

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.: AD11

Trade mark: TECNO

FCC ID: 2ADYY-AD11

Applicable standards: FCC 47 CFR Part 2.1093

Date of Test: 15 Apr., 2023 ~ 14 May, 2023

Test Result: Maximum Reported 1-g SAR (W/kg)
Head: 1.145 Body: 1.440 Hotspot: 1.440

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.

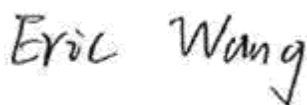
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2 Version

Version No.	Date	Description
00	26 Jun., 2023	Original
01	29 Jun., 2023	Updated on Page 10,58

Tested by:



Date:

29 Jun., 2023

Test Engineer

Reviewed by:



Date:

29 Jun., 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	0.055	PCE	1.145
	PCS 1900	0.691		
	WCDMA Band II	0.622		
	WCDMA Band IV	1.125		
	WCDMA Band V	0.094		
	LTE Band 2	0.975		
	LTE Band 5	0.071		
	LTE Band 7	1.030		
	LTE Band 12 & Band 17	0.068		
	LTE Band 41 & Band 38	0.796		
	LTE Band 66 & Band 4	0.792		
	NR n5	0.075		
	NR n7	0.973		
	NR n12	0.048		
	NR n41 &n38	0.751		
	NR n66	0.392		
	NR n77 (3450MHz~3550MHz) &n78 (3450MHz~3550MHz)	0.793		
	NRn77 (3700MHz~3980MHz) &n78 (3700MHz~3800MHz)	1.145		
WLAN 2.4 GHz	0.150	DTS	1.440	
Bluetooth	0.017	DSS		
WLAN 5.2 GHz	0.220	NII		
WLAN 5.8 GHz	0.219			
Body	GSM 850	1.440	PCE	1.440
	PCS 1900	0.558		
	WCDMA Band II	0.183		
	WCDMA Band IV	0.385		
	WCDMA Band V	0.654		
	LTE Band 2	0.179		
	LTE Band 5	0.716		
	LTE Band 7	0.215		
	LTE Band 12 & Band 17	0.574		
	LTE Band 41 & Band 38	0.183		
	LTE Band 66 & Band 4	0.290		
	NR n5	0.539		
	NR n7	0.389		
	NR n12	0.655		
	NR n41 &n38	0.421		

	NR n66	0.173		
	NR n77 (3450MHz~3550MHz) &n78 (3450MHz~3550MHz)	0.198		
	NRn77 (3700MHz~3980MHz) &n78 (3700MHz~3800MHz)	0.169		
	WLAN 2.4 GHz	0.129		
	Bluetooth	0.008		
	WLAN 5.2 GHz	0.248		
	WLAN 5.8 GHz	0.343		
Hotspot	GSM 850	1.440	PCE	1.440
	PCS 1900	1.122		
	WCDMA Band II	0.335		
	WCDMA Band IV	0.662		
	WCDMA Band V	0.654		
	LTE Band 2	0.338		
	LTE Band 5	0.716		
	LTE Band 7	0.536		
	LTE Band 12 & Band 17	0.574		
	LTE Band 41 & Band 38	0.306		
	LTE Band 66 & Band 4	0.635		
	NR n5	0.539		
	NR n7	0.682		
	NR n12	0.655		
	NR n41 &n38	0.493		
	NR n66	0.322		
	NR n77 (3450MHz~3550MHz) &n78 (3450MHz~3550MHz)	0.198		
	NRn77 (3700MHz~3980MHz) &n78 (3700MHz~3800MHz)	0.212		
	WLAN 2.4 GHz	0.186		
	Bluetooth	0.008		
	WLAN 5.2 GHz	0.384		
	WLAN 5.8 GHz	0.343		

<Highest Reported simultaneous SAR Summary>

Exposure Position	Frequency Band	Reported 1-g SAR (W/kg)	Equipment Class	Highest Reported Simultaneous Transmission 1-g SAR (W/kg)
Back	GSM 850	1.440	PCE	1.557
	5GWiFi MIMO	0.116	NII	
	NFC	0.00	DXX	

Note:

1. The highest simultaneous transmission is scalar summation of Reported standalone SAR per FCC KDB 690783 D01 v01r03, and

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scalar SAR summation of all possible simultaneous transmission scenarios are $< 1.6\text{W/kg}$.

2. This device is compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits (1.6 W/kg) specified in FCC 47 CFR part 2 (2.1093) and ANSI/IEEE C95.1-2005, and had been tested in accordance with the measurement methods and procedures specified in IEC/IEEE 62209-1528.
3. For FDD-LTE Band 17 is full covered by FDD-LTE Band 12, so only FDD-LTE Band 12 was tested.
4. For TDD-LTE Band 38 is full covered by TDD-LTE Band 41,so only TDD-LTE Band 41 was tested.
5. For FDD-LTE Band 4 is full covered by FDD-LTE Band 66, so only FDD-LTE Band 66 was tested.
6. For NR n38 is full covered by NR n41, so only NR n41 was tested.
7. For 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 of Applicant:	FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE 19-25 SHAN MEI STREET FOTAN NT HONGKONG
Manufacturer:	TECNO MOBILE LIMITED
Address of Manufacturer:	FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE 19-25 SHAN MEI STREET FOTAN NT HONGKONG
Factory	SHENZHEN TECNO TECHNOLOGY CO.,LTD.
Address of Factory:	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.:	AD11		
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: 3300MHz~4200MHz	n78: 3300MHz~3800MHz
	Wi-Fi:	2412MHz~2462MHz	5150MHz-5250MHz
		5725MHz-5850MHz	
	Bluetooth: 2402 MHz ~ 2480 MHz		
	NFC : 13.56MHz		
Network Mode:	LTE CA:	CA_B7C, CA_B41C, CA_B41D, CA_B38C, CA_B7A_B7A, CA_B2A_B7A, CA_B7A_B5A, CA_B41A_B41A (LTE CA only supports downlink)	
	SA:	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_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, DC_7A-7A_n78A, DC_2A-7A_n78A, DC_5A-7A_n78A, DC_2A-7C_n78A (LTE Band 7C and 41C only supports downlink)	

Modulation technology:	GSM:	☒ Voice(GMSK)	☒ GPRS(GMSK)	☒ EGPRS(GMSK, 8PSK)	
	WCDMA:	☒ RMC(QPSK)	☒ HSUPA(QPSK)	☒ HSDPA(QPSK, 16QAM)	
	LTE:	☒ QPSK	☒ 16QAM	☒ 64QAM	
	5G NR:	☒ CP-OFDM(QPSK, 16QAM, 64QAM, 256QAM)			
		☒ DFT-s-OFDM($\pi/2$ -BPSK, QPSK, 16QAM, 64QAM, 256QAM)			
	Wi-Fi:	☒ 802.11b(DSSS)		☒ 802.11a/g/n/ac/ax (OFDM)	
	Bluetooth:	☒ BDR(GFSK)	☒ EDR($\pi/4$ -DQPSK, 8DPSK)	☒ LE(GFSK)	
NFC :	ASK				
Antenna Type:	Internal Antenna				
Antenna Gain:	Open Mode: GSM 850:-7.2 dBi; PCS 1900: -1.8dBi WCDMA Band II: -1.8dBi; WCDMA Band V: -7.2dBi WCDMA Band IV: -1.4dBi LTE Band 2: -1.8dBi; LTE Band 4: -1.4dBi LTE Band 5: -7.2dBi; LTE Band 7: ANT7:-0.98dBi ANT3:-0.74dBi LTE Band 12 -2.1dBi; LTE Band 17: -2.1dBi LTE Band 38: ANT7:-0.98dBi ANT3:-0.74dBi LTE Band 41: ANT7:-0.98dBi ANT3:-0.74dBi LTE Band 66: ANT7:--1.4dBi ANT3:-4.4dBi n5: -7.2dBi; n7: -0.98dBi n12: -2.1dBi; n38: -0.98dBi ; n41: -0.98dBi n66: -1.4dBi; n77: -3.0dBi ; n78: -3.0dBi Bluetooth: -0.3dBi; 2.4G Wi-Fi: ANT9:-1.9dBi; ANT6:-0.3dBi; 5G Wi-Fi: ANT 1:0.48dBi ANT 10:-0.22dBi				
	Closed Mode: GSM 850: -10dBi; PCS 1900: -1.9dBi WCDMA Band II: -1.9dBi; WCDMA Band V: -10dBi WCDMA Band IV: -3.8dBi LTE Band 2: -1.8dBi; LTE Band 4: -3.8dBi LTE Band 5: -7.2dBi; LTE Band 7: ANT7:-1.5dBi ANT3:-2.05dBi LTE Band 12 -8.5dBi; LTE Band 17: -8.5dBi LTE Band 38: ANT7:-1.5dBi ANT3:-2.05dBi LTE Band 41: ANT7:-1.5dBi ANT3:-2.05dBi LTE Band 66: ANT7:-3.8dBi ANT3:-6.8dBi				

	n5: -10dBi; n7: -1.5dBi n12: -8.5dBi; n38: -1.5dBi ; n41:-1.5 dBi n66: --3.8dBi; n77: -0.1dBi ; n78: -0.1dBi Bluetooth: -2.0dBi; 2.4G Wi-Fi: ANT9:-2.0dBi; ANT6:-1.8dBi; 5G Wi-Fi: ANT 1:0.26dBi ANT 10:-0.22dBi	
(E)GPRS Class:	(E)GPRS Class: 12	
Dimensions (L*W*H):	Open mode:171 mm (L)× 74 mm (W)× 7mm (H) Closed mode:89 mm (L)× 74 mm (W)× 15 mm (H)	
Accessories information:	Adapter: Model: U450TSA Input: AC100-240V, 50/60Hz, 0.18A Output: DC 5.0V, 2.0A or 11.0V, 4.1AMAX	Battery: Rechargeable Li-ion Polymer Battery DC3.89V, 1165mAh & Rechargeable Li-ion Polymer Battery DC3.89V, 2735mAh
		Headset: Support(shipped without)

5.3 Maximum RF Output Power

ANT 4:

Mode	Average Power (dBm)
	GSM 850
GSM (Voice)	33.11
GPRS (1 TX Slot)	33.09
GPRS (2 TX Slots)	32.14
GPRS (3 TX Slots)	30.15
GPRS (4 TX Slots)	29.46
EGPRS (1 TX Slot)	27.09
EGPRS (2 TX Slots)	26.05
EGPRS (3 TX Slots)	23.81
EGPRS (4 TX Slots)	22.66

Mode	Average Power (dBm)
	WCDMA Band V
AMR 12.2 kbps	23.30
RMC 12.2 kbps	23.31
HSDPA Sub-test 1	22.35
HSDPA Sub-test 2	21.86
HSDPA Sub-test 3	21.90
HSDPA Sub-test 4	21.86
HSUPA Sub-test 1	20.32
HSUPA Sub-test 2	20.85
HSUPA Sub-test 3	21.34
HSUPA Sub-test 4	20.38
HSUPA Sub-test 5	22.35

Mode	Average Power (dBm)	
	LTE Band 5	LTE Band 12
BW/1.4 MHz	23.55	23.28
BW/3.0 MHz	23.50	23.34
BW/5.0 MHz	23.71	23.50
BW/10 MHz	23.49	23.34
BW/15 MHz	/	/
BW/20 MHz	/	/

Mode	Average Power (dBm)	
	NR Band n5	NR Band n12
BW/10MHz	22.13	24.49
BW/15MHz	21.91	24.49
BW/20MHz	22.45	/
BW/30MHz	/	/
BW/40MHz	/	/
BW/50MHz	/	/
BW/60MHz	/	/
BW/80MHz	/	/
BW/90MHz	/	/
BW/100MHz	/	/

ANT 7:

Mode	Average Power (dBm)
	GSM 1900
GSM (Voice)	29.64
GPRS (1 TX Slot)	29.71
GPRS (2 TX Slots)	28.85
GPRS (3 TX Slots)	26.92
GPRS (4 TX Slots)	25.86
EGPRS (1 TX Slot)	27.14
EGPRS (2 TX Slots)	26.14
EGPRS (3 TX Slots)	24.12
EGPRS (4 TX Slots)	22.82

Mode	Average Power (dBm)	
	WCDMA Band II	WCDMA Band IV
AMR 12.2 kbps	23.16	22.60
RMC 12.2 kbps	23.15	22.66
HSDPA Sub-test 1	22.13	21.65
HSDPA Sub-test 2	21.57	21.16
HSDPA Sub-test 3	21.62	21.23
HSDPA Sub-test 4	21.62	21.16
HSUPA Sub-test 1	19.97	19.84
HSUPA Sub-test 2	20.54	20.36
HSUPA Sub-test 3	21.03	20.66
HSUPA Sub-test 4	20.05	19.85
HSUPA Sub-test 5	22.03	21.68

Mode	Average Power (dBm)			
	LTE Band 2	LTE Band 7	LTE Band 41	LTE Band 66
BW/1.4 MHz	22.83	/	/	23.91
BW/3.0 MHz	22.83	/	/	23.93
BW/5.0 MHz	23.14	22.65	25.06	24.11
BW/10 MHz	23.05	22.61	24.99	24.01
BW/15 MHz	23.09	22.61	25.11	24.02
BW/20 MHz	23.19	22.70	24.91	24.12

Mode	Average Power (dBm)				
	NR n7	NR n41	NR n66	NR n77 3450-3550	NR n77 3700-3980
BW/10MHz	23.33	26.31	20.24	26.34	25.91
BW/15MHz	23.24	26.22	20.18	26.32	25.93
BW/20MHz	23.27	26.30	20.25	26.34	25.97
BW/30MHz	/	26.31	/	26.37	25.91
BW/40MHz	/	26.29	20.26	26.36	25.96
BW/50MHz	/	26.31	/	26.46	25.98
BW/60MHz	/	26.32	/	26.38	25.90
BW/80MHz	/	26.30	/	26.41	25.91
BW/90MHz	/	26.20	/	26.22	25.85
BW/100MHz	/	26.18	/	26.16	25.79

ANT 9

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	16.48	13.62	13.15	13.05	10.36	10.51

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	2.89	2.42	2.82	2.14	2.22	2.19	2.14

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	16.57	13.48	13.04	12.97	10.45	10.61

ANT 1

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	12.69	13.35	12.77	12.60	11.77	10.96	10.33	14.52	14.17

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	12.27	13.19	12.53	12.26	11.54	11.16	10.33	13.76	13.32

ANT 10

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	12.44	11.95	11.89	11.49	10.20	9.74	9.33	12.86	12.89

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	12.49	12.11	11.35	11.28	10.78	9.94	9.31	12.95	12.10

NFC Band Average Power (dBm)	
Mode/Band	ASK
NFC	-41.13

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.
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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

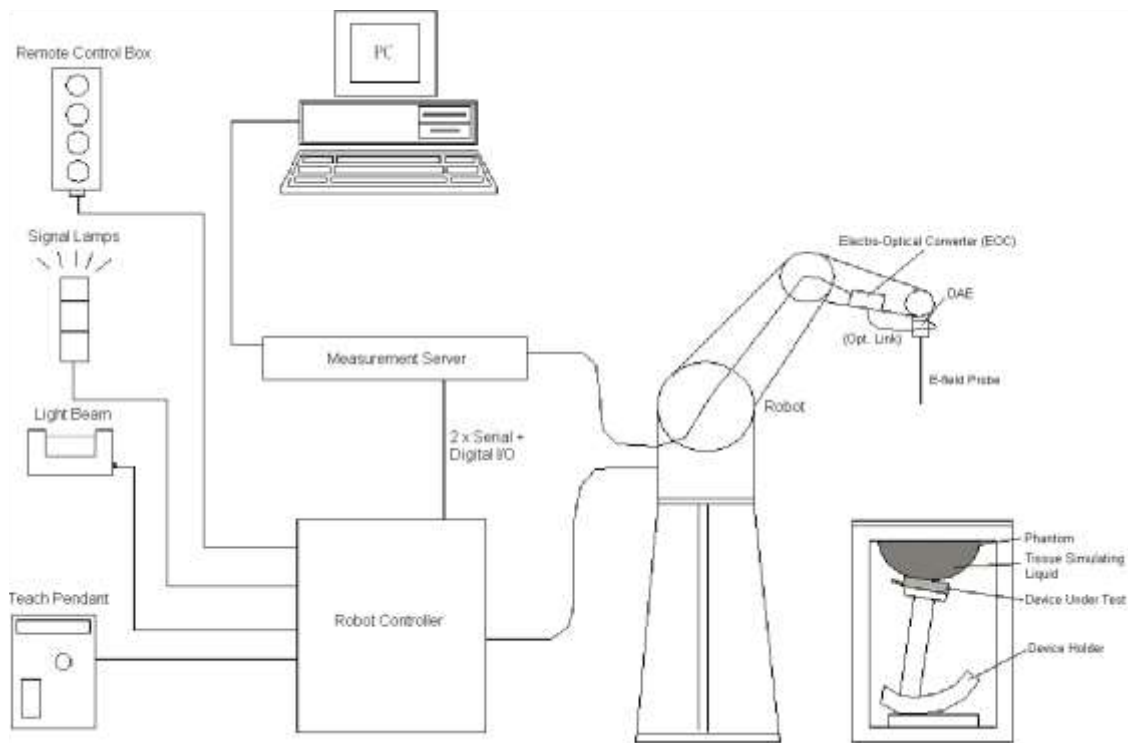


Fig. 8.1 SPEAG DASY System Configurations

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 μ W/g to 100 mW/g; Linearity: ± 0.2 dB (noise: typically < 1 μ W/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 $\pm 10\%$. 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
Filling Volume Dimensions	Approx. 25 liters Length: 1000mm; Width: 500mm; Height: adjustable feet
Measurement Areas	Left Head, Right Head, Flat phantom



Fig. 8.7 Photo of SAM Twin 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

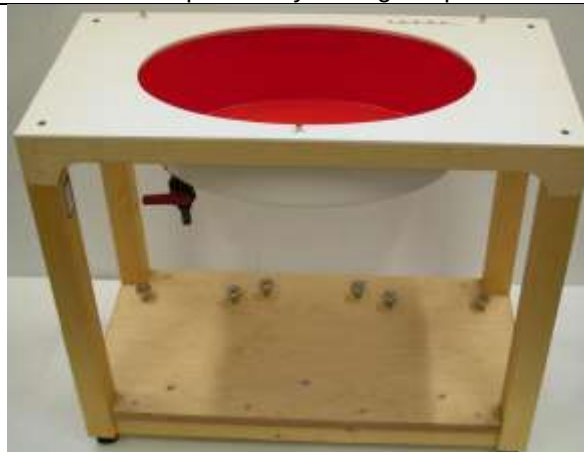


Fig.8.8 Photo of ELI4 Phantom

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	$\text{Norm}_i, a_{i0}, a_{i1}, a_{i2}$
	- 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:

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

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

With V_i = compensated signal of channel i, (i = x, y, z)
 Norm_i = sensor sensitivity of channel i, (i = x, y, z), $\mu\text{V}/(\text{V/m})^2$
 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	01.10.2023	01.09.2025
R&S	Universal Radio Communication Tester	CMU200	WXJ008-2	03.30.2022	03.29.2024
KEYSIGHT	Network Analyzer	E5071C	WXJ091	01.10.2023	01.09.2024
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:

- The calibration certificate of DASY can be referred to appendix C of this report.
- 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.
- The Insertion Loss calibration of Dual Directional Coupler and Attenuator were characterized via the network analyzer and compensated during system check.
- 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.
- 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.

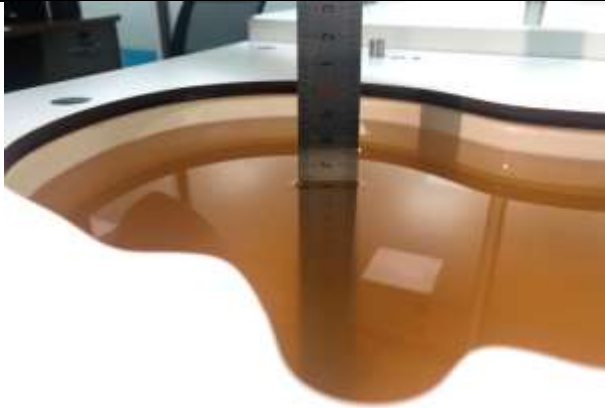


Fig. 9.1 Photo of Liquid Height for Head SAR

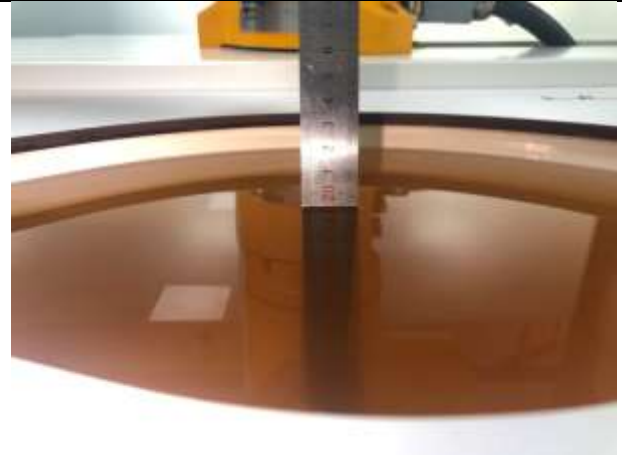


Fig. 9.2 Photo of Liquid Height for Body SAR

The relative permittivity and conductivity of the tissue material should be within $\pm 5\%$ 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	21.1	0.88	42.34	0.89	41.90	-1.12	1.06	±5	04.15.2023
835	21.1	0.91	42.11	0.90	41.50	1.11	1.47	±5	04.15.2023
1750	21.5	1.35	40.62	1.37	40.10	-1.46	1.30	±5	04.23.2023
1900	21.5	1.35	40.88	1.40	40.00	-3.57	2.20	±5	04.23.2023
2450	21.2	1.74	39.90	1.80	39.20	-3.33	1.78	±5	04.30.2023
2600	21.2	1.91	39.90	1.96	39.00	-2.55	2.30	±5	04.30.2023
3500	21.4	2.85	39.29	2.91	37.90	-2.06	3.67	±5	05.07.2023
3700	21.4	3.03	38.99	3.12	37.70	-2.88	3.42	±5	05.07.2023
3900	21.4	3.23	38.95	3.32	37.50	-2.71	3.87	±5	05.07.2023
5200	21.1	4.70	36.80	4.67	35.74	0.64	2.97	±5	05.14.2023
5800	21.1	5.39	36.36	5.27	35.30	2.28	3.00	±5	05.14.2023

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:

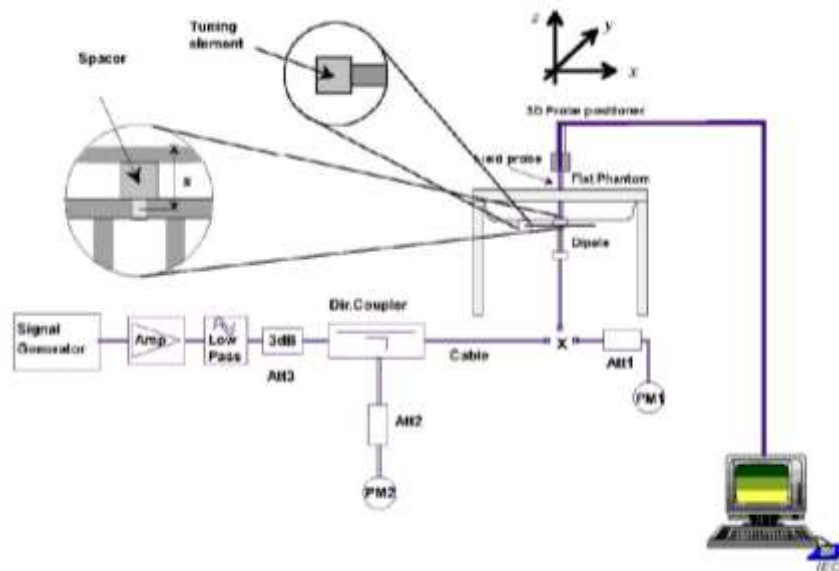


Fig.10.1 System Verification Setup Diagram

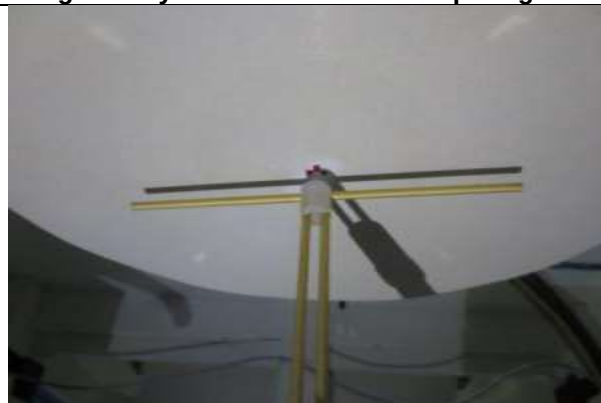


Fig.10.2 Photo of Dipole setup

➤ **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 (%)
04.15.2023	750	80	0.676	8.45	8.37	0.96
04.15.2023	835	80	0.759	9.49	9.6	-1.15
04.23.2023	1750	40	1.450	36.25	36.4	-0.41
04.23.2023	1900	40	1.560	39.00	39.9	-2.26
04.30.2023	2450	40	2.020	50.50	53.4	-5.43
04.30.2023	2600	40	2.180	54.50	55.3	-1.45
05.07.2023	3500	40	2.560	64.00	65.6	-2.44
05.07.2023	3700	40	2.590	64.75	66.1	-2.04
05.07.2023	3900	40	2.760	69.00	69.9	-1.29
05.14.2023	5200	40	3.080	77.00	79.10	-2.65
05.14.2023	5800	40	3.120	78.00	80.90	-3.58

11 EUT Testing Position

This EUT was tested in sixteen different positions. They are right cheek/right tilted/left cheek/left tilted for head, Front/Back/Left Side/Right Side/Top Side/Bottom Side of the open EUT with phantom 10 mm gap, Front/Back/Left Side/Right Side/Top Side/Bottom Side of the closed EUT with phantom 5 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

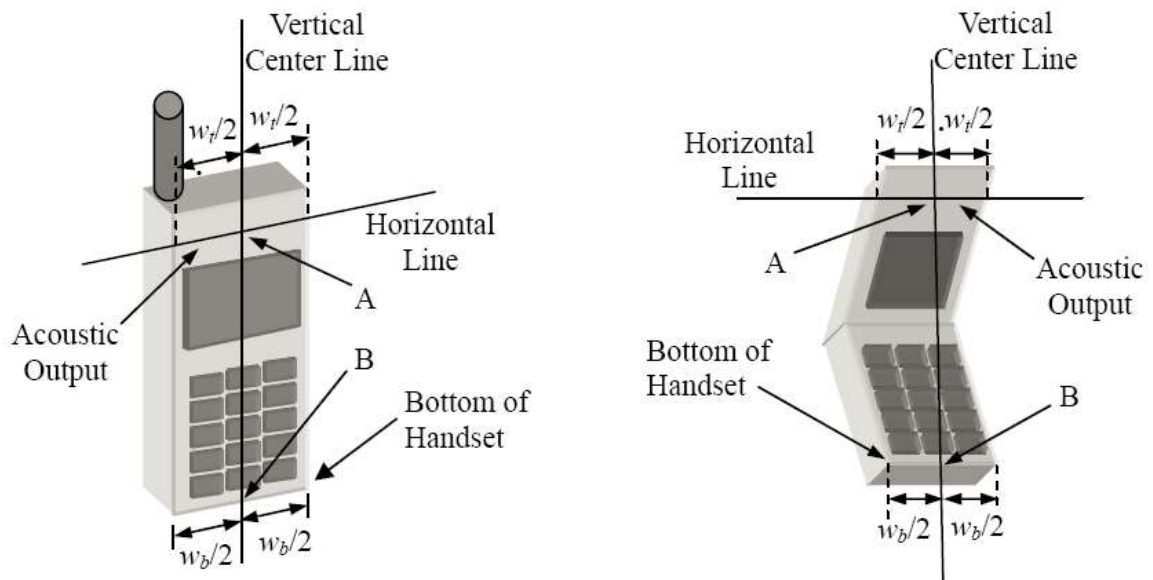


Fig. 11.2 Illustration for Handset Vertical and Horizontal Reference Lines

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.

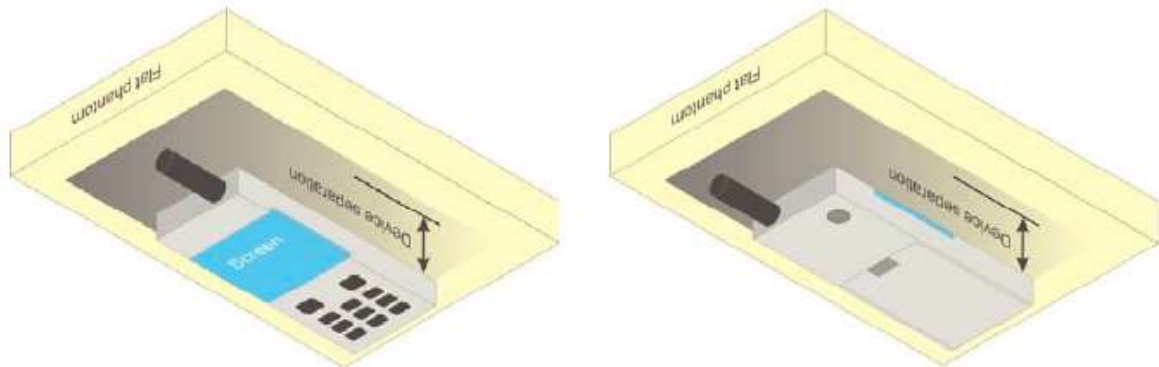


Fig.11.5 Illustration for Body Worn Position

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.

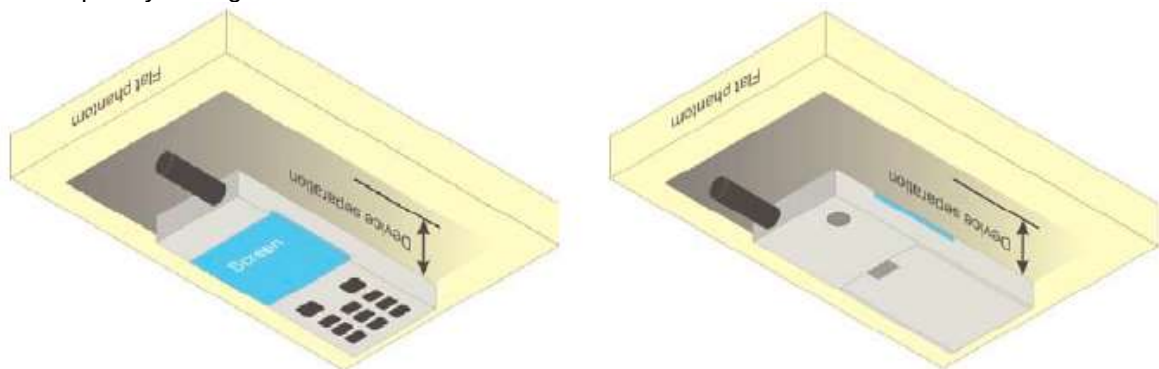


Fig.11.6 Illustration for Hotspot Position

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: Δx_{Area} , Δy_{Area}			≤ 2 GHz: ≤ 15 mm 2 – 3 GHz: ≤ 12 mm	3 – 4 GHz: ≤ 12 mm 4 – 6 GHz: ≤ 10 mm
			When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be $\leq$ 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: Δx_{Zoom} , Δy_{Zoom}			≤ 2 GHz: ≤ 8 mm 2 – 3 GHz: ≤ 5 mm*	3 – 4 GHz: ≤ 5 mm* 4 – 6 GHz: ≤ 4 mm*
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{Zoom}(n)$		≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm
	graded grid	$\Delta z_{Zoom}(1)$: between 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
Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details.				
* When zoom scan is required and the <u>reported</u> SAR from the <u>area scan based 1-g SAR estimation</u> procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.				

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 scan combines and subsequently superposes these measurement data to calculate the multiband SAR.

12.5 SAR Averaged Methods

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

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

12.6 Power Drift Monitoring

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

13 Conducted RF Output Power

The detailed conducted power table can refer to JYTSZ-R14-2300043 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.
5. The EUT do not support DTM and VoIP function.

13.2 GSM 1900 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 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.
5. The EUT do not support DTM and VoIP function.

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: Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 8 \Leftrightarrow A_{hs} = \beta_{hs}/\beta_c = 30/15 \Leftrightarrow \beta_{hs} = 30/15 * \beta_c$
 Note 2: CM = 1 for $\beta_c/\beta_d = 12/15$, $\beta_{hs}/\beta_c = 24/15$.
 Note 3: For subtest 2 the β_c/β_d ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 11/15$ and $\beta_d = 15/15$.

HSDPA Sub-test setup configuration

HSUPA Setup Configuration:

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

Table 2

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	$\beta_{hs}^{(1)}$	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: Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 8 \Leftrightarrow A_{hs} = \beta_{hs}/\beta_c = 30/15 \Leftrightarrow \beta_{hs} = 30/15 * \beta_c$.

Note 2: CM = 1 for $\beta_c/\beta_d = 12/15$, $\beta_{hs}/\beta_c = 24/15$. 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

WCDMA Conducted Power:**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

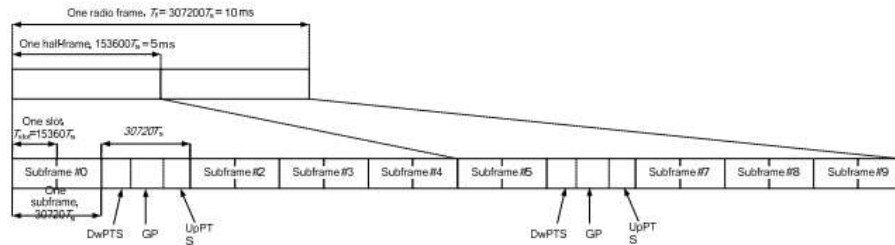


Figure 4.2-1: Frame structure type 2 (for 5 ms switch-point periodicity)

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/n38/n41/n77/n78 supports NSA; n5/n7/n12/n38/n41/n66/n77/n78 supports SA.
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:

1. SAR test of WLAN 2.4GHz is performed.
2. Per KDB 248227 D01v02r02, choose the highest output power channel to test SAR and determine further SAR exclusion.
3. 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.
4. 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.
5. 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. Per KDB 447498 D04v01 section 2.1.2: 1-mW Test Exemption, SAR test for BLE is not required.
3. The output power of all data rate were pre-scan, just the worst case 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.

13.10 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

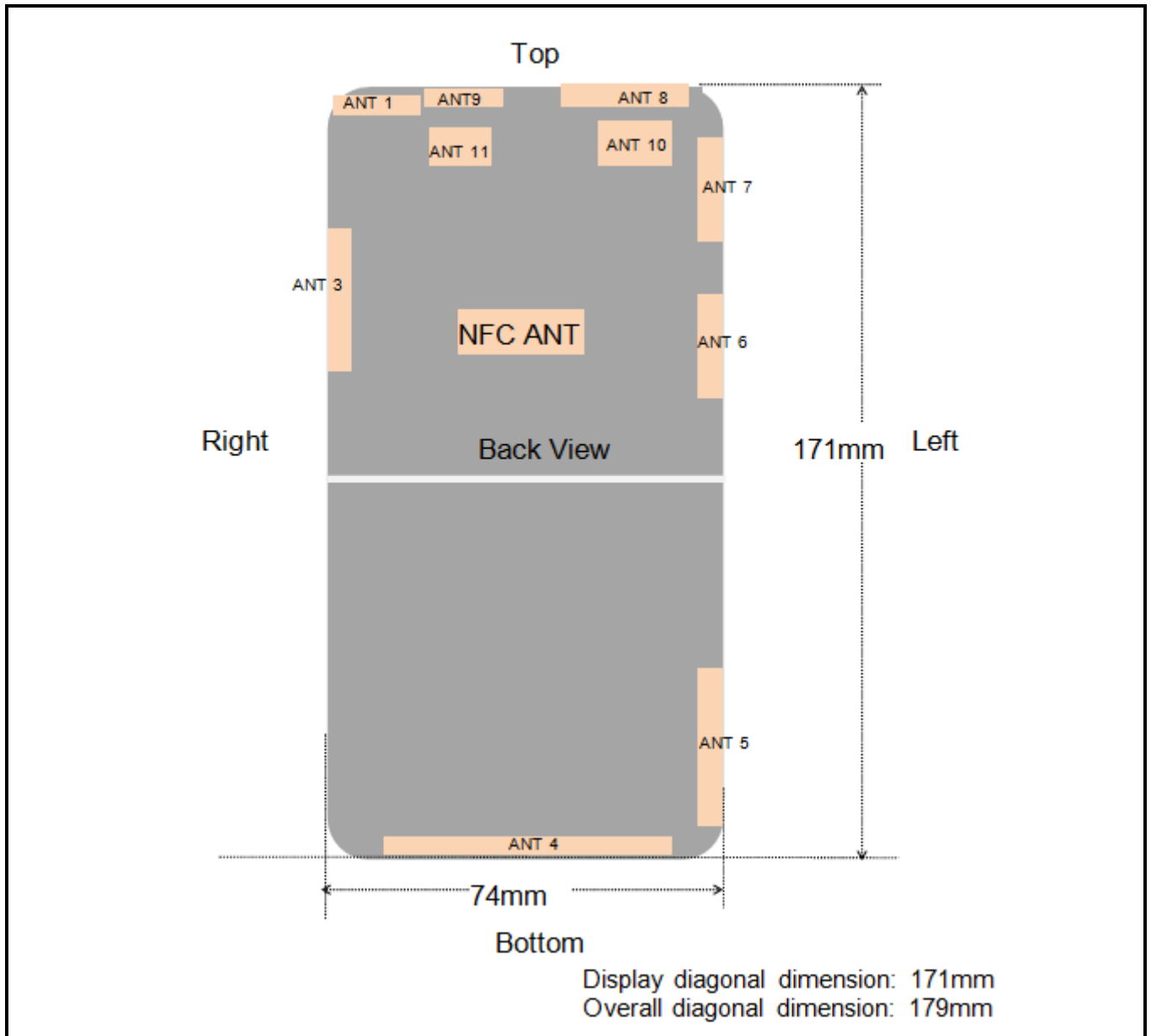


Fig.14.1 EUT Open Mode Antenna Locations

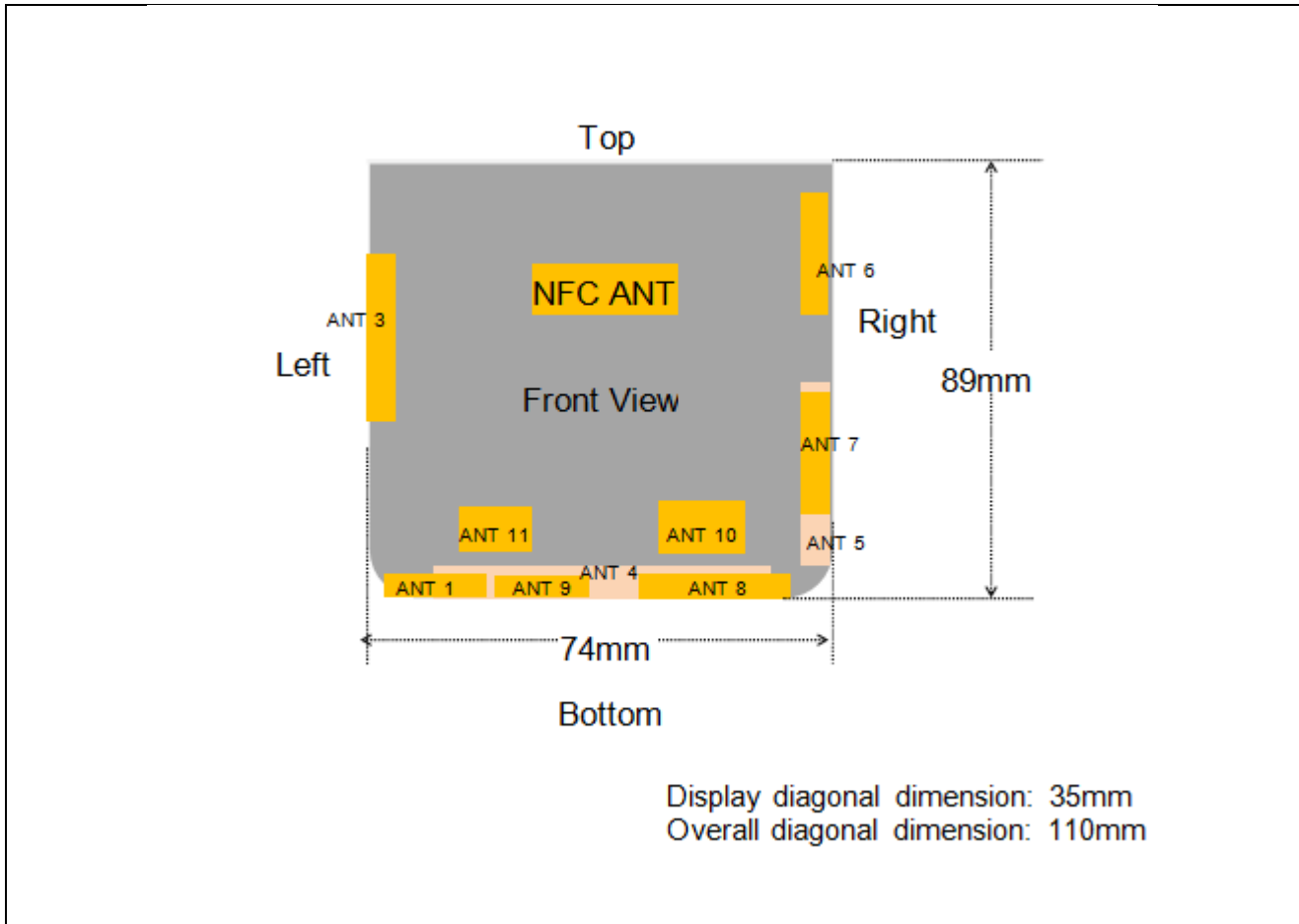


Fig.14.2 EUT Closed Mode Antenna Locations

Note:

1. ANT 1: 5GWiFi MIMO 1+GPS L5 ANT.
2. ANT 2: N77/78 DRX1 ANT.
3. ANT 3: Below 1GHz Band DRX&M/H Band MIMO 1+N41 MIMO 1 ANT.
4. ANT 4: Below 1 GHz Band PRX ANT.
5. ANT 5: MHB DRX& N41 DRX ANT.
6. ANT 6: 2.4GWiFi MIMO 2&N77/78 MIMO 1 ANT.
7. ANT 7: M/H Band PRX& N41 PRX ANT.
8. ANT 8: MHB Band MIMO 2&N41MIMO 2+N77/78PRX ANT.
9. ANT 9: BT ANT 2.4GWiFi MIMO 1+GPS L1 ANT.
10. ANT 10:5GWiFi MiMO 2 ANT.
11. ANT 11:N77/78 MIMO 2 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

EUT Open Mode Antenna Locations

Distance of Antennas to EUT edge/surface Test distance: 10mm						
Antennas	Front	Back	Left Side	Right Side	Top Side	Bottom Side
ANT 1	<25mm	<25mm	67mm	<25mm	<25mm	159mm
ANT 3	<25mm	<25mm	70mm	<25mm	<25mm	114mm
ANT 4	<25mm	<25mm	<25mm	<25mm	166mm	<25mm
ANT 6	<25mm	<25mm	<25mm	68mm	45mm	102mm
ANT 7	<25mm	<25mm	<25mm	70mm	<25mm	125mm
ANT 8	<25mm	<25mm	<25mm	46mm	<25mm	160mm
ANT 9	<25mm	<25mm	46mm	<25mm	<25mm	168mm
ANT 10	<25mm	<25mm	<25mm	45mm	<25mm	157mm

Test Positions Test distance: 10mm						
Antennas	Front	Back	Left Side	Right Side	Top Side	Bottom Side
ANT 1	Yes	Yes		Yes	Yes	
ANT 3	Yes	Yes		Yes	Yes	
ANT 4	Yes	Yes	Yes	Yes		Yes
ANT 6	Yes	Yes	Yes			
ANT 7	Yes	Yes	Yes		Yes	
ANT 8	Yes	Yes	Yes		Yes	
ANT 9	Yes	Yes		Yes	Yes	
ANT 10	Yes	Yes	Yes		Yes	

EUT Closed Mode Antenna Locations

Distance of Antennas to EUT edge/surface Test distance: 5mm						
Antennas	Front	Back	Left Side	Right Side	Top Side	Bottom Side
ANT 1	<25mm	<25mm	<25mm	67mm	76mm	<25mm
ANT 3	<25mm	<25mm	<25mm	70mm	<25mm	<25mm
ANT 4	<25mm	<25mm	<25mm	<25mm	88mm	<25mm
ANT 6	<25mm	<25mm	68mm	<25mm	<25mm	45mm
ANT 7	<25mm	<25mm	70mm	<25mm	43mm	<25mm
ANT 8	<25mm	<25mm	46mm	<25mm	77mm	<25mm
ANT 9	<25mm	<25mm	<25mm	46mm	82mm	<25mm
ANT 10	<25mm	<25mm	45mm	<25mm	73mm	<25mm

Test Positions Test distance: 5mm						
Antennas	Front	Back	Left Side	Right Side	Top Side	Bottom Side
ANT 1	Yes	Yes	Yes			Yes
ANT 3	Yes	Yes	Yes		Yes	Yes
ANT 4	Yes	Yes	Yes	Yes		Yes
ANT 6	Yes	Yes		Yes	Yes	
ANT 7	Yes	Yes		Yes		Yes
ANT 8	Yes	Yes		Yes		Yes
ANT 9	Yes	Yes	Yes			Yes
ANT 10	Yes	Yes		Yes		Yes

