)
Feb. 14, 2025	Head	750	22.1	0.914	41.819	0.89	41.90	2.70	-0.19
Feb. 15, 2025	Head	835	22.5	0.933	40.818	0.90	41.50	3.67	-1.64
Feb. 16, 2025	Head	835	22.2	0.942	40.829	0.90	41.50	4.67	-1.62
Mar. 05, 2025	Head	1750	22.6	1.420	39.853	1.37	40.10	3.65	-0.62
Mar. 03, 2025	Head	1950	22.7	1.464	39.086	1.40	40.00	4.57	-2.29
Mar. 04, 2025	Head	1950	22.2	1.455	39.097	1.40	40.00	3.93	-2.26
Feb. 17, 2025	Head	2450	22.5	1.868	38.713	1.80	39.20	3.78	-1.24
Mar. 09, 2025	Head	2550	22.6	1.921	39.014	1.91	39.07	0.62	-0.15
Mar. 01, 2025	Head	3500	22.6	2.821	39.678	2.91	37.93	-3.14	4.61
Mar. 08, 2025	Head	3500	22.8	2.833	39.696	2.91	37.93	-2.73	4.66
Mar. 02, 2025	Head	3700	22.6	2.981	38.811	3.12	37.70	-4.38	2.95
Mar. 03, 2025	Head	3900	22.3	3.180	38.519	3.32	37.47	-4.29	2.80
Mar. 07, 2025	Head	5250	22.4	4.629	36.246	4.71	35.90	-1.72	0.96
Mar. 07, 2025	Head	5600	22.4	5.016	35.683	5.07	35.50	-1.07	0.52
Mar. 07, 2025	Head	5750	22.4	5.124	35.379	5.27	35.30	-2.77	0.22

Note:

The dielectric properties of the tissue simulating liquid must be measured within 24 hours before the SAR testing and within ±5% of the target values. Liquid temperature during the SAR testing must be within ±2 ℃.

4.4System Verification

The measuring result for system verification is tabulated as below.

<1g>

Test Date	Mode	Frequency (MHz)	1W Target SAR-1g (W/kg)	Measured SAR-1g (W/kg)	Normalized to 1W SAR-1g (W/kg)	Deviation (%)	Dipole S/N	Probe S/N	DAE S/N
Feb. 14, 2025	Head	750	8.42	2.05	8.20	-2.61	1200	3985	755
Feb. 15, 2025	Head	835	9.63	2.45	9.80	1.77	4d265	3985	755
Feb. 16, 2025	Head	835	9.63	2.37	9.48	-1.56	4d265	3985	755
Mar. 05, 2025	Head	1750	36.70	9.22	36.88	0.49	1176	3985	755
Mar. 03, 2025	Head	1950	40.80	10.40	41.60	1.96	1229	3985	755
Mar. 04, 2025	Head	1950	40.80	10.30	41.20	0.98	1229	3985	755
Feb. 17, 2025	Head	2450	53.30	13.80	55.20	3.56	1048	3985	755
Mar. 09, 2025	Head	2550	53.00	12.80	51.20	-3.40	1022	3985	755
Mar. 01, 2025	Head	3500	65.70	6.77	67.70	3.04	1111	3985	755
Mar. 08, 2025	Head	3500	65.70	6.71	67.10	2.13	1111	3985	755
Mar. 02, 2025	Head	3700	66.60	6.76	67.60	1.50	1082	3985	755
Mar. 03, 2025	Head	3900	68.20	6.83	68.30	0.15	1055	3985	755
Mar. 07, 2025	Head	5250	77.30	7.52	75.20	-2.72	1315	3985	755
Mar. 07, 2025	Head	5600	81.70	8.33	83.30	1.96	1315	3985	755
Mar. 07, 2025	Head	5750	77.10	7.40	74.00	-4.02	1315	3985	755

<10g>

Test Date	Mode	Frequency (MHz)	1W Target SAR-10g (W/kg)	Measured SAR-10g (W/kg)	Normalized to 1W SAR-10g (W/kg)	Deviation (%)	Dipole S/N	Probe S/N	DAE S/N
Feb. 14, 2025	Head	750	5.55	1.41	5.64	-2.61	1200	3985	755
Feb. 15, 2025	Head	835	6.33	1.58	6.32	1.77	4d265	3985	755
Feb. 16, 2025	Head	835	6.33	1.57	6.28	-1.56	4d265	3985	755
Mar. 05, 2025	Head	1750	19.50	5.02	20.08	0.49	1176	3985	755
Mar. 03, 2025	Head	1950	20.90	5.41	21.64	1.96	1229	3985	755
Mar. 04, 2025	Head	1950	20.90	5.37	21.48	0.98	1229	3985	755
Feb. 17, 2025	Head	2450	24.60	6.43	25.72	3.56	1048	3985	755
Mar. 09, 2025	Head	2550	24.20	6.04	24.16	-3.40	1022	3985	755
Mar. 01, 2025	Head	3500	24.80	2.56	25.60	3.04	1111	3985	755
Mar. 08, 2025	Head	3500	24.80	2.52	25.20	2.13	1111	3985	755
Mar. 02, 2025	Head	3700	24.20	2.50	25.00	1.50	1082	3985	755
Mar. 03, 2025	Head	3900	23.50	2.42	24.20	0.15	1055	3985	755
Mar. 07, 2025	Head	5250	21.60	2.11	21.10	-2.72	1315	3985	755
Mar. 07, 2025	Head	5600	22.70	2.36	23.60	1.96	1315	3985	755
Mar. 07, 2025	Head	5750	21.20	2.07	20.70	-4.02	1315	3985	755

Note:

Comparing to the reference SAR value provided by SPEAG, the validation data should be within its specification of 10 %. The result indicates the system check can meet the variation criterion and the plots can be referred to Appendix A of this report.

4.5 Maximum Output Power

4.5.1 Maximum Conducted Power

The maximum conducted average power (Unit: dBm) including tune-up tolerance please refer to Appendix D.

4.5.2 Measured Conducted Power Result

The measuring conducted average power (Unit: dBm) please refer to Appendix D.

4.6 SAR Testing Results

4.6.1 SAR Test Reduction Considerations

<KDB 447498 D01, General RF Exposure Guidance>

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

(1) ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz
(2) ≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz
(3) ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz

<KDB 941225 D01, 3G SAR Measurement Procedures>

The mode tested for SAR is referred to as the primary mode. The equivalent modes considered for SAR test reduction are denoted as secondary modes. Both primary and secondary modes must be in the same frequency band. When the maximum output power and tune-up tolerance specified for production units in a secondary mode is ≤ 1/4 dB higher than the primary mode or when the highest reported SAR of the primary mode is scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for the secondary mode.

<KDB 941225 D05, SAR Evaluation Considerations for LTE Devices>

(1) QPSK with 1 RB and 50% RB allocation

Start with the largest channel bandwidth and measure SAR, using the RB offset and required test channel combination with the highest maximum output power among RB offsets at the upper edge, middle and lower edge of each required test channel. When the reported SAR is ≤ 0.8 W/kg, testing of the remaining RB offset configurations and required test channels is not required; otherwise, SAR is required for the remaining required test channels and only for the RB offset configuration with the highest output power for that channel. When the reported SAR of a required test channel is > 1.45 W/kg, SAR is required for all three RB offset configurations for that required test channel.

(2) 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.

(3) Higher order modulations

SAR is required only when the highest maximum output power for the configuration in the higher order modulation is > 1/2 dB higher than the same configuration in QPSK or when the reported SAR for the QPSK configuration is >

1.45 W/kg.

(4) Other channel bandwidth

SAR is required when the highest maximum output power of the smaller channel bandwidth is > 1/2 dB higher than the equivalent channel configurations in the largest channel bandwidth configuration or the reported SAR of a configuration for the largest channel bandwidth is > 1.45 W/kg.

<KDB 941225 D05, SAR Evaluation Considerations for 5G NR Devices>

1) For DFT-OFDM and CP-OFDM output power measurement reduction, according to 38.101 maximum power reduction for power class2 and 3, the CP-OFDM mode will not higher than DFT-OFDM mode, therefore, similar FCC KDB 941225 D05 procedure for other modulation output power for each RB allocation configuration is > not ½ dB higher than the same configuration in DFT-QPSK and the reported SAR for the DFT-QPSK configuration is ≤ 1.45 W/kg; CP-OFDM testing is not required.
2) For DFT-OFDM output power measurement reduction, according to 38.101 maximum power reduction for power class2 and 3, for 16QAM/64QAM/256QAM and smaller bandwidth output power will spot check largest channel bandwidth worst RB configuration to ensure the 16QAM/64QAM/256QAM and smaller bandwidth output power will not ½ dB higher than the same configuration in the largest supported bandwidth.
3) SAR testing 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 offset at the upper edge, middle and lower edge of each required test channel.
4) 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
5) 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) PI/2 BPSK/16QAM/64QAM/256QAM output powers according to 3GPP MPR will not ½ dB higher than the same configuration in QPSK, also reported SAR for the QPSK configuration is less than 1.45 W/kg, PI/2 BPSK/16QAM/64QAM/256QAM SAR testing are not required.
7) Smaller bandwidth output power for each RB allocation configuration for this device will 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, smaller bandwidth SAR testing is not required for this device.

<KDB 248227 D01, SAR Guidance for Wi-Fi Transmitters>

(1) For handsets operating next to ear, hotspot mode or mini-tablet configurations, the initial test position procedures were applied. The test position with the highest extrapolated peak SAR will be used as the initial test position. When the reported SAR of initial test position is <= 0.4 W/kg, SAR testing for remaining test positions is not required. Otherwise, SAR is evaluated at the subsequent highest peak SAR positions until the reported SAR result is <= 0.8 W/kg or all test positions are measured.

(2) For WLAN 2.4 GHz, the highest measured maximum output power channel for DSSS was selected for SAR measurement. When the reported SAR is <= 0.8 W/kg, no further SAR testing is required. Otherwise, SAR is evaluated at the next highest measured output power channel. When any reported SAR is > 1.2 W/kg, SAR is required for the third channel. For OFDM modes (802.11g/n), SAR is not required when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and it is <= 1.2

W/kg.

(3) For WLAN 5 GHz, the initial test configuration was selected according to the transmission mode with the highest maximum output power. When the reported SAR of initial test configuration is > 0.8 W/kg, SAR is required for the subsequent highest measured output power channel until the reported SAR result is <= 1.2 W/kg or all required channels are measured. For other transmission modes, SAR is not required when the highest reported SAR for initial test configuration is adjusted by the ratio of subsequent test configuration to initial test configuration specified maximum output power and it is <= 1.2 W/kg.

(4) For WLAN MIMO mode, the power-based standalone SAR test exclusion or the sum of SAR provision in KDB 447498 to determine simultaneous transmission SAR test exclusion should be applied. Otherwise, SAR for MIMO mode will be measured with all applicable antennas transmitting simultaneously at the specified maximum output power of MIMO operation.

4.6.2 SAR Results for Head Exposure Condition

The SAR Results for Head Exposure Condition please refer to Appendix E.

4.6.3 SAR Results for Body-worn Exposure Condition (Separation Distance is 1.0 cm Gap)

The SAR Results for Body-worn Exposure Condition please refer to Appendix E.

4.6.4 SAR Results for Hotspot Exposure Condition (Separation Distance is 1.0 cm Gap)

The SAR Results for Hotspot Exposure Condition please refer to Appendix E.

4.6.5 SAR Results for Extremity Exposure Condition (Separation Distance is 0 cm Gap)

The SAR Results for Extremity Exposure Condition please refer to Appendix E.

Note：When the hotspot SAR is adjusted for maximum tune-up tolerance and the result is <1.2W/kg, the extremity SAR is not required.

4.6.6 SAR Measurement Variability

According to KDB 865664 D01, SAR measurement variability was 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. Alternatively, if the highest measured SAR for both head and body tissue-equivalent media are ≤ 1.45 W/kg and the ratio of these highest SAR values, i.e., largest divided by smallest value, is ≤ 1.10, the highest SAR configuration for either head or body tissue-equivalent medium may be used to perform the repeated measurement. These additional measurements are repeated after the completion of all measurements requiring the same head or body tissue-equivalent medium in a frequency band. The test device should be returned to ambient conditions (normal room temperature) with the battery fully charged before it is re-mounted on the device holder for the repeated measurement(s) to minimize any unexpected variations in the repeated results.

SAR repeated measurement procedure:

1. When the highest measured SAR is < 0.80 W/kg, repeated measurement is not required.
2. When the highest measured SAR is >= 0.80 W/kg, repeat that measurement once.
3. If the ratio of largest to smallest SAR for the original and first repeated measurements is > 1.20, or when the original or repeated measurement is >= 1.45 W/kg, perform a second repeated measurement.
4. If the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20, and the original, first or second repeated measurement is >= 1.5 W/kg, perform a third repeated measurement.

Band	Test Position 10mm	Ch.	Original Measured SAR-1g (W/kg)	1st Repeated SAR-1g (W/kg)	L/S Ratio	2nd Repeated SAR-1g (W/kg)	L/S Ratio	3rd Repeated SAR-1g (W/kg)	L/S Ratio
LTE 2	Right Tilted	19100	0.801	0.788	1.02	N/A	N/A	N/A	N/A
LTE 7	Right Tilted	21100	0.839	0.811	1.03	N/A	N/A	N/A	N/A
NR n66	Right Tilted	349000	0.729	0.705	1.03	N/A	N/A	N/A	N/A
NR n48	Right Cheek	638000	0.960	0.938	1.02	N/A	N/A	N/A	N/A
NR n77	Right Cheek	633334	0.855	0.821	1.04	N/A	N/A	N/A	N/A

Band	Test Position 10mm	Ch.	Original Measured SAR-1g (W/kg)	1st Repeated SAR-1g (W/kg)	L/S Ratio	2nd Repeated SAR-1g (W/kg)	L/S Ratio	3rd Repeated SAR-1g (W/kg)	L/S Ratio
GSM1900	Rear Face	661	0.758	0.736	1.03	N/A	N/A	N/A	N/A
LTE 7	Rear Face	21100	0.828	0.809	1.02	N/A	N/A	N/A	N/A
LTE 66/4	Rear Face	132072	0.676	0.651	1.04	N/A	N/A	N/A	N/A
NR n48	Rear Face	638000	0.945	0.912	1.04	N/A	N/A	N/A	N/A
NR n77	Left Side	633334	0.761	0.738	1.03	N/A	N/A	N/A	N/A

Band	Test Position 10mm	Ch.	Original Measured SAR-1g (W/kg)	1st Repeated SAR-1g (W/kg)	L/S Ratio	2nd Repeated SAR-1g (W/kg)	L/S Ratio	3rd Repeated SAR-1g (W/kg)	L/S Ratio
WCDMA II	Rear Face	9262	2.55	2.48	1.03	N/A	N/A	N/A	N/A
LTE 7	Rear Face	21100	1.81	1.72	1.05	N/A	N/A	N/A	N/A
NR n48	Rear Face	638000	2.29	2.18	1.05	N/A	N/A	N/A	N/A
NR n66	Rear Face	352000	2.50	2.42	1.03	N/A	N/A	N/A	N/A
NR n77	Left Side	662000	2.35	2.27	1.04	N/A	N/A	N/A	N/A

4.6.7 Simultaneous Multi-band Transmission Evaluation

The simultaneous transmission possibilities for this device are listed as below.

Simultaneous TX Combination	Capable Transmit Configurations	Head	Body worn	Hotspot	Extremity
1	WWAN + WLAN2.4GHz	Yes	Yes	Yes	Yes
2	WWAN + WLAN5GHz + BT	Yes	Yes	Yes	Yes

<SAR Summation Analysis>

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

Note:

The detailed sim-Tx analysis please refer to Appendix F.

Test Engineer : Renjie Liu, and Zixiao Xia.

5. Calibration of Test Equipment

Equipment	Manufacturer	Model	SN	Cal. Data	Due Data
System Validation Dipole	SPEAG	D750V3	1200	Nov. 07, 2024	Nov. 06, 2025
System Validation Dipole	SPEAG	D835V2	4d265	Nov. 04, 2024	Nov. 03, 2025
System Validation Dipole	SPEAG	D1750V2	1176	Nov. 06, 2024	Nov. 05, 2025
System Validation Dipole	SPEAG	D1950V3	1229	Nov. 07, 2024	Nov. 06, 2025
System Validation Dipole	SPEAG	D2450V2	1048	Nov. 06, 2024	Nov. 05, 2025
System Validation Dipole	SPEAG	D2550V2	1022	Sep. 22, 2022	Sep. 19, 2025
System Validation Dipole	SPEAG	D3500V2	1111	Nov. 11, 2024	Nov. 08, 2024
System Validation Dipole	SPEAG	D3700V2	1082	Nov. 08, 2024	Nov. 05, 2024
System Validation Dipole	SPEAG	D3900V2	1055	Nov. 07, 2024	Nov. 04, 2024
System Validation Dipole	SPEAG	D5GHzV2	1315	Nov. 05, 2024	Nov. 02, 2024
Data Acquisition Electronics	SPEAG	DAE4	755	Jul. 05, 2024	Jul. 04, 2025
Dosimetric E-Field Probe	SPEAG	EX3DV4	3985	Jul. 23, 2024	Jul. 22, 2025
Radio Communication Analyzer	ANRITSU	MT8821C	6272459679	Jul. 02, 2024	Jun. 30, 2026
Magnetic Field Probe	SPEAG	DAK-3.5	1119	Feb. 19, 2024	Feb. 18, 2025
ENA Series Network Analyzer	SPEAG	DAKS_VNA R140	0121219	Feb. 19, 2024	Feb. 18, 2025
Power Meter	Rohde&Schwarz	NRX	102380	Mar. 28, 2024	Mar. 27, 2025
Power Sensor	Rohde&Schwarz	NRP6A	102942	Mar. 20, 2024	Mar. 19, 2025
Power Sensor	Rohde&Schwarz	NRP6A	102943	Mar. 20, 2024	Mar. 19, 2025
ESG Analog Signal Generator	Rohde&Schwarz	SMB100B	102507	Mar. 28, 2024	Mar. 27, 2025
Coupler	Woken	0110A056020-10	COM27RW1A3	May. 09, 2024	May. 08, 2025
Temp.&Humi.Recorder	Deli	/	SZ-RF-002	Apr. 02, 2024	Mar. 31, 2026

6. Measurement Uncertainty

DASY6 Uncertainty Budget According to IEEE 1528-2013 and IEC 62209-1/2016 (0.3 - 3 GHz range)								
Error Description	**Uncertainty Value (±%)**	**Probability**	**Divisor**	**(Ci) 1g**	**(Ci) 10g**	**Standard Uncertainty (1g) (±%)**	**Standard Uncertainty (10g) (±%)**	**(Vi) Veff**
Measurement System								
Probe Calibration	6.05	N	1	1	1	6.1	6.1	∞
Axial Isotropy	4.7	R	1.732	0.7	0.7	1.9	1.9	∞
Hemispherical Isotropy	9.6	R	1.732	0.7	0.7	3.9	3.9	∞
Boundary Effects	2.0	R	1.732	1	1	1.2	1.2	∞
Linearity	4.7	R	1.732	1	1	2.7	2.7	∞
System Detection Limits	1.0	R	1.732	1	1	0.6	0.6	∞
Modulation Response	3.2	R	1.732	1	1	1.8	1.8	∞
Readout Electronics	0.3	N	1	1	1	0.3	0.3	∞
Response Time	0.0	R	1.732	1	1	0.0	0.0	∞
Integration Time	2.6	R	1.732	1	1	1.5	1.5	∞
RF Ambient Noise	3.0	R	1.732	1	1	1.7	1.7	∞
RF Ambient Reflections	3.0	R	1.732	1	1	1.7	1.7	∞
Probe Positioner	0.4	R	1.732	1	1	0.2	0.2	∞
Probe Positioning	6.7	R	1.732	1	1	3.9	3.9	∞
Max. SAR Eval.	4.0	R	1.732	1	1	2.3	2.3	∞
Test Sample Related								
Device Positioning	4.0	N	1	1	1	4.0	4.0	35
Device Holder	4.9	N	1	1	1	4.9	4.9	12
Power Drift	5.0	R	1.732	1	1	2.9	2.9	∞
Power Scaling	0.0	R	1.732	1	1	0.0	0.0	∞
Phantom and Setup								
Phantom Uncertainty	6.6	R	1.732	1	1	3.8	3.8	∞
SAR correction	0.0	R	1.732	1	0.84	0.0	0.0	∞
Liquid Conductivity Repeatability	0.14	N	1	0.78	0.71	0.1	0.1	5
Liquid Conductivity (target)	10.0	R	1.732	0.78	0.71	4.5	4.1	∞
Liquid Conductivity (mea.)	2.5	R	1.732	0.78	0.71	1.1	1.0	∞
Temp. unc. - Conductivity	2.61	R	1.732	0.78	0.71	1.2	1.1	∞
Liquid Permittivity Repeatability	0.03	N	1	0.23	0.26	0.0	0.0	5
Liquid Permittivity (target)	10.0	R	1.732	0.23	0.26	1.3	1.5	∞
Liquid Permittivity (mea.)	2.5	R	1.732	0.23	0.26	0.3	0.4	∞
Temp. unc. - Permittivity	1.78	R	1.732	0.23	0.26	0.2	0.3	∞
Combined Std. Uncertainty						13.6%	13.5%	578
Coverage Factor for 95 %						K=2	K=2	
Expanded STD Uncertainty						27.2%	26.9%	

Uncertainty budget for frequency range 300 MHz to 3 GHz

DASY6 Uncertainty Budget According to IEC 62209-2/2019 (30 MHz - 6 GHz range)								
Error Description	**Uncertainty Value (±%)**	**Probability**	**Divisor**	**(Ci) 1g**	**(Ci) 10g**	**Standard Uncertainty (1g) (±%)**	**Standard Uncertainty (10g) (±%)**	**(Vi) Veff**
Measurement System								
Probe Calibration	6.65	N	1	1	1	6.7	6.7	∞
Axial Isotropy	4.7	R	1.732	0.7	0.7	1.9	1.9	∞
Hemispherical Isotropy	9.6	R	1.732	0.7	0.7	3.9	3.9	∞
Boundary Effects	2.0	R	1.732	1	1	1.2	1.2	∞
Linearity	4.7	R	1.732	1	1	2.7	2.7	∞
System Detection Limits	1.0	R	1.732	1	1	0.6	0.6	∞
Modulation Response	3.2	R	1.732	1	1	1.8	1.8	∞
Readout Electronics	0.3	N	1	1	1	0.3	0.3	∞
Response Time	0.0	R	1.732	1	1	0.0	0.0	∞
Integration Time	2.6	R	1.732	1	1	1.5	1.5	∞
RF Ambient Noise	3.0	R	1.732	1	1	1.7	1.7	∞
RF Ambient Reflections	3.0	R	1.732	1	1	1.7	1.7	∞
Probe Positioner	0.4	R	1.732	1	1	0.2	0.2	∞
Probe Positioning	6.7	R	1.732	1	1	3.9	3.9	∞
Max. SAR Eval.	4.0	R	1.732	1	1	2.3	2.3	∞
Test Sample Related								
Device Positioning	4.3	N	1	1	1	4.3	4.3	35
Device Holder	4.9	N	1	1	1	4.9	4.9	12
Power Drift	5.0	R	1.732	1	1	2.9	2.9	∞
Power Scaling	0.0	R	1.732	1	1	0.0	0.0	∞
Phantom and Setup								
Phantom Uncertainty	6.6	R	1.732	1	1	3.8	3.8	∞
SAR correction	0.0	R	1.732	1	0.84	0.0	0.0	∞
Liquid Conductivity Repeatability	0.16	N	1	0.78	0.71	0.1	0.1	5
Liquid Conductivity (target)	10.0	R	1.732	0.78	0.71	4.5	4.1	∞
Liquid Conductivity (mea.)	2.5	R	1.732	0.78	0.71	1.1	1.0	∞
Temp. unc. - Conductivity	3.64	R	1.732	0.78	0.71	1.6	1.5	∞
Liquid Permittivity Repeatability	0.08	N	1	0.23	0.26	0.0	0.0	5
Liquid Permittivity (target)	10.0	R	1.732	0.23	0.26	1.3	1.5	∞
Liquid Permittivity (mea.)	2.5	R	1.732	0.23	0.26	0.3	0.4	∞
Temp. unc. - Permittivity	1.78	R	1.732	0.23	0.26	0.2	0.3	∞
Combined Std. Uncertainty						14.0%	13.9%	624
Coverage Factor for 95 %						K=2	K=2	
Expanded STD Uncertainty						28.0%	27.7%	

Uncertainty budget for frequency range 30 MHz to 6 GHz

7. Information on the Testing Laboratories

We, Huarui Saiwei (Suzhou) Technology Co., LTD., were founded in 2020 to provide our best service in EMC, Radio, Telecom and Safety consultation.

If you have any comments, please feel free to contact us at the following:

Add: Tower N, Innovation Center, 88 Zuyi Road, High-tech District, Suzhou City, Anhui Province
Tel: +86 (0557) 368 1008

The road map of all our labs can be found in our web site also
Web: http://www.7Layers.com

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Appendix A. SAR Plots of System Verification

The plots for system verification with largest deviation for each SAR system combination are shown as follows.

Test Laboratory: ritt 7 Layers SAR/HAC Testing Lab Date: 2025/2/14

System Check_HSL750_250214

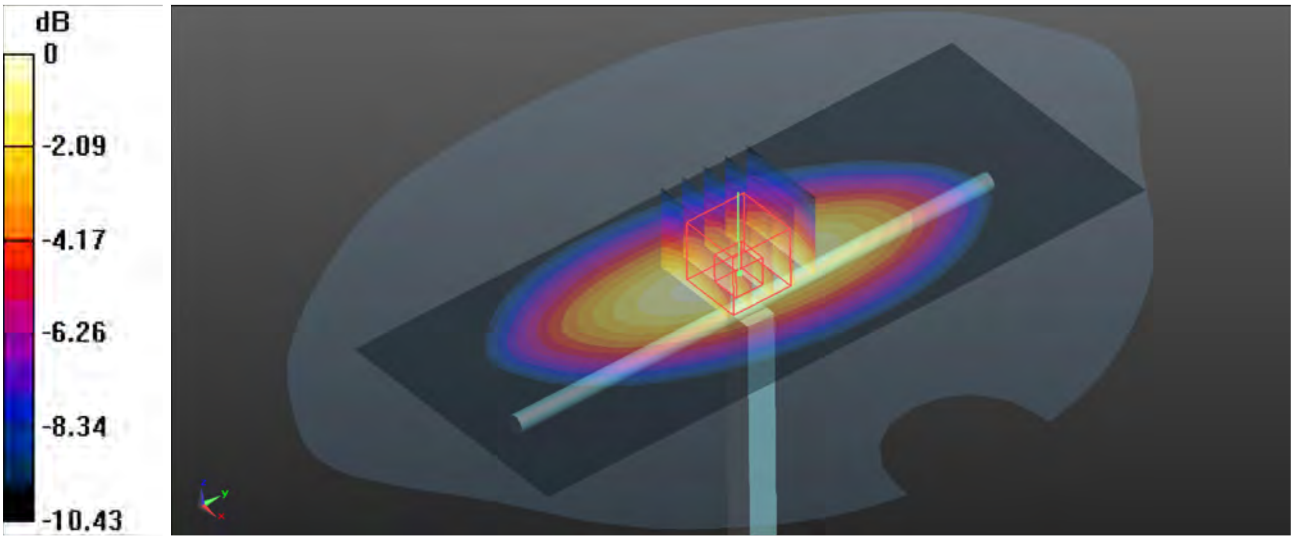
DUT: Dipole 750 MHz; Type: D750V3

Communication System: CW; Frequency: 750 MHz;Duty Cycle: 1:1
Medium: HSL750_0214 Medium parameters used: f = 750 MHz; σ = 0.914 S/m; ε_r = 41.819; ρ = 1000 kg/m^3
Ambient Temperature：23.3℃; Liquid Temperature：22.1℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(10.25, 10.25, 10.25) @ 750 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Pin=250mW/Area Scan (61x151x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 2.14 W/kg

Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 48.58 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 2.94 W/kg
SAR(1 g) = 2.05 W/kg; SAR(10 g) = 1.41 W/kg (SAR corrected for target medium)
Smallest distance from peaks to all points 3 dB below = 21.5 mm
Ratio of SAR at M2 to SAR at M1 = 67.5%
Maximum value of SAR (measured) = 2.15 W/kg



0 dB = 2.15 W/kg

System Check_HSL835_250215

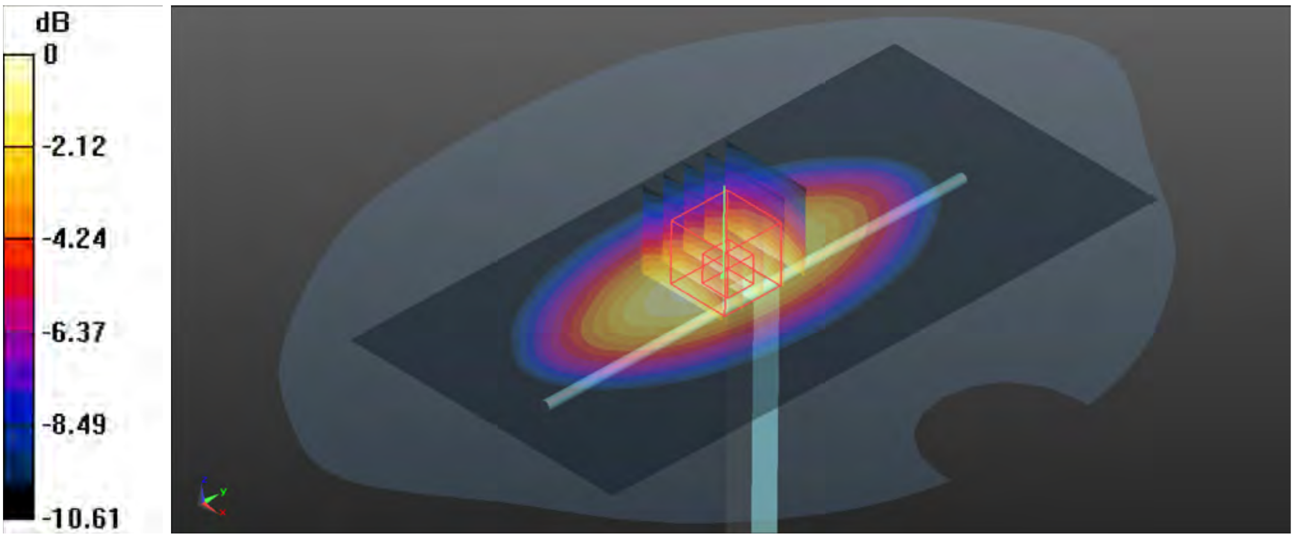
DUT: Dipole 835 MHz; Type: D835V2

Communication System: CW; Frequency: 835 MHz;Duty Cycle: 1:1
Medium: HSL835_0215 Medium parameters used: f = 835 MHz; σ = 0.933 S/m; ε_r = 40.818; ρ = 1000 kg/m^3
Ambient Temperature：23.4°C; Liquid Temperature：22.5°C

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(9.93, 9.93, 9.93) @ 835 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Pin=250mW/Area Scan (71x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 2.35 W/kg

Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 48.79 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 3.33 W/kg
SAR(1 g) = 2.45 W/kg; SAR(10 g) = 1.58 W/kg
Smallest distance from peaks to all points 3 dB below: Larger than measurement grid (> 16 mm)
Ratio of SAR at M2 to SAR at M1 = 67.4%
Maximum value of SAR (measured) = 2.43 W/kg



0 dB = 2.43 W/kg

System Check_HSL835_250216

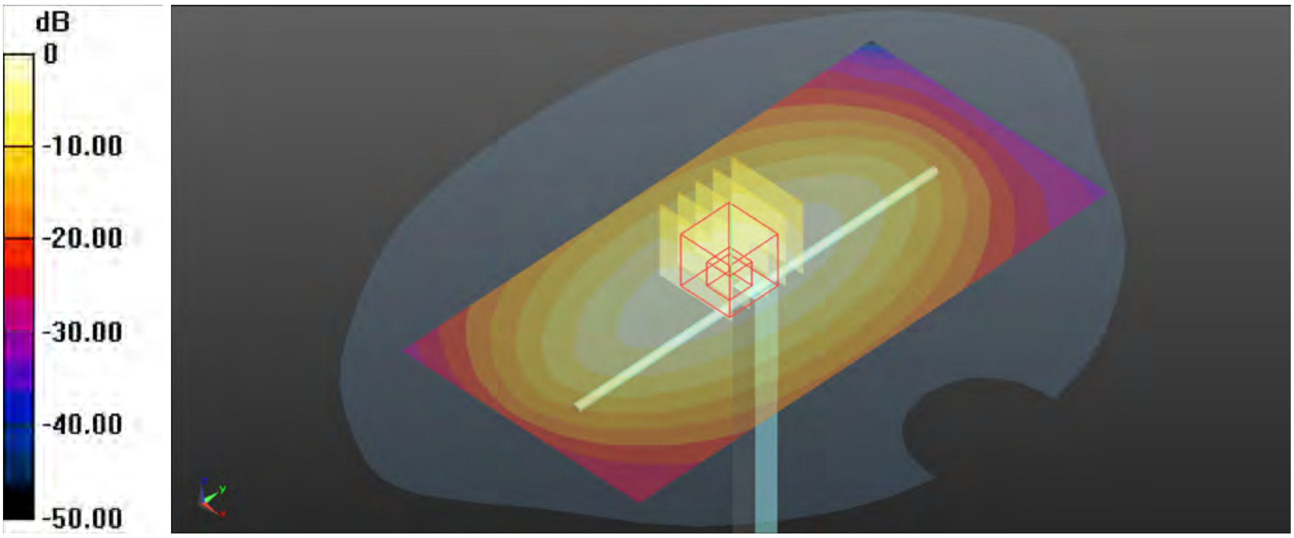
DUT: Dipole 835 MHz; Type: D835V2

Communication System: CW; Frequency: 835 MHz;Duty Cycle: 1:1
Medium: HSL835_0216 Medium parameters used: f = 835 MHz; σ = 0.942 S/m; ε_r = 40.829; ρ = 1000 kg/m^3
Ambient Temperature：23.3℃; Liquid Temperature：22.2℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(9.93, 9.93, 9.93) @ 835 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Pin=250mW/Area Scan (71x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 2.57 W/kg

Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 51.03 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 3.55 W/kg
SAR(1 g) = 2.37 W/kg; SAR(10 g) = 1.57 W/kg
Smallest distance from peaks to all points 3 dB below: Larger than measurement grid (> 16 mm)
Ratio of SAR at M2 to SAR at M1 = 67.2%
Maximum value of SAR (measured) = 2.59 W/kg



0 dB = 2.59 W/kg

System Check_HSL1750_250305

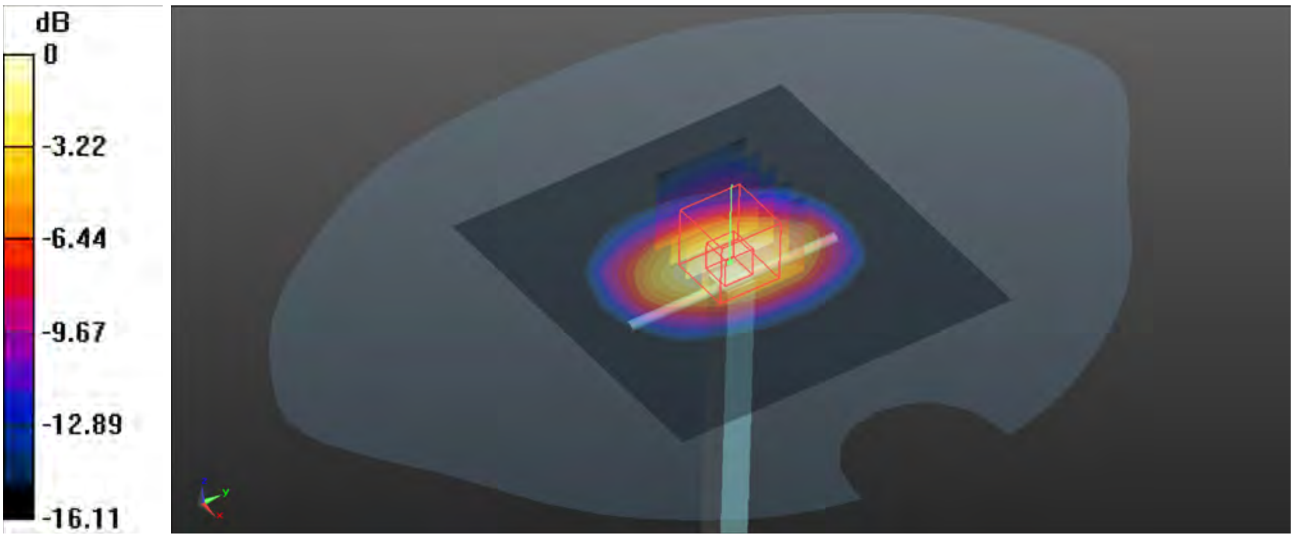
DUT: Dipole 1750 MHz; Type: D1750V2

Communication System: CW; Frequency: 1750 MHz;Duty Cycle: 1:1
Medium: HSL1750_0305 Medium parameters used: f = 1750 MHz; σ = 1.42 S/m; ε_r = 39.853; ρ = 1000 kg/m^3
Ambient Temperature：23.5℃; Liquid Temperature：22.6℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(8.51, 8.51, 8.51) @ 1750 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Pin=250mW/Area Scan (81x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 10.4 W/kg

Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 85.48 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 16.2 W/kg
SAR(1 g) = 9.22 W/kg; SAR(10 g) = 5.02 W/kg
Smallest distance from peaks to all points 3 dB below = 12.2 mm
Ratio of SAR at M2 to SAR at M1 = 57.8%
Maximum value of SAR (measured) = 10.3 W/kg



0 dB = 10.3 W/kg

Test Laboratory: ritt 7 Layers SAR/HAC Testing Lab Date: 2025/3/3

System Check_HSL1950_250303

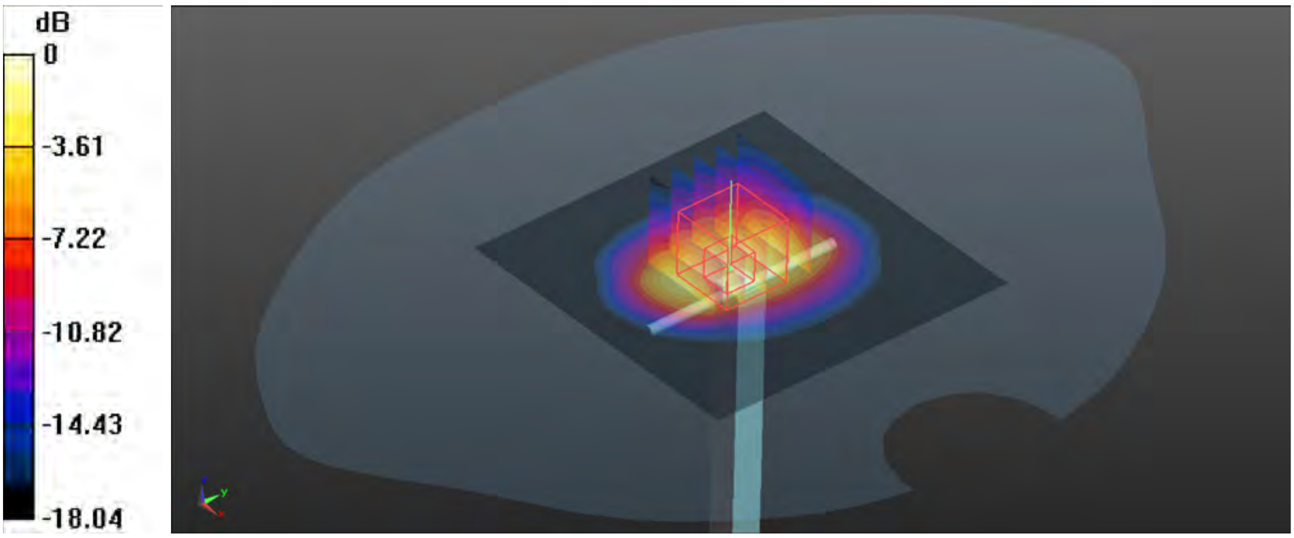
DUT: Dipole 1950 MHz; Type: D1950V3

Communication System: CW; Frequency: 1950 MHz;Duty Cycle: 1:1
Medium: HSL1950_0303 Medium parameters used: f = 1950 MHz; σ = 1.464 S/m; ε_r = 39.086; ρ = 1000 kg/m^3
Ambient Temperature：23.4℃; Liquid Temperature：22.7℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(8.16, 8.16, 8.16) @ 1950 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Pin=250mW/Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 12.1 W/kg

Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 88.80 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 19.0 W/kg
SAR(1 g) = 10.4 W/kg; SAR(10 g) = 5.41 W/kg
Smallest distance from peaks to all points 3 dB below = 11.3 mm
Ratio of SAR at M2 to SAR at M1 = 55.6%
Maximum value of SAR (measured) = 11.6 W/kg



0 dB = 11.6 W/kg

System Check_HSL1950_250304

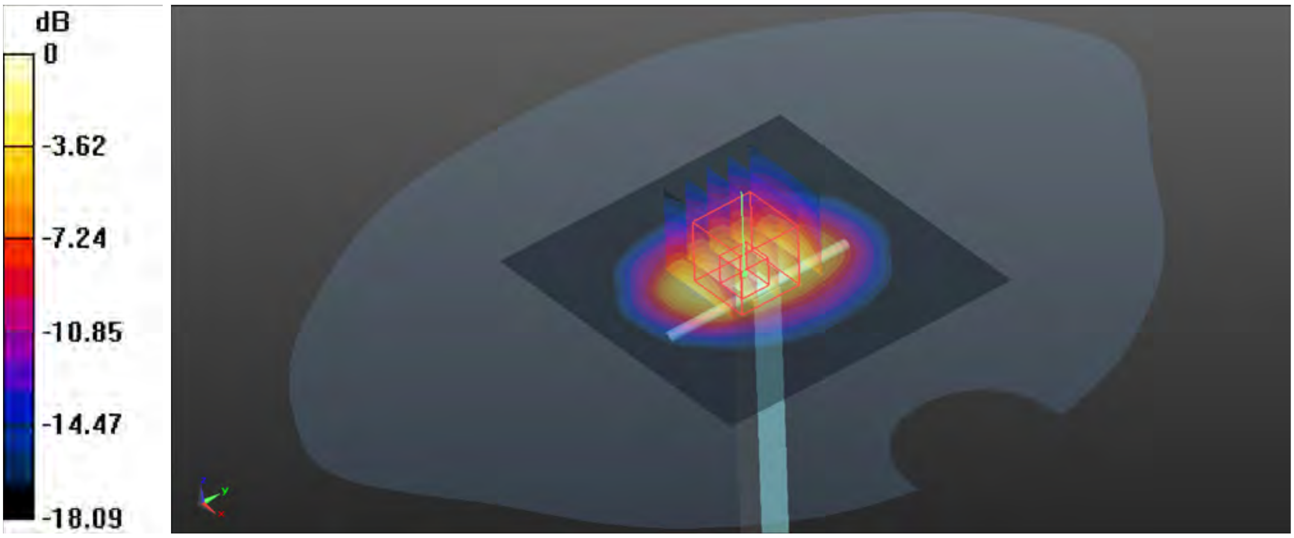
DUT: Dipole 1950 MHz; Type: D1950V3

Communication System: CW; Frequency: 1950 MHz;Duty Cycle: 1:1
Medium: HSL1950_0304 Medium parameters used: f = 1950 MHz; σ = 1.455 S/m; ε_r = 39.097; ρ = 1000 kg/m^3
Ambient Temperature：23.3℃; Liquid Temperature：22.2℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(8.16, 8.16, 8.16) @ 1950 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Pin=250mW/Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 13.0 W/kg

Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 92.09 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 19.1 W/kg
SAR(1 g) = 10.3 W/kg; SAR(10 g) = 5.37 W/kg
Smallest distance from peaks to all points 3 dB below = 11.2 mm
Ratio of SAR at M2 to SAR at M1 = 55.5%
Maximum value of SAR (measured) = 11.7 W/kg



0 dB = 11.7 W/kg

Test Laboratory: ritt 7 Layers SAR/HAC Testing Lab   Date: 2025/2/17

System Check_HSL2450_250217

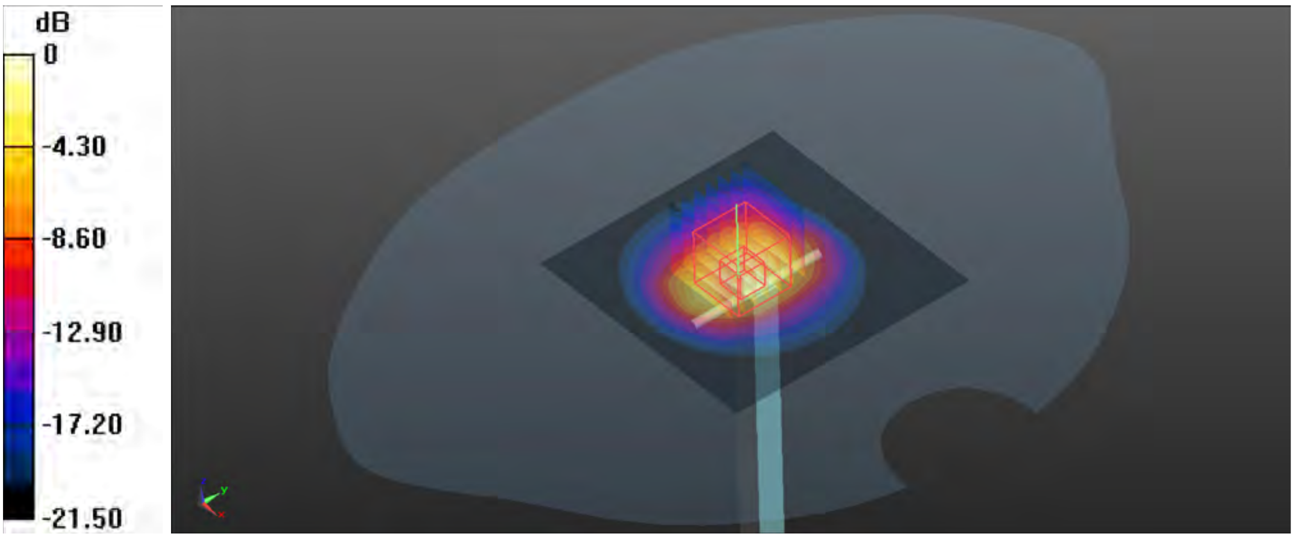
DUT: Dipole 2450 MHz; Type: D2450V2

Communication System: CW; Frequency: 2450 MHz;Duty Cycle: 1:1
Medium: HSL2450_0217 Medium parameters used: f = 2450 MHz; σ = 1.868 S/m; ε_r = 38.713; ρ = 1000 kg/m^3
Ambient Temperature：23.3℃; Liquid Temperature：22.5℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(7.79, 7.79, 7.79) @ 2450 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Pin=250mW/Area Scan (81x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 16.2 W/kg

Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 90.54 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 29.1 W/kg
SAR(1 g) = 13.8 W/kg; SAR(10 g) = 6.43 W/kg
Smallest distance from peaks to all points 3 dB below = 10 mm
Ratio of SAR at M2 to SAR at M1 = 50%
Maximum value of SAR (measured) = 15.6 W/kg



