FCC SAR REPORT

Report No.:	JYTSZ-R14-2500006
Applicant:	SWAGTEK
Address of Applicant:	10205 NW 19th Street, STE 101, Miami, FL33172, USA
Equipment Under Test (EUT)	
Product Name:	4G Feature Phone
Model No.:	A23L, SNAP
Trade mark	LOGIC, UNONU, iSWAG
FCC ID:	O552435124
Applicable standards:	FCC 47 CFR Part 2.1093
Date of Test:	07 Jan., 2025 ~ 15 Jan., 2025
Test Result:	Maximum Reported 1-g SAR (W/kg) Head: 0.721 Body: 1.183

Project by:	Jair Lin ***Project Engineer***	***Date:***	*22 Jan., 2025*
Reviewed by:	Dieu Zhang ***Senior Engineer***	***Date:***	*22 Jan., 2025*
Approved by:	Janet Wei ***Manager***	***Date:***	*22 Jan., 2025*

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in above the application standard version. Test results reported herein relate only to the item(s) tested.

2 Version

Version No.	Date	Description
00	*22 Jan., 2025*	*Original*
01	*24 Jan., 2025*	*Updated on page 5,54,55*

3 Contents

4 SAR Results Summary

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

<Highest Reported standalone SAR Summary>

Exposure Position	Frequency Band	Reported 1-g SAR (W/kg)	Equipment Class	Highest Reported 1-g SAR (W/kg)
Head	GSM 850	0.196	PCE	0.721
	PCS 1900	0.085		
	WCDMA Band II	0.277		
	WCDMA Band IV	0.263		
	WCDMA Band V	0.721		
	LTE Band 2	0.097		
	LTE Band 4	0.139		
	LTE Band 5	0.265		
	LTE Band 7	0.134		
	BLE	0.000	DTS	
Body (10 mm Gap)	GSM 850	1.051	PCE	1.183
	PCS 1900	1.183		
	WCDMA Band II	0.578		
	WCDMA Band IV	0.359		
	WCDMA Band V	0.605		
	LTE Band 2	0.601		
	LTE Band 4	0.306		
	LTE Band 5	0.363		
	LTE Band 7	0.622		
	Bluetooth	0.000	DTS	

<Highest Reported simultaneous SAR Summary>

Exposure Position	Frequency Band	Reported 1-g SAR (W/kg)	Equipment Class	Highest Reported Simultaneous Transmission 1-g SAR (W/kg)
Back	GPRS1900/3 slots	1.183	PCE	1.183
	Bluetooth	0.000	DSS	

Note:
1. The highest simultaneous transmission is scalar summation of Reported standalone SAR per FCC KDB 690783 D01 v01r03, and scalar SAR summation of all possible simultaneous transmission scenarios are < 1.6W/kg.
2. This device is compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits (1.6 W/kg) specified in FCC 47 CFR part 2 (2.1093) and ANSI/IEEE C95.1-2005, and had been tested in accordance with the measurement methods and procedures specified in IEC/IEEE 62209-1528:2020.

5 General Information

5.1 Client Information

Applicant:	SWAGTEK
Address of Applicant:	10205 NW 19th Street, STE 101, Miami, FL33172, USA
Manufacturer:	SWAGTEK
Address of Manufacturer:	10205 NW 19th Street, STE 101, Miami, FL33172, USA
Factory:	SWAGTEK
Address of Factory:	10205 NW 19th Street, STE 101, Miami, FL33172, USA

5.2 General Description of EUT

<table>
<tr><td>Product Name:</td><td colspan="4">4G Feature Phone</td></tr>
<tr><td>Model No.:</td><td colspan="4">A23L, SNAP</td></tr>
<tr><td>Category of device</td><td colspan="4">Portable device</td></tr>
<tr><td rowspan="6">Operation Frequency:</td><td>GSM:</td><td>GSM850: 824.2~848.8 MHz</td><td colspan="2">PCS 1900: 1850.2~1909.8 MHz</td></tr>
<tr><td rowspan="2">WCDMA:</td><td>Band II: 1852.4~1907.6 MHz</td><td colspan="2">Band V: 826.4~846.6 MHz</td></tr>
<tr><td>Band IV: 1712.4~1752.6 MHz</td><td colspan="2"></td></tr>
<tr><td rowspan="2">LTE:</td><td>Band 2:1850MHz~1910MHz</td><td colspan="2">Band 4:1710MHz~1755MHz</td></tr>
<tr><td>Band 5:824MHz~849MHz</td><td colspan="2">Band 7: 2500MHz~2570MHz</td></tr>
<tr><td colspan="4">Bluetooth: 2402 MHz ~ 2480 MHz</td></tr>
<tr><td rowspan="4">Modulation technology:</td><td>GSM:</td><td>☒Voice(GMSK)</td><td>☒GPRS(GMSK)</td><td>☒EGPRS(GMSK, 8PSK)</td></tr>
<tr><td>WCDMA:</td><td>☒RMC(QPSK)</td><td>☐HSUPA(QPSK)</td><td>☐HSDPA(QPSK,16QAM)</td></tr>
<tr><td>LTE:</td><td>☒QPSK</td><td>☒16QAM</td><td>☐64QAM</td></tr>
<tr><td>Bluetooth:</td><td>☒BDR(GFSK)</td><td>☒EDR(π/4-DQPSK, 8DPSK)</td><td>☒LE(GFSK)</td></tr>
<tr><td>Antenna Type:</td><td colspan="4">Internal Antenna</td></tr>
<tr><td rowspan="5">Antenna Gain:</td><td>GSM 850:</td><td>0.5 dBi</td><td>PCS 1900:</td><td>0.9 dBi</td></tr>
<tr><td>WCDMA Band II:</td><td>0.9 dBi</td><td>WCDMA Band V</td><td>0.5 dBi</td></tr>
<tr><td>WCDMA Band IV:</td><td>0.8 dBi</td><td></td><td></td></tr>
<tr><td>LTE Band 2:</td><td>0.9 dBi</td><td>LTE Band 4</td><td>0.8 dBi</td></tr>
<tr><td>LTE Band 5:</td><td>0.5 dBi</td><td>LTE Band 7:</td><td>1.1 dBi</td></tr>
<tr><td>(E)GPRS Class:</td><td colspan="4">(E)GPRS Class: 12</td></tr>
<tr><td>Dimensions (L*W*H):</td><td colspan="4">132 mm (L)× 54 mm (W)× 14 mm (H)</td></tr>
<tr><td rowspan="2">Accessories information:</td><td rowspan="2" colspan="2">Adapter:
Model: YD050-002
Input: AC100-240V, 50/60Hz, 0.3A
Output: DC 5.0V, 500mA</td><td colspan="2">Battery:
Rechargeable Li-ion Battery DC3.7V, 1400mAh</td></tr>
<tr><td colspan="2">Headset:
Support headset (shipped without)</td></tr>
<tr><td>Remark:</td><td colspan="4">A23L, SNAP were identical inside, the electrical circuit design, layout, components used and internal wiring, with only difference being model name and trade mark.</td></tr>
</table>

5.3 Maximum RF Output Power

Mode	Average Power (dBm)	
	GSM 850	PCS 1900
GSM (Voice)	32.95	30.15
GPRS (1 TX Slot)	32.95	30.15
GPRS (2 TX Slots)	32.74	29.89
GPRS (3 TX Slots)	31.83	28.94
GPRS (4 TX Slots)	29.72	26.87
EGPRS (1 TX Slot)	27.98	28.17
EGPRS (2 TX Slots)	26.31	26.50
EGPRS (3 TX Slots)	23.60	24.32
EGPRS (4 TX Slots)	21.38	21.90

Mode	Average Power (dBm)		
	WCDMA Band II	WCDMA Band IV	WCDMA Band V
AMR 12.2 kbps	22.84	22.66	23.01
RMC 12.2 kbps	22.94	22.73	23.07

Mode	Average Power (dBm)			
	LTE Band 2	LTE Band 4	LTE Band 5	LTE Band 7
BW/1.4 MHz	22.95	22.75	22.79	/
BW/3.0 MHz	22.31	23.03	22.81	/
BW/5.0 MHz	22.21	23.13	22.85	23.79
BW/10 MHz	21.99	22.92	22.72	23.98
BW/15 MHz	22.68	22.81	/	23.71
BW/20 MHz	22.79	23.35	/	23.87

Bluetooth Average Power (dBm)							
Mode/Band	1 Mbps (GFSK)	2 Mbps (π/4DQPSK)	3 Mbps (8DPSK)	BLE PHY 1M	BLE PHY 2M	BLE Coded PHY S=2	BLE Coded PHY S=8
Bluetooth	-7.65	-5.67	-5.11	5.65	5.79	5.74	5.58

5.4 Environment of Test Site

Temperature:	18°C ~25 °C
Humidity:	35%~75% RH
Atmospheric Pressure:	1010 mbar

5.5 Test Sample Plan

Sample Number	Used for Test Items
SZR012400591-1	SAR
***Remark**: JianYan Testing Group Shenzhen Co., Ltd. is only responsible for the test project data of the above samples, and will keep the above samples for a month.*	

5.6 Laboratory Facility

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

- **FCC - Designation No.: CN1211**

JianYan Testing Group Shenzhen Co., Ltd. has been accredited as a testing laboratory by FCC(Federal Communications Commission). The test firm Registration No. is 727551.

- **ISED – CAB identifier.: CN0021**

The 3m Semi-anechoic chamber and 10m Semi-anechoic chamber of JianYan Testing Group Shenzhen Co., Ltd. has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 10106A-1.

- **CNAS - Registration No.: CNAS L15527**

JianYan Testing Group Shenzhen Co., Ltd. is accredited to ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration laboratories for the competence of testing. The Registration No. is CNAS L15527.

- **A2LA - Registration No.: 4346.01**

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories. The test scope can be found as below link: https://portal.a2la.org/scopepdf/4346-01.pdf

5.7 Test Location

JianYan Testing Group Shenzhen Co., Ltd.
No.101, Building 8, Innovation Wisdom Port, No.155 Hongtian Road, Huangpu Community,Xinqiao Street, Bao'an District, Shenzhen, Guangdong,People's Republic of China.
Tel: +86-755-23118282, Fax: +86-755-23116366
Email: info-JYTee@lets.com, Website: http://jyt.lets.com

6 Introduction

6.1 Introduction

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

6.2 SAR Definition

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

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

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

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

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

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

Where: σ is the conductivity of the tissue, ρ is the mass density of the tissue and E is the RMS electrical field strength. However for evaluating SAR of low power transmitter, electrical field measurement is typically applied.

7 RF Exposure Limits

7.1 Uncontrolled Environment

Uncontrolled Environments are defined as locations where there is the exposure of individuals who have no knowledge or control of their exposure. The general population/uncontrolled exposure limits are applicable to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Members of the general public would come under this category when exposure is not employment-related; for example, in the case of a wireless transmitter that exposes persons in its vicinity.

7.2 Controlled Environment

Controlled Environments are defined as locations where there is exposure that may be incurred by persons who are aware of the potential for exposure, (i.e. as a result of employment or occupation). In general, occupational/controlled exposure limits are applicable to situations in which persons are exposed as a consequence of their employment, who have been made fully aware of the potential for exposure and can exercise control over their exposure. This exposure category is also applicable when the exposure is of a transient nature due to incidental passage through a location where the exposure levels may be higher than the general population/uncontrolled limits, but the exposed person is fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

7.3 RF Exposure Limits

SAR Human Exposure Specified in ANSI/IEEE C95.1-1992 and Health Canada Safety Code 6

HUMAN EXPOSURE LIMITS		
	UNCONTROLLED ENVIRONMENT *General Population* (W/kg) or (mW/g)	CONTROLLED ENVIRONMENT *Occupational* (W/kg) or (mW/g)
SPATIAL PEAK SAR Brain	1.6	8.0
SPATIAL AVERAGE SAR Whole Body	0.08	0.4
SPATIAL PEAK SAR Hands, Feet, Ankles, Wrists	4.0	20

Note:

1. The Spatial Peak value of the SAR averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.
2. The Spatial Average value of the SAR averaged over the whole body.
3. The Spatial Peak value of the SAR averaged over any 10 grams of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.

8 SAR Measurement System

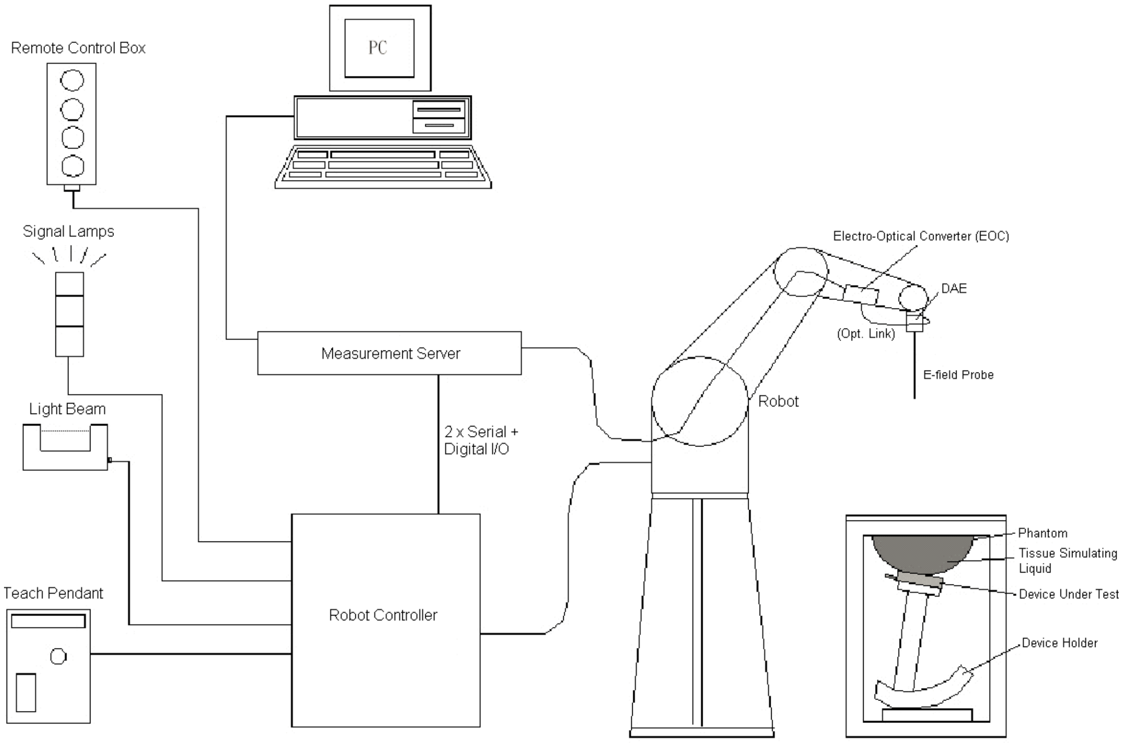


Fig. 8.1 SPEAG DASY System Configurations

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

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

Component details are described in the following sub-sections.

8.1 E-Field Probe

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

- **E-Field Probe Specification**
  <EX3DV4 Probe>

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

Fig. 8.2 Photo of E-Field Probe

- **E-Field Probe Calibration**
  Each probe needs to be calibrated according to a dosimetric assessment procedure with accuracy better than ± 10%. The spherical isotropy shall be evaluated and within ± 0.25 dB. The sensitivity parameters (Norm X, Norm Y and Norm Z), the diode compression parameter (DCP) and the conversion factor (ConvF) of the probe are tested. The calibration data can be referred to appendix E of this report.

8.2 Data Acquisition Electronics (DAE)

The Data acquisition electronics (DAE) consists of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converter and a command decoder and control logic unit. Transmission to the measurement server is accomplished through an optical downlink for data and status information as well as an optical uplink for commands and the clock. The input impedance of the DAE is 200 MOhm; the inputs are symmetrical and floating. Common mode rejection is above 80 dB.

Fig. 8.3 Photo of DAE

8.3 Robot

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

- High precision (repeatability 0.02 mm)
- High reliability (industrial design)
- Low maintenance costs (virtually maintenance free due to direct drive gears; nobelt drives)
- Jerk-free straight movements
- Low ELF interference (motor control fields shielded via the closed metallic construction shields)

Fig. 8.4 Photo of Robot

8.4 Measurement Server

The measurement server is based on a PC/104 CPU board with CPU (DASY 5: 400MHz, Intel Celeron), chip-disk (DASY5: 128 MB), RAM (DASY5: 128 MB). The necessary circuits for communication with the DAE electronic box, as well as the 16 bit AD converter system for optical detection and digital I/O interface are contained on the DASY I/O board, which is directly connected to the PC/104 bus of the CPU board.

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

Fig. 8.5 Photo of Server for DASY5

8.5 Light Beam Unit

The light beam switch allows automatic "tooling" of the probe. During the process, the actual position of the probe tip with respect to the robot arm is measured, as well as the probe length and the horizontal probe offset. The software then corrects all movements, such that the robot coordinates are valid for the probe tip.

The repeatability of this process is better than 0.1 mm. If a position has been taught with an aligned probe, the same position will be reached with another aligned probe within 0.1 mm, even if the other probe has different dimensions. During probe rotations, the probe tip will keep its actual position.

Fig. 8.6 Photo of Light Beam

8.6 Phantom

<SAM Twin Phantom>

Shell Thickness	2 ± 0.2 mm; Center ear point: 6 ± 0.2 mm	 **Fig. 8.7 Photo of SAM Twin Phantom**
Filling Volume Dimensions	Approx. 25 liters Length: 1000mm; Width: 500mm; Height: adjustable feet	
Measurement Areas	Left Head, Right Head, Flat phantom	

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

<ELI4 Phantom >

The ELI4 phantom is intended for compliance testing of handheld and body-mounted wireless devices in the frequency range of 30MHz to 6 GHz. ELI4 is fully compatible with the latest draft of the standard IEC 62209-2 and all known tissue simulating liquids.
ELI4 has been optimized regarding its performance and can be integrated into a SPEAG standard phantom table. 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 can be used with the following tissue simulating liquids:

- Water-sugar based liquids can be left permanently in the phantom. Always cover the liquid if the system is not in use; otherwise the parameters will change due to water evaporation.
- DGBE based liquids should be used with care. As DGBE is a softener for most plastics, the liquid should be taken out of the phantom and the phantom should be dried when the system is not in use (desirable at least once a week).
- Do not use other organic solvents without previously testing the phantom resistiveness

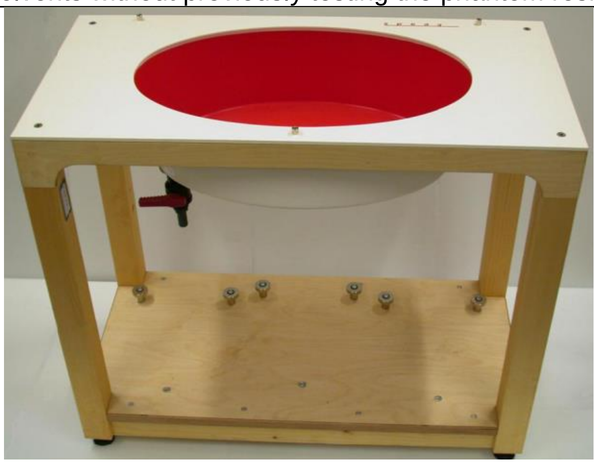


Fig.8.8 Photo of ELI4 Phantom

8.7 Device Holder

<Device Holder for SAM Twin Phantom>

The SAR in the phantom is approximately inversely proportional to the square of the distance between the source and the liquid surface. For a source at 5 mm distance, a positioning uncertainty of ± 0.5 mm would produce a SAR uncertainty of ± 20 %. Accurate device positioning is therefore crucial for accurate and repeatable measurements. The positions in which the devices must be measured are defined by the standards.
The DASY device holder is designed to cope with different positions given in the standard. It has two scales for the device rotation (with respect to the body axis) and the device inclination (with respect to the line between the ear reference points). The rotation center for both scales is the ear reference point (ERP).
Thus the device needs no repositioning when changing the angles.
The DASY device holder is constructed of low-low POM material having the following dielectric parameters: relative permittivity ε = 3 and loss tangent δ = 0.02. The amount of dielectric material has been reduced in the closest vicinity of the device, since measurements have suggested that the influence of the clamp on the test results could thus be lowered.

Fig. 8.9 Photo of Device Holder

8.8 Data storage and Evaluation

- **Data Storage**

The DASY software stores the assessed data from the data acquisition electronics as raw data (in microvolt readings from the probe sensors), together with all the necessary software parameters for the data evaluation (probe calibration data, liquid parameters and device frequency and modulation data) in measurement files. The post-processing software evaluates the desired unit and format for output each time the data is visualized or exported. This allows verifications of the complete software setup even after the measurement and allows correction of erroneous parameter settings. For example, if a measurement has been performed with an incorrect crest factor parameter in the device setup, the parameter can be corrected afterwards and the data can be reevaluated.

