SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch

FCC SAR TEST REPORT

Application No.:	ZEWM2309001295RG01
Applicant:	vivo Mobile Communication Co., Ltd.
Manufacturer:	vivo Mobile Communication Co., Ltd.
Product Name:	Mobile Phone
Model No.(EUT):	V2314
Trade Mark:	vivo
FCC ID:	2AUCY-V2314
Standards:	FCC 47CFR §2.1093
Date of Receipt:	2023/09/05
Date of Test:	2023/09/12 to 2023/10/12
Date of Issue:	2023/10/22
Test conclusion:	**PASS ***

* In the configuration tested, the EUT detailed in this report complied with the standards specified above.

Authorized Signature:

Ervin Li

Regulatory Manager

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REVISION HISTORY

Report Number	Revision	Description	Issue Date
ZEWM2309001295RG01	01	Original	2023/10/22

Prepared By	Vito Wang **Vito Wang**
Checked By	Roman Pan **Roman Pan**

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TEST SUMMARY

Frequency Band	Maximum Reported SAR(W/kg)			
	Head	Body-worn	Hotspot	Product specific 10g SAR
GSM850	0.54	0.27	0.58	/
GSM1900	0.75	0.28	0.52	/
WCDMA Band II	<0.10	0.32	0.58	/
WCDMA Band IV	<0.10	0.29	0.50	/
WCDMA Band V	0.46	0.24	0.45	/
LTE Band 2	0.74	0.39	0.68	2.14
LTE Band 7	0.81	0.63	0.60	**2.14**
LTE Band 12/17	0.21	0.10	0.27	/
LTE Band 13	0.40	0.21	0.44	/
LTE Band 26/5	0.53	0.24	0.49	/
LTE Band 41/38	<0.10	0.23	0.33	/
LTE Band 66/4	0.74	0.32	0.58	/
NR Band 2	0.13	0.32	0.55	/
NR Band 7	0.66	0.75	0.56	1.83
NR Band 26/5	0.84	0.26	0.57	/
NR Band 38	0.68	0.57	0.60	1.55
NR Band 41	0.63	0.72	0.57	1.53
NR Band 66	0.71	0.34	0.65	/
NR Band 77	**0.98**	0.76	**0.75**	1.86
NR Band 78	0.84	**0.93**	0.60	1.99
WI-FI (2.4GHz)	0.36	0.14	0.28	/
WI-FI (5GHz)	0.45	0.40	0.74	1.83
BT	0.19	<0.10	<0.10	/
SAR Limited(W/kg)	1.6			4.0
Maximum Simultaneous Transmission SAR (W/kg)				
Scenario	Head	Body-worn	Hotspot	Product specific 10g SAR
Sum SAR	1.38	1.36	1.37	3.11
SPLSR	/	/	/	/
SPLSR Limited	0.04			0.10

Note:
1) The Simultaneous transmission SAR is the same test position of the WWAN antenna + WiFi/BT antenna.
2) According to TCB workshop (Overlapping LTE Bands): SAR in LTE band 17 (frequency range: 704-716 MHz) is covered by LTE band 12 (frequency range: 699-716 MHz). SAR in LTE band 5 (frequency range: 824-849 MHz) is covered by LTE band 26 (frequency range: 814-849 MHz). The SAR in LTE band 38 (frequency range: 2570-2620 MHz) is covered by LTE band 41 (frequency range: 2496-2690 MHz). The SAR in LTE band 4 (frequency range: 1710~1755 MHz) is covered by LTE band 66 (frequency range: 1710~1780 MHz). The SAR in NR band 5 (frequency range: 824-849 MHz) is covered by NR band 26 (frequency range: 814-849 MHz). Because the frequency range is similar, the maximum tuning limit is the same, and the channel bandwidth and other operating parameters for the smaller band is fully supported by the larger band.

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1 General Information

1.1 Details of Client

Applicant:	vivo Mobile Communication Co., Ltd.
Address:	No.1, vivo Road, Chang'an, Dongguan, Guangdong, China
Manufacturer:	vivo Mobile Communication Co., Ltd.
Address:	No.1, vivo Road, Chang'an, Dongguan, Guangdong, China

1.2 Test Location

Company:	SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch
Address:	No. 1 Workshop, M-10, Middle section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China
Post code:	518057
Test engineer:	Claire Shen, Charley Yi, Mike Li, Durant Lin, Bernie Zhuang, Messi Chen, James Zheng, Ethan Li

1.3 Test Facility

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

• A2LA (Certificate No. 3816.01)

SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 3816.01.

• Innovation, Science and Economic Development Canada

SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0006.

IC#: 4620C.

• FCC –Designation Number: CN1336

SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch has been recognized as an accredited testing laboratory.

Designation Number: CN1336. Test Firm Registration Number: 787754.

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1.4 General Description of EUT

Device Type :	portable device		
Exposure Category:	uncontrolled environment / general population		
Product Name:	Mobile Phone		
Model No.(EUT):	V2314		
FCC ID:	2AUCY-V2314		
Trade Mark:	vivo		
Product Phase:	Identical Prototype		
IMEI:	864236069991151 864236069991839 864236069991698 864236069992514 864236069981798 864236069991532 864236069991672		
Hardware Version:	MP_0.1		
Software Version:	PD2325HF_EX_A_13.0.6.4.W30		
Antenna Type:	PIFA Antenna		
Device Operating Configurations :			
Modulation Mode:	**GSM:** GMSK, 8PSK; **WCDMA:** QPSK, 16QAM(HSPA+); **LTE:** QPSK,16QAM,64QAM **5G NR:** DFT-s-OFDM (PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM), CP-OFDM (QPSK, 16QAM, 64QAM, 256QAM) **WIFI:** DSSS, OFDM; **BT:** GFSK, π/4DQPSK,8DPSK **NFC:** ASK		
Device Class:	B		
GPRS Multi-slots Class:	33	EGPRS Multi-slots Class:	33
HSDPA UE Category:	24	HSUPA UE Category	6
DC-HSDPA UE Category:	24		
Power Class:	4,tested with power level 5(GSM850)		
	1,tested with power level 0(GSM1900)		
	3, tested with power control “all 1”(WCDMA Band)		
	3, tested with power control Max Power(LTE Band)		
Frequency Bands:	Band	Tx (MHz)	Rx (MHz)
	GSM850	824~849	869~894
	GSM1900	1850~1910	1930~1990
	WCDMA Band II	1850~1910	1930~1990
	WCDMA Band IV	1710~1755	2110~2155
	WCDMA Band V	824~849	869~894
	LTE Band 2	1850 ~1910	1930 ~1990
	LTE Band 4	1710~1755	2110~2155
	LTE Band 5	824~849	869-894
	LTE Band 7	2500~2570	2620~2690
	LTE Band 12	699~716	729~746
	LTE Band 13	777~787	746~756
	LTE Band 17	704-716	734-746

	LTE Band 26	814~849	859~894
	LTE Band 38	2570~2620	2570~2620
	LTE Band 41	2496~2690	2496~2690
	LTE Band 66	1710~1780	2110~2120
	NR Band n2	1850 ~1910	1930 ~1990
	NR Band n5	824~849	869-894
	NR Band n7	2500~2570	2620~2690
	NR Band n26	814~849	859~894
	NR Band n38	2570~2620	2570~2620
	NR Band n41 (Class 2/3)	2496~2690	2496~2690
	NR Band n66	1710~1780	2110~2120
	NR Band n77	3450~3550	3450~3550
		3700~3980	3700~3980
	NR Band n78 (Class 2/3)	3450~3550	3450~3550
		3700~3800	3700~3800
	Bluetooth	2402~2480	2402~2480
	Wi-Fi 2.4G	2412~2462	2412~2462
	Wi-Fi 5G	5150~5250	5150~5250
		5250~5350	5250~5350
		5470~5725	5470~5725
		5725~5850	5725~5850
	NFC	13.56	13.56
RF Cable:	☒ Provided by the applicant ☐ Provided by the laboratory		
Battery Information:	Model:	BA16	
	Normal Voltage:	+3.91V	
	Rated capacity:	4700mAh	
	Manufacturer:	Dongguan NVT Technology Co.,Ltd	
Note: *Since the above data and/or information is provided by the client relevant results or conclusions of this report are only made for these data and/or information, SGS is not responsible for the authenticity, integrity and results of the data and information and/or the validity of the conclusion. Remark: As above information is provided and confirmed by the applicant. SGS is not liable to the accuracy, suitability, reliability or/and integrity of the information.			

Note:
1.When the user makes a call in the head scene and triggers the sensor distance mechanism, WCDMA B2/4, LTE and NR at Antenna 14 cannot be transmitted, so the Head SAR test for WCDMA B2/4, LTE and NR at Antenna 14 were not required.
2. Sample1 and sample2 only have different memory, sample1 is 8G+256G, and sample2 is 12G+256G. Therefore, sample2 only the worst tested based on sample1.

1.4.1 DUT Antenna Locations (Back View)

The DUT Antenna Locations can be referred to Appendix F
Note:
1) The test device is a smart phone. The overall diagonal dimension of this device is 177mm. Per KDB 648474 D04, because the diagonal distance of this device is ≥160mm, so it is a phablet.

According to the distance between NR/LTE/WCDMA/GSM/WIFI/BT antennas and the sides of the EUT we can draw the conclusion that:

Distance of the Antenna to the EUT surface/edge						
Mode	Front	Back	Left	Right	Top	Bottom
Ant11	≤25mm	≤25mm	≤25mm	>25mm	≤25mm	>25mm
Ant12	≤25mm	≤25mm	≤25mm	>25mm	≤25mm	>25mm
Ant13	≤25mm	≤25mm	≤25mm	>25mm	≤25mm	>25mm
Ant14	≤25mm	≤25mm	≤25mm	>25mm	≤25mm	>25mm
Ant21	≤25mm	≤25mm	>25mm	≤25mm	≤25mm	>25mm
Ant22	≤25mm	≤25mm	>25mm	≤25mm	≤25mm	>25mm
Ant23	≤25mm	≤25mm	>25mm	≤25mm	≤25mm	>25mm
Ant31	≤25mm	≤25mm	>25mm	≤25mm	>25mm	≤25mm
Ant41	≤25mm	≤25mm	≤25mm	>25mm	>25mm	≤25mm

Table 1： Distance of the Antenna to the EUT surface/edge
Note:
1) When the antenna-to-edge distance is greater than 25mm, such position does not need to be tested.

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1.4.2 Smart Transmit feature for RF Exposure compliance

The RF exposure limit is defined based on time-averaged RF exposure. The product implements Qualcomm Smart Transmit feature which controls the instantaneous transmit power for WWAN transmitter to ensure the product in compliance with RF exposure limit over a defined time window, for SAR (transmit frequency ≤ 6GHz). To control and manage transmitting power in real time and to ensure at all times the time-averaged RF exposure is compliant to the regulation requirement.

The parameters obtained from SAR characterization (referred to as SAR char, respectively) will be used as input for Smart Transmit. SAR char will be entered via the Embedded File System (EFS) to enable the Smart Transmit Feature.

<Terminologies in this report>

P_{limit}	The time-averaged RF power which corresponds to SAR_design_target
P_{max}	Maximum tune-up power level
SAR_design _target	The design target for SAR compliance. It should be less than SAR limit to account for all device design related uncertainties.
SAR char	P_{limit} for all the technologies/bands

<SAR Characterization>
SAR char must be generated to cover all radio configurations and usage scenarios that the wireless device supports for operating at 6 GHz or below. It will then be used as input for Smart Transmit to control and manage RF exposure for f < 6 GHz.

SAR_design_target and Uncertainty
SAR_design_target is determined by ensuring that it is less than FCC SAR limit after accounting for total device designed related uncertainties specified by the manufacturer.

$$SAR\_design\_target < SAR_{regulatory\_limit} \times 10^{\frac{-\text{total uncertainty}}{10}}$$

Uncertainty dB (k=2)	All Band
Total uncertainty	1.5

Exposure position	Frequency band	SAR_Regulatory_Limit W/kg(1g)	SAR_design_target W/kg(1g)
Head	WWAN	1.6	0.8
Body worn	WWAN	1.6	0.8
Hotspot	WWAN	1.6	0.8

Exposure position	Frequency band	SAR_Regulatory_Limit W/kg(10g)	SAR_design_target W/kg(10g)
Product specific 10gSAR	WWAN	4.0	2.5

The Smart Transmit algorithm maintains the time-averaged transmit power, in turn, time-averaged RF exposure of SAR_design_target, below the predefined time-averaged power limit, for each characterized technology and band.
Smart Transmit allows the device to transmit at higher power instantaneously, as high as P_{max}, when needed, but enforces power limiting to maintain time-averaged transmit power to P_{limit}. Below table shows P_{limit} EFS settings and maximum tune up output power P_{max} configured for this EUT for various transmit conditions (DSI: Device State Index).

P_{limit} for supported technologies and bands (actual EFS settings)

Band	Mode	Antenna	P_{max}*	P_{limit} (average)			
				Head	Body Worn	Extremity	Hotspot
				DSI 2	DSI 4	DSI 5	DSI 10
GSM 850	GPRS 2TS	11#	24.5	24.5	24.5	24.5	24.5
	GPRS 2TS	41#	24.5	24.5	24.5	24.5	24.5
GSM 1900	GPRS 4TS	14#	21.0	19.0	20.5	20.5	19.0
	GPRS 2TS	31#	21.5	21.5	/	/	/
	GPRS 4TS		21.0	/	20.5	20.5	19.5
WCDMA_B2	RMC	14#	23.5	/	21.5	21.5	20.0
	RMC	31#	23.5	23.5	20.0	20.0	19.0
WCDMA_B4	RMC	14#	23.5	/	21.0	21.0	19.5
	RMC	31#	23.5	23.5	20.5	20.5	19.5
WCDMA_B5	RMC	11#	23.5	23.5	23.5	23.5	23.5
	RMC	41#	23.5	23.5	23.5	23.5	23.5
LTE_B2	QPSK	14#	23.0	/	21.0	21.0	19.5
	QPSK	31#	23.0	23.0	20.5	20.5	19.5
LTE_B4	QPSK	14#	23.2	/	21.2	21.2	19.7
	QPSK	31#	23.2	23.2	21.2	21.2	20.2
LTE_B5	QPSK	11#	23.2	23.2	23.2	23.2	23.2
	QPSK	41#	23.2	23.2	23.2	23.2	23.2
LTE_B7	QPSK	14#	23.0	/	22.0	22.0	20.0
	QPSK	31#	23.0	23.0	21.5	21.5	20.0
LTE_B12	QPSK	11#	23.0	23.0	23.0	23.0	23.0
	QPSK	41#	23.0	23.0	23.0	23.0	23.0
LTE_B13	QPSK	11#	23.0	23.0	23.0	23.0	23.0
	QPSK	41#	23.0	23.0	23.0	23.0	23.0
LTE_B17	QPSK	11#	23.0	23.0	23.0	23.0	23.0
	QPSK	41#	23.0	23.0	23.0	23.0	23.0
LTE_B26	QPSK	11#	23.2	23.2	23.2	23.2	23.2
	QPSK	41#	23.2	23.2	23.2	23.2	23.2
LTE_B38	QPSK	14#	21.8	/	21.3	21.3	19.3
	QPSK	31#	21.8	21.8	20.8	20.8	19.3
LTE_B41	QPSK	14#	21.8	/	21.3	21.3	19.3
	QPSK	31#	21.8	21.8	20.8	20.8	19.3
LTE_B66	QPSK	14#	23.2	/	21.2	21.2	19.7
	QPSK	31#	23.2	23.2	21.2	21.2	20.2
NR5G_N2	QPSK	14#	23.0	/	21.0	21.0	19.5
	QPSK	31#	23.0	23.0	20.5	20.5	19.0
NR5G_N5	QPSK	11#	23.2	23.2	23.2	23.2	23.2
	QPSK	41#	23.2	23.2	23.2	23.2	23.2
NR5G_N7	QPSK	11#	23.0	16.5	23.0	19.0	17.5
	QPSK	14#	23.0	/	21.0	21.0	19.5
	QPSK	31#	23.0	23.0	22.0	22.0	20.5
NR5G_N26	QPSK	11#	23.2	23.2	23.2	23.2	23.2
	QPSK	41#	23.2	23.2	23.2	23.2	23.2
NR5G_N38	QPSK	11#	23.5	16.5	23.5	19.0	17.5
	QPSK	14#	22.7	/	21.2	21.2	19.7
	QPSK	31#	23.1	23.1	21.6	21.6	20.1
NR5G_N41 PC2	QPSK	11#	25.0	16.5	24.5	19.0	17.5
	QPSK	14#	24.2	/	21.7	21.7	19.7
	QPSK	31#	24.6	24.6	21.1	21.1	19.6
NR5G_N41 PC3	QPSK	11#	23.0	16.5	23.0	19.0	17.5

	QPSK	31#	23.0	23.0	21.1	21.1	19.6
NR5G_N66	QPSK	11#	23.2	23.2	23.2	22.2	20.7
	QPSK	14#	23.2	/	21.2	21.2	19.7
	QPSK	31#	23.2	23.2	21.2	21.2	19.7
NR5G_N77	QPSK	12#	23.5	18.5	23.5	19.5	18.0
	QPSK	23#	22.8	15.3	18.3	18.3	16.3
NR5G_N78 PC2	QPSK	12#	25.5	18.5	24.5	19.5	18.0
	QPSK	23#	24.5	15.0	18.0	18.0	16.0
NR5G_N78 PC3	QPSK	12#	23.5	18.5	23.5	19.5	18.0
	QPSK	23#	23.5	15.0	18.0	18.0	16.0

Note:
1) *P_{max} is used for RF tune up procedure. The maximum allowed output power is equal to P_{max} + Total uncertainty.
2) The max allowed output power is the P_{limit} + Total uncertainty, and if P_{limit} is higher than P_{max}, the device output power will be P_{max} instead.
3) Note that WLAN operations are not enabled with Smart Transmit.

The purpose of this report (Part 1 test) is to demonstrate that the EUT meets FCC SAR limits when transmitting in static transmission scenario at maximum allowable time-averaged power levels.

1.4.3 Power reduction specification

This device uses a single fixed level of power reduction through static table look-up for SAR compliance and it is triggered by a single event or operation

1) A fixed level power reduction is applied for some frequency bands when hotspot mode becomes active. When the hotspot is disabled, the power value will be recovered.

2) A fixed level power reduction is applied for some frequency bands when simultaneously transmitting with the other antennas in certain simultaneous transmission conditions.

3) This device uses the receiver to indicate whether the user is making a voice call in head scenario or not. The selection between head and body power levels is based on the receiver detection mechanism. A fixed level power reduction is applied for some frequency bands when the audio receiver is on.

4) The proximity sensor is used to indicate when the device is held close to a user's body exposure condition. It utilizes the proximity sensor to reduce the output power in specific wireless and operating modes of main antenna to ensure SAR compliance (Refer to section 5.4 for detailed proximity Sensor information and validation data per KDB 616217).

The detailed power reduction information can be referred to Appendix E (Conducted RF Output Power).

1.5 Test Specification

Identity	Document Title
FCC 47CFR §2.1093	Radiofrequency Radiation Exposure Evaluation: Portable Devices
ANSI/IEEE C95.1-1992	IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz – 300 GHz.
IEEE 1528-2013	Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques
KDB 941225 D01	3G SAR Measurement Procedures v03r01
KDB 941225 D05	SAR for LTE Devices v02r05
KDB 941225 D05A	LTE Rel.10 KDB Inquiry Sheet v01r02
KDB 941225 D06	Hotspot Mode SAR v02r01
KDB 248227 D01	SAR Guidance for IEEE 802 11 Wi-Fi SAR v02r02
KDB 648474 D04	Handset SAR v01r03
KDB 447498 D04	Interim General RF Exposure Guidance v01
KDB 865664 D01	SAR Measurement 100 MHz to 6 GHz v01r04
KDB 865664 D02	RF Exposure Reporting v01r02
KDB 690783 D01	SAR Listings on Grants v01r03
KDB 616217 D04	SAR for laptop and tablets v01r02

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1.6 RF exposure limits

Human Exposure	Uncontrolled Environment General Population	Controlled Environment Occupational
Spatial Peak SAR* (Brain*Trunk)	1.60 mW/g	8.00 mW/g
Spatial Average SAR** (Whole Body)	0.08 mW/g	0.40 mW/g
Spatial Peak SAR*** (Hands/Feet/Ankle/Wrist)	4.00 mW/g	20.00 mW/g

Notes:

* 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

** The Spatial Average value of the SAR averaged over the whole body.

*** 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.

Uncontrolled Environments are defined as locations where there is the exposure of individuals who have no knowledge or control of their exposure.

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.)

2 Laboratory Environment

Temperature	Min. = 18°C, Max. = 25 °C
Relative humidity	Min. = 30%, Max. = 70%
Ambient noise is checked and found very low and in compliance with requirement of standards. Reflection of surrounding objects is minimized and in compliance with requirement of standards.	

Table 2： The Ambient Conditions

3 SAR Measurements System Configuration

3.1 The SAR Measurement System

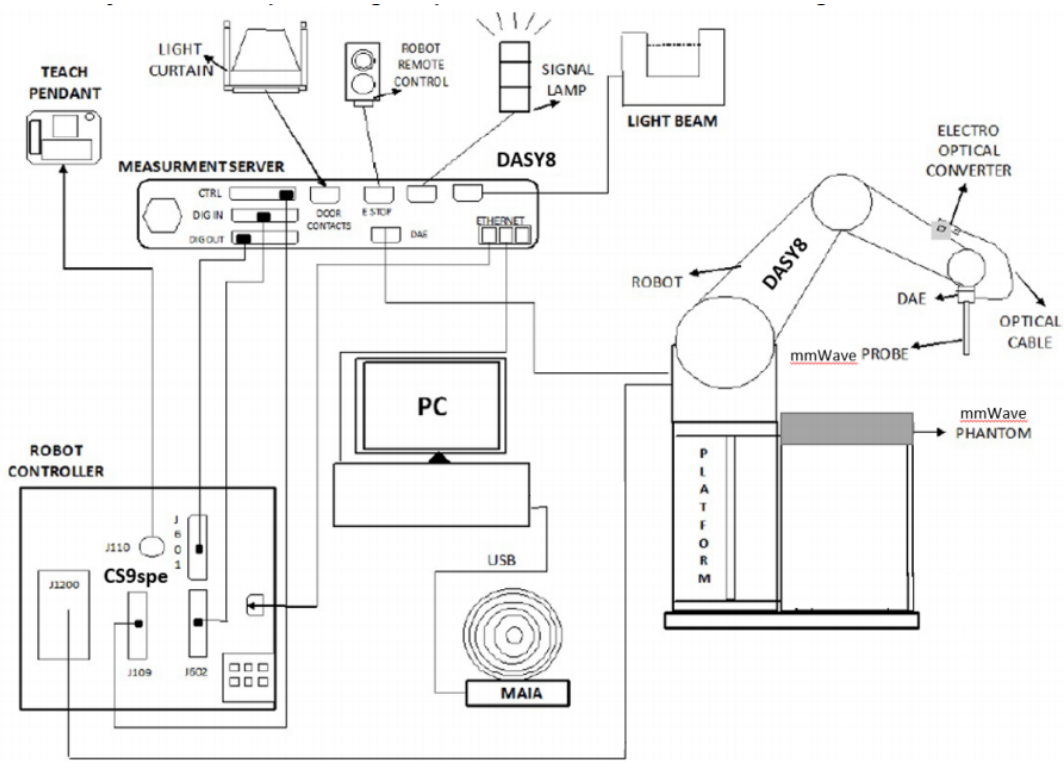
This SAR Measurement System uses a Computer-controlled 3-D stepper motor system (SPEAG DASY professional system). A E-field probe is used to determine the internal electric fields. The SAR can be obtained from the equation SAR= σ (|Ei|2)/ ρ where σ and ρ are the conductivity and mass density of the tissue-Simulate.

The DASY system for performing compliance tests consists of the following items:
A standard high precision 6-axis robot (Stabile RX family) with controller, teach pendant and software An arm extension for accommodation the data acquisition electronics (DAE).

A dosimetric probe, i.e., an isotropic E-field probe optimized and calibrated for usage in tissue simulating liquid. The probe is equipped with an optical surface detector system.

A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.

The Electro-optical converter (EOC) performs the conversion between optical and electrical of the signals for the digital communication to DAE and for the analog signal from the optical surface detection. The EOC is connected to the measurement server.



F-1. SAR Measurement System Configuration

- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- A probe alignment unit which improves the (absolute) accuracy of the probe positioning.
- A computer operating Windows system.
- DASY software.
- Remote control with teach pendant and additional circuitry for robot safety such as warning lamps, etc.
- The SAM twin phantom enabling testing left-hand, right-hand and Body Worn usage.
- The device holder for handheld mobile phones.
- Tissue simulating liquid mixed according to the given recipes.
- Validation dipole kits allowing to validating the proper functioning of the system.

3.2 Isotropic E-field Probe EX3DV4

	Symmetrical design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)
Calibration	ISO/IEC 17025 calibration service available.
Frequency	10 MHz to > 6 GHz Linearity: ± 0.2 dB (30 MHz to 6 GHz)
Directivity	± 0.3 dB in TSL (rotation around probe axis) ± 0.5 dB in TSL (rotation normal to probe axis)
Dynamic Range	10 µW/g to > 100 mW/g Linearity: ± 0.2 dB (noise: typically < 1 µW/g)
Dimensions	Overall length: 337 mm (Tip: 20 mm) Tip diameter: 2.5 mm (Body: 12 mm) Typical distance from probe tip to dipole centers: 1 mm
Application	High precision dosimetric measurements in any exposure scenario (e.g., very strong gradient fields); the only probe that enables compliance testing for frequencies up to 6 GHz with precision of better 30%.
Compatibility	DASY3, DASY4, DASY52 SAR and higher, EASY4/MRI

3.3 Data Acquisition Electronics (DAE)

Model	DAE
Construction	Signal amplifier, multiplexer, A/D converter and control logic. Serial optical link for communication with DASY4/5 embedded system (fully remote controlled). Two step probe touch detector for mechanical surface detection and emergency robot stop.
Measurement Range	-100 to +300 mV (16 bit resolution and two range settings: 4mV,400mV)
Input Offset Voltage	< 5µV (with auto zero)
Input Bias Current	< 50 f A
Dimensions	60 x 60 x 68 mm

3.4 SAM Twin Phantom

Material	Vinylester, glass fiber reinforced (VE-GF)
Liquid Compatibility	Compatible with all SPEAG tissue simulating liquids (incl. DGBE type)
Shell Thickness	2 ± 0.2 mm (6 ± 0.2 mm at ear point)
Dimensions (incl. Wooden Support)	Length: 1000 mm Width: 500 mm Height: adjustable feet
Filling Volume	approx. 25 liters
Wooden Support	SPEAG standard phantom table

The shell corresponds to the specifications of the Specific Anthropomorphic Mannequin (SAM) phantom defined in IEEE 1528 and IEC 62209-1. It enables the dosimetric evaluation of left and right hand phone usage as well as body mounted usage at the flat phantom region. A cover prevents evaporation of the liquid. Reference markings on the phantom allow the complete setup of all predefined phantom positions and measurement grids by teaching three points with the robot.

Twin SAM V5.0 has the same shell geometry and is manufactured from the same material as Twin SAM V4.0, but has reinforced top structure.

3.5 ELI Phantom

Material	Vinylester, glass fiber reinforced (VE-GF)	
Liquid Compatibility	Compatible with all SPEAG tissue simulating liquids (incl. DGBE type)	
Shell Thickness	2.0 ± 0.2 mm (bottom plate)	
Dimensions	Major axis: 600 mm Minor axis: 400 mm	
Filling Volume	approx. 30 liters	
Wooden Support	SPEAG standard phantom table	

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

ELI V5.0 has the same shell geometry and is manufactured from the same material as ELI4, but has reinforced top structure.

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3.6 Device Holder for Transmitters

F-2. **Device Holder for Transmitters**

- The DASY device holder is designed to cope with different positions given in the standard. It has two scales for the device rotation (with respect to the body axis) and the device inclination (with respect to the line between the ear reference points). The rotation centres for both scales are the ear reference point (ERP). Thus the device needs no repositioning when changing the angles.
- The DASY device holder has been made out of low-loss POM material having the following dielectric parameters: relative permittivity ε=3 and loss tangent δ=0.02. The amount of dielectric material has been reduced in the closest vicinity of the device, since measurements have suggested that the influence of the clamp on the test results could thus be lowered.

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3.7 Measurement procedure

3.7.1 Scanning procedure

Step 1: Power reference measurement

The “reference” and “drift” measurements are located at the beginning and end of the batch process. They measure the field drift at one single point in the liquid over the complete procedure.

Step 2: *Area scan*

The SAR distribution at the exposed side of the head was measured at a distance of 4mm from the inner surface of the shell. The area covered the entire dimension of the head and the horizontal grid spacing was 15mm*15mm or 12mm*12mm or 10mm*10mm.Based on the area scan data, the area of the maximum absorption was determined by spline interpolation.

Step 3: *Zoom scan*

Around this point, a volume of 32mm*32mm*30mm (f≤2GHz), 30mm*30mm*30mm (f for 2-3GHz) and 24mm*24mm*22mm (f for 5-6GHz) was assessed by measuring 5x5x7 points (f≤2GHz), 7x7x7 points (f for 2-3GHz) and 7x7x12 points (f for 5-6GHz). On this basis of this data set, the spatial peak SAR value was evaluated with the following procedure:

The data at the surface was extrapolated, since the centre of the dipoles is 2.0mm away from the tip of the probe and the distance between the surface and the lowest measuring point is 1.2mm. (This can be variable. Refer to the probe specification).The extrapolation was based on a least square algorithm. A polynomial of the fourth order was calculated through the points in z-axes. This polynomial was then used to evaluate the points between the surface and the probe tip. The maximum interpolated value was searched with a straight-forward algorithm. Around this maximum the SAR values averaged over the spatial volumes (1g or 10g) were computed using the 3D-Spline interpolation algorithm. The volume was integrated with the trapezoidal algorithm. One thousand points were interpolated to calculate the average. All neighbouring volumes were evaluated until no neighboring volume with a higher average value was found.

The area and zoom scan resolutions specified in the table below must be applied to the SAR measurements Probe boundary effect error compensation is required for measurements with the probe tip closer than half a probe tip diameter to the phantom surface. Both the probe tip diameter and sensor offset distance must satisfy measurement protocols; to ensure probe boundary effect errors are minimized and the higher fields closest to the phantom surface can be correctly measured and extrapolated to the phantom surface for computing 1-g SAR. Tolerances of the post-processing algorithms must be verified by the test laboratory for the scan resolutions used in the SAR measurements, according to the reference distribution functions specified in IEEE Std. 1528-2013.

			≤ 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

Step 4: Power reference measurement (drift)

The Power Drift Measurement job measures the field at the same location as the most recent power reference measurement job within the same procedure, and with the same settings. The indicated drift is mainly the variation of the DUT's output power and should vary max. ± 5 %

3.7.2 Data Storage

The DASY software stores the acquired data from the data acquisition electronics as raw data (in microvolt readings from the probe sensors), together with all necessary software parameters for the data evaluation (probe calibration data, liquid parameters and device frequency and modulation data) in measurement files with the extension ".DAE4". The software evaluates the desired unit and format for output each time the data is visualized or exported. This allows verification of the complete software setup even after the measurement and allows correction of incorrect parameter settings. For example, if a measurement has been performed with a wrong crest factor parameter in the device setup, the parameter can be corrected afterwards and the data can be re-evaluated. The measured data can be visualized or exported in different units or formats, depending on the selected probe type ([V/m], [A/m], [°C], [m W/g], [m W/cm²], [dBrel], etc.). Some of these units are not available in certain situations or show meaningless results, e.g., a SAR output in a lossless media will always be zero. Raw data can also be exported to perform the evaluation with other software packages.

3.7.3 Data Evaluation by SEMCAD

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

Probe parameters:	- Sensitivity	Normi, ai0, ai1, ai2
	- Conversion factor	ConvFi
	- Diode compression point	Dcpi
Device parameters:	- Frequency	f
	- Crest factor	cf
Media parameters:	- Conductivity	ε
	- Density	ρ

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

The first step of the evaluation is a linearization of the filtered input signal to account for the compression characteristics of the detector diode. The compensation depends on the input signal, the diode type and the DC-transmission factor from the diode to the evaluation electronics.

If the exciting field is pulsed, the crest factor of the signal must be known to correctly compensate for peak power. The formula for each channel can be given as:

$$V_i = U_i + U_i^2 \cdot cf / dcp_i$$

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

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

E-field probes:

$$E_i = (V_i / Norm_i \cdot ConvF)^{1/2}$$

H-field probes:

$$H_i = (V_i)^{1/2} \cdot (a_{i0} + a_{i1} f + a_{i2} f^2) / f$$

With Vi = compensated signal of channel i (i = x, y, z)
Normi = sensor sensitivity of channel I (i = x, y, z)
[mV/(V/m)2] for E-field Probes
ConvF = sensitivity enhancement in solution
aij = sensor sensitivity factors for H-field probes
f = carrier frequency [GHz]
Ei = electric field strength of channel i in V/m
Hi = magnetic field strength of channel i in A/m

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

$$E_{tot} = (E_x^2 + E_Y^2 + E_z^2)^{1/2}$$

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

$$SAR = (Etot^2 \cdot \sigma) / (\varepsilon \cdot 1000)$$

with SAR = local specific absorption rate in mW/g
Etot = total field strength in V/m
σ= conductivity in [mho/m] or [Siemens/m]
ε= equivalent tissue density in g/cm3

Note that the density is normally set to 1 (or 1.06), to account for actual brain density rather than the density of the simulation liquid. The power flow density is calculated assuming the excitation field to be a free space field.

$$P_{pwe} = E_{tot}{}^2{}_2 / 3770 \text{ or } \quad P_{pwe} = H_{tot}^2 \cdot 37.7$$

with Ppwe = equivalent power density of a plane wave in mW/cm2
Etot = total electric field strength in V/m
Htot = total magnetic field strength in A/m

4 SAR measurement variability and uncertainty

4.1 SAR measurement variability

Per KDB 865664 D01 SAR measurement 100 MHz to 6 GHz v01r04, SAR measurement variability must be assessed for each frequency band, which is determined by the SAR probe calibration point and tissue-equivalent medium used for the device measurements. The additional measurements are repeated after the completion of all measurements requiring the same head or body tissue-equivalent medium in a frequency band. The test device should be returned to ambient conditions (normal room temperature) with the battery fully charged before it is re-mounted on the device holder for the repeated measurement(s) to minimize any unexpected variations in the repeated results.

1) Repeated measurement is not required when the original highest measured SAR is < 0.80 W/kg; steps 2) through 4) do not apply.

2) When the original highest measured SAR is ⩾ 0.80 W/kg, repeat that measurement once.

3) Perform a second repeated measurement only if the ratio of largest to smallest SAR for the original and first repeated measurements is > 1.20 or when the original or repeated measurement is ⩾ 1.45 W/kg (~ 10% from the 1-g SAR limit).

4) Perform a third repeated measurement only if the original, first or second repeated measurement is ⩾1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20.

The same procedures should be adapted for measurements according to extremity and occupational exposure limits by applying a factor of 2.5 for extremity exposure and a factor of 5 for occupational exposure to the corresponding SAR thresholds.

4.2 SAR measurement uncertainty

Per KDB865664 D01 SAR Measurement 100 MHz to 6 GHz, 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.

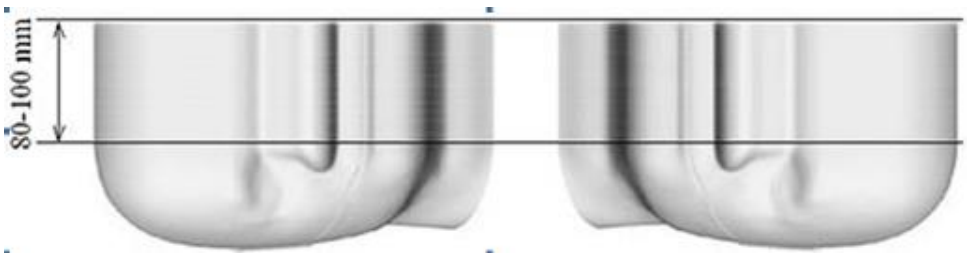
5 Description of Test Position

5.1 Head Exposure Condition

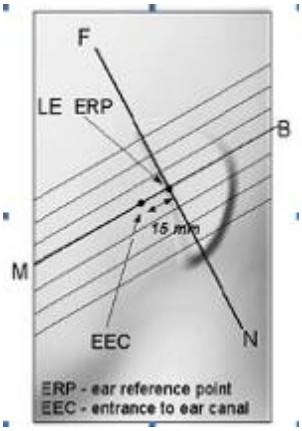
5.1.1 SAM Phantom Shape

F-3. Front, back, and side views of SAM (model for the phantom shell). Full-head model is for illustration purposes only-procedures in this recommended practice are intended primarily for the phantom setup.

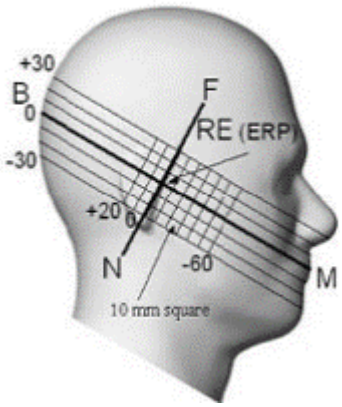
Note: The centre strip including the nose region has a different thickness tolerance.



F-4.Sagittally bisected phantom with extended perimeter (shown placed on its side as used for SAR measurements)

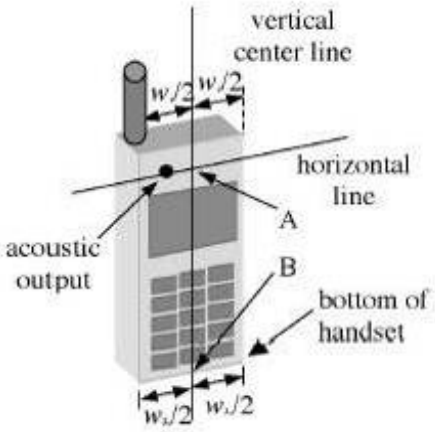


F-5. Close-up side view of phantom, showing the ear region, N-F and B-M lines, and seven cross-sectional plane locations

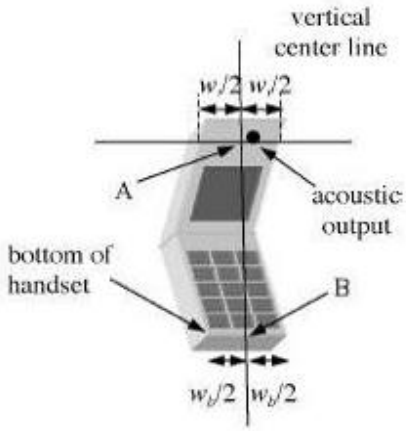


F-6. Side view of the phantom showing relevant markings and seven cross-sectional plane locations

5.1.2 EUT constructions



F-7. Handset vertical and horizontal reference lines-“fixed case”



F-8. Handset vertical and horizontal reference lines-“clam-shell case”

5.1.3 Definition of the “cheek” position

a) Position the device with the vertical centre line of the body of the device and the horizontal line crossing the centre of the ear piece in a plane parallel to the sagittal plane of the phantom ("initial position"). While maintaining the device in this plane, align the vertical centre line with the reference plane containing the three ear and mouth reference points (M, RE and LE) and align the centre of the ear piece with the line RE-LE.
b) Translate the mobile phone box towards the phantom with the ear piece aligned with the line LE-RE until telephone touches the ear. While maintaining the device in the reference plane and maintaining the phone contact with the ear, move the bottom of the box until any point on the front side is in contact with the cheek of the phantom or until contact with the ear is lost.

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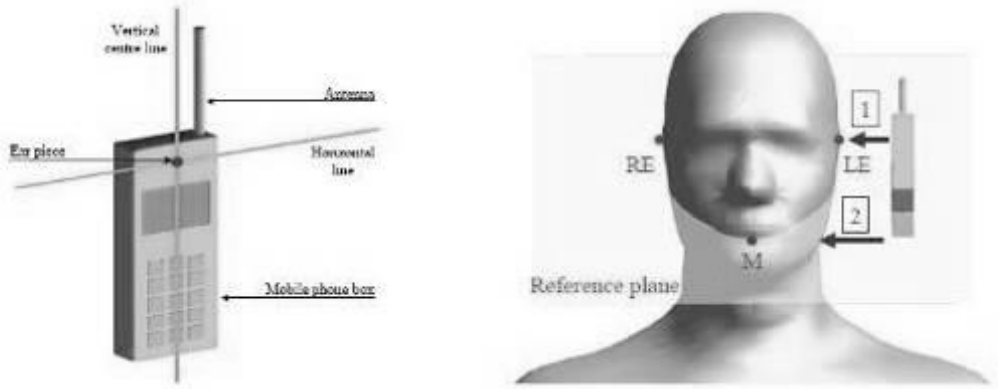
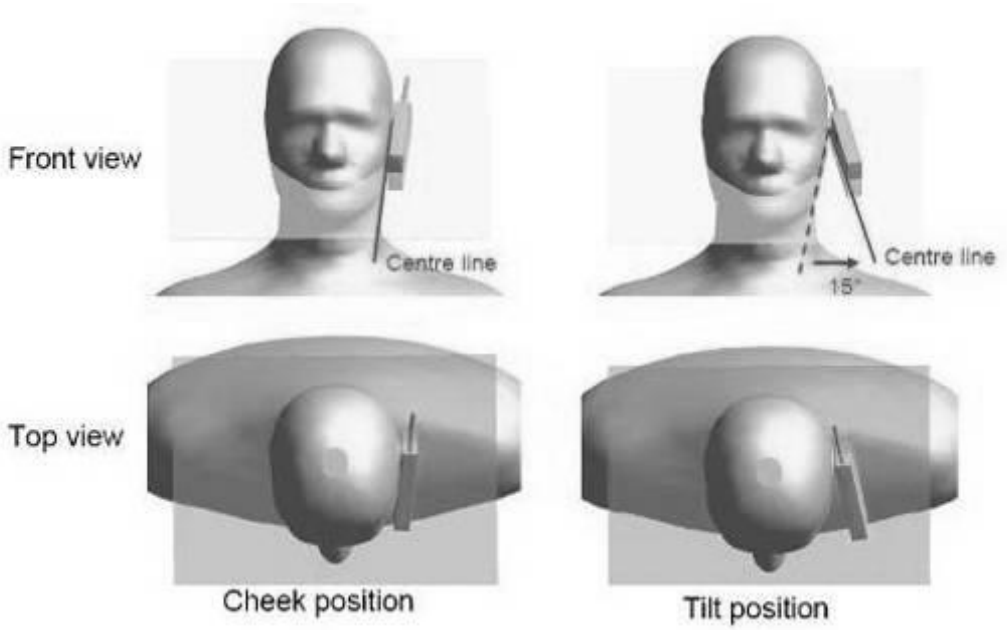
5.1.4 Definition of the “tilted” position

a) Position the device in the “cheek” position described above.
b) While maintaining the device in the reference plane described above and pivoting against the ear, move it outward away from the mouth by an angle of 15 degrees or until contact with the ear is lost.



F-9. **Definition of the reference lines and points, on the phone and on the phantom and initial position**



F-10. **“Cheek” and “tilt” positions of the mobile phone on the left side**

5.2 Body Exposure Condition

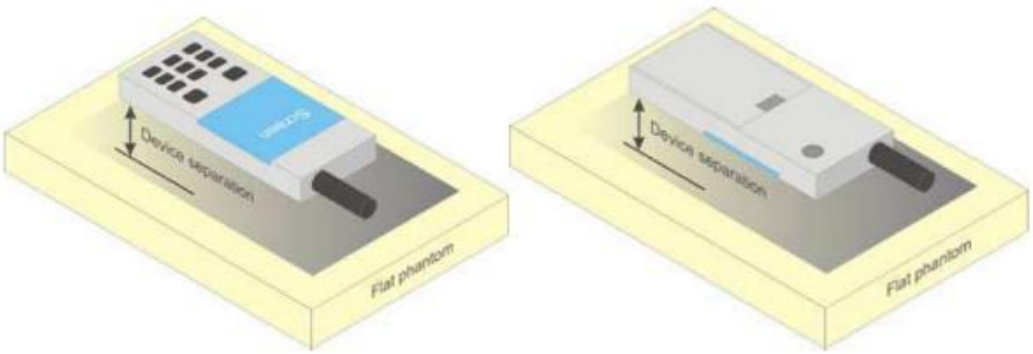
5.2.1 Body-worn accessory exposure conditions

Body-worn operating configurations should be tested with the belt-clips and holsters attached to the device and positioned against a flat phantom in normal use configurations.

Body-worn operating configurations are tested with the belt-clips and holsters attached to the device and positioned against a flat phantom in a normal use configuration. Per FCC KDB Publication 648474 D04, Body-worn accessory exposure is typically related to voice mode operations when handsets are carried in body-worn accessories. The body-worn accessory procedures in FCC KDB Publication 447498 D04 should be used to test for body-worn accessory SAR compliance, without a headset connected to it. This enables the test results for such configuration to be compatible with that required for hotspot mode when the body-worn accessory test separation distance is greater than or equal to that required for hotspot mode, when applicable. When the reported SAR for a body-worn accessory, measured without a headset connected to the handset, is > 1.2 W/kg, the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body-worn accessory with a headset attached to the handset.

