

FCC SAR REPORT

Applicant: TECNO MOBILE LIMITED

Address of Applicant: FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE
19-25 SHAN MEI STREET FOTAN NT HONGKONG

Equipment Under Test (EUT)

Product Name: Mobile Phone

Model No.: CK8n

Trade mark: TECNO

FCC ID: 2ADYY-CK8N

Applicable standards: FCC 47 CFR Part 2.1093

Date of Test: 14 Jan., 2023 ~ 02 Feb., 2023

Test Result: Maximum Reported 1-g SAR (W/kg)
Head: 0.891 Body: 0.744 Hotspot: 0.744

Authorized Signature:



Bruce Zhang
Laboratory Manager

This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product and does not permit the use of the JYT product certification mark. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

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2 Version

Version No.	Date	Description
00	27 Feb., 2023	Original

Tested by:*Eric Wang***Date:***27 Feb., 2023***Test Engineer****Reviewed by:***Janet. Wei***Date:***27 Feb., 2023***Project Engineer**

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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	0.490	PCE	0.891
	PCS 1900	0.564		
	WCDMA Band II	0.451		
	WCDMA Band IV	0.891		
	WCDMA Band V	0.493		
	LTE Band 2	0.530		
	LTE Band 5	0.619		
	LTE Band 7	0.549		
	LTE Band 12 & Band 17	0.564		
	LTE Band 41 & Band 38	0.436		
	LTE Band 66 & Band 4	0.882		
	NR n5	0.619		
	NR n7	0.602		
	NR n12	0.621		
	NR n41 & n38	0.797		
	NR n66	0.695		
	NR n77 (3450MHz~3550MHz) & n78 (3450MHz~3550MHz)	0.337		
	NRn77 (3700MHz~3980MHz) & n78 (3700MHz~3800MHz)	0.445		
	WLAN 2.4 GHz	0.128	DTS	
WLAN 5.2 GHz	0.265	NII		
WLAN 5.8 GHz	0.066			
Bluetooth	0.014	DSS		
Body (10 mm Gap)	GSM 850	0.419	PCE	0.744
	PCS 1900	0.409		
	WCDMA Band II	0.157		
	WCDMA Band IV	0.216		
	WCDMA Band V	0.267		
	LTE Band 2	0.227		
	LTE Band 5	0.301		
	LTE Band 7	0.410		
	LTE Band 12 & Band 17	0.226		
	LTE Band 41 & Band 38	0.331		
	LTE Band 66 & Band 4	0.271		
	NR n5	0.241		
	NR n7	0.417		
	NR n12	0.246		
NR n41 & n38	0.744			

	NR n66	0.196			
	NR n77 (3450MHz~3550MHz) &n78 (3450MHz~3550MHz)	0.022			
	NRn77 (3700MHz~3980MHz) &n78 (3700MHz~3800MHz)	0.189			
	WLAN 2.4 GHz	0.071			DTS
	WLAN 5.2 GHz	0.053			NII
	WLAN 5.8 GHz	0.083			
	Bluetooth	0.008			DSS
	Hotspot (10 mm Gap)	GSM 850			0.419
PCS 1900		0.523			
WCDMA Band II		0.221			
WCDMA Band IV		0.348			
WCDMA Band V		0.267			
LTE Band 2		0.284			
LTE Band 5		0.301			
LTE Band 7		0.410			
LTE Band 12 & Band 17		0.226			
LTE Band 41 & Band 38		0.331			
LTE Band 66 & Band 4		0.409			
NR n5		0.241			
NR n7		0.417			
NR n12		0.246			
NR n41 &n38		0.744			
NR n66		0.287			
NR n77 (3450MHz~3550MHz) &n78 (3450MHz~3550MHz)		0.022			
NRn77 (3700MHz~3980MHz) &n78 (3700MHz~3800MHz)		0.282			
WLAN 2.4 GHz		0.071	DTS		
WLAN 5.2 GHz		0.053	NII		
WLAN 5.8 GHz	0.083				
Bluetooth	0.008	DSS			

<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)
Right Tilted	EN-DC 5A_n41A	1.246	PCE	1.473
	WLAN 5 GHz MIMO	0.225	NII	
	NFC	0.000	DXX	

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 IEEE 1528-2013.
3. For FDD-LTE Band 17 is full covered by FDD-LTE Band 12, so only FDD-LTE Band 12 was tested.
4. For FDD-LTE Band 4 is full covered by FDD-LTE Band 66, so only FDD-LTE Band 66 was tested.
5. For TDD-LTE Band 38 is full covered by TDD-LTE Band 41, so only FDD-LTE Band 41 was tested.
6. NR n38 is full covered by NR n41, so only NR n41 was tested.
7. NR n78 is full covered by NR n77, so only NR n77 was tested.

5 General Information

5.1 Client Information

Applicant:	TECNO MOBILE LIMITED
Address:	FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE 19-25 SHAN MEI STREET FOTAN NT HONGKONG
Manufacturer:	TECNO MOBILE LIMITED
Address:	FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE 19-25 SHAN MEI STREET FOTAN NT HONGKONG
Factory:	SHENZHEN TECNO TECHNOLOGY CO., LTD.
Address:	101, Building 24, Waijing Industrial Park, Fumin Community, Fucheng Street, Longhua District, Shenzhen City, P.R.China

5.2 General Description of EUT

Product Name:	Mobile Phone		
Model No.:	CK8n		
Category of device	Portable device		
Operation Frequency:	GSM :	GSM850: 824.2~848.8 MHz	PCS 1900: 1850.2~1909.8 MHz
	WCDMA :	Band II: 1852.4~1907.6 MHz	Band V: 826.4~846.6 MHz
		Band IV: 1712.4~1752.6 MHz	
	LTE :	Band 2 :1850MHz~1910MHz	Band 4 :1710MHz~1755MHz
		Band 5 :824MHz~849MHz	Band 7: 2500MHz~2570MHz
		Band 12: 699-716MHz	Band 17: 704MHz~716MHz
		Band 38: 2570MHz~2620MHz	Band 41: 2496MHz~2690MHz
		Band 66 :1710MHz~1780MHz	
	5G NR	n5: 824MHz~849MHz	n7: 2500MHz~2570MHz
		n12: 699-716MHz	n38: 2570MHz~2620MHz
		n41: 2496MHz~2690MHz	n66 :1710MHz~1780MHz
		n77: 3450MHz~3550MHz	n77: 3700MHz~3980MHz
		n78: 3450MHz~3550MHz	n78: 3700MHz~3800MHz
	Wi-Fi:	2412MHz~2462MHz	5150MHz-5250MHz
		5725MHz-5850MHz	
Bluetooth: 2402 MHz ~ 2480 MHz			
NFC : 13.56MHz			
Modulation technology:	GSM:	<input checked="" type="checkbox"/> Voice(GMSK)	<input checked="" type="checkbox"/> GPRS(GMSK) <input checked="" type="checkbox"/> EGPRS(GMSK, 8PSK)
	WCDMA:	<input checked="" type="checkbox"/> RMC(QPSK)	<input checked="" type="checkbox"/> HSUPA(QPSK) <input checked="" type="checkbox"/> HSDPA(QPSK, 16QAM)
	LTE:	<input checked="" type="checkbox"/> QPSK	<input checked="" type="checkbox"/> 16QAM <input checked="" type="checkbox"/> 64QAM
	5G NR:	<input checked="" type="checkbox"/> CP-OFDM(QPSK, 16QAM, 64QAM, 256QAM)	
		<input checked="" type="checkbox"/> DFT-s-OFDM($\pi/2$ -BPSK, QPSK, 16QAM, 64QAM, 256QAM)	
	Wi-Fi:	<input checked="" type="checkbox"/> 802.11b(DSSS)	<input checked="" type="checkbox"/> 802.11a/g/n/ac/ax (OFDM)
	Bluetooth:	<input checked="" type="checkbox"/> BDR(GFSK)	<input checked="" type="checkbox"/> EDR($\pi/4$ -DQPSK, 8DPSK) <input checked="" type="checkbox"/> LE(GFSK)
	NFC :	ASK	
SA: NR n5, n7, n12, n38, n41, n66, n77, n78			

	NSA(EN-DC): DC_5A - n7A, DC_5A - n41A, DC_41A - n41A DC_2A - n78A, DC_4A - n78A, DC_5A - n78A DC_7A - n78A, DC_38A - n78A, DC_41A - n78A DC_66A - n78A, DC_5A - n77A, DC_7A - n77A DC_41A - n77A, DC_66A - n77A, DC_7C - n78A DC_41C - n78A, DC_7C - n77A, DC_41C - n77A DC_41C - n41A (LTE Band 7C and 41C only supports downlink)	
Antenna Type:	Internal Antenna	
Antenna Gain:	GSM 850: -1.5dBi; PCS 1900: -0.5dBi WCDMA Band II: -0.5dBi; WCDMA Band V: -1.5dBi WCDMA Band IV: -0.7dBi LTE Band 2: -0.5dBi; LTE Band 4: -0.7dBi LTE Band 5: -1.5dBi; ANT0:LTE Band 7:-0.4dBi ANT5:LTE Band 7: -1.3dBi TE Band 12: -1.9dBi; LTE Band 17: -1.9dBi ; ANT0:LTE Band 38: -0.4dBi; LTE Band 41:-0.4 dBi ANT5: LTE Band 38: -1.3dBi; LTE Band 41: -1.3dBi LTE Band 66: -0.7dBi n5: -1.5dBi; n7:-0.4 dBi n12: -1.9dBi ; n38: -0.4dBi n41: -0.4dBi; n66: -0.7dBi; n77:-0.3dBi ; n78: -0.3dBi ANT 7:Bluetooth: -2.45dBi; 2.4G Wi-Fi: -2.45dBi; 5G Wi-Fi:-0.12dBi ANT 6:2.4G Wi-Fi: -3.25dBi; 5G Wi-Fi: -0.9dBi	
(E)GPRS Class:	(E)GPRS Class: 12	
Dimensions (L*W*H):	163 mm (L)× 76 mm (W)× 8 mm (H)	
Accessories information:	Adapter: Model: U330TSA Input: AC100-240V, 50/60Hz, 1.5A Output: DC 5.0V, 3.0A 15.0W or DC 10.0V, 3.3A 33.0W MAX	Battery: Rechargeable Li-ion Polymer Battery DC3.87V, 4900mAh
		Headset: Support headset

5.3 Maximum RF Output Power

ANT 0 :

Mode	Average Power (dBm)	
	GSM 850	PCS 1900
GSM (Voice)	33.29	29.22
GPRS (1 TX Slot)	33.31	29.20
GPRS (2 TX Slots)	32.45	28.20
GPRS (3 TX Slots)	30.57	26.56
GPRS (4 TX Slots)	29.52	25.98
EGPRS (1 TX Slot)	27.78	28.03
EGPRS (2 TX Slots)	26.68	27.54
EGPRS (3 TX Slots)	24.67	26.34
EGPRS (4 TX Slots)	23.62	25.61

Mode	Average Power (dBm)		
	WCDMA Band II	WCDMA Band IV	WCDMA Band V
AMR 12.2 kbps	22.45	22.04	23.18
RMC 12.2 kbps	22.55	22.03	23.18
HSDPA Sub-test 1	21.55	21.17	22.16
HSDPA Sub-test 2	21.04	20.69	21.68
HSDPA Sub-test 3	21.09	20.73	21.70
HSDPA Sub-test 4	21.08	20.67	21.66
HSUPA Sub-test 1	19.52	19.33	20.16
HSUPA Sub-test 2	20.02	19.68	20.60
HSUPA Sub-test 3	20.52	20.18	21.12
HSUPA Sub-test 4	19.48	19.35	20.19
HSUPA Sub-test 5	21.53	21.22	22.19

Mode	Average Power (dBm)					
	LTE Band 2	LTE Band 5	LTE Band 7	LTE Band 12	LTE Band 41	LTE Band 66
BW/1.4 MHz	23.61	23.85	/	23.61	/	23.17
BW/3.0 MHz	23.45	23.81	/	23.66	/	23.02
BW/5.0 MHz	23.78	23.99	23.49	23.79	23.63	23.32
BW/10 MHz	23.49	23.83	23.30	23.66	23.50	23.11
BW/15 MHz	23.42	/	23.29	/	23.43	23.11
BW/20 MHz	23.38	/	23.37	/	23.21	23.09

Mode	Average Power (dBm)			
	NR Band n5	NR Band n7	NR Band n41	NR Band 66
BW/10MHz	23.59	23.62	26.42	22.92
BW/15MHz	23.55	23.86	26.77	22.99
BW/20 MHz	23.65	23.58	26.47	22.97
BW/30MHz	/	/	26.48	/
BW/40MHz	/	/	26.40	23.03
BW/50MHz	/	/	26.51	/
BW/60MHz	/	/	26.35	/
BW/80MHz	/	/	26.42	/
BW/90MHz	/	/	26.35	/
BW/100MHz	/	/	26.24	/

ANT 4 :

Mode	Average Power (dBm)	
	NR Band n77 3450-3550	NR Band n77 3700-3980
BW/10MHz	27.40	27.38
BW/15MHz	27.46	27.33
BW/20 MHz	27.46	27.35
BW/30MHz	27.38	27.29
BW/40MHz	27.31	27.21
BW/50MHz	27.46	27.20
BW/60MHz	27.51	27.23
BW/80MHz	27.44	27.27
BW/90MHz	27.34	27.20
BW/100MHz	27.27	27.11

ANT 5 :

Mode	Average Power (dBm)	
	LTE Band 7	LTE Band 41
BW/1.4 MHz	/	/
BW/3.0 MHz	/	/
BW/5.0 MHz	23.49	23.63
BW/10 MHz	23.30	23.50
BW/15 MHz	23.29	23.43
BW/20 MHz	23.37	23.21

ANT 6 :

WLAN 2.4 GHz Band Average Power (dBm)						
Mode/Band	b	g	n (HT-20)	n (HT-40)	ax 20	ax 40
WLAN 2.4GHz	17.94	14.67	11.51	11.28	8.26	8.34

WLAN 5.2 GHz Band Average Power (dBm)									
Mode/Band	a	ac 20	ac 40	ac 80	ax 20	ax 40	ax 80	n 20	n 40
WLAN 5.2GHz	13.05	10.35	10.03	9.65	7.26	7.07	6.59	11.22	10.99

WLAN 5.8 GHz Band Average Power (dBm)									
Mode/Band	a	ac 20	ac 40	ac 80	ax 20	ax 40	ax 80	n 20	n 40
WLAN 5.8GHz	9.31	5.96	5.61	5.21	5.01	4.96	4.60	5.98	5.68

ANT 7:

WLAN 2.4 GHz Band Average Power (dBm)						
Mode/Band	b	g	n (HT-20)	n (HT-40)	ax 20	ax 40
WLAN 2.4GHz	16.73	13.59	10.65	10.70	8.10	8.25

WLAN 5.2 GHz Band Average Power (dBm)									
Mode/Band	a	ac 20	ac 40	ac 80	ax 20	ax 40	ax 80	n 20	n 40
WLAN 5.2GHz	13.28	8.92	8.54	8.18	6.90	6.99	6.76	9.80	9.72

WLAN 5.8 GHz Band Average Power (dBm)									
Mode/Band	a	ac 20	ac 40	ac 80	ax 20	ax 40	ax 80	n 20	n 40
WLAN 5.8GHz	9.61	5.32	5.24	4.61	4.76	4.51	3.91	5.39	5.28

Bluetooth Average Power (dBm)							
Mode/Band	1 Mbps (GFSK)	2 Mbps ($\pi/4$ DQPSK)	3 Mbps (8DPSK)	BLE PHY 1M	BLE PHY 2M	BLE Coded PHY S=2	BLE Coded PHY S=2
Bluetooth	7.03	6.67	7.14	1.93	1.84	1.85	1.79

NFC ANT

NFC Band Average Power (dBm)	
Mode/Band	ASK
NFC	-44.53

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
3#	SAR
<i>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.</i>	

5.6 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 <i>General Population</i> (W/kg) or (mW/g)	CONTROLLED ENVIRONMENT <i>Occupational</i> (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

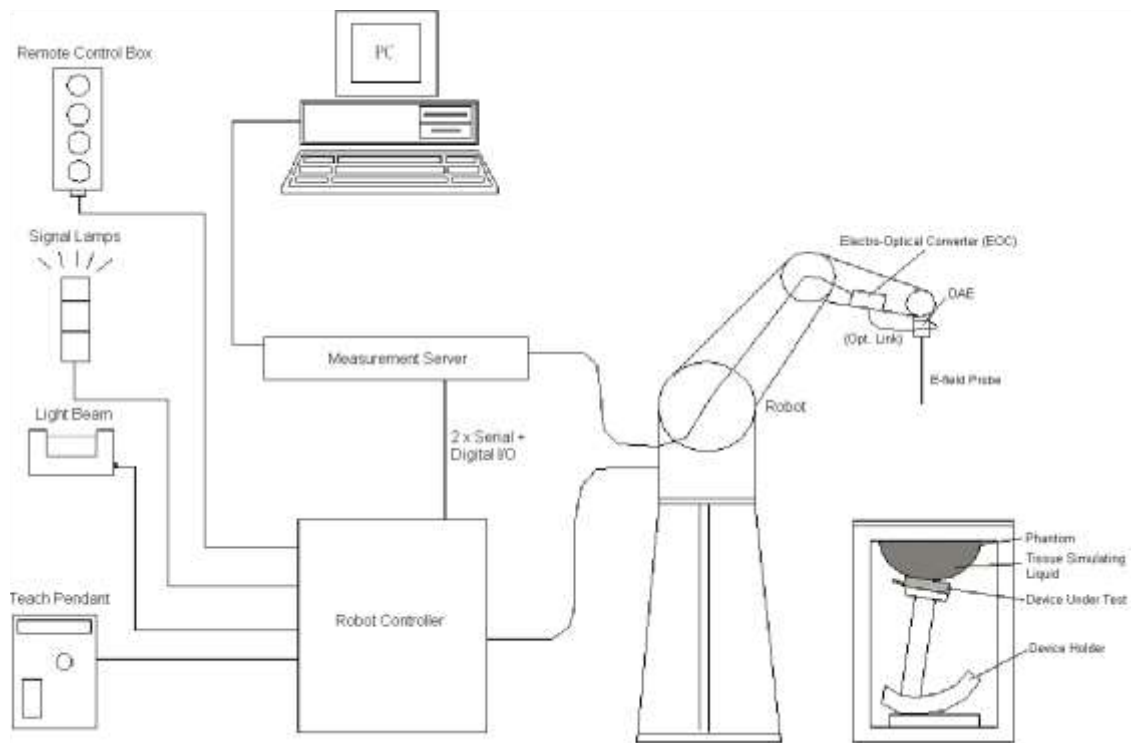


Fig. 8.1 SPEAG DASY System Configurations

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
- Remote control with teach pendant and additional circuitry for robot safety such as warning 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	 <p>Fig. 8.7 Photo of SAM Twin Phantom</p>
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

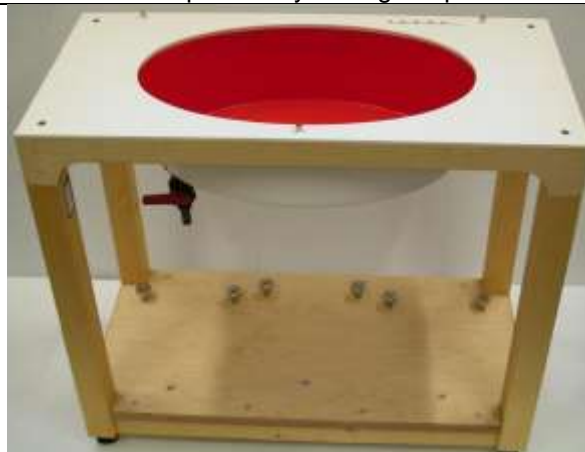


Fig.8.8 Photo of ELI4 Phantom

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 $\epsilon = 3$ and loss tangent $\delta = 0.02$. The amount of dielectric material has been reduced in the closest vicinity of the device, since measurements have suggested that the influence of the clamp on the test results could thus be lowered.



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:

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

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

With V_i = compensated signal of channel i, (i = x, y, z)
 $Norm_i$ = sensor sensitivity of channel i, (i = x, y, z), $\mu V / (V/m)^2$
 $ConvF$ = 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
 H_i = magnetic field strength of channel i in A/m

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

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

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	750MHz System Validation Kit	D750V3	WXJ023	05.28.2020	05.27.2023
SPEAG	835MHz System Validation Kit	D835V2	WXJ023-1	06.08.2022	06.07.2025
SPEAG	1750MHz System Validation Kit	D1750V2	WXJ023-6	02.10.2021	02.09.2024
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	10.28.2021	10.27.2024
SPEAG	3500MHz System Validation Kit	D3500V2	WXJ023-8	02.04.2021	02.03.2024
SPEAG	3700MHz System Validation Kit	D3700V2	WXJ023-9	02.04.2021	02.03.2024
SPEAG	3900MHz System Validation Kit	D3900V2	WXJ023-10	02.09.2021	02.08.2024
SPEAG	5GHz System Validation Kit	D5GHzV2	WXJ023-14	02.05.2021	02.04.2024
SPEAG	Data Acquisition Electronics	DAE4	WXJ021	06.06.2022	06.05.2023
SPEAG	Dosimetric E-Field Probe	EX3DV4	WXJ022	01.03.2023	01.02.2024
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 (7483)	N.C.R	N.C.R
SPEAG	Phantom	Twin Phantom	WXG008-3	N.C.R	N.C.R
SPEAG	Phantom	ELI V5.0	WXG008-4	N.C.R	N.C.R
SPEAG	Phone Positioner	N/A	WXG008-5	N.C.R	N.C.R
Stäubli	Robot	TX60L	WXG008-2	N.C.R	N.C.R
KEYSIGHT	UXM 5G Wireless Test Platform	E7515B	WXJ008-6	10.17.2022	10.16.2023
Anritsu	Universal Radio Communication Analyzer	MT8820C	WXJ008-5	03.03.2021	03.02.2023
R&S	Universal Radio Communication Tester	CMU200	WXJ008-2	03.30.2022	03.29.2024
KEYSIGHT	Network Analyzer	E5071C	WXJ091	03.30.2022	03.29.2023
KEYSIGHT	EPM Series Power Meter	N1914A	WXJ075	06.29.2022	06.28.2023
KEYSIGHT	E-Series Power Sensor	E9300H	WXJ075-1	06.29.2022	06.28.2023
KEYSIGHT	E-Series Power Sensor	E9300H	WXJ075-2	06.29.2022	06.28.2023
KEYSIGHT	Signal Generator	N5173B	WXJ006-3	06.29.2022	06.28.2023
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 spectrum analyzer, 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 spectrum analyzer 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.



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

Target Frequency (MHz)	ϵ_r	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

(ϵ_r = relative permittivity, σ = conductivity and $\rho = 1000 \text{ kg/m}^3$)

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. (°C)	Conductivity (σ)	Permittivity (ϵ_r)	Conductivity Target(σ)	Permittivity Target(ϵ_r)	Delta (σ)%	Delta (ϵ_r)%	Limit (%)	Date (mm/dd/yy)
750	21.4	0.89	40.44	0.89	41.90	0.00	-3.48	±5	01.30.2023
835	21.4	0.92	40.20	0.90	41.50	1.78	-3.13	±5	01.30.2023
1750	21.9	1.33	38.72	1.37	40.10	-2.92	-3.44	±5	01.14.2023
1900	21.9	1.37	38.98	1.40	40.00	-2.14	-2.55	±5	01.14.2023
2450	21.7	1.72	37.99	1.80	39.20	-4.44	-3.09	±5	01.18.2023
2600	21.7	1.88	37.99	1.96	39.00	-4.08	-2.59	±5	01.18.2023
3500	22.2	2.89	37.38	2.91	37.90	-0.69	-1.37	±5	02.02.2023
3700	22.2	3.07	37.08	3.12	37.70	-1.60	-1.64	±5	02.02.2023
3900	22.2	3.27	37.04	3.32	37.50	-1.51	-1.23	±5	02.02.2023
5200	21.7	4.76	36.56	4.67	35.74	1.93	2.29	±5	01.26.2023
5800	21.7	5.45	35.56	5.27	35.30	3.42	0.74	±5	01.26.2023

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:

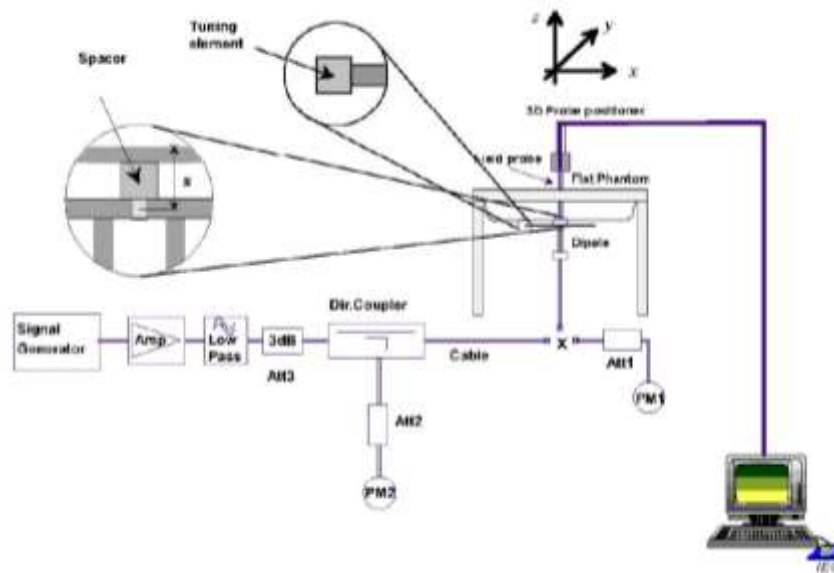


Fig.10.1 System Verification Setup Diagram

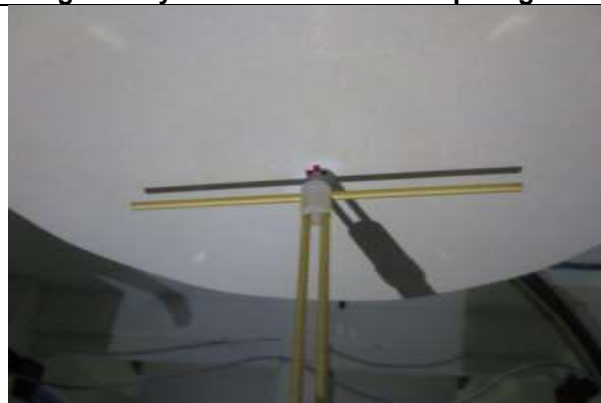


Fig.10.2 Photo of Dipole setup

➤

➤ **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 1g SAR (W/kg)	Target 1g SAR (W/kg)	Deviation (%)
01.30.2023	750	80	0.671	8.39	8.37	0.24
01.30.2023	835	80	0.786	9.83	9.6	2.40
01.14.2023	1750	40	1.520	38.00	36.4	4.40
01.14.2023	1900	40	1.610	40.25	39.9	0.88
01.18.2023	2450	40	2.020	50.50	53.4	-5.43
01.18.2023	2600	40	2.230	55.75	55.3	0.81
02.02.2023	3500	40	2.590	64.75	65.6	-1.30
02.02.2023	3700	40	2.700	67.50	66.1	2.12
02.02.2023	3900	40	2.810	70.25	69.9	0.50
01.26.2023	5200	40	3.120	78.00	79.10	-1.39
01.26.2023	5800	40	3.210	80.25	80.90	-0.80

11 EUT Testing Position

This EUT was tested in nine different positions. They are right cheek/right tilted/left cheek/left tilted for head, Front/Back/Right Side/Top Side 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

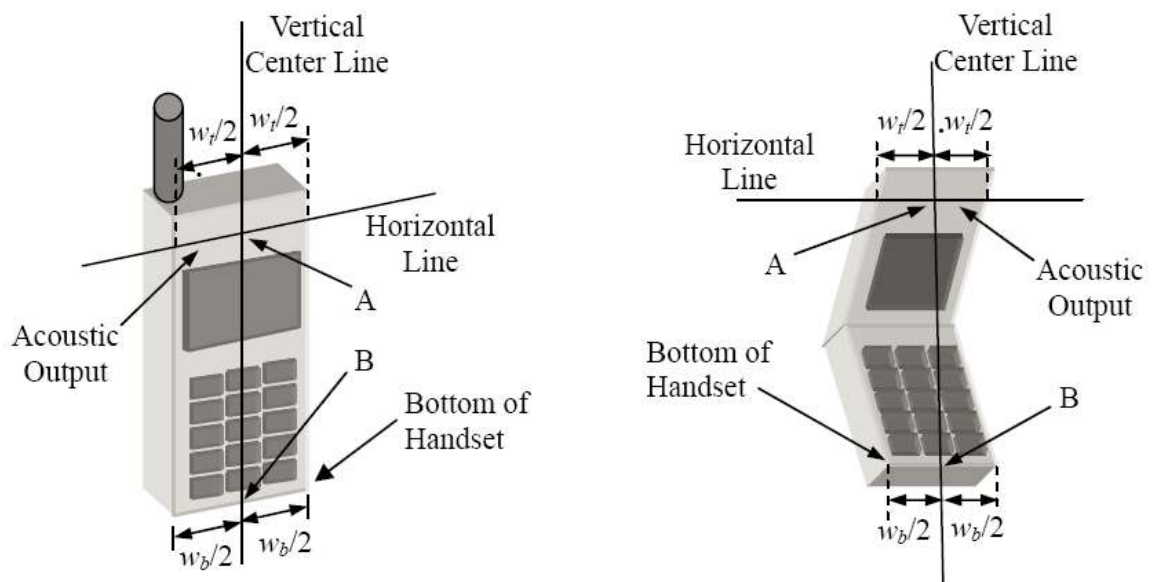


Fig. 11.2 Illustration for Handset Vertical and Horizontal Reference Lines

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 / 15° 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.

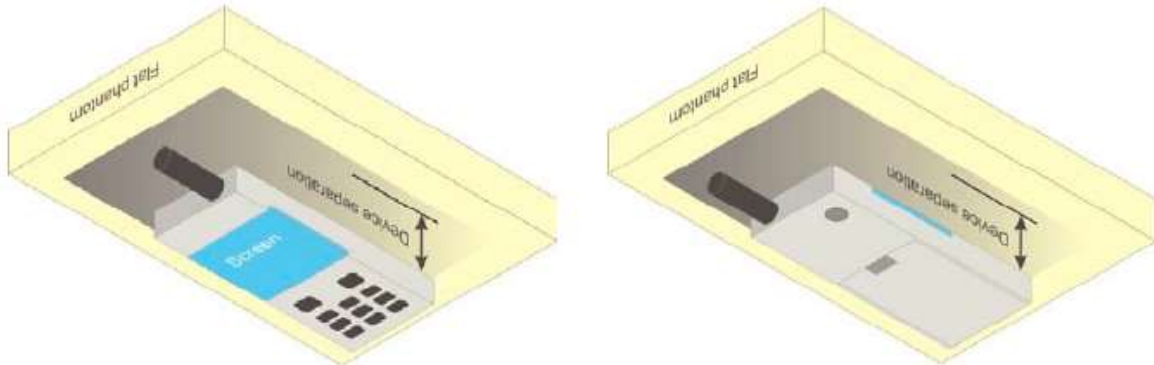


Fig.11.5 Illustration for Body Worn Position

11.6 Wireless Router (Hotspot) Configurations

Some battery-operated handsets have the capability to transmit and receive internet connectivity through simultaneous transmission of WIFI in conjunction with a separate licensed transmitter. The FCC has provided guidance in KDB Publication 941225 D06 where SAR test considerations for handsets ($L \times W \geq 9 \text{ cm} \times 5 \text{ cm}$) are based on a composite test separation distance of 10 mm from the front, back and edges of the device with antennas 2.5 cm or closer to the edge of the device, determined from general mixed use conditions for this type of devices. Since the hotspot SAR results may overlap with the body-worn accessory SAR requirements, the more conservative configurations can be considered, thus excluding some body-worn accessory SAR tests.

When the user enables the personal wireless router functions for the handset, actual operations include simultaneous transmission of both the WIFI transmitter and another licensed transmitter. Both transmitters often do not transmit at the same transmitting frequency and thus cannot be evaluated for SAR under actual use conditions. Therefore, SAR must be evaluated for each frequency transmission and mode separately and summed with the WIFI transmitter according to KDB 648474 publication procedures. The “Portable Hotspot” feature on the handset was NOT activated, to ensure the SAR measurements were evaluated for a single transmission frequency RF signal.

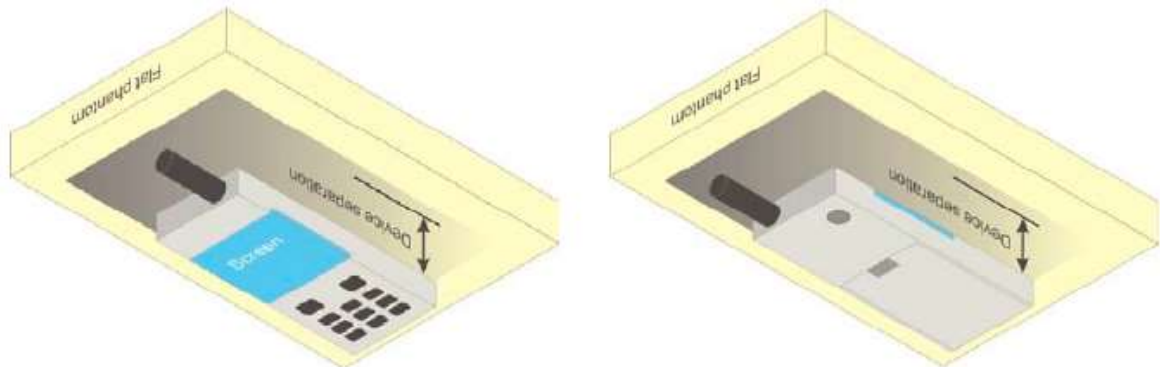


Fig.11.6 Illustration for Hotspot Position

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 from 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.

		≤ 3 GHz	> 3 GHz	
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface		5 ± 1 mm	$\frac{1}{2} \cdot \delta \cdot \ln(2) \pm 0.5$ mm	
Maximum probe angle from probe axis to phantom surface normal at the measurement location		$30^\circ \pm 1^\circ$	$20^\circ \pm 1^\circ$	
Maximum area scan spatial resolution: $\Delta x_{Area}, \Delta y_{Area}$		≤ 2 GHz: ≤ 15 mm 2 – 3 GHz: ≤ 12 mm	3 – 4 GHz: ≤ 12 mm 4 – 6 GHz: ≤ 10 mm	
		When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be \leq the corresponding x or y dimension of the test device with at least one measurement point on the test device.		
Maximum zoom scan spatial resolution: $\Delta x_{Zoom}, \Delta y_{Zoom}$		≤ 2 GHz: ≤ 8 mm 2 – 3 GHz: ≤ 5 mm*	3 – 4 GHz: ≤ 5 mm* 4 – 6 GHz: ≤ 4 mm*	
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{Zoom}(n)$	≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm	
	graded grid	$\Delta z_{Zoom}(1)$: between 1 st two points closest to phantom surface	≤ 4 mm	3 – 4 GHz: ≤ 3 mm 4 – 5 GHz: ≤ 2.5 mm 5 – 6 GHz: ≤ 2 mm
		$\Delta z_{Zoom}(n>1)$: between subsequent points	$\leq 1.5 \cdot \Delta z_{Zoom}(n-1)$	
Minimum zoom scan volume	x, y, z	≥ 30 mm	3 – 4 GHz: ≥ 28 mm 4 – 5 GHz: ≥ 25 mm 5 – 6 GHz: ≥ 22 mm	
<p>Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details.</p> <p>* When zoom scan is required and the <u>reported</u> SAR from the <u>area scan based 1-g SAR estimation</u> procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.</p>				

12.4 Volume Scan Procedures

The volume scan is used to 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 remains in the same test position for all measurements and all volume scans use the same spatial resolution and grid spacing. When all volume scans are completed, the software, SEMCAD post-processor scans combine and subsequently superpose these measurement data to calculate the multiband SAR.

12.5 SAR Averaged Methods

In DASYS, 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 with a full charged battery and transmit maximum output power. In DASYS 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

The detailed conducted power table can refer to JYTSZ-R14-2300001 Appendix D Conducted RF Output Power.

13.1 GSM 850 Conducted Power

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 log (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, GSM Voice, GPRS and EGPRS mode should be evaluated, therefore the EUT was set in GPRS 4 TX slots mode due to the highest frame-averaged power..
3. For Hotspot mode SAR testing, GPRS and EGPRS mode should be evaluated, therefore the EUT was set in GPRS 4 TX slots mode due to the highest frame-averaged power.
4. Per KDB447498 D04v01, the maximum output power channel is used for SAR testing and for further SAR test reduction.

13.2 GSM 1900 Conducted Power

Remark:

3. 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 log (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
4. 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 1900 Voice mode.
2. For Body worn SAR testing, GSM Voice, GPRS and EGPRS mode should be evaluated, therefore the EUT was set in GPRS 4 TX slots mode due to the highest frame-averaged power..
3. For Hotspot mode SAR testing, GPRS and EGPRS mode should be evaluated, therefore the EUT was set in GPRS 4 TX slots mode due to the highest frame-averaged power.
4. Per KDB447498 D04v01, the maximum output power channel is used for SAR testing and for further SAR test reduction.

13.3 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	$\beta_{hs}^{(1)}$	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: $\Delta_{ACK}, \Delta_{NACK}$ 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	$\beta_{hs}^{(1)}$	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	$\beta_{ed1}: 47/15$ $\beta_{ed2}: 47/15$	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: $\Delta_{ACK}, \Delta_{NACK}$ 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 $\beta_c/\beta_d = 12/15, \beta_{hs}/\beta_c = 24/15$. 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 $\beta_c = 10/15$ and $\beta_d = 15/15$.

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 $\beta_c = 14/15$ and $\beta_d = 15/15$.

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

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.

13.4 LTE Conducted Power

13.4.1 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 $> \frac{1}{2}$ dB higher than the same configuration in QPSK or when the reported SAR for the QPSK configuration is > 1.45 W/kg.

13.4.2 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 $> \frac{1}{2}$ dB higher than the equivalent channel configurations in the largest channel bandwidth configuration or the reported SAR of a configuration for the largest channel bandwidth is > 1.45 W/kg. 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

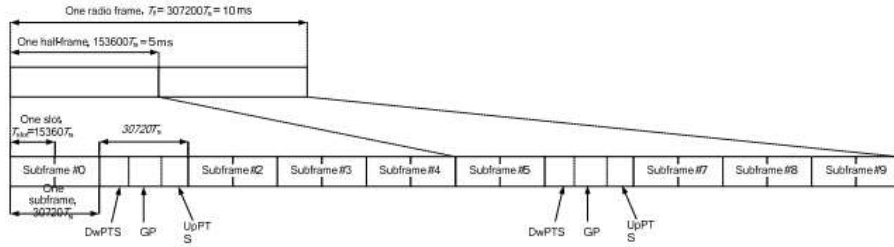


Figure 4.2-1: Frame structure type 2 (for 5 ms switch-point periodicity)

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	$26336 \cdot T_s$			$7680 \cdot T_s$		
5	$6592 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$	$20480 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$
6	$19760 \cdot T_s$			$23040 \cdot T_s$		
7	$21952 \cdot T_s$			$12800 \cdot T_s$		
8	$24144 \cdot T_s$			-		
9	$13168 \cdot T_s$			-		

Per 3GPP 36.211 section 4.2, each radio frame of length $T_f=37200 \cdot T_s = 10$ ms consists of two half-frames of length $153600 \cdot T_s = 5$ ms each. Each half-frame consists of five subframes of length $30720 \cdot T_s = 1$ ms. 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: $(3\text{ms} + 0.143\text{ms})/5\text{ms}=62.86\%$;
3. The duty factor of uplink in one half-frame with extended cyclic prefix is: $(3\text{ms} + 0.167\text{ms})/5\text{ms}=63.34\%$;
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.

13.5 NR Conducted Power

Note:

1. 5G NR n7/n41/n77/n78 supports NSA.
2. 5G NR n41/n77/n78 supports HPUE.
3. SAR testing start with the largest channel bandwidth and measure SAR for PI/2 BPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
4. 50% RB allocation for PI/2 BPSK SAR testing follows 1RB PI/2 BPSK allocation procedure.
5. QPSK/16QAM/64QAM/256QAM output powers according to 3GPP MPR will not 1/2 dB higher than the same configuration in PI/2 BPSK, also reported SAR for the PI/2 BPSK configuration is less than 1.45 W/kg, QPSK/16QAM/64QAM/256QAM SAR testing are not required.
6. Smaller bandwidth output power for each RB allocation configuration for this device will not 1/2 dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is less than 1.45 W/kg, smaller bandwidth SAR testing is no required for this device.

13.6 WLAN 2.4 GHz Band Conducted Power

Note:

7. SAR test of WLAN 2.4GHz is performed.
 1. Per KDB 248227 D01v02r02, choose the highest output power channel to test SAR and determine further SAR exclusion.
 2. Per KDB 248227 D01v02r02, In the 2.4 GHz band, separate SAR procedures are applied to DSSS and OFDM configurations to simplify DSSS test requirements. SAR is not required for the following 2.4 GHz OFDM conditions:
 - 1) When KDB Publication 447498 SAR test exclusion applies to the OFDM configuration.
 - 2) When the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg.
 3. The output power of all data rate were pre-scan, just the worst case (the lowest data rate) of all mode were shown in report.
 4. 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.

13.7 WLAN 5.2GHz Band Conducted Power

Note:

1. SAR test of WLAN 5.2GHz is performed.
2. Per KDB 248227 D01v02r02, choose the highest output power channel to test SAR and determine further SAR exclusion.
3. The output power of all data rate were pre-scan, just the worst case (the lowest data rate) of all mode were shown in report.
4. 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.

13.8 WLAN 5.8GHz Band Conducted Power

Note:

1. SAR test of WLAN 5.8GHz is performed.
2. Per KDB 248227 D01v02r02, choose the highest output power channel to test SAR and determine further SAR exclusion.
3. The output power of all data rate were pre-scan, just the worst case (the lowest data rate) of all mode were shown in report.
4. 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.

13.9 Bluetooth Conducted Power

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.