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

- **Data Evaluation**

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

Probe Parameters:	- Sensitivity	$Norm_i$, a_{i0}, a_{i1}, a_{i2}
	- Conversion	$ConvF_i$
	- Diode compression point	dcp_i
Device Parameters:	- Frequency	f
	- Crest	cf
Media Parameters:	- Conductivity	σ
	- Density	ρ

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

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

The formula for each channel can be given as:

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

With V_i = compensated signal of channel i, (i = x, y, z)
U_i = input signal of channel i, (i = x, y, z)
cf = crest factor of exciting field (DASY parameter)
dcp^i = diode compression point (DASY parameter)

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

E- Field Probes: $$E_i = \sqrt{\frac{v_i}{Norm_i \cdot ConvF}}$$

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

With V_i = compensated signal of channel i, (i = x, y, z)
$Norm_i$ = senor sensitivity of channel i, (i = x, y, z), μV/ (V/m) ^{2}
ConvF = sensitivity enhancement in solution
a_{ij} = sensor sensitivity factors for H-field probes
f = carrier frequency (GHz)
E_i = electric field strength of channel i in V/m
Hi = magnetic field strength of channel i in A/m

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

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

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

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

With SAR = local specific absorption rate in mW/g
E_{tot} = total field strength in V/m
σ = conductivity in (mho/m) or (Siemens/m)
ρ = equipment tissue density in g/cm^3

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

8.9 Test Equipment List

Manufacturer	Equipment Description	Model	Management Number	Cal. Information	
				Last Cal.	Due Date
SPEAG	835MHz System Validation Kit	D835V2	WXJ023-1	06.08.2022	06.07.2025
SPEAG	1750MHz System Validation Kit	D1750V2	WXJ023-6	01.17.2024	01.16.2027
SPEAG	1900MHz System Validation Kit	D1900V2	WXJ023-2	06.07.2022	06.06.2025
SPEAG	2450MHz System Validation Kit	D2450V2	WXJ023-3	06.06.2022	06.05.2025
SPEAG	2600MHz System Validation Kit	D2600V2	WXJ023-4	10.23.2024	10.22.2027
SPEAG	Data Acquisition Electronics	DAE4	WXJ021-1	03.26.2024	03.25.2025
SPEAG	Dosimetric E-Field Probe	EX3DV4	WXJ022	03.20.2024	03.19.2025
SPEAG	DASY 52 Measurement Software	DASY 52	Version 52.10.4.1527	N.C.R	N.C.R
SPEAG	DASY 52 File Conversion Software	SEMCAD X	Version 14.6.14 (7501)	N.C.R	N.C.R
SPEAG	Robot Controller	CS8Cspeag-TX60	WXG021-1	N.C.R	N.C.R
SPEAG	Phantom	Twin SAM Phantom	WXG021-4	N.C.R	N.C.R
SPEAG	Phantom	ELI V5.0	WXG021-5	N.C.R	N.C.R
SPEAG	Phone Positioner	N/A	WXG021-6	N.C.R	N.C.R
St?ubli	Robot	TX60Lspeag	WXG021-3	N.C.R	N.C.R
Anritsu	Universal Radio Communication Analyzer	MT8820C	WXJ008-5	01.10.2023	01.09.2025
R&S	Universal Radio Communication Tester	CMU200	WXJ008-2	12.27.2023	12.26.2025
KEYSIGHT	Network Analyzer	E5071C	WXJ091	12.16.2024	12.15.2025
KEYSIGHT	EPM Series Power Meter	N1914A	WXJ075	06.11.2024	06.10.2025
KEYSIGHT	E-Series Power Sensor	E9300H	WXJ075-1	06.11.2024	06.10.2025
KEYSIGHT	E-Series Power Sensor	E9300H	WXJ075-2	06.11.2024	06.10.2025
KEYSIGHT	Signal Generator	N5173B	WXJ006-3	09.09.2024	09.08.2025
Huber Suhner	RF Cable	SUCOFLEX	WXG008-13	See Note 3	
Huber Suhner	RF Cable	SUCOFLEX	WXG008-14	See Note 3	
Huber Suhner	RF Cable	SUCOFLEX	WXG008-15	See Note 3	
Weinschel	Attenuator	23-3-34	WXG008-16	See Note 3	
Anritsu	Directional Coupler	MP654A	WXG008-17	See Note 3	
SPEAG	Dielectric Assessment Kit	3.5 Probe	WXG008-7	See Note 4	
SPEAG	DAK Measurement Software	DAK	Version: DAK 3.5	N.C.R	
TXC	Broadband Amplifier	BBA018000	WXG008-11	See Note 5	

Note:

1. The calibration certificate of DASY can be referred to appendix C of this report.
2. Referring to KDB 865664 D01v01r04, the dipole calibration interval can be extended to 3 years with justification. The dipoles are also not physically damaged, or repaired during the interval.
3. The Insertion Loss calibration of Dual Directional Coupler and Attenuator were characterized via the network analyzer and compensated during system check.
4. The dielectric probe kit was calibrated via the network analyzer, with the specified procedure (calibrated in pure water) and calibration kit (standard) short circuit, before the dielectric measurement. The specific procedure and calibration kit are provided by Speag.
5. In system check we need to monitor the level on the power meter, and adjust the power amplifier level to have precise power level to the dipole; the measured SAR will be normalized to 1 W input power according to the ratio of 1 W to the input power to the dipole. For system check, the calibration of the power amplifier is deemed not critically required for correct measurement; the power meter is critical and we do have calibration for it
6. Attenuator insertion loss is calibrated by the network Analyzer, which the calibration is valid, before system check.
7. N.C.R means No Calibration Requirement.

9 Tissue Simulating Liquids

For the measurement of the field distribution inside the SAM phantom with DASY, the phantom must be filled with around 25 liters of homogeneous body tissue simulating liquid. For head SAR testing, the liquid height from the ear reference point (ERP) of the phantom to the liquid top surface is larger than 15 cm, which is shown in Fig. 9.1, for body SAR testing, the liquid height from the center of the flat phantom to liquid top surface is larger than 15 cm, which is shown in Fig. 9.2.

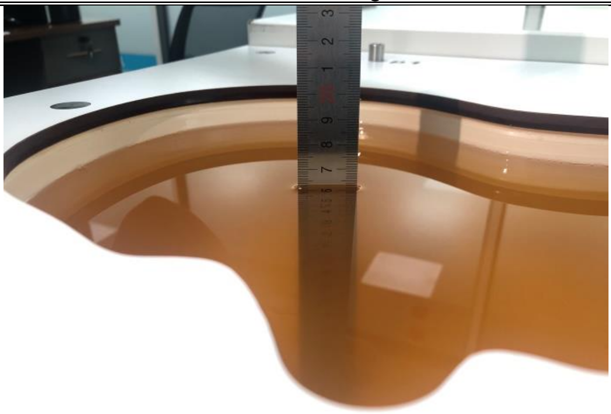


Fig. 9.1 Photo of Liquid Height for Head SAR

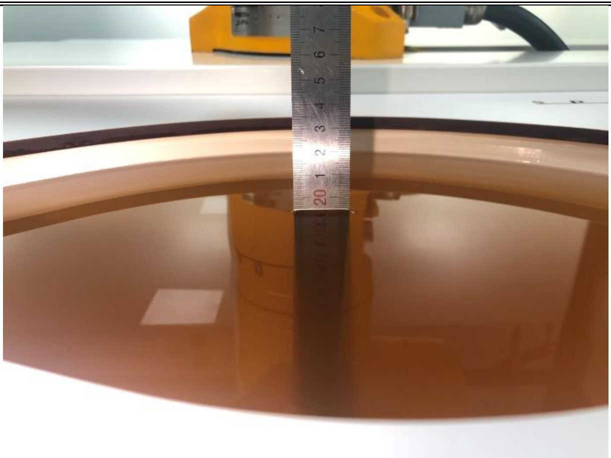


Fig. 9.2 Photo of Liquid Height for Body SAR

The relative permittivity and conductivity of the tissue material should be within ±5% of the values given in the table below recommended by the FCC OET 65 supplement C and RSS 102 Issue 5.

Target Frequency (MHz)	εr	σ(S/m)
150	52.3	0.76
300	45.3	0.87
450	43.5	0.87
835	41.5	0.90
900	41.5	0.97
915	41.5	0.98
1450	40.5	1.20
1610	40.3	1.29
1800-2000	40.0	1.40
2450	39.2	1.80
3000	38.5	2.40
5800	35.3	5.27

(εr = relative permittivity, σ = conductivity and ρ = 1000 kg/m^3)

The dielectric parameters of liquids were verified prior to the SAR evaluation using a Speag Dielectric Probe Kit and an Agilent Network Analyzer.
The following table shows the measuring results for simulating liquid.

Frequency (MHz)	Liquid Temp. (℃)	Conductivity (σ)	Permittivity (εr)	Conductivity Target(σ)	Permittivity Target(εr)	Delta (σ)%	Delta (εr)%	Limit (%)	Date (mm/dd/yy)
835	22.1	0.93	42.32	0.90	41.50	3.56	1.98	±5	1.7.2025
1750	22.1	1.32	41.35	1.37	40.10	-3.65	3.13	±5	1.10.2025
1900	22.1	1.35	41.28	1.40	40.00	-3.79	3.19	±5	1.10.2025
2450	22.3	1.73	40.48	1.80	39.20	-3.89	3.25	±5	1.15.2025
2600	22.3	1.89	40.28	1.96	39.00	-3.52	3.29	±5	1.15.2025

10 SAR System Verification

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

- **Purpose of System Performance check**

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

- **System Setup**

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

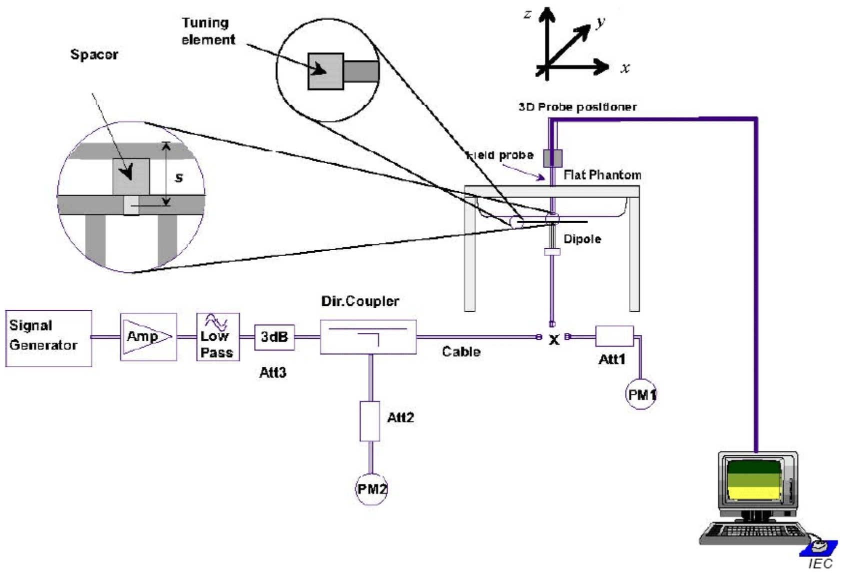


Fig.10.1 System Verification Setup Diagram

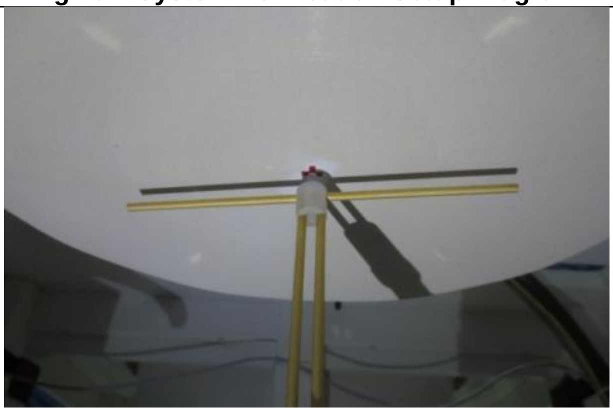


Fig.10.2 Photo of Dipole setup

-

- **System Verification Results**
  Comparing to the original SAR value provided by SPEAG, the verification data should be within its specification of 10%. The table as below indicates the system performance check can meet the variation criterion and the plots can be referred to Appendix C of this report.

Date (mm/dd/yy)	Frequency (MHz)	Power fed onto dipole (mW)	Measured 1g SAR (W/kg)	Normalized to1W 1g SAR (W/kg)	1W Target 1g SAR (W/kg)	Deviation (%)
1.7.2025	835	80	0.788	9.85	9.6	2.60
1.10.2025	1750	40	1.430	35.75	36.5	-2.05
1.10.2025	1900	40	1.570	39.25	39.9	-1.63
1.15.2025	2450	40	2.210	55.25	53.4	3.46
1.15.2025	2600	40	2.290	57.25	56.3	1.69

11 EUT Testing Position

This EUT was tested in six different positions. They are right cheek/right tilted/left cheek/left tilted for head, Front/Back of the EUT with phantom 10 mm gap, as illustrated below, please refer to Appendix B for the test setup photos.

11.1 Handset Reference Points

- The vertical centreline passes through two points on the front side of the handset – the midpoint of the width w_t of the handset at the level of the acoustic output, and the midpoint of the width w_b of the bottom of the handset.
- The horizontal line is perpendicular to the vertical centreline and passes the center of the acoustic output. The horizontal line is also tangential to the handset at point A.
- The two lines intersect at point A. Note that for many handsets, point A coincides with the center of the acoustic output; however, the acoustic output may be located elsewhere on the horizontal line. Also note that the vertical centreline 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.11.1 Illustration for Front, Back and Side of SAM Phantom

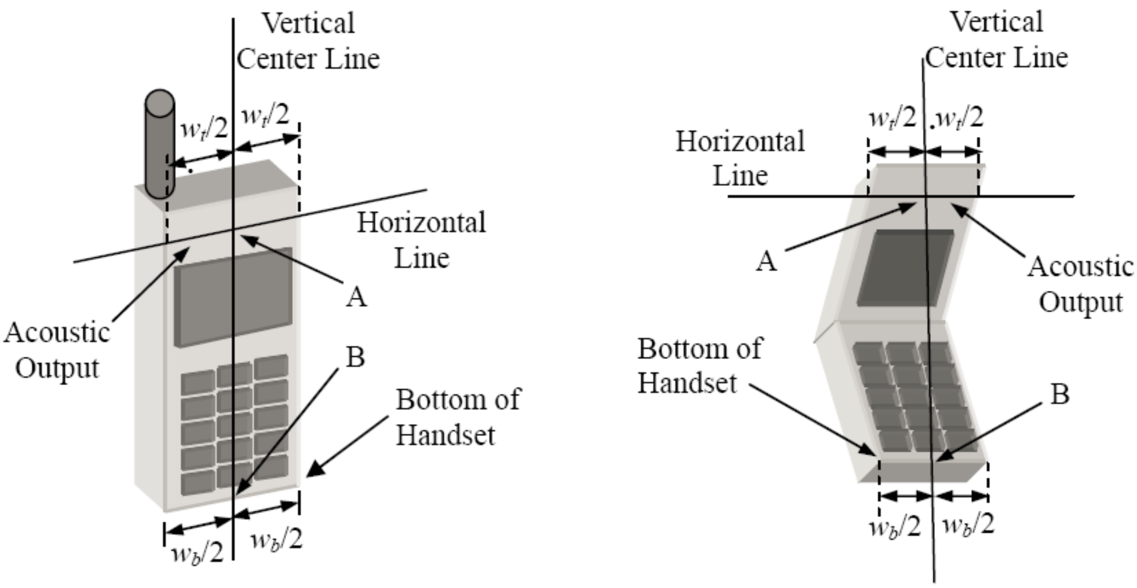


Fig. 11.2 Illustration for Handset Vertical and Horizontal Reference Lines

11.2 Positioning for Cheek / Touch

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

Fig. 11.3 Illustration for Cheek Position

11.3 Positioning for Ear / 15o Tilt

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

Fig.11.4 Illustration for Tilted Position

11.4 SAR Evaluations near the Mouth/Jaw Regions of the SAM Phantom

Antennas located near the bottom of a phone may require SAR measurements around the mouth and jaw regions of the SAM head phantom. This typically applies to clam-shell style phones that are generally longer in the unfolded normal use positions or to certain older style long rectangular phones.
Under these circumstances, the following procedures apply, adopted from the FCC guidance on SAR handsets document FCC KDB Publication 648474 D04v01r03. The SAR required in these regions of SAM should be measured using a flat phantom. The phone should be positioned with a separation distance of 4 mm between the ear reference point (ERP) and the outer surface of the flat phantom shell. While maintaining this distance at the ERP location, the low (bottom) edge of the phone should be lowered from the phantom to establish the same separation distance between the peak SAR locations identified by the truncated partial SAR distribution measured with the SAM phantom. The distance from the peak SAR location to the phone is determined by the straight line passing perpendicularly through the phantom surface. When it is not feasible to maintain 4 mm separation at the ERP while also establishing the required separation at the peak SAR location, the top edge of the phone will be allowed to touch the phantom with a separation < 4 mm at the ERP. The phone should not be tilted to the left or right while placed in this inclined position to the flat phantom.

11.5 Body Worn Accessory Configurations

- To position the device parallel to the phantom surface with either keypad up or down.
- To adjust the device parallel to the flat phantom.
- To adjust the distance between the device surface and the flat phantom to 10 mm or holster surface and the flat phantom to 0 mm.

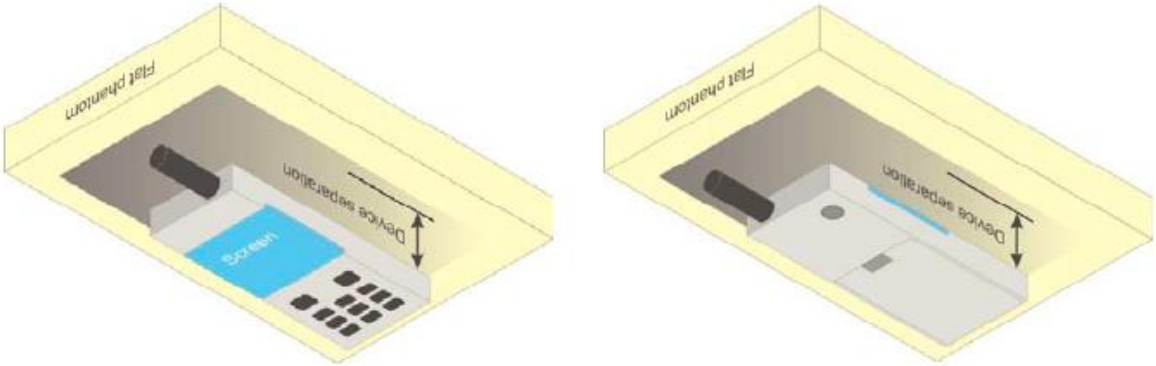


Fig.11.5 Illustration for Body Worn Position

12 Measurement Procedures

The measurement procedures are as below:

<Conducted power measurement>

- For WWAN power measurement, use base station simulator to configure EUT WWAN transition in conducted connection with RF cable, at maximum power in each supported wireless interface and frequency band.
- Read the WWAN RF power level from the base station simulator.
- For WLAN/BT power measurement, use engineering software to configure EUT WLAN/BT continuously transmission, at maximum RF power in each supported wireless interface and frequency band.
- Connect EUT RF port through RF cable to the power meter or spectrum analyzer, and measure WLAN/BT output power.

<Conducted power measurement>

- Use base station simulator to configure EUT WWAN transmission in radiated connection, and engineering software to configure EUT WLAN/BT continuously transmission, at maximum RF power, in the highest power channel.
- Place the EUT in positions as Appendix B demonstrates.
- Set scan area, grid size and other setting on the DASY software.
- Measure SAR results for the highest power channel on each testing position.
- Find out the largest SAR result on these testing positions of each band.
- Measure SAR results for other channels in worst SAR testing position if the Reported SAR or highest power channel is larger than 0.8 W/kg.

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

- Power reference measurement
- Area scan
- Zoom scan
- Power drift measurement

12.1 Spatial Peak SAR Evaluation

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

The base for the evaluation is a “cube” measurement. The measured volume must include the 1g and 10 g 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 1g and 10g cubes. The algorithm to find the cube with highest averaged SAR is divided into the following stages:

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

12.2 Power Reference Measurement

The Power Reference Measurement and Power Drift Measurement are for monitoring the power drift of the device under test in the batch process. The minimum distance of probe sensors to surface determines the closest measurement point to phantom surface. This distance cannot be smaller than the distance of sensor calibration points to probe tip as defined in the probe properties.

12.3 Area & Zoom Scan Procedures

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 10g. Area scan and zoom scan resolution setting follows KDB 865664 D01v01r04 quoted below.

<table>
<tr><th colspan="3"></th><th>≤ 3 GHz</th><th>> 3 GHz</th></tr>
<tr><td colspan="3">Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface</td><td>5 mm ± 1 mm</td><td>$\frac{1}{2}\cdot\delta\cdot\ln(2)$ mm ± 0.5 mm</td></tr>
<tr><td colspan="3">Maximum probe angle from probe axis to phantom surface normal at the measurement location</td><td>30° ± 1°</td><td>20° ± 1°</td></tr>
<tr><td colspan="3" rowspan="2">Maximum area scan spatial resolution: Δx_{Area}, Δy_{Area}</td><td>≤ 2 GHz: ≤ 15 mm
2 – 3 GHz: ≤ 12 mm</td><td>3 – 4 GHz: ≤ 12 mm
4 – 6 GHz: ≤ 10 mm</td></tr>
<tr><td colspan="2">When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be ≤ the corresponding x or y dimension of the test device with at least one measurement point on the test device.</td></tr>
<tr><td colspan="3">Maximum zoom scan spatial resolution: Δx_{Zoom}, Δy_{Zoom}</td><td>≤ 2 GHz: ≤ 8 mm
2 – 3 GHz: ≤ 5 mm*</td><td>3 – 4 GHz: ≤ 5 mm*
4 – 6 GHz: ≤ 4 mm*</td></tr>
<tr><td rowspan="3">Maximum zoom scan spatial resolution, normal to phantom surface</td><td colspan="2">uniform grid: $\Delta z_{Zoom}(n)$</td><td>≤ 5 mm</td><td>3 – 4 GHz: ≤ 4 mm
4 – 5 GHz: ≤ 3 mm
5 – 6 GHz: ≤ 2 mm</td></tr>
<tr><td rowspan="2">graded grid</td><td>$\Delta z_{Zoom}(1)$: between 1st two points closest to phantom surface</td><td>≤ 4 mm</td><td>3 – 4 GHz: ≤ 3 mm
4 – 5 GHz: ≤ 2.5 mm
5 – 6 GHz: ≤ 2 mm</td></tr>
<tr><td>$\Delta z_{Zoom}(n>1)$: between subsequent points</td><td colspan="2">≤ $1.5\cdot\Delta z_{Zoom}(n-1)$ mm</td></tr>
<tr><td>Minimum zoom scan volume</td><td colspan="2">x, y, z</td><td>≥ 30 mm</td><td>3 – 4 GHz: ≥ 28 mm
4 – 5 GHz: ≥ 25 mm
5 – 6 GHz: ≥ 22 mm</td></tr>
<tr><td colspan="5">Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see IEEE Std 1528-2013 for details.
* When zoom scan is required and the <u>reported</u> SAR from the area scan based 1-g SAR estimation procedures of KDB Publication 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.</td></tr>
</table>

12.4 Volume Scan Procedures

The volume scan is used for assess overlapping SAR distributions for antennas transmitting in different frequency bands. It is equivalent to an oversized zoom scan used in standalone measurements. The measurement volume will be used to enclose all the simultaneous transmitting antennas. For antennas transmitting simultaneously in different frequency bands, the volume scan is measured separately in each frequency band. In order to sum correctly to compute the 1g 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 post-processor scan combine and subsequently superpose these measurement data to calculating the multiband SAR.