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 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)	Form Factor	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	4	Right Cheek	190	836.6	Open	33.11	0.07	33.5	0.050	1.094	0.055
	GSM850/Voice	4	Right Tilted	190	836.6	Open	33.11	0.03	33.5	0.027	1.094	0.030
	GSM850/Voice	4	Left Cheek	190	836.6	Open	33.11	0.01	33.5	0.039	1.094	0.043
	GSM850/Voice	4	Left Tilted	190	836.6	Open	33.11	0.15	33.5	0.020	1.094	0.022
2	PCS1900/Voice	7	Right Cheek	810	1909.8	Open	29.64	0.03	30.0	0.636	1.086	0.691
	PCS1900/Voice	7	Right Tilted	810	1909.8	Open	29.64	-0.10	30.0	0.183	1.086	0.199
	PCS1900/Voice	7	Left Cheek	810	1909.8	Open	29.64	0.02	30.0	0.346	1.086	0.376
	PCS1900/Voice	7	Left Tilted	810	1909.8	Open	29.64	-0.14	30.0	0.109	1.086	0.118
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)	Form Factor	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	7	Right Cheek	9538	1907.6	Open	23.15	0.13	23.5	0.574	1.084	0.622
	Band II/RMC	7	Right Tilted	9538	1907.6	Open	23.15	0.18	23.5	0.167	1.084	0.181
	Band II/RMC	7	Left Cheek	9538	1907.6	Open	23.15	-0.04	23.5	0.348	1.084	0.377
	Band II/RMC	7	Left Tilted	9538	1907.6	Open	23.15	0.18	23.5	0.114	1.084	0.124
	Band IV/RMC	7	Right Cheek	1413	1732.6	Open	22.66	-0.15	23.0	0.918	1.081	0.992
	Band IV/RMC	7	Right Tilted	1413	1732.6	Open	22.66	-0.06	23.0	0.275	1.081	0.297
	Band IV/RMC	7	Left Cheek	1413	1732.6	Open	22.66	-0.09	23.0	0.524	1.081	0.566
	Band IV/RMC	7	Left Tilted	1413	1732.6	Open	22.66	0.12	23.0	0.165	1.081	0.178
	Band IV/RMC	7	Right Cheek	1312	1712.4	Open	22.39	0.05	23.0	0.865	1.151	0.996
4	Band IV/RMC	7	Right Cheek	1513	1752.6	Open	22.53	0.05	23.0	1.010	1.114	1.125
	Band IV/RMC	7	Right Cheek	1513	1752.6	Open	22.53	0.07	23.0	0.992	1.114	1.105
5	Band V/RMC	4	Right Cheek	4183	836.6	Open	23.31	-0.16	23.5	0.090	1.045	0.094
	Band V/RMC	4	Right Tilted	4183	836.6	Open	23.31	-0.05	23.5	0.048	1.045	0.050
	Band V/RMC	4	Left Cheek	4183	836.6	Open	23.31	-0.13	23.5	0.075	1.045	0.078
	Band V/RMC	4	Left Tilted	4183	836.6	Open	23.31	0.10	23.5	0.039	1.045	0.041
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)	Form Factor	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR ₁₀ (W/kg)	Scaling Factor	Reported SAR ₁₀ (W/kg)
	Band2/1RB#99	7	Right Cheek	19100	1900	Open	23.19	0.03	23.5	0.749	1.074	0.804
	Band2/1RB#99	7	Right Tilted	19100	1900	Open	23.19	0.02	23.5	0.225	1.074	0.242
	Band2/1RB#99	7	Left Cheek	19100	1900	Open	23.19	0.11	23.5	0.485	1.074	0.521
	Band2/1RB#99	7	Left Tilted	19100	1900	Open	23.19	0.07	23.5	0.134	1.074	0.144
6	Band2/1RB#99	7	Right Cheek	18700	1860	Open	22.73	-0.08	23.5	0.817	1.194	0.975
	Band2/1RB#49	7	Right Cheek	18900	1880	Open	22.82	-0.09	23.5	0.754	1.169	0.881
	Band2/50%RB#0	7	Right Cheek	19100	1900	Open	22.00	0.17	22.5	0.685	1.122	0.769
	Band2/50%RB#0	7	Right Tilted	19100	1900	Open	22.00	-0.09	22.5	0.194	1.122	0.218
	Band2/50%RB#0	7	Left Cheek	19100	1900	Open	22.00	0.13	22.5	0.451	1.122	0.506
	Band2/50%RB#0	7	Left Tilted	19100	1900	Open	22.00	-0.05	22.5	0.108	1.122	0.121
	Band2/100%RB#0	7	Right Cheek	19100	1900	Open	21.98	-0.02	22.5	0.658	1.127	0.742
	Band2/1RB#99	7	Right Cheek	18700	1860	Open	22.73	-0.13	23.5	0.805	1.194	0.961
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)	Form Factor	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR ₁₀ (W/kg)	Scaling Factor	Reported SAR ₁₀ (W/kg)
7	Band5/1RB#24	4	Right Cheek	20450	829	Open	23.49	-0.02	24.0	0.063	1.125	0.071
	Band5/1RB#24	4	Right Tilted	20450	829	Open	23.49	-0.03	24.0	0.037	1.125	0.042
	Band5/1RB#24	4	Left Cheek	20450	829	Open	23.49	0.07	24.0	0.045	1.125	0.051
	Band5/1RB#24	4	Left Tilted	20450	829	Open	23.49	0.02	24.0	0.028	1.125	0.032
	Band5/50%RB#0	4	Right Cheek	20600	844	Open	22.51	0.17	23.0	0.058	1.119	0.065
	Band5/50%RB#0	4	Right Tilted	20600	844	Open	22.51	-0.02	23.0	0.034	1.119	0.038
	Band5/50%RB#0	4	Left Cheek	20600	844	Open	22.51	0.13	23.0	0.040	1.119	0.045
	Band5/50%RB#0	4	Left Tilted	20600	844	Open	22.51	-0.01	23.0	0.025	1.119	0.028
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)	Form Factor	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR ₁₀ (W/kg)	Scaling Factor	Reported SAR ₁₀ (W/kg)
8	Band7/1RB#49	7	Right Cheek	21350	2560	Open	22.70	-0.06	23.0	0.961	1.072	1.030
	Band7/1RB#49	7	Right Tilted	21350	2560	Open	22.70	0.06	23.0	0.308	1.072	0.330
	Band7/1RB#49	7	Left Cheek	21350	2560	Open	22.70	0.10	23.0	0.625	1.072	0.670
	Band7/1RB#49	7	Left Tilted	21350	2560	Open	22.70	-0.14	23.0	0.236	1.072	0.253
	Band7/1RB#49	7	Right Cheek	20850	2510	Open	22.50	0.03	23.0	0.848	1.122	0.951
	Band7/1RB#49	7	Right Cheek	21100	2535	Open	22.43	-0.11	23.0	0.897	1.14	1.023
	Band7/50%RB#49	7	Right Cheek	21100	2535	Open	21.56	0.16	22.0	0.923	1.107	1.022
	Band7/50%RB#49	7	Right Tilted	21100	2535	Open	21.56	0.14	22.0	0.265	1.107	0.293
	Band7/50%RB#49	7	Left Cheek	21100	2535	Open	21.56	0.06	22.0	0.594	1.107	0.658
	Band7/50%RB#49	7	Left Tilted	21100	2535	Open	21.56	-0.14	22.0	0.202	1.107	0.224
	Band7/50%RB#49	7	Right Cheek	20850	2510	Open	21.46	-0.17	22.0	0.805	1.132	0.911
	Band7/50%RB#49	7	Right Cheek	21350	2560	Open	21.53	0.12	22.0	0.859	1.114	0.957
	Band7/100%RB#0	7	Right Cheek	21350	2560	Open	21.54	0.07	22.0	0.826	1.112	0.919
	Band7/100%RB#0	7	Right Cheek	20850	2510	Open	21.51	0.09	22.0	0.762	1.119	0.853
	Band7/100%RB#0	7	Right Cheek	21100	2535	Open	21.47	-0.02	22.0	0.785	1.13	0.887
	Band7/1RB#49	7	Right Cheek	21350	2560	Open	22.70	0.03	23.0	0.952	1.072	1.021
	Band7/1RB#49	3	Right Cheek	20850	2510	Open	20.40	0.15	21.0	0.287	1.148	0.329
	Band7/1RB#49	3	Right Tilted	20850	2510	Open	20.40	0.03	21.0	0.154	1.148	0.177
	Band7/1RB#49	3	Left Cheek	20850	2510	Open	20.40	-0.06	21.0	0.432	1.148	0.496
	Band7/1RB#49	3	Left Tilted	20850	2510	Open	20.40	-0.09	21.0	0.248	1.148	0.285
	Band7/50%RB#0	3	Right Cheek	20850	2510	Open	19.44	-0.17	19.5	0.267	1.014	0.271
	Band7/50%RB#0	3	Right Tilted	20850	2510	Open	19.44	-0.08	19.5	0.139	1.014	0.141
	Band7/50%RB#0	3	Left Cheek	20850	2510	Open	19.44	-0.14	19.5	0.404	1.014	0.410
	Band7/50%RB#0	3	Left Tilted	20850	2510	Open	19.44	-0.07	19.5	0.219	1.014	0.222
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)	Form Factor	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR ₁₀ (W/kg)	Scaling Factor	Reported SAR ₁₀ (W/kg)
9	Band12/1RB#49	4	Right Cheek	23130	711	Open	23.34	0.04	24.0	0.058	1.164	0.068
	Band12/1RB#49	4	Right Tilted	23130	711	Open	23.34	-0.01	24.0	0.032	1.164	0.037
	Band12/1RB#49	4	Left Cheek	23130	711	Open	23.34	0.02	24.0	0.040	1.164	0.047
	Band12/1RB#49	4	Left Tilted	23130	711	Open	23.34	0.08	24.0	0.024	1.164	0.028
	Band12/50%RB#12	4	Right Cheek	23130	711	Open	22.38	0.13	22.5	0.052	1.028	0.053
	Band12/50%RB#12	4	Right Tilted	23130	711	Open	22.38	0.07	22.5	0.028	1.028	0.029
	Band12/50%RB#12	4	Left Cheek	23130	711	Open	22.38	0.18	22.5	0.036	1.028	0.037
	Band12/50%RB#12	4	Left Tilted	23130	711	Open	22.38	0.14	22.5	0.020	1.028	0.021
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)	Form Factor	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR ₁₀ (W/kg)	Scaling Factor	D.C Factor	Reported SAR ₁₀ (W/kg)
10	Band41/1RB#49	7	Right Cheek	40620	2593	Open	24.91	0.18	25.5	0.689	1.146	1.008	0.796
	Band41/1RB#49	7	Right Tilted	40620	2593	Open	24.91	0.18	25.5	0.254	1.146	1.008	0.293
	Band41/1RB#49	7	Left Cheek	40620	2593	Open	24.91	0.01	25.5	0.495	1.146	1.008	0.572
	Band41/1RB#49	7	Left Tilted	40620	2593	Open	24.91	-0.15	25.5	0.182	1.146	1.008	0.210
	Band41/50%RB#0	7	Right Cheek	40620	2593	Open	23.95	0.12	24.0	0.653	1.012	1.008	0.666
	Band41/50%RB#0	7	Right Tilted	40620	2593	Open	23.95	0.05	24.0	0.232	1.012	1.008	0.237
	Band41/50%RB#0	7	Left Cheek	40620	2593	Open	23.95	-0.11	24.0	0.452	1.012	1.008	0.461
	Band41/50%RB#0	7	Left Tilted	40620	2593	Open	23.95	0.18	24.0	0.167	1.012	1.008	0.170
	Band41/1RB#49	3	Right Cheek	39750	2506	Open	23.01	0.13	23.5	0.182	1.119	1.008	0.205
	Band41/1RB#49	3	Right Tilted	39750	2506	Open	23.01	-0.07	23.5	0.106	1.119	1.008	0.120
	Band41/1RB#49	3	Left Cheek	39750	2506	Open	23.01	-0.01	23.5	0.279	1.119	1.008	0.315
	Band41/1RB#49	3	Left Tilted	39750	2506	Open	23.01	-0.02	23.5	0.158	1.119	1.008	0.178
	Band41/50%RB#0	3	Right Cheek	39750	2506	Open	21.91	-0.15	22.0	0.169	1.021	1.008	0.174
	Band41/50%RB#0	3	Right Tilted	39750	2506	Open	21.91	-0.05	22.0	0.097	1.021	1.008	0.100
	Band41/50%RB#0	3	Left Cheek	39750	2506	Open	21.91	0.17	22.0	0.263	1.021	1.008	0.271
	Band41/50%RB#0	3	Left Tilted	39750	2506	Open	21.91	0.09	22.0	0.144	1.021	1.008	0.148
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)	Form Factor	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR ₁₀ (W/kg)	Scaling Factor	Reported SAR ₁₀ (W/kg)
11	Band66/1RB#49	7	Right Cheek	132572	1770	Open	24.12	0.08	24.5	0.726	1.091	0.792
	Band66/1RB#49	7	Right Tilted	132572	1770	Open	24.12	0.11	24.5	0.266	1.091	0.290
	Band66/1RB#49	7	Left Cheek	132572	1770	Open	24.12	0.17	24.5	0.523	1.091	0.571
	Band66/1RB#49	7	Left Tilted	132572	1770	Open	24.12	0.05	24.5	0.214	1.091	0.233
	Band66/50%RB#0	7	Right Cheek	132572	1770	Open	23.04	0.01	23.5	0.696	1.112	0.774
	Band66/50%RB#0	7	Right Tilted	132572	1770	Open	23.04	0.14	23.5	0.241	1.112	0.268
	Band66/50%RB#0	7	Left Cheek	132572	1770	Open	23.04	0.19	23.5	0.505	1.112	0.562
	Band66/50%RB#0	7	Left Tilted	132572	1770	Open	23.04	-0.02	23.5	0.202	1.112	0.225
	Band66/1RB#0	3	Right Cheek	132072	1720	Open	20.10	-0.07	20.5	0.164	1.096	0.180
	Band66/1RB#0	3	Right Tilted	132072	1720	Open	20.10	-0.19	20.5	0.088	1.096	0.096
	Band66/1RB#0	3	Left Cheek	132072	1720	Open	20.10	0.04	20.5	0.250	1.096	0.274
	Band66/1RB#0	3	Left Tilted	132072	1720	Open	20.10	0.12	20.5	0.134	1.096	0.147
	Band66/50%RB#0	3	Right Cheek	132322	1745	Open	18.97	0.01	19.0	0.157	1.007	0.158
	Band66/50%RB#0	3	Right Tilted	132322	1745	Open	18.97	-0.07	19.0	0.081	1.007	0.082
	Band66/50%RB#0	3	Left Cheek	132322	1745	Open	18.97	-0.07	19.0	0.235	1.007	0.237
	Band66/50%RB#0	3	Left Tilted	132322	1745	Open	18.97	0.15	19.0	0.122	1.007	0.123
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 Head SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Form Factor	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR ₁₀ (W/kg)	Scaling Factor	Reported SAR ₁₀ (W/kg)
12	NR n5 /1@1	4	Right Cheek	167300	836.5	Open	21.62	0.14	22.0	0.069	1.091	0.075
	NR n5 /1@1	4	Right Tilted	167300	836.5	Open	21.62	-0.05	22.0	0.042	1.091	0.046
	NR n5 /1@1	4	Left Cheek	167300	836.5	Open	21.62	0.09	22.0	0.052	1.091	0.057
	NR n5 /1@1	4	Left Tilted	167300	836.5	Open	21.62	-0.03	22.0	0.033	1.091	0.036
	NR n5 /25@12	4	Right Cheek	167300	836.5	Open	21.79	0.13	22.0	0.057	1.050	0.060
	NR n5 /25@12	4	Right Tilted	167300	836.5	Open	21.79	0.03	22.0	0.035	1.050	0.037
	NR n5 /25@12	4	Left Cheek	167300	836.5	Open	21.79	-0.09	22.0	0.042	1.050	0.044
	NR n5 /25@12	4	Left Tilted	167300	836.5	Open	21.79	0.19	22.0	0.026	1.050	0.027
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)	Form Factor	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR ₁₀ (W/kg)	Scaling Factor	Reported SAR ₁₀ (W/kg)
	NR n7 /1@1	7	Right Cheek	507000	2535	Open	22.89	0.02	23.0	0.851	1.026	0.873
	NR n7 /1@1	7	Right Tilted	507000	2535	Open	22.89	-0.13	23.0	0.278	1.026	0.285
	NR n7 /1@1	7	Left Cheek	507000	2535	Open	22.89	-0.01	23.0	0.253	1.026	0.260
	NR n7 /1@1	7	Left Tilted	507000	2535	Open	22.89	-0.03	23.0	0.206	1.026	0.211
	NR n7 /1@49	7	Right Cheek	502000	2510	Open	22.80	0.04	23.0	0.848	1.047	0.888
13	NR n7 /1@49	7	Right Cheek	512000	2560	Open	22.79	-0.05	23.0	0.927	1.050	0.973
	NR n7 /1@49	7	Right Cheek	512000	2560	Open	22.79	0.02	23.0	0.916	1.050	0.962
	NR n7 /25@12	7	Right Cheek	512000	2560	Open	23.20	-0.02	23.5	0.741	1.072	0.794
	NR n7 /25@12	7	Right Tilted	512000	2560	Open	23.20	0.13	23.5	0.234	1.072	0.251
	NR n7 /25@12	7	Left Cheek	512000	2560	Open	23.20	-0.13	23.5	0.198	1.072	0.212
	NR n7 /25@12	7	Left Tilted	512000	2560	Open	23.20	0.12	23.5	0.167	1.072	0.179
	NR n7 /1@1 NSA	7	Right Cheek	507000	2535	Open	19.72	-0.04	20.0	0.481	1.067	0.513
	NR n7 /1@1 NSA	7	Right Tilted	507000	2535	Open	19.72	-0.13	20.0	0.145	1.067	0.155
	NR n7 /1@1 NSA	7	Left Cheek	507000	2535	Open	19.72	0.16	20.0	0.115	1.067	0.123
	NR n7 /1@1 NSA	7	Left Tilted	507000	2535	Open	19.72	-0.03	20.0	0.086	1.067	0.092
	NR n7 /25@12 NSA	7	Right Cheek	512000	2560	Open	19.96	-0.17	20.5	0.445	1.132	0.504
	NR n7 /25@12 NSA	7	Right Tilted	512000	2560	Open	19.96	-0.07	20.5	0.138	1.132	0.156
	NR n7 /25@12 NSA	7	Left Cheek	512000	2560	Open	19.96	0.19	20.5	0.111	1.132	0.126
	NR n7 /25@12 NSA	7	Left Tilted	512000	2560	Open	19.96	0.08	20.5	0.080	1.132	0.091
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)	Form Factor	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR ₁₀ (W/kg)	Scaling Factor	Reported SAR ₁₀ (W/kg)
14	NR n12 /1@1	4	Right Cheek	141700	708.5	Open	24.45	0.06	24.5	0.047	1.012	0.048
	NR n12 /1@1	4	Right Tilted	141700	708.5	Open	24.45	0.18	24.5	0.026	1.012	0.026
	NR n12 /1@1	4	Left Cheek	141700	708.5	Open	24.45	-0.08	24.5	0.033	1.012	0.033
	NR n12 /1@1	4	Left Tilted	141700	708.5	Open	24.45	0.13	24.5	0.014	1.012	0.014
	NR n12 /18@9	4	Right Cheek	141300	706.5	Open	24.42	0.11	24.5	0.046	1.019	0.047
	NR n12 /18@9	4	Right Tilted	141300	706.5	Open	24.42	-0.08	24.5	0.023	1.019	0.023
	NR n12 /18@9	4	Left Cheek	141300	706.5	Open	24.42	-0.15	24.5	0.030	1.019	0.031
	NR n12 /18@9	4	Left Tilted	141300	706.5	Open	24.42	0.04	24.5	0.012	1.019	0.012
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)	Form Factor	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR ₁₀ (W/kg)	Scaling Factor	Reported SAR ₁₀ (W/kg)
	NR n41 /1@271	7	Right Cheek	509202	2546.01	Open	25.39	0.18	25.5	0.649	1.026	0.666
	NR n41 /1@271	7	Right Tilted	509202	2546.01	Open	25.39	-0.11	25.5	0.231	1.026	0.237
	NR n41 /1@271	7	Left Cheek	509202	2546.01	Open	25.39	-0.13	25.5	0.158	1.026	0.162
	NR n41 /1@271	7	Left Tilted	509202	2546.01	Open	25.39	0.20	25.5	0.084	1.026	0.086
15	NR n41 /135@67	7	Right Cheek	518598	2592.99	Open	26.16	0.04	26.5	0.695	1.081	0.751
	NR n41 /135@67	7	Right Tilted	518598	2592.99	Open	26.16	-0.02	26.5	0.247	1.081	0.267
	NR n41 /135@67	7	Left Cheek	518598	2592.99	Open	26.16	-0.05	26.5	0.170	1.081	0.184
	NR n41 /135@67	7	Left Tilted	518598	2592.99	Open	26.16	0.10	26.5	0.094	1.081	0.102
	NR n41 /1@271 NSA	7	Right Cheek	509202	2546.01	Open	19.84	0.01	20.0	0.232	1.038	0.241
	NR n41 /1@271 NSA	7	Right Tilted	509202	2546.01	Open	19.84	-0.06	20.0	0.076	1.038	0.079
	NR n41 /1@271 NSA	7	Left Cheek	509202	2546.01	Open	19.84	0.01	20.0	0.055	1.038	0.057
	NR n41 /1@271 NSA	7	Left Tilted	509202	2546.01	Open	19.84	0.12	20.0	0.032	1.038	0.033
	NR n41 /135@67 NSA	7	Right Cheek	518598	2592.99	Open	20.60	0.05	21.0	0.241	1.096	0.264
	NR n41 /135@67 NSA	7	Right Tilted	518598	2592.99	Open	20.60	0.05	21.0	0.088	1.096	0.096
	NR n41 /135@67 NSA	7	Left Cheek	518598	2592.99	Open	20.60	0.05	21.0	0.058	1.096	0.064
	NR n41 /135@67 NSA	7	Left Tilted	518598	2592.99	Open	20.60	0.05	21.0	0.037	1.096	0.041
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)	Form Factor	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR ₁₀ (W/kg)	Scaling Factor	Reported SAR ₁₀ (W/kg)
16	NR n66/1@104	7	Right Cheek	349000	1745	Open	19.90	-0.01	20.0	0.383	1.023	0.392
	NR n66/1@104	7	Right Tilted	349000	1745	Open	19.90	-0.12	20.0	0.224	1.023	0.229
	NR n66/1@104	7	Left Cheek	349000	1745	Open	19.90	-0.09	20.0	0.236	1.023	0.241
	NR n66/1@104	7	Left Tilted	349000	1745	Open	19.90	-0.04	20.0	0.128	1.023	0.131
	NR n66/50@25	7	Right Cheek	352000	1760	Open	20.12	0.16	20.5	0.351	1.091	0.383
	NR n66/50@25	7	Right Tilted	352000	1760	Open	20.12	-0.07	20.5	0.215	1.091	0.235
	NR n66/50@25	7	Left Cheek	352000	1760	Open	20.12	-0.06	20.5	0.229	1.091	0.250
	NR n66/50@25	7	Left Tilted	352000	1760	Open	20.12	-0.02	20.5	0.119	1.091	0.130
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)	Form Factor	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR ₁₀ (W/kg)	Scaling Factor	Reported SAR ₁₀ (W/kg)
	NR n77 /1@1	8	Right Cheek	633334	3500.01	Open	25.23	-0.06	25.5	0.708	1.064	0.753
	NR n77 /1@1	8	Right Tilted	633334	3500.01	Open	25.23	-0.05	25.5	0.526	1.064	0.560
	NR n77 /1@1	8	Left Cheek	633334	3500.01	Open	25.23	-0.11	25.5	0.398	1.064	0.423
	NR n77 /1@1	8	Left Tilted	633334	3500.01	Open	25.23	0.03	25.5	0.261	1.064	0.278
17	NR n77 /135@67	8	Right Cheek	633334	3500.01	Open	26.16	-0.08	26.5	0.734	1.081	0.793
	NR n77 /135@67	8	Right Tilted	633334	3500.01	Open	26.16	0.03	26.5	0.556	1.081	0.601
	NR n77 /135@67	8	Left Cheek	633334	3500.01	Open	26.16	-0.14	26.5	0.436	1.081	0.471
	NR n77 /135@67	8	Left Tilted	633334	3500.01	Open	26.16	-0.17	26.5	0.291	1.081	0.315
	NR n77 /1@1 NSA	8	Right Cheek	633334	3500.01	Open	18.55	-0.09	19.0	0.144	1.109	0.160
	NR n77 /1@1 NSA	8	Right Tilted	633334	3500.01	Open	18.55	0.05	19.0	0.118	1.109	0.131
	NR n77 /1@1 NSA	8	Left Cheek	633334	3500.01	Open	18.55	0.00	19.0	0.081	1.109	0.090
	NR n77 /1@1 NSA	8	Left Tilted	633334	3500.01	Open	18.55	0.17	19.0	0.048	1.109	0.053
	NR n77 /135@67 NSA	8	Right Cheek	633334	3500.01	Open	19.56	0.19	20.0	0.159	1.107	0.176
	NR n77 /135@67 NSA	8	Right Tilted	633334	3500.01	Open	19.56	0.13	20.0	0.124	1.107	0.137
	NR n77 /135@67 NSA	8	Left Cheek	633334	3500.01	Open	19.56	0.13	20.0	0.089	1.107	0.099
	NR n77 /135@67 NSA	8	Left Tilted	633334	3500.01	Open	19.56	-0.09	20.0	0.057	1.107	0.063
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)	Form Factor	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR ₁₀ (W/kg)	Scaling Factor	Reported SAR ₁₀ (W/kg)
	NR n77 /1@271	8	Right Cheek	662000	3930	Open	25.06	0.16	25.5	1.030	1.107	1.140
	NR n77 /1@271	8	Right Tilted	662000	3930	Open	25.06	-0.03	25.5	0.703	1.107	0.778
	NR n77 /1@271	8	Left Cheek	662000	3930	Open	25.06	-0.07	25.5	0.484	1.107	0.536
	NR n77 /1@271	8	Left Tilted	662000	3930	Open	25.06	0.07	25.5	0.351	1.107	0.389
	NR n77 /1@271	8	Right Cheek	650000	3750	Open	24.94	-0.03	25.5	0.846	1.138	0.963
	NR n77 /1@271	8	Right Cheek	656000	3840	Open	24.80	0.04	25.5	0.782	1.175	0.919
18	NR n77 /135@67	8	Right Cheek	650000	3750	Open	25.79	0.01	26.0	1.090	1.050	1.145
	NR n77 /135@67	8	Right Tilted	650000	3750	Open	25.79	-0.19	26.0	0.726	1.050	0.762
	NR n77 /135@67	8	Left Cheek	650000	3750	Open	25.79	0.18	26.0	0.523	1.050	0.549
	NR n77 /135@67	8	Left Tilted	650000	3750	Open	25.79	-0.06	26.0	0.394	1.050	0.414
	NR n77 /135@67	8	Right Cheek	656000	3840	Open	25.67	-0.07	26.0	0.871	1.079	0.940
	NR n77 /135@67	8	Right Cheek	662000	3930	Open	25.58	0.06	26.0	0.857	1.102	0.944
	NR n77 /135@67	8	Right Cheek	650000	3750	Open	25.79	-0.03	26.0	1.080	1.050	1.134
	NR n77 /1@271 NSA	8	Right Cheek	662000	3930	Open	19.08	0.15	19.5	0.172	1.102	0.190
	NR n77 /1@271 NSA	8	Right Tilted	662000	3930	Open	19.08	-0.11	19.5	0.122	1.102	0.134
	NR n77 /1@271 NSA	8	Left Cheek	662000	3930	Open	19.08	0.13	19.5	0.103	1.102	0.114
	NR n77 /1@271 NSA	8	Left Tilted	662000	3930	Open	19.08	0.04	19.5	0.067	1.102	0.074
	NR n77 /135@67 NSA	8	Right Cheek	650000	3750	Open	19.81	0.03	20.5	0.188	1.172	0.220
	NR n77 /135@67 NSA	8	Right Tilted	650000	3750	Open	19.81	0.14	20.5	0.134	1.172	0.157
	NR n77 /135@67 NSA	8	Left Cheek	650000	3750	Open	19.81	-0.02	20.5	0.120	1.172	0.141
	NR n77 /135@67 NSA	8	Left Tilted	650000	3750	Open	19.81	0.10	20.5	0.075	1.172	0.088
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)	Form Factor	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR ₁₀ (W/kg)	Scaling Factor	D.C Factor	Reported SAR ₁₀ (W/kg)
	2.4GHz/802.11b	9	Right Cheek	6	2437	Open	16.48	0.17	16.5	0.111	1.005	1.000	0.112
	2.4GHz/802.11b	9	Right Tilted	6	2437	Open	16.48	0.03	16.5	0.053	1.005	1.000	0.053
19	2.4GHz/802.11b	9	Left Cheek	6	2437	Open	16.48	-0.05	16.5	0.149	1.005	1.000	0.150
	2.4GHz/802.11b	9	Left Tilted	6	2437	Open	16.48	0.03	16.5	0.071	1.005	1.000	0.071
	2.4GHz/802.11b	6	Right Cheek	6	2437	Open	16.57	-0.07	17.0	0.133	1.104	1.000	0.147
	2.4GHz/802.11b	6	Right Tilted	6	2437	Open	16.57	0.03	17.0	0.062	1.104	1.000	0.068
	2.4GHz/802.11b	6	Left Cheek	6	2437	Open	16.57	-0.17	17.0	0.085	1.104	1.000	0.094
	2.4GHz/802.11b	6	Left Tilted	6	2437	Open	16.57	0.05	17.0	0.039	1.104	1.000	0.043
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)	Form Factor	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR ₁₀ (W/kg)	Scaling Factor	D.C Factor	Reported SAR ₁₀ (W/kg)
	5.2GHz/802.11n20	1	Right Cheek	48	5240	Open	14.52	0.12	15.0	0.124	1.117	1.000	0.139
	5.2GHz/802.11n20	1	Right Tilted	48	5240	Open	14.52	0.15	15.0	0.069	1.117	1.000	0.077
20	5.2GHz/802.11n20	1	Left Cheek	48	5240	Open	14.52	0.02	15.0	0.197	1.117	1.000	0.220
	5.2GHz/802.11n20	1	Left Tilted	48	5240	Open	14.52	0.04	15.0	0.112	1.117	1.000	0.125
	5.2GHz/802.11a	10	Right Cheek	36	5180	Open	12.44	-0.16	13.0	0.035	1.138	1.000	0.040
	5.2GHz/802.11a	10	Right Tilted	36	5180	Open	12.44	0.15	13.0	0.019	1.138	1.000	0.022
	5.2GHz/802.11a	10	Left Cheek	36	5180	Open	12.44	0.06	13.0	0.026	1.138	1.000	0.030
	5.2GHz/802.11a	10	Left Tilted	36	5180	Open	12.44	0.13	13.0	0.015	1.138	1.000	0.017
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)	Form Factor	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR ₁₀ (W/kg)	Scaling Factor	D.C Factor	Reported SAR ₁₀ (W/kg)
	5.8GHz/802.11n20	1	Right Cheek	157	5785	Open	13.76	0.03	14.0	0.128	1.057	1.000	0.135
	5.8GHz/802.11n20	1	Right Tilted	157	5785	Open	13.76	-0.07	14.0	0.075	1.057	1.000	0.079
21	5.8GHz/802.11n20	1	Left Cheek	157	5785	Open	13.76	0.00	14.0	0.207	1.057	1.000	0.219
	5.8GHz/802.11n20	1	Left Tilted	157	5785	Open	13.76	0.16	14.0	0.119	1.057	1.000	0.126
	5.8GHz/802.11a	10	Right Cheek	157	5785	Open	12.49	0.00	13.0	0.156	1.125	1.000	0.176
	5.8GHz/802.11a	10	Right Tilted	157	5785	Open	12.49	-0.18	13.0	0.084	1.125	1.000	0.095
	5.8GHz/802.11a	10	Left Cheek	157	5785	Open	12.49	-0.01	13.0	0.119	1.125	1.000	0.134
	5.8GHz/802.11a	10	Left Tilted	157	5785	Open	12.49	-0.13	13.0	0.067	1.125	1.000	0.075
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)	Form Factor	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR ₁₀ (W/kg)	Scaling Factor	D.C Factor	Reported SAR ₁₀ (W/kg)
	BT/GFSK	9	Right Cheek	39	2441	Open	2.89	0.06	3.0	0.010	1.026	1.000	0.010
	BT/GFSK	9	Right Tilted	39	2441	Open	2.89	0.15	3.0	0.007	1.026	1.000	0.007
22	BT/GFSK	9	Left Cheek	39	2441	Open	2.89	0.05	3.0	0.016	1.026	1.000	0.017
	BT/GFSK	9	Left Tilted	39	2441	Open	2.89	-0.04	3.0	0.009	1.026	1.000	0.009
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 25.12mW(14.0dBm) and 50.12mW(17dBm), the scaled SAR would be $0.186 \times (25.12/50.12) = 0.093$ 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.

15.2 Standalone Body SAR

➤ GSM Body SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Form Factor	Spacing	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	4	Front	190	836.6	Open	10mm	29.46	0.02	29.5	0.476	1.009	0.480
	GPRS850/4 slots	4	Back	190	836.6	Open	10mm	29.46	-0.06	29.5	0.510	1.009	0.515
	GPRS850/4 slots	4	Front	190	836.6	Closed	5mm	29.46	-0.01	29.5	0.141	1.009	0.142
	GPRS850/4 slots	4	Back	190	836.6	Closed	5mm	29.46	-0.07	29.5	1.310	1.009	1.322
	GPRS850/4 slots	4	Back	128	824.2	Closed	5mm	29.31	-0.19	29.5	1.050	1.045	1.097
23	GPRS850/4 slots	4	Back	251	848.8	Closed	5mm	29.44	-0.04	29.5	1.420	1.014	1.440
	GPRS850/4 slots with headset	4	Back	251	848.8	Closed	5mm	29.44	-0.04	29.5	0.336	1.014	0.341
	GPRS850/4 slots	4	Back	251	848.8	Closed	5mm	29.44	0.02	29.5	1.400	1.014	1.420
	GPRS1900/4 slots	7	Front	810	1909.8	Open	10mm	25.86	-0.16	26.0	0.319	1.033	0.330
	GPRS1900/4 slots	7	Back	810	1909.8	Open	10mm	25.86	0.00	26.0	0.353	1.033	0.365
24	GPRS1900/4 slots	7	Front	810	1909.8	Closed	5mm	25.86	-0.10	26.0	0.540	1.033	0.558
	GPRS1900/4 slots	7	Back	810	1909.8	Closed	5mm	25.86	0.05	26.0	0.178	1.033	0.184
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)	Form Factor	Spacing	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	7	Front	9538	1907.6	Open	10mm	23.15	0.17	23.5	0.144	1.084	0.156
25	Band II/RMC	7	Back	9538	1907.6	Open	10mm	23.15	0.00	23.5	0.169	1.084	0.183
	Band II/RMC	7	Front	9538	1907.6	Closed	5mm	23.15	-0.16	23.5	0.138	1.084	0.150
	Band II/RMC	7	Back	9538	1907.6	Closed	5mm	23.15	0.08	23.5	0.056	1.084	0.061
	Band IV/RMC	7	Front	1413	1732.6	Open	10mm	22.66	0.15	23.0	0.114	1.081	0.123
	Band IV/RMC	7	Back	1413	1732.6	Open	10mm	22.66	0.03	23.0	0.128	1.081	0.138
26	Band IV/RMC	7	Front	1413	1732.6	Closed	5mm	22.66	-0.08	23.0	0.356	1.081	0.385
	Band IV/RMC	7	Back	1413	1732.6	Closed	5mm	22.66	-0.07	23.0	0.153	1.081	0.165
	Band V/RMC	4	Front	4183	836.6	Open	10mm	23.31	-0.15	23.5	0.263	1.045	0.275
	Band V/RMC	4	Back	4183	836.6	Open	10mm	23.31	-0.16	23.5	0.279	1.045	0.292
	Band V/RMC	4	Front	4183	836.6	Closed	5mm	23.31	0.03	23.5	0.243	1.045	0.254
27	Band V/RMC	4	Back	4183	836.6	Closed	5mm	23.31	0.02	23.5	0.626	1.045	0.654
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)	Form Factor	Spacing	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	7	Front	19100	1900	Open	10mm	23.19	0.02	23.5	0.092	1.074	0.099
	Band2/1RB#99	7	Back	19100	1900	Open	10mm	23.19	-0.05	23.5	0.115	1.074	0.124
	Band2/50%RB#0	7	Front	19100	1900	Open	10mm	22.00	0.02	22.5	0.083	1.122	0.093
	Band2/50%RB#0	7	Back	19100	1900	Open	10mm	22.00	0.06	22.5	0.106	1.122	0.119
28	Band2/1RB#99	7	Front	19100	1900	Closed	5mm	23.19	0.05	23.5	0.167	1.074	0.179
	Band2/1RB#99	7	Back	19100	1900	Closed	5mm	23.19	0.07	23.5	0.069	1.074	0.074
	Band2/50%RB#0	7	Front	19100	1900	Closed	5mm	22.00	-0.01	22.5	0.154	1.122	0.173
	Band2/50%RB#0	7	Back	19100	1900	Closed	5mm	22.00	0.08	22.5	0.063	1.122	0.071
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)	Form Factor	Spacing	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR ₁₀ (W/kg)	Scaling Factor	Reported SAR ₁₀ (W/kg)
	Band5/1RB#24	4	Front	20450	829	Open	10mm	23.49	-0.01	24.0	0.267	1.125	0.300
	Band5/1RB#24	4	Back	20450	829	Open	10mm	23.49	-0.15	24.0	0.246	1.125	0.277
	Band5/50%RB#0	4	Front	20600	844	Open	10mm	22.51	0.14	23.0	0.252	1.119	0.282
	Band5/50%RB#0	4	Back	20600	844	Open	10mm	22.51	0.05	23.0	0.229	1.119	0.256
	Band5/1RB#24	4	Front	20450	829	Closed	5mm	23.49	-0.02	24.0	0.249	1.125	0.280
29	Band5/1RB#24	4	Back	20450	829	Closed	5mm	23.49	-0.19	24.0	0.636	1.125	0.716
	Band5/50%RB#0	4	Front	20600	844	Closed	5mm	22.51	0.19	23.0	0.241	1.119	0.270
	Band5/50%RB#0	4	Back	20600	844	Closed	5mm	22.51	0.00	23.0	0.618	1.119	0.692
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)	Form Factor	Spacing	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR ₁₀ (W/kg)	Scaling Factor	Reported SAR ₁₀ (W/kg)
	Band7/1RB#49	7	Front	21350	2560	Open	10mm	22.70	0.09	23.0	0.123	1.072	0.132
30	Band7/1RB#49	7	Back	21350	2560	Open	10mm	22.70	-0.11	23.0	0.201	1.072	0.215
	Band7/50%RB#49	7	Front	21100	2535	Open	10mm	21.56	0.02	22.0	0.113	1.107	0.125
	Band7/50%RB#49	7	Back	21100	2535	Open	10mm	21.56	0.16	22.0	0.190	1.107	0.210
	Band7/1RB#49	3	Front	20850	2510	Open	10mm	20.40	0.03	21.0	0.027	1.148	0.031
	Band7/1RB#49	3	Back	20850	2510	Open	10mm	20.40	0.13	21.0	0.056	1.148	0.064
	Band7/50%RB#49	3	Front	20850	2510	Open	10mm	19.44	0.05	19.5	0.023	1.014	0.023
	Band7/50%RB#49	3	Back	20850	2510	Open	10mm	19.44	0.18	19.5	0.050	1.014	0.051
	Band7/1RB#49	7	Front	21350	2560	Closed	5mm	22.70	0.07	23.0	0.120	1.072	0.129
	Band7/1RB#49	7	Back	21350	2560	Closed	5mm	22.70	-0.14	23.0	0.053	1.072	0.057
	Band7/50%RB#49	7	Front	21100	2535	Closed	5mm	21.56	-0.02	22.0	0.114	1.107	0.126
	Band7/50%RB#49	7	Back	21100	2535	Closed	5mm	21.56	-0.12	22.0	0.048	1.107	0.053
	Band7/1RB#49	3	Front	20850	2510	Closed	5mm	20.40	0.07	21.0	0.093	1.148	0.107
	Band7/1RB#49	3	Back	20850	2510	Closed	5mm	20.40	0.12	21.0	0.179	1.148	0.205
	Band7/50%RB#0	3	Front	20850	2510	Closed	5mm	19.44	0.11	19.5	0.085	1.014	0.086
	Band7/50%RB#0	3	Back	20850	2510	Closed	5mm	19.44	-0.01	19.5	0.169	1.014	0.171
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)	Form Factor	Spacing	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR ₁₀ (W/kg)	Scaling Factor	Reported SAR ₁₀ (W/kg)
	Band12/1RB#49	4	Front	23130	711	Open	10mm	23.34	0.04	23.5	0.187	1.038	0.194
	Band12/1RB#49	4	Back	23130	711	Open	10mm	23.34	-0.10	23.5	0.174	1.038	0.181
	Band12/50%RB#12	4	Front	23130	711	Open	10mm	22.38	0.06	22.5	0.178	1.028	0.183
	Band12/50%RB#12	4	Back	23130	711	Open	10mm	22.38	0.12	22.5	0.166	1.028	0.171
	Band12/1RB#49	4	Front	23130	711	Closed	5mm	23.34	0.07	23.5	0.225	1.038	0.234
31	Band12/1RB#49	4	Back	23130	711	Closed	5mm	23.34	0.06	23.5	0.553	1.038	0.574
	Band12/50%RB#12	4	Front	23130	711	Closed	5mm	22.38	-0.18	22.5	0.211	1.028	0.217
	Band12/50%RB#12	4	Back	23130	711	Closed	5mm	22.38	0.16	22.5	0.538	1.028	0.553
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)	Form Factor	Spacing	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	7	Front	40620	2593	Open	10mm	24.91	0.09	25.5	0.062	1.146	1.008	0.072
	Band41/1RB#49	7	Back	40620	2593	Open	10mm	24.91	0.09	25.5	0.078	1.146	1.008	0.090
	Band41/50%RB#0	7	Front	40620	2593	Open	10mm	23.95	0.17	24.0	0.056	1.012	1.008	0.057
	Band41/50%RB#0	7	Back	40620	2593	Open	10mm	23.95	0.08	24.0	0.072	1.012	1.008	0.073
	Band41/1RB#49	3	Front	39750	2506	Open	10mm	23.01	0.10	23.5	0.019	1.119	1.008	0.021
	Band41/1RB#49	3	Back	39750	2506	Open	10mm	23.01	0.07	23.5	0.042	1.119	1.008	0.047
	Band41/50%RB#0	3	Front	39750	2506	Open	10mm	21.91	0.16	22.0	0.017	1.021	1.008	0.017
	Band41/50%RB#0	3	Back	39750	2506	Open	10mm	21.91	0.14	22.0	0.040	1.021	1.008	0.041
32	Band41/1RB#49	7	Front	40620	2593	Closed	5mm	24.91	0.06	25.5	0.158	1.146	1.008	0.183
	Band41/1RB#49	7	Back	40620	2593	Closed	5mm	24.91	0.16	25.5	0.045	1.146	1.008	0.052
	Band41/50%RB#0	7	Front	40620	2593	Closed	5mm	23.95	0.19	24.0	0.102	1.012	1.008	0.104
	Band41/50%RB#0	7	Back	40620	2593	Closed	5mm	23.95	-0.06	24.0	0.041	1.012	1.008	0.042
	Band41/1RB#49	3	Front	39750	2506	Closed	5mm	23.01	0.19	23.5	0.078	1.119	1.008	0.088
	Band41/1RB#49	3	Back	39750	2506	Closed	5mm	23.01	0.02	23.5	0.151	1.119	1.008	0.170
	Band41/50%RB#0	3	Front	39750	2506	Closed	5mm	21.91	-0.04	22.0	0.074	1.021	1.008	0.076
	Band41/50%RB#0	3	Back	39750	2506	Closed	5mm	21.91	0.01	22.0	0.153	1.021	1.008	0.157
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)	Form Factor	Spacing	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	7	Front	132572	1770	Open	10mm	24.12	0.01	24.5	0.096	1.091	0.105
	Band66/1RB#49	7	Back	132572	1770	Open	10mm	24.12	0.08	24.5	0.115	1.091	0.125
	Band66/50%RB#0	7	Front	132572	1770	Open	10mm	23.04	0.08	23.5	0.089	1.112	0.099
	Band66/50%RB#0	7	Back	132572	1770	Open	10mm	23.04	-0.05	23.5	0.107	1.112	0.119
	Band66/1RB#49	3	Front	132072	1720	Open	10mm	20.10	0.04	20.5	0.022	1.096	0.024
	Band66/1RB#49	3	Back	132072	1720	Open	10mm	20.10	0.07	20.5	0.043	1.096	0.047
	Band66/50%RB#0	3	Front	132322	1745	Open	10mm	18.97	0.08	19.0	0.020	1.007	0.020
	Band66/50%RB#0	3	Back	132322	1745	Open	10mm	18.97	-0.11	19.0	0.039	1.007	0.039
33	Band66/1RB#49	7	Front	132572	1770	Closed	5mm	24.12	-0.07	24.5	0.266	1.091	0.290
	Band66/1RB#49	7	Back	132572	1770	Closed	5mm	24.12	0.06	24.5	0.117	1.091	0.128
	Band66/50%RB#0	7	Front	132572	1770	Closed	5mm	23.04	0.11	23.5	0.243	1.112	0.270
	Band66/50%RB#0	7	Back	132572	1770	Closed	5mm	23.04	0.14	23.5	0.108	1.112	0.120
	Band66/1RB#99	3	Front	132072	1720	Closed	5mm	20.10	0.12	20.5	0.136	1.096	0.149
	Band66/1RB#99	3	Back	132072	1720	Closed	5mm	20.10	0.03	20.5	0.256	1.096	0.281
	Band66/50%RB#0	3	Front	132322	1745	Closed	5mm	18.97	-0.20	19.0	0.122	1.007	0.123
	Band66/50%RB#0	3	Back	132322	1745	Closed	5mm	18.97	0.09	19.0	0.261	1.007	0.263
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)	Form Factor	Spacing	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR ₁₀ (W/kg)	Scaling Factor	Reported SAR ₁₀ (W/kg)
	NR n5/1@49	4	Front	167300	836.5	Open	10mm	21.62	0.17	22.0	0.163	1.091	0.178
	NR n5/1@49	4	Back	167300	836.5	Open	10mm	21.62	-0.06	22.0	0.178	1.091	0.194
	NR n5/25@12	4	Front	167300	836.5	Open	10mm	21.79	0.12	22.0	0.187	1.050	0.197
	NR n5/25@12	4	Back	167300	836.5	Open	10mm	21.79	-0.09	22.0	0.217	1.050	0.228
	NR n5/1@1	4	Front	167300	836.5	Closed	5mm	21.62	0.05	22.0	0.224	1.091	0.244
	NR n5/1@1	4	Back	167300	836.5	Closed	5mm	21.62	0.03	22.0	0.481	1.091	0.525
	NR n5/25@12	4	Front	167300	836.5	Closed	5mm	21.79	0.16	22.0	0.242	1.050	0.254
34	NR n5/25@12	4	Back	167300	836.5	Closed	5mm	21.79	0.12	22.0	0.513	1.050	0.539
ANSI / IEEE C95.1 – SAFETY LIMIT						1.6 W/kg (mW/g) Averaged over 1g							
Spatial Peak Uncontrolled Exposure/General Population													

➤ NR n7(20MHz) DFT-BPSK Body SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Form Factor	Spacing	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR ₁₀ (W/kg)	Scaling Factor	Reported SAR ₁₀ (W/kg)
	NR n7 /1@49	7	Front	507000	2535	Open	10mm	22.89	0.12	23.0	0.066	1.026	0.068
	NR n7 /1@49	7	Back	507000	2535	Open	10mm	22.89	-0.02	23.0	0.192	1.026	0.197
	NR n7 /25@12	7	Front	512000	2560	Open	10mm	23.20	-0.02	23.5	0.074	1.072	0.079
	NR n7 /25@12	7	Back	512000	2560	Open	10mm	23.20	0.00	23.5	0.214	1.072	0.229
	NR n7 /1@49 NSA	7	Front	507000	2535	Open	10mm	19.72	0.19	20.0	0.043	1.067	0.046
	NR n7 /1@49 NSA	7	Back	507000	2535	Open	10mm	19.72	0.08	20.0	0.158	1.067	0.169
	NR n7 /25@12 NSA	7	Front	512000	2560	Open	10mm	19.96	0.12	20.0	0.056	1.009	0.057
	NR n7 /25@12 NSA	7	Back	512000	2560	Open	10mm	19.96	0.06	20.0	0.178	1.009	0.180
	NR n7 /1@49	7	Front	507000	2535	Closed	5mm	22.89	-0.19	23.0	0.262	1.026	0.269
	NR n7 /1@49	7	Back	507000	2535	Closed	5mm	22.89	0.06	23.0	0.182	1.026	0.187
35	NR n7 /25@12	7	Front	512000	2560	Closed	5mm	23.20	-0.18	23.5	0.363	1.072	0.389
	NR n7 /25@12	7	Back	512000	2560	Closed	5mm	23.20	0.20	23.5	0.269	1.072	0.288
	NR n7 /1@49 NSA	7	Front	507000	2535	Closed	5mm	19.72	0.06	20.0	0.186	1.067	0.198
	NR n7 /1@49 NSA	7	Back	507000	2535	Closed	5mm	19.72	-0.02	20.0	0.101	1.067	0.108
	NR n7 /25@12 NSA	7	Front	512000	2560	Closed	5mm	19.96	-0.02	20.0	0.245	1.009	0.247
	NR n7 /25@12 NSA	7	Back	512000	2560	Closed	5mm	19.96	0.05	20.0	0.135	1.009	0.136
ANSI / IEEE C95.1 – SAFETY LIMIT						1.6 W/kg (mW/g) Averaged over 1g							
Spatial Peak Uncontrolled Exposure/General Population													

➤ NR n12(15MHz) DFT-BPSK Body SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Form Factor	Spacing	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR ₁₀ (W/kg)	Scaling Factor	Reported SAR ₁₀ (W/kg)
	NR n12 /1@1	4	Front	141700	708.5	Open	10mm	24.45	0.15	24.5	0.208	1.012	0.210
	NR n12 /1@1	4	Back	141700	708.5	Open	10mm	24.45	-0.14	24.5	0.225	1.012	0.228
	NR n12 /18@9	4	Front	141300	706.5	Open	10mm	24.42	0.07	24.5	0.214	1.019	0.218
	NR n12 /18@9	4	Back	141300	706.5	Open	10mm	24.42	0.03	24.5	0.228	1.019	0.232
	NR n12 /1@1	4	Front	141700	708.5	Closed	5mm	24.45	0.06	24.5	0.247	1.012	0.250
	NR n12 /1@1	4	Back	141700	708.5	Closed	5mm	24.45	0.03	24.5	0.575	1.012	0.582
	NR n12 /18@9	4	Front	141300	706.5	Closed	5mm	24.42	-0.12	24.5	0.274	1.019	0.279
36	NR n12 /18@9	4	Back	141300	706.5	Closed	5mm	24.42	0.05	24.5	0.643	1.019	0.655
ANSI / IEEE C95.1 – SAFETY LIMIT						1.6 W/kg (mW/g) Averaged over 1g							
Spatial Peak Uncontrolled Exposure/General Population													

➤ NR n41(100MHz) DFT-BPSK Body SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Form Factor	Spacing	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	7	Front	509202	2546.01	Open	10mm	25.39	-0.03	25.5	0.078	1.026	0.080
	NR n41 /1@271	7	Back	509202	2546.01	Open	10mm	25.39	-0.01	25.5	0.225	1.026	0.231
	NR n41 /135@67	7	Front	518598	2592.99	Open	10mm	26.16	-0.11	26.5	0.093	1.081	0.101
	NR n41 /135@67	7	Back	518598	2592.99	Open	10mm	26.16	0.12	26.5	0.249	1.081	0.269
	NR n41 /1@271 NSA	7	Front	509202	2546.01	Open	10mm	19.84	0.05	20.0	0.018	1.038	0.019
	NR n41 /1@271 NSA	7	Back	509202	2546.01	Open	10mm	19.84	0.02	20.0	0.037	1.038	0.038
	NR n41 /135@67 NSA	7	Front	518598	2592.99	Open	10mm	20.60	0.03	21.0	0.022	1.096	0.024
	NR n41 /135@67 NSA	7	Back	518598	2592.99	Open	10mm	20.60	0.15	21.0	0.041	1.096	0.045
	NR n41 /1@271	7	Front	509202	2546.01	Closed	5mm	25.39	0.11	25.5	0.342	1.026	0.351
	NR n41 /1@271	7	Back	509202	2546.01	Closed	5mm	25.39	0.05	25.5	0.178	1.026	0.183
37	NR n41 /135@67	7	Front	518598	2592.99	Closed	5mm	26.16	-0.02	26.5	0.389	1.081	0.421
	NR n41 /135@67	7	Back	518598	2592.99	Closed	5mm	26.16	-0.16	26.5	0.204	1.081	0.221
	NR n41 /1@271 NSA	7	Front	509202	2546.01	Closed	5mm	19.84	0.11	20.0	0.098	1.038	0.102
	NR n41 /1@271 NSA	7	Back	509202	2546.01	Closed	5mm	19.84	0.05	20.0	0.049	1.038	0.051
	NR n41/135@67 NSA	7	Front	518598	2592.99	Closed	5mm	20.60	0.09	21.0	0.108	1.096	0.118
	NR n41 /135@67 NSA	7	Back	518598	2592.99	Closed	5mm	20.60	-0.04	21.0	0.056	1.096	0.061
ANSI / IEEE C95.1 – SAFETY LIMIT						1.6 W/kg (mW/g)							
Spatial Peak						Averaged over 1g							
Uncontrolled Exposure/General Population													

➤ NR n66(40MHz) DFT-BPSK Body SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Form Factor	Spacing	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	7	Front	349000	1745	Open	10mm	19.90	0.19	20.0	0.043	1.023	0.044
	NR n66/1@104	7	Back	349000	1745	Open	10mm	19.90	0.17	20.0	0.072	1.023	0.074
	NR n66/50@25	7	Front	352000	1760	Open	10mm	20.12	-0.02	20.5	0.047	1.091	0.051
	NR n66/50@25	7	Back	352000	1760	Open	10mm	20.12	-0.03	20.5	0.075	1.091	0.082
38	NR n66/1@104	7	Front	349000	1745	Closed	5mm	19.90	-0.07	20.0	0.169	1.023	0.173
	NR n66/1@104	7	Back	349000	1745	Closed	5mm	19.90	0.01	20.0	0.109	1.023	0.112
	NR n66/50@25	7	Front	352000	1760	Closed	5mm	20.12	0.18	20.5	0.156	1.091	0.170
	NR n66/50@25	7	Back	352000	1760	Closed	5mm	20.12	0.03	20.5	0.100	1.091	0.109
ANSI / IEEE C95.1 – SAFETY LIMIT						1.6 W/kg (mW/g)							
Spatial Peak						Averaged over 1g							
Uncontrolled Exposure/General Population													

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

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Form Factor	Spacing	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	8	Front	633334	3500.01	Open	10mm	25.23	0.13	25.5	0.134	1.064	0.143
	NR n77 /1@1	8	Back	633334	3500.01	Open	10mm	25.23	0.01	25.5	0.128	1.064	0.136
	NR n77 /135@67	8	Front	633334	3500.01	Open	10mm	26.16	0.03	26.5	0.151	1.081	0.163
	NR n77 /135@67	8	Back	633334	3500.01	Open	10mm	26.16	-0.09	26.5	0.145	1.081	0.157
	NR n77 /1@271 NSA	8	Front	633334	3500.01	Open	10mm	18.55	-0.05	19.0	0.030	1.109	0.033
	NR n77 /1@271 NSA	8	Back	633334	3500.01	Open	10mm	18.55	-0.01	19.0	0.027	1.109	0.030
	NR n77 /135@67 NSA	8	Front	633334	3500.01	Open	10mm	19.56	0.09	20.0	0.036	1.107	0.040
	NR n77 /135@67 NSA	8	Back	633334	3500.01	Open	10mm	19.56	0.12	20.0	0.033	1.107	0.037
	NR n77 /1@1	8	Front	633334	3500.01	Closed	5mm	25.23	0.09	25.5	0.166	1.064	0.177
	NR n77 /1@1	8	Back	633334	3500.01	Closed	5mm	25.23	-0.03	25.5	0.170	1.064	0.181
	NR n77 /135@67	8	Front	633334	3500.01	Closed	5mm	26.16	-0.05	26.5	0.180	1.081	0.195
39	NR n77 /135@67	8	Back	633334	3500.01	Closed	5mm	26.16	0.12	26.5	0.183	1.081	0.198
	NR n77 /1@1 NSA	8	Front	633334	3500.01	Closed	5mm	18.55	0.11	19.0	0.002	1.109	0.002
	NR n77 /1@1 NSA	8	Back	633334	3500.01	Closed	5mm	18.55	0.01	19.0	0.003	1.109	0.003
	NR n77 /135@67 NSA	8	Front	633334	3500.01	Closed	5mm	19.56	0.01	20.0	0.003	1.107	0.003
	NR n77 /135@67 NSA	8	Back	633334	3500.01	Closed	5mm	19.56	0.02	20.0	0.004	1.107	0.004
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)	Form Factor	Spacing	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	8	Front	662000	3930	Open	10mm	25.06	0.09	25.5	0.147	1.107	0.163
	NR n77 /1@271	8	Back	662000	3930	Open	10mm	25.06	0.04	25.5	0.090	1.107	0.100
40	NR n77 /135@67	8	Front	650000	3750	Open	10mm	25.79	-0.03	26.0	0.161	1.050	0.169
	NR n77 /135@67	8	Back	650000	3750	Open	10mm	25.79	0.00	26.0	0.097	1.050	0.102
	NR n77 /1@271 NSA	8	Front	656000	3840	Open	10mm	19.08	0.03	19.5	0.037	1.102	0.041
	NR n77 /1@271 NSA	8	Back	656000	3840	Open	10mm	19.08	0.02	19.5	0.023	1.102	0.025
	NR n77 /135@67 NSA	8	Front	656000	3840	Open	10mm	19.81	0.00	20.5	0.041	1.172	0.048
	NR n77 /135@67 NSA	8	Back	656000	3840	Open	10mm	19.81	0.02	20.5	0.026	1.172	0.030
	NR n77 /1@271	8	Front	662000	3930	Closed	5mm	25.06	0.09	25.5	0.146	1.107	0.162
	NR n77 /1@271	8	Back	662000	3930	Closed	5mm	25.06	-0.01	25.5	0.038	1.107	0.042
	NR n77 /135@67	8	Front	650000	3750	Closed	5mm	25.79	0.15	26.0	0.152	1.050	0.160
	NR n77 /135@67	8	Back	650000	3750	Closed	5mm	25.79	-0.02	26.0	0.042	1.050	0.044
	NR n77 /1@271 NSA	8	Front	656000	3840	Closed	5mm	19.08	0.04	19.5	0.072	1.102	0.079
	NR n77 /1@271 NSA	8	Back	656000	3840	Closed	5mm	19.08	0.05	19.5	0.023	1.102	0.025
	NR n77 /135@67 NSA	8	Front	656000	3840	Closed	5mm	19.81	-0.12	20.5	0.076	1.172	0.089
	NR n77 /135@67 NSA	8	Back	656000	3840	Closed	5mm	19.81	0.07	20.5	0.026	1.172	0.030
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)	Form Factor	Spacing	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR ₁₀ (W/kg)	Scaling Factor	D.C Factor	Reported SAR ₁₀ (W/kg)
	2.4GHz/802.11b	9	Front	6	2437	Open	10mm	16.48	0.12	16.5	0.013	1.005	1.000	0.013
	2.4GHz/802.11b	9	Back	6	2437	Open	10mm	16.48	0.00	16.5	0.036	1.005	1.000	0.036
	2.4GHz/802.11b	6	Front	6	2437	Open	10mm	16.57	0.10	17.0	0.012	1.104	1.000	0.013
	2.4GHz/802.11b	6	Back	6	2437	Open	10mm	16.57	0.09	17.0	0.037	1.104	1.000	0.041
41	2.4GHz/802.11b	9	Front	6	2437	Closed	5mm	16.48	0.00	16.5	0.128	1.005	1.000	0.129
	2.4GHz/802.11b	9	Back	6	2437	Closed	5mm	16.48	0.07	16.5	0.043	1.005	1.000	0.043
	2.4GHz/802.11b	6	Front	6	2437	Closed	5mm	16.57	-0.11	17.0	0.068	1.104	1.000	0.075
	2.4GHz/802.11b	6	Back	6	2437	Closed	5mm	16.57	0.08	17.0	0.046	1.104	1.000	0.051
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)	Form Factor	Spacing	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR ₁₀ (W/kg)	Scaling Factor	D.C Factor	Reported SAR ₁₀ (W/kg)
	5.2GHz/802.11n20	1	Front	48	5240	Open	10mm	12.69	0.01	13.0	0.046	1.074	1.000	0.049
	5.2GHz/802.11n20	1	Back	48	5240	Open	10mm	12.69	-0.01	13.0	0.113	1.074	1.000	0.121
	5.2GHz/802.11a	10	Front	36	5180	Open	10mm	12.44	-0.08	13.0	0.013	1.138	1.000	0.015
	5.2GHz/802.11a	10	Back	36	5180	Open	10mm	12.44	0.02	13.0	0.028	1.138	1.000	0.032
	5.2GHz/802.11n20	1	Front	48	5240	Closed	5mm	12.69	-0.07	13.0	0.069	1.074	1.000	0.074
	5.2GHz/802.11n20	1	Back	48	5240	Closed	5mm	12.69	0.16	13.0	0.028	1.074	1.000	0.030
42	5.2GHz/802.11a	10	Front	36	5180	Closed	5mm	12.44	0.00	13.0	0.218	1.138	1.000	0.248
	5.2GHz/802.11a	10	Back	36	5180	Closed	5mm	12.44	-0.03	13.0	0.012	1.138	1.000	0.014
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)	Form Factor	Spacing	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR ₁₀ (W/kg)	Scaling Factor	D.C Factor	Reported SAR ₁₀ (W/kg)
	5.8GHz/802.11n20	1	Front	157	5785	Open	10mm	13.76	0.05	14.0	0.042	1.057	1.000	0.044
	5.8GHz/802.11n20	1	Back	157	5785	Open	10mm	13.76	0.00	14.0	0.105	1.057	1.000	0.111
	5.8GHz/802.11a	10	Front	157	5785	Open	10mm	12.49	0.01	13.0	0.011	1.125	1.000	0.012
	5.8GHz/802.11a	10	Back	157	5785	Open	10mm	12.49	-0.02	13.0	0.025	1.125	1.000	0.028
	5.8GHz/802.11n20	1	Front	157	5785	Closed	5mm	13.76	0.00	14.0	0.239	1.057	1.000	0.253
	5.8GHz/802.11n20	1	Back	157	5785	Closed	5mm	13.76	0.15	14.0	0.085	1.057	1.000	0.090
43	5.8GHz/802.11a	10	Front	157	5785	Closed	5mm	12.49	0.00	13.0	0.305	1.125	1.000	0.343
	5.8GHz/802.11a	10	Back	157	5785	Closed	5mm	12.49	0.04	13.0	0.023	1.125	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							

➤ Bluetooth Body SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Form Factor	Spacing	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR ₁₀ (W/kg)	Scaling Factor	D.C Factor	Reported SAR ₁₀ (W/kg)
	BT/GFSK	9	Front	39	2441	Open	10mm	2.89	-0.01	3.0	0.003	1.026	1.000	0.003
44	BT/GFSK	9	Back	39	2441	Open	10mm	2.89	0.00	3.0	0.008	1.026	1.000	0.008
	BT/GFSK	9	Front	39	2441	Closed	5mm	2.89	0.00	3.0	0.002	1.026	1.000	0.002
	BT/GFSK	9	Back	39	2441	Closed	5mm	2.89	0.06	3.0	0.001	1.026	1.000	0.001
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population							1.6 W/kg (mW/g) Averaged over 1g							

Note:

1. Body-worn SAR testing was performed at 10mm separation, and this distance is determined by the handset manufacturer that there will be body-worn accessories that users may acquire at the time of equipment certification, to enable users to purchase aftermarket body-worn accessories with the required minimum separation.
2. 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.
9. Highlight part of test data means repeated test.

