FCC SAR REPORT

Applicant:	Blackshark Technologies（Nanchang）Co., Ltd.
Address of Applicant:	Room 815-1, 8th floor, Block A, Huajiang Building, No. 1 Tsinghua Science Park

Equipment Under Test (EUT)

Product Name:	5G Digital Mobile Phone
Model No.:	SHARK KTUS-H0
Trade mark	BLACK SHARK
FCC ID:	2A2ZHKTUS-H0
Applicable standards:	FCC 47 CFR Part 2.1093
Date of Test:	22 Mar., 2022 ~ 19 Apr., 2022
Test Result:	Maximum Reported 1-g SAR (W/kg) Head: 0.992 Body: 0.685 Hotspot: 1.183

Authorized Signature:

Bruce Zhang
Laboratory Manager

2 Version

Version No.	Date	Description
00	*02 Jun., 2022*	*Original*
01	*10 Jun., 2022*	*Add description of Power reduction specification in section 13*

Tested by:	Vieta.Zhang	***Date:***	*10 Jun., 2022*
	Test Engineer		
Reviewed by:	Wiky Zhang	***Date:***	*10 Jun., 2022*
	Project Engineer		

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4 SAR Results Summary

The maximum results of Specific Absorption Rate (SAR) found during test as bellows:
<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	0.732	PCE	0.992
	GSM 1900	0.659		
	WCDMA Band V	0.544		
	WCDMA Band IV	0.695		
	WCDMA Band II	0.733		
	LTE Band 2	0.833		
	LTE Band 4	0.992		
	LTE Band 7	0.507		
	LTE Band 12&17	0.378		
	LTE Band 26&5	0.522		
	LTE Band 41&38	0.796		
	NR n5	0.524		
	NR n41	0.924		
	NR n77 (3450MHz~3550MHz) &n78 (3450MHz~3550MHz)	0.480		
	NR n77 (3700MHz~3980MHz) &n78 (3700MHz~3800MHz)	0.416		
	WLAN 2.4 GHz	0.288	DTS	
	BT	0.018	DSS	
	WLAN 5.3 GHz	0.233	NII	
	WLAN 5.6 GHz	0.322		
	WLAN 5.8 GHz	0.288		
Body (10 mm Gap)	GSM 850	0.417	PCE	0.685
	GSM 1900	0.310		
	WCDMA Band V	0.632		
	WCDMA Band IV	0.656		
	WCDMA Band II	0.370		
	LTE Band 2	0.311		
	LTE Band 4	0.645		
	LTE Band 7	0.416		
	LTE Band 12&17	0.438		
	LTE Band 26&5	0.603		
	LTE Band 41&38	0.338		
	NR n5	0.656		
	NR n41	0.685		
	NR n77 (3450MHz~3550MHz) &n78 (3450MHz~3550MHz)	0.447		
	NR n77 (3700MHz~3980MHz) &n78 (3700MHz~3800MHz)	0.397		
	WLAN 2.4GHz	0.158	DTS	

	BT	0.001	DSS	
	WLAN 5.3 GHz	0.142	NII	
	WLAN 5.6 GHz	0.178		
	WLAN 5.8 GHz	0.200		
Hotspot (10 mm Gap)	GSM 850	0.720	PCE	1.183
	GSM 1900	0.639		
	WCDMA Band V	0.961		
	WCDMA Band IV	1.183		
	WCDMA Band II	0.679		
	LTE Band 2	0.590		
	LTE Band 4	1.097		
	LTE Band 7	0.827		
	LTE Band 12&17	0.644		
	LTE Band 26&5	0.764		
	LTE Band 41&38	0.533		
	NR n5	1.017		
	NR n41	0.859		
	NR n77 (3450MHz~3550MHz) &n78 (3450MHz~3550MHz)	0.864		
	NR n77 (3700MHz~3980MHz) &n78 (3700MHz~3800MHz)	0.821		
	WLAN 2.4 GHz	0.435	DTS	
	BT	0.006	DSS	
	WLAN 5.3 GHz	0.142	NII	
	WLAN 5.6 GHz	0.178		
	WLAN 5.8 GHz	0.200		

<Highest Reported simultaneous SAR Summary>

Exposure Position	Frequency Band	Reported 1-g SAR (W/kg)	Equipment Class	Highest Reported Simultaneous Transmission 1-g SAR (W/kg)
Right Tilted	EN-DC 38A_n78A	1.267	PCE	1.590
	WLAN 2.4 GHz ANT5	0.125	DTS	
	WLAN 2.4 GHz ANT6	0.026		
	WLAN 5 GHz ANT5	0.170		
	WLAN 5 GHz ANT7	0.002		
	NFC	0.000	DXX	

Note:

1. The highest simultaneous transmission is scalar summation of Reported standalone SAR per FCC KDB 690783 D01 v01r03, and scalar SAR summation of all possible simultaneous transmission scenarios are < 1.6W/kg.
2. This device is compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits (1.6 W/kg) specified in FCC 47 CFR part 2 (2.1093) and ANSI/IEEE C95.1-2005, and had been tested in accordance with the measurement methods and procedures specified in IEEE 1528-2013.
3. For FDD-LTE Band 17 is covered by FDD-LTE Band 12, so only FDD-LTE Band 12 was tested.
4. For FDD-LTE Band 5 is covered by FDD-LTE Band 26, so only FDD-LTE Band 26 was tested.
   For FDD-LTE Band 38 is covered by FDD-LTE Band 41, so only FDD-LTE Band 41 was tested.
   For NR n78 is covered by NR n77, so only NR n77 was tested.

5 General Information

5.1 Client Information

Applicant:	Blackshark Technologies（Nanchang） Co., Ltd.
Address of Applicant:	Room 815-1, 8th floor, Block A, Huajiang Building, No. 1 Tsinghua Science Park
Manufacturer:	Blackshark Technologies（Nanchang） Co., Ltd.
Address of Manufacturer:	Room 815-1, 8th floor, Block A, Huajiang Building, No. 1 Tsinghua Science Park

5.2 General Description of EUT

Product Name:	5G Digital Mobile Phone			
Model No.:	SHARK KTUS-H0			
Category of device	Portable device			
Operation Frequency:	2G :	GSM850: 824.2~848.8 MHz	PCS 1900: 1850.2~1909.8 MHz	
	3G :	Band II: 1852.4~1907.6 MHz	Band V: 826.4~846.6 MHz	
		Band IV: 1712.4~1752.6 MHz		
	4G :	Band 2 : 1850MHz~1910 MHz	Band 4 : 1710MHz~1755MHz	
		Band 5 : 824MHz~849 MHz	Band 7: 2500MHz~2570MHz	
		Band 12: 699 MHz~716 MHz	Band 17: 704MHz~716MHz	
		Band 26: 814 MHz~ 849 MHz	Band 38: 2570MHz~2620MHz	
		Band 41: 2496MHz~2690MHz		
	5G NR	n5: 824MHz~849MHz	n41: 2496MHz~2690MHz	
		n77: 3450MHz~3550MHz	n77: 3700MHz~3980MHz	
		n78: 3450MHz~3550MHz	n78: 3700MHz~3800MHz	
	Wi-Fi:	2412MHz~2462MHz	5150MHz-5250MHz	
		5250MHz-5350MHz	5470MHz-5725MHz	
		5725MHz-5825MHz		
	Bluetooth: 2402 MHz ~ 2480 MHz			
Modulation technology:	2G:	☒Voice(GMSK)	☒GPRS(GMSK)	☒EGPRS(GMSK, 8PSK)
	3G:	☒RMC(QPSK)	☒HSUPA(QPSK)	☒HSDPA(QPSK,16QAM)
	4G:	☒QPSK	☒16QAM	☒64QAM
	5G NR：	☒CP-OFDM(QPSK,16QAM,64QAM,256QAM)		
		☒DFT-s-OFDM(π/2 -BPSK,QPSK,16QAM,64QAM,256QAM)		
	Wi-Fi:	☒802.11b(DSSS)	☒802.11a/g/n/ac/ax (OFDM)	
	Bluetooth:	☒BDR(GFSK)	☒EDR(π/4-DQPSK, 8DPSK)	☒LE(GFSK)
	SA: NR n5, n41, n77, n78			
	NSA(EN-DC): DC_5A_n78A, DC_7A_n78A, DC_38A_n78A			
Antenna Type:	Internal Antenna			

Antenna Gain:	ANT 1 : GSM 850: -2.2 dBi; WCDMA Band V: -2.2 dBi ; LTE Band 5: -2.2 dBi; LTE Band 12: -1.8 dBi ; LTE Band 17: -1.8 dBi n5: -2.2 dBi; ANT 2: GSM 850: -3.8 dBi; PCS 1900: 0.9 dBi WCDMA Band V: -3.8 dBi ;WCDMA Band II: 0.9 dBi; WCDMA Band IV: 2.3 dBi LTE Band 2: 0.9 dBi; LTE Band 4: 2.3 dBi LTE Band 5: -3.8 dBi; LTE Band 7: 0.0 dBi LTE Band 12: -3.6 dBi ; LTE Band 17: -3.6 dBi LTE Band 38: 0.1 dBi ;LTE Band 41: 0.8 dBi n5: -3.8 dBi; n41 0.8 dBi; ANT 3 : PCS 1900: 1.0 dBi WCDMA Band II: 1.0 dBi;WCDMA Band IV: 2.8 dBi LTE Band 2: 1.0 dBi; LTE Band 4: 2.8 dBi LTE Band 7: 1.1 dBi LTE Band 38: 1.1 dBi ;LTE Band 41: 1.1 dBi n5: -2.2 dBi; n41 1.1 dBi; ANT 5 : Bluetooth: -0.9 dBi; 2.4G Wi-Fi: -0.8 dBi; 5G Wi-Fi: -0.8 dBi ANT 6 : 5G Wi-Fi: -1.2 dBi ANT 7 : Bluetooth: -1.0 dBi; 2.4G Wi-Fi: -0.9 dBi; n77(n78) : -1.2 dBi ANT 8 : n41 3.6 dBi; n77(n78) : -0.3 dBi ANT 9 : n41 -6.0 dBi; n77(n78) : --5.2 dBi ANT 10 : n77(n78) : -2.7 dBi	
(E)GPRS Class:	(E)GPRS Class: 12	
Dimensions (L*W*H):	166 mm (L)× 77 mm (W)× 10 mm (H)	
Accessories information:	Adapter: Model: MDY-13-EG-1 Input: AC100-240V, 50/60Hz, 1.7A Normal Output: DC 5.0V, 3A Fast Output:DC 3.6-20V, 3-6A (120W Max)	Battery: Rechargeable Li-ion Polymer Battery 7.78V/2240mAh Headset: Support headset

5.3 Maximum RF Output Power

Ant 1

Mode	Average Power (dBm)
	GSM 850
GSM (Voice)	33.01
GPRS (1 TX Slot)	33.01
GPRS (2 TX Slots)	31.01
GPRS (3 TX Slots)	28.97
GPRS (4 TX Slots)	26.84
EGPRS (1 TX Slot)	27.05
EGPRS (2 TX Slots)	25.97
EGPRS (3 TX Slots)	24.49
EGPRS (4 TX Slots)	22.98

Mode	Average Power (dBm)
	WCDMA Band V
AMR 12.2 kbps	24.94
RMC 12.2 kbps	25.00
HSDPA Sub-test 1	23.99
HSDPA Sub-test 2	23.46
HSDPA Sub-test 3	23.47
HSDPA Sub-test 4	23.47
HSUPA Sub-test 1	23.90
HSUPA Sub-test 2	22.51
HSUPA Sub-test 3	22.99
HSUPA Sub-test 4	21.91
HSUPA Sub-test 5	23.98

Mode	Average Power (dBm)	
	LTE Band 12	LTE Band 26
BW/1.4 MHz	22.89	23.62
BW/3.0 MHz	22.82	22.78
BW/5.0 MHz	22.87	24.46
BW/10 MHz	22.79	23.66
BW/15 MHz	/	24.48
BW/20 MHz	/	/

Mode	Average Power (dBm)
	NR Band n41
BW/20 MHz	23.90
BW/30MHz	23.85
BW/40MHz	24.25
BW/50MHz	24.03
BW/60MHz	23.96
BW/80MHz	23.87
BW/90MHz	23.93
BW/100MHz	23.89

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Mode	Average Power (dBm)	
	GSM 850	GSM 1900
GSM (Voice)	32.91	28.88
GPRS (1 TX Slot)	32.95	29.14
GPRS (2 TX Slots)	30.78	27.00
GPRS (3 TX Slots)	28.77	24.68
GPRS (4 TX Slots)	26.62	22.80
EGPRS (1 TX Slot)	26.52	25.21
EGPRS (2 TX Slots)	25.63	23.94
EGPRS (3 TX Slots)	24.16	22.69
EGPRS (4 TX Slots)	22.56	20.74

Mode	Average Power (dBm)		
	WCDMA Band V	WCDMA Band IV	WCDMA Band II
AMR 12.2 kbps	24.61	24.46	24.28
RMC 12.2 kbps	24.64	24.49	24.30
HSDPA Sub-test 1	23.63	20.18	23.32
HSDPA Sub-test 2	23.13	19.73	22.80
HSDPA Sub-test 3	23.10	19.75	22.74
HSDPA Sub-test 4	23.12	19.58	22.74
HSUPA Sub-test 1	23.66	23.41	23.25
HSUPA Sub-test 2	22.16	21.99	21.78
HSUPA Sub-test 3	22.64	22.51	22.35
HSUPA Sub-test 4	21.59	21.41	21.22
HSUPA Sub-test 5	23.63	23.48	23.27

Mode	Average Power (dBm)					
	LTE Band 2	LTE Band 4	LTE Band 7	LTE Band 12	LTE Band 26	LTE Band 41
BW/1.4 MHz	22.74	24.17	/	22.78	24.07	/
BW/3.0 MHz	22.66	24.17	/	22.34	23.38	/
BW/5.0 MHz	22.85	24.25	23.46	22.40	24.42	24.74
BW/10 MHz	22.64	24.06	23.33	22.07	23.70	24.68
BW/15 MHz	22.57	23.92	23.25	/	24.57	24.70
BW/20 MHz	22.50	23.97	23.16	/	/	24.53

Mode	Average Power (dBm)	
	NR Band n5	NR Band n41
BW/5MHz	23.95	/
BW/10MHz	23.89	/
BW/15MHz	24.00	/
BW/20 MHz	24.04	24.39
BW/30MHz	/	24.34
BW/40MHz	/	24.64
BW/50MHz	/	24.51
BW/60MHz	/	24.49
BW/80MHz	/	24.70
BW/90MHz	/	24.31
BW/100MHz	/	24.28

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Mode	Average Power (dBm)
	GSM 1900
GSM (Voice)	30.17
GPRS (1 TX Slot)	30.13
GPRS (2 TX Slots)	27.97
GPRS (3 TX Slots)	25.49
GPRS (4 TX Slots)	23.64
EGPRS (1 TX Slot)	26.13
EGPRS (2 TX Slots)	24.81
EGPRS (3 TX Slots)	23.51
EGPRS (4 TX Slots)	21.57

Mode	Average Power (dBm)	
	WCDMA Band IV	WCDMA Band II
AMR 12.2 kbps	24.26	22.96
RMC 12.2 kbps	24.26	23.02
HSDPA Sub-test 1	23.31	22.41
HSDPA Sub-test 2	22.83	21.95
HSDPA Sub-test 3	22.82	21.85
HSDPA Sub-test 4	22.83	21.90
HSUPA Sub-test 1	23.29	21.77
HSUPA Sub-test 2	21.84	20.49
HSUPA Sub-test 3	22.31	20.87
HSUPA Sub-test 4	21.26	19.87
HSUPA Sub-test 5	23.32	21.90

Mode	Average Power (dBm)			
	LTE Band 2	LTE Band 4	LTE Band 7	LTE Band 41
BW/1.4 MHz	22.72	23.51	/	/
BW/3.0 MHz	22.67	23.43	/	/
BW/5.0 MHz	22.66	23.48	23.15	24.01
BW/10 MHz	22.68	23.39	23.07	24.16
BW/15 MHz	22.62	23.34	22.87	23.92
BW/20 MHz	22.64	23.40	22.83	24.04

Mode	Average Power (dBm)
	NR Band n41
BW/20 MHz	23.90
BW/30MHz	23.85
BW/40MHz	24.25
BW/50MHz	24.03
BW/60MHz	23.96
BW/80MHz	23.87
BW/90MHz	23.93
BW/100MHz	23.89

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WLAN 2.4 GHz Band Average Power (dBm)						
Mode/Band	b	g	n (HT-20)	n (HT-40)	ax 20	ax 40
WLAN 2.4GHz	16.87	17.36	16.44	16.21	16.42	15.69

WLAN 5.2 GHz Band Average Power (dBm)									
Mode/Band	a	ac 20	ac 40	ac 80	ax 20	ax 40	ax 80	n 20	n 40
WLAN 5.2GHz	15.28	14.77	14.34	14.18	12.44	11.84	11.44	15.19	14.81

WLAN 5.3 GHz Band Average Power (dBm)									
Mode/Band	a	ac 20	ac 40	ac 80	ax 20	ax 40	ax 80	n 20	n 40
WLAN 5.3GHz	15.89	15.84	15.55	14.64	13.07	12.36	11.49	15.76	15.55

WLAN 5.3 GHz Band Average Power (dBm)		
Mode/Band	ac 160	ax 160
WLAN 5.3GHz	11.02	9.26

WLAN 5.6 GHz Band Average Power (dBm)									
Mode/Band	a	ac 20	ac 40	ac 80	ax 20	ax 40	ax 80	n 20	n 40
WLAN 5.6GHz	15.64	15.57	15.66	15.20	13.26	13.29	12.98	15.54	15.66

WLAN 5.8 GHz Band Average Power (dBm)									
Mode/Band	a	ac 20	ac 40	ac 80	ax 20	ax 40	ax 80	n 20	n 40
WLAN 5.8GHz	16.23	15.28	14.93	15.29	13.45	12.89	11.27	16.16	15.98

Bluetooth Average Power (dBm)							
Mode/Band	1 Mbps (GFSK)	2 Mbps (π/4DQPSK)	3 Mbps (8DPSK)	BLE PHY 1M	BLE PHY 2M	BLE Coded PHY S=2	BLE Coded PHY S=2
Bluetooth	4.24	3.68	4.01	1.35	1.38	1.35	1.35

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WLAN 5.2 GHz Band Average Power (dBm)									
Mode/Band	a	ac 20	ac 40	ac 80	ax 20	ax 40	ax 80	n 20	n 40
WLAN 5.2GHz	14.41	15.00	14.51	12.98	12.09	11.42	11.22	14.05	13.59

WLAN 5.3 GHz Band Average Power (dBm)									
Mode/Band	a	ac 20	ac 40	ac 80	ax 20	ax 40	ax 80	n 20	n 40
WLAN 5.3GHz	15.76	15.71	15.26	14.53	12.76	12.14	11.38	15.74	15.32

WLAN 5.3 GHz Band Average Power (dBm)		
Mode/Band	ac 160	ax 160
WLAN 5.3GHz	10.43	8.53

WLAN 5.6 GHz Band Average Power (dBm)									
Mode/Band	a	ac 20	ac 40	ac 80	ax 20	ax 40	ax 80	n 20	n 40
WLAN 5.6GHz	16.37	16.15	16.28	15.82	14.48	13.47	13.17	15.79	16.36

WLAN 5.8 GHz Band Average Power (dBm)									
Mode/Band	a	ac 20	ac 40	ac 80	ax 20	ax 40	ax 80	n 20	n 40
WLAN 5.8GHz	14.64	16.07	15.67	13.42	11.84	11.60	10.80	14.58	14.02

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WLAN 2.4 GHz Band Average Power (dBm)						
Mode/Band	b	g	n (HT-20)	n (HT-40)	ax 20	ax 40
WLAN 2.4GHz	17.00	17.11	16.32	15.70	16.22	15.28

Bluetooth Average Power (dBm)							
Mode/Band	1 Mbps (GFSK)	2 Mbps (π/4DQPSK)	3 Mbps (8DPSK)	BLE PHY 1M	BLE PHY 2M	BLE Coded PHY S=2	BLE Coded PHY S=2
Bluetooth	4.01	3.51	3.85	3.85	3.85	1.17	1.07

Mode	Average Power (dBm)	
	NR Band n77(3450-3550MHz)	NR Band n77(3700-3980MHz)
BW/20 MHz	21.64	21.02
BW/30MHz	21.34	21.07
BW/40MHz	21.46	20.91
BW/60MHz	21.05	20.72
BW/80MHz	21.19	20.42
BW/100MHz	20.67	20.57

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Mode	Average Power (dBm)		
	NR Band n41	NR Band n77(3450-3550MHz)	NR Band n77(3700-3980MHz)
BW/20 MHz	21.95	25.82	25.16
BW/30MHz	21.83	25.86	25.22
BW/40MHz	22.11	25.91	25.25
BW/50MHz	21.90	/	/
BW/60MHz	21.86	25.67	24.96
BW/80MHz	21.75	25.57	24.92
BW/90MHz	21.79	/	/
BW/100MHz	21.84	25.11	24.99

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Mode	Average Power (dBm)		
	NR Band n41	NR Band n77(3450-3550MHz)	NR Band n77(3700-3980MHz)
BW/20 MHz	22.91	19.34	17.38
BW/30MHz	22.87	19.35	17.37
BW/40MHz	23.33	19.37	17.54
BW/50MHz	23.10	/	/
BW/60MHz	22.99	19.11	17.25
BW/80MHz	22.99	18.96	17.17
BW/90MHz	22.88	/	/
BW/100MHz	22.93	18.91	17.35

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Mode	Average Power (dBm)	
	NR Band n77(3450-3550MHz)	NR Band n77(3700-3980MHz)
BW/20 MHz	25.30	26.62
BW/30MHz	25.30	26.58
BW/40MHz	25.17	26.64
BW/60MHz	24.82	26.33
BW/80MHz	24.17	26.14
BW/100MHz	24.65	26.10

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
1#	SAR
***Remark**: JianYan Testing Group Shenzhen Co., Ltd. is only responsible for the test project data of the above samples, and will keep the above samples for a month.*	

5.6 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.
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6 Introduction

6.1 Introduction

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

6.2 SAR Definition

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

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

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

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

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

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

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

7 RF Exposure Limits

7.1 Uncontrolled Environment

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

7.2 Controlled Environment

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

7.3 RF Exposure Limits

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

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

Note:

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

8 SAR Measurement System

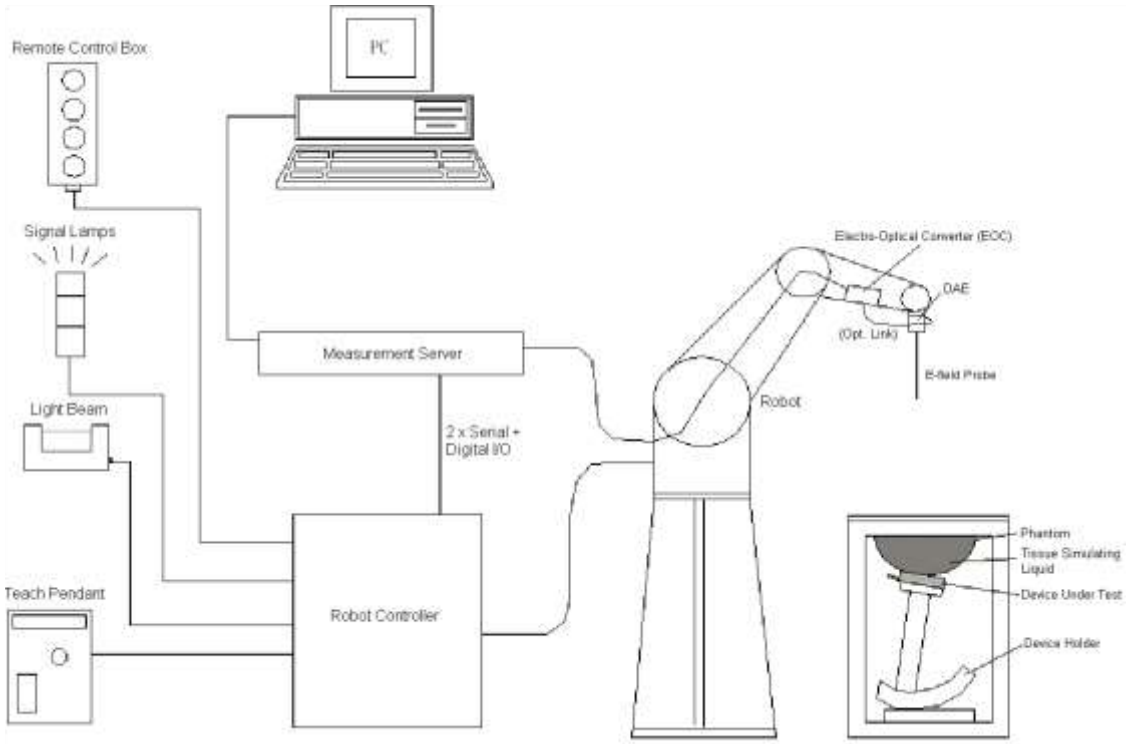

Fig. 8.1 SPEAG DASY System Configurations

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

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

Component details are described in the following sub-sections.

8.1 E-Field Probe

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

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

Construction	Symmetrical design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)
Frequency Directivity	10 MHz to 6 GHz; Linearity: ± 0.2 dB ± 0.3 dB in HSL (rotation around probe axis) ± 0.5 dB in tissue material (rotation normal to probe axis)
Dynamic Range	10 µW/g to 100 mW/g; Linearity: ± 0.2 dB (noise: typically < 1 µW/g)
Dimensions	Overall length: 330 mm (Tip: 20mm) Tip diameter: 2.5 mm (Body: 12mm) Typical distance from probe tip to dipole centers: 1 mm

Fig. 8.2 Photo of E-Field Probe

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

8.2 Data Acquisition Electronics (DAE)

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

Fig. 8.3 Photo of DAE

8.3 Robot

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

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

Fig. 8.4 Photo of Robot

8.4 Measurement Server

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

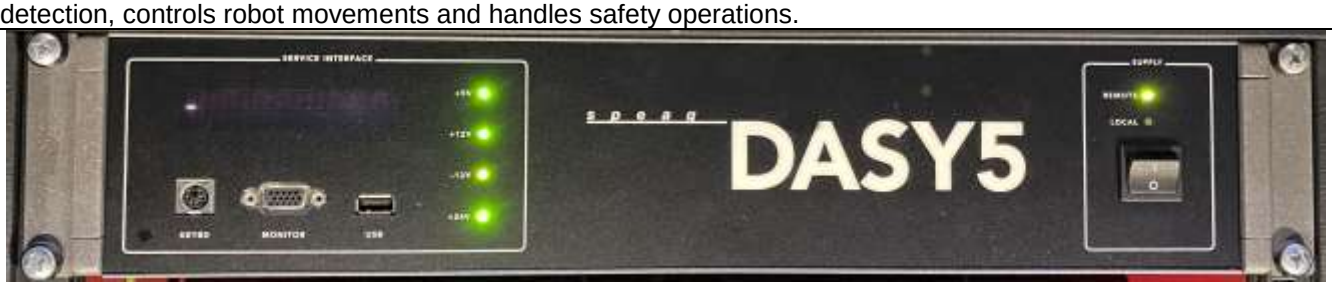

Fig. 8.5 Photo of Server for DASY5

8.5 Light Beam Unit

The light beam switch allows automatic "tooling" of the probe. During the process, the actual position of the probe tip with respect to the robot arm is measured, as well as the probe length and the horizontal probe offset. The software then corrects all movements, such that the robot coordinates are valid for the probe tip.
The repeatability of this process is better than0.1 mm. If a position has been taught with an aligned probe, the same position will be reached with another aligned probe within 0.1 mm, even if the other probe has different dimensions. During probe rotations, the probe tip will keep its actual position.

Fig. 8.6 Photo of Light Beam

8.6 Phantom

<SAM Twin Phantom>

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

Fig. 8.7 Photo of SAM Twin Phantom

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

<ELI4 Phantom >

The ELI4 phantom is intended for compliance testing of handheld and body-mounted wireless devices in the frequency range of 30MHz to 6 GHz. ELI4 is fully compatible with the latest draft of the standard IEC 62209-2 and all known tissue simulating liquids.
ELI4 has been optimized regarding its performance and can be integrated into a SPEAG standard phantom table. A cover prevents evaporation of the liquid. Reference markings on the phantom allow installation of the complete setup, including all predefined phantom positions and measurement grids, by teaching three points
The phantom can be used with the following tissue simulating liquids:

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

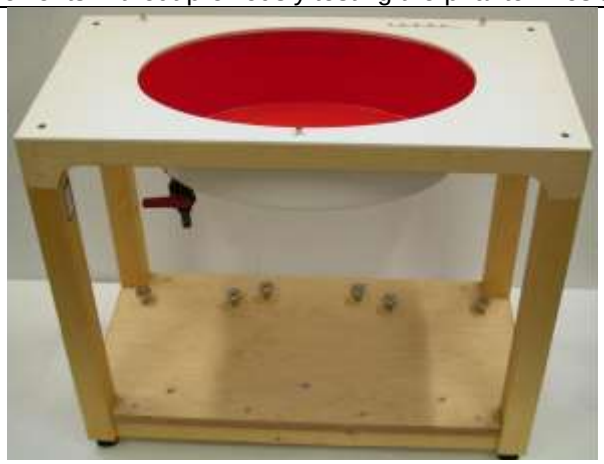

Fig.8.8 Photo of ELI4 Phantom

8.7 Device Holder

<Device Holder for SAM Twin Phantom>

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

Fig. 8.9 Photo of Device Holder

8.8 Data storage and Evaluation

- **Data Storage**

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

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

- **Data Evaluation**

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

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

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

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

The formula for each channel can be given as:

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

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

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

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

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

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

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

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

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

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

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

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

8.9 Test Equipment List

Manufacturer	Equipment Description	Model	Management Number	Cal. Information	
				Last Cal.	Due Date
SPEAG	750MHz System Validation Kit	D750V3	1118	05.28.2020	05.27.2023
SPEAG	835MHz System Validation Kit	D835V2	4d154	06.11.2019	06.10.2022
SPEAG	1750MHz System Validation Kit	D1750V2	1177	02.10.2021	02.09.2024
SPEAG	1900MHz System Validation Kit	D1900V2	5d175	06.11.2019	06.10.2022
SPEAG	2450MHz System Validation Kit	D2450V2	910	06.10.2019	06.09.2022
SPEAG	2600MHz System Validation Kit	D2600V2	1114	10.28.2021	10.27.2024
SPEAG	3500MHz System Validation Kit	D3500V2	1118	02.04.2021	02.03.2024
SPEAG	3700MHz System Validation Kit	D3700V2	1089	02.04.2021	02.03.2024
SPEAG	3900MHz System Validation Kit	D3900V2	1064	02.04.2021	02.03.2024
SPEAG	5GHz System Validation Kit	D5GHzV2	1320	02.05.2021	02.04.2024
SPEAG	Data Acquisition Electronics	DAE4	1452	05.26.2021	05.25.2022
SPEAG	Dosimetric E-Field Probe	EX3DV4	7601	12.28.2021	12.27.2022
SPEAG	Dosimetric E-Field Probe	EX3DV4	3826	07.28.2021	07.27.2022
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	1765	N.C.R	N.C.R
SPEAG	Phantom	ELI V5.0	1208	N.C.R	N.C.R
SPEAG	Phone Positioner	N/A	N/A	N.C.R	N.C.R
Stäubli	Robot	TX60L	F13/5P6VB1/A/01	N.C.R	N.C.R
Anritsu	Universal Radio Communication Analyzer	MT8820C	6201468866	03.03.2021	03.02.2023
R&S	Universal Radio Communication Tester	CMU200	109231	06.18.2020	06.17.2022
KEYSIGHT	5G Radio Communication Tester	E7515B	MY60192444	27.10.2021	26.10.2022
HP	Network Analyzer	8753D	3410A06291	06.18.2020	06.17.2022
KEYSIGHT	EPM Series Power Meter	N1914A	MY60400002	08.29.2021	08.28.2022
KEYSIGHT	E-Series Power Sensor	E9300H	MY60340002	08.29.2021	08.28.2022
KEYSIGHT	E-Series Power Sensor	E9300H	MY60340003	08.29.2021	08.28.2022
KEYSIGHT	Signal Generator	N5173B	MY59100857	10.27.2021	10.26.2022
Huber Suhner	RF Cable	SUCOFLEX	12341	See Note 3	
Huber Suhner	RF Cable	SUCOFLEX	17268	See Note 3	
Huber Suhner	RF Cable	SUCOFLEX	2080	See Note 3	
Weinschel	Attenuator	23-3-34	BL5513	See Note 3	
Anritsu	Directional Coupler	MP654A	100217491	See Note 3	
SPEAG	Dielectric Assessment Kit	3.5 Probe	1119	See Note 4	
SPEAG	DAK Measurement Software	DAK	Version: DAK 3.5	N.C.R	
TXC	Broadband Amplifier	BBA018000	LNA-00500200-2515	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.

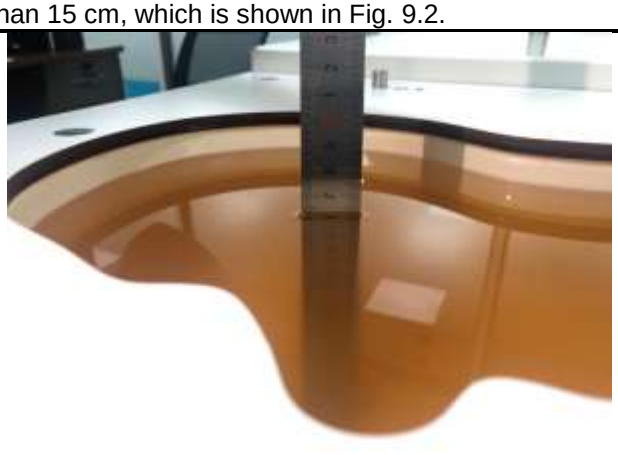

Fig. 9.1 Photo of Liquid Height for Head SAR

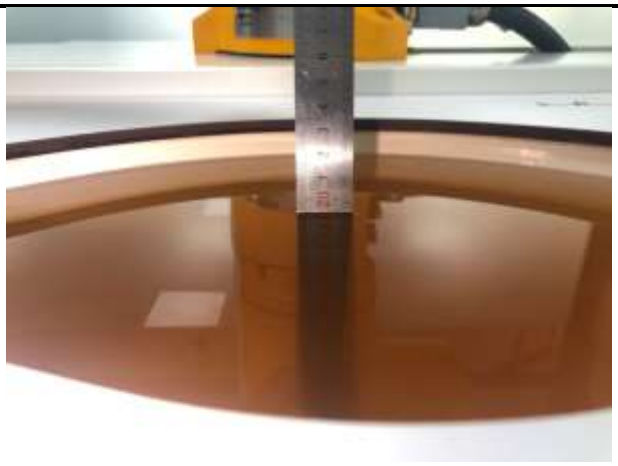

Fig. 9.2 Photo of Liquid Height for Body SAR

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

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

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

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

Frequency (MHz)	Liquid Temp. (℃)	Conductivity (σ)	Permittivity (εr)	Conductivity Target(σ)	Permittivity Target(εr)	Delta (σ)%	Delta (εr)%	Limit (%)	Date (mm/dd/yy)
750	22.4	0.88	42.43	0.89	41.90	-1.57	1.26	±5	03.22.2022
835	22.6	0.92	42.12	0.90	41.50	2.22	1.49	±5	03.23.2022
1750	23.5	1.32	40.41	1.37	40.10	-3.65	0.77	±5	03.27.2022
1900	23.1	1.39	40.45	1.40	40.00	-0.71	1.13	±5	03.30.2022
2450	22.7	1.75	39.44	1.80	39.20	-2.78	0.61	±5	04.03.2022
2600	22.8	1.88	39.54	1.96	39.00	-4.08	1.38	±5	04.06.2022
3500	23.2	2.94	37.62	2.91	37.90	1.03	-0.74	±5	04.14.2022
3700	22.4	3.05	37.18	3.12	37.70	-2.24	-1.38	±5	04.19.2022
3900	22.4	3.40	36.95	3.32	37.50	2.41	-1.47	±5	04.19.2022
5300	22.7	4.89	34.76	4.76	35.90	2.73	-3.18	±5	04.08.2022
5600	23.8	5.08	34.10	5.06	35.50	0.40	-3.94	±5	04.10.2022
5800	23.6	5.37	34.28	5.27	35.30	1.90	-2.89	±5	04.11.2022

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:

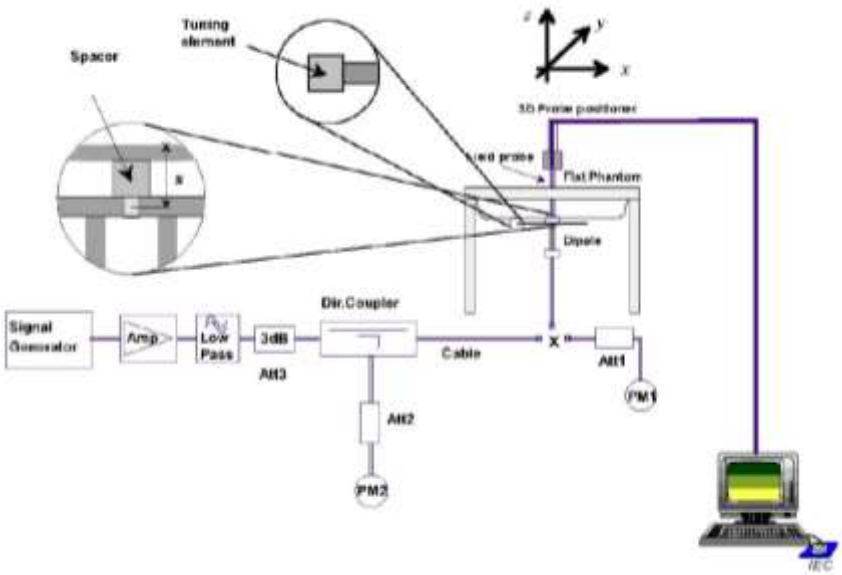

Fig.10.1 System Verification Setup Diagram

Fig.10.2 Photo of Dipole setup

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➢ **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 to 1W 1g SAR (W/kg)	1W Target 1g SAR (W/kg)	Deviation (%)
03.22.2022	750	80	0.668	8.35	8.37	-0.24
03.23.2022	835	80	0.785	9.81	9.49	3.37
03.27.2022	1750	40	1.550	38.75	36.4	6.46
03.30.2022	1900	40	1.610	40.25	39.4	2.16
04.03.2022	2450	40	2.070	51.75	52.6	-1.62
04.06.2022	2600	40	2.150	53.75	56.3	-4.53
04.14.2022	3500	40	2.520	63.00	65.6	-3.96
04.19.2022	3700	40	2.630	65.75	66.1	-0.53
04.19.2022	3900	40	2.840	71.00	69.9	1.57
04.08.2022	5300	40	3.050	76.25	80.80	-5.63
04.10.2022	5600	40	3.330	83.25	83.20	0.06
04.11.2022	5800	40	3.240	81.00	80.90	0.12

11 EUT Testing Position

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

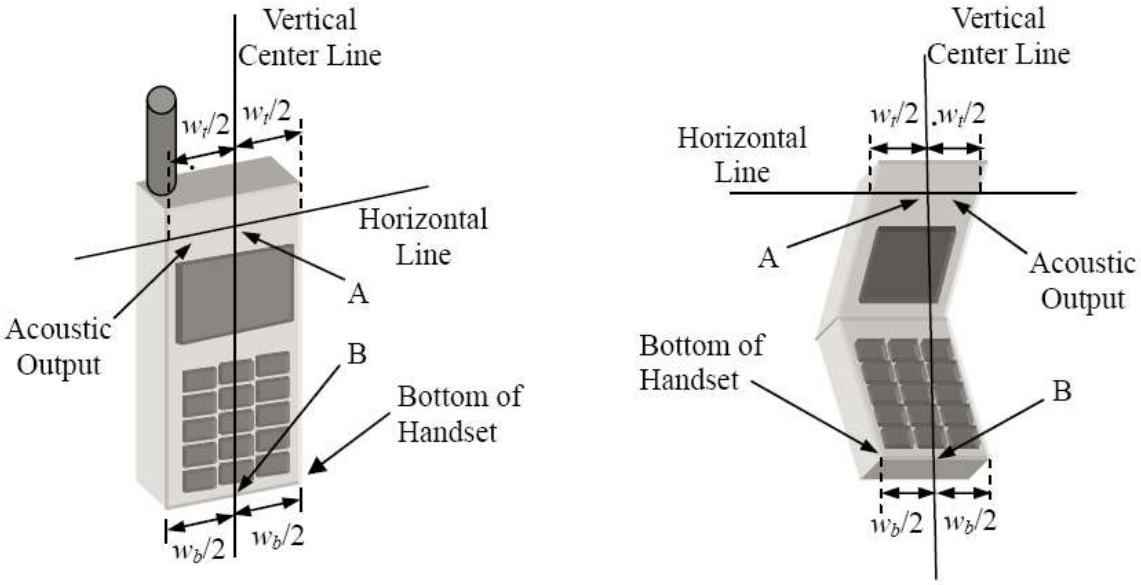

Fig. 11.2 Illustration for Handset Vertical and Horizontal Reference Lines

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 / 15º Tilt

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

Fig.11.4 Illustration for Tilted Position

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

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

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

11.5 Body Worn Accessory Configurations

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

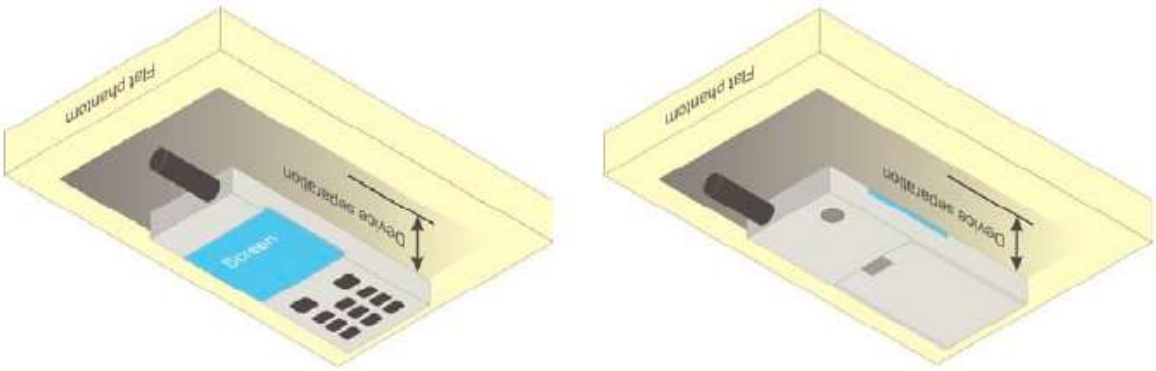

Fig.11.5 Illustration for Body Worn Position

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 x W ≥
9 cm x 5 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.

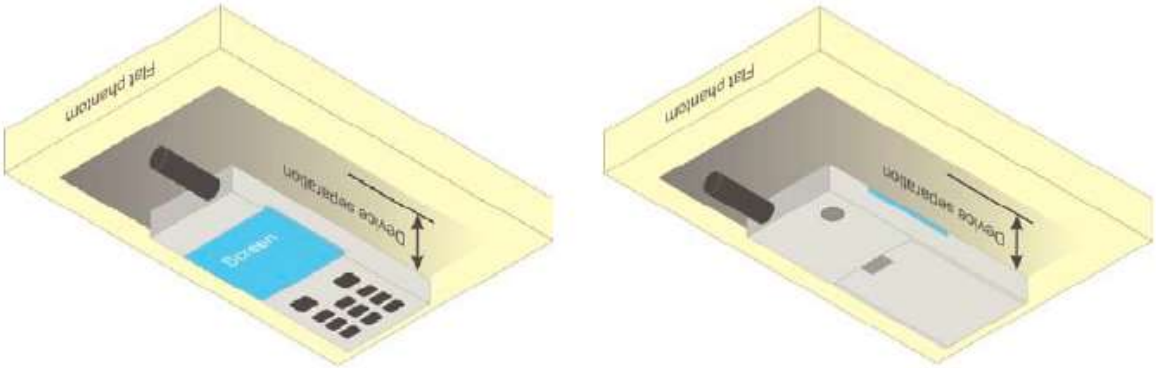

Fig.11.6 Illustration for Hotspot Position

12 Measurement Procedures

The measurement procedures are as bellows:

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

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

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

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

12.1 Spatial Peak SAR Evaluation

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

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

The entire evaluation of the spatial peak values is performed within the post-processing engine (SEMCAD). The system always gives the maximum values for 1g and 10g cubes. The algorithm to find the cube with highest averaged SAR is divided into the following stages:
- Extraction of the measured data (grid and values) from the Zoom Scan.
- Calculation of the SAR value at every measurement point based on all stored data (A/D values and measurement parameters).
- Generation of a high-resolution mesh within the measured volume.
- Interpolation of all measured values form the measurement grid to the high-resolution grid
- Extrapolation of the entire 3-D field distribution to the phantom surface over the distance from sensor to surface
- Calculation of the averaged SAR within masses of 1g and 10g.

12.2 Power Reference Measurement

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

12.3 Area & Zoom Scan Procedures

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

			≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface			5 ± 1 mm	½·δ·ln(2) ± 0.5 mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location			30° ± 1°	20° ± 1°
Maximum area scan spatial resolution: Δx_{Area}, Δy_{Area}			≤ 2 GHz: ≤ 15 mm 2 – 3 GHz: ≤ 12 mm	3 – 4 GHz: ≤ 12 mm 4 – 6 GHz: ≤ 10 mm
			When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be ≤ the corresponding x or y dimension of the test device with at least one measurement point on the test device.	
Maximum zoom scan spatial resolution: Δx_{Zoom}, Δy_{Zoom}			≤ 2 GHz: ≤ 8 mm 2 – 3 GHz: ≤ 5 mm*	3 – 4 GHz: ≤ 5 mm* 4 – 6 GHz: ≤ 4 mm*
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{Zoom}(n)$		≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm
	graded grid	$\Delta z_{Zoom}(1)$: between 1st two points closest to phantom surface	≤ 4 mm	3 – 4 GHz: ≤ 3 mm 4 – 5 GHz: ≤ 2.5 mm 5 – 6 GHz: ≤ 2 mm
		$\Delta z_{Zoom}(n>1)$: between subsequent points	≤ 1.5·$\Delta z_{Zoom}(n-1)$	
Minimum zoom scan volume	x, y, z		≥ 30 mm	3 – 4 GHz: ≥ 28 mm 4 – 5 GHz: ≥ 25 mm 5 – 6 GHz: ≥ 22 mm

Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details.

* When zoom scan is required and the ***reported*** SAR from the *area scan based 1-g SAR estimation* procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.

12.4 Volume Scan Procedures

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

12.5 SAR Averaged Methods

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

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

12.6 Power Drift Monitoring

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

13 Power reduction specification

In order to reduce the harm of electromagnetic radiation to human body, we reduce the transmission power according to the following strategies:

(1) This device uses a single fixed level of power reduction through static table look-up for SAR compliance and itis triggered by a single event or operation.

(2)The central control module identifies the usage scenarios of mobile phone—in head scenario or in body/hotspot scenario according to the working state of receiver. When the mobile phone is in the calling scenario, the receiver is working and the phone is close to the human head，so the phone is identified to work in head scenario. In addition to this, the receiver isn't working and the phone is identified to work in body/hotspot scenario.

(3)The reduction of transmission power of relevant frequency band is implemented according to the usage scenarios of mobile phone. And the information about the antenna、the band、the reduced power of every scenario is written to the phone's configuration files respectively (the information of 2/3/4/5G is stored in sar NV, and the information of wifi is stored in BDF). The central control module loads the 2/3/4/5g sar NV and configures the corresponding wifi power parameters according to the identified usage scenarios of mobile phone, so the transmission power will be reduced.

(4)The following tables summarize the key power reduction information. Head scenario works in Head Scene in the tables and body/hotspot scenario works in Body Scene in the tables. The detailed full power which is the Max.power the state can use and reduced tune-up specifications and conducted power measurement results are provided in JYTSZ-R14-2200061 Appendix D Conducted RF Output Power.

Ant1 Power Level(dBm)					
Power Reduction Scenario	GSM850	WCDMA V	LTE Band 12 & Band 17	LTE Band 26 & Band 5	NR Band n5
Full Power	33.5	25.5	23.0	25.0	24.5
Head Scene	33.5	25.5	23.0	24.5	24.5
Body Scene	33.5	25.5	23.0	22.0	24.5

Ant2 Power Level(dBm)					
Power Reduction Scenario	GSM850	GSM1900	WCDMA V	WCDMA IV	WCDMA II
Full Power	33.0	29.0	25.0	25.0	24.5
Head Scene	33.0	29.0	25.0	25.0	24.5
Body Scene	33.0	29.0	24.0	25.0	24.5

Ant2 Power Level(dBm)								
Power Reduction Scenario	LTE Band 2	LTE Band 4	LTE Band 7	LTE Band 12 & Band 17	LTE Band 26 & Band 5	LTE Band 41 & Band 38	NR Band n5	NR Band n41
Full Power	23.0	24.5	23.5	23.0	25.0	25.0	24.0	25.0
Head Scene	23.0	24.5	17.5	23.0	25.0	16.5	24.0	22.0
Body Scene	23.0	24.5	23.5	23.0	25.0	25.0	24.0	24.0

Ant3 Power Level(dBm)								
Power Reduction Scenario	GSM 1900	WCDMA IV	WCDMA II	LTE Band 2	LTE Band 4	LTE Band 7	LTE Band 41 & Band 38	NR Band n41
Full Power	30.5	24.5	23.5	23.0	24.0	23.5	24.5	24.5
Head Scene	26.5	16.5	15.5	16.5	16.5	14.0	18.0	21.0
Body Scene	26.5	20.0	19.5	20.0	21.0	19.5	20.5	24.5

Ant7 Power Level(dBm)		
Power Reduction Scenario	NR Band n77 3450-3550MHz & n78 3450-3550MHz	NR Band n77 3700-3980MHz & n78 3700-3800MHz
Full Power	22.0	21.5
Head Scene	17.0	17.5
Body Scene	18.5	18.5

Ant8 Power Level(dBm)			
Power Reduction Scenario	NR Band n41	NR Band n77 3450-3550MHz & n78 3450-3550MHz	NR Band n77 3700-3980MHz & n78 3700-3800MHz
Full Power	22.5	26.0	26.0
Head Scene	13.5	16.5	16.5
Body Scene	16.0	26.0	26.0

Ant9 Power Level(dBm)			
Power Reduction Scenario	NR Band n41	NR Band n77 3450-3550MHz & n78 3450-3550MHz	NR Band n77 3700-3980MHz & n78 3700-3800MHz
Full Power	23.5	19.5	18.0
Head Scene	23.5	19.5	18.0
Body Scene	22.5	19.5	18.0

Ant10 Power Level(dBm)		
Power Reduction Scenario	NR Band n77 3450-3550MHz & n78 3450-3550MHz	NR Band n77 3700-3980MHz & n78 3700-3800MHz
Full Power	25.5	27.0
Head Scene	19.0	20.5
Body Scene	18.0	19.5

ANT 5 WiFi antenna Power Level(dBm)			
Band	Target Power and Tolerance (dBm)		
	Full Power	Head Scene	Body Scene
WLAN 2.4GHz	17.50	11.50	17.50
WLAN 5.3GHz & WLAN 5.2GHz	16.00	10.50	16.00
WLAN 5.6GHz	16.00	10.50	16.00
WLAN 5.8GHz	16.50	11.00	16.50
BT	4.50	4.50	4.50

ANT 6 WiFi antenna Power Level(dBm)			
Band	Target Power and Tolerance (dBm)		
	Full Power	Head Scene	Body Scene
WLAN 5.3GHz & WLAN 5.2GHz	16.00	16.00	13.00
WLAN 5.6GHz	16.50	16.50	14.00
WLAN 5.8GHz	16.50	16.50	13.00

ANT 7 WiFi antenna Power Level(dBm)			
Band	Target Power and Tolerance (dBm)		
	Full Power	Head Scene	Body Scene
WLAN 2.4GHz	17.50	11.50	17.50
BT	4.50	4.50	4.50

14 Conducted RF Output Power

The detailed conducted power table can refer to JYTSZ-R14-2200061 Appendix D Conducted RF Output Power.

14.1 GSM Conducted Power

Remark:

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

Note:

1. For Head SAR testing, GSM Voice mode should be evaluated; therefore the EUT was set in GSM 850 Voice mode.
2. For Body worn SAR testing and Hotspot mode SAR testing, GPRS and EGPRS mode should be evaluated, therefore the EUT was set in GPRS 2 TX slots mode due to the highest frame-averaged power.
3. For GPRS multi time slots SAR measurement, when the measured maximum output power levels are within 0.25 dB of each other, test the configuration with the most number of time slots.
4. Per KDB447498 D04v01, the maximum output power channel is used for SAR testing and for further SAR test reduction.
5. The EUT do not support DTM function.

14.2 WCDMA Conducted Power

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

HSDPA Setup Configuration:

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

Table 1

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

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

HSDPA Sub-test setup configuration

HSUPA Setup Configuration:

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

Table 2

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{hs} (1)	β_{ec}	β_{ed}	β_{ed} (SF)	β_{ed} (codes)	CM (2) (dB)	MPR (dB)	AG (4) Index	E-TFCI
1	11/15 (3)	15/15 (3)	64	11/15 (3)	22/15	209/225	1039/225	4	1	1.0	0.0	20	75
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67
3	15/15	9/15	64	15/9	30/15	30/15	β_{ed1}: 47/15 β_{ed2}: 47/15	4	2	2.0	1.0	15	92
4	2/15	15/15	64	2/15	4/15	2/15	56/75	4	1	3.0	2.0	17	71
5	15/15 (4)	15/15 (4)	64	15/15 (4)	30/15	24/15	134/15	4	1	1.0	0.0	21	81

Note 1: Δ_{ACK}, Δ_{NACK} and $\Delta_{CQI} = 8 \Leftrightarrow A_{hs} = \beta_{hs}/\beta_c = 30/15 \Leftrightarrow \beta_{hs} = 30/15 * \beta_c$.
Note 2: CM = 1 for β_c/β_d =12/15, β_{hs}/β_c=24/15. For all other combinations of DPDCH, DPCCH, HS- DPCCH, E-DPDCH and E-DPCCH the MPR is based on the relative CM difference.
Note 3: For subtest 1 the β_c/β_d ratio of 11/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to β_c = 10/15 and β_d = 15/15.
Note 4: For subtest 5 the β_c/β_d ratio of 15/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to β_c = 14/15 and β_d = 15/15.
Note 5: Testing UE using E-DPDCH Physical Layer category 1 Sub-test 3 is not required according to TS 25.306 Table 5.1g.
Note 6: β_{ed} cannot be set directly; it is set by Absolute Grant Value.