12.5 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 1g and 10g cubes, the extrapolation distance should not be larger than 5 mm.

12.6 Power Drift Monitoring

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

13 Conducted RF Output Power

13.1 GSM Conducted Power

Band: GSM 850	Burst Average Power (dBm)			Frame-Average Power(dBm)		
Channel	128	190	251	128	190	251
Frequency (MHz)	824.2	836.6	848.8	824.2	836.6	848.8
GSM (GMSK, Voice)	32.84	32.93	**32.95**	23.81	23.90	23.92
GPRS (GMSK, 1 TX slot)	32.82	32.93	32.95	23.79	23.90	23.92
GPRS (GMSK, 2 TX slots)	32.61	32.70	32.74	26.59	26.68	26.72
GPRS (GMSK, 3 TX slots)	31.70	31.77	**31.83**	27.44	27.51	**27.57**
GPRS (GMSK, 4 TX slots)	29.62	29.71	29.72	26.61	26.70	26.71
EGPRS (8PSK, 1 TX slot)	27.98	27.55	27.21	18.95	18.52	18.18
EGPRS (8PSK, 2 TX slots)	26.31	26.00	25.67	20.29	19.98	19.65
EGPRS (8PSK, 3 TX slots)	23.60	23.24	22.94	19.34	18.98	18.68
EGPRS (8PSK, 4 TX slots)	21.38	21.13	20.94	18.37	18.12	17.93

Remark:

1. The frame-averaged power is linearly reported the maximum burst averaged power over 8 time slots. The calculated method are shown as below:
   The duty cycle "x" of different time slots as below:
   1 TX slot is 1/8, 2 TX slots is 2/8, 3 TX slots is 3/8 and 4 TX slots is 4/8
   Based on the calculation formula:
   Frame-averaged power = Burst averaged power + 10 1og (x)
   So,
   Frame-averaged power (1 TX slot) = Burst averaged power (1 TX slot)– 9.03
   Frame-averaged power (2 TX slots) = Burst averaged power (2 TX slots)– 6.02
   Frame-averaged power (3 TX slots) = Burst averaged power (3 TX slots)– 4.26
   Frame-averaged power (4 TX slots) = Burst averaged power (4 TX slots) – 3.01
2. CS1 coding scheme was used in GPRS conducted power measurements and SAR testing, MCS5 coding scheme was used in EGPRS conducted power measurements and SAR testing (if necessary).

Note:

1. For Head SAR testing, GSM Voice mode should be evaluated, therefore the EUT was set in GSM 850 Voice mode.
2. For Body worn SAR testing and Hotspot mode SAR testing, GPRS and EGPRS mode should be evaluated, therefore the EUT was set in GPRS 3 TX slots mode due to the highest frame-averaged power.
3. For GPRS multi time slots SAR measurement, when the measured maximum output power levels are within 0.25 dB of each other, test the configuration with the most number of time slots.
4. Per KDB447498 D04v01, the maximum output power channel is used for SAR testing and for further SAR test reduction.

Band: PCS 1900	Burst Average Power (dBm)			Frame-Average Power(dBm)		
Channel	512	661	810	512	661	810
Frequency (MHz)	1850.2	1880.0	1909.8	1850.2	1880.0	1909.8
GSM (GMSK, Voice)	29.95	30.02	**30.15**	20.92	20.99	21.12
GPRS (GMSK, 1 TX slot)	29.99	30.02	30.15	20.96	20.99	21.12
GPRS (GMSK, 2 TX slots)	29.73	29.77	29.89	23.71	23.75	23.87
GPRS (GMSK, 3 TX slots)	28.80	28.84	**28.94**	24.54	24.58	**24.68**
GPRS (GMSK, 4 TX slots)	26.80	26.77	26.87	23.79	23.76	23.86
EGPRS (8PSK, 1 TX slot)	27.82	27.62	28.17	18.79	18.59	19.14
EGPRS (8PSK, 2 TX slots)	26.14	25.90	26.50	20.12	19.88	20.48
EGPRS (8PSK, 3 TX slots)	23.74	23.49	24.32	19.48	19.23	20.06
EGPRS (8PSK, 4 TX slots)	21.25	21.05	21.90	18.24	18.04	18.89

Remark:

1. The frame-averaged power is linearly reported the maximum burst averaged power over 8 time slots. The calculated method are shown as below:
   The duty cycle "x" of different time slots as below:
   1 TX slot is 1/8, 2 TX slots is 2/8, 3 TX slots is 3/8 and 4 TX slots is 4/8
   Based on the calculation formula:
   Frame-averaged power = Burst averaged power + 10 1og (x)
   So,
   Frame-averaged power (1 TX slot) = Burst averaged power (1 TX slot)– 9.03
   Frame-averaged power (2 TX slots) = Burst averaged power (2 TX slots)– 6.02
   Frame-averaged power (3 TX slots) = Burst averaged power (3 TX slots)– 4.26
   Frame-averaged power (4 TX slots) = Burst averaged power (4 TX slots) – 3.01
2. CS1 coding scheme was used in GPRS conducted power measurements and SAR testing, MCS5 coding scheme was used in EGPRS conducted power measurements and SAR testing (if necessary).

Note:

1. For Head SAR testing, GSM Voice mode should be evaluated, therefore the EUT was set in PCS 1900 Voice mode.
2. For Body worn SAR testing and Hotspot mode SAR testing, GPRS and EGPRS mode should be evaluated, therefore the EUT was set in GPRS 3 TX slots mode due to the highest frame-averaged power.
3. Per KDB447498 D04v01, the maximum output power channel is used for SAR testing and for further SAR test reduction.

13.2 WCDMA Conducted Power

The following tests were conducted according to the test requirements outlines in 3GPP TS 34.121 specification. A summary of these settings are illustrated below:

HSDPA Setup Configuration:

a. The EUT was connected to Base Station Rohde & Schwarz CMU200 referred to the Setup Configuration.
b. The RF path losses were compensated into the measurements.
c. A call was established between EUT and Base Station with following setting:
   i. Set Gain Factors (β_c and β_d) and parameters were set according to each
   ii. Specific sub-test in the following table, C10.1.4, quoted from the TS 34.121
   iii. Set RMC 12.2kbps + HSDPA mode.
   iv. Set Cell Power = -86 dBm
   v. Set HS-DSCH Configuration Type to FRC (H-set 1, QPSK)
   vi. Select HSDPA Uplink Parameters
   vii. Set Delta ACK, Delta NACK and Delta CQI = 8
   viii. Set Ack-Nack Repetition Factor to 3
   ix. Set CQI Feedback Cycle (k) to 4 ms
   x. Set CQI Repetition Factor to 2
   xi. Power Ctrl Mode = All Up bits
d. The transmitted maximum output power was recorded.

Table 1

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{hs} (1)	CM (dB)(2)
1	2/15	15/15	64	2/15	4/15	0.0
2	12/15(3)	15/15(3)	64	12/15(3)	24/15	1.0
3	15/15	8/15	64	15/8	30/15	1.5
4	15/15	4/15	64	15/4	30/15	1.5

Note 1: Δ_{ACK}, Δ_{NACK} and $\Delta_{CQI} = 8 \Leftrightarrow A_{hs} = \beta_{hs}/\beta_c = 30/15 \Leftrightarrow \beta_{hs} = 30/15 * \beta_c$
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 $\beta_d = 15/15$.

HSDPA Sub-test setup configuration

HSUPA Setup Configuration:

a. The EUT was connected to Base Station Rohde & Schwarz CMU200 referred to the Setup Configuration.
b. The RF path losses were compensated into the measurements.
c. A call was established between EUT and Base Station with following setting * :
   i. Call Configs = 5.2B, 5.9B, 5.10B, and 5.13.2B with QPSK
   ii. Set the Gain Factors (β_c and β_d) and parameters (AG Index) were set according to each specific sub-test in the following table, C11.1.3, quoted from the TS 34.121
   iii. Set Cell Power = -86 dBm
   iv. Set Channel Type = 12.2k + HSPA
   v. Set UE Target Power
   vi. Power Ctrl Mode= Alternating bits
   vii. Set and observe the E-TFCI
   viii. Confirm that E-TFCI is equal to the target E-TFCI of 75 for sub-test 1, and other subtest's E-TFCI
d. The transmitted maximum output power was recorded.

Table 2

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 ⇔ $A_{hs} = \beta_{hs}/\beta_c$ = 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.

HSUPA Sub-test setup configuration

WCDMA Conducted Power:

WCDMA Average power (dBm)			
Band	WCDMA Band II		
Channel	9262	9400	9538
Frequency (MHz)	1852.4	1880.0	1907.6
AMR 12.2 kbps	22.37	22.84	22.75
RMC 12.2 kbps	22.48	**22.94**	22.83

WCDMA Average power (dBm)			
Band	WCDMA Band IV		
Channel	1312	1413	1513
Frequency (MHz)	1712.4	1732.6	1752.6
AMR 12.2 kbps	22.59	20.95	22.66
RMC 12.2 kbps	22.53	20.96	**22.73**

WCDMA Average power (dBm)			
Band	WCDMA Band V		
Channel	4132	4183	4233
Frequency (MHz)	826.4	836.6	846.6
AMR 12.2 kbps	22.55	23.01	22.29
RMC 12.2 kbps	22.52	**23.07**	22.33

Note:

1. Applying the subtest setup in Table C.11.1.3 of 3GPP TS 34.121-1
2. Per KDB 941225 D01, RMC 12.2kbps mode is used to evaluate SAR due the highest output power. If AMR 12.2 kbps power is < 0.25dB higher than RMC 12.2kbps, SAR tests with AMR 12.2 kbps can be excluded.
3. AMR, HSDPA RF power will not be larger than RMC 12.2kbps, detailed information is included in Tune-up Procure exhibit.

13.3 LTE Conducted Power

13.3.1 Largest channel bandwidth standalone SAR test requirements

QPSK with 1 RB allocation

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 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 for 1 RB allocation; 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.8 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.

QPSK with 50% RB allocation

The procedures required for 1 RB allocation in section 4.2.1 are applied to measure the SAR for QPSK with 50% RB allocation.9

QPSK with 100% RB allocation

For QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation in sections 4.2.1 and 4.2.2 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.

Higher order modulations

For each modulation besides QPSK; e.g., 16-QAM, 64-QAM, apply the QPSK procedures in sections 4.2.1, 5.2.2 and 4.2.3 to determine the QAM configurations that may need SAR measurement. For each configuration identified as required for testing, SAR is required only when the highest maximum output power for the configuration in the higher order modulation is > ? dB higher than the same configuration in QPSK or when the reported SAR for the QPSK configuration is > 1.45 W/kg.

13.3.2 Other channel bandwidth standalone SAR test requirements

For the other channel bandwidths used by the device in a frequency band, apply all the procedures required for the largest channel bandwidth in section 4.2 to determine the channels and RB configurations that need SAR testing and only measure SAR when the highest maximum output power of a configuration requiring testing in the smaller channel bandwidth is > ? 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. The equivalent channel configuration for the RB allocation, RB offset and modulation etc. is determined for the smaller channel bandwidth according to the same number of RB allocated in the largest channel bandwidth. For example, 50 RB in 10 MHz channel bandwidth does not apply to 5 MHz channel bandwidth; therefore, this cannot be tested in the smaller channel bandwidth. However, 50% RB allocation in 10 MHz channel bandwidth is equivalent to 100% RB allocation in 5 MHz channel bandwidth; therefore, these are the equivalent configurations to be compared to determine the specific channel and configuration in the smaller channel bandwidth that need SAR testing.

13.3.3 TDD LTE configuration setup for SAR measurement

According to KDB 941225 D05v02r03 and April 2013 TCB workshop slides, SAR must be tested with a fixed periodic duty factor according to the highest transmission duty factor implemented for the device and supported by 3GPP.

- see 3GPP TS 36.211 section 4.2 for Type 2 Frame Structure and Table 4.2-2 for uplink-downlink configurations
- “special subframe S” contains both uplink and downlink transmissions and must be taken into consideration to determine the transmission duty factor
  – according to the worst case uplink and downlink cyclic prefix requirements for UpPTS to determine the highest SAR test duty factor

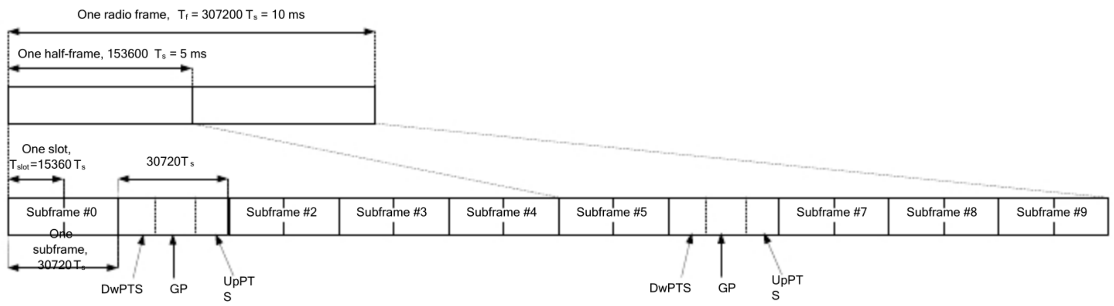


Figure 4.2-1: Frame structure type 2 (for 5 ms switch-point periodicity).

Table 4.2-1: Configuration of special subframe (lengths of DwPTS/GP/UpPTS).

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	$6592 \cdot T_s$	$2192 \cdot T_s$	$2560 \cdot T_s$	$7680 \cdot T_s$	$2192 \cdot T_s$	$2560 \cdot T_s$
1	$19760 \cdot T_s$			$20480 \cdot T_s$		
2	$21952 \cdot T_s$			$23040 \cdot T_s$		
3	$24144 \cdot T_s$			$25600 \cdot T_s$		
4	$26336 \cdot T_s$			$7680 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$
5	$6592 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$	$20480 \cdot T_s$		
6	$19760 \cdot T_s$			$23040 \cdot T_s$		
7	$21952 \cdot T_s$			-	-	-
8	$24144 \cdot T_s$			-	-	-

Per 3GPP 36.211 section 4.2, each radio frame of length T_f=37200?*T*s = 10 ms consists of two half-frames of length 153600?Ts = 5ms each. Each half-frame consists of five subframes of length 30720 ?*T*s = 1ms. So, the uplink duty factor in special subframe as below:

Special Subframe configuration	Normal cyclic prefix in downlink		Extended cyclic prefix in downlink	
	Duty factor of Uplink		Duty factor of Uplink	
	Normal cyclic prefix in uplink	Extended cyclic prefix in uplink	Normal cyclic prefix in uplink	Extended cyclic prefix in uplink
0	7.14%	8.33%	7.14%	8.33%
1	7.14%	8.33%	7.14%	8.33%
2	7.14%	8.33%	7.14%	8.33%
3	7.14%	8.33%	7.14%	8.33%
4	7.14%	8.33%	14.27%	16.67%
5	14.27%	16.67%	14.27%	16.67%
6	14.27%	16.67%	14.27%	16.67%
7	14.27%	16.67%	14.27%	16.67%
8	14.27%	16.67%	/	/
9	14.27%	16.67%	/	/

Table 4.2-2: Uplink-downlink configurations.

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

According to above table:

1. The highest duty factor is configuration 0;
2. The duty factor of uplink in one half-frame with normal cyclic prefix is: (3ms + 0.143ms)/5ms=62.86%;
3. The duty factor of uplink in one half-frame with extended cyclic prefix is: (3ms + 0.167ms)/5ms=63.34%;
4. For purpose to get the worst case SAR test duty factor, the duty factor of normal cyclic prefix in uplink scaled-up to the extended cyclic prefix in uplink, the scaling factor is 63.34%/62.86%=1.008, and the scaling factor will be taken into the final measured SAR.

LTE Band 2 part：

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					18607	18900	19193
					1850.7MHz	1880.0MHz	1909.3MHz
Band 2	1.4	QPSK	1	0	22.88	22.93	22.95
			1	2	22.64	22.67	22.62
			1	5	22.56	22.67	22.59
			3	0	22.47	22.59	22.42
			3	1	22.41	22.57	22.40
			3	2	22.35	22.54	22.38
			6	0	21.39	21.70	21.55
		16QAM	1	0	21.98	21.97	21.59
			1	2	21.87	22.00	21.60
			1	5	21.72	21.92	21.52
			3	0	21.48	21.61	21.38
			3	1	21.41	21.59	21.36
			3	2	21.37	21.58	21.34
			6	0	20.46	20.85	20.66

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					18615	18900	19185
					1851.5MHz	1880.0MHz	1908.5MHz
Band 2	3	QPSK	1	0	22.18	22.31	22.29
			1	7	22.13	22.30	22.12
			1	14	21.97	22.23	22.07
			8	0	21.06	21.30	21.20
			8	4	21.07	21.35	21.24
			8	7	21.07	21.42	21.20
			15	0	21.06	21.38	21.23
		16QAM	1	0	21.33	21.29	21.34
			1	7	21.26	21.51	21.29
			1	14	21.10	21.47	21.24
			8	0	20.20	20.47	20.32
			8	4	20.17	20.47	20.33
			8	7	20.16	20.56	20.35
			15	0	20.01	20.46	20.20

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					18625	18900	19175
					1852.5MHz	1880.0MHz	1907.5MHz
Band 2	5	QPSK	1	0	22.15	22.11	21.92
			1	12	22.04	22.21	22.06
			1	24	21.92	22.15	21.99
			12	0	20.87	20.96	20.91
			12	6	20.86	20.99	20.97
			12	11	20.83	20.99	20.97
			25	0	20.83	21.16	21.04
		16QAM	1	0	21.37	20.94	21.10
			1	12	21.34	21.32	21.37
			1	24	21.20	21.33	21.32
			12	0	20.08	20.14	20.04
			12	6	20.05	20.13	20.05
			12	11	20.02	20.13	20.05
			25	0	19.91	20.26	20.09

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					18650	18900	19150
					1855.0MHz	1880.0MHz	1905.0MHz
Band 2	10	QPSK	1	0	21.63	21.60	21.77
			1	24	21.68	21.95	21.68
			1	49	21.73	21.99	21.67
			25	0	20.65	20.56	20.59
			25	12	20.58	20.59	20.65
			25	24	20.56	20.58	20.65
			50	0	20.52	20.83	20.67
		16QAM	1	0	20.54	20.56	20.84
			1	24	20.63	21.17	20.95
			1	49	20.65	21.13	20.87
			25	0	19.60	19.78	19.84
			25	12	19.57	19.79	19.87
			25	24	19.57	19.78	19.86
			27	0	19.66	19.88	19.89

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					18675	18900	19125
					1857.5MHz	1880.0MHz	1902.5MHz
Band 2	15	QPSK	1	0	22.36	22.37	22.68
			1	37	22.54	22.58	22.24
			1	74	22.57	22.66	22.31
			36	0	21.37	21.10	21.38
			36	16	21.29	21.12	21.44
			36	35	21.27	21.11	21.44
			75	0	21.38	21.53	21.34
		16QAM	1	0	21.28	21.54	22.15
			1	37	21.57	21.86	21.76
			1	74	21.69	21.87	21.80
			27	0	20.31	20.15	20.56
					0.00	0.00	0.00
					0.00	0.00	0.00
					0.00	0.00	0.00

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					18700	18900	19100
					1860.0MHz	1880.0MHz	1900.0MHz
Band 2	20	QPSK	1	0	22.39	22.40	22.73
			1	49	22.77	22.79	22.33
			1	99	22.04	22.69	22.35
			50	0	21.43	21.08	21.53
			50	24	21.38	21.09	21.56
			50	49	21.35	21.08	21.56
			100	0	21.23	21.55	21.24
		16QAM	1	0	21.13	21.31	21.97
			1	49	21.55	21.83	21.75
			1	99	20.90	21.69	21.79
			27	0	20.15	19.85	20.69
					0.00	0.00	0.00
					0.00	0.00	0.00
					0.00	0.00	0.00

LTE Band 4 part:

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					19957	20175	20393
					1710.7	1732.5MHz	1754.3MHz
Band 4	1.4	QPSK	1	0	22.75	21.43	22.24
			1	2	22.61	21.15	22.06
			1	5	22.56	21.09	22.09
			3	0	22.43	21.04	21.98
			3	1	22.41	20.95	21.97
			3	2	22.39	20.88	21.96
			6	0	21.63	20.12	21.23
		16QAM	1	0	21.89	20.60	21.41
			1	2	21.94	20.57	21.49
			1	5	21.83	20.43	21.44
			3	0	21.52	20.10	21.11
			3	1	21.48	20.02	21.10
			3	2	21.46	19.97	21.09
			6	0	20.64	19.24	20.35

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					19965	20175	20385
					1711.5MHz	1732.5MHz	1753.5MHz
Band 4	3	QPSK	1	0	23.03	21.42	22.00
			1	7	22.93	21.13	22.23
			1	14	22.64	20.98	22.20
			8	0	21.80	20.29	21.17
			8	4	21.83	20.35	21.24
			8	7	21.78	20.35	21.46
			15	0	21.76	20.35	21.40
		16QAM	1	0	22.12	20.16	21.21
			1	7	22.10	20.28	21.51
			1	14	21.85	20.16	21.51
			8	0	20.93	19.43	20.36
			8	4	20.90	19.44	20.37
			8	7	20.92	19.45	20.56
			15	0	20.80	19.35	20.43

