FCC SAR REPORT

Report No.: JYTSZ-R14-2400032

Applicant: INFINIX MOBILITY LIMITED

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

Equipment Under Test (EUT)

Product Name: Mobile Phone

Model No.: X6838

Trade mark Infinix

FCC ID: 2AIZN-X6838

Applicable standards: FCC 47 CFR Part 2.1093

Date of Test: 11 Apr., 2024 ~ 07 May, 2024

Test Result: Maximum Reported 1-g SAR (W/kg)

Head: 1.170 Body: 0.838 Hotspot: 1.046

Project by:	Eric Wang ***Project Engineer***	***Date:***	*30 May., 2024*
Reviewed by:	Jet Zhang ***Senior Engineer***	***Date:***	*30 May., 2024*
Approved by:	Jamet Wei ***Manager***	***Date:***	*30 May., 2024*

2 Version

Version No.	Date	Description
00	*30 May., 2024*	*Original*

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4 SAR Results Summary

The maximum results of Specific Absorption Rate (SAR) found during test as below:
<Highest Reported standalone SAR Summary>

Exposure Position	Frequency Band	Reported 1-g SAR (W/kg)	Equipment Class	Highest Reported 1-g SAR (W/kg)
Head	GSM 850	0.476	PCE	1.170
	PCS 1900	0.577		
	WCDMA Band II	1.170		
	WCDMA Band IV	0.659		
	WCDMA Band V	0.421		
	LTE Band 2	0.200		
	LTE Band 5	0.471		
	LTE Band 7	0.191		
	LTE Band 12 & Band 17	0.391		
	LTE Band 38	0.159		
	LTE Band 41	0.468		
	LTE Band 42	0.488		
	LTE Band 66&Band 4	0.164		
	NR n5	0.447		
	NR n7	0.488		
	NR n12	0.296		
	NR n41 &n38	0.509		
	NR n66	0.292		
	NR n77 (3450MHz~3550MHz) &n78 (3450MHz~3550MHz)	0.335		
	NR n77 (3550MHz~3700MHz) &n78 (3550MHz~3700MHz)	0.334		
	NRn77 (3700MHz~3980MHz) &n78 (3700MHz~3800MHz)	0.371		
	WLAN 2.4 GHz	0.269	DTS	
	Bluetooth	0.059	DSS	
	WLAN 5.3 GHz & WLAN 5.2 GHz	0.156	NII	
	WLAN 5.6 GHz	0.238		
	WLAN 5.8 GHz	0.078		
Body (10 mm Gap)	GSM 850	0.596	PCE	0.838
	PCS 1900	0.625		
	WCDMA Band II	0.700		
	WCDMA Band IV	0.366		
	WCDMA Band V	0.307		
	LTE Band 2	0.667		
	LTE Band 5	0.348		
	LTE Band 7	0.498		
	LTE Band 12 & Band 17	0.253		
	LTE Band 38	0.572		
	LTE Band 41	0.190		
	LTE Band 42	0.158		

	LTE Band 66&Band 4	0.283		
	NR n5	0.335		
	NR n7	0.838		
	NR n12	0.208		
	NR n41 &n38	0.250		
	NR n66	0.242		
	NR n77 (3450MHz~3550MHz) &n78 (3450MHz~3550MHz)	0.086		
	NR n77 (3550MHz~3700MHz) &n78 (3550MHz~3700MHz)	0.090		
	NRn77 (3700MHz~3980MHz) &n78 (3700MHz~3800MHz)	0.107		
	WLAN 2.4GHz	0.092	DTS	
	Bluetooth	0.025	DSS	
	WLAN 5.3 GHz & WLAN 5.2 GHz	0.079	NII	
	WLAN 5.6 GHz	0.067		
	WLAN 5.8 GHz	0.048		
Hotspot (10 mm Gap)	GSM 850	0.596	PCE	1.046
	PCS 1900	0.786		
	WCDMA Band II	1.046		
	WCDMA Band IV	0.498		
	WCDMA Band V	0.307		
	LTE Band 2	1.032		
	LTE Band 5	0.348		
	LTE Band 7	0.498		
	LTE Band 12 & Band 17	0.253		
	LTE Band 38	0.572		
	LTE Band 41	0.269		
	LTE Band 42	0.158		
	LTE Band 66&Band 4	0.424		
	NR n5	0.335		
	NR n7	0.838		
	NR n12	0.208		
	NR n41 &n38	0.350		
	NR n66	0.399		
	NR n77 (3450MHz~3550MHz) &n78 (3450MHz~3550MHz)	0.086		
	NR n77 (3550MHz~3700MHz) &n78 (3550MHz~3700MHz)	0.090		
	NRn77 (3700MHz~3980MHz) &n78 (3700MHz~3800MHz)	0.107		

	WLAN 2.4 GHz	0.092	DTS	
	Bluetooth	0.025	DSS	
	WLAN 5.2GHz	0.158	NII	
	WLAN 5.8 GHz	0.061		

<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	WCDMA 1900	1.170	PCE	1.326
	WLAN 2.4 GHz	0.156	DTS	
	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 IEC/IEEE 62209-1528:2020.
3. For DFS operation type is slaver device without radar detection function, 5.3GHz WLAN and 5.6GHz WLAN does not support hotspot mode.
4. For FDD-LTE Band 17 is full covered by FDD-LTE Band 12, so only FDD-LTE Band 12 was tested.
5. For FDD-LTE Band 4 is full covered by FDD-LTE Band 66, so only FDD-LTE Band 66 was tested.
6. For NR n38 is full covered by NR n41, so only NR n38 was tested.
7. For NR n78 is full covered by NR n77, so only NR n78 was tested.

5 General Information

5.1 Client Information

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

5.2 General Description of EUT

Product Name:	Mobile Phone		
Model No.:	X6838		
Category of device	Portable device		
Operation Frequency:	GSM:	GSM850: 824.2~848.8 MHz	PCS 1900: 1850.2~1909.8 MHz
	WCDMA:	Band II: 1852.4~1907.6 MHz	Band V: 826.4~846.6 MHz
		Band IV: 1712.4~1752.6 MHz	
	LTE:	Band 2:1850MHz~1910MHz	Band 4:1710MHz~1755MHz
		Band 5:824MHz~849MHz	Band 7: 2500MHz~2570MHz
		Band 12: 699MHz~716MHz	Band 17: 704MHz~716MHz
		Band 38: 2570MHz~2620MHz	Band 41: 2496MHz~2690MHz
		Band 42:3450MHz~3550MHz	Band 66:1710MHz~1780MHz
	5G NR	n5: 824MHz~849MHz	n7: 2500MHz~2570MHz
		n12: 699-716MHz	n38: 2570MHz~2620MHz
		n41: 2496MHz~2690MHz	n66:1710MHz~1780MHz
		n77: 3450MHz~3550MHz	n77: 3550MHz~3700MHz
		n77: 3700MHz~3980MHz	
		n78: 3450MHz~3550MHz	n78: 3550MHz~3700MHz
		n78: 3700MHz~3800MHz	
	Wi-Fi:	2412MHz~2462MHz	5150MHz-5250MHz
		5250MHz-5350MHz	5470MHz-5725MHz
		5725MHz-5850MHz	
	Bluetooth: 2402 MHz ~ 2480 MHz		
	NFC:13.56MHz		

Modulation technology:	GSM:	☒Voice(GMSK)	☒GPRS(GMSK)	☒EGPRS(GMSK, 8PSK)
	WCDMA:	☒RMC(QPSK)	☒HSUPA(QPSK)	☒HSDPA(QPSK,16QAM)
	LTE:	☒QPSK	☒16QAM	☒64QAM
	5G NR：	☒CP-OFDM(QPSK,16QAM,64QAM,256QAM)		
		☒DFT-s-OFDM(π/2 -BPSK,QPSK,16QAM,64QAM,256QAM)		
	Wi-Fi:	☒802.11b(DSSS)	☒802.11a/g/n/ac (OFDM)	

	Bluetooth:	☒BDR(GFSK)	☒EDR(π/4-DQPSK, 8DPSK)	☒LE(GFSK)
	NFC:	☒ASK		
	SA: NR n5, n7,n12, n38, n41,n66, n77, n78			
	CA: CA_N78C, CA_N41C, CA_N41A_N41A, CA_N41A_N78A, CA_N78A_N78A (Only supports downlink CA)			
	NSA(EN-DC): DC_2A_n7A, DC_5A_n7A, DC_7A_n7A, DC_66A_n7A, DC_4A_n38A, DC_5A_n38A, DC_66A_n38A, DC_4A_n41A, DC_5A_n41A, DC_41A_n41A, DC_66A_n41A, DC_2A_n66A, DC_5A_n66A, DC_7A_n66A, DC_66A_n66A, DC_2A_n78A, DC_4A_n78A, DC_5A_n78A, DC_7A_n78A, DC_38A_n78A, DC_41A_n78A, DC_66A_n78A, DC_3A_n77A, DC_5A_n77A, DC_7A_n77A, DC_41A_n77A, DC_66A_n77A EN-DC with LTE 2CA： DC_7C-n78A, DC_41C-n78A, DC_7C-n77A, DC_41C-n77A, DC_41C-n41A, DC_7A-7A_n78A, DC_2A_7A_n78, DC_2A_66A_n78, DC_5A-7A_n78A (LTE Band 7C and 41C only supports downlink)			
Antenna Type:	Internal Antenna			
Antenna Gain:	GSM 850:	ANT0:-5.38 dBi	ANT4:-5.97 dBi	
	PCS 1900:	ANT0:-2.07 dBi	ANT4:-2.1 dBi	
	WCDMA Band II:	ANT0:-2.07 dBi	ANT4:-2.1 dBi	
	WCDMA Band IV:	ANT0:-2.07 dBi	ANT4:-0.67 dBi	
	WCDMA Band V	ANT0:-5.38 dBi	ANT4:-5.97 dBi	
	LTE Band 2:	ANT0:-2.07 dBi	ANT4:-2.1 dBi	
	LTE Band 4:	ANT0:-2.07 dBi	ANT4:-0.67 dBi	
	LTE Band 5:	ANT0:-5.38 dBi	ANT4:-5.97 dBi	
	LTE Band 7:	ANT1:0.05 dBi		
	LTE Band 12:	ANT0:-2.35 dBi	ANT4:-8.13 dBi	
	LTE Band 17:	ANT0:-2.35 dBi	ANT4:-8.13 dBi	
	LTE Band 38:	ANT1:1.04 dBi		
	LTE Band 41:	ANT1:0.05 dBi	ANT4:1.04 dBi	
	LTE Band 42:	ANT5:-0.7 dBi		
	LTE Band 66:	ANT0:-2.07 dBi	ANT4:-0.67 dBi	
	n5:	ANT0:-5.38 dBi	ANT4:-5.97 dBi	
	n7:	ANT1:-0.05 dBi	ANT4:1.04 dBi	
	n12:	ANT0:-2.35 dBi	ANT4:-8.13 dBi	
	n38	ANT4:1.04 dBi		
	n41	ANT4:1.04 dBi		
	n66:	ANT0:-2.07 dBi	ANT4:-2.67 dBi	
	n77:	ANT5:-0.7 dBi		
	n78:	ANT5:-0.7 dBi		
	2.4G Wi-Fi:	ANT6:1.49 dBi		

	5G Wi-Fi:	ANT6:1.52 dBi	
	Bluetooth:	ANT6:1.49 dBi	
(E)GPRS Class:	(E)GPRS Class: 12		
DFS Operation Type:	☐ Master Device ☐ Slaver Device with Radar detection function ☒ Slaver Device without Radar detection function		
Dimensions (L*W*H):	169 mm (L)× 77 mm (W)× 9 mm (H)		
Accessories information:	Adapter: Model: U180XSA Input: AC100-240V, 50/60Hz, 0.6A Output: DC 5.0V, 2.4A or 7.5V, 2.4A 18.0W MAX	Battery: Rechargeable Li-ion Polymer Battery DC3.85V, 4900mAh	
		Headset: Support headset	

5.3 Maximum RF Output Power

ANT 0		
Mode	Average Power (dBm)	
	GSM 850	PCS 1900
GSM (Voice)	32.45	29.47
GPRS (1 TX Slot)	32.43	29.39
GPRS (2 TX Slots)	31.70	28.71
GPRS (3 TX Slots)	29.94	27.04
GPRS (4 TX Slots)	28.86	25.97
EGPRS (1 TX Slot)	26.82	24.90
EGPRS (2 TX Slots)	25.74	23.98
EGPRS (3 TX Slots)	23.65	22.14
EGPRS (4 TX Slots)	22.41	21.03

ANT 4		
Mode	Average Power (dBm)	
	GSM 850	PCS 1900
GSM (Voice)	31.66	26.57
GPRS (1 TX Slot)	31.66	26.64
GPRS (2 TX Slots)	30.91	25.87
GPRS (3 TX Slots)	29.10	24.13
GPRS (4 TX Slots)	27.95	22.98
EGPRS (1 TX Slot)	25.12	21.97
EGPRS (2 TX Slots)	24.06	21.12
EGPRS (3 TX Slots)	21.94	19.29
EGPRS (4 TX Slots)	20.70	18.15

ANT 0			
Mode	Average Power (dBm)		
	WCDMA Band II	WCDMA Band IV	WCDMA Band V
AMR 12.2 kbps	23.30	23.13	23.62
RMC 12.2 kbps	23.19	23.15	23.60
HSDPA Sub-test 1	22.31	22.13	22.64
HSDPA Sub-test 2	21.78	21.67	22.16
HSDPA Sub-test 3	21.81	21.71	22.21
HSDPA Sub-test 4	21.84	21.66	22.15
HSUPA Sub-test 1	21.29	21.16	21.68
HSUPA Sub-test 2	21.78	21.67	22.17
HSUPA Sub-test 3	22.28	22.17	22.65
HSUPA Sub-test 4	21.00	20.89	21.40
HSUPA Sub-test 5	23.29	23.17	23.69

ANT 4			
Mode	Average Power (dBm)		
	WCDMA Band II	WCDMA Band IV	WCDMA Band V
AMR 12.2 kbps	20.45	20.87	22.30
RMC 12.2 kbps	20.41	20.88	22.28
HSDPA Sub-test 1	19.44	19.85	21.31
HSDPA Sub-test 2	18.91	19.36	20.83
HSDPA Sub-test 3	18.98	19.43	20.88
HSDPA Sub-test 4	18.93	19.42	20.83
HSUPA Sub-test 1	18.44	18.91	20.37
HSUPA Sub-test 2	18.93	19.39	20.90
HSUPA Sub-test 3	19.44	19.90	21.38
HSUPA Sub-test 4	18.20	18.61	20.11
HSUPA Sub-test 5	20.46	20.92	22.39

ANT 0				
Mode	Average Power (dBm)			
	LTE Band 2	LTE Band 5	LTE Band 12	LTE Band 66
BW/1.4 MHz	23.00	22.89	23.11	22.82
BW/3.0 MHz	22.93	22.95	23.14	22.81
BW/5.0 MHz	23.08	23.09	23.33	22.95
BW/10 MHz	23.00	23.04	23.15	22.82
BW/15 MHz	23.05	/	/	22.81
BW/20 MHz	23.08	/	/	22.92

ANT 1			
Mode	Average Power (dBm)		
	LTE Band 7	LTE Band 38	LTE Band 41
BW/5.0 MHz	22.53	22.40	21.14
BW/10 MHz	22.45	22.41	21.02
BW/15 MHz	22.47	22.44	21.10
BW/20 MHz	22.50	22.32	20.97

ANT 4					
Mode	Average Power (dBm)				
	LTE Band 2	LTE Band 5	LTE Band 12	LTE Band 41	LTE Band 66
BW/1.4 MHz	22.77	21.62	22.96	/	22.65
BW/3.0 MHz	22.58	19.69	23.00	/	22.72
BW/5.0 MHz	23.08	19.79	23.17	21.70	22.79
BW/10 MHz	22.86	19.93	23.09	21.69	22.71
BW/15 MHz	22.66	/	/	21.68	22.64
BW/20 MHz	21.63	/	/	21.71	22.76

ANT 5	
Mode	Average Power (dBm)
	LTE Band 42
BW/5.0 MHz	21.92
BW/10 MHz	21.97
BW/15 MHz	21.92
BW/20 MHz	21.94

ANT 0			
Mode	Average Power (dBm)		
	NR n5	NR n12	NR n66
BW/10MHz	23.18	23.17	22.81
BW/15MHz	23.11	23.12	22.62
BW/20MHz	23.15	/	22.70
BW/40MHz	/	/	22.71

ANT 1	
Mode	Average Power (dBm)
	NR n7
BW/10MHz	22.66
BW/15MHz	22.16
BW/20 MHz	22.09
BW/30MHz	/
BW/40MHz	/
BW/50MHz	/
BW/60MHz	/
BW/80MHz	/
BW/90MHz	/
BW/100MHz	/

ANT 4					
Mode	Average Power (dBm)				
	NR n5	NR n7	NR n12	NR n41	NR n66
BW/10MHz	22.97	21.45	23.08	25.42	22.85
BW/15MHz	22.91	21.17	23.00	25.41	22.76
BW/20MHz	23.20	21.17	/	25.50	22.88
BW/30MHz	/	/	/	25.56	/
BW/40MHz	/	/	/	25.58	22.82
BW/50MHz	/	/	/	25.55	/
BW/60MHz	/	/	/	25.47	/
BW/80MHz	/	/	/	25.52	/
BW/90MHz	/	/	/	25.52	/
BW/100MHz	/	/	/	25.47	/

ANT 5			
Mode	Average Power (dBm)		
	NR n77 3450-3550	NR n77 3550-3700	NR n77 3700-3980
BW/10MHz	25.81	25.53	25.56
BW/15MHz	25.82	25.55	25.55
BW/20MHz	25.91	25.59	25.63
BW/30MHz	25.89	25.58	25.59
BW/40MHz	25.92	25.62	25.63
BW/50MHz	25.97	25.81	25.68
BW/60MHz	25.93	25.70	25.68
BW/80MHz	25.92	25.66	25.64
BW/90MHz	25.94	25.69	25.67
BW/100MHz	25.92	25.68	25.63

WLAN 2.4 GHz Band Average Power (dBm)			
Mode/Band	b	g	n (HT-20)
WLAN 2.4GHz	17.67	15.82	15.78

WLAN 5.2 GHz Band Average Power (dBm)						
Mode/Band	a	ac 20	ac 40	ac 80	n 20	n 40
WLAN 5.2GHz	13.82	11.93	7.26	5.36	11.93	7.28

WLAN 5.3 GHz Band Average Power (dBm)						
Mode/Band	a	ac 20	ac 40	ac 80	n 20	n 40
WLAN 5.3GHz	13.79	13.37	7.18	5.90	13.80	7.32

WLAN 5.6 GHz Band Average Power (dBm)						
Mode/Band	a	ac 20	ac 40	ac 80	n 20	n 40
WLAN 5.6GHz	12.53	12.42	8.66	7.27	12.35	8.66