HSUPA Sub-test setup configuration

WCDMA Conducted Power

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.

14.3 LTE Conducted Power

14.3.1 Largest channel bandwidth standalone SAR test requirements

QPSK with 1 RB allocation

Start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power among RB offsets at the upper edge, middle and lower edge of each required test channel. When the reported SAR is ≤ 0.8 W/kg, testing of the remaining RB offset configurations and required test channels is not required for 1 RB allocation; otherwise, SAR is required for the remaining required test channels and only for the RB offset configuration with the highest output power for that channel.8 When the reported SAR of a required test channel is > 1.45 W/kg, SAR is required for all three RB offset configurations for that required test channel.

QPSK with 50% RB allocation

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

QPSK with 100% RB allocation

For QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation in sections 4.2.1 and 4.2.2 are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.

Higher order modulations

For each modulation besides QPSK; e.g., 16-QAM, 64-QAM, apply the QPSK procedures in sections 4.2.1, 5.2.2 and 4.2.3 to determine the QAM configurations that may need SAR measurement. For each configuration identified as required for testing, SAR is required only when the highest maximum output power for the configuration in the higher order modulation is > ½ dB higher than the same configuration in QPSK or when the reported SAR for the QPSK configuration is > 1.45 W/kg.

14.3.2 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 > ½ dB higher than the equivalent channel configurations in the largest channel bandwidth configuration or the reported SAR of a configuration for the largest channel bandwidth is > 1.45 W/kg. The equivalent channel configuration for the RB allocation, RB offset and modulation etc. is determined for the smaller channel bandwidth according to the same number of RB allocated in the largest channel bandwidth. For example, 50 RB in 10 MHz channel bandwidth does not apply to 5 MHz channel bandwidth; therefore, this cannot be tested in the smaller channel bandwidth. However, 50% RB allocation in 10 MHz channel bandwidth is equivalent to 100% RB allocation in 5 MHz channel bandwidth; therefore, these are the equivalent configurations to be compared to determine the specific channel and configuration in the smaller channel bandwidth that need SAR testing.

13.3.3 TDD LTE configuration setup for SAR measurement

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

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

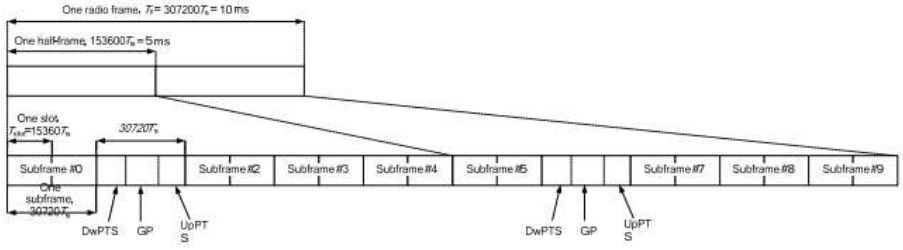

Figure 4.2-1: Frame structure type 2 (for 5 ms switch-point periodicity)

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

Special subframe configuration	Normal cyclic prefix in downlink			Extended cyclic prefix in downlink		
	DwPTS	UpPTS		DwPTS	UpPTS	
		Normal cyclic prefix in uplink	Extended cyclic prefix in uplink		Normal cyclic prefix in uplink	Extended cyclic prefix in uplink
0	$6592 \cdot T_s$	$2192 \cdot T_s$	$2560 \cdot T_s$	$7680 \cdot T_s$	$2192 \cdot T_s$	$2560 \cdot T_s$
1	$19760 \cdot T_s$			$20480 \cdot T_s$		
2	$21952 \cdot T_s$			$23040 \cdot T_s$		
3	$24144 \cdot T_s$			$25600 \cdot T_s$		
4	$26336 \cdot T_s$			$7680 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$
5	$6592 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$	$20480 \cdot T_s$		
6	$19760 \cdot T_s$			$23040 \cdot T_s$		
7	$21952 \cdot T_s$			$12800 \cdot T_s$		
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·Ts = 10 ms consists of two half-frames of length 153600·Ts = 5ms each. Each half-frame consists of five subframes of length 30720 ·Ts = 1ms. So, the uplink duty factor in special subframe as below:

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

Table 4.2-2: Uplink-downlink configurations

Uplink-downlink configuration	Downlink-to-Uplink Switch-point periodicity	Subframe number									
		0	1	2	3	4	5	6	7	8	9
0	5 ms	D	S	U	U	U	D	S	U	U	U
1	5 ms	D	S	U	U	D	D	S	U	U	D
2	5 ms	D	S	U	D	D	D	S	U	D	D
3	10 ms	D	S	U	U	U	D	D	D	D	D
4	10 ms	D	S	U	U	D	D	D	D	D	D
5	10 ms	D	S	U	D	D	D	D	D	D	D
6	5 ms	D	S	U	U	U	D	S	U	U	D

According to above table:

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

14.4 5G NR Conducted Power

Note:

1. 5G NR n41/n77/n78 supports HPUE.
2. 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.
3. 50% RB allocation for PI/2 BPSK SAR testing follows 1RB PI/2 BPSK allocation procedure.
4. QPSK/16QAM/64QAM256QAM 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.
5. 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.
6. Due to test setup limitations, SAR testing for NR was performed using Factory Test Mode software to establish the connection and perform SAR with 100% transmission.

14.5 WLAN 2.4 GHz Band Conducted Power

Note:

7. SAR test of WLAN 2.4GHz is performed.
8. Per KDB 248227 D01v02r02, choose the highest output power channel to test SAR and determine further SAR exclusion.
9. Per KDB 248227 D01v02r02, In the 2.4 GHz band, separate SAR procedures are applied to DSSS and OFDM configurations to simplify DSSS test requirements. SAR is not required for the following 2.4 GHz OFDM conditions:
   1) When KDB Publication 447498 SAR test exclusion applies to the OFDM configuration.
   2) When the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg.
10. 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.
11. Per KDB 248227 D01V02r02 section 2.2, when the EUT in continuously transmitting mode, the actual duty cycle is 100%, so the duty cycle factor is 1.

14.6 WLAN 5.2GHz Band Conducted Power

Note:

1. Per KDB 248227 D01V02r02, WLAN 5.2GHz is not required when the WLAN 5.3GHz highest reported SAR for a test configuration is<1.2W/Kg, SAR is not required for WLAN 5.2GHz.

14.7 WLAN 5.3GHz Band Conducted Power

Note:

12. SAR test of WLAN 5.3GHz is performed.
13. Per KDB 248227 D01v02r02, choose the highest output power channel to test SAR and determine further SAR exclusion.
14. 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.
15. Per KDB 248227 D01V02r02 section 2.2, when the EUT in continuously transmitting mode, the actual duty cycle is 99.80%, so the duty cycle factor is 1.002.

14.8 WLAN 5.6GHz Band Conducted Power

Note:

16. SAR test of WLAN 5.6GHz is performed.
17. Per KDB 248227 D01v02r02, choose the highest output power channel to test SAR and determine further SAR exclusion.
18. 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.
19. Per KDB 248227 D01V02r02 section 2.2, when the EUT in continuously transmitting mode, the actual duty cycle is 99.78%, so the duty cycle factor is 1.002.

14.9 WLAN 5.8GHz Band Conducted Power

Note:

20. SAR test of WLAN 5.8GHz is performed.
21. Per KDB 248227 D01v02r02, choose the highest output power channel to test SAR and determine further SAR exclusion.
22. 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.
23. Per KDB 248227 D01V02r02 section 2.2, when the EUT in continuously transmitting mode, the actual duty cycle is 99.76%, so the duty cycle factor is 1.002.

14.10 Bluetooth Conducted Power

Note:

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

14.11 NFC Conducted Power

Note:

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

15 Exposure Positions Consideration

15.1 EUT Antenna Locations

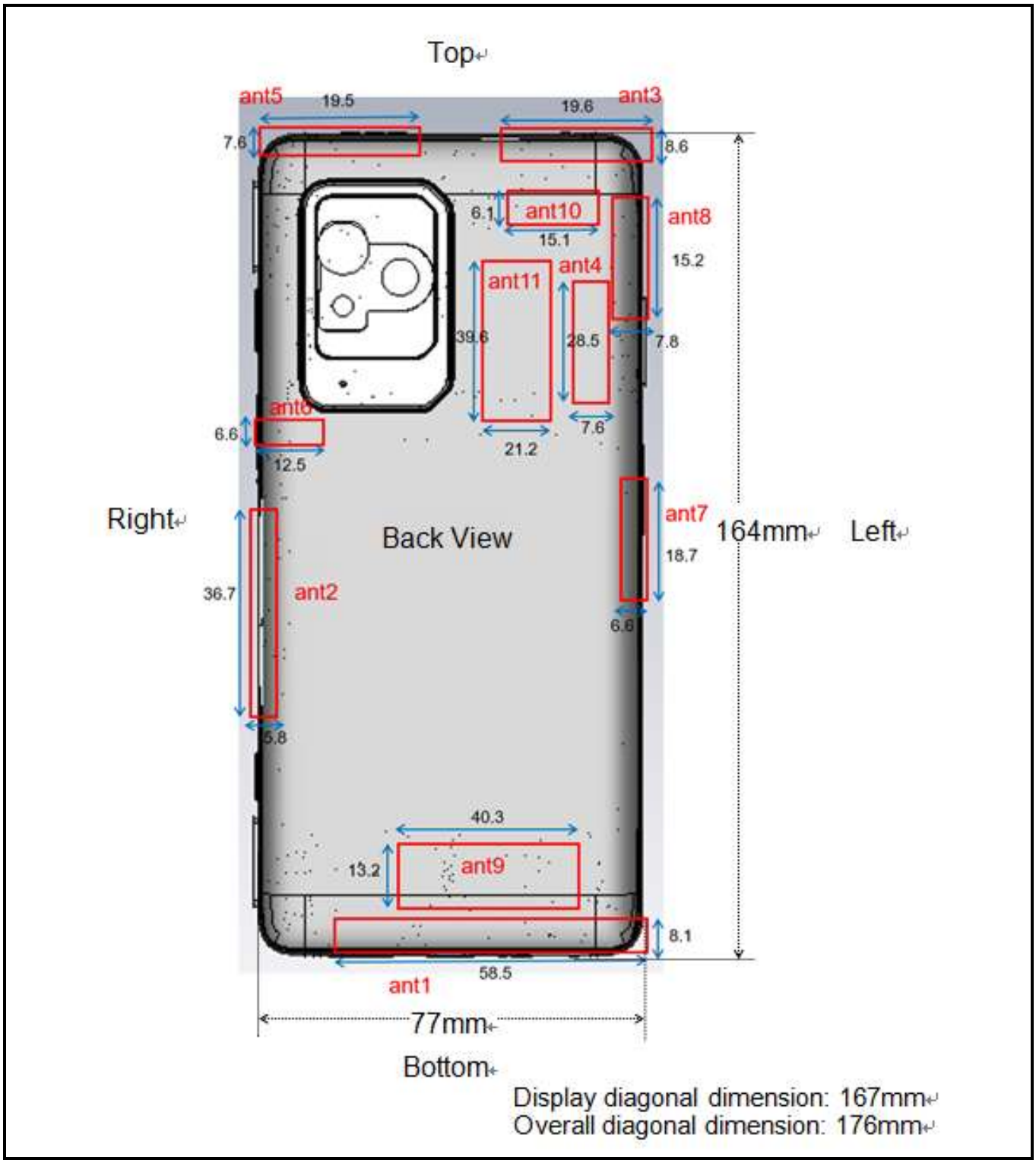

Fig.14.1 EUT Antenna Locations

Note: 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.

15.2 Test Positions Consideration

Distance of Antennas to EUT edge/surface Test distance: 10mm						
Antennas	**Back**	**Front**	**Top Side**	**Bottom Side**	**Right Side**	**Left Side**
ant 1	<25mm	<25mm	156mm	<25mm	<25mm	<25mm
ant 2	<25mm	<25mm	77mm	50mm	<25mm	71mm
ant 3	<25mm	<25mm	<25mm	155mm	68mm	<25mm
ant 5	<25mm	<25mm	<25mm	156mm	<25mm	69mm
ant 6	<25mm	<25mm	57mm	100mm	<25mm	64mm
ant 7	<25mm	<25mm	70mm	75mm	70mm	<25mm
ant 8	<25mm	<25mm	<25mm	135mm	69mm	<25mm
ant 9	<25mm	<25mm	145mm	<25mm	<25mm	<25mm
ant 10	<25mm	<25mm	<25mm	144mm	50mm	<25mm

Test Positions Test distance: 10mm						
Antennas	**Back**	**Front**	**Top Side**	**Bottom Side**	**Right Side**	**Left Side**
ant 1	Yes	Yes	No	Yes	Yes	Yes
ant 2	Yes	Yes	No	No	Yes	No
ant 3	Yes	Yes	Yes	No	No	Yes
ant 5	Yes	Yes	Yes	No	Yes	No
ant 6	Yes	Yes	No	No	Yes	No
ant 7	Yes	Yes	No	No	No	Yes
ant 8	Yes	Yes	Yes	No	No	Yes
ant 9	Yes	Yes	No	Yes	Yes	Yes
ant 10	Yes	Yes	Yes	No	No	Yes

Note:

1. ant 1: GSM&WCDMA&LTE ANT (Below 1GHz), NR n5 ANT
2. ant 2: GSM&WCDMA&LTE ANT,NR n5&n41 ANT
3. ant 3: GSM&WCDMA&LTE ANT (Above 1GHz) , NR n41 ANT
4. ant 5: 2.4GWi-Fi&5GWi-Fi &BT ANT
5. ant 6: 5GWi-Fi ANT
6. ant 7: 2.4GWi-Fi&BT ANT, NR n77&n78 ANT
7. ant 8: NR n41&n77&n78 ANT
8. ant 9: NR n41&n77&n78 ANT
9. ant 10: NR n77&n78 ANT
10. ant 11: NFC ANT
11. Head/Body-worn/Hotspot mode SAR assessments are required.
12. Referring to KDB 941225 D06 v02r01, when the overall device length and width are ≥ 9cm * 5cm, 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.
13. 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.
14. 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

16 SAR Test Results Summary

16.1 Standalone Head SAR Data

➢ GSM Head SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	GSM850/Voice_Ant1	Right Cheek	190	836.6	33.01	0.07	33.5	0.080	1.119	0.090
	GSM850/Voice_Ant1	Right Tilted	190	836.6	33.01	0.03	33.5	0.042	1.119	0.047
	GSM850/Voice_Ant1	Left Cheek	190	836.6	33.01	-0.20	33.5	0.059	1.119	0.066
	GSM850/Voice_Ant1	Left Tilted	190	836.6	33.01	0.01	33.5	0.029	1.119	0.032
1	GSM850/Voice_Ant2	Right Cheek	251	848.8	32.91	-0.03	33.5	**0.639**	1.146	0.732
	GSM850/Voice_Ant2	Right Tilted	251	848.8	32.91	0.08	33.5	0.103	1.146	0.118
	GSM850/Voice_Ant2	Left Cheek	251	848.8	32.91	0.06	33.5	0.313	1.146	0.359
	GSM850/Voice_Ant2	Left Tilted	251	848.8	32.91	-0.08	33.5	0.067	1.146	0.077
	GSM1900/Voice_Ant2	Right Cheek	661	1880	28.88	0.05	29.0	0.385	1.028	0.396
	GSM1900/Voice_Ant2	Right Tilted	661	1880	28.88	0.20	29.0	0.077	1.028	0.079
	GSM1900/Voice_Ant2	Left Cheek	661	1880	28.88	0.19	29.0	0.211	1.028	0.217
	GSM1900/Voice_Ant2	Left Tilted	661	1880	28.88	-0.19	29.0	0.045	1.028	0.046
	GSM1900/Voice_Ant3	Right Cheek	661	1880	26.14	0.03	26.5	0.352	1.086	0.382
2	GSM1900/Voice_Ant3	Right Tilted	661	1880	26.14	0.10	26.5	**0.607**	1.086	0.659
	GSM1900/Voice_Ant3	Left Cheek	661	1880	26.14	-0.03	26.5	0.216	1.086	0.235
	GSM1900/Voice_Ant3	Left Tilted	661	1880	26.14	-0.15	26.5	0.394	1.086	0.428
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ WCDMA Head SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band V/RMC_Ant1	Right Cheek	4233	846.6	25.00	0.00	25.5	0.099	1.122	0.111
	Band V/RMC_Ant1	Right Tilted	4233	846.6	25.00	0.07	25.5	0.047	1.122	0.053
	Band V/RMC_Ant1	Left Cheek	4233	846.6	25.00	-0.09	25.5	0.076	1.122	0.085
	Band V/RMC_Ant1	Left Tilted	4233	846.6	25.00	0.06	25.5	0.035	1.122	0.039
3	Band V/RMC_Ant2	Right Cheek	4132	826.4	24.64	0.09	25.0	**0.501**	1.086	0.544
	Band V/RMC_Ant2	Right Tilted	4132	826.4	24.64	-0.10	25.0	0.088	1.086	0.096
	Band V/RMC_Ant2	Left Cheek	4132	826.4	24.64	0.08	25.0	0.251	1.086	0.273
	Band V/RMC_Ant2	Left Tilted	4132	826.4	24.64	0.18	25.0	0.051	1.086	0.055
4	Band IV/RMC_Ant2	Right Cheek	1513	1752.6	24.49	0.16	25.0	**0.618**	1.125	0.695
	Band IV/RMC_Ant2	Right Tilted	1513	1752.6	24.49	-0.08	25.0	0.096	1.125	0.108
	Band IV/RMC_Ant2	Left Cheek	1513	1752.6	24.49	-0.07	25.0	0.344	1.125	0.387
	Band IV/RMC_Ant2	Left Tilted	1513	1752.6	24.49	0.01	25.0	0.056	1.125	0.063
	Band IV/RMC_Ant3	Right Cheek	1413	1732.6	16.37	0.02	16.5	0.415	1.03	0.427
	Band IV/RMC_Ant3	Right Tilted	1413	1732.6	16.37	0.02	16.5	0.600	1.03	0.618
	Band IV/RMC_Ant3	Left Cheek	1413	1732.6	16.37	-0.01	16.5	0.187	1.03	0.193
	Band IV/RMC_Ant3	Left Tilted	1413	1732.6	16.37	0.04	16.5	0.378	1.03	0.389
5	Band II/RMC_Ant2	Right Cheek	9400	1880	24.30	-0.06	24.5	**0.700**	1.047	0.733
	Band II/RMC_Ant2	Right Tilted	9400	1880	24.30	-0.06	24.5	0.102	1.047	0.107
	Band II/RMC_Ant2	Left Cheek	9400	1880	24.30	0.00	24.5	0.356	1.047	0.373
	Band II/RMC_Ant2	Left Tilted	9400	1880	24.30	0.08	24.5	0.064	1.047	0.067
	Band II/RMC_Ant3	Right Cheek	9400	1880	15.22	0.04	15.5	0.400	1.067	0.427
	Band II/RMC_Ant3	Right Tilted	9400	1880	15.22	0.01	15.5	0.649	1.067	0.692
	Band II/RMC_Ant3	Left Cheek	9400	1880	15.22	-0.19	15.5	0.239	1.067	0.255
	Band II/RMC_Ant3	Left Tilted	9400	1880	15.22	-0.05	15.5	0.423	1.067	0.451
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ FDD-LTE Band 2(20MHz) QPSK Head SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
6	Band2/1RB#49 _Ant2	Right Cheek	18900	1880	22.50	-0.04	23.0	**0.742**	1.122	0.833
	Band2/1RB#49 _Ant2	Right Tilted	18900	1880	22.50	0.15	23.0	0.114	1.122	0.128
	and2/1RB#49 _Ant2	Left Cheek	18900	1880	22.50	0.07	23.0	0.198	1.122	0.222
	Band2/1RB#49 _Ant2	Left Tilted	18900	1880	22.50	0.04	23.0	0.033	1.122	0.037
	Band2/1RB#99 _Ant2	Right Cheek	18700	1860	22.45	-0.12	23.0	0.711	1.135	0.807
	Band2/1RB#99 _Ant2	Right Cheek	19100	1900	22.27	-0.15	23.0	0.689	1.183	0.815
	Band2/50%RB#0 _Ant2	Right Cheek	18900	1880	21.56	-0.14	22.0	0.649	1.107	0.718
	Band2/50%RB#0 _Ant2	Right Tilted	18900	1880	21.56	-0.17	22.0	0.082	1.107	0.091
	Band2/50%RB#0 _Ant2	Left Cheek	18900	1880	21.56	-0.13	22.0	0.154	1.107	0.170
	Band2/50%RB#0 _Ant2	Left Tilted	18900	1880	21.56	-0.06	22.0	0.021	1.107	0.023
	Band2/100%RB#0 _Ant2	Right Cheek	18900	1880	21.47	0.18	22.0	0.602	1.13	0.680
	Band2/1RB#99 _Ant3	Right Cheek	18900	1880	16.20	0.13	16.5	0.357	1.072	0.383
	Band2/1RB#99 _Ant3	Right Tilted	18900	1880	16.20	0.06	16.5	0.570	1.072	0.611
	Band2/1RB#99 _Ant3	Left Cheek	18900	1880	16.20	0.15	16.5	0.201	1.072	0.215
	Band2/1RB#99 _Ant3	Left Tilted	18900	1880	16.20	0.13	16.5	0.355	1.072	0.381
	Band2/50%RB#49 _Ant3	Right Cheek	18900	1880	15.26	-0.01	15.5	0.289	1.057	0.305
	Band2/50%RB#49 _Ant3	Right Tilted	18900	1880	15.26	0.20	15.5	0.498	1.057	0.526
	Band2/50%RB#49 _Ant3	Left Cheek	18900	1880	15.26	0.19	15.5	0.128	1.057	0.135
	Band2/50%RB#49 _Ant3	Left Tilted	18900	1880	15.26	-0.08	15.5	0.251	1.057	0.265
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ FDD-LTE Band 4(20MHz) QPSK Head SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band4/1RB#0 _Ant2	Right Cheek	20050	1720	23.97	0.05	24.5	0.796	1.13	0.899
	Band4/1RB#0 _Ant2	Right Tilted	20050	1720	23.97	-0.05	24.5	0.135	1.13	0.153
	Band4/1RB#0 _Ant2	Left Cheek	20050	1720	23.97	0.11	24.5	0.270	1.13	0.305
	Band4/1RB#0 _Ant2	Left Tilted	20050	1720	23.97	0.01	24.5	0.047	1.13	0.053
7	Band4/1RB#0 _Ant2	Right Cheek	20175	1732.5	23.73	0.13	24.5	**0.831**	1.194	0.992
	Band4/1RB#99 _Ant2	Right Cheek	20300	1745	23.71	0.03	24.5	0.802	1.199	0.962
	Band4/1RB#0 _Ant2	**Right Cheek**	**20175**	**1732.5**	**23.73**	**0.13**	**24.5**	**0.825**	**1.194**	**0.985**
	Band4/50%RB#49 _Ant2	Right Cheek	20050	1720	22.97	0.05	23.5	0.701	1.13	0.792
	Band4/50%RB#49 _Ant2	Right Tilted	20050	1720	22.97	0.11	23.5	0.102	1.13	0.115
	Band4/50%RB#49 _Ant2	Left Cheek	20050	1720	22.97	0.15	23.5	0.198	1.13	0.224
	Band4/50%RB#49 _Ant2	Left Tilted	20050	1720	22.97	-0.14	23.5	0.029	1.13	0.033
	Band4/100%RB#0 _Ant2	Right Cheek	20050	1720	22.95	0.05	23.5	0.686	1.135	0.779
	Band4/1RB#99 _Ant3	Right Cheek	20175	1732.5	15.87	0.06	16.0	0.427	1.03	0.440
	Band4/1RB#99 _Ant3	Right Tilted	20175	1732.5	15.87	0.02	16.0	0.632	1.03	0.651
	Band4/1RB#99 _Ant3	Left Cheek	20175	1732.5	15.87	-0.11	16.0	0.225	1.03	0.232
	Band4/1RB#99 _Ant3	Left Tilted	20175	1732.5	15.87	-0.11	16.0	0.442	1.03	0.455
	Band4/50%RB#49 _Ant3	Right Cheek	20300	1745	14.87	0.01	15.0	0.356	1.03	0.367
	Band4/50%RB#49 _Ant3	Right Tilted	20300	1745	14.87	-0.02	15.0	0.587	1.03	0.605
	Band4/50%RB#49 _Ant3	Left Cheek	20300	1745	14.87	-0.09	15.0	0.179	1.03	0.184
	Band4/50%RB#49 _Ant3	Left Tilted	20300	1745	14.87	0.12	15.0	0.377	1.03	0.388
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ FDD-LTE Band 7(20MHz) QPSK Head SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band7/1RB#49 _Ant2	Right Cheek	20850	2510	16.76	0.00	17.0	0.266	1.057	0.281
	Band7/1RB#49 _Ant2	Right Tilted	20850	2510	16.76	0.13	17.0	0.043	1.057	0.045
	Band7/1RB#49 _Ant2	Left Cheek	20850	2510	16.76	0.13	17.0	0.126	1.057	0.133
	Band7/1RB#49 _Ant2	Left Tilted	20850	2510	16.76	-0.06	17.0	0.019	1.057	0.020
	Band7/50%RB#24 _Ant2	Right Cheek	20850	2510	15.85	-0.03	16.0	0.206	1.035	0.213
	Band7/50%RB#24 _Ant2	Right Tilted	20850	2510	15.85	-0.20	16.0	0.036	1.035	0.037
	Band7/50%RB#24 _Ant2	Left Cheek	20850	2510	15.85	-0.04	16.0	0.088	1.035	0.091
	Band7/50%RB#24 _Ant2	Left Tilted	20850	2510	15.85	0.09	16.0	0.011	1.035	0.011
	Band7/1RB#49 _Ant3	Right Cheek	21350	2560	13.39	0.08	13.5	0.313	1.026	0.321
8	Band7/1RB#49 _Ant3	Right Tilted	21350	2560	13.39	0.03	13.5	**0.494**	1.026	0.507
	Band7/1RB#49 _Ant3	Left Cheek	21350	2560	13.39	0.16	13.5	0.200	1.026	0.205
	Band7/1RB#49 _Ant3	Left Tilted	21350	2560	13.39	-0.20	13.5	0.314	1.026	0.322
	Band7/50RB#24 _Ant3	Right Cheek	20850	2510	12.61	0.15	13.0	0.257	1.094	0.281
	Band7/50%RB#24 _Ant3	Right Tilted	20850	2510	12.61	-0.18	13.0	0.411	1.094	0.450
	Band7/50%RB#24 _Ant3	Left Cheek	20850	2510	12.61	-0.07	13.0	0.135	1.094	0.148
	Band7/50%RB#24 _Ant3	Left Tilted	20850	2510	12.61	-0.07	13.0	0.234	1.094	0.256
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

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

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band12/1RB#24 _Ant1	Right Cheek	23130	711	22.79	0.05	23.0	0.060	1.05	0.063
	Band12/1RB#24 _Ant1	Right Tilted	23130	711	22.79	0.04	23.0	0.028	1.05	0.029
	Band12/1RB#24 _Ant1	Left Cheek	23130	711	22.79	-0.10	23.0	0.047	1.05	0.049
	Band12/1RB#24 _Ant1	Left Tilted	23130	711	22.79	-0.19	23.0	0.020	1.05	0.021
	Band12/50%RB#0 _Ant1	Right Cheek	23130	711	21.76	-0.13	22.0	0.040	1.057	0.042
	Band12/50%RB#0 _Ant1	Right Tilted	23130	711	21.76	-0.15	22.0	0.018	1.057	0.019
	Band12/50%RB#0 _Ant1	Left Cheek	23130	711	21.76	0.18	22.0	0.023	1.057	0.024
	Band12/50%RB#0 _Ant1	Left Tilted	23130	711	21.76	-0.14	22.0	0.010	1.057	0.011
9	Band12/1RB#0 _Ant2	Right Cheek	23060	704	22.07	0.00	22.5	**0.342**	1.104	0.378
	Band12/1RB#0 _Ant2	Right Tilted	23060	704	22.07	-0.06	22.5	0.054	1.104	0.060
	Band12/1RB#0 _Ant2	Left Cheek	23060	704	22.07	-0.13	22.5	0.177	1.104	0.195
	Band12/1RB#0 _Ant2	Left Tilted	23060	704	22.07	-0.14	22.5	0.031	1.104	0.034
	Band12/50%RB#12 _Ant2	Right Cheek	23060	704	21.10	-0.20	21.5	0.288	1.096	0.316
	Band12/50%RB#12 _Ant2	Right Tilted	23060	704	21.10	-0.20	21.5	0.031	1.096	0.034
	Band12/50%RB#12 _Ant2	Left Cheek	23060	704	21.10	-0.07	21.5	0.125	1.096	0.137
	Band12/50%RB#12 _Ant2	Left Tilted	23060	704	21.10	0.02	21.5	0.020	1.096	0.022
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ FDD-LTE Band 26(15MHz) QPSK Body SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band26/1RB#74 _Ant1	Right Cheek	26965	841.5	24.39	-0.05	24.5	0.104	1.026	0.107
	Band26/1RB#74 _Ant1	Right Tilted	26965	841.5	24.39	0.06	24.5	0.055	1.026	0.056
	Band26/1RB#74 _Ant1	Left Cheek	26965	841.5	24.39	-0.03	24.5	0.075	1.026	0.077
	Band26/1RB#74 _Ant1	Left Tilted	26965	841.5	24.39	0.01	24.5	0.039	1.026	0.040
	Band26/50%RB#35 _Ant1	Right Cheek	26965	841.5	23.21	-0.17	23.5	0.077	1.069	0.082
	Band26/50%RB#35 _Ant1	Right Tilted	26965	841.5	23.21	0.15	23.5	0.035	1.069	0.037
	Band26/50%RB#35 _Ant1	Left Cheek	26965	841.5	23.21	-0.12	23.5	0.051	1.069	0.055
	Band26/50%RB#35 _Ant1	Left Tilted	26965	841.5	23.21	-0.10	23.5	0.022	1.069	0.024
10	Band26/1RB#74 _Ant2	Right Cheek	26965	841.5	24.46	-0.03	25.0	**0.461**	1.132	0.522
	Band26/1RB#74 _Ant2	Right Tilted	26965	841.5	24.46	-0.19	25.0	0.062	1.132	0.070
	Band26/1RB#74 _Ant2	Left Cheek	26965	841.5	24.46	0.05	25.0	0.289	1.132	0.327
	Band26/1RB#74 _Ant2	Left Tilted	26965	841.5	24.46	0.13	25.0	0.049	1.132	0.055
	Band26/50%RB#16 _Ant2	Right Cheek	26965	841.5	23.14	0.14	23.5	0.391	1.086	0.425
	Band26/50%RB#16 _Ant2	Right Tilted	26965	841.5	23.14	-0.09	23.5	0.052	1.086	0.056
	Band26/50%RB#16 _Ant2	Left Cheek	26965	841.5	23.14	0.09	23.5	0.231	1.086	0.251
	Band26/50%RB#16 _Ant2	Left Tilted	26965	841.5	23.14	0.18	23.5	0.035	1.086	0.038
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ TDD-LTE Band 41(20MHz) QPSK Head SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	Band41/1RB#49 _Ant2	Right Cheek	39750	2506	16.03	0.01	16.5	0.150	1.114	1.008	0.168
	Band41/1RB#49 _Ant2	Right Tilted	39750	2506	16.03	0.06	16.5	0.017	1.114	1.008	0.019
	Band41/1RB#49 _Ant2	Left Cheek	39750	2506	16.03	0.09	16.5	0.072	1.114	1.008	0.081
	Band41/1RB#49 _Ant2	Left Tilted	39750	2506	16.03	0.12	16.5	0.013	1.114	1.008	0.015
	Band41/50%RB#24 _Ant2	Right Cheek	41490	2680	15.80	-0.06	16.0	0.103	1.047	1.008	0.109
	Band41/50%RB#24 _Ant2	Right Tilted	41490	2680	15.80	-0.09	16.0	0.012	1.047	1.008	0.013
	Band41/50%RB#24 _Ant2	Left Cheek	41490	2680	15.80	0.06	16.0	0.050	1.047	1.008	0.053
	Band41/50%RB#24 _Ant2	Left Tilted	41490	2680	15.80	0.05	16.0	0.007	1.047	1.008	0.007
	Band41/1RB#49 _Ant3	Right Cheek	39750	2506	17.28	0.04	17.5	0.646	1.052	1.008	0.685
11	Band41/1RB#49 _Ant3	Right Tilted	39750	2506	17.28	0.05	17.5	**0.751**	1.052	1.008	0.796
	Band41/1RB#49 _Ant3	Left Cheek	39750	2506	17.28	-0.11	17.5	0.348	1.052	1.008	0.369
	Band41/1RB#49 _Ant3	Left Tilted	39750	2506	17.28	-0.16	17.5	0.578	1.052	1.008	0.613
	Band41/50%RB#24 _Ant3	Right Cheek	39750	2506	17.35	0.05	17.5	0.528	1.035	1.008	0.551
	Band41/50%RB#24 _Ant3	Right Tilted	39750	2506	17.35	-0.07	17.5	0.722	1.035	1.008	0.753
	Band41/50%RB#24 _Ant3	Left Cheek	39750	2506	17.35	0.16	17.5	0.202	1.035	1.008	0.211
	Band41/50%RB#24 _Ant3	Left Tilted	39750	2506	17.35	0.10	17.5	0.424	1.035	1.008	0.442
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**						

➢ NR n5 DFT-BPSK Head SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Variation (%)	Tune-Up Limit (dBm)	Meas. SAR_{10g} (W/kg)	Scaling Factor	Reported SAR_{10g} (W/kg)
	NR n5 DFT-BPSK /1@271 20M_Ant1	Right Cheek	167800	839	24.00	0.14	24.5	0.085	1.122	0.095
	NR n5 DFT-BPSK /1@271 20M_Ant1	Right Tilted	167800	839	24.00	0.07	24.5	0.041	1.122	0.046
	NR n5 DFT-BPSK /1@271 20M_Ant1	Left Cheek	167800	839	24.00	0.00	24.5	0.044	1.122	0.049
	NR n5 DFT-BPSK /1@271 20M_Ant1	Left Tilted	167800	839	24.00	0.16	24.5	0.020	1.122	0.022
	NR n5 DFT-BPSK /50@25 20M_Ant1	Right Cheek	167800	839	23.80	0.02	24.0	0.062	1.047	0.065
	NR n5 DFT-BPSK /50@25 20M_Ant1	Right Tilted	167800	839	23.80	-0.04	24.0	0.031	1.047	0.032
	NR n5 DFT-BPSK /50@25 20M_Ant1	Left Cheek	167800	839	23.80	-0.09	24.0	0.029	1.047	0.030
	NR n5 DFT-BPSK /50@25 20M_Ant1	Left Tilted	167800	839	23.80	0.13	24.0	0.012	1.047	0.013
12	NR n5 DFT-BPSK /1@1 20M_Ant2	Right Cheek	167300	836.5	23.16	-0.06	23.5	**0.485**	1.081	0.524
	NR n5 DFT-BPSK /1@1 20M_Ant2	Right Tilted	167300	836.5	23.16	-0.15	23.5	0.038	1.081	0.041
	NR n5 DFT-BPSK /1@1 20M_Ant2	Left Cheek	167300	836.5	23.16	0.10	23.5	0.159	1.081	0.172
	NR n5 DFT-BPSK /1@1 20M_Ant2	Left Tilted	167300	836.5	23.16	-0.12	23.5	0.025	1.081	0.027
	NR n5 DFT-BPSK /50@25 20M_Ant2	Right Cheek	167300	836.5	23.10	0.07	23.5	0.412	1.096	0.452
	NR n5 DFT-BPSK /50@25 20M_Ant2	Right Tilted	167300	836.5	23.10	0.07	23.5	0.029	1.096	0.032
	NR n5 DFT-BPSK /50@25 20M_Ant2	Left Cheek	167300	836.5	23.10	-0.15	23.5	0.123	1.096	0.135
	NR n5 DFT-BPSK /50@25 20M_Ant2	Left Tilted	167300	836.5	23.10	-0.07	23.5	0.017	1.096	0.019
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ NR n41 DFT-BPSK Head SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Varia-tion (%)	Tune-Up Limit (dBm)	Meas. SAR_{10g} (W/kg)	Scaling Factor	Reported SAR_{10g} (W/kg)
	NR n41 DFT-BPSK /1@1 100M_Ant2	Right Cheek	509202	2546.01	21.29	-0.05	21.5	0.866	1.05	0.909
	NR n41 DFT-BPSK /1@1 100M_Ant2	Right Tilted	509202	2546.01	21.29	0.05	21.5	0.102	1.05	0.107
	NR n41 DFT-BPSK /1@1 100M_Ant2	Left Cheek	509202	2546.01	21.29	0.08	21.5	0.317	1.05	0.333
	NR n41 DFT-BPSK /1@1 100M_Ant2	Left Tilted	509202	2546.01	21.29	-0.11	21.5	0.065	1.05	0.068
	NR n41 DFT-BPSK /1@271 100M_Ant2	Right Cheek	518598	2592.99	21.28	-0.06	21.5	0.855	1.052	0.899
	NR n41 DFT-BPSK /1@271 100M_Ant2	Right Cheek	520998	2604.99	21.23	-0.05	21.5	0.773	1.064	0.822
	NR n41 DFT-BPSK /137@67 100M_Ant2	Right Cheek	528000	2640	21.27	0.19	21.5	0.756	1.054	0.797
	NR n41 DFT-BPSK /137@67 100M_Ant2	Right Tilted	528000	2640	21.27	0.13	21.5	0.078	1.054	0.082
	NR n41 DFT-BPSK /137@67 100M_Ant2	Left Cheek	528000	2640	21.27	0.14	21.5	0.174	1.054	0.183
	NR n41 DFT-BPSK /137@67 100M_Ant2	Left Tilted	528000	2640	21.27	-0.01	21.5	0.037	1.054	0.039
	NR n41 DFT-BPSK /1@271 100M_Ant3	Right Cheek	518598	2592.99	20.31	0.07	20.5	0.591	1.045	0.618
	NR n41 DFT-BPSK /1@271 100M_Ant3	Right Tilted	518598	2592.99	20.31	0.04	20.5	0.850	1.045	0.888
	NR n41 DFT-BPSK /1@271 100M_Ant3	Left Cheek	518598	2592.99	20.31	-0.06	20.5	0.205	1.045	0.214
	NR n41 DFT-BPSK /1@271 100M_Ant3	Left Tilted	518598	2592.99	20.31	-0.15	20.5	0.386	1.045	0.403
	NR n41 DFT-BPSK /1@1 100M_Ant3	Right Tilted	509202	2546.01	20.20	0.11	20.5	0.811	1.072	0.869
	NR n41 DFT-BPSK /1@271 100M_Ant3	Right Tilted	528000	2640	20.18	0.19	20.5	0.769	1.076	0.827
	NR n41 DFT-BPSK /137@67 100M_Ant3	Right Cheek	518598	2592.99	20.28	-0.15	20.5	0.496	1.052	0.522
	NR n41 DFT-BPSK /137@67 100M_Ant3	Right Tilted	518598	2592.99	20.28	0.16	20.5	0.742	1.052	0.781
	NR n41 DFT-BPSK /137@67 100M_Ant3	Left Cheek	518598	2592.99	20.28	-0.08	20.5	0.161	1.052	0.169
	NR n41 DFT-BPSK /137@67 100M_Ant3	Left Tilted	518598	2592.99	20.28	0.07	20.5	0.304	1.052	0.320
13	NR n41 DFT-BPSK /1@271 100M_Ant8	Right Cheek	518598	2592.99	12.90	-0.06	13.0	**0.903**	1.023	0.924
	NR n41 DFT-BPSK /1@271 100M_Ant8	Right Tilted	518598	2592.99	12.90	0.16	13.0	0.304	1.023	0.311
	NR n41 DFT-BPSK /1@271 100M_Ant8	Left Cheek	518598	2592.99	12.90	-0.09	13.0	0.175	1.023	0.179
	NR n41 DFT-BPSK /1@271 100M_Ant8	Left Tilted	518598	2592.99	12.90	-0.16	13.0	0.086	1.023	0.088
	NR n41 DFT-BPSK /1@1 100M_Ant8	Right Cheek	509202	2546.01	12.65	0.10	13.0	0.845	1.084	0.916
	NR n41 DFT-BPSK /1@271 100M_Ant8	Right Cheek	528000	2640	12.75	0.11	13.0	0.859	1.059	0.910
	NR n41 DFT-BPSK /1@1 100M_Ant8	**Right Cheek**	**518598**	**2592.99**	**12.90**	**0.01**	**13.0**	**0.884**	**1.023**	**0.904**
	NR n41 DFT-BPSK /137@67 100M_Ant8	Right Cheek	518598	2592.99	12.94	0.06	13.5	0.723	1.138	0.823
	NR n41 DFT-BPSK /137@67 100M_Ant8	Right Tilted	518598	2592.99	12.94	-0.01	13.5	0.279	1.138	0.318
	NR n41 DFT-BPSK /137@67 100M_Ant8	Left Cheek	518598	2592.99	12.94	-0.12	13.5	0.143	1.138	0.163

	NR n41 DFT-BPSK /137@67 100M_Ant8	Left Tilted	518598	2592.99	12.94	-0.13	13.5	0.064	1.138	0.073
	NR n41 DFT-BPSK /1@271 100M_Ant9	Right Cheek	518598	2592.99	22.82	-0.16	23.5	<0.001	1.169	<0.001
	NR n41 DFT-BPSK /1@271 100M_Ant9	Right Tilted	518598	2592.99	22.82	-0.01	23.5	<0.001	1.169	<0.001
	NR n41 DFT-BPSK /1@271 100M_Ant9	Left Cheek	518598	2592.99	22.82	-0.16	23.5	<0.001	1.169	<0.001
	NR n41 DFT-BPSK /1@271 100M_Ant9	Left Tilted	518598	2592.99	22.82	0.11	23.5	<0.001	1.169	<0.001
	NR n41 DFT-BPSK /137@67 100M_Ant9	Right Cheek	518598	2592.99	22.77	-0.02	23.5	<0.001	1.183	<0.001
	NR n41 DFT-BPSK /137@67 100M_Ant9	Right Tilted	518598	2592.99	22.77	-0.15	23.5	<0.001	1.183	<0.001
	NR n41 DFT-BPSK /137@67 100M_Ant9	Left Cheek	518598	2592.99	22.77	0.03	23.5	<0.001	1.183	<0.001
	NR n41 DFT-BPSK /137@67 100M_Ant9	Left Tilted	518598	2592.99	22.77	0.07	23.5	<0.001	1.183	<0.001
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population				**1.6 W/kg (mW/g) Averaged over 1g**						

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

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Variation (%)	Tune-Up Limit (dBm)	Meas. SAR_{10g} (W/kg)	Scaling Factor	Reported SAR_{10g} (W/kg)
	NR n77 DFT-BPSK /1@1 100M_Ant7	Right Cheek	633334	3500.01	16.14	-0.06	16.5	0.398	1.086	0.432
	NR n77 DFT-BPSK /1@1 100M_Ant7	Right Tilted	633334	3500.01	16.14	0.03	16.5	0.244	1.086	0.265
	NR n77 DFT-BPSK /1@1 100M_Ant7	Left Cheek	633334	3500.01	16.14	0.18	16.5	0.325	1.086	0.353
	NR n77 DFT-BPSK /1@1 100M_Ant7	Left Tilted	633334	3500.01	16.14	0.06	16.5	0.196	1.086	0.213
	NR n77 DFT-BPSK /137@67100M_Ant7	Right Cheek	633334	3500.01	15.93	-0.02	16.5	0.325	1.14	0.371
	NR n77 DFT-BPSK /137@67 100M_Ant7	Right Tilted	633334	3500.01	15.93	0.07	16.5	0.201	1.14	0.229
	NR n77 DFT-BPSK /137@67 100M_Ant7	Left Cheek	633334	3500.01	15.93	-0.08	16.5	0.254	1.14	0.290
	NR n77 DFT-BPSK /137@67 100M_Ant7	Left Tilted	633334	3500.01	15.93	-0.04	16.5	0.133	1.14	0.152
	NR n77 DFT-BPSK /1@1 100M_Ant8	Right Cheek	633334	3500.01	15.60	-0.04	16.0	0.362	1.096	0.397
	NR n77 DFT-BPSK /1@1 100M_Ant8	Right Tilted	633334	3500.01	15.60	-0.15	16.0	0.163	1.096	0.179
	NR n77 DFT-BPSK /1@1 100M_Ant8	Left Cheek	633334	3500.01	15.60	-0.11	16.0	0.139	1.096	0.152
	NR n77 DFT-BPSK /1@1 100M_Ant8	Left Tilted	633334	3500.01	15.60	-0.18	16.0	0.066	1.096	0.072
	NR n77 DFT-BPSK /137@67 100M_Ant8	Right Cheek	633334	3500.01	15.56	0.20	16.0	0.301	1.107	0.333
	NR n77 DFT-BPSK /137@67 100M_Ant8	Right Tilted	633334	3500.01	15.56	0.10	16.0	0.126	1.107	0.139
	NR n77 DFT-BPSK /137@67 100M_Ant8	Left Cheek	633334	3500.01	15.56	0.03	16.0	0.101	1.107	0.112
	NR n77 DFT-BPSK /137@67 100M_Ant8	Left Tilted	633334	3500.01	15.56	0.14	16.0	0.042	1.107	0.046
	NR n77 DFT-BPSK /1@1 100M_Ant9	Right Cheek	633334	3500.01	18.91	0.14	19.0	<0.001	1.021	<0.001
	NR n77 DFT-BPSK /1@1 100M_Ant9	Right Tilted	633334	3500.01	18.91	-0.18	19.0	<0.001	1.021	<0.001
	NR n77 DFT-BPSK /1@1 100M_Ant9	Left Cheek	633334	3500.01	18.91	-0.14	19.0	<0.001	1.021	<0.001
	NR n77 DFT-BPSK /1@1 100M_Ant9	Left Tilted	633334	3500.01	18.91	0.07	19.0	<0.001	1.021	<0.001
	NR n77 DFT-BPSK /137@67 100M_Ant9	Right Cheek	633334	3500.01	18.10	0.05	18.5	<0.001	1.096	<0.001
	NR n77 DFT-BPSK /137@67 100M_Ant9	Right Tilted	633334	3500.01	18.10	-0.19	18.5	<0.001	1.096	<0.001
	NR n77 DFT-BPSK /137@67 100M_Ant9	Left Cheek	633334	3500.01	18.10	-0.10	18.5	<0.001	1.096	<0.001
	NR n77 DFT-BPSK /137@67 100M_Ant9	Left Tilted	633334	3500.01	18.10	-0.18	18.5	<0.001	1.096	<0.001
14	NR n77 DFT-BPSK /1@1 100M_Ant10	Right Cheek	633334	3500.01	18.22	-0.05	18.5	**0.450**	1.067	0.480
	NR n77 DFT-BPSK /1@1 100M_Ant10	Right Tilted	633334	3500.01	18.22	0.00	18.5	0.441	1.067	0.471
	NR n77 DFT-BPSK /1@1 100M_Ant10	Left Cheek	633334	3500.01	18.22	0.02	18.5	0.169	1.067	0.180
	NR n77 DFT-BPSK /1@1 100M_Ant10	Left Tilted	633334	3500.01	18.22	-0.09	18.5	0.166	1.067	0.177
	NR n77 DFT-BPSK /137@67 100M_Ant10	Right Cheek	633334	3500.01	18.00	0.19	18.5	0.402	1.122	0.451
	NR n77 DFT-BPSK /137@67 100M_Ant10	Right Tilted	633334	3500.01	18.00	0.00	18.5	0.392	1.122	0.440

	NR n77 DFT-BPSK /137@67 100M_Ant10	Left Cheek	633334	3500.01	18.00	-0.07	18.5	0.136	1.122	0.153
	NR n77 DFT-BPSK /137@67 100M_Ant10	Left Tilted	633334	3500.01	18.00	-0.14	18.5	0.130	1.122	0.146
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

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

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Variation (%)	Tune-Up Limit (dBm)	Meas. SAR_{10g} (W/kg)	Scaling Factor	Reported SAR_{10g} (W/kg)
	NR n77 DFT-BPSK /1@271 100M_Ant7	Right Cheek	656000	3840	16.21	0.00	16.5	0.168	1.069	0.180
	NR n77 DFT-BPSK /1@271 100M_Ant7	Right Tilted	656000	3840	16.21	-0.01	16.5	0.106	1.069	0.113
	NR n77 DFT-BPSK /1@271 100M_Ant7	Left Cheek	656000	3840	16.21	0.07	16.5	0.124	1.069	0.133
	NR n77 DFT-BPSK /1@271 100M_Ant7	Left Tilted	656000	3840	16.21	-0.05	16.5	0.075	1.069	0.080
	NR n77 DFT-BPSK /137@67100M_Ant7	Right Cheek	656000	3840	15.85	-0.01	16.0	0.126	1.035	0.130
	NR n77 DFT-BPSK /137@67 100M_Ant7	Right Tilted	656000	3840	15.85	-0.17	16.0	0.082	1.035	0.085
	NR n77 DFT-BPSK /137@67 100M_Ant7	Left Cheek	656000	3840	15.85	0.17	16.0	0.097	1.035	0.100
	NR n77 DFT-BPSK /137@67 100M_Ant7	Left Tilted	656000	3840	15.85	0.10	16.0	0.053	1.035	0.055
	NR n77 DFT-BPSK /1@271 100M_Ant8	Right Cheek	656000	3840	15.45	-0.20	15.5	0.303	1.012	0.307
	NR n77 DFT-BPSK /1@271 100M_Ant8	Right Tilted	656000	3840	15.45	-0.04	15.5	0.132	1.012	0.134
	NR n77 DFT-BPSK /1@271 100M_Ant8	Left Cheek	656000	3840	15.45	-0.12	15.5	0.108	1.012	0.109
	NR n77 DFT-BPSK /1@271 100M_Ant8	Left Tilted	656000	3840	15.45	0.15	15.5	0.046	1.012	0.047
	NR n77 DFT-BPSK /137@67 100M_Ant8	Right Cheek	662000	3930	15.44	-0.07	15.5	0.266	1.014	0.270
	NR n77 DFT-BPSK /137@67 100M_Ant8	Right Tilted	662000	3930	15.44	-0.17	15.5	0.101	1.014	0.102
	NR n77 DFT-BPSK /137@67 100M_Ant8	Left Cheek	662000	3930	15.44	-0.10	15.5	0.083	1.014	0.084
	NR n77 DFT-BPSK /137@67 100M_Ant8	Left Tilted	662000	3930	15.44	0.20	15.5	0.032	1.014	0.032
	NR n77 DFT-BPSK /1@271 100M_Ant9	Right Cheek	650000	3750	17.35	-0.06	17.5	<0.001	1.035	<0.001
	NR n77 DFT-BPSK /1@271 100M_Ant9	Right Tilted	650000	3750	17.35	-0.14	17.5	<0.001	1.035	<0.001
	NR n77 DFT-BPSK /1@271 100M_Ant9	Left Cheek	650000	3750	17.35	0.13	17.5	<0.001	1.035	<0.001
	NR n77 DFT-BPSK /1@271 100M_Ant9	Left Tilted	650000	3750	17.35	0.08	17.5	<0.001	1.035	<0.001
	NR n77 DFT-BPSK /137@67 100M_Ant9	Right Cheek	650000	3750	17.25	0.14	17.5	<0.001	1.059	<0.001
	NR n77 DFT-BPSK /137@67 100M_Ant9	Right Tilted	650000	3750	17.25	-0.06	17.5	<0.001	1.059	<0.001
	NR n77 DFT-BPSK /137@67 100M_Ant9	Left Cheek	650000	3750	17.25	0.10	17.5	<0.001	1.059	<0.001
	NR n77 DFT-BPSK /137@67 100M_Ant9	Left Tilted	650000	3750	17.25	-0.03	17.5	<0.001	1.059	<0.001
15	NR n77 DFT-BPSK /1@271 100M_Ant10	Right Cheek	650000	3750	19.71	-0.08	20.0	**0.389**	1.069	0.416
	NR n77 DFT-BPSK /1@271 100M_Ant10	Right Tilted	650000	3750	19.71	0.03	20.0	0.365	1.069	0.390
	NR n77 DFT-BPSK /1@271 100M_Ant10	Left Cheek	650000	3750	19.71	0.15	20.0	0.103	1.069	0.110
	NR n77 DFT-BPSK /1@271 100M_Ant10	Left Tilted	650000	3750	19.71	0.14	20.0	0.094	1.069	0.100
	NR n77 DFT-BPSK /137@67100M_Ant10	Right Cheek	656000	3840	19.73	0.15	20.0	0.354	1.064	0.377
	NR n77 DFT-BPSK /137@67 100M_Ant10	Right Tilted	656000	3840	19.73	-0.01	20.0	0.321	1.064	0.342

	NR n77 DFT-BPSK /137@67 100M_Ant10	Left Cheek	656000	3840	19.73	0.04	20.0	0.081	1.064	0.086
	NR n77 DFT-BPSK /137@67 100M_Ant10	Left Tilted	656000	3840	19.73	0.11	20.0	0.075	1.064	0.080
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ WLAN 2.4 GHz Head SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	2.4GHz/802.11b _Ant5	Right Cheek	1	2412	10.76	0.03	11.0	0.101	1.057	1.000	0.107
	2.4GHz/802.11b _Ant5	Right Tilted	1	2412	10.76	0.14	11.0	0.118	1.057	1.000	0.125
	2.4GHz/802.11b _Ant5	Left Cheek	1	2412	10.76	0.04	11.0	0.265	1.057	1.000	0.280
16	2.4GHz/802.11b _Ant5	Left Tilted	1	2412	10.76	0.01	11.0	**0.272**	1.057	1.000	0.288
	2.4GHz/802.11b _Ant7	Right Cheek	1	2412	11.11	-0.03	11.5	0.104	1.094	1.000	0.114
	2.4GHz/802.11b _Ant7	Right Tilted	1	2412	11.11	-0.12	11.5	0.024	1.094	1.000	0.026
	2.4GHz/802.11b _Ant7	Left Cheek	1	2412	11.11	-0.05	11.5	0.107	1.094	1.000	0.117
	2.4GHz/802.11b _Ant7	Left Tilted	1	2412	11.11	0.09	11.5	0.026	1.094	1.000	0.028
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**						

➢ Bluetooth Head SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	Bluetooth_Ant5	Right Cheek	39	2441	4.24	-0.03	4.5	0.013	1.062	1.000	0.014
	Bluetooth_Ant5	Right Tilted	39	2441	4.24	0.12	4.5	0.008	1.062	1.000	0.008
	Bluetooth_Ant5	Left Cheek	39	2441	4.24	-0.04	4.5	0.014	1.062	1.000	0.015
17	Bluetooth_Ant5	Left Tilted	39	2441	4.24	-0.20	4.5	**0.017**	1.062	1.000	0.018
	Bluetooth_Ant7	Right Cheek	39	2441	4.01	-0.06	4.5	<0.001	1.119	1.000	<0.001
	Bluetooth_Ant7	Right Tilted	39	2441	4.01	0.17	4.5	<0.001	1.119	1.000	<0.001
	Bluetooth_Ant7	Left Cheek	39	2441	4.01	0.00	4.5	<0.001	1.119	1.000	<0.001
	Bluetooth_Ant7	Left Tilted	39	2441	4.01	0.13	4.5	<0.001	1.119	1.000	<0.001
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**						

➢ WLAN 5.3 GHz Head SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	5.3GHz/802.11a _Ant5	Right Cheek	64	5320	10.41	0.08	10.5	0.092	1.021	1.002	0.094
	5.3GHz/802.11a _Ant5	Right Tilted	64	5320	10.41	0.06	10.5	0.142	1.021	1.002	0.145
	5.3GHz/802.11a _Ant5	Left Cheek	64	5320	10.41	0.00	10.5	0.153	1.021	1.002	0.157
18	5.3GHz/802.11a _Ant5	Left Tilted	64	5320	10.41	-0.03	10.5	**0.228**	1.021	1.002	0.233
	5.3GHz/802.11a _Ant6	Right Cheek	56	5280	15.76	0.11	16.0	0.008	1.057	1.002	0.008
	5.3GHz/802.11a _Ant6	Right Tilted	56	5280	15.76	0.20	16.0	0.002	1.057	1.002	0.002
	5.3GHz/802.11a _Ant6	Left Cheek	56	5280	15.76	0.00	16.0	0.017	1.057	1.002	0.018
	5.3GHz/802.11a _Ant6	Left Tilted	56	5280	15.76	-0.13	16.0	0.005	1.057	1.002	0.005
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**						

➢ WLAN 5.6 GHz Head SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	5.6GHz/802.11a_Ant5	Right Cheek	140	5700	10.12	-0.07	10.5	0.085	1.091	1.002	0.093
	5.6GHz/802.11a_Ant5	Right Tilted	140	5700	10.12	0.10	10.5	0.156	1.091	1.002	0.171
	5.6GHz/802.11a_Ant5	Left Cheek	140	5700	10.12	-0.03	10.5	0.220	1.091	1.002	0.241
19	5.6GHz/802.11a_Ant5	Left Tilted	140	5700	10.12	-0.08	10.5	**0.295**	1.091	1.002	0.322
	5.6GHz/802.11a_Ant6	Right Cheek	140	5700	16.37	-0.19	16.5	<0.001	1.03	1.002	<0.001
	5.6GHz/802.11a_Ant6	Right Tilted	140	5700	16.37	-0.02	16.5	<0.001	1.03	1.002	<0.001
	5.6GHz/802.11a_Ant6	Left Cheek	140	5700	16.37	0.14	16.5	<0.001	1.03	1.002	<0.001
	5.6GHz/802.11a_Ant6	Left Tilted	140	5700	16.37	-0.15	16.5	<0.001	1.03	1.002	<0.001
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**						

➢ WLAN 5.8 GHz Head SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	5.8GHz/802.11a_Ant5	Right Cheek	157	5785	10.71	-0.05	11.0	0.066	1.069	1.002	0.071
	5.8GHz/802.11a_Ant5	Right Tilted	157	5785	10.71	0.19	11.0	0.133	1.069	1.002	0.142
	5.8GHz/802.11a_Ant5	Left Cheek	157	5785	10.71	0.12	11.0	0.189	1.069	1.002	0.202
20	5.8GHz/802.11a_Ant5	Left Tilted	157	5785	10.71	-0.11	11.0	**0.269**	1.069	1.002	0.288
	5.8GHz/802.11 ac20_Ant6	Right Cheek	157	5785	16.07	0.10	16.5	<0.001	1.104	1.002	<0.001
	5.8GHz/802.11 ac20_Ant6	Right Tilted	157	5785	16.07	-0.19	16.5	<0.001	1.104	1.002	<0.001
	5.8GHz/802.11 ac20_Ant6	Left Cheek	157	5785	16.07	0.08	16.5	<0.001	1.104	1.002	<0.001
	5.8GHz/802.11 ac20_Ant6	Left Tilted	157	5785	16.07	-0.04	16.5	<0.001	1.104	1.002	<0.001
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**						

Note:

1. Per KDB 447498 D04v01, for each exposure position, if the highest output power channel Reported SAR ≤ 0.8W/kg, other channels SAR testing is not necessary.
2. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required when the measured SAR is ≥ 0.8W/kg.
3. Per KDB 941225 D05v02r05, 100% RB allocation SAR measurement is not required when the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg.
4. Per KDB 248227 D01v02r02, for 802.11b DSSS , when the reported SAR of the highest measured maximum output power channel for the exposure configuration is ≤ 0.8 W/kg, no further SAR testing is required in that exposure configuration.
5. 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 56.23mW(17.5dBm) and 56.23mW(17.5dBm), the scaled SAR would be 0.435×(56.23/56.23)=0.435/Kg<1.2 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.