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					19975	20175	20375
					1712.5MHz	1732.5MHz	1752.5MHz
Band 4	5	QPSK	1	0	23.13	21.52	21.92
			1	12	22.99	21.24	22.15
			1	24	22.59	21.15	22.30
			12	0	21.79	20.24	20.97
			12	6	21.81	20.29	21.02
			12	11	21.78	20.29	21.03
			25	0	21.71	20.34	21.20
		16QAM	1	0	22.38	20.35	20.95
			1	12	22.30	20.49	21.35
			1	24	21.94	20.36	21.55
			12	0	21.01	19.44	20.04
			12	6	20.98	19.45	20.04
			12	11	20.95	19.44	20.04
			25	0	20.82	19.46	20.27

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					20000	20175	20350
					1715.0MHz	1732.5MHz	1750.0MHz
Band 4	10	QPSK	1	0	22.92	20.52	21.25
			1	24	22.75	21.22	21.59
			1	49	22.10	20.88	22.08
			25	0	21.60	20.18	20.33
			25	12	21.63	20.18	20.37
			25	24	21.60	20.17	20.36
			50	0	21.40	20.16	20.59
		16QAM	1	0	21.38	20.33	20.40
			1	24	21.36	20.48	20.98
			1	49	20.84	20.11	21.37
			25	0	20.49	19.43	19.60
			25	12	20.57	19.44	19.62
			25	24	20.58	19.42	19.61
			27	0	20.63	19.47	19.67

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					20025	20175	20325
					1717.5MHz	1732.5MHz	1747.5MHz
Band 4	15	QPSK	1	0	22.81	20.72	20.97
			1	37	22.35	21.14	21.24
			1	74	21.57	20.90	22.10
			36	0	21.46	20.25	20.15
			36	16	21.52	20.26	20.19
			36	35	21.50	20.25	20.20
			75	0	21.22	20.25	20.49
		16QAM	1	0	21.50	19.73	20.55
			1	37	21.12	20.56	20.87
			1	74	20.41	20.36	21.69
			27	0	20.51	19.44	19.09

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					20050	20175	20300
					1720.0MHz	1732.5MHz	1745.0MHz
Band 4	20	QPSK	1	0	23.35	21.47	22.05
			1	49	22.90	22.06	22.09
			1	99	21.95	21.69	22.98
			50	0	22.17	21.18	20.90
			50	24	22.24	21.18	20.94
			50	49	22.23	21.17	20.94
			100	0	21.89	21.15	21.26
		16QAM	1	0	21.73	19.61	20.34
			1	49	21.23	20.41	20.43
			1	99	20.37	19.98	21.22
			27	0	20.43	19.35	18.91

LTE Band 5 part:

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					20407	20525	20643
					824.7MHz	836.5MHz	848.3MHz
Band 5	1.4	QPSK	1	0	22.31	22.79	22.21
			1	2	22.48	22.67	22.17
			1	5	22.54	22.65	22.15
			3	0	22.34	22.57	22.08
			3	1	22.38	22.60	22.16
			3	2	22.36	22.58	22.14
			6	0	21.50	21.46	21.10
		16QAM	1	0	21.46	21.49	21.20
			1	2	21.63	21.49	21.24
			1	5	21.61	21.39	21.24
			3	0	21.29	21.36	21.01
			3	1	21.28	21.33	20.98
			3	2	21.26	21.41	21.01
			6	0	20.41	20.59	20.05

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					20415	20525	20635
					825.5MHz	836.5MHz	847.5MHz
Band 5	3	QPSK	1	0	22.31	22.81	22.17
			1	7	22.62	22.68	22.17
			1	14	22.53	22.41	22.06
			8	0	21.42	21.57	21.05
			8	4	21.45	21.61	21.09
			8	7	21.63	21.47	21.08
			15	0	21.50	21.47	21.07
		16QAM	1	0	21.41	21.34	21.07
			1	7	21.68	21.43	21.17
			1	14	21.65	21.14	21.08
			8	0	20.52	20.61	20.15
			8	4	20.50	20.62	20.16
			8	7	20.64	20.52	20.16
			15	0	20.50	20.46	20.08

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					20425	20525	20625
					826.5MHz	836.5MHz	846.5MHz
Band 5	5	QPSK	1	0	22.56	22.84	22.35
			1	12	22.79	22.82	22.24
			1	24	22.85	22.58	22.29
			12	0	21.44	21.52	20.87
			12	6	21.47	21.57	20.90
			12	11	21.50	21.56	20.91
			25	0	21.58	21.44	20.96
		16QAM	1	0	21.73	21.76	21.09
			1	12	21.97	21.64	21.12
			1	24	21.93	21.50	21.21
			12	0	20.58	20.63	20.03
			12	6	20.56	20.63	20.04
			12	11	20.64	20.63	19.95
			25	0	20.62	20.56	20.05

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					20450	20525	20600
					829MHz	836.5MHz	844MHz
Band 5	10	QPSK	1	0	22.43	21.38	22.33
			1	24	22.72	22.69	21.88
			1	49	22.51	22.29	22.00
			25	0	21.25	21.22	20.79
			25	12	21.32	21.26	20.83
			25	24	21.30	21.30	20.83
			50	0	21.36	21.22	20.62
		16QAM	1	0	21.20	21.44	21.15
			1	24	21.60	21.42	20.88
			1	49	21.45	21.07	20.92
			25	0	20.34	20.42	20.02
			25	12	20.43	20.44	20.02
			25	24	20.44	20.43	20.01
			27	0	20.49	20.47	20.05

LTE Band 7 part:

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					20775	21100	21425
					2502.5MHz	2535MHz	2567.5MHz
Band 7	5	QPSK	1	0	23.79	23.60	23.21
			1	12	23.69	23.15	22.80
			1	24	23.68	23.16	22.76
			12	0	22.48	21.89	21.43
			12	6	22.46	21.94	21.45
			12	11	22.51	22.00	21.51
			25	0	22.52	22.01	21.43
		16QAM	1	0	22.67	22.36	21.94
			1	12	22.63	22.25	21.71
			1	24	22.66	22.15	21.48
			12	0	21.17	20.71	20.50
			12	6	21.23	20.78	20.47
			12	11	21.23	20.75	20.53
			25	0	21.21	20.78	20.38

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					20800	21100	21400
					2505MHz	2535MHz	2565MHz
Band 7	10	QPSK	1	0	23.73	23.16	23.98
			1	24	23.43	22.96	22.72
			1	49	23.37	23.17	22.91
			25	0	22.33	21.53	21.31
			25	12	22.29	21.59	21.39
			25	24	22.31	21.59	21.46
			50	0	22.23	21.74	21.24
		16QAM	1	0	22.43	21.81	22.01
			1	24	22.36	21.92	21.49
			1	49	22.22	21.79	21.24
			25	0	21.18	20.47	20.57
			25	12	21.17	20.51	20.58
			25	24	21.16	20.49	20.60
			27	0	21.13	20.56	20.61

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					20825	21100	21375
					2507.5MHz	2535MHz	2562.5MHz
Band 7	15	QPSK	1	0	23.58	22.28	23.71
			1	37	23.48	22.97	22.98
			1	74	23.41	23.12	22.66
			36	0	22.48	21.64	21.77
			36	16	22.43	21.71	21.83
			36	35	22.40	21.75	21.84
			75	0	22.20	21.90	21.64
		16QAM	1	0	22.58	20.90	22.67
			1	37	22.36	22.26	22.09
			1	74	22.30	22.14	21.62
			27	0	21.28	20.49	20.84

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					20850	21100	21350
					2510MHz	2535MHz	2560MHz
Band 7	20	QPSK	1	0	23.87	22.10	23.78
			1	49	23.56	23.01	23.34
			1	99	23.29	23.16	22.90
			50	0	22.31	21.58	21.73
			50	24	22.24	21.67	21.80
			50	49	22.28	21.66	21.79
			100	0	21.93	21.86	21.74
		16QAM	1	0	22.70	20.73	22.52
			1	49	22.46	22.22	22.14
			1	99	22.32	21.98	21.37
			27	0	21.12	20.33	20.75

13.4 Bluetooth Conducted Power

Average Power (dBm)				
Channel	Frequency (MHz)	GFSK	π/4-DQPSK	8DPSK
CH 00	2402	-9.58	-7.85	-7.40
CH 39	2441	-8.33	-6.76	-6.23
CH 78	2480	-7.65	-5.67	-5.11

Average Power (dBm)					
Channel	Frequency (MHz)	BLE PHY 1M	BLE PHY 2M	BLE Coded PHY S=2	BLE Coded PHY S=8
CH 00	2402	3.02	3.07	2.94	2.82
CH 20	2442	4.47	4.68	4.52	4.36
CH 39	2480	5.65	**5.79**	5.74	5.58

Note:

1. SAR test of Bluetooth is performed and the mode with highest average power is selected for SAR testing.
2. The output power of all data rate were pre-scan, just the worst case of all mode were shown in report.
3. Per KDB 248227 D01V02r02 section 2.2, when the EUT in continuously transmitting mode, the actual duty cycle is 100%, so the duty cycle factor is 1.

14 SAR Test Results Summary

14.1 Standalone Head SAR Data

➢ GSM Head SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	GSM850/Voice	Right Cheek	251	848.8	32.95	-0.20	33.0	0.168	1.012	0.170
	GSM850/Voice	Right Tilted	251	848.8	32.95	0.17	33.0	0.111	1.012	0.112
1	GSM850/Voice	Left Cheek	251	848.8	32.95	-0.17	33.0	**0.194**	1.012	0.196
	GSM850/Voice	Left Tilted	251	848.8	32.95	-0.18	33.0	0.124	1.012	0.125
	PCS1900/Voice	Right Cheek	810	1909.8	30.15	0.08	30.5	0.042	1.084	0.046
	PCS1900/Voice	Right Tilted	810	1909.8	30.15	-0.17	30.5	0.014	1.084	0.015
2	PCS1900/Voice	Left Cheek	810	1909.8	30.15	-0.17	30.5	**0.078**	1.084	0.085
	PCS1900/Voice	Left Tilted	810	1909.8	30.15	0.17	30.5	0.026	1.084	0.028
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ WCDMA Head SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
3	Band II/RMC	Right Cheek	9400	1880	22.94	0.20	23.0	**0.273**	1.014	0.277
	Band II/RMC	Right Tilted	9400	1880	22.94	-0.13	23.0	0.099	1.014	0.100
	Band II/RMC	Left Cheek	9400	1880	22.94	-0.11	23.0	0.151	1.014	0.153
	Band II/RMC	Left Tilted	9400	1880	22.94	0.01	23.0	0.047	1.014	0.048
4	Band IV/RMC	Right Cheek	1513	1752.6	22.73	-0.09	23.0	**0.247**	1.064	0.263
	Band IV/RMC	Right Tilted	1513	1752.6	22.73	0.13	23.0	0.086	1.064	0.092
	Band IV/RMC	Left Cheek	1513	1752.6	22.73	0.00	23.0	0.215	1.064	0.229
	Band IV/RMC	Left Tilted	1513	1752.6	22.73	0.17	23.0	0.071	1.064	0.076
	Band V/RMC	Right Cheek	4183	836.6	23.07	-0.03	23.5	0.648	1.104	0.715
	Band V/RMC	Right Tilted	4183	836.6	23.07	0.03	23.5	0.413	1.104	0.456
5	Band V/RMC	Left Cheek	4183	836.6	23.07	-0.09	23.5	**0.653**	1.104	0.721
	Band V/RMC	Left Tilted	4183	836.6	23.07	-0.03	23.5	0.422	1.104	0.466
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ FDD-LTE Band 2(20MHz) QPSK Head SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band2/1RB#49	Right Cheek	18900	1880	22.79	-0.16	23.0	0.087	1.05	0.091
	Band2/1RB#49	Right Tilted	18900	1880	22.79	-0.15	23.0	0.021	1.05	0.022
6	Band2/1RB#49	Left Cheek	18900	1880	22.79	-0.04	23.0	**0.093**	1.05	0.097
	Band2/1RB#49	Left Tilted	18900	1880	22.79	-0.15	23.0	0.024	1.05	0.025
	Band2/50%RB#24	Right Cheek	19100	1900	21.56	0.01	22.0	0.066	1.107	0.073
	Band2/50%RB#24	Right Tilted	19100	1900	21.56	-0.03	22.0	0.015	1.107	0.017
	Band2/50%RB#24	Left Cheek	19100	1900	21.56	-0.03	22.0	0.074	1.107	0.082
	Band2/50%RB#24	Left Tilted	19100	1900	21.56	0.12	22.0	0.019	1.107	0.021
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ FDD-LTE Band 4(20MHz) QPSK Head SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band4/1RB#0	Right Cheek	20050	1720	23.35	-0.03	23.5	0.081	1.035	0.084
	Band4/1RB#0	Right Tilted	20050	1720	23.35	0.11	23.5	0.020	1.035	0.021
7	Band4/1RB#0	Left Cheek	20050	1720	23.35	0.06	23.5	**0.134**	1.035	0.139
	Band4/1RB#0	Left Tilted	20050	1720	23.35	-0.13	23.5	0.029	1.035	0.030
	Band4/50%RB#24	Right Cheek	20050	1720	22.24	-0.09	22.5	0.074	1.062	0.079
	Band4/50%RB#24	Right Tilted	20050	1720	22.24	0.05	22.5	0.016	1.062	0.017
	Band4/50%RB#24	Left Cheek	20050	1720	22.24	0.04	22.5	0.120	1.062	0.127
	Band4/50%RB#24	Left Tilted	20050	1720	22.24	0.14	22.5	0.024	1.062	0.025
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ FDD-LTE Band 5(10MHz) QPSK Head SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band5/1RB#24	Right Cheek	20450	829	22.72	-0.17	23.0	0.201	1.067	0.214
	Band5/1RB#24	Right Tilted	20450	829	22.72	0.15	23.0	0.111	1.067	0.118
8	Band5/1RB#24	Left Cheek	20450	829	22.72	-0.01	23.0	**0.248**	1.067	0.265
	Band5/1RB#24	Left Tilted	20450	829	22.72	-0.03	23.0	0.125	1.067	0.133
	Band5/50%RB#12	Right Cheek	20450	829	21.32	0.20	21.5	0.187	1.042	0.195
	Band5/50%RB#12	Right Tilted	20450	829	21.32	-0.19	21.5	0.097	1.042	0.101
	Band5/50%RB#12	Left Cheek	20450	829	21.32	0.14	21.5	0.213	1.042	0.222
	Band5/50%RB#12	Left Tilted	20450	829	21.32	-0.07	21.5	0.101	1.042	0.105
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ FDD-LTE Band 7(20MHz) QPSK Head SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band7/1RB#0	Right Cheek	20850	2510	23.87	0.18	24.0	0.069	1.03	0.071
	Band7/1RB#0	Right Tilted	20850	2510	23.87	0.01	24.0	0.023	1.03	0.024
9	Band7/1RB#0	Left Cheek	20850	2510	23.87	0.05	24.0	**0.130**	1.03	0.134
	Band7/1RB#0	Left Tilted	20850	2510	23.87	-0.02	24.0	0.048	1.03	0.049
	Band7/50%RB#0	Right Cheek	20850	2510	22.31	0.11	22.5	0.055	1.045	0.057
	Band7/50%RB#0	Right Tilted	20850	2510	22.31	0.19	22.5	0.018	1.045	0.019
	Band7/50%RB#0	Left Cheek	20850	2510	22.31	0.02	22.5	0.123	1.045	0.129
	Band7/50%RB#0	Left Tilted	20850	2510	22.31	-0.19	22.5	0.041	1.045	0.043
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ Bluetooth Head SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	BLE-2M	Right Cheek	39	2480	5.79	0.00	6.0	<0.001*	1.05	1.000	<0.001*
	BLE-2M	Right Tilted	39	2480	5.79	0.00	6.0	<0.001*	1.05	1.000	<0.001*
	BLE-2M	Left Cheek	39	2480	5.79	0.00	6.0	<0.001*	1.05	1.000	<0.001*
	BLE-2M	Left Tilted	39	2480	5.79	0.00	6.0	<0.001*	1.05	1.000	<0.001*
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**						

Note:

1. Per KDB 447498 D04v01, for each exposure position, if the highest output power channel Reported SAR ≤ 0.8W/kg, other channels SAR testing is not necessary.
2. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required when the measured SAR is ≥ 0.8W/kg.
3. Per KDB 941225 D05v02r05, 100% RB allocation SAR measurement is not required when the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg.
4. Per KDB 248227 D01v02r02, for 802.11b DSSS , when the reported SAR of the highest measured maximum output power channel for the exposure configuration is ≤ 0.8 W/kg, no further SAR testing is required in that exposure configuration.
5. According to KDB 865664 D02v01r02, SAR plot is required for the highest measured SAR in each exposure configuration, wireless mode and frequency band combination
6. Highlight part of test data means repeated test.
7. *: Due the antenna location and antenna performance results the SAR value lower than the lowest system limit, then we show "<0.001* W/Kg" in the report.

14.2 Standalone Body SAR

➢ GSM Body SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	GPRS850/3 slots	Front	251	848.8	31.83	-0.01	32.0	0.498	1.040	0.518
10	GPRS850/3 slots	Back	251	848.8	31.83	0.03	32.0	**1.010**	1.040	1.050
	GPRS850/3 slots	**Back**	**251**	**848.8**	**31.83**	**-0.01**	**32.0**	**0.959**	**1.040**	**0.997**
	GPRS850/3 slots	Back	128	824.2	31.70	-0.04	32.0	0.980	1.072	1.051
	GPRS850/3 slots	Back	190	836.6	31.77	-0.08	32.0	0.981	1.054	1.034
	GPRS1900/3 slots	Front	810	1909.8	28.94	-0.17	29.0	0.421	1.014	0.427
	GPRS1900/3 slots	Back	810	1909.8	28.94	0.03	29.0	0.833	1.014	0.845
11	GPRS1900/3 slots	Back	512	1850.2	28.80	0.09	29.0	**1.130**	1.047	1.183
	GPRS1900/3 slots	Back	661	1880	28.84	0.08	29.0	1.050	1.038	1.090
	GPRS1900/3 slots	**Back**	**661**	**1880**	**28.84**	**0.10**	**29.0**	**1.120**	**1.038**	**1.163**
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ WCDMA Body SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band II/RMC	Front	9400	1880	22.94	-0.09	23.0	0.259	1.014	0.263
12	Band II/RMC	Back	9400	1880	22.94	0.01	23.0	**0.570**	1.014	0.578
	Band IV/RMC	Front	1513	1752.6	22.73	-0.06	23.0	0.159	1.064	0.169
13	Band IV/RMC	Back	1513	1752.6	22.73	0.02	23.0	**0.337**	1.064	0.359
	Band V/RMC	Front	4183	836.6	23.07	0.09	23.5	0.214	1.104	0.236
14	Band V/RMC	Back	4183	836.6	23.07	0.00	23.5	**0.548**	1.104	0.605
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ FDD-LTE Band 2(20MHz) QPSK Body SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band2/1RB#49	Front	18900	1880	22.79	0.15	23.0	0.257	1.050	0.270
15	Band2/1RB#49	Back	18900	1880	22.79	-0.08	23.0	**0.572**	1.050	0.601
	Band2/50%RB#24	Front	19100	1900	21.56	-0.07	22.0	0.223	1.107	0.247
	Band2/50%RB#24	Back	19100	1900	21.56	-0.03	22.0	0.501	1.107	0.555
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ FDD-LTE Band 4(20MHz) QPSK Body SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band4/1RB#0	Front	20050	1720	23.35	0.02	23.5	0.136	1.035	0.141
16	Band4/1RB#0	Back	20050	1720	23.35	0.13	23.5	**0.296**	1.035	0.306
	Band4/50%RB#24	Front	20050	1720	22.24	-0.02	22.5	0.120	1.062	0.127
	Band4/50%RB#24	Back	20050	1720	22.24	0.09	22.5	0.258	1.062	0.274
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➤ FDD-LTE Band 5(10MHz) QPSK Body SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band5/1RB#24	Front	20450	829	22.72	0.06	23.0	0.159	1.067	0.170
17	Band5/1RB#24	Back	20450	829	22.72	-0.04	23.0	**0.340**	1.067	0.363
	Band5/50%RB#12	Front	20450	829	21.32	0.02	21.5	0.121	1.042	0.126
	Band5/50%RB#12	Back	20450	829	21.32	0.08	21.5	0.316	1.042	0.329
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➤ FDD-LTE Band 7(20MHz) QPSK Body SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band7/1RB#0	Front	20850	2510	23.87	-0.07	24.0	0.391	1.030	0.403
18	Band7/1RB#0	Back	20850	2510	23.87	0.02	24.0	**0.604**	1.030	0.622
	Band7/50%RB#0	Front	20850	2510	22.31	-0.06	22.5	0.349	1.045	0.365
	Band7/50%RB#0	Back	20850	2510	22.31	0.19	22.5	0.556	1.045	0.581
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➤ Bluetooth Body SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	BLE-2M	Front	39	2480	5.79	0.00	6.0	<0.001*	1.050	1.000	<0.001*
	BLE-2M	Back	39	2480	5.79	0.00	6.0	<0.001*	1.050	1.000	<0.001*
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**						

Note:

1. Body-worn SAR testing was performed at 10mm separation, and this distance is determined by the handset manufacturer that there will be body-worn accessories that users may acquire at the time of equipment certification, to enable users to purchase aftermarket body-worn accessories with the required minimum separation.
2. Body-worn exposure conditions are intended to voice call operations, therefore GSM voice call is selected to be tested.
3. Per KDB 648474 D04v01r03, when the *Reported* SAR for a body-worn accessory measured without a headset connected to the handset is ≤ 1.2 W/kg, SAR testing with a headset connected to the handset is not required.
4. The WLAN SAR perform the front and back position, due considered the simultaneous SAR for body-worn.
5. Per KDB 447498 D04v01, for each exposure position, if the highest output channel Reported SAR ≤0.8W/kg, other channels SAR testing is not necessary.
6. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required when the measured SAR is ≥0.8W/kg.
7. Per KDB 941225 D05v02r05, 100% RB allocation SAR measurement is not required when the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg.
8. According to KDB 865664 D02v01r02, SAR plot is required for the highest measured SAR in each exposure configuration, wireless mode and frequency band combination.
9. Highlight part of test data means repeated test.
10. *: Due the antenna location and antenna performance results the SAR value lower than the lowest system limit, then we show “<0.001* W/Kg” in the report.