13.10 NFC Conducted Power

Note:

1. Per KDB 447498 D04v01 section 2.1.2: 1-mW Test Exemption, SAR test for NFC is not required.

14 Exposure Positions Consideration

14.1 EUT Antenna Locations

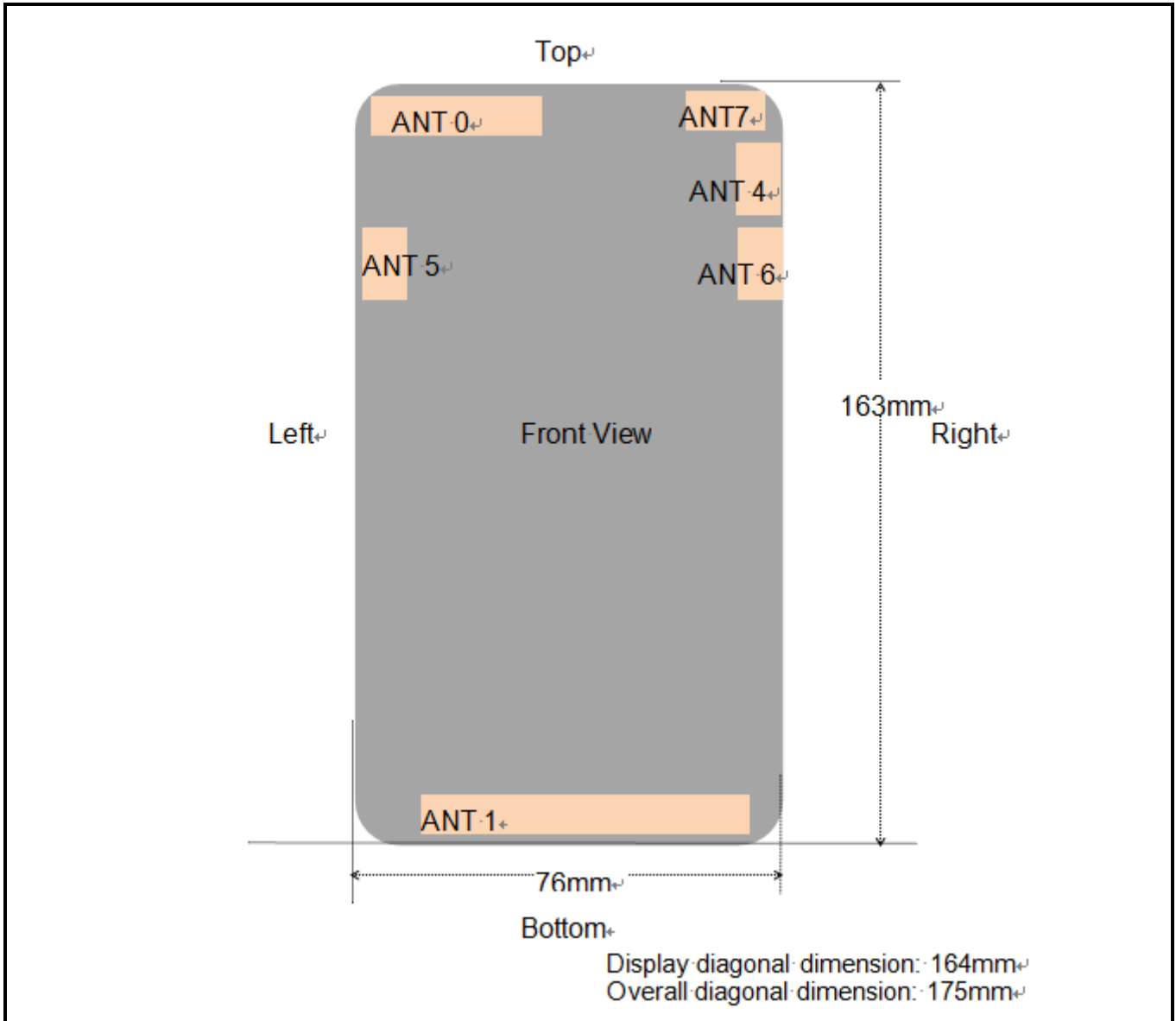


Fig.14.1 EUT Antenna Locations

Note:

1. ANT 0: GSM&WCDMA<E&NR(n5/7/12/38/41/66) Tx ANT
2. ANT 1: GSM&WCDMA<E Rx ANT (Rx Only)
3. ANT 4: NR(n77/78) Tx ANT
4. ANT 5: LTE(B7/38/41) TX ANT (Only in ENDC mode) ; NR(n77/78) Rx ANT (Rx Only)
5. ANT 6: Wi-Fi MIMO ANT
6. ANT 7: Wi-Fi&BT&GPS(L1) ANT

This antenna diagram is only used as a reference for the distance from the antenna to each edge. For the specific shape of the antenna, please refer to the physical photo.

14.2 Test Positions Consideration

Distance of Antennas to EUT edge/surface Test distance: 10mm						
Antennas	Back	Front	Top Side	Bottom Side	Right Side	Left Side
ANT 0	<25mm	<25mm	<25mm	154mm	35mm	<25mm
ANT 4	<25mm	<25mm	<25mm	138mm	<25mm	70mm
ANT 5	<25mm	<25mm	35mm	100mm	70mm	<25mm
ANT 6	<25mm	<25mm	<25mm	123mm	<25mm	71mm
ANT 7	<25mm	<25mm	<25mm	154mm	<25mm	53mm

Test Positions Test distance: 10mm						
Antennas	Back	Front	Top Side	Bottom Side	Right Side	Left Side
ANT 0	Yes	Yes	Yes	No	No	Yes
ANT 4	Yes	Yes	Yes	No	Yes	No
ANT 5	Yes	Yes	No	No	No	Yes
ANT 6	Yes	Yes	Yes	No	Yes	No
ANT 7	Yes	Yes	Yes	No	Yes	No

Note:

1. Head/Body-worn/Hotspot mode SAR assessments are required.
2. Referring to KDB 941225 D06 v02r01, when the overall device length and width are $\geq 9\text{cm} * 5\text{cm}$, the test distance is 10mm. SAR must be measured for all sides and surfaces with a transmitting antenna located within 25mm from that surface or edge.
3. Per KDB 447498 D04v01, for handsets the test separation distance is determined by the smallest distance between the outer surface of the device and the user, which is 0 mm for head SAR, 10 mm for hotspot SAR, and 10 mm for body-worn SAR.
4. Per KDB 648474 D04 v01r03, when hotspot mode applies, 10-g extremity SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR $> 1.2 \text{ W/kg}$

15 SAR Test Results Summary

15.1 Standalone Head SAR Data

➤ GSM Head SAR

Plot No.	Band/Mode	ANT	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)
1	GSM850/Voice	0	Right Cheek	190	836.6	33.29	-0.01	33.5	0.467	1.05	0.490
	GSM850/Voice	0	Right Tilted	190	836.6	33.29	-0.29	33.5	0.390	1.05	0.410
	GSM850/Voice	0	Left Cheek	190	836.6	33.29	0.18	33.5	0.273	1.05	0.287
	GSM850/Voice	0	Left Tilted	190	836.6	33.29	0.03	33.5	0.225	1.05	0.236
	PCS1900/Voice	0	Right Cheek	810	1909.8	29.22	0.03	29.5	0.421	1.067	0.449
2	PCS1900/Voice	0	Right Tilted	810	1909.8	29.22	0.05	29.5	0.529	1.067	0.564
	PCS1900/Voice	0	Left Cheek	810	1909.8	29.22	0.19	29.5	0.323	1.067	0.345
	PCS1900/Voice	0	Left Tilted	810	1909.8	29.22	-0.04	29.5	0.387	1.067	0.413
	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	ANT	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	0	Right Cheek	9538	1907.6	22.55	0.14	23.0	0.335	1.109	0.372
	Band II/RMC	0	Right Tilted	9538	1907.6	22.55	-0.04	23.0	0.407	1.109	0.451
	Band II/RMC	0	Left Cheek	9538	1907.6	22.55	-0.15	23.0	0.214	1.109	0.237
	Band II/RMC	0	Left Tilted	9538	1907.6	22.55	0.05	23.0	0.278	1.109	0.308
	Band IV/RMC	0	Right Cheek	1413	1732.6	21.87	0.12	22.0	0.654	1.03	0.674
	Band IV/RMC	0	Right Tilted	1413	1732.6	21.87	0.04	22.0	0.817	1.03	0.842
	Band IV/RMC	0	Left Cheek	1413	1732.6	21.87	0.06	22.0	0.497	1.03	0.512
	Band IV/RMC	0	Left Tilted	1413	1732.6	21.87	0.17	22.0	0.542	1.03	0.558
	Band IV/RMC	0	Right Tilted	1312	1712.4	22.03	0.04	22.0	0.779	0.993	0.774
	4	Band IV/RMC	0	Right Tilted	1513	1752.6	21.84	0.03	22.0	0.858	1.038
5	Band IV/RMC	0	Right Tilted	1513	1752.6	21.84	-0.05	22.0	0.844	1.038	0.876
	Band V/RMC	0	Right Cheek	4183	836.6	23.18	0.07	23.5	0.458	1.076	0.493
	Band V/RMC	0	Right Tilted	4183	836.6	23.18	-0.11	23.5	0.306	1.076	0.329
	Band V/RMC	0	Left Cheek	4183	836.6	23.18	0.00	23.5	0.381	1.076	0.410
	Band V/RMC	0	Left Tilted	4183	836.6	23.18	0.20	23.5	0.228	1.076	0.245
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	ANT	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)
6	Band2/1RB#99	0	Right Cheek	19100	1900	23.38	-0.06	24.0	0.365	1.153	0.421
	Band2/1RB#99	0	Right Tilted	19100	1900	23.38	-0.01	24.0	0.460	1.153	0.530
	Band2/1RB#99	0	Left Cheek	19100	1900	23.38	0.11	24.0	0.274	1.153	0.316
	Band2/1RB#99	0	Left Tilted	19100	1900	23.38	0.03	24.0	0.334	1.153	0.385
	Band2/50%RB#24	0	Right Cheek	19100	1900	22.28	0.10	22.5	0.321	1.052	0.338
	Band2/50%RB#24	0	Right Tilted	19100	1900	22.28	-0.12	22.5	0.418	1.052	0.440
	Band2/50%RB#24	0	Left Cheek	19100	1900	22.28	-0.17	22.5	0.246	1.052	0.259
	Band2/50%RB#24	0	Left Tilted	19100	1900	22.28	-0.02	22.5	0.295	1.052	0.310
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	ANT	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)
7	Band5/1RB#24	0	Right Cheek	20450	829	23.83	-0.08	24.0	0.595	1.04	0.619
	Band5/1RB#24	0	Right Tilted	20450	829	23.83	0.07	24.0	0.497	1.04	0.517
	Band5/1RB#24	0	Left Cheek	20450	829	23.83	-0.02	24.0	0.352	1.04	0.366
	Band5/1RB#24	0	Left Tilted	20450	829	23.83	0.13	24.0	0.287	1.04	0.298
	Band5/50%RB#0	0	Right Cheek	20525	836.5	22.81	-0.09	23.0	0.542	1.045	0.566
	Band5/50%RB#0	0	Right Tilted	20525	836.5	22.81	-0.01	23.0	0.461	1.045	0.482
	Band5/50%RB#0	0	Left Cheek	20525	836.5	22.81	0.13	23.0	0.326	1.045	0.341
	Band5/50%RB#0	0	Left Tilted	20525	836.5	22.81	0.04	23.0	0.255	1.045	0.266
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	ANT	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)
8	Band7/1RB#99	0	Right Cheek	20850	2510	23.37	-0.09	23.5	0.468	1.03	0.482
	Band7/1RB#99	0	Right Tilted	20850	2510	23.37	0.05	23.5	0.533	1.03	0.549
	Band7/1RB#99	0	Left Cheek	20850	2510	23.37	-0.07	23.5	0.345	1.03	0.355
	Band7/1RB#99	0	Left Tilted	20850	2510	23.37	-0.11	23.5	0.404	1.03	0.416
	Band7/50%RB#0	0	Right Cheek	21350	2560	22.34	-0.15	22.5	0.415	1.038	0.431
	Band7/50%RB#0	0	Right Tilted	21350	2560	22.34	-0.06	22.5	0.492	1.038	0.511
	Band7/50%RB#0	0	Left Cheek	21350	2560	22.34	0.11	22.5	0.311	1.038	0.323
	Band7/50%RB#0	0	Left Tilted	21350	2560	22.34	-0.02	22.5	0.373	1.038	0.387
	Band7/1RB#49	5	Right Cheek	20850	2510	21.33	0.04	21.5	0.211	1.04	0.219
	Band7/1RB#49	5	Right Tilted	20850	2510	21.33	-0.07	21.5	0.157	1.04	0.163
	Band7/1RB#49	5	Left Cheek	20850	2510	21.33	-0.20	21.5	0.075	1.04	0.078
	Band7/1RB#49	5	Left Tilted	20850	2510	21.33	-0.17	21.5	0.049	1.04	0.051
	Band7/50%RB#49	5	Right Cheek	21100	2535	20.28	-0.06	20.5	0.188	1.052	0.198
	Band7/50%RB#49	5	Right Tilted	21100	2535	20.28	-0.11	20.5	0.135	1.052	0.142
	Band7/50%RB#49	5	Left Cheek	21100	2535	20.28	-0.08	20.5	0.066	1.052	0.069
	Band7/50%RB#49	5	Left Tilted	21100	2535	20.28	-0.18	20.5	0.041	1.052	0.043
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						1.6 W/kg (mW/g) Averaged over 1g					

➤ FDD-LTE Band 12(10MHz) QPSK Head SAR

Plot No.	Band/Mode	ANT	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)
9	Band12/1RB#0	0	Right Cheek	23060	704	23.66	0.09	24.0	0.522	1.081	0.564
	Band12/1RB#0	0	Right Tilted	23060	704	23.66	-0.04	24.0	0.436	1.081	0.471
	Band12/1RB#0	0	Left Cheek	23060	704	23.66	0.16	24.0	0.309	1.081	0.334
	Band12/1RB#0	0	Left Tilted	23060	704	23.66	0.13	24.0	0.252	1.081	0.272
	Band12/50%RB#49	0	Right Cheek	23130	711	22.59	-0.01	23.0	0.484	1.099	0.532
	Band12/50%RB#49	0	Right Tilted	23130	711	22.59	-0.16	23.0	0.399	1.099	0.439
	Band12/50%RB#49	0	Left Cheek	23130	711	22.59	-0.17	23.0	0.278	1.099	0.306
	Band12/50%RB#49	0	Left Tilted	23130	711	22.59	0.19	23.0	0.224	1.099	0.246
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						1.6 W/kg (mW/g) Averaged over 1g					

➤ TDD-LTE Band41(20MHz) QPSK Head SAR

Plot No.	Band/Mode	ANT	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)
	Band41/1RB#49	0	Right Cheek	40620	2593	23.21	0.16	24.0	0.305	1.199	1.008	0.369
10	Band41/1RB#49	0	Right Tilted	40620	2593	23.21	0.08	24.0	0.361	1.199	1.008	0.436
	Band41/1RB#49	0	Left Cheek	40620	2593	23.21	-0.14	24.0	0.224	1.199	1.008	0.271
	Band41/1RB#49	0	Left Tilted	40620	2593	23.21	-0.06	24.0	0.258	1.199	1.008	0.312
	Band41/50%RB#49	0	Right Cheek	40620	2593	22.30	0.11	22.5	0.277	1.047	1.008	0.292
	Band41/50%RB#49	0	Right Tilted	40620	2593	22.30	-0.11	22.5	0.336	1.047	1.008	0.355
	Band41/50%RB#49	0	Left Cheek	40620	2593	22.30	0.00	22.5	0.198	1.047	1.008	0.209
	Band41/50%RB#49	0	Left Tilted	40620	2593	22.30	-0.17	22.5	0.231	1.047	1.008	0.244
	Band41/1RB#49	5	Right Cheek	39750	2506	21.21	-0.05	21.5	0.155	1.069	1.008	0.167
	Band41/1RB#49	5	Right Tilted	39750	2506	21.21	-0.12	21.5	0.114	1.069	1.008	0.123
	Band41/1RB#49	5	Left Cheek	39750	2506	21.21	0.05	21.5	0.064	1.069	1.008	0.069
	Band41/1RB#49	5	Left Tilted	39750	2506	21.21	0.07	21.5	0.091	1.069	1.008	0.098
	Band41/50%RB#0	5	Right Cheek	39750	2506	20.13	-0.01	20.5	0.134	1.089	1.008	0.147
	Band41/50%RB#0	5	Right Tilted	39750	2506	20.13	-0.19	20.5	0.101	1.089	1.008	0.111
	Band41/50%RB#0	5	Left Cheek	39750	2506	20.13	0.04	20.5	0.052	1.089	1.008	0.057
	Band41/50%RB#0	5	Left Tilted	39750	2506	20.13	0.16	20.5	0.085	1.089	1.008	0.093
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						1.6 W/kg (mW/g) Averaged over 1g						

➤ FDD-LTE Band 66(20MHz) QPSK Head SAR

Plot No.	Band/Mode	ANT	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)
	Band66/1RB#49	0	Right Cheek	132322	1745	23.09	0.03	23.5	0.657	1.099	0.722
11	Band66/1RB#49	0	Right Tilted	132322	1745	23.09	-0.01	23.5	0.803	1.099	0.882
	Band66/1RB#49	0	Left Cheek	132322	1745	23.09	0.14	23.5	0.542	1.099	0.596
	Band66/1RB#49	0	Left Tilted	132322	1745	23.09	0.05	23.5	0.614	1.099	0.675
	Band66/50%RB#0	0	Right Cheek	132322	1745	22.21	0.12	22.5	0.615	1.069	0.657
	Band66/50%RB#0	0	Right Tilted	132322	1745	22.21	0.08	22.5	0.714	1.069	0.763
	Band66/50%RB#0	0	Left Cheek	132322	1745	22.21	-0.11	22.5	0.504	1.069	0.539
	Band66/50%RB#0	0	Left Tilted	132322	1745	22.21	-0.01	22.5	0.566	1.069	0.605
	Band66/100%RB#0	0	Right Tilted	132322	1745	22.16	0.08	22.5	0.688	1.081	0.744
	Band66/1RB#99	0	Right Tilted	132072	1720	23.08	0.02	23.5	0.739	1.102	0.814
	Band66/1RB#49	0	Right Tilted	132572	1770	23.06	0.02	23.5	0.785	1.107	0.869
	Band66/1RB#49	0	Right Tilted	132322	1745	23.09	0.03	23.5	0.789	1.099	0.867
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						1.6 W/kg (mW/g) Averaged over 1g					

➤ n5(20MHz) DFT-BPSK Head SAR

Plot No.	Band/Mode	ANT	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)
	NR n5/1@49	0	Right Cheek	166800	834	23.14	0.05	23.5	0.545	1.086	0.592
	NR n5/1@49	0	Right Tilted	166800	834	23.14	-0.04	23.5	0.504	1.086	0.547
	NR n5/1@49	0	Left Cheek	166800	834	23.14	-0.17	23.5	0.335	1.086	0.364
	NR n5/1@49	0	Left Tilted	166800	834	23.14	-0.10	23.5	0.389	1.086	0.422
12	NR n5 /25@12	0	Right Cheek	166800	834	23.58	0.01	24.0	0.562	1.102	0.619
	NR n5 /25@12	0	Right Tilted	166800	834	23.58	0.10	24.0	0.508	1.102	0.560
	NR n5 /25@12	0	Left Cheek	166800	834	23.58	0.07	24.0	0.348	1.102	0.383
	NR n5 /25@12	0	Left Tilted	166800	834	23.58	-0.14	24.0	0.395	1.102	0.435
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						1.6 W/kg (mW/g) Averaged over 1g					

➤ NR n7(20MHz) DFT-BPSK Head SAR

Plot No.	Band/Mode	ANT	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)
	NR n7/1@1	0	Right Cheek	512000	2560	23.32	-0.11	23.5	0.467	1.042	0.487
	NR n7/1@1	0	Right Tilted	512000	2560	23.32	-0.01	23.5	0.536	1.042	0.559
	NR n7/1@1	0	Left Cheek	512000	2560	23.32	0.07	23.5	0.308	1.042	0.321
	NR n7/1@1	0	Left Tilted	512000	2560	23.32	-0.01	23.5	0.355	1.042	0.370
	NR n7/25@12	0	Right Cheek	502000	2510	23.58	-0.13	24.0	0.475	1.102	0.523
13	NR n7/25@12	0	Right Tilted	502000	2510	23.58	-0.15	24.0	0.546	1.102	0.602
	NR n7/25@12	0	Left Cheek	502000	2510	23.58	-0.03	24.0	0.334	1.102	0.368
	NR n7/25@12	0	Left Tilted	502000	2510	23.58	0.05	24.0	0.372	1.102	0.410
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						1.6 W/kg (mW/g) Averaged over 1g					

➤ NR n12(15MHz) DFT-BPSK Head SAR

Plot No.	Band/Mode	ANT	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)
14	NR n12/1@1	0	Right Cheek	141700	708.5	23.49	0.08	23.5	0.620	1.002	0.621
	NR n12/1@1	0	Right Tilted	141700	708.5	23.49	0.02	23.5	0.534	1.002	0.535
	NR n12/1@1	0	Left Cheek	141700	708.5	23.49	0.13	23.5	0.384	1.002	0.385
	NR n12/1@1	0	Left Tilted	141700	708.5	23.49	-0.17	23.5	0.325	1.002	0.326
	NR n12/18@9	0	Right Cheek	141700	708.5	23.54	0.03	24.0	0.536	1.112	0.596
	NR n12/18@9	0	Right Tilted	141700	708.5	23.54	0.15	24.0	0.446	1.112	0.496
	NR n12/18@9	0	Left Cheek	141700	708.5	23.54	0.13	24.0	0.315	1.112	0.350
	NR n12/18@9	0	Left Tilted	141700	708.5	23.54	-0.16	24.0	0.267	1.112	0.297
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						1.6 W/kg (mW/g) Averaged over 1g					

➤ NR n41(100MHz) DFT-BPSK Head SAR

Plot No.	Band/Mode	ANT	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)
	NR n41 /1@271	0	Right Cheek	518598	2592.99	25.33	-0.07	25.5	0.547	1.040	0.569
15	NR n41 /1@271	0	Right Tilted	518598	2592.99	25.33	-0.09	25.5	0.766	1.040	0.797
	NR n41 /1@271	0	Left Cheek	518598	2592.99	25.33	0.19	25.5	0.468	1.040	0.487
	NR n41 /1@271	0	Left Tilted	518598	2592.99	25.33	-0.16	25.5	0.492	1.040	0.512
	NR n41/137@67	0	Right Cheek	509202	2546.01	26.24	-0.06	26.5	0.519	1.062	0.551
	NR n41/137@67	0	Right Tilted	509202	2546.01	26.24	0.14	26.5	0.689	1.062	0.732
	NR n41/137@67	0	Left Cheek	509202	2546.01	26.24	-0.03	26.5	0.425	1.062	0.451
	NR n41/137@67	0	Left Tilted	509202	2546.01	26.24	0.01	26.5	0.467	1.062	0.496
	NR n41 /1@271 NSA	0	Right Cheek	518598	2592.99	20.14	-0.13	20.5	0.506	1.086	0.550
	NR n41 /1@271 NSA	0	Right Tilted	518598	2592.99	20.14	0.16	20.5	0.671	1.086	0.729
	NR n41 /1@271 NSA	0	Left Cheek	518598	2592.99	20.14	0.02	20.5	0.347	1.086	0.377
	NR n41 /1@271 NSA	0	Left Tilted	518598	2592.99	20.14	0.03	20.5	0.385	1.086	0.418
	NR n41 /137@67 NSA	0	Right Cheek	518598	2592.99	20.34	0.12	20.5	0.441	1.038	0.458
	NR n41 /137@67 NSA	0	Right Tilted	518598	2592.99	20.34	-0.13	20.5	0.615	1.038	0.638
	NR n41 /137@67 NSA	0	Left Cheek	518598	2592.99	20.34	-0.06	20.5	0.295	1.038	0.306
	NR n41 /137@67 NSA	0	Left Tilted	518598	2592.99	20.34	-0.15	20.5	0.327	1.038	0.339
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						1.6 W/kg (mW/g) Averaged over 1g					

➤ NR n66(40MHz) DFT-BPSK Head SAR

Plot No.	Band/Mode	ANT	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)
	NR n66/1@104	0	Right Cheek	349000	1745	22.59	-0.03	22.5	0.457	0.979	0.447
	NR n66/1@104	0	Right Tilted	349000	1745	22.59	0.06	22.5	0.604	0.979	0.591
	NR n66/1@104	0	Left Cheek	349000	1745	22.59	0.04	22.5	0.305	0.979	0.299
	NR n66/1@104	0	Left Tilted	349000	1745	22.59	0.11	22.5	0.374	0.979	0.366
	NR n66/50@25	0	Right Cheek	346000	1730	22.92	0.16	23.0	0.478	1.019	0.487
16	NR n66/50@25	0	Right Tilted	346000	1730	22.92	0.02	23.0	0.682	1.019	0.695
	NR n66/50@25	0	Left Cheek	346000	1730	22.92	0.01	23.0	0.327	1.019	0.333
	NR n66/50@25	0	Left Tilted	346000	1730	22.92	-0.15	23.0	0.388	1.019	0.395
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						1.6 W/kg (mW/g) Averaged over 1g					

➤ NR n77(3450MHz~3550MHz) (100MHz)DFT-BPSK Head SAR

Plot No.	Band/Mode	ANT	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)
	NR n77 /1@1	4	Right Cheek	633334	3500.01	26.50	-0.07	27.0	0.079	1.122	0.089
	NR n77 /1@1	4	Right Tilted	633334	3500.01	26.50	0.14	27.0	0.053	1.122	0.059
	NR n77 /1@1	4	Left Cheek	633334	3500.01	26.50	0.16	27.0	0.200	1.122	0.224
	NR n77 /1@1	4	Left Tilted	633334	3500.01	26.50	-0.03	27.0	0.166	1.122	0.186
	NR n77 /137@67	4	Right Cheek	633334	3500.01	27.27	-0.04	28.0	0.107	1.183	0.127
	NR n77 /137@67	4	Right Tilted	633334	3500.01	27.27	0.13	28.0	0.075	1.183	0.089
17	NR n77 /137@67	4	Left Cheek	633334	3500.01	27.27	0.00	28.0	0.285	1.183	0.337
	NR n77 /137@67	4	Left Tilted	633334	3500.01	27.27	0.11	28.0	0.231	1.183	0.273
	NR n77 /1@1 NSA	4	Right Cheek	633334	3500.01	20.11	-0.03	20.5	0.042	1.094	0.046
	NR n77 /1@1 NSA	4	Right Tilted	633334	3500.01	20.11	-0.02	20.5	0.026	1.094	0.028
	NR n77 /1@1 NSA	4	Left Cheek	633334	3500.01	20.11	0.19	20.5	0.105	1.094	0.115
	NR n77 /1@1 NSA	4	Left Tilted	633334	3500.01	20.11	0.00	20.5	0.090	1.094	0.098
	NR n77 /137@67 NSA	4	Right Cheek	633334	3500.01	20.32	0.13	20.5	0.051	1.042	0.053
	NR n77 /137@67 NSA	4	Right Tilted	633334	3500.01	20.32	-0.10	20.5	0.040	1.042	0.042
	NR n77 /137@67 NSA	4	Left Cheek	633334	3500.01	20.32	-0.13	20.5	0.254	1.042	0.265
	NR n77 /137@67 NSA	4	Left Tilted	633334	3500.01	20.32	0.03	20.5	0.207	1.042	0.216
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						1.6 W/kg (mW/g) Averaged over 1g					

➤ NR n77(3700MHz~3980MHz) DFT-BPSK Head SAR

Plot No.	Band/Mode	ANT	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)
	NR n77 /1@271	4	Right Cheek	650000	3750	26.43	0.15	26.5	0.134	1.016	0.136
	NR n77 /1@271	4	Right Tilted	650000	3750	26.43	-0.10	26.5	0.205	1.016	0.208
	NR n77 /1@271	4	Left Cheek	650000	3750	26.43	0.06	26.5	0.286	1.016	0.291
	NR n77 /1@271	4	Left Tilted	650000	3750	26.43	-0.05	26.5	0.395	1.016	0.401
	NR n77 /137@67	4	Right Cheek	650000	3750	27.11	0.11	27.5	0.141	1.094	0.154
	NR n77 /137@67	4	Right Tilted	650000	3750	27.11	-0.05	27.5	0.227	1.094	0.248
	NR n77 /137@67	4	Left Cheek	650000	3750	27.11	0.17	27.5	0.305	1.094	0.334
18	NR n77 /137@67	4	Left Tilted	650000	3750	27.11	0.00	27.5	0.407	1.094	0.445
	NR n77 /1@271 NSA	4	Right Cheek	656000	3840	20.45	0.05	20.5	0.012	1.012	0.012
	NR n77 /1@271 NSA	4	Right Tilted	656000	3840	20.45	-0.11	20.5	0.015	1.012	0.015
	NR n77 /1@271 NSA	4	Left Cheek	656000	3840	20.45	-0.16	20.5	0.022	1.012	0.022
	NR n77 /1@271 NSA	4	Left Tilted	656000	3840	20.45	0.19	20.5	0.027	1.012	0.027
	NR n77 /137@67 NSA	4	Right Cheek	656000	3840	20.74	0.07	21.0	0.009	1.062	0.010
	NR n77 /137@67 NSA	4	Right Tilted	656000	3840	20.74	-0.16	21.0	0.013	1.062	0.014
	NR n77 /137@67 NSA	4	Left Cheek	656000	3840	20.74	-0.08	21.0	0.020	1.062	0.021
	NR n77 /137@67 NSA	4	Left Tilted	656000	3840	20.74	-0.01	21.0	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					

➤ WLAN 2.4 GHz Head SAR

Plot No.	Band/Mode	ANT	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)
	2.4GHz/802.11b	7	Right Cheek	1	2412	16.73	0.10	17.0	0.052	1.064	1.000	0.055
	2.4GHz/802.11b	7	Right Tilted	1	2412	16.73	0.05	17.0	0.059	1.064	1.000	0.063
	2.4GHz/802.11b	7	Left Cheek	1	2412	16.73	-0.08	17.0	0.113	1.064	1.000	0.120
19	2.4GHz/802.11b	7	Left Tilted	1	2412	16.73	-0.08	17.0	0.120	1.064	1.000	0.128
	2.4GHz/802.11b	6	Right Cheek	6	2437	17.94	-0.13	18.0	0.053	1.014	1.000	0.054
	2.4GHz/802.11b	6	Right Tilted	6	2437	17.94	0.15	18.0	0.028	1.014	1.000	0.028
	2.4GHz/802.11b	6	Left Cheek	6	2437	17.94	-0.09	18.0	0.087	1.014	1.000	0.088
	2.4GHz/802.11b	6	Left Tilted	6	2437	17.94	-0.19	18.0	0.039	1.014	1.000	0.040
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									1.6 W/kg (mW/g) Averaged over 1g			

➤ WLAN 5.2 GHz Head SAR

Plot No.	Band/Mode	ANT	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)
	5.2GHz/802.11a	7	Right Cheek	48	5240	13.28	0.02	13.5	0.123	1.052	1.000	0.129
	5.2GHz/802.11a	7	Right Tilted	48	5240	13.28	0.07	13.5	0.100	1.052	1.000	0.105
	5.2GHz/802.11a	7	Left Cheek	48	5240	13.28	-0.09	13.5	0.226	1.052	1.000	0.238
	5.2GHz/802.11a	7	Left Tilted	48	5240	13.28	0.05	13.5	0.137	1.052	1.000	0.144
	5.2GHz/802.11a	6	Right Cheek	48	5240	13.05	0.00	13.5	0.130	1.109	1.000	0.144
	5.2GHz/802.11a	6	Right Tilted	48	5240	13.05	0.00	13.5	0.108	1.109	1.000	0.120
20	5.2GHz/802.11a	6	Left Cheek	48	5240	13.05	0.00	13.5	0.239	1.109	1.000	0.265
	5.2GHz/802.11a	6	Left Tilted	48	5240	13.05	0.00	13.5	0.141	1.109	1.000	0.156
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									1.6 W/kg (mW/g) Averaged over 1g			

➤ WLAN 5.8 GHz Head SAR

Plot No.	Band/Mode	ANT	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)
	5.8GHz/802.11a	7	Right Cheek	165	5825	9.61	0.00	10.0	0.033	1.094	1.000	0.036
	5.8GHz/802.11a	7	Right Tilted	165	5825	9.61	0.00	10.0	0.039	1.094	1.000	0.043
	5.8GHz/802.11a	7	Left Cheek	165	5825	9.61	0.00	10.0	0.047	1.094	1.000	0.051
	5.8GHz/802.11a	7	Left Tilted	165	5825	9.61	0.00	10.0	0.061	1.094	1.000	0.067
	5.8GHz/802.11a	6	Right Cheek	149	5745	9.31	0.00	9.5	0.041	1.045	1.000	0.043
	5.8GHz/802.11a	6	Right Tilted	149	5745	9.31	0.00	9.5	0.035	1.045	1.000	0.037
21	5.8GHz/802.11a	6	Left Cheek	149	5745	9.31	0.00	9.5	0.063	1.045	1.000	0.066
	5.8GHz/802.11a	6	Left Tilted	149	5745	9.31	0.00	9.5	0.048	1.045	1.000	0.050
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	ANT	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)
	BT/GFSK	7	Right Cheek	39	2441	7.14	-0.02	7.5	0.007	1.086	1.000	0.008
	BT/GFSK	7	Right Tilted	39	2441	7.14	0.03	7.5	0.002	1.086	1.000	0.002
22	BT/GFSK	7	Left Cheek	39	2441	7.14	0.08	7.5	0.013	1.086	1.000	0.014
	BT/GFSK	7	Left Tilted	39	2441	7.14	0.04	7.5	0.005	1.086	1.000	0.005
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						1.6 W/kg (mW/g) Averaged over 1g						

Note:

- Per KDB 447498 D04v01, for each exposure position, if the highest output power channel Reported SAR ≤ 0.8 W/kg, other channels SAR testing is not necessary.
- Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required when the measured SAR is ≥ 0.8 W/kg.
- 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.
- 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.
- Per KDB 248227 D01v02r02, OFDM SAR is not required when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg. Cuz the maximum output power specified for OFDM and DSSS are 31.62mW(15.0dBm) and 63.1mW(18.0dBm), the scaled SAR would be $0.128 \times (31.62/63.1) = 0.064$ W/Kg < 1.2 W/kg, therefore, SAR is not required for OFDM.
- According to KDB 865664 D02v01r02, SAR plot is required for the highest measured SAR in each exposure configuration, wireless mode and frequency band combination.
- Highlight part of test data means repeated test.

15.2 Standalone Body SAR

➤ GSM Body SAR

Plot No.	Band/Mode	ANT	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)
	GPRS850/4 slots	0	Front	190	836.6	29.52	0.17	30.0	0.158	1.117	0.176
23	GPRS850/4 slots	0	Back	190	836.6	29.52	-0.01	30.0	0.375	1.117	0.419
	GPRS1900/4 slots	0	Front	810	1909.8	25.98	0.05	26.0	0.314	1.005	0.316
24	GPRS1900/4 slots	0	Back	810	1909.8	25.98	0.03	26.0	0.407	1.005	0.409
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	ANT	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	0	Front	9538	1907.6	22.55	-0.18	23.0	0.101	1.109	0.112
25	Band II/RMC	0	Back	9538	1907.6	22.55	0.04	23.0	0.142	1.109	0.157
	Band IV/RMC	0	Front	1413	1732.6	21.87	-0.10	22.0	0.172	1.030	0.177
26	Band IV/RMC	0	Back	1413	1732.6	21.87	0.03	22.0	0.210	1.030	0.216
	Band V/RMC	0	Front	4183	836.6	23.18	0.07	23.5	0.178	1.076	0.192
27	Band V/RMC	0	Back	4183	836.6	23.18	-0.14	23.5	0.248	1.076	0.267
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	ANT	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#99	0	Front	19100	1900	23.38	-0.11	24.0	0.090	1.153	0.104
28	Band2/1RB#99	0	Back	19100	1900	23.38	-0.03	24.0	0.197	1.153	0.227
	Band2/50%RB#24	0	Front	19100	1900	22.28	-0.04	22.5	0.077	1.052	0.081
	Band2/50%RB#24	0	Back	19100	1900	22.28	0.05	22.5	0.168	1.052	0.177
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	ANT	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	0	Front	20450	829	23.83	0.01	24.0	0.192	1.040	0.200
29	Band5/1RB#24	0	Back	20450	829	23.83	-0.14	24.0	0.289	1.040	0.301
	Band5/50%RB#0	0	Front	20525	836.5	22.81	0.10	23.0	0.168	1.045	0.176
	Band5/50%RB#0	0	Back	20525	836.5	22.81	0.17	23.0	0.254	1.045	0.265
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	ANT	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#99	0	Front	20850	2510	23.37	0.18	23.5	0.263	1.030	0.271
30	Band7/1RB#99	0	Back	20850	2510	23.37	-0.17	23.5	0.398	1.030	0.410
	Band7/50%RB#0	0	Front	21350	2560	22.34	0.14	22.5	0.247	1.038	0.256
	Band7/50%RB#0	0	Back	21350	2560	22.34	-0.06	22.5	0.369	1.038	0.383
	Band7/1RB#49	5	Front	20850	2510	21.33	0.20	21.5	0.075	1.04	0.078
	Band7/1RB#49	5	Back	20850	2510	21.33	0.06	21.5	0.200	1.04	0.208
	Band7/50%RB#49	5	Front	21100	2535	20.28	0.12	20.5	0.065	1.052	0.068
	Band7/50%RB#49	5	Back	21100	2535	20.28	-0.13	20.5	0.184	1.052	0.194
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population								1.6 W/kg (mW/g) Averaged over 1g			

➤ FDD-LTE Band 12(10MHz) QPSK Body SAR

Plot No.	Band/Mode	ANT	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)
	Band12/1RB#0	0	Front	23060	704	23.66	-0.02	24.0	0.140	1.081	0.151
31	Band12/1RB#0	0	Back	23060	704	23.66	-0.04	24.0	0.209	1.081	0.226
	Band12/50%RB#49	0	Front	23130	711	22.59	0.13	23.0	0.131	1.099	0.144
	Band12/50%RB#49	0	Back	23130	711	22.59	-0.04	23.0	0.194	1.099	0.213
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population								1.6 W/kg (mW/g) Averaged over 1g			

➤ TDD-LTE Band 41(20MHz) QPSK Body SAR

Plot No.	Band/Mode	ANT	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)
	Band41/1RB#49	0	Front	40620	2593	23.21	-0.13	24.0	0.199	1.199	1.008	0.241
32	Band41/1RB#49	0	Back	40620	2593	23.21	0.19	24.0	0.274	1.199	1.008	0.331
	Band41/50%RB#49	0	Front	40620	2593	22.30	0.16	22.5	0.165	1.047	1.008	0.174
	Band41/50%RB#49	0	Back	40620	2593	22.30	-0.11	22.5	0.254	1.047	1.008	0.268
	Band41/1RB#49	5	Front	40620	2593	21.22	-0.02	21.5	0.092	1.067	1.008	0.099
	Band41/1RB#49	5	Back	40620	2593	21.22	0.06	21.5	0.120	1.067	1.008	0.129
	Band41/50%RB#0	5	Front	40620	2593	20.29	0.04	20.5	0.085	1.050	1.008	0.090
	Band41/50%RB#0	5	Back	40620	2593	20.29	0.02	20.5	0.107	1.050	1.008	0.113
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population								1.6 W/kg (mW/g) Averaged over 1g				

➤ FDD-LTE Band 66(20MHz) QPSK Body SAR

Plot No.	Band/Mode	ANT	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)
	Band66/1RB#49	0	Front	132322	1745	23.09	0.02	23.5	0.109	1.099	0.120
33	Band66/1RB#49	0	Back	132322	1745	23.09	0.00	23.5	0.247	1.099	0.271
	Band66/50%RB#0	0	Front	132322	1745	22.21	0.02	22.5	0.098	1.069	0.105
	Band66/50%RB#0	0	Back	132322	1745	22.21	-0.11	22.5	0.211	1.069	0.226
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population								1.6 W/kg (mW/g) Averaged over 1g			

➤ NR n5(20MHz) DFT-BPSK Body SAR

Plot No.	Band/Mode	ANT	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)
	NR n5 /1@49	0	Front	166800	834	23.14	0.03	23.5	0.131	1.086	0.142
	NR n5 /1@49	0	Back	166800	834	23.14	-0.04	23.5	0.196	1.086	0.213
	NR n5 /25@12	0	Front	166800	834	23.58	-0.07	24.0	0.144	1.102	0.159
34	NR n5 /25@12	0	Back	166800	834	23.58	-0.03	24.0	0.219	1.102	0.241
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						1.6 W/kg (mW/g) Averaged over 1g					

➤ NR n7(20MHz) DFT-BPSK Body SAR

Plot No.	Band/Mode	ANT	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)
	NR n7/1@1	0	Front	512000	2560	23.32	0.10	23.5	0.211	1.042	0.220
	NR n7/1@1	0	Back	512000	2560	23.32	0.15	23.5	0.354	1.042	0.369
	NR n7/25@12	0	Front	502000	2510	23.58	-0.08	24.0	0.234	1.102	0.258
35	NR n7/25@12	0	Back	502000	2510	23.58	0.08	24.0	0.378	1.102	0.417
	NR n7/1@1 NSA	0	Front	507000	2535	20.24	-0.10	20.5	0.116	1.062	0.123
	NR n7/1@1 NSA	0	Back	507000	2535	20.24	0.02	20.5	0.185	1.062	0.196
	NR n7/25@12 NSA	0	Front	507000	2535	20.51	-0.17	21.0	0.122	1.119	0.137
	NR n7/25@12 NSA	0	Back	507000	2535	20.51	-0.04	21.0	0.194	1.119	0.217
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						1.6 W/kg (mW/g) Averaged over 1g					

➤ NR n12(15MHz) DFT-BPSK Body SAR

Plot No.	Band/Mode	ANT	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)
	NR n12/1@1	0	Front	141700	708.5	23.49	-0.08	23.5	0.124	1.002	0.124
	NR n12/1@1	0	Back	141700	708.5	23.49	-0.02	23.5	0.211	1.002	0.211
	NR n12/18@9	0	Front	141700	708.5	23.54	-0.05	24.0	0.132	1.112	0.147
36	NR n12/18@9	0	Back	141700	708.5	23.54	-0.03	24.0	0.221	1.112	0.246
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						1.6 W/kg (mW/g) Averaged over 1g					

➤ NR n41(100MHz) DFT-BPSK Body SAR

Plot No.	Band/Mode	ANT	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)
	NR n41 /1@271	0	Front	518598	2592.99	25.33	-0.19	26.0	0.115	1.167	0.134
	NR n41 /1@271	0	Back	518598	2592.99	25.33	-0.01	26.0	0.398	1.167	0.464
	NR n41 /137@67	0	Front	509202	2546.01	26.24	-0.12	26.5	0.206	1.062	0.219
37	NR n41 /137@67	0	Back	509202	2546.01	26.24	0.03	26.5	0.701	1.062	0.744
	NR n41 /1@271 NSA	0	Front	518598	2592.99	20.14	-0.14	20.5	0.066	1.086	0.072
	NR n41 /1@271 NSA	0	Back	518598	2592.99	20.14	0.15	20.5	0.224	1.086	0.243
	NR n41 /137@67 NSA	0	Front	518598	2592.99	20.34	-0.15	20.5	0.121	1.038	0.126
	NR n41 /137@67 NSA	0	Back	518598	2592.99	20.34	0.01	20.5	0.378	1.038	0.392
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						1.6 W/kg (mW/g) Averaged over 1g					

➤ NR n66(40MHz) DFT-BPSK Body SAR

Plot No.	Band/Mode	ANT	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)
	NR n66/1 @104	0	Front	349000	1745	22.59	0.04	23.0	0.125	1.099	0.137
	NR n66/1 @104	0	Back	349000	1745	22.59	-0.08	23.0	0.182	1.099	0.200
	NR n66/50@25	0	Front	346000	1730	22.92	0.09	23.0	0.144	1.019	0.147
38	NR n66/50@25	0	Back	346000	1730	22.92	-0.06	23.0	0.192	1.019	0.196
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						1.6 W/kg (mW/g) Averaged over 1g					

➤ NR n77(3450MHz~3550MHz) (100MHz) DFT-BPSK Body SAR

Plot No.	Band/Mode	ANT	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)
	NR n77 /1@1	4	Front	633334	3500.01	26.50	0.17	27.0	0.003	1.122	0.003
	NR n77 /1@1	4	Back	633334	3500.01	26.50	0.03	27.0	0.015	1.122	0.017
	NR n77 /137@67	4	Front	633334	3500.01	27.27	-0.01	28.0	0.004	1.183	0.005
39	NR n77 /137@67	4	Back	633334	3500.01	27.27	0.20	28.0	0.019	1.183	0.022
	NR n77 /1@1 NSA	4	Front	633334	3500.01	20.11	0.03	20.5	0.002	1.094	0.002
	NR n77 /1@1 NSA	4	Back	633334	3500.01	20.11	-0.12	20.5	0.008	1.094	0.009
	NR n77 /137@67 NSA	4	Front	633334	3500.01	20.32	-0.02	20.5	0.003	1.042	0.003
	NR n77 /137@67 NSA	4	Back	633334	3500.01	20.32	-0.16	20.5	0.010	1.042	0.010
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						1.6 W/kg (mW/g) Averaged over 1g					

➤ NR n77(3700MHz~3980MHz)(100MHz) DFT-BPSK Body SAR

Plot No.	Band/Mode	ANT	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)
	NR n77 /1@271	4	Front	650000	3750	26.43	-0.03	26.5	0.057	1.016	0.058
	NR n77 /1@271	4	Back	650000	3750	26.43	-0.14	26.5	0.144	1.016	0.146
	NR n77 /137@67	4	Front	650000	3750	27.11	0.00	27.5	0.068	1.094	0.074
40	NR n77 /137@67	4	Back	650000	3750	27.11	-0.08	27.5	0.173	1.094	0.189
	NR n77 /1@271 NSA	4	Front	656000	3840	20.45	0.04	20.5	0.031	1.012	0.031
	NR n77 /1@271 NSA	4	Back	656000	3840	20.45	-0.12	20.5	0.078	1.012	0.079
	NR n77 /137@67 NSA	4	Front	656000	3840	20.74	0.20	21.0	0.037	1.062	0.039
	NR n77 /137@67 NSA	4	Back	656000	3840	20.74	-0.06	21.0	0.092	1.062	0.098
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						1.6 W/kg (mW/g) Averaged over 1g					

➤ WLAN 2.4GHz Body SAR

Plot No.	Band/Mode	ANT	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)
	2.4GHz/802.11b	7	Front	1	2412	16.73	0.01	17.0	0.033	1.064	1.000	0.035
41	2.4GHz/802.11b	7	Back	1	2412	16.73	0.00	17.0	0.067	1.064	1.000	0.071
	2.4GHz/802.11b	6	Front	6	2437	17.94	0.17	18.0	0.014	1.014	1.000	0.014
	2.4GHz/802.11b	6	Back	6	2437	17.94	-0.02	18.0	0.026	1.014	1.000	0.026
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						1.6 W/kg (mW/g) Averaged over 1g						

➤ WLAN 5.2GHz Body SAR

Plot No.	Band/Mode	ANT	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)
	5.2GHz/802.11a	7	Front	48	5240	13.28	-0.18	13.5	0.031	1.052	1.000	0.033
42	5.2GHz/802.11a	7	Back	48	5240	13.28	0.00	13.5	0.050	1.052	1.000	0.053
	5.2GHz/802.11a	6	Front	48	5240	13.05	0.09	13.5	0.015	1.109	1.000	0.017
	5.2GHz/802.11a	6	Back	48	5240	13.05	0.00	13.5	0.028	1.109	1.000	0.031
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						1.6 W/kg (mW/g) Averaged over 1g						

➤ WLAN 5.8GHz Body SAR

Plot No.	Band/Mode	ANT	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)
	5.8GHz/802.11a	7	Front	165	5825	9.61	0.13	10.0	0.044	1.094	1.000	0.048
43	5.8GHz/802.11a	7	Back	165	5825	9.61	0.00	10.0	0.076	1.094	1.000	0.083
	5.8GHz/802.11a	6	Front	149	5745	9.31	-0.01	9.5	0.008	1.045	1.000	0.008
	5.8GHz/802.11a	6	Back	149	5745	9.31	0.00	9.5	0.012	1.045	1.000	0.013
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	ANT	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)
	BT/GFSK	7	Front	39	2441	7.14	0.00	7.5	0.004	1.086	1.000	0.004
44	BT/GFSK	7	Back	39	2441	7.14	0.00	7.5	0.007	1.086	1.000	0.008
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. Per KDB 941225 D06v02r01, when the same wireless modes and device transmission configurations are required for testing body-worn accessories and hotspot mode, it is not necessary to test body-worn accessory SAR for the same device orientation if the test separation distance for hotspot mode is more conservative than that used for body-worn accessories.
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 ≤ 0.8 W/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 ≥ 0.8 W/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.

