FCC SAR REPORT

Applicant: TECNO MOBILE LIMITED

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

Equipment Under Test (EUT)

Product Name: Mobile Phone

Model No.: KI8

Trade mark TECNO

FCC ID: 2ADYY-KI8

Applicable standards: FCC 47 CFR Part 2.1093

Date of Test: 04 Nov., 2022 ~ 14 Nov., 2022

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

Head: 1.134 Body: 0.532 Hotspot: 0.555

Authorized Signature:

Bruce Zhang
Laboratory Manager

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

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2 Version

Version No.	Date	Description
00	*16 Dec., 2022*	*Original*

Tested by: Vieta.Zhang ***Date:*** *16 Dec., 2022*

Test Engineer

Reviewed by: Janet.Wei ***Date:*** *16 Dec., 2022*

Project Engineer

3 Contents

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	0.685	PCE	1.134
	PCS 1900	0.328		
	WCDMA Band II	0.669		
	WCDMA Band IV	1.134		
	WCDMA Band V	0.457		
	LTE Band 2	0.389		
	LTE Band 5	0.636		
	LTE Band 7	0.513		
	LTE Band 12 & Band 17	0.230		
	LTE Band 41 & Band 38	0.254		
	LTE Band 66 & Band 4	0.477		
	NR n5	0.757		
	NR n7	0.392		
	NR n12	0.297		
	NR n41 &n38	0.309		
	NR n66	0.379		
	NR n77 (3450MHz~3550MHz) &n78 (3450MHz~3550MHz)	0.799		
	NRn77 (3700MHz~3980MHz) &n78 (3700MHz~3800MHz)	0.388		
	WLAN 2.4 GHz	0.104	DTS	
	WLAN 5.2 GHz	0.294	NII	
	WLAN 5.8 GHz	0.189		
	Bluetooth	0.028	DSS	
Body (10 mm Gap)	GSM 850	0.526	PCE	0.532
	PCS 1900	0.532		
	WCDMA Band II	0.386		
	WCDMA Band IV	0.376		
	WCDMA Band V	0.272		
	LTE Band 2	0.411		
	LTE Band 5	0.291		
	LTE Band 7	0.341		
	LTE Band 12 & Band 17	0.113		
	LTE Band 41 & Band 38	0.223		
	LTE Band 66 & Band 4	0.328		
	NR n5	0.296		
	NR n7	0.224		
	NR n12	0.097		
	NR n41 &n38	0.220		

	NR n66	0.384		
	NR n77 (3450MHz~3550MHz) &n78 (3450MHz~3550MHz)	0.413		
	NRn77 (3700MHz~3980MHz) &n78 (3700MHz~3800MHz)	0.437		
	WLAN 2.4 GHz	0.090	DTS	
	WLAN 5.2 GHz	0.069	NII	
	WLAN 5.8 GHz	0.079		
	Bluetooth	0.025	DSS	
Hotspot (10 mm Gap)	GSM 850	0.526	PCE	0.555
	PCS 1900	0.532		
	WCDMA Band II	0.386		
	WCDMA Band IV	0.452		
	WCDMA Band V	0.272		
	LTE Band 2	0.435		
	LTE Band 5	0.291		
	LTE Band 7	0.341		
	LTE Band 12 & Band 17	0.113		
	LTE Band 41 & Band 38	0.223		
	LTE Band 66 & Band 4	0.428		
	NR n5	0.296		
	NR n7	0.224		
	NR n12	0.097		
	NR n41 &n38	0.220		
	NR n66	0.555		
	NR n77 (3450MHz~3550MHz) &n78 (3450MHz~3550MHz)	0.413		
	NRn77 (3700MHz~3980MHz) &n78 (3700MHz~3800MHz)	0.437		
	WLAN 2.4 GHz	0.090	DTS	
	WLAN 5.2 GHz	0.091	NII	
	WLAN 5.8 GHz	0.091		
	Bluetooth	0.025	DSS	

<Highest Reported simultaneous SAR Summary>

Exposure Position	Frequency Band	Reported 1-g SAR (W/kg)	Equipment Class	Highest Reported Simultaneous Transmission 1-g SAR (W/kg)
Right Tilted	EN-DC 5A_n77A	1.364	PCE	1.568
	WLAN 5GHz	0.204	DTS	

Note:

1. The highest simultaneous transmission is scalar summation of Reported standalone SAR per FCC KDB 690783 D01 v01r03, and scalar SAR summation of all possible simultaneous transmission scenarios are < 1.6W/kg.

2. This device is compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits (1.6 W/kg) specified in FCC 47 CFR part 2 (2.1093) and ANSI/IEEE C95.1-2005, and had been tested in accordance with the measurement methods and procedures specified in IEEE 1528-2013.
3. For FDD-LTE Band 17 is full covered by FDD-LTE Band 12, so only FDD-LTE Band 12 was tested.
4. For TDD-LTE Band 38 is full covered by TDD-LTE Band 41, 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 n41 was tested.
7. For NR n78 is full covered by NR n77, so only NR n77 was tested.

5 General Information

5.1 Client Information

Applicant:	TECNO MOBILE LIMITED
Address of Applicant:	FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE 19-25 SHAN MEI STREET FOTAN NT HONGKONG
Manufacturer:	TECNO MOBILE LIMITED
Address of Manufacturer:	FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE 19-25 SHAN MEI STREET FOTAN NT HONGKONG
Factory:	SHENZHEN TECNO TECHNOLOGY CO.,LTD.
Address:	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.:	KI8			
Category of device	Portable device			
Operation Frequency:	GSM :	GSM850: 824.2~848.8 MHz	PCS 1900: 1850.2~1909.8 MHz	
	WCDMA :	Band II: 1852.4~1907.6 MHz	Band V: 826.4~846.6 MHz	
		Band IV: 1712.4~1752.6 MHz		
	LTE :	Band 2 :1850MHz~1910MHz	Band 4 :1710MHz~1755MHz	
		Band 5 :824MHz~849MHz	Band 7: 2500MHz~2570MHz	
		Band 12: 699-716MHz	Band 17: 704MHz~716MHz	
		Band 38: 2570MHz~2620MHz	Band 41: 2496MHz~2690MHz	
		Band 66 :1710MHz~1780MHz		
	5G NR	n5: 824MHz~849MHz	n7: 2500MHz~2570MHz	
		n12: 699MHz -716MHz	n38: 2570MHz~2620MHz	
		n41: 2496MHz~2690MHz	n66 :1710MHz~1780MHz	
		n77: 3300MHz~4200MHz	n78: 3300MHz~3800MHz	
	Wi-Fi:	2412MHz~2462MHz	5150MHz-5250MHz	
		5725MHz-5850MHz		
	Bluetooth: 2402 MHz ~ 2480 MHz			
Modulation technology:	GSM:	☒Voice(GMSK)	☒GPRS(GMSK)	☒EGPRS(GMSK, 8PSK)
	WCDMA:	☒RMC(QPSK)	☒HSUPA(QPSK)	☒HSDPA(QPSK,16QAM)
	LTE:	☒QPSK	☒16QAM	☒64QAM / ☒256QAM (Downlink Only)
	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)
	SA: NR n5, n7,n12, n38, n41, n77, n78			
	NSA(EN-DC): DC_5A_n7A, DC_5A_n41A, DC_41A_n41A, DC_2A_n78A, DC_5A_n78A, DC_7A_n78A, DC_38A_n78A, DC_41A_n78A, DC_66A_n78A, DC_5A_n77A, DC_7A_n77A, DC_41A_n77A, DC_66A_n77A, DC_41C_n78A, DC_7C_n77A, DC_41C_n41A (LTE Band 7C and 41C only supports downlink)			

Antenna Type:	Internal Antenna	
Antenna Gain:	ANT 7 : GSM 850: -1.5dBi; PCS 1900: -0.5dBi WCDMA Band V: -1.5dBi ;WCDMA Band II: -0.5dBi; WCDMA Band IV: -0.7dBi LTE Band 2: -0.5dBi; LTE Band 4: -0.7dBi LTE Band 5: -1.5dBi; LTE Band 7: -0.4dBi LTE Band 12: -1.9dBi ;LTE Band 17: -1.9dBi LTE Band 38: -0.4dBi ; LTE Band 41: -0.4dBi; LTE Band 66: -0.7dBi n5: -1.5dBi; n7: -0.4dBi n12: -1.9dBi; n38: -0.4dBi n41: -0.4dBi ; n66: -0.7dBi ANT 2 : n77: 0.2dBi ; n78: 0.2dBi ANT 1 : Bluetooth: -2.45dBi; 2.4G Wi-Fi: -2.45dBi; 5G Wi-Fi: 0.12dBi ANT 3 : Bluetooth: -2.45dBi; 2.4G Wi-Fi: -2.45dBi;	
(E)GPRS Class:	(E)GPRS Class: 12	
Dimensions (L*W*H):	164 mm (L)× 75 mm (W)× 9 mm (H)	
Accessories information:	Adapter: Model: U180TSA Input:100-240V AC,50/60Hz 0.6A Output: DC 5.0V, 2.4A or DC 7.5V~2.4V, 18.0W Max	Battery: Rechargeable Li-ion polymer Battery 3.85V/4900mAh Headset: Support headset

5.3 Maximum RF Output Power

Mode	Average Power (dBm)	
	GSM 850	GSM 1900
GSM (Voice)	34.11	30.57
GPRS (1 TX Slot)	34.09	30.55
GPRS (2 TX Slots)	33.20	29.72
GPRS (3 TX Slots)	31.30	27.87
GPRS (4 TX Slots)	30.25	26.76
EGPRS (1 TX Slot)	28.10	26.90
EGPRS (2 TX Slots)	27.13	26.05
EGPRS (3 TX Slots)	25.14	24.30
EGPRS (4 TX Slots)	23.94	23.12

Mode	Average Power (dBm)		
	WCDMA Band V	WCDMA Band IV	WCDMA Band II
AMR 12.2 kbps	23.66	23.64	23.52
RMC 12.2 kbps	23.65	23.70	23.56
HSDPA Sub-test 1	22.85	22.71	22.55
HSDPA Sub-test 2	22.37	22.22	22.00
HSDPA Sub-test 3	22.43	22.27	22.03
HSDPA Sub-test 4	22.35	22.19	22.03
HSUPA Sub-test 1	20.85	20.67	20.43
HSUPA Sub-test 2	21.35	21.18	20.93
HSUPA Sub-test 3	21.84	21.66	21.45
HSUPA Sub-test 4	20.88	20.66	20.45
HSUPA Sub-test 5	22.87	22.69	22.43

Mode	Average Power (dBm)					
	LTE Band 2	LTE Band 5	LTE Band 7	LTE Band 12	LTE Band 41	LTE Band 66
BW/1.4 MHz	24.11	23.93	/	23.82	/	23.93
BW/3.0 MHz	24.11	23.84	/	23.80	/	23.92
BW/5.0 MHz	24.29	24.08	24.34	23.99	24.31	24.19
BW/10 MHz	24.11	23.88	24.27	23.87	24.21	24.00
BW/15 MHz	24.10	/	24.24	/	24.35	23.99
BW/20 MHz	24.15	/	24.31	/	24.13	24.06

Mode	Average Power (dBm)						
	NR Band n5	NR Band n7	NR Band n12	NR Band n41	NR Band n66	NR Band n77 3450-3550	NR Band n77 3700-3980
BW/10MHz	25.47	22.96	22.56	25.60	22.54	25.57	26.19
BW/15MHz	24.91	22.90	22.48	25.48	22.51	25.70	26.12
BW/20 MHz	24.95	22.88	/	25.52	22.57	25.66	26.18
BW/30MHz	/	/	/	25.49	/	25.80	26.15
BW/40MHz	/	/	/	25.51	22.59	25.61	26.19
BW/50MHz	/	/	/	25.52	/	25.52	26.14
BW/60MHz	/	/	/	25.46	/	25.59	26.11
BW/80MHz	/	/	/	25.51	/	25.55	26.08
BW/90MHz	/	/	/	25.49	/	25.47	26.03
BW/100MHz	/	/	/	25.40	/	25.35	25.94

ANT1

WLAN 2.4 GHz Band Average Power (dBm)				
Mode/Band	b	g	n (HT-20)	n (HT-40)
WLAN 2.4GHz	16.60	14.62	13.42	13.46

ANT3

WLAN 2.4 GHz Band Average Power (dBm)				
Mode/Band	b	g	n (HT-20)	n (HT-40)
WLAN 2.4GHz	16.40	14.42	13.22	13.17

WLAN 5.2 GHz Band Average Power (dBm)						
Mode/Band	a	ac 20	ac 40	ac 80	n 20	n 40
WLAN 5.2GHz	13.87	11.84	11.76	11.23	13.76	13.58

WLAN 5.8 GHz Band Average Power (dBm)						
Mode/Band	a	ac 20	ac 40	ac 80	n 20	n 40
WLAN 5.8GHz	13.76	12.42	12.22	11.88	13.47	13.13

ANT1

Bluetooth Average Power (dBm)							
Mode/Band	1 Mbps (GFSK)	2 Mbps (π/4DQPSK)	3 Mbps (8DPSK)	BLE PHY 1M	BLE PHY 2M	BLE Coded PHY S=2	BLE Coded PHY S=2
Bluetooth	6.19	5.38	5.31	-3.73	-3.58	-3.72	-3.74

ANT3

Bluetooth Average Power (dBm)							
Mode/Band	1 Mbps (GFSK)	2 Mbps (π/4DQPSK)	3 Mbps (8DPSK)	BLE PHY 1M	BLE PHY 2M	BLE Coded PHY S=2	BLE Coded PHY S=2
Bluetooth	7.07	6.22	6.18	-3.62	-3.47	-3.43	-3.48

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

5.6 Test Location

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

6 Introduction

6.1 Introduction

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

6.2 SAR Definition

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

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

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

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

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

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

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

7 RF Exposure Limits

7.1 Uncontrolled Environment

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

7.2 Controlled Environment

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

7.3 RF Exposure Limits

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

HUMAN EXPOSURE LIMITS		
	UNCONTROLLED ENVIRONMENT *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

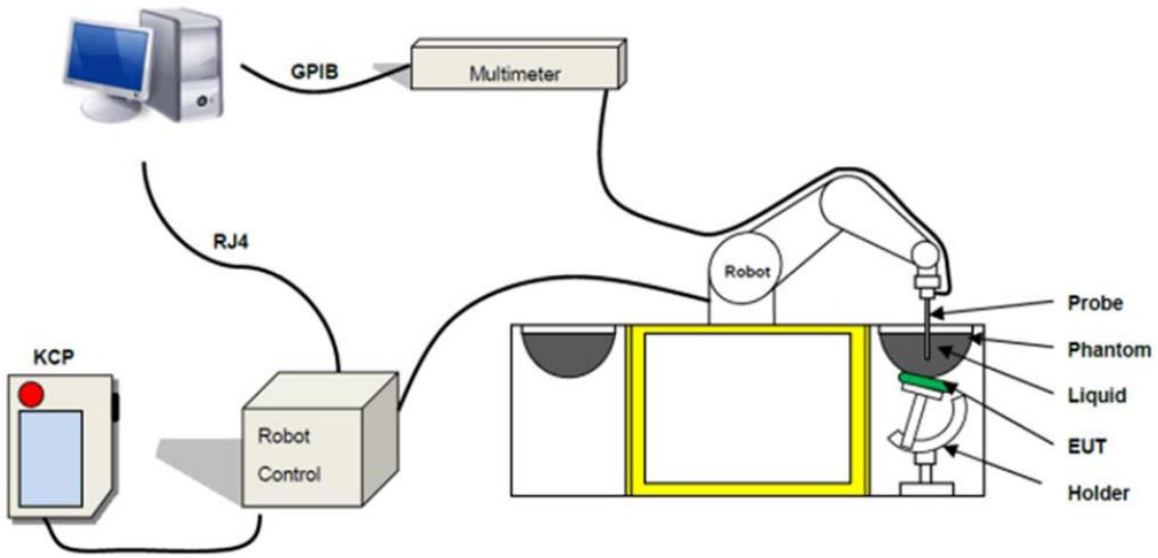


Fig. 8.1 MVG COMOSAR System Configurations

These measurements were performed with the automated near-field scanning system COMOSAR from MVG. The system is based on a high precision robot (working range: 850 mm), which positions the probes with a positional repeatability of better than ± 0.02 mm. Special E- and H-field probes have been developed for measurements close to material discontinuity, the sensors of which are directly loaded with a Schottky diode and connected via highly resistive lines to the data acquisition unit.

The SAR measurements were conducted with dosimetric probe (manufactured by MVG), designed in the classical triangular configuration and optimized for dosimetric evaluation. The probe has been calibrated according to the procedure described in SAR standard with accuracy of better than ±10%.The spherical isotropy was evaluated with the procedure described in SAR standard and found to be better than ±0.25 dB. The phantom used was the SAM Phantom as described in FCC supplement C, IEEE P1528.

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

- Main computer to control all the system
- 6 axis robot
- Data acquisition system
- Miniature E-field probe
- Phone holder
- Head simulating tissue

8.1 E-Field Probe

The SAR measurement is conducted with the dosimetric probe (manufactured by MVG). 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.

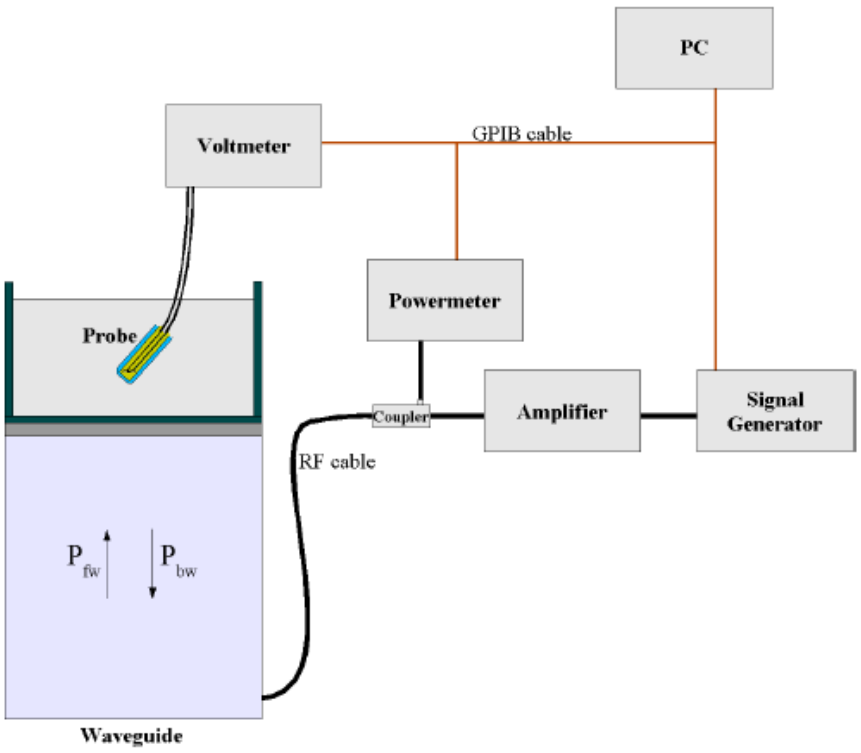
➢ **E-Field Probe Specification**

Device Type	COMOSAR DOSIMETRIC E FIELD PROBE
Model	SSE2
Frequency Range	150 MHz to 6 GHz
Dynamic Range	0.01W/kg to 100W/kg
Probe linearity	<0.25dB
Dimensions	Overall length: 330 mm Tip diameter: 2.5 mm Distance between dipoles / probe extremity: 1 mm

Fig. 8.2 Photo of E-Field Probe

➢ **E-Field Probe Calibration**

Probe calibration is realized, in compliance with EN/IEC 62209-1/-2 and IEEE 1528 std, with CALISAR, MVG proprietary calibration system. The calibration is performed with the technique using reference waveguide.



$$SAR = \frac{4(P_{fw} - P_{bw})}{ab\sigma} \cos^2\left(\pi \frac{y}{a}\right) c^{(2\pi/\sigma)}$$

Where :

Pfw	=	Forward Power
Pbw	=	Backward Power
a and b	=	Waveguide Dimensions
ı	=	Skin Depth

Keithley configuration

Rate=Medium; Filter=ON; RDGS=10; FILTER TYPE=MOVING AVERAGE; RANGE AUTO

After each calibration, a SAR measurement performed on a validation dipole and compared with a NPL calibrated probe, to verify it.

The Calibration factors, CF(N), for the 3 sensors corresponding to dipole 1, dipole 2 and dipole 3 are:

CF(N)=SAR(N)/Vlin(N) (N=1,2,3)

The linearized output voltage Vlin(N) is obtained from the displayed output voltage V(N) using

Vlin(N)=V(N)*(1+V(N)/DCP(N)) N=1,2,3

Where the DCP is the dipole compression point in mV

8.2 Robot

The COMOSAR system uses the high precision robots from KUKA. For the 6-axis controller system, the robot controller version (KUKA-KRC2sr) from KUKA is used. The KUKA 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; no belt drives)
- Jerk-free straight movements
- Low ELF interference (motor control fields shielded via the closed metallic construction shields)

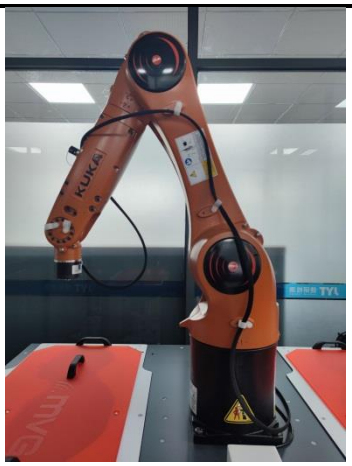


Fig. 8.4 Photo of Robot

8.3 Phantom

<SAM Phantom>

Shell Thickness	2 ± 0.2 mm; Center ear point: 6 ± 0.2 mm
Filling Volume **Dimensions**	Approx. 27 liters Length: 1000mm; Width: 500mm; Height: 200mm
Material	Fiberglass based
Relative permittivity	3-4
Loss tangent	0.02
Measurement Areas	Left Head, Right Head, Flat phantom

Fig. 8.7 Photo of SAM Phantom

The phantom developed by MVG is produced in accordance with the specified in the standards. It has been designed to fit the COMOSAR phantom tables and is delivered with a plastic cover to prevent liquid evaporation.

8.4 Device Holder

The positioning system is made of an extremely stable material, which ensures easy handling and reproducible positioning. It also allows correct positioning of the dipoles referenced by the IEEE, ANSI and IEC.

<Device Holder for SAM Phantom>

Model	Handset Positioning System
Material properties	The positioning system is made of PETP. This material offers a low permittivity of 3.2 and low loss, with a loss tangent of 0.005 to minimize the influence of the DUT on measurement results.
Mechanical properties	The positioning system developed by MVG allows a positioning resolution better than 1 mm. The system is fixed on a bottom rail “x axis” so that the positioning system can be quickly moved from the right to the left part of the phantom. In addition, it can be moved on a perpendicular “y axis” and the height can be adapted. The system is also composed of three rotation points for accurate positioning of the device’s acoustical output.
Accuracy and precision	A curved rail on the top part allows the fast switch from the cheek to the tilt position. The required 15° angle for the tilt position can be easily checked thanks to a printed scale on the curved rail with a tolerance of ± 1°

Fig. 8.9 Photo of Device Holder

8.5 Test Equipment List

Manufacturer	Equipment Description	Model	Management Number	Cal. Information	
				Last Cal.	Due Date
MVG	COMOSAR DOSIMETRIC E FIELD PROBE	SSE2	WXJ076	06.30.2022	06.29.2023
MVG	COMOSAR 750 MHz REFERENCE DIPOLE	SID750	WXJ076-4	01.14.2021	01.13.2024
MVG	COMOSAR 835 MHz REFERENCE DIPOLE	SID835	WXJ076-5	01.14.2021	01.13.2024
MVG	COMOSAR 1750 MHz REFERENCE DIPOLE	SID1750	WXJ076-8	01.14.2021	01.13.2024
MVG	COMOSAR 1900 MHz REFERENCE DIPOLE	SID1900	WXJ076-9	01.14.2021	01.13.2024
MVG	COMOSAR 2450 MHz REFERENCE DIPOLE	SID2450	WXJ076-12	01.14.2021	01.13.2024
MVG	COMOSAR 2600 MHz REFERENCE DIPOLE	SID2600	WXJ076-13	01.14.2021	01.13.2024
MVG	COMOSAR 3500 MHz REFERENCE DIPOLE	SID3500	WXJ076-15	01.14.2021	01.13.2024
MVG	COMOSAR 3900 MHz REFERENCE DIPOLE	SID3900	WXJ076-17	01.14.2021	01.13.2024
MVG	COMOSAR 5200-5800 MHz REFERENCE DIPOLE	SID5000	WXJ076-21	01.14.2021	01.13.2024
KEITHLEY	DIGIT MULTIMETER	DMM6500	WXJ076-1	12.17.2019	12.16.2022
MVG	MVG Measurement Software	OpenSAR	Version: V5_01_09	N.C.R	N.C.R
MVG	COMOSAR IEEE SAM PHANTOM	N/A	WXG009-2	N.C.R	N.C.R
MVG	COMOSAR IEEE SAM PHANTOM	N/A	WXG009-3	N.C.R	N.C.R
MVG	MOBILE PHONE POSITIONNING SYSTEM	N/A	WXG009-4	N.C.R	N.C.R
KUKA	Robot	KR 6 R900 sixx	WXG009-1	N.C.R	N.C.R
KEYSIGHT	UXM 5G Wireless Test Platform	E7515B	WXJ008-6	10.17.2022	10.16.2023
Anritsu	Universal Radio Communication Analyzer	MT8820C	WXJ008-5	03.03.2021	03.02.2023
R&S	Universal Radio Communication Tester	CMU200	WXJ008-2	03.30.2022	03.29.2024
KEYSIGHT	Network Analyzer	E5071C	WXJ091	03.30.2022	03.29.2023
KEYSIGHT	EPM Series Power Meter	N1914A	WXJ075	06.29.2022	06.28.2023
KEYSIGHT	E-Series Power Sensor	E9300H	WXJ075-1	06.29.2022	06.28.2023
KEYSIGHT	E-Series Power Sensor	E9300H	WXJ075-2	06.29.2022	06.28.2023
KEYSIGHT	Signal Generator	N5173B	WXJ006-3	06.29.2022	06.28.2023
Huber Suhner	RF Cable	SUCOFLEX	WXG008-13	See Note 3	
Huber Suhner	RF Cable	SUCOFLEX	WXG008-14	See Note 3	
Huber Suhner	RF Cable	SUCOFLEX	WXG008-15	See Note 3	
Weinschel	Attenuator	23-3-34	WXG008-16	See Note 3	
Anritsu	Directional Coupler	MP654A	WXG008-17	See Note 3	
MVG	LIMESAR DIELECTRIC PROBE	SCLMP	WXG009-5	See Note 4	
TXC	Broadband Amplifier	BBA018000	WXG008-11	See Note 5	

Note:

1. The calibration certificate of MVG 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 MVG.
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, 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.

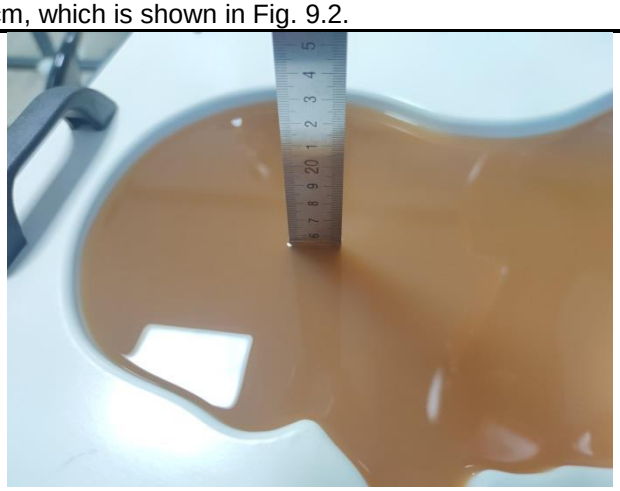


Fig. 9.1 Photo of Liquid Height for Head SAR (depth>15cm)

Fig. 9.2 Photo of Liquid Height for Body SAR (depth>15cm)

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	Head		Body	
(MHz)	εr	σ(S/m)	εr	σ(S/m)
150	52.3	0.76	61.9	0.80
300	45.3	0.87	58.2	0.92
450	43.5	0.87	56.7	0.94
835	41.5	0.90	55.2	0.97
900	41.5	0.97	55.0	1.05
915	41.5	0.98	55.0	1.06
1450	40.5	1.20	54.0	1.30
1610	40.3	1.29	53.8	1.40
1800-2000	40.0	1.40	53.3	1.52
2450	39.2	1.80	52.7	1.95
3000	38.5	2.40	52.0	2.73
5800	35.3	5.27	48.2	6.00

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

The dielectric parameters of liquids wer e verified prior to the SAR evaluation using a MVG Liquid measurement Kit and an Agilent Network Analyzer.
The following table shows the measuring results for simulating liquid.

Frequency (MHz)	Liquid Temp. (℃)	Conductivity (σ)	Permittivity (εr)	Conductivity Target(σ)	Permittivity Target(εr)	Delta (σ)%	Delta (εr)%	Limit (%)	Date (mm/dd/yy)
750	22.4	0.88	41.32	0.89	41.90	-1.12	-1.38	±5	11.04.2022
835	22.4	0.89	40.68	0.90	41.50	-1.11	-1.98	±5	11.04.2022
1750	22.3	1.35	39.69	1.37	40.10	-1.46	-1.02	±5	11.06.2022
1900	22.3	1.37	39.33	1.40	40.00	-2.14	-1.68	±5	11.06.2022
2450	22.7	1.79	38.86	1.80	39.20	-0.56	-0.87	±5	11.09.2022
2600	22.7	1.94	38.20	1.96	39.00	-1.02	-2.05	±5	11.09.2022
3500	22.2	2.93	38.78	2.91	37.90	0.69	2.32	±5	11.11.2022
3900	22.2	3.36	38.12	3.32	37.50	1.20	1.65	±5	11.11.2022
5200	22.6	4.73	37.10	4.66	36.00	1.50	3.06	±5	11.14.2022
5800	22.6	5.22	35.10	5.27	35.30	-0.95	-0.57	±5	11.14.2022

10 SAR System Verification

Each ComoSAR system is equipped with one or more system validation kits. These units, together with the predefined measurement procedures within the OpenSAR software, enable the user to conduct the system performance check and system validation. System validation kit includes a dipole, tripod holder to fix it underneath the flat phantom and a corresponding distance holder.

- **Purpose of System Performance check**

  The system performance check verifies that the system operates within its specifications. System and operator errors can be detected and corrected. It is recommended that the system performance check be performed prior to any usage of the system in order to guarantee reproducible results. The system performance check uses normal SAR measurements in a simplified setup with a well characterized source. This setup was selected to give a high sensitivity to all parameters that might fail or vary over time. The system check does not intend to replace the calibration of the components, but indicates situations where the system uncertainty is exceeded due to drift or failure.