14.3 Repeated SAR measurement

Band/ Mode	Test Position	CH.	Freq. (MHz)	Measured SAR (W/kg)				
				Original	1st Repeated		2nd Repeated	
					Value	Ratio	Value	Ratio
GPRS850/3 slots	Back	251	848.8	1.010	0.959	1.05	/	/
GPRS1900/3 slots	Back	661	1880	1.130	1.120	1.03	/	/
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population				**1.6 W/kg (mW/g) Averaged over 1g**				

Note:

1. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required only when the measured SAR is ≥0.8 W/kg
2. Per KDB 865664 D01v01r04, if the ratio of *original* and *repeated* is ≤ 1.2 and the measured SAR <1.45 W/kg, only one repeated measurement is required.

14.4 Multi-Band Simultaneous Transmission Considerations

➢ **Simultaneous Transmission Capabilities**

According to FCC KDB Publication 447498 D04v01, transmitters are considered to be transmitting simultaneously when there is overlapping transmission, with the exception of transmissions during network hand-offs with maximum hand-off duration less than 30 seconds. Possible transmission paths for the EUT are shown in below Figure and are color-coded to indicate communication modes which share the same path. Modes which share the same transmission path cannot transmit simultaneously with one another.

Path 1	Path 2
GSM/WCDMA/LTE	Bluetooth

Fig.15.1 Simultaneous Transmission Paths

➢ **Multi-Band simultaneous Transmission Consideration**

Simultaneous Transmission Consideration	Position	Applicable Combination
	Head	WWAN (Voice) + Bluetooth
	Body	WWAN (Voice) + Bluetooth

Note:

1. GSM/WCDMA/LTE shares the same antenna, and cannot transmit simultaneously.
2. The Report SAR summation is calculated based on the same configuration and test position.
3. Per KDB 447498 D04v01, simultaneous transmission SAR is compliant if,
   - i. Scalar SAR summation < 1.6 W/kg.
   - ii. SPLSR = $(SAR_1 + SAR_2)^{1.5}$ / (*min. separation distance, mm*), and the peak separation distance is determined from the square root of $[(x_1-x_2)^2 + (y_1-y_2)^2 + (z_1-z_2)^2]$, where (x_1, y_1, z_1) and (x_2, y_2, z_2) are the coordinates of the extrapolated peak SAR locations in the zoom scan If SPLSR ≤ 0.04, simultaneously transmission SAR measurement is not necessary
   - iii. Simultaneously transmission SAR measurement, and the Reported multi-band SAR < 1.6 W/kg

14.5 SAR Simultaneous Transmission Analysis

➢ **Simultaneous Transmission**

Position		Standalone SAR(W/kg)		? SAR_{1g} (W/kg)
		1	2	1+2
		WWAN	BT	
Head	Right Cheek	0.715	0.000	0.715
	Right Tilted	0.456	0.000	0.456
	Left Cheek	0.721	0.000	0.721
	Left Tilted	0.466	0.000	0.466
Body-worn	Front	0.518	0.000	0.518
	Back	1.183	0.000	1.183

➢ **Simultaneous Transmission Conclusion**

The above numerical summed SAR results for all the case simultaneous transmission conditions were below the SAR limit. Therefore, the above analysis is sufficient to determine that simultaneous transmission cases will not exceed the SAR limit and therefore no measured volumetric simultaneous SAR summation is required per FCC KDB Publication 447498 D04v01.

14.6 Measurement Uncertainty

Per KDB865664 D01 SAR Measurement 100 MHz to 6 GHz v01r04, when the highest measured 1-g SAR within a frequency band is < 1.5 W/kg, the extensive SAR measurement uncertainty analysis described in IEC/IEEE 62209-1528:2020 is not required in SAR reports submitted for equipment approval. The equivalent ratio (1.5/1.6) is applied to extremity and occupational exposure conditions.

14.7 Measurement Conclusion

The SAR evaluation indicates that the EUT complies with the RF radiation exposure limits of the FCC and Industry Canada, with respect to all parameters subject to this test. These measurements were taken to simulate the RF effects of RF exposure under worst-case conditions. Precise laboratory measures were taken to assure repeatability of the tests. The results and statements relate only to the item(s) tested. Please note that the absorption and distribution of electromagnetic energy in the body are very complex phenomena that depend on the mass, shape, and size of the body, the orientation of the body with respect to the field vectors, and the electrical properties of both the body and the environment. Other variables that may play a substantial role in possible biological effects are those that characterize the environment (e.g. ambient temperature, air velocity, relative humidity, and body insulation) and those that characterize the individual (e.g. age, gender, activity level, debilitation, or disease). Because various factors may interact with one another to vary the specific biological outcome of an exposure to electromagnetic fields, any protection guide should consider maximal amplification of biological effects as a result of field-body interactions, environmental conditions, and physiological variables.

15 Reference

[1]. FCC 47 CFR Part 2 “Frequency Allocations and Radio Treaty Matters; General Rules and Regulations”

[2]. ANSI/IEEE Std. C95.1-1992, “IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz”, September 1992

[3]. IEC/IEEE 62209-1528:2020, “Measurement procedure for the assessment of specific absorption rate of human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices –Part 1528: Human models, instrumentation, and procedures (Frequency range of 4 MHz to 10 GHz)”, October 2020

[4]. SPEAG DASY52 System Handbook

[5]. FCC KDB 248227 D01 v02r02, “SAR GUIDANCE FOR IEEE 802.11 (Wi-Fi) TRANSMITTERS”, October 2015

[6]. FCC KDB 447498 D04 v01, “RF EXPOSURE PROCEDURES AND EQUIPMENT AUTHORIZATION POLICIES FOR MOBILE AND PORTABLE DEVICES”, November 2021

[7]. FCC KDB 648474 D04 v01r03, “SAR EVALUATION CONSIDERATIONS FOR WIRELESS HANDSETS”, October 2015

[8]. FCC KDB 941225 D01 v03r01, “3G SAR MEAUREMENT PROCEDURES”, October 2015

[9]. FCC KDB 941225 D05 v02r05, “SAR EVALUATION CONSIDERATIONS FOR LTE DEVICES”, Dec 2015

[10]. FCC KDB 941225 D06 v02r01, " SAR EVALUATION PROCEDURES FOR PORTABLE DEVICES WITH WIRELESS ROUTER CAPABILITIES", October 2015

[11]. FCC KDB 865664 D01 v01r04, “SAR MEASUREMENT REQUIREMENTS FOR 100 MHz TO 6 GHz”, August 2015

Appendix A: Plots of SAR System Check

Test Laboratory: JYTSZ Date: 1/7/2025

DUT: Dipole 835 MHz; Type: D835V2; Serial: SN:4D154

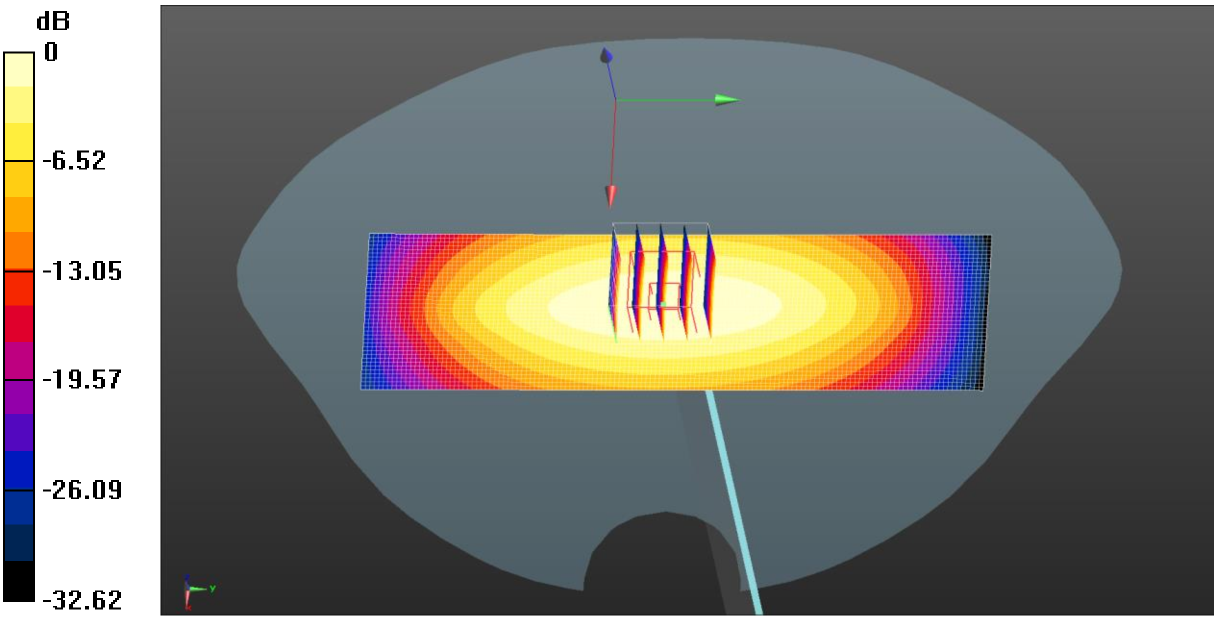
Communication System: UID 0, CW (0); Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 835 MHz; σ = 0.932 S/m; ε_r = 42.322; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(9.85, 9.85, 9.85) @ 835 MHz; Calibrated: 3/20/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 3/26/2024
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

System Performance Check at Frequency835 MHz Head Tissue/d=15mm, Pin=80 mW, dist=1.4mm (EX-Probe)/Area Scan (41x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.07 W/kg

System Performance Check at Frequency835 MHz Head Tissue/d=15mm, Pin=80 mW, dist=1.4mm (EX-Probe)/Zoom Scan (7x7x7) (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 35.13 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 1.32 W/kg
SAR(1 g) = 0.788 W/kg; SAR(10 g) = 0.511 W/kg
Smallest distance from peaks to all points 3 dB below = 17.3 mm
Ratio of SAR at M2 to SAR at M1 = 61.7%
Maximum value of SAR (measured) = 1.06 W/kg



0 dB = 1.07 W/kg = 0.29 dBW/kg

Test Laboratory: JYTSZ Date: 1/10/2025

DUT: Dipole 1750 MHz; Type: D1750V2; Serial: SN:1177

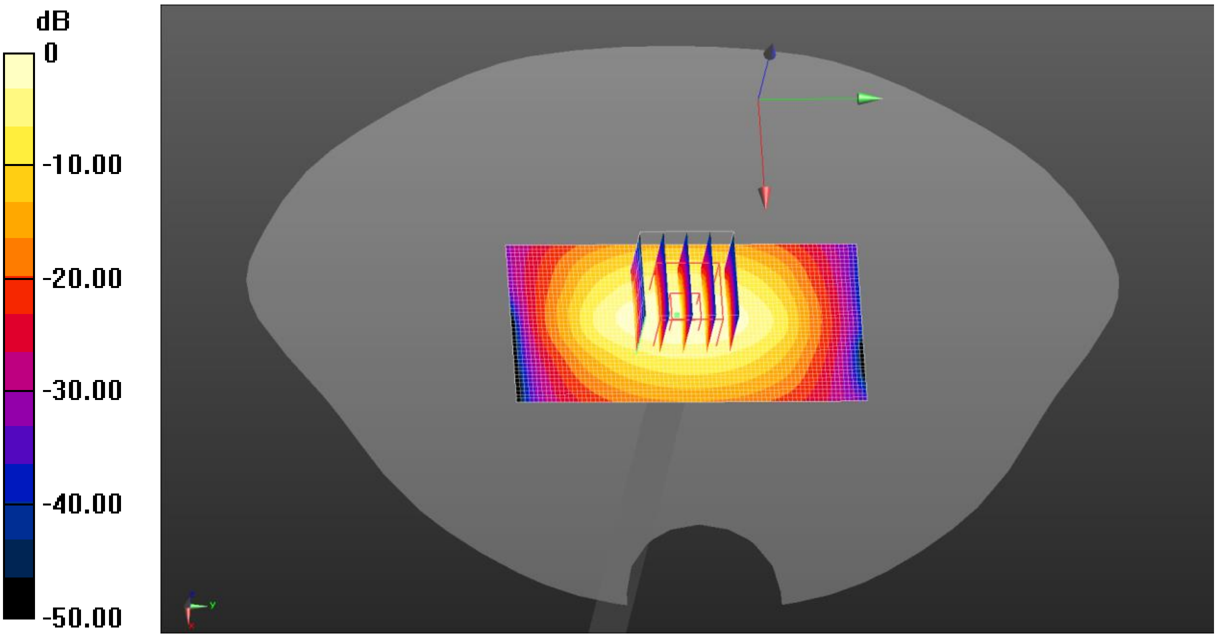
Communication System: UID 0, CW (0); Frequency: 1750 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1750 MHz; σ = 1.322 S/m; ε_r = 41.354; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(8.52, 8.52, 8.52) @ 1750 MHz; Calibrated: 3/20/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 3/26/2024
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

System Performance Check at Frequency1750 MHz Head Tissue/d=10mm, Pin=40 mW, dist=1.4mm (EX-Probe)/Area Scan (41x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 2.32 W/kg

System Performance Check at Frequency1750 MHz Head Tissue/d=10mm, Pin=40 mW, dist=1.4mm (EX-Probe)/Zoom Scan (7x7x7) (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 41.22 V/m; Power Drift = -0.12 dB
Peak SAR (extrapolated) = 2.71 W/kg
SAR(1 g) = 1.43 W/kg; SAR(10 g) = 0.771 W/kg
Smallest distance from peaks to all points 3 dB below = 10.6 mm
Ratio of SAR at M2 to SAR at M1 = 53.6%
Maximum value of SAR (measured) = 2.27 W/kg



0 dB = 2.32 W/kg = 3.65 dBW/kg

Test Laboratory: JYTSZ Date: 1/10/2025

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: SN:5d175

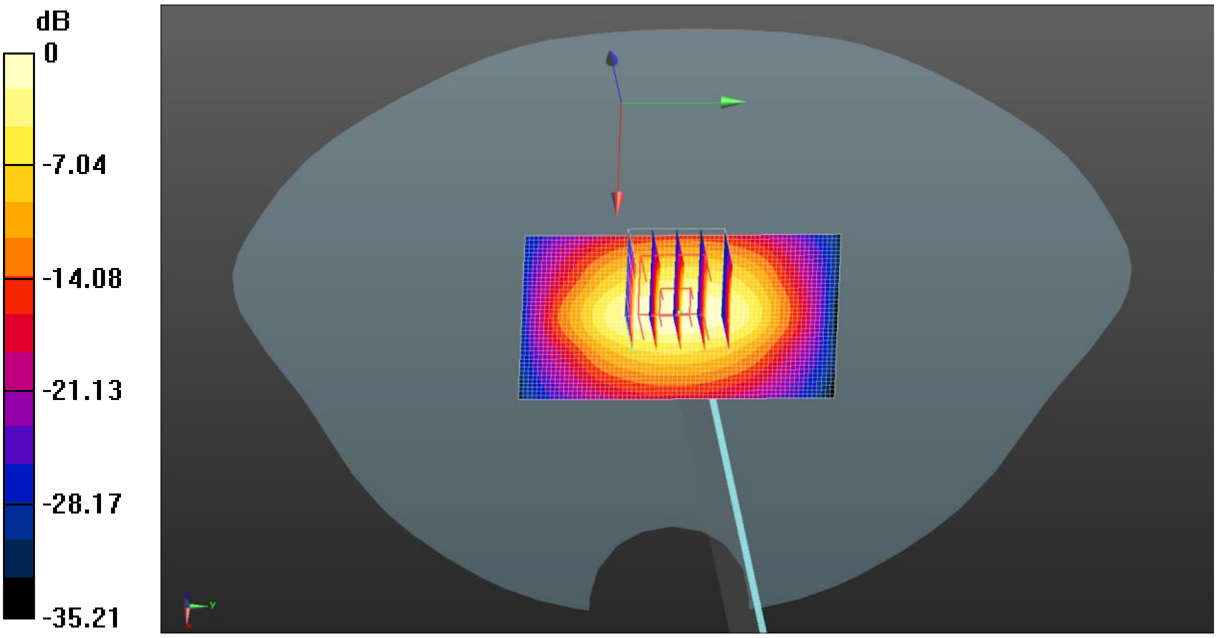
Communication System: UID 0, CW (0); Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.347 S/m; ε_r = 41.275; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(8.12, 8.12, 8.12) @ 1900 MHz; Calibrated: 3/20/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 3/26/2024
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

System Performance Check at Frequency1900 MHz Head Tissue/d=10mm, Pin=40 mW, dist=1.4mm (EX-Probe)/Area Scan (41x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 2.67 W/kg

System Performance Check at Frequency1900 MHz Head Tissue/d=10mm, Pin=40 mW, dist=1.4mm (EX-Probe)/Zoom Scan (7x7x7) (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 41.82 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 3.11 W/kg
SAR(1 g) = 1.57 W/kg; SAR(10 g) = 0.823 W/kg
Smallest distance from peaks to all points 3 dB below = 9.5 mm
Ratio of SAR at M2 to SAR at M1 = 52.4%
Maximum value of SAR (measured) = 2.66 W/kg



0 dB = 2.67 W/kg = 4.27 dBW/kg

Test Laboratory: JYTSZ Date: 1/15/2025

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: SN:910

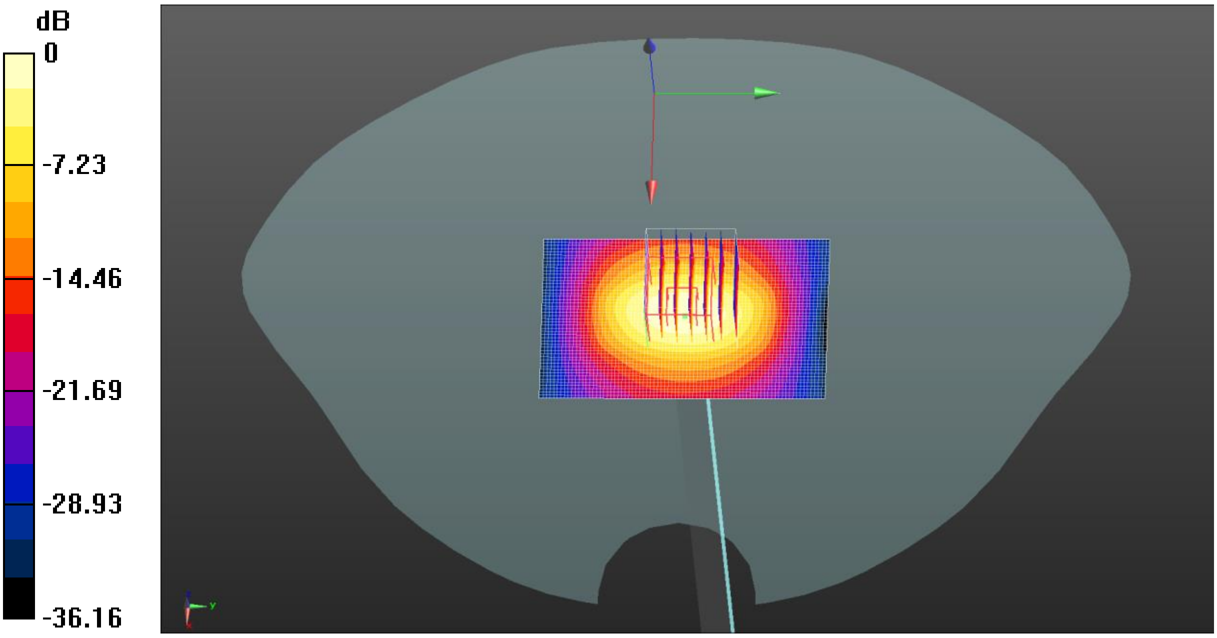
Communication System: UID 0, CW (0); Frequency: 2450 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2450 MHz; σ = 1.731 S/m; ε_r = 40.475; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(7.59, 7.59, 7.59) @ 2450 MHz; Calibrated: 3/20/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 3/26/2024
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

System Performance Check at Frequency2450 MHz Head Tissue/d=10mm, Pin=40 mW, dist=1.4mm (EX-Probe)/Area Scan (51x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 3.67 W/kg

System Performance Check at Frequency2450 MHz Head Tissue/d=10mm, Pin=40 mW, dist=1.4mm (EX-Probe)/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 45.81 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 4.59 W/kg
SAR(1 g) = 2.21 W/kg; SAR(10 g) = 1.02 W/kg
Smallest distance from peaks to all points 3 dB below = 9.1 mm
Ratio of SAR at M2 to SAR at M1 = 49.2%
Maximum value of SAR (measured) = 3.51 W/kg