15.3 Body SAR in Hotspot Mode

➤ GSM Body SAR in Hotspot mode

Plot No.	Band/Mode	ANT	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)
	GPRS850/4 slots	0	Front	190	836.6	29.52	0.17	30.0	0.158	1.117	0.176
23	GPRS850/4 slots	0	Back	190	836.6	29.52	-0.01	30.0	0.375	1.117	0.419
	GPRS850/4 slots	0	Left	190	836.6	29.52	0.03	30.0	0.054	1.117	0.060
	GPRS850/4 slots	0	Top	190	836.6	29.52	0.15	30.0	0.138	1.117	0.154
	GPRS1900/4 slots	0	Front	810	1909.8	25.98	0.05	26.0	0.314	1.005	0.316
	GPRS1900/4 slots	0	Back	810	1909.8	25.98	0.03	26.0	0.407	1.005	0.409
	GPRS1900/4 slots	0	Left	810	1909.8	25.98	0.02	26.0	0.067	1.005	0.067
45	GPRS1900/4 slots	0	Top	810	1909.8	25.98	0.01	26.0	0.520	1.005	0.523
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						1.6 W/kg (mW/g) Averaged over 1g					

➤ WCDMA Body SAR in Hotspot mode

Plot No.	Band/Mode	ANT	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	0	Front	9538	1907.6	22.55	-0.18	23.0	0.101	1.109	0.112
	Band II/RMC	0	Back	9538	1907.6	22.55	0.04	23.0	0.142	1.109	0.157
	Band II/RMC	0	Left	9538	1907.6	22.55	0.14	23.0	0.028	1.109	0.031
46	Band II/RMC	0	Top	9538	1907.6	22.55	0.20	23.0	0.199	1.109	0.221
	Band IV/RMC	0	Front	1413	1732.6	21.87	-0.10	22.0	0.172	1.030	0.177
	Band IV/RMC	0	Back	1413	1732.6	21.87	0.03	22.0	0.210	1.030	0.216
	Band IV/RMC	0	Left	1413	1732.6	21.87	0.10	22.0	0.045	1.030	0.046
47	Band IV/RMC	0	Top	1413	1732.6	21.87	0.12	22.0	0.338	1.030	0.348
	Band V/RMC	0	Front	4183	836.6	23.18	0.07	23.5	0.178	1.076	0.192
27	Band V/RMC	0	Back	4183	836.6	23.18	-0.14	23.5	0.248	1.076	0.267
	Band V/RMC	0	Left	4183	836.6	23.18	-0.08	23.5	0.033	1.076	0.036
	Band V/RMC	0	Top	4183	836.6	23.18	-0.02	23.5	0.131	1.076	0.141
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 in Hotspot mode

Plot No.	Band/Mode	ANT	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#99	0	Front	19100	1900	23.38	-0.11	24.0	0.090	1.153	0.104
	Band2/1RB#99	0	Back	19100	1900	23.38	-0.03	24.0	0.197	1.153	0.227
	Band2/1RB#99	0	Left	19100	1900	23.38	0.07	24.0	0.040	1.153	0.046
48	Band2/1RB#99	0	Top	19100	1900	23.38	0.01	24.0	0.246	1.153	0.284
	Band2/50%RB#24	0	Front	19100	1900	22.28	-0.04	22.5	0.077	1.052	0.081
	Band2/50%RB#24	0	Back	19100	1900	22.28	0.05	22.5	0.168	1.052	0.177
	Band2/50%RB#24	0	Left	19100	1900	22.28	0.12	22.5	0.032	1.052	0.034
	Band2/50%RB#24	0	Top	19100	1900	22.28	0.06	22.5	0.227	1.052	0.239
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 in Hotspot mode

Plot No.	Band/Mode	ANT	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	0	Front	20450	829	23.83	0.01	24.0	0.192	1.040	0.200
29	Band5/1RB#24	0	Back	20450	829	23.83	-0.14	24.0	0.289	1.040	0.301
	Band5/1RB#24	0	Left	20450	829	23.83	0.09	24.0	0.025	1.040	0.026
	Band5/1RB#24	0	Top	20450	829	23.83	-0.02	24.0	0.142	1.040	0.148
	Band5/50%RB#0	0	Front	20525	836.5	22.81	0.10	23.0	0.168	1.045	0.176
	Band5/50%RB#0	0	Back	20525	836.5	22.81	0.17	23.0	0.254	1.045	0.265
	Band5/50%RB#0	0	Left	20525	836.5	22.81	-0.05	23.0	0.128	1.045	0.134
	Band5/50%RB#0	0	Top	20525	836.5	22.81	-0.01	23.0	0.149	1.045	0.156
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 in Hotspot mode

Plot No.	Band/Mode	ANT	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#99	0	Front	20850	2510	23.37	0.18	23.5	0.263	1.030	0.271
30	Band7/1RB#99	0	Back	20850	2510	23.37	-0.17	23.5	0.398	1.030	0.410
	Band7/1RB#99	0	Left	20850	2510	23.37	0.03	23.5	0.046	1.030	0.047
	Band7/1RB#99	0	Top	20850	2510	23.37	0.06	23.5	0.368	1.030	0.379
	Band7/50%RB#0	0	Front	21350	2560	22.34	0.14	22.5	0.247	1.038	0.256
	Band7/50%RB#0	0	Back	21350	2560	22.34	-0.06	22.5	0.369	1.038	0.383
	Band7/50%RB#0	0	Left	21350	2560	22.34	0.04	22.5	0.038	1.038	0.039
	Band7/50%RB#0	0	Top	21350	2560	22.34	-0.05	22.5	0.334	1.038	0.347
	Band7/1RB#49	5	Front	20850	2510	21.33	0.20	21.5	0.075	1.04	0.078
	Band7/1RB#49	5	Back	20850	2510	21.33	0.06	21.5	0.200	1.04	0.208
	Band7/1RB#49	5	Left	20850	2510	21.33	0.05	21.5	0.160	1.04	0.166
	Band7/50%RB#49	5	Front	21100	2535	20.28	0.12	20.5	0.065	1.052	0.068
	Band7/50%RB#49	5	Back	21100	2535	20.28	-0.13	20.5	0.184	1.052	0.194
	Band7/50%RB#49	5	Left	21100	2535	20.28	-0.19	20.5	0.147	1.052	0.155
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						1.6 W/kg (mW/g) Averaged over 1g					

➤ FDD-LTE Band 12(10MHz) QPSK Body SAR in Hotspot mode

Plot No.	Band/Mode	ANT	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)
	Band12/1RB#0	0	Front	23060	704	23.66	-0.02	24.0	0.140	1.081	0.151
31	Band12/1RB#0	0	Back	23060	704	23.66	-0.04	24.0	0.209	1.081	0.226
	Band12/1RB#0	0	Left	23060	704	23.66	-0.14	24.0	0.025	1.081	0.027
	Band12/1RB#0	0	Top	23060	704	23.66	-0.08	24.0	0.114	1.081	0.123
	Band12/50%RB#49	0	Front	23130	711	22.59	0.13	23.0	0.131	1.099	0.144
	Band12/50%RB#49	0	Back	23130	711	22.59	-0.04	23.0	0.194	1.099	0.213
	Band12/50%RB#49	0	Left	23130	711	22.59	-0.01	23.0	0.021	1.099	0.023
	Band12/50%RB#49	0	Top	23130	711	22.59	-0.12	23.0	0.101	1.099	0.111
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						1.6 W/kg (mW/g) Averaged over 1g					

➤ TDD-LTE Band 41(20MHz) QPSK Body SAR in Hotspot mode

Plot No.	Band/Mode	ANT	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)
	Band41/1RB#49	0	Front	40620	2593	23.21	-0.13	24.0	0.199	1.199	1.008	0.241
32	Band41/1RB#49	0	Back	40620	2593	23.21	0.19	24.0	0.274	1.199	1.008	0.331
	Band41/1RB#49	0	Left	40620	2593	23.21	0.12	24.0	0.026	1.199	1.008	0.031
	Band41/1RB#49	0	Top	40620	2593	23.21	0.14	24.0	0.243	1.199	1.008	0.294
	Band41/50%RB#49	0	Front	40620	2593	22.30	0.16	22.5	0.165	1.047	1.008	0.174
	Band41/50%RB#49	0	Back	40620	2593	22.30	-0.11	22.5	0.254	1.047	1.008	0.268
	Band41/50%RB#49	0	Left	40620	2593	22.30	0.18	22.5	0.021	1.047	1.008	0.022
	Band41/50%RB#49	0	Top	40620	2593	22.30	0.13	22.5	0.227	1.047	1.008	0.240
	Band41/1RB#49	5	Front	40620	2593	21.22	-0.02	21.5	0.092	1.067	1.008	0.099
	Band41/1RB#49	5	Back	40620	2593	21.22	0.06	21.5	0.120	1.067	1.008	0.129
	Band41/1RB#49	5	Left	40620	2593	21.22	0.15	21.5	0.014	1.067	1.008	0.015
	Band41/50%RB#0	5	Front	40620	2593	20.29	0.04	20.5	0.085	1.050	1.008	0.090
	Band41/50%RB#0	5	Back	40620	2593	20.29	0.02	20.5	0.107	1.050	1.008	0.113
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						1.6 W/kg (mW/g) Averaged over 1g						

➤ FDD-LTE Band 66(20MHz) QPSK Body SAR in Hotspot mode

Plot No.	Band/Mode	ANT	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)
	Band66/1RB#49	0	Front	132322	1745	23.09	0.02	23.5	0.109	1.099	0.120
	Band66/1RB#49	0	Back	132322	1745	23.09	0.00	23.5	0.247	1.099	0.271
	Band66/1RB#49	0	Left	132322	1745	23.09	0.13	23.5	0.033	1.099	0.036
49	Band66/1RB#49	0	Top	132322	1745	23.09	0.00	23.5	0.372	1.099	0.409
	Band66/50%RB#0	0	Front	132322	1745	22.21	0.02	22.5	0.098	1.069	0.105
	Band66/50%RB#0	0	Back	132322	1745	22.21	-0.11	22.5	0.211	1.069	0.226
	Band66/50%RB#0	0	Left	132322	1745	22.21	-0.14	22.5	0.027	1.069	0.029
	Band66/50%RB#0	0	Top	132322	1745	22.21	0.07	22.5	0.324	1.069	0.346
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						1.6 W/kg (mW/g) Averaged over 1g					

➤ NR n5(20MHz) DFT-BPSK Body SAR in Hotspot mode

Plot No.	Band/Mode	ANT	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)
	NR n5 /1@49	0	Front	166800	834	23.14	0.03	23.5	0.131	1.086	0.142
	NR n5 /1@49	0	Back	166800	834	23.14	-0.04	23.5	0.196	1.086	0.213
	NR n5 /1@49	0	Left	166800	834	23.14	-0.16	23.5	0.022	1.086	0.024
	NR n5 /1@49	0	Top	166800	834	23.14	-0.19	23.5	0.114	1.086	0.124
	NR n5 /25@12	0	Front	166800	834	23.58	-0.07	24.0	0.144	1.102	0.159
34	NR n5 /25@12	0	Back	166800	834	23.58	-0.03	24.0	0.219	1.102	0.241
	NR n5 /25@12	0	Left	166800	834	23.58	-0.14	24.0	0.025	1.102	0.028
	NR n5 /25@12	0	Top	166800	834	23.58	0.05	24.0	0.122	1.102	0.134
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						1.6 W/kg (mW/g) Averaged over 1g					

➤ NR n7(20MHz) DFT-BPSK Body SAR in Hotspot mode

Plot No.	Band/Mode	ANT	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)
	NR n7/1@1	0	Front	512000	2560	23.32	0.10	23.5	0.211	1.042	0.220
	NR n7/1@1	0	Back	512000	2560	23.32	0.15	23.5	0.354	1.042	0.369
	NR n7/1@1	0	Left	512000	2560	23.32	-0.14	23.5	0.035	1.042	0.036
	NR n7/1@1	0	Top	512000	2560	23.32	0.11	23.5	0.342	1.042	0.356
	NR n7/25@12	0	Front	502000	2510	23.58	-0.08	24.0	0.234	1.102	0.258
35	NR n7/25@12	0	Back	502000	2510	23.58	0.08	24.0	0.378	1.102	0.417
	NR n7/25@12	0	Left	502000	2510	23.58	0.12	24.0	0.041	1.102	0.045
	NR n7/25@12	0	Top	502000	2510	23.58	-0.04	24.0	0.376	1.102	0.414
	NR n7/1@1 NSA	0	Front	507000	2535	20.24	-0.10	20.5	0.116	1.062	0.123
	NR n7/1@1 NSA	0	Back	507000	2535	20.24	0.02	20.5	0.185	1.062	0.196
	NR n7/1@1 NSA	0	Left	507000	2535	20.24	0.12	20.5	0.019	1.062	0.020
	NR n7/1@1 NSA	0	Top	507000	2535	20.24	-0.03	20.5	0.166	1.062	0.176
	NR n7/25@12 NSA	0	Front	507000	2535	20.51	-0.17	21.0	0.122	1.119	0.137
	NR n7/25@12 NSA	0	Back	507000	2535	20.51	-0.04	21.0	0.194	1.119	0.217
	NR n7/25@12 NSA	0	Left	507000	2535	20.51	-0.03	21.0	0.017	1.119	0.019
	NR n7/25@12 NSA	0	Top	507000	2535	20.51	0.15	21.0	0.157	1.119	0.176
ANSI / IEEE C95.1 – SAFETY LIMIT											
Spatial Peak						1.6 W/kg (mW/g)					
Uncontrolled Exposure/General Population						Averaged over 1g					

➤ NR n12(15MHz) DFT-BPSK Body SAR in Hotspot mode

Plot No.	Band/Mode	ANT	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)
	NR n12/1@1	0	Front	141700	708.5	23.49	-0.08	23.5	0.124	1.002	0.124
	NR n12/1@1	0	Back	141700	708.5	23.49	-0.02	23.5	0.211	1.002	0.211
	NR n12/1@1	0	Left	141700	708.5	23.49	-0.04	23.5	0.026	1.002	0.026
	NR n12/1@1	0	Top	141700	708.5	23.49	0.10	23.5	0.094	1.002	0.094
	NR n12/18@9	0	Front	141700	708.5	23.54	-0.05	24.0	0.132	1.112	0.147
36	NR n12/18@9	0	Back	141700	708.5	23.54	-0.03	24.0	0.221	1.112	0.246
	NR n12/18@9	0	Left	141700	708.5	23.54	0.13	24.0	0.028	1.112	0.031
	NR n12/18@9	0	Top	141700	708.5	23.54	0.09	24.0	0.101	1.112	0.112
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						1.6 W/kg (mW/g) Averaged over 1g					

➤ NR n41(100MHz) DFT-BPSK Body SAR in Hotspot mode

Plot No.	Band/Mode	ANT	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)
	NR n41 /1@271	0	Front	518598	2592.99	25.33	-0.19	26.0	0.115	1.167	0.134
	NR n41 /1@271	0	Back	518598	2592.99	25.33	-0.01	26.0	0.398	1.167	0.464
	NR n41 /1@271	0	Left	518598	2592.99	25.33	-0.09	26.0	0.022	1.167	0.026
	NR n41 /1@271	0	Top	518598	2592.99	25.33	-0.07	26.0	0.377	1.167	0.440
	NR n41 /137@67	0	Front	509202	2546.01	26.24	-0.12	26.5	0.206	1.062	0.219
37	NR n41 /137@67	0	Back	509202	2546.01	26.24	0.03	26.5	0.701	1.062	0.744
	NR n41 /137@67	0	Left	509202	2546.01	26.24	0.04	26.5	0.046	1.062	0.049
	NR n41 /137@67	0	Top	509202	2546.01	26.24	-0.01	26.5	0.614	1.062	0.652
	NR n41 /1@271 NSA	0	Front	518598	2592.99	20.14	-0.14	20.5	0.066	1.086	0.072
	NR n41 /1@271 NSA	0	Back	518598	2592.99	20.14	0.15	20.5	0.224	1.086	0.243
	NR n41 /1@271 NSA	0	Left	518598	2592.99	20.14	-0.07	20.5	0.013	1.086	0.014
	NR n41 /1@271 NSA	0	Top	518598	2592.99	20.14	0.15	20.5	0.194	1.086	0.211
	NR n41 /137@67 NSA	0	Front	518598	2592.99	20.34	-0.15	20.5	0.121	1.038	0.126
	NR n41 /137@67 NSA	0	Back	518598	2592.99	20.34	0.01	20.5	0.378	1.038	0.392
	NR n41 /137@67 NSA	0	Left	518598	2592.99	20.34	0.06	20.5	0.027	1.038	0.028
	NR n41 /137@67 NSA	0	Top	518598	2592.99	20.34	0.05	20.5	0.321	1.038	0.333
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						1.6 W/kg (mW/g) Averaged over 1g					

➤ NR n66(40MHz) DFT-BPSK Body SAR in Hotspot mode

Plot No.	Band/Mode	ANT	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)
	NR n66/1@104	0	Front	349000	1745	22.59	0.04	23.0	0.125	1.099	0.137
	NR n66/1@104	0	Back	349000	1745	22.59	-0.08	23.0	0.182	1.099	0.200
	NR n66/1@104	0	Left	349000	1745	22.59	0.03	23.0	0.024	1.099	0.026
	NR n66/1@104	0	Top	349000	1745	22.59	-0.01	23.0	0.246	1.099	0.270
	NR n66/50@25	0	Front	346000	1730	22.92	0.09	23.0	0.144	1.019	0.147
	NR n66/50@25	0	Back	346000	1730	22.92	-0.06	23.0	0.192	1.019	0.196
	NR n66/50@25	0	Left	346000	1730	22.92	0.20	23.0	0.029	1.019	0.030
50	NR n66/50@25	0	Top	346000	1730	22.92	0.00	23.0	0.282	1.019	0.287
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						1.6 W/kg (mW/g) Averaged over 1g					

➤ NR n77(3450MHz~3550MHz) (100MHz) DFT-BPSK Body SAR in Hotspot mode

Plot No.	Band/Mode	ANT	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)
	NR n77 /1@1	4	Front	633334	3500.01	26.50	0.17	27.0	0.003	1.122	0.003
	NR n77 /1@1	4	Back	633334	3500.01	26.50	0.03	27.0	0.015	1.122	0.017
	NR n77 /1@1	4	Right	633334	3500.01	26.50	-0.18	27.0	0.002	1.122	0.002
	NR n77 /1@1	4	Top	633334	3500.01	26.50	-0.03	27.0	0.010	1.122	0.011
	NR n77 /137@67	4	Front	633334	3500.01	27.27	-0.01	28.0	0.004	1.183	0.005
39	NR n77 /137@67	4	Back	633334	3500.01	27.27	0.20	28.0	0.019	1.183	0.022
	NR n77 /137@67	4	Right	633334	3500.01	27.27	0.16	28.0	0.002	1.183	0.002
	NR n77 /137@67	4	Top	633334	3500.01	27.27	0.02	28.0	0.015	1.183	0.018
	NR n77 /1@1 NSA	4	Front	633334	3500.01	20.11	0.03	20.5	0.002	1.094	0.002
	NR n77 /1@1 NSA	4	Back	633334	3500.01	20.11	-0.12	20.5	0.008	1.094	0.009
	NR n77 /1@1 NSA	4	Right	633334	3500.01	20.11	0.04	20.5	0.001	1.094	0.001
	NR n77 /1@1 NSA	4	Top	633334	3500.01	20.11	-0.18	20.5	0.006	1.094	0.007
	NR n77 /137@67 NSA	4	Front	633334	3500.01	20.32	-0.02	20.5	0.003	1.042	0.003
	NR n77 /137@67 NSA	4	Back	633334	3500.01	20.32	-0.16	20.5	0.010	1.042	0.010
	NR n77 /137@67 NSA	4	Right	633334	3500.01	20.32	-0.02	20.5	0.001	1.042	0.001
	NR n77 /137@67 NSA	4	Top	633334	3500.01	20.32	-0.09	20.5	0.007	1.042	0.007
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						1.6 W/kg (mW/g) Averaged over 1g					

➤ NR n77(3700MHz~3980MHz)(100MHz) DFT-BPSK Body SAR in Hotspot mode

Plot No.	Band/Mode	ANT	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)
	NR n77 /1@271	4	Front	650000	3750	26.43	-0.03	26.5	0.057	1.016	0.058
	NR n77 /1@271	4	Back	650000	3750	26.43	-0.14	26.5	0.144	1.016	0.146
	NR n77 /1@271	4	Right	650000	3750	26.43	0.02	26.5	0.016	1.016	0.016
	NR n77 /1@271	4	Top	650000	3750	26.43	-0.17	26.5	0.237	1.016	0.241
	NR n77 /137@67	4	Front	650000	3750	27.11	0.00	27.5	0.068	1.094	0.074
	NR n77 /137@67	4	Back	650000	3750	27.11	-0.08	27.5	0.173	1.094	0.189
	NR n77 /137@67	4	Right	650000	3750	27.11	-0.02	27.5	0.021	1.094	0.023
51	NR n77 /137@67	4	Top	650000	3750	27.11	0.00	27.5	0.258	1.094	0.282
	NR n77 /1@271 NSA	4	Front	656000	3840	20.45	0.04	20.5	0.031	1.012	0.031
	NR n77 /1@271 NSA	4	Back	656000	3840	20.45	-0.12	20.5	0.078	1.012	0.079
	NR n77 /1@271 NSA	4	Right	656000	3840	20.45	0.01	20.5	0.009	1.012	0.009
	NR n77 /1@271 NSA	4	Top	656000	3840	20.45	-0.04	20.5	0.114	1.012	0.115
	NR n77 /137@67 NSA	4	Front	656000	3840	20.74	0.20	21.0	0.037	1.062	0.039
	NR n77 /137@67 NSA	4	Back	656000	3840	20.74	-0.06	21.0	0.092	1.062	0.098
	NR n77 /137@67 NSA	4	Right	656000	3840	20.74	-0.16	21.0	0.012	1.062	0.013
	NR n77 /137@67 NSA	4	Top	656000	3840	20.74	0.20	21.0	0.139	1.062	0.148
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						1.6 W/kg (mW/g) Averaged over 1g					

➤ WLAN 2.4GHz Body SAR in Hotspot mode

Plot No.	Band/Mode	ANT	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)
	2.4GHz/802.11b	7	Front	1	2412	16.73	0.01	17.0	0.033	1.064	1.000	0.035
41	2.4GHz/802.11b	7	Back	1	2412	16.73	0.00	17.0	0.067	1.064	1.000	0.071
	2.4GHz/802.11b	7	Right	1	2412	16.73	0.04	17.0	0.060	1.064	1.000	0.064
	2.4GHz/802.11b	7	Top	1	2412	16.73	0.07	17.0	0.016	1.064	1.000	0.017
	2.4GHz/802.11b	6	Front	6	2437	17.94	0.17	18.0	0.014	1.014	1.000	0.014
	2.4GHz/802.11b	6	Back	6	2437	17.94	-0.02	18.0	0.026	1.014	1.000	0.026
	2.4GHz/802.11b	6	Right	6	2437	17.94	0.00	18.0	0.013	1.014	1.000	0.013
	2.4GHz/802.11b	6	Top	6	2437	17.94	0.08	18.0	0.003	1.014	1.000	0.003
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									1.6 W/kg (mW/g) Averaged over 1g			

➤ WLAN 5.2GHz Body SAR in Hotspot mode

Plot No.	Band/Mode	ANT	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)
	5.2GHz/802.11a	7	Front	48	5240	13.28	-0.18	13.5	0.031	1.052	1.000	0.033
42	5.2GHz/802.11a	7	Back	48	5240	13.28	0.00	13.5	0.050	1.052	1.000	0.053
	5.2GHz/802.11a	7	Right	48	5240	13.28	0.03	13.5	0.045	1.052	1.000	0.047
	5.2GHz/802.11a	7	Top	48	5240	13.28	0.17	13.5	0.157	1.052	1.000	0.165
	5.2GHz/802.11a	6	Front	48	5240	13.05	0.09	13.5	0.015	1.109	1.000	0.017
	5.2GHz/802.11a	6	Back	48	5240	13.05	0.00	13.5	0.028	1.109	1.000	0.031
	5.2GHz/802.11a	6	Right	48	5240	13.05	-0.03	13.5	0.050	1.109	1.000	0.055
	5.2GHz/802.11a	6	Top	48	5240	13.05	-0.03	13.5	0.070	1.109	1.000	0.078
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									1.6 W/kg (mW/g) Averaged over 1g			

➤ WLAN 5.8GHz Body SAR in Hotspot mode

Plot No.	Band/Mode	ANT	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)
	5.8GHz/802.11a	7	Front	165	5825	9.61	0.13	10.0	0.044	1.094	1.000	0.048
43	5.8GHz/802.11a	7	Back	165	5825	9.61	0.00	10.0	0.076	1.094	1.000	0.083
	5.8GHz/802.11a	7	Right	165	5825	9.61	0.02	10.0	0.068	1.094	1.000	0.074
	5.8GHz/802.11a	7	Top	165	5825	9.61	0.05	10.0	0.056	1.094	1.000	0.061
	5.8GHz/802.11a	6	Front	149	5745	9.31	-0.01	9.5	0.008	1.045	1.000	0.008
	5.8GHz/802.11a	6	Back	149	5745	9.31	0.00	9.5	0.012	1.045	1.000	0.013
	5.8GHz/802.11a	6	Right	149	5745	9.31	0.03	9.5	0.023	1.045	1.000	0.024
	5.8GHz/802.11a	6	Top	149	5745	9.31	0.00	9.5	0.007	1.045	1.000	0.007
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									1.6 W/kg (mW/g) Averaged over 1g			

> Bluetooth Body SAR in Hotspot mode

Plot No.	Band/Mode	ANT	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)
	BT/GFSK	7	Front	39	2441	7.14	0.00	7.5	0.004	1.086	1.000	0.004
44	BT/GFSK	7	Back	39	2441	7.14	0.00	7.5	0.007	1.086	1.000	0.008
	BT/GFSK	7	Right	39	2441	7.14	0.00	7.5	0.002	1.086	1.000	0.002
	BT/GFSK	7	Top	39	2441	7.14	0.00	7.5	0.003	1.086	1.000	0.003
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						1.6 W/kg (mW/g) Averaged over 1g						

Note:

- Per KDB 447498 D04v01, for each exposure position, if the highest output channel Reported SAR ≤ 0.8 W/kg, other channels SAR testing is not necessary.
- Additional WLAN SAR testing was performed for simultaneous transmission analysis.
- For Hotspot SAR testing, per KDB 941225 D06v02r01, for EUT dimension ≥ 9 cm*5cm, the test distance is 10mm. SAR must be measured for all surfaces and sides with a transmitting antenna located within 2.5cm from that surface or edge.
- Per KDB 941225 D01v03r01, RMC 12.2kbps setting is used to evaluate SAR. If HSDPA output power is < 0.25 dB higher than RMC 12.2kbps, or Reported SAR with RMC 12.2kbps setting is ≤ 1.2 W/kg, HSDPA SAR evaluation can be excluded.
- Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required when the measured SAR is ≥ 0.8 W/kg.
- 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 required.
- 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. Otherwise, SAR is measured for the highest output power channel.
- According to KDB 865664 D02v01r02, SAR plot is required for the highest measured SAR in each exposure configuration, wireless mode and frequency band combination.

15.4 Repeated SAR measurement

Band/ Mode	Test Position	CH.	Freq. (MHz)	Measured SAR (W/kg)				
				Original	1 st Repeated		2 nd Repeated	
					Value	Ratio	Value	Ratio
Band IV/RMC	Right Tilted	1513	1752.6	0.858	0.844	1.02	/	/
Band66/1RB#49	Right Tilted	132322	1745	0.803	0.789	1.02	/	/
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.

15.5 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.

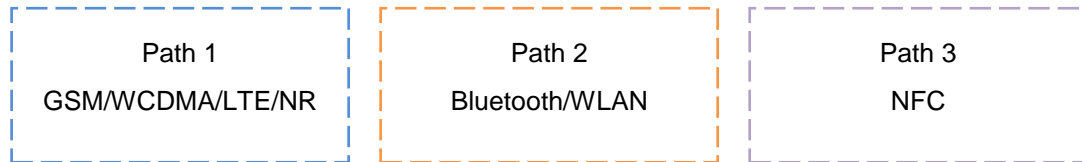


Fig.15.1 Simultaneous Transmission Paths

➤ **Simultaneous Transmission Procedures**

This device contains transmitters that may operate simultaneously. Therefore simultaneous transmission analysis is required. Per FCC KDB 447498 D04v01, simultaneous transmission SAR test exclusion may be applied when the sum of the 1-g SAR for all the simultaneous transmitting antennas in a specific a physical test configuration is ≤ 1.6 W/kg. When standalone SAR is not required to be measured, per FCC KDB 447498 D04v01 Appendix E, E.1), the following equation must be used to estimate the standalone 1g SAR for simultaneous transmission assessment involving that transmitter.

$$SAR_{est} = 1.6 \cdot P_{ant} / P_{th} [W/kg].$$

Mode	Max. Power (dBm)	Max. Power (mW)	Exposure Position	Head	Body	Hotspot
NFC	-44.53	0.000035	Estimated SAR (W/kg)	0.000	0.000	0.000

Note:

- Per KDB 447498 D04v01 section 2.1.2: 1-mW Test Exemption, P_{th}=1mW.

➤ **Multi-Band simultaneous Transmission Consideration**

Simultaneous Transmission Consideration	Position		Applicable Combination	
	Head		WWAN (Voice) + WLAN 2.4GMIMO/5GMIMO+NFC	
			WWAN (Voice) + WLAN 2.4 GHz + Bluetooth + NFC	
	Body		WWAN (Voice) + WLAN 2.4GMIMO/5GMIMO+NFC	
			WWAN (Voice) + WLAN 2.4 GHz + Bluetooth + NFC	
	Hotspot		WWAN (Data) + WLAN 2.4GMIMO/5GMIMO+NFC	
WWAN (Data) + WLAN 2.4 GHz + Bluetooth + NFC				

Note:

- ANT7:WLAN 2.4GHz Band, WLAN 5.2GHz Band, WLAN 5.8GHz Band and Bluetooth share the same antenna, and cannot transmit simultaneously.
- ANT6: WLAN 2.4GHz Band, WLAN 5.2GHz Band, WLAN 5.8GHz Band share the same antenna, and cannot transmit simultaneously.
- GSM/WCDMA/LTE shares the same antenna, and cannot transmit simultaneously.
- Per KDB 447498 D04v01 section 2.1.2: 1-mW Test Exemption, SAR simultaneous transmission consideration for NFC is not required.
- The Report SAR summation is calculated based on the same configuration and test position.
- Per KDB 447498 D04v01, simultaneous transmission SAR is compliant if,
 - Scalar SAR summation < 1.6 W/kg.
 - SPLSR = (SAR₁ + SAR₂)^{1.5} / (min. separation distance, mm), and the peak separation distance is determined from the square root of [(x₁-x₂)² + (y₁-y₂)² + (z₁-z₂)²], where (x₁, y₁, z₁) and (x₂, y₂, z₂) are the coordinates of the extrapolated peak SAR locations in the zoom scan If SPLSR ≤ 0.04, simultaneously transmission SAR measurement is not necessary
 - Simultaneously transmission SAR measurement, and the Reported multi-band SAR < 1.6 W/kg

15.6 SAR Simultaneous Transmission Analysis

➤ Simultaneous Transmission

Position		Standalone SAR _{1g} (W/kg)		Σ SAR _{1g} (W/kg)
		LTE Band 5	NR n7 NSA	Max EN-DC
Head	Right Cheek	0.619	0.619	0.838
	Right Tilted	0.517	0.517	0.680
	Left Cheek	0.366	0.366	0.444
	Left Tilted	0.298	0.298	0.349
Body-worn	Front	0.200	0.200	0.336
	Back	0.301	0.301	0.518
Hotspot	Front	0.200	0.200	0.336
	Back	0.301	0.301	0.518
	Left	0.026	0.026	0.045
	Right	/	/	/
	Top	0.148	0.148	0.323
	Bottom	/	/	/

Position		Standalone SAR _{1g} (W/kg)			Σ SAR _{1g} (W/kg)
		LTE Band 5	LTE Band 41 (ANT 5)	NR n41(n38) NSA	Max EN-DC
Head	Right Cheek	0.619	0.167	0.550	1.168
	Right Tilted	0.517	0.123	0.729	1.246
	Left Cheek	0.366	0.069	0.377	0.743
	Left Tilted	0.298	0.098	0.418	0.717
Body- worn	Front	0.200	0.099	0.219	0.418
	Back	0.301	0.129	0.744	1.045
Hotspot	Front	0.200	0.099	0.126	0.325
	Back	0.301	0.129	0.392	0.693
	Left	0.026	0.015	0.028	0.054
	Right	/	/	/	/
	Top	0.148	/	0.333	0.481
	Bottom	/	/	/	/

Position		Standalone SAR _{1g} (W/kg)						Σ SAR _{1g} (W/kg)
		LTE Band 2	LTE Band 5	LTE Band 7 (ANT5)	LTE Band 41 (ANT 5)	LTE Band 66(4)	NR n77(n78) NSA	Max EN-DC
Head	Right Cheek	0.421	0.219	0.219	0.167	0.722	0.053	0.775
	Right Tilted	0.530	0.163	0.163	0.123	0.882	0.042	0.924
	Left Cheek	0.316	0.078	0.078	0.069	0.596	0.265	0.860
	Left Tilted	0.385	0.051	0.051	0.098	0.675	0.216	0.890
Body- worn	Front	0.104	0.137	0.078	0.099	0.120	0.039	0.217
	Back	0.227	0.217	0.208	0.129	0.271	0.098	0.369
Hotspot	Front	0.104	0.137	0.078	0.099	0.120	0.039	0.217
	Back	0.227	0.217	0.208	0.129	0.271	0.098	0.369
	Left	0.046	0.019	0.166	0.015	0.036	/	0.166
	Right	/	/	/	/	/	0.013	0.013
	Top	0.284	0.176	/	/	0.409	0.148	0.556
	Bottom	/	/	/	/	/	0.053	0.000

Position		Max Standalone SAR _{1g} (W/kg)						Σ SAR _{1g} (W/kg)		
		1	2	3	4	5	6	1+2+3+6	1+3+5+6	1+4+5+6
		MAX WWAN	2.4G ANT 7	2.4G ANT 6	5G MIMO	BT	NFC			
Head	Right Cheek	1.168	0.055	0.054	0.274	0.008	0.000	1.277	1.230	1.450
	Right Tilted	1.246	0.063	0.028	0.225	0.002	0.000	1.337	1.276	1.473
	Left Cheek	0.860	0.120	0.088	0.503	0.014	0.000	1.068	0.962	1.377
	Left Tilted	0.890	0.128	0.040	0.300	0.005	0.000	1.058	0.935	1.195
Body-worn	Front	0.418	0.035	0.014	0.056	0.004	0.000	0.467	0.436	0.478
	Back	1.045	0.071	0.026	0.096	0.008	0.000	1.142	1.079	1.149
Hotspot	Front	0.336	0.035	0.014	0.056	0.004	0.000	0.385	0.354	0.396
	Back	0.744	0.071	0.026	0.096	0.008	0.000	0.841	0.778	0.848
	Left	0.166	/	/	/	/	0.000	0.166	0.166	0.166
	Right	0.023	0.064	0.013	0.102	0.002	0.000	0.100	0.038	0.127
	Top	0.652	0.017	0.003	0.243	0.003	0.000	0.672	0.658	0.898
	Bottom	/	/	/	/	/	0.000	0.000	0.000	0.000

➤ **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.

15.7 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 IEEE Std 1528-2013 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.

15.8 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.