WLAN 5.8 GHz Band Average Power (dBm)						
Mode/Band	a	ac 20	ac 40	ac 80	n 20	n 40
WLAN 5.8GHz	17.66	15.81	15.67	15.45	16.24	16.49

Bluetooth Average Power (dBm)							
Mode/Band	1 Mbps (GFSK)	2 Mbps (π/4DQPSK)	3 Mbps (8DPSK)	BLE PHY 1M	BLE PHY 2M	BLE Coded PHY S=2	BLE Coded PHY S=8
Bluetooth	3.92	3.04	2.73	2.57	2.36	2.40	2.37

NFC Band Average Power (dBm)	
Mode/Band	ASK
NFC	-55.83

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
SZR012400030-3	SAR
***Remark**: JianYan Testing Group Shenzhen Co., Ltd. is only responsible for the test project data of the above samples, and will keep the above samples for a month.*	

5.6 Laboratory Facility

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

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

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

- **ISED – CAB identifier.: CN0021**

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

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

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

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

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

5.7 Test Location

JianYan Testing Group Shenzhen Co., Ltd.
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Email: info-JYTee@lets.com, Website: http://jyt.lets.com

6 Introduction

6.1 Introduction

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

6.2 SAR Definition

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

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

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

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

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

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

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

7 RF Exposure Limits

7.1 Uncontrolled Environment

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

7.2 Controlled Environment

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

7.3 RF Exposure Limits

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

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

Note:

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

8 SAR Measurement System

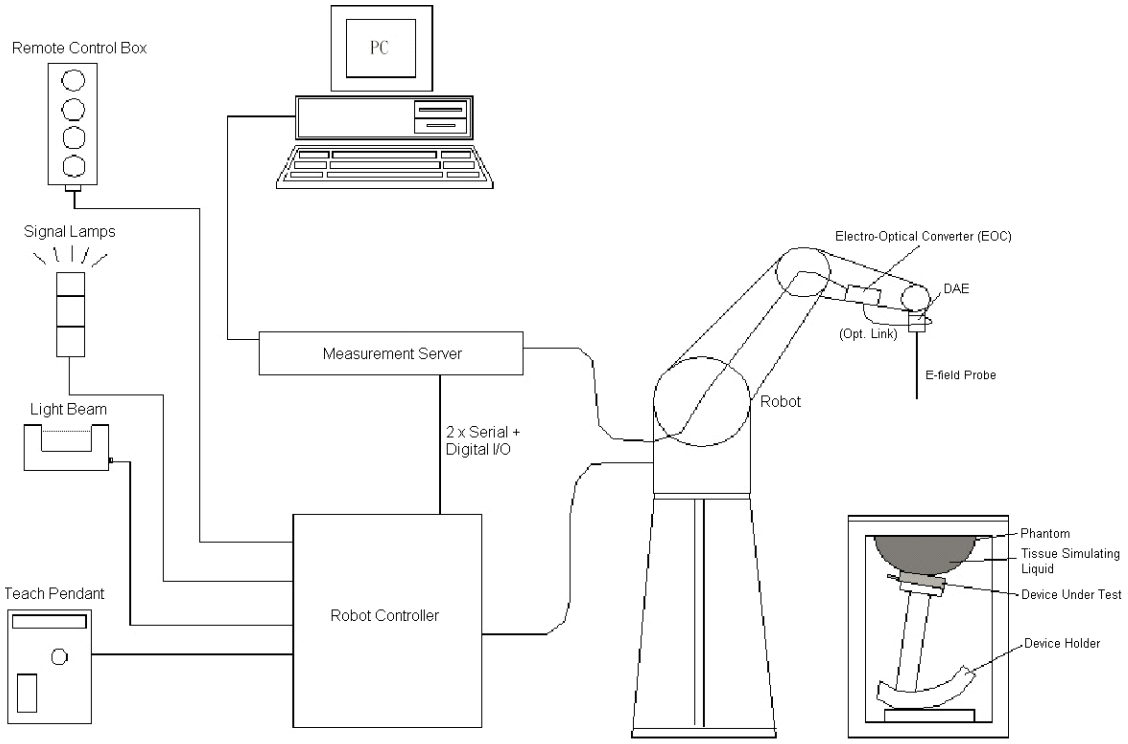

Fig. 8.1 SPEAG DASY System Configurations

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

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

Component details are described in the following sub-sections.

8.1 E-Field Probe

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

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

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

Fig. 8.2 Photo of E-Field Probe

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

8.2 Data Acquisition Electronics (DAE)

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

Fig. 8.3 Photo of DAE

8.3 Robot

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

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

Fig. 8.4 Photo of Robot

8.4 Measurement Server

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

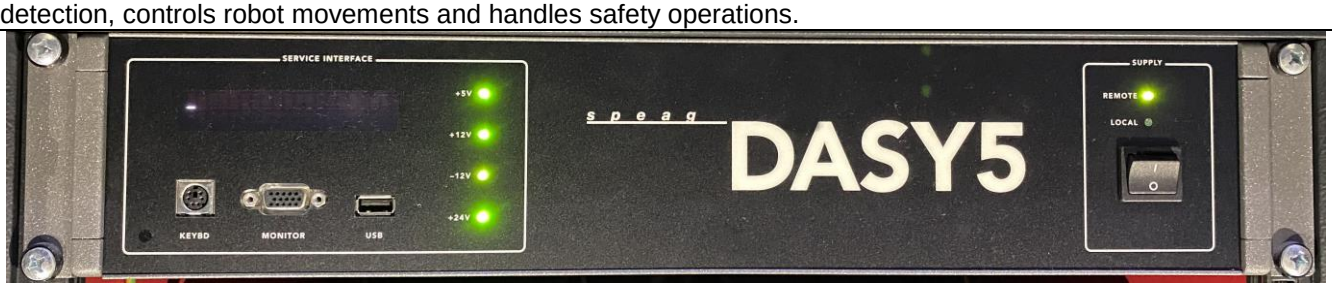

Fig. 8.5 Photo of Server for DASY5

8.5 Light Beam Unit

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

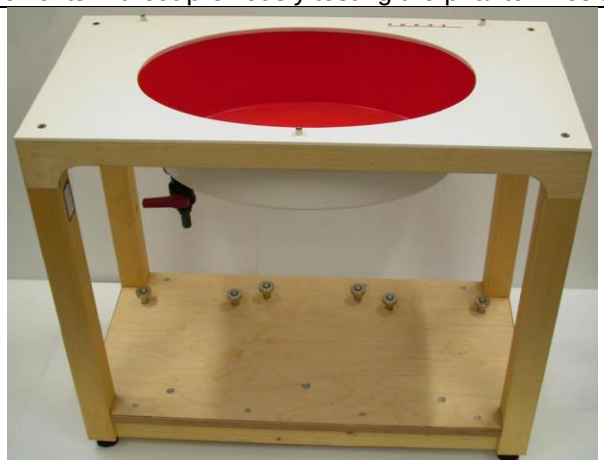

Fig.8.8 Photo of ELI4 Phantom

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	WXJ023	05.18.2023	05.17.2026
SPEAG	835MHz System Validation Kit	D835V2	WXJ023-1	06.08.2022	06.07.2025
SPEAG	1750MHz System Validation Kit	D1750V2	WXJ023-6	01.17.2024	01.16.2027
SPEAG	1900MHz System Validation Kit	D1900V2	WXJ023-2	06.07.2022	06.06.2025
SPEAG	2450MHz System Validation Kit	D2450V2	WXJ023-3	06.06.2022	06.05.2025
SPEAG	2600MHz System Validation Kit	D2600V2	WXJ023-4	10.28.2021	10.27.2024
SPEAG	3500MHz System Validation Kit	D3500V2	WXJ023-8	01.22.2024	01.21.2027
SPEAG	3700MHz System Validation Kit	D3700V2	WXJ023-9	01.17.2024	01.16.2027
SPEAG	3900MHz System Validation Kit	D3900V2	WXJ023-10	01.22.2024	01.21.2027
SPEAG	5GHz System Validation Kit	D5GHzV2	WXJ023-14	01.16.2024	01.15.2027
SPEAG	Data Acquisition Electronics	DAE4	WXJ021-1	03.26.2024	03.25.2025
SPEAG	Dosimetric E-Field Probe	EX3DV4	WXJ022	03.20.2024	03.19.2025
SPEAG	DASY 52 Measurement Software	DASY 52	Version 52.10.4.1527	N.C.R	N.C.R
SPEAG	DASY 52 File Conversion Software	SEMCAD X	Version 14.6.14 (7501)	N.C.R	N.C.R
SPEAG	Robot Controller	CS8Cspeag-TX60	WXG021-1	N.C.R	N.C.R
SPEAG	Phantom	Twin SAM Phantom	WXG021-4	N.C.R	N.C.R
SPEAG	Phantom	ELI V5.0	WXG021-5	N.C.R	N.C.R
SPEAG	Phone Positioner	N/A	WXG021-6	N.C.R	N.C.R
St?ubli	Robot	TX60Lspeag	WXG021-3	N.C.R	N.C.R
KEYSIGHT	UXM 5G Wireless Test Platform	E7515B	WXJ008-6	09.25.2023	09.24.2024
R&S	Broadband radio communication tester	CMW500	WXJ008-3	06.13.2023	06.12.2024
Anritsu	Universal Radio Communication Analyzer	MT8820C	WXJ008-5	01.10.2023	01.09.2025
R&S	Universal Radio Communication Tester	CMU200	WXJ008-2	12.27.2023	12.26.2025
KEYSIGHT	Network Analyzer	E5071C	WXJ091	12.27.2023	12.26.2024
KEYSIGHT	EPM Series Power Meter	N1914A	WXJ075	06.13.2023	06.12.2024
KEYSIGHT	E-Series Power Sensor	E9300H	WXJ075-1	06.13.2023	06.12.2024
KEYSIGHT	E-Series Power Sensor	E9300H	WXJ075-2	06.13.2023	06.12.2024
KEYSIGHT	Signal Generator	N5173B	WXJ006-3	09.25.2023	09.24.2024
Huber Suhner	RF Cable	SUCOFLEX	WXG008-13	See Note 3	
Huber Suhner	RF Cable	SUCOFLEX	WXG008-14	See Note 3	
Huber Suhner	RF Cable	SUCOFLEX	WXG008-15	See Note 3	
Weinschel	Attenuator	23-3-34	WXG008-16	See Note 3	
Anritsu	Directional Coupler	MP654A	WXG008-17	See Note 3	
SPEAG	Dielectric Assessment Kit	3.5 Probe	WXG008-7	See Note 4	
SPEAG	DAK Measurement Software	DAK	Version: DAK 3.5	N.C.R	
TXC	Broadband Amplifier	BBA018000	WXG008-11	See Note 5	

Note:

1. The calibration certificate of DASY can be referred to appendix C of this report.
2. Referring to KDB 865664 D01v01r04, the dipole calibration interval can be extended to 3 years with justification. The dipoles are also not physically damaged, or repaired during the interval.
3. The Insertion Loss calibration of Dual Directional Coupler and Attenuator were characterized via the network analyzer and compensated during system check.
4. The dielectric probe kit was calibrated via the network analyzer, with the specified procedure (calibrated in pure water) and calibration kit (standard) short circuit, before the dielectric measurement. The specific procedure and calibration kit

are provided by Speag.

5. In system check we need to monitor the level on the spectrum analyzer, and adjust the power amplifier level to have precise power level to the dipole; the measured SAR will be normalized to 1 W input power according to the ratio of 1 W to the input power to the dipole. For system check, the calibration of the power amplifier is deemed not critically required for correct measurement; the spectrum analyzer is critical and we do have calibration for it
6. Attenuator insertion loss is calibrated by the network Analyzer, which the calibration is valid, before system check.
7. N.C.R means No Calibration Requirement.

9 Tissue Simulating Liquids

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

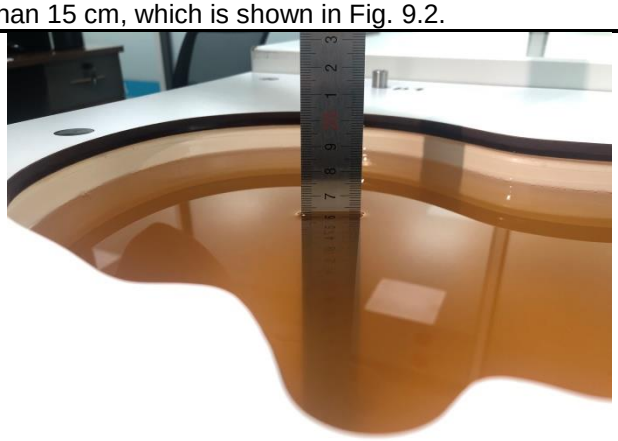

Fig. 9.1 Photo of Liquid Height for Head SAR

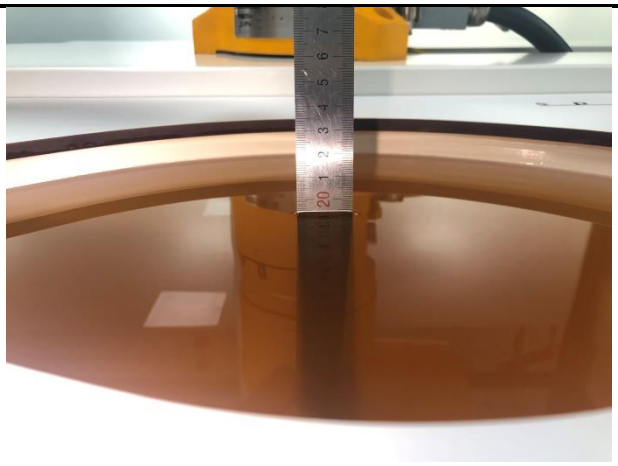

Fig. 9.2 Photo of Liquid Height for Body SAR

The relative permittivity and conductivity of the tissue material should be within ±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	22.2	0.89	41.68	0.89	41.90	0.22	-0.52	±5	04.11.2024
835	22.3	0.91	41.29	0.90	41.50	1.33	-0.50	±5	04.13.2024
1750	22.6	1.37	39.09	1.37	40.10	-0.07	-2.53	±5	04.15.2024
1900	22.5	1.40	39.01	1.40	40.00	-0.21	-2.48	±5	04.18.2024
2450	22.1	1.80	38.28	1.80	39.20	-0.17	-2.35	±5	04.21.2024
2450	22.3	1.79	38.26	1.80	39.20	-0.56	-2.40	±5	04.23.2024
2600	22.1	1.95	38.02	1.96	39.00	-0.51	-2.51	±5	04.21.2024
2600	22.3	1.96	38.09	1.96	39.00	0.00	-2.34	±5	04.23.2024
3500	22.1	2.91	37.66	2.91	37.90	-0.07	-0.63	±5	04.26.2024
3700	22.2	3.11	37.43	3.12	37.70	-0.32	-0.71	±5	04.29.2024
3900	22.2	3.32	37.20	3.32	37.50	0.00	-0.79	±5	04.29.2024
5200	22.3	4.65	36.89	4.65	35.74	0.00	3.22	±5	05.04.2024
5300	22.3	4.75	36.77	4.76	35.90	-0.21	2.43	±5	05.04.2024
5600	22.4	5.06	36.43	5.06	35.50	0.00	2.62	±5	05.07.2024
5800	22.4	5.26	36.20	5.27	35.30	-0.19	2.55	±5	05.07.2024

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:

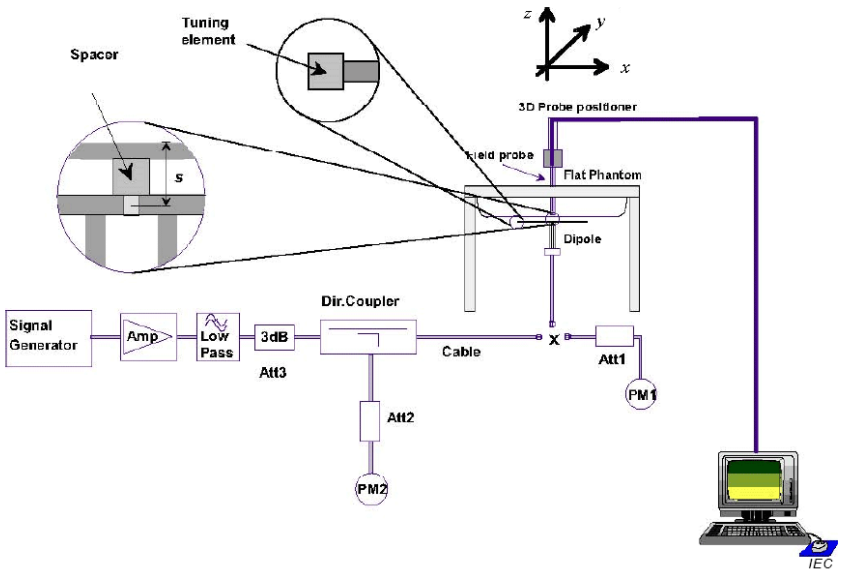

Fig.10.1 System Verification Setup Diagram

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 to1W 1g SAR (W/kg)	1W Target 1g SAR (W/kg)	Deviation (%)
04.11.2024	750	80	0.688	8.60	8.55	0.58
04.13.2024	835	80	0.786	9.83	9.6	2.40
04.15.2024	1750	40	1.420	35.50	36.5	-2.74
04.18.2024	1900	40	1.580	39.50	39.9	-1.00
04.21.2024	2450	40	2.110	52.75	53.4	-1.22
04.23.2024	2450	40	2.130	53.25	53.4	-0.28
04.21.2024	2600	40	2.150	53.75	55.3	-2.80
04.23.2024	2600	40	2.140	53.50	55.3	-3.25
04.26.2024	3500	40	2.550	63.75	66.2	-3.70
04.29.2024	3700	40	2.610	65.25	66.5	-1.88
04.29.2024	3900	40	2.680	67.00	68.0	-1.47
05.04.2024	5200	40	3.090	77.25	77.00	0.32
05.04.2024	5300	40	3.180	79.50	79.20	0.38
05.07.2024	5600	40	3.310	82.75	81.90	1.04
05.07.2024	5800	40	3.180	79.50	78.90	0.76

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/Left Side /Right 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

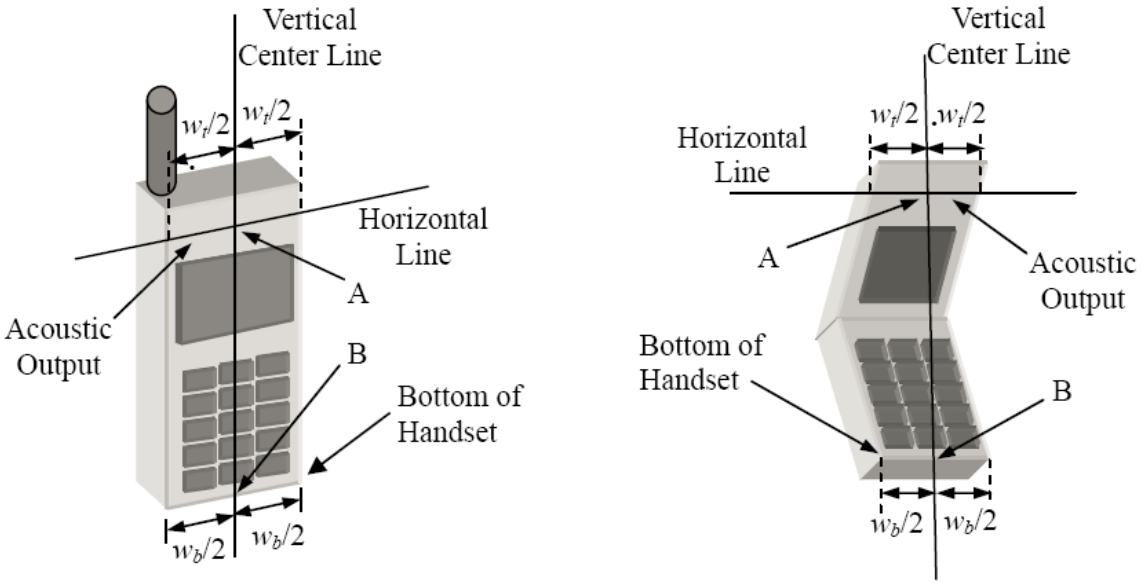

Fig. 11.2 Illustration for Handset Vertical and Horizontal Reference Lines

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.