0 dB = 3.67 W/kg = 5.65 dBW/kg

Test Laboratory: JYTSZ Date: 1/15/2025

DUT: Dipole 2600 MHz; Type: D2600V2; Serial: SN:1114

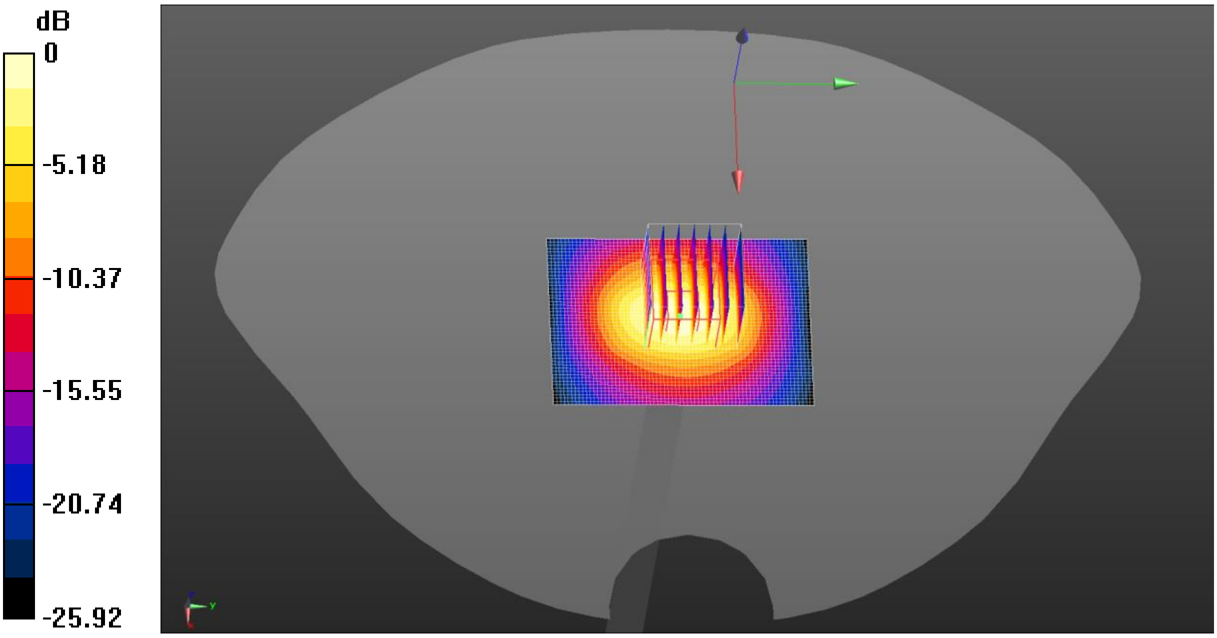
Communication System: UID 0, CW (0); Frequency: 2600 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2600 MHz; σ = 1.891 S/m; ε_r = 40.284; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(7.41, 7.41, 7.41) @ 2600 MHz; Calibrated: 3/20/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 3/26/2024
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

System Performance Check at Frequency2600 MHz Head Tissue/d=10mm, Pin=40 mW, dist=1.4mm (EX-Probe)/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 47.87 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 4.88 W/kg
SAR(1 g) = 2.29 W/kg; SAR(10 g) = 1.02 W/kg
Smallest distance from peaks to all points 3 dB below = 8.6mm
Ratio of SAR at M2 to SAR at M1 = 47.5%
Maximum value of SAR (measured) = 3.76 W/kg

System Performance Check at Frequency2600 MHz Head Tissue/d=10mm, Pin=40 mW, dist=1.4mm (EX-Probe)/Area Scan (51x71x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 4.25 W/kg



0 dB = 3.76 W/kg = 5.75 dBW/kg

Appendix B: Plots of SAR Test Data

Test Laboratory: JYTSZ Date: 1/7/2025

DUT: 4G Feature Phone; Type: SNAP KD240; Serial: SZR012400591-1

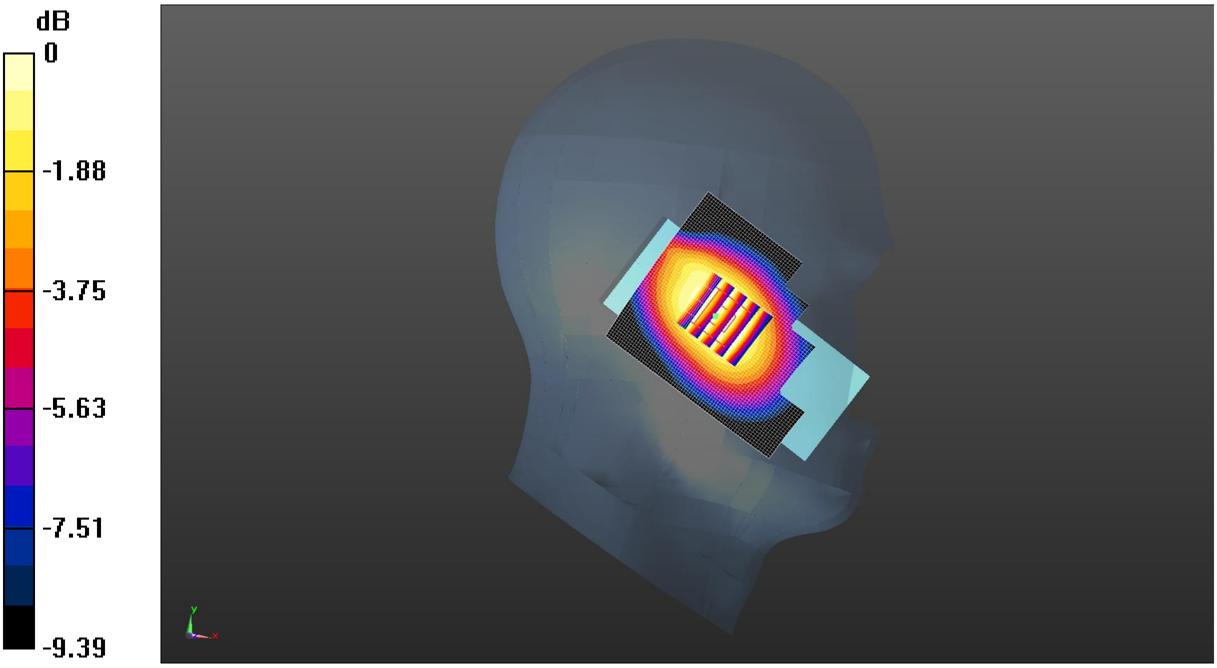
Communication System: UID 0, GSM (0); Frequency: 848.8 MHz;Duty Cycle: 1:8.30042
Medium parameters used (interpolated): f = 848.8 MHz; σ = 0.911 S/m; ε_r = 40.471; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(9.85, 9.85, 9.85) @ 848.8 MHz; Calibrated: 3/20/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 3/26/2024
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

GSM 850 Left Cheek/High Channel/Area Scan (61x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.253 W/kg

GSM 850 Left Cheek/High Channel/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.136 V/m; Power Drift = -0.17 dB
Peak SAR (extrapolated) = 0.263 W/kg
SAR(1 g) = 0.194 W/kg; SAR(10 g) = 0.142 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 = 75.5%
Maximum value of SAR (measured) = 0.238 W/kg



0 dB = 0.238 W/kg = -6.23 dBW/kg

Test Laboratory: JYTSZ Date: 1/10/2025

DUT: 4G Feature Phone; Type: SNAP KD240; Serial: SZR012400591-1

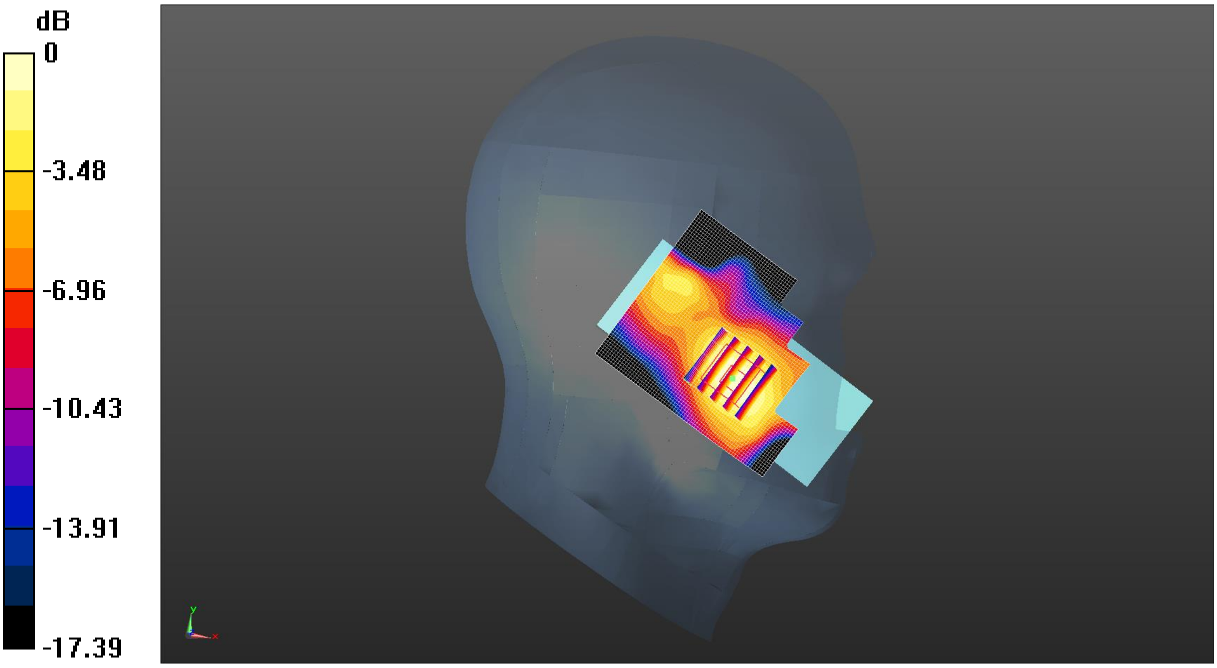
Communication System: UID 0, GSM (0); Frequency: 1909.8 MHz;Duty Cycle: 1:8.30042
Medium parameters used: f = 1910 MHz; σ = 1.389 S/m; ε_r = 38.966; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(8.12, 8.12, 8.12) @ 1909.8 MHz; Calibrated: 3/20/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 3/26/2024
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

GSM 1900 Left Cheek/High Channel/Area Scan (61x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.115 W/kg

GSM 1900 Left Cheek/High Channel/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.028 V/m; Power Drift = -0.17 dB
Peak SAR (extrapolated) = 0.124 W/kg
SAR(1 g) = 0.078 W/kg; SAR(10 g) = 0.047 W/kg
Smallest distance from peaks to all points 3 dB below = 12.9 mm
Ratio of SAR at M2 to SAR at M1 = 65.1%
Maximum value of SAR (measured) = 0.108 W/kg



0 dB = 0.108 W/kg = -9.67 dBW/kg

Test Laboratory: JYTSZ Date: 1/10/2025

DUT: 4G Feature Phone; Type: SNAP KD240; Serial: SZR012400591-1

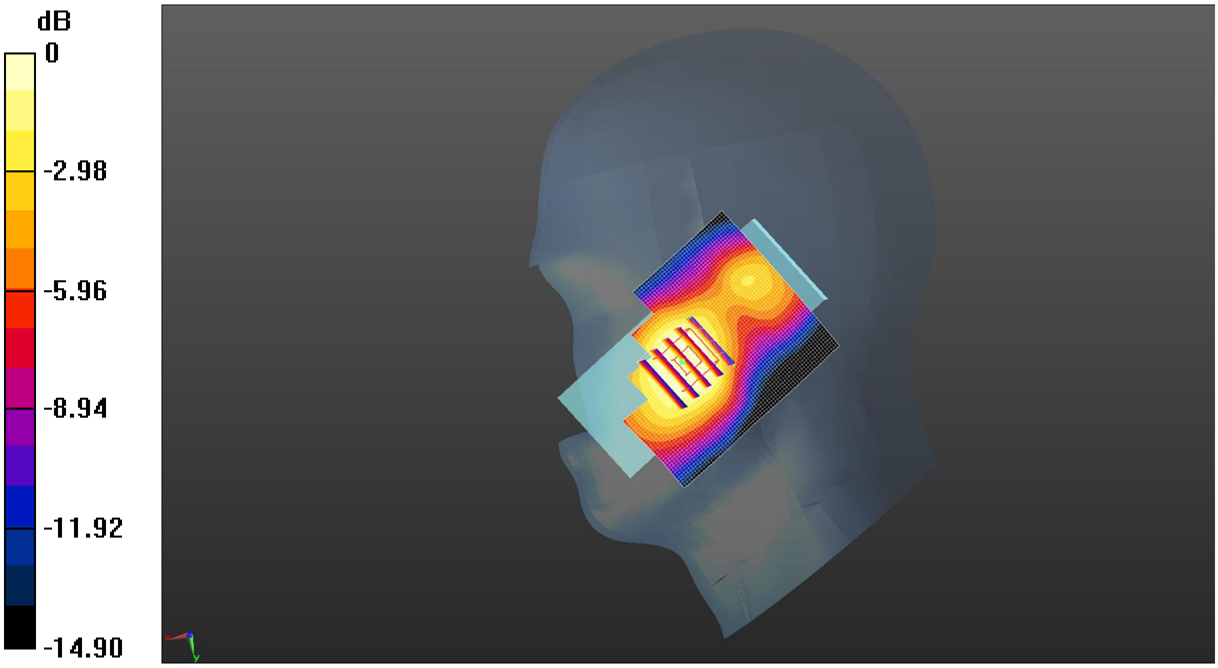
Communication System: UID 0, UMTS-FDD(WCDMA) (0); Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.389 S/m; ε_r = 38.966; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(8.12, 8.12, 8.12) @ 1880 MHz; Calibrated: 3/20/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 3/26/2024
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

WCDMA 1900 Right Cheek/Middle Channel/Area Scan (61x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.391 W/kg

WCDMA 1900 Right Cheek/Middle Channel/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.422 V/m; Power Drift = 0.20 dB
Peak SAR (extrapolated) = 0.401 W/kg
SAR(1 g) = 0.273 W/kg; SAR(10 g) = 0.179 W/kg
Smallest distance from peaks to all points 3 dB below = 15.7 mm
Ratio of SAR at M2 to SAR at M1 = 64.9%
Maximum value of SAR (measured) = 0.346 W/kg



0 dB = 0.346 W/kg = -4.61 dBW/kg

Test Laboratory: JYTSZ Date: 1/10/2025

DUT: 4G Feature Phone; Type: SNAP KD240; Serial: SZR012400591-1

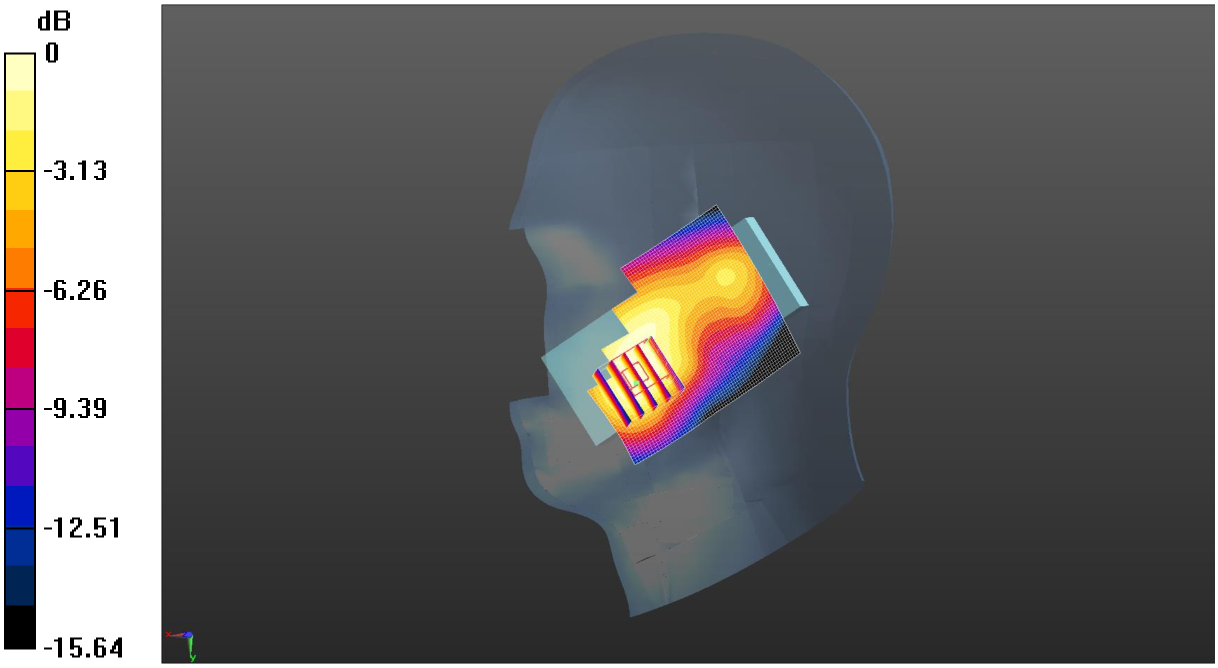
Communication System: UID 0, UMTS-FDD(WCDMA) (0); Frequency: 1752.6 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1752.6 MHz; σ = 1.363 S/m; ε_r = 39.041; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(8.52, 8.52, 8.52) @ 1752.6 MHz; Calibrated: 3/20/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 3/26/2024
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

WCDMA 1700 Right Cheek/High Channel/Area Scan (61x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.335 W/kg

WCDMA 1700 Right Cheek/High Channel/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 7.742 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 0.382 W/kg
SAR(1 g) = 0.247 W/kg; SAR(10 g) = 0.162 W/kg
Smallest distance from peaks to all points 3 dB below = 15.2 mm
Ratio of SAR at M2 to SAR at M1 = 64.4%
Maximum value of SAR (measured) = 0.329 W/kg



0 dB = 0.329 W/kg = -4.82 dBW/kg

Test Laboratory: JYTSZ Date: 1/7/2025

DUT: 4G Feature Phone; Type: SNAP KD240; Serial: SZR012400591-1

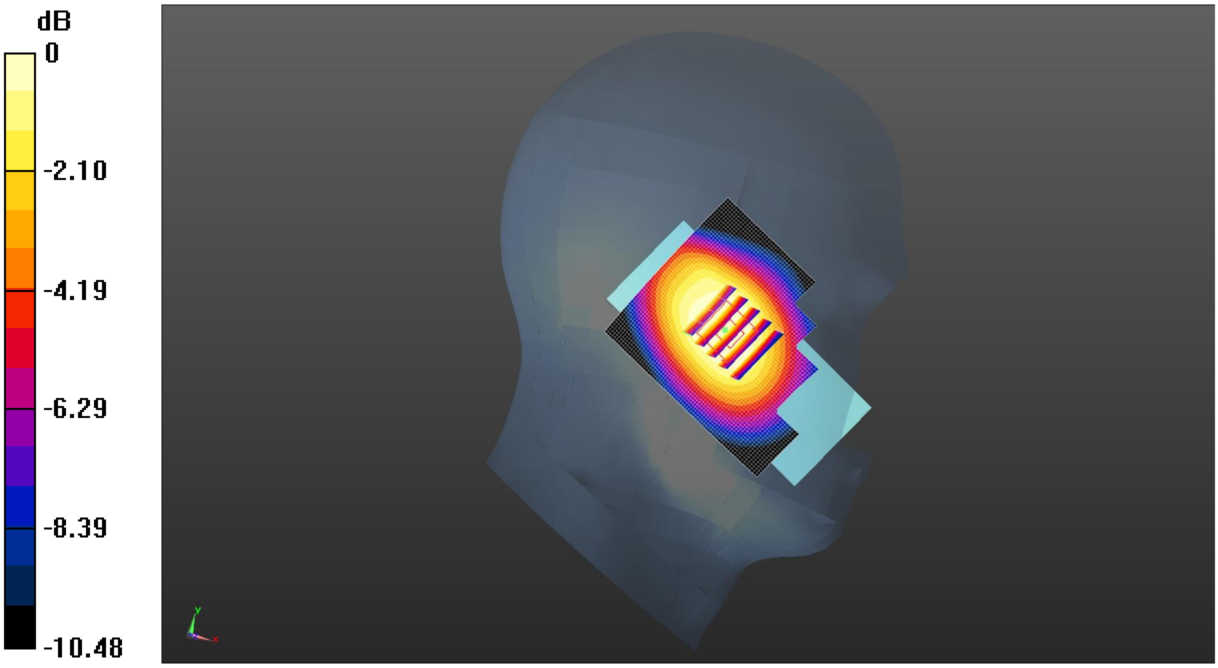
Communication System: UID 0, UMTS-FDD(WCDMA) (0); Frequency: 836.6 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.906 S/m; ε_r = 40.515; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(9.85, 9.85, 9.85) @ 836.6 MHz; Calibrated: 3/20/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 3/26/2024
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

WCDMA 850 Left Cheek/Middle Channel/Area Scan (61x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.958 W/kg

WCDMA 850 Left Cheek/Middle Channel/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 16.37 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 0.959 W/kg
SAR(1 g) = 0.653 W/kg; SAR(10 g) = 0.471 W/kg
Smallest distance from peaks to all points 3 dB below = 20.6 mm
Ratio of SAR at M2 to SAR at M1 = 70.5%
Maximum value of SAR (measured) = 0.837 W/kg



0 dB = 0.837 W/kg = -0.77 dBW/kg

Test Laboratory: JYTSZ Date: 1/10/2025

DUT: 4G Feature Phone; Type: SNAP KD240; Serial: SZR012400591-1

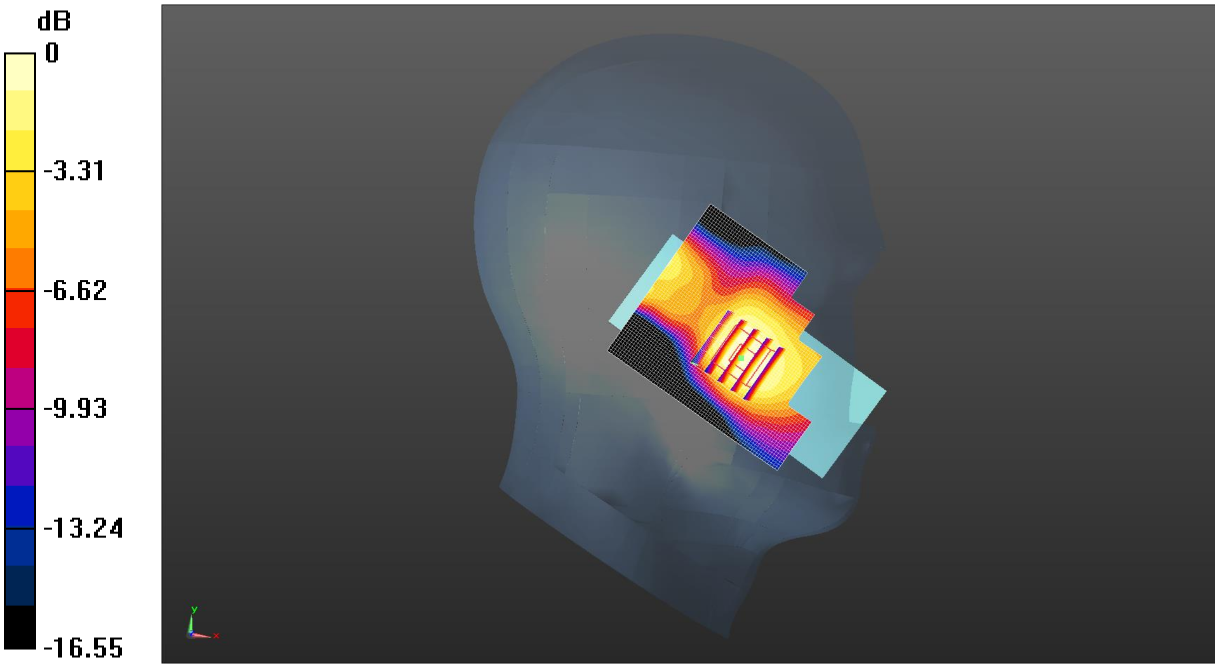
Communication System: UID 0, LTE-Fdd(USA) 1RB QPSK (0); Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.389 S/m; ε_r = 38.966; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(8.12, 8.12, 8.12) @ 1880 MHz; Calibrated: 3/20/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 3/26/2024
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