16 Reference

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- [3]. IEEE Std. 1528-2013, “Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques”, September 2013
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- [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
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- [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: 01.30.2023

DUT: Dipole 750 MHz; Type: D750V3; Serial: SN:1118

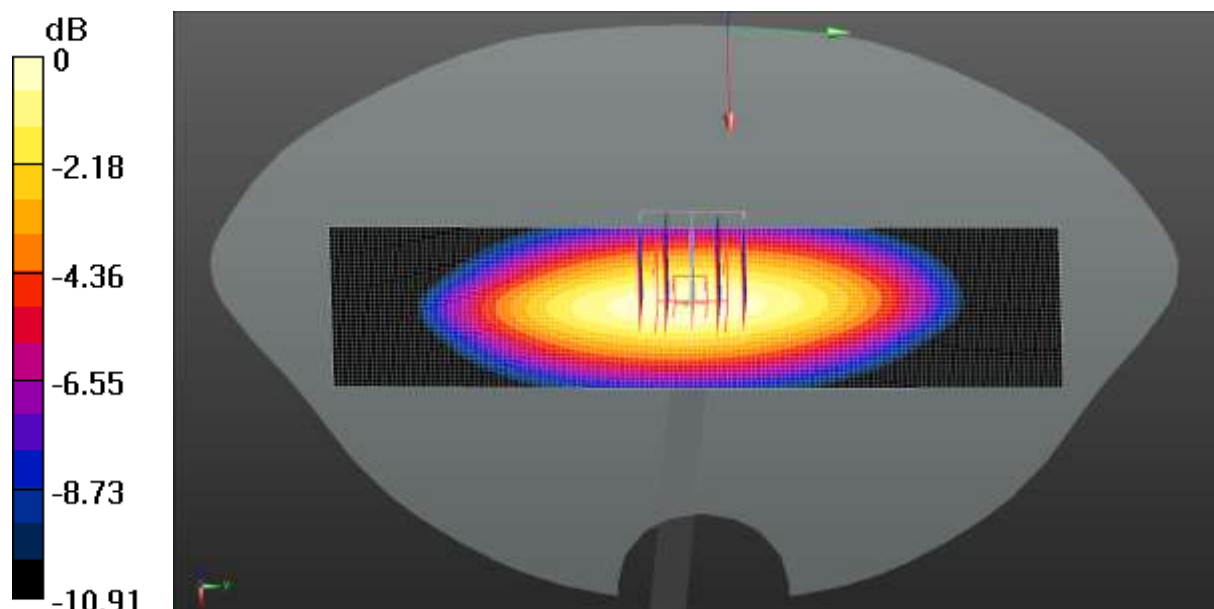
Communication System: UID 0, CW (0); Frequency: 750 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 750 \text{ MHz}$; $\sigma = 0.896 \text{ S/m}$; $\epsilon_r = 40.788$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(10.2, 10.2, 10.2) @ 750 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

System Performance Check at Frequency 750 MHz Head Tissue/d=15mm, Pin=80 mW, dist=1.4mm (EX-Probe)/Area Scan (41x151x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.941 W/kg

System Performance Check at Frequency 750 MHz Head Tissue/d=15mm, Pin=80 mW, dist=1.4mm (EX-Probe)/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 31.12 V/m; Power Drift = 0.01 dB
 Peak SAR (extrapolated) = 1.02 W/kg
SAR(1 g) = 0.671 W/kg; SAR(10 g) = 0.436 W/kg
 Smallest distance from peaks to all points 3 dB below = 17.1 mm
 Ratio of SAR at M2 to SAR at M1 = 52%
 Maximum value of SAR (measured) = 0.942 W/kg



0 dB = 0.942 W/kg = -0.26 dBW/kg

Test Laboratory: JYTSZ

Date: 01.30.2023

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

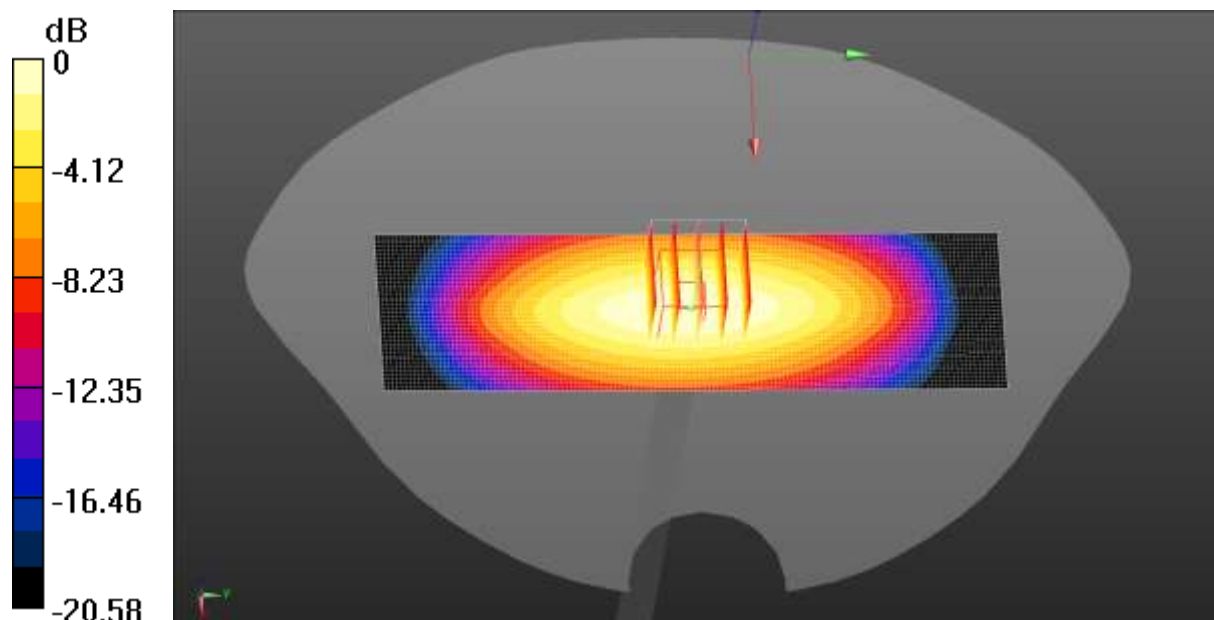
Communication System: UID 0, CW (0); Frequency: 835 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.918 \text{ S/m}$; $\epsilon_r = 40.593$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(9.8, 9.8, 9.8) @ 835 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

System Performance Check at Frequency 835 MHz Head Tissue/d=15mm, Pin=80 mW, dist=1.4mm (EX-Probe)/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 32.35 V/m; Power Drift = 0.05 dB
 Peak SAR (extrapolated) = 1.11 W/kg
SAR(1 g) = 0.786 W/kg; SAR(10 g) = 0.508 W/kg
 Smallest distance from peaks to all points 3 dB below = 17.2 mm
 Ratio of SAR at M2 to SAR at M1 = 61.5%
 Maximum value of SAR (measured) = 1.01 W/kg

System Performance Check at Frequency 835 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



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

Test Laboratory: JYTSZ

Date: 01.14.2023

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: $f = 1750 \text{ MHz}$; $\sigma = 1.353 \text{ S/m}$; $\epsilon_r = 41.426$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(8.38, 8.38, 8.38) @ 1750 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

System Performance Check at Frequency 1750 MHz Head Tissue/d=10mm, Pin=40 mW, dist=1.4mm (EX-Probe)/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 41.21 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 2.73 W/kg

SAR(1 g) = 1.52 W/kg; SAR(10 g) = 0.786 W/kg

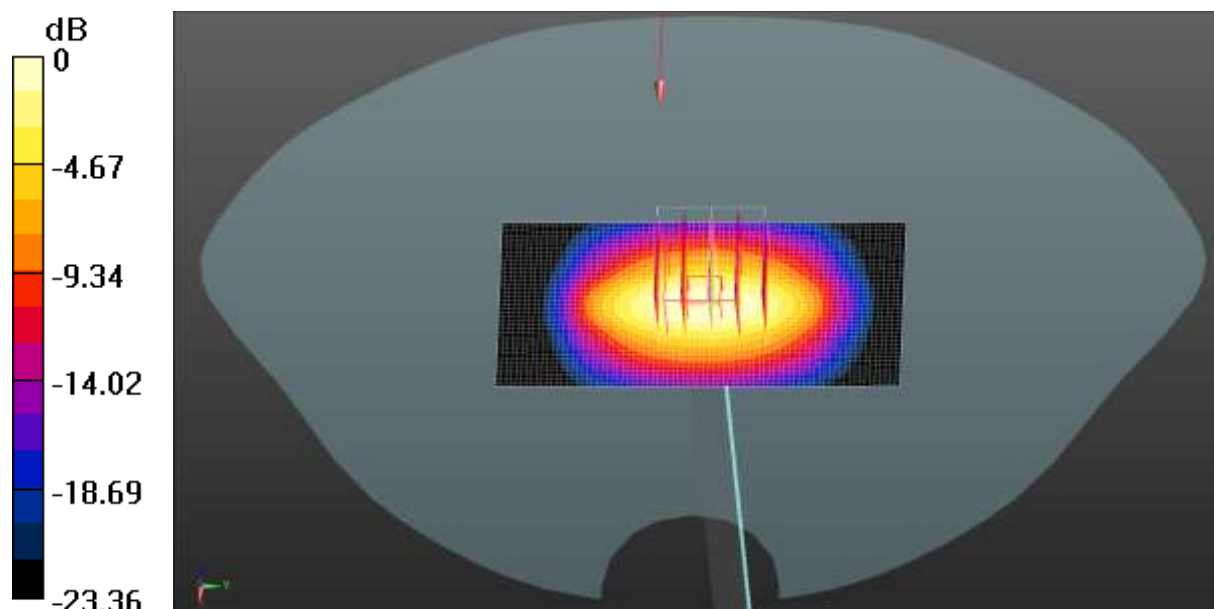
Smallest distance from peaks to all points 3 dB below = 10.6 mm

Ratio of SAR at M2 to SAR at M1 = 53.2%

Maximum value of SAR (measured) = 2.21 W/kg

System Performance Check at Frequency 1750 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) = 2.31 W/kg



0 dB = 2.31 W/kg = 3.64 dBW/kg

Test Laboratory: JYTSZ

Date: 01.14.2023

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: $f = 1900 \text{ MHz}$; $\sigma = 1.435 \text{ S/m}$; $\epsilon_r = 41.21$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(8.05, 8.05, 8.05) @ 1900 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

System Performance Check at Frequency 1900 MHz Head Tissue/d=10mm, Pin=40 mW, dist=1.4mm (EX-Probe)/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 43.25 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 3.11 W/kg

SAR(1 g) = 1.61 W/kg; SAR(10 g) = 0.811 W/kg

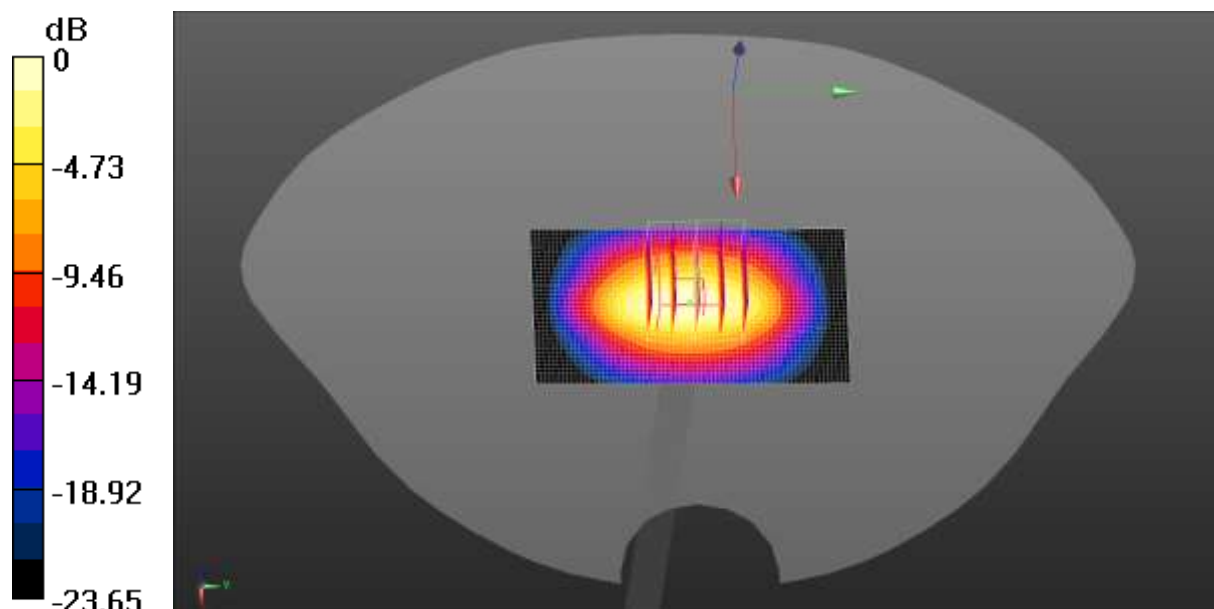
Smallest distance from peaks to all points 3 dB below = 9.6 mm

Ratio of SAR at M2 to SAR at M1 = 52.7%

Maximum value of SAR (measured) = 2.43 W/kg

System Performance Check at Frequency 1900 MHz Head Tissue/d=10mm, Pin=40 mW, dist=1.4mm (EX-Probe)/Area Scan (41x71x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 2.52 W/kg



0 dB = 2.52 W/kg = 4.01 dBW/kg

Test Laboratory: JYTSZ

Date: 01.18.2023

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; $\sigma = 1.842$ S/m; $\epsilon_r = 40.459$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(7.6, 7.6, 7.6) @ 2450 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

System Performance Check at Frequency 2450 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 = 43.51 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 4.26 W/kg

SAR(1 g) = 2.02 W/kg; SAR(10 g) = 0.925 W/kg

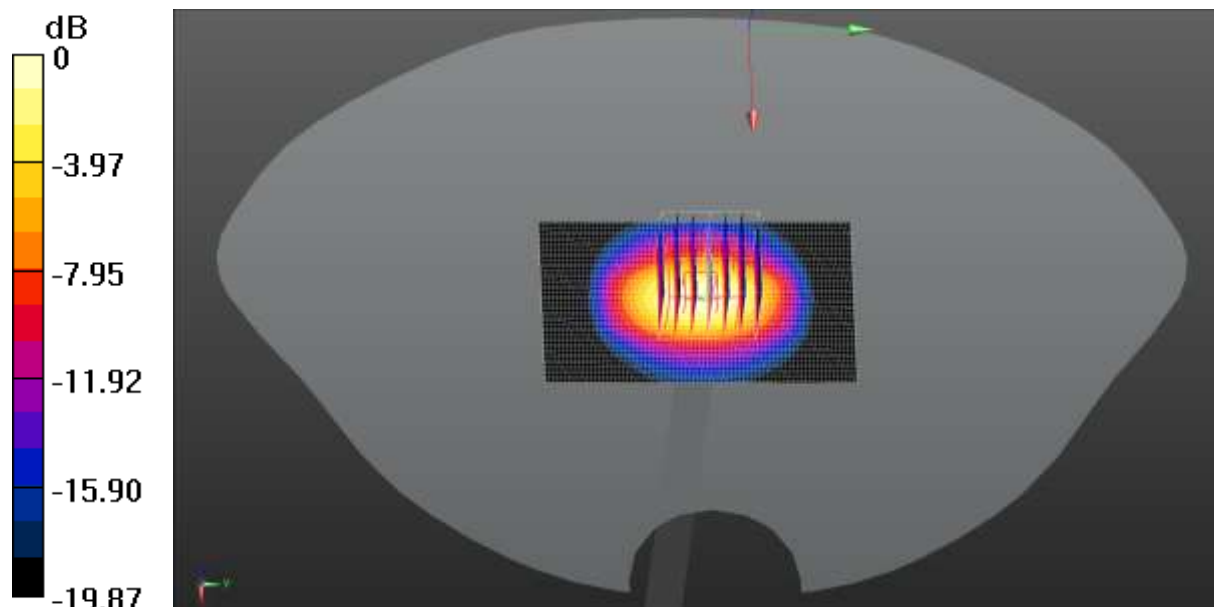
Smallest distance from peaks to all points 3 dB below = 9.2 mm

Ratio of SAR at M2 to SAR at M1 = 47.4%

Maximum value of SAR (measured) = 3.38 W/kg

System Performance Check at Frequency 2450 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) = 3.46 W/kg



0 dB = 3.46 W/kg = 5.39 dBW/kg

Test Laboratory: JYTSZ

Date: 01.18.2023

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; $\sigma = 1.997$ S/m; $\epsilon_r = 40.221$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(7.35, 7.35, 7.35) @ 2600 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

System Performance Check at Frequency 2600 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) = 4.18 W/kg

System Performance Check at Frequency 2600 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 = 45.98 V/m; Power Drift = 0.03 dB

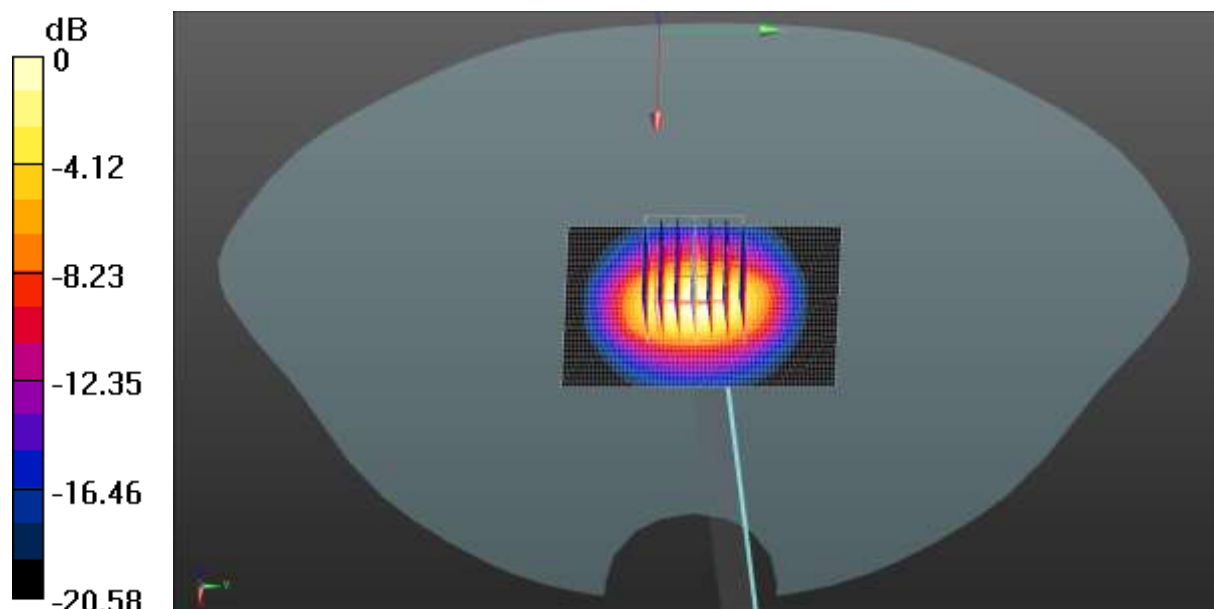
Peak SAR (extrapolated) = 4.83 W/kg

SAR(1 g) = 2.23 W/kg; SAR(10 g) = 0.992 W/kg

Smallest distance from peaks to all points 3 dB below = 9 mm

Ratio of SAR at M2 to SAR at M1 = 46.6%

Maximum value of SAR (measured) = 3.88 W/kg



0 dB = 3.88 W/kg = 5.89 dBW/kg

Test Laboratory: JYTSZ

Date: 02.02.2023

DUT: Dipole 3500 MHz; Type: D3500V2; Serial: SN:1118

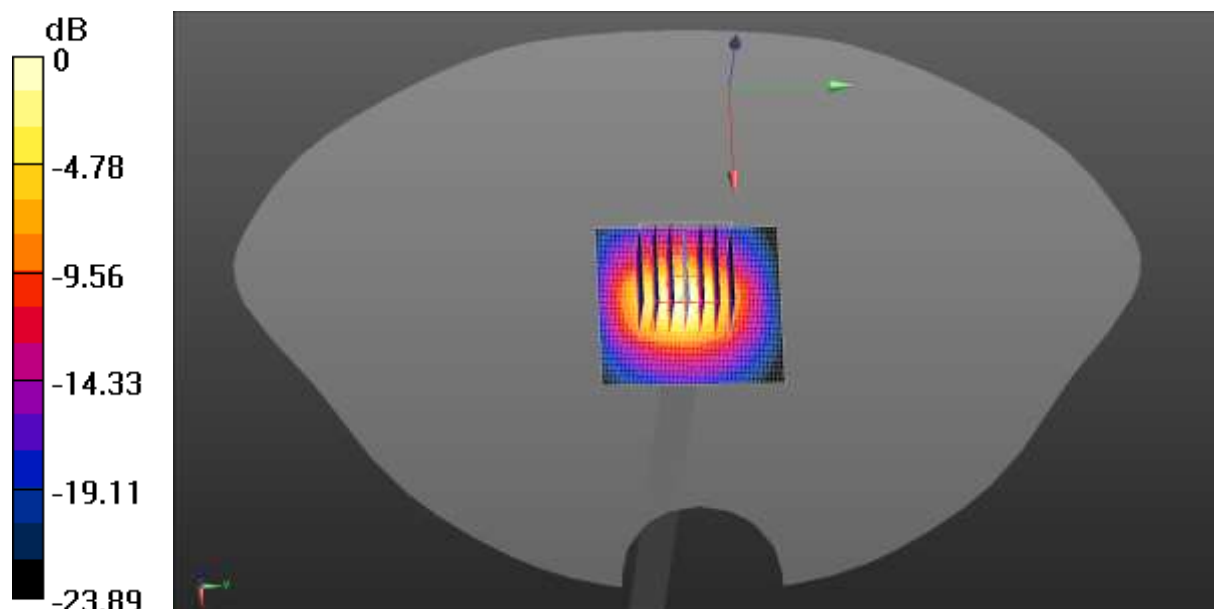
Communication System: UID 0, CW (0); Frequency: 3500 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 3500 \text{ MHz}$; $\sigma = 2.892 \text{ S/m}$; $\epsilon_r = 37.083$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(7.02, 7.02, 7.02) @ 3500 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

System Performance Check at Frequency 3500 MHz Head Tissue/d=10mm, Pin=40 mW, dist=1.4mm (EX-Probe)/Area Scan (51x51x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
 Maximum value of SAR (interpolated) = 5.12 W/kg

System Performance Check at Frequency 3500 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=4mm
 Reference Value = 41.88 V/m; Power Drift = 0.07 dB
 Peak SAR (extrapolated) = 6.92 W/kg
SAR(1 g) = 2.59 W/kg; SAR(10 g) = 0.996 W/kg
 Smallest distance from peaks to all points 3 dB below = 8 mm
 Ratio of SAR at M2 to SAR at M1 = 36.8%
 Maximum value of SAR (measured) = 5.12 W/kg



0 dB = 5.12 W/kg = 7.09 dBW/kg

Test Laboratory: JYTSZ

Date: 02.02.2023

DUT: Dipole 3700 MHz; Type: D3700V2; Serial: SN:1089

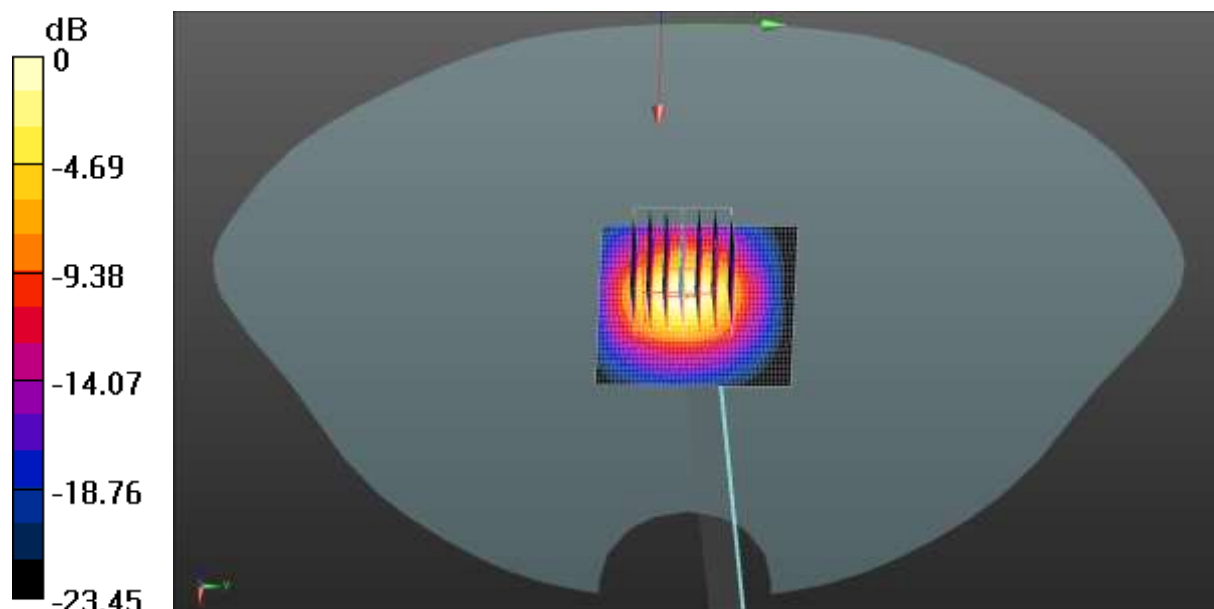
Communication System: UID 0, CW (0); Frequency: 3700 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 3700 \text{ MHz}$; $\sigma = 3.075 \text{ S/m}$; $\epsilon_r = 37.566$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(6.75, 6.75, 6.75) @ 3700 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

System Performance Check at Frequency 3700 MHz Head Tissue/d=10mm, Pin=40 mW, dist=1.4mm (EX-Probe)/Area Scan (51x51x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
 Maximum value of SAR (interpolated) = 5.36 W/kg

System Performance Check at Frequency 3700 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=4mm
 Reference Value = 39.11 V/m; Power Drift = 0.05 dB
 Peak SAR (extrapolated) = 7.53 W/kg
SAR(1 g) = 2.7 W/kg; SAR(10 g) = 0.987 W/kg
 Smallest distance from peaks to all points 3 dB below = 8.2 mm
 Ratio of SAR at M2 to SAR at M1 = 35.1%
 Maximum value of SAR (measured) = 5.48 W/kg



0 dB = 5.48 W/kg = 7.39 dBW/kg

Test Laboratory: JYTSZ

Date: 02.02.2023

DUT: Dipole 3900 MHz; Type: D3900V2; Serial: SN:1064

Communication System: UID 0, CW (0); Frequency: 3900 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 3900 \text{ MHz}$; $\sigma = 3.272 \text{ S/m}$; $\epsilon_r = 36.32$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 – SN3924; ConvF(6.62, 6.62, 6.62) @ 3900 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

System Performance Check at Frequency 3900 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=4mm

Reference Value = 44.23 V/m; Power Drift = -0.17 dB

Peak SAR (extrapolated) = 7.84 W/kg

SAR(1 g) = 2.81 W/kg; SAR(10 g) = 0.970 W/kg

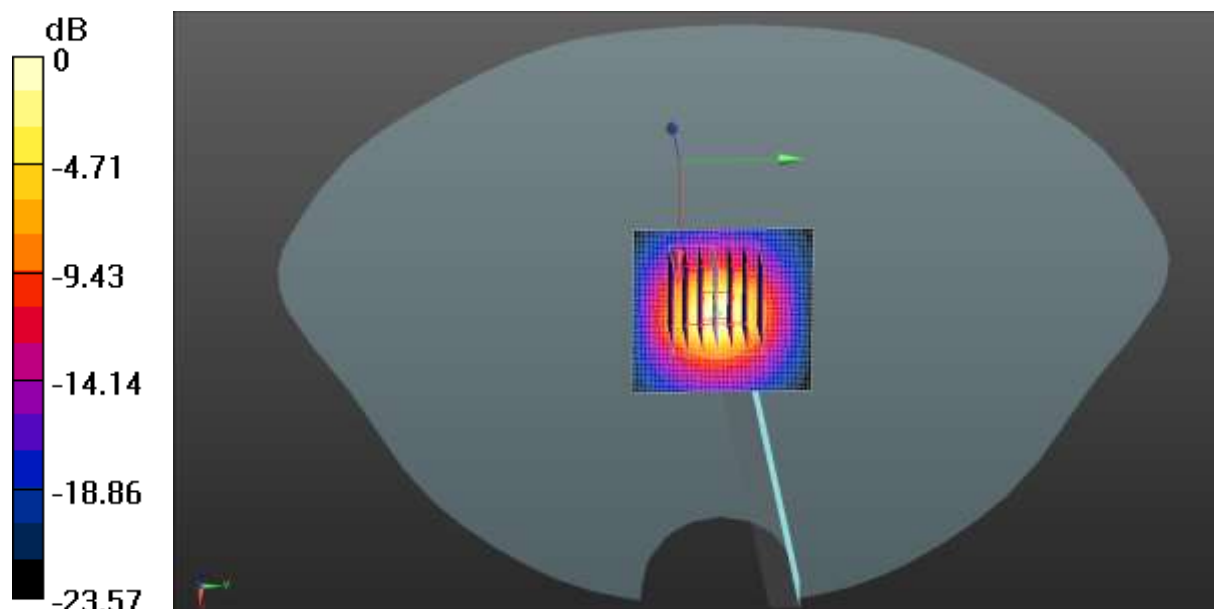
Smallest distance from peaks to all points 3 dB below = 8 mm

Ratio of SAR at M2 to SAR at M1 = 35.4%

Maximum value of SAR (measured) = 5.73 W/kg

System Performance Check at Frequency 3900 MHz Head Tissue/d=10mm, Pin=40 mW, dist=1.4mm (EX-Probe)/Area Scan (51x51x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 5.82 W/kg



0 dB = 5.82 W/kg = 7.65 dBW/kg

Test Laboratory: JYTSZ

Date: 01.26.2023

DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: SN:1182

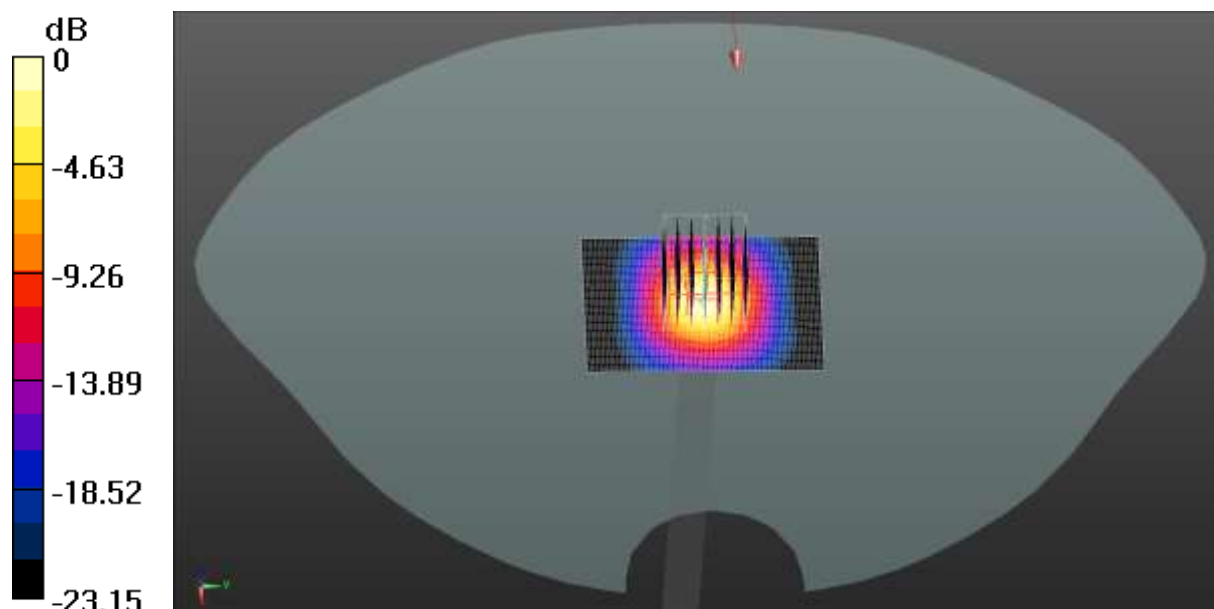
Communication System: UID 0, CW (0); Frequency: 5200 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 5200$ MHz; $\sigma = 4.528$ S/m; $\epsilon_r = 35.793$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(5.41, 5.41, 5.41) @ 5200 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

System Performance Check at Frequency 5200 MHz Head Tissue/d=10mm, Pin=40 mW, dist=1.4mm (EX-Probe)/Area Scan (51x71x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
 Maximum value of SAR (interpolated) = 8.25 W/kg

System Performance Check at Frequency 5200 MHz Head Tissue/d=10mm, Pin=40 mW, dist=1.4mm (EX-Probe)/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
 Reference Value = 44.75 V/m; Power Drift = -0.05 dB
 Peak SAR (extrapolated) = 12.6 W/kg
SAR(1 g) = 3.12 W/kg; SAR(10 g) = 0.894 W/kg
 Smallest distance from peaks to all points 3 dB below = 7.2 mm
 Ratio of SAR at M2 to SAR at M1 = 22.1%
 Maximum value of SAR (measured) = 7.48 W/kg



0 dB = 7.48 W/kg = 8.74 dBW/kg

Test Laboratory: JYTSZ

Date: 01.26.2023

DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: SN:1182

Communication System: UID 0, CW (0); Frequency: 5800 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 5800 \text{ MHz}$; $\sigma = 5.17 \text{ S/m}$; $\epsilon_r = 34.797$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(4.9, 4.9, 4.9) @ 5800 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

System Performance Check at Frequency 5800 MHz Head Tissue/d=10mm, Pin=40 mW, dist=1.4mm (EX-Probe)/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 42.58 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 14.3 W/kg

SAR(1 g) = 3.21 W/kg; SAR(10 g) = 0.910 W/kg

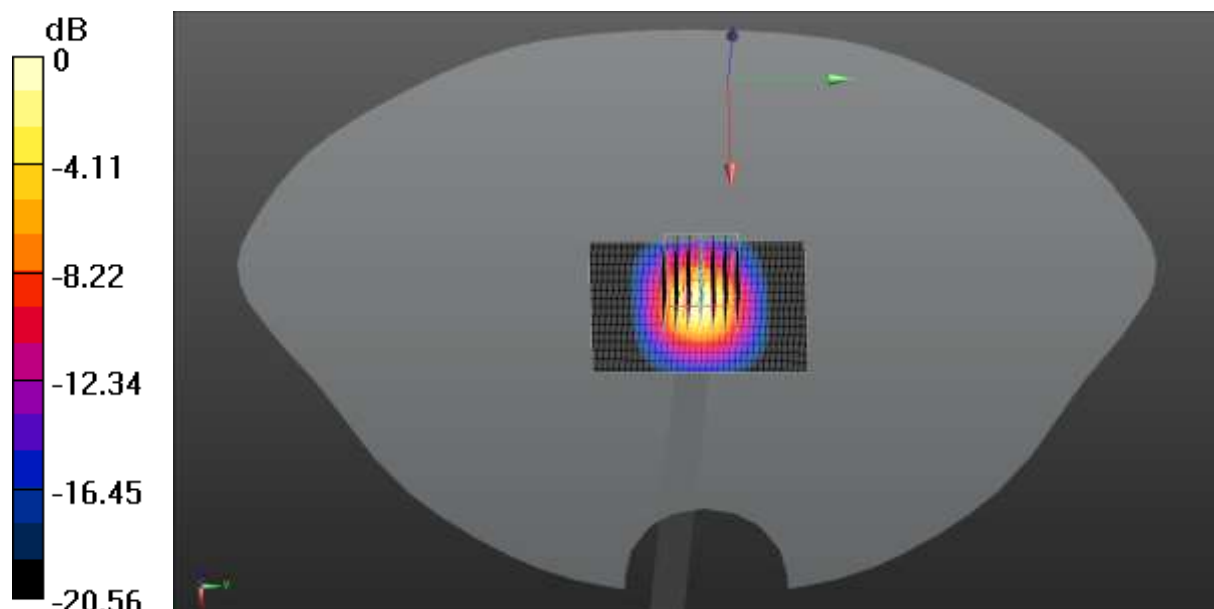
Smallest distance from peaks to all points 3 dB below = 7.2 mm

Ratio of SAR at M2 to SAR at M1 = 17.6%

Maximum value of SAR (measured) = 7.97 W/kg

System Performance Check at Frequency 5800 MHz Head Tissue/d=10mm, Pin=40 mW, dist=1.4mm (EX-Probe)/Area Scan (51x71x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 8.36 W/kg



0 dB = 8.36 W/kg = 9.22 dBW/kg

Appendix B: Plots of SAR Test Data

Test Laboratory: JYTSZ

Date: 01.30.2023

DUT: Mobile Phone; Type: CK8n; Serial: 3#

Communication System: UID 0, GSM (0); Frequency: 836.6 MHz; Duty Cycle: 1:8.30042
 Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.917$ S/m; $\epsilon_r = 40.203$; $\rho = 1000$ kg/m³
 Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(9.8, 9.8, 9.8) @ 836.6 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

GSM 850 Right Cheek/Middle Channel/Area Scan (51x51x1): Interpolated grid:

dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.702 W/kg

GSM 850 Right Cheek/Middle Channel/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 21.46 V/m; Power Drift = -0.01 dB

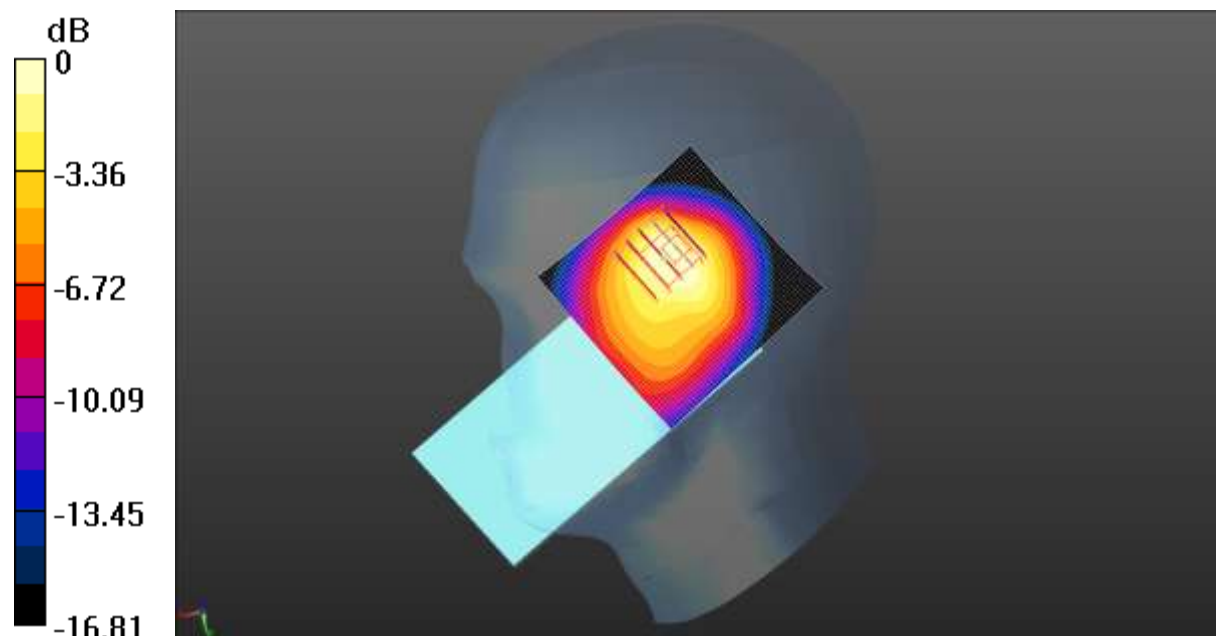
Peak SAR (extrapolated) = 1.00 W/kg

SAR(1 g) = 0.467 W/kg; SAR(10 g) = 0.278 W/kg

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

Ratio of SAR at M2 to SAR at M1 = 53.2%

Maximum value of SAR (measured) = 0.716 W/kg



0 dB = 0.716 W/kg = -1.45 dBW/kg

Test Laboratory: JYTSZ

Date: 01.14.2023

DUT: Mobile Phone; Type: CK8n; Serial: 3#

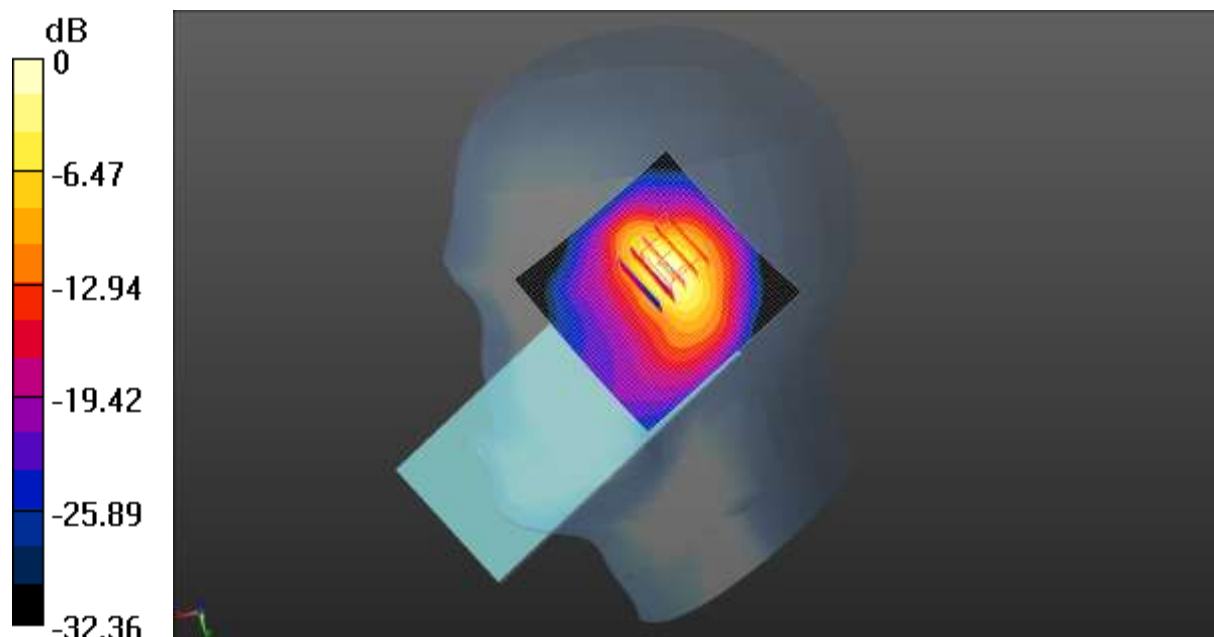
Communication System: UID 0, GSM (0); Frequency: 1909.8 MHz; Duty Cycle: 1:8.30042
 Medium parameters used: $f = 1910 \text{ MHz}$; $\sigma = 1.371 \text{ S/m}$; $\epsilon_r = 38.962$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(8.05, 8.05, 8.05) @ 1909.8 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

GSM 1900 Right Tilted/High Channel/Area Scan (51x51x1): Interpolated grid:
 $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.719 W/kg

GSM 1900 Right Tilted/High Channel/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 15.81 V/m; Power Drift = 0.05 dB
 Peak SAR (extrapolated) = 1.22 W/kg
SAR(1 g) = 0.529 W/kg; SAR(10 g) = 0.221 W/kg
 Smallest distance from peaks to all points 3 dB below = 5.1 mm
 Ratio of SAR at M2 to SAR at M1 = 45.5%
 Maximum value of SAR (measured) = 0.772 W/kg



0 dB = 0.772 W/kg = -1.12 dBW/kg

Test Laboratory: JYTSZ

Date: 01.14.2023

DUT: Mobile Phone; Type: CK8n; Serial: 3#

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

Medium parameters used (interpolated): $f = 1907.6 \text{ MHz}$; $\sigma = 1.37 \text{ S/m}$; $\epsilon_r = 38.965$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(8.05, 8.05, 8.05) @ 1907.6 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

WCDMA 1900 Right Tilted/High Channel/Area Scan (51x51x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 0.590 W/kg

WCDMA 1900 Right Tilted/High Channel/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 14.13 V/m; Power Drift = -0.04 dB