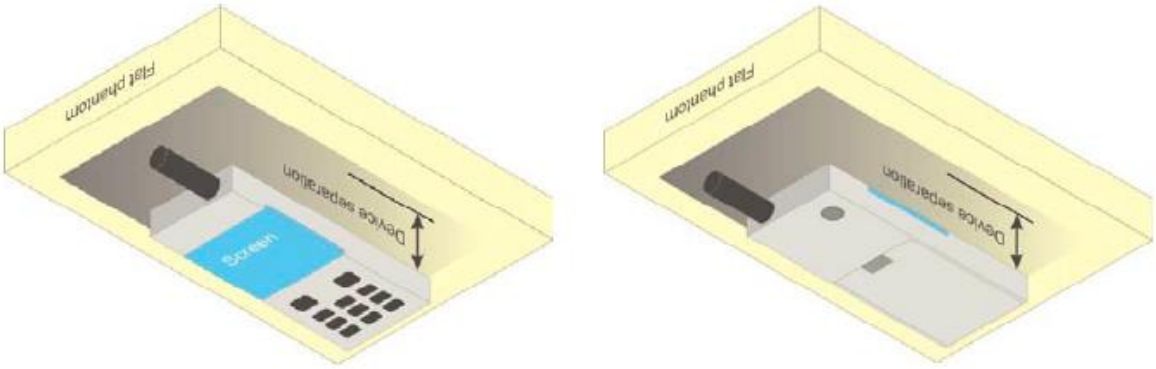

Fig.11.5 Illustration for Body Worn Position

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.

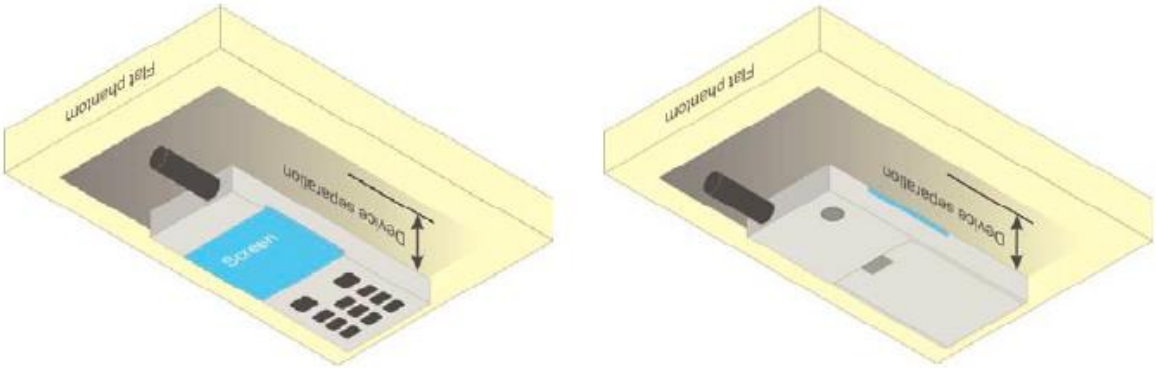

Fig.11.6 Illustration for Hotspot Position

12 Measurement Procedures

The measurement procedures are as below:

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

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

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

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

12.1 Spatial Peak SAR Evaluation

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

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

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

12.2 Power Reference Measurement

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

12.3 Area & Zoom Scan Procedures

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

			≤ 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 Conducted RF Output Power

The detailed conducted power table can refer to JYTSZ-R14-2400032 Appendix D Conducted RF Output Power.

13.1 GSM 850 Conducted Power

Remark:

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

Note:

1. For Head SAR testing, GSM Voice mode should be evaluated, therefore the EUT was set in GSM 850 Voice mode.
2. For Body worn SAR testing and Hotspot mode SAR testing, GPRS and EGPRS mode should be evaluated, therefore the EUT was set in GPRS 4 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.

13.2 GSM 1900 Conducted Power

Remark:

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

Note:

1. For Head SAR testing, GSM Voice mode should be evaluated, therefore the EUT was set in PCS 1900 Voice mode.
2. For Body worn SAR testing and Hotspot mode SAR testing, GPRS and EGPRS mode should be evaluated, therefore the EUT was set in GPRS 4 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.

13.3 WCDMA Conducted Power

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

HSDPA Setup Configuration:

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

Table 1

Sub-test	β_c	β_d	β_d *(SF)*	β_c/β_d	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

Note:

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

13.4 LTE Conducted Power

13.4.1 Largest channel bandwidth standalone SAR test requirements

QPSK with 1 RB allocation

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

QPSK with 50% RB allocation

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

QPSK with 100% RB allocation

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

Higher order modulations

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

13.4.2 Other channel bandwidth standalone SAR test requirements

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

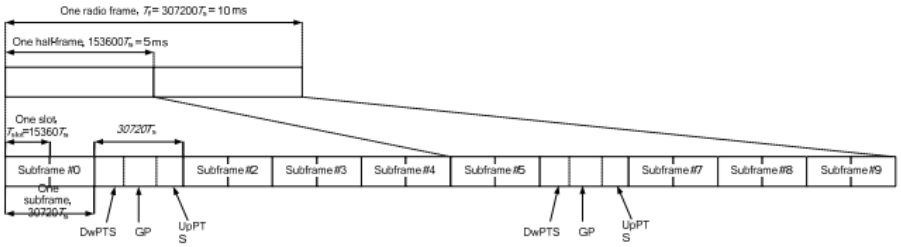

Figure 4.2-1: Frame structure type 2 (for 5 ms switch-point periodicity)

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

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

Table 4.2-2: Uplink-downlink configurations

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

According to above table:

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

Note:

1. Per KDB 447498 D04v01 section 3.1.6, the required test channels number is 5 for LTE Band 41.

13.5 NR Conducted Power

Note:

1. 5G NR n7/n38/n41/n66/n77/n78 supports NSA; n5/n7/n12/n38/n41/n66/n77/n78supports SA.
2. 5G NR n41/n77/n78 supports HPUE.
3. SAR testing start with the largest channel bandwidth and measure SAR for PI/2 BPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
4. 50% RB allocation for PI/2 BPSK SAR testing follows 1RB Pl/2 BPSK allocation procedure.
5. QPSK/16QAM/64QAM/256QAM output powers according to 3GPP MPR will not 1/2 dB higher than the same configuration in PI/2 BPSK, also reported SAR for the PI/2 BPSK configuration is less than 1.45 W/kg, QPSK/16QAM/64QAM/256QAM SAR testing are not required.
6. Smaller bandwidth output power for each RB allocation configuration for this device will not 1/2 dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is less than 1.45 W/kg, smaller bandwidth SAR testing is no required for this device.

13.6 WLAN 2.4 GHz Band Conducted Power

Note:

1. SAR test of WLAN 2.4GHz is performed.
2. Per KDB 248227 D01v02r02, choose the highest output power channel to test SAR and determine further SAR exclusion.
3. Per KDB 248227 D01v02r02, In the 2.4 GHz band, separate SAR procedures are applied to DSSS and OFDM configurations to simplify DSSS test requirements. SAR is not required for the following 2.4 GHz OFDM conditions:
   1) When KDB Publication 447498 SAR test exclusion applies to the OFDM configuration.
   2) When the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg.
4. The output power of all data rate were pre-scan, just the worst case (the lowest data rate) of all mode were shown in report.
5. Per KDB 248227 D01V02r02 section 2.2, when the EUT in continuously transmitting mode, the actual duty cycle is 100%, so the duty cycle factor is 1.

13.7 WLAN 5.2GHz Band Conducted Power

Note:

1. SAR test of WLAN 5.2GHz is performed.
2. Per KDB 248227 D01v02r02, choose the highest output power channel to test SAR and determine further SAR exclusion.
3. The output power of all data rate were pre-scan, just the worst case (the lowest data rate) of all mode were shown in report.
4. Per KDB 248227 D01V02r02 section 2.2, when the EUT in continuously transmitting mode, the actual duty cycle is 100%, so the duty cycle factor is 1.

13.8 WLAN 5.3GHz Band Conducted Power

Note:

1. SAR test of WLAN 5.3GHz is performed.
2. Per KDB 248227 D01v02r02, choose the highest output power channel to test SAR and determine further SAR exclusion.
3. The output power of all data rate were pre-scan, just the worst case (the lowest data rate) of all mode were shown in report.
4. Per KDB 248227 D01V02r02 section 2.2, when the EUT in continuously transmitting mode, the actual duty cycle is 100%, so the duty cycle factor is 1.

13.9 WLAN 5.6GHz Band Conducted Power

Note:

5. SAR test of WLAN 5.6GHz is performed.
1. Per KDB 248227 D01v02r02, choose the highest output power channel to test SAR and determine further SAR exclusion.
2. The output power of all data rate were pre-scan, just the worst case (the lowest data rate) of all mode were shown in report.
3. Per KDB 248227 D01V02r02 section 2.2, when the EUT in continuously transmitting mode, the actual duty cycle is 100%, so the duty cycle factor is 1.

13.10 WLAN 5.8GHz Band Conducted Power

Note:

1. SAR test of WLAN 5.8GHz is performed.
2. Per KDB 248227 D01v02r02, choose the highest output power channel to test SAR and determine further SAR exclusion.
3. The output power of all data rate were pre-scan, just the worst case (the lowest data rate) of all mode were shown in report.
4. Per KDB 248227 D01V02r02 section 2.2, when the EUT in continuously transmitting mode, the actual duty cycle is 100%, so the duty cycle factor is 1.

13.11 Bluetooth Conducted Power

Note:

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

13.12 NFC Conducted Power

Note:

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

dBm	mW
-55.83	0.0000026

2. The output power of all data rate were pre-scan, just the worst case of all mode were shown in report.

14 Exposure Positions Consideration

14.1 EUT Antenna Locations

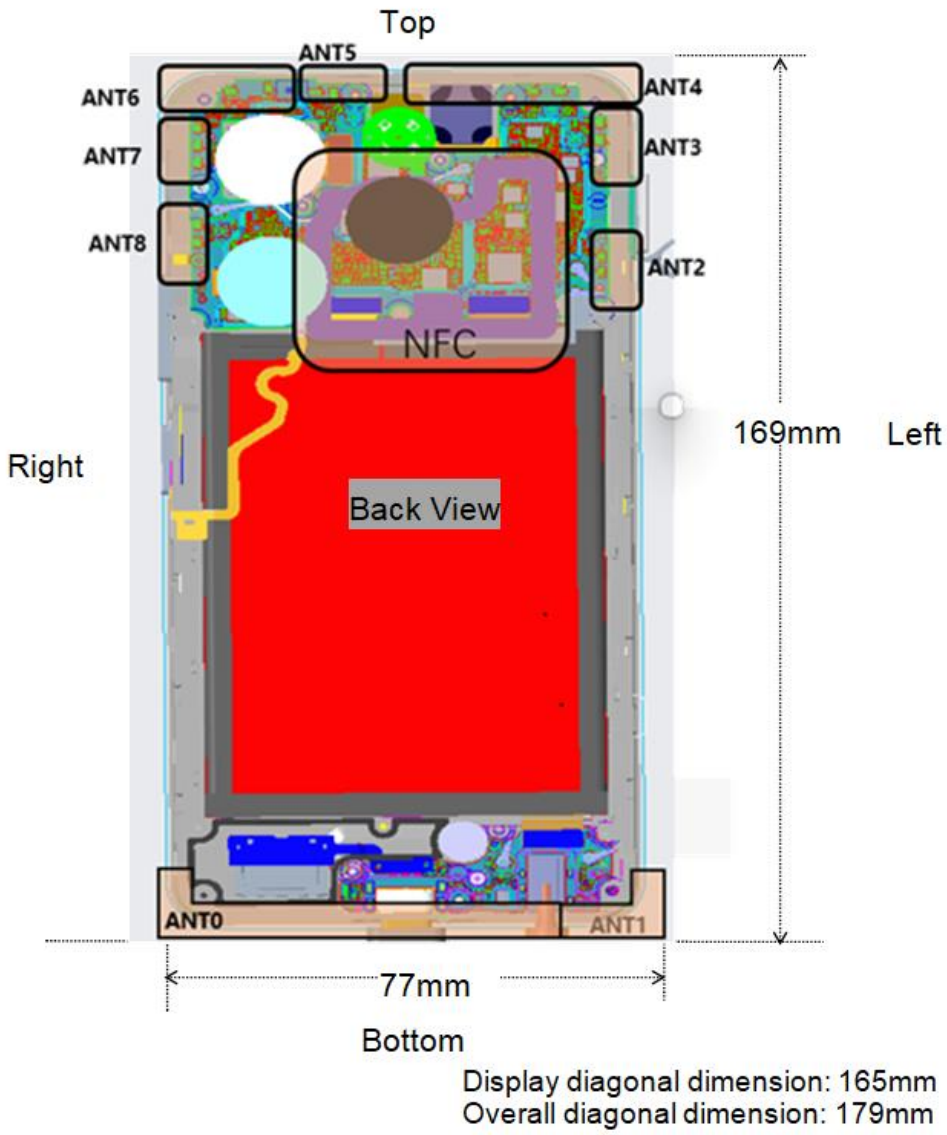

Fig.14.1 EUT Antenna Locations

Note: 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.

ANT0: L/M TPX(TX)
ANT1: LTE B7 TX0&B7/38/41PRX(TX)+UHB DRX MIMO(RX)
ANT2: LTE B42+ N77/78 DRX(RX)
ANT3: PRX MIMO(RX)
ANT4: L/M/H Band DRX(RX) + LTE B41&NR N41 PRX1(TX) + L/M BAND PRX1(TX)
ANT5: N77/N78 PRX + LTE B42 PRX(TX)
ANT6: 2.4G/5GWiFi + GNSS + BT/BLE
ANT7: M/H Band MIMO(RX).
ANT8: LTE B42&5G N77/78 PRX MIMO.(RX)

14.2 Test Positions Consideration

Distance of Antennas to EUT edge/surface Test distance: 10mm						
Antennas	**Front**	**Back**	**Left Side**	**Right Side**	**Top Side**	**Bottom Side**
ANT 0	<25mm	<25mm	<25mm	<25mm	153mm	<25mm
ANT 1	<25mm	<25mm	<25mm	62mm	151mm	<25mm
ANT 4	<25mm	<25mm	<25mm	35mm	<25mm	159mm
ANT 5	<25mm	<25mm	42mm	<25mm	<25mm	162mm
ANT 6	<25mm	<25mm	58mm	<25mm	<25mm	160mm

Test Positions Test distance: 10mm						
Antennas	**Front**	**Back**	**Left Side**	**Right Side**	**Top Side**	**Bottom Side**
ANT 0	Yes	Yes	Yes	Yes		Yes
ANT 1	Yes	Yes	Yes			Yes
ANT 4	Yes	Yes	Yes		Yes	
ANT 5	Yes	Yes		Yes	Yes	
ANT 6	Yes	Yes		Yes	Yes	

Note:

1. Head/Body-worn/Hotspot mode SAR assessments are required.
2. Referring to KDB 941225 D06 v02r01, when the overall device length and width are ≥ 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.
3. Per KDB 447498 D04v01, for handsets the test separation distance is determined by the smallest distance between the outer surface of the device and the user, which is 0 mm for head SAR, 10 mm for hotspot SAR, and 10 mm for body-worn SAR.
4. Per KDB 648474 D04 v01r03, when hotspot mode applies, 10-g extremity SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg

15 SAR Test Results Summary

15.1 Standalone Head SAR Data

➢ GSM Head SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	GSM850/Voice	0	Right Cheek	190	836.6	32.45	0.09	32.5	0.162	1.012	0.164
	GSM850/Voice	0	Right Tilted	190	836.6	32.45	0.03	32.5	0.072	1.012	0.073
	GSM850/Voice	0	Left Cheek	190	836.6	32.45	0.12	32.5	0.142	1.012	0.144
	GSM850/Voice	0	Left Tilted	190	836.6	32.45	-0.02	32.5	0.077	1.012	0.078
1	GSM850/Voice	4	Right Cheek	128	824.2	31.66	0.06	32.0	**0.440**	1.081	0.476
	GSM850/Voice	4	Right Tilted	128	824.2	31.66	0.06	32.0	0.425	1.081	0.459
	GSM850/Voice	4	Left Cheek	128	824.2	31.66	0.12	32.0	0.321	1.081	0.347
	GSM850/Voice	4	Left Tilted	128	824.2	31.66	0.11	32.0	0.305	1.081	0.330
	PCS1900/Voice	0	Right Cheek	661	1880	29.47	0.09	29.5	0.031	1.007	0.031
	PCS1900/Voice	0	Right Tilted	661	1880	29.47	0.18	29.5	0.018	1.007	0.018
	PCS1900/Voice	0	Left Cheek	661	1880	29.47	-0.05	29.5	0.023	1.007	0.023
	PCS1900/Voice	0	Left Tilted	661	1880	29.47	0.15	29.5	0.029	1.007	0.029
	PCS1900/Voice	4	Right Cheek	512	1850.2	26.57	0.11	27.0	0.457	1.104	0.505
2	PCS1900/Voice	4	Right Tilted	512	1850.2	26.57	0.12	27.0	**0.523**	1.104	0.577
	PCS1900/Voice	4	Left Cheek	512	1850.2	26.57	0.13	27.0	0.396	1.104	0.437
	PCS1900/Voice	4	Left Tilted	512	1850.2	26.57	0.11	27.0	0.465	1.104	0.513
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**					