- **System Setup**

In the simplified setup for system evaluation, the EUT is replaced by a calibrated dipole and the power source is replaced by a continuous wave that comes from a signal generator. The calibrated dipole must be placed beneath the flat phantom section of the SAM twin phantom with the correct distance holder. The distance holder should touch the phantom surface with a light pressure at the reference marking and be oriented parallel to the long side of the phantom. The equipment setup is shown below:

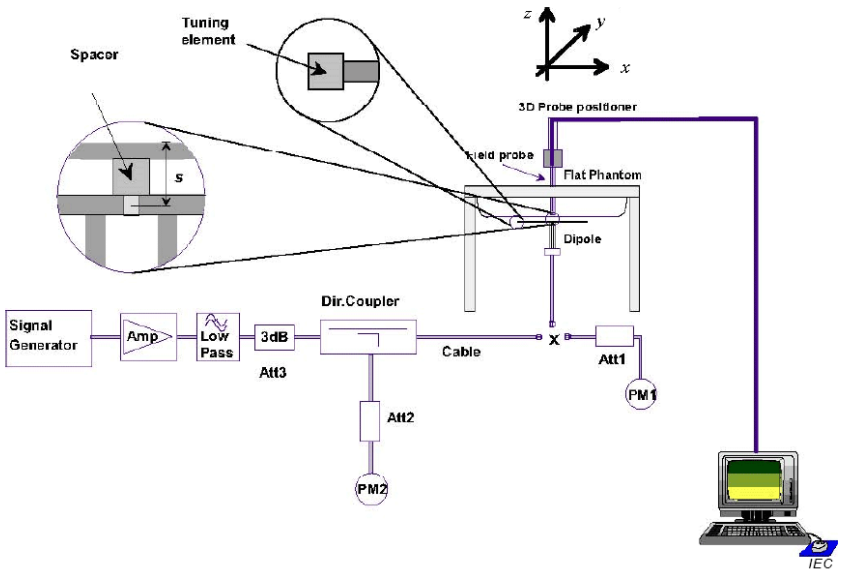


Fig.10.1 System Verification Setup Diagram

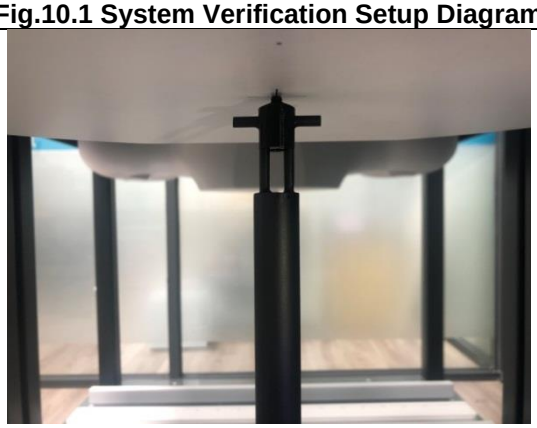


Fig.10.2 Photo of Dipole setup

-

➢ **System Verification Results**

Comparing to the original SAR value provided by MVG, the verification data should be within its specification of 10%. The table as below indicates the system performance check can meet the variation criterion and the plots can be referred to Appendix C of this report.

Date (mm/dd/yy)	Frequency (MHz)	Power fed onto dipole (mW)	Measured 1g SAR (W/kg)	Normalized to 1W 1g SAR (W/kg)	1W Target 1g SAR (W/kg)	Deviation (%)
11.04.2022	750	100	0.849	8.49	8.57	-0.93
11.04.2022	835	100	0.946	9.46	9.57	-1.15
11.06.2022	1750	100	3.580	35.80	36.5	-1.92
11.06.2022	1900	100	3.910	39.10	39.6	-1.26
11.09.2022	2450	40	2.113	52.83	52.92	-0.18
11.09.2022	2600	40	2.210	55.25	55.47	-0.40
11.11.2022	3500	40	2.513	62.83	67.11	-6.39
11.11.2022	3900	40	2.630	65.75	66.92	-1.75
11.14.2022	5200	40	2.950	73.75	76.67	-3.81
11.14.2022	5800	40	2.948	73.70	78.36	-5.95

11 EUT Testing Position

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

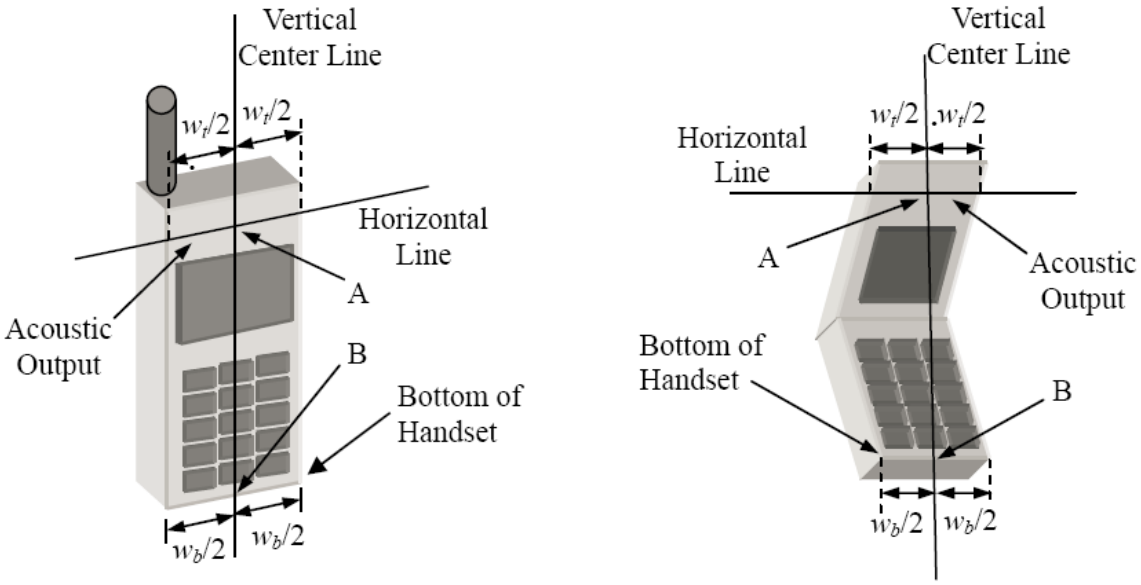


Fig. 11.2 Illustration for Handset Vertical and Horizontal Reference Lines

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.

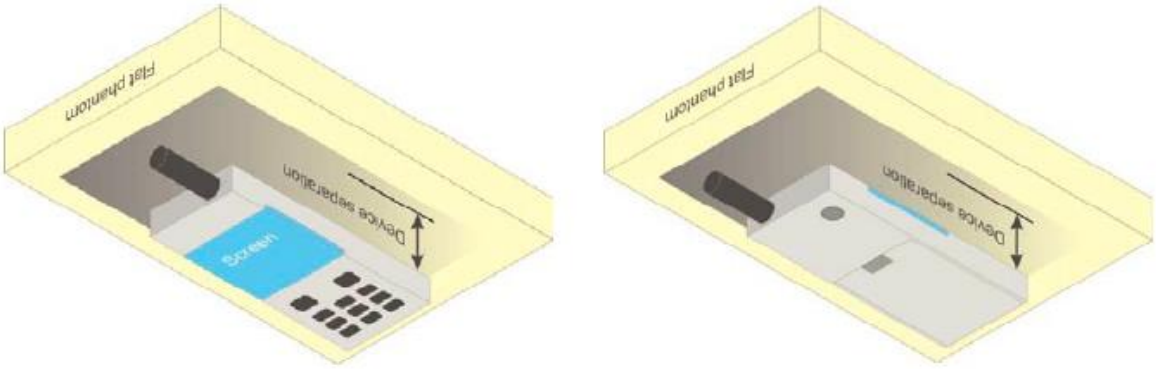


Fig.11.5 Illustration for Body Worn Position

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.

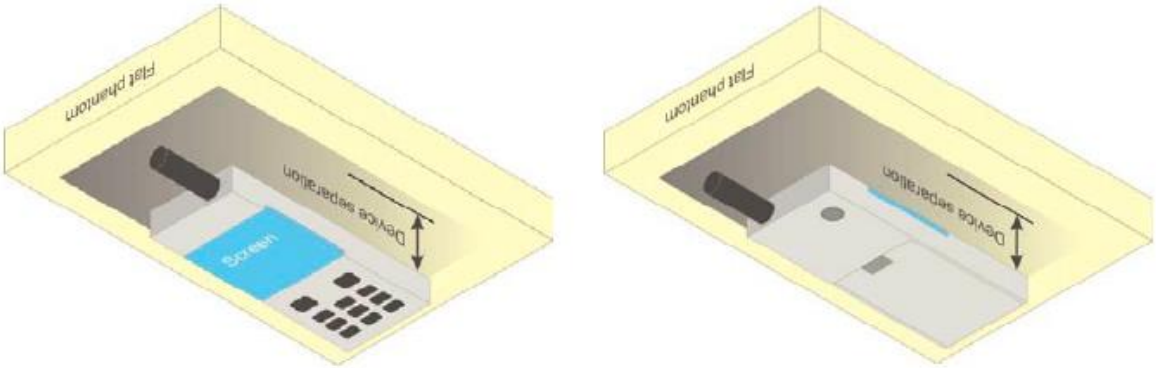


Fig.11.6 Illustration for Hotspot Position

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 OpenSAR 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 OpenSAR 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. 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 can combine and subsequently superpose these measurement data to calculating the multiband SAR.

12.5 SAR Averaged Methods

In COMOSAR system, 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 OpenSAR 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. If the power drifts more than 5%, the SAR will be retested.

13 Conducted RF Output Power

13.1 GSM Conducted Power

Band: GSM 850	Burst Average Power (dBm)			Frame-Average Power(dBm)		
Channel	128	190	251	128	190	251
Frequency (MHz)	824.2	836.6	848.8	824.2	836.6	848.8
GSM (GMSK, Voice)	33.72	**34.11**	33.89	24.69	25.08	24.86
GPRS (GMSK, 1 TX slot)	33.68	34.09	33.87	24.65	25.06	24.84
GPRS (GMSK, 2 TX slots)	32.79	33.20	32.98	26.77	27.18	26.96
GPRS (GMSK, 3 TX slots)	30.89	31.30	31.08	26.63	27.04	26.82
GPRS (GMSK, 4 TX slots)	29.85	**30.25**	30.02	26.84	**27.24**	27.01
EGPRS (8PSK, 1 TX slot)	28.06	27.97	28.10	19.03	18.94	19.07
EGPRS (8PSK, 2 TX slots)	26.99	26.96	27.13	20.97	20.94	21.11
EGPRS (8PSK, 3 TX slots)	25.14	25.08	25.11	20.88	20.82	20.85
EGPRS (8PSK, 4 TX slots)	23.89	23.85	23.94	20.88	20.84	20.93

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

Band: PCS 1900	Burst Average Power (dBm)			Frame-Average Power(dBm)		
Channel	512	661	810	512	661	810
Frequency (MHz)	1850.2	1880.0	1909.8	1850.2	1880.0	1909.8
GSM (GMSK, Voice)	**30.57**	30.34	30.37	21.54	21.31	21.34
GPRS (GMSK, 1 TX slot)	30.55	30.33	30.38	21.52	21.30	21.35
GPRS (GMSK, 2 TX slots)	29.72	29.49	29.54	23.70	23.47	23.52
GPRS (GMSK, 3 TX slots)	27.87	27.61	27.69	23.61	23.35	23.43
GPRS (GMSK, 4 TX slots)	**26.76**	26.53	26.63	**23.75**	23.52	23.62
EGPRS (8PSK, 1 TX slot)	26.90	26.67	26.73	17.87	17.64	17.70
EGPRS (8PSK, 2 TX slots)	26.05	25.84	25.92	20.03	19.82	19.90
EGPRS (8PSK, 3 TX slots)	24.30	24.08	24.19	20.04	19.82	19.93
EGPRS (8PSK, 4 TX slots)	23.12	22.92	23.06	20.11	19.91	20.05

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:

5. For Head SAR testing, GSM Voice mode should be evaluated; therefore the EUT was set in GSM 1900 Voice mode.
6. For Body worn SAR testing, GSM Voice, GPRS and EGPRS mode should be evaluated, therefore the EUT was set in GPRS 4 TX slots mode due to the highest frame-averaged power..
7. For Hotspot mode SAR testing, GPRS and EGPRS mode should be evaluated, therefore the EUT was set in GPRS 4 TX slots mode due to the highest frame-averaged power.
8. Per KDB447498 D04v01, the maximum output power channel is used for SAR testing and for further SAR test reduction.
9. The EUT do not support DTM and VoIP function.

13.2 WCDMA Conducted Power

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

HSDPA Setup Configuration:

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

Table 1

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

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

HSDPA Sub-test setup configuration

HSUPA Setup Configuration:

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

Table 2

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

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

HSUPA Sub-test setup configuration

WCDMA Conducted Power:

WCDMA Average power (dBm)			
Band	WCDMA Band II		
Channel	9262	9400	9538
Frequency (MHz)	1852.4	1880.0	1907.6
AMR 12.2 kbps	23.46	23.38	23.52
RMC 12.2 kbps	23.50	23.47	**23.56**
HSDPA Sub-test 1	22.53	22.49	22.55
HSDPA Sub-test 2	22.00	21.93	21.99
HSDPA Sub-test 3	22.03	21.94	22.02
HSDPA Sub-test 4	21.97	21.90	22.03
HSUPA Sub-test 1	20.43	20.35	20.38
HSUPA Sub-test 2	20.93	20.86	20.92
HSUPA Sub-test 3	21.45	21.35	21.43
HSUPA Sub-test 4	20.45	20.36	20.42
HSUPA Sub-test 5	22.43	22.35	22.42

WCDMA Average power (dBm)			
Band	WCDMA Band IV		
Channel	1312	1413	1513
Frequency (MHz)	1712.4	1732.6	1752.6
AMR 12.2 kbps	23.44	23.25	23.64
RMC 12.2 kbps	23.45	23.34	**23.70**
HSDPA Sub-test 1	22.51	22.37	22.71
HSDPA Sub-test 2	22.01	21.88	22.22
HSDPA Sub-test 3	22.07	21.97	22.27
HSDPA Sub-test 4	22.03	21.88	22.19
HSUPA Sub-test 1	20.51	20.34	20.67
HSUPA Sub-test 2	20.99	20.84	21.18
HSUPA Sub-test 3	21.48	21.34	21.66
HSUPA Sub-test 4	20.48	20.35	20.66
HSUPA Sub-test 5	22.51	22.38	22.69

WCDMA Average power (dBm)			
Band	WCDMA Band V		
Channel	4132	4183	4233
Frequency (MHz)	826.4	836.6	846.6
AMR 12.2 kbps	23.37	23.62	23.66
RMC 12.2 kbps	23.38	23.54	**23.65**
HSDPA Sub-test 1	22.59	22.75	22.85
HSDPA Sub-test 2	22.07	22.24	22.37
HSDPA Sub-test 3	22.13	22.29	22.43
HSDPA Sub-test 4	22.07	22.24	22.35
HSUPA Sub-test 1	20.58	20.73	20.85
HSUPA Sub-test 2	21.06	21.24	21.35
HSUPA Sub-test 3	21.57	21.74	21.84
HSUPA Sub-test 4	20.59	20.76	20.88
HSUPA Sub-test 5	22.59	22.76	22.87

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.

13.3 LTE Conducted Power

13.3.1 Largest channel bandwidth standalone SAR test requirements

QPSK with 1 RB allocation

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

QPSK with 50% RB allocation

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

QPSK with 100% RB allocation

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

Higher order modulations

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

13.3.2 Other channel bandwidth standalone SAR test requirements

For the other channel bandwidths used by the device in a frequency band, apply all the procedures required for the largest channel bandwidth in section 4.2 to determine the channels and RB configurations that need SAR testing and only measure SAR when the highest maximum output power of a configuration requiring testing in the smaller channel bandwidth is > ½ dB higher than the equivalent channel configurations in the largest channel bandwidth configuration or the reported SAR of a configuration for the largest channel bandwidth is > 1.45 W/kg. The equivalent channel configuration for the RB allocation, RB offset and modulation etc. is determined for the smaller channel bandwidth according to the same number of RB allocated in the largest channel bandwidth. For example, 50 RB in 10 MHz channel bandwidth does not apply to 5 MHz channel bandwidth; therefore, this cannot be tested in the smaller channel bandwidth. However, 50% RB allocation in 10 MHz channel bandwidth is equivalent to 100% RB allocation in 5 MHz channel bandwidth; therefore, these are the equivalent configurations to be compared to determine the specific channel and configuration in the smaller channel bandwidth that need SAR testing.

13.3.3 TDD LTE configuration setup for SAR measurement

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

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

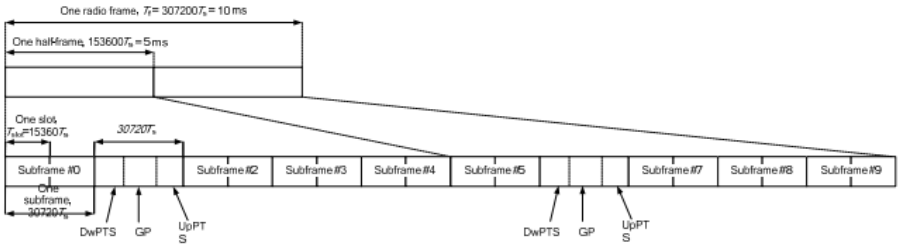


Figure 4.2-1: Frame structure type 2 (for 5 ms switch-point periodicity)

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

Special subframe configuration	Normal cyclic prefix in downlink			Extended cyclic prefix in downlink		
	DwPTS	UpPTS		DwPTS	UpPTS	
		Normal cyclic prefix in uplink	Extended cyclic prefix in uplink		Normal cyclic prefix in uplink	Extended cyclic prefix in uplink
0	$6592 \cdot T_s$	$2192 \cdot T_s$	$2560 \cdot T_s$	$7680 \cdot T_s$	$2192 \cdot T_s$	$2560 \cdot T_s$
1	$19760 \cdot T_s$			$20480 \cdot T_s$		
2	$21952 \cdot T_s$			$23040 \cdot T_s$		
3	$24144 \cdot T_s$			$25600 \cdot T_s$		
4	$26336 \cdot T_s$			$7680 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$
5	$6592 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$	$20480 \cdot T_s$		
6	$19760 \cdot T_s$			$23040 \cdot T_s$		
7	$21952 \cdot T_s$			$12800 \cdot T_s$		
8	$24144 \cdot T_s$			-	-	-
9	$13168 \cdot T_s$			-	-	-

Per 3GPP 36.211 section 4.2, each radio frame of length T_f=37200·Ts = 10 ms consists of two half-frames of length 153600·Ts = 5ms each. Each half-frame consists of five subframes of length 30720 ·Ts = 1ms. So, the uplink duty factor in special subframe as below:

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

Table 4.2-2: Uplink-downlink configurations

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

According to above table:

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

LTE Band 2 part：

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					18607	18900	19193
					1850.7MHz	1880.0MHz	1909.3MHz
Band 2	1.4	QPSK	1	0	23.76	23.81	23.84
			1	2	23.76	23.78	23.76
			1	5	23.73	23.83	23.81
			3	0	23.93	23.94	23.99
			3	1	23.91	23.92	23.98
			3	2	23.91	23.91	23.97
			6	0	22.92	22.91	22.96
		16QAM	1	0	22.94	23.08	22.93
			1	2	22.99	23.11	22.99
			1	5	22.86	23.08	22.90
			3	0	22.90	22.83	22.93
			3	1	22.89	22.80	22.98
			3	2	22.91	22.82	22.96
			6	0	21.98	21.87	22.06
		64QAM	1	0	22.27	21.94	22.40
			1	2	22.29	21.95	22.37
			1	5	22.20	21.96	22.35
			3	0	21.91	21.73	22.13
			3	1	21.90	21.76	22.13
			3	2	21.90	21.78	22.12
			6	0	20.73	20.74	20.94

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					18615	18900	19185
					1851.5MHz	1880.0MHz	1908.5MHz
Band 2	3	QPSK	1	0	24.11	23.84	23.93
			1	7	24.06	23.92	23.90
			1	14	24.08	23.95	23.87
			8	0	22.97	22.98	23.13
			8	4	22.99	22.95	23.13
			8	7	23.00	22.99	23.10
			15	0	23.02	22.98	23.14
		16QAM	1	0	23.31	23.11	22.95
			1	7	23.20	23.14	22.94
			1	14	23.21	23.14	22.95
			8	0	22.04	21.94	22.14
			8	4	22.03	21.94	22.15
			8	7	22.07	21.99	22.13
			15	0	22.04	21.91	22.06
		64QAM	1	0	22.13	21.89	22.38
			1	7	22.06	21.93	22.44
			1	14	22.11	21.95	22.42
			8	0	20.96	20.87	21.09
			8	4	20.98	20.89	21.08
			8	7	20.95	20.95	21.07
			15	0	21.02	20.84	21.00

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					18625	18900	19175
					1852.5MHz	1880.0MHz	1907.5MHz
Band 2	5	QPSK	1	0	24.20	24.08	24.29
			1	12	24.13	24.17	24.27
			1	24	24.14	24.20	24.23
			12	0	22.98	22.99	23.23
			12	6	22.98	22.98	23.22
			12	11	23.01	22.98	23.21
			25	0	23.03	23.02	23.22
		16QAM	1	0	23.05	23.18	23.25
			1	12	22.98	23.22	23.22
			1	24	22.98	23.31	23.15
			12	0	21.99	22.04	22.19
			12	6	22.00	22.04	22.22
			12	11	22.00	22.04	22.22
			25	0	22.04	22.02	22.23
		64QAM	1	0	22.09	21.94	22.68
			1	12	21.97	21.94	22.64
			1	24	22.01	22.00	22.60
			12	0	20.99	20.91	21.20
			12	6	20.99	20.91	21.23
			12	11	21.00	20.92	21.23
			25	0	20.95	20.92	21.15

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					18650	18900	19150
					1855.0MHz	1880.0MHz	1905.0MHz
Band 2	10	QPSK	1	0	24.11	23.86	24.08
			1	24	24.09	24.00	24.11
			1	49	24.04	24.03	23.99
			25	0	22.98	22.99	23.26
			25	12	22.99	22.96	23.25
			25	24	22.99	22.99	23.23
			50	0	23.02	23.05	23.25
		16QAM	1	0	23.31	23.11	23.10
			1	24	23.25	23.21	23.10
			1	49	23.17	23.23	23.03
			25	0	21.99	22.02	22.30
			25	12	22.01	22.01	22.31
			25	24	22.01	22.02	22.31
			50	0	22.02	22.04	22.22
		64QAM	1	0	22.07	21.82	22.51
			1	24	21.90	21.94	22.48
			1	49	21.93	21.96	22.42
			25	0	20.82	20.82	21.08
			25	12	20.84	20.81	21.12
			25	24	20.81	20.81	21.12
			50	0	20.85	20.86	21.09

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					18675	18900	19125
					1857.5MHz	1880.0MHz	1902.5MHz
Band 2	15	QPSK	1	0	24.06	23.82	24.04
			1	37	24.09	24.02	24.10
			1	74	23.93	24.03	23.96
			36	0	22.98	22.99	23.22
			36	16	22.95	22.92	23.23
			36	35	22.98	22.91	23.22
			75	0	23.02	23.07	23.24
		16QAM	1	0	23.16	23.15	23.09
			1	37	23.24	23.32	23.12
			1	74	23.07	23.33	23.01
			36	0	21.99	22.06	22.24
			36	16	21.99	22.06	22.23
			36	35	21.98	22.02	22.22
			75	0	21.93	22.04	22.23
		64QAM	1	0	22.02	21.94	22.44
			1	37	22.08	22.15	22.56
			1	74	21.85	22.20	22.39
			36	0	21.01	20.89	21.16
			36	16	21.02	20.87	21.16
			36	35	20.94	20.87	21.09
			75	0	20.91	20.95	21.13

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					18700	18900	19100
					1860.0MHz	1880.0MHz	1900.0MHz
Band 2	20	QPSK	1	0	24.07	23.91	24.02
			1	49	24.15	24.07	24.09
			1	99	24.04	24.12	23.93
			50	0	22.97	22.99	23.35
			50	24	22.98	22.99	23.32
			50	49	22.97	22.96	23.34
			100	0	22.97	23.05	23.29
		16QAM	1	0	23.05	23.21	23.19
			1	49	23.09	23.40	23.34
			1	99	22.94	23.46	23.21
			50	0	21.96	22.00	22.38
			50	24	21.97	21.99	22.38
			50	49	21.93	21.98	22.38
			100	0	21.96	22.02	22.26
		64QAM	1	0	22.14	22.07	22.00
			1	49	22.23	22.21	22.08
			1	99	22.13	22.28	22.02
			50	0	20.87	20.90	21.22
			50	24	20.87	20.91	21.22
			50	49	20.86	20.84	21.23
			100	0	20.86	20.97	21.15

LTE Band 5 part：

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					20407	20525	20643
					824.7MHz	836.5MHz	848.3MHz
Band 5	1.4	QPSK	1	0	23.66	23.73	23.76
			1	2	23.63	23.70	23.76
			1	5	23.71	23.72	23.78
			3	0	23.78	23.77	23.93
			3	1	23.80	23.77	23.91
			3	2	23.79	23.77	23.91
			6	0	22.74	22.94	23.03
		16QAM	1	0	22.90	23.00	23.20
			1	2	22.97	23.05	23.21
			1	5	22.94	22.97	23.17
			3	0	22.68	22.86	22.97
			3	1	22.68	22.86	22.96
			3	2	22.68	22.85	22.96
			6	0	21.63	22.00	21.91
		64QAM	1	0	22.00	21.90	22.27
			1	2	21.99	21.88	22.28
			1	5	22.00	21.92	22.27
			3	0	21.64	21.73	22.03
			3	1	21.67	21.73	22.03
			3	2	21.63	21.71	22.02
			6	0	20.48	20.70	20.89

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					20415	20525	20635
					825.5MHz	836.5MHz	847.5MHz
Band 5	3	QPSK	1	0	23.79	23.84	23.77
			1	7	23.83	23.74	23.77
			1	14	23.82	23.75	23.75
			8	0	22.75	22.89	23.05
			8	4	22.73	22.90	23.04
			8	7	22.75	22.96	23.04
			15	0	22.76	22.93	23.04
		16QAM	1	0	22.96	23.09	22.94
			1	7	22.95	23.10	22.89
			1	14	22.97	23.08	22.90
			8	0	21.83	21.89	22.05
			8	4	21.82	21.92	22.07
			8	7	21.86	21.94	22.04
			15	0	21.77	21.90	21.98
		64QAM	1	0	21.72	21.82	22.26
			1	7	21.76	21.92	22.29
			1	14	21.81	21.89	22.30
			8	0	20.69	20.87	21.02
			8	4	20.73	20.85	21.02
			8	7	20.71	20.91	20.97
			15	0	20.79	20.82	20.93

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					20425	20525	20625
					826.5MHz	836.5MHz	846.5MHz
Band 5	5	QPSK	1	0	23.96	24.04	24.03
			1	12	23.97	23.96	24.06
			1	24	23.98	24.04	24.08
			12	0	22.83	22.95	23.11
			12	6	22.82	22.93	23.12
			12	11	22.81	22.94	23.10
			25	0	22.85	22.99	23.06
		16QAM	1	0	22.82	23.17	23.10
			1	12	22.81	23.23	23.14
			1	24	22.82	23.30	23.13
			12	0	21.86	22.02	22.09
			12	6	21.84	21.98	22.09
			12	11	21.85	21.99	22.11
			25	0	21.85	21.97	22.09
		64QAM	1	0	21.70	22.43	22.24
			1	12	21.72	22.47	22.27
			1	24	21.77	22.51	22.26
			12	0	20.77	20.89	21.06
			12	6	20.79	20.91	21.09
			12	11	20.76	20.92	21.08
			25	0	20.77	20.87	21.01

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					20450	20525	20600
					829MHz	836.5MHz	844MHz
Band 5	10	QPSK	1	0	23.79	23.77	23.80
			1	24	23.81	23.77	23.88
			1	49	23.86	23.88	23.88
			25	0	22.75	22.90	22.97
			25	12	22.76	22.91	22.99
			25	24	22.74	22.94	22.99
			50	0	22.76	23.02	23.01
		16QAM	1	0	22.92	23.00	22.87
			1	24	22.95	23.11	22.90
			1	49	23.00	23.18	22.93
			25	0	21.76	21.96	22.05
			25	12	21.74	21.98	22.07
			25	24	21.79	21.98	22.06
			50	0	21.77	22.03	21.97
		64QAM	1	0	21.65	21.77	22.27
			1	24	21.72	21.90	22.26
			1	49	21.76	21.98	22.29
			25	0	20.70	20.81	20.85
			25	12	20.69	20.82	20.84
			25	24	20.68	20.81	20.87
			50	0	20.68	20.88	20.83

LTE Band 7 part：

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					20775	21100	21425
					2502.5MHz	2535MHz	2567.5MHz
Band 7	5	QPSK	1	0	24.31	24.28	24.13
			1	12	24.32	24.26	24.16
			1	24	24.34	24.26	24.14
			12	0	23.15	23.15	23.13
			12	6	23.15	23.15	23.12
			12	11	23.15	23.16	23.12
			25	0	23.20	23.15	23.08
		16QAM	1	0	23.17	23.34	23.12
			1	12	23.14	23.36	23.12
			1	24	23.18	23.39	23.13
			12	0	22.19	22.22	22.14
			12	6	22.19	22.21	22.14
			12	11	22.20	22.21	22.15
			25	0	22.24	22.11	22.17
		64QAM	1	0	22.00	22.57	22.14
			1	12	22.01	22.53	22.11
			1	24	22.05	22.54	22.10
			12	0	20.97	21.04	20.94
			12	6	20.97	21.02	20.92
			12	11	20.99	21.02	20.98
			25	0	21.00	20.89	20.93

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					20800	21100	21400
					2505MHz	2535MHz	2565MHz
Band 7	10	QPSK	1	0	24.25	24.10	23.96
			1	24	24.25	24.11	23.94
			1	49	24.27	24.07	23.92
			25	0	23.22	23.25	23.17
			25	12	23.22	23.22	23.21
			25	24	23.21	23.24	23.19
			50	0	23.24	23.24	23.19
		16QAM	1	0	23.43	23.37	22.98
			1	24	23.41	23.39	22.97
			1	49	23.41	23.37	22.96
			25	0	22.20	22.27	22.28
			25	12	22.23	22.27	22.29
			25	24	22.20	22.27	22.28
			50	0	22.23	22.23	22.17
		64QAM	1	0	22.07	22.04	22.28
			1	24	22.07	22.07	22.26
			1	49	22.09	22.04	22.25
			25	0	20.97	21.01	21.01
			25	12	20.98	20.98	21.02
			25	24	20.96	21.02	20.99
			50	0	21.00	20.97	20.92

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					20825	21100	21375
					2507.5MHz	2535MHz	2562.5MHz
Band 7	15	QPSK	1	0	24.19	24.05	23.94
			1	37	24.24	24.11	23.98
			1	74	24.20	24.05	23.86
			36	0	23.12	23.17	23.16
			36	16	23.13	23.15	23.15
			36	35	23.19	23.16	23.17
			75	0	23.18	23.16	23.12
		16QAM	1	0	23.34	23.39	22.97
			1	37	23.40	23.46	23.03
			1	74	23.35	23.40	22.94
			36	0	22.16	22.24	22.19
			36	16	22.14	22.29	22.19
			36	35	22.15	22.28	22.17
			75	0	22.14	22.21	22.15
		64QAM	1	0	22.00	22.10	22.26
			1	37	22.06	22.15	22.29
			1	74	22.02	22.12	22.17
			36	0	21.01	20.96	20.92
			36	16	21.01	20.98	20.94
			36	35	20.99	21.00	20.93
			75	0	20.94	20.99	20.88

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					20850	21100	21350
					2510MHz	2535MHz	2560MHz
Band 7	20	QPSK	1	0	24.24	24.09	23.87
			1	49	24.31	24.19	23.89
			1	99	24.24	24.09	23.78
			50	0	23.17	23.25	23.35
			50	24	23.15	23.26	23.32
			50	49	23.17	23.23	23.34
			100	0	23.17	23.22	23.18
		16QAM	1	0	23.19	23.44	23.17
			1	49	23.27	23.54	23.17
			1	99	23.18	23.49	23.14
			50	0	22.15	22.26	22.37
			50	24	22.15	22.23	22.35
			50	49	22.13	22.24	22.35
			100	0	22.18	22.20	22.19
		64QAM	1	0	22.24	22.16	21.85
			1	49	22.29	22.22	21.82
			1	99	22.25	22.18	21.75
			50	0	20.90	21.01	21.08
			50	24	20.88	21.02	21.07
			50	49	20.88	21.02	21.06
			100	0	20.91	21.02	20.92