Accessories for Body-worn operation configurations are divided into two categories: those that do not contain metallic components and those that do contain metallic components. When multiple accessories that do not contain metallic components are supplied with the device, the device is tested with only the accessory that dictates the closest spacing to the body. Then multiple accessories that contain metallic components are tested with the device with each accessory. If multiple accessories share an identical metallic component (i.e. the same metallic belt-clip used with different holsters with no other metallic components) only the accessory that dictates the closest spacing to the body is tested.

Body-worn accessories may not always be supplied or available as options for some devices intended to be authorized for body-worn use. In this case, a test configuration with a separation distance between the back of the device and the flat phantom is used. Test position spacing was documented. Transmitters that are designed to operate in front of a person's face, as in push-to-talk configurations, are tested for SAR compliance with the front of the device positioned to face the flat phantom in head fluid. For devices that are carried next to the body such as a shoulder, waist or chest-worn transmitters, SAR compliance is tested with the accessories, including headsets and microphones, attached to the device and positioned against a flat phantom in a normal use configuration.



F-11. **Test positions for body-worn devices**

5.2.2 Wireless Router exposure conditions

Some battery-operated handsets have the capability to transmit and receive user data through simultaneous transmission of WIFI simultaneously with a separate licensed transmitter. The FCC has provided guidance in FCC 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 containing transmitting antennas within 2.5 cm of their edges, determined from general mixed-use conditions for this type of devices. For devices with form factors smaller than 9 cm x 5 cm, a test separation distance of 5 mm is required.

5.3 Extremity exposure conditions

Per FCC KDB 648474D04, for smart phones with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm that provide similar mobile web access and multimedia support found in mini-tablets or UMPC mini-tablets that support voice calls next to the ear, the device is marketed as “Phablet”.
The UMPC mini-tablet procedures must also be applied to test the SAR of all surfaces and edges with an antenna located at ≤ 25 mm from that surface or edge, in direct contact with a flat phantom, for Product Specific 10-g SAR according to the body-equivalent tissue dielectric parameters in KDB 865664 to address interactive hand use exposure conditions. The UMPC mini-tablet 1-g SAR at 5 mm is not required. When hotspot mode applies, Product Specific 10-g SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg; however, when power reduction applies to hotspot mode the measured SAR must be scaled to the maximum output power, including tolerance, allowed for phablet modes to compare with the 1.2 W/kg SAR test reduction threshold.

Due to the SAR result, only the following frequency bands need to test with 0mm for the Product Specific 10-g SAR, the others are not required.

LTE B2(Ant11):

Ant 11 Test Record											
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Product Specific 10-g SAR Exclusion
Hotspot Test data (Separate 10mm 1RB) DSI10											
Front side	20	QPSK 1_0	19100/1900	1:1	0.137	-0.16	19.06	24.00	3.119	0.427	Yes
Back side	20	QPSK 1_0	19100/1900	1:1	0.271	-0.03	19.06	24.00	3.119	0.845	Yes
Left side	20	QPSK 1_0	19100/1900	1:1	0.490	0.02	19.06	24.00	3.119	1.528	No
Top side	20	QPSK 1_0	19100/1900	1:1	0.021	0.08	19.06	24.00	3.119	0.066	Yes
Hotspot Test data (Separate 10mm 50%RB) DSI10											
Front side	20	QPSK 50_0	19100/1900	1:1	0.136	0.04	19.49	24.00	2.825	0.384	Yes
Back side	20	QPSK 50_0	19100/1900	1:1	0.280	0.08	19.49	24.00	2.825	0.791	Yes
Left side	20	QPSK 50_0	19100/1900	1:1	0.500	0.02	19.49	24.00	2.825	1.412	No
Top side	20	QPSK 50_0	19100/1900	1:1	0.023	0.03	19.49	24.00	2.825	0.064	Yes

LTE B7(Ant11):

Ant 11 Test Record											
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Product Specific 10-g SAR Exclusion
Hotspot Test data (Separate 10mm 1RB) DSI10											
Front side	20	QPSK 1_99	21100/2535	1:1	0.154	-0.05	18.14	24.00	3.855	0.594	Yes
Back side	20	QPSK 1_99	21100/2535	1:1	0.337	-0.05	18.14	24.00	3.855	1.299	No
Left side	20	QPSK 1_99	21100/2535	1:1	0.436	-0.08	18.14	24.00	3.855	1.681	No
Top side	20	QPSK 1_99	21100/2535	1:1	0.056	0.03	18.14	24.00	3.855	0.216	Yes
Hotspot Test data (Separate 10mm 50%RB) DSI10											
Front side	20	QPSK 50_50	21100/2535	1:1	0.156	0.03	18.00	24.00	3.981	0.621	Yes
Back side	20	QPSK 50_50	21100/2535	1:1	0.328	-0.05	18.00	24.00	3.981	1.306	No
Left side	20	QPSK 50_50	21100/2535	1:1	0.424	-0.08	18.00	24.00	3.981	1.688	No
Top side	20	QPSK 50_50	21100/2535	1:1	0.060	0.05	18.00	24.00	3.981	0.239	Yes

N7(Ant11):

Ant 11 Test Record											
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Product Specific 10-g SAR Exclusion
Hotspot Test data (Separate 10mm 1RB) DSI10											
Front side	40	QPSK 1_108	504000/2520	100%	0.158	-0.17	17.29	24.00	4.688	0.741	Yes
Back side	40	QPSK 1_108	504000/2520	100%	0.337	-0.03	17.29	24.00	4.688	1.580	No
Left side	40	QPSK 1_108	504000/2520	100%	0.396	-0.09	17.29	24.00	4.688	1.857	No
Top side	40	QPSK 1_108	504000/2520	100%	0.047	0.05	17.29	24.00	4.688	0.220	Yes
Hotspot Test data (Separate 10mm 50%RB) DSI10											
Front side	40	QPSK 108_54	507000/2535	100%	0.170	-0.16	17.32	24.00	4.656	0.791	Yes
Back side	40	QPSK 108_54	507000/2535	100%	0.300	-0.08	17.32	24.00	4.656	1.397	No
Left side	40	QPSK 108_54	507000/2535	100%	0.428	-0.10	17.32	24.00	4.656	1.993	No
Top side	40	QPSK 108_54	507000/2535	100%	0.056	0.03	17.32	24.00	4.656	0.261	Yes

N38(Ant11):

Ant 11 Test Record											
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Product Specific 10-g SAR Exclusion
Hotspot Test data (Separate 10mm 1RB) DSI10											
Front side	40	QPSK 1_104	520000/2600	100%	0.150	-0.02	17.56	24.50	4.943	0.741	Yes
Back side	40	QPSK 1_104	520000/2600	100%	0.268	0.05	17.56	24.50	4.943	1.325	No
Left side	40	QPSK 1_104	520000/2600	100%	0.480	-0.09	17.56	24.50	4.943	2.373	No
Top side	40	QPSK 1_104	520000/2600	100%	0.085	-0.02	17.56	24.50	4.943	0.420	Yes
Hotspot Test data (Separate 10mm 50%RB) DSI10											
Front side	40	QPSK 50_28	520000/2600	100%	0.151	-0.16	17.41	24.50	5.117	0.773	Yes
Back side	40	QPSK 50_28	520000/2600	100%	0.263	-0.03	17.41	24.50	5.117	1.346	No
Left side	40	QPSK 50_28	520000/2600	100%	0.431	-0.02	17.41	24.50	5.117	2.205	No
Top side	40	QPSK 50_28	520000/2600	100%	0.090	-0.02	17.41	24.50	5.117	0.461	Yes

N41(Ant11):

Ant 11 Test Record											
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Product Specific 10-g SAR Exclusion
Hotspot Test data (Separate 10mm 1RB) DSI10											
Front side	100	QPSK 1_1	518598/2592.99	100%	0.156	-0.02	17.76	25.50	5.943	0.927	Yes
Back side	100	QPSK 1_1	518598/2592.99	100%	0.339	-0.16	17.76	25.50	5.943	2.015	No
Left side	100	QPSK 1_1	518598/2592.99	100%	0.444	-0.05	17.76	25.50	5.943	2.639	No
Top side	100	QPSK 1_1	518598/2592.99	100%	0.075	0.18	17.76	25.50	5.943	0.446	Yes
Hotspot Test data (Separate 10mm 50%RB) DSI10											
Front side	100	QPSK 135_69	509202/2546.01	100%	0.161	-0.13	17.65	25.50	6.095	0.981	Yes
Back side	100	QPSK 135_69	509202/2546.01	100%	0.332	-0.05	17.65	25.50	6.095	2.024	No
Left side	100	QPSK 135_69	509202/2546.01	100%	0.405	-0.18	17.65	25.50	6.095	2.469	No
Top side	100	QPSK 135_69	509202/2546.01	100%	0.083	-0.02	17.65	25.50	6.095	0.506	Yes

N77 (Ant12):

3700-3980:

Ant12 Test Record											
Test position	BW.	Modulation	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Product Specific 10-g SAR Exclusion
Hotspot Test data (Separate 10mm 1RB) DSI10											
Front side	100	QPSK 1_271	662000/3930	100%	0.083	-0.06	18.08	24.50	4.385	0.364	Yes
Back side	100	QPSK 1_271	662000/3930	100%	0.347	0.06	18.08	24.50	4.385	1.522	No
Left side	100	QPSK 1_271	662000/3930	100%	0.284	-0.09	18.08	24.50	4.385	1.245	No
Top side	100	QPSK 1_271	662000/3930	100%	0.106	-0.04	18.08	24.50	4.385	0.465	Yes
Hotspot Test data (Separate 10mm 50%RB) DSI10											
Front side	100	QPSK 135_69	662000/3930	100%	0.086	-0.01	17.94	24.50	4.529	0.389	Yes
Back side	100	QPSK 135_69	662000/3930	100%	0.356	-0.01	17.94	24.50	4.529	1.612	No
Left side	100	QPSK 135_69	662000/3930	100%	0.261	-0.05	17.94	24.50	4.529	1.182	Yes
Top side	100	QPSK 135_69	662000/3930	100%	0.113	-0.11	17.94	24.50	4.529	0.512	Yes

N78 (Ant12):

3450-3550:

Ant12 Test Record											
Test position	BW.	Modulation	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Product Specific 10-g SAR Exclusion
Hotspot Test data (Separate 10mm 1RB) DSI10											
Front side	100	QPSK 1_1	633334/3500	100%	0.061	-0.02	17.72	25.50	5.998	0.366	Yes
Back side	100	QPSK 1_1	633334/3500	100%	0.219	-0.04	17.72	25.50	5.998	1.314	No
Left side	100	QPSK 1_1	633334/3500	100%	0.184	0.02	17.72	25.50	5.998	1.104	Yes
Top side	100	QPSK 1_1	633334/3500	100%	0.199	-0.01	17.72	25.50	5.998	1.194	Yes
Hotspot Test data (Separate 10mm 50%RB) DSI10											
Front side	100	QPSK 135_69	633334/3500	100%	0.064	-0.02	17.63	25.50	6.124	0.392	Yes
Back side	100	QPSK 135_69	633334/3500	100%	0.213	-0.05	17.63	25.50	6.124	1.304	No
Left side	100	QPSK 135_69	633334/3500	100%	0.202	-0.15	17.63	25.50	6.124	1.237	No

Top side	100	QPSK 135_69	633334/3500	100%	0.230	0.09	17.63	25.50	6.124	1.408	No

N78 (Ant12):

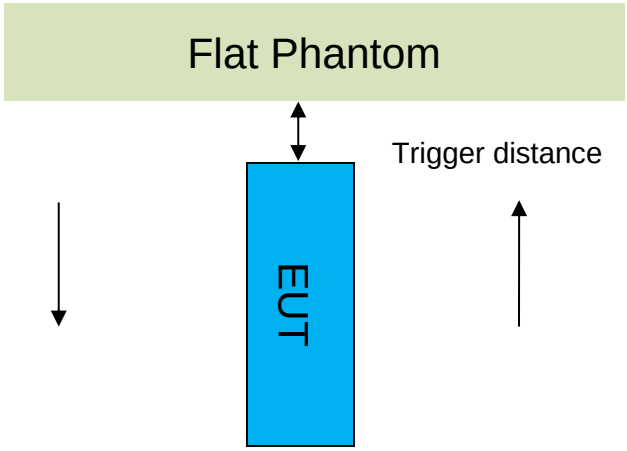
3700-3800:

Ant12 Test Record											
Test position	**BW.**	**Modulation**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Hotspot Test data (Separate 10mm 1RB) DSI10											
Front side	100	QPSK 1_271	650000/3750	100%	0.103	0.04	17.81	25.50	5.875	0.605	Yes
Back side	100	QPSK 1_271	650000/3750	100%	0.319	0.09	17.81	25.50	5.875	1.874	No
Left side	100	QPSK 1_271	650000/3750	100%	0.305	-0.09	17.81	25.50	5.875	1.792	No
Top side	100	QPSK 1_271	650000/3750	100%	0.199	-0.06	17.81	25.50	5.875	1.169	Yes
Hotspot Test data (Separate 10mm 50%RB) DSI10											
Front side	100	QPSK 135_69	650000/3750	100%	0.098	0.10	17.76	25.50	5.943	0.582	Yes
Back side	100	QPSK 135_69	650000/3750	100%	0.277	-0.16	17.76	25.50	5.943	1.646	No
Left side	100	QPSK 135_69	650000/3750	100%	0.278	-0.12	17.76	25.50	5.943	1.652	No
Top side	100	QPSK 135_69	650000/3750	100%	0.175	-0.01	17.76	25.50	5.943	1.040	Yes

5.4 Proximity Sensor Triggering Test

Proximity sensor triggering distances：

The Proximity sensor triggering was applied to WWAN antenna. Proximity sensor triggering distance testing was performed according to the procedures outlined in KDB 616217 D04 section 6.2, and EUT moving further away from the flat phantom and EUT moving toward the flat phantom were both assessed.

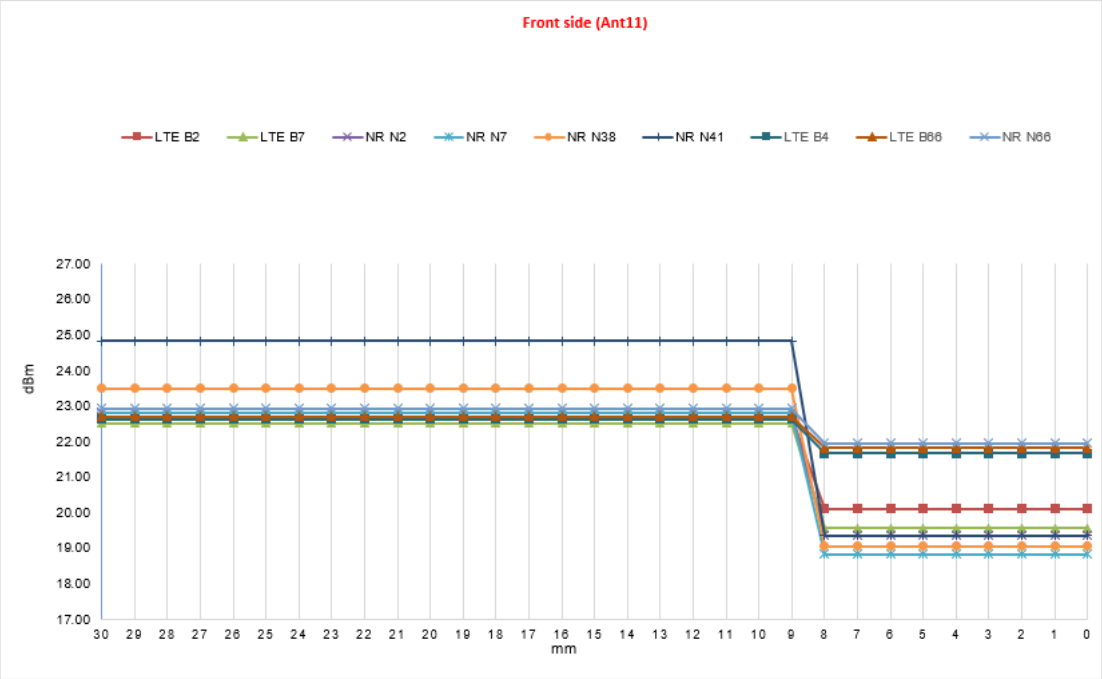


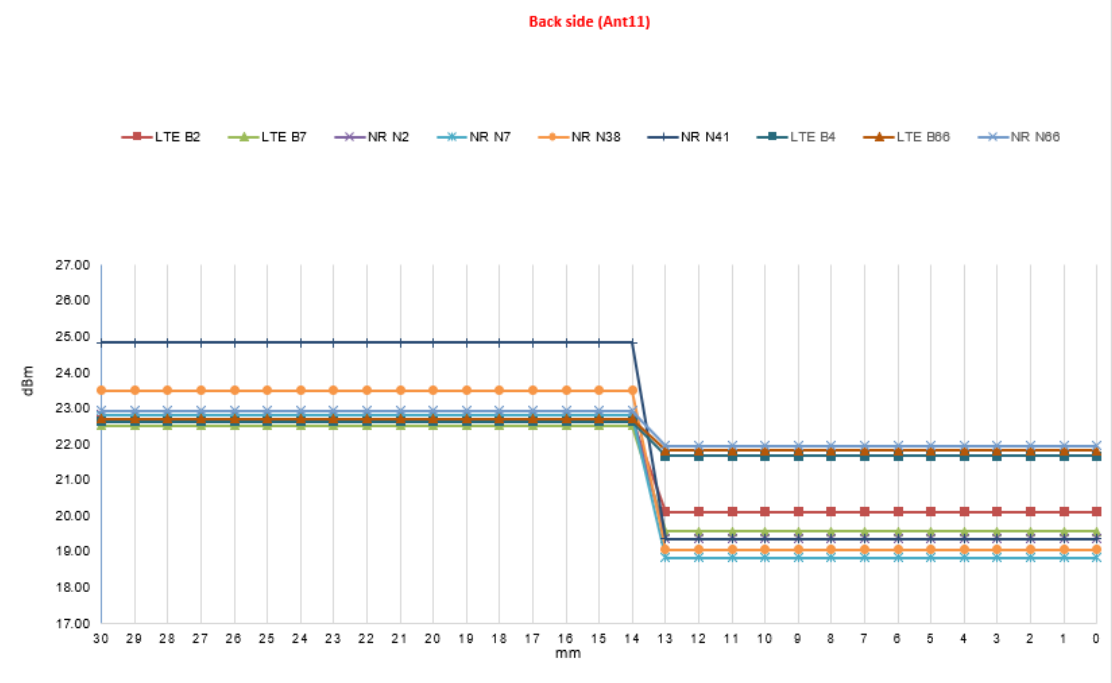
Proximity Sensor Triggering Distance(mm)			
Ant	Ant11	Ant12	Ant13
Band	LTE B2/4/7/66 NR N7/38/41/66	NR N77/78	NR N77/78
Position	Front Side 8mm Back Side 13mm Left Side 12mm	Front Side 8mm Back Side 13mm Top Side12mm Left Side 12mm	Front Side 8mm Back Side 13mm Top Side12mm Left Side 12mm

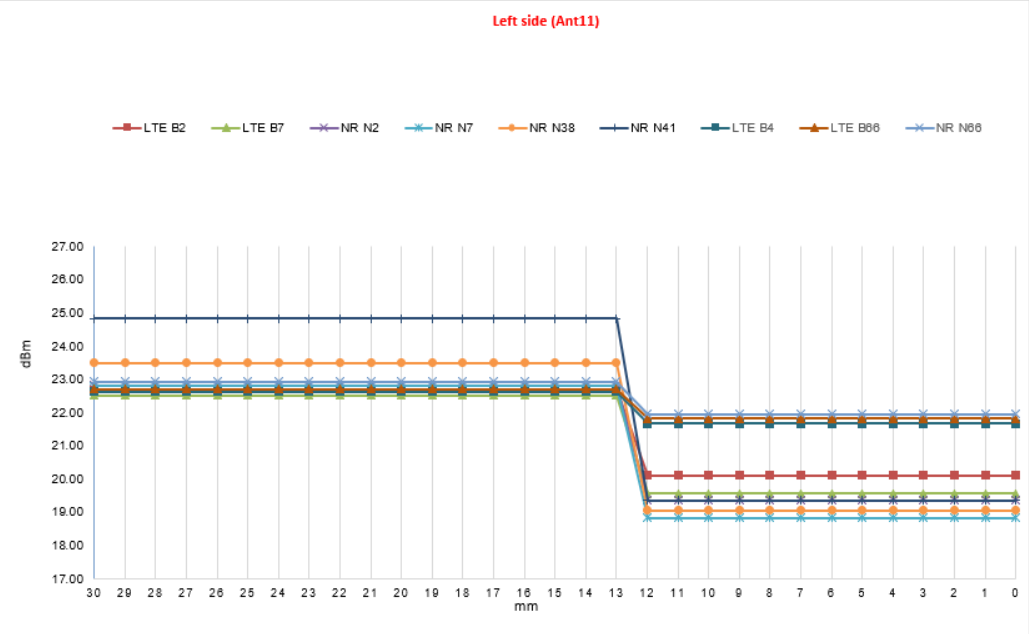
Note:

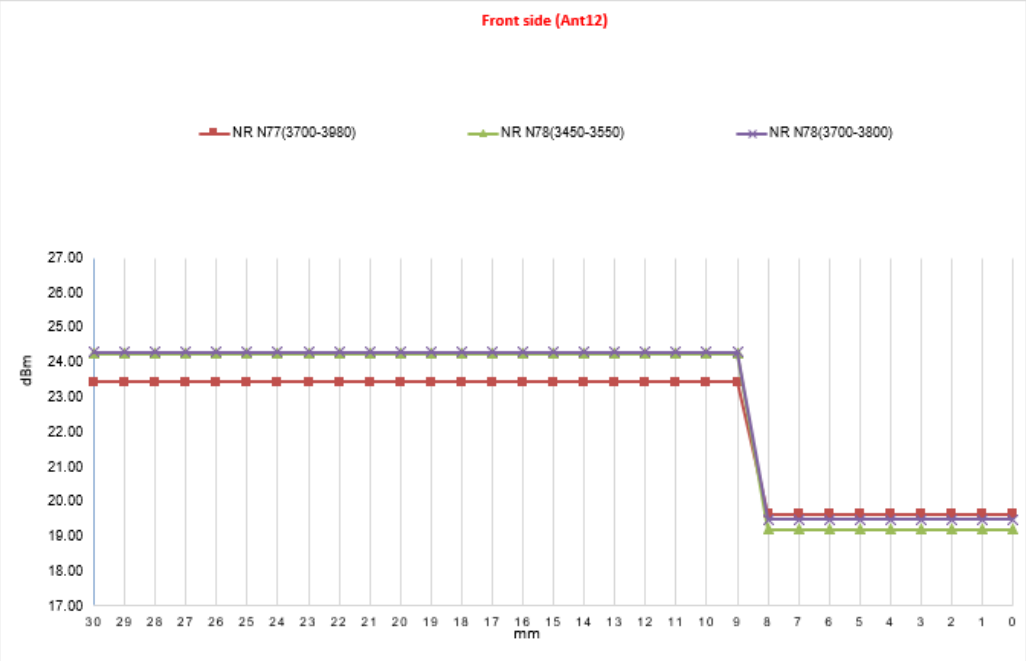
SAR tests with proximity sensor power reduction are only required for the sides of frequency bands in the table above. For the other sides or other frequency bands of the device, SAR is still tested at the maximum power level with sensor off.

- DUT Moving Toward(Trigger)the Phantom









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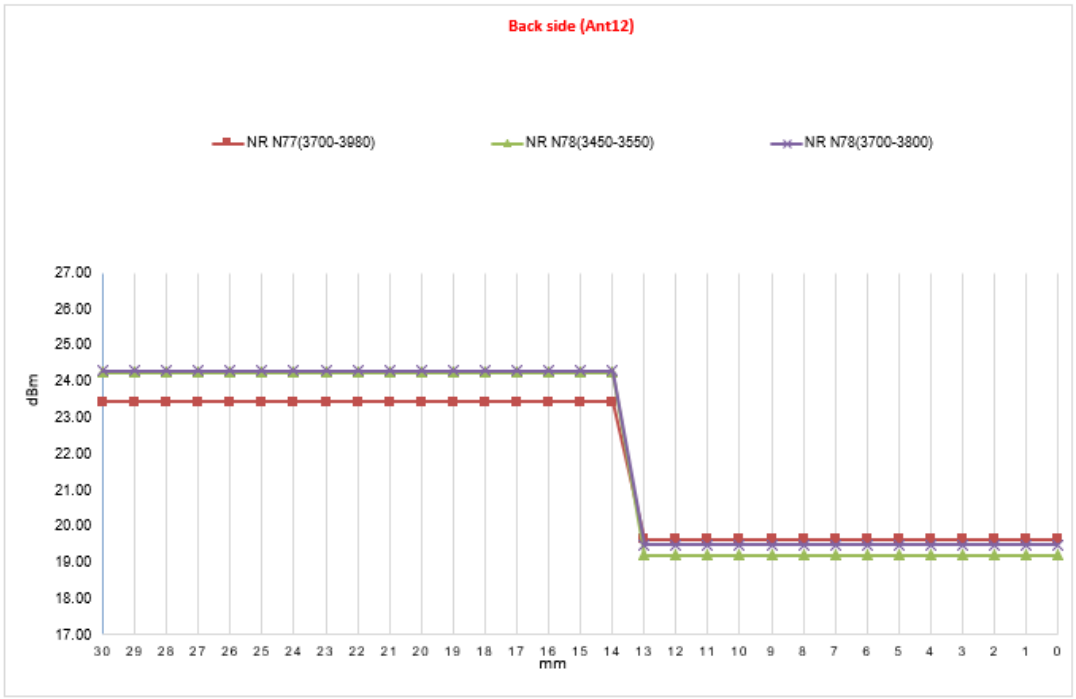
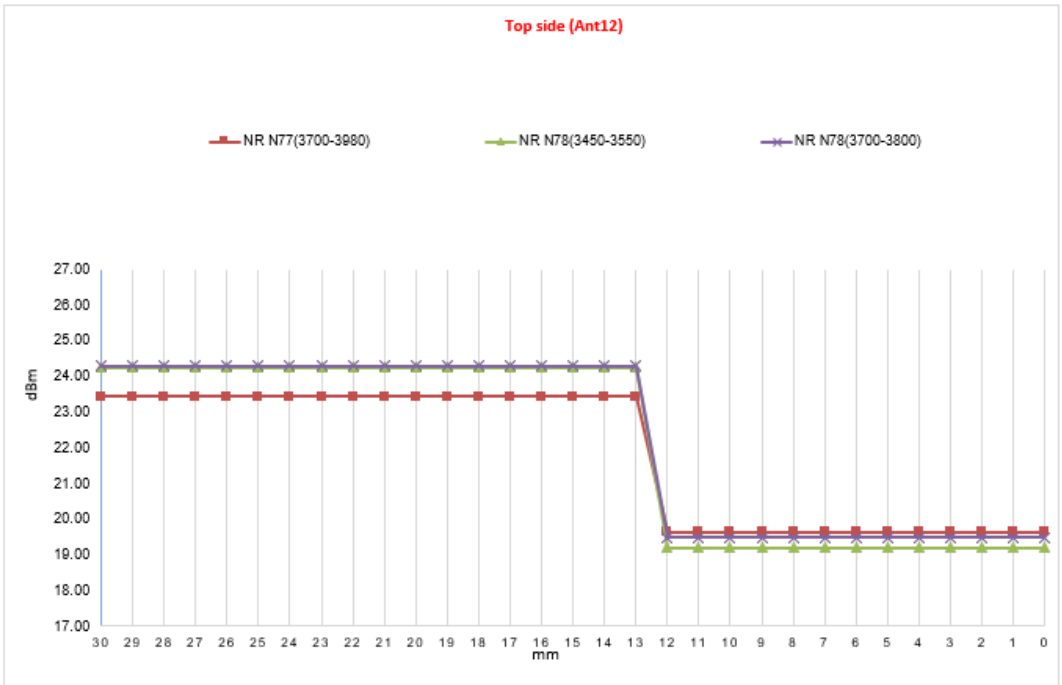
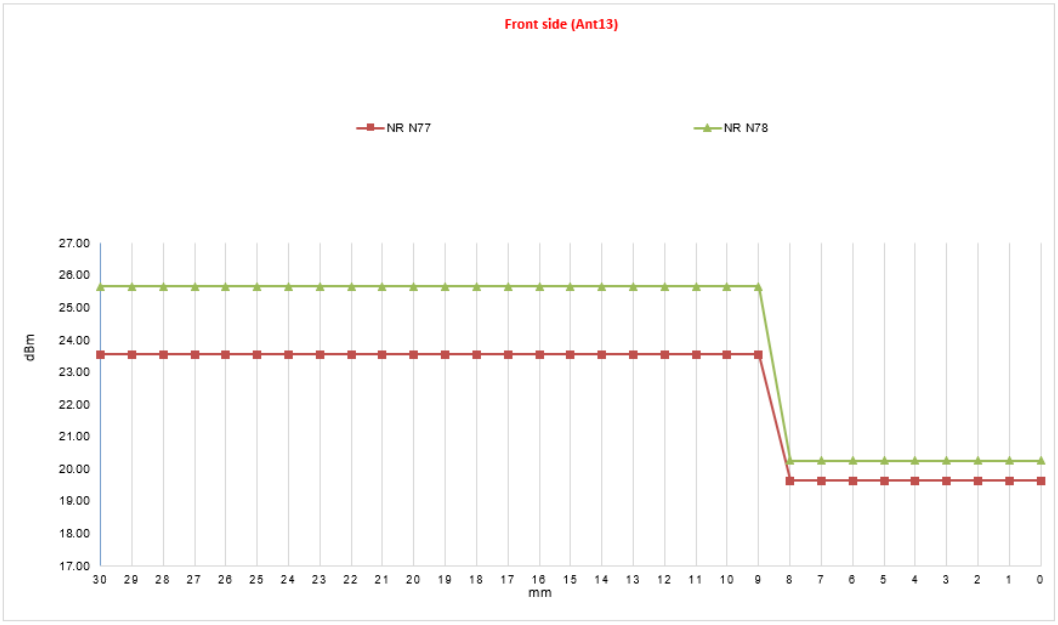
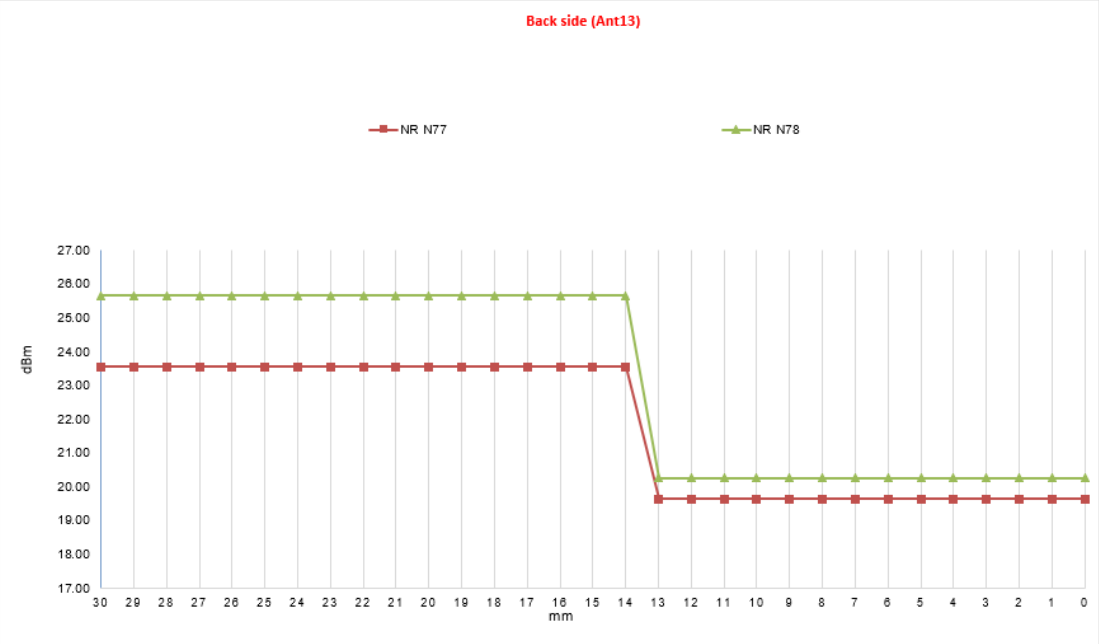
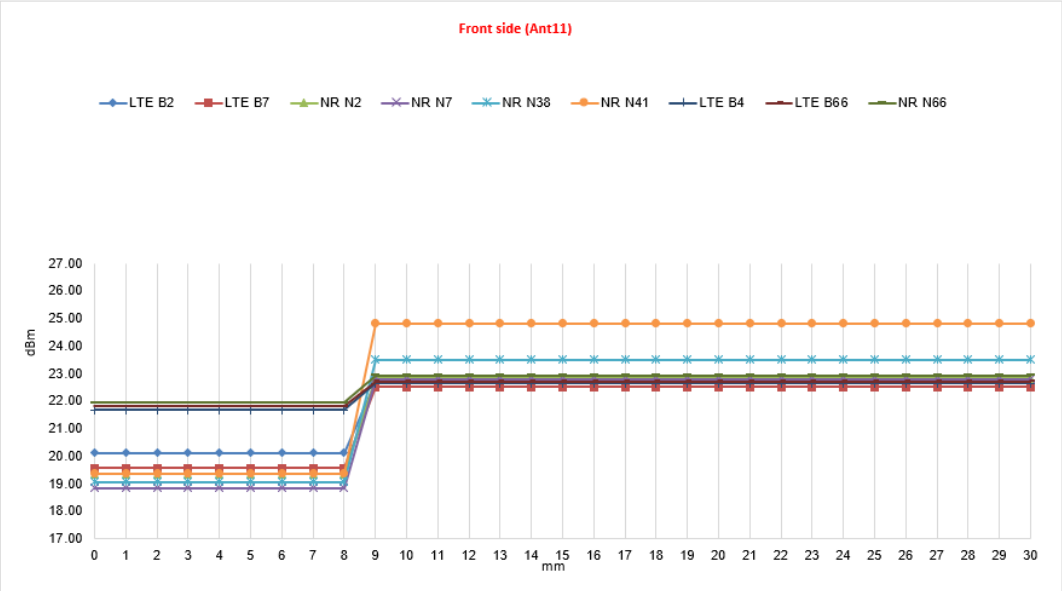


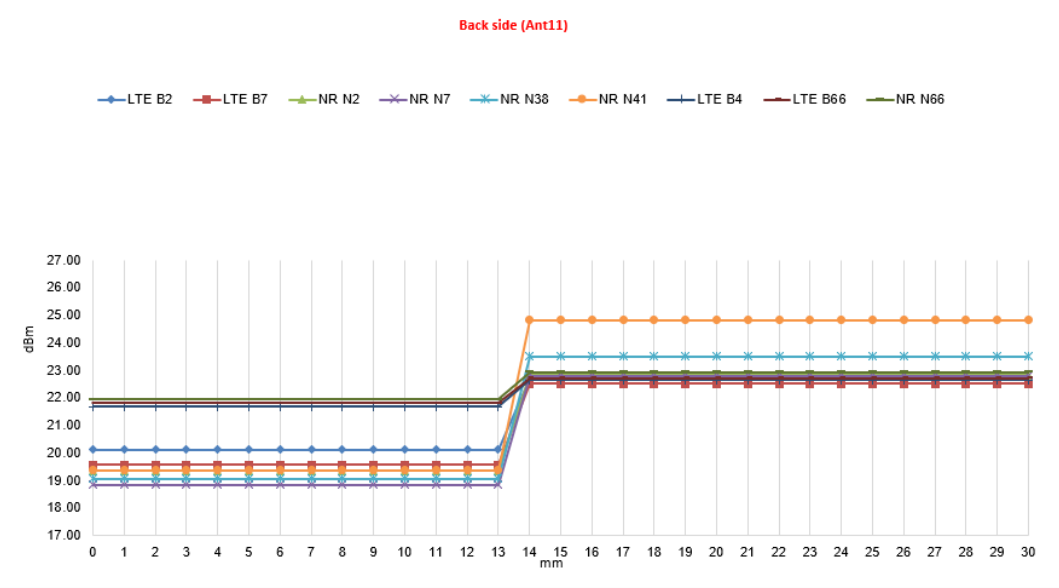


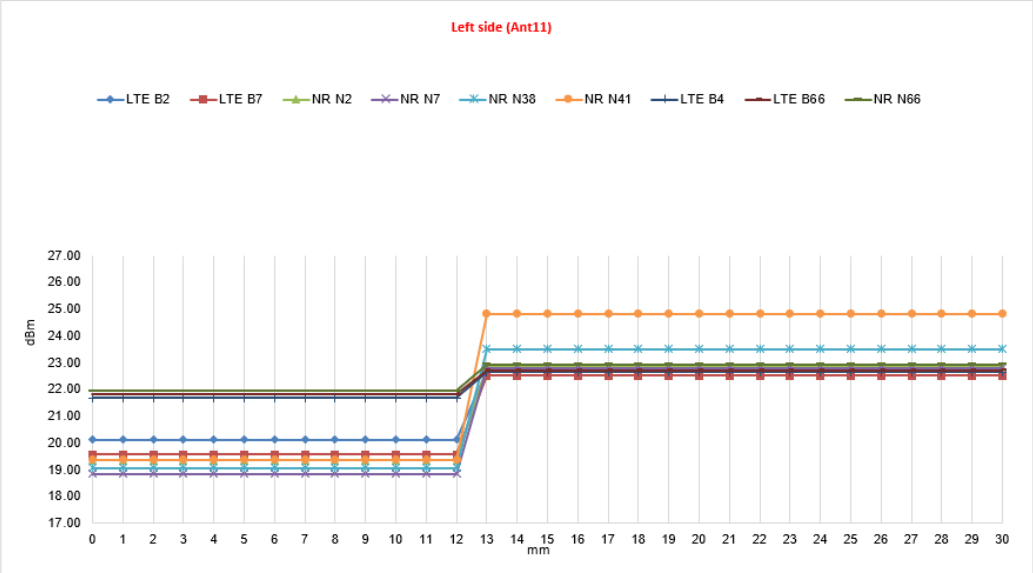


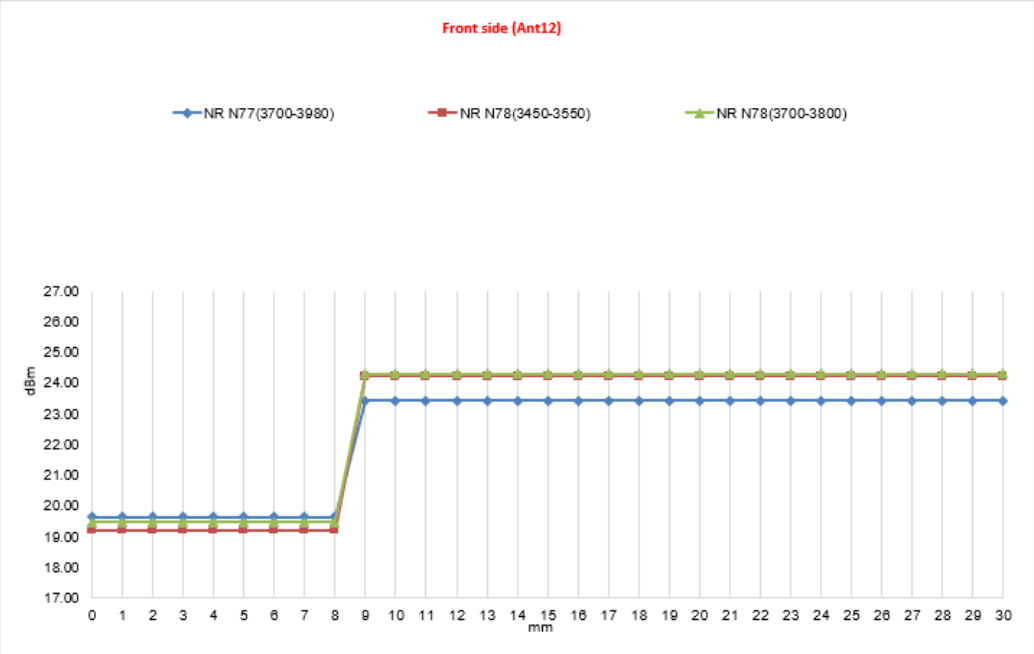


- DUT Moving Away(Release) from the Phantom









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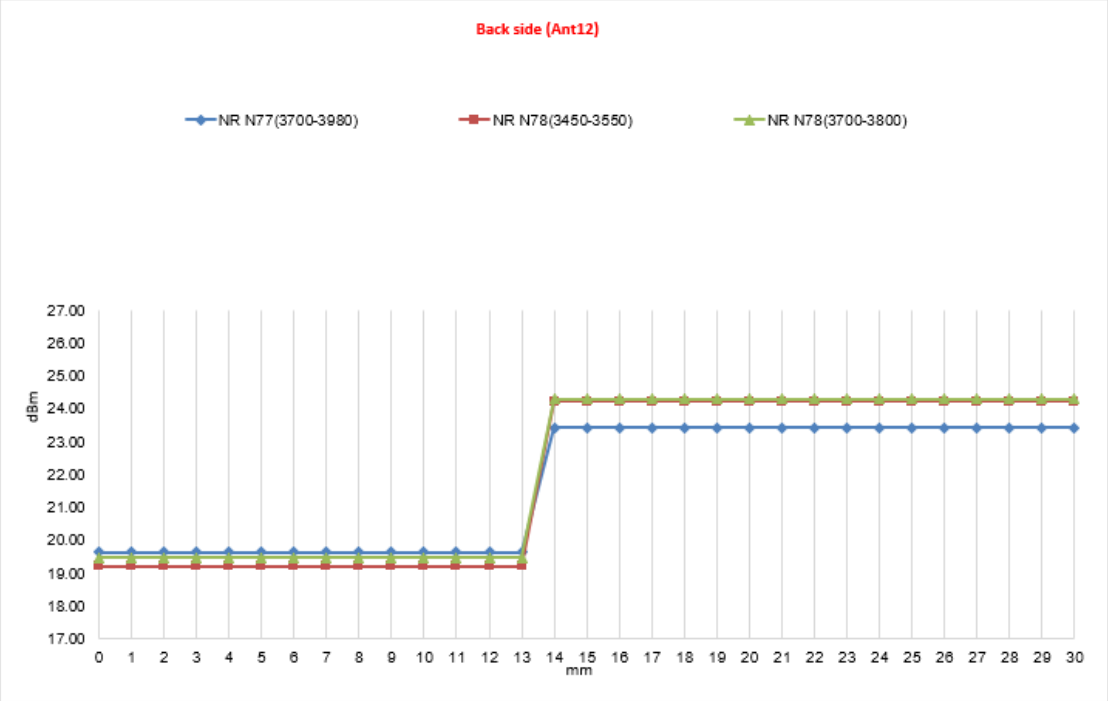

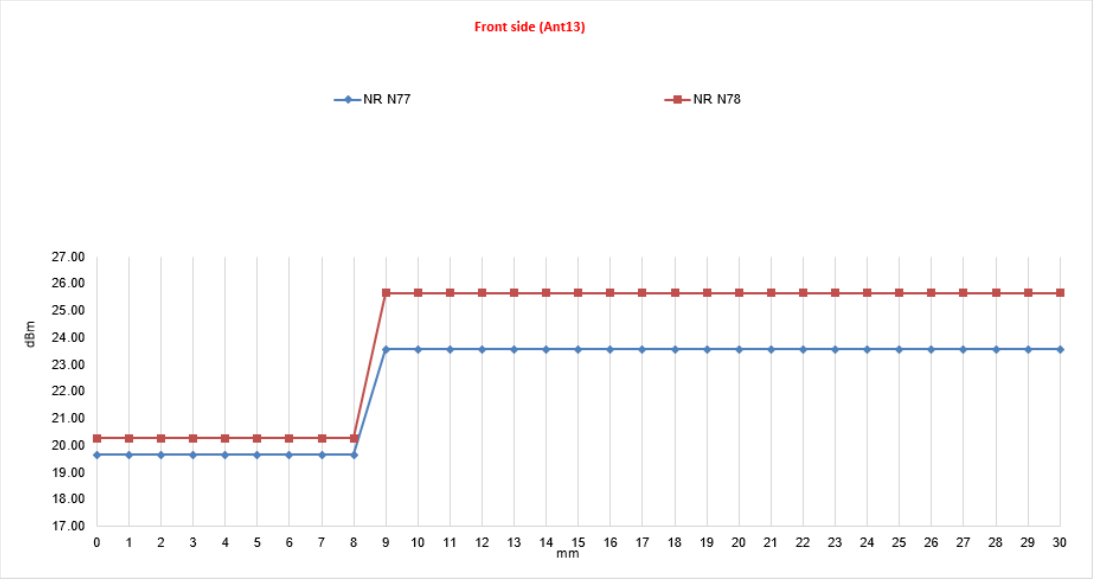

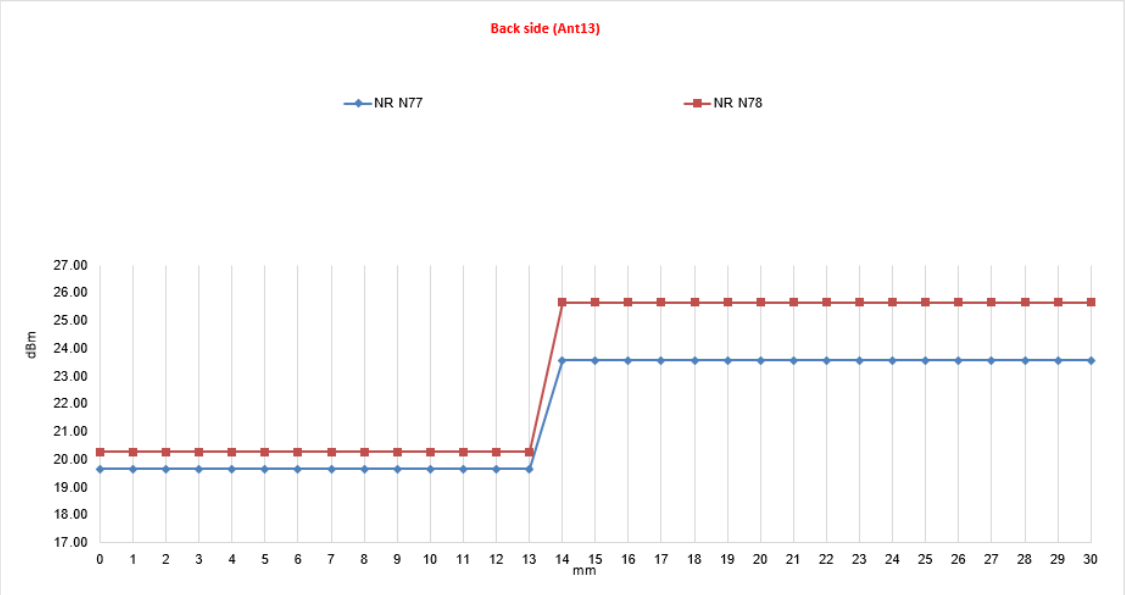

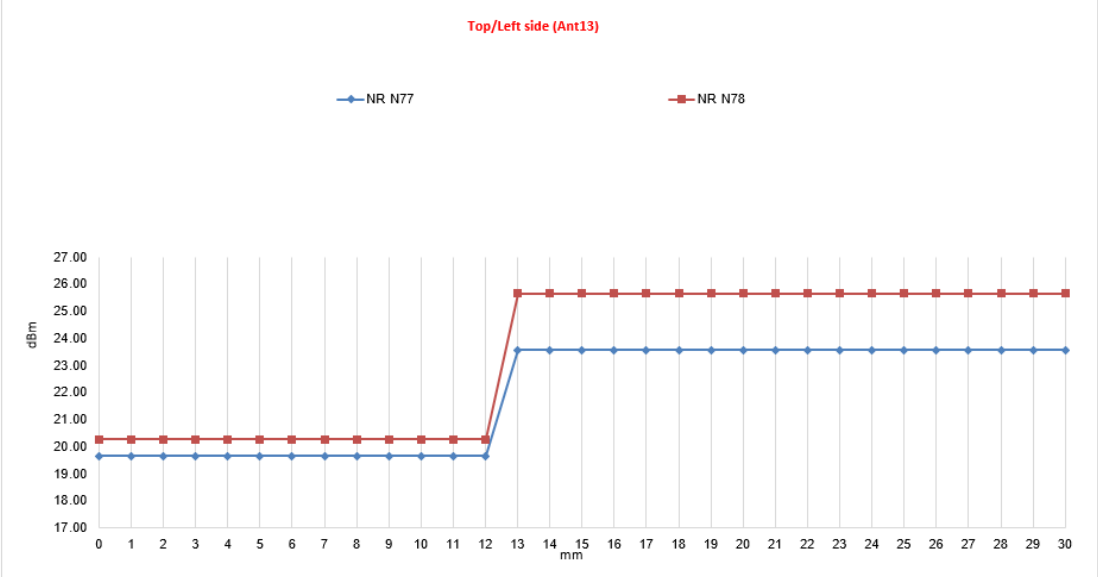

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Proximity sensor coverage

If a sensor is spatially offset from the antenna(s), it is necessary to verify sensor triggering for conditions where the antenna is next to the user, but the sensor is laterally further away to ensure sensor coverage is sufficient for reducing the power to maintain compliance. For p-sensor coverage testing, the device is moved and “along the direction of maximum antenna and sensor offset”.

