

# 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.: LH8n

Trade mark: TECNO

**FCC ID:** 2ADYY-LH8N

**Applicable standards:** FCC 47 CFR Part 2.1093

**Date of Test:** 28 Apr., 2023 ~ 18 May, 2023

**Test Result:** Maximum Reported 1-g SAR (W/kg)  
Head: 0.720      Body: 0.578      Hotspot: 0.658

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	06 Jun., 2023	Original

**Tested by:***Jair Lin***Date:***06 Jun., 2023*

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**Test Engineer****Reviewed by:***Janet. Wei***Date:***06 Jun., 2023*

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**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	0.111	PCE	0.720
	PCS 1900	0.681		
	WCDMA Band II	0.720		
	WCDMA Band IV	0.307		
	WCDMA Band V	0.491		
	LTE Band 2	0.609		
	LTE Band 5	0.571		
	LTE Band 7	0.628		
	LTE Band 12 & Band 17	0.570		
	LTE Band 41 & Band 38	0.522		
	LTE Band 66 & Band 4	0.710		
	NR n5	0.340		
	NR n7	0.646		
	NR n12	0.440		
	NR n41 & n38	0.461		
	NR n66	0.680		
	NR n77 (3450MHz~3550MHz) & n78 (3450MHz~3550MHz)	0.179		
	NRn77 (3700MHz~3980MHz) & n78 (3700MHz~3800MHz)	0.574		
	WLAN 2.4 GHz	0.285	DTS	
	Bluetooth	0.059	DSS	
WLAN 5.2 GHz	0.246	NII		
WLAN 5.8 GHz	0.395			
Body (10 mm Gap)	GSM 850	0.051	PCE	0.578
	PCS 1900	0.373		
	WCDMA Band II	0.225		
	WCDMA Band IV	0.158		
	WCDMA Band V	0.183		
	LTE Band 2	0.172		
	LTE Band 5	0.184		
	LTE Band 7	0.541		
	LTE Band 12 & Band 17	0.201		
	LTE Band 41 & Band 38	0.384		
	LTE Band 66 & Band 4	0.172		
	NR n5	0.165		
	NR n7	0.578		
	NR n12	0.146		
	NR n41 & n38	0.495		

	NR n66	0.131			
	NR n77 (3450MHz~3550MHz) &n78 (3450MHz~3550MHz)	0.078			
	NRn77 (3700MHz~3980MHz) &n78 (3700MHz~3800MHz)	0.115			
	WLAN 2.4 GHz	0.120			DTS
	Bluetooth	0.022			DSS
	WLAN 5.2 GHz	0.171			NII
	WLAN 5.8 GHz	0.271			
	Hotspot (10 mm Gap)	GSM 850			0.051
PCS 1900		0.658			
WCDMA Band II		0.350			
WCDMA Band IV		0.239			
WCDMA Band V		0.183			
LTE Band 2		0.265			
LTE Band 5		0.184			
LTE Band 7		0.541			
LTE Band 12 & Band 17		0.201			
LTE Band 41 & Band 38		0.384			
LTE Band 66 & Band 4		0.281			
NR n5		0.165			
NR n7		0.578			
NR n12		0.146			
NR n41 &n38		0.495			
NR n66		0.231			
NR n77 (3450MHz~3550MHz) &n78 (3450MHz~3550MHz)		0.108			
NRn77 (3700MHz~3980MHz) &n78 (3700MHz~3800MHz)		0.115			
WLAN 2.4 GHz		0.120	DTS		
Bluetooth		0.022	DSS		
WLAN 5.2 GHz		0.171	NII		
WLAN 5.8 GHz	0.271				

<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)
Left Cheek	NRn77 (3700MHz~3980MHz)	0.574	PCE	1.021
	WLAN 5.8 GHz	0.395	NII	
	Bluetooth ANT6	0.059	DSS	
	NFC	0	DXX	

**Note:**

1. The highest simultaneous transmission is scalar summation of Reported standalone SAR per FCC KDB 690783 D01 v01r03, and scalar SAR summation of all possible simultaneous transmission scenarios are < 1.6W/kg.
2. This device is compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits (1.6 W/kg) specified in FCC 47 CFR part 2 (2.1093) and ANSI/IEEE C95.1-2005, and had been tested in accordance with the measurement methods and procedures specified in 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 FDD-LTE Band 4 is full covered by FDD-LTE Band 66, so only FDD-LTE Band 66 was tested.
5. For TDD-LTE Band 38 is full covered by TDD-LTE Band 41, so only TDD-LTE Band 41 was tested.
6. For TDD-NR n38 is full covered by TDD-NR n41, so only TDD-NR n41 was tested.
7. For TDD-NR n78 is full covered by TDD-NR n77, so only TDD-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.:	LH8n			
Category of device	Portable device			
Operation Frequency:	GSM :	GSM850: 824.2~848.8 MHz	PCS 1900: 1850.2~1909.8 MHz	
	WCDMA :	Band II: 1852.4~1907.6 MHz	Band V: 826.4~846.6 MHz	
		Band IV: 1712.4~1752.6 MHz		
	LTE :	Band 2:1850MHz~1910MHz	Band 4:1710MHz~1755MHz	
		Band 5:824MHz~849MHz	Band 7: 2500MHz~2570MHz	
		Band 12: 699-716MHz	Band 17: 704MHz~716MHz	
		Band 38: 2570MHz~2620MHz	Band 41: 2496MHz~2690MHz	
		Band 66:1710MHz~1780MHz		
	5G NR	n5: 824MHz~849MHz	n7: 2500MHz~2570MHz	
		n12: 699-716MHz	n38: 2570MHz~2620MHz	
		n41: 2496MHz~2690MHz	n66:1710MHz~1780MHz	
		n77: 3450MHz~3550MHz	n77: 3700MHz~3980MHz	
		n78: 3450MHz~3550MHz	n78: 3700MHz~3800MHz	
	Wi-Fi:	2412MHz~2462MHz	5150MHz-5250MHz	
5725MHz-5850MHz				
Bluetooth: 2402 MHz ~ 2480 MHz				
NFC: 13.56MHz				
Modulation technology:	GSM:	<input checked="" type="checkbox"/> Voice(GMSK)	<input checked="" type="checkbox"/> GPRS(GMSK)	<input checked="" type="checkbox"/> EGPRS(GMSK, 8PSK)
	WCDMA:	<input checked="" type="checkbox"/> RMC(QPSK)	<input checked="" type="checkbox"/> HSUPA(QPSK)	<input checked="" type="checkbox"/> HSDPA(QPSK, 16QAM)
	LTE:	<input checked="" type="checkbox"/> QPSK	<input checked="" type="checkbox"/> 16QAM	<input checked="" type="checkbox"/> 64QAM
	5G NR :	<input checked="" type="checkbox"/> CP-OFDM(QPSK, 16QAM, 64QAM, 256QAM)		
		<input checked="" type="checkbox"/> DFT-s-OFDM( $\pi/2$ -BPSK, QPSK, 16QAM, 64QAM, 256QAM)		
	Wi-Fi:	<input checked="" type="checkbox"/> 802.11b(DSSS)	<input checked="" type="checkbox"/> 802.11a/g/n/ac (OFDM)	
	Bluetooth:	<input checked="" type="checkbox"/> BDR(GFSK)	<input checked="" type="checkbox"/> EDR( $\pi/4$ -DQPSK, 8DPSK)	<input checked="" type="checkbox"/> LE(GFSK)
	NFC :	ASK		
SA: NR n5, n7, n12, n38, n41, n66, n77, n78				



	NSA(EN-DC): DC_5A_n7A, DC_5A_n41A, DC_41A_n41A, DC_2A_n78A, DC_5A_n78A, DC_7A_n78A, DC_38A_n78A, DC_41A_n78A, DC_66A_n78A, DC_5A_n77A, DC_7A_n77A, DC_41A_n77A, DC_66A_n77A, DC_7C_n78A, DC_41C_n78A, DC_7C_n77A, DC_41C_n77A, DC_41C_n41A (LTE Band 7C and 41C only supports downlink)	
Antenna Type:	Internal Antenna	
Antenna Gain:	GSM 850: -3.45dBi; PCS 1900: -1.00dBi WCDMA Band II: -1.00dBi;; WCDMA Band V: -3.45dBi WCDMA Band IV: -1.20dBi LTE Band 2: -1.00dBi; LTE Band 4: -1.20dBi LTE Band 5: -3.45dBi; LTE Band 7: -0.38dBi LTE Band 12: -4.65dBi; LTE Band 17: -4.65dBi LTE Band 38 ANT0: -0.38dBi LTE Band 38 ANT5: -4.70dBi LTE Band 41 ANT0: -0.38dBi LTE Band 41 ANT5: -4.70dBi LTE Band 66 ANT0: -1.20dBi LTE Band 66 ANT5: -5.50dBi n5: -3.45dBi; n7: -0.38dBi n12: -4.65dBi; n38: -0.38dBi n41: -0.38dBi; n66: -1.20dBi n77: -2.30dBi;n78: -2.30dBi Bluetooth ANT6: -2.2dBi; Bluetooth ANT7: -3.7dBi; 2.4G Wi-Fi ANT6: -2.2dBi 2.4G Wi-Fi ANT7: -3.7dBi 5G Wi-Fi : -0.52dBi	
(E)GPRS Class:	(E)GPRS Class: 12	
Dimensions (L*W*H):	169 mm (L)× 77 mm (W)× 9 mm (H)	
Accessories information:	Adapter: Model: U680TSA Input: AC100-240V, 50/60Hz, 2.0A Output: DC 5.0V, 2.0A or 11.0V, 6.2A or 4.0V-21.0V, 3.25A 68.0W MAX	Battery: Rechargeable Li-ion Polymer Battery DC3.87V, 4900mAh
		Headset: Support headset

### 5.3 Maximum RF Output Power

ANT 0:

Mode	Average Power (dBm)	
	GSM 850	PCS 1900
GSM (Voice)	33.65	30.10
GPRS (1 TX Slot)	33.63	30.16
GPRS (2 TX Slots)	32.62	29.34
GPRS (3 TX Slots)	30.04	27.31
GPRS (4 TX Slots)	28.40	25.96
EGPRS (1 TX Slot)	27.09	26.32
EGPRS (2 TX Slots)	26.02	25.11
EGPRS (3 TX Slots)	23.79	23.04
EGPRS (4 TX Slots)	22.37	21.74

Mode	Average Power (dBm)		
	WCDMA Band II	WCDMA Band IV	WCDMA Band V
AMR 12.2 kbps	23.33	22.86	22.83
RMC 12.2 kbps	23.38	22.87	23.21
HSDPA Sub-test 1	22.40	21.89	22.40
HSDPA Sub-test 2	21.84	21.42	21.88
HSDPA Sub-test 3	21.87	21.44	21.92
HSDPA Sub-test 4	21.90	21.41	21.87
HSUPA Sub-test 1	20.27	19.86	20.38
HSUPA Sub-test 2	20.82	20.37	20.87
HSUPA Sub-test 3	21.28	20.85	21.40
HSUPA Sub-test 4	20.28	19.87	20.40
HSUPA Sub-test 5	22.29	21.86	22.41

Mode	Average Power (dBm)					
	LTE Band 2	LTE Band 5	LTE Band 7	LTE Band 12	LTE Band 41	LTE Band 66
BW/1.4 MHz	22.93	23.48	/	23.35	/	23.90
BW/3.0 MHz	23.14	23.38	/	23.40	/	24.00
BW/5.0 MHz	23.37	23.65	23.51	23.56	22.86	24.18
BW/10 MHz	23.25	23.48	23.46	23.49	22.81	24.11
BW/15 MHz	23.20	/	23.51	/	22.96	24.12
BW/20 MHz	23.29	/	23.63	/	22.78	23.46

Mode	Average Power (dBm)				
	NR n5	NR n7	NR n12	NR 41	NR n66
BW/10MHz	23.12	23.32	22.91	26.32	23.08
BW/15MHz	23.05	23.23	22.94	26.32	23.12
BW/20MHz	23.14	23.26	/	26.36	23.06
BW/30MHz	/	/	/	26.39	22.96
BW/40MHz	/	/	/	26.42	/
BW/50MHz	/	/	/	26.47	/
BW/60MHz	/	/	/	26.45	/
BW/80MHz	/	/	/	26.40	/
BW/90MHz	/	/	/	26.33	/
BW/100MHz	/	/	/	26.32	/

**ANT 4:**

Mode	Average Power (dBm)	
	NR Band n77 3450-3550	NR Band n77 3700-3980
BW/10MHz	25.95	25.99
BW/15MHz	25.98	25.96
BW/20 MHz	25.99	25.98
BW/30MHz	25.95	25.86
BW/40MHz	25.97	25.89
BW/50MHz	26.07	25.92
BW/60MHz	25.96	25.91
BW/80MHz	25.85	25.93
BW/90MHz	25.85	25.87
BW/100MHz	25.73	25.83

**ANT 5:**

Mode	Average Power (dBm)		
	LTE Band 7	LTE Band 41	LTE Band 66
BW/1.4 MHz	/	/	19.40
BW/3.0 MHz	/	/	19.47
BW/5.0 MHz	21.96	21.46	19.68
BW/10 MHz	21.03	21.29	19.61
BW/15 MHz	22.03	21.45	19.65
BW/20 MHz	21.98	21.30	19.78

**ANT6:**

WLAN 2.4 GHz Band Average Power (dBm)				
Mode/Band	b	g	n (HT-20)	n (HT-40)
WLAN 2.4GHz	17.45	13.11	13.67	13.03

WLAN 5.2 GHz Band Average Power (dBm)						
Mode/Band	a	ac 20	ac 40	ac 80	n 20	n 40
WLAN 5.2GHz	13.85	12.57	11.53	11.2	13.69	13.35

WLAN 5.8 GHz Band Average Power (dBm)						
Mode/Band	a	ac 20	ac 40	ac 80	n 20	n 40
WLAN 5.8GHz	14.05	13.1	12.16	11.36	13.88	13.67

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	11.68	11.80	11.65	5.14	5.09	5.14	5.12

**ANT7:**

WLAN 2.4 GHz Band Average Power (dBm)				
Mode/Band	b	g	n (HT-20)	n (HT-40)
WLAN 2.4GHz	16.80	13.25	13.60	13.25

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	8.31	8.47	8.11	4.02	4.01	4.02	3.97

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

## 6 Introduction

### 6.1 Introduction

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

### 6.2 SAR Definition

The SAR definition is the time derivative (rate) of the incremental energy (dW) absorbed by (dissipated in) an incremental mass (dm) contained in a volume element (dv) of a given density ( $\rho$ ). 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,  $\delta T$  is the temperature rise and  $\delta t$  is the exposure duration, or related to the electrical field in the tissue by

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

Where:  $\sigma$  is the conductivity of the tissue,  $\rho$  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

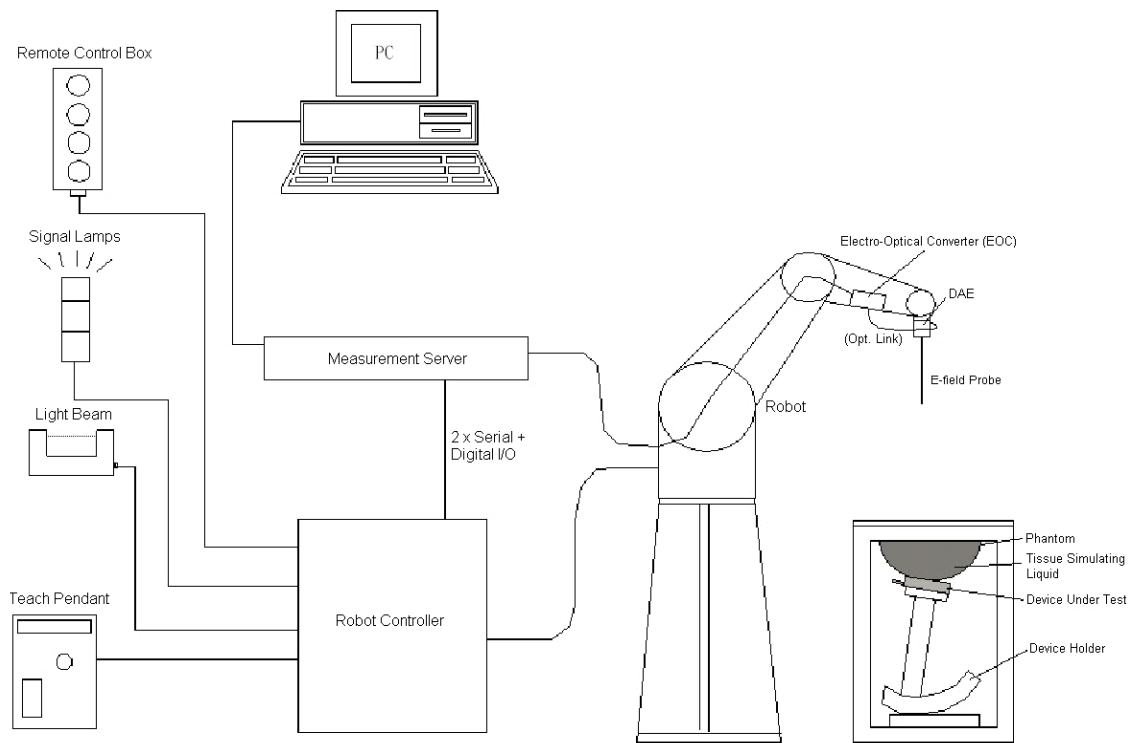
SAR Human Exposure Specified in ANSI/IEEE C95.1-1992 and Health Canada Safety Code 6

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>**

<b>Construction</b>	Symmetrical design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)	
<b>Frequency Directivity</b>	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)	
<b>Dynamic Range</b>	10 µW/g to 100 mW/g; Linearity: ± 0.2 dB (noise: typically < 1 µW/g)	
<b>Dimensions</b>	Overall length: 330 mm (Tip: 20mm) Tip diameter: 2.5 mm (Body: 12mm) Typical distance from probe tip to dipole centers: 1 mm	


**Fig. 8.2 Photo of E-Field Probe**

➤ **E-Field Probe Calibration**

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

**8.2 Data Acquisition Electronics (DAE)**

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



**Fig. 8.3 Photo of DAE**

### 8.3 Robot

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

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



Fig. 8.4 Photo of Robot

### 8.4 Measurement Server

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



Fig. 8.5 Photo of Server for DASY5

### 8.5 Light Beam Unit


The light beam switch allows automatic "tooling" of the probe. During the process, the actual position of the probe tip with respect to the robot arm is measured, as well as the probe length and the horizontal probe offset. The software then corrects all movements, such that the robot coordinates are valid for the probe tip. The repeatability of this process is better than 0.1 mm. If a position has been taught with an aligned probe, the same position will be reached with another aligned probe within 0.1 mm, even if the other probe has different dimensions. During probe rotations, the probe tip will keep its actual position.



Fig. 8.6 Photo of Light Beam

**8.6 Phantom**

**<SAM Twin Phantom>**

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

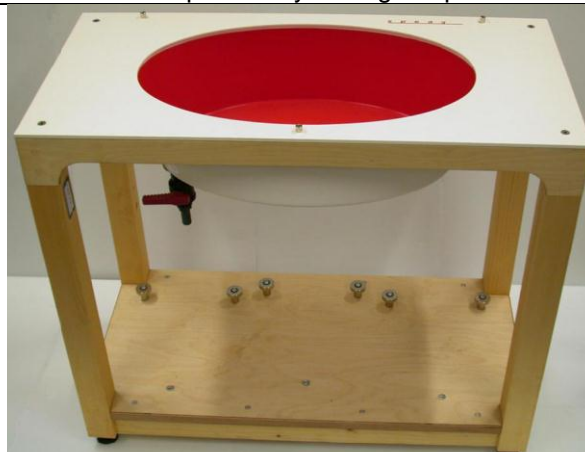
The bottom plate contains three pair of bolts for locking the device holder. The device holder positions are adjusted to the standard measurement positions in the three sections. A white cover is provided to tap the phantom during off-periods to prevent water evaporation and changes in the liquid parameters.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

**<ELI4 Phantom >**

The ELI4 phantom is intended for compliance testing of handheld and body-mounted wireless devices in the frequency range of 30MHz to 6 GHz. ELI4 is fully compatible with the latest draft of the standard IEC 62209-2 and all known tissue simulating liquids.

ELI4 has been optimized regarding its performance and can be integrated into a SPEAG standard phantom table. A cover prevents evaporation of the liquid. Reference markings on the phantom allow installation of the complete setup, including all predefined phantom positions and measurement grids, by teaching three points. The phantom can be used with the following tissue simulating liquids:

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



**Fig.8.8 Photo of ELI4 Phantom**

**8.7 Device Holder**

**<Device Holder for SAM Twin Phantom>**

The SAR in the phantom is approximately inversely proportional to the square of the distance between the source and the liquid surface. For a source at 5 mm distance, a positioning uncertainty of  $\pm 0.5$  mm would produce a SAR uncertainty of  $\pm 20$  %. 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:

<b>Probe Parameters:</b>	- Sensitivity	Norm <sub>i</sub> , a <sub>i0</sub> , a <sub>i1</sub> , a <sub>i2</sub>
	- Conversion	ConvF <sub>i</sub>
	- Diode compression point	dcp <sub>i</sub>
<b>Device Parameters:</b>	- Frequency	f
	- Crest	cf
<b>Media Parameters:</b>	- 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)  
 $\text{Norm}_i$  = 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.

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

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

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:

1. The calibration certificate of DASY can be referred to appendix C of this report.
2. Referring to KDB 865664 D01v01r04, the dipole calibration interval can be extended to 3 years with justification. The dipoles are also not physically damaged, or repaired during the interval.
3. The Insertion Loss calibration of Dual Directional Coupler and Attenuator were characterized via the network analyzer and compensated during system check.
4. The dielectric probe kit was calibrated via the network analyzer, with the specified procedure (calibrated in pure water) and calibration kit (standard) short circuit, before the dielectric measurement. The specific procedure and calibration kit are provided by Speag.
5. In system check we need to monitor the level on the spectrum analyzer, and adjust the power amplifier level to have precise power level to the dipole; the measured SAR will be normalized to 1 W input power according to the ratio of 1 W to the input power to the dipole. For system check, the calibration of the power amplifier is deemed not critically

- required for correct measurement; the spectrum analyzer is critical and we do have calibration for it
6. Attenuator insertion loss is calibrated by the network Analyzer, which the calibration is valid, before system check.
  7. N.C.R means No Calibration Requirement.



## 9 Tissue Simulating Liquids

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

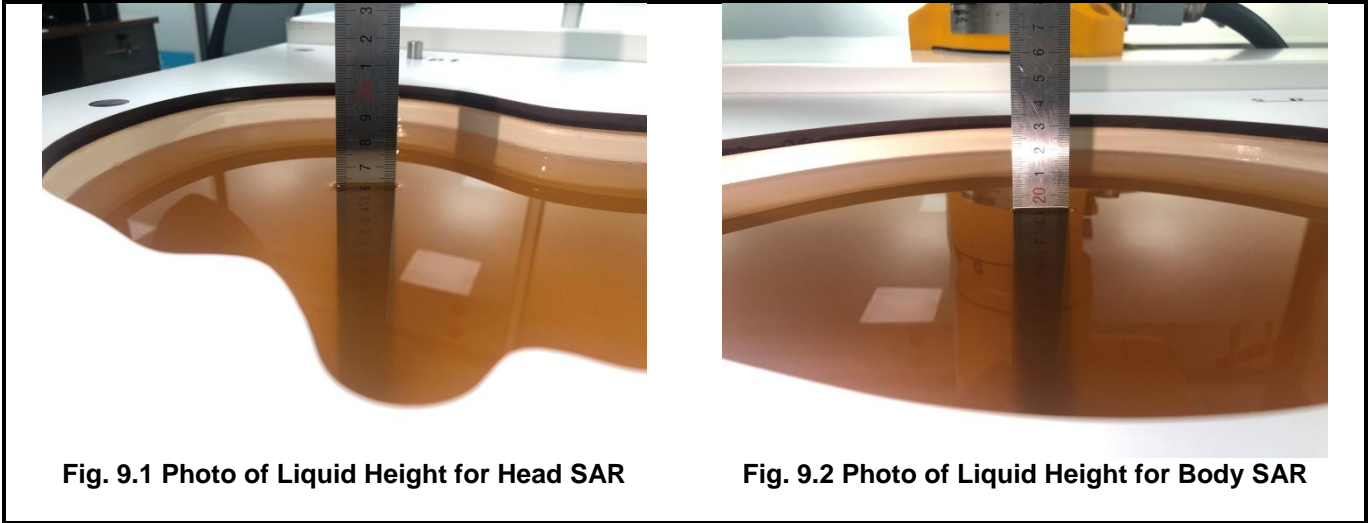


Fig. 9.1 Photo of Liquid Height for Head SAR

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)	$\epsilon_r$	$\sigma$ (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

(  $\epsilon_r$  = relative permittivity,  $\sigma$  = 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 ( $\sigma$ )	Permittivity ( $\epsilon_r$ )	Conductivity Target( $\sigma$ )	Permittivity Target( $\epsilon_r$ )	Delta ( $\sigma$ )%	Delta ( $\epsilon_r$ )%	Limit (%)	Date (mm/dd/yy)
750	22.4	0.88	42.58	0.89	41.90	-1.12	1.62	±5	04.28.2023
835	22.4	0.91	42.35	0.90	41.50	0.78	2.05	±5	04.28.2023
1750	22.1	1.35	40.86	1.37	40.10	-1.46	1.90	±5	05.04.2023
1900	22.1	1.34	41.12	1.40	40.00	-4.29	2.80	±5	05.04.2023
2450	22.7	1.75	40.13	1.80	39.20	-2.78	2.37	±5	05.18.2023
2600	22.7	1.91	40.13	1.96	39.00	-2.55	2.90	±5	05.18.2023
3500	23.1	2.85	39.53	2.91	37.90	-2.06	4.30	±5	05.09.2023
3700	23.1	3.03	39.23	3.12	37.70	-2.88	4.06	±5	05.09.2023
3900	23.1	3.22	39.19	3.32	37.50	-3.01	4.51	±5	05.09.2023
5200	22.6	4.50	36.56	4.67	35.74	-3.64	2.29	±5	05.13.2023
5800	22.6	5.38	35.92	5.27	35.30	2.09	1.76	±5	05.13.2023

## 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:

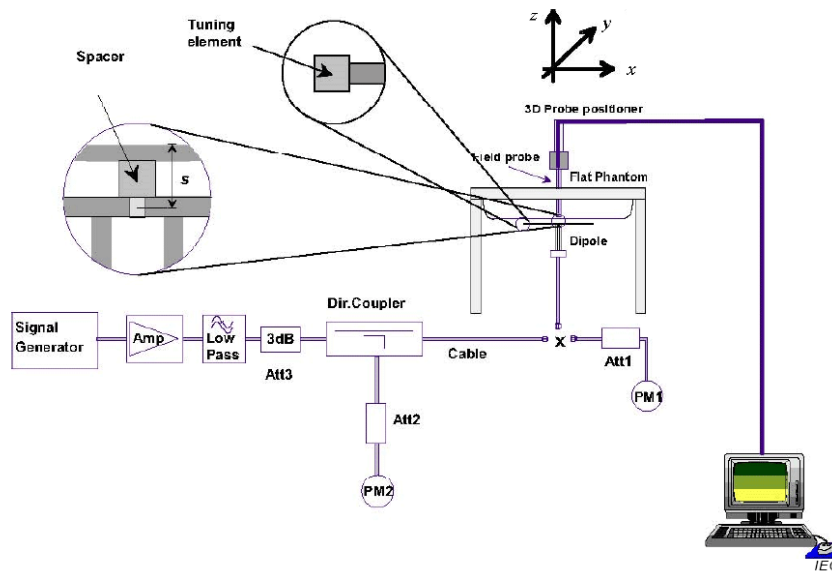


Fig.10.1 System Verification Setup Diagram

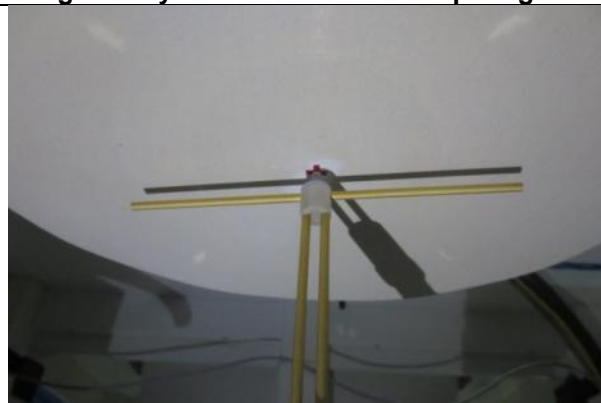


Fig.10.2 Photo of Dipole setup



➤ **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 (%)
04.28.2023	750	80	0.653	8.16	8.37	-2.51
04.28.2023	835	80	0.776	9.70	9.6	1.04
05.04.2023	1750	40	1.430	35.75	36.4	-1.79
05.04.2023	1900	40	1.590	39.75	39.9	-0.38
05.18.2023	2450	40	2.150	53.75	53.4	0.66
05.18.2023	2600	40	2.230	55.75	55.3	0.81
05.09.2023	3500	40	2.590	64.75	65.6	-1.30
05.09.2023	3700	40	2.630	65.75	66.1	-0.53
05.09.2023	3900	40	2.760	69.00	69.9	-1.29
05.13.2023	5200	40	3.150	78.75	79.10	-0.44
05.13.2023	5800	40	3.230	80.75	80.90	-0.19

## 11 EUT Testing Position

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

### 11.1 Handset Reference Points

- The vertical centreline passes through two points on the front side of the handset – the midpoint of the width  $w_t$  of the handset at the level of the acoustic output, and the midpoint of the width  $w_b$  of the bottom of the handset.
- The horizontal line is perpendicular to the vertical centreline and passes the center of the acoustic output. The horizontal line is also tangential to the handset at point A.
- The two lines intersect at point A. Note that for many handsets, point A coincides with the center of the acoustic output; however, the acoustic output may be located elsewhere on the horizontal line. Also note that the vertical centreline is not necessarily parallel to the front face of the handset, especially for clamshell handsets, handsets with flip covers, and other irregularly shaped handsets.



Fig.11.1 Illustration for Front, Back and Side of SAM Phantom

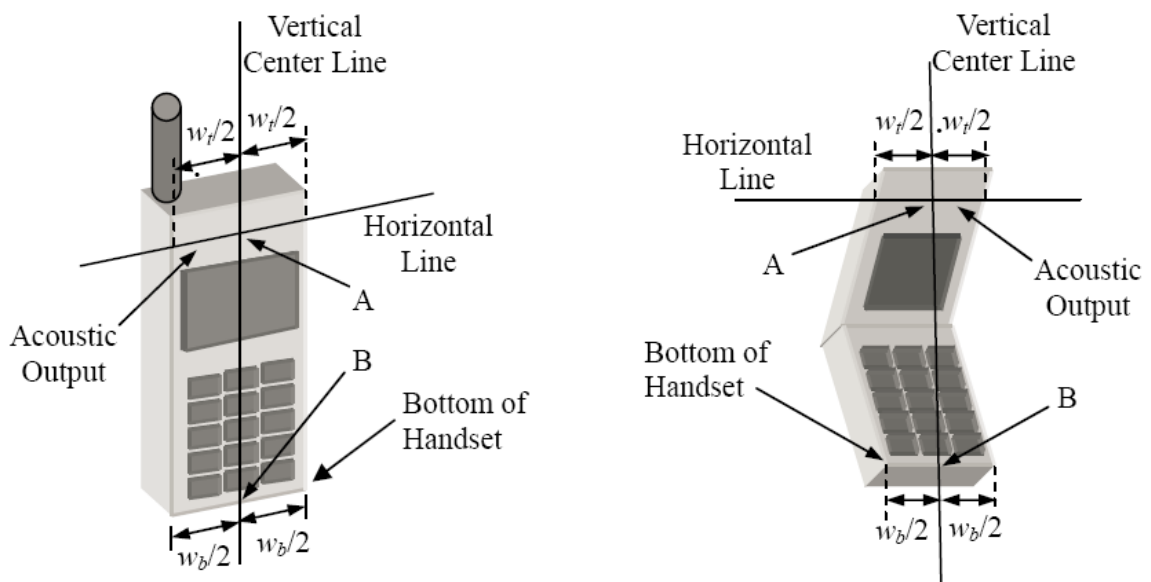


Fig. 11.2 Illustration for Handset Vertical and Horizontal Reference Lines

**11.2 Positioning for Cheek / Touch**

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

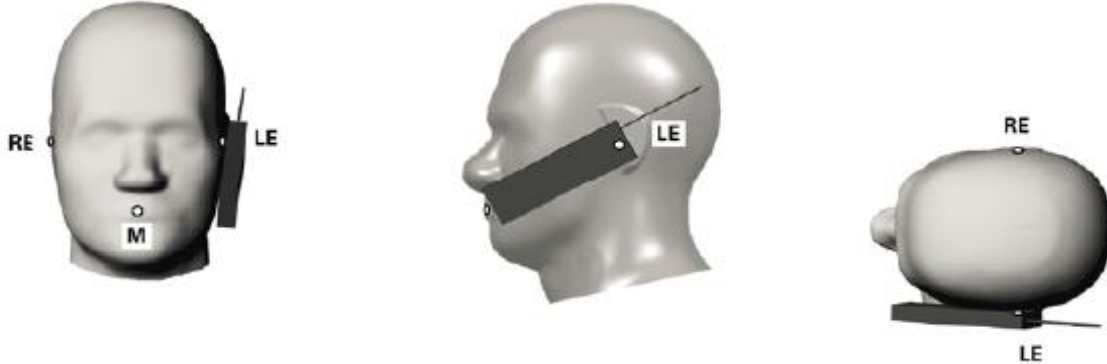


Fig. 11.3 Illustration for Cheek Position

**11.3 Positioning for Ear / 15° Tilt**

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



Fig.11.4 Illustration for Tilted Position

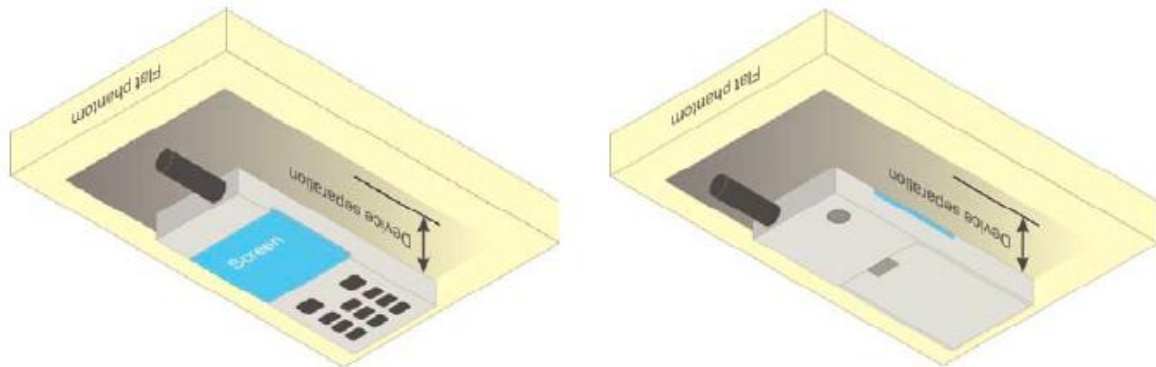
**11.4 SAR Evaluations near the Mouth/Jaw Regions of the SAM Phantom**

Antennas located near the bottom of a phone may require SAR measurements around the mouth and jaw regions of the SAM head phantom. This typically applies to clam-shell style phones that are generally longer in the unfolded normal use positions or to certain older style long rectangular phones.

Under these circumstances, the following procedures apply, adopted from the FCC guidance on SAR handsets document FCC KDB Publication 648474 D04v01r03. The SAR required in these regions of SAM should be measured using a flat phantom. The phone should be positioned with a separation distance of 4 mm between the ear reference point (ERP) and the outer surface of the flat phantom shell. While maintaining this distance at the ERP location, the low (bottom) edge of the phone should be lowered from the phantom to establish the same separation distance between the peak SAR locations identified by the truncated partial SAR distribution measured with the SAM phantom. The distance from the peak SAR location to the phone is determined by the straight line passing perpendicularly through the phantom surface. When it is not feasible to maintain 4 mm separation at the ERP while also establishing the required separation at the peak SAR location, the top edge of the phone will be allowed to touch the phantom with a separation < 4 mm at the ERP. The phone should not be tilted to the left or right while placed in this inclined position to the flat phantom.

**11.5 Body Worn Accessory Configurations**

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

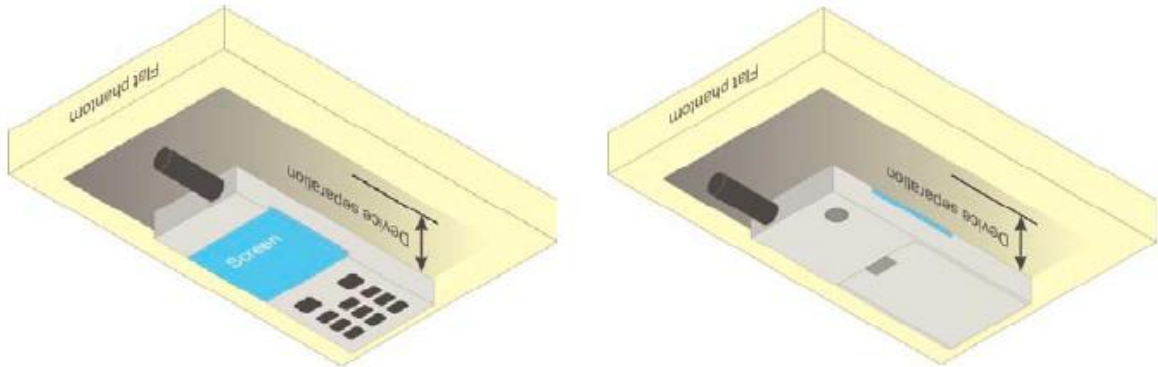


**Fig.11.5 Illustration for Body Worn Position**

**11.6 Wireless Router (Hotspot) Configurations**

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

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



**Fig.11.6 Illustration for Hotspot Position**



## 12 Measurement Procedures

The measurement procedures are as below:

<Conducted power measurement>

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

<Conducted power measurement>

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

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

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

### 12.1 Spatial Peak SAR Evaluation

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

The base for the evaluation is a “cube” measurement. The measured volume must include the 1g and 10 g cubes with the highest averaged SAR values. For that purpose, the center of the measured volume is aligned to the interpolated peak SAR value of a previously performed area scan.

The entire evaluation of the spatial peak values is performed within the post-processing engine (SEMCAD). The system always gives the maximum values for 1g and 10g cubes. The algorithm to find the cube with highest averaged SAR is divided into the following stages:

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

## 12.2 Power Reference Measurement

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

## 12.3 Area & Zoom Scan Procedures

First Area Scan is used to locate the approximate location(s) of the local peak SAR value(s). The measurement grid within an Area Scan is defined by the grid extent, grid step size and grid offset. Next, in order to determine the EM field distribution in a three-dimensional spatial extension, Zoom Scan is required. The Zoom Scan is performed around the highest E-field value to determine the averaged SAR-distribution over 10g. Area scan and zoom scan resolution setting follows KDB 865664 D01v01r04 quoted below.

		$\leq 3$ GHz	$> 3$ GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface		$5 \pm 1$ mm	$\frac{1}{2} \delta \cdot \ln(2) \pm 0.5$ mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location		$30^\circ \pm 1^\circ$	$20^\circ \pm 1^\circ$
Maximum area scan spatial resolution: $\Delta x_{Area}$ , $\Delta y_{Area}$		$\leq 2$ GHz: $\leq 15$ mm 2 – 3 GHz: $\leq 12$ mm	3 – 4 GHz: $\leq 12$ mm 4 – 6 GHz: $\leq 10$ mm
		When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be $\leq$ the corresponding x or y dimension of the test device with at least one measurement point on the test device.	
Maximum zoom scan spatial resolution: $\Delta x_{Zoom}$ , $\Delta y_{Zoom}$		$\leq 2$ GHz: $\leq 8$ mm 2 – 3 GHz: $\leq 5$ mm*	3 – 4 GHz: $\leq 5$ mm* 4 – 6 GHz: $\leq 4$ mm*
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{Zoom}(n)$	$\leq 5$ mm	3 – 4 GHz: $\leq 4$ mm 4 – 5 GHz: $\leq 3$ mm 5 – 6 GHz: $\leq 2$ mm
	graded grid	$\Delta z_{Zoom}(1)$ : between 1 <sup>st</sup> two points closest to phantom surface	$\leq 4$ 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	$\geq 30$ mm	3 – 4 GHz: $\geq 28$ mm 4 – 5 GHz: $\geq 25$ mm 5 – 6 GHz: $\geq 22$ mm
Note: $\delta$ 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 $\leq 1.4$ W/kg, $\leq 8$ mm, $\leq 7$ mm and $\leq 5$ 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 scans combine and subsequently superpose 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 with a full charged battery and transmit maximum output power. In DASY measurement software, the power reference measurement and power drift measurement procedures are used for monitoring the power drift of EUT during SAR test. Both these procedures measure the field at a specified reference position before and after the SAR testing. The software will calculate the field difference in dB. If the power drifts more than 5%, the SAR will be retested.

## 13 Conducted RF Output Power

### 13.1 GSM Conducted Power

The detailed conducted power table can refer to JYTSZ-R14-2300048 Appendix D Conducted RF Output 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 2 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 2 TX slots mode due to the highest frame-averaged power.
4. For GPRS multi time slots SAR measurement, when the measured maximum output power levels are within 0.25 dB of each other, test the configuration with the most number of time slots.
5. Per KDB447498 D04v01, the maximum output power channel is used for SAR testing and for further SAR test reduction.

**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 2 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 2 TX slots mode due to the highest frame-averaged power.
4. For GPRS multi time slots SAR measurement, when the measured maximum output power levels are within 0.25 dB of each other, test the configuration with the most number of time slots.
5. Per KDB447498 D04v01, the maximum output power channel is used for SAR testing and for further SAR test reduction.

### 13.2 WCDMA Conducted Power

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

#### HSDPA Setup Configuration:

- a. The EUT was connected to Base Station Rohde & Schwarz CMU200 referred to the Setup Configuration.
- b. The RF path losses were compensated into the measurements.
- c. A call was established between EUT and Base Station with following setting:
  - i. Set Gain Factors ( $\beta_c$  and  $\beta_d$ ) 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	$\beta_c$	$\beta_d$	$\beta_d$ (SF)	$\beta_c/\beta_d$	$\beta_{hs}^{(1)}$	CM (dB) <sup>(2)</sup>
1	2/15	15/15	64	2/15	4/15	0.0
2	12/15 <sup>(3)</sup>	15/15 <sup>(3)</sup>	64	12/15 <sup>(3)</sup>	24/15	1.0
3	15/15	8/15	64	15/8	30/15	1.5
4	15/15	4/15	64	15/4	30/15	1.5

Note 1:  $\Delta_{ACK}, \Delta_{NACK}$  and  $\Delta_{CQI} = 8 \Leftrightarrow A_{hs} = \beta_{hs}/\beta_c = 30/15 \Leftrightarrow \beta_{hs} = 30/15 * \beta_c$   
 Note 2: CM = 1 for  $\beta_c/\beta_d = 12/15, \beta_{hs}/\beta_c = 24/15$ .  
 Note 3: For subtest 2 the  $\beta_c/\beta_d$  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 ( $\beta_c$  and  $\beta_d$ ) 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	$\beta_c$	$\beta_d$	$\beta_d$ (SF)	$\beta_c/\beta_d$	$\beta_{hs}^{(1)}$	$\beta_{ec}$	$\beta_{ed}$	$\beta_{ed}$ (SF)	$\beta_{ed}$ (codes)	CM <sup>(2)</sup> (dB)	MPR (dB)	AG <sup>(4)</sup> Index	E-TFCI
1	11/15 <sup>(3)</sup>	15/15 <sup>(3)</sup>	64	11/15 <sup>(3)</sup>	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 <sup>(4)</sup>	15/15 <sup>(4)</sup>	64	15/15 <sup>(4)</sup>	30/15	24/15	134/15	4	1	1.0	0.0	21	81

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

Note 2: CM = 1 for  $\beta_c/\beta_d = 12/15, \beta_{hs}/\beta_c = 24/15$ . For all other combinations of DPDCH, DPCCH, HS-DPCCH, E-DPDCH and E-DPCCH the MPR is based on the relative CM difference.