LTE Band 2 1RB(20MHz) Left Cheek/Middle Channel/Area Scan (61x71x1):
Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.136 W/kg

LTE Band 2 1RB(20MHz) Left Cheek/Middle Channel/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.323 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 0.135 W/kg
SAR(1 g) = 0.092 W/kg; SAR(10 g) = 0.058 W/kg
Smallest distance from peaks to all points 3 dB below = 14.3 mm
Ratio of SAR at M2 to SAR at M1 = 72.7%
Maximum value of SAR (measured) = 0.119 W/kg



0 dB = 0.119 W/kg = -9.23 dBW/kg

Test Laboratory: JYTSZ Date: 1/10/2025

DUT: 4G Feature Phone; Type: SNAP KD240; Serial: SZR012400591-1

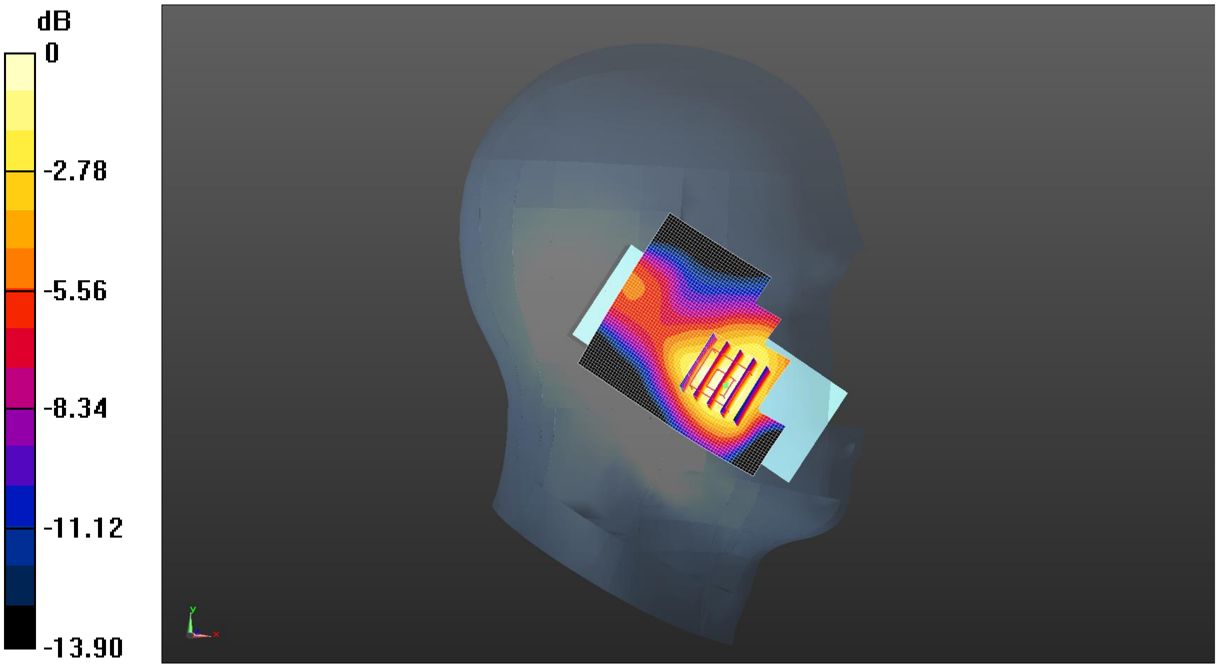
Communication System: UID 0, LTE-Fdd(USA) 1RB QPSK (0); Frequency: 1720 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1720 MHz; σ = 1.344 S/m; ε_r = 39.093; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(8.52, 8.52, 8.52) @ 1720 MHz; Calibrated: 3/20/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 3/26/2024
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

LTE Band 4 1RB(20MHz) Left Cheek/Low Channel/Area Scan (61x71x1):
Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.184 W/kg

LTE Band 4 1RB(20MHz) Left Cheek/Low Channel/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.670 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 0.196 W/kg
SAR(1 g) = 0.134 W/kg; SAR(10 g) = 0.086 W/kg
Smallest distance from peaks to all points 3 dB below = 14.3 mm
Ratio of SAR at M2 to SAR at M1 = 70.6%
Maximum value of SAR (measured) = 0.171 W/kg



0 dB = 0.171 W/kg = -7.68 dBW/kg

Test Laboratory: JYTSZ Date: 1/7/2025

DUT: 4G Feature Phone; Type: SNAP KD240; Serial: SZR012400591-1

Communication System: UID 0, LTE-Fdd(USA) 1RB QPSK (0); Frequency: 829 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 829 MHz; σ = 0.904 S/m; ε_r = 40.543; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY5 Configuration:

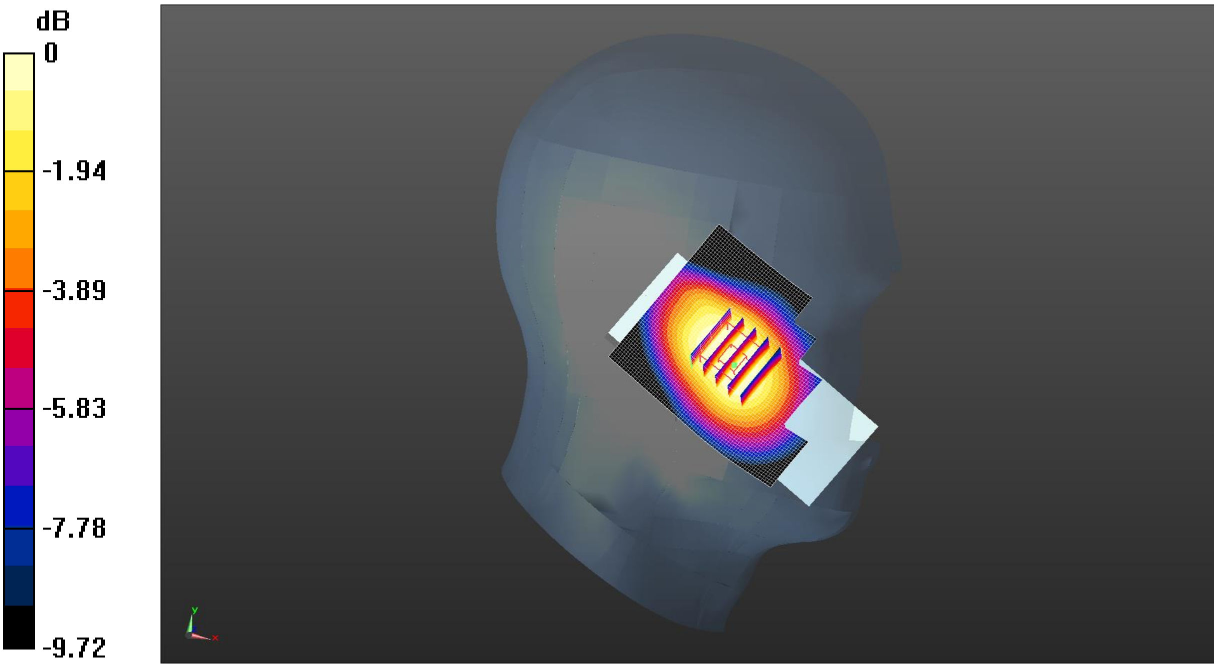
- Probe: EX3DV4 - SN3924; ConvF(9.85, 9.85, 9.85) @ 829 MHz; Calibrated: 3/20/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 3/26/2024
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

LTE Band 5 1RB(10MHz) Left Cheek/Low Channel/Area Scan (61x71x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.329 W/kg

LTE Band 5 1RB(10MHz) Left Cheek/Low Channel/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.102 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.343 W/kg
SAR(1 g) = 0.248 W/kg; SAR(10 g) = 0.181 W/kg
Smallest distance from peaks to all points 3 dB below = 20.4 mm
Ratio of SAR at M2 to SAR at M1 = 73.9%
Maximum value of SAR (measured) = 0.307 W/kg



0 dB = 0.307 W/kg = -5.12 dBW/kg

Test Laboratory: JYTSZ Date: 1/15/2025

DUT: 4G Feature Phone; Type: SNAP KD240; Serial: SZR012400591-1

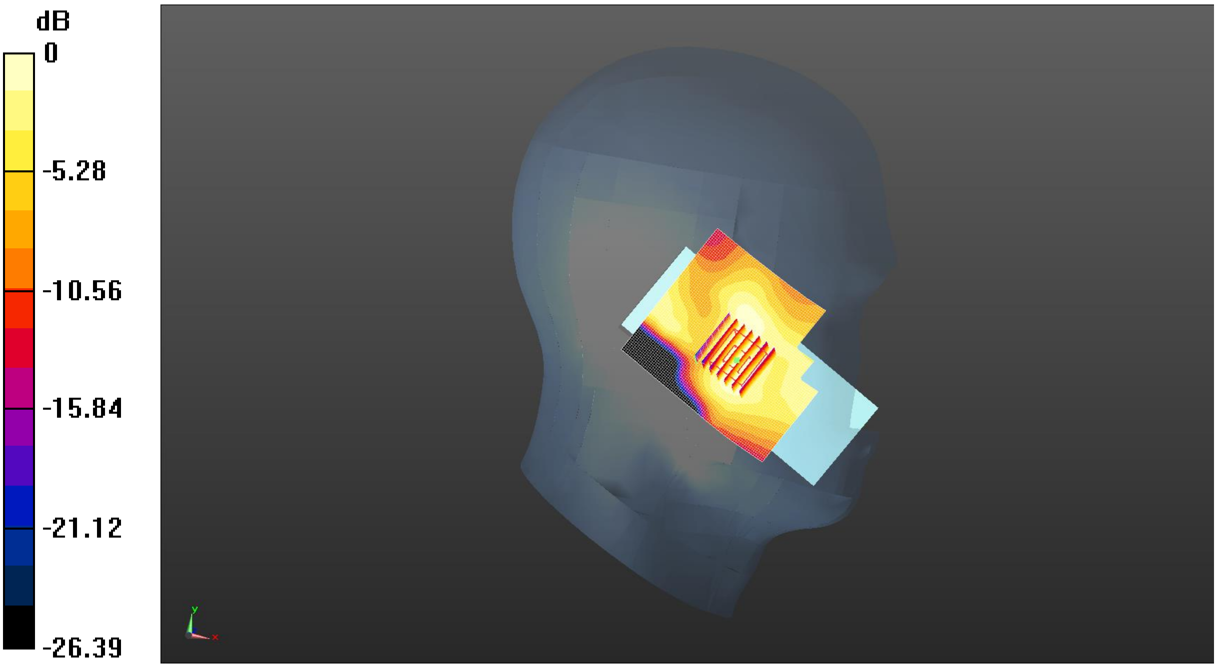
Communication System: UID 0, LTE-Fdd(USA) 1RB QPSK (0); Frequency: 2510 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2510 MHz; σ = 1.851 S/m; ε_r = 38.09; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(7.59, 7.59, 7.59) @ 2510 MHz; Calibrated: 3/20/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 3/26/2024
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

LTE Band 7 1RB(20MHz) Left Cheek/Low Channel/Area Scan (71x81x1):
Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.192 W/kg

LTE Band 7 1RB(20MHz) Left Cheek/Low Channel/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.709 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 0.224 W/kg
SAR(1 g) = 0.130 W/kg; SAR(10 g) = 0.071 W/kg
Smallest distance from peaks to all points 3 dB below = 7.7 mm
Ratio of SAR at M2 to SAR at M1 = 61.4%
Maximum value of SAR (measured) = 0.185 W/kg



0 dB = 0.185 W/kg = -7.33 dBW/kg

Test Laboratory: JYTSZ Date: 1/7/2025

DUT: 4G Feature Phone; Type: SNAP KD240; Serial: SZR012400591-1

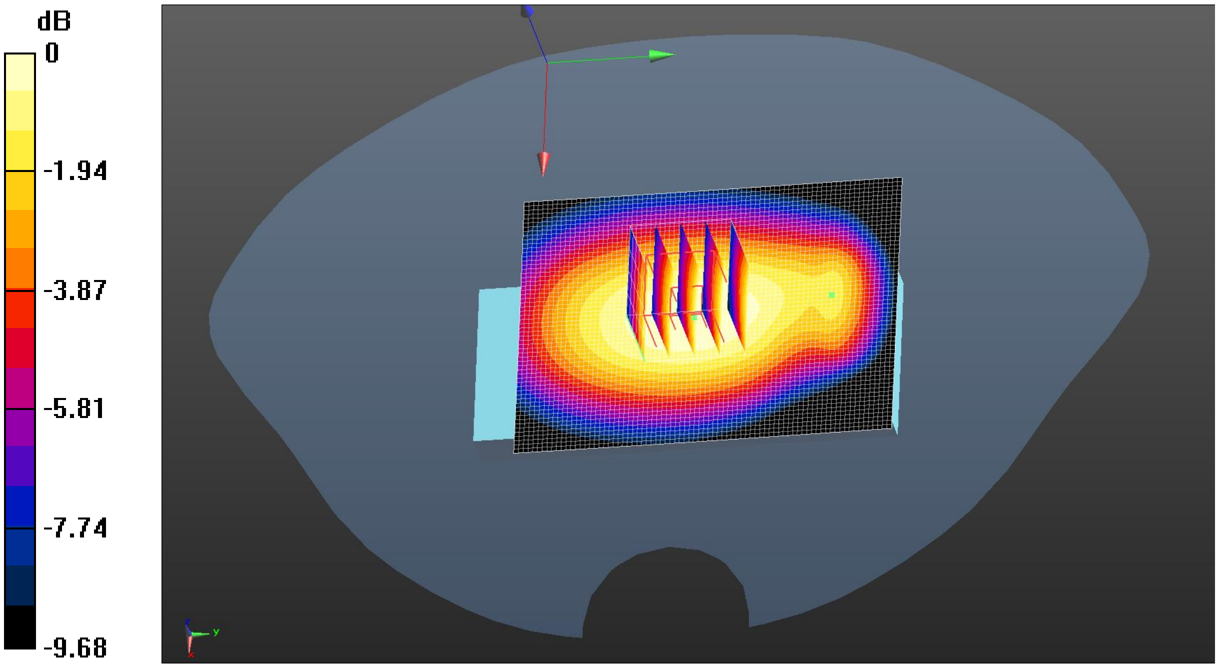
Communication System: UID 0, GPRS(3 Slots) (0); Frequency: 848.8 MHz;Duty Cycle: 1:2.77971
Medium parameters used (interpolated): f = 848.8 MHz; σ = 0.911 S/m; ε_r = 40.471; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(9.85, 9.85, 9.85) @ 848.8 MHz; Calibrated: 3/20/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 3/26/2024
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

GPRS 850 3Slots Body Back/High Channel/Area Scan (61x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.27 W/kg

GPRS 850 3Slots Body Back/High Channel/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 37.19 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 1.42 W/kg
SAR(1 g) = 1.01 W/kg; SAR(10 g) = 0.736 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 = 71.9%
Maximum value of SAR (measured) = 1.26 W/kg



0 dB = 1.26 W/kg = 1.00 dBW/kg

Test Laboratory: JYTSZ Date: 1/10/2025

DUT: 4G Feature Phone; Type: SNAP KD240; Serial: SZR012400591-1

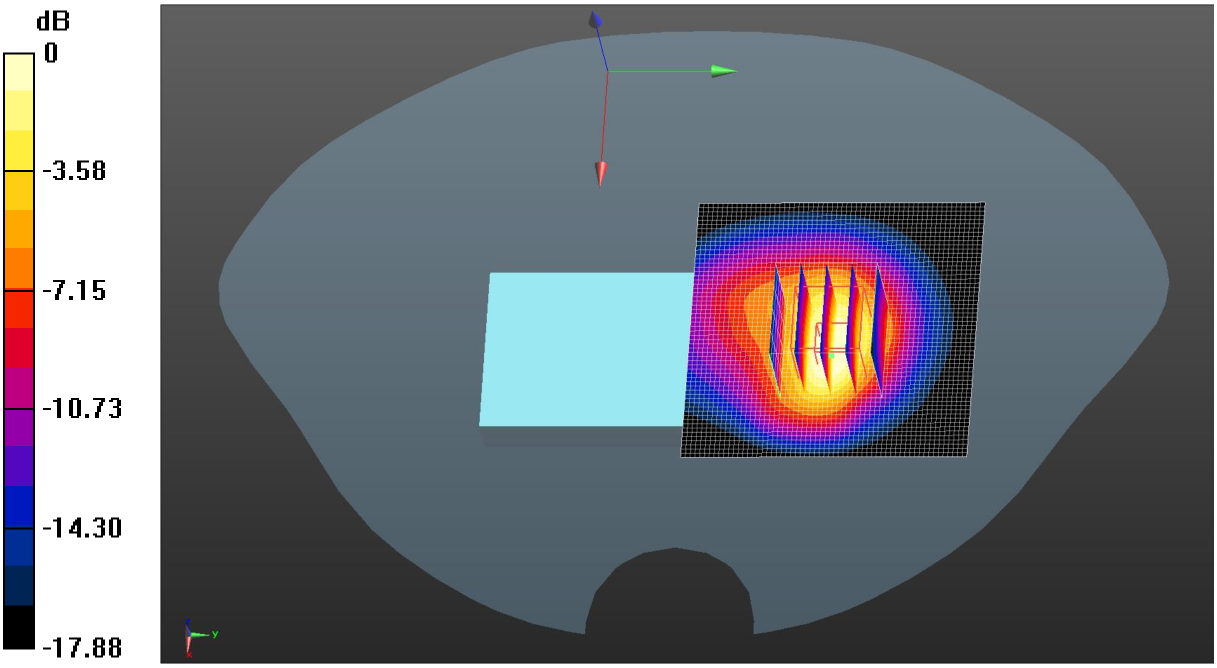
Communication System: UID 0, GPRS(3 Slots) (0); Frequency: 1850.2 MHz;Duty Cycle: 1:2.77971
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.39 S/m; ε_r = 38.966; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(8.12, 8.12, 8.12) @ 1850.2 MHz; Calibrated: 3/20/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 3/26/2024
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

GPRS 1900 3Slots Body Back/Low Channel/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.83 W/kg

GPRS 1900 3Slots Body Back/Low Channel/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.406 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 2.06 W/kg
SAR(1 g) = 1.13 W/kg; SAR(10 g) = 0.595 W/kg
Smallest distance from peaks to all points 3 dB below = 9.7 mm
Ratio of SAR at M2 to SAR at M1 = 57.3%
Maximum value of SAR (measured) = 1.71 W/kg



0 dB = 1.71 W/kg = 2.34 dBW/kg

Test Laboratory: JYTSZ Date: 1/10/2025

DUT: 4G Feature Phone; Type: SNAP KD240; Serial: SZR012400591-1

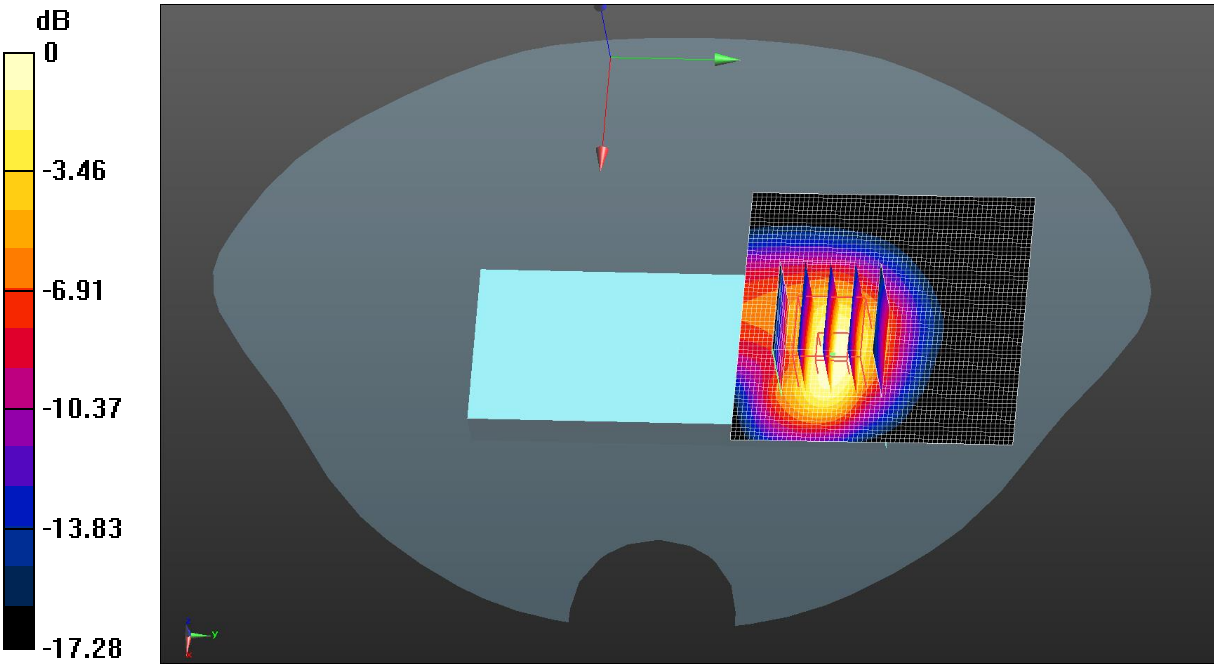
Communication System: UID 0, UMTS-FDD(WCDMA) (0); Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.389 S/m; ε_r = 38.966; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(8.12, 8.12, 8.12) @ 1880 MHz; Calibrated: 3/20/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 3/26/2024
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