15.3 Body SAR in Hotspot Mode

➤ GSM Body SAR in Hotspot mode

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Form Factor	Spacing	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	4	Front	190	836.6	Open	10mm	29.46	0.02	29.5	0.476	1.009	0.480
	GPRS850/4 slots	4	Back	190	836.6	Open	10mm	29.46	-0.06	29.5	0.510	1.009	0.515
	GPRS850/4 slots	4	Left	190	836.6	Open	10mm	29.46	0.03	29.5	0.052	1.009	0.052
	GPRS850/4 slots	4	Right	190	836.6	Open	10mm	29.46	-0.06	29.5	0.175	1.009	0.177
	GPRS850/4 slots	4	Bottom	190	836.6	Open	10mm	29.46	0.11	29.5	0.439	1.009	0.443
	GPRS850/4 slots	4	Front	190	836.6	Closed	5mm	29.46	-0.01	29.5	0.141	1.009	0.142
	GPRS850/4 slots	4	Back	190	836.6	Closed	5mm	29.46	-0.09	29.5	1.310	1.009	1.322
	GPRS850/4 slots	4	Left	190	836.6	Closed	5mm	29.46	0.16	29.5	0.051	1.009	0.051
	GPRS850/4 slots	4	Right	190	836.6	Closed	5mm	29.46	-0.13	29.5	0.038	1.009	0.038
	GPRS850/4 slots	4	Bottom	190	836.6	Closed	5mm	29.46	0.06	29.5	0.685	1.009	0.691
	GPRS850/4 slots	4	Back	128	824.2	Closed	5mm	29.31	0.14	29.5	1.050	1.045	1.097
23	GPRS850/4 slots	4	Back	251	848.8	Closed	5mm	29.44	-0.04	29.5	1.420	1.014	1.440
	GPRS850/4 slots	4	Back	251	848.8	Closed	5mm	29.44	0.02	29.5	1.400	1.014	1.420
	GPRS1900/4 slots	7	Front	810	1909.8	Open	10mm	25.86	-0.16	26.0	0.319	1.033	0.330
	GPRS1900/4 slots	7	Back	810	1909.8	Open	10mm	25.86	0.00	26.0	0.353	1.033	0.365
	GPRS1900/4 slots	7	Left	810	1909.8	Open	10mm	25.86	-0.06	26.0	0.569	1.033	0.588
	GPRS1900/4 slots	7	Top	810	1909.8	Open	10mm	25.86	0.01	26.0	0.077	1.033	0.080
	GPRS1900/4 slots	7	Front	810	1909.8	Closed	5mm	25.86	-0.10	26.0	0.540	1.033	0.558
	GPRS1900/4 slots	7	Back	810	1909.8	Closed	5mm	25.86	0.05	26.0	0.178	1.033	0.184
	GPRS1900/4 slots	7	Left	810	1909.8	Closed	5mm	25.86	-0.02	26.0	0.906	1.033	0.936
	GPRS1900/4 slots	7	Bottom	810	1909.8	Closed	5mm	25.86	-0.11	26.0	0.163	1.033	0.168
45	GPRS1900/4 slots	7	Left	512	1850.2	Closed	5mm	25.43	-0.09	26.0	0.984	1.140	1.122
	GPRS1900/4 slots	7	Left	661	1880	Closed	5mm	25.73	0.04	26.0	0.885	1.064	0.942
	GPRS1900/4 slots	7	Left	512	1850.2	Closed	5mm	25.43	-0.07	26.0	0.972	1.140	1.108
ANSI / IEEE C95.1 – SAFETY LIMIT						1.6 W/kg (mW/g)							
Spatial Peak						Averaged over 1g							
Uncontrolled Exposure/General Population													

➤ WCDMA Body SAR in Hotspot mode

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Form Factor	Spacing	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR ₁₀ (W/kg)	Scaling Factor	Reported SAR ₁₀ (W/kg)
	Band II/RMC	7	Front	9538	1907.6	Open	10mm	23.15	0.17	23.5	0.144	1.084	0.156
	Band II/RMC	7	Back	9538	1907.6	Open	10mm	23.15	0.00	23.5	0.169	1.084	0.183
46	Band II/RMC	7	Left	9538	1907.6	Open	10mm	23.15	0.08	23.5	0.309	1.084	0.335
	Band II/RMC	7	Top	9538	1907.6	Open	10mm	23.15	0.11	23.5	0.041	1.084	0.044
	Band IV/RMC	7	Front	1413	1732.6	Open	10mm	22.66	0.15	23.0	0.114	1.081	0.123
	Band IV/RMC	7	Back	1413	1732.6	Open	10mm	22.66	0.03	23.0	0.128	1.081	0.138
	Band IV/RMC	7	Left	1413	1732.6	Open	10mm	22.66	0.14	23.0	0.164	1.081	0.177
	Band IV/RMC	7	Top	1413	1732.6	Open	10mm	22.66	0.14	23.0	0.036	1.081	0.039
	Band V/RMC	4	Front	4183	836.6	Open	10mm	23.31	-0.15	23.5	0.263	1.045	0.275
	Band V/RMC	4	Back	4183	836.6	Open	10mm	23.31	-0.16	23.5	0.279	1.045	0.292
	Band V/RMC	4	Left	4183	836.6	Open	10mm	23.31	0.07	23.5	0.029	1.045	0.030
	Band V/RMC	4	Right	4183	836.6	Open	10mm	23.31	-0.02	23.5	0.086	1.045	0.090
	Band V/RMC	4	Bottom	4183	836.6	Open	10mm	23.31	-0.04	23.5	0.222	1.045	0.232
	Band II/RMC	7	Front	9538	1907.6	Closed	5mm	23.15	-0.16	23.5	0.138	1.084	0.150
	Band II/RMC	7	Back	9538	1907.6	Closed	5mm	23.15	0.08	23.5	0.056	1.084	0.061
	Band II/RMC	7	Left	9538	1907.6	Closed	5mm	23.15	-0.01	23.5	0.219	1.084	0.237
	Band II/RMC	7	Bottom	9538	1907.6	Closed	5mm	23.15	-0.01	23.5	0.050	1.084	0.054
	Band IV/RMC	7	Front	1413	1732.6	Closed	5mm	22.66	-0.08	23.0	0.356	1.081	0.385
	Band IV/RMC	7	Back	1413	1732.6	Closed	5mm	22.66	-0.07	23.0	0.153	1.081	0.165
47	Band IV/RMC	7	Left	1413	1732.6	Closed	5mm	22.66	0.00	23.0	0.612	1.081	0.662
	Band IV/RMC	7	Bottom	1413	1732.6	Closed	5mm	22.66	-0.06	23.0	0.142	1.081	0.154
	Band V/RMC	4	Front	4183	836.6	Closed	5mm	23.31	0.03	23.5	0.243	1.045	0.254
27	Band V/RMC	4	Back	4183	836.6	Closed	5mm	23.31	0.02	23.5	0.626	1.045	0.654
	Band V/RMC	4	Left	4183	836.6	Closed	5mm	23.31	-0.05	23.5	0.065	1.045	0.068
	Band V/RMC	4	Right	4183	836.6	Closed	5mm	23.31	-0.04	23.5	0.042	1.045	0.044
	Band V/RMC	4	Bottom	4183	836.6	Closed	5mm	23.31	0.11	23.5	0.378	1.045	0.395
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)	Form Factor	Spacing	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR ₁₀ (W/kg)	Scaling Factor	Reported SAR ₁₀ (W/kg)
	Band2/1RB#99	7	Front	19100	1900	Open	10mm	23.19	0.02	23.5	0.092	1.074	0.099
	Band2/1RB#99	7	Back	19100	1900	Open	10mm	23.19	-0.05	23.5	0.115	1.074	0.124
	Band2/1RB#99	7	Left	19100	1900	Open	10mm	23.19	-0.09	23.5	0.195	1.074	0.209
	Band2/1RB#99	7	Top	19100	1900	Open	10mm	23.19	0.16	23.5	0.042	1.074	0.045
	Band2/50%RB#0	7	Front	19100	1900	Open	10mm	22.00	0.02	22.5	0.083	1.122	0.093
	Band2/50%RB#0	7	Back	19100	1900	Open	10mm	22.00	0.06	22.5	0.106	1.122	0.119
	Band2/50%RB#0	7	Left	19100	1900	Open	10mm	22.00	0.01	22.5	0.180	1.122	0.202
	Band2/50%RB#0	7	Top	19100	1900	Open	10mm	22.00	0.05	22.5	0.038	1.122	0.043
	Band2/1RB#99	7	Front	19100	1900	Closed	5mm	23.19	0.05	23.5	0.167	1.074	0.179
	Band2/1RB#99	7	Back	19100	1900	Closed	5mm	23.19	0.07	23.5	0.069	1.074	0.074
48	Band2/1RB#99	7	Left	19100	1900	Closed	5mm	23.19	-0.02	23.5	0.315	1.074	0.338
	Band2/1RB#99	7	Bottom	19100	1900	Closed	5mm	23.19	-0.02	23.5	0.065	1.074	0.070
	Band2/50%RB#0	7	Front	19100	1900	Closed	5mm	22.00	-0.01	22.5	0.154	1.122	0.173
	Band2/50%RB#0	7	Back	19100	1900	Closed	5mm	22.00	0.08	22.5	0.063	1.122	0.071
	Band2/50%RB#0	7	Left	19100	1900	Closed	5mm	22.00	0.04	22.5	0.294	1.122	0.330
	Band2/50%RB#0	7	Bottom	19100	1900	Closed	5mm	22.00	-0.03	22.5	0.061	1.122	0.068
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)	Form Factor	Spacing	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR ₁₀ (W/kg)	Scaling Factor	Reported SAR ₁₀ (W/kg)
	Band5/1RB#24	4	Front	20450	829	Open	10mm	23.49	-0.01	24.0	0.267	1.125	0.300
	Band5/1RB#24	4	Back	20450	829	Open	10mm	23.49	-0.15	24.0	0.246	1.125	0.277
	Band5/1RB#24	4	Left	20450	829	Open	10mm	23.49	0.16	24.0	0.030	1.125	0.034
	Band5/1RB#24	4	Right	20450	829	Open	10mm	23.49	0.17	24.0	0.092	1.125	0.104
	Band5/1RB#24	4	Bottom	20450	829	Open	10mm	23.49	0.01	24.0	0.230	1.125	0.259
	Band5/50%RB#0	4	Front	20600	844	Open	10mm	22.51	0.14	23.0	0.252	1.119	0.282
	Band5/50%RB#0	4	Back	20600	844	Open	10mm	22.51	0.05	23.0	0.229	1.119	0.256
	Band5/50%RB#0	4	Left	20600	844	Open	10mm	22.51	0.02	23.0	0.027	1.119	0.030
	Band5/50%RB#0	4	Right	20600	844	Open	10mm	22.51	0.12	23.0	0.088	1.119	0.098
	Band5/50%RB#0	4	Bottom	20600	844	Open	10mm	22.51	0.05	23.0	0.221	1.119	0.247
	Band5/1RB#24	4	Front	20450	829	Closed	5mm	23.49	-0.02	24.0	0.249	1.125	0.280
29	Band5/1RB#24	4	Back	20450	829	Closed	5mm	23.49	-0.19	24.0	0.636	1.125	0.716
	Band5/1RB#24	4	Left	20450	829	Closed	5mm	23.49	0.02	24.0	0.070	1.125	0.079
	Band5/1RB#24	4	Right	20450	829	Closed	5mm	23.49	0.13	24.0	0.048	1.125	0.054
	Band5/1RB#24	4	Bottom	20450	829	Closed	5mm	23.49	-0.11	24.0	0.394	1.125	0.443
	Band5/50%RB#0	4	Front	20600	844	Closed	5mm	22.51	0.19	23.0	0.241	1.119	0.270
	Band5/50%RB#0	4	Back	20600	844	Closed	5mm	22.51	0.00	23.0	0.618	1.119	0.692
	Band5/50%RB#0	4	Left	20600	844	Closed	5mm	22.51	-0.17	23.0	0.063	1.119	0.070
	Band5/50%RB#0	4	Right	20600	844	Closed	5mm	22.51	0.05	23.0	0.044	1.119	0.049
	Band5/50%RB#0	4	Bottom	20600	844	Closed	5mm	22.51	-0.18	23.0	0.367	1.119	0.411
ANSI / IEEE C95.1 – SAFETY LIMIT						1.6 W/kg (mW/g)							
Spatial Peak						Averaged over 1g							
Uncontrolled Exposure/General Population													

➤ FDD-LTE Band 7(20MHz) QPSK Body SAR in Hotspot mode

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Form Factor	Spacing	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR ₁₀ (W/kg)	Scaling Factor	Reported SAR ₁₀ (W/kg)
	Band7/1RB#49	7	Front	21350	2560	Open	10mm	22.70	0.09	23.0	0.123	1.072	0.132
	Band7/1RB#49	7	Back	21350	2560	Open	10mm	22.70	-0.11	23.0	0.201	1.072	0.215
	Band7/1RB#49	7	Left	21350	2560	Open	10mm	22.70	0.01	23.0	0.115	1.072	0.123
	Band7/1RB#49	7	Top	21350	2560	Open	10mm	22.70	0.12	23.0	0.087	1.072	0.093
	Band7/50%RB#49	7	Front	21100	2535	Open	10mm	21.56	0.02	22.0	0.113	1.107	0.125
	Band7/50%RB#49	7	Back	21100	2535	Open	10mm	21.56	0.16	22.0	0.190	1.107	0.210
	Band7/50%RB#49	7	Left	21100	2535	Open	10mm	21.56	-0.17	22.0	0.104	1.107	0.115
	Band7/50%RB#49	7	Top	21100	2535	Open	10mm	21.56	0.02	22.0	0.080	1.107	0.089
	Band7/1RB#49	3	Front	20850	2510	Open	10mm	20.40	0.03	21.0	0.027	1.148	0.031
	Band7/1RB#49	3	Back	20850	2510	Open	10mm	20.40	0.13	21.0	0.056	1.148	0.064
	Band7/1RB#49	3	Right	20850	2510	Open	10mm	20.40	-0.03	21.0	0.076	1.148	0.087
	Band7/1RB#49	3	Top	20850	2510	Open	10mm	20.40	0.04	21.0	0.021	1.148	0.024
	Band7/50%RB#49	3	Front	20850	2510	Open	10mm	19.44	0.05	19.5	0.023	1.014	0.023
	Band7/50%RB#49	3	Back	20850	2510	Open	10mm	19.44	0.18	19.5	0.050	1.014	0.051
	Band7/50%RB#49	3	Right	20850	2510	Open	10mm	19.44	0.09	19.5	0.068	1.014	0.069
	Band7/50%RB#49	3	Top	20850	2510	Open	10mm	19.44	0.04	19.5	0.018	1.014	0.018
	Band7/1RB#49	7	Front	21350	2560	Closed	5mm	22.70	0.07	23.0	0.120	1.072	0.129
	Band7/1RB#49	7	Back	21350	2560	Closed	5mm	22.70	-0.14	23.0	0.053	1.072	0.057
	Band7/1RB#49	7	Left	21350	2560	Closed	5mm	22.70	0.06	23.0	0.270	1.072	0.289
	Band7/1RB#49	7	Bottom	21350	2560	Closed	5mm	22.70	-0.07	23.0	0.058	1.072	0.062
	Band7/50%RB#49	7	Front	21100	2535	Closed	5mm	21.56	-0.02	22.0	0.114	1.107	0.126
	Band7/50%RB#49	7	Back	21100	2535	Closed	5mm	21.56	-0.12	22.0	0.048	1.107	0.053
	Band7/50%RB#49	7	Left	21100	2535	Closed	5mm	21.56	0.11	22.0	0.257	1.107	0.284
	Band7/50%RB#49	7	Bottom	21100	2535	Closed	5mm	21.56	-0.07	22.0	0.052	1.107	0.058
	Band7/1RB#49	3	Front	20850	2510	Closed	5mm	20.40	0.07	21.0	0.093	1.148	0.107
	Band7/1RB#49	3	Back	20850	2510	Closed	5mm	20.40	0.12	21.0	0.179	1.148	0.205
49	Band7/1RB#49	3	Right	20850	2510	Closed	5mm	20.40	-0.03	21.0	0.467	1.148	0.536
	Band7/1RB#49	3	Top	20850	2510	Closed	5mm	20.40	0.02	21.0	0.082	1.148	0.094
	Band7/1RB#49	3	Bottom	20850	2510	Closed	5mm	20.40	0.15	21.0	0.023	1.148	0.026
	Band7/50%RB#0	3	Front	20850	2510	Closed	5mm	19.44	0.11	19.5	0.085	1.014	0.086
	Band7/50%RB#0	3	Back	20850	2510	Closed	5mm	19.44	-0.01	19.5	0.169	1.014	0.171
	Band7/50%RB#0	3	Right	20850	2510	Closed	5mm	19.44	0.12	19.5	0.448	1.014	0.454
	Band7/50%RB#0	3	Top	20850	2510	Closed	5mm	19.44	0.03	19.5	0.076	1.014	0.077
	Band7/50%RB#0	3	Bottom	20850	2510	Closed	5mm	19.44	0.08	19.5	0.020	1.014	0.020
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)	Form Factor	Spacing	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR ₁₀ (W/kg)	Scaling Factor	Reported SAR ₁₀ (W/kg)
	Band12/1RB#49	4	Front	23130	711	Open	10mm	23.34	0.04	23.5	0.187	1.038	0.194
	Band12/1RB#49	4	Back	23130	711	Open	10mm	23.34	-0.10	23.5	0.174	1.038	0.181
	Band12/1RB#49	4	Left	23130	711	Open	10mm	23.34	0.13	23.5	0.027	1.038	0.028
	Band12/1RB#49	4	Right	23130	711	Open	10mm	23.34	0.03	23.5	0.084	1.038	0.087
	Band12/1RB#49	4	Bottom	23130	711	Open	10mm	23.34	-0.05	23.5	0.162	1.038	0.168
	Band12/50%RB#12	4	Front	23130	711	Open	10mm	22.38	0.06	22.5	0.178	1.028	0.183
	Band12/50%RB#12	4	Back	23130	711	Open	10mm	22.38	0.12	22.5	0.166	1.028	0.171
	Band12/50%RB#12	4	Left	23130	711	Open	10mm	22.38	0.02	22.5	0.023	1.028	0.024
	Band12/50%RB#12	4	Right	23130	711	Open	10mm	22.38	0.05	22.5	0.077	1.028	0.079
	Band12/50%RB#12	4	Bottom	23130	711	Open	10mm	22.38	0.04	22.5	0.153	1.028	0.157
	Band12/1RB#49	4	Front	23130	711	Closed	5mm	23.34	0.07	23.5	0.225	1.038	0.234
31	Band12/1RB#49	4	Back	23130	711	Closed	5mm	23.34	0.06	23.5	0.553	1.038	0.574
	Band12/1RB#49	4	Left	23130	711	Closed	5mm	23.34	0.09	23.5	0.053	1.038	0.055
	Band12/1RB#49	4	Right	23130	711	Closed	5mm	23.34	-0.08	23.5	0.039	1.038	0.040
	Band12/1RB#49	4	Bottom	23130	711	Closed	5mm	23.34	-0.08	23.5	0.339	1.038	0.352
	Band12/50%RB#12	4	Front	23130	711	Closed	5mm	22.38	-0.18	22.5	0.211	1.028	0.217
	Band12/50%RB#12	4	Back	23130	711	Closed	5mm	22.38	0.16	22.5	0.538	1.028	0.553
	Band12/50%RB#12	4	Left	23130	711	Closed	5mm	22.38	0.19	22.5	0.049	1.028	0.050
	Band12/50%RB#12	4	Right	23130	711	Closed	5mm	22.38	0.05	22.5	0.037	1.028	0.038
	Band12/50%RB#12	4	Bottom	23130	711	Closed	5mm	22.38	-0.16	22.5	0.315	1.028	0.324
ANSI / IEEE C95.1 – SAFETY LIMIT						1.6 W/kg (mW/g)							
Spatial Peak						Averaged over 1g							
Uncontrolled Exposure/General Population													

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

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Form Factor	Spacing	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR ₁₀ (W/kg)	Scaling Factor	D.C Factor	Reported SAR ₁₀ (W/kg)
	Band41/1RB#49	7	Front	40620	2593	Open	10mm	24.91	0.09	25.5	0.062	1.146	1.008	0.072
	Band41/1RB#49	7	Back	40620	2593	Open	10mm	24.91	0.09	25.5	0.078	1.146	1.008	0.090
	Band41/1RB#49	7	Left	40620	2593	Open	10mm	24.91	0.06	25.5	0.108	1.146	1.008	0.125
	Band41/1RB#49	7	Top	40620	2593	Open	10mm	24.91	0.01	25.5	0.050	1.146	1.008	0.058
	Band41/50%RB#0	7	Front	40620	2593	Open	10mm	23.95	0.17	24.0	0.056	1.012	1.008	0.057
	Band41/50%RB#0	7	Back	40620	2593	Open	10mm	23.95	0.08	24.0	0.072	1.012	1.008	0.073
	Band41/50%RB#0	7	Left	40620	2593	Open	10mm	23.95	0.13	24.0	0.099	1.012	1.008	0.101
	Band41/50%RB#0	7	Top	40620	2593	Open	10mm	23.95	-0.04	24.0	0.047	1.012	1.008	0.048
	Band41/1RB#49	3	Front	39750	2506	Open	10mm	23.01	0.10	23.5	0.019	1.119	1.008	0.021
	Band41/1RB#49	3	Back	39750	2506	Open	10mm	23.01	0.07	23.5	0.042	1.119	1.008	0.047
	Band41/1RB#49	3	Right	39750	2506	Open	10mm	23.01	-0.17	23.5	0.054	1.119	1.008	0.061
	Band41/1RB#49	3	Top	39750	2506	Open	10mm	23.01	0.09	23.5	0.016	1.119	1.008	0.018
	Band41/50%RB#0	3	Front	39750	2506	Open	10mm	21.91	0.16	22.0	0.017	1.021	1.008	0.017
	Band41/50%RB#0	3	Back	39750	2506	Open	10mm	21.91	0.14	22.0	0.040	1.021	1.008	0.041
	Band41/50%RB#0	3	Right	39750	2506	Open	10mm	21.91	0.08	22.0	0.049	1.021	1.008	0.050
	Band41/50%RB#0	3	Top	39750	2506	Open	10mm	21.91	-0.10	22.0	0.014	1.021	1.008	0.014
	Band41/1RB#49	7	Front	40620	2593	Closed	5mm	24.91	0.06	25.5	0.158	1.146	1.008	0.183
	Band41/1RB#49	7	Back	40620	2593	Closed	5mm	24.91	0.16	25.5	0.045	1.146	1.008	0.052
	Band41/1RB#49	7	Left	40620	2593	Closed	5mm	24.91	0.09	25.5	0.249	1.146	1.008	0.288
	Band41/1RB#49	7	Bottom	40620	2593	Closed	5mm	24.91	0.01	25.5	0.049	1.146	1.008	0.057
	Band41/50%RB#0	7	Front	40620	2593	Closed	5mm	23.95	0.19	24.0	0.102	1.012	1.008	0.104
	Band41/50%RB#0	7	Back	40620	2593	Closed	5mm	23.95	-0.06	24.0	0.041	1.012	1.008	0.042
	Band41/50%RB#0	7	Left	40620	2593	Closed	5mm	23.95	0.05	24.0	0.237	1.012	1.008	0.242
	Band41/50%RB#0	7	Bottom	40620	2593	Closed	5mm	23.95	0.16	24.0	0.044	1.012	1.008	0.045
	Band41/1RB#49	3	Front	39750	2506	Closed	5mm	23.01	0.19	23.5	0.078	1.119	1.008	0.088
	Band41/1RB#49	3	Back	39750	2506	Closed	5mm	23.01	0.02	23.5	0.151	1.119	1.008	0.170
50	Band41/1RB#49	3	Right	39750	2506	Closed	5mm	23.01	0.06	23.5	0.271	1.119	1.008	0.306
	Band41/1RB#49	3	Top	39750	2506	Closed	5mm	23.01	0.11	23.5	0.125	1.119	1.008	0.141
	Band41/1RB#49	3	Bottom	39750	2506	Closed	5mm	23.01	0.02	23.5	0.026	1.119	1.008	0.029
	Band41/50%RB#0	3	Front	39750	2506	Closed	5mm	21.91	-0.04	22.0	0.074	1.021	1.008	0.076
	Band41/50%RB#0	3	Back	39750	2506	Closed	5mm	21.91	0.01	22.0	0.153	1.021	1.008	0.157
	Band41/50%RB#0	3	Right	39750	2506	Closed	5mm	21.91	0.16	22.0	0.258	1.021	1.008	0.266
	Band41/50%RB#0	3	Top	39750	2506	Closed	5mm	21.91	0.09	22.0	0.116	1.021	1.008	0.119
	Band41/50%RB#0	3	Bottom	39750	2506	Closed	5mm	21.91	0.12	22.0	0.022	1.021	1.008	0.023
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)	Form Factor	Spacing	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR ₁₀ (W/kg)	Scaling Factor	Reported SAR ₁₀ (W/kg)
	Band66/1RB#49	7	Front	132572	1770	Open	10mm	24.12	0.01	24.5	0.096	1.091	0.105
	Band66/1RB#49	7	Back	132572	1770	Open	10mm	24.12	0.08	24.5	0.115	1.091	0.125
	Band66/1RB#49	7	Left	132572	1770	Open	10mm	24.12	0.09	24.5	0.193	1.091	0.211
	Band66/1RB#49	7	Top	132572	1770	Open	10mm	24.12	0.11	24.5	0.044	1.091	0.048
	Band66/50%RB#0	7	Front	132572	1770	Open	10mm	23.04	0.08	23.50	0.089	1.112	0.099
	Band66/50%RB#0	7	Back	132572	1770	Open	10mm	23.04	-0.05	23.50	0.107	1.112	0.119
	Band66/50%RB#0	7	Left	132572	1770	Open	10mm	23.04	0.04	23.50	0.182	1.112	0.202
	Band66/50%RB#0	7	Top	132572	1770	Open	10mm	23.04	0.10	23.50	0.040	1.112	0.044
	Band66/1RB#49	3	Front	132072	1720	Open	10mm	20.10	0.04	20.5	0.022	1.096	0.024
	Band66/1RB#49	3	Back	132072	1720	Open	10mm	20.10	0.07	20.5	0.043	1.096	0.047
	Band66/1RB#49	3	Right	132072	1720	Open	10mm	20.10	0.11	20.5	0.062	1.096	0.068
	Band66/1RB#49	3	Top	132072	1720	Open	10mm	20.10	0.10	20.5	0.018	1.096	0.020
	Band66/50%RB#0	3	Front	132322	1745	Open	10mm	18.97	0.08	19.00	0.020	1.007	0.020
	Band66/50%RB#0	3	Back	132322	1745	Open	10mm	18.97	-0.11	19.00	0.039	1.007	0.039
	Band66/50%RB#0	3	Right	132322	1745	Open	10mm	18.97	0.01	19.00	0.058	1.007	0.058
	Band66/50%RB#0	3	Top	132322	1745	Open	10mm	18.97	0.15	19.00	0.016	1.007	0.016
	Band66/1RB#49	7	Front	132572	1770	Closed	5mm	24.12	-0.07	24.5	0.266	1.091	0.290
	Band66/1RB#49	7	Back	132572	1770	Closed	5mm	24.12	0.06	24.5	0.117	1.091	0.128
	Band66/1RB#49	7	Left	132572	1770	Closed	5mm	24.12	-0.04	24.5	0.570	1.091	0.622
	Band66/1RB#49	7	Bottom	132572	1770	Closed	5mm	24.12	0.05	24.5	0.109	1.091	0.119
	Band66/50%RB#0	7	Front	132572	1770	Closed	5mm	23.04	0.11	23.5	0.243	1.112	0.270
	Band66/50%RB#0	7	Back	132572	1770	Closed	5mm	23.04	0.14	23.5	0.108	1.112	0.120
	Band66/50%RB#0	7	Left	132572	1770	Closed	5mm	23.04	0.11	23.5	0.531	1.112	0.590
	Band66/50%RB#0	7	Bottom	132572	1770	Closed	5mm	23.04	-0.04	23.5	0.102	1.112	0.113
	Band66/1RB#99	3	Front	132072	1720	Closed	5mm	20.10	0.12	20.5	0.136	1.096	0.149
	Band66/1RB#99	3	Back	132072	1720	Closed	5mm	20.10	0.03	20.5	0.256	1.096	0.281
51	Band66/1RB#99	3	Right	132072	1720	Closed	5mm	20.10	-0.05	20.5	0.579	1.096	0.635
	Band66/1RB#99	3	Top	132072	1720	Closed	5mm	20.10	0.14	20.5	0.122	1.096	0.134
	Band66/1RB#99	3	Bottom	132072	1720	Closed	5mm	20.10	0.14	20.5	0.025	1.096	0.027
	Band66/50%RB#0	3	Front	132322	1745	Closed	5mm	18.97	-0.20	19.0	0.122	1.007	0.123
	Band66/50%RB#0	3	Back	132322	1745	Closed	5mm	18.97	0.09	19.0	0.261	1.007	0.263
	Band66/50%RB#0	3	Right	132322	1745	Closed	5mm	18.97	0.13	19.0	0.552	1.007	0.556
	Band66/50%RB#0	3	Top	132322	1745	Closed	5mm	18.97	0.13	19.0	0.109	1.007	0.110
	Band66/50%RB#0	3	Bottom	132322	1745	Closed	5mm	18.97	0.09	19.0	0.022	1.007	0.022
ANSI / IEEE C95.1 – SAFETY LIMIT						1.6 W/kg (mW/g)							
Spatial Peak						Averaged over 1g							
Uncontrolled Exposure/General Population													

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

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Form Factor	Spacing	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR ₁₀ (W/kg)	Scaling Factor	Reported SAR ₁₀ (W/kg)
	NR n5 /1@49	4	Front	167300	836.5	Open	10mm	21.62	0.17	22.0	0.163	1.091	0.178
	NR n5 /1@49	4	Back	167300	836.5	Open	10mm	21.62	-0.06	22.0	0.178	1.091	0.194
	NR n5 /1@49	4	Left	167300	836.5	Open	10mm	21.62	0.11	22.0	0.019	1.091	0.021
	NR n5 /1@49	4	Right	167300	836.5	Open	10mm	21.62	0.10	22.0	0.053	1.091	0.058
	NR n5 /1@49	4	Bottom	167300	836.5	Open	10mm	21.62	0.05	22.0	0.158	1.091	0.172
	NR n5 /25@12	4	Front	167300	836.5	Open	10mm	21.79	0.12	22.0	0.187	1.050	0.197
	NR n5 /25@12	4	Back	167300	836.5	Open	10mm	21.79	-0.09	22.0	0.217	1.050	0.228
	NR n5 /25@12	4	Left	167300	836.5	Open	10mm	21.79	0.07	22.0	0.024	1.050	0.025
	NR n5 /25@12	4	Right	167300	836.5	Open	10mm	21.79	0.08	22.0	0.071	1.050	0.075
	NR n5 /25@12	4	Bottom	167300	836.5	Open	10mm	21.79	-0.02	22.0	0.182	1.050	0.191
	NR n5 /1@1	4	Front	167300	836.5	Closed	5mm	21.62	0.05	22.0	0.224	1.091	0.244
	NR n5 /1@1	4	Back	167300	836.5	Closed	5mm	21.62	0.03	22.0	0.481	1.091	0.525
	NR n5 /1@1	4	Left	167300	836.5	Closed	5mm	21.62	-0.06	22.0	0.127	1.091	0.139
	NR n5 /1@1	4	Right	167300	836.5	Closed	5mm	21.62	0.08	22.0	0.051	1.091	0.056
	NR n5 /1@1	4	Bottom	167300	836.5	Closed	5mm	21.62	0.00	22.0	0.380	1.091	0.415
	NR n5 /25@12	4	Front	167300	836.5	Closed	5mm	21.79	0.16	22.0	0.242	1.050	0.254
34	NR n5 /25@12	4	Back	167300	836.5	Closed	5mm	21.79	0.12	22.0	0.513	1.050	0.539
	NR n5 /25@12	4	Left	167300	836.5	Closed	5mm	21.79	-0.11	22.0	0.136	1.050	0.143
	NR n5 /25@12	4	Right	167300	836.5	Closed	5mm	21.79	0.01	22.0	0.069	1.050	0.072
	NR n5 /25@12	4	Bottom	167300	836.5	Closed	5mm	21.79	-0.04	22.0	0.393	1.050	0.413
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)	Form Factor	Spacing	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR ₁₀ (W/kg)	Scaling Factor	Reported SAR ₁₀ (W/kg)
	NR n7 /1@49	7	Front	507000	2535	Open	10mm	22.89	0.12	23.0	0.066	1.026	0.068
	NR n7 /1@49	7	Back	507000	2535	Open	10mm	22.89	-0.02	23.0	0.192	1.026	0.197
	NR n7 /1@49	7	Left	507000	2535	Open	10mm	22.89	-0.07	23.0	0.010	1.026	0.010
	NR n7 /1@49	7	Top	507000	2535	Open	10mm	22.89	0.13	23.0	0.032	1.026	0.033
	NR n7 /25@12	7	Front	512000	2560	Open	10mm	23.20	-0.02	23.5	0.074	1.072	0.079
	NR n7 /25@12	7	Back	512000	2560	Open	10mm	23.20	0.00	23.5	0.214	1.072	0.229
	NR n7 /25@12	7	Left	512000	2560	Open	10mm	23.20	-0.05	23.5	0.013	1.072	0.014
	NR n7 /25@12	7	Top	512000	2560	Open	10mm	23.20	0.13	23.5	0.037	1.072	0.040
	NR n7 /1@49 NSA	7	Front	507000	2535	Open	10mm	19.72	0.19	20.0	0.043	1.067	0.046
	NR n7 /1@49 NSA	7	Back	507000	2535	Open	10mm	19.72	0.08	20.0	0.158	1.067	0.169
	NR n7 /1@49 NSA	7	Left	507000	2535	Open	10mm	19.72	-0.03	20.0	0.007	1.067	0.007
	NR n7 /1@49 NSA	7	Top	507000	2535	Open	10mm	19.72	0.07	20.0	0.024	1.067	0.026
	NR n7 /25@12 NSA	7	Front	512000	2560	Open	10mm	19.96	0.12	20.0	0.056	1.009	0.057
	NR n7 /25@12 NSA	7	Back	512000	2560	Open	10mm	19.96	0.06	20.0	0.178	1.009	0.180
	NR n7 /25@12 NSA	7	Left	512000	2560	Open	10mm	19.96	0.18	20.0	0.009	1.009	0.009
	NR n7 /25@12 NSA	7	Top	512000	2560	Open	10mm	19.96	0.03	20.0	0.028	1.009	0.028
	NR n7 /1@49	7	Front	507000	2535	Closed	5mm	22.89	-0.19	23.0	0.262	1.026	0.269
	NR n7 /1@49	7	Back	507000	2535	Closed	5mm	22.89	0.06	23.0	0.182	1.026	0.187
	NR n7 /1@49	7	Left	507000	2535	Closed	5mm	22.89	-0.08	23.0	0.521	1.026	0.535
	NR n7 /1@49	7	Bottom	507000	2535	Closed	5mm	22.89	0.07	23.0	0.235	1.026	0.241
	NR n7 /25@12	7	Front	512000	2560	Closed	5mm	23.20	-0.18	23.5	0.363	1.072	0.389
	NR n7 /25@12	7	Back	512000	2560	Closed	5mm	23.20	0.20	23.5	0.269	1.072	0.288
52	NR n7 /25@12	7	Left	512000	2560	Closed	5mm	23.20	-0.09	23.5	0.636	1.072	0.682
	NR n7 /25@12	7	Bottom	512000	2560	Closed	5mm	23.20	0.01	23.5	0.332	1.072	0.356
	NR n7 /1@49 NSA	7	Front	507000	2535	Closed	5mm	19.72	0.06	20.0	0.186	1.067	0.198
	NR n7 /1@49 NSA	7	Back	507000	2535	Closed	5mm	19.72	-0.02	20.0	0.101	1.067	0.108
	NR n7 /1@49 NSA	7	Left	507000	2535	Closed	5mm	19.72	-0.15	20.0	0.371	1.067	0.396
	NR n7 /1@49 NSA	7	Bottom	507000	2535	Closed	5mm	19.72	0.13	20.0	0.162	1.067	0.173
	NR n7 /25@12 NSA	7	Front	512000	2560	Closed	5mm	19.96	-0.02	20.0	0.245	1.009	0.247
	NR n7 /25@12 NSA	7	Back	512000	2560	Closed	5mm	19.96	0.05	20.0	0.135	1.009	0.136
	NR n7 /25@12 NSA	7	Left	512000	2560	Closed	5mm	19.96	-0.05	20.0	0.431	1.009	0.435
	NR n7 /25@12 NSA	7	Bottom	512000	2560	Closed	5mm	19.96	0.01	20.0	0.206	1.009	0.208
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 in Hotspot mode

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Form Factor	Spacing	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR ₁₀ (W/kg)	Scaling Factor	Reported SAR ₁₀ (W/kg)
	NR n12 /1@1	4	Front	141700	708.5	Open	10mm	24.45	0.15	24.5	0.208	1.012	0.210
	NR n12 /1@1	4	Back	141700	708.5	Open	10mm	24.45	-0.14	24.5	0.225	1.012	0.228
	NR n12 /1@1	4	Left	141700	708.5	Open	10mm	24.45	0.01	24.5	0.034	1.012	0.034
	NR n12 /1@1	4	Right	141700	708.5	Open	10mm	24.45	0.07	24.5	0.102	1.012	0.103
	NR n12 /1@1	4	Bottom	141700	708.5	Open	10mm	24.45	0.04	24.5	0.200	1.012	0.202
	NR n12 /18@9	4	Front	141300	706.5	Open	10mm	24.42	0.07	24.5	0.214	1.019	0.218
	NR n12 /18@9	4	Back	141300	706.5	Open	10mm	24.42	0.03	24.5	0.228	1.019	0.232
	NR n12 /18@9	4	Left	141300	706.5	Open	10mm	24.42	-0.01	24.5	0.033	1.019	0.034
	NR n12 /18@9	4	Right	141300	706.5	Open	10mm	24.42	0.16	24.5	0.111	1.019	0.113
	NR n12 /18@9	4	Bottom	141300	706.5	Open	10mm	24.42	0.02	24.5	0.203	1.019	0.207
	NR n12 /1@1	4	Front	141700	708.5	Closed	5mm	24.45	0.06	24.5	0.247	1.012	0.250
	NR n12 /1@1	4	Back	141700	708.5	Closed	5mm	24.45	0.03	24.5	0.575	1.012	0.582
	NR n12 /1@1	4	Left	141700	708.5	Closed	5mm	24.45	-0.03	24.5	0.182	1.012	0.184
	NR n12 /1@1	4	Right	141700	708.5	Closed	5mm	24.45	0.07	24.5	0.122	1.012	0.123
	NR n12 /1@1	4	Bottom	141700	708.5	Closed	5mm	24.45	0.07	24.5	0.502	1.012	0.508
	NR n12 /18@9	4	Front	141300	706.5	Closed	5mm	24.42	-0.12	24.5	0.274	1.019	0.279
36	NR n12 /18@9	4	Back	141300	706.5	Closed	5mm	24.42	0.05	24.5	0.643	1.019	0.655
	NR n12 /18@9	4	Left	141300	706.5	Closed	5mm	24.42	0.02	24.5	0.199	1.019	0.203
	NR n12 /18@9	4	Right	141300	706.5	Closed	5mm	24.42	0.02	24.5	0.131	1.019	0.133
	NR n12 /18@9	4	Bottom	141300	706.5	Closed	5mm	24.42	0.07	24.5	0.586	1.019	0.597
ANSI / IEEE C95.1 – SAFETY LIMIT						1.6 W/kg (mW/g)							
Spatial Peak						Averaged over 1g							
Uncontrolled Exposure/General Population													

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

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Form Factor	Spacing	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR ₁₀ (W/kg)	Scaling Factor	Reported SAR ₁₀ (W/kg)
	NR n41 /1@271	7	Front	509202	2546.01	Open	10mm	25.39	-0.03	25.5	0.078	1.026	0.080
	NR n41 /1@271	7	Back	509202	2546.01	Open	10mm	25.39	-0.01	25.5	0.225	1.026	0.231
	NR n41 /1@271	7	Left	509202	2546.01	Open	10mm	25.39	-0.14	25.5	0.234	1.026	0.240
	NR n41 /1@271	7	Top	509202	2546.01	Open	10mm	25.39	0.03	25.5	0.064	1.026	0.066
	NR n41 /135@67	7	Front	518598	2592.99	Open	10mm	26.16	-0.11	26.5	0.093	1.081	0.101
	NR n41 /135@67	7	Back	518598	2592.99	Open	10mm	26.16	0.12	26.5	0.249	1.081	0.269
	NR n41 /135@67	7	Left	518598	2592.99	Open	10mm	26.16	0.07	26.5	0.254	1.081	0.275
	NR n41 /135@67	7	Top	518598	2592.99	Open	10mm	26.16	0.06	26.5	0.072	1.081	0.078
	NR n41 /1@271 NSA	7	Front	509202	2546.01	Open	10mm	19.84	0.05	20.0	0.018	1.038	0.019
	NR n41 /1@271 NSA	7	Back	509202	2546.01	Open	10mm	19.84	0.02	20.0	0.037	1.038	0.038
	NR n41 /1@271 NSA	7	Left	509202	2546.01	Open	10mm	19.84	-0.03	20.0	0.042	1.038	0.044
	NR n41 /1@271 NSA	7	Top	509202	2546.01	Open	10mm	19.84	0.15	20.0	0.012	1.038	0.012
	NR n41 /135@67 NSA	7	Front	518598	2592.99	Open	10mm	20.60	0.03	21.0	0.022	1.096	0.024
	NR n41 /135@67 NSA	7	Back	518598	2592.99	Open	10mm	20.60	0.15	21.0	0.041	1.096	0.045
	NR n41 /135@67 NSA	7	Left	518598	2592.99	Open	10mm	20.60	0.02	21.0	0.047	1.096	0.052
	NR n41 /135@67 NSA	7	Top	518598	2592.99	Open	10mm	20.60	-0.19	21.0	0.016	1.096	0.018
	NR n41 /1@271	7	Front	509202	2546.01	Closed	5mm	25.39	0.11	25.5	0.342	1.026	0.351
	NR n41 /1@271	7	Back	509202	2546.01	Closed	5mm	25.39	0.05	25.5	0.178	1.026	0.183
	NR n41 /1@271	7	Left	509202	2546.01	Closed	5mm	25.39	0.04	25.5	0.412	1.026	0.423
	NR n41 /1@271	7	Bottom	509202	2546.01	Closed	5mm	25.39	-0.18	25.5	0.163	1.026	0.167
	NR n41 /135@67	7	Front	518598	2592.99	Closed	5mm	26.16	-0.02	26.5	0.389	1.081	0.421
	NR n41 /135@67	7	Back	518598	2592.99	Closed	5mm	26.16	-0.16	26.5	0.204	1.081	0.221
53	NR n41 /135@67	7	Left	518598	2592.99	Closed	5mm	26.16	-0.03	26.5	0.456	1.081	0.493
	NR n41 /135@67	7	Bottom	518598	2592.99	Closed	5mm	26.16	0.18	26.5	0.183	1.081	0.198
	NR n41 /1@271 NSA	7	Front	509202	2546.01	Closed	5mm	19.84	0.11	20.0	0.098	1.038	0.102
	NR n41 /1@271 NSA	7	Back	509202	2546.01	Closed	5mm	19.84	0.05	20.0	0.049	1.038	0.051
	NR n41 /1@271 NSA	7	Left	509202	2546.01	Closed	5mm	19.84	-0.06	20.0	0.132	1.038	0.137
	NR n41 /1@271 NSA	7	Bottom	509202	2546.01	Closed	5mm	19.84	0.08	20.0	0.038	1.038	0.039
	NR n41/135@67 NSA	7	Front	518598	2592.99	Closed	5mm	20.60	0.09	21.0	0.108	1.096	0.118
	NR n41/135@67 NSA	7	Back	518598	2592.99	Closed	5mm	20.60	-0.04	21.0	0.056	1.096	0.061
	NR n41/135@67 NSA	7	Left	518598	2592.99	Closed	5mm	20.60	-0.08	21.0	0.144	1.096	0.158
	NR n41/135@67 NSA	7	Bottom	518598	2592.99	Closed	5mm	20.60	0.03	21.0	0.043	1.096	0.047
ANSI / IEEE C95.1 – SAFETY LIMIT						1.6 W/kg (mW/g)							
Spatial Peak						Averaged over 1g							
Uncontrolled Exposure/General Population													

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

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Form Factor	Spacing	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR ₁₀ (W/kg)	Scaling Factor	Reported SAR ₁₀ (W/kg)
	NR n66/1@104	7	Front	349000	1745	Open	10mm	19.90	0.19	20.0	0.043	1.023	0.044
	NR n66/1@104	7	Back	349000	1745	Open	10mm	19.90	0.17	20.0	0.072	1.023	0.074
	NR n66/1@104	7	Left	349000	1745	Open	10mm	19.90	-0.02	20.0	0.107	1.023	0.109
	NR n66/1@104	7	Top	349000	1745	Open	10mm	19.90	0.01	20.0	0.028	1.023	0.029
	NR n66/50@25	7	Front	352000	1760	Open	10mm	20.12	-0.02	20.5	0.047	1.091	0.051
	NR n66/50@25	7	Back	352000	1760	Open	10mm	20.12	-0.03	20.5	0.075	1.091	0.082
	NR n66/50@25	7	Left	352000	1760	Open	10mm	20.12	0.12	20.5	0.113	1.091	0.123
	NR n66/50@25	7	Top	352000	1760	Open	10mm	20.12	0.04	20.5	0.031	1.091	0.034
	NR n66/1@104	7	Front	349000	1745	Closed	5mm	19.90	-0.07	20.0	0.169	1.023	0.173
	NR n66/1@104	7	Back	349000	1745	Closed	5mm	19.90	0.01	20.0	0.109	1.023	0.112
54	NR n66/1@104	7	Left	349000	1745	Closed	5mm	19.90	-0.13	20.0	0.315	1.023	0.322
	NR n66/1@104	7	Bottom	349000	1745	Closed	5mm	19.90	0.05	20.0	0.056	1.023	0.057
	NR n66/50@25	7	Front	352000	1760	Closed	5mm	20.12	0.18	20.5	0.156	1.091	0.170
	NR n66/50@25	7	Back	352000	1760	Closed	5mm	20.12	0.03	20.5	0.100	1.091	0.109
	NR n66/50@25	7	Left	352000	1760	Closed	5mm	20.12	0.01	20.5	0.294	1.091	0.321
	NR n66/50@25	7	Bottom	352000	1760	Closed	5mm	20.12	-0.02	20.5	0.048	1.091	0.052
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)	Form Factor	Spacing	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR ₁₀ (W/kg)	Scaling Factor	Reported SAR ₁₀ (W/kg)
	NR n77 /1@1	8	Front	633334	3500.01	Open	10mm	25.23	0.13	25.5	0.134	1.064	0.143
	NR n77 /1@1	8	Back	633334	3500.01	Open	10mm	25.23	0.01	25.5	0.128	1.064	0.136
	NR n77 /1@1	8	Left	633334	3500.01	Open	10mm	25.23	0.05	25.5	0.072	1.064	0.077
	NR n77 /1@1	8	Top	633334	3500.01	Open	10mm	25.23	-0.04	25.5	0.169	1.064	0.180
	NR n77 /135@67	8	Front	633334	3500.01	Open	10mm	26.16	0.03	26.5	0.151	1.081	0.163
	NR n77 /135@67	8	Back	633334	3500.01	Open	10mm	26.16	-0.09	26.5	0.145	1.081	0.157
	NR n77 /135@67	8	Left	633334	3500.01	Open	10mm	26.16	0.07	26.5	0.077	1.081	0.083
	NR n77 /135@67	8	Top	633334	3500.01	Open	10mm	26.16	-0.03	26.5	0.181	1.081	0.196
	NR n77 /1@271 NSA	8	Front	633334	3500.01	Open	10mm	18.55	-0.05	19.0	0.030	1.109	0.033
	NR n77 /1@271 NSA	8	Back	633334	3500.01	Open	10mm	18.55	-0.01	19.0	0.027	1.109	0.030
	NR n77 /1@271 NSA	8	Left	633334	3500.01	Open	10mm	18.55	0.16	19.0	0.022	1.109	0.024
	NR n77 /1@271 NSA	8	Top	633334	3500.01	Open	10mm	18.55	-0.03	19.0	0.038	1.109	0.042
	NR n77 /135@67 NSA	8	Front	633334	3500.01	Open	10mm	19.56	0.09	20.0	0.036	1.107	0.040
	NR n77 /135@67 NSA	8	Back	633334	3500.01	Open	10mm	19.56	0.12	20.0	0.033	1.107	0.037
	NR n77 /135@67 NSA	8	Left	633334	3500.01	Open	10mm	19.56	0.17	20.0	0.026	1.107	0.029
	NR n77 /135@67 NSA	8	Top	633334	3500.01	Open	10mm	19.56	-0.02	20.0	0.042	1.107	0.046
	NR n77 /1@1	8	Front	633334	3500.01	Closed	5mm	25.23	0.09	25.5	0.166	1.064	0.177
	NR n77 /1@1	8	Back	633334	3500.01	Closed	5mm	25.23	-0.03	25.5	0.170	1.064	0.181
	NR n77 /1@1	8	Left	633334	3500.01	Closed	5mm	25.23	0.19	25.5	0.152	1.064	0.162
	NR n77 /1@1	8	Bottom	633334	3500.01	Closed	5mm	25.23	0.06	25.5	0.162	1.064	0.172
	NR n77 /135@67	8	Front	633334	3500.01	Closed	5mm	26.16	-0.05	26.5	0.180	1.081	0.195
39	NR n77 /135@67	8	Back	633334	3500.01	Closed	5mm	26.16	0.12	26.5	0.183	1.081	0.198
	NR n77 /135@67	8	Left	633334	3500.01	Closed	5mm	26.16	0.16	26.5	0.156	1.081	0.169
	NR n77 /135@67	8	Bottom	633334	3500.01	Closed	5mm	26.16	0.03	26.5	0.174	1.081	0.188
	NR n77 /1@1 NSA	8	Front	633334	3500.01	Closed	5mm	18.55	0.11	19.0	0.002	1.109	0.002
	NR n77 /1@1 NSA	8	Back	633334	3500.01	Closed	5mm	18.55	0.01	19.0	0.003	1.109	0.003
	NR n77 /1@1 NSA	8	Left	633334	3500.01	Closed	5mm	18.55	0.00	19.0	0.002	1.109	0.002
	NR n77 /1@1 NSA	8	Bottom	633334	3500.01	Closed	5mm	18.55	0.03	19.0	0.002	1.109	0.002
	NR n77 /135@67 NSA	8	Front	633334	3500.01	Closed	5mm	19.56	0.01	20.0	0.003	1.107	0.003
	NR n77 /135@67 NSA	8	Back	633334	3500.01	Closed	5mm	19.56	0.02	20.0	0.004	1.107	0.004
	NR n77 /135@67 NSA	8	Left	633334	3500.01	Closed	5mm	19.56	0.00	20.0	0.002	1.107	0.002
	NR n77 /135@67 NSA	8	Bottom	633334	3500.01	Closed	5mm	19.56	0.03	20.0	0.003	1.107	0.003
ANSI / IEEE C95.1 – SAFETY LIMIT						1.6 W/kg (mW/g)							
Spatial Peak						Averaged over 1g							
Uncontrolled Exposure/General Population													