➢ WCDMA Head SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band II/RMC	0	Right Cheek	9400	1880	23.19	0.12	23.5	0.062	1.074	0.067
	Band II/RMC	0	Right Tilted	9400	1880	23.19	0.15	23.5	0.042	1.074	0.045
	Band II/RMC	0	Left Cheek	9400	1880	23.19	0.09	23.5	0.055	1.074	0.059
	Band II/RMC	0	Left Tilted	9400	1880	23.19	-0.05	23.5	0.060	1.074	0.064
	Band II/RMC	4	Right Cheek	9262	1852.4	20.41	-0.01	20.5	1.020	1.021	1.041
	Band II/RMC	4	Right Tilted	9262	1852.4	20.41	-0.03	20.5	1.090	1.021	1.113
	Band II/RMC	4	Left Cheek	9262	1852.4	20.41	0.04	20.5	0.865	1.021	0.883
	Band II/RMC	4	Left Tilted	9262	1852.4	20.41	0.14	20.5	0.898	1.021	0.917
	Band II/RMC	4	Right Cheek	9400	1880	20.33	-0.05	20.5	0.986	1.04	1.025
	Band II/RMC	4	Right Cheek	9538	1907.6	20.31	-0.08	20.5	1.010	1.045	1.055
	Band II/RMC	4	Right Tilted	9400	1880	20.33	0.03	20.5	1.110	1.04	1.154
3	Band II/RMC	4	Right Tilted	9538	1907.6	20.31	-0.17	20.5	**1.120**	1.045	1.170
	Band II/RMC	4	Left Cheek	9400	1880	20.33	-0.15	20.5	0.831	1.04	0.864
	Band II/RMC	4	Left Cheek	9538	1907.6	20.31	-0.12	20.5	0.844	1.045	0.882
	Band II/RMC	4	Left Tilted	9400	1880	20.33	-0.10	20.5	0.881	1.04	0.916
	Band II/RMC	4	Left Tilted	9538	1907.6	20.31	-0.04	20.5	0.893	1.045	0.933
	Band II/RMC	**4**	**Right Tilted**	**9538**	**1907.6**	**20.31**	**-0.03**	**20.5**	**1.090**	**1.045**	**1.139**
	Band IV/RMC	0	Right Cheek	1513	1752.6	23.15	0.03	23.5	0.030	1.084	0.033
	Band IV/RMC	0	Right Tilted	1513	1752.6	23.15	0.02	23.5	0.022	1.084	0.024
	Band IV/RMC	0	Left Cheek	1513	1752.6	23.15	-0.02	23.5	0.026	1.084	0.028
	Band IV/RMC	0	Left Tilted	1513	1752.6	23.15	-0.12	23.5	0.027	1.084	0.029
	Band IV/RMC	4	Right Cheek	1312	1712.4	20.88	0.00	21.0	0.621	1.028	0.638
4	Band IV/RMC	4	Right Tilted	1312	1712.4	20.88	0.03	21.0	**0.641**	1.028	0.659
	Band IV/RMC	4	Left Cheek	1312	1712.4	20.88	0.20	21.0	0.558	1.028	0.574
	Band IV/RMC	4	Left Tilted	1312	1712.4	20.88	-0.16	21.0	0.573	1.028	0.589
	Band V/RMC	0	Right Cheek	4233	846.6	23.60	0.08	24.0	0.154	1.096	0.169
	Band V/RMC	0	Right Tilted	4233	846.6	23.60	0.17	24.0	0.059	1.096	0.065
	Band V/RMC	0	Left Cheek	4233	846.6	23.60	-0.04	24.0	0.105	1.096	0.115
	Band V/RMC	0	Left Tilted	4233	846.6	23.60	0.03	24.0	0.046	1.096	0.050
5	Band V/RMC	4	Right Cheek	4233	846.6	22.23	0.00	22.5	**0.396**	1.064	0.421
	Band V/RMC	4	Right Tilted	4233	846.6	22.23	0.02	22.5	0.361	1.064	0.384
	Band V/RMC	4	Left Cheek	4233	846.6	22.23	-0.08	22.5	0.286	1.064	0.304
	Band V/RMC	4	Left Tilted	4233	846.6	22.23	0.14	22.5	0.271	1.064	0.288
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**					

➢ FDD-LTE Band 2(20MHz) QPSK Head SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band2/1RB#99	0	Right Cheek	18700	1860	23.08	0.06	23.5	0.035	1.102	0.039
	Band2/1RB#99	0	Right Tilted	18700	1860	23.08	-0.07	23.5	0.028	1.102	0.031
	Band2/1RB#99	0	Left Cheek	18700	1860	23.08	0.05	23.5	0.030	1.102	0.033
	Band2/1RB#99	0	Left Tilted	18700	1860	23.08	0.06	23.5	0.030	1.102	0.033
	Band2/50%RB#49	0	Right Cheek	18700	1860	22.00	-0.09	22.5	0.032	1.122	0.036
	Band2/50%RB#49	0	Right Tilted	18700	1860	22.00	0.20	22.5	0.022	1.122	0.025
	Band2/50%RB#49	0	Left Cheek	18700	1860	22.00	-0.18	22.5	0.025	1.122	0.028
	Band2/50%RB#49	0	Left Tilted	18700	1860	22.00	0.17	22.5	0.026	1.122	0.029
	Band2/1RB#0	4	Right Cheek	18700	1860	21.63	0.20	22.0	0.181	1.089	0.197
6	Band2/1RB#0	4	Right Tilted	18700	1860	21.63	0.19	22.0	**0.184**	1.089	0.200
	Band2/1RB#0	4	Left Cheek	18700	1860	21.63	-0.03	22.0	0.153	1.089	0.167
	Band2/1RB#0	4	Left Tilted	18700	1860	21.63	0.07	22.0	0.167	1.089	0.182
	Band2/50%RB#0	4	Right Cheek	18700	1860	19.55	0.08	20.0	0.175	1.109	0.194
	Band2/50%RB#0	4	Right Tilted	18700	1860	19.55	-0.19	20.0	0.179	1.109	0.199
	Band2/50%RB#0	4	Left Cheek	18700	1860	19.55	0.14	20.0	0.143	1.109	0.159
	Band2/50%RB#0	4	Left Tilted	18700	1860	19.55	0.19	20.0	0.155	1.109	0.172
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**					

➢ FDD-LTE Band 5(10MHz) QPSK Head SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band5/1RB#49	0	Right Cheek	20525	836.5	23.04	-0.20	23.5	0.153	1.112	0.170
	Band5/1RB#49	0	Right Tilted	20525	836.5	23.04	-0.04	23.5	0.084	1.112	0.093
	Band5/1RB#49	0	Left Cheek	20525	836.5	23.04	0.14	23.5	0.142	1.112	0.158
	Band5/1RB#49	0	Left Tilted	20525	836.5	23.04	-0.20	23.5	0.077	1.112	0.086
	Band5/50%RB#24	0	Right Cheek	20525	836.5	21.99	-0.01	22.0	0.149	1.002	0.149
	Band5/50%RB#24	0	Right Tilted	20525	836.5	21.99	-0.20	22.0	0.082	1.002	0.082
	Band5/50%RB#24	0	Left Cheek	20525	836.5	21.99	-0.12	22.0	0.144	1.002	0.144
	Band5/50%RB#24	0	Left Tilted	20525	836.5	21.99	0.09	22.0	0.073	1.002	0.073
7	Band5/1RB#49	4	Right Cheek	20450	829	19.86	0.13	20.0	**0.456**	1.033	0.471
	Band5/1RB#49	4	Right Tilted	20450	829	19.86	0.19	20.0	0.428	1.033	0.442
	Band5/1RB#49	4	Left Cheek	20450	829	19.86	-0.17	20.0	0.377	1.033	0.389
	Band5/1RB#49	4	Left Tilted	20450	829	19.86	-0.06	20.0	0.357	1.033	0.369
	Band5/50%RB#24	4	Right Cheek	20525	836.5	19.77	0.18	20.0	0.419	1.054	0.442
	Band5/50%RB#24	4	Right Tilted	20525	836.5	19.77	-0.11	20.0	0.401	1.054	0.423
	Band5/50%RB#24	4	Left Cheek	20525	836.5	19.77	0.02	20.0	0.368	1.054	0.388
	Band5/50%RB#24	4	Left Tilted	20525	836.5	19.77	0.17	20.0	0.366	1.054	0.386
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**					

➢ FDD-LTE Band 7(20MHz) QPSK Head SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band7/1RB#99	1	Right Cheek	21350	2560	22.50	0.01	23.0	0.146	1.122	0.164
	Band7/1RB#99	1	Right Tilted	21350	2560	22.50	-0.08	23.0	0.142	1.122	0.159
8	Band7/1RB#99	1	Left Cheek	21350	2560	22.50	-0.09	23.0	**0.170**	1.122	0.191
	Band7/1RB#99	1	Left Tilted	21350	2560	22.50	0.03	23.0	0.067	1.122	0.075
	Band7/50%RB#49	1	Right Cheek	21350	2560	21.43	-0.16	21.5	0.134	1.016	0.136
	Band7/50%RB#49	1	Right Tilted	21350	2560	21.43	0.03	21.5	0.132	1.016	0.134
	Band7/50%RB#49	1	Left Cheek	21350	2560	21.43	0.13	21.5	0.094	1.016	0.096
	Band7/50%RB#49	1	Left Tilted	21350	2560	21.43	0.04	21.5	0.091	1.016	0.092
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**					

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

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band12/1RB#0	0	Right Cheek	23095	707.5	23.15	0.06	23.5	0.149	1.084	0.162
	Band12/1RB#0	0	Right Tilted	23095	707.5	23.15	0.08	23.5	0.072	1.084	0.078
	Band12/1RB#0	0	Left Cheek	23095	707.5	23.15	0.09	23.5	0.132	1.084	0.143
	Band12/1RB#0	0	Left Tilted	23095	707.5	23.15	0.09	23.5	0.068	1.084	0.074
	Band12/50%RB#24	0	Right Cheek	23095	707.5	22.08	0.01	22.5	0.014	1.102	0.015
	Band12/50%RB#24	0	Right Tilted	23095	707.5	22.08	0.10	22.5	0.070	1.102	0.077
	Band12/50%RB#24	0	Left Cheek	23095	707.5	22.08	-0.13	22.5	0.131	1.102	0.144
	Band12/50%RB#24	0	Left Tilted	23095	707.5	22.08	0.15	22.5	0.059	1.102	0.065
9	Band12/1RB#49	4	Right Cheek	23060	704	23.09	0.07	23.5	**0.356**	1.099	0.391
	Band12/1RB#49	4	Right Tilted	23060	704	23.09	-0.19	23.5	0.341	1.099	0.375
	Band12/1RB#49	4	Left Cheek	23060	704	23.09	0.18	23.5	0.211	1.099	0.232
	Band12/1RB#49	4	Left Tilted	23060	704	23.09	0.10	23.5	0.203	1.099	0.223
	Band12/50%RB#0	4	Right Cheek	23095	707.5	21.99	0.05	22.0	0.329	1.002	0.330
	Band12/50%RB#0	4	Right Tilted	23095	707.5	21.99	-0.18	22.0	0.321	1.002	0.322
	Band12/50%RB#0	4	Left Cheek	23095	707.5	21.99	0.09	22.0	0.207	1.002	0.207
	Band12/50%RB#0	4	Left Tilted	23095	707.5	21.99	0.02	22.0	0.200	1.002	0.200
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**					

➢ TDD-LTE Band38(20MHz) QPSK Head SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	Band38/1RB#99	1	Right Cheek	38000	2595	22.32	0.03	23.0	0.115	1.169	1.008	0.136
	Band38/1RB#99	1	Right Tilted	38000	2595	22.32	0.05	23.0	0.041	1.169	1.008	0.048
10	Band38/1RB#99	1	Left Cheek	38000	2595	22.32	0.03	23.0	**0.135**	1.169	1.008	0.159
	Band38/1RB#99	1	Left Tilted	38000	2595	22.32	0.11	23.0	0.048	1.169	1.008	0.057
	Band38/50%RB#49	1	Right Cheek	38150	2610	21.30	-0.15	21.5	0.104	1.047	1.008	0.110
	Band38/50%RB#49	1	Right Tilted	38150	2610	21.30	-0.01	21.5	0.038	1.047	1.008	0.040
	Band38/50%RB#49	1	Left Cheek	38150	2610	21.30	0.12	21.5	0.128	1.047	1.008	0.135
	Band38/50%RB#49	1	Left Tilted	38150	2610	21.30	0.17	21.5	0.041	1.047	1.008	0.043
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**						

➢ TDD-LTE Band41(20MHz) QPSK Head SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	Band41/1RB#49	4	Right Cheek	40620	2593	21.71	0.19	22.0	0.431	1.069	1.008	0.464
11	Band41/1RB#49	4	Right Tilted	40620	2593	21.71	-0.16	22.0	**0.434**	1.069	1.008	0.468
	Band41/1RB#49	4	Left Cheek	40620	2593	21.71	0.01	22.0	0.373	1.069	1.008	0.402
	Band41/1RB#49	4	Left Tilted	40620	2593	21.71	0.01	22.0	0.387	1.069	1.008	0.417
	Band41/50%RB#24	4	Right Cheek	40620	2593	20.65	-0.20	21.0	0.420	1.084	1.008	0.459
	Band41/50%RB#24	4	Right Tilted	40620	2593	20.65	-0.17	21.0	0.426	1.084	1.008	0.465
	Band41/50%RB#24	4	Left Cheek	40620	2593	20.65	0.00	21.0	0.369	1.084	1.008	0.403
	Band41/50%RB#24	4	Left Tilted	40620	2593	20.65	0.07	21.0	0.377	1.084	1.008	0.412
	Band41/1RB#99 ENDC	1	Right Cheek	40620	2593	20.97	0.00	21.5	0.034	1.130	1.008	0.039
	Band41/1RB#99 ENDC	1	Right Tilted	40620	2593	20.97	0.04	21.5	0.012	1.130	1.008	0.014
	Band41/1RB#99 ENDC	1	Left Cheek	40620	2593	20.97	0.03	21.5	0.047	1.130	1.008	0.054
	Band41/1RB#99 ENDC	1	Left Tilted	40620	2593	20.97	0.08	21.5	0.015	1.130	1.008	0.017
	Band41/50%RB#0 ENDC	1	Right Cheek	40620	2593	19.95	0.14	20.0	0.031	1.012	1.008	0.032
	Band41/50%RB#0 ENDC	1	Right Tilted	40620	2593	19.95	0.16	20.0	0.011	1.012	1.008	0.011
	Band41/50%RB#0 ENDC	1	Left Cheek	40620	2593	19.95	0.17	20.0	0.042	1.012	1.008	0.043
	Band41/50%RB#0 ENDC	1	Left Tilted	40620	2593	19.95	0.07	20.0	0.013	1.012	1.008	0.013
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**						

➢ TDD-LTE Band42(20MHz) QPSK Head SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	Band42/1RB#99	5	Right Cheek	43490	3590	21.94	0.12	22.0	0.287	1.014	1.008	0.293
	Band42/1RB#99	5	Right Tilted	43490	3590	21.94	0.02	22.0	0.289	1.014	1.008	0.295
	Band42/1RB#99	5	Left Cheek	43490	3590	21.94	0.06	22.0	0.454	1.014	1.008	0.464
12	Band42/1RB#99	5	Left Tilted	43490	3590	21.94	0.02	22.0	**0.477**	1.014	1.008	0.488
	Band42/50%RB#49	5	Right Cheek	42990	3540	20.81	-0.18	21.0	0.274	1.045	1.008	0.289
	Band42/50%RB#49	5	Right Tilted	42990	3540	20.81	0.00	21.0	0.276	1.045	1.008	0.291
	Band42/50%RB#49	5	Left Cheek	42990	3540	20.81	-0.11	21.0	0.413	1.045	1.008	0.435
	Band42/50%RB#49	5	Left Tilted	42990	3540	20.81	-0.02	21.0	0.425	1.045	1.008	0.448
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**						

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

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band66/1RB#49	0	Right Cheek	132322	1745	22.92	0.00	23.0	0.010	1.019	0.010
	Band66/1RB#49	0	Right Tilted	132322	1745	22.92	0.06	23.0	0.005	1.019	0.005
	Band66/1RB#49	0	Left Cheek	132322	1745	22.92	0.00	23.0	0.009	1.019	0.009
	Band66/1RB#49	0	Left Tilted	132322	1745	22.92	-0.05	23.0	0.004	1.019	0.004
	Band66/50%RB#49	0	Right Cheek	132322	1745	21.83	-0.12	22.0	0.009	1.04	0.009
	Band66/50%RB#49	0	Right Tilted	132322	1745	21.83	0.10	22.0	0.005	1.04	0.005
	Band66/50%RB#49	0	Left Cheek	132322	1745	21.83	-0.19	22.0	0.008	1.04	0.008
	Band66/50%RB#49	0	Left Tilted	132322	1745	21.83	-0.11	22.0	0.004	1.04	0.004
	Band66/1RB#0	4	Right Cheek	132072	1720	22.76	-0.12	23.0	0.147	1.057	0.155
13	Band66/1RB#0	4	Right Tilted	132072	1720	22.76	0.07	23.0	**0.155**	1.057	0.164
	Band66/1RB#0	4	Left Cheek	132072	1720	22.76	0.09	23.0	0.128	1.057	0.135
	Band66/1RB#0	4	Left Tilted	132072	1720	22.76	-0.14	23.0	0.141	1.057	0.149
	Band66/50%RB#0	4	Right Cheek	132322	1745	20.64	0.12	21.0	0.144	1.086	0.156
	Band66/50%RB#0	4	Right Tilted	132322	1745	20.64	-0.20	21.0	0.148	1.086	0.161
	Band66/50%RB#0	4	Left Cheek	132322	1745	20.64	0.02	21.0	0.122	1.086	0.132
	Band66/50%RB#0	4	Left Tilted	132322	1745	20.64	0.07	21.0	0.140	1.086	0.152
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**					