0 dB = 15.6 W/kg

Test Laboratory: ritt 7 Layers SAR/HAC Testing Lab   Date: 2025/3/9

System Check_HSL2550_250309

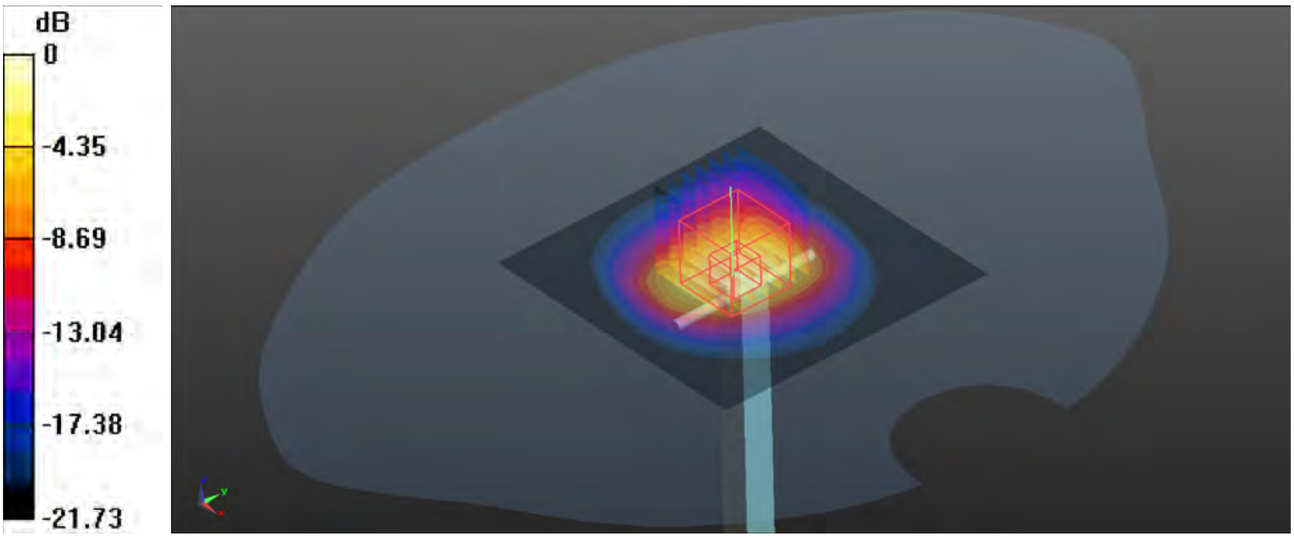
DUT: Dipole 2550 MHz; Type: D2550V2

Communication System: CW; Frequency: 2550 MHz;Duty Cycle: 1:1
Medium: HSL2550_0309 Medium parameters used: f = 2550 MHz; σ = 1.921 S/m; ε_r = 39.014; ρ = 1000 kg/m^3
Ambient Temperature：23.4°C; Liquid Temperature：22.6°C

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(7.64, 7.64, 7.64) @ 2550 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Pin=250mW/Area Scan (81x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 14.9 W/kg

Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 86.87 V/m; Power Drift = -0.14 dB
Peak SAR (extrapolated) = 26.4 W/kg
SAR(1 g) = 12.8 W/kg; SAR(10 g) = 6.04 W/kg
Smallest distance from peaks to all points 3 dB below = 10.4 mm
Ratio of SAR at M2 to SAR at M1 = 50.3%
Maximum value of SAR (measured) = 14.6 W/kg



0 dB = 14.6 W/kg

Test Laboratory: ritt 7 Layers SAR/HAC Testing Lab Date: 2025/3/1

System Check_HSL3500_250301

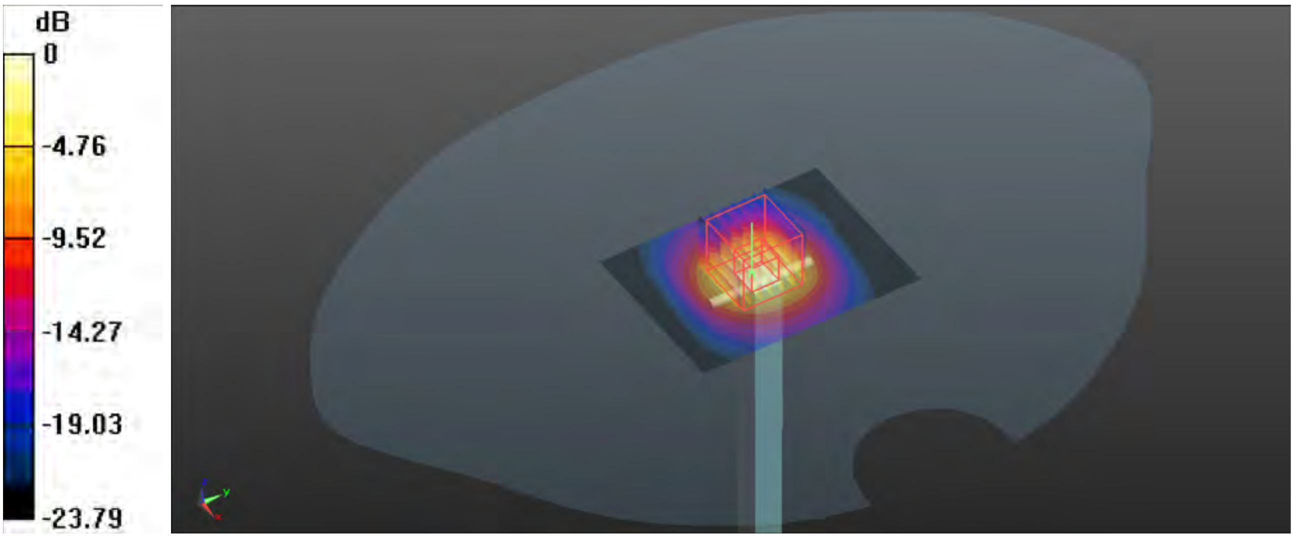
DUT: Dipole 3500 MHz; Type: D3500V2

Communication System: CW; Frequency: 3500 MHz;Duty Cycle: 1:1
Medium: HSL3500_0301 Medium parameters used: f = 3500 MHz; σ = 2.821 S/m; ε_r = 39.678; ρ = 1000 kg/m^3
Ambient Temperature：23.5℃; Liquid Temperature：22.6℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(6.92, 6.92, 6.92) @ 3500 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Pin=100mW/Area Scan (61x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 11.9 W/kg

Pin=100mW/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 66.05 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 16.8 W/kg
SAR(1 g) = 6.77 W/kg; SAR(10 g) = 2.56 W/kg
Smallest distance from peaks to all points 3 dB below = 8.4 mm
Ratio of SAR at M2 to SAR at M1 = 68.9%
Maximum value of SAR (measured) = 11.4 W/kg



0 dB = 11.4 W/kg

System Check_HSL3500_250308

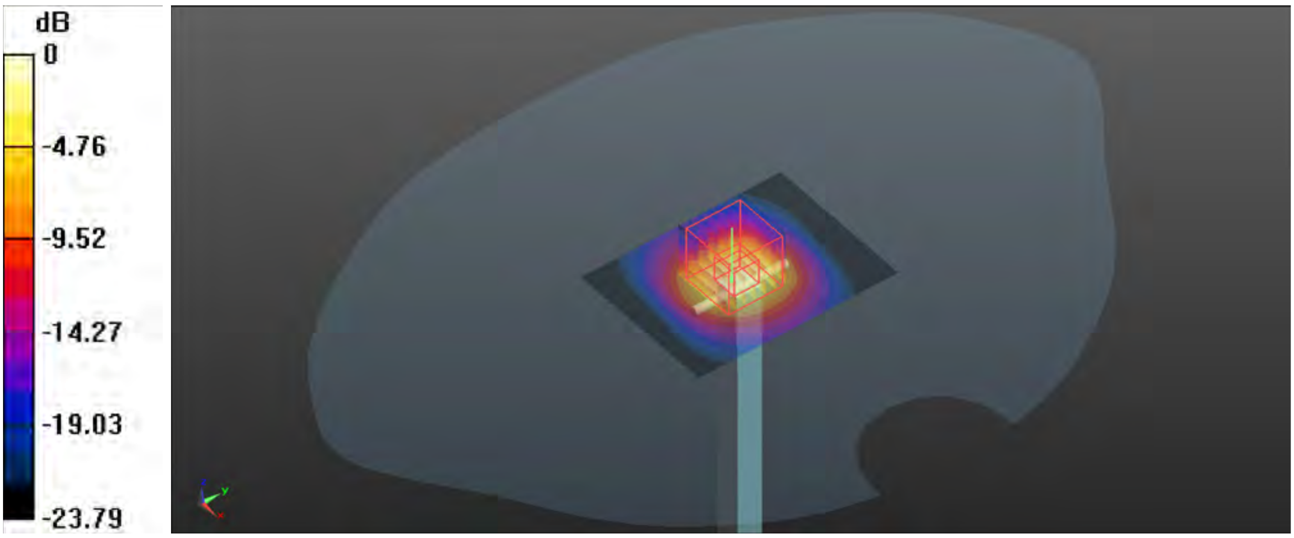
DUT: Dipole 3500 MHz; Type: D3500V2

Communication System: CW; Frequency: 3500 MHz;Duty Cycle: 1:1
Medium: HSL3500_0308 Medium parameters used: f = 3500 MHz; σ = 2.833 S/m; ε_r = 39.696; ρ = 1000 kg/m^3
Ambient Temperature：23.7℃; Liquid Temperature：22.8℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(6.92, 6.92, 6.92) @ 3500 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Pin=100mW/Area Scan (61x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 11.9 W/kg

Pin=100mW/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 66.05 V/m; Power Drift = -0.3 dB
Peak SAR (extrapolated) = 16.8 W/kg
SAR(1 g) = 6.71 W/kg; SAR(10 g) = 2.52 W/kg
Smallest distance from peaks to all points 3 dB below = 8.4 mm
Ratio of SAR at M2 to SAR at M1 = 68.9%
Maximum value of SAR (measured) = 11.2 W/kg



0 dB = 11.2 W/kg

System Check_HSL3700_250302

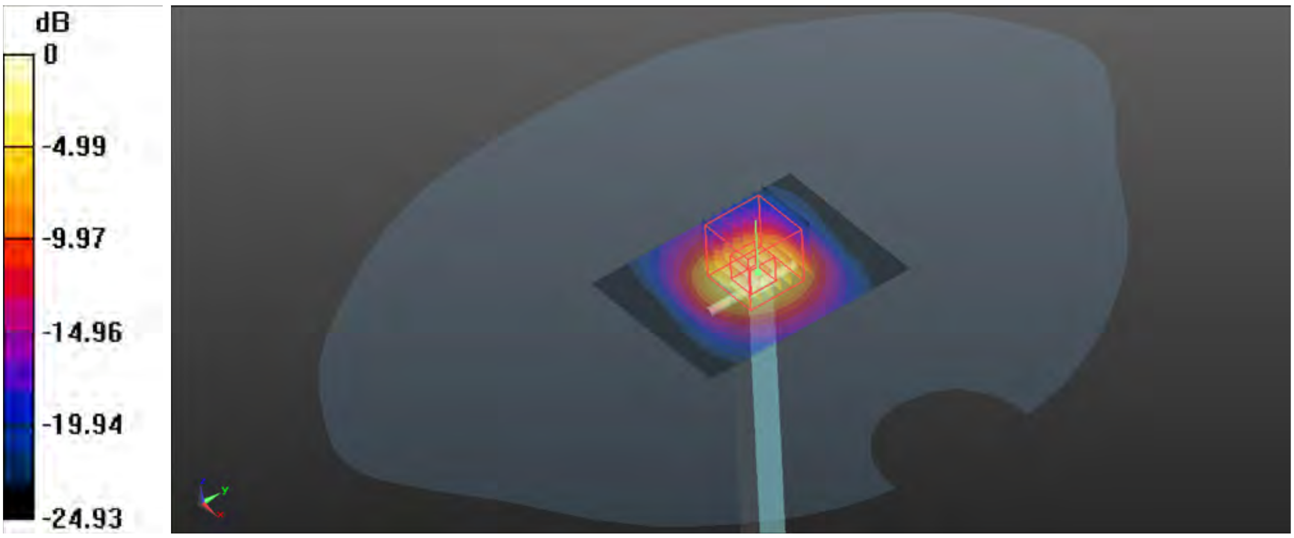
DUT: Dipole 3700 MHz; Type: D3700V2

Communication System: CW; Frequency: 3700 MHz;Duty Cycle: 1:1
Medium: HSL3700_0302 Medium parameters used: f = 3700 MHz; σ = 2.981 S/m; ε_r = 38.811; ρ = 1000 kg/m^3
Ambient Temperature：23.5°C; Liquid Temperature：22.6°C

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(6.71, 6.71, 6.71) @ 3700 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Pin=100mW/Area Scan (61x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 12.0 W/kg

Pin=100mW/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 64.84 V/m; Power Drift = -0.15 dB
Peak SAR (extrapolated) = 17.5 W/kg
SAR(1 g) = 6.76 W/kg; SAR(10 g) = 2.5 W/kg
Smallest distance from peaks to all points 3 dB below = 8.4 mm
Ratio of SAR at M2 to SAR at M1 = 67.7%
Maximum value of SAR (measured) = 11.6 W/kg



0 dB = 11.6 W/kg

System Check_HSL3900_250303

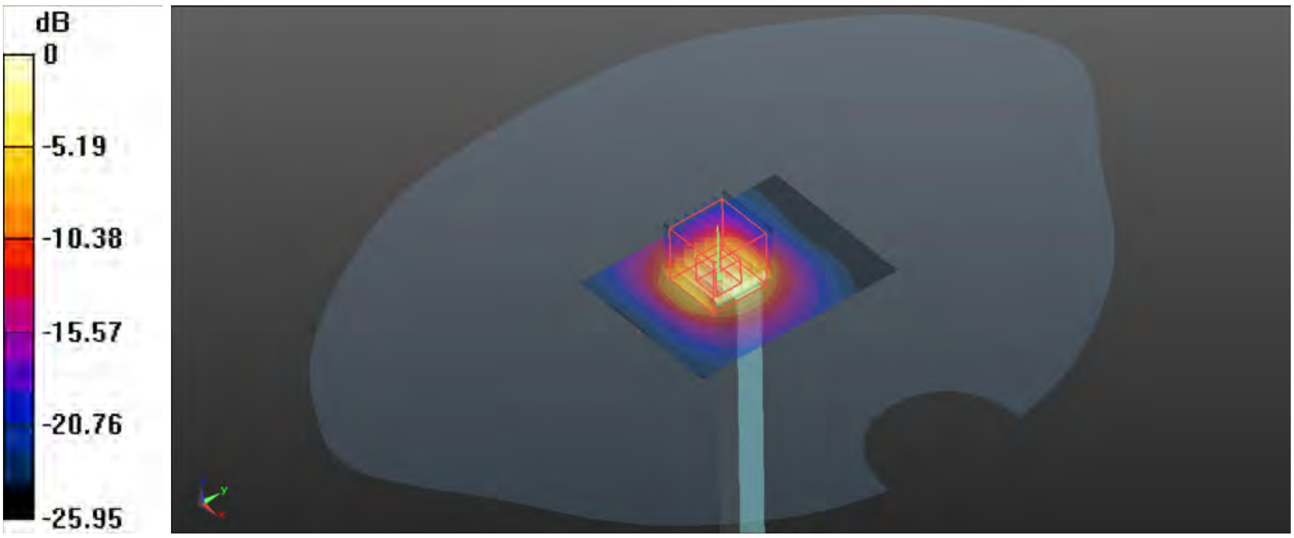
DUT: Dipole 3900 MHz; Type: D3900V2

Communication System: CW; Frequency: 3900 MHz;Duty Cycle: 1:1
Medium: HSL3900_0303 Medium parameters used: f = 3900 MHz; $\sigma = 3.18$ S/m; $\varepsilon_r = 38.519$; $\rho = 1000$ kg/m^3
Ambient Temperature：23.2℃; Liquid Temperature：22.3℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(6.68, 6.68, 6.68) @ 3900 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Pin=100mW/Area Scan (61x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 13.3 W/kg

Pin=100mW/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 55.17 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 18.8 W/kg
SAR(1 g) = 6.83 W/kg; SAR(10 g) = 2.42 W/kg
Smallest distance from peaks to all points 3 dB below = 8.4 mm
Ratio of SAR at M2 to SAR at M1 = 65.7%
Maximum value of SAR (measured) = 12.3 W/kg



0 dB = 12.3 W/kg

System Check_HSL5250_250307

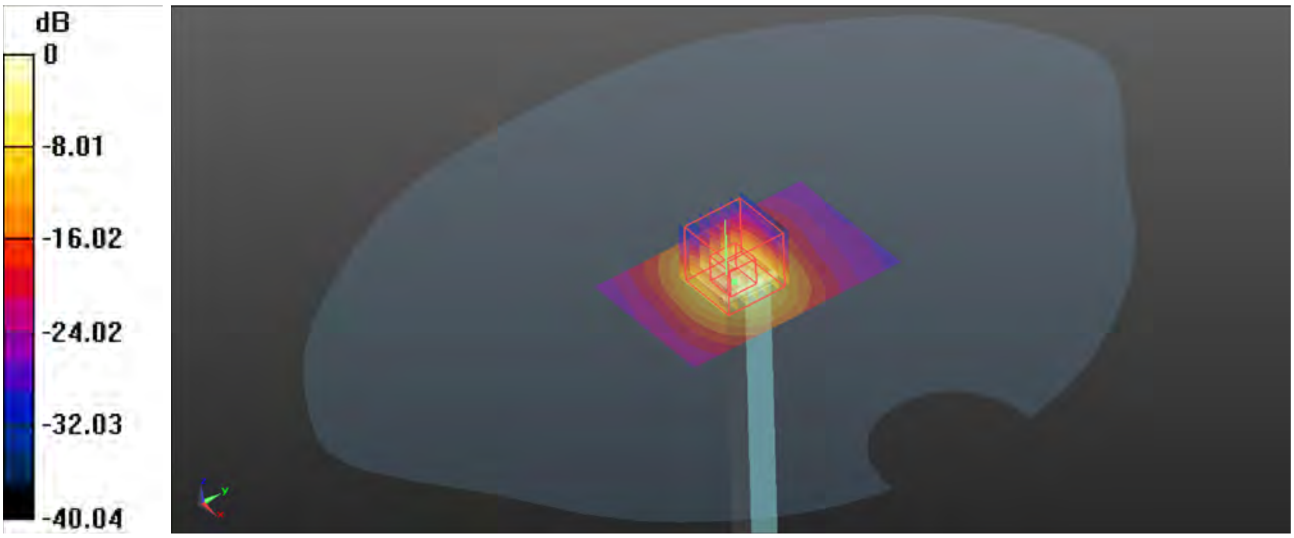
DUT: Dipole D5GHz; Type: D5GV2

Communication System: CW; Frequency: 5250 MHz;Duty Cycle: 1:1
Medium: HSL5G_0307 Medium parameters used: f = 5250 MHz; σ = 4.629 S/m; ε_r = 36.246; ρ = 1000 kg/m^3
Ambient Temperature：23.6℃; Liquid Temperature：22.4℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(5.52, 5.52, 5.52) @ 5250 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Pin=100mW/Area Scan (51x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 17.0 W/kg

Pin=100mW/Zoom Scan (7x7x6)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 53.95 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 28.3 W/kg
SAR(1 g) = 7.52 W/kg; SAR(10 g) = 2.11 W/kg
Smallest distance from peaks to all points 3 dB below = 7.4 mm
Ratio of SAR at M2 to SAR at M1 = 55.1%
Maximum value of SAR (measured) = 13.8 W/kg



0 dB = 13.8 W/kg

System Check_HSL5600_250307

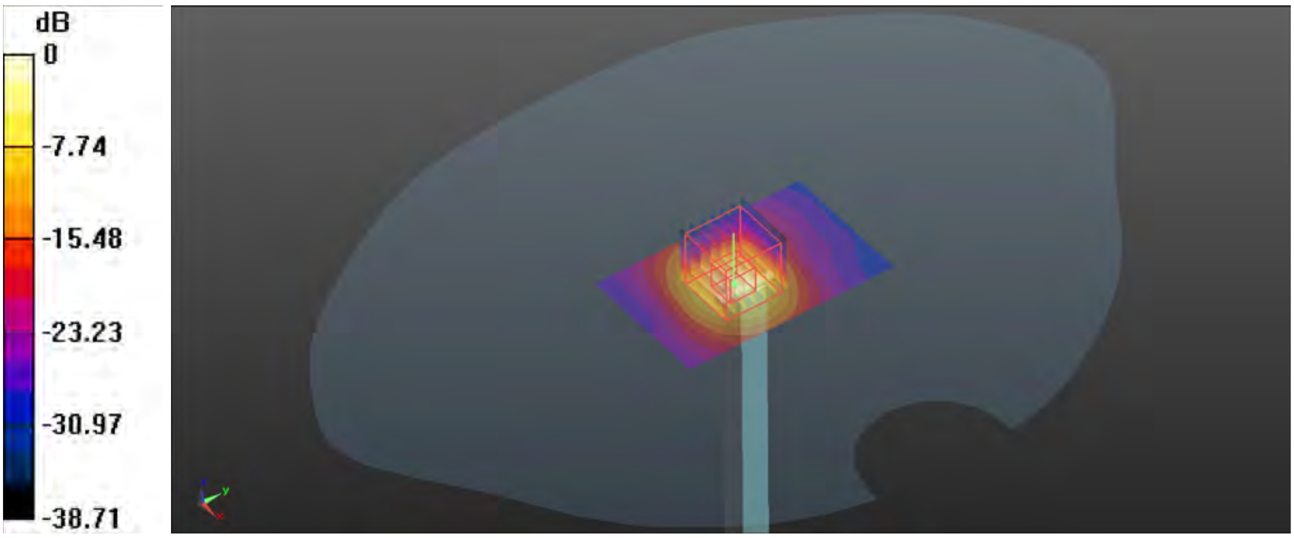
DUT: Dipole D5GHz ; Type: D5GV2

Communication System: CW; Frequency: 5600 MHz;Duty Cycle: 1:1
Medium: HSL5G_0307 Medium parameters used: f = 5600 MHz; σ = 5.016 S/m; ε_r = 35.683; ρ = 1000 kg/m^3
Ambient Temperature：23.6℃; Liquid Temperature：22.4℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(4.95, 4.95, 4.95) @ 5600 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Pin=100mW/Area Scan (51x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 19.2 W/kg

Pin=100mW/Zoom Scan (7x7x6)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 54.04 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 35.2 W/kg
SAR(1 g) = 8.33 W/kg; SAR(10 g) = 2.36 W/kg
Smallest distance from peaks to all points 3 dB below = 7.4 mm
Ratio of SAR at M2 to SAR at M1 = 52.8%
Maximum value of SAR (measured) = 17.7 W/kg



0 dB = 17.7 W/kg

Test Laboratory: ritt 7 Layers SAR/HAC Testing Lab Date: 2025/3/7

System Check_HSL5750_250307

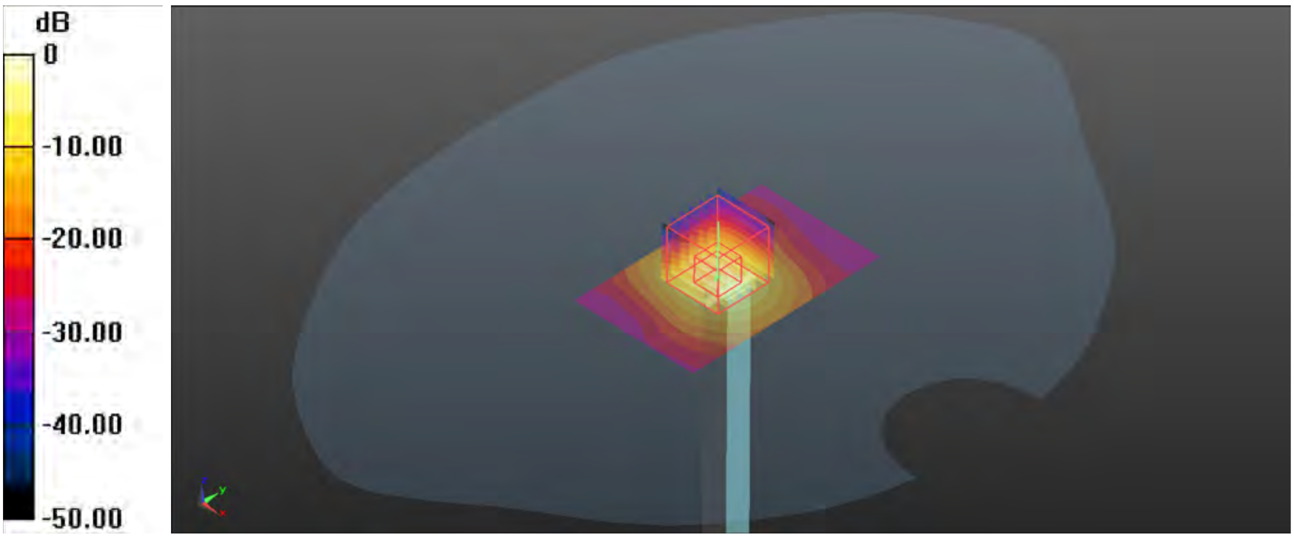
DUT: Dipole D5GHz ; Type: D5GV2

Communication System: CW; Frequency: 5750 MHz;Duty Cycle: 1:1
Medium: HSL5G_0307 Medium parameters used: f = 5750 MHz; σ = 5.124 S/m; ε_r = 35.379; ρ = 1000 kg/m^3
Ambient Temperature：23.6℃; Liquid Temperature：22.4℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(5.05, 5.05, 5.05) @ 5750 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Pin=100mW/Area Scan (51x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 19.1 W/kg

Pin=100mW/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 38.98 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 32.6 W/kg
SAR(1 g) = 7.4 W/kg; SAR(10 g) = 2.07 W/kg
Smallest distance from peaks to all points 3 dB below = 7.5 mm
Ratio of SAR at M2 to SAR at M1 = 50.8%
Maximum value of SAR (measured) = 19.2 W/kg



0 dB = 19.2 W/kg

Appendix B. SAR Plots of SAR Measurement

The SAR plots for highest measured SAR in each exposure configuration, wireless mode and frequency band combination, and measured SAR > 1.5 W/kg are shown as follows.

Test Laboratory: ritt 7 Layers SAR/HAC Testing Lab Date: 2025/2/15

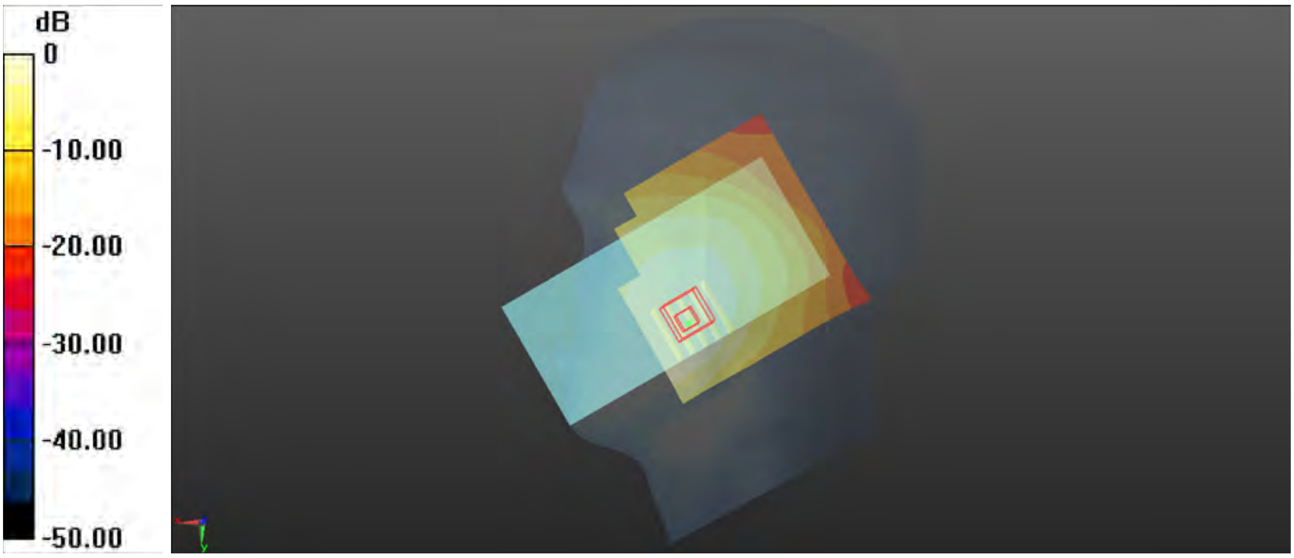
P01 GSM850_GPRS 2Tx slot_Right Cheek_Ch251

Communication System: GPRS 2Tx slot; Frequency: 848.8 MHz;Duty Cycle: 1:4.15
Medium: HSL835_0215 Medium parameters used: f = 849 MHz; σ = 0.947 S/m; ε_r = 40.791; ρ = 1000 kg/m^3
Ambient Temperature：23.4℃; Liquid Temperature：22.5℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(9.93, 9.93, 9.93) @ 848.8 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (81x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.394 W/kg

-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.672 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 0.436 W/kg
SAR(1 g) = 0.308 W/kg; SAR(10 g) = 0.239 W/kg
Smallest distance from peaks to all points 3 dB below = 24.3 mm
Ratio of SAR at M2 to SAR at M1 = 80.9%
Maximum value of SAR (measured) = 0.385 W/kg



0 dB = 0.385 W/kg

Test Laboratory: ritt 7 Layers SAR/HAC Testing Lab Date: 2025/3/3

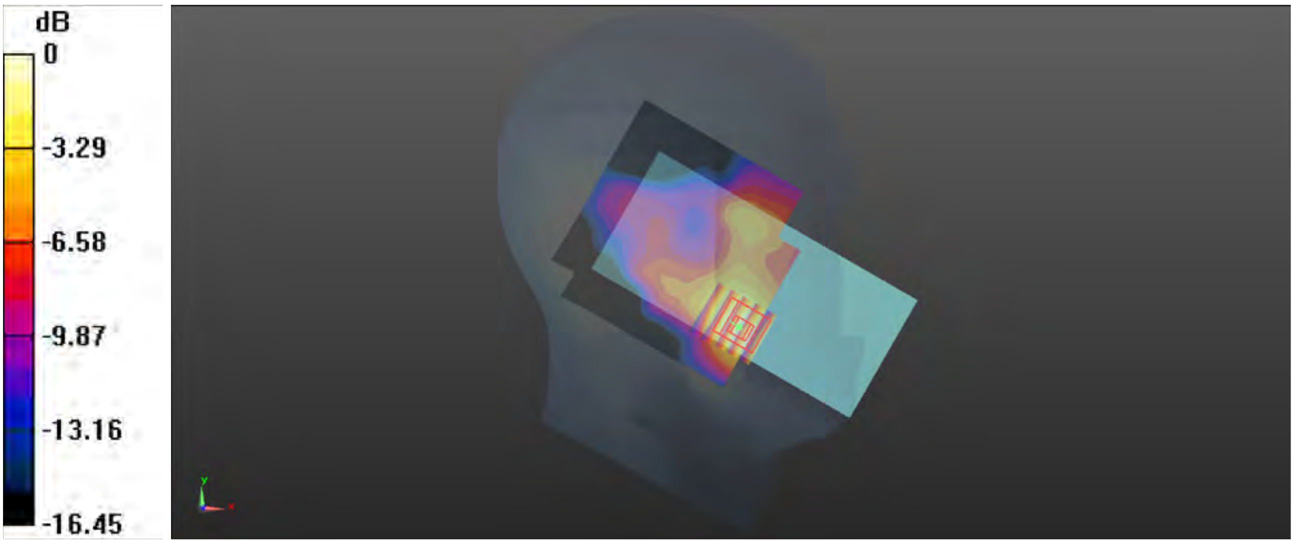
P02 GSM1900_GPRS 2Tx Slot_Left Cheek_Ch512

Communication System: GPRS 2Tx Slot; Frequency: 1850.2 MHz;Duty Cycle: 1:4.15
Medium: HSL1950_0303 Medium parameters used: f = 1850.2 MHz; σ = 1.41 S/m; ε_r = 39.212; ρ = 1000 kg/m^3
Ambient Temperature：23.4℃; Liquid Temperature：22.7℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(8.16, 8.16, 8.16) @ 1850.2 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (81x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.190 W/kg

-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.476 V/m; Power Drift = -0.17 dB
Peak SAR (extrapolated) = 0.227 W/kg
SAR(1 g) = 0.154 W/kg; SAR(10 g) = 0.099 W/kg
Smallest distance from peaks to all points 3 dB below = 13.3 mm
Ratio of SAR at M2 to SAR at M1 = 71.2%
Maximum value of SAR (measured) = 0.178 W/kg



0 dB = 0.178 W/kg

Test Laboratory: ritt 7 Layers SAR/HAC Testing Lab Date: 2025/3/3

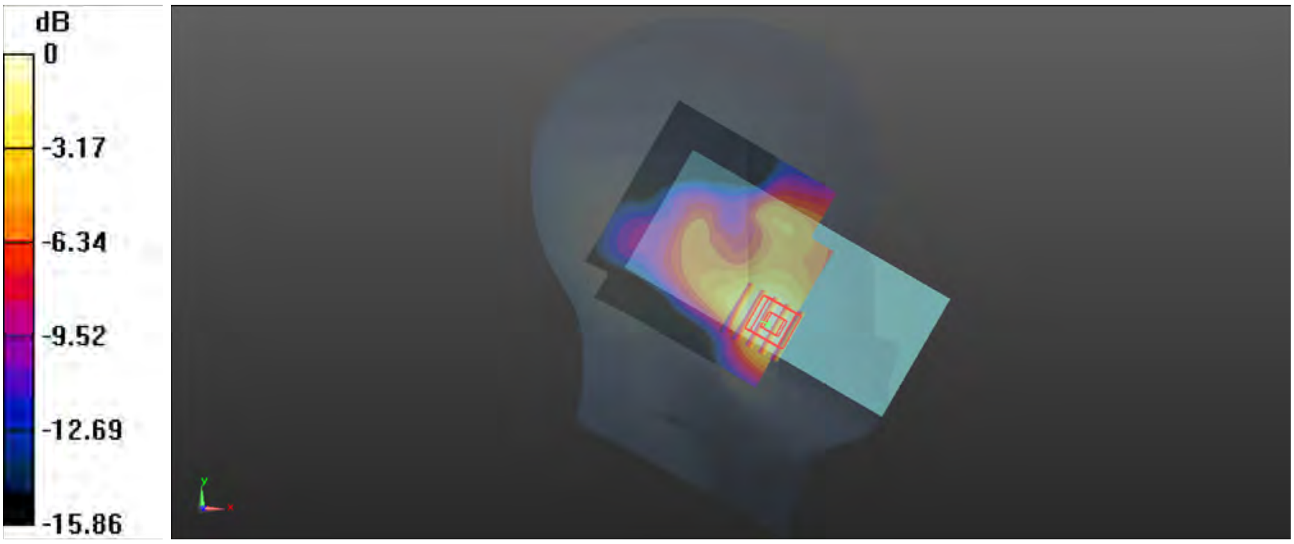
P03 WCDMA II_RMC12.2K_Left Cheek_Ch9400

Communication System: WCDMA; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium: HSL1950_0303 Medium parameters used: f = 1880 MHz; σ = 1.427 S/m; ε_r = 39.153; ρ = 1000 kg/m^3
Ambient Temperature：23.4℃; Liquid Temperature：22.7℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(8.16, 8.16, 8.16) @ 1880 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (81x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.361 W/kg

-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 7.385 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 0.401 W/kg
SAR(1 g) = 0.277 W/kg; SAR(10 g) = 0.183 W/kg
Smallest distance from peaks to all points 3 dB below = 14.7 mm
Ratio of SAR at M2 to SAR at M1 = 70.3%
Maximum value of SAR (measured) = 0.315 W/kg



0 dB = 0.315 W/kg

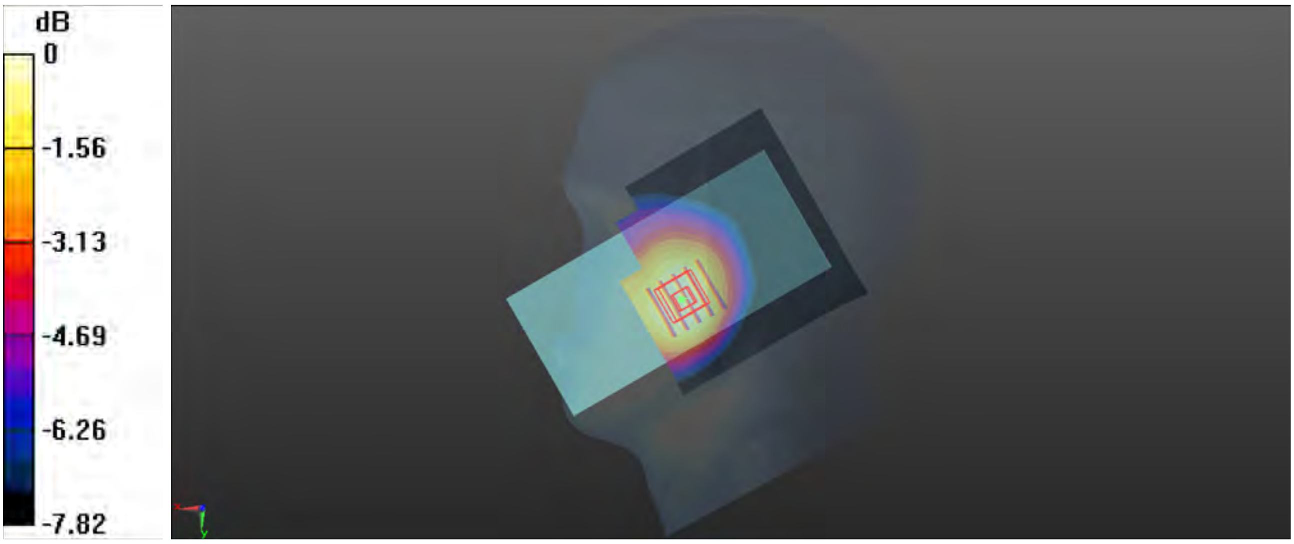
P04 WCDMA V_RMC12.2K_Right Cheek_Ch4182

Communication System: WCDMA; Frequency: 836.4 MHz;Duty Cycle: 1:1
Medium: HSL835_0216 Medium parameters used: f = 836.4 MHz; σ = 0.942 S/m; ε_r = 40.822; ρ = 1000 kg/m^3
Ambient Temperature：23.3℃; Liquid Temperature：22.2℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(9.93, 9.93, 9.93) @ 836.4 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (81x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.296 W/kg

-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.224 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 0.341 W/kg
SAR(1 g) = 0.269 W/kg; SAR(10 g) = 0.210 W/kg
Smallest distance from peaks to all points 3 dB below: Larger than measurement grid (> 16 mm)
Ratio of SAR at M2 to SAR at M1 = 83.5%
Maximum value of SAR (measured) = 0.292 W/kg



0 dB = 0.292 W/kg

Test Laboratory: ritt 7 Layers SAR/HAC Testing Lab Date: 2025/3/4

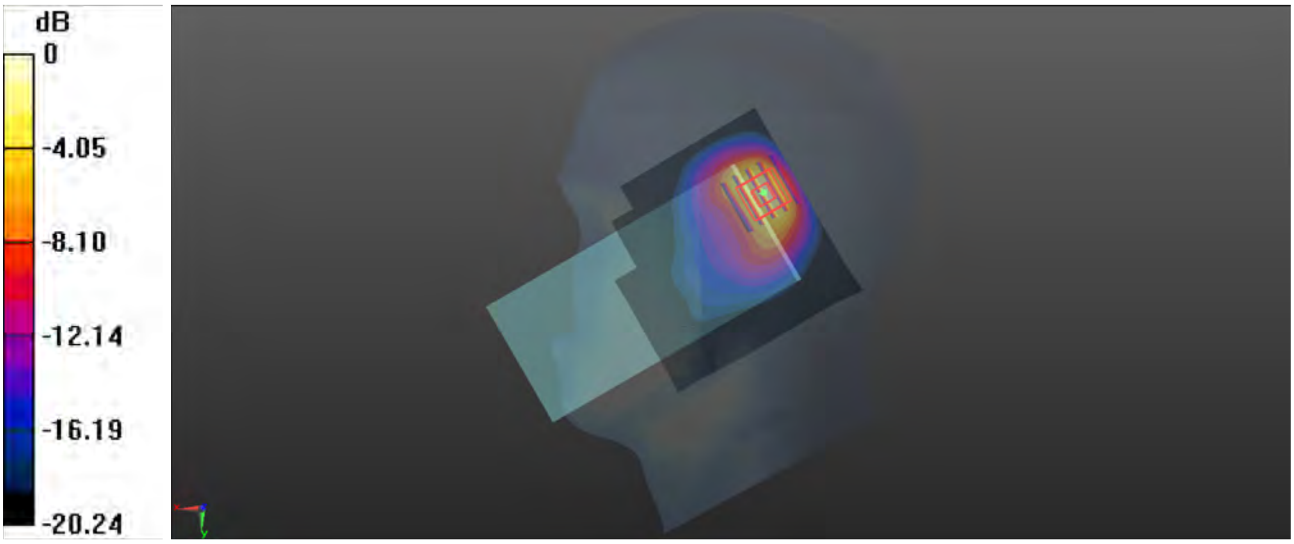
P05 LTE B2_QPSK20M_Right Tilted_Ch19100_50RB_OS50

Communication System: LTE_FDD; Frequency: 1900 MHz;Duty Cycle: 1:1
Medium: HSL1950_0304 Medium parameters used: f = 1900 MHz; σ = 1.439 S/m; ε_r = 39.151; ρ = 1000 kg/m^3
Ambient Temperature：23.3℃; Liquid Temperature：22.2℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(8.16, 8.16, 8.16) @ 1900 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (81x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.886 W/kg

-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 14.31 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 1.63 W/kg
SAR(1 g) = 0.801 W/kg; SAR(10 g) = 0.381 W/kg
Smallest distance from peaks to all points 3 dB below = 8 mm
Ratio of SAR at M2 to SAR at M1 = 54.1%
Maximum value of SAR (measured) = 1.09 W/kg



0 dB = 1.09 W/kg

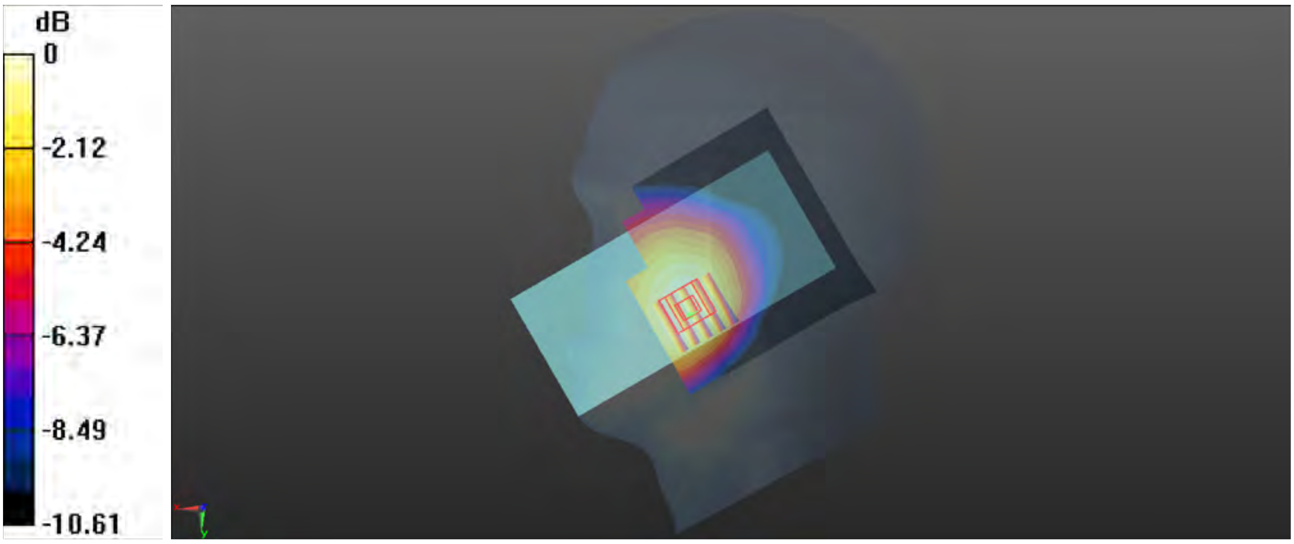
P06 LTE B5_QPSK10M_Right Cheek_Ch20600_1RB_OS0

Communication System: LTE_FDD; Frequency: 844 MHz;Duty Cycle: 1:1
Medium: HSL835_0216 Medium parameters used: f = 844 MHz; σ = 0.945 S/m; ε_r = 40.804; ρ = 1000 kg/m^3
Ambient Temperature：23.3℃; Liquid Temperature：22.2℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(9.93, 9.93, 9.93) @ 844 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (81x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.237 W/kg

-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.085 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 0.260 W/kg
SAR(1 g) = 0.209 W/kg; SAR(10 g) = 0.162 W/kg
Smallest distance from peaks to all points 3 dB below = 23.2 mm
Ratio of SAR at M2 to SAR at M1 = 80%
Maximum value of SAR (measured) = 0.227 W/kg



0 dB = 0.227 W/kg

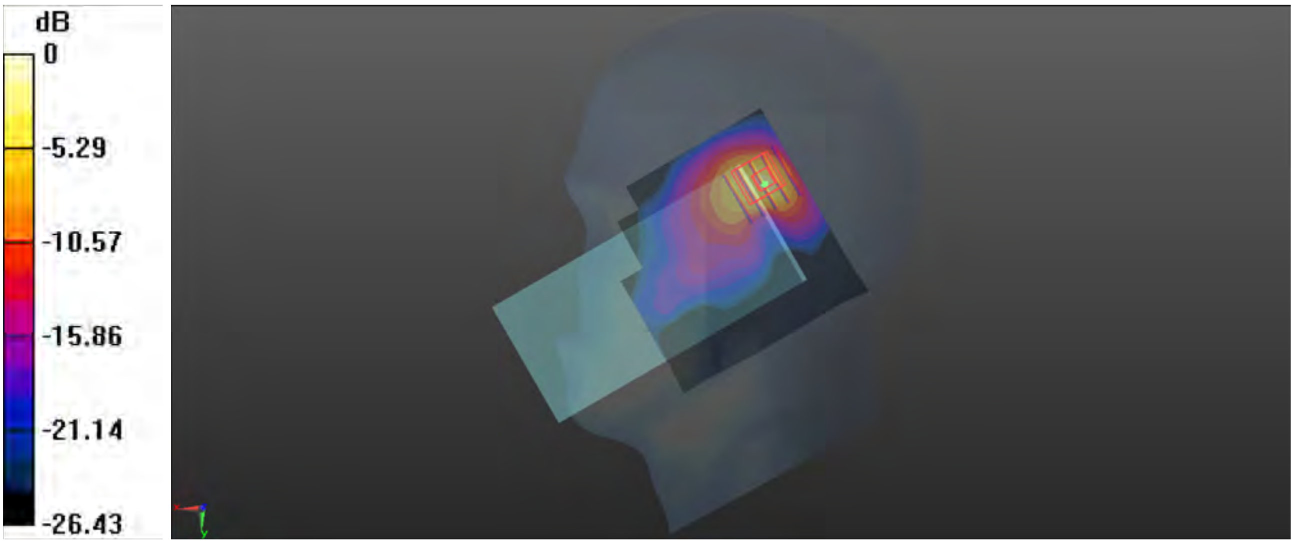
P07 LTE B7_QPSK20M_Right Tilted_Ch21100_1RB_OS0

Communication System: LTE_FDD; Frequency: 2535 MHz;Duty Cycle: 1:1
Medium: HSL2550_0309 Medium parameters used: f = 2535 MHz; σ = 1.908 S/m; ε_r = 39.048; ρ = 1000 kg/m^3
Ambient Temperature：23.4℃; Liquid Temperature：22.6℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(7.64, 7.64, 7.64) @ 2535 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (81x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.683 W/kg

-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 2.884 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 2.06 W/kg
SAR(1 g) = 0.839 W/kg; SAR(10 g) = 0.333 W/kg
Smallest distance from peaks to all points 3 dB below = 5.1 mm
Ratio of SAR at M2 to SAR at M1 = 46.4%
Maximum value of SAR (measured) = 1.24 W/kg