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

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Form Factor	Spacing	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR ₁₀ (W/kg)	Scaling Factor	Reported SAR ₁₀ (W/kg)
	NR n77 /1@271	8	Front	662000	3930	Open	10mm	25.06	0.09	25.5	0.147	1.107	0.163
	NR n77 /1@271	8	Back	662000	3930	Open	10mm	25.06	0.04	25.5	0.090	1.107	0.100
	NR n77 /1@271	8	Left	662000	3930	Open	10mm	25.06	-0.14	25.5	0.053	1.107	0.059
	NR n77 /1@271	8	Top	662000	3930	Open	10mm	25.06	0.01	25.5	0.108	1.107	0.120
	NR n77 /135@67	8	Front	650000	3750	Open	10mm	25.79	-0.03	26.0	0.161	1.050	0.169
	NR n77 /135@67	8	Back	650000	3750	Open	10mm	25.79	0.00	26.0	0.097	1.050	0.102
	NR n77 /135@67	8	Left	650000	3750	Open	10mm	25.79	0.04	26.0	0.062	1.050	0.065
	NR n77 /135@67	8	Top	650000	3750	Open	10mm	25.79	-0.05	26.0	0.120	1.050	0.126
	NR n77 /1@271 NSA	8	Front	656000	3840	Open	10mm	19.08	0.03	19.5	0.037	1.102	0.041
	NR n77 /1@271 NSA	8	Back	656000	3840	Open	10mm	19.08	0.02	19.5	0.023	1.102	0.025
	NR n77 /1@271 NSA	8	Left	656000	3840	Open	10mm	19.08	0.00	19.5	0.015	1.102	0.017
	NR n77 /1@271 NSA	8	Top	656000	3840	Open	10mm	19.08	-0.01	19.5	0.029	1.102	0.032
	NR n77 /135@67 NSA	8	Front	656000	3840	Open	10mm	19.81	0.00	20.5	0.041	1.172	0.048
	NR n77 /135@67 NSA	8	Back	656000	3840	Open	10mm	19.81	0.02	20.5	0.026	1.172	0.030
	NR n77 /135@67 NSA	8	Left	656000	3840	Open	10mm	19.81	-0.11	20.5	0.017	1.172	0.020
	NR n77 /135@67 NSA	8	Top	656000	3840	Open	10mm	19.81	0.03	20.5	0.032	1.172	0.038
	NR n77 /1@271	8	Front	662000	3930	Closed	5mm	25.06	0.09	25.5	0.146	1.107	0.162
	NR n77 /1@271	8	Back	662000	3930	Closed	5mm	25.06	-0.01	25.5	0.038	1.107	0.042
	NR n77 /1@271	8	Left	662000	3930	Closed	5mm	25.06	0.17	25.5	0.088	1.107	0.097
	NR n77 /1@271	8	Bottom	662000	3930	Closed	5mm	25.06	0.14	25.5	0.187	1.107	0.207
	NR n77 /135@67	8	Front	650000	3750	Closed	5mm	25.79	0.15	26.0	0.152	1.050	0.160
	NR n77 /135@67	8	Back	650000	3750	Closed	5mm	25.79	-0.02	26.0	0.042	1.050	0.044
	NR n77 /135@67	8	Left	650000	3750	Closed	5mm	25.79	0.05	26.0	0.094	1.050	0.099
55	NR n77 /135@67	8	Bottom	650000	3750	Closed	5mm	25.79	0.06	26.0	0.202	1.050	0.212
	NR n77 /1@271 NSA	8	Front	656000	3840	Closed	5mm	19.08	0.04	19.5	0.072	1.102	0.079
	NR n77 /1@271 NSA	8	Back	656000	3840	Closed	5mm	19.08	0.05	19.5	0.023	1.102	0.025
	NR n77 /1@271 NSA	8	Left	656000	3840	Closed	5mm	19.08	-0.03	19.5	0.047	1.102	0.052
	NR n77 /1@271 NSA	8	Bottom	656000	3840	Closed	5mm	19.08	0.01	19.5	0.082	1.102	0.090
	NR n77 /135@67 NSA	8	Front	656000	3840	Closed	5mm	19.81	-0.12	20.5	0.076	1.172	0.089
	NR n77 /135@67 NSA	8	Back	656000	3840	Closed	5mm	19.81	0.07	20.5	0.026	1.172	0.030
	NR n77 /135@67 NSA	8	Left	656000	3840	Closed	5mm	19.81	0.09	20.5	0.050	1.172	0.059
	NR n77 /135@67 NSA	8	Bottom	656000	3840	Closed	5mm	19.81	0.06	20.5	0.088	1.172	0.103
ANSI / IEEE C95.1 – SAFETY LIMIT						1.6 W/kg (mW/g)							
Spatial Peak						Averaged over 1g							
Uncontrolled Exposure/General Population													

➤ WLAN 2.4GHz Body SAR in Hotspot mode

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Form Factor	Spacing	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR ₁₀ (W/kg)	Scaling Factor	D.C Factor	Reported SAR ₁₀ (W/kg)
	2.4GHz/802.11b	9	Front	6	2437	Open	10mm	16.48	0.12	16.5	0.013	1.005	1.000	0.013
	2.4GHz/802.11b	9	Back	6	2437	Open	10mm	16.48	0.00	16.5	0.036	1.005	1.000	0.036
	2.4GHz/802.11b	9	Right	6	2437	Open	10mm	16.48	0.00	16.5	0.001	1.005	1.000	0.001
	2.4GHz/802.11b	9	Top	6	2437	Open	10mm	16.48	0.04	16.5	0.060	1.005	1.000	0.060
	2.4GHz/802.11b	6	Front	6	2437	Open	10mm	16.57	0.10	17.0	0.012	1.104	1.000	0.013
	2.4GHz/802.11b	6	Back	6	2437	Open	10mm	16.57	0.09	17.0	0.037	1.104	1.000	0.041
	2.4GHz/802.11b	6	Left	6	2437	Open	10mm	16.57	0.04	17.0	0.029	1.104	1.000	0.032
	2.4GHz/802.11b	6	Top	6	2437	Open	10mm	16.57	-0.17	17.0	0.008	1.104	1.000	0.009
	2.4GHz/802.11b	9	Front	6	2437	Closed	5mm	16.48	0.00	16.5	0.128	1.005	1.000	0.129
	2.4GHz/802.11b	9	Back	6	2437	Closed	5mm	16.48	0.07	16.5	0.043	1.005	1.000	0.043
	2.4GHz/802.11b	9	Right	6	2437	Closed	5mm	16.48	0.09	16.5	0.027	1.005	1.000	0.027
56	2.4GHz/802.11b	9	Bottom	6	2437	Closed	5mm	16.48	0.18	16.5	0.185	1.005	1.000	0.186
	2.4GHz/802.11b	6	Front	6	2437	Closed	5mm	16.57	-0.11	17.0	0.068	1.104	1.000	0.075
	2.4GHz/802.11b	6	Back	6	2437	Closed	5mm	16.57	0.08	17.0	0.046	1.104	1.000	0.051
	2.4GHz/802.11b	6	Left	6	2437	Closed	5mm	16.57	0.17	17.0	0.095	1.104	1.000	0.105
	2.4GHz/802.11b	6	Bottom	6	2437	Closed	5mm	16.57	0.01	17.0	0.020	1.104	1.000	0.022
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)	Form Factor	Spacing	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR ₁₀ (W/kg)	Scaling Factor	D.C Factor	Reported SAR ₁₀ (W/kg)
	5.2GHz/802.11n20	1	Front	48	5240	Open	10mm	12.69	0.01	13.0	0.046	1.074	1.000	0.049
	5.2GHz/802.11n20	1	Back	48	5240	Open	10mm	12.69	-0.01	13.0	0.113	1.074	1.000	0.121
	5.2GHz/802.11n20	1	Right	48	5240	Open	10mm	12.69	0.03	13.0	0.092	1.074	1.000	0.099
	5.2GHz/802.11n20	1	Top	48	5240	Open	10mm	12.69	-0.07	13.0	0.148	1.074	1.000	0.159
	5.2GHz/802.11a	10	Front	36	5180	Open	10mm	12.44	-0.08	13.0	0.013	1.138	1.000	0.015
	5.2GHz/802.11a	10	Back	36	5180	Open	10mm	12.44	0.02	13.0	0.028	1.138	1.000	0.032
	5.2GHz/802.11a	10	Left	36	5180	Open	10mm	12.44	0.09	13.0	0.015	1.138	1.000	0.017
	5.2GHz/802.11a	10	Top	36	5180	Open	10mm	12.44	0.02	13.0	0.020	1.138	1.000	0.023
	5.2GHz/802.11n20	1	Front	48	5240	Closed	5mm	12.69	-0.07	13.0	0.069	1.074	1.000	0.074
	5.2GHz/802.11n20	1	Back	48	5240	Closed	5mm	12.69	0.16	13.0	0.028	1.074	1.000	0.030
	5.2GHz/802.11n20	1	Right	48	5240	Closed	5mm	12.69	0.05	13.0	0.052	1.074	1.000	0.056
57	5.2GHz/802.11n20	1	Bottom	48	5240	Closed	5mm	12.69	-0.08	13.0	0.358	1.074	1.000	0.384
	5.2GHz/802.11a	10	Front	36	5180	Closed	5mm	12.44	0.00	13.0	0.218	1.138	1.000	0.248
	5.2GHz/802.11a	10	Back	36	5180	Closed	5mm	12.44	-0.03	13.0	0.012	1.138	1.000	0.014
	5.2GHz/802.11a	10	Left	36	5180	Closed	5mm	12.44	0.13	13.0	0.132	1.138	1.000	0.150
	5.2GHz/802.11a	10	Bottom	36	5180	Closed	5mm	12.44	0.05	13.0	0.086	1.138	1.000	0.098
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)	Form Factor	Spacing	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/802.11n20	1	Front	157	5785	Open	10mm	13.76	0.05	14.0	0.042	1.057	1.000	0.044
	5.8GHz/802.11n20	1	Back	157	5785	Open	10mm	13.76	0.00	14.0	0.114	1.057	1.000	0.120
	5.8GHz/802.11n20	1	Right	157	5785	Open	10mm	13.76	0.20	14.0	0.076	1.057	1.000	0.080
	5.8GHz/802.11n20	1	Top	157	5785	Open	10mm	13.76	0.03	14.0	0.094	1.057	1.000	0.099
	5.8GHz/802.11a	10	Front	157	5785	Open	10mm	12.49	0.01	13.0	0.011	1.125	1.000	0.012
	5.8GHz/802.11a	10	Back	157	5785	Open	10mm	12.49	-0.02	13.0	0.025	1.125	1.000	0.028
	5.8GHz/802.11a	10	Left	157	5785	Open	10mm	12.49	0.12	13.0	0.014	1.125	1.000	0.016
	5.8GHz/802.11a	10	Top	157	5785	Open	10mm	12.49	0.06	13.0	0.018	1.125	1.000	0.020
	5.8GHz/802.11n20	1	Front	157	5785	Closed	5mm	13.76	0.00	14.0	0.239	1.057	1.000	0.253
	5.8GHz/802.11n20	1	Back	157	5785	Closed	5mm	13.76	0.15	14.0	0.085	1.057	1.000	0.090
	5.8GHz/802.11n20	1	Right	157	5785	Closed	5mm	13.76	0.10	14.0	0.143	1.057	1.000	0.151
	5.8GHz/802.11n20	1	Bottom	157	5785	Closed	5mm	13.76	0.16	14.0	0.172	1.057	1.000	0.182
43	5.8GHz/802.11a	10	Front	157	5785	Closed	5mm	12.49	0.00	13.0	0.305	1.125	1.000	0.343
	5.8GHz/802.11a	10	Back	157	5785	Closed	5mm	12.49	0.04	13.0	0.023	1.125	1.000	0.026
	5.8GHz/802.11a	10	Left	157	5785	Closed	5mm	12.49	0.05	13.0	0.133	1.125	1.000	0.150
	5.8GHz/802.11a	10	Bottom	157	5785	Closed	5mm	12.49	0.12	13.0	0.069	1.125	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						

➤ Bluetooth Body SAR in Hotspot mode

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Form Factor	Spacing	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	9	Front	39	2441	Open	10mm	2.89	-0.01	3.0	0.003	1.026	1.000	0.003
44	BT/GFSK	9	Back	39	2441	Open	10mm	2.89	0.00	3.0	0.008	1.026	1.000	0.008
	BT/GFSK	9	Right	39	2441	Open	10mm	2.89	0.01	3.0	0.006	1.026	1.000	0.006
	BT/GFSK	9	Top	39	2441	Open	10mm	2.89	0.00	3.0	0.001	1.026	1.000	0.001
	BT/GFSK	9	Front	39	2441	Closed	5mm	2.89	0.00	3.0	0.002	1.026	1.000	0.002
	BT/GFSK	9	Back	39	2441	Closed	5mm	2.89	0.06	3.0	0.001	1.026	1.000	0.001
	BT/GFSK	9	Right	39	2441	Closed	5mm	2.89	0.01	3.0	0.001	1.026	1.000	0.001
	BT/GFSK	9	Bottom	39	2441	Closed	5mm	2.89	0.12	3.0	0.001	1.026	1.000	0.001
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population								1.6 W/kg (mW/g) Averaged over 1g						

Note:

- 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 is required 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.
- Highlight part of test data means repeated test.

15.4 Repeated SAR measurement

Band/ Mode	Test Position	Form Factor	CH.	Freq. (MHz)	Measured SAR (W/kg)				
					Original	1 st Repeated		2 nd Repeated	
						Value	Ratio	Value	Ratio
Band IV/RMC	Right Cheek	Open	1513	1752.6	1.01	0.992	1.01	/	/
Band2/1RB#99	Right Cheek	Open	18700	1860	0.817	0.805	1.01	/	/
Band7/1RB#49	Right Cheek	Open	21350	2560	0.961	0.952	1.01	/	/
NR n7 /1@49	Right Cheek	Open	512000	2560	0.927	0.916	1.01	/	/
NR n77 /135@67	Right Cheek	Open	650000	3750	1.090	1.080	1.01	/	/
GPRS850/4 slots	Back	Closed	251	848.8	1.420	1.400	1.01	/	/
GPRS1900/4 slots	Left	Closed	512	1850.2	0.984	0.972	1.01	/	/
ANSI / IEEE C95.1 – SAFETY LIMIT					1.6 W/kg (mW/g)				
Spatial Peak					Averaged over 1g				
Uncontrolled Exposure/General Population									

Note:

- Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required only when the measured SAR is ≥ 0.8 W/kg
- 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 DUT holder perturbation uncertainty evaluation

1. According to TCB workshop, Oct 2016:
When the highest reported SAR of an antenna is > 1.2 W/kg, holder perturbation verification is required for each antenna, using the highest SAR configuration among all applicable frequency bands.
2. When the highest reported SAR of an antenna is > 1.2 W/kg, holder perturbation verification is required for each antenna, using the highest SAR configuration among all applicable frequency bands.
3. According to IEEE 1528-2013 section E.4.1, When it is unknown if a device holder perturbs the fields of a test device, the SAR uncertainty shall be assessed with a flat phantom (see Clause 5) by comparing the SAR with and without the device holder according to the following tests:
 - a) With device holder: 1 g or 10 g peak spatial-average SAR is measured with the handset fixed in the holder in a manner similar to the way it was held when tested for the head SAR position. The handset horizontal and vertical centerlines (see Clause 6) are aligned parallel to the bottom of the flat phantom and the device is in direct contact with the phantom. The test shall be performed with the antenna position and device operational configuration corresponding to that where the highest head SAR was previously measured for each frequency band.
 - b) Without device holder: 1 g or 10 g peak spatial-average SAR is measured with the handset placed on a low-loss foam block or support in the position identical to that tested with the device holder. The relative permittivity and loss tangent of the foam material shall be less than 1.2 and 10–5, respectively.

Test result:

Plot	Band/ Mode	Test Position	Form Factor	CH.	Freq. (MHz)	Test configuration	Measured SAR (W/kg) Averaged over 1g
58	GPRS850/4 slots	Back	Closed	251	848.8	With device holder	3.26
59	GPRS850/4 slots	Back	Closed	251	848.8	Without device holder	3.24

Note:

The following equation is used to computed the SAR tolerance,

$$SAR_{\text{tolerance}} [\%] = 100 \times \left(\frac{SAR_{\text{w/ holder}} - SAR_{\text{w/o holder}}}{SAR_{\text{w/o holder}}} \right)$$

Therefore, the $SAR_{\text{tolerance}} = 100 \times [(3.26 - 3.24) / 3.24] = 0.62\%$.

15.6 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.

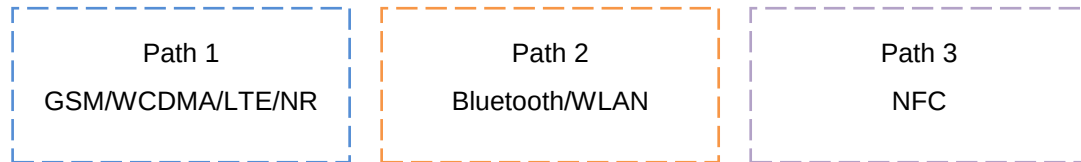


Fig.15.1 Simultaneous Transmission Paths

➤ 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.

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

Mode	Max. Power (dBm)	Max. Power (mW)	Exposure Position	Head	Body	Hotspot
NFC	-41.13	0.000077	Estimated SAR (W/kg)	0.000	0.000	0.000

Note:

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

➤ Multi-Band simultaneous Transmission Consideration

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

Note:

1. WLAN 2.4GHz ANT 9 and Bluetooth share the same antenna, and cannot transmit simultaneously.
2. WLAN 2.4 GHz MIMO and WLAN 5 GHz MIMO cannot transmit simultaneously.
3. GSM/WCDMA/LTE shares the same antenna, and cannot transmit simultaneously.
4. Per KDB 447498 D04v01 section 2.1.2: 1-mW Test Exemption, SAR simultaneous transmission consideration for NFC is not required.
5. The Report SAR summation is calculated based on the same configuration and test position.
6. Per KDB 447498 D04v01, simultaneous transmission SAR is compliant if,
 - i. Scalar SAR summation < 1.6 W/kg.

- ii. $SPLSR = (SAR_1 + SAR_2)^{1.5} / (\text{min. separation distance, mm})$, and the peak separation distance is determined from the square root of $[(x_1 - x_2)^2 + (y_1 - y_2)^2 + (z_1 - z_2)^2]$, where (x_1, y_1, z_1) and (x_2, y_2, z_2) are the coordinates of the extrapolated peak SAR locations in the zoom scan. If $SPLSR \leq 0.04$, simultaneously transmission SAR measurement is not necessary.
- iii. Simultaneously transmission SAR measurement, and the Reported multi-band SAR < 1.6 W/kg

15.7 SAR Simultaneous Transmission Analysis

➤ Simultaneous Transmission

Spacing and Position			Standalone SAR _{1g} (W/kg)		Σ SAR _{1g} (W/kg)
			LTE Band 5	NR n7 NSA	Max EN-DC
0mm	Head	Right Cheek	0.071	0.513	0.584
		Right Tilted	0.042	0.155	0.196
		Left Cheek	0.051	0.123	0.173
		Left Tilted	0.032	0.092	0.123
10mm	Body- worn	Front	0.300	0.057	0.357
		Back	0.277	0.180	0.456
	Hotspot	Front	0.300	0.057	0.357
		Back	0.277	0.180	0.456
		Left	0.034	0.009	0.043
		Right	0.104	/	0.104
		Top	/	0.028	0.028
		Bottom	0.259	/	0.259
5mm	Body- worn	Front	0.280	0.247	0.527
		Back	0.716	0.136	0.852
	Hotspot	Front	0.280	0.247	0.527
		Back	0.716	0.136	0.852
		Left	0.079	0.435	0.514
		Right	0.054	/	0.054
		Top	/	/	/
		Bottom	0.443	0.208	0.651

Spacing and Position			Standalone SAR _{1g} (W/kg)			Σ SAR _{1g} (W/kg)
			LTE Band 5	LTE Band 41(38) (ANT 3)	NR n41(n38) NSA	Max EN-DC
0mm	Head	Right Cheek	0.071	0.205	0.264	0.469
		Right Tilted	0.042	0.120	0.096	0.216
		Left Cheek	0.051	0.315	0.064	0.378
		Left Tilted	0.032	0.178	0.041	0.219
10mm	Body- worn	Front	0.300	0.021	0.024	0.324
		Back	0.277	0.047	0.045	0.322
	Hotspot	Front	0.300	0.021	0.024	0.324
		Back	0.277	0.047	0.045	0.322
		Left	0.034	/	0.052	0.085
		Right	0.104	0.061	/	0.104
		Top	/	0.018	0.018	0.036
		Bottom	0.259	/	/	0.259
5mm	Body- worn	Front	0.280	0.088	0.118	0.398
		Back	0.716	0.184	0.061	0.777
	Hotspot	Front	0.280	0.088	0.118	0.398
		Back	0.716	0.184	0.061	0.777
		Left	0.079	/	0.158	0.237
		Right	0.054	0.306	/	0.306
		Top	/	0.141	/	0.141
		Bottom	0.443	0.029	0.047	0.490

Spacing and Position			Standalone SAR _{1g} (W/kg)						Σ SAR _{1g} (W/kg)
			LTE Band 2	LTE Band 5	LTE Band 7 (ANT 3)	LTE Band 41 (ANT 3)	LTE Band 66(4) (ANT 3)	NR n77(n78) NSA	Max EN-DC
0mm	Head	Right Cheek	0.975	0.071	0.329	0.205	0.180	0.220	1.195
		Right Tilted	0.242	0.042	0.177	0.120	0.096	0.157	0.399
		Left Cheek	0.521	0.051	0.496	0.315	0.274	0.141	0.662
		Left Tilted	0.144	0.032	0.285	0.178	0.147	0.088	0.373
10mm	Body- worn	Front	0.099	0.300	0.031	0.021	0.024	0.048	0.348
		Back	0.124	0.277	0.064	0.047	0.047	0.037	0.313
	Hotspot	Front	0.099	0.300	0.031	0.021	0.024	0.048	0.348
		Back	0.124	0.277	0.064	0.047	0.047	0.037	0.313
		Left	0.209	0.034	/	/	/	0.029	0.238
		Right	/	0.104	0.087	0.061	0.068	/	0.104
		Top	0.045	/	0.024	0.018	0.020	0.046	0.092
		Bottom	/	0.259	/	/	/	/	0.259
5mm	Body- worn	Front	0.179	0.280	0.107	0.088	0.149	0.089	0.369
		Back	0.074	0.716	0.247	0.184	0.305	0.030	0.746
	Hotspot	Front	0.179	0.280	0.107	0.088	0.149	0.089	0.369
		Back	0.074	0.716	0.247	0.184	0.305	0.030	0.746
		Left	0.338	0.079	/	/	/	0.059	0.397
		Right	/	0.054	0.536	0.306	0.635	/	0.635
		Top	/	/	0.094	0.141	0.134	/	0.141
		Bottom	0.070	0.443	0.026	0.029	0.027	0.103	0.546

Spacing and 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 9	2.4G ANT 6	5G MIMO	BT	NFC			
0mm	Head	Right Cheek	1.195	0.112	0.147	0.311	0.018	0.00	1.454	1.361	1.525
		Right Tilted	0.778	0.053	0.068	0.174	0.011	0.00	0.900	0.858	0.963
		Left Cheek	0.670	0.150	0.094	0.353	0.017	0.00	0.914	0.780	1.039
		Left Tilted	0.414	0.071	0.043	0.201	0.015	0.00	0.528	0.472	0.630
10mm	Body-worn	Front	0.519	0.013	0.013	0.064	0.003	0.00	0.546	0.536	0.587
		Back	0.556	0.036	0.041	0.153	0.008	0.00	0.633	0.605	0.718
	Hotspot	Front	0.519	0.013	0.013	0.064	0.003	0.00	0.546	0.536	0.587
		Back	0.556	0.036	0.041	0.153	0.008	0.00	0.633	0.605	0.718
		Left	0.588	/	0.032	0.017	/	0.00	0.620	0.620	0.605
		Right	0.191	0.001	/	0.099	0.006	0.00	0.192	0.197	0.296
		Top	0.196	0.060	0.009	0.182	0.001	0.00	0.265	0.206	0.378
		Bottom	0.479	/	/	/	/	0.00	0.479	0.479	0.479
5mm	Body-worn	Front	0.558	0.129	0.075	0.577	0.002	0.00	0.762	0.635	1.137
		Back	1.440	0.043	0.051	0.116	0.001	0.00	1.534	1.492	1.557
	Hotspot	Front	0.558	0.129	0.075	0.577	0.002	0.00	0.762	0.635	1.137
		Back	1.440	0.043	0.051	0.116	0.001	0.00	1.534	1.492	1.557
		Left	1.122	/	0.105	0.150	/	0.00	1.227	1.227	1.272
		Right	0.635	0.027	/	0.151	0.001	0.00	0.662	0.636	0.787
		Top	0.141	/	/	/	/	0.00	0.141	0.141	0.141
		Bottom	0.691	0.186	0.022	0.384	0.001	0.00	0.899	0.714	1.077

➤ 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.

15.8 Measurement Uncertainty

Per KDB865664 D01 SAR Measurement 100 MHz to 6 GHz v01r04, when the highest measured 1-g SAR within a frequency band is < 1.5 W/kg, the extensive SAR measurement uncertainty analysis described in IEC/IEEE 62209-1528 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.

15.9 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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- [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: 04.15.2023

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: $f = 750 \text{ MHz}$; $\sigma = 0.882 \text{ S/m}$; $\epsilon_r = 42.344$; $\rho = 1000 \text{ kg/m}^3$

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) = 0.942 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 = 33.11 V/m; Power Drift = 0.06 dB

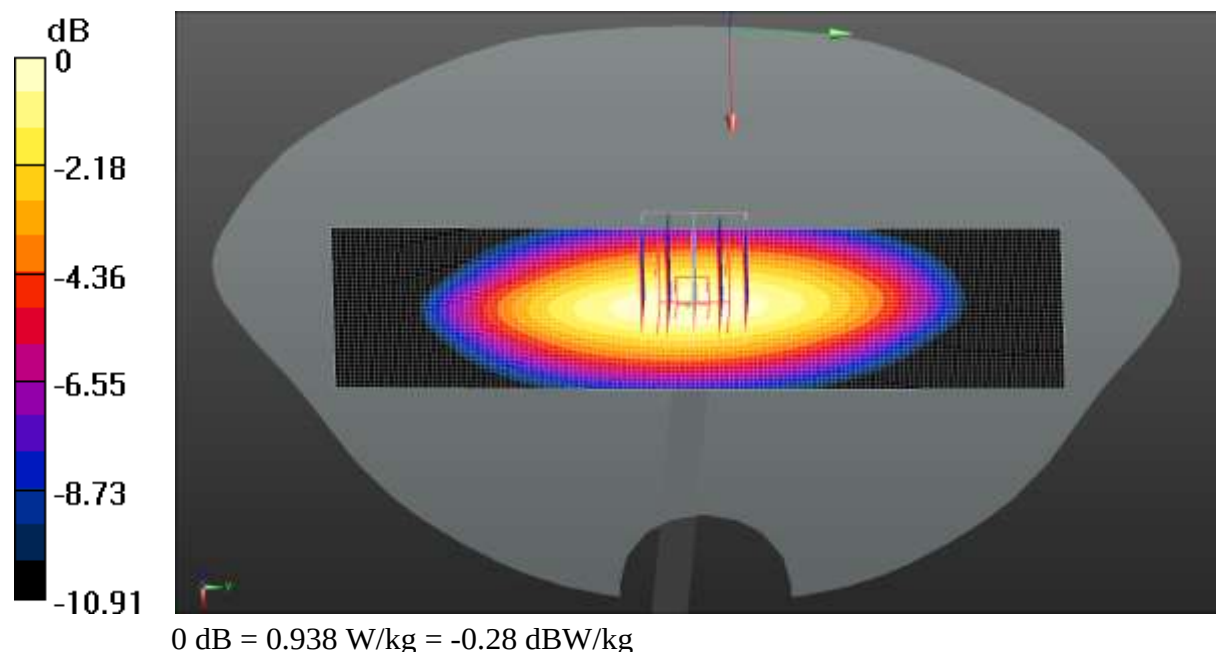
Peak SAR (extrapolated) = 1.06 W/kg

SAR(1 g) = 0.676 W/kg; SAR(10 g) = 0.436 W/kg

Smallest distance from peaks to all points 3 dB below = 17.6 mm

Ratio of SAR at M2 to SAR at M1 = 62%

Maximum value of SAR (measured) = 0.938 W/kg



Test Laboratory: JYTSZ

Date: 04.15.2023

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: $f = 835 \text{ MHz}$; $\sigma = 0.908 \text{ S/m}$; $\epsilon_r = 42.112$; $\rho = 1000 \text{ kg/m}^3$

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 = 35.12 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 1.12 W/kg

SAR(1 g) = 0.759 W/kg; SAR(10 g) = 0.486 W/kg

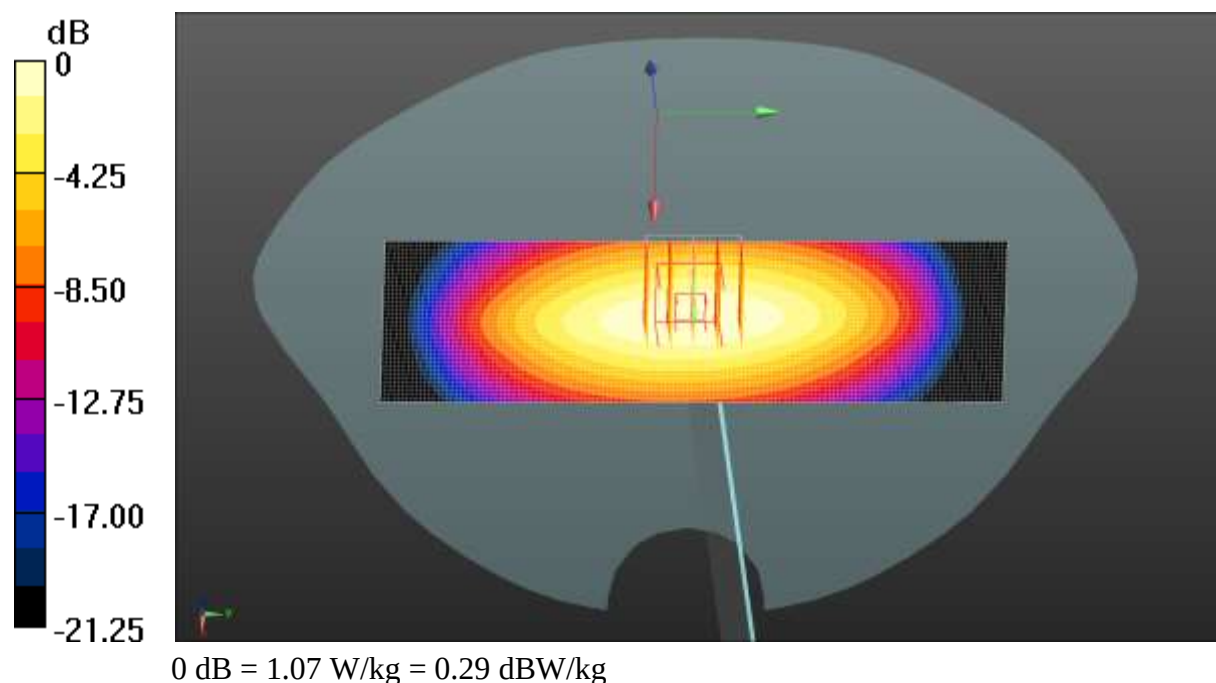
Smallest distance from peaks to all points 3 dB below = 17.6 mm

Ratio of SAR at M2 to SAR at M1 = 62.5%

Maximum value of SAR (measured) = 1.02 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



Test Laboratory: JYTSZ

Date: 04.23.2023

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: $f = 1750$ MHz; $\sigma = 1.351$ S/m; $\epsilon_r = 40.624$; $\rho = 1000$ kg/m³

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 = 42.12 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 2.52 W/kg

SAR(1 g) = 1.45 W/kg; SAR(10 g) = 0.756 W/kg

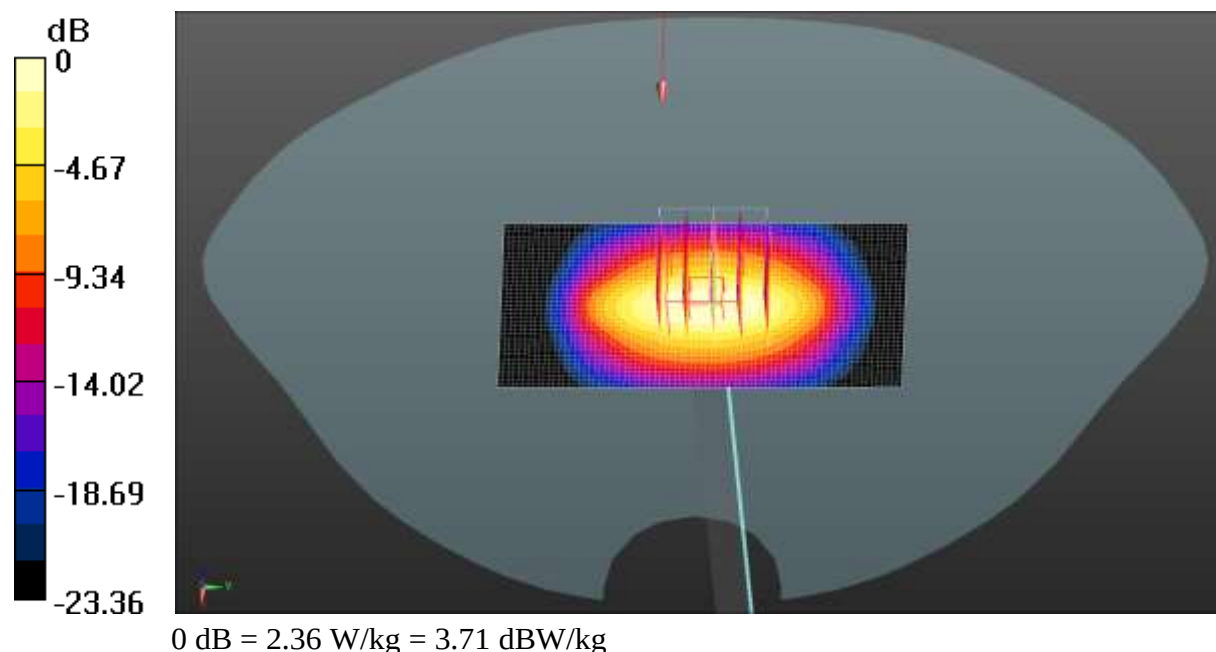
Smallest distance from peaks to all points 3 dB below = 10.1 mm

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

Maximum value of SAR (measured) = 2.31 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) = 2.36 W/kg



Test Laboratory: JYTSZ

Date: 04.23.2023

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: $f = 1900 \text{ MHz}$; $\sigma = 1.345 \text{ S/m}$; $\epsilon_r = 40.883$; $\rho = 1000 \text{ kg/m}^3$

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 = 43.08 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 3.11 W/kg

SAR(1 g) = 1.56 W/kg; SAR(10 g) = 0.803 W/kg

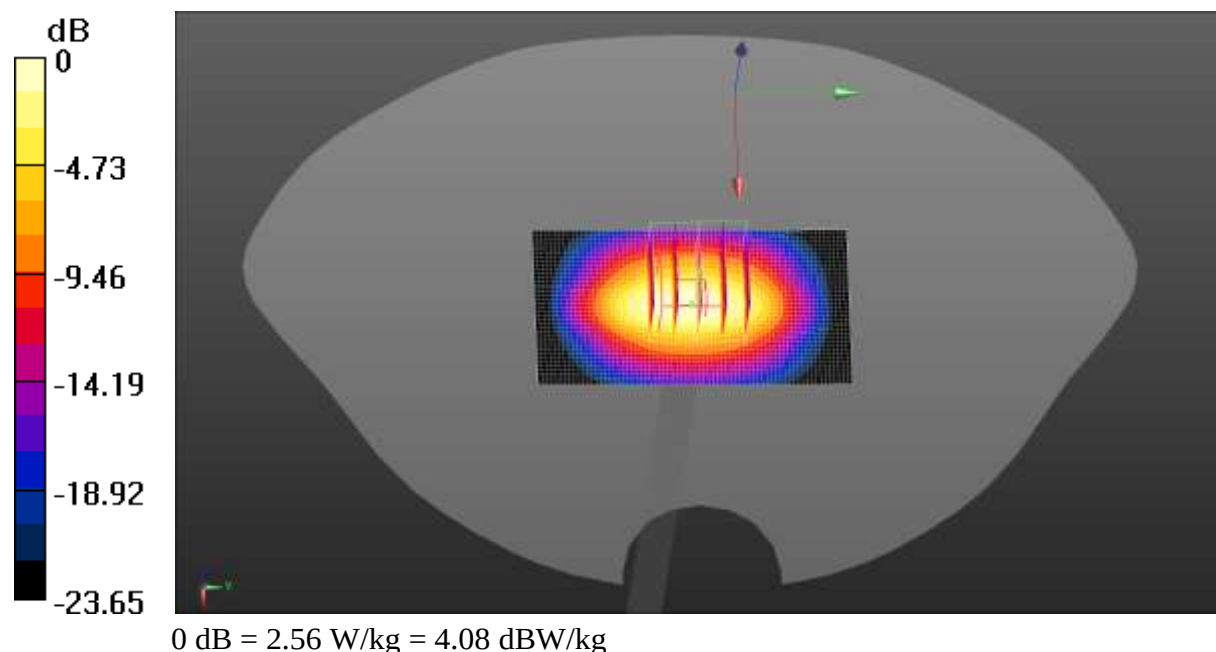
Smallest distance from peaks to all points 3 dB below = 9.6 mm

Ratio of SAR at M2 to SAR at M1 = 52.3%

Maximum value of SAR (measured) = 2.48 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) = 2.56 W/kg



Test Laboratory: JYTSZ

Date: 04.30.2023

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; $\sigma = 1.744$ S/m; $\epsilon_r = 39.896$; $\rho = 1000$ 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 = 43.71 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 4.18 W/kg

SAR(1 g) = 2.02 W/kg; SAR(10 g) = 0.953 W/kg

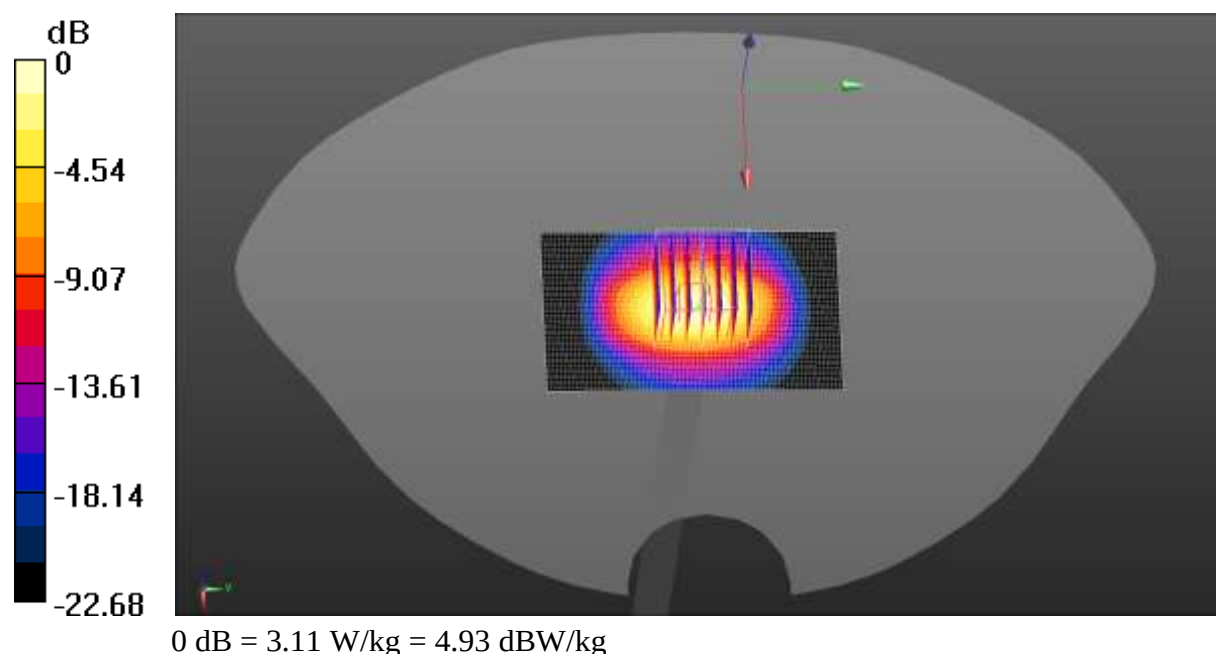
Smallest distance from peaks to all points 3 dB below = 9 mm

Ratio of SAR at M2 to SAR at M1 = 47.8%

Maximum value of SAR (measured) = 3.12 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) = 3.11 W/kg



Test Laboratory: JYTSZ

Date: 04.30.2023

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; $\sigma = 1.907$ S/m; $\epsilon_r = 39.896$; $\rho = 1000$ 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) = 4.07 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 = 44.88 V/m; Power Drift = 0.03 dB

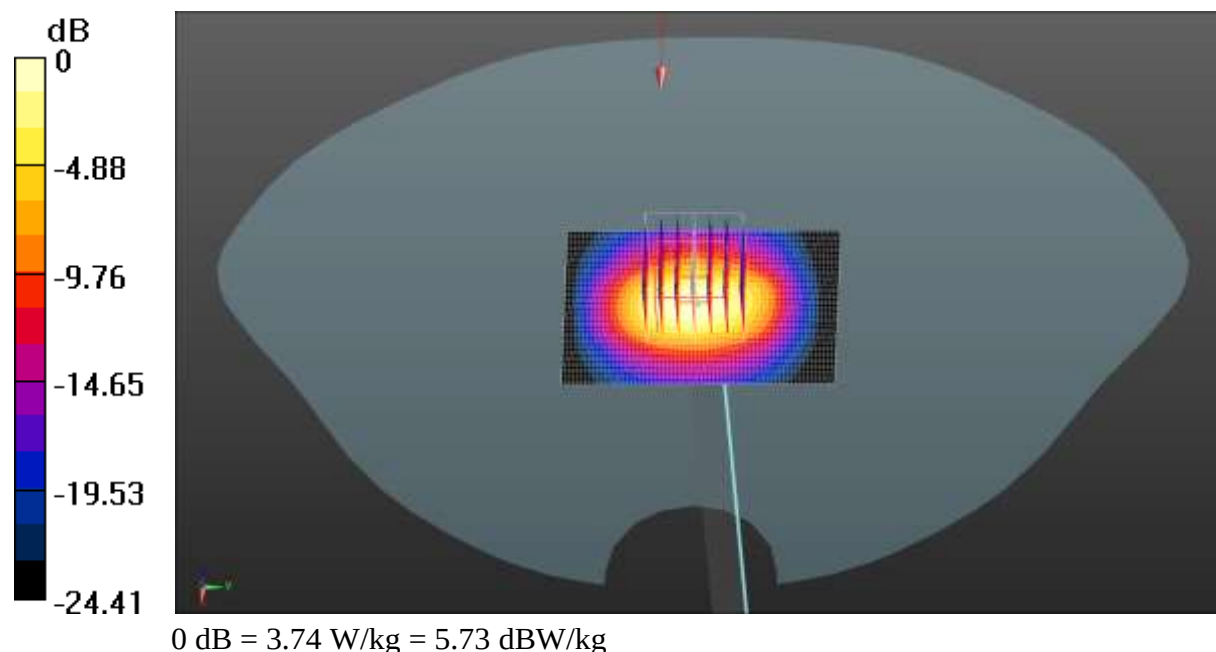
Peak SAR (extrapolated) = 4.83 W/kg

SAR(1 g) = 2.18 W/kg; SAR(10 g) = 0.962 W/kg

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

Ratio of SAR at M2 to SAR at M1 = 46.3%

Maximum value of SAR (measured) = 3.74 W/kg



Test Laboratory: JYTSZ

Date: 05.07.2023

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

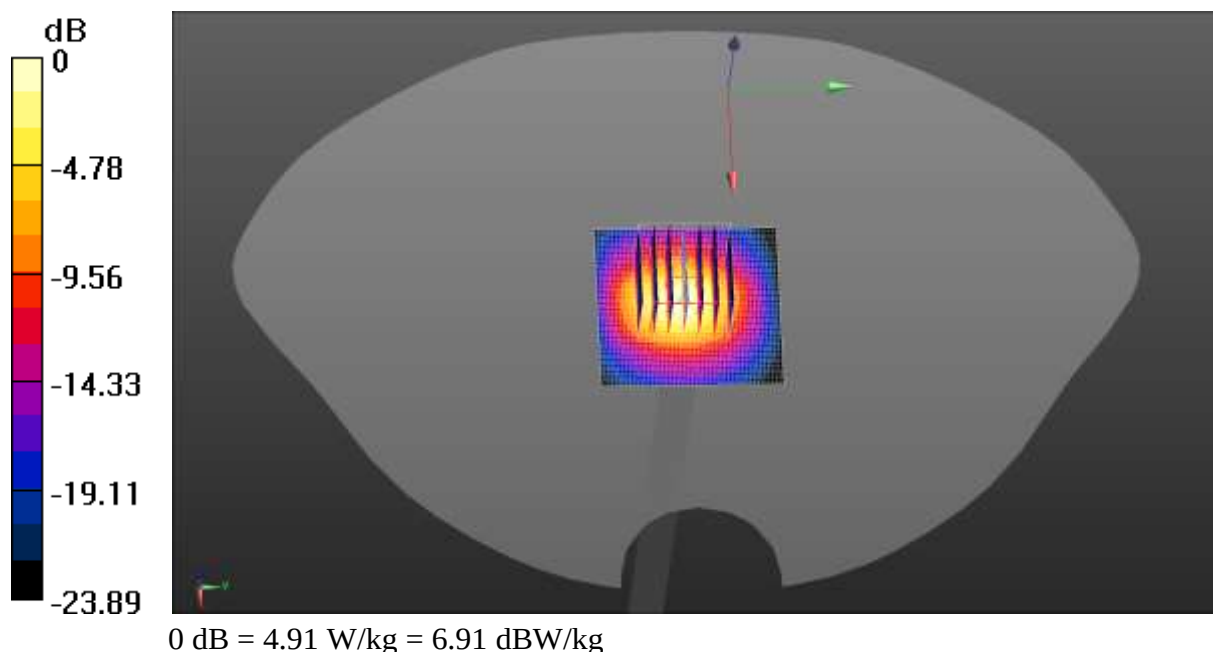
Communication System: UID 0, CW (0); Frequency: 3500 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 3500 \text{ MHz}$; $\sigma = 2.852 \text{ S/m}$; $\epsilon_r = 39.29$; $\rho = 1000 \text{ kg/m}^3$
Phantom section: Flat Section

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: $dx=1.200 \text{ mm}$, $dy=1.200 \text{ mm}$
Maximum value of SAR (interpolated) = 4.94 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: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=4\text{mm}$
Reference Value = 41.73 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 6.81 W/kg
SAR(1 g) = 2.56 W/kg; SAR(10 g) = 0.972 W/kg
Smallest distance from peaks to all points 3 dB below = 8.9 mm
Ratio of SAR at M2 to SAR at M1 = 36.8%
Maximum value of SAR (measured) = 4.91 W/kg



Test Laboratory: JYTSZ

Date: 05.07.2023

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: $f = 3700 \text{ MHz}$; $\sigma = 3.032 \text{ S/m}$; $\epsilon_r = 38.991$; $\rho = 1000 \text{ kg/m}^3$

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) = 5.34 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 = 39.01 V/m; Power Drift = 0.02 dB

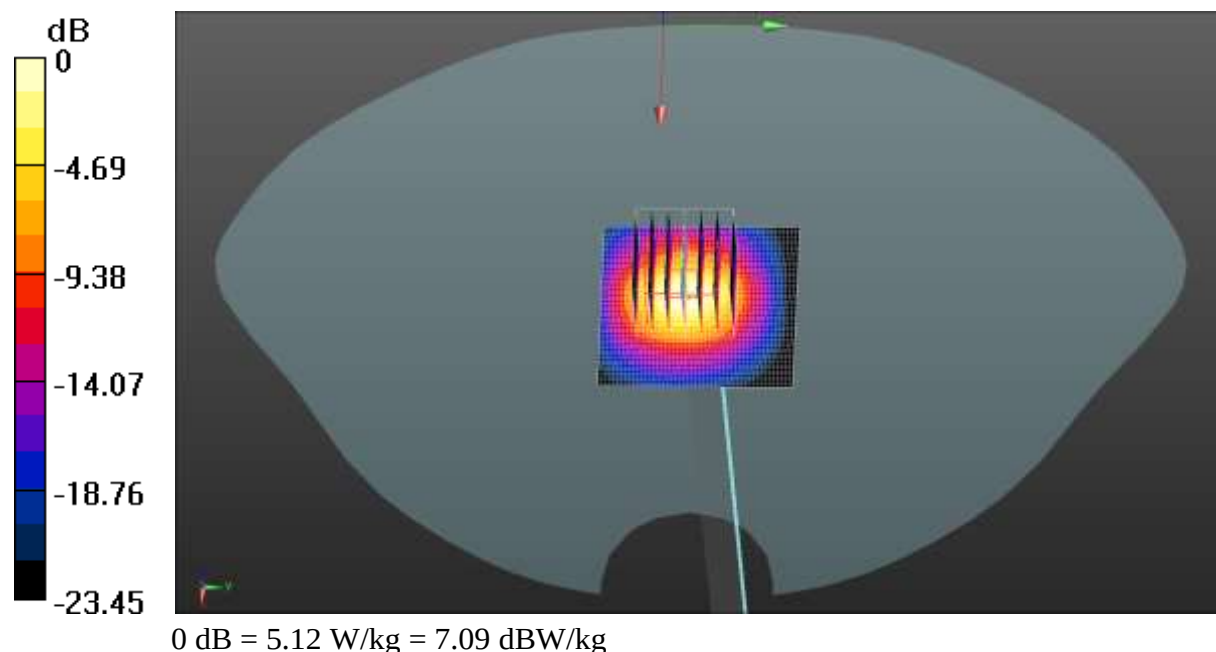
Peak SAR (extrapolated) = 7.43 W/kg

SAR(1 g) = 2.59 W/kg; SAR(10 g) = 0.978 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) = 5.12 W/kg