➢ NR n5(20MHz) DFT-BPSK Head SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	NR n5 /1@1	0	Right Cheek	166800	834	23.07	0.02	23.5	0.107	1.104	0.118
	NR n5 /1@1	0	Right Tilted	166800	834	23.07	0.14	23.5	0.068	1.104	0.075
	NR n5 /1@1	0	Left Cheek	166800	834	23.07	-0.16	23.5	0.095	1.104	0.105
	NR n5 /1@1	0	Left Tilted	166800	834	23.07	0.14	23.5	0.053	1.104	0.059
	NR n5 /25@12	0	Right Cheek	166800	834	23.15	-0.07	23.5	0.089	1.084	0.096
	NR n5 /25@12	0	Right Tilted	166800	834	23.15	0.08	23.5	0.071	1.084	0.077
	NR n5 /25@12	0	Left Cheek	166800	834	23.15	0.13	23.5	0.084	1.084	0.091
	NR n5 /25@12	0	Left Tilted	166800	834	23.15	0.12	23.5	0.056	1.084	0.061
	NR n5 /1@49	4	Right Cheek	166800	834	22.93	0.05	23.0	0.401	1.016	0.407
	NR n5 /1@49	4	Right Tilted	166800	834	22.93	0.06	23.0	0.387	1.016	0.393
	NR n5 /1@49	4	Left Cheek	166800	834	22.93	-0.12	23.0	0.314	1.016	0.319
	NR n5 /1@49	4	Left Tilted	166800	834	22.93	0.09	23.0	0.306	1.016	0.311
14	NR n5 /25@12	4	Right Cheek	166800	834	23.20	0.02	23.5	**0.417**	1.072	0.447
	NR n5 /25@12	4	Right Tilted	166800	834	23.20	0.10	23.5	0.400	1.072	0.429
	NR n5 /25@12	4	Left Cheek	166800	834	23.20	0.01	23.5	0.332	1.072	0.356
	NR n5 /25@12	4	Left Tilted	166800	834	23.20	-0.20	23.5	0.323	1.072	0.346
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**					

➢ NR n7(20MHz) DFT-BPSK Head SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	NR n7 /1@49	1	Right Cheek	512000	2560	22.06	0.19	22.5	0.102	1.107	0.113
	NR n7 /1@49	1	Right Tilted	512000	2560	22.06	0.16	22.5	0.028	1.107	0.031
	NR n7 /1@49	1	Left Cheek	512000	2560	22.06	0.08	22.5	0.128	1.107	0.142
	NR n7 /1@49	1	Left Tilted	512000	2560	22.06	-0.02	22.5	0.033	1.107	0.037
	NR n7 /25@12	1	Right Cheek	512000	2560	22.09	0.04	22.5	0.106	1.099	0.116
	NR n7 /25@12	1	Right Tilted	512000	2560	22.09	-0.19	22.5	0.029	1.099	0.032
	NR n7 /25@12	1	Left Cheek	512000	2560	22.09	0.09	22.5	0.137	1.099	0.151
	NR n7 /25@12	1	Left Tilted	512000	2560	22.09	0.10	22.5	0.036	1.099	0.039
	NR n7 /1@49 NSA	4	Right Cheek	512000	2560	20.78	-0.04	21.0	0.307	1.052	0.323
15	NR n7 /1@49 NSA	4	Right Tilted	512000	2560	20.78	0.01	21.0	**0.464**	1.052	0.488
	NR n7 /1@49 NSA	4	Left Cheek	512000	2560	20.78	0.13	21.0	0.085	1.052	0.089
	NR n7 /1@49 NSA	4	Left Tilted	512000	2560	20.78	0.03	21.0	0.221	1.052	0.232
	NR n7 /25@12 NSA	4	Right Cheek	507000	2535	20.93	-0.04	21.0	0.301	1.016	0.306
	NR n7 /25@12 NSA	4	Right Tilted	507000	2535	20.93	0.07	21.0	0.417	1.016	0.424
	NR n7 /25@12 NSA	4	Left Cheek	507000	2535	20.93	0.16	21.0	0.079	1.016	0.080
	NR n7 /25@12 NSA	4	Left Tilted	507000	2535	20.93	-0.19	21.0	0.217	1.016	0.220
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**					

➢ NR n12(15MHz) DFT-BPSK Head SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	NR n12 /1@1	0	Right Cheek	141300	706.5	23.05	-0.10	23.5	0.091	1.109	0.101
	NR n12 /1@1	0	Right Tilted	141300	706.5	23.05	0.09	23.5	0.047	1.109	0.052
	NR n12 /1@1	0	Left Cheek	141300	706.5	23.05	0.20	23.5	0.096	1.109	0.106
	NR n12 /1@1	0	Left Tilted	141300	706.5	23.05	0.11	23.5	0.050	1.109	0.055
	NR n12/18@9	0	Right Cheek	141500	707.5	23.12	0.19	23.5	0.094	1.091	0.103
	NR n12/18@9	0	Right Tilted	141500	707.5	23.12	0.08	23.5	0.051	1.091	0.056
	NR n12/18@9	0	Left Cheek	141500	707.5	23.12	-0.13	23.5	0.108	1.091	0.118
	NR n12/18@9	0	Left Tilted	141500	707.5	23.12	0.05	23.5	0.056	1.091	0.061
	NR n12 /1@1	4	Right Cheek	141500	707.5	22.95	0.05	23.0	0.287	1.012	0.290
	NR n12 /1@1	4	Right Tilted	141500	707.5	22.95	-0.16	23.0	0.214	1.012	0.217
	NR n12 /1@1	4	Left Cheek	141500	707.5	22.95	0.07	23.0	0.207	1.012	0.209
	NR n12 /1@1	4	Left Tilted	141500	707.5	22.95	0.20	23.0	0.189	1.012	0.191
16	NR n12 /18@9	4	Right Cheek	141300	706.5	22.98	0.05	23.0	**0.295**	1.005	0.296
	NR n12/18@9	4	Right Tilted	141300	706.5	22.98	0.03	23.0	0.225	1.005	0.226
	NR n12/18@9	4	Left Cheek	141300	706.5	22.98	0.05	23.0	0.211	1.005	0.212
	NR n12/18@9	4	Left Tilted	141300	706.5	22.98	0.20	23.0	0.198	1.005	0.199
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**					

➢ NR n41(100MHz) DFT-BPSK Head SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	NR n41 /1@271	4	Right Cheek	509202	2546.01	25.47	0.02	25.5	0.378	1.007	0.381
17	NR n41 /1@271	4	Right Tilted	509202	2546.01	25.47	-0.08	25.5	**0.505**	1.007	0.509
	NR n41 /1@271	4	Left Cheek	509202	2546.01	25.47	-0.08	25.5	0.086	1.007	0.087
	NR n41 /1@271	4	Left Tilted	509202	2546.01	25.47	0.01	25.5	0.130	1.007	0.131
	NR n41 /135@67	4	Right Cheek	518598	2592.99	25.44	0.19	25.5	0.365	1.014	0.370
	NR n41 /135@67	4	Right Tilted	518598	2592.99	25.44	-0.06	25.5	0.483	1.014	0.490
	NR n41 /135@67	4	Left Cheek	518598	2592.99	25.44	0.19	25.5	0.082	1.014	0.083
	NR n41 /135@67	4	Left Tilted	518598	2592.99	25.44	0.03	25.5	0.121	1.014	0.123
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**					

➢ NR n66(20MHz) DFT-BPSK Head SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	NR n66/1@104	0	Right Cheek	346000	1730	22.69	0.04	23.0	0.014	1.074	0.015
	NR n66/1@104	0	Right Tilted	346000	1730	22.69	0.08	23.0	0.015	1.074	0.016
	NR n66/1@104	0	Left Cheek	346000	1730	22.69	0.06	23.0	0.019	1.074	0.020
	NR n66/1@104	0	Left Tilted	346000	1730	22.69	0.03	23.0	0.018	1.074	0.019
	NR n66/50@25	0	Right Cheek	349000	1745	22.66	-0.20	23.0	0.015	1.081	0.016
	NR n66/50@25	0	Right Tilted	349000	1745	22.66	-0.05	23.0	0.016	1.081	0.018
	NR n66/50@25	0	Left Cheek	349000	1745	22.66	0.00	23.0	0.020	1.081	0.022
	NR n66/50@25	0	Left Tilted	349000	1745	22.66	0.06	23.0	0.020	1.081	0.022
	NR n66/1@104	4	Right Cheek	352000	1760	22.68	0.12	23.0	0.197	1.076	0.212
	NR n66/1@104	4	Right Tilted	352000	1760	22.68	0.00	23.0	0.265	1.076	0.285
	NR n66/1@104	4	Left Cheek	352000	1760	22.68	-0.01	23.0	0.134	1.076	0.144
	NR n66/1@104	4	Left Tilted	352000	1760	22.68	0.06	23.0	0.168	1.076	0.181
	NR n66/50@25	4	Right Cheek	346000	1730	22.81	-0.08	23.0	0.205	1.045	0.214
18	NR n66/50@25	4	Right Tilted	346000	1730	22.81	0.02	23.0	**0.279**	1.045	0.292
	NR n66/50@25	4	Left Cheek	346000	1730	22.81	-0.06	23.0	0.142	1.045	0.148
	NR n66/50@25	4	Left Tilted	346000	1730	22.81	0.06	23.0	0.173	1.045	0.181
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**					

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

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	NR n77 /1@1	5	Right Cheek	633334	3500.01	25.92	0.09	26.0	0.174	1.019	0.177
	NR n77 /1@1	5	Right Tilted	633334	3500.01	25.92	0.20	26.0	0.188	1.019	0.192
	NR n77 /1@1	5	Left Cheek	633334	3500.01	25.92	-0.06	26.0	0.287	1.019	0.292
	NR n77 /1@1	5	Left Tilted	633334	3500.01	25.92	-0.02	26.0	0.293	1.019	0.299
	NR n77 /135@67	5	Right Cheek	633334	3500.01	25.74	0.19	26.0	0.200	1.062	0.212
	NR n77 /135@67	5	Right Tilted	633334	3500.01	25.74	-0.20	26.0	0.217	1.062	0.230
	NR n77 /135@67	5	Left Cheek	633334	3500.01	25.74	0.09	26.0	0.303	1.062	0.322
19	NR n77 /135@67	5	Left Tilted	633334	3500.01	25.74	-0.01	26.0	**0.315**	1.062	0.335
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**					

➢ NR n77(3550MHz~3700MHz) DFT-BPSK Head SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	NR n77 /1@1	5	Right Cheek	643332	3649.98	25.68	-0.13	26.0	0.187	1.076	0.201
	NR n77 /1@1	5	Right Tilted	643332	3649.98	25.68	0.05	26.0	0.196	1.076	0.211
	NR n77 /1@1	5	Left Cheek	643332	3649.98	25.68	0.19	26.0	0.278	1.076	0.299
	NR n77 /1@1	5	Left Tilted	643332	3649.98	25.68	0.01	26.0	0.297	1.076	0.320
	NR n77 /135@67	5	Right Cheek	640000	3600	25.65	0.13	26.0	0.195	1.084	0.211
	NR n77 /135@67	5	Right Tilted	640000	3600	25.65	0.09	26.0	0.211	1.084	0.229
	NR n77 /135@67	5	Left Cheek	640000	3600	25.65	-0.03	26.0	0.301	1.084	0.326
20	NR n77 /135@67	5	Left Tilted	640000	3600	25.65	0.04	26.0	**0.308**	1.084	0.334
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**					

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

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	NR n77 /1@271	5	Right Cheek	662000	3930	25.58	-0.17	26.0	0.165	1.102	0.182
	NR n77 /1@271	5	Right Tilted	662000	3930	25.58	-0.18	26.0	0.174	1.102	0.192
	NR n77 /1@271	5	Left Cheek	662000	3930	25.58	-0.03	26.0	0.213	1.102	0.235
	NR n77 /1@271	5	Left Tilted	662000	3930	25.58	0.04	26.0	0.224	1.102	0.247
	NR n77 /135@67	5	Right Cheek	650000	3750	25.62	0.04	26.0	0.223	1.091	0.243
	NR n77 /135@67	5	Right Tilted	650000	3750	25.62	0.11	26.0	0.245	1.091	0.267
	NR n77 /135@67	5	Left Cheek	650000	3750	25.62	0.00	26.0	0.324	1.091	0.353
21	NR n77 /135@67	5	Left Tilted	650000	3750	25.62	0.04	26.0	**0.340**	1.091	0.371
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**					

➢ WLAN 2.4 GHz Head SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	2.4GHz/802.11b	6	Right Cheek	6	2437	17.67	0.19	18.0	0.154	1.079	1.000	0.166
	2.4GHz/802.11b	6	Right Tilted	6	2437	17.67	0.08	18.0	0.145	1.079	1.000	0.156
22	2.4GHz/802.11b	6	Left Cheek	6	2437	17.67	0.05	18.0	**0.249**	1.079	1.000	0.269
	2.4GHz/802.11b	6	Left Tilted	6	2437	17.67	0.07	18.0	0.234	1.079	1.000	0.252
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	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	5.3GHz/802.11a	6	Right Cheek	56	5280	13.79	-0.19	14.0	0.074	1.05	1.000	0.078
	5.3GHz/802.11a	6	Right Tilted	56	5280	13.79	0.10	14.0	0.068	1.05	1.000	0.071
23	5.3GHz/802.11a	6	Left Cheek	56	5280	13.79	0.01	14.0	**0.149**	1.05	1.000	0.156
	5.3GHz/802.11a	6	Left Tilted	56	5280	13.79	-0.15	14.0	0.125	1.05	1.000	0.131
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	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	5.6GHz/802.11a	6	Right Cheek	100	5500	12.53	0.20	13.0	0.057	1.114	1.000	0.063
	5.6GHz/802.11a	6	Right Tilted	100	5500	12.53	-0.16	13.0	0.084	1.114	1.000	0.094
	5.6GHz/802.11a	6	Left Cheek	100	5500	12.53	-0.11	13.0	0.123	1.114	1.000	0.137
24	5.6GHz/802.11a	6	Left Tilted	100	5500	12.53	0.06	13.0	**0.214**	1.114	1.000	0.238
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**						

➢ WLAN 5.8 GHz Head SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	5.8GHz/802.11a	6	Right Cheek	149	5745	17.66	-0.03	18.0	0.032	1.081	1.000	0.035
	5.8GHz/802.11a	6	Right Tilted	149	5745	17.66	-0.10	18.0	0.031	1.081	1.000	0.034
25	5.8GHz/802.11a	6	Left Cheek	149	5745	17.66	0.04	18.0	**0.073**	1.081	1.000	0.078
	5.8GHz/802.11a	6	Left Tilted	149	5745	17.66	-0.06	18.0	0.064	1.081	1.000	0.069
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**						

➢ Bluetooth Head SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	BT/GFSK	6	Right Cheek	39	2441	3.92	0.19	4.0	0.021	1.019	1.000	0.021
	BT/GFSK	6	Right Tilted	39	2441	3.92	-0.16	4.0	0.018	1.019	1.000	0.018
26	BT/GFSK	6	Left Cheek	39	2441	3.92	0.04	4.0	**0.058**	1.019	1.000	0.059
	BT/GFSK	6	Left Tilted	39	2441	3.92	0.04	4.0	0.047	1.019	1.000	0.048
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 39.81mW(16.0dBm) and 63.1mW(18.0dBm), the scaled SAR would be 0.269×(39.81/63.1)=0.170W/Kg<1.2 W/kg, therefore, SAR is not required for OFDM.
6. Per KDB 248227 D01v02r02, When the same maximum output power is specified for both bands, begin SAR measurement in 5.3GWLAN band by applying the OFDM SAR requirements. If the highest reported SAR for a test configuration is ≤ 1.2 W/kg, SAR is not required for 5.2GWLAN band for that configuration.
7. According to KDB 865664 D02v01r02, SAR plot is required for the highest measured SAR in each exposure configuration, wireless mode and frequency band combination
8. Highlight part of test data means repeated test.

15.2 Standalone Body SAR

➢ GSM Body SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	GPRS850/4 slots	0	Front	251	848.8	28.86	0.19	29.0	0.396	1.033	0.409
27	GPRS850/4 slots	0	Back	251	848.8	28.86	-0.14	29.0	**0.577**	1.033	0.596
	GPRS850/4 slots	4	Front	128	824.2	31.66	-0.05	32.0	0.172	1.081	0.186
	GPRS850/4 slots	4	Back	128	824.2	31.66	-0.11	32.0	0.256	1.081	0.277
	GPRS1900/4 slots	0	Front	810	1909.8	25.97	0.07	26.0	0.312	1.007	0.314
28	GPRS1900/4 slots	0	Back	810	1909.8	25.97	-0.07	26.0	**0.621**	1.007	0.625
	GPRS1900/4 slots	4	Front	512	1850.2	26.57	0.19	27.0	0.182	1.104	0.201
	GPRS1900/4 slots	4	Back	512	1850.2	26.57	-0.07	27.0	0.259	1.104	0.286
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**					

➢ WCDMA Body SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band II/RMC	0	Front	9400	1880	23.19	0.08	23.5	0.339	1.074	0.364
29	Band II/RMC	0	Back	9400	1880	23.19	0.04	23.5	**0.652**	1.074	0.700
	Band II/RMC	4	Front	9262	1852.4	20.41	0.04	21.0	0.213	1.146	0.244
	Band II/RMC	4	Back	9262	1852.4	20.41	0.12	21.0	0.272	1.146	0.312
	Band IV/RMC	0	Front	1513	1752.6	23.15	0.18	23.5	0.142	1.084	0.154
30	Band IV/RMC	0	Back	1513	1752.6	23.15	-0.01	23.5	**0.338**	1.084	0.366
	Band IV/RMC	4	Front	1312	1712.4	20.88	0.12	21.0	0.119	1.028	0.122
	Band IV/RMC	4	Back	1312	1712.4	20.88	-0.02	21.0	0.172	1.028	0.177
	Band V/RMC	0	Front	4233	846.6	23.60	-0.20	24.0	0.147	1.096	0.161
31	Band V/RMC	0	Back	4233	846.6	23.60	-0.02	24.0	**0.280**	1.096	0.307
	Band V/RMC	4	Front	4233	846.6	22.23	0.16	22.5	0.085	1.064	0.090
	Band V/RMC	4	Back	4233	846.6	22.23	0.11	22.5	0.132	1.064	0.140
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**					

➢ FDD-LTE Band 2(20MHz) QPSK Body SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band2/1RB#99	0	Front	18700	1860	23.08	0.04	23.5	0.386	1.102	0.425
32	Band2/1RB#99	0	Back	18700	1860	23.08	-0.03	23.5	**0.605**	1.102	0.667
	Band2/50%RB#49	0	Front	18700	1860	22.00	0.19	22.5	0.357	1.122	0.401
	Band2/50%RB#49	0	Back	18700	1860	22.00	0.11	22.5	0.583	1.122	0.654
	Band2/1RB#0	4	Front	18700	1860	21.63	-0.15	22.0	0.058	1.089	0.063
	Band2/1RB#0	4	Back	18700	1860	21.63	-0.12	22.0	0.082	1.089	0.089
	Band2/50%RB#0	4	Front	18700	1860	19.55	0.14	20.0	0.047	1.109	0.052
	Band2/50%RB#0	4	Back	18700	1860	19.55	0.02	20.0	0.076	1.109	0.084
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**					