Note 3: For subtest 1 the  $\beta_c/\beta_d$  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  $\beta_c/\beta_d$  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:  $\beta_{ed}$  cannot be set directly; it is set by Absolute Grant Value.

**HSUPA Sub-test setup configuration**
**Note:**

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

## 13.3 LTE Conducted Power

### 13.3.1 Largest channel bandwidth standalone SAR test requirements

#### QPSK with 1 RB allocation

Start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power among RB offsets at the upper edge, middle and lower edge of each required test channel. When the reported SAR is  $\leq 0.8$  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.<sup>8</sup> 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.<sup>9</sup>

#### 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  $\leq 0.8$  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.

### 13.3.2 Other channel bandwidth standalone SAR test requirements

For the other channel bandwidths used by the device in a frequency band, apply all the procedures required for the largest channel bandwidth in section 4.2 to determine the channels and RB configurations that need SAR testing and only measure SAR when the highest maximum output power of a configuration requiring testing in the smaller channel bandwidth is  $> \frac{1}{2}$  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

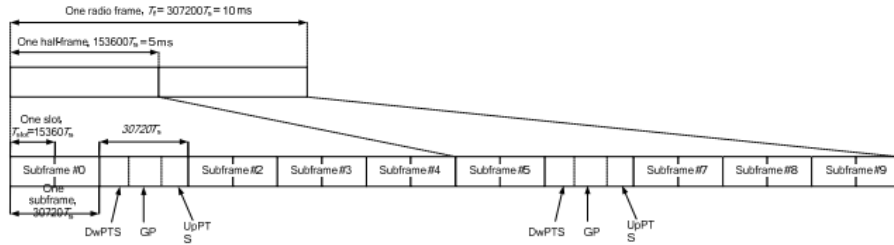


Figure 4.2-1: Frame structure type 2 (for 5 ms switch-point periodicity)

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.

### 13.4 NR Conducted Power

**Note:**

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

### 13.5 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  $\leq 1.2$  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.

### 13.6 WLAN 5.2GHz Band Conducted Power

**Note:**

6. SAR test of WLAN 5.2GHz is performed.
1. Per KDB 248227 D01v02r02, choose the highest output power channel to test SAR and determine further SAR exclusion.
2. 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.
3. Per KDB 248227 D01V02r02 section 2.2, when the EUT in continuously transmitting mode, the actual duty cycle is 100%, so the duty cycle factor is 1.

### 13.7 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.

### 13.8 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.

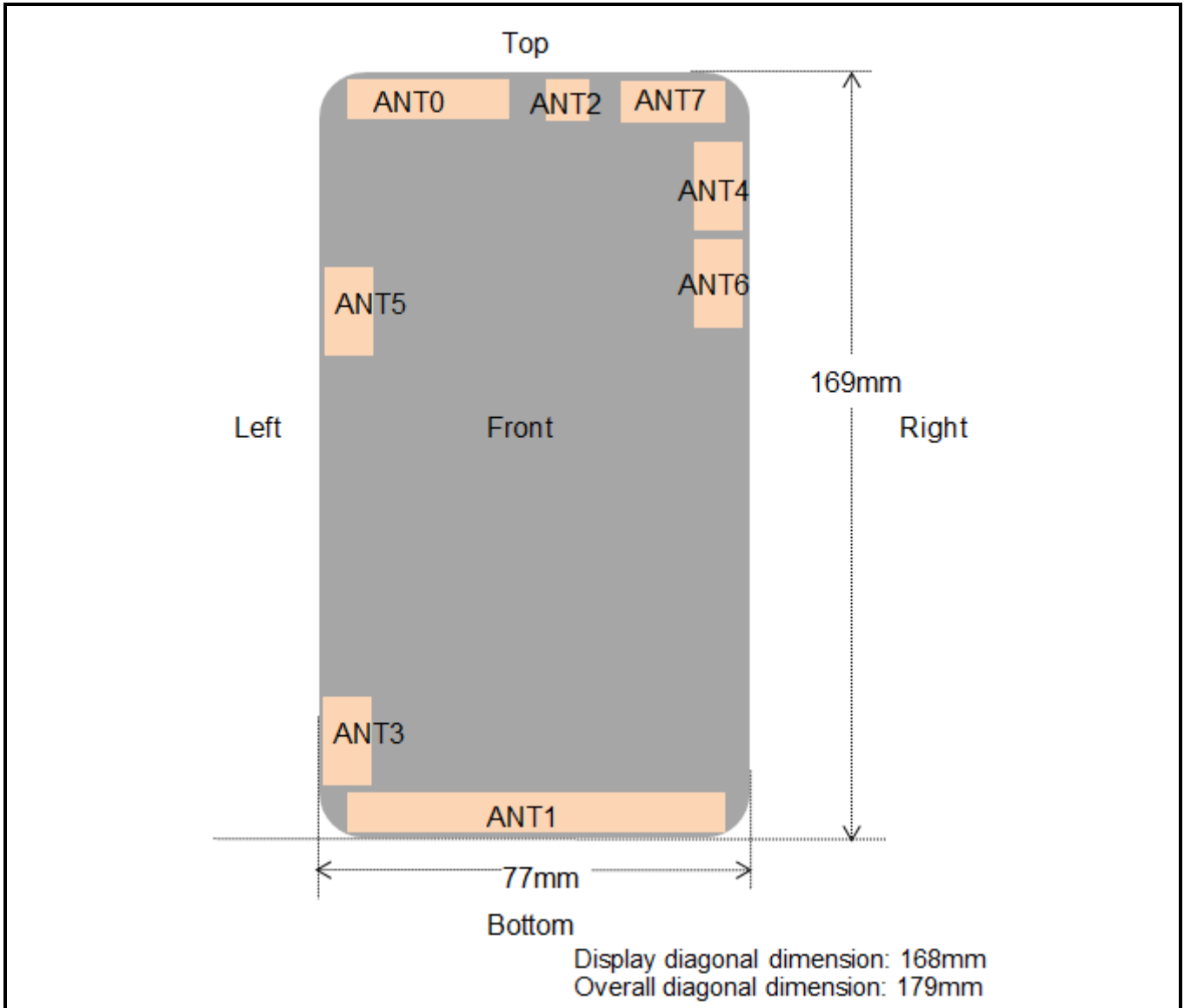
### 13.9 NFC Conducted Power

**Note:**

1. Per KDB 447498 D04v01 section 2.1.2: 1-mW Test Exemption, SAR test for NFC is not required.
2. The output power of all data rate were pre-scan, just the worst case of all mode were shown in report.

## 14 Exposure Positions Consideration

### 14.1 EUT Antenna Locations



**Fig.14.1 EUT Antenna Locations**

**Note:**

1. ANT 0: L/M/H Band Main ANT
2. ANT 1: L/M/H Band DRX ANT
3. ANT 2:N77/78 DRX ANT
4. ANT 3:n7/n38/n41/n77/n78 PRX ANT
5. ANT 4: NR(n77/78) PRX ANT
6. ANT 5: LTE(B7/38/41/B66) PRX2 & NR( n77/78) DRX ANT
7. ANT 6: 2.4/5GWi-Fi&BT ANT
8. ANT 7: 2.4GWi-Fi&BT ANT

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

### 14.2 Test Positions Consideration

Distance of Antennas to EUT edge/surface Test distance: 10mm						
Antennas	Back	Front	Top Side	Bottom Side	Right Side	Left Side
ANT0	<25mm	<25mm	<25mm	155mm	38mm	<25mm
ANT4	<25mm	<25mm	<25mm	146mm	<25mm	70mm
ANT5	<25mm	<25mm	36mm	95mm	69mm	<25mm
ANT6	<25mm	<25mm	<25mm	128mm	<25mm	70mm
ANT7	<25mm	<25mm	<25mm	161mm	<25mm	56mm

Test Positions Test distance: 10mm						
Antennas	Back	Front	Top Side	Bottom Side	Right Side	Left Side
ANT0	Yes	Yes	Yes	No	No	Yes
ANT4	Yes	Yes	Yes	No	Yes	No
ANT5	Yes	Yes	No	No	No	Yes
ANT6	Yes	Yes	Yes	No	Yes	No
ANT7	Yes	Yes	Yes	No	Yes	No

**Note:**

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

## 15 SAR Test Results Summary

### 15.1 Standalone Head SAR Data

➤ GSM Head SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR <sub>1g</sub> (W/kg)	Scaling Factor	Reported SAR <sub>1g</sub> (W/kg)
1	GSM850/Voice	0	Right Cheek	190	836.6	33.65	0.10	34.0	<b>0.102</b>	1.084	0.111
	GSM850/Voice	0	Right Tilted	190	836.6	33.65	0.02	34.0	0.068	1.084	0.074
	GSM850/Voice	0	Left Cheek	190	836.6	33.65	-0.17	34.0	0.074	1.084	0.080
	GSM850/Voice	0	Left Tilted	190	836.6	33.65	0.18	34.0	0.042	1.084	0.046
	PCS1900/Voice	0	Right Cheek	661	1880	30.10	0.04	30.5	0.328	1.096	0.359
2	PCS1900/Voice	0	Right Tilted	661	1880	30.10	-0.04	30.5	<b>0.621</b>	1.096	0.681
	PCS1900/Voice	0	Left Cheek	661	1880	30.10	0.02	30.5	0.245	1.096	0.269
	PCS1900/Voice	0	Left Tilted	661	1880	30.10	0.10	30.5	0.439	1.096	0.481
	<b>ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population</b>						<b>1.6 W/kg (mW/g) Averaged over 1g</b>				

➤ WCDMA Head SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR <sub>1g</sub> (W/kg)	Scaling Factor	Reported SAR <sub>1g</sub> (W/kg)
3	Band II/RMC	0	Right Cheek	9538	1907.6	23.38	0.17	23.5	0.369	1.028	0.379
	Band II/RMC	0	Right Tilted	9538	1907.6	23.38	0.03	23.5	<b>0.700</b>	1.028	0.720
	Band II/RMC	0	Left Cheek	9538	1907.6	23.38	0.04	23.5	0.268	1.028	0.276
	Band II/RMC	0	Left Tilted	9538	1907.6	23.38	0.02	23.5	0.543	1.028	0.558
4	Band IV/RMC	0	Right Cheek	1413	1732.6	22.87	0.16	23.0	0.172	1.03	0.177
	Band IV/RMC	0	Right Tilted	1413	1732.6	22.87	0.13	23.0	<b>0.298</b>	1.03	0.307
	Band IV/RMC	0	Left Cheek	1413	1732.6	22.87	-0.12	23.0	0.138	1.03	0.142
	Band IV/RMC	0	Left Tilted	1413	1732.6	22.87	0.03	23.0	0.242	1.03	0.249
5	Band V/RMC	0	Right Cheek	4183	836.6	23.21	0.00	23.5	<b>0.459</b>	1.069	0.491
	Band V/RMC	0	Right Tilted	4183	836.6	23.21	0.15	23.5	0.263	1.069	0.281
	Band V/RMC	0	Left Cheek	4183	836.6	23.21	0.03	23.5	0.203	1.069	0.217
	Band V/RMC	0	Left Tilted	4183	836.6	23.21	0.09	23.5	0.386	1.069	0.413
<b>ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population</b>						<b>1.6 W/kg (mW/g) Averaged over 1g</b>					

➤ FDD-LTE Band 2(20MHz) QPSK Head SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR <sub>1g</sub> (W/kg)	Scaling Factor	Reported SAR <sub>1g</sub> (W/kg)
6	Band2/1RB#49	0	Right Cheek	19100	1900	23.29	0.03	23.5	0.445	1.05	0.467
	Band2/1RB#49	0	Right Tilted	19100	1900	23.29	0.03	23.5	<b>0.580</b>	1.05	0.609
	Band2/1RB#49	0	Left Cheek	19100	1900	23.29	-0.11	23.5	0.234	1.05	0.246
	Band2/1RB#49	0	Left Tilted	19100	1900	23.29	0.02	23.5	0.286	1.05	0.300
	Band2/50%RB#49	0	Right Cheek	19100	1900	22.15	-0.17	22.5	0.402	1.084	0.436
	Band2/50%RB#49	0	Right Tilted	19100	1900	22.15	0.08	22.5	0.535	1.084	0.580
	Band2/50%RB#49	0	Left Cheek	19100	1900	22.15	-0.05	22.5	0.198	1.084	0.215
	Band2/50%RB#49	0	Left Tilted	19100	1900	22.15	-0.08	22.5	0.246	1.084	0.267
<b>ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population</b>						<b>1.6 W/kg (mW/g) Averaged over 1g</b>					

➤ FDD-LTE Band 5(10MHz) QPSK Head SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR <sub>1g</sub> (W/kg)	Scaling Factor	Reported SAR <sub>1g</sub> (W/kg)
7	Band5/1RB#0	0	Right Cheek	20600	844	23.48	0.02	24.0	<b>0.507</b>	1.127	0.571
	Band5/1RB#0	0	Right Tilted	20600	844	23.48	0.00	24.0	0.470	1.127	0.530
	Band5/1RB#0	0	Left Cheek	20600	844	23.48	-0.12	24.0	0.278	1.127	0.313
	Band5/1RB#0	0	Left Tilted	20600	844	23.48	-0.03	24.0	0.234	1.127	0.264
	Band5/50%RB#12	0	Right Cheek	20600	844	22.44	-0.02	22.5	0.485	1.014	0.492
	Band5/50%RB#12	0	Right Tilted	20600	844	22.44	0.12	22.5	0.442	1.014	0.448
	Band5/50%RB#12	0	Left Cheek	20600	844	22.44	0.05	22.5	0.246	1.014	0.249
	Band5/50%RB#12	0	Left Tilted	20600	844	22.44	-0.04	22.5	0.204	1.014	0.207
<b>ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population</b>						<b>1.6 W/kg (mW/g) Averaged over 1g</b>					

➤ FDD-LTE Band 7(20MHz) QPSK Head SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR <sub>1g</sub> (W/kg)	Scaling Factor	Reported SAR <sub>1g</sub> (W/kg)
8	Band7/1RB#49	0	Right Cheek	21350	2560	23.63	0.01	24.0	0.426	1.089	0.464
	Band7/1RB#49	0	Right Tilted	21350	2560	23.63	0.03	24.0	<b>0.577</b>	1.089	0.628
	Band7/1RB#49	0	Left Cheek	21350	2560	23.63	0.14	24.0	0.228	1.089	0.248
	Band7/1RB#49	0	Left Tilted	21350	2560	23.63	-0.11	24.0	0.269	1.089	0.293
	Band7/50%RB#24	0	Right Cheek	21350	2560	22.58	0.16	23.0	0.394	1.102	0.434
	Band7/50%RB#24	0	Right Tilted	21350	2560	22.58	-0.07	23.0	0.525	1.102	0.579
	Band7/50%RB#24	0	Left Cheek	21350	2560	22.58	-0.08	23.0	0.191	1.102	0.210
	Band7/50%RB#24	0	Left Tilted	21350	2560	22.58	-0.06	23.0	0.233	1.102	0.257
	Band7/1RB#49	5	Right Cheek	20850	2510	21.98	0.01	22.5	0.196	1.127	0.221
	Band7/1RB#49	5	Right Tilted	20850	2510	21.98	0.14	22.5	0.109	1.127	0.123
	Band7/1RB#49	5	Left Cheek	20850	2510	21.98	0.09	22.5	0.160	1.127	0.180
	Band7/1RB#49	5	Left Tilted	20850	2510	21.98	0.03	22.5	0.088	1.127	0.099
	Band7/50%RB#24	5	Right Cheek	20850	2510	21.09	0.06	21.5	0.177	1.099	0.195
	Band7/50%RB#24	5	Right Tilted	20850	2510	21.09	-0.01	21.5	0.103	1.099	0.113
	Band7/50%RB#24	5	Left Cheek	20850	2510	21.09	0.13	21.5	0.149	1.099	0.164
	Band7/50%RB#24	5	Left Tilted	20850	2510	21.09	0.03	21.5	0.081	1.099	0.089
<b>ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population</b>						<b>1.6 W/kg (mW/g) Averaged over 1g</b>					

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

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR <sub>1g</sub> (W/kg)	Scaling Factor	Reported SAR <sub>1g</sub> (W/kg)
9	Band12/1RB#49	0	Right Cheek	23130	711	23.49	0.00	24.0	<b>0.507</b>	1.125	0.570
	Band12/1RB#49	0	Right Tilted	23130	711	23.49	-0.18	24.0	0.466	1.125	0.524
	Band12/1RB#49	0	Left Cheek	23130	711	23.49	0.08	24.0	0.245	1.125	0.276
	Band12/1RB#49	0	Left Tilted	23130	711	23.49	-0.16	24.0	0.286	1.125	0.322
	Band12/50%RB#0	0	Right Cheek	20360	704	22.37	0.02	22.5	0.492	1.03	0.507
	Band12/50%RB#0	0	Right Tilted	20360	704	22.37	0.04	22.5	0.453	1.03	0.467
	Band12/50%RB#0	0	Left Cheek	20360	704	22.37	0.06	22.5	0.241	1.03	0.248
	Band12/50%RB#0	0	Left Tilted	20360	704	22.37	0.02	22.5	0.280	1.03	0.288
<b>ANSI / IEEE C95.1 – SAFETY LIMIT</b>											
<b>Spatial Peak</b>											
<b>Uncontrolled Exposure/General Population</b>							<b>1.6 W/kg (mW/g)</b> <b>Averaged over 1g</b>				

➤ TDD-LTE Band41(20MHz) QPSK Head SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR <sub>1g</sub> (W/kg)	Scaling Factor	D.C Factor	Reported SAR <sub>1g</sub> (W/kg)
	Band41/1RB#49	0	Right Cheek	41490	2680	22.78	0.03	23.0	0.426	1.052	1.008	0.452
10	Band41/1RB#49	0	Right Tilted	41490	2680	22.78	0.18	23.0	<b>0.492</b>	1.052	1.008	0.522
	Band41/1RB#49	0	Left Cheek	41490	2680	22.78	-0.14	23.0	0.245	1.052	1.008	0.260
	Band41/1RB#49	0	Left Tilted	41490	2680	22.78	-0.15	23.0	0.277	1.052	1.008	0.294
	Band41/50%RB#0	0	Right Cheek	41490	2680	21.77	0.03	22.0	0.403	1.054	1.008	0.428
	Band41/50%RB#0	0	Right Tilted	41490	2680	21.77	0.08	22.0	0.476	1.054	1.008	0.506
	Band41/50%RB#0	0	Left Cheek	41490	2680	21.77	0.16	22.0	0.232	1.054	1.008	0.246
	Band41/50%RB#0	0	Left Tilted	41490	2680	21.77	-0.05	22.0	0.265	1.054	1.008	0.282
	Band41/1RB#49	5	Right Cheek	39750	2506	21.30	0.14	21.5	0.119	1.047	1.008	0.126
	Band41/1RB#49	5	Right Tilted	39750	2506	21.30	-0.19	21.5	0.065	1.047	1.008	0.069
	Band41/1RB#49	5	Left Cheek	39750	2506	21.30	-0.12	21.5	0.098	1.047	1.008	0.103
	Band41/1RB#49	5	Left Tilted	39750	2506	21.30	-0.16	21.5	0.053	1.047	1.008	0.056
	Band41/50%RB#24	5	Right Cheek	39750	2506	20.20	-0.12	20.5	0.111	1.072	1.008	0.120
	Band41/50%RB#24	5	Right Tilted	39750	2506	20.20	0.13	20.5	0.059	1.072	1.008	0.064
	Band41/50%RB#24	5	Left Cheek	39750	2506	20.20	-0.01	20.5	0.094	1.072	1.008	0.102
	Band41/50%RB#24	5	Left Tilted	39750	2506	20.20	0.09	20.5	0.048	1.072	1.008	0.052
<b>ANSI / IEEE C95.1 – SAFETY LIMIT</b>												
<b>Spatial Peak</b>												
<b>Uncontrolled Exposure/General Population</b>							<b>1.6 W/kg (mW/g)</b> <b>Averaged over 1g</b>					

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

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR <sub>1g</sub> (W/kg)	Scaling Factor	Reported SAR <sub>1g</sub> (W/kg)
	Band66/1RB#99	0	Right Cheek	132072	1720	23.46	-0.05	24.5	0.416	1.271	0.529
11	Band66/1RB#99	0	Right Tilted	132072	1720	23.46	0.07	24.5	<b>0.559</b>	1.271	0.710
	Band66/1RB#99	0	Left Cheek	132072	1720	23.46	0.14	24.5	0.196	1.271	0.249
	Band66/1RB#99	0	Left Tilted	132072	1720	23.46	0.09	24.5	0.222	1.271	0.282
	Band66/50%RB#0	0	Right Cheek	132572	1770	22.39	-0.15	22.5	0.404	1.026	0.415
	Band66/50%RB#0	0	Right Tilted	132572	1770	22.39	-0.13	22.5	0.539	1.026	0.553
	Band66/50%RB#0	0	Left Cheek	132572	1770	22.39	0.18	22.5	0.182	1.026	0.187
	Band66/50%RB#0	0	Left Tilted	132572	1770	22.39	0.05	22.5	0.206	1.026	0.211
	Band66/1RB#49	5	Right Cheek	132572	1770	19.78	-0.08	20.0	0.027	1.052	0.028
	Band66/1RB#49	5	Right Tilted	132572	1770	19.78	0.11	20.0	0.015	1.052	0.016
	Band66/1RB#49	5	Left Cheek	132572	1770	19.78	0.04	20.0	0.020	1.052	0.021
	Band66/1RB#49	5	Left Tilted	132572	1770	19.78	-0.12	20.0	0.012	1.052	0.013
	Band66/50%RB#49	5	Right Cheek	132572	1770	18.75	0.08	19.0	0.023	1.059	0.024
	Band66/50%RB#49	5	Right Tilted	132572	1770	18.75	0.07	19.0	0.012	1.059	0.013
	Band66/50%RB#49	5	Left Cheek	132572	1770	18.75	0.04	19.0	0.016	1.059	0.017
	Band66/50%RB#49	5	Left Tilted	132572	1770	18.75	-0.19	19.0	0.009	1.059	0.010
<b>ANSI / IEEE C95.1 – SAFETY LIMIT</b>											
<b>Spatial Peak</b>											
<b>Uncontrolled Exposure/General Population</b>							<b>1.6 W/kg (mW/g)</b> <b>Averaged over 1g</b>				

➤ NR n5(20MHz) DFT-BPSK Head SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR <sub>1g</sub> (W/kg)	Scaling Factor	Reported SAR <sub>1g</sub> (W/kg)
12	NR n5 /1@1	0	Right Cheek	167300	836.5	22.95	-0.05	23.0	<b>0.336</b>	1.012	0.340
	NR n5 /1@1	0	Right Tilted	167300	836.5	22.95	-0.06	23.0	0.268	1.012	0.271
	NR n5 /1@1	0	Left Cheek	167300	836.5	22.95	0.14	23.0	0.124	1.012	0.125
	NR n5 /1@1	0	Left Tilted	167300	836.5	22.95	-0.18	23.0	0.165	1.012	0.167
	NR n5 /25@12	0	Right Cheek	167300	836.5	23.14	0.11	23.5	0.310	1.086	0.337
	NR n5 /25@12	0	Right Tilted	167300	836.5	23.14	-0.17	23.5	0.243	1.086	0.264
	NR n5 /25@12	0	Left Cheek	167300	836.5	23.14	-0.12	23.5	0.111	1.086	0.121
	NR n5 /25@12	0	Left Tilted	167300	836.5	23.14	0.07	23.5	0.142	1.086	0.154
<b>ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population</b>						<b>1.6 W/kg (mW/g) Averaged over 1g</b>					

➤ NR n7(20MHz) DFT-BPSK Head SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR <sub>1g</sub> (W/kg)	Scaling Factor	Reported SAR <sub>1g</sub> (W/kg)
	NR n7 /1@49	0	Right Cheek	512000	2560	23.03	0.05	23.5	0.462	1.114	0.515
13	NR n7 /1@49	0	Right Tilted	512000	2560	23.03	-0.09	23.5	<b>0.580</b>	1.114	0.646
	NR n7 /1@49	0	Left Cheek	512000	2560	23.03	-0.12	23.5	0.254	1.114	0.283
	NR n7 /1@49	0	Left Tilted	512000	2560	23.03	0.11	23.5	0.292	1.114	0.325
	NR n7 /25@12	0	Right Cheek	502000	2510	23.26	0.06	23.5	0.448	1.057	0.474
	NR n7 /25@12	0	Right Tilted	502000	2510	23.26	-0.13	23.5	0.571	1.057	0.604
	NR n7 /25@12	0	Left Cheek	502000	2510	23.26	-0.16	23.5	0.255	1.057	0.270
	NR n7 /25@12	0	Left Tilted	502000	2510	23.26	0.00	23.5	0.302	1.057	0.319
	NR n7 /1@1 NSA	0	Right Cheek	507000	2535	20.10	0.06	20.5	0.224	1.096	0.246
	NR n7 /1@1 NSA	0	Right Tilted	507000	2535	20.10	0.05	20.5	0.270	1.096	0.296
	NR n7 /1@1 NSA	0	Left Cheek	507000	2535	20.10	0.11	20.5	0.096	1.096	0.105
	NR n7 /1@1 NSA	0	Left Tilted	507000	2535	20.10	-0.13	20.5	0.115	1.096	0.126
	NR n7 /25@12 NSA	0	Right Cheek	502000	2510	20.21	0.08	20.5	0.218	1.069	0.233
	NR n7 /25@12 NSA	0	Right Tilted	502000	2510	20.21	-0.14	20.5	0.265	1.069	0.283
	NR n7 /25@12 NSA	0	Left Cheek	502000	2510	20.21	-0.20	20.5	0.091	1.069	0.097
	NR n7 /25@12 NSA	0	Left Tilted	502000	2510	20.21	-0.20	20.5	0.101	1.069	0.108
<b>ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population</b>						<b>1.6 W/kg (mW/g) Averaged over 1g</b>					

➤ NR n12(15MHz) DFT-BPSK Head SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR <sub>1g</sub> (W/kg)	Scaling Factor	Reported SAR <sub>1g</sub> (W/kg)
14	NR n12 /1@1	0	Right Cheek	141700	708.5	22.81	-0.01	23.0	<b>0.421</b>	1.045	0.440
	NR n12 /1@1	0	Right Tilted	141700	708.5	22.81	-0.14	23.0	0.345	1.045	0.361
	NR n12 /1@1	0	Left Cheek	141700	708.5	22.81	0.19	23.0	0.234	1.045	0.245
	NR n12 /1@1	0	Left Tilted	141700	708.5	22.81	-0.05	23.0	0.269	1.045	0.281
	NR n12 /18@9	0	Right Cheek	141700	708.5	22.82	0.04	23.0	0.415	1.042	0.432
	NR n12 /18@9	0	Right Tilted	141700	708.5	22.82	0.20	23.0	0.339	1.042	0.353
	NR n12 /18@9	0	Left Cheek	141700	708.5	22.82	-0.08	23.0	0.247	1.042	0.257
	NR n12 /18@9	0	Left Tilted	141700	708.5	22.82	0.19	23.0	0.253	1.042	0.264
<b>ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population</b>						<b>1.6 W/kg (mW/g) Averaged over 1g</b>					



## ➤ NR n41(100MHz) DFT-BPSK Head SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR <sub>1g</sub> (W/kg)	Scaling Factor	Reported SAR <sub>1g</sub> (W/kg)
	NR n41 /1 @1	0	Right Cheek	509202	2546.01	25.39	0.02	25.5	0.272	1.026	0.279
15	NR n41 /1 @1	0	Right Tilted	509202	2546.01	25.39	-0.06	25.5	<b>0.449</b>	1.026	0.461
	NR n41 /1 @1	0	Left Cheek	509202	2546.01	25.39	0.13	25.5	0.196	1.026	0.201
	NR n41 /1 @1	0	Left Tilted	509202	2546.01	25.39	0.08	25.5	0.367	1.026	0.377
	NR n41 /135@67	0	Right Cheek	509202	2546.01	26.32	0.12	26.5	0.262	1.042	0.273
	NR n41 /135@67	0	Right Tilted	509202	2546.01	26.32	0.08	26.5	0.432	1.042	0.450
	NR n41 /135@67	0	Left Cheek	509202	2546.01	26.32	0.10	26.5	0.182	1.042	0.190
	NR n41 /135@67	0	Left Tilted	509202	2546.01	26.32	0.06	26.5	0.351	1.042	0.366
	NR n41 /1@271 NSA	0	Right Cheek	509202	2546.01	19.69	0.19	20.0	0.072	1.074	0.077
	NR n41 /1@271 NSA	0	Right Tilted	509202	2546.01	19.69	0.04	20.0	0.104	1.074	0.112
	NR n41 /1@271 NSA	0	Left Cheek	509202	2546.01	19.69	0.18	20.0	0.055	1.074	0.059
	NR n41 /1@271 NSA	0	Left Tilted	509202	2546.01	19.69	0.09	20.0	0.083	1.074	0.089
	NR n41 /135@67 NSA	0	Right Cheek	509202	2546.01	20.61	0.10	21.0	0.066	1.094	0.072
	NR n41 /135@67 NSA	0	Right Tilted	509202	2546.01	20.61	0.09	21.0	0.098	1.094	0.107
	NR n41 /135@67 NSA	0	Left Cheek	509202	2546.01	20.61	0.12	21.0	0.051	1.094	0.056
	NR n41 /135@67 NSA	0	Left Tilted	509202	2546.01	20.61	0.02	21.0	0.078	1.094	0.085
<b>ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population</b>						<b>1.6 W/kg (mW/g) Averaged over 1g</b>					

## ➤ NR n66(40MHz) DFT-BPSK Head SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR <sub>1g</sub> (W/kg)	Scaling Factor	Reported SAR <sub>1g</sub> (W/kg)
	NR n66 /1 @1	0	Right Cheek	346000	1730	22.52	0.17	23.0	0.326	1.117	0.364
16	NR n66 /1 @1	0	Right Tilted	346000	1730	22.52	-0.09	23.0	<b>0.609</b>	1.117	0.680
	NR n66 /1 @1	0	Left Cheek	346000	1730	22.52	0.09	23.0	0.274	1.117	0.306
	NR n66 /1 @1	0	Left Tilted	346000	1730	22.52	-0.14	23.0	0.489	1.117	0.546
	NR n66 /50@25	0	Right Cheek	346000	1730	22.93	0.20	23.5	0.308	1.140	0.351
	NR n66 /50@25	0	Right Tilted	346000	1730	22.93	0.02	23.5	0.582	1.140	0.663
	NR n66 /50@25	0	Left Cheek	346000	1730	22.93	-0.01	23.5	0.259	1.140	0.295
	NR n66 /50@25	0	Left Tilted	346000	1730	22.93	0.03	23.5	0.470	1.140	0.536
<b>ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population</b>						<b>1.6 W/kg (mW/g) Averaged over 1g</b>					

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

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR <sub>1g</sub> (W/kg)	Scaling Factor	Reported SAR <sub>1g</sub> (W/kg)
	NR n77 /1 @1	5	Right Cheek	633334	3500.01	24.88	-0.01	25.0	0.136	1.028	0.140
	NR n77 /1 @1	5	Right Tilted	633334	3500.01	24.88	0.13	25.0	0.083	1.028	0.085
17	NR n77 /1 @1	5	Left Cheek	633334	3500.01	24.88	0.19	25.0	<b>0.174</b>	1.028	0.179
	NR n77 /1 @1	5	Left Tilted	633334	3500.01	24.88	0.02	25.0	0.106	1.028	0.109
	NR n77 /135@67	5	Right Cheek	633334	3500.01	25.73	0.07	26.0	0.128	1.064	0.136
	NR n77 /135@67	5	Right Tilted	633334	3500.01	25.73	0.16	26.0	0.077	1.064	0.082
	NR n77 /135@67	5	Left Cheek	633334	3500.01	25.73	0.11	26.0	0.161	1.064	0.171
	NR n77 /135@67	5	Left Tilted	633334	3500.01	25.73	-0.11	26.0	0.100	1.064	0.106
	NR n77 /1@1 NSA	5	Right Cheek	633334	3500.01	17.92	0.08	18.0	0.082	1.019	0.084
	NR n77 /1@1 NSA	5	Right Tilted	633334	3500.01	17.92	0.17	18.0	0.051	1.019	0.052
	NR n77 /1@1 NSA	5	Left Cheek	633334	3500.01	17.92	0.08	18.0	0.122	1.019	0.124
	NR n77 /1@1 NSA	5	Left Tilted	633334	3500.01	17.92	0.01	18.0	0.074	1.019	0.075
	NR n77 /135@67 NSA	5	Right Cheek	633334	3500.01	18.69	0.15	19.0	0.076	1.074	0.082
	NR n77 /135@67 NSA	5	Right Tilted	633334	3500.01	18.69	0.07	19.0	0.048	1.074	0.052
	NR n77 /135@67 NSA	5	Left Cheek	633334	3500.01	18.69	-0.03	19.0	0.112	1.074	0.120
	NR n77 /135@67 NSA	5	Left Tilted	633334	3500.01	18.69	0.08	19.0	0.068	1.074	0.073
<b>ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population</b>						<b>1.6 W/kg (mW/g) Averaged over 1g</b>					

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

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR <sub>1g</sub> (W/kg)	Scaling Factor	Reported SAR <sub>1g</sub> (W/kg)	
	NR n77 /1@271	5	Right Cheek	662000	3930	25.11	-0.15	25.5	0.342	1.094	0.374	
	NR n77 /1@271	5	Right Tilted	662000	3930	25.11	0.17	25.5	0.187	1.094	0.205	
	NR n77 /1@271	5	Left Cheek	662000	3930	25.11	0.05	25.5	0.466	1.094	0.510	
	NR n77 /1@271	5	Left Tilted	662000	3930	25.11	0.08	25.5	0.273	1.094	0.299	
	NR n77 /135@67	5	Right Cheek	650000	3750	25.77	0.05	26.0	0.392	1.054	0.413	
	NR n77 /135@67	5	Right Tilted	650000	3750	25.77	0.06	26.0	0.223	1.054	0.235	
18	NR n77 /135@67	5	Left Cheek	650000	3750	25.77	-0.20	26.0	<b>0.545</b>	1.054	0.574	
	NR n77 /135@67	5	Left Tilted	650000	3750	25.77	0.03	26.0	0.331	1.054	0.349	
	NR n77 /1@271 NSA	5	Right Cheek	662000	3930	17.77	0.05	18.0	0.098	1.054	0.103	
	NR n77 /1@271 NSA	5	Right Tilted	662000	3930	17.77	-0.01	18.0	0.056	1.054	0.059	
	NR n77 /1@271 NSA	5	Left Cheek	662000	3930	17.77	0.20	18.0	0.136	1.054	0.143	
	NR n77 /1@271 NSA	5	Left Tilted	662000	3930	17.77	0.03	18.0	0.079	1.054	0.083	
	NR n77 /135@67 NSA	5	Right Cheek	650000	3750	18.55	0.16	19.0	0.106	1.109	0.118	
	NR n77 /135@67 NSA	5	Right Tilted	650000	3750	18.55	0.12	19.0	0.062	1.109	0.069	
	NR n77 /135@67 NSA	5	Left Cheek	650000	3750	18.55	0.03	19.0	0.151	1.109	0.167	
	NR n77 /135@67 NSA	5	Left Tilted	650000	3750	18.55	0.01	19.0	0.084	1.109	0.093	
<b>ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population</b>							<b>1.6 W/kg (mW/g) Averaged over 1g</b>					

➤ WLAN 2.4 GHz Head SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR <sub>1g</sub> (W/kg)	Scaling Factor	D.C Factor	Reported SAR <sub>1g</sub> (W/kg)
	2.4GHz/802.11b ant0	6	Right Cheek	11	2462	17.45	-0.12	17.5	0.098	1.012	1.000	0.099
	2.4GHz/802.11b ant0	6	Right Tilted	11	2462	17.45	0.18	17.5	0.063	1.012	1.000	0.064
19	2.4GHz/802.11b ant0	6	Left Cheek	11	2462	17.45	0.08	17.5	<b>0.282</b>	1.012	1.000	0.285
	2.4GHz/802.11b ant0	6	Left Tilted	11	2462	17.45	0.07	17.5	0.168	1.012	1.000	0.170
	2.4GHz/802.11b ant1	7	Right Cheek	11	2462	16.80	0.01	17.0	0.085	1.047	1.000	0.089
	2.4GHz/802.11b ant1	7	Right Tilted	11	2462	16.80	0.09	17.0	0.054	1.047	1.000	0.057
	2.4GHz/802.11b ant1	7	Left Cheek	11	2462	16.80	-0.07	17.0	0.213	1.047	1.000	0.223
	2.4GHz/802.11b ant1	7	Left Tilted	11	2462	16.80	0.19	17.0	0.123	1.047	1.000	0.129
<b>ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population</b>							<b>1.6 W/kg (mW/g) Averaged over 1g</b>					

➤ WLAN 5.2 GHz Head SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR <sub>1g</sub> (W/kg)	Scaling Factor	D.C Factor	Reported SAR <sub>1g</sub> (W/kg)
	5.2GHz/802.11a	6	Right Cheek	48	5240	13.85	-0.05	14.0	0.058	1.035	1.000	0.060
	5.2GHz/802.11a	6	Right Tilted	48	5240	13.85	-0.11	14.0	0.036	1.035	1.000	0.037
20	5.2GHz/802.11a	6	Left Cheek	48	5240	13.85	-0.03	14.0	<b>0.238</b>	1.035	1.000	0.246
	5.2GHz/802.11a	6	Left Tilted	48	5240	13.85	0.17	14.0	0.142	1.035	1.000	0.147
<b>ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population</b>							<b>1.6 W/kg (mW/g) Averaged over 1g</b>					

➤ WLAN 5.8 GHz Head SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR <sub>1g</sub> (W/kg)	Scaling Factor	D.C Factor	Reported SAR <sub>1g</sub> (W/kg)
	5.8GHz/802.11a	6	Right Cheek	157	5785	14.05	0.09	14.5	0.089	1.109	1.000	0.099
	5.8GHz/802.11a	6	Right Tilted	157	5785	14.05	0.16	14.5	0.052	1.109	1.000	0.058
21	5.8GHz/802.11a	6	Left Cheek	157	5785	14.05	0.04	14.5	<b>0.356</b>	1.109	1.000	0.395
	5.8GHz/802.11a	6	Left Tilted	157	5785	14.05	0.01	14.5	0.197	1.109	1.000	0.218
<b>ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population</b>							<b>1.6 W/kg (mW/g) Averaged over 1g</b>					

➤ Bluetooth Head SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR <sub>1g</sub> (W/kg)	Scaling Factor	D.C Factor	Reported SAR <sub>1g</sub> (W/kg)
	BT/π/4DQPSK ant0	6	Right Cheek	39	2441	11.80	0.04	12.0	0.025	1.047	1.000	0.026
	BT/π/4DQPSK ant0	6	Right Tilted	39	2441	11.80	0.15	12.0	0.018	1.047	1.000	0.019
22	BT/π/4DQPSK ant0	6	Left Cheek	39	2441	11.80	-0.01	12.0	<b>0.056</b>	1.047	1.000	0.059
	BT/π/4DQPSK ant0	6	Left Tilted	39	2441	11.80	-0.12	12.0	0.030	1.047	1.000	0.031
	BT/π/4DQPSK ant1	7	Right Cheek	39	2441	8.47	0.19	9.0	0.021	1.13	1.000	0.024
	BT/π/4DQPSK ant1	7	Right Tilted	39	2441	8.47	-0.08	9.0	0.015	1.13	1.000	0.017
	BT/π/4DQPSK ant1	7	Left Cheek	39	2441	8.47	-0.06	9.0	0.046	1.13	1.000	0.052
	BT/π/4DQPSK ant1	7	Left Tilted	39	2441	8.47	0.12	9.0	0.026	1.13	1.000	0.029
<b>ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population</b>						<b>1.6 W/kg (mW/g) Averaged over 1g</b>						

**Note:**

1. Per KDB 447498 D04v01, for each exposure position, if the highest output power channel Reported SAR ≤ 0.8W/kg, other channels SAR testing is not necessary.
2. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required when the measured SAR is ≥ 0.8W/kg.
3. Per KDB 941225 D05v02r05, 100% RB allocation SAR measurement is not required when the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg.
4. Per KDB 248227 D01v02r02, for 802.11b DSSS , when the reported SAR of the highest measured maximum output power channel for the exposure configuration is ≤ 0.8 W/kg, no further SAR testing is required in that exposure configuration.
5. 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 56.23mW(17.5dBm), the scaled SAR would be  $0.285 \times (25.12/56.23) = 0.127 \text{ W/Kg} < 1.2 \text{ W/kg}$ , therefore, SAR is not required for OFDM.
6. 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)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR <sub>1g</sub> (W/kg)	Scaling Factor	Reported SAR <sub>1g</sub> (W/kg)
	GPRS850/2 slots	0	Front	190	836.6	32.62	0.14	33.0	0.022	1.091	0.024
23	GPRS850/2 slots	0	Back	190	836.6	32.62	-0.01	33.0	<b>0.047</b>	1.091	0.051
	GPRS1900/2 slots	0	Front	661	1880	29.34	0.11	29.5	0.178	1.038	0.185
24	GPRS1900/2 slots	0	Back	661	1880	29.34	0.05	29.5	<b>0.359</b>	1.038	0.373
<b>ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population</b>						<b>1.6 W/kg (mW/g) Averaged over 1g</b>					

### ➤ WCDMA Body SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR <sub>1g</sub> (W/kg)	Scaling Factor	Reported SAR <sub>1g</sub> (W/kg)
	Band II/RMC	0	Front	9538	1907.6	23.38	0.15	23.5	0.128	1.028	0.132
25	Band II/RMC	0	Back	9538	1907.6	23.38	-0.10	23.5	<b>0.219</b>	1.028	0.225
	Band IV/RMC	0	Front	1413	1732.6	22.87	0.04	23.0	0.102	1.030	0.105
26	Band IV/RMC	0	Back	1413	1732.6	22.87	-0.03	23.0	<b>0.153</b>	1.030	0.158
	Band V/RMC	0	Front	4183	836.6	23.21	0.09	23.5	0.108	1.069	0.115
27	Band V/RMC	0	Back	4183	836.6	23.21	-0.04	23.5	<b>0.171</b>	1.069	0.183
<b>ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population</b>						<b>1.6 W/kg (mW/g) Averaged over 1g</b>					

### ➤ FDD-LTE Band 2(20MHz) QPSK Body SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR <sub>1g</sub> (W/kg)	Scaling Factor	Reported SAR <sub>1g</sub> (W/kg)
	Band2/1RB#49	0	Front	19100	1900	23.29	-0.01	23.5	0.106	1.050	0.111
28	Band2/1RB#49	0	Back	19100	1900	23.29	-0.04	23.5	<b>0.164</b>	1.050	0.172
	Band2/50%RB#49	0	Front	19100	1900	22.15	0.04	22.5	0.094	1.084	0.102
	Band2/50%RB#49	0	Back	19100	1900	22.15	0.06	22.5	0.147	1.084	0.159
<b>ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population</b>						<b>1.6 W/kg (mW/g) Averaged over 1g</b>					

### ➤ FDD-LTE Band 5(10MHz) QPSK Body SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR <sub>1g</sub> (W/kg)	Scaling Factor	Reported SAR <sub>1g</sub> (W/kg)
	Band5/1RB#0	0	Front	20600	844	23.48	0.04	24.0	0.120	1.127	0.135
29	Band5/1RB#0	0	Back	20600	844	23.48	-0.06	24.0	<b>0.163</b>	1.127	0.184
	Band5/50%RB#12	0	Front	20600	844	22.44	-0.04	22.5	0.105	1.014	0.106
	Band5/50%RB#12	0	Back	20600	844	22.44	0.15	22.5	0.155	1.014	0.157
<b>ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population</b>						<b>1.6 W/kg (mW/g) Averaged over 1g</b>					

➤ FDD-LTE Band 7(20MHz) QPSK Body SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR <sub>1g</sub> (W/kg)	Scaling Factor	Reported SAR <sub>1g</sub> (W/kg)
	Band7/1RB#49	0	Front	21350	2560	23.63	0.03	24.0	0.154	1.089	0.168
30	Band7/1RB#49	0	Back	21350	2560	23.63	0.19	24.0	<b>0.497</b>	1.089	0.541
	Band7/50%RB#24	0	Front	21350	2560	22.58	-0.06	23.0	0.141	1.102	0.155
	Band7/50%RB#24	0	Back	21350	2560	22.58	0.07	23.0	0.465	1.102	0.512
	Band7/1RB#49	5	Front	20850	2510	21.98	0.02	22.5	0.068	1.127	0.077
	Band7/1RB#49	5	Back	20850	2510	21.98	0.03	22.5	0.117	1.127	0.132
	Band7/50%RB#24	5	Front	20850	2510	21.09	-0.13	21.5	0.062	1.099	0.068
	Band7/50%RB#24	5	Back	20850	2510	21.09	0.04	21.5	0.125	1.099	0.137
<b>ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population</b>						<b>1.6 W/kg (mW/g) Averaged over 1g</b>					