Test Laboratory: JYTSZ

Date: 05.07.2023

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: $f = 3900$ MHz; $\sigma = 3.227$ S/m; $\epsilon_r = 38.951$; $\rho = 1000$ kg/m³

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 = 44.11 V/m; Power Drift = -0.12 dB

Peak SAR (extrapolated) = 7.59 W/kg

SAR(1 g) = 2.76 W/kg; SAR(10 g) = 0.956 W/kg

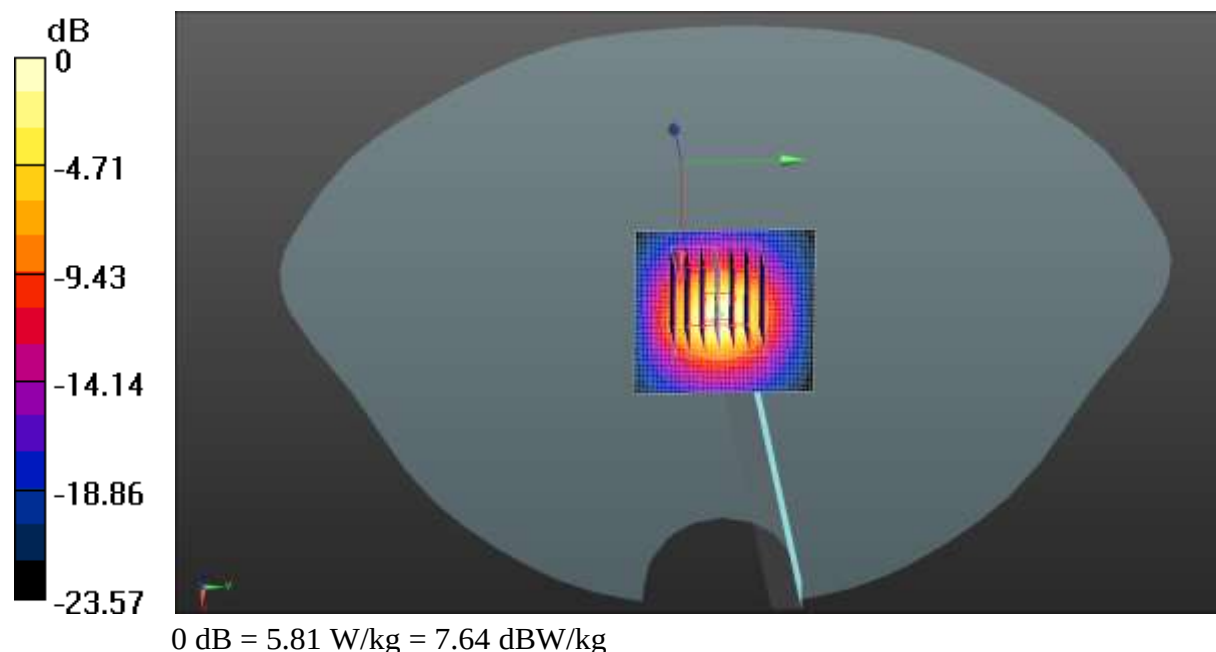
Smallest distance from peaks to all points 3 dB below = 8 mm

Ratio of SAR at M2 to SAR at M1 = 35.8%

Maximum value of SAR (measured) = 5.77 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) = 5.81 W/kg



Test Laboratory: JYTSZ

Date: 05.14.2023

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; $\sigma = 4.704$ S/m; $\epsilon_r = 36.802$; $\rho = 1000$ 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) = 8.22 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 = 44.35 V/m; Power Drift = -0.05 dB

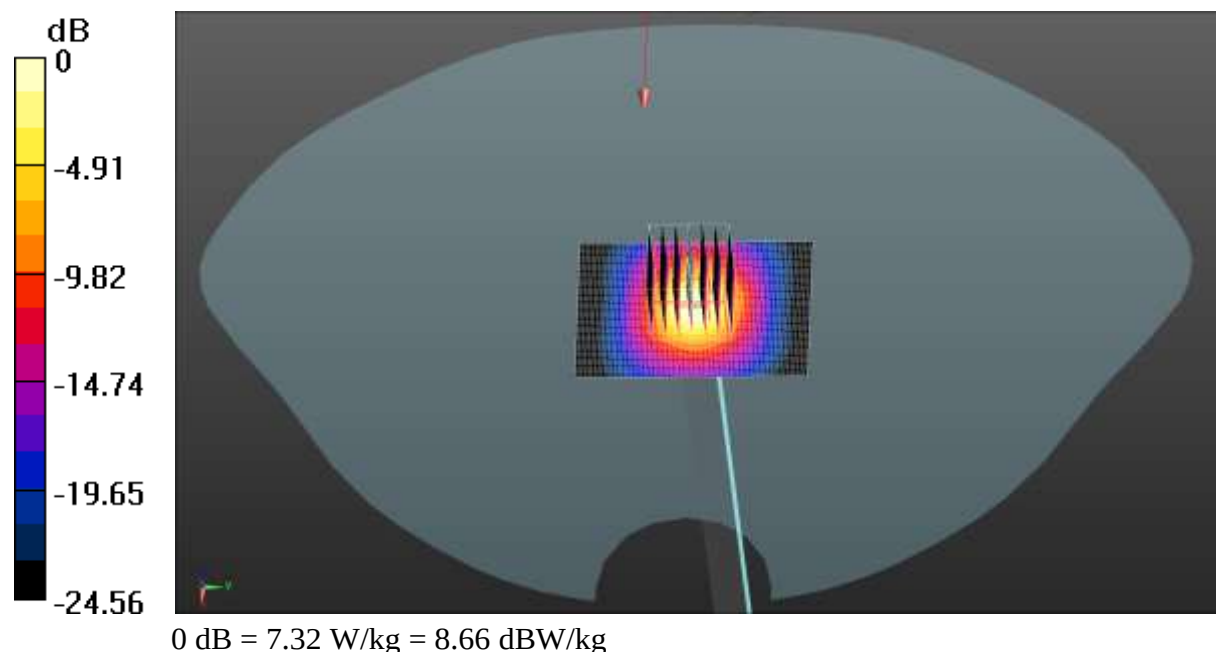
Peak SAR (extrapolated) = 11.8 W/kg

SAR(1 g) = 3.08 W/kg; SAR(10 g) = 0.865 W/kg

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

Ratio of SAR at M2 to SAR at M1 = 22.6%

Maximum value of SAR (measured) = 7.32 W/kg



Test Laboratory: JYTSZ

Date: 05.14.2023

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

Communication System: UID 0, CW (0); Frequency: 5800 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5800$ MHz; $\sigma = 5.385$ S/m; $\epsilon_r = 36.359$; $\rho = 1000$ kg/m³

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) = 3.12 W/kg; SAR(10 g) = 0.876 W/kg

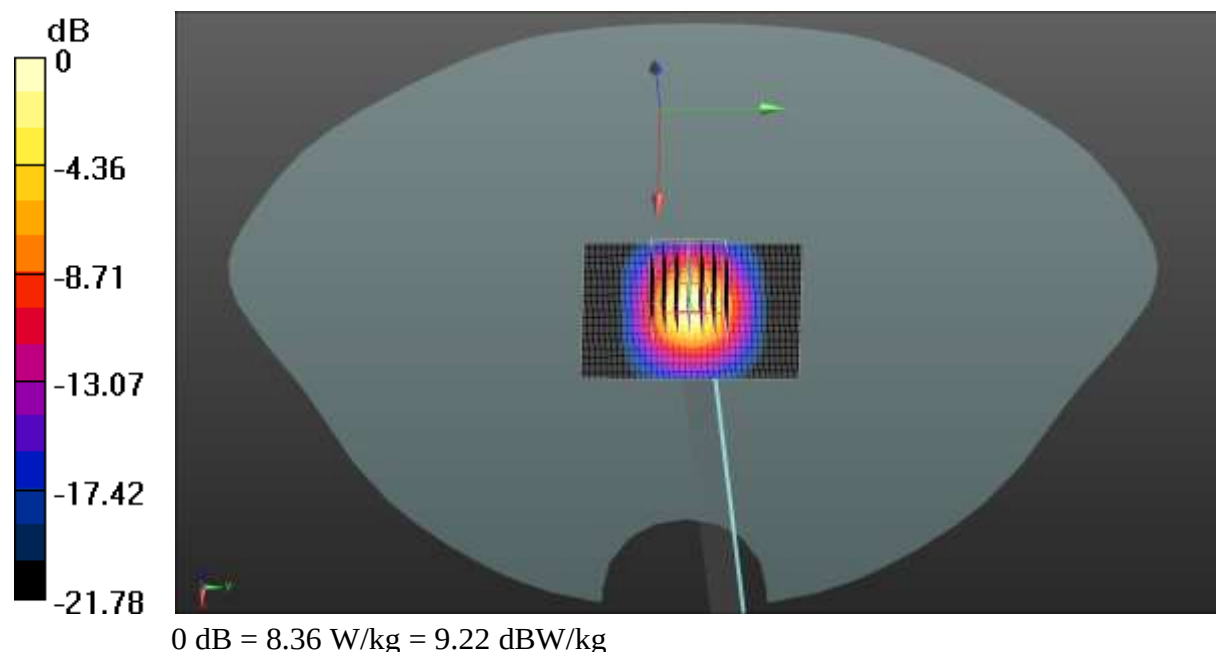
Smallest distance from peaks to all points 3 dB below = 7.2 mm

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



Appendix B: Plots of SAR Test Data

Test Laboratory: JYTSZ

Date: 04.15.2023

DUT: Mobile Phone; Type: AD11; 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; $\sigma = 0.914$ S/m; $\epsilon_r = 42.113$; $\rho = 1000$ 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 (51x61x1): Interpolated grid:
dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.0602 W/kg

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

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

Reference Value = 1.685 V/m; Power Drift = 0.07 dB

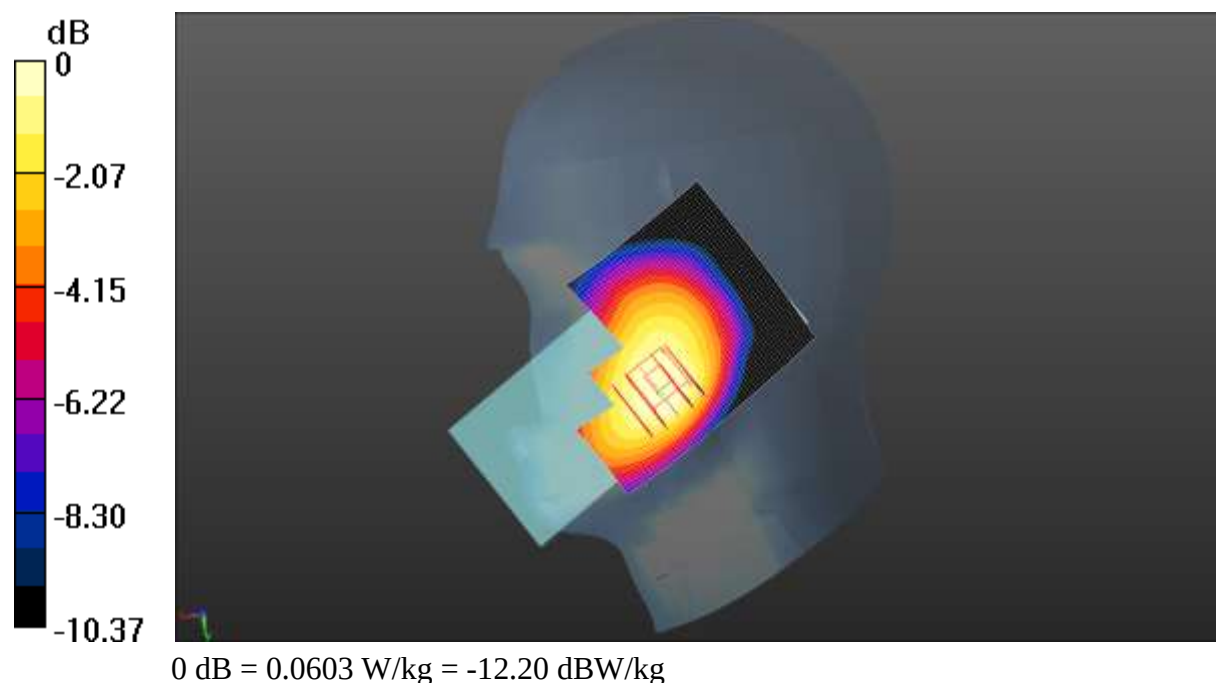
Peak SAR (extrapolated) = 0.0680 W/kg

SAR(1 g) = 0.050 W/kg; SAR(10 g) = 0.038 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 = 72.8%

Maximum value of SAR (measured) = 0.0603 W/kg



Test Laboratory: JYTSZ

Date: 04.23.2023

DUT: Mobile Phone; Type: AD11; Serial: 3#

Communication System: UID 0, GSM (0); Frequency: 1880 MHz; Duty Cycle: 1:8.30042

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.336$ S/m; $\epsilon_r = 40.897$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(8.05, 8.05, 8.05) @ 1880 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 Cheek/Middle Channel/Area Scan (51x51x1): Interpolated grid:

$dx=1.500$ mm, $dy=1.500$ mm

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

GSM 1900 Right Cheek/Middle Channel/Zoom Scan (5x5x7)/Cube 0:

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

Reference Value = 7.062 V/m; Power Drift = 0.03 dB

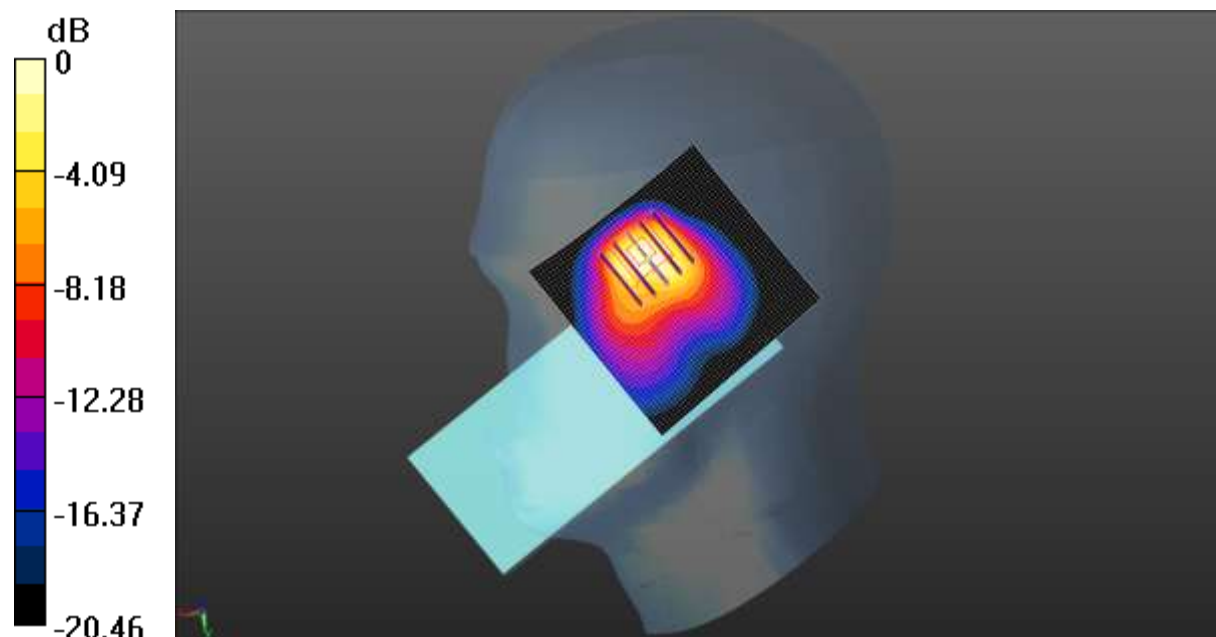
Peak SAR (extrapolated) = 1.41 W/kg

SAR(1 g) = 0.636 W/kg; SAR(10 g) = 0.287 W/kg

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

Ratio of SAR at M2 to SAR at M1 = 52.9%

Maximum value of SAR (measured) = 1.02 W/kg



0 dB = 1.02 W/kg = 0.09 dBW/kg

Test Laboratory: JYTSZ

Date: 04.23.2023

DUT: Mobile Phone; Type: AD11; Serial: 3#

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

Medium parameters used (interpolated): $f = 1907.6$ MHz; $\sigma = 1.355$ S/m; $\epsilon_r = 40.874$; $\rho = 1000$ kg/m³

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 Cheek/High Channel/Area Scan (51x51x1): Interpolated

grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 1.49 W/kg

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

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

Reference Value = 5.920 V/m; Power Drift = 0.13 dB

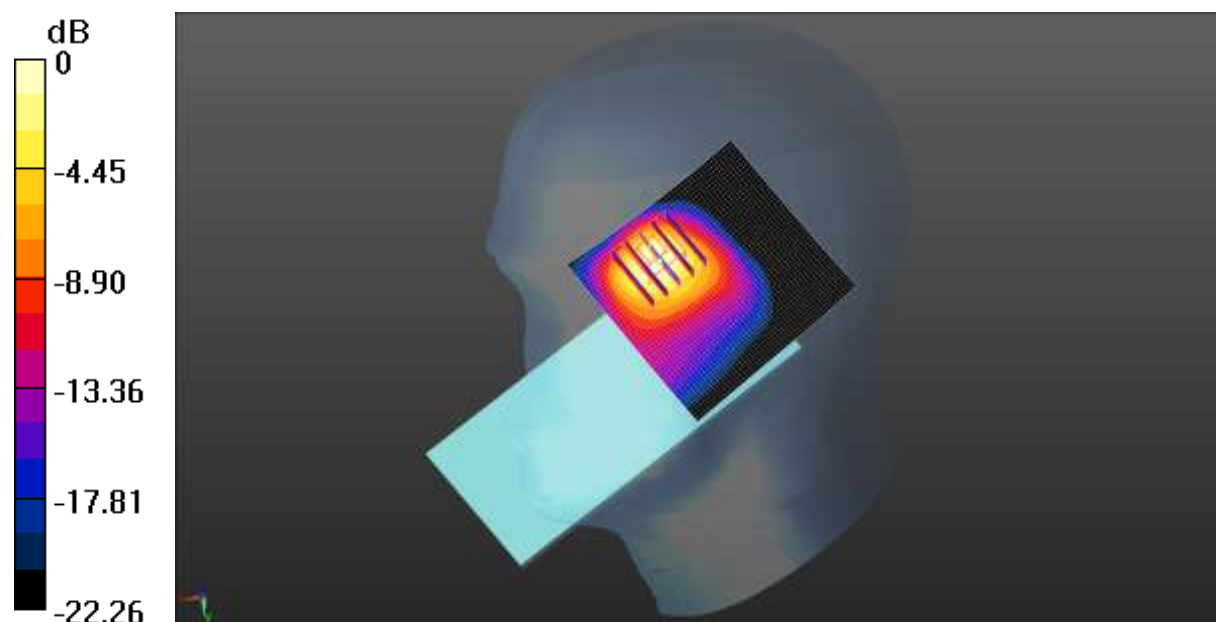
Peak SAR (extrapolated) = 1.29 W/kg

SAR(1 g) = 0.574 W/kg; SAR(10 g) = 0.256 W/kg

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

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

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



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

Test Laboratory: JYTSZ

Date: 04.23.2023

DUT: Mobile Phone; Type: AD11; 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; $\sigma = 1.352$ S/m; $\epsilon_r = 40.617$; $\rho = 1000$ 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 Cheek/High Channel/Area Scan (51x51x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.92 W/kg

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

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

Reference Value = 8.940 V/m; Power Drift = 0.05 dB

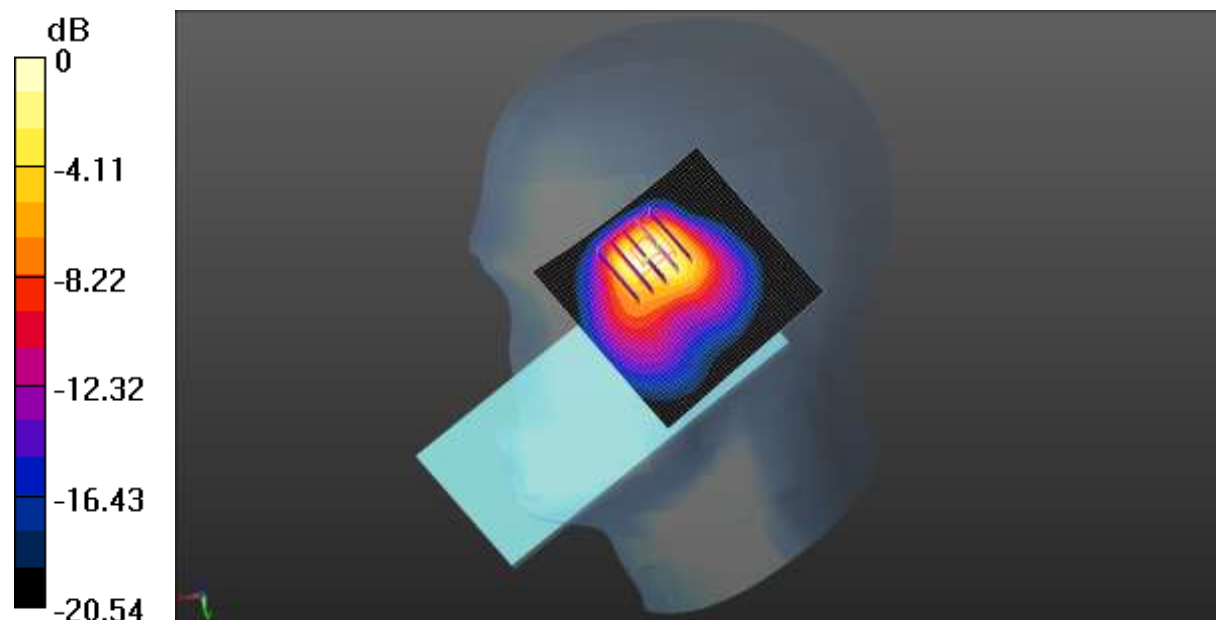
Peak SAR (extrapolated) = 2.37 W/kg

SAR(1 g) = 1.01 W/kg; SAR(10 g) = 0.443 W/kg

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

Ratio of SAR at M2 to SAR at M1 = 39.2%

Maximum value of SAR (measured) = 1.71 W/kg



0 dB = 1.71 W/kg = 2.33 dBW/kg

Test Laboratory: JYTSZ

Date: 04.15.2023

DUT: Mobile Phone; Type: AD11; 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; $\sigma = 0.914$ S/m; $\epsilon_r = 42.113$; $\rho = 1000$ 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)

WCDMA 850 Right Cheek/Middle Channel/Area Scan (51x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.113 W/kg

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

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

Reference Value = 2.326 V/m; Power Drift = -0.16 dB

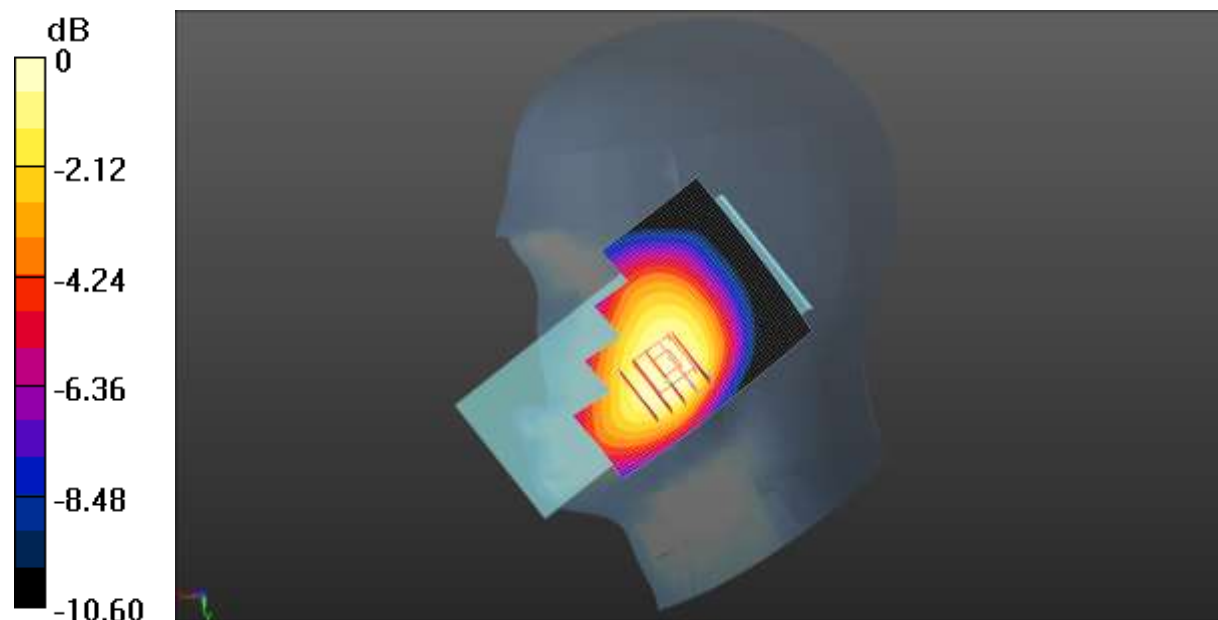
Peak SAR (extrapolated) = 0.121 W/kg

SAR(1 g) = 0.090 W/kg; SAR(10 g) = 0.068 W/kg

Smallest distance from peaks to all points 3 dB below = 19.5 mm

Ratio of SAR at M2 to SAR at M1 = 76.9%

Maximum value of SAR (measured) = 0.108 W/kg



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

Test Laboratory: JYTSZ

Date: 04.23.2023

DUT: Mobile Phone; Type: AD11; Serial: 3#

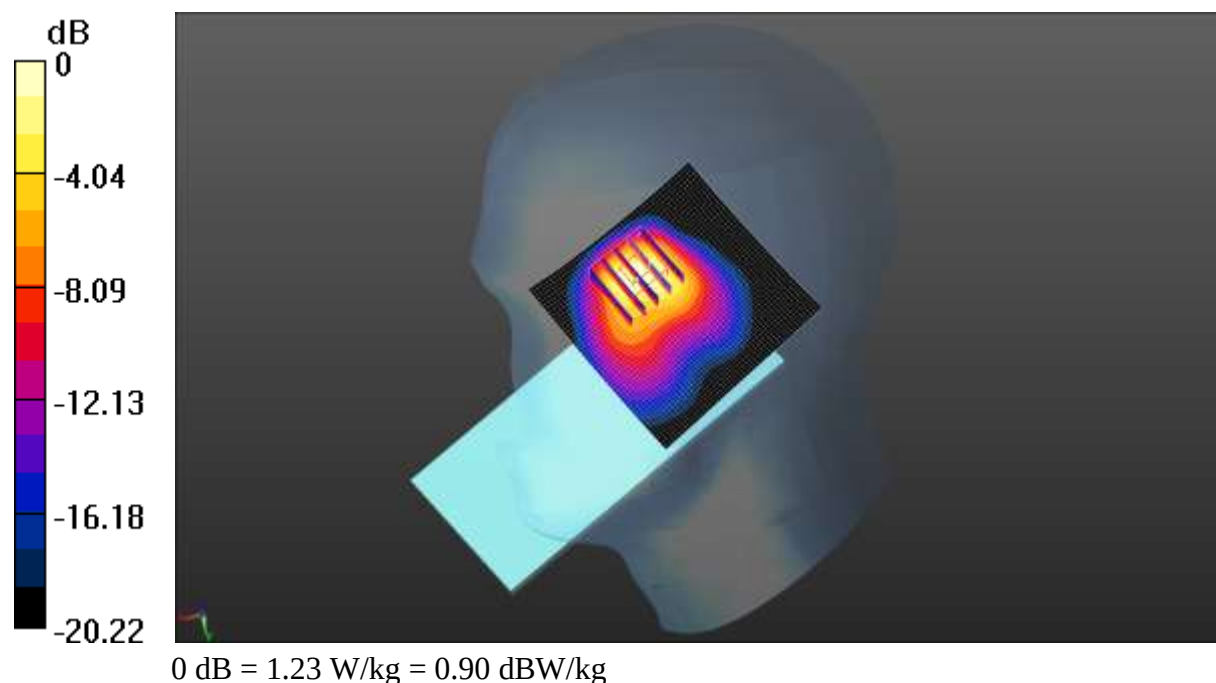
Communication System: UID 0, LTE-Fdd(USA) 1RB QPSK (0); Frequency: 1860 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1860 \text{ MHz}$; $\sigma = 1.328 \text{ S/m}$; $\epsilon_r = 40.864$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(8.05, 8.05, 8.05) @ 1860 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 Cheek/Low Channel/Area Scan (51x51x1):Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$ Maximum value of SAR (interpolated) = 1.58 W/kg **LTE Band 2 1RB(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 = 6.904 V/m ; Power Drift = -0.08 dB Peak SAR (extrapolated) = 1.85 W/kg **SAR(1 g) = 0.817 W/kg ; SAR(10 g) = 0.357 W/kg** Smallest distance from peaks to all points 3 dB below = 6.6 mm Ratio of SAR at M2 to SAR at M1 = 41.7% Maximum value of SAR (measured) = 1.23 W/kg 

Test Laboratory: JYTSZ

Date: 04.15.2023

DUT: Mobile Phone; Type: AD11; Serial: 3#

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

Medium parameters used (interpolated): $f = 829 \text{ MHz}$; $\sigma = 0.902 \text{ S/m}$; $\epsilon_r = 42.128$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right 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) Right Cheek/Low Channel/Area Scan (51x61x1):

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

Maximum value of SAR (interpolated) = 0.0809 W/kg

LTE Band 5 1RB(10MHz) 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 = 2.529 V/m ; Power Drift = -0.02 dB

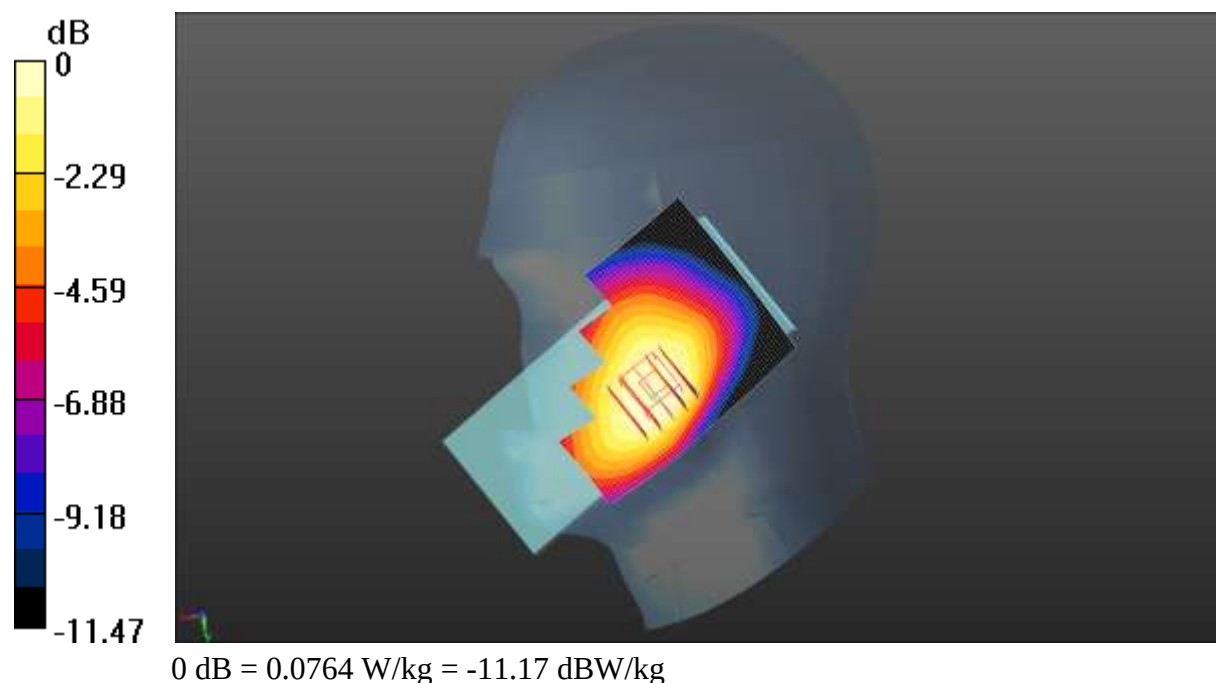
Peak SAR (extrapolated) = 0.0860 W/kg

SAR(1 g) = 0.063 W/kg ; SAR(10 g) = 0.047 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 = 72.4%

Maximum value of SAR (measured) = 0.0764 W/kg



Test Laboratory: JYTSZ

Date: 04.30.2023

DUT: Mobile Phone; Type: AD11; Serial: 3#

Communication System: UID 0, LTE-Fdd(USA) 1RB QPSK (0); Frequency: 2560 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 2560$ MHz; $\sigma = 1.842$ S/m; $\epsilon_r = 39.956$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(7.6, 7.6, 7.6) @ 2560 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 Cheek/High Channel/Area Scan (51x51x1):

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

Maximum value of SAR (interpolated) = 1.60 W/kg

LTE Band 7 1RB(20MHz) Right Cheek/High Channel/Zoom Scan

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

Reference Value = 7.027 V/m; Power Drift = -0.06 dB

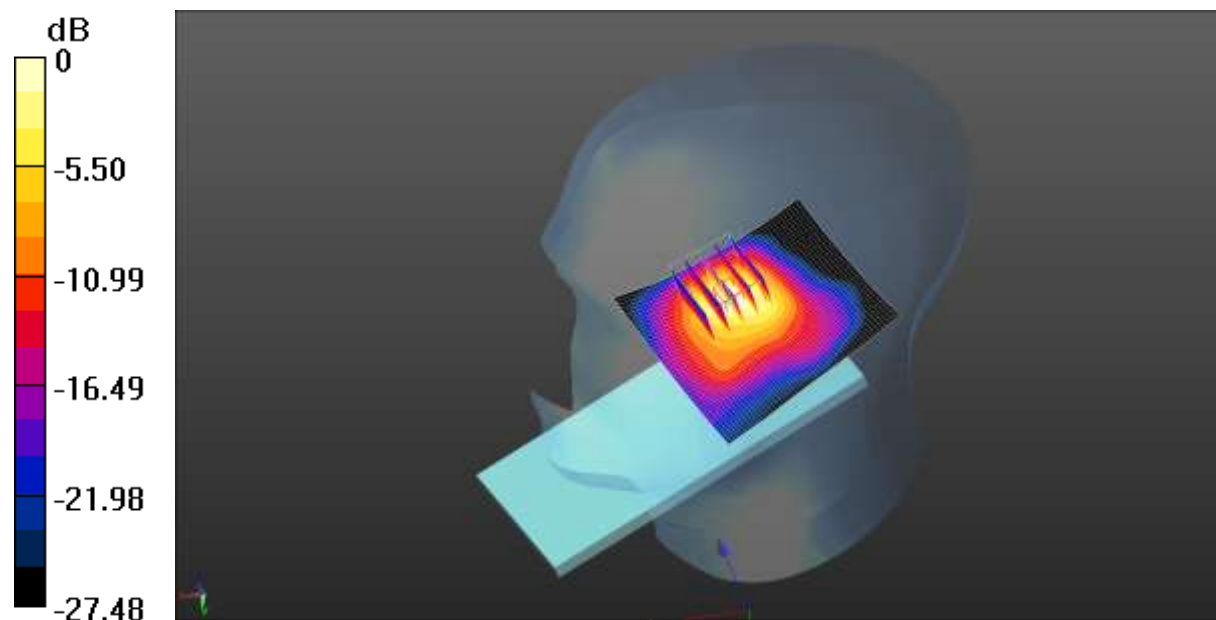
Peak SAR (extrapolated) = 2.32 W/kg

SAR(1 g) = 0.961 W/kg; SAR(10 g) = 0.380 W/kg

Smallest distance from peaks to all points 3 dB below = 6.6 mm

Ratio of SAR at M2 to SAR at M1 = 44.6%

Maximum value of SAR (measured) = 1.52 W/kg



0 dB = 1.52 W/kg = 1.82 dBW/kg

Test Laboratory: JYTSZ

Date: 04.15.2023

DUT: Mobile Phone; Type: AD11; Serial: 3#

Communication System: UID 0, LTE-Fdd(USA) 1RB QPSK (0); Frequency: 711 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 711$ MHz; $\sigma = 0.862$ S/m; $\epsilon_r = 42.396$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(10.2, 10.2, 10.2) @ 711 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/High Channel/Area Scan (51x61x1):

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

Maximum value of SAR (interpolated) = 0.0711 W/kg

LTE Band 12 1RB(10MHz) Right Cheek/High Channel/Zoom Scan**(5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 1.613 V/m; Power Drift = 0.04 dB

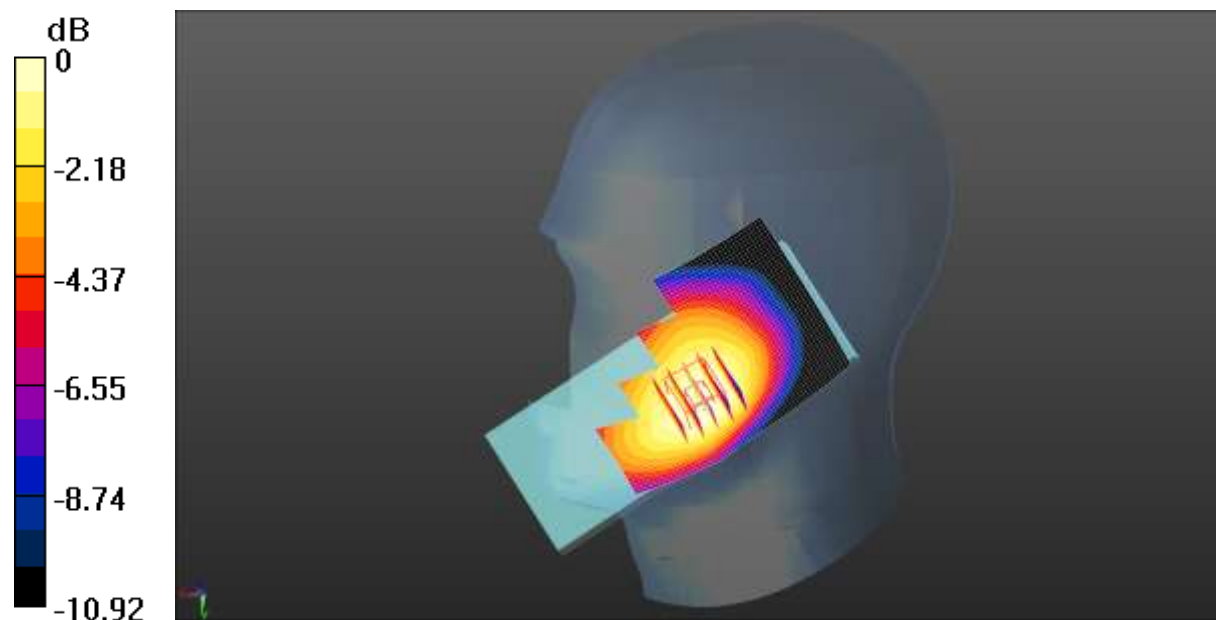
Peak SAR (extrapolated) = 0.0780 W/kg

SAR(1 g) = 0.058 W/kg; SAR(10 g) = 0.044 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 = 77.3%

Maximum value of SAR (measured) = 0.0696 W/kg



0 dB = 0.0696 W/kg = -11.57 dBW/kg

Test Laboratory: JYTSZ

Date: 04.30.2023

DUT: Mobile Phone; Type: AD11; 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; $\sigma = 1.906$ S/m; $\epsilon_r = 39.897$; $\rho = 1000$ 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 Cheek/Middle Channel/Area Scan

(51x51x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 1.10 W/kg

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

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

Reference Value = 5.784 V/m; Power Drift = 0.18 dB

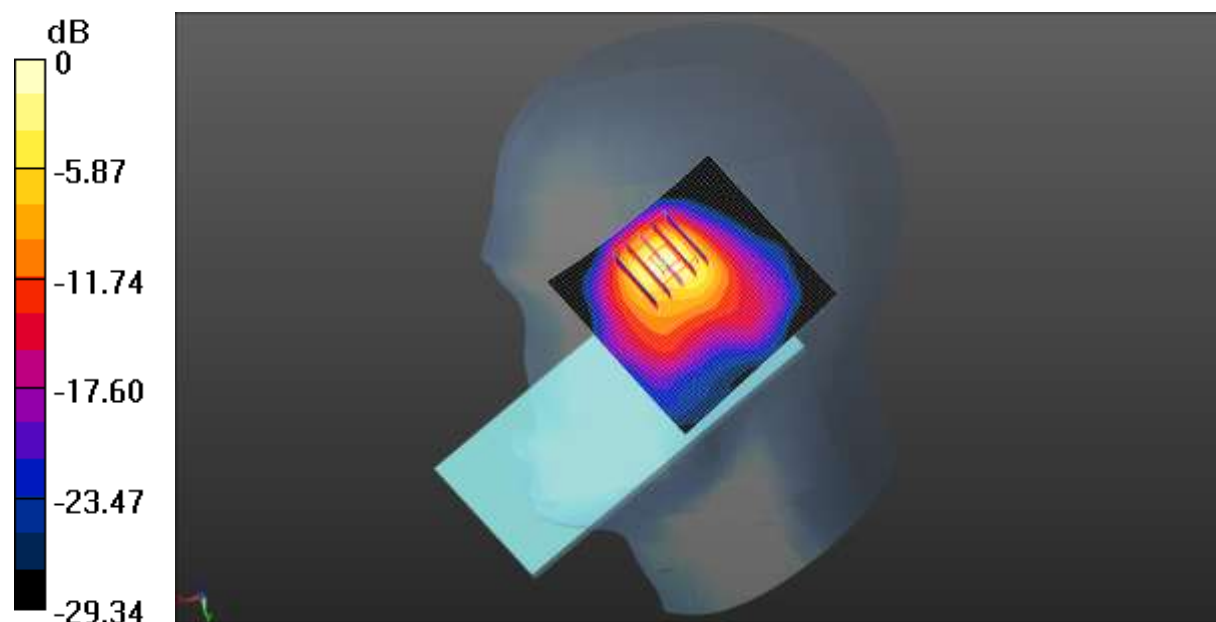
Peak SAR (extrapolated) = 1.73 W/kg

SAR(1 g) = 0.689 W/kg; SAR(10 g) = 0.270 W/kg

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

Ratio of SAR at M2 to SAR at M1 = 41.2%

Maximum value of SAR (measured) = 1.24 W/kg



0 dB = 1.24 W/kg = 0.93 dBW/kg

Test Laboratory: JYTSZ

Date: 04.23.2023

DUT: Mobile Phone; Type: AD11; Serial: 3#

Communication System: UID 0, LTE-Fdd(USA) 1RB QPSK (0); Frequency: 1770 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 1770$ MHz; $\sigma = 1.364$ S/m; $\epsilon_r = 40.583$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(8.38, 8.38, 8.38) @ 1770 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 Cheek/Low Channel/Area Scan (51x51x1):

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

Maximum value of SAR (interpolated) = 1.45 W/kg

LTE Band 66 1RB(20MHz) Right Cheek/Low Channel/Zoom Scan

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

Reference Value = 7.634 V/m; Power Drift = 0.08 dB

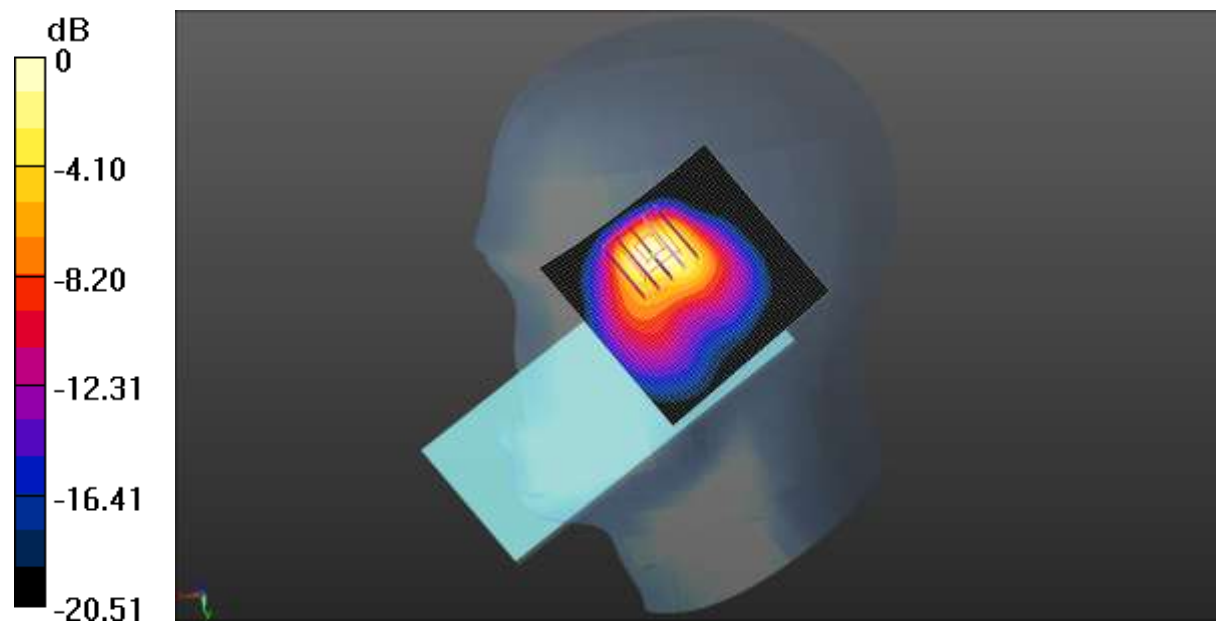
Peak SAR (extrapolated) = 1.67 W/kg

SAR(1 g) = 0.726 W/kg; SAR(10 g) = 0.324 W/kg

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

Ratio of SAR at M2 to SAR at M1 = 40.3%

Maximum value of SAR (measured) = 1.17 W/kg



0 dB = 1.17 W/kg = 0.68 dBW/kg

Test Laboratory: JYTSZ

Date: 04.15.2023

DUT: Mobile Phone; Type: AD11; Serial: 3#

Communication System: UID 0, NR (0); Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.913$ S/m; $\epsilon_r = 42.114$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(9.8, 9.8, 9.8) @ 836.5 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 n5 1RB(20MHz) Right Cheek/Middle Channel/Area Scan (51x61x1):Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.0843 W/kg

NR n5 1RB(20MHz) Right Cheek/Middle Channel/Zoom Scan (5x5x7)/Cube 0:Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 2.272 V/m; Power Drift = 0.14 dB

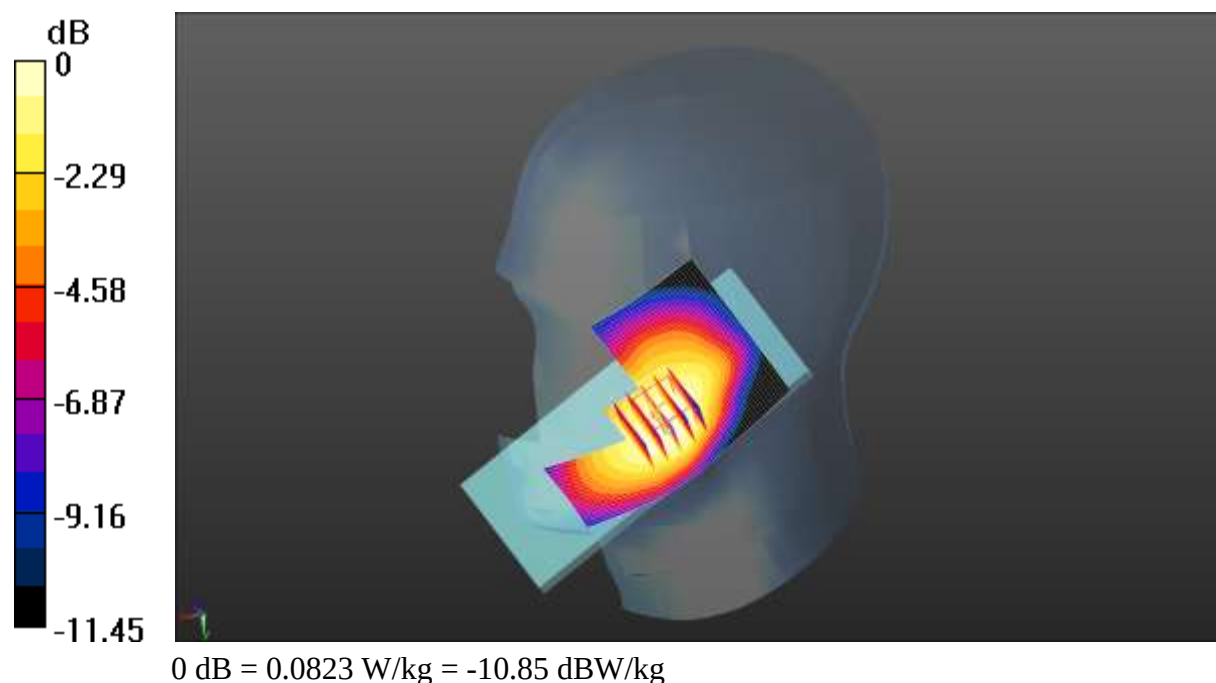
Peak SAR (extrapolated) = 0.0930 W/kg

SAR(1 g) = 0.069 W/kg; SAR(10 g) = 0.052 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 = 73%

Maximum value of SAR (measured) = 0.0823 W/kg



Test Laboratory: JYTSZ

Date: 04.30.2023

DUT: Mobile Phone; Type: AD11; Serial: 3#

Communication System: UID 0, NR (0); Frequency: 2560 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2560$ MHz; $\sigma = 1.842$ S/m; $\epsilon_r = 39.956$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(7.35, 7.35, 7.35) @ 2560 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 1RB(20MHz) Right Cheek/High Channel/Area Scan (51x51x1):Interpolated grid: $dx=1.200$ mm, $dy=1.200$ mm

Maximum value of SAR (interpolated) = 1.39 W/kg

NR n7 1RB(20MHz) Right Cheek/High Channel/Zoom Scan (5x5x7)/Cube 0:Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 6.619 V/m; Power Drift = -0.05 dB

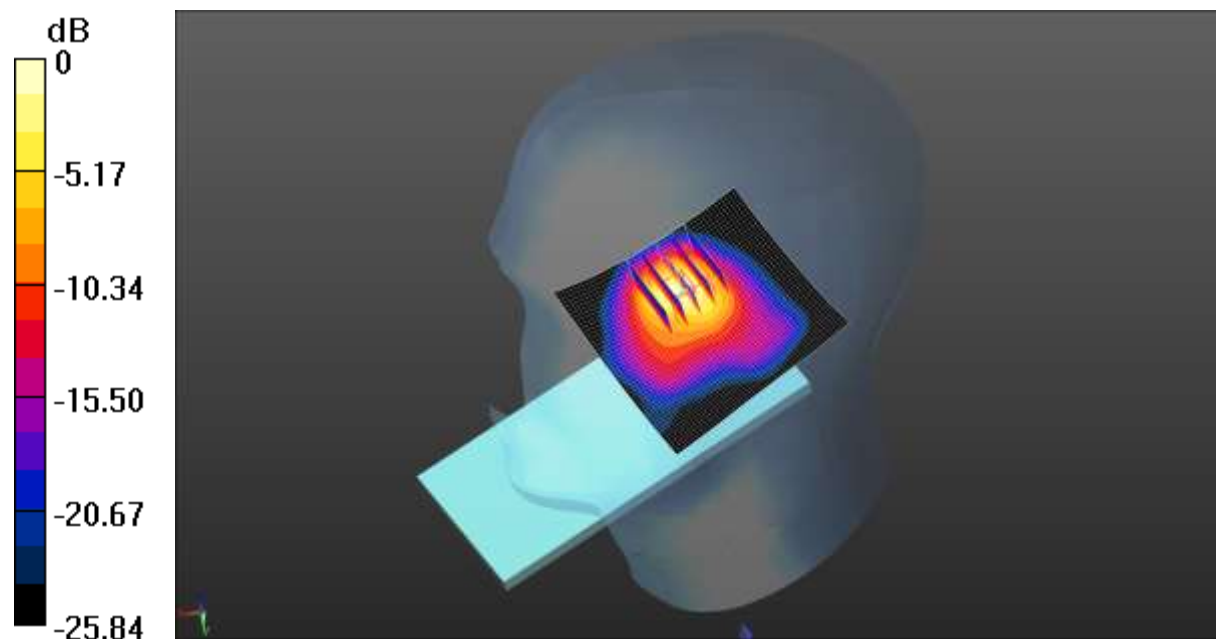
Peak SAR (extrapolated) = 2.35 W/kg

SAR(1 g) = 0.927 W/kg; SAR(10 g) = 0.361 W/kg

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

Ratio of SAR at M2 to SAR at M1 = 41.1%

Maximum value of SAR (measured) = 1.59 W/kg



0 dB = 1.59 W/kg = 2.01 dBW/kg

Test Laboratory: JYTSZ

Date: 04.15.2023

DUT: Mobile Phone; Type: AD11; Serial: 3#

Communication System: UID 0, NR (0); Frequency: 708.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 708.5$ MHz; $\sigma = 0.864$ S/m; $\epsilon_r = 42.372$; $\rho = 1000$ 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 (51x61x1):