WCDMA 1900 Body Back/Middle Channel/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.918 W/kg

WCDMA 1900 Body Back/Middle Channel/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.863 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 1.06 W/kg
SAR(1 g) = 0.570 W/kg; SAR(10 g) = 0.291 W/kg
Smallest distance from peaks to all points 3 dB below = 8.2 mm
Ratio of SAR at M2 to SAR at M1 = 57.5%
Maximum value of SAR (measured) = 0.848 W/kg



0 dB = 0.848 W/kg = -0.71 dBW/kg

Test Laboratory: JYTSZ Date: 1/10/2025

DUT: 4G Feature Phone; Type: SNAP KD240; Serial: SZR012400591-1

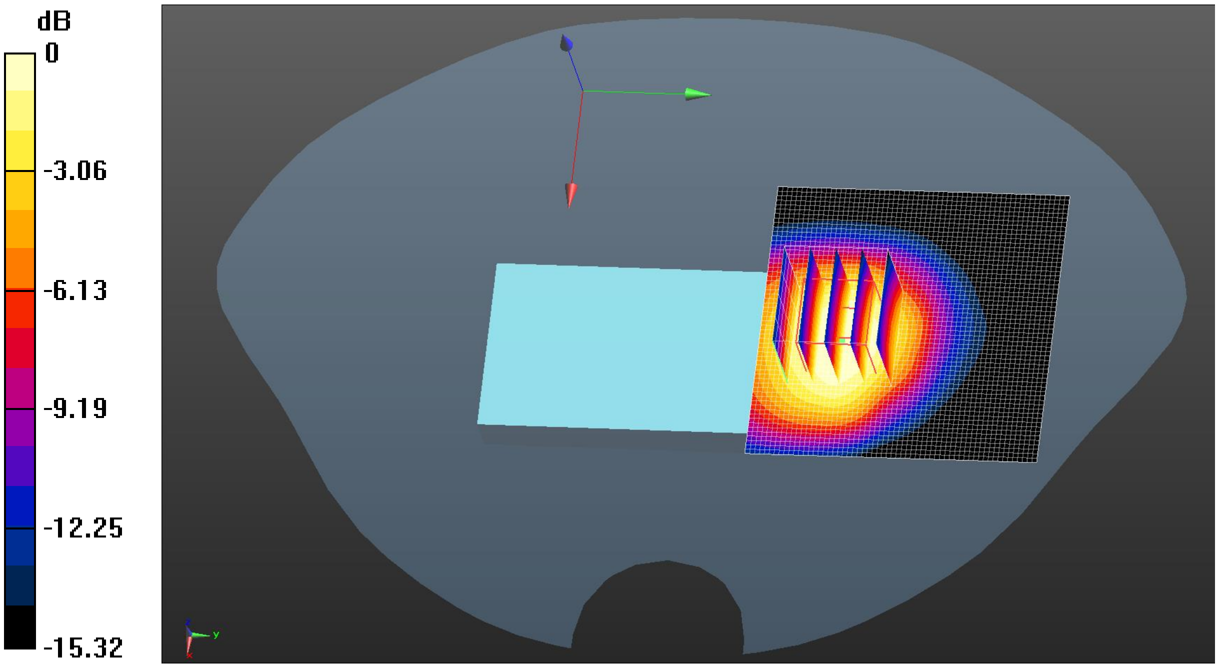
Communication System: UID 0, UMTS-FDD(WCDMA) (0); Frequency: 1752.6 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1752.6 MHz; σ = 1.363 S/m; ε_r = 39.041; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(8.52, 8.52, 8.52) @ 1752.6 MHz; Calibrated: 3/20/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 3/26/2024
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

WCDMA 1700 Body Back/High Channel/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.557 W/kg

WCDMA 1700 Body Back/High Channel/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.527 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.601 W/kg
SAR(1 g) = 0.337 W/kg; SAR(10 g) = 0.205 W/kg
Smallest distance from peaks to all points 3 dB below = 13.8 mm
Ratio of SAR at M2 to SAR at M1 = 55.2%
Maximum value of SAR (measured) = 0.484 W/kg



0 dB = 0.484 W/kg = -3.15 dBW/kg

Test Laboratory: JYTSZ Date: 1/7/2025

DUT: 4G Feature Phone; Type: SNAP KD240; Serial: SZR012400591-1

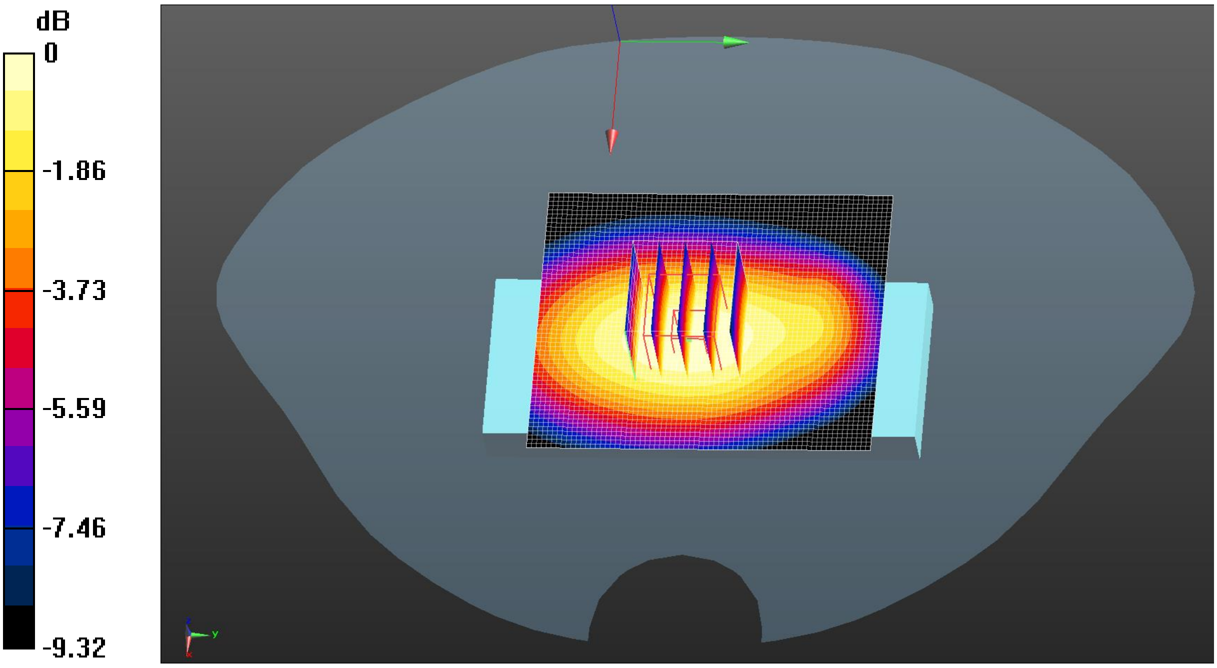
Communication System: UID 0, UMTS-FDD(WCDMA) (0); Frequency: 836.6 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.906 S/m; ε_r = 40.515; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(9.85, 9.85, 9.85) @ 836.6 MHz; Calibrated: 3/20/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 3/26/2024
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

WCDMA 850 Body Back/Middle Channel/Area Scan (61x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.696 W/kg

WCDMA 850 Body Back/Middle Channel/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 28.13 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 0.778 W/kg
SAR(1 g) = 0.548 W/kg; SAR(10 g) = 0.401 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 = 71.4%
Maximum value of SAR (measured) = 0.690 W/kg



0 dB = 0.690 W/kg = -1.61 dBW/kg

Test Laboratory: JYTSZ Date: 1/10/2025

DUT: 4G Feature Phone; Type: SNAP KD240; Serial: SZR012400591-1

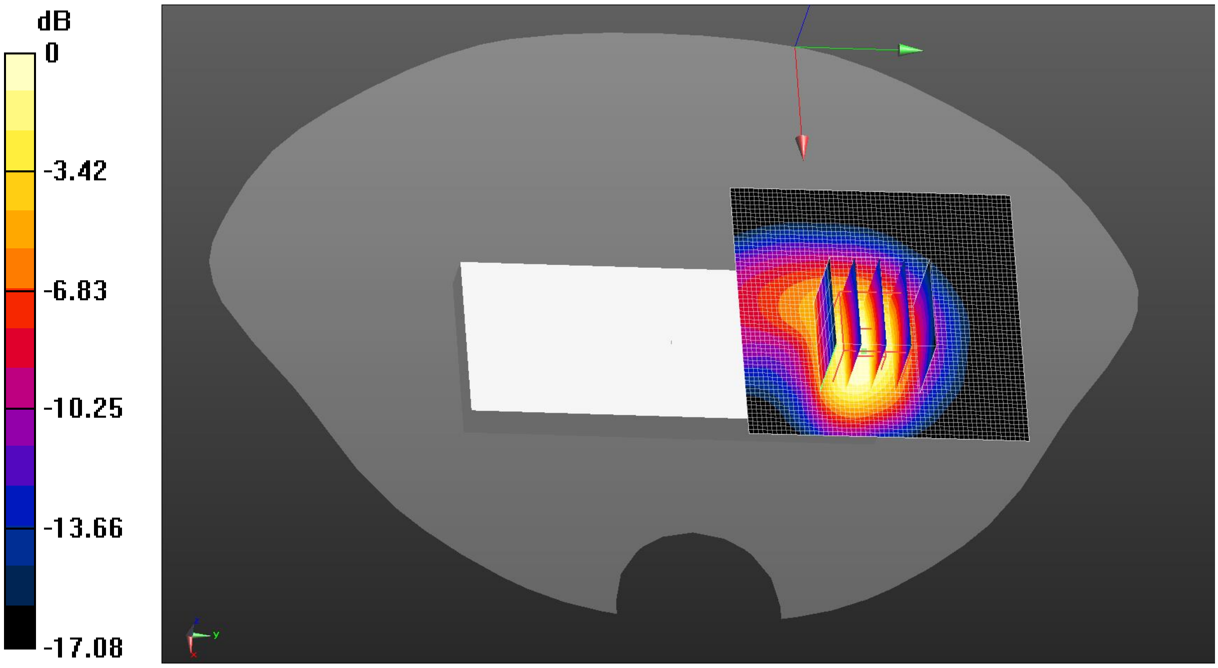
Communication System: UID 0, LTE-Fdd(USA) 1RB QPSK (0); Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.389 S/m; ε_r = 38.966; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(8.12, 8.12, 8.12) @ 1880 MHz; Calibrated: 3/20/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 3/26/2024
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

LTE Band 2 1RB(20MHz) Body Back/Middle Channel/Area Scan (61x61x1):
Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.862 W/kg

LTE Band 2 1RB(20MHz) Body Back/Middle Channel/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.149 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 1.04 W/kg
SAR(1 g) = 0.572 W/kg; SAR(10 g) = 0.297 W/kg
Smallest distance from peaks to all points 3 dB below = 9.6 mm
Ratio of SAR at M2 to SAR at M1 = 58.9%
Maximum value of SAR (measured) = 0.843 W/kg



0 dB = 0.843 W/kg = -0.74 dBW/kg

Test Laboratory: JYTSZ Date: 1/10/2025

DUT: 4G Feature Phone; Type: SNAP KD240; Serial: SZR012400591-1

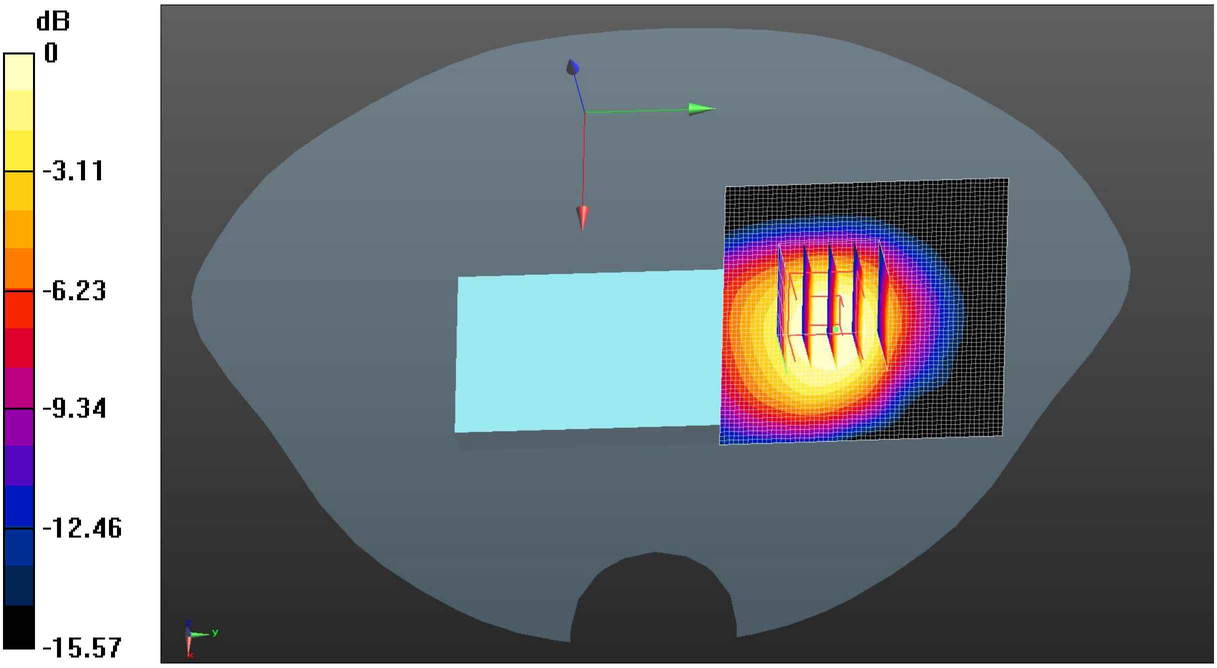
Communication System: UID 0, LTE-Fdd(USA) 1RB QPSK (0); Frequency: 1720 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1720 MHz; σ = 1.344 S/m; ε_r = 39.093; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(8.52, 8.52, 8.52) @ 1720 MHz; Calibrated: 3/20/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 3/26/2024
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

LTE Band 4 1RB(20MHz) Body Back/Low Channel/Area Scan (61x61x1):
Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.504 W/kg

LTE Band 4 1RB(20MHz) Body Back/Low Channel/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.909 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 0.536 W/kg
SAR(1 g) = 0.296 W/kg; SAR(10 g) = 0.179 W/kg
Smallest distance from peaks to all points 3 dB below = 15.8 mm
Ratio of SAR at M2 to SAR at M1 = 53.6%
Maximum value of SAR (measured) = 0.430 W/kg



0 dB = 0.430 W/kg = -3.67 dBW/kg

Test Laboratory: JYTSZ Date: 1/7/2025

DUT: 4G Feature Phone; Type: SNAP KD240; Serial: SZR012400591-1

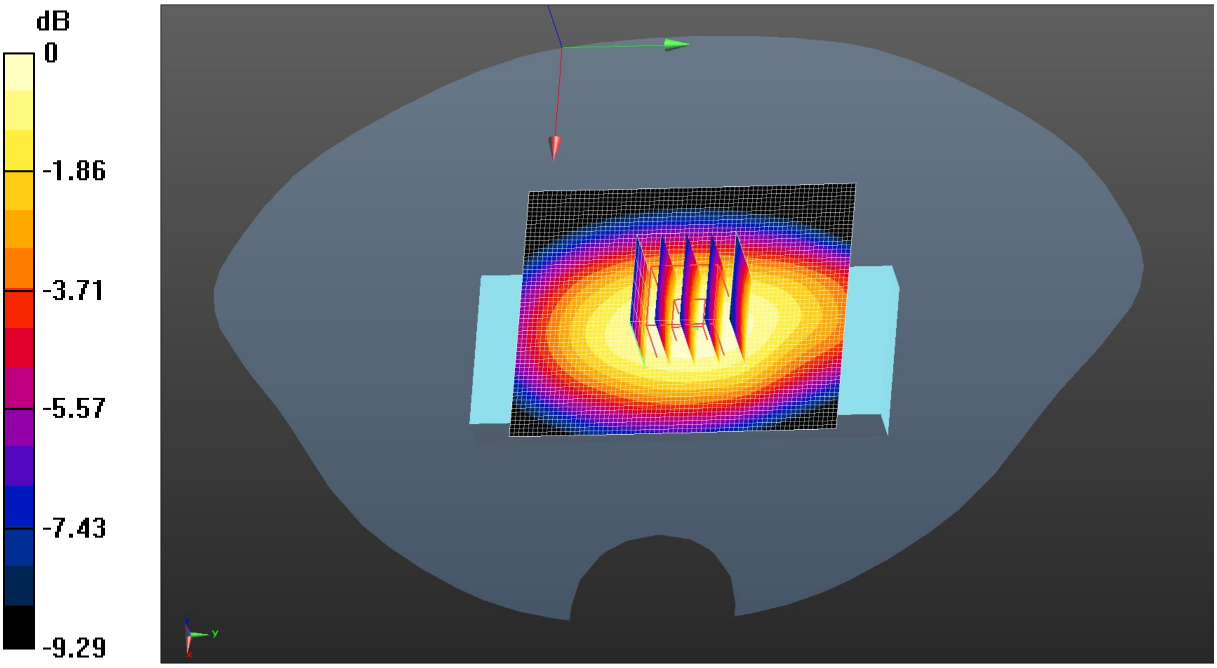
Communication System: UID 0, LTE-Fdd(USA) 1RB QPSK (0); Frequency: 829 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 829 MHz; σ = 0.904 S/m; ε_r = 40.543; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(9.85, 9.85, 9.85) @ 829 MHz; Calibrated: 3/20/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 3/26/2024
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

LTE Band 5 1RB(10MHz) Body Back/Low Channel/Area Scan (61x71x1):
Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.430 W/kg

LTE Band 5 1RB(10MHz) Body Back/Low Channel/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 22.14 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 0.487 W/kg
SAR(1 g) = 0.340 W/kg; SAR(10 g) = 0.250 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 = 70.7%
Maximum value of SAR (measured) = 0.431 W/kg



0 dB = 0.431 W/kg = -3.65 dBW/kg

Test Laboratory: JYTSZ Date: 1/15/2025

DUT: 4G Feature Phone; Type: SNAP KD240; Serial: SZR012400591-1

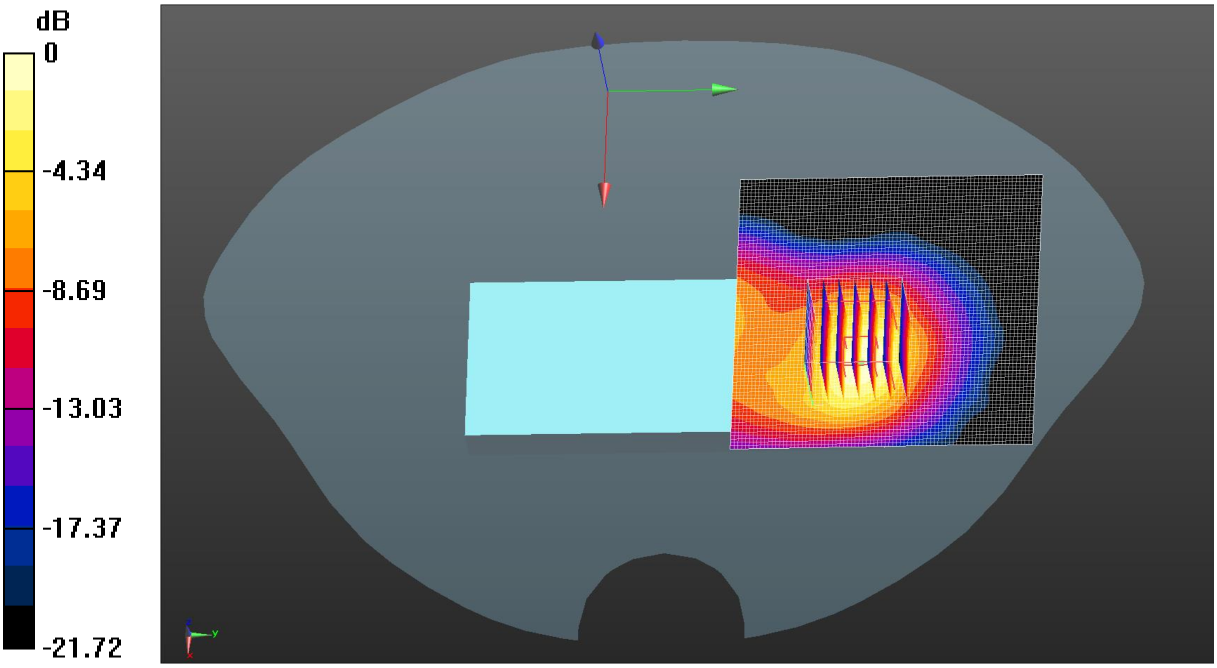
Communication System: UID 0, LTE-Fdd(USA) 1RB QPSK (0); Frequency: 2510 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2510 MHz; σ = 1.851 S/m; ε_r = 38.09; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(7.59, 7.59, 7.59) @ 2510 MHz; Calibrated: 3/20/2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 3/26/2024
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

LTE Band 7 1RB(20MHz) Body Back/Low Channel/Area Scan (81x81x1):
Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.926 W/kg

LTE Band 7 1RB(20MHz) Body Back/Low Channel/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.82 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 1.27 W/kg
SAR(1 g) = 0.604 W/kg; SAR(10 g) = 0.285 W/kg
Smallest distance from peaks to all points 3 dB below = 10 mm
Ratio of SAR at M2 to SAR at M1 = 48.2%
Maximum value of SAR (measured) = 1.01 W/kg



0 dB = 1.01 W/kg = 0.06 dBW/kg

------End of Report------