0 dB = 1.24 W/kg

Test Laboratory: ritt 7 Layers SAR/HAC Testing Lab Date: 2025/2/14

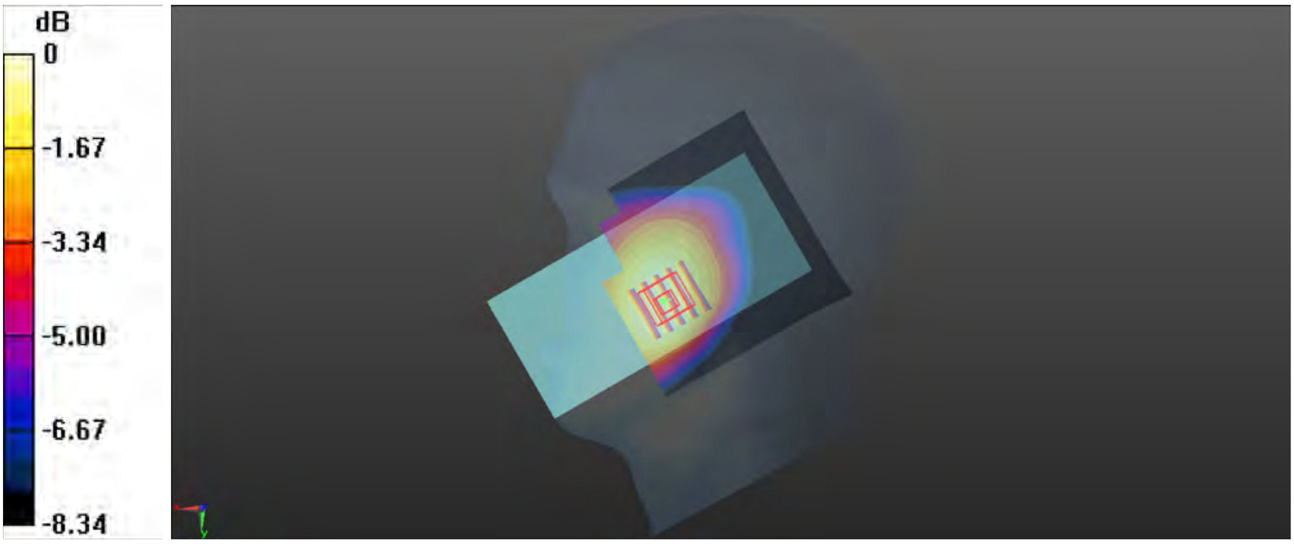
P08 LTE B12_QPSK10M_Right Cheek_Ch23095_1RB_OS24

Communication System: LTE_FDD; Frequency: 707.5 MHz;Duty Cycle: 1:1
Medium: HSL750_0214 Medium parameters used: f = 707.5 MHz; σ = 0.9 S/m; ε_r = 41.967; ρ = 1000 kg/m^3
Ambient Temperature：23.3℃; Liquid Temperature：22.1℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(10.25, 10.25, 10.25) @ 707.5 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (81x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.107 W/kg

-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.324 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.118 W/kg
SAR(1 g) = 0.097 W/kg; SAR(10 g) = 0.075 W/kg
Smallest distance from peaks to all points 3 dB below: Larger than measurement grid (> 16 mm)
Ratio of SAR at M2 to SAR at M1 = 82.8%
Maximum value of SAR (measured) = 0.104 W/kg



0 dB = 0.104 W/kg

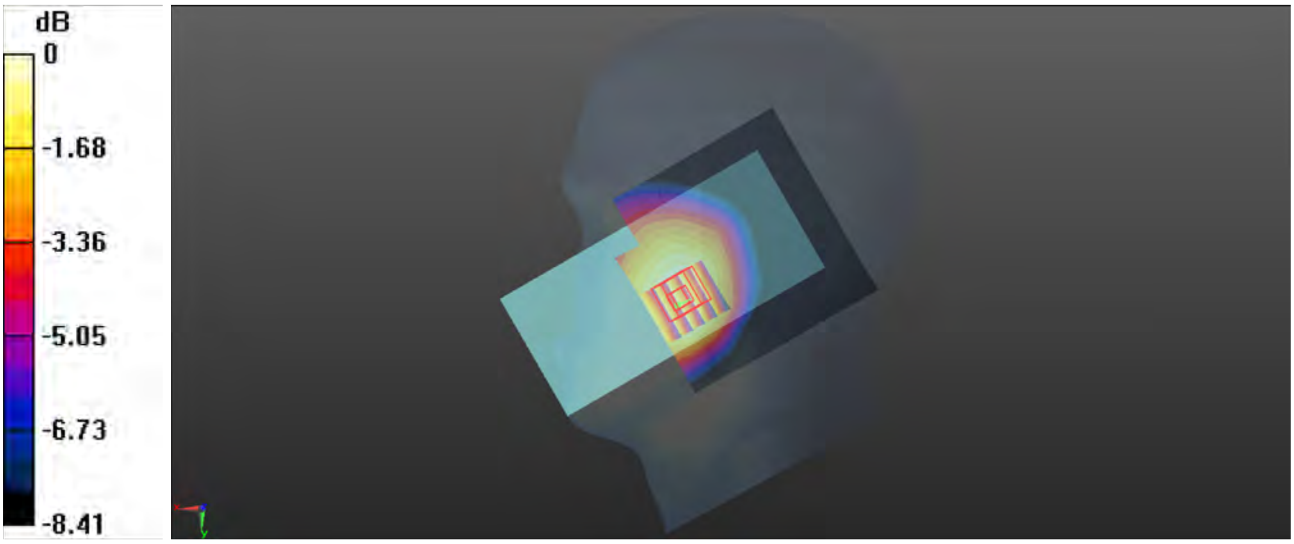
P09 LTE B13_QPSK10M_Right Cheek_Ch23230_25RB_OS25

Communication System: LTE_FDD; Frequency: 782 MHz;Duty Cycle: 1:1
Medium: HSL750_0214 Medium parameters used: f = 782 MHz; σ = 0.926 S/m; ε_r = 41.701; ρ = 1000 kg/m^3
Ambient Temperature：23.3℃; Liquid Temperature：22.1℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(10.25, 10.25, 10.25) @ 782 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (81x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.169 W/kg

-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.802 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 0.181 W/kg
SAR(1 g) = 0.153 W/kg; SAR(10 g) = 0.122 W/kg
Smallest distance from peaks to all points 3 dB below: Larger than measurement grid (> 16 mm)
Ratio of SAR at M2 to SAR at M1 = 84.6%
Maximum value of SAR (measured) = 0.164 W/kg



0 dB = 0.164 W/kg

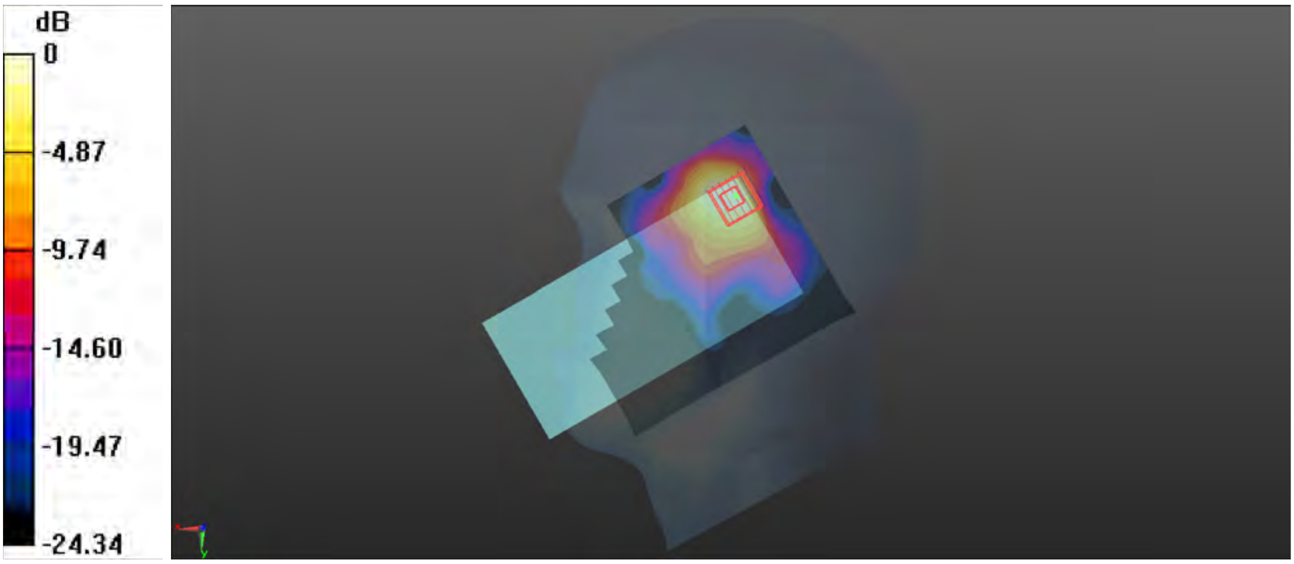
P10 LTE B48_QPSK20M_Right Cheek_Ch55340_1RB_OS50

Communication System: LTE_TDD; Frequency: 3560 MHz;Duty Cycle: 1:1.59
Medium: HSL3500_0308 Medium parameters used: f = 3560 MHz; σ = 2.881 S/m; ε_r = 39.583; ρ = 1000 kg/m^3
Ambient Temperature：23.7℃; Liquid Temperature：22.8℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(6.92, 6.92, 6.92) @ 3560 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (121x141x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.67 W/kg

-Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 8.366 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 2.23 W/kg
SAR(1 g) = 0.908 W/kg; SAR(10 g) = 0.376 W/kg
Smallest distance from peaks to all points 3 dB below = 7.6 mm
Ratio of SAR at M2 to SAR at M1 = 72.8%
Maximum value of SAR (measured) = 1.56 W/kg



0 dB = 1.56 W/kg

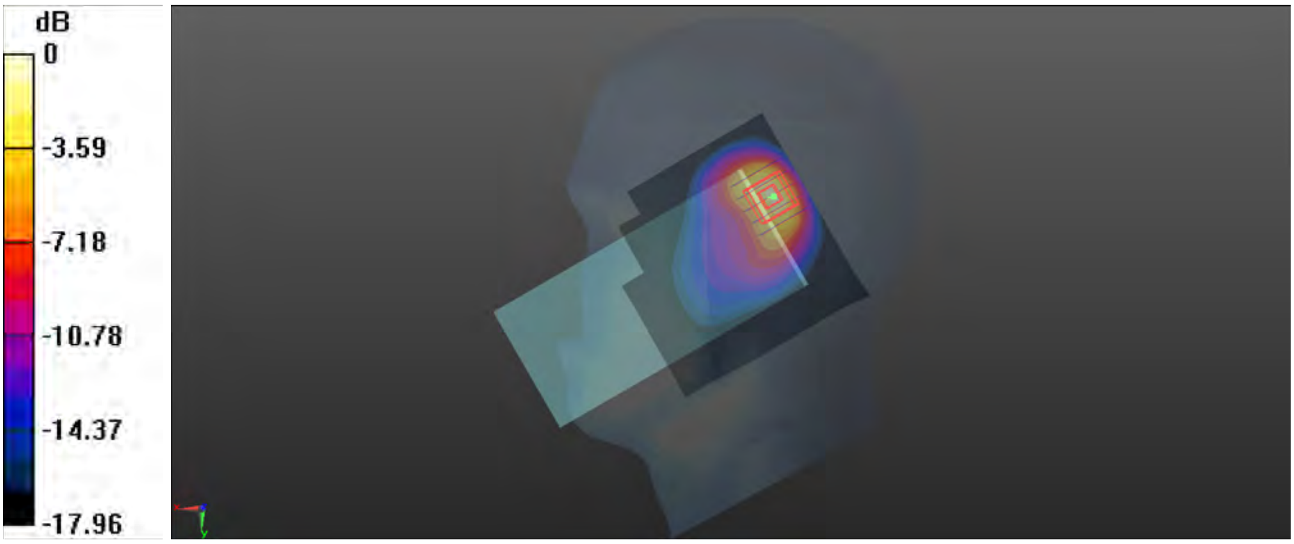
P11 LTE B66_QPSK20M_Right Cheek_Ch132322_1RB_OS99

Communication System: LTE_FDD; Frequency: 1745 MHz;Duty Cycle: 1:1
Medium: HSL1750_0305 Medium parameters used: f = 1745 MHz; σ = 1.41 S/m; ε_r = 39.212; ρ = 1000 kg/m^3
Ambient Temperature：23.5℃; Liquid Temperature：22.6℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(8.51, 8.51, 8.51) @ 1745 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (81x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.826 W/kg

-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 14.32 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 1.59 W/kg
SAR(1 g) = 0.748 W/kg; SAR(10 g) = 0.373 W/kg
Smallest distance from peaks to all points 3 dB below = 7.2 mm
Ratio of SAR at M2 to SAR at M1 = 57%
Maximum value of SAR (measured) = 0.980 W/kg



0 dB = 0.980 W/kg

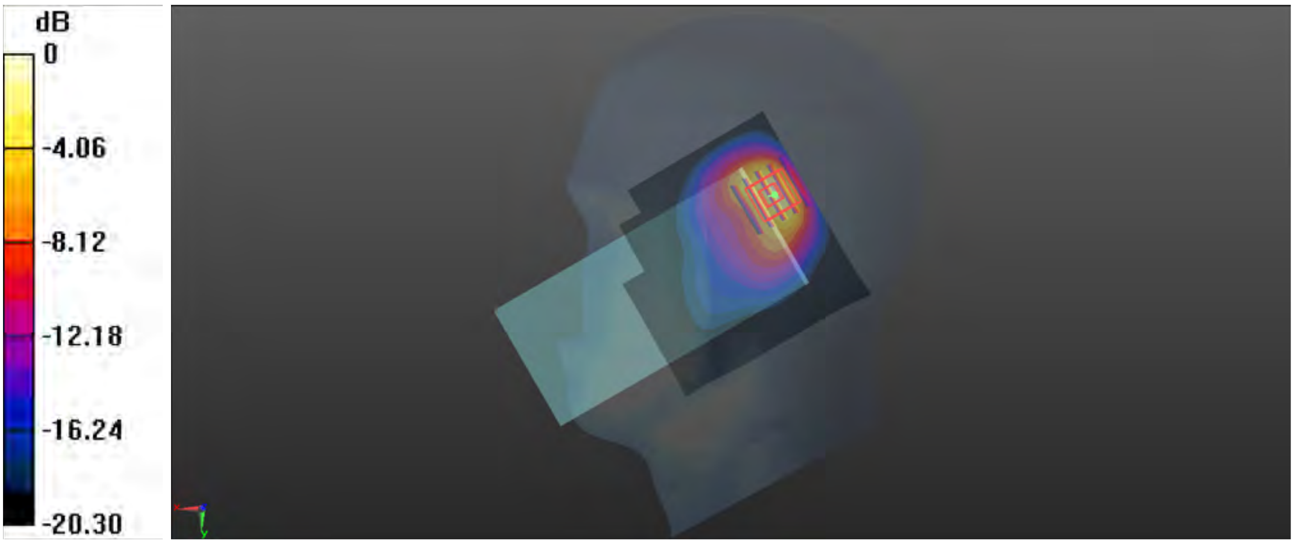
P12 N2_DFT-15KHz_QPSK20M_Right Tilted_Ch380000_1RB_OS1

Communication System: NR; Frequency: 1900 MHz;Duty Cycle: 1:1
Medium: HSL1950_0303 Medium parameters used: f = 1900 MHz; σ = 1.439 S/m; ε_r = 39.151; ρ = 1000 kg/m^3
Ambient Temperature：23.4℃; Liquid Temperature：22.7℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(8.16, 8.16, 8.16) @ 1900 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (81x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.906 W/kg

-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 14.06 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 1.65 W/kg
SAR(1 g) = 0.823 W/kg; SAR(10 g) = 0.376 W/kg
Smallest distance from peaks to all points 3 dB below = 8 mm
Ratio of SAR at M2 to SAR at M1 = 55%
Maximum value of SAR (measured) = 1.07 W/kg



0 dB = 1.07 W/kg

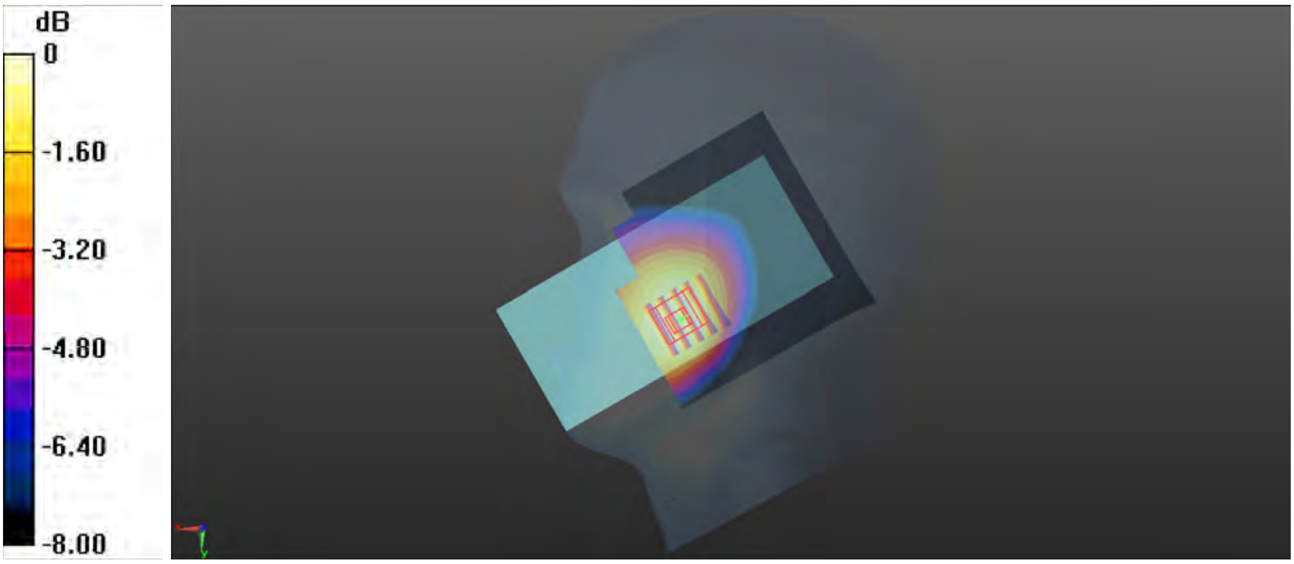
P13 N5_DFT-15KHz_QPSK20M_Right Cheek_Ch167300_50RB_OS56

Communication System: NR; Frequency: 836.5 MHz;Duty Cycle: 1:1
Medium: HSL835_0216 Medium parameters used: f = 836.5 MHz; σ = 0.942 S/m; ε_r = 40.822; ρ = 1000 kg/m^3
Ambient Temperature：23.3℃; Liquid Temperature：22.2℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(9.93, 9.93, 9.93) @ 836.5 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (81x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.205 W/kg

-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.690 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 0.222 W/kg
SAR(1 g) = 0.182 W/kg; SAR(10 g) = 0.144 W/kg
Smallest distance from peaks to all points 3 dB below: Larger than measurement grid
Ratio of SAR at M2 to SAR at M1 = 83.1%
Maximum value of SAR (measured) = 0.198 W/kg



0 dB = 0.198 W/kg

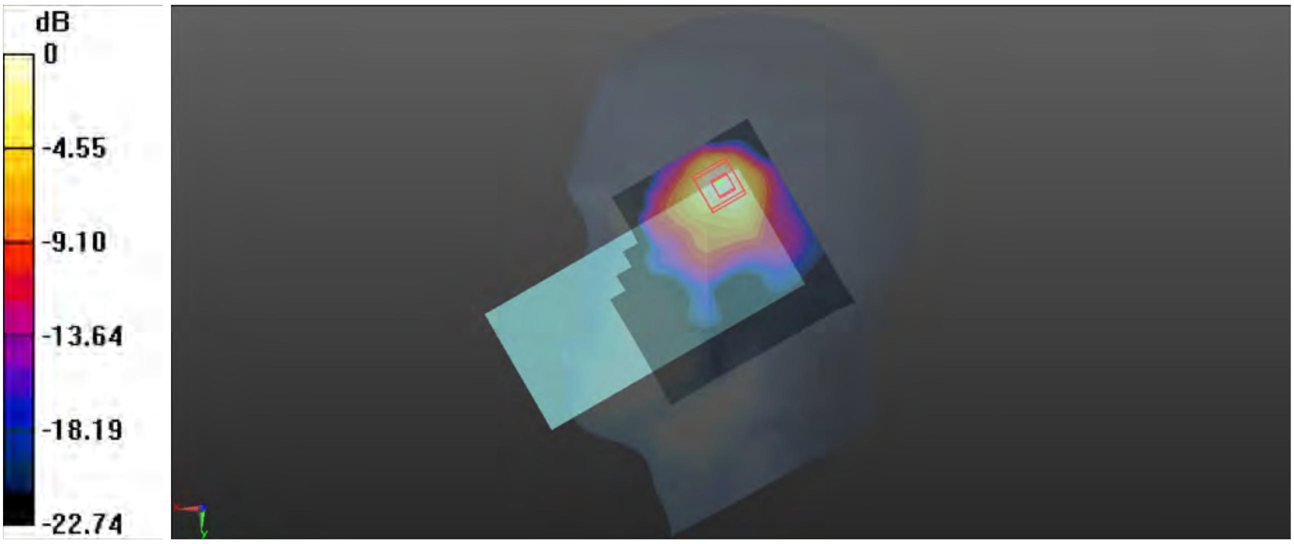
P14 N48_DFT-30kHz_QPSK40M_Right Cheek_Ch638000_50RB_OS0

Communication System: NR; Frequency: 3570 MHz;Duty Cycle: 1:1
Medium: HSL3500_0308 Medium parameters used: f = 3570 MHz; σ = 2.891 S/m; ε_r = 39.569; ρ = 1000 kg/m^3
Ambient Temperature：23.7℃; Liquid Temperature：22.8℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(6.92, 6.92, 6.92) @ 3570 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (121x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.99 W/kg

-Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 7.048 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 2.63 W/kg
SAR(1 g) = 0.96 W/kg; SAR(10 g) = 0.460 W/kg
Smallest distance from peaks to all points 3 dB below = 8.6 mm
Ratio of SAR at M2 to SAR at M1 = 65.7%
Maximum value of SAR (measured) = 1.72 W/kg



0 dB = 1.72 W/kg

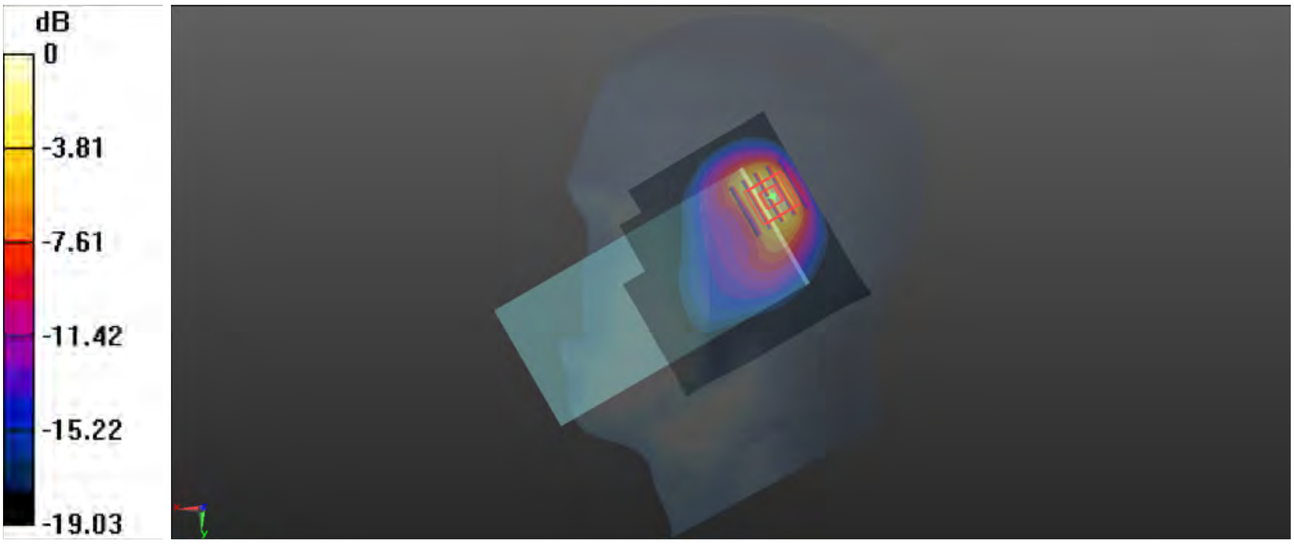
P15 N66_DFT-15kHz_QPSK40M_Right Tilted_Ch349000_108RB_OS54

Communication System: NR; Frequency: 1745 MHz;Duty Cycle: 1:1
Medium: HSL1750_0305 Medium parameters used: f = 1745 MHz; σ = 1.417 S/m; ε_r = 39.863; ρ = 1000 kg/m^3
Ambient Temperature：23.5℃; Liquid Temperature：22.6℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(8.51, 8.51, 8.51) @ 1745 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (81x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.802 W/kg

-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.59 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 1.52 W/kg
SAR(1 g) = 0.729 W/kg; SAR(10 g) = 0.352 W/kg
Smallest distance from peaks to all points 3 dB below = 8 mm
Ratio of SAR at M2 to SAR at M1 = 53.7%
Maximum value of SAR (measured) = 1.01 W/kg



0 dB = 1.01 W/kg

Test Laboratory: ritt 7 Layers SAR/HAC Testing Lab   Date: 2025/3/1

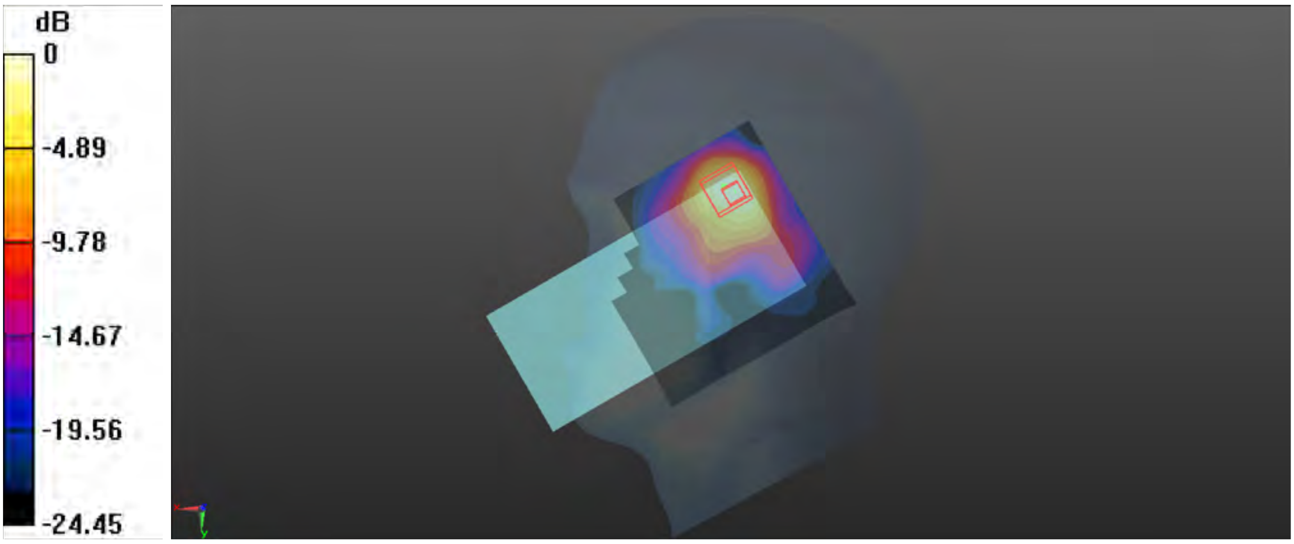
P16 N77_DFT-30kHz_QPSK100M_Right Cheek_Ch633334_270RB_OS0

Communication System: NR; Frequency: 3500.01 MHz;Duty Cycle: 1:1
Medium: HSL3500_0301 Medium parameters used: f = 3500.01 MHz; σ = 2.821 S/m; ε_r = 39.678; ρ = 1000 kg/m^3
Ambient Temperature：23.5℃; Liquid Temperature：22.6℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(6.92, 6.92, 6.92) @ 3500.01 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (121x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.27 W/kg

-Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 8.031 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 1.99 W/kg
SAR(1 g) = 0.855 W/kg; SAR(10 g) = 0.338 W/kg
Smallest distance from peaks to all points 3 dB below = 8.6 mm
Ratio of SAR at M2 to SAR at M1 = 72.5%
Maximum value of SAR (measured) = 1.43 W/kg



0 dB = 1.43 W/kg

Test Laboratory: ritt 7 Layers SAR/HAC Testing Lab Date: 2025/2/17

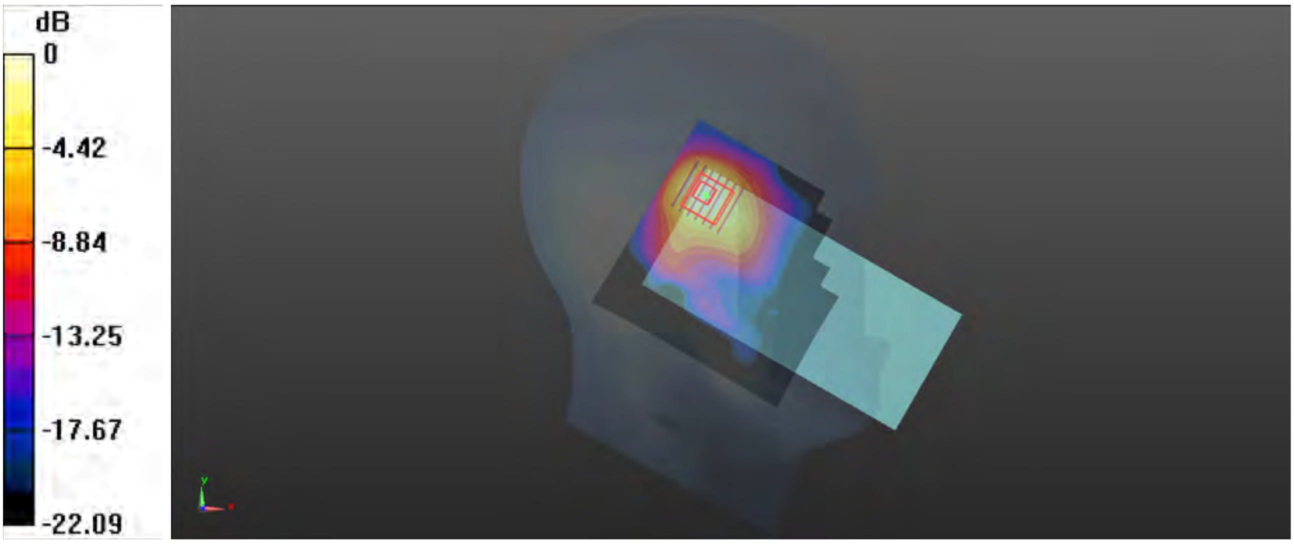
P17 WLAN2.4G_802.11b_Left Cheek_Ch6

Communication System: 802.11b; Frequency: 2437 MHz;Duty Cycle: 1:1.012
Medium: HSL2450_0217 Medium parameters used: f = 2437 MHz; σ = 1.858 S/m; ε_r = 38.735; ρ = 1000 kg/m^3
Ambient Temperature：23.3℃; Liquid Temperature：22.5℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(7.79, 7.79, 7.79) @ 2437 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (101x101x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.951 W/kg

-Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.97 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 1.31 W/kg
SAR(1 g) = 0.542 W/kg; SAR(10 g) = 0.323 W/kg
Smallest distance from peaks to all points 3 dB below = 10.4 mm
Ratio of SAR at M2 to SAR at M1 = 49.2%
Maximum value of SAR (measured) = 0.967 W/kg



0 dB = 0.967 W/kg

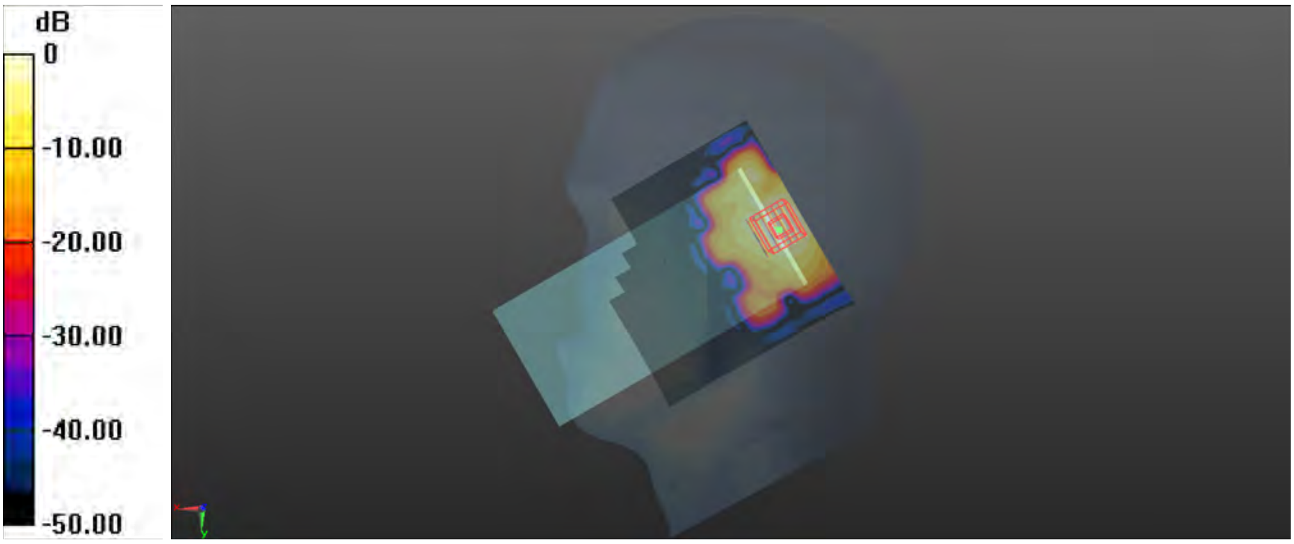
P18 WLAN5G_802.11a_Right Tilted_Ch60

Communication System: 802.11a; Frequency: 5300 MHz;Duty Cycle: 1:1.022
Medium: HSL5G_0307 Medium parameters used: f = 5300 MHz; σ = 4.627 S/m; ε_r = 36.117; ρ = 1000 kg/m^3
Ambient Temperature：23.6℃; Liquid Temperature：22.4℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(5.25, 5.25, 5.25) @ 5300 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (121x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.832 W/kg

-Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 11.87 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 1.42 W/kg
SAR(1 g) = 0.444 W/kg; SAR(10 g) = 0.163 W/kg
Smallest distance from peaks to all points 3 dB below = 8.9 mm
Ratio of SAR at M2 to SAR at M1 = 58%
Maximum value of SAR (measured) = 0.808 W/kg



0 dB = 0.808 W/kg

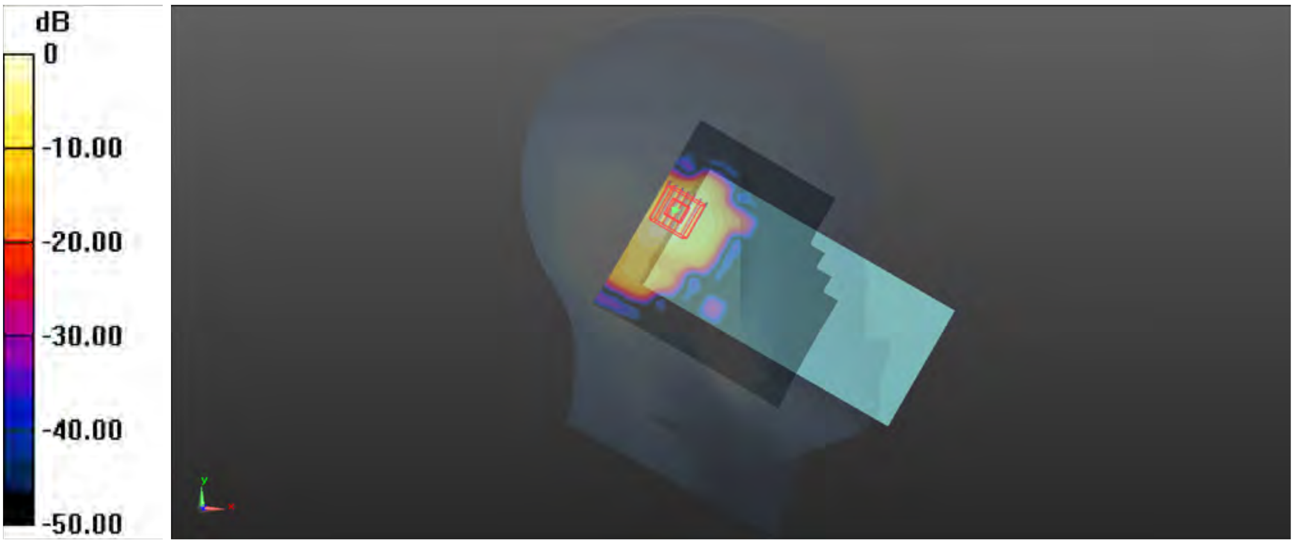
P19 WLAN5G_802.11a_Left Tilted_Ch144

Communication System: 802.11a; Frequency: 5720 MHz;Duty Cycle: 1:1.022
Medium: HSL5G_0307 Medium parameters used: f = 5720 MHz; σ = 5.104 S/m; ε_r = 35.49; ρ = 1000 kg/m^3
Ambient Temperature：23.6℃; Liquid Temperature：22.4℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(5.05, 5.05, 5.05) @ 5720 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (121x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.07 W/kg

-Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 10.47 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 2.32 W/kg
SAR(1 g) = 0.546 W/kg; SAR(10 g) = 0.176 W/kg
Smallest distance from peaks to all points 3 dB below = 6.8 mm
Ratio of SAR at M2 to SAR at M1 = 53%
Maximum value of SAR (measured) = 1.15 W/kg



0 dB = 1.15 W/kg

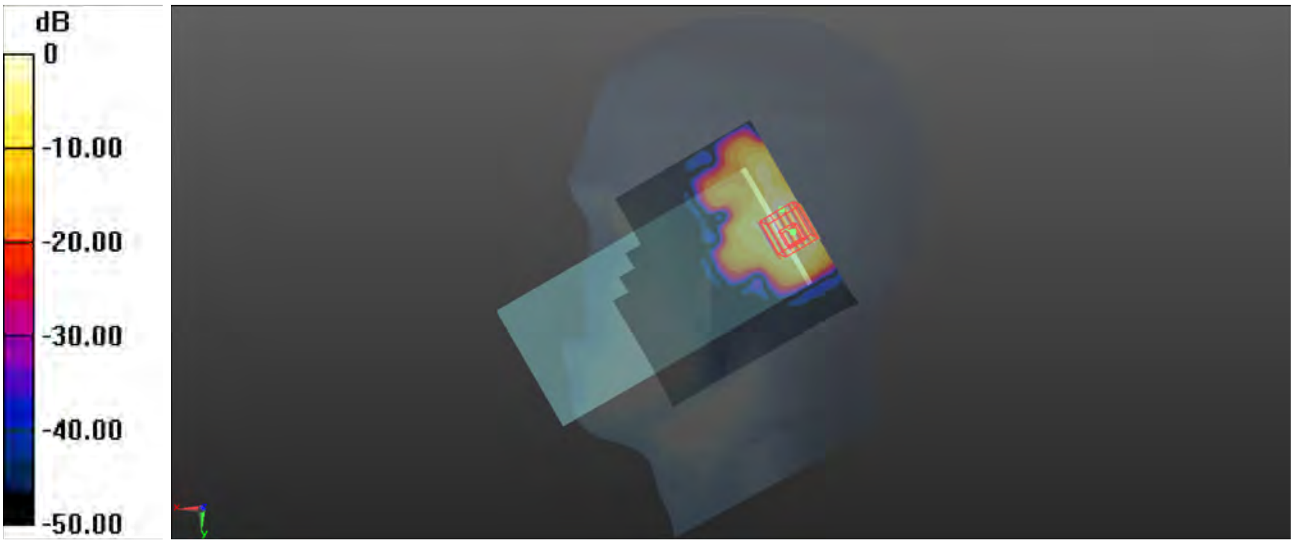
P20 WLAN5G_802.11a_Right Tilted_Ch149

Communication System: 802.11a; Frequency: 5745 MHz;Duty Cycle: 1:1.022
Medium: HSL5G_0307 Medium parameters used: f = 5745 MHz; σ = 5.118 S/m; ε_r = 35.399; ρ = 1000 kg/m^3
Ambient Temperature：23.6℃; Liquid Temperature：22.4℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(5.05, 5.05, 5.05) @ 5745 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (121x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.859 W/kg

-Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 10.51 V/m; Power Drift = -0.17 dB
Peak SAR (extrapolated) = 1.78 W/kg
SAR(1 g) = 0.460 W/kg; SAR(10 g) = 0.162 W/kg
Smallest distance from peaks to all points 3 dB below = 8.8 mm
Ratio of SAR at M2 to SAR at M1 = 54.6%
Maximum value of SAR (measured) = 0.891 W/kg



0 dB = 0.891 W/kg

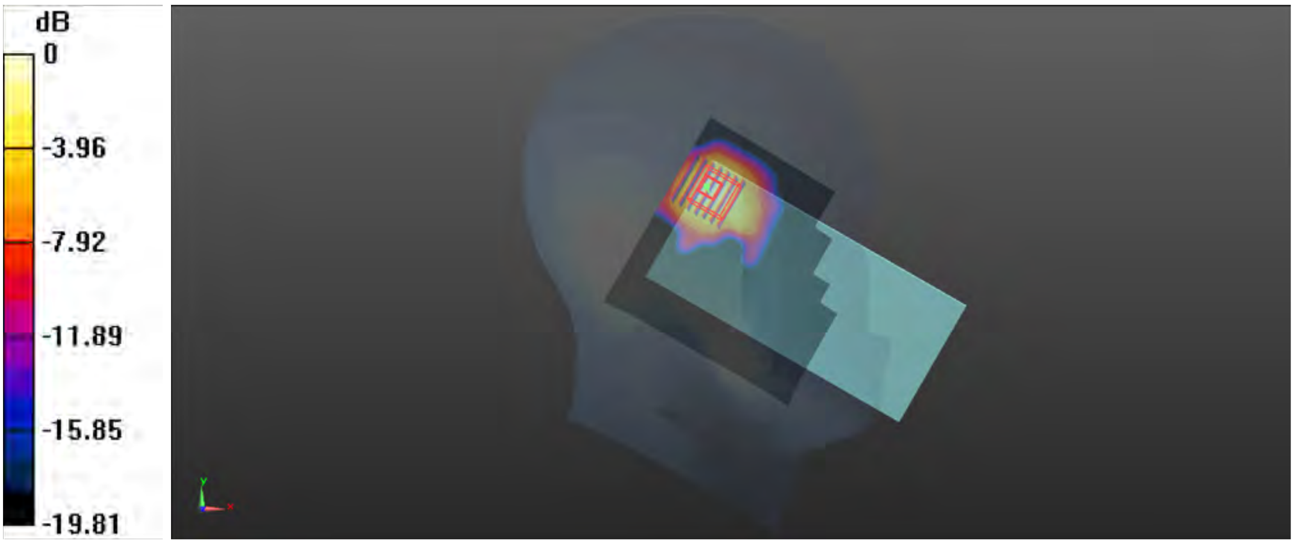
P21 BT_GFSK_Left Cheek_Ch78

Communication System: BT; Frequency: 2480 MHz;Duty Cycle: 1:1.305
Medium: HSL2450_0217 Medium parameters used: f = 2480 MHz; σ = 1.894 S/m; ε_r = 38.648; ρ = 1000 kg/m^3
Ambient Temperature：23.3℃; Liquid Temperature：22.5℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(7.79, 7.79, 7.79) @ 2480 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (101x101x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.0761 W/kg

-Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.750 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 0.125 W/kg
SAR(1 g) = 0.059 W/kg; SAR(10 g) = 0.029 W/kg
Smallest distance from peaks to all points 3 dB below: Larger than measurement grid (> 15 mm)
Ratio of SAR at M2 to SAR at M1 = 48.6%
Maximum value of SAR (measured) = 0.0767 W/kg



0 dB = 0.0767 W/kg

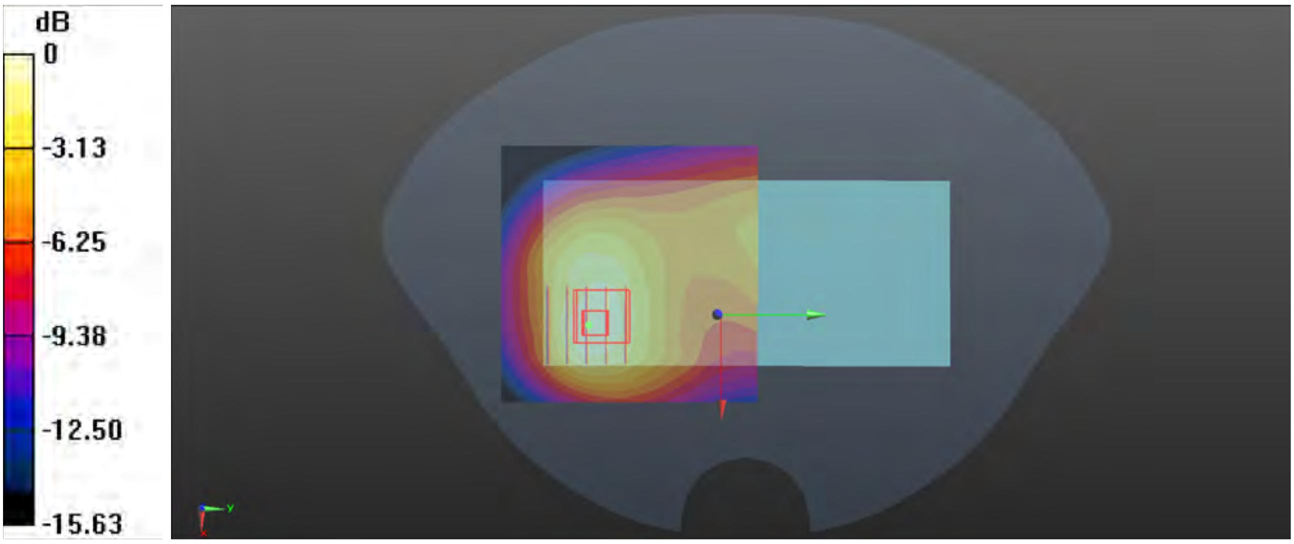
P22 GSM850_GPRS 2Tx slot_Rear Face_1cm_Ch251

Communication System: GPRS 2Tx slot; Frequency: 848.6 MHz;Duty Cycle: 1:4.15
Medium: HSL835_0215 Medium parameters used: f = 849 MHz; σ = 0.947 S/m; ε_r = 40.791; ρ = 1000 kg/m^3
Ambient Temperature：23.4℃; Liquid Temperature：22.5℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(9.93, 9.93, 9.93) @ 848.6 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.757 W/kg

-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 17.19 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.936 W/kg
SAR(1 g) = 0.579 W/kg; SAR(10 g) = 0.366 W/kg
Smallest distance from peaks to all points 3 dB below = 15.2 mm
Ratio of SAR at M2 to SAR at M1 = 61.2%
Maximum value of SAR (measured) = 0.758 W/kg