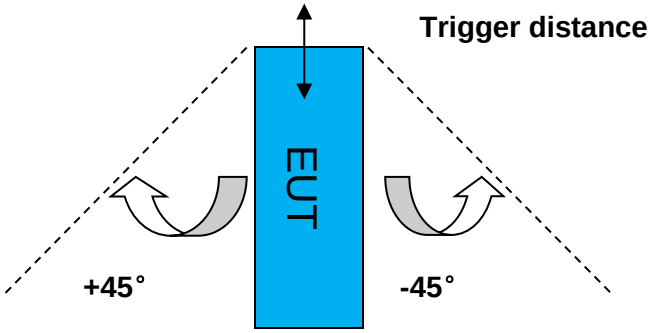
The proximity sensor and main antenna use same metallic electrode, so there is no spatial offset.

Device tilt angle influences on proximity sensor triggering

The influence of device tilt angles to proximity sensor triggering was determined by positioning each tablet edge that contains a transmitting antenna, perpendicular to the flat phantom.

Rotating the tablet around the edge next to the phantom in ≤ 10° increments until the tablet is ± 45° from the vertical position at 0°, and the maximum output power remains in the reduced mode.

Flat Phantom



Summary of Tablet Tilt Angle Influence on Proximity Sensor Triggering for Edge Side												
Band (MHz)	Minimum trigger distance Per KDB616217§6.2	Minimum trigger distance at which power reduction was maintained over ±45°	Power Reduction Status									
			-45°	-35°	-25°	-15°	-5°	0°	5°	15°	25°	35°	45°
Ant 11: LTE B2/4/7/66 NR N7/38/41	Left side:12mm	Left side:12mm	on	on	on	on	on	on	on	on	on	on	on
Ant 12:NR N77/78	Left side:12mm Top side:12mm	Left side:12mm Top side:12mm	on	on	on	on	on	on	on	on	on	on	on
Ant 13:NR N77/78	Left side:12mm Top side:12mm	Left side:12mm Top side:12mm	on	on	on	on	on	on	on	on	on	on	on

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6 SAR System Verification Procedure

6.1 Tissue Simulate Liquid

6.1.1 Recipes for Tissue Simulate Liquid

The bellowing tables give the recipes for tissue simulating liquids to be used in different frequency bands：

Ingredients (% by weight)	Frequency (MHz)				
	450	700-900	1750-2000	2300-2500	2500-2700
Water	38.56	40.30	55.24	55.00	54.92
Salt (NaCl)	3.95	1.38	0.31	0.2	0.23
Sucrose	56.32	57.90	0	0	0
HEC	0.98	0.24	0	0	0
Bactericide	0.19	0.18	0	0	0
Tween	0	0	44.45	44.80	44.85
Salt: 99⁺% Pure Sodium Chloride Water: De-ionized, 16 MΩ⁺ resistivity Tween: Polyoxyethylene (20) sorbitan monolaurate			Sucrose: 98⁺% Pure Sucrose HEC: Hydroxyethyl Cellulose		
HSL5GHz is composed of the following ingredients：(Manufactured by SPEAG) Water：50-65% Mineral oil：10-30% Emulsifiers：8-25% Sodium salt：0-1.5%					

Table 3： Recipe of Tissue Simulate Liquid

6.1.2 Measurement for Tissue Simulate Liquid

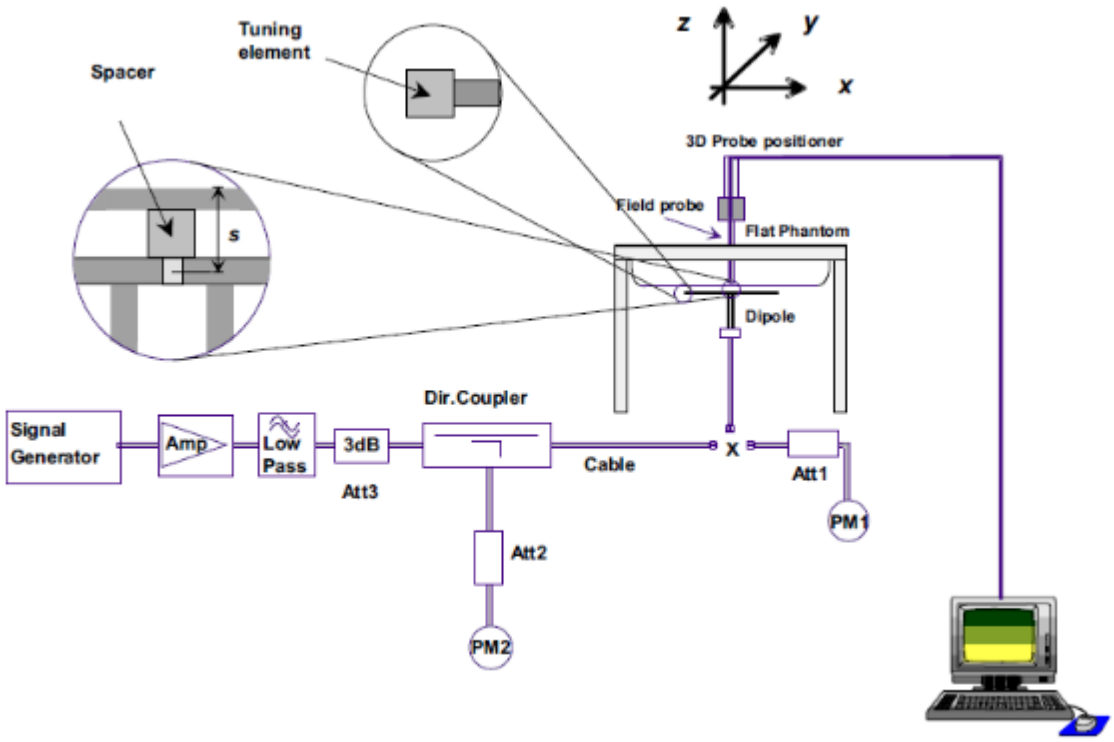
The Conductivity (σ) and Permittivity (ε_r) are listed in bellow table. For the SAR measurement given in this report. The temperature variation of the Tissue Simulate Liquids was 22±2°C.

Tissue Type	Measured Frequency (MHz)	Measured Tissue		Target Tissue (±5%)		Deviation (Within ±5%)		Liquid Temp. (℃)	Test Date
		ε_r	σ(S/m)	ε_r	σ(S/m)	ε_r	σ(S/m)		
750 Head	750	42.720	0.886	41.90	0.89	1.96%	-0.45%	22.5	2023/9/13
835 Head	835	43.207	0.891	41.50	0.90	4.11%	-1.00%	22.2	2023/9/15
835 Head	835	43.052	0.885	41.50	0.90	3.74%	-1.67%	22.3	2023/9/17
1750 Head	1750	40.179	1.374	40.10	1.37	0.20%	0.29%	22.5	2023/9/21
1750 Head	1750	40.474	1.383	40.10	1.37	0.93%	0.95%	22.3	2023/9/22
1750 Head	1750	40.179	1.309	40.10	1.37	0.20%	-4.45%	22.6	2023/9/25
1900 Head	1900	40.223	1.362	40.00	1.40	0.56%	-2.71%	22.4	2023/9/19
1900 Head	1900	40.376	1.409	40.00	1.40	0.94%	0.64%	22.5	2023/9/23
1900 Head	1900	40.489	1.401	40.00	1.40	1.22%	0.07%	22.1	2023/9/24
2450 Head	2450	40.300	1.790	39.20	1.80	2.81%	-0.56%	22.4	2023/9/12
2600 Head	2600	37.800	1.990	39.00	1.96	-3.08%	1.53%	22.2	2023/9/21
2600 Head	2600	38.500	1.970	39.00	1.96	-1.28%	0.51%	22.3	2023/9/24
2600 Head	2600	37.700	1.960	39.00	1.96	-3.33%	0.00%	21.8	2023/9/25
2600 Head	2600	40.100	1.940	39.00	1.96	2.82%	-1.02%	21.8	2023/9/27
2600 Head	2600	39.300	1.980	39.00	1.96	0.77%	1.02%	21.9	2023/10/12
3500 Head	3500	37.900	2.880	37.90	2.91	0.00%	-1.03%	22.5	2023/9/16
3500 Head	3500	38.100	2.900	37.90	2.91	0.53%	-0.34%	21.9	2023/10/7
3700 Head	3700	37.200	3.070	37.70	3.12	-1.33%	-1.60%	22.4	2023/9/17
3700 Head	3700	37.400	3.100	37.70	3.12	-0.80%	-0.64%	22.4	2023/10/8
3900 Head	3900	36.700	3.310	37.50	3.32	-2.13%	-0.30%	22.2	2023/10/9
5250 Head	5250	37.400	4.690	35.90	4.66	4.18%	0.64%	22.4	2023/9/28
5600 Head	5600	36.900	5.020	35.50	5.07	3.94%	-0.99%	22.4	2023/9/29
5750 Head	5750	36.600	5.290	35.40	5.22	3.39%	1.34%	22.4	2023/9/30

Table 4： Measurement result of Tissue electric parameters

6.2 SAR System Check

The microwave circuit arrangement for system Check is sketched in F-12. The daily system accuracy verification occurs within the flat section of the SAM phantom. A SAR measurement was performed to see if the measured SAR was within +/- 10% from the target SAR values. The tests were conducted on the same days as the measurement of the EUT. The obtained results from the system accuracy verification are displayed in the following table (A power level of 250mW (below 3GHz) or 100mW (3-6GHz) was input to the dipole antenna). During the tests, the ambient temperature of the laboratory was in the range 22±2°C, the relative humidity was in the range 60% and the liquid depth above the ear reference points was above 15±0.5 cm in all the cases. It is seen that the system is operating within its specification, as the results are within acceptable tolerance of the reference values.



F-12. the microwave circuit arrangement used for SAR system check

6.2.1 Justification for Extended SAR Dipole Calibrations

1) Referring to KDB865664 D01 requirements for dipole calibration, instead of the typical annual calibration recommended by measurement standards, longer calibration intervals of up to three years may be considered when it is demonstrated that the SAR target, impedance and return loss of a dipole have remain stable according to the following requirements. Each measured dipole is expected to evaluate with the following criteria at least on annual interval in Appendix C.
a) There is no physical damage on the dipole.
b) System check with specific dipole is within 10% of calibrated value.
c) Return-loss is within 10% of calibrated measurement.
d) Impedance is within 5Ω from the previous measurement.

2) Network analyzer probe calibration against air, distilled water and a shorting block performed before measuring liquid parameters.

6.2.2 Summary System Check Result(s)

Validation Kit		Measured SAR 250mW	Measured SAR 250mW	Measured SAR (normalized to 1W)	Measured SAR (normalized to 1W)	Target SAR (normalized to 1W)	Target SAR (normalized to 1W)	Deviation (Within ±10%)		Liquid Temp. (℃)	Test Date
		1g (W/kg)	10g (W/kg)	1g (W/kg)	10g (W/kg)	1-g(W/kg)	10-g(W/kg)	1-g(W/kg)	10-g(W/kg)		
D750V3	Head	2.23	1.46	8.92	5.84	8.37	5.53	6.57%	5.61%	22.5	2023/9/13
D835V2	Head	2.44	1.57	9.76	6.28	9.53	6.29	2.41%	-0.16%	22.2	2023/9/15
D835V2	Head	2.42	1.56	9.68	6.24	9.53	6.29	1.57%	-0.79%	22.3	2023/9/17
D1750V2	Head	8.94	4.71	35.76	18.84	36.60	19.30	-2.30%	-2.38%	22.5	2023/9/21
D1750V2	Head	9.42	4.99	37.68	19.96	36.60	19.30	2.95%	3.42%	22.3	2023/9/22
D1750V2	Head	9.07	4.93	36.28	19.72	36.60	19.30	-0.87%	2.18%	22.6	2023/9/25
D1900V2	Head	9.66	5.08	38.64	20.32	39.50	20.60	-2.18%	-1.36%	22.4	2023/9/19
D1900V2	Head	9.97	5.25	39.88	21.00	39.50	20.60	0.96%	1.94%	22.5	2023/9/23
D1900V2	Head	9.92	5.21	39.68	20.84	39.50	20.60	0.46%	1.17%	22.1	2023/9/24
D2450V2	Head	12.30	5.74	49.20	22.96	52.20	24.30	-5.75%	-5.51%	22.4	2023/9/12
D2600V2	Head	13.80	6.33	55.20	25.32	57.70	25.80	-4.33%	-1.86%	22.2	2023/9/21
D2600V2	Head	13.20	5.95	52.80	23.80	57.70	25.80	-8.49%	-7.75%	22.3	2023/9/24
D2600V2	Head	13.40	6.30	53.60	25.20	57.70	25.80	-7.11%	-2.33%	21.8	2023/9/25
D2600V2	Head	14.90	7.01	59.60	28.04	57.70	25.80	3.29%	8.68%	21.8	2023/9/27
D2600V2	Head	13.20	5.95	52.80	23.80	57.70	25.80	-8.49%	-7.75%	21.9	2023/10/12
Validation Kit		**Measured SAR 100mW**	**Measured SAR 100mW**	**Measured SAR (normalized to 1W)**	**Measured SAR (normalized to 1W)**	**Target SAR (normalized to 1W)**	**Target SAR (normalized to 1W)**	**Deviation (Within ±10%)**		**Liquid Temp. (℃)**	**Test Date**
		1g (W/kg)	10g (W/kg)	1g (W/kg)	10g (W/kg)	1-g(W/kg)	10-g(W/kg)	1-g(W/kg)	10-g(W/kg)		
D3500V2	Head(3.5GHz)	6.36	2.45	63.60	24.50	65.80	25.70	-3.34%	-4.67%	22.5	2023/9/16
	Head(3.5GHz)	6.21	2.38	62.10	23.80	65.80	25.70	-5.62%	-7.39%	21.9	2023/10/7
D3700V2	Head(3.7GHz)	6.76	2.54	67.60	25.40	66.10	24.70	2.27%	2.83%	22.4	2023/9/17
D3700V2	Head(3.7GHz)	5.97	2.24	59.70	22.40	66.10	24.70	-9.68%	-9.31%	22.4	2023/10/8
D3900V2	Head(3.9GHz)	6.45	2.30	64.50	23.00	66.70	23.80	-3.30%	-3.36%	22.2	2023/10/9
D5GHzV2	Head(5.25GHz)	8.05	2.32	80.50	23.20	77.30	22.10	4.14%	4.98%	22.4	2023/9/28
	Head(5.6GHz)	8.19	2.34	81.90	23.40	81.30	23.10	0.74%	1.30%	22.4	2023/9/29
	Head(5.75GHz)	7.43	2.12	74.30	21.20	77.10	21.30	-3.63%	-0.47%	22.4	2023/9/30

Table 5： SAR System Check Result

6.2.3 Detailed System Check Results

Please see the Appendix A

7 Test Configuration

7.1 3G SAR Test Reduction Procedure

According to KDB 941225D01, in the following procedures, the mode tested for SAR is referred to as the primary mode. The equivalent modes considered for SAR test reduction are denoted as secondary modes. Both primary and secondary modes must be in the same frequency band. When the maximum output power and tune-up tolerance specified for production units in a secondary mode is ≤ ¼ dB higher than the primary mode or when the highest reported SAR of the primary mode is scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for the secondary mode. This is referred to as the 3G SAR test reduction procedure in the following SAR test guidance, where the primary mode is identified in the applicable wireless mode test procedures and the secondary mode is wireless mode being considered for SAR test reduction by that procedure. When the 3G SAR test reduction procedure is not satisfied, it is identified as “otherwise” in the applicable procedures; SAR measurement is required for the secondary mode.

7.2 Operation Configurations

7.2.1 GSM Test Configuration

SAR tests for GSM 850 and GSM 1900, a communication link is set up with a base station by air link. Using Radio Communication Analyzer, the power lever is set to “5”and “0” in SAR of GSM 850 and GSM 1900. The tests in the band of GSM 850 and GSM 1900 are performed in the mode of GPRS/EGPRS function. Since the GPRS class is 33 for this EUT, it has at most 4 timeslots in uplink and at most 4 timeslots in downlink, the maximum total timeslot is 5. The EGPRS class is 33 for this EUT, it has at most 4 timeslots in uplink, and at most 4 timeslots in downlink, the maximum total timeslot is 5.

SAR test reduction for GPRS and EDGE modes is determined by the source-based time-averaged output power specified for production units, including tune-up tolerance. The data mode with highest specified time-averaged output power should be tested for SAR compliance in the applicable exposure conditions. For modes with the same specified maximum output power and tolerance, the higher number time-slot configuration should be tested.

When SAR tests for EGPRS mode is necessary, GMSK modulation should be used to minimize SAR measurement error due to higher peak-to-average power (PAR) ratios inherent in 8-PSK.

The 3G SAR test reduction procedure is applied to 8-PSK EDGE with GMSK GPRS/EDGE as the primary mode

7.2.2 WCDMA Test Configuration

1）. Output Power Verification

Maximum output power is verified on the high, middle and low channels according to procedures described in section 5.2 of 3GPP TS 34.121, using the appropriate RMC or AMR with TPC (transmit power control) set to all "1's" for WCDMA/HSDPA or by applying the required inner loop power control procedures to maintain maximum output power while HSUPA is active. Results for all applicable physical channel configurations (DPCCH, DPDCHn and spreading codes, HSDPA, HSPA) are required in the SAR report. All configurations that are not supported by the handset or cannot be measured due to technical or equipment limitations must be clearly identified.

2）. Head SAR

SAR for next to the ear head exposure is measured using a 12.2 kbps RMC with TPC bits configured to all "1's". The 3G SAR test reduction procedure is applied to AMR configurations with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured for 12.2 kbps AMR in 3.4 kbps SRB (signaling radio bearer) using the highest reported SAR configuration in 12.2 kbps RMC for head exposure

3）. Body SAR

SAR for body configurations is measured using a 12.2 kbps RMC with TPC bits configured to all "1's". The 3G SAR test reduction procedure is applied to other spreading codes and multiple DPDCHn configurations supported by the handset with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured using an applicable RMC configuration with the corresponding spreaing code or DPDCHn, for the highest reported body-worn accessory exposure SAR configuration in 12.2 kbps RMC. When more than 2 DPDCHn are supported by the handset, it may be necessary to configure additional DPDCHn using FTM (Factory Test Mode) or other chipset based test approaches with parameters similar to those used in 384 kbps and 768 kbps RMC.

4）. HSDPA / HSUPA / DC-HSDPA

According to KDB 941225 D01v03, RMC 12.2kbps setting is used to evaluate SAR. If the maximum output power and tune-up tolerance specified for production units in HSDPA / HSUPA / DC-HSDPA is ≤ ¼ dB higher than RMC 12.2Kbps or when the highest reported SAR of the RMC12.2Kbps is scaled by the ratio of specified maximum output power and tune-up tolerance of HSDPA / HSUPA / DC-HSDPA to RMC12.2Kbps and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA

a) HSDPA

HSDPA is configured according to the applicable UE category of a test device. The number of HS-DSCH/HS-PDSCHs, HARQ processes, minimum inter-TTI interval, transport block sizes and RV coding sequence are defined by the H-set. To maintain a consistent test configuration and stable transmission conditions, QPSK is used in the H-set for SAR testing. HS-DPCCH should be configured with a CQI feedback cycle of 4 ms and a CQI repetition factor of 2 to maintain a constant rate of active CQI slots. DPCCH and DPDCH gain factors(βc, βd), and HS-DPCCH power offset parameters (ΔACK, ΔNACK, ΔCQI) are set according to values indicated in the following table The CQI value is determined by the UE category, transport block size, number of HS-PDSCHs and modulation used in the H-set.

Sub-test	βc	Bd	βd(SF)	βc/βd	βhs	CM(dB)	MPR (dB)
1	2/15	15/15	64	2/15	4/15	0.0	0
2	12/15(3)	15/15(3)	64	12/15(3)	24/15	1.0	0
3	15/15	8/15	64	15/8	30/15	1.5	0.5
4	15/15	4/15	64	15/4	30/15	1.5	0.5

Note1: △ACK, △NACK and △CQI= 8 Ahs = βhs/βc=30/15 βhs=30/15*βc
Note2: For the HS-DPCCH power mask requirement test in clause 5.2C,5.7A,and the Error Vector Magnitude(EVM) with HS-DPCCH test in clause 5.13.1.A,and HSDPA EVM with phase discontinuity in clause 5.13.1AA, △ACK and △NACK= 8 (Ahs=30/15) with βhs=30/15*βc,and △CQI=
7 (Ahs=24/15) with βhs=24/15*βc.
Note3: CM=1 forβc/βd =12/15, βhs/βc=24/15. For all other combinations of DPDCH, DPCCH and HS-DPCCH the MPR is based on the relative CM difference. This is applicable for only UEs that support HSDPA in release 6 and later releases.

The measurements were performed with a Fixed Reference Channel (FRC) and H-Set 1 QPSK.

Parameter	Value
Nominal average inf. bit rate	534 kbit/s
Inter-TTI Distance	3 TTI"s
Number of HARQ Processes	2 Processes
Information Bit Payload	3202 Bits
MAC-d PDU size	336 Bits
Number Code Blocks	1 Block
Binary Channel Bits Per TTI	4800 Bits
Total Available SMLs in UE	19200 SMLs
Number of SMLs per HARQ Process	9600 SMLs
Coding Rate	0.67
Number of Physical Channel Codes	5

Table 6： settings of required H-Set 1 QPSK acc. to 3GPP 34.121

HS-DSCH Category	Maximum HS-DSCH Codes Received	Minimum Inter-TTI Interval	MaximumH S-DSCH Transport BlockBits/HS-DSCH TTI	Total Soft Channel Bits
1	5	3	7298	19200
2	5	3	7298	28800
3	5	2	7298	28800
4	5	2	7298	38400
5	5	1	7298	57600
6	5	1	7298	67200
7	10	1	14411	115200
8	10	1	14411	134400
9	15	1	25251	172800
10	15	1	27952	172800
11	5	2	3630	14400
12	5	1	3630	28800
13	15	1	34800	259200
14	15	1	42196	259200
15	15	1	23370	345600
16	15	1	27952	345600

Table 7： HSDPA UE category

b) HSUPA

Due to inner loop power control requirements in HSUPA, a commercial communication test set should be used for the output power and SAR tests. The 12.2 kbps RMC, FRC H-set 1 and E-DCH configurations for HSUPA should be configured according to the values indicated below as well as other applicable procedures described in the WCDMA Handset and Release 5 HSUPA Data Device sections of 3G device.

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{hs}(1)	β_{ec}	β_{ed}	β_{ec} (SF)	β_{ed} (code)	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 Δ CQI = 8 $A_{hs} = \beta_{hs}/\beta_c = 30/15$ $\beta_{hs} = 30/15 * \beta_c$

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

Note 3 : For subtest 1 the β_c/β_d ratio of 11/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 10/15$ and $\beta_d = 15/15$

Note 4 : For subtest 5 the β_c/β_d ratio of 15/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 14/15$ and $\beta_d = 15/15$

Note 5 : Testing UE using E-DPDCH Physical Layer category 1 Sub-test 3 is not required according to TS 25.306 Table 5.1g

Note 6: β_{ed} can not be set directly; it is set by Absolute Grant Value.

Table 8： Subtests for UMTS Release 6 HSUPA

UE E-DCH Category	Maximum E-DCH Codes Transmitted	Number of HARQ Processes	E-DCH TTI(ms)	Minimum Speading Factor	Maximum E-DCH Transport Block Bits	Max Rate (Mbps)
1	1	4	10	4	7110	0.7296
2	2	8	2	4	2798	1.4592
	2	4	10	4	14484	
3	2	4	10	4	14484	1.4592
4	2	8	2	2	5772	2.9185
	2	4	10	2	20000	2.00
5	2	4	10	2	20000	2.00
6 (No DPDCH)	4	8	10	2SF2&2SF4	11484	5.76
	4	4	2		20000	2.00
7 (No DPDCH)	4	8	2	2SF2&2SF4	22996	?
	4	4	10		20000	?

NOTE: When 4 codes are transmitted in parallel, two codes shall be transmitted with SF2 and two with SF4.UE categories 1 to 6 support QPSK only. UE category 7 supports QPSK and 16QAM.(TS25.306-7.3.0).

Table 9： HSUPA UE category

c) DC-HSDPA

SAR is required for Rel. 8 DC-HSDPA when SAR is required for Rel. 5 HSDPA; otherwise, the 3G SAR test reduction procedure is applied to DC-HSDPA with 12.2 kbps RMC as the primary mode. Power is measured for DC-HSDPA according to the H-Set 12, FRC configuration in Table C.8.1.12 of 3GPP TS 34.121-1 to determine SAR test reduction. A primary and a Second serving HS-DSCH Cell are required to perform the power measurement and for the results to be acceptable.
The following tests were completed according to procedures in section 7.3.13 of 3GPP TS 34.108 v9.5.0.
A summary of these settings are illustrated below:
Downlink Physical Channels are set as per 3GPP TS34.121-1 v9.0.0 E.5.0

Table E.5.0: Levels for HSDPA connection setup

Parameter During Connection setup	Unit	Value
P-CPICH_Ec/Ior	dB	-10
P-CCPCH and SCH_Ec/Ior	dB	-12
PICH _Ec/Ior	dB	-15
HS-PDSCH	dB	off
HS-SCCH_1	dB	off
DPCH_Ec/Ior	dB	-5
OCNS_Ec/Ior	dB	-3.1

Call is set up as per 3GPP TS34.108 v9.5.0 sub clause 7.3.13.
The configurations of the fixed reference channels for HSDPA RF tests are described in 3GPP TS 34.121, annex C for FDD and 3GPP TS 34.122.
The measurements were performed with a Fixed Reference Channel (FRC) H-Set 12 with QPSK.

Parameter	Value
Nominal average inf. bit rate	60 kbit/s
Inter-TTI Distance	1 TTI's
Number of HARQ Processes	6 Processes
Information Bit Payload	120 Bits
Number Code Blocks	1 Block
Binary Channel Bits Per TTI	960 Bits
Total Available SMLs in UE	19200 SMLs
Number of SMLs per HARQ Process	3200 SMLs
Coding Rate	0.15
Number of Physical Channel Codes	1

Table 10：settings of required H-Set 12 QPSK acc. to 3GPP 34.121

Note:
1. The RMC is intended to be used for DC-HSDPA mode and both cells shall transmit with identical parameters as listed in the table above.
2. Maximum number of transmission is limited to 1,i.e.,retransmission is not allowed. The redundancy and constellation version 0 shall be used.

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86-755) 26012053 www.sgsgroup.com.cn
中国·广东·深圳市南山区科技园中区M-10栋1号厂房 邮编：518057 t (86-755) 26012053 sgs.china@sgs.com

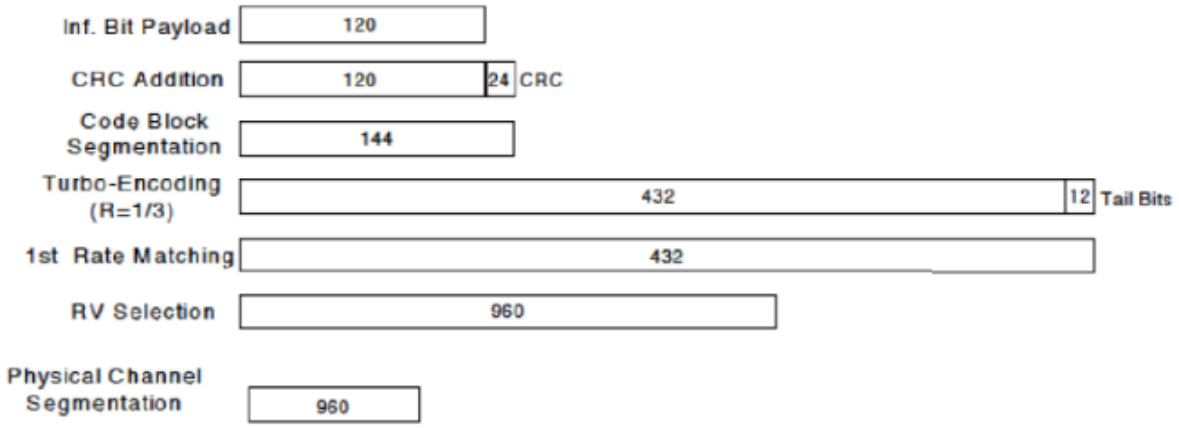


Figure C.8.19: Coding rate for Fixed reference Channel H-Set 12 (QPSK)

The following 4 Sub-tests for HSDPA were completed according to Release 5 procedures. A summary of subtest settings are illustrated below:

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{hs} (1)	CM(dB)(2)	MPR (dB)
1	2/15	15/15	64	2/15	4/15	0.0	0
2	12/15(3)	15/15(3)	64	12/15(3)	24/15	1.0	0
3	15/15	8/15	64	15/8	30/15	1.5	0.5
4	15/15	4/15	64	15/4	30/15	1.5	0.5

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

Note 2: CM=1 for $\beta_c/\beta_d = 12/15$, $\beta_{hs}/\beta_c = 24/15$. For all other combinations of DPDCH, DPCCH and HS-DPCCH the MPR is based on the relative CM difference. This is applicable for only UEs that support HSDPA in release 6 and later releases.

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 signalled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 11/15$ and $\beta_d = 15/15$

Up commands are set continuously to set the UE to Max power.

Note:

1. The Dual Carriers transmission only applies to HSDPA physical channels
2. The Dual Carriers belong to the same Node and are on adjacent carriers.
3. The Dual Carriers do not support MIMO to serve UEs configured for dual cell operation
4. The Dual Carriers operate in the same frequency band.
5. The device doesn't support the modulation of 16QAM in uplink but 64QAM in downlink for DC-HSDPA mode.
6. The device doesn't support carrier aggregation for it just can operate in Release 8.

d) HSPA+

Per KDB941225 D01, SAR is required for Rel. 7 HSPA+ when SAR is required for Rel. 6 HSPA; otherwise, the 3G SAR test reduction procedure is applied to (uplink) HSPA+ with 12.2 kbps RMC as the primary mode. Power is measured for HSPA+ that supports uplink 16 QAM according to configurations in Table C.11.1.4 of 3GPP TS 34.121-1 to determine SAR test reduction.

Table C.11.1.4: β values for transmitter characteristics tests with HS-DPCCH and E-DCH with 16QAM

Sub-test	β_c (Note3)	β_d	β_{HS} (Note1)	β_{ec}	β_{ed} (2xSF2) (Note 4)	β_{ed} (2xSF4) (Note 4)	CM (dB) (Note 2)	MPR (dB) (Note 2)	AG Index (Note 4)	E-TFCI (Note 5)	E-TFCI (boost)
1	1	0	30/15	30/15	β_{ed}1: 30/15 β_{ed}2: 30/15	β_{ed}3: 24/15 β_{ed}4: 24/15	3.5	2.5	14	105	105

Note 1: Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 30/15 with β_{hs} = 30/15 * β_c.

Note 2: CM = 3.5 and the MPR is based on the relative CM difference, MPR = MAX(CM-1,0).

Note 3: DPDCH is not configured, therefore the β_c is set to 1 and β_d = 0 by default.

Note 4: β_{ed} can not be set directly; it is set by Absolute Grant Value.

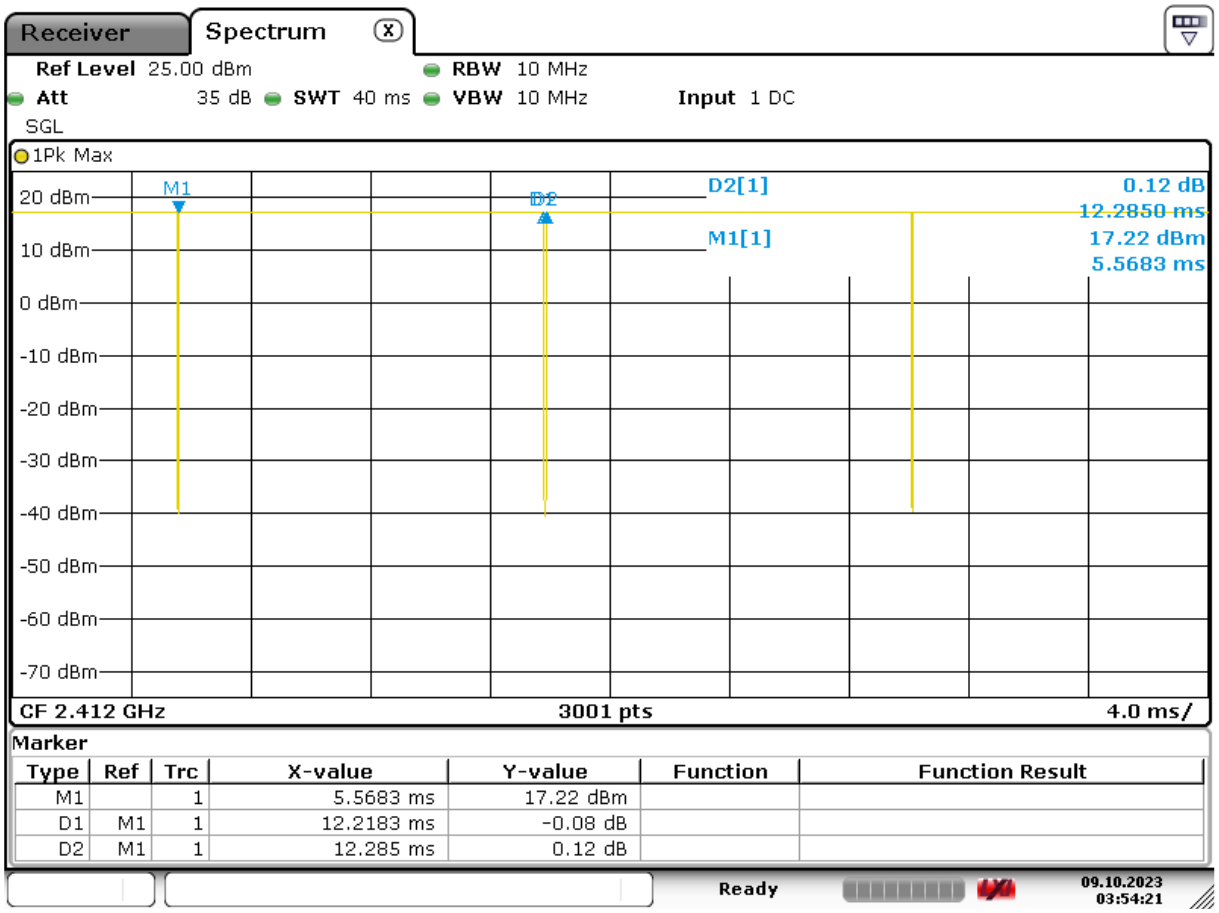
Note 5: All the sub-tests require the UE to transmit 2SF2+2SF4 16QAM EDCH and they apply for UE using E-DPDCH category 7. E-DCH TTI is set to 2ms TTI and E-DCH table index = 2. To support these E-DCH configurations DPDCH is not allocated. The UE is signalled to use the extrapolation algorithm.

7.2.3 WiFi Test Configuration

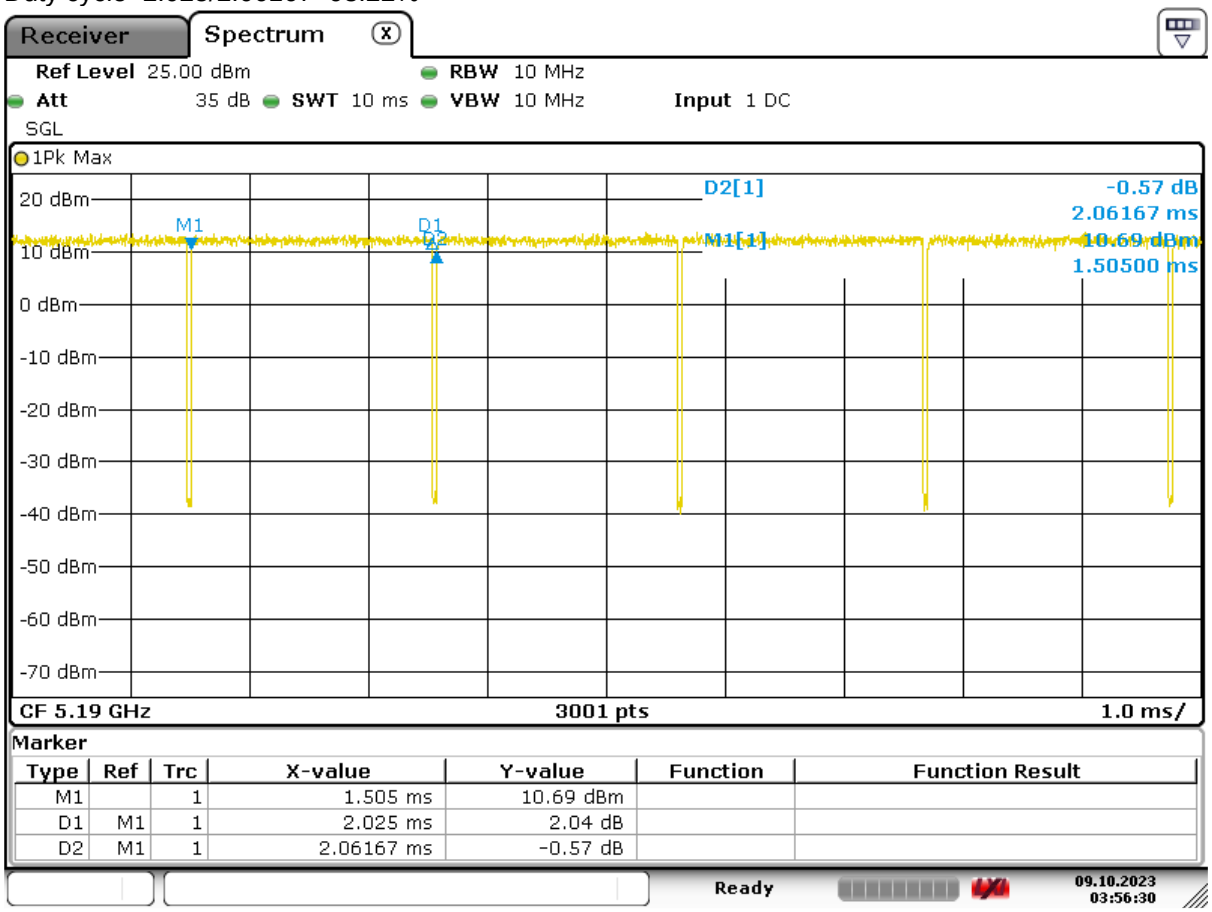
A Wi-Fi device must be configured to transmit continuously at the required data rate, channel bandwidth and signal modulation, using the highest transmission duty factor supported by the test mode tools for SAR measurement.