16.2 Standalone Body-worn SAR

➢ GSM Body-worn SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	GPRS850/2 slots _Ant1	Front	251	848.8	31.01	-0.03	31.5	0.191	1.119	0.214
	GPRS850/2 slots _Ant1	Back	251	848.8	31.01	-0.10	31.5	0.302	1.119	0.338
21	GPRS850/2 slots _Ant2	Front	251	848.8	30.78	-0.14	31.0	**0.396**	1.052	0.417
	GPRS850/2 slots _Ant2	Back	251	848.8	30.78	-0.06	31.0	0.332	1.052	0.349
	GPRS1900/2 slots _Ant2	Front	661	1880	27.00	0.03	27.5	0.091	1.122	0.102
	GPRS1900/2 slots _Ant2	Back	661	1880	27.00	-0.09	27.5	0.089	1.122	0.100
	GPRS1900/2 slots _Ant3	Front	661	1880	23.88	0.08	24.0	0.239	1.028	0.246
22	GPRS1900/2 slots _Ant3	Back	661	1880	23.88	-0.10	24.0	**0.302**	1.028	0.310
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ WCDMA Body-worn SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band V/RMC_Ant1	Front	4233	846.6	25.00	0.03	25.5	0.454	1.122	0.509
23	Band V/RMC_Ant1	Back	4233	846.6	25.00	0.05	25.5	**0.563**	1.122	0.632
	Band V/RMC_Ant2	Front	4132	826.4	23.72	0.06	24.0	0.425	1.067	0.453
	Band V/RMC_Ant2	Back	4132	826.4	23.72	0.02	24.0	0.549	1.067	0.586
24	Band IV/RMC_Ant2	Front	1513	1752.6	24.49	0.03	25.0	**0.583**	1.125	0.656
	Band IV/RMC_Ant2	Back	1513	1752.6	24.49	-0.05	25.0	0.514	1.125	0.578
	Band IV/RMC_Ant3	Front	1413	1732.6	19.78	-0.07	20.0	0.312	1.052	0.328
	Band IV/RMC_Ant3	Back	1413	1732.6	19.78	-0.11	20.0	0.440	1.052	0.463
	Band II/RMC_Ant2	Front	9400	1880	24.30	0.17	24.5	0.348	1.047	0.364
	Band II/RMC_Ant2	Back	9400	1880	24.30	0.13	24.5	0.306	1.047	0.320
	Band II/RMC_Ant3	Front	9400	1880	19.11	0.05	19.5	0.255	1.094	0.279
25	Band II/RMC_Ant3	Back	9400	1880	19.11	-0.10	19.5	**0.338**	1.094	0.370
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ FDD-LTE Band 2(20MHz) QPSK Body-worn SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band2/1RB#49_Ant2	Front	18900	1880	22.50	0.01	23.0	0.261	1.122	0.293
	Band2/1RB#49_Ant2	Back	18900	1880	22.50	-0.19	23.0	0.204	1.122	0.229
	Band2/50%RB#0_Ant2	Front	18900	1880	21.56	0.08	22.0	0.201	1.107	0.223
	Band2/50%RB#0_Ant2	Back	18900	1880	21.56	0.17	22.0	0.153	1.107	0.169
	Band2/1RB#0_Ant3	Front	18900	1880	19.61	0.07	20.0	0.213	1.094	0.233
26	Band2/1RB#0_Ant3	Back	18900	1880	19.61	0.08	20.0	**0.284**	1.094	0.311
	Band2/50%RB#24_Ant3	Front	18900	1880	18.69	-0.01	19.0	0.157	1.074	0.169
	Band2/50%RB#24_Ant3	Back	18900	1880	18.69	0.17	19.0	0.226	1.074	0.243
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ FDD-LTE Band 4(20MHz) QPSK Body-worn SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
27	Band4/1RB#0_Ant2	Front	20050	1720	23.97	0.03	24.5	**0.571**	1.130	0.645
	Band4/1RB#0_Ant2	Back	20050	1720	23.97	0.05	24.5	0.490	1.130	0.554
	Band4/50%RB#49_Ant2	Front	20050	1720	22.97	0.06	23.5	0.487	1.130	0.550
	Band4/50%RB#49_Ant2	Back	20050	1720	22.97	-0.14	23.5	0.398	1.130	0.450
	Band4/1RB#49_Ant3	Front	20175	1732.5	20.39	0.17	20.5	0.517	1.026	0.530
	Band4/1RB#49_Ant3	Back	20175	1732.5	20.39	0.02	20.5	0.623	1.026	0.639
	Band4/50%RB#24_Ant3	Front	20300	1745	19.37	0.16	19.5	0.378	1.030	0.389
	Band4/50%RB#24_Ant3	Back	20300	1745	19.37	0.00	19.5	0.496	1.030	0.511
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ FDD-LTE Band 7(20MHz) QPSK Body-worn SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
28	Band7/1RB#49_Ant2	Front	20850	2510	23.16	0.07	23.5	**0.385**	1.081	0.416
	Band7/1RB#49_Ant2	Back	20850	2510	23.16	0.00	23.5	0.334	1.081	0.361
	Band7/50%RB#0_Ant2	Front	20850	2510	22.29	-0.06	22.5	0.325	1.050	0.341
	Band7/50%RB#0_Ant2	Back	20850	2510	22.29	0.01	22.5	0.277	1.050	0.291
	Band7/1RB#99_Ant3	Front	21350	2560	18.86	0.00	19.0	0.228	1.033	0.236
	Band7/1RB#99_Ant3	Back	21350	2560	18.86	0.03	19.0	0.318	1.033	0.328
	Band7/50%RB#0_Ant3	Front	20850	2510	18.06	0.17	18.5	0.157	1.107	0.174
	Band7/50%RB#0_Ant3	Back	20850	2510	18.06	-0.14	18.5	0.248	1.107	0.275
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

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

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band12/1RB#24_Ant1	Front	23130	711	22.79	0.05	23.0	0.297	1.050	0.312
	Band12/1RB#24_Ant1	Back	23130	711	22.79	-0.02	23.0	0.341	1.050	0.358
	Band12/50%RB#0_Ant1	Front	23130	711	21.76	-0.13	22.0	0.251	1.057	0.265
	Band12/50%RB#0_Ant1	Back	23130	711	21.76	0.20	22.0	0.311	1.057	0.329
29	Band12/1RB#0_Ant2	Front	23060	704	22.07	-0.05	22.5	**0.397**	1.104	0.438
	Band12/1RB#0_Ant2	Back	23060	704	22.07	0.01	22.5	0.302	1.104	0.333
	Band12/50%RB#12_Ant2	Front	23060	704	21.10	-0.18	21.5	0.311	1.096	0.341
	Band12/50%RB#12_Ant2	Back	23060	704	21.10	0.10	21.5	0.237	1.096	0.260
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ FDD-LTE Band 26(15MHz) QPSK Body-worn SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band26/1RB#74_Ant1	Front	26965	841.5	21.37	0.01	21.5	0.404	1.030	0.416
	Band26/1RB#74_Ant1	Back	26965	841.5	21.37	0.01	21.5	0.376	1.030	0.387
	Band26/50%RB#0_Ant1	Front	26965	841.5	20.22	-0.05	20.5	0.321	1.067	0.343
	Band26/50%RB#0_Ant1	Back	26965	841.5	20.22	-0.05	20.5	0.275	1.067	0.293
30	Band26/1RB#74_Ant2	Front	26965	841.5	24.46	0.00	25.0	**0.533**	1.132	0.603
	Band26/1RB#74_Ant2	Back	26965	841.5	24.46	0.08	25.0	0.441	1.132	0.499
	Band26/50%RB#35_Ant2	Front	26965	841.5	23.14	-0.04	23.5	0.416	1.086	0.452
	Band26/50%RB#35_Ant2	Back	26965	841.5	23.14	-0.07	23.5	0.365	1.086	0.396
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

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

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	Band41/1RB#49_Ant2	Front	39750	2506	24.53	0.04	25.0	0.253	1.114	1.008	0.284
	Band41/1RB#49_Ant2	Back	39750	2506	24.53	-0.03	25.0	0.218	1.114	1.008	0.245
	Band41/50%RB#49_Ant2	Front	41490	2680	24.33	-0.10	24.5	0.188	1.040	1.008	0.197
	Band41/50%RB#49_Ant2	Back	41490	2680	24.33	0.04	24.5	0.162	1.040	1.008	0.170
	Band41/1RB#49_Ant3	Front	39750	2506	19.71	0.06	20.0	0.163	1.069	1.008	0.176
31	Band41/1RB#49_Ant3	Back	39750	2506	19.71	0.04	20.0	**0.314**	1.069	1.008	0.338
	Band41/50%RB#24_Ant3	Front	39750	2506	19.78	0.11	20.0	0.124	1.052	1.008	0.131
	Band41/50%RB#24_Ant3	Back	39750	2506	19.78	0.19	20.0	0.269	1.052	1.008	0.285
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**						

➢ NR n5 DFT-BPSK Body-worn SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Variation (%)	Tune-Up Limit (dBm)	Meas. SAR_{10g} (W/kg)	Scaling Factor	Reported SAR_{10g} (W/kg)
	NR n5 DFT-BPSK /1@104 20M_Ant1	Front	167800	839	24.00	-0.02	24.5	0.354	1.122	0.397
	NR n5 DFT-BPSK /1@104 20M_Ant1	Back	167800	839	24.00	-0.08	24.5	0.353	1.122	0.396
	NR n5 DFT-BPSK /50@25 20M_Ant1	Front	167800	839	23.80	-0.20	24.0	0.297	1.047	0.311
	NR n5 DFT-BPSK /50@25 20M_Ant1	Back	167800	839	23.80	-0.03	24.0	0.295	1.047	0.309
32	NR n5 DFT-BPSK /1@1 20M_Ant2	Front	167300	836.5	23.16	-0.01	23.5	**0.607**	1.081	0.656
	NR n5 DFT-BPSK /1@1 20M_Ant2	Back	167300	836.5	23.16	-0.02	23.5	0.457	1.081	0.494
	NR n5 DFT-BPSK /50@25 20M_Ant2	Front	167300	836.5	23.10	-0.03	23.5	0.513	1.096	0.562
	NR n5 DFT-BPSK /50@25 20M_Ant2	Back	167300	836.5	23.10	0.09	23.5	0.341	1.096	0.374
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ NR n41 DFT-BPSK Body-worn SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Variation (%)	Tune-Up Limit (dBm)	Meas. SAR_{10g} (W/kg)	Scaling Factor	Reported SAR_{10g} (W/kg)
	NR n41 DFT-BPSK /1@271 100M_Ant2	Front	528000	2640	23.31	0.02	23.5	0.280	1.045	0.293
	NR n41 DFT-BPSK /1@271 100M_Ant2	Back	528000	2640	23.31	0.04	23.5	0.278	1.045	0.291
	NR n41 DFT-BPSK /137@67 100M_Ant2	Front	528000	2640	23.26	-0.18	23.5	0.213	1.057	0.225
	NR n41 DFT-BPSK /137@67 100M_Ant2	Back	528000	2640	23.26	-0.09	23.5	0.205	1.057	0.217
	NR n41 DFT-BPSK /1@1 100M_Ant3	Front	518598	2592.99	23.78	0.09	24.0	0.191	1.052	0.201
	NR n41 DFT-BPSK /1@1 100M_Ant3	Back	518598	2592.99	23.78	0.05	24.0	0.404	1.052	0.425
	NR n41 DFT-BPSK /137@67 100M_Ant3	Front	518598	2592.99	23.75	-0.09	24.0	0.166	1.059	0.176
	NR n41 DFT-BPSK /137@67 100M_Ant3	Back	518598	2592.99	23.75	-0.11	24.0	0.346	1.059	0.366
	NR n41 DFT-BPSK /1@271 100M_Ant8	Front	528000	2640	15.35	-0.18	15.5	0.261	1.035	0.270
	NR n41 DFT-BPSK /1@271 100M_Ant8	Back	528000	2640	15.35	-0.02	15.5	0.265	1.035	0.274
	NR n41 DFT-BPSK /137@67 100M_Ant8	Front	518598	2592.99	15.35	-0.09	15.5	0.221	1.035	0.229
	NR n41 DFT-BPSK /137@67 100M_Ant8	Back	518598	2592.99	15.35	-0.12	15.5	0.228	1.035	0.236
	NR n41 DFT-BPSK /1@1 100M_Ant9	Front	528000	2640	21.74	-0.20	22.0	0.011	1.062	0.012
33	NR n41 DFT-BPSK /1@1 100M_Ant9	Back	528000	2640	21.74	0.02	22.0	**0.645**	1.062	0.685
	NR n41 DFT-BPSK /137@67 100M_Ant9	Front	518598	2592.99	21.79	0.08	22.0	0.008	1.050	0.008
	NR n41 DFT-BPSK /137@67 100M_Ant9	Back	518598	2592.99	21.79	0.02	22.0	0.613	1.050	0.644
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ NR n77(3450MHz~3550MHz) DFT-BPSK Body-worn SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Variation (%)	Tune-Up Limit (dBm)	Meas. SAR_{10g} (W/kg)	Scaling Factor	Reported SAR_{10g} (W/kg)
	NR n77 DFT-BPSK /1@1 100M_Ant7	Front	633334	3500.01	17.65	-0.11	18.0	0.175	1.084	0.190
	NR n77 DFT-BPSK /1@1 100M_Ant7	Back	633334	3500.01	17.65	0.05	18.0	0.163	1.084	0.177
	NR n77 DFT-BPSK /137@67 100M_Ant7	Front	633334	3500.01	17.32	0.09	17.5	0.156	1.042	0.163
	NR n77 DFT-BPSK /137@67 100M_Ant7	Back	633334	3500.01	17.32	0.19	17.5	0.149	1.042	0.155
	NR n77 DFT-BPSK /1@1 100M_Ant8	Front	633334	3500.01	25.08	-0.08	25.5	0.263	1.102	0.290
	NR n77 DFT-BPSK /1@1 100M_Ant8	Back	633334	3500.01	25.08	0.05	25.5	0.276	1.102	0.304
	NR n77 DFT-BPSK /137@67 100M_Ant8	Front	633334	3500.01	25.11	0.00	25.5	0.226	1.094	0.247
	NR n77 DFT-BPSK /137@67 100M_Ant8	Back	633334	3500.01	25.11	0.13	25.5	0.231	1.094	0.253
	NR n77 DFT-BPSK /1@1 100M_Ant9	Front	633334	3500.01	18.91	0.00	19.0	0.014	1.021	0.014
	NR n77 DFT-BPSK /1@1 100M_Ant9	Back	633334	3500.01	18.91	0.08	19.0	0.247	1.021	0.252
	NR n77 DFT-BPSK /137@67 100M_Ant9	Front	633334	3500.01	18.10	-0.14	18.5	0.010	1.096	0.011
	NR n77 DFT-BPSK /137@67 100M_Ant9	Back	633334	3500.01	18.10	-0.20	18.5	0.213	1.096	0.233
	NR n77 DFT-BPSK /1@1 100M_Ant10	Front	633334	3500.01	17.15	-0.04	17.5	0.315	1.084	0.341
34	NR n77 DFT-BPSK /1@1 100M_Ant10	Back	633334	3500.01	17.15	0.02	17.5	**0.412**	1.084	0.447
	NR n77 DFT-BPSK /137@67 100M_Ant10	Front	633334	3500.01	16.94	-0.03	17.5	0.281	1.138	0.320
	NR n77 DFT-BPSK /137@67 100M_Ant10	Back	633334	3500.01	16.94	-0.19	17.5	0.356	1.138	0.405
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ NR n77(3700MHz~3980MHz) DFT-BPSK Body-worn SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Variation (%)	Tune-Up Limit (dBm)	Meas. SAR_{10g} (W/kg)	Scaling Factor	Reported SAR_{10g} (W/kg)
	NR n77 DFT-BPSK /1@271 100M_Ant7	Front	650000	3750	17.78	-0.06	18.0	0.105	1.052	0.110
	NR n77 DFT-BPSK /1@271 100M_Ant7	Back	650000	3750	17.78	-0.13	18.0	0.097	1.052	0.102
	NR n77 DFT-BPSK /137@67 100M_Ant7	Front	656000	3840	17.68	-0.08	18.0	0.087	1.076	0.094
	NR n77 DFT-BPSK /137@67 100M_Ant7	Back	656000	3840	17.68	0.17	18.0	0.081	1.076	0.087
	NR n77 DFT-BPSK /1@271 100M_Ant8	Front	656000	3840	24.99	0.08	25.5	0.235	1.125	0.264
	NR n77 DFT-BPSK /1@271 100M_Ant8	Back	656000	3840	24.99	-0.07	25.5	0.242	1.125	0.272
	NR n77 DFT-BPSK /137@67 100M_Ant8	Front	662000	3930	24.91	-0.16	25.0	0.214	1.021	0.218
	NR n77 DFT-BPSK /137@67 100M_Ant8	Back	662000	3930	24.91	0.20	25.0	0.219	1.021	0.224
	NR n77 DFT-BPSK /1@271 100M_Ant9	Front	650000	3750	17.35	0.17	17.5	0.011	1.035	0.011
	NR n77 DFT-BPSK /1@271 100M_Ant9	Back	650000	3750	17.35	-0.11	17.5	0.219	1.035	0.227
	NR n77 DFT-BPSK /137@67 100M_Ant9	Front	650000	3750	17.25	-0.01	17.5	0.008	1.059	0.008
	NR n77 DFT-BPSK /137@67 100M_Ant9	Back	650000	3750	17.25	-0.15	17.5	0.201	1.059	0.213
	NR n77 DFT-BPSK /1@271 100M_Ant10	Front	650000	3750	18.69	0.20	19.0	0.275	1.074	0.295
35	NR n77 DFT-BPSK /1@271 100M_Ant10	Back	650000	3750	18.69	0.00	19.0	**0.370**	1.074	0.397
	NR n77 DFT-BPSK /137@67 100M Ant10	Front	656000	3840	18.63	0.15	19.0	0.244	1.089	0.266
	NR n77 DFT-BPSK /137@67 100M Ant10	Back	656000	3840	18.63	-0.14	19.0	0.315	1.089	0.343
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ WLAN 2.4 GHz Body-worn SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	2.4GHz/802.11b _Ant5	Front	1	2412	16.87	0.13	17.0	0.149	1.030	1.000	0.153
36	2.4GHz/802.11b _Ant5	Back	1	2412	16.87	-0.01	17.0	**0.153**	1.030	1.000	0.158
	2.4GHz/802.11b _Ant7	Front	1	2412	17.00	0.09	17.5	0.130	1.122	1.000	0.146
	2.4GHz/802.11b _Ant7	Back	1	2412	17.00	0.14	17.5	0.135	1.122	1.000	0.151
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**						

➢ Bluetooth Body-worn SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	Bluetooth_Ant5	Front	39	2441	4.24	0.00	4.5	0.001	1.062	1.000	0.001
37	Bluetooth_Ant5	Back	39	2441	4.24	0.00	4.5	**0.001**	1.062	1.000	0.001
	Bluetooth_Ant7	Front	39	2441	4.01	0.05	4.5	<0.001	1.119	1.000	<0.001
	Bluetooth_Ant7	Back	39	2441	4.01	-0.06	4.5	<0.001	1.119	1.000	<0.001
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**						

➢ WLAN 5.3 GHz Body SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	5.3GHz/802.11a _Ant5	Front	64	5320	15.89	-0.07	16.0	0.099	1.026	1.002	0.102
	5.3GHz/802.11a _Ant5	Back	64	5320	15.89	0.00	16.0	0.110	1.026	1.002	0.113
	5.3GHz/802.11a _Ant6	Front	56	5280	12.84	0.05	13.0	0.061	1.038	1.002	0.063
38	5.3GHz/802.11a _Ant6	Back	56	5280	12.84	0.00	13.0	**0.137**	1.038	1.002	0.142
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**						

➢ WLAN 5.6 GHz Body-worn SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	5.6GHz/802.11a _Ant5	Front	140	5700	15.64	-0.13	16.0	0.121	1.086	1.002	0.131
	5.6GHz/802.11a _Ant5	Back	140	5700	15.64	0.00	16.0	0.141	1.086	1.002	0.153
	5.6GHz/802.11a _Ant6	Front	140	5700	13.52	0.13	14.0	0.042	1.117	1.002	0.047
39	5.6GHz/802.11a _Ant6	Back	140	5700	13.52	-0.05	14.0	**0.159**	1.117	1.002	0.178
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**						

➢ WLAN 5.8 GHz Body-worn SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	5.8GHz/802.11a_Ant5	Front	157	5785	16.23	0.09	16.5	0.164	1.064	1.002	0.175
40	5.8GHz/802.11a_Ant5	Back	157	5785	16.23	0.00	16.5	**0.188**	1.064	1.002	0.200
	5.8GHz/802.11ac20_Ant6	Front	157	5785	12.97	0.1	13.0	0.041	1.007	1.002	0.041
	5.8GHz/802.11ac20_Ant6	Back	157	5785	12.97	0.00	13.0	0.129	1.007	1.002	0.130
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**						

Note:

1. Body-worn SAR testing was performed at 10mm separation, and this distance is determined by the handset manufacturer that there will be body-worn accessories that users may acquire at the time of equipment certification, to enable users to purchase aftermarket body-worn accessories with the required minimum separation.
2. Per KDB 941225 D06v02r01, when the same wireless modes and device transmission configurations are required for testing body-worn accessories and hotspot mode, it is not necessary to test body-worn accessory SAR for the same device orientation if the test separation distance for hotspot mode is more conservative than that used for body-worn accessories.
3. Body-worn exposure conditions are intended to voice call operations, therefore GSM voice call is selected to be tested.
4. Per KDB 648474 D04v01r03, when the *Reported* SAR for a body-worn accessory measured without a headset connected to the handset is ≤ 1.2 W/kg, SAR testing with a headset connected to the handset is not required.
5. The WLAN SAR perform the front and back position, due considered the simultaneous SAR for body-worn.
6. 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.
7. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required when the measured SAR is ≥0.8W/kg.
8. 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.
9. According to KDB 865664 D02v01r02, SAR plot is required for the highest measured SAR in each exposure configuration, wireless mode and frequency band combination.
10. Highlight part of test data means repeated test.

16.3 Body SAR in Hotspot Mode

➢ GSM Body SAR in Hotspot mode

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	GPRS850/2 slots _Ant1	Front	251	848.8	31.01	-0.03	31.5	0.191	1.119	0.214
	GPRS850/2 slots _Ant1	Back	251	848.8	31.01	-0.10	31.5	0.302	1.119	0.338
	GPRS850/2 slots _Ant1	Left	251	848.8	31.01	0.10	31.5	0.144	1.119	0.161
	GPRS850/2 slots _Ant1	Right	251	848.8	31.01	-0.03	31.5	0.057	1.119	0.064
	GPRS850/2 slots _Ant1	Bottom	251	848.8	31.01	0.16	31.5	0.169	1.119	0.189
	GPRS850/2 slots _Ant2	Front	251	848.8	30.78	-0.14	31.0	0.396	1.052	0.417
	GPRS850/2 slots _Ant2	Back	251	848.8	30.78	-0.06	31.0	0.332	1.052	0.349
41	GPRS850/2 slots _Ant2	Right	251	848.8	30.78	0.05	31.0	**0.684**	1.052	0.720
	GPRS1900/2 slots _Ant2	Front	661	1880	27.00	0.03	27.5	0.091	1.122	0.102
	GPRS1900/2 slots _Ant2	Back	661	1880	27.00	-0.09	27.5	0.089	1.122	0.100
	GPRS1900/2 slots _Ant2	Right	661	1880	27.00	-0.05	27.5	0.150	1.122	0.168
	GPRS1900/2 slots _Ant3	Front	661	1880	23.88	0.08	24.0	0.239	1.028	0.246
	GPRS1900/2 slots _Ant3	Back	661	1880	23.88	-0.10	24.0	0.302	1.028	0.310
	GPRS1900/2 slots _Ant3	Left	661	1880	23.88	-0.04	24.0	0.053	1.028	0.054
42	GPRS1900/2 slots _Ant3	Top	661	1880	23.88	-0.07	24.0	**0.622**	1.028	0.639
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ WCDMA Body SAR in Hotspot mode

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band V/RMC_Ant1	Front	4233	846.6	25.00	0.03	25.5	0.454	1.122	0.509
	Band V/RMC_Ant1	Back	4233	846.6	25.00	0.05	25.5	0.563	1.122	0.632
	Band V/RMC_Ant1	Left	4233	846.6	25.00	-0.08	25.5	0.272	1.122	0.305
	Band V/RMC_Ant1	Right	4233	846.6	25.00	0.11	25.5	0.112	1.122	0.126
	Band V/RMC_Ant1	Bottom	4233	846.6	25.00	-0.09	25.5	0.435	1.122	0.488
	Band V/RMC_Ant2	Front	4132	826.4	23.72	0.06	24.0	0.425	1.067	0.453
	Band V/RMC_Ant2	Back	4132	826.4	23.72	0.02	24.0	0.549	1.067	0.586
	Band V/RMC_Ant2	Right	4132	826.4	23.72	0.08	24.0	0.753	1.067	0.803
	Band V/RMC_Ant2	Right	4183	836.6	23.63	0.06	24.0	0.799	1.089	0.870
43	Band V/RMC_Ant2	Right	4233	846.6	23.53	0.10	24.0	**0.863**	1.114	0.961
	Band V/RMC_Ant2	**Right**	**4233**	**846.6**	**23.53**	**0.10**	**24.0**	**0.857**	**1.114**	**0.955**
	Band IV/RMC_Ant2	Front	1513	1752.6	24.49	0.03	25.0	0.583	1.125	0.656
	Band IV/RMC_Ant2	Back	1513	1752.6	24.49	-0.05	25.0	0.514	1.125	0.578
	Band IV/RMC_Ant2	Right	1513	1752.6	24.49	-0.08	25.0	0.859	1.125	0.966
	Band IV/RMC_Ant2	Right	1312	1712.4	24.23	-0.15	25.0	0.854	1.194	1.020
44	Band IV/RMC_Ant2	Right	1413	1732.6	24.48	0.05	25.0	**1.050**	1.127	1.183
	Band IV/RMC_Ant2	**Right**	**1413**	**1732.6**	**24.48**	**0.05**	**25.0**	**1.043**	**1.127**	**1.175**
	Band IV/RMC_Ant3	Front	1413	1732.6	19.78	-0.07	20.0	0.312	1.052	0.328
	Band IV/RMC_Ant3	Back	1413	1732.6	19.78	-0.11	20.0	0.440	1.052	0.463
	Band IV/RMC_Ant3	Left	1413	1732.6	19.78	0.05	20.0	0.072	1.052	0.075
	Band IV/RMC_Ant3	Top	1413	1732.6	19.78	0.07	20.0	0.635	1.052	0.668
	Band II/RMC_Ant2	Front	9400	1880	24.30	0.17	24.5	0.348	1.047	0.364
	Band II/RMC_Ant2	Back	9400	1880	24.30	0.13	24.5	0.306	1.047	0.320
	Band II/RMC_Ant2	Right	9400	1880	24.30	0.04	24.5	0.540	1.047	0.565
	Band II/RMC_Ant3	Front	9400	1880	19.11	0.05	19.5	0.255	1.094	0.279
	Band II/RMC_Ant3	Back	9400	1880	19.11	-0.10	19.5	0.338	1.094	0.370
	Band II/RMC_Ant3	Left	9400	1880	19.11	-0.12	19.5	0.078	1.094	0.085
45	Band II/RMC_Ant3	Top	9400	1880	19.11	0.08	19.5	**0.621**	1.094	0.679
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

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

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band2/1RB#49_Ant2	Front	18900	1880	22.50	0.01	23.0	0.261	1.122	0.293
	Band2/1RB#49_Ant2	Back	18900	1880	22.50	-0.19	23.0	0.204	1.122	0.229
	Band2/1RB#49_Ant2	Right	18900	1880	22.50	0.18	23.0	0.328	1.122	0.368
	Band2/50%RB#0_Ant2	Front	18900	1880	21.56	0.08	22.0	0.201	1.107	0.223
	Band2/50%RB#0_Ant2	Back	18900	1880	21.56	0.17	22.0	0.153	1.107	0.169
	Band2/50%RB#0_Ant2	Right	18900	1880	21.56	-0.17	22.0	0.259	1.107	0.287
	Band2/1RB#0_Ant3	Front	18900	1880	19.61	0.07	20.0	0.213	1.094	0.233
	Band2/1RB#0_Ant3	Back	18900	1880	19.61	0.08	20.0	0.284	1.094	0.311
	Band2/1RB#0_Ant3	Left	18900	1880	19.61	-0.05	20.0	0.051	1.094	0.056
46	Band2/1RB#0_Ant3	Top	18900	1880	19.61	0.13	20.0	**0.539**	1.094	0.590
	Band2/50%RB#24_Ant3	Front	18900	1880	18.69	-0.01	19.0	0.157	1.074	0.169
	Band2/50%RB#24_Ant3	Back	18900	1880	18.69	0.17	19.0	0.226	1.074	0.243
	Band2/50%RB#24_Ant3	Left	18900	1880	18.69	-0.08	19.0	0.039	1.074	0.042
	Band2/50%RB#24_Ant3	Top	18900	1880	18.69	-0.17	19.0	0.458	1.074	0.492
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ FDD-LTE Band 4(20MHz) QPSK Body SAR in Hotspot mode

	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band4/1RB#0_Ant2	Front	20050	1720	23.97	0.03	24.5	0.571	1.130	0.645
	Band4/1RB#0_Ant2	Back	20050	1720	23.97	0.05	24.5	0.490	1.130	0.554
47	Band4/1RB#0_Ant2	Right	20050	1720	23.97	0.06	24.5	**0.971**	1.130	1.097
	Band4/1RB#0_Ant2	Right	20175	1732.5	23.73	0.03	24.5	0.868	1.194	1.036
	Band4/1RB#99_Ant2	Right	20300	1745	23.71	-0.02	24.5	0.907	1.199	1.087
	Band4/1RB#0_Ant2	**Right**	**20050**	**1720**	**23.97**	**0.06**	**24.5**	**0.966**	**1.130**	**1.092**
	Band4/50%RB#49_Ant2	Front	20050	1720	22.97	0.06	23.5	0.487	1.130	0.550
	Band4/50%RB#49_Ant2	Back	20050	1720	22.97	-0.14	23.5	0.398	1.130	0.450
	Band4/50%RB#49_Ant2	Right	20050	1720	22.97	0.01	23.5	0.786	1.130	0.888
	Band4/50%RB#24_Ant2	Right	20175	1732.5	22.78	-0.18	23.5	0.736	1.180	0.868
	Band4/50%RB#24_Ant2	Right	20300	1745	22.66	0.06	23.5	0.715	1.213	0.867
	Band4/100%RB#0_Ant2	Right	20050	1720	22.95	-0.15	23.5	0.688	1.135	0.781
	Band4/1RB#49_Ant3	Front	20175	1732.5	20.39	0.17	20.5	0.517	1.026	0.530
	Band4/1RB#49_Ant3	Back	20175	1732.5	20.39	0.02	20.5	0.623	1.026	0.639
	Band4/1RB#49_Ant3	Left	20175	1732.5	20.39	-0.04	20.5	0.114	1.026	0.117
	Band4/1RB#49_Ant3	Top	20175	1732.5	20.39	0.07	20.5	0.876	1.026	0.899
	Band4/1RB#99_Ant3	Top	20050	1720	20.17	0.16	20.5	0.825	1.079	0.890
	Band4/1RB#49_Ant3	Top	20300	1745	20.33	0.01	20.5	0.766	1.040	0.797
	Band4/50%RB#24_Ant3	Front	20300	1745	19.37	0.16	19.5	0.378	1.030	0.389
	Band4/50%RB#24_Ant3	Back	20300	1745	19.37	0.00	19.5	0.496	1.030	0.511
	Band4/50%RB#24_Ant3	Left	20300	1745	19.37	0.11	19.5	0.089	1.030	0.092
	Band4/50%RB#24_Ant3	Top	20300	1745	19.37	0.18	19.5	0.648	1.030	0.667
	Band4/100%RB#0_Ant3	Top	20175	1732.5	19.29	-0.01	19.5	0.611	1.050	0.642
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

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

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band7/1RB#49_Ant2	Front	20850	2510	23.16	0.07	23.5	0.385	1.081	0.416
	Band7/1RB#49_Ant2	Back	20850	2510	23.16	0.00	23.5	0.334	1.081	0.361
48	Band7/1RB#49_Ant2	Right	20850	2510	23.16	0.11	23.5	**0.765**	1.081	0.827
	Band7/1RB#49_Ant2	Right	21100	2535	22.86	0.08	23.5	0.702	1.159	0.814
	Band7/1RB#99_Ant2	Right	21350	2560	23.12	0.04	23.5	0.736	1.091	0.803
	Band7/50%RB#0_Ant2	Front	20850	2510	22.29	-0.06	22.5	0.325	1.050	0.341
	Band7/50%RB#0_Ant2	Back	20850	2510	22.29	0.01	22.5	0.277	1.050	0.291
	Band7/50%RB#0_Ant2	Right	20850	2510	22.29	-0.03	22.5	0.676	1.050	0.710
	Band7/100%RB#0_Ant2	Right	20850	2510	22.26	0.11	22.5	0.631	1.057	0.667
	Band7/1RB#99_Ant3	Front	21350	2560	18.86	0.00	19.0	0.228	1.033	0.236
	Band7/1RB#99_Ant3	Back	21350	2560	18.86	0.03	19.0	0.318	1.033	0.328
	Band7/1RB#99_Ant3	Left	21350	2560	18.86	0.14	19.0	0.066	1.033	0.068
	Band7/1RB#99_Ant3	Top	21350	2560	18.86	0.17	19.0	0.527	1.033	0.544
	Band7/50%RB#0_Ant3	Front	20850	2510	18.06	0.17	18.5	0.157	1.107	0.174
	Band7/50%RB#0_Ant3	Back	20850	2510	18.06	-0.14	18.5	0.248	1.107	0.275
	Band7/50%RB#0_Ant3	Left	20850	2510	18.06	0.15	18.5	0.043	1.107	0.048
	Band7/50%RB#0_Ant3	Top	20850	2510	18.06	-0.05	18.5	0.418	1.107	0.463
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

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

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band12/1RB#24_Ant1	Front	23130	711	22.79	0.05	23.0	0.297	1.050	0.312
	Band12/1RB#24_Ant1	Back	23130	711	22.79	-0.02	23.0	0.341	1.050	0.358
	Band12/1RB#24_Ant1	Left	23130	711	22.79	0.01	23.0	0.277	1.050	0.291
	Band12/1RB#24_Ant1	Right	23130	711	22.79	0.13	23.0	0.125	1.050	0.131
	Band12/1RB#24_Ant1	Bottom	23130	711	22.79	-0.12	23.0	0.340	1.050	0.357
	Band12/50%RB#0_Ant1	Front	23130	711	21.76	-0.13	22.0	0.251	1.057	0.265
	Band12/50%RB#0_Ant1	Back	23130	711	21.76	0.20	22.0	0.311	1.057	0.329
	Band12/50%RB#0_Ant1	Left	23130	711	21.76	-0.16	22.0	0.227	1.057	0.240
	Band12/50%RB#0_Ant1	Right	23130	711	21.76	-0.17	22.0	0.092	1.057	0.097
	Band12/50%RB#0_Ant1	Bottom	23130	711	21.76	-0.06	22.0	0.273	1.057	0.289
	Band12/1RB#0_Ant2	Front	23060	704	22.07	-0.05	22.5	0.397	1.104	0.438
	Band12/1RB#0_Ant2	Back	23060	704	22.07	0.01	22.5	0.302	1.104	0.333
49	Band12/1RB#0_Ant2	Right	23060	704	22.07	0.11	22.5	**0.583**	1.104	0.644
	Band12/50%RB#12_Ant2	Front	23060	704	21.10	-0.18	21.5	0.311	1.096	0.341
	Band12/50%RB#12_Ant2	Back	23060	704	21.10	0.10	21.5	0.237	1.096	0.260
	Band12/50%RB#12_Ant2	Right	23060	704	21.10	0.04	21.5	0.495	1.096	0.543
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ FDD-LTE Band 26(15MHz) QPSK Body SAR in Hotspot mode

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band26/1RB#74_Ant1	Front	26965	841.5	21.37	0.01	21.5	0.404	1.030	0.416
	Band26/1RB#74_Ant1	Back	26965	841.5	21.37	0.01	21.5	0.376	1.030	0.387
	Band26/1RB#74_Ant1	Left	26965	841.5	21.37	0.11	21.5	0.212	1.030	0.218
	Band26/1RB#74_Ant1	Right	26965	841.5	21.37	0.13	21.5	0.101	1.030	0.104
	Band26/1RB#74_Ant1	Bottom	26965	841.5	21.37	0.06	21.5	0.328	1.030	0.338
	Band26/50%RB#0_Ant1	Front	26965	841.5	20.22	-0.05	20.5	0.321	1.067	0.343
	Band26/50%RB#0_Ant1	Back	26965	841.5	20.22	-0.05	20.5	0.275	1.067	0.293
	Band26/50%RB#0_Ant1	Left	26965	841.5	20.22	-0.17	20.5	0.163	1.067	0.174
	Band26/50%RB#0_Ant1	Right	26965	841.5	20.22	-0.09	20.5	0.074	1.067	0.079
	Band26/50%RB#0_Ant1	Bottom	26965	841.5	20.22	-0.14	20.5	0.248	1.067	0.265
	Band26/1RB#74_Ant2	Front	26965	841.5	24.46	0.00	25.0	0.533	1.132	0.603
	Band26/1RB#74_Ant2	Back	26965	841.5	24.46	0.08	25.0	0.441	1.132	0.499
50	Band26/1RB#74_Ant2	Right	26965	841.5	24.46	0.20	25.0	**0.675**	1.132	0.764
	Band26/50%RB#35_Ant2	Front	26965	841.5	23.14	-0.04	23.5	0.416	1.086	0.452
	Band26/50%RB#35_Ant2	Back	26965	841.5	23.14	-0.07	23.5	0.365	1.086	0.396
	Band26/50%RB#35_Ant2	Right	26965	841.5	23.14	-0.10	23.5	0.524	1.086	0.569
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

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

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	Band41/1RB#49_Ant2	Front	39750	2506	24.53	0.04	25.0	0.253	1.114	1.008	0.284
	Band41/1RB#49_Ant2	Back	39750	2506	24.53	-0.03	25.0	0.218	1.114	1.008	0.245
	Band41/1RB#49_Ant2	Right	39750	2506	24.53	0.11	25.0	0.459	1.114	1.008	0.515
	Band41/50%RB#49_Ant2	Front	41490	2680	24.33	-0.10	24.5	0.188	1.040	1.008	0.197
	Band41/50%RB#49_Ant2	Back	41490	2680	24.33	0.04	24.5	0.162	1.040	1.008	0.170
	Band41/50%RB#49_Ant2	Right	41490	2680	24.33	-0.18	24.5	0.325	1.040	1.008	0.341
	Band41/1RB#49_Ant3	Front	39750	2506	19.71	0.06	20.0	0.163	1.069	1.008	0.176
	Band41/1RB#49_Ant3	Back	39750	2506	19.71	0.04	20.0	0.314	1.069	1.008	0.338
	Band41/1RB#49_Ant3	Left	39750	2506	19.71	-0.12	20.0	0.059	1.069	1.008	0.064
51	Band41/1RB#49_Ant3	Top	39750	2506	19.71	0.04	20.0	**0.495**	1.069	1.008	0.533
	Band41/50%RB#24_Ant3	Front	39750	2506	19.78	0.11	20.0	0.124	1.052	1.008	0.131
	Band41/50%RB#24_Ant3	Back	39750	2506	19.78	0.19	20.0	0.269	1.052	1.008	0.285
	Band41/50%RB#24_Ant3	Left	39750	2506	19.78	-0.08	20.0	0.047	1.052	1.008	0.050
	Band41/50%RB#24_Ant3	Top	39750	2506	19.78	0.19	20.0	0.411	1.052	1.008	0.436
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**						

➢ NR n5 DFT-BPSK Body SAR in Hotspot mode

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Variation (%)	Tune-Up Limit (dBm)	Meas. SAR_{10g} (W/kg)	Scaling Factor	Reported SAR_{10g} (W/kg)
	NR n5 DFT-BPSK /1@104 20M_Ant1	Front	167800	839	24.00	-0.02	24.5	0.354	1.122	0.397
	NR n5 DFT-BPSK /1@104 20M_Ant1	Back	167800	839	24.00	-0.08	24.5	0.353	1.122	0.396
	NR n5 DFT-BPSK /1@104 20M_Ant1	Left	167800	839	24.00	-0.18	24.5	0.217	1.122	0.243
	NR n5 DFT-BPSK /1@104 20M_Ant1	Right	167800	839	24.00	-0.11	24.5	0.104	1.122	0.117
	NR n5 DFT-BPSK /1@104 20M_Ant1	Bottom	167800	839	24.00	0.14	24.5	0.404	1.122	0.453
	NR n5 DFT-BPSK /50@25 20M_Ant1	Front	167800	839	23.80	-0.20	24.0	0.297	1.047	0.311
	NR n5 DFT-BPSK /50@25 20M_Ant1	Back	167800	839	23.80	-0.03	24.0	0.295	1.047	0.309
	NR n5 DFT-BPSK /50@25 20M_Ant1	Left	167800	839	23.80	0.05	24.0	0.144	1.047	0.151
	NR n5 DFT-BPSK /50@25 20M_Ant1	Right	167800	839	23.80	-0.08	24.0	0.071	1.047	0.074
	NR n5 DFT-BPSK /50@25 20M_Ant1	Bottom	167800	839	23.80	0.13	24.0	0.312	1.047	0.327
	NR n5 DFT-BPSK /1@1 20M_Ant2	Front	167300	836.5	23.16	-0.01	23.5	0.607	1.081	0.656
	NR n5 DFT-BPSK /1@1 20M_Ant2	Back	167300	836.5	23.16	-0.02	23.5	0.457	1.081	0.494
	NR n5 DFT-BPSK /1@1 20M_Ant2	Right	167300	836.5	23.16	0.02	23.5	0.897	1.081	0.970
	NR n5 DFT-BPSK /1@1 20M_Ant2	Right	166800	834	23.00	0.04	23.5	0.839	1.122	0.941
52	NR n5 DFT-BPSK /1@1 20M_Ant2	Right	167800	839	23.08	0.01	23.5	**0.923**	1.102	1.017
	NR n5 DFT-BPSK /1@1 20M_Ant2	**Right**	**167800**	**839**	**23.08**	**0.08**	**23.5**	**0.911**	**1.102**	**1.004**
	NR n5 DFT-BPSK /50@25 20M_Ant2	Front	167300	836.5	23.10	-0.03	23.5	0.513	1.096	0.562
	NR n5 DFT-BPSK /50@25 20M_Ant2	Back	167300	836.5	23.10	0.09	23.5	0.341	1.096	0.374
	NR n5 DFT-BPSK /50@25 20M_Ant2	Right	167300	836.5	23.10	0.15	23.5	0.803	1.096	0.880
	NR n5 DFT-BPSK /50@25 20M_Ant2	Right	166800	834	23.01	0.11	23.5	0.754	1.119	0.844
	NR n5 DFT-BPSK /50@25 20M_Ant2	Right	167800	839	22.96	-0.16	23.5	0.816	1.132	0.924
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ NR n41 DFT-BPSK Body SAR in Hotspot mode

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Variation (%)	Tune-Up Limit (dBm)	Meas. SAR_{10g} (W/kg)	Scaling Factor	Reported SAR_{10g} (W/kg)
	NR n41 DFT-BPSK /1@271 100M_Ant2	Front	528000	2640	23.31	0.02	23.5	0.280	1.045	0.293
	NR n41 DFT-BPSK /1@271 100M_Ant2	Back	528000	2640	23.31	0.04	23.5	0.278	1.045	0.291
	NR n41 DFT-BPSK /1@271 100M_Ant2	Right	528000	2640	23.31	0.05	23.5	0.688	1.045	0.719
	NR n41 DFT-BPSK /137@67 100M_Ant2	Front	528000	2640	23.26	-0.18	23.5	0.213	1.057	0.225
	NR n41 DFT-BPSK /137@67 100M_Ant2	Back	528000	2640	23.26	-0.09	23.5	0.205	1.057	0.217
	NR n41 DFT-BPSK /137@67 100M_Ant2	Right	528000	2640	23.26	-0.08	23.5	0.595	1.057	0.629
	NR n41 DFT-BPSK /1@1 100M_Ant3	Front	518598	2592.99	23.78	0.09	24.0	0.191	1.052	0.201
	NR n41 DFT-BPSK /1@1 100M_Ant3	Back	518598	2592.99	23.78	0.05	24.0	0.404	1.052	0.425
	NR n41 DFT-BPSK /1@1 100M_Ant3	Left	518598	2592.99	23.78	-0.05	24.0	0.071	1.052	0.075
	NR n41 DFT-BPSK /1@1 100M_Ant3	Top	518598	2592.99	23.78	-0.04	24.0	0.403	1.052	0.424
	NR n41 DFT-BPSK /137@67 100M_Ant3	Front	518598	2592.99	23.75	-0.09	24.0	0.166	1.059	0.176
	NR n41 DFT-BPSK /137@67 100M_Ant3	Back	518598	2592.99	23.75	-0.11	24.0	0.346	1.059	0.366
	NR n41 DFT-BPSK /137@67 100M_Ant3	Left	518598	2592.99	23.75	0.18	24.0	0.051	1.059	0.054
	NR n41 DFT-BPSK /137@67 100M_Ant3	Top	518598	2592.99	23.75	0.07	24.0	0.343	1.059	0.363
	NR n41 DFT-BPSK /1@271 100M_Ant8	Front	528000	2640	15.35	-0.18	15.5	0.261	1.035	0.270
	NR n41 DFT-BPSK /1@271 100M_Ant8	Back	528000	2640	15.35	-0.02	15.5	0.265	1.035	0.274
53	NR n41 DFT-BPSK /1@271 100M_Ant8	Left	528000	2640	15.35	-0.04	15.5	**0.830**	1.035	0.859
	NR n41 DFT-BPSK /1@271 100M_Ant8	Top	528000	2640	15.35	0.00	15.5	0.089	1.035	0.092
	NR n41 DFT-BPSK /1@1 100M_Ant8	Left	509202	2546.01	15.12	-0.20	15.5	0.801	1.091	0.874
	NR n41 DFT-BPSK /1@271 100M_Ant8	Left	518598	2592.99	15.28	-0.01	15.5	0.788	1.052	0.829
	NR n41 DFT-BPSK /1@271 100M_Ant8	**Left**	**528000**	**2640**	**15.35**	**0.03**	**15.5**	**0.811**	**1.035**	**0.839**
	NR n41 DFT-BPSK /137@67 100M_Ant8	Front	518598	2592.99	15.35	-0.09	15.5	0.221	1.035	0.229
	NR n41 DFT-BPSK /137@67 100M_Ant8	Back	518598	2592.99	15.35	-0.12	15.5	0.228	1.035	0.236
	NR n41 DFT-BPSK /137@67 100M_Ant8	Left	518598	2592.99	15.35	0.11	15.5	0.745	1.035	0.771
	NR n41 DFT-BPSK /137@67 100M_Ant8	Top	518598	2592.99	15.35	-0.02	15.5	0.062	1.035	0.064
	NR n41 DFT-BPSK /1@1 100M_Ant9	Front	528000	2640	21.74	-0.20	22.0	0.011	1.062	0.012
	NR n41 DFT-BPSK /1@1 100M_Ant9	Back	528000	2640	21.74	0.02	22.0	0.645	1.062	0.685
	NR n41 DFT-BPSK /1@1 100M_Ant9	Left	528000	2640	21.74	-0.03	22.0	0.041	1.062	0.044
	NR n41 DFT-BPSK /1@1 100M_Ant9	Right	528000	2640	21.74	0.09	22.0	0.032	1.062	0.034
	NR n41 DFT-BPSK /1@1 100M_Ant9	Bottom	528000	2640	21.74	0.05	22.0	0.046	1.062	0.049