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

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR <sub>1g</sub> (W/kg)	Scaling Factor	Reported SAR <sub>1g</sub> (W/kg)
	Band12/1RB#49	0	Front	23130	711	23.49	0.08	24.0	0.134	1.125	0.151
31	Band12/1RB#49	0	Back	23130	711	23.49	-0.04	24.0	<b>0.179</b>	1.125	0.201
	Band12/50%RB#0	0	Front	20360	704	22.37	-0.17	22.5	0.125	1.030	0.129
	Band12/50%RB#0	0	Back	20360	704	22.37	-0.07	22.5	0.166	1.030	0.171
<b>ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population</b>						<b>1.6 W/kg (mW/g) Averaged over 1g</b>					

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

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR <sub>1g</sub> (W/kg)	Scaling Factor	D.C Factor	Reported SAR <sub>1g</sub> (W/kg)
	Band41/1RB#49	0	Front	41490	2680	22.78	0.01	23.0	0.116	1.052	1.008	0.123
32	Band41/1RB#49	0	Back	41490	2680	22.78	0.07	23.0	<b>0.362</b>	1.052	1.008	0.384
	Band41/50%RB#0	0	Front	41490	2680	21.77	0.01	22.0	0.104	1.054	1.008	0.110
	Band41/50%RB#0	0	Back	41490	2680	21.77	-0.05	22.0	0.344	1.054	1.008	0.365
	Band41/1RB#49	5	Front	39750	2506	21.30	0.08	21.5	0.054	1.047	1.008	0.057
	Band41/1RB#49	5	Back	39750	2506	21.30	-0.11	21.5	0.093	1.047	1.008	0.098
	Band41/50%RB#24	5	Front	39750	2506	20.20	-0.14	20.5	0.051	1.072	1.008	0.055
	Band41/50%RB#24	5	Back	39750	2506	20.20	-0.14	20.5	0.088	1.072	1.008	0.095
<b>ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population</b>						<b>1.6 W/kg (mW/g) Averaged over 1g</b>						

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

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR <sub>1g</sub> (W/kg)	Scaling Factor	Reported SAR <sub>1g</sub> (W/kg)
	Band66/1RB#99	0	Front	132072	1720	23.46	-0.13	24.5	0.085	1.271	0.108
33	Band66/1RB#99	0	Back	132072	1720	23.46	0.01	24.5	<b>0.135</b>	1.271	0.172
	Band66/50%RB#0	0	Front	132572	1770	22.39	-0.03	22.5	0.078	1.026	0.080
	Band66/50%RB#0	0	Back	132572	1770	22.39	-0.15	22.5	0.124	1.026	0.127
	Band66/1RB#49	5	Front	132572	1770	19.78	-0.01	20.0	0.009	1.052	0.009
	Band66/1RB#49	5	Back	132572	1770	19.78	0.18	20.0	0.020	1.052	0.021
	Band66/50%RB#49	5	Front	132572	1770	18.75	0.13	19.00	0.008	1.059	0.008
	Band66/50%RB#49	5	Back	132572	1770	18.75	-0.17	19.00	0.018	1.059	0.019
<b>ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population</b>						<b>1.6 W/kg (mW/g) Averaged over 1g</b>					

## ➤ NR n5(20MHz) DFT-BPSK Body SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR <sub>1g</sub> (W/kg)	Scaling Factor	Reported SAR <sub>1g</sub> (W/kg)
	NR n5 /1@1	0	Front	167300	836.5	22.95	0.02	23.0	0.096	1.012	0.097
34	NR n5 /1@1	0	Back	167300	836.5	22.95	-0.03	23.0	<b>0.163</b>	1.012	0.165
	NR n5 /25@12	0	Front	167300	836.5	23.14	0.14	23.5	0.088	1.086	0.096
	NR n5 /25@12	0	Back	167300	836.5	23.14	0.02	23.5	0.150	1.086	0.163
<b>ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population</b>						<b>1.6 W/kg (mW/g) Averaged over 1g</b>					

## ➤ NR n7(20MHz) DFT-BPSK Body SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR <sub>1g</sub> (W/kg)	Scaling Factor	Reported SAR <sub>1g</sub> (W/kg)
	NR n7 /1@49	0	Front	512000	2560	23.03	0.12	23.5	0.289	1.114	0.322
35	NR n7 /1@49	0	Back	512000	2560	23.03	-0.08	23.5	<b>0.519</b>	1.114	0.578
	NR n7 /25@12	0	Front	502000	2510	23.26	0.17	23.5	0.270	1.057	0.285
	NR n7 /25@12	0	Back	502000	2510	23.26	0.05	23.5	0.492	1.057	0.520
	NR n7 /1@1 NSA	0	Front	507000	2535	20.10	0.13	20.5	0.148	1.096	0.162
	NR n7 /1@1 NSA	0	Back	507000	2535	20.10	0.12	20.5	0.275	1.096	0.301
	NR n7 /25@12 NSA	0	Front	502000	2510	20.21	0.18	20.5	0.139	1.069	0.149
	NR n7 /25@12 NSA	0	Back	502000	2510	20.21	0.02	20.5	0.260	1.069	0.278
<b>ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population</b>						<b>1.6 W/kg (mW/g) Averaged over 1g</b>					

## ➤ NR n12(15MHz) DFT-BPSK Body SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR <sub>1g</sub> (W/kg)	Scaling Factor	Reported SAR <sub>1g</sub> (W/kg)
	NR n12 /1@1	0	Front	141700	708.5	22.81	0.04	23.0	0.088	1.045	0.092
36	NR n12 /1@1	0	Back	141700	708.5	22.81	-0.05	23.0	<b>0.140</b>	1.045	0.146
	NR n12 /18@9	0	Front	141700	708.5	22.82	0.12	23.0	0.082	1.042	0.085
	NR n12 /18@9	0	Back	141700	708.5	22.82	0.03	23.0	0.128	1.042	0.133
<b>ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population</b>						<b>1.6 W/kg (mW/g) Averaged over 1g</b>					

## ➤ NR n41(100MHz) DFT-BPSK Body SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR <sub>1g</sub> (W/kg)	Scaling Factor	Reported SAR <sub>1g</sub> (W/kg)
	NR n41 /1@1	0	Front	509202	2546.01	25.39	0.15	25.5	0.173	1.026	0.177
37	NR n41 /1@1	0	Back	509202	2546.01	25.39	0.11	25.5	<b>0.482</b>	1.026	0.495
	NR n41 /135@67	0	Front	509202	2546.01	26.32	0.04	26.5	0.162	1.042	0.169
	NR n41 /135@67	0	Back	509202	2546.01	26.32	0.16	26.5	0.466	1.042	0.486
	NR n41 /1@1 NSA	0	Front	509202	2546.01	19.69	0.14	20.0	0.063	1.074	0.068
	NR n41 /1@1 NSA	0	Back	509202	2546.01	19.69	0.09	20.0	0.143	1.074	0.154
	NR n41 /135@67 NSA	0	Front	509202	2546.01	20.61	0.01	21.0	0.058	1.094	0.063
	NR n41 /135@67 NSA	0	Back	509202	2546.01	20.61	0.15	21.0	0.136	1.094	0.149
<b>ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population</b>						<b>1.6 W/kg (mW/g) Averaged over 1g</b>					

➤ NR n66(40MHz) DFT-BPSK Body SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR <sub>1g</sub> (W/kg)	Scaling Factor	Reported SAR <sub>1g</sub> (W/kg)
	NR n66/1 @1	0	Front	346000	1730	22.52	-0.06	23.0	0.078	1.117	0.087
38	NR n66/1 @1	0	Back	346000	1730	22.52	-0.08	23.0	<b>0.117</b>	1.117	0.131
	NR n66 /50 @25	0	Front	346000	1730	22.93	0.18	23.5	0.072	1.140	0.082
	NR n66 /50 @25	0	Back	346000	1730	22.93	0.01	23.5	0.110	1.140	0.125
<b>ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population</b>						<b>1.6 W/kg (mW/g) Averaged over 1g</b>					

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

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR <sub>1g</sub> (W/kg)	Scaling Factor	Reported SAR <sub>1g</sub> (W/kg)
	NR n77 /1 @1	4	Front	633334	3500.01	24.88	0.00	25.0	0.036	1.028	0.037
39	NR n77 /1 @1	4	Back	633334	3500.01	24.88	0.00	25.0	<b>0.076</b>	1.028	0.078
	NR n77 /135 @67	4	Front	633334	3500.01	25.73	-0.06	26.0	0.032	1.064	0.034
	NR n77 /135 @67	4	Back	633334	3500.01	25.73	0.05	26.0	0.071	1.064	0.076
	NR n77 /1 @1 NSA	4	Front	633334	3500.01	17.92	0.05	18.0	0.010	1.019	0.010
	NR n77 /1 @1 NSA	4	Back	633334	3500.01	17.92	-0.06	18.0	0.018	1.019	0.018
	NR n77 /135 @67 NSA	4	Front	633334	3500.01	18.69	0.15	19.0	0.009	1.074	0.010
	NR n77 /135 @67 NSA	4	Back	633334	3500.01	18.69	0.20	19.0	0.016	1.074	0.017
<b>ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population</b>						<b>1.6 W/kg (mW/g) Averaged over 1g</b>					

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

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR <sub>1g</sub> (W/kg)	Scaling Factor	Reported SAR <sub>1g</sub> (W/kg)
	NR n77 /1 @271	4	Front	662000	3930	25.11	-0.07	25.5	0.048	1.094	0.053
	NR n77 /1 @271	4	Back	662000	3930	25.11	-0.15	25.5	0.103	1.094	0.113
	NR n77 /135 @67	4	Front	650000	3750	25.77	0.04	26.0	0.051	1.054	0.054
40	NR n77 /135 @67	4	Back	650000	3750	25.77	-0.04	26.0	<b>0.109</b>	1.054	0.115
	NR n77 /1 @271 NSA	4	Front	662000	3930	17.77	0.17	18.0	0.009	1.054	0.009
	NR n77 /1 @271 NSA	4	Back	662000	3930	17.77	0.01	18.0	0.016	1.054	0.017
	NR n77 /135 @67 NSA	4	Front	650000	3750	18.55	0.19	19.0	0.008	1.109	0.009
	NR n77 /135 @67 NSA	4	Back	650000	3750	18.55	-0.03	19.0	0.014	1.109	0.016
<b>ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population</b>						<b>1.6 W/kg (mW/g) Averaged over 1g</b>					

➤ WLAN 2.4GHz Body SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR <sub>1g</sub> (W/kg)	Scaling Factor	D.C Factor	Reported SAR <sub>1g</sub> (W/kg)
	2.4GHz/802.11b ant0	6	Front	11	2462	17.45	0.05	17.5	0.091	1.012	1.000	0.092
41	2.4GHz/802.11b ant0	6	Back	11	2462	17.45	-0.15	17.5	<b>0.119</b>	1.012	1.000	0.120
	2.4GHz/802.11b ant1	7	Front	11	2462	16.80	0.03	17.0	0.038	1.047	1.000	0.040
	2.4GHz/802.11b ant1	7	Back	11	2462	16.80	-0.01	17.0	0.052	1.047	1.000	0.054
<b>ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population</b>						<b>1.6 W/kg (mW/g) Averaged over 1g</b>						

## &gt; WLAN 5.2GHz Body SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR <sub>1g</sub> (W/kg)	Scaling Factor	D.C Factor	Reported SAR <sub>1g</sub> (W/kg)
	5.2GHz/802.11a	6	Front	48	5240	13.85	-0.06	14.0	0.105	1.035	1.000	0.109
42	5.2GHz/802.11a	6	Back	48	5240	13.85	-0.09	14.0	<b>0.165</b>	1.035	1.000	0.171
<b>ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population</b>									<b>1.6 W/kg (mW/g) Averaged over 1g</b>			

## &gt; WLAN 5.8GHz Body SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR <sub>1g</sub> (W/kg)	Scaling Factor	D.C Factor	Reported SAR <sub>1g</sub> (W/kg)
	5.8GHz/802.11a	6	Front	157	5785	14.05	0.15	14.5	0.167	1.109	1.000	0.185
43	5.8GHz/802.11a	6	Back	157	5785	14.05	-0.03	14.5	<b>0.244</b>	1.109	1.000	0.271
<b>ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population</b>									<b>1.6 W/kg (mW/g) Averaged over 1g</b>			

## &gt; Bluetooth Body SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR <sub>1g</sub> (W/kg)	Scaling Factor	D.C Factor	Reported SAR <sub>1g</sub> (W/kg)
	BT/π/4DQPSK ant0	6	Front	39	2441	11.80	-0.08	12.0	0.013	1.047	1.000	0.014
44	BT/π/4DQPSK ant0	6	Back	39	2441	11.80	-0.03	12.0	<b>0.021</b>	1.047	1.000	0.022
	BT/π/4DQPSK ant1	7	Front	39	2441	8.47	-0.04	9.0	0.007	1.13	1.000	0.008
	BT/π/4DQPSK ant1	7	Back	39	2441	8.47	-0.05	9.0	0.012	1.13	1.000	0.014
<b>ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population</b>									<b>1.6 W/kg (mW/g) Averaged over 1g</b>			

**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  $\leq 1.2$  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  $\leq 0.8$ 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  $\geq 0.8$ 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  $\leq 0.8$  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)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR <sub>1g</sub> (W/kg)	Scaling Factor	Reported SAR <sub>1g</sub> (W/kg)
	GPRS850/2 slots	0	Front	190	836.6	32.62	0.14	33.0	0.022	1.091	0.024
23	GPRS850/2 slots	0	Back	190	836.6	32.62	-0.01	33.0	<b>0.047</b>	1.091	0.051
	GPRS850/2 slots	0	Left	190	836.6	32.62	0.06	33.0	0.019	1.091	0.021
	GPRS850/2 slots	0	Top	190	836.6	32.62	-0.05	33.0	0.029	1.091	0.032
	GPRS1900/2 slots	0	Front	661	1880	29.34	0.11	29.5	0.178	1.038	0.185
	GPRS1900/2 slots	0	Back	661	1880	29.34	0.05	29.5	0.359	1.038	0.373
	GPRS1900/2 slots	0	Left	661	1880	29.34	0.13	29.5	0.194	1.038	0.201
45	GPRS1900/2 slots	0	Top	661	1880	29.34	0.09	29.5	<b>0.634</b>	1.038	0.658
<b>ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population</b>						<b>1.6 W/kg (mW/g) Averaged over 1g</b>					

➤ WCDMA Body SAR in Hotspot mode

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR <sub>1g</sub> (W/kg)	Scaling Factor	Reported SAR <sub>1g</sub> (W/kg)
	Band II/RMC	0	Front	9538	1907.6	23.38	0.15	23.5	0.128	1.028	0.132
	Band II/RMC	0	Back	9538	1907.6	23.38	-0.10	23.5	0.219	1.028	0.225
	Band II/RMC	0	Left	9538	1907.6	23.38	0.18	23.5	0.112	1.028	0.115
46	Band II/RMC	0	Top	9538	1907.6	23.38	-0.01	23.5	<b>0.340</b>	1.028	0.350
	Band IV/RMC	0	Front	1413	1732.6	22.87	0.04	23.0	0.102	1.030	0.105
	Band IV/RMC	0	Back	1413	1732.6	22.87	-0.03	23.0	0.153	1.030	0.158
	Band IV/RMC	0	Left	1413	1732.6	22.87	-0.16	23.0	0.072	1.030	0.074
47	Band IV/RMC	0	Top	1413	1732.6	22.87	-0.15	23.0	<b>0.232</b>	1.030	0.239
	Band V/RMC	0	Front	4183	836.6	23.21	0.09	23.5	0.108	1.069	0.115
27	Band V/RMC	0	Back	4183	836.6	23.21	-0.04	23.5	<b>0.171</b>	1.069	0.183
	Band V/RMC	0	Left	4183	836.6	23.21	0.05	23.5	0.096	1.069	0.103
	Band V/RMC	0	Top	4183	836.6	23.21	0.14	23.5	0.136	1.069	0.145
<b>ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population</b>						<b>1.6 W/kg (mW/g) Averaged over 1g</b>					

➤ FDD-LTE Band 2(20MHz) QPSK Body SAR in Hotspot mode

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR <sub>1g</sub> (W/kg)	Scaling Factor	Reported SAR <sub>1g</sub> (W/kg)
	Band2/1RB#49	0	Front	19100	1900	23.29	-0.01	23.5	0.106	1.050	0.111
	Band2/1RB#49	0	Back	19100	1900	23.29	-0.04	23.5	0.164	1.050	0.172
	Band2/1RB#49	0	Left	19100	1900	23.29	0.03	23.5	0.025	1.050	0.026
48	Band2/1RB#49	0	Top	19100	1900	23.29	-0.19	23.5	<b>0.252</b>	1.050	0.265
	Band2/50%RB#49	0	Front	19100	1900	22.15	0.04	22.5	0.094	1.084	0.102
	Band2/50%RB#49	0	Back	19100	1900	22.15	0.06	22.5	0.147	1.084	0.159
	Band2/50%RB#49	0	Left	19100	1900	22.15	0.17	22.5	0.020	1.084	0.022
	Band2/50%RB#49	0	Top	19100	1900	22.15	-0.17	22.5	0.236	1.084	0.256
<b>ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population</b>						<b>1.6 W/kg (mW/g) Averaged over 1g</b>					

## ➤ FDD-LTE Band 5(10MHz) QPSK Body SAR in Hotspot mode

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR <sub>1g</sub> (W/kg)	Scaling Factor	Reported SAR <sub>1g</sub> (W/kg)
	Band5/1RB#0	0	Front	20600	844	23.48	0.04	24.0	0.120	1.127	0.135
29	Band5/1RB#0	0	Back	20600	844	23.48	-0.06	24.0	<b>0.163</b>	1.127	0.184
	Band5/1RB#0	0	Left	20600	844	23.48	-0.16	24.0	0.120	1.127	0.135
	Band5/1RB#0	0	Top	20600	844	23.48	-0.03	24.0	0.126	1.127	0.142
	Band5/50%RB#12	0	Front	20600	844	22.44	-0.04	22.5	0.105	1.014	0.106
	Band5/50%RB#12	0	Back	20600	844	22.44	0.15	22.5	0.155	1.014	0.157
	Band5/50%RB#12	0	Left	20600	844	22.44	-0.15	22.5	0.101	1.014	0.102
	Band5/50%RB#12	0	Top	20600	844	22.44	-0.17	22.5	0.107	1.014	0.108
<b>ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population</b>						<b>1.6 W/kg (mW/g) Averaged over 1g</b>					

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

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR <sub>1g</sub> (W/kg)	Scaling Factor	Reported SAR <sub>1g</sub> (W/kg)
	Band7/1RB#49	0	Front	21350	2560	23.63	0.03	24.0	0.154	1.089	0.168
30	Band7/1RB#49	0	Back	21350	2560	23.63	0.19	24.0	<b>0.497</b>	1.089	0.541
	Band7/1RB#49	0	Left	21350	2560	23.63	0.03	24.0	0.038	1.089	0.041
	Band7/1RB#49	0	Top	21350	2560	23.63	-0.07	24.0	0.393	1.089	0.428
	Band7/50%RB#24	0	Front	21350	2560	22.58	-0.06	23.0	0.141	1.102	0.155
	Band7/50%RB#24	0	Back	21350	2560	22.58	0.07	23.0	0.465	1.102	0.512
	Band7/50%RB#24	0	Left	21350	2560	22.58	0.11	23.0	0.033	1.102	0.036
	Band7/50%RB#24	0	Top	21350	2560	22.58	-0.04	23.0	0.377	1.102	0.415
	Band7/1RB#49	5	Front	20850	2510	21.98	0.02	22.5	0.068	1.127	0.077
	Band7/1RB#49	5	Back	20850	2510	21.98	0.03	22.5	0.117	1.127	0.132
	Band7/1RB#49	5	Left	20850	2510	21.98	0.08	22.5	0.163	1.127	0.184
	Band7/50%RB#24	5	Front	20850	2510	21.09	-0.13	21.5	0.062	1.099	0.068
	Band7/50%RB#24	5	Back	20850	2510	21.09	0.04	21.5	0.125	1.099	0.137
	Band7/50%RB#24	5	Left	20850	2510	21.09	-0.17	21.5	0.176	1.099	0.193
<b>ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population</b>						<b>1.6 W/kg (mW/g) Averaged over 1g</b>					

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

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR <sub>1g</sub> (W/kg)	Scaling Factor	Reported SAR <sub>1g</sub> (W/kg)
	Band12/1RB#49	0	Front	23130	711	23.49	0.08	24.0	0.134	1.125	0.151
31	Band12/1RB#49	0	Back	23130	711	23.49	-0.04	24.0	<b>0.179</b>	1.125	0.201
	Band12/1RB#49	0	Left	23130	711	23.49	-0.08	24.0	0.126	1.125	0.142
	Band12/1RB#49	0	Top	23130	711	23.49	-0.13	24.0	0.131	1.125	0.147
	Band12/50%RB#0	0	Front	20360	704	22.37	-0.17	22.5	0.125	1.030	0.129
	Band12/50%RB#0	0	Back	20360	704	22.37	-0.07	22.5	0.166	1.030	0.171
	Band12/50%RB#0	0	Left	20360	704	22.37	-0.12	22.5	0.121	1.030	0.125
	Band12/50%RB#0	0	Top	20360	704	22.37	0.07	22.5	0.129	1.030	0.133
<b>ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population</b>						<b>1.6 W/kg (mW/g) Averaged over 1g</b>					

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

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR <sub>1g</sub> (W/kg)	Scaling Factor	D.C Factor	Reported SAR <sub>1g</sub> (W/kg)
	Band41/1RB#49	0	Front	41490	2680	22.78	0.01	23.0	0.116	1.052	1.008	0.123
32	Band41/1RB#49	0	Back	41490	2680	22.78	0.07	23.0	<b>0.362</b>	1.052	1.008	0.384
	Band41/1RB#49	0	Left	41490	2680	22.78	-0.17	23.0	0.025	1.052	1.008	0.027
	Band41/1RB#49	0	Top	41490	2680	22.78	-0.16	23.0	0.318	1.052	1.008	0.337
	Band41/50%RB#0	0	Front	41490	2680	21.77	0.01	22.0	0.104	1.054	1.008	0.110
	Band41/50%RB#0	0	Back	41490	2680	21.77	-0.05	22.0	0.344	1.054	1.008	0.365
	Band41/50%RB#0	0	Left	41490	2680	21.77	-0.05	22.0	0.022	1.054	1.008	0.023
	Band41/50%RB#0	0	Top	41490	2680	21.77	0.07	22.0	0.303	1.054	1.008	0.322
	Band41/1RB#49	5	Front	39750	2506	21.30	0.08	21.5	0.054	1.047	1.008	0.057
	Band41/1RB#49	5	Back	39750	2506	21.30	-0.11	21.5	0.093	1.047	1.008	0.098
	Band41/1RB#49	5	Left	39750	2506	21.30	-0.11	21.5	0.146	1.047	1.008	0.154
	Band41/50%RB#24	5	Front	39750	2506	20.20	-0.14	20.5	0.051	1.072	1.008	0.055
	Band41/50%RB#24	5	Back	39750	2506	20.20	-0.14	20.5	0.088	1.072	1.008	0.095
	Band41/50%RB#24	5	Left	39750	2506	20.20	0.06	20.5	0.137	1.072	1.008	0.148
<b>ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population</b>								<b>1.6 W/kg (mW/g) Averaged over 1g</b>				

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

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR <sub>1g</sub> (W/kg)	Scaling Factor	Reported SAR <sub>1g</sub> (W/kg)	
	Band66/1RB#99	0	Front	132072	1720	23.46	-0.13	24.5	0.085	1.271	0.108	
	Band66/1RB#99	0	Back	132072	1720	23.46	0.01	24.5	0.135	1.271	0.172	
	Band66/1RB#99	0	Left	132072	1720	23.46	0.08	24.5	0.019	1.271	0.024	
49	Band66/1RB#99	0	Top	132072	1720	23.46	-0.13	24.5	<b>0.221</b>	1.271	0.281	
	Band66/50%RB#0	0	Front	132572	1770	22.39	-0.03	22.5	0.078	1.026	0.080	
	Band66/50%RB#0	0	Back	132572	1770	22.39	-0.15	22.5	0.124	1.026	0.127	
	Band66/50%RB#0	0	Left	132572	1770	22.39	-0.05	22.5	0.015	1.026	0.015	
	Band66/50%RB#0	0	Top	132572	1770	22.39	-0.01	22.5	0.203	1.026	0.208	
	Band66/1RB#49	5	Front	132572	1770	19.78	-0.01	20.0	0.009	1.052	0.009	
	Band66/1RB#49	5	Back	132572	1770	19.78	0.18	20.0	0.020	1.052	0.021	
	Band66/1RB#49	5	Left	132572	1770	19.78	-0.01	20.0	0.031	1.052	0.033	
	Band66/50%RB#49	5	Front	132572	1770	18.75	0.13	19.00	0.008	1.059	0.008	
	Band66/50%RB#49	5	Back	132572	1770	18.75	-0.17	19.00	0.018	1.059	0.019	
	Band66/50%RB#49	5	Left	132572	1770	18.75	-0.19	19.00	0.023	1.059	0.024	
<b>ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population</b>								<b>1.6 W/kg (mW/g) Averaged over 1g</b>				

➤ NR n5(20MHz) DFT-BPSK Body SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR <sub>1g</sub> (W/kg)	Scaling Factor	Reported SAR <sub>1g</sub> (W/kg)	
	NR n5 /1 @1	0	Front	167300	836.5	22.95	0.02	23.0	0.096	1.012	0.097	
34	NR n5 /1 @1	0	Back	167300	836.5	22.95	-0.03	23.0	<b>0.163</b>	1.012	0.165	
	NR n5 /1 @1	0	Left	167300	836.5	22.95	0.08	23.0	0.063	1.012	0.064	
	NR n5 /1 @1	0	Top	167300	836.5	22.95	0.11	23.0	0.139	1.012	0.141	
	NR n5 /25 @12	0	Front	167300	836.5	23.14	0.14	23.5	0.088	1.086	0.096	
	NR n5 /25 @12	0	Back	167300	836.5	23.14	0.02	23.5	0.150	1.086	0.163	
	NR n5 /25 @12	0	Left	167300	836.5	23.14	0.15	23.5	0.059	1.086	0.064	
	NR n5 /25 @12	0	Top	167300	836.5	23.14	0.18	23.5	0.132	1.086	0.143	
<b>ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population</b>								<b>1.6 W/kg (mW/g) Averaged over 1g</b>				

➤ NR n7(20MHz) DFT-BPSK Body SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR <sub>1g</sub> (W/kg)	Scaling Factor	Reported SAR <sub>1g</sub> (W/kg)
	NR n7 /1@49	0	Front	512000	2560	23.03	0.12	23.5	0.289	1.114	0.322
35	NR n7 /1@49	0	Back	512000	2560	23.03	-0.08	23.5	<b>0.519</b>	1.114	0.578
	NR n7 /1@49	0	Left	512000	2560	23.03	0.18	23.5	0.226	1.114	0.252
	NR n7 /1@49	0	Top	512000	2560	23.03	0.01	23.5	0.404	1.114	0.450
	NR n7 /25@12	0	Front	502000	2510	23.26	0.17	23.5	0.270	1.057	0.285
	NR n7 /25@12	0	Back	502000	2510	23.26	0.05	23.5	0.492	1.057	0.520
	NR n7 /25@12	0	Left	502000	2510	23.26	0.13	23.5	0.208	1.057	0.220
	NR n7 /25@12	0	Top	502000	2510	23.26	0.07	23.5	0.386	1.057	0.408
	NR n7 /1@1 NSA	0	Front	507000	2535	20.10	0.13	20.5	0.148	1.096	0.162
	NR n7 /1@1 NSA	0	Back	507000	2535	20.10	0.12	20.5	0.275	1.096	0.301
	NR n7 /1@1 NSA	0	Left	507000	2535	20.10	0.19	20.5	0.122	1.096	0.134
	NR n7 /1@1 NSA	0	Top	507000	2535	20.10	-0.07	20.5	0.232	1.096	0.254
	NR n7 /25@12 NSA	0	Front	502000	2510	20.21	0.18	20.5	0.139	1.069	0.149
	NR n7 /25@12 NSA	0	Back	502000	2510	20.21	0.02	20.5	0.260	1.069	0.278
	NR n7 /25@12 NSA	0	Left	502000	2510	20.21	-0.06	20.5	0.112	1.069	0.120
	NR n7 /25@12 NSA	0	Top	502000	2510	20.21	0.02	20.5	0.221	1.069	0.236
<b>ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population</b>						<b>1.6 W/kg (mW/g) Averaged over 1g</b>					

➤ NR n12(15MHz) DFT-BPSK Body SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR <sub>1g</sub> (W/kg)	Scaling Factor	Reported SAR <sub>1g</sub> (W/kg)
	NR n12 /1@1	0	Front	141700	708.5	22.81	0.04	23.0	0.088	1.045	0.092
36	NR n12 /1@1	0	Back	141700	708.5	22.81	-0.05	23.0	<b>0.140</b>	1.045	0.146
	NR n12 /1@1	0	Left	141700	708.5	22.81	0.07	23.0	0.074	1.045	0.077
	NR n12 /1@1	0	Top	141700	708.5	22.81	0.03	23.0	0.111	1.045	0.116
	NR n12 /18@9	0	Front	141700	708.5	22.82	0.12	23.0	0.082	1.042	0.085
	NR n12 /18@9	0	Back	141700	708.5	22.82	0.03	23.0	0.128	1.042	0.133
	NR n12 /18@9	0	Left	141700	708.5	22.82	-0.02	23.0	0.067	1.042	0.070
	NR n12 /18@9	0	Top	141700	708.5	22.82	-0.01	23.0	0.102	1.042	0.106
<b>ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population</b>						<b>1.6 W/kg (mW/g) Averaged over 1g</b>					

➤ NR n41(100MHz) DFT-BPSK Body SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR <sub>1g</sub> (W/kg)	Scaling Factor	Reported SAR <sub>1g</sub> (W/kg)
	NR n41 /1@1	0	Front	509202	2546.01	25.39	0.15	25.5	0.173	1.026	0.177
37	NR n41 /1@1	0	Back	509202	2546.01	25.39	0.11	25.5	<b>0.482</b>	1.026	0.495
	NR n41 /1@1	0	Left	509202	2546.01	25.39	0.18	25.5	0.146	1.026	0.150
	NR n41 /1@1	0	Top	509202	2546.01	25.39	0.20	25.5	0.376	1.026	0.386
	NR n41 /135@67	0	Front	509202	2546.01	26.32	0.04	26.5	0.162	1.042	0.169
	NR n41 /135@67	0	Back	509202	2546.01	26.32	0.16	26.5	0.466	1.042	0.486
	NR n41 /135@67	0	Left	509202	2546.01	26.32	-0.02	26.5	0.135	1.042	0.141
	NR n41 /135@67	0	Top	509202	2546.01	26.32	0.04	26.5	0.362	1.042	0.377
	NR n41 /1@1 NSA	0	Front	509202	2546.01	19.69	0.14	20.0	0.063	1.074	0.068
	NR n41 /1@1 NSA	0	Back	509202	2546.01	19.69	0.09	20.0	0.143	1.074	0.154
	NR n41 /1@1 NSA	0	Left	509202	2546.01	19.69	0.05	20.0	0.051	1.074	0.055
	NR n41 /1@1 NSA	0	Top	509202	2546.01	19.69	0.07	20.0	0.092	1.074	0.099
	NR n41 /135@67 NSA	0	Front	509202	2546.01	20.61	0.01	21.0	0.058	1.094	0.063
	NR n41 /135@67 NSA	0	Back	509202	2546.01	20.61	0.15	21.0	0.136	1.094	0.149
	NR n41 /135@67 NSA	0	Left	509202	2546.01	20.61	0.14	21.0	0.047	1.094	0.051
	NR n41 /135@67 NSA	0	Top	509202	2546.01	20.61	0.16	21.0	0.085	1.094	0.093
<b>ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population</b>						<b>1.6 W/kg (mW/g) Averaged over 1g</b>					

## ➤ NR n66(40MHz) DFT-BPSK Body SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR <sub>1g</sub> (W/kg)	Scaling Factor	Reported SAR <sub>1g</sub> (W/kg)
	NR n66/1@1	0	Front	346000	1730	22.52	-0.06	23.0	0.078	1.117	0.087
	NR n66/1@1	0	Back	346000	1730	22.52	-0.08	23.0	0.117	1.117	0.131
	NR n66/1@1	0	Left	346000	1730	22.52	0.09	23.0	0.066	1.117	0.074
50	NR n66/1@1	0	Top	346000	1730	22.52	0.07	23.0	<b>0.207</b>	1.117	0.231
	NR n66 /50@25	0	Front	346000	1730	22.93	0.18	23.5	0.072	1.140	0.082
	NR n66 /50@25	0	Back	346000	1730	22.93	0.01	23.5	0.110	1.140	0.125
	NR n66 /50@25	0	Left	346000	1730	22.93	-0.05	23.5	0.061	1.140	0.070
	NR n66 /50@25	0	Top	346000	1730	22.93	0.04	23.5	0.198	1.140	0.226
<b>ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population</b>						<b>1.6 W/kg (mW/g) Averaged over 1g</b>					

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

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR <sub>1g</sub> (W/kg)	Scaling Factor	Reported SAR <sub>1g</sub> (W/kg)
	NR n77 /1@1	4	Front	633334	3500.01	24.88	0.00	25.0	0.036	1.028	0.037
	NR n77 /1@1	4	Back	633334	3500.01	24.88	0.00	25.0	0.076	1.028	0.078
	NR n77 /1@1	4	Right	633334	3500.01	24.88	0.03	25.0	0.014	1.028	0.014
51	NR n77 /1@1	4	Top	633334	3500.01	24.88	0.18	25.0	<b>0.105</b>	1.028	0.108
	NR n77 /135@67	4	Front	633334	3500.01	25.73	-0.06	26.0	0.032	1.064	0.034
	NR n77 /135@67	4	Back	633334	3500.01	25.73	0.05	26.0	0.071	1.064	0.076
	NR n77 /135@67	4	Right	633334	3500.01	25.73	-0.19	26.0	0.013	1.064	0.014
	NR n77 /135@67	4	Top	633334	3500.01	25.73	0.14	26.0	0.101	1.064	0.107
	NR n77 /1@1 NSA	4	Front	633334	3500.01	17.92	0.05	18.0	0.010	1.019	0.010
	NR n77 /1@1 NSA	4	Back	633334	3500.01	17.92	-0.06	18.0	0.018	1.019	0.018
	NR n77 /1@1 NSA	4	Right	633334	3500.01	17.92	-0.17	18.0	0.004	1.019	0.004
	NR n77 /1@1 NSA	4	Top	633334	3500.01	17.92	-0.07	18.0	0.023	1.019	0.023
	NR n77 /135@67 NSA	4	Front	633334	3500.01	18.69	0.15	19.0	0.009	1.074	0.010
	NR n77 /135@67 NSA	4	Back	633334	3500.01	18.69	0.20	19.0	0.016	1.074	0.017
	NR n77 /135@67 NSA	4	Right	633334	3500.01	18.69	0.10	19.0	0.003	1.074	0.003
	NR n77 /135@67 NSA	4	Top	633334	3500.01	18.69	-0.02	19.0	0.019	1.074	0.020
<b>ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population</b>						<b>1.6 W/kg (mW/g) Averaged over 1g</b>					

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

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR <sub>1g</sub> (W/kg)	Scaling Factor	Reported SAR <sub>1g</sub> (W/kg)
	NR n77 /1@271	4	Front	662000	3930	25.11	-0.07	25.5	0.048	1.094	0.053
	NR n77 /1@271	4	Back	662000	3930	25.11	-0.15	25.5	0.103	1.094	0.113
	NR n77 /1@271	4	Right	662000	3930	25.11	-0.03	25.5	0.013	1.094	0.014
	NR n77 /1@271	4	Top	662000	3930	25.11	0.16	25.5	0.028	1.094	0.031
	NR n77 /135@67	4	Front	650000	3750	25.77	0.04	26.0	0.051	1.054	0.054
40	NR n77 /135@67	4	Back	650000	3750	25.77	-0.04	26.0	<b>0.109</b>	1.054	0.115
	NR n77 /135@67	4	Right	650000	3750	25.77	0.17	26.0	0.015	1.054	0.016
	NR n77 /135@67	4	Top	650000	3750	25.77	-0.01	26.0	0.032	1.054	0.034
	NR n77 /1@271 NSA	4	Front	662000	3930	17.77	0.17	18.0	0.009	1.054	0.009
	NR n77 /1@271 NSA	4	Back	662000	3930	17.77	0.01	18.0	0.016	1.054	0.017
	NR n77 /1@271 NSA	4	Right	662000	3930	17.77	0.12	18.0	0.005	1.054	0.005
	NR n77 /1@271 NSA	4	Top	662000	3930	17.77	-0.14	18.0	0.008	1.054	0.008
	NR n77 /135@67 NSA	4	Front	650000	3750	18.55	0.19	19.0	0.008	1.109	0.009
	NR n77 /135@67 NSA	4	Back	650000	3750	18.55	-0.03	19.0	0.014	1.109	0.016
	NR n77 /135@67 NSA	4	Right	650000	3750	18.55	-0.12	19.0	0.004	1.109	0.004
	NR n77 /135@67 NSA	4	Top	650000	3750	18.55	-0.20	19.0	0.007	1.109	0.008
<b>ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population</b>						<b>1.6 W/kg (mW/g) Averaged over 1g</b>					

## &gt; WLAN 2.4GHz Body SAR in Hotspot mode

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR <sub>1g</sub> (W/kg)	Scaling Factor	D.C Factor	Reported SAR <sub>1g</sub> (W/kg)
	2.4GHz/802.11b ant0	6	Front	11	2462	17.45	0.05	17.5	0.091	1.012	1.000	0.092
41	2.4GHz/802.11b ant0	6	Back	11	2462	17.45	-0.15	17.5	<b>0.119</b>	1.012	1.000	0.120
	2.4GHz/802.11b ant0	6	Right	11	2462	17.45	0.14	17.5	0.062	1.012	1.000	0.063
	2.4GHz/802.11b ant0	6	Top	11	2462	17.45	0.01	17.5	0.026	1.012	1.000	0.026
	2.4GHz/802.11b ant1	7	Front	11	2462	16.80	0.03	17.0	0.038	1.047	1.000	0.040
	2.4GHz/802.11b ant1	7	Back	11	2462	16.80	-0.01	17.0	0.052	1.047	1.000	0.054
	2.4GHz/802.11b ant1	7	Right	11	2462	16.80	-0.15	17.0	0.013	1.047	1.000	0.014
	2.4GHz/802.11b ant1	7	Top	11	2462	16.80	0.02	17.0	0.044	1.047	1.000	0.046
<b>ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population</b>									<b>1.6 W/kg (mW/g) Averaged over 1g</b>			

## &gt; WLAN 5.2GHz Body SAR in Hotspot mode

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR <sub>1g</sub> (W/kg)	Scaling Factor	D.C Factor	Reported SAR <sub>1g</sub> (W/kg)
	5.2GHz/802.11a	6	Front	48	5240	13.85	-0.06	14.0	0.105	1.035	1.000	0.109
42	5.2GHz/802.11a	6	Back	48	5240	13.85	-0.09	14.0	<b>0.165</b>	1.035	1.000	0.171
	5.2GHz/802.11a	6	Right	48	5240	13.85	0.13	14.0	0.112	1.035	1.000	0.116
	5.2GHz/802.11a	6	Top	48	5240	13.85	0.02	14.0	0.041	1.035	1.000	0.042
<b>ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population</b>									<b>1.6 W/kg (mW/g) Averaged over 1g</b>			

## &gt; WLAN 5.8GHz Body SAR in Hotspot mode

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR <sub>1g</sub> (W/kg)	Scaling Factor	D.C Factor	Reported SAR <sub>1g</sub> (W/kg)
	5.8GHz/802.11a	6	Front	157	5785	14.05	0.15	14.5	0.167	1.109	1.000	0.185
43	5.8GHz/802.11a	6	Back	157	5785	14.05	-0.03	14.5	<b>0.244</b>	1.109	1.000	0.271
	5.8GHz/802.11a	6	Right	157	5785	14.05	0.11	14.5	0.181	1.109	1.000	0.201
	5.8GHz/802.11a	6	Top	157	5785	14.05	0.01	14.5	0.076	1.109	1.000	0.084
<b>ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population</b>									<b>1.6 W/kg (mW/g) Averaged over 1g</b>			

## &gt; Bluetooth Body SAR in Hotspot mode

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR <sub>1g</sub> (W/kg)	Scaling Factor	D.C Factor	Reported SAR <sub>1g</sub> (W/kg)
	BT/π/4DQPSK ant0	6	Front	39	2441	11.80	-0.08	12.0	0.013	1.047	1.000	0.014
44	BT/π/4DQPSK ant0	6	Back	39	2441	11.80	-0.03	12.0	<b>0.021</b>	1.047	1.000	0.022
	BT/π/4DQPSK ant0	6	Right	39	2441	11.80	0.17	12.0	0.005	1.047	1.000	0.005
	BT/π/4DQPSK ant0	6	Top	39	2441	11.80	0.14	12.0	0.003	1.047	1.000	0.003
	BT/π/4DQPSK ant1	7	Front	39	2441	8.47	-0.04	9.0	0.007	1.13	1.000	0.008
	BT/π/4DQPSK ant1	7	Back	39	2441	8.47	-0.05	9.0	0.012	1.13	1.000	0.014
	BT/π/4DQPSK ant1	7	Right	39	2441	8.47	-0.01	9.0	0.001	1.13	1.000	0.001
	BT/π/4DQPSK ant1	7	Top	39	2441	8.47	0.03	9.0	0.003	1.13	1.000	0.003
<b>ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population</b>									<b>1.6 W/kg (mW/g) Averaged over 1g</b>			

**Note:**

- Per KDB 447498 D04v01, for each exposure position, if the highest output channel Reported SAR ≤ 0.8W/kg, other channels SAR testing is not necessary.
- Additional WLAN SAR testing was performed for simultaneous transmission analysis.
- For Hotspot SAR testing, per KDB 941225 D06v02r01, for EUT dimension ≥ 9cm\*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 < 0.25dB higher than RMC 12.2kbps, or Reported SAR with RMC 12.2kbps setting is ≤ 1.2W/kg, HSDPA SAR evaluation can be

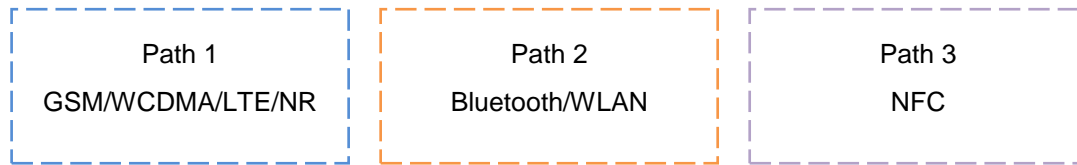
excluded.

5. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required when the measured SAR is  $\geq 0.8$  W/kg.
6. 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.
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  $\leq 0.8$  W/kg. Otherwise, SAR is measured for the highest output power channel.
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.