7.2.3.1 Duty cycle

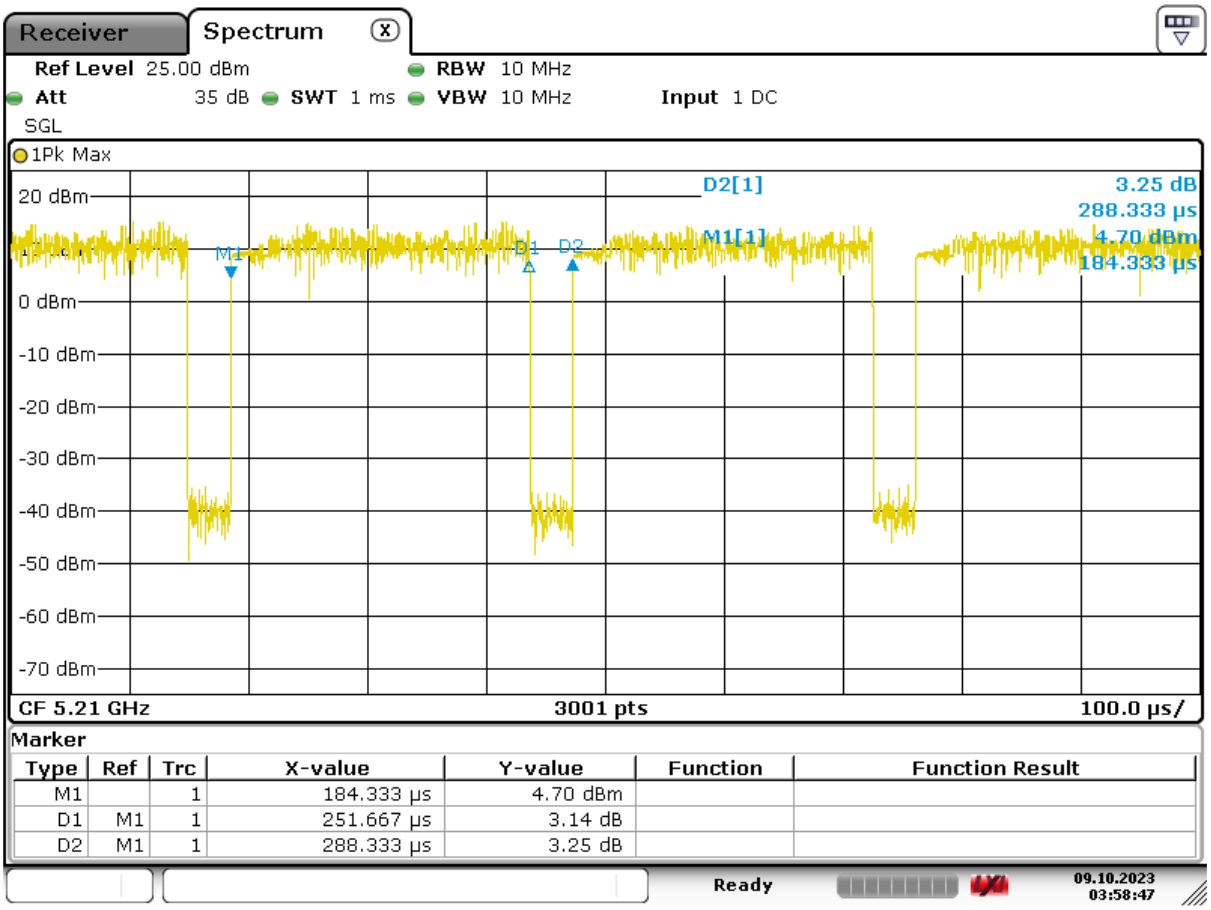
1) Wi-Fi 2.4GHz 802.11b:
Duty cycle=12.2183/12.285=99.45%



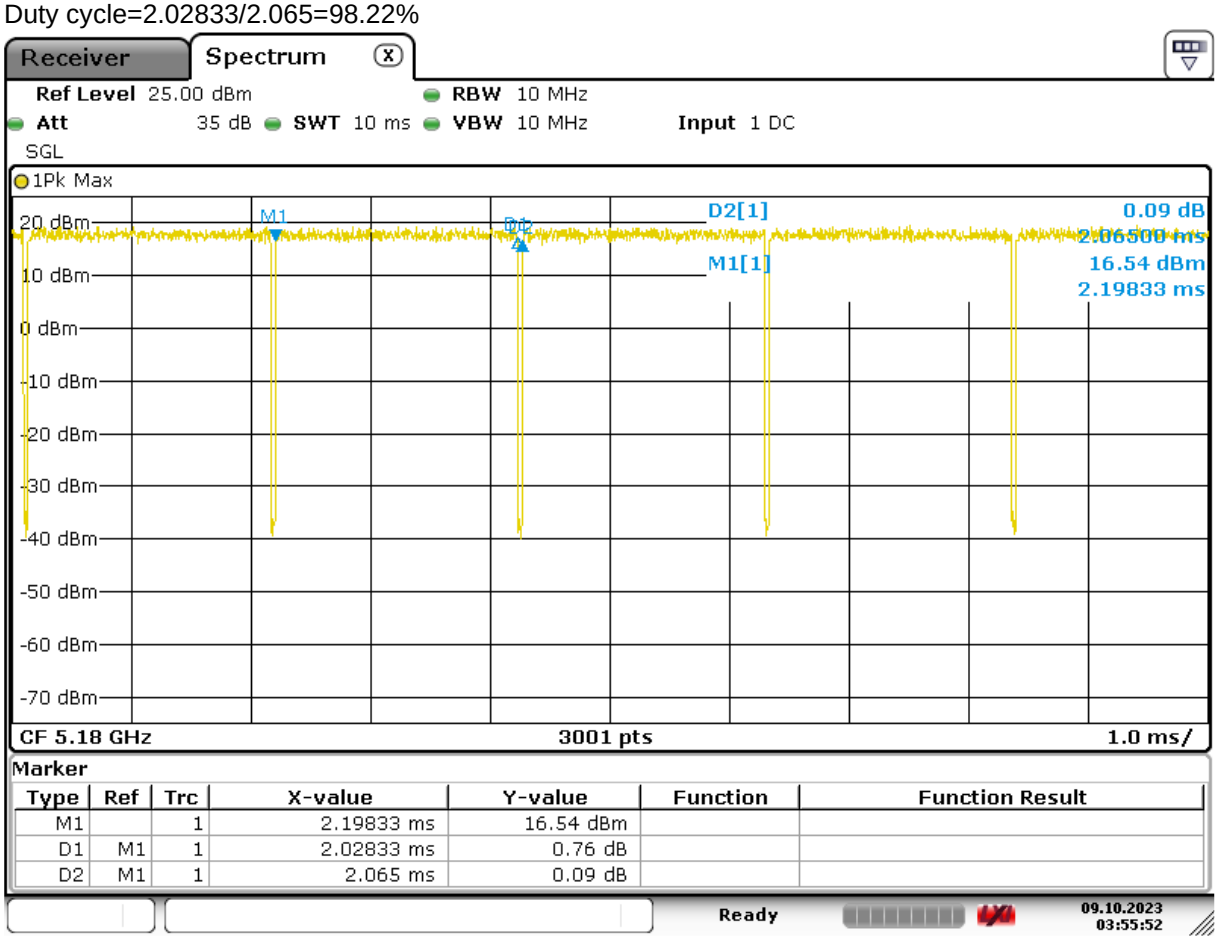
2) Wi-Fi 5GHz 802.11n40:
Duty cycle=2.025/2.06167=98.22%



3) Wi-Fi 5GHz 802.11ac80:
Duty cycle=251.667/288.333=87.28%



4) Wi-Fi 5GHz 802.11a:
Duty cycle=2.02833/2.065=98.22%



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中国·广东·深圳市南山区科技园中区M-10栋1号厂房 邮编: 518057 t (86-755) 26012053 sgs.china@sgs.com

7.2.3.2 Initial Test Position SAR Test Reduction Procedure

DSSS and OFDM configurations are considered separately according to the required SAR procedures. SAR is measured in the initial test position using the 802.11 transmission mode configuration required by the DSSS procedure or initial test configuration and subsequent test configuration(s) according to the OFDM procedures. The initial test position procedure is described in the following:

1）. When the reported SAR of the initial test position is ≤ 0.4 W/kg, further SAR measurement is not required for the other (remaining) test positions in that exposure configuration and 802.11 transmission mode combinations within the frequency band or aggregated band. SAR is also not required for that exposure configuration in the subsequent test configuration(s).
2）. When the reported SAR of the initial test position is > 0.4 W/kg, SAR is repeated for the 802.11 transmission mode configuration tested in the initial test position using subsequent highest extrapolated or estimated 1-g SAR conditions determined by area scans or next closest/smallest test separation distance and maximum RF coupling test positions based on manufacturer justification, on the highest maximum output power channel, until the reported SAR is ≤ 0.8 W/kg or all required test positions (left, right, touch, tilt or subsequent surfaces and edges) are tested.
3）. For all positions/configurations tested using the initial test position and subsequent test positions, when the reported SAR is > 0.8 W/kg, SAR is measured for these test positions/configurations on the subsequent next highest measured output power channel(s) until the reported SAR is ≤ 1.2 W/kg or all required channels are tested. a) Additional power measurements may be required for this step, which should be limited to those necessary for identifying the subsequent highest output power channels.

7.2.3.3 Initial Test Configuration Procedures

An initial test configuration is determined for OFDM transmission modes according to the channel bandwidth, modulation and data rate combination(s) with the highest maximum output power specified for production units in each standalone and aggregated frequency band. SAR is measured using the highest measured maximum output power channel. For configurations with the same specified or measured maximum output power, additional transmission mode and test channel selection procedures are required. SAR test reduction for subsequent highest output test channels is determined according to *reported* SAR of the initial test configuration.
For next to the ear, hotspot mode and UMC mini-tablet exposure configurations where multiple test positions are required, the initial test position procedure is applied to minimize the number of test positions required for SAR measurement using the initial test configuration transmission mode. For fixed exposure conditions that do not have multiple SAR test positions, SAR is measured in the transmission mode determined by the initial test configuration.
When the *reported* SAR of the initial test configuration is > 0.8 W/kg, SAR measurement is required for subsequent next highest measured output power channel(s) in the initial test configuration until *reported* SAR is ≤ 1.2 W/kg or all required channels are tested.

7.2.3.4 Subsequent Test Configuration Procedures

SAR measurement requirements for the remaining 802.11 transmission mode configurations that have not been tested in the initial test configuration are determined separately for each standalone and aggregated frequency band, in each exposure condition, according to the maximum output power specified for production units. The initial test position procedure is applied to next to the ear, UMPC mini-tablet and hotspot mode configurations. When the same maximum output power is specified for multiple transmission modes, additional power measurements may be required to determine if SAR measurements are required for subsequent highest output power channels in a subsequent test configuration. The subsequent test configuration and SAR measurement procedures are described in the following.

1）. When SAR test exclusion provisions of KDB Publication 447498 are applicable and SAR measurement is not required for the initial test configuration, SAR is also not required for the next highest maximum output power transmission mode subsequent test configuration(s) in that frequency band or aggregated band and exposure configuration.

2）. When the highest *reported* SAR for the initial test configuration (when applicable, include subsequent highest output channels), according to the initial test position or fixed exposure position requirements, is adjusted by the ratio of the subsequent test configuration to initial test configuration specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg, SAR is not required for that subsequent test configuration.

3）. The number of channels in the initial test configuration and subsequent test configuration can be different due to differences in channel bandwidth. When SAR measurement is required for a subsequent test configuration and the channel bandwidth is smaller than that in the initial test configuration, all channels in the subsequent test configuration that overlap with the larger bandwidth channel tested in the initial test configuration should be used to determine the highest maximum output power channel. This step requires additional power measurement to identify the highest maximum output power channel in the subsequent test configuration to determine SAR test reduction.

a) SAR should first be measured for the channel with highest measured output power in the subsequent test configuration.

b) SAR for subsequent highest measured maximum output power channels in the subsequent test configuration is required only when the *reported* SAR of the preceding higher maximum output power channel(s) in the subsequent test configuration is > 1.2 W/kg or until all required channels are tested. i) For channels with the same measured maximum output power, SAR should be measured using the channel closest to the center frequency of the larger channel bandwidth channel in the initial test configuration.

4）. SAR measurements for the remaining highest specified maximum output power OFDM transmission mode configurations that have not been tested in the initial test configuration (highest maximum output) or subsequent test configuration(s) (subsequent next highest maximum output power) is determined by recursively applying the subsequent test configuration procedures in this section to the remaining configurations according to the following:

a) replace “subsequent test configuration” with “next subsequent test configuration” (i.e., subsequent next highest specified maximum output power configuration)

b) replace “initial test configuration” with “all tested higher output power configurations”

7.2.3.5 2.4 GHz WiFi SAR Procedures

Separate SAR procedures are applied to DSSS and OFDM configurations in the 2.4 GHz band to simplify DSSS test requirements. For 802.11b DSSS SAR measurements, DSSS SAR procedure applies to fixed exposure test position and initial test position procedure applies to multiple exposure test positions. When SAR measurement is required for an OFDM configuration, the initial test configuration, subsequent test configuration and initial test position procedures are applied. The SAR test exclusion requirements for 802.11g/n OFDM configurations are described in following.

- **802.11b DSSS SAR Test Requirements**

SAR is measured for 2.4 GHz 802.11b DSSS using either a fixed test position or, when applicable, the initial test position procedure. SAR test reduction is determined according to the following:

1）. 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 for 802.11b DSSS in that exposure configuration.

2）. When the reported SAR is > 0.8 W/kg, SAR is required for that exposure configuration using the next highest measured output power channel. When any reported SAR is > 1.2 W/kg, SAR is required for the third channel; i.e., all channels require testing.

- **2.4 GHz 802.11g/n OFDM SAR Test Exclusion Requirements**

When SAR measurement is required for 2.4 GHz 802.11g/n OFDM configurations, the measurement and test reduction procedures for OFDM are applied (section 5.3, including sub-sections). 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.

- **SAR Test Requirements for OFDM configurations**

When SAR measurement is required for 802.11 g/n OFDM configurations, each standalone and frequency aggregated band is considered separately for SAR test reduction. In applying the initial test configuration and subsequent test configuration procedures, the 802.11 transmission configuration with the highest specified maximum output power and the channel within a test configuration with the highest measured maximum output power should be clearly distinguished to apply the procedures.

7.2.3.6 5 GHz WiFi SAR Procedures

- **U-NII-1 and U-NII-2A Bands**
  For devices that operate in only one of the U-NII-1 and U-NII-2A bands, the normally required SAR procedures for OFDM configurations are applied. For devices that operate in both U-NII bands using the same transmitter and antenna(s), SAR test reduction is determined according to the following：

1) When the same maximum output power is specified for both bands, begin SAR measurement in U-NII-2A band by applying the OFDM SAR requirements. If the highest reported SAR for a test configuration is ≤ 1.2 W/kg, SAR is not required for U-NII-1 band for that configuration (802.11 mode and exposure condition); otherwise, both bands are tested independently for SAR.
2) When different maximum output power is specified for the bands, begin SAR measurement in the band with higher specified maximum output power. The highest reported SAR for the tested configuration is adjusted by the ratio of lower to higher specified maximum output power for the two bands. When the adjusted SAR is ≤ 1.2 W/kg, SAR is not required for the band with lower maximum output power in that test configuration; otherwise, both bands are tested independently for SAR.
3) The two U-NII bands may be aggregated to support a 160 MHz channel on channel number 50. Without additional testing, the maximum output power for this is limited to the lower of the maximum output power certified for the two bands. When SAR measurement is required for at least one of the bands and the highest reported SAR adjusted by the ratio of specified maximum output power of aggregated to standalone band is > 1.2 W/kg, SAR is required for the 160 MHz channel. This procedure does not apply to an aggregated band with maximum output higher than the standalone band(s); the aggregated band must be tested independently for SAR. SAR is not required when the 160 MHz channel is operating at a reduced maximum power and also qualifies for SAR test exclusion.

- **U-NII-2C and U-NII-3 Bands**
  The frequency range covered by these bands is 380 MHz (5.47 – 5.85 GHz), which requires a minimum of at least two SAR probe calibration frequency points to support SAR measurements. when Terminal Doppler Weather Radar (TDWR) restriction applies, all channels that operate at 5.60 – 5.65 GHz must be included to apply the SAR test reduction and measurement procedures.

  When the same transmitter and antenna(s) are used for U-NII-2C band and U-NII-3 band or 5.8 GHz band of §15.247, the bands may be aggregated to enable additional channels with 20, 40 or 80 MHz bandwidth to span across the band gap, as illustrated in Appendix B. The maximum output power for the additional band gap channels is limited to the lower of those certified for the bands. Unless band gap channels are permanently disabled, they must be considered for SAR testing. The frequency range covered by these bands is 380 MHz (5.47 – 5.85 GHz), which requires a minimum of at least two SAR probe calibration frequency points to support SAR measurements. To maintain SAR measurement accuracy and to facilitate test reduction, the channels in U-NII-2C band above 5.65 GHz may be grouped with the 5.8 GHz channels in U-NII-3 or §15.247 band to enable two SAR probe calibration frequency points to cover the bands, including the band gap channels. When band gap channels are supported and the bands are not aggregated for SAR testing, band gap channels must be considered independently in each band according to the normally required OFDM SAR measurement and probe calibration frequency points requirements.

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中国・广东・深圳市南山区科技园中区M-10栋1号厂房 邮编：518057 t (86-755) 26012053 sgs.china@sgs.com

- **OFDM Transmission Mode SAR Test Configuration and Channel Selection Requirements**
  The initial test configuration for 5 GHz OFDM transmission modes is determined by the 802.11 configuration with the highest maximum output power specified for production units, including tune-up tolerance, in each standalone and aggregated frequency band. SAR for the initial test configuration is measured using the highest maximum output power channel determined by the default power measurement procedures. When multiple configurations in a frequency band have the same specified maximum output power, the initial test configuration is determined according to the following steps applied sequentially.
  1) The largest channel bandwidth configuration is selected among the multiple configurations with the same specified maximum output power.
  2) If multiple configurations have the same specified maximum output power and largest channel bandwidth, the lowest order modulation among the largest channel bandwidth configurations is selected.
  3) If multiple configurations have the same specified maximum output power, largest channel bandwidth and lowest order modulation, the lowest data rate configuration among these configurations is selected.
  4) When multiple transmission modes (802.11a/g/n/ac) have the same specified maximum output power, largest channel bandwidth, lowest order modulation and lowest data rate, the lowest order 802.11 mode is selected; i.e., 802.11a is chosen over 802.11n then 802.11ac or 802.11g is chosen over 802.11n. After an initial test configuration is determined, if multiple test channels have the same measured maximum output power, the channel chosen for SAR measurement is determined according to the following. These channel selection procedures apply to both the initial test configuration and subsequent test configuration(s), with respect to the default power measurement procedures or additional power measurements required for further SAR test reduction. The same procedures also apply to subsequent highest output power channel(s) selection.
     a) The channel closest to mid-band frequency is selected for SAR measurement.
     b) For channels with equal separation from mid-band frequency; for example, high and low channels or two mid-band channels, the higher frequency (number) channel is selected for SAR measurement.

- **SAR Test Requirements for OFDM configurations**

When SAR measurement is required for 802.11 a/n/ac OFDM configurations, each standalone and frequency aggregated band is considered separately for SAR test reduction. When the same transmitter and antenna(s) are used for U-NII-1 and U-NII-2A bands, additional SAR test reduction applies. When band gap channels between U-NII-2C band and 5.8 GHz U-NII-3 or §15.247 band are supported, the highest maximum output power transmission mode configuration and maximum output power channel across the bands must be used to determine SAR test reduction, according to the initial test configuration and subsequent test configuration requirements. In applying the initial test configuration and subsequent test configuration procedures, the 802.11 transmission configuration with the highest specified maximum output power and the channel within a test configuration with the highest measured maximum output power should be clearly distinguished to apply the procedures.

7.2.4 LTE Test Configuration

LTE modes were tested according to FCC KDB 941225 D05 publication. Please see notes after the tabulated SAR data for required test configurations. Establishing connections with base station simulators ensure a consistent means for testing SAR and are recommended for evaluating SAR [4]. The Radio Communication Analyzer was used for LTE output power measurements and SAR testing. Max power control was used so the UE transmits with maximum output power during SAR testing. SAR must be measured with the maximum TTI (transmit time interval) supported by the device in each LTE configuration.

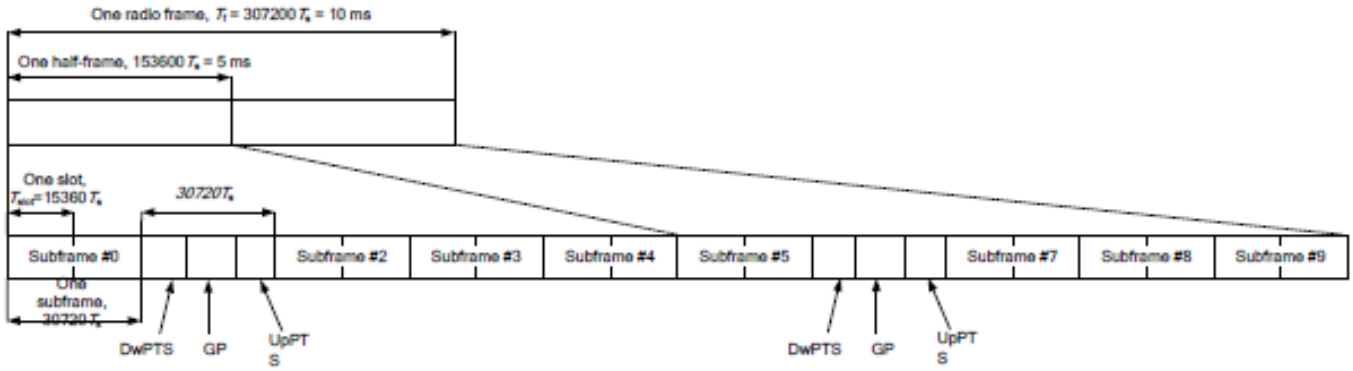
TDD LTE test consideration

For Time-Division Duplex (TDD) systems, SAR must be tested using a fixed periodic duty factor according to the highest transmission duty factor implemented for the device and supported by the defined 3GPP LTE TDD configurations.

SAR was tested with the highest transmission duty factor (63.33%) using Uplink-downlink configuration 0 and Special subframe configuration 7.

LTE TDD Band support 3GPP TS 36.211 section 4.2 for Type 2 Frame Structure and Table 4.2-2 for uplink-downlink configurations and Table 4.2-1 for Special subframe configurations.

Frame structure type 2:



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.Ts	2192.Ts	2560.Ts	7680.Ts	2192.Ts	2560.Ts
1	19760.Ts			20480.Ts		
2	21952.Ts			23040.Ts		
3	24144.Ts			25600.Ts		
4	26336.Ts			7680.Ts	4384.Ts	5120.Ts
5	6592.Ts	4384.Ts	5120.Ts	20480.Ts		
6	19760.Ts			23040.Ts		
7	21952.Ts			25600.Ts		
8	24144.Ts			-	-	-
9	13168.Ts			-	-	-

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

Calculated Duty Cycle=[Extended cyclic prefix in uplink x (Ts) x # of S + # of U]/10ms

Uplink-Downlink Configuration	Downlink-to-Uplink Switch-point Periodicity	Subframe Number										Calculated Duty Cycle (%)
		0	1	2	3	4	5	6	7	8	9	
0	5 ms	D	S	U	U	U	D	S	U	U	U	63.33
1	5 ms	D	S	U	U	D	D	S	U	U	D	43.33
2	5 ms	D	S	U	D	D	D	S	U	D	D	23.33
3	10 ms	D	S	U	U	U	D	D	D	D	D	31.67
4	10 ms	D	S	U	U	D	D	D	D	D	D	21.67
5	10 ms	D	S	U	D	D	D	D	D	D	D	11.67
6	5 ms	D	S	U	U	U	D	S	U	U	D	53.33

A) Spectrum Plots for RB Configurations

A properly configured base station simulator was used for SAR tests and power measurements. Therefore, spectrum plots for RB configurations were not required to be included in this report.

B) MPR

MPR is permanently implemented for this device by the manufacturer. The specific manufacturer target MPR is indicated alongside the SAR results. MPR is enabled for this device, according to 3GPP TS36.101 Section 6.2.3 – 6.2.5 under Table 6.2.3-1.

Modulation	Channel bandwidth/Transmission bandwidth						MPR (dB)
	1.4 MHz	3 MHz	5 MHz	10 MHz	15 MHz	20 MHz	
QPSK	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	0
QPSK	> 5	> 4	> 8	> 12	> 16	> 18	1
16QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	1
16QAM	> 5	> 4	> 8	> 12	> 16	> 18	2
64QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	2
64QAM	> 5	> 4	> 8	> 12	> 16	> 18	3
256QAM	≥1						5

C) A-MPR

A-MPR (Additional MPR) has been disabled for all SAR tests by setting NS=01 on the base station simulator.

D) Largest channel bandwidth standalone SAR test requirements

1) 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 for 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. 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.

2) QPSK with 50% RB allocation

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

3) 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 1) and 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.

4) Higher order modulations

For each modulation besides QPSK; e.g., 16-QAM, 64-QAM, apply the QPSK procedures in above sections 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.

E) 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 A) 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.In this report we have check and ensure power in higher bands are equal to or higher than the lower bands for each antenna head and body with matching channel bandwidth.

F) LTE CA additional specification

The device supports intra-band contiguous and inter-band discontinuous uplink and downlink LTE Carrier Aggregation (CA). When carrier aggregation applies, implementation and measurement details for the following are necessary.

a) Intra-band carrier aggregation requirements for uplink.

b) Intra-band and inter-band carrier aggregation requirements for downlink.

The possible downlink and uplink LTE CA combinations supported by this device are as below tables per 3GPP TS 36.101 V15.4.0. The conducted power measurement results of downlink and uplink LTE CA are provided in Appendix E (Conducted RF Output Power). The downlink LTE CA SAR test is not required since the maximum output power for downlink LTE CA was not more than 0.25dB higher than the maximum output power for without downlink LTE CA.

Downlink LTE CA
CA_7C
CA_38C
CA_41C
CA_66C
CA_2A-2A
CA_4A-4A
CA_5A-5A
CA_7A-7A
CA_41A-41A
CA_66A-66A
CA_2A-4A
CA_2A-7A
CA_2A-26A
CA_2A-66A
CA_4A-5A
CA_4A-7A
CA_5A-7A
CA_5A-38A
CA_5A-41A
CA_5A-66A
CA_7A-26A
CA_7A-66A
CA_26A-38A
CA_26A-41A
CA_2A-4A-5A
CA_2A-5A-7A
CA_2A-5A-66A
CA_2A-7A-7A
CA_4A-4A-5A
CA_4A-4A-7A
CA_5A-7A-66A
CA_5A-66A-66A
CA_7A-66A-66A
CA_41A-41A-41A
CA_2A-7C
CA_4A-7C

CA_5A-7C
CA_5A-66C
CA_7C-66A
CA_41D
CA_5A-7C-66A
CA_5A-7A-66A-66A
CA_2A-7C-28A
CA_7C-66A-66A
Uplink LTE CA
CA_7C
CA_41C

SAR test procedure for intra-band contiguous UL LTE CA is as below:

1)Maximum output power is measured for each UL CA configuration for the required test channels described in KDB 941225 D05

- UL PCC configuration is determined by the required test channel

- SCC and subsequent CCs are added alternatively to either side of the PCC or within the transmission band for channels at the ends of a frequency band.

2)SAR for UL CA is required in each exposure condition and frequency band combination

3)For this device , as the maximum output for Intra-band uplink LTE CA is ≤ standalone LTE mode (without CA),

- PCC is configured according to the highest standalone SAR configuration tested.

- SCC and subsequent CCs are configured according to procedures used for power measurement and parameters (BW, RB etc.) similar to that used for the PCC

4)When the reported SAR for UL CA configuration, described above, is > 1.2 W/kg, UL CA SAR is also required for all required test channels (PCC based)

5)UL CA SAR is also required for standalone SAR configurations > 1.2 W/kg when they are scaled to the UL CA power level.

c) Inter-band carrier aggregation requirements for uplink.

1. For Inter-band uplink CA mode, Qualcomm Smart Transmit algorithm in WWAN directly adds the time-averaged RF exposure from 4G(LTE) and time-averaged RF exposure from another 4G(LTE). Smart Transmit algorithm controls the total RF exposure of Inter-band uplink CA to not exceed FCC limit.

The Inter band Uplink CA as below table:

LTE Band/Antenna		B2			B4			B5		B7			B66		
		Ant11	Ant14	Ant31	Ant11	Ant14	Ant31	Ant41	Ant11	Ant11	Ant14	Ant31	Ant11	Ant14	Ant31
B2	Ant31				√					√					
	Ant14							√	√						
	Ant11							√							
B4	Ant31									√					
	Ant14							√	√						
	Ant11							√							
B5	Ant41									√	√		√	√	
	Ant11										√			√	

7.2.5 NR Band Test Configuration

1. NR Band n2/n5/n7/n26/n38/n41/n66/n77/n78 support SA mode and n2/n7/n38/n41/n66/n78 support NSA mode. LTE+NR Band operations are possible only with LTE under EN-DC mode and the operations are possible as following table:

Band/Antenna		LTE Band 2		LTE Band 4		LTE Band 5		LTE Band 7			LTE Band 26		LTE Band 38		LTE Band 41		LTE Band 66	
		Ant14	*Ant31*	*Ant14*	*Ant31*	*Ant41*	*Ant11*	*Ant11*	*Ant14*	*Ant31*	*Ant41*	*Ant11*	*Ant31*	*Ant14*	*Ant31*	*Ant14*	*Ant14*	*Ant31*
n2	*Ant31*							√	√									
n7	*Ant11*		√		√	√							√					√
	Ant14		√		√	√							√					√
n38	*Ant11*		√		√	√												√
	Ant14		√		√	√												√
n41	*Ant11*		√		√						√							√
	Ant14		√		√						√							√
n66	*Ant11*		√			√				√								
	Ant14		√			√				√								
n78	*Ant12*	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
	Ant23	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√

2. The general information supported by the NR band is as following table:

Band			n2	n5	n7	n26	n38	n41	n66	n77 Ant12/23	n77 Ant13/21	n78 Ant12/23	n78 Ant13/21
Modulation	DFT-s-OFDM	PI/2 BPSK	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		QPSK	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		16QAM	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		64QAM	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		256QAM	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	CP-OFDM	QPSK	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		16QAM	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		64QAM	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		256QAM	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Max Duty Cycle			100%	100%	100%	100%	100%	100%	100%	100%	8.5%	100%	8.5%

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86-755) 26012053 www.sgsgroup.com.cn
中国·广东·深圳市南山区科技园中区M-10栋1号厂房 邮编: 518057 t (86-755) 26012053 sgs.china@sgs.com

Band	SCS	Bandwidth												
		5Mhz	10Mhz	15Mhz	20Mhz	25Mhz	30Mhz	40Mhz	50Mhz	60Mhz	70Mhz	80Mhz	90Mhz	100Mhz
n2	15KHZ	Yes	Yes	Yes	Yes	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	30KHZ	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
n5	15KHZ	Yes	Yes	Yes	Yes	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	30KHZ	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
n7	15KHZ	Yes	Yes	Yes	Yes	Yes	Yes	Yes	N/A	N/A	N/A	N/A	N/A	N/A
	30KHZ	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
n26	15KHZ	Yes	Yes	Yes	Yes	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	30KHZ	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
n38	15KHZ	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	30KHZ	N/A	N/A	N/A	Yes	N/A	Yes	Yes	N/A	N/A	N/A	N/A	N/A	N/A
n41	15KHZ	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	30KHZ	N/A	N/A	N/A	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
n66	15KHZ	Yes	Yes	Yes	Yes	N/A	Yes	Yes	N/A	N/A	N/A	N/A	N/A	N/A
	30KHZ	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
n77	15KHZ	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	30KHZ	N/A	N/A	N/A	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
n78	15KHZ	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	30KHZ	N/A	N/A	N/A	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

3. For 5G NR test procedure was following step similar FCC KDB 941225 D05:
   a. For DFT-OFDM and CP-OFDM output power measurement reduction, according to 3GPP 38.101 maximum power reduction for power class 3, the CP-OFDM mode will not higher than DFT-OFDM mode, therefore, similar FCC KDB 941225 D05 procedure for other modulation output power for each RB allocation configuration is > not ½ dB higher than the same configuration in DFT-QPSK and the reported SAR for the DFT-QPSK configuration is ≤ 1.45 W/kg; CP-OFDM testing is not required.
   b. For DFT-OFDM output power measurement reduction, according to 38.101 maximum power reduction for power class 3, for PI/2 BPSK/16QAM/64QMA/256QAM and smaller bandwidth output power will spot check largest channel bandwidth worst RB configuration to ensure the PI/2 BPSK/16QAM/64QMA/256QAM and smaller bandwidth output power will not ½ dB higher than the same configuration in the largest supported bandwidth.
   c. SAR testing start with the largest SCS and 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 for RB offsets at the upper edge, middle and lower edge of each required test channel.
   d. 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure
   e. 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 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.
   f. PI/2 BPSK/16QAM/64QAM/256QAM output powers according to 3GPP MPR will not ½ dB higher than the same configuration in QPSK, also reported SAR for the QPSK configuration is less than 1.45 W/kg, PI/2 BPSK/16QAM/64QAM/256QAM SAR testing are not required.
   g. Smaller SCS/bandwidth output power for each RB allocation configuration for this device will not ½ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg, smaller bandwidth SAR testing is not required for this device

4. MPR

MPR is permanently implemented for this device by the manufacturer. The specific manufacturer target MPR is indicated alongside the SAR results. MPR is enabled for this device, according to 3GPP TS 38.101-1 Section 6.2.2 under Table 6.2.2 -1.

Modulation		MPR (dB)		
		Edge RB allocations	Outer RB allocations	Inner RB allocations
DFT-s-OFDM	PI/2 BPSK	≤ 3.5[1]	≤ 1.2[1]	≤ 0.2[1]
		≤ 0.5[2]	≤ 0.5[2]	0[2]
	QPSK	≤ 1		0
	16 QAM	≤ 2		≤ 1
	64 QAM	≤ 2.5		
	256 QAM	≤ 4.5		
CP-OFDM	QPSK	≤ 3		≤ 1.5
	16 QAM	≤ 3		≤ 2
	64 QAM	≤ 3.5		
	256 QAM	≤ 6.5		

NOTE 1: Applicable for UE operating in TDD mode with Pi/2 BPSK modulation and UE indicates support for UE capability powerBoosting-pi2BPSK and if the IE powerBoostPi2BPSK is set to 1 and 40 % or less slots in radio frame are used for UL transmission for bands n40, n41, n77, n78 and n79. The reference power of 0 dB MPR is 26dBm.

NOTE 2: Applicable for UE operating in FDD mode, or in TDD mode in bands other than n40, n41, n77, n78 and n79 with Pi/2 BPSK modulation and if the IE powerBoostPi2BPSK is set to 0 and if more than 40 % of slots in radio frame are used for UL transmission for bands n40, n41, n77, n78 and n79.

5. For FDD NR Band operation does not have the fixed UL/DL frame structure, but during the transmitting/ receiving it can be operated in the slot structure of 100% UL duty cycle, we are proposing the conservative way to evaluate SAR at 100% duty cycle. For the purpose of test NR Band standalone SAR, and also test SAR level at 100% TX duty cycle.

6. For 5G NR Sub6GHz SISO Mode, SAR Test plan as below:

1) For 5G NR NSA mode with the same UL EN_DC combination but different DL EN_DC combinations, eg: EN-DC configuration: UL DC_7A_n5 (UL two bands) with DL DC_7C_n5 (DL two bands)

a) The UL EN-DC configuration, including the Tx antenna configuration, RF path, the channel bandwidth and other operating parameters are the same.

b) The maximum output power, including tolerance, for the UL EN-DC configuration with DL two or more bands must be ≤ the same UL EN-DC configuration with DL two bands only to qualify for the SAR test exclusion.

7. For EN-DC mode, Qualcomm Smart Transmit algorithm in WWAN directly adds the time-averaged RF exposure from 4G(LTE) and time-averaged RF exposure from 5G NR. Smart Transmit algorithm controls the total RF exposure from both 4G and 5G NR to not exceed FCC limit.

8. For n77/78 antenna 13/21 support SRS, the max duty cycle is 8.5%.

8 Test Result

8.1 Measurement of RF conducted Power

The detailed conducted power can be referred to Appendix E.

Note:

1）. For SAR the time based average power is relevant. The difference in between depends on the duty cycle of the TDMA signal:

No. of timeslots	1	2	3	4
Duty Cycle	1:8.3	1:4.15	1:2.77	1:2.075
Time based avg. power compared to slotted avg. power	-9.19	-6.18	-4.42	-3.17

2）. The frame-averaged power is linearly proportion to the slot number configured and it is linearly scaled the maximum burst-averaged power based on time slots. The calculated method is shown as below:
Frame-averaged power = 10 x log (Burst-averaged power mW x Slot used / 8.

3）. When the maximum output power variation across the required test channels is > ½ dB, instead of the middle channel, the highest output power channel must be used.

4）. According to FCC guidance, the output power with uplink CA active was measured for the high / middle / low channel configuration with the highest reported SAR for each exposure condition, the power was measured with wideband signal integration over both component carriers.

5）. In applying the power measurement procedures of KDB 941225 D05A for DL CA to qualify for UL SAR test exclusion, power measurement is required only for the subset in each row with the largest combination of frequency bands and CCs.

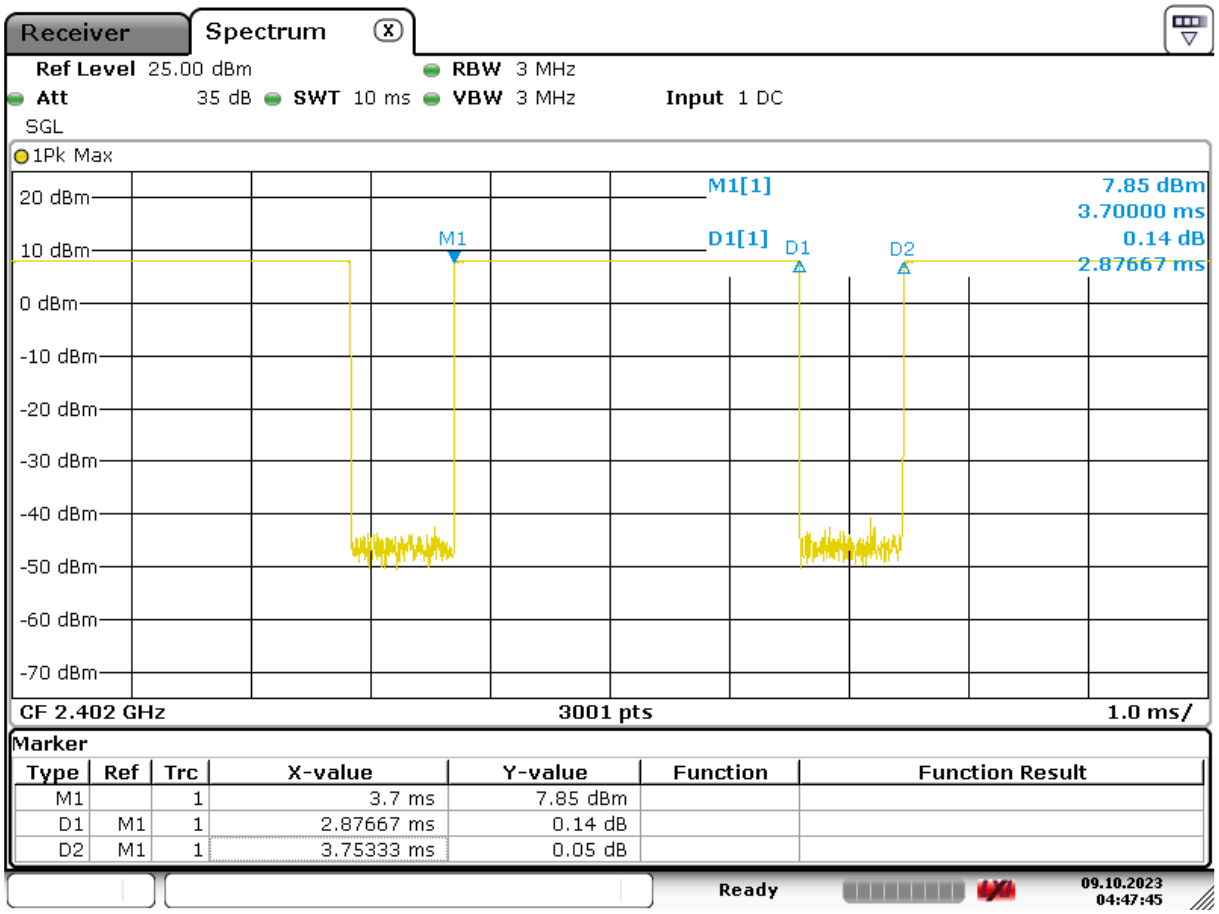
6）. Maximum output power measurement is required for each UL CA configuration for the required test channels described in KDB 941225 D05.

7）. Conducted power measurement results of downlink LTE carrier aggregation are provided to quantify downlink only carrier aggregation SAR test exclusion per KDB 941225 D05A.Uplink maximum output power is measured with downlink carrier aggregation active, using the channel with highest measured maximum output power when downlink carrier aggregation is inactive, to confirm that when downlink carrier aggregation is active uplink maximum output power remains within the specified tune-up tolerance limits and not more than ¼ dB higher than the maximum output power measured when downlink carrier aggregation inactive, therefore SAR evaluation with downlink carrier aggregation can be excluded.
The possible downlink LTE CA combinations supported by this device are as below tables per 3GPP TS 36.101 V15.4.0. The detailed conducted power measurement results of downlink LTE CA are provided in the SAR report per 3GPP TS 36.521-1 V14.4.0. According to KDB 941225 D05A, the downlink only carrier aggregation conditions for this device can be excluded from SAR testing.
The conducted power measurement results of downlink LTE CA Conducted Power are as Appendix E conducted RF output power, so the downlink only carrier aggregation conditions for this device can be excluded from SAR testing.

8）. For conducted power of WIFI must be measured at each transmit antenna port according to the DSSS and OFDM transmission configurations in each standalone and aggregated frequency band. For each transmission mode configuration, power must be measured for the highest and lowest channels; and at the mid-band channel(s) when there are at least 3 channels. For configurations with multiple mid-band channels, due to an even number of channels, both channels should be measured. Power measurement is required for the transmission mode configuration with the highest maximum output power specified for production units.
1) When the same highest maximum output power specification applies to multiple transmission modes, the largest channel bandwidth configuration with the lowest order modulation and lowest data rate is measured.

2) When the same highest maximum output power is specified for multiple largest channel bandwidth configurations with the same lowest order modulation or lowest order modulation and lowest data rate, power measurement is required for all equivalent 802.11 configurations with the same maximum output power.

9）. The conducted power of BT is measured with RMS detector. BT DH5 Duty Cycle=2.87667/3.75333=76.64%



8.2 Measurement of SAR Data

Note:

1) The maximum Scaled SAR value is marked in bold. Graph results refer to Appendix B.

2) Per KDB447498 D04, testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is:

- ≤ 0.8W/kg for 1-g or 2.0W/kg for 10-g respectively, when the transmission band is ≤ 100MHz.
- ≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz.
- ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz.

WiFi 2.4G:

1) When the highest reported SAR for the initial test configuration is adjusted by the ratio of the subsequent test configuration to initial test configuration specified maximum output power and the adjusted SAR is ⩽ 1.2 W/kg, SAR test for the other 802.11 modes are not required.

WiFi 5G:

1) When the same maximum output power is specified for both bands, begin SAR measurement in U-NII-2A band by applying the OFDM SAR requirements. As the highest reported SAR for a test configuration is ⩽ 1.2 W/kg, SAR is not required for U-NII-1 band for that configuration.
2) For Wi-Fi 5G, U-NII-2A (5250-5350 MHz) and U-NII-2C (5470-5725 MHz) bands does not support hotspot function.

When the highest reported SAR for the initial test configuration is adjusted by the ratio of the subsequent test configuration to initial test configuration specified maximum output power and the adjusted SAR is ⩽ 1.2 W/kg, SAR test for the other 802.11 modes are not required.

8.2.1 SAR Result of GSM850

Ant 11 Test Record										
Test position	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test Data DSI2										
Left cheek	GPRS 2TS	190/836.6	1:4.15	0.177	0.09	30.17	31.50	1.358	0.240	22.3
Left tilted	GPRS 2TS	190/836.6	1:4.15	0.073	0.17	30.17	31.50	1.358	0.099	22.3
Right cheek	GPRS 2TS	190/836.6	1:4.15	0.394	0.10	30.17	31.50	1.358	**0.535**	22.3
Right tilted	GPRS 2TS	190/836.6	1:4.15	0.117	0.08	30.17	31.50	1.358	0.159	22.3
Body worn Test data(Separate 15mm) DSI4										
Front side	GPRS 2TS	190/836.6	1:4.15	0.106	-0.05	30.17	31.50	1.358	0.144	22.3
Back side	GPRS 2TS	190/836.6	1:4.15	0.198	0.09	30.17	31.50	1.358	**0.269**	22.3
Hotspot Test data(Separate 10mm) DSI10										
Front side	GPRS 2TS	190/836.6	1:4.15	0.141	0.07	30.17	31.50	1.358	0.192	22.3
Back side	GPRS 2TS	190/836.6	1:4.15	0.265	-0.01	30.17	31.50	1.358	0.360	22.3
Left side	GPRS 2TS	190/836.6	1:4.15	0.272	0.08	30.17	31.50	1.358	0.369	22.3
Top side	GPRS 2TS	190/836.6	1:4.15	0.019	0.02	30.17	31.50	1.358	0.025	22.3
Ant 41 Test Record										
Test position	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test Data DSI2										
Left cheek	GPRS 2TS	190/836.6	1:4.15	0.151	0.07	30.16	31.50	1.361	0.206	22.3
Left tilted	GPRS 2TS	190/836.6	1:4.15	0.078	0.08	30.16	31.50	1.361	0.106	22.3
Right cheek	GPRS 2TS	190/836.6	1:4.15	0.142	0.05	30.16	31.50	1.361	0.193	22.3
Right tilted	GPRS 2TS	190/836.6	1:4.15	0.071	-0.02	30.16	31.50	1.361	0.096	22.3
Body worn Test data(Separate 15mm) DSI4										
Front side	GPRS 2TS	190/836.6	1:4.15	0.115	0.05	30.16	31.50	1.361	0.157	22.3
Back side	GPRS 2TS	190/836.6	1:4.15	0.163	0.05	30.16	31.50	1.361	0.222	22.3
Hotspot Test data(Separate 10mm) DSI10										
Front side	GPRS 2TS	190/836.6	1:4.15	0.324	-0.08	30.16	31.50	1.361	0.441	22.3
Back side	GPRS 2TS	190/836.6	1:4.15	0.428	0.12	30.16	31.50	1.361	**0.583**	22.3
Left side	GPRS 2TS	190/836.6	1:4.15	0.200	0.10	30.16	31.50	1.361	0.272	22.3
Bottom side	GPRS 2TS	190/836.6	1:4.15	0.210	-0.06	30.16	31.50	1.361	0.286	22.3

Table 11： SAR of GSM850 for Head and Body.