LTE Band 12 part：

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					23017	23095	23175
					699.7MHz	707.5MHz	715.3MHz
Band 12	1.4	QPSK	1	0	23.73	23.71	23.59
			1	12	23.76	23.68	23.59
			1	24	23.77	23.65	23.58
			12	0	23.81	23.65	23.61
			12	6	23.81	23.65	23.60
			12	11	23.82	23.66	23.63
			25	0	22.76	22.77	22.69
		16QAM	1	0	22.95	22.66	22.73
			1	12	23.02	22.68	22.82
			1	24	23.01	22.63	22.75
			12	0	22.74	22.67	22.58
			12	6	22.73	22.65	22.59
			12	11	22.70	22.62	22.61
			25	0	21.67	21.77	21.74
		64QAM	1	0	21.68	21.93	21.99
			1	12	21.72	21.92	21.94
			1	24	21.71	21.91	21.94
			12	0	21.49	21.69	21.57
			12	6	21.50	21.70	21.56
			12	11	21.47	21.70	21.57
			25	0	20.46	20.51	20.41

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					23025	23095	23165
					700.5MHz	707.5MHz	714.5MHz
Band 12	3	QPSK	1	0	23.80	23.70	23.59
			1	24	23.80	23.70	23.60
			1	49	23.79	23.67	23.60
			25	0	22.74	22.68	22.69
			25	12	22.73	22.66	22.68
			25	24	22.76	22.68	22.67
			50	0	22.81	22.71	22.68
		16QAM	1	0	22.97	22.92	22.50
			1	24	22.94	22.90	22.58
			1	49	22.93	22.88	22.61
			25	0	21.78	21.70	21.72
			25	12	21.80	21.71	21.71
			25	24	21.83	21.72	21.72
			50	0	21.78	21.63	21.60
		64QAM	1	0	21.63	21.61	21.85
			1	24	21.61	21.68	21.93
			1	49	21.60	21.62	21.93
			25	0	20.62	20.59	20.61
			25	12	20.64	20.61	20.60
			25	24	20.65	20.60	20.58
			50	0	20.72	20.56	20.49

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					23035	23095	23155
					701.5MHz	707.5MHz	713.5MHz
Band 12	5	QPSK	1	0	23.98	23.91	23.83
			1	37	23.94	23.85	23.83
			1	74	23.99	23.86	23.87
			36	0	22.74	22.72	22.74
			36	16	22.76	22.71	22.68
			36	35	22.79	22.73	22.71
			75	0	22.77	22.71	22.69
		16QAM	1	0	22.79	23.04	22.77
			1	37	22.80	22.99	22.77
			1	74	22.87	23.01	22.84
			36	0	21.74	21.74	21.65
			36	16	21.76	21.74	21.66
			36	35	21.77	21.73	21.71
			75	0	21.83	21.70	21.69
		64QAM	1	0	21.66	22.33	21.96
			1	37	21.66	22.25	21.92
			1	74	21.70	22.22	21.99
			36	0	20.68	20.63	20.63
			36	16	20.68	20.64	20.62
			36	35	20.67	20.63	20.63
			75	0	20.65	20.57	20.55

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					23060	23095	23130
					704MHz	707.5MHz	711MHz
Band 12	10	QPSK	1	0	23.83	23.75	23.72
			1	49	23.87	23.80	23.73
			1	99	23.81	23.67	23.71
			50	0	22.77	22.77	22.75
			50	24	22.75	22.78	22.79
			50	49	22.75	22.73	22.79
			100	0	22.83	22.79	22.71
		16QAM	1	0	22.98	22.98	22.64
			1	49	23.00	23.01	22.68
			1	99	22.98	22.91	22.68
			50	0	21.77	21.78	21.79
			50	24	21.77	21.80	21.79
			50	49	21.76	21.81	21.83
			100	0	21.80	21.78	21.72
		64QAM	1	0	21.67	21.70	21.94
			1	49	21.67	21.70	21.95
			1	99	21.67	21.66	21.98
			50	0	20.62	20.64	20.63
			50	24	20.65	20.61	20.64
			50	49	20.66	20.63	20.64
			100	0	20.62	20.64	20.58

LTE Band 41 part:

LTE Band	Band-width (MHz)	Modu-lation	RB Size	RB Offset	Average Power (dBm)				
					39675	40148	40620	41093	41565
					2498.5MHz	2545.5MHz	2593.0MHz	2640.3MHz	2687.5MHz
Band 41	5	QPSK	1	0	24.12	24.13	24.31	24.19	24.14
			1	12	24.10	24.13	24.28	24.18	24.15
			1	24	24.15	24.16	24.30	24.21	24.17
			12	0	23.17	23.21	22.96	23.12	23.24
			12	6	23.14	23.19	23.00	23.13	23.24
			12	11	23.11	23.18	22.97	23.11	23.25
			25	0	23.16	23.21	22.97	23.13	23.25
		16QAM	1	0	23.43	23.44	23.33	23.40	23.44
			1	12	23.39	23.42	23.27	23.37	23.45
			1	24	23.42	23.44	23.34	23.41	23.46
			12	0	22.20	22.25	22.00	22.16	22.29
			12	6	22.19	22.23	22.01	22.16	22.27
			12	11	22.20	22.27	22.01	22.18	22.33
			25	0	22.20	22.23	21.97	22.14	22.25
		64QAM	1	0	22.58	22.60	22.21	22.47	22.61
			1	12	22.57	22.60	22.18	22.46	22.62
			1	24	22.63	22.64	22.20	22.49	22.65
			12	0	21.08	21.11	20.88	21.03	21.14
			12	6	21.09	21.13	20.86	21.04	21.16
			12	11	21.08	21.12	20.87	21.04	21.16
			25	0	20.96	21.00	20.85	20.95	21.04

LTE Band	Band-width (MHz)	Modu-lation	RB Size	RB Offset	Average Power (dBm)				
					39700	40160	40620	41080	41540
					2501.0MHz	2547.0MHz	2593.0MHz	2639.0MHz	2685.0MHz
Band 41	10	QPSK	1	0	24.16	24.16	24.10	24.14	24.15
			1	24	24.20	24.20	24.09	24.16	24.19
			1	49	24.21	24.19	24.01	24.13	24.17
			25	0	23.08	23.16	22.97	23.09	23.23
			25	12	23.10	23.14	22.99	23.09	23.18
			25	24	23.04	23.12	22.97	23.07	23.19
			50	0	23.14	23.19	22.99	23.12	23.23
		16QAM	1	0	23.43	23.29	23.33	23.30	23.15
			1	24	23.50	23.36	23.34	23.35	23.21
			1	49	23.48	23.36	23.32	23.34	23.23
			25	0	22.14	22.19	22.09	22.16	22.24
			25	12	22.15	22.19	22.03	22.14	22.23
			25	24	22.15	22.20	22.04	22.14	22.24
			50	0	22.13	22.17	21.98	22.11	22.21
		64QAM	1	0	22.38	22.18	22.23	22.19	21.97
			1	24	22.44	22.22	22.28	22.24	21.99
			1	49	22.37	22.21	22.22	22.21	22.05
			25	0	20.97	20.94	20.83	20.90	20.91
			25	12	20.96	20.96	20.84	20.92	20.95
			25	24	20.91	20.93	20.83	20.89	20.94
			50	0	21.03	21.02	20.90	20.98	21.01

LTE Band	Band-width (MHz)	Modu-lation	RB Size	RB Offset	Average Power (dBm)				
					39725	40173	40620	41068	41515
					2503.5MHz	2548.5MHz	2593.0MHz	2637.8MHz	2682.5MHz
Band 41	15	QPSK	1	0	24.06	24.16	23.97	24.10	24.26
			1	37	24.18	24.27	24.04	24.19	24.35
			1	74	24.17	24.25	23.92	24.14	24.32
			36	0	23.00	23.06	22.88	23.00	23.11
			36	16	23.00	23.07	22.90	23.01	23.13
			36	35	23.02	23.08	22.93	23.03	23.13
			75	0	23.06	23.09	22.93	23.04	23.12
		16QAM	1	0	23.41	23.27	23.29	23.27	23.12
			1	37	23.47	23.33	23.32	23.33	23.19
			1	74	23.40	23.29	23.21	23.26	23.18
			36	0	22.07	22.14	21.98	22.08	22.20
			36	16	22.04	22.11	21.94	22.05	22.18
			36	35	22.07	22.11	21.96	22.06	22.14
			75	0	22.11	22.11	21.93	22.05	22.11
		64QAM	1	0	22.30	22.29	22.20	22.26	22.27
			1	37	22.39	22.39	22.27	22.35	22.38
			1	74	22.31	22.34	22.18	22.29	22.37
			36	0	20.94	20.97	20.80	20.91	21.00
			36	16	20.91	20.96	20.83	20.91	21.00
			36	35	20.91	20.97	20.86	20.93	21.02
			75	0	21.00	21.00	20.87	20.96	21.00

LTE Band	Band-width (MHz)	Modu-lation	RB Size	RB Offset	Average Power (dBm)				
					39750	40185	40620	41055	41490
					2506.0MHz	2549.5MHz	2593.0MHz	2636.5MHz	2680.0MHz
Band 41	20	QPSK	1	0	23.94	23.94	23.81	23.90	23.94
			1	49	24.02	24.07	23.91	24.01	24.11
			1	99	23.94	24.04	23.80	23.96	24.13
			50	0	23.01	23.08	22.96	23.04	23.14
			50	24	23.01	23.10	22.90	23.03	23.18
			50	49	23.03	23.11	22.92	23.04	23.18
			100	0	23.06	23.10	22.95	23.05	23.14
		16QAM	1	0	23.11	22.90	23.02	22.94	22.68
			1	49	23.22	23.04	23.06	23.04	22.85
			1	99	23.09	22.96	22.98	22.96	22.82
			50	0	22.01	22.08	21.92	22.03	22.15
			50	24	22.00	22.10	21.93	22.04	22.19
			50	49	22.00	22.08	21.90	22.02	22.16
			100	0	22.08	22.09	21.93	22.04	22.10
		64QAM	1	0	22.00	21.97	21.92	21.95	21.94
			1	49	22.08	22.11	21.99	22.07	22.13
			1	99	22.01	22.06	21.90	22.01	22.11
			50	0	20.81	20.94	20.74	20.87	21.07
			50	24	20.80	20.92	20.82	20.89	21.04
			50	49	20.79	20.92	20.81	20.88	21.05
			100	0	20.89	20.95	20.85	20.92	21.01

Note:

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

LTE Band 66 part:

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					131979	132322	132665
					1710.70MHz	1745.00MHz	1779.3MHz
Band 66	1.4	QPSK	1	0	23.71	23.86	23.73
			1	2	23.68	23.87	23.71
			1	5	23.72	23.87	23.72
			3	0	23.87	23.93	23.84
			3	1	23.88	23.88	23.84
			3	2	23.91	23.90	23.85
			6	0	22.83	23.01	22.86
		16QAM	1	0	22.94	22.84	22.89
			1	2	23.00	22.89	22.94
			1	5	22.99	22.86	22.85
			3	0	22.78	22.90	22.80
			3	1	22.74	22.90	22.80
			3	2	22.75	22.89	22.81
			6	0	21.74	22.00	21.91
		64QAM	1	0	21.95	21.87	22.08
			1	2	21.96	21.85	22.08
			1	5	21.93	21.85	22.06
			3	0	21.64	21.66	21.76
			3	1	21.64	21.67	21.82
			3	2	21.65	21.67	21.79
			6	0	20.50	20.63	20.66

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					131987	132322	132657
					1711.50MHz	1745.00MHz	1778.50MHz
Band 66	3	QPSK	1	0	23.87	23.92	23.74
			1	7	23.91	23.92	23.71
			1	14	23.86	23.92	23.70
			8	0	22.83	23.01	22.91
			8	4	22.82	22.99	22.90
			8	7	22.78	23.02	22.86
			15	0	22.79	23.02	22.92
		16QAM	1	0	23.05	23.20	22.72
			1	7	23.04	23.17	22.72
			1	14	23.01	23.15	22.76
			8	0	21.90	21.98	21.90
			8	4	21.89	21.99	21.89
			8	7	21.87	22.01	21.87
			15	0	21.84	21.96	21.85
		64QAM	1	0	21.71	21.81	22.06
			1	7	21.72	21.82	22.07
			1	14	21.70	21.84	22.07
			8	0	20.67	20.83	20.76
			8	4	20.68	20.82	20.75
			8	7	20.68	20.84	20.71
			15	0	20.72	20.80	20.67

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					131997	132322	132647
					1712.50MHz	1745.00MHz	1777.50MHz
Band 66	5	QPSK	1	0	24.05	24.19	24.07
			1	12	23.99	24.15	24.01
			1	24	24.06	24.18	24.09
			12	0	22.85	23.03	22.99
			12	6	22.86	23.04	23.00
			12	11	22.86	23.03	22.97
			25	0	22.84	23.09	22.95
		16QAM	1	0	22.92	23.27	23.02
			1	12	22.82	23.27	22.95
			1	24	22.84	23.33	23.04
			12	0	21.88	22.09	21.98
			12	6	21.88	22.09	21.97
			12	11	21.90	22.06	21.96
			25	0	21.90	22.07	21.98
		64QAM	1	0	21.73	22.42	22.08
			1	12	21.67	22.42	22.02
			1	24	21.73	22.46	22.07
			12	0	20.71	20.88	20.83
			12	6	20.72	20.91	20.80
			12	11	20.71	20.92	20.82
			25	0	20.68	20.89	20.78

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					132022	132322	132622
					1715.00MHz	1745.00MHz	1775.00MHz
Band 66	10	QPSK	1	0	23.90	23.86	23.78
			1	24	23.90	24.00	23.82
			1	49	23.88	23.99	23.76
			25	0	22.85	22.97	22.96
			25	12	22.84	23.01	22.97
			25	24	22.85	22.97	22.95
			50	0	22.90	23.09	22.95
		16QAM	1	0	23.04	23.11	22.76
			1	24	23.09	23.23	22.79
			1	49	23.04	23.21	22.81
			25	0	21.85	22.04	22.02
			25	12	21.83	22.05	22.01
			25	24	21.85	22.04	22.00
			50	0	21.84	22.08	21.90
		64QAM	1	0	21.74	21.80	22.05
			1	24	21.76	21.90	22.12
			1	49	21.69	21.91	22.10
			25	0	20.64	20.80	20.75
			25	12	20.63	20.77	20.75
			25	24	20.63	20.80	20.77
			50	0	20.65	20.86	20.71

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					132047	132322	132597
					1717.50MHz	1745.00MHz	1772.50MHz
Band 66	15	QPSK	1	0	23.85	23.78	23.72
			1	37	23.89	23.95	23.75
			1	74	23.75	23.99	23.76
			36	0	22.81	22.98	22.90
			36	16	22.78	22.96	22.89
			36	35	22.82	22.91	22.87
			75	0	22.80	23.05	22.88
		16QAM	1	0	23.03	23.10	22.72
			1	37	23.06	23.28	22.76
			1	74	22.91	23.30	22.76
			36	0	21.82	22.01	21.87
			36	16	21.82	22.04	21.87
			36	35	21.82	22.01	21.84
			75	0	21.75	22.09	21.90
		64QAM	1	0	21.69	21.83	22.01
			1	37	21.76	22.05	22.04
			1	74	21.60	22.04	22.11
			36	0	20.68	20.79	20.65
			36	16	20.68	20.76	20.66
			36	35	20.69	20.75	20.68
			75	0	20.60	20.84	20.70

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					132072	132322	132572
					1720.00MHz	1745.00MHz	1770.00MHz
Band 66	20	QPSK	1	0	23.91	23.76	23.70
			1	49	23.92	24.06	23.74
			1	99	23.87	24.03	23.71
			50	0	22.83	23.00	22.89
			50	24	22.81	23.00	22.92
			50	49	22.81	22.99	22.93
			100	0	22.76	23.07	22.86
		16QAM	1	0	22.84	23.09	22.90
			1	49	22.87	23.38	22.95
			1	99	22.75	23.36	22.97
			50	0	21.80	22.00	21.93
			50	24	21.82	22.04	21.92
			50	49	21.80	22.00	21.94
			100	0	21.77	22.05	21.88
		64QAM	1	0	21.90	21.84	21.58
			1	49	21.90	22.13	21.66
			1	99	21.82	22.07	21.67
			50	0	20.61	20.82	20.69
			50	24	20.57	20.85	20.71
			50	49	20.60	20.85	20.73
			100	0	20.52	20.90	20.69

13.4 NR Conducted Power

NR n5 part:

NR Band	SCS (KHz)	Bandwidth (MHz)	RB Allocation	Modulation	Average Power (dBm)		
					165800	167300	168800
					829MHz	836.5MHz	844MHz
n5	30	10	12@6	DFT_BPSK	25.40	24.65	24.70
			1@1	DFT_BPSK	25.07	24.46	24.72
			1@22	DFT_BPSK	25.13	24.75	23.97
			12@6	DFT_QPSK	25.45	24.42	24.78
			1@1	DFT_QPSK	25.21	24.39	24.77
			1@22	DFT_QPSK	25.14	24.74	24.12
			12@6	DFT_QAM16	24.44	24.31	24.59
			1@1	DFT_QAM16	24.50	24.03	24.54
			1@22	DFT_QAM16	24.48	24.16	23.83
			12@6	DFT_QAM64	23.75	23.01	23.35
			1@1	DFT_QAM64	23.39	23.18	23.38
			1@22	DFT_QAM64	23.42	23.33	22.76
			12@6	DFT_QAM256	24.02	20.85	21.20
			1@1	DFT_QAM256	24.71	21.03	21.39
			1@22	DFT_QAM256	24.79	21.04	21.19
			12@6	CP_QPSK	25.47	24.49	24.81
			1@1	CP_QPSK	25.24	24.38	24.95
			1@22	CP_QPSK	25.33	24.74	24.28
			12@6	CP_QAM16	25.46	24.43	24.59
			1@1	CP_QAM16	25.33	24.82	24.72
			1@22	CP_QAM16	25.35	25.00	24.19
			12@6	CP_QAM64	24.85	23.32	23.54
			1@1	CP_QAM64	24.51	23.11	23.86
			1@22	CP_QAM64	24.69	23.38	23.47
			12@6	CP_QAM256	23.93	20.98	21.17
			1@1	CP_QAM256	24.83	20.89	21.72
			1@22	CP_QAM256	24.82	21.07	20.99

NR Band	SCS (KHz)	Bandwidth (MHz)	RB Allocation	Modulation	Average Power (dBm)		
					166300	167300	168300
					831.5MHz	836.5MHz	841.5MHz
n5	30	15	18@9	DFT_BPSK	24.64	24.84	24.91
			1@1	DFT_BPSK	24.27	24.61	24.68
			1@36	DFT_BPSK	24.69	24.87	24.48
			18@9	DFT_QPSK	24.69	24.69	24.85
			1@1	DFT_QPSK	24.39	24.65	24.63
			1@36	DFT_QPSK	24.74	24.81	24.34
			18@9	DFT_QAM16	24.41	24.34	24.51
			1@1	DFT_QAM16	24.08	24.64	24.72
			1@36	DFT_QAM16	24.58	24.62	24.39
			18@9	DFT_QAM64	23.25	23.32	23.62
			1@1	DFT_QAM64	23.28	23.15	23.64
			1@36	DFT_QAM64	23.15	23.29	23.34
			18@9	DFT_QAM256	20.78	20.88	21.22
			1@1	DFT_QAM256	20.95	21.08	21.03
			1@36	DFT_QAM256	21.39	21.48	20.90
			19@9	CP_QPSK	24.63	24.73	24.90
			1@1	CP_QPSK	24.44	24.74	24.75
			1@36	CP_QPSK	24.75	24.79	24.54
			19@9	CP_QAM16	24.38	24.56	24.75
			1@1	CP_QAM16	24.22	24.48	24.74
			1@36	CP_QAM16	24.78	24.84	24.10
			19@9	CP_QAM64	23.42	23.48	23.64
			1@1	CP_QAM64	23.31	23.85	23.82
			1@36	CP_QAM64	23.57	23.92	23.79
			19@9	CP_QAM256	20.73	20.90	20.92
			1@1	CP_QAM256	21.07	21.03	21.42
			1@36	CP_QAM256	21.37	21.53	20.90

NR Band	SCS (KHz)	Bandwidth (MHz)	RB Allocation	Modulation	Average Power (dBm)		
					166800	167300	167800
					834MHz	836.5MHz	839MHz
n5	30	20	25@12	DFT_BPSK	24.59	24.85	24.80
			1@1	DFT_BPSK	24.24	24.53	24.66
			1@49	DFT_BPSK	24.68	24.68	24.29
			25@12	DFT_QPSK	24.71	24.95	24.76
			1@1	DFT_QPSK	24.33	24.43	24.57
			1@49	DFT_QPSK	24.71	24.70	24.43
			25@12	DFT_QAM16	24.42	24.52	24.48
			1@1	DFT_QAM16	24.30	24.28	24.45
			1@49	DFT_QAM16	24.67	24.44	24.24
			25@12	DFT_QAM64	23.55	23.57	23.63
			1@1	DFT_QAM64	23.23	23.09	23.10
			1@49	DFT_QAM64	23.34	23.43	23.16
			25@12	DFT_QAM256	21.13	21.07	21.01
			1@1	DFT_QAM256	21.13	20.88	21.22
			1@49	DFT_QAM256	21.12	21.34	21.24
			25@12	CP_QPSK	24.83	24.95	24.73
			1@1	CP_QPSK	24.46	24.61	24.61
			1@49	CP_QPSK	24.77	24.67	24.39
			25@12	CP_QAM16	24.28	24.27	24.42
			1@1	CP_QAM16	24.54	24.16	24.23
			1@49	CP_QAM16	24.79	24.09	23.95
			25@12	CP_QAM64	23.45	23.63	23.48
			1@1	CP_QAM64	23.50	23.99	23.40
			1@49	CP_QAM64	23.76	23.84	23.40
			25@12	CP_QAM256	21.03	21.10	21.06
			1@1	CP_QAM256	20.77	21.01	21.23
			1@49	CP_QAM256	21.17	21.34	21.16

NR n7 part:

NR Band	SCS (KHz)	Bandwidth (MHz)	RB Allocation	Modulation	Average Power (dBm)		
					501000	507000	513000
					2505MHz	2535MHz	2565MHz
n7	30	10	12@6	DFT_BPSK	22.86	22.96	22.95
			1@1	DFT_BPSK	22.88	22.91	22.88
			1@22	DFT_BPSK	22.88	22.80	22.92
			12@6	DFT_QPSK	22.86	22.92	22.94
			1@1	DFT_QPSK	22.66	22.69	22.75
			1@22	DFT_QPSK	22.71	22.73	22.81
			12@6	DFT_QAM16	22.01	21.95	22.06
			1@1	DFT_QAM16	22.14	22.21	22.16
			1@22	DFT_QAM16	22.14	22.07	22.24
			12@6	DFT_QAM64	20.40	20.48	20.42
			1@1	DFT_QAM64	20.73	20.62	20.67
			1@22	DFT_QAM64	20.71	20.69	20.81
			12@6	DFT_QAM256	18.30	18.32	18.40
			1@1	DFT_QAM256	18.94	18.85	18.81
			1@22	DFT_QAM256	18.78	18.92	19.19
			12@6	CP_QPSK	21.34	21.28	21.41
			1@1	CP_QPSK	21.15	21.60	21.22
			1@22	CP_QPSK	21.29	21.56	21.33
			12@6	CP_QAM16	20.86	20.86	21.02
			1@1	CP_QAM16	21.49	20.87	21.38
			1@22	CP_QAM16	21.38	20.74	21.49
			12@6	CP_QAM64	19.46	19.32	19.45
			1@1	CP_QAM64	19.87	19.56	19.90
			1@22	CP_QAM64	19.95	19.62	19.99
			12@6	CP_QAM256	16.48	16.46	16.59
			1@1	CP_QAM256	16.51	16.37	16.53
			1@22	CP_QAM256	16.54	16.35	16.68

NR Band	SCS (KHz)	Bandwidth (MHz)	RB Allocation	Modulation	Average Power (dBm)		
					501500	507000	512500
					2507.5MHz	2535MHz	2562.5MHz
n7	30	15	18@9	DFT_BPSK	22.75	22.75	22.88
			1@1	DFT_BPSK	22.78	22.82	22.81
			1@36	DFT_BPSK	22.74	22.85	22.86
			18@9	DFT_QPSK	22.81	22.84	22.90
			1@1	DFT_QPSK	22.60	22.56	22.71
			1@36	DFT_QPSK	22.64	22.61	22.72
			18@9	DFT_QAM16	21.74	21.85	21.86
			1@1	DFT_QAM16	21.99	21.65	21.59
			1@36	DFT_QAM16	22.01	21.70	21.74
			18@9	DFT_QAM64	20.32	20.34	20.44
			1@1	DFT_QAM64	20.69	20.53	20.53
			1@36	DFT_QAM64	20.57	21.02	20.66
			18@9	DFT_QAM256	18.35	18.36	18.53
			1@1	DFT_QAM256	18.88	18.50	18.89
			1@36	DFT_QAM256	18.62	18.78	19.12
			19@9	CP_QPSK	21.28	21.27	21.38
			1@1	CP_QPSK	21.44	21.32	21.45
			1@36	CP_QPSK	21.34	21.27	21.58
			19@9	CP_QAM16	20.83	20.81	20.95
			1@1	CP_QAM16	20.72	21.22	21.19
			1@36	CP_QAM16	20.66	21.15	21.35
			19@9	CP_QAM64	19.33	19.30	19.29
			1@1	CP_QAM64	19.68	20.00	19.41
			1@36	CP_QAM64	19.61	19.43	19.58
			19@9	CP_QAM256	16.44	16.62	16.58
			1@1	CP_QAM256	16.64	16.55	16.32
			1@36	CP_QAM256	16.58	16.24	16.56

NR Band	SCS (KHz)	Bandwidth (MHz)	RB Allocation	Modulation	Average Power (dBm)		
					502000	507000	512000
					2510MHz	2535MHz	2560MHz
n7	30	20	25@12	DFT_BPSK	22.81	22.88	22.84
			1@1	DFT_BPSK	22.63	22.75	22.70
			1@49	DFT_BPSK	22.73	22.77	22.80
			25@12	DFT_QPSK	22.83	22.87	22.88
			1@1	DFT_QPSK	22.50	22.53	22.52
			1@49	DFT_QPSK	22.58	22.59	22.68
			25@12	DFT_QAM16	21.86	21.93	21.93
			1@1	DFT_QAM16	21.54	21.90	21.86
			1@49	DFT_QAM16	21.54	21.92	21.59
			25@12	DFT_QAM64	20.32	20.31	20.31
			1@1	DFT_QAM64	21.03	20.55	20.65
			1@49	DFT_QAM64	20.99	20.63	20.81
			25@12	DFT_QAM256	18.25	18.27	18.32
			1@1	DFT_QAM256	18.64	18.84	18.69
			1@49	DFT_QAM256	18.53	18.81	18.86
			25@12	CP_QPSK	21.25	21.36	21.34
			1@1	CP_QPSK	21.22	21.36	21.33
			1@49	CP_QPSK	21.14	21.35	21.43
			25@12	CP_QAM16	20.80	20.77	20.80
			1@1	CP_QAM16	21.04	21.11	20.52
			1@49	CP_QAM16	20.61	20.60	20.74
			25@12	CP_QAM64	19.28	19.32	19.43
			1@1	CP_QAM64	19.81	19.83	19.64
			1@49	CP_QAM64	19.92	19.74	19.75
			25@12	CP_QAM256	16.38	16.45	16.45
			1@1	CP_QAM256	16.68	16.31	16.50
			1@49	CP_QAM256	16.51	16.17	16.48

NR n12 part:

NR Band	SCS (KHz)	Bandwidth (MHz)	RB Allocation	Modulation	Average Power (dBm)		
					140800	141500	142200
					704MHz	707.5MHz	711MHz
n12	30	10	12@6	DFT_BPSK	22.51	22.45	22.40
			1@1	DFT_BPSK	22.47	22.49	22.44
			1@22	DFT_BPSK	22.51	22.32	22.29
			12@6	DFT_QPSK	22.56	22.48	22.35
			1@1	DFT_QPSK	22.44	22.39	22.39
			1@22	DFT_QPSK	22.36	22.24	22.21
			12@6	DFT_QAM16	21.47	21.50	21.39
			1@1	DFT_QAM16	21.88	21.74	21.78
			1@22	DFT_QAM16	21.73	21.59	21.51
			12@6	DFT_QAM64	20.02	19.91	19.90
			1@1	DFT_QAM64	20.05	20.07	19.99
			1@22	DFT_QAM64	19.96	19.83	19.82
			12@6	DFT_QAM256	18.17	18.10	18.07
			1@1	DFT_QAM256	18.21	18.21	18.17
			1@22	DFT_QAM256	18.16	18.11	17.99
			12@6	CP_QPSK	20.96	20.91	20.87
			1@1	CP_QPSK	21.12	21.03	20.93
			1@22	CP_QPSK	21.06	20.92	20.75
			12@6	CP_QAM16	20.51	20.48	20.49
			1@1	CP_QAM16	20.83	20.81	20.73
			1@22	CP_QAM16	20.80	20.65	20.58
			12@6	CP_QAM64	19.00	19.06	18.85
			1@1	CP_QAM64	19.57	19.58	19.74
			1@22	CP_QAM64	19.46	19.35	19.40
			12@6	CP_QAM256	16.15	16.04	16.00
			1@1	CP_QAM256	16.02	15.95	15.92
			1@22	CP_QAM256	15.92	15.90	15.67

NR Band	SCS (KHz)	Bandwidth (MHz)	RB Allocation	Modulation	Average Power (dBm)		
					141300	141500	141700
					706.5MHz	707.5MHz	708.5MHz
n12	30	15	18@9	DFT_BPSK	22.42	22.37	22.41
			1@1	DFT_BPSK	22.39	22.43	22.48
			1@36	DFT_BPSK	22.23	22.27	22.22
			18@9	DFT_QPSK	22.47	22.46	22.45
			1@1	DFT_QPSK	22.32	22.38	22.25
			1@36	DFT_QPSK	22.13	22.13	22.08
			18@9	DFT_QAM16	21.41	21.52	21.36
			1@1	DFT_QAM16	21.75	21.74	21.94
			1@36	DFT_QAM16	21.57	21.52	21.52
			18@9	DFT_QAM64	19.83	19.98	19.98
			1@1	DFT_QAM64	19.91	20.08	19.83
			1@36	DFT_QAM64	19.87	19.74	19.90
			18@9	DFT_QAM256	18.03	18.05	17.98
			1@1	DFT_QAM256	18.18	17.75	17.73
			1@36	DFT_QAM256	17.50	17.50	17.48
			19@9	CP_QPSK	20.86	20.79	20.79
			1@1	CP_QPSK	21.23	21.10	21.00
			1@36	CP_QPSK	20.98	20.76	20.79
			19@9	CP_QAM16	20.42	20.51	20.44
			1@1	CP_QAM16	20.51	20.90	20.69
			1@36	CP_QAM16	20.31	20.47	20.42
			19@9	CP_QAM64	19.09	19.07	19.00
			1@1	CP_QAM64	19.50	19.13	19.48
			1@36	CP_QAM64	19.29	19.30	19.25
			19@9	CP_QAM256	16	16.08	15.95
			1@1	CP_QAM256	15.89	16.01	16.01
			1@36	CP_QAM256	15.69	15.76	15.64

NR n41 part:

NR Band	SCS (KHz)	Bandwidth (MHz)	RB Allocation	Modulation	Average Power (dBm)		
					500202	518598	537000
					2501.01MHz	2592.99MHz	2685MHz
n41	30	10	12@6	DFT_BPSK	25.38	25.54	25.39
			1@1	DFT_BPSK	25.33	25.48	25.14
			1@22	DFT_BPSK	25.33	25.53	25.29
			12@6	DFT_QPSK	25.44	25.60	25.36
			1@1	DFT_QPSK	25.21	25.25	25.07
			1@22	DFT_QPSK	25.19	25.31	25.17
			12@6	DFT_QAM16	24.56	24.72	24.39
			1@1	DFT_QAM16	24.62	24.58	24.44
			1@22	DFT_QAM16	24.55	24.55	24.51
			12@6	DFT_QAM64	23.02	23.09	22.89
			1@1	DFT_QAM64	23.08	23.19	22.86
			1@22	DFT_QAM64	23.05	23.19	23.10
			12@6	DFT_QAM256	21.00	21.07	20.99
			1@1	DFT_QAM256	21.67	21.41	21.38
			1@22	DFT_QAM256	21.26	21.49	21.24
			12@6	CP_QPSK	23.88	24.08	23.89
			1@1	CP_QPSK	23.75	23.84	23.59
			1@22	CP_QPSK	23.68	23.88	23.68
			12@6	CP_QAM16	23.51	23.60	23.42
			1@1	CP_QAM16	23.19	23.66	23.01
			1@22	CP_QAM16	23.38	23.73	23.49
			12@6	CP_QAM64	21.89	22.03	21.98
			1@1	CP_QAM64	22.60	22.47	22.25
			1@22	CP_QAM64	22.51	22.29	22.22
			12@6	CP_QAM256	19.04	19.00	18.96
			1@1	CP_QAM256	19.04	19.24	18.84
			1@22	CP_QAM256	19.23	19.23	19.09

NR Band	SCS (KHz)	Bandwidth (MHz)	RB Allocation	Modulation	Average Power (dBm)		
					500700	518598	536496
					2503.50MHz	2592.99MHz	2682.48MHz
n41	30	15	18@9	DFT_BPSK	25.33	25.46	25.29
			1@1	DFT_BPSK	25.24	25.45	25.06
			1@36	DFT_BPSK	25.28	25.48	25.33
			18@9	DFT_QPSK	25.36	25.47	25.26
			1@1	DFT_QPSK	25.13	25.44	24.93
			1@36	DFT_QPSK	25.12	25.41	25.03
			18@9	DFT_QAM16	24.29	24.56	24.30
			1@1	DFT_QAM16	24.46	24.19	24.10
			1@36	DFT_QAM16	24.51	24.66	24.48
			18@9	DFT_QAM64	22.92	23.10	22.86
			1@1	DFT_QAM64	23.03	23.06	22.91
			1@36	DFT_QAM64	23.05	23.14	23.15
			18@9	DFT_QAM256	21.04	21.18	20.91
			1@1	DFT_QAM256	21.22	21.56	20.75
			1@36	DFT_QAM256	21.05	21.54	21.26
			19@9	CP_QPSK	23.74	23.86	23.69
			1@1	CP_QPSK	23.53	23.76	23.49
			1@36	CP_QPSK	23.32	23.71	23.68
			19@9	CP_QAM16	23.49	23.50	23.29
			1@1	CP_QAM16	23.46	23.31	23.30
			1@36	CP_QAM16	23.06	23.33	23.08
			19@9	CP_QAM64	21.85	22.06	21.75
			1@1	CP_QAM64	22.36	22.46	21.95
			1@36	CP_QAM64	22.07	22.41	22.27
			19@9	CP_QAM256	18.94	19.06	18.86
			1@1	CP_QAM256	19.13	19.00	18.51
			1@36	CP_QAM256	19.07	19.05	18.72

NR Band	SCS (KHz)	Bandwidth (MHz)	RB Allocation	Modulation	Average Power (dBm)		
					501204	518598	535998
					2506.02MHz	2592.99MHz	2679.99MHz
n41	30	20	25@12	DFT_BPSK	25.37	25.52	25.24
			1@1	DFT_BPSK	25.26	25.17	24.92
			1@49	DFT_BPSK	25.18	25.34	25.17
			25@12	DFT_QPSK	25.38	25.48	25.23
			1@1	DFT_QPSK	24.99	25.11	24.79
			1@49	DFT_QPSK	24.96	25.15	25.03
			25@12	DFT_QAM16	24.48	24.54	24.29
			1@1	DFT_QAM16	24.46	24.55	24.17
			1@49	DFT_QAM16	24.16	24.56	24.37
			25@12	DFT_QAM64	22.90	23.04	22.75
			1@1	DFT_QAM64	23.15	23.06	22.72
			1@49	DFT_QAM64	23.03	22.95	22.87
			25@12	DFT_QAM256	20.90	21.12	20.83
			1@1	DFT_QAM256	21.32	21.41	20.70
			1@49	DFT_QAM256	21.05	21.54	21.48
			25@12	CP_QPSK	23.94	24.00	23.75
			1@1	CP_QPSK	23.61	23.57	23.36
			1@49	CP_QPSK	23.64	23.63	23.58
			25@12	CP_QAM16	23.34	23.47	23.23
			1@1	CP_QAM16	23.04	23.09	23.25
			1@49	CP_QAM16	23.24	23.06	23.42
			25@12	CP_QAM64	21.86	22.03	21.77
			1@1	CP_QAM64	22.55	22.35	21.93
			1@49	CP_QAM64	22.21	22.35	22.28
			25@12	CP_QAM256	18.85	19.03	18.78
			1@1	CP_QAM256	19.04	18.88	18.66
			1@49	CP_QAM256	18.64	18.98	18.94

NR Band	SCS (KHz)	Bandwidth (MHz)	RB Allocation	Modulation	Average Power (dBm)		
					502200	518598	534996
					2511MHz	2592.99MHz	2674.98MHz
n41	30	30	36@18	DFT_BPSK	25.34	25.45	25.17
			1@1	DFT_BPSK	25.05	25.09	24.93
			1@76	DFT_BPSK	24.96	25.15	25.03
			36@18	DFT_QPSK	25.45	25.49	25.19
			1@1	DFT_QPSK	24.93	25.17	24.81
			1@76	DFT_QPSK	25.07	25.21	25.04
			36@18	DFT_QAM16	24.48	24.55	24.25
			1@1	DFT_QAM16	24.24	24.35	24.09
			1@76	DFT_QAM16	23.80	23.97	24.27
			36@18	DFT_QAM64	22.86	23.00	22.69
			1@1	DFT_QAM64	22.84	23.02	22.71
			1@76	DFT_QAM64	22.73	22.97	22.84
			36@18	DFT_QAM256	20.93	20.99	20.71
			1@1	DFT_QAM256	21.45	21.13	20.82
			1@76	DFT_QAM256	21.37	20.98	21.13
			39@19	CP_QPSK	23.86	23.98	23.69
			1@1	CP_QPSK	23.53	23.57	23.30
			1@76	CP_QPSK	23.22	23.55	23.53
			39@19	CP_QAM16	23.38	23.41	23.16
			1@1	CP_QAM16	23.53	23.63	23.31
			1@76	CP_QAM16	22.96	23.12	23.04
			39@19	CP_QAM64	21.83	21.93	21.66
			1@1	CP_QAM64	22.60	22.33	21.91
			1@76	CP_QAM64	22.02	22.17	22.14
			39@19	CP_QAM256	18.98	19.06	18.78
			1@1	CP_QAM256	19.03	18.93	18.40
			1@76	CP_QAM256	18.92	18.98	18.75

NR Band	SCS (KHz)	Bandwidth (MHz)	RB Allocation	Modulation	Average Power (dBm)		
					503202	518598	534000
					2516.01MHz	2592.99MHz	2670MHz
n41	30	40	50@25	DFT_BPSK	25.36	25.45	25.18
			1@1	DFT_BPSK	24.78	24.89	24.82
			1@104	DFT_BPSK	24.95	25.01	24.85
			50@25	DFT_QPSK	25.39	25.51	25.17
			1@1	DFT_QPSK	24.63	24.79	24.61
			1@104	DFT_QPSK	24.72	24.95	24.77
			50@25	DFT_QAM16	24.38	24.46	24.13
			1@1	DFT_QAM16	24.09	23.70	23.55
			1@104	DFT_QAM16	23.96	24.20	24.08
			50@25	DFT_QAM64	22.86	22.92	22.70
			1@1	DFT_QAM64	22.76	22.79	22.53
			1@104	DFT_QAM64	22.94	22.71	22.75
			50@25	DFT_QAM256	20.87	21.00	20.68
			1@1	DFT_QAM256	21.04	21.18	20.78
			1@104	DFT_QAM256	20.82	20.85	20.81
			53@26	CP_QPSK	23.85	23.98	23.67
			1@1	CP_QPSK	23.30	23.41	23.17
			1@104	CP_QPSK	23.25	23.21	23.32
			53@26	CP_QAM16	23.33	23.49	23.15
			1@1	CP_QAM16	22.69	23.41	23.26
			1@104	CP_QAM16	23.12	22.86	23.27
			53@26	CP_QAM64	21.82	21.95	21.63
			1@1	CP_QAM64	22.26	21.96	21.88
			1@104	CP_QAM64	22.30	22.14	21.93
			53@26	CP_QAM256	18.81	18.93	18.69
			1@1	CP_QAM256	18.87	18.80	18.51
			1@104	CP_QAM256	18.62	18.49	18.61

NR Band	SCS (KHz)	Bandwidth (MHz)	RB Allocation	Modulation	Average Power (dBm)		
					504204	518598	532998
					2521.02MHz	2592.99MHz	2664.99MHz
n41	30	50	64@32	DFT_BPSK	25.37	25.51	25.21
			1@1	DFT_BPSK	25.12	25.20	25.17
			1@131	DFT_BPSK	25.11	25.30	25.09
			64@32	DFT_QPSK	25.40	25.52	25.21
			1@1	DFT_QPSK	25.14	25.24	24.96
			1@131	DFT_QPSK	25.04	25.36	24.98
			64@32	DFT_QAM16	24.40	24.52	24.27
			1@1	DFT_QAM16	24.30	24.47	23.95
			1@131	DFT_QAM16	24.27	24.51	23.90
			64@32	DFT_QAM64	22.87	23.05	22.77
			1@1	DFT_QAM64	23.06	23.12	22.85
			1@131	DFT_QAM64	23.10	22.93	22.80
			64@32	DFT_QAM256	20.93	21.02	20.78
			1@1	DFT_QAM256	20.96	21.02	20.84
			1@131	DFT_QAM256	21.22	21.44	21.27
			67@33	CP_QPSK	23.80	23.99	23.65
			1@1	CP_QPSK	23.48	23.68	23.51
			1@131	CP_QPSK	23.52	23.53	23.38
			67@33	CP_QAM16	23.34	23.51	23.20
			1@1	CP_QAM16	23.61	23.74	23.06
			1@131	CP_QAM16	23.01	23.82	23.67
			67@33	CP_QAM64	21.87	21.87	21.55
			1@1	CP_QAM64	22.46	22.34	22.13
			1@131	CP_QAM64	22.48	22.43	22.30
			67@33	CP_QAM256	18.91	18.96	18.74
			1@1	CP_QAM256	18.55	18.92	18.93
			1@131	CP_QAM256	18.95	18.82	18.89

NR Band	SCS (KHz)	Bandwidth (MHz)	RB Allocation	Modulation	Average Power (dBm)		
					505200	518598	531996
					2526MHz	2592.99MHz	2659.98MHz
n41	30	60	81@40	DFT_BPSK	25.40	25.39	25.23
			1@1	DFT_BPSK	24.95	25.14	24.97
			1@160	DFT_BPSK	24.89	25.04	24.94
			81@40	DFT_QPSK	25.44	25.46	25.24
			1@1	DFT_QPSK	24.82	24.89	24.82
			1@160	DFT_QPSK	24.76	24.92	24.79
			81@40	DFT_QAM16	24.46	24.52	24.22
			1@1	DFT_QAM16	24.14	24.25	24.06
			1@160	DFT_QAM16	24.16	24.25	24.02
			81@40	DFT_QAM64	22.88	22.95	22.75
			1@1	DFT_QAM64	23.19	23.25	22.89
			1@160	DFT_QAM64	23.18	22.97	22.77
			81@40	DFT_QAM256	20.95	21.07	20.72
			1@1	DFT_QAM256	20.90	21.06	20.86
			1@160	DFT_QAM256	21.03	20.76	20.87
			81@40	CP_QPSK	23.83	23.95	23.70
			1@1	CP_QPSK	23.40	23.67	23.46
			1@160	CP_QPSK	23.48	23.60	23.33
			81@40	CP_QAM16	23.29	23.48	23.15
			1@1	CP_QAM16	22.76	23.37	23.23
			1@160	CP_QAM16	23.17	22.96	23.08
			81@40	CP_QAM64	21.86	22.00	21.79
			1@1	CP_QAM64	21.86	21.94	22.17
			1@160	CP_QAM64	21.87	22.02	22.07
			81@40	CP_QAM256	18.82	18.97	18.74
			1@1	CP_QAM256	18.78	19.06	18.74
			1@160	CP_QAM256	18.55	18.58	18.39

NR Band	SCS (KHz)	Bandwidth (MHz)	RB Allocation	Modulation	Average Power (dBm)		
					507204	518598	529998
					2536.02MHz	2592.99MHz	2649.99MHz
n41	30	80	108@54	DFT_BPSK	25.40	25.51	25.37
			1@1	DFT_BPSK	24.78	24.70	24.90
			1@215	DFT_BPSK	24.82	24.85	24.69
			108@54	DFT_QPSK	25.37	25.48	25.35
			1@1	DFT_QPSK	24.80	24.72	24.70
			1@215	DFT_QPSK	24.87	24.78	24.58
			108@54	DFT_QAM16	24.40	24.54	24.38
			1@1	DFT_QAM16	23.62	23.57	24.16
			1@215	DFT_QAM16	23.66	23.59	24.15
			108@54	DFT_QAM64	23.06	23.06	22.93
			1@1	DFT_QAM64	22.68	22.62	22.40
			1@215	DFT_QAM64	22.63	22.55	22.38
			108@54	DFT_QAM256	21.02	21.03	20.86
			1@1	DFT_QAM256	20.55	20.51	20.57
			1@215	DFT_QAM256	20.80	20.44	20.44
			109@54	CP_QPSK	23.79	23.95	23.78
			1@1	CP_QPSK	23.15	23.24	23.18
			1@215	CP_QPSK	23.24	23.16	23.07
			109@54	CP_QAM16	23.31	23.50	23.31
			1@1	CP_QAM16	23.24	23.25	22.66
			1@215	CP_QAM16	22.78	23.31	22.54
			109@54	CP_QAM64	21.83	21.95	21.85
			1@1	CP_QAM64	22.04	22.07	21.86
			1@215	CP_QAM64	21.90	21.77	21.47
			109@54	CP_QAM256	18.93	18.94	18.79
			1@1	CP_QAM256	18.18	18.58	18.58
			1@215	CP_QAM256	18.49	18.13	18.41

NR Band	SCS (KHz)	Bandwidth (MHz)	RB Allocation	Modulation	Average Power (dBm)		
					508200	518598	528996
					2541MHz	2592.99MHz	2644.98MHz
n41	30	90	120@60	DFT_BPSK	25.28	25.49	25.33
			1@1	DFT_BPSK	24.52	24.63	24.82
			1@243	DFT_BPSK	24.65	24.58	24.61
			120@60	DFT_QPSK	25.36	25.45	25.35
			1@1	DFT_QPSK	24.49	24.61	24.63
			1@243	DFT_QPSK	24.61	24.47	24.46
			120@60	DFT_QAM16	24.35	24.55	24.24
			1@1	DFT_QAM16	23.97	24.05	24.00
			1@243	DFT_QAM16	24.00	24.03	23.90
			120@60	DFT_QAM64	22.81	23.00	22.76
			1@1	DFT_QAM64	22.50	22.81	22.78
			1@243	DFT_QAM64	22.37	22.62	22.45
			120@60	DFT_QAM256	20.91	20.91	20.82
			1@1	DFT_QAM256	20.38	21.09	20.34
			1@243	DFT_QAM256	20.83	20.61	20.46
			123@61	CP_QPSK	23.82	23.91	23.72
			1@1	CP_QPSK	22.95	23.34	23.21
			1@243	CP_QPSK	23.06	23.22	23.19
			123@61	CP_QAM16	23.28	23.44	23.30
			1@1	CP_QAM16	22.40	22.94	22.57
			1@243	CP_QAM16	22.94	22.90	22.90
			123@61	CP_QAM64	21.84	21.87	21.71
			1@1	CP_QAM64	21.97	21.39	21.14
			1@243	CP_QAM64	21.78	21.19	21.58
			123@61	CP_QAM256	18.85	18.85	18.76
			1@1	CP_QAM256	18.19	18.38	18.08
			1@243	CP_QAM256	18.21	18.00	18.07

NR Band	SCS (KHz)	Bandwidth (MHz)	RB Allocation	Modulation	Average Power (dBm)		
					509202	518598	528000
					2546.01MHz	2592.99MHz	2640MHz
n41	30	100	135@67	DFT_BPSK	25.38	25.40	25.36
			1@1	DFT_BPSK	24.50	24.45	24.48
			1@271	DFT_BPSK	24.53	24.33	24.47
			135@67	DFT_QPSK	25.35	25.37	25.37
			1@1	DFT_QPSK	24.24	24.25	24.37
			1@271	DFT_QPSK	24.42	24.18	24.26
			135@67	DFT_QAM16	24.43	24.48	24.37
			1@1	DFT_QAM16	23.64	23.64	23.78
			1@271	DFT_QAM16	23.77	23.76	23.50
			135@67	DFT_QAM64	22.92	22.98	22.78
			1@1	DFT_QAM64	22.65	22.32	22.25
			1@271	DFT_QAM64	22.33	22.43	22.21
			137@68	DFT_QAM256	20.90	21.03	20.86
			1@1	DFT_QAM256	20.13	20.35	20.35
			1@271	DFT_QAM256	20.13	20.27	20.03
			137@68	CP_QPSK	23.92	23.99	23.84
			1@1	CP_QPSK	22.94	22.98	23.02
			1@271	CP_QPSK	23.01	23.01	22.88
			137@68	CP_QAM16	23.44	23.43	23.37
			1@1	CP_QAM16	22.15	22.23	22.42
			1@271	CP_QAM16	22.83	22.18	22.63
			137@68	CP_QAM64	22.00	21.92	21.82
			1@1	CP_QAM64	21.49	21.29	21.38
			1@271	CP_QAM64	21.02	20.93	21.42
			137@68	CP_QAM256	18.87	18.97	18.84
			1@1	CP_QAM256	18.27	18.27	17.83
			1@271	CP_QAM256	17.88	17.91	18.09

NR n66 part:

NR Band	SCS (KHz)	Bandwidth (MHz)	RB Allocation	Modulation	Average Power (dBm)		
					343000	349000	355000
					1715MHz	1745MHz	1775MHz
n66	30	10	12@6	DFT_BPSK	22.30	22.36	22.54
			1@1	DFT_BPSK	22.12	22.25	22.30
			1@22	DFT_BPSK	22.31	22.24	22.22
			12@6	DFT_QPSK	22.40	22.41	22.54
			1@1	DFT_QPSK	22.29	22.27	22.33
			1@22	DFT_QPSK	22.38	22.26	22.22
			12@6	DFT_QAM16	21.39	21.45	21.53
			1@1	DFT_QAM16	21.09	21.52	21.79
			1@22	DFT_QAM16	21.20	21.60	21.70
			12@6	DFT_QAM64	19.90	20.04	19.90
			1@1	DFT_QAM64	19.89	20.34	19.95
			1@22	DFT_QAM64	19.98	20.29	19.90
			12@6	DFT_QAM256	17.85	17.94	18.03
			1@1	DFT_QAM256	18.15	18.48	18.59
			1@22	DFT_QAM256	18.15	18.59	18.43
			12@6	CP_QPSK	20.70	20.74	20.87
			1@1	CP_QPSK	20.49	20.74	20.83
			1@22	CP_QPSK	20.57	20.77	20.68
			12@6	CP_QAM16	20.33	20.43	20.50
			1@1	CP_QAM16	19.96	20.66	20.20
			1@22	CP_QAM16	20.14	20.70	20.17
			12@6	CP_QAM64	18.98	19.05	19.08
			1@1	CP_QAM64	18.87	19.33	19.24
			1@22	CP_QAM64	18.96	19.38	19.22
			12@6	CP_QAM256	15.79	15.92	15.97
			1@1	CP_QAM256	15.77	15.83	15.67
			1@22	CP_QAM256	15.76	15.62	15.67

NR Band	SCS (KHz)	Bandwidth (MHz)	RB Allocation	Modulation	Average Power (dBm)		
					343500	349000	354500
					1717.5MHz	1745MHz	1772.5MHz
n66	30	15	18@9	DFT_BPSK	22.27	22.32	22.49
			1@1	DFT_BPSK	22.08	22.14	22.40
			1@36	DFT_BPSK	22.19	22.29	22.26
			18@9	DFT_QPSK	22.20	22.35	22.51
			1@1	DFT_QPSK	22.07	22.07	22.44
			1@36	DFT_QPSK	22.21	22.16	22.18
			18@9	DFT_QAM16	21.20	21.35	21.37
			1@1	DFT_QAM16	21.35	21.44	21.66
			1@36	DFT_QAM16	21.48	21.52	21.18
			18@9	DFT_QAM64	19.85	19.95	19.92
			1@1	DFT_QAM64	19.79	19.88	20.04
			1@36	DFT_QAM64	20.03	19.84	19.85
			18@9	DFT_QAM256	17.85	18.00	17.97
			1@1	DFT_QAM256	17.80	17.88	18.50
			1@36	DFT_QAM256	17.93	17.96	17.94
			19@9	CP_QPSK	20.73	20.79	20.96
			1@1	CP_QPSK	20.40	20.61	20.89
			1@36	CP_QPSK	20.60	20.66	20.61
			19@9	CP_QAM16	20.35	20.32	20.54
			1@1	CP_QAM16	20.44	20.01	20.66
			1@36	CP_QAM16	20.11	20.06	20.51
			19@9	CP_QAM64	18.85	19.01	19.03
			1@1	CP_QAM64	18.86	19.28	19.20
			1@36	CP_QAM64	19.11	19.39	19.07
			19@9	CP_QAM256	15.71	15.88	15.92
			1@1	CP_QAM256	15.53	15.51	15.75
			1@36	CP_QAM256	15.87	15.54	15.90

NR Band	SCS (KHz)	Bandwidth (MHz)	RB Allocation	Modulation	Average Power (dBm)		
					344000	349000	354000
					1720MHz	1745MHz	1770MHz
n66	30	20	25@12	DFT_BPSK	22.28	22.32	22.51
			1@1	DFT_BPSK	21.98	22.09	22.31
			1@49	DFT_BPSK	22.10	22.24	22.15
			25@12	DFT_QPSK	22.37	22.33	22.57
			1@1	DFT_QPSK	21.99	22.10	22.30
			1@49	DFT_QPSK	22.14	22.17	22.16
			25@12	DFT_QAM16	21.38	21.36	21.54
			1@1	DFT_QAM16	20.86	21.45	21.62
			1@49	DFT_QAM16	21.35	21.53	21.49
			25@12	DFT_QAM64	19.91	19.92	19.90
			1@1	DFT_QAM64	19.68	19.99	19.91
			1@49	DFT_QAM64	19.83	19.93	19.76
			25@12	DFT_QAM256	17.80	17.76	17.96
			1@1	DFT_QAM256	18.00	18.08	17.97
			1@49	DFT_QAM256	18.19	18.26	17.95
			25@12	CP_QPSK	20.74	20.82	21.07
			1@1	CP_QPSK	20.40	20.50	20.68
			1@49	CP_QPSK	20.56	20.66	20.58
			25@12	CP_QAM16	20.32	20.31	20.44
			1@1	CP_QAM16	20.15	20.44	20.13
			1@49	CP_QAM16	19.97	20.56	20.03
			25@12	CP_QAM64	18.83	18.90	19.06
			1@1	CP_QAM64	18.76	19.07	19.05
			1@49	CP_QAM64	18.87	19.10	19.02
			25@12	CP_QAM256	15.78	15.83	15.95
			1@1	CP_QAM256	15.67	15.75	15.83
			1@49	CP_QAM256	15.35	15.79	15.68

NR Band	SCS (KHz)	Bandwidth (MHz)	RB Allocation	Modulation	Average Power (dBm)		
					346000	349000	352000
					1730MHz	1745MHz	1760MHz
n66	30	40	50@25	DFT_BPSK	22.31	22.33	22.45
			1@1	DFT_BPSK	21.61	21.84	21.81
			1@104	DFT_BPSK	21.83	21.96	21.72
			50@25	DFT_QPSK	22.34	22.35	22.59
			1@1	DFT_QPSK	21.63	21.74	21.62
			1@104	DFT_QPSK	21.64	22.12	21.74
			50@25	DFT_QAM16	21.33	21.30	21.45
			1@1	DFT_QAM16	20.96	20.98	21.18
			1@104	DFT_QAM16	21.26	20.99	21.13
			50@25	DFT_QAM64	19.88	19.88	19.89
			1@1	DFT_QAM64	19.52	19.58	19.63
			1@104	DFT_QAM64	19.71	19.63	19.52
			50@25	DFT_QAM256	17.83	17.89	18.01
			1@1	DFT_QAM256	17.84	17.53	17.76
			1@104	DFT_QAM256	18.04	18.20	17.64
			53@26	CP_QPSK	20.79	20.84	20.99
			1@1	CP_QPSK	20.20	20.24	20.25
			1@104	CP_QPSK	20.36	20.50	20.36
			53@26	CP_QAM16	20.29	20.24	20.43
			1@1	CP_QAM16	19.56	19.62	19.62
			1@104	CP_QAM16	19.71	20.28	19.62
			53@26	CP_QAM64	18.87	18.93	19.02
			1@1	CP_QAM64	18.74	18.74	18.60
			1@104	CP_QAM64	18.73	19.05	18.68
			53@26	CP_QAM256	15.70	15.78	16.02
			1@1	CP_QAM256	15.15	15.46	15.09
			1@104	CP_QAM256	15.27	15.75	15.57

NR n77(3450-3550MHz) part:

NR Band	SCS (KHz)	Bandwidth (MHz)	RB Allocation	Modulation	Average Power (dBm)		
					630334	633334	636332
					3455.01MHz	3500.01MHz	3544.98MHz
n77 3450-3550 MHz	30	10	12@6	DFT_BPSK	25.48	25.32	25.07
			1@1	DFT_BPSK	25.49	25.57	25.19
			1@22	DFT_BPSK	25.15	25.05	24.86
			12@6	DFT_QPSK	25.50	25.29	25.13
			1@1	DFT_QPSK	25.29	25.41	25.12
			1@22	DFT_QPSK	25.04	24.85	24.85
			12@6	DFT_QAM16	24.63	24.34	24.15
			1@1	DFT_QAM16	24.59	24.63	24.47
			1@22	DFT_QAM16	24.31	24.01	24.21
			12@6	DFT_QAM64	23.13	22.91	22.73
			1@1	DFT_QAM64	23.07	23.21	22.84
			1@22	DFT_QAM64	22.83	22.62	22.64
			12@6	DFT_QAM256	21.29	21.12	20.88
			1@1	DFT_QAM256	21.40	21.70	21.48
			1@22	DFT_QAM256	21.22	21.15	21.17
			12@6	CP_QPSK	24.01	23.82	23.51
			1@1	CP_QPSK	23.90	23.85	23.60
			1@22	CP_QPSK	23.52	23.30	23.31
			12@6	CP_QAM16	23.40	23.38	23.12
			1@1	CP_QAM16	23.59	23.44	23.46
			1@22	CP_QAM16	23.09	22.89	23.20
			12@6	CP_QAM64	21.99	21.82	21.67
			1@1	CP_QAM64	21.99	22.51	21.44
			1@22	CP_QAM64	21.84	21.94	21.31
			12@6	CP_QAM256	19.07	19.13	18.83
			1@1	CP_QAM256	19.06	19.21	18.82
			1@22	CP_QAM256	19.07	18.83	18.53

NR Band	SCS (KHz)	Bandwidth (MHz)	RB Allocation	Modulation	Average Power (dBm)		
					630500	633334	636166
					3457.5MHz	3500.01MHz	3542.49MHz
n77 3450-3550 MHz	30	15	18@9	DFT_BPSK	25.42	25.39	25.22
			1@1	DFT_BPSK	25.37	25.70	25.42
			1@36	DFT_BPSK	24.87	24.90	24.95
			18@9	DFT_QPSK	25.40	25.34	25.24
			1@1	DFT_QPSK	25.27	25.52	25.33
			1@36	DFT_QPSK	24.91	24.66	24.79
			18@9	DFT_QAM16	24.50	24.27	24.21
			1@1	DFT_QAM16	24.63	24.88	24.54
			1@36	DFT_QAM16	24.15	23.95	24.15
			18@9	DFT_QAM64	23.09	23.00	22.85
			1@1	DFT_QAM64	22.95	23.32	23.12
			1@36	DFT_QAM64	22.47	22.45	22.57
			18@9	DFT_QAM256	21.14	21.15	20.97
			1@1	DFT_QAM256	21.42	21.88	21.38
			1@36	DFT_QAM256	20.88	21.00	20.83
			19@9	CP_QPSK	23.85	23.70	23.66
			1@1	CP_QPSK	23.71	24.12	23.88
			1@36	CP_QPSK	23.27	23.26	23.35
			19@9	CP_QAM16	23.53	23.47	23.22
			1@1	CP_QAM16	23.65	23.93	23.33
			1@36	CP_QAM16	22.86	22.61	23.12
			19@9	CP_QAM64	21.92	21.91	21.73
			1@1	CP_QAM64	22.33	22.32	22.20
			1@36	CP_QAM64	21.83	21.44	21.49
			19@9	CP_QAM256	19.12	19.07	18.95
			1@1	CP_QAM256	19.37	19.34	19.31
			1@36	CP_QAM256	18.68	18.72	18.44

NR Band	SCS (KHz)	Bandwidth (MHz)	RB Allocation	Modulation	Average Power (dBm)		
					630668	633334	636000
					3460.02MHz	3500.01MHz	3540MHz
n77 3450-3550 MHz	30	20	25@12	DFT_BPSK	25.36	25.42	25.39
			1@1	DFT_BPSK	25.40	25.66	25.44
			1@49	DFT_BPSK	24.73	24.55	24.83
			25@12	DFT_QPSK	25.36	25.42	25.41
			1@1	DFT_QPSK	25.25	25.55	25.32
			1@49	DFT_QPSK	24.67	24.53	24.74
			25@12	DFT_QAM16	24.38	24.47	24.49
			1@1	DFT_QAM16	24.64	24.97	24.81
			1@49	DFT_QAM16	23.98	23.83	24.14
			25@12	DFT_QAM64	22.90	22.92	22.93
			1@1	DFT_QAM64	23.05	23.17	22.91
			1@49	DFT_QAM64	22.48	22.07	22.30
			25@12	DFT_QAM256	21.04	21.04	21.06
			1@1	DFT_QAM256	21.74	22.11	22.07
			1@49	DFT_QAM256	20.78	21.18	21.41
			25@12	CP_QPSK	23.90	23.80	23.85
			1@1	CP_QPSK	23.90	23.96	23.74
			1@49	CP_QPSK	23.22	22.90	23.18
			25@12	CP_QAM16	23.33	23.31	23.36
			1@1	CP_QAM16	23.23	23.93	23.65
			1@49	CP_QAM16	22.95	22.72	23.13
			25@12	CP_QAM64	21.82	21.90	21.91
			1@1	CP_QAM64	22.16	22.59	22.33
			1@49	CP_QAM64	21.48	21.50	21.74
			25@12	CP_QAM256	19.00	19.00	19.01
			1@1	CP_QAM256	19.05	19.47	19.28
			1@49	CP_QAM256	18.79	18.29	18.55

NR n77(3700-3980MHz) part:

NR Band	SCS (KHz)	Bandwidth (MHz)	RB Allocation	Modulation	Average Power (dBm)		
					647000	656000	665000
					3705.6MHz	3840MHz	3975MHz
n77 3700-3980 MHz	30	10	12@6	DFT_BPSK	25.85	26.00	26.15
			1@1	DFT_BPSK	25.76	25.74	26.07
			1@22	DFT_BPSK	25.58	25.98	26.16
			12@6	DFT_QPSK	25.84	26.02	26.19
			1@1	DFT_QPSK	25.76	25.62	25.93
			1@22	DFT_QPSK	25.57	25.89	25.99
			12@6	DFT_QAM16	24.80	25.06	25.23
			1@1	DFT_QAM16	25.10	24.98	25.32
			1@22	DFT_QAM16	24.90	25.20	25.31
			12@6	DFT_QAM64	23.36	23.53	23.76
			1@1	DFT_QAM64	23.65	23.32	23.48
			1@22	DFT_QAM64	23.52	23.46	23.78
			12@6	DFT_QAM256	21.48	21.57	21.75
			1@1	DFT_QAM256	21.91	21.34	22.03
			1@22	DFT_QAM256	21.78	21.98	22.19
			12@6	CP_QPSK	24.21	24.47	24.62
			1@1	CP_QPSK	24.21	24.10	24.43
			1@22	CP_QPSK	24.13	24.40	24.44
			12@6	CP_QAM16	23.85	23.96	24.17
			1@1	CP_QAM16	24.08	23.60	24.32
			1@22	CP_QAM16	23.91	24.27	24.33
			12@6	CP_QAM64	22.36	22.51	22.77
			1@1	CP_QAM64	22.08	22.33	22.59
			1@22	CP_QAM64	21.92	22.18	22.65
			12@6	CP_QAM256	19.42	19.64	19.73
			1@1	CP_QAM256	19.28	19.48	19.90
			1@22	CP_QAM256	19.17	19.74	19.81

NR Band	SCS (KHz)	Bandwidth (MHz)	RB Allocation	Modulation	Average Power (dBm)		
					647168	656000	664832
					3707.52MHz	3840MHz	3972.48MHz
n77 3700-3980 MHz	30	15	18@9	DFT_BPSK	25.81	25.95	26.11
			1@1	DFT_BPSK	25.85	25.69	26.01
			1@36	DFT_BPSK	25.54	25.93	26.12
			18@9	DFT_QPSK	25.69	25.95	26.05
			1@1	DFT_QPSK	25.66	25.43	26.04
			1@36	DFT_QPSK	25.40	25.81	26.10
			18@9	DFT_QAM16	24.70	24.99	25.03
			1@1	DFT_QAM16	25.02	24.81	25.28
			1@36	DFT_QAM16	24.74	25.09	25.31
			18@9	DFT_QAM64	23.31	23.48	23.70
			1@1	DFT_QAM64	23.37	23.10	23.56
			1@36	DFT_QAM64	22.91	23.49	23.68
			18@9	DFT_QAM256	21.49	21.44	21.65
			1@1	DFT_QAM256	22.02	21.40	22.12
			1@36	DFT_QAM256	21.33	21.82	22.10
			19@9	CP_QPSK	24.08	24.35	24.53
			1@1	CP_QPSK	24.05	23.99	24.41
			1@36	CP_QPSK	23.86	24.39	24.36
			19@9	CP_QAM16	23.78	24.01	24.18
			1@1	CP_QAM16	24.03	23.80	23.94
			1@36	CP_QAM16	23.58	24.22	24.54
			19@9	CP_QAM64	22.20	22.53	22.60
			1@1	CP_QAM64	22.60	22.26	22.78
			1@36	CP_QAM64	22.03	22.64	22.61
			19@9	CP_QAM256	19.40	19.57	19.83
			1@1	CP_QAM256	19.35	19.11	19.65
			1@36	CP_QAM256	19.03	19.74	19.72

NR Band	SCS (KHz)	Bandwidth (MHz)	RB Allocation	Modulation	Average Power (dBm)		
					647334	656000	664666
					3710.01MHz	3840MHz	3969.99MHz
n77 3700-3980 MHz	30	20	25@12	DFT_BPSK	25.75	26.02	26.18
			1@1	DFT_BPSK	25.68	25.44	25.91
			1@49	DFT_BPSK	25.29	25.99	25.95
			25@12	DFT_QPSK	25.67	26.03	26.17
			1@1	DFT_QPSK	25.74	25.37	25.87
			1@49	DFT_QPSK	25.37	25.91	25.94
			25@12	DFT_QAM16	24.75	25.00	25.22
			1@1	DFT_QAM16	24.59	24.30	25.24
			1@49	DFT_QAM16	24.08	24.79	25.27
			25@12	DFT_QAM64	23.20	23.58	23.67
			1@1	DFT_QAM64	23.07	22.93	23.64
			1@49	DFT_QAM64	22.72	23.40	23.64
			25@12	DFT_QAM256	21.33	21.46	21.63
			1@1	DFT_QAM256	22.07	21.11	22.03
			1@49	DFT_QAM256	21.66	21.55	22.01
			25@12	CP_QPSK	24.12	24.53	24.61
			1@1	CP_QPSK	23.98	23.88	24.37
			1@49	CP_QPSK	23.57	24.28	24.38
			25@12	CP_QAM16	23.65	23.93	24.14
			1@1	CP_QAM16	24.10	23.29	24.31
			1@49	CP_QAM16	23.75	24.35	24.27
			25@12	CP_QAM64	22.22	22.50	22.72
			1@1	CP_QAM64	22.53	22.40	22.76
			1@49	CP_QAM64	22.16	22.71	22.48
			25@12	CP_QAM256	19.26	19.55	19.80
			1@1	CP_QAM256	19.41	19.15	19.79
			1@49	CP_QAM256	19.01	19.63	19.72

NR Band	SCS (KHz)	Bandwidth (MHz)	RB Allocation	Modulation	Average Power (dBm)		
					647668	656000	664332
					3715.02MHz	3840MHz	3964.98MHz
n77 3700-3980 MHz	30	30	36@18	DFT_BPSK	25.55	25.93	26.14
			1@1	DFT_BPSK	25.42	25.24	25.93
			1@76	DFT_BPSK	25.15	25.80	25.96
			36@18	DFT_QPSK	25.57	25.98	26.15
			1@1	DFT_QPSK	25.39	25.19	25.83
			1@76	DFT_QPSK	24.97	25.66	25.81
			36@18	DFT_QAM16	24.56	24.95	25.20
			1@1	DFT_QAM16	24.90	24.45	25.14
			1@76	DFT_QAM16	24.29	24.98	25.00
			36@18	DFT_QAM64	23.10	23.45	23.69
			1@1	DFT_QAM64	22.97	22.75	23.45
			1@76	DFT_QAM64	22.69	23.46	23.54
			36@18	DFT_QAM256	21.13	21.42	21.73
			1@1	DFT_QAM256	21.75	21.11	21.86
			1@76	DFT_QAM256	20.89	21.66	21.61
			39@19	CP_QPSK	24.02	24.43	24.67
			1@1	CP_QPSK	23.84	23.74	24.31
			1@76	CP_QPSK	23.47	24.30	24.29
			39@19	CP_QAM16	23.43	23.88	24.09
			1@1	CP_QAM16	23.76	23.11	24.08
			1@76	CP_QAM16	23.36	24.18	23.80
			39@19	CP_QAM64	21.92	22.37	22.58
			1@1	CP_QAM64	22.50	22.01	22.65
			1@76	CP_QAM64	22.15	22.45	22.59
			39@19	CP_QAM256	19.14	19.65	19.82
			1@1	CP_QAM256	19.22	18.97	19.64
			1@76	CP_QAM256	18.90	19.56	19.60

NR Band	SCS (KHz)	Bandwidth (MHz)	RB Allocation	Modulation	Average Power (dBm)		
					648000	656000	664000
					3720MHz	3840MHz	3960MHz
n77 3700-3980 MHz	30	40	50@25	DFT_BPSK	25.51	25.92	26.15
			1@1	DFT_BPSK	25.36	24.90	25.46
			1@104	DFT_BPSK	24.88	25.57	25.72
			50@25	DFT_QPSK	25.47	25.89	26.19
			1@1	DFT_QPSK	25.31	24.82	25.27
			1@104	DFT_QPSK	24.78	25.53	25.68
			50@25	DFT_QAM16	24.49	24.87	25.20
			1@1	DFT_QAM16	24.53	24.14	24.65
			1@104	DFT_QAM16	24.14	24.81	24.95
			50@25	DFT_QAM64	23.00	23.39	23.66
			1@1	DFT_QAM64	22.99	22.55	23.02
			1@104	DFT_QAM64	22.51	23.07	23.35
			50@25	DFT_QAM256	21.12	21.38	21.69
			1@1	DFT_QAM256	21.13	21.14	21.35
			1@104	DFT_QAM256	20.94	21.72	22.00
			53@26	CP_QPSK	23.97	24.41	24.65
			1@1	CP_QPSK	23.84	23.34	23.82
			1@104	CP_QPSK	23.27	23.82	24.02
			53@26	CP_QAM16	23.48	23.91	24.11
			1@1	CP_QAM16	23.77	23.27	23.38
			1@104	CP_QAM16	22.87	24.00	24.14
			53@26	CP_QAM64	21.97	22.43	22.72
			1@1	CP_QAM64	22.20	21.56	22.49
			1@104	CP_QAM64	21.80	22.22	22.70
			53@26	CP_QAM256	19.12	19.50	19.84
			1@1	CP_QAM256	19.04	18.64	19.09
			1@104	CP_QAM256	18.32	19.14	19.56

NR Band	SCS (KHz)	Bandwidth (MHz)	RB Allocation	Modulation	Average Power (dBm)		
					648334	656000	663666
					3725.01MHz	3840MHz	3954.99MHz
n77 3700-3980 MHz	30	50	64@32	DFT_BPSK	25.49	25.92	26.07
			1@1	DFT_BPSK	25.62	25.21	25.74
			1@131	DFT_BPSK	25.09	25.79	25.91
			64@32	DFT_QPSK	25.46	25.95	26.14
			1@1	DFT_QPSK	25.48	25.09	25.57
			1@131	DFT_QPSK	24.95	25.66	25.84
			64@32	DFT_QAM16	24.49	24.93	25.12
			1@1	DFT_QAM16	24.47	24.43	24.55
			1@131	DFT_QAM16	24.28	24.99	24.80
			64@32	DFT_QAM64	22.92	23.36	23.66
			1@1	DFT_QAM64	23.15	23.03	23.28
			1@131	DFT_QAM64	22.66	23.53	23.39
			64@32	DFT_QAM256	21.14	21.38	21.65
			1@1	DFT_QAM256	21.84	20.74	21.82
			1@131	DFT_QAM256	21.28	21.59	22.07
			67@33	CP_QPSK	23.95	24.41	24.63
			1@1	CP_QPSK	23.90	23.61	24.19
			1@131	CP_QPSK	23.41	24.15	24.28
			67@33	CP_QAM16	23.48	23.95	24.12
			1@1	CP_QAM16	24.00	22.98	23.55
			1@131	CP_QAM16	23.43	23.55	23.81
			67@33	CP_QAM64	21.85	22.32	22.52
			1@1	CP_QAM64	22.30	21.92	22.60
			1@131	CP_QAM64	21.77	22.08	22.80
			67@33	CP_QAM256	19.00	19.48	19.79
			1@1	CP_QAM256	19.36	18.98	19.50
			1@131	CP_QAM256	18.67	19.23	19.71

NR Band	SCS (KHz)	Bandwidth (MHz)	RB Allocation	Modulation	Average Power (dBm)		
					648668	656000	663332
					3730.02MHz	3840MHz	3949.98MHz
n77 3700-3980 MHz	30	60	81@40	DFT_BPSK	25.39	25.92	26.11
			1@1	DFT_BPSK	25.42	25.13	25.66
			1@160	DFT_BPSK	24.81	25.63	25.79
			81@40	DFT_QPSK	25.38	25.85	26.10
			1@1	DFT_QPSK	25.31	24.89	25.48
			1@160	DFT_QPSK	24.71	25.52	25.66
			81@40	DFT_QAM16	24.45	24.98	25.09
			1@1	DFT_QAM16	24.51	24.29	24.90
			1@160	DFT_QAM16	23.97	24.86	25.01
			81@40	DFT_QAM64	22.92	23.44	23.57
			1@1	DFT_QAM64	23.05	22.70	23.21
			1@160	DFT_QAM64	22.40	23.19	23.32
			81@40	DFT_QAM256	21.05	21.38	21.63
			1@1	DFT_QAM256	21.63	20.96	21.41
			1@160	DFT_QAM256	20.98	21.17	21.41
			81@40	CP_QPSK	23.97	24.37	24.54
			1@1	CP_QPSK	23.80	23.56	24.12
			1@160	CP_QPSK	23.21	24.11	24.23
			81@40	CP_QAM16	23.38	23.82	23.98
			1@1	CP_QAM16	23.59	22.96	23.88
			1@160	CP_QAM16	22.95	24.20	23.71
			81@40	CP_QAM64	21.97	22.36	22.61
			1@1	CP_QAM64	22.20	21.85	22.33
			1@160	CP_QAM64	21.55	22.32	22.40
			81@40	CP_QAM256	19.03	19.46	19.71
			1@1	CP_QAM256	18.99	18.56	19.46
			1@160	CP_QAM256	18.37	19.15	19.51

NR Band	SCS (KHz)	Bandwidth (MHz)	RB Allocation	Modulation	Average Power (dBm)		
					649334	656000	662666
					3740.01MHz	3840MHz	3939.99MHz
n77 3700-3980 MHz	30	80	108@54	DFT_BPSK	25.35	25.90	26.08
			1@1	DFT_BPSK	25.27	24.70	25.23
			1@215	DFT_BPSK	24.60	25.67	25.56
			108@54	DFT_QPSK	25.38	25.87	26.08
			1@1	DFT_QPSK	25.36	24.69	25.27
			1@215	DFT_QPSK	24.85	25.50	25.51
			108@54	DFT_QAM16	24.43	24.98	25.10
			1@1	DFT_QAM16	24.11	24.09	24.12
			1@215	DFT_QAM16	23.43	24.86	24.38
			108@54	DFT_QAM64	22.91	23.50	23.65
			1@1	DFT_QAM64	22.76	22.06	22.68
			1@215	DFT_QAM64	22.12	23.05	23.09
			108@54	DFT_QAM256	21.05	21.34	21.54
			1@1	DFT_QAM256	21.45	20.80	20.77
			1@215	DFT_QAM256	20.40	21.57	21.38
			109@54	CP_QPSK	23.80	24.28	24.44
			1@1	CP_QPSK	23.58	23.17	23.59
			1@215	CP_QPSK	22.83	24.06	23.93
			109@54	CP_QAM16	23.29	23.86	23.99
			1@1	CP_QAM16	23.61	23.08	23.12
			1@215	CP_QAM16	23.01	23.47	24.01
			109@54	CP_QAM64	21.88	22.36	22.48
			1@1	CP_QAM64	21.84	21.24	21.70
			1@215	CP_QAM64	21.25	22.43	22.08
			109@54	CP_QAM256	18.99	19.54	19.65
			1@1	CP_QAM256	18.70	18.59	18.80
			1@215	CP_QAM256	18.13	19.52	19.19

NR Band	SCS (KHz)	Bandwidth (MHz)	RB Allocation	Modulation	Average Power (dBm)		
					649668	656000	662332
					3745.02MHz	3840MHz	3934.98MHz
n77 3700-3980 MHz	30	90	120@60	DFT_BPSK	25.26	25.87	25.98
			1@1	DFT_BPSK	24.98	24.55	25.27
			1@243	DFT_BPSK	24.41	25.46	25.42
			120@60	DFT_QPSK	25.32	25.82	26.03
			1@1	DFT_QPSK	25.01	24.47	25.18
			1@243	DFT_QPSK	24.29	25.29	25.25
			120@60	DFT_QAM16	24.36	24.92	25.00
			1@1	DFT_QAM16	24.44	23.79	24.65
			1@243	DFT_QAM16	23.79	24.84	24.82
			120@60	DFT_QAM64	22.78	23.42	23.51
			1@1	DFT_QAM64	22.85	21.84	22.70
			1@243	DFT_QAM64	22.20	22.81	23.01
			120@60	DFT_QAM256	20.94	21.27	21.48
			1@1	DFT_QAM256	21.24	20.10	20.79
			1@243	DFT_QAM256	19.98	21.43	21.40
			123@61	CP_QPSK	23.70	24.26	24.42
			1@1	CP_QPSK	23.54	22.91	23.77
			1@243	CP_QPSK	22.80	23.82	23.79
			123@61	CP_QAM16	23.29	23.78	24.01
			1@1	CP_QAM16	23.27	22.81	23.55
			1@243	CP_QAM16	22.59	23.34	23.72
			123@61	CP_QAM64	21.72	22.35	22.42
			1@1	CP_QAM64	21.33	21.44	21.94
			1@243	CP_QAM64	20.74	22.06	22.00
			123@61	CP_QAM256	18.80	19.48	19.59
			1@1	CP_QAM256	18.58	18.30	19.02
			1@243	CP_QAM256	18.01	19.22	19.42

NR Band	SCS (KHz)	Bandwidth (MHz)	RB Allocation	Modulation	Average Power (dBm)		
					650000	656000	662000
					3750MHz	3840MHz	3930MHz
n77 3700-3980 MHz	30	100	135@67	DFT_BPSK	25.29	25.85	25.91
			1@1	DFT_BPSK	24.86	24.27	25.36
			1@271	DFT_BPSK	24.36	25.15	25.17
			135@67	DFT_QPSK	25.20	25.84	25.94
			1@1	DFT_QPSK	24.70	24.09	25.11
			1@271	DFT_QPSK	24.26	25.08	25.11
			135@67	DFT_QAM16	24.28	24.81	25.04
			1@1	DFT_QAM16	24.24	23.38	24.68
			1@271	DFT_QAM16	23.74	24.46	24.54
			135@67	DFT_QAM64	22.77	23.38	23.53
			1@1	DFT_QAM64	22.64	21.73	22.86
			1@271	DFT_QAM64	22.20	22.70	22.69
			135@67	DFT_QAM256	20.92	21.32	21.51
			1@1	DFT_QAM256	21.09	20.02	20.73
			1@271	DFT_QAM256	20.28	20.95	20.75
			137@68	CP_QPSK	23.88	24.30	24.49
			1@1	CP_QPSK	23.27	22.73	23.65
			1@271	CP_QPSK	22.72	23.63	23.77
			137@68	CP_QAM16	23.31	23.82	23.96
			1@1	CP_QAM16	23.06	22.47	23.60
			1@271	CP_QAM16	22.70	23.45	23.06
			137@68	CP_QAM64	21.73	22.37	22.54
			1@1	CP_QAM64	21.18	20.85	22.11
			1@271	CP_QAM64	20.76	21.73	22.15
			137@68	CP_QAM256	18.92	19.52	19.61
			1@1	CP_QAM256	18.42	17.91	19.17
			1@271	CP_QAM256	17.99	18.79	19.13

Note:

1. 5G NR n41/n77/n78 supports HPUE.
2. SAR testing start with the largest channel bandwidth and measure SAR for PI/2 BPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
3. 50% RB allocation for PI/2 BPSK SAR testing follows 1RB PI/2 BPSK allocation procedure.
4. QPSK/16QAM/64QAM256QAM output powers according to 3GPP MPR will not 1/2 dB higher than the same configuration in PI/2 BPSK, also reported SAR for the PI/2 BPSK configuration is less than 1.45 W/kg, QPSK/16QAM/64QAM/256QAM SAR testing are not required.
5. Smaller bandwidth output power for each RB allocation configuration for this device will not 1/2 dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is less than 1.45 W/kg, smaller bandwidth SAR testing is no required for this device.

13.5 WLAN 2.4 GHz Band Conducted Power

ANT1

Average Power (dBm)				
Channel	Frequency (MHz)	802.11 b	802.11 g	802.11n (HT20)
CH 01	2412	16.17	14.19	12.98
CH 06	2437	**16.60**	14.62	13.42
CH 11	2462	16.32	14.28	13.08

Average Power (dBm)		
Channel	Frequency (MHz)	802.11n (HT40)
CH 03	2422	13.42
CH 06	2437	13.46
CH 09	2452	13.41

ANT3

Average Power (dBm)				
Channel	Frequency (MHz)	802.11 b	802.11 g	802.11n (HT20)
CH 01	2412	16.37	14.42	13.22
CH 06	2437	16.33	14.26	12.82
CH 11	2462	**16.40**	14.42	13.07

Average Power (dBm)		
Channel	Frequency (MHz)	802.11n (HT40)
CH 03	2422	13.17
CH 06	2437	13.13
CH 09	2452	13.15

Note:

6. SAR test of WLAN 2.4GHz is performed.
7. Per KDB 248227 D01v02r02, choose the highest output power channel to test SAR and determine further SAR exclusion.
8. 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.
9. 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.
10. Per KDB 248227 D01V02r02 section 2.2, when the EUT in continuously transmitting mode, the actual duty cycle is 100%, so the duty cycle factor is 1.

13.6 WLAN 5.2GHz Band Conducted Power

Average Power (dBm)				
Channel	Frequency (MHz)	802.11 a	802.11 ac20	802.11 n20
CH 36	5180	13.65	11.84	12.97
CH 40	5200	13.77	11.63	13.53
CH 48	5240	**13.87**	11.65	13.76

Average Power (dBm)			
Channel	Frequency (MHz)	802.11 ac40	802.11 n40
CH 38	5190	11.76	13.58
CH 46	5230	11.63	13.53

Average Power (dBm)		
Channel	Frequency (MHz)	802.11 ac80
CH 42	5210	11.23

Note:

11. SAR test of WLAN 5.2GHz is performed.
12. Per KDB 248227 D01v02r02, choose the highest output power channel to test SAR and determine further SAR exclusion.
13. 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.
14. Per KDB 248227 D01V02r02 section 2.2, when the EUT in continuously transmitting mode, the actual duty cycle is 100%, so the duty cycle factor is 1.

13.7 WLAN 5.8GHz Band Conducted Power

Average Power (dBm)				
Channel	Frequency (MHz)	802.11 a	802.11 ac20	802.11 n20
CH 149	5745	13.29	12.00	13.05
CH 157	5785	**13.76**	12.42	13.47
CH 165	5825	13.51	12.03	13.12

Average Power (dBm)			
Channel	Frequency (MHz)	802.11 ac40	802.11 n40
CH 151	5755	11.68	12.96
CH 159	5795	12.22	13.13

Average Power (dBm)		
Channel	Frequency (MHz)	802.11 ac80
CH 155	5775	11.88

Note:

15. SAR test of WLAN 5.8GHz is performed.
16. Per KDB 248227 D01v02r02, choose the highest output power channel to test SAR and determine further SAR exclusion.
17. 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.
18. Per KDB 248227 D01V02r02 section 2.2, when the EUT in continuously transmitting mode, the actual duty cycle is 100%, so the duty cycle factor is 1.

13.8 Bluetooth Conducted Power

ANT1

Average Power (dBm)				
Channel	Frequency (MHz)	GFSK	π/4-DQPSK	8DPSK
CH 00	2402	4.21	3.40	3.23
CH 39	2441	4.06	3.22	3.15
CH 78	2480	**6.19**	5.38	5.31

Average Power (dBm)					
Channel	Frequency (MHz)	BLE PHY 1M	BLE PHY 2M	BLE Coded PHY S=2	BLE Coded PHY S=8
CH 00	2402	-5.35	-5.24	-5.35	-5.36
CH 20	2442	-3.73	-3.58	-3.72	-3.74
CH 39	2480	-4.17	-3.94	-4.15	-4.16

ANT3

Average Power (dBm)				
Channel	Frequency (MHz)	GFSK	π/4-DQPSK	8DPSK
CH 00	2402	6.20	5.23	5.18
CH 39	2441	4.23	3.65	3.25
CH 78	2480	**7.07**	6.22	6.18

Average Power (dBm)					
Channel	Frequency (MHz)	BLE PHY 1M	BLE PHY 2M	BLE Coded PHY S=2	BLE Coded PHY S=8
CH 00	2402	-5.06	-5.00	-4.96	-5.02
CH 20	2442	-3.62	-3.47	-3.43	-3.48
CH 39	2480	-4.52	-4.36	-4.35	-4.37

Note:

1. SAR test of Bluetooth is performed and the mode with highest average power is selected for SAR testing.
2. Per KDB 447498 D04v01 section 2.1.2: 1-mW Test Exemption, SAR test for BLE is not required.
3. The output power of all data rate were pre-scan, just the worst case of all mode were shown in report.
4. Per KDB 248227 D01V02r02 section 2.2, when the EUT in continuously transmitting mode, the actual duty cycle is 100%, so the duty cycle factor is 1.

14 Exposure Positions Consideration

14.1 EUT Antenna Locations

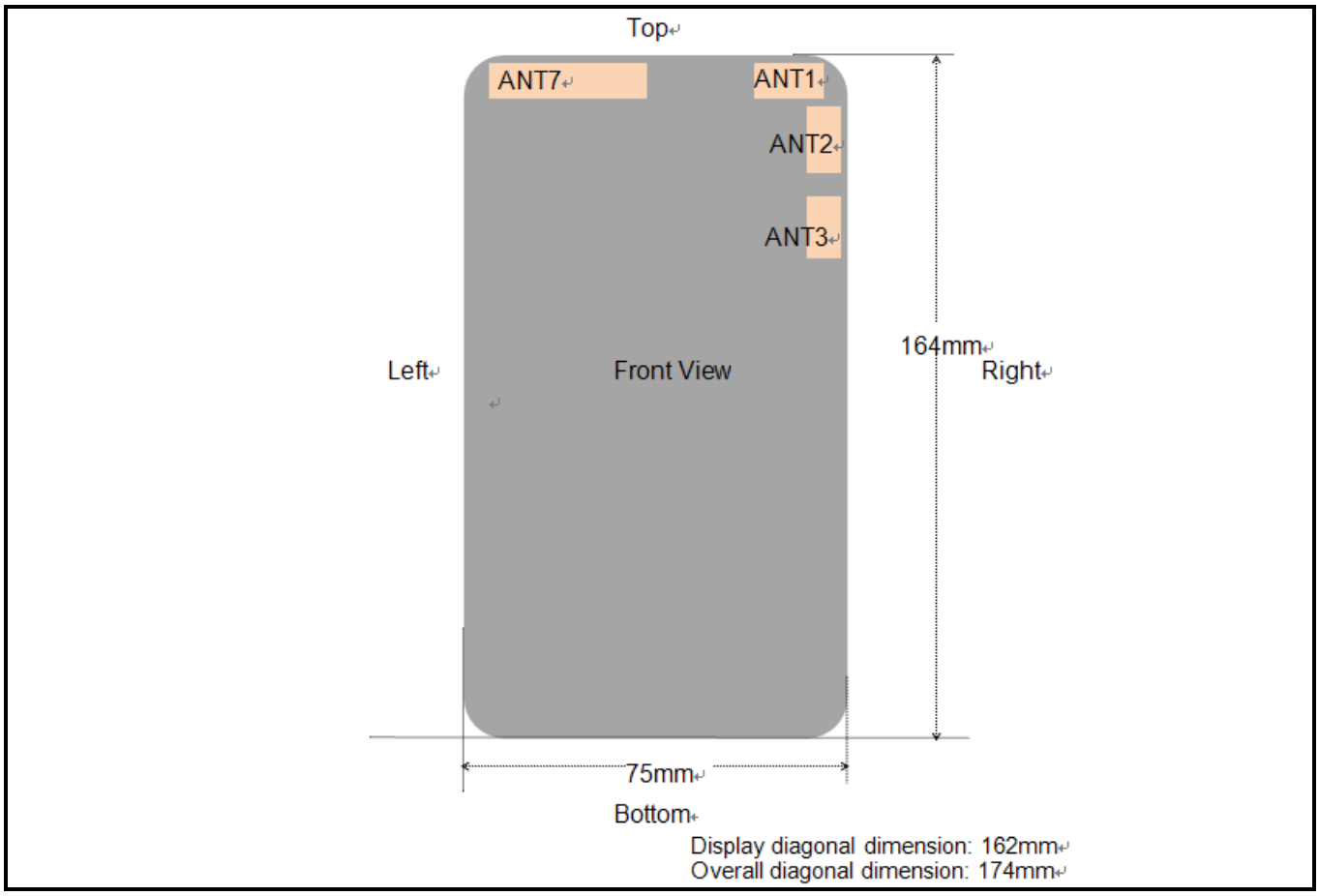


Fig.14.1 EUT Antenna Locations

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.

14.2 Test Positions Consideration

Distance of Antennas to EUT edge/surface Test distance: 10mm						
Antennas	**Back**	**Front**	**Top Side**	**Bottom Side**	**Right Side**	**Left Side**
ANT1	<25mm	<25mm	<25mm	155mm	<25mm	56mm
ANT2	<25mm	<25mm	<25mm	113mm	40mm	68mm
ANT3	<25mm	<25mm	28mm	122mm	<25mm	68mm
ANT7	<25mm	<25mm	<25mm	117mm	41mm	<25mm

Test Positions Test distance: 10mm						
Antennas	**Back**	**Front**	**Top Side**	**Bottom Side**	**Right Side**	**Left Side**
ANT1	Yes	Yes	Yes	No	Yes	No
ANT2	Yes	Yes	Yes	No	No	No
ANT3	Yes	Yes	No	No	Yes	No
ANT7	Yes	Yes	Yes	No	No	Yes

Note:

1. ANT 1 2.4GWi-Fi&5GWi-Fi&BT&GPS TX ANT
2. ANT 2 5G NR n77/n78 TX ANT
3. ANT 3 2.4GWi-Fi&BT&GPS TX ANT,5G NR n77/n78 ANT (RX Only)
4. ANT 7 GSM&WCDMA&LTE&5G NR n5/n7/n12/n41/n66 TX ANT
5. Head/Body-worn/Hotspot mode SAR assessments are required.
6. 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.
7. 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.