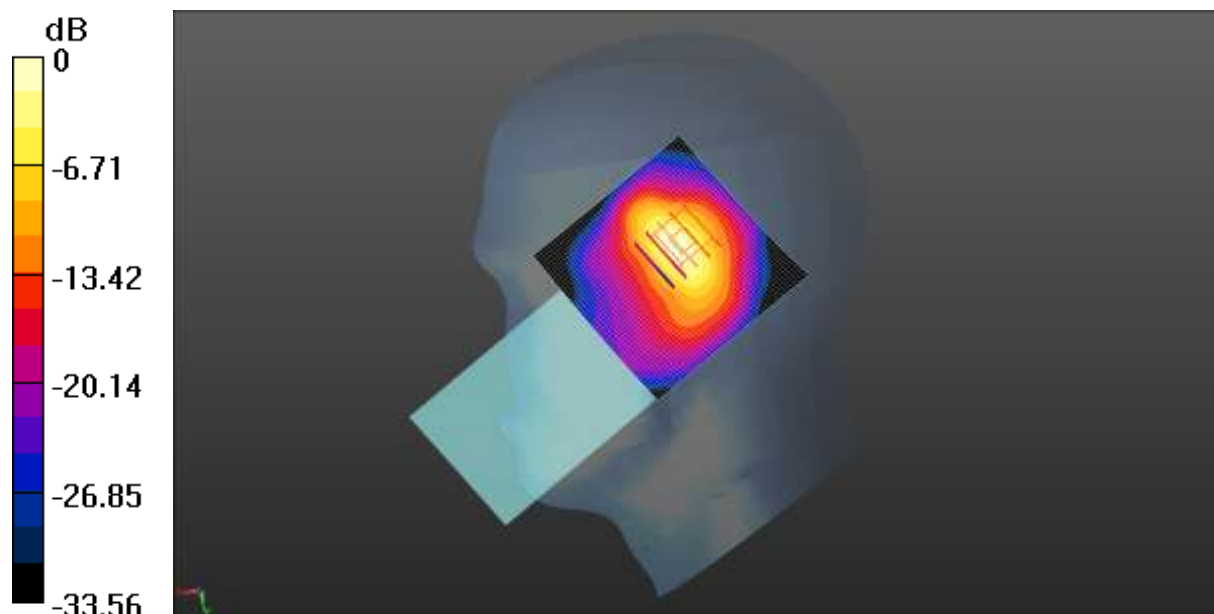
Peak SAR (extrapolated) = 0.939 W/kg

SAR(1 g) = 0.407 W/kg; SAR(10 g) = 0.169 W/kg

Smallest distance from peaks to all points 3 dB below = 5.1 mm

Ratio of SAR at M2 to SAR at M1 = 45.2%

Maximum value of SAR (measured) = 0.592 W/kg



0 dB = 0.592 W/kg = -2.28 dBW/kg

Test Laboratory: JYTSZ

Date: 01.14.2023

DUT: Mobile Phone; Type: CK8n; Serial: 3#

Communication System: UID 0, UMTS-FDD(WCDMA) (0); Frequency: 1752.6 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 1752.6$ MHz; $\sigma = 1.334$ S/m; $\epsilon_r = 38.714$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(8.38, 8.38, 8.38) @ 1752.6 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

WCDMA 1700 Right Tilted/High Channel/Area Scan (51x51x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 1.19 W/kg

WCDMA 1700 Right Tilted/High Channel/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 20.76 V/m; Power Drift = 0.03 dB

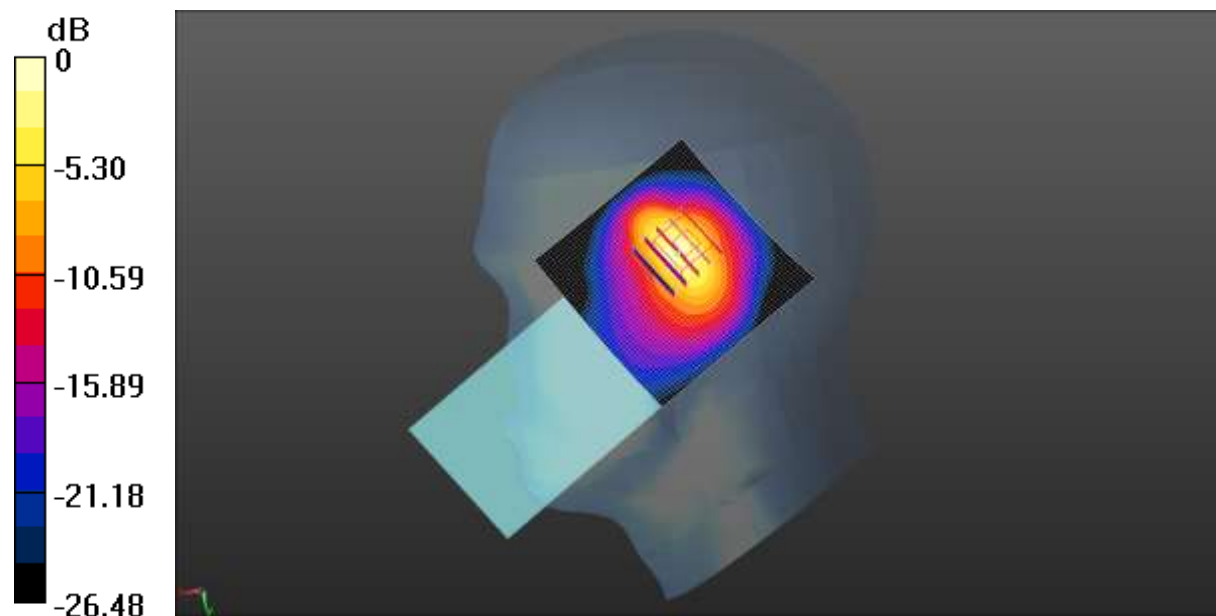
Peak SAR (extrapolated) = 1.78 W/kg

SAR(1 g) = 0.858 W/kg; SAR(10 g) = 0.369 W/kg

Smallest distance from peaks to all points 3 dB below = 8 mm

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

Maximum value of SAR (measured) = 1.35 W/kg



0 dB = 1.35 W/kg = 1.30 dBW/kg

Test Laboratory: JYTSZ

Date: 01.30.2023

DUT: Mobile Phone; Type: CK8n; Serial: 3#

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

Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.917$ S/m; $\epsilon_r = 40.203$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(10.2, 10.2, 10.2) @ 836.6 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

WCDMA 850 Right Cheek/Middle Channel/Area Scan (51x51x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.775 W/kg

WCDMA 850 Right Cheek/Middle Channel/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 21.65 V/m; Power Drift = 0.07 dB

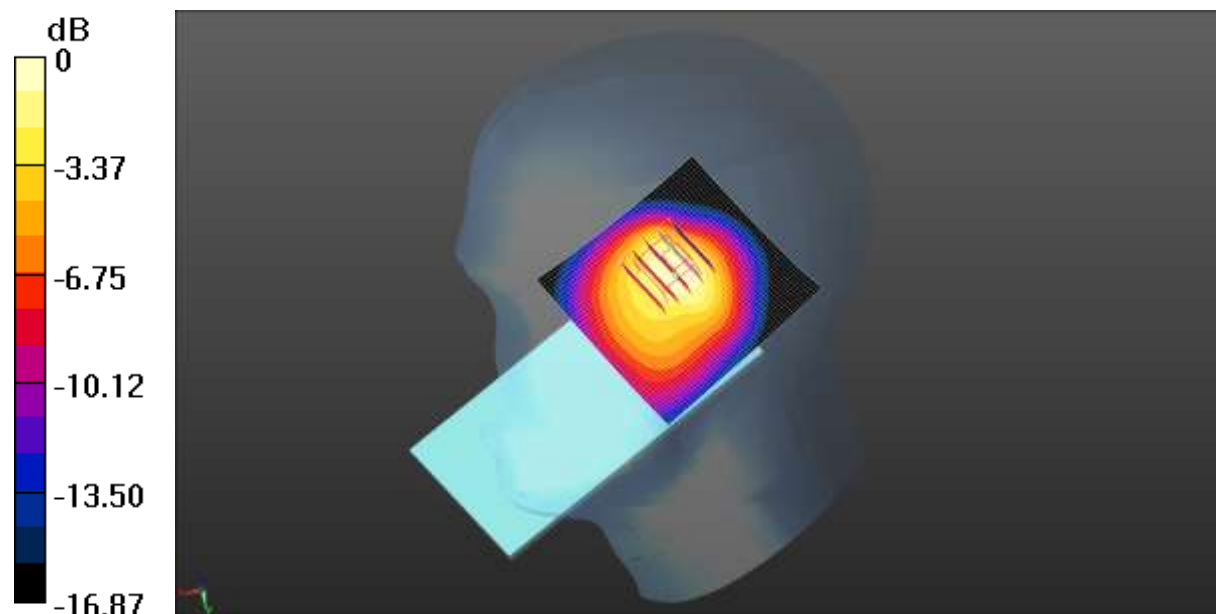
Peak SAR (extrapolated) = 1.01 W/kg

SAR(1 g) = 0.458 W/kg; SAR(10 g) = 0.267 W/kg

Smallest distance from peaks to all points 3 dB below = 11.3 mm

Ratio of SAR at M2 to SAR at M1 = 45.7%

Maximum value of SAR (measured) = 0.758 W/kg



0 dB = 0.758 W/kg = -1.20 dBW/kg

Test Laboratory: JYTSZ

Date: 01.14.2023

DUT: Mobile Phone; Type: CK8n; Serial: 3#

Communication System: UID 0, LTE-Fdd(USA) 1RB QPSK (0); Frequency: 1900 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1900 \text{ MHz}$; $\sigma = 1.365 \text{ S/m}$; $\epsilon_r = 38.977$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(8.05, 8.05, 8.05) @ 1900 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

LTE Band 2 1RB(20MHz) Right Tilted/High Channel/Area Scan (51x51x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 0.669 W/kg

LTE Band 2 1RB(20MHz) Right Tilted/High Channel/Zoom Scan

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

Reference Value = 15.20 V/m; Power Drift = -0.01 dB

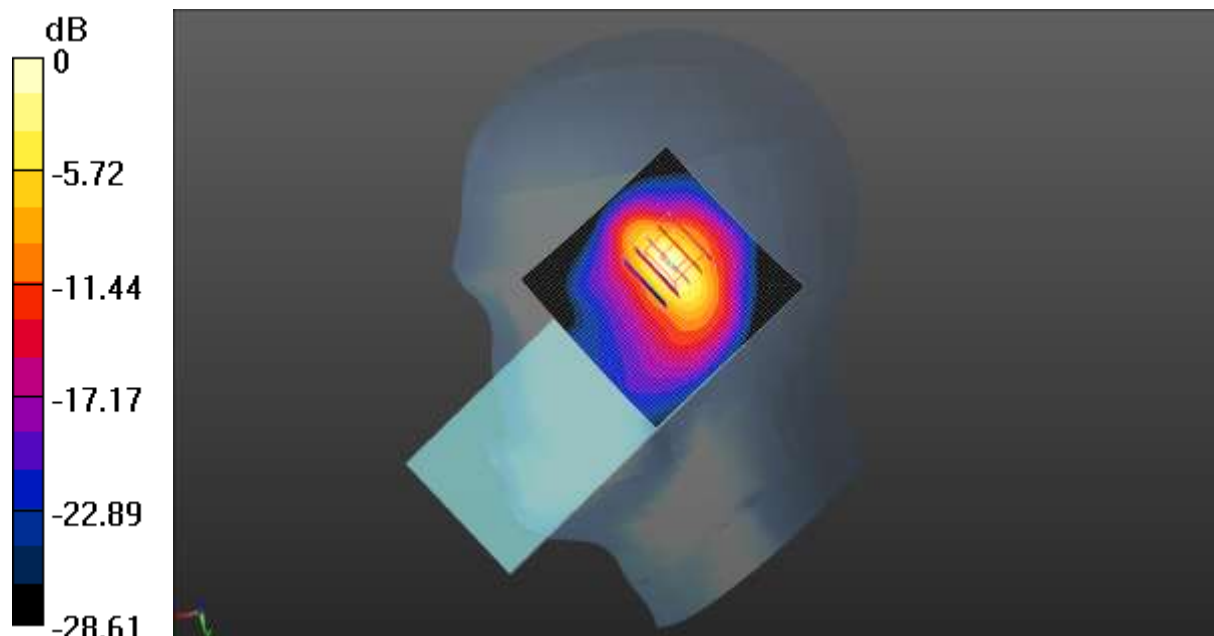
Peak SAR (extrapolated) = 1.06 W/kg

SAR(1 g) = 0.460 W/kg; SAR(10 g) = 0.191 W/kg

Smallest distance from peaks to all points 3 dB below = 5.8 mm

Ratio of SAR at M2 to SAR at M1 = 45%

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



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

Test Laboratory: JYTSZ

Date: 01.30.2023

DUT: Mobile Phone; Type: CK8n; Serial: 3#

Communication System: UID 0, LTE-Fdd(USA) 1RB QPSK (0); Frequency: 829 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 829$ MHz; $\sigma = 0.917$ S/m; $\epsilon_r = 40.203$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7601; ConvF(10.2, 10.2, 10.2) @ 829 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

LTE Band 5 1RB(10MHz) Right Cheek/Low Channel/Area Scan (51x51x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 1.06 W/kg

LTE Band 5 1RB(10MHz) Right Cheek/Low Channel/Zoom Scan**(5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 24.61 V/m; Power Drift = -0.08 dB

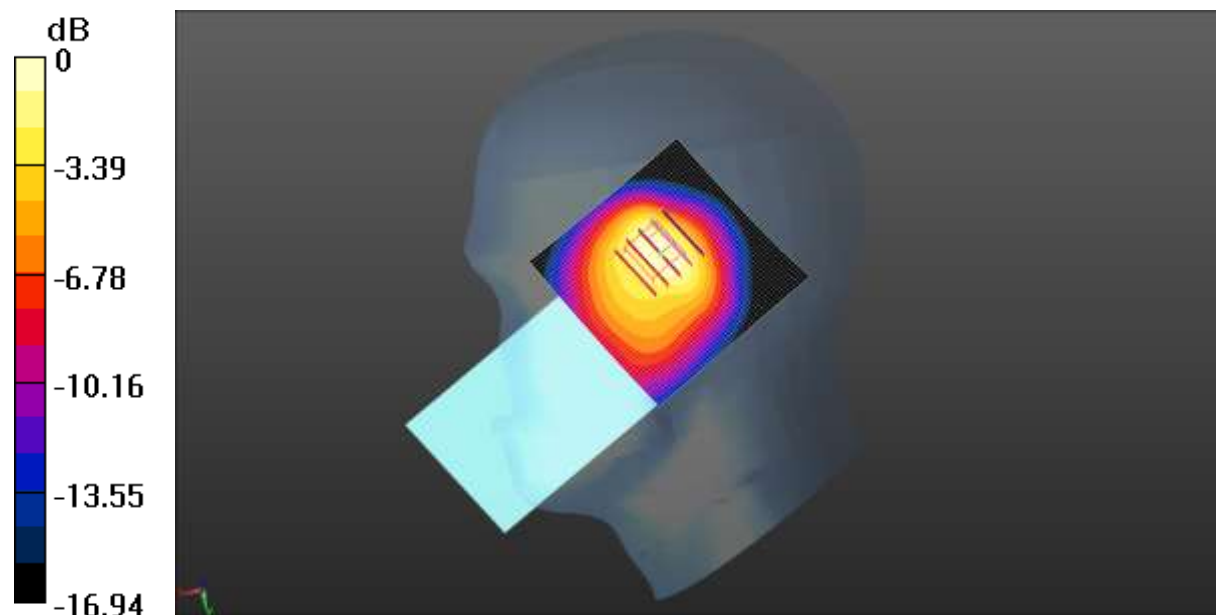
Peak SAR (extrapolated) = 1.35 W/kg

SAR(1 g) = 0.595 W/kg; SAR(10 g) = 0.349 W/kg

Smallest distance from peaks to all points 3 dB below = 10.7 mm

Ratio of SAR at M2 to SAR at M1 = 43.4%

Maximum value of SAR (measured) = 1.01 W/kg



0 dB = 1.01 W/kg = 0.04 dBW/kg

Test Laboratory: JYTSZ

Date: 01.18.2023

DUT: Mobile Phone; Type: CK8n; Serial: 3#

Communication System: UID 0, LTE-Fdd(USA) 1RB QPSK (0); Frequency: 2510 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2510 \text{ MHz}$; $\sigma = 1.798 \text{ S/m}$; $\epsilon_r = 37.895$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(7.6, 7.6, 7.6) @ 2510 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

LTE Band 7 1RB(20MHz) Right Tilted/Low Channel/Area Scan (51x51x1):

Interpolated grid: $dx=1.200 \text{ mm}$, $dy=1.200 \text{ mm}$

Maximum value of SAR (interpolated) = 0.892 W/kg

LTE Band 7 1RB(20MHz) Right Tilted/Low Channel/Zoom Scan

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

Reference Value = 7.024 V/m; Power Drift = 0.04 dB

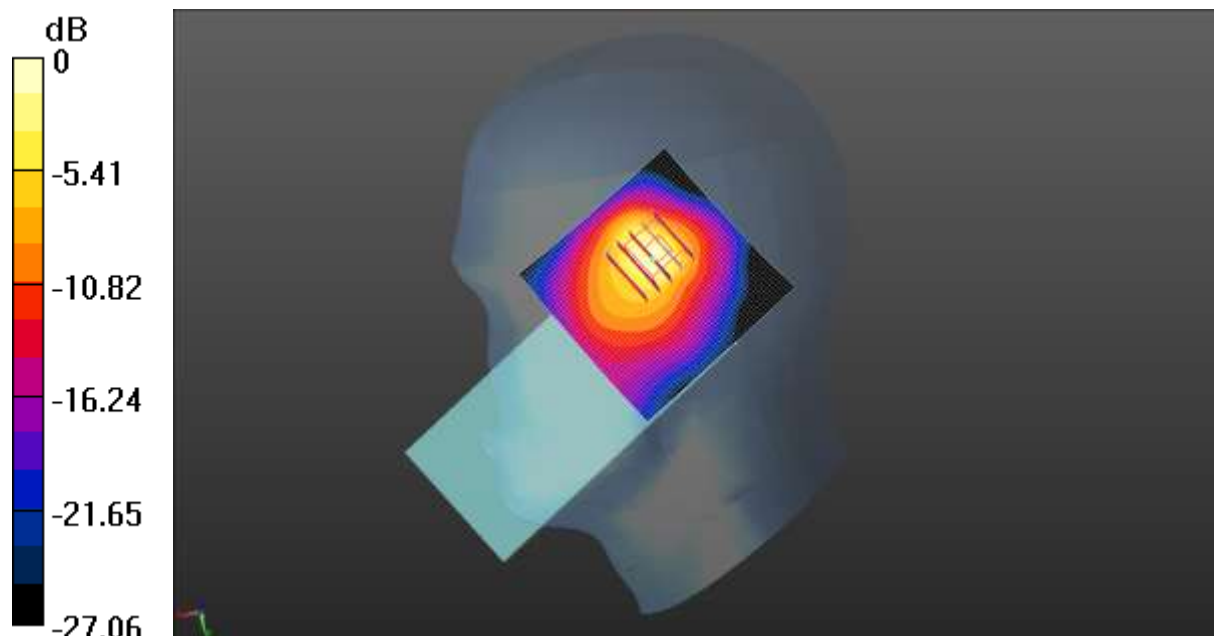
Peak SAR (extrapolated) = 1.24 W/kg

SAR(1 g) = 0.533 W/kg; SAR(10 g) = 0.235 W/kg

Smallest distance from peaks to all points 3 dB below = 8 mm

Ratio of SAR at M2 to SAR at M1 = 46.6%

Maximum value of SAR (measured) = 0.909 W/kg



0 dB = 0.909 W/kg = -0.41 dBW/kg

Test Laboratory: JYTSZ

Date: 01.30.2023

DUT: Mobile Phone; Type: CK8n; Serial: 3#

Communication System: UID 0, LTE-Fdd(USA) 1RB QPSK (0); Frequency: 704 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 704$ MHz; $\sigma = 0.878$ S/m; $\epsilon_r = 40.748$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(10.2, 10.2, 10.2) @ 704 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

LTE Band 12 1RB(10MHz) Right Cheek/Low Channel/Area Scan (51x51x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.947 W/kg

LTE Band 12 1RB(10MHz) Right Cheek/Low Channel/Zoom Scan

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

Reference Value = 24.16 V/m; Power Drift = 0.09 dB

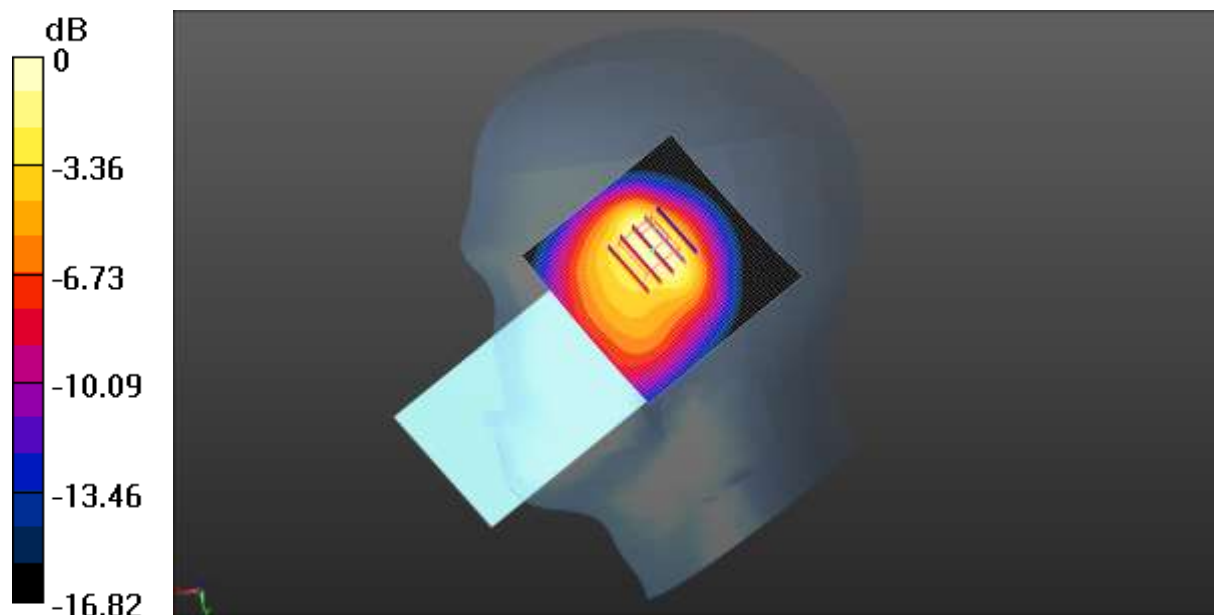
Peak SAR (extrapolated) = 1.24 W/kg

SAR(1 g) = 0.522 W/kg; SAR(10 g) = 0.303 W/kg

Smallest distance from peaks to all points 3 dB below = 10.3 mm

Ratio of SAR at M2 to SAR at M1 = 41.7%

Maximum value of SAR (measured) = 0.913 W/kg



0 dB = 0.913 W/kg = -0.40 dBW/kg

Test Laboratory: JYTSZ

Date: 01.18.2023

DUT: Mobile Phone; Type: CK8n; Serial: 3#

Communication System: UID 0, LTE-TDD(USA) 20MHz 1RB QPSK (0); Frequency: 2593 MHz; Duty Cycle: 1:1.59956
 Medium parameters used (interpolated): $f = 2593$ MHz; $\sigma = 1.876$ S/m; $\epsilon_r = 37.999$; $\rho = 1000$ kg/m³
 Phantom section: Right Section

DASY5 Configuration:

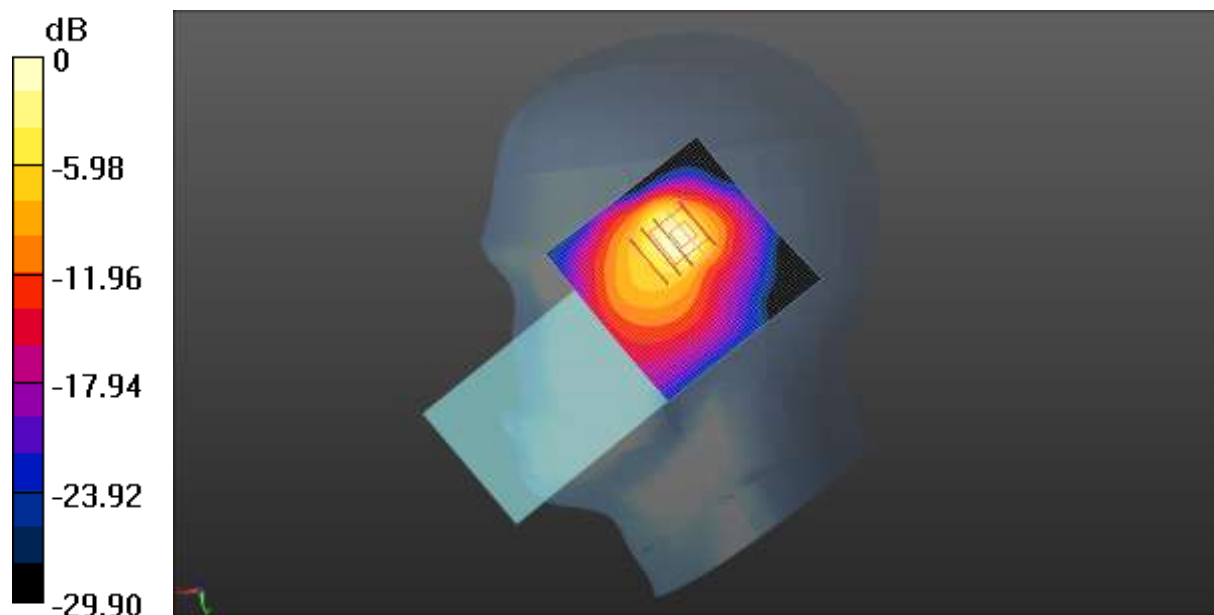
- Probe: EX3DV4 - SN3924; ConvF(7.35, 7.35, 7.35) @ 2593 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

LTE Band 41 1RB(20MHz) Right Tilted/Middle Channel/Area Scan (51x51x1):

Interpolated grid: dx=1.200 mm, dy=1.200 mm
 Maximum value of SAR (interpolated) = 0.660 W/kg

LTE Band 41 1RB(20MHz) Right Tilted/Middle Channel/Zoom Scan

(5x5x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
 Reference Value = 4.627 V/m; Power Drift = 0.08 dB
 Peak SAR (extrapolated) = 0.876 W/kg
SAR(1 g) = 0.361 W/kg; SAR(10 g) = 0.158 W/kg
 Smallest distance from peaks to all points 3 dB below = 9.4 mm
 Ratio of SAR at M2 to SAR at M1 = 41.3%
 Maximum value of SAR (measured) = 0.674 W/kg



0 dB = 0.674 W/kg = -1.71 dBW/kg

Test Laboratory: JYTSZ

Date: 01.14.2023

DUT: Mobile Phone; Type: CK8n; Serial: 3#

Communication System: UID 0, LTE-Fdd(USA) 1RB QPSK (0); Frequency: 1745 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 1745 \text{ MHz}$; $\sigma = 1.332 \text{ S/m}$; $\epsilon_r = 38.724$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(8.38, 8.38, 8.38) @ 1745 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

LTE Band 66 1RB(20MHz) Right Tilted/Middle Channel/Area Scan (51x51x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 1.26 W/kg

LTE Band 66 1RB(20MHz) Right Tilted/Middle Channel/Zoom Scan

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

Reference Value = 22.16 V/m; Power Drift = -0.01 dB

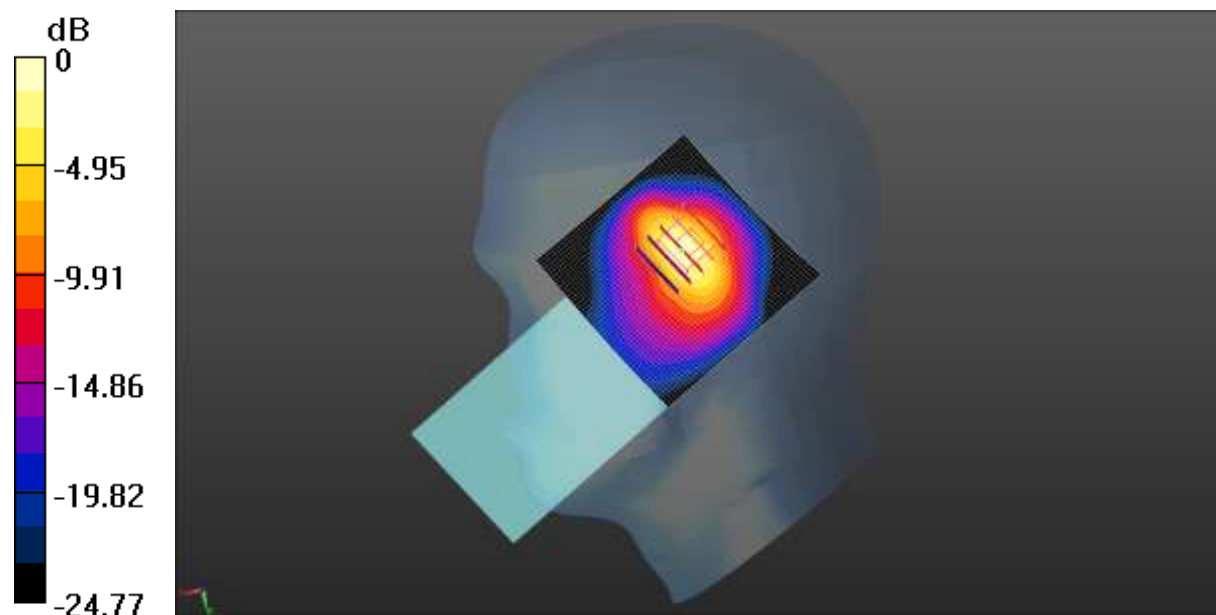
Peak SAR (extrapolated) = 1.68 W/kg

SAR(1 g) = 0.803 W/kg; SAR(10 g) = 0.348 W/kg

Smallest distance from peaks to all points 3 dB below = 6.4 mm

Ratio of SAR at M2 to SAR at M1 = 55.7%

Maximum value of SAR (measured) = 1.20 W/kg



0 dB = 1.20 W/kg = 0.79 dBW/kg

Test Laboratory: JYTSZ

Date: 01.30.2023

DUT: Mobile Phone; Type: CK8n; Serial: 3#

Communication System: UID 0, NR (0); Frequency: 834 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 834 \text{ MHz}$; $\sigma = 0.917 \text{ S/m}$; $\epsilon_r = 40.203$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Right Section

DASY5 Configuration:

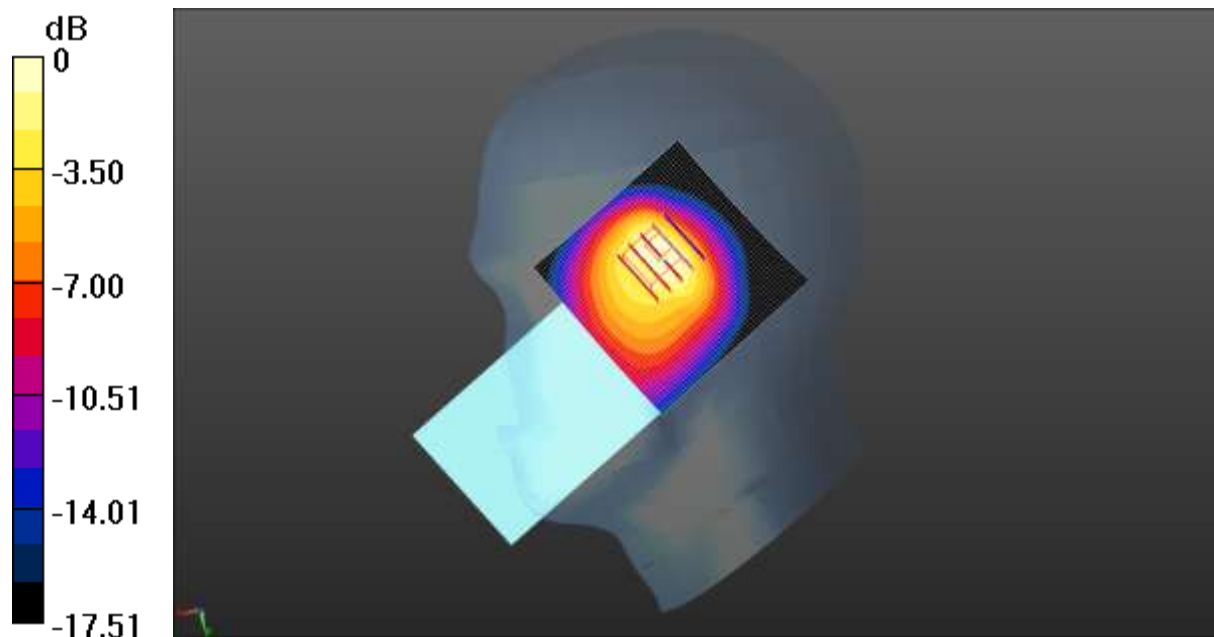
- Probe: EX3DV4 - SN3924; ConvF(9.8, 9.8, 9.8) @ 834 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

NR n5 50%RB(20MHz) Right Cheek/Low Channel/Area Scan (51x51x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 1.03 W/kg

NR n5 50%RB(20MHz) Right Cheek/ Low Channel/Zoom Scan (5x5x7)/Cube

0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 22.53 V/m; Power Drift = 0.01 dB
 Peak SAR (extrapolated) = 1.35 W/kg
SAR(1 g) = 0.562 W/kg; SAR(10 g) = 0.331 W/kg
 Smallest distance from peaks to all points 3 dB below = 8.6 mm
 Ratio of SAR at M2 to SAR at M1 = 40.4%
 Maximum value of SAR (measured) = 0.968 W/kg



0 dB = 0.968 W/kg = -0.14 dBW/kg

Test Laboratory: JYTSZ

Date: 01.18.2023

DUT: Mobile Phone; Type: CK8n; Serial: 3#

Communication System: UID 0, NR (0); Frequency: 2510 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 2510 \text{ MHz}$; $\sigma = 1.818 \text{ S/m}$; $\epsilon_r = 38.098$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Right Section

DASY5 Configuration:

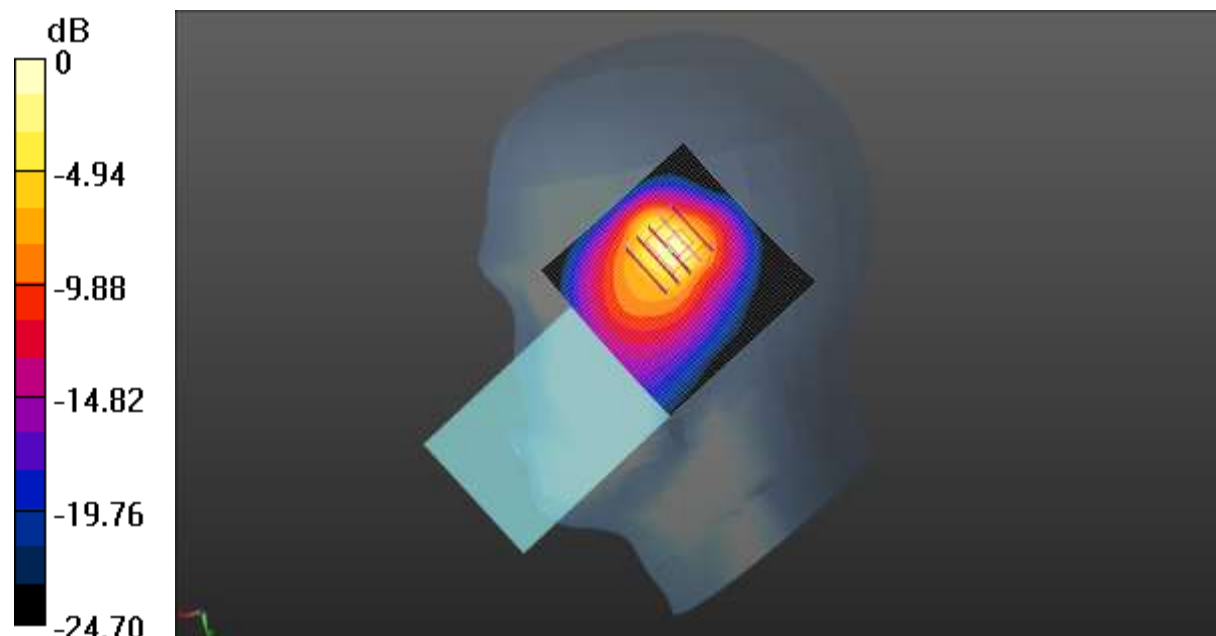
- Probe: EX3DV4 - SN3924; ConvF(7.6, 7.6, 7.6) @ 2510 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

NR n7 50%RB(20MHz) Right Tilted/Low Channel/Area Scan (51x51x1):

Interpolated grid: $dx=1.200 \text{ mm}$, $dy=1.200 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.855 W/kg

NR n7 50%RB(20MHz) Right Tilted/Low Channel/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$
 Reference Value = 6.890 V/m; Power Drift = -0.15 dB
 Peak SAR (extrapolated) = 1.24 W/kg
SAR(1 g) = 0.546 W/kg; SAR(10 g) = 0.244 W/kg
 Smallest distance from peaks to all points 3 dB below = 8.6 mm
 Ratio of SAR at M2 to SAR at M1 = 46.1%
 Maximum value of SAR (measured) = 0.967 W/kg



0 dB = 0.967 W/kg = -0.15 dBW/kg

Test Laboratory: JYTSZ

Date: 01.30.2023

DUT: Mobile Phone; Type: CK8n; Serial: 3#

Communication System: UID 0, NR (0); Frequency: 708.5 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 708.5$ MHz; $\sigma = 0.878$ S/m; $\epsilon_r = 40.748$; $\rho = 1000$ kg/m³
Phantom section: Right Section

DASY5 Configuration:

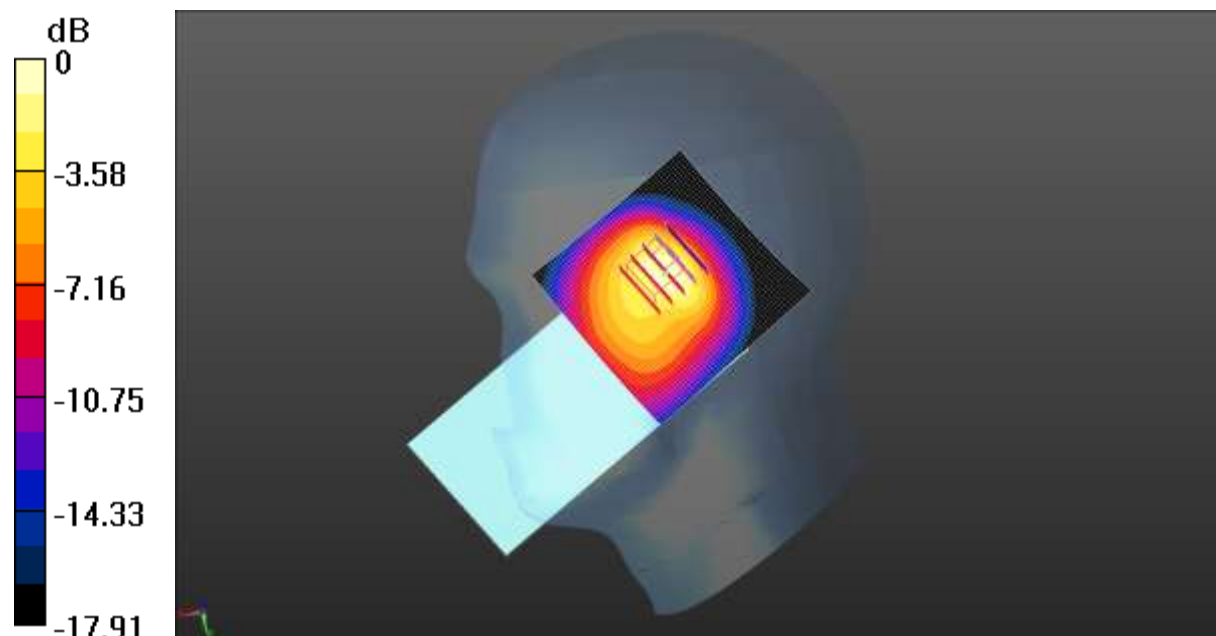
- Probe: EX3DV4 - SN3924; ConvF(10.2, 10.2, 10.2) @ 708.5 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

NR n12 1RB(15MHz) Right Cheek/High Channel/Area Scan (51x51x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.22 W/kg

NR n12 1RB(15MHz) Right Cheek/ High Channel/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 25.36 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 1.63 W/kg
SAR(1 g) = 0.620 W/kg; SAR(10 g) = 0.360 W/kg
Smallest distance from peaks to all points 3 dB below = 9.3 mm
Ratio of SAR at M2 to SAR at M1 = 37.5%
Maximum value of SAR (measured) = 1.16 W/kg



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

Test Laboratory: JYTSZ

Date: 01.18.2023

DUT: Mobile Phone; Type: CK8n; Serial: 3#

Communication System: UID 0, NR (0); Frequency: 2592.99 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 2592.99$ MHz; $\sigma = 1.865$ S/m; $\epsilon_r = 37.999$; $\rho = 1000$ kg/m³
 Phantom section: Right Section

DASY5 Configuration:

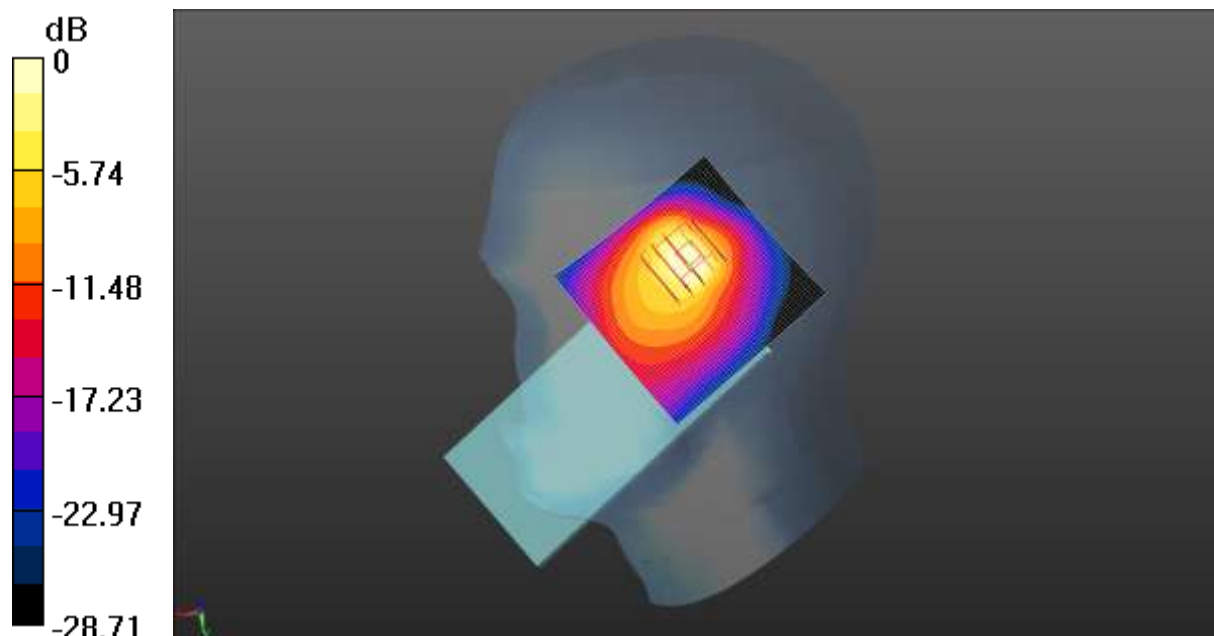
- Probe: EX3DV4 - SN3924; ConvF(7.35, 7.35, 7.35) @ 2592.99 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