➢ FDD-LTE Band 5(10MHz) QPSK Body SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band5/1RB#49	0	Front	20525	836.5	23.04	0.02	23.5	0.186	1.112	0.207
33	Band5/1RB#49	0	Back	20525	836.5	23.04	0.01	23.5	**0.313**	1.112	0.348
	Band5/50%RB#24	0	Front	20525	836.5	21.99	-0.16	22.0	0.174	1.002	0.174
	Band5/50%RB#24	0	Back	20525	836.5	21.99	-0.01	22.0	0.306	1.002	0.307
	Band5/1RB#49	4	Front	20450	829	19.86	0.04	20.0	0.098	1.033	0.101
	Band5/1RB#49	4	Back	20450	829	19.86	0.08	20.0	0.138	1.033	0.143
	Band5/50%RB#24	4	Front	20525	836.5	19.77	0.10	20.0	0.086	1.054	0.091
	Band5/50%RB#24	4	Back	20525	836.5	19.77	-0.10	20.0	0.125	1.054	0.132
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**					

➢ FDD-LTE Band 7(20MHz) QPSK Body SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band7/1RB#99	1	Front	21350	2560	22.50	-0.04	23.0	0.310	1.122	0.348
34	Band7/1RB#99	1	Back	21350	2560	22.50	0.09	23.0	**0.444**	1.122	0.498
	Band7/50%RB#49	1	Front	21350	2560	21.43	0.14	22.0	0.298	1.140	0.340
	Band7/50%RB#49	1	Back	21350	2560	21.43	0.03	22.0	0.421	1.140	0.480
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**					

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

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band12/1RB#0	0	Front	23095	707.5	23.15	0.17	23.5	0.152	1.084	0.165
35	Band12/1RB#0	0	Back	23095	707.5	23.15	0.01	23.5	**0.233**	1.084	0.253
	Band12/50%RB#24	0	Front	23095	707.5	22.08	-0.10	22.5	0.143	1.102	0.158
	Band12/50%RB#24	0	Back	23095	707.5	22.08	-0.17	22.5	0.215	1.102	0.237
	Band12/1RB#49	4	Front	23060	704	23.09	0.05	23.5	0.054	1.099	0.059
	Band12/1RB#49	4	Back	23060	704	23.09	-0.05	23.5	0.098	1.099	0.108
	Band12/50%RB#0	4	Front	23095	707.5	21.99	-0.12	22.0	0.052	1.002	0.052
	Band12/50%RB#0	4	Back	23095	707.5	21.99	0.19	22.0	0.090	1.002	0.090
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**					

➢ TDD-LTE Band 38(20MHz) QPSK Body SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	Band38/1RB#99	1	Front	38000	2595	22.32	-0.10	23.0	0.347	1.169	1.008	0.409
36	Band38/1RB#99	1	Back	38000	2595	22.32	0.06	23.0	**0.485**	1.169	1.008	0.572
	Band38/50%RB#49	1	Front	38150	2610	21.30	-0.14	21.5	0.321	1.047	1.008	0.339
	Band38/50%RB#49	1	Back	38150	2610	21.30	-0.05	21.5	0.459	1.047	1.008	0.484
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**						

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

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	Band41/1RB#49	4	Front	40620	2593	21.71	-0.12	22.0	0.073	1.069	1.008	0.079
37	Band41/1RB#49	4	Back	40620	2593	21.71	0.09	22.0	**0.176**	1.069	1.008	0.190
	Band41/50%RB#24	4	Front	40620	2593	20.65	0.00	21.0	0.071	1.084	1.008	0.078
	Band41/50%RB#24	4	Back	40620	2593	20.65	-0.14	21.0	0.168	1.084	1.008	0.184
	Band41/1RB#99 ENDC	1	Front	40620	2593	20.97	-0.03	21.5	0.047	1.130	1.008	0.053
	Band41/1RB#99 ENDC	1	Back	40620	2593	20.97	0.06	21.5	0.147	1.130	1.008	0.167
	Band41/50%RB#0 ENDC	1	Front	40620	2593	19.95	0.02	20.0	0.045	1.012	1.008	0.046
	Band41/50%RB#0 ENDC	1	Back	40620	2593	19.95	0.08	20.0	0.138	1.012	1.008	0.141
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**						

➢ TDD-LTE Band 42(20MHz) QPSK Body SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	Band42/1RB#99	5	Front	43490	3590	21.94	0.14	22.0	0.102	1.014	1.008	0.104
38	Band42/1RB#99	5	Back	43490	3590	21.94	-0.05	22.0	**0.155**	1.014	1.008	0.158
	Band42/50%RB#49	5	Front	42990	3540	20.81	-0.19	21.0	0.098	1.045	1.008	0.103
	Band42/50%RB#49	5	Back	42990	3540	20.81	0.01	21.0	0.142	1.045	1.008	0.150
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**						

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

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band66/1RB#0	0	Front	132322	1745	22.92	0.11	23.0	0.146	1.019	0.149
39	Band66/1RB#0	0	Back	132322	1745	22.92	-0.06	23.0	**0.278**	1.019	0.283
	Band66/50%RB#0	0	Front	132322	1745	21.83	-0.13	22.0	0.137	1.040	0.142
	Band66/50%RB#0	0	Back	132322	1745	21.83	0.06	22.0	0.259	1.040	0.269
	Band66/1RB#0	4	Front	132072	1720	22.76	0.16	23.0	0.032	1.057	0.034
	Band66/1RB#0	4	Back	132072	1720	22.76	-0.13	23.0	0.045	1.057	0.047
	Band66/50%RB#0	4	Front	132322	1745	20.64	0.14	21.0	0.028	1.086	0.030
	Band66/50%RB#0	4	Back	132322	1745	20.64	0.09	21.0	0.039	1.086	0.042
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**					

➢ NR n5(20MHz) DFT-BPSK Body SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	NR n5 /1@1	0	Front	166800	834	23.07	0.15	23.5	0.170	1.104	0.188
	NR n5 /1@1	0	Back	166800	834	23.07	0.00	23.5	0.295	1.104	0.326
	NR n5 /25@12	0	Front	166800	834	23.15	-0.15	23.5	0.174	1.084	0.189
40	NR n5 /25@12	0	Back	166800	834	23.15	-0.07	23.5	**0.309**	1.084	0.335
	NR n5 /1@49	4	Front	166800	834	22.93	0.03	23.0	0.100	1.016	0.102
	NR n5 /1@49	4	Back	166800	834	22.93	0.05	23.0	0.147	1.016	0.149
	NR n5 /25@12	4	Front	166800	834	23.20	-0.08	23.5	0.121	1.072	0.130
	NR n5 /25@12	4	Back	166800	834	23.20	-0.04	23.5	0.188	1.072	0.202
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**					

➢ NR n7(20MHz) DFT-BPSK Body SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	NR n7 /1@49	1	Front	512000	2560	22.06	-0.17	23.0	0.473	1.242	0.587
41	NR n7 /1@49	1	Back	512000	2560	22.06	0.08	23.0	**0.675**	1.242	0.838
	NR n7 /1@49	1	Back	502000	2510	21.85	0.03	23.0	0.615	1.303	0.801
	NR n7 /1@49	1	Back	507000	2535	21.84	0.05	23.0	0.603	1.306	0.788
	NR n7 /25@12	1	Front	512000	2560	22.09	0.10	22.5	0.452	1.099	0.497
	NR n7 /25@12	1	Back	512000	2560	22.09	0.02	22.5	0.660	1.099	0.725
	NR n7 /1@49 NSA	4	Front	512000	2560	20.78	0.02	21.0	0.048	1.052	0.050
	NR n7 /1@49 NSA	4	Back	512000	2560	20.78	-0.17	21.0	0.189	1.052	0.199
	NR n7 /25@12 NSA	4	Front	507000	2535	20.93	0.04	21.0	0.054	1.016	0.055
	NR n7 /25@12 NSA	4	Back	507000	2535	20.93	0.07	21.0	0.201	1.016	0.204
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**					

➢ NR n12(15MHz) DFT-BPSK Body SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	NR n12 /1@1	0	Front	141300	706.5	23.05	-0.07	23.5	0.095	1.109	0.105
	NR n12 /1@1	0	Back	141300	706.5	23.05	-0.01	23.5	0.175	1.109	0.194
	NR n12/18@9	0	Front	141500	707.5	23.12	-0.01	23.5	0.108	1.091	0.118
42	NR n12/18@9	0	Back	141500	707.5	23.12	-0.02	23.5	**0.191**	1.091	0.208
	NR n12 /1@1	4	Front	141500	707.5	22.95	0.18	23.0	0.042	1.012	0.043
	NR n12 /1@1	4	Back	141500	707.5	22.95	-0.07	23.0	0.069	1.012	0.070
	NR n12 /18@9	4	Front	141300	706.5	22.98	-0.04	23.0	0.048	1.005	0.049
	NR n12 /18@9	4	Back	141300	706.5	22.98	0.00	23.0	0.076	1.005	0.076
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**					

➢ NR n41(100MHz) DFT-BPSK Body SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	NR n41 /1@271	4	Front	509202	2546.01	25.47	-0.04	25.5	0.082	1.007	0.083
43	NR n41 /1@271	4	Back	509202	2546.01	25.47	0.11	25.5	**0.248**	1.007	0.250
	NR n41 /135@67	4	Front	518598	2592.99	25.44	-0.13	25.5	0.079	1.014	0.080
	NR n41 /135@67	4	Back	518598	2592.99	25.44	-0.07	25.5	0.214	1.014	0.217
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**					

➢ NR n66(40MHz) DFT-BPSK Body SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	NR n66/1@104	0	Front	346000	1730	22.69	-0.17	23.0	0.108	1.074	0.116
	NR n66/1@104	0	Back	346000	1730	22.69	-0.18	23.0	0.217	1.074	0.233
	NR n66/50@25	0	Front	349000	1745	22.66	0.10	23.0	0.112	1.081	0.121
44	NR n66/50@25	0	Back	349000	1745	22.66	0.03	23.0	**0.224**	1.081	0.242
	NR n66/1@104	4	Front	352000	1760	22.68	0.07	23.0	0.054	1.076	0.058
	NR n66/1@104	4	Back	352000	1760	22.68	-0.19	23.0	0.071	1.076	0.076
	NR n66/50@25	4	Front	346000	1730	22.81	-0.20	23.0	0.058	1.045	0.061
	NR n66/50@25	4	Back	346000	1730	22.81	-0.13	23.0	0.075	1.045	0.078
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**					

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

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	NR n77 /1@1	5	Front	633334	3500.01	25.92	0.00	26.0	0.031	1.019	0.032
	NR n77 /1@1	5	Back	633334	3500.01	25.92	-0.20	26.0	0.080	1.019	0.082
	NR n77 /135@67	5	Front	633334	3500.01	25.74	0.20	26.0	0.035	1.062	0.037
45	NR n77 /135@67	5	Back	633334	3500.01	25.74	-0.03	26.0	**0.081**	1.062	0.086
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**					

➢ NR n77(3550MHz~3700MHz) (100MHz) DFT-BPSK Body SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	NR n77 /1@1	5	Front	643332	3649.98	25.68	0.03	26.0	0.028	1.076	0.030
	NR n77 /1@1	5	Back	643332	3649.98	25.68	-0.15	26.0	0.078	1.076	0.084
	NR n77 /135@67	5	Front	640000	3600	25.65	-0.04	26.0	0.032	1.084	0.035
46	NR n77 /135@67	5	Back	640000	3600	25.65	-0.02	26.0	**0.083**	1.084	0.090
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**					

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

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	NR n77 /1@271	5	Front	662000	3930	25.58	0.14	26.0	0.042	1.102	0.046
	NR n77 /1@271	5	Back	662000	3930	25.58	-0.17	26.0	0.087	1.102	0.096
	NR n77 /135@67	5	Front	650000	3750	25.62	0.08	26.0	0.048	1.091	0.052
47	NR n77 /135@67	5	Back	650000	3750	25.62	0.00	26.0	**0.098**	1.091	0.107
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**					

➢ WLAN 2.4GHz Body SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	2.4GHz/802.11b	6	Front	6	2437	17.67	-0.02	18.0	0.044	1.079	1.000	0.047
48	2.4GHz/802.11b	6	Back	6	2437	17.67	-0.04	18.0	**0.086**	1.079	1.000	0.092
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

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	5.3GHz/802.11a	6	Front	56	5280	13.79	0.06	14.0	0.027	1.050	1.000	0.028
49	5.3GHz/802.11a	6	Back	56	5280	13.79	0.06	14.0	**0.075**	1.050	1.000	0.079
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

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	5.6GHz/802.11a	6	Front	100	5500	12.53	0.15	13.0	0.023	1.114	1.000	0.026
50	5.6GHz/802.11a	6	Back	100	5500	12.53	0.00	13.0	**0.060**	1.114	1.000	0.067
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**						

➢ WLAN 5.8GHz Body SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	5.8GHz/802.11a	6	Front	149	5745	17.66	0.06	18.0	0.018	1.081	1.000	0.019
51	5.8GHz/802.11a	6	Back	149	5745	17.66	0.02	18.0	**0.044**	1.081	1.000	0.048
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**						

➢ Bluetooth Body SAR

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	BT/GFSK	6	Front	39	2441	3.92	-0.11	4.0	0.010	1.019	1.000	0.010
52	BT/GFSK	6	Back	39	2441	3.92	0.00	4.0	**0.025**	1.019	1.000	0.025
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.

15.3 Body SAR in Hotspot Mode

➢ GSM Body SAR in Hotspot mode

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	GPRS850/4 slots	0	Front	251	848.8	28.86	0.19	29.0	0.396	1.033	0.409
27	GPRS850/4 slots	0	Back	251	848.8	28.86	-0.14	29.0	**0.577**	1.033	0.596
	GPRS850/4 slots	0	Left	251	848.8	28.86	0.08	29.0	0.281	1.033	0.290
	GPRS850/4 slots	0	Right	251	848.8	28.86	0.01	29.0	0.418	1.033	0.432
	GPRS850/4 slots	0	Bottom	251	848.8	28.86	0.20	29.0	0.421	1.033	0.435
	GPRS850/4 slots	4	Front	128	824.2	31.66	-0.05	32.0	0.172	1.081	0.186
	GPRS850/4 slots	4	Back	128	824.2	31.66	-0.11	32.0	0.256	1.081	0.277
	GPRS850/4 slots	4	Left	128	824.2	31.66	-0.01	32.0	0.098	1.081	0.106
	GPRS850/4 slots	4	Top	128	824.2	31.66	0.07	32.0	0.145	1.081	0.157
	GPRS1900/4 slots	0	Front	810	1909.8	25.97	0.07	26.0	0.312	1.007	0.314
	GPRS1900/4 slots	0	Back	810	1909.8	25.97	-0.07	26.0	0.621	1.007	0.625
	GPRS1900/4 slots	0	Left	810	1909.8	25.97	0.09	26.0	0.102	1.007	0.103
	GPRS1900/4 slots	0	Right	810	1909.8	25.97	-0.18	26.0	0.069	1.007	0.069
53	GPRS1900/4 slots	0	Bottom	810	1909.8	25.97	0.04	26.0	**0.781**	1.007	0.786
	GPRS1900/4 slots	4	Front	512	1850.2	26.57	0.19	27.0	0.182	1.104	0.201
	GPRS1900/4 slots	4	Back	512	1850.2	26.57	-0.07	27.0	0.259	1.104	0.286
	GPRS1900/4 slots	4	Left	512	1850.2	26.57	0.00	27.0	0.064	1.104	0.071
	GPRS1900/4 slots	4	Top	512	1850.2	26.57	0.14	27.0	0.401	1.104	0.443
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**					

➢ WCDMA Body SAR in Hotspot mode

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band II/RMC	0	Front	9400	1880	23.19	0.08	23.5	0.339	1.074	0.364
	Band II/RMC	0	Back	9400	1880	23.19	0.04	23.5	0.652	1.074	0.700
	Band II/RMC	0	Left	9400	1880	23.19	-0.14	23.5	0.095	1.074	0.102
	Band II/RMC	0	Right	9400	1880	23.19	-0.20	23.5	0.071	1.074	0.076
54	Band II/RMC	0	Bottom	9400	1880	23.19	0.07	23.5	**0.974**	1.074	1.046
	Band II/RMC	0	Bottom	9262	1852.4	23.08	0.09	23.5	0.862	1.102	0.950
	Band II/RMC	0	Bottom	9538	1907.6	23.18	0.15	23.5	0.949	1.076	1.021
	Band II/RMC	**0**	**Bottom**	**9400**	**1880**	**23.19**	**-0.05**	**23.5**	**0.952**	**1.074**	**1.022**
	Band II/RMC	4	Front	9262	1852.4	20.41	0.04	21.0	0.213	1.146	0.244
	Band II/RMC	4	Back	9262	1852.4	20.41	0.12	21.0	0.272	1.146	0.312
	Band II/RMC	4	Left	9262	1852.4	20.41	-0.09	21.0	0.088	1.146	0.101
	Band II/RMC	4	Top	9262	1852.4	20.41	0.13	21.0	0.441	1.146	0.505
	Band IV/RMC	0	Front	1513	1752.6	23.15	0.18	23.5	0.142	1.084	0.154
	Band IV/RMC	0	Back	1513	1752.6	23.15	-0.01	23.5	0.338	1.084	0.366
	Band IV/RMC	0	Left	1513	1752.6	23.15	0.00	23.5	0.057	1.084	0.062
	Band IV/RMC	0	Right	1513	1752.6	23.15	-0.20	23.5	0.087	1.084	0.094
55	Band IV/RMC	0	Bottom	1513	1752.6	23.15	0.11	23.5	**0.459**	1.084	0.498
	Band IV/RMC	4	Front	1312	1712.4	20.88	0.12	21.0	0.119	1.028	0.122
	Band IV/RMC	4	Back	1312	1712.4	20.88	-0.02	21.0	0.172	1.028	0.177
	Band IV/RMC	4	Left	1312	1712.4	20.88	0.11	21.0	0.041	1.028	0.042
	Band IV/RMC	4	Top	1312	1712.4	20.88	0.13	21.0	0.077	1.028	0.079
	Band V/RMC	0	Front	4233	846.6	23.60	-0.20	24.0	0.147	1.096	0.161
31	Band V/RMC	0	Back	4233	846.6	23.60	-0.02	24.0	**0.280**	1.096	0.307
	Band V/RMC	0	Left	4233	846.6	23.60	-0.10	24.0	0.101	1.096	0.111
	Band V/RMC	0	Right	4233	846.6	23.60	0.19	24.0	0.155	1.096	0.170
	Band V/RMC	0	Bottom	4233	846.6	23.60	-0.18	24.0	0.158	1.096	0.173
	Band V/RMC	4	Front	4233	846.6	22.23	0.16	22.5	0.085	1.064	0.090
	Band V/RMC	4	Back	4233	846.6	22.23	0.11	22.5	0.132	1.064	0.140
	Band V/RMC	4	Left	4233	846.6	22.23	0.02	22.5	0.041	1.064	0.044
	Band V/RMC	4	Top	4233	846.6	22.23	-0.01	22.5	0.076	1.064	0.081
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**					