8.2.2 SAR Result of GSM1900

Ant 14 Test Record										
Test position	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test Data DSI2										
Left cheek	GPRS 4TS	661/1880	1:2.075	0.310	0.01	21.26	23.00	1.493	0.463	22.3
Left tilted	GPRS 4TS	661/1880	1:2.075	0.446	0.03	21.26	23.00	1.493	0.666	22.3
Right cheek	GPRS 4TS	661/1880	1:2.075	0.499	-0.02	21.26	23.00	1.493	**0.745**	22.3
Right tilted	GPRS 4TS	661/1880	1:2.075	0.495	0.05	21.26	23.00	1.493	0.739	22.3
Body worn Test data(Separate 15mm) DSI4										
Front side	GPRS 4TS	661/1880	1:2.075	0.092	0.06	23.03	24.50	1.403	0.129	22.3
Back side	GPRS 4TS	661/1880	1:2.075	0.159	0.09	23.03	24.50	1.403	0.223	22.3
Hotspot Test data(Separate 10mm) DSI10										
Front side	GPRS 4TS	661/1880	1:2.075	0.197	0.14	21.23	23.00	1.503	0.296	22.3
Back side	GPRS 4TS	661/1880	1:2.075	0.225	0.07	21.23	23.00	1.503	0.338	22.3
Left side	GPRS 4TS	661/1880	1:2.075	0.036	0.08	21.23	23.00	1.503	0.054	22.3
Top side	GPRS 4TS	661/1880	1:2.075	0.257	0.04	21.23	23.00	1.503	0.386	22.3
Ant 31 Test Record										
Test position	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test Data DSI2										
Left cheek	GPRS 2TS	661/1880	1:4.15	0.060	-0.14	27.23	28.50	1.340	0.080	22.3
Left tilted	GPRS 2TS	661/1880	1:4.15	0.037	0.07	27.23	28.50	1.340	0.050	22.3
Right cheek	GPRS 2TS	661/1880	1:4.15	0.041	0.09	27.23	28.50	1.340	0.055	22.3
Right tilted	GPRS 2TS	661/1880	1:4.15	0.068	0.15	27.23	28.50	1.340	0.091	22.3
Body worn Test data(Separate 15mm) DSI4										
Front side	GPRS 4TS	661/1880	1:2.075	0.137	0.08	22.79	24.50	1.483	0.203	22.3
Back side	GPRS 4TS	661/1880	1:2.075	0.190	-0.02	22.79	24.50	1.483	**0.282**	22.3
Hotspot Test data(Separate 10mm) DSI10										
Front side	GPRS 4TS	661/1880	1:2.075	0.211	0.05	22.08	23.50	1.387	0.293	22.3
Back side	GPRS 4TS	661/1880	1:2.075	0.294	0.03	22.08	23.50	1.387	0.408	22.3
Right side	GPRS 4TS	661/1880	1:2.075	0.038	0.05	22.08	23.50	1.387	0.053	22.3
Bottom side	GPRS 4TS	661/1880	1:2.075	0.378	0.05	22.08	23.50	1.387	**0.524**	22.3

Table 12： SAR of GSM1900 for Head and Body.

8.2.3 SAR Result of WCDMA Band II

Ant 14 Test Record										
Test position	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Body worn Test data(Separate 15mm) DSI4										
Front side	RMC	9400/1880	1:1	0.110	0.03	21.72	22.50	1.197	0.132	22.5
Back side	RMC	9400/1880	1:1	0.270	-0.05	21.72	22.50	1.197	**0.323**	22.3
Hotspot Test data(Separate 10mm) DSI10										
Front side	RMC	9400/1880	1:1	0.160	0.09	20.18	21.00	1.208	0.193	22.5
Back side	RMC	9400/1880	1:1	0.355	0.10	20.18	21.00	1.208	0.429	22.5
Left side	RMC	9400/1880	1:1	0.038	0.03	20.18	21.00	1.208	0.046	22.5
Top side	RMC	9400/1880	1:1	0.406	0.03	20.18	21.00	1.208	0.490	22.5
Ant 31 Test Record										
Test position	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test Data DSI2										
Left cheek	RMC	9400/1880	1:1	0.068	0.15	23.62	24.50	1.225	**0.083**	22.5
Left tilted	RMC	9400/1880	1:1	0.049	0.07	23.62	24.50	1.225	0.060	22.5
Right cheek	RMC	9400/1880	1:1	0.049	0.06	23.62	24.50	1.225	0.059	22.5
Right tilted	RMC	9400/1880	1:1	0.028	0.02	23.62	24.50	1.225	0.035	22.5
Body worn Test data(Separate 15mm) DSI4										
Front side	RMC	9400/1880	1:1	0.145	-0.07	20.17	21.00	1.211	0.176	22.5
Back side	RMC	9400/1880	1:1	0.199	-0.05	20.17	21.00	1.211	0.241	22.5
Hotspot Test data(Separate 10mm) DSI10										
Front side	RMC	9400/1880	1:1	0.236	0.06	19.12	20.00	1.225	0.289	22.5
Back side	RMC	9400/1880	1:1	0.312	0.14	19.12	20.00	1.225	0.382	22.5
Right side	RMC	9400/1880	1:1	0.042	0.01	19.12	20.00	1.225	0.052	22.5
Bottom side	RMC	9400/1880	1:1	0.470	0.07	19.12	20.00	1.225	**0.576**	22.5

Table 13： SAR of WCDMA Band II for Head and Body.

8.2.4 SAR Result of WCDMA Band IV

Ant 14 Test Record										
Test position	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Body worn Test data(Separate 15mm) DSI4										
Front side	RMC	1412/1732.4	1:1	0.117	-0.02	21.24	22.00	1.191	0.139	22.5
Back side	RMC	1412/1732.4	1:1	0.241	0.11	21.24	22.00	1.191	**0.287**	22.3
Hotspot Test data(Separate 10mm) DSI10										
Front side	RMC	1412/1732.4	1:1	0.158	0.04	19.75	20.50	1.189	0.188	22.5
Back side	RMC	1412/1732.4	1:1	0.320	0.01	19.75	20.50	1.189	0.380	22.5
Left side	RMC	1412/1732.4	1:1	0.104	0.05	19.75	20.50	1.189	0.124	22.5
Top side	RMC	1412/1732.4	1:1	0.420	0.04	19.75	20.50	1.189	**0.499**	22.5
Ant 31 Test Record										
Test position	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test Data DSI2										
Left cheek	RMC	1412/1732.4	1:1	0.049	0.04	23.74	24.50	1.191	0.058	22.5
Left tilted	RMC	1412/1732.4	1:1	0.050	0.08	23.74	24.50	1.191	0.059	22.5
Right cheek	RMC	1412/1732.4	1:1	0.055	0.09	23.74	24.50	1.191	**0.066**	22.5
Right tilted	RMC	1412/1732.4	1:1	0.042	0.02	23.74	24.50	1.191	0.049	22.5
Body worn Test data(Separate 15mm) DSI4										
Front side	RMC	1412/1732.4	1:1	0.119	-0.07	20.76	21.50	1.186	0.141	22.5
Back side	RMC	1412/1732.4	1:1	0.153	0.08	20.76	21.50	1.186	0.181	22.5
Hotspot Test data(Separate 10mm) DSI10										
Front side	RMC	1412/1732.4	1:1	0.197	0.09	19.73	20.50	1.194	0.235	22.5
Back side	RMC	1412/1732.4	1:1	0.233	-0.12	19.73	20.50	1.194	0.278	22.5
Right side	RMC	1412/1732.4	1:1	0.049	0.08	19.73	20.50	1.194	0.059	22.5
Bottom side	RMC	1412/1732.4	1:1	0.379	0.18	19.73	20.50	1.194	0.453	22.5

Table 14： SAR of WCDMA Band IV for Head and Body.

8.2.5 SAR Result of WCDMA Band V

Ant 11 Test Record										
Test position	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test Data DSI2										
Left cheek	RMC	4182/836.4	1:1	0.234	-0.03	23.38	24.50	1.294	0.303	22.6
Left tilted	RMC	4182/836.4	1:1	0.080	-0.02	23.38	24.50	1.294	0.104	22.6
Right cheek	RMC	4182/836.4	1:1	0.353	0.15	23.38	24.50	1.294	**0.457**	22.6
Right tilted	RMC	4182/836.4	1:1	0.138	-0.01	23.38	24.50	1.294	0.179	22.6
Body worn Test data(Separate 15mm) DSI4										
Front side	RMC	4182/836.4	1:1	0.095	0.05	23.38	24.50	1.294	0.123	22.6
Back side	RMC	4182/836.4	1:1	0.182	-0.15	23.38	24.50	1.294	**0.236**	22.6
Hotspot Test data(Separate 10mm) DSI10										
Front side	RMC	4182/836.4	1:1	0.168	0.09	23.38	24.50	1.294	0.217	22.6
Back side	RMC	4182/836.4	1:1	0.345	0.17	23.38	24.50	1.294	**0.446**	22.6
Left side	RMC	4182/836.4	1:1	0.340	0.14	23.38	24.50	1.294	0.440	22.6
Top side	RMC	4182/836.4	1:1	0.019	0.05	23.38	24.50	1.294	0.024	22.6
Ant 41 Test Record										
Test position	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test Data DSI2										
Left cheek	RMC	4182/836.4	1:1	0.134	0.06	23.36	24.50	1.300	0.174	22.6
Left tilted	RMC	4182/836.4	1:1	0.063	0.19	23.36	24.50	1.300	0.081	22.6
Right cheek	RMC	4182/836.4	1:1	0.121	0.06	23.36	24.50	1.300	0.157	22.6
Right tilted	RMC	4182/836.4	1:1	0.055	0.06	23.36	24.50	1.300	0.072	22.6
Body worn Test data(Separate 15mm) DSI4										
Front side	RMC	4182/836.4	1:1	0.111	0.01	23.36	24.50	1.300	0.144	22.6
Back side	RMC	4182/836.4	1:1	0.158	0.16	23.36	24.50	1.300	0.205	22.6
Hotspot Test data(Separate 10mm) DSI10										
Front side	RMC	4182/836.4	1:1	0.198	0.04	23.36	24.50	1.300	0.257	22.6
Back side	RMC	4182/836.4	1:1	0.284	-0.02	23.36	24.50	1.300	0.369	22.6
Left side	RMC	4182/836.4	1:1	0.164	0.11	23.36	24.50	1.300	0.213	22.6
Bottom side	RMC	4182/836.4	1:1	0.134	0.13	23.36	24.50	1.300	0.174	22.6

Table 15： SAR of WCDMA Band V for Head and Body.

8.2.6 SAR Result of LTE Band 2

Ant 11 Test Record											
Test position	**BW.**	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test Data (1RB) DSI2											
Left cheek	20	QPSK 1_0	19100/1900	1:1	0.310	-0.08	20.22	21.50	1.343	0.416	22.8
Left tilted	20	QPSK 1_0	19100/1900	1:1	0.061	0.02	20.22	21.50	1.343	0.082	22.8
Right cheek	20	QPSK 1_0	19100/1900	1:1	0.550	0.01	20.22	21.50	1.343	**0.739**	22.8
Right tilted	20	QPSK 1_0	19100/1900	1:1	0.111	0.03	20.22	21.50	1.343	0.149	22.8
Head Test Data (50%RB) DSI2											
Left cheek	20	QPSK 50_0	19100/1900	1:1	0.303	0.03	20.21	21.50	1.346	0.408	22.8
Left tilted	20	QPSK 50_0	19100/1900	1:1	0.064	0.05	20.21	21.50	1.346	0.086	22.8
Right cheek	20	QPSK 50_0	19100/1900	1:1	0.520	0.01	20.21	21.50	1.346	0.700	22.8
Right tilted	20	QPSK 50_0	19100/1900	1:1	0.114	0.09	20.21	21.50	1.346	0.153	22.8
Body worn Test data (Separate 15mm 1RB) DSI4											
Front side	20	QPSK 1_0	19100/1900	1:1	0.132	0.04	22.69	24.00	1.352	0.178	22.8
Back side	20	QPSK 1_0	19100/1900	1:1	0.286	0.08	22.69	24.00	1.352	**0.387**	22.8
Body worn Test data (Separate 15mm 50%RB) DSI4											
Front side	20	QPSK 50_0	19100/1900	1:1	0.106	0.01	21.93	23.00	1.279	0.136	22.8
Back side	20	QPSK 50_0	19100/1900	1:1	0.237	0.08	21.93	23.00	1.279	0.303	22.8
Hotspot Test data (Separate 10mm 1RB) DSI10											
Front side	20	QPSK 1_0	19100/1900	1:1	0.137	-0.16	19.06	20.50	1.393	0.191	22.8
Back side	20	QPSK 1_0	19100/1900	1:1	0.271	-0.03	19.06	20.50	1.393	0.378	22.8
Left side	20	QPSK 1_0	19100/1900	1:1	0.490	0.02	19.06	20.50	1.393	**0.683**	22.8
Top side	20	QPSK 1_0	19100/1900	1:1	0.021	0.08	19.06	20.50	1.393	0.030	22.8
Hotspot Test data (Separate 10mm 50%RB) DSI10											
Front side	20	QPSK 50_0	19100/1900	1:1	0.136	0.04	19.49	20.50	1.262	0.172	22.8
Back side	20	QPSK 50_0	19100/1900	1:1	0.280	0.08	19.49	20.50	1.262	0.353	22.8
Left side	20	QPSK 50_0	19100/1900	1:1	0.500	0.02	19.49	20.50	1.262	0.631	22.8
Top side	20	QPSK 50_0	19100/1900	1:1	0.023	0.03	19.49	20.50	1.262	0.029	22.8
Test position	**BW.**	**Test mode**	**Test Ch./Freq.**	**Duty Cycle**	**SAR (W/kg)10-g**	**Power Drift(dB)**	**Conducted power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 10-g (W/kg)**	**Liquid Temp.**
Product specific 10g SAR Test data(Separate 0mm 1RB) Sensor On DSI5											
Left side	20	QPSK 1_0	19100/1900	1:1	1.350	0.03	20.22	21.50	1.343	1.813	22.6
Product specific 10g SAR Test data(Separate 0mm 50%RB) Sensor On DSI5											
Left side	20	QPSK 50_0	19100/1900	1:1	1.590	0.01	20.21	21.50	1.346	**2.140**	22.6
Left side	20	QPSK 50_0	19100/1900	1:1	1.560	0.01	20.15	21.50	1.365	2.129	22.6
Left side	20	QPSK 50_0	19100/1900	1:1	1.550	0.01	20.11	21.50	1.377	2.135	22.6
Product specific 10g SAR Test data(Separate 0mm 100%RB) Sensor On DSI5											
Left side	20	QPSK 100_0	19100/1900	1:1	1.320	0.01	20.20	21.50	1.349	1.781	22.6
Product specific 10g SAR Test data(1RB) Sensor Off DSI4											
Left side 11mm	20	QPSK 1_0	19100/1900	1:1	0.408	0.02	22.69	24.00	1.352	0.552	22.6
Product specific 10g SAR Test data(50%RB) Sensor Off DSI4											
Left side 11mm	20	QPSK 50_0	19100/1900	1:1	0.348	-0.03	21.93	23.00	1.279	0.445	22.6
Ant 14 Test Record											
Test position	**BW.**	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Body worn Test data (Separate 15mm 1RB) DSI4											
Front side	20	QPSK 1_99	18700/1860	1:1	0.083	0.03	20.83	22.00	1.309	0.109	22.5
Back side	20	QPSK 1_99	18700/1860	1:1	0.148	0.01	20.83	22.00	1.309	0.194	22.5
Body worn Test data (Separate 15mm 50%RB) DSI4											
Front side	20	QPSK 50_50	18700/1860	1:1	0.083	0.06	20.90	22.00	1.288	0.107	22.5
Back side	20	QPSK 50_50	18700/1860	1:1	0.154	-0.08	20.90	22.00	1.288	0.198	22.5
Hotspot Test data (Separate 10mm 1RB) DSI10											
Front side	20	QPSK 1_0	18700/1860	1:1	0.115	0.02	19.33	20.50	1.309	0.151	22.5
Back side	20	QPSK 1_0	18700/1860	1:1	0.245	0.19	19.33	20.50	1.309	0.321	22.5
Left side	20	QPSK 1_0	18700/1860	1:1	0.053	0.02	19.33	20.50	1.309	0.069	22.5
Top side	20	QPSK 1_0	18700/1860	1:1	0.339	0.04	19.33	20.50	1.309	0.444	22.5

Hotspot Test data (Separate 10mm 50%RB) DSI10											
Front side	20	QPSK 50_0	18900/1880	1:1	0.124	0.02	19.46	20.50	1.271	0.158	22.5
Back side	20	QPSK 50_0	18900/1880	1:1	0.166	0.02	19.46	20.50	1.271	0.211	22.5
Left side	20	QPSK 50_0	18900/1880	1:1	0.055	0.01	19.46	20.50	1.271	0.069	22.5
Top side	20	QPSK 50_0	18900/1880	1:1	0.323	0.17	19.46	20.50	1.271	0.410	22.5
Ant 31 Test Record											
Test position	**BW.**	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test Data (1RB) DSI2											
Left cheek	20	QPSK 1_99	18900/1880	1:1	0.071	0.08	22.86	24.00	1.300	0.093	22.4
Left tilted	20	QPSK 1_99	18900/1880	1:1	0.036	0.03	22.86	24.00	1.300	0.047	22.4
Right cheek	20	QPSK 1_99	18900/1880	1:1	0.042	0.02	22.86	24.00	1.300	0.055	22.4
Right tilted	20	QPSK 1_99	18900/1880	1:1	0.033	0.04	22.86	24.00	1.300	0.043	22.4
Head Test Data (50%RB) DSI2											
Left cheek	20	QPSK 50_25	18900/1880	1:1	0.054	0.07	21.89	23.00	1.291	0.069	22.4
Left tilted	20	QPSK 50_25	18900/1880	1:1	0.029	0.01	21.89	23.00	1.291	0.037	22.4
Right cheek	20	QPSK 50_25	18900/1880	1:1	0.039	0.09	21.89	23.00	1.291	0.050	22.4
Right tilted	20	QPSK 50_25	18900/1880	1:1	0.027	0.02	21.89	23.00	1.291	0.035	22.4
Body worn Test data (Separate 15mm 1RB) DSI4											
Front side	20	QPSK 1_50	18900/1880	1:1	0.161	-0.08	20.28	21.50	1.324	0.213	22.3
Back side	20	QPSK 1_50	18900/1880	1:1	0.204	-0.03	20.28	21.50	1.324	0.270	22.3
Body worn Test data (Separate 15mm 50%RB) DSI4											
Front side	20	QPSK 50_25	18900/1880	1:1	0.162	0.02	20.36	21.50	1.300	0.211	22.3
Back side	20	QPSK 50_25	18900/1880	1:1	0.219	0.06	20.36	21.50	1.300	0.285	22.3
Hotspot Test data (Separate 10mm 1RB) DSI10											
Front side	20	QPSK 1_50	18700/1860	1:1	0.231	-0.02	19.31	20.50	1.315	0.304	22.2
Back side	20	QPSK 1_50	18700/1860	1:1	0.320	-0.05	19.31	20.50	1.315	0.421	22.2
Right side	20	QPSK 1_50	18700/1860	1:1	0.058	0.05	19.31	20.50	1.315	0.076	22.4
Bottom side	20	QPSK 1_50	18700/1860	1:1	0.459	0.10	19.31	20.50	1.315	0.604	22.4
Hotspot Test data (Separate 10mm 50%RB) DSI10											
Front side	20	QPSK 50_25	18700/1860	1:1	0.242	0.06	19.42	20.50	1.282	0.310	22.2
Back side	20	QPSK 50_25	18700/1860	1:1	0.356	-0.04	19.42	20.50	1.282	0.457	22.2
Right side	20	QPSK 50_25	18700/1860	1:1	0.060	0.03	19.42	20.50	1.282	0.077	22.4
Bottom side	20	QPSK 50_25	18700/1860	1:1	0.471	0.01	19.42	20.50	1.282	0.604	22.4

Table 16：SAR of LTE Band 2 for Head and Body and Product specific 10g SAR.

8.2.7 SAR Result of LTE Band 7

LTE Band 7 SAR Test Record											
Ant 11 Test Record											
Test position	**BW.**	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test Data (1RB) DSI2											
Left cheek	20	QPSK 1_99	21100/2535	1:1	0.192	0.02	16.57	18.00	1.390	0.267	21.9
Left tilted	20	QPSK 1_99	21100/2535	1:1	0.057	0.01	16.57	18.00	1.390	0.079	21.9
Right cheek	20	QPSK 1_99	21100/2535	1:1	0.575	-0.14	16.57	18.00	1.390	0.799	21.9
Right tilted	20	QPSK 1_99	21100/2535	1:1	0.143	0.14	16.57	18.00	1.390	0.199	21.9
Head Test Data (50%RB) DSI2											
Left cheek	20	QPSK 50_50	21100/2535	1:1	0.210	-0.01	16.57	18.00	1.390	0.292	21.9
Left tilted	20	QPSK 50_50	21100/2535	1:1	0.064	0.06	16.57	18.00	1.390	0.089	21.9
Right cheek	20	QPSK 50_50	21100/2535	1:1	0.579	-0.09	16.57	18.00	1.390	**0.805**	21.9
Right tilted	20	QPSK 50_50	21100/2535	1:1	0.147	-0.08	16.57	18.00	1.390	0.204	21.9
Right cheek	20	QPSK 50_50	20850/2510	1:1	0.520	-0.02	16.42	18.00	1.439	0.748	21.9
Right cheek	20	QPSK 50_50	21350/2560	1:1	0.553	-0.07	16.45	18.00	1.429	0.790	21.9
Head Test Data (100%RB) DSI2											
Right cheek	20	QPSK 100_0	21350/2560	1:1	0.545	-0.06	16.40	18.00	1.445	0.788	21.9
Body worn Test data (Separate 15mm 1RB) DSI4											
Front side	20	QPSK 1_99	21350/2560	1:1	0.232	0.14	22.52	24.00	1.406	0.326	21.9
Back side	20	QPSK 1_99	21350/2560	1:1	0.450	-0.10	22.52	24.00	1.406	**0.633**	21.9
Body worn Test data (Separate 15mm 50%RB) DSI4											
Front side	20	QPSK 50_0	21350/2560	1:1	0.180	-0.04	21.63	23.00	1.371	0.247	21.9
Back side	20	QPSK 50_0	21350/2560	1:1	0.344	-0.10	21.63	23.00	1.371	0.472	21.9
Hotspot Test data (Separate 10mm 1RB) DSI10											
Front side	20	QPSK 1_99	21100/2535	1:1	0.154	-0.05	18.14	19.50	1.368	0.211	21.9
Back side	20	QPSK 1_99	21100/2535	1:1	0.337	-0.05	18.14	19.50	1.368	0.461	21.9
Left side	20	QPSK 1_99	21100/2535	1:1	0.436	-0.08	18.14	19.50	1.368	0.596	21.9
Top side	20	QPSK 1_99	21100/2535	1:1	0.056	0.03	18.14	19.50	1.368	0.077	21.9
Hotspot Test data (Separate 10mm 50%RB) DSI10											
Front side	20	QPSK 50_50	21100/2535	1:1	0.156	0.03	18.00	19.50	1.413	0.220	21.9
Back side	20	QPSK 50_50	21100/2535	1:1	0.328	-0.05	18.00	19.50	1.413	0.463	21.9
Left side	20	QPSK 50_50	21100/2535	1:1	0.424	-0.08	18.00	19.50	1.413	**0.599**	21.9
Top side	20	QPSK 50_50	21100/2535	1:1	0.060	0.05	18.00	19.50	1.413	0.085	21.9
Test position	**BW.**	**Test mode**	**Test Ch./Freq.**	**Duty Cycle**	**SAR (W/kg)10-g**	**Power Drift(dB)**	**Conducted power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled 10-g SAR(W/kg)**	**Liquid Temp.**
Product specific 10g SAR Test data(Separate 0mm 1RB) Sensor On DSI5											
Back side	20	QPSK 1_99	21350/2560	1:1	1.410	-0.03	19.57	21.00	1.390	1.960	21.9
Left side	20	QPSK 1_99	21350/2560	1:1	1.380	0.01	19.57	21.00	1.390	1.918	21.9
Product specific 10g SAR Test data(Separate 0mm 50RB) Sensor On DSI5											
Back side	20	QPSK 50_50	21100/2535	1:1	1.480	-0.06	19.49	21.00	1.416	2.095	21.9
Left side	20	QPSK 50_50	21100/2535	1:1	1.490	-0.04	19.49	21.00	1.416	2.110	21.9
Back side	20	QPSK 50_25	20850/2510	1:1	1.480	0.06	19.45	21.00	1.429	2.115	21.9
Back side	20	QPSK 50_50	21350/2560	1:1	1.440	0.03	19.47	21.00	1.422	2.048	21.9
Left side	20	QPSK 50_25	20850/2510	1:1	1.500	-0.01	19.45	21.00	1.429	**2.143**	21.9
Left side	20	QPSK 50_50	21350/2560	1:1	1.410	-0.06	19.47	21.00	1.422	2.005	21.9
Left side Sample 2	20	QPSK 50_25	20850/2510	1:1	1.400	0.03	19.45	21.00	1.429	2.000	21.9
Product specific 10g SAR Test data(Separate 0mm 100RB) Sensor On DSI5											
Back side	20	QPSK 100_0	21100/2535	1:1	1.460	0.02	19.46	21.00	1.426	2.081	21.9
Left side	20	QPSK 100_0	21100/2535	1:1	1.490	-0.03	19.46	21.00	1.426	2.124	21.9
Product specific 10g SAR Test data(1RB) Sensor Off DSI4											
Back side 12mm	20	QPSK 1_99	21350/2560	1:1	0.230	0.01	22.52	24.00	1.406	0.323	21.9
Left side 11mm	20	QPSK 1_99	21350/2560	1:1	0.496	0.02	22.52	24.00	1.406	0.697	21.9
Product specific 10g SAR Test data(50RB) Sensor Off DSI4											
Back side 12mm	20	QPSK 50_0	21350/2560	1:1	0.189	0.05	21.63	23.00	1.371	0.259	21.9
Left side 11mm	20	QPSK 50_0	21350/2560	1:1	0.408	0.01	21.63	23.00	1.371	0.559	21.9

Ant 14 Test Record											
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Body worn Test data (Separate 15mm 1RB) DSI4											
Front side	20	QPSK 1_99	21350/2560	1:1	0.084	0.01	22.19	23.00	1.205	0.101	21.8
Back side	20	QPSK 1_99	21350/2560	1:1	0.223	-0.02	22.19	23.00	1.205	0.269	22.0
Body worn Test data (Separate 15mm 50%RB) DSI4											
Front side	20	QPSK 50_50	21350/2560	1:1	0.088	-0.05	22.26	23.00	1.186	0.104	21.8
Back side	20	QPSK 50_50	21350/2560	1:1	0.226	-0.03	22.26	23.00	1.186	0.268	22.0
Back side	20	QPSK PCC 1_0 QPSK SCC 0_0	21350/2560 21152/2540.2	1:1	0.218	0.05	22.34	23.00	1.164	0.254	22.2
Hotspot Test data (Separate 10mm 1RB) DSI10											
Front side	20	QPSK 1_99	21350/2560	1:1	0.081	0.02	20.19	21.00	1.205	0.098	22.0
Back side	20	QPSK 1_99	21350/2560	1:1	0.315	0.08	20.19	21.00	1.205	0.380	22.0
Left side	20	QPSK 1_99	21350/2560	1:1	0.029	0.01	20.19	21.00	1.205	0.035	22.0
Top side	20	QPSK 1_99	21350/2560	1:1	0.272	-0.02	20.19	21.00	1.205	0.328	22.0
Hotspot Test data (Separate 10mm 50%RB) DSI10											
Front side	20	QPSK 50_50	21350/2560	1:1	0.085	0.02	20.24	21.00	1.191	0.101	22.0
Back side	20	QPSK 50_50	21350/2560	1:1	0.327	-0.04	20.24	21.00	1.191	0.390	22.0
Left side	20	QPSK 50_50	21350/2560	1:1	0.024	0.01	20.24	21.00	1.191	0.029	22.0
Top side	20	QPSK 50_50	21350/2560	1:1	0.280	-0.01	20.24	21.00	1.191	0.334	22.0
Back side	20	QPSK PCC 1_0 QPSK SCC 0_0	21350/2560 21152/2540.2	1:1	0.169	0.12	19.59	21.00	1.384	0.234	22.2
Ant 31 Test Record											
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Head Test Data (1RB) DSI2											
Left cheek	20	QPSK 1_50	21100/2535	1:1	0.054	0.08	23.29	24.00	1.178	0.064	22.1
Left tilted	20	QPSK 1_50	21100/2535	1:1	0.066	0.05	23.29	24.00	1.178	0.078	22.3
Right cheek	20	QPSK 1_50	21100/2535	1:1	0.109	-0.03	23.29	24.00	1.178	0.128	22.3
Right tilted	20	QPSK 1_50	21100/2535	1:1	0.053	-0.01	23.29	24.00	1.178	0.062	22.3
Head Test Data (50%RB) DSI2											
Left cheek	20	QPSK 50_50	21100/2535	1:1	0.041	-0.07	22.33	23.00	1.167	0.048	22.1
Left tilted	20	QPSK 50_50	21100/2535	1:1	0.058	-0.12	22.33	23.00	1.167	0.068	22.3
Right cheek	20	QPSK 50_50	21100/2535	1:1	0.084	-0.11	22.33	23.00	1.167	0.098	22.3
Right tilted	20	QPSK 50_50	21100/2535	1:1	0.040	-0.04	22.33	23.00	1.167	0.047	22.3
Right cheek	20	QPSK PCC 1_0 QPSK SCC 0_0	21100/2535 20902/2515.2	1:1	0.075	0.08	22.57	24.00	1.390	0.105	22.2
Head Test Data (100%RB) DSI2											
Body worn Test data (Separate 15mm 1RB) DSI4											
Front side	20	QPSK 1_99	21100/2535	1:1	0.072	0.02	21.74	22.50	1.191	0.086	21.8
Back side	20	QPSK 1_99	21100/2535	1:1	0.107	-0.02	21.74	22.50	1.191	0.127	21.8
Body worn Test data (Separate 15mm 50%RB) DSI4											
Front side	20	QPSK 50_50	21100/2535	1:1	0.078	-0.05	21.80	22.50	1.175	0.092	21.8
Back side	20	QPSK 50_50	21100/2535	1:1	0.113	-0.04	21.80	22.50	1.175	0.133	21.8
Back side	20	QPSK PCC 1_0 QPSK SCC 0_0	21100/2535 20902/2515.2	1:1	0.108	0.09	21.08	22.50	1.387	0.150	22.2
Hotspot Test data (Separate 10mm 1RB) DSI10											
Front side	20	QPSK 1_99	21100/2535	1:1	0.104	0.12	20.21	21.00	1.199	0.125	21.8
Back side	20	QPSK 1_99	21100/2535	1:1	0.193	-0.09	20.21	21.00	1.199	0.232	21.8
Right side	20	QPSK 1_99	21100/2535	1:1	0.103	-0.12	20.21	21.00	1.199	0.124	21.8
Bottom side	20	QPSK 1_99	21100/2535	1:1	0.139	-0.13	20.21	21.00	1.199	0.167	22.0
Hotspot Test data (Separate 10mm 50%RB) DSI10											
Front side	20	QPSK 50_50	21100/2535	1:1	0.108	-0.08	20.21	21.00	1.199	0.130	21.8
Back side	20	QPSK 50_50	21100/2535	1:1	0.205	0.00	20.21	21.00	1.199	0.246	21.8
Right side	20	QPSK 50_50	21100/2535	1:1	0.108	-0.05	20.21	21.00	1.199	0.130	21.8
Bottom side	20	QPSK 50_50	21100/2535	1:1	0.146	0.01	20.21	21.00	1.199	0.175	22.0
Back side	20	QPSK PCC 1_0 QPSK SCC 0_0	21100/2535 20902/2515.2	1:1	0.203	0.06	19.61	21.00	1.377	0.280	22.2

Table 17：SAR of LTE Band 7 for Head and Body and Product specific 10g SAR.

8.2.8 SAR Result of LTE Band 12

Ant 11 Test Record											
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Head Test Data (1RB) DSI2											
Left cheek	10	QPSK 1_0	23095/707.5	1:1	0.092	0.02	22.90	24.00	1.288	0.118	22.4
Left tilted	10	QPSK 1_0	23095/707.5	1:1	0.034	0.09	22.90	24.00	1.288	0.044	22.4
Right cheek	10	QPSK 1_0	23095/707.5	1:1	0.162	0.05	22.90	24.00	1.288	**0.209**	22.4
Right tilted	10	QPSK 1_0	23095/707.5	1:1	0.048	0.07	22.90	24.00	1.288	0.061	22.4
Head Test Data (50%RB) DSI2											
Left cheek	10	QPSK 25_25	23095/707.5	1:1	0.087	0.02	21.84	23.00	1.306	0.113	22.4
Left tilted	10	QPSK 25_25	23095/707.5	1:1	0.033	0.07	21.84	23.00	1.306	0.042	22.4
Right cheek	10	QPSK 25_25	23095/707.5	1:1	0.156	0.03	21.84	23.00	1.306	0.204	22.4
Right tilted	10	QPSK 25_25	23095/707.5	1:1	0.043	0.12	21.84	23.00	1.306	0.056	22.4
Body worn Test data (Separate 15mm 1RB) DSI4											
Front side	10	QPSK 1_0	23095/707.5	1:1	0.038	0.11	22.90	24.00	1.288	0.049	22.4
Back side	10	QPSK 1_0	23095/707.5	1:1	0.079	-0.09	22.90	24.00	1.288	**0.101**	22.2
Body worn Test data (Separate 15mm 50%RB) DSI4											
Front side	10	QPSK 25_25	23095/707.5	1:1	0.038	0.10	21.84	23.00	1.306	0.049	22.4
Back side	10	QPSK 25_25	23095/707.5	1:1	0.072	0.12	21.84	23.00	1.306	0.094	22.4
Hotspot Test data (Separate 10mm 1RB) DSI10											
Front side	10	QPSK 1_0	23095/707.5	1:1	0.100	0.07	22.90	24.00	1.288	0.129	22.2
Back side	10	QPSK 1_0	23095/707.5	1:1	0.159	0.01	22.90	24.00	1.288	0.205	22.2
Left side	10	QPSK 1_0	23095/707.5	1:1	0.206	0.04	22.90	24.00	1.288	**0.265**	22.5
Top side	10	QPSK 1_0	23095/707.5	1:1	0.009	0.02	22.90	24.00	1.288	0.012	22.5
Hotspot Test data (Separate 10mm 50%RB) DSI10											
Front side	10	QPSK 25_25	23095/707.5	1:1	0.080	0.03	21.84	23.00	1.306	0.104	22.2
Back side	10	QPSK 25_25	23095/707.5	1:1	0.152	0.13	21.84	23.00	1.306	0.199	22.2
Left side	10	QPSK 25_25	23095/707.5	1:1	0.191	0.02	21.84	23.00	1.306	0.249	22.5
Top side	10	QPSK 25_25	23095/707.5	1:1	0.012	0.05	21.84	23.00	1.306	0.015	22.5
Ant 41 Test Record											
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Head Test Data (1RB) DSI2											
Left cheek	10	QPSK 1_0	23060/704	1:1	0.050	0.05	22.84	24.00	1.306	0.065	22.4
Left tilted	10	QPSK 1_0	23060/704	1:1	0.026	0.07	22.84	24.00	1.306	0.033	22.4
Right cheek	10	QPSK 1_0	23060/704	1:1	0.048	0.07	22.84	24.00	1.306	0.062	22.4
Right tilted	10	QPSK 1_0	23060/704	1:1	0.022	0.02	22.84	24.00	1.306	0.028	22.4
Head Test Data (50%RB) DSI2											
Left cheek	10	QPSK 25_25	23060/704	1:1	0.049	0.07	21.88	23.00	1.294	0.063	22.4
Left tilted	10	QPSK 25_25	23060/704	1:1	0.025	0.01	21.88	23.00	1.294	0.032	22.4
Right cheek	10	QPSK 25_25	23060/704	1:1	0.046	0.05	21.88	23.00	1.294	0.060	22.4
Right tilted	10	QPSK 25_25	23060/704	1:1	0.022	0.02	21.88	23.00	1.294	0.028	22.4
Body worn Test data (Separate 15mm 1RB) DSI4											
Front side	10	QPSK 1_0	23060/704	1:1	0.057	0.06	22.84	24.00	1.306	0.074	22.4
Back side	10	QPSK 1_0	23060/704	1:1	0.070	-0.04	22.84	24.00	1.306	0.091	22.4
Body worn Test data (Separate 15mm 50%RB) DSI4											
Front side	10	QPSK 25_25	23060/704	1:1	0.057	0.06	21.88	23.00	1.294	0.074	22.4
Back side	10	QPSK 25_25	23060/704	1:1	0.064	0.16	21.88	23.00	1.294	0.083	22.4

Hotspot Test data (Separate 10mm 1RB) DSI10											
Front side	10	QPSK 1_0	23060/704	1:1	0.079	0.12	22.84	24.00	1.306	0.104	22.5
Back side	10	QPSK 1_0	23060/704	1:1	0.087	-0.04	22.84	24.00	1.306	0.114	22.5
Left side	10	QPSK 1_0	23060/704	1:1	0.076	0.16	22.84	24.00	1.306	0.100	22.5
Bottom side	10	QPSK 1_0	23060/704	1:1	0.034	0.02	22.84	24.00	1.306	0.045	22.5
Hotspot Test data (Separate 10mm 50%RB) DSI10											
Front side	10	QPSK 25_25	23060/704	1:1	0.067	0.03	21.88	23.00	1.294	0.087	22.5
Back side	10	QPSK 25_25	23060/704	1:1	0.090	-0.04	21.88	23.00	1.294	0.117	22.5
Left side	10	QPSK 25_25	23060/704	1:1	0.076	-0.16	21.88	23.00	1.294	0.098	22.5
Bottom side	10	QPSK 25_25	23060/704	1:1	0.036	0.16	21.88	23.00	1.294	0.047	22.5

Table 18：SAR of LTE Band 12 for Head and Body.

8.2.9 SAR Result of LTE Band 13

Ant 11 Test Record											
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Head Test Data (1RB) DSI2											
Left cheek	10	QPSK 1_0	23230/782	1:1	0.178	0.05	22.75	24.00	1.334	0.237	22.4
Left tilted	10	QPSK 1_0	23230/782	1:1	0.063	0.08	22.75	24.00	1.334	0.084	22.4
Right cheek	10	QPSK 1_0	23230/782	1:1	0.300	0.08	22.75	24.00	1.334	**0.400**	22.4
Right tilted	10	QPSK 1_0	23230/782	1:1	0.092	0.17	22.75	24.00	1.334	0.123	22.4
Head Test Data (50%RB) DSI2											
Left cheek	10	QPSK 25_13	23230/782	1:1	0.137	0.06	21.75	23.00	1.334	0.183	22.4
Left tilted	10	QPSK 25_13	23230/782	1:1	0.046	0.04	21.75	23.00	1.334	0.061	22.4
Right cheek	10	QPSK 25_13	23230/782	1:1	0.281	0.02	21.75	23.00	1.334	0.375	22.4
Right tilted	10	QPSK 25_13	23230/782	1:1	0.070	0.07	21.75	23.00	1.334	0.093	22.4
Body worn Test data (Separate 15mm 1RB) DSI4											
Front side	10	QPSK 1_0	23230/782	1:1	0.072	0.01	22.75	24.00	1.334	0.097	22.4
Back side	10	QPSK 1_0	23230/782	1:1	0.154	-0.05	22.75	24.00	1.334	**0.205**	22.2
Body worn Test data (Separate 15mm 50%RB) DSI4											
Front side	10	QPSK 25_13	23230/782	1:1	0.054	-0.01	21.75	23.00	1.334	0.072	22.4
Back side	10	QPSK 25_13	23230/782	1:1	0.119	0.06	21.75	23.00	1.334	0.159	22.4
Hotspot Test data (Separate 10mm 1RB) DSI10											
Front side	10	QPSK 1_0	23230/782	1:1	0.139	0.06	22.75	24.00	1.334	0.185	22.2
Back side	10	QPSK 1_0	23230/782	1:1	0.281	-0.04	22.75	24.00	1.334	0.375	22.2
Left side	10	QPSK 1_0	23230/782	1:1	0.326	0.17	22.75	24.00	1.334	**0.435**	22.5
Top side	10	QPSK 1_0	23230/782	1:1	0.013	0.07	22.75	24.00	1.334	0.018	22.5
Hotspot Test data (Separate 10mm 50%RB) DSI10											
Front side	10	QPSK 25_13	23230/782	1:1	0.110	-0.10	21.75	23.00	1.334	0.147	22.2
Back side	10	QPSK 25_13	23230/782	1:1	0.247	0.07	21.75	23.00	1.334	0.329	22.2
Left side	10	QPSK 25_13	23230/782	1:1	0.272	0.19	21.75	23.00	1.334	0.363	22.5
Top side	10	QPSK 25_13	23230/782	1:1	0.011	-0.13	21.75	23.00	1.334	0.015	22.5
Ant 41 Test Record											
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Head Test Data (1RB) DSI2											
Left cheek	10	QPSK 1_25	23230/782	1:1	0.060	0.08	22.62	24.00	1.374	0.082	22.4
Left tilted	10	QPSK 1_25	23230/782	1:1	0.034	0.05	22.62	24.00	1.374	0.047	22.4
Right cheek	10	QPSK 1_25	23230/782	1:1	0.064	0.08	22.62	24.00	1.374	0.088	22.4
Right tilted	10	QPSK 1_25	23230/782	1:1	0.030	0.06	22.62	24.00	1.374	0.041	22.4
Head Test Data (50%RB) DSI2											
Left cheek	10	QPSK 25_13	23230/782	1:1	0.049	0.08	21.70	23.00	1.349	0.067	22.4
Left tilted	10	QPSK 25_13	23230/782	1:1	0.028	0.06	21.70	23.00	1.349	0.038	22.4
Right cheek	10	QPSK 25_13	23230/782	1:1	0.052	0.02	21.70	23.00	1.349	0.070	22.4
Right tilted	10	QPSK 25_13	23230/782	1:1	0.024	0.09	21.70	23.00	1.349	0.033	22.4
Body worn Test data (Separate 15mm 1RB) DSI4											
Front side	10	QPSK 1_25	23230/782	1:1	0.083	0.07	22.62	24.00	1.374	0.114	22.4
Back side	10	QPSK 1_25	23230/782	1:1	0.095	0.19	22.62	24.00	1.374	0.131	22.4
Body worn Test data (Separate 15mm 50%RB) DSI4											
Front side	10	QPSK 25_13	23230/782	1:1	0.067	0.08	21.70	23.00	1.349	0.091	22.4
Back side	10	QPSK 25_13	23230/782	1:1	0.078	-0.07	21.70	23.00	1.349	0.105	22.4

Hotspot Test data (Separate 10mm 1RB) DSI10											
Front side	10	QPSK 1_25	23230/782	1:1	0.104	0.00	22.62	24.00	1.374	0.143	22.5
Back side	10	QPSK 1_25	23230/782	1:1	0.136	-0.14	22.62	24.00	1.374	0.187	22.5
Left side	10	QPSK 1_25	23230/782	1:1	0.093	0.04	22.62	24.00	1.374	0.128	22.5
Bottom side	10	QPSK 1_25	23230/782	1:1	0.059	0.07	22.62	24.00	1.374	0.081	22.5
Hotspot Test data (Separate 10mm 50%RB) DSI10											
Front side	10	QPSK 25_13	23230/782	1:1	0.083	0.04	21.70	23.00	1.349	0.113	22.5
Back side	10	QPSK 25_13	23230/782	1:1	0.112	0.05	21.70	23.00	1.349	0.151	22.5
Left side	10	QPSK 25_13	23230/782	1:1	0.075	0.06	21.70	23.00	1.349	0.101	22.5
Bottom side	10	QPSK 25_13	23230/782	1:1	0.046	0.13	21.70	23.00	1.349	0.062	22.5

Table 19：SAR of LTE Band 13 for Head and Body.