**15.4 Multi-Band Simultaneous Transmission Considerations**

➤ **Simultaneous Transmission Capabilities**

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



**Fig.15.1 Simultaneous Transmission Paths**

➤ **Simultaneous Transmission Procedures**

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

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

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

Note:

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

➤ **Multi-Band simultaneous Transmission Consideration**

Simultaneous Transmission Consideration	Position	Applicable Combination
	Head	WWAN (Voice)+WLAN 2.4 GHz+NFC
		WWAN (Voice)+WLAN 5.2GHz/5.8GHz+Bluetooth+NFC
		WWAN (Voice) + Bluetooth + NFC
	Body	WWAN (Voice)+WLAN 2.4 GHz+NFC
		WWAN (Voice)+WLAN 5.2GHz/5.8GHz+Bluetooth+NFC
		WWAN (Voice) + Bluetooth + NFC
	Hotspot	WWAN (Data)+WLAN 2.4 GHz+NFC
		WWAN (Data)+WLAN 5.2GHz/5.8GHz+Bluetooth+NFC
		WWAN (Data) + Bluetooth + NFC

Note:

- GSM/WCDMA/LTE cannot transmit simultaneously.
- 2.4GHz WIFI and 5GHz WIFI cannot transmit simultaneously.
- 2.4GHz WIFI and BT cannot transmit simultaneously.
- GSM/WCDMA/LTE shares the same antenna, and cannot transmit simultaneously.
- Per KDB 447498 D04v01 section 2.1.2: 1-mW Test Exemption, SAR simultaneous transmission consideration for NFC is not required.
- The Report SAR summation is calculated based on the same configuration and test position.
- Per KDB 447498 D04v01, simultaneous transmission SAR is compliant if,
  - Scalar SAR summation < 1.6 W/kg.
  - $SPLSR = (SAR_1 + SAR_2)^{1.5} / (min. \text{ separation distance, mm})$ , 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



- iii. measurement is not necessary  
Simultaneously transmission SAR measurement, and the Reported multi-band SAR < 1.6 W/kg

## 15.5 SAR Simultaneous Transmission Analysis

### ➤ Simultaneous Transmission

Position		Standalone SAR(W/kg)		$\Sigma$ SAR <sub>1g</sub> (W/kg)
		LTE Band 5	NR n7 NSA	Max EN-DC
Head	Right Cheek	0.571	0.246	0.817
	Right Tilted	0.530	0.296	0.826
	Left Cheek	0.313	0.105	0.418
	Left Tilted	0.264	0.126	0.390
Body- worn	Front	0.135	0.162	0.297
	Back	0.184	0.301	0.485
Hotspot	Front	0.135	0.162	0.297
	Back	0.184	0.301	0.485
	Left	0.135	0.134	0.269
	Right	/	/	/
	Top	0.142	0.254	0.396
	Bottom	/	/	/

Position		Standalone SAR <sub>1g</sub> (W/kg)			$\Sigma$ SAR <sub>1g</sub> (W/kg)
		LTE Band 5	LTE Band 41(ANT 5)	NR n41(n38) NSA	Max EN-DC
Head	Right Cheek	0.571	0.126	0.077	0.648
	Right Tilted	0.530	0.069	0.112	0.642
	Left Cheek	0.313	0.103	0.059	0.372
	Left Tilted	0.264	0.056	0.089	0.353
Body- worn	Front	0.135	0.057	0.068	0.203
	Back	0.184	0.098	0.154	0.338
Hotspot	Front	0.135	0.057	0.068	0.203
	Back	0.184	0.098	0.154	0.338
	Left	0.135	0.154	0.055	0.209
	Right	/	/	/	/
	Top	0.142	/	0.099	0.241
	Bottom	/	/	/	/

Position		Standalone SAR <sub>1g</sub> (W/kg)						Σ SAR <sub>1g</sub> (W/kg)
		LTE Band 2	LTE Band 5	LTE Band 7 (ANT5)	LTE Band 41(38) (ANT 5)	LTE Band 66(4) (ANT 5)	NR n77(n78) NSA	Max EN-DC
Head	Right Cheek	0.467	0.571	0.221	0.126	0.028	0.118	0.689
	Right Tilted	0.609	0.530	0.123	0.069	0.016	0.069	0.678
	Left Cheek	0.246	0.313	0.180	0.103	0.021	0.167	0.48
	Left Tilted	0.300	0.264	0.099	0.056	0.013	0.093	0.393
Body- worn	Front	0.111	0.135	0.077	0.057	0.009	0.010	0.145
	Back	0.172	0.184	0.132	0.098	0.021	0.018	0.202
Hotspot	Front	0.111	0.135	0.077	0.057	0.009	0.010	0.145
	Back	0.172	0.184	0.132	0.098	0.021	0.018	0.202
	Left	0.026	0.135	0.184	0.154	0.033	/	0.184
	Right	/	/	/	/	/	0.005	0.005
	Top	0.265	0.142	/	/	/	0.023	0.288
	Bottom	/	/	/	/	/	/	/

Position		Max Standalone SAR <sub>1g</sub> (W/kg)						Σ SAR <sub>1g</sub> (W/kg)		
		1	2	3	4	5	6	1+2+6	1+3+5+6	1+4+6
		MAX WWAN	2.4G	5G	BT (ANT6)	BT (ANT7)	NFC			
Head	Right Cheek	0.817	0.099	0.099	0.026	0.024	0	0.916	0.940	0.843
	Right Tilted	0.826	0.064	0.058	0.019	0.017	0	0.89	0.901	0.845
	Left Cheek	0.574	0.285	0.395	0.059	0.052	0	0.859	1.021	0.633
	Left Tilted	0.558	0.170	0.218	0.031	0.029	0	0.728	0.805	0.589
Body-worn	Front	0.297	0.092	0.185	0.014	0.008	0	0.389	0.490	0.311
	Back	0.485	0.120	0.271	0.022	0.014	0	0.605	0.770	0.507
Hotspot	Front	0.297	0.092	0.185	0.014	0.008	0	0.389	0.490	0.311
	Back	0.485	0.120	0.271	0.022	0.014	0	0.605	0.770	0.507
	Left	0.269	/	/	/	/	0	0.269	0.269	0.269
	Right	0.016	0.063	0.201	0.005	0.001	0	0.079	0.218	0.021
	Top	0.396	0.046	0.084	0.003	0.003	0	0.442	0.483	0.399
	Bottom	/	/	/	/	/	0	/	/	/

➤ **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.

### **15.6 Measurement Uncertainty**

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

## **15.7 Measurement Conclusion**

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

## 16 Reference

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- [5]. FCC KDB 248227 D01 v02r02, “SAR GUIDANCE FOR IEEE 802.11 (Wi-Fi) TRANSMITTERS”, October 2015
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- [8]. FCC KDB 941225 D01 v03r01, “3G SAR MEAUREMENT PROCEDURES”, October 2015
- [9]. FCC KDB 941225 D05 v02r05, “SAR EVALUATION CONSIDERATIONS FOR LTE DEVICES”, Dec 2015
- [10]. FCC KDB 941225 D06 v02r01, " SAR EVALUATION PROCEDURES FOR PORTABLE DEVICES WITH WIRELESS ROUTER CAPABILITIES", October 2015
- [11]. FCC KDB 865664 D01 v01r04, “SAR MEASUREMENT REQUIREMENTS FOR 100 MHz TO 6 GHz”, August 2015

## Appendix A: Plots of SAR System Check

Test Laboratory: JYTSZ

Date: 04.28.2023

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

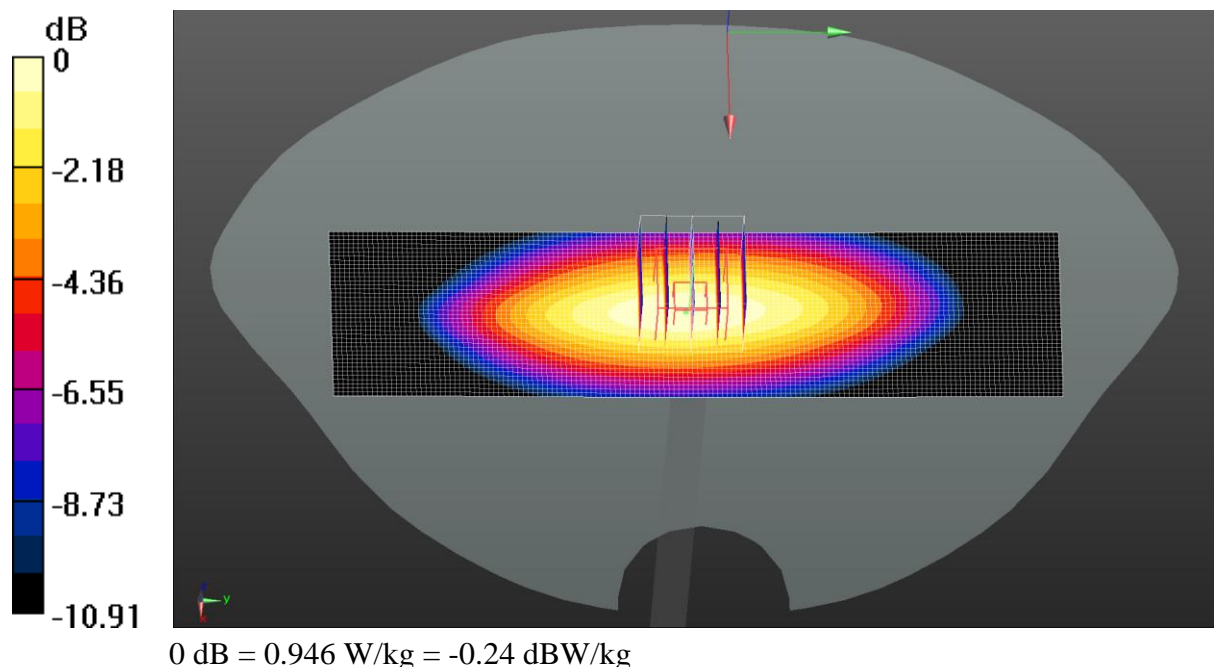
Communication System: UID 0, CW (0); Frequency: 750 MHz; Duty Cycle: 1:1  
 Medium parameters used:  $f = 750 \text{ MHz}$ ;  $\sigma = 0.881 \text{ S/m}$ ;  $\epsilon_r = 42.583$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section

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) = 0.949 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 = 33.10 V/m; Power Drift = 0.01 dB  
 Peak SAR (extrapolated) = 1.09 W/kg  
**SAR(1 g) = 0.653 W/kg; SAR(10 g) = 0.452 W/kg**  
 Smallest distance from peaks to all points 3 dB below = 17.5 mm  
 Ratio of SAR at M2 to SAR at M1 = 62%  
 Maximum value of SAR (measured) = 0.946 W/kg





Test Laboratory: JYTSZ

Date: 04.28.2023

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

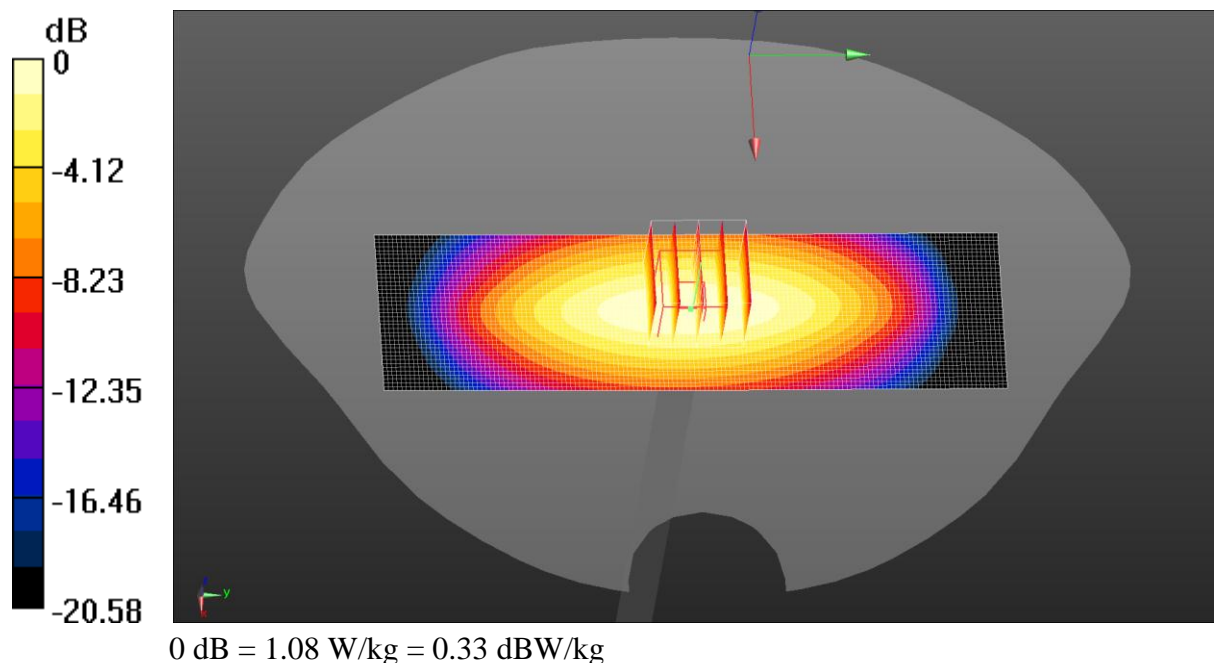
Communication System: UID 0, CW (0); Frequency: 835 MHz; Duty Cycle: 1:1  
 Medium parameters used:  $f = 835 \text{ MHz}$ ;  $\sigma = 0.907 \text{ S/m}$ ;  $\epsilon_r = 42.354$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section

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 = 35.33 V/m; Power Drift = 0.01 dB  
 Peak SAR (extrapolated) = 1.27 W/kg  
**SAR(1 g) = 0.776 W/kg; SAR(10 g) = 0.501 W/kg**  
 Smallest distance from peaks to all points 3 dB below = 17.6 mm  
 Ratio of SAR at M2 to SAR at M1 = 62.4%  
 Maximum value of SAR (measured) = 1.07 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) = 1.08 W/kg



Test Laboratory: JYTSZ

Date: 05.04.2023

**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;  $\sigma = 1.353$  S/m;  $\epsilon_r = 40.862$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
 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 = 43.35 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 2.85 W/kg

**SAR(1 g) = 1.43 W/kg; SAR(10 g) = 0.764 W/kg**

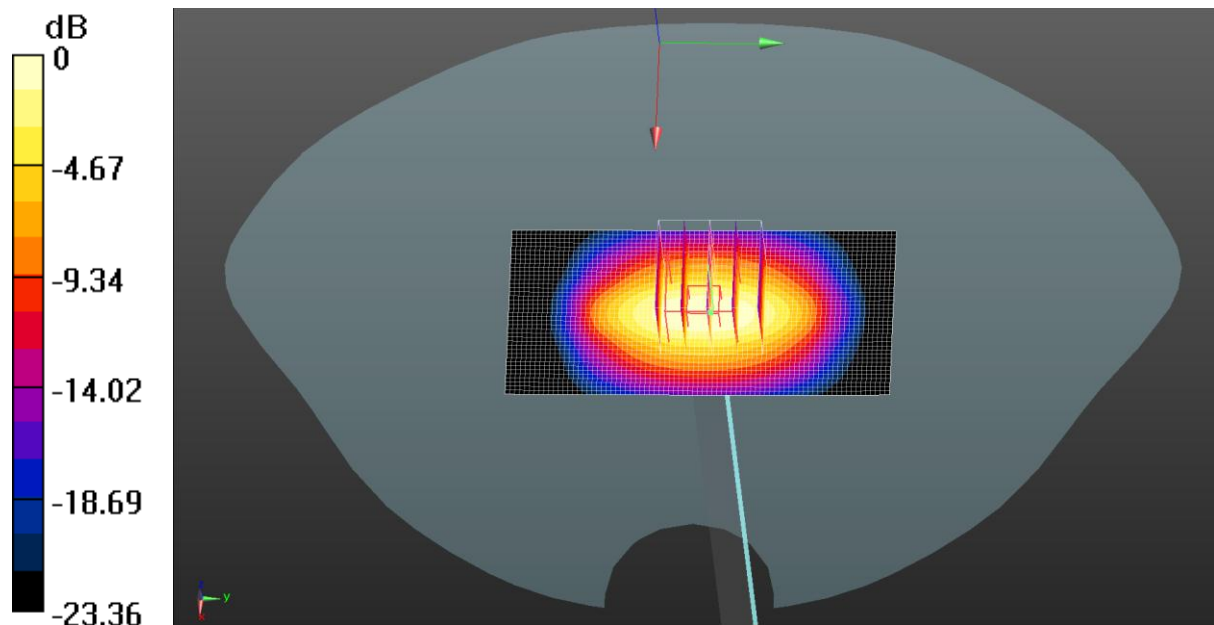
Smallest distance from peaks to all points 3 dB below = 10.1 mm

Ratio of SAR at M2 to SAR at M1 = 53.6%

Maximum value of SAR (measured) = 2.28 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) = 2.35 W/kg



0 dB = 2.35 W/kg = 3.71 dBW/kg

Test Laboratory: JYTSZ

Date: 05.04.2023

**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:  $f = 1900 \text{ MHz}$ ;  $\sigma = 1.343 \text{ S/m}$ ;  $\epsilon_r = 41.123$ ;  $\rho = 1000 \text{ kg/m}^3$   
 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=8mm, dy=8mm, dz=5mm

Reference Value = 43.53 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 3.10 W/kg

**SAR(1 g) = 1.59 W/kg; SAR(10 g) = 0.811 W/kg**

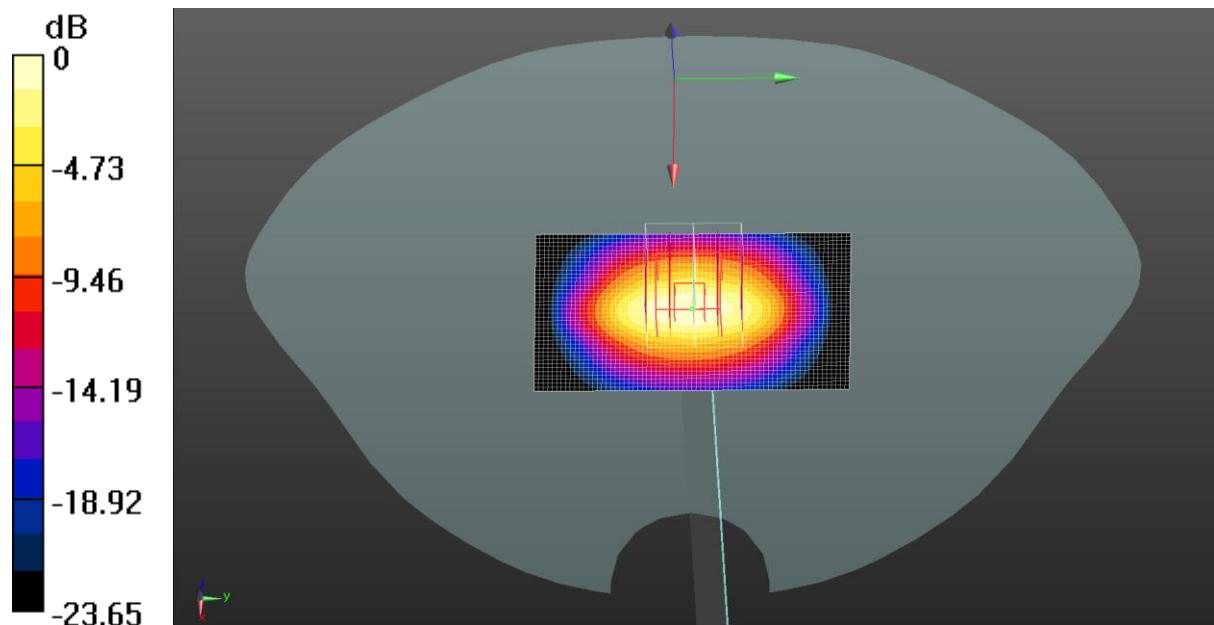
Smallest distance from peaks to all points 3 dB below = 9.6 mm

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

Maximum value of SAR (measured) = 2.50 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 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 2.70 W/kg



0 dB = 2.70 W/kg = 4.31 dBW/kg

Test Laboratory: JYTSZ

Date: 05.18.2023

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

Communication System: UID 0, CW (0); Frequency: 2450 MHz; Duty Cycle: 1:1  
 Medium parameters used:  $f = 2450$  MHz;  $\sigma = 1.747$  S/m;  $\epsilon_r = 40.134$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
 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 = 43.94 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 4.18 W/kg

**SAR(1 g) = 2.15 W/kg; SAR(10 g) = 0.972 W/kg**

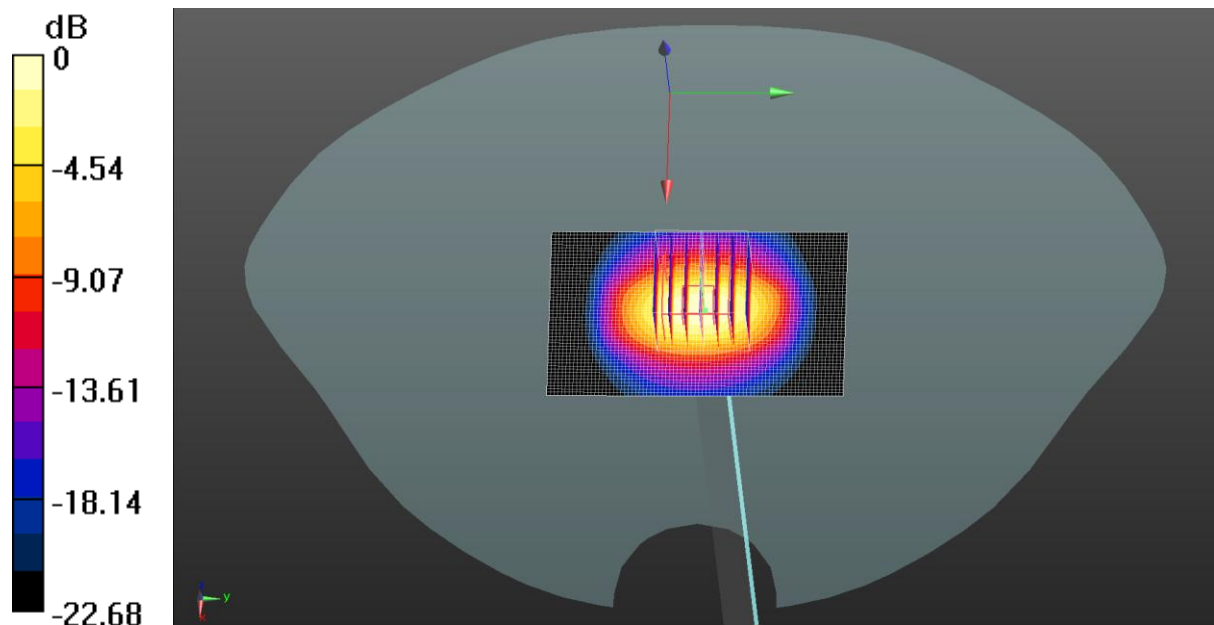
Smallest distance from peaks to all points 3 dB below = 9 mm

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

Maximum value of SAR (measured) = 3.36 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) = 3.43 W/kg



0 dB = 3.43 W/kg = 5.35 dBW/kg

Test Laboratory: JYTSZ

Date: 05.18.2023

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

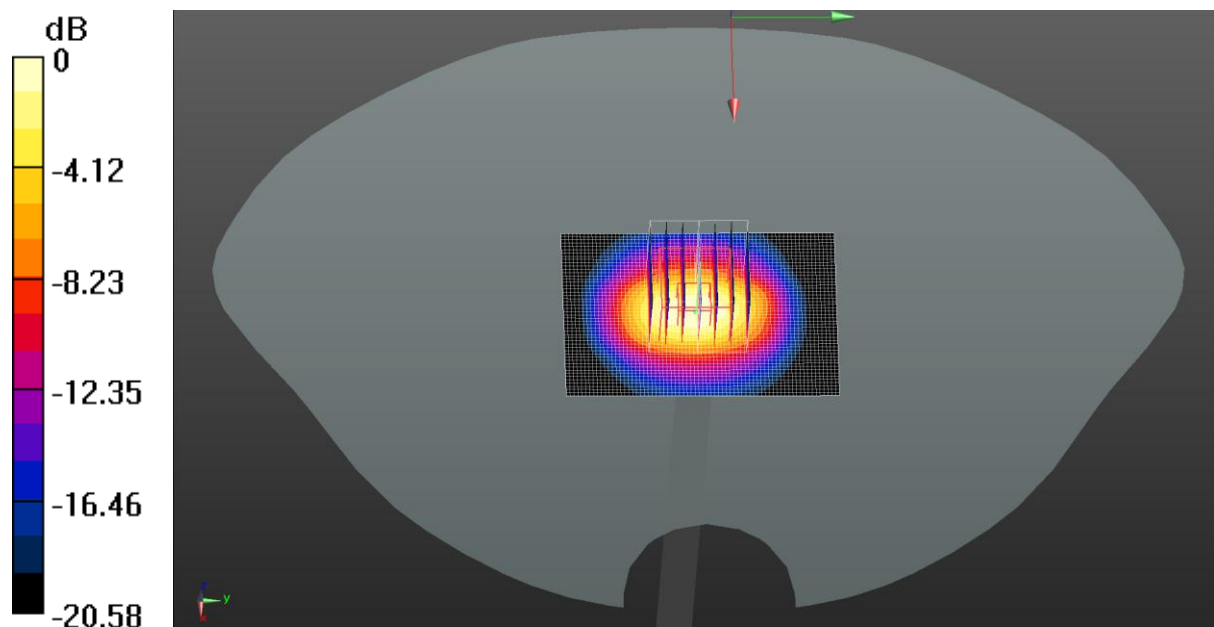
Communication System: UID 0, CW (0); Frequency: 2600 MHz; Duty Cycle: 1:1  
 Medium parameters used:  $f = 2600$  MHz;  $\sigma = 1.911$  S/m;  $\epsilon_r = 40.134$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
 Phantom section: Flat Section

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) = 4.10 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 = 44.99 V/m; Power Drift = 0.01 dB  
 Peak SAR (extrapolated) = 4.84 W/kg  
**SAR(1 g) = 2.23 W/kg; SAR(10 g) = 0.988 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) = 3.85 W/kg



0 dB = 3.85 W/kg = 5.85 dBW/kg

Test Laboratory: JYTSZ

Date: 05.09.2023

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

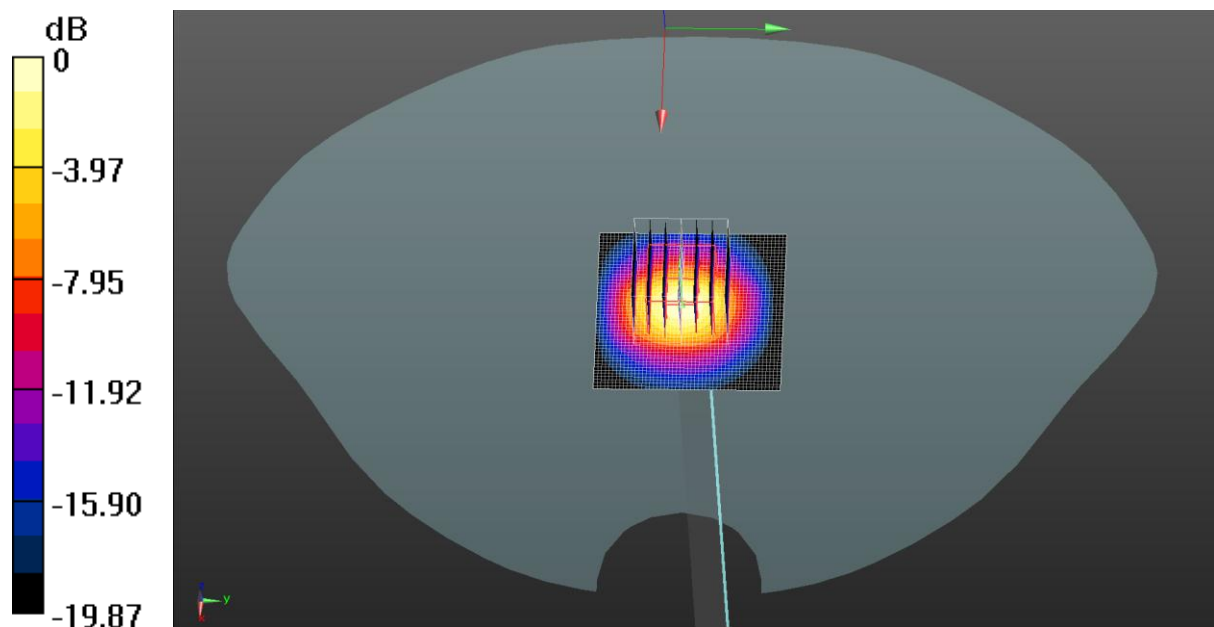
Communication System: UID 0, CW (0); Frequency: 3500 MHz; Duty Cycle: 1:1  
 Medium parameters used:  $f = 3500 \text{ MHz}$ ;  $\sigma = 2.847 \text{ S/m}$ ;  $\epsilon_r = 39.528$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section

DASY5 Configuration:

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

**System Performance Check at Frequency 3500 MHz Head Tissue/d=10mm, Pin=40 mW, dist=1.4mm (EX-Probe)/Area Scan (51x51x1):** Interpolated grid: dx=1.200 mm, dy=1.200 mm  
 Maximum value of SAR (interpolated) = 5.04 W/kg

**System Performance Check at Frequency 3500 MHz Head Tissue/d=10mm, Pin=40 mW, dist=1.4mm (EX-Probe)/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=4mm  
 Reference Value = 41.85 V/m; Power Drift = 0.08 dB  
 Peak SAR (extrapolated) = 6.89 W/kg  
**SAR(1 g) = 2.59 W/kg; SAR(10 g) = 1.01 W/kg**  
 Smallest distance from peaks to all points 3 dB below = 8 mm  
 Ratio of SAR at M2 to SAR at M1 = 36.8%  
 Maximum value of SAR (measured) = 5.09 W/kg



0 dB = 5.09 W/kg = 7.07 dBW/kg

Test Laboratory: JYTSZ

Date: 05.09.2023

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

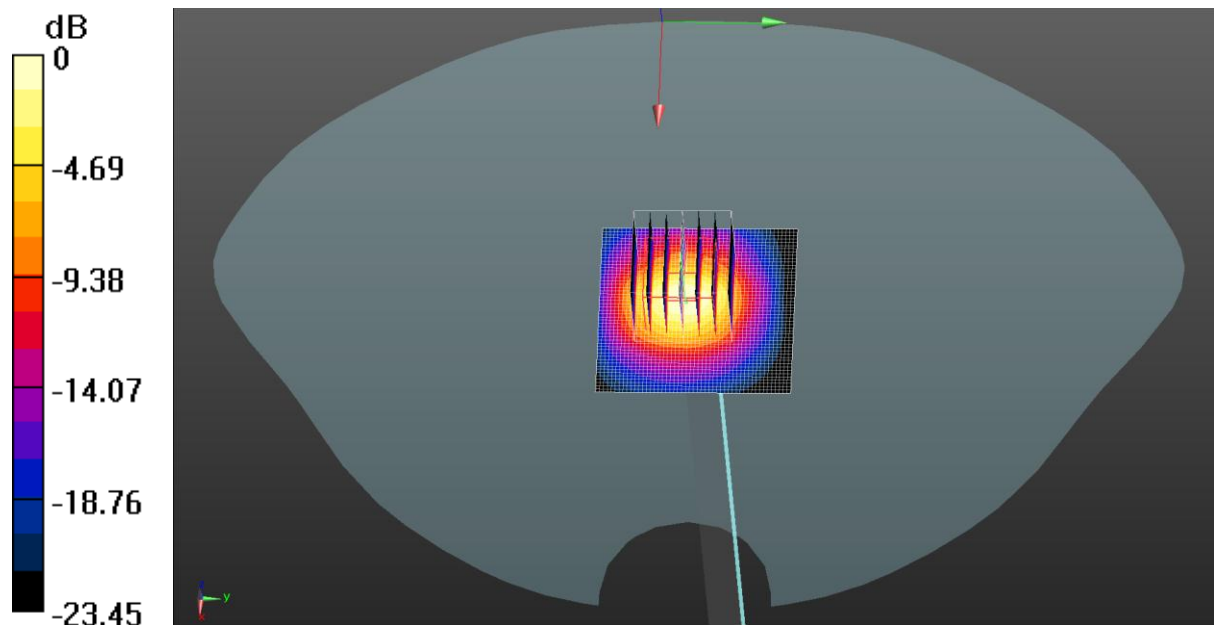
Communication System: UID 0, CW (0); Frequency: 3700 MHz; Duty Cycle: 1:1  
 Medium parameters used:  $f = 3700 \text{ MHz}$ ;  $\sigma = 3.027 \text{ S/m}$ ;  $\epsilon_r = 39.23$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section

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 = 38.98 V/m; Power Drift = 0.02 dB  
 Peak SAR (extrapolated) = 7.43 W/kg  
**SAR(1 g) = 2.63 W/kg; SAR(10 g) = 0.956 W/kg**  
 Smallest distance from peaks to all points 3 dB below = 8.2 mm  
 Ratio of SAR at M2 to SAR at M1 = 35.0%  
 Maximum value of SAR (measured) = 5.39 W/kg



0 dB = 5.39 W/kg = 7.32 dBW/kg

Test Laboratory: JYTSZ

Date: 05.09.2023

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

Communication System: UID 0, CW (0); Frequency: 3900 MHz; Duty Cycle: 1:1  
 Medium parameters used:  $f = 3900 \text{ MHz}$ ;  $\sigma = 3.222 \text{ S/m}$ ;  $\epsilon_r = 39.189$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section

DASY5 Configuration:

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

**System Performance Check at Frequency 3900 MHz Head Tissue/d=10mm, Pin=40 mW, dist=1.4mm (EX-Probe)/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=4mm

Reference Value = 44.20 V/m; Power Drift = -0.15 dB

Peak SAR (extrapolated) = 7.84 W/kg

**SAR(1 g) = 2.76 W/kg; SAR(10 g) = 0.947 W/kg**

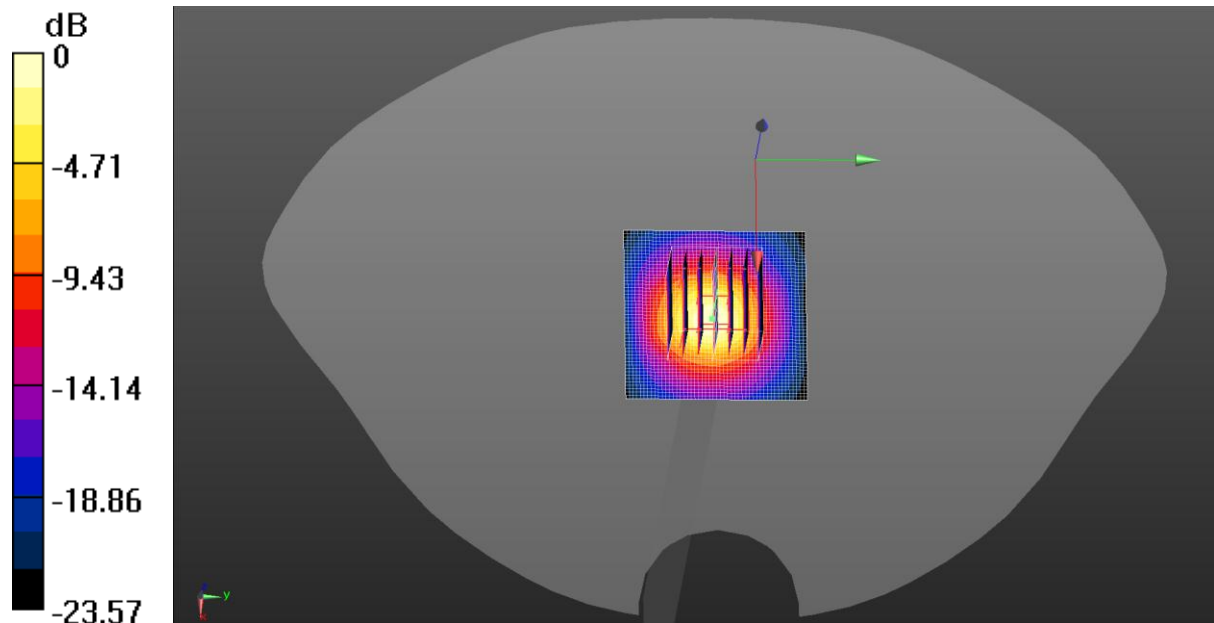
Smallest distance from peaks to all points 3 dB below = 8 mm

Ratio of SAR at M2 to SAR at M1 = 35.3%

Maximum value of SAR (measured) = 5.74 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) = 5.85 W/kg



0 dB = 5.85 W/kg = 7.67 dBW/kg



Test Laboratory: JYTSZ

Date: 05.13.2023

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

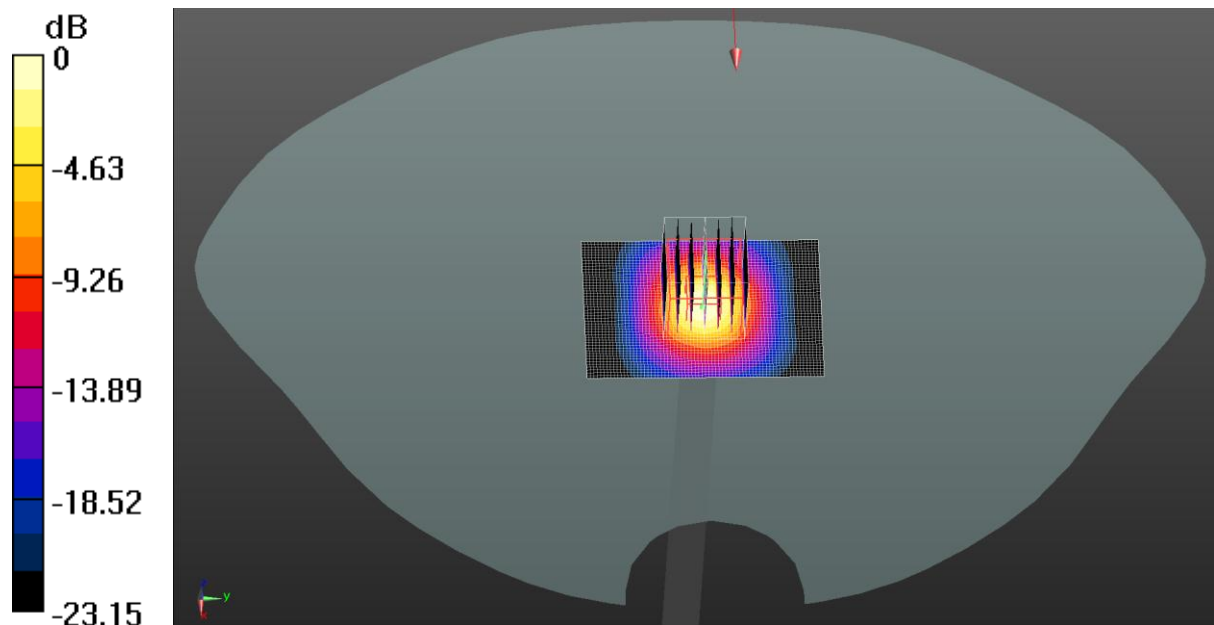
Communication System: UID 0, CW (0); Frequency: 5200 MHz; Duty Cycle: 1:1  
 Medium parameters used:  $f = 5200 \text{ MHz}$ ;  $\sigma = 4.498 \text{ S/m}$ ;  $\epsilon_r = 36.563$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section

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 = 44.78 V/m; Power Drift = -0.06 dB  
 Peak SAR (extrapolated) = 12.1 W/kg  
**SAR(1 g) = 3.15 W/kg; SAR(10 g) = 0.893 W/kg**  
 Smallest distance from peaks to all points 3 dB below = 7.2 mm  
 Ratio of SAR at M2 to SAR at M1 = 22.1%  
 Maximum value of SAR (measured) = 7.49 W/kg



0 dB = 7.49 W/kg = 8.74 dBW/kg

Test Laboratory: JYTSZ

Date: 05.13.2023

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

Communication System: UID 0, CW (0); Frequency: 5800 MHz; Duty Cycle: 1:1  
 Medium parameters used:  $f = 5800 \text{ MHz}$ ;  $\sigma = 5.378 \text{ S/m}$ ;  $\epsilon_r = 35.921$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section

DASY5 Configuration:

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

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

Reference Value = 42.63 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 14.3 W/kg

**SAR(1 g) = 3.23 W/kg; SAR(10 g) = 0.928 W/kg**

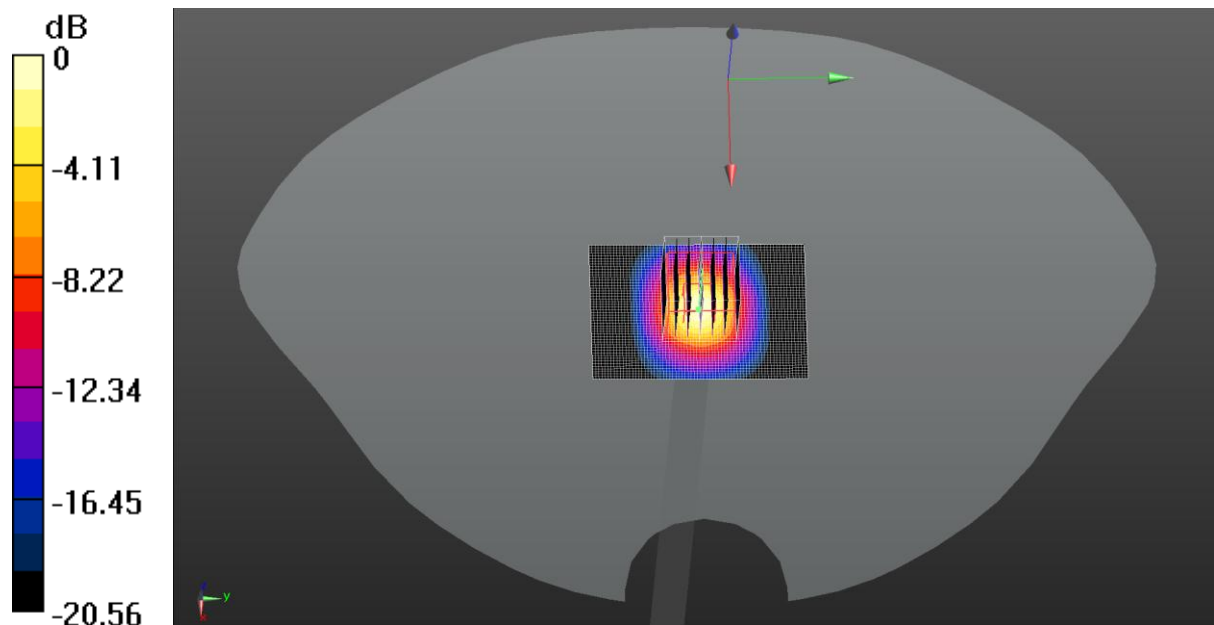
Smallest distance from peaks to all points 3 dB below = 7.3 mm

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

Maximum value of SAR (measured) = 8.04 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) = 8.41 W/kg



0 dB = 8.41 W/kg = 9.25 dBW/kg

## Appendix B: Plots of SAR Test Data

Test Laboratory: JYTSZ

Date: 04.28.2023

**DUT: Mobile Phone; Type: LH8n; Serial: 3#**

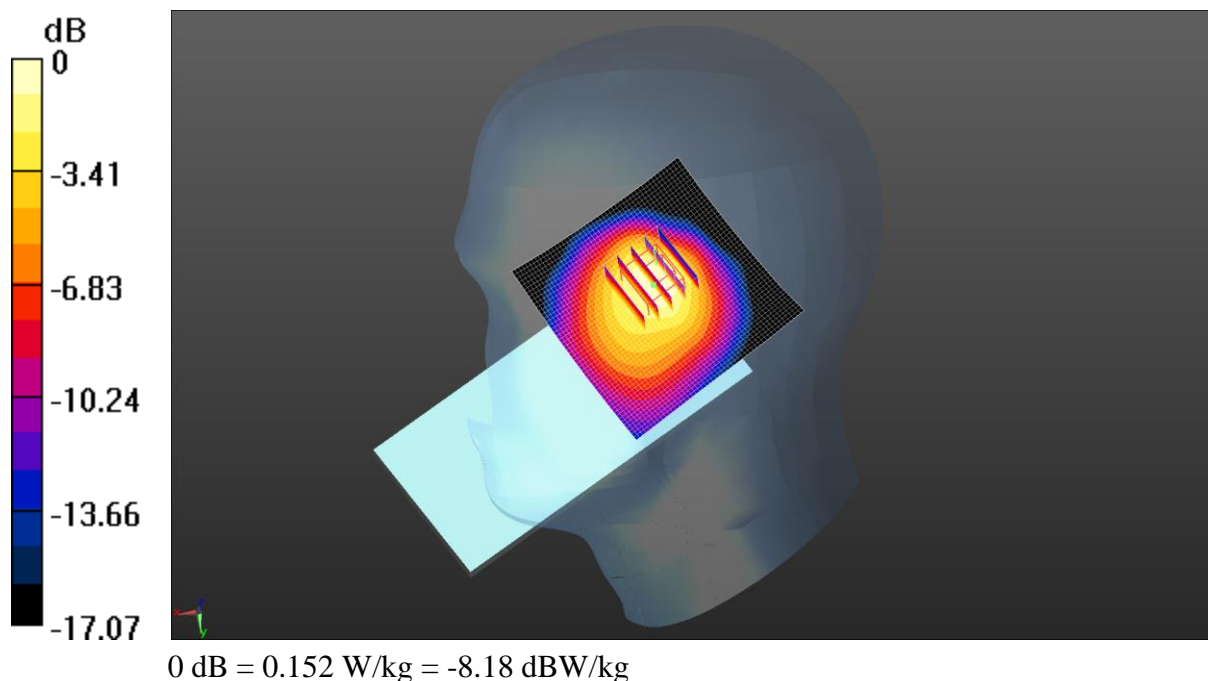
Communication System: UID 0, GSM (0); Frequency: 836.6 MHz; Duty Cycle: 1:8.30042  
 Medium parameters used (interpolated):  $f = 836.6 \text{ MHz}$ ;  $\sigma = 0.919 \text{ S/m}$ ;  $\epsilon_r = 42.342$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Right Section