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

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band2/1RB#99	0	Front	18700	1860	23.08	0.04	23.5	0.386	1.102	0.425
	Band2/1RB#99	0	Back	18700	1860	23.08	-0.03	23.5	0.605	1.102	0.667
	Band2/1RB#99	0	Left	18700	1860	23.08	0.09	23.5	0.095	1.102	0.105
	Band2/1RB#99	0	Right	18700	1860	23.08	0.08	23.5	0.062	1.102	0.068
	Band2/1RB#99	0	Bottom	18700	1860	23.08	0.20	23.5	0.830	1.102	0.915
	Band2/1RB#49	0	Bottom	18900	1880	23.01	0.01	23.5	0.899	1.119	1.006
56	Band2/1RB#99	0	Bottom	19100	1900	23.04	0.20	23.5	**0.928**	1.112	1.032
	Band2/1RB#99	**0**	**Bottom**	**19100**	**1900**	**23.04**	**0.04**	**23.5**	**0.905**	**1.112**	**1.006**
	Band2/50%RB#49	0	Front	18700	1860	22.00	0.19	22.5	0.357	1.122	0.401
	Band2/50%RB#49	0	Back	18700	1860	22.00	0.11	22.5	0.583	1.122	0.654
	Band2/50%RB#49	0	Left	18700	1860	22.00	-0.09	22.5	0.088	1.122	0.099
	Band2/50%RB#49	0	Right	18700	1860	22.00	0.15	22.5	0.059	1.122	0.066
	Band2/50%RB#49	0	Bottom	18700	1860	22.00	0.17	22.5	0.702	1.122	0.788
	Band2/1RB#0	4	Front	18700	1860	21.63	-0.15	22.0	0.058	1.089	0.063
	Band2/1RB#0	4	Back	18700	1860	21.63	-0.12	22.0	0.082	1.089	0.089
	Band2/1RB#0	4	Left	18700	1860	21.63	-0.01	22.0	0.021	1.089	0.023
	Band2/1RB#0	4	Top	18700	1860	21.63	0.19	22.0	0.112	1.089	0.122
	Band2/50%RB#0	4	Front	18700	1860	19.55	0.14	20.0	0.047	1.109	0.052
	Band2/50%RB#0	4	Back	18700	1860	19.55	0.02	20.0	0.076	1.109	0.084
	Band2/50%RB#0	4	Left	18700	1860	19.55	0.06	20.0	0.020	1.109	0.022
	Band2/50%RB#0	4	Top	18700	1860	19.55	-0.11	20.0	0.107	1.109	0.119
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**					

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

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band5/1RB#49	0	Front	20525	836.5	23.04	0.02	23.5	0.186	1.112	0.207
33	Band5/1RB#49	0	Back	20525	836.5	23.04	0.01	23.5	**0.313**	1.112	0.348
	Band5/1RB#49	0	Left	20525	836.5	23.04	0.05	23.5	0.105	1.112	0.117
	Band5/1RB#49	0	Right	20525	836.5	23.04	0.08	23.5	0.199	1.112	0.221
	Band5/1RB#49	0	Bottom	20525	836.5	23.04	0.10	23.5	0.193	1.112	0.215
	Band5/50%RB#24	0	Front	20525	836.5	21.99	-0.16	22.0	0.174	1.002	0.174
	Band5/50%RB#24	0	Back	20525	836.5	21.99	-0.01	22.0	0.306	1.002	0.307
	Band5/50%RB#24	0	Left	20525	836.5	21.99	0.00	22.0	0.096	1.002	0.096
	Band5/50%RB#24	0	Right	20525	836.5	21.99	0.05	22.0	0.178	1.002	0.178
	Band5/50%RB#24	0	Bottom	20525	836.5	21.99	0.13	22.0	0.176	1.002	0.176
	Band5/1RB#49	4	Front	20450	829	19.86	0.04	20.0	0.098	1.033	0.101
	Band5/1RB#49	4	Back	20450	829	19.86	0.08	20.0	0.138	1.033	0.143
	Band5/1RB#49	4	Left	20450	829	19.86	0.07	20.0	0.044	1.033	0.045
	Band5/1RB#49	4	Top	20450	829	19.86	-0.06	20.0	0.130	1.033	0.134
	Band5/50%RB#24	4	Front	20525	836.5	19.77	0.10	20.0	0.086	1.054	0.091
	Band5/50%RB#24	4	Back	20525	836.5	19.77	-0.10	20.0	0.125	1.054	0.132
	Band5/50%RB#24	4	Left	20525	836.5	19.77	0.16	20.0	0.042	1.054	0.044
	Band5/50%RB#24	4	Top	20525	836.5	19.77	0.17	20.0	0.116	1.054	0.122
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**					

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

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band7/1RB#99	1	Front	21350	2560	22.50	-0.04	23.0	0.310	1.122	0.348
34	Band7/1RB#99	1	Back	21350	2560	22.50	0.09	23.0	**0.444**	1.122	0.498
	Band7/1RB#99	1	Left	21350	2560	22.50	0.09	23.0	0.229	1.122	0.257
	Band7/1RB#99	1	Bottom	21350	2560	22.50	0.11	23.0	0.331	1.122	0.371
	Band7/50%RB#49	1	Front	21350	2560	21.43	0.14	22.0	0.298	1.140	0.340
	Band7/50%RB#49	1	Back	21350	2560	21.43	0.03	22.0	0.421	1.140	0.480
	Band7/50%RB#49	1	Left	21350	2560	21.43	0.14	22.0	0.208	1.140	0.237
	Band7/50%RB#49	1	Bottom	21350	2560	21.43	0.00	22.0	0.306	1.140	0.349
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**					

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

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band12/1RB#0	0	Front	23095	707.5	23.15	0.17	23.5	0.152	1.084	0.165
35	Band12/1RB#0	0	Back	23095	707.5	23.15	0.01	23.5	**0.233**	1.084	0.253
	Band12/1RB#0	0	Left	23095	707.5	23.15	-0.20	23.5	0.085	1.084	0.092
	Band12/1RB#0	0	Right	23095	707.5	23.15	0.15	23.5	0.176	1.084	0.191
	Band12/1RB#0	0	Bottom	23095	707.5	23.15	-0.18	23.5	0.173	1.084	0.188
	Band12/50%RB#24	0	Front	23095	707.5	22.08	-0.10	22.5	0.143	1.102	0.158
	Band12/50%RB#24	0	Back	23095	707.5	22.08	-0.17	22.5	0.215	1.102	0.237
	Band12/50%RB#24	0	Left	23095	707.5	22.08	0.02	22.5	0.081	1.102	0.089
	Band12/50%RB#24	0	Right	23095	707.5	22.08	-0.08	22.5	0.168	1.102	0.185
	Band12/50%RB#24	0	Bottom	23095	707.5	22.08	0.13	22.5	0.157	1.102	0.173
	Band12/1RB#49	4	Front	23060	704	23.09	0.05	23.5	0.054	1.099	0.059
	Band12/1RB#49	4	Back	23060	704	23.09	-0.05	23.5	0.098	1.099	0.108
	Band12/1RB#49	4	Left	23060	704	23.09	0.06	23.5	0.038	1.099	0.042
	Band12/1RB#49	4	Top	23060	704	23.09	0.17	23.5	0.063	1.099	0.069
	Band12/50%RB#0	4	Front	23095	707.5	21.99	-0.12	22.0	0.052	1.002	0.052
	Band12/50%RB#0	4	Back	23095	707.5	21.99	0.19	22.0	0.090	1.002	0.090
	Band12/50%RB#0	4	Left	23095	707.5	21.99	-0.13	22.0	0.032	1.002	0.032
	Band12/50%RB#0	4	Top	23095	707.5	21.99	0.17	22.0	0.059	1.002	0.059
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**					

➢ TDD-LTE Band 38(20MHz) QPSK Body SAR in Hotspot mode

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	Band38/1RB#99	1	Front	38000	2595	22.32	-0.10	23.0	0.347	1.169	1.008	0.409
36	Band38/1RB#99	1	Back	38000	2595	22.32	0.06	23.0	**0.485**	1.169	1.008	0.572
	Band38/1RB#99	1	Left	38000	2595	22.32	0.17	23.0	0.224	1.169	1.008	0.264
	Band38/1RB#99	1	Bottom	38000	2595	22.32	0.15	23.0	0.316	1.169	1.008	0.372
	Band38/50%RB#49	1	Front	38150	2610	21.30	-0.14	21.5	0.321	1.047	1.008	0.339
	Band38/50%RB#49	1	Back	38150	2610	21.30	-0.05	21.5	0.459	1.047	1.008	0.484
	Band38/50%RB#49	1	Left	38150	2610	21.30	0.04	21.5	0.217	1.047	1.008	0.229
	Band38/50%RB#49	1	Bottom	38150	2610	21.30	-0.10	21.5	0.311	1.047	1.008	0.328
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**						

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

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	Band41/1RB#49	4	Front	40620	2593	21.71	-0.12	22.0	0.073	1.069	1.008	0.079
	Band41/1RB#49	4	Back	40620	2593	21.71	0.09	22.0	0.176	1.069	1.008	0.190
	Band41/1RB#49	4	Left	40620	2593	21.71	0.20	22.0	0.059	1.069	1.008	0.064
57	Band41/1RB#49	4	Top	40620	2593	21.71	0.12	22.0	**0.250**	1.069	1.008	0.269
	Band41/50%RB#24	4	Front	40620	2593	20.65	0.00	21.0	0.071	1.084	1.008	0.078
	Band41/50%RB#24	4	Back	40620	2593	20.65	-0.14	21.0	0.168	1.084	1.008	0.184
	Band41/50%RB#24	4	Left	40620	2593	20.65	-0.07	21.0	0.054	1.084	1.008	0.059
	Band41/50%RB#24	4	Top	40620	2593	20.65	-0.11	21.0	0.237	1.084	1.008	0.259
	Band41/1RB#99 ENDC	1	Front	40620	2593	20.97	-0.03	21.5	0.047	1.130	1.008	0.053
	Band41/1RB#99 ENDC	1	Back	40620	2593	20.97	0.06	21.5	0.147	1.130	1.008	0.167
	Band41/1RB#99 ENDC	1	Left	40620	2593	20.97	0.07	21.5	0.041	1.130	1.008	0.047
	Band41/1RB#99 ENDC	1	Bottom	40620	2593	20.97	-0.05	21.5	0.093	1.130	1.008	0.106
	Band41/50%RB#0 ENDC	1	Front	40620	2593	19.95	0.02	20.0	0.045	1.012	1.008	0.046
	Band41/50%RB#0 ENDC	1	Back	40620	2593	19.95	0.08	20.0	0.138	1.012	1.008	0.141
	Band41/50%RB#0 ENDC	1	Left	40620	2593	19.95	-0.07	20.0	0.036	1.012	1.008	0.037
	Band41/50%RB#0 ENDC	1	Bottom	40620	2593	19.95	-0.03	20.0	0.087	1.012	1.008	0.089
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**						

➢ TDD-LTE Band 42(20MHz) QPSK Body SAR in Hotspot mode

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	Band42/1RB#99	5	Front	43490	3590	21.94	0.14	22.0	0.102	1.014	1.008	0.104
38	Band42/1RB#99	5	Back	43490	3590	21.94	-0.05	22.0	**0.155**	1.014	1.008	0.158
	Band42/1RB#99	5	Right	43490	3590	21.94	-0.08	22.0	0.064	1.014	1.008	0.065
	Band42/1RB#99	5	Top	43490	3590	21.94	0.13	22.0	0.116	1.014	1.008	0.119
	Band42/50%RB#49	5	Front	42990	3540	20.81	-0.19	21.0	0.098	1.045	1.008	0.103
	Band42/50%RB#49	5	Back	42990	3540	20.81	0.01	21.0	0.142	1.045	1.008	0.150
	Band42/50%RB#49	5	Right	42990	3540	20.81	0.19	21.0	0.055	1.045	1.008	0.058
	Band42/50%RB#49	5	Top	42990	3540	20.81	0.12	21.0	0.108	1.045	1.008	0.114
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**						

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

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band66/1RB#0	0	Front	132322	1745	22.92	0.11	23.0	0.146	1.019	0.149
	Band66/1RB#0	0	Back	132322	1745	22.92	-0.06	23.0	0.278	1.019	0.283
	Band66/1RB#0	0	Left	132322	1745	22.92	0.18	23.0	0.039	1.019	0.040
	Band66/1RB#0	0	Right	132322	1745	22.92	-0.09	23.0	0.044	1.019	0.045
58	Band66/1RB#0	0	Bottom	132322	1745	22.92	-0.12	23.0	**0.416**	1.019	0.424
	Band66/50%RB#0	0	Front	132322	1745	21.83	-0.13	22.0	0.137	1.040	0.142
	Band66/50%RB#0	0	Back	132322	1745	21.83	0.06	22.0	0.259	1.040	0.269
	Band66/50%RB#0	0	Left	132322	1745	21.83	-0.19	22.0	0.038	1.040	0.040
	Band66/50%RB#0	0	Right	132322	1745	21.83	0.03	22.0	0.041	1.040	0.043
	Band66/50%RB#0	0	Bottom	132322	1745	21.83	0.19	22.0	0.406	1.040	0.422
	Band66/1RB#0	4	Front	132072	1720	22.76	0.16	23.0	0.032	1.057	0.034
	Band66/1RB#0	4	Back	132072	1720	22.76	-0.13	23.0	0.045	1.057	0.047
	Band66/1RB#0	4	Left	132072	1720	22.76	-0.03	23.0	0.018	1.057	0.019
	Band66/1RB#0	4	Top	132072	1720	22.76	0.02	23.0	0.066	1.057	0.070
	Band66/50%RB#0	4	Front	132322	1745	20.64	0.14	21.0	0.028	1.086	0.030
	Band66/50%RB#0	4	Back	132322	1745	20.64	0.09	21.0	0.039	1.086	0.042
	Band66/50%RB#0	4	Left	132322	1745	20.64	-0.11	21.0	0.010	1.086	0.011
	Band66/50%RB#0	4	Top	132322	1745	20.64	0.05	21.0	0.057	1.086	0.062
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**					

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

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	NR n5 /1@1	0	Front	166800	834	23.07	0.15	23.5	0.170	1.104	0.188
	NR n5 /1@1	0	Back	166800	834	23.07	0.00	23.5	0.295	1.104	0.326
	NR n5 /1@1	0	Left	166800	834	23.07	-0.17	23.5	0.096	1.104	0.106
	NR n5 /1@1	0	Right	166800	834	23.07	0.04	23.5	0.181	1.104	0.200
	NR n5 /1@1	0	Bottom	166800	834	23.07	-0.13	23.5	0.172	1.104	0.190
	NR n5 /25@12	0	Front	166800	834	23.15	-0.15	23.5	0.174	1.084	0.189
40	NR n5 /25@12	0	Back	166800	834	23.15	-0.07	23.5	**0.309**	1.084	0.335
	NR n5 /25@12	0	Left	166800	834	23.15	-0.14	23.5	0.100	1.084	0.108
	NR n5 /25@12	0	Right	166800	834	23.15	0.12	23.5	0.189	1.084	0.205
	NR n5 /25@12	0	Bottom	166800	834	23.15	0.12	23.5	0.184	1.084	0.199
	NR n5 /1@49	4	Front	166800	834	22.93	0.03	23.0	0.100	1.016	0.102
	NR n5 /1@49	4	Back	166800	834	22.93	0.05	23.0	0.147	1.016	0.149
	NR n5 /1@49	4	Left	166800	834	22.93	0.02	23.0	0.043	1.016	0.044
	NR n5 /1@49	4	Top	166800	834	22.93	-0.07	23.0	0.120	1.016	0.122
	NR n5 /25@12	4	Front	166800	834	23.20	-0.08	23.5	0.121	1.072	0.130
	NR n5 /25@12	4	Back	166800	834	23.20	-0.04	23.5	0.188	1.072	0.202
	NR n5 /25@12	4	Left	166800	834	23.20	-0.10	23.5	0.056	1.072	0.060
	NR n5 /25@12	4	Top	166800	834	23.20	0.20	23.5	0.137	1.072	0.147
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**					

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

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	NR n7 /1@49	1	Front	512000	2560	22.06	-0.17	23.0	0.473	1.242	0.587
41	NR n7 /1@49	1	Back	512000	2560	22.06	0.08	23.0	**0.675**	1.242	0.838
	NR n7 /1@49	1	Left	512000	2560	22.06	0.20	23.0	0.313	1.242	0.389
	NR n7 /1@49	1	Bottom	512000	2560	22.06	0.01	23.0	0.498	1.242	0.619
	NR n7 /1@49	1	Back	502000	2510	21.85	0.03	23.0	0.615	1.303	0.801
	NR n7 /1@49	1	Back	507000	2535	21.84	0.05	23.0	0.603	1.306	0.788
	NR n7 /25@12	1	Front	512000	2560	22.09	0.10	22.5	0.452	1.099	0.497
	NR n7 /25@12	1	Back	512000	2560	22.09	0.02	22.5	0.660	1.099	0.725
	NR n7 /25@12	1	Left	512000	2560	22.09	-0.03	22.5	0.308	1.099	0.338
	NR n7 /25@12	1	Bottom	512000	2560	22.09	0.13	22.5	0.475	1.099	0.522
	NR n7 /1@49 NSA	4	Front	512000	2560	20.78	0.02	21.0	0.048	1.052	0.050
	NR n7 /1@49 NSA	4	Back	512000	2560	20.78	-0.17	21.0	0.189	1.052	0.199
	NR n7 /1@49 NSA	4	Left	512000	2560	20.78	-0.14	21.0	0.037	1.052	0.039
	NR n7 /1@49 NSA	4	Top	512000	2560	20.78	-0.05	21.0	0.269	1.052	0.283
	NR n7 /25@12 NSA	4	Front	507000	2535	20.93	0.04	21.0	0.054	1.016	0.055
	NR n7 /25@12 NSA	4	Back	507000	2535	20.93	0.07	21.0	0.201	1.016	0.204
	NR n7 /25@12 NSA	4	Left	507000	2535	20.93	-0.09	21.0	0.041	1.016	0.041
	NR n7 /25@12 NSA	4	Top	507000	2535	20.93	0.02	21.0	0.287	1.016	0.292
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**					