8.2.10 SAR Result of LTE Band 26

Ant 11 Test Record											
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Head Test Data (1RB) DSI2											
Left cheek	15	QPSK 1_0	26965/841.5	1:1	0.229	-0.04	22.72	24.20	1.406	0.322	22.4
Left tilted	15	QPSK 1_0	26965/841.5	1:1	0.079	0.10	22.72	24.20	1.406	0.111	22.4
Right cheek	15	QPSK 1_0	26965/841.5	1:1	0.378	0.06	22.72	24.20	1.406	**0.531**	22.4
Right tilted	15	QPSK 1_0	26965/841.5	1:1	0.113	0.09	22.72	24.20	1.406	0.159	22.4
Head Test Data (50%RB) DSI2											
Left cheek	15	QPSK 36_39	26965/841.5	1:1	0.188	0.18	21.86	23.20	1.361	0.256	22.4
Left tilted	15	QPSK 36_39	26965/841.5	1:1	0.063	0.09	21.86	23.20	1.361	0.085	22.4
Right cheek	15	QPSK 36_39	26965/841.5	1:1	0.366	0.07	21.86	23.20	1.361	0.498	22.4
Right tilted	15	QPSK 36_39	26965/841.5	1:1	0.128	0.09	21.86	23.20	1.361	0.174	22.4
Body worn Test data (Separate 15mm 1RB) DSI4											
Front side	15	QPSK 1_0	26965/841.5	1:1	0.086	0.05	22.72	24.20	1.406	0.121	22.4
Back side	15	QPSK 1_0	26965/841.5	1:1	0.171	-0.01	22.72	24.20	1.406	**0.240**	22.2
Body worn Test data (Separate 15mm 50%RB) DSI4											
Front side	15	QPSK 36_39	26965/841.5	1:1	0.070	0.02	21.86	23.20	1.361	0.095	22.4
Back side	15	QPSK 36_39	26965/841.5	1:1	0.142	-0.11	21.86	23.20	1.361	0.193	22.2
Hotspot Test data (Separate 10mm 1RB) DSI10											
Front side	15	QPSK 1_0	26965/841.5	1:1	0.186	-0.17	22.72	24.20	1.406	0.262	22.2
Back side	15	QPSK 1_0	26965/841.5	1:1	0.345	0.11	22.72	24.20	1.406	**0.485**	22.2
Left side	15	QPSK 1_0	26965/841.5	1:1	0.314	0.06	22.72	24.20	1.406	0.441	22.5
Top side	15	QPSK 1_0	26965/841.5	1:1	0.019	0.03	22.72	24.20	1.406	0.027	22.5
Hotspot Test data (Separate 10mm 50%RB) DSI10											
Front side	15	QPSK 36_39	26965/841.5	1:1	0.144	0.07	21.86	23.20	1.361	0.196	22.2
Back side	15	QPSK 36_39	26965/841.5	1:1	0.312	0.11	21.86	23.20	1.361	0.425	22.2
Left side	15	QPSK 36_39	26965/841.5	1:1	0.283	0.02	21.86	23.20	1.361	0.385	22.5
Top side	15	QPSK 36_39	26965/841.5	1:1	0.016	0.10	21.86	23.20	1.361	0.022	22.5

Ant 41 Test Record											
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Head Test Data (1RB) DSI2											
Left cheek	15	QPSK 1_0	26865/831.5	1:1	0.089	0.01	22.68	24.20	1.419	0.127	22.4
Left tilted	15	QPSK 1_0	26865/831.5	1:1	0.046	0.03	22.68	24.20	1.419	0.065	22.4
Right cheek	15	QPSK 1_0	26865/831.5	1:1	0.089	-0.12	22.68	24.20	1.419	0.126	22.4
Right tilted	15	QPSK 1_0	26865/831.5	1:1	0.042	0.01	22.68	24.20	1.419	0.059	22.4
Head Test Data (50%RB) DSI2											
Left cheek	15	QPSK 36_0	26865/831.5	1:1	0.075	0.07	21.78	23.20	1.387	0.105	22.4
Left tilted	15	QPSK 36_0	26865/831.5	1:1	0.038	0.04	21.78	23.20	1.387	0.053	22.4
Right cheek	15	QPSK 36_0	26865/831.5	1:1	0.074	0.01	21.78	23.20	1.387	0.102	22.4
Right tilted	15	QPSK 36_0	26865/831.5	1:1	0.036	0.06	21.78	23.20	1.387	0.049	22.4
Body worn Test data (Separate 15mm 1RB) DSI4											
Front side	15	QPSK 1_0	26865/831.5	1:1	0.092	0.04	22.68	24.20	1.419	0.131	22.4
Back side	15	QPSK 1_0	26865/831.5	1:1	0.108	0.15	22.68	24.20	1.419	0.153	22.4
Body worn Test data (Separate 15mm 50%RB) DSI4											
Front side	15	QPSK 36_0	26865/831.5	1:1	0.076	0.15	21.78	23.20	1.387	0.106	22.4
Back side	15	QPSK 36_0	26865/831.5	1:1	0.091	0.02	21.78	23.20	1.387	0.127	22.4
Hotspot Test data (Separate 10mm 1RB) DSI10											
Front side	15	QPSK 1_0	26865/831.5	1:1	0.141	0.05	22.68	24.20	1.419	0.200	22.5
Back side	15	QPSK 1_0	26865/831.5	1:1	0.182	-0.04	22.68	24.20	1.419	0.258	22.5
Left side	15	QPSK 1_0	26865/831.5	1:1	0.118	0.05	22.68	24.20	1.419	0.167	22.5
Bottom side	15	QPSK 1_0	26865/831.5	1:1	0.080	0.12	22.68	24.20	1.419	0.113	22.5
Hotspot Test data (Separate 10mm 50%RB) DSI10											
Front side	15	QPSK 36_0	26865/831.5	1:1	0.119	0.03	21.78	23.20	1.387	0.165	22.5
Back side	15	QPSK 36_0	26865/831.5	1:1	0.155	-0.13	21.78	23.20	1.387	0.215	22.5
Left side	15	QPSK 36_0	26865/831.5	1:1	0.065	0.11	21.78	23.20	1.387	0.090	22.5
Bottom side	15	QPSK 36_0	26865/831.5	1:1	0.070	0.01	21.78	23.20	1.387	0.097	22.5

Table 20：SAR of LTE Band 26 for Head and Body.

8.2.11 SAR Result of LTE Band 41

Ant 14 Test Record											
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Body worn Test data (Separate 15mm 1RB) DSI4											
Front side	20	QPSK 1_99	40620/2593	1:1.58	0.064	0.02	23.70	24.30	1.148	0.073	22.0
Back side	20	QPSK 1_99	40620/2593	1:1.58	0.204	0.04	23.70	24.30	1.148	**0.234**	22.0
Body worn Test data (Separate 15mm 50%RB) DSI4											
Front side	20	QPSK 50_0	40620/2593	1:1.58	0.063	0.02	23.11	23.30	1.045	0.066	22.0
Back side	20	QPSK 50_0	40620/2593	1:1.58	0.183	-0.11	23.11	23.30	1.045	0.191	22.0
Back side	20	QPSK PCC 1_0 QPSK SCC 0_0	40620/2593 40818/2612.8	1:1.58	0.191	0.04	23.19	23.30	1.026	0.196	22.2
Hotspot Test data (Separate 10mm 1RB) DSI10											
Front side	20	QPSK 1_99	41055/2636.5	1:1.58	0.070	0.02	21.65	22.30	1.161	0.081	22.0
Back side	20	QPSK 1_99	41055/2636.5	1:1.58	0.254	-0.06	21.65	22.30	1.161	0.295	22.0
Left side	20	QPSK 1_99	41055/2636.5	1:1.58	0.042	0.03	21.65	22.30	1.161	0.049	22.0
Top side	20	QPSK 1_99	41055/2636.5	1:1.58	0.262	-0.03	21.65	22.30	1.161	0.304	22.0
Hotspot Test data (Separate 10mm 50%RB) DSI10											
Front side	20	QPSK 50_50	40620/2593	1:1.58	0.076	0.02	21.76	22.30	1.132	0.086	22.0
Back side	20	QPSK 50_50	40620/2593	1:1.58	0.285	0.01	21.76	22.30	1.132	0.323	22.0
Left side	20	QPSK 50_50	40620/2593	1:1.58	0.020	0.10	21.76	22.30	1.132	0.023	22.0
Top side	20	QPSK 50_50	40620/2593	1:1.58	0.294	-0.02	21.76	22.30	1.132	**0.333**	22.0
Top side	20	QPSK PCC 1_0 QPSK SCC 0_0	40620/2593 40818/2612.8	1:1.58	0.254	0.06	21.20	22.30	1.288	0.327	22.2

Ant 31 Test Record											
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Head Test Data (1RB) DSI2											
Left cheek	20	QPSK 1_99	40620/2593	1:1.58	0.037	0.05	23.67	24.80	1.297	0.048	22.1
Left tilted	20	QPSK 1_99	40620/2593	1:1.58	0.029	0.08	23.67	24.80	1.297	0.038	22.3
Right cheek	20	QPSK 1_99	40620/2593	1:1.58	0.039	-0.04	23.67	24.80	1.297	**0.051**	22.3
Right tilted	20	QPSK 1_99	40620/2593	1:1.58	0.038	-0.02	23.67	24.80	1.297	0.049	22.3
Head Test Data (50%RB) DSI2											
Left cheek	20	QPSK 50_25	39750/2506	1:1.58	0.032	0.01	22.84	23.80	1.247	0.040	22.1
Left tilted	20	QPSK 50_25	39750/2506	1:1.58	0.030	0.01	22.84	23.80	1.247	0.037	22.3
Right cheek	20	QPSK 50_25	39750/2506	1:1.58	0.035	0.08	22.84	23.80	1.247	0.044	22.3
Right tilted	20	QPSK 50_25	39750/2506	1:1.58	0.030	-0.04	22.84	23.80	1.247	0.037	22.3
Right cheek	20	QPSK PCC 1_0	40620/2593	1:1.58	0.044	0.05	23.85	24.00	1.035	0.046	22.2
		QPSK SCC 0_0	40818/2612.8								
Body worn Test data (Separate 15mm 1RB) DSI4											
Front side	20	QPSK 1_0	40620/2593	1:1.58	0.050	-0.05	22.28	23.80	1.419	0.071	21.8
Back side	20	QPSK 1_0	40620/2593	1:1.58	0.071	0.07	22.28	23.80	1.419	0.101	21.8
Body worn Test data (Separate 15mm 50%RB) DSI4											
Front side	20	QPSK 50_25	39750/2506	1:1.58	0.062	0.07	22.41	23.80	1.377	0.085	21.8
Back side	20	QPSK 50_25	39750/2506	1:1.58	0.092	0.15	22.41	23.80	1.377	0.127	21.8
Back side	20	QPSK PCC 1_0	39750/2506	1:1.58	0.152	0.07	22.25	23.80	1.429	0.217	22.2
		QPSK SCC 0_0	39948/2525.8								
Hotspot Test data (Separate 10mm 1RB) DSI10											
Front side	20	QPSK 1_0	39750/2506	1:1.58	0.089	-0.01	21.22	22.30	1.282	0.114	21.8
Back side	20	QPSK 1_0	39750/2506	1:1.58	0.170	-0.06	21.22	22.30	1.282	0.218	21.8
Right side	20	QPSK 1_0	39750/2506	1:1.58	0.077	0.02	21.22	22.30	1.282	0.099	21.8
Bottom side	20	QPSK 1_0	39750/2506	1:1.58	0.120	-0.02	21.22	22.30	1.282	0.154	22.0
Hotspot Test data (Separate 10mm 50%RB) DSI10											
Front side	20	QPSK 50_0	39750/2506	1:1.58	0.090	0.11	21.13	22.30	1.309	0.118	21.8
Back side	20	QPSK 50_0	39750/2506	1:1.58	0.168	0.08	21.13	22.30	1.309	0.220	21.8
Right side	20	QPSK 50_0	39750/2506	1:1.58	0.079	0.05	21.13	22.30	1.309	0.103	21.8
Bottom side	20	QPSK 50_0	39750/2506	1:1.58	0.119	0.02	21.13	22.30	1.309	0.156	22.0
Back side	20	QPSK PCC 1_0	39750/2506	1:1.58	0.163	0.08	20.87	22.30	1.390	0.227	22.2
		QPSK SCC 0_0	39948/2525.8								

Table 21：SAR of LTE Band 41 for Head and Body.

8.2.12 SAR Result of LTE Band 66

Ant 11 Test Record											
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Head Test Data (1RB) DSI2											
Left cheek	20	QPSK 1_99	132572/1770	1:1	0.305	0.04	22.72	24.20	1.406	0.429	22.3
Left tilted	20	QPSK 1_99	132572/1770	1:1	0.065	-0.03	22.72	24.20	1.406	0.092	22.3
Right cheek	20	QPSK 1_99	132572/1770	1:1	0.440	0.13	22.72	24.20	1.406	0.619	22.3
Right tilted	20	QPSK 1_99	132572/1770	1:1	0.088	0.12	22.72	24.20	1.406	0.124	22.3
Head Test Data (50%RB) DSI2											
Left cheek	20	QPSK 50_50	132572/1770	1:1	0.054	0.06	21.74	23.20	1.400	0.076	22.3
Left tilted	20	QPSK 50_50	132572/1770	1:1	0.257	0.12	21.74	23.20	1.400	0.360	22.3
Right cheek	20	QPSK 50_50	132572/1770	1:1	0.528	0.05	21.74	23.20	1.400	**0.739**	22.3
Right tilted	20	QPSK 50_50	132572/1770	1:1	0.085	0.08	21.74	23.20	1.400	0.120	22.3
Body worn Test data (Separate 15mm 1RB) DSI4											
Front side	20	QPSK 1_99	132572/1770	1:1	0.070	-0.12	22.72	24.20	1.406	0.098	22.3
Back side	20	QPSK 1_99	132572/1770	1:1	0.128	0.04	22.72	24.20	1.406	0.180	22.3
Body worn Test data (Separate 15mm 50%RB) DSI4											
Front side	20	QPSK 50_50	132572/1770	1:1	0.043	0.08	21.74	23.20	1.400	0.061	22.3
Back side	20	QPSK 50_50	132572/1770	1:1	0.101	-0.01	21.74	23.20	1.400	0.141	22.3
Hotspot Test data (Separate 10mm 1RB) DSI10											
Front side	20	QPSK 1_0	132572/1770	1:1	0.077	0.08	20.27	21.70	1.390	0.107	22.3
Back side	20	QPSK 1_0	132572/1770	1:1	0.167	0.11	20.27	21.70	1.390	0.232	22.3
Left side	20	QPSK 1_0	132572/1770	1:1	0.231	0.03	20.27	21.70	1.390	0.321	22.3
Top side	20	QPSK 1_0	132572/1770	1:1	0.017	0.13	20.27	21.70	1.390	0.024	22.3
Hotspot Test data (Separate 10mm 50%RB) DSI10											
Front side	20	QPSK 50_25	132322/1745	1:1	0.069	-0.06	20.25	21.70	1.396	0.097	22.3
Back side	20	QPSK 50_25	132322/1745	1:1	0.172	0.07	20.25	21.70	1.396	0.240	22.3
Left side	20	QPSK 50_25	132322/1745	1:1	0.264	0.06	20.25	21.70	1.396	0.369	22.3
Top side	20	QPSK 50_25	132322/1745	1:1	0.015	0.02	20.25	21.70	1.396	0.021	22.3
Ant 14 Test Record											
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Body worn Test data (Separate 15mm 1RB) DSI4											
Front side	20	QPSK 1_99	132572/1770	1:1	0.122	0.02	21.08	22.20	1.294	0.158	22.5
Back side	20	QPSK 1_99	132572/1770	1:1	0.208	0.05	21.08	22.20	1.294	0.269	22.5
Body worn Test data (Separate 15mm 50%RB) DSI4											
Front side	20	QPSK 50_50	132572/1770	1:1	0.125	0.11	21.20	22.20	1.259	0.157	22.5
Back side	20	QPSK 50_50	132572/1770	1:1	0.221	0.07	21.20	22.20	1.259	0.278	22.5
Hotspot Test data (Separate 10mm 1RB) DSI10											
Front side	20	QPSK 1_99	132322/1745	1:1	0.146	0.14	19.03	20.70	1.469	0.214	22.5
Back side	20	QPSK 1_99	132322/1745	1:1	0.321	0.08	19.03	20.70	1.469	0.472	22.5
Left side	20	QPSK 1_99	132322/1745	1:1	0.088	0.05	19.03	20.70	1.469	0.129	22.5
Top side	20	QPSK 1_99	132322/1745	1:1	0.384	0.03	19.03	20.70	1.469	0.564	22.5
Hotspot Test data (Separate 10mm 50%RB) DSI10											
Front side	20	QPSK 50_50	132322/1745	1:1	0.146	0.03	19.06	20.70	1.459	0.213	22.5
Back side	20	QPSK 50_50	132322/1745	1:1	0.322	0.14	19.06	20.70	1.459	0.470	22.5
Left side	20	QPSK 50_50	132322/1745	1:1	0.093	0.08	19.06	20.70	1.459	0.135	22.5
Top side	20	QPSK 50_50	132322/1745	1:1	0.395	0.09	19.06	20.70	1.459	**0.576**	22.5

Ant 31 Test Record											
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Head Test Data (1RB) DSI2											
Left cheek	20	QPSK 1_0	132572/1770	1:1	0.050	0.07	23.20	24.20	1.259	0.063	22.4
Left tilted	20	QPSK 1_0	132572/1770	1:1	0.043	0.09	23.20	24.20	1.259	0.054	22.4
Right cheek	20	QPSK 1_0	132572/1770	1:1	0.049	0.01	23.20	24.20	1.259	0.061	22.4
Right tilted	20	QPSK 1_0	132572/1770	1:1	0.031	0.03	23.20	24.20	1.259	0.039	22.4
Head Test Data (50%RB) DSI2											
Left cheek	20	QPSK 50_25	132572/1770	1:1	0.039	0.01	22.26	23.20	1.242	0.049	22.4
Left tilted	20	QPSK 50_25	132572/1770	1:1	0.035	0.07	22.26	23.20	1.242	0.044	22.4
Right cheek	20	QPSK 50_25	132572/1770	1:1	0.041	0.04	22.26	23.20	1.242	0.051	22.4
Right tilted	20	QPSK 50_25	132572/1770	1:1	0.023	0.08	22.26	23.20	1.242	0.029	22.4
Body worn Test data (Separate 15mm 1RB) DSI4											
Front side	20	QPSK 1_99	132572/1770	1:1	0.187	0.02	21.67	22.70	1.268	0.237	22.3
Back side	20	QPSK 1_99	132572/1770	1:1	0.248	0.09	21.67	22.70	1.268	0.314	22.3
Body worn Test data (Separate 15mm 50%RB) DSI4											
Front side	20	QPSK 50_50	132572/1770	1:1	0.192	0.05	21.73	22.70	1.250	0.240	22.3
Back side	20	QPSK 50_50	132572/1770	1:1	0.255	0.01	21.73	22.70	1.250	**0.319**	22.3
Hotspot Test data (Separate 10mm 1RB) DSI10											
Front side	20	QPSK 1_99	132072/1720	1:1	0.203	0.03	20.06	21.20	1.300	0.264	22.2
Back side	20	QPSK 1_99	132072/1720	1:1	0.263	0.05	20.06	21.20	1.300	0.342	22.2
Right side	20	QPSK 1_99	132072/1720	1:1	0.048	0.01	20.06	21.20	1.300	0.062	22.4
Bottom side	20	QPSK 1_99	132072/1720	1:1	0.338	0.07	20.06	21.20	1.300	0.439	22.4
Hotspot Test data (Separate 10mm 50%RB) DSI10											
Front side	20	QPSK 50_50	132072/1720	1:1	0.202	-0.04	20.10	21.20	1.288	0.260	22.2
Back side	20	QPSK 50_50	132072/1720	1:1	0.273	-0.10	20.10	21.20	1.288	0.352	22.2
Right side	20	QPSK 50_50	132072/1720	1:1	0.048	0.09	20.10	21.20	1.288	0.061	22.4
Bottom side	20	QPSK 50_50	132072/1720	1:1	0.354	0.04	20.10	21.20	1.288	0.456	22.4

Table 22：SAR of LTE Band 66 for Head and Body.

8.2.13 SAR Result of 5G NR n2

Ant 14 Test Record											
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Body worn Test data (Separate 15mm 1RB) DSI4											
Front side	20	QPSK 1_1	372000/1860	100%	0.130	0.11	20.89	22.50	1.449	0.188	22.1
Back side	20	QPSK 1_1	372000/1860	100%	0.219	0.10	20.89	22.50	1.449	0.317	22.1
Body worn Test data (Separate 15mm 50%RB) DSI4											
Front side	20	QPSK 50_28	372000/1860	100%	0.139	0.09	20.88	22.50	1.452	0.202	22.1
Back side	20	QPSK 50_28	372000/1860	100%	0.220	0.04	20.88	22.50	1.452	**0.319**	22.1
Hotspot Test data (Separate 10mm 1RB) DSI10											
Front side	20	QPSK 1_1	372000/1860	100%	0.136	0.13	19.45	21.00	1.429	0.194	22.1
Back side	20	QPSK 1_1	372000/1860	100%	0.268	0.09	19.45	21.00	1.429	0.383	22.1
Left side	20	QPSK 1_1	372000/1860	100%	0.066	0.04	19.45	21.00	1.429	0.094	22.1
Top side	20	QPSK 1_1	372000/1860	100%	0.337	0.16	19.45	21.00	1.429	0.482	22.1
Hotspot Test data (Separate 10mm 50%RB) DSI10											
Front side	20	QPSK 50_28	372000/1860	100%	0.203	0.12	19.37	21.00	1.455	0.295	22.1
Back side	20	QPSK 50_28	372000/1860	100%	0.280	-0.07	19.37	21.00	1.455	0.408	22.1
Left side	20	QPSK 50_28	372000/1860	100%	0.069	0.11	19.37	21.00	1.455	0.100	22.1
Top side	20	QPSK 50_28	372000/1860	100%	0.368	0.02	19.37	21.00	1.455	0.536	22.1
Ant 31 Test Record											
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Head Test Data (1RB) DSI2											
Left cheek	20	QPSK 1_1	376000/1880	100%	0.095	0.04	22.94	24.00	1.276	0.121	22.1
Left tilted	20	QPSK 1_1	376000/1880	100%	0.054	0.02	22.94	24.00	1.276	0.069	22.1
Right cheek	20	QPSK 1_1	376000/1880	100%	0.044	0.06	22.94	24.00	1.276	0.056	22.1
Right tilted	20	QPSK 1_1	376000/1880	100%	0.064	0.07	22.94	24.00	1.276	0.081	22.1
Head Test Data (50%RB) DSI2											
Left cheek	20	QPSK 50_28	376000/1880	100%	0.097	0.16	22.85	24.00	1.303	**0.127**	22.1
Left tilted	20	QPSK 50_28	376000/1880	100%	0.055	0.08	22.85	24.00	1.303	0.071	22.1
Right cheek	20	QPSK 50_28	376000/1880	100%	0.036	0.14	22.85	24.00	1.303	0.047	22.1
Right tilted	20	QPSK 50_28	376000/1880	100%	0.047	0.08	22.85	24.00	1.303	0.061	22.1
Body worn Test data (Separate 15mm 1RB) DSI4											
Front side	20	QPSK 1_1	376000/1880	100%	0.115	0.08	20.46	21.50	1.271	0.146	22.1
Back side	20	QPSK 1_1	376000/1880	100%	0.187	-0.10	20.46	21.50	1.271	0.238	22.1
Body worn Test data (Separate 15mm 50%RB) DSI4											
Front side	20	QPSK 50_28	376000/1880	100%	0.158	-0.06	20.40	21.50	1.288	0.204	22.1
Back side	20	QPSK 50_28	376000/1880	100%	0.215	-0.14	20.40	21.50	1.288	0.277	22.1
Hotspot Test data (Separate 10mm 1RB) DSI10											
Front side	20	QPSK 1_1	376000/1880	100%	0.197	0.10	18.92	20.00	1.282	0.253	22.1
Back side	20	QPSK 1_1	376000/1880	100%	0.302	-0.03	18.92	20.00	1.282	0.387	22.1
Right side	20	QPSK 1_1	376000/1880	100%	0.052	0.18	18.92	20.00	1.282	0.067	22.1
Bottom side	20	QPSK 1_1	376000/1880	100%	0.431	0.03	18.92	20.00	1.282	**0.553**	22.1
Hotspot Test data (Separate 10mm 50%RB) DSI10											
Front side	20	QPSK 50_28	376000/1880	100%	0.206	0.08	18.86	20.00	1.300	0.268	22.1
Back side	20	QPSK 50_28	376000/1880	100%	0.306	0.07	18.86	20.00	1.300	0.398	22.1
Right side	20	QPSK 50_28	376000/1880	100%	0.051	-0.05	18.86	20.00	1.300	0.066	22.1
Bottom side	20	QPSK 50_28	376000/1880	100%	0.412	0.11	18.86	20.00	1.300	0.536	22.1

Table 23： SAR of 5G NR n2 for Head and Body and Product specific 10g SAR.

8.2.14 SAR Result of 5G NR n7

Ant 11 Test Record											
Test position	**BW.**	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test Data (1RB) DSI2											
Left cheek	40	QPSK 1_108	504000/2520	100%	0.217	0.13	16.29	17.50	1.321	0.287	22.5
Left tilted	40	QPSK 1_108	504000/2520	100%	0.056	-0.05	16.29	17.50	1.321	0.074	22.5
Right cheek	40	QPSK 1_108	504000/2520	100%	0.500	0.05	16.29	17.50	1.321	**0.661**	22.5
Right tilted	40	QPSK 1_108	504000/2520	100%	0.130	-0.15	16.29	17.50	1.321	0.172	22.5
Head Test Data (50%RB) DSI2											
Left cheek	40	QPSK 108_54	507000/2535	100%	0.204	0.07	16.29	17.50	1.321	0.270	22.5
Left tilted	40	QPSK 108_54	507000/2535	100%	0.058	0.06	16.29	17.50	1.321	0.077	22.5
Right cheek	40	QPSK 108_54	507000/2535	100%	0.498	-0.13	16.29	17.50	1.321	0.658	22.5
Right tilted	40	QPSK 108_54	507000/2535	100%	0.133	-0.14	16.29	17.50	1.321	0.176	22.5
Body worn Test data (Separate 15mm 1RB) DSI4											
Front side	40	QPSK 1_108	504000/2520	100%	0.329	-0.02	22.80	24.00	1.318	0.434	22.2
Back side	40	QPSK 1_108	504000/2520	100%	0.570	0.02	22.80	24.00	1.318	**0.751**	22.2
Body worn Test data (Separate 15mm 50%RB) DSI4											
Front side	40	QPSK 108_54	507000/2535	100%	0.329	-0.19	22.76	24.00	1.330	0.438	22.2
Back side	40	QPSK 108_54	507000/2535	100%	0.541	-0.18	22.76	24.00	1.330	0.720	22.2
Hotspot Test data (Separate 10mm 1RB) DSI10											
Front side	40	QPSK 1_108	504000/2520	100%	0.158	-0.17	17.29	18.50	1.321	0.209	22.2
Back side	40	QPSK 1_108	504000/2520	100%	0.337	-0.03	17.29	18.50	1.321	0.445	22.2
Left side	40	QPSK 1_108	504000/2520	100%	0.396	-0.09	17.29	18.50	1.321	0.523	22.2
Top side	40	QPSK 1_108	504000/2520	100%	0.047	0.05	17.29	18.50	1.321	0.062	22.2
Hotspot Test data (Separate 10mm 50%RB) DSI10											
Front side	40	QPSK 108_54	507000/2535	100%	0.170	-0.16	17.32	18.50	1.312	0.223	22.2
Back side	40	QPSK 108_54	507000/2535	100%	0.300	-0.08	17.32	18.50	1.312	0.394	22.2
Left side	40	QPSK 108_54	507000/2535	100%	0.428	-0.10	17.32	18.50	1.312	**0.562**	22.2
Top side	40	QPSK 108_54	507000/2535	100%	0.056	0.03	17.32	18.50	1.312	0.073	22.2
Test position	**BW.**	**Test mode**	**Test Ch./Freq.**	**Duty Cycle**	**SAR (W/kg)10-g**	**Power Drift(dB)**	**Conducted power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled 10-g SAR(W/kg)**	**Liquid Temp.**
Product specific 10g SAR Test data(Separate 0mm 1RB) Sensor On DSI5											
Back side	40	QPSK 1_108	504000/2520	1:1	1.300	0.01	18.84	20.00	1.306	1.698	21.8
Left side	40	QPSK 1_108	504000/2520	1:1	1.100	0.02	18.84	20.00	1.306	1.437	21.8
Product specific 10g SAR Test data(Separate 0mm 50RB) Sensor On DSI5											
Back side	40	QPSK 108_54	507000/2535	1:1	1.390	0.03	18.81	20.00	1.315	**1.828**	21.8
Left side	40	QPSK 108_54	507000/2535	1:1	1.050	-0.10	18.81	20.00	1.315	1.381	21.8
Product specific 10g SAR Test data(1RB) Sensor Off DSI4											
Back side 12mm	40	QPSK 1_108	504000/2520	1:1	0.405	0.04	22.80	24.00	1.318	0.534	21.8
Left side 11mm	40	QPSK 1_108	504000/2520	1:1	0.593	0.06	22.80	24.00	1.318	0.782	21.8
Product specific 10g SAR Test data(50RB) Sensor Off DSI4											
Back side 12mm	40	QPSK 108_54	507000/2535	1:1	0.395	0.07	22.76	24.00	1.330	0.526	21.8
Left side 11mm	40	QPSK 108_54	507000/2535	1:1	0.570	0.05	22.76	24.00	1.330	0.758	21.8
Ant 14 Test Record											
Test position	**BW.**	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Body worn Test data (Separate 15mm 1RB) DSI4											
Front side	40	QPSK 1_1	504000/2520	100%	0.144	-0.04	21.20	22.50	1.349	0.194	22.4
Back side	40	QPSK 1_1	504000/2520	100%	0.243	-0.06	21.20	22.50	1.349	0.328	22.4
Body worn Test data (Separate 15mm 50%RB) DSI4											
Front side	40	QPSK 108_54	504000/2520	100%	0.153	-0.02	21.03	22.50	1.403	0.215	22.4
Back side	40	QPSK 108_54	504000/2520	100%	0.234	-0.08	21.03	22.50	1.403	0.328	22.4
Hotspot Test data (Separate 10mm 1RB) DSI10											
Front side	40	QPSK 1_1	504000/2520	100%	0.154	0.08	19.76	21.00	1.330	0.205	22.4
Back side	40	QPSK 1_1	504000/2520	100%	0.278	-0.12	19.76	21.00	1.330	0.370	22.4
Left side	40	QPSK 1_1	504000/2520	100%	0.042	-0.08	19.76	21.00	1.330	0.056	22.4

Top side	40	QPSK 1_1	504000/2520	100%	0.308	0.00	19.76	21.00	1.330	0.410	22.4
Hotspot Test data (Separate 10mm 50%RB) DSI10											
Front side	40	QPSK 108_54	504000/2520	100%	0.145	0.08	19.49	21.00	1.416	0.205	22.4
Back side	40	QPSK 108_54	504000/2520	100%	0.261	0.04	19.49	21.00	1.416	0.370	22.4
Left side	40	QPSK 108_54	504000/2520	100%	0.035	0.05	19.49	21.00	1.416	0.050	22.4
Top side	40	QPSK 108_54	504000/2520	100%	0.298	-0.11	19.49	21.00	1.416	0.422	22.4
Ant 31 Test Record											
Test position	**BW.**	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test Data (1RB) DSI2											
Left cheek	40	QPSK 1_1	504000/2520	100%	0.078	-0.08	23.03	24.00	1.250	0.098	22.1
Left tilted	40	QPSK 1_1	504000/2520	100%	0.068	-0.03	23.03	24.00	1.250	0.085	22.1
Right cheek	40	QPSK 1_1	504000/2520	100%	0.149	-0.07	23.03	24.00	1.250	0.186	22.1
Right tilted	40	QPSK 1_1	504000/2520	100%	0.085	-0.15	23.03	24.00	1.250	0.106	22.1
Head Test Data (50%RB) DSI2											
Left cheek	40	QPSK 108_54	504000/2520	100%	0.063	0.08	22.87	24.00	1.297	0.082	22.1
Left tilted	40	QPSK 108_54	504000/2520	100%	0.066	0.02	22.87	24.00	1.297	0.086	22.1
Right cheek	40	QPSK 108_54	504000/2520	100%	0.148	-0.01	22.87	24.00	1.297	0.192	22.1
Right tilted	40	QPSK 108_54	504000/2520	100%	0.075	0.01	22.87	24.00	1.297	0.097	22.1
Body worn Test data (Separate 15mm 1RB) DSI4											
Front side	40	QPSK 1_1	504000/2520	100%	0.112	-0.05	22.03	23.00	1.250	0.140	22.1
Back side	40	QPSK 1_1	504000/2520	100%	0.176	-0.02	22.03	23.00	1.250	0.220	22.1
Body worn Test data (Separate 15mm 50%RB) DSI4											
Front side	40	QPSK 108_54	504000/2520	100%	0.107	-0.04	21.86	23.00	1.300	0.139	22.1
Back side	40	QPSK 108_54	504000/2520	100%	0.157	-0.04	21.86	23.00	1.300	0.204	22.1
Hotspot Test data (Separate 10mm 1RB) DSI10											
Front side	40	QPSK 1_1	504000/2520	100%	0.161	-0.09	20.58	21.50	1.236	0.199	22.1
Back side	40	QPSK 1_1	504000/2520	100%	0.273	-0.05	20.58	21.50	1.236	0.337	22.1
Right side	40	QPSK 1_1	504000/2520	100%	0.195	-0.05	20.58	21.50	1.236	0.241	22.6
Bottom side	40	QPSK 1_1	504000/2520	100%	0.288	-0.08	20.58	21.50	1.236	0.356	22.6
Hotspot Test data (Separate 10mm 50%RB) DSI10											
Front side	40	QPSK 108_54	507000/2535	100%	0.201	-0.09	20.38	21.50	1.294	0.260	22.6
Back side	40	QPSK 108_54	507000/2535	100%	0.254	-0.13	20.38	21.50	1.294	0.329	22.6
Right side	40	QPSK 108_54	507000/2535	100%	0.165	-0.16	20.38	21.50	1.294	0.214	22.6
Bottom side	40	QPSK 108_54	507000/2535	100%	0.201	-0.09	20.38	21.50	1.294	0.260	22.6

Table 24：SAR of 5G NR n7 for Head and Body and Product specific 10g SAR.

8.2.15 SAR Result of 5G NR n26

Ant 11 Test Record											
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Head Test Data (1RB) DSI2											
Left cheek	20	QPSK 1_1	164800/824	100%	0.267	-0.08	23.11	24.70	1.442	0.385	22.3
Left tilted	20	QPSK 1_1	164800/824	100%	0.125	0.14	23.11	24.70	1.442	0.180	22.3
Right cheek	20	QPSK 1_1	164800/824	100%	0.580	0.03	23.11	24.70	1.442	**0.836**	22.3
Right tilted	20	QPSK 1_1	164800/824	100%	0.187	0.13	23.11	24.70	1.442	0.270	22.3
Head Test Data (50%RB) DSI2											
Left cheek	20	QPSK 50_28	164800/824	100%	0.235	0.10	22.94	24.70	1.500	0.352	22.3
Left tilted	20	QPSK 50_28	164800/824	100%	0.109	-0.06	22.94	24.70	1.500	0.163	22.3
Right cheek	20	QPSK 50_28	164800/824	100%	0.503	0.02	22.94	24.70	1.500	0.754	22.3
Right tilted	20	QPSK 50_28	164800/824	100%	0.148	0.06	22.94	24.70	1.500	0.222	22.3
Body worn Test data (Separate 15mm 1RB) DSI4											
Front side	20	QPSK 1_1	164800/824	100%	0.130	0.16	23.11	24.70	1.442	0.187	22.3
Back side	20	QPSK 1_1	164800/824	100%	0.163	-0.14	23.11	24.70	1.442	0.235	22.3
Body worn Test data (Separate 15mm 50%RB) DSI4											
Front side	20	QPSK 50_28	164800/824	100%	0.127	0.08	22.94	24.70	1.500	0.190	22.3
Back side	20	QPSK 50_28	164800/824	100%	0.171	0.14	22.94	24.70	1.500	**0.256**	22.3
Hotspot Test data (Separate 10mm 1RB) DSI10											
Front side	20	QPSK 1_1	164800/824	100%	0.207	0.09	23.11	24.70	1.442	0.299	22.3
Back side	20	QPSK 1_1	164800/824	100%	0.361	0.12	23.11	24.70	1.442	0.521	22.3
Left side	20	QPSK 1_1	164800/824	100%	0.314	0.06	23.11	24.70	1.442	0.453	22.3
Top side	20	QPSK 1_1	164800/824	100%	0.019	-0.09	23.11	24.70	1.442	0.028	22.3
Hotspot Test data (Separate 10mm 50%RB) DSI10											
Front side	20	QPSK 50_28	164800/824	100%	0.259	-0.16	22.94	24.70	1.500	0.388	22.3
Back side	20	QPSK 50_28	164800/824	100%	0.381	-0.11	22.94	24.70	1.500	**0.571**	22.3
Left side	20	QPSK 50_28	164800/824	100%	0.355	0.04	22.94	24.70	1.500	0.532	22.3
Top side	20	QPSK 50_28	164800/824	100%	0.021	0.09	22.94	24.70	1.500	0.032	22.3
Ant 41 Test Record											
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Head Test Data (1RB) DSI2											
Left cheek	20	QPSK 1_1	166300/831.5	100%	0.110	0.08	23.03	24.20	1.309	0.144	22.5
Left tilted	20	QPSK 1_1	166300/831.5	100%	0.051	0.05	23.03	24.20	1.309	0.067	22.5
Right cheek	20	QPSK 1_1	166300/831.5	100%	0.110	0.03	23.03	24.20	1.309	0.144	22.5
Right tilted	20	QPSK 1_1	166300/831.5	100%	0.047	0.06	23.03	24.20	1.309	0.062	22.5
Head Test Data (50%RB) DSI2											
Left cheek	20	QPSK 50_28	164800/824	100%	0.110	0.09	22.92	24.20	1.343	0.148	22.5
Left tilted	20	QPSK 50_28	164800/824	100%	0.051	0.05	22.92	24.20	1.343	0.068	22.5
Right cheek	20	QPSK 50_28	164800/824	100%	0.103	0.04	22.92	24.20	1.343	0.138	22.5
Right tilted	20	QPSK 50_28	164800/824	100%	0.045	-0.12	22.92	24.20	1.343	0.060	22.5
Body worn Test data (Separate 15mm 1RB) DSI4											
Front side	20	QPSK 1_1	166300/831.5	100%	0.124	-0.07	23.03	24.20	1.309	0.162	22.3
Back side	20	QPSK 1_1	166300/831.5	100%	0.128	0.06	23.03	24.20	1.309	0.168	22.3
Body worn Test data (Separate 15mm 50%RB) DSI4											
Front side	20	QPSK 50_28	164800/824	100%	0.110	0.01	22.92	24.20	1.343	0.148	22.3

Back side	20	QPSK 50_28	164800/824	100%	0.125	0.10	22.92	24.20	1.343	0.168	22.3
Hotspot Test data (Separate 10mm 1RB) DSI10											
Front side	20	QPSK 1_1	166300/831.5	100%	0.173	0.14	23.03	24.20	1.309	0.226	22.3
Back side	20	QPSK 1_1	166300/831.5	100%	0.247	0.04	23.03	24.20	1.309	0.323	22.3
Left side	20	QPSK 1_1	166300/831.5	100%	0.148	0.08	23.03	24.20	1.309	0.194	22.3
Bottom side	20	QPSK 1_1	166300/831.5	100%	0.109	0.02	23.03	24.20	1.309	0.143	22.3
Hotspot Test data (Separate 10mm 50%RB) DSI10											
Front side	20	QPSK 50_28	164800/824	100%	0.166	0.17	22.92	24.20	1.343	0.223	22.3
Back side	20	QPSK 50_28	164800/824	100%	0.245	-0.03	22.92	24.20	1.343	0.329	22.3
Left side	20	QPSK 50_28	164800/824	100%	0.155	0.02	22.92	24.20	1.343	0.208	22.3
Bottom side	20	QPSK 50_28	164800/824	100%	0.114	0.12	22.92	24.20	1.343	0.153	22.3

Table 25：SAR of 5G NR n26 for Head and Body.

8.2.16 SAR Result of 5G NR n38

Ant 11 Test Record											
Test position	**BW.**	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test Data (1RB) DSI2											
Left cheek	40	QPSK 1_104	520000/2600	100%	0.164	0.06	16.55	17.50	1.245	0.204	22.3
Left tilted	40	QPSK 1_104	520000/2600	100%	0.074	0.07	16.55	17.50	1.245	0.092	22.3
Right cheek	40	QPSK 1_104	520000/2600	100%	0.548	0.16	16.55	17.50	1.245	**0.682**	22.3
Right tilted	40	QPSK 1_104	520000/2600	100%	0.138	0.00	16.55	17.50	1.245	0.172	22.3
Head Test Data (50%RB) DSI2											
Left cheek	40	QPSK 50_28	520000/2600	100%	0.164	0.05	16.44	17.50	1.276	0.209	22.3
Left tilted	40	QPSK 50_28	520000/2600	100%	0.075	-0.05	16.44	17.50	1.276	0.096	22.3
Right cheek	40	QPSK 50_28	520000/2600	100%	0.523	0.09	16.44	17.50	1.276	0.668	22.3
Right tilted	40	QPSK 50_28	520000/2600	100%	0.143	0.02	16.44	17.50	1.276	0.183	22.3
Body worn Test data (Separate 15mm 1RB) DSI4											
Front side	40	QPSK 1_104	520000/2600	100%	0.297	-0.07	23.51	24.50	1.256	0.373	22.3
Back side	40	QPSK 1_104	520000/2600	100%	0.457	-0.06	23.51	24.50	1.256	**0.574**	22.3
Body worn Test data (Separate 15mm 50%RB) DSI4											
Front side	40	QPSK 50_28	520000/2600	100%	0.291	-0.06	23.40	24.50	1.288	0.375	22.3
Back side	40	QPSK 50_28	520000/2600	100%	0.445	0.04	23.40	24.50	1.288	0.573	22.3
Hotspot Test data (Separate 10mm 1RB) DSI10											
Front side	40	QPSK 1_104	520000/2600	100%	0.150	-0.02	17.56	18.50	1.242	0.186	22.3
Back side	40	QPSK 1_104	520000/2600	100%	0.268	0.05	17.56	18.50	1.242	0.333	22.3
Left side	40	QPSK 1_104	520000/2600	100%	0.480	-0.09	17.56	18.50	1.242	**0.596**	22.3
Top side	40	QPSK 1_104	520000/2600	100%	0.085	-0.02	17.56	18.50	1.242	0.106	22.3
Hotspot Test data (Separate 10mm 50%RB) DSI10											
Front side	40	QPSK 50_28	520000/2600	100%	0.151	-0.16	17.41	18.50	1.285	0.194	22.3
Back side	40	QPSK 50_28	520000/2600	100%	0.263	-0.03	17.41	18.50	1.285	0.338	22.3
Left side	40	QPSK 50_28	520000/2600	100%	0.431	-0.02	17.41	18.50	1.285	0.554	22.3
Top side	40	QPSK 50_28	520000/2600	100%	0.090	-0.02	17.41	18.50	1.285	0.116	22.3
Test position	**BW.**	**Test mode**	**Test Ch./Freq.**	**Duty Cycle**	**SAR (W/kg)10-g**	**Power Drift(dB)**	**Conducted power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled 10-g SAR(W/kg)**	**Liquid Temp.**
Product specific 10g SAR Test data(Separate 0mm 1RB) Sensor On DSI5											
Back side	40	QPSK 1_104	520000/2600	100%	0.999	0.01	19.06	20.00	1.242	1.240	22.3
Left side	40	QPSK 1_104	520000/2600	100%	1.230	0.00	19.06	20.00	1.242	1.527	22.3
Product specific 10g SAR Test data(Separate 0mm 50RB) Sensor On DSI5											
Back side	40	QPSK 50_28	520000/2600	100%	0.968	0.02	18.92	20.00	1.282	1.241	22.3
Left side	40	QPSK 50_28	520000/2600	100%	1.210	-0.08	18.92	20.00	1.282	**1.552**	22.3
Product specific 10g SAR Test data(1RB) Sensor Off DSI4											
Back side 12mm	40	QPSK 1_104	520000/2600	100%	0.320	0.01	23.51	24.50	1.256	0.402	22.3
Left side 11mm	40	QPSK 1_104	520000/2600	100%	0.458	0.05	23.51	24.50	1.256	0.575	22.3
Product specific 10g SAR Test data(1RB) Sensor Off DSI4											
Back side 12mm	40	QPSK 50_28	520000/2600	100%	0.320	-0.02	23.40	24.50	1.288	0.412	22.3
Left side 11mm	40	QPSK 50_28	520000/2600	100%	0.438	-0.05	23.40	24.50	1.288	0.564	22.3
Ant 14 Test Record											
Test position	**BW.**	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Body worn Test data (Separate 15mm 1RB) DSI4											
Front side	40	QPSK 1_1	519000/2595	100%	0.134	-0.07	21.42	22.70	1.343	0.180	22.3
Back side	40	QPSK 1_1	519000/2595	100%	0.238	-0.06	21.42	22.70	1.343	0.320	22.3
Body worn Test data (Separate 15mm 50%RB) DSI4											
Front side	40	QPSK 50_28	519000/2595	100%	0.150	0.05	21.23	22.70	1.403	0.210	22.3
Back side	40	QPSK 50_28	519000/2595	100%	0.265	0.08	21.23	22.70	1.403	0.372	22.3
Hotspot Test data (Separate 10mm 1RB) DSI10											
Front side	40	QPSK 1_1	519000/2595	100%	0.180	-0.06	19.93	21.20	1.340	0.241	22.3
Back side	40	QPSK 1_1	519000/2595	100%	0.386	-0.06	19.93	21.20	1.340	0.517	22.3
Left side	40	QPSK 1_1	519000/2595	100%	0.048	-0.19	19.93	21.20	1.340	0.064	22.3
Top side	40	QPSK 1_1	519000/2595	100%	0.367	-0.14	19.93	21.20	1.340	0.492	22.3

Hotspot Test data (Separate 10mm 50%RB) DSI10											
Front side	40	QPSK 50_28	519000/2595	100%	0.202	0.10	19.76	21.20	1.393	0.281	22.3
Back side	40	QPSK 50_28	519000/2595	100%	0.401	0.08	19.76	21.20	1.393	0.559	22.3
Left side	40	QPSK 50_28	519000/2595	100%	0.062	-0.02	19.76	21.20	1.393	0.086	22.3
Top side	40	QPSK 50_28	519000/2595	100%	0.379	-0.11	19.76	21.20	1.393	0.528	22.3
Ant 31 Test Record											
Test position	**BW.**	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test Data (1RB) DSI2											
Left cheek	40	QPSK 1_104	520000/2600	100%	0.048	0.18	22.83	24.60	1.503	0.072	22.3
Left tilted	40	QPSK 1_104	520000/2600	100%	0.047	0.08	22.83	24.60	1.503	0.071	22.3
Right cheek	40	QPSK 1_104	520000/2600	100%	0.111	0.03	22.83	24.60	1.503	0.167	22.3
Right tilted	40	QPSK 1_104	520000/2600	100%	0.047	0.01	22.83	24.60	1.503	0.071	22.3
Head Test Data (50%RB) DSI2											
Left cheek	40	QPSK 50_28	518000/2590	100%	0.045	0.15	22.66	24.60	1.563	0.070	22.3
Left tilted	40	QPSK 50_28	518000/2590	100%	0.050	0.09	22.66	24.60	1.563	0.078	22.3
Right cheek	40	QPSK 50_28	518000/2590	100%	0.106	-0.11	22.66	24.60	1.563	0.166	22.3
Right tilted	40	QPSK 50_28	518000/2590	100%	0.047	-0.07	22.66	24.60	1.563	0.073	22.3
Body worn Test data (Separate 15mm 1RB) DSI4											
Front side	40	QPSK 1_104	520000/2600	100%	0.090	-0.19	21.35	23.10	1.496	0.135	22.3
Back side	40	QPSK 1_104	520000/2600	100%	0.129	-0.04	21.35	23.10	1.496	0.193	22.3
Body worn Test data (Separate 15mm 50%RB) DSI4											
Front side	40	QPSK 50_28	518000/2590	100%	0.076	-0.03	21.20	23.10	1.549	0.118	22.3
Back side	40	QPSK 50_28	518000/2590	100%	0.130	-0.19	21.20	23.10	1.549	0.201	22.3
Hotspot Test data (Separate 10mm 1RB) DSI10											
Front side	40	QPSK 1_104	519000/2595	100%	0.126	-0.09	19.87	21.60	1.489	0.188	22.3
Back side	40	QPSK 1_104	519000/2595	100%	0.210	-0.10	19.87	21.60	1.489	0.313	22.3
Right side	40	QPSK 1_104	519000/2595	100%	0.107	-0.01	19.87	21.60	1.489	0.159	22.3
Bottom side	40	QPSK 1_104	519000/2595	100%	0.177	-0.03	19.87	21.60	1.489	0.264	22.3
Hotspot Test data (Separate 10mm 50%RB) DSI10											
Front side	40	QPSK 50_28	520000/2600	100%	0.120	-0.08	19.71	21.60	1.545	0.185	22.3
Back side	40	QPSK 50_28	520000/2600	100%	0.199	-0.16	19.71	21.60	1.545	0.308	22.3
Right side	40	QPSK 50_28	520000/2600	100%	0.124	0.03	19.71	21.60	1.545	0.192	22.3
Bottom side	40	QPSK 50_28	520000/2600	100%	0.165	-0.04	19.71	21.60	1.545	0.255	22.3

Table 26：SAR of 5G NR n38 for Head and Body and Product specific 10g SAR.