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

Maximum value of SAR (interpolated) = 0.0596 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 = 1.008 V/m; Power Drift = 0.06 dB

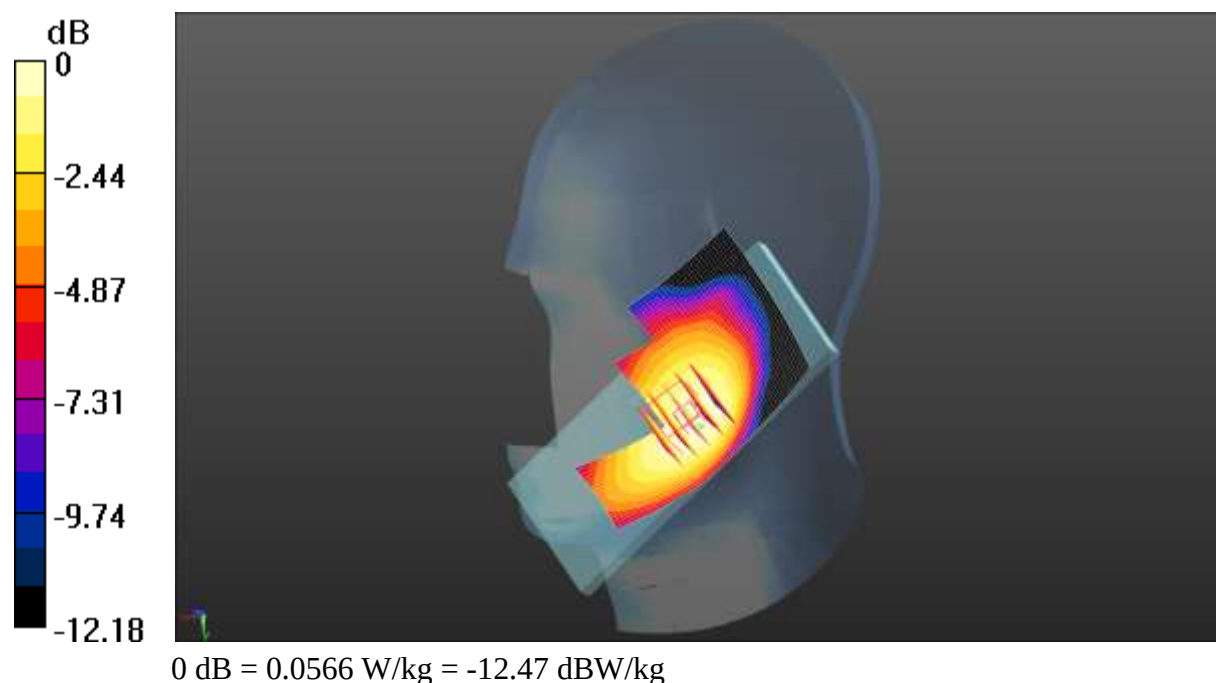
Peak SAR (extrapolated) = 0.0630 W/kg

SAR(1 g) = 0.047 W/kg; SAR(10 g) = 0.036 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 = 76.2%

Maximum value of SAR (measured) = 0.0566 W/kg



Test Laboratory: JYTSZ

Date: 04.30.2023

DUT: Mobile Phone; Type: AD11; Serial: 3#

Communication System: UID 0, NR (0); Frequency: 2592.99 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 2592.99$ MHz; $\sigma = 1.906$ S/m; $\epsilon_r = 39.897$; $\rho = 1000$ 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 50%RB(100MHz) Right Cheek/Middle Channel/Area Scan (51x51x1):

Interpolated grid: $dx=1.200$ mm, $dy=1.200$ mm
Maximum value of SAR (interpolated) = 1.23 W/kg

NR n41 50%RB(100MHz) Right Cheek/Middle Channel/Zoom Scan

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

Reference Value = 5.339 V/m; Power Drift = 0.04 dB

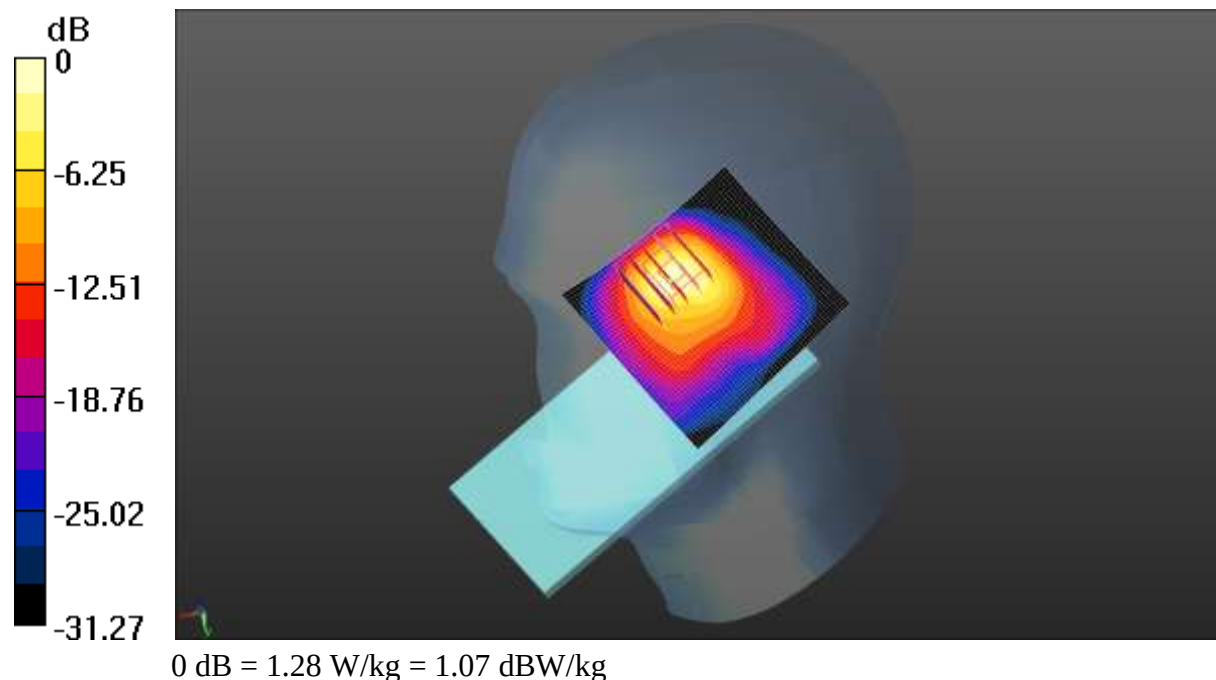
Peak SAR (extrapolated) = 1.71 W/kg

SAR(1 g) = 0.695 W/kg; SAR(10 g) = 0.271 W/kg

Smallest distance from peaks to all points 3 dB below = 6.6 mm

Ratio of SAR at M2 to SAR at M1 = 38.5%

Maximum value of SAR (measured) = 1.28 W/kg



Test Laboratory: JYTSZ

Date: 04.23.2023

DUT: Mobile Phone; Type: AD11; Serial: 3#

Communication System: UID 0, NR (0); Frequency: 1745 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 1745$ MHz; $\sigma = 1.347$ S/m; $\epsilon_r = 40.623$; $\rho = 1000$ kg/m³

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)

NR n66 1RB(40MHz) Right Cheek/Middle Channel/Area Scan (51x51x1):Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.900 W/kg

NR n66 1RB(40MHz) Right Cheek/Middle Channel/Zoom Scan (5x5x7)/Cube**0:** Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 5.669 V/m; Power Drift = -0.01 dB

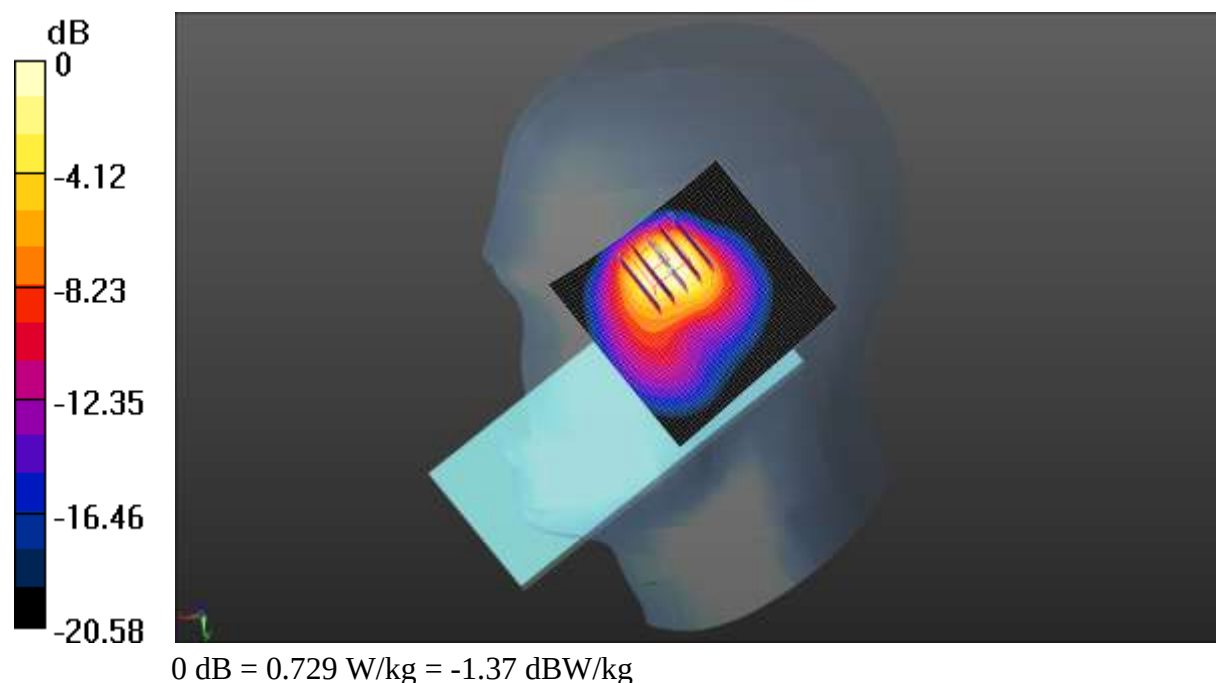
Peak SAR (extrapolated) = 0.885 W/kg

SAR(1 g) = 0.383 W/kg; SAR(10 g) = 0.170 W/kg

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

Ratio of SAR at M2 to SAR at M1 = 44.5%

Maximum value of SAR (measured) = 0.729 W/kg



Test Laboratory: JYTSZ

Date: 05.07.2023

DUT: Mobile Phone; Type: AD11; Serial: 3#

Communication System: UID 0, NR (0); Frequency: 3500.01 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 3500.01$ MHz; $\sigma = 2.851$ S/m; $\epsilon_r = 39.29$; $\rho = 1000$ kg/m³
Phantom section: Right 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 50%RB(100MHz) Right Cheek/Middle Channel/Area Scan (51x51x1):

Interpolated grid: $dx=1.200$ mm, $dy=1.200$ mm
Maximum value of SAR (interpolated) = 1.77 W/kg

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

(7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=4$ mm

Reference Value = 13.38 V/m; Power Drift = -0.08 dB

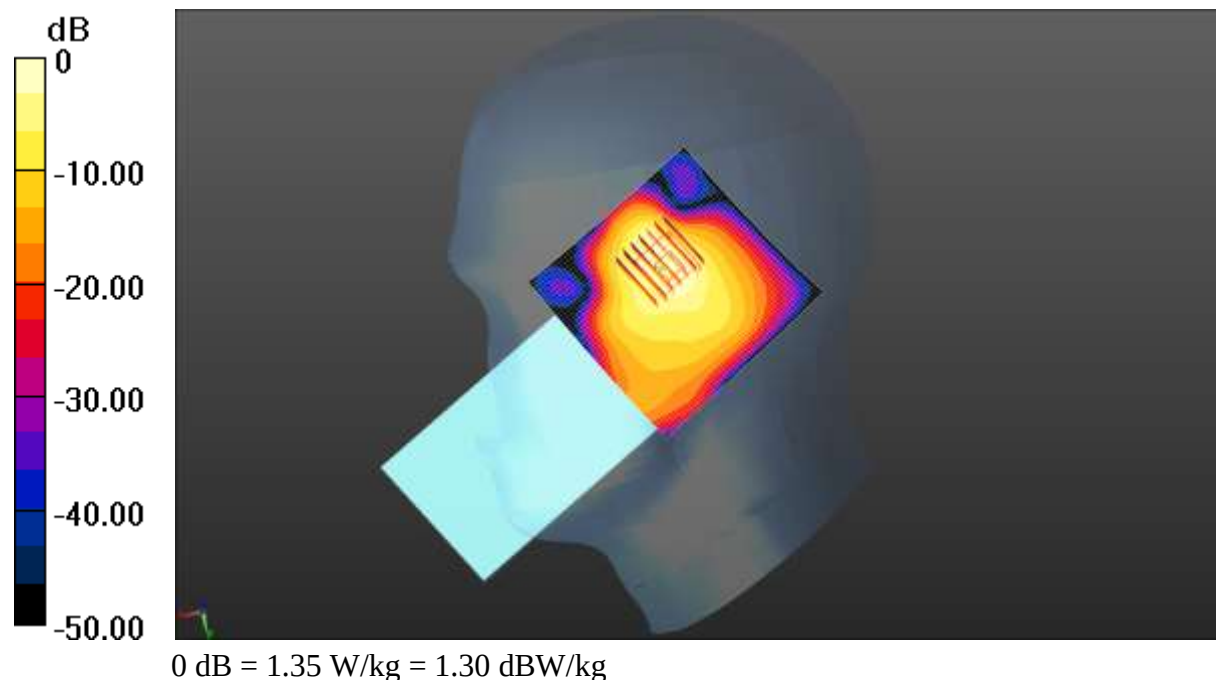
Peak SAR (extrapolated) = 1.87 W/kg

SAR(1 g) = 0.734 W/kg; SAR(10 g) = 0.295 W/kg

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

Ratio of SAR at M2 to SAR at M1 = 35.7%

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



Test Laboratory: JYTSZ

Date: 05.07.2023

DUT: Mobile Phone; Type: AD11; Serial: 3#

Communication System: UID 0, NR (0); Frequency: 3750 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 3750$ MHz; $\sigma = 3.082$ S/m; $\epsilon_r = 38.978$; $\rho = 1000$ kg/m³
Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(6.75, 6.75, 6.75) @ 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) Right Cheek/Low Channel/Area Scan**(51x51x1):** Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 2.03 W/kg

NR n77(3840) 50%RB(100MHz) Right Cheek/Low Channel/Zoom Scan**(7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=4mm

Reference Value = 11.46 V/m; Power Drift = 0.01 dB

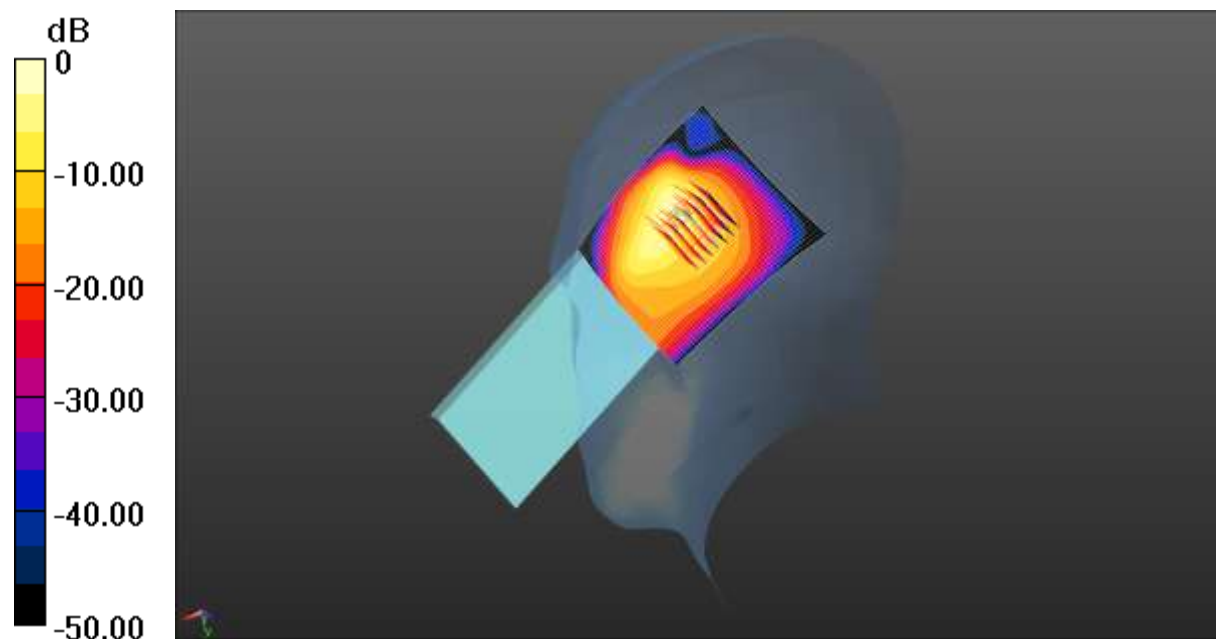
Peak SAR (extrapolated) = 2.95 W/kg

SAR(1 g) = 1.09 W/kg; SAR(10 g) = 0.413 W/kg

Smallest distance from peaks to all points 3 dB below = 7.6 mm

Ratio of SAR at M2 to SAR at M1 = 37.4%

Maximum value of SAR (measured) = 2.12 W/kg



0 dB = 2.12 W/kg = 3.26 dBW/kg

Test Laboratory: JYTSZ

Date: 04.30.2023

DUT: Mobile Phone; Type: AD11; Serial: 3#

Communication System: UID 0, IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps) (0);

Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 2437$ MHz; $\sigma = 1.733$ S/m; $\epsilon_r = 39.912$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(7.6, 7.6, 7.6) @ 2437 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 Left Cheek/Middle Channel/Area Scan (51x51x1): Interpolated grid:
dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.328 W/kg

2.4GWIFI Left Cheek/Middle Channel/Zoom Scan (5x5x7)/Cube 0:

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

Reference Value = 8.409 V/m; Power Drift = -0.05 dB

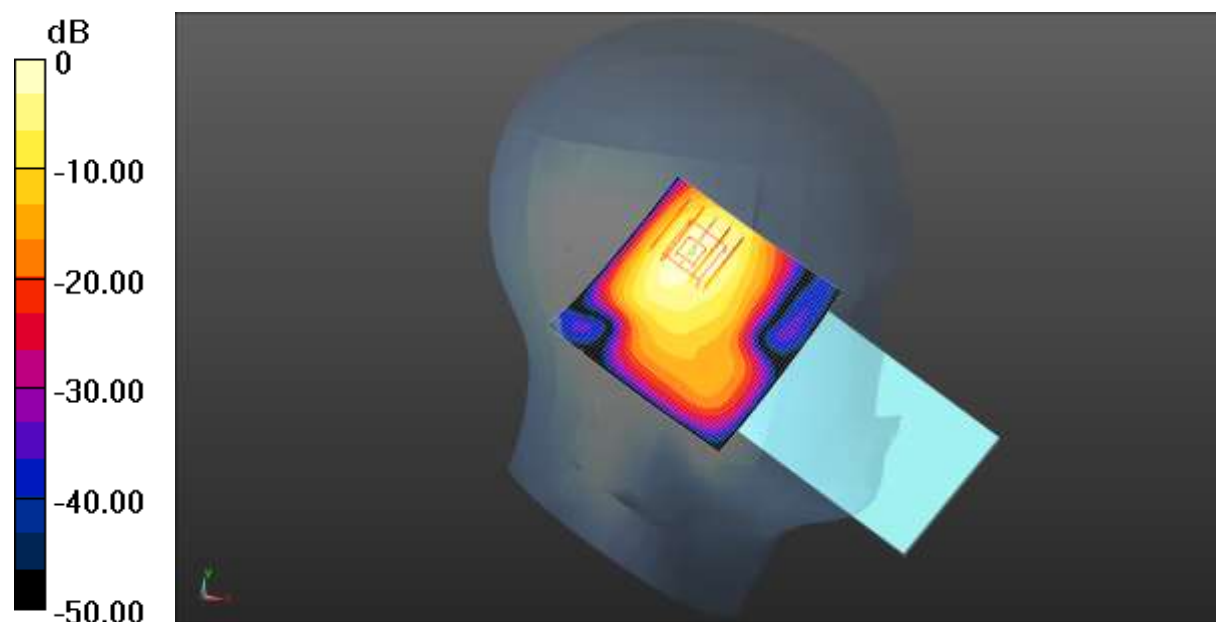
Peak SAR (extrapolated) = 0.309 W/kg

SAR(1 g) = 0.149 W/kg; SAR(10 g) = 0.070 W/kg

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

Ratio of SAR at M2 to SAR at M1 = 47.9%

Maximum value of SAR (measured) = 0.251 W/kg



0 dB = 0.251 W/kg = -6.00 dBW/kg

Test Laboratory: JYTSZ

Date: 05.14.2023

DUT: Mobile Phone; Type: AD11; Serial: 3#

Communication System: UID 0, IEEE 802.11n20 WiFi 5GHz (0); Frequency: 5240 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5240$ MHz; $\sigma = 4.723$ S/m; $\epsilon_r = 36.832$; $\rho = 1000$ kg/m³
Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(5.41, 5.41, 5.41) @ 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 Left Cheek/High Channel/Area Scan (51x51x1): Interpolated grid:

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

Maximum value of SAR (interpolated) = 0.374 W/kg

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

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

Reference Value = 1.997 V/m; Power Drift = 0.02 dB

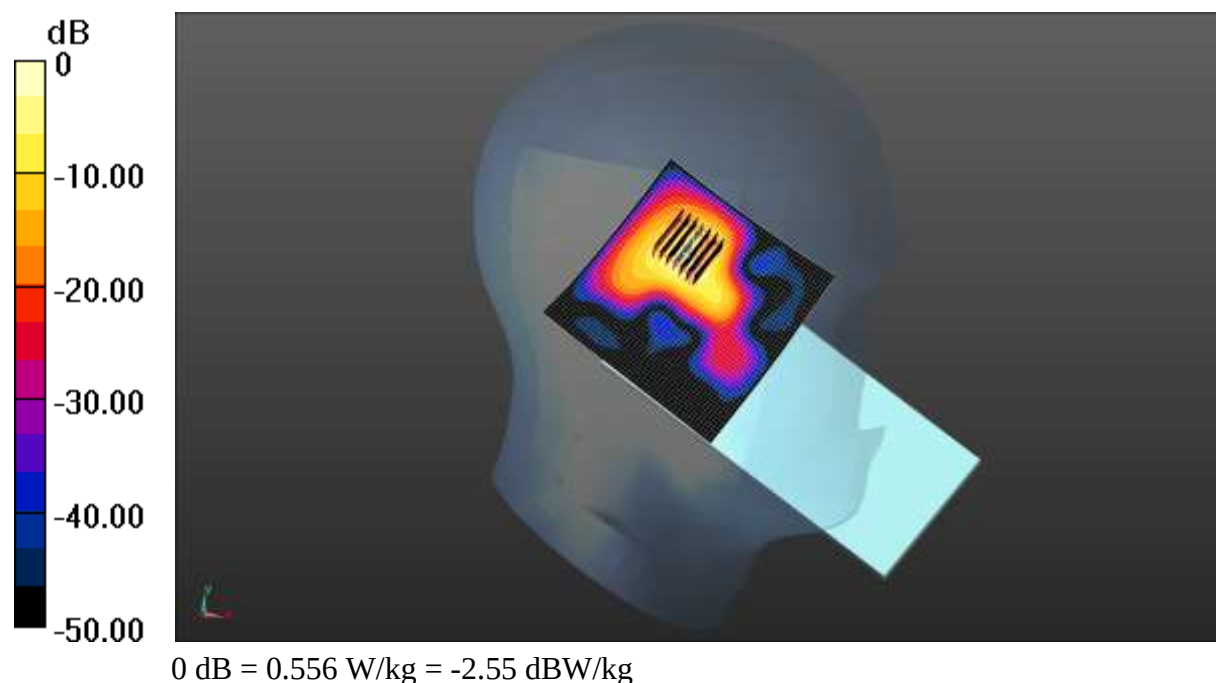
Peak SAR (extrapolated) = 1.02 W/kg

SAR(1 g) = 0.197 W/kg; SAR(10 g) = 0.055 W/kg

Smallest distance from peaks to all points 3 dB below = 4.7 mm

Ratio of SAR at M2 to SAR at M1 = 17.9%

Maximum value of SAR (measured) = 0.556 W/kg



Test Laboratory: JYTSZ

Date: 05.14.2023

DUT: Mobile Phone; Type: AD11; Serial: 3#

Communication System: UID 0, IEEE 802.11n20 WiFi 5GHz (0); Frequency: 5785

MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 5785$ MHz; $\sigma = 5.382$ S/m; $\epsilon_r = 36.367$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(4.9, 4.9, 4.9) @ 5785 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 Left Cheek/Middle Channel/Area Scan (51x51x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.171 W/kg

5.8GWIFI Left Cheek/Middle Channel/Zoom Scan (7x7x7)/Cube 0:

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

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

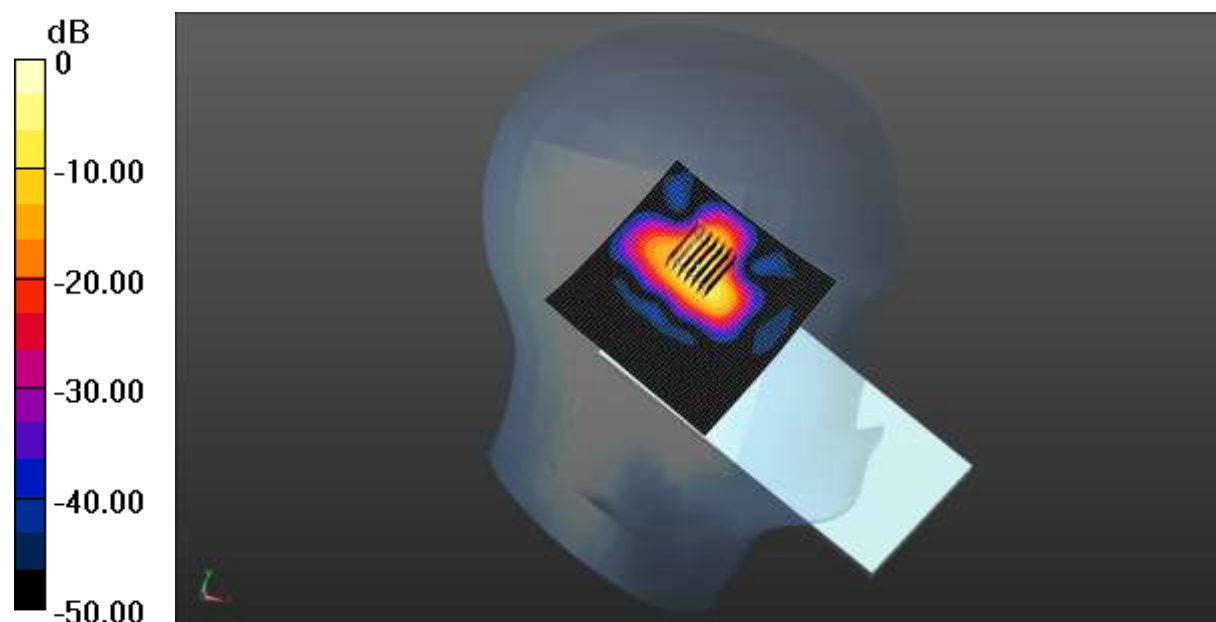
Peak SAR (extrapolated) = 2.00 W/kg

SAR(1 g) = 0.207 W/kg; SAR(10 g) = 0.044 W/kg

Smallest distance from peaks to all points 3 dB below = 4.7 mm

Ratio of SAR at M2 to SAR at M1 = 13.5%

Maximum value of SAR (measured) = 0.606 W/kg



0 dB = 0.606 W/kg = -2.18 dBW/kg

Test Laboratory: JYTSZ

Date: 04.30.2023

DUT: Mobile Phone; Type: AD11; Serial: 3#

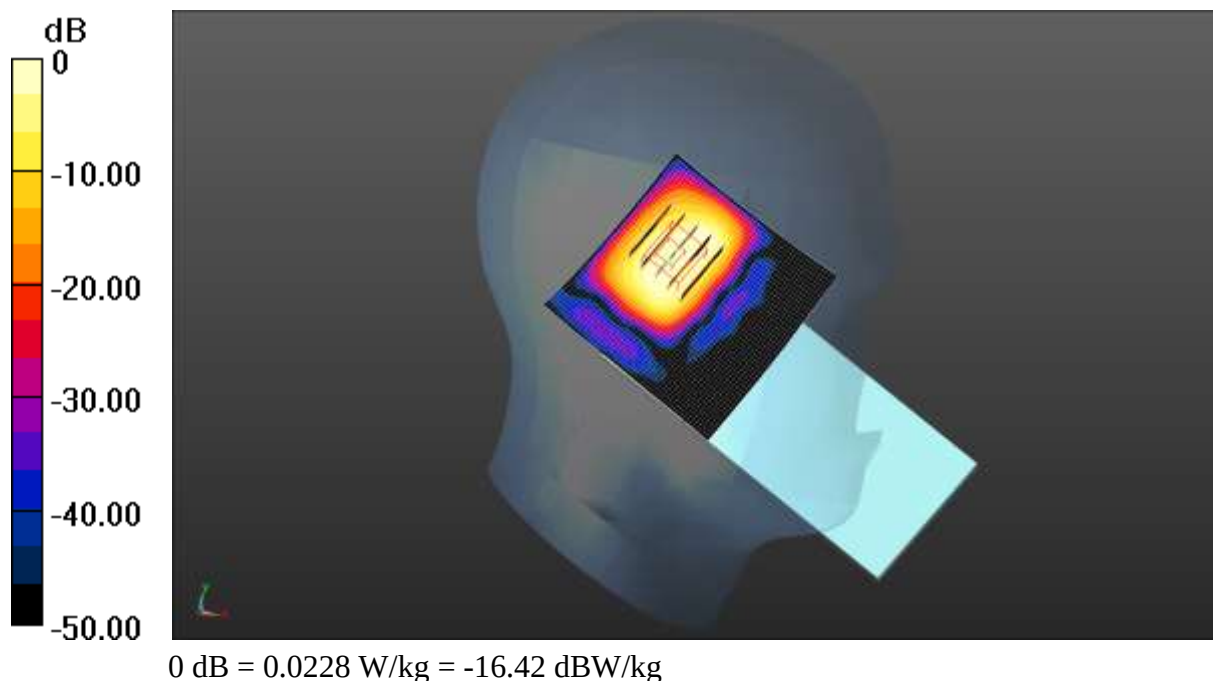
Communication System: UID 0, Bluetooth (0); Frequency: 2441 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 2441$ MHz; $\sigma = 1.735$ S/m; $\epsilon_r = 39.916$; $\rho = 1000$ kg/m³
Phantom section: Left Section

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)

Bluetooth Left Cheek/Middle Channel/Area Scan (51x51x1): Interpolated grid:
dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.0451 W/kg

Bluetooth Left Cheek/Middle Channel/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.267 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 0.0300 W/kg
SAR(1 g) = 0.016 W/kg; SAR(10 g) = 0.00611 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 = 56.7%
Maximum value of SAR (measured) = 0.0228 W/kg



Test Laboratory: JYTSZ

Date: 04.15.2023

DUT: Mobile Phone; Type: AD11; Serial: 3#

Communication System: UID 0, GPRS(4 Slots) (0); Frequency: 848.8 MHz; Duty Cycle: 1:1.99986

Medium parameters used (interpolated): $f = 848.8$ MHz; $\sigma = 0.921$ S/m; $\epsilon_r = 42.118$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(9.8, 9.8, 9.8) @ 848.8 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 850 4Slots Closed Body Back/High Channel/Area Scan (51x61x1):

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

Maximum value of SAR (interpolated) = 1.63 W/kg

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

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

Reference Value = 26.13 V/m; Power Drift = -0.04 dB

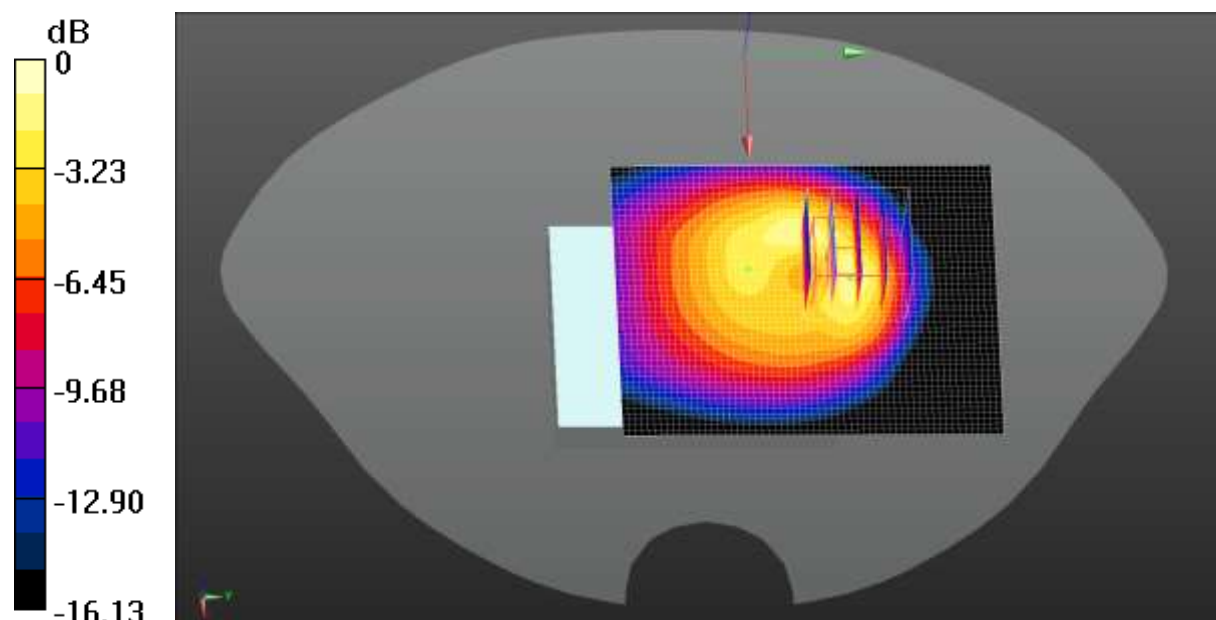
Peak SAR (extrapolated) = 3.14 W/kg

SAR(1 g) = 1.42 W/kg; SAR(10 g) = 0.754 W/kg

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

Ratio of SAR at M2 to SAR at M1 = 46.1%

Maximum value of SAR (measured) = 2.20 W/kg



0 dB = 2.20 W/kg = 3.42 dBW/kg

Test Laboratory: JYTSZ

Date: 04.23.2023

DUT: Mobile Phone; Type: AD11; 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; $\sigma = 1.359$ S/m; $\epsilon_r = 40.893$; $\rho = 1000$ 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 Closed Body Front/High Channel/Area Scan (51x61x1):

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

Maximum value of SAR (interpolated) = 1.21 W/kg

GPRS 1900 4Slots Closed Body Front/High Channel/Zoom Scan (5x5x7)/Cube

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

Reference Value = 12.59 V/m; Power Drift = -0.10 dB

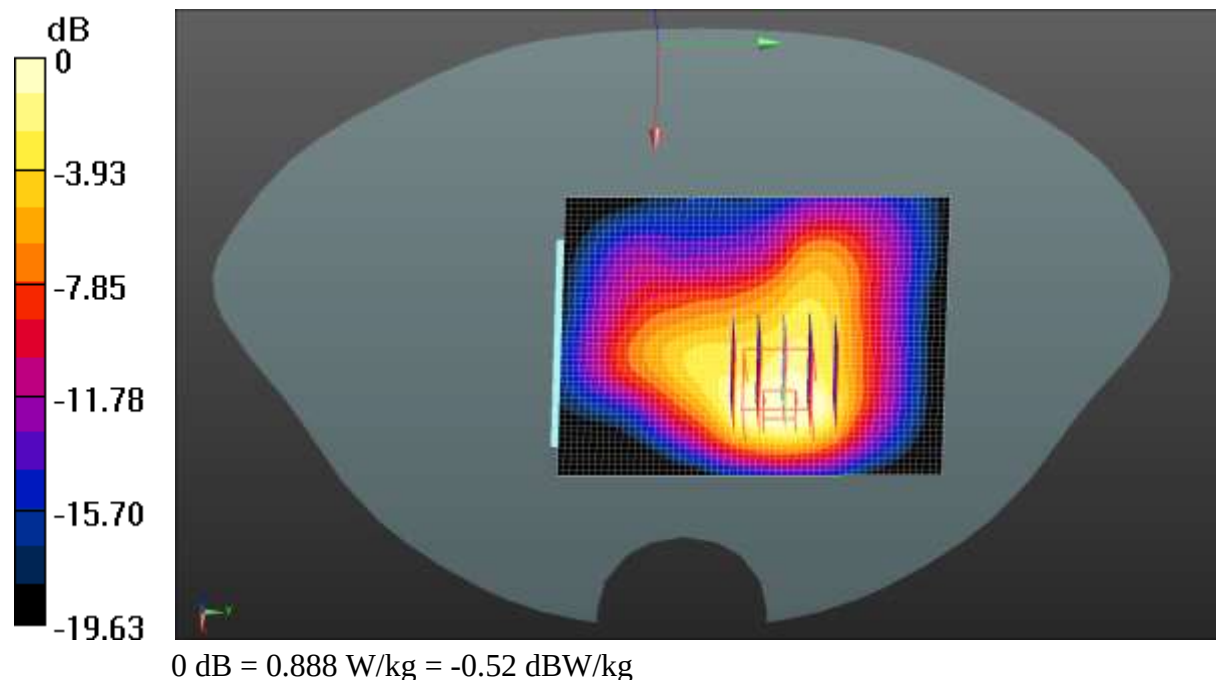
Peak SAR (extrapolated) = 1.16 W/kg

SAR(1 g) = 0.540 W/kg; SAR(10 g) = 0.264 W/kg

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

Ratio of SAR at M2 to SAR at M1 = 50.9%

Maximum value of SAR (measured) = 0.888 W/kg



Test Laboratory: JYTSZ

Date: 04.23.2023

DUT: Mobile Phone; Type: AD11; Serial: 3#

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

Medium parameters used: $f = 1907.6$ MHz; $\sigma = 1.355$ S/m; $\epsilon_r = 40.874$; $\rho = 1000$ kg/m³

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 (51x61x1): Interpolated grid:

$dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.282 W/kg

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

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

Reference Value = 7.694 V/m; Power Drift = 0.00 dB

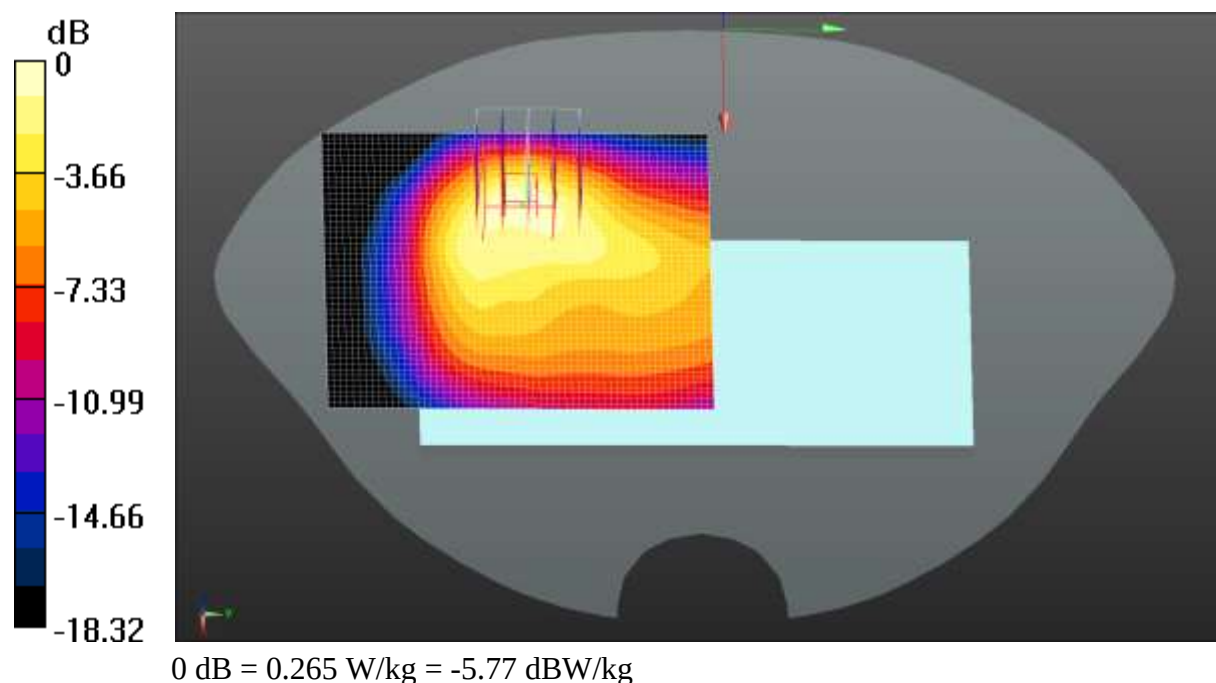
Peak SAR (extrapolated) = 0.313 W/kg

SAR(1 g) = 0.169 W/kg; SAR(10 g) = 0.092 W/kg

Smallest distance from peaks to all points 3 dB below = 11.2 mm

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

Maximum value of SAR (measured) = 0.265 W/kg



Test Laboratory: JYTSZ

Date: 04.23.2023

DUT: Mobile Phone; Type: AD11; 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; $\sigma = 1.338$ S/m; $\epsilon_r = 40.636$; $\rho = 1000$ 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 Closed Body Front/Middle Channel/Area Scan (51x61x1):

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

Maximum value of SAR (interpolated) = 0.887 W/kg

WCDMA 1700 Closed Body Front/Middle Channel/Zoom Scan (5x5x7)/Cube

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

Reference Value = 5.467 V/m; Power Drift = -0.08 dB

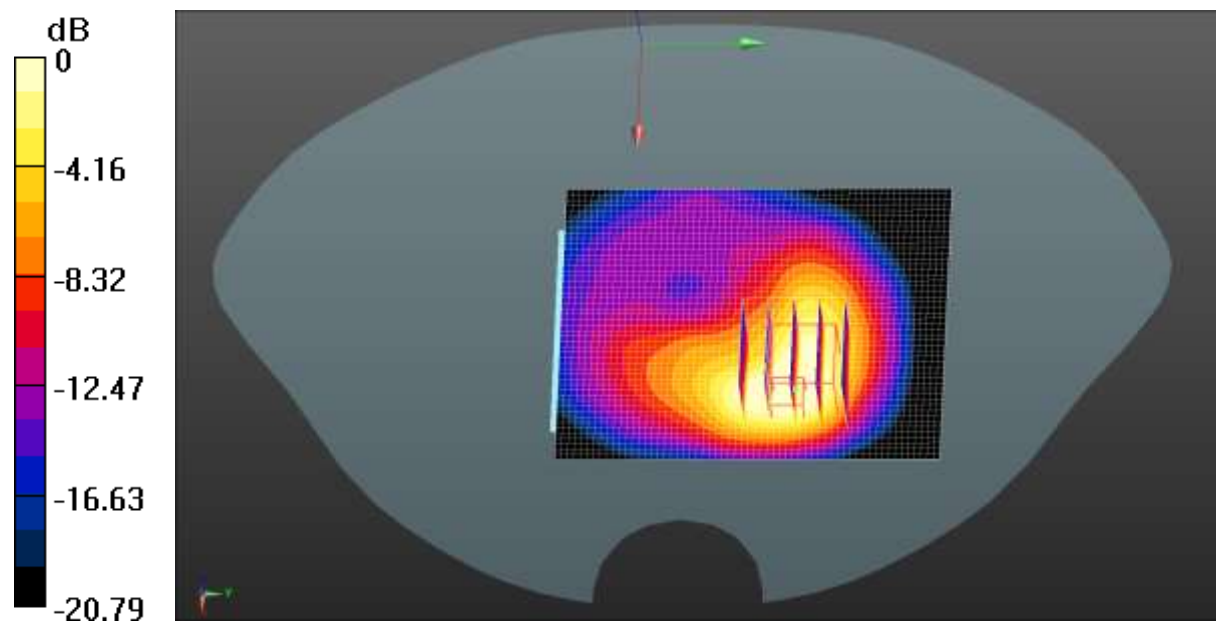
Peak SAR (extrapolated) = 0.758 W/kg

SAR(1 g) = 0.356 W/kg; SAR(10 g) = 0.188 W/kg

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

Ratio of SAR at M2 to SAR at M1 = 48.9%

Maximum value of SAR (measured) = 0.605 W/kg



0 dB = 0.605 W/kg = -2.18 dBW/kg

Test Laboratory: JYTSZ

Date: 04.15.2023

DUT: Mobile Phone; Type: AD11; 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; $\sigma = 0.914$ S/m; $\epsilon_r = 42.113$; $\rho = 1000$ 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 Closed Body Back/Middle Channel/Area Scan (51x61x1):

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

Maximum value of SAR (interpolated) = 0.903 W/kg

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

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

Reference Value = 17.51 V/m; Power Drift = 0.02 dB

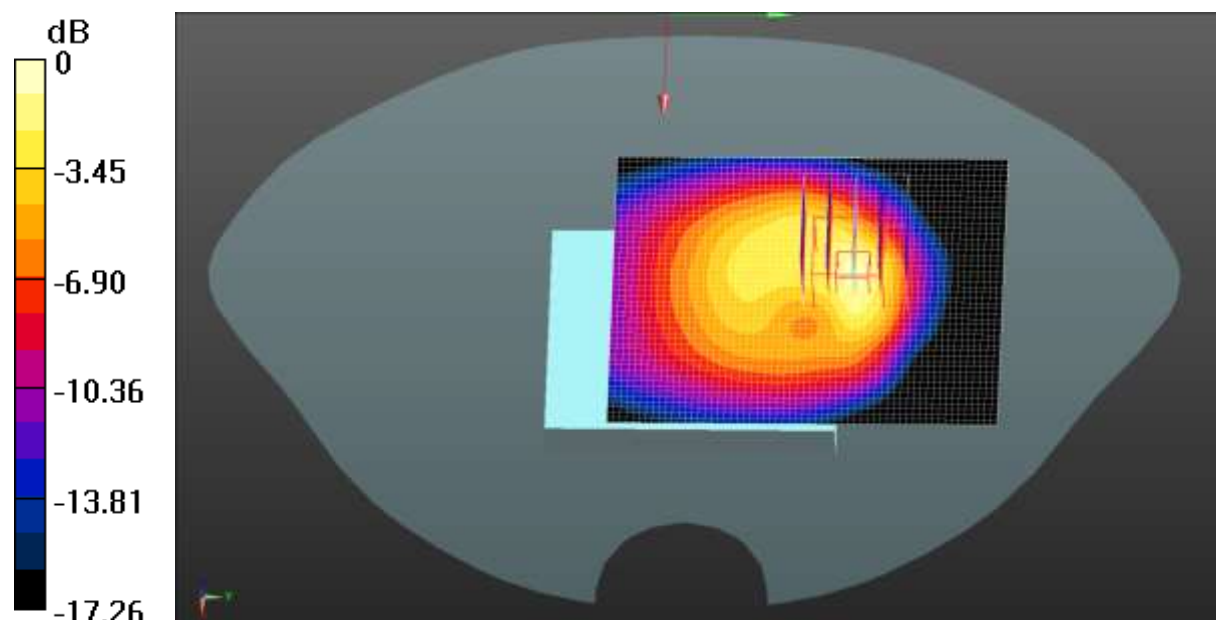
Peak SAR (extrapolated) = 1.33 W/kg

SAR(1 g) = 0.626 W/kg; SAR(10 g) = 0.332 W/kg

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

Ratio of SAR at M2 to SAR at M1 = 48.9%

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



0 dB = 1.06 W/kg = 0.25 dBW/kg

Test Laboratory: JYTSZ

Date: 04.23.2023

DUT: Mobile Phone; Type: AD11; Serial: 3#

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

Medium parameters used: $f = 1900 \text{ MHz}$; $\sigma = 1.35 \text{ S/m}$; $\epsilon_r = 40.881$; $\rho = 1000 \text{ kg/m}^3$

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) Closed Body Front/High Channel/Area Scan

(51x51x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 0.347 W/kg

LTE Band 2 1RB(20MHz) Closed Body Front/High Channel/Zoom Scan

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

Reference Value = 6.914 V/m ; Power Drift = 0.05 dB

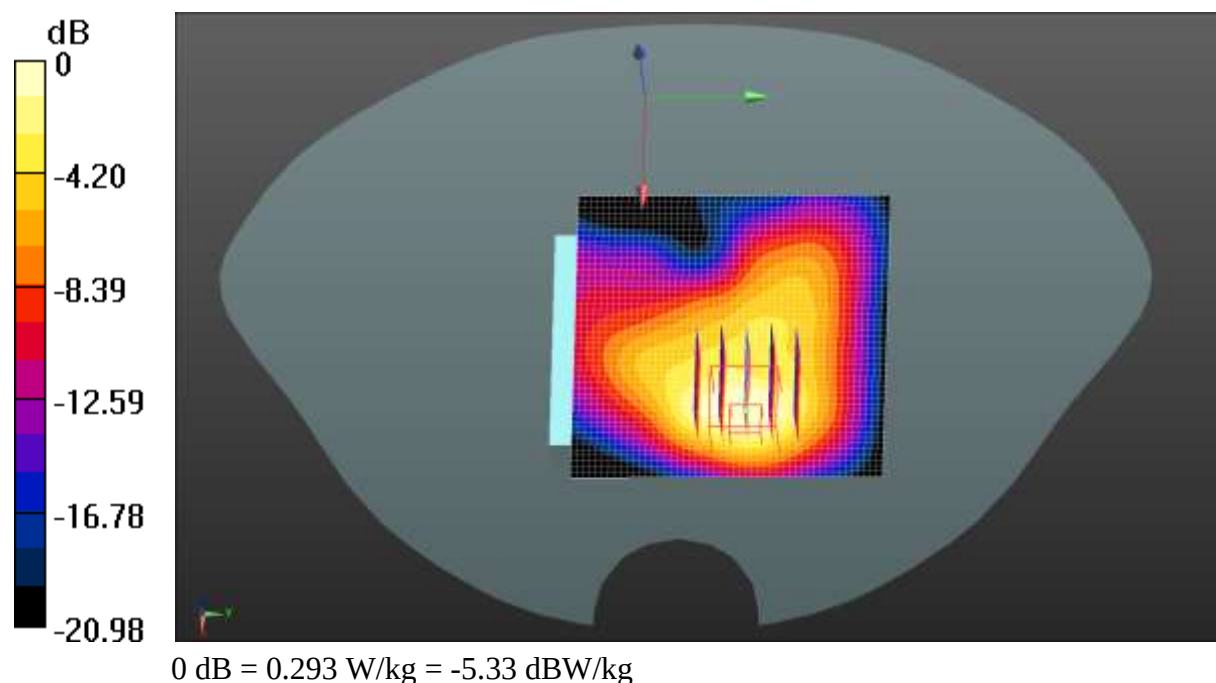
Peak SAR (extrapolated) = 0.361 W/kg

SAR(1 g) = 0.167 W/kg ; SAR(10 g) = 0.080 W/kg

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

Ratio of SAR at M2 to SAR at M1 = 49.1%

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



Test Laboratory: JYTSZ

Date: 04.15.2023

DUT: Mobile Phone; Type: AD11; Serial: 3#

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

Medium parameters used (interpolated): $f = 829 \text{ MHz}$; $\sigma = 0.902 \text{ S/m}$; $\epsilon_r = 42.128$; $\rho = 1000 \text{ kg/m}^3$

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) Closed Body Back/Low Channel/Area Scan

(51x61x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 0.850 W/kg

LTE Band 5 1RB(10MHz) Closed 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 = 18.48 V/m ; Power Drift = -0.19 dB