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

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	NR n12 /1@1	0	Front	141300	706.5	23.05	-0.07	23.5	0.095	1.109	0.105
	NR n12 /1@1	0	Back	141300	706.5	23.05	-0.01	23.5	0.175	1.109	0.194
	NR n12 /1@1	0	Left	141300	706.5	23.05	0.01	23.5	0.063	1.109	0.070
	NR n12 /1@1	0	Right	141300	706.5	23.05	0.02	23.5	0.110	1.109	0.122
	NR n12 /1@1	0	Bottom	141300	706.5	23.05	-0.06	23.5	0.102	1.109	0.113
	NR n12/18@9	0	Front	141500	707.5	23.12	-0.01	23.5	0.108	1.091	0.118
42	NR n12/18@9	0	Back	141500	707.5	23.12	-0.02	23.5	**0.191**	1.091	0.208
	NR n12/18@9	0	Left	141500	707.5	23.12	0.11	23.5	0.067	1.091	0.073
	NR n12/18@9	0	Right	141500	707.5	23.12	-0.18	23.5	0.123	1.091	0.134
	NR n12/18@9	0	Bottom	141500	707.5	23.12	-0.17	23.5	0.121	1.091	0.132
	NR n12 /1@1	4	Front	141500	707.5	22.95	0.18	23.0	0.042	1.012	0.043
	NR n12 /1@1	4	Back	141500	707.5	22.95	-0.07	23.0	0.069	1.012	0.070
	NR n12 /1@1	4	Left	141500	707.5	22.95	0.02	23.0	0.047	1.012	0.048
	NR n12 /1@1	4	Top	141500	707.5	22.95	0.07	23.0	0.042	1.012	0.043
	NR n12 /18@9	4	Front	141300	706.5	22.98	-0.04	23.0	0.048	1.005	0.049
	NR n12 /18@9	4	Back	141300	706.5	22.98	0.00	23.0	0.076	1.005	0.076
	NR n12 /18@9	4	Left	141300	706.5	22.98	-0.03	23.0	0.053	1.005	0.053
	NR n12 /18@9	4	Top	141300	706.5	22.98	-0.01	23.0	0.044	1.005	0.045
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**					

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

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	NR n41 /1@271	4	Front	509202	2546.01	25.47	-0.04	25.5	0.082	1.007	0.083
	NR n41 /1@271	4	Back	509202	2546.01	25.47	0.11	25.5	0.248	1.007	0.250
	NR n41 /1@271	4	Left	509202	2546.01	25.47	-0.01	25.5	0.066	1.007	0.066
59	NR n41 /1@271	4	Top	509202	2546.01	25.47	-0.20	25.5	**0.348**	1.007	0.350
	NR n41 /135@67	4	Front	518598	2592.99	25.44	-0.13	25.5	0.079	1.014	0.080
	NR n41 /135@67	4	Back	518598	2592.99	25.44	-0.07	25.5	0.214	1.014	0.217
	NR n41 /135@67	4	Left	518598	2592.99	25.44	-0.09	25.5	0.066	1.014	0.067
	NR n41 /135@67	4	Top	518598	2592.99	25.44	-0.04	25.5	0.339	1.014	0.344
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**					

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

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	NR n66/1@104	0	Front	346000	1730	22.69	-0.17	23.0	0.108	1.074	0.116
	NR n66/1@104	0	Back	346000	1730	22.69	-0.18	23.0	0.217	1.074	0.233
	NR n66/1@104	0	Left	346000	1730	22.69	-0.02	23.0	0.026	1.074	0.028
	NR n66/1@104	0	Right	346000	1730	22.69	0.10	23.0	0.034	1.074	0.037
	NR n66/1@104	0	Bottom	346000	1730	22.69	-0.13	23.0	0.330	1.074	0.354
	NR n66/50@25	0	Front	349000	1745	22.66	0.10	23.0	0.112	1.081	0.121
	NR n66/50@25	0	Back	349000	1745	22.66	0.03	23.0	0.224	1.081	0.242
	NR n66/50@25	0	Left	349000	1745	22.66	0.16	23.0	0.030	1.081	0.032
	NR n66/50@25	0	Right	349000	1745	22.66	-0.01	23.0	0.035	1.081	0.038
60	NR n66/50@25	0	Bottom	349000	1745	22.66	-0.02	23.0	**0.369**	1.081	0.399
	NR n66/1@104	4	Front	352000	1760	22.68	0.07	23.0	0.054	1.076	0.058
	NR n66/1@104	4	Back	352000	1760	22.68	-0.19	23.0	0.071	1.076	0.076
	NR n66/1@104	4	Left	352000	1760	22.68	0.07	23.0	0.022	1.076	0.024
	NR n66/1@104	4	Top	352000	1760	22.68	-0.20	23.0	0.079	1.076	0.085
	NR n66/50@25	4	Front	346000	1730	22.81	-0.20	23.0	0.058	1.045	0.061
	NR n66/50@25	4	Back	346000	1730	22.81	-0.13	23.0	0.075	1.045	0.078
	NR n66/50@25	4	Left	346000	1730	22.81	0.01	23.0	0.024	1.045	0.025
	NR n66/50@25	4	Top	346000	1730	22.81	0.10	23.0	0.088	1.045	0.092
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**					

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

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	NR n77 /1@1	5	Front	633334	3500.01	25.92	0.00	26.0	0.031	1.019	0.032
	NR n77 /1@1	5	Back	633334	3500.01	25.92	-0.20	26.0	0.080	1.019	0.082
	NR n77 /1@1	5	Right	633334	3500.01	25.92	-0.13	26.0	0.044	1.019	0.045
	NR n77 /1@1	5	Top	633334	3500.01	25.92	0.07	26.0	0.068	1.019	0.069
	NR n77 /135@67	5	Front	633334	3500.01	25.74	0.20	26.0	0.035	1.062	0.037
45	NR n77 /135@67	5	Back	633334	3500.01	25.74	-0.03	26.0	**0.081**	1.062	0.086
	NR n77 /135@67	5	Right	633334	3500.01	25.74	-0.05	26.0	0.048	1.062	0.051
	NR n77 /135@67	5	Top	633334	3500.01	25.74	0.08	26.0	0.073	1.062	0.077
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**					

➢ NR n77(3550MHz~3700MHz) (100MHz) DFT-BPSK Body SAR in Hotspot mode

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	NR n77 /1@1	5	Front	643332	3649.98	25.68	0.03	26.0	0.028	1.076	0.030
	NR n77 /1@1	5	Back	643332	3649.98	25.68	-0.15	26.0	0.078	1.076	0.084
	NR n77 /1@1	5	Right	643332	3649.98	25.68	0.05	26.0	0.036	1.076	0.039
	NR n77 /1@1	5	Top	643332	3649.98	25.68	0.12	26.0	0.067	1.076	0.072
	NR n77 /135@67	5	Front	640000	3600	25.65	-0.04	26.0	0.032	1.084	0.035
46	NR n77 /135@67	5	Back	640000	3600	25.65	-0.02	26.0	**0.083**	1.084	0.090
	NR n77 /135@67	5	Right	640000	3600	25.65	0.11	26.0	0.041	1.084	0.044
	NR n77 /135@67	5	Top	640000	3600	25.65	-0.10	26.0	0.077	1.084	0.083
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**					

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

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	NR n77 /1@271	5	Front	662000	3930	25.58	0.14	26.0	0.042	1.102	0.046
	NR n77 /1@271	5	Back	662000	3930	25.58	-0.17	26.0	0.087	1.102	0.096
	NR n77 /1@271	5	Right	662000	3930	25.58	0.19	26.0	0.047	1.102	0.052
	NR n77 /1@271	5	Top	662000	3930	25.58	0.00	26.0	0.080	1.102	0.088
	NR n77 /135@67	5	Front	650000	3750	25.62	0.08	26.0	0.048	1.091	0.052
47	NR n77 /135@67	5	Back	650000	3750	25.62	0.00	26.0	**0.098**	1.091	0.107
	NR n77 /135@67	5	Right	650000	3750	25.62	0.08	26.0	0.051	1.091	0.056
	NR n77 /135@67	5	Top	650000	3750	25.62	-0.17	26.0	0.082	1.091	0.089
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**					

➢ WLAN 2.4GHz Body SAR in Hotspot mode

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	2.4GHz/802.11b	6	Front	6	2437	17.67	-0.02	18.0	0.044	1.079	1.000	0.047
48	2.4GHz/802.11b	6	Back	6	2437	17.67	-0.04	18.0	**0.086**	1.079	1.000	0.092
	2.4GHz/802.11b	6	Right	6	2437	17.67	-0.09	18.0	0.024	1.079	1.000	0.026
	2.4GHz/802.11b	6	Top	6	2437	17.67	0.07	18.0	0.059	1.079	1.000	0.064
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**						

➢ WLAN 5.2GHz Body SAR in Hotspot mode

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	5.2GHz/802.11a	6	Front	40	5200	17.92	0.12	18.0	0.053	1.019	1.000	0.054
	5.2GHz/802.11a	6	Back	40	5200	17.92	0.00	18.0	0.104	1.019	1.000	0.106
	5.2GHz/802.11a	6	Right	40	5200	17.92	0.09	18.0	0.062	1.019	1.000	0.063
61	5.2GHz/802.11a	6	Top	40	5200	17.92	0.02	18.0	**0.155**	1.019	1.000	0.158
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**						

➢ WLAN 5.8GHz Body SAR in Hotspot mode

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	5.8GHz/802.11a	6	Front	149	5745	17.66	0.06	18.0	0.018	1.081	1.000	0.019
	5.8GHz/802.11a	6	Back	149	5745	17.66	0.02	18.0	0.044	1.081	1.000	0.048
	5.8GHz/802.11a	6	Right	149	5745	17.66	0.06	18.0	0.026	1.081	1.000	0.028
62	5.8GHz/802.11a	6	Top	149	5745	17.66	-0.06	18.0	**0.056**	1.081	1.000	0.061
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**						

➢ Bluetooth Body SAR in Hotspot mode

Plot No.	Band/Mode	ANT	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	BT/GFSK	6	Front	39	2441	3.92	-0.11	4.0	0.010	1.019	1.000	0.010
52	BT/GFSK	6	Back	39	2441	3.92	0.00	4.0	**0.025**	1.019	1.000	0.025
	BT/GFSK	6	Right	39	2441	3.92	-0.09	4.0	0.008	1.019	1.000	0.008
	BT/GFSK	6	Top	39	2441	3.92	0.12	4.0	0.021	1.019	1.000	0.021
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.

15.4 Product specific 10g SAR

Extremity SAR measurement is not required.

Note:

1. For smart phones with a display diagonal dimension > 15.0 cm or an overall diagonal dimension> 16.0 cm. Per KDB648474 D04v01r03, When hotspot mode applies, 10-g extremity SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR> 1.2W/kg.

15.5 Repeated SAR measurement

Repeated SAR measurement is not required.

Band/ Mode	ANT	Test Position	CH.	Freq. (MHz)	Measured SAR (W/kg)				
					Original	1st Repeated		2nd Repeated	
						Value	Ratio	Value	Ratio
Band II/RMC	4	Right Tilted	9538	1907.6	1.12	1.09	1.03	/	/
Band II/RMC	0	Bottom	9400	1880	0.974	0.952	1.02	/	/
Band2/1RB#99	0	Bottom	19100	1900	0.928	0.905	1.03	/	/
	ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population				**1.6 W/kg (mW/g) Averaged over 1g**				

Note:

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

15.6 Multi-Band Simultaneous Transmission Considerations

➢ **Simultaneous Transmission Capabilities**

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

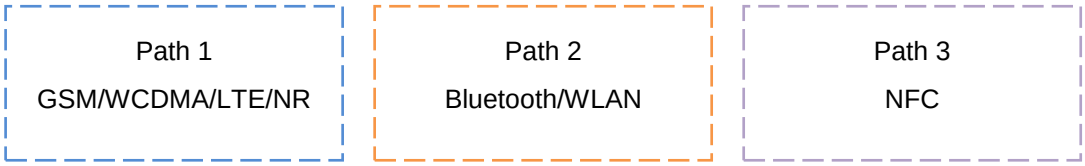

Fig.15.1 Simultaneous Transmission Paths

➢ **Simultaneous Transmission Procedures**

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

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

Mode	Max. Power (dBm)	Max. Power (mW)	Exposure Position	Head	Body	Hotspot
NFC	-55.83	0.0000026	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+ NFC
		WWAN (Voice) + WLAN 5.2GHz/5.3GHz/5.6GHz/5.8GHz + Bluetooth+ NFC
	Body	WWAN (Data) + WLAN 2.4 GHz+ NFC
		WWAN (Data) + WLAN 5.2GHz/5.3GHz/5.6GHz/5.8GHz + Bluetooth+ NFC
	Hotspot	WWAN (Data) + WLAN 2.4 GHz+ NFC
		WWAN (Data) + WLAN 5.2GHz/5.8GHz + Bluetooth+ NFC

Note:

1. WLAN 2.4GHz Band and Bluetooth share the same antenna, and cannot transmit simultaneously.
2. WLAN 2.4GHz Band WLAN 5.2GHz Band, WLAN 5.3GHz Band, WLAN 5.6GHz Band, WLAN 5.8GHz Band share the same antenna, and cannot transmit simultaneously.
3. GSM/WCDMA/LTE shares the same antenna, and cannot transmit simultaneously.
4. GSM/WCDMA/LTE ANT 0, ANT 4 cannot transmit simultaneously.
5. For 5GNR EN-DC mode the simultaneous transmission analysis is use standalone SAR at total power level to show compliance.
6. The Report SAR summation is calculated based on the same configuration and test position.
7. 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

15.7 SAR Simultaneous Transmission Analysis

➢ **Simultaneous Transmission**

Position		Standalone SAR_{1g} (W/kg)					? SAR_{1g} (W/kg)
		LTE Band 2 ANT 0	LTE Band 5 ANT 0	LTE Band 7 ANT 1	LTE Band 66 ANT 0	NR n7 ANT 4	Max EN-DC
Head	Right Cheek	0.197	0.471	0.164	0.155	0.323	0.794
	Right Tilted	0.200	0.442	0.159	0.164	0.488	0.930
	Left Cheek	0.167	0.389	0.191	0.135	0.089	0.479
	Left Tilted	0.182	0.369	0.075	0.149	0.232	0.601
Body- worn	Front	0.425	0.207	0.348	0.149	0.055	0.480
	Back	0.667	0.348	0.498	0.283	0.204	0.871
Hotspot	Front	0.425	0.207	0.348	0.149	0.055	0.480
	Back	0.667	0.348	0.498	0.283	0.204	0.871
	Left	0.105	0.117	0.257	0.040	0.041	0.298
	Right	0.068	0.221	/	0.045	/	0.221
	Top	0.122	0.134	/	0.070	0.292	0.426
	Bottom	1.032	0.215	0.371	0.424	/	1.032

Position		Standalone SAR_{1g} (W/kg)				? SAR_{1g} (W/kg)
		LTE Band 5 ANT 0	LTE Band 66(4) ANT 0	LTE Band 41 ANT 1	NR n41(n38) ANT 4	Max EN-DC
Head	Right Cheek	0.471	0.155	0.039	0.381	0.852
	Right Tilted	0.442	0.164	0.014	0.509	0.951
	Left Cheek	0.389	0.135	0.054	0.087	0.476
	Left Tilted	0.369	0.149	0.017	0.131	0.500
Body- worn	Front	0.207	0.149	0.053	0.083	0.290
	Back	0.348	0.283	0.167	0.250	0.598
Hotspot	Front	0.207	0.149	0.053	0.083	0.290
	Back	0.348	0.283	0.167	0.250	0.598
	Left	0.117	0.040	0.047	0.066	0.183
	Right	0.221	0.045	/	/	0.221
	Top	/	/	/	0.350	0.484
	Bottom	0.215	0.424	0.106	/	0.424

Position		Standalone SAR_{1g} (W/kg)					? SAR_{1g} (W/kg)
		LTE Band 2 ANT 0	LTE Band 5 ANT 0	LTE Band 7 ANT 1	LTE Band 66 ANT 0	NR n66 ANT 4	Max EN-DC
Head	Right Cheek	0.197	0.471	0.164	0.155	0.214	0.685
	Right Tilted	0.200	0.442	0.159	0.164	0.292	0.734
	Left Cheek	0.167	0.389	0.191	0.135	0.148	0.538
	Left Tilted	0.182	0.369	0.075	0.149	0.181	0.550
Body- worn	Front	0.425	0.207	0.348	0.149	0.061	0.486
	Back	0.667	0.348	0.498	0.283	0.078	0.745
Hotspot	Front	0.425	0.207	0.348	0.149	0.061	0.486
	Back	0.667	0.348	0.498	0.283	0.078	0.745
	Left	0.105	0.117	0.257	0.040	0.025	0.282
	Right	0.068	0.221	/	0.045	/	0.221
	Top	/	/	/	/	0.092	0.226
	Bottom	1.032	0.215	0.371	0.424	/	1.032

Position		Standalone SAR_{1g} (W/kg)						? SAR_{1g} (W/kg)
		LTE Band 2 ANT 0	LTE Band 5 ANT 0	LTE Band 7 ANT 1	LTE Band 41(38) ANT 1	LTE Band 66(4) ANT 0	NR n77(n78) NSA	Max EN-DC
Head	Right Cheek	0.197	0.471	0.164	0.039	0.155	0.243	0.714
	Right Tilted	0.200	0.442	0.159	0.014	0.164	0.267	0.709
	Left Cheek	0.167	0.389	0.191	0.054	0.135	0.353	0.743
	Left Tilted	0.182	0.369	0.075	0.017	0.149	0.371	0.740
Body- worn	Front	0.425	0.207	0.348	0.053	0.149	0.052	0.478
	Back	0.667	0.348	0.498	0.167	0.283	0.107	0.773
Hotspot	Front	0.425	0.207	0.348	0.053	0.149	0.052	0.478
	Back	0.667	0.348	0.498	0.167	0.283	0.107	0.773
	Left	0.105	0.117	0.257	0.047	0.040	/	0.257
	Right	0.068	0.221	/	/	0.045	0.056	0.277
	Top	/	/	/	/	/	0.089	0.089
	Bottom	1.032	0.215	0.371	0.106	0.424	/	1.032

Position		Max Standalone SAR_{1g} (W/kg)					? SAR_{1g} (W/kg)	
		1	2	4	5	6	1+2+6	1+4+5+6
		MAX WWAN	2.4G	5G MAX	BT	NFC		
Head	Right Cheek	1.041	0.166	0.109	0.021	0.000	1.207	1.171
	Right Tilted	1.170	0.156	0.102	0.018	0.000	**1.326**	1.290
	Left Cheek	0.883	0.269	0.246	0.059	0.000	1.152	1.188
	Left Tilted	0.917	0.252	0.238	0.048	0.000	1.169	1.203
Body-worn	Front	0.587	0.047	0.042	0.010	0.000	0.634	0.639
	Back	0.871	0.092	0.124	0.025	0.000	0.963	1.020
Hotspot	Front	0.587	0.047	0.042	0.010	0.000	0.634	0.639
	Back	0.871	0.092	0.124	0.025	0.000	0.963	1.020
	Left	0.389	/	/	/	0.000	0.389	0.389
	Right	0.432	0.026	0.079	0.008	0.000	0.458	0.519
	Top	0.505	0.064	0.162	0.021	0.000	0.569	0.688
	Bottom	1.046	/	/	/	0.000	1.046	1.046

➢ **Simultaneous Transmission Conclusion**

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

15.8 Measurement Uncertainty

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

15.9 Measurement Conclusion

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

16 Reference

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