8.2.17 SAR Result of 5G NR n41

Ant 11 Test Record											
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Head Test Data (1RB) DSI2											
Left cheek	100	QPSK 1_271	518598/2592.99	100%	0.247	-0.13	16.68	17.50	1.208	0.298	22.3
Left tilted	100	QPSK 1_271	518598/2592.99	100%	0.083	-0.11	16.68	17.50	1.208	0.100	22.3
Right cheek	100	QPSK 1_271	518598/2592.99	100%	0.519	0.06	16.68	17.50	1.208	**0.627**	22.3
Right tilted	100	QPSK 1_271	518598/2592.99	100%	0.173	-0.02	16.68	17.50	1.208	0.209	22.3
Right cheek	100	QPSK 1_271	509202/2546.01	100%	0.488	-0.01	16.45	17.50	1.274	0.621	22.3
Right cheek	100	QPSK 1_271	513900/2569.5	100%	0.425	-0.03	16.48	17.50	1.265	0.538	22.3
Right cheek	100	QPSK 1_271	523302/2616.51	100%	0.423	0.02	16.54	17.50	1.247	0.528	22.3
Right cheek	100	QPSK 1_271	528000/2640	100%	0.424	0.05	16.61	17.50	1.227	0.520	22.3
Head Test Data (50%RB) DSI2											
Left cheek	100	QPSK 135_69	509202/2546.01	100%	0.227	0.01	16.57	17.50	1.239	0.281	22.3
Left tilted	100	QPSK 135_69	509202/2546.01	100%	0.055	-0.05	16.57	17.50	1.239	0.068	22.3
Right cheek	100	QPSK 135_69	509202/2546.01	100%	0.470	-0.05	16.57	17.50	1.239	0.582	22.3
Right tilted	100	QPSK 135_69	509202/2546.01	100%	0.130	-0.05	16.57	17.50	1.239	0.161	22.3
Head Test Data (100%RB) DSI2											
Right cheek	100	QPSK 270_0	518598/2592.99	100%	0.359	0.03	15.57	16.50	1.239	0.445	22.3
Body worn Test data (Separate 15mm 1RB) DSI4											
Front side	100	QPSK 1_271	518598/2592.99	100%	0.309	-0.14	24.83	25.50	1.167	0.361	22.3
Back side	100	QPSK 1_271	518598/2592.99	100%	0.594	0.10	24.83	25.50	1.167	0.693	22.3
Back side	100	QPSK 1_271	509202/2546.01	100%	0.552	0.03	24.70	25.50	1.202	0.664	22.3
Back side	100	QPSK 1_271	513900/2569.5	100%	0.542	0.05	24.71	25.50	1.199	0.650	22.3
Back side	100	QPSK 1_271	518598/2592.99	100%	0.568	0.04	24.70	25.50	1.202	0.683	22.3
Back side	100	QPSK 1_271	523302/2616.51	100%	0.535	0.05	24.82	25.50	1.169	0.626	22.3
Body worn Test data (Separate 15mm 50%RB) DSI4											
Front side	100	QPSK 135_69	528000/2640	100%	0.357	-0.05	24.76	25.50	1.186	0.423	22.3
Back side	100	QPSK 135_69	528000/2640	100%	0.603	-0.17	24.76	25.50	1.186	**0.715**	22.3
Back side	100	QPSK 135_69	509202/2546.01	100%	0.555	0.05	24.72	25.50	1.197	0.664	22.3
Back side	100	QPSK 135_69	513900/2569.5	100%	0.545	0.05	24.57	25.50	1.239	0.675	22.3
Back side	100	QPSK 135_69	518598/2592.99	100%	0.562	-0.04	24.59	25.50	1.233	0.693	22.3
Back side	100	QPSK 135_69	523302/2616.51	100%	0.548	0.04	24.62	25.50	1.225	0.671	22.3
Body worn Test data (Separate 15mm 100%RB) DSI4											
Back side	100	QPSK 270_0	509202/2546.01	100%	0.451	0.07	23.75	24.50	1.189	0.536	22.3
Hotspot Test data (Separate 10mm 1RB) DSI10											
Front side	100	QPSK 1_1	518598/2592.99	100%	0.156	-0.02	17.76	18.50	1.186	0.185	22.3
Back side	100	QPSK 1_1	518598/2592.99	100%	0.339	-0.16	17.76	18.50	1.186	0.402	22.3
Left side	100	QPSK 1_1	518598/2592.99	100%	0.444	-0.05	17.76	18.50	1.186	0.526	22.3
Top side	100	QPSK 1_1	518598/2592.99	100%	0.075	0.18	17.76	18.50	1.186	0.089	22.3
Hotspot Test data (Separate 10mm 50%RB) DSI10											
Front side	100	QPSK 135_69	509202/2546.01	100%	0.161	-0.13	17.65	18.50	1.216	0.196	22.3
Back side	100	QPSK 135_69	509202/2546.01	100%	0.332	-0.05	17.65	18.50	1.216	0.404	22.3
Left side	100	QPSK 135_69	509202/2546.01	100%	0.405	-0.18	17.65	18.50	1.216	0.493	22.3
Top side	100	QPSK 135_69	509202/2546.01	100%	0.083	-0.02	17.65	18.50	1.216	0.101	22.3
Test position	BW.	Test mode	Test Ch./Freq.	Duty Cycle	SAR (W/kg)10-g	Power Drift(dB)	Conducted power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled 10-g SAR(W/kg)	Liquid Temp.
Product specific 10g SAR Test data(Separate 0mm 1RB) Sensor On DSI5											
Back side	100	QPSK 1_271	518598/2592.99	100%	1.040	0.02	19.37	20.00	1.156	1.202	22.3
Left side	100	QPSK 1_271	518598/2592.99	100%	1.290	-0.04	19.37	20.00	1.156	1.491	22.3
Product specific 10g SAR Test data(Separate 0mm 50RB) Sensor On DSI5											
Back side	100	QPSK 135_69	528000/2640	100%	1.030	0.01	19.27	20.00	1.183	1.219	22.3
Left side	100	QPSK 135_69	528000/2640	100%	1.290	0.02	19.27	20.00	1.183	**1.526**	22.3
Left side	100	QPSK 135_69	509202/2546.01	100%	1.150	0.03	19.18	20.00	1.208	1.389	22.3
Left side	100	QPSK 135_69	513900/2569.5	100%	1.170	0.05	19.12	20.00	1.225	1.433	22.3
Left side	100	QPSK 135_69	518598/2592.99	100%	1.160	0.09	19.05	20.00	1.245	1.444	22.3
Left side	100	QPSK 135_69	523302/2616.51	100%	1.150	0.05	19.14	20.00	1.219	1.402	22.3
Product specific 10g SAR Test data(Separate 0mm 100RB) Sensor On DSI5											

Left side	100	QPSK 270_0	528000/2640	100%	0.888	0.04	18.24	19.00	1.191	1.058	22.3
Product specific 10g SAR Test data(1RB) Sensor Off DSI4											
Back side 12mm	100	QPSK 1_271	518598/2592.99	100%	0.538	0.02	24.83	25.50	1.167	0.628	22.3
Left side 11mm	100	QPSK 1_271	518598/2592.99	100%	0.737	0.02	24.83	25.50	1.167	0.860	22.3
Product specific 10g SAR Test data(50RB) Sensor Off DSI4											
Back side 12mm	100	QPSK 135_69	528000/2640	100%	0.502	0.01	24.76	25.50	1.186	0.595	22.3
Left side 11mm	100	QPSK 135_69	528000/2640	100%	0.719	0.01	24.76	25.50	1.186	0.853	22.3
Ant 14 Test Record											
Test position	**BW.**	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Body worn Test data (Separate 15mm 1RB) DSI4											
Front side	100	QPSK 1_271	528000/2640	100%	0.123	-0.01	21.91	23.20	1.346	0.166	22.0
Back side	100	QPSK 1_271	528000/2640	100%	0.211	-0.07	21.91	23.20	1.346	0.284	22.0
Body worn Test data (Separate 15mm 50%RB) DSI4											
Front side	100	QPSK 135_69	528000/2640	100%	0.159	-0.01	21.81	23.20	1.377	0.219	22.0
Back side	100	QPSK 135_69	528000/2640	100%	0.280	-0.04	21.81	23.20	1.377	0.386	22.0
Hotspot Test data (Separate 10mm 1RB) DSI10											
Front side	100	QPSK 1_271	528000/2640	100%	0.140	-0.05	19.90	21.20	1.349	0.189	22.0
Back side	100	QPSK 1_271	528000/2640	100%	0.297	-0.02	19.90	21.20	1.349	0.401	22.0
Left side	100	QPSK 1_271	528000/2640	100%	0.060	0.03	19.90	21.20	1.349	0.081	22.0
Top side	100	QPSK 1_271	528000/2640	100%	0.300	-0.13	19.90	21.20	1.349	0.405	22.0
Hotspot Test data (Separate 10mm 50%RB) DSI10											
Front side	100	QPSK 135_69	523302/2616.51	100%	0.212	-0.07	19.81	21.20	1.377	0.292	22.0
Back side	100	QPSK 135_69	523302/2616.51	100%	0.386	0.07	19.81	21.20	1.377	0.532	22.0
Left side	100	QPSK 135_69	523302/2616.51	100%	0.056	-0.05	19.81	21.20	1.377	0.077	22.0
Top side	100	QPSK 135_69	523302/2616.51	100%	0.411	-0.12	19.81	21.20	1.377	**0.566**	22.0
Ant 31 Test Record											
Test position	**BW.**	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test Data (1RB) DSI2											
Left cheek	100	QPSK 1_271	528000/2640	100%	0.059	0.01	24.87	26.10	1.327	0.078	22.1
Left tilted	100	QPSK 1_271	528000/2640	100%	0.060	-0.04	24.87	26.10	1.327	0.080	22.1
Right cheek	100	QPSK 1_271	528000/2640	100%	0.170	0.05	24.87	26.10	1.327	0.226	22.1
Right tilted	100	QPSK 1_271	528000/2640	100%	0.069	-0.03	24.87	26.10	1.327	0.092	22.1
Head Test Data (50%RB) DSI2											
Left cheek	100	QPSK 135_69	528000/2640	100%	0.056	0.04	24.89	26.10	1.321	0.074	22.3
Left tilted	100	QPSK 135_69	528000/2640	100%	0.047	-0.04	24.89	26.10	1.321	0.062	22.3
Right cheek	100	QPSK 135_69	528000/2640	100%	0.128	0.05	24.89	26.10	1.321	0.169	22.3
Right tilted	100	QPSK 135_69	528000/2640	100%	0.052	-0.17	24.89	26.10	1.321	0.069	22.3
Body worn Test data (Separate 15mm 1RB) DSI4											
Front side	100	QPSK 1_271	528000/2640	100%	0.092	-0.16	21.47	22.60	1.297	0.119	22.0
Back side	100	QPSK 1_271	528000/2640	100%	0.138	-0.18	21.47	22.60	1.297	0.179	22.0
Body worn Test data (Separate 15mm 50%RB) DSI4											
Front side	100	QPSK 135_69	528000/2640	100%	0.085	0.01	21.39	22.60	1.321	0.112	22.0
Back side	100	QPSK 135_69	528000/2640	100%	0.124	-0.07	21.39	22.60	1.321	0.164	22.0
Hotspot Test data (Separate 10mm 1RB) DSI10											
Front side	100	QPSK 1_271	528000/2640	100%	0.123	0.15	20.01	21.10	1.285	0.158	22.0
Back side	100	QPSK 1_271	528000/2640	100%	0.228	0.01	20.01	21.10	1.285	0.293	22.0
Right side	100	QPSK 1_271	528000/2640	100%	0.105	-0.08	20.01	21.10	1.285	0.135	22.0
Bottom side	100	QPSK 1_271	528000/2640	100%	0.203	-0.13	20.01	21.10	1.285	0.261	22.0
Hotspot Test data (Separate 10mm 50%RB) DSI10											
Front side	100	QPSK 135_69	528000/2640	100%	0.118	-0.08	19.79	21.10	1.352	0.160	22.0
Back side	100	QPSK 135_69	528000/2640	100%	0.208	0.05	19.79	21.10	1.352	0.281	22.0
Right side	100	QPSK 135_69	528000/2640	100%	0.100	-0.08	19.79	21.10	1.352	0.135	22.0
Bottom side	100	QPSK 135_69	528000/2640	100%	0.179	-0.08	19.79	21.10	1.352	0.242	22.0

Table 27：SAR of 5G NR n41 for Head and Body and Product specific 10g SAR.

8.2.18 SAR Result of 5G NR n66

Ant 11 Test Record											
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Head Test Data (1RB) DSI2											
Left cheek	40	QPSK 1_1	352000/1760	100%	0.170	0.04	23.03	24.20	1.309	0.223	22.1
Left tilted	40	QPSK 1_1	352000/1760	100%	0.073	0.06	23.03	24.20	1.309	0.096	22.1
Right cheek	40	QPSK 1_1	352000/1760	100%	0.515	0.13	23.03	24.20	1.309	0.674	22.1
Right tilted	40	QPSK 1_1	352000/1760	100%	0.090	0.07	23.03	24.20	1.309	0.118	22.1
Head Test Data (50%RB) DSI2											
Left cheek	40	QPSK 108_54	352000/1760	100%	0.161	0.02	23.06	24.20	1.300	0.209	22.1
Left tilted	40	QPSK 108_54	352000/1760	100%	0.043	0.13	23.06	24.20	1.300	0.056	22.1
Right cheek	40	QPSK 108_54	352000/1760	100%	0.548	0.07	23.06	24.20	1.300	**0.712**	22.1
Right tilted	40	QPSK 108_54	352000/1760	100%	0.116	0.05	23.06	24.20	1.300	0.151	22.1
Body worn Test data (Separate 15mm 1RB) DSI4											
Front side	40	QPSK 1_1	352000/1760	100%	0.055	0.08	23.03	24.20	1.309	0.072	22.1
Back side	40	QPSK 1_1	352000/1760	100%	0.115	0.09	23.03	24.20	1.309	0.151	22.1
Body worn Test data (Separate 15mm 50%RB) DSI4											
Front side	40	QPSK 108_54	352000/1760	100%	0.055	-0.03	23.06	24.20	1.300	0.071	22.1
Back side	40	QPSK 108_54	352000/1760	100%	0.160	0.01	23.06	24.20	1.300	0.208	22.1
Hotspot Test data (Separate 10mm 1RB) DSI10											
Front side	40	QPSK 1_1	352000/1760	100%	0.088	0.10	20.56	21.70	1.300	0.114	22.3
Back side	40	QPSK 1_1	352000/1760	100%	0.168	0.13	20.56	21.70	1.300	0.218	22.3
Left side	40	QPSK 1_1	352000/1760	100%	0.265	0.15	20.56	21.70	1.300	0.345	22.3
Top side	40	QPSK 1_1	352000/1760	100%	0.190	-0.04	20.56	21.70	1.300	0.247	22.3
Hotspot Test data (Separate 10mm 50%RB) DSI10											
Front side	40	QPSK 108_54	352000/1760	100%	0.066	0.08	20.55	21.70	1.303	0.086	22.1
Back side	40	QPSK 108_54	352000/1760	100%	0.159	0.02	20.55	21.70	1.303	0.207	22.1
Left side	40	QPSK 108_54	352000/1760	100%	0.287	0.01	20.55	21.70	1.303	0.374	22.1
Top side	40	QPSK 108_54	352000/1760	100%	0.007	0.07	20.55	21.70	1.303	0.009	22.1
Ant 14 Test Record											
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Body worn Test data (Separate 15mm 1RB) DSI4											
Front side	40	QPSK 1_214	349000/1745	100%	0.121	-0.06	21.38	22.70	1.355	0.164	22.3
Back side	40	QPSK 1_214	349000/1745	100%	0.249	-0.02	21.38	22.70	1.355	**0.337**	22.3
Body worn Test data (Separate 15mm 50%RB) DSI4											
Front side	40	QPSK 108_54	352000/1760	100%	0.112	0.01	21.26	22.70	1.393	0.156	22.3
Back side	40	QPSK 108_54	352000/1760	100%	0.228	0.03	21.26	22.70	1.393	0.318	22.3
Hotspot Test data (Separate 10mm 1RB) DSI10											
Front side	40	QPSK 1_214	349000/1745	100%	0.184	0.17	19.82	21.20	1.374	0.253	22.6
Back side	40	QPSK 1_214	349000/1745	100%	0.371	-0.10	19.82	21.20	1.374	0.510	22.6
Left side	40	QPSK 1_214	349000/1745	100%	0.107	0.03	19.82	21.20	1.374	0.147	22.6
Top side	40	QPSK 1_214	349000/1745	100%	0.475	0.09	19.82	21.20	1.374	**0.653**	22.6
Hotspot Test data (Separate 10mm 50%RB) DSI10											
Front side	40	QPSK 108_54	352000/1760	100%	0.175	0.01	19.80	21.20	1.380	0.242	22.6
Back side	40	QPSK 108_54	352000/1760	100%	0.360	0.09	19.80	21.20	1.380	0.497	22.6
Left side	40	QPSK 108_54	352000/1760	100%	0.105	0.08	19.80	21.20	1.380	0.145	22.6
Top side	40	QPSK 108_54	352000/1760	100%	0.430	0.03	19.80	21.20	1.380	0.594	22.6

Ant 31 Test Record											
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Head Test Data (1RB) DSI2											
Left cheek	40	QPSK 1_1	346000/1730	100%	0.039	-0.06	23.50	24.20	1.175	0.046	22.5
Left tilted	40	QPSK 1_1	346000/1730	100%	0.046	0.09	23.50	24.20	1.175	0.054	22.5
Right cheek	40	QPSK 1_1	346000/1730	100%	0.043	0.07	23.50	24.20	1.175	0.051	22.5
Right tilted	40	QPSK 1_1	346000/1730	100%	0.032	0.08	23.50	24.20	1.175	0.038	22.5
Head Test Data (50%RB) DSI2											
Left cheek	40	QPSK 108_54	349000/1745	100%	0.052	0.02	23.43	24.20	1.194	0.062	22.5
Left tilted	40	QPSK 108_54	349000/1745	100%	0.039	0.07	23.43	24.20	1.194	0.047	22.5
Right cheek	40	QPSK 108_54	349000/1745	100%	0.053	0.03	23.43	24.20	1.194	0.063	22.5
Right tilted	40	QPSK 108_54	349000/1745	100%	0.029	0.02	23.43	24.20	1.194	0.035	22.5
Body worn Test data (Separate 15mm 1RB) DSI4											
Front side	40	QPSK 1_1	349000/1745	100%	0.123	0.01	21.53	22.20	1.167	0.144	22.6
Back side	40	QPSK 1_1	349000/1745	100%	0.150	0.08	21.53	22.20	1.167	0.175	22.6
Body worn Test data (Separate 15mm 50%RB) DSI4											
Front side	40	QPSK 108_54	349000/1745	100%	0.137	0.05	21.48	22.20	1.180	0.162	22.6
Back side	40	QPSK 108_54	349000/1745	100%	0.171	0.03	21.48	22.20	1.180	0.202	22.6
Hotspot Test data (Separate 10mm 1RB) DSI10											
Front side	40	QPSK 1_1	349000/1745	100%	0.184	0.07	19.98	20.70	1.180	0.217	22.6
Back side	40	QPSK 1_1	349000/1745	100%	0.223	0.01	19.98	20.70	1.180	0.263	22.6
Right side	40	QPSK 1_1	349000/1745	100%	0.043	0.05	19.98	20.70	1.180	0.050	22.6
Bottom side	40	QPSK 1_1	349000/1745	100%	0.357	0.03	19.98	20.70	1.180	0.421	22.6
Hotspot Test data (Separate 10mm 50%RB) DSI10											
Front side	40	QPSK 108_54	349000/1745	100%	0.205	0.09	19.89	20.70	1.205	0.247	22.6
Back side	40	QPSK 108_54	349000/1745	100%	0.225	0.10	19.89	20.70	1.205	0.271	22.6
Right side	40	QPSK 108_54	349000/1745	100%	0.043	0.04	19.89	20.70	1.205	0.052	22.6
Bottom side	40	QPSK 108_54	349000/1745	100%	0.375	0.16	19.89	20.70	1.205	0.452	22.6

Table 28：SAR of 5G NR n66 for Head and Body.

8.2.19 SAR Result of 5G NR n77

N77(3450-3550) Ant12 Test Record											
Test position	BW.	Modulation	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Head Test Data (1RB) DSI2											
Left cheek	100	QPSK 1_1	633334/3500	100%	0.183	-0.08	18.55	19.50	1.245	0.228	21.9
Left tilted	100	QPSK 1_1	633334/3500	100%	0.231	-0.03	18.55	19.50	1.245	0.287	21.9
Right cheek	100	QPSK 1_1	633334/3500	100%	0.367	0.12	18.55	19.50	1.245	0.457	21.9
Right tilted	100	QPSK 1_1	633334/3500	100%	0.497	0.12	18.55	19.50	1.245	0.619	21.9
Head Test Data (50%RB) DSI2											
Left cheek	100	QPSK 135_69	633334/3500	100%	0.156	-0.02	18.46	19.50	1.271	0.198	21.9
Left tilted	100	QPSK 135_69	633334/3500	100%	0.224	-0.07	18.46	19.50	1.271	0.285	21.9
Right cheek	100	QPSK 135_69	633334/3500	100%	0.381	-0.01	18.46	19.50	1.271	0.484	21.9
Right tilted	100	QPSK 135_69	633334/3500	100%	0.452	-0.03	18.46	19.50	1.271	0.574	21.9
Body worn Test data (Separate 15mm 1RB) DSI4											
Front side	100	QPSK 1_1	633334/3500	100%	0.114	0.02	23.45	24.50	1.274	0.145	21.9
Back side	100	QPSK 1_1	633334/3500	100%	0.398	0.01	23.45	24.50	1.274	0.507	21.9
Body worn Test data (Separate 15mm 50%RB) DSI4											
Front side	100	QPSK 135_69	633334/3500	100%	0.108	0.04	23.36	24.50	1.300	0.140	21.9
Back side	100	QPSK 135_69	633334/3500	100%	0.375	0.03	23.36	24.50	1.300	0.488	21.9
Hotspot Test data (Separate 10mm 1RB) DSI10											
Front side	100	QPSK 1_1	633334/3500	100%	0.064	0.01	18.03	19.00	1.250	0.080	21.9
Back side	100	QPSK 1_1	633334/3500	100%	0.223	-0.05	18.03	19.00	1.250	0.279	21.9
Left side	100	QPSK 1_1	633334/3500	100%	0.181	-0.08	18.03	19.00	1.250	0.226	21.9
Top side	100	QPSK 1_1	633334/3500	100%	0.219	-0.02	18.03	19.00	1.250	0.274	21.9
Hotspot Test data (Separate 10mm 50%RB) DSI10											
Front side	100	QPSK 135_69	633334/3500	100%	0.062	-0.07	17.99	19.00	1.262	0.078	21.9
Back side	100	QPSK 135_69	633334/3500	100%	0.215	-0.08	17.99	19.00	1.262	0.271	21.9
Left side	100	QPSK 135_69	633334/3500	100%	0.178	-0.02	17.99	19.00	1.262	0.225	21.9
Top side	100	QPSK 135_69	633334/3500	100%	0.199	0.09	17.99	19.00	1.262	0.251	21.9
N77(3450-3550) Ant23 Test Record											
Test position	BW.	Modulation	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Head Test Data (1RB) DSI2											
Left cheek	100	QPSK 1_271	633334/3500	100%	0.535	0.13	16.18	16.80	1.153	0.617	22.4
Left tilted	100	QPSK 1_271	633334/3500	100%	0.250	-0.02	16.18	16.80	1.153	0.288	22.4
Right cheek	100	QPSK 1_271	633334/3500	100%	0.121	0.08	16.18	16.80	1.153	0.140	22.4
Right tilted	100	QPSK 1_271	633334/3500	100%	0.107	0.08	16.18	16.80	1.153	0.123	22.4
Head Test Data (50%RB) DSI2											
Left cheek	100	QPSK 135_69	633334/3500	100%	0.474	0.05	16.14	16.80	1.164	0.552	22.4
Left tilted	100	QPSK 135_69	633334/3500	100%	0.232	-0.08	16.14	16.80	1.164	0.270	22.4
Right cheek	100	QPSK 135_69	633334/3500	100%	0.109	0.06	16.14	16.80	1.164	0.127	22.4
Right tilted	100	QPSK 135_69	633334/3500	100%	0.098	0.01	16.14	16.80	1.164	0.114	22.4
Body worn Test data (Separate 15mm 1RB) DSI4											
Front side	100	QPSK 1_271	633334/3500	100%	0.109	0.11	19.16	19.80	1.159	0.126	22.4
Back side	100	QPSK 1_271	633334/3500	100%	0.269	0.10	19.16	19.80	1.159	0.312	22.4
Body worn Test data (Separate 15mm 50%RB) DSI4											
Front side	100	QPSK 135_69	633334/3500	100%	0.097	-0.01	19.19	19.80	1.151	0.112	22.4
Back side	100	QPSK 135_69	633334/3500	100%	0.241	0.07	19.19	19.80	1.151	0.277	22.4

Hotspot Test data (Separate 10mm 1RB) DSI10											
Front side	100	QPSK 1_271	633334/3500	100%	0.128	-0.01	17.22	17.80	1.143	0.146	22.4
Back side	100	QPSK 1_271	633334/3500	100%	0.299	-0.11	17.22	17.80	1.143	0.342	22.4
Right side	100	QPSK 1_271	633334/3500	100%	0.422	-0.13	17.22	17.80	1.143	0.482	22.4
Top side	100	QPSK 1_271	633334/3500	100%	0.115	0.03	17.22	17.80	1.143	0.131	22.4
Hotspot Test data (Separate 10mm 50%RB) DSI10											
Front side	100	QPSK 135_69	633334/3500	100%	0.116	0.11	17.08	17.80	1.180	0.137	22.4
Back side	100	QPSK 135_69	633334/3500	100%	0.266	0.04	17.08	17.80	1.180	0.314	22.4
Right side	100	QPSK 135_69	633334/3500	100%	0.365	-0.01	17.08	17.80	1.180	0.431	22.4
Top side	100	QPSK 135_69	633334/3500	100%	0.106	-0.02	17.08	17.80	1.180	0.125	22.4
N77(3450-3550) Ant13 Test Record											
Test position	**BW.**	**Modulation**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test Data (1RB) DSI2											
Left cheek	100	QPSK 1_271	633334/3500	8.5%	0.047	0.08	14.87	16.50	0.247	0.012	22.2
Left tilted	100	QPSK 1_271	633334/3500	8.5%	0.054	0.09	14.87	16.50	0.247	0.013	22.2
Right cheek	100	QPSK 1_271	633334/3500	8.5%	0.064	-0.03	14.87	16.50	0.247	0.016	22.2
Right tilted	100	QPSK 1_271	633334/3500	8.5%	0.083	-0.04	14.87	16.50	0.247	0.021	22.2
Head Test Data(50%RB) DSI2											
Left cheek	100	QPSK 135_69	633334/3500	8.5%	0.043	0.02	14.63	16.50	0.261	0.011	22.2
Left tilted	100	QPSK 135_69	633334/3500	8.5%	0.059	0.08	14.63	16.50	0.261	0.015	22.2
Right cheek	100	QPSK 135_69	633334/3500	8.5%	0.076	0.05	14.63	16.50	0.261	0.020	22.2
Right tilted	100	QPSK 135_69	633334/3500	8.5%	0.089	0.04	14.63	16.50	0.261	0.023	22.2
Body worn Test data (Separate 15mm 1RB) DSI4											
Front side	100	QPSK 1_271	633334/3500	8.5%	0.061	0.04	23.88	25.50	0.247	0.015	22.2
Back side	100	QPSK 1_271	633334/3500	8.5%	0.114	0.05	23.88	25.50	0.247	0.028	22.2
Body worn Test data (Separate 15mm 50%RB) DSI4											
Front side	100	QPSK 135_69	633334/3500	8.5%	0.064	0.08	23.70	25.50	0.257	0.016	22.2
Back side	100	QPSK 135_69	633334/3500	8.5%	0.123	0.05	23.70	25.50	0.257	0.032	22.2
Hotspot Test data (Separate 10mm 1RB) DSI10											
Front side	100	QPSK 1_271	633334/3500	8.5%	0.035	0.04	18.35	20.00	0.249	0.009	22.2
Back side	100	QPSK 1_271	633334/3500	8.5%	0.036	0.04	18.35	20.00	0.249	0.009	22.2
Left side	100	QPSK 1_271	633334/3500	8.5%	0.032	0.08	18.35	20.00	0.249	0.008	22.2
Top side	100	QPSK 1_271	633334/3500	8.5%	0.069	0.02	18.35	20.00	0.249	0.017	22.2
Hotspot Test data (Separate 10mm 50%RB) DSI10											
Front side	100	QPSK 135_69	633334/3500	8.5%	0.030	0.08	18.09	20.00	0.264	0.008	22.2
Back side	100	QPSK 135_69	633334/3500	8.5%	0.066	0.02	18.09	20.00	0.264	0.017	22.2
Left side	100	QPSK 135_69	633334/3500	8.5%	0.028	0.01	18.09	20.00	0.264	0.007	22.2
Top side	100	QPSK 135_69	633334/3500	8.5%	0.074	0.02	18.09	20.00	0.264	0.020	22.2
N77(3450-3550) Ant 21 Test Record SRS											
Test position	**BW.**	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test Data(1RB) DSI2											
Left cheek	100	QPSK 1_1	633334/3500	8.5%	0.236	0.01	19.87	21.50	0.247	0.058	21.8
Left tilted	100	QPSK 1_1	633334/3500	8.5%	0.223	0.01	19.87	21.50	0.247	0.055	21.8
Right cheek	100	QPSK 1_1	633334/3500	8.5%	0.170	0.05	19.87	21.50	0.247	0.042	21.8
Right tilted	100	QPSK 1_1	633334/3500	8.5%	0.155	0.04	19.87	21.50	0.247	0.038	21.8
Head Test Data(50%RB) DSI2											
Left cheek	100	QPSK 135_69	633334/3500	8.5%	0.200	-0.05	19.65	21.50	0.260	0.052	21.8
Left tilted	100	QPSK 135_69	633334/3500	8.5%	0.181	0.02	19.65	21.50	0.260	0.047	21.8

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Right cheek	100	QPSK 135_69	633334/3500	8.5%	0.151	0.08	19.65	21.50	0.260	0.039	21.8
Right tilted	100	QPSK 135_69	633334/3500	8.5%	0.120	0.08	19.65	21.50	0.260	0.031	21.8
Body worn Test data (Separate 15mm 1RB) DSI4											
Front side	100	QPSK 1_1	633334/3500	8.5%	0.042	0.01	22.82	24.50	0.250	0.011	21.8
Back side	100	QPSK 1_1	633334/3500	8.5%	0.037	0.07	22.82	24.50	0.250	0.009	21.8
Body worn Test data (Separate 15mm 50%RB) DSI4											
Front side	100	QPSK 135_69	633334/3500	8.5%	0.049	0.02	22.57	24.50	0.265	0.013	21.8
Back side	100	QPSK 135_69	633334/3500	8.5%	0.046	0.05	22.57	24.50	0.265	0.012	21.8
Hotspot Test data (Separate 10mm 1RB) DSI10											
Front side	100	QPSK 1_1	633334/3500	8.5%			22.82	24.50	0.250	0.000	21.8
Back side	100	QPSK 1_1	633334/3500	8.5%	0.082	0.04	22.82	24.50	0.250	0.021	21.8
Left side	100	QPSK 1_1	633334/3500	8.5%	0.009	-0.04	22.82	24.50	0.250	0.002	21.8
Right side	100	QPSK 1_1	633334/3500	8.5%	0.020	0.08	22.82	24.50	0.250	0.005	21.8
Top side	100	QPSK 1_1	633334/3500	8.5%	0.083	0.01	22.82	24.50	0.250	0.021	21.8
Hotspot Test data (Separate 10mm 50%RB) DSI10											
Front side	100	QPSK 135_69	633334/3500	8.5%	0.085	0.01	22.57	24.50	0.265	0.023	21.8
Back side	100	QPSK 135_69	633334/3500	8.5%	0.083	0.02	22.57	24.50	0.265	0.022	21.8
Left side	100	QPSK 135_69	633334/3500	8.5%	0.013	0.01	22.57	24.50	0.265	0.003	21.8
Right side	100	QPSK 135_69	633334/3500	8.5%	0.018	0.01	22.57	24.50	0.265	0.005	21.8
Top side	100	QPSK 135_69	633334/3500	8.5%	0.077	0.08	22.57	24.50	0.265	0.020	21.8

N77 (3700-3980) Ant12 Test Record

Test position	BW.	Modulation	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Head Test Data (1RB) DSI2											
Left cheek	100	QPSK 1_271	662000/3930	100%	0.150	0.07	18.68	19.50	1.208	0.181	21.8
Left tilted	100	QPSK 1_271	662000/3930	100%	0.180	0.01	18.68	19.50	1.208	0.217	21.8
Right cheek	100	QPSK 1_271	662000/3930	100%	0.493	0.15	18.68	19.50	1.208	0.595	21.8
Right tilted	100	QPSK 1_271	662000/3930	100%	0.278	0.18	18.68	19.50	1.208	0.336	21.8
Right cheek	100	QPSK 1_271	650000/3750	100%	0.412	0.01	18.50	19.50	1.259	0.519	21.9
Right cheek	100	QPSK 1_137	652400/3786	100%	0.395	-0.08	18.39	19.50	1.291	0.510	21.9
Right cheek	100	QPSK 1_137	654800/3822	100%	0.410	-0.08	18.41	19.50	1.285	0.527	21.9
Right cheek	100	QPSK 1_271	657200/3858	100%	0.397	0.09	18.49	19.50	1.262	0.501	21.9
Right cheek	100	QPSK 1_271	659600/3894	100%	0.393	-0.13	18.53	19.50	1.250	0.491	21.9
Head Test Data (50%RB) DSI2											
Left cheek	100	QPSK 135_69	662000/3930	100%	0.164	-0.03	18.52	19.50	1.253	0.206	21.9
Left tilted	100	QPSK 135_69	662000/3930	100%	0.197	0.01	18.52	19.50	1.253	0.247	21.9
Right cheek	100	QPSK 135_69	662000/3930	100%	0.567	-0.06	18.52	19.50	1.253	0.711	21.9
Right tilted	100	QPSK 135_69	662000/3930	100%	0.232	0.01	18.52	19.50	1.253	0.291	21.9
Right cheek	100	QPSK 135_69	650000/3750	100%	0.445	0.02	18.49	19.50	1.262	0.562	21.9
Right cheek	100	QPSK 135_69	652400/3786	100%	0.456	0.08	18.39	19.50	1.291	0.589	21.9
Right cheek	100	QPSK 135_69	654800/3822	100%	0.447	-0.02	18.40	19.50	1.288	0.576	21.9
Right cheek	100	QPSK 135_69	657200/3858	100%	0.446	0.01	18.42	19.50	1.282	0.572	21.9
Right cheek	100	QPSK 135_69	659600/3894	100%	0.451	0.01	18.43	19.50	1.279	0.577	21.9
Head Test Data (100%RB) DSI2											
Right cheek	100	QPSK 270_0	662000/3930	100%	0.353	0.01	17.52	18.50	1.253	0.442	21.9
Right cheek	100	QPSK 270_0	650000/3750	100%	0.315	-0.12	17.40	18.50	1.288	0.406	21.9
Right cheek	100	QPSK 270_0	652400/3786	100%	0.315	-0.08	17.37	18.50	1.297	0.409	21.9
Right cheek	100	QPSK 270_0	654800/3822	100%	0.311	-0.01	17.36	18.50	1.300	0.404	21.9
Right cheek	100	QPSK 270_0	657200/3858	100%	0.304	0.01	17.42	18.50	1.282	0.390	21.9
Right cheek	100	QPSK 270_0	659600/3894	100%	0.316	-0.06	17.38	18.50	1.294	0.409	21.9
Body worn Test data (Separate 15mm 1RB) DSI4											
Front side	100	QPSK 1_271	662000/3930	100%	0.156	-0.08	23.44	24.50	1.276	0.199	21.9
Back side	100	QPSK 1_271	662000/3930	100%	0.591	-0.12	23.44	24.50	1.276	0.754	21.9
Back side	100	QPSK 1_271	650000/3750	100%	0.527	0.04	23.25	24.50	1.334	0.703	21.9
Back side	100	QPSK 1_137	652400/3786	100%	0.505	0.17	23.23	24.50	1.340	0.677	21.9
Back side	100	QPSK 1_271	654800/3822	100%	0.484	-0.05	23.23	24.50	1.340	0.648	21.9
Back side	100	QPSK 1_271	657200/3858	100%	0.469	0.19	23.26	24.50	1.330	0.624	21.9

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Back side	100	QPSK 1_271	659600/3894	100%	0.464	0.18	23.31	24.50	1.315	0.610	21.9
Body worn Test data (Separate 15mm 50%RB) DSI4											
Front side	100	QPSK 135_69	657200/3858	100%	0.172	0.07	23.30	24.50	1.318	0.227	21.9
Back side	100	QPSK 135_69	657200/3858	100%	0.577	0.07	23.30	24.50	1.318	**0.761**	21.9
Back side	100	QPSK 135_69	650000/3750	100%	0.515	-0.14	23.27	24.50	1.327	0.684	21.9
Back side	100	QPSK 135_69	652400/3786	100%	0.494	0.13	23.21	24.50	1.346	0.665	21.9
Back side	100	QPSK 135_69	654800/3822	100%	0.479	0.00	23.18	24.50	1.355	0.649	21.9
Back side	100	QPSK 135_69	657200/3858	100%	0.493	0.04	23.26	24.50	1.330	0.656	21.9
Back side	100	QPSK 135_69	659600/3894	100%	0.473	-0.15	23.30	24.50	1.318	0.624	21.9
Body worn Test data (Separate 15mm 100%RB) DSI4											
Back side	100	QPSK 270_0	657200/3858	100%	0.422	0.08	22.28	23.50	1.324	0.559	21.9
Back side	100	QPSK 270_0	650000/3750	100%	0.358	-0.09	22.25	23.50	1.334	0.477	21.9
Back side	100	QPSK 270_0	652400/3786	100%	0.340	-0.12	22.21	23.50	1.346	0.458	21.9
Back side	100	QPSK 270_0	654800/3822	100%	0.333	-0.01	22.16	23.50	1.361	0.453	21.9
Back side	100	QPSK 270_0	657200/3858	100%	0.323	0.04	22.23	23.50	1.340	0.433	21.9
Back side	100	QPSK 270_0	659600/3894	100%	0.323	-0.02	22.16	23.50	1.361	0.440	21.9
Hotspot Test data (Separate 10mm 1RB) DSI10											
Front side	100	QPSK 1_271	662000/3930	100%	0.083	-0.06	18.08	19.00	1.236	0.103	21.8
Back side	100	QPSK 1_271	662000/3930	100%	0.347	0.06	18.08	19.00	1.236	0.429	21.8
Left side	100	QPSK 1_271	662000/3930	100%	0.284	-0.09	18.08	19.00	1.236	0.351	21.8
Top side	100	QPSK 1_271	662000/3930	100%	0.106	-0.04	18.08	19.00	1.236	0.131	21.8
Back side	100	QPSK 1_271	650000/3750	100%	0.278	0.16	17.85	19.00	1.303	0.362	21.9
Back side	100	QPSK 1_137	652400/3786	100%	0.291	-0.05	17.90	19.00	1.288	0.375	21.9
Back side	100	QPSK 1_271	654800/3822	100%	0.276	0.12	17.82	19.00	1.312	0.362	21.9
Back side	100	QPSK 1_271	657200/3858	100%	0.270	0.19	17.84	19.00	1.306	0.353	21.9
Back side	100	QPSK 1_271	659600/3894	100%	0.261	-0.18	17.86	19.00	1.300	0.339	21.9
Hotspot Test data (Separate 10mm 50%RB) DSI10											
Front side	100	QPSK 135_69	662000/3930	100%	0.086	-0.01	17.94	19.00	1.276	0.110	21.9
Back side	100	QPSK 135_69	662000/3930	100%	0.356	-0.01	17.94	19.00	1.276	0.454	21.9
Left side	100	QPSK 135_69	662000/3930	100%	0.261	-0.05	17.94	19.00	1.276	0.333	21.9
Top side	100	QPSK 135_69	662000/3930	100%	0.113	-0.11	17.94	19.00	1.276	0.144	21.9
Back side	100	QPSK 135_69	650000/3750	100%	0.321	0.14	17.91	19.00	1.285	0.413	21.9
Back side	100	QPSK 135_69	652400/3786	100%	0.333	0.04	17.86	19.00	1.300	0.433	21.9
Back side	100	QPSK 135_69	654800/3822	100%	0.323	-0.17	17.78	19.00	1.324	0.428	21.9
Back side	100	QPSK 135_69	657200/3858	100%	0.313	0.02	17.86	19.00	1.300	0.407	21.9
Back side	100	QPSK 135_69	659600/3894	100%	0.300	-0.01	17.90	19.00	1.288	0.386	21.9
Hotspot Test data (Separate 10mm 100%RB) DSI10											
Back side	100	QPSK 270_0	662000/3930	100%	0.279	0.03	16.96	18.00	1.271	0.354	21.9
Test position	**BW.**	**Test mode**	**Test Ch./Freq.**	**Duty Cycle**	**SAR (W/kg)10-g**	**Power Drift(dB)**	**Conducted power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled 10-g SAR(W/kg)**	**Liquid Temp.**
Product specific 10g SAR Test data(Separate 0mm 1RB) Sensor On DSI5											
Back side	100	QPSK 1_271	662000/3930	100%	1.510	-0.05	19.65	20.50	1.216	1.836	21.9
Left side	100	QPSK 1_271	662000/3930	100%	1.280	-0.03	19.65	20.50	1.216	1.557	21.9
Back side	100	QPSK 1_271	650000/3750	100%	1.330	0.03	19.47	20.50	1.268	1.686	21.9
Back side	100	QPSK 1_271	652400/3786	100%	1.316	-0.16	19.45	20.50	1.274	1.676	21.9
Back side	100	QPSK 1_271	654800/3822	100%	1.342	0.03	19.42	20.50	1.282	1.721	21.9
Back side	100	QPSK 1_271	657200/3858	100%	1.342	0.15	19.41	20.50	1.285	1.725	21.9
Back side	100	QPSK 1_271	659600/3894	100%	1.274	-0.18	19.49	20.50	1.262	1.608	21.9
Left side	100	QPSK 1_271	650000/3750	100%	1.100	0.11	19.47	20.50	1.268	1.394	21.9
Left side	100	QPSK 1_271	652400/3786	100%	1.155	0.02	19.45	20.50	1.274	1.471	21.9
Left side	100	QPSK 1_271	654800/3822	100%	1.108	0.15	19.42	20.50	1.282	1.421	21.9
Left side	100	QPSK 1_271	657200/3858	100%	1.063	0.09	19.41	20.50	1.285	1.366	21.9
Left side	100	QPSK 1_271	659600/3894	100%	1.105	-0.12	19.49	20.50	1.262	1.394	21.9
Product specific 10g SAR Test data(Separate 0mm 50RB) Sensor On DSI5											
Back side	100	QPSK 135_69	662000/3930	100%	1.470	-0.06	19.47	20.50	1.268	**1.863**	21.9
Left side	100	QPSK 135_69	662000/3930	100%	1.360	-0.13	19.47	20.50	1.268	1.724	21.9
Back side	100	QPSK 135_69	650000/3750	100%	1.350	0.01	19.47	20.50	1.268	1.711	21.9
Back side	100	QPSK 135_69	652400/3786	100%	1.296	0.19	19.44	20.50	1.276	1.654	21.9
Back side	100	QPSK 135_69	654800/3822	100%	1.283	-0.08	19.33	20.50	1.309	1.680	21.9
Back side	100	QPSK 135_69	657200/3858	100%	1.270	0.16	19.32	20.50	1.312	1.666	21.9
Back side	100	QPSK 135_69	659600/3894	100%	1.270	0.17	19.39	20.50	1.291	1.640	21.9
Left side	100	QPSK 135_69	650000/3750	100%	1.270	-0.17	19.47	20.50	1.268	1.610	21.9