0 dB = 0.758 W/kg

Test Laboratory: ritt 7 Layers SAR/HAC Testing Lab   Date: 2025/3/3

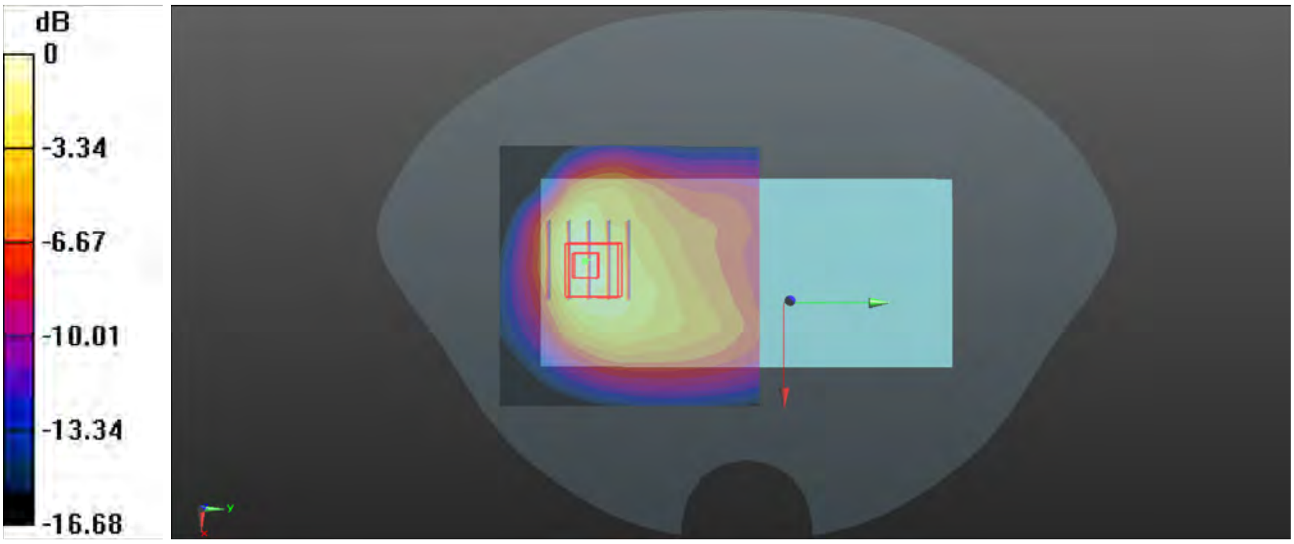
P23 GSM1900_GPRS 2Tx slot_Rear Face_1cm_Ch661

Communication System: GPRS 2Tx slot; Frequency: 1880 MHz;Duty Cycle: 1:4.15
Medium: HSL1950_0303 Medium parameters used: f = 1880 MHz; σ = 1.427 S/m; ε_r = 39.153; ρ = 1000 kg/m^3
Ambient Temperature：23.4℃; Liquid Temperature：22.7℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(8.16, 8.16, 8.16) @ 1880 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.09 W/kg

-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.32 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 1.27 W/kg
SAR(1 g) = 0.758 W/kg; SAR(10 g) = 0.463 W/kg
Smallest distance from peaks to all points 3 dB below = 12.2 mm
Ratio of SAR at M2 to SAR at M1 = 61%
Maximum value of SAR (measured) = 1.06 W/kg



0 dB = 1.06 W/kg

Test Laboratory: ritt 7 Layers SAR/HAC Testing Lab Date: 2025/3/3

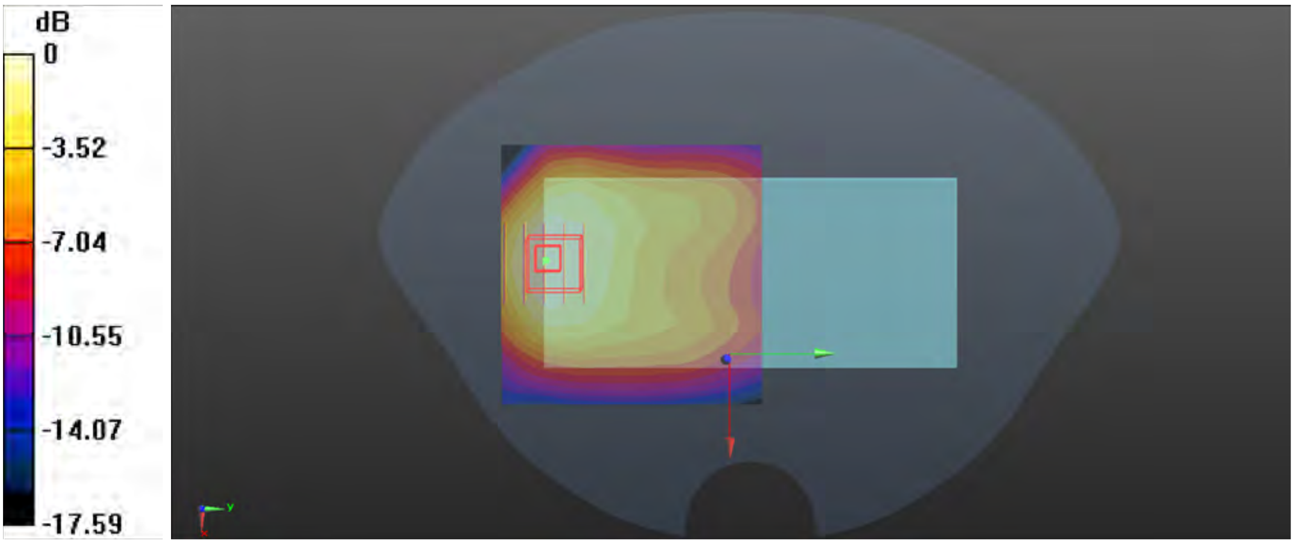
P24 WCDMA II_RMC12.2K_Rear Face_1cm_Ch9400

Communication System: WCDMA; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium: HSL1950_0303 Medium parameters used: f = 1880 MHz; σ = 1.427 S/m; ε_r = 39.153; ρ = 1000 kg/m^3
Ambient Temperature：23.4℃; Liquid Temperature：22.7℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(8.16, 8.16, 8.16) @ 1880 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.762 W/kg

-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.806 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 0.871 W/kg
SAR(1 g) = 0.640 W/kg; SAR(10 g) = 0.336 W/kg
Smallest distance from peaks to all points 3 dB below = 16 mm
Ratio of SAR at M2 to SAR at M1 = 60.7%
Maximum value of SAR (measured) = 0.714 W/kg



0 dB = 0.714 W/kg

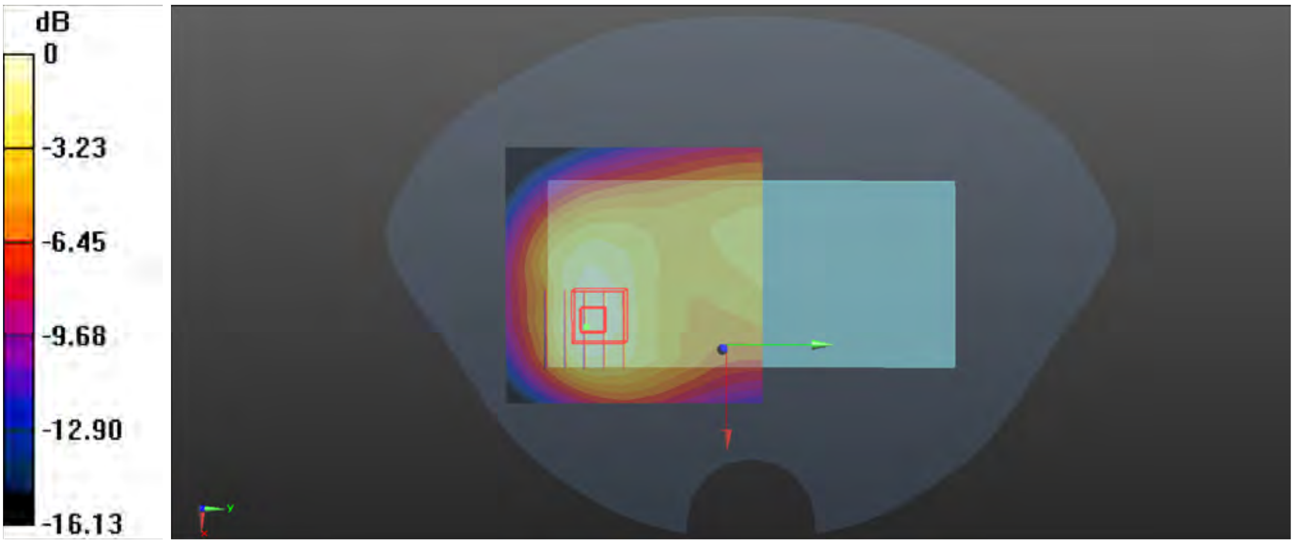
P25 WCDMA V_RMC12.2K_Rear Face_1cm_Ch4182

Communication System: WCDMA; Frequency: 836.4 MHz;Duty Cycle: 1:1
Medium: HSL835_0216 Medium parameters used: f = 836.4 MHz; σ = 0.942 S/m; ε_r = 40.822; ρ = 1000 kg/m^3
Ambient Temperature：23.3℃; Liquid Temperature：22.2℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(9.93, 9.93, 9.93) @ 836.4 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.687 W/kg

-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.97 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.818 W/kg
SAR(1 g) = 0.506 W/kg; SAR(10 g) = 0.324 W/kg
Smallest distance from peaks to all points 3 dB below = 15.2 mm
Ratio of SAR at M2 to SAR at M1 = 61.5%
Maximum value of SAR (measured) = 0.662 W/kg



0 dB = 0.662 W/kg

Test Laboratory: ritt 7 Layers SAR/HAC Testing Lab Date: 2025/3/4

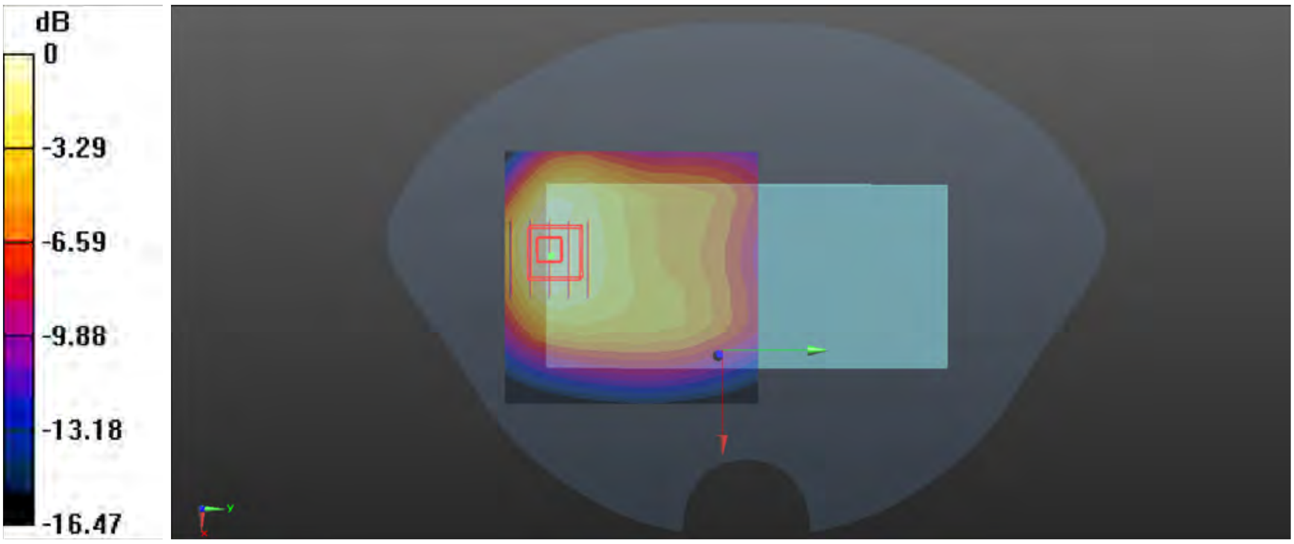
P26 LTE B2_QPSK20M_Rear Face_1cm_Ch18700_1RB_OS50

Communication System: LTE_FDD; Frequency: 1860 MHz;Duty Cycle: 1:1
Medium: HSL1950_0304 Medium parameters used: f = 1860 MHz; σ = 1.415 S/m; ε_r = 39.196; ρ = 1000 kg/m^3
Ambient Temperature：23.3℃; Liquid Temperature：22.2℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(8.16, 8.16, 8.16) @ 1860 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.673 W/kg

-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.499 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 0.795 W/kg
SAR(1 g) = 0.579 W/kg; SAR(10 g) = 0.293 W/kg
Smallest distance from peaks to all points 3 dB below = 13.2 mm
Ratio of SAR at M2 to SAR at M1 = 60%
Maximum value of SAR (measured) = 0.629 W/kg



0 dB = 0.629 W/kg

Test Laboratory: ritt 7 Layers SAR/HAC Testing Lab   Date: 2025/2/16

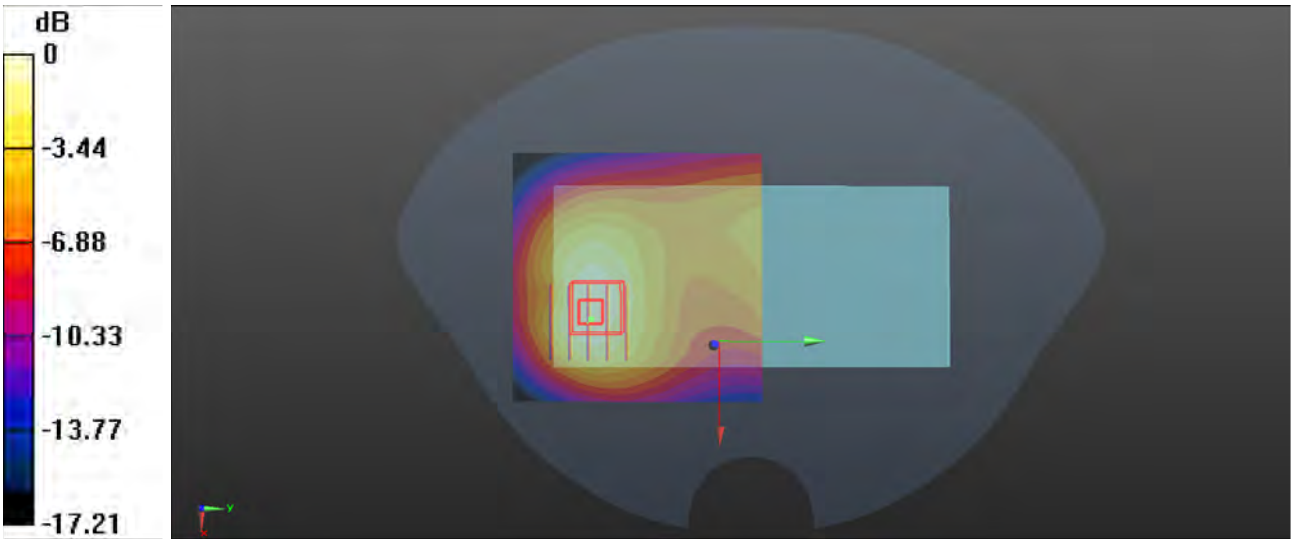
P27 LTE B5_QPSK10M_Rear Face_1cm_Ch20600_1RB_OS0

Communication System: LTE_FDD; Frequency: 844 MHz;Duty Cycle: 1:1
Medium: HSL835_0216 Medium parameters used: f = 844 MHz; σ = 0.945 S/m; ε_r = 40.804; ρ = 1000 kg/m^3
Ambient Temperature：23.3℃; Liquid Temperature：22.2℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(9.93, 9.93, 9.93) @ 844 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.631 W/kg

-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.09 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 0.772 W/kg
SAR(1 g) = 0.464 W/kg; SAR(10 g) = 0.284 W/kg
Smallest distance from peaks to all points 3 dB below = 13.2 mm
Ratio of SAR at M2 to SAR at M1 = 61.8%
Maximum value of SAR (measured) = 0.604 W/kg



0 dB = 0.604 W/kg

Test Laboratory: ritt 7 Layers SAR/HAC Testing Lab   Date: 2025/3/9

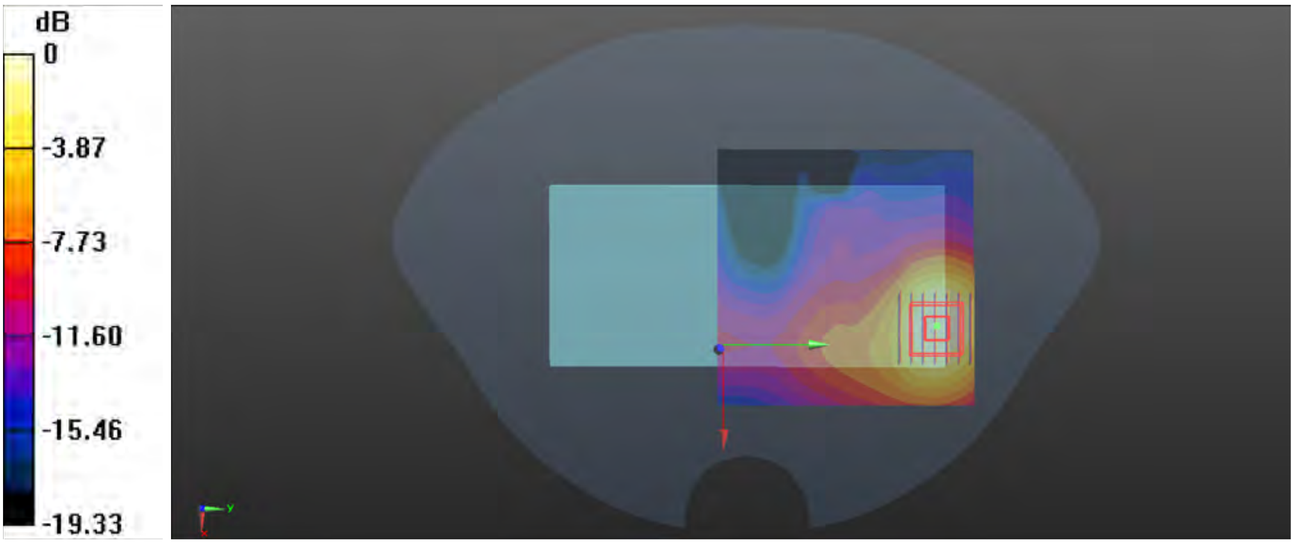
P28 LTE B7_QPSK20M_Rear Face_2.2cm_Ch21100_1RB_OS0

Communication System: LTE_FDD; Frequency: 2535 MHz;Duty Cycle: 1:1
Medium: HSL2550_0309 Medium parameters used: f = 2535 MHz; σ = 1.908 S/m; ε_r = 39.048; ρ = 1000 kg/m^3
Ambient Temperature：23.4℃; Liquid Temperature：22.6℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(7.64, 7.64, 7.64) @ 2535 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (91x91x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 1.27 W/kg

-Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.308 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 1.48 W/kg
SAR(1 g) = 0.828 W/kg; SAR(10 g) = 0.438 W/kg
Smallest distance from peaks to all points 3 dB below = 14 mm
Ratio of SAR at M2 to SAR at M1 = 56%
Maximum value of SAR (measured) = 1.16 W/kg



0 dB = 1.16 W/kg

Test Laboratory: ritt 7 Layers SAR/HAC Testing Lab   Date: 2025/2/14

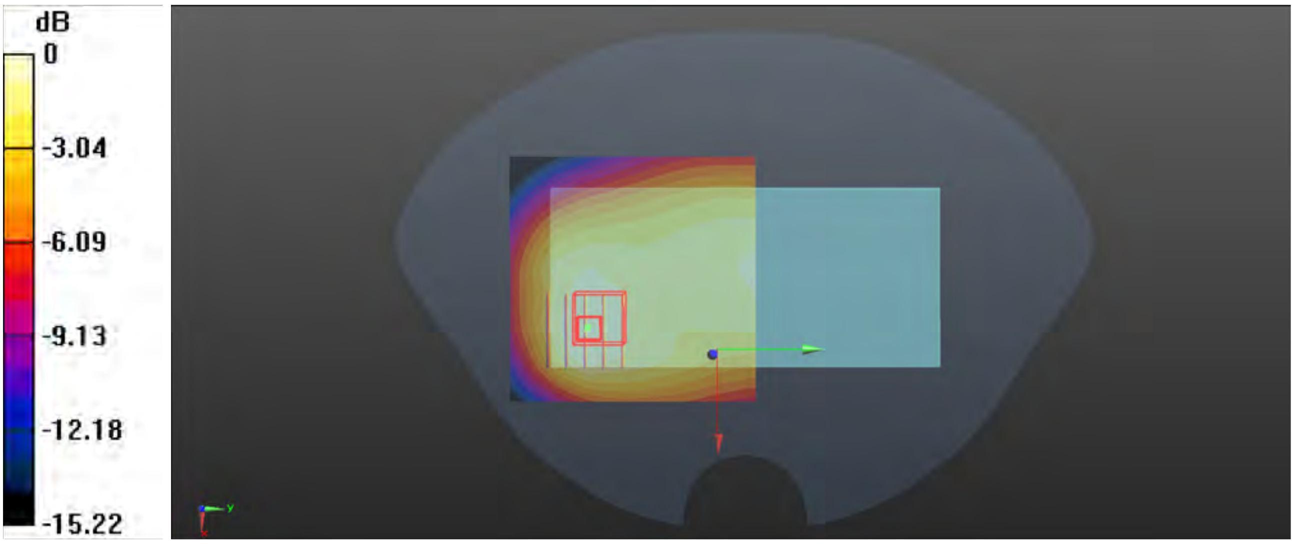
P29 LTE B12_QPSK10M_Rear Face_1cm_Ch23095_1RB_OS24

Communication System: LTE_FDD; Frequency: 707.5 MHz;Duty Cycle: 1:1
Medium: HSL750_0214 Medium parameters used: f = 707.5 MHz; $\sigma = 0.9$ S/m; $\varepsilon_r = 41.967$; $\rho = 1000$ kg/m^3
Ambient Temperature：23.3℃; Liquid Temperature：22.1℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(10.25, 10.25, 10.25) @ 707.5 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.288 W/kg

-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.52 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 0.333 W/kg
SAR(1 g) = 0.211 W/kg; SAR(10 g) = 0.142 W/kg
Smallest distance from peaks to all points 3 dB below = 20.5 mm
Ratio of SAR at M2 to SAR at M1 = 64%
Maximum value of SAR (measured) = 0.270 W/kg



0 dB = 0.270 W/kg

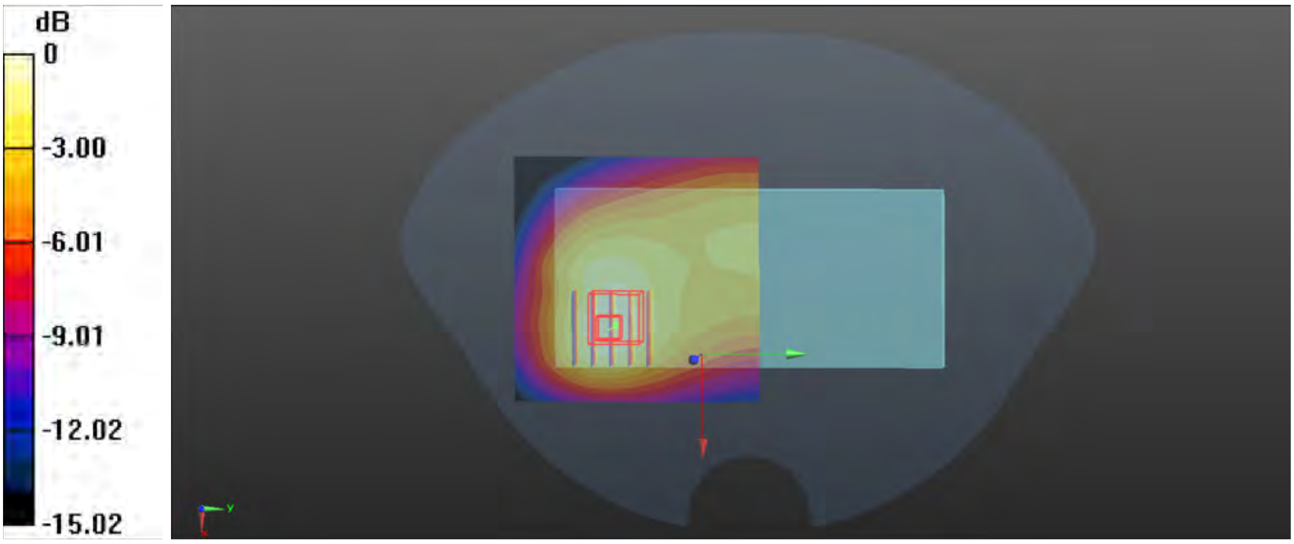
P30 LTE B13_QPSK10M_Rear Face_1cm_Ch23230_1RB_OS24

Communication System: LTE_FDD; Frequency: 782 MHz;Duty Cycle: 1:1
Medium: HSL750_0214 Medium parameters used: f = 782 MHz; σ = 0.926 S/m; ε_r = 41.701; ρ = 1000 kg/m^3
Ambient Temperature：23.3℃; Liquid Temperature：22.1℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(10.25, 10.25, 10.25) @ 782 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.394 W/kg

-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 14.81 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.505 W/kg
SAR(1 g) = 0.311 W/kg; SAR(10 g) = 0.197 W/kg
Smallest distance from peaks to all points 3 dB below = 20.5 mm
Ratio of SAR at M2 to SAR at M1 = 65.1%
Maximum value of SAR (measured) = 0.393 W/kg



0 dB = 0.393 W/kg

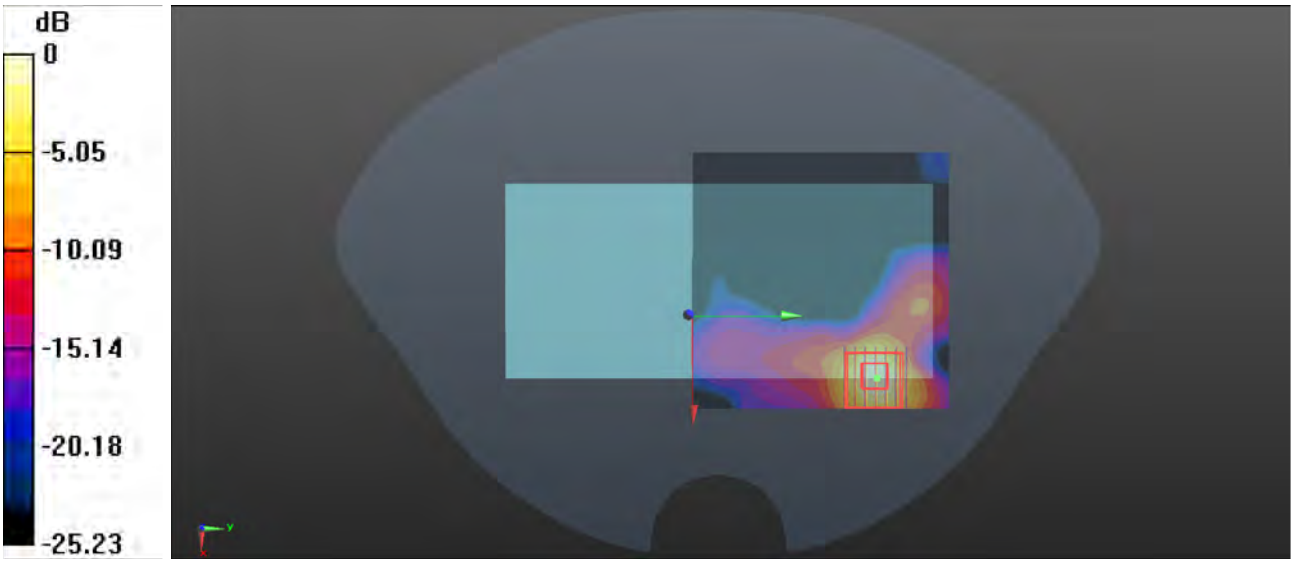
P31 LTE B48_QPSK20M_Rear Face_1cm_Ch56640_1RB_OS50

Communication System: LTE_TDD; Frequency: 3690 MHz;Duty Cycle: 1:1.59
Medium: HSL3700_0308 Medium parameters used: f = 3690 MHz; σ = 2.974 S/m; ε_r = 38.828; ρ = 1000 kg/m^3
Ambient Temperature：23.7℃; Liquid Temperature：22.8℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(6.71, 6.71, 6.71) @ 3690 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (101x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.07 W/kg

-Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 1.339 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 1.68 W/kg
SAR(1 g) = 0.686 W/kg; SAR(10 g) = 0.235 W/kg
Smallest distance from peaks to all points 3 dB below = 7.9 mm
Ratio of SAR at M2 to SAR at M1 = 68.7%
Maximum value of SAR (measured) = 1.13 W/kg



0 dB = 1.13 W/kg

Test Laboratory: ritt 7 Layers SAR/HAC Testing Lab Date: 2025/3/5

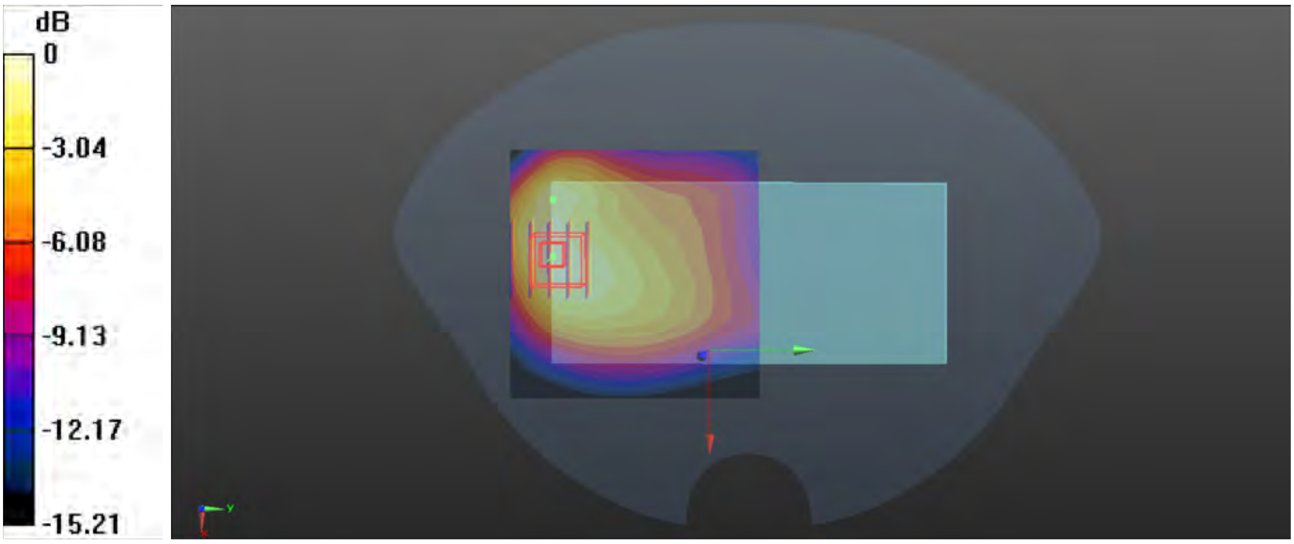
P32 LTE B66_QPSK20M_Rear Face_1cm_Ch132072_1RB_OS99

Communication System: LTE_FDD; Frequency: 1720 MHz;Duty Cycle: 1:1
Medium: HSL1750_0305 Medium parameters used: f = 1720 MHz; σ = 1.403 S/m; ε_r = 39.911; ρ = 1000 kg/m^3
Ambient Temperature：23.5℃; Liquid Temperature：22.6℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(8.51, 8.51, 8.51) @ 1720 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.906 W/kg

-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.437 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 1.04 W/kg
SAR(1 g) = 0.676 W/kg; SAR(10 g) = 0.398 W/kg
Smallest distance from peaks to all points 3 dB below = 15.1 mm
Ratio of SAR at M2 to SAR at M1 = 62.9%
Maximum value of SAR (measured) = 0.859 W/kg



0 dB = 0.859 W/kg

Test Laboratory: ritt 7 Layers SAR/HAC Testing Lab Date: 2025/3/3

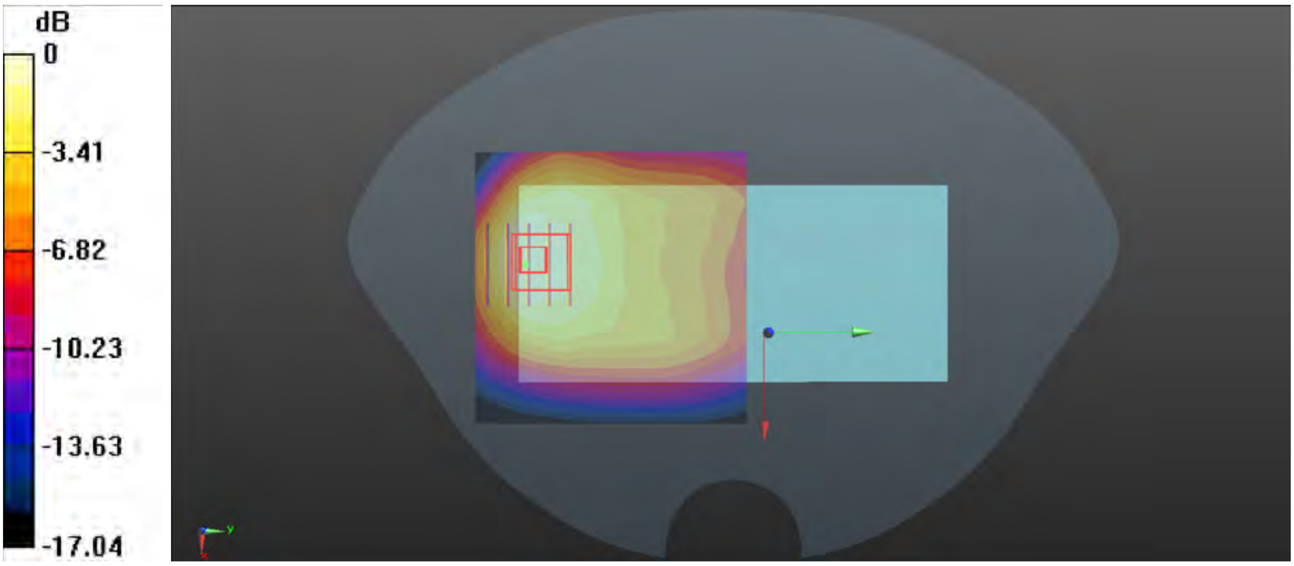
P33 N2_DFT-15KHz_QPSK20M_Rear Face_1cm_Ch372000_50RB_OS28

Communication System: NR; Frequency: 1860 MHz;Duty Cycle: 1:1
Medium: HSL1950_0303 Medium parameters used: f = 1860 MHz; σ = 1.415 S/m; ε_r = 39.196; ρ = 1000 kg/m^3
Ambient Temperature：23.4℃; Liquid Temperature：22.7℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(8.83, 8.83, 8.83) @ 1860 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.934 W/kg

-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.04 V/m; Power Drift = -0.14 dB
Peak SAR (extrapolated) = 1.10 W/kg
SAR(1 g) = 0.674 W/kg; SAR(10 g) = 0.413 W/kg
Smallest distance from peaks to all points 3 dB below = 14.4 mm
Ratio of SAR at M2 to SAR at M1 = 60%
Maximum value of SAR (measured) = 0.890 W/kg



0 dB = 0.890 W/kg

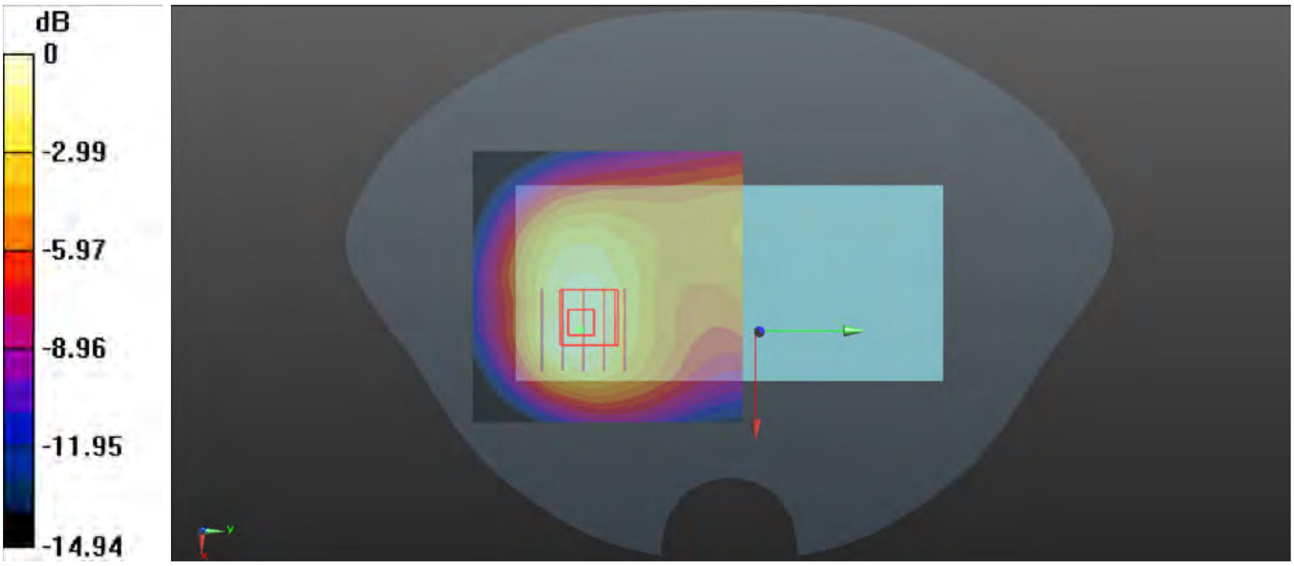
P34 N5_DFT-15KHz_QPSK20M_Rear Face_1cm_Ch167300_50RB_OS56

Communication System: NR; Frequency: 836.5 MHz;Duty Cycle: 1:1
Medium: HSL835_0226 Medium parameters used: f = 836.5 MHz; σ = 0.942 S/m; ε_r = 40.822; ρ = 1000 kg/m^3
Ambient Temperature：23.3℃; Liquid Temperature：22.2℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(9.93, 9.93, 9.93) @ 836.5 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.511 W/kg

-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 14.01 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 0.653 W/kg
SAR(1 g) = 0.410 W/kg; SAR(10 g) = 0.261 W/kg
Smallest distance from peaks to all points 3 dB below = 13.7 mm
Ratio of SAR at M2 to SAR at M1 = 65%
Maximum value of SAR (measured) = 0.524 W/kg



0 dB = 0.524 W/kg

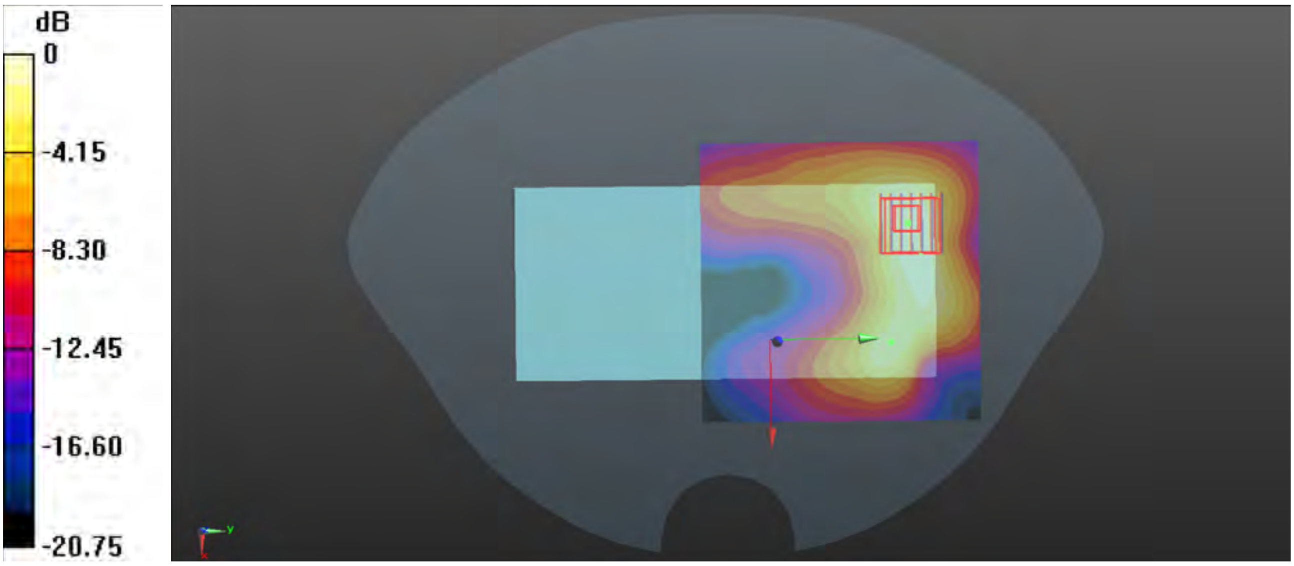
P35 N48_DFT-30KHZ_QPSK40M_Rear Face_1cm_Ch638000_1RB_OS1

Communication System: NR; Frequency: 3570 MHz;Duty Cycle: 1:1
Medium: HSL3500_0308 Medium parameters used: f = 3570 MHz; σ = 2.891 S/m; ε_r = 39.569; ρ = 1000 kg/m^3
Ambient Temperature：23.7℃; Liquid Temperature：22.8℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(6.92, 6.92, 6.92) @ 3570 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (111x111x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.74 W/kg

-Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 1.842 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 2.51 W/kg
SAR(1 g) = 0.945 W/kg; SAR(10 g) = 0.489 W/kg
Smallest distance from peaks to all points 3 dB below = 10.9 mm
Ratio of SAR at M2 to SAR at M1 = 68.4%
Maximum value of SAR (measured) = 1.69 W/kg



0 dB = 1.69 W/kg

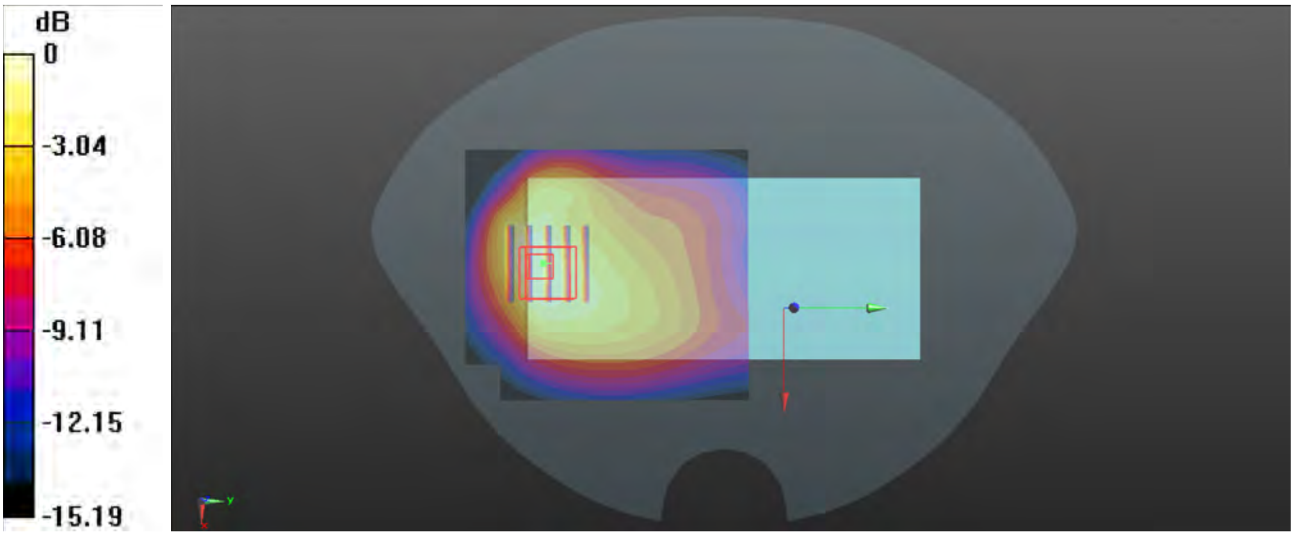
P36 N66_DFT-15KHz_QPSK40M_Rear Face_1cm_Ch346000_108RB_OS54

Communication System: NR; Frequency: 1730 MHz;Duty Cycle: 1:1
Medium: HSL1750_0305 Medium parameters used: f = 1730 MHz; σ = 1.409 S/m; ε_r = 39.896; ρ = 1000 kg/m^3
Ambient Temperature：23.5°C; Liquid Temperature：22.6°C

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(8.51, 8.51, 8.51) @ 1730 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (71x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.856 W/kg

-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.872 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 0.978 W/kg
SAR(1 g) = 0.634 W/kg; SAR(10 g) = 0.336 W/kg
Smallest distance from peaks to all points 3 dB below = 12.2 mm
Ratio of SAR at M2 to SAR at M1 = 62.1%
Maximum value of SAR (measured) = 0.787 W/kg



0 dB = 0.787 W/kg

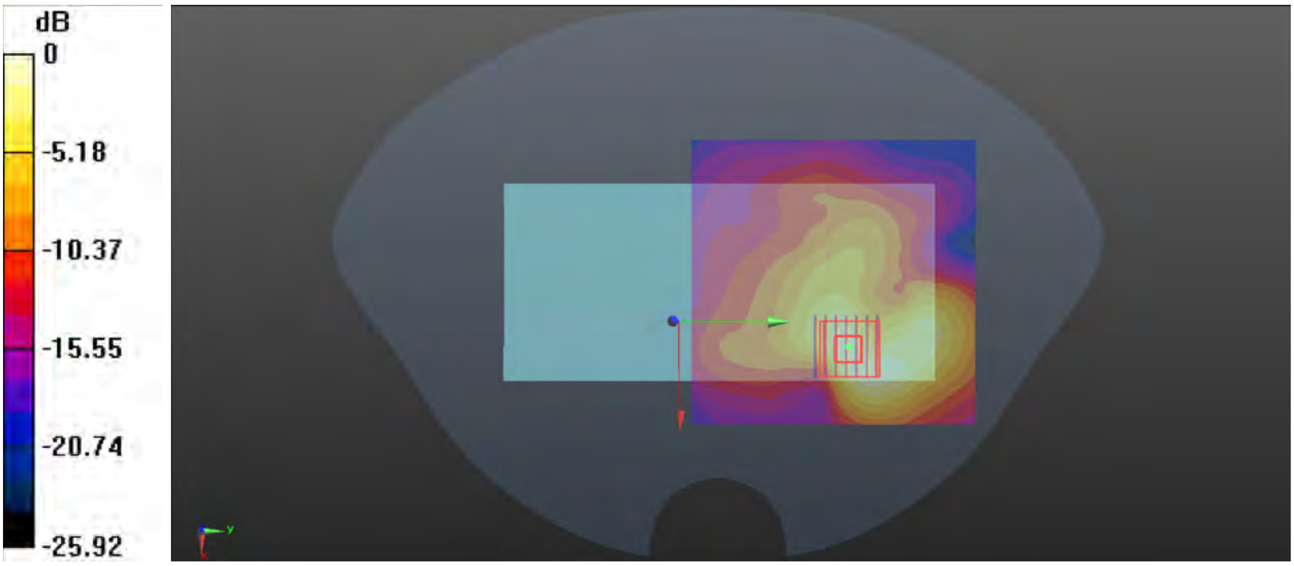
P37 N77_DFT-30KHz_QPSK100M_Rear Face_1cm_Ch662000_135RB_OS69

Communication System: NR; Frequency: 3930 MHz;Duty Cycle: 1:1
Medium: HSL3900_0303 Medium parameters used: f = 3930 MHz; σ = 3.212 S/m; ε_r = 38.468; ρ = 1000 kg/m^3
Ambient Temperature：23.2℃; Liquid Temperature：22.3℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(6.68, 6.68, 6.68) @ 3930 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (111x111x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.39 W/kg

-Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 5.359 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 2.01 W/kg
SAR(1 g) = 0.767 W/kg; SAR(10 g) = 0.309 W/kg
Smallest distance from peaks to all points 3 dB below = 6.8 mm
Ratio of SAR at M2 to SAR at M1 = 67.7%
Maximum value of SAR (measured) = 1.31 W/kg