	NR n41 DFT-BPSK /137@67 100M_Ant9	Front	518598	2592.99	21.79	0.08	22.0	0.008	1.050	0.008
	NR n41 DFT-BPSK /137@67 100M_Ant9	Back	518598	2592.99	21.79	0.02	22.0	0.613	1.050	0.644
	NR n41 DFT-BPSK /137@67 100M_Ant9	Left	518598	2592.99	21.79	0.11	22.0	0.034	1.050	0.036
	NR n41 DFT-BPSK /137@67 100M_Ant9	Right	518598	2592.99	21.79	-0.14	22.0	0.028	1.050	0.029
	NR n41 DFT-BPSK /137@67 100M_Ant9	Bottom	518598	2592.99	21.79	0.06	22.0	0.037	1.050	0.039
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

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

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Variation (%)	Tune-Up Limit (dBm)	Meas. SAR_{10g} (W/kg)	Scaling Factor	Reported SAR_{10g} (W/kg)
	NR n77 DFT-BPSK /1@1 100M_Ant7	Front	633334	3500.01	17.65	-0.11	18.0	0.175	1.084	0.190
	NR n77 DFT-BPSK /1@1 100M_Ant7	Back	633334	3500.01	17.65	0.05	18.0	0.163	1.084	0.177
	NR n77 DFT-BPSK /1@1 100M_Ant7	Left	633334	3500.01	17.65	0.07	18.0	0.487	1.084	0.528
	NR n77 DFT-BPSK /137@67 100M_Ant7	Front	633334	3500.01	17.32	0.09	17.5	0.156	1.042	0.163
	NR n77 DFT-BPSK /137@67 100M_Ant7	Back	633334	3500.01	17.32	0.19	17.5	0.149	1.042	0.155
	NR n77 DFT-BPSK /137@67 100M_Ant7	Left	633334	3500.01	17.32	0.14	17.5	0.431	1.042	0.449
	NR n77 DFT-BPSK /1@1 100M_Ant8	Front	633334	3500.01	25.08	-0.08	25.5	0.263	1.102	0.290
	NR n77 DFT-BPSK /1@1 100M_Ant8	Back	633334	3500.01	25.08	0.05	25.5	0.276	1.102	0.304
54	NR n77 DFT-BPSK /1@1 100M_Ant8	Left	633334	3500.01	25.08	0.09	25.5	**0.784**	1.102	0.864
	NR n77 DFT-BPSK /1@1 100M_Ant8	Top	633334	3500.01	25.08	0.03	25.5	0.194	1.102	0.214
	NR n77 DFT-BPSK /137@67 100M_Ant8	Front	633334	3500.01	25.11	0.00	25.5	0.226	1.094	0.247
	NR n77 DFT-BPSK /137@67 100M_Ant8	Back	633334	3500.01	25.11	0.13	25.5	0.231	1.094	0.253
	NR n77 DFT-BPSK /137@67 100M_Ant8	Left	633334	3500.01	25.11	-0.07	25.5	0.711	1.094	0.778
	NR n77 DFT-BPSK /137@67 100M_Ant8	Top	633334	3500.01	25.11	-0.05	25.5	0.177	1.094	0.194
	NR n77 DFT-BPSK /1@1 100M_Ant9	Front	633334	3500.01	18.91	0.00	19.0	0.014	1.021	0.014
	NR n77 DFT-BPSK /1@1 100M_Ant9	Back	633334	3500.01	18.91	0.08	19.0	0.247	1.021	0.252
	NR n77 DFT-BPSK /1@1 100M_Ant9	Left	633334	3500.01	18.91	-0.03	19.0	0.031	1.021	0.032
	NR n77 DFT-BPSK /1@1 100M_Ant9	Right	633334	3500.01	18.91	-0.11	19.0	0.022	1.021	0.022
	NR n77 DFT-BPSK /1@1 100M_Ant9	Bottom	633334	3500.01	18.91	-0.02	19.0	0.052	1.021	0.053
	NR n77 DFT-BPSK /137@67 100M_Ant9	Front	633334	3500.01	18.10	-0.14	18.5	0.010	1.096	0.011
	NR n77 DFT-BPSK /137@67 100M_Ant9	Back	633334	3500.01	18.10	-0.20	18.5	0.213	1.096	0.233
	NR n77 DFT-BPSK /137@67 100M_Ant9	Left	633334	3500.01	18.10	-0.08	18.5	0.026	1.096	0.028
	NR n77 DFT-BPSK /137@67 100M_Ant9	Right	633334	3500.01	18.10	-0.07	18.5	0.018	1.096	0.020
	NR n77 DFT-BPSK /137@67 100M_Ant9	Bottom	633334	3500.01	18.10	0.05	18.5	0.042	1.096	0.046
	NR n77 DFT-BPSK /1@1 100M_Ant10	Front	633334	3500.01	17.15	-0.04	17.5	0.315	1.084	0.341
	NR n77 DFT-BPSK /1@1 100M_Ant10	Back	633334	3500.01	17.15	0.02	17.5	0.412	1.084	0.447
	NR n77 DFT-BPSK /1@1 100M_Ant10	Left	633334	3500.01	17.15	-0.18	17.5	0.102	1.084	0.111
	NR n77 DFT-BPSK /1@1 100M_Ant10	Top	633334	3500.01	17.15	0.02	17.5	0.087	1.084	0.094
	NR n77 DFT-BPSK /137@67 100M_Ant10	Front	633334	3500.01	16.94	-0.03	17.5	0.281	1.138	0.320
	NR n77 DFT-BPSK /137@67 100M_Ant10	Back	633334	3500.01	16.94	-0.19	17.5	0.356	1.138	0.405

	NR n77 DFT-BPSK /137@67 100M_Ant10	Left	633334	3500.01	16.94	-0.10	17.5	0.082	1.138	0.093
	NR n77 DFT-BPSK /137@67 100M_Ant10	Top	633334	3500.01	16.94	-0.10	17.5	0.066	1.138	0.075
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

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

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Variation (%)	Tune-Up Limit (dBm)	Meas. SAR_{10g} (W/kg)	Scaling Factor	Reported SAR_{10g} (W/kg)
	NR n77 DFT-BPSK /1@271 100M_Ant7	Front	650000	3750	17.78	-0.06	18.0	0.105	1.052	0.110
	NR n77 DFT-BPSK /1@271 100M_Ant7	Back	650000	3750	17.78	-0.13	18.0	0.097	1.052	0.102
	NR n77 DFT-BPSK /1@271 100M_Ant7	Left	650000	3750	17.78	-0.03	18.0	0.270	1.052	0.284
	NR n77 DFT-BPSK /137@67 100M_Ant7	Front	656000	3840	17.68	-0.08	18.0	0.087	1.076	0.094
	NR n77 DFT-BPSK /137@67 100M_Ant7	Back	656000	3840	17.68	0.17	18.0	0.081	1.076	0.087
	NR n77 DFT-BPSK /137@67 100M_Ant7	Left	656000	3840	17.68	-0.16	18.0	0.224	1.076	0.241
	NR n77 DFT-BPSK /1@271 100M_Ant8	Front	656000	3840	24.99	0.08	25.5	0.235	1.125	0.264
	NR n77 DFT-BPSK /1@271 100M_Ant8	Back	656000	3840	24.99	-0.07	25.5	0.242	1.125	0.272
55	NR n77 DFT-BPSK /1@271 100M_Ant8	Left	656000	3840	24.99	-0.16	25.5	**0.730**	1.125	0.821
	NR n77 DFT-BPSK /1@271 100M_Ant8	Top	656000	3840	24.99	-0.02	25.5	0.182	1.125	0.205
	NR n77 DFT-BPSK /1@271 100M_Ant8	Left	650000	3750	24.91	0.16	25.5	0.712	1.146	0.816
	NR n77 DFT-BPSK /1@1 100M_Ant8	Left	662000	3930	24.82	0.15	25.5	0.689	1.169	0.805
	NR n77 DFT-BPSK /137@67 100M_Ant8	Front	662000	3930	24.91	-0.16	25.0	0.214	1.021	0.218
	NR n77 DFT-BPSK /137@67 100M_Ant8	Back	662000	3930	24.91	0.20	25.0	0.219	1.021	0.224
	NR n77 DFT-BPSK /137@67 100M_Ant8	Left	662000	3930	24.91	-0.20	25.0	0.694	1.021	0.709
	NR n77 DFT-BPSK /137@67 100M_Ant8	Top	662000	3930	24.91	0.16	25.0	0.170	1.021	0.174
	NR n77 DFT-BPSK /1@271 100M_Ant9	Front	650000	3750	17.35	0.17	17.5	0.011	1.035	0.011
	NR n77 DFT-BPSK /1@271 100M_Ant9	Back	650000	3750	17.35	-0.11	17.5	0.219	1.035	0.227
	NR n77 DFT-BPSK /1@271 100M_Ant9	Left	650000	3750	17.35	-0.13	17.5	0.028	1.035	0.029
	NR n77 DFT-BPSK /1@271 100M_Ant9	Right	650000	3750	17.35	-0.03	17.5	0.019	1.035	0.020
	NR n77 DFT-BPSK /1@271 100M_Ant9	Bottom	650000	3750	17.35	0.01	17.5	0.046	1.035	0.048
	NR n77 DFT-BPSK /137@67 100M_Ant9	Front	650000	3750	17.25	-0.01	17.5	0.008	1.059	0.008
	NR n77 DFT-BPSK /137@67 100M_Ant9	Back	650000	3750	17.25	-0.15	17.5	0.201	1.059	0.213
	NR n77 DFT-BPSK /137@67 100M_Ant9	Left	650000	3750	17.25	-0.16	17.5	0.024	1.059	0.025
	NR n77 DFT-BPSK /137@67 100M_Ant9	Right	650000	3750	17.25	-0.06	17.5	0.015	1.059	0.016
	NR n77 DFT-BPSK /137@67 100M_Ant9	Bottom	650000	3750	17.25	-0.15	17.5	0.038	1.059	0.040
	NR n77 DFT-BPSK /1@271 100M_Ant10	Front	650000	3750	18.69	0.20	19.0	0.275	1.074	0.295
	NR n77 DFT-BPSK /1@271 100M_Ant10	Back	650000	3750	18.69	0.00	19.0	0.370	1.074	0.397
	NR n77 DFT-BPSK /1@271 100M_Ant10	Left	650000	3750	18.69	0.09	19.0	0.093	1.074	0.100
	NR n77 DFT-BPSK /1@271 100M_Ant10	Top	650000	3750	18.69	0.12	19.0	0.069	1.074	0.074

	NR n77 DFT-BPSK /137@67 100M Ant10	Front	656000	3840	18.63	0.15	19.0	0.244	1.089	0.266
	NR n77 DFT-BPSK /137@67 100M Ant10	Back	656000	3840	18.63	-0.14	19.0	0.315	1.089	0.343
	NR n77 DFT-BPSK /137@67 100M Ant10	Left	656000	3840	18.63	0.02	19.0	0.071	1.089	0.077
	NR n77 DFT-BPSK /137@67 100M Ant10	Top	656000	3840	18.63	0.05	19.0	0.053	1.089	0.058
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**				

➢ WLAN 2.4GHz Body SAR in Hotspot mode

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	2.4GHz/802.11b_Ant5	Front	1	2412	16.87	0.13	17.0	0.149	1.030	1.000	0.153
	2.4GHz/802.11b_Ant5	Back	1	2412	16.87	-0.01	17.0	0.153	1.030	1.000	0.158
	2.4GHz/802.11b_Ant5	Right	1	2412	16.87	-0.05	17.0	0.075	1.030	1.000	0.077
	2.4GHz/802.11b_Ant5	Top	1	2412	16.87	0.01	17.0	0.299	1.030	1.000	0.308
	2.4GHz/802.11b_Ant7	Front	1	2412	17.00	0.09	17.5	0.130	1.122	1.000	0.146
	2.4GHz/802.11b_Ant7	Back	1	2412	17.00	0.14	17.5	0.135	1.122	1.000	0.151
56	2.4GHz/802.11b_Ant7	Left	1	2412	17.00	-0.13	17.5	**0.388**	1.122	1.000	0.435
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**						

➢ Bluetooth Body SAR in Hotspot mode

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	Bluetooth_Ant5	Front	39	2441	4.24	0.00	4.5	0.001	1.062	1.000	0.001
	Bluetooth_Ant5	Back	39	2441	4.24	0.00	4.5	0.001	1.062	1.000	0.001
	Bluetooth_Ant5	Right	39	2441	4.24	0.01	4.5	<0.001	1.062	1.000	<0.001
57	Bluetooth_Ant5	Top	39	2441	4.24	-0.05	4.5	**0.006**	1.062	1.000	0.006
	Bluetooth_Ant7	Front	39	2441	4.01	0.05	4.5	<0.001	1.119	1.000	<0.001
	Bluetooth_Ant7	Back	39	2441	4.01	-0.06	4.5	<0.001	1.119	1.000	<0.001
	Bluetooth_Ant7	Left	39	2441	4.01	0.05	4.5	0.002	1.119	1.000	0.002
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**						

➢ WLAN 5.3GHz Body SAR in Hotspot mode

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	5.3GHz/802.11a_Ant5	Front	64	5320	15.89	-0.07	16.0	0.099	1.026	1.002	0.102
	5.3GHz/802.11a_Ant5	Back	64	5320	15.89	0.00	16.0	0.110	1.026	1.002	0.113
	5.3GHz/802.11a_Ant5	Right	64	5320	15.89	0.00	16.0	0.054	1.026	1.002	0.056
	5.3GHz/802.11a_Ant5	Top	64	5320	15.89	0.02	16.0	0.134	1.026	1.002	0.138
	5.3GHz/802.11a_Ant6	Front	56	5280	12.84	0.05	13.0	0.061	1.038	1.002	0.063
38	5.3GHz/802.11a_Ant6	Back	56	5280	12.84	0.00	13.0	**0.137**	1.038	1.002	0.142
	5.3GHz/802.11a_Ant6	Right	56	5280	12.84	0.00	13.0	0.042	1.038	1.002	0.044
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**						

➢ WLAN 5.6GHz Body SAR in Hotspot mode

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	5.6GHz/802.11a_Ant5	Front	140	5700	15.64	-0.13	16.0	0.121	1.086	1.002	0.131
	5.6GHz/802.11a_Ant5	Back	140	5700	15.64	0.00	16.0	0.140	1.086	1.002	0.152
	5.6GHz/802.11a_Ant5	Right	140	5700	15.64	0.16	16.0	0.081	1.086	1.002	0.088
	5.6GHz/802.11a_Ant5	Top	140	5700	15.64	0.08	16.0	0.159	1.086	1.002	0.172
	5.6GHz/802.11a_Ant6	Front	140	5700	13.52	0.13	14.0	0.042	1.117	1.002	0.047
39	5.6GHz/802.11a_Ant6	Back	140	5700	13.52	-0.05	14.0	**0.159**	1.117	1.002	0.178
	5.6GHz/802.11a_Ant6	Right	140	5700	13.52	0.02	14.0	0.056	1.117	1.002	0.063
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**						

➢ WLAN 5.8GHz Body SAR in Hotspot mode

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	5.8GHz/802.11a_Ant5	Front	157	5785	16.23	0.09	16.5	0.164	1.064	1.002	0.175
40	5.8GHz/802.11a_Ant5	Back	157	5785	16.23	0.00	16.5	**0.188**	1.064	1.002	0.200
	5.8GHz/802.11a_Ant5	Right	157	5785	16.23	0.02	16.5	0.096	1.064	1.002	0.102
	5.8GHz/802.11a_Ant5	Top	157	5785	16.23	0.02	16.5	0.180	1.064	1.002	0.192
	5.8GHz/802.11ac20_Ant6	Front	157	5785	12.97	0.1	13.0	0.041	1.007	1.002	0.041
	5.8GHz/802.11ac20_Ant6	Back	157	5785	12.97	0.00	13.0	0.129	1.007	1.002	0.130
	5.8GHz/802.11ac20_Ant6	Right	157	5785	12.97	0.09	13.0	0.040	1.007	1.002	0.040
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**						

Note:

1. Per KDB 447498 D04v01, for each exposure position, if the highest output channel Reported SAR ≤0.8W/kg, other channels SAR testing is not necessary.
2. Additional WLAN SAR testing was performed for simultaneous transmission analysis.
3. 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.
4. 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 ≥0.8W/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 ≤ 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.

16.4 Repeated SAR measurement

Band/ Mode	Test Position	CH.	Freq. (MHz)	Measured SAR (W/kg)				
				Original	1st Repeated		2nd Repeated	
					Value	Ratio	Value	Ratio
Band4/1RB#0_Ant2	Right Cheek	20175	1732.5	0.831	0.825	1.01	/	/
NR n41 DFT-BPSK /1@1 100M_Ant8	Right Cheek	518598	2592.99	0.903	0.884	1.02	/	/
Band V/RMC_Ant2	Right	4233	846.6	0.863	0.857	1.01	/	/
Band IV/RMC_Ant2	Right	1413	1732.6	1.050	1.043	1.01	/	/
Band4/1RB#0_Ant2	Right	20050	1720	0.971	0.966	1.01	/	/
NR n5 DFT-BPSK /1@1 20M_Ant2	Right	167800	839	0.923	0.911	1.01	/	/
NR n41 DFT-BPSK /1@271 100M_Ant8	Left	528000	2640	0.830	0.811	1.02	/	/
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population				**1.6 W/kg (mW/g) Averaged over 1g**				

Note:

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

16.5 Multi-Band Simultaneous Transmission Considerations

➢ **Simultaneous Transmission Capabilities**

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

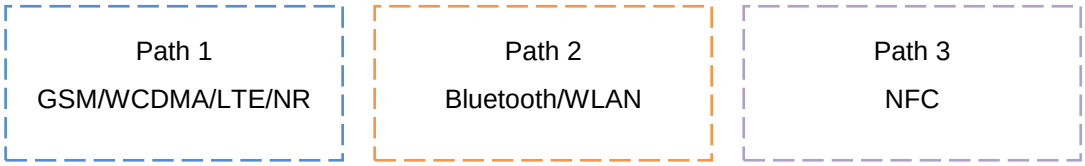

Fig.15.1 Simultaneous Transmission Paths

➢ **Simultaneous Transmission Procedures**

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

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

Mode	Max. Power (dBm)	Max. Power (mW)	Exposure Position	Head	Body	Hotspot
NFC	-44.62	0.0000345	Estimated SAR (W/kg)	0.000	0.000	0.000

Note:

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

➢ **Multi-Band simultaneous Transmission Consideration**

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

Note:

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

16.6 SAR Simultaneous Transmission Analysis

➢ **Simultaneous Transmission**

WLAN

Position		Standalone SAR(W/kg)				Σ SAR$_{1g}$ (W/kg)	
		1	2	3	4	1+2	3+4
		2.4GWIFI Ant5	2.4GWIFI Ant7	5GWIFI ANT5	5GWIFI ANT6	2.4GWLAN MIMO	5GWLAN MIMO
Head	Right Cheek	0.107	0.114	0.094	0.008	0.221	0.102
	Right Tilted	0.125	0.026	0.170	0.002	0.151	0.172
	Left Cheek	0.280	0.117	0.240	0.018	0.397	0.258
	Left Tilted	0.288	0.028	0.322	0.005	0.316	0.327
Body- worn	Front	0.153	0.146	0.102	0.063	0.299	0.165
	Back	0.158	0.151	0.112	0.142	0.309	0.254
Hotspot	Front	0.153	0.146	0.102	0.063	0.299	0.165
	Back	0.158	0.151	0.112	0.142	0.309	0.254
	Left	0.000	0.435	0.000	0.000	0.435	0.000
	Right	0.077	0.000	0.056	0.044	0.077	0.100
	Top	0.153	0.146	0.102	0.063	0.299	0.165
	Bottom	0.158	0.151	0.112	0.142	0.309	0.254

5G NR DC_5A_n78

Position		Standalone SAR(W/kg)		Σ SAR$_{1g}$ (W/kg)
		NR n77(n78) SA	LTE Band 26(5)	5G NR DC_5A_n78
Head	Right Cheek	0.480	0.522	1.002
	Right Tilted	0.471	0.070	0.541
	Left Cheek	0.353	0.327	0.680
	Left Tilted	0.213	0.055	0.268
Body- worn	Front	0.341	0.603	0.944
	Back	0.447	0.499	0.946
Hotspot	Front	0.341	0.603	0.944
	Back	0.447	0.499	0.946
	Left	0.864	0.218	1.082
	Right	0.022	0.764	0.786
	Top	0.214	0.000	0.214
	Bottom	0.053	0.338	0.391

5G NR DC_7A_n78

Position		Standalone SAR(W/kg)		Σ SAR_{1g} (W/kg)
		NR n77(n78) SA	LTE Band 7	5G NR DC_7A_n78
Head	Right Cheek	0.480	0.321	0.801
	Right Tilted	0.471	0.507	0.978
	Left Cheek	0.353	0.205	0.558
	Left Tilted	0.213	0.322	0.535
Body- worn	Front	0.341	0.416	0.757
	Back	0.447	0.361	0.808
Hotspot	Front	0.341	0.416	0.757
	Back	0.447	0.361	0.808
	Left	0.864	0.048	0.912
	Right	0.022	0.827	0.849
	Top	0.214	0.463	0.677
	Bottom	0.053	0.000	0.053

5G NR DC_38A_n78

Position		Standalone SAR(W/kg)		Σ SAR_{1g} (W/kg)
		NR n77(n78) SA	LTE Band 41(38)	5G NR DC_38A_n78
Head	Right Cheek	0.480	0.685	1.165
	Right Tilted	0.471	0.796	**1.267**
	Left Cheek	0.353	0.369	0.722
	Left Tilted	0.213	0.613	0.826
Body- worn	Front	0.341	0.236	0.625
	Back	0.447	0.328	0.785
Hotspot	Front	0.341	0.236	0.625
	Back	0.447	0.328	0.785
	Left	0.864	0.048	0.928
	Right	0.022	0.000	0.537
	Top	0.214	0.463	0.747
	Bottom	0.053	0.000	0.053

Position		Standalone SAR(W/kg)					Σ SAR_{1g} (W/kg)	
		1	2	3	4	5	1+2+3+5	1+3+4+5
		WWAN	2.4GWLAN MIMO	5GWLAN MIMO	BT	NFC		
Head	Right Cheek	1.165	0.221	0.102	0.014	0.000	1.488	1.281
	Right Tilted	1.267	0.151	0.172	0.008	0.000	**1.590**	1.447
	Left Cheek	0.722	0.397	0.258	0.015	0.000	1.377	0.995
	Left Tilted	0.826	0.316	0.327	0.019	0.000	1.469	1.172
Body-worn	Front	0.944	0.299	0.165	0.001	0.000	1.408	1.110
	Back	0.946	0.309	0.254	0.001	0.000	1.509	1.201
Hotspot	Front	0.944	0.299	0.165	0.001	0.000	1.408	1.110
	Back	0.946	0.309	0.254	0.001	0.000	1.509	1.201
	Left	1.082	0.435	0.000	0.002	0.000	1.517	1.084
	Right	1.183	0.077	0.100	0.000	0.000	1.360	1.283
	Top	0.899	0.299	0.165	0.006	0.000	1.345	1.070
	Bottom	0.488	0.309	0.254	0.000	0.000	0.488	0.742

➢ **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.

16.7 Measurement Uncertainty

The component of uncertainly may generally be categorized according to the methods used to evaluate them. The evaluation of uncertainly by the statistical analysis of a series of observations is termed a Type A evaluation of uncertainty. The evaluation of uncertainty by means other than the statistical analysis of a series of observation is termed a Type B evaluation of uncertainty. Each component of uncertainty, however evaluated, is represented by an estimated standard deviation, termed standard uncertainty, which is determined by the positive square root of the estimated variance.

A Type A evaluation of standard uncertainty may be based on any valid statistical method for treating data. This includes calculating the standard deviation of the mean of a series of independent observations; using the method of least squares to fit a curve to the data in order to estimate the parameter of the curve and their standard deviations; or carrying out an analysis of variance in order to identify and quantify random effects in certain kinds of measurement.

A Type B evaluation of standard uncertainty is typically based on scientific judgment using all of the relevant information available. These may include previous measurement data, experience, and knowledge of the behavior and properties of relevant materials and instruments, manufacture's specification, data provided in calibration reports and uncertainties assigned to reference data taken from handbooks. Broadly speaking, the uncertainty is either obtained from an outdoor source or obtained from an assumed distribution, such as the normal distribution, rectangular or triangular distributions indicated in below Table.

Uncertainty Distributions	Normal	Rectangular	Triangular	U-Shape
Multi-plying Factor	1/k(b)	$1/\sqrt{3}$	$1/\sqrt{6}$	$1/\sqrt{2}$

Standard Uncertainty for Assumed Distribution

The combined standard uncertainty of the measurement result represents the estimated standard deviation of the result. It is obtained by combining the individual standard uncertainties of both Type A and Type B evaluation using the usual "root-sum-squares" (RSS) methods of combining standard deviations by taking the positive square root of the estimated variances.

Expanded uncertainty is a measure of uncertainty that defines an interval about the measurement result within which the measured value is confidently believed to lie. It is obtained by multiplying the combined standard uncertainty by a coverage factor. Typically, the coverage factor ranges from 2 to 3. Using a coverage factor allows the true value of a measured quantity to be specified with a defined probability within the specified uncertainty range. For purpose of this document, a coverage factor two is used, which corresponds to confidence interval of about 95 %. The DASY uncertainty Budget is shown in the following tables.

Uncertainty Component	Section	Uncert. Value	Prob. Dist.	Div.	(C_i) (1 g)	(C_i) (10 g)	Std. Unc. (1 g)	Std. Unc. (10 g)	V_i
Measurement System									
Probe Calibration	E.2.1	±7.4%	N	1	1	1	±7.4%	±7.4%	∞
Axial Isotropy	E.2.2	±1.2%	R	$\sqrt{3}$	0.7	0.7	±0.49%	±0.49%	∞
Hemispherical Isotropy	E.2.2	±0.9%	R	$\sqrt{3}$	0.7	0.7	±0.36%	±0.36%	∞
Boundary Effects	E.2.3	±1.0%	R	$\sqrt{3}$	1	1	±0.58%	±0.58%	∞
Linearity	E.2.4	±0.9%	R	$\sqrt{3}$	1	1	±0.52%	±0.52%	∞
System Detection Limits	E.2.5	±0.25%	R	$\sqrt{3}$	1	1	±0.14%	±0.14%	∞
Readout Electronics	E.2.6	±0.3%	N	1	1	1	±0.3%	±0.3%	∞
Response Time	E.2.7	±0.8%	R	$\sqrt{3}$	1	1	±0.46%	±0.46%	∞
Integration Time	E.2.8	±2.6%	R	$\sqrt{3}$	1	1	±1.5%	±1.5%	∞
RF Ambient Noise	E.6.1	±3.0%	R	$\sqrt{3}$	1	1	±1.73%	±1.73%	∞
RF Ambient Reflections	E.6.1	±3.0%	R	$\sqrt{3}$	1	1	±1.73%	±1.73%	∞
Probe positioner mechanical tolerances	E.6.2	±0.4%	R	$\sqrt{3}$	1	1	±0.23%	±0.23%	∞
Probe positioning tolerance with respect to the phantom shell surface	E.6.3	±2.9%	R	$\sqrt{3}$	1	1	±1.68%	±1.68%	∞
Interpolation, extrapolation, and integration algorithm For max. SAR Evaluation.	E.5	±1.0%	R	$\sqrt{3}$	1	1	±0.58%	±0.58%	∞
Test Sample Related									
Device Positioning	E.4.2	±4.6%	N	1	1	1	±4.6%	±4.6%	M-1
Device Holder	E.4.1	±5.2%	N	1	1	1	±5.2%	±5.2%	M-1
Power Drift	6.6.2	±5.0%	R	$\sqrt{3}$	1	1	±2.89%	±2.89%	∞
Phantom and Setup									
Phantom Uncertainty	E.3.1	±4.0%	R	$\sqrt{3}$	1	1	±2.31%	±2.31%	∞
Liquid conductivity (measured value)	E.3.3	±3.33%	N	1	0.78	0.71	±2.6%	±2.6%	M
Liquid dielectric constant (measured value)	E.3.3	±3.25%	N	1	0.23	0.26	±0.75%	±0.85%	M
Liquid Conductivity - Temperature Uncertainty	E.3.4	±1.3%	R	$\sqrt{3}$	0.78	0.71	±0.59%	±0.53%	∞
Liquid Dielectric Constant - Temperature Uncertainty	E.3.4	±1.1%	R	$\sqrt{3}$	0.23	0.26	±0.15%	±0.17%	∞
Combined Standard Uncertainty (RSS)							±11.56%	±11.50%	
Expanded Uncertainty (95% Confidence Level, k = 2)							±23.11%	±23.0%	

Uncertainty Budget for frequency range 300 MHz to 3 GHz according to IEEE1528-2013

16.8 Measurement Conclusion

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

17 Reference

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[4]. SPEAG DASY52 System Handbook

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

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

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

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

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

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

Appendix A: Plots of SAR System Check

Test Laboratory: JYTSZ Date: 03.22.2022

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

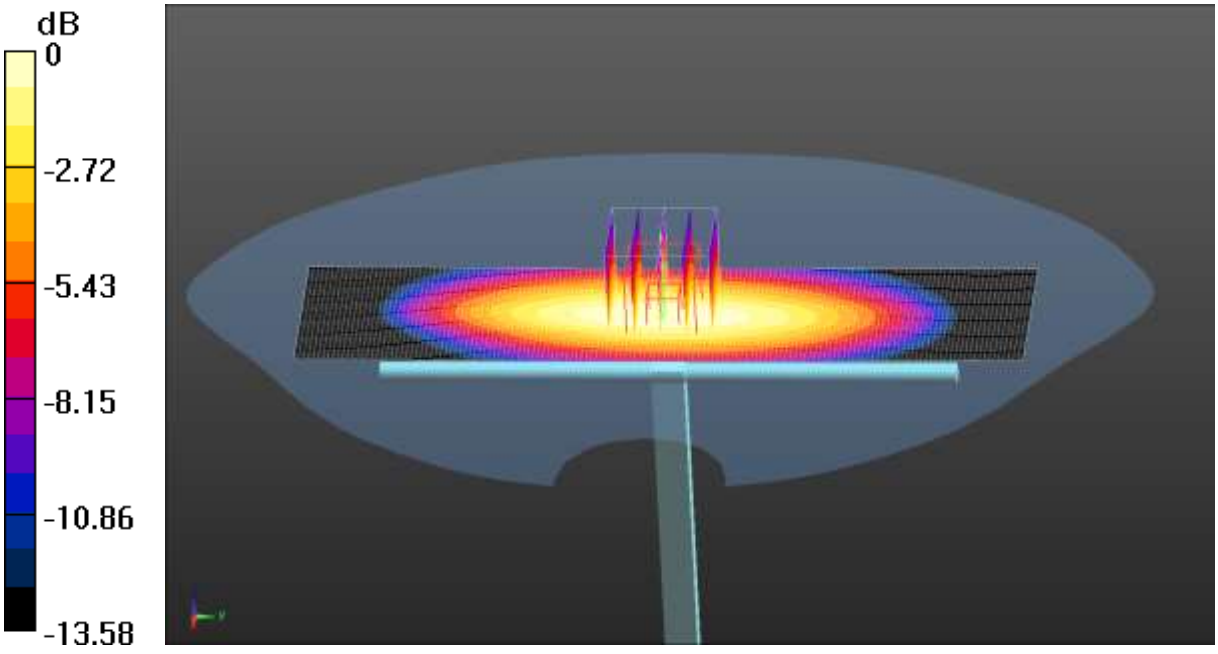
Communication System: UID 0, CW (0); Frequency: 750 MHz;Duty Cycle: 1:1
Medium parameters used: f = 750 MHz; σ = 0.876 S/m; ε_r = 42.428; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 – SN7601; ConvF(10.58, 10.58, 10.58) @ 750 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- 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 Frequency750 MHz Head Tissue/d=15mm, Pin=80 mW, dist=1.4mm (EX-Probe)/Area Scan (41x151x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.931 W/kg

System Performance Check at Frequency750 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 = 33.52 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 1.01 W/kg
SAR(1 g) = 0.668 W/kg; SAR(10 g) = 0.451 W/kg
Smallest distance from peaks to all points 3 dB below = 16 mm
Ratio of SAR at M2 to SAR at M1 = 62.4%
Maximum value of SAR (measured) = 0.942 W/kg



0 dB = 0.942 W/kg = -0.20 dBW/kg

Test Laboratory: JYTSZ Date: 03.23.2022

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

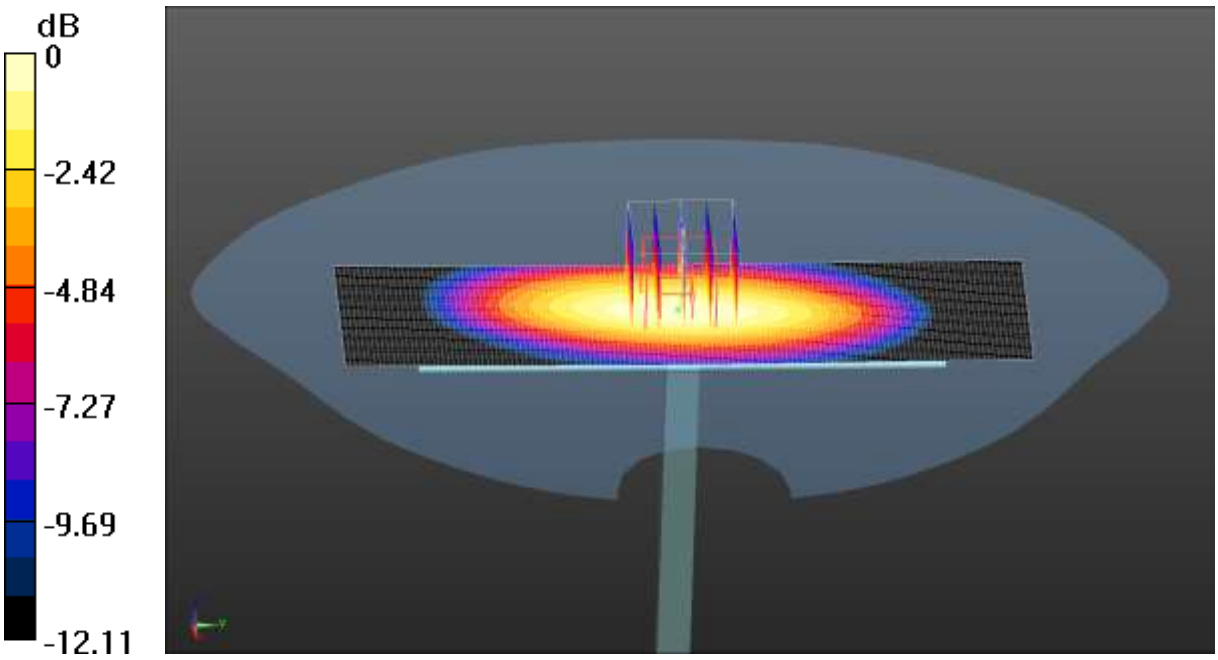
Communication System: UID 0, CW (0); Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used: f = 835 MHz; σ = 0.918 S/m; ε_r = 42.123; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 – SN7601; ConvF(10.20, 10.20, 10.20) @ 835 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- 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)/Area Scan (41x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.06W/kg

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 = 35.10 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 1.23 W/kg
SAR(1 g) = 0.785 W/kg; SAR(10 g) = 0.526 W/kg
Smallest distance from peaks to all points 3 dB below = 16.3 mm
Ratio of SAR at M2 to SAR at M1 = 63.4%
Maximum value of SAR (measured) = 1.08 W/kg



0 dB = 1.08 W/kg = 0.33 dBW/kg

Test Laboratory: JYTSZ Date: 03.27.2022

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

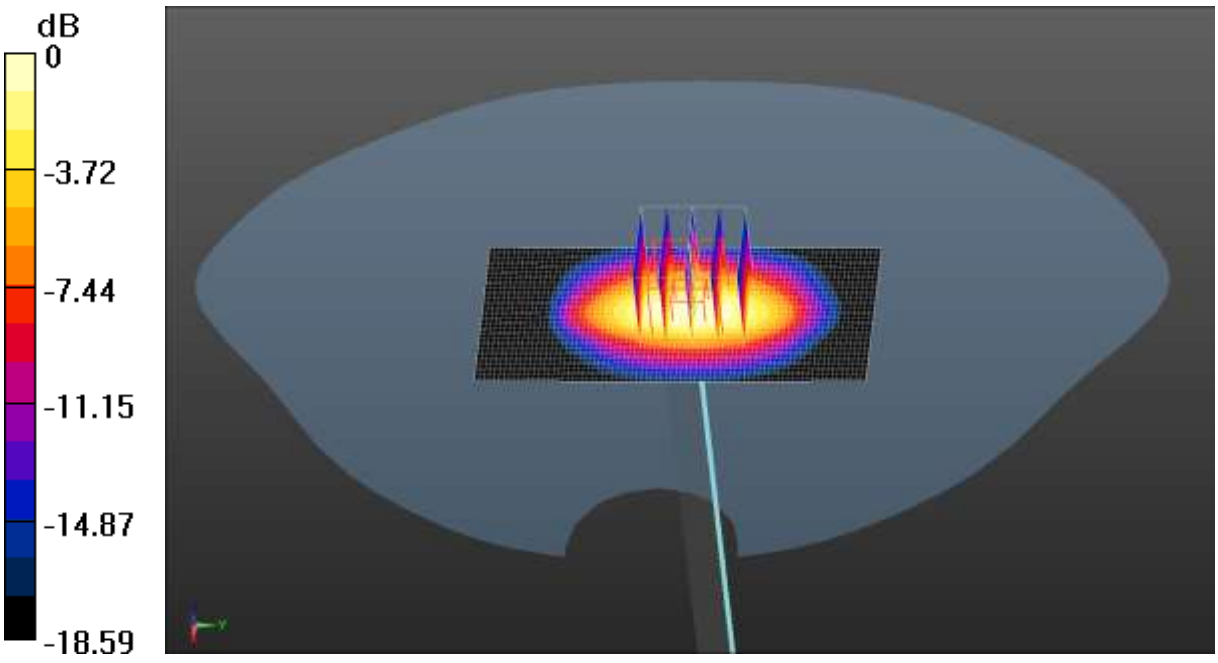
Communication System: UID 0, CW (0); Frequency: 1750 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1750 MHz; σ = 1.318 S/m; ε_r = 40.414; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 – SN7601; ConvF(8.62, 8.62, 8.62) @ 1750 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- 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 Frequency1750 MHz Head Tissue/d=10mm, Pin=40 mW, dist=1.4mm (EX-Probe)/Area Scan (41x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 2.38 W/kg

System Performance Check at Frequency1750 MHz Head Tissue/d=10mm, Pin=40 mW, dist=1.4mm (EX-Probe)/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 41.83 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 2.88 W/kg
SAR(1 g) = 1.55 W/kg; SAR(10 g) = 0.787 W/kg
Smallest distance from peaks to all points 3 dB below = 9.6 mm
Ratio of SAR at M2 to SAR at M1 = 52.3%
Maximum value of SAR (measured) = 2.36 W/kg



0 dB = 2.36 W/kg = 3.73 dBW/kg

Test Laboratory: JYTSZ Date: 03.30.2022

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

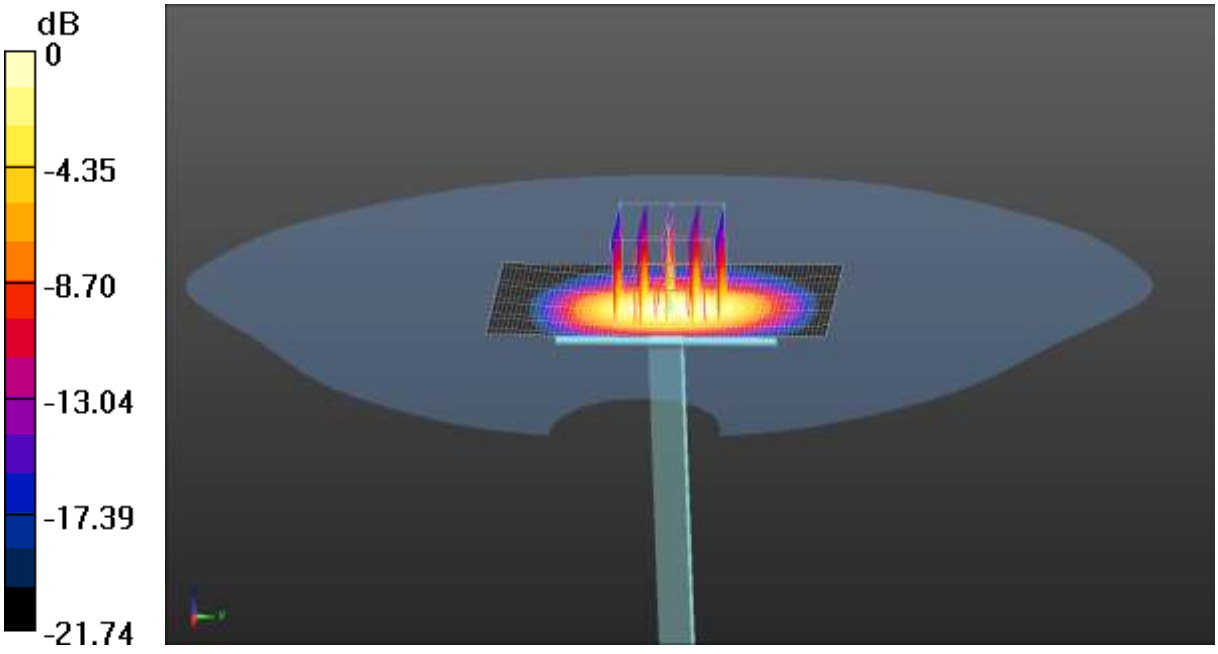
Communication System: UID 0, CW (0); Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.392 S/m; ε_r = 40.453; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 – SN7601; ConvF(8.37, 8.37, 8.37) @ 1900 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- 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)/Area Scan (41x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 2.70 W/kg

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 = 37.24 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 3.22 W/kg
SAR(1 g) = 1.61 W/kg; SAR(10 g) = 0.868 W/kg
Smallest distance from peaks to all points 3 dB below = 9.6 mm
Ratio of SAR at M2 to SAR at M1 = 51.4%
Maximum value of SAR (measured) = 2.65 W/kg



0 dB = 2.65W/kg = 4.23 dBW/kg

Test Laboratory: JYTSZ Date: 04.03.2022

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

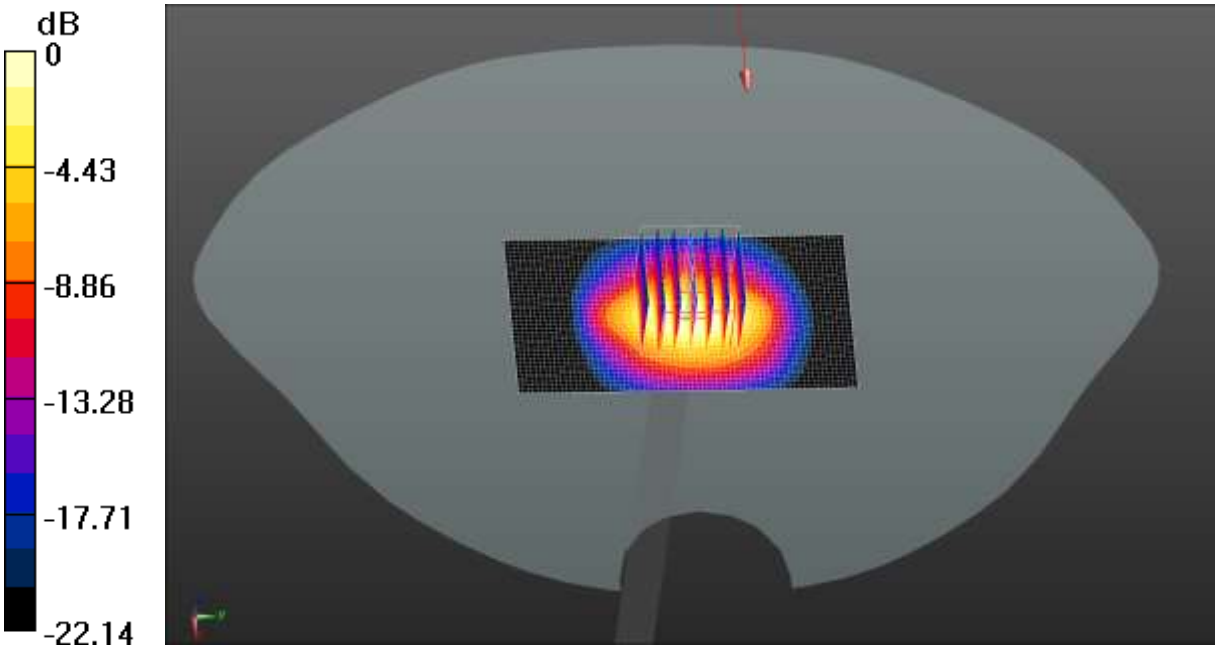
Communication System: UID 0, CW (0); Frequency: 2450 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2450 MHz; σ = 1.752 S/m; ε_r = 39.441; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 – SN7601; ConvF(7.74, 7.74, 7.74) @ 2450 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- 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 Frequency2450 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) = 3.94 W/kg

System Performance Check at Frequency2450 MHz Head Tissue/d=10mm, Pin=40 mW, dist=1.4mm (EX-Probe)/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 45.07 V/m; Power Drift = -0.14 dB
Peak SAR (extrapolated) = 4.55 W/kg
SAR(1 g) = 2.07 W/kg; SAR(10 g) = 1.03 W/kg
Smallest distance from peaks to all points 3 dB below = 9 mm
Ratio of SAR at M2 to SAR at M1 = 48.2%
Maximum value of SAR (measured) = 3.64W/kg



0 dB = 3.64 W/kg = 5.61 dBW/kg

Test Laboratory: JYTSZ Date: 04.06.2022

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

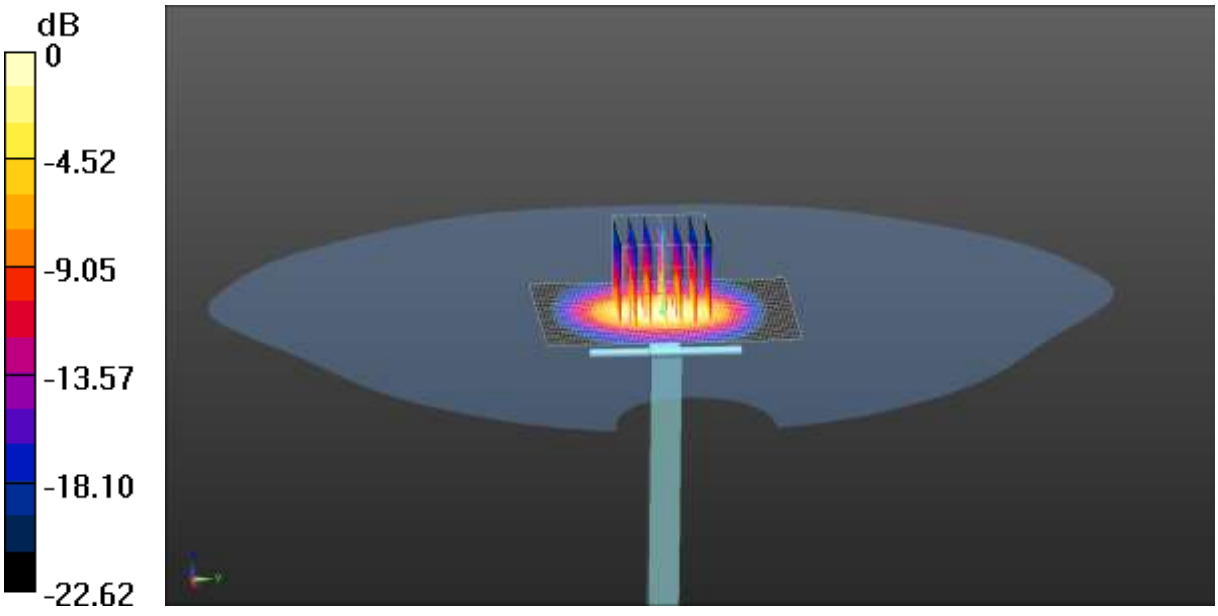
Communication System: UID 0, CW (0); Frequency: 2600 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2600 MHz; σ = 1.878 S/m; ε_r = 39.541; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 – SN7601; ConvF(7.49, 7.49, 7.49) @ 2600 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- 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)/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 47.47 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 4.93 W/kg
SAR(1 g) = 2.15 W/kg; SAR(10 g) = 1.07 W/kg
Smallest distance from peaks to all points 3 dB below = 8.2 mm
Ratio of SAR at M2 to SAR at M1 = 46.2%
Maximum value of SAR (measured) = 3.92 W/kg

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) = 4.11W/kg



0 dB = 4.11 W/kg = 6.14 dBW/kg

Test Laboratory: JYTSZ Date: 04.14.2022

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

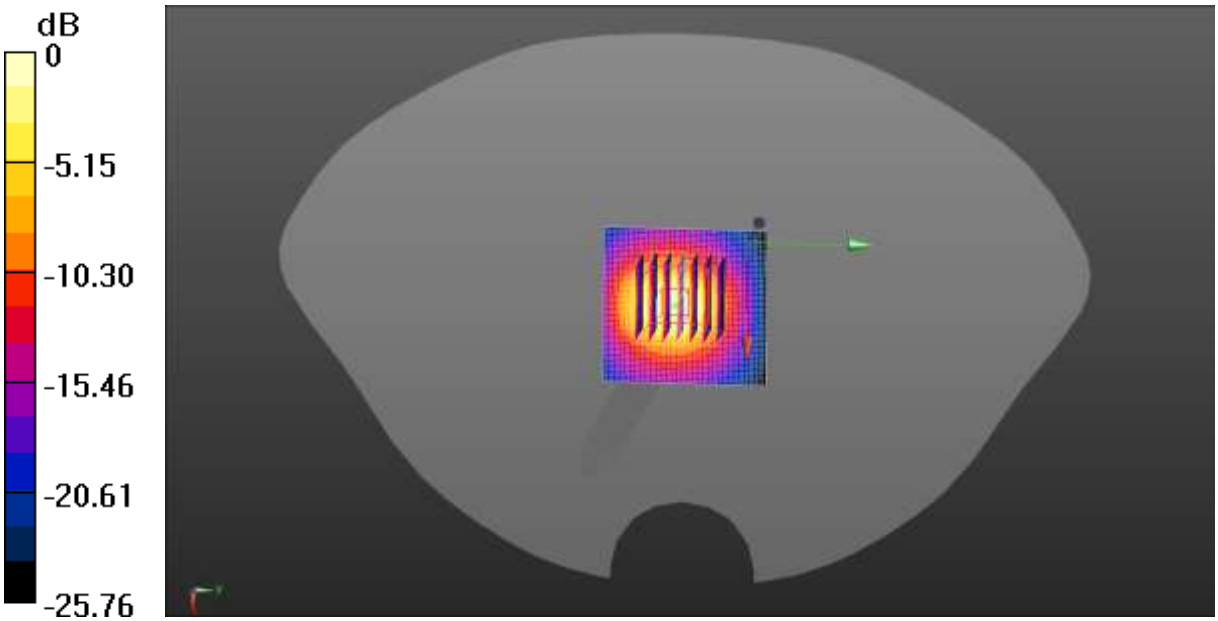
Communication System: UID 0, CW (0); Frequency: 3500 MHz;Duty Cycle: 1:1
Medium parameters used: f = 3500 MHz; σ = 2.94 S/m; ε_r = 37.624; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 – SN3826; ConvF(6.61, 6.61, 6.61) @ 3500 MHz; Calibrated: 07.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- 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 Frequencies above 3500MHz/d=10mm, Pin=40 mW, dist=1.4mm (EX-Probe)/Zoom Scan (7x7x7) (7x7x8)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=4mm
Reference Value = 46.18 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 6.6 W/kg
SAR(1 g) = 2.52 W/kg; SAR(10 g) = 0.966 W/kg
Smallest distance from peaks to all points 3 dB below = 8.5 mm
Ratio of SAR at M2 to SAR at M1 = 45.6%
Maximum value of SAR (measured) = 4.6 W/kg

System Performance Check at Frequencies above 3500MHz/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) = 4.8 W/kg