15 SAR Test Results Summary

15.1 Standalone Head SAR Data

➢ GSM Head SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	GSM850/Voice	Right Cheek	190	836.6	34.11	0.00	34.5	0.513	1.094	0.561
1	GSM850/Voice	Right Tilted	190	836.6	34.11	0.60	34.5	**0.626**	1.094	0.685
	GSM850/Voice	Left Cheek	190	836.6	34.11	0.24	34.5	0.397	1.094	0.434
	GSM850/Voice	Left Tilted	190	836.6	34.11	-1.87	34.5	0.484	1.094	0.529
	PCS1900/Voice	Right Cheek	512	1850.2	30.57	-0.40	31.0	0.225	1.104	0.248
2	PCS1900/Voice	Right Tilted	512	1850.2	30.57	-2.56	31.0	**0.297**	1.104	0.328
	PCS1900/Voice	Left Cheek	512	1850.2	30.57	0.98	31.0	0.091	1.104	0.100
	PCS1900/Voice	Left Tilted	512	1850.2	30.57	-1.45	31.0	0.138	1.104	0.152
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ WCDMA Head SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band II/RMC	Right Cheek	9538	1907.6	23.56	1.21	24.0	0.408	1.107	0.452
3	Band II/RMC	Right Tilted	9538	1907.6	23.56	-3.94	24.0	**0.604**	1.107	0.669
	Band II/RMC	Left Cheek	9538	1907.6	23.56	1.40	24.0	0.188	1.107	0.208
	Band II/RMC	Left Tilted	9538	1907.6	23.56	-1.06	24.0	0.279	1.107	0.309
	Band IV/RMC	Right Cheek	1513	1752.6	23.70	-1.86	24.0	0.743	1.072	0.796
4	Band IV/RMC	Right Tilted	1513	1752.6	23.70	-3.05	24.0	**1.058**	1.072	1.134
	Band IV/RMC	Left Cheek	1513	1752.6	23.70	-1.85	24.0	0.465	1.072	0.498
	Band IV/RMC	Left Tilted	1513	1752.6	23.70	-1.61	24.0	0.687	1.072	0.736
	Band IV/RMC	Right Tilted	1312	1712.4	23.45	-2.59	24.0	0.866	1.135	0.983
	Band IV/RMC	Right Tilted	1413	1732.6	23.34	-3.60	24.0	0.921	1.164	1.072
	Band IV/RMC	**Right Tilted**	**1513**	**1752.6**	**23.70**	**0.01**	**24.0**	**1.049**	**1.072**	**1.125**
	Band V/RMC	Right Cheek	4233	846.6	23.65	-1.72	24.0	0.364	1.084	0.395
5	Band V/RMC	Right Tilted	4233	846.6	23.65	-2.31	24.0	**0.422**	1.084	0.457
	Band V/RMC	Left Cheek	4233	846.6	23.65	1.24	24.0	0.251	1.084	0.272
	Band V/RMC	Left Tilted	4233	846.6	23.65	-1.89	24.0	0.328	1.084	0.356
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ FDD-LTE Band 2(20MHz) QPSK Head SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band2/1RB#49	Right Cheek	18700	1860	24.15	1.07	24.5	0.211	1.084	0.229
6	Band2/1RB#49	Right Tilted	18700	1860	24.15	-1.94	24.5	**0.359**	1.084	0.389
	Band2/1RB#49	Left Cheek	18700	1860	24.15	-1.84	24.5	0.089	1.084	0.096
	Band2/1RB#49	Left Tilted	18700	1860	24.15	-0.27	24.5	0.135	1.084	0.146
	Band2/50%RB#0	Right Cheek	19100	1900	23.35	-1.80	23.5	0.179	1.035	0.185
	Band2/50%RB#0	Right Tilted	19100	1900	23.35	1.15	23.5	0.302	1.035	0.313
	Band2/50%RB#0	Left Cheek	19100	1900	23.35	-0.43	23.5	0.068	1.035	0.070
	Band2/50%RB#0	Left Tilted	19100	1900	23.35	-1.66	23.5	0.103	1.035	0.107
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	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	Right Cheek	20525	836.5	23.88	-1.06	24.5	0.458	1.153	0.528
7	Band5/1RB#49	Right Tilted	20525	836.5	23.88	-1.95	24.5	**0.552**	1.153	0.636
	Band5/1RB#49	Left Cheek	20525	836.5	23.88	-1.89	24.5	0.411	1.153	0.474
	Band5/1RB#49	Left Tilted	20525	836.5	23.88	-1.51	24.5	0.394	1.153	0.454
	Band5/50%RB#12	Right Cheek	20600	844	22.99	0.47	23.0	0.217	1.002	0.217
	Band5/50%RB#12	Right Tilted	20600	844	22.99	-2.66	23.0	0.379	1.002	0.380
	Band5/50%RB#12	Left Cheek	20600	844	22.99	-0.74	23.0	0.326	1.002	0.327
	Band5/50%RB#12	Left Tilted	20600	844	22.99	0.51	23.0	0.315	1.002	0.316
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ FDD-LTE Band 7(20MHz) QPSK Head SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band7/1RB#49	Right Cheek	20850	2510	24.31	-0.55	24.5	0.464	1.045	0.485
	Band7/1RB#49	Right Tilted	20850	2510	24.31	-1.81	24.5	0.406	1.045	0.424
	Band7/1RB#49	Left Cheek	20850	2510	24.31	1.10	24.5	0.268	1.045	0.280
	Band7/1RB#49	Left Tilted	20850	2510	24.31	-0.10	24.5	0.243	1.045	0.254
8	Band7/50%RB#0	Right Cheek	21350	2560	23.35	-1.45	23.5	**0.496**	1.035	0.513
	Band7/50%RB#0	Right Tilted	21350	2560	23.35	-1.06	23.5	0.435	1.035	0.450
	Band7/50%RB#0	Left Cheek	21350	2560	23.35	1.85	23.5	0.294	1.035	0.304
	Band7/50%RB#0	Left Tilted	21350	2560	23.35	-0.26	23.5	0.266	1.035	0.275
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

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

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band12/1RB#24	Right Cheek	23060	704	23.87	-0.98	24.0	0.182	1.03	0.187
9	Band12/1RB#24	Right Tilted	23060	704	23.87	-2.17	24.0	**0.223**	1.03	0.230
	Band12/1RB#24	Left Cheek	23060	704	23.87	1.78	24.0	0.102	1.03	0.105
	Band12/1RB#24	Left Tilted	23060	704	23.87	-1.37	24.0	0.134	1.03	0.138
	Band12/50%RB#12	Right Cheek	23130	711	22.79	-1.59	23.0	0.134	1.05	0.141
	Band12/50%RB#12	Right Tilted	23130	711	22.79	-1.50	23.0	0.185	1.05	0.194
	Band12/50%RB#12	Left Cheek	23130	711	22.79	-0.17	23.0	0.086	1.05	0.090
	Band12/50%RB#12	Left Tilted	23130	711	22.79	0.51	23.0	0.113	1.05	0.119
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	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#99	Right Cheek	41490	2680	24.13	-0.41	24.5	0.212	1.089	1.008	0.233
10	Band41/1RB#99	Right Tilted	41490	2680	24.13	-1.39	24.5	**0.231**	1.089	1.008	0.254
	Band41/1RB#99	Left Cheek	41490	2680	24.13	-1.70	24.5	0.115	1.089	1.008	0.126
	Band41/1RB#99	Left Tilted	41490	2680	24.13	-1.78	24.5	0.138	1.089	1.008	0.151
	Band41/50%RB#24	Right Cheek	41490	2680	23.18	-0.64	23.5	0.139	1.076	1.008	0.151
	Band41/50%RB#24	Right Tilted	41490	2680	23.18	2.26	23.5	0.158	1.076	1.008	0.171
	Band41/50%RB#24	Left Cheek	41490	2680	23.18	1.51	23.5	0.071	1.076	1.008	0.077
	Band41/50%RB#24	Left Tilted	41490	2680	23.18	0.64	23.5	0.098	1.076	1.008	0.106
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	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	Right Cheek	132322	1745	24.06	-2.22	24.5	0.315	1.107	0.349
11	Band66/1RB#49	Right Tilted	132322	1745	24.06	-0.29	24.5	**0.431**	1.107	0.477
	Band66/1RB#49	Left Cheek	132322	1745	24.06	1.35	24.5	0.204	1.107	0.226
	Band66/1RB#49	Left Tilted	132322	1745	24.06	-0.36	24.5	0.273	1.107	0.302
	Band66/50%RB#0	Right Cheek	132322	1745	23.00	1.57	23.5	0.265	1.122	0.297
	Band66/50%RB#0	Right Tilted	132322	1745	23.00	-0.85	23.5	0.384	1.122	0.431
	Band66/50%RB#0	Left Cheek	132322	1745	23.00	1.07	23.5	0.164	1.122	0.184
	Band66/50%RB#0	Left Tilted	132322	1745	23.00	-0.21	23.5	0.213	1.122	0.239
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ NR n5 DFT-BPSK Head SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	NR n5 DFT-BPSK /1@1 20M	Right Cheek	167800	839	24.66	0.98	25.5	0.603	1.213	0.731
12	NR n5 DFT-BPSK /1@1 20M	Right Tilted	167800	839	24.66	1.94	25.5	**0.624**	1.213	0.757
	NR n5 DFT-BPSK /1@1 20M	Left Cheek	167800	839	24.66	-1.17	25.5	0.471	1.213	0.571
	NR n5 DFT-BPSK /1@1 20M	Left Tilted	167800	839	24.66	-3.36	25.5	0.506	1.213	0.614
	NR n5 DFT-BPSK /25@12 20M	Right Cheek	167300	836.5	24.85	-1.06	25.5	0.564	1.161	0.655
	NR n5 DFT-BPSK /25@12 20M	Right Tilted	167300	836.5	24.85	-2.49	25.5	0.583	1.161	0.677
	NR n5 DFT-BPSK /25@12 20M	Left Cheek	167300	836.5	24.85	-2.82	25.5	0.440	1.161	0.511
	NR n5 DFT-BPSK /25@12 20M	Left Tilted	167300	836.5	24.85	0.90	25.5	0.467	1.161	0.542
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ NR n7 DFT-BPSK Head SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
13	NR n7 DFT-BPSK /1@49 20M	Right Cheek	512000	2560	22.80	-3.50	23.0	**0.374**	1.047	0.392
	NR n7 DFT-BPSK /1@49 20M	Right Tilted	512000	2560	22.80	-1.63	23.0	0.246	1.047	0.258
	NR n7 DFT-BPSK /1@49 20M	Left Cheek	512000	2560	22.80	1.81	23.0	0.301	1.047	0.315
	NR n7 DFT-BPSK /1@49 20M	Left Tilted	512000	2560	22.80	-0.39	23.0	0.183	1.047	0.192
	NR n7 DFT-BPSK /25@12 20M	Right Cheek	507000	2535	22.88	-2.49	23.0	0.353	1.028	0.363
	NR n7 DFT-BPSK /25@12 20M	Right Tilted	507000	2535	22.88	1.56	23.0	0.229	1.028	0.235
	NR n7 DFT-BPSK /25@12 20M	Left Cheek	507000	2535	22.88	-1.27	23.0	0.273	1.028	0.281
	NR n7 DFT-BPSK /25@12 20M	Left Tilted	507000	2535	22.88	1.12	23.0	0.168	1.028	0.173
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ NR n12 DFT-BPSK Head SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	NR n12 DFT-BPSK /1@1 15M	Right Cheek	141700	708.5	22.48	-1.64	23.0	0.215	1.127	0.242
	NR n12 DFT-BPSK /1@1 15M	Right Tilted	141700	708.5	22.48	-0.66	23.0	0.240	1.127	0.270
	NR n12 DFT-BPSK /1@1 15M	Left Cheek	141700	708.5	22.48	-4.37	23.0	0.140	1.127	0.158
	NR n12 DFT-BPSK /1@1 15M	Left Tilted	141700	708.5	22.48	-3.07	23.0	0.128	1.127	0.144
	NR n12 DFT-BPSK /18@9 15M	Right Cheek	141300	706.5	22.42	-0.29	23.0	0.233	1.143	0.266
14	NR n12 DFT-BPSK /18@9 15M	Right Tilted	141300	706.5	22.42	-1.30	23.0	**0.260**	1.143	0.297
	NR n12 DFT-BPSK /18@9 15M	Left Cheek	141300	706.5	22.42	-1.87	23.0	0.158	1.143	0.181
	NR n12 DFT-BPSK /18@9 15M	Left Tilted	141300	706.5	22.42	-1.37	23.0	0.140	1.143	0.160
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ NR n41 DFT-BPSK Head SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	NR n41 DFT-BPSK /1@271 100M	Right Cheek	509202	2546.01	24.53	-0.46	25.0	0.191	1.114	0.213
	NR n41 DFT-BPSK /1@271 100M	Right Tilted	509202	2546.01	24.53	-2.65	25.0	0.162	1.114	0.180
	NR n41 DFT-BPSK /1@271 100M	Left Cheek	509202	2546.01	24.53	-0.36	25.0	0.134	1.114	0.149
	NR n41 DFT-BPSK /1@271 100M	Left Tilted	509202	2546.01	24.53	0.03	25.0	0.095	1.114	0.106
15	NR n41 DFT-BPSK /137@67 100M	Right Cheek	518598	2592.99	25.40	-1.57	26.0	**0.269**	1.148	0.309
	NR n41 DFT-BPSK /137@67 100M	Right Tilted	518598	2592.99	25.40	-0.16	26.0	0.207	1.148	0.238
	NR n41 DFT-BPSK /137@67 100M	Left Cheek	518598	2592.99	25.40	0.40	26.0	0.155	1.148	0.178
	NR n41 DFT-BPSK /137@67 100M	Left Tilted	518598	2592.99	25.40	-0.26	26.0	0.106	1.148	0.122
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ NR n66 DFT-BPSK Head SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	NR n66 DFT-BPSK /1@104 40M	Right Cheek	349000	1745	21.96	-2.53	22.0	0.214	1.009	0.216
16	NR n66 DFT-BPSK /1@104 40M	Right Tilted	349000	1745	21.96	-3.75	22.0	**0.376**	1.009	0.379
	NR n66 DFT-BPSK /1@104 40M	Left Cheek	349000	1745	21.96	1.43	22.0	0.043	1.009	0.043
	NR n66 DFT-BPSK /1@104 40M	Left Tilted	349000	1745	21.96	-1.10	22.0	0.062	1.009	0.063
	NR n66 DFT-BPSK /50@25 40M	Right Cheek	352000	1760	22.45	1.41	23.0	0.185	1.135	0.210
	NR n66 DFT-BPSK /50@25 40M	Right Tilted	352000	1760	22.45	0.97	23.0	0.331	1.135	0.376
	NR n66 DFT-BPSK /50@25 40M	Left Cheek	352000	1760	22.45	1.61	23.0	0.032	1.135	0.036
	NR n66 DFT-BPSK /50@25 40M	Left Tilted	352000	1760	22.45	1.05	23.0	0.049	1.135	0.056
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

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

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	NR n77 DFT-BPSK /1@1 100M	Right Cheek	633334	3500.01	24.60	-0.14	25.0	0.235	1.096	0.258
	NR n77 DFT-BPSK /1@1 100M	Right Tilted	633334	3500.01	24.60	-0.08	25.0	0.547	1.096	0.600
	NR n77 DFT-BPSK /1@1 100M	Left Cheek	633334	3500.01	24.60	-0.03	25.0	0.354	1.096	0.388
	NR n77 DFT-BPSK /1@1 100M	Left Tilted	633334	3500.01	24.60	-3.55	25.0	0.573	1.096	0.628
	NR n77 DFT-BPSK /137@67 100M	Right Cheek	633334	3500.01	25.35	-1.92	26.0	0.317	1.161	0.368
	NR n77 DFT-BPSK /137@67 100M	Right Tilted	633334	3500.01	25.35	-0.80	26.0	0.627	1.161	0.728
	NR n77 DFT-BPSK /137@67 100M	Left Cheek	633334	3500.01	25.35	1.70	26.0	0.445	1.161	0.517
17	NR n77 DFT-BPSK /137@67 100M	Left Tilted	633334	3500.01	25.35	-0.49	26.0	**0.688**	1.161	0.799
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

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

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	NR n77 DFT-BPSK /1@1 100M	Right Cheek	662000	3930	25.36	-0.40	25.5	0.120	1.033	0.124
	NR n77 DFT-BPSK /1@1 100M	Right Tilted	662000	3930	25.36	1.84	25.5	0.150	1.033	0.155
	NR n77 DFT-BPSK /1@1 100M	Left Cheek	662000	3930	25.36	-0.41	25.5	0.245	1.033	0.253
	NR n77 DFT-BPSK /1@1 100M	Left Tilted	662000	3930	25.36	-1.84	25.5	0.293	1.033	0.303
	NR n77 DFT-BPSK /137@67 100M	Right Cheek	662000	3930	25.91	-2.31	26.5	0.133	1.146	0.152
	NR n77 DFT-BPSK /137@67 100M	Right Tilted	662000	3930	25.91	-2.53	26.5	0.183	1.146	0.210
	NR n77 DFT-BPSK /137@67 100M	Left Cheek	662000	3930	25.91	-1.44	26.5	0.278	1.146	0.319
18	NR n77 DFT-BPSK /137@67 100M	Left Tilted	662000	3930	25.91	-1.02	26.5	**0.339**	1.146	0.388
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ WLAN 2.4 GHz Head SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	2.4GHz/802.11b ANT 1	Right Cheek	6	2437	16.60	-1.98	17.0	0.076	1.096	1.000	0.083
	2.4GHz/802.11b ANT 1	Right Tilted	6	2437	16.60	1.36	17.0	0.058	1.096	1.000	0.064
	2.4GHz/802.11b ANT 1	Left Cheek	6	2437	16.60	-0.10	17.0	0.076	1.096	1.000	0.083
	2.4GHz/802.11b ANT 1	Left Tilted	6	2437	16.60	0.00	17.0	0.064	1.096	1.000	0.070
	2.4GHz/802.11b ANT 3	Right Cheek	11	2462	16.40	-0.74	16.5	0.062	1.023	1.000	0.063
	2.4GHz/802.11b ANT 3	Right Tilted	11	2462	16.40	-2.72	16.5	0.040	1.023	1.000	0.041
19	2.4GHz/802.11b ANT 3	Left Cheek	11	2462	16.40	-1.43	16.5	**0.102**	1.023	1.000	0.104
	2.4GHz/802.11b ANT 3	Left Tilted	11	2462	16.40	0.00	16.5	0.044	1.023	1.000	0.045
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**						

➢ WLAN 5.2 GHz Head SAR

Plot No.	Band/Mode	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	Right Cheek	48	5240	13.87	1.26	14.0	0.162	1.03	1.000	0.167
	5.2GHz/802.11a	Right Tilted	48	5240	13.87	3.83	14.0	0.198	1.03	1.000	0.204
20	5.2GHz/802.11a	Left Cheek	48	5240	13.87	1.20	14.0	**0.285**	1.03	1.000	0.294
	5.2GHz/802.11a	Left Tilted	48	5240	13.87	0.71	14.0	0.154	1.03	1.000	0.159
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**						

➢ WLAN 5.8 GHz Head SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	5.8GHz/802.11a	Right Cheek	157	5785	13.76	-0.58	14.0	0.142	1.057	1.000	0.150
	5.8GHz/802.11a	Right Tilted	157	5785	13.76	-1.44	14.0	0.122	1.057	1.000	0.129
21	5.8GHz/802.11a	Left Cheek	157	5785	13.76	-0.86	14.0	**0.179**	1.057	1.000	0.189
	5.8GHz/802.11a	Left Tilted	157	5785	13.76	-2.94	14.0	0.148	1.057	1.000	0.156
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**						

➢ Bluetooth Head SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	BT/GFSK ANT1	Right Cheek	78	2480	6.19	-4.48	6.5	0.023	1.074	1.000	0.025
	BT/GFSK ANT1	Right Tilted	78	2480	6.19	1.29	6.5	0.011	1.074	1.000	0.012
22	BT/GFSK ANT1	Left Cheek	78	2480	6.19	-3.04	6.5	**0.025**	1.074	1.000	0.027
	BT/GFSK ANT1	Left Tilted	78	2480	6.19	-1.89	6.5	0.015	1.074	1.000	0.016
	BT/GFSK ANT3	Right Cheek	78	2480	7.07	-0.59	7.5	0.021	1.104	1.000	0.023
	BT/GFSK ANT3	Right Tilted	78	2480	7.07	-0.06	7.5	0.010	1.104	1.000	0.011
	BT/GFSK ANT3	Left Cheek	78	2480	7.07	-0.30	7.5	0.024	1.104	1.000	0.026
	BT/GFSK ANT3	Left Tilted	78	2480	7.07	0.12	7.5	0.014	1.104	1.000	0.015
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. For ANT1:Cuz the maximum output power specified for OFDM and DSSS are 31.62mW(15.0dBm) and 50.12mW(17.0dBm), the scaled SAR would be 0.090×(31.62/50.12)=0.057W/Kg<1.2 W/kg, therefore, SAR is not required for OFDM. For ANT3:Cuz the maximum output power specified for OFDM and DSSS are 28.18mW(14.5dBm) and 44.67mW(16.5dBm), the scaled SAR would be 0.104×(22.39/35.48)=0.066W/Kg<1.2 W/kg, therefore, SAR is not required for OFDM.
6. According to KDB 865664 D02v01r02, SAR plot is required for the highest measured SAR in each exposure configuration, wireless mode and frequency band combination.

15.2 Standalone Body SAR

➢ GSM Body SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	GPRS850/4 slots	Front	190	836.6	30.25	0.33	30.5	0.234	1.059	0.248
23	GPRS850/4 slots	Back	190	836.6	30.25	-3.56	30.5	**0.497**	1.059	0.526
	GPRS1900/4 slots	Front	512	1850.2	26.76	0.10	27.0	0.296	1.057	0.313
24	GPRS1900/4 slots	Back	512	1850.2	26.76	0.45	27.0	**0.503**	1.057	0.532
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	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	Front	9538	1907.6	23.56	-1.66	24.0	0.228	1.107	0.252
25	Band II/RMC	Back	9538	1907.6	23.56	-0.85	24.0	**0.349**	1.107	0.386
	Band IV/RMC	Front	1513	1752.6	23.70	3.48	24.0	0.194	1.072	0.208
26	Band IV/RMC	Back	1513	1752.6	23.70	-4.07	24.0	**0.351**	1.072	0.376
	Band V/RMC	Front	4233	846.6	23.65	-2.11	24.0	0.153	1.084	0.166
27	Band V/RMC	Back	4233	846.6	23.65	-1.98	24.0	**0.251**	1.084	0.272
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	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band2/1RB#49	Front	18700	1860	24.15	1.30	24.5	0.268	1.084	0.291
28	Band2/1RB#49	Back	18700	1860	24.15	-3.61	24.5	**0.379**	1.084	0.411
	Band2/50%RB#0	Front	19100	1900	23.35	1.87	23.5	0.212	1.035	0.219
	Band2/50%RB#0	Back	19100	1900	23.35	-1.62	23.5	0.308	1.035	0.319
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	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	Front	20525	836.5	23.88	-0.74	24.5	0.197	1.153	0.227
29	Band5/1RB#49	Back	20525	836.5	23.88	-1.64	24.5	**0.252**	1.153	0.291
	Band5/50%RB#12	Front	20600	844	22.99	-0.74	23.0	0.173	1.002	0.173
	Band5/50%RB#12	Back	20600	844	22.99	-2.32	23.0	0.229	1.002	0.229
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	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band7/1RB#49	Front	20850	2510	24.31	3.00	24.5	0.125	1.045	0.131
30	Band7/1RB#49	Back	20850	2510	24.31	1.83	24.5	**0.326**	1.045	0.341
	Band7/50%RB#0	Front	21350	2560	23.35	0.08	23.5	0.100	1.035	0.104
	Band7/50%RB#0	Back	21350	2560	23.35	-1.24	23.5	0.278	1.035	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 12(10MHz) QPSK Body SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band12/1RB#24	Front	23060	704	23.87	1.26	24.0	0.073	1.030	0.075
31	Band12/1RB#24	Back	23060	704	23.87	-3.04	24.0	**0.110**	1.030	0.113
	Band12/50%RB#12	Front	23130	711	22.79	1.15	23.0	0.066	1.050	0.069
	Band12/50%RB#12	Back	23130	711	22.79	-4.98	23.0	0.108	1.050	0.113
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	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#99	Front	41490	2680	24.13	-0.17	24.5	0.123	1.089	1.008	0.135
32	Band41/1RB#99	Back	41490	2680	24.13	-1.04	24.5	**0.203**	1.089	1.008	0.223
	Band41/50%RB#24	Front	41490	2680	23.18	0.02	23.5	0.098	1.076	1.008	0.106
	Band41/50%RB#24	Back	41490	2680	23.18	-0.89	23.5	0.146	1.076	1.008	0.158
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	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	Front	132322	1745	24.06	-1.16	24.5	0.201	1.107	0.223
33	Band66/1RB#49	Back	132322	1745	24.06	-0.21	24.5	**0.296**	1.107	0.328
	Band66/50%RB#0	Front	132322	1745	23.00	-1.10	23.5	0.171	1.122	0.192
	Band66/50%RB#0	Back	132322	1745	23.00	1.67	23.5	0.255	1.122	0.286
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ NR n5 DFT-BPSK Body SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	NR n5 DFT-BPSK /1@1 20M	Front	167800	839	24.66	-0.43	25.5	0.163	1.213	0.198
	NR n5 DFT-BPSK /1@1 20M	Back	167800	839	24.66	-3.02	25.5	0.238	1.213	0.289
	NR n5 DFT-BPSK /25@12 20M	Front	167300	836.5	24.85	-2.97	25.5	0.167	1.161	0.194
34	NR n5 DFT-BPSK /25@12 20M	Back	167300	836.5	24.85	-1.08	25.5	**0.255**	1.161	0.296
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ NR n7 DFT-BPSK Body SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	NR n7 DFT-BPSK /1@49 20M	Front	512000	2560	22.80	-1.24	23.0	0.126	1.047	0.132
35	NR n7 DFT-BPSK /1@49 20M	Back	512000	2560	22.80	-4.13	23.0	**0.214**	1.047	0.224
	NR n7 DFT-BPSK /25@12 20M	Front	507000	2535	22.88	-1.81	23.0	0.089	1.028	0.091
	NR n7 DFT-BPSK /25@12 20M	Back	507000	2535	22.88	3.45	23.0	0.160	1.028	0.164
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ NR n12 DFT-BPSK Body SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	NR n12 DFT-BPSK /1@1 15M	Front	141700	708.5	22.48	-3.12	23.0	0.063	1.127	0.071
	NR n12 DFT-BPSK /1@1 15M	Back	141700	708.5	22.48	-2.27	23.0	0.079	1.127	0.089
	NR n12 DFT-BPSK /18@9 15M	Front	141300	706.5	22.42	-0.27	23.0	0.056	1.143	0.064
36	NR n12 DFT-BPSK /18@9 15M	Back	141300	706.5	22.42	-0.52	23.0	**0.085**	1.143	0.097
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ NR n41 DFT-BPSK Body SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	NR n41 DFT-BPSK /1@271 100M	Front	509202	2546.01	24.53	1.84	25.0	0.062	1.114	0.069
	NR n41 DFT-BPSK /1@271 100M	Back	509202	2546.01	24.53	-1.08	25.0	0.120	1.114	0.134
	NR n41 DFT-BPSK /137@67 100M	Front	518598	2592.99	25.40	4.10	26.0	0.081	1.148	0.093
37	NR n41 DFT-BPSK /137@67 100M	Back	518598	2592.99	25.40	-0.31	26.0	**0.192**	1.148	0.220
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ NR n66 DFT-BPSK Body SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	NR n66 DFT-BPSK /1@104 40M	Front	349000	1745	21.96	0.54	22.0	0.211	1.009	0.213
	NR n66 DFT-BPSK /1@104 40M	Back	349000	1745	21.96	-0.54	22.0	0.291	1.009	0.294
	NR n66 DFT-BPSK /50@25 40M	Front	352000	1760	22.45	0.23	23.0	0.239	1.135	0.271
38	NR n66 DFT-BPSK /50@25 40M	Back	352000	1760	22.45	-1.67	23.0	**0.338**	1.135	0.384
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

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

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	NR n77 DFT-BPSK /1@1 100M	Front	633334	3500.01	24.60	0.94	25.0	0.259	1.096	0.284
	NR n77 DFT-BPSK /1@1 100M	Back	633334	3500.01	24.60	-0.53	25.0	0.344	1.096	0.377
	NR n77 DFT-BPSK /137@67 100M	Front	633334	3500.01	25.35	-0.70	26.0	0.270	1.161	0.313
39	NR n77 DFT-BPSK /137@67 100M	Back	633334	3500.01	25.35	1.00	26.0	**0.356**	1.161	0.413
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

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

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	NR n77 DFT-BPSK /1@1 100M	Front	662000	3930	25.36	1.50	25.5	0.048	1.033	0.050
	NR n77 DFT-BPSK /1@1 100M	Back	662000	3930	25.36	1.12	25.5	0.229	1.033	0.237
	NR n77 DFT-BPSK /137@67 100M	Front	662000	3930	25.91	-0.13	26.5	0.073	1.146	0.084
40	NR n77 DFT-BPSK /137@67 100M	Back	662000	3930	25.91	1.01	26.5	**0.381**	1.146	0.437
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	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 ANT 1	Front	6	2437	16.60	1.58	17.0	0.051	1.096	1.000	0.056
41	2.4GHz/802.11b ANT 1	Back	6	2437	16.60	0.76	17.0	**0.082**	1.096	1.000	0.090
	2.4GHz/802.11b ANT 3	Front	11	2462	16.40	-1.30	16.5	0.032	1.023	1.000	0.033
	2.4GHz/802.11b ANT 3	Back	11	2462	16.40	-0.90	16.5	0.065	1.023	1.000	0.066
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**						

➢ WLAN 5.2GHz Body SAR

Plot No.	Band/Mode	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	Front	48	5240	13.87	1.91	14.0	0.038	1.030	1.000	0.039
42	5.2GHz/802.11a	Back	48	5240	13.87	-4.25	14.0	**0.067**	1.030	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**						

➢ WLAN 5.8GHz Body SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	5.8GHz/802.11a	Front	157	5785	13.76	-1.49	14.0	0.043	1.057	1.000	0.045
43	5.8GHz/802.11a	Back	157	5785	13.76	-0.62	14.0	**0.075**	1.057	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**						

➢ Bluetooth Body SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	BT/GFSK ANT1	Front	78	2480	6.19	1.89	6.5	0.012	1.074	1.000	0.013
	BT/GFSK ANT1	Back	78	2480	6.19	-3.98	6.5	0.021	1.074	1.000	0.023
	BT/GFSK ANT3	Front	78	2480	7.07	-1.93	7.5	0.013	1.104	1.000	0.014
44	BT/GFSK ANT3	Back	78	2480	7.07	3.74	7.5	**0.023**	1.104	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. Per KDB 648474 D04v01r03, when the Reported SAR for a body-worn accessory measured without a headset connected to the handset is ≤ 1.2 W/kg, SAR testing with a headset connected to the handset is not required.
4. The WLAN SAR perform the front and back position, due considered the simultaneous SAR for body-worn.
5. Per KDB 447498 D04v01, for each exposure position, if the highest output channel Reported SAR ≤0.8W/kg, other channels SAR testing is not necessary.
6. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required when the measured SAR is ≥0.8W/kg.
7. Per KDB 941225 D05v02r05, 100% RB allocation SAR measurement is not required when the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg.

8. According to KDB 865664 D02v01r02, SAR plot is required for the highest measured SAR in each exposure configuration, wireless mode and frequency band combination.
9. Highlight part of test data means repeated test.