0 dB = 1.31 W/kg

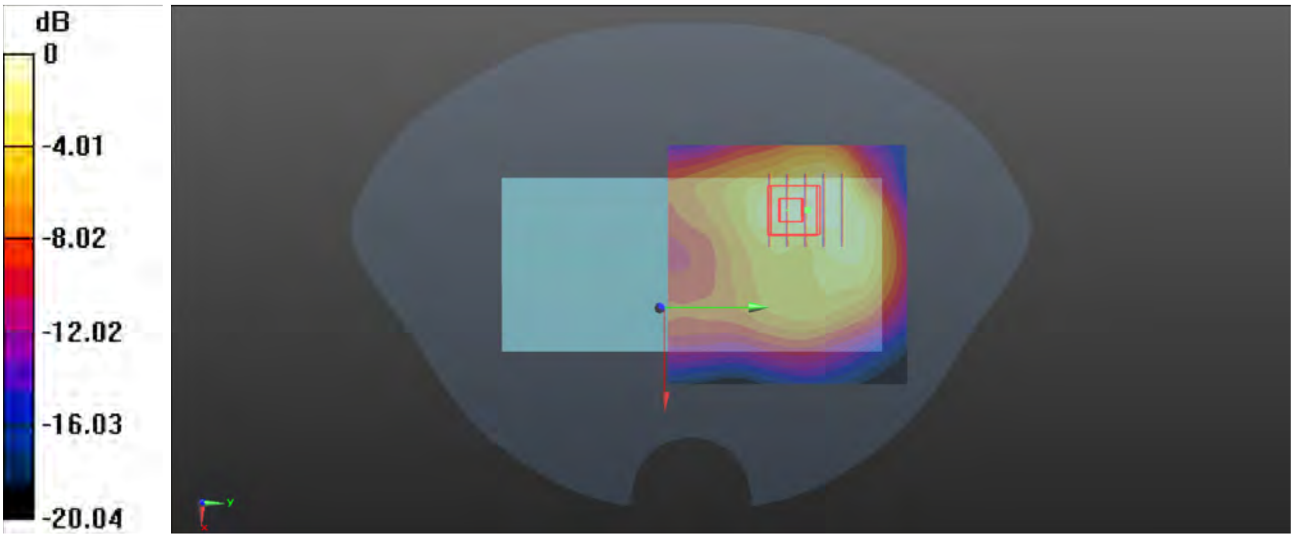
P38 WLAN2.4G_802.11b_Rear Face_1cm_Ch6

Communication System: 802.11b; Frequency: 2437 MHz;Duty Cycle: 1:1.012
Medium: HSL2450_0217 Medium parameters used: f = 2437 MHz; σ = 1.858 S/m; ε_r = 38.735; ρ = 1000 kg/m^3
Ambient Temperature：23.3℃; Liquid Temperature：22.5℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(7.79, 7.79, 7.79) @ 2437 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (71x71x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.337 W/kg

-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.028 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.464 W/kg
SAR(1 g) = 0.198 W/kg; SAR(10 g) = 0.146 W/kg
Smallest distance from peaks to all points 3 dB below = 13.2 mm
Ratio of SAR at M2 to SAR at M1 = 60.8%
Maximum value of SAR (measured) = 0.378 W/kg



0 dB = 0.378 W/kg

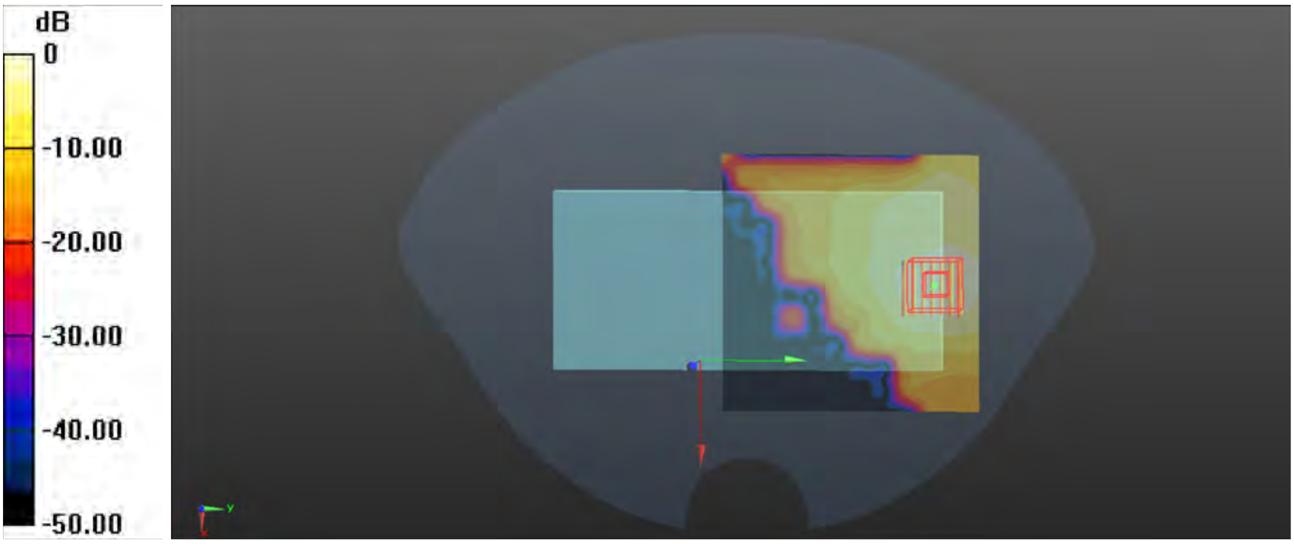
P39 WLAN5G_802.11a_Front Face_1.4cm_Ch60

Communication System: 802.11a; Frequency: 5300 MHz;Duty Cycle: 1:1.022
Medium: HSL5G_0307 Medium parameters used: f = 5300 MHz; σ = 4.627 S/m; ε_r = 36.117; ρ = 1000 kg/m^3
Ambient Temperature：23.6℃; Liquid Temperature：22.4℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(5.52, 5.52, 5.52) @ 5300 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (111x111x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.339 W/kg

-Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 1.582 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 0.592 W/kg
SAR(1 g) = 0.188 W/kg; SAR(10 g) = 0.078 W/kg
Smallest distance from peaks to all points 3 dB below = 13.8 mm
Ratio of SAR at M2 to SAR at M1 = 58.9%
Maximum value of SAR (measured) = 0.332 W/kg



0 dB = 0.332 W/kg

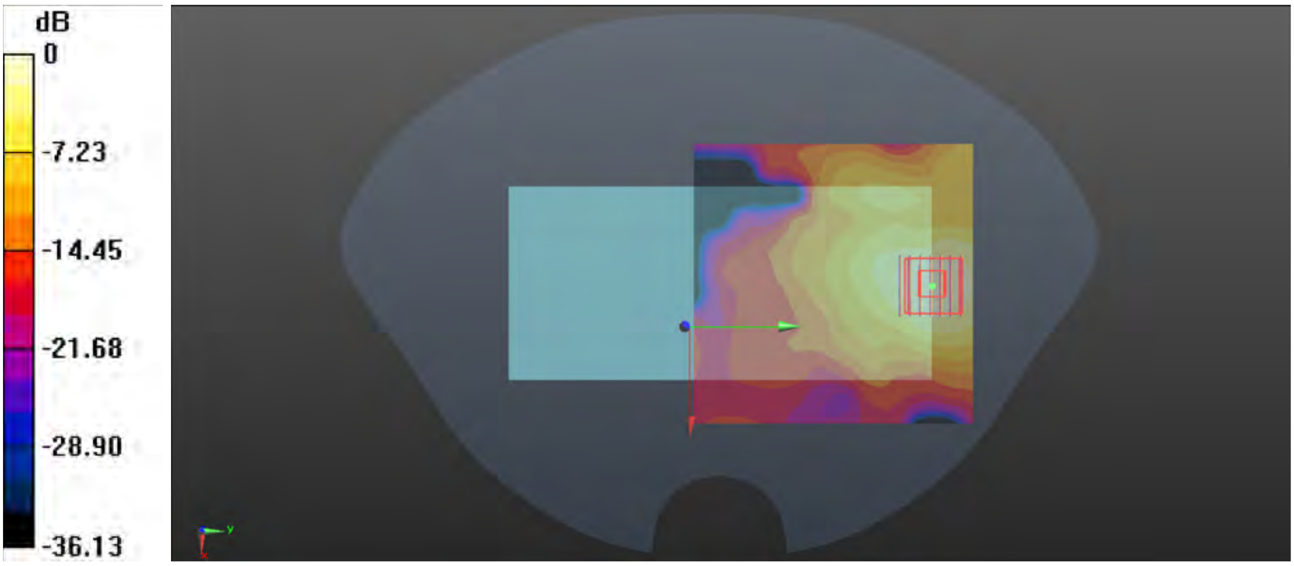
P40 WLAN5G_802.11a_Front Face_1.4cm_Ch144

Communication System: 802.11a; Frequency: 5720 MHz;Duty Cycle: 1:1.022
Medium: HSL5G_0307 Medium parameters used: f = 5720 MHz; σ = 5.104 S/m; ε_r = 35.49; ρ = 1000 kg/m^3
Ambient Temperature：23.6℃; Liquid Temperature：22.4℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(5.05, 5.05, 5.05) @ 5720 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (111x111x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.837 W/kg

-Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 2.161 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 1.55 W/kg
SAR(1 g) = 0.454 W/kg; SAR(10 g) = 0.186 W/kg
Smallest distance from peaks to all points 3 dB below = 14.2 mm
Ratio of SAR at M2 to SAR at M1 = 55.3%
Maximum value of SAR (measured) = 0.820 W/kg



0 dB = 0.820 W/kg

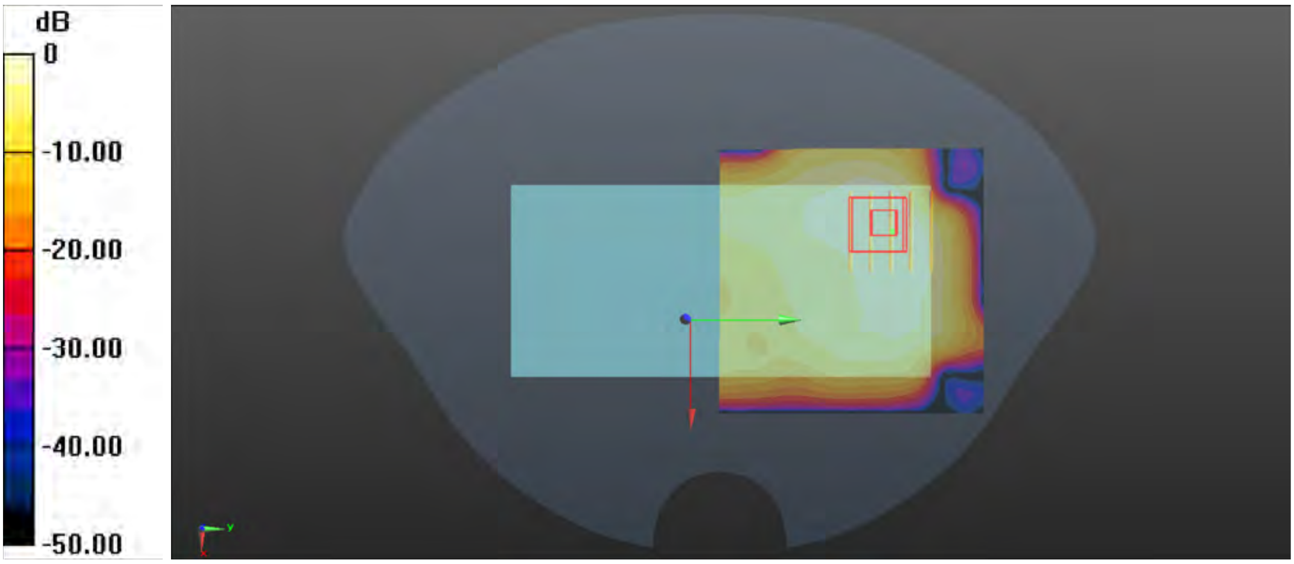
P41 BT_GFSK_Rear Face_1cm_Ch78

Communication System: BT; Frequency: 2480 MHz;Duty Cycle: 1:1.305
Medium: HSL2450_0217 Medium parameters used: f = 2480 MHz; σ = 1.894 S/m; ε_r = 38.648; ρ = 1000 kg/m^3
Ambient Temperature：23.3℃; Liquid Temperature：22.5℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(7.79, 7.79, 7.79) @ 2480 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.08 W/kg

-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 1.048 V/m; Power Drift = 0.16 dB
Peak SAR (extrapolated) = 0.100 W/kg
SAR(1 g) = 0.008 W/kg; SAR(10 g) = 0.001 W/kg
Smallest distance from peaks to all points 3 dB below: Larger than measurement grid
Ratio of SAR at M2 to SAR at M1 = 42.4%
Maximum value of SAR (measured) = 0.06 W/kg



0 dB = 0.06 W/kg

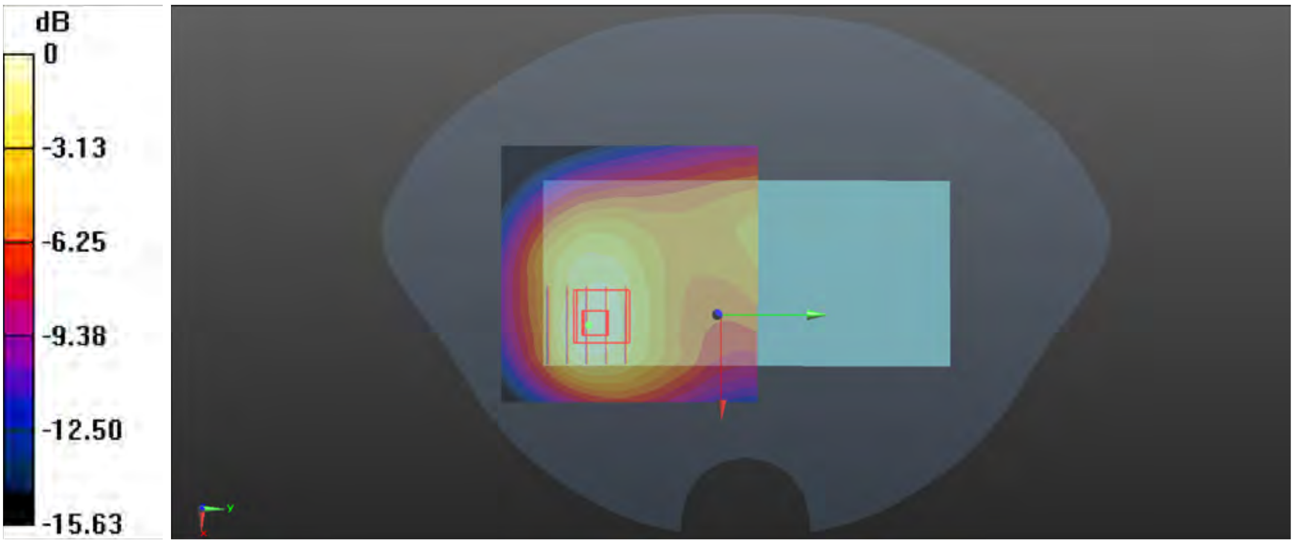
P42 GSM850_GPRS 2Tx slot_Rear Face_1cm_Ch251

Communication System: GPRS 2Tx slot; Frequency: 848.6 MHz;Duty Cycle: 1:4.15
Medium: HSL835_0215 Medium parameters used: f = 849 MHz; σ = 0.947 S/m; ε_r = 40.791; ρ = 1000 kg/m^3
Ambient Temperature：23.4℃; Liquid Temperature：22.5℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(9.93, 9.93, 9.93) @ 848.6 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.757 W/kg

-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 17.19 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.936 W/kg
SAR(1 g) = 0.579 W/kg; SAR(10 g) = 0.366 W/kg
Smallest distance from peaks to all points 3 dB below = 15.2 mm
Ratio of SAR at M2 to SAR at M1 = 61.2%
Maximum value of SAR (measured) = 0.758 W/kg



0 dB = 0.758 W/kg

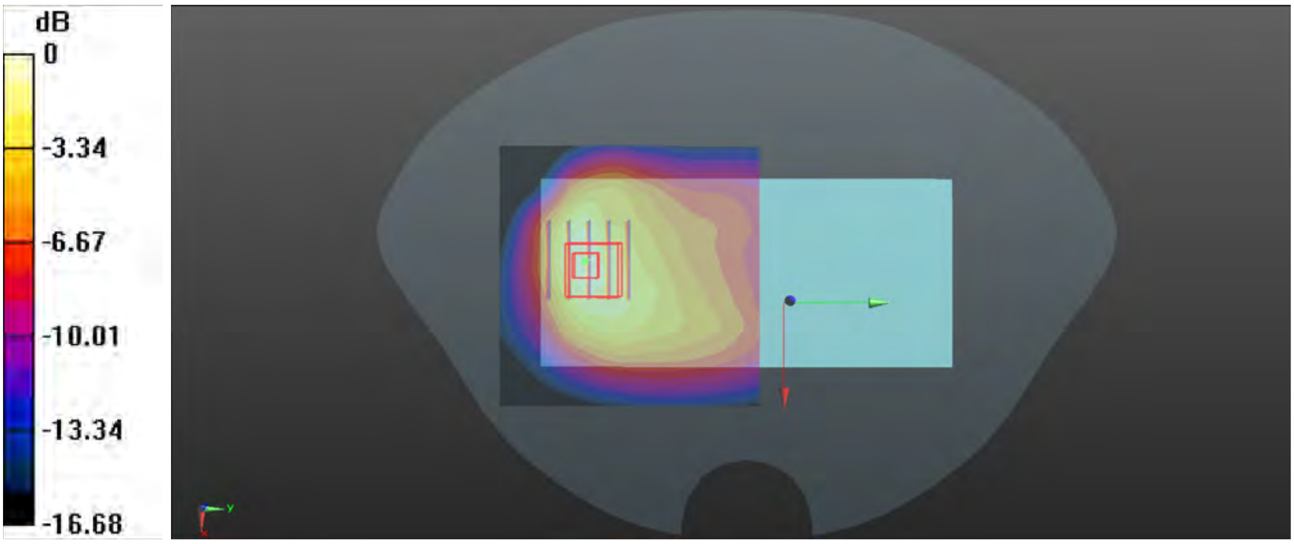
P43 GSM1900_GPRS 2Tx slot_Rear Face_1cm_Ch661

Communication System: GPRS 2Tx slot; Frequency: 1880 MHz;Duty Cycle: 1:4.15
Medium: HSL1950_0303 Medium parameters used: f = 1880 MHz; σ = 1.427 S/m; ε_r = 39.153; ρ = 1000 kg/m^3
Ambient Temperature：23.4℃; Liquid Temperature：22.7℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(8.16, 8.16, 8.16) @ 1880 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.09 W/kg

-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.32 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 1.27 W/kg
SAR(1 g) = 0.758 W/kg; SAR(10 g) = 0.463 W/kg
Smallest distance from peaks to all points 3 dB below = 12.2 mm
Ratio of SAR at M2 to SAR at M1 = 61%
Maximum value of SAR (measured) = 1.06 W/kg



0 dB = 1.06 W/kg

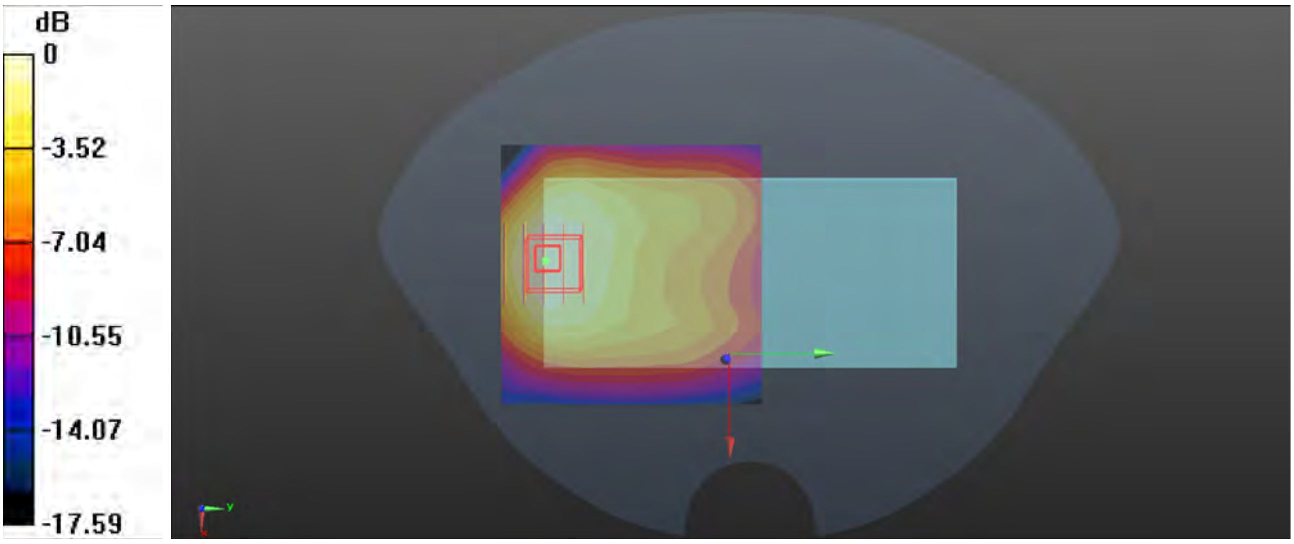
P44 WCDMA II_RMC12.2K_Rear Face_1cm_Ch9400

Communication System: WCDMA; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium: HSL1950_0303 Medium parameters used: f = 1880 MHz; σ = 1.427 S/m; ε_r = 39.153; ρ = 1000 kg/m^3
Ambient Temperature：23.4℃; Liquid Temperature：22.7℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(8.16, 8.16, 8.16) @ 1880 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.762 W/kg

-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.806 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 0.871 W/kg
SAR(1 g) = 0.640 W/kg; SAR(10 g) = 0.336 W/kg
Smallest distance from peaks to all points 3 dB below = 16 mm
Ratio of SAR at M2 to SAR at M1 = 60.7%
Maximum value of SAR (measured) = 0.714 W/kg



0 dB = 0.714 W/kg

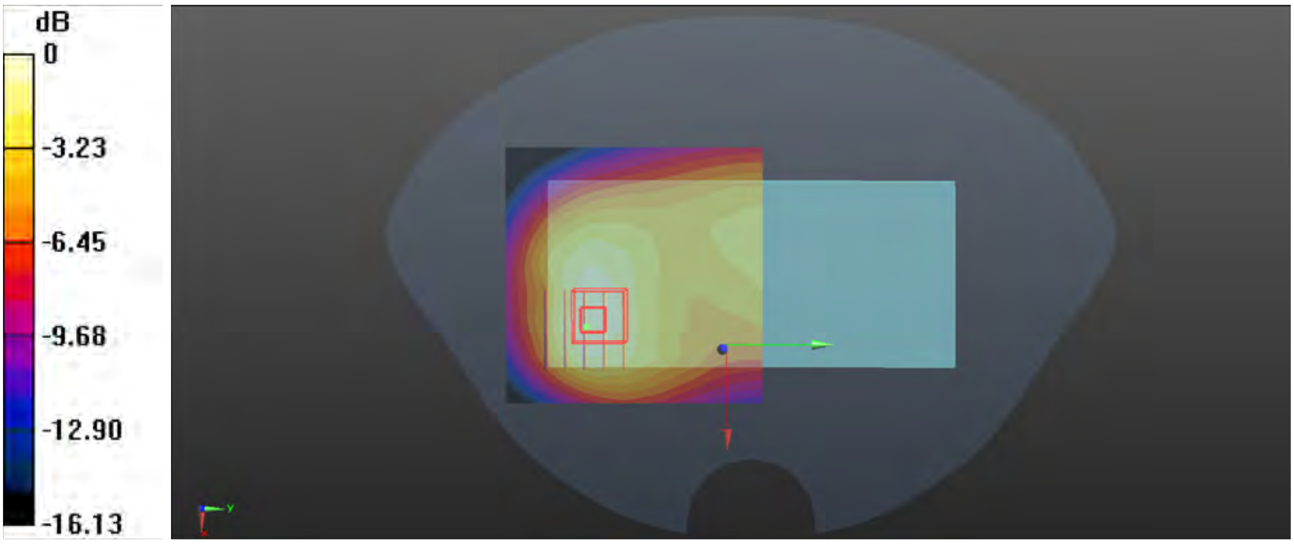
P45 WCDMA V_RMC12.2K_Rear Face_1cm_Ch4182

Communication System: WCDMA; Frequency: 836.4 MHz;Duty Cycle: 1:1
Medium: HSL835_0216 Medium parameters used: f = 836.4 MHz; σ = 0.942 S/m; ε_r = 40.822; ρ = 1000 kg/m^3
Ambient Temperature：23.3℃; Liquid Temperature：22.2℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(9.93, 9.93, 9.93) @ 836.4 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.687 W/kg

-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.97 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.818 W/kg
SAR(1 g) = 0.506 W/kg; SAR(10 g) = 0.324 W/kg
Smallest distance from peaks to all points 3 dB below = 15.2 mm
Ratio of SAR at M2 to SAR at M1 = 61.5%
Maximum value of SAR (measured) = 0.662 W/kg



0 dB = 0.662 W/kg

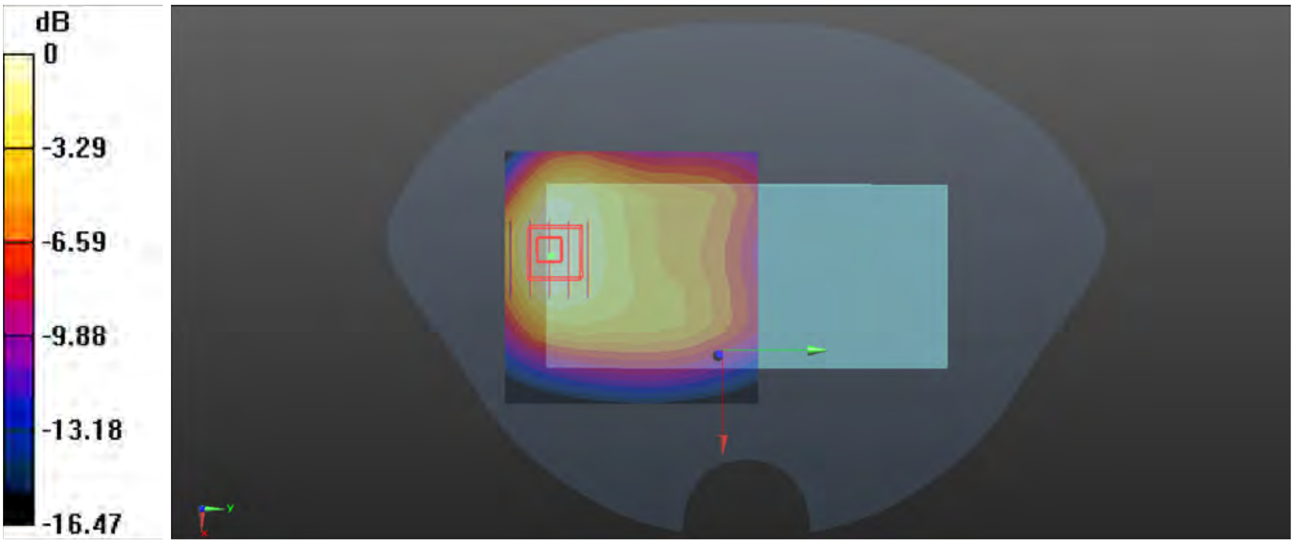
P46 LTE B2_QPSK20M_Rear Face_1cm_Ch18700_1RB_OS50

Communication System: LTE_FDD; Frequency: 1860 MHz;Duty Cycle: 1:1
Medium: HSL1950_0304 Medium parameters used: f = 1860 MHz; σ = 1.415 S/m; ε_r = 39.196; ρ = 1000 kg/m^3
Ambient Temperature：23.3℃; Liquid Temperature：22.2℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(8.16, 8.16, 8.16) @ 1860 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.673 W/kg

-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.499 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 0.795 W/kg
SAR(1 g) = 0.579 W/kg; SAR(10 g) = 0.293 W/kg
Smallest distance from peaks to all points 3 dB below = 13.2 mm
Ratio of SAR at M2 to SAR at M1 = 60%
Maximum value of SAR (measured) = 0.629 W/kg



0 dB = 0.629 W/kg

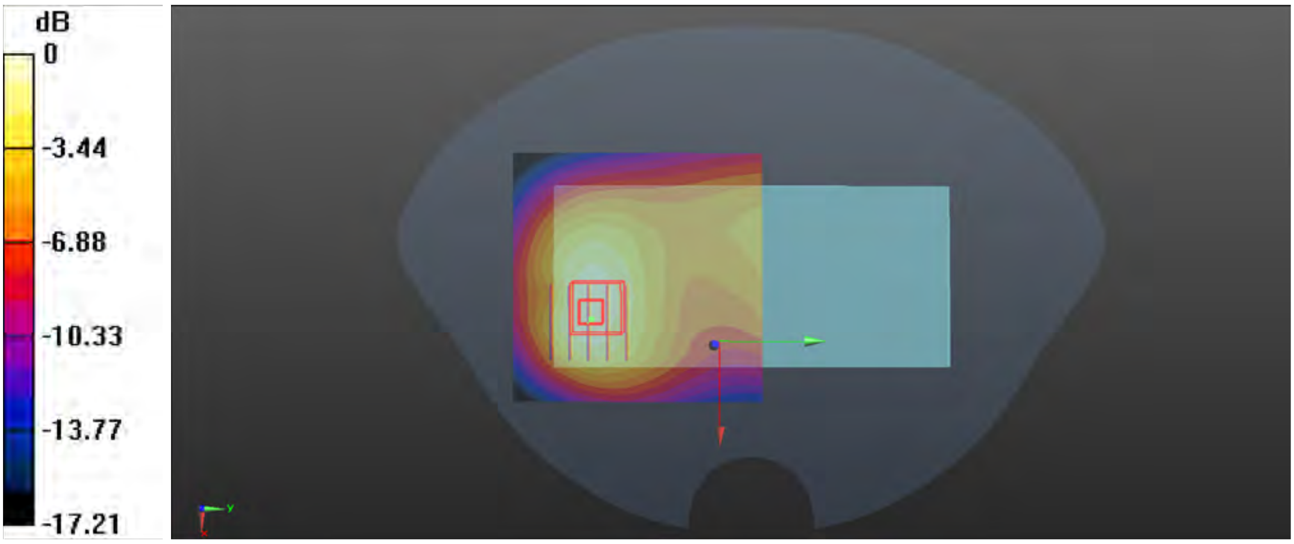
P47 LTE B5_QPSK10M_Rear Face_1cm_Ch20600_1RB_OS0

Communication System: LTE_FDD; Frequency: 844 MHz;Duty Cycle: 1:1
Medium: HSL835_0216 Medium parameters used: f = 844 MHz; σ = 0.945 S/m; ε_r = 40.804; ρ = 1000 kg/m^3
Ambient Temperature：23.3℃; Liquid Temperature：22.2℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(9.93, 9.93, 9.93) @ 844 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.631 W/kg

-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.09 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 0.772 W/kg
SAR(1 g) = 0.464 W/kg; SAR(10 g) = 0.284 W/kg
Smallest distance from peaks to all points 3 dB below = 13.2 mm
Ratio of SAR at M2 to SAR at M1 = 61.8%
Maximum value of SAR (measured) = 0.604 W/kg



0 dB = 0.604 W/kg

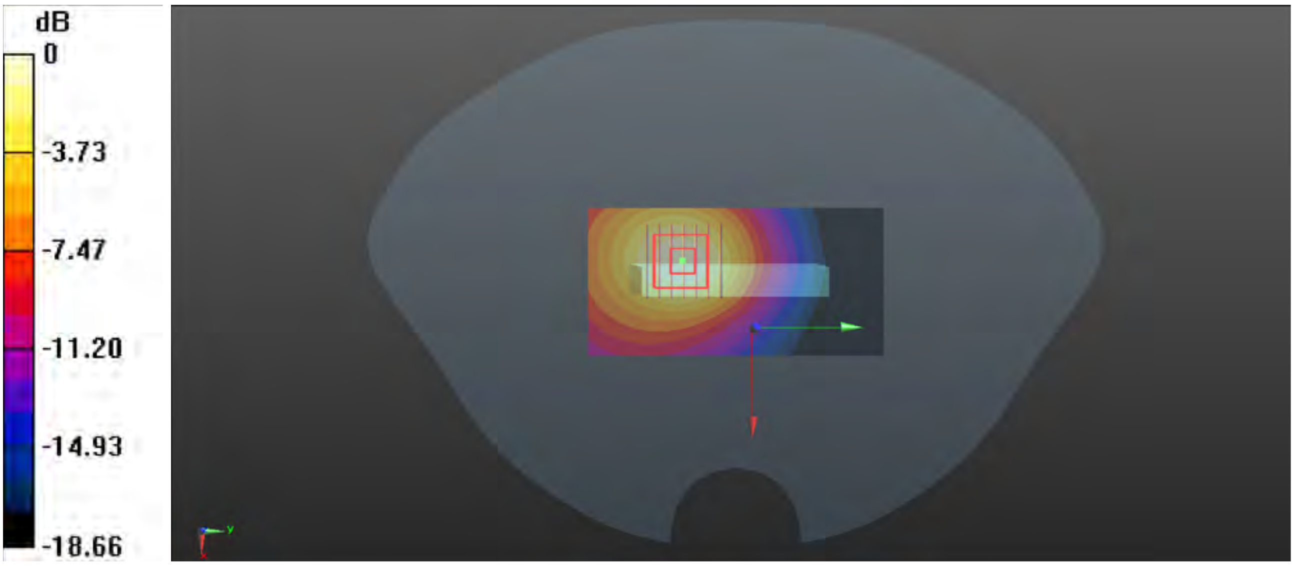
P48 LTE B7_QPSK20M_Top Side_1cm_Ch21100_50RB_OS0

Communication System: LTE_FDD; Frequency: 2535 MHz;Duty Cycle: 1:1
Medium: HSL2550_0309 Medium parameters used: f = 2535 MHz; σ = 1.908 S/m; ε_r = 39.048; ρ = 1000 kg/m^3
Ambient Temperature：23.4℃; Liquid Temperature：22.6℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(7.64, 7.64, 7.64) @ 2535 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (51x101x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 1.12 W/kg

-Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.61 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 1.27 W/kg
SAR(1 g) = 0.601 W/kg; SAR(10 g) = 0.332 W/kg
Smallest distance from peaks to all points 3 dB below = 15.2 mm
Ratio of SAR at M2 to SAR at M1 = 55.9%
Maximum value of SAR (measured) = 1.12 W/kg



0 dB = 1.12 W/kg

Test Laboratory: ritt 7 Layers SAR/HAC Testing Lab Date: 2025/2/14

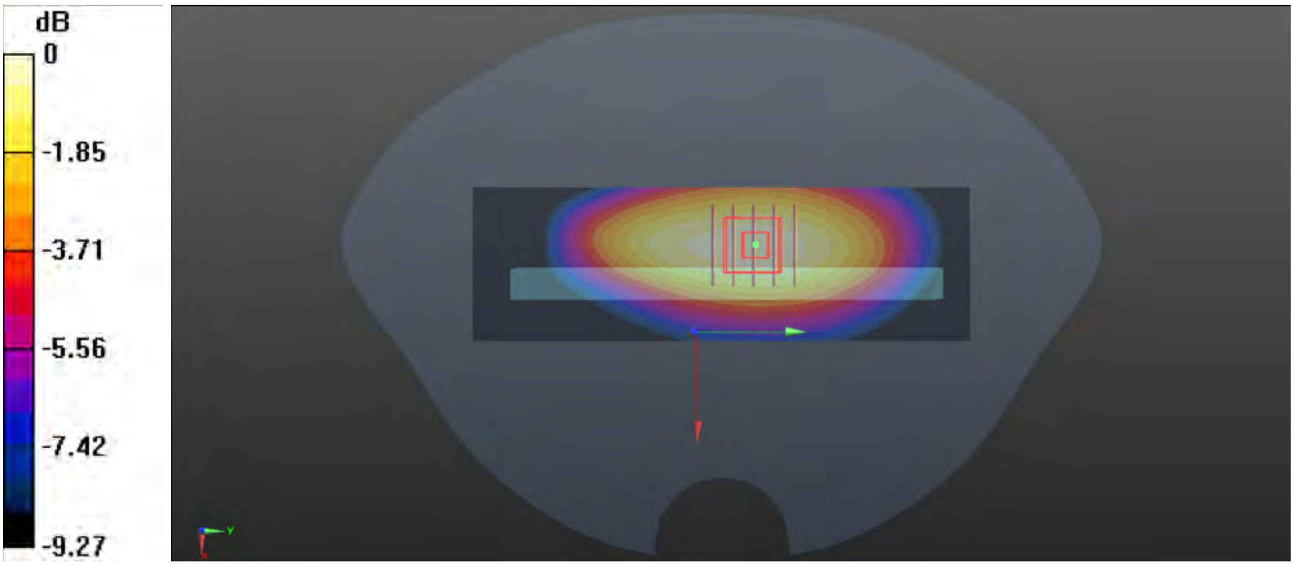
P49 LTE B12_QPSK10M_Left Side_1cm_Ch23095_25RB_OS25

Communication System: LTE_FDD; Frequency: 707.5 MHz;Duty Cycle: 1:1
Medium: HSL750_0214 Medium parameters used: f = 707.5 MHz; σ = 0.9 S/m; ε_r = 41.967; ρ = 1000 kg/m^3
Ambient Temperature：23.3℃; Liquid Temperature：22.1℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(10.25, 10.25, 10.25) @ 707.5 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (41x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.285 W/kg

-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 17.03 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 0.337 W/kg
SAR(1 g) = 0.236 W/kg; SAR(10 g) = 0.164 W/kg
Smallest distance from peaks to all points 3 dB below: Larger than measurement grid
Ratio of SAR at M2 to SAR at M1 = 70%
Maximum value of SAR (measured) = 0.291 W/kg



0 dB = 0.291 W/kg

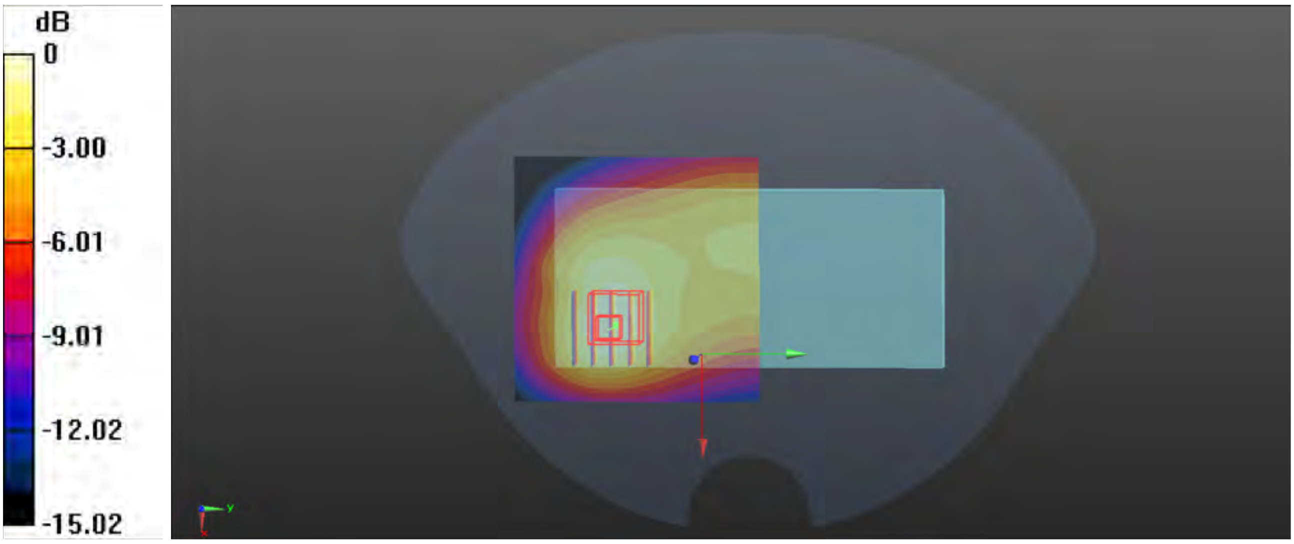
P50 LTE B13_QPSK10M_Rear Face_1cm_Ch23230_1RB_OS24

Communication System: LTE_FDD; Frequency: 782 MHz;Duty Cycle: 1:1
Medium: HSL750_0214 Medium parameters used: f = 782 MHz; σ = 0.926 S/m; ε_r = 41.701; ρ = 1000 kg/m^3
Ambient Temperature：23.3℃; Liquid Temperature：22.1℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(10.25, 10.25, 10.25) @ 782 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.394 W/kg

-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 14.81 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.505 W/kg
SAR(1 g) = 0.311 W/kg; SAR(10 g) = 0.197 W/kg
Smallest distance from peaks to all points 3 dB below = 20.5 mm
Ratio of SAR at M2 to SAR at M1 = 65.1%
Maximum value of SAR (measured) = 0.393 W/kg



0 dB = 0.393 W/kg

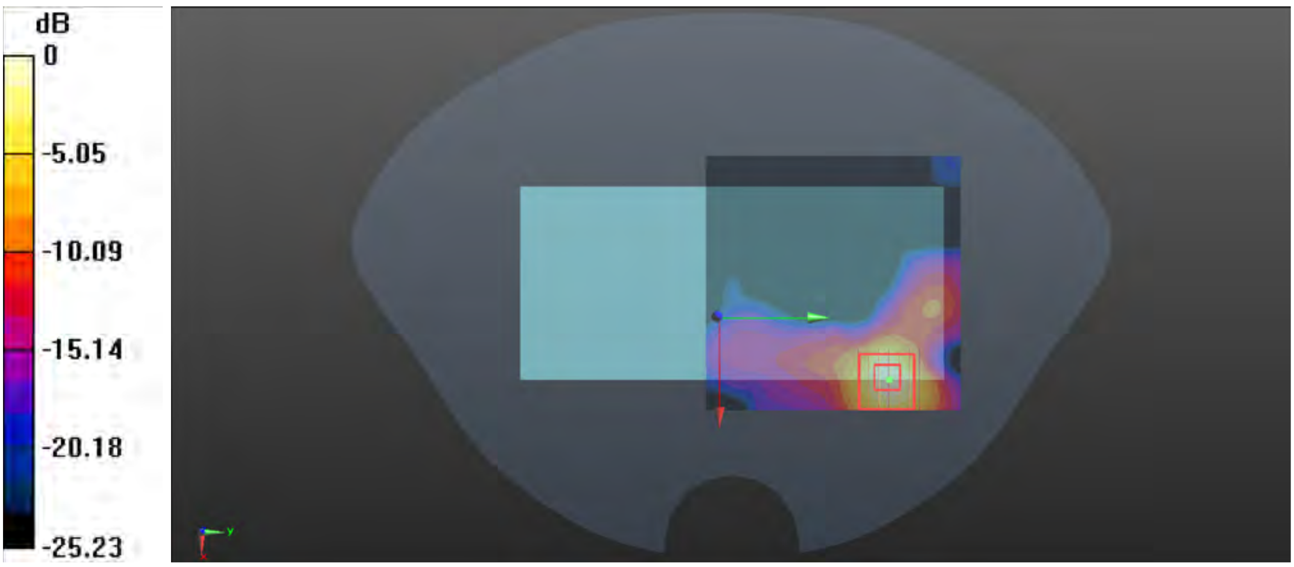
P51 LTE B48_QPSK20M_Rear Face_1cm_Ch56640_1RB_OS50

Communication System: LTE_TDD; Frequency: 3690 MHz;Duty Cycle: 1:1.59
Medium: HSL3700_0308 Medium parameters used: f = 3690 MHz; σ = 2.974 S/m; ε_r = 38.828; ρ = 1000 kg/m^3
Ambient Temperature：23.7℃; Liquid Temperature：22.8℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(6.92, 6.92, 6.92) @ 3690 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (101x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.07 W/kg

-Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 1.339 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 1.68 W/kg
SAR(1 g) = 0.686 W/kg; SAR(10 g) = 0.245 W/kg
Smallest distance from peaks to all points 3 dB below = 7.9 mm
Ratio of SAR at M2 to SAR at M1 = 68.7%
Maximum value of SAR (measured) = 1.13 W/kg



0 dB = 1.13 W/kg

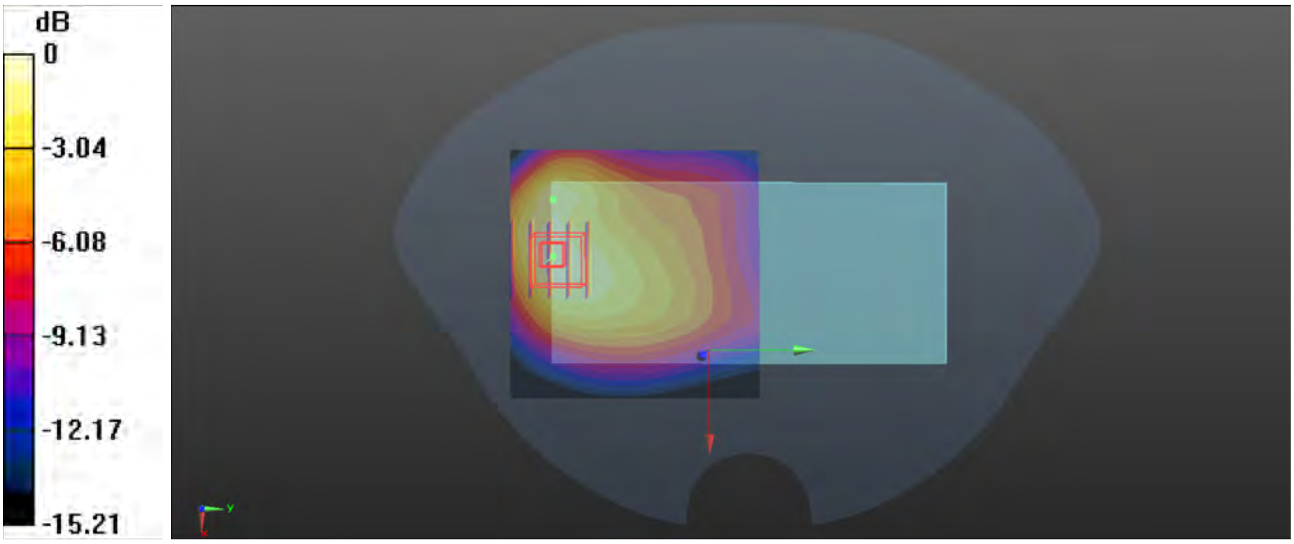
P52 LTE B66_QPSK20M_Rear Face_1cm_Ch132072_1RB_OS99

Communication System: LTE_FDD; Frequency: 1720 MHz;Duty Cycle: 1:1
Medium: HSL1750_0305 Medium parameters used: f = 1720 MHz; σ = 1.403 S/m; ε_r = 39.911; ρ = 1000 kg/m^3
Ambient Temperature：23.5℃; Liquid Temperature：22.6℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(8.51, 8.51, 8.51) @ 1720 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.906 W/kg

-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.437 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 1.04 W/kg
SAR(1 g) = 0.676 W/kg; SAR(10 g) = 0.398 W/kg
Smallest distance from peaks to all points 3 dB below = 15.1 mm
Ratio of SAR at M2 to SAR at M1 = 62.9%
Maximum value of SAR (measured) = 0.859 W/kg



0 dB = 0.859 W/kg

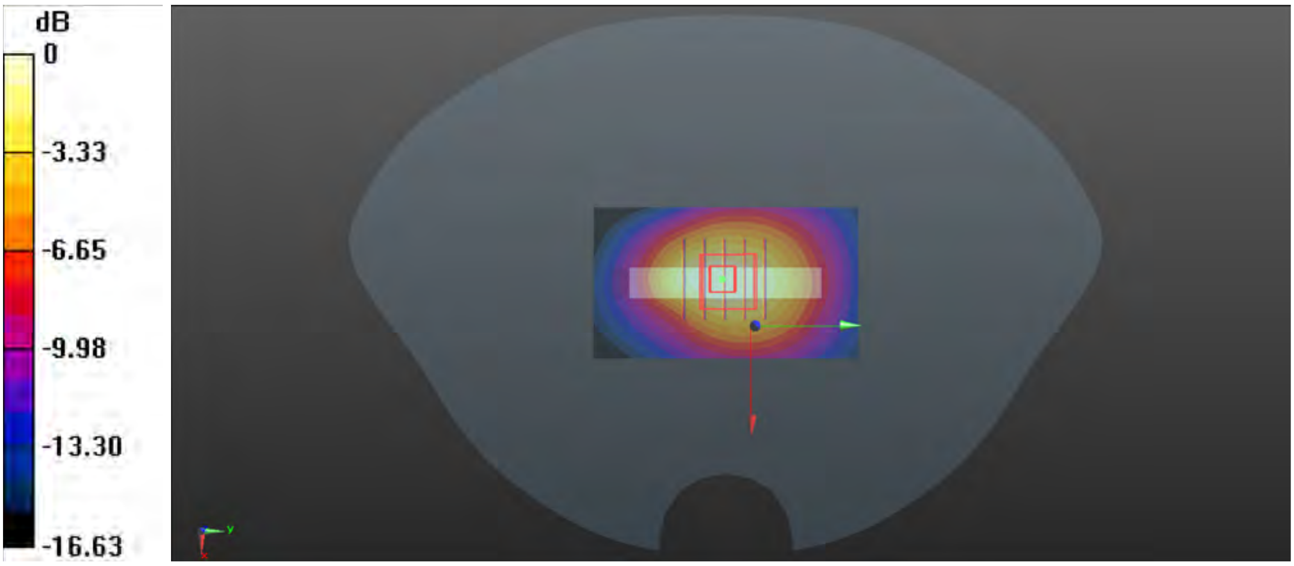
P53 N2_DFT-15KHz_QPSK20M_Bottom Side_1cm_Ch372000_1RB_OS1