0 dB = 4.8 W/kg = 6.81 dBW/kg

Test Laboratory: JYTSZ Date: 04.19.2022

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

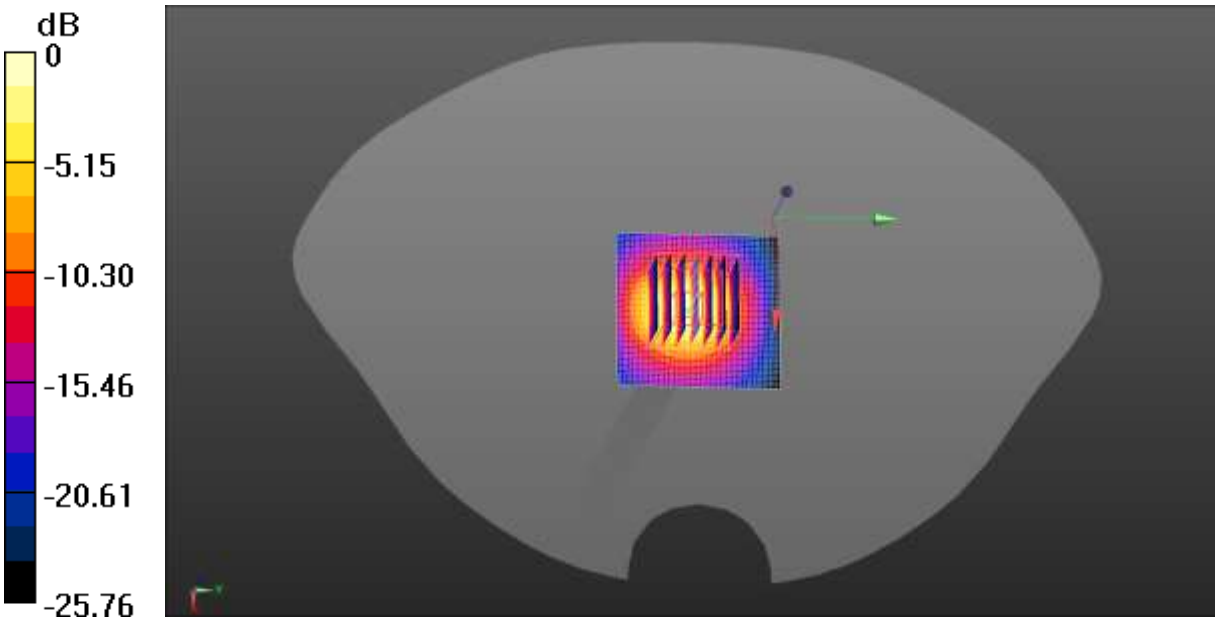
Communication System: UID 0, CW (0); Frequency: 3700 MHz;Duty Cycle: 1:1
Medium parameters used: f = 3700 MHz; σ = 3.05 S/m; ε_r = 37.18; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 – SN3826; ConvF(6.31, 6.31, 6.31) @ 3700 MHz; Calibrated: 07.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- 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 Frequencies above 3700MHz/d=10mm, Pin=40 mW, dist=1.4mm (EX-Probe)/Zoom Scan (7x7x7) (7x7x8)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=4mm
Reference Value = 47.08 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 6.81 W/kg
SAR(1 g) = 2.63 W/kg; SAR(10 g) = 0.974 W/kg
Smallest distance from peaks to all points 3 dB below = 7.5 mm
Ratio of SAR at M2 to SAR at M1 = 41.6%
Maximum value of SAR (measured) = 4.81 W/kg

System Performance Check at Frequencies above 3700MHz/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) = 4.92 W/kg



0 dB = 4.92 W/kg = 6.92 dBW/kg

Test Laboratory: JYTSZ Date: 04.19.2022

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

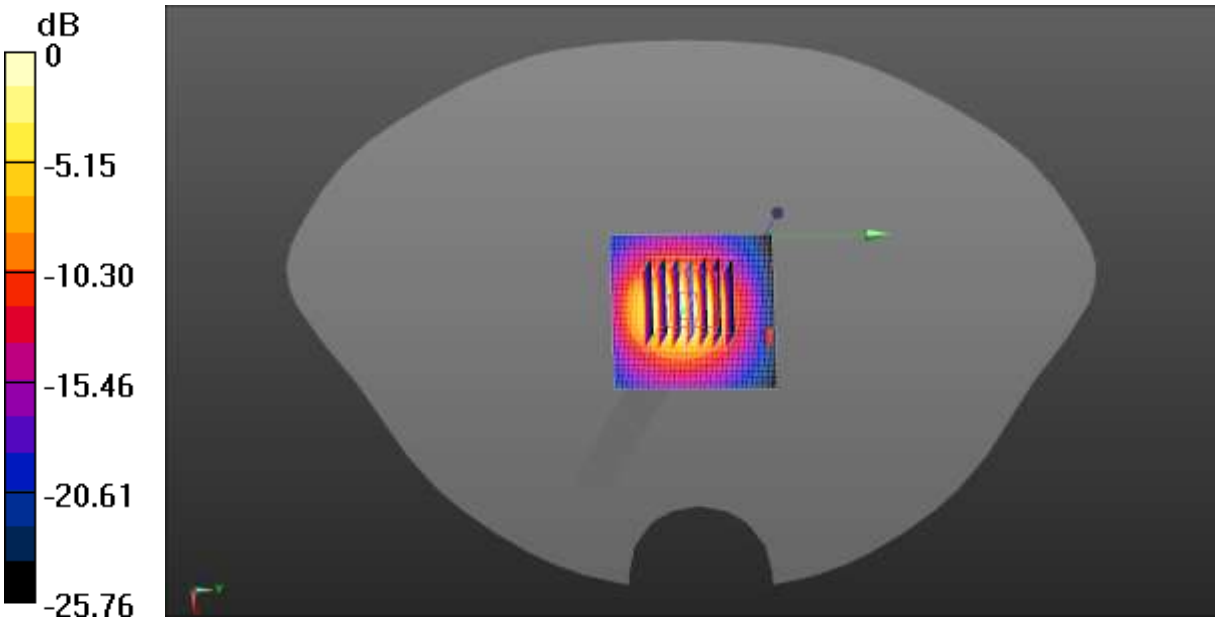
Communication System: UID 0, CW (0); Frequency: 3900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 3900 MHz; σ = 3.40 S/m; ε_r = 36.952; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 – SN3826; ConvF(6.21, 6.21, 6.21) @ 3900 MHz; Calibrated: 07.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- 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 Frequencies above 3900MHz/d=10mm, Pin=40 mW, dist=1.4mm (EX-Probe)/Zoom Scan (7x7x7) (7x7x8)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=4mm
Reference Value = 59.44 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 6.95 W/kg
SAR(1 g) = 2.84 W/kg; SAR(10 g) = 0.980 W/kg
Smallest distance from peaks to all points 3 dB below = 7.77 mm
Ratio of SAR at M2 to SAR at M1 = 36.58%
Maximum value of SAR (measured) = 5.10 W/kg

System Performance Check at Frequencies above 3900MHz/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) = 5.08 W/kg



0 dB = 5.08 W/kg = 7.06 dBW/kg

Test Laboratory: JYTSZ Date: 04.08.2022

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

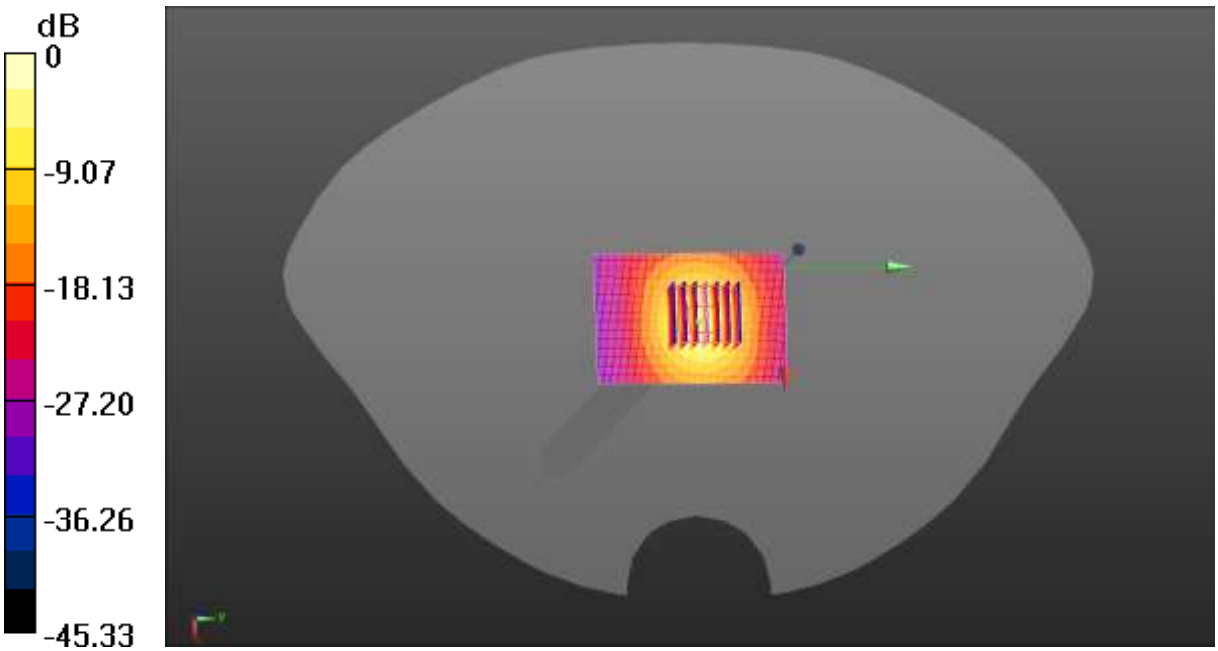
Communication System: UID 0, CW (0); Frequency: 5300 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5300 MHz; σ = 4.893 S/m; ε_r = 34.758; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 – SN7601; ConvF(5.35, 5.35, 5.35) @ 5300 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- 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 Frequency5300 MHz Head Tissue/d=10mm, Pin=40 mW, dist=1.4mm (EX-Probe)/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 42.35 V/m; Power Drift = -0.17 dB
Peak SAR (extrapolated) = 12.7 W/kg
SAR(1 g) = 3.05 W/kg; SAR(10 g) = 0.915 W/kg
Smallest distance from peaks to all points 3 dB below = 7.2 mm
Ratio of SAR at M2 to SAR at M1 = 53.3%
Maximum value of SAR (measured) = 7.67 W/kg

System Performance Check at Frequency5300 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) = 7.94 W/kg



0 dB = 7.94 W/kg = 9.00 dBW/kg

Test Laboratory: JYTSZ Date: 04.10.2022

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

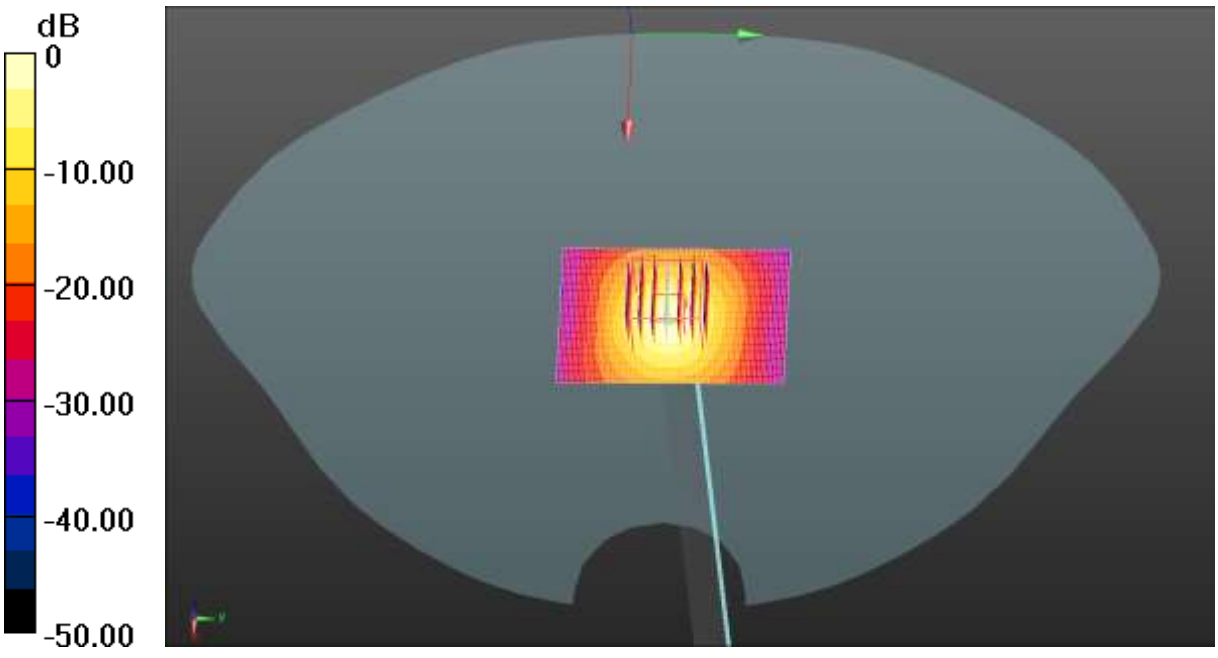
Communication System: UID 0, CW (0); Frequency: 5600 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5600 MHz; σ = 5.08 S/m; ε_r = 34.103; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 – SN7601; ConvF(4.96, 4.96, 4.96) @ 5600 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- 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 Frequency5600 MHz Head Tissue/d=10mm, Pin=40 mW, dist=1.4mm (EX-Probe)/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 44.01 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 15.1 W/kg
SAR(1 g) = 3.33 W/kg; SAR(10 g) = 0.942 W/kg
Smallest distance from peaks to all points 3 dB below = 7.2 mm
Ratio of SAR at M2 to SAR at M1 = 50.8%
Maximum value of SAR (measured) = 8.96 W/kg

System Performance Check at Frequency5600 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) = 9.33 W/kg



0 dB = 9.33 W/kg = 9.70 dBW/kg

Test Laboratory: JYTSZ Date: 04.11.2022

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

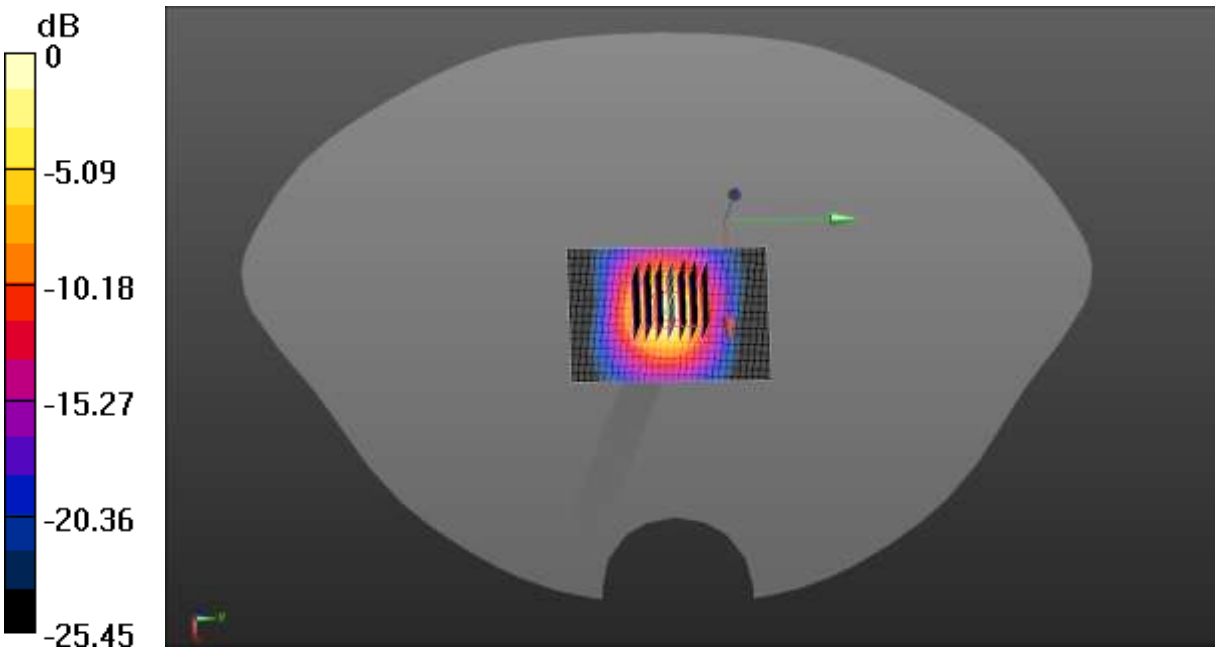
Communication System: UID 0, CW (0); Frequency: 5800 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5800 MHz; σ = 5.37 S/m; ε_r = 34.277; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 – SN7601; ConvF(5.04, 5.04, 5.04) @ 5800 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- 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 Frequency5800 MHz Head Tissue/d=10mm, Pin=80 mW, dist=1.4mm (EX-Probe)/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 43.57 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 15.2 W/kg
SAR(1 g) = 3.24 W/kg; SAR(10 g) = 0.893 W/kg
Smallest distance from peaks to all points 3 dB below = 7.4 mm
Ratio of SAR at M2 to SAR at M1 = 17.9%
Maximum value of SAR (measured) = 8.62 W/kg

System Performance Check at Frequency5800 MHz Head Tissue/d=10mm, Pin=80 mW, dist=1.4mm (EX-Probe)/Area Scan (51x71x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 8.86 W/kg



0 dB = 8.86 W/kg = 9.47 dBW/kg

Appendix B: Plots of SAR Test Data

Test Laboratory: JYTSZ Date: 03.23.2022

DUT: 5G Digital Mobile Phone; Type: SHARK KTUS-H0; Serial: 1#

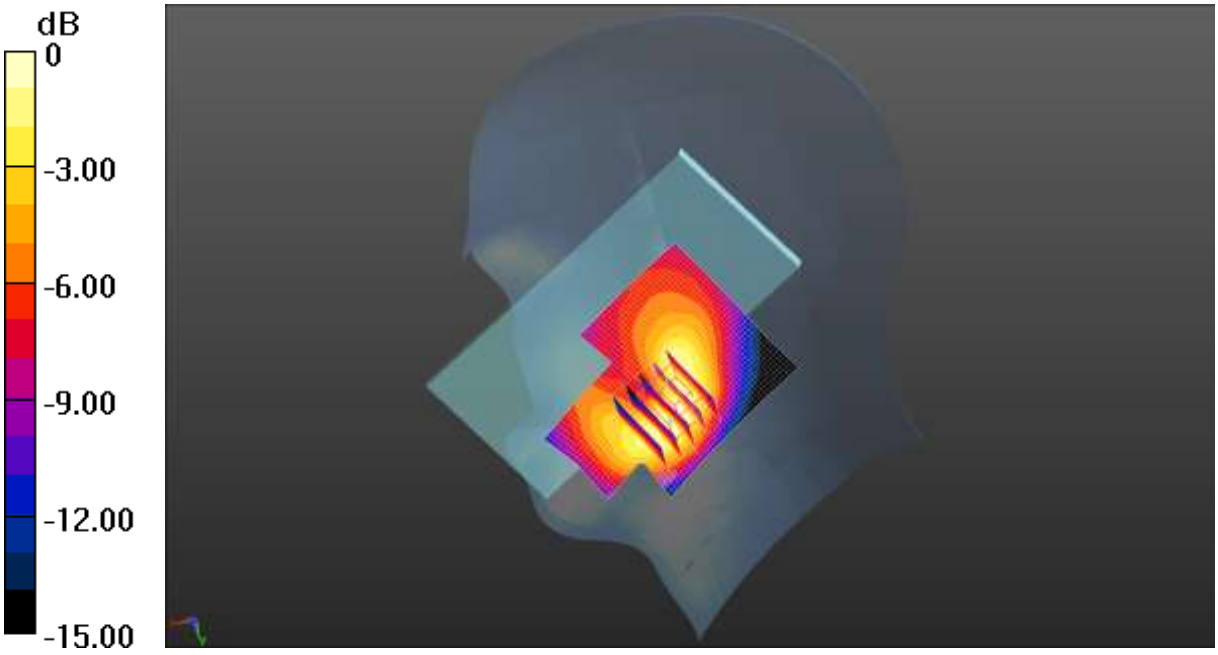
Communication System: UID 0, GSM (0); Frequency: 848.8 MHz;Duty Cycle: 1:8.30042
Medium parameters used (interpolated): f = 848.8 MHz; σ = 0.93 S/m; ε_r = 42.11; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7601; ConvF(10.2, 10.2, 10.2) @ 848.8 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- 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/High Channel/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.953 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 1.22 W/kg
SAR(1 g) = 0.639 W/kg; SAR(10 g) = 0.342 W/kg
Smallest distance from peaks to all points 3 dB below = 8.2 mm
Ratio of SAR at M2 to SAR at M1 = 53.7%
Maximum value of SAR (measured) = 0.983 W/kg

GSM 850 Right Cheek/High Channel/Area Scan (41x51x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.684 W/kg



0 dB = 0.684 W/kg = -1.65 dBW/kg

Test Laboratory: JYTSZ Date: 03.30.2022

DUT: 5G Digital Mobile Phone; Type: SHARK KTUS-H0; Serial: 1#

Communication System: UID 0, GSM (0); Frequency: 1880 MHz;Duty Cycle: 1:8.30042
Medium parameters used: f = 1880 MHz; σ = 1.386 S/m; ε_r = 40.46; ρ = 1000 kg/m^3
Phantom section: Right Section

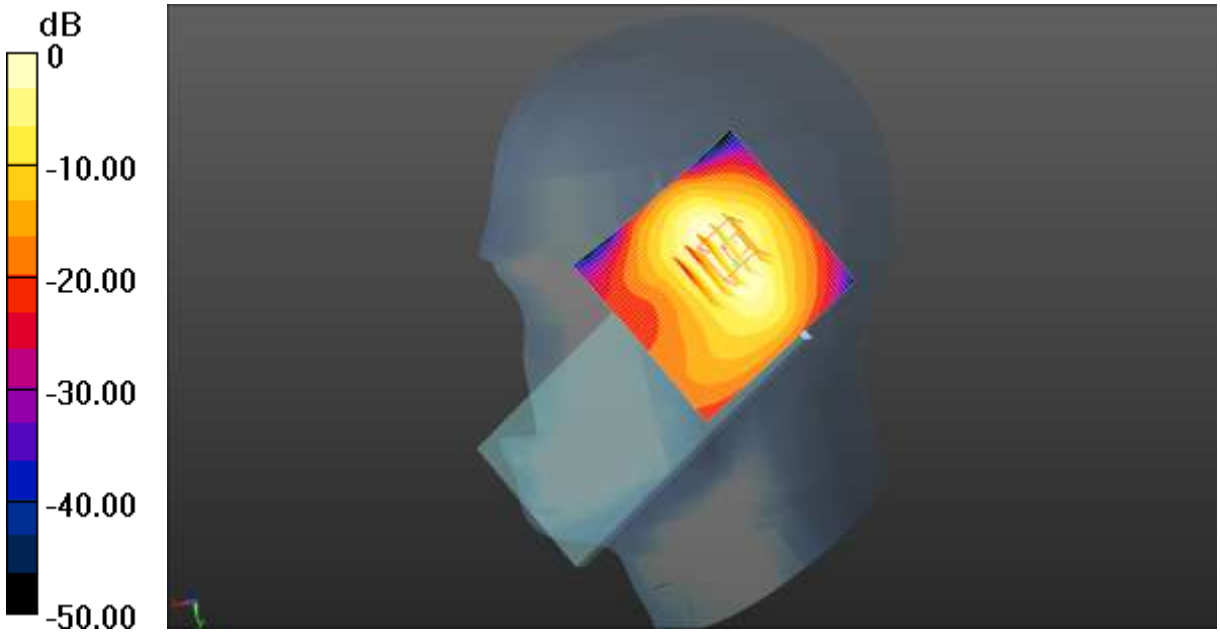
DASY5 Configuration:

- Probe: EX3DV4 - SN7601; ConvF(8.37, 8.37, 8.37) @ 1880 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- 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/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 20.25 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 1.35 W/kg
SAR(1 g) = 0.607 W/kg; SAR(10 g) = 0.275 W/kg
Smallest distance from peaks to all points 3 dB below = 6.4 mm
Ratio of SAR at M2 to SAR at M1 = 46.7%
Maximum value of SAR (measured) = 1.09 W/kg

GSM 1900 Right Tilted/Middle Channel/Area Scan (51x51x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.662 W/kg



0 dB = 0.662 W/kg = -1.79 dBW/kg

Test Laboratory: JYTSZ Date: 03.23.2022

DUT: 5G Digital Mobile Phone; Type: SHARK KTUS-H0; Serial: 1#

Communication System: UID 0, UMTS-FDD(WCDMA) (0); Frequency: 826.4 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 826.4 MHz; σ = 0.93 S/m; ε_r = 42.11; ρ = 1000 kg/m^3
Phantom section: Right Section

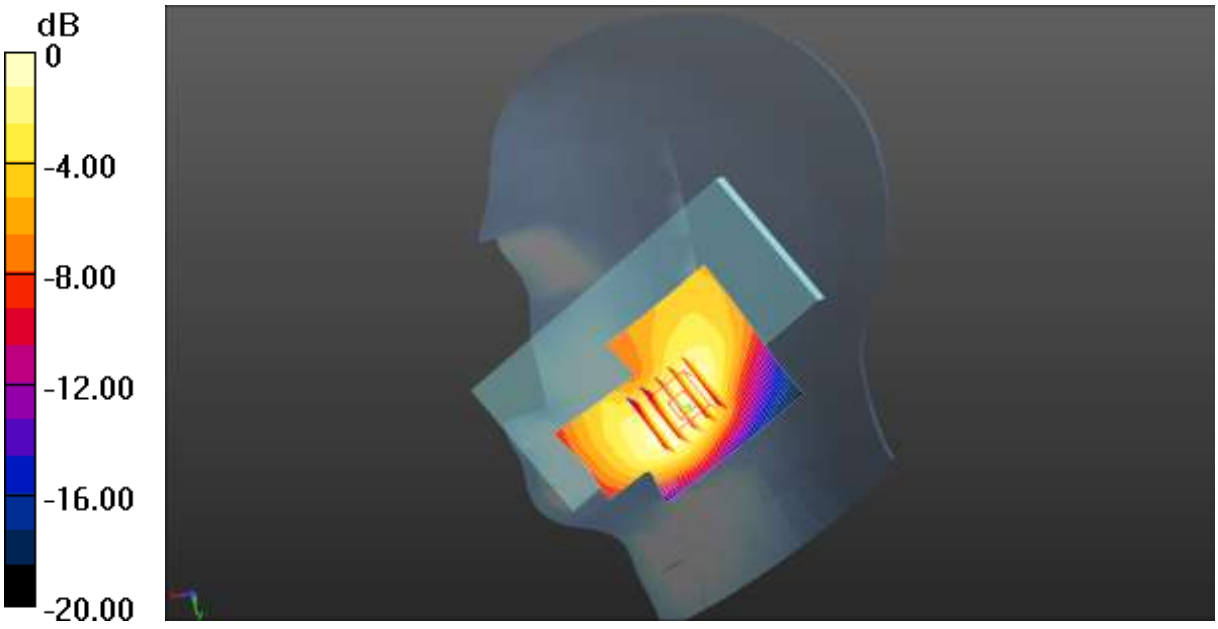
DASY5 Configuration:

- Probe: EX3DV4 - SN7601; ConvF(10.2, 10.2, 10.2) @ 826.4 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- 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/Low Channel/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.220 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 0.890 W/kg
SAR(1 g) = 0.501 W/kg; SAR(10 g) = 0.292 W/kg
Smallest distance from peaks to all points 3 dB below = 9.6 mm
Ratio of SAR at M2 to SAR at M1 = 61.4%
Maximum value of SAR (measured) = 0.708 W/kg

WCDMA 850 Right Cheek/Low Channel/Area Scan (41x51x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.553 W/kg



0 dB = 0.553 W/kg = -2.57 dBW/kg

Test Laboratory: JYTSZ Date: 03.27.2022

DUT: 5G Digital Mobile Phone; Type: SHARK KTUS-H0; Serial: 1#

Communication System: UID 0, UMTS-FDD(WCDMA) (0); Frequency: 1752.6 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1752.6 MHz; σ = 1.307 S/m; ε_r = 40.415; ρ = 1000 kg/m^3
Phantom section: Right Section

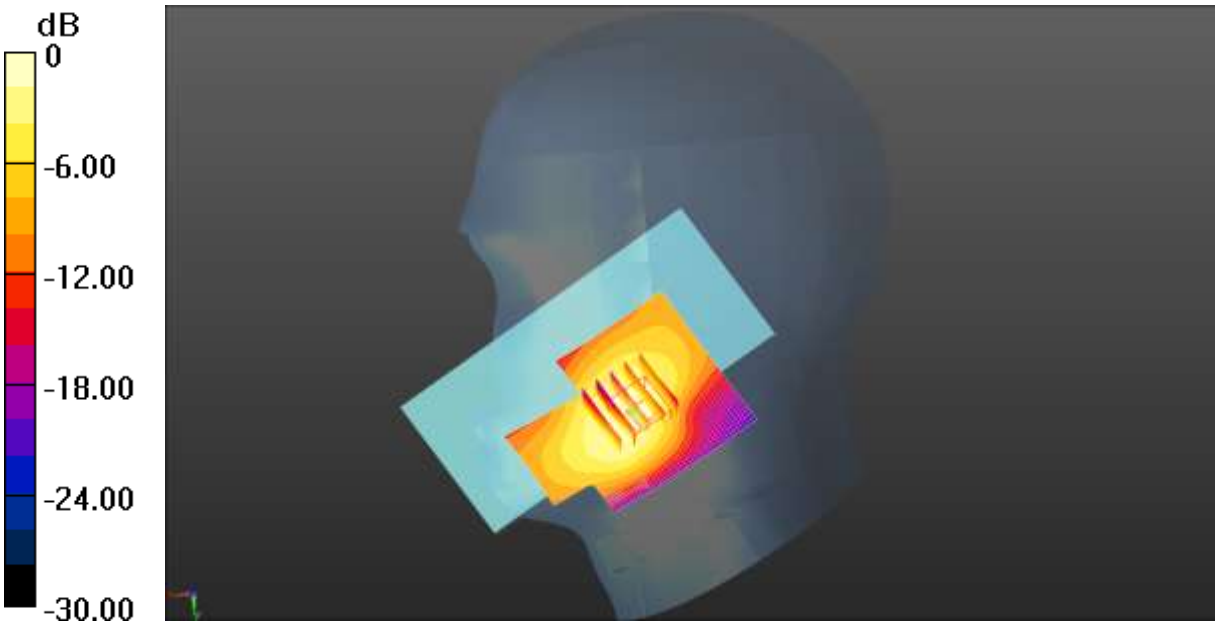
DASY5 Configuration:

- Probe: EX3DV4 - SN7601; ConvF(8.62, 8.62, 8.62) @ 1752.6 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

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

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.531 V/m; Power Drift = 0.16 dB
Peak SAR (extrapolated) = 1.05 W/kg
SAR(1 g) = 0.618 W/kg; SAR(10 g) = 0.345 W/kg
Smallest distance from peaks to all points 3 dB below = 8.9 mm
Ratio of SAR at M2 to SAR at M1 = 62.5%
Maximum value of SAR (measured) = 0.882 W/kg

WCDMA 1700 Right Cheek/High Channel/Area Scan (41x51x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.960 W/kg



0 dB = 0.960 W/kg = -0.18 dBW/kg

Test Laboratory: JYTSZ Date: 03.30.2022

DUT: 5G Digital Mobile Phone; Type: SHARK KTUS-H0; Serial: 1#

Communication System: UID 0, UMTS-FDD(WCDMA) (0); Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.383 S/m; ε_r = 40.202; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY5 Configuration:

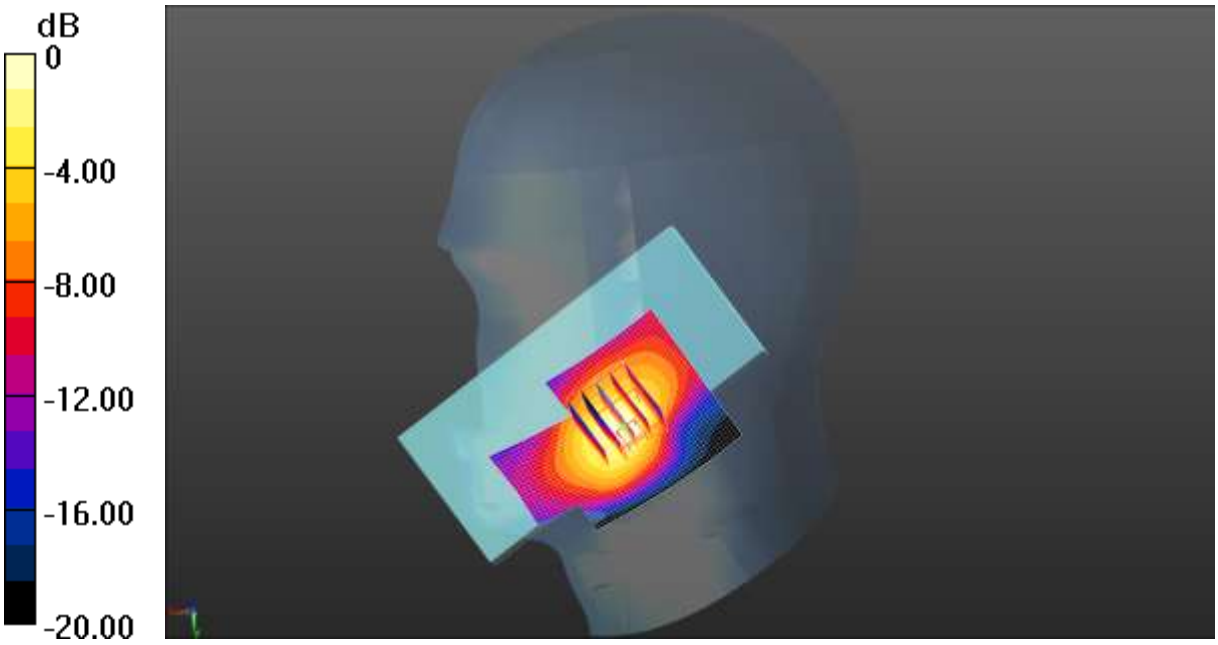
- Probe: EX3DV4 - SN7601; ConvF(8.37, 8.37, 8.37) @ 1880 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

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

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.178 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 1.29 W/kg
SAR(1 g) = 0.700 W/kg; SAR(10 g) = 0.366 W/kg
Smallest distance from peaks to all points 3 dB below = 8.1 mm
Ratio of SAR at M2 to SAR at M1 = 57.3%
Maximum value of SAR (measured) = 1.10 W/kg

WCDMA 1900 Right Cheek/Middle Channel/Area Scan (41x51x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.10 W/kg



0 dB = 1.10 W/kg = 0.41 dBW/kg

Test Laboratory: JYTSZ Date: 03.30.2022

DUT: 5G Digital Mobile Phone; Type: SHARK KTUS-H0; Serial: 1#

Communication System: UID 0, LTE-Fdd(USA) 1RB QPSK (0); Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.383 S/m; ε_r = 40.202; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY5 Configuration:

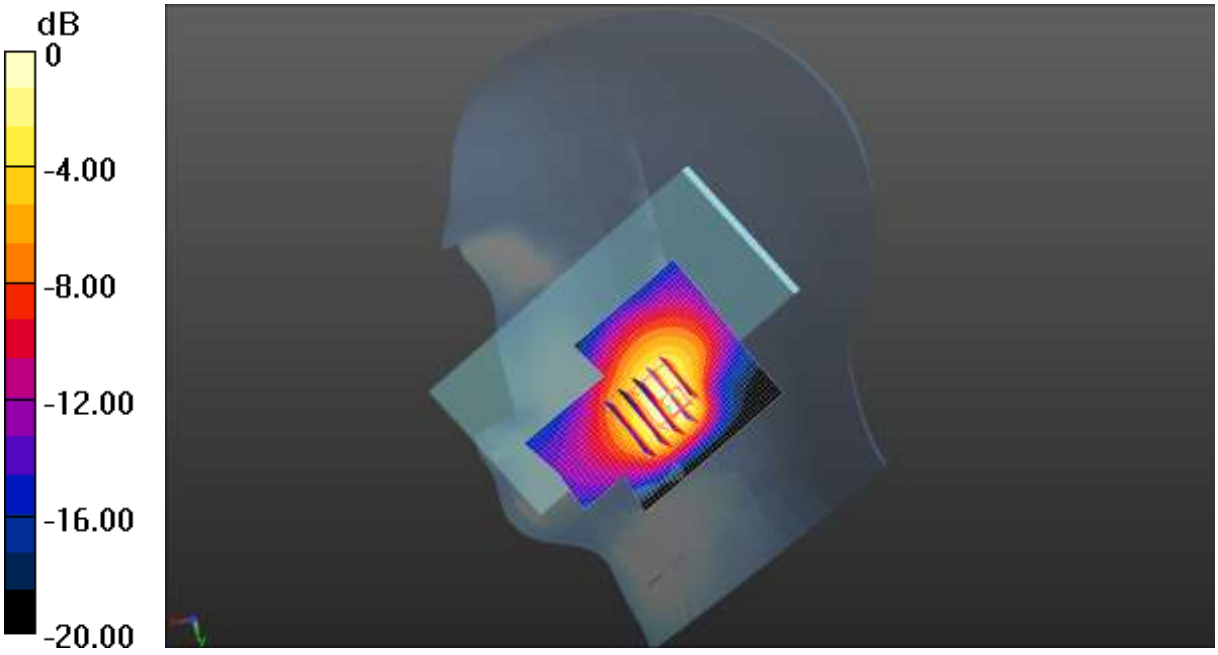
- Probe: EX3DV4 - SN7601; ConvF(8.37, 8.37, 8.37) @ 1880 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

LTE Band 2 1RB(20MHz) Right Cheek/Middle Channel/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.010 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 1.53 W/kg
SAR(1 g) = 0.742 W/kg; SAR(10 g) = 0.350 W/kg
Smallest distance from peaks to all points 3 dB below = 6.7 mm
Ratio of SAR at M2 to SAR at M1 = 51.8%
Maximum value of SAR (measured) = 1.28 W/kg

LTE Band 2 1RB(20MHz) Right Cheek/Middle Channel/Area Scan (41x51x1):

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



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

Test Laboratory: JYTSZ Date: 03.27.2022

DUT: 5G Digital Mobile Phone; Type: SHARK KTUS-H0; Serial: 1#

Communication System: UID 0, LTE-Fdd(USA) 1RB QPSK (0); Frequency: 1732.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.307 S/m; ε_r = 40.415; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY5 Configuration:

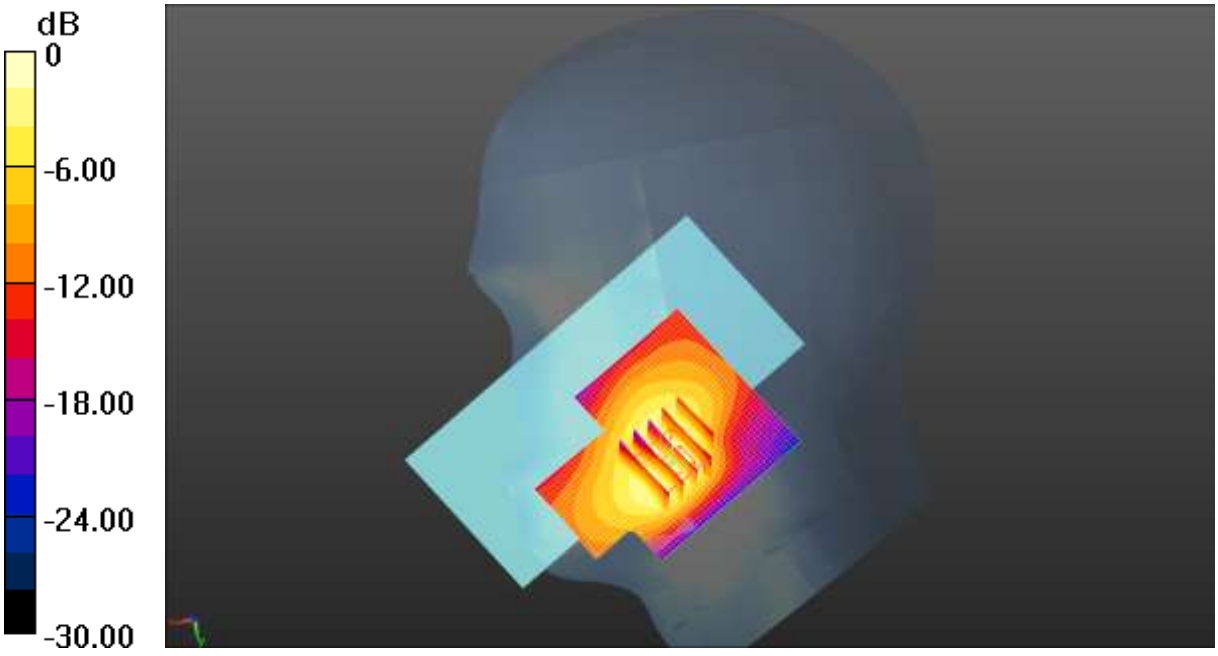
- Probe: EX3DV4 - SN7601; ConvF(8.62, 8.62, 8.62) @ 1732.5 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

LTE Band 4 1RB(20MHz) Right Cheek/Middle Channel/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.395 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 1.64 W/kg
SAR(1 g) = 0.831 W/kg; SAR(10 g) = 0.418 W/kg
Smallest distance from peaks to all points 3 dB below = 6.7 mm
Ratio of SAR at M2 to SAR at M1 = 49.9%
Maximum value of SAR (measured) = 1.37 W/kg

LTE Band 4 1RB(20MHz) Right Cheek/Middle Channel/Area Scan (41x51x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.17 W/kg



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

Test Laboratory: JYTSZ Date: 04.06.2022

DUT: 5G Digital Mobile Phone; Type: SHARK KTUS-H0; Serial: 1#

Communication System: UID 0, LTE-Fdd(USA) 1RB QPSK (0); Frequency: 2560 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2560 MHz; σ = 1.851 S/m; ε_r = 39.548; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY5 Configuration:

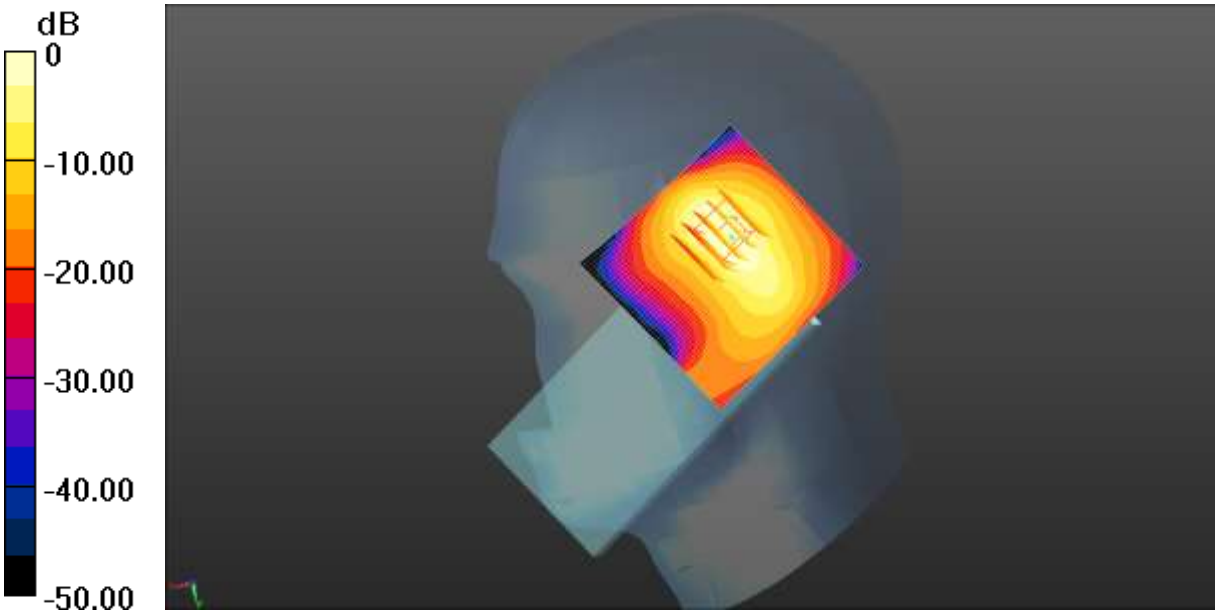
- Probe: EX3DV4 - SN7601; ConvF(7.74, 7.74, 7.74) @ 2560 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

LTE Band 7 1RB(20MHz) Right Tilted/High Channel/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.50 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 1.12 W/kg
SAR(1 g) = 0.494 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 = 44.3%
Maximum value of SAR (measured) = 0.768 W/kg

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) = 0.647 W/kg



0 dB = 0.647 W/kg = -1.89 dBW/kg

Test Laboratory: JYTSZ Date: 03.22.2022

DUT: 5G Digital Mobile Phone; Type: SHARK KTUS-H0; Serial: 1#

Communication System: UID 0, LTE-Fdd(USA) 1RB QPSK (0); Frequency: 704 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 704 MHz; σ = 0.889 S/m; ε_r = 42.417; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY5 Configuration:

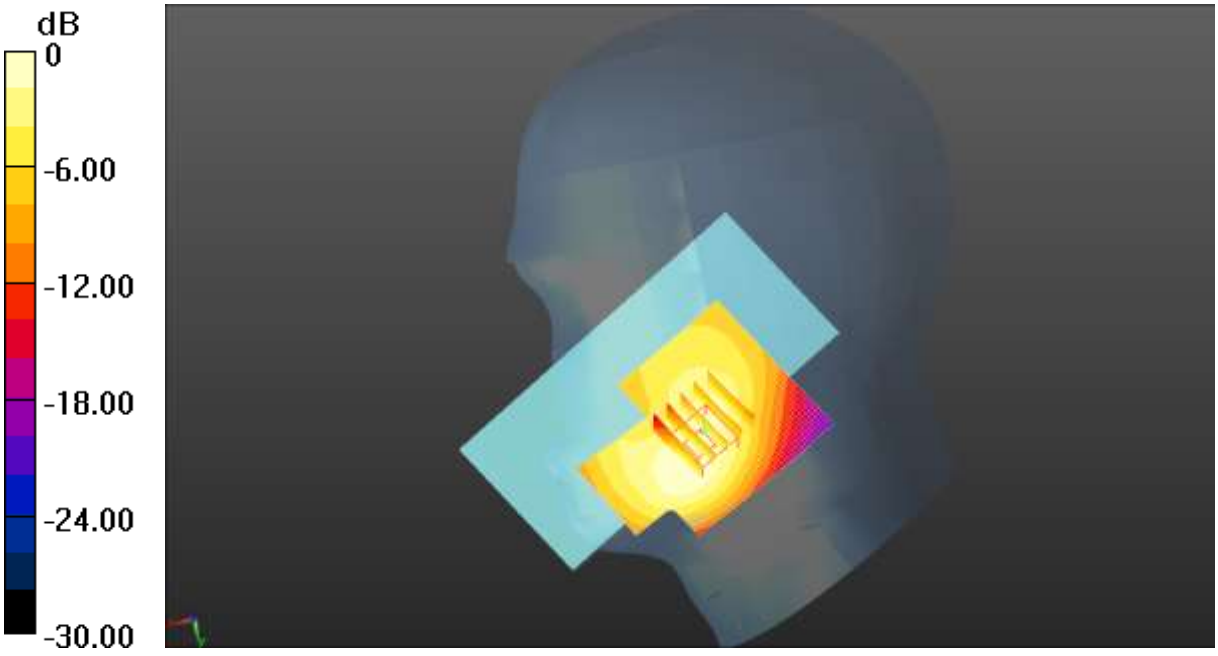
- Probe: EX3DV4 - SN7601; ConvF(10.58, 10.58, 10.58) @ 704 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

LTE Band 12 1RB(10MHz) Right Cheek/Low Channel/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.120 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 0.630 W/kg
SAR(1 g) = 0.342 W/kg; SAR(10 g) = 0.200 W/kg
Smallest distance from peaks to all points 3 dB below = 7.3 mm
Ratio of SAR at M2 to SAR at M1 = 58.5%
Maximum value of SAR (measured) = 0.484 W/kg

LTE Band 12 1RB(10MHz) Right Cheek/Low Channel/Area Scan (41x51x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.367 W/kg



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

Test Laboratory: JYTSZ Date: 03.23.2022

DUT: 5G Digital Mobile Phone; Type: SHARK KTUS-H0; Serial: 1#

Communication System: UID 0, LTE-Fdd(USA) 1RB QPSK (0); Frequency: 841.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 841.5 MHz; σ = 0.928 S/m; ε_r = 42.124; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY5 Configuration:

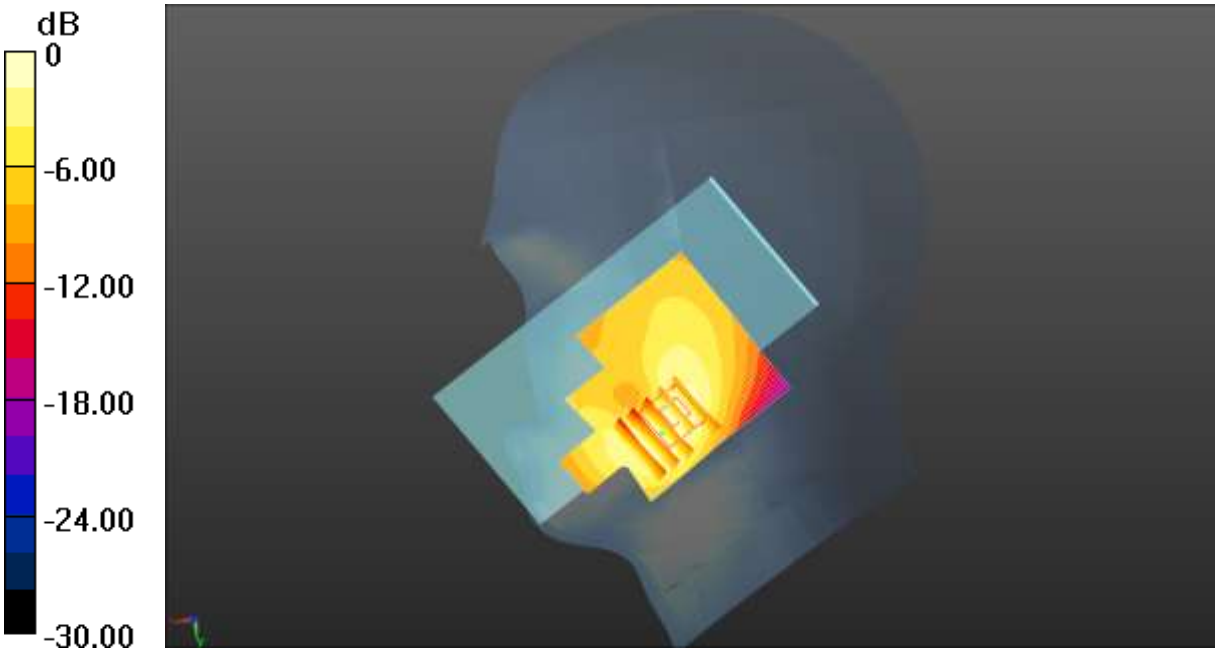
- Probe: EX3DV4 - SN7601; ConvF(10.2, 10.2, 10.2) @ 841.5 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

LTE Band 26 1RB(15MHz) Right Cheek/High Channel/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.980 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 0.863 W/kg
SAR(1 g) = 0.461 W/kg; SAR(10 g) = 0.259 W/kg
Smallest distance from peaks to all points 3 dB below = 64.1 mm
Ratio of SAR at M2 to SAR at M1 = 53.7%
Maximum value of SAR (measured) = 0.646 W/kg

LTE Band 26 1RB(15MHz) Right Cheek/High Channel/Area Scan (41x51x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.594 W/kg



0 dB = 0.594 W/kg = -2.26 dBW/kg

Test Laboratory: JYTSZ Date: 04.03.2022

DUT: 5G Digital Mobile Phone; Type: SHARK KTUS-H0; Serial: 1#

Communication System: UID 0, LTE-TDD(USA) 20MHz 1RB QPSK (0); Frequency: 2506 MHz;Duty Cycle: 1:1.59956
Medium parameters used (interpolated): f = 2506 MHz; σ = 1.896 S/m; ε_r = 39.446; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY5 Configuration:

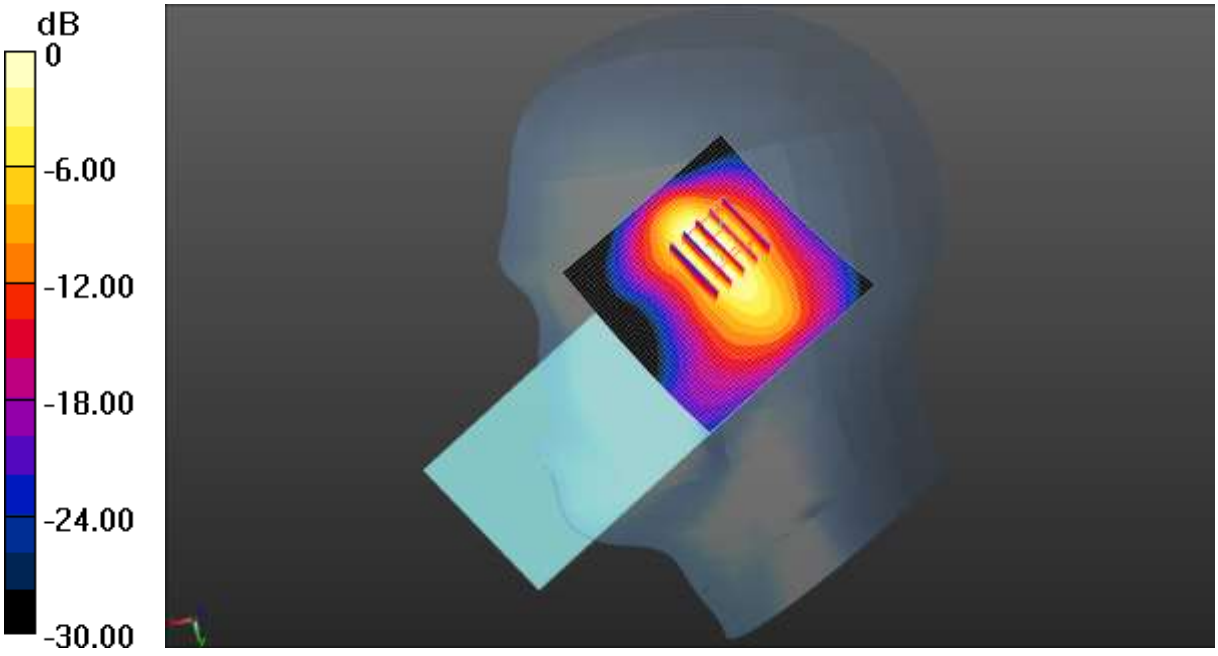
- Probe: EX3DV4 - SN7601; ConvF(7.49, 7.49, 7.49) @ 2506 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

LTE Band 41 1RB(20MHz) Right Tilted/Low Channel/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 19.47 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 1.87 W/kg
SAR(1 g) = 0.751 W/kg; SAR(10 g) = 0.383 W/kg
Smallest distance from peaks to all points 3 dB below = 7.2 mm
Ratio of SAR at M2 to SAR at M1 = 44.8%
Maximum value of SAR (measured) = 1.32 W/kg