DASY5 Configuration:

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

**GSM 850 Right Cheek/Middle Channel/Area Scan (51x51x1):** Interpolated grid:  
 $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$   
 Maximum value of SAR (interpolated) = 0.172 W/kg

**GSM 850 Right Cheek/Middle Channel/Zoom Scan (5x5x7)/Cube 0:**  
 Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value = 7.798 V/m; Power Drift = 0.10 dB  
 Peak SAR (extrapolated) = 0.218 W/kg  
**SAR(1 g) = 0.102 W/kg; SAR(10 g) = 0.062 W/kg**  
 Smallest distance from peaks to all points 3 dB below = 10.8 mm  
 Ratio of SAR at M2 to SAR at M1 = 51.9%  
 Maximum value of SAR (measured) = 0.152 W/kg



Test Laboratory: JYTSZ

Date: 05.04.2023

**DUT: Mobile Phone; Type: LH8n; Serial: 3#**

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

Medium parameters used:  $f = 1880 \text{ MHz}$ ;  $\sigma = 1.328 \text{ S/m}$ ;  $\epsilon_r = 41.132$ ;  $\rho = 1000 \text{ kg/m}^3$

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 Tilted/Middle Channel/Area Scan (51x51x1):** Interpolated grid:  
 $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 0.776 W/kg

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

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

Reference Value = 16.23 V/m; Power Drift = -0.04 dB

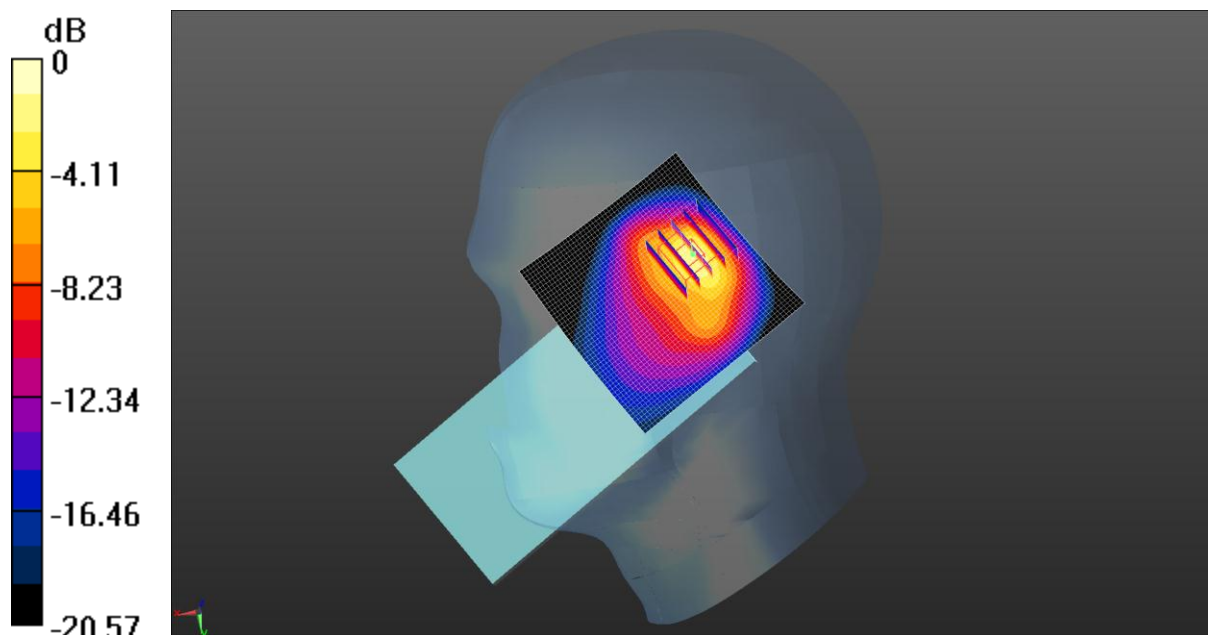
Peak SAR (extrapolated) = 1.28 W/kg

**SAR(1 g) = 0.621 W/kg; SAR(10 g) = 0.293 W/kg**

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

Ratio of SAR at M2 to SAR at M1 = 51%

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



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

Test Laboratory: JYTSZ

Date: 05.04.2023

**DUT: Mobile Phone; Type: LH8n; 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;  $\sigma = 1.351$  S/m;  $\epsilon_r = 41.148$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Right Section

DASY5 Configuration:

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

**WCDMA 1900 Right Tilted/High Channel/Area Scan (51x51x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.768 W/kg

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

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

Reference Value = 16.27 V/m; Power Drift = 0.03 dB

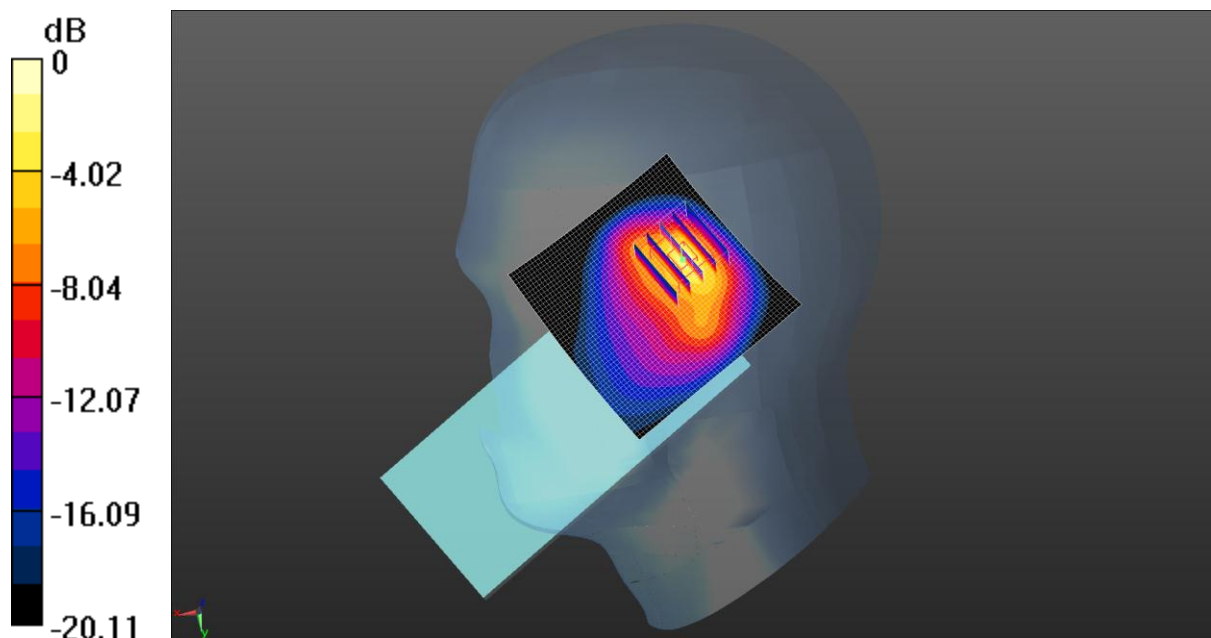
Peak SAR (extrapolated) = 1.51 W/kg

**SAR(1 g) = 0.700 W/kg; SAR(10 g) = 0.321 W/kg**

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

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

Maximum value of SAR (measured) = 1.25 W/kg



0 dB = 1.25 W/kg = 0.97 dBW/kg

Test Laboratory: JYTSZ

Date: 05.04.2023

**DUT: Mobile Phone; Type: LH8n; 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;  $\sigma = 1.342$  S/m;  $\epsilon_r = 40.872$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Right 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 Right Tilted/Middle Channel/Area Scan (51x51x1):** Interpolated

grid: dx=1.500 mm, dy=1.500 mm

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

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

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

Reference Value = 10.77 V/m; Power Drift = 0.13 dB

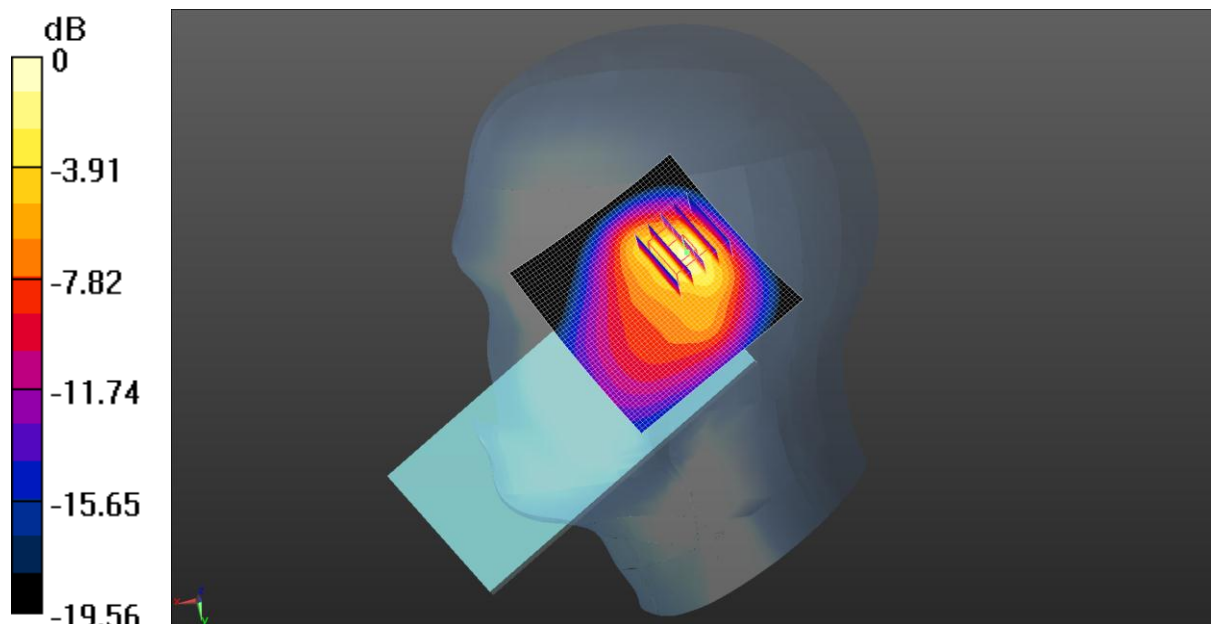
Peak SAR (extrapolated) = 0.569 W/kg

**SAR(1 g) = 0.298 W/kg; SAR(10 g) = 0.150 W/kg**

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

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

Maximum value of SAR (measured) = 0.476 W/kg



0 dB = 0.476 W/kg = -3.22 dBW/kg

Test Laboratory: JYTSZ

Date: 04.28.2023

**DUT: Mobile Phone; Type: LH8n; 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;  $\sigma = 0.919$  S/m;  $\epsilon_r = 42.342$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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 (51x51x1):** Interpolated

grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.770 W/kg

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

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

Reference Value = 16.69 V/m; Power Drift = -0.00 dB

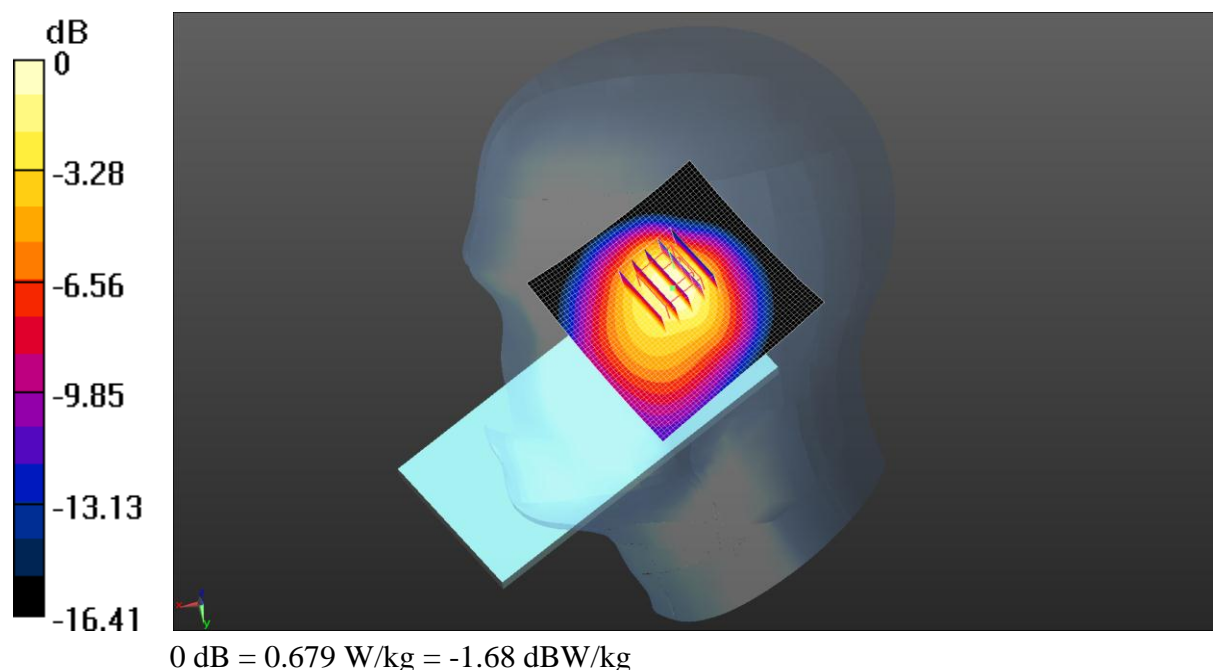
Peak SAR (extrapolated) = 0.974 W/kg

**SAR(1 g) = 0.459 W/kg; SAR(10 g) = 0.278 W/kg**

Smallest distance from peaks to all points 3 dB below = 10.8 mm

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

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





Test Laboratory: JYTSZ

Date: 05.04.2023

**DUT: Mobile Phone; Type: LH8n; 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;  $\sigma = 1.343$  S/m;  $\epsilon_r = 41.123$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Right Section

DASY5 Configuration:

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

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

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

Maximum value of SAR (interpolated) = 0.500 W/kg

**LTE Band 2 1RB(20MHz) Right Tilted/High Channel/Zoom Scan****(5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.70 V/m; Power Drift = 0.03 dB

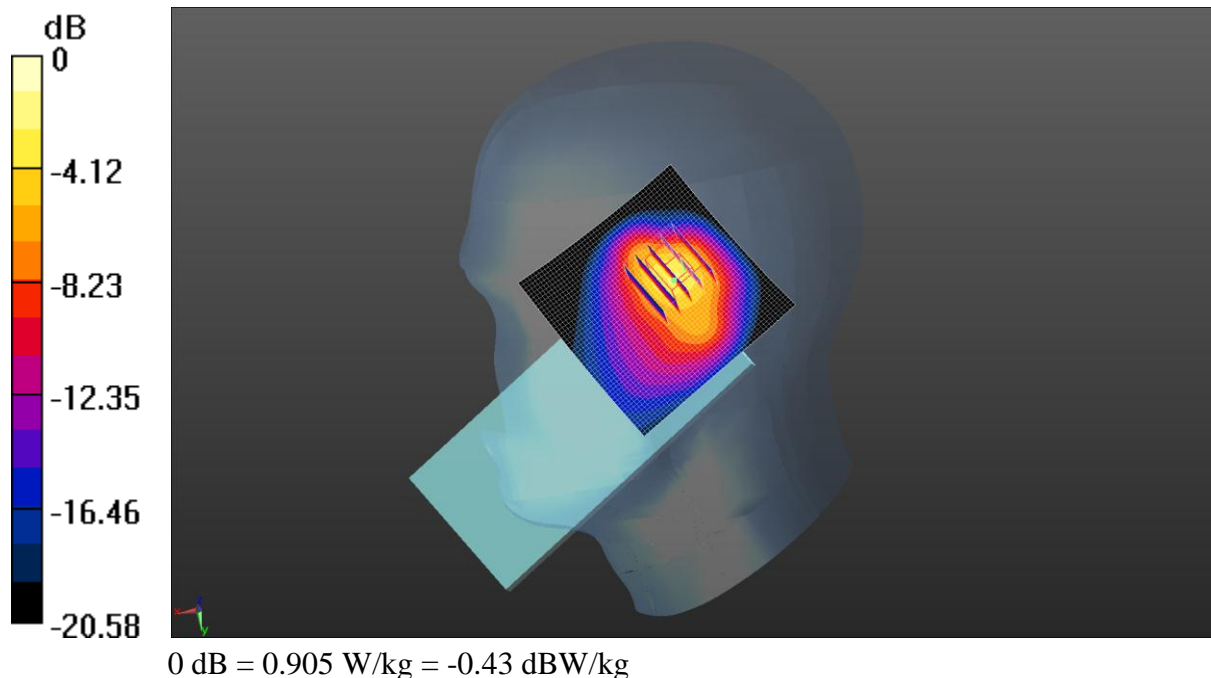
Peak SAR (extrapolated) = 1.22 W/kg

**SAR(1 g) = 0.580 W/kg; SAR(10 g) = 0.265 W/kg**

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

Ratio of SAR at M2 to SAR at M1 = 52.5%

Maximum value of SAR (measured) = 0.905 W/kg



Test Laboratory: JYTSZ

Date: 04.28.2023

**DUT: Mobile Phone; Type: LH8n; Serial: 3#**

Communication System: UID 0, LTE-Fdd(USA) 1RB QPSK (0); Frequency: 844 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 844$  MHz;  $\sigma = 0.923$  S/m;  $\epsilon_r = 42.349$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(9.8, 9.8, 9.8) @ 844 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/High Channel/Area Scan (51x51x1):**

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

Maximum value of SAR (interpolated) = 0.841 W/kg

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

Reference Value = 17.48 V/m; Power Drift = 0.02 dB

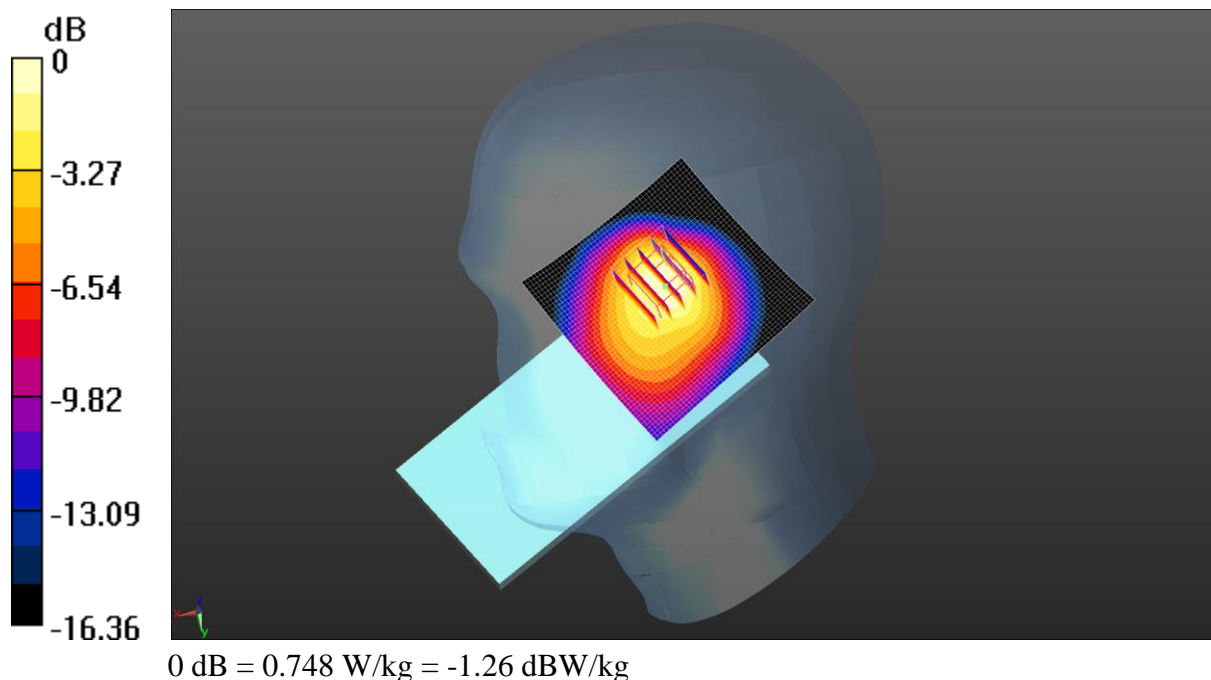
Peak SAR (extrapolated) = 1.09 W/kg

**SAR(1 g) = 0.507 W/kg; SAR(10 g) = 0.308 W/kg**

Smallest distance from peaks to all points 3 dB below = 10.8 mm

Ratio of SAR at M2 to SAR at M1 = 52.6%

Maximum value of SAR (measured) = 0.748 W/kg



Test Laboratory: JYTSZ

Date: 05.18.2023

**DUT: Mobile Phone; Type: LH8n; 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;  $\sigma = 1.844$  S/m;  $\epsilon_r = 40.148$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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 Tilted/High Channel/Area Scan (51x51x1):**

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

Maximum value of SAR (interpolated) = 0.519 W/kg

**LTE Band 7 1RB(20MHz) Right Tilted/High Channel/Zoom Scan****(5x5x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.479 V/m; Power Drift = 0.03 dB

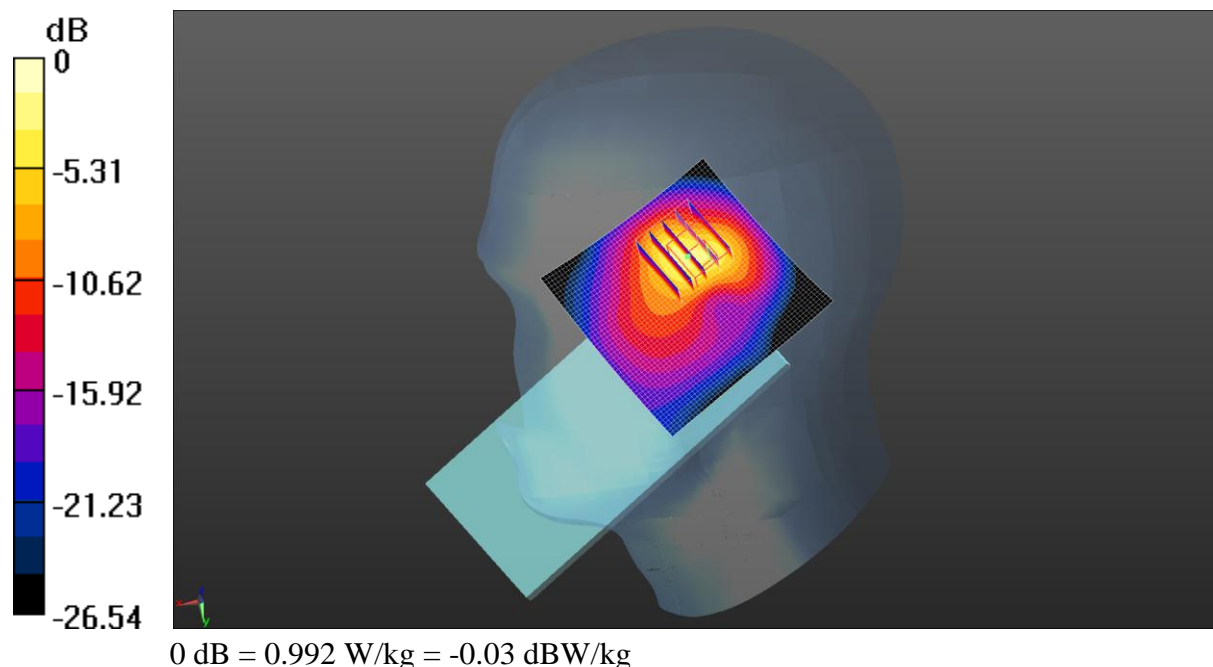
Peak SAR (extrapolated) = 1.36 W/kg

**SAR(1 g) = 0.577 W/kg; SAR(10 g) = 0.244 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) = 0.992 W/kg



Test Laboratory: JYTSZ

Date: 04.28.2023

**DUT: Mobile Phone; Type: LH8n; Serial: 3#**

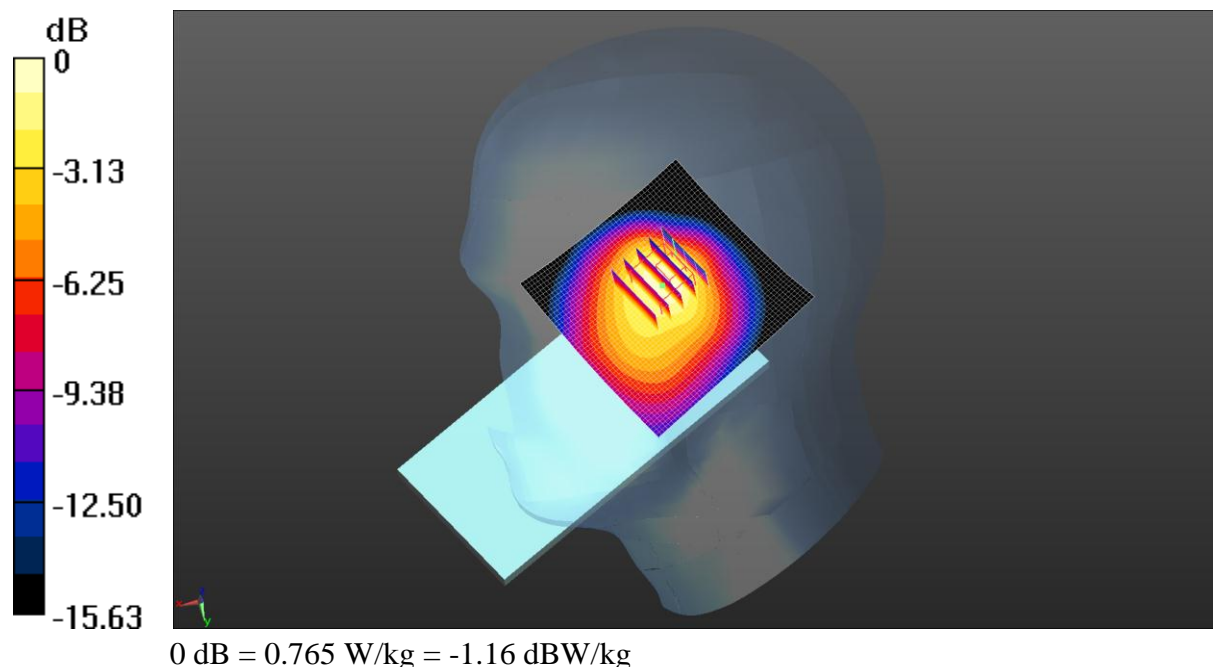
Communication System: UID 0, LTE-Fdd(USA) 1RB QPSK (0); Frequency: 711 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 711 \text{ MHz}$ ;  $\sigma = 0.861 \text{ S/m}$ ;  $\epsilon_r = 42.612$ ;  $\rho = 1000 \text{ kg/m}^3$ 

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 (51x51x1):**Interpolated grid:  $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$ Maximum value of SAR (interpolated) =  $0.798 \text{ W/kg}$ **LTE Band 12 1RB(10MHz) Right Cheek/ High Channel/Zoom Scan****(5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$ Reference Value =  $18.50 \text{ V/m}$ ; Power Drift =  $0.00 \text{ dB}$ Peak SAR (extrapolated) =  $1.21 \text{ W/kg}$ **SAR(1 g) =  $0.507 \text{ W/kg}$ ; SAR(10 g) =  $0.305 \text{ W/kg}$** Smallest distance from peaks to all points 3 dB below =  $8.2 \text{ mm}$ Ratio of SAR at M2 to SAR at M1 =  $35.7\%$ Maximum value of SAR (measured) =  $0.765 \text{ W/kg}$ 

Test Laboratory: JYTSZ

Date: 05.18.2023

**DUT: Mobile Phone; Type: LH8n; Serial: 3#**

Communication System: UID 0, LTE-TDD(USA) 20MHz 1RB QPSK (0); Frequency: 2680 MHz; Duty Cycle: 1:1.59956

Medium parameters used (interpolated):  $f = 2680$  MHz;  $\sigma = 1.945$  S/m;  $\epsilon_r = 40.128$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(7.35, 7.35, 7.35) @ 2680 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

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

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

Maximum value of SAR (interpolated) = 0.514 W/kg

**LTE Band 41 1RB(20MHz) Right Tilted/ High Channel/Zoom Scan****(5x5x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.936 V/m; Power Drift = 0.18 dB

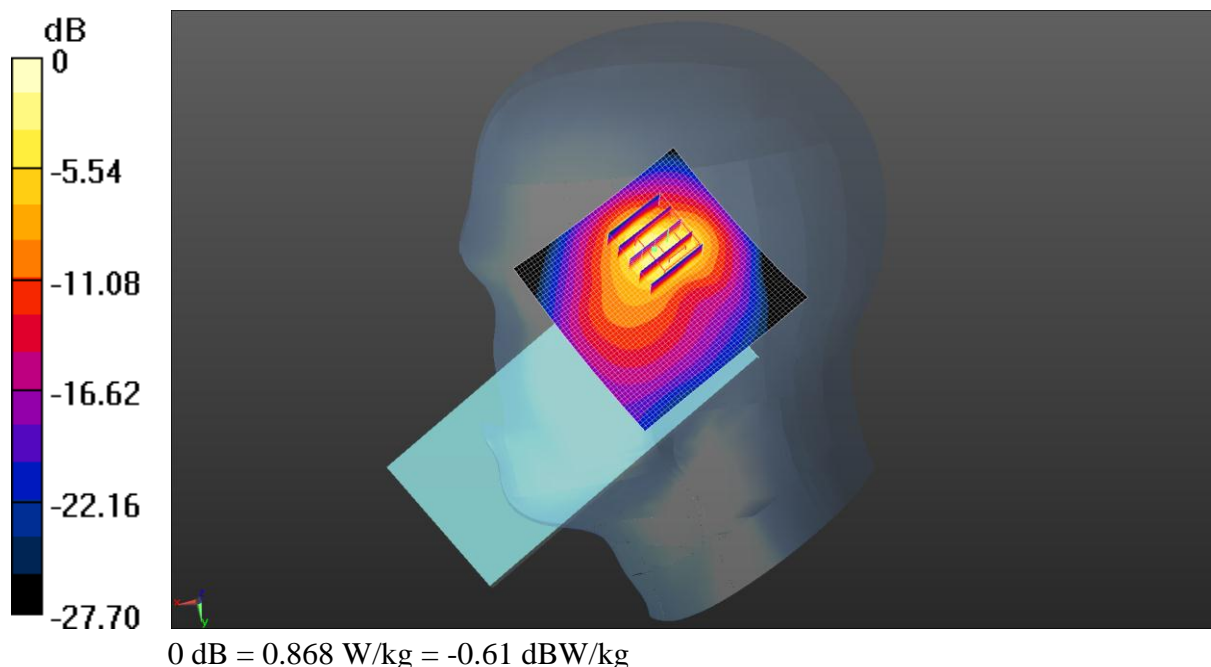
Peak SAR (extrapolated) = 1.18 W/kg

**SAR(1 g) = 0.492 W/kg; SAR(10 g) = 0.209 W/kg**

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

Ratio of SAR at M2 to SAR at M1 = 42.6%

Maximum value of SAR (measured) = 0.868 W/kg



Test Laboratory: JYTSZ

Date: 05.04.2023

**DUT: Mobile Phone; Type: LH8n; 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;  $\sigma = 1.329$  S/m;  $\epsilon_r = 40.874$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Right 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) Right Tilted/Low Channel/Area Scan (51x51x1):**

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

Maximum value of SAR (interpolated) = 0.492 W/kg

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

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

Reference Value = 15.57 V/m; Power Drift = 0.07 dB

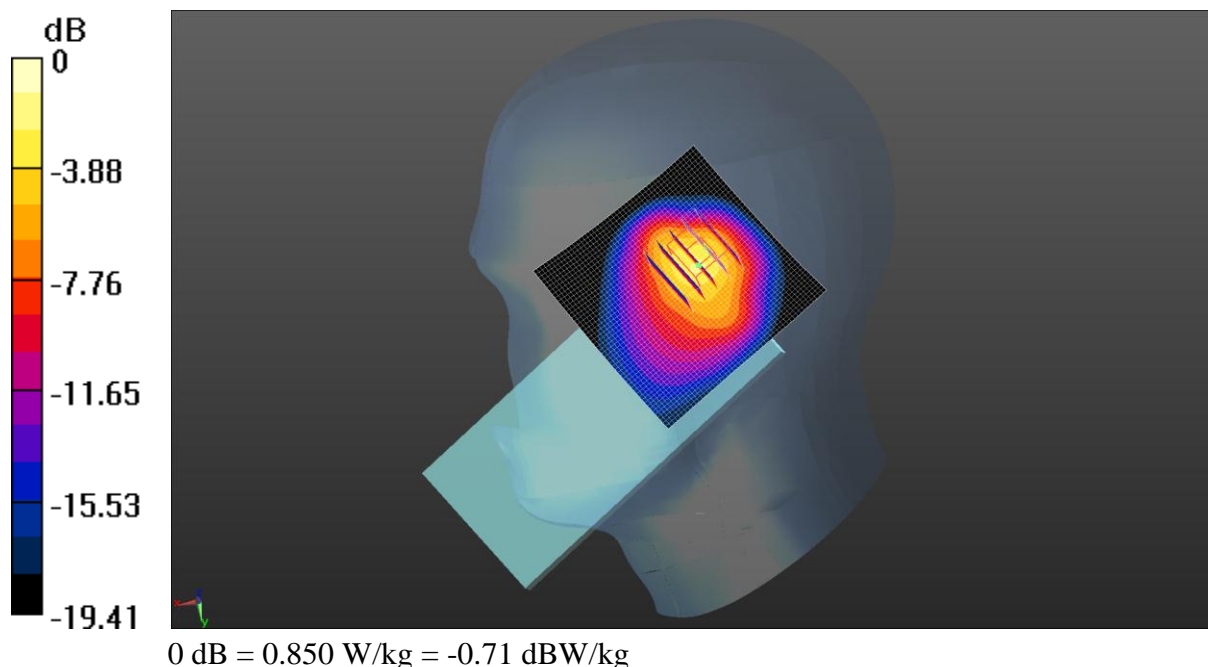
Peak SAR (extrapolated) = 1.17 W/kg

**SAR(1 g) = 0.559 W/kg; SAR(10 g) = 0.261 W/kg**

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

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

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



Test Laboratory: JYTSZ

Date: 04.28.2023

**DUT: Mobile Phone; Type: LH8n; Serial: 3#**

Communication System: UID 0, NR (0); Frequency: 836.5 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 836.5$  MHz;  $\sigma = 0.918$  S/m;  $\epsilon_r = 42.343$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section

DASY5 Configuration:

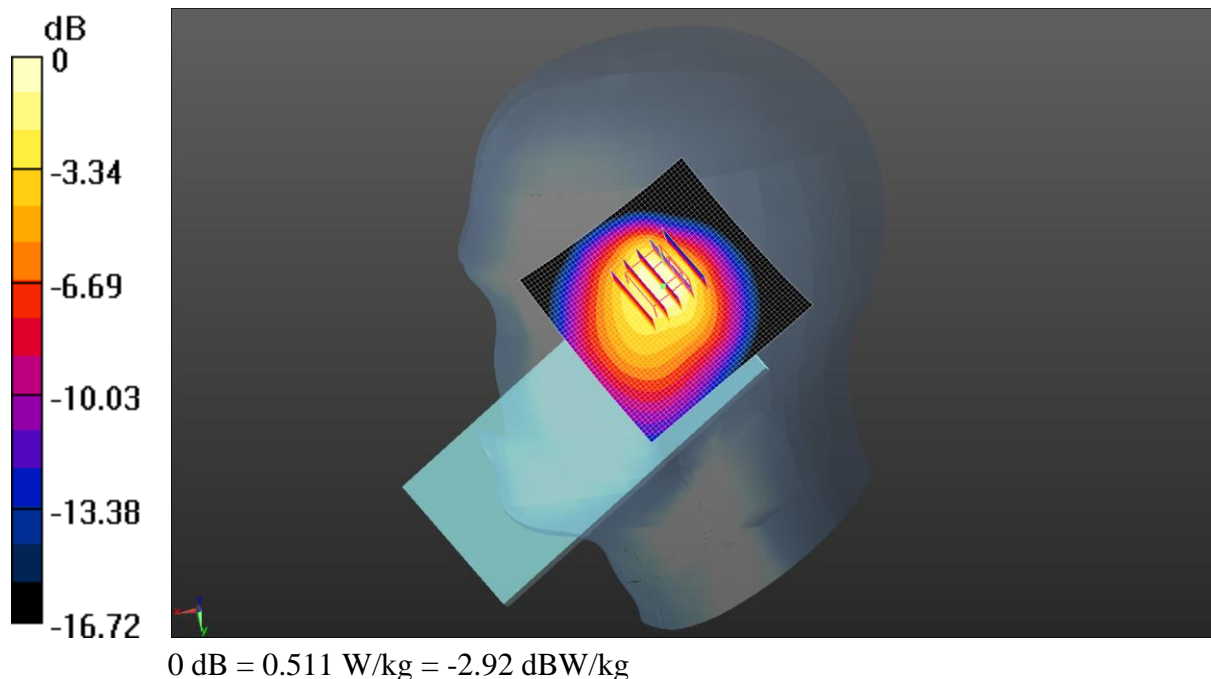
- Probe: EX3DV4 - SN3924; ConvF(9.8, 9.8, 9.8) @ 836.5 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**NR n5 1RB(20MHz) Right Cheek/Middle Channel/Area Scan (51x51x1):**

Interpolated grid: dx=1.500 mm, dy=1.500 mm  
Maximum value of SAR (interpolated) = 0.584 W/kg

**NR n5 1RB(20MHz) Right Cheek/Middle Channel/Zoom Scan (5x5x7)/Cube 0:**

Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 13.73 V/m; Power Drift = -0.05 dB  
Peak SAR (extrapolated) = 0.688 W/kg  
**SAR(1 g) = 0.336 W/kg; SAR(10 g) = 0.202 W/kg**  
Smallest distance from peaks to all points 3 dB below = 12.5 mm  
Ratio of SAR at M2 to SAR at M1 = 50.4%  
Maximum value of SAR (measured) = 0.511 W/kg



Test Laboratory: JYTSZ

Date: 05.18.2023

**DUT: Mobile Phone; Type: LH8n; Serial: 3#**

Communication System: UID 0, NR (0); Frequency: 2560 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 2560$  MHz;  $\sigma = 1.844$  S/m;  $\epsilon_r = 40.148$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section

DASY5 Configuration:

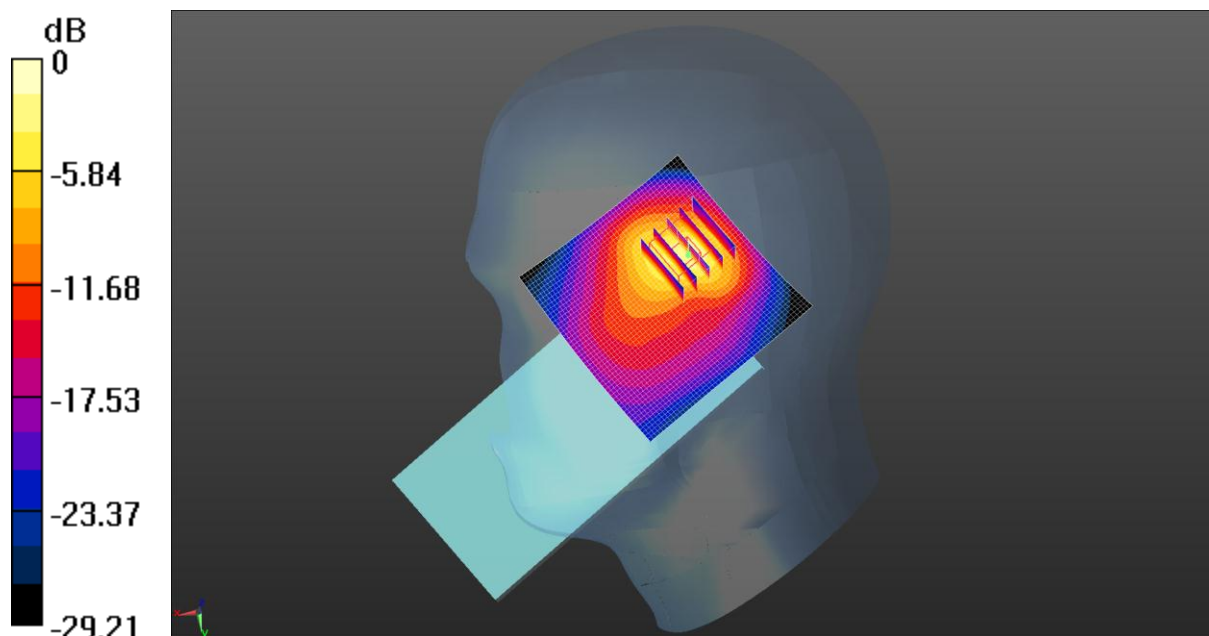
- Probe: EX3DV4 - SN3924; ConvF(7.6, 7.6, 7.6) @ 2560 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**NR n7 1RB(20MHz) Right Tilted/High Channel/Area Scan (51x51x1):**

Interpolated grid:  $dx=1.200$  mm,  $dy=1.200$  mm  
Maximum value of SAR (interpolated) = 0.689 W/kg

**NR n7 1RB(20MHz) Right Tilted/ High Channel/Zoom Scan (5x5x7)/Cube 0:**

Measurement grid:  $dx=5$ mm,  $dy=5$ mm,  $dz=5$ mm  
Reference Value = 4.253 V/m; Power Drift = -0.09 dB  
Peak SAR (extrapolated) = 1.38 W/kg  
**SAR(1 g) = 0.580 W/kg; SAR(10 g) = 0.246 W/kg**  
Smallest distance from peaks to all points 3 dB below = 7.2 mm  
Ratio of SAR at M2 to SAR at M1 = 43.1%  
Maximum value of SAR (measured) = 1.09 W/kg



0 dB = 1.09 W/kg = 0.37 dBW/kg



Test Laboratory: JYTSZ

Date: 04.28.2023

**DUT: Mobile Phone; Type: LH8n; Serial: 3#**

Communication System: UID 0, NR (0); Frequency: 708.5 MHz; Duty Cycle: 1:1  
 Medium parameters used (interpolated):  $f = 708.5 \text{ MHz}$ ;  $\sigma = 0.862 \text{ S/m}$ ;  $\epsilon_r = 42.63$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Right Section

DASY5 Configuration:

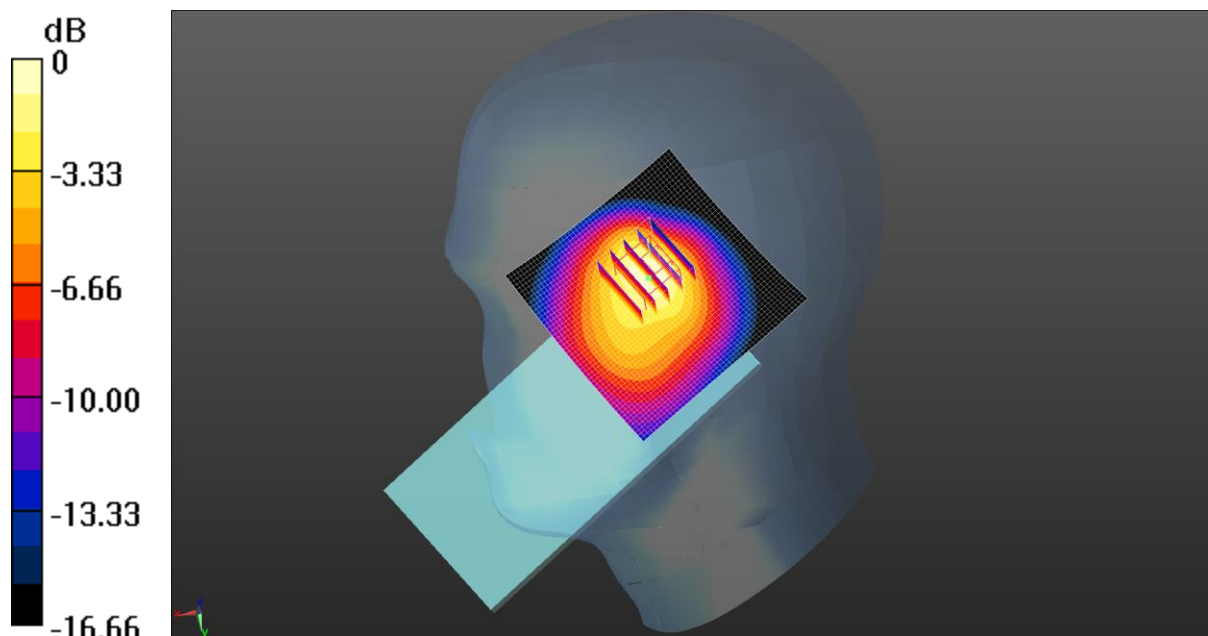
- Probe: EX3DV4 - SN3924; ConvF(10.2, 10.2, 10.2) @ 708.5 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version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

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

Interpolated grid:  $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$   
 Maximum value of SAR (interpolated) =  $0.683 \text{ W/kg}$

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

Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value =  $15.92 \text{ V/m}$ ; Power Drift =  $-0.01 \text{ dB}$   
 Peak SAR (extrapolated) =  $0.979 \text{ W/kg}$   
**SAR(1 g) =  $0.421 \text{ W/kg}$ ; SAR(10 g) =  $0.248 \text{ W/kg}$**   
 Smallest distance from peaks to all points 3 dB below =  $10.3 \text{ mm}$   
 Ratio of SAR at M2 to SAR at M1 =  $45.5\%$   
 Maximum value of SAR (measured) =  $0.677 \text{ W/kg}$



0 dB =  $0.677 \text{ W/kg} = -1.69 \text{ dBW/kg}$

Test Laboratory: JYTSZ

Date: 05.18.2023

**DUT: Mobile Phone; Type: LH8n; Serial: 3#**

Communication System: UID 0, NR (0); Frequency: 2546.01 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 2546.01$  MHz;  $\sigma = 1.876$  S/m;  $\epsilon_r = 40.162$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(7.6, 7.6, 7.6) @ 2546.01 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

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

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

Maximum value of SAR (interpolated) = 0.476 W/kg

**NR n41 1RB(100MHz) Right Tilted/Low Channel/Zoom Scan (5x5x7)/Cube 0:**

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

Reference Value = 4.329 V/m; Power Drift = -0.06 dB

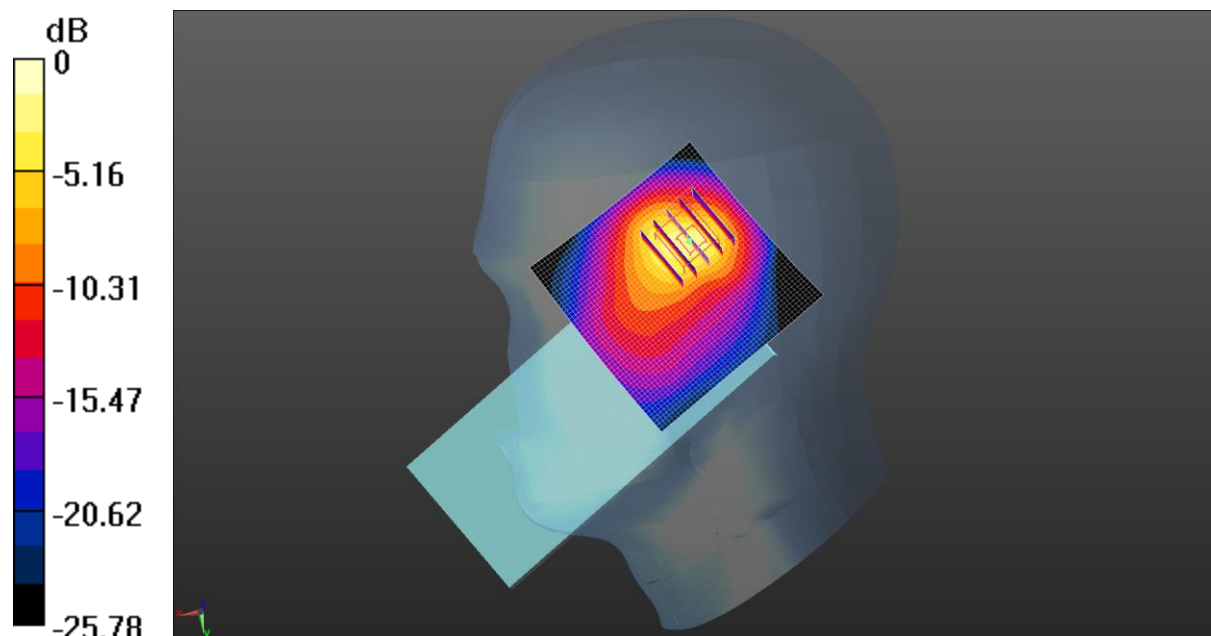
Peak SAR (extrapolated) = 1.06 W/kg

**SAR(1 g) = 0.449 W/kg; SAR(10 g) = 0.193 W/kg**

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

Ratio of SAR at M2 to SAR at M1 = 40.5%

Maximum value of SAR (measured) = 0.827 W/kg



0 dB = 0.827 W/kg = -0.82 dBW/kg

Test Laboratory: JYTSZ

Date: 05.04.2023

**DUT: Mobile Phone; Type: LH8n; Serial: 3#**

Communication System: UID 0, NR (0); Frequency: 1730 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 1730$  MHz;  $\sigma = 1.341$  S/m;  $\epsilon_r = 40.875$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right Section

DASY5 Configuration:

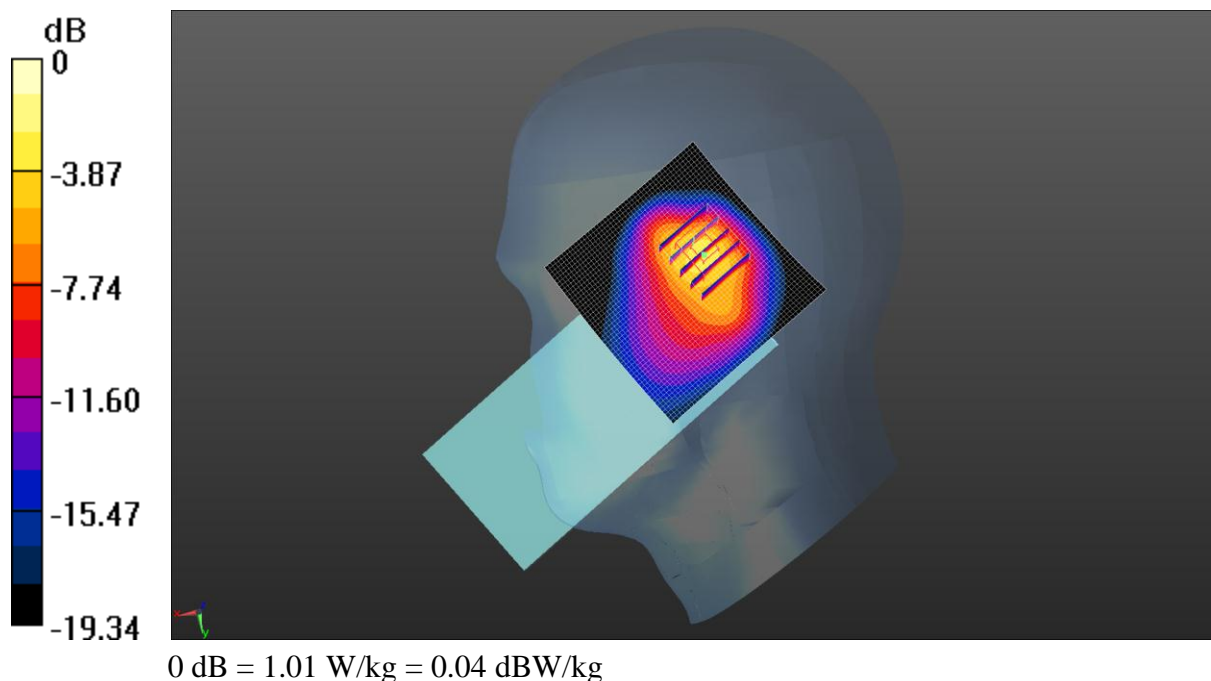
- Probe: EX3DV4 - SN3924; ConvF(8.38, 8.38, 8.38) @ 1730 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version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

**NR n66 1RB(40MHz) Right Tilted/Low Channel/Area Scan (51x51x1):**

Interpolated grid:  $dx=1.500$  mm,  $dy=1.500$  mm  
Maximum value of SAR (interpolated) = 0.516 W/kg

**NR n66 1RB(40MHz) Right Tilted/Low Channel/Zoom Scan (5x5x7)/Cube 0:**

Measurement grid:  $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm  
Reference Value = 17.08 V/m; Power Drift = -0.09 dB  
Peak SAR (extrapolated) = 1.29 W/kg  
**SAR(1 g) = 0.609 W/kg; SAR(10 g) = 0.277 W/kg**  
Smallest distance from peaks to all points 3 dB below = 6.4 mm  
Ratio of SAR at M2 to SAR at M1 = 46.2%  
Maximum value of SAR (measured) = 1.01 W/kg



Test Laboratory: JYTSZ

Date: 05.09.2023

**DUT: Mobile Phone; Type: LH8n; 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;  $\epsilon_r = 39.53$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section

DASY5 Configuration:

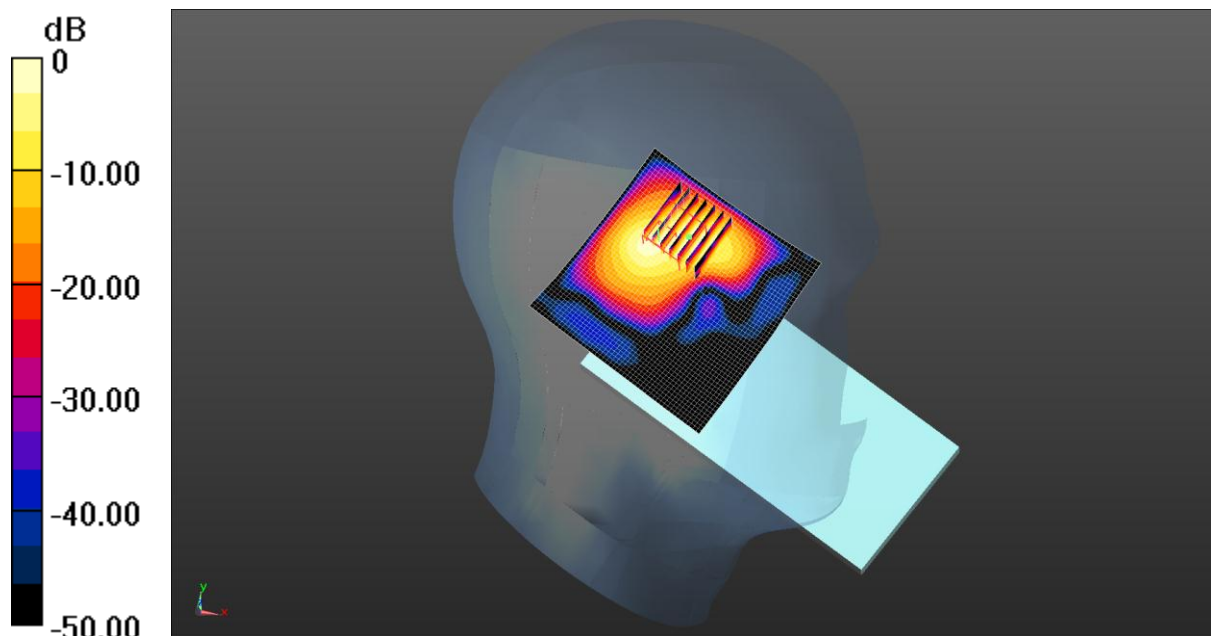
- Probe: EX3DV4 - SN3924; ConvF(7.02, 7.02, 7.02) @ 3500.01 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X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

**NR n77 1RB(100MHz) Left Cheek/Middle Channel/Area Scan (51x51x1):**

Interpolated grid: dx=1.200 mm, dy=1.200 mm  
Maximum value of SAR (interpolated) = 0.353 W/kg

**NR n77 1RB(100MHz) Left Cheek/Middle Channel/Zoom Scan (7x7x7)/Cube**

**0:** Measurement grid: dx=5mm, dy=5mm, dz=4mm  
Reference Value = 1.616 V/m; Power Drift = 0.19 dB  
Peak SAR (extrapolated) = 0.544 W/kg  
**SAR(1 g) = 0.174 W/kg; SAR(10 g) = 0.063 W/kg**  
Smallest distance from peaks to all points 3 dB below = 5.1 mm  
Ratio of SAR at M2 to SAR at M1 = 31.4%  
Maximum value of SAR (measured) = 0.380 W/kg



0 dB = 0.380 W/kg = -4.20 dBW/kg

Test Laboratory: JYTSZ

Date: 05.09.2023

**DUT: Mobile Phone; Type: LH8n; Serial: 3#**

Communication System: UID 0, NR (0); Frequency: 3750 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 3750$  MHz;  $\sigma = 3.052$  S/m;  $\epsilon_r = 39.21$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section

DASY5 Configuration:

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

**NR n77 50%RB(100MHz) Left Cheek/Low Channel/Area Scan (51x51x1):**Interpolated grid:  $dx=1.200$  mm,  $dy=1.200$  mm

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

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

Reference Value = 4.451 V/m; Power Drift = -0.20 dB

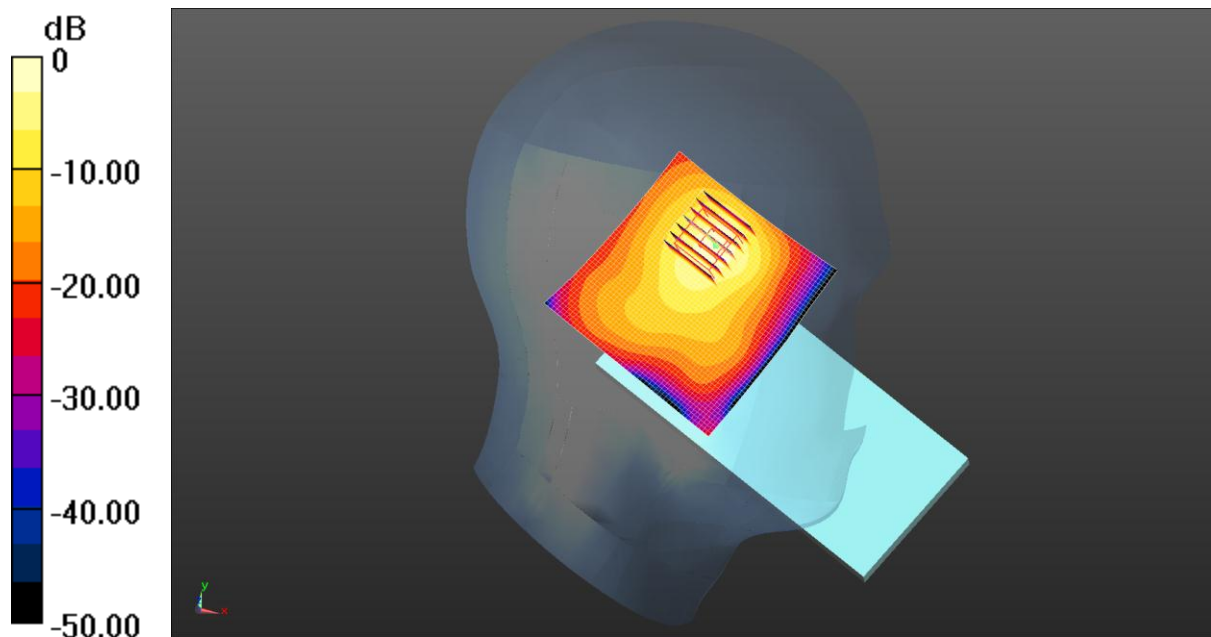
Peak SAR (extrapolated) = 1.52 W/kg

**SAR(1 g) = 0.545 W/kg; SAR(10 g) = 0.201 W/kg**

Smallest distance from peaks to all points 3 dB below = 7 mm

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

Maximum value of SAR (measured) = 1.09 W/kg



0 dB = 1.09 W/kg = 0.37 dBW/kg

Test Laboratory: JYTSZ

Date: 05.18.2023

**DUT: Mobile Phone; Type: LH8n; Serial: 3#**

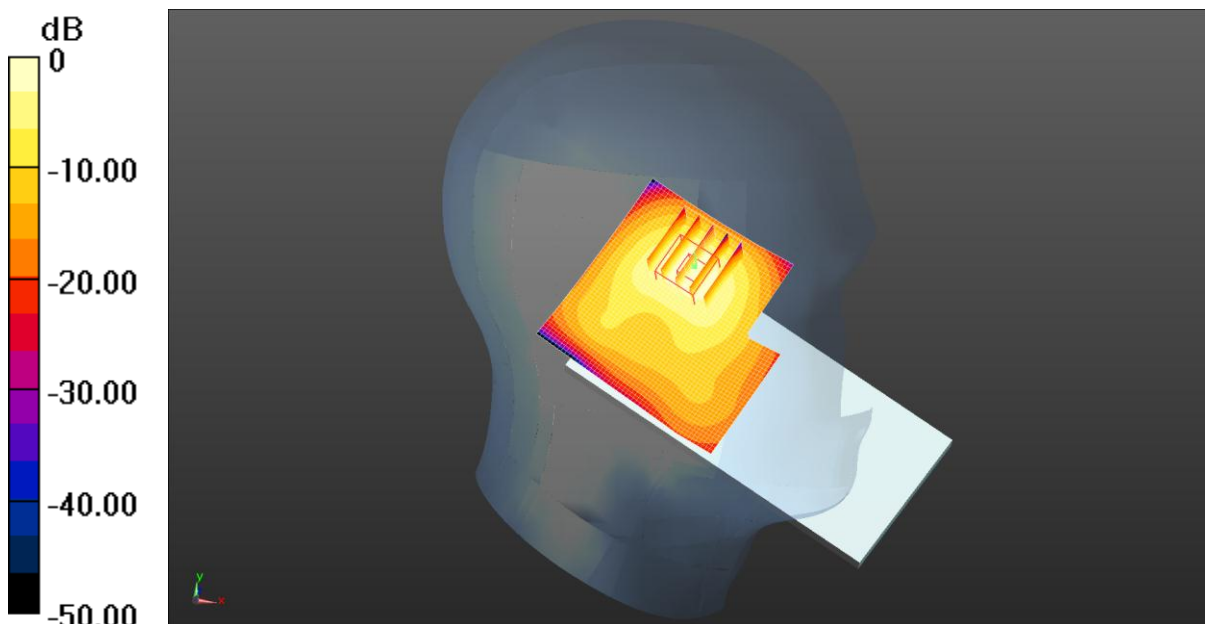
Communication System: UID 0, IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps) (0);  
 Frequency: 2462 MHz; Duty Cycle: 1:1  
 Medium parameters used (interpolated):  $f = 2462 \text{ MHz}$ ;  $\sigma = 1.758 \text{ S/m}$ ;  $\epsilon_r = 40.12$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(7.6, 7.6, 7.6) @ 2462 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/High Channel/Area Scan (51x51x1):** Interpolated grid:  
 $dx=1.200 \text{ mm}$ ,  $dy=1.200 \text{ mm}$   
 Maximum value of SAR (interpolated) = 0.535 W/kg

**2.4GWIFI Left Cheek/High Channel/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value = 5.943 V/m; Power Drift = 0.08 dB  
 Peak SAR (extrapolated) = 0.644 W/kg  
**SAR(1 g) = 0.282 W/kg; SAR(10 g) = 0.137 W/kg**  
 Smallest distance from peaks to all points 3 dB below = 8.6 mm  
 Ratio of SAR at M2 to SAR at M1 = 40.9%  
 Maximum value of SAR (measured) = 0.481 W/kg



0 dB = 0.481 W/kg = -3.18 dBW/kg

Test Laboratory: JYTSZ

Date: 05.13.2023

**DUT: Mobile Phone; Type: LH8n; Serial: 3#**

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

Medium parameters used:  $f = 5240$  MHz;  $\sigma = 4.718$  S/m;  $\epsilon_r = 36.54$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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) = 0.559 W/kg

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

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

Reference Value = 1.437 V/m; Power Drift = -0.03 dB

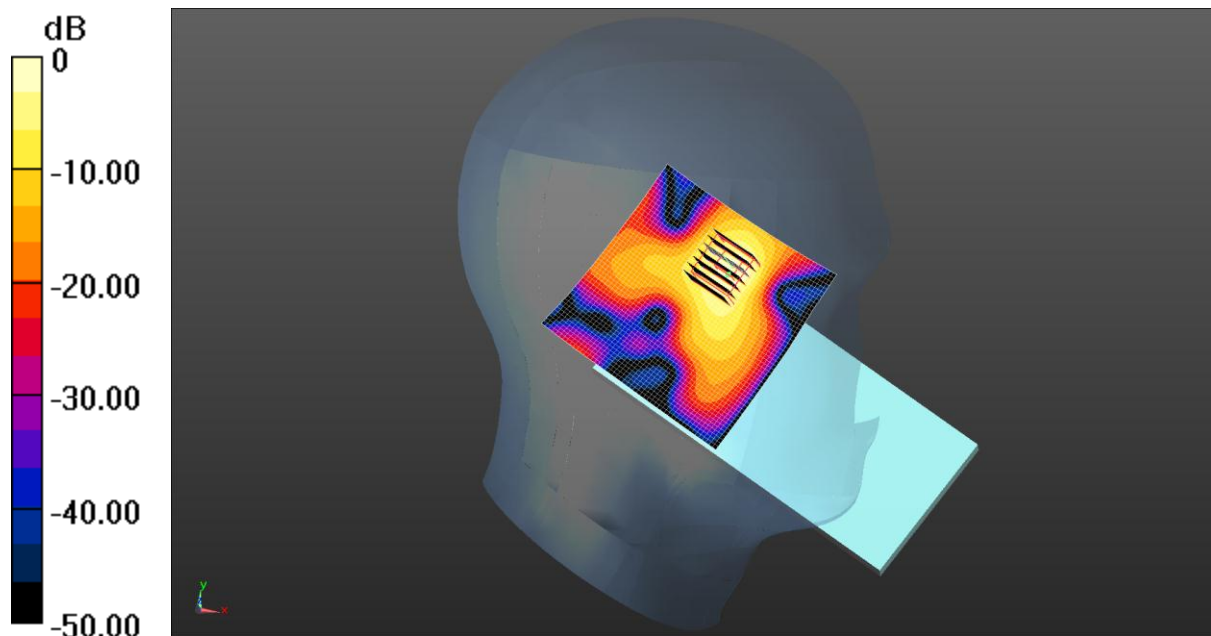
Peak SAR (extrapolated) = 0.975 W/kg

**SAR(1 g) = 0.238 W/kg; SAR(10 g) = 0.074 W/kg**

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

Ratio of SAR at M2 to SAR at M1 = 18.6%

Maximum value of SAR (measured) = 0.614 W/kg



0 dB = 0.614 W/kg = -2.12 dBW/kg

Test Laboratory: JYTSZ

Date: 05.13.2023

**DUT: Mobile Phone; Type: LH8n; Serial: 3#**

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

Medium parameters used (interpolated):  $f = 5785 \text{ MHz}$ ;  $\sigma = 5.372 \text{ S/m}$ ;  $\epsilon_r = 35.928$ ;  $\rho = 1000 \text{ kg/m}^3$

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:

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

Maximum value of SAR (interpolated) = 0.596 W/kg

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

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

Reference Value = 0.7880 V/m; Power Drift = 0.04 dB

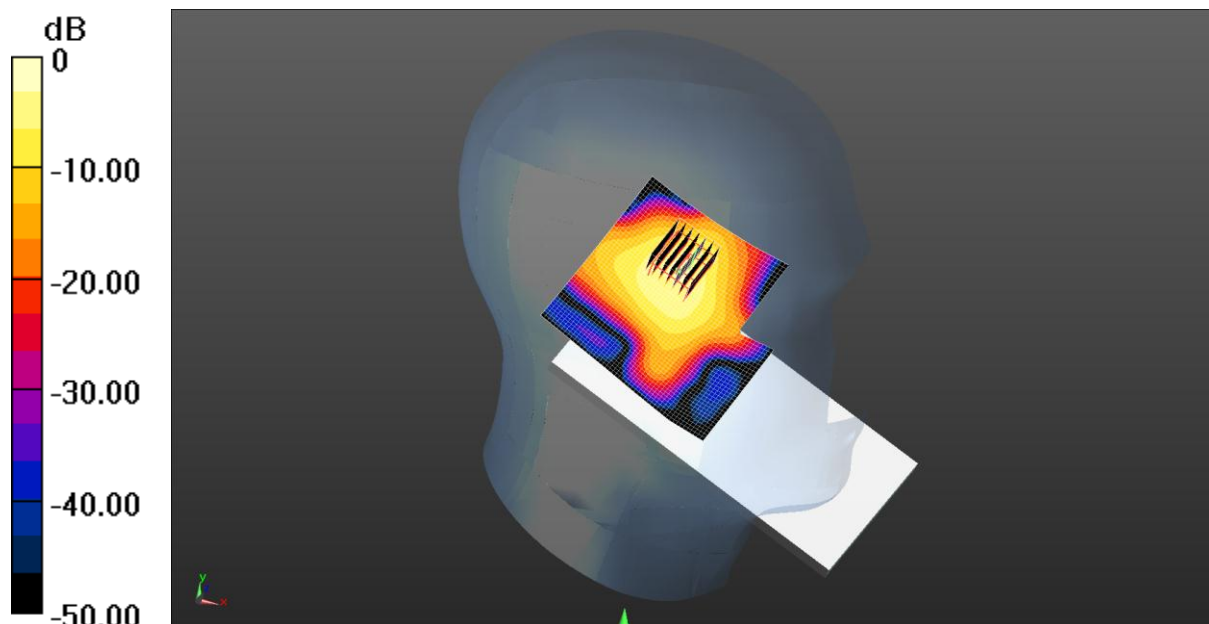
Peak SAR (extrapolated) = 1.54 W/kg

**SAR(1 g) = 0.356 W/kg; SAR(10 g) = 0.100 W/kg**

Smallest distance from peaks to all points 3 dB below = 5.4 mm

Ratio of SAR at M2 to SAR at M1 = 15.6%

Maximum value of SAR (measured) = 1.03 W/kg



0 dB = 1.03 W/kg = 0.13 dBW/kg



Test Laboratory: JYTSZ

Date: 05.18.2023

**DUT: Mobile Phone; Type: LH8n; Serial: 3#**

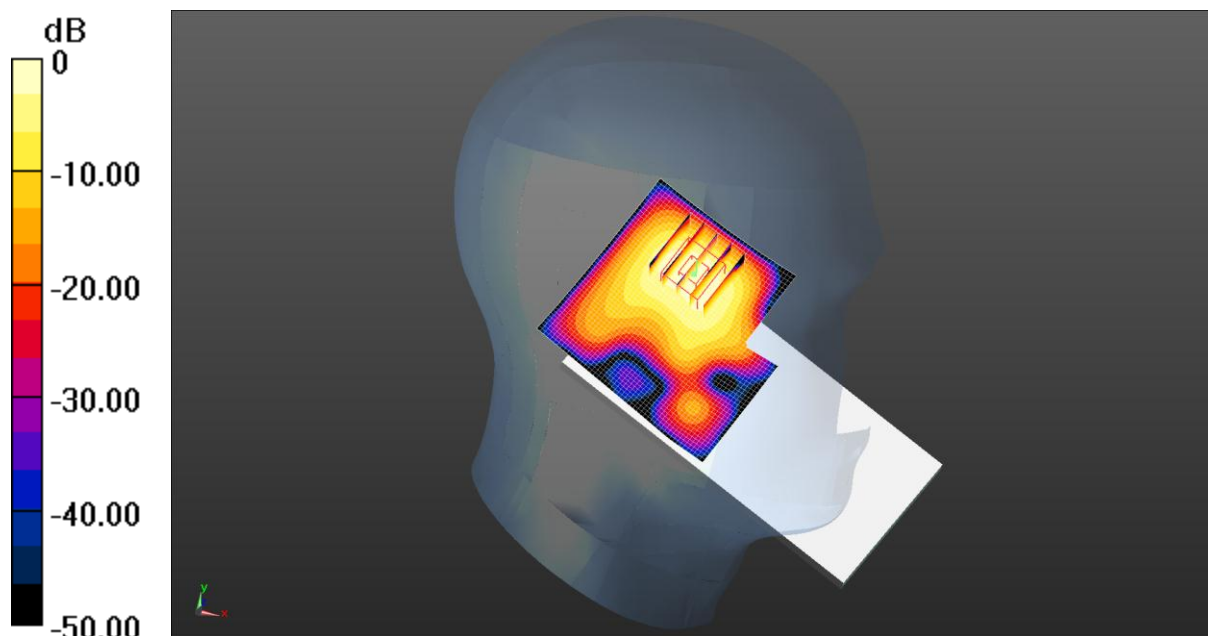
Communication System: UID 0, Bluetooth (0); Frequency: 2441 MHz; Duty Cycle: 1:1  
 Medium parameters used (interpolated):  $f = 2441 \text{ MHz}$ ;  $\sigma = 1.746 \text{ S/m}$ ;  $\epsilon_r = 40.138$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Left Section

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)

**BT Left Cheek/Middle Channel/Area Scan (51x51x1):** Interpolated grid:  $dx=1.200 \text{ mm}$ ,  $dy=1.200 \text{ mm}$   
 Maximum value of SAR (interpolated) = 0.140 W/kg

**BT Left Cheek/Middle Channel/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value = 2.106 V/m; Power Drift = -0.01 dB  
 Peak SAR (extrapolated) = 0.123 W/kg  
**SAR(1 g) = 0.056 W/kg; SAR(10 g) = 0.027 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 = 43.2%  
 Maximum value of SAR (measured) = 0.0962 W/kg



0 dB = 0.0962 W/kg = -10.17 dBW/kg

Test Laboratory: JYTSZ

Date: 04.28.2023

**DUT: Mobile Phone; Type: LH8n; Serial: 3#**

Communication System: UID 0, GPRS(2 Slots) (0); Frequency: 836.6 MHz; Duty Cycle: 1:4.10015

Medium parameters used (interpolated):  $f = 836.6$  MHz;  $\sigma = 0.919$  S/m;  $\epsilon_r = 42.342$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY5 Configuration:

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

**GPRS 850 2Slots Body Back/Middle Channel/Area Scan (51x71x1):** Interpolated

grid: dx=1.500 mm, dy=1.500 mm

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

**GPRS 850 2Slots Body Back/Middle Channel/Zoom Scan (5x5x7)/Cube 0:**

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

Reference Value = 5.620 V/m; Power Drift = -0.01 dB

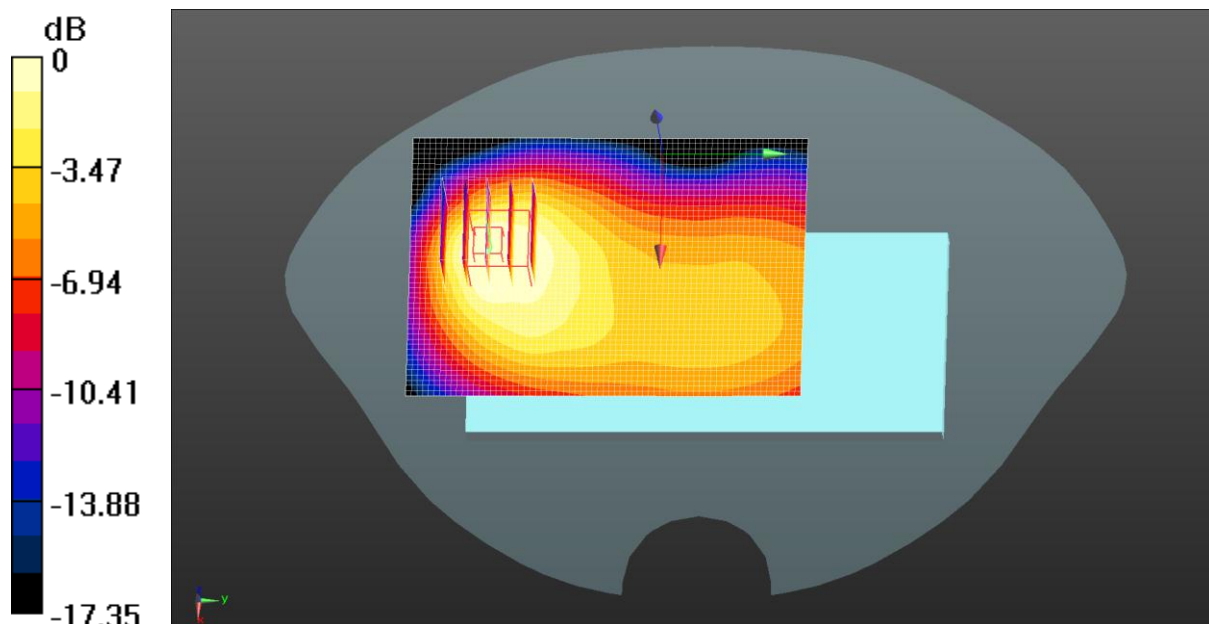
Peak SAR (extrapolated) = 0.0860 W/kg

**SAR(1 g) = 0.047 W/kg; SAR(10 g) = 0.030 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 = 58.6%

Maximum value of SAR (measured) = 0.0669 W/kg



0 dB = 0.0669 W/kg = -11.75 dBW/kg

Test Laboratory: JYTSZ

Date: 05.04.2023

**DUT: Mobile Phone; Type: LH8n; Serial: 3#**

Communication System: UID 0, GPRS(2 Slots) (0); Frequency: 1880 MHz;Duty Cycle: 1:4.10015

Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.328$  S/m;  $\epsilon_r = 41.132$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat 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)

**GPRS 1900 Body Back/Middle Channel/Area Scan (51x61x1):** Interpolated grid:

dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.587 W/kg

**GPRS 1900 Body Back/Middle Channel/Zoom Scan (5x5x7)/Cube 0:**

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

Reference Value = 8.574 V/m; Power Drift = 0.05 dB

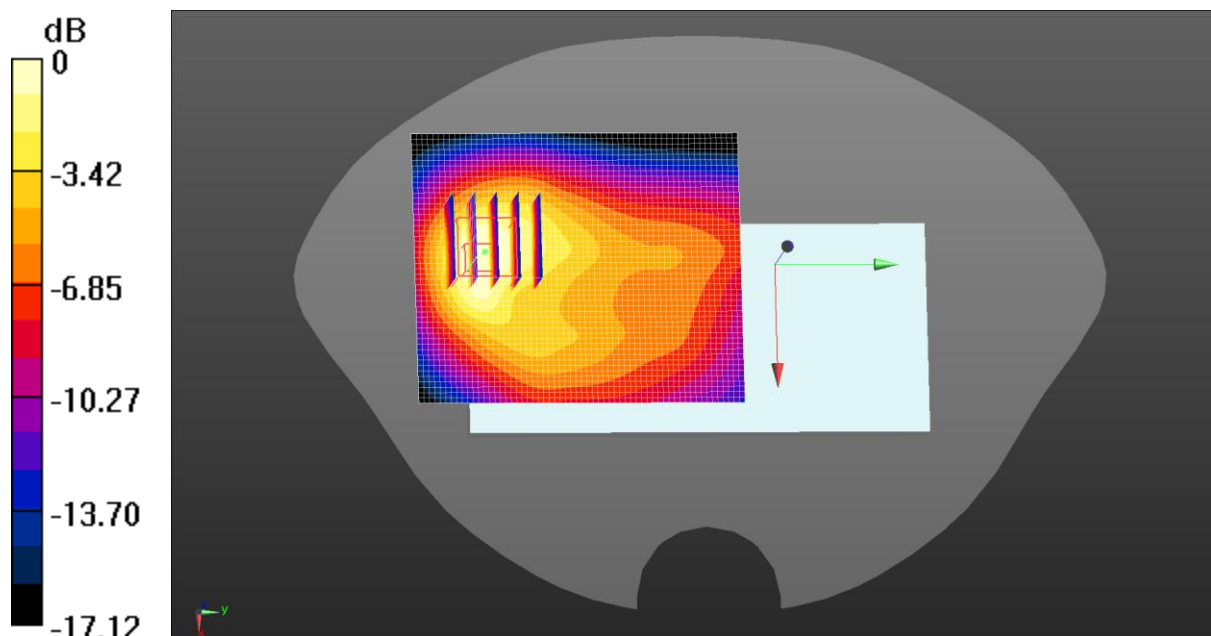
Peak SAR (extrapolated) = 0.666 W/kg

**SAR(1 g) = 0.359 W/kg; SAR(10 g) = 0.195 W/kg**

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

Ratio of SAR at M2 to SAR at M1 = 58.5%

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



0 dB = 0.502 W/kg = -2.99 dBW/kg

Test Laboratory: JYTSZ

Date: 05.04.2023

**DUT: Mobile Phone; Type: LH8n; 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;  $\sigma = 1.351$  S/m;  $\epsilon_r = 41.148$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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) = 0.255 W/kg

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

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

Reference Value = 6.833 V/m; Power Drift = -0.10 dB

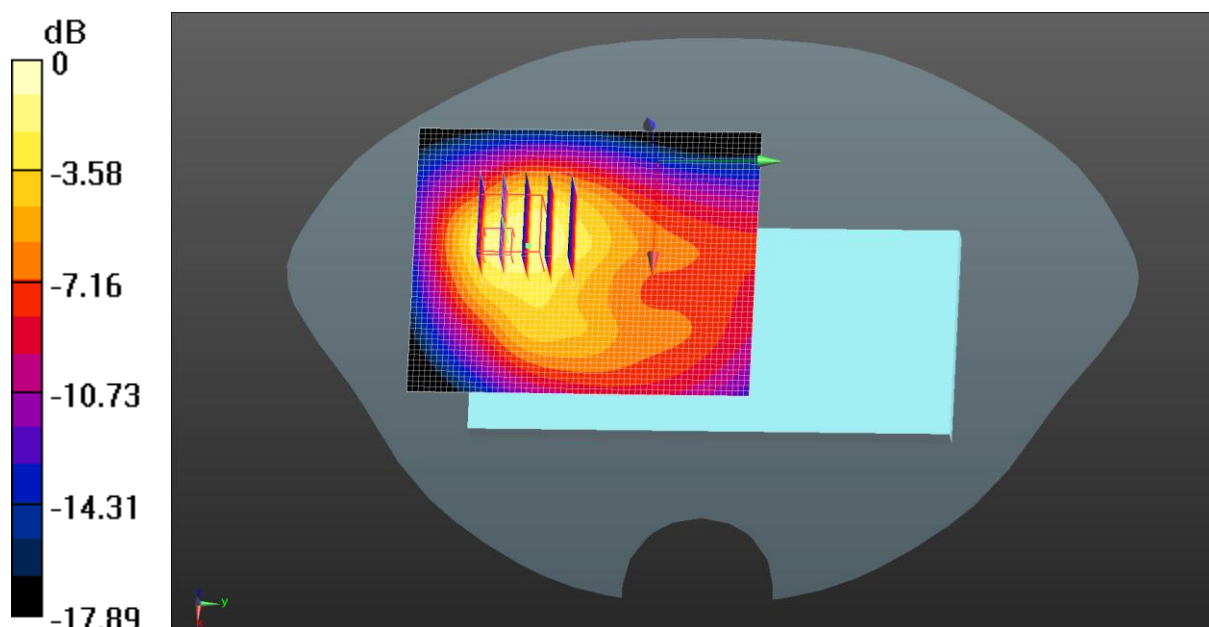
Peak SAR (extrapolated) = 0.411 W/kg

**SAR(1 g) = 0.219 W/kg; SAR(10 g) = 0.113 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) = 0.334 W/kg



0 dB = 0.334 W/kg = -4.76 dBW/kg

Test Laboratory: JYTSZ

Date: 05.04.2023

**DUT: Mobile Phone; Type: LH8n; 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;  $\sigma = 1.342$  S/m;  $\epsilon_r = 40.872$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY5 Configuration:

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

**WCDMA 1700 Body Back/Middle Channel/Area Scan (51x61x1):** Interpolated

grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.226 W/kg

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

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

Reference Value = 6.904 V/m; Power Drift = -0.03 dB

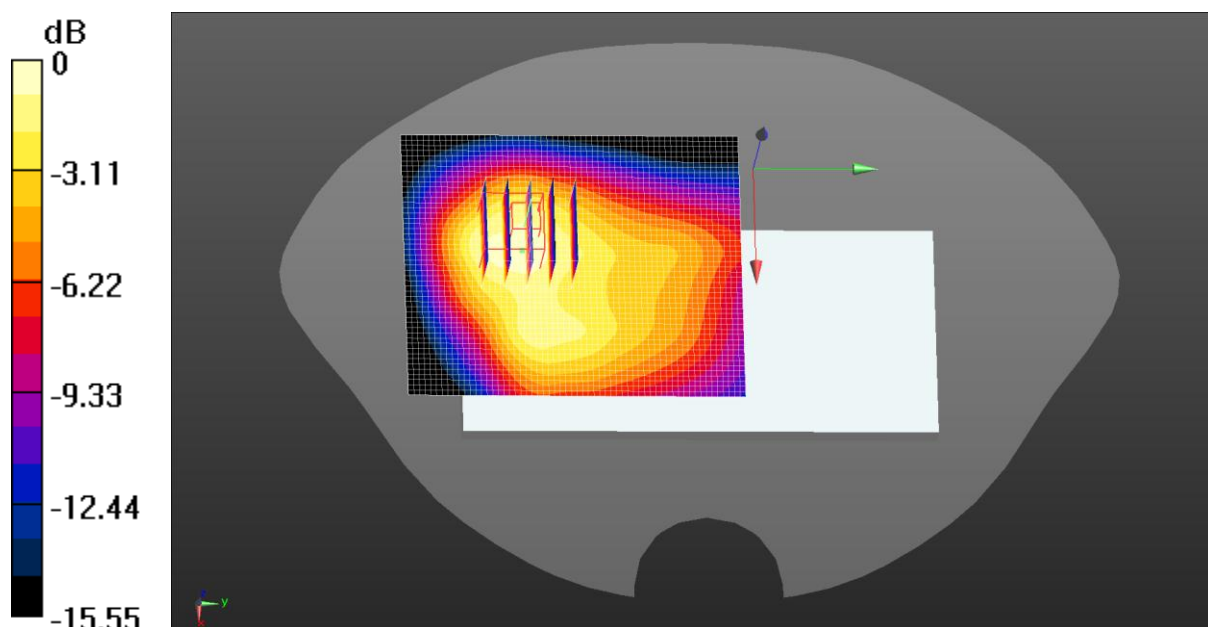
Peak SAR (extrapolated) = 0.293 W/kg

**SAR(1 g) = 0.153 W/kg; SAR(10 g) = 0.087 W/kg**

Smallest distance from peaks to all points 3 dB below = 16.5 mm

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

Maximum value of SAR (measured) = 0.241 W/kg



0 dB = 0.241 W/kg = -6.18 dBW/kg

Test Laboratory: JYTSZ

Date: 04.28.2023

**DUT: Mobile Phone; Type: LH8n; 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;  $\sigma = 0.919$  S/m;  $\epsilon_r = 42.342$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY5 Configuration:

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

**WCDMA 850 Body Back/Middle Channel/Area Scan (51x71x1):** Interpolated grid:

dx=1.500 mm, dy=1.500 mm

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

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

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

Reference Value = 12.17 V/m; Power Drift = -0.04 dB

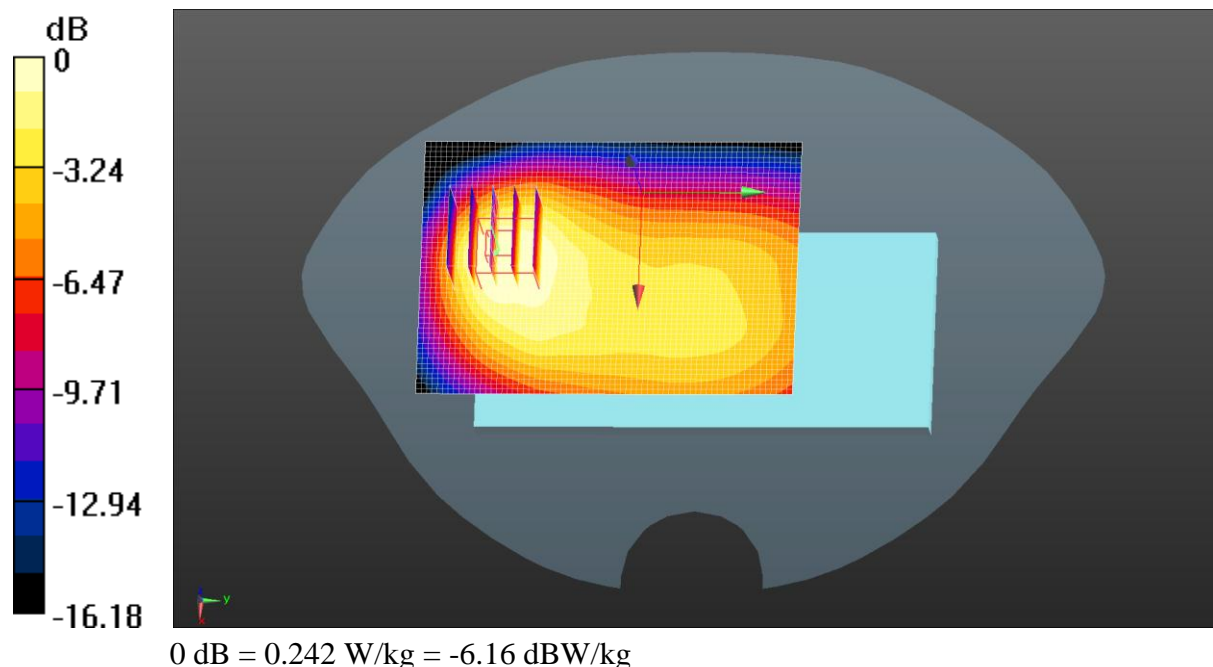
Peak SAR (extrapolated) = 0.300 W/kg

**SAR(1 g) = 0.171 W/kg; SAR(10 g) = 0.110 W/kg**

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

Ratio of SAR at M2 to SAR at M1 = 58.5%

Maximum value of SAR (measured) = 0.242 W/kg



Test Laboratory: JYTSZ

Date: 05.04.2023

**DUT: Mobile Phone; Type: LH8n; Serial: 3#**

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

Medium parameters used:  $f = 1900 \text{ MHz}$ ;  $\sigma = 1.343 \text{ S/m}$ ;  $\epsilon_r = 41.123$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

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

**LTE Band 2 1RB(20MHz) Body Back/High Channel/Area Scan (51x61x1):**

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

Maximum value of SAR (interpolated) = 0.209 W/kg

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

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

Reference Value = 6.138 V/m; Power Drift = -0.04 dB

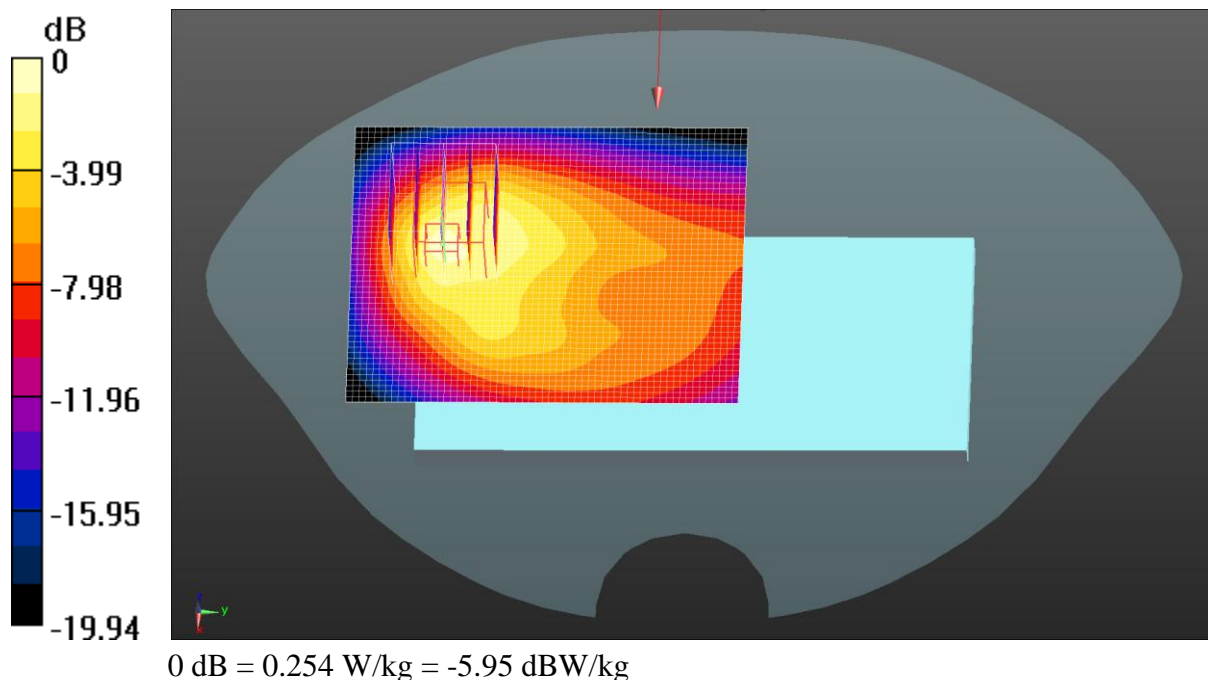
Peak SAR (extrapolated) = 0.307 W/kg

**SAR(1 g) = 0.164 W/kg; SAR(10 g) = 0.088 W/kg**

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

Ratio of SAR at M2 to SAR at M1 = 54.7%

Maximum value of SAR (measured) = 0.254 W/kg



Test Laboratory: JYTSZ

Date: 04.28.2023

**DUT: Mobile Phone; Type: LH8n; Serial: 3#**

Communication System: UID 0, LTE-Fdd(USA) 1RB QPSK (0); Frequency: 844 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 844 \text{ MHz}$ ;  $\sigma = 0.923 \text{ S/m}$ ;  $\epsilon_r = 42.349$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(9.8, 9.8, 9.8) @ 844 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**LTE Band 5 1RB(10MHz) Body Back/High Channel/Area Scan (51x71x1):**

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

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

**LTE Band 5 1RB(10MHz) 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 = 11.63 V/m; Power Drift = -0.06 dB

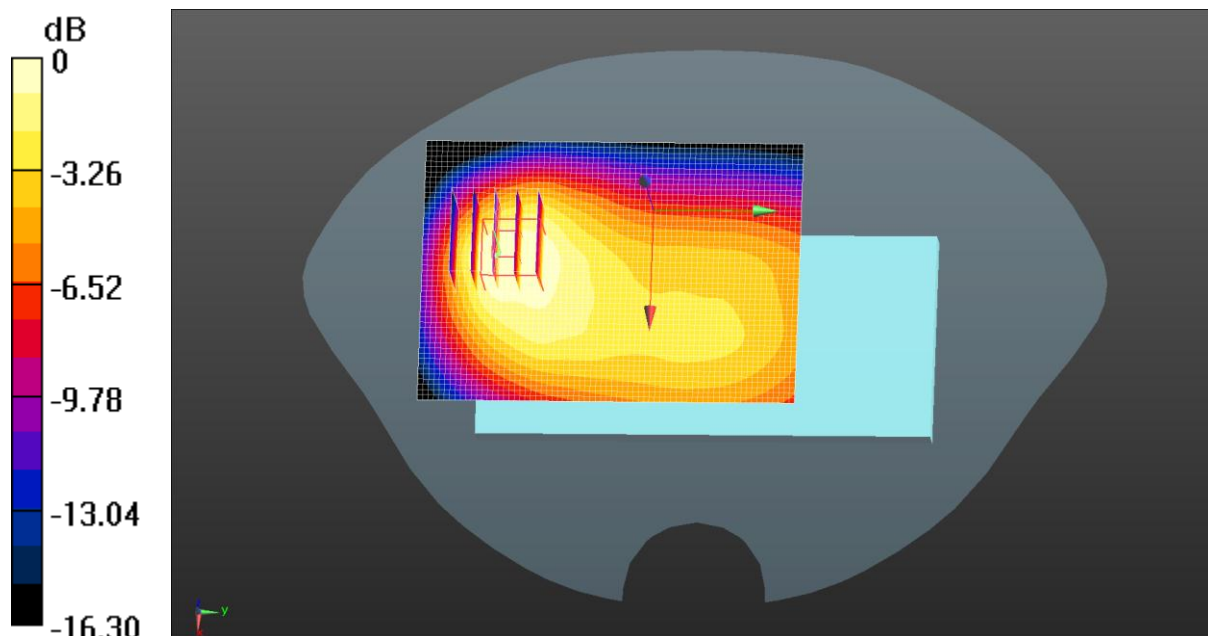
Peak SAR (extrapolated) = 0.289 W/kg

**SAR(1 g) = 0.163 W/kg; SAR(10 g) = 0.105 W/kg**

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

Ratio of SAR at M2 to SAR at M1 = 58%

Maximum value of SAR (measured) = 0.234 W/kg



0 dB = 0.234 W/kg = -6.31 dBW/kg



Test Laboratory: JYTSZ

Date: 05.18.2023

**DUT: Mobile Phone; Type: LH8n; Serial: 3#**

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

Medium parameters used:  $f = 2560$  MHz;  $\sigma = 1.844$  S/m;  $\epsilon_r = 40.148$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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)

**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) = 0.453 W/kg

**LTE Band 7 1RB(20MHz) Body Back/High Channel/Zoom Scan (5x5x7)/Cube****0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.191 V/m; Power Drift = 0.19 dB

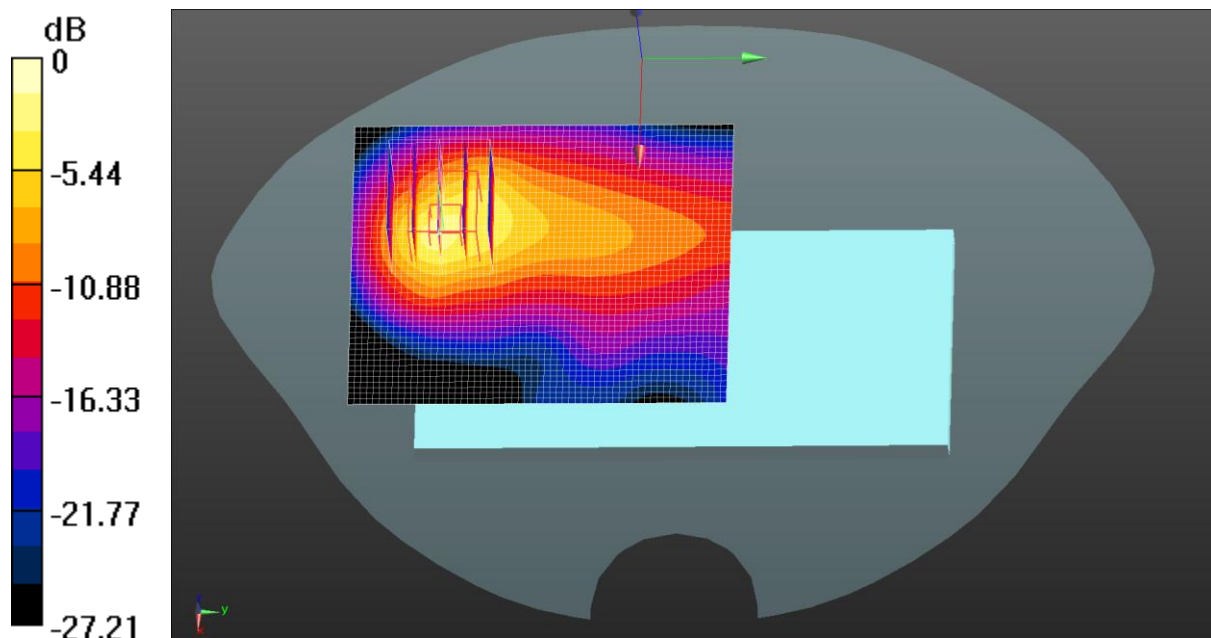
Peak SAR (extrapolated) = 1.10 W/kg

**SAR(1 g) = 0.497 W/kg; SAR(10 g) = 0.213 W/kg**

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

Ratio of SAR at M2 to SAR at M1 = 48.4%

Maximum value of SAR (measured) = 0.855 W/kg



0 dB = 0.855 W/kg = -0.68 dBW/kg

Test Laboratory: JYTSZ

Date: 04.28.2023

**DUT: Mobile Phone; Type: LH8n; Serial: 3#**

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

Medium parameters used (interpolated):  $f = 711 \text{ MHz}$ ;  $v = 0.861 \text{ S/m}$ ;  $\epsilon_r = 42.612$ ;  $\rho = 1000 \text{ kg/m}^3$

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) Body Back/High Channel/Area Scan (51x71x1):**

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

Maximum value of SAR (interpolated) = 0.297 W/kg

**LTE Band 12 1RB(10MHz) 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 = 14.51 V/m; Power Drift = -0.04 dB

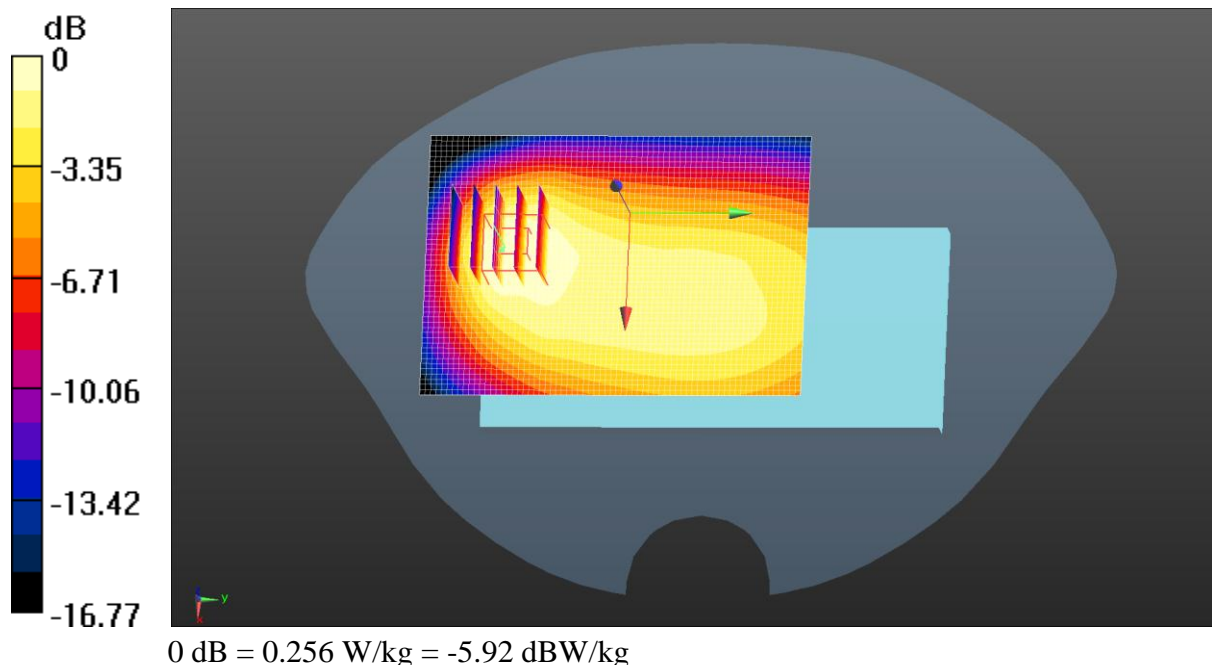
Peak SAR (extrapolated) = 0.328 W/kg

**SAR(1 g) = 0.179 W/kg; SAR(10 g) = 0.117 W/kg**

Smallest distance from peaks to all points 3 dB below = 13.8 mm

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

Maximum value of SAR (measured) = 0.256 W/kg



Test Laboratory: JYTSZ

Date: 05.18.2023

**DUT: Mobile Phone; Type: LH8n; Serial: 3#**

Communication System: UID 0, LTE-TDD(USA) 20MHz 1RB QPSK (0); Frequency: 2680 MHz; Duty Cycle: 1:1.59956

Medium parameters used:  $f = 2680 \text{ MHz}$ ;  $\sigma = 1.945 \text{ S/m}$ ;  $\epsilon_r = 40.128$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(7.35, 7.35, 7.35) @ 2680 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**LTE Band 41 1RB(20MHz) Body Back/High Channel/Area Scan (51x61x1):**

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

Maximum value of SAR (interpolated) = 0.479 W/kg

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

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

Reference Value = 4.089 V/m; Power Drift = 0.07 dB

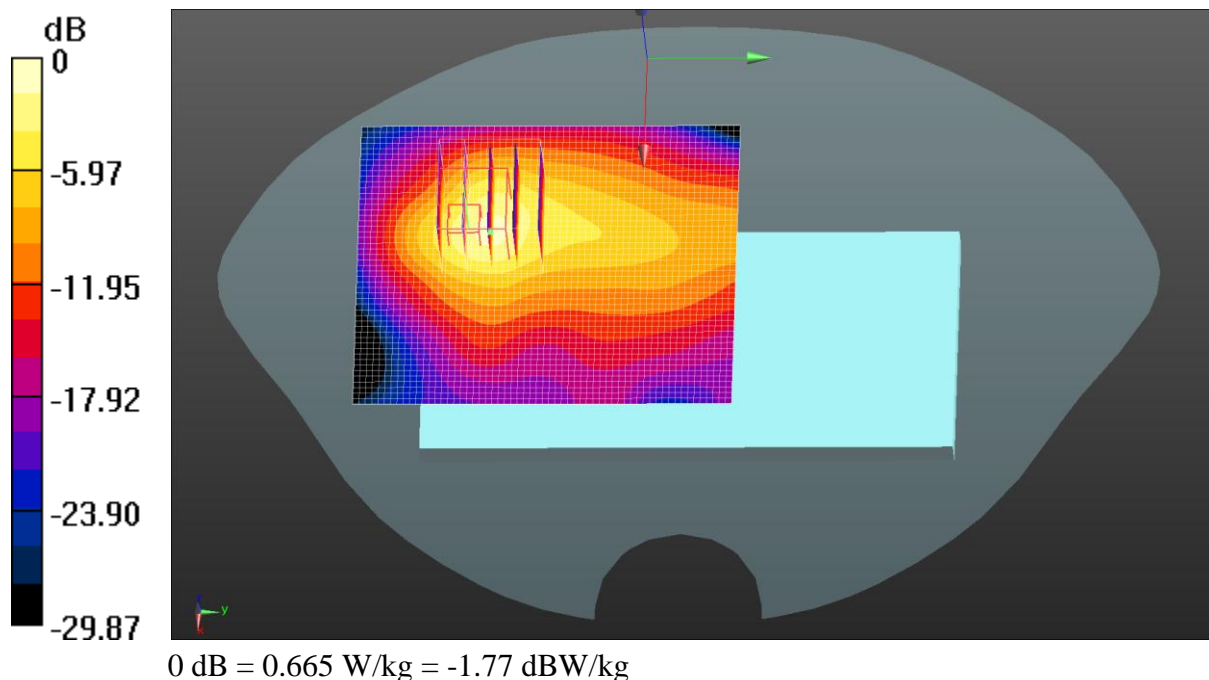
Peak SAR (extrapolated) = 0.842 W/kg

**SAR(1 g) = 0.362 W/kg; SAR(10 g) = 0.153 W/kg**

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

Ratio of SAR at M2 to SAR at M1 = 43.8%

Maximum value of SAR (measured) = 0.665 W/kg



Test Laboratory: JYTSZ

Date: 05.04.2023

**DUT: Mobile Phone; Type: LH8n; Serial: 3#**

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

Medium parameters used:  $f = 1720$  MHz;  $\sigma = 1.329$  S/m;  $\epsilon_r = 40.874$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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) Body Back/Low Channel/Area Scan (51x61x1):**

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

Maximum value of SAR (interpolated) = 0.200 W/kg

**LTE Band 66 1RB(20MHz) Body Back/Low Channel/Zoom Scan****(5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.632 V/m; Power Drift = 0.01 dB

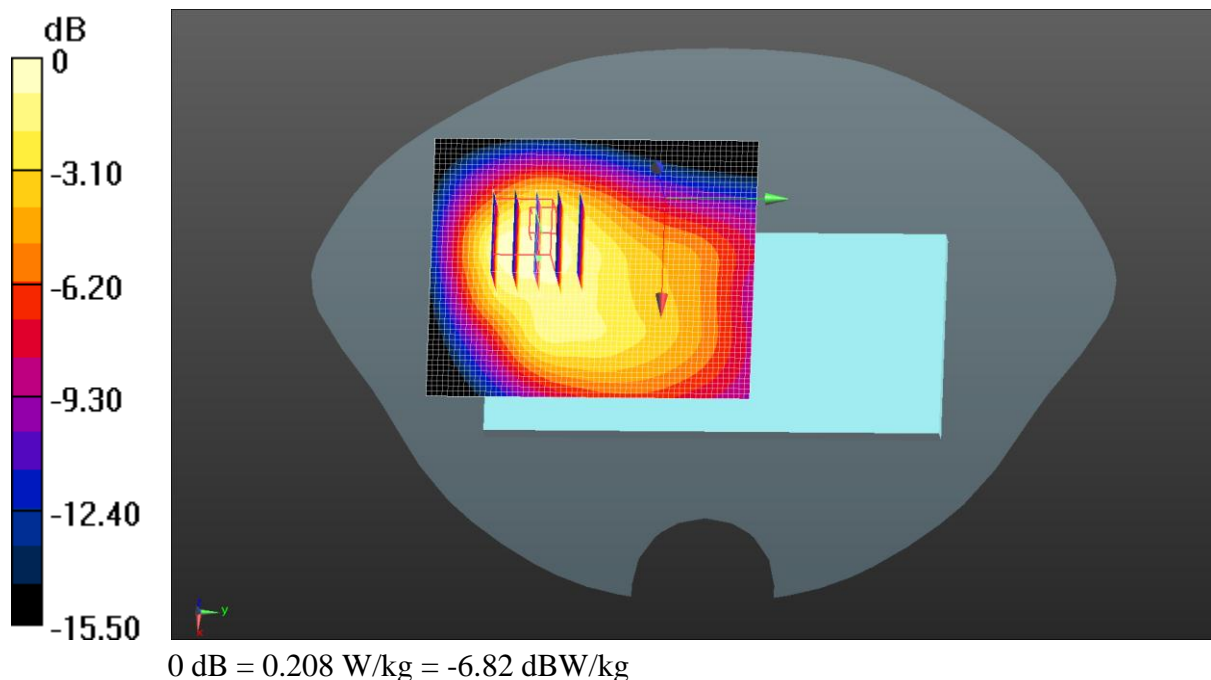
Peak SAR (extrapolated) = 0.256 W/kg

**SAR(1 g) = 0.135 W/kg; SAR(10 g) = 0.078 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 = 50.6%

Maximum value of SAR (measured) = 0.208 W/kg



Test Laboratory: JYTSZ

Date: 04.28.2023

**DUT: Mobile Phone; Type: LH8n; Serial: 3#**

Communication System: UID 0, NR (0); Frequency: 836.5 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 836.5$  MHz;  $\sigma = 0.918$  S/m;  $\epsilon_r = 42.343$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section

DASY5 Configuration:

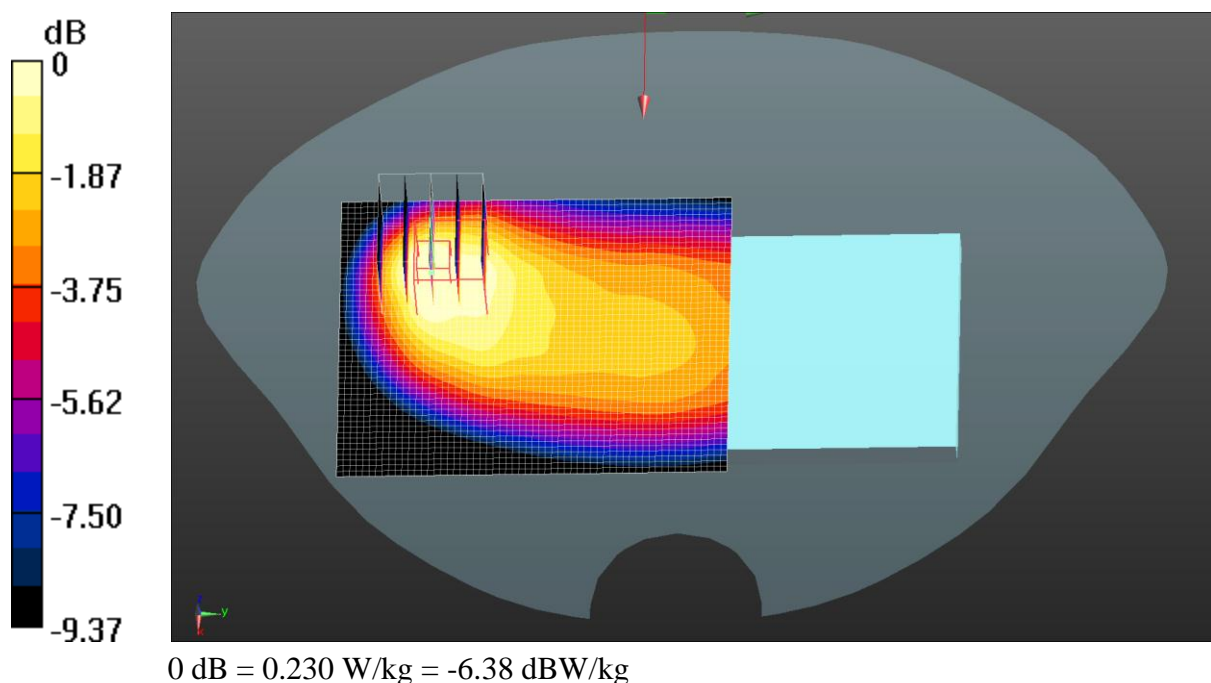
- Probe: EX3DV4 - SN3924; ConvF(9.8, 9.8, 9.8) @ 836.5 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**NR n5 1RB(20MHz) Body Back/Middle Channel/Area Scan (51x61x1):**

Interpolated grid:  $dx=1.500$  mm,  $dy=1.500$  mm  
Maximum value of SAR (interpolated) = 0.293 W/kg

**NR n5 1RB(20MHz) Body Back/Middle Channel/Zoom Scan (5x5x7)/Cube 0:**

Measurement grid:  $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm  
Reference Value = 12.36 V/m; Power Drift = -0.03 dB  
Peak SAR (extrapolated) = 0.287 W/kg  
**SAR(1 g) = 0.163 W/kg; SAR(10 g) = 0.107 W/kg**  
Smallest distance from peaks to all points 3 dB below = 11.5 mm  
Ratio of SAR at M2 to SAR at M1 = 59.2%  
Maximum value of SAR (measured) = 0.230 W/kg



Test Laboratory: JYTSZ

Date: 05.18.2023

**DUT: Mobile Phone; Type: LH8n; Serial: 3#**

Communication System: UID 0, NR (0); Frequency: 2560 MHz; Duty Cycle: 1:1  
 Medium parameters used:  $f = 2560 \text{ MHz}$ ;  $\sigma = 1.844 \text{ S/m}$ ;  $\epsilon_r = 40.148$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section

DASY5 Configuration:

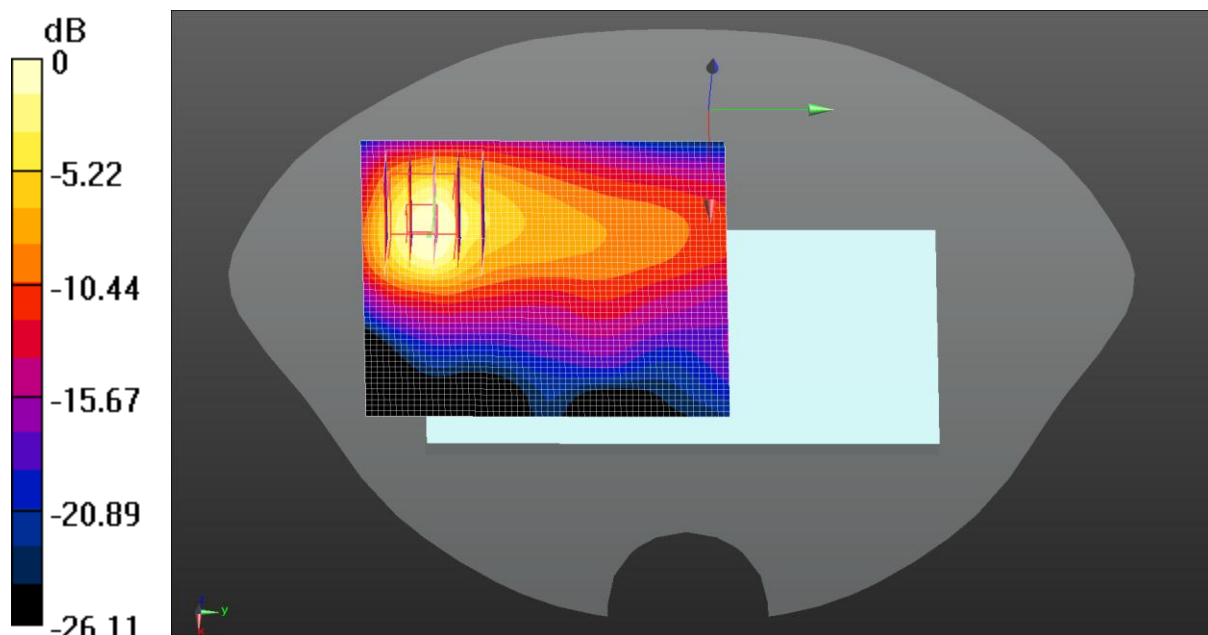
- Probe: EX3DV4 - SN3924; ConvF(7.35, 7.35, 7.35) @ 2560 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**NR n7 1RB(20MHz) Body Back/High Channel/Area Scan (51x61x1):**

Interpolated grid:  $dx=1.200 \text{ mm}$ ,  $dy=1.200 \text{ mm}$   
 Maximum value of SAR (interpolated) = 0.870 W/kg

**NR n7 1RB(20MHz) Body Back/High Channel/Zoom Scan (5x5x7)/Cube 0:**

Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value = 3.036 V/m; Power Drift = -0.08 dB  
 Peak SAR (extrapolated) = 1.15 W/kg  
**SAR(1 g) = 0.519 W/kg; SAR(10 g) = 0.221 W/kg**  
 Smallest distance from peaks to all points 3 dB below = 8 mm  
 Ratio of SAR at M2 to SAR at M1 = 46%  
 Maximum value of SAR (measured) = 0.816 W/kg



0 dB = 0.816 W/kg = -0.88 dBW/kg

Test Laboratory: JYTSZ

Date: 04.28.2023

**DUT: Mobile Phone; Type: LH8n; Serial: 3#**

Communication System: UID 0, NR (0); Frequency: 708.5 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 708.5$  MHz;  $\sigma = 0.862$  S/m;  $\epsilon_r = 42.63$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section

DASY5 Configuration:

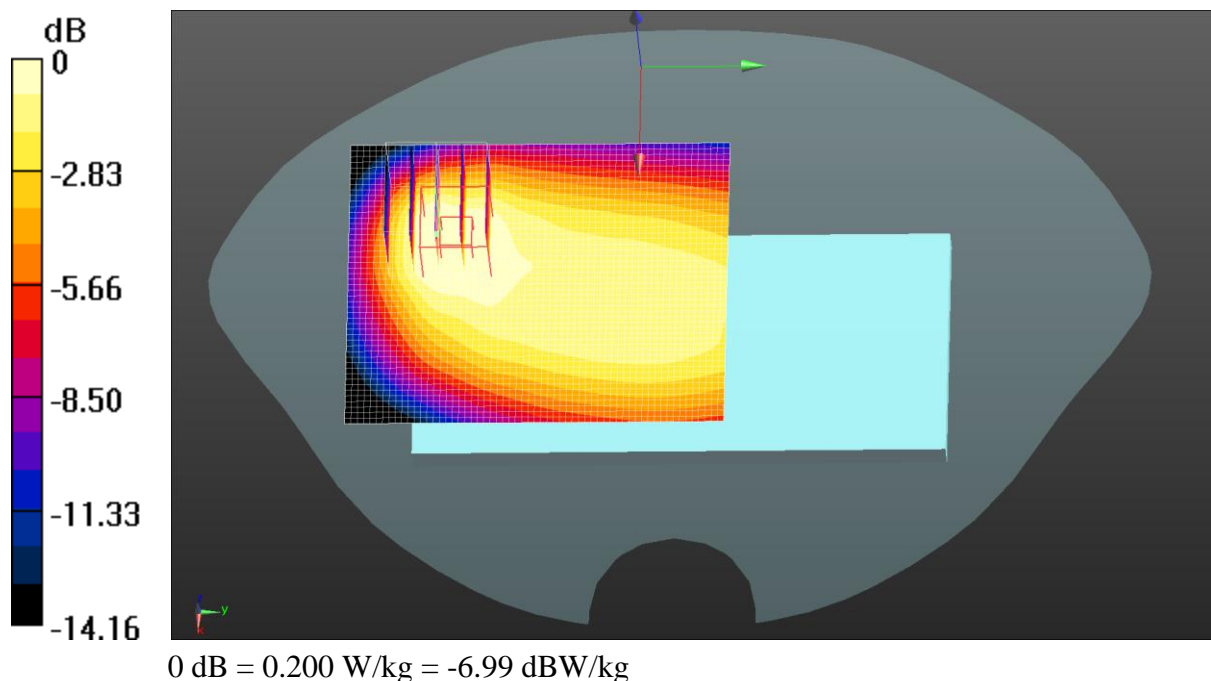
- Probe: EX3DV4 - SN3924; ConvF(10.2, 10.2, 10.2) @ 708.5 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version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

**NR n12 1RB(15MHz) Body Back/High Channel/Area Scan (51x61x1):**

Interpolated grid:  $dx=1.500$  mm,  $dy=1.500$  mm  
Maximum value of SAR (interpolated) = 0.228 W/kg

**NR n12 1RB(15MHz) Body Back/High Channel/Zoom Scan (5x5x7)/Cube 0:**

Measurement grid:  $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm  
Reference Value = 13.29 V/m; Power Drift = -0.05 dB  
Peak SAR (extrapolated) = 0.253 W/kg  
**SAR(1 g) = 0.140 W/kg; SAR(10 g) = 0.094 W/kg**  
Smallest distance from peaks to all points 3 dB below = 17 mm  
Ratio of SAR at M2 to SAR at M1 = 55.8%  
Maximum value of SAR (measured) = 0.200 W/kg



Test Laboratory: JYTSZ

Date: 05.18.2023

**DUT: Mobile Phone; Type: LH8n; Serial: 3#**

Communication System: UID 0, NR (0); Frequency: 2546.01 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 2546.01$  MHz;  $\sigma = 1.876$  S/m;  $\epsilon_r = 40.162$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section

DASY5 Configuration:

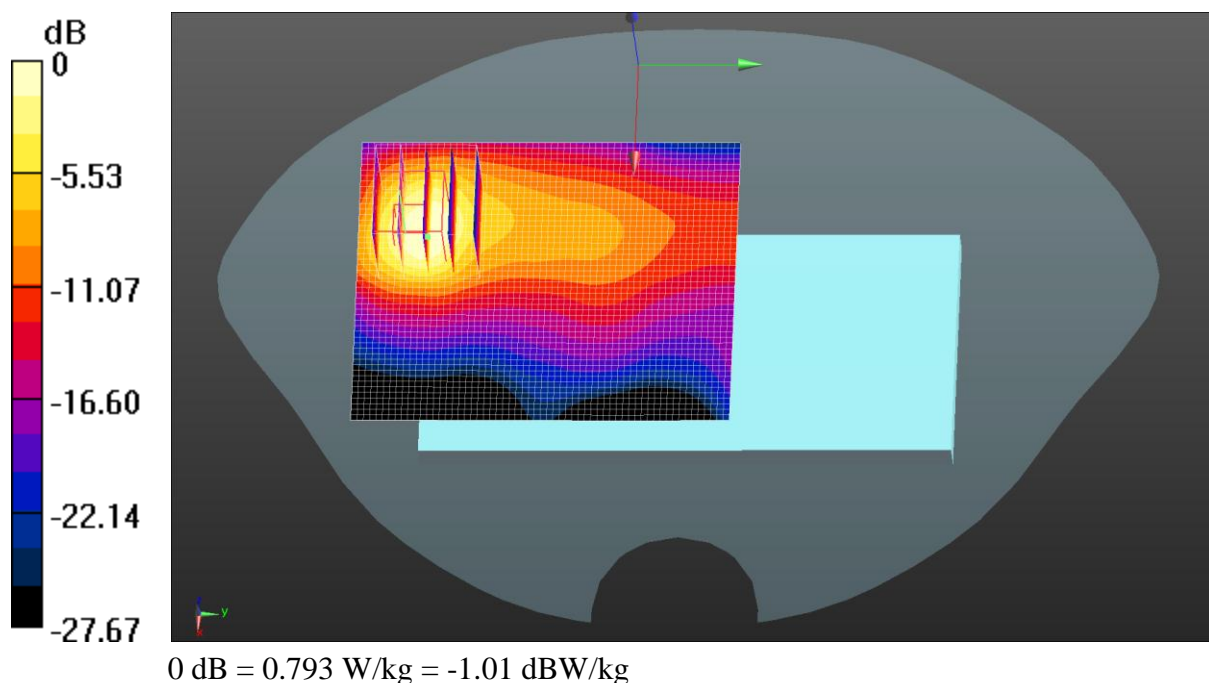
- Probe: EX3DV4 - SN3924; ConvF(7.6, 7.6, 7.6) @ 2546.01 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**NR n41 1RB(100MHz) Body Back/Low Channel/Area Scan (51x61x1):**

Interpolated grid:  $dx=1.200$  mm,  $dy=1.200$  mm  
Maximum value of SAR (interpolated) = 0.754 W/kg

**NR n41 1RB(100MHz) Body Back/Low Channel/Zoom Scan (5x5x7)/Cube 0:**

Measurement grid:  $dx=5$ mm,  $dy=5$ mm,  $dz=5$ mm  
Reference Value = 2.705 V/m; Power Drift = 0.11 dB  
Peak SAR (extrapolated) = 1.05 W/kg  
**SAR(1 g) = 0.482 W/kg; SAR(10 g) = 0.208 W/kg**  
Smallest distance from peaks to all points 3 dB below = 8.2 mm  
Ratio of SAR at M2 to SAR at M1 = 49.4%  
Maximum value of SAR (measured) = 0.793 W/kg





Test Laboratory: JYTSZ

Date: 05.04.2023

**DUT: Mobile Phone; Type: LH8n; Serial: 3#**

Communication System: UID 0, NR (0); Frequency: 1730 MHz; Duty Cycle: 1:1  
 Medium parameters used:  $f = 1730 \text{ MHz}$ ;  $\sigma = 1.341 \text{ S/m}$ ;  $\epsilon_r = 40.875$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section

DASY5 Configuration:

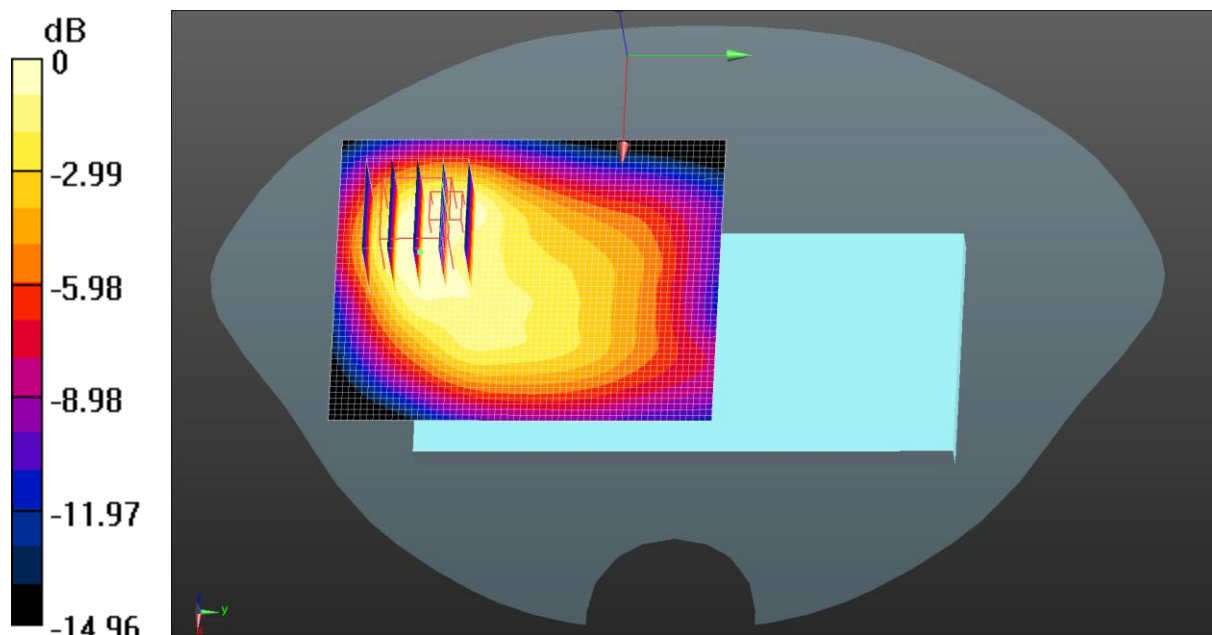
- Probe: EX3DV4 - SN3924; ConvF(8.38, 8.38, 8.38) @ 1730 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version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

**NR n66 1RB(40MHz) Body Back/Low Channel/Area Scan (51x61x1):**

Interpolated grid:  $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$   
 Maximum value of SAR (interpolated) =  $0.213 \text{ W/kg}$

**NR n66 1RB(40MHz) Body Back/Low Channel/Zoom Scan (5x5x7)/Cube 0:**

Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value =  $4.699 \text{ V/m}$ ; Power Drift =  $-0.08 \text{ dB}$   
 Peak SAR (extrapolated) =  $0.219 \text{ W/kg}$   
**SAR(1 g) =  $0.117 \text{ W/kg}$ ; SAR(10 g) =  $0.069 \text{ W/kg}$**   
 Smallest distance from peaks to all points 3 dB below =  $12.5 \text{ mm}$   
 Ratio of SAR at M2 to SAR at M1 =  $51.5\%$   
 Maximum value of SAR (measured) =  $0.176 \text{ W/kg}$



0 dB =  $0.176 \text{ W/kg} = -7.54 \text{ dBW/kg}$

Test Laboratory: JYTSZ

Date: 05.09.2023

**DUT: Mobile Phone; Type: LH8n; 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;  $\epsilon_r = 39.53$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
 Phantom section: Flat Section

DASY5 Configuration:

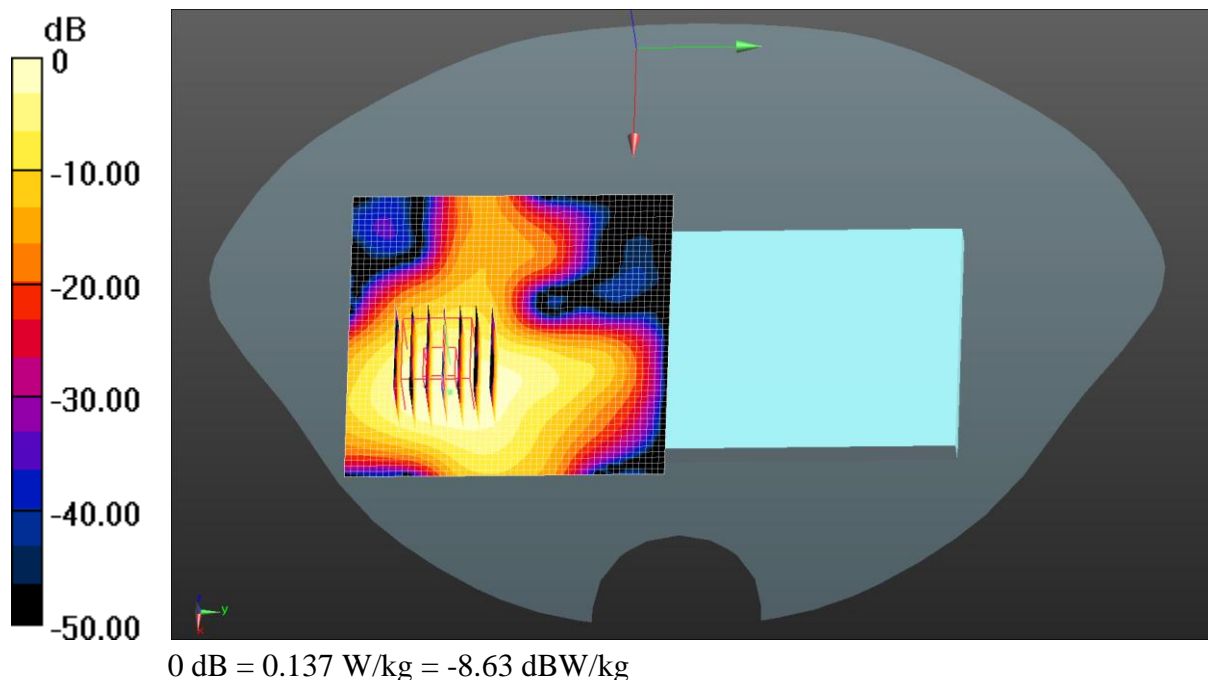
- Probe: EX3DV4 - SN3924; ConvF(7.02, 7.02, 7.02) @ 3500.01 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X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

**NR n77 1RB(100MHz) Body Back/Middle Channel/Area Scan (51x51x1):**

Interpolated grid: dx=1.200 mm, dy=1.200 mm  
 Maximum value of SAR (interpolated) = 0.170 W/kg

**NR n77 1RB(100MHz) Body Back/Middle Channel/Zoom Scan (7x7x7)/Cube**

**0:** Measurement grid: dx=5mm, dy=5mm, dz=4mm  
 Reference Value = 0 V/m; Power Drift = 0.00 dB  
 Peak SAR (extrapolated) = 0.186 W/kg  
**SAR(1 g) = 0.076 W/kg; SAR(10 g) = 0.033 W/kg**  
 Smallest distance from peaks to all points 3 dB below = 9.9 mm  
 Ratio of SAR at M2 to SAR at M1 = 39%  
 Maximum value of SAR (measured) = 0.137 W/kg



Test Laboratory: JYTSZ

Date: 05.09.2023

**DUT: Mobile Phone; Type: LH8n; Serial: 3#**

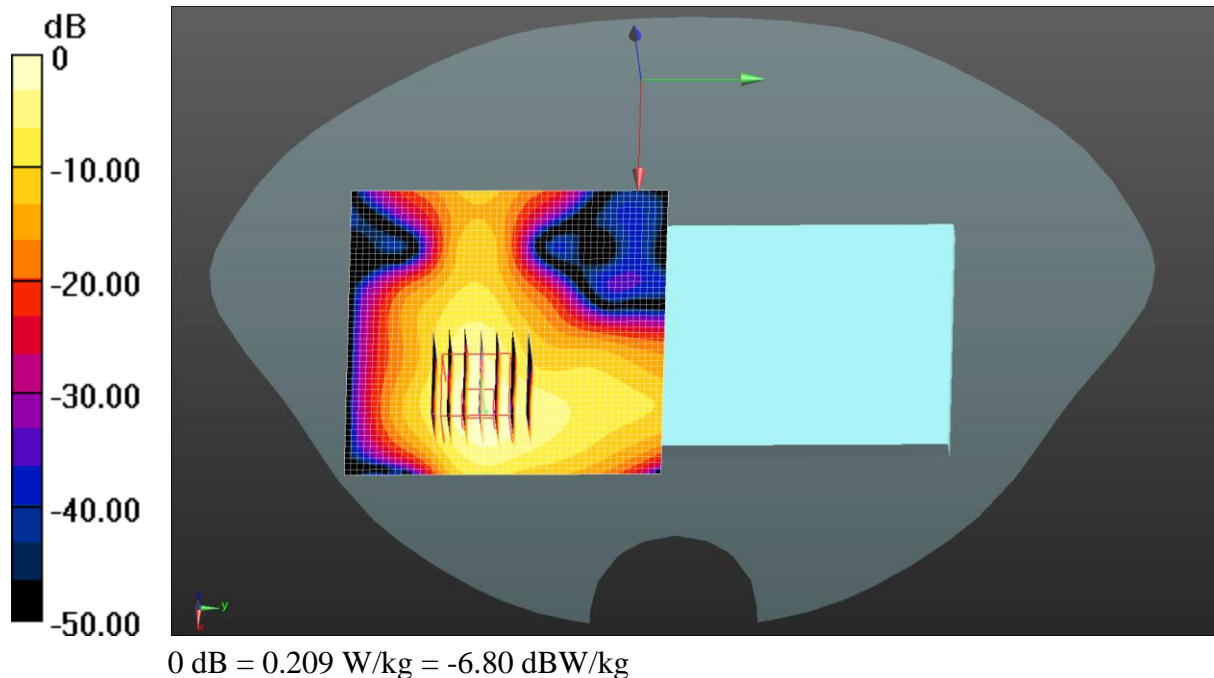
Communication System: UID 0, NR (0); Frequency: 3750 MHz; Duty Cycle: 1:1  
 Medium parameters used:  $f = 3750 \text{ MHz}$ ;  $\sigma = 3.052 \text{ S/m}$ ;  $\epsilon_r = 39.21$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section

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(3840) 50%RB(100MHz) Body Back/Low Channel/Area Scan**  
**(51x51x1):** Interpolated grid:  $dx=1.200 \text{ mm}$ ,  $dy=1.200 \text{ mm}$   
 Maximum value of SAR (interpolated) = 0.239 W/kg

**NR n77(3840) 50%RB(100MHz) Body Back/Low Channel/Zoom Scan**  
**(7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=4\text{mm}$   
 Reference Value = 0.4250 V/m; Power Drift = -0.04 dB  
 Peak SAR (extrapolated) = 0.291 W/kg  
**SAR(1 g) = 0.109 W/kg; SAR(10 g) = 0.040 W/kg**  
 Smallest distance from peaks to all points 3 dB below = 8.5 mm  
 Ratio of SAR at M2 to SAR at M1 = 37.3%  
 Maximum value of SAR (measured) = 0.209 W/kg



Test Laboratory: JYTSZ

Date: 05.18.2023

**DUT: Mobile Phone; Type: LH8n; Serial: 3#**

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

Frequency: 2462 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 2462$  MHz;  $\sigma = 1.758$  S/m;  $\epsilon_r = 40.12$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(7.6, 7.6, 7.6) @ 2462 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**2.4GWIFI Body Back/High Channel/Area Scan (51x61x1):** Interpolated grid:

$dx=1.200$  mm,  $dy=1.200$  mm

Maximum value of SAR (interpolated) = 0.193 W/kg

**2.4GWIFI Body Back/High Channel/Zoom Scan (5x5x7)/Cube 0:** Measurement

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

Reference Value = 3.583 V/m; Power Drift = -0.15 dB

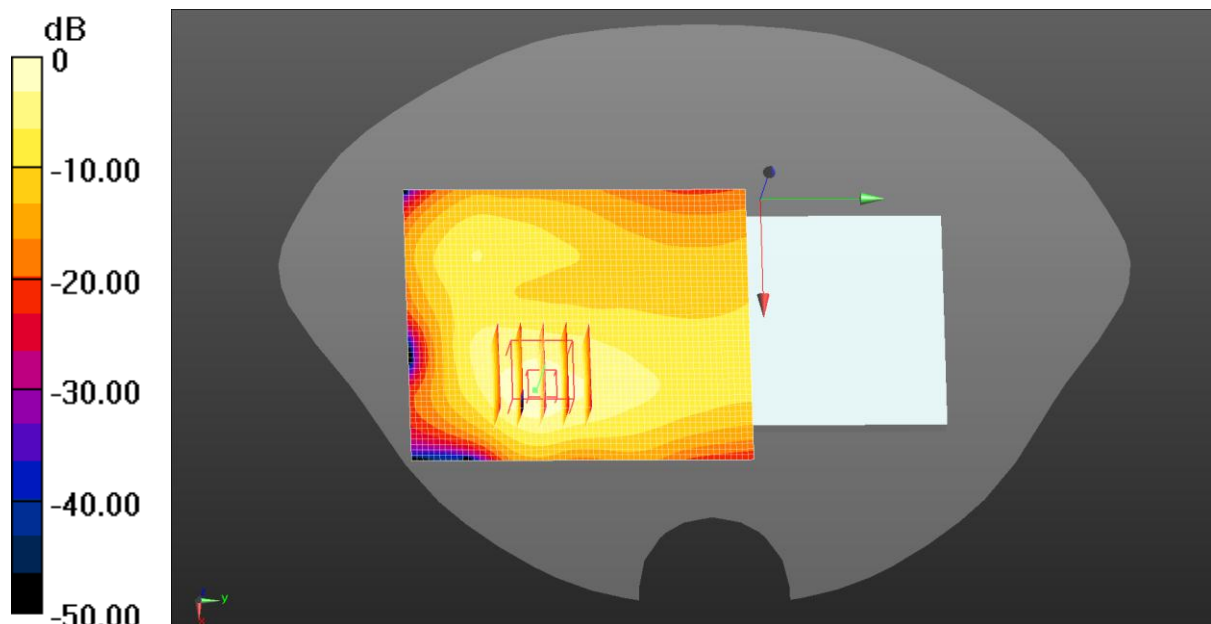
Peak SAR (extrapolated) = 0.271 W/kg

**SAR(1 g) = 0.119 W/kg; SAR(10 g) = 0.055 W/kg**

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

Ratio of SAR at M2 to SAR at M1 = 44.1%

Maximum value of SAR (measured) = 0.207 W/kg



0 dB = 0.207 W/kg = -6.84 dBW/kg

Test Laboratory: JYTSZ

Date: 05.13.2023

**DUT: Mobile Phone; Type: LH8n; Serial: 3#**

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

Medium parameters used:  $f = 5240$  MHz;  $\sigma = 4.718$  S/m;  $\epsilon_r = 36.54$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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 Body Back/High Channel/Area Scan (51x51x1):** Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.308 W/kg

**5.2GWIFI Body Back/High Channel/Zoom Scan (7x7x7)/Cube 0:** Measurement

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

Reference Value = 2.885 V/m; Power Drift = -0.09 dB

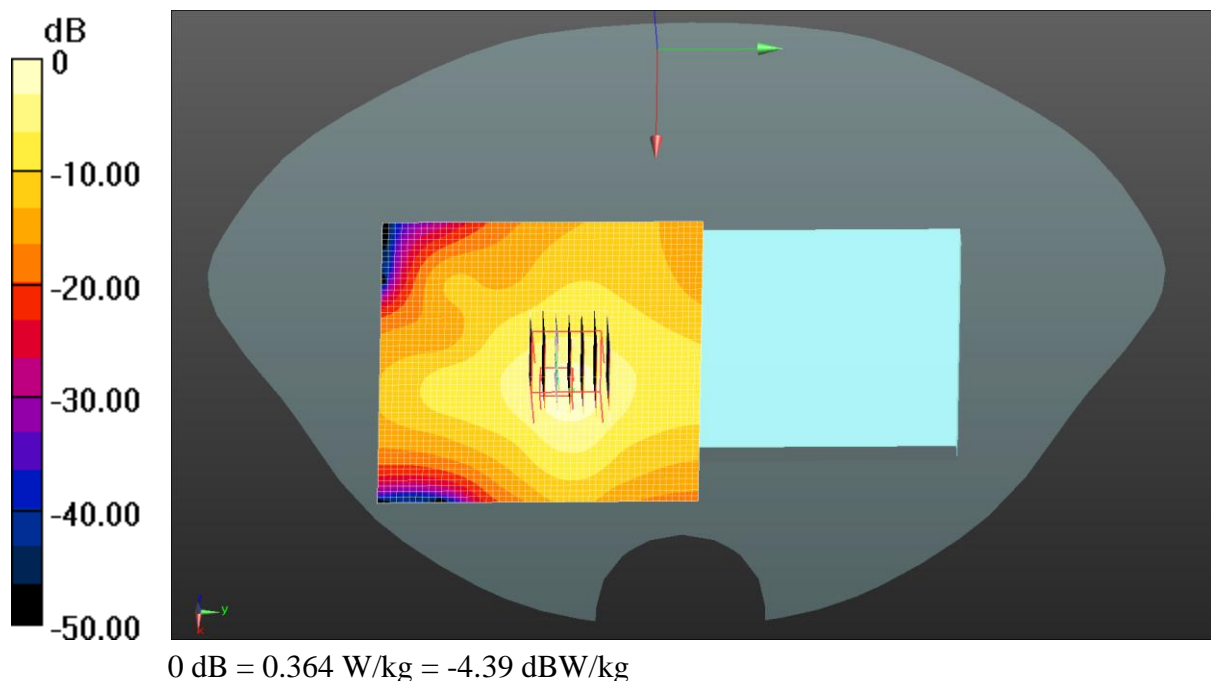
Peak SAR (extrapolated) = 0.546 W/kg

**SAR(1 g) = 0.165 W/kg; SAR(10 g) = 0.057 W/kg**

Smallest distance from peaks to all points 3 dB below = 11.9 mm

Ratio of SAR at M2 to SAR at M1 = 23.6%

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



Test Laboratory: JYTSZ

Date: 05.13.2023

**DUT: Mobile Phone; Type: LH8n; 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;  $\sigma = 5.372$  S/m;  $\epsilon_r = 35.928$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.422 W/kg

**5.8GWIFI Body Back/Middle Channel/Zoom Scan (7x7x7)/Cube 0:**

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

Reference Value = 2.675 V/m; Power Drift = -0.03 dB

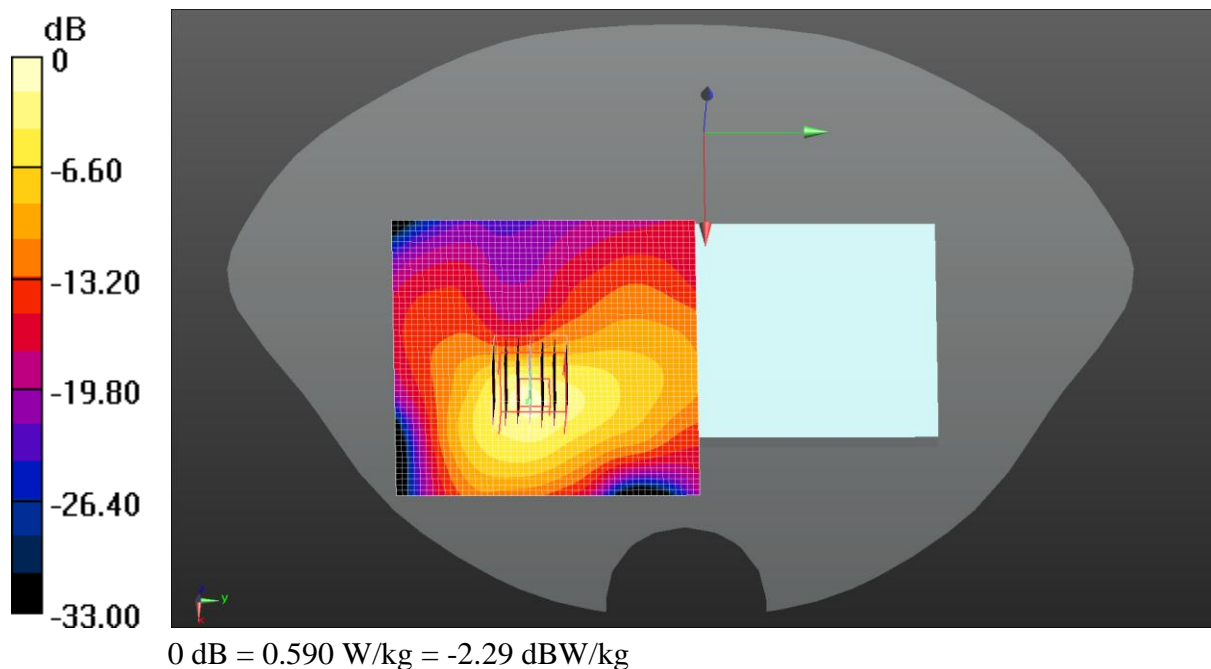
Peak SAR (extrapolated) = 0.908 W/kg

**SAR(1 g) = 0.244 W/kg; SAR(10 g) = 0.082 W/kg**

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

Ratio of SAR at M2 to SAR at M1 = 17.4%

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



Test Laboratory: JYTSZ

Date: 05.18.2023

**DUT: Mobile Phone; Type: LH8n; Serial: 3#**

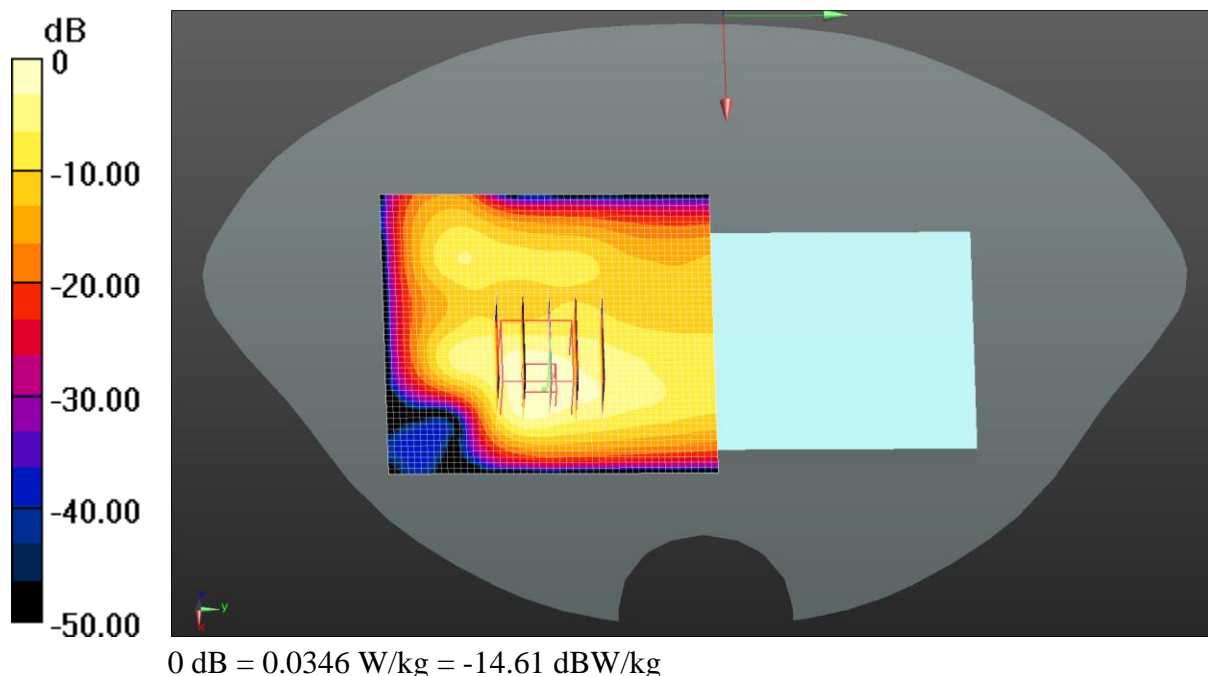
Communication System: UID 0, Bluetooth (0); Frequency: 2441 MHz; Duty Cycle: 1:1  
 Medium parameters used (interpolated):  $f = 2441 \text{ MHz}$ ;  $\sigma = 1.746 \text{ S/m}$ ;  $\epsilon_r = 40.138$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section

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 (51x51x1):** Interpolated grid:  
 $dx=1.200 \text{ mm}$ ,  $dy=1.200 \text{ mm}$   
 Maximum value of SAR (interpolated) = 0.0369 W/kg

**Bluetooth Body Back/Middle Channel/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value = 1.179 V/m; Power Drift = -0.03 dB  
 Peak SAR (extrapolated) = 0.0480 W/kg  
**SAR(1 g) = 0.021 W/kg; SAR(10 g) = 0.00876 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 = 41.6%  
 Maximum value of SAR (measured) = 0.0346 W/kg



Test Laboratory: JYTSZ

Date: 05.04.2023

**DUT: Mobile Phone; Type: LH8n; Serial: 3#**

Communication System: UID 0, GPRS(2 Slots) (0); Frequency: 1880 MHz; Duty Cycle: 1:4.10015

Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.328$  S/m;  $\epsilon_r = 41.132$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat 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)

**GPRS 1900 Body Top/Middle Channel/Area Scan (41x61x1):** Interpolated grid:

dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.700 W/kg

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

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

Reference Value = 14.31 V/m; Power Drift = 0.09 dB

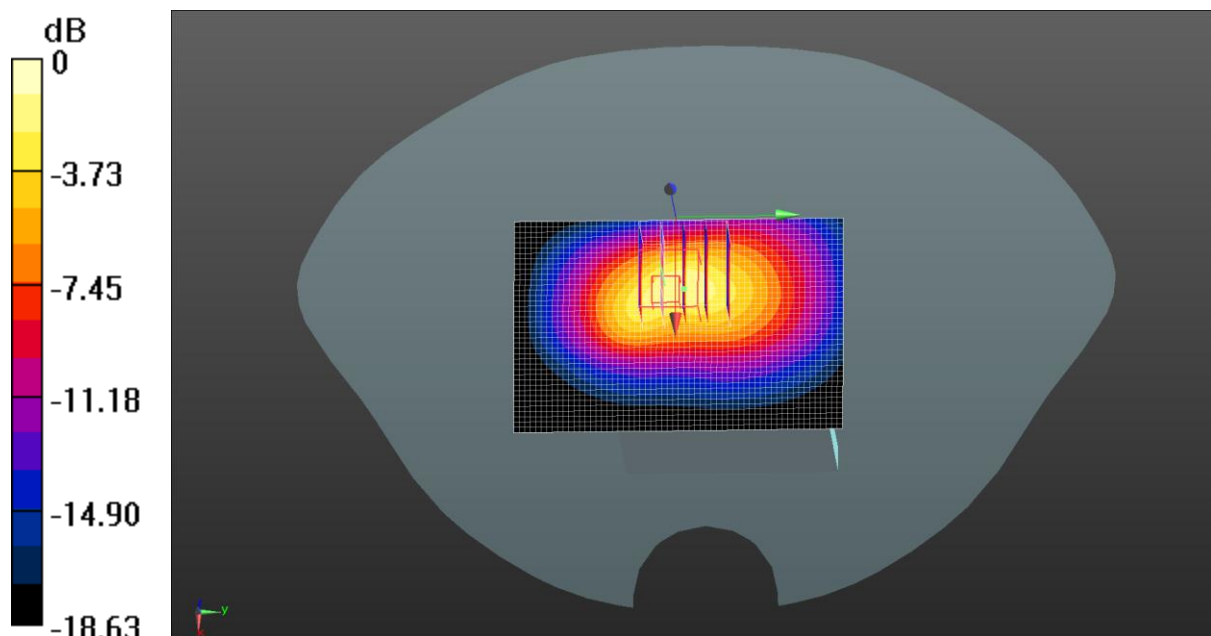
Peak SAR (extrapolated) = 1.26 W/kg

**SAR(1 g) = 0.634 W/kg; SAR(10 g) = 0.313 W/kg**

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

Ratio of SAR at M2 to SAR at M1 = 54.1%

Maximum value of SAR (measured) = 0.923 W/kg



0 dB = 0.923 W/kg = -0.35 dBW/kg



Test Laboratory: JYTSZ

Date: 05.04.2023

**DUT: Mobile Phone; Type: LH8n; 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;  $\sigma = 1.351$  S/m;  $\epsilon_r = 41.148$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY5 Configuration:

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

**WCDMA 1900 Body Top/High Channel/Area Scan (41x61x1):** Interpolated grid:

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

Maximum value of SAR (interpolated) = 0.524 W/kg

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

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

Reference Value = 17.25 V/m; Power Drift = -0.01 dB

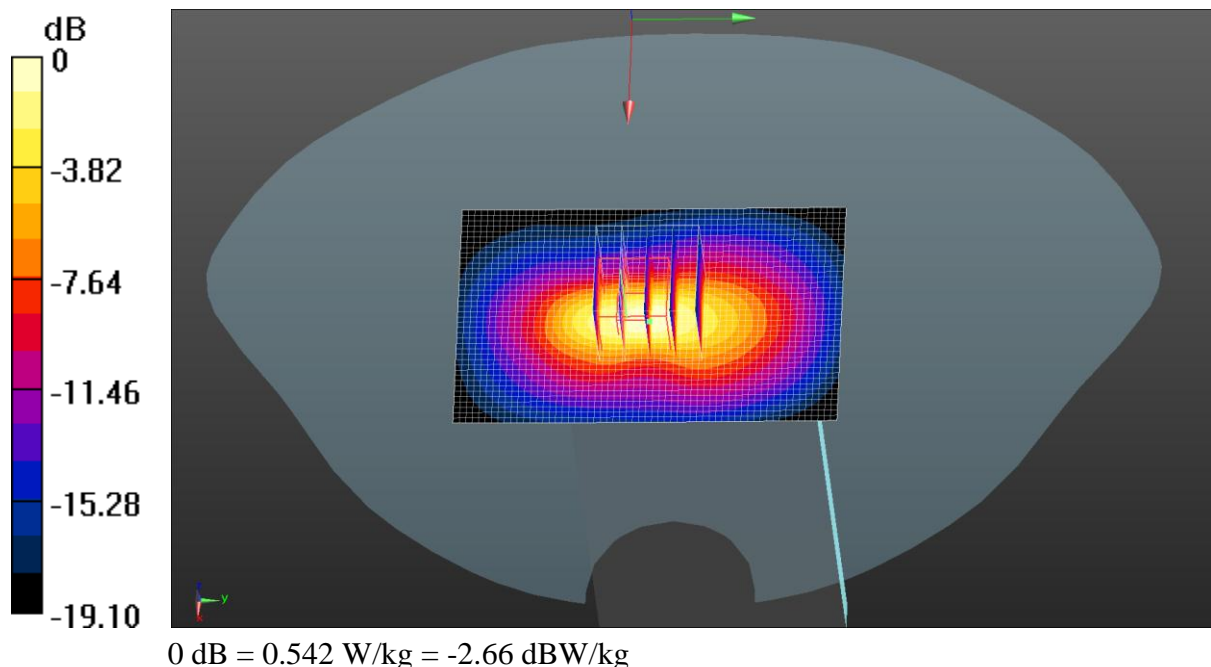
Peak SAR (extrapolated) = 0.677 W/kg

**SAR(1 g) = 0.340 W/kg; SAR(10 g) = 0.169 W/kg**

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

Ratio of SAR at M2 to SAR at M1 = 52.5%

Maximum value of SAR (measured) = 0.542 W/kg



Test Laboratory: JYTSZ

Date: 05.04.2023

**DUT: Mobile Phone; Type: LH8n; 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;  $\sigma = 1.342$  S/m;  $\epsilon_r = 40.872$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY5 Configuration:

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

**WCDMA 1700 Body Top/Middle Channel/Area Scan (41x61x1):** Interpolated

grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.339 W/kg

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

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

Reference Value = 13.67 V/m; Power Drift = -0.15 dB

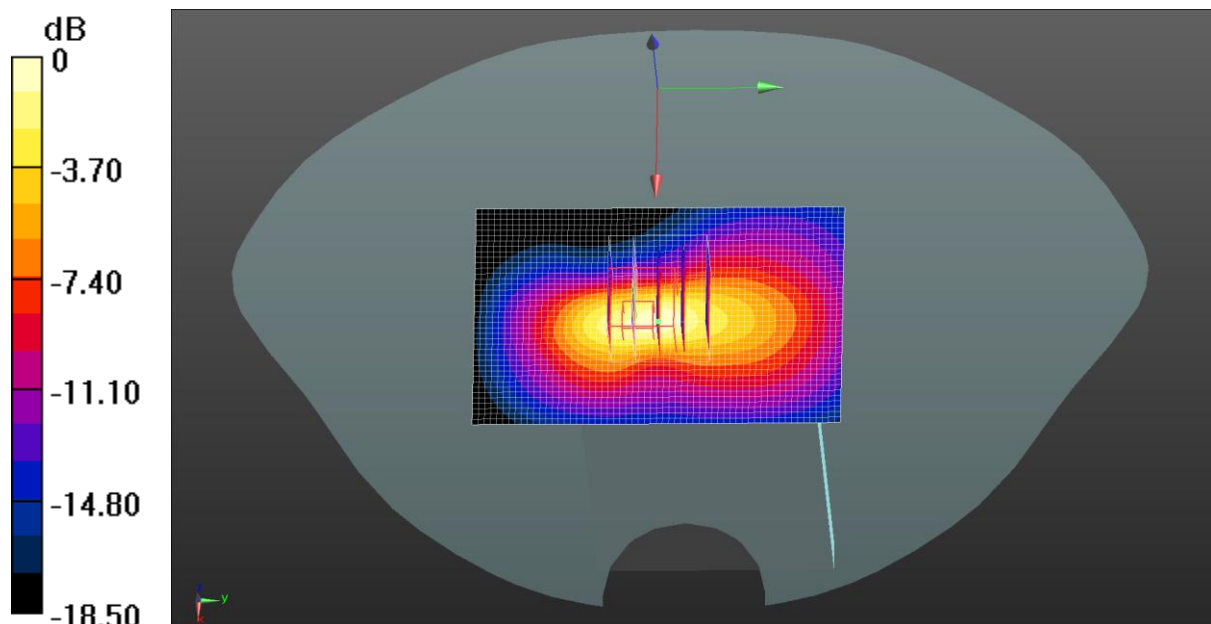
Peak SAR (extrapolated) = 0.465 W/kg

**SAR(1 g) = 0.232 W/kg; SAR(10 g) = 0.114 W/kg**

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

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

Maximum value of SAR (measured) = 0.360 W/kg



0 dB = 0.360 W/kg = -4.44 dBW/kg

Test Laboratory: JYTSZ

Date: 05.04.2023

**DUT: Mobile Phone; Type: LH8n; Serial: 3#**

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

Medium parameters used:  $f = 1900 \text{ MHz}$ ;  $\sigma = 1.343 \text{ S/m}$ ;  $\epsilon_r = 41.123$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

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

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

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

Maximum value of SAR (interpolated) = 0.387 W/kg

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

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

Reference Value = 14.95 V/m; Power Drift = -0.19 dB

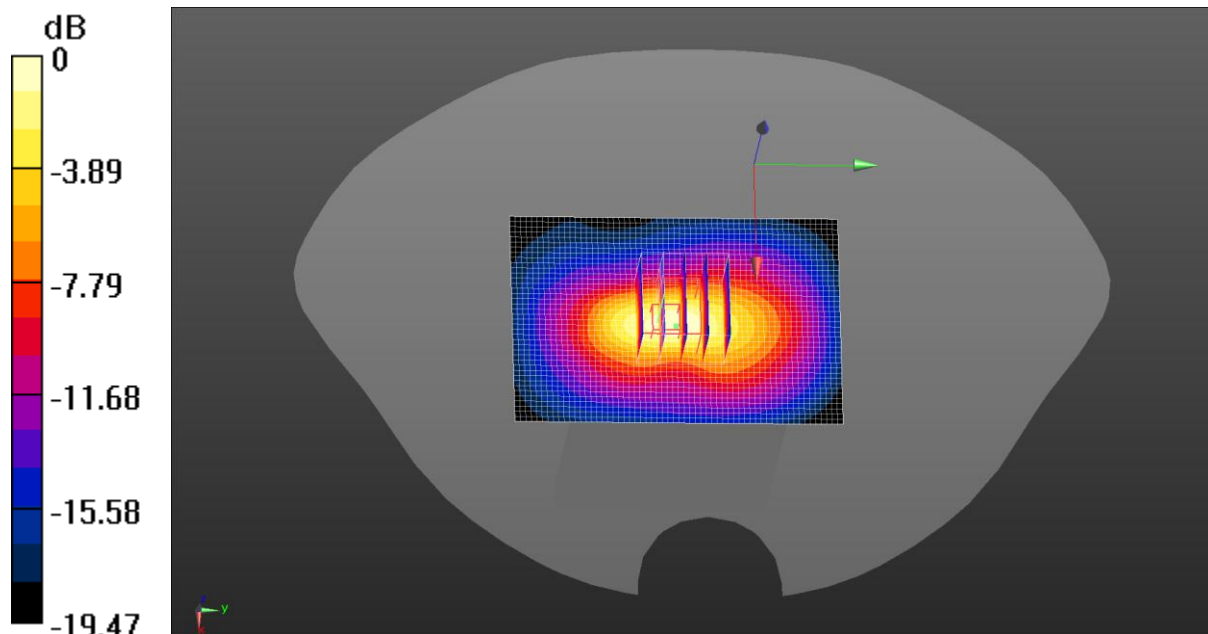
Peak SAR (extrapolated) = 0.501 W/kg

**SAR(1 g) = 0.252 W/kg; SAR(10 g) = 0.125 W/kg**

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

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

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



0 dB = 0.402 W/kg = -3.96 dBW/kg

Test Laboratory: JYTSZ

Date: 05.04.2023

**DUT: Mobile Phone; Type: LH8n; Serial: 3#**

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

Medium parameters used:  $f = 1720$  MHz;  $\sigma = 1.329$  S/m;  $\epsilon_r = 40.874$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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) Body Top/Low Channel/Area Scan (41x61x1):**

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

Maximum value of SAR (interpolated) = 0.331 W/kg

**LTE Band 66 1RB(20MHz) Body Top/Low Channel/Zoom Scan (5x5x7)/Cube****0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.63 V/m; Power Drift = -0.13 dB

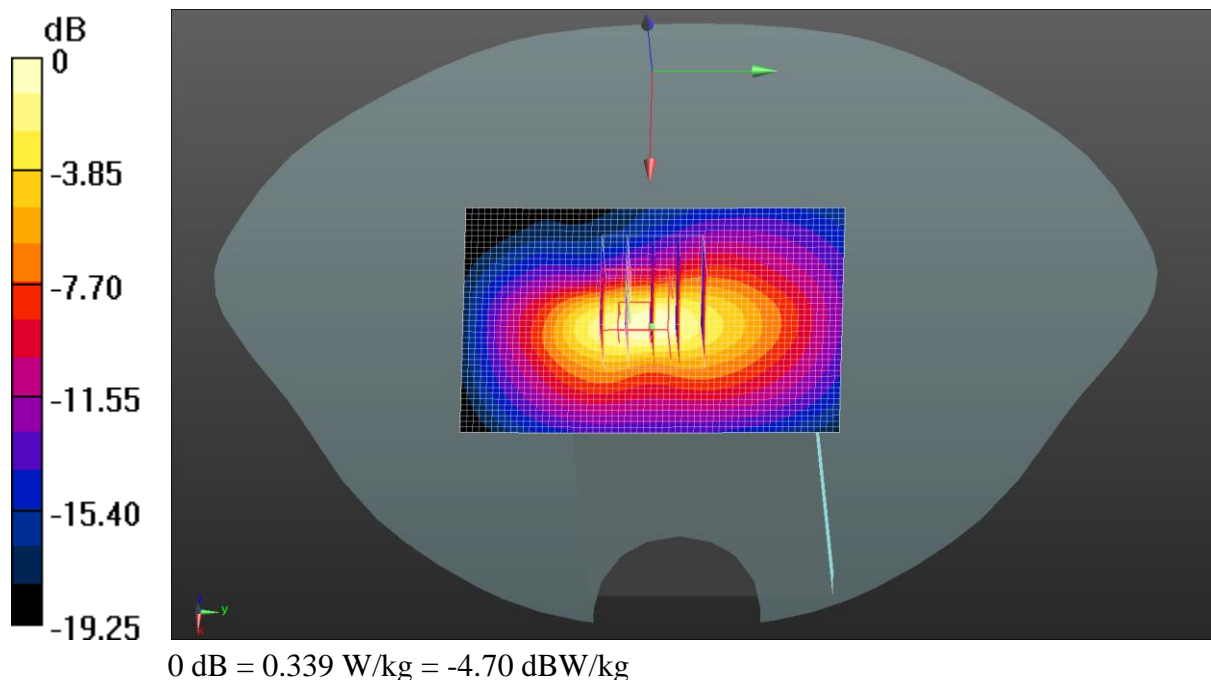
Peak SAR (extrapolated) = 0.430 W/kg

**SAR(1 g) = 0.221 W/kg; SAR(10 g) = 0.112 W/kg**

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

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

Maximum value of SAR (measured) = 0.339 W/kg



Test Laboratory: JYTSZ

Date: 05.04.2023

**DUT: Mobile Phone; Type: LH8n; Serial: 3#**

Communication System: UID 0, NR (0); Frequency: 1730 MHz; Duty Cycle: 1:1  
 Medium parameters used:  $f = 1730 \text{ MHz}$ ;  $\sigma = 1.341 \text{ S/m}$ ;  $\epsilon_r = 40.875$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Phantom section: Flat Section

DASY5 Configuration:

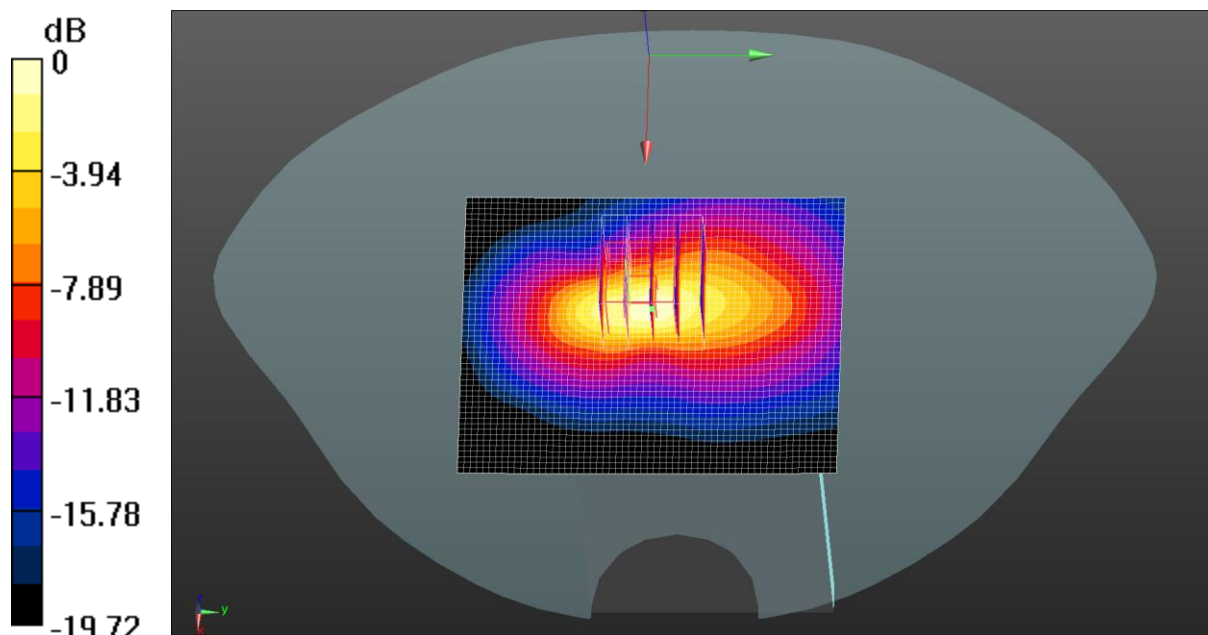
- Probe: EX3DV4 - SN3924; ConvF(8.38, 8.38, 8.38) @ 1730 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version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

**NR n66 1RB(40MHz) Body Top/Low Channel/Area Scan (51x61x1):**

Interpolated grid:  $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$   
 Maximum value of SAR (interpolated) = 0.302 W/kg

**NR n66 1RB(40MHz) Body Top/Low Channel/Zoom Scan (5x5x7)/Cube 0:**

Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value = 10.40 V/m; Power Drift = 0.07 dB  
 Peak SAR (extrapolated) = 0.408 W/kg  
**SAR(1 g) = 0.207 W/kg; SAR(10 g) = 0.104 W/kg**  
 Smallest distance from peaks to all points 3 dB below = 8.6 mm  
 Ratio of SAR at M2 to SAR at M1 = 52.5%  
 Maximum value of SAR (measured) = 0.331 W/kg



0 dB = 0.331 W/kg = -4.80 dBW/kg

Test Laboratory: JYTSZ

Date: 05.09.2023

**DUT: Mobile Phone; Type: LH8n; 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;  $\epsilon_r = 39.53$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section

## DASY5 Configuration:

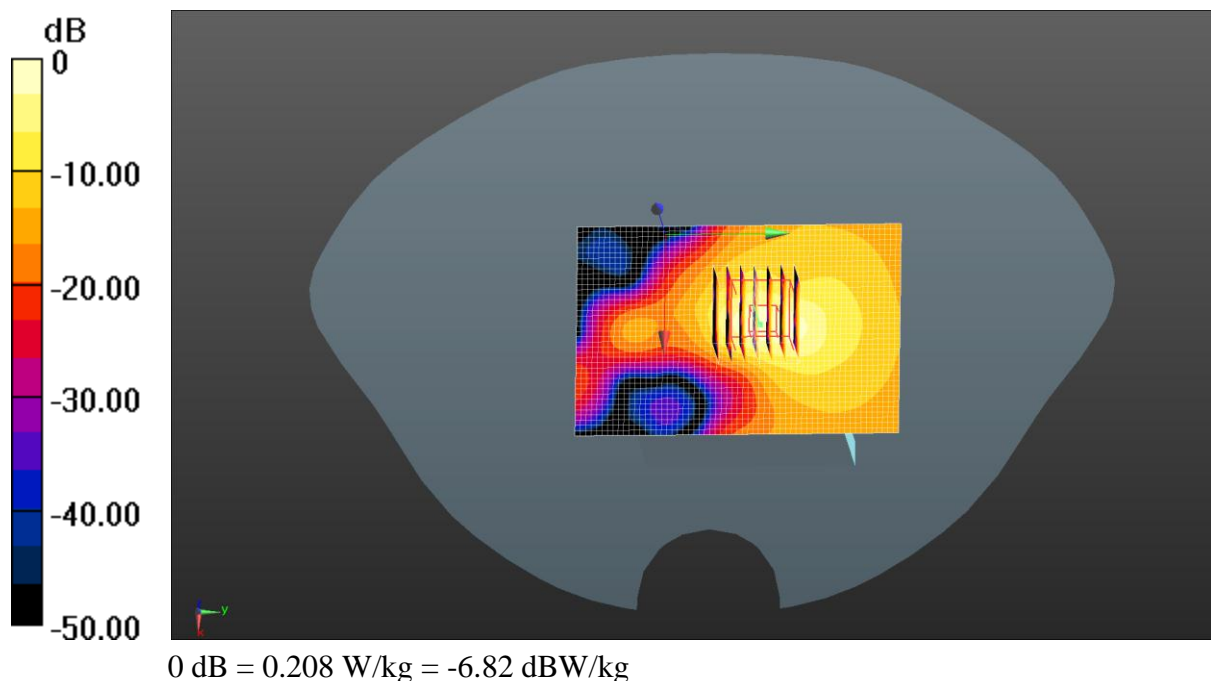
- Probe: EX3DV4 - SN3924; ConvF(7.02, 7.02, 7.02) @ 3500.01 MHz; Calibrated: 01.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 06.06.2022
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X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

**NR n77 1RB(100MHz) Body Top/Middle Channel/Area Scan (41x61x1):**

Interpolated grid: dx=1.200 mm, dy=1.200 mm  
Maximum value of SAR (interpolated) = 0.162 W/kg

**NR n77 1RB(100MHz) Body Top/Middle Channel/Zoom Scan (7x7x7)/Cube 0:**

Measurement grid: dx=5mm, dy=5mm, dz=4mm  
Reference Value = 3.401 V/m; Power Drift = 0.18 dB  
Peak SAR (extrapolated) = 0.299 W/kg  
**SAR(1 g) = 0.105 W/kg; SAR(10 g) = 0.037 W/kg**  
Smallest distance from peaks to all points 3 dB below = 7 mm  
Ratio of SAR at M2 to SAR at M1 = 36.1%  
Maximum value of SAR (measured) = 0.208 W/kg



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