Communication System: NR; Frequency: 1860 MHz;Duty Cycle: 1:1
Medium: HSL1950_0303 Medium parameters used: f = 1860 MHz; σ = 1.415 S/m; ε_r = 39.196; ρ = 1000 kg/m^3
Ambient Temperature：23.4℃; Liquid Temperature：22.7℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(8.16, 8.16, 8.16) @ 1860 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (41x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.985 W/kg

-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 25.79 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 1.14 W/kg
SAR(1 g) = 0.693 W/kg; SAR(10 g) = 0.401 W/kg
Smallest distance from peaks to all points 3 dB below = 13.7 mm
Ratio of SAR at M2 to SAR at M1 = 61.2%
Maximum value of SAR (measured) = 0.931 W/kg



0 dB = 0.931 W/kg

Test Laboratory: ritt 7 Layers SAR/HAC Testing Lab Date: 2025/2/26

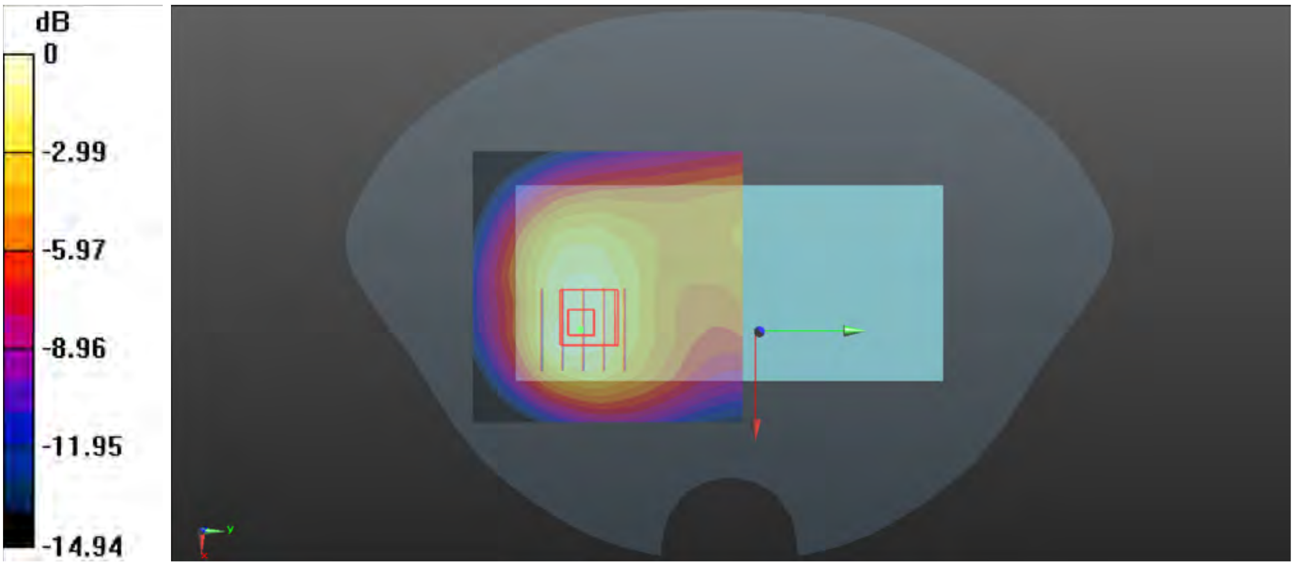
P54 N5_DFT-15KHz_QPSK20M_Rear Face_1cm_Ch167300_50RB_OS56

Communication System: NR; Frequency: 836.5 MHz;Duty Cycle: 1:1
Medium: HSL835_0226 Medium parameters used: f = 836.5 MHz; σ = 0.942 S/m; ε_r = 40.822; ρ = 1000 kg/m^3
Ambient Temperature：23.3℃; Liquid Temperature：22.2℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(9.93, 9.93, 9.93) @ 836.5 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.511 W/kg

-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 14.01 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 0.653 W/kg
SAR(1 g) = 0.410 W/kg; SAR(10 g) = 0.261 W/kg
Smallest distance from peaks to all points 3 dB below = 13.7 mm
Ratio of SAR at M2 to SAR at M1 = 65%
Maximum value of SAR (measured) = 0.524 W/kg



0 dB = 0.524 W/kg

Test Laboratory: ritt 7 Layers SAR/HAC Testing Lab Date: 2025/3/8

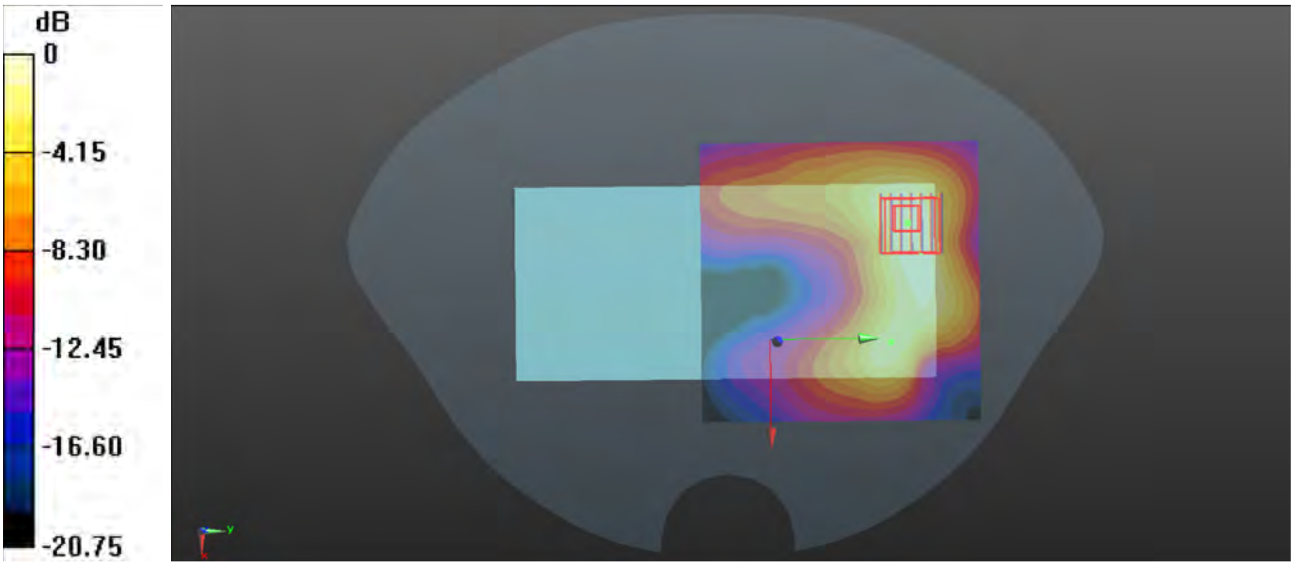
P55 N48_DFT-30KHZ_QPSK40M_Rear Face_1cm_Ch638000_1RB_OS1

Communication System: NR; Frequency: 3570 MHz;Duty Cycle: 1:1
Medium: HSL3500_0308 Medium parameters used: f = 3570 MHz; σ = 2.891 S/m; ε_r = 39.569; ρ = 1000 kg/m^3
Ambient Temperature：23.7℃; Liquid Temperature：22.8℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(6.92, 6.92, 6.92) @ 3570 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (111x111x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.74 W/kg

-Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 1.842 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 2.51 W/kg
SAR(1 g) = 0.945 W/kg; SAR(10 g) = 0.489 W/kg
Smallest distance from peaks to all points 3 dB below = 10.9 mm
Ratio of SAR at M2 to SAR at M1 = 68.4%
Maximum value of SAR (measured) = 1.69 W/kg



0 dB = 1.69 W/kg

Test Laboratory: ritt 7 Layers SAR/HAC Testing Lab Date: 2025/3/5

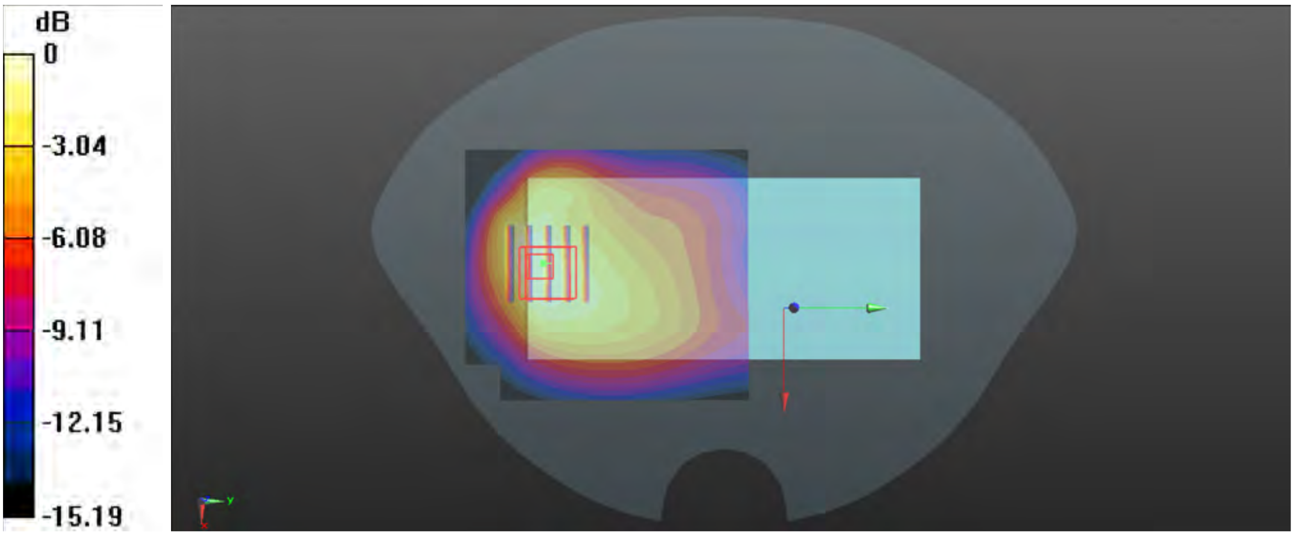
P56 N66_DFT-15KHz_QPSK40M_Rear Face_1cm_Ch346000_108RB_OS54

Communication System: NR; Frequency: 1730 MHz;Duty Cycle: 1:1
Medium: HSL1750_0305 Medium parameters used: f = 1730 MHz; σ = 1.409 S/m; ε_r = 39.896; ρ = 1000 kg/m^3
Ambient Temperature：23.5℃; Liquid Temperature：22.6℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(8.51, 8.51, 8.51) @ 1730 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (71x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.856 W/kg

-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.872 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 0.978 W/kg
SAR(1 g) = 0.634 W/kg; SAR(10 g) = 0.336 W/kg
Smallest distance from peaks to all points 3 dB below = 12.2 mm
Ratio of SAR at M2 to SAR at M1 = 62.1%
Maximum value of SAR (measured) = 0.787 W/kg



0 dB = 0.787 W/kg

Test Laboratory: ritt 7 Layers SAR/HAC Testing Lab Date: 2025/3/3

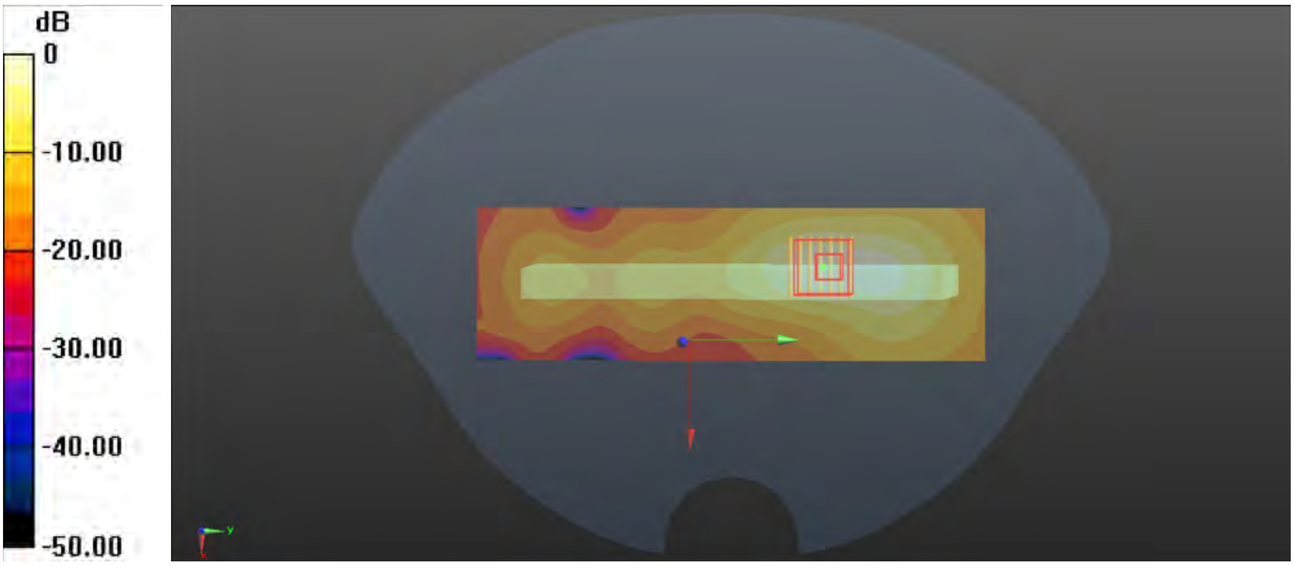
P57 N77_DFT-30KHZ_QPSK100M_Left Side_1cm_Ch633334_1RB_OS1

Communication System: NR; Frequency: 3500.01 MHz;Duty Cycle: 1:1
Medium: HSL3500_0303 Medium parameters used: f = 3500.01 MHz; σ = 2.821 S/m; ε_r = 39.678; ρ = 1000 kg/m^3
Ambient Temperature：23.2℃; Liquid Temperature：22.3℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(6.92, 6.92, 6.92) @ 3500.01 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (61x201x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.23 W/kg

-Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 7.132 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 1.68 W/kg
SAR(1 g) = 0.761 W/kg; SAR(10 g) = 0.322 W/kg
Smallest distance from peaks to all points 3 dB below = 8.6 mm
Ratio of SAR at M2 to SAR at M1 = 72.3%
Maximum value of SAR (measured) = 1.23 W/kg



0 dB = 1.23 W/kg

Test Laboratory: ritt 7 Layers SAR/HAC Testing Lab Date: 2025/2/17

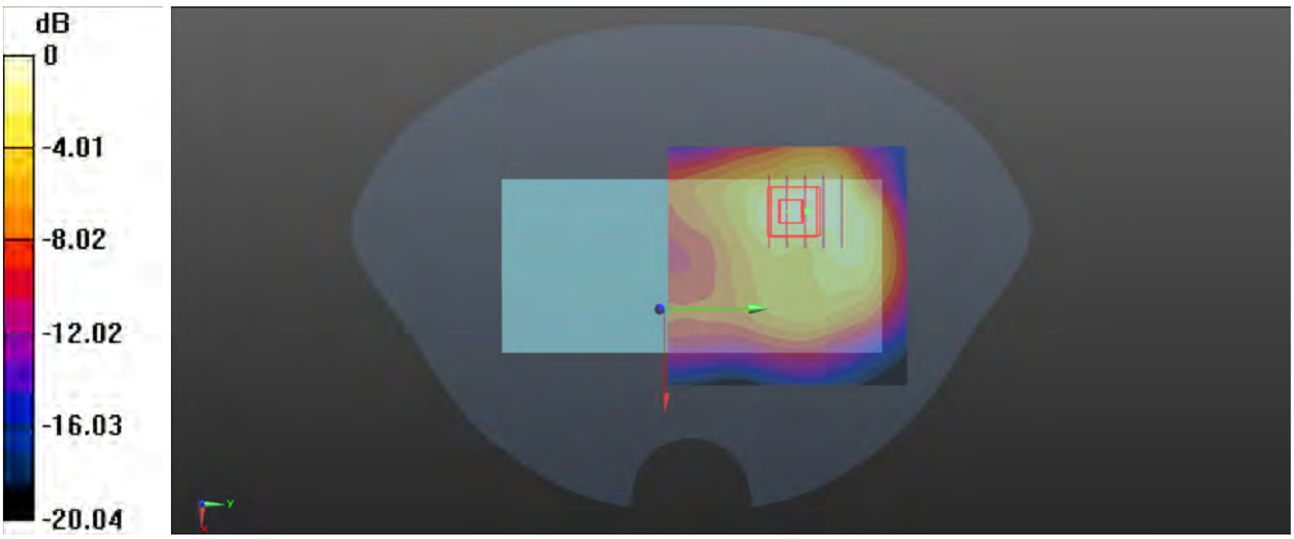
P58 WLAN2.4G_802.11b_Rear Face_1cm_Ch6

Communication System: 802.11b; Frequency: 2437 MHz;Duty Cycle: 1:1.012
Medium: HSL2450_0217 Medium parameters used: f = 2437 MHz; σ = 1.858 S/m; ε_r = 38.735; ρ = 1000 kg/m^3
Ambient Temperature：23.3℃; Liquid Temperature：22.5℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(7.79, 7.79, 7.79) @ 2437 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (71x71x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.337 W/kg

-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.028 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.464 W/kg
SAR(1 g) = 0.198 W/kg; SAR(10 g) = 0.146 W/kg
Smallest distance from peaks to all points 3 dB below = 13.2 mm
Ratio of SAR at M2 to SAR at M1 = 60.8%
Maximum value of SAR (measured) = 0.378 W/kg



0 dB = 0.378 W/kg

Test Laboratory: ritt 7 Layers SAR/HAC Testing Lab Date: 2025/3/7

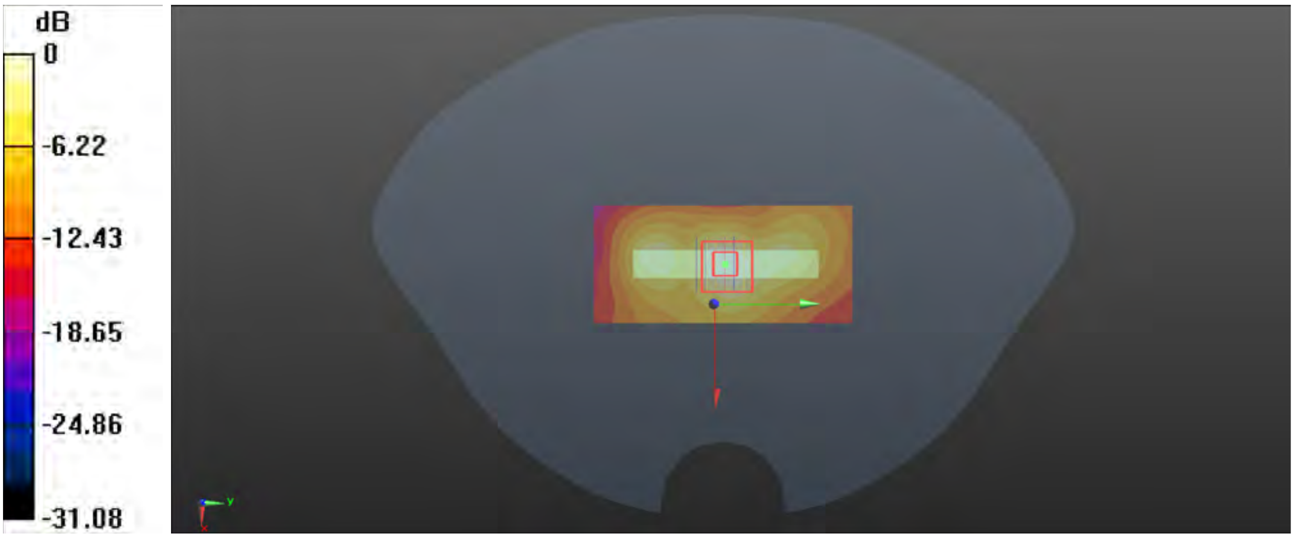
P59 WLAN5G_802.11a_Top Side_1cm_Ch48

Communication System: 802.11a; Frequency: 5240 MHz;Duty Cycle: 1:1.022
Medium: HSL5G_0307 Medium parameters used: f = 5240 MHz; σ = 4.612 S/m; ε_r = 36.235; ρ = 1000 kg/m^3
Ambient Temperature：23.6℃; Liquid Temperature：22.4℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(5.52, 5.52, 5.52) @ 5240 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (51x111x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.640 W/kg

-Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 12.57 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 1.10 W/kg
SAR(1 g) = 0.343 W/kg; SAR(10 g) = 0.123 W/kg
Smallest distance from peaks to all points 3 dB below = 9.3 mm
Ratio of SAR at M2 to SAR at M1 = 59.5%
Maximum value of SAR (measured) = 0.634 W/kg



0 dB = 0.634 W/kg

Test Laboratory: ritt 7 Layers SAR/HAC Testing Lab   Date: 2025/3/7

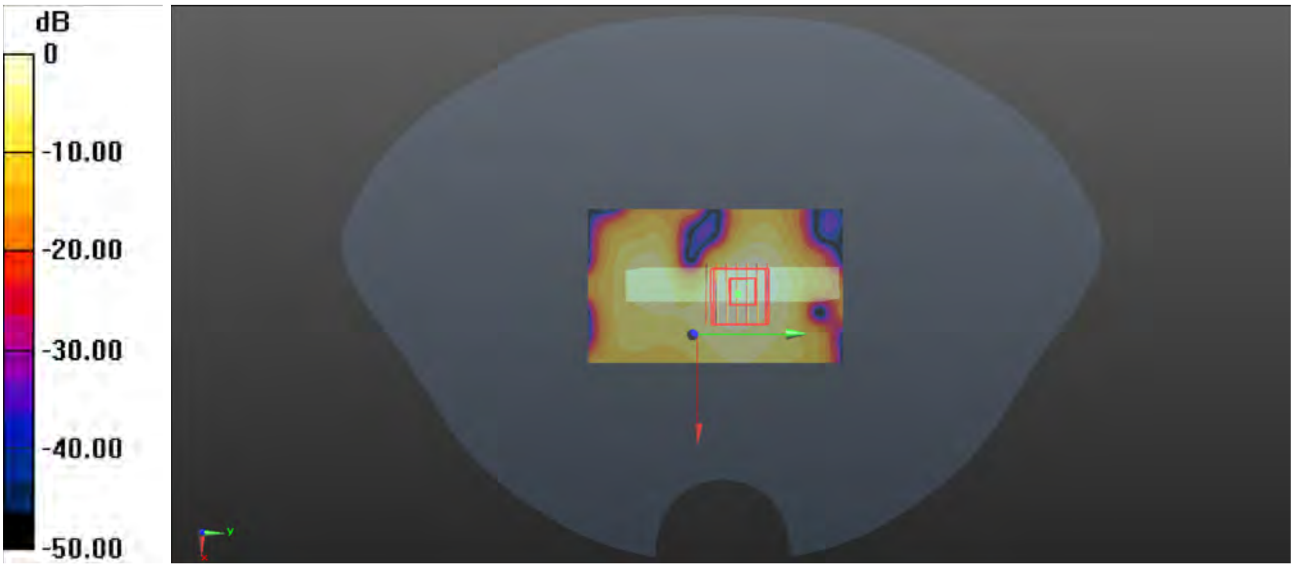
P60 WLAN5G_802.11a_Top Side_1cm_Ch149

Communication System: 802.11a; Frequency: 5745 MHz;Duty Cycle: 1:1.022
Medium: HSL5G_0307 Medium parameters used: f = 5745 MHz; σ = 5.118 S/m; ε_r = 35.399; ρ = 1000 kg/m^3
Ambient Temperature：23.6℃; Liquid Temperature：22.4℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(5.05, 5.05, 5.05) @ 5745 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (61x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.306 W/kg

-Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 6.697 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 0.510 W/kg
SAR(1 g) = 0.167 W/kg; SAR(10 g) = 0.052 W/kg
Smallest distance from peaks to all points 3 dB below = 7.5 mm
Ratio of SAR at M2 to SAR at M1 = 49.7%
Maximum value of SAR (measured) = 0.270 W/kg



0 dB = 0.270 W/kg

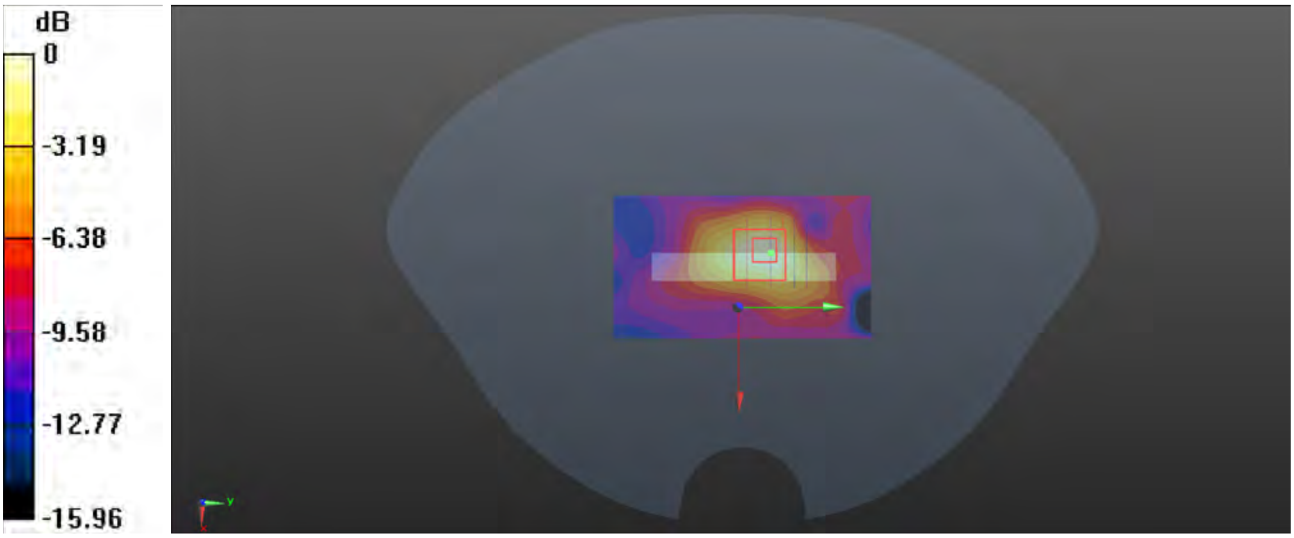
P61 BT_GFSK_Top Side_1cm_Ch78

Communication System: BT; Frequency: 2480 MHz;Duty Cycle: 1:1.305
Medium: HSL2450_0217 Medium parameters used: f = 2480 MHz; σ = 1.894 S/m; ε_r = 38.648; ρ = 1000 kg/m^3
Ambient Temperature：23.3℃; Liquid Temperature：22.5℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(7.79, 7.79, 7.79) @ 2480 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (51x91x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.0210 W/kg

-Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.558 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 0.0290 W/kg
SAR(1 g) = 0.013 W/kg; SAR(10 g) = 0.006 W/kg
Smallest distance from peaks to all points 3 dB below: Larger than measurement grid (> 15 mm)
Ratio of SAR at M2 to SAR at M1 = 48%
Maximum value of SAR (measured) = 0.0204 W/kg



0 dB = 0.0204 W/kg

Test Laboratory: ritt 7 Layers SAR/HAC Testing Lab   Date: 2025/3/3

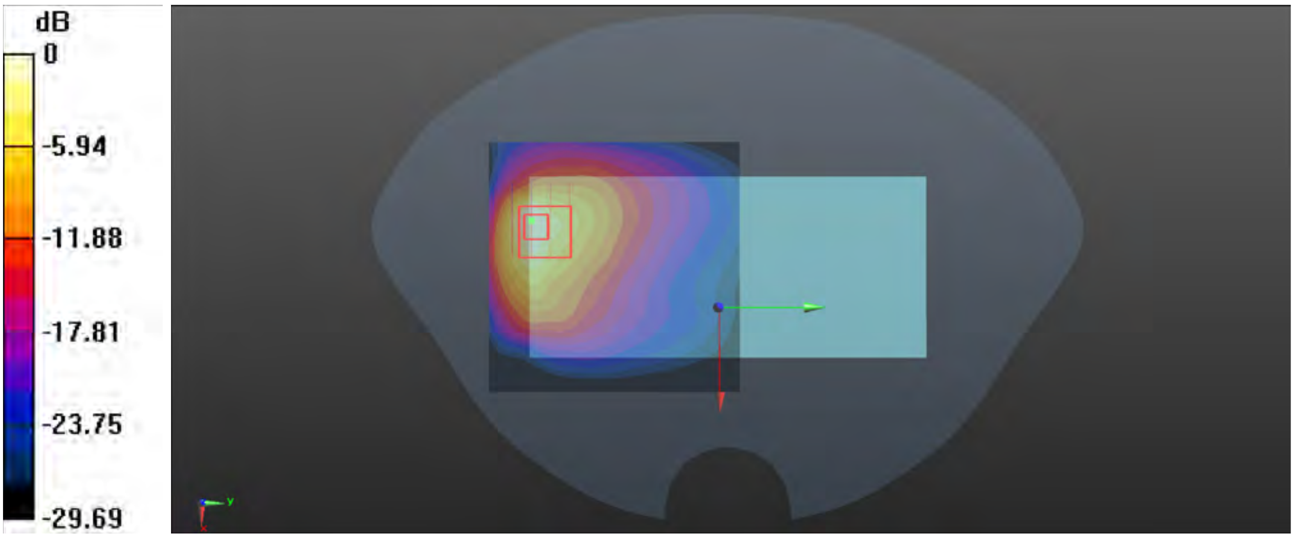
P62 WCDMA II_RMC12.2K_Rear Face_0cm_Ch9262

Communication System: WCDMA; Frequency: 1852.4 MHz;Duty Cycle: 1:1
Medium: HSL1950_0303 Medium parameters used: f = 1852.4 MHz; σ = 1.411 S/m; ε_r = 39.208; ρ = 1000 kg/m^3
Ambient Temperature：23.4℃; Liquid Temperature：22.7℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(8.16, 8.16, 8.16) @ 1852.4 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 13.5 W/kg

-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.113 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 18.1 W/kg
SAR(1 g) = 6.25 W/kg; SAR(10 g) = 2.55 W/kg
Smallest distance from peaks to all points 3 dB below = 4.8 mm
Ratio of SAR at M2 to SAR at M1 = 31.1%
Maximum value of SAR (measured) = 12.5 W/kg



0 dB = 12.5 W/kg

Test Laboratory: ritt 7 Layers SAR/HAC Testing Lab   Date: 2025/3/4

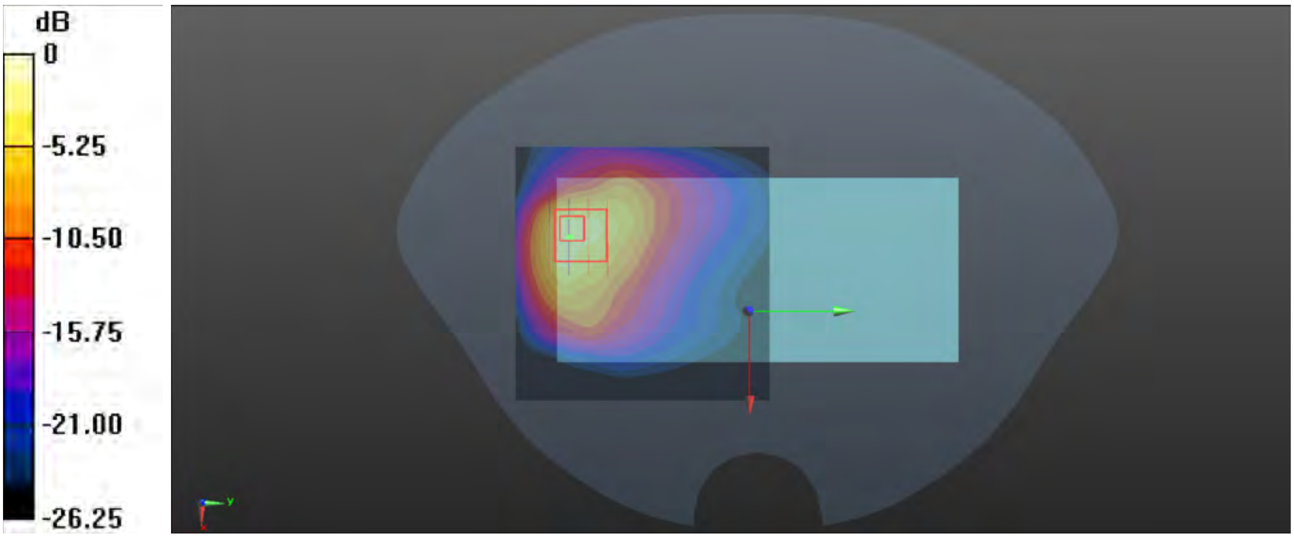
P63 LTE B2_QPSK20M_Rear Face_0cm_Ch18900_1RB_OS50

Communication System: LTE_FDD; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium: HSL1950_0304 Medium parameters used: f = 1880 MHz; σ = 1.427 S/m; ε_r = 39.153; ρ = 1000 kg/m^3
Ambient Temperature：23.3℃; Liquid Temperature：22.2℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(8.16, 8.16, 8.16) @ 1880 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 5.53 W/kg

-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.926 V/m; Power Drift = -0.17 dB
Peak SAR (extrapolated) = 12.3 W/kg
SAR(1 g) = 4.74 W/kg; SAR(10 g) = 2.14 W/kg
Smallest distance from peaks to all points 3 dB below = 5.1 mm
Ratio of SAR at M2 to SAR at M1 = 35.2%
Maximum value of SAR (measured) = 8.49 W/kg



0 dB = 8.49 W/kg

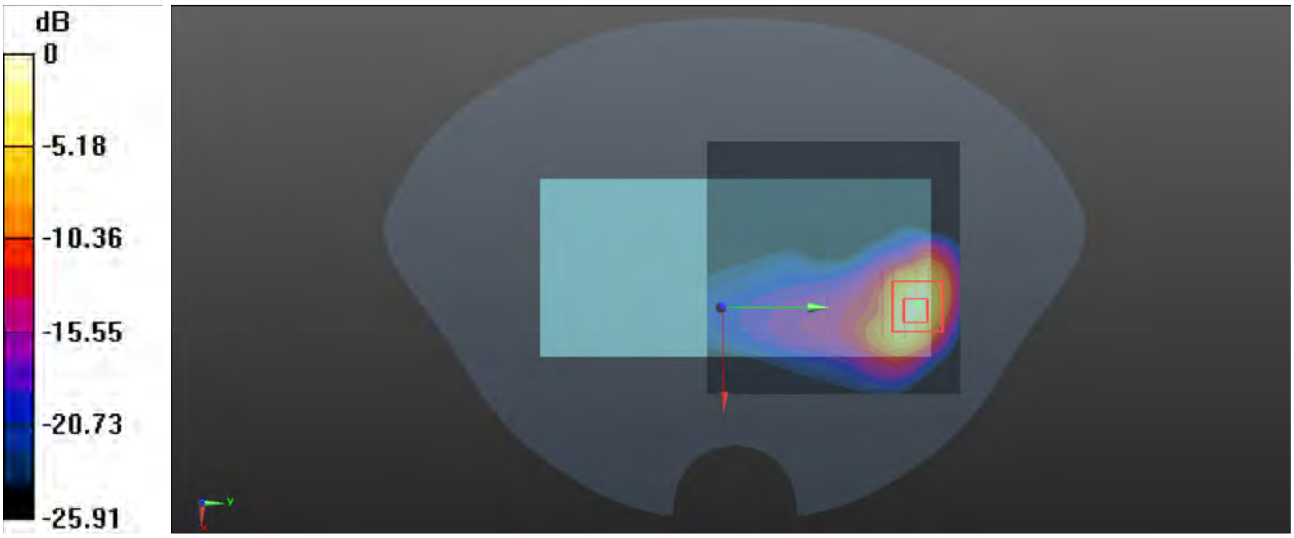
P64 LTE B7_QPSK20M_Rear Face_0cm_Ch21100_1RB_OS0

Communication System: LTE_FDD; Frequency: 2535 MHz;Duty Cycle: 1:1
Medium: HSL2550_0309 Medium parameters used: f = 2535 MHz; σ = 1.908 S/m; ε_r = 39.048; ρ = 1000 kg/m^3
Ambient Temperature：23.4℃; Liquid Temperature：22.6℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(7.64, 7.64, 7.64) @ 2535 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (91x91x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 6.14 W/kg

-Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.508 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 12.8 W/kg
SAR(1 g) = 4.64 W/kg; SAR(10 g) = 1.81 W/kg
Smallest distance from peaks to all points 3 dB below = 5.4 mm
Ratio of SAR at M2 to SAR at M1 = 41.1%
Maximum value of SAR (measured) = 8.01 W/kg



0 dB = 8.01 W/kg

Test Laboratory: ritt 7 Layers SAR/HAC Testing Lab Date: 2025/3/8

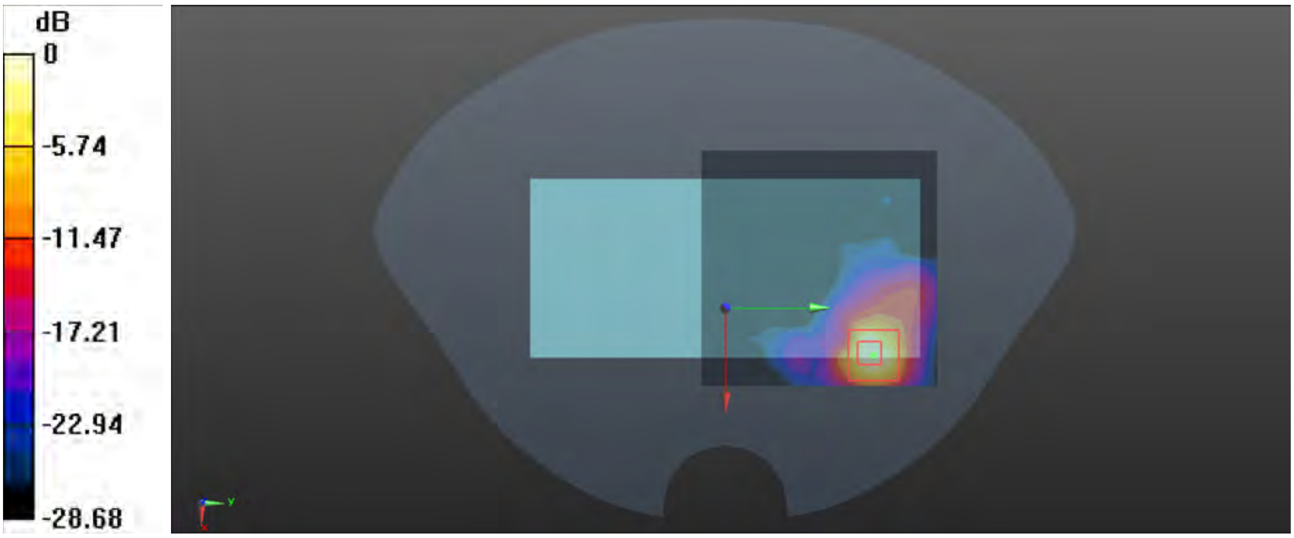
P65 LTE B48_QPSK20M_Rear Face_0cm_Ch56640_1RB_OS50

Communication System: LTE_TDD; Frequency: 3690 MHz;Duty Cycle: 1:1.59
Medium: HSL3500_0308 Medium parameters used: f = 3690 MHz; σ = 2.974 S/m; ε_r = 38.828; ρ = 1000 kg/m^3
Ambient Temperature：23.7℃; Liquid Temperature：22.8℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(6.92, 6.92, 6.92) @ 3690 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (101x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 9.31 W/kg

-Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 0 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 16.9 W/kg
SAR(1 g) = 4.5 W/kg; SAR(10 g) = 1.29 W/kg
Smallest distance from peaks to all points 3 dB below = 5.1 mm
Ratio of SAR at M2 to SAR at M1 = 60.4%
Maximum value of SAR (measured) = 8.90 W/kg



0 dB = 8.90 W/kg

Test Laboratory: ritt 7 Layers SAR/HAC Testing Lab Date: 2025/3/5

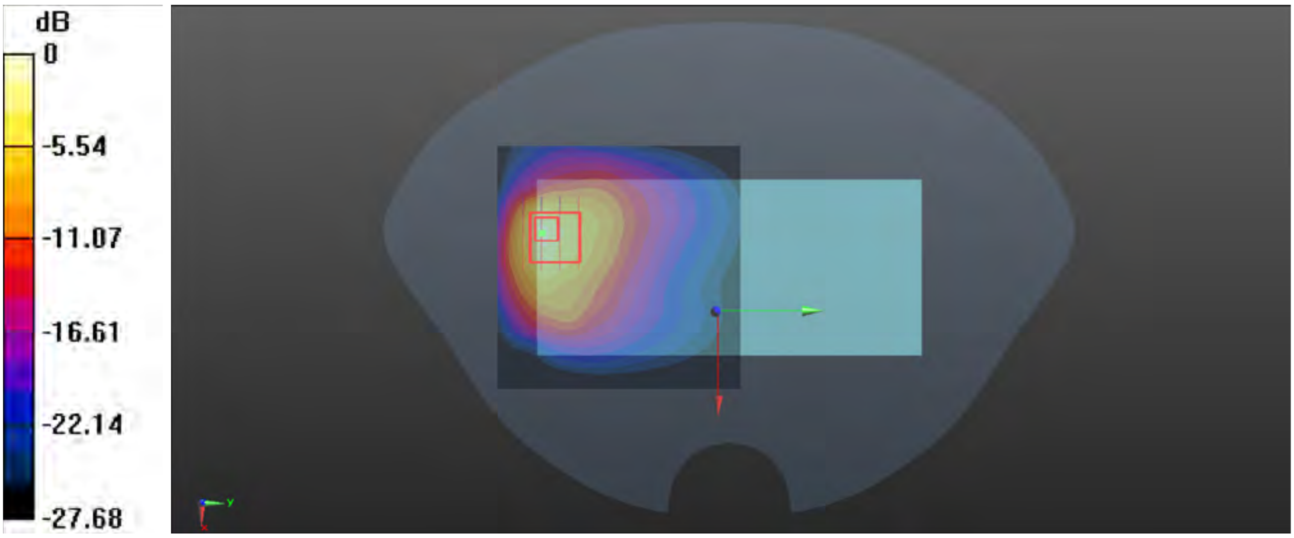
P66 LTE B66_QPSK20M_Rear Face_0cm_Ch132572_1RB_OS99

Communication System: LTE_FDD; Frequency: 1770 MHz;Duty Cycle: 1:1
Medium: HSL1750_0305 Medium parameters used: f = 1770 MHz; σ = 1.433 S/m; ε_r = 39.805; ρ = 1000 kg/m^3
Ambient Temperature：23.5℃; Liquid Temperature：22.6℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(8.51, 8.51, 8.51) @ 1770 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 7.13 W/kg

-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.821 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 16.0 W/kg
SAR(1 g) = 5.32 W/kg; SAR(10 g) = 2.37 W/kg
Smallest distance from peaks to all points 3 dB below = 3.6 mm
Ratio of SAR at M2 to SAR at M1 = 35.7%
Maximum value of SAR (measured) = 10.3 W/kg



0 dB = 10.3 W/kg

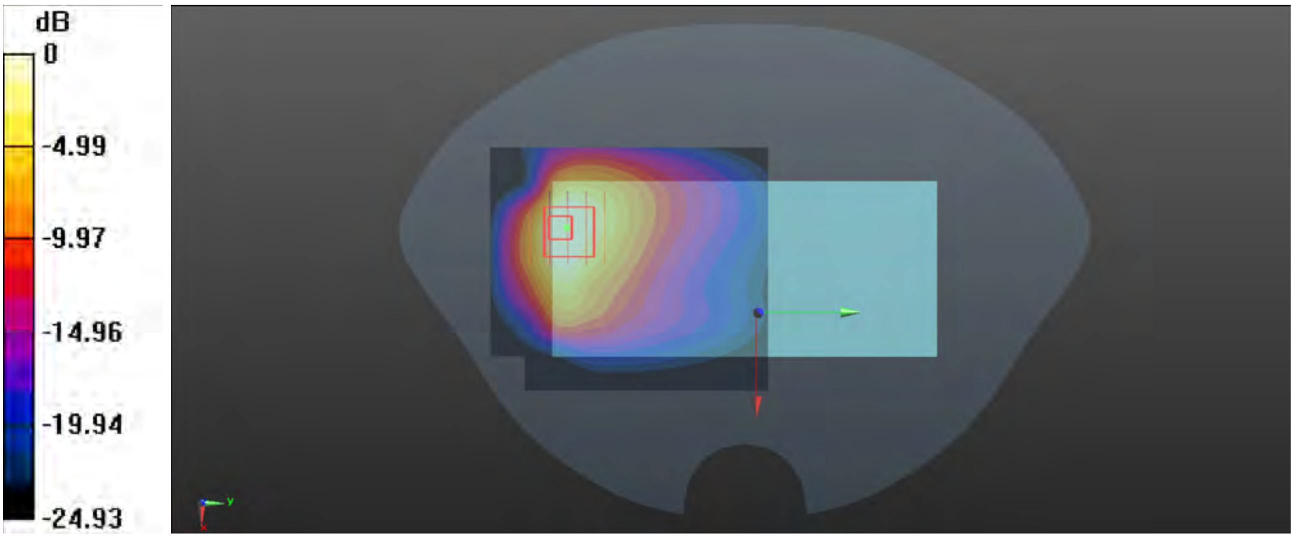
P67 N2_DFT-15KHz_QPSK20M_Rear Face_0cm_Ch372000_1RB_OS1

Communication System: NR; Frequency: 1860 MHz;Duty Cycle: 1:1
Medium: HSL1950_0303 Medium parameters used: f = 1860 MHz; σ = 1.389 S/m; ε_r = 40.466; ρ = 1000 kg/m^3
Ambient Temperature：23.4℃; Liquid Temperature：22.7℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(8.16, 8.16, 8.16) @ 1860 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (71x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 11.1 W/kg

-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.745 V/m; Power Drift = 0.17 dB
Peak SAR (extrapolated) = 12.9 W/kg
SAR(1 g) = 5.31 W/kg; SAR(10 g) = 2.59 W/kg
Smallest distance from peaks to all points 3 dB below = 6.4 mm
Ratio of SAR at M2 to SAR at M1 = 54%
Maximum value of SAR (measured) = 7.12 W/kg