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

Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.13 W/kg



0 dB = 1.13 W/kg = 0.531 dBW/kg

Test Laboratory: JYTSZ Date: 03.23.2022

DUT: 5G Digital Mobile Phone; Type: SHARK KTUS-H0; Serial: 1#

Communication System: UID 0, NR (0); Frequency: 836.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.5 MHz; σ = 0.93 S/m; ε_r = 42.111; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY5 Configuration:

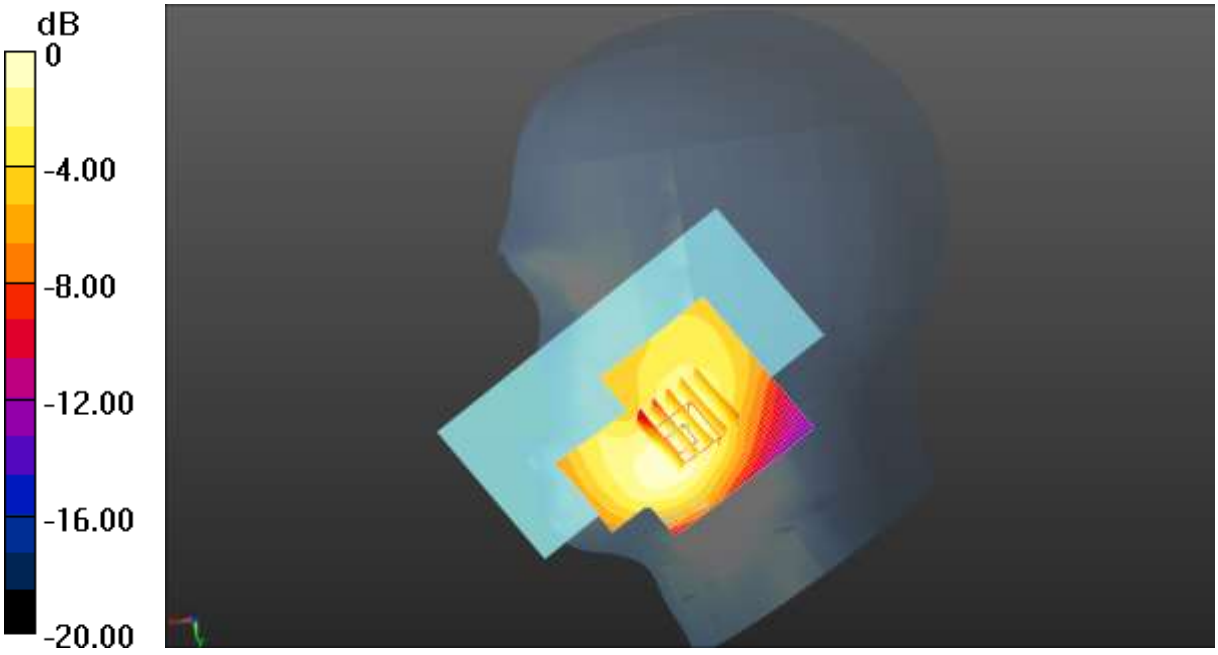
- Probe: EX3DV4 - SN7601; ConvF(10.2, 10.2, 10.2) @ 836.5 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

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

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.440 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 0.896 W/kg
SAR(1 g) = 0.485 W/kg; SAR(10 g) = n.a.
Smallest distance from peaks to all points 3 dB below = 66.5 mm
Ratio of SAR at M2 to SAR at M1 = 54.9%
Maximum value of SAR (measured) = 0.709 W/kg

NR n5 1RB(20MHz) Right Cheek/Middle Channel/Area Scan (41x51x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.552 W/kg



0 dB = 0.552 W/kg = -2.58 dBW/kg

Test Laboratory: JYTSZ Date: 04.06.2022

DUT: 5G Digital Mobile Phone; Type: SHARK KTUS-H0; Serial: 1#

Communication System: UID 0, NR (0); Frequency: 2546.01 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2546.01MHz; σ = 1.896 S/m; ε_r = 39.446; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY5 Configuration:

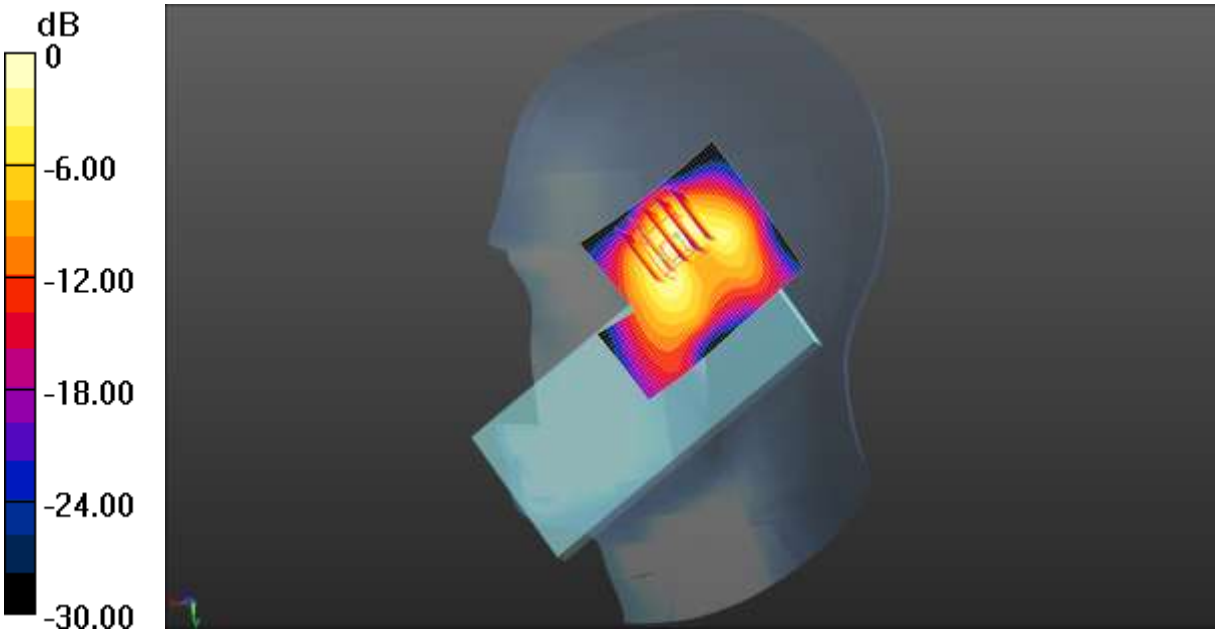
- Probe: EX3DV4 - SN7601; ConvF(7.49, 7.49, 7.49) @ 2546.01MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

NR n41 1RB(100MHz) Right Cheek ant8/Low Channel/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.382 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 2.23 W/kg
SAR(1 g) = 0.903 W/kg; SAR(10 g) = 0.386 W/kg
Smallest distance from peaks to all points 3 dB below = 6.7 mm
Ratio of SAR at M2 to SAR at M1 = 43.2%
Maximum value of SAR (measured) = 1.57 W/kg

NR n41 1RB(100MHz) Right Cheek ant8/Low Channel/Area Scan (41x51x1):

Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.717 W/kg



0 dB = 0.717 W/kg = -1.44 dBW/kg

Test Laboratory: JYTSZ Date: 04.14.2022

DUT: 5G Digital Mobile Phone; Type: SHARK KTUS-H0; Serial: 1#

Communication System: UID 0, NR (0); Frequency: 3500.01 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 3500.01 MHz; σ = 2.942 S/m; ε_r = 37.621; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY5 Configuration:

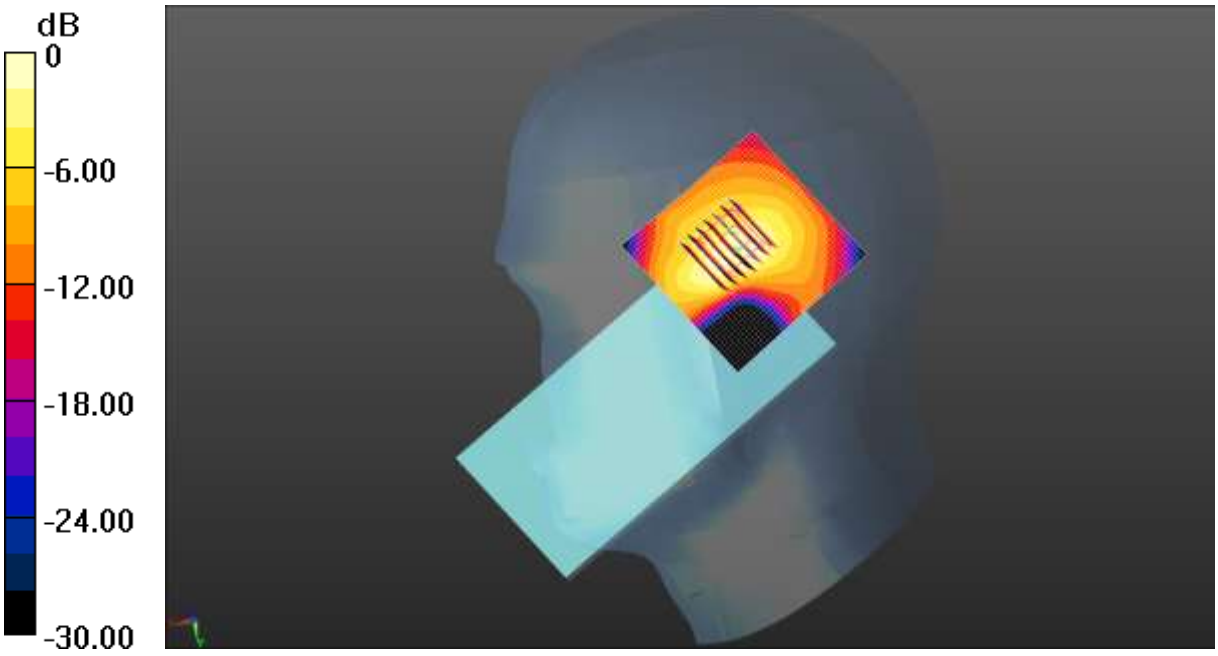
- Probe: EX3DV4 – SN3826; ConvF(6.61, 6.61, 6.61) @ 3500.01 MHz; Calibrated: 07.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

NR n77(3450-3550) 1RB(100MHz) Right Cheek/Middle Channel/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=4mm
Reference Value = 4.733 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 1.56 W/kg
SAR(1 g) = 0.450 W/kg; SAR(10 g) = 0.144 W/kg
Smallest distance from peaks to all points 3 dB below = 5 mm
Ratio of SAR at M2 to SAR at M1 = 29.5%
Maximum value of SAR (measured) = 0.937 W/kg

NR n77(3450-3550) 1RB(100MHz) Right Cheek/Middle Channel/Area Scan (41x41x1):

Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.403 W/kg



0 dB = 0.403 W/kg = -3.95 dBW/kg

Test Laboratory: JYTSZ Date: 04.19.2022

DUT: 5G Digital Mobile Phone; Type: SHARK KTUS-H0; Serial: 1#

Communication System: UID 0, NR (0); Frequency: 3930 MHz;Duty Cycle: 1:1
Medium parameters used: f = 3930 MHz; σ = 3.385 S/m; ε_r = 36.868; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY5 Configuration:

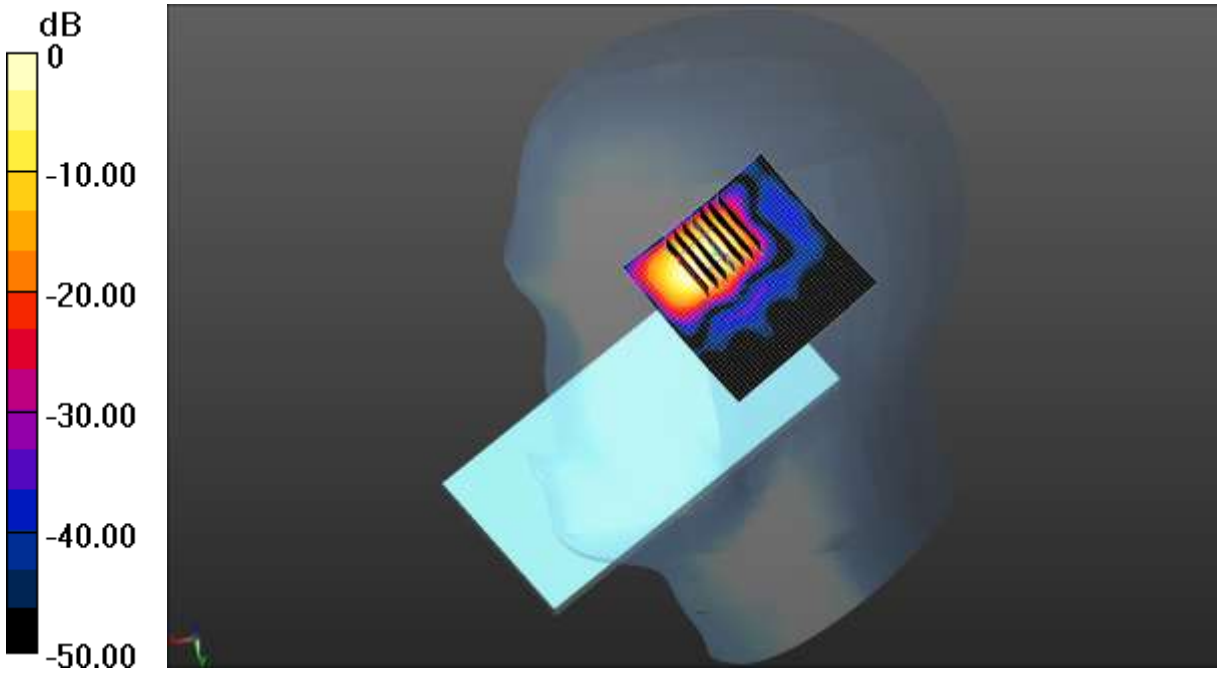
- Probe: EX3DV4 – SN3826; ConvF(6.21, 6.21, 6.21) @ 3930 MHz; Calibrated: 07.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

NR n77(3700-3980) 1RB(100MHz) Right Cheek/High Channel/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=4mm
Reference Value = 0.2440 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 0.0950 W/kg
SAR(1 g) = 0.389 W/kg; SAR(10 g) = 0.00685 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 = 19.8%
Maximum value of SAR (measured) = 1.1617 W/kg

NR n77(3700-3980) 1RB(100MHz) Right Cheek/High Channel/Area Scan (41x41x1):

Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.732 W/kg



0 dB = 0.732 W/kg = -1.35 dBW/kg

Test Laboratory: JYTSZ Date: 04.03.2022

DUT: 5G Digital Mobile Phone; Type: SHARK KTUS-H0; Serial: 1#

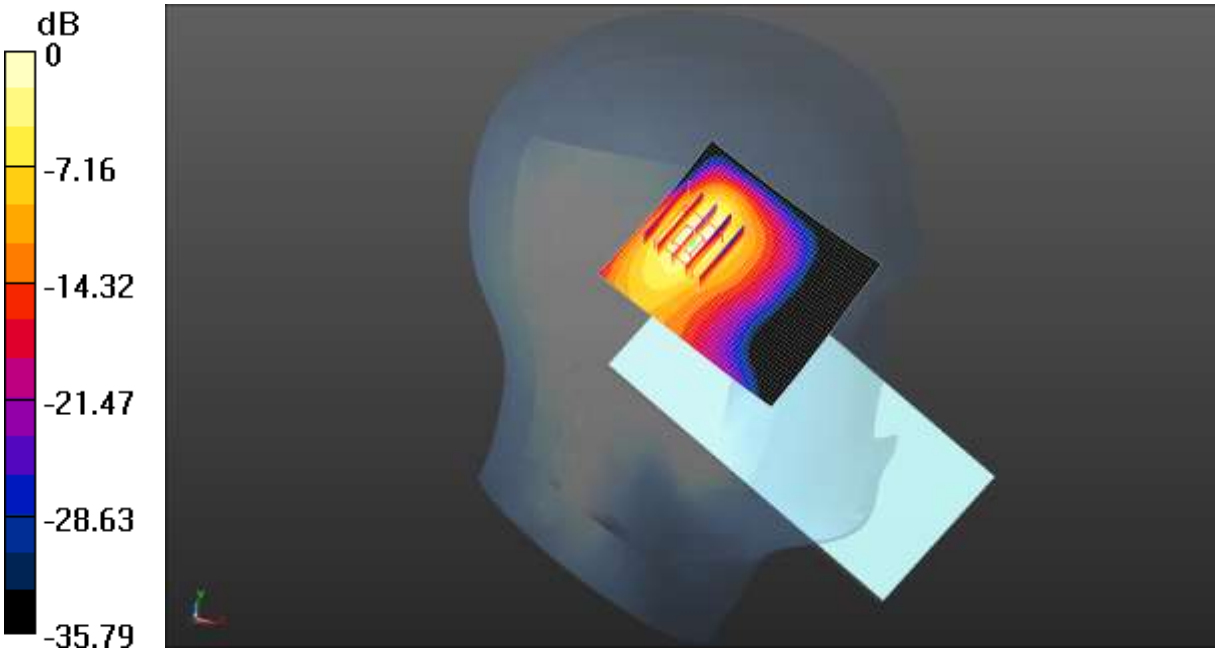
Communication System: UID 0, IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps) (0);
Frequency: 2412 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2412 MHz; σ = 1.731 S/m; ε_r = 39.445; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7601; ConvF(7.74, 7.74, 7.74) @ 2412 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

2.4GWIFI Left Tilted/Low Channel/Area Scan (41x51x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.593 W/kg

2.4GWIFI Left Tilted/Low Channel/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.777 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.706 W/kg
SAR(1 g) = 0.272 W/kg; SAR(10 g) = 0.112 W/kg
Smallest distance from peaks to all points 3 dB below = 6.5 mm
Ratio of SAR at M2 to SAR at M1 = 38.2%
Maximum value of SAR (measured) = 0.536 W/kg



0 dB = 0.536 W/kg = -2.71 dBW/kg

Test Laboratory: JYTSZ Date: 04.03.2022

DUT: 5G Digital Mobile Phone; Type: SHARK KTUS-H0; Serial: 1#

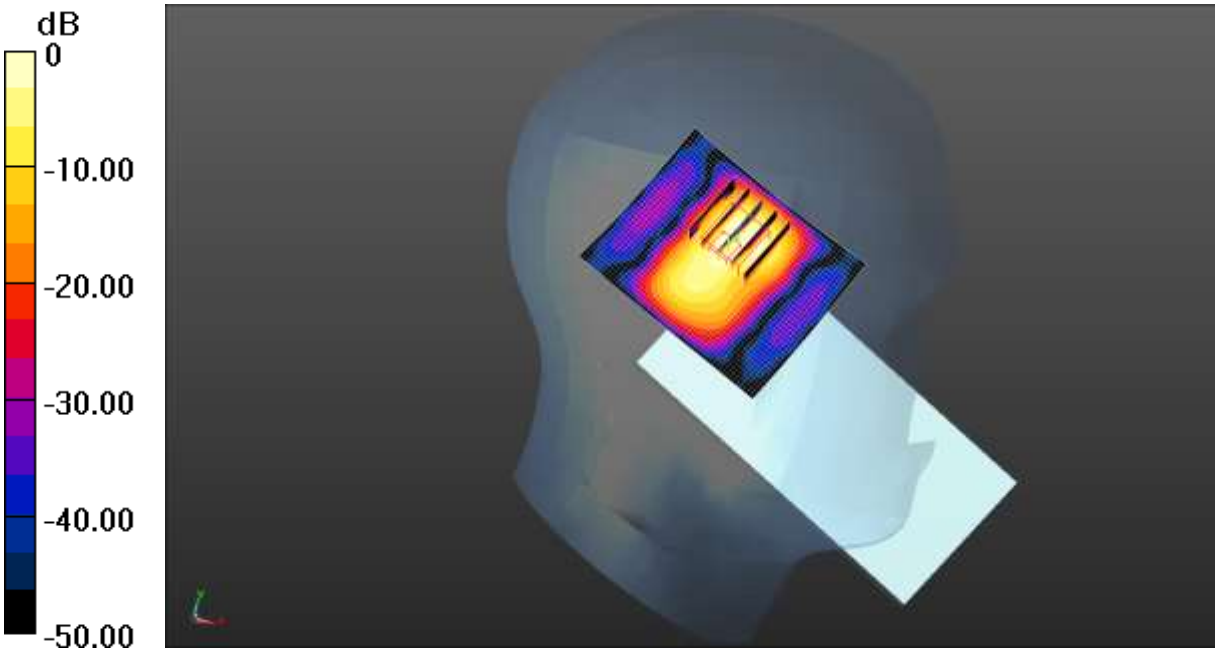
Communication System: UID 0, Bluetooth (0); Frequency: 2441 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2441 MHz; σ = 1.735 S/m; ε_r = 39.438; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7601; ConvF(7.74, 7.74, 7.74) @ 2441 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- 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 Tilted/Middle Channel/Area Scan (41x51x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.0594 W/kg

BT Left Tilted/Middle Channel/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.896 V/m; Power Drift = -0.20 dB
Peak SAR (extrapolated) = 0.0420 W/kg
SAR(1 g) = 0.017 W/kg; SAR(10 g) = 0.00606 W/kg
Smallest distance from peaks to all points 3 dB below: Larger than measurement grid
Ratio of SAR at M2 to SAR at M1 = 40%
Maximum value of SAR (measured) = 0.0347 W/kg



0 dB = 0.0347 W/kg = -14.60 dBW/kg

Test Laboratory: JYTSZ Date: 04.08.2022

DUT: 5G Digital Mobile Phone; Type: SHARK KTUS-H0; Serial: 1#

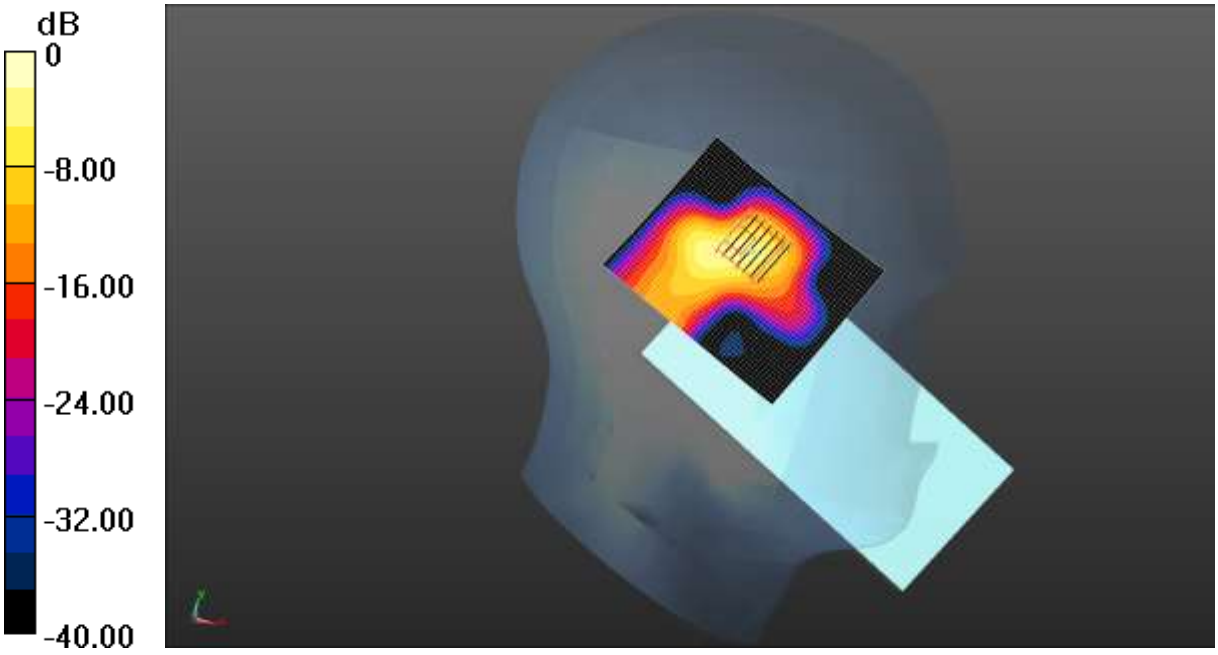
Communication System: UID 0, IEEE 802.11a WiFi 5GHz (0); Frequency: 5320 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5320 MHz; σ = 4.9 S/m; ε_r = 34.754; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7601; ConvF(5.35, 5.35, 5.35) @ 5320 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

5.3GWIFI Left Tilted/High Channel/Area Scan (41x51x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.286 W/kg

5.3GWIFI Left Tilted/High Channel/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 4.071 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 0.850 W/kg
SAR(1 g) = 0.228 W/kg; SAR(10 g) = 0.054 W/kg
Smallest distance from peaks to all points 3 dB below = 7.5 mm
Ratio of SAR at M2 to SAR at M1 = 15%
Maximum value of SAR (measured) = 0.632 W/kg



0 dB = 0.632 W/kg = -1.99 dBW/kg

Test Laboratory: JYTSZ Date: 04.10.2022

DUT: 5G Digital Mobile Phone; Type: SHARK KTUS-H0; Serial: 1#

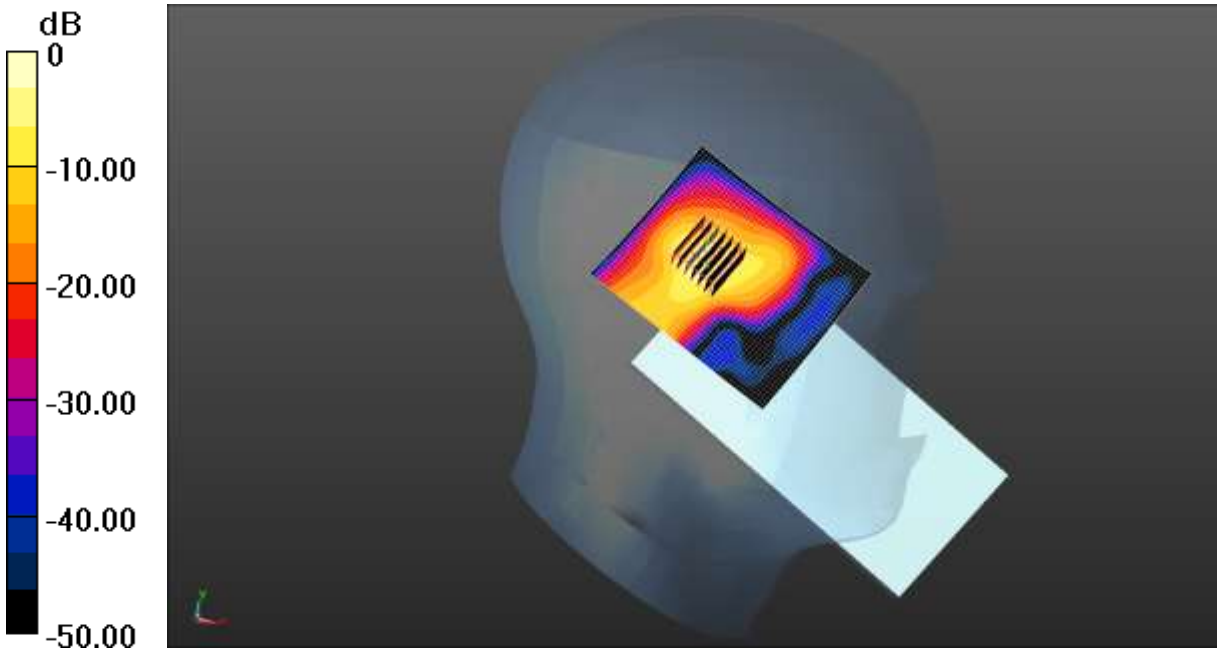
Communication System: UID 0, IEEE 802.11a WiFi 5GHz (0); Frequency: 5700 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5700 MHz; σ = 5.132 S/m; ε_r = 33.795; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7601; ConvF(4.96, 4.96, 4.96) @ 5700 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

5.6GWIFI Left Tilted/High Channel/Area Scan (41x51x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.363 W/kg

5.6GWIFI Left Tilted/High Channel/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 4.926 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 1.41 W/kg
SAR(1 g) = 0.295 W/kg; SAR(10 g) = 0.082 W/kg
Smallest distance from peaks to all points 3 dB below = 6.3 mm
Ratio of SAR at M2 to SAR at M1 = 14.8%
Maximum value of SAR (measured) = 0.801 W/kg



0 dB = 0.801 W/kg = -0.96 dBW/kg

Test Laboratory: JYTSZ Date: 04.11.2022

DUT: 5G Digital Mobile Phone; Type: SHARK KTUS-H0; Serial: 1#

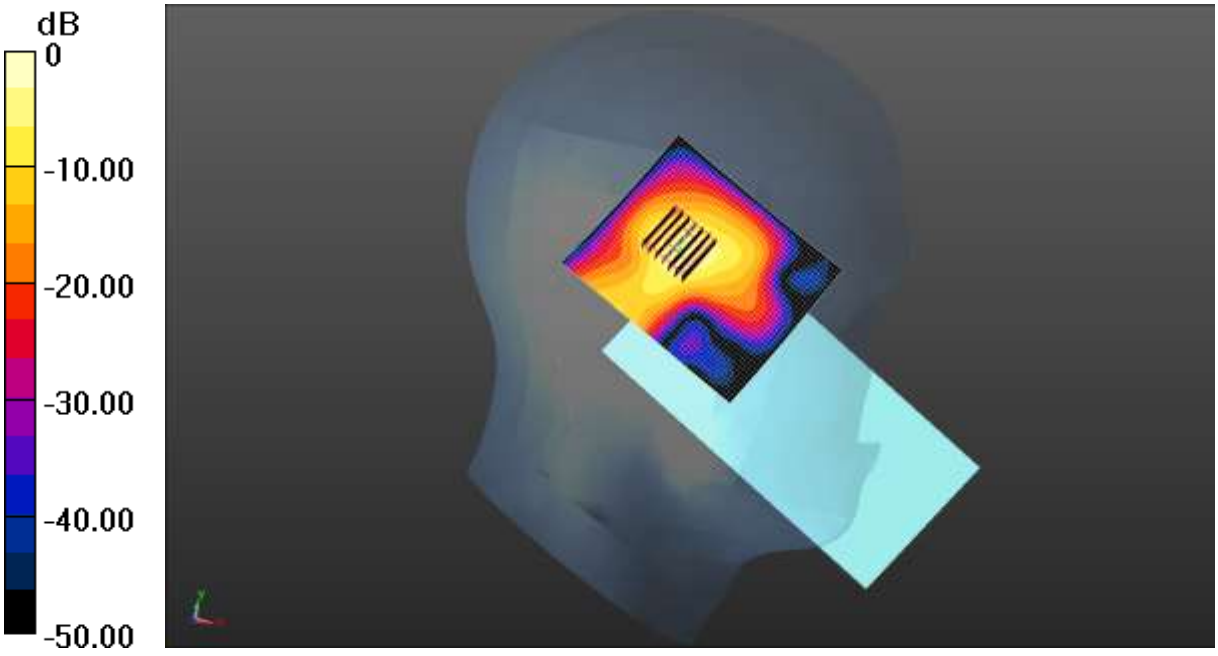
Communication System: UID 0, IEEE 802.11a WiFi 5GHz (0); Frequency: 5785 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 5785 MHz; σ = 5.369 S/m; ε_r = 34.284; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7601; ConvF(5.04, 5.04, 5.04) @ 5785 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- 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 Tilted/Middle Channel/Area Scan (41x51x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.307 W/kg

5.8GWIFI Left Tilted/Middle Channel/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 4.718 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 1.05 W/kg
SAR(1 g) = 0.269 W/kg; SAR(10 g) = 0.079 W/kg
Smallest distance from peaks to all points 3 dB below = 5.8 mm
Ratio of SAR at M2 to SAR at M1 = 12%
Maximum value of SAR (measured) = 0.731 W/kg



0 dB = 0.731 W/kg = -1.36 dBW/kg

Test Laboratory: JYTSZ Date: 03.23.2022

DUT: 5G Digital Mobile Phone; Type: SHARK KTUS-H0; Serial: 1#

Communication System: UID 0, GPRS(2 Slots) (0); Frequency: 848.8 MHz;Duty Cycle: 1:4.10015
Medium parameters used (interpolated): f = 848.8 MHz; σ = 0.93 S/m; ε_r = 42.11; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

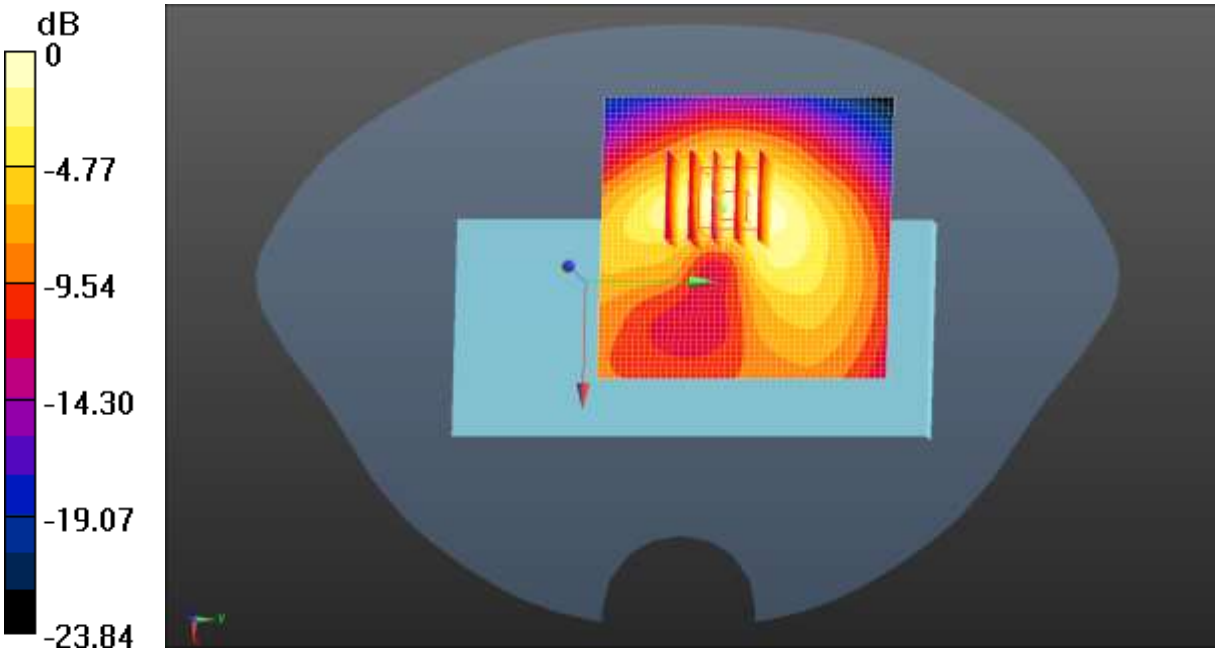
- Probe: EX3DV4 - SN7601; ConvF(10.2, 10.2, 10.2) @ 848.8 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

GPRS 850 2slots Body Front/High Channel/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.558 V/m; Power Drift = -0.14 dB
Peak SAR (extrapolated) = 0.766 W/kg
SAR(1 g) = 0.396 W/kg; SAR(10 g) = 0.224 W/kg
Smallest distance from peaks to all points 3 dB below = 10.7 mm
Ratio of SAR at M2 to SAR at M1 = 52.2%
Maximum value of SAR (measured) = 0.612 W/kg

GPRS 850 2slots Body Front/High Channel/Area Scan (51x51x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.592 W/kg



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

Test Laboratory: JYTSZ Date: 03.30.2022

DUT: 5G Digital Mobile Phone; Type: SHARK KTUS-H0; Serial: 1#

Communication System: UID 0, GPRS(2 Slots) (0); Frequency: 1880 MHz;Duty Cycle: 1:4.10015
Medium parameters used: f = 1880 MHz; σ = 1.386 S/m; ε_r = 40.46; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

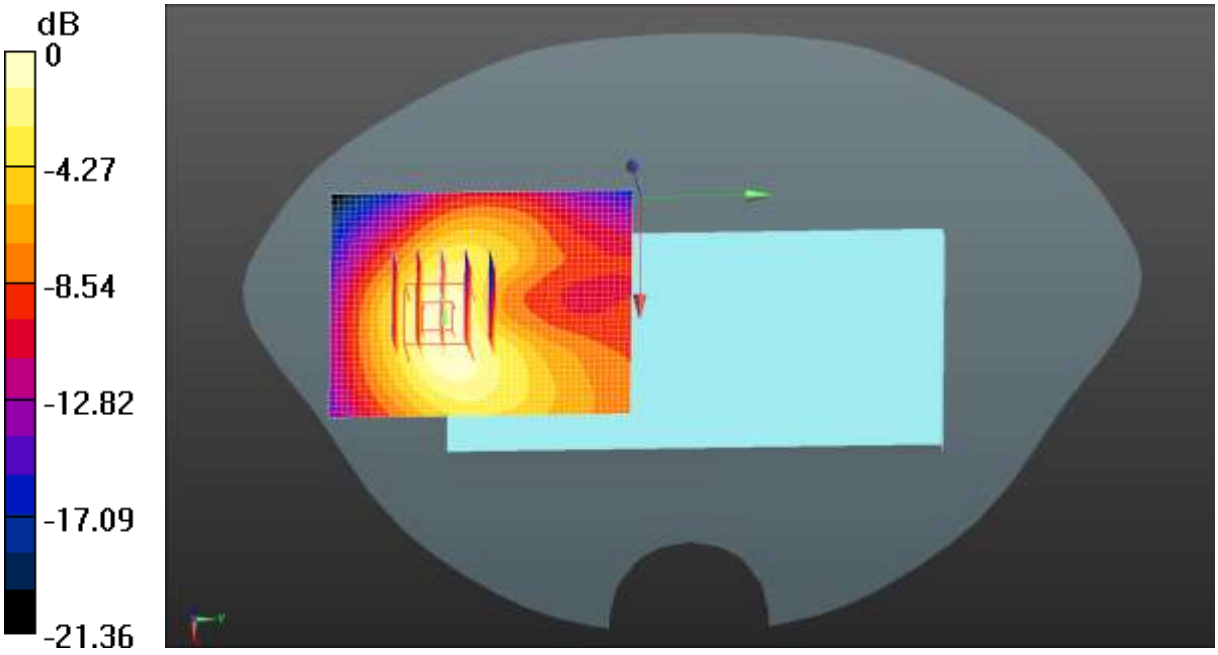
- Probe: EX3DV4 - SN7601; ConvF(8.37, 8.37, 8.37) @ 1880 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

GPRS 1900 2slots Body Back/Middle Channel/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.481 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 0.588 W/kg
SAR(1 g) = 0.302 W/kg; SAR(10 g) = 0.186 W/kg
Smallest distance from peaks to all points 3 dB below = 10.2 mm
Ratio of SAR at M2 to SAR at M1 = 56.6%
Maximum value of SAR (measured) = 0.477 W/kg

GPRS 1900 2slots Body Back/Middle Channel/Area Scan (41x51x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.433 W/kg



0 dB = 0.433 W/kg = -3.64 dBW/kg

Test Laboratory: JYTSZ Date: 03.23.2022

DUT: 5G Digital Mobile Phone; Type: SHARK KTUS-H0; Serial: 1#

Communication System: UID 0, UMTS-FDD(WCDMA) (0); Frequency: 846.6 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 846.6 MHz; σ = 0.931 S/m; ε_r = 42.369; ρ = 1000 kg/m^3
Phantom section: Flat Section

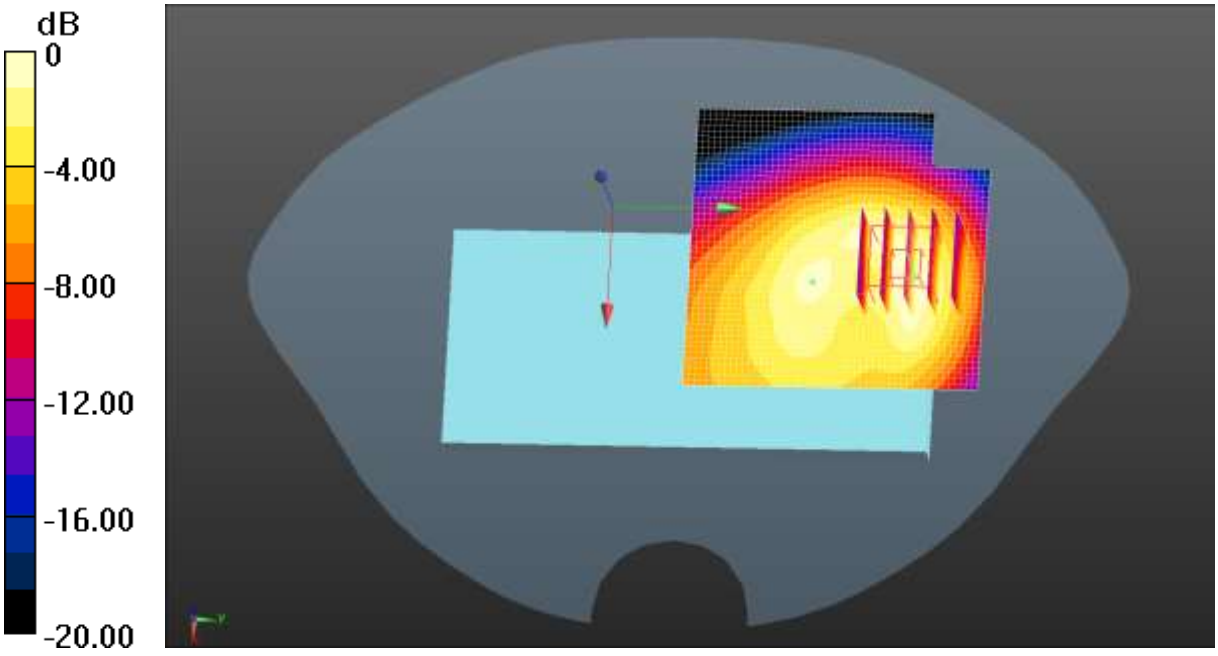
DASY5 Configuration:

- Probe: EX3DV4 - SN7601; ConvF(10.2, 10.2, 10.2) @ 846.6 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- 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/High Channel/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 14.66 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 1.04 W/kg
SAR(1 g) = 0.563 W/kg; SAR(10 g) = 0.329 W/kg
Smallest distance from peaks to all points 3 dB below = 12.5 mm
Ratio of SAR at M2 to SAR at M1 = 56.6%
Maximum value of SAR (measured) = 0.825 W/kg

WCDMA 850 Body Back/High Channel/Area Scan (51x51x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.859 W/kg



0 dB = 0.859 W/kg = -0.66 dBW/kg

Test Laboratory: JYTSZ Date: 03.27.2022

DUT: 5G Digital Mobile Phone; Type: SHARK KTUS-H0; Serial: 1#

Communication System: UID 0, UMTS-FDD(WCDMA) (0); Frequency: 1752.6 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1752.6 MHz; σ = 1.307 S/m; ε_r = 40.415; ρ = 1000 kg/m^3
Phantom section: Flat Section

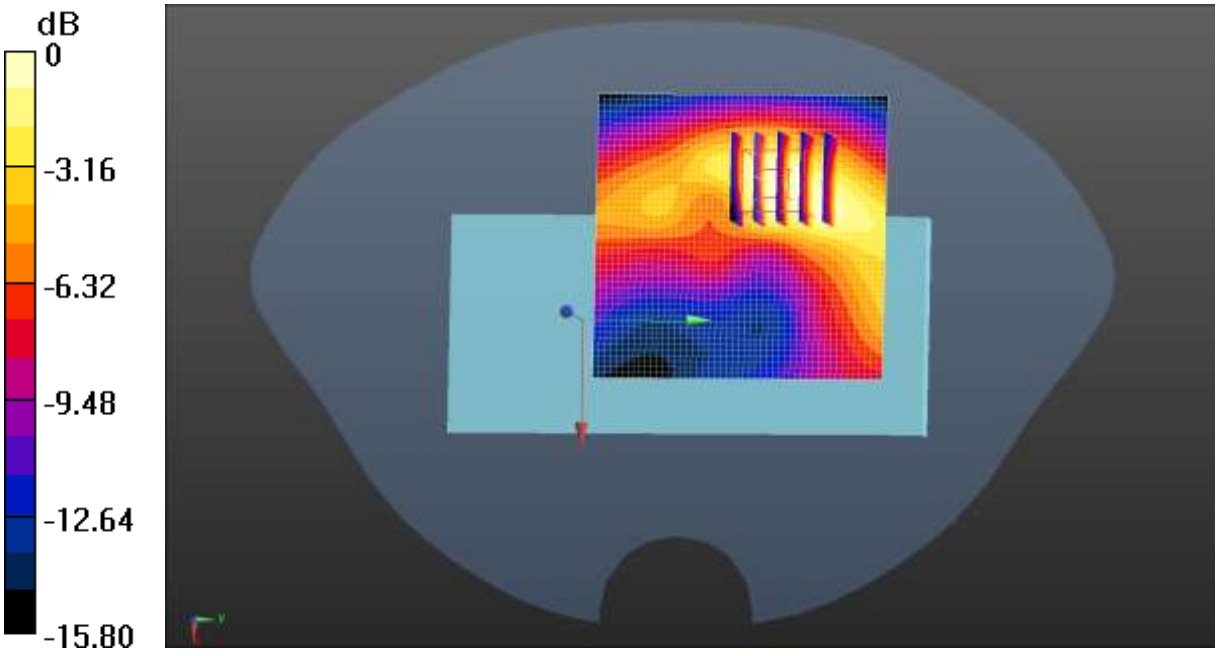
DASY5 Configuration:

- Probe: EX3DV4 - SN7601; ConvF(8.62, 8.62, 8.62) @ 1752.6 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- 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 Front/High Channel/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.270 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 1.10 W/kg
SAR(1 g) = 0.583 W/kg; SAR(10 g) = 0.310 W/kg
Smallest distance from peaks to all points 3 dB below = 10.1 mm
Ratio of SAR at M2 to SAR at M1 = 53.7%
Maximum value of SAR (measured) = 0.907 W/kg

WCDMA 1700 Body Front/High Channel/Area Scan (51x51x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.643 W/kg



0 dB = 0.643 W/kg = -1.92 dBW/kg

Test Laboratory: JYTSZ Date: 03.30.2022

DUT: 5G Digital Mobile Phone; Type: SHARK KTUS-H0; Serial: 1#

Communication System: UID 0, UMTS-FDD(WCDMA) (0); Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.386 S/m; ε_r = 40.46; ρ = 1000 kg/m^3
Phantom section: Flat Section

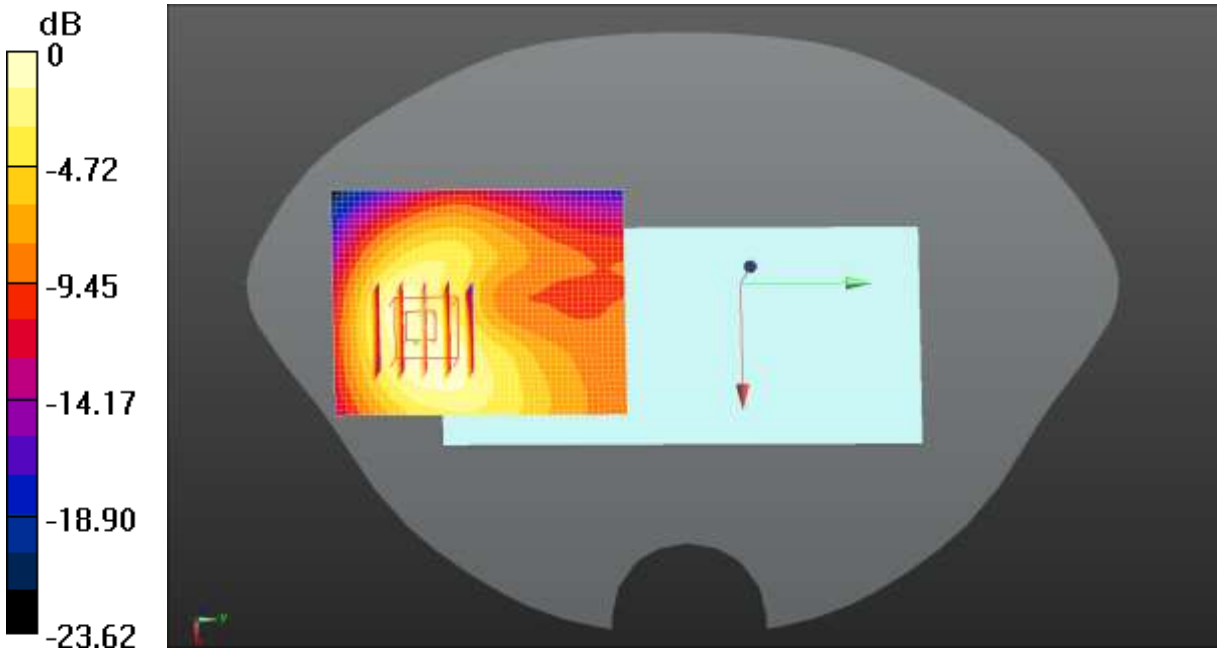
DASY5 Configuration:

- Probe: EX3DV4 - SN7601; ConvF(8.37, 8.37, 8.37) @ 1880 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- 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/Middle Channel/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.633 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 0.594 W/kg
SAR(1 g) = 0.338 W/kg; SAR(10 g) = 0.188 W/kg
Smallest distance from peaks to all points 3 dB below = 11.5 mm
Ratio of SAR at M2 to SAR at M1 = 57.4%
Maximum value of SAR (measured) = 0.493 W/kg

WCDMA 1900 Body Back/Middle Channel/Area Scan (41x51x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.393 W/kg



0 dB = 0.393 W/kg = -4.06 dBW/kg

Test Laboratory: JYTSZ Date: 03.30.2022

DUT: 5G Digital Mobile Phone; Type: SHARK KTUS-H0; Serial: 1#

Communication System: UID 0, LTE-Fdd(USA) 1RB QPSK (0); Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.386 S/m; ε_r = 40.46; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

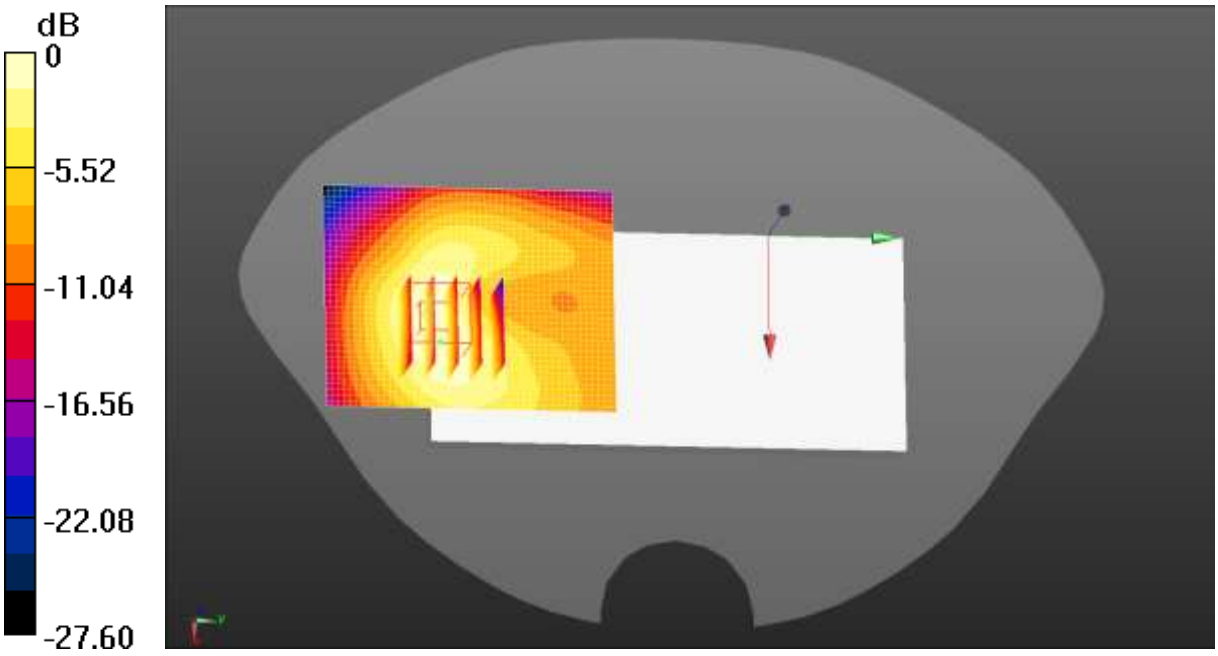
- Probe: EX3DV4 - SN7601; ConvF(8.37, 8.37, 8.37) @ 1880 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

LTE Band 2 1RB(20MHz) Body Back/Middle Channel/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.104 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 0.503 W/kg
SAR(1 g) = 0.284 W/kg; SAR(10 g) = 0.157 W/kg
Smallest distance from peaks to all points 3 dB below = 11.5 mm
Ratio of SAR at M2 to SAR at M1 = 58.7%
Maximum value of SAR (measured) = 0.401 W/kg

LTE Band 2 1RB(20MHz) Body Back/Middle Channel/Area Scan (41x51x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.354 W/kg



0 dB = 0.354 W/kg = -4.51 dBW/kg

Test Laboratory: JYTSZ Date: 03.27.2022

DUT: 5G Digital Mobile Phone; Type: SHARK KTUS-H0; Serial: 1#

Communication System: UID 0, LTE-Fdd(USA) 1RB QPSK (0); Frequency: 1720 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1720 MHz; σ = 1.307 S/m; ε_r = 40.415; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