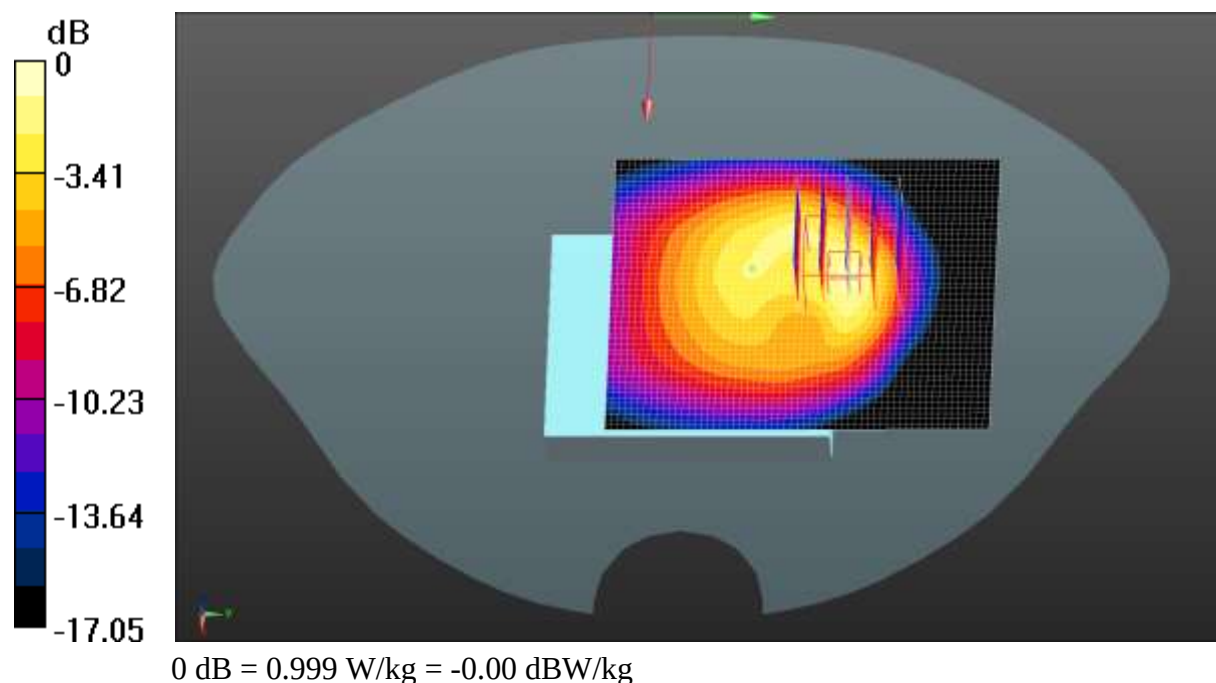
Peak SAR (extrapolated) = 1.34 W/kg

SAR(1 g) = 0.636 W/kg ; SAR(10 g) = 0.340 W/kg

Smallest distance from peaks to all points 3 dB below = 8.2 mm

Ratio of SAR at M2 to SAR at M1 = 51.4%

Maximum value of SAR (measured) = 0.999 W/kg



Test Laboratory: JYTSZ

Date: 04.30.2023

DUT: Mobile Phone; Type: AD11; Serial: 3#

Communication System: UID 0, LTE-Fdd(USA) 1RB QPSK (0); Frequency: 2560 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 2560$ MHz; $\sigma = 1.842$ S/m; $\epsilon_r = 39.956$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(7.6, 7.6, 7.6) @ 2560 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/High Channel/Area Scan (51x61x1):

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

Maximum value of SAR (interpolated) = 0.294 W/kg

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

0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

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

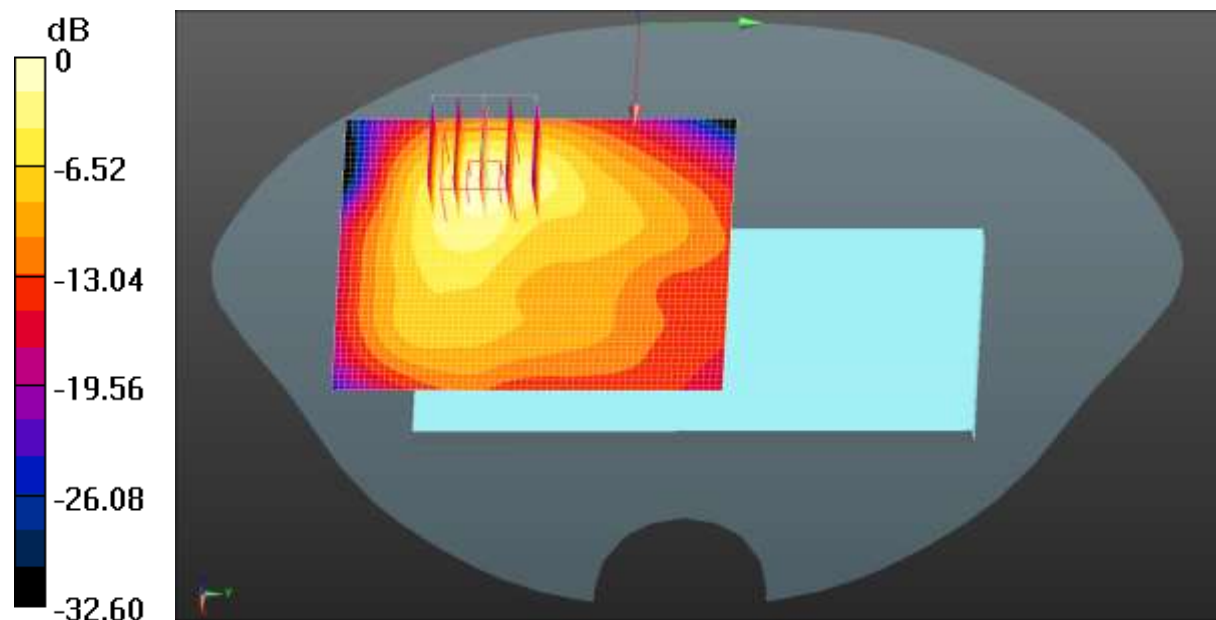
Peak SAR (extrapolated) = 0.410 W/kg

SAR(1 g) = 0.201 W/kg; SAR(10 g) = 0.098 W/kg

Smallest distance from peaks to all points 3 dB below = 11.2 mm

Ratio of SAR at M2 to SAR at M1 = 50.5%

Maximum value of SAR (measured) = 0.329 W/kg



0 dB = 0.329 W/kg = -4.83 dBW/kg

Test Laboratory: JYTSZ

Date: 04.15.2023

DUT: Mobile Phone; Type: AD11; Serial: 3#

Communication System: UID 0, LTE-Fdd(USA) 1RB QPSK (0); Frequency: 711 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 711 \text{ MHz}$; $\sigma = 0.862 \text{ S/m}$; $\epsilon_r = 42.396$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(10.2, 10.2, 10.2) @ 711 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) Closed Body Back/High Channel/Area Scan

(51x61x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 0.773 W/kg

LTE Band 12 1RB(10MHz) Closed 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 = 15.21 V/m ; Power Drift = 0.06 dB

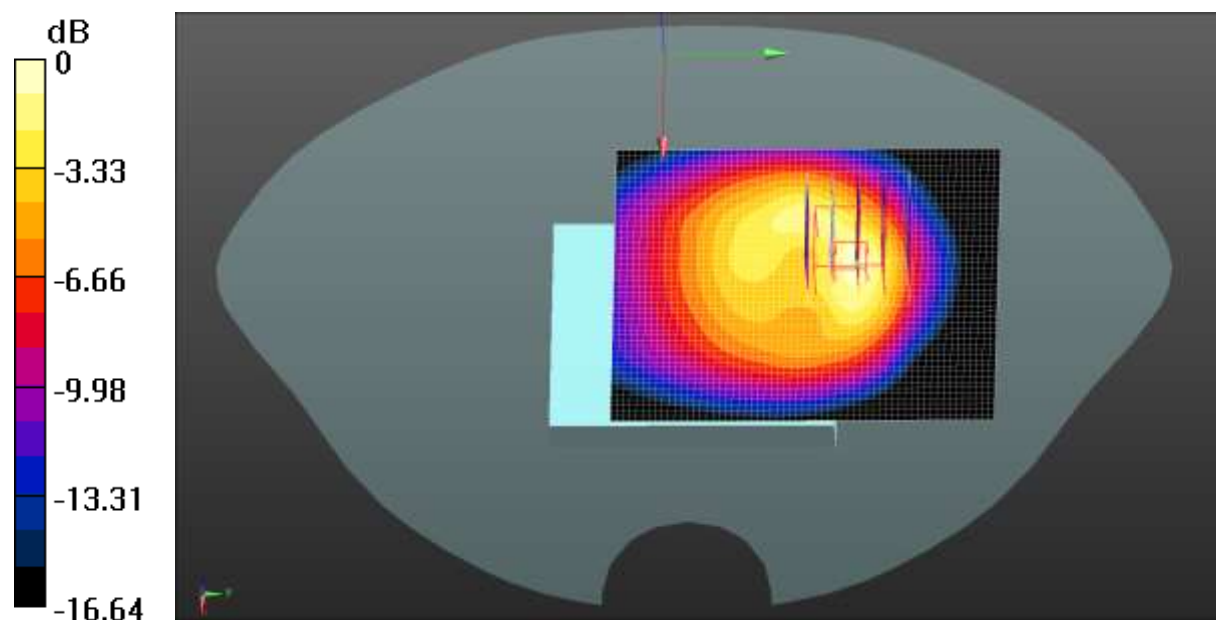
Peak SAR (extrapolated) = 1.24 W/kg

SAR(1 g) = 0.553 W/kg ; SAR(10 g) = 0.287 W/kg

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

Ratio of SAR at M2 to SAR at M1 = 43.1%

Maximum value of SAR (measured) = 0.863 W/kg



0 dB = 0.863 W/kg = -0.64 dBW/kg

Test Laboratory: JYTSZ

Date: 04.30.2023

DUT: Mobile Phone; Type: AD11; 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; $\sigma = 1.906$ S/m; $\epsilon_r = 39.897$; $\rho = 1000$ 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) Closed Body Back/Middle Channel/Area Scan

(51x51x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.259 W/kg

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

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

Reference Value = 2.683 V/m; Power Drift = 0.06 dB

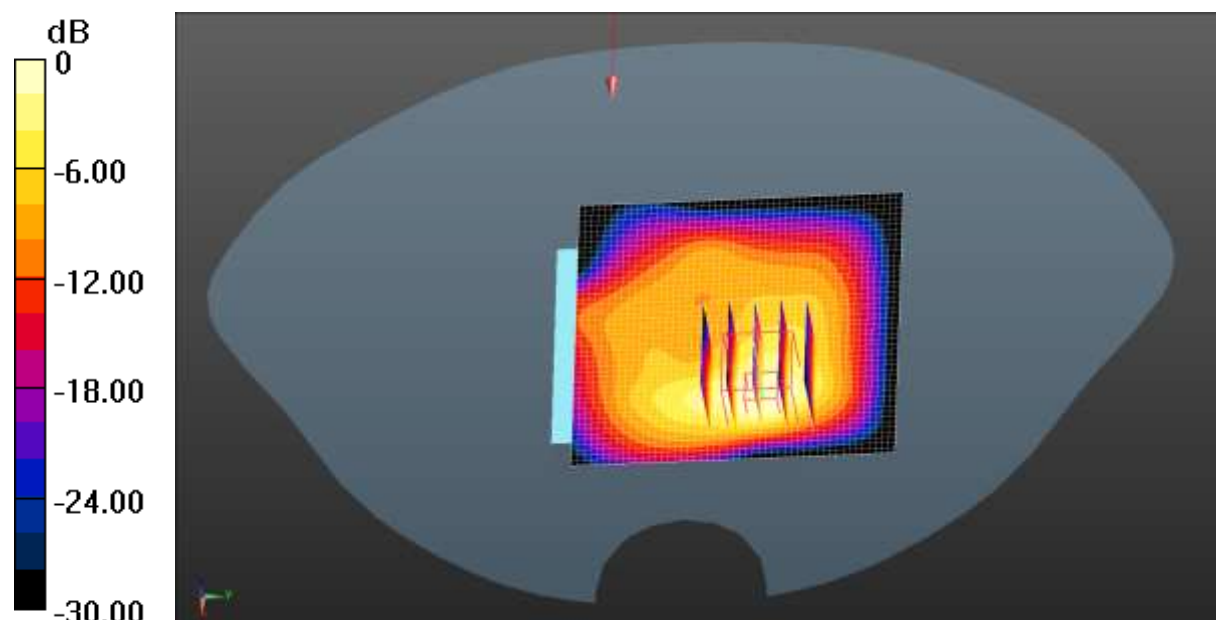
Peak SAR (extrapolated) = 0.231 W/kg

SAR(1 g) = 0.158 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 = 49.3%

Maximum value of SAR (measured) = 0.168 W/kg



Test Laboratory: JYTSZ

Date: 04.23.2023

DUT: Mobile Phone; Type: AD11; Serial: 3#

Communication System: UID 0, LTE-Fdd(USA) 1RB QPSK (0); Frequency: 1770 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1770 \text{ MHz}$; $\sigma = 1.364 \text{ S/m}$; $\epsilon_r = 40.583$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(8.38, 8.38, 8.38) @ 1770 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) Closed Body Back/High Channel/Area Scan

(51x51x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 0.494 W/kg

LTE Band 66 1RB(20MHz) Closed 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 = 4.610 V/m ; Power Drift = -0.07 dB

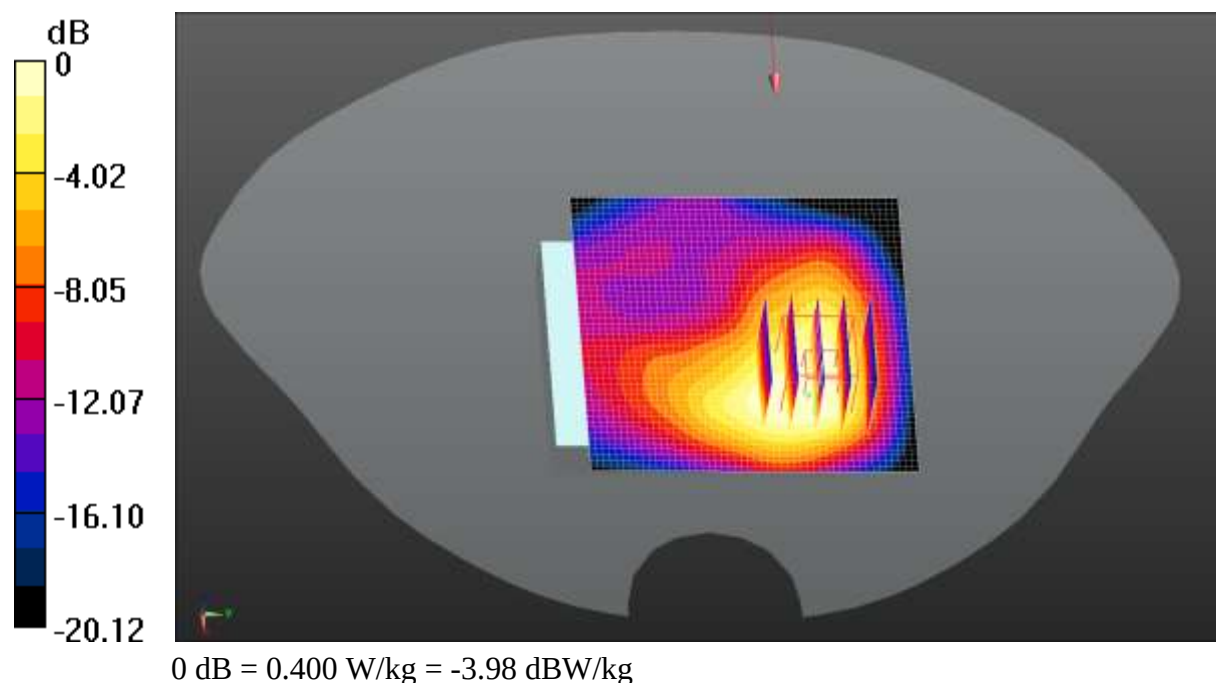
Peak SAR (extrapolated) = 0.514 W/kg

SAR(1 g) = 0.266 W/kg ; SAR(10 g) = 0.145 W/kg

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

Ratio of SAR at M2 to SAR at M1 = 47.9%

Maximum value of SAR (measured) = 0.400 W/kg



Test Laboratory: JYTSZ

Date: 04.15.2023

DUT: Mobile Phone; Type: AD11; Serial: 3#

Communication System: UID 0, NR (0); Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.913$ S/m; $\epsilon_r = 42.114$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(9.8, 9.8, 9.8) @ 836.5 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 n5 50%RB(20MHz) Closed Body Back/Middle Channel/Area Scan

(51x51x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.805 W/kg

NR n5 50%RB(20MHz) Closed Body Back/Middle Channel/Zoom Scan

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

Reference Value = 15.47 V/m; Power Drift = 0.12 dB

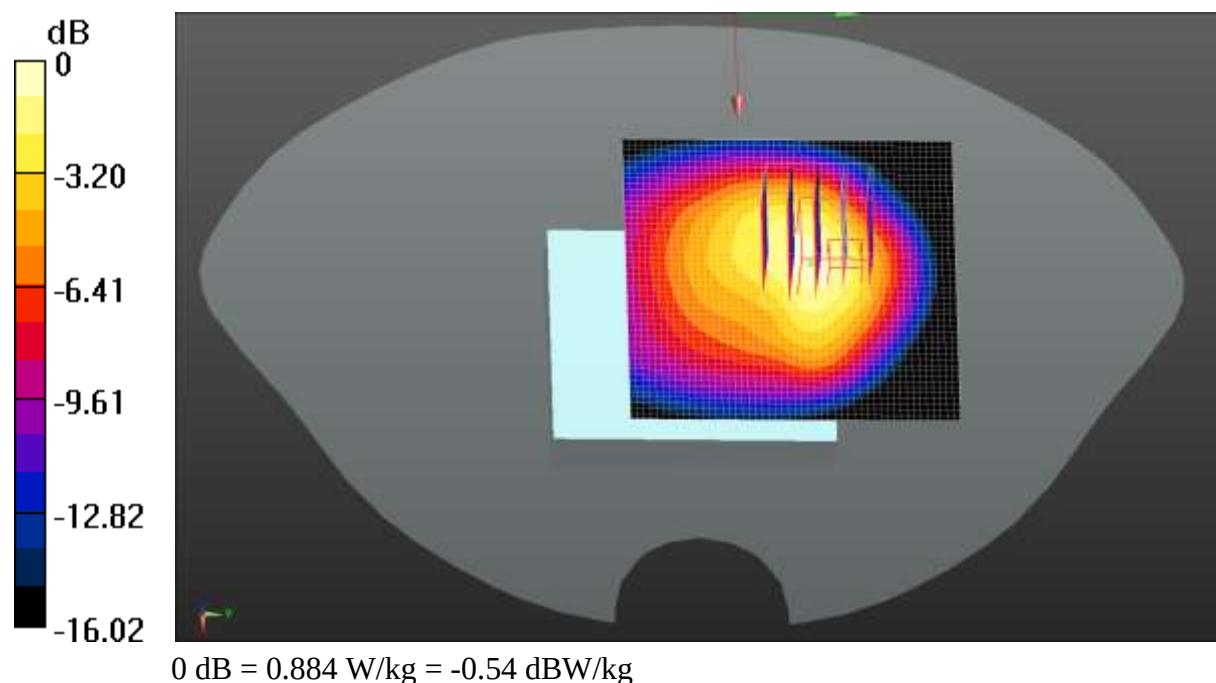
Peak SAR (extrapolated) = 1.12 W/kg

SAR(1 g) = 0.513 W/kg; SAR(10 g) = 0.262 W/kg

Smallest distance from peaks to all points 3 dB below = 8.6 mm

Ratio of SAR at M2 to SAR at M1 = 46.2%

Maximum value of SAR (measured) = 0.884 W/kg



Test Laboratory: JYTSZ

Date: 04.30.2023

DUT: Mobile Phone; Type: AD11; Serial: 3#

Communication System: UID 0, NR (0); Frequency: 2560 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2560$ MHz; $\sigma = 1.842$ S/m; $\epsilon_r = 39.956$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(7.35, 7.35, 7.35) @ 2560 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 1RB(20MHz) Closed Body Front/High Channel/Area Scan (51x61x1):

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

Maximum value of SAR (interpolated) = 0.494 W/kg

NR n7 1RB(20MHz) Closed Body Front/High Channel/Zoom Scan

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

Reference Value = 4.580 V/m; Power Drift = -0.18 dB

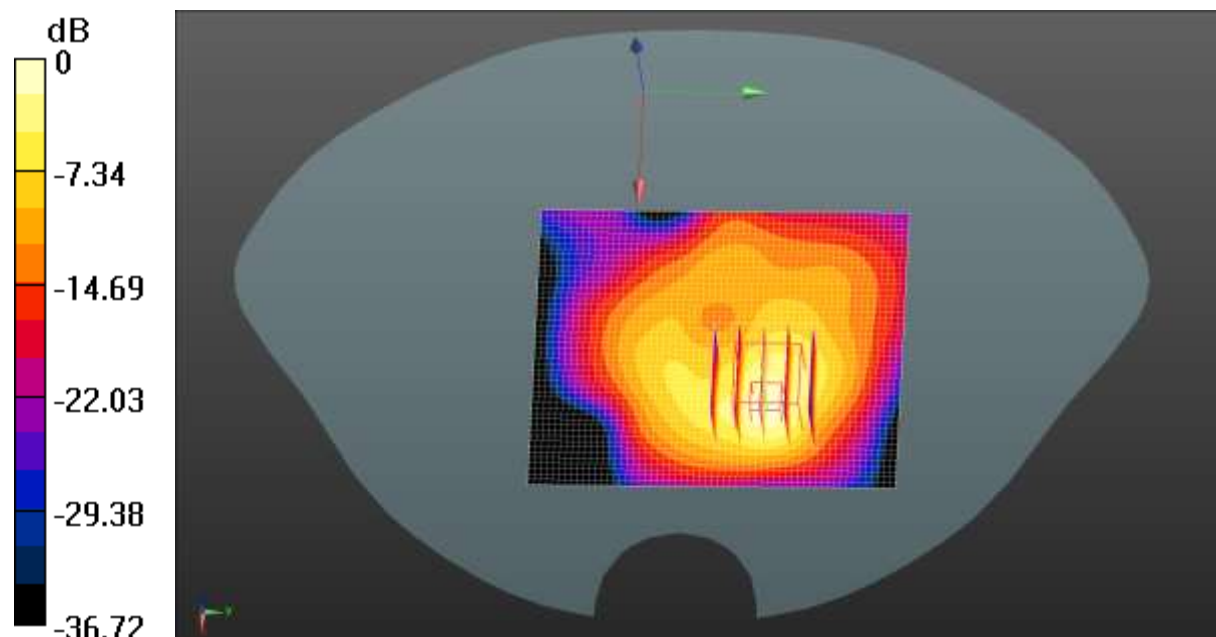
Peak SAR (extrapolated) = 0.816 W/kg

SAR(1 g) = 0.363 W/kg; SAR(10 g) = 0.161 W/kg

Smallest distance from peaks to all points 3 dB below = 8.6 mm

Ratio of SAR at M2 to SAR at M1 = 46.3%

Maximum value of SAR (measured) = 0.646 W/kg



0 dB = 0.646 W/kg = -1.90 dBW/kg

Test Laboratory: JYTSZ

Date: 04.15.2023

DUT: Mobile Phone; Type: AD11; Serial: 3#

Communication System: UID 0, NR (0); Frequency: 706.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 706.5$ MHz; $\sigma = 0.861$ S/m; $\epsilon_r = 42.369$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(10.2, 10.2, 10.2) @ 706.5 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) Closed Body Back/Low Channel/Area Scan (51x61x1):Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 1.21 W/kg

NR n12 1RB(15MHz) Closed Body Back/Low Channel/Zoom Scan**(5x5x7)/Cube 0:** Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 15.70 V/m; Power Drift = 0.05 dB

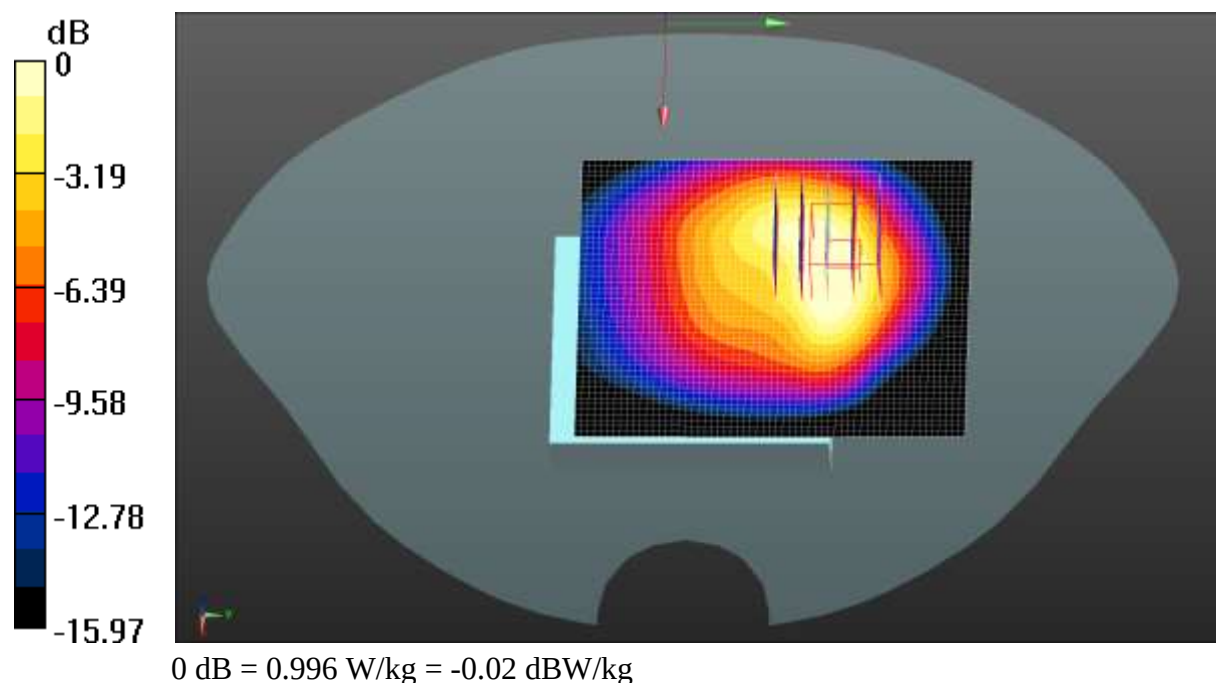
Peak SAR (extrapolated) = 1.47 W/kg

SAR(1 g) = 0.643 W/kg; SAR(10 g) = 0.330 W/kg

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

Ratio of SAR at M2 to SAR at M1 = 43.3%

Maximum value of SAR (measured) = 0.996 W/kg



Test Laboratory: JYTSZ

Date: 04.30.2023

DUT: Mobile Phone; Type: AD11; Serial: 3#

Communication System: UID 0, NR (0); Frequency: 2592.99 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 2592.99$ MHz; $\sigma = 1.906$ S/m; $\epsilon_r = 39.897$; $\rho = 1000$ kg/m³
Phantom section: Flat 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 50%RB(100MHz) Closed Body Front/Middle Channel/Area Scan

(51x51x1): Interpolated grid: $dx=1.200$ mm, $dy=1.200$ mm

Maximum value of SAR (interpolated) = 0.486 W/kg

NR n41 50%RB(100MHz) Closed Body Front /Middle Channel/Zoom Scan

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

Reference Value = 5.202 V/m; Power Drift = -0.02 dB

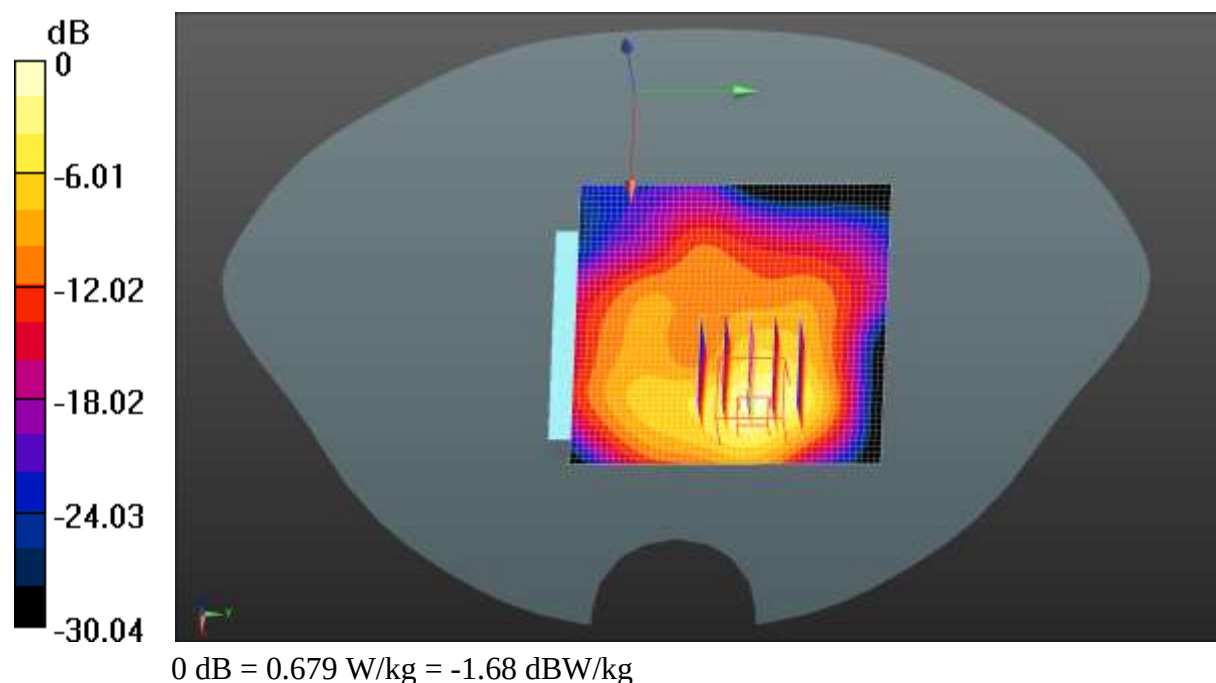
Peak SAR (extrapolated) = 0.857 W/kg

SAR(1 g) = 0.389 W/kg; SAR(10 g) = 0.173 W/kg

Smallest distance from peaks to all points 3 dB below = 10.1 mm

Ratio of SAR at M2 to SAR at M1 = 47.5%

Maximum value of SAR (measured) = 0.679 W/kg



Test Laboratory: JYTSZ

Date: 04.23.2023

DUT: Mobile Phone; Type: AD11; Serial: 3#

Communication System: UID 0, NR (0); Frequency: 1745 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 1745$ MHz; $\sigma = 1.347$ S/m; $\epsilon_r = 40.623$; $\rho = 1000$ kg/m³
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)

NR n66 1RB(40MHz) Closed Body Front/Middle Channel/Area Scan

(51x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.317 W/kg

NR n66 1RB(40MHz) Closed Body Front/Middle Channel/Zoom Scan

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

Reference Value = 4.212 V/m; Power Drift = -0.07 dB

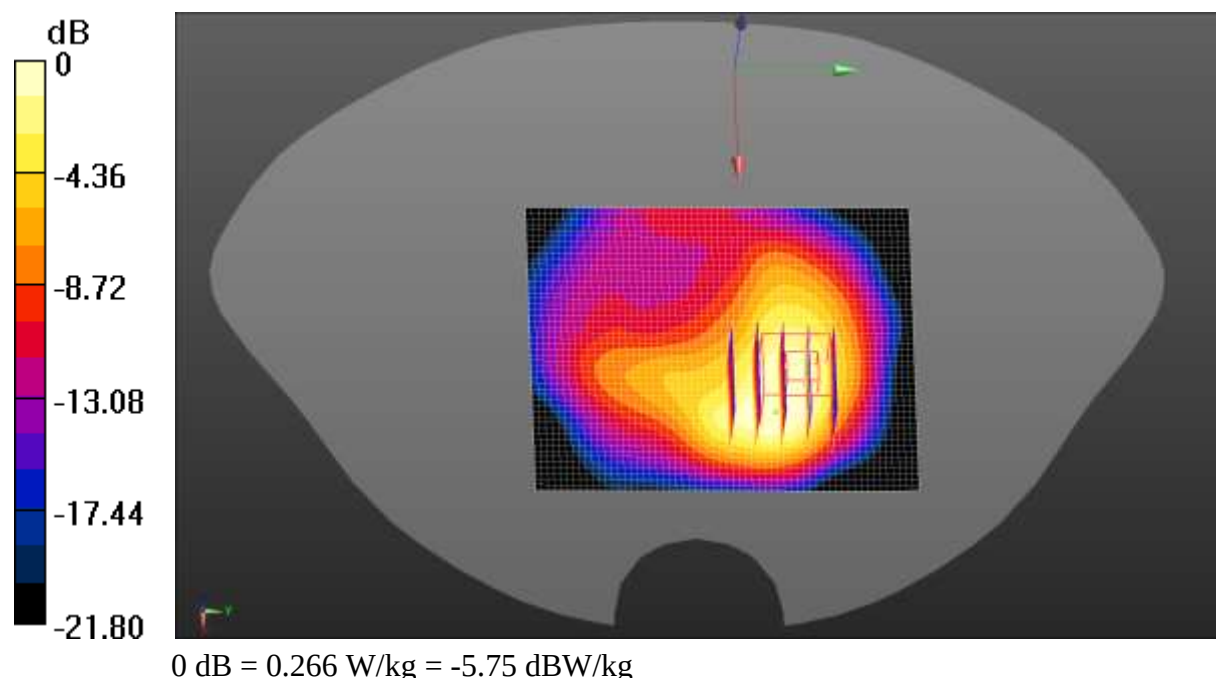
Peak SAR (extrapolated) = 0.329 W/kg

SAR(1 g) = 0.169 W/kg; SAR(10 g) = 0.088 W/kg

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

Ratio of SAR at M2 to SAR at M1 = 52.2%

Maximum value of SAR (measured) = 0.266 W/kg



Test Laboratory: JYTSZ

Date: 05.07.2023

DUT: Mobile Phone; Type: AD11; Serial: 3#

Communication System: UID 0, NR (0); Frequency: 3500.01 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 3500.01$ MHz; $\sigma = 2.851$ S/m; $\epsilon_r = 39.29$; $\rho = 1000$ kg/m³
Phantom section: Flat 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) Closed Body Back/Middle Channel/Area

Scan (51x51x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.403 W/kg

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

Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=4mm

Reference Value = 3.633 V/m; Power Drift = 0.12 dB

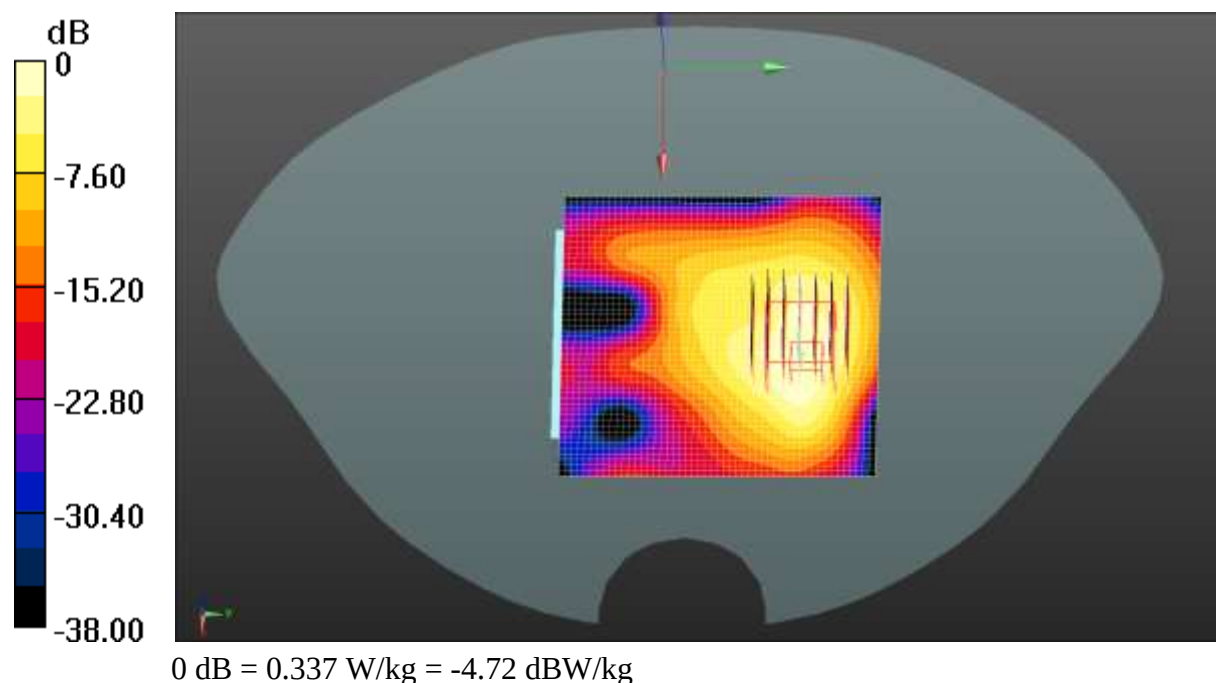
Peak SAR (extrapolated) = 0.469 W/kg

SAR(1 g) = 0.183 W/kg; SAR(10 g) = 0.076 W/kg

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

Ratio of SAR at M2 to SAR at M1 = 41.6%

Maximum value of SAR (measured) = 0.337 W/kg



Test Laboratory: JYTSZ

Date: 05.07.2023

DUT: Mobile Phone; Type: AD11; Serial: 3#

Communication System: UID 0, NR (0); Frequency: 3750 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 3750$ MHz; $\sigma = 3.082$ S/m; $\epsilon_r = 38.978$; $\rho = 1000$ 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 Front/Low Channel/Area Scan**(51x61x1):** Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.269 W/kg

NR n77(3840) 50%RB(100MHz) Body Front/Low Channel/Zoom Scan**(7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=4mm

Reference Value = 2.336 V/m; Power Drift = -0.03 dB

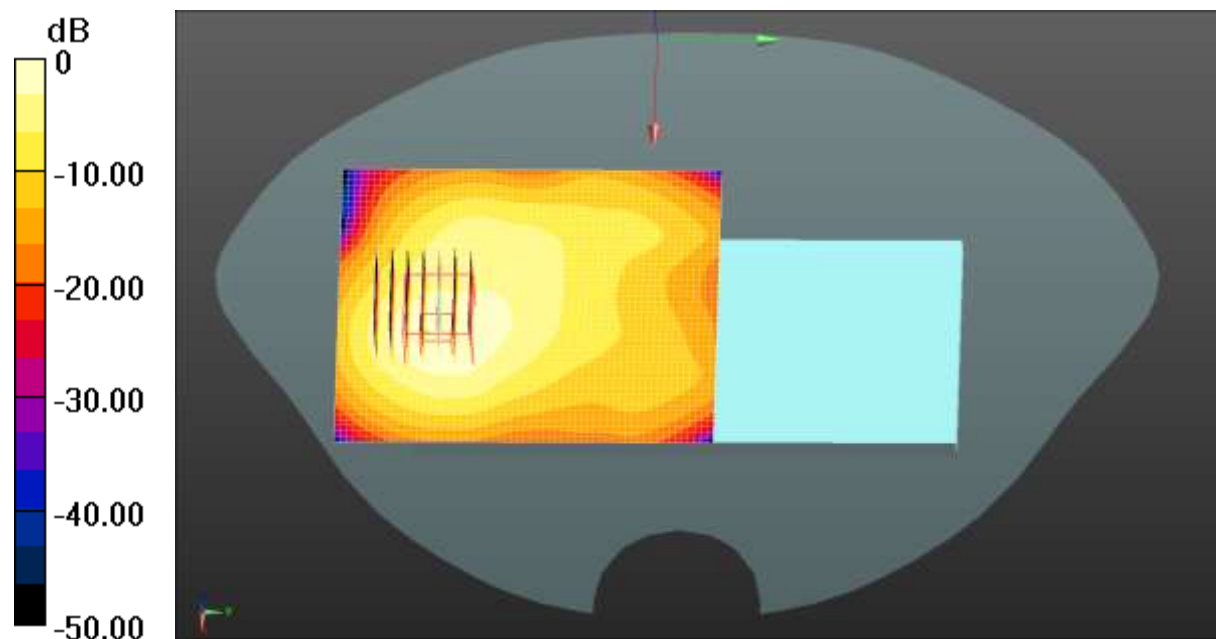
Peak SAR (extrapolated) = 0.416 W/kg

SAR(1 g) = 0.161 W/kg; SAR(10 g) = 0.069 W/kg

Smallest distance from peaks to all points 3 dB below = 11.4 mm

Ratio of SAR at M2 to SAR at M1 = 35.2%

Maximum value of SAR (measured) = 0.292 W/kg



0 dB = 0.292 W/kg = -5.35 dBW/kg

Test Laboratory: JYTSZ

Date: 04.30.2023

DUT: Mobile Phone; Type: AD11; Serial: 3#

Communication System: UID 0, IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps) (0);

Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 2437$ MHz; $\sigma = 1.733$ S/m; $\epsilon_r = 39.912$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(7.6, 7.6, 7.6) @ 2437 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 Closed Body Front/Middle Channel/Area Scan (51x51x1):

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

Maximum value of SAR (interpolated) = 0.143 W/kg

2.4GWIFI Closed Body Front/Middle Channel/Zoom Scan (5x5x7)/Cube 0:

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

Reference Value = 1.350 V/m; Power Drift = 0.00 dB

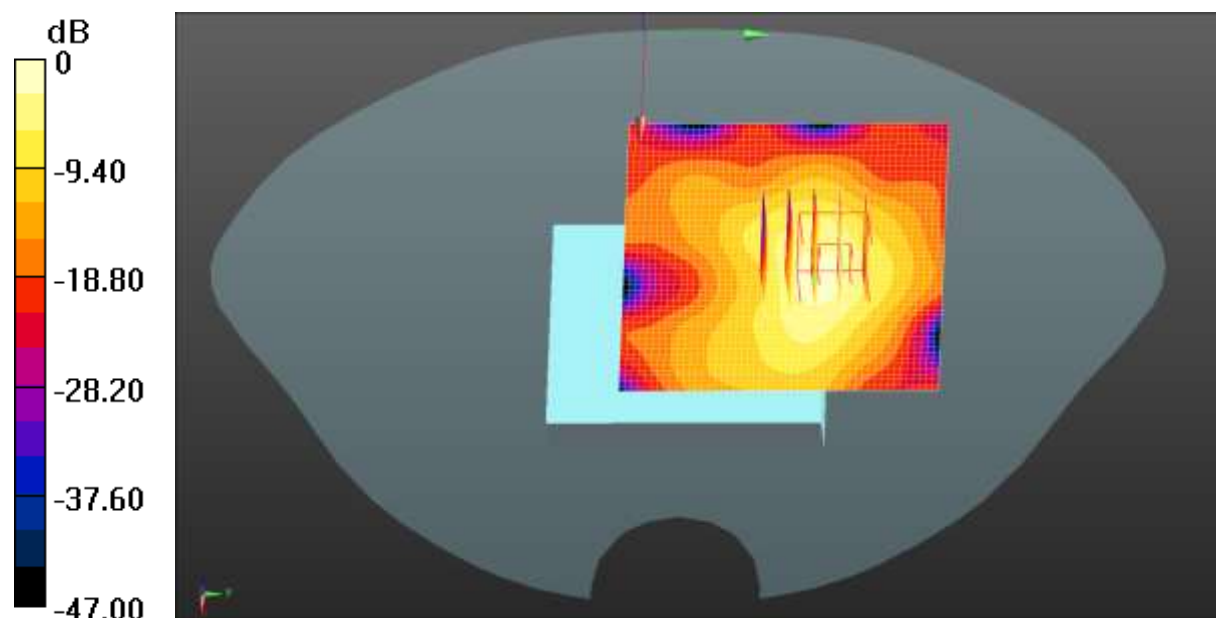
Peak SAR (extrapolated) = 0.300 W/kg

SAR(1 g) = 0.128 W/kg; SAR(10 g) = 0.053 W/kg

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

Ratio of SAR at M2 to SAR at M1 = 46.8%

Maximum value of SAR (measured) = 0.212 W/kg



0 dB = 0.212 W/kg = -6.74 dBW/kg

Test Laboratory: JYTSZ

Date: 05.14.2023

DUT: Mobile Phone; Type: AD11; Serial: 3#

Communication System: UID 0, IEEE 802.11a WiFi 5GHz (0); Frequency: 5180 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5180 \text{ MHz}$; $\sigma = 4.689 \text{ S/m}$; $\epsilon_r = 36.786$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(5.41, 5.41, 5.41) @ 5180 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 Closed Body Front/Low Channel/Area Scan (51x51x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Maximum value of SAR (interpolated) = 0.364 W/kg

5.2GWIFI Closed Body Front/Low 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

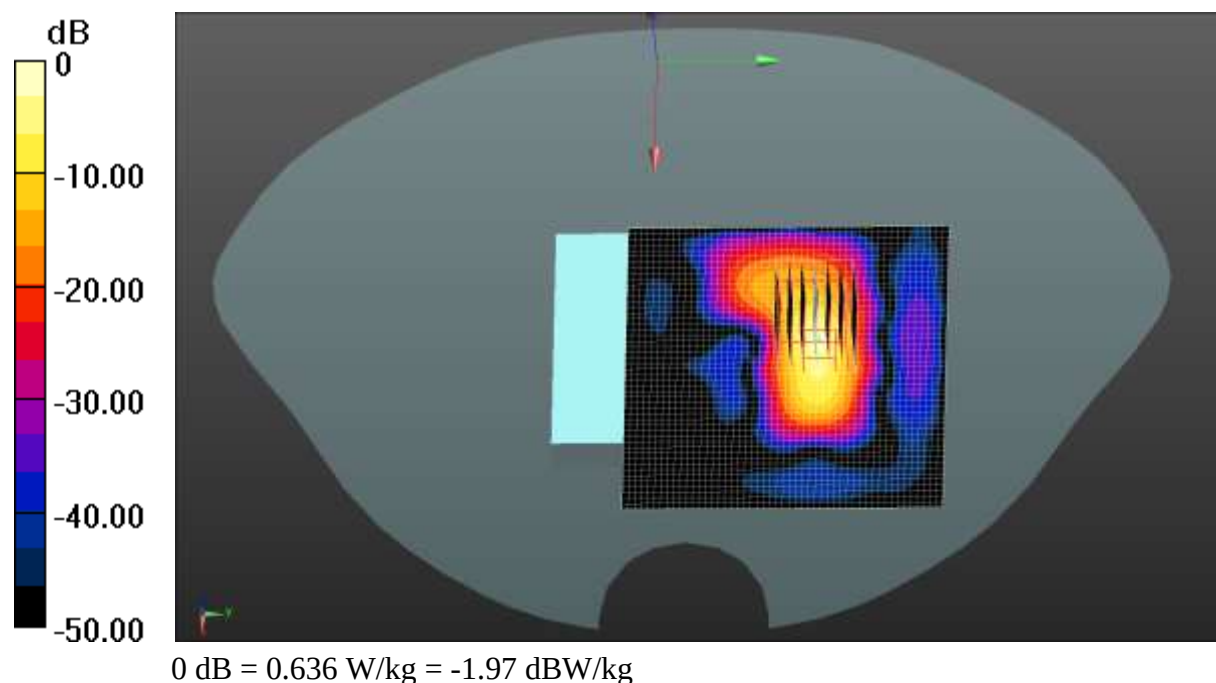
Peak SAR (extrapolated) = 1.10 W/kg

SAR(1 g) = 0.218 W/kg ; SAR(10 g) = 0.043 W/kg

Smallest distance from peaks to all points 3 dB below = 4.8 mm

Ratio of SAR at M2 to SAR at M1 = 19.2%

Maximum value of SAR (measured) = 0.636 W/kg



Test Laboratory: JYTSZ

Date: 05.14.2023

DUT: Mobile Phone; Type: AD11; Serial: 3#

Communication System: UID 0, IEEE 802.11a WiFi 5GHz (0); Frequency: 5785 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 5785$ MHz; $\sigma = 5.382$ S/m; $\epsilon_r = 36.367$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(4.9, 4.9, 4.9) @ 5785 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 Closed Body Front/Middle Channel/Area Scan (51x51x1):

Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.595 W/kg

5.8GWIFI Closed Body Front/Middle Channel/Zoom Scan (7x7x7)/Cube 0:

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

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

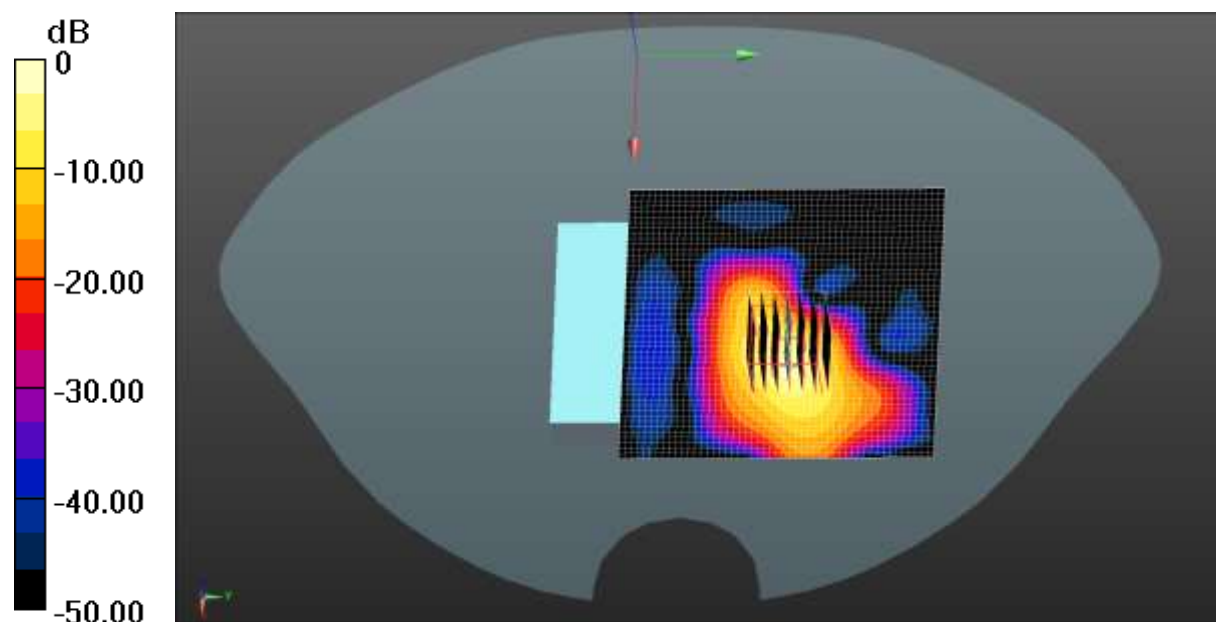
Peak SAR (extrapolated) = 1.48 W/kg

SAR(1 g) = 0.305 W/kg; SAR(10 g) = 0.074 W/kg

Smallest distance from peaks to all points 3 dB below = 4.8 mm

Ratio of SAR at M2 to SAR at M1 = 15.2%

Maximum value of SAR (measured) = 0.955 W/kg



0 dB = 0.955 W/kg = -0.20 dBW/kg

Test Laboratory: JYTSZ

Date: 04.30.2023

DUT: Mobile Phone; Type: AD11; Serial: 3#

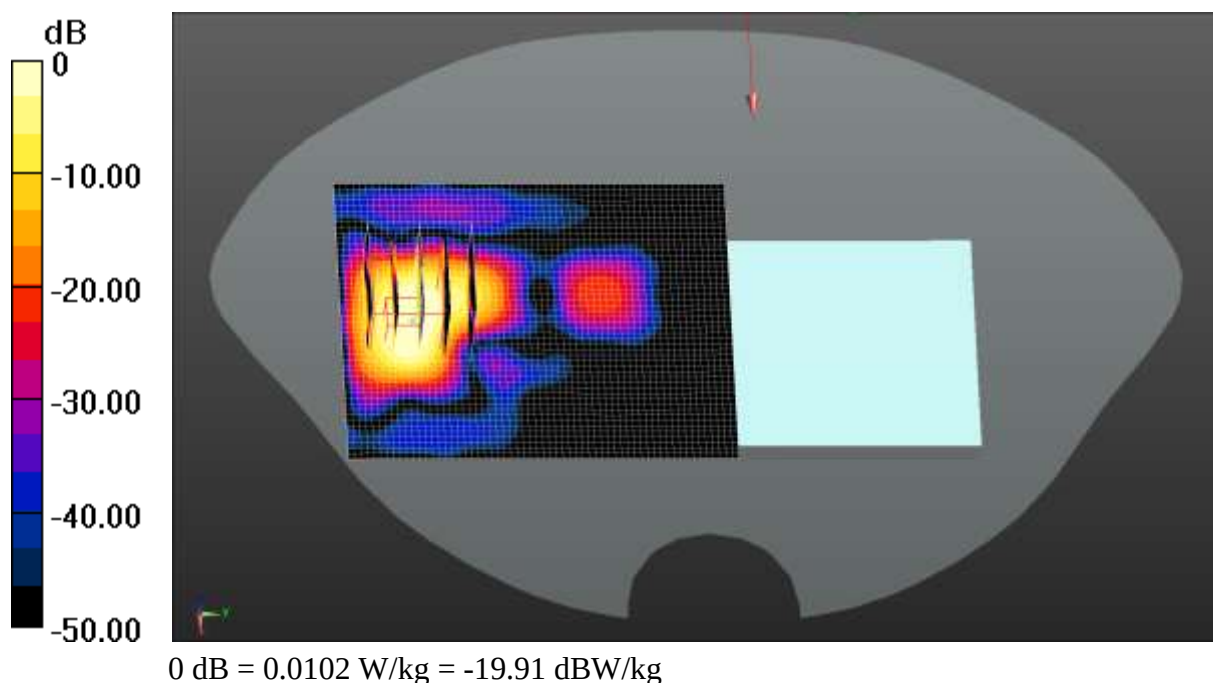
Communication System: UID 0, Bluetooth (0); Frequency: 2441 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 2441$ MHz; $\sigma = 1.735$ S/m; $\epsilon_r = 39.916$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