0 dB = 7.12 W/kg

Test Laboratory: ritt 7 Layers SAR/HAC Testing Lab   Date: 2025/3/8

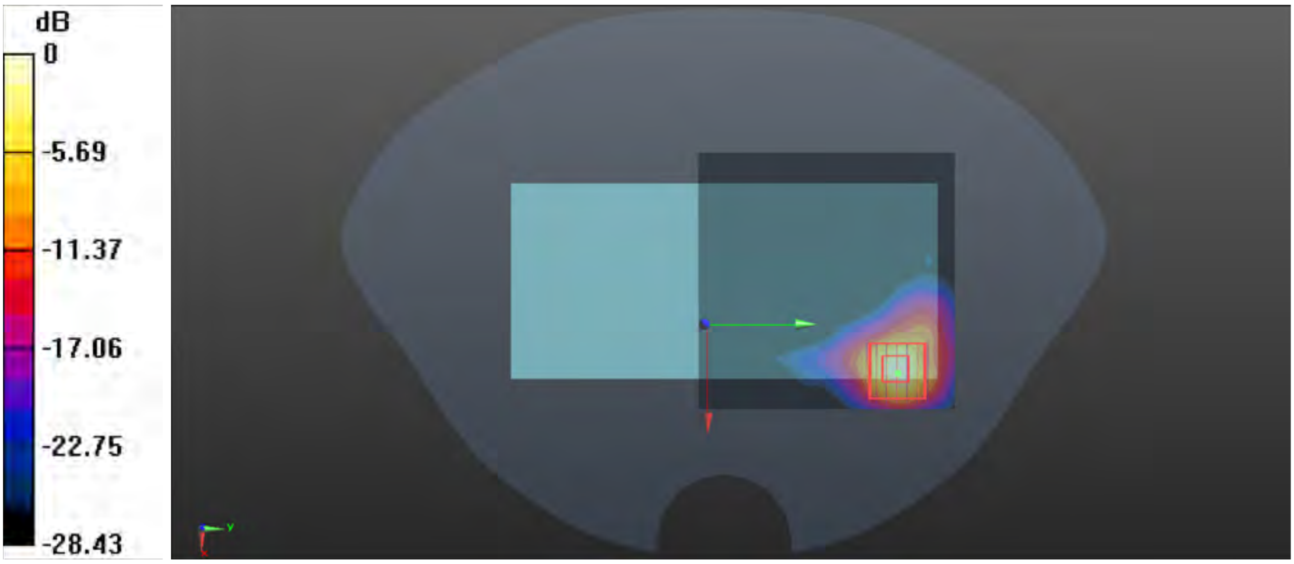
P68 N48_DFT-30KHz_QPSK40M_Rear Face_0cm_Ch638000_50RB_OS0

Communication System: NR; Frequency: 3570 MHz;Duty Cycle: 1:1
Medium: HSL3700_0308 Medium parameters used: f = 3570 MHz; σ = 2.863 S/m; ε_r = 39.022; ρ = 1000 kg/m^3
Ambient Temperature：23.7℃; Liquid Temperature：22.8℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(6.92, 6.92, 6.92) @ 3570 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: SAM Right ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

-Area Scan (101x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 14.5 W/kg

-Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 0 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 30.7 W/kg
SAR(1 g) = 8.34 W/kg; SAR(10 g) = 2.29 W/kg
Smallest distance from peaks to all points 3 dB below = 4 mm
Ratio of SAR at M2 to SAR at M1 = 61.3%
Maximum value of SAR (measured) = 16.4 W/kg



0 dB = 16.4 W/kg

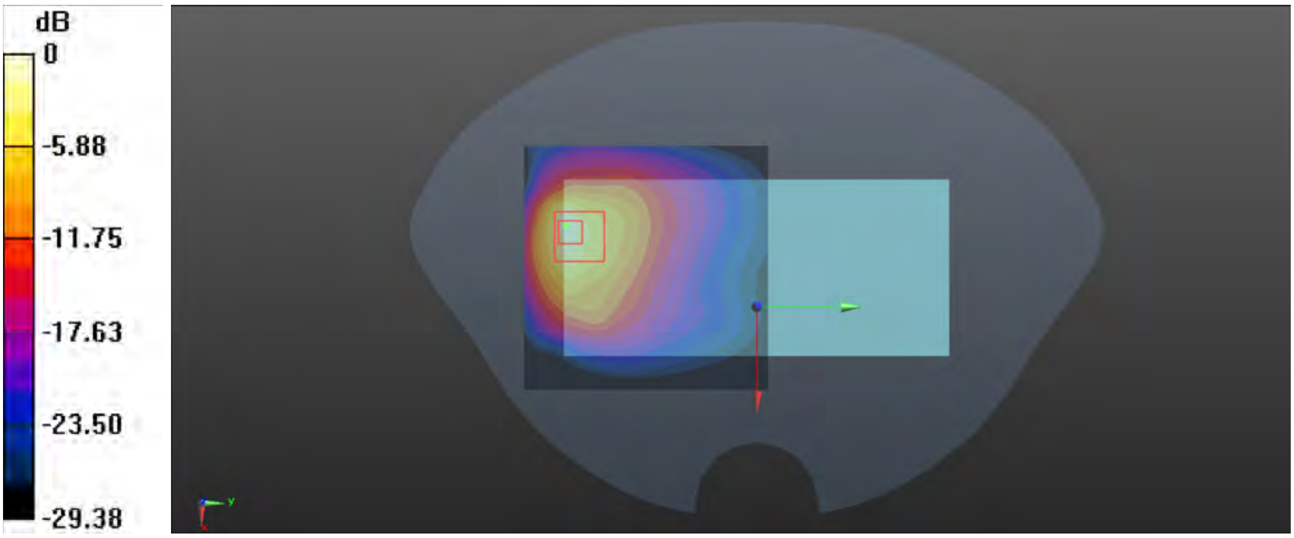
P69 N66_DFT-15KHz_QPSK40M_Rear Face_0cm_Ch352000_1RB_OS1

Communication System: NR; Frequency: 1760 MHz;Duty Cycle: 1:1
Medium: HSL1750_0305 Medium parameters used: f = 1760 MHz; σ = 1.427 S/m; ε_r = 39.835; ρ = 1000 kg/m^3
Ambient Temperature：23.5℃; Liquid Temperature：22.6℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(8.51, 8.51, 8.51) @ 1760 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 9.09 W/kg

-Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.435 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 16.1 W/kg
SAR(1 g) = 5.6 W/kg; SAR(10 g) = 2.5 W/kg
Smallest distance from peaks to all points 3 dB below = 4.8 mm
Ratio of SAR at M2 to SAR at M1 = 31.6%
Maximum value of SAR (measured) = 11.0 W/kg



0 dB = 11.0 W/kg

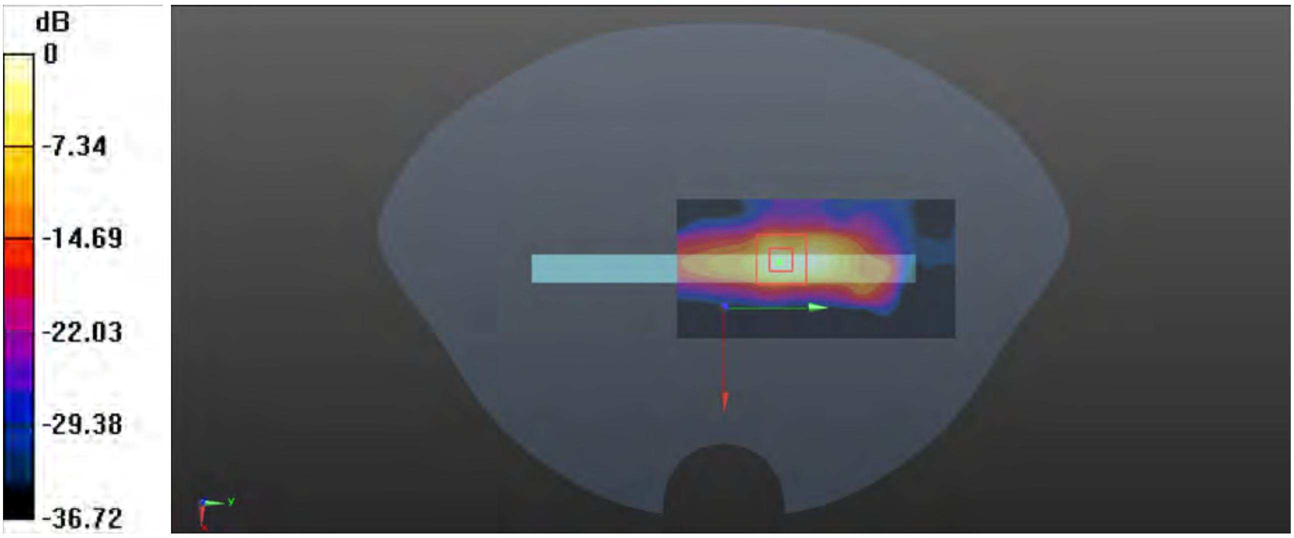
P70 N77_DFT-30KHZ_QPSK100M_Left Side_0cm_Ch662000_135RB_OS69

Communication System: NR; Frequency: 3930 MHz;Duty Cycle: 1:1
Medium: HSL3900_0303 Medium parameters used: f = 3930 MHz; σ = 3.244 S/m; ε_r = 39.017; ρ = 1000 kg/m^3
Ambient Temperature：23.2°C; Liquid Temperature：22.3

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(6.68, 6.68, 6.68) @ 3930 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (61x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 21.9 W/kg

-Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 26.78 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 55.6 W/kg
SAR(1 g) = 10.8 W/kg; SAR(10 g) = 2.62 W/kg
Smallest distance from peaks to all points 3 dB below = 4.3 mm
Ratio of SAR at M2 to SAR at M1 = 53.5%
Maximum value of SAR (measured) = 26.6 W/kg



0 dB = 26.6 W/kg

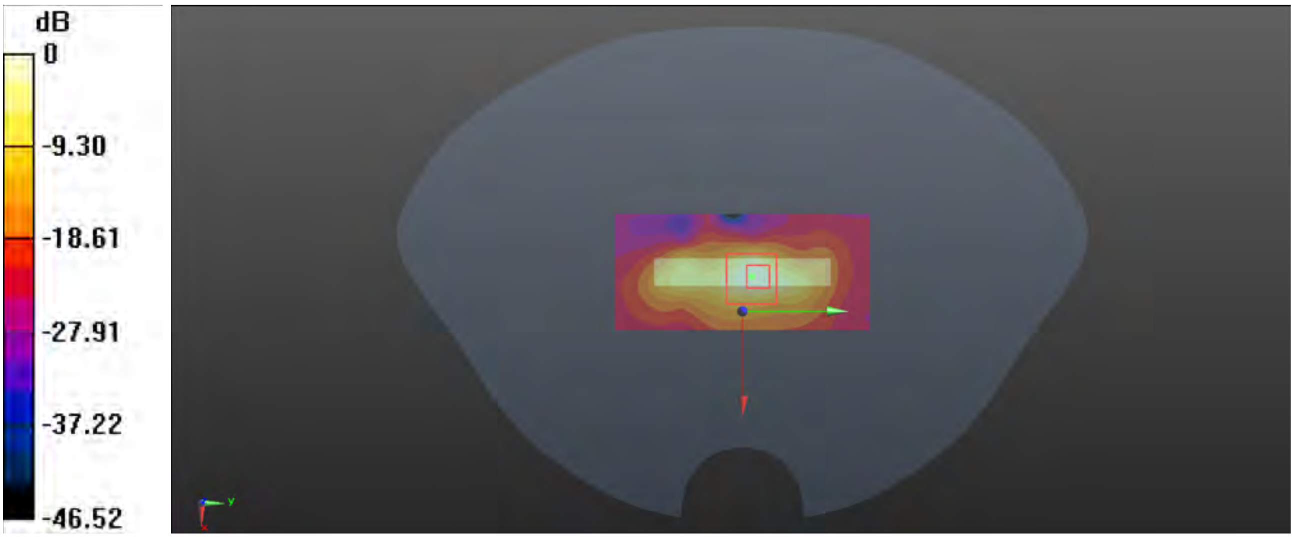
P71 WLAN5G_802.11a_Top Side_0cm_Ch60

Communication System: 802.11a; Frequency: 5300 MHz;Duty Cycle: 1:1.022
Medium: HSL5G_0307 Medium parameters used: f = 5300 MHz; σ = 4.627 S/m; ε_r = 36.117; ρ = 1000 kg/m^3
Ambient Temperature：23.6℃; Liquid Temperature：22.4℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(5.52, 5.52, 5.52) @ 5300 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (51x111x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 4.74 W/kg

-Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 27.09 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 15.2 W/kg
SAR(1 g) = 2.40 W/kg; SAR(10 g) = 0.584 W/kg
Smallest distance from peaks to all points 3 dB below = 4 mm
Ratio of SAR at M2 to SAR at M1 = 43.8%
Maximum value of SAR (measured) = 5.23 W/kg



0 dB = 5.23 W/kg

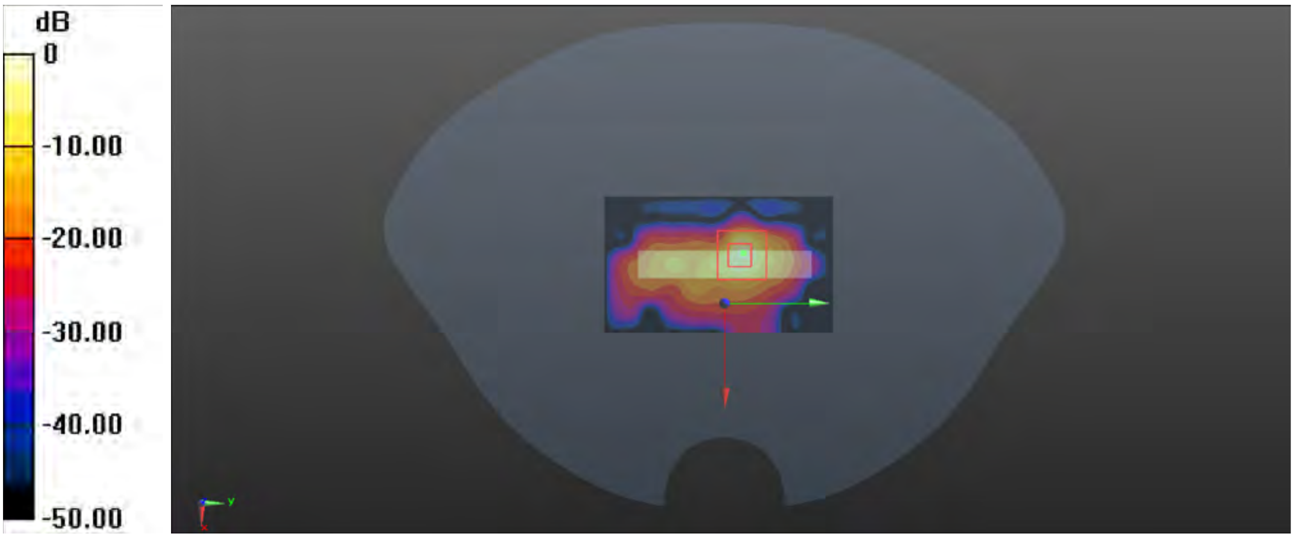
P72 WLAN5G_802.11a_Top Side_0cm_Ch144

Communication System: 802.11a; Frequency: 5720 MHz;Duty Cycle: 1:1.022
Medium: HSL5G_0307 Medium parameters used: f = 5720 MHz; σ = 5.104 S/m; ε_r = 35.49; ρ = 1000 kg/m^3
Ambient Temperature：23.6℃; Liquid Temperature：22.4℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3985; ConvF(4.95, 4.95, 4.95) @ 5720 MHz; Calibrated: 2024/7/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn755; Calibrated: 2024/7/5
- Phantom: Right v5.0 ; Type: QD000P40CD; Serial: TP:1611
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

-Area Scan (61x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 5.57 W/kg

-Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 22.05 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 30.5 W/kg
SAR(1 g) = 3.25 W/kg; SAR(10 g) = 0.571 W/kg
Smallest distance from peaks to all points 3 dB below = 3.6 mm
Ratio of SAR at M2 to SAR at M1 = 44.3%
Maximum value of SAR (measured) = 9.81 W/kg



0 dB = 9.81 W/kg

Appendix C. Calibration Certificate for Probe and Dipole

The SPEAG calibration certificates are shown as follows.

In Collaboration with
speag
CALIBRATION LABORATORY
Add: No.52 HuaYuanBei Road, Haidian District, Beijing, 100191, China
Tel: +86-10-62304633-2117
E-mail: emf@caict.ac.cn http://www.caict.ac.cn

中国认可 国际互认 校准 CALIBRATION CNAS L0570

Client : 7layers

Certificate No: 24J02Z000385

CALIBRATION CERTIFICATE

Object	DAE4 - SN: 755
Calibration Procedure(s)	FF-Z11-002-01 Calibration Procedure for the Data Acquisition Electronics (DAEx)
Calibration date:	July 05, 2024

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

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

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date(Calibrated by, Certificate No.)	Scheduled Calibration
Process Calibrator 753	1971018	11-Jun-24 (CTTL, No.24J02X005147)	Jun-25

	Name	Function	Signature
Calibrated by:	Yu Zongying	SAR Test Engineer	
Reviewed by:	Lin Jun	SAR Test Engineer	
Approved by:	Qi Dianyuan	SAR Project Leader	

Issued: July 07, 2024

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

Glossary:

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

Methods Applied and Interpretation of Parameters:

- *DC Voltage Measurement*: Calibration Factor assessed for use in DASY system by comparison with a calibrated instrument traceable to national standards. The figure given corresponds to the full scale range of the voltmeter in the respective range.

- *Connector angle*: The angle of the connector is assessed measuring the angle mechanically by a tool inserted. Uncertainty is not required.

- The report provide only calibration results for DAE, it does not contain other performance test results.

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

DC Voltage Measurement

A/D - Converter Resolution nominal

High Range: 1LSB = 6.1μV , full range = -100…+300 mV

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

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

Calibration Factors	X	Y	Z
High Range	405.325 ± 0.15% (k=2)	404.544 ± 0.15% (k=2)	405.090 ± 0.15% (k=2)
Low Range	3.93382 ± 0.7% (k=2)	3.95511 ± 0.7% (k=2)	3.93494 ± 0.7% (k=2)

Connector Angle

Connector Angle to be used in DASY system	332° ± 1 °

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Client **7layers** **Certificate No: 24J02Z000386**

CALIBRATION CERTIFICATE

Object: EX3DV4 - SN : 3985

Calibration Procedure(s): FF-Z11-004-02
Calibration Procedures for Dosimetric E-field Probes

Calibration date: July 23, 2024

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

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

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date(Calibrated by, Certificate No.)	Scheduled Calibration
Power Meter NRP2	106277	19-Oct-23(CTTL, No.J23X11026)	Oct-24
Power sensor NRP8S	104291	19-Oct-23(CTTL, No.J23X11026)	Oct-24
Power sensor NRP8S	104292	19-Oct-23(CTTL, No.J23X11026)	Oct-24
Reference 10dBAttenuator	18N50W-10dB	19-Jan-23(CTTL, No.J23X00212)	Jan-25
Reference 20dBAttenuator	18N50W-20dB	19-Jan-23(CTTL, No.J23X00211)	Jan-25
Reference Probe EX3DV4	SN 7307	28-May-24(SPEAG, No.EX-7307_May24)	May-25
DAE4	SN 1555	24-Aug-23(SPEAG, No.DAE4-1555_Aug23)	Aug-24
Secondary Standards	**ID #**	**Cal Date(Calibrated by, Certificate No.)**	**Scheduled Calibration**
SignalGenerator MG3700A	6201052605	12-Jun-24(CTTL, No.24J02X005419)	Jun-25
SignalGenerator APSIN26G	181-33A6D0700-1959	26-Mar-24(CTTL, No.24J02X002468)	Mar-25
Network Analyzer E5071C	MY46110673	25-Dec-23(CTTL, No.J23X13425)	Dec-24
Reference 10dBAttenuator	BT0520	11-May-23(CTTL, No.J23X04061)	May-25
Reference 20dBAttenuator	BT0267	11-May-23(CTTL, No.J23X04062)	May-25
OCP DAK-12	SN 1174	25-Oct-23(SPEAG, No.OCP-DAK12-1174_Oct23)	Oct-24

	Name	Function	Signature
Calibrated by:	Yu Zongying	SAR Test Engineer	
Reviewed by:	Lin Jun	SAR Test Engineer	
Approved by:	Qi Dianyuan	SAR Project Leader	

Issued: July 28, 2024

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Glossary:

TSL	tissue simulating liquid
NORMx,y,z	sensitivity in free space
ConvF	sensitivity in TSL / NORMx,y,z
DCP	diode compression point
CF	crest factor (1/duty_cycle) of the RF signal
A,B,C,D	modulation dependent linearization parameters
Polarization Φ	Φ rotation around probe axis
Polarization θ	θ rotation around an axis that is in the plane normal to probe axis (at measurement center), i θ=0 is normal to probe axis
Connector Angle	information used in DASY system to align probe sensor X to the robot coordinate system

Calibration is Performed According to the Following Standards:

a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013

b) IEC 62209-1, "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from hand-held and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016

c) IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010

d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Methods Applied and Interpretation of Parameters:

- *NORMx,y,z:* Assessed for E-field polarization θ=0 (f≤900MHz in TEM-cell; f>1800MHz: waveguide). NORMx,y,z are only intermediate values, i.e., the uncertainties of NORMx,y,z does not effect the E^2-field uncertainty inside TSL (see below ConvF).
- *NORM(f)x,y,z = NORMx,y,z* frequency_response* (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of ConvF.
- *DCPx,y,z:* DCP are numerical linearization parameters assessed based on the data of power sweep (no uncertainty required). DCP does not depend on frequency nor media.
- PAR: PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics.
- *Ax,y,z; Bx,y,z; Cx,y,z;VRx,y,z:*A,B,C are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. VR is the maximum calibration range expressed in RMS voltage across the diode.
- *ConvF and Boundary Effect Parameters:* Assessed in flat phantom using E-field (or Temperature Transfer Standard for f≤800MHz) and inside waveguide using analytical field distributions based on power measurements for f >800MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty valued are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to NORMx,y,z* ConvF whereby the uncertainty corresponds to that given for ConvF. A frequency dependent ConvF is used in DASY version 4.4 and higher which allows extending the validity from±50MHz to±100MHz.
- *Spherical isotropy (3D deviation from isotropy):* in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- *Sensor Offset:* The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.
- *Connector Angle:* The angle is assessed using the information gained by determining the *NORMx* (no uncertainty required).

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DASY/EASY – Parameters of Probe: EX3DV4 – SN: 3985

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (*k*=2)
Norm(μV/(V/m)²) A	0.53	0.42	0.42	±10.0%
DCP(mV) B	102.5	104.6	103.9	

Calibration Results for Modulation Response

UID	Communication System Name		A dB	B dB√μV	C	D dB	VR mV	Max Dev.	Max Unc E (*k*=2)
0	CW	X	0.0	0.0	1.0	0.00	188.3	±2.1%	±4.7%
		Y	0.0	0.0	1.0		165.4		
		Z	0.0	0.0	1.0		162.4		
10352-AAA	Pulse Waveform (200Hz, 10%)	X	12.47	82.29	16.86		60	±4.1%	±9.6%
		Y	12.26	82.99	17.13	10.00	60		
		Z	5.23	73.74	13.61		60		
10353-AAA	Pulse Waveform (200Hz, 20%)	X	20.00	86.10	16.92		80	±2.2%	±9.6%
		Y	20.00	87.09	17.05	6.99	80		
		Z	6.16	76.21	13.32		80		
10354-AAA	Pulse Waveform (200Hz, 40%)	X	20.00	85.80	15.63		95	±2.3%	±9.6%
		Y	20.00	85.97	15.19	3.98	95		
		Z	1.27	65.68	8.28		95		
10355-AAA	Pulse Waveform (200Hz, 60%)	X	20.00	83.94	13.60		120	±1.8%	±9.6%
		Y	1.04	65.72	7.68	2.22	120		
		Z	0.33	60.00	4.46		120		
10387-AAA	QPSK Waveform, 1 MHz	X	1.71	66.35	15.06		150	±2.5%	±9.6%
		Y	1.55	65.37	14.02	1.00	150		
		Z	1.31	63.55	12.28		150		
10388-AAA	QPSK Waveform, 10 MHz	X	2.38	69.12	15.98		150	±1.9%	±9.6%
		Y	2.14	67.67	15.02	0.00	150		
		Z	1.83	65.45	13.57		150		
10396-AAA	64-QAM Waveform, 100 kHz	X	3.53	74.84	21.82		150	±1.0%	±9.6%
		Y	3.55	75.77	21.89	3.01	150		
		Z	2.81	71.30	19.43		150		
10414-AAA	WLAN CCDF, 64-QAM, 40MHz	X	4.94	65.84	15.64		150	±3.7%	±9.6%
		Y	4.80	65.64	15.37	0.00	150		
		Z	4.69	65.53	15.16		150		

Note: For details on UID parameters see Appendix

The reported uncertainty of measurement is stated as the standard uncertainty of Measurement multiplied by the coverage factor *k*=2, which for a normal distribution Corresponds to a coverage probability of approximately 95%.

A The uncertainties of Norm X, Y, Z do not affect the E^2-field uncertainty inside TSL (see Page 5).
B Numerical linearization parameter: uncertainty not required.
E Uncertainly is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

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DASY/EASY – Parameters of Probe: EX3DV4 – SN: 3985

Sensor Model Parameters

	C1 fF	C2 fF	α V^{-1}	T1 $ms.V^{-2}$	T2 $ms.V^{-1}$	T3 ms	T4 V^{-2}	T5 V^{-1}	T6
X	54.38	411.47	36.34	23.58	0.00	5.10	0.68	0.34	1.03
Y	47.17	350.05	34.98	14.75	0.01	5.10	1.21	0.17	1.02
Z	38.97	290.52	35.03	10.54	0.00	5.10	1.10	0.14	1.02

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (°)	53.1
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disable
Probe Overall Length	337mm
Probe Body Diameter	10mm
Tip Length	9mm
Tip Diameter	2.5mm
Probe Tip to Sensor X Calibration Point	1mm
Probe Tip to Sensor Y Calibration Point	1mm
Probe Tip to Sensor Z Calibration Point	1mm
Recommended Measurement Distance from Surface	1.4mm

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DASY/EASY – Parameters of Probe: EX3DV4 – SN:3985

Calibration Parameter Determined in Head Tissue Simulating Media

f [MHz][C]	Relative Permittivity [F]	Conductivity (S/m) [F]	ConvF X	ConvF Y	ConvF Z	Alpha[G]	Depth[G] (mm)	Unct. (*k*=2)
750	41.9	0.89	10.25	10.25	10.25	0.15	1.30	±12.7%
835	41.5	0.90	9.93	9.93	9.93	0.19	1.20	±12.7%
900	41.5	0.97	9.85	9.85	9.85	0.16	1.34	±12.7%
1750	40.1	1.37	8.51	8.51	8.51	0.27	1.00	±12.7%
1900	40.0	1.40	8.16	8.16	8.16	0.24	1.05	±12.7%
2100	39.8	1.49	8.21	8.21	8.21	0.23	1.05	±12.7%
2300	39.5	1.67	8.05	8.05	8.05	0.59	0.68	±12.7%
2450	39.2	1.80	7.79	7.79	7.79	0.60	0.70	±12.7%
2600	39.0	1.96	7.64	7.64	7.64	0.64	0.67	±12.7%
3300	38.2	2.71	7.11	7.11	7.11	0.53	0.87	±13.9%
3500	37.9	2.91	6.92	6.92	6.92	0.52	0.93	±13.9%
3700	37.7	3.12	6.71	6.71	6.71	0.40	1.12	±13.9%
3900	37.5	3.32	6.68	6.68	6.68	0.35	1.35	±13.9%
5250	35.9	4.71	5.52	5.52	5.52	0.40	1.52	±13.9%
5600	35.5	5.07	4.95	4.95	4.95	0.45	1.42	±13.9%
5800	35.3	5.27	5.05	5.05	5.05	0.45	1.37	±13.9%

[C] Frequency validity above 300 MHz of ±100MHz only applies for DASY v4.4 and higher (Page 2), else it is restricted to ±50MHz. The uncertainty is the RSS of ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Above 5 GHz frequency validity can be extended to ± 110 MHz.

[F] At frequency up to 6 GHz, the validity of tissue parameters (ε and σ) can be relaxed to ±10% if liquid compensation formula is applied to measured SAR values. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

[G] Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for the frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

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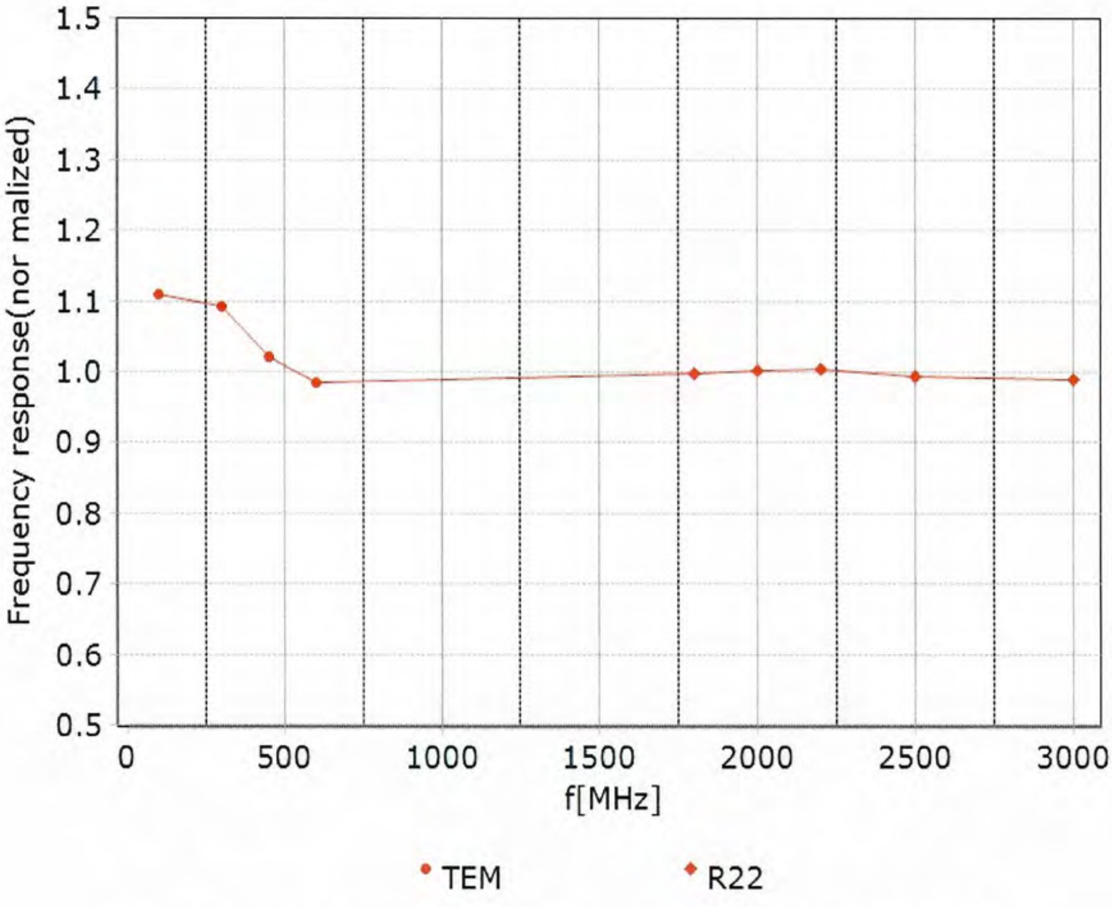
Frequency Response of E-Field
(TEM-Cell: ifi110 EXX, Waveguide: R22)



Uncertainty of Frequency Response of E-field: ±7.4% (*k*=2)

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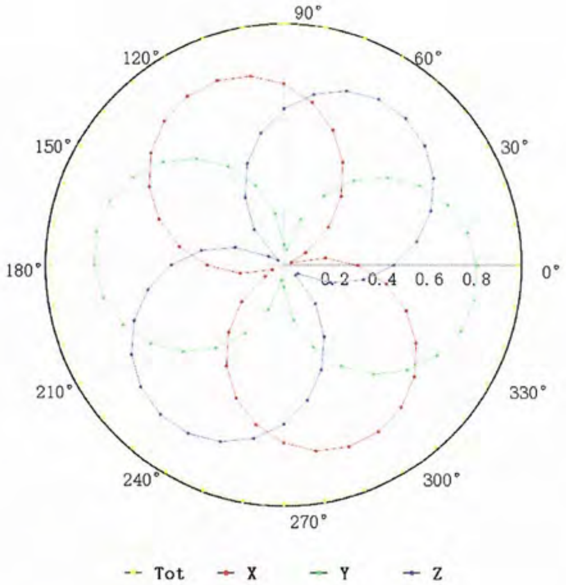
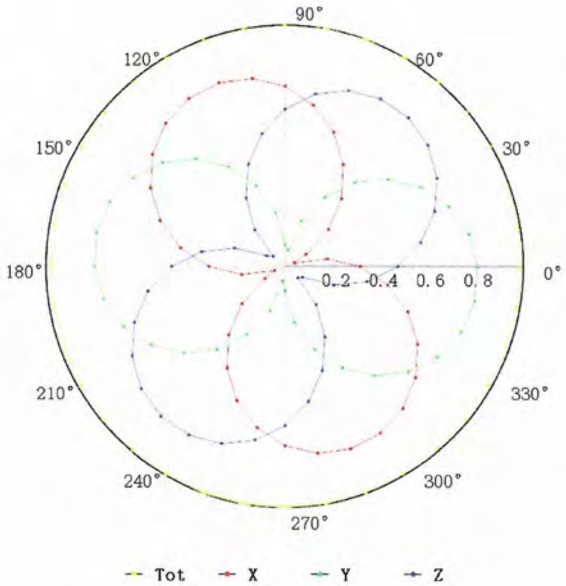
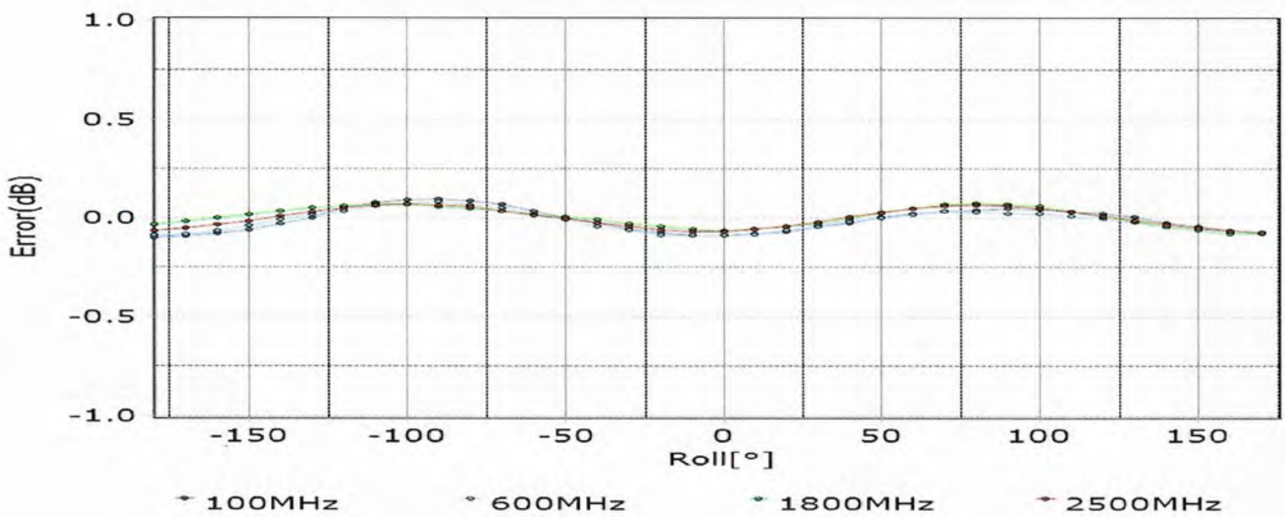
Receiving Pattern (Φ), θ=0°

f=600 MHz, TEM



f=1800 MHz, R22





Uncertainty of Axial Isotropy Assessment: ±1.2% (k=2)

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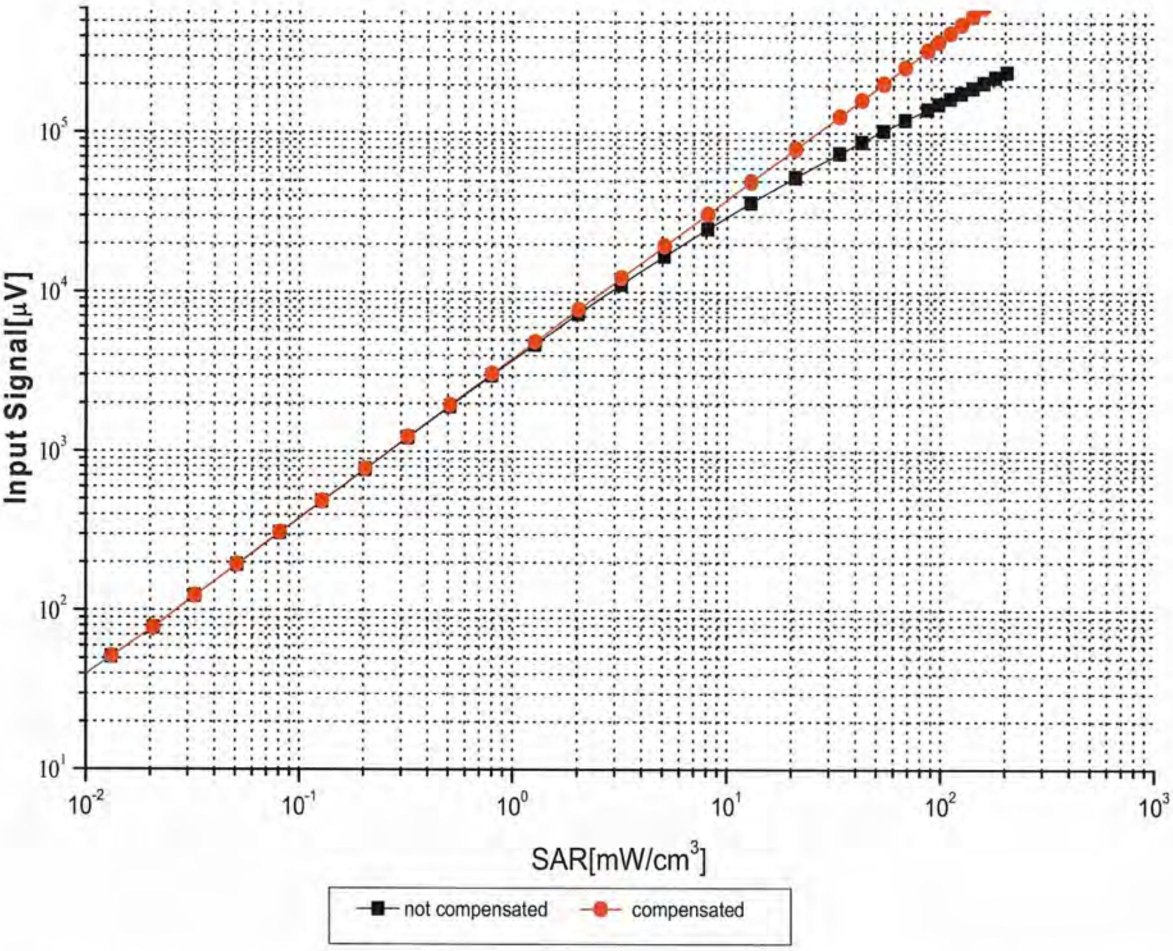
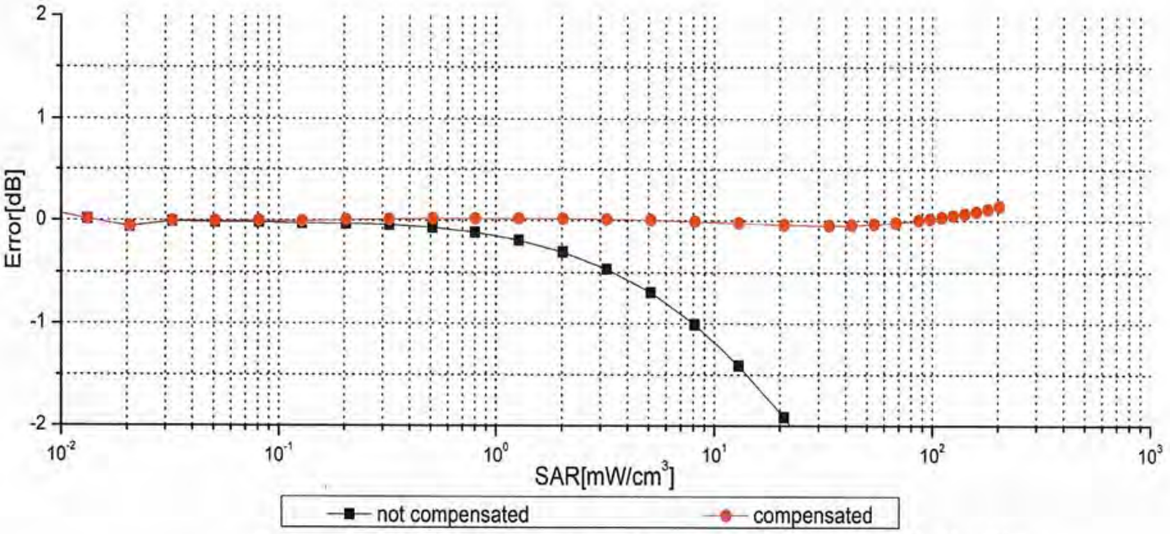
Dynamic Range f(SAR$_{head}$)
(TEM cell, f = 900 MHz)





Uncertainty of Linearity Assessment: ±0.9% (*k*=2)

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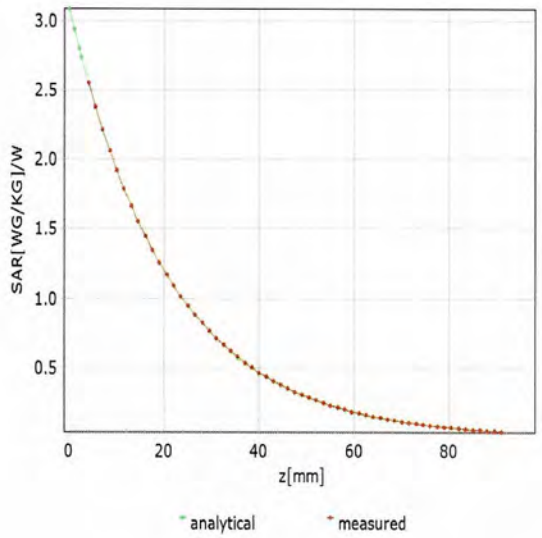
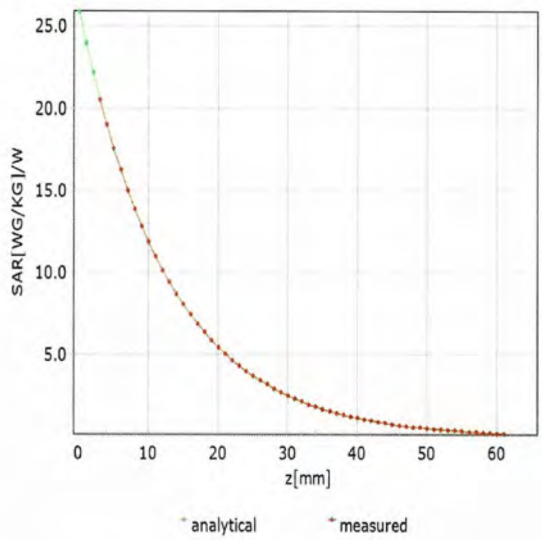
Conversion Factor Assessment

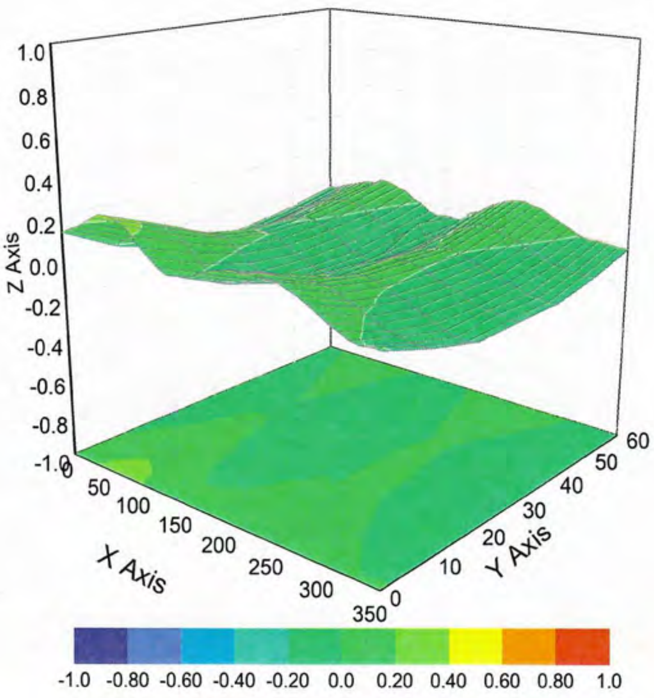
f=750 MHz,WGLS R9(H_convF)



f=1750 MHz,WGLS R22(H_convF)



Deviation from Isotropy in Liquid



Uncertainty of Spherical Isotropy Assessment: ±3.2% (*k*=2)

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Appendix: Modulation Calibration Parameters

UID	Rev	Communication System Name	Group	PAR (dB)	UncE (*k*=2)
0		CW	CW	0.00	± 4.7 %
10010	CAA	SAR Validation (Square, 100ms, 10ms)	Test	10.00	± 9.6 %
10011	CAB	UMTS-FDD (WCDMA)	WCDMA	2.91	± 9.6 %
10012	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps)	WLAN	1.87	± 9.6 %
10013	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps)	WLAN	9.46	± 9.6 %
10021	DAC	GSM-FDD (TDMA, GMSK)	GSM	9.39	± 9.6 %
10023	DAC	GPRS-FDD (TDMA, GMSK, TN 0)	GSM	9.57	± 9.6 %
10024	DAC	GPRS-FDD (TDMA, GMSK, TN 0-1)	GSM	6.56	± 9.6 %
10025	DAC	EDGE-FDD (TDMA, 8PSK, TN 0)	GSM	12.62	± 9.6 %
10026	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1)	GSM	9.55	± 9.6 %
10027	DAC	GPRS-FDD (TDMA, GMSK, TN 0-1-2)	GSM	4.80	± 9.6 %
10028	DAC	GPRS-FDD (TDMA, GMSK, TN 0-1-2-3)	GSM	3.55	± 9.6 %
10029	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1-2)	GSM	7.78	± 9.6 %
10030	CAA	IEEE 802.15.1 Bluetooth (GFSK, DH1)	Bluetooth	5.30	± 9.6 %
10031	CAA	IEEE 802.15.1 Bluetooth (GFSK, DH3)	Bluetooth	1.87	± 9.6 %
10032	CAA	IEEE 802.15.1 Bluetooth (GFSK, DH5)	Bluetooth	1.16	± 9.6 %
10033	CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH1)	Bluetooth	7.74	± 9.6 %
10034	CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH3)	Bluetooth	4.53	± 9.6 %
10035	CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH5)	Bluetooth	3.83	± 9.6 %
10036	CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH1)	Bluetooth	8.01	± 9.6 %
10037	CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH3)	Bluetooth	4.77	± 9.6 %
10038	CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH5)	Bluetooth	4.10	± 9.6 %
10039	CAB	CDMA2000 (1xRTT, RC1)	CDMA2000	4.57	± 9.6 %
10042	CAB	IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Halfrate)	AMPS	7.78	± 9.6 %
10044	CAA	IS-91/EIA/TIA-553 FDD (FDMA, FM)	AMPS	0.00	± 9.6 %
10048	CAA	DECT (TDD, TDMA/FDM, GFSK, Full Slot, 24)	DECT	13.80	± 9.6 %
10049	CAA	DECT (TDD, TDMA/FDM, GFSK, Double Slot, 12)	DECT	10.79	± 9.6 %
10056	CAA	UMTS-TDD (TD-SCDMA, 1.28 Mcps)	TD-SCDMA	11.01	± 9.6 %
10058	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1-2-3)	GSM	6.52	± 9.6 %
10059	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps)	WLAN	2.12	± 9.6 %
10060	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps)	WLAN	2.83	± 9.6 %
10061	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps)	WLAN	3.60	± 9.6 %
10062	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps)	WLAN	8.68	± 9.6 %
10063	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps)	WLAN	8.63	± 9.6 %
10064	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps)	WLAN	9.09	± 9.6 %
10065	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps)	WLAN	9.00	± 9.6 %
10066	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps)	WLAN	9.38	± 9.6 %
10067	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps)	WLAN	10.12	± 9.6 %
10068	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps)	WLAN	10.24	± 9.6 %
10069	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps)	WLAN	10.56	± 9.6 %
10071	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 9 Mbps)	WLAN	9.83	± 9.6 %
10072	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 12 Mbps)	WLAN	9.62	± 9.6 %
10073	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 18 Mbps)	WLAN	9.94	± 9.6 %
10074	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 24 Mbps)	WLAN	10.30	± 9.6 %
10075	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 36 Mbps)	WLAN	10.77	± 9.6 %
10076	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 48 Mbps)	WLAN	10.94	± 9.6 %
10077	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 54 Mbps)	WLAN	11.00	± 9.6 %
10081	CAB	CDMA2000 (1xRTT, RC3)	CDMA2000	3.97	± 9.6 %
10082	CAB	IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Fullrate)	AMPS	4.77	± 9.6 %
10090	DAC	GPRS-FDD (TDMA, GMSK, TN 0-4)	GSM	6.56	± 9.6 %
10097	CAC	UMTS-FDD (HSDPA)	WCDMA	3.98	± 9.6 %
10098	DAC	UMTS-FDD (HSUPA, Subtest 2)	WCDMA	3.98	± 9.6 %
10099	CAC	EDGE-FDD (TDMA, 8PSK, TN 0-4)	GSM	9.55	± 9.6 %
10100	CAC	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	LTE-FDD	5.67	± 9.6 %
10101	CAB	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	LTE-FDD	6.42	± 9.6 %