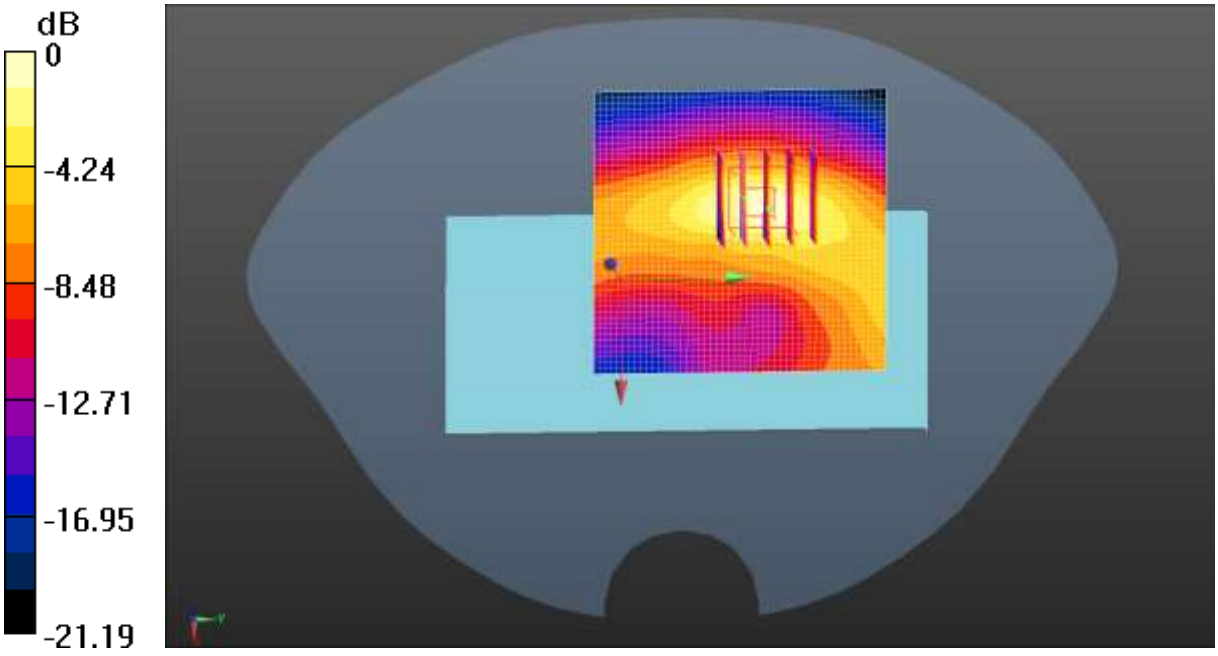
- Probe: EX3DV4 - SN7601; ConvF(8.62, 8.62, 8.62) @ 1720 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

LTE Band 4 1RB(20MHz) Body Front/Low Channel/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 7.296 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 1.10 W/kg
SAR(1 g) = 0.571 W/kg; SAR(10 g) = 0.297 W/kg
Smallest distance from peaks to all points 3 dB below = 9.3 mm
Ratio of SAR at M2 to SAR at M1 = 51.9%
Maximum value of SAR (measured) = 0.888 W/kg

LTE Band 4 1RB(20MHz) Body Front/Low Channel/Area Scan (51x51x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.893 W/kg



0 dB = 0.893 W/kg = -0.49 dBW/kg

Test Laboratory: JYTSZ Date: 04.03.2022

DUT: 5G Digital Mobile Phone; Type: SHARK KTUS-H0; Serial: 1#

Communication System: UID 0, LTE-Fdd(USA) 1RB QPSK (0); Frequency: 2510 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2510 MHz; σ = 1.848 S/m; ε_r = 39.29; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

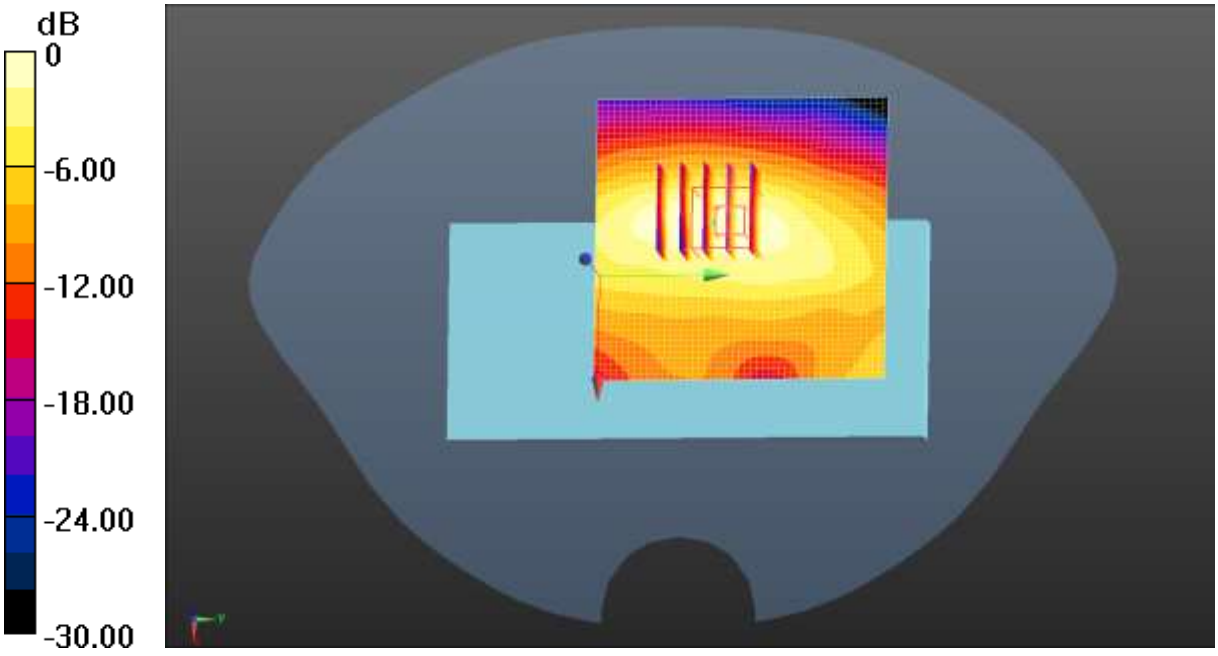
- Probe: EX3DV4 - SN7601; ConvF(7.74, 7.74, 7.74) @ 2510 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

LTE Band 7 1RB(20MHz) Body Front/Low Channel/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.884 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 0.779 W/kg
SAR(1 g) = 0.385 W/kg; SAR(10 g) = 0.195 W/kg
Smallest distance from peaks to all points 3 dB below = 11.6 mm
Ratio of SAR at M2 to SAR at M1 = 49.2%
Maximum value of SAR (measured) = 0.608 W/kg

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

Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.628 W/kg



0 dB = 0.628 W/kg = -2.02 dBW/kg

Test Laboratory: JYTSZ Date: 03.22.2022

DUT: 5G Digital Mobile Phone; Type: SHARK KTUS-H0; Serial: 1#

Communication System: UID 0, LTE-Fdd(USA) 1RB QPSK (0); Frequency: 704 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 704 MHz; σ = 0.889 S/m; ε_r = 42.417; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

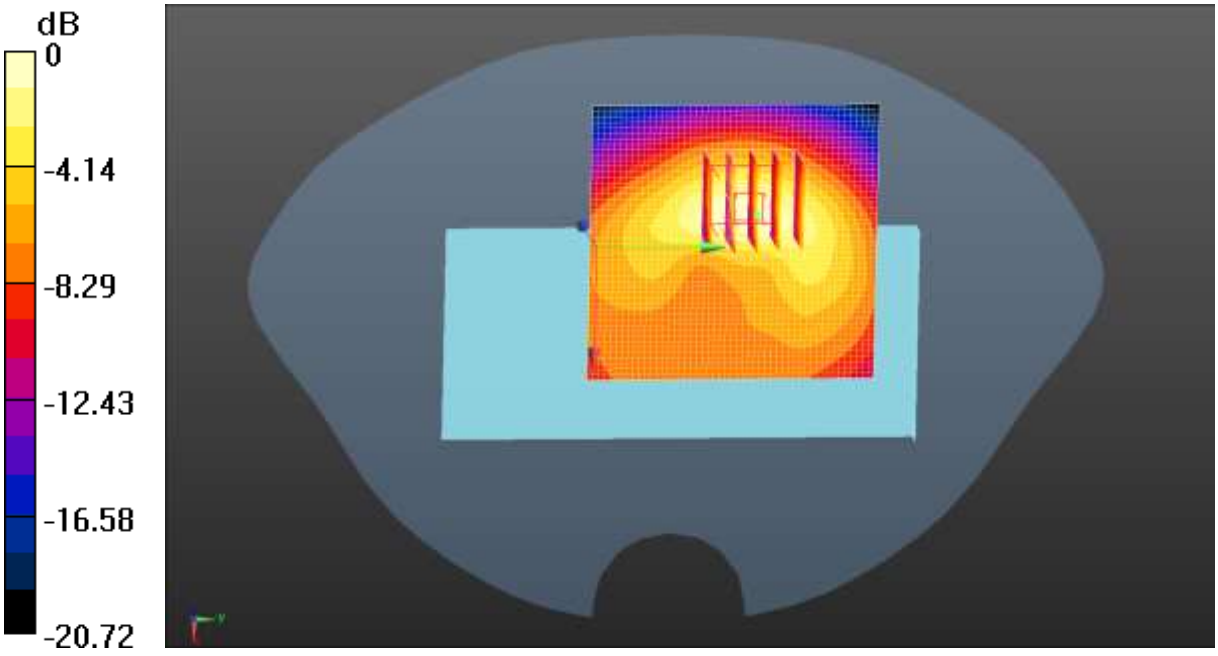
- Probe: EX3DV4 - SN7601; ConvF(10.58, 10.58, 10.58) @ 704 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

LTE Band 12 1RB(10MHz) Body Front/Low Channel/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.64 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 0.759 W/kg
SAR(1 g) = 0.397 W/kg; SAR(10 g) = 0.228 W/kg
Smallest distance from peaks to all points 3 dB below = 9.7 mm
Ratio of SAR at M2 to SAR at M1 = 53.3%
Maximum value of SAR (measured) = 0.599 W/kg

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

Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.608 W/kg



0 dB = 0.608 W/kg = -2.16 dBW/kg

Test Laboratory: JYTSZ Date: 03.23.2022

DUT: 5G Digital Mobile Phone; Type: SHARK KTUS-H0; Serial: 1#

Communication System: UID 0, LTE-Fdd(USA) 1RB QPSK (0); Frequency: 841.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 841.5 MHz; σ = 0.928 S/m; ε_r = 42.124; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

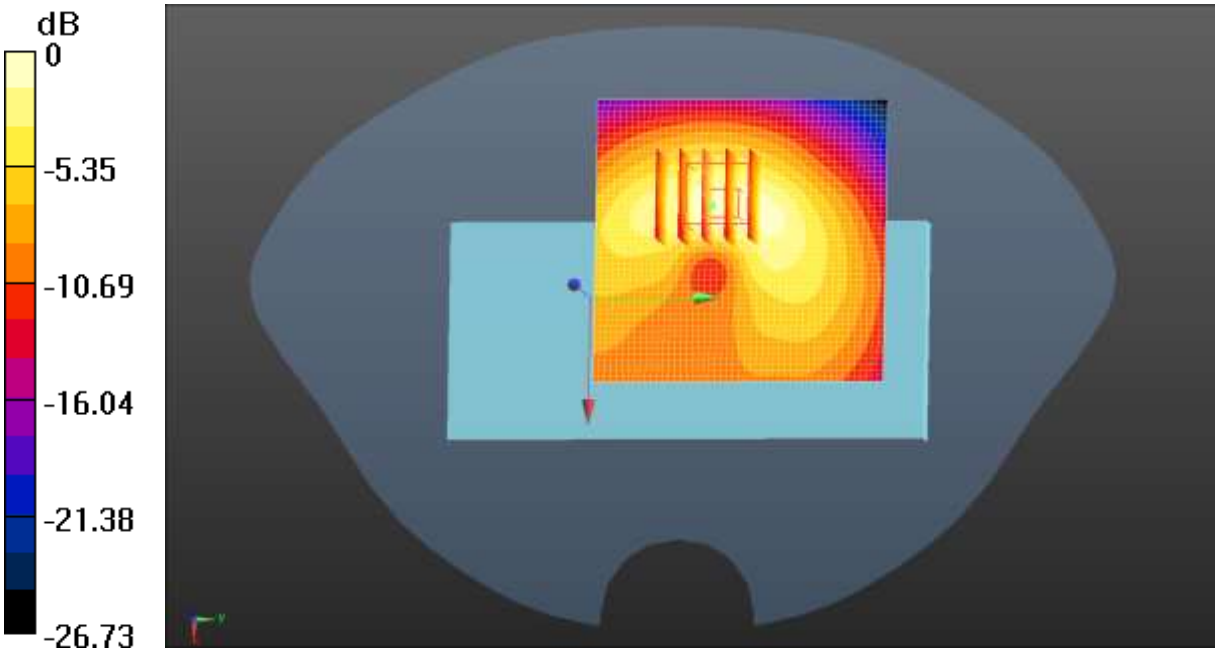
- Probe: EX3DV4 - SN7601; ConvF(10.2, 10.2, 10.2) @ 841.5 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

LTE Band 26 1RB(15MHz) Body Front/High Channel/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.300 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 1.03 W/kg
SAR(1 g) = 0.533 W/kg; SAR(10 g) = 0.299 W/kg
Smallest distance from peaks to all points 3 dB below = 9.6 mm
Ratio of SAR at M2 to SAR at M1 = 54.1%
Maximum value of SAR (measured) = 0.791 W/kg

LTE Band 26 1RB(15MHz) Body Front/High Channel/Area Scan (51x51x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.788 W/kg



0 dB = 0.788 W/kg = -1.03 dBW/kg

Test Laboratory: JYTSZ Date: 04.03.2022

DUT: 5G Digital Mobile Phone; Type: SHARK KTUS-H0; Serial: 1#

Communication System: UID 0, LTE-TDD(USA) 20MHz 1RB QPSK (0); Frequency: 2506 MHz;Duty Cycle: 1:1.59956
Medium parameters used (interpolated): f = 2506 MHz; σ = 1.896 S/m; ε_r = 39.446; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

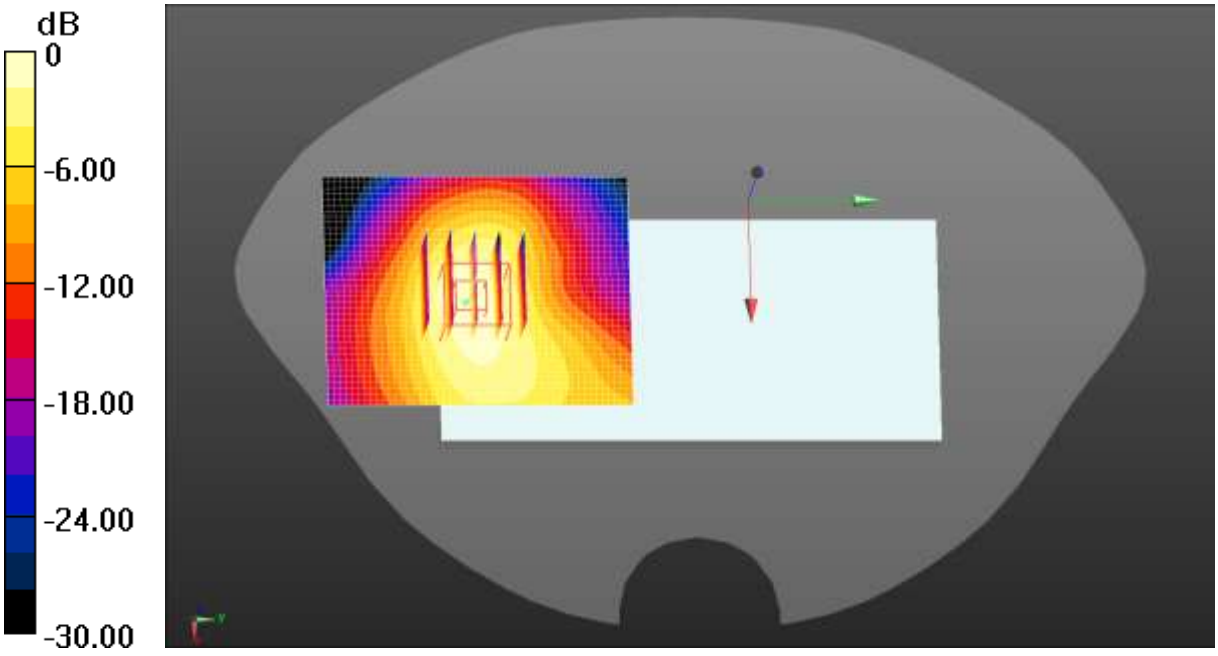
- Probe: EX3DV4 - SN7601; ConvF(7.49, 7.49, 7.49) @ 2506 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

LTE Band 41 1RB(20MHz) Body Back/Low Channel/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.1580 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 0.621 W/kg
SAR(1 g) = 0.314 W/kg; SAR(10 g) = 0.162 W/kg
Smallest distance from peaks to all points 3 dB below = 12.8 mm
Ratio of SAR at M2 to SAR at M1 = 50.6%
Maximum value of SAR (measured) = 0.507 W/kg

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

Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.531 W/kg



0 dB = 0.531 W/kg = -2.75 dBW/kg

Test Laboratory: JYTSZ Date: 03.23.2022

DUT: 5G Digital Mobile Phone; Type: SHARK KTUS-H0; Serial: 1#

Communication System: UID 0, NR (0); Frequency: 836.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.5 MHz; σ = 0.93 S/m; ε_r = 42.111; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

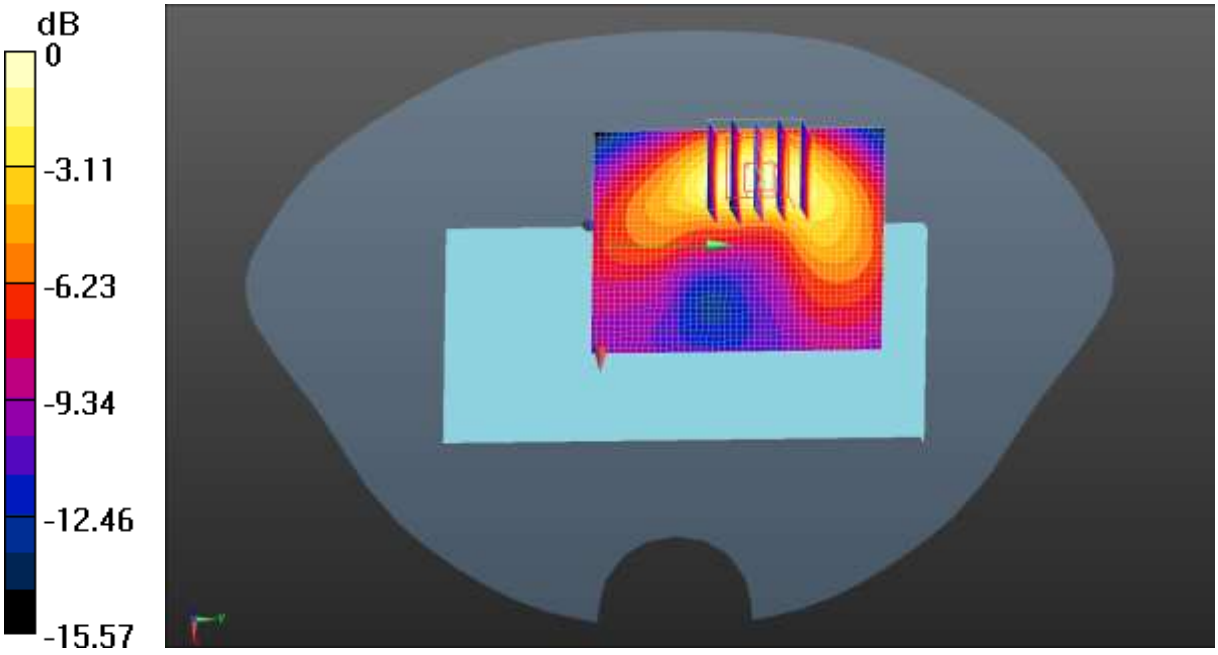
- Probe: EX3DV4 - SN7601; ConvF(10.2, 10.2, 10.2) @ 836.5 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

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

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.365 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 1.19 W/kg
SAR(1 g) = 0.607 W/kg; SAR(10 g) = 0.336 W/kg
Smallest distance from peaks to all points 3 dB below = 9.7 mm
Ratio of SAR at M2 to SAR at M1 = 52.7%
Maximum value of SAR (measured) = 0.934 W/kg

NR n5 1RB(20MHz) Body Front/Middle Channel/Area Scan (41x51x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.950 W/kg



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

Test Laboratory: JYTSZ Date: 04.06.2022

DUT: 5G Digital Mobile Phone; Type: SHARK KTUS-H0; Serial: 1#

Communication System: UID 0, NR (0); Frequency: 2640 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2640 MHz; σ = 1.896 S/m; ε_r = 39.446; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

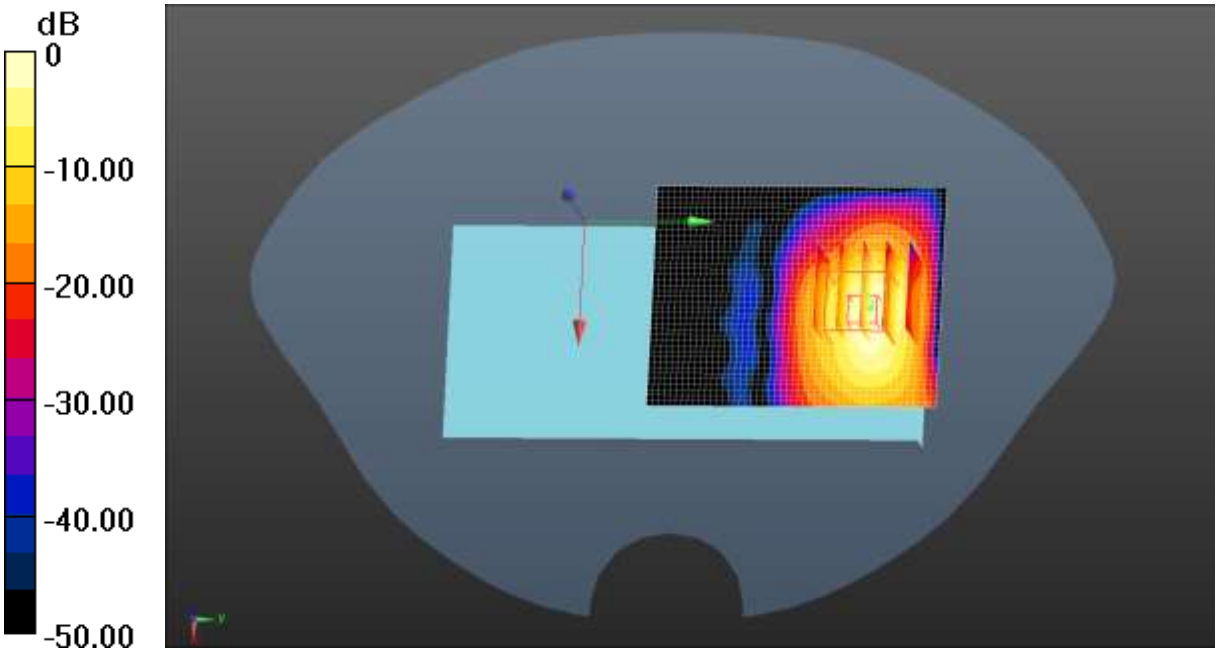
- Probe: EX3DV4 - SN7601; ConvF(7.49, 7.49, 7.49) @ 2640 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

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

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.6390 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 1.51 W/kg
SAR(1 g) = 0.645 W/kg; SAR(10 g) = 0.250 W/kg
Smallest distance from peaks to all points 3 dB below = 7.2 mm
Ratio of SAR at M2 to SAR at M1 = 49.4%
Maximum value of SAR (measured) = 0.936 W/kg

NR n41 1RB(100MHz) Body Back/High Channel/Area Scan (41x51x1):

Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.807 W/kg



0 dB = 0.807 W/kg = -0.93 dBW/kg

Test Laboratory: JYTSZ Date: 04.14.2022

DUT: 5G Digital Mobile Phone; Type: SHARK KTUS-H0; Serial: 1#

Communication System: UID 0, NR (0); Frequency: 3500.01 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 3500.01 MHz; σ = 2.942 S/m; ε_r = 37.621; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

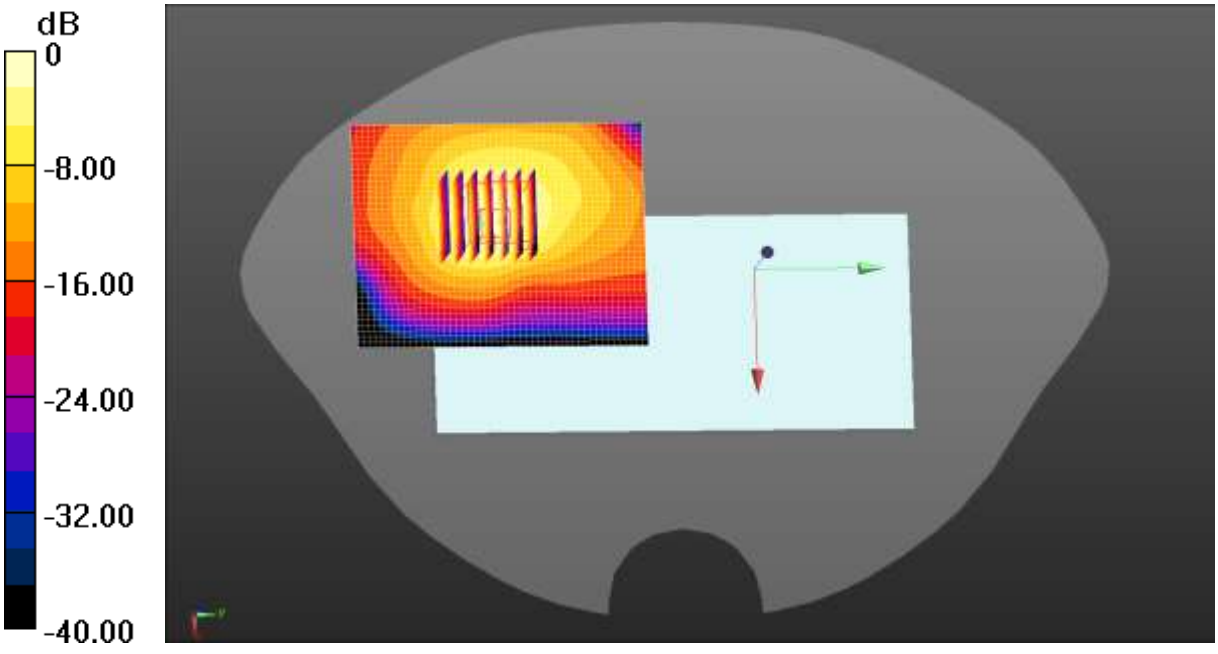
- Probe: EX3DV4 – SN3826; ConvF(6.61, 6.61, 6.61) @ 3500.01 MHz; Calibrated: 07.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

NR n77(3450-3550) 1RB(100MHz) Body Back/Middle Channel/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=4mm
Reference Value = 0.7830 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 1.06 W/kg
SAR(1 g) = 0.412 W/kg; SAR(10 g) = 0.157 W/kg
Smallest distance from peaks to all points 3 dB below = 7.3 mm
Ratio of SAR at M2 to SAR at M1 = 39.7%
Maximum value of SAR (measured) = 0.768 W/kg

NR n77(3450-3550) 1RB(100MHz) Body Back/Middle Channel/Area Scan (41x51x1):

Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.520 W/kg



0 dB = 0.520 W/kg = -2.84 dBW/kg

Test Laboratory: JYTSZ Date: 04.19.2022

DUT: 5G Digital Mobile Phone; Type: SHARK KTUS-H0; Serial: 1#

Communication System: UID 0, NR (0); Frequency: 3930 MHz;Duty Cycle: 1:1
Medium parameters used: f = 3930 MHz; σ = 3.385 S/m; ε_r = 36.868; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

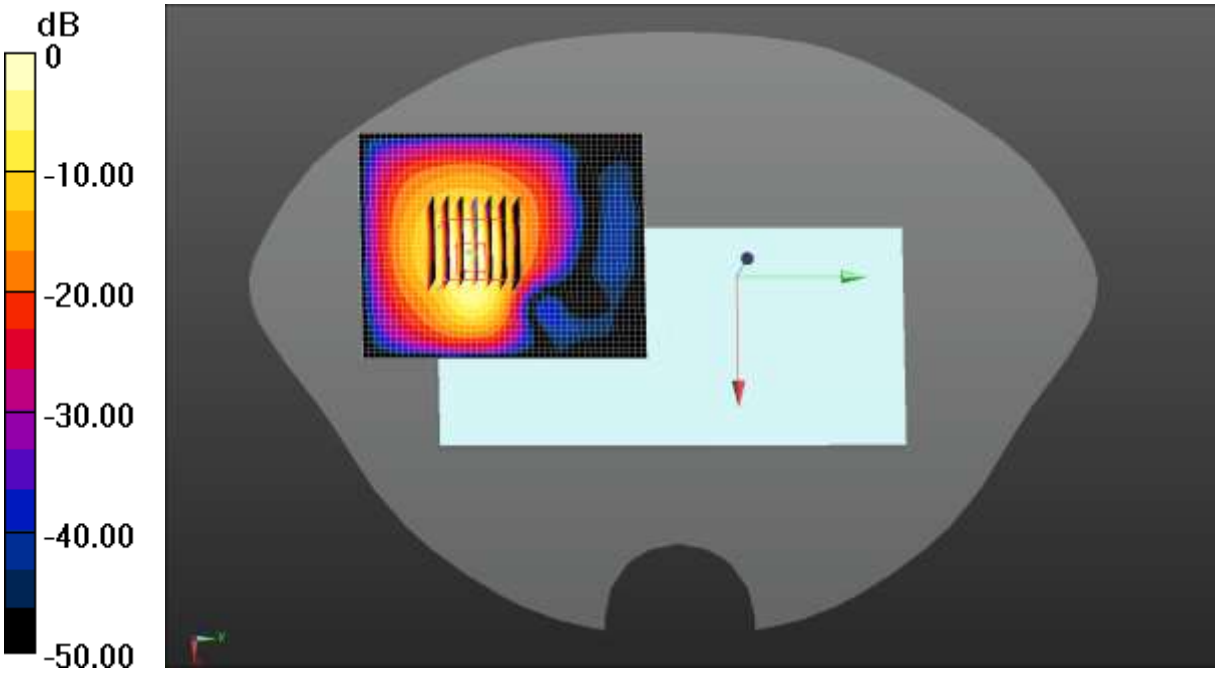
- Probe: EX3DV4 – SN3826; ConvF(6.21, 6.21, 6.21) @ 3930 MHz; Calibrated: 07.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

NR n77(3700-3980) 1RB(100MHz) Body Back/High 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) = 1.07 W/kg
SAR(1 g) = 0.370 W/kg; SAR(10 g) = 0.114 W/kg
Smallest distance from peaks to all points 3 dB below = 6.3 mm
Ratio of SAR at M2 to SAR at M1 = 36%
Maximum value of SAR (measured) = 0.780 W/kg

NR n77(3700-3980) 1RB(100MHz) Body Back/High Channel/Area Scan (41x51x1):

Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.579 W/kg



0 dB = 0.579 W/kg = -2.37 dBW/kg

Test Laboratory: JYTSZ Date: 04.03.2022

DUT: 5G Digital Mobile Phone; Type: SHARK KTUS-H0; Serial: 1#

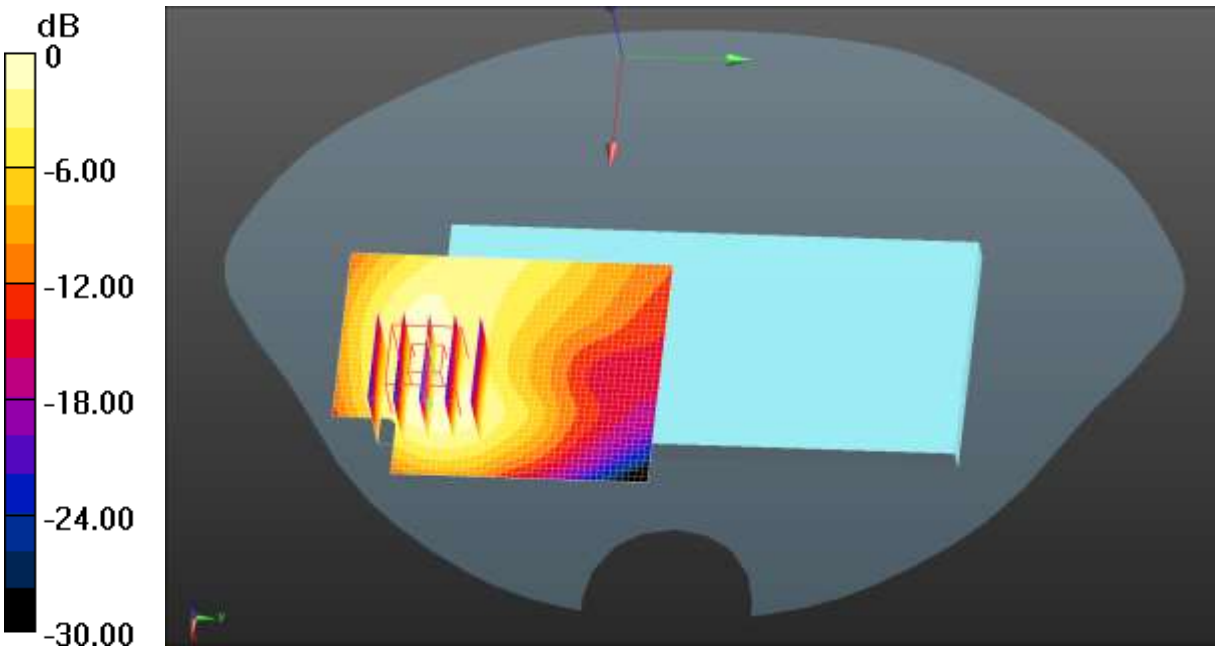
Communication System: UID 0, IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps) (0);
Frequency: 2412 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2412 MHz; σ = 1.731 S/m; ε_r = 39.445; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7601; ConvF(7.74, 7.74, 7.74) @ 2412 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

2.4GWIFI Body Back/Low Channel/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.548 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.287 W/kg
SAR(1 g) = 0.153 W/kg; SAR(10 g) = 0.075 W/kg
Smallest distance from peaks to all points 3 dB below = 13.2 mm
Ratio of SAR at M2 to SAR at M1 = 53%
Maximum value of SAR (measured) = 0.232 W/kg

2.4GWIFI Body Back/Low Channel/Area Scan (41x51x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.258 W/kg



0 dB = 0.258 W/kg = -5.88 dBW/kg

Test Laboratory: JYTSZ Date: 04.03.2022

DUT: 5G Digital Mobile Phone; Type: SHARK KTUS-H0; Serial: 1#

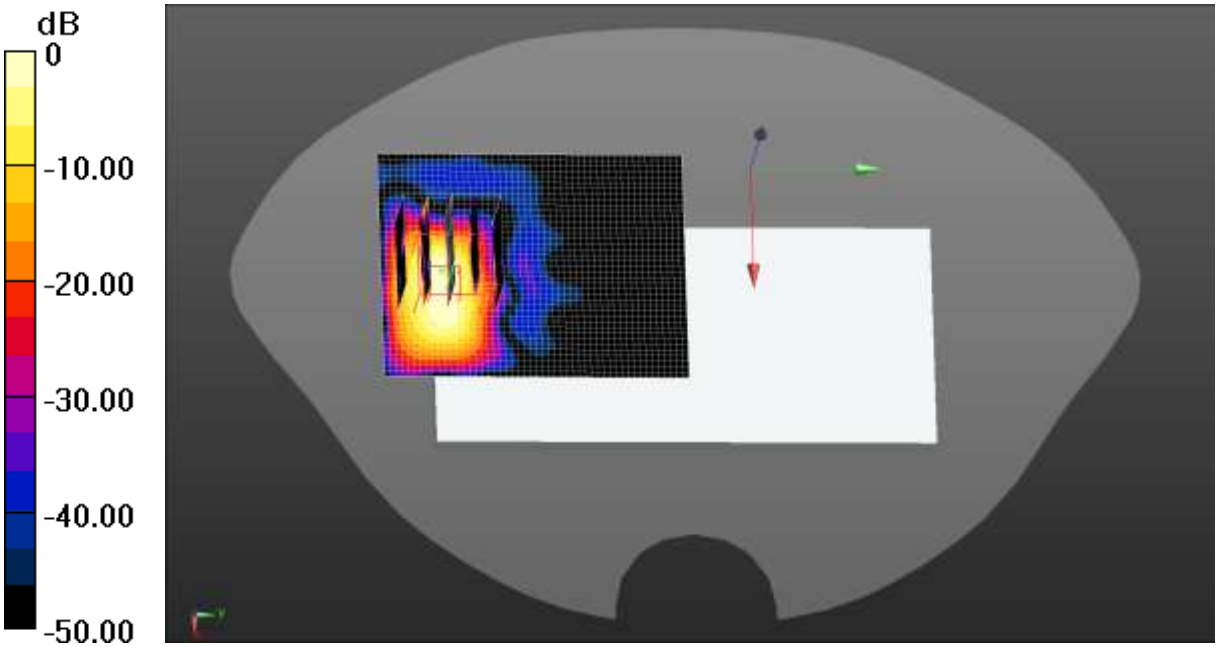
Communication System: UID 0, Bluetooth (0); Frequency: 2441 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2441 MHz; σ = 1.735 S/m; ε_r = 39.438; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7601; ConvF(7.74, 7.74, 7.74) @ 2441 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

BT Body Back/Middle Channel/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 0.00534 W/kg
SAR(1 g) = 0.001 W/kg; SAR(10 g) = 0.00032 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 = 25.8%
Maximum value of SAR (measured) = 0.00259 W/kg

BT Body Back/Middle Channel/Area Scan (41x51x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.00408 W/kg



0 dB = 0.00408 W/kg = -23.89 dBW/kg

Test Laboratory: JYTSZ Date: 04.08.2022

DUT: 5G Digital Mobile Phone; Type: SHARK KTUS-H0; Serial: 1#

Communication System: UID 0, IEEE 802.11a WiFi 5GHz (0); Frequency: 5280 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5280 MHz; σ = 4.9 S/m; ε_r = 34.754; ρ = 1000 kg/m^3
Phantom section: Flat Section

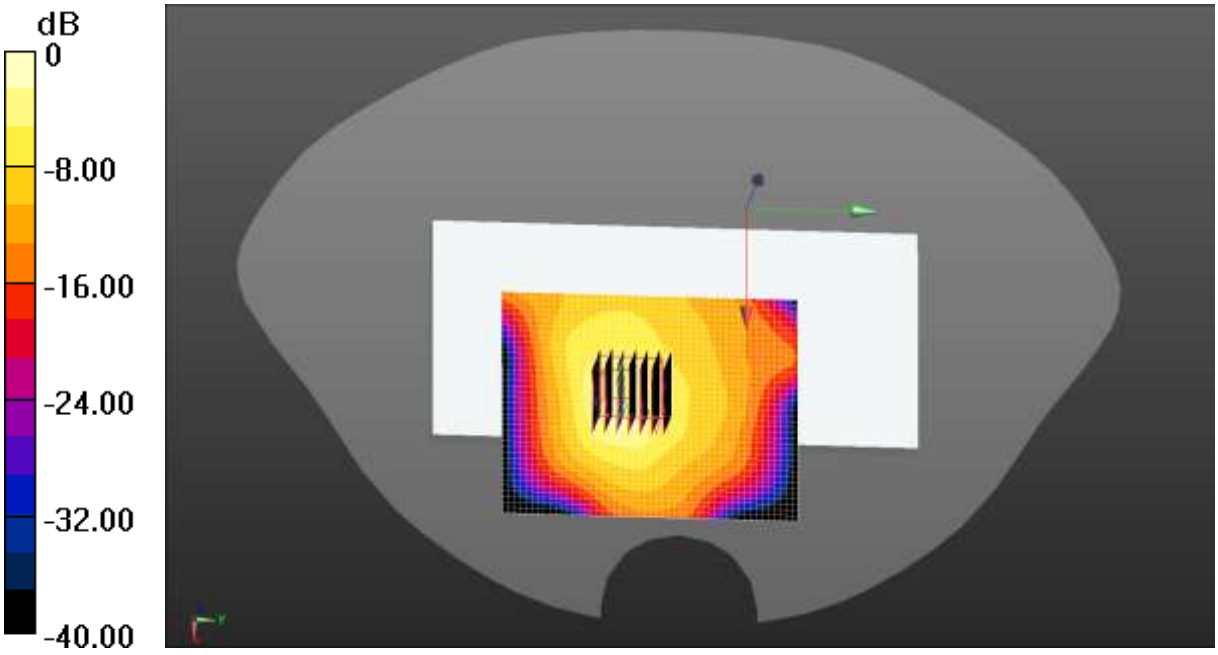
DASY5 Configuration:

- Probe: EX3DV4 - SN7601; ConvF(5.35, 5.35, 5.35) @ 5280 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

5.3GWIFI Body Back/Middle Channel/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 2.055 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 0.343 W/kg
SAR(1 g) = 0.137 W/kg; SAR(10 g) = 0.037 W/kg
Smallest distance from peaks to all points 3 dB below = 6.9 mm
Ratio of SAR at M2 to SAR at M1 = 20.9%
Maximum value of SAR (measured) = 0.329 W/kg

5.3GWIFI Body Back/Middle Channel/Area Scan (41x51x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.226 W/kg



0 dB = 0.226 W/kg = -6.46 dBW/kg

Test Laboratory: JYTSZ Date: 04.10.2022

DUT: 5G Digital Mobile Phone; Type: SHARK KTUS-H0; Serial: 1#

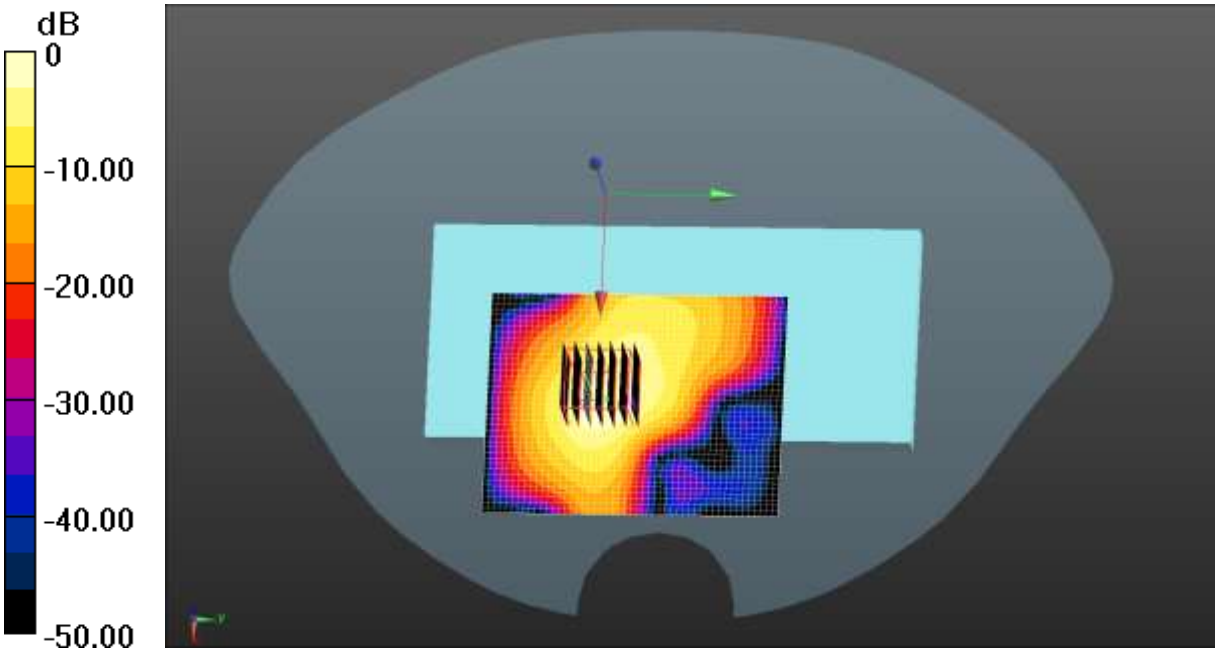
Communication System: UID 0, IEEE 802.11a WiFi 5GHz (0); Frequency: 5700 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5700 MHz; σ = 5.132 S/m; ε_r = 33.795; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7601; ConvF(4.96, 4.96, 4.96) @ 5700 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

5.6GWIFI Body Back/High Channel/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 3.330 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 0.527 W/kg
SAR(1 g) = 0.159 W/kg; SAR(10 g) = 0.048 W/kg
Smallest distance from peaks to all points 3 dB below = 7.4 mm
Ratio of SAR at M2 to SAR at M1 = 17.2%
Maximum value of SAR (measured) = 0.388 W/kg

5.6GWIFI Body Back/High Channel/Area Scan (41x51x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.339 W/kg



0 dB = 0.339 W/kg = -4.70 dBW/kg

Test Laboratory: JYTSZ Date: 04.11.2022

DUT: 5G Digital Mobile Phone; Type: SHARK KTUS-H0; Serial: 1#

Communication System: UID 0, IEEE 802.11a WiFi 5GHz (0); Frequency: 5785 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 5785 MHz; σ = 5.369 S/m; ε_r = 34.284; ρ = 1000 kg/m^3
Phantom section: Flat Section

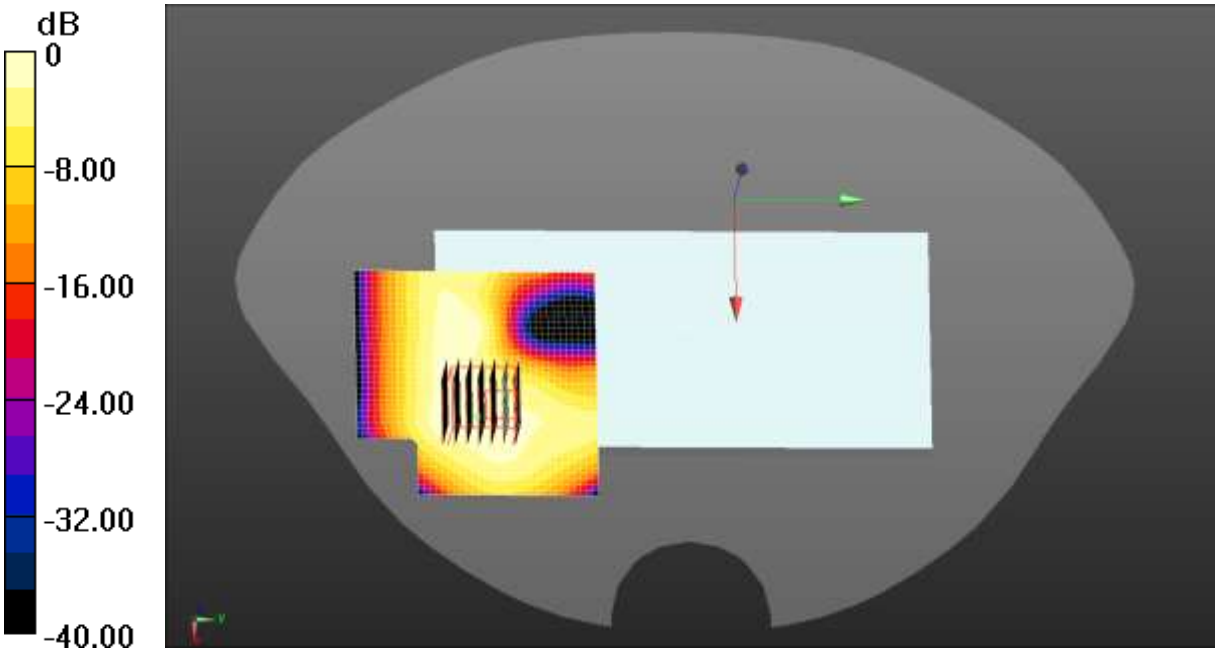
DASY5 Configuration:

- Probe: EX3DV4 - SN7601; ConvF(5.04, 5.04, 5.04) @ 5785 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- 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/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 0 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 0.496 W/kg
SAR(1 g) = 0.188 W/kg; SAR(10 g) = 0.063 W/kg
Smallest distance from peaks to all points 3 dB below = 9.4 mm
Ratio of SAR at M2 to SAR at M1 = 17.3%
Maximum value of SAR (measured) = 0.444 W/kg

5.8GWIFI Body Back/Middle Channel/Area Scan (41x41x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.334 W/kg



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

Test Laboratory: JYTSZ Date: 03.23.2022

DUT: 5G Digital Mobile Phone; Type: SHARK KTUS-H0; Serial: 1#

Communication System: UID 0, GPRS(2 Slots) (0); Frequency: 848.8 MHz;Duty Cycle: 1:4.10015
Medium parameters used (interpolated): f = 848.8 MHz; σ = 0.93 S/m; ε_r = 42.11; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

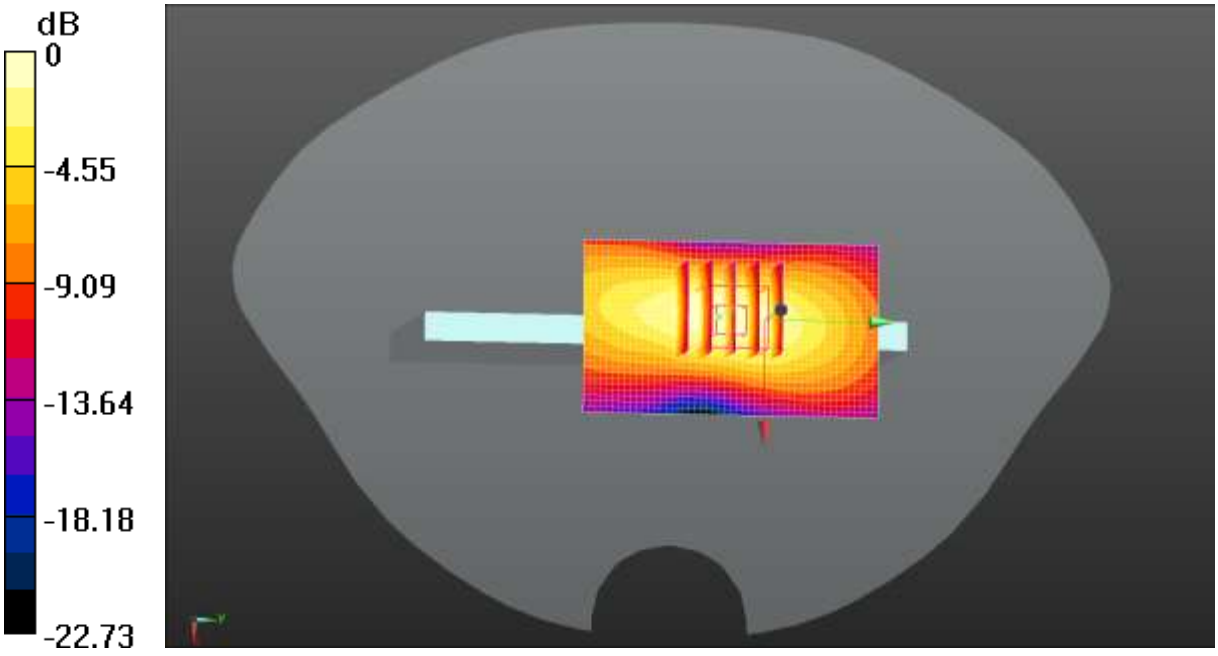
- Probe: EX3DV4 - SN7601; ConvF(10.2, 10.2, 10.2) @ 848.8 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

GPRS 850 2slots Body Right/High Channel/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 26.52 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 1.42 W/kg
SAR(1 g) = 0.684 W/kg; SAR(10 g) = 0.359 W/kg
Smallest distance from peaks to all points 3 dB below = 8.2 mm
Ratio of SAR at M2 to SAR at M1 = 50.5%
Maximum value of SAR (measured) = 1.05 W/kg

GPRS 850 2slots Body Right/High Channel/Area Scan (31x51x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.832 W/kg



0 dB = 0.832 W/kg = -0.80 dBW/kg

Test Laboratory: JYTSZ Date: 03.30.2022

DUT: 5G Digital Mobile Phone; Type: SHARK KTUS-H0; Serial: 1#

Communication System: UID 0, GPRS(2 Slots) (0); Frequency: 1880 MHz;Duty Cycle: 1:4.10015
Medium parameters used: f = 1880 MHz; σ = 1.386 S/m; ε_r = 40.46; ρ = 1000 kg/m^3
Phantom section: Flat Section

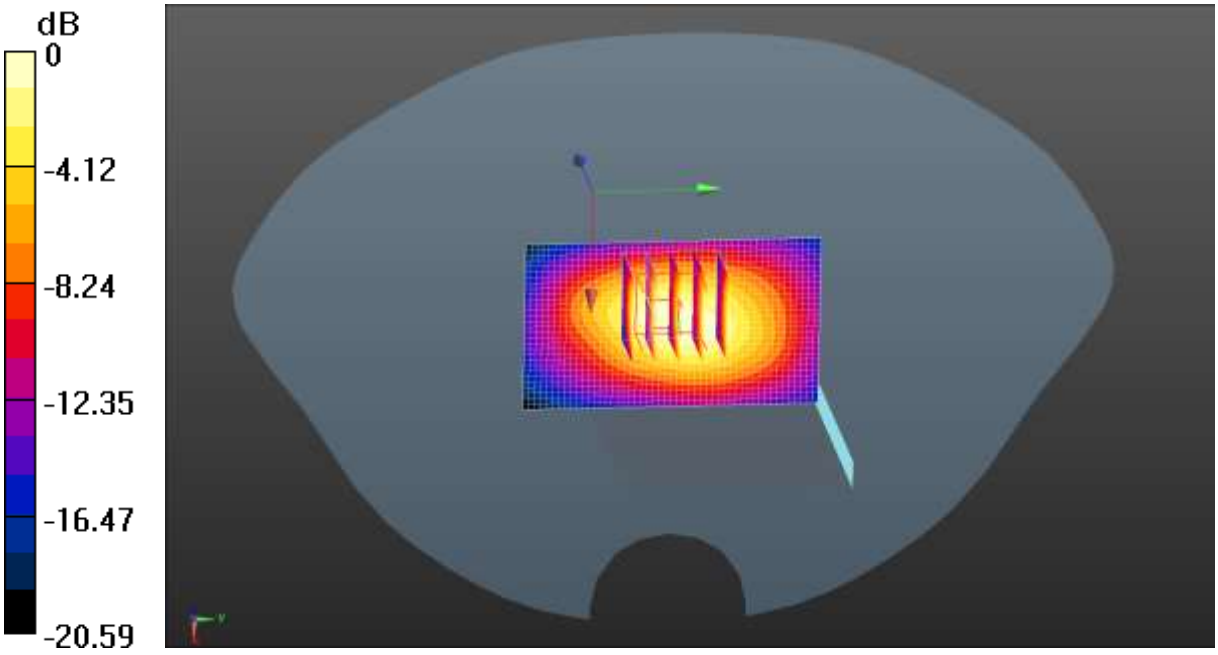
DASY5 Configuration:

- Probe: EX3DV4 - SN7601; ConvF(8.37, 8.37, 8.37) @ 1880 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- 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 2slots Body Top/Middle Channel/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 27.23 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 1.16 W/kg
SAR(1 g) = 0.622 W/kg; SAR(10 g) = 0.332 W/kg
Smallest distance from peaks to all points 3 dB below = 9.7 mm
Ratio of SAR at M2 to SAR at M1 = 54.3%
Maximum value of SAR (measured) = 0.954 W/kg

GPRS 1900 2slots Body Top/Middle Channel/Area Scan (31x51x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.818 W/kg



0 dB = 0.818 W/kg = -0.87 dBW/kg

Test Laboratory: JYTSZ Date: 03.23.2022

DUT: 5G Digital Mobile Phone; Type: SHARK KTUS-H0; Serial: 1#

Communication System: UID 0, UMTS-FDD(WCDMA) (0); Frequency: 846.6 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 846.6 MHz; σ = 0.934 S/m; ε_r = 42.081; ρ = 1000 kg/m^3
Phantom section: Flat Section

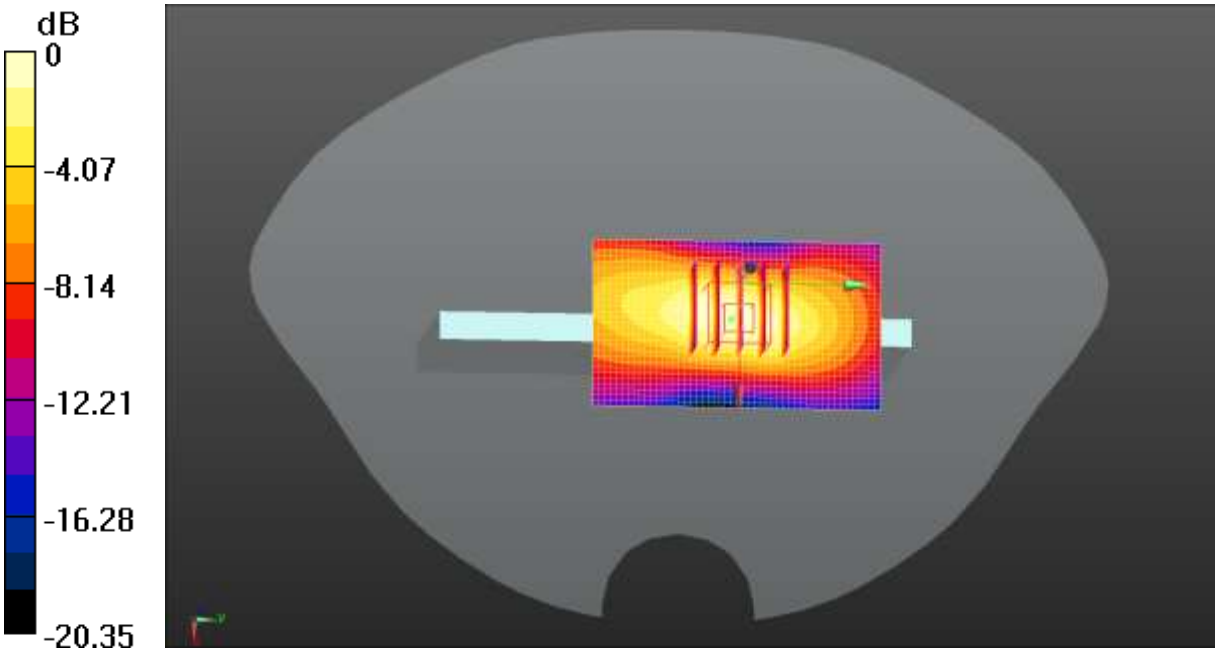
DASY5 Configuration:

- Probe: EX3DV4 - SN7601; ConvF(10.2, 10.2, 10.2) @ 846.6 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- 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 Right/High Channel/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 29.45 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 1.77 W/kg
SAR(1 g) = 0.863 W/kg; SAR(10 g) = 0.455 W/kg
Smallest distance from peaks to all points 3 dB below = 9.6 mm
Ratio of SAR at M2 to SAR at M1 = 50.3%
Maximum value of SAR (measured) = 1.37 W/kg

WCDMA 850 Body Right/High Channel/Area Scan (31x51x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.07 W/kg



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

Test Laboratory: JYTSZ Date: 03.27.2022

DUT: 5G Digital Mobile Phone; Type: SHARK KTUS-H0; Serial: 1#

Communication System: UID 0, UMTS-FDD(WCDMA) (0); Frequency: 1732.6 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1732.6 MHz; σ = 1.307 S/m; ε_r = 40.415; ρ = 1000 kg/m^3
Phantom section: Flat Section

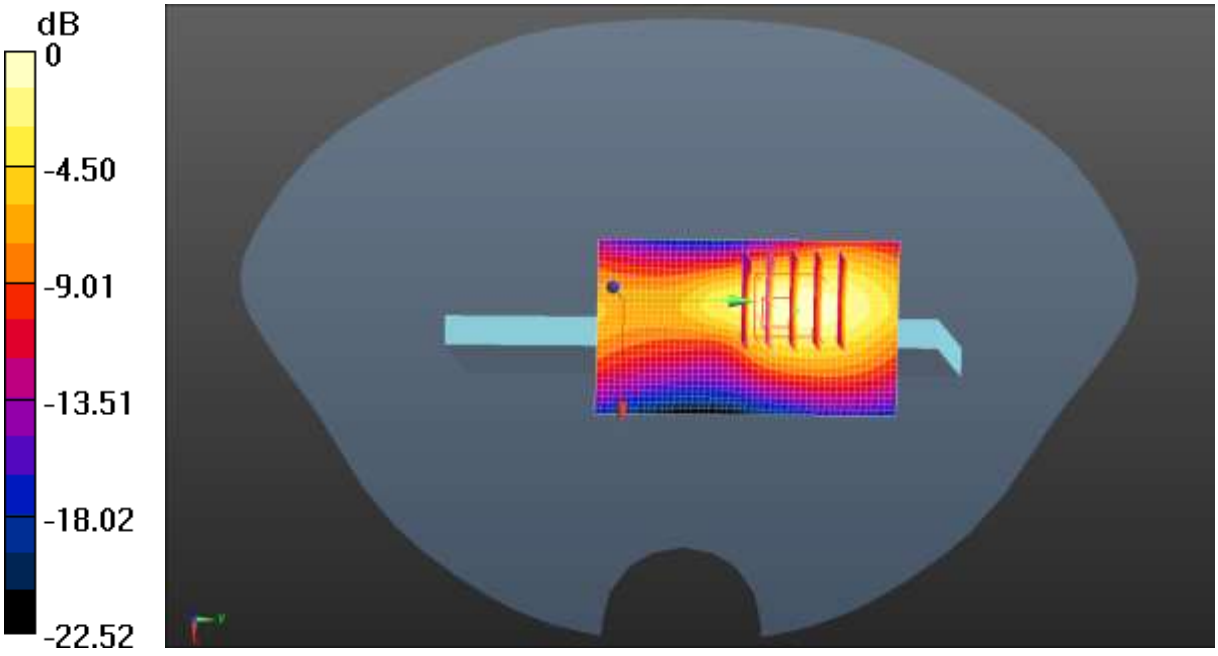
DASY5 Configuration:

- Probe: EX3DV4 - SN7601; ConvF(8.62, 8.62, 8.62) @ 1732.6 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- 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 Right/Middle Channel/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 20.27 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 2.05 W/kg
SAR(1 g) = 1.05 W/kg; SAR(10 g) = 0.554 W/kg
Smallest distance from peaks to all points 3 dB below = 8.6 mm
Ratio of SAR at M2 to SAR at M1 = 54.1%
Maximum value of SAR (measured) = 1.55 W/kg

WCDMA 1700 Body Right/Middle Channel/Area Scan (31x51x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.44 W/kg



0 dB = 1.44 W/kg = 1.58 dBW/kg

Test Laboratory: JYTSZ Date: 03.30.2022

DUT: 5G Digital Mobile Phone; Type: SHARK KTUS-H0; Serial: 1#

Communication System: UID 0, UMTS-FDD(WCDMA) (0); Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.386 S/m; ε_r = 40.46; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

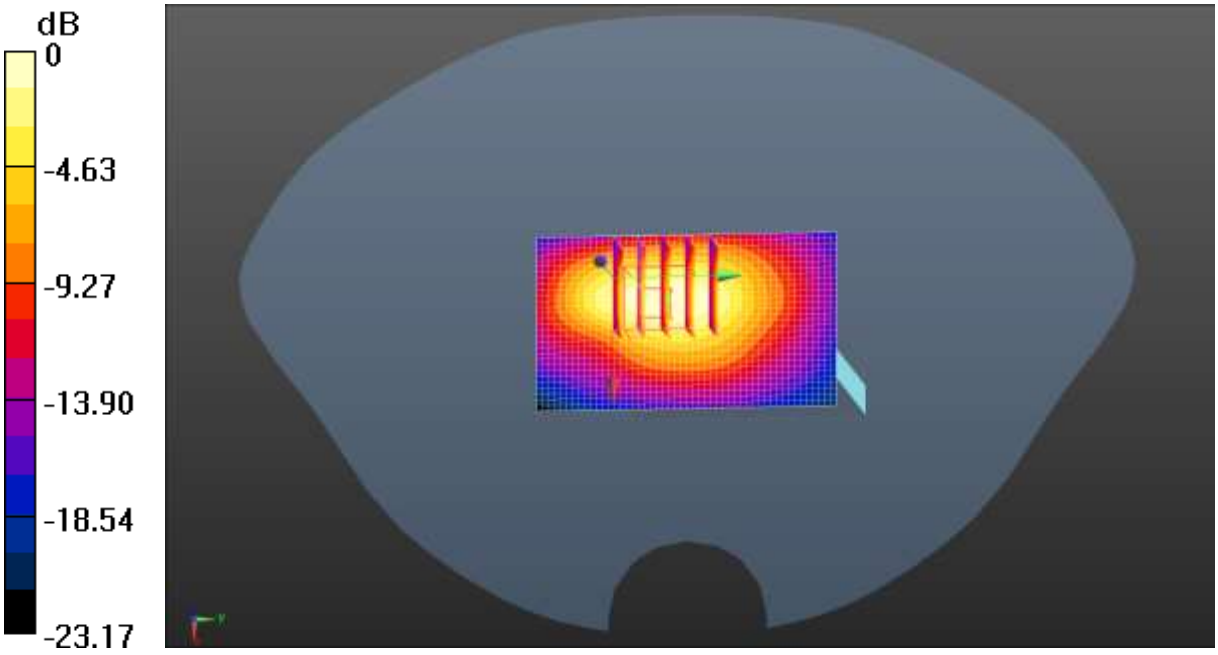
- Probe: EX3DV4 - SN7601; ConvF(8.37, 8.37, 8.37) @ 1880 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

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

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 22.98 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 1.16 W/kg
SAR(1 g) = 0.621 W/kg; SAR(10 g) = 0.327 W/kg
Smallest distance from peaks to all points 3 dB below = 8.6 mm
Ratio of SAR at M2 to SAR at M1 = 57.5%
Maximum value of SAR (measured) = 0.836 W/kg

WCDMA 1900 Body Top/Middle Channel/Area Scan (31x51x1): Interpolated

grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.877 W/kg



0 dB = 0.877 W/kg = -0.57 dBW/kg

Test Laboratory: JYTSZ Date: 03.30.2022

DUT: 5G Digital Mobile Phone; Type: SHARK KTUS-H0; Serial: 1#

Communication System: UID 0, LTE-Fdd(USA) 1RB QPSK (0); Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.386 S/m; ε_r = 40.46; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

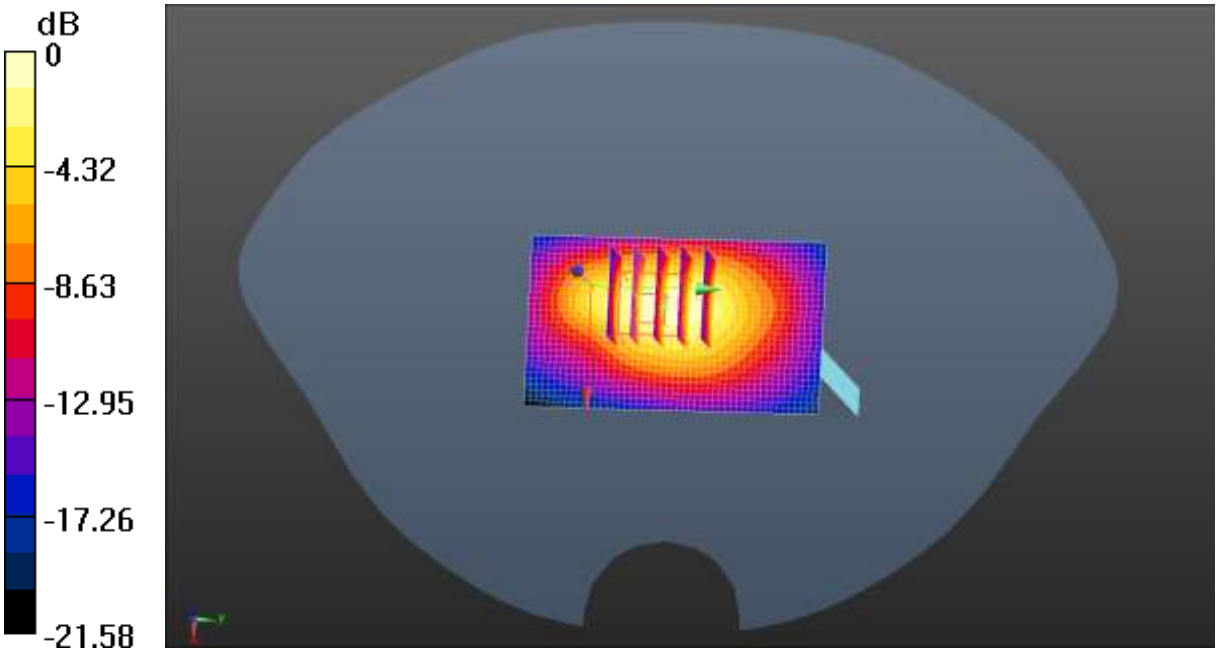
- Probe: EX3DV4 - SN7601; ConvF(8.37, 8.37, 8.37) @ 1880 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

LTE Band 2 1RB(20MHz) Body Top/Middle Channel/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 23.10 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 1.00 W/kg
SAR(1 g) = 0.539 W/kg; SAR(10 g) = 0.284 W/kg
Smallest distance from peaks to all points 3 dB below = 9.6 mm
Ratio of SAR at M2 to SAR at M1 = 57.1%
Maximum value of SAR (measured) = 0.758 W/kg

LTE Band 2 1RB(20MHz) Body Top/Middle Channel/Area Scan (31x51x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.754 W/kg



0 dB = 0.754 W/kg = -1.23 dBW/kg

Test Laboratory: JYTSZ Date: 03.27.2022

DUT: 5G Digital Mobile Phone; Type: SHARK KTUS-H0; Serial: 1#

Communication System: UID 0, LTE-Fdd(USA) 1RB QPSK (0); Frequency: 1720 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1720 MHz; σ = 1.3 S/m; ε_r = 40.439; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

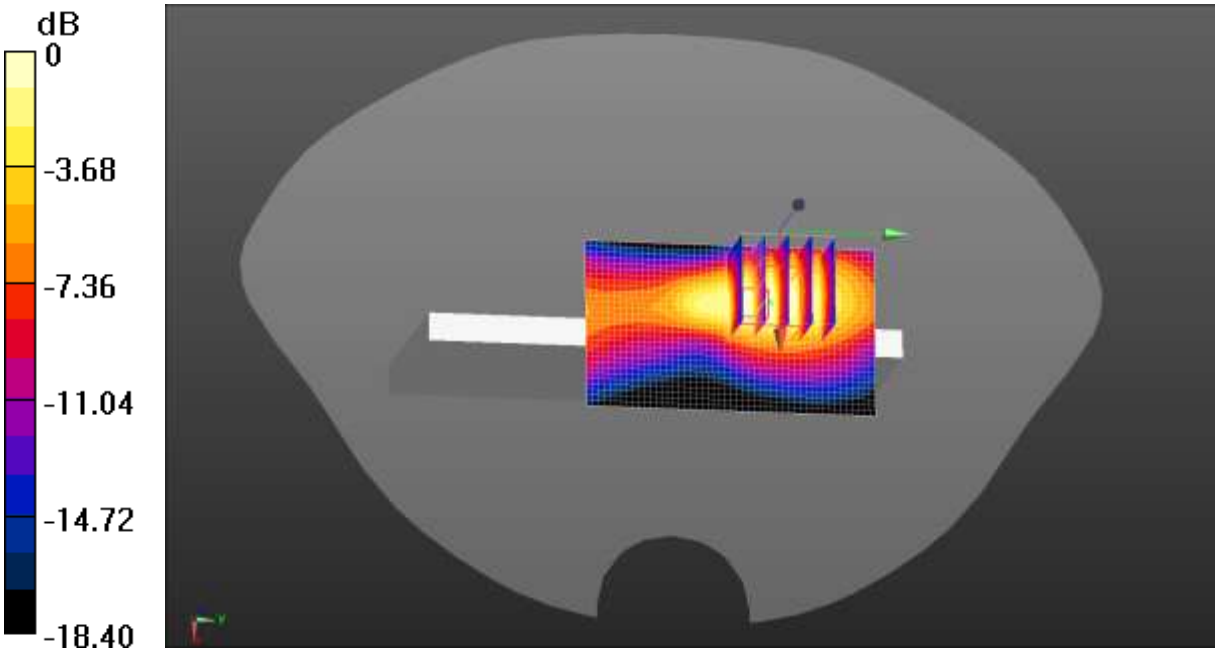
- Probe: EX3DV4 - SN7601; ConvF(8.62, 8.62, 8.62) @ 1720 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

LTE Band 4 1RB(20MHz) Body Right/Low Channel/Area Scan (31x51x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.42 W/kg

LTE Band 4 1RB(20MHz) Body Right/Low Channel/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 19.06 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 1.90 W/kg
SAR(1 g) = 0.971 W/kg; SAR(10 g) = 0.503 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) = 1.33 W/kg



0 dB = 1.33 W/kg = 1.24 dBW/kg

Test Laboratory: JYTSZ Date: 04.03.2022

DUT: 5G Digital Mobile Phone; Type: SHARK KTUS-H0; Serial: 1#

Communication System: UID 0, LTE-Fdd(USA) 1RB QPSK (0); Frequency: 2510 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2510 MHz; σ = 1.848 S/m; ε_r = 39.29; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

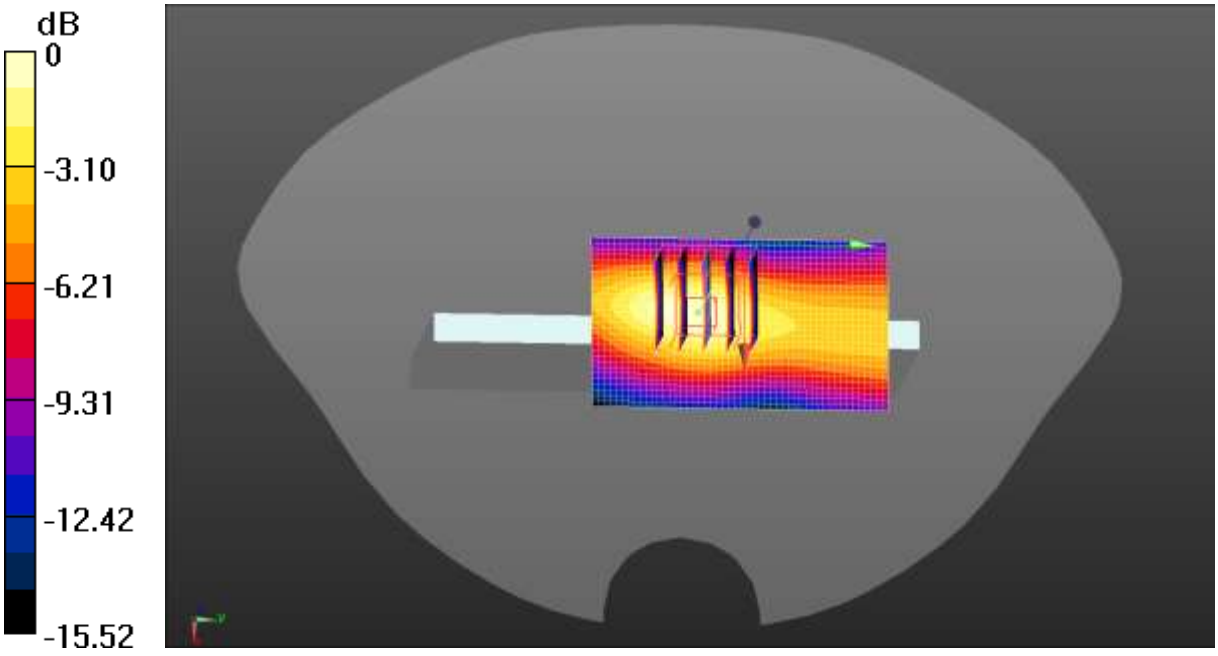
- Probe: EX3DV4 - SN7601; ConvF(7.74, 7.74, 7.74) @ 2510 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

LTE Band 7 1RB(20MHz) Body Right/Low Channel/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 26.37 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 1.58 W/kg
SAR(1 g) = 0.765 W/kg; SAR(10 g) = 0.369 W/kg
Smallest distance from peaks to all points 3 dB below = 9.6 mm
Ratio of SAR at M2 to SAR at M1 = 49.4%
Maximum value of SAR (measured) = 1.17 W/kg

LTE Band 7 1RB(20MHz) Body Right/Low Channel/Area Scan (31x51x1):

Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.937 W/kg



0 dB = 0.937 W/kg = -0.28 dBW/kg

Test Laboratory: JYTSZ Date: 03.22.2022

DUT: 5G Digital Mobile Phone; Type: SHARK KTUS-H0; Serial: 1#

Communication System: UID 0, LTE-Fdd(USA) 1RB QPSK (0); Frequency: 704 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 704 MHz; σ = 0.889 S/m; ε_r = 42.417; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

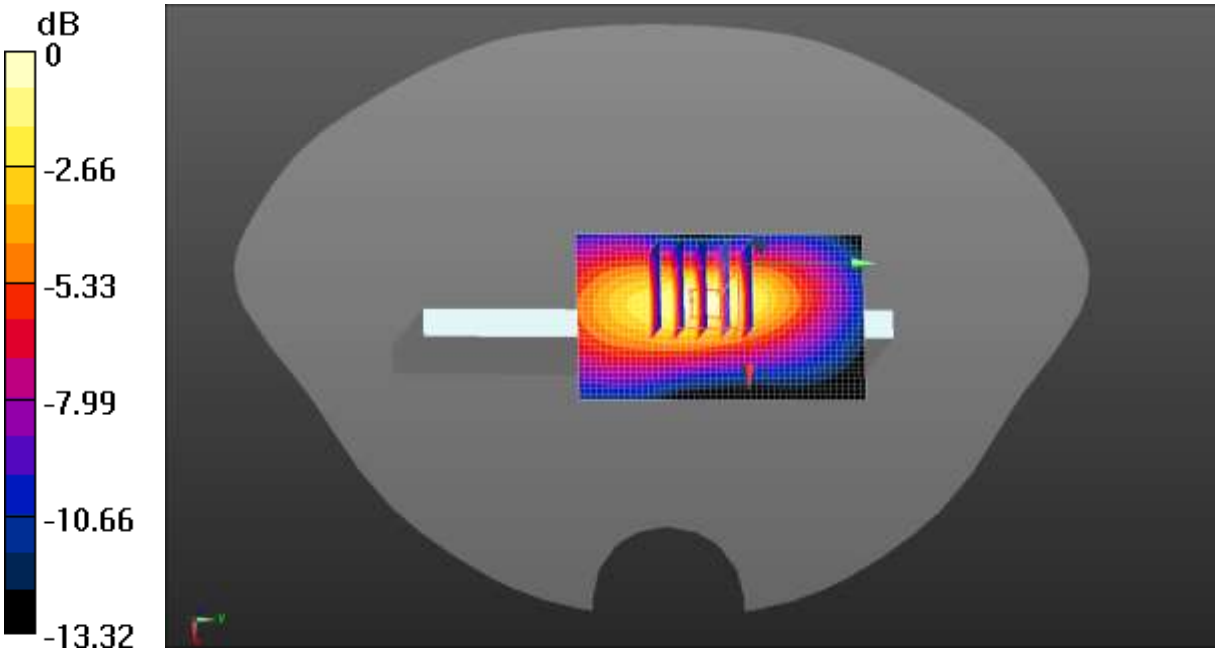
- Probe: EX3DV4 - SN7601; ConvF(10.58, 10.58, 10.58) @ 704 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

LTE Band 12 1RB(10MHz) Body Right/Low Channel/Area Scan (31x51x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.761 W/kg

LTE Band 12 1RB(10MHz) Body Right/Low Channel/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 27.88 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 1.11 W/kg
SAR(1 g) = 0.583 W/kg; SAR(10 g) = 0.329 W/kg
Smallest distance from peaks to all points 3 dB below = 9.6 mm
Ratio of SAR at M2 to SAR at M1 = 55.8%
Maximum value of SAR (measured) = 0.808 W/kg



0 dB = 0.808 W/kg = -0.93 dBW/kg

Test Laboratory: JYTSZ Date: 03.23.2022

DUT: 5G Digital Mobile Phone; Type: SHARK KTUS-H0; Serial: 1#

Communication System: UID 0, LTE-Fdd(USA) 1RB QPSK (0); Frequency: 841.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 841.5 MHz; σ = 0.928 S/m; ε_r = 42.124; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

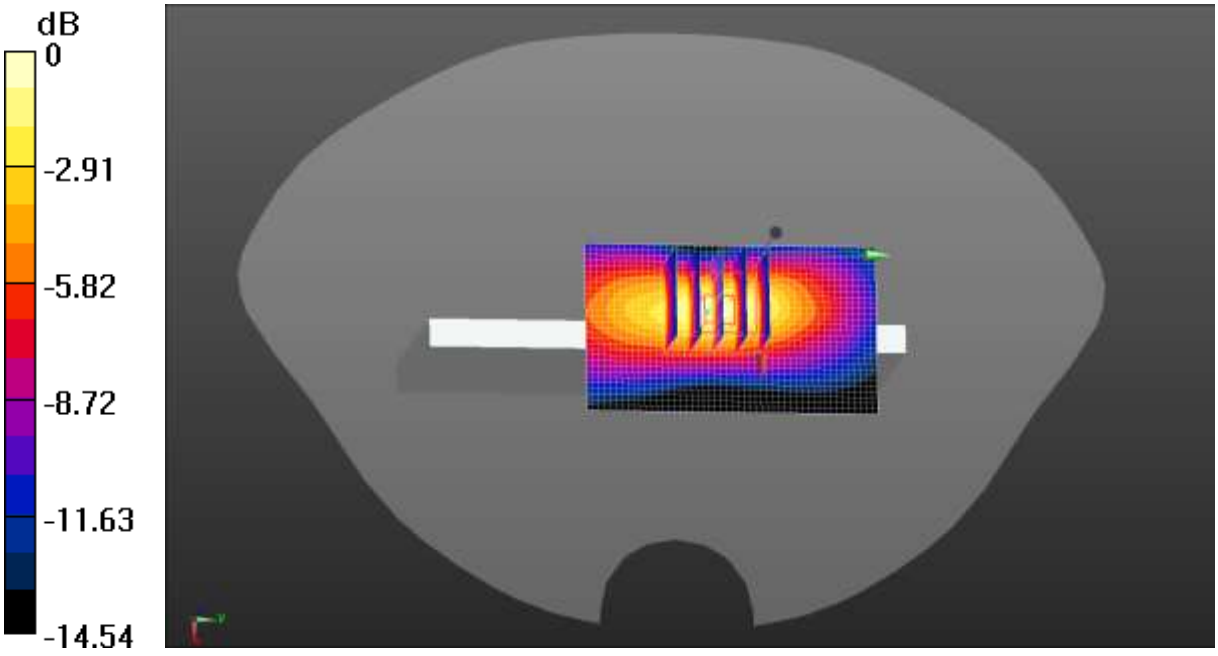
- Probe: EX3DV4 - SN7601; ConvF(10.2, 10.2, 10.2) @ 841.5 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

LTE Band 26 1RB(15MHz) Body Right/High Channel/Area Scan (31x51x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.922 W/kg

LTE Band 26 1RB(15MHz) Body Right/High Channel/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 27.37 V/m; Power Drift = 0.20 dB
Peak SAR (extrapolated) = 1.35 W/kg
SAR(1 g) = 0.675 W/kg; SAR(10 g) = 0.361 W/kg
Smallest distance from peaks to all points 3 dB below = 9.6 mm
Ratio of SAR at M2 to SAR at M1 = 52.3%
Maximum value of SAR (measured) = 1.03 W/kg



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

Test Laboratory: JYTSZ Date: 04.03.2022

DUT: 5G Digital Mobile Phone; Type: SHARK KTUS-H0; Serial: 1#

Communication System: UID 0, LTE-TDD(USA) 20MHz 1RB QPSK (0); Frequency: 2506 MHz;Duty Cycle: 1:1.59956
Medium parameters used (interpolated): f = 2506 MHz; σ = 1.896 S/m; ε_r = 39.446; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

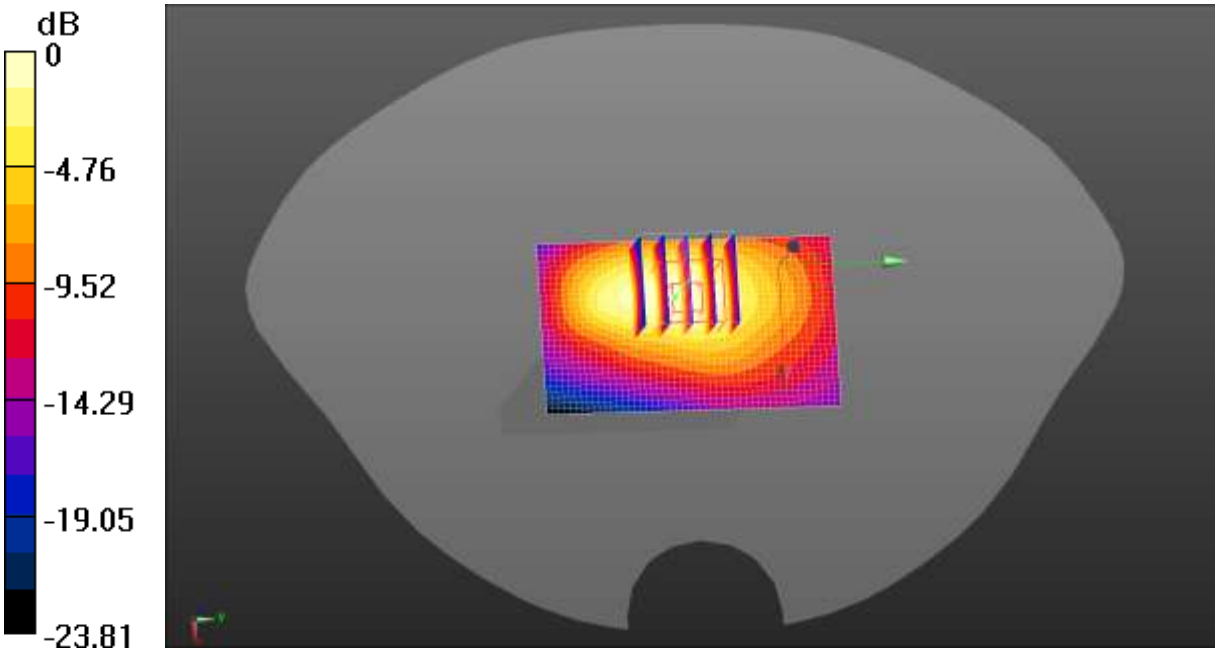
- Probe: EX3DV4 - SN7601; ConvF(7.49, 7.49, 7.49) @ 2506 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

LTE Band 41 1RB(20MHz) Body Top/Low Channel/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 18.23 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 0.959 W/kg
SAR(1 g) = 0.495 W/kg; SAR(10 g) = 0.254 W/kg
Smallest distance from peaks to all points 3 dB below = 11.3 mm
Ratio of SAR at M2 to SAR at M1 = 51.7%
Maximum value of SAR (measured) = 0.740 W/kg

LTE Band 41 1RB(20MHz) Body Top/Low Channel/Area Scan (31x51x1):

Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.785 W/kg



0 dB = 0.785 W/kg = -1.05 dBW/kg

Test Laboratory: JYTSZ Date: 03.23.2022

DUT: 5G Digital Mobile Phone; Type: SHARK KTUS-H0; Serial: 1#

Communication System: UID 0, NR (0); Frequency: 839 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 839 MHz; σ = 0.931 S/m; ε_r = 42.104; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

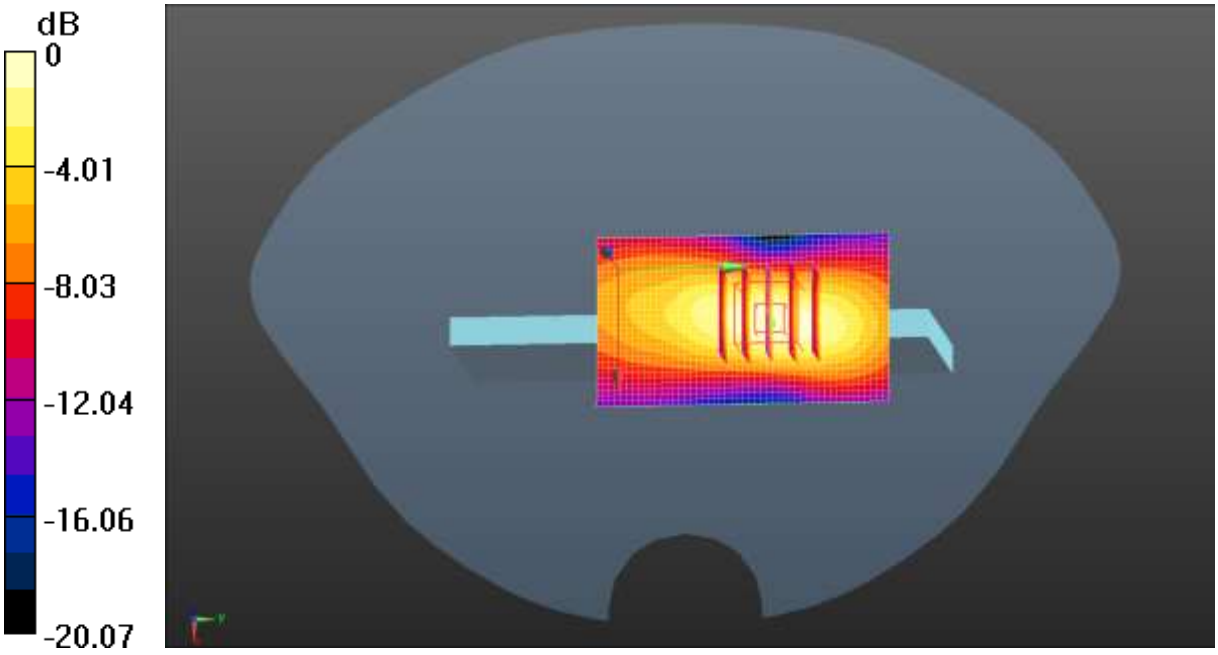
- Probe: EX3DV4 - SN7601; ConvF(10.2, 10.2, 10.2) @ 839 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

NR n5 1RB(20MHz) Body Right/High Channel/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 25.04 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 1.89 W/kg
SAR(1 g) = 0.923 W/kg; SAR(10 g) = 0.488 W/kg
Smallest distance from peaks to all points 3 dB below = 9.6 mm
Ratio of SAR at M2 to SAR at M1 = 49.9%
Maximum value of SAR (measured) = 1.51 W/kg

NR n5 1RB(20MHz) Body Right/High Channel/Area Scan (31x51x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.16 W/kg



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

Test Laboratory: JYTSZ Date: 04.06.2022

DUT: 5G Digital Mobile Phone; Type: SHARK KTUS-H0; Serial: 1#

Communication System: UID 0, NR (0); Frequency: 2546.01 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2546.01 MHz; σ = 1.896 S/m; ε_r = 39.446; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

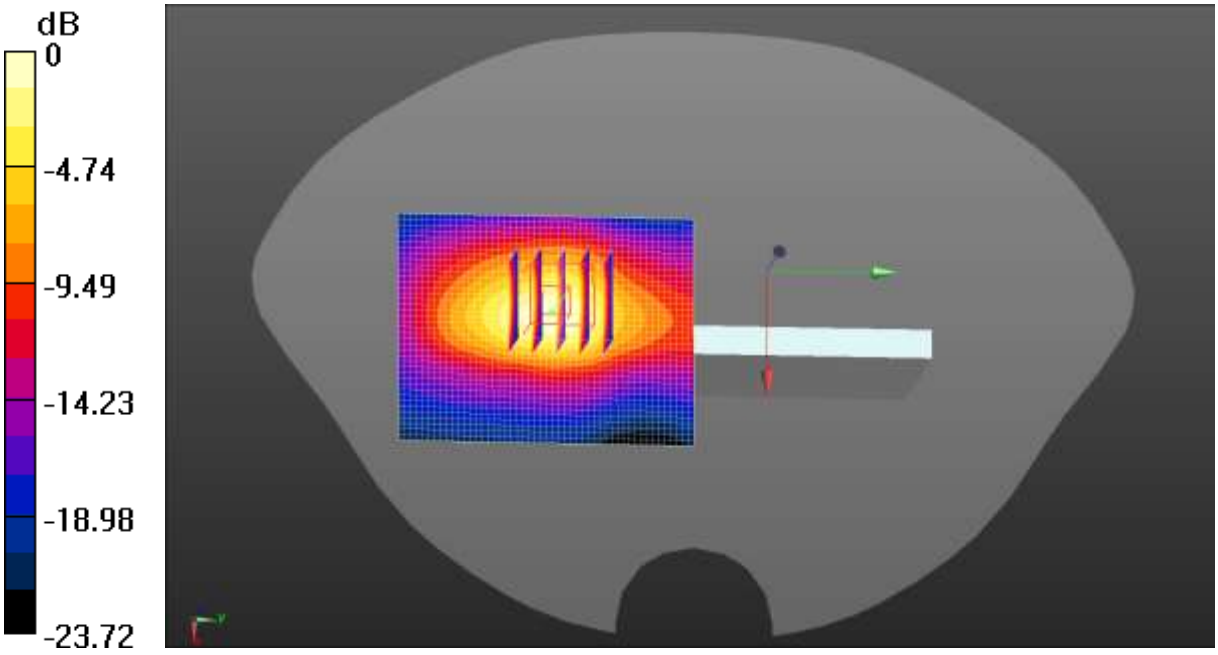
- Probe: EX3DV4 - SN7601; ConvF(7.49, 7.49, 7.49) @ 2546.01 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

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

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.614 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 1.55 W/kg
SAR(1 g) = 0.830 W/kg; SAR(10 g) = 0.365 W/kg
Smallest distance from peaks to all points 3 dB below = 9.6 mm
Ratio of SAR at M2 to SAR at M1 = 50.7%
Maximum value of SAR (measured) = 1.23 W/kg

NR n41 1RB(100MHz) Body Left/Low Channel/Area Scan (41x51x1):

Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 1.14 W/kg



0 dB = 1.14 W/kg = 0.57 dBW/kg

Test Laboratory: JYTSZ Date: 04.14.2022

DUT: 5G Digital Mobile Phone; Type: SHARK KTUS-H0; Serial: 1#

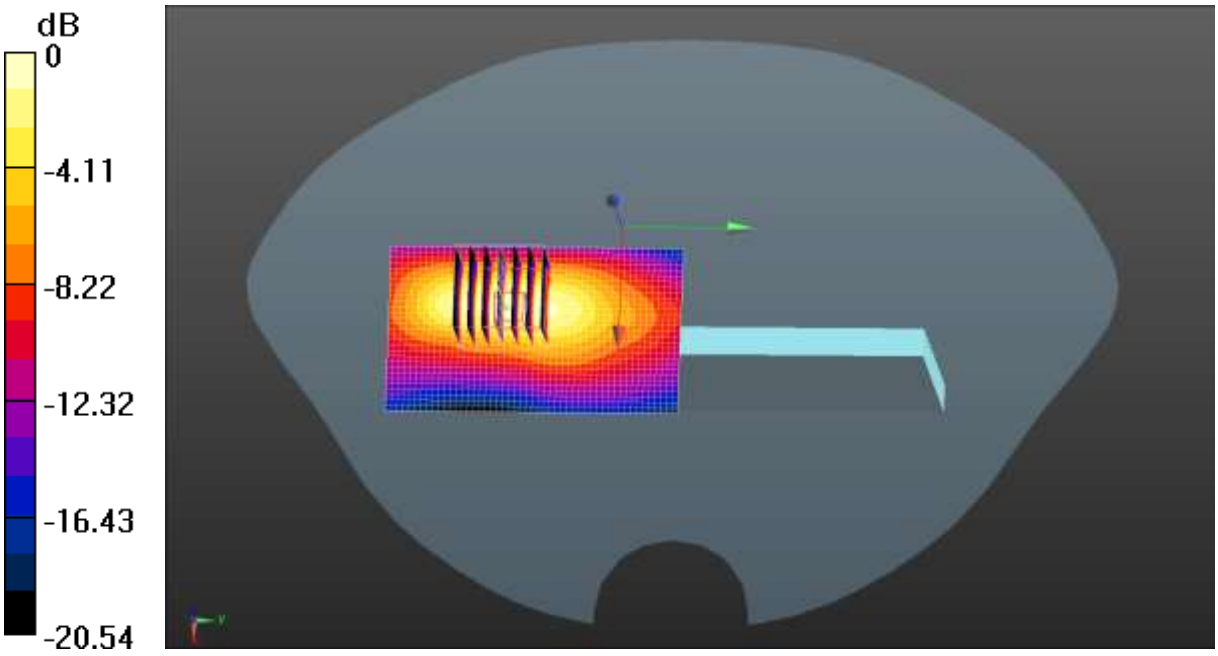
Communication System: UID 0, NR (0); Frequency: 3500.01 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 3500.01 MHz; σ = 2.942 S/m; ε_r = 37.621; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 – SN3826; ConvF(6.61, 6.61, 6.61) @ 3500.01 MHz; Calibrated: 07.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- 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(3450-3550) 1RB(100MHz) Body Left/Middle Channel/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=4mm
Reference Value = 7.358 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 1.43 W/kg
SAR(1 g) = 0.784 W/kg; SAR(10 g) = 0.289 W/kg
Smallest distance from peaks to all points 3 dB below = 7.6 mm
Ratio of SAR at M2 to SAR at M1 = 39.3%
Maximum value of SAR (measured) = 1.47 W/kg

NR n77(3450-3550) 1RB(100MHz) Body Left/Middle Channel/Area Scan (31x51x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 1.134 W/kg



0 dB = 1.134 W/kg = 0.55 dBW/kg

Test Laboratory: JYTSZ Date: 04.19.2022

DUT: 5G Digital Mobile Phone; Type: SHARK KTUS-H0; Serial: 1#

Communication System: UID 0, NR (0); Frequency: 3930 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 3930 MHz; σ = 2.942 S/m; ε_r = 37.621; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

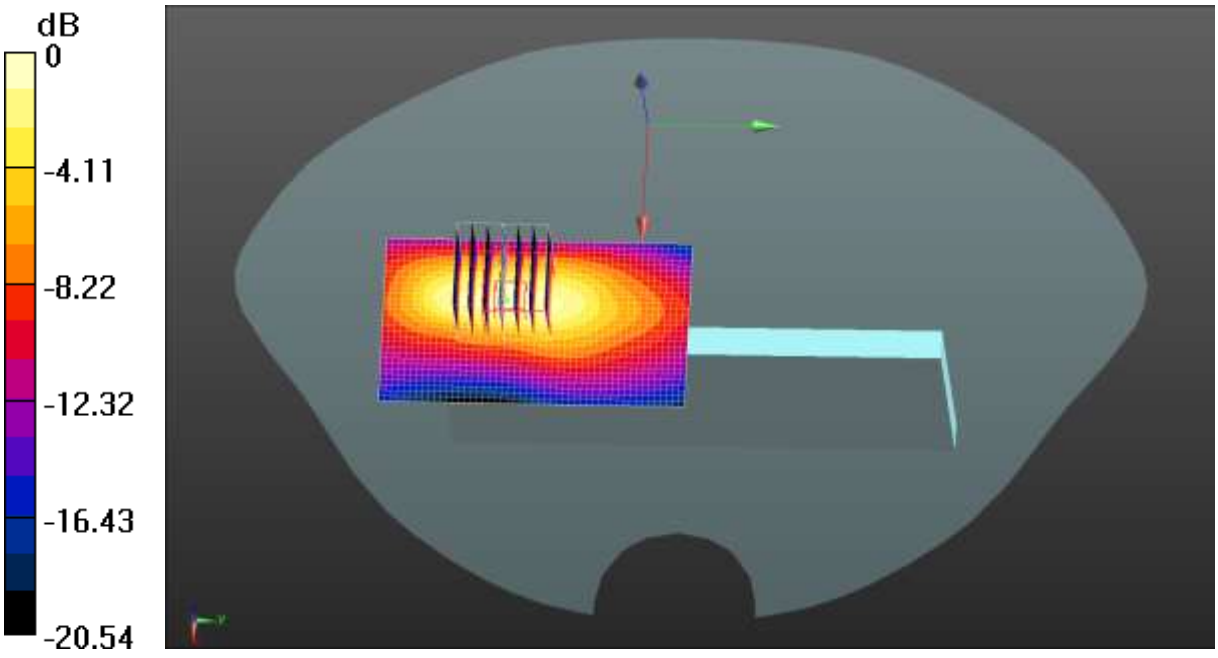
- Probe: EX3DV4 – SN3826; ConvF(6.21, 6.21, 6.21) @ 3930 MHz; Calibrated: 07.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

NR n77(3700-3980) 1RB(100MHz) Body Left/High Channel/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=4mm
Reference Value = 6.798 V/m; Power Drift = -0.16 dB
Peak SAR (extrapolated) = 1.53 W/kg
SAR(1 g) = 0.730 W/kg; SAR(10 g) = 0.263 W/kg
Smallest distance from peaks to all points 3 dB below = 7.6 mm
Ratio of SAR at M2 to SAR at M1 = 39.3%
Maximum value of SAR (measured) = 1.34 W/kg

NR n77(3700-3980) 1RB(100MHz) Body Left/High Channel/Area Scan (31x51x1):

Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 1.031 W/kg



0 dB = 1.031 W/kg = 0.13 dBW/kg

Test Laboratory: JYTSZ Date: 04.03.2022

DUT: 5G Digital Mobile Phone; Type: SHARK KTUS-H0; Serial: 1#

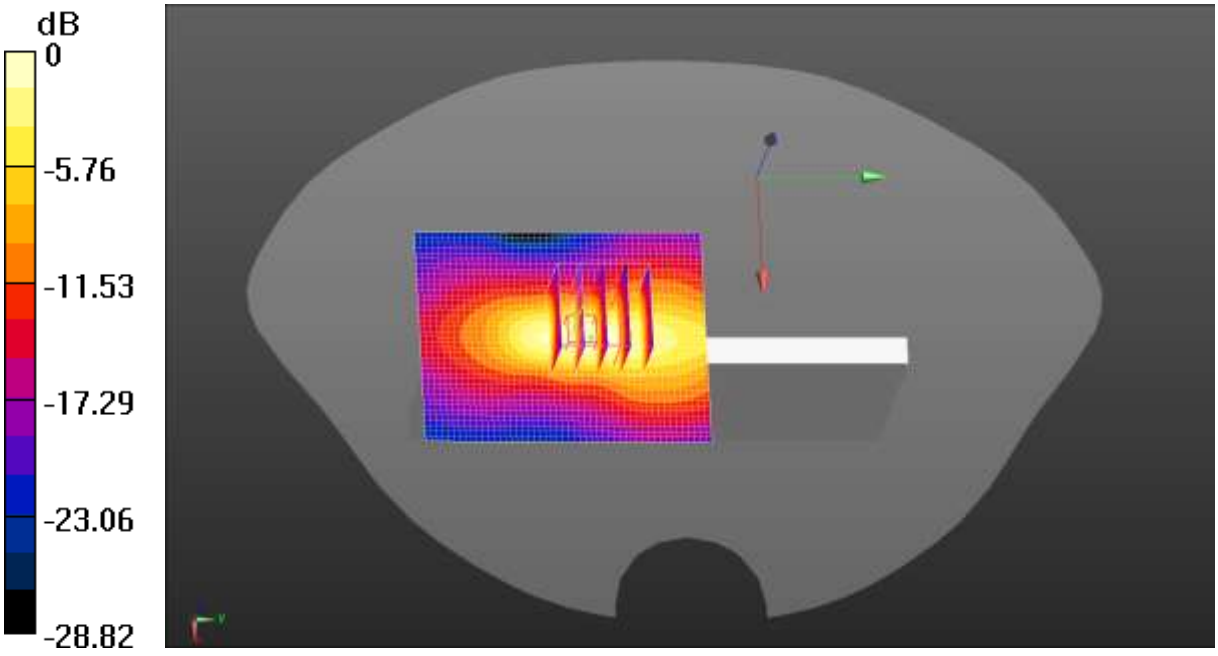
Communication System: UID 0, IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps) (0);
Frequency: 2412 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2412 MHz; σ = 1.731 S/m; ε_r = 39.445; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7601; ConvF(7.74, 7.74, 7.74) @ 2412 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- 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 Left/Low Channel/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.53 V/m; Power Drift = -0.13 dB
Peak SAR (extrapolated) = 0.852 W/kg
SAR(1 g) = 0.388 W/kg; SAR(10 g) = 0.169 W/kg
Smallest distance from peaks to all points 3 dB below = 8 mm
Ratio of SAR at M2 to SAR at M1 = 47.4%
Maximum value of SAR (measured) = 0.653 W/kg

2.4GWIFI Body Left/Low Channel/Area Scan (41x51x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.642 W/kg



0 dB = 0.642 W/kg = -1.92 dBW/kg

Test Laboratory: JYTSZ Date: 04.03.2022

DUT: 5G Digital Mobile Phone; Type: SHARK KTUS-H0; Serial: 1#

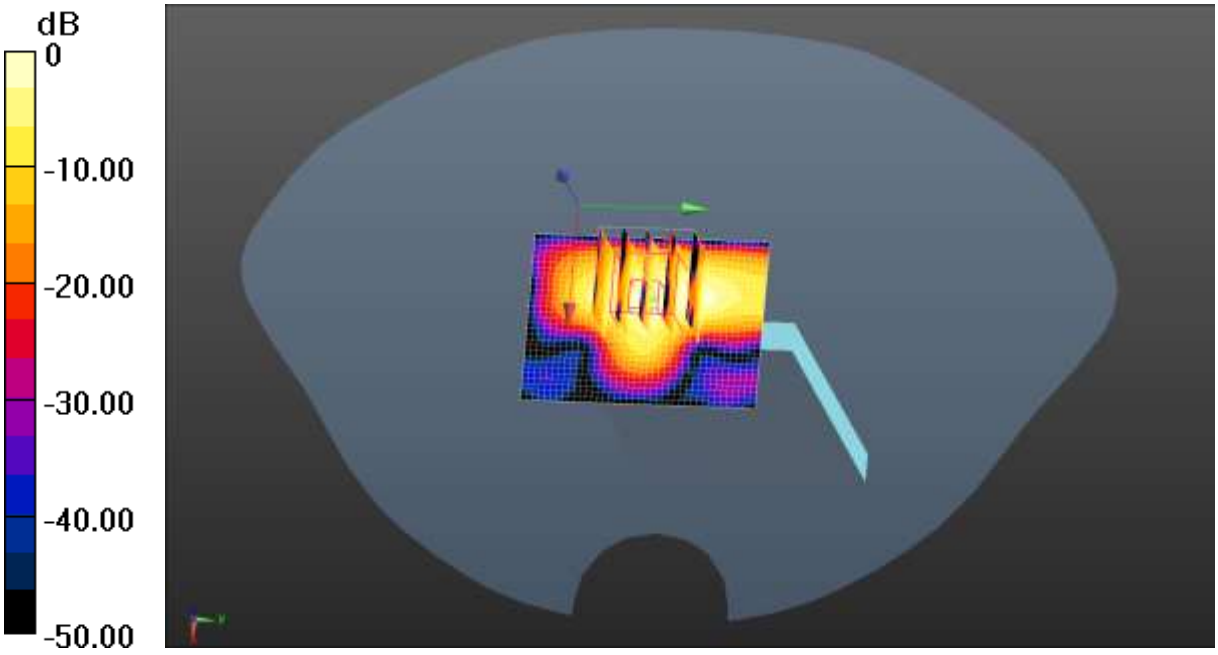
Communication System: UID 0, Bluetooth (0); Frequency: 2441 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2441 MHz; σ = 1.735 S/m; ε_r = 39.438; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7601; ConvF(7.74, 7.74, 7.74) @ 2441 MHz; Calibrated: 12.28.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1452; Calibrated: 05.26.2021
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

BT Body Top/Middle Channel/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.087 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 0.0210 W/kg
SAR(1 g) = 0.006 W/kg; SAR(10 g) = 0.00211 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 = 43.4%
Maximum value of SAR (measured) = 0.00884 W/kg

BT Body Top/Middle Channel/Area Scan (31x41x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.00950 W/kg



0 dB = 0.00950 W/kg = -20.22 dBW/kg