NR n41 1RB(100MHz) Right Tilted/Middle Channel/Area Scan (51x51x1):

Interpolated grid: dx=1.200 mm, dy=1.200 mm
 Maximum value of SAR (interpolated) = 1.39 W/kg

NR n41 1RB(100MHz) Right Tilted/Middle Channel/Zoom Scan (5x5x7)/Cube

0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
 Reference Value = 7.513 V/m; Power Drift = -0.09 dB
 Peak SAR (extrapolated) = 1.86 W/kg
SAR(1 g) = 0.766 W/kg; SAR(10 g) = 0.332 W/kg
 Smallest distance from peaks to all points 3 dB below = 8.2 mm
 Ratio of SAR at M2 to SAR at M1 = 41.9%
 Maximum value of SAR (measured) = 1.20 W/kg



0 dB = 1.20 W/kg = 0.79 dBW/kg

Test Laboratory: JYTSZ

Date: 01.14.2023

DUT: Mobile Phone; Type: CK8n; Serial: 3#

Communication System: UID 0, NR (0); Frequency: 1730 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 1730 \text{ MHz}$; $\sigma = 1.332 \text{ S/m}$; $\epsilon_r = 38.724$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Right Section

DASY5 Configuration:

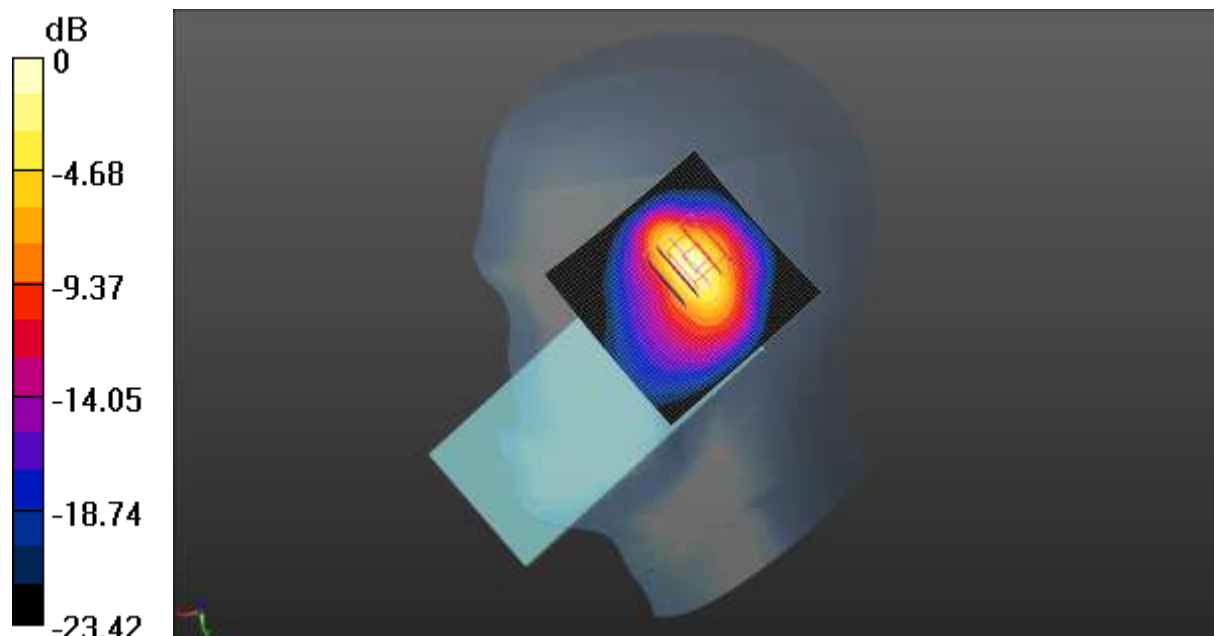
- Probe: EX3DV4 - SN3924; ConvF(8.38, 8.38, 8.38) @ 1730 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

NR n66 50%RB(40MHz) Right Tilted/Low Channel/Area Scan (51x51x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.871 W/kg

NR n66 50%RB(40MHz) Right Tilted/Low Channel/Zoom Scan (5x5x7)/Cube

0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 18.04 V/m; Power Drift = 0.02 dB
 Peak SAR (extrapolated) = 1.54 W/kg
SAR(1 g) = 0.682 W/kg; SAR(10 g) = 0.290 W/kg
 Smallest distance from peaks to all points 3 dB below = 4.8 mm
 Ratio of SAR at M2 to SAR at M1 = 47%
 Maximum value of SAR (measured) = 0.950 W/kg



0 dB = 0.950 W/kg = -0.22 dBW/kg

Test Laboratory: JYTSZ

Date: 02.02.2023

DUT: Mobile Phone; Type: CK8n; Serial: 3#

Communication System: UID 0, NR (0); Frequency: 3500.01 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 3500.01$ MHz; $\sigma = 2.888$ S/m; $\epsilon_r = 37.382$; $\rho = 1000$ kg/m³
 Phantom section: Left Section

DASY5 Configuration:

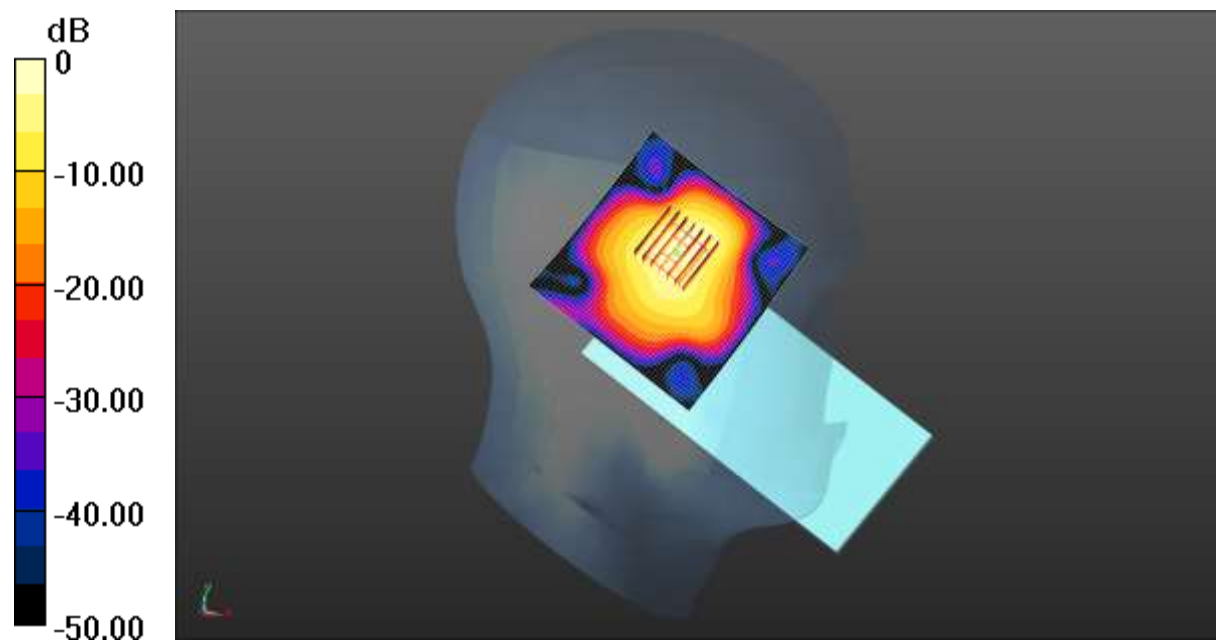
- Probe: EX3DV4 - SN3924; ConvF(7.02, 7.02, 7.02) @ 3500.01 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

NR n77(3500) 50%RB(100MHz) Left Cheek/Middle Channel/Area Scan

(51x51x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
 Maximum value of SAR (interpolated) = 0.543 W/kg

NR n77(3500) 50%RB(100MHz) Left Cheek/Middle Channel/Zoom Scan

(7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=4mm
 Reference Value = 2.543 V/m; Power Drift = -0.00 dB
 Peak SAR (extrapolated) = 0.707 W/kg
SAR(1 g) = 0.285 W/kg; SAR(10 g) = 0.112 W/kg
 Smallest distance from peaks to all points 3 dB below = 5.8 mm
 Ratio of SAR at M2 to SAR at M1 = 46.4%
 Maximum value of SAR (measured) = 0.507 W/kg



0 dB = 0.507 W/kg = -2.95 dBW/kg

Test Laboratory: JYTSZ

Date: 02.02.2023

DUT: Mobile Phone; Type: CK8n; Serial: 3#

Communication System: UID 0, NR (0); Frequency: 3750 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 3750 \text{ MHz}$; $\sigma = 3.207 \text{ S/m}$; $\epsilon_r = 36.888$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Left Section

DASY5 Configuration:

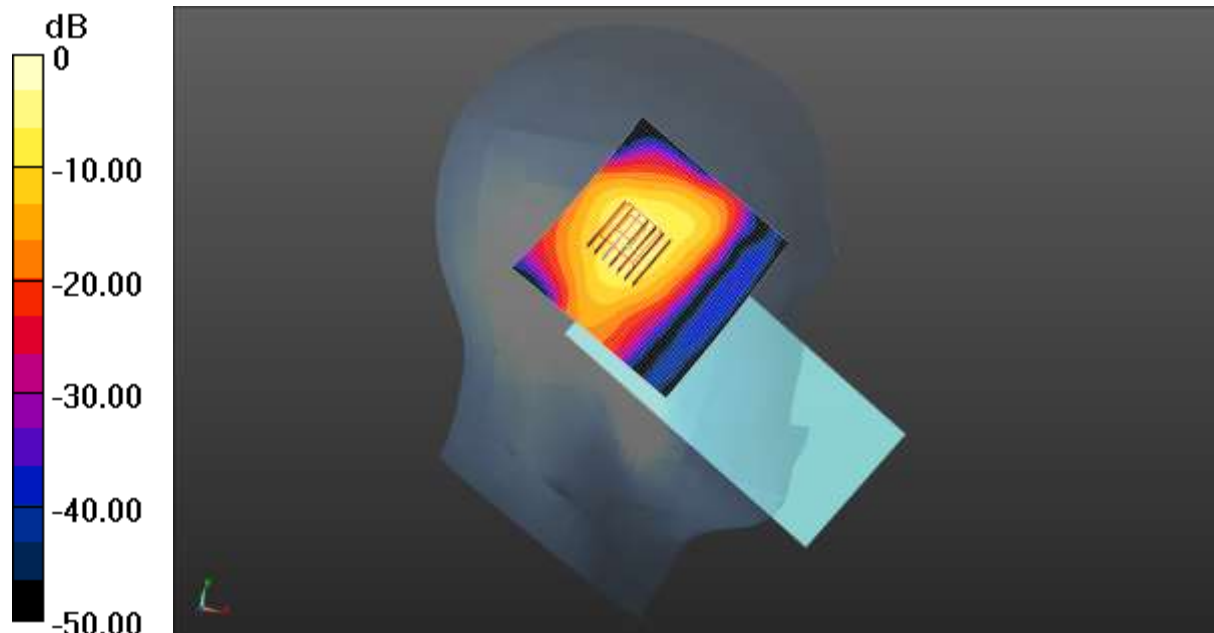
- Probe: EX3DV4 - SN3924; ConvF(6.62, 6.62, 6.62) @ 3750 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

NR n77(3840) 50%RB(100MHz) Left Tilted/Low Channel/Area Scan

(51x51x1): Interpolated grid: $dx=1.200 \text{ mm}$, $dy=1.200 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.408 W/kg

NR n77(3840) 50%RB(100MHz) Left Tilted/ Low Channel/Zoom Scan

(7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=4\text{mm}$
 Reference Value = 5.988 V/m; Power Drift = -0.00 dB
 Peak SAR (extrapolated) = 1.16 W/kg
SAR(1 g) = 0.407 W/kg; SAR(10 g) = 0.137 W/kg
 Smallest distance from peaks to all points 3 dB below = 6.7 mm
 Ratio of SAR at M2 to SAR at M1 = 35.7%
 Maximum value of SAR (measured) = 0.843 W/kg



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

Test Laboratory: JYTSZ

Date: 01.18.2023

DUT: Mobile Phone; Type: X6710; Serial: 3#

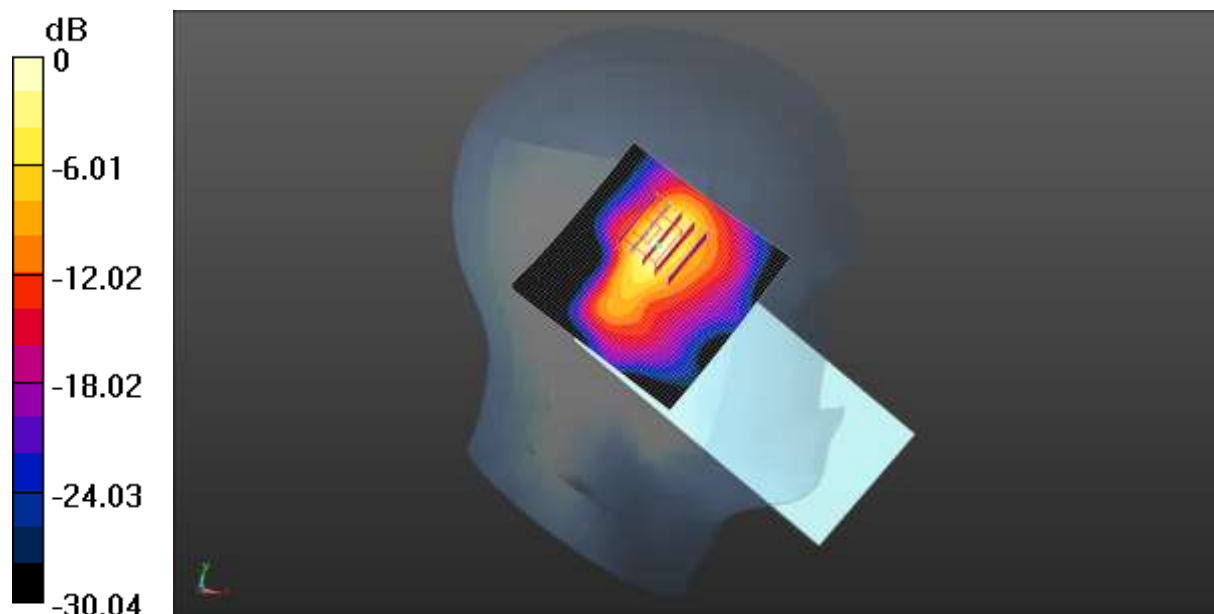
Communication System: UID 0, IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps) (0);
 Frequency: 2412 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 2412 \text{ MHz}$; $\sigma = 1.706 \text{ S/m}$; $\epsilon_r = 37.776$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(7.74, 7.74, 7.74) @ 2412 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

2.4GWIFI Left Tilted/Low Channel/Area Scan (51x51x1): Interpolated grid:
 $dx=1.200 \text{ mm}$, $dy=1.200 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.168 W/kg

2.4GWIFI Left Tilted/Low Channel/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$
 Reference Value = 5.293 V/m; Power Drift = -0.08 dB
 Peak SAR (extrapolated) = 0.279 W/kg
SAR(1 g) = 0.120 W/kg; SAR(10 g) = 0.048 W/kg
 Smallest distance from peaks to all points 3 dB below = 6.4 mm
 Ratio of SAR at M2 to SAR at M1 = 38.3%
 Maximum value of SAR (measured) = 0.214 W/kg



0 dB = 0.214 W/kg = -6.70 dBW/kg

Test Laboratory: JYTSZ

Date: 01.26.2023

DUT: Mobile Phone; Type: X6710; Serial: 3#

Communication System: UID 0, IEEE 802.11a WiFi 5GHz (0); Frequency: 5240 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5240 \text{ MHz}$; $\sigma = 4.765 \text{ S/m}$; $\epsilon_r = 36.325$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(5.35, 5.35, 5.35) @ 5240 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

5.2WIFI Left Cheek/High Channel/Area Scan (51x51x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.350 W/kg

5.2WIFI Left Cheek/ High Channel/Zoom Scan (7x7x7)/Cube 0: Measurement

grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 0 V/m; Power Drift = 0.00 dB

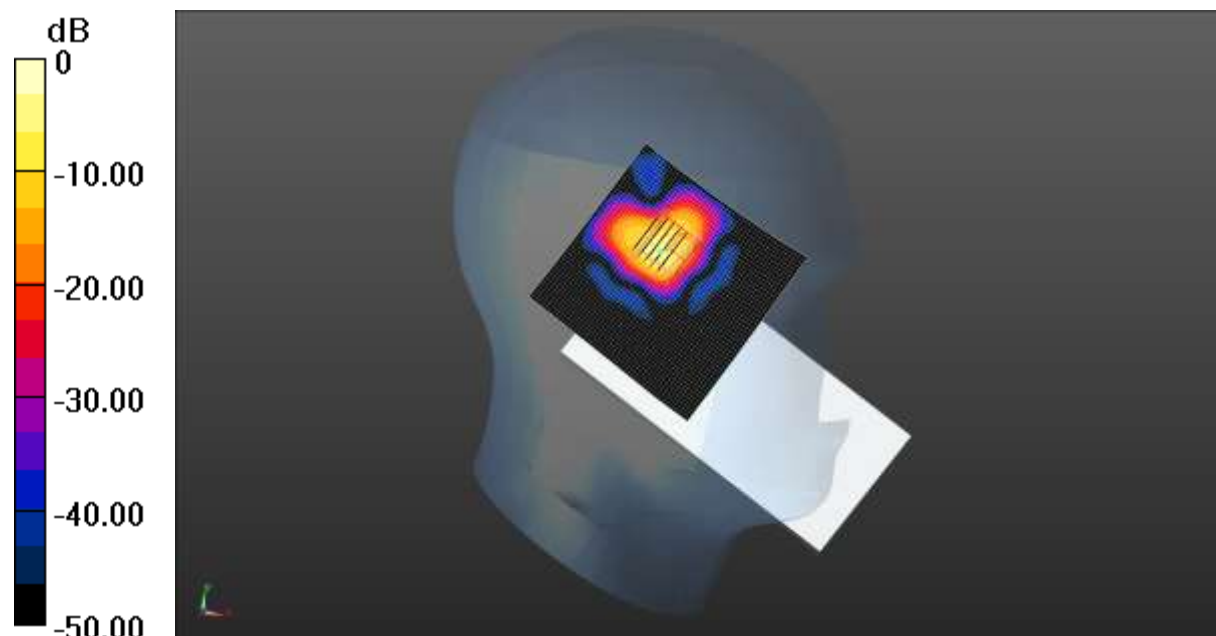
Peak SAR (extrapolated) = 0.982 W/kg

SAR(1 g) = 0.239 W/kg; SAR(10 g) = 0.049 W/kg

Smallest distance from peaks to all points 3 dB below = 2.9 mm

Ratio of SAR at M2 to SAR at M1 = 13.4%

Maximum value of SAR (measured) = 0.730 W/kg



0 dB = 0.730 W/kg = -1.37 dBW/kg

Test Laboratory: JYTSZ

Date: 01.26.2023

DUT: Mobile Phone; Type: X6710; Serial: 3#

Communication System: UID 0, IEEE 802.11a WiFi 5GHz (0); Frequency: 5745 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 5745$ MHz; $\sigma = 5.432$ S/m; $\epsilon_r = 35.341$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(4.9, 4.9, 4.9) @ 5745 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

5.8WIFI Left Cheek/Low Channel/Area Scan (51x51x1): Interpolated grid:

$dx=1.000$ mm, $dy=1.000$ mm

Maximum value of SAR (interpolated) = 0.107 W/kg

5.8WIFI Left Cheek/Low Channel/Zoom Scan (7x7x7)/Cube 0: Measurement grid:

$dx=4$ mm, $dy=4$ mm, $dz=2$ mm

Reference Value = 0 V/m; Power Drift = 0.00 dB

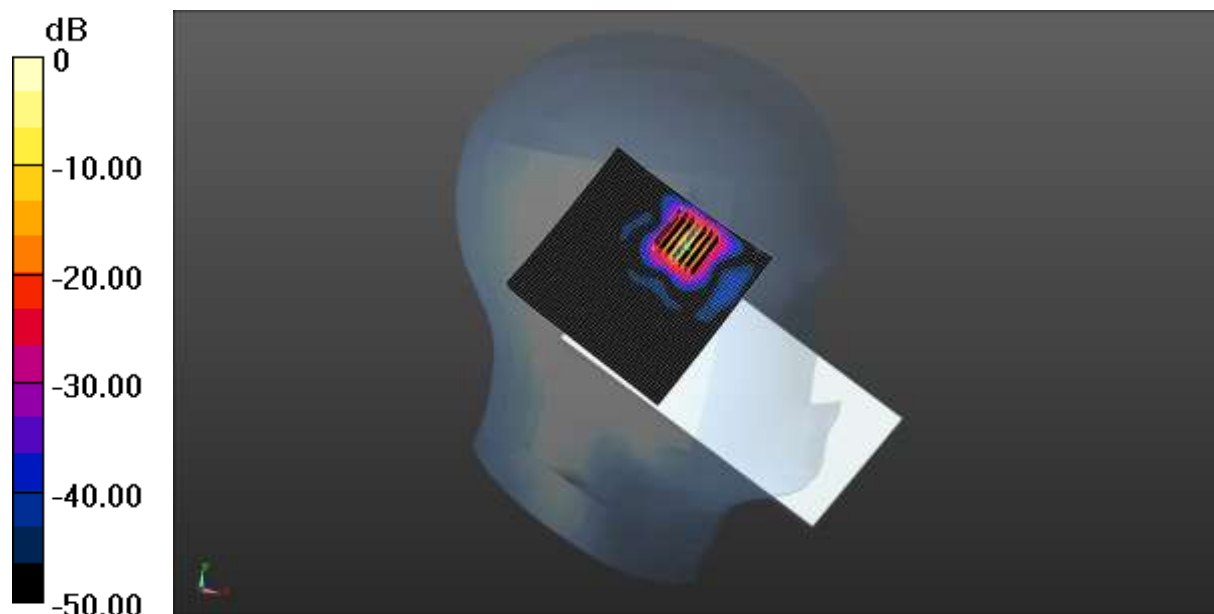
Peak SAR (extrapolated) = 0.484 W/kg

SAR(1 g) = 0.063 W/kg; SAR(10 g) = 0.015 W/kg

Smallest distance from peaks to all points 3 dB below = 2.4 mm

Ratio of SAR at M2 to SAR at M1 = 8.6%

Maximum value of SAR (measured) = 0.321 W/kg



0 dB = 0.321 W/kg = -4.93 dBW/kg

Test Laboratory: JYTSZ

Date: 01.18.2023

DUT: Mobile Phone; Type: X6710; Serial: 3#

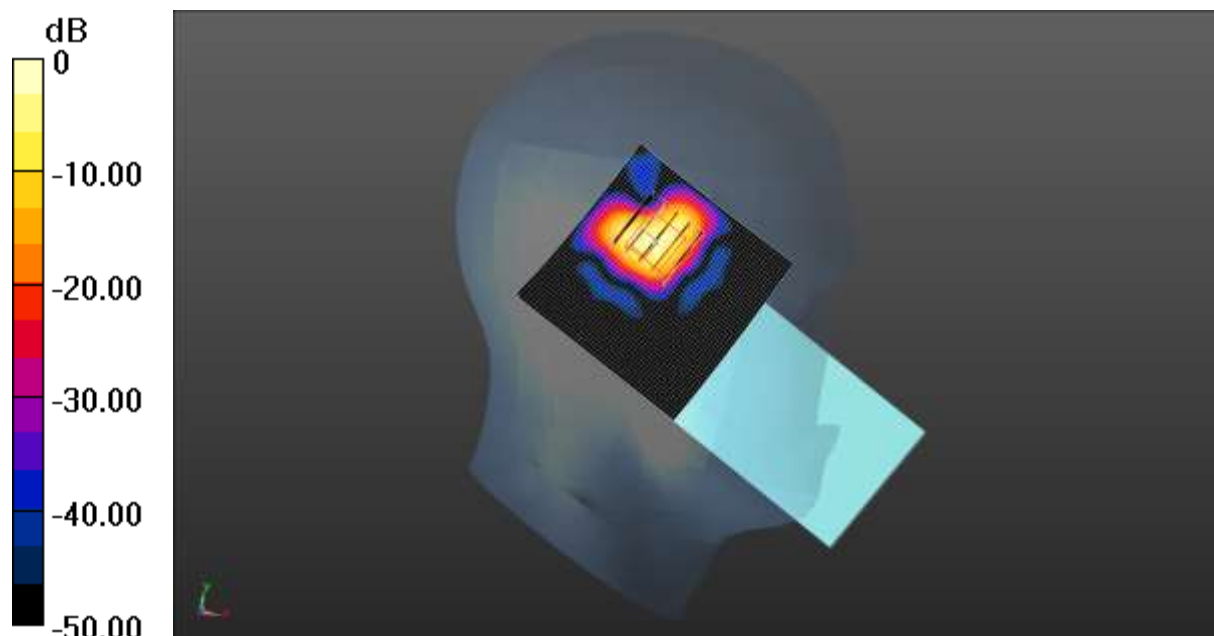
Communication System: UID 0, Bluetooth (0); Frequency: 2441 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 2441 \text{ MHz}$; $\sigma = 1.712 \text{ S/m}$; $\epsilon_r = 37.769$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(7.74, 7.74, 7.74) @ 2441 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Bluetooth Left Cheek/Middle Channel/Area Scan (51x51x1): Interpolated grid:
 $dx=1.200 \text{ mm}$, $dy=1.200 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.0186 W/kg

Bluetooth Left Cheek/Middle Channel/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$
 Reference Value = 0.9910 V/m; Power Drift = 0.08 dB
 Peak SAR (extrapolated) = 0.0600 W/kg
SAR(1 g) = 0.013 W/kg; SAR(10 g) = 0.00473 W/kg
 Smallest distance from peaks to all points 3 dB below: Larger than measurement grid
 Ratio of SAR at M2 to SAR at M1 = 22.7%
 Maximum value of SAR (measured) = 0.0269 W/kg



0 dB = 0.0269 W/kg = -15.70 dBW/kg

Test Laboratory: JYTSZ

Date: 01.30.2023

DUT: Mobile Phone; Type: CK8n; Serial: 3#

Communication System: UID 0, GPRS(4 Slots) (0); Frequency: 836.6 MHz; Duty Cycle: 1:1.99986

Medium parameters used (interpolated): $f = 836.6 \text{ MHz}$; $\sigma = 0.917 \text{ S/m}$; $\epsilon_r = 40.203$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(9.8, 9.8, 9.8) @ 836.6 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

GPRS 850 4Slots Body Back /Middle Channel/Area Scan (51x51x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 0.584 W/kg

GPRS 850 4Slots Body Back/Middle Channel/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 18.09 V/m; Power Drift = -0.01 dB

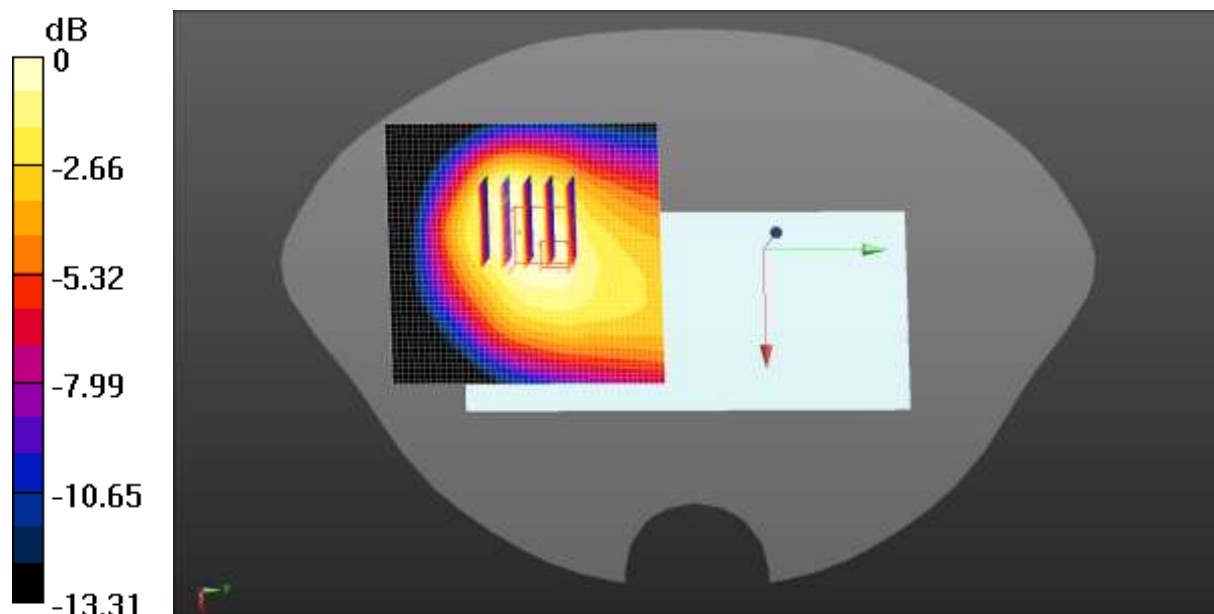
Peak SAR (extrapolated) = 0.686 W/kg

SAR(1 g) = 0.375 W/kg; SAR(10 g) = 0.241 W/kg

Smallest distance from peaks to all points 3 dB below: Larger than measurement grid

Ratio of SAR at M2 to SAR at M1 = 53.8%

Maximum value of SAR (measured) = 0.558 W/kg



0 dB = 0.558 W/kg = -2.53 dBW/kg

Test Laboratory: JYTSZ

Date: 01.14.2023

DUT: Mobile Phone; Type: CK8n; Serial: 3#

Communication System: UID 0, GPRS(4 Slots) (0); Frequency: 1909.8 MHz; Duty Cycle: 1:1.99986

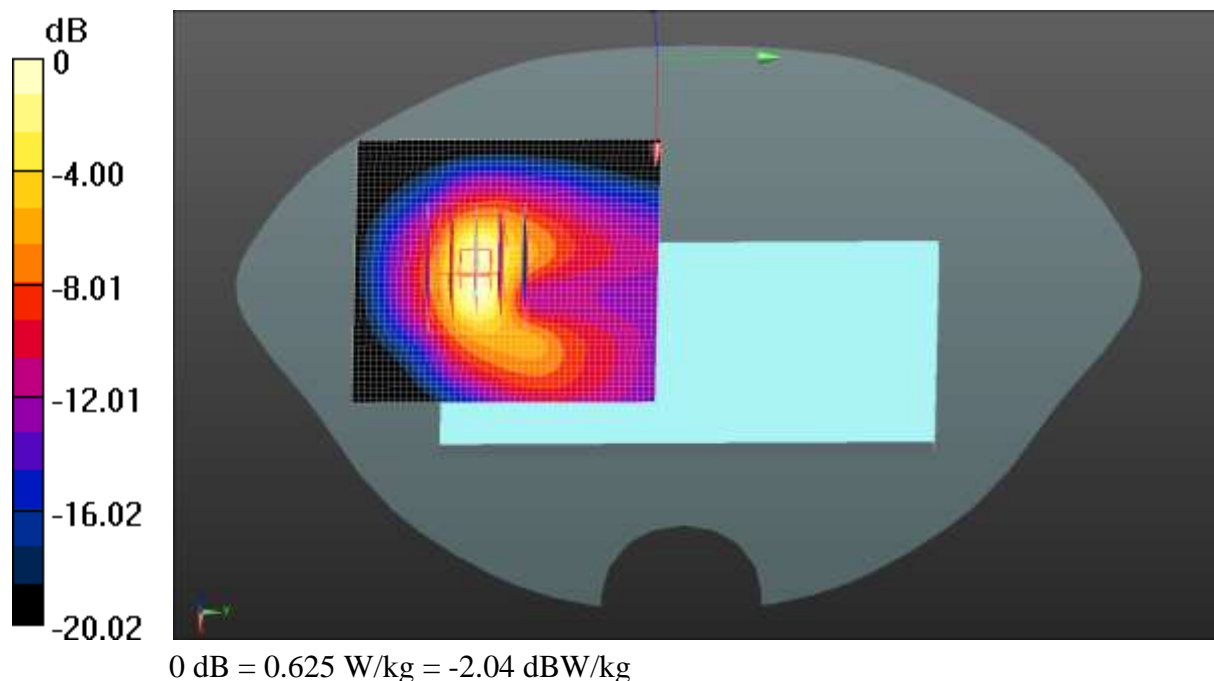
Medium parameters used: $f = 1910 \text{ MHz}$; $\sigma = 1.371 \text{ S/m}$; $\epsilon_r = 38.962$; $\rho = 1000 \text{ kg/m}^3$
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(8.05, 8.05, 8.05) @ 1909.8 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

GPRS 1900 4Slots Body Back/High Channel/Area Scan (51x51x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
Maximum value of SAR (interpolated) = 0.529 W/kg

GPRS 1900 4Slots Body Back/High Channel/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
Reference Value = 4.745 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.760 W/kg
SAR(1 g) = 0.407 W/kg; SAR(10 g) = 0.205 W/kg
Smallest distance from peaks to all points 3 dB below = 8 mm
Ratio of SAR at M2 to SAR at M1 = 55.4%
Maximum value of SAR (measured) = 0.625 W/kg



Test Laboratory: JYTSZ

Date: 01.14.2023

DUT: Mobile Phone; Type: CK8n; Serial: 3#

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

Medium parameters used (interpolated): $f = 1907.6 \text{ MHz}$; $\sigma = 1.37 \text{ S/m}$; $\epsilon_r = 38.965$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(8.05, 8.05, 8.05) @ 1907.6 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

WCDMA 1900 Body Back/High Channel/Area Scan (51x51x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 0.156 W/kg

WCDMA 1900 Body Back/High Channel/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 2.555 V/m; Power Drift = 0.04 dB

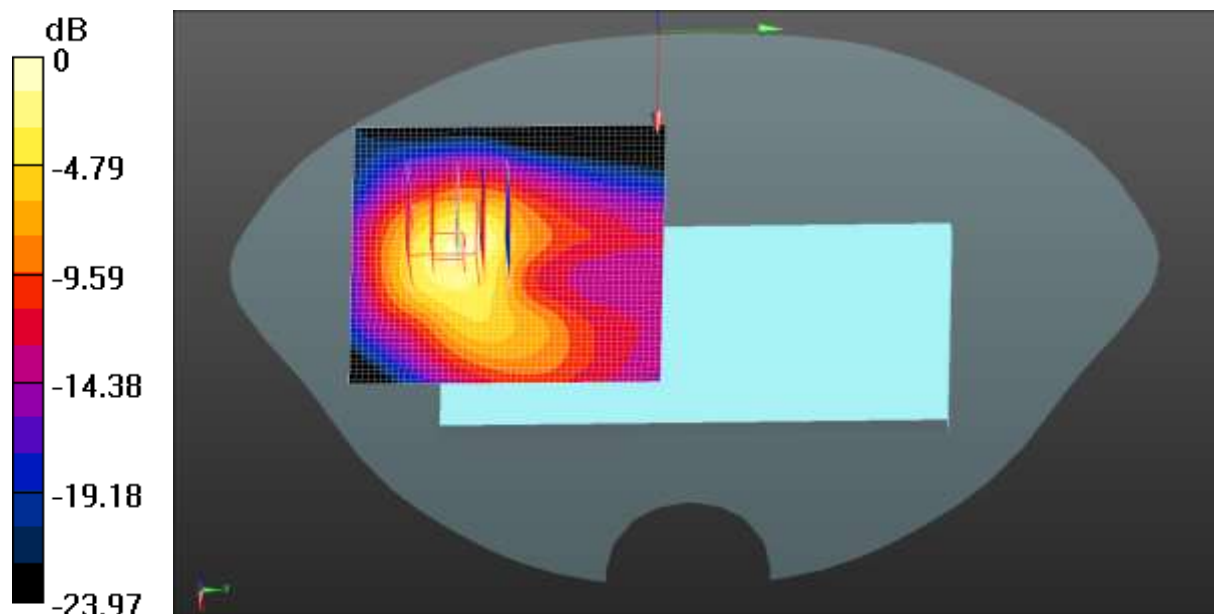
Peak SAR (extrapolated) = 0.277 W/kg

SAR(1 g) = 0.142 W/kg; SAR(10 g) = 0.068 W/kg

Smallest distance from peaks to all points 3 dB below = 8 mm

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

Maximum value of SAR (measured) = 0.204 W/kg



0 dB = 0.204 W/kg = -6.90 dBW/kg

Test Laboratory: JYTSZ

Date: 01.14.2023

DUT: Mobile Phone; Type: CK8n; Serial: 3#

Communication System: UID 0, UMTS-FDD(WCDMA) (0); Frequency: 1732.6 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 1732.6$ MHz; $\sigma = 1.327$ S/m; $\epsilon_r = 38.746$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(8.38, 8.38, 8.38) @ 1732.6 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

WCDMA 1700 Body Back/Middle Channel/Area Scan (51x51x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.239 W/kg

WCDMA 1700 Body Back/Middle Channel/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.513 V/m; Power Drift = 0.03 dB

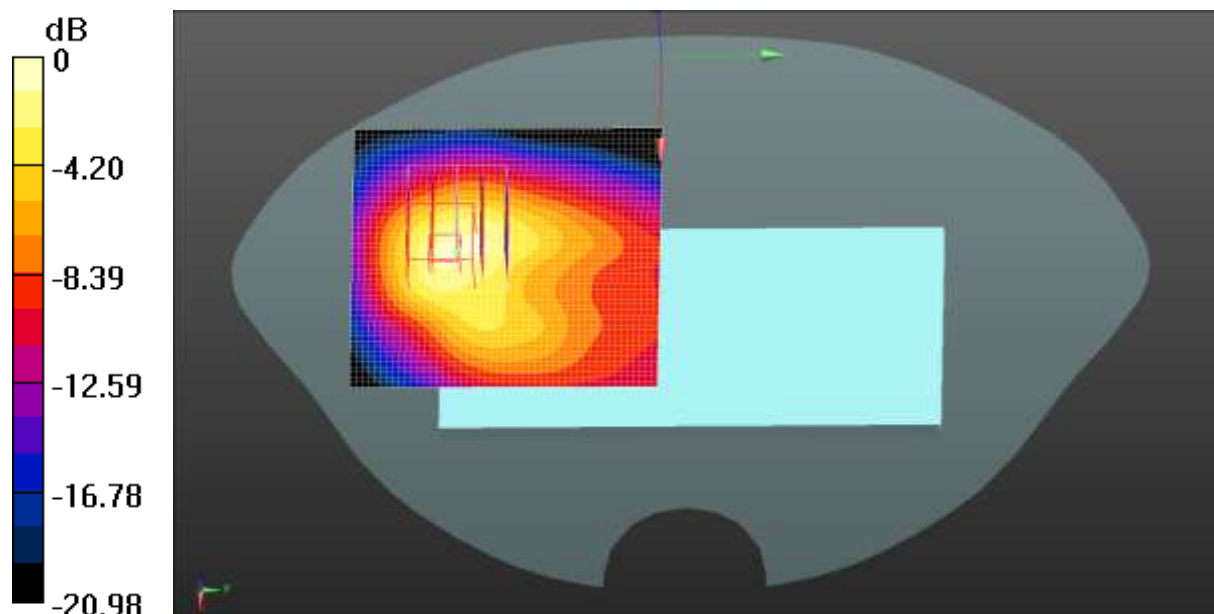
Peak SAR (extrapolated) = 0.388 W/kg

SAR(1 g) = 0.210 W/kg; SAR(10 g) = 0.108 W/kg

Smallest distance from peaks to all points 3 dB below = 9.6 mm

Ratio of SAR at M2 to SAR at M1 = 53.9%

Maximum value of SAR (measured) = 0.283 W/kg



0 dB = 0.283 W/kg = -5.48 dBW/kg

Test Laboratory: JYTSZ

Date: 01.30.2023

DUT: Mobile Phone; Type: CK8n; Serial: 3#

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

Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.917$ S/m; $\epsilon_r = 40.203$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(9.8, 9.8, 9.8) @ 836.6 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

WCDMA 850 Body Back/Middle Channel/Area Scan (51x51x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.458 W/kg

WCDMA 850 Body Back/Middle Channel/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.51 V/m; Power Drift = -0.14 dB

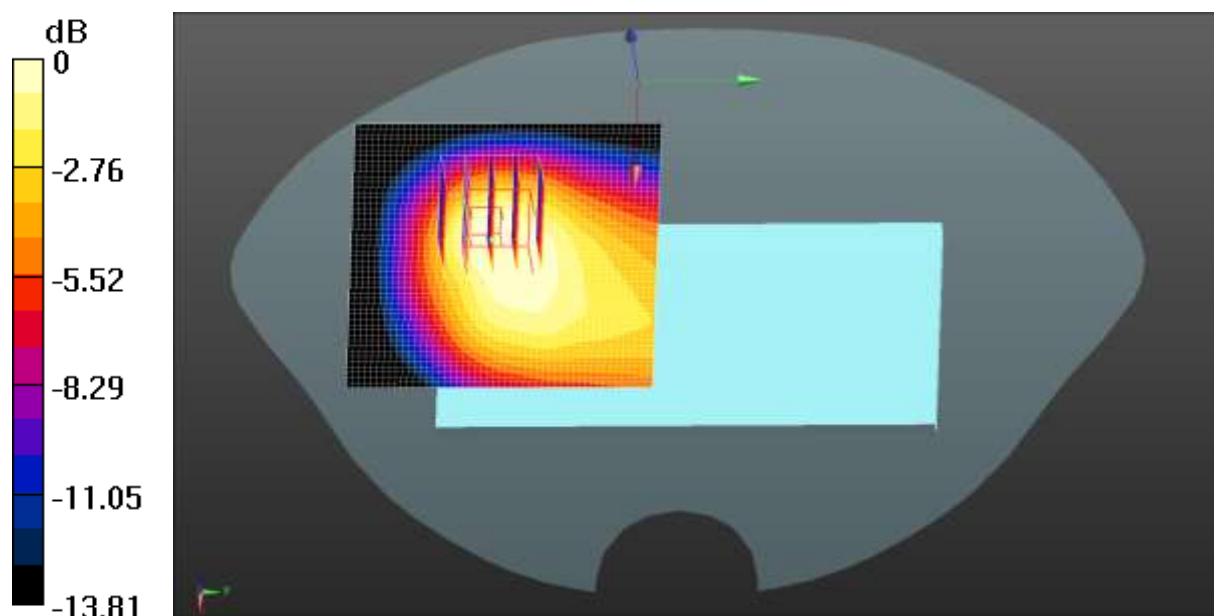
Peak SAR (extrapolated) = 0.460 W/kg

SAR(1 g) = 0.248 W/kg; SAR(10 g) = 0.156 W/kg

Smallest distance from peaks to all points 3 dB below = 13.6 mm

Ratio of SAR at M2 to SAR at M1 = 53.9%

Maximum value of SAR (measured) = 0.366 W/kg



0 dB = 0.366 W/kg = -4.37 dBW/kg

Test Laboratory: JYTSZ

Date: 01.14.2023

DUT: Mobile Phone; Type: CK8n; Serial: 3#

Communication System: UID 0, LTE-Fdd(USA) 1RB QPSK (0); Frequency: 1900 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1900 \text{ MHz}$; $\sigma = 1.365 \text{ S/m}$; $\epsilon_r = 38.977$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(8.05, 8.05, 8.05) @ 1900 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