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10102	CAB	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	LTE-FDD	6.60	± 9.6 %
10103	DAC	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	LTE-TDD	9.29	± 9.6 %
10104	CAE	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	LTE-TDD	9.97	± 9.6 %
10105	CAE	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	LTE-TDD	10.01	± 9.6 %
10108	CAE	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK)	LTE-FDD	5.80	± 9.6 %
10109	CAG	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)	LTE-FDD	6.43	± 9.6 %
10110	CAG	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK)	LTE-FDD	5.75	± 9.6 %
10111	CAG	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)	LTE-FDD	6.44	± 9.6 %
10112	CAG	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)	LTE-FDD	6.59	± 9.6 %
10113	CAG	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)	LTE-FDD	6.62	± 9.6 %
10114	CAG	IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK)	WLAN	8.10	± 9.6 %
10115	CAG	IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)	WLAN	8.46	± 9.6 %
10116	CAG	IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM)	WLAN	8.15	± 9.6 %
10117	CAG	IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK)	WLAN	8.07	± 9.6 %
10118	CAD	IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM)	WLAN	8.59	± 9.6 %
10119	CAD	IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM)	WLAN	8.13	± 9.6 %
10140	CAD	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)	LTE-FDD	6.49	± 9.6 %
10141	CAD	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	LTE-FDD	6.53	± 9.6 %
10142	CAD	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK)	LTE-FDD	5.73	± 9.6 %
10143	CAD	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	LTE-FDD	6.35	± 9.6 %
10144	CAC	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)	LTE-FDD	6.65	± 9.6 %
10145	CAC	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	LTE-FDD	5.76	± 9.6 %
10146	CAC	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	LTE-FDD	6.41	± 9.6 %
10147	CAC	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	LTE-FDD	6.72	± 9.6 %
10149	CAE	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	LTE-FDD	6.42	± 9.6 %
10150	CAE	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)	LTE-FDD	6.60	± 9.6 %
10151	CAE	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	LTE-TDD	9.28	± 9.6 %
10152	CAE	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	LTE-TDD	9.92	± 9.6 %
10153	CAE	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)	LTE-TDD	10.05	± 9.6 %
10154	CAF	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK)	LTE-FDD	5.75	± 9.6 %
10155	CAF	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	LTE-FDD	6.43	± 9.6 %
10156	CAF	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK)	LTE-FDD	5.79	± 9.6 %
10157	CAE	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)	LTE-FDD	6.49	± 9.6 %
10158	CAE	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)	LTE-FDD	6.62	± 9.6 %
10159	CAG	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)	LTE-FDD	6.56	± 9.6 %
10160	CAG	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK)	LTE-FDD	5.82	± 9.6 %
10161	CAG	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	LTE-FDD	6.43	± 9.6 %
10162	CAG	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)	LTE-FDD	6.58	± 9.6 %
10166	CAG	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	LTE-FDD	5.46	± 9.6 %
10167	CAG	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	LTE-FDD	6.21	± 9.6 %
10168	CAG	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	LTE-FDD	6.79	± 9.6 %
10169	CAG	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	LTE-FDD	5.73	± 9.6 %
10170	CAG	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	LTE-FDD	6.52	± 9.6 %
10171	CAE	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	LTE-FDD	6.49	± 9.6 %
10172	CAE	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	LTE-TDD	9.21	± 9.6 %
10173	CAE	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	LTE-TDD	9.48	± 9.6 %
10174	CAF	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	LTE-TDD	10.25	± 9.6 %
10175	CAF	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	LTE-FDD	5.72	± 9.6 %
10176	CAF	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	LTE-FDD	6.52	± 9.6 %
10177	CAE	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	LTE-FDD	5.73	± 9.6 %
10178	CAE	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	LTE-FDD	6.52	± 9.6 %
10179	AAE	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	LTE-FDD	6.50	± 9.6 %
10180	CAG	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)	LTE-FDD	6.50	± 9.6 %
10181	CAG	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	LTE-FDD	5.72	± 9.6 %
10182	CAG	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	LTE-FDD	6.52	± 9.6 %
10183	CAG	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)	LTE-FDD	6.50	± 9.6 %
10184	CAG	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK)	LTE-FDD	5.73	± 9.6 %
10185	CAI	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)	LTE-FDD	6.51	± 9.6 %
10186	CAG	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)	LTE-FDD	6.50	± 9.6 %

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10187	CAG	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	LTE-FDD	5.73	± 9.6 %
10188	CAG	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	LTE-FDD	6.52	± 9.6 %
10189	CAE	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	LTE-FDD	6.50	± 9.6 %
10193	CAE	IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK)	WLAN	8.09	± 9.6 %
10194	AAD	IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM)	WLAN	8.12	± 9.6 %
10195	CAE	IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM)	WLAN	8.21	± 9.6 %
10196	CAE	IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK)	WLAN	8.10	± 9.6 %
10197	AAE	IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM)	WLAN	8.13	± 9.6 %
10198	CAF	IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM)	WLAN	8.27	± 9.6 %
10219	CAF	IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK)	WLAN	8.03	± 9.6 %
10220	AAF	IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM)	WLAN	8.13	± 9.6 %
10221	CAC	IEEE 802.11n (HT Mixed, 72.2 Mbps, 64-QAM)	WLAN	8.27	± 9.6 %
10222	CAC	IEEE 802.11n (HT Mixed, 15 Mbps, BPSK)	WLAN	8.06	± 9.6 %
10223	CAD	IEEE 802.11n (HT Mixed, 90 Mbps, 16-QAM)	WLAN	8.48	± 9.6 %
10224	CAD	IEEE 802.11n (HT Mixed, 150 Mbps, 64-QAM)	WLAN	8.08	± 9.6 %
10225	CAD	UMTS-FDD (HSPA+)	WCDMA	5.97	± 9.6 %
10226	CAD	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	LTE-TDD	9.49	± 9.6 %
10227	CAD	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	LTE-TDD	10.26	± 9.6 %
10228	CAD	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	LTE-TDD	9.22	± 9.6 %
10229	DAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)	LTE-TDD	9.48	± 9.6 %
10230	CAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)	LTE-TDD	10.25	± 9.6 %
10231	CAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK)	LTE-TDD	9.19	± 9.6 %
10232	CAD	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	LTE-TDD	9.48	± 9.6 %
10233	CAD	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)	LTE-TDD	10.25	± 9.6 %
10234	CAD	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	LTE-TDD	9.21	± 9.6 %
10235	CAD	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	LTE-TDD	9.48	± 9.6 %
10236	CAD	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	LTE-TDD	10.25	± 9.6 %
10237	CAD	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	LTE-TDD	9.21	± 9.6 %
10238	CAB	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	LTE-TDD	9.48	± 9.6 %
10239	CAB	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)	LTE-TDD	10.25	± 9.6 %
10240	CAB	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	LTE-TDD	9.21	± 9.6 %
10241	CAB	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	LTE-TDD	9.82	± 9.6 %
10242	CAD	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	LTE-TDD	9.86	± 9.6 %
10243	CAD	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	LTE-TDD	9.46	± 9.6 %
10244	CAD	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	LTE-TDD	10.06	± 9.6 %
10245	CAG	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)	LTE-TDD	10.06	± 9.6 %
10246	CAG	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK)	LTE-TDD	9.30	± 9.6 %
10247	CAG	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)	LTE-TDD	9.91	± 9.6 %
10248	CAG	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)	LTE-TDD	10.09	± 9.6 %
10249	CAG	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK)	LTE-TDD	9.29	± 9.6 %
10250	CAG	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	LTE-TDD	9.81	± 9.6 %
10251	CAF	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)	LTE-TDD	10.17	± 9.6 %
10252	CAF	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK)	LTE-TDD	9.24	± 9.6 %
10253	CAF	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	LTE-TDD	9.90	± 9.6 %
10254	CAB	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)	LTE-TDD	10.14	± 9.6 %
10255	CAB	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK)	LTE-TDD	9.20	± 9.6 %
10256	CAB	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	LTE-TDD	9.96	± 9.6 %
10257	CAD	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	LTE-TDD	10.08	± 9.6 %
10258	CAD	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	LTE-TDD	9.34	± 9.6 %
10259	CAD	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	LTE-TDD	9.98	± 9.6 %
10260	CAG	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)	LTE-TDD	9.97	± 9.6 %
10261	CAG	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK)	LTE-TDD	9.24	± 9.6 %
10262	CAG	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)	LTE-TDD	9.83	± 9.6 %
10263	CAG	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)	LTE-TDD	10.16	± 9.6 %
10264	CAG	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK)	LTE-TDD	9.23	± 9.6 %
10265	CAG	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)	LTE-TDD	9.92	± 9.6 %
10266	CAF	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)	LTE-TDD	10.07	± 9.6 %
10267	CAF	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK)	LTE-TDD	9.30	± 9.6 %
10268	CAF	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)	LTE-TDD	10.06	± 9.6 %

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10269	CAB	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	LTE-TDD	10.13	± 9.6 %
10270	CAB	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK)	LTE-TDD	9.58	± 9.6 %
10274	CAB	UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10)	WCDMA	4.87	± 9.6 %
10275	CAD	UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4)	WCDMA	3.96	± 9.6 %
10277	CAD	PHS (QPSK)	PHS	11.81	± 9.6 %
10278	CAD	PHS (QPSK, BW 884MHz, Rolloff 0.5)	PHS	11.81	± 9.6 %
10279	CAG	PHS (QPSK, BW 884MHz, Rolloff 0.38)	PHS	12.18	± 9.6 %
10290	CAG	CDMA2000, RC1, SO55, Full Rate	CDMA2000	3.91	± 9.6 %
10291	CAG	CDMA2000, RC3, SO55, Full Rate	CDMA2000	3.46	± 9.6 %
10292	CAG	CDMA2000, RC3, SO32, Full Rate	CDMA2000	3.39	± 9.6 %
10293	CAG	CDMA2000, RC3, SO3, Full Rate	CDMA2000	3.50	± 9.6 %
10295	CAG	CDMA2000, RC1, SO3, 1/8th Rate 25 fr.	CDMA2000	12.49	± 9.6 %
10297	CAF	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	LTE-FDD	5.81	± 9.6 %
10298	CAF	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK)	LTE-FDD	5.72	± 9.6 %
10299	CAF	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	LTE-FDD	6.39	± 9.6 %
10300	CAC	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)	LTE-FDD	6.60	± 9.6 %
10301	CAC	IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC)	WiMAX	12.03	± 9.6 %
10302	CAB	IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC, 3CTRL)	WiMAX	12.57	± 9.6 %
10303	CAB	IEEE 802.16e WiMAX (31:15, 5ms, 10MHz, 64QAM, PUSC)	WiMAX	12.52	± 9.6 %
10304	CAA	IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, 64QAM, PUSC)	WiMAX	11.86	± 9.6 %
10305	CAA	IEEE 802.16e WiMAX (31:15, 10ms, 10MHz, 64QAM, PUSC)	WiMAX	15.24	± 9.6 %
10306	CAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 64QAM, PUSC)	WiMAX	14.67	± 9.6 %
10307	AAB	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, PUSC)	WiMAX	14.49	± 9.6 %
10308	AAB	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, PUSC)	WiMAX	14.46	± 9.6 %
10309	AAB	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM,AMC 2x3)	WiMAX	14.58	± 9.6 %
10310	AAB	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, AMC 2x3	WiMAX	14.57	± 9.6 %
10311	AAB	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK)	LTE-FDD	6.06	± 9.6 %
10313	AAD	iDEN 1:3	iDEN	10.51	± 9.6 %
10314	AAD	iDEN 1:6	iDEN	13.48	± 9.6 %
10315	AAD	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc dc)	WLAN	1.71	± 9.6 %
10316	AAD	IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 96pc dc)	WLAN	8.36	± 9.6 %
10317	AAA	IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc dc)	WLAN	8.36	± 9.6 %
10352	AAA	Pulse Waveform (200Hz, 10%)	Generic	10.00	± 9.6 %
10353	AAA	Pulse Waveform (200Hz, 20%)	Generic	6.99	± 9.6 %
10354	AAA	Pulse Waveform (200Hz, 40%)	Generic	3.98	± 9.6 %
10355	AAA	Pulse Waveform (200Hz, 60%)	Generic	2.22	± 9.6 %
10356	AAA	Pulse Waveform (200Hz, 80%)	Generic	0.97	± 9.6 %
10387	AAA	QPSK Waveform, 1 MHz	Generic	5.10	± 9.6 %
10388	AAA	QPSK Waveform, 10 MHz	Generic	5.22	± 9.6 %
10396	AAA	64-QAM Waveform, 100 kHz	Generic	6.27	± 9.6 %
10399	AAA	64-QAM Waveform, 40 MHz	Generic	6.27	± 9.6 %
10400	AAD	IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc dc)	WLAN	8.37	± 9.6 %
10401	AAA	IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc dc)	WLAN	8.60	± 9.6 %
10402	AAA	IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc dc)	WLAN	8.53	± 9.6 %
10403	AAB	CDMA2000 (1xEV-DO, Rev. 0)	CDMA2000	3.76	± 9.6 %
10404	AAB	CDMA2000 (1xEV-DO, Rev. A)	CDMA2000	3.77	± 9.6 %
10406	AAD	CDMA2000, RC3, SO32, SCH0, Full Rate	CDMA2000	5.22	± 9.6 %
10410	AAA	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Sub=2,3,4,7,8,9)	LTE-TDD	7.82	± 9.6 %
10414	AAA	WLAN CCDF, 64-QAM, 40MHz	Generic	8.54	± 9.6 %
10415	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc dc)	WLAN	1.54	± 9.6 %
10416	AAA	IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 99pc dc)	WLAN	8.23	± 9.6 %
10417	AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 99pc dc)	WLAN	8.23	± 9.6 %
10418	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc, Long)	WLAN	8.14	± 9.6 %
10419	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc, Short)	WLAN	8.19	± 9.6 %
10422	AAA	IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK)	WLAN	8.32	± 9.6 %
10423	AAA	IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM)	WLAN	8.47	± 9.6 %
10424	AAE	IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM)	WLAN	8.40	± 9.6 %
10425	AAE	IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK)	WLAN	8.41	± 9.6 %
10426	AAE	IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM)	WLAN	8.45	± 9.6 %

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10427	AAB	IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)	WLAN	8.41	± 9.6 %
10430	AAB	LTE-FDD (OFDMA, 5 MHz, E-TM 3.1)	LTE-FDD	8.28	± 9.6 %
10431	AAC	LTE-FDD (OFDMA, 10 MHz, E-TM 3.1)	LTE-FDD	8.38	± 9.6 %
10432	AAB	LTE-FDD (OFDMA, 15 MHz, E-TM 3.1)	LTE-FDD	8.34	± 9.6 %
10433	AAC	LTE-FDD (OFDMA, 20 MHz, E-TM 3.1)	LTE-FDD	8.34	± 9.6 %
10434	AAG	W-CDMA (BS Test Model 1, 64 DPCH)	WCDMA	8.60	± 9.6 %
10435	AAA	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Sub)	LTE-TDD	7.82	± 9.6 %
10447	AAA	LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)	LTE-FDD	7.56	± 9.6 %
10448	AAA	LTE-FDD (OFDMA, 10 MHz, E-TM 3.1, Clippin 44%)	LTE-FDD	7.53	± 9.6 %
10449	AAC	LTE-FDD (OFDMA, 15 MHz, E-TM 3.1, Cliping 44%)	LTE-FDD	7.51	± 9.6 %
10450	AAA	LTE-FDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)	LTE-FDD	7.48	± 9.6 %
10451	AAA	W-CDMA (BS Test Model 1, 64 DPCH, Clipping 44%)	WCDMA	7.59	± 9.6 %
10453	AAC	Validation (Square, 10ms, 1ms)	Test	10.00	± 9.6 %
10456	AAC	IEEE 802.11ac WiFi (160MHz, 64-QAM, 99pc dc)	WLAN	8.63	± 9.6 %
10457	AAC	UMTS-FDD (DC-HSDPA)	WCDMA	6.62	± 9.6 %
10458	AAC	CDMA2000 (1xEV-DO, Rev. B, 2 carriers)	CDMA2000	6.55	± 9.6 %
10459	AAC	CDMA2000 (1xEV-DO, Rev. B, 3 carriers)	CDMA2000	8.25	± 9.6 %
10460	AAC	UMTS-FDD (WCDMA, AMR)	WCDMA	2.39	± 9.6 %
10461	AAC	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK, UL Sub)	LTE-TDD	7.82	± 9.6 %
10462	AAC	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM, UL Sub)	LTE-TDD	8.30	± 9.6 %
10463	AAD	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM, UL Sub)	LTE-TDD	8.56	± 9.6 %
10464	AAD	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK, UL Sub)	LTE-TDD	7.82	± 9.6 %
10465	AAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM, UL Sub)	LTE-TDD	8.32	± 9.6 %
10466	AAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM, UL Sub)	LTE-TDD	8.57	± 9.6 %
10467	AAA	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Sub)	LTE-TDD	7.82	± 9.6 %
10468	AAF	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL Sub)	LTE-TDD	8.32	± 9.6 %
10469	AAD	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL Sub)	LTE-TDD	8.56	± 9.6 %
10470	AAD	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Sub)	LTE-TDD	7.82	± 9.6 %
10471	AAC	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM, UL Sub)	LTE-TDD	8.32	± 9.6 %
10472	AAC	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL Sub)	LTE-TDD	8.57	± 9.6 %
10473	AAA	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK, UL Sub)	LTE-TDD	7.82	± 9.6 %
10474	AAC	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM, UL Sub)	LTE-TDD	8.32	± 9.6 %
10475	AAD	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL Sub)	LTE-TDD	8.57	± 9.6 %
10477	AAC	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM, UL Sub)	LTE-TDD	8.32	± 9.6 %
10478	AAC	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL Sub)	LTE-TDD	8.57	± 9.6 %
10479	AAC	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL Sub)	LTE-TDD	7.74	± 9.6 %
10480	AAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL Sub)	LTE-TDD	8.18	± 9.6 %
10481	AAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM, UL Sub)	LTE-TDD	8.45	± 9.6 %
10482	AAA	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK, UL Sub)	LTE-TDD	7.71	± 9.6 %
10483	AAA	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM, Sub)	LTE-TDD	8.39	± 9.6 %
10484	AAB	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM, UL Sub)	LTE-TDD	8.47	± 9.6 %
10485	AAB	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK, UL Sub)	LTE-TDD	7.59	± 9.6 %
10486	AAB	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM, UL Sub)	LTE-TDD	8.38	± 9.6 %
10487	AAC	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM, UL Sub)	LTE-TDD	8.60	± 9.6 %
10488	AAC	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK, UL Sub)	LTE-TDD	7.70	± 9.6 %
10489	AAC	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL Sub)	LTE-TDD	8.31	± 9.6 %
10490	AAF	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL Sub)	LTE-TDD	8.54	± 9.6 %
10491	AAF	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL Sub)	LTE-TDD	7.74	± 9.6 %
10492	AAF	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM, UL Sub)	LTE-TDD	8.41	± 9.6 %
10493	AAF	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM, UL Sub)	LTE-TDD	8.55	± 9.6 %
10494	AAF	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL Sub)	LTE-TDD	7.74	± 9.6 %
10495	AAF	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM, UL Sub)	LTE-TDD	8.37	± 9.6 %
10496	AAE	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL Sub)	LTE-TDD	8.54	± 9.6 %
10497	AAE	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK, UL Sub)	LTE-TDD	7.67	± 9.6 %
10498	AAE	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL Sub)	LTE-TDD	8.40	± 9.6 %
10499	AAC	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL Sub)	LTE-TDD	8.68	± 9.6 %
10500	AAF	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL Sub)	LTE-TDD	7.67	± 9.6 %
10501	AAF	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL Sub)	LTE-TDD	8.44	± 9.6 %
10502	AAB	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL Sub)	LTE-TDD	8.52	± 9.6 %

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10503	AAB	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL Sub)	LTE-TDD	7.72	± 9.6 %
10504	AAB	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL Sub)	LTE-TDD	8.31	± 9.6 %
10505	AAC	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL Sub)	LTE-TDD	8.54	± 9.6 %
10506	AAC	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL Sub)	LTE-TDD	7.74	± 9.6 %
10507	AAC	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL Sub)	LTE-TDD	8.36	± 9.6 %
10508	AAF	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL Sub)	LTE-TDD	8.55	± 9.6 %
10509	AAF	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL Sub)	LTE-TDD	7.99	± 9.6 %
10510	AAF	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL Sub)	LTE-TDD	8.49	± 9.6 %
10511	AAF	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL Sub)	LTE-TDD	8.51	± 9.6 %
10512	AAF	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL Sub)	LTE-TDD	7.74	± 9.6 %
10513	AAF	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Sub)	LTE-TDD	8.42	± 9.6 %
10514	AAE	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Sub)	LTE-TDD	8.45	± 9.6 %
10515	AAE	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc dc)	WLAN	1.58	± 9.6 %
10516	AAE	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc dc)	WLAN	1.57	± 9.6 %
10517	AAF	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc dc)	WLAN	1.58	± 9.6 %
10518	AAF	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc dc)	WLAN	8.23	± 9.6 %
10519	AAF	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc dc)	WLAN	8.39	± 9.6 %
10520	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc dc)	WLAN	8.12	± 9.6 %
10521	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc dc)	WLAN	7.97	± 9.6 %
10522	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc dc)	WLAN	8.45	± 9.6 %
10523	AAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc dc)	WLAN	8.08	± 9.6 %
10524	AAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc dc)	WLAN	8.27	± 9.6 %
10525	AAC	IEEE 802.11ac WiFi (20MHz, MCS0, 99pc dc)	WLAN	8.36	± 9.6 %
10526	AAF	IEEE 802.11ac WiFi (20MHz, MCS1, 99pc dc)	WLAN	8.42	± 9.6 %
10527	AAF	IEEE 802.11ac WiFi (20MHz, MCS2, 99pc dc)	WLAN	8.21	± 9.6 %
10528	AAF	IEEE 802.11ac WiFi (20MHz, MCS3, 99pc dc)	WLAN	8.36	± 9.6 %
10529	AAF	IEEE 802.11ac WiFi (20MHz, MCS4, 99pc dc)	WLAN	8.36	± 9.6 %
10531	AAF	IEEE 802.11ac WiFi (20MHz, MCS6, 99pc dc)	WLAN	8.43	± 9.6 %
10532	AAF	IEEE 802.11ac WiFi (20MHz, MCS7, 99pc dc)	WLAN	8.29	± 9.6 %
10533	AAE	IEEE 802.11ac WiFi (20MHz, MCS8, 99pc dc)	WLAN	8.38	± 9.6 %
10534	AAE	IEEE 802.11ac WiFi (40MHz, MCS0, 99pc dc)	WLAN	8.45	± 9.6 %
10535	AAE	IEEE 802.11ac WiFi (40MHz, MCS1, 99pc dc)	WLAN	8.45	± 9.6 %
10536	AAF	IEEE 802.11ac WiFi (40MHz, MCS2, 99pc dc)	WLAN	8.32	± 9.6 %
10537	AAF	IEEE 802.11ac WiFi (40MHz, MCS3, 99pc dc)	WLAN	8.44	± 9.6 %
10538	AAF	IEEE 802.11ac WiFi (40MHz, MCS4, 99pc dc)	WLAN	8.54	± 9.6 %
10540	AAA	IEEE 802.11ac WiFi (40MHz, MCS6, 99pc dc)	WLAN	8.39	± 9.6 %
10541	AAA	IEEE 802.11ac WiFi (40MHz, MCS7, 99pc dc)	WLAN	8.46	± 9.6 %
10542	AAA	IEEE 802.11ac WiFi (40MHz, MCS8, 99pc dc)	WLAN	8.65	± 9.6 %
10543	AAC	IEEE 802.11ac WiFi (40MHz, MCS9, 99pc dc)	WLAN	8.65	± 9.6 %
10544	AAC	IEEE 802.11ac WiFi (80MHz, MCS0, 99pc dc)	WLAN	8.47	± 9.6 %
10545	AAC	IEEE 802.11ac WiFi (80MHz, MCS1, 99pc dc)	WLAN	8.55	± 9.6 %
10546	AAC	IEEE 802.11ac WiFi (80MHz, MCS2, 99pc dc)	WLAN	8.35	± 9.6 %
10547	AAC	IEEE 802.11ac WiFi (80MHz, MCS3, 99pc dc)	WLAN	8.49	± 9.6 %
10548	AAC	IEEE 802.11ac WiFi (80MHz, MCS4, 99pc dc)	WLAN	8.37	± 9.6 %
10550	AAC	IEEE 802.11ac WiFi (80MHz, MCS6, 99pc dc)	WLAN	8.38	± 9.6 %
10551	AAC	IEEE 802.11ac WiFi (80MHz, MCS7, 99pc dc)	WLAN	8.50	± 9.6 %
10552	AAC	IEEE 802.11ac WiFi (80MHz, MCS8, 99pc dc)	WLAN	8.42	± 9.6 %
10553	AAC	IEEE 802.11ac WiFi (80MHz, MCS9, 99pc dc)	WLAN	8.45	± 9.6 %
10554	AAC	IEEE 802.11ac WiFi (160MHz, MCS0, 99pc dc)	WLAN	8.48	± 9.6 %
10555	AAC	IEEE 802.11ac WiFi (160MHz, MCS1, 99pc dc)	WLAN	8.47	± 9.6 %
10556	AAC	IEEE 802.11ac WiFi (160MHz, MCS2, 99pc dc)	WLAN	8.50	± 9.6 %
10557	AAC	IEEE 802.11ac WiFi (160MHz, MCS3, 99pc dc)	WLAN	8.52	± 9.6 %
10558	AAC	IEEE 802.11ac WiFi (160MHz, MCS4, 99pc dc)	WLAN	8.61	± 9.6 %
10560	AAC	IEEE 802.11ac WiFi (160MHz, MCS6, 99pc dc)	WLAN	8.73	± 9.6 %
10561	AAC	IEEE 802.11ac WiFi (160MHz, MCS7, 99pc dc)	WLAN	8.56	± 9.6 %
10562	AAC	IEEE 802.11ac WiFi (160MHz, MCS8, 99pc dc)	WLAN	8.69	± 9.6 %
10563	AAC	IEEE 802.11ac WiFi (160MHz, MCS9, 99pc dc)	WLAN	8.77	± 9.6 %
10564	AAC	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 99pc dc)	WLAN	8.25	± 9.6 %
10565	AAC	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 99pc dc)	WLAN	8.45	± 9.6 %

10566	AAC	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 99pc dc)	WLAN	8.13	± 9.6 %
10567	AAC	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 99pc dc)	WLAN	8.00	± 9.6 %
10568	AAC	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 99pc dc)	WLAN	8.37	± 9.6 %
10569	AAC	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 99pc dc)	WLAN	8.10	± 9.6 %
10570	AAC	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 99pc dc)	WLAN	8.30	± 9.6 %
10571	AAC	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc dc)	WLAN	1.99	± 9.6 %
10572	AAC	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc dc)	WLAN	1.99	± 9.6 %
10573	AAC	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc dc)	WLAN	1.98	± 9.6 %
10574	AAC	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc dc)	WLAN	1.98	± 9.6 %
10575	AAC	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc dc)	WLAN	8.59	± 9.6 %
10576	AAC	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc dc)	WLAN	8.60	± 9.6 %
10577	AAC	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc dc)	WLAN	8.70	± 9.6 %
10578	AAD	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc dc)	WLAN	8.49	± 9.6 %
10579	AAD	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc dc)	WLAN	8.36	± 9.6 %
10580	AAD	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc dc)	WLAN	8.76	± 9.6 %
10581	AAD	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc dc)	WLAN	8.35	± 9.6 %
10582	AAD	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc dc)	WLAN	8.67	± 9.6 %
10583	AAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 90pc dc)	WLAN	8.59	± 9.6 %
10584	AAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 90pc dc)	WLAN	8.60	± 9.6 %
10585	AAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 90pc dc)	WLAN	8.70	± 9.6 %
10586	AAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 90pc dc)	WLAN	8.49	± 9.6 %
10587	AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 90pc dc)	WLAN	8.36	± 9.6 %
10588	AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 90pc dc)	WLAN	8.76	± 9.6 %
10589	AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 90pc dc)	WLAN	8.35	± 9.6 %
10590	AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 90pc dc)	WLAN	8.67	± 9.6 %
10591	AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS0, 90pc dc)	WLAN	8.63	± 9.6 %
10592	AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS1, 90pc dc)	WLAN	8.79	± 9.6 %
10593	AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS2, 90pc dc)	WLAN	8.64	± 9.6 %
10594	AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS3, 90pc dc)	WLAN	8.74	± 9.6 %
10595	AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS4, 90pc dc)	WLAN	8.74	± 9.6 %
10596	AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS5, 90pc dc)	WLAN	8.71	± 9.6 %
10597	AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS6, 90pc dc)	WLAN	8.72	± 9.6 %
10598	AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS7, 90pc dc)	WLAN	8.50	± 9.6 %
10599	AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS0, 90pc dc)	WLAN	8.79	± 9.6 %
10600	AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS1, 90pc dc)	WLAN	8.88	± 9.6 %
10601	AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS2, 90pc dc)	WLAN	8.82	± 9.6 %
10602	AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS3, 90pc dc)	WLAN	8.94	± 9.6 %
10603	AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS4, 90pc dc)	WLAN	9.03	± 9.6 %
10604	AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS5, 90pc dc)	WLAN	8.76	± 9.6 %
10605	AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS6, 90pc dc)	WLAN	8.97	± 9.6 %
10606	AAC	IEEE 802.11n (HT Mixed, 40MHz, MCS7, 90pc dc)	WLAN	8.82	± 9.6 %
10607	AAC	IEEE 802.11ac WiFi (20MHz, MCS0, 90pc dc)	WLAN	8.64	± 9.6 %
10608	AAC	IEEE 802.11ac WiFi (20MHz, MCS1, 90pc dc)	WLAN	8.77	± 9.6 %
10609	AAC	IEEE 802.11ac WiFi (20MHz, MCS2, 90pc dc)	WLAN	8.57	± 9.6 %
10610	AAC	IEEE 802.11ac WiFi (20MHz, MCS3, 90pc dc)	WLAN	8.78	± 9.6 %
10611	AAC	IEEE 802.11ac WiFi (20MHz, MCS4, 90pc dc)	WLAN	8.70	± 9.6 %
10612	AAC	IEEE 802.11ac WiFi (20MHz, MCS5, 90pc dc)	WLAN	8.77	± 9.6 %
10613	AAC	IEEE 802.11ac WiFi (20MHz, MCS6, 90pc dc)	WLAN	8.94	± 9.6 %
10614	AAC	IEEE 802.11ac WiFi (20MHz, MCS7, 90pc dc)	WLAN	8.59	± 9.6 %
10615	AAC	IEEE 802.11ac WiFi (20MHz, MCS8, 90pc dc)	WLAN	8.82	± 9.6 %
10616	AAC	IEEE 802.11ac WiFi (40MHz, MCS0, 90pc dc)	WLAN	8.82	± 9.6 %
10617	AAC	IEEE 802.11ac WiFi (40MHz, MCS1, 90pc dc)	WLAN	8.81	± 9.6 %
10618	AAC	IEEE 802.11ac WiFi (40MHz, MCS2, 90pc dc)	WLAN	8.58	± 9.6 %
10619	AAC	IEEE 802.11ac WiFi (40MHz, MCS3, 90pc dc)	WLAN	8.86	± 9.6 %
10620	AAC	IEEE 802.11ac WiFi (40MHz, MCS4, 90pc dc)	WLAN	8.87	± 9.6 %
10621	AAC	IEEE 802.11ac WiFi (40MHz, MCS5, 90pc dc)	WLAN	8.77	± 9.6 %
10622	AAC	IEEE 802.11ac WiFi (40MHz, MCS6, 90pc dc)	WLAN	8.68	± 9.6 %
10623	AAC	IEEE 802.11ac WiFi (40MHz, MCS7, 90pc dc)	WLAN	8.82	± 9.6 %
10624	AAC	IEEE 802.11ac WiFi (40MHz, MCS8, 90pc dc)	WLAN	8.96	± 9.6 %

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10625	AAC	IEEE 802.11ac WiFi (40MHz, MCS9, 90pc dc)	WLAN	8.96	± 9.6 %
10626	AAC	IEEE 802.11ac WiFi (80MHz, MCS0, 90pc dc)	WLAN	8.83	± 9.6 %
10627	AAC	IEEE 802.11ac WiFi (80MHz, MCS1, 90pc dc)	WLAN	8.88	± 9.6 %
10628	AAC	IEEE 802.11ac WiFi (80MHz, MCS2, 90pc dc)	WLAN	8.71	± 9.6 %
10629	AAC	IEEE 802.11ac WiFi (80MHz, MCS3, 90pc dc)	WLAN	8.85	± 9.6 %
10630	AAC	IEEE 802.11ac WiFi (80MHz, MCS4, 90pc dc)	WLAN	8.72	± 9.6 %
10631	AAC	IEEE 802.11ac WiFi (80MHz, MCS5, 90pc dc)	WLAN	8.81	± 9.6 %
10632	AAC	IEEE 802.11ac WiFi (80MHz, MCS6, 90pc dc)	WLAN	8.74	± 9.6 %
10633	AAC	IEEE 802.11ac WiFi (80MHz, MCS7, 90pc dc)	WLAN	8.83	± 9.6 %
10634	AAC	IEEE 802.11ac WiFi (80MHz, MCS8, 90pc dc)	WLAN	8.80	± 9.6 %
10635	AAC	IEEE 802.11ac WiFi (80MHz, MCS9, 90pc dc)	WLAN	8.81	± 9.6 %
10636	AAC	IEEE 802.11ac WiFi (160MHz, MCS0, 90pc dc)	WLAN	8.83	± 9.6 %
10637	AAC	IEEE 802.11ac WiFi (160MHz, MCS1, 90pc dc)	WLAN	8.79	± 9.6 %
10638	AAC	IEEE 802.11ac WiFi (160MHz, MCS2, 90pc dc)	WLAN	8.86	± 9.6 %
10639	AAC	IEEE 802.11ac WiFi (160MHz, MCS3, 90pc dc)	WLAN	8.85	± 9.6 %
10640	AAC	IEEE 802.11ac WiFi (160MHz, MCS4, 90pc dc)	WLAN	8.98	± 9.6 %
10641	AAC	IEEE 802.11ac WiFi (160MHz, MCS5, 90pc dc)	WLAN	9.06	± 9.6 %
10642	AAC	IEEE 802.11ac WiFi (160MHz, MCS6, 90pc dc)	WLAN	9.06	± 9.6 %
10643	AAC	IEEE 802.11ac WiFi (160MHz, MCS7, 90pc dc)	WLAN	8.89	± 9.6 %
10644	AAC	IEEE 802.11ac WiFi (160MHz, MCS8, 90pc dc)	WLAN	9.05	± 9.6 %
10645	AAC	IEEE 802.11ac WiFi (160MHz, MCS9, 90pc dc)	WLAN	9.11	± 9.6 %
10646	AAC	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Sub=2,7)	LTE-TDD	11.96	± 9.6 %
10647	AAC	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Sub=2,7)	LTE-TDD	11.96	± 9.6 %
10648	AAC	CDMA2000 (1x Advanced)	CDMA2000	3.45	± 9.6 %
10652	AAC	LTE-TDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	6.91	± 9.6 %
10653	AAC	LTE-TDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	7.42	± 9.6 %
10654	AAC	LTE-TDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	6.96	± 9.6 %
10655	AAC	LTE-TDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	7.21	± 9.6 %
10658	AAC	Pulse Waveform (200Hz, 10%)	Test	10.00	± 9.6 %
10659	AAC	Pulse Waveform (200Hz, 20%)	Test	6.99	± 9.6 %
10660	AAC	Pulse Waveform (200Hz, 40%)	Test	3.98	± 9.6 %
10661	AAC	Pulse Waveform (200Hz, 60%)	Test	2.22	± 9.6 %
10662	AAC	Pulse Waveform (200Hz, 80%)	Test	0.97	± 9.6 %
10670	AAC	Bluetooth Low Energy	Bluetooth	2.19	± 9.6 %
10671	AAD	IEEE 802.11ax (20MHz, MCS0, 90pc dc)	WLAN	9.09	± 9.6 %
10672	AAD	IEEE 802.11ax (20MHz, MCS1, 90pc dc)	WLAN	8.57	± 9.6 %
10673	AAD	IEEE 802.11ax (20MHz, MCS2, 90pc dc)	WLAN	8.78	± 9.6 %
10674	AAD	IEEE 802.11ax (20MHz, MCS3, 90pc dc)	WLAN	8.74	± 9.6 %
10675	AAD	IEEE 802.11ax (20MHz, MCS4, 90pc dc)	WLAN	8.90	± 9.6 %
10676	AAD	IEEE 802.11ax (20MHz, MCS5, 90pc dc)	WLAN	8.77	± 9.6 %
10677	AAD	IEEE 802.11ax (20MHz, MCS6, 90pc dc)	WLAN	8.73	± 9.6 %
10678	AAD	IEEE 802.11ax (20MHz, MCS7, 90pc dc)	WLAN	8.78	± 9.6 %
10679	AAD	IEEE 802.11ax (20MHz, MCS8, 90pc dc)	WLAN	8.89	± 9.6 %
10680	AAD	IEEE 802.11ax (20MHz, MCS9, 90pc dc)	WLAN	8.80	± 9.6 %
10681	AAG	IEEE 802.11ax (20MHz, MCS10, 90pc dc)	WLAN	8.62	± 9.6 %
10682	AAF	IEEE 802.11ax (20MHz, MCS11, 90pc dc)	WLAN	8.83	± 9.6 %
10683	AAA	IEEE 802.11ax (20MHz, MCS0, 99pc dc)	WLAN	8.42	± 9.6 %
10684	AAC	IEEE 802.11ax (20MHz, MCS1, 99pc dc)	WLAN	8.26	± 9.6 %
10685	AAC	IEEE 802.11ax (20MHz, MCS2, 99pc dc)	WLAN	8.33	± 9.6 %
10686	AAC	IEEE 802.11ax (20MHz, MCS3, 99pc dc)	WLAN	8.28	± 9.6 %
10687	AAE	IEEE 802.11ax (20MHz, MCS4, 99pc dc)	WLAN	8.45	± 9.6 %
10688	AAE	IEEE 802.11ax (20MHz, MCS5, 99pc dc)	WLAN	8.29	± 9.6 %
10689	AAD	IEEE 802.11ax (20MHz, MCS6, 99pc dc)	WLAN	8.55	± 9.6 %
10690	AAE	IEEE 802.11ax (20MHz, MCS7, 99pc dc)	WLAN	8.29	± 9.6 %
10691	AAB	IEEE 802.11ax (20MHz, MCS8, 99pc dc)	WLAN	8.25	± 9.6 %
10692	AAA	IEEE 802.11ax (20MHz, MCS9, 99pc dc)	WLAN	8.29	± 9.6 %
10693	AAA	IEEE 802.11ax (20MHz, MCS10, 99pc dc)	WLAN	8.25	± 9.6 %
10694	AAA	IEEE 802.11ax (20MHz, MCS11, 99pc dc)	WLAN	8.57	± 9.6 %
10695	AAA	IEEE 802.11ax (40MHz, MCS0, 90pc dc)	WLAN	8.78	± 9.6 %

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10696	AAA	IEEE 802.11ax (40MHz, MCS1, 90pc dc)	WLAN	8.91	± 9.6 %
10697	AAA	IEEE 802.11ax (40MHz, MCS2, 90pc dc)	WLAN	8.61	± 9.6 %
10698	AAA	IEEE 802.11ax (40MHz, MCS3, 90pc dc)	WLAN	8.89	± 9.6 %
10699	AAA	IEEE 802.11ax (40MHz, MCS4, 90pc dc)	WLAN	8.82	± 9.6 %
10700	AAA	IEEE 802.11ax (40MHz, MCS5, 90pc dc)	WLAN	8.73	± 9.6 %
10701	AAA	IEEE 802.11ax (40MHz, MCS6, 90pc dc)	WLAN	8.86	± 9.6 %
10702	AAA	IEEE 802.11ax (40MHz, MCS7, 90pc dc)	WLAN	8.70	± 9.6 %
10703	AAA	IEEE 802.11ax (40MHz, MCS8, 90pc dc)	WLAN	8.82	± 9.6 %
10704	AAA	IEEE 802.11ax (40MHz, MCS9, 90pc dc)	WLAN	8.56	± 9.6 %
10705	AAA	IEEE 802.11ax (40MHz, MCS10, 90pc dc)	WLAN	8.69	± 9.6 %
10706	AAC	IEEE 802.11ax (40MHz, MCS11, 90pc dc)	WLAN	8.66	± 9.6 %
10707	AAC	IEEE 802.11ax (40MHz, MCS0, 99pc dc)	WLAN	8.32	± 9.6 %
10708	AAC	IEEE 802.11ax (40MHz, MCS1, 99pc dc)	WLAN	8.55	± 9.6 %
10709	AAC	IEEE 802.11ax (40MHz, MCS2, 99pc dc)	WLAN	8.33	± 9.6 %
10710	AAC	IEEE 802.11ax (40MHz, MCS3, 99pc dc)	WLAN	8.29	± 9.6 %
10711	AAC	IEEE 802.11ax (40MHz, MCS4, 99pc dc)	WLAN	8.39	± 9.6 %
10712	AAC	IEEE 802.11ax (40MHz, MCS5, 99pc dc)	WLAN	8.67	± 9.6 %
10713	AAC	IEEE 802.11ax (40MHz, MCS6, 99pc dc)	WLAN	8.33	± 9.6 %
10714	AAC	IEEE 802.11ax (40MHz, MCS7, 99pc dc)	WLAN	8.26	± 9.6 %
10715	AAC	IEEE 802.11ax (40MHz, MCS8, 99pc dc)	WLAN	8.45	± 9.6 %
10716	AAC	IEEE 802.11ax (40MHz, MCS9, 99pc dc)	WLAN	8.30	± 9.6 %
10717	AAC	IEEE 802.11ax (40MHz, MCS10, 99pc dc)	WLAN	8.48	± 9.6 %
10718	AAC	IEEE 802.11ax (40MHz, MCS11, 99pc dc)	WLAN	8.24	± 9.6 %
10719	AAC	IEEE 802.11ax (80MHz, MCS0, 90pc dc)	WLAN	8.81	± 9.6 %
10720	AAC	IEEE 802.11ax (80MHz, MCS1, 90pc dc)	WLAN	8.87	± 9.6 %
10721	AAC	IEEE 802.11ax (80MHz, MCS2, 90pc dc)	WLAN	8.76	± 9.6 %
10722	AAC	IEEE 802.11ax (80MHz, MCS3, 90pc dc)	WLAN	8.55	± 9.6 %
10723	AAC	IEEE 802.11ax (80MHz, MCS4, 90pc dc)	WLAN	8.70	± 9.6 %
10724	AAC	IEEE 802.11ax (80MHz, MCS5, 90pc dc)	WLAN	8.90	± 9.6 %
10725	AAC	IEEE 802.11ax (80MHz, MCS6, 90pc dc)	WLAN	8.74	± 9.6 %
10726	AAC	IEEE 802.11ax (80MHz, MCS7, 90pc dc)	WLAN	8.72	± 9.6 %
10727	AAC	IEEE 802.11ax (80MHz, MCS8, 90pc dc)	WLAN	8.66	± 9.6 %
10728	AAC	IEEE 802.11ax (80MHz, MCS9, 90pc dc)	WLAN	8.65	± 9.6 %
10729	AAC	IEEE 802.11ax (80MHz, MCS10, 90pc dc)	WLAN	8.64	± 9.6 %
10730	AAC	IEEE 802.11ax (80MHz, MCS11, 90pc dc)	WLAN	8.67	± 9.6 %
10731	AAC	IEEE 802.11ax (80MHz, MCS0, 99pc dc)	WLAN	8.42	± 9.6 %
10732	AAC	IEEE 802.11ax (80MHz, MCS1, 99pc dc)	WLAN	8.46	± 9.6 %
10733	AAC	IEEE 802.11ax (80MHz, MCS2, 99pc dc)	WLAN	8.40	± 9.6 %
10734	AAC	IEEE 802.11ax (80MHz, MCS3, 99pc dc)	WLAN	8.25	± 9.6 %
10735	AAC	IEEE 802.11ax (80MHz, MCS4, 99pc dc)	WLAN	8.33	± 9.6 %
10736	AAC	IEEE 802.11ax (80MHz, MCS5, 99pc dc)	WLAN	8.27	± 9.6 %
10737	AAC	IEEE 802.11ax (80MHz, MCS6, 99pc dc)	WLAN	8.36	± 9.6 %
10738	AAC	IEEE 802.11ax (80MHz, MCS7, 99pc dc)	WLAN	8.42	± 9.6 %
10739	AAC	IEEE 802.11ax (80MHz, MCS8, 99pc dc)	WLAN	8.29	± 9.6 %
10740	AAC	IEEE 802.11ax (80MHz, MCS9, 99pc dc)	WLAN	8.48	± 9.6 %
10741	AAC	IEEE 802.11ax (80MHz, MCS10, 99pc dc)	WLAN	8.40	± 9.6 %
10742	AAC	IEEE 802.11ax (80MHz, MCS11, 99pc dc)	WLAN	8.43	± 9.6 %
10743	AAC	IEEE 802.11ax (160MHz, MCS0, 90pc dc)	WLAN	8.94	± 9.6 %
10744	AAC	IEEE 802.11ax (160MHz, MCS1, 90pc dc)	WLAN	9.16	± 9.6 %
10745	AAC	IEEE 802.11ax (160MHz, MCS2, 90pc dc)	WLAN	8.93	± 9.6 %
10746	AAC	IEEE 802.11ax (160MHz, MCS3, 90pc dc)	WLAN	9.11	± 9.6 %
10747	AAC	IEEE 802.11ax (160MHz, MCS4, 90pc dc)	WLAN	9.04	± 9.6 %
10748	AAC	IEEE 802.11ax (160MHz, MCS5, 90pc dc)	WLAN	8.93	± 9.6 %
10749	AAC	IEEE 802.11ax (160MHz, MCS6, 90pc dc)	WLAN	8.90	± 9.6 %
10750	AAC	IEEE 802.11ax (160MHz, MCS7, 90pc dc)	WLAN	8.79	± 9.6 %
10751	AAC	IEEE 802.11ax (160MHz, MCS8, 90pc dc)	WLAN	8.82	± 9.6 %
10752	AAC	IEEE 802.11ax (160MHz, MCS9, 90pc dc)	WLAN	8.81	± 9.6 %
10753	AAC	IEEE 802.11ax (160MHz, MCS10, 90pc dc)	WLAN	9.00	± 9.6 %
10754	AAC	IEEE 802.11ax (160MHz, MCS11, 90pc dc)	WLAN	8.94	± 9.6 %