15.3 Body SAR in Hotspot Mode

➢ GSM Body SAR in Hotspot mode

Plot No.	Band/Mode	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	Front	190	836.6	30.25	0.33	30.5	0.234	1.059	0.248
23	GPRS850/4 slots	Back	190	836.6	30.25	-3.56	30.5	**0.497**	1.059	0.526
	GPRS850/4 slots	Left	190	836.6	30.25	0.94	30.5	0.196	1.059	0.208
	GPRS850/4 slots	Top	190	836.6	30.25	-1.22	30.5	0.199	1.059	0.211
	GPRS1900/4 slots	Front	512	1850.2	26.76	0.10	27.0	0.296	1.057	0.313
24	GPRS1900/4 slots	Back	512	1850.2	26.76	0.45	27.0	**0.503**	1.057	0.532
	GPRS1900/4 slots	Left	512	1850.2	26.76	-3.42	27.0	0.391	1.057	0.413
	GPRS1900/4 slots	Top	512	1850.2	26.76	-1.22	27.0	0.424	1.057	0.448
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ WCDMA Body SAR in Hotspot mode

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band II/RMC	Front	9538	1907.6	23.56	-1.66	24.0	0.228	1.107	0.252
25	Band II/RMC	Back	9538	1907.6	23.56	-0.85	24.0	**0.349**	1.107	0.386
	Band II/RMC	Left	9538	1907.6	23.56	-1.41	24.0	0.301	1.107	0.333
	Band II/RMC	Top	9538	1907.6	23.56	-3.12	24.0	0.340	1.107	0.376
	Band IV/RMC	Front	1513	1752.6	23.70	3.48	24.0	0.194	1.072	0.208
	Band IV/RMC	Back	1513	1752.6	23.70	-4.07	24.0	0.351	1.072	0.376
	Band IV/RMC	Left	1513	1752.6	23.70	-1.33	24.0	0.329	1.072	0.353
45	Band IV/RMC	Top	1513	1752.6	23.70	-2.86	24.0	**0.422**	1.072	0.452
	Band V/RMC	Front	4233	846.6	23.65	-2.11	24.0	0.153	1.084	0.166
27	Band V/RMC	Back	4233	846.6	23.65	-1.98	24.0	**0.251**	1.084	0.272
	Band V/RMC	Left	4233	846.6	23.65	-0.09	24.0	0.135	1.084	0.146
	Band V/RMC	Top	4233	846.6	23.65	1.19	24.0	0.151	1.084	0.164
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

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

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band2/1RB#49	Front	18700	1860	24.15	1.30	24.5	0.268	1.084	0.291
	Band2/1RB#49	Back	18700	1860	24.15	-3.61	24.5	0.379	1.084	0.411
	Band2/1RB#49	Left	18700	1860	24.15	-1.15	24.5	0.346	1.084	0.375
46	Band2/1RB#49	Top	18700	1860	24.15	-3.89	24.5	**0.401**	1.084	0.435
	Band2/50%RB#0	Front	19100	1900	23.35	1.87	23.5	0.212	1.035	0.219
	Band2/50%RB#0	Back	19100	1900	23.35	-1.62	23.5	0.308	1.035	0.319
	Band2/50%RB#0	Left	19100	1900	23.35	1.45	23.5	0.297	1.035	0.307
	Band2/50%RB#0	Top	19100	1900	23.35	-0.10	23.5	0.334	1.035	0.346
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	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	Front	20525	836.5	23.88	-0.74	24.5	0.197	1.153	0.227
29	Band5/1RB#49	Back	20525	836.5	23.88	-1.64	24.5	**0.252**	1.153	0.291
	Band5/1RB#49	Left	20525	836.5	23.88	0.08	24.5	0.164	1.153	0.189
	Band5/1RB#49	Top	20525	836.5	23.88	0.48	24.5	0.181	1.153	0.209
	Band5/50%RB#12	Front	20600	844	22.99	-0.74	23.0	0.173	1.002	0.173
	Band5/50%RB#12	Back	20600	844	22.99	-2.32	23.0	0.229	1.002	0.229
	Band5/50%RB#12	Left	20600	844	22.99	-0.83	23.0	0.145	1.002	0.145
	Band5/50%RB#12	Top	20600	844	22.99	-1.69	23.0	0.160	1.002	0.160
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

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

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band7/1RB#49	Front	20850	2510	24.31	3.00	24.5	0.125	1.045	0.131
30	Band7/1RB#49	Back	20850	2510	24.31	1.83	24.5	**0.326**	1.045	0.341
	Band7/1RB#49	Left	20850	2510	24.31	1.58	24.5	0.112	1.045	0.117
	Band7/1RB#49	Top	20850	2510	24.31	-2.07	24.5	0.154	1.045	0.161
	Band7/50%RB#0	Front	21350	2560	23.35	0.08	23.5	0.100	1.035	0.104
	Band7/50%RB#0	Back	21350	2560	23.35	-1.24	23.5	0.278	1.035	0.288
	Band7/50%RB#0	Left	21350	2560	23.35	0.10	23.5	0.091	1.035	0.094
	Band7/50%RB#0	Top	21350	2560	23.35	1.78	23.5	0.132	1.035	0.137
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

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

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band12/1RB#24	Front	23060	704	23.87	1.26	24.0	0.073	1.030	0.075
31	Band12/1RB#24	Back	23060	704	23.87	-3.04	24.0	**0.110**	1.030	0.113
	Band12/1RB#24	Left	23060	704	23.87	1.77	24.0	0.052	1.030	0.054
	Band12/1RB#24	Top	23060	704	23.87	3.06	24.0	0.061	1.030	0.063
	Band12/50%RB#12	Front	23130	711	22.79	1.15	23.0	0.066	1.050	0.069
	Band12/50%RB#12	Back	23130	711	22.79	-4.98	23.0	0.108	1.050	0.113
	Band12/50%RB#12	Left	23130	711	22.79	-1.40	23.0	0.049	1.050	0.051
	Band12/50%RB#12	Top	23130	711	22.79	0.13	23.0	0.054	1.050	0.057
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

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

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	Band41/1RB#99	Front	41490	2680	24.13	-0.17	24.5	0.123	1.089	1.008	0.135
32	Band41/1RB#99	Back	41490	2680	24.13	-1.04	24.5	**0.203**	1.089	1.008	0.223
	Band41/1RB#99	Left	41490	2680	24.13	-0.87	24.5	0.084	1.089	1.008	0.092
	Band41/1RB#99	Top	41490	2680	24.13	-1.40	24.5	0.099	1.089	1.008	0.109
	Band41/50%RB#24	Front	41490	2680	23.18	0.02	23.5	0.098	1.076	1.008	0.106
	Band41/50%RB#24	Back	41490	2680	23.18	-0.89	23.5	0.146	1.076	1.008	0.158
	Band41/50%RB#24	Left	41490	2680	23.18	-0.05	23.5	0.061	1.076	1.008	0.066
	Band41/50%RB#24	Top	41490	2680	23.18	1.24	23.5	0.076	1.076	1.008	0.082
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	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	Front	132322	1745	24.06	-1.16	24.5	0.201	1.107	0.223
	Band66/1RB#49	Back	132322	1745	24.06	-0.21	24.5	0.296	1.107	0.328
	Band66/1RB#49	Left	132322	1745	24.06	0.97	24.5	0.346	1.107	0.383
47	Band66/1RB#49	Top	132322	1745	24.06	-0.19	24.5	**0.387**	1.107	0.428
	Band66/50%RB#0	Front	132322	1745	23.00	-1.10	23.5	0.171	1.122	0.192
	Band66/50%RB#0	Back	132322	1745	23.00	1.67	23.5	0.255	1.122	0.286
	Band66/50%RB#0	Left	132322	1745	23.00	1.18	23.5	0.302	1.122	0.339
	Band66/50%RB#0	Top	132322	1745	23.00	1.78	23.5	0.326	1.122	0.366
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ NR n5 DFT-BPSK Body SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	NR n5 DFT-BPSK /1@1 20M	Front	167800	839	24.66	-0.43	25.5	0.163	1.213	0.198
	NR n5 DFT-BPSK /1@1 20M	Back	167800	839	24.66	-3.02	25.5	0.238	1.213	0.289
	NR n5 DFT-BPSK /1@1 20M	Left	167800	839	24.66	-0.55	25.5	0.139	1.213	0.169
	NR n5 DFT-BPSK /1@1 20M	Top	167800	839	24.66	-0.05	25.5	0.153	1.213	0.186
	NR n5 DFT-BPSK /25@12 20M	Front	167300	836.5	24.85	-2.97	25.5	0.167	1.161	0.194
34	NR n5 DFT-BPSK /25@12 20M	Back	167300	836.5	24.85	-1.08	25.5	**0.255**	1.161	0.296
	NR n5 DFT-BPSK /25@12 20M	Left	167300	836.5	24.85	1.69	25.5	0.154	1.161	0.179
	NR n5 DFT-BPSK /25@12 20M	Top	167300	836.5	24.85	0.19	25.5	0.176	1.161	0.204
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ NR n7 DFT-BPSK Body SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	NR n7 DFT-BPSK /1@49 20M	Front	512000	2560	22.80	-1.24	23.0	0.126	1.047	0.132
35	NR n7 DFT-BPSK /1@49 20M	Back	512000	2560	22.80	-4.13	23.0	**0.214**	1.047	0.224
	NR n7 DFT-BPSK /1@49 20M	Left	512000	2560	22.80	2.32	23.0	0.209	1.047	0.219
	NR n7 DFT-BPSK /1@49 20M	Top	512000	2560	22.80	4.30	23.0	0.080	1.047	0.084
	NR n7 DFT-BPSK /25@12 20M	Front	507000	2535	22.88	-1.81	23.0	0.089	1.028	0.091
	NR n7 DFT-BPSK /25@12 20M	Back	507000	2535	22.88	3.45	23.0	0.160	1.028	0.164
	NR n7 DFT-BPSK /25@12 20M	Left	507000	2535	22.88	-0.11	23.0	0.151	1.028	0.155
	NR n7 DFT-BPSK /25@12 20M	Top	507000	2535	22.88	1.54	23.0	0.063	1.028	0.065
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ NR n12 DFT-BPSK Body SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	NR n12 DFT-BPSK /1@1 15M	Front	141700	708.5	22.48	-3.12	23.0	0.063	1.127	0.071
	NR n12 DFT-BPSK /1@1 15M	Back	141700	708.5	22.48	-2.27	23.0	0.079	1.127	0.089
	NR n12 DFT-BPSK /1@1 15M	Left	141700	708.5	22.48	-1.48	23.0	0.039	1.127	0.044
	NR n12 DFT-BPSK /1@1 15M	Top	141700	708.5	22.48	0.28	23.0	0.046	1.127	0.052
	NR n12 DFT-BPSK /18@9 15M	Front	141300	706.5	22.42	-0.27	23.0	0.056	1.143	0.064
36	NR n12 DFT-BPSK /18@9 15M	Back	141300	706.5	22.42	-0.52	23.0	**0.085**	1.143	0.097
	NR n12 DFT-BPSK /18@9 15M	Left	141300	706.5	22.42	-1.56	23.0	0.031	1.143	0.035
	NR n12 DFT-BPSK /18@9 15M	Top	141300	706.5	22.42	-1.69	23.0	0.035	1.143	0.040
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ NR n41 DFT-BPSK Body SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	NR n41 DFT-BPSK /1@271 100M	Front	509202	2546.01	24.53	1.84	25.0	0.062	1.114	0.069
	NR n41 DFT-BPSK /1@271 100M	Back	509202	2546.01	24.53	-1.08	25.0	0.120	1.114	0.134
	NR n41 DFT-BPSK /1@271 100M	Left	509202	2546.01	24.53	0.04	25.0	0.103	1.114	0.115
	NR n41 DFT-BPSK /1@271 100M	Top	509202	2546.01	24.53	1.54	25.0	0.047	1.114	0.052
	NR n41 DFT-BPSK /137@67 100M	Front	518598	2592.99	25.40	4.10	26.0	0.081	1.148	0.093
37	NR n41 DFT-BPSK /137@67 100M	Back	518598	2592.99	25.40	-0.31	26.0	**0.192**	1.148	0.220
	NR n41 DFT-BPSK /137@67 100M	Left	518598	2592.99	25.40	-2.02	26.0	0.163	1.148	0.187
	NR n41 DFT-BPSK /137@67 100M	Top	518598	2592.99	25.40	4.63	26.0	0.069	1.148	0.079
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ NR n66 DFT-BPSK Body SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	NR n66 DFT-BPSK /1@104 40M	Front	349000	1745	21.96	0.54	22.0	0.211	1.009	0.213
	NR n66 DFT-BPSK /1@104 40M	Back	349000	1745	21.96	-0.54	22.0	0.291	1.009	0.294
	NR n66 DFT-BPSK /1@104 40M	Left	349000	1745	21.96	-1.06	22.0	0.111	1.009	0.112
	NR n66 DFT-BPSK /1@104 40M	Top	349000	1745	21.96	0.12	22.0	0.439	1.009	0.443
	NR n66 DFT-BPSK /50@25 40M	Front	352000	1760	22.45	0.23	23.0	0.239	1.135	0.271
	NR n66 DFT-BPSK /50@25 40M	Back	352000	1760	22.45	-1.67	23.0	0.338	1.135	0.384
	NR n66 DFT-BPSK /50@25 40M	Left	352000	1760	22.45	1.89	23.0	0.135	1.135	0.153
48	NR n66 DFT-BPSK /50@25 40M	Top	352000	1760	22.45	-0.17	23.0	**0.489**	1.135	0.555
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

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

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	NR n77 DFT-BPSK /1@1 100M	Front	633334	3500.01	24.60	0.94	25.0	0.259	1.096	0.284
	NR n77 DFT-BPSK /1@1 100M	Back	633334	3500.01	24.60	-0.53	25.0	0.344	1.096	0.377
	NR n77 DFT-BPSK /1@1 100M	Right	633334	3500.01	24.60	0.35	25.0	0.332	1.096	0.364
	NR n77 DFT-BPSK /1@1 100M	Top	633334	3500.01	24.60	-1.82	25.0	0.200	1.096	0.219
	NR n77 DFT-BPSK /137@67 100M	Front	633334	3500.01	25.35	-0.70	26.0	0.270	1.161	0.313
39	NR n77 DFT-BPSK /137@67 100M	Back	633334	3500.01	25.35	1.00	26.0	**0.356**	1.161	0.413
	NR n77 DFT-BPSK /137@67 100M	Right	633334	3500.01	25.35	-2.31	26.0	0.347	1.161	0.403
	NR n77 DFT-BPSK /137@67 100M	Top	633334	3500.01	25.35	-0.80	26.0	0.210	1.161	0.244
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

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

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	NR n77 DFT-BPSK /1@1 100M	Front	662000	3930	25.36	1.50	25.5	0.048	1.033	0.050
	NR n77 DFT-BPSK /1@1 100M	Back	662000	3930	25.36	1.12	25.5	0.229	1.033	0.237
	NR n77 DFT-BPSK /1@1 100M	Right	662000	3930	25.36	-0.61	25.5	0.202	1.033	0.209
	NR n77 DFT-BPSK /1@1 100M	Top	662000	3930	25.36	0.26	25.5	0.056	1.033	0.058
	NR n77 DFT-BPSK /137@67 100M	Front	662000	3930	25.91	-0.13	26.5	0.073	1.146	0.084
40	NR n77 DFT-BPSK /137@67 100M	Back	662000	3930	25.91	1.01	26.5	**0.381**	1.146	0.437
	NR n77 DFT-BPSK /137@67 100M	Right	662000	3930	25.91	-2.99	26.5	0.326	1.146	0.374
	NR n77 DFT-BPSK /137@67 100M	Top	662000	3930	25.91	4.69	26.5	0.079	1.146	0.091
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ WLAN 2.4GHz Body SAR in Hotspot mode

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	2.4GHz/802.11b ANT 1	Front	6	2437	16.60	1.58	17.0	0.051	1.096	1.000	0.056
41	2.4GHz/802.11b ANT 1	Back	6	2437	16.60	0.76	17.0	**0.082**	1.096	1.000	0.090
	2.4GHz/802.11b ANT 1	Right	6	2437	16.60	1.94	17.0	0.020	1.096	1.000	0.022
	2.4GHz/802.11b ANT 1	Top	6	2437	16.60	3.69	17.0	0.028	1.096	1.000	0.031
	2.4GHz/802.11b ANT 3	Front	11	2462	16.40	-1.30	16.5	0.032	1.023	1.000	0.033
	2.4GHz/802.11b ANT 3	Back	11	2462	16.40	-0.90	16.5	0.065	1.023	1.000	0.066
	2.4GHz/802.11b ANT 3	Right	11	2462	16.40	-0.03	16.5	0.044	1.023	1.000	0.045
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	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	Front	48	5240	13.87	1.91	14.0	0.038	1.030	1.000	0.039
	5.2GHz/802.11a	Back	48	5240	13.87	-4.25	14.0	0.067	1.030	1.000	0.069
	5.2GHz/802.11a	Right	48	5240	13.87	0.63	14.0	0.076	1.030	1.000	0.078
49	5.2GHz/802.11a	Top	48	5240	13.87	3.07	14.0	**0.088**	1.030	1.000	0.091
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**						

➢ WLAN 5.8GHz Body SAR in Hotspot mode

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	5.8GHz/802.11a	Front	157	5785	13.76	-1.49	14.0	0.043	1.057	1.000	0.045
	5.8GHz/802.11a	Back	157	5785	13.76	-0.62	14.0	0.075	1.057	1.000	0.079
	5.8GHz/802.11a	Right	157	5785	13.76	1.22	14.0	0.072	1.057	1.000	0.076
50	5.8GHz/802.11a	Top	157	5785	13.76	0.20	14.0	**0.086**	1.057	1.000	0.091
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**						

➢ Bluetooth Body SAR in Hotspot mode

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	BT/GFSK ANT1	Front	78	2480	6.19	1.89	6.5	0.012	1.074	1.000	0.013
	BT/GFSK ANT1	Back	78	2480	6.19	-3.98	6.5	0.021	1.074	1.000	0.023
	BT/GFSK ANT1	Left	78	2480	6.19	-0.45	6.5	0.013	1.074	1.000	0.014
	BT/GFSK ANT1	Top	78	2480	6.19	0.45	6.5	0.017	1.074	1.000	0.018
	BT/GFSK ANT3	Front	78	2480	7.07	-1.93	7.5	0.013	1.104	1.000	0.014
44	BT/GFSK ANT3	Back	78	2480	7.07	3.74	7.5	**0.023**	1.104	1.000	0.025
	BT/GFSK ANT3	Left	78	2480	7.07	-1.67	7.5	0.015	1.104	1.000	0.017
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**						

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 Repeated SAR measurement

Band/ Mode	Test Position	CH.	Freq. (MHz)	Measured SAR (W/kg)				
				Original	1st Repeated		2nd Repeated	
					Value	Ratio	Value	Ratio
Band IV/RMC	Right Tilted	1513	1752.6	1.058	1.049	1.01	/	/
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population				**1.6 W/kg (mW/g) Averaged over 1g**				

Note:

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

15.5 Multi-Band Simultaneous Transmission Considerations

➢ **Simultaneous Transmission Capabilities**

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

Fig.15.1 Simultaneous Transmission Paths

➢ **Multi-Band simultaneous Transmission Consideration**

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

Note:

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

15.6 SAR Simultaneous Transmission Analysis

➢ **Simultaneous Transmission**

Position		Standalone SAR(W/kg)		Σ SAR_{1g} (W/kg)
		LTE Band 5	NR n7 SA	5G NR DC_5A_n7
Head	Right Cheek	0.528	0.392	0.920
	Right Tilted	0.636	0.258	0.894
	Left Cheek	0.474	0.315	0.789
	Left Tilted	0.454	0.173	0.627
Body- worn	Front	0.227	0.132	0.359
	Back	0.291	0.224	0.515
Hotspot	Front	0.227	0.132	0.359
	Back	0.291	0.224	0.515
	Left	0.189	0.219	0.408
	Right	0.000	0.000	0.000
	Top	0.209	0.084	0.293
	Bottom	0.000	0.000	0.000

Position		Standalone SAR(W/kg)		Σ SAR_{1g} (W/kg)
		LTE Band 5	NR n41(n38) SA	5G NR DC_5A_n41
Head	Right Cheek	0.528	0.309	0.837
	Right Tilted	0.636	0.238	0.874
	Left Cheek	0.474	0.178	0.652
	Left Tilted	0.454	0.122	0.576
Body- worn	Front	0.227	0.093	0.320
	Back	0.291	0.220	0.511
Hotspot	Front	0.227	0.093	0.320
	Back	0.291	0.220	0.511
	Left	0.189	0.187	0.376
	Right	0.000	0.000	0.000
	Top	0.209	0.079	0.288
	Bottom	0.000	0.000	0.000

Position		Standalone SAR(W/kg)		Σ SAR_{1g} (W/kg)
		LTE Band 41(38)	NR n41(n38) SA	5G NR DC_41A_n41
Head	Right Cheek	0.233	0.309	0.542
	Right Tilted	0.254	0.238	0.492
	Left Cheek	0.126	0.178	0.304
	Left Tilted	0.151	0.122	0.273
Body- worn	Front	0.135	0.093	0.228
	Back	0.223	0.220	0.443
Hotspot	Front	0.135	0.093	0.228
	Back	0.223	0.220	0.443
	Left	0.092	0.187	0.279
	Right	0.000	0.000	0.000
	Top	0.109	0.079	0.188
	Bottom	0.000	0.000	0.000

Position		Standalone SAR(W/kg)		Σ SAR_{1g} (W/kg)
		LTE Band 2	NR n77(n78) SA	5G NR DC_2A_n77 & DC_2A_n78
Head	Right Cheek	0.229	0.368	0.597
	Right Tilted	0.389	0.728	1.117
	Left Cheek	0.096	0.517	0.613
	Left Tilted	0.146	0.799	0.945
Body- worn	Front	0.291	0.313	0.604
	Back	0.411	0.413	0.824
Hotspot	Front	0.291	0.313	0.604
	Back	0.411	0.413	0.824
	Left	0.375	0.000	0.375
	Right	0.000	0.403	0.403
	Top	0.435	0.244	0.679
	Bottom	0.000	0.000	0.000

Position		Standalone SAR(W/kg)		Σ SAR_{1g} (W/kg)
		LTE Band 5	NR n77(n78) SA	5G NR DC_5A_n77 & DC_5A_n78
Head	Right Cheek	0.528	0.368	0.896
	Right Tilted	0.636	0.728	1.364
	Left Cheek	0.474	0.517	0.991
	Left Tilted	0.454	0.799	1.253
Body- worn	Front	0.227	0.313	0.540
	Back	0.291	0.413	0.704
Hotspot	Front	0.227	0.313	0.540
	Back	0.291	0.413	0.704
	Left	0.189	0.000	0.189
	Right	0.000	0.403	0.403
	Top	0.209	0.244	0.453
	Bottom	0.000	0.000	0.000

Position		Standalone SAR(W/kg)		Σ SAR_{1g} (W/kg)
		LTE Band 7	NR n77(n78) SA	5G NR DC_7A_n77 & DC_7A_n78
Head	Right Cheek	0.513	0.368	0.881
	Right Tilted	0.450	0.728	1.178
	Left Cheek	0.304	0.517	0.821
	Left Tilted	0.275	0.799	1.074
Body- worn	Front	0.131	0.313	0.444
	Back	0.341	0.413	0.754
Hotspot	Front	0.131	0.313	0.444
	Back	0.341	0.413	0.754
	Left	0.117	0.000	0.117
	Right	0.000	0.403	0.403
	Top	0.161	0.244	0.405
	Bottom	0.000	0.000	0.000

Position		Standalone SAR(W/kg)		Σ SAR_{1g} (W/kg)
		LTE Band 41(38)	NR n77(n78) SA	5G NR DC_41A_n77 & DC_41A_n78 & DC_38A_n78
Head	Right Cheek	0.233	0.368	0.601
	Right Tilted	0.254	0.728	0.982
	Left Cheek	0.126	0.517	0.643
	Left Tilted	0.151	0.799	0.950
Body- worn	Front	0.135	0.313	0.448
	Back	0.223	0.413	0.636
Hotspot	Front	0.092	0.313	0.448
	Back	0.000	0.413	0.636
	Left	0.109	0.000	0.092
	Right	0.000	0.403	0.403
	Top	0.233	0.244	0.353
	Bottom	0.254	0.000	0.000

Position		Standalone SAR(W/kg)		Σ SAR_{1g} (W/kg)
		LTE Band 66	NR n77(n78) SA	5G NR DC_66A_n77 & DC_66A_n78
Head	Right Cheek	0.349	0.368	0.717
	Right Tilted	0.477	0.728	1.205
	Left Cheek	0.226	0.517	0.743
	Left Tilted	0.302	0.799	1.101
Body- worn	Front	0.223	0.313	0.536
	Back	0.328	0.413	0.741
Hotspot	Front	0.223	0.313	0.536
	Back	0.328	0.413	0.741
	Left	0.383	0.000	0.383
	Right	0.000	0.403	0.403
	Top	0.428	0.244	0.672
	Bottom	0.000	0.000	0.000

Position		Standalone SAR(W/kg)				Σ SAR_{1g} (W/kg)		
		1	2	3	4	1+2	1+3	1+4
		WWAN	2.4G WLAN	5G WLAN	BT			
Head	Right Cheek	0.920	0.083	0.167	0.025	1.003	1.087	0.945
	Right Tilted	1.364	0.064	0.204	0.012	1.428	**1.568**	1.376
	Left Cheek	0.991	0.104	0.294	0.027	1.095	1.285	1.018
	Left Tilted	1.253	0.070	0.159	0.016	1.323	1.412	1.269
Body-worn	Front	0.604	0.056	0.045	0.014	0.660	0.649	0.618
	Back	0.824	0.090	0.079	0.025	0.914	0.903	0.849
Hotspot	Front	0.604	0.056	0.045	0.014	0.660	0.649	0.618
	Back	0.824	0.090	0.079	0.025	0.914	0.903	0.849
	Left	0.413	0.000	0.000	0.017	0.413	0.413	0.430
	Right	0.403	0.045	0.078	0.000	0.448	0.481	0.403
	Top	0.679	0.031	0.091	0.018	0.710	0.770	0.697
	Bottom	0.000	0.000	0.000	0.000	0.000	0.000	0.000

➢ **Simultaneous Transmission Conclusion**

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

15.7 Measurement Uncertainty

Per KDB865664 D01 SAR Measurement 100 MHz to 6 GHz v01r04, when the highest measured 1-g SAR within a frequency band is < 1.5 W/kg, the extensive SAR measurement uncertainty analysis described in IEEE Std 1528-2013 is not required in SAR reports submitted for equipment approval. The equivalent ratio (1.5/1.6) is applied to extremity and occupational exposure conditions.

16 Reference

[1]. FCC 47 CFR Part 2 “Frequency Allocations and Radio Treaty Matters; General Rules and Regulations”

[2]. ANSI/IEEE Std. C95.1-1992, “IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz”, September 1992

[3]. IEEE Std. 1528-2013, “Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques”, September2013

[4]. OpenSAR V5 Software User Manual

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

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

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

[8]. FCC KDB 941225 D01 v03r01, “3G SAR MEAUREMENT PROCEDURES”, October 2015

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

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

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

Appendix A: Plots of SAR System Check

System check at 750 MHz

Date of measurement: 4/11/2022

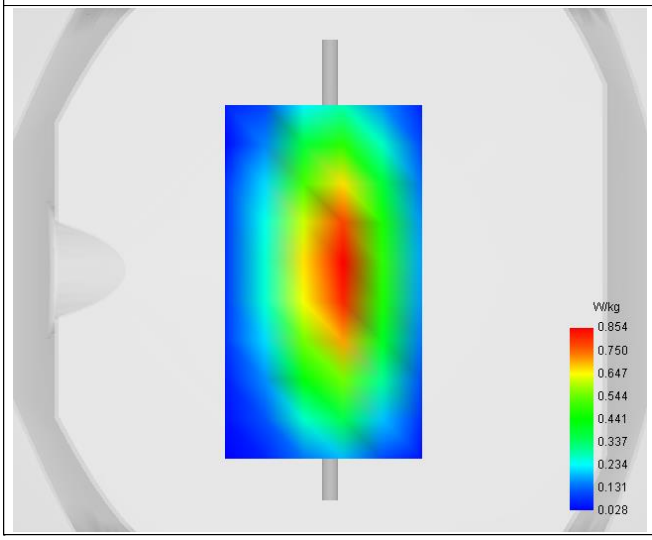
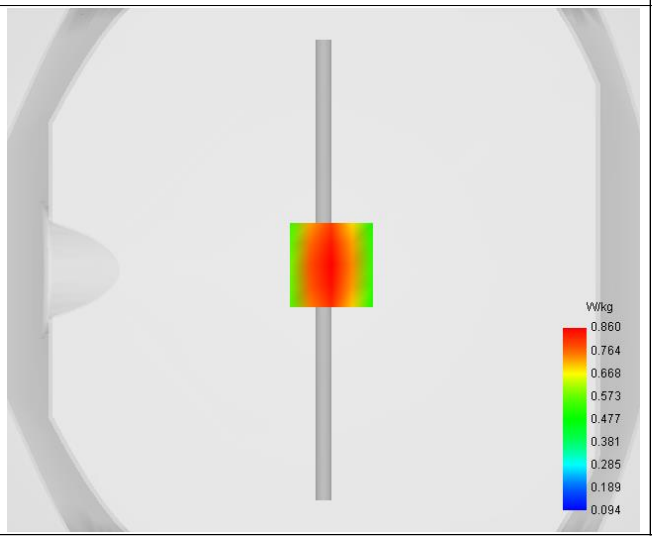
A. Experimental conditions.

Probe	SN 18/21 EPGO354
ConvF	1.70
Area Scan	surf_sam_plan.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Dipole
Band	CW750
Channels	Middle
Signal	CW (Crest factor: 1.0)

B. Permitivity

Frequency (MHz)	750.000000
Relative permitivity (real part)	41.320000
Conductivity (S/m)	0.880000

C. SAR Surface and Volume

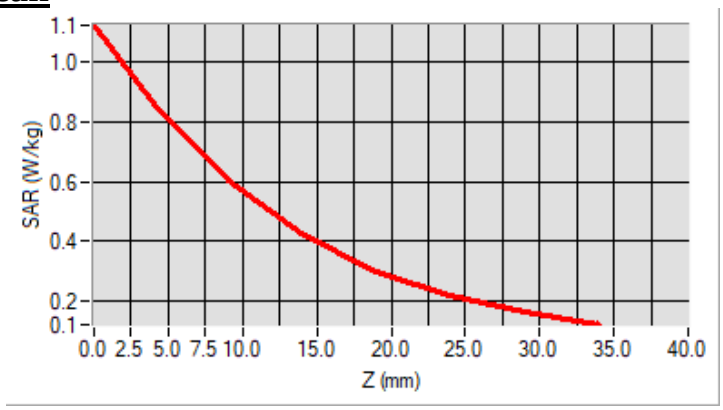
SURFACE SAR	VOLUME SAR
	

Maximum location: X=3.00, Y=2.00 ; SAR Peak: 1.13 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.540261
SAR 1g (W/Kg)	0.849360
Variation (%)	1.920000

E. Z Axis Scan



System check at 835 MHz

Date of measurement: 4/11/2022

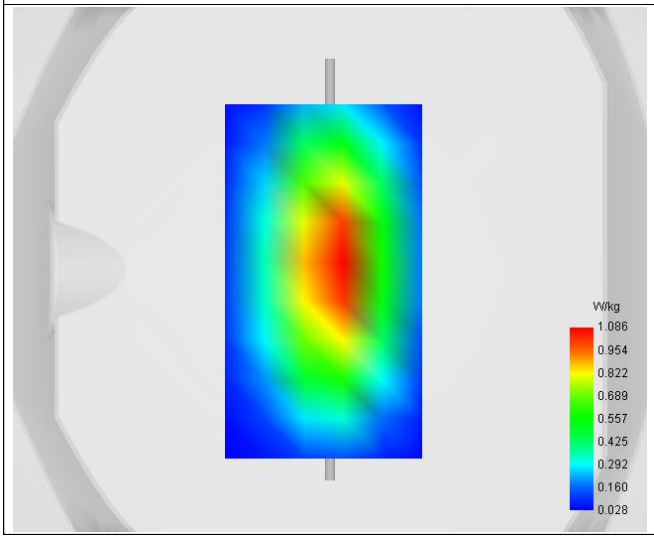
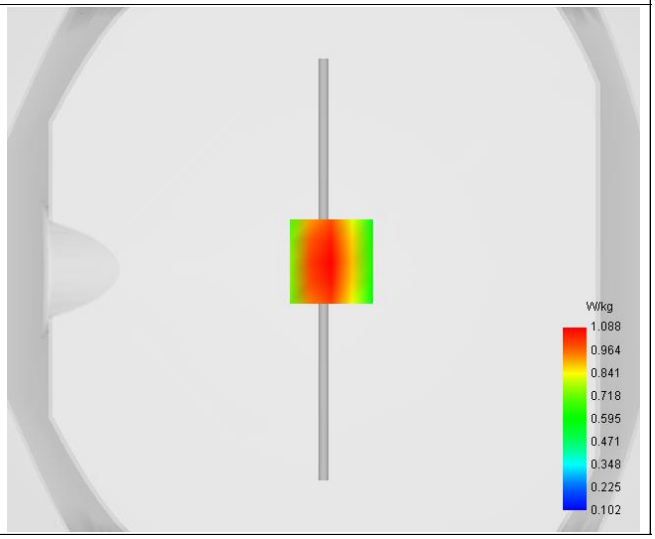
A. Experimental conditions.