LTE Band 2 1RB(20MHz) Body Back/High Channel/Area Scan (51x51x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 0.276 W/kg

LTE Band 2 1RB(20MHz) Body Back/High Channel/Zoom Scan (5x5x7)/Cube

0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 2.855 V/m; Power Drift = -0.03 dB

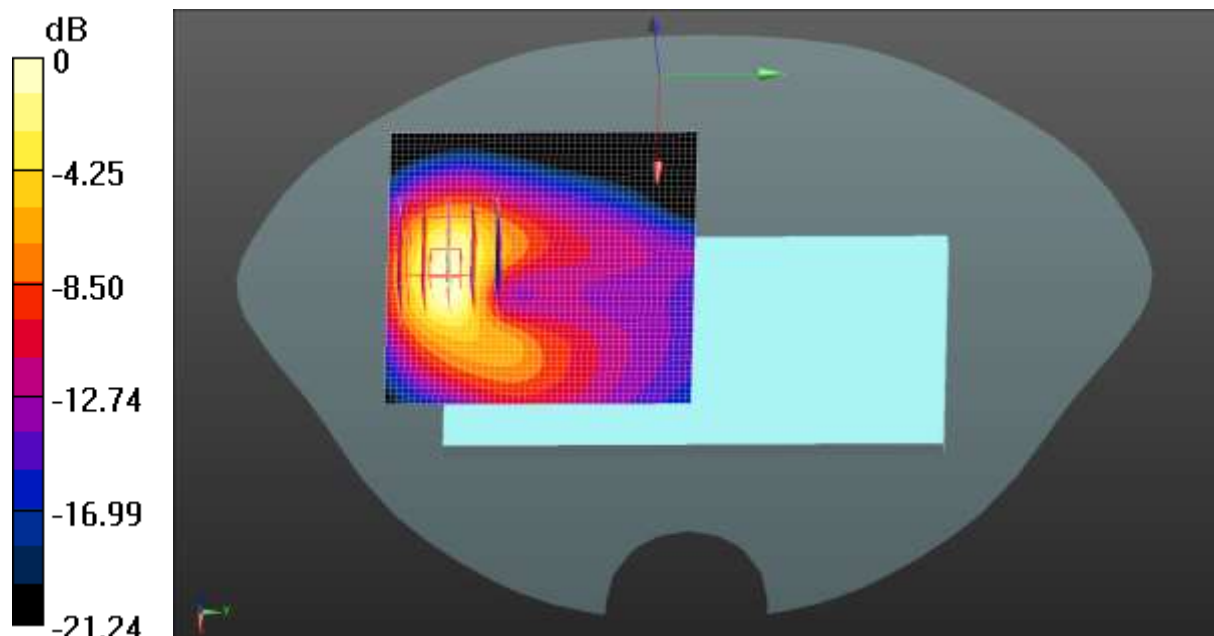
Peak SAR (extrapolated) = 0.370 W/kg

SAR(1 g) = 0.197 W/kg; SAR(10 g) = 0.098 W/kg

Smallest distance from peaks to all points 3 dB below = 9.3 mm

Ratio of SAR at M2 to SAR at M1 = 54.8%

Maximum value of SAR (measured) = 0.300 W/kg



0 dB = 0.300 W/kg = -5.23 dBW/kg

Test Laboratory: JYTSZ

Date: 01.30.2023

DUT: Mobile Phone; Type: CK8n; Serial: 3#

Communication System: UID 0, LTE-Fdd(USA) 1RB QPSK (0); Frequency: 829 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 829$ MHz; $\sigma = 0.915$ S/m; $\epsilon_r = 40.223$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(9.8, 9.8, 9.8) @ 829 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

LTE Band 5 1RB(10MHz) Body Back/Low Channel/Area Scan (51x51x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.559 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 = 15.38 V/m; Power Drift = -0.14 dB

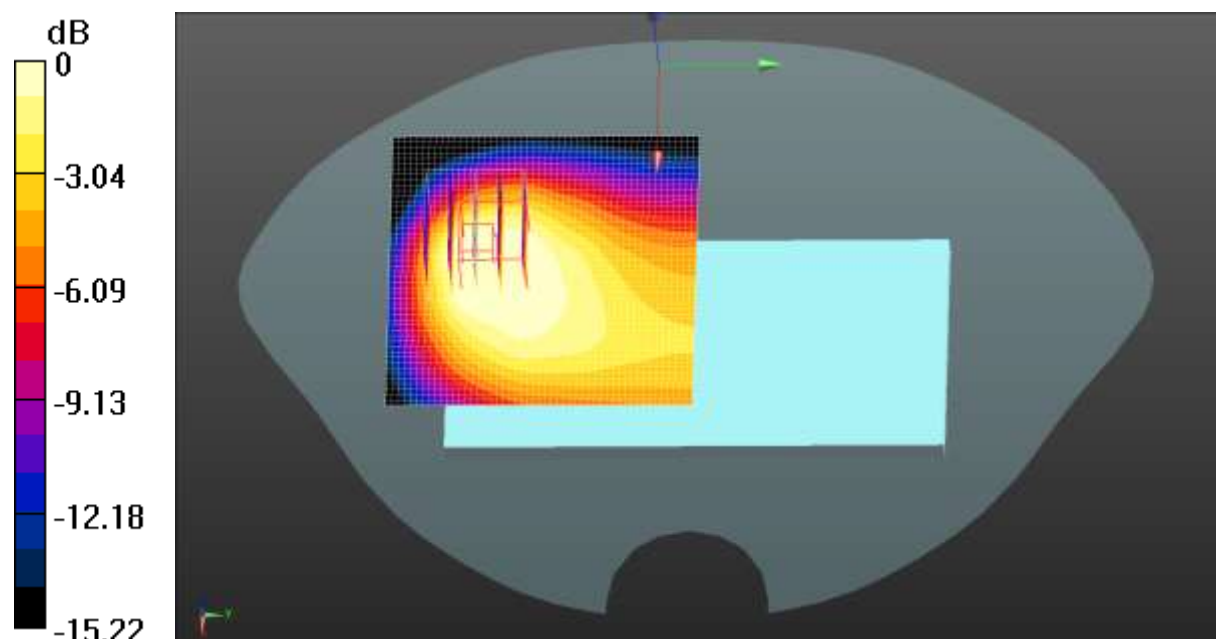
Peak SAR (extrapolated) = 0.547 W/kg

SAR(1 g) = 0.289 W/kg; SAR(10 g) = 0.179 W/kg

Smallest distance from peaks to all points 3 dB below = 12.5 mm

Ratio of SAR at M2 to SAR at M1 = 55.7%

Maximum value of SAR (measured) = 0.413 W/kg



0 dB = 0.413 W/kg = -3.84 dBW/kg

Test Laboratory: JYTSZ

Date: 01.18.2023

DUT: Mobile Phone; Type: CK8n; Serial: 3#

Communication System: UID 0, LTE-Fdd(USA) 1RB QPSK (0); Frequency: 2510 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2510 \text{ MHz}$; $\sigma = 1.798 \text{ S/m}$; $\epsilon_r = 37.895$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(7.6, 7.6, 7.6) @ 2510 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

LTE Band 7 1RB(20MHz) Body Back/Low Channel/Area Scan (51x51x1):

Interpolated grid: $dx=1.200 \text{ mm}$, $dy=1.200 \text{ mm}$

Maximum value of SAR (interpolated) = 0.607 W/kg

LTE Band 7 1RB(20MHz) Body Back/Low Channel/Zoom Scan (5x5x7)/Cube

0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 2.981 V/m; Power Drift = -0.17 dB

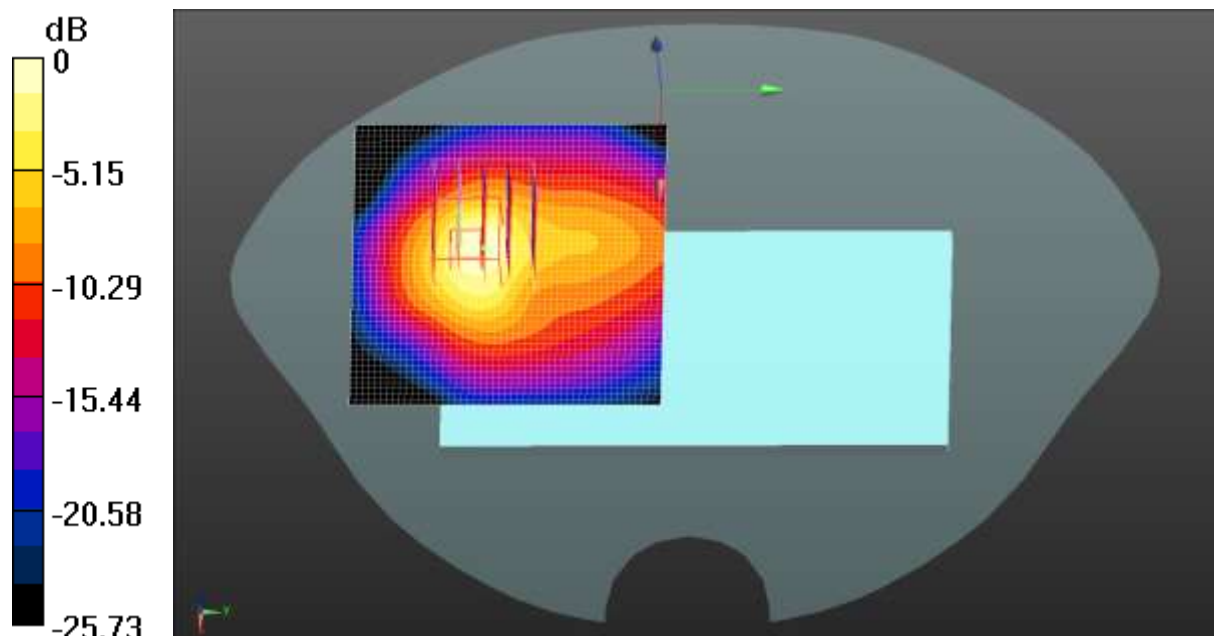
Peak SAR (extrapolated) = 0.819 W/kg

SAR(1 g) = 0.398 W/kg; SAR(10 g) = 0.186 W/kg

Smallest distance from peaks to all points 3 dB below = 9.6 mm

Ratio of SAR at M2 to SAR at M1 = 50.6%

Maximum value of SAR (measured) = 0.623 W/kg



0 dB = 0.623 W/kg = -2.06 dBW/kg

Test Laboratory: JYTSZ

Date: 01.30.2023

DUT: Mobile Phone; Type: CK8n; Serial: 3#

Communication System: UID 0, LTE-Fdd(USA) 1RB QPSK (0); Frequency: 704 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 704$ MHz; $\sigma = 0.877$ S/m; $\epsilon_r = 40.754$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(10.2, 10.2, 10.2) @ 704 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

LTE Band 12 1RB(10MHz) Body Back/Low Channel/Area Scan (51x61x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.389 W/kg

LTE Band 12 1RB(10MHz) Body Back/Low Channel/Zoom Scan

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

Reference Value = 16.78 V/m; Power Drift = -0.04 dB

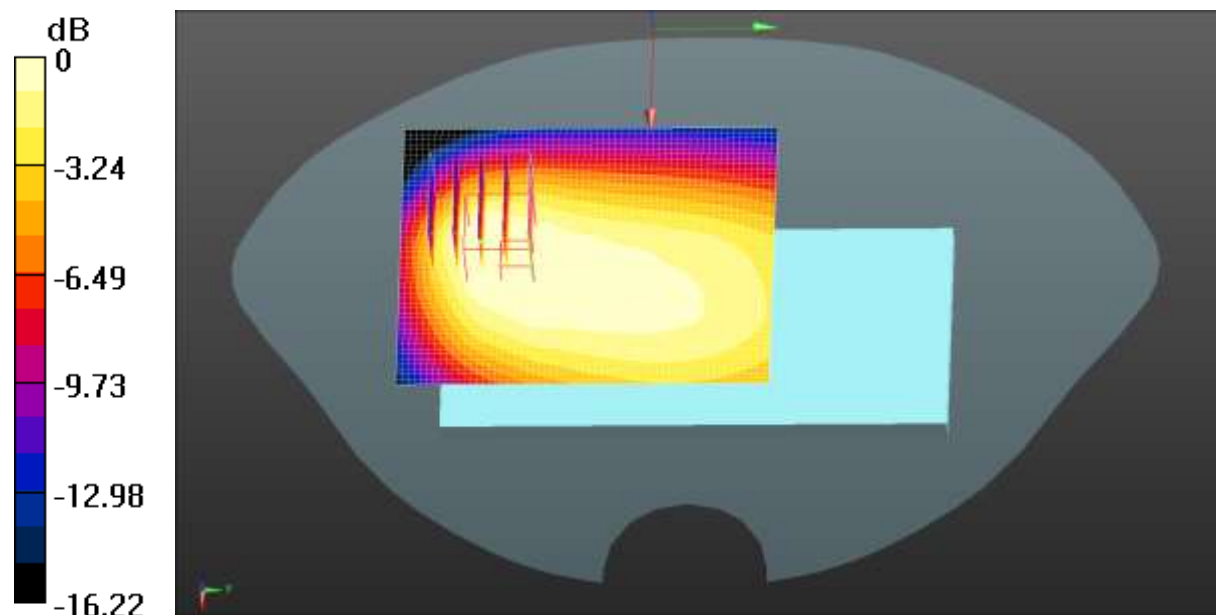
Peak SAR (extrapolated) = 0.388 W/kg

SAR(1 g) = 0.209 W/kg; SAR(10 g) = 0.134 W/kg

Smallest distance from peaks to all points 3 dB below = 11.5 mm

Ratio of SAR at M2 to SAR at M1 = 64.3%

Maximum value of SAR (measured) = 0.299 W/kg



0 dB = 0.299 W/kg = -5.24 dBW/kg

Test Laboratory: JYTSZ

Date: 01.18.2023

DUT: Mobile Phone; Type: CK8n; Serial: 3#

Communication System: UID 0, LTE-TDD(USA) 20MHz 1RB QPSK (0); Frequency: 2593 MHz; Duty Cycle: 1:1.59956

Medium parameters used (interpolated): $f = 2593$ MHz; $\sigma = 1.866$ S/m; $\epsilon_r = 37.999$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(7.35, 7.35, 7.35) @ 2593 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

LTE Band 41 1RB(20MHz) Body Back/Middle Channel/Area Scan (51x51x1):

Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.502 W/kg

LTE Band 41 1RB(20MHz) Body Back/Middle Channel/Zoom Scan

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

Reference Value = 2.541 V/m; Power Drift = 0.19 dB

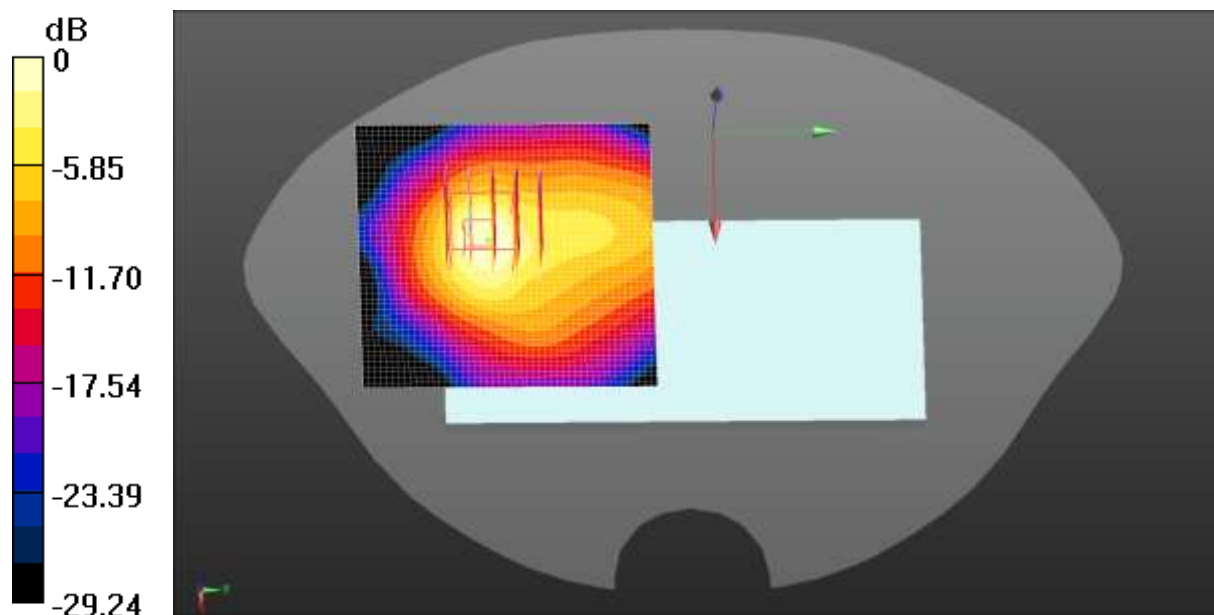
Peak SAR (extrapolated) = 0.575 W/kg

SAR(1 g) = 0.274 W/kg; SAR(10 g) = 0.126 W/kg

Smallest distance from peaks to all points 3 dB below = 9.6 mm

Ratio of SAR at M2 to SAR at M1 = 50.2%

Maximum value of SAR (measured) = 0.420 W/kg



0 dB = 0.420 W/kg = -3.77 dBW/kg

Test Laboratory: JYTSZ

Date: 01.14.2023

DUT: Mobile Phone; Type: CK8n; Serial: 3#

Communication System: UID 0, LTE-Fdd(USA) 1RB QPSK (0); Frequency: 1745 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 1745 \text{ MHz}$; $\sigma = 1.332 \text{ S/m}$; $\epsilon_r = 38.724$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(8.38, 8.38, 8.38) @ 1745 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

LTE Band 66 1RB(20MHz) Body Back/Middle Channel/Area Scan (51x51x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 0.293 W/kg

LTE Band 66 1RB(20MHz) Body Back/Middle Channel/Zoom Scan

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

Reference Value = 4.928 V/m; Power Drift = -0.00 dB

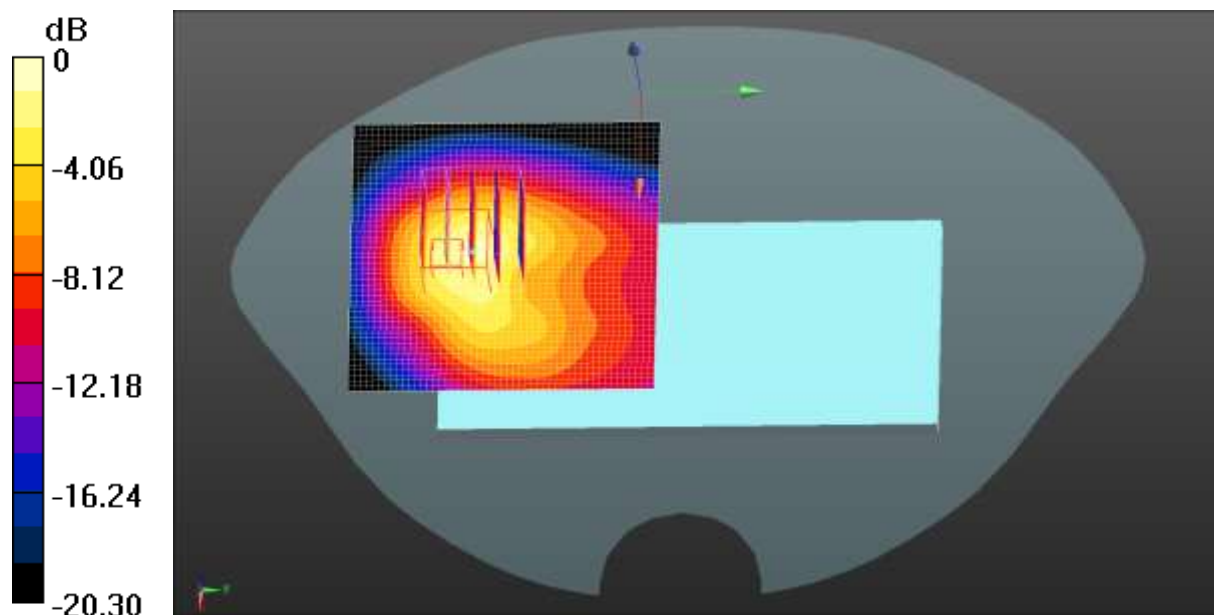
Peak SAR (extrapolated) = 0.442 W/kg

SAR(1 g) = 0.247 W/kg; SAR(10 g) = 0.126 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%

Maximum value of SAR (measured) = 0.373 W/kg



0 dB = 0.373 W/kg = -4.28 dBW/kg

Test Laboratory: JYTSZ

Date: 01.30.2023

DUT: Mobile Phone; Type: CK8n; Serial: 3#

Communication System: UID 0, NR (0); Frequency: 834 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 834 \text{ MHz}$; $\sigma = 0.917 \text{ S/m}$; $\epsilon_r = 40.203$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

DASY5 Configuration:

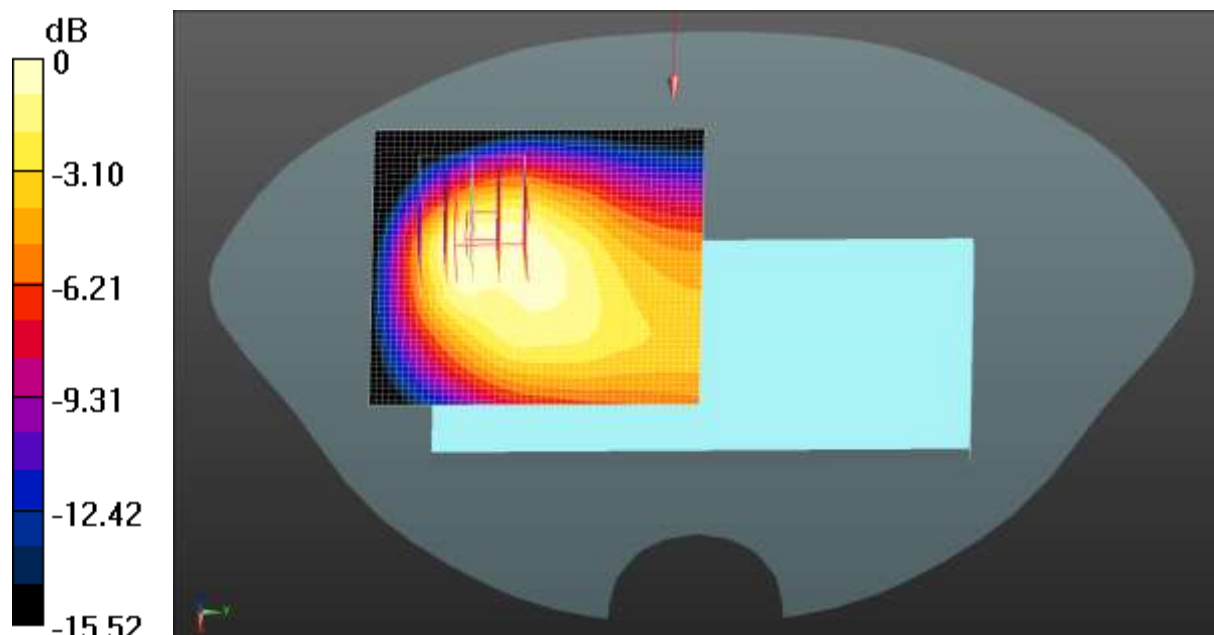
- Probe: EX3DV4 - SN3924; ConvF(9.8, 9.8, 9.8) @ 834 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

NR n5 50%RB(20MHz) Body Back/Low Channel/Area Scan (51x51x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.360 W/kg

NR n5 50%RB(20MHz) Body Back/Low Channel/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 12.74 V/m ; Power Drift = -0.03 dB
 Peak SAR (extrapolated) = 0.420 W/kg
SAR(1 g) = 0.219 W/kg ; SAR(10 g) = 0.135 W/kg
 Smallest distance from peaks to all points 3 dB below = 12.2 mm
 Ratio of SAR at M2 to SAR at M1 = 52.5%
 Maximum value of SAR (measured) = 0.323 W/kg



0 dB = 0.323 W/kg = -4.91 dBW/kg

Test Laboratory: JYTSZ

Date: 01.18.2023

DUT: Mobile Phone; Type: CK8n; Serial: 3#

Communication System: UID 0, NR (0); Frequency: 2510 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 2510 \text{ MHz}$; $\sigma = 1.818 \text{ S/m}$; $\epsilon_r = 38.098$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

DASY5 Configuration:

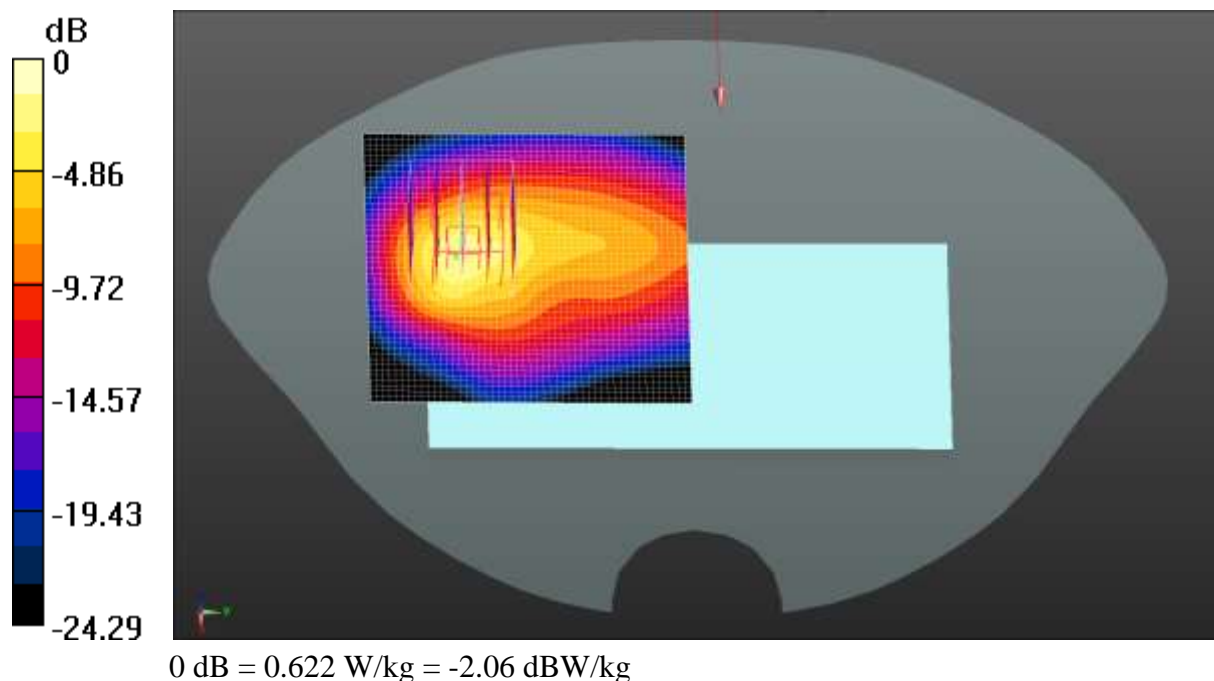
- Probe: EX3DV4 - SN3924; ConvF(7.6, 7.6, 7.6) @ 2510 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

NR n7 50%RB(20MHz) Body Back/Low Channel/Area Scan (51x51x1):

Interpolated grid: $dx=1.200 \text{ mm}$, $dy=1.200 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.412 W/kg

NR n7 50%RB(20MHz) Body Back/Low Channel/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 3.247 V/m ; Power Drift = 0.08 dB
 Peak SAR (extrapolated) = 0.790 W/kg
SAR(1 g) = 0.378 W/kg ; SAR(10 g) = 0.176 W/kg
 Smallest distance from peaks to all points 3 dB below = 9.6 mm
 Ratio of SAR at M2 to SAR at M1 = 50.4%
 Maximum value of SAR (measured) = 0.622 W/kg



Test Laboratory: JYTSZ

Date: 01.30.2023

DUT: Mobile Phone; Type: CK8n; Serial: 3#

Communication System: UID 0, NR (0); Frequency: 708.5 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 708.5 \text{ MHz}$; $\sigma = 0.878 \text{ S/m}$; $\epsilon_r = 40.748$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

DASY5 Configuration:

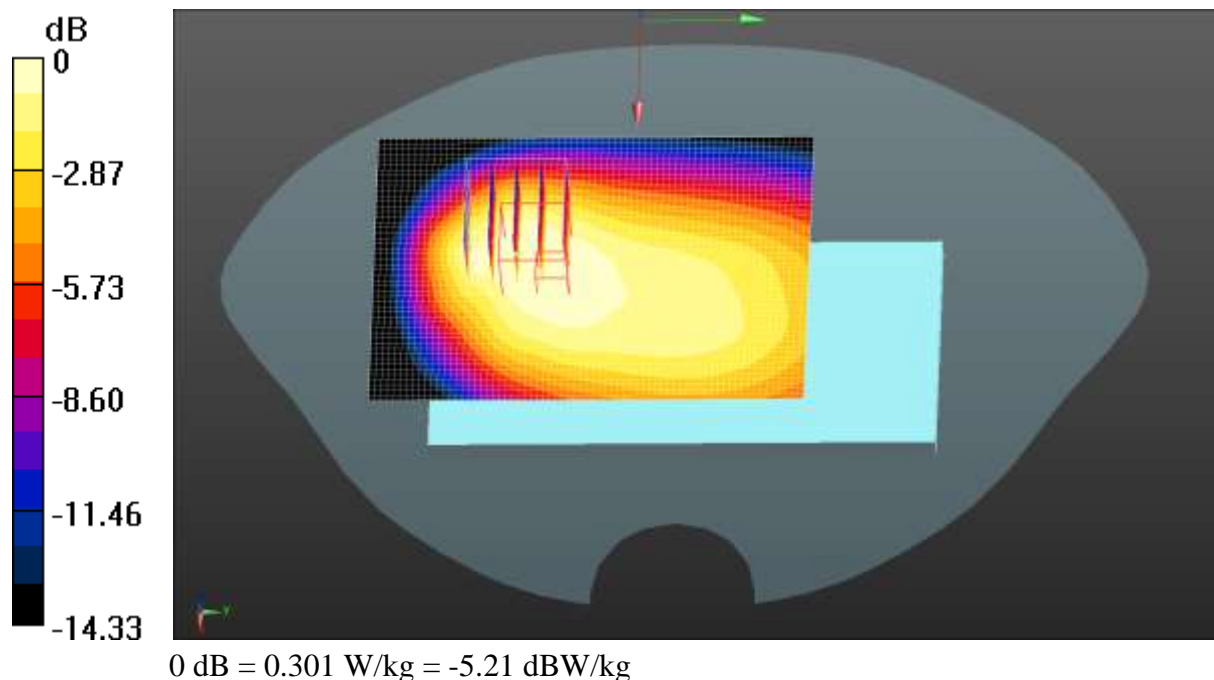
- Probe: EX3DV4 - SN3924; ConvF(10.2, 10.2, 10.2) @ 708.5 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

NR n12 50%RB(15MHz) Body Back/High Channel/Area Scan (51x71x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.341 W/kg

NR n12 50%RB(15MHz) Body Back/High Channel/Zoom Scan (5x5x7)/Cube

0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 16.27 V/m; Power Drift = -0.03 dB
 Peak SAR (extrapolated) = 0.401 W/kg
SAR(1 g) = 0.221 W/kg; SAR(10 g) = 0.144 W/kg
 Smallest distance from peaks to all points 3 dB below: Larger than measurement grid
 Ratio of SAR at M2 to SAR at M1 = 47.1%
 Maximum value of SAR (measured) = 0.301 W/kg



Test Laboratory: JYTSZ

Date: 01.18.2023

DUT: Mobile Phone; Type: CK8n; Serial: 3#

Communication System: UID 0, NR (0); Frequency: 2546.01 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 2546.01$ MHz; $\sigma = 1.865$ S/m; $\epsilon_r = 37.999$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY5 Configuration:

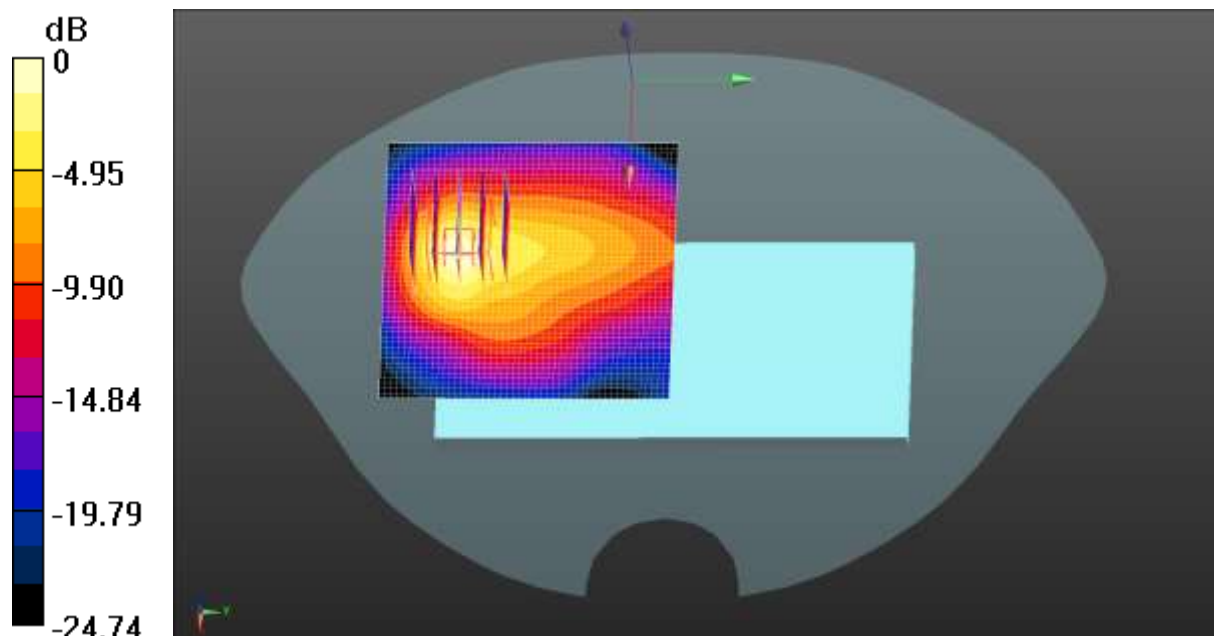
- Probe: EX3DV4 - SN3924; ConvF(7.35, 7.35, 7.35) @ 2546.01 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

NR n41 50%RB(100MHz) Body Back/Low Channel/Area Scan (51x51x1):

Interpolated grid: dx=1.200 mm, dy=1.200 mm
 Maximum value of SAR (interpolated) = 1.08 W/kg

NR n41 50%RB(100MHz) Body Back/Low Channel/Zoom Scan (5x5x7)/Cube

0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
 Reference Value = 4.404 V/m; Power Drift = 0.03 dB
 Peak SAR (extrapolated) = 1.53 W/kg
SAR(1 g) = 0.701 W/kg; SAR(10 g) = 0.318 W/kg
 Smallest distance from peaks to all points 3 dB below = 10.7 mm
 Ratio of SAR at M2 to SAR at M1 = 46.6%
 Maximum value of SAR (measured) = 1.21 W/kg



0 dB = 1.21 W/kg = 0.83 dBW/kg

Test Laboratory: JYTSZ

Date: 01.14.2023

DUT: Mobile Phone; Type: CK8n; Serial: 3#

Communication System: UID 0, NR (0); Frequency: 1730 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 1730 \text{ MHz}$; $\sigma = 1.332 \text{ S/m}$; $\epsilon_r = 38.724$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

DASY5 Configuration:

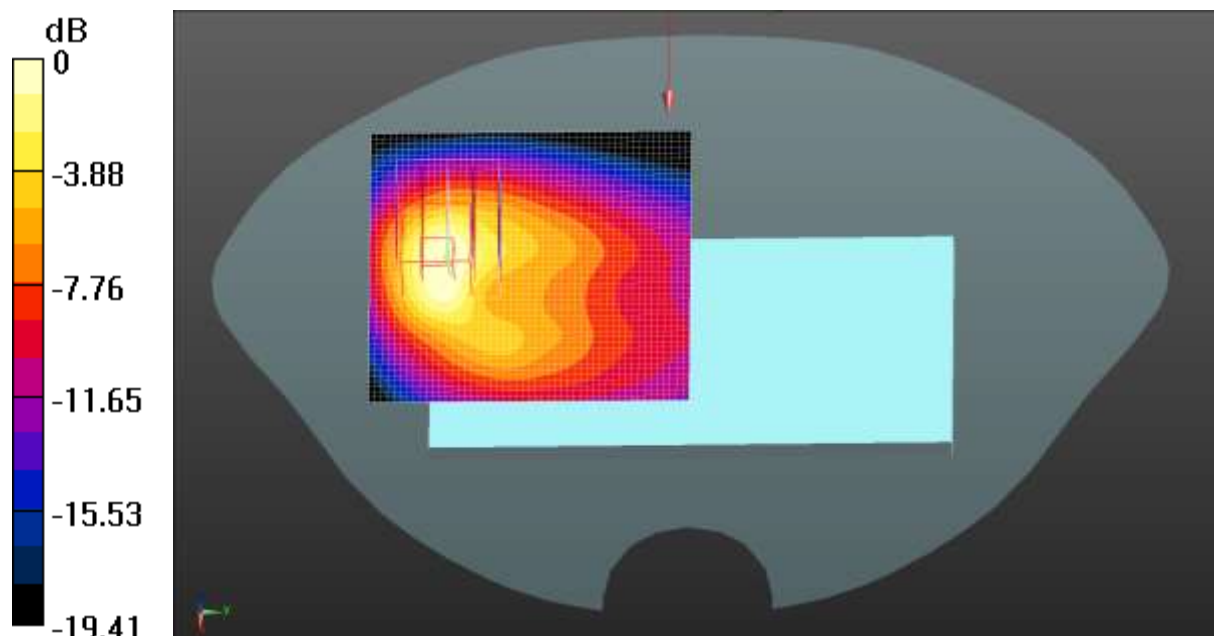
- Probe: EX3DV4 - SN3924; ConvF(8.38, 8.38, 8.38) @ 1730 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

NR n66 50%RB(40MHz) Body Back/Low Channel/Area Scan (51x51x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.283 W/kg

NR n66 50%RB(40MHz) Body Back/Low Channel/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 4.508 V/m; Power Drift = -0.06 dB
 Peak SAR (extrapolated) = 0.353 W/kg
SAR(1 g) = 0.192 W/kg; SAR(10 g) = 0.099 W/kg
 Smallest distance from peaks to all points 3 dB below = 9.6 mm
 Ratio of SAR at M2 to SAR at M1 = 55.3%
 Maximum value of SAR (measured) = 0.279 W/kg



0 dB = 0.279 W/kg = -5.54 dBW/kg

Test Laboratory: JYTSZ

Date: 02.02.2023

DUT: Mobile Phone; Type: CK8n; Serial: 3#

Communication System: UID 0, NR (0); Frequency: 3500.01 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 3500.01$ MHz; $\sigma = 3.207$ S/m; $\epsilon_r = 36.888$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY5 Configuration:

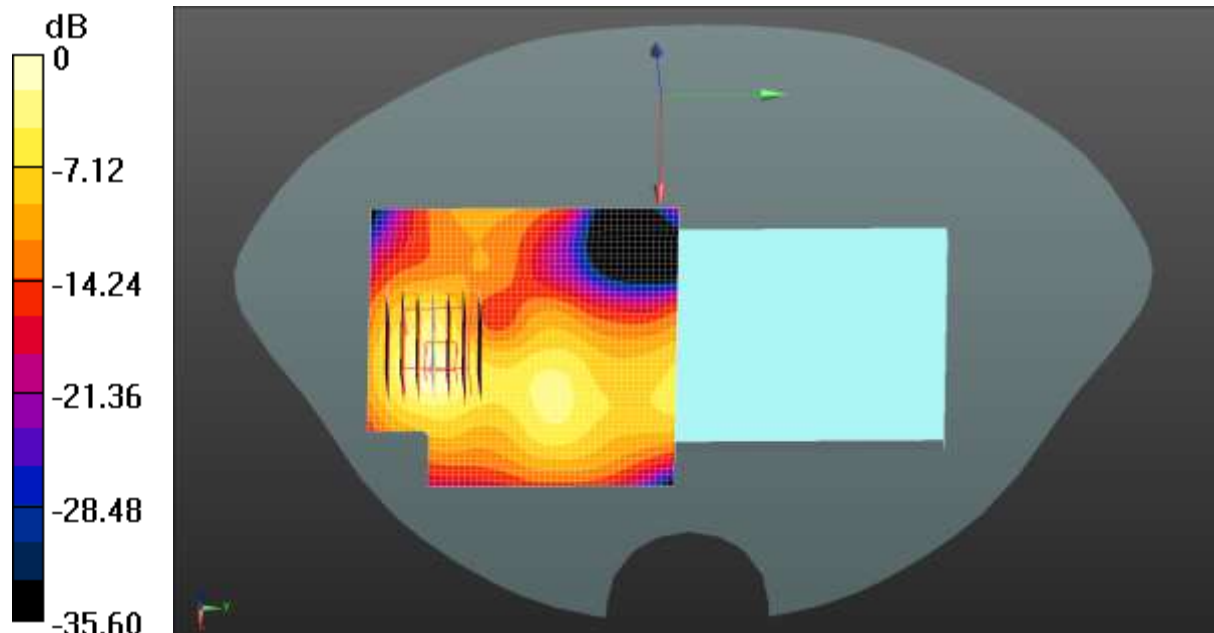
- Probe: EX3DV4 - SN3924; ConvF(6.62, 6.62, 6.62) @ 3500.01 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

NR n77(3500) 50%RB(100MHz) Body Back/Middle Channel/Area Scan

(51x51x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
 Maximum value of SAR (interpolated) = 0.029 W/kg