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)

Bluetooth Body Back/Middle Channel/Area Scan (51x61x1): Interpolated grid:
 $dx=1.200$ mm, $dy=1.200$ mm
Maximum value of SAR (interpolated) = 0.0134 W/kg

Bluetooth Body Back/Middle Channel/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm
Reference Value = 0 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 0.0360 W/kg
SAR(1 g) = 0.00755 W/kg; SAR(10 g) = 0.00225 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 = 41.1%
Maximum value of SAR (measured) = 0.0102 W/kg



Test Laboratory: JYTSZ

Date: 04.23.2023

DUT: Mobile Phone; Type: AD11; Serial: 3#

Communication System: UID 0, GPRS(4 Slots) (0); Frequency: 1850.2 MHz; Duty Cycle: 1:1.99986

Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.322$ S/m; $\epsilon_r = 40.868$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(8.05, 8.05, 8.05) @ 1850.2 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 4mm (Mechanical Surface Detection), 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 Closed Body Left/Low Channel/Zoom Scan (5x5x7)/Cube 0:

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

Reference Value = 23.85 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 2.28 W/kg

SAR(1 g) = 0.984 W/kg; SAR(10 g) = 0.446 W/kg

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

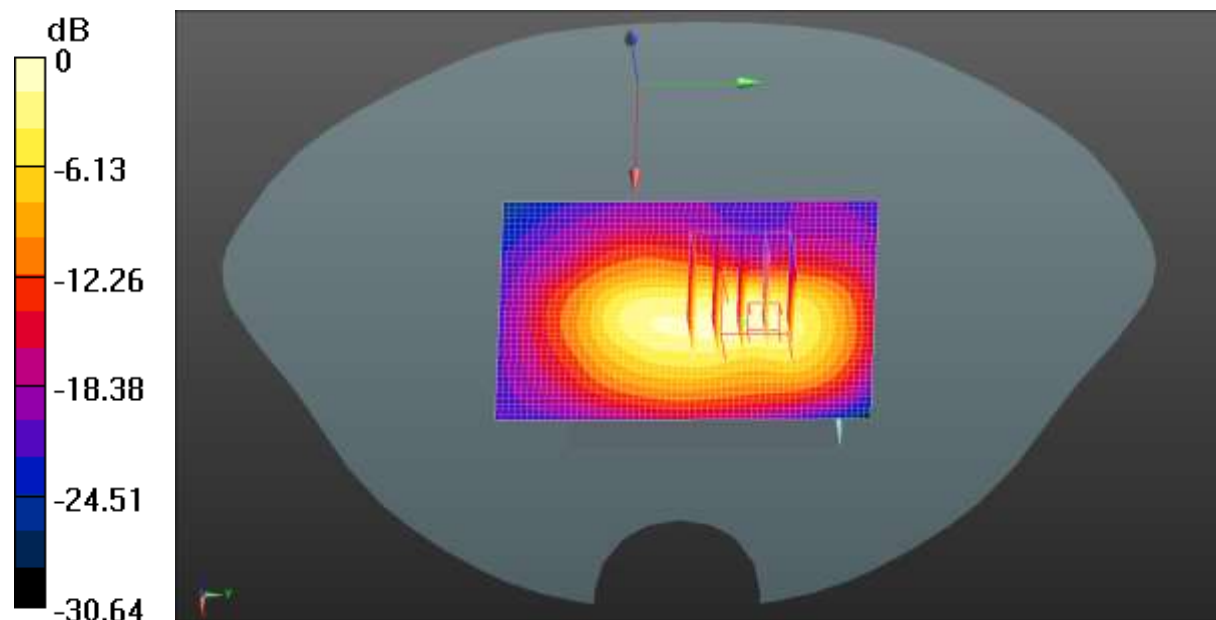
Ratio of SAR at M2 to SAR at M1 = 57%

Maximum value of SAR (measured) = 0.990 W/kg

GPRS 1900 4Slots Closed Body Left/Low Channel/Area Scan (41x61x1):

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

Maximum value of SAR (interpolated) = 1.36 W/kg



0 dB = 1.36 W/kg = 1.34 dBW/kg

Test Laboratory: JYTSZ

Date: 04.23.2023

DUT: Mobile Phone; Type: AD11; Serial: 3#

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

Medium parameters used: $f = 1907.6$ MHz; $\sigma = 1.355$ S/m; $\epsilon_r = 40.874$; $\rho = 1000$ kg/m³

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 Left/High Channel/Area Scan (41x61x1): Interpolated grid:

$dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.341 W/kg

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

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

Reference Value = 7.724 V/m; Power Drift = 0.08 dB

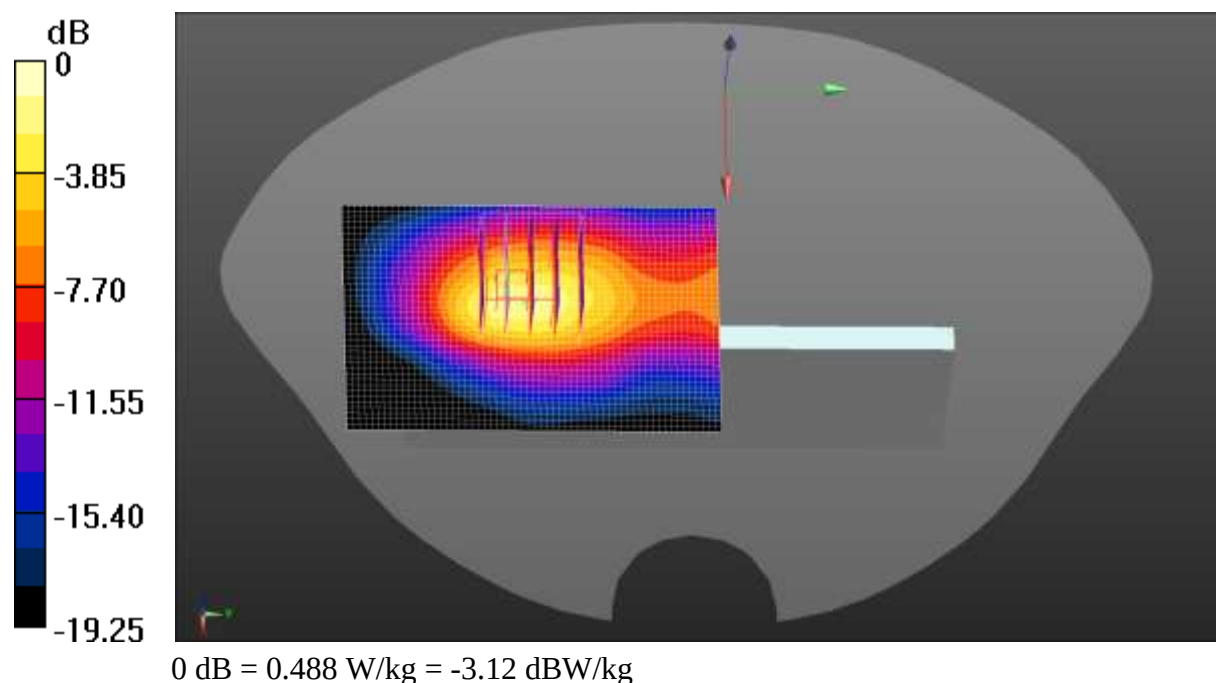
Peak SAR (extrapolated) = 0.594 W/kg

SAR(1 g) = 0.309 W/kg; SAR(10 g) = 0.155 W/kg

Smallest distance from peaks to all points 3 dB below = 8.2 mm

Ratio of SAR at M2 to SAR at M1 = 54.3%

Maximum value of SAR (measured) = 0.488 W/kg



Test Laboratory: JYTSZ

Date: 04.23.2023

DUT: Mobile Phone; Type: AD11; 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; $\sigma = 1.338$ S/m; $\epsilon_r = 40.636$; $\rho = 1000$ 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: 4mm (Mechanical Surface Detection), 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 Closed Body Left/Middle Channel/Zoom Scan (5x5x7)/Cube 0:

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

Reference Value = 21.00 V/m; Power Drift = -0.00 dB

Peak SAR (extrapolated) = 1.31 W/kg

SAR(1 g) = 0.612 W/kg; SAR(10 g) = 0.271 W/kg

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

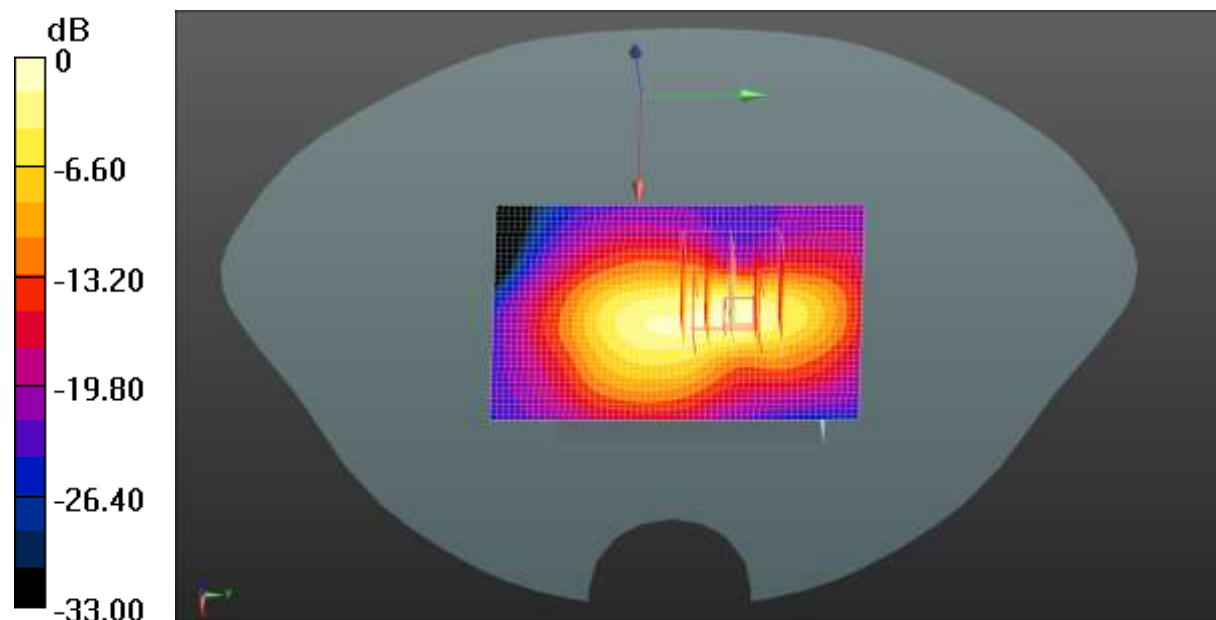
Ratio of SAR at M2 to SAR at M1 = 53%

Maximum value of SAR (measured) = 0.656 W/kg

WCDMA 1700 Closed Body Left/Middle Channel/Area Scan (41x61x1):

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

Maximum value of SAR (interpolated) = 0.956 W/kg



0 dB = 0.956 W/kg = -0.20 dBW/kg

Test Laboratory: JYTSZ

Date: 04.23.2023

DUT: Mobile Phone; Type: AD11; Serial: 3#

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

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.35$ S/m; $\epsilon_r = 40.881$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(8.05, 8.05, 8.05) @ 1900 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 4mm (Mechanical Surface Detection), 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) Closed Body Left/High Channel/Zoom Scan**(5x5x7)/Cube 0:** Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 14.29 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 0.727 W/kg

SAR(1 g) = 0.315 W/kg; SAR(10 g) = 0.131 W/kg

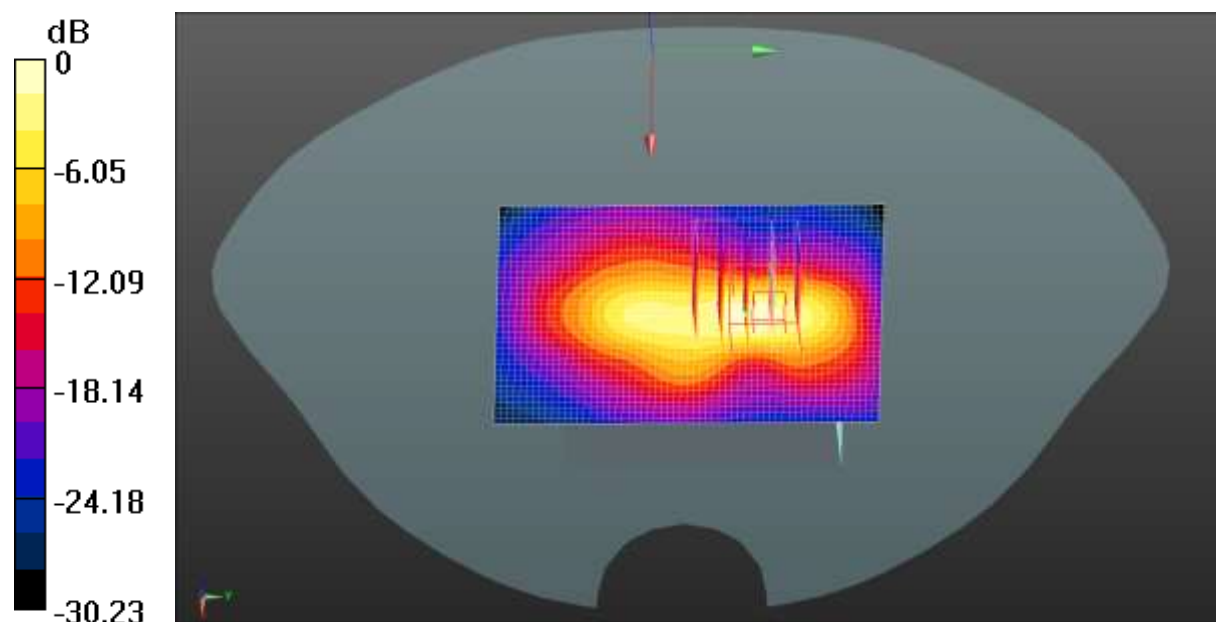
Smallest distance from peaks to all points 3 dB below = 5.8 mm

Ratio of SAR at M2 to SAR at M1 = 46%

Maximum value of SAR (measured) = 0.363 W/kg

LTE Band 2 1RB(20MHz) Closed Body Left/High Channel/Area Scan**(41x61x1):** Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.591 W/kg



0 dB = 0.591 W/kg = -2.28 dBW/kg

Test Laboratory: JYTSZ

Date: 04.30.2023

DUT: Mobile Phone; Type: AD11; Serial: 3#

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

Medium parameters used: $f = 2510 \text{ MHz}$; $\sigma = 1.811 \text{ S/m}$; $\epsilon_r = 39.913$; $\rho = 1000 \text{ kg/m}^3$

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) Closed Body Right/Low Channel/Area Scan

(41x61x1): Interpolated grid: $dx=1.200 \text{ mm}$, $dy=1.200 \text{ mm}$

Maximum value of SAR (interpolated) = 0.836 W/kg

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

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

Reference Value = 12.82 V/m ; Power Drift = -0.03 dB

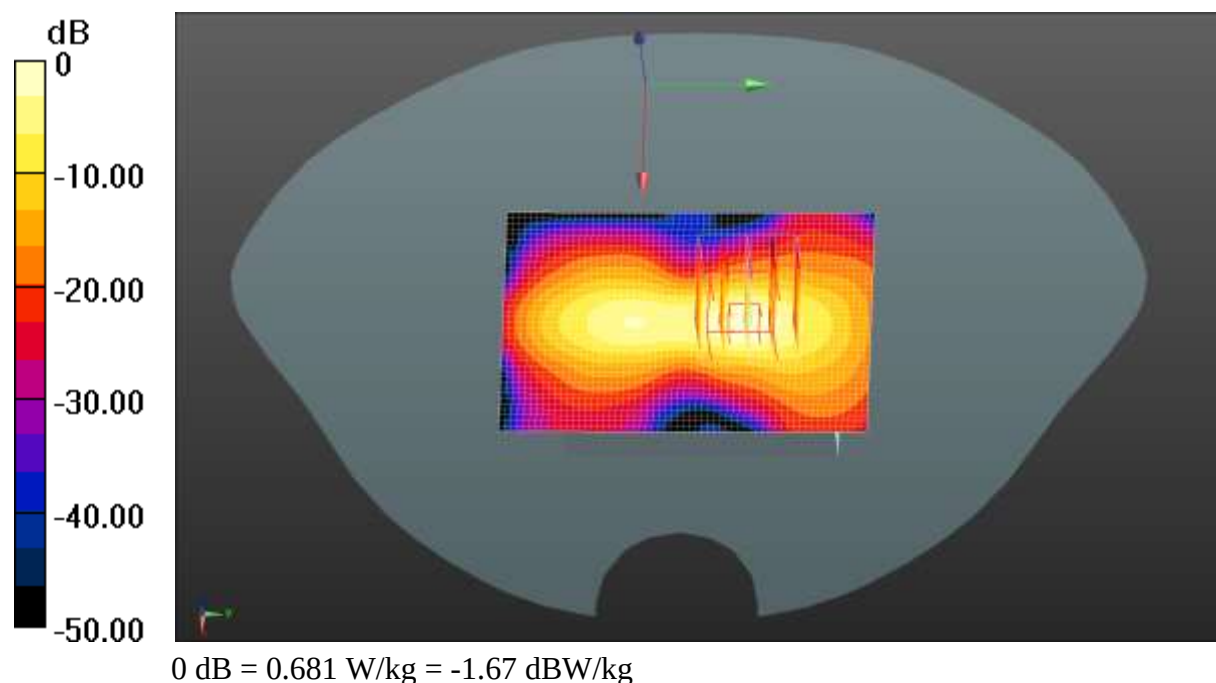
Peak SAR (extrapolated) = 1.25 W/kg

SAR(1 g) = 0.467 W/kg ; SAR(10 g) = 0.161 W/kg

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

Ratio of SAR at M2 to SAR at M1 = 45.8%

Maximum value of SAR (measured) = 0.681 W/kg



Test Laboratory: JYTSZ

Date: 04.30.2023

DUT: Mobile Phone; Type: AD11; Serial: 3#

Communication System: UID 0, LTE-TDD(USA) 20MHz 1RB QPSK (0); Frequency: 2506 MHz; Duty Cycle: 1:1.59956

Medium parameters used (interpolated): $f = 2506$ MHz; $\sigma = 1.821$ S/m; $\epsilon_r = 39.809$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(7.6, 7.6, 7.6) @ 2506 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) Closed Body Right/Low Channel/Area Scan

(41x61x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.170 W/kg

LTE Band 41 1RB(20MHz) Closed Body Right/Low Channel/Zoom Scan

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

Reference Value = 5.986 V/m; Power Drift = 0.06 dB

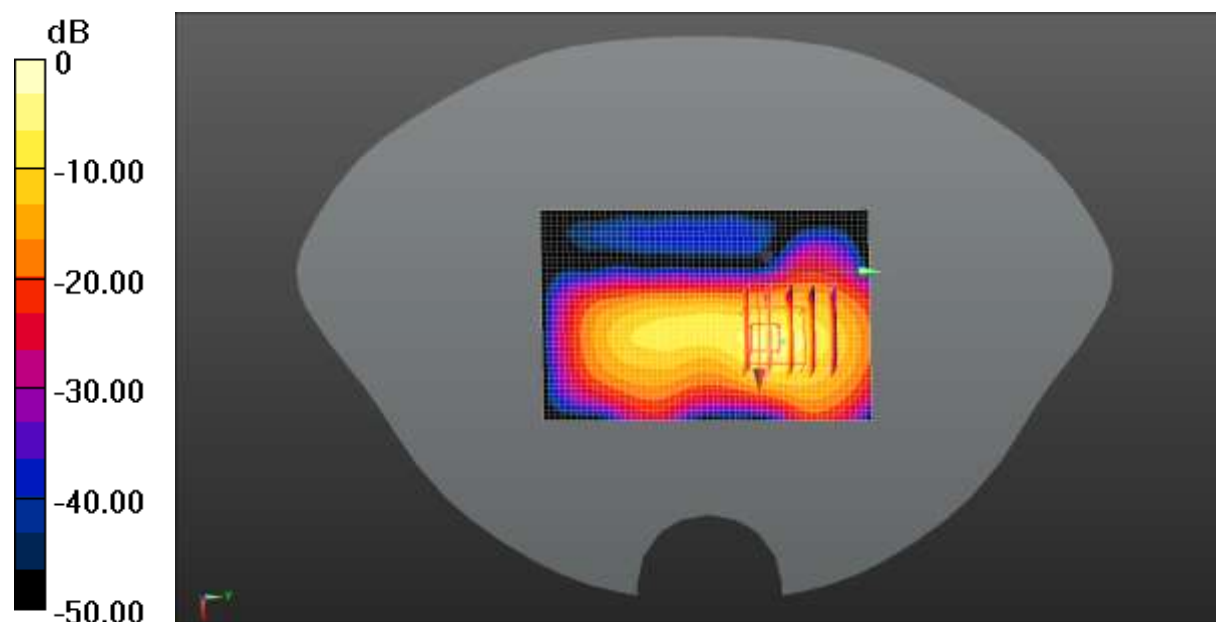
Peak SAR (extrapolated) = 0.733 W/kg

SAR(1 g) = 0.271 W/kg; SAR(10 g) = 0.093 W/kg

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

Ratio of SAR at M2 to SAR at M1 = 39.9%

Maximum value of SAR (measured) = 0.556 W/kg



0 dB = 0.556 W/kg = -2.55 dBW/kg

Test Laboratory: JYTSZ

Date: 04.23.2023

DUT: Mobile Phone; Type: AD11; Serial: 3#

Communication System: UID 0, LTE-Fdd(USA) 1RB QPSK (0); Frequency: 1720 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 1720$ MHz; $\sigma = 1.332$ S/m; $\epsilon_r = 40.636$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(8.38, 8.38, 8.38) @ 1720 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) Closed Body Right/Low Channel/Area Scan

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

Maximum value of SAR (interpolated) = 0.398 W/kg

LTE Band 66 1RB(20MHz) Closed Body Right/Low Channel/Zoom Scan

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

Reference Value = 14.33 V/m; Power Drift = -0.05 dB

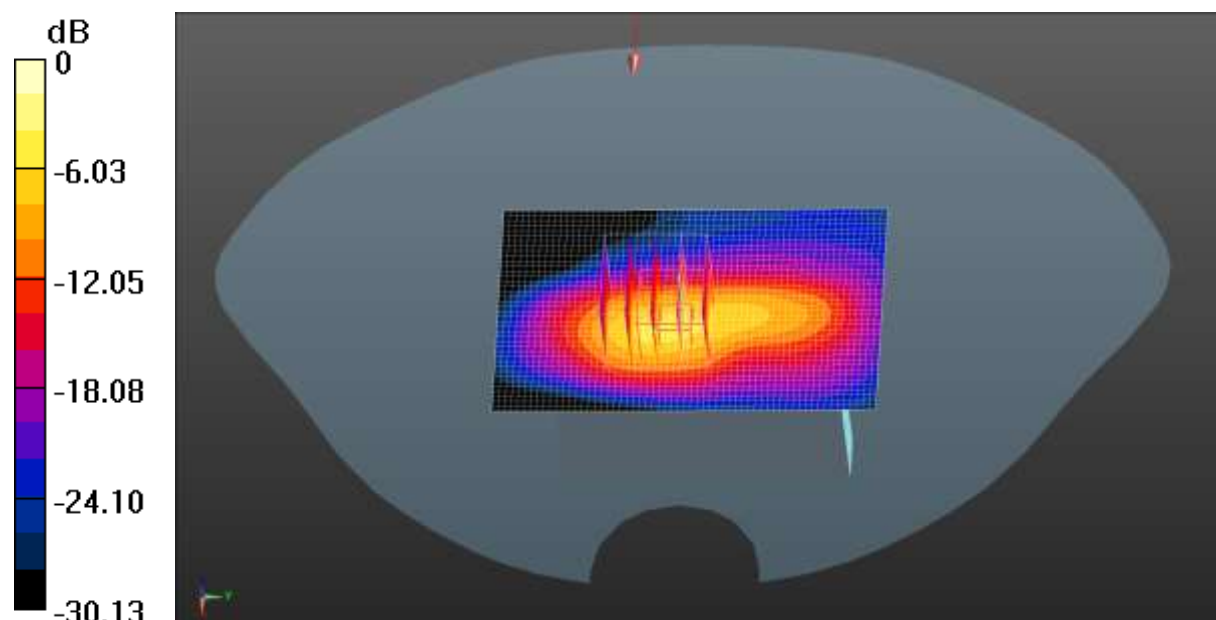
Peak SAR (extrapolated) = 1.50 W/kg

SAR(1 g) = 0.579 W/kg; SAR(10 g) = 0.239 W/kg

Smallest distance from peaks to all points 3 dB below = 4.8 mm

Ratio of SAR at M2 to SAR at M1 = 37.7%

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



0 dB = 1.22 W/kg = 0.86 dBW/kg

Test Laboratory: JYTSZ

Date: 04.30.2023

DUT: Mobile Phone; Type: AD11; Serial: 3#

Communication System: UID 0, NR (0); Frequency: 2560 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2560$ MHz; $\sigma = 1.842$ S/m; $\epsilon_r = 39.956$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(7.35, 7.35, 7.35) @ 2560 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) Closed Body Left/High Channel/Area Scan (41x61x1):Interpolated grid: $dx=1.200$ mm, $dy=1.200$ mm

Maximum value of SAR (interpolated) = 0.891 W/kg

NR n7 50%RB(20MHz) Closed Body Left/High Channel/Zoom Scan**(5x5x7)/Cube 0:** Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 13.31 V/m; Power Drift = -0.09 dB

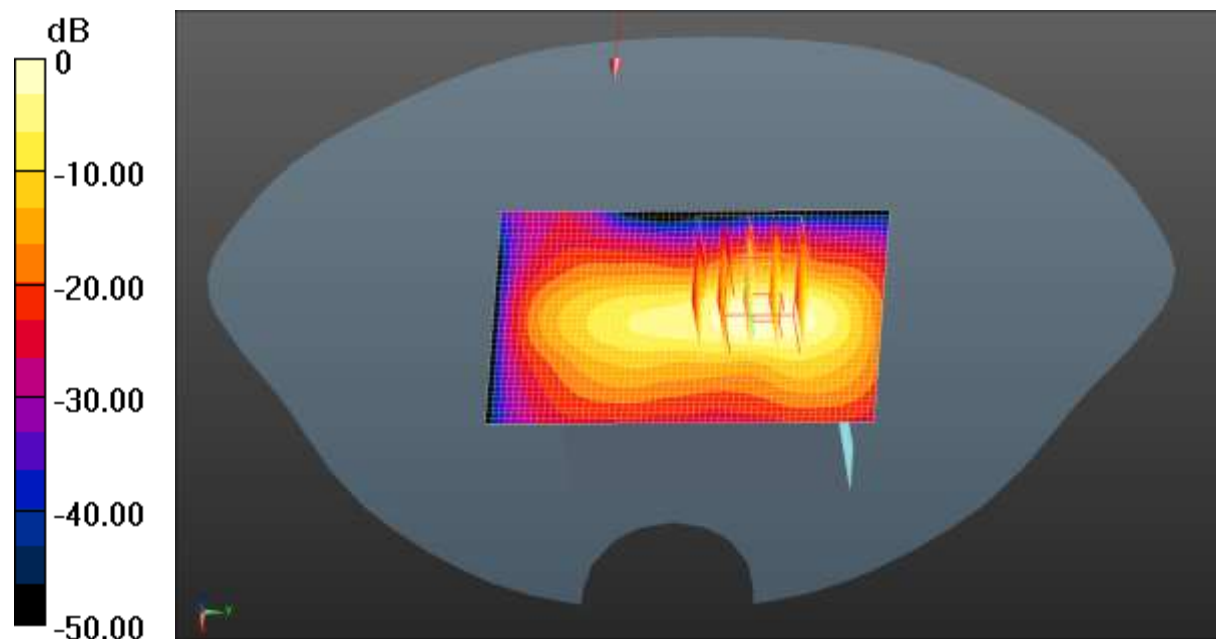
Peak SAR (extrapolated) = 1.65 W/kg

SAR(1 g) = 0.636 W/kg; SAR(10 g) = 0.230 W/kg

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

Ratio of SAR at M2 to SAR at M1 = 40.9%

Maximum value of SAR (measured) = 0.896 W/kg



0 dB = 0.896 W/kg = -0.48 dBW/kg

Test Laboratory: JYTSZ

Date: 04.30.2023

DUT: Mobile Phone; Type: AD11; Serial: 3#

Communication System: UID 0, NR (0); Frequency: 2592.99 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 2592.99$ MHz; $\sigma = 1.906$ S/m; $\epsilon_r = 39.897$; $\rho = 1000$ kg/m³
Phantom section: Flat 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 50%RB(100MHz) Closed Body Left/Middle Channel/Area Scan

(41x61x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.908 W/kg

NR n41 50%RB(100MHz) Closed Body Left/Middle Channel/Zoom Scan

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

Reference Value = 12.55 V/m; Power Drift = -0.03 dB

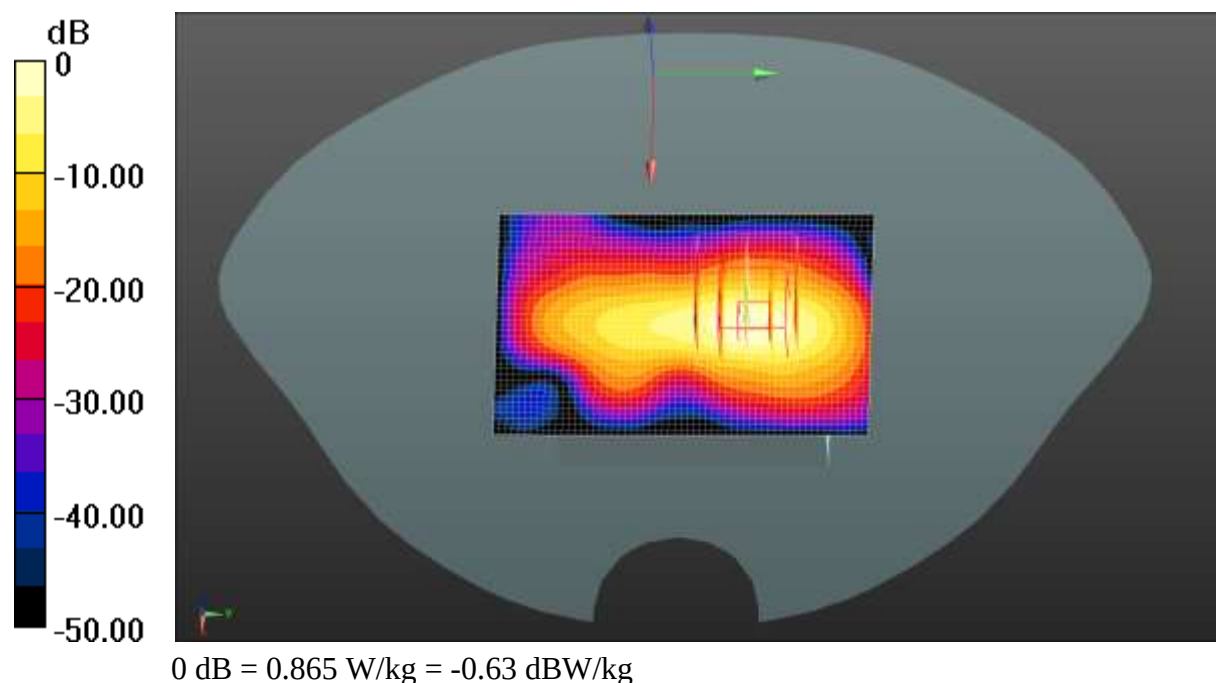
Peak SAR (extrapolated) = 1.16 W/kg

SAR(1 g) = 0.456 W/kg; SAR(10 g) = 0.166 W/kg

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

Ratio of SAR at M2 to SAR at M1 = 44.8%

Maximum value of SAR (measured) = 0.865 W/kg



Test Laboratory: JYTSZ

Date: 04.23.2023

DUT: Mobile Phone; Type: AD11; Serial: 3#

Communication System: UID 0, NR (0); Frequency: 1745 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 1745$ MHz; $\sigma = 1.347$ S/m; $\epsilon_r = 40.623$; $\rho = 1000$ kg/m³

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)

NR n66 1RB(40MHz) Closed Body Left/Middle Channel/Area Scan (41x61x1):Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.577 W/kg

NR n66 1RB(40MHz) Closed Body Left/Middle Channel/Zoom Scan**(7x7x7)/Cube 0:** Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 16.43 V/m; Power Drift = -0.13 dB

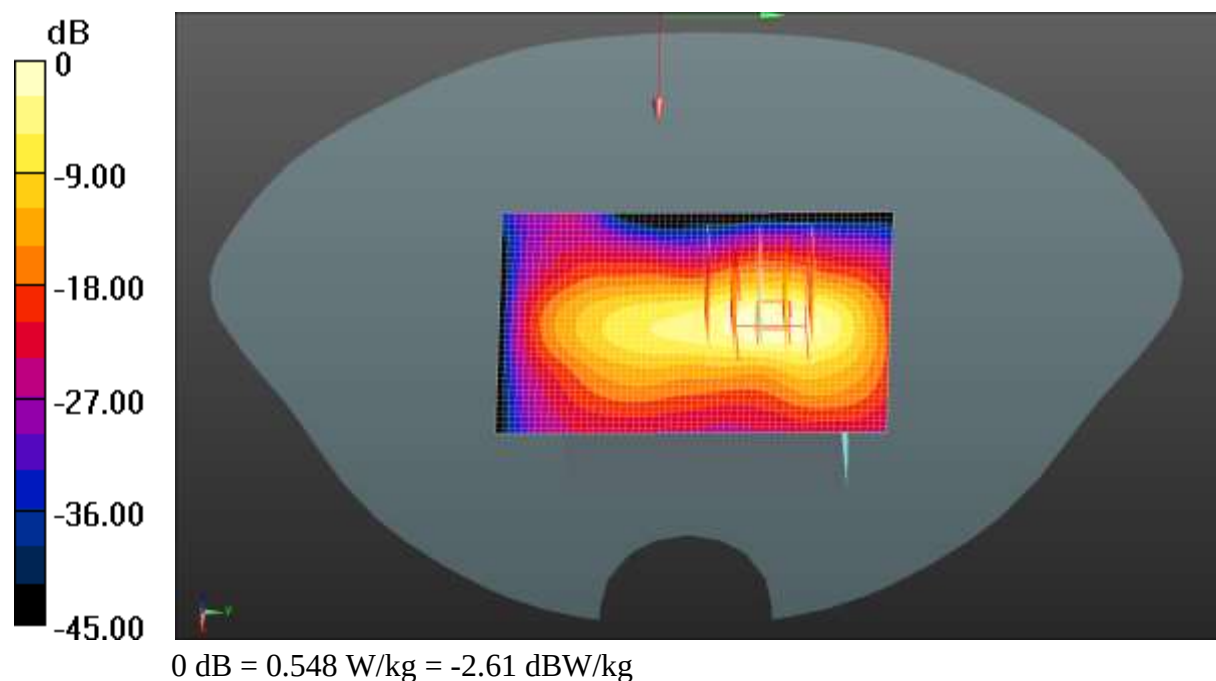
Peak SAR (extrapolated) = 0.713 W/kg

SAR(1 g) = 0.315 W/kg; SAR(10 g) = 0.143 W/kg

Smallest distance from peaks to all points 3 dB below = 6.7 mm

Ratio of SAR at M2 to SAR at M1 = 47.1%

Maximum value of SAR (measured) = 0.548 W/kg



Test Laboratory: JYTSZ

Date: 05.07.2023

DUT: Mobile Phone; Type: AD11; Serial: 3#

Communication System: UID 0, NR (0); Frequency: 3750 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 3750$ MHz; $\sigma = 3.082$ S/m; $\epsilon_r = 38.978$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(6.75, 6.75, 6.75) @ 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 50%RB(100MHz) Closed Body Bottom/Low Channel/Area Scan**(41x61x1):** Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.185 W/kg

NR n77 50%RB(100MHz) Closed Body Bottom/Low Channel/Zoom Scan**(7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=4mm

Reference Value = 5.621 V/m; Power Drift = 0.06 dB

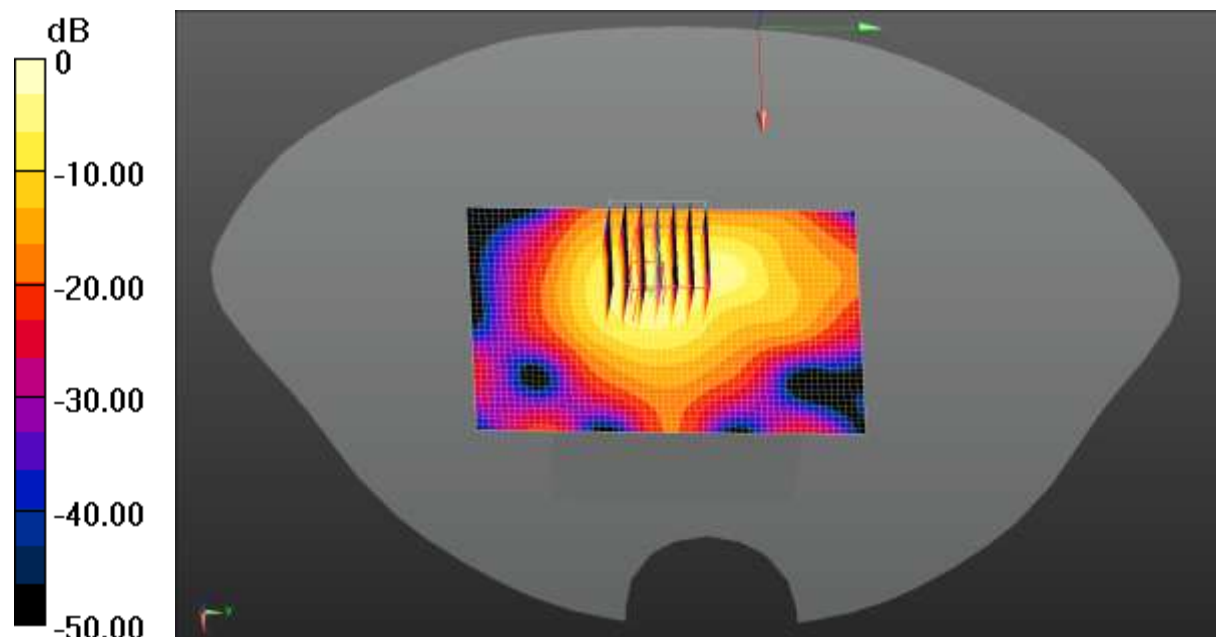
Peak SAR (extrapolated) = 0.693 W/kg

SAR(1 g) = 0.202 W/kg; SAR(10 g) = 0.071 W/kg

Smallest distance from peaks to all points 3 dB below = 5 mm

Ratio of SAR at M2 to SAR at M1 = 26.7%

Maximum value of SAR (measured) = 0.464 W/kg



Test Laboratory: JYTSZ

Date: 04.30.2023

DUT: Mobile Phone; Type: AD11; Serial: 3#

Communication System: UID 0, IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps) (0);

Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 2437$ MHz; $\sigma = 1.733$ S/m; $\epsilon_r = 39.912$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(7.6, 7.6, 7.6) @ 2437 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 Closed Body Bottom/Middle Channel/Area Scan (41x61x1):

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

Maximum value of SAR (interpolated) = 0.315 W/kg

2.4GWIFI Closed Body Bottom/Middle Channel/Zoom Scan (5x5x7)/Cube 0:

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

Reference Value = 13.10 V/m; Power Drift = 0.18 dB

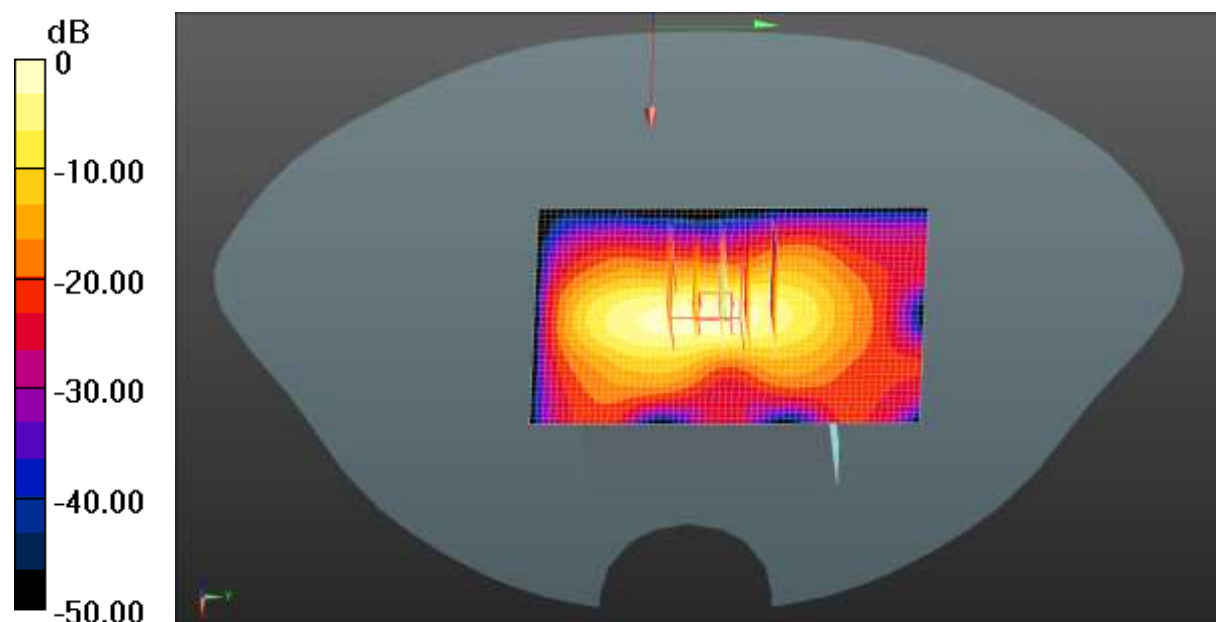
Peak SAR (extrapolated) = 0.453 W/kg

SAR(1 g) = 0.185 W/kg; SAR(10 g) = 0.076 W/kg

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

Ratio of SAR at M2 to SAR at M1 = 39.4%

Maximum value of SAR (measured) = 0.319 W/kg



0 dB = 0.319 W/kg = -4.96 dBW/kg

Test Laboratory: JYTSZ

Date: 05.14.2023

DUT: Mobile Phone; Type: AD11; Serial: 3#

Communication System: UID 0, IEEE 802.11 n20 5GHz (0); Frequency: 5240 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5240 \text{ MHz}$; $\sigma = 4.723 \text{ S/m}$; $\epsilon_r = 36.832$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(5.41, 5.41, 5.41) @ 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 Closed Body Bottom/High Channel/Area Scan (41x61x1):

Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

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

5.2GWIFI Closed Body Bottom/High Channel/Zoom Scan (7x7x7)/Cube 0:

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

Reference Value = 7.937 V/m ; Power Drift = -0.08 dB

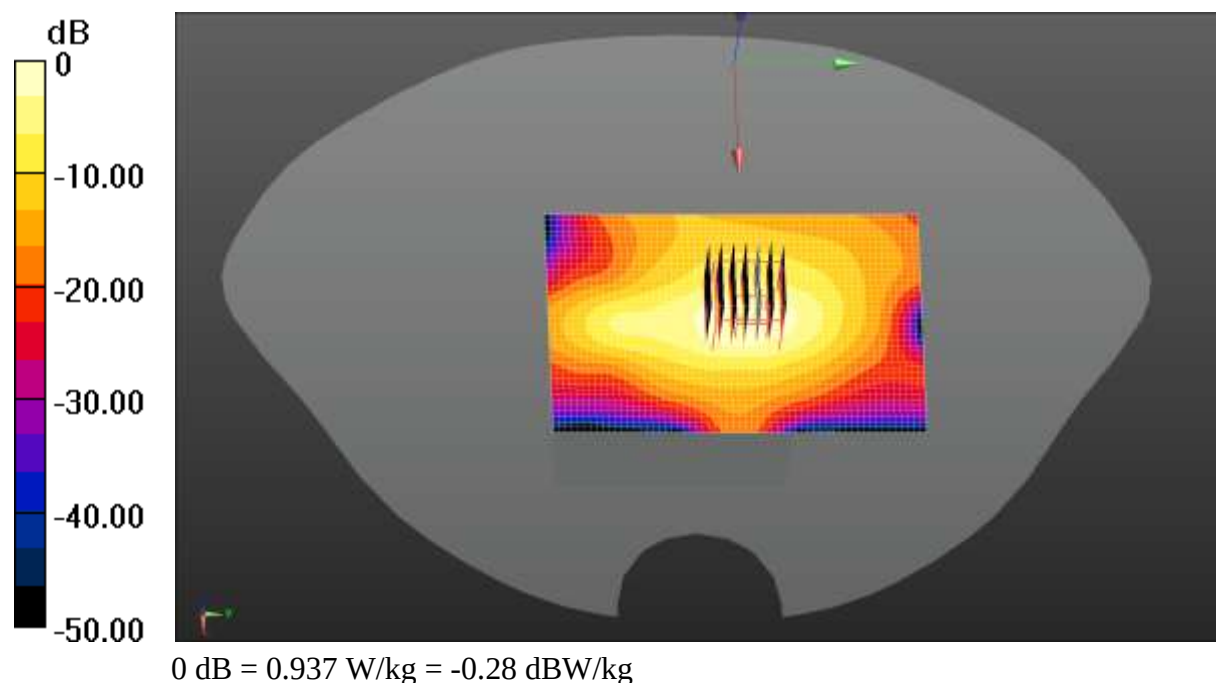
Peak SAR (extrapolated) = 1.33 W/kg

SAR(1 g) = 0.358 W/kg ; SAR(10 g) = 0.099 W/kg

Smallest distance from peaks to all points 3 dB below = 4.8 mm

Ratio of SAR at M2 to SAR at M1 = 21.6%

Maximum value of SAR (measured) = 0.937 W/kg



Test Laboratory: JYTSZ

Date: 04.15.2023

DUT: Mobile Phone; Type: AD11; Serial: 3#

Communication System: UID 0, GPRS(4 Slots) (0); Frequency: 848.8 MHz; Duty Cycle: 1:1.99986

Medium parameters used (interpolated): $f = 848.8$ MHz; $\sigma = 0.913$ S/m; $\epsilon_r = 42.075$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(9.8, 9.8, 9.8) @ 848.8 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 850 4Slots Closed Body Back With Holder/High Channel/Area Scan

(51x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 6.59 W/kg

GPRS 850 4Slots Closed Body Back With Holder/High Channel/Zoom Scan

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

Reference Value = 30.71 V/m; Power Drift = -0.03 dB

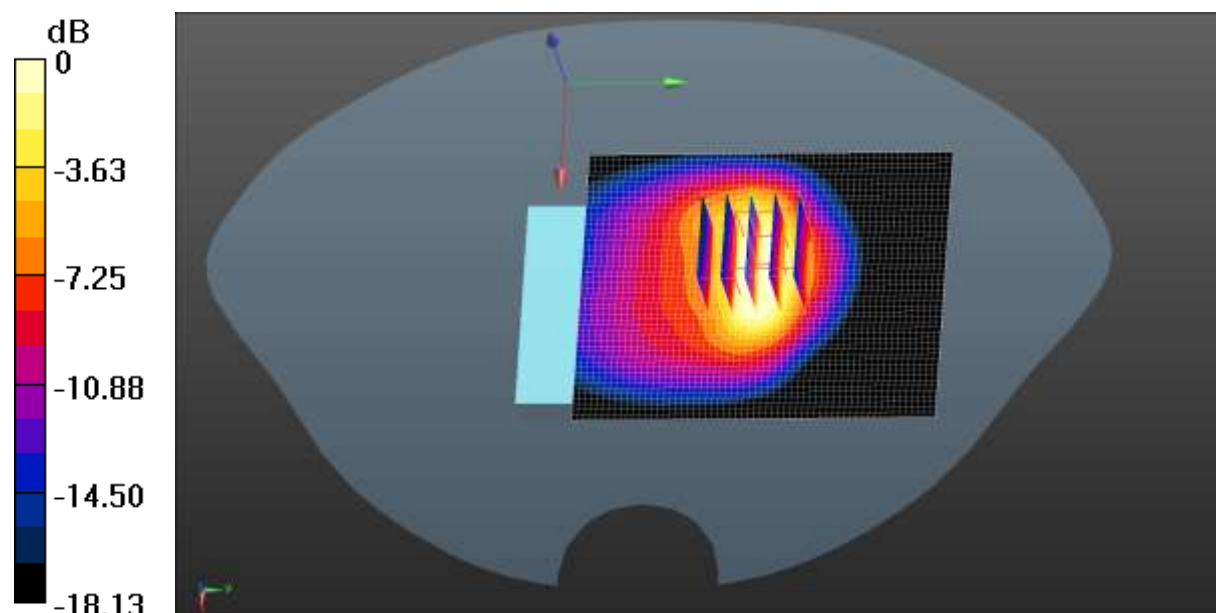
Peak SAR (extrapolated) = 8.10 W/kg

SAR(1 g) = 3.26 W/kg; SAR(10 g) = 1.59 W/kg

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

Ratio of SAR at M2 to SAR at M1 = 36.2%

Maximum value of SAR (measured) = 5.76 W/kg



0 dB = 5.76 W/kg = 7.60 dBW/kg

Test Laboratory: JYTSZ

Date: 04.15.2023

DUT: Mobile Phone; Type: AD11; Serial: 3#

Communication System: UID 0, GPRS(4 Slots) (0); Frequency: 848.8 MHz; Duty Cycle: 1:1.99986

Medium parameters used (interpolated): $f = 848.8$ MHz; $\sigma = 0.913$ S/m; $\epsilon_r = 42.075$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(9.8, 9.8, 9.8) @ 848.8 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 850 4Slots Closed Body Back Without Holder/High Channel/Area Scan

(51x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 5.79 W/kg

GPRS 850 4Slots Closed Body Back Without Holder/High Channel/Zoom

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

Reference Value = 24.58 V/m; Power Drift = -0.13 dB

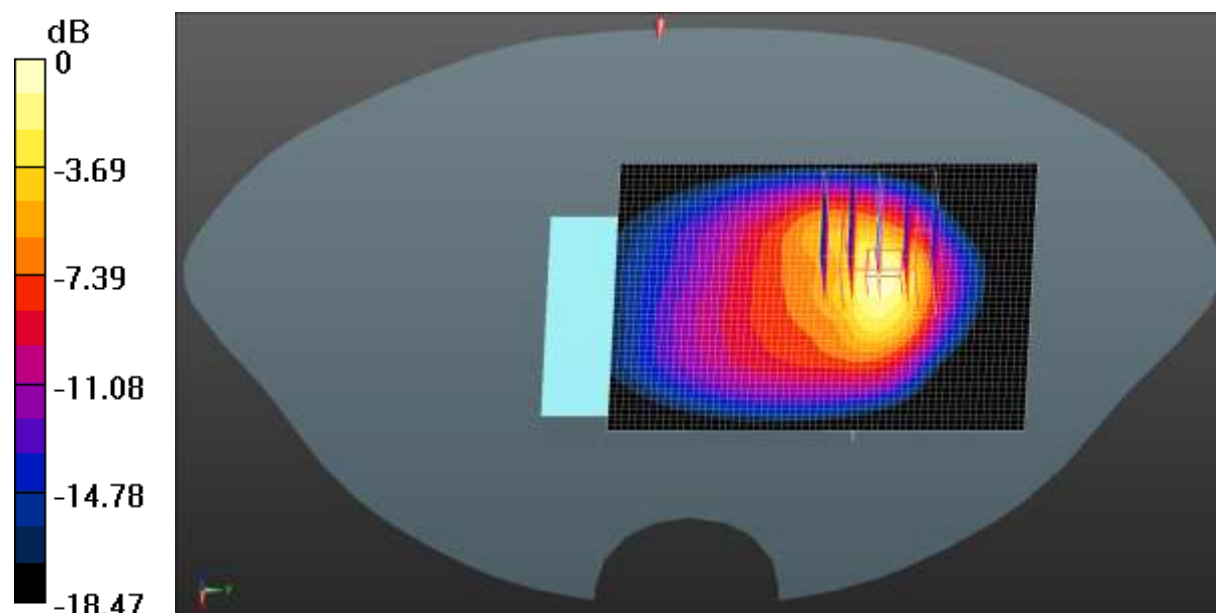
Peak SAR (extrapolated) = 8.21 W/kg

SAR(1 g) = 3.24 W/kg; SAR(10 g) = 1.57 W/kg

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

Ratio of SAR at M2 to SAR at M1 = 40.5%

Maximum value of SAR (measured) = 6.39 W/kg



0 dB = 6.39 W/kg = 8.06 dBW/kg

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