Probe	SN 18/21 EPGO354
ConvF	1.73
Area Scan	surf_sam_plan.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Dipole
Band	CW835
Channels	Middle
Signal	CW (Crest factor: 1.0)

B. Permitivity

Frequency (MHz)	835.000000
Relative permitivity (real part)	40.680000
Conductivity (S/m)	0.890654

C. SAR Surface and Volume

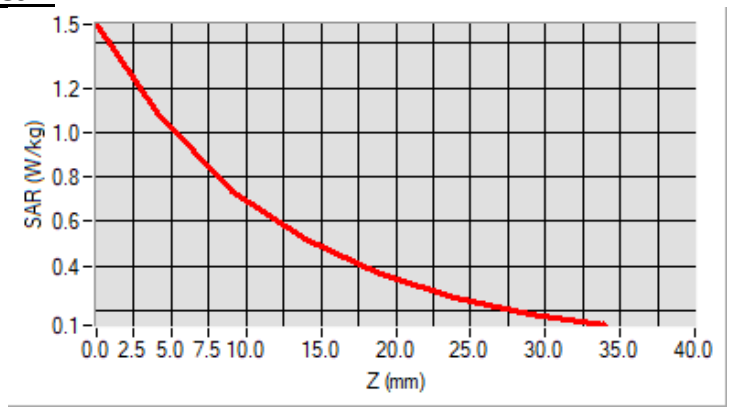
SURFACE SAR	VOLUME SAR
	

Maximum location: X=3.00, Y=3.00 ; SAR Peak: 1.50 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.593132
SAR 1g (W/Kg)	0.945724
Variation (%)	0.360000

E. Z Axis Scan



System check at 1750 MHz

Date of measurement: 6/11/2022

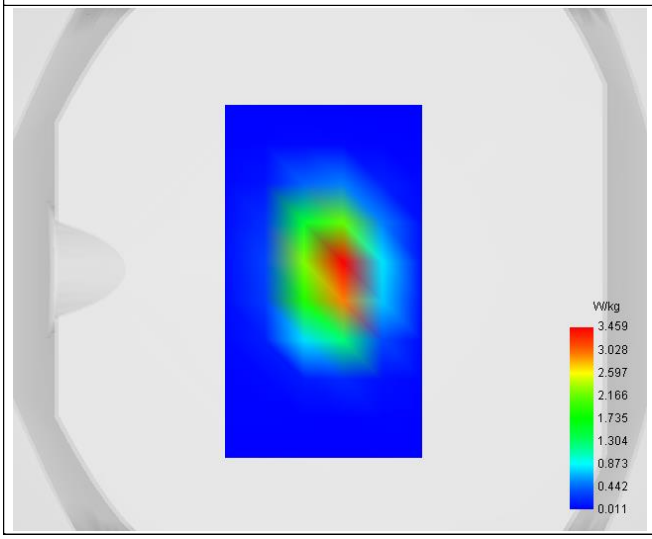
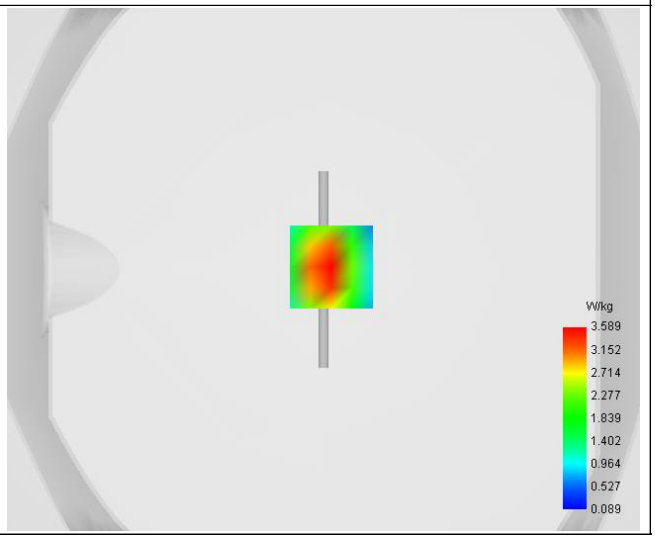
A. Experimental conditions.

Probe	SN 18/21 EPGO354
ConvF	2.05
Area Scan	surf_sam_plan.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Dipole
Band	CW1750
Channels	Middle
Signal	CW (Crest factor: 1.0)

B. Permitivity

Frequency (MHz)	1750.000000
Relative permitivity (real part)	39.690514
Conductivity (S/m)	1.351210

C. SAR Surface and Volume

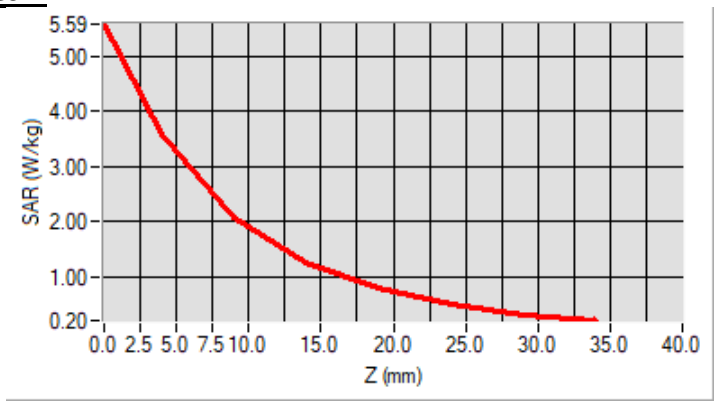
SURFACE SAR	VOLUME SAR
	

Maximum location: X=3.00, Y=1.00 ; SAR Peak: 5.69 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	1.904122
SAR 1g (W/Kg)	3.580123
Variation (%)	0.130000

E. Z Axis Scan



System check at 1900 MHz

Date of measurement: 6/11/2022

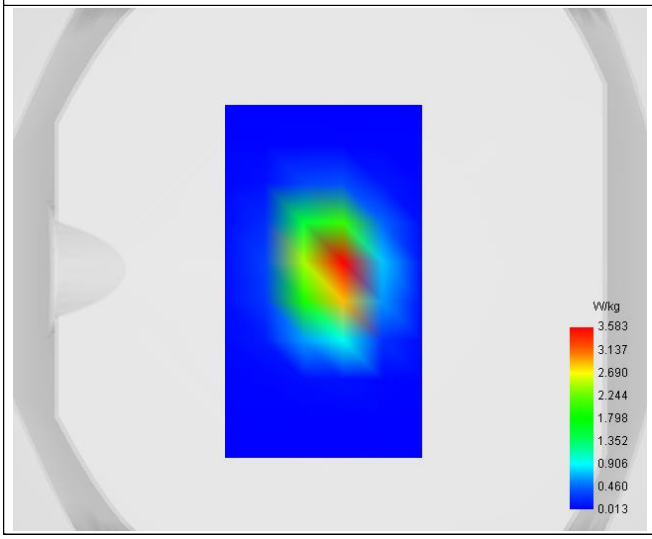
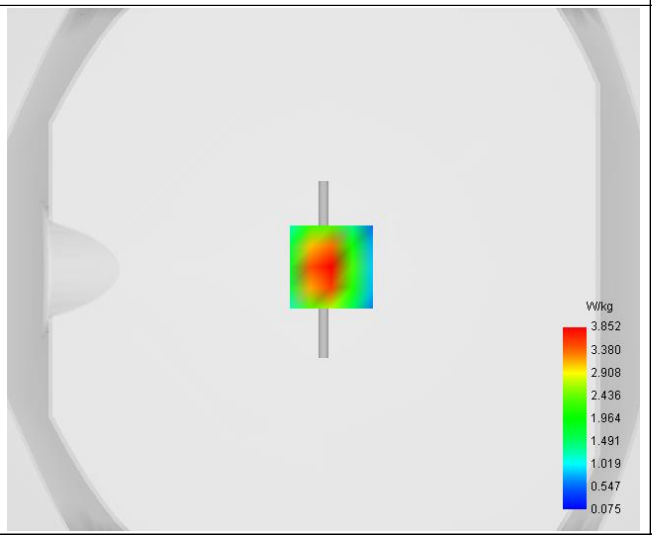
A. Experimental conditions.

Probe	SN 18/21 EPGO354
ConvF	2.00
Area Scan	surf_sam_plan.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Dipole
Band	CW1900
Channels	Middle
Signal	CW (Crest factor: 1.0)

B. Permitivity

Frequency (MHz)	1900.000000
Relative permitivity (real part)	39.330000
Conductivity (S/m)	1.373667

C. SAR Surface and Volume

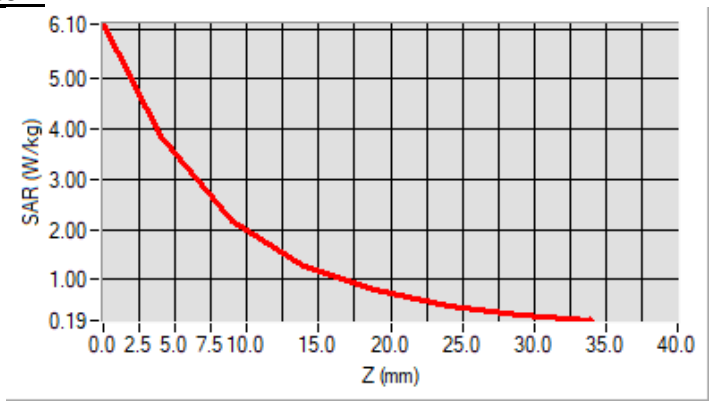
SURFACE SAR	VOLUME SAR
	

Maximum location: X=3.00, Y=1.00 ; SAR Peak: 6.27 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	2.021331
SAR 1g (W/Kg)	3.910241
Variation (%)	-1.660000

E. Z Axis Scan



System check at 2450 MHz

Date of measurement: 9/11/2022

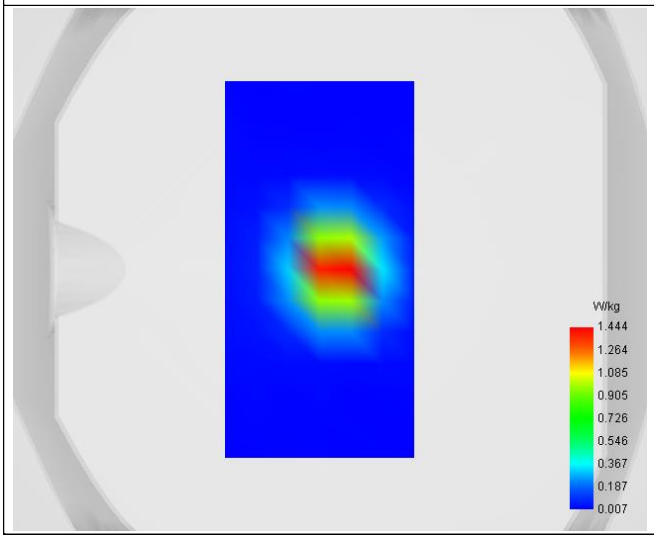
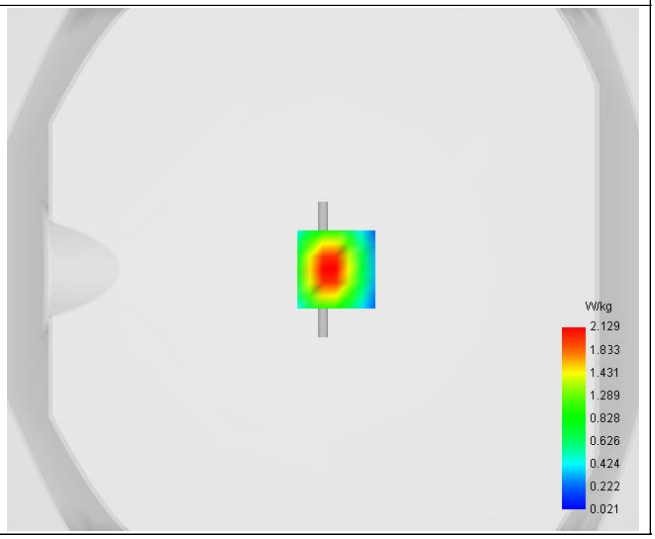
A. Experimental conditions.

Probe	SN 18/21 EPGO354
ConvF	2.46
Area Scan	surf_sam_plan.txt
Zoom Scan	7x7x7,dx=5mm dy=5mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Dipole
Band	CW2450
Channels	Middle
Signal	CW (Crest factor: 1.0)

B. Permitivity

Frequency (MHz)	2450.000000
Relative permitivity (real part)	38.860001
Conductivity (S/m)	1.791240

C. SAR Surface and Volume

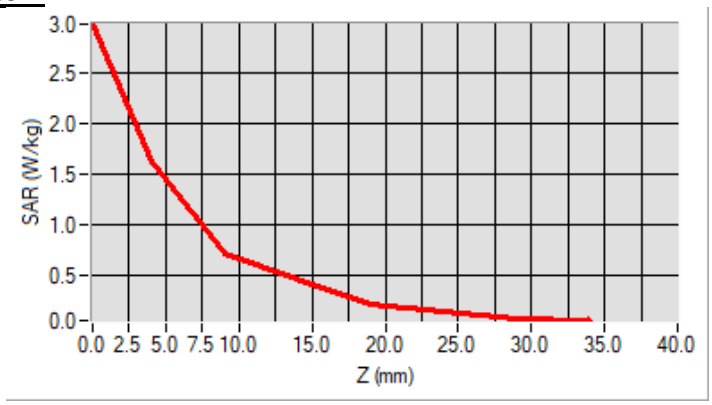
SURFACE SAR	VOLUME SAR
	

Maximum location: X=5.00, Y=0.00 ; SAR Peak: 2.67 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.946283
SAR 1g (W/Kg)	2.113029
Variation (%)	0.020000

E. Z Axis Scan



System check at 2600 MHz

Date of measurement: 9/11/2022

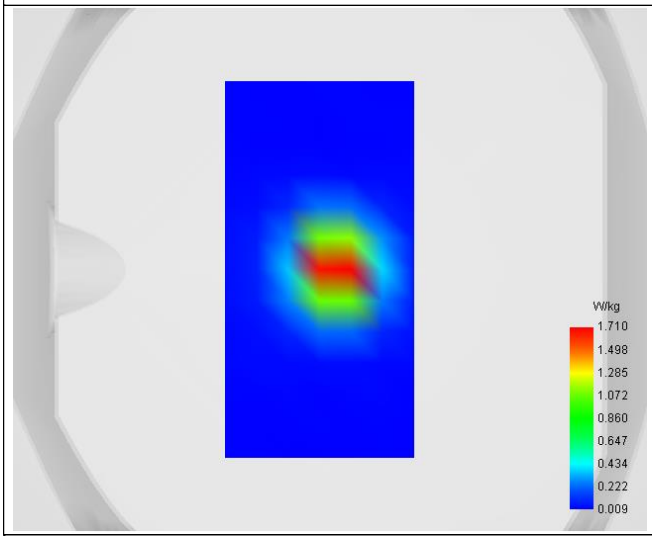
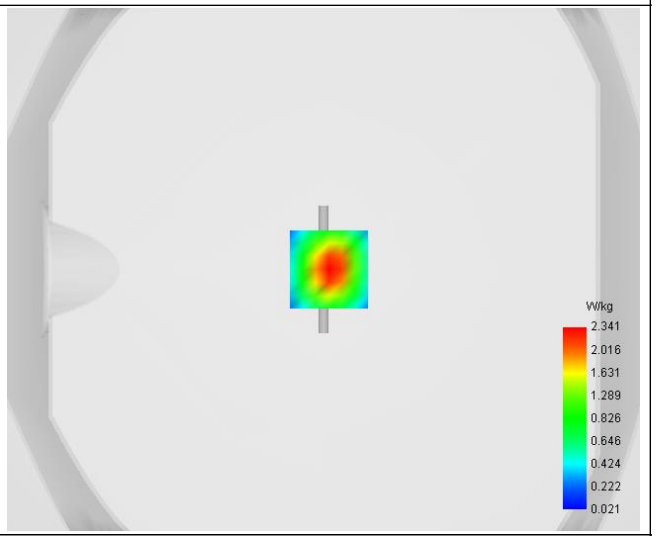
A. Experimental conditions.

Probe	SN 18/21 EPGO354
ConvF	2.27
Area Scan	surf_sam_plan.txt
Zoom Scan	7x7x7,dx=5mm dy=5mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Dipole
Band	CW2600
Channels	Middle
Signal	CW (Crest factor: 1.0)

B. Permitivity

Frequency (MHz)	2600.000000
Relative permitivity (real part)	38.200000
Conductivity (S/m)	1.940111

C. SAR Surface and Volume

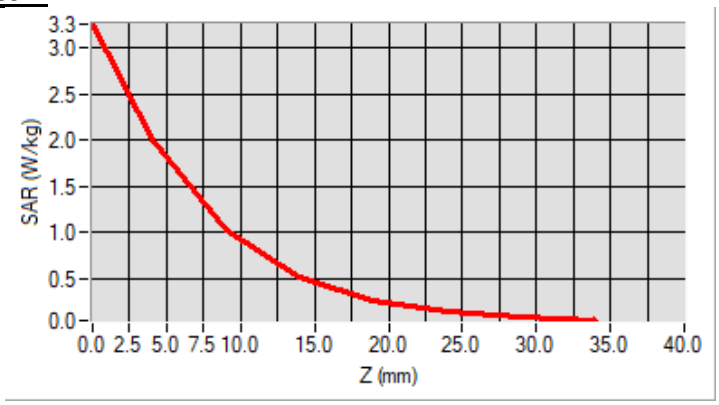
SURFACE SAR	VOLUME SAR
	

Maximum location: X=3.00, Y=0.00 ; SAR Peak: 3.24 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.938113
SAR 1g (W/Kg)	2.210141
Variation (%)	3.440000

E. Z Axis Scan



System check at 3500 MHz

Date of measurement: 11/11/2022

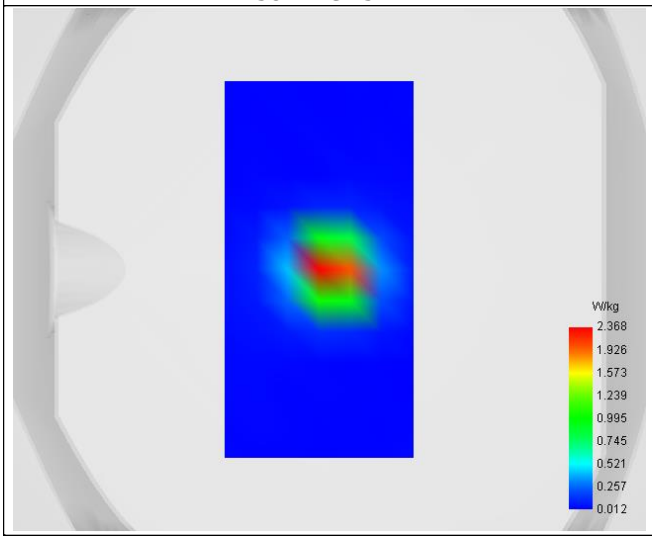
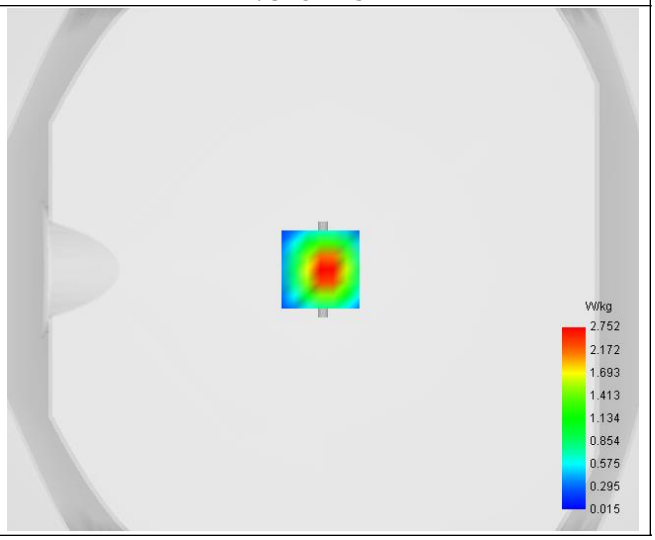
A. Experimental conditions.

Probe	SN 18/21 EPGO354
ConvF	2.10
Area Scan	surf_sam_plan.txt
Zoom Scan	7x7x8,dx=5mm dy=5mm dz=4mm,Complete
Phantom	Validation plane
Device Position	Dipole
Band	CW3500
Channels	Middle
Signal	CW (Crest factor: 1.0)

B. Permitivity

Frequency (MHz)	3500.000000
Relative permitivity (real part)	38.780101
Conductivity (S/m)	2.930342

C. SAR Surface and Volume

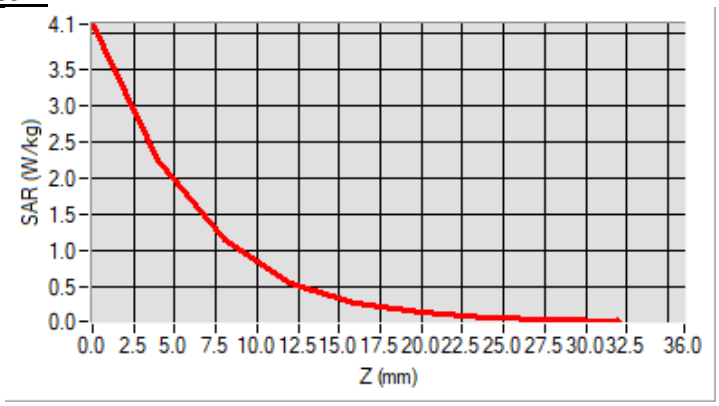
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-1.00, Y=0.00 ; SAR Peak: 4.21 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.932112
SAR 1g (W/Kg)	2.513207
Variation (%)	-2.330000

E. Z Axis Scan



System check at 3900 MHz

Date of measurement: 11/11/2022

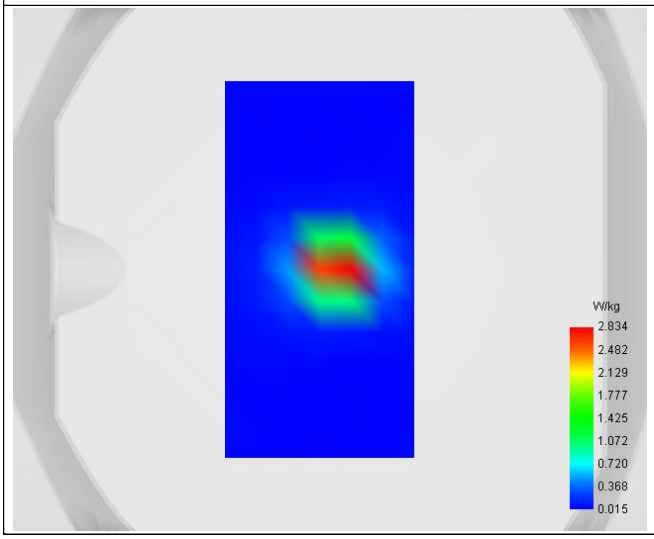
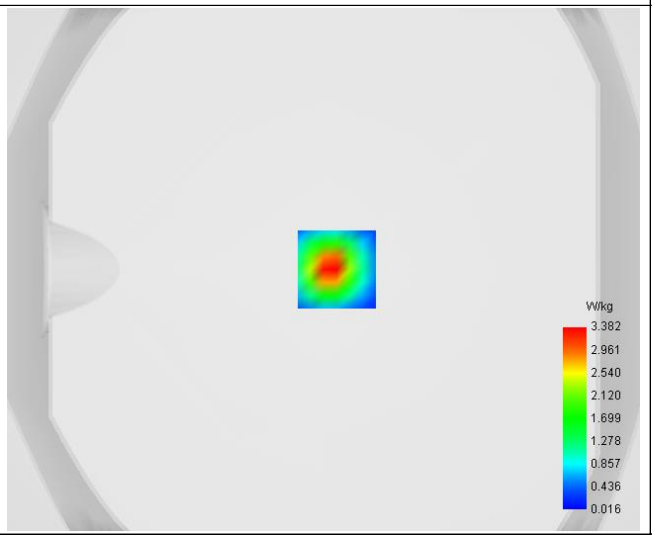
A. Experimental conditions.

Probe	SN 18/21 EPGO354
ConvF	2.41
Area Scan	surf_sam_plan.txt
Zoom Scan	7x7x8,dx=5mm dy=5mm dz=4mm,Complete
Phantom	Validation plane
Device Position	Dipole
Band	CW3900
Channels	Middle
Signal	CW (Crest factor: 1.0)

B. Permitivity

Frequency (MHz)	3900.000000
Relative permitivity (real part)	38.120000
Conductivity (S/m)	3.360162

C. SAR Surface and Volume

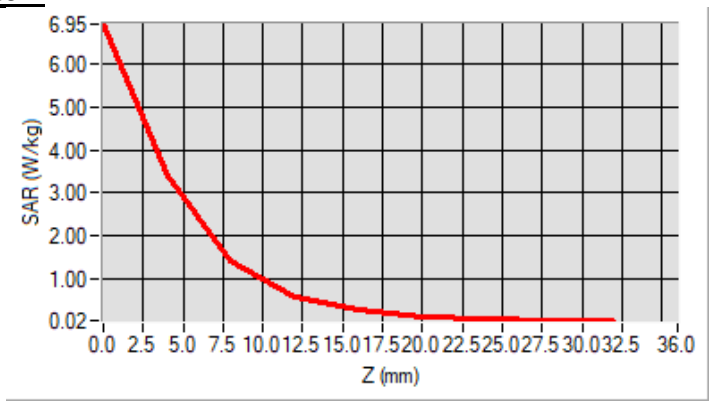
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-1.00, Y=0.00 ; SAR Peak: 5.2 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.945128
SAR 1g (W/Kg)	2.630124
Variation (%)	-0.020000

E. Z Axis Scan



System check at 5200 MHz

Date of measurement: 14/11/2022

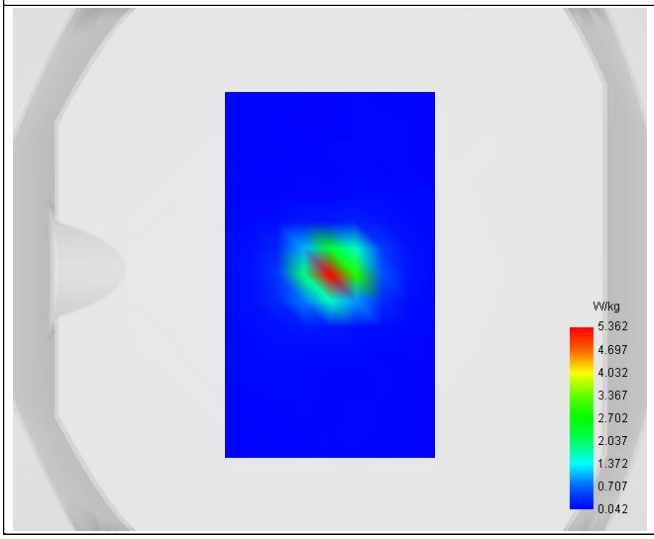
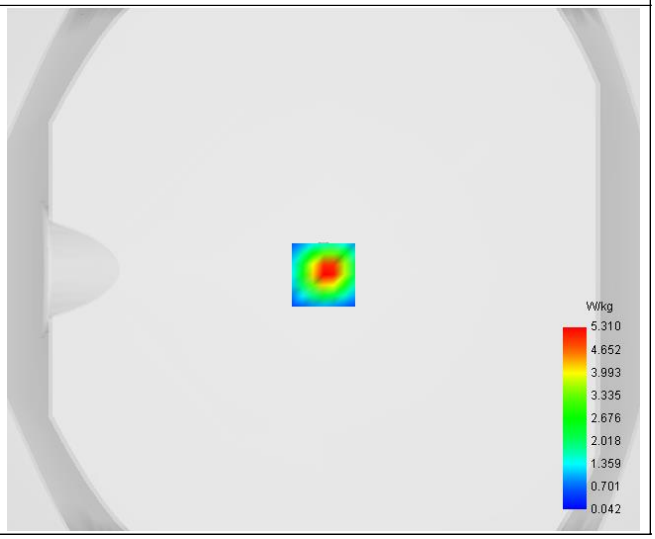
A. Experimental conditions.

Probe	SN 18/21 EPGO354
ConvF	1.71
Area Scan	surf_sam_plan.txt
Zoom Scan	7x7x12,dx=4mm dy=4mm dz=2mm,Complete
Phantom	Validation plane
Device Position	Dipole
Band	CW5200
Channels	Middle
Signal	CW (Crest factor: 1.0)

B. Permitivity

Frequency (MHz)	5200.000000
Relative permitivity (real part)	37.100000
Conductivity (S/m)	4.731778

C. SAR Surface and Volume

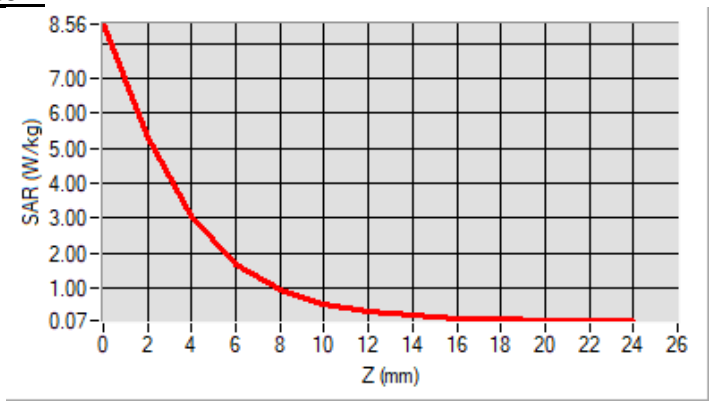
SURFACE SAR	VOLUME SAR
	

Maximum location: X=0.00, Y=-2.00 ; SAR Peak: 9.16 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.913283
SAR 1g (W/Kg)	2.950134
Variation (%)	1.710000

E. Z Axis Scan



System check at 5800 MHz

Date of measurement: 14/11/2022

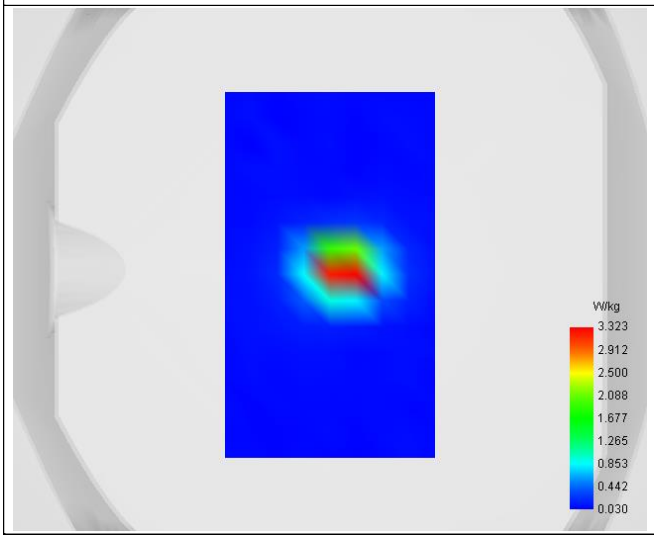
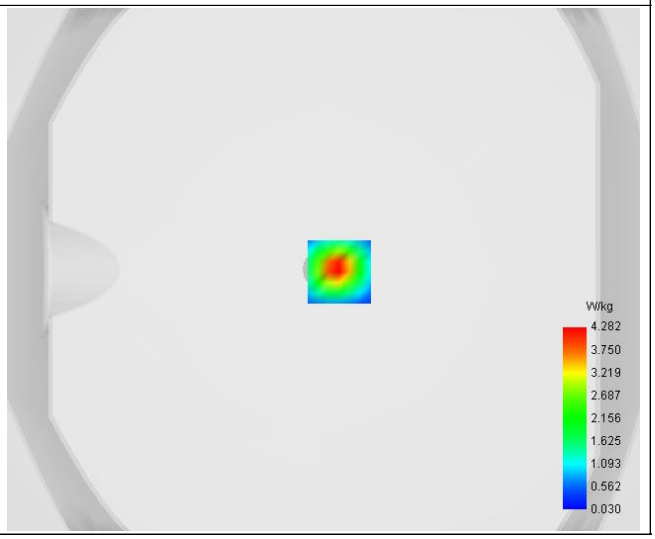
A. Experimental conditions.

Probe	SN 18/21 EPGO354
ConvF	1.94
Area Scan	surf_sam_plan.txt
Zoom Scan	7x7x12,dx=4mm dy=4mm dz=2mm,Complete
Phantom	Validation plane
Device Position	Dipole
Band	CW5800
Channels	Middle
Signal	CW (Crest factor: 1.0)

B. Permitivity

Frequency (MHz)	5800.000000
Relative permitivity (real part)	35.100000
Conductivity (S/m)	5.221501

C. SAR Surface and Volume

SURFACE SAR	VOLUME SAR
	

Maximum location: X=6.00, Y=-1.00 ; SAR Peak: 7.66 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.906031
SAR 1g (W/Kg)	2.948025
Variation (%)	0.320000

E. Z Axis Scan