NR n77(3500) 50%RB(100MHz) Body Back/Middle Channel/Zoom Scan

(7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=4mm
 Reference Value = 0 V/m; Power Drift = 0.20 dB
 Peak SAR (extrapolated) = 0.047 W/kg
SAR(1 g) = 0.019 W/kg; SAR(10 g) = 0.012 W/kg
 Smallest distance from peaks to all points 3 dB below = 10.6 mm
 Ratio of SAR at M2 to SAR at M1 = 40.1%
 Maximum value of SAR (measured) = 0.031 W/kg



0 dB = 0.031 W/kg = -15.1 dBW/kg

Test Laboratory: JYTSZ

Date: 02.02.2023

DUT: Mobile Phone; Type: CK8n; Serial: 3#

Communication System: UID 0, NR (0); Frequency: 3750 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 3750 \text{ MHz}$; $\sigma = 3.207 \text{ S/m}$; $\epsilon_r = 36.888$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

DASY5 Configuration:

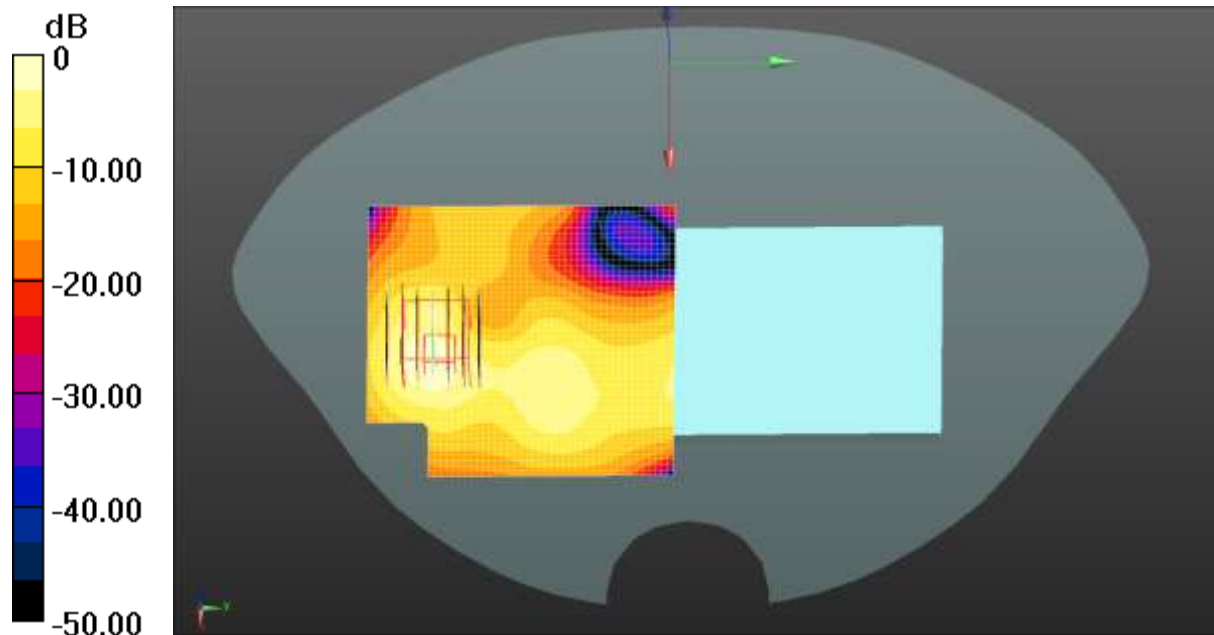
- Probe: EX3DV4 - SN3924; ConvF(6.62, 6.62, 6.62) @ 3750 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

NR n77(3840) 50%RB(100MHz) Body Back/Low Channel/Area Scan

(51x51x1): Interpolated grid: $dx=1.200 \text{ mm}$, $dy=1.200 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.287 W/kg

NR n77(3840) 50%RB(100MHz) Body Back/Low Channel/Zoom Scan

(7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=4\text{mm}$
 Reference Value = 2.227 V/m; Power Drift = -0.08 dB
 Peak SAR (extrapolated) = 0.448 W/kg
SAR(1 g) = 0.173 W/kg; SAR(10 g) = 0.064 W/kg
 Smallest distance from peaks to all points 3 dB below = 9 mm
 Ratio of SAR at M2 to SAR at M1 = 38.2%
 Maximum value of SAR (measured) = 0.322 W/kg



0 dB = 0.322 W/kg = -4.92 dBW/kg

Test Laboratory: JYTSZ

Date: 01.18.2023

DUT: Mobile Phone; Type: CK8n; Serial: 3#

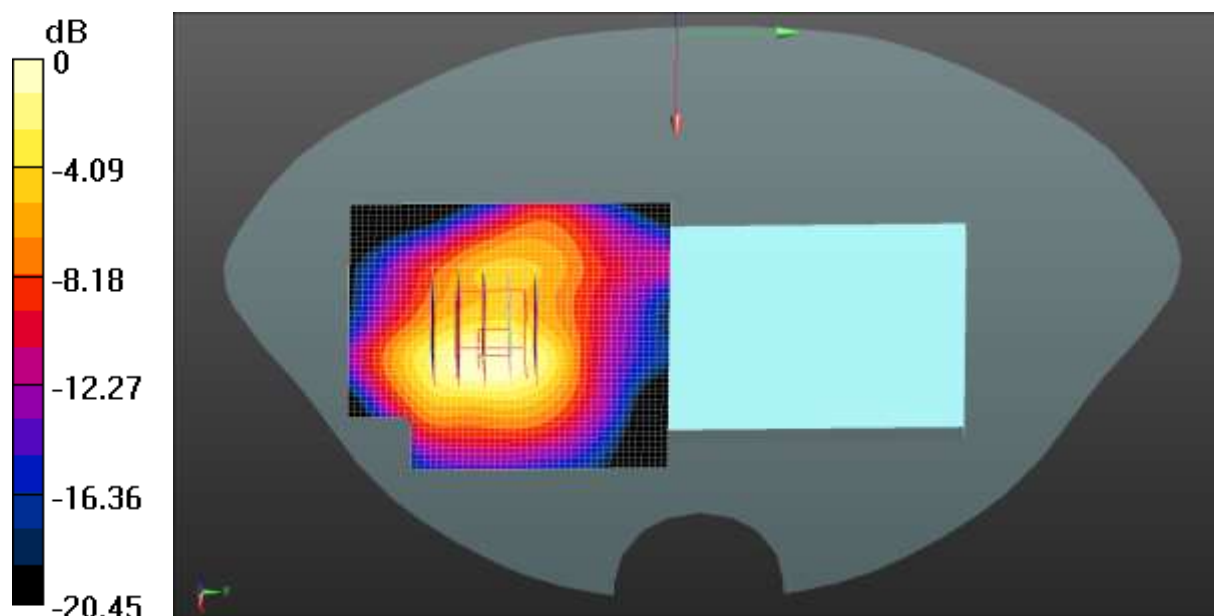
Communication System: UID 0, IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps) (0);
 Frequency: 2412 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 2412 \text{ MHz}$; $\sigma = 1.713 \text{ S/m}$; $\epsilon_r = 38.014$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(7.74, 7.74, 7.74) @ 2412 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

2.4GWIFI Body Back/Low Channel/Area Scan (51x51x1): Interpolated grid:
 $dx=1.200 \text{ mm}$, $dy=1.200 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.100 W/kg

2.4GWIFI Body Back/Low Channel/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$
 Reference Value = 0 V/m; Power Drift = 0.00 dB
 Peak SAR (extrapolated) = 0.124 W/kg
SAR(1 g) = 0.067 W/kg; SAR(10 g) = 0.035 W/kg
 Smallest distance from peaks to all points 3 dB below = 11.2 mm
 Ratio of SAR at M2 to SAR at M1 = 59.9%
 Maximum value of SAR (measured) = 0.0990 W/kg



0 dB = 0.0990 W/kg = -10.04 dBW/kg

Test Laboratory: JYTSZ

Date: 01.26.2023

DUT: Mobile Phone; Type: CK8n; Serial: 3#

Communication System: UID 0, IEEE 802.11a WiFi 5GHz (0); Frequency: 5240 MHz;Duty Cycle: 1:1

Medium parameters used: $f = 5240 \text{ MHz}$; $\sigma = 4.758 \text{ S/m}$; $\epsilon_r = 36.563$; $\rho = 1000 \text{ kg/m}^3$
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(5.35, 5.35, 5.35) @ 5240 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

5.2GWIFI Body Back/Middle Channel/Area Scan (51x51x1): Interpolated grid:

$dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Maximum value of SAR (interpolated) = 0.149 W/kg

5.2GWIFI Body Back/Middle Channel/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 0 V/m; Power Drift = 0.00 dB

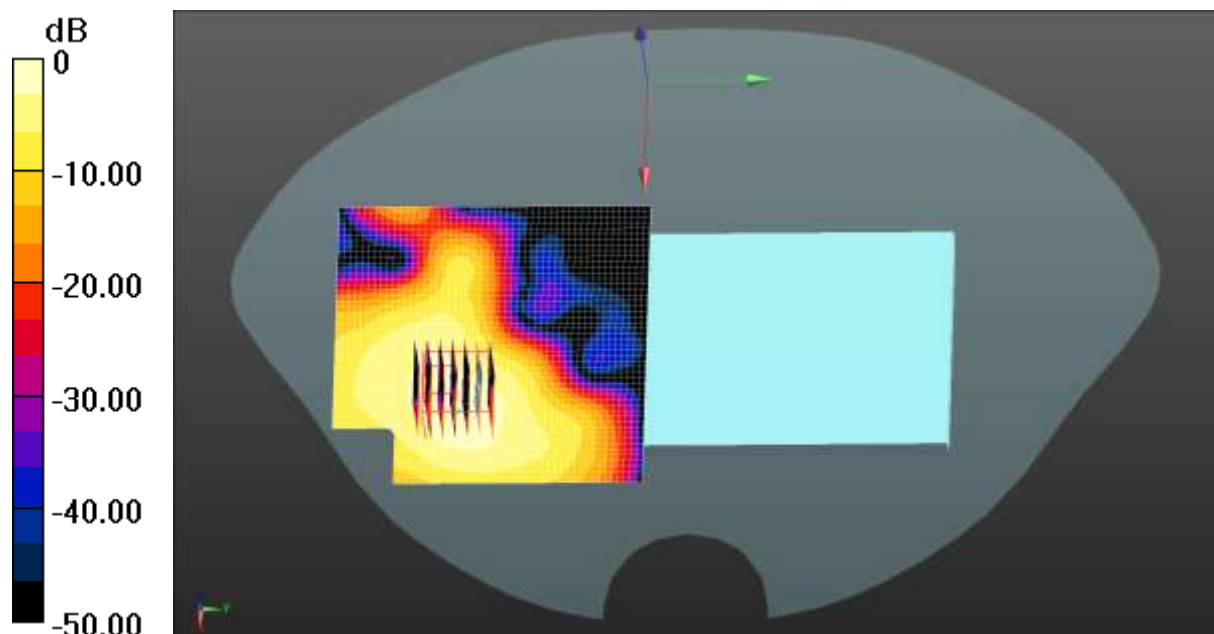
Peak SAR (extrapolated) = 0.602 W/kg

SAR(1 g) = 0.050 W/kg; SAR(10 g) = 0.016 W/kg

Smallest distance from peaks to all points 3 dB below = 3.3 mm

Ratio of SAR at M2 to SAR at M1 = 17.5%

Maximum value of SAR (measured) = 0.173 W/kg



0 dB = 0.173 W/kg = -7.62 dBW/kg

Test Laboratory: JYTSZ

Date: 01.26.2023

DUT: Mobile Phone; Type: CK8n; Serial: 3#

Communication System: UID 0, IEEE 802.11a WiFi 5GHz (0); Frequency: 5825 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 5825 \text{ MHz}$; $\sigma = 5.424 \text{ S/m}$; $\epsilon_r = 35.579$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(5.04, 5.04, 5.04) @ 5825 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

5.8GWIFI Body Back/High Channel/Area Scan (51x51x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Maximum value of SAR (interpolated) = 0.350 W/kg

5.8GWIFI Body Back/High Channel/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 0 V/m; Power Drift = 0.00 dB

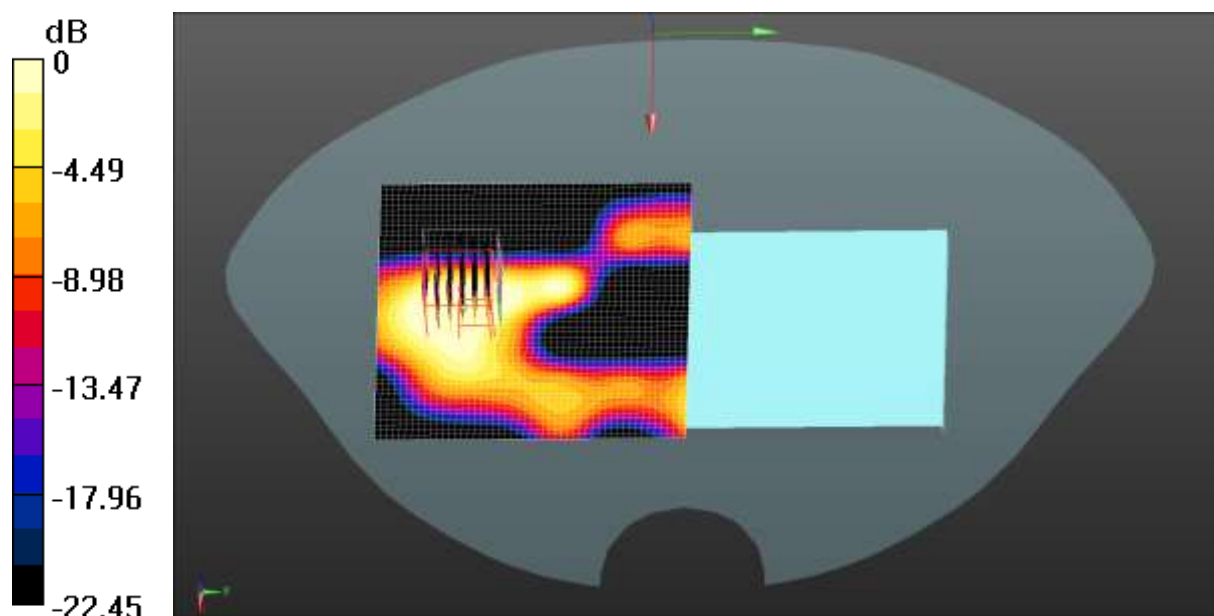
Peak SAR (extrapolated) = 0.534 W/kg

SAR(1 g) = 0.076 W/kg; SAR(10 g) = 0.022 W/kg

Smallest distance from peaks to all points 3 dB below = 1.8 mm

Ratio of SAR at M2 to SAR at M1 = 49.5%

Maximum value of SAR (measured) = 0.149 W/kg



0 dB = 0.149 W/kg = -8.27 dBW/kg

Test Laboratory: JYTSZ

Date: 01.18.2023

DUT: Mobile Phone; Type: CK8n; Serial: 3#

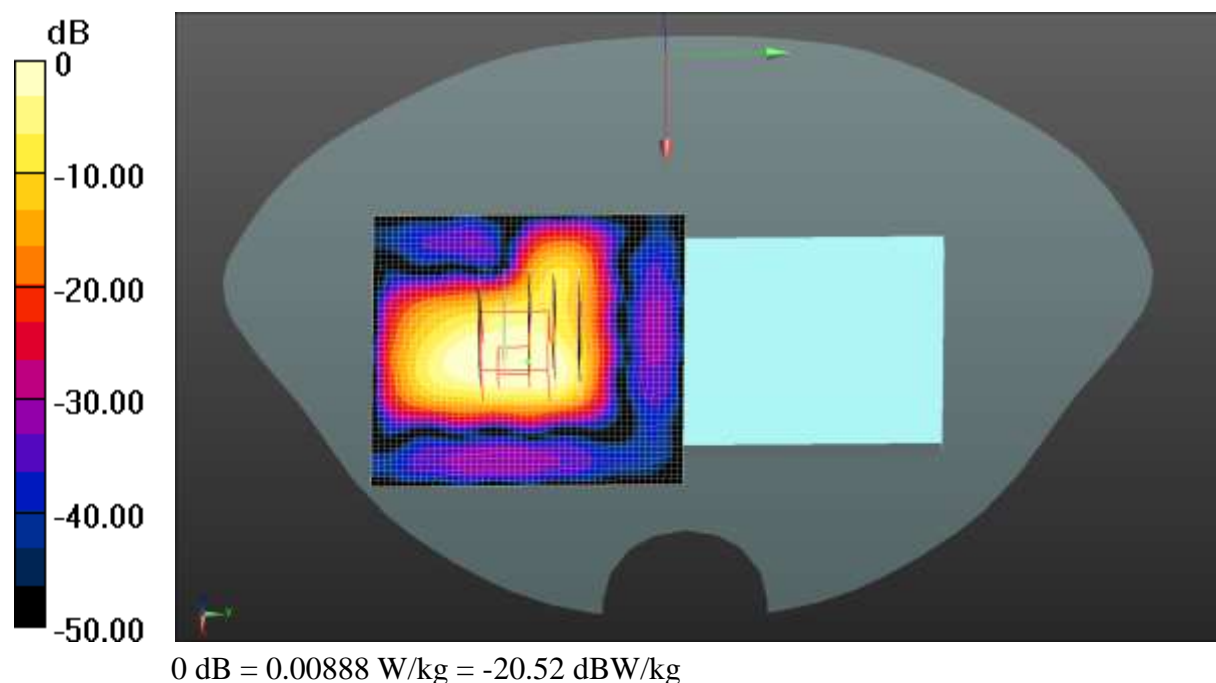
Communication System: UID 0, Bluetooth (0); Frequency: 2441 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 2441$ MHz; $\sigma = 1.718$ S/m; $\epsilon_r = 38.008$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(7.6, 7.6, 7.6) @ 2441 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

BT Body Back/Middle Channel/Area Scan (51x51x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.0206 W/kg

BT Body Back/Middle Channel/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 0.0200 W/kg
SAR(1 g) = 0.00702 W/kg; SAR(10 g) = 0.00233 W/kg
Smallest distance from peaks to all points 3 dB below: Larger than measurement grid
Ratio of SAR at M2 to SAR at M1 = 40.7%
Maximum value of SAR (measured) = 0.00888 W/kg



Test Laboratory: JYTSZ

Date: 01.14.2023

DUT: Mobile Phone; Type: CK8n; Serial: 3#

Communication System: UID 0, GPRS(4 Slots) (0); Frequency: 1909.8 MHz;Duty Cycle: 1:1.99986

Medium parameters used: $f = 1909.8$ MHz; $\sigma = 1.371$ S/m; $\epsilon_r = 38.962$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(8.05, 8.05, 8.05) @ 1909.8 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

GPRS 1900 4Slots Body Top/High Channel/Area Scan (31x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.558 W/kg

GPRS 1900 4Slots Body Top/High Channel/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 18.80 V/m; Power Drift = 0.01 dB

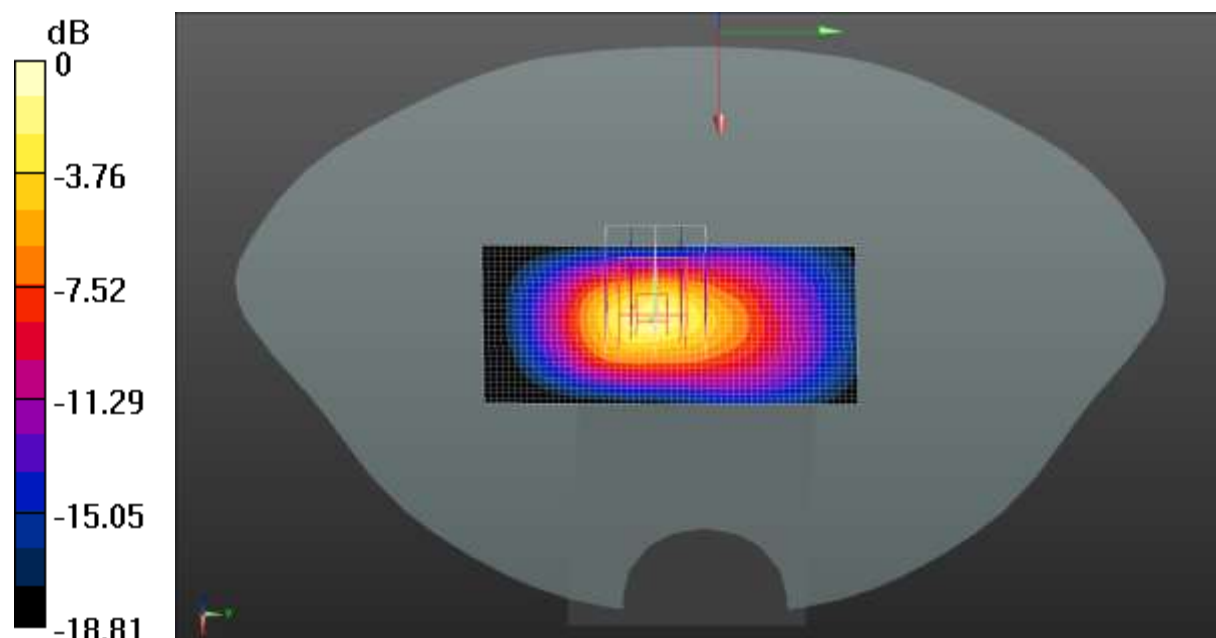
Peak SAR (extrapolated) = 0.983 W/kg

SAR(1 g) = 0.520 W/kg; SAR(10 g) = 0.257 W/kg

Smallest distance from peaks to all points 3 dB below = 9.3 mm

Ratio of SAR at M2 to SAR at M1 = 55.4%

Maximum value of SAR (measured) = 0.789 W/kg



0 dB = 0.789 W/kg = -1.03 dBW/kg

Test Laboratory: JYTSZ

Date: 01.14.2023

DUT: Mobile Phone; Type: CK8n; Serial: 3#

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

Medium parameters used (interpolated): $f = 1907.6 \text{ MHz}$; $\sigma = 1.37 \text{ S/m}$; $\epsilon_r = 38.965$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(8.05, 8.05, 8.05) @ 1907.6 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

WCDMA 1900 Body Top/Middle Channel/Area Scan (31x61x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 0.247 W/kg

WCDMA 1900 Body Top/Middle Channel/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 12.84 V/m; Power Drift = 0.20 dB

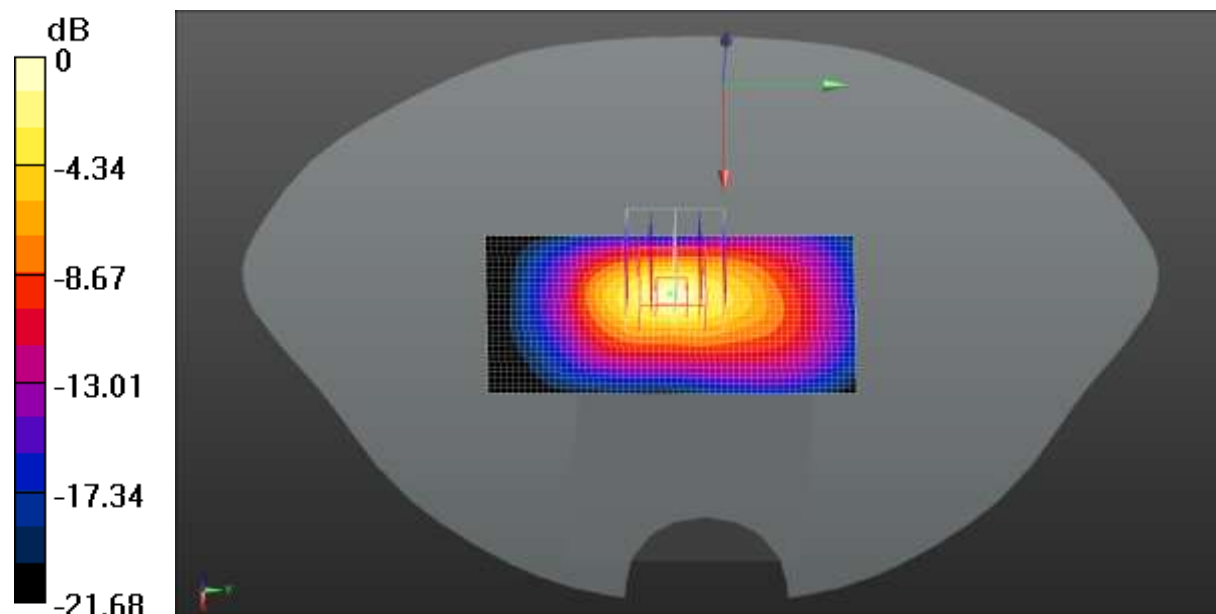
Peak SAR (extrapolated) = 0.398 W/kg

SAR(1 g) = 0.199 W/kg; SAR(10 g) = 0.094 W/kg

Smallest distance from peaks to all points 3 dB below = 8 mm

Ratio of SAR at M2 to SAR at M1 = 53.1%

Maximum value of SAR (measured) = 0.289 W/kg



0 dB = 0.289 W/kg = -5.39 dBW/kg

Test Laboratory: JYTSZ

Date: 01.14.2023

DUT: Mobile Phone; Type: CK8n; Serial: 3#

Communication System: UID 0, UMTS-FDD(WCDMA) (0); Frequency: 1732.6 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 1732.6$ MHz; $\sigma = 1.327$ S/m; $\epsilon_r = 38.746$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(8.38, 8.38, 8.38) @ 1732.6 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

WCDMA 1700 Body Top/Middle Channel/Area Scan (31x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.402 W/kg

WCDMA 1700 Body Top/Middle Channel/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 17.39 V/m; Power Drift = 0.12 dB

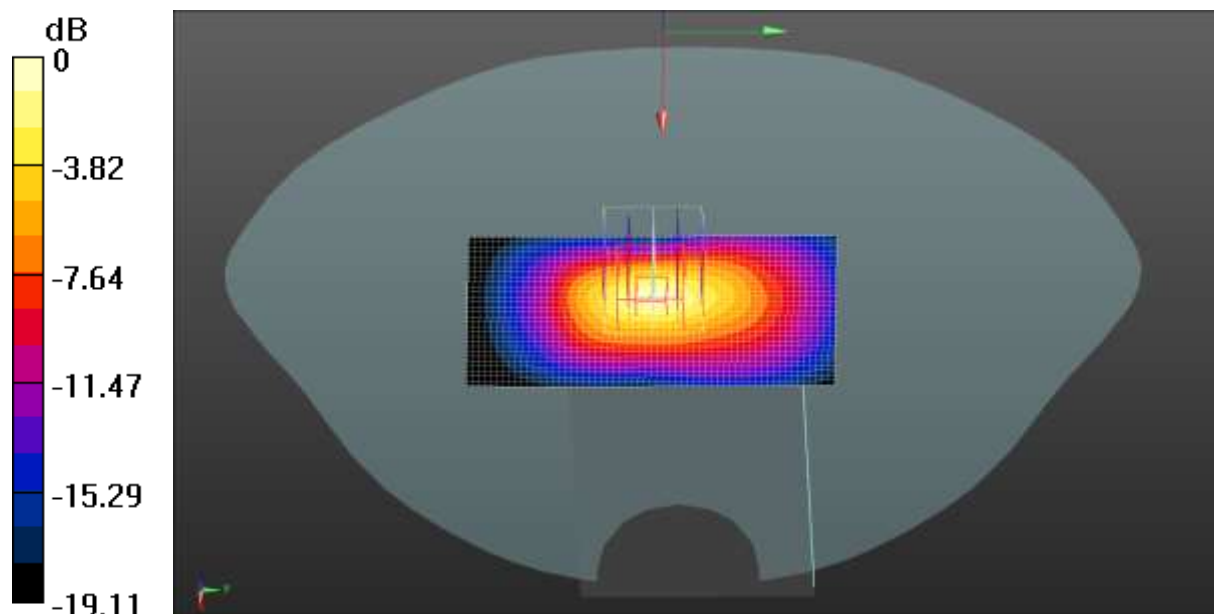
Peak SAR (extrapolated) = 0.663 W/kg

SAR(1 g) = 0.338 W/kg; SAR(10 g) = 0.166 W/kg

Smallest distance from peaks to all points 3 dB below = 8 mm

Ratio of SAR at M2 to SAR at M1 = 56.3%

Maximum value of SAR (measured) = 0.466 W/kg



0 dB = 0.466 W/kg = -3.32 dBW/kg

Test Laboratory: JYTSZ

Date: 01.14.2023

DUT: Mobile Phone; Type: CK8n; Serial: 3#

Communication System: UID 0, LTE-Fdd(USA) 1RB QPSK (0); Frequency: 1900 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1900 \text{ MHz}$; $\sigma = 1.365 \text{ S/m}$; $\epsilon_r = 38.977$; $\rho = 1000 \text{ kg/m}^3$
Phantom section: Flat Section

DASY5 Configuration:

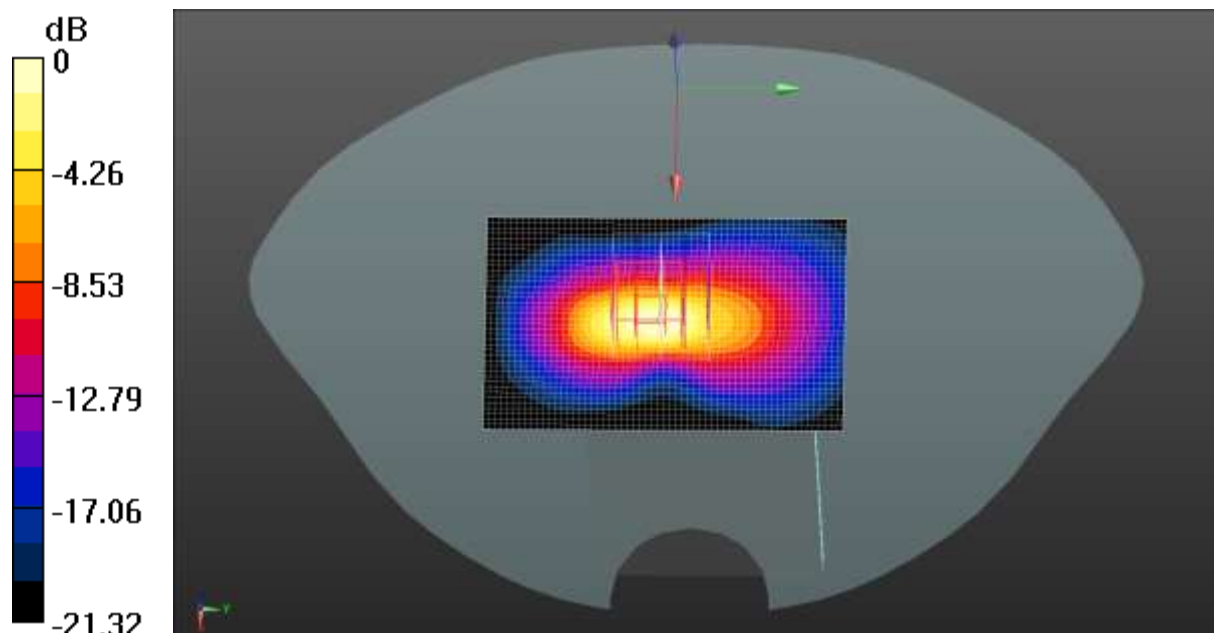
- Probe: EX3DV4 - SN3924; ConvF(8.05, 8.05, 8.05) @ 1900 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

LTE Band 2 1RB(20MHz) Body Top/High Channel/Area Scan (41x61x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
Maximum value of SAR (interpolated) = 0.363 W/kg

LTE Band 2 1RB(20MHz) Body Top/High Channel/Zoom Scan (5x5x7)/Cube

0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
Reference Value = 13.52 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.475 W/kg
SAR(1 g) = 0.246 W/kg; SAR(10 g) = 0.119 W/kg
Smallest distance from peaks to all points 3 dB below = 8.2 mm
Ratio of SAR at M2 to SAR at M1 = 55.2%
Maximum value of SAR (measured) = 0.367 W/kg



0 dB = 0.367 W/kg = -4.35 dBW/kg

Test Laboratory: JYTSZ

Date: 01.14.2023

DUT: Mobile Phone; Type: CK8n; Serial: 3#

Communication System: UID 0, LTE-Fdd(USA) 1RB QPSK (0); Frequency: 1745 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 1745 \text{ MHz}$; $\sigma = 1.332 \text{ S/m}$; $\epsilon_r = 38.724$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(8.38, 8.38, 8.38) @ 1745 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

LTE Band 66 1RB(20MHz) Body Top/Middle Channel/Area Scan (41x61x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 0.552 W/kg

LTE Band 66 1RB(20MHz) Body Top/Middle Channel/Zoom Scan

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

Reference Value = 17.31 V/m; Power Drift = 0.00 dB

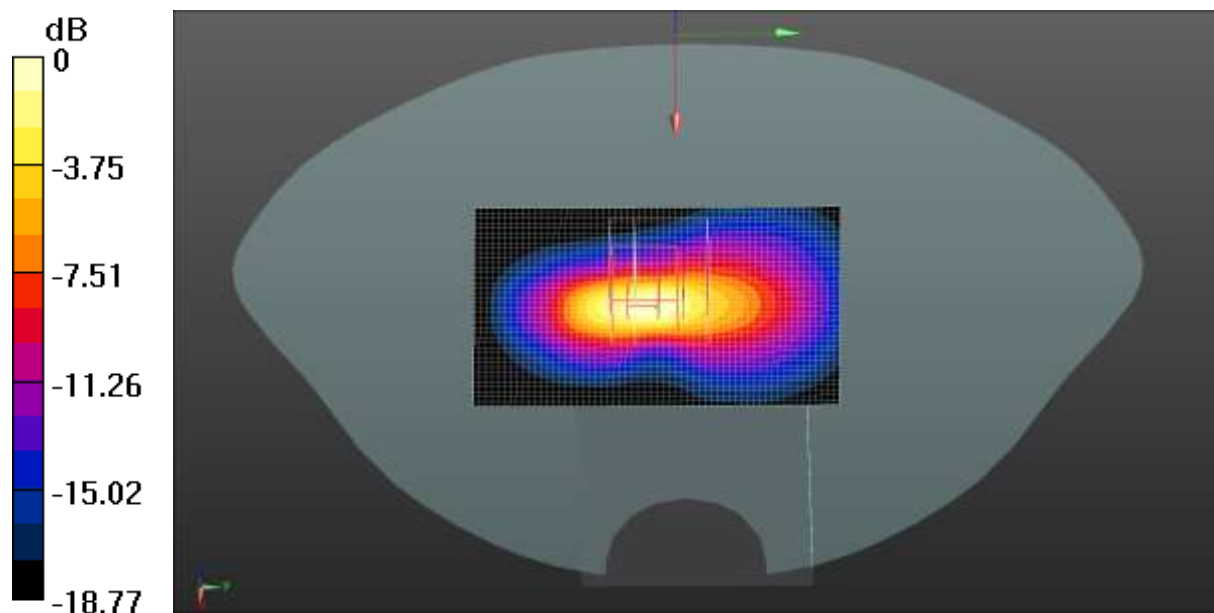
Peak SAR (extrapolated) = 0.709 W/kg

SAR(1 g) = 0.372 W/kg; SAR(10 g) = 0.186 W/kg

Smallest distance from peaks to all points 3 dB below = 8 mm

Ratio of SAR at M2 to SAR at M1 = 54.8%

Maximum value of SAR (measured) = 0.570 W/kg



0 dB = 0.570 W/kg = -2.44 dBW/kg

Test Laboratory: JYTSZ

Date: 01.14.2023

DUT: Mobile Phone; Type: CK8n; Serial: 3#

Communication System: UID 0, NR (0); Frequency: 1730 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 1730$ MHz; $\sigma = 1.332$ S/m; $\epsilon_r = 38.724$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY5 Configuration:

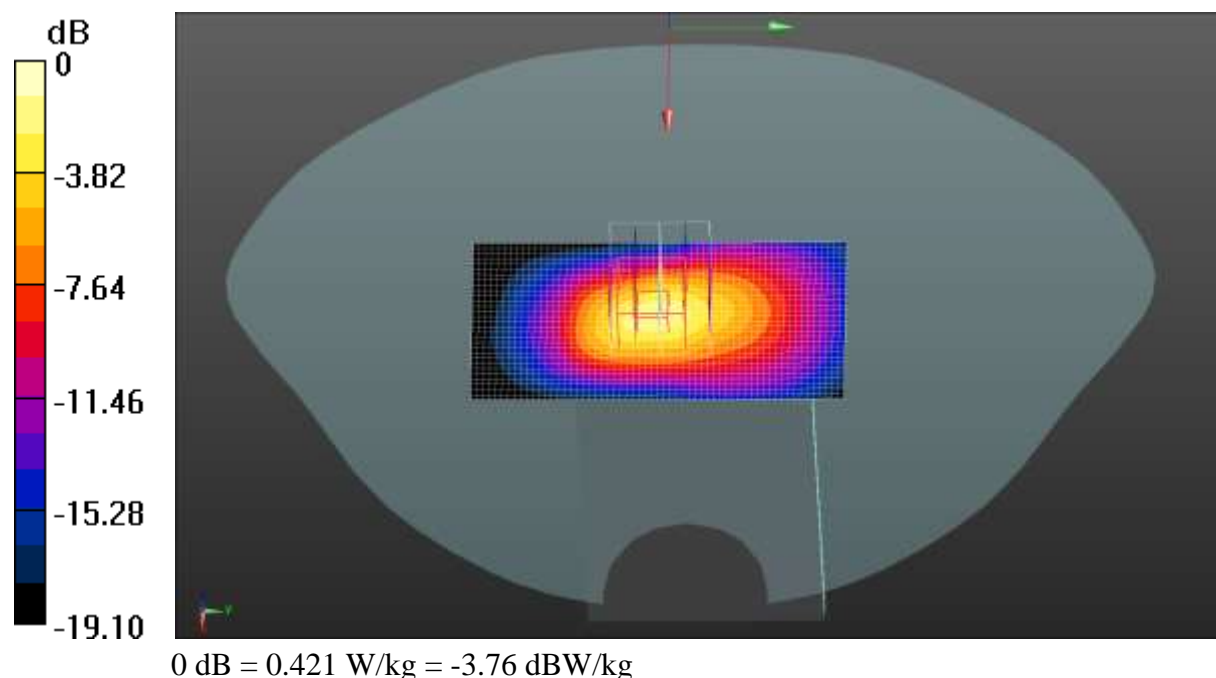
- Probe: EX3DV4 - SN3924; ConvF(8.38, 8.38, 8.38) @ 1730 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

NR n66 50%RB(40MHz) Body Top/Low Channel/Area Scan (31x61x1):

Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm
Maximum value of SAR (interpolated) = 0.297 W/kg

NR n66 50%RB(40MHz) Body Top/Low Channel/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm
Reference Value = 15.96 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 0.552 W/kg
SAR(1 g) = 0.282 W/kg; SAR(10 g) = 0.137 W/kg
Smallest distance from peaks to all points 3 dB below = 8 mm
Ratio of SAR at M2 to SAR at M1 = 54.5%
Maximum value of SAR (measured) = 0.421 W/kg



Test Laboratory: JYTSZ

Date: 02.02.2023

DUT: Mobile Phone; Type: CK8n; Serial: 3#

Communication System: UID 0, NR (0); Frequency: 3750 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 3750$ MHz; $\sigma = 3.207$ S/m; $\epsilon_r = 36.888$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY5 Configuration:

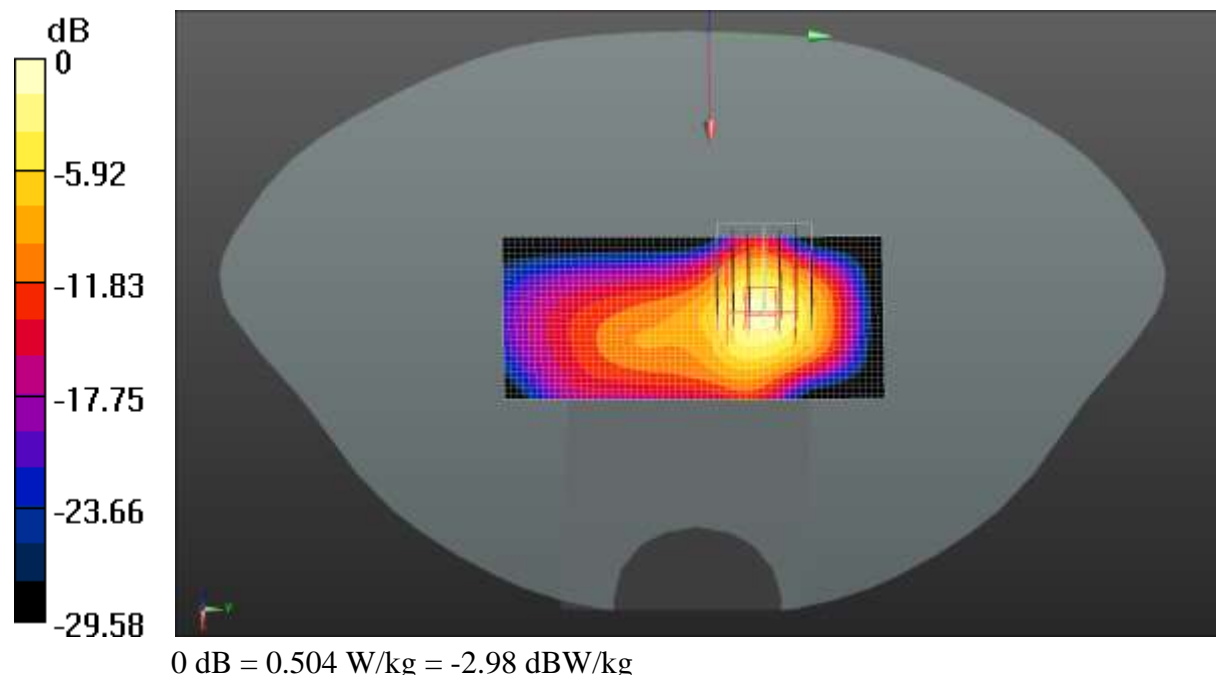
- Probe: EX3DV4 - SN3924; ConvF(6.62, 6.62, 6.62) @ 3750 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

NR n77(3840) 50%RB(100MHz) Body Top/Low Channel/Area Scan (31x61x1):

Interpolated grid: $dx=1.200$ mm, $dy=1.200$ mm
Maximum value of SAR (interpolated) = 0.404 W/kg

NR n77(3840) 50%RB(100MHz) Body Top/Low Channel/Zoom Scan

(7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=4$ mm
Reference Value = 4.969 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 0.683 W/kg
SAR(1 g) = 0.258 W/kg; SAR(10 g) = 0.096 W/kg
Smallest distance from peaks to all points 3 dB below = 8.9 mm
Ratio of SAR at M2 to SAR at M1 = 37.4%
Maximum value of SAR (measured) = 0.504 W/kg



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