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Left side	100	QPSK 135_69	652400/3786	100%	1.231	-0.15	19.44	20.50	1.276	1.571	21.9
Left side	100	QPSK 135_69	654800/3822	100%	1.169	0.07	19.33	20.50	1.309	1.530	21.9
Left side	100	QPSK 135_69	657200/3858	100%	1.227	-0.17	19.32	20.50	1.312	1.610	21.9
Left side	100	QPSK 135_69	659600/3894	100%	1.227	-0.05	19.39	20.50	1.291	1.584	21.9
Product specific 10g SAR Test data(Separate 0mm 100RB) Sensor On DSI5											
Back side	100	QPSK 270_0	662000/3930	100%	1.280	0.16	18.50	19.50	1.259	1.611	21.9
Left side	100	QPSK 270_0	662000/3930	100%	1.050	-0.01	18.50	19.50	1.259	1.322	21.9
Back side	100	QPSK 270_0	650000/3750	100%	1.120	-0.13	18.45	19.50	1.274	1.426	21.9
Back side	100	QPSK 270_0	652400/3786	100%	1.086	0.02	18.35	19.50	1.303	1.415	21.9
Back side	100	QPSK 270_0	654800/3822	100%	1.118	-0.15	18.38	19.50	1.294	1.447	21.9
Back side	100	QPSK 270_0	657200/3858	100%	1.140	0.06	18.40	19.50	1.288	1.469	21.9
Back side	100	QPSK 270_0	659600/3894	100%	1.140	0.11	18.36	19.50	1.300	1.482	21.9
Left side	100	QPSK 270_0	650000/3750	100%	0.950	0.11	18.45	19.50	1.274	1.210	21.9
Left side	100	QPSK 270_0	652400/3786	100%	0.931	0.17	18.35	19.50	1.303	1.213	21.9
Left side	100	QPSK 270_0	654800/3822	100%	0.977	0.06	18.38	19.50	1.294	1.264	21.9
Left side	100	QPSK 270_0	657200/3858	100%	0.957	-0.12	18.40	19.50	1.288	1.233	21.9
Left side	100	QPSK 270_0	659600/3894	100%	0.966	0.05	18.36	19.50	1.300	1.256	21.9
Product specific 10g SAR Test data(1RB) Sensor Off DSI4											
Back side 12mm	100	QPSK 1_271	662000/3930	100%	0.414	0.02	23.44	24.50	1.276	0.528	21.9
Left side 11mm	100	QPSK 1_271	662000/3930	100%	0.420	0.01	23.44	24.50	1.276	0.536	21.9
Product specific 10g SAR Test data(50RB) Sensor Off DSI4											
Back side 12mm	100	QPSK 135_69	662000/3930	100%	0.401	0.08	23.30	24.50	1.318	0.529	21.9
Left side 11mm	100	QPSK 135_69	662000/3930	100%	0.461	0.03	23.30	24.50	1.318	0.608	21.9

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N77 (3700-3980) Ant23 Test Record											
Test position	BW.	Modulation	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Head Test Data (1RB) DSI2											
Left cheek	100	QPSK 1_137	652400/3786	100%	0.537	0.09	15.77	16.80	1.268	0.681	21.9
Left tilted	100	QPSK 1_137	652400/3786	100%	0.227	0.02	15.77	16.80	1.268	0.288	21.9
Right cheek	100	QPSK 1_137	652400/3786	100%	0.110	-0.14	15.77	16.80	1.268	0.139	21.9
Right tilted	100	QPSK 1_137	652400/3786	100%	0.091	-0.03	15.77	16.80	1.268	0.115	21.9
Left cheek	100	QPSK 1_1	650000/3750	100%	0.772	0.02	15.76	16.80	1.271	**0.981**	21.9
Left cheek	100	QPSK 1_137	654800/3822	100%	0.513	0.05	15.56	16.80	1.330	0.683	21.9
Left cheek	100	QPSK 1_1	657200/3858	100%	0.552	0.05	15.51	16.80	1.346	0.743	21.9
Left cheek	100	QPSK 1_1	659600/3894	100%	0.518	0.01	15.49	16.80	1.352	0.700	21.9
Left cheek	100	QPSK 1_1	662000/3930	100%	0.470	0.04	15.27	16.80	1.422	0.668	21.9
Left cheek Sample 2	100	QPSK 1_1	650000/3750	100%	0.763	0.03	15.76	16.80	1.271	0.969	21.9
Head Test Data (50%RB) DSI2											
Left cheek	100	QPSK 135_69	652400/3786	100%	0.563	-0.09	15.67	16.80	1.297	0.730	21.9
Left tilted	100	QPSK 135_69	652400/3786	100%	0.268	-0.05	15.67	16.80	1.297	0.348	21.9
Right cheek	100	QPSK 135_69	652400/3786	100%	0.120	-0.12	15.67	16.80	1.297	0.156	21.9
Right tilted	100	QPSK 135_69	652400/3786	100%	0.101	0.04	15.67	16.80	1.297	0.131	21.9
Left cheek	100	QPSK 135_69	650000/3750	100%	0.631	-0.08	15.66	16.80	1.300	0.820	21.9
Left cheek	100	QPSK 135_69	654800/3822	100%	0.484	-0.05	15.60	16.80	1.318	0.638	21.9
Left cheek	100	QPSK 135_69	657200/3858	100%	0.463	0.01	15.46	16.80	1.361	0.630	21.9
Left cheek	100	QPSK 135_69	659600/3894	100%	0.457	0.08	15.20	16.80	1.445	0.661	21.9
Left cheek	100	QPSK 135_69	662000/3930	100%	0.470	0.01	14.97	16.80	1.524	0.716	21.9
Head Test Data (100%RB) DSI2											
Left cheek	100	QPSK 270_0	652400/3786	100%	0.571	0.02	14.60	15.80	1.318	0.753	21.9
Left cheek	100	QPSK 270_0	650000/3750	100%	0.512	0.18	14.54	15.80	1.337	0.684	21.9
Left cheek	100	QPSK 270_0	654800/3822	100%	0.512	-0.01	14.44	15.80	1.368	0.700	21.9
Left cheek	100	QPSK 270_0	657200/3858	100%	0.502	-0.05	14.45	15.80	1.365	0.685	21.9
Left cheek	100	QPSK 270_0	659600/3894	100%	0.523	0.09	14.29	15.80	1.416	0.740	21.9
Left cheek	100	QPSK 270_0	662000/3930	100%	0.452	-0.18	13.90	15.80	1.549	0.700	21.9
Head Test Data (1RB) DSI3*											
Left cheek	100	QPSK 1_137	652400/3786	100%	0.537	0.09	15.77	15.30	0.897	0.482	21.9
Left tilted	100	QPSK 1_137	652400/3786	100%	0.227	0.02	15.77	15.30	0.897	0.204	21.9
Right cheek	100	QPSK 1_137	652400/3786	100%	0.110	-0.14	15.77	15.30	0.897	0.099	21.9
Right tilted	100	QPSK 1_137	652400/3786	100%	0.091	-0.03	15.77	15.30	0.897	0.082	21.9
Left cheek	100	QPSK 1_1	650000/3750	100%	0.772	0.02	15.76	15.30	0.899	0.694	21.9
Left cheek	100	QPSK 1_137	654800/3822	100%	0.513	0.05	15.56	15.30	0.942	0.483	21.9
Left cheek	100	QPSK 1_1	657200/3858	100%	0.552	0.05	15.51	15.30	0.953	0.526	21.9
Left cheek	100	QPSK 1_1	659600/3894	100%	0.518	0.01	15.49	15.30	0.957	0.496	21.9
Left cheek	100	QPSK 1_1	662000/3930	100%	0.470	0.04	15.27	15.30	1.007	0.473	21.9
Head Test Data (50%RB) DSI3*											
Left cheek	100	QPSK 135_69	652400/3786	100%	0.563	-0.09	15.67	15.30	0.918	0.517	21.9
Left tilted	100	QPSK 135_69	652400/3786	100%	0.268	-0.05	15.67	15.30	0.918	0.246	21.9
Right cheek	100	QPSK 135_69	652400/3786	100%	0.120	-0.12	15.67	15.30	0.918	0.110	21.9
Right tilted	100	QPSK 135_69	652400/3786	100%	0.101	0.04	15.67	15.30	0.918	0.093	21.9
Left cheek	100	QPSK 135_69	650000/3750	100%	0.631	-0.08	15.66	15.30	0.920	0.581	21.9
Left cheek	100	QPSK 135_69	654800/3822	100%	0.484	-0.05	15.60	15.30	0.933	0.452	21.9
Left cheek	100	QPSK 135_69	657200/3858	100%	0.463	0.01	15.46	15.30	0.964	0.446	21.9
Left cheek	100	QPSK 135_69	659600/3894	100%	0.457	0.08	15.20	15.30	1.023	0.468	21.9
Left cheek	100	QPSK 135_69	662000/3930	100%	0.470	0.01	14.97	15.30	1.079	0.507	21.9
Head Test Data (100%RB) DSI3*											
Left cheek	100	QPSK 270_0	652400/3786	100%	0.571	0.02	14.60	14.30	0.933	0.533	21.9
Left cheek	100	QPSK 270_0	650000/3750	100%	0.512	0.18	14.54	14.30	0.946	0.484	21.9
Left cheek	100	QPSK 270_0	654800/3822	100%	0.512	-0.01	14.44	14.30	0.968	0.496	21.9
Left cheek	100	QPSK 270_0	657200/3858	100%	0.502	-0.05	14.45	14.30	0.966	0.485	21.9
Left cheek	100	QPSK 270_0	659600/3894	100%	0.523	0.09	14.29	14.30	1.002	0.524	21.9
Left cheek	100	QPSK 270_0	662000/3930	100%	0.452	-0.18	13.90	14.30	1.096	0.496	21.9
Body worn Test data (Separate 15mm 1RB) DSI4											
Front side	100	QPSK 1_137	652400/3786	100%	0.117	-0.17	18.69	19.80	1.291	0.151	21.9
Back side	100	QPSK 1_137	652400/3786	100%	0.315	-0.04	18.69	19.80	1.291	0.407	21.9

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Back side	100	QPSK 1_271	650000/3750	100%	0.250	0.16	18.58	19.80	1.324	0.331	21.9
Back side	100	QPSK 1_137	654800/3822	100%	0.250	-0.07	18.57	19.80	1.327	0.332	21.9
Back side	100	QPSK 1_1	657200/3858	100%	0.242	0.02	18.59	19.80	1.321	0.320	21.9
Back side	100	QPSK 1_1	659600/3894	100%	0.244	-0.16	18.46	19.80	1.361	0.332	21.9
Back side	100	QPSK 1_1	662000/3930	100%	0.256	-0.18	18.21	19.80	1.442	0.369	21.9
Body worn Test data (Separate 15mm 50%RB) DSI4											
Front side	100	QPSK 135_69	652400/3786	100%	0.107	-0.04	18.62	19.80	1.312	0.140	21.9
Back side	100	QPSK 135_69	652400/3786	100%	0.289	0.03	18.62	19.80	1.312	0.379	21.9
Body worn Test data (Separate 15mm 50%RB) DSI4											
Back side	100	QPSK 270_0	652400/3786	100%	0.250	0.03	17.62	18.80	1.312	0.328	21.9
Hotspot Test data (Separate 10mm 1RB) DSI10											
Front side	100	QPSK 1_137	652400/3786	100%	0.126	0.04	16.78	17.80	1.265	0.159	21.9
Back side	100	QPSK 1_137	652400/3786	100%	0.327	-0.04	16.78	17.80	1.265	0.414	21.9
Right side	100	QPSK 1_137	652400/3786	100%	0.503	0.03	16.78	17.80	1.265	0.636	21.9
Top side	100	QPSK 1_137	652400/3786	100%	0.088	0.13	16.78	17.80	1.265	0.111	21.9
Right side	100	QPSK 1_137	650000/3750	100%	0.554	0.18	16.49	17.80	1.352	**0.749**	21.9
Right side	100	QPSK 1_137	654800/3822	100%	0.469	0.02	16.63	17.80	1.309	0.614	21.9
Right side	100	QPSK 1_1	657200/3858	100%	0.488	-0.01	16.42	17.80	1.374	0.671	21.9
Right side	100	QPSK 1_1	659600/3894	100%	0.464	0.01	16.44	17.80	1.368	0.635	21.9
Right side	100	QPSK 1_1	662000/3930	100%	0.465	-0.04	16.27	17.80	1.422	0.661	21.9
Right side Sample 2	100	QPSK 1_137	650000/3750	100%	0.547	0.03	16.49	17.80	1.352	0.740	21.9
Hotspot Test data (Separate 10mm 50%RB) DSI10											
Front side	100	QPSK 135_69	652400/3786	100%	0.124	0.02	16.67	17.80	1.297	0.161	21.9
Back side	100	QPSK 135_69	652400/3786	100%	0.353	0.01	16.67	17.80	1.297	0.458	21.9
Right side	100	QPSK 135_69	652400/3786	100%	0.478	-0.06	16.67	17.80	1.297	0.620	21.9
Top side	100	QPSK 135_69	652400/3786	100%	0.089	-0.14	16.67	17.80	1.297	0.115	21.9
Right side	100	QPSK 135_69	650000/3750	100%	0.504	0.01	16.60	17.80	1.318	0.664	21.9
Right side	100	QPSK 135_69	654800/3822	100%	0.426	-0.02	16.58	17.80	1.324	0.564	21.9
Right side	100	QPSK 135_69	657200/3858	100%	0.416	-0.05	16.40	17.80	1.380	0.574	21.9
Right side	100	QPSK 135_69	659600/3894	100%	0.423	0.01	16.15	17.80	1.462	0.619	21.9
Right side	100	QPSK 135_69	662000/3930	100%	0.438	0.02	16.00	17.80	1.514	0.663	21.9
Hotspot Test data (Separate 10mm 100%RB) DSI10											
Right side	100	QPSK 270_0	650000/3750	100%	0.418	0.01	15.64	16.80	1.306	0.546	21.9
Right side	100	QPSK 270_0	650000/3750	100%	0.321	0.05	15.58	16.80	1.324	0.425	21.9
Right side	100	QPSK 270_0	654800/3822	100%	0.337	0.18	15.36	16.80	1.393	0.469	21.9
Right side	100	QPSK 270_0	657200/3858	100%	0.323	0.00	15.41	16.80	1.377	0.445	21.9
Right side	100	QPSK 270_0	659600/3894	100%	0.329	-0.03	15.19	16.80	1.449	0.477	21.9
Right side	100	QPSK 270_0	662000/3930	100%	0.315	-0.06	15.00	16.80	1.514	0.477	21.9
N77 (3700-3980) Ant 13 Test Record SRS											
Test position	**BW.**	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test Data(1RB) DSI2											
Left cheek	100	QPSK 1_137	657200/3858	8.5%	0.035	0.01	14.87	16.50	0.247	0.009	22.2
Left tilted	100	QPSK 1_137	657200/3858	8.5%	0.086	0.06	14.87	16.50	0.247	0.021	22.2
Right cheek	100	QPSK 1_137	657200/3858	8.5%	0.049	0.05	14.87	16.50	0.247	0.012	22.2
Right tilted	100	QPSK 1_137	657200/3858	8.5%	0.040	0.04	14.87	16.50	0.247	0.010	22.2
Head Test Data(50%RB) DSI2											
Left cheek	100	QPSK 135_69	657200/3858	8.5%	0.030	0.05	14.98	16.50	0.241	0.007	22.2
Left tilted	100	QPSK 135_69	657200/3858	8.5%	0.038	0.02	14.98	16.50	0.241	0.009	22.2
Right cheek	100	QPSK 135_69	657200/3858	8.5%	0.027	0.01	14.98	16.50	0.241	0.007	22.2
Right tilted	100	QPSK 135_69	657200/3858	8.5%	0.055	0.05	14.98	16.50	0.241	0.013	22.2
Body worn Test data (Separate 15mm 1RB) DSI4											
Front side	100	QPSK 1_1	654800/3822	8.5%	0.032	0.02	23.77	25.50	0.253	0.008	22.2
Back side	100	QPSK 1_1	654800/3822	8.5%	0.062	0.08	23.77	25.50	0.253	0.016	22.2
Body worn Test data (Separate 15mm 50%RB) DSI4											
Front side	100	QPSK 135_69	654800/3822	8.5%	0.030	0.08	23.89	25.50	0.246	0.007	22.2
Back side	100	QPSK 135_69	654800/3822	8.5%	0.054	0.01	23.89	25.50	0.246	0.013	22.2
Hotspot Test data (Separate 10mm 1RB) DSI10											
Front side	100	QPSK 1_137	662000/3930	8.5%	0.018	0.02	18.50	20.00	0.240	0.004	22.2
Back side	100	QPSK 1_137	662000/3930	8.5%	0.020	0.01	18.50	20.00	0.240	0.005	22.2
Left side	100	QPSK 1_137	662000/3930	8.5%	0.022	0.04	18.50	20.00	0.240	0.005	22.2
Top side	100	QPSK 1_137	662000/3930	8.5%	0.038	0.02	18.50	20.00	0.240	0.009	22.2

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Hotspot Test data (Separate 10mm 50%RB) DSI10											
Front side	100	QPSK 135_69	650000/3750	8.5%	0.017	-0.08	18.50	20.00	0.240	0.004	22.2
Back side	100	QPSK 135_69	650000/3750	8.5%	0.041	-0.05	18.50	20.00	0.240	0.010	22.2
Left side	100	QPSK 135_69	650000/3750	8.5%	0.029	0.05	18.50	20.00	0.240	0.007	22.2
Top side	100	QPSK 135_69	650000/3750	8.5%	0.040	-0.01	18.50	20.00	0.240	0.010	22.2
N77 (3700-3980) Ant 21 Test Record SRS											
Test position	**BW.**	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test Data(1RB) DSI2											
Left cheek	100	QPSK 1_1	652400/3786	8.5%	0.108	0.01	19.11	20.50	0.234	0.025	22.2
Left tilted	100	QPSK 1_1	652400/3786	8.5%	0.097	0.02	19.11	20.50	0.234	0.023	22.2
Right cheek	100	QPSK 1_1	652400/3786	8.5%	0.061	0.01	19.11	20.50	0.234	0.014	22.2
Right tilted	100	QPSK 1_1	652400/3786	8.5%	0.055	0.02	19.11	20.50	0.234	0.013	22.2
Head Test Data(50%RB) DSI2											
Left cheek	100	QPSK 135_69	654800/3822	8.5%	0.093	0.01	18.98	20.50	0.241	0.022	22.2
Left tilted	100	QPSK 135_69	654800/3822	8.5%	0.109	0.04	18.98	20.50	0.241	0.026	22.2
Right cheek	100	QPSK 135_69	654800/3822	8.5%	0.082	0.01	18.98	20.50	0.241	0.020	22.2
Right tilted	100	QPSK 135_69	654800/3822	8.5%	0.084	0.02	18.98	20.50	0.241	0.020	22.2
Body worn Test data (Separate 15mm 1RB) DSI4											
Front side	100	QPSK 1_1	652400/3786	8.5%	0.028	0.01	22.21	23.50	0.229	0.006	22.2
Back side	100	QPSK 1_1	652400/3786	8.5%	0.020	0.05	22.21	23.50	0.229	0.005	22.2
Body worn Test data (Separate 15mm 50%RB) DSI4											
Front side	100	QPSK 135_69	650000/3750	8.5%	0.046	0.01	22.04	23.50	0.238	0.011	22.2
Back side	100	QPSK 135_69	650000/3750	8.5%	0.018	0.08	22.04	23.50	0.238	0.004	22.2
Hotspot Test data (Separate 10mm 1RB) DSI10											
Front side	100	QPSK 1_1	652400/3786	8.5%	0.044	0.05	22.21	23.50	0.229	0.010	22.2
Back side	100	QPSK 1_1	652400/3786	8.5%	0.037	0.02	22.21	23.50	0.229	0.008	22.2
Left side	100	QPSK 1_1	652400/3786	8.5%	0.006	0.04	22.21	23.50	0.229	0.001	22.2
Right side	100	QPSK 1_1	652400/3786	8.5%	0.011	0.07	22.21	23.50	0.229	0.003	22.2
Top side	100	QPSK 1_1	652400/3786	8.5%	0.048	0.07	22.21	23.50	0.229	0.011	22.2
Hotspot Test data (Separate 10mm 50%RB) DSI10											
Front side	100	QPSK 135_69	650000/3750	8.5%	0.038	0.08	22.04	23.50	0.238	0.009	22.2
Back side	100	QPSK 135_69	650000/3750	8.5%	0.036	0.04	22.04	23.50	0.238	0.009	22.2
Left side	100	QPSK 135_69	650000/3750	8.5%	0.006	0.07	22.04	23.50	0.238	0.001	22.2
Right side	100	QPSK 135_69	650000/3750	8.5%	0.009	-0.02	22.04	23.50	0.238	0.002	22.2
Top side	100	QPSK 135_69	650000/3750	8.5%	0.046	0.08	22.04	23.50	0.238	0.011	22.2

Table 29：SAR of 5G NR n77 for Head and Body and Product specific 10g SAR.
Note: For n77 antenna 13/21 support SRS, the max duty cycle is 8.5%, due to limitations of FTM testing tools, the SAR testing duty cycle is set to 50%, therefore, the duty cycle factor coefficient is 0.17.

Note: * The simultaneous transmission is reduced by XdB (the detailed power reduced can be referred to Conducted Power Appendix E), therefore, those SAR of simultaneous transmission mode are scaled based on standalone SAR results.

8.2.20 SAR Result of 5G NR n78

N78 (3450-3550) Ant12 Test Record											
Test position	**BW.**	**Modulation**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test Data (1RB) DSI2											
Left cheek	100	QPSK 1_1	633334/3500	100%	0.178	-0.01	18.29	19.50	1.321	0.235	22.2
Left tilted	100	QPSK 1_1	633334/3500	100%	0.243	-0.03	18.29	19.50	1.321	0.321	22.2
Right cheek	100	QPSK 1_1	633334/3500	100%	0.345	0.03	18.29	19.50	1.321	0.456	22.2
Right tilted	100	QPSK 1_1	633334/3500	100%	0.539	0.01	18.29	19.50	1.321	0.712	22.2
Head Test Data (50%RB) DSI2											
Left cheek	100	QPSK 135_69	633334/3500	100%	0.163	0.10	18.16	19.50	1.361	0.222	22.2
Left tilted	100	QPSK 135_69	633334/3500	100%	0.233	0.07	18.16	19.50	1.361	0.317	22.2
Right cheek	100	QPSK 135_69	633334/3500	100%	0.333	0.04	18.16	19.50	1.361	0.453	22.2
Right tilted	100	QPSK 135_69	633334/3500	100%	0.438	0.04	18.16	19.50	1.361	0.596	22.2
Body worn Test data (Separate 15mm 1RB) DSI4											
Front side	100	QPSK 1_1	633334/3500	100%	0.144	-0.09	24.24	25.50	1.337	0.192	22.2
Back side	100	QPSK 1_1	633334/3500	100%	0.477	-0.05	24.24	25.50	1.337	0.638	22.2
Body worn Test data (Separate 15mm 50%RB) DSI4											
Front side	100	QPSK 135_69	633334/3500	100%	0.145	-0.07	24.10	25.50	1.380	0.200	22.2
Back side	100	QPSK 135_69	633334/3500	100%	0.491	0.09	24.10	25.50	1.380	0.678	22.2
Hotspot Test data (Separate 10mm 1RB) DSI10											
Front side	100	QPSK 1_1	633334/3500	100%	0.061	-0.02	17.72	19.00	1.343	0.082	22.2
Back side	100	QPSK 1_1	633334/3500	100%	0.219	-0.04	17.72	19.00	1.343	0.294	22.2
Left side	100	QPSK 1_1	633334/3500	100%	0.184	0.02	17.72	19.00	1.343	0.247	22.2
Top side	100	QPSK 1_1	633334/3500	100%	0.199	-0.01	17.72	19.00	1.343	0.267	22.2
Hotspot Test data (Separate 10mm 50%RB) DSI10											
Front side	100	QPSK 135_69	633334/3500	100%	0.064	-0.02	17.63	19.00	1.371	0.088	22.2
Back side	100	QPSK 135_69	633334/3500	100%	0.213	-0.05	17.63	19.00	1.371	0.292	22.2
Left side	100	QPSK 135_69	633334/3500	100%	0.202	-0.15	17.63	19.00	1.371	0.277	22.2
Top side	100	QPSK 135_69	633334/3500	100%	0.230	0.09	17.63	19.00	1.371	0.315	22.2
Test position	**BW.**	**Test mode**	**Test Ch./Freq.**	**Duty Cycle**	**SAR (W/kg)10-g**	**Power Drift(dB)**	**Conducted power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled 10-g SAR(W/kg)**	**Liquid Temp.**
Product specific 10g SAR Test data(Separate 0mm 1RB) Sensor On DSI5											
Back side	100	QPSK 1_1	633334/3500	100%	0.875	-0.10	19.21	20.50	1.346	1.178	22.2
Left side	100	QPSK 1_1	633334/3500	100%	1.350	-0.05	19.21	20.50	1.346	1.817	22.2
Top side	100	QPSK 1_1	633334/3500	100%	0.752	0.02	19.21	20.50	1.346	1.012	22.2
Product specific 10g SAR Test data(Separate 0mm 50RB) Sensor On DSI5											
Back side	100	QPSK 135_69	633334/3500	100%	0.912	0.06	19.13	20.50	1.371	1.250	22.2
Left side	100	QPSK 135_69	633334/3500	100%	1.370	-0.07	19.13	20.50	1.371	1.878	22.2
Top side	100	QPSK 135_69	633334/3500	100%	0.706	0.02	19.13	20.50	1.371	0.968	22.2
Product specific 10g SAR Test data(1RB) Sensor Off DSI4											
Back side 12mm	100	QPSK 1_1	633334/3500	100%	0.400	0.02	24.24	25.50	1.337	0.535	22.2
Left side 11mm	100	QPSK 1_1	633334/3500	100%	0.386	0.02	24.24	25.50	1.337	0.516	22.2
Top side 11mm	100	QPSK 1_1	633334/3500	100%	0.455	0.02	24.24	25.50	1.337	0.608	22.2
Product specific 10g SAR Test data(50RB) Sensor Off DSI4											
Back side 12mm	100	QPSK 135_69	633334/3500	100%	0.383	0.03	24.10	25.50	1.380	0.529	22.2
Left side 11mm	100	QPSK 135_69	633334/3500	100%	0.452	0.01	24.10	25.50	1.380	0.624	22.2
Top side 11mm	100	QPSK 135_69	633334/3500	100%	0.429	0.02	24.10	25.50	1.380	0.592	22.2

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N78 (3450-3550) Ant23 Test Record											
Test position	BW.	Modulation	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Head Test Data (1RB) DSI2											
Left cheek	100	QPSK 1_1	633334/3500	100%	0.328	-0.02	15.81	16.50	1.172	0.384	22.2
Left tilted	100	QPSK 1_1	633334/3500	100%	0.226	-0.02	15.81	16.50	1.172	0.265	22.2
Right cheek	100	QPSK 1_1	633334/3500	100%	0.085	-0.01	15.81	16.50	1.172	0.100	22.2
Right tilted	100	QPSK 1_1	633334/3500	100%	0.094	0.01	15.81	16.50	1.172	0.110	22.2
Head Test Data (50%RB) DSI2											
Left cheek	100	QPSK 135_69	633334/3500	100%	0.435	0.08	15.63	16.50	1.222	0.531	22.2
Left tilted	100	QPSK 135_69	633334/3500	100%	0.234	0.02	15.63	16.50	1.222	0.286	22.2
Right cheek	100	QPSK 135_69	633334/3500	100%	0.107	0.01	15.63	16.50	1.222	0.131	22.2
Right tilted	100	QPSK 135_69	633334/3500	100%	0.077	0.05	15.63	16.50	1.222	0.094	22.2
Body worn Test data (Separate 15mm 1RB) DSI4											
Front side	100	QPSK 1_1	633334/3500	100%	0.079	-0.02	18.76	19.50	1.186	0.094	22.2
Back side	100	QPSK 1_1	633334/3500	100%	0.172	-0.11	18.76	19.50	1.186	0.204	22.2
Body worn Test data (Separate 15mm 50%RB) DSI4											
Front side	100	QPSK 135_69	633334/3500	100%	0.087	0.01	18.69	19.50	1.205	0.105	22.2
Back side	100	QPSK 135_69	633334/3500	100%	0.211	-0.02	18.69	19.50	1.205	0.254	22.2
Hotspot Test data (Separate 10mm 1RB) DSI10											
Front side	100	QPSK 1_1	633334/3500	100%	0.094	0.03	16.78	17.50	1.180	0.111	22.2
Back side	100	QPSK 1_1	633334/3500	100%	0.209	-0.07	16.78	17.50	1.180	0.247	22.2
Right side	100	QPSK 1_1	633334/3500	100%	0.316	-0.09	16.78	17.50	1.180	0.373	22.2
Top side	100	QPSK 1_1	633334/3500	100%	0.096	-0.01	16.78	17.50	1.180	0.113	22.2
Hotspot Test data (Separate 10mm 50%RB) DSI10											
Front side	100	QPSK 135_69	633334/3500	100%	0.101	-0.05	16.55	17.50	1.245	0.126	22.2
Back side	100	QPSK 135_69	633334/3500	100%	0.221	-0.03	16.55	17.50	1.245	0.275	22.2
Right side	100	QPSK 135_69	633334/3500	100%	0.305	-0.02	16.55	17.50	1.245	0.380	22.2
Top side	100	QPSK 135_69	633334/3500	100%	0.101	0.12	16.55	17.50	1.245	0.126	22.2
N78 (3450-3550) Ant 13 Test Record SRS											
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Head Test Data(1RB) DSI2											
Left cheek	100	QPSK 1_1	633334/3500	8.5%	0.069	-0.10	14.94	16.50	0.243	0.017	22.4
Left tilted	100	QPSK 1_1	633334/3500	8.5%	0.083	-0.09	14.94	16.50	0.243	0.020	22.4
Right cheek	100	QPSK 1_1	633334/3500	8.5%	0.163	0.02	14.94	16.50	0.243	0.040	22.4
Right tilted	100	QPSK 1_1	633334/3500	8.5%	0.193	0.05	14.94	16.50	0.243	0.047	22.4
Head Test Data(50%RB) DSI2											
Left cheek	100	QPSK 135_69	633334/3500	8.5%	0.058	0.02	14.88	16.50	0.247	0.014	22.4
Left tilted	100	QPSK 135_69	633334/3500	8.5%	0.082	0.08	14.88	16.50	0.247	0.020	22.4
Right cheek	100	QPSK 135_69	633334/3500	8.5%	0.132	0.01	14.88	16.50	0.247	0.033	22.4
Right tilted	100	QPSK 135_69	633334/3500	8.5%	0.178	0.02	14.88	16.50	0.247	0.044	22.4
Body worn Test data (Separate 15mm 1RB) DSI4											
Front side	100	QPSK 1_1	633334/3500	8.5%	0.175	0.05	25.45	27.00	0.243	0.043	22.5
Back side	100	QPSK 1_1	633334/3500	8.5%	0.314	0.02	25.45	27.00	0.243	0.076	22.5
Body worn Test data (Separate 15mm 50%RB) DSI4											
Front side	100	QPSK 135_69	633334/3500	8.5%	0.183	0.04	25.42	27.00	0.245	0.045	22.5
Back side	100	QPSK 135_69	633334/3500	8.5%	0.315	0.02	25.42	27.00	0.245	0.077	22.5
Hotspot Test data (Separate 10mm 1RB) DSI10											
Front side	100	QPSK 1_137	633334/3500	8.5%	0.066	0.05	18.46	20.00	0.242	0.016	22.5

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Back side	100	QPSK 1_137	633334/3500	8.5%	0.119	0.02	18.46	20.00	0.242	0.029	22.5
Left side	100	QPSK 1_137	633334/3500	8.5%	0.051	0.01	18.46	20.00	0.242	0.012	22.5
Top side	100	QPSK 1_137	633334/3500	8.5%	0.140	0.02	18.46	20.00	0.242	0.034	22.4
Hotspot Test data (Separate 10mm 50%RB) DSI10											
Front side	100	QPSK 135_69	633334/3500	8.5%	0.064	0.02	18.33	20.00	0.250	0.016	22.5
Back side	100	QPSK 135_69	633334/3500	8.5%	0.131	0.05	18.33	20.00	0.250	0.033	22.5
Left side	100	QPSK 135_69	633334/3500	8.5%	0.046	0.03	18.33	20.00	0.250	0.011	22.5
Top side	100	QPSK 135_69	633334/3500	8.5%	0.141	0.03	18.33	20.00	0.250	0.035	22.4
N78 (3450-3550) Ant 21 Test Record SRS											
Test position	**BW.**	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test Data(1RB) DSI2											
Left cheek	100	QPSK 1_271	633334/3500	8.5%	0.189	0.01	19.86	21.50	0.248	0.047	21.9
Left tilted	100	QPSK 1_271	633334/3500	8.5%	0.173	0.06	19.86	21.50	0.248	0.043	21.9
Right cheek	100	QPSK 1_271	633334/3500	8.5%	0.153	0.02	19.86	21.50	0.248	0.038	21.9
Right tilted	100	QPSK 1_271	633334/3500	8.5%	0.170	0.05	19.86	21.50	0.248	0.042	21.9
Head Test Data(50%RB) DSI2											
Left cheek	100	QPSK 135_69	633334/3500	8.5%	0.178	-0.05	19.80	21.50	0.251	0.045	21.9
Left tilted	100	QPSK 135_69	633334/3500	8.5%	0.152	0.01	19.80	21.50	0.251	0.038	21.9
Right cheek	100	QPSK 135_69	633334/3500	8.5%	0.140	0.08	19.80	21.50	0.251	0.035	21.9
Right tilted	100	QPSK 135_69	633334/3500	8.5%	0.137	0.02	19.80	21.50	0.251	0.034	21.9
Body worn Test data (Separate 15mm 1RB) DSI4											
Front side	100	QPSK 1_271	633334/3500	8.5%	0.066	0.05	24.90	26.50	0.246	0.016	21.9
Back side	100	QPSK 1_271	633334/3500	8.5%	0.050	0.01	24.90	26.50	0.246	0.012	21.9
Body worn Test data (Separate 15mm 50%RB) DSI4											
Front side	100	QPSK 135_69	633334/3500	8.5%	0.077	0.04	24.71	26.50	0.257	0.020	21.9
Back side	100	QPSK 135_69	633334/3500	8.5%	0.060	-0.02	24.71	26.50	0.257	0.015	21.9
Hotspot Test data (Separate 10mm 1RB) DSI10											
Front side	100	QPSK 1_271	633334/3500	8.5%	0.118	0.01	24.90	26.50	0.246	0.029	21.9
Back side	100	QPSK 1_271	633334/3500	8.5%	0.114	0.02	24.90	26.50	0.246	0.028	21.9
Left side	100	QPSK 1_271	633334/3500	8.5%	0.023	0.05	24.90	26.50	0.246	0.006	21.9
Right side	100	QPSK 1_271	633334/3500	8.5%	0.046	-0.05	24.90	26.50	0.246	0.011	21.9
Top side	100	QPSK 1_271	633334/3500	8.5%	0.133	-0.09	24.90	26.50	0.246	0.033	21.9
Hotspot Test data (Separate 10mm 50%RB) DSI10											
Front side	100	QPSK 135_69	633334/3500	8.5%	0.136	0.02	24.71	26.50	0.257	0.035	21.9
Back side	100	QPSK 135_69	633334/3500	8.5%	0.139	0.08	24.71	26.50	0.257	0.036	21.9
Left side	100	QPSK 135_69	633334/3500	8.5%	0.014	-0.04	24.71	26.50	0.257	0.004	21.9
Right side	100	QPSK 135_69	633334/3500	8.5%	0.030	-0.09	24.71	26.50	0.257	0.008	21.9
Top side	100	QPSK 135_69	633334/3500	8.5%	0.126	-0.03	24.71	26.50	0.257	0.032	21.9

N78 (3700-3800) Ant12 Test Record											
Test position	**BW.**	**Modulation**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test Data (1RB) DSI2											
Left cheek	100	QPSK 1_271	650000/3750	100%	0.182	-0.04	18.36	19.50	1.300	0.237	22.5
Left tilted	100	QPSK 1_271	650000/3750	100%	0.221	-0.04	18.36	19.50	1.300	0.287	22.5
Right cheek	100	QPSK 1_271	650000/3750	100%	0.643	-0.15	18.36	19.50	1.300	**0.836**	22.5
Right tilted	100	QPSK 1_271	650000/3750	100%	0.418	-0.01	18.36	19.50	1.300	0.543	22.5
Head Test Data (50%RB) DSI2											
Left cheek	100	QPSK 135_69	650000/3750	100%	0.187	-0.06	18.31	19.50	1.315	0.246	22.5
Left tilted	100	QPSK 135_69	650000/3750	100%	0.289	-0.06	18.31	19.50	1.315	0.380	22.5
Right cheek	100	QPSK 135_69	650000/3750	100%	0.630	-0.11	18.31	19.50	1.315	0.829	22.5
Right tilted	100	QPSK 135_69	650000/3750	100%	0.391	-0.05	18.31	19.50	1.315	0.514	22.5
Head Test Data (100%RB) DSI2											
Right cheek	100	QPSK 270_0	650000/3750	100%	0.326	0.01	17.13	18.50	1.371	0.447	22.5
Body worn Test data (Separate 15mm 1RB) DSI4											
Front side	100	QPSK 1_271	650000/3750	100%	0.237	-0.01	24.30	25.50	1.318	0.312	22.3
Back side	100	QPSK 1_271	650000/3750	100%	0.708	-0.03	24.30	25.50	1.318	**0.933**	22.3
Back side Sample 2	100	QPSK 1_271	650000/3750	100%	0.589	0.03	24.30	25.50	1.318	0.776	22.3
Body worn Test data (Separate 15mm 50%RB) DSI4											
Front side	100	QPSK 135_69	650000/3750	100%	0.200	0.06	24.40	25.50	1.288	0.258	22.3
Back side	100	QPSK 135_69	650000/3750	100%	0.563	-0.02	24.40	25.50	1.288	0.725	22.3
Body worn Test data (Separate 15mm 100%RB) DSI4											
Back side	100	QPSK 270_0	650000/3750	100%	0.421	0.02	23.26	24.50	1.330	0.560	22.3
Hotspot Test data (Separate 10mm 1RB) DSI10											
Front side	100	QPSK 1_271	650000/3750	100%	0.103	0.04	17.81	19.00	1.315	0.135	22.2
Back side	100	QPSK 1_271	650000/3750	100%	0.319	0.09	17.81	19.00	1.315	0.420	22.2
Left side	100	QPSK 1_271	650000/3750	100%	0.305	-0.09	17.81	19.00	1.315	0.401	22.2
Top side	100	QPSK 1_271	650000/3750	100%	0.199	-0.06	17.81	19.00	1.315	0.262	22.2
Hotspot Test data (Separate 10mm 50%RB) DSI10											
Front side	100	QPSK 135_69	650000/3750	100%	0.098	0.10	17.76	19.00	1.330	0.130	22.2
Back side	100	QPSK 135_69	650000/3750	100%	0.277	-0.16	17.76	19.00	1.330	0.369	22.2
Left side	100	QPSK 135_69	650000/3750	100%	0.278	-0.12	17.76	19.00	1.330	0.370	22.2
Top side	100	QPSK 135_69	650000/3750	100%	0.175	-0.01	17.76	19.00	1.330	0.233	22.2
Test position	**BW.**	**Test mode**	**Test Ch./Freq.**	**Duty Cycle**	**SAR (W/kg)10-g**	**Power Drift(dB)**	**Conducted power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled 10-g SAR(W/kg)**	**Liquid Temp.**
Product specific 10g SAR Test data(Separate 0mm 1RB) Sensor On DSI5											
Back side	100	QPSK 1_271	650000/3750	100%	1.170	-0.01	19.49	20.50	1.262	1.476	22.2
Left side	100	QPSK 1_271	650000/3750	100%	1.580	-0.17	19.49	20.50	1.262	**1.994**	22.2
Product specific 10g SAR Test data(Separate 0mm 50RB) Sensor On DSI5											
Back side	100	QPSK 135_69	650000/3750	100%	1.030	0.02	19.41	20.50	1.285	1.324	22.2
Left side	100	QPSK 135_69	650000/3750	100%	1.520	0.01	19.41	20.50	1.285	1.954	22.2
Product specific 10g SAR Test data(1RB) Sensor Off DSI4											
Back side 12mm	100	QPSK 1_271	650000/3750	100%	0.520	0.01	24.30	25.50	1.318	0.685	22.2
Left side 11mm	100	QPSK 1_271	650000/3750	100%	0.580	-0.04	24.30	25.50	1.318	0.765	22.2
Product specific 10g SAR Test data(50RB) Sensor Off DSI4											
Back side 12mm	100	QPSK 135_69	650000/3750	100%	0.451	0.01	24.40	25.50	1.288	0.581	22.2
Left side 11mm	100	QPSK 135_69	650000/3750	100%	0.540	0.02	24.40	25.50	1.288	0.696	22.2

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N78 (3700-3800) Ant23 Test Record											
Test position	BW.	Modulation	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Head Test Data (1RB) DSI2											
Left cheek	100	QPSK 1_271	650000/3750	100%	0.424	-0.10	15.16	16.50	1.361	0.577	22.4
Left tilted	100	QPSK 1_271	650000/3750	100%	0.226	0.11	15.16	16.50	1.361	0.308	22.4
Right cheek	100	QPSK 1_271	650000/3750	100%	0.107	0.09	15.16	16.50	1.361	0.146	22.4
Right tilted	100	QPSK 1_271	650000/3750	100%	0.090	-0.06	15.16	16.50	1.361	0.123	22.4
Head Test Data (50%RB) DSI2											
Left cheek	100	QPSK 135_69	650000/3750	100%	0.505	0.18	14.84	16.50	1.466	0.740	22.4
Left tilted	100	QPSK 135_69	650000/3750	100%	0.251	-0.09	14.84	16.50	1.466	0.368	22.4
Right cheek	100	QPSK 135_69	650000/3750	100%	0.122	0.08	14.84	16.50	1.466	0.179	22.4
Right tilted	100	QPSK 135_69	650000/3750	100%	0.095	0.01	14.84	16.50	1.466	0.139	22.4
Body worn Test data (Separate 15mm 1RB) DSI4											
Front side	100	QPSK 1_271	650000/3750	100%	0.092	0.14	18.12	19.50	1.374	0.126	22.4
Back side	100	QPSK 1_271	650000/3750	100%	0.268	-0.01	18.12	19.50	1.374	0.368	22.4
Body worn Test data (Separate 15mm 50%RB) DSI4											
Front side	100	QPSK 135_69	650000/3750	100%	0.094	0.10	17.92	19.50	1.439	0.135	22.4
Back side	100	QPSK 135_69	650000/3750	100%	0.270	0.03	17.92	19.50	1.439	0.388	22.4
Hotspot Test data (Separate 10mm 1RB) DSI10											
Front side	100	QPSK 1_271	650000/3750	100%	0.108	0.14	16.10	17.50	1.380	0.149	22.4
Back side	100	QPSK 1_271	650000/3750	100%	0.315	-0.09	16.10	17.50	1.380	0.435	22.4
Right side	100	QPSK 1_271	650000/3750	100%	0.436	0.13	16.10	17.50	1.380	**0.602**	22.4
Top side	100	QPSK 1_271	650000/3750	100%	0.077	0.07	16.10	17.50	1.380	0.106	22.4
Hotspot Test data (Separate 10mm 50%RB) DSI10											
Front side	100	QPSK 135_69	650000/3750	100%	0.116	-0.13	15.80	17.50	1.479	0.172	22.4
Back side	100	QPSK 135_69	650000/3750	100%	0.337	-0.03	15.80	17.50	1.479	0.498	22.4
Right side	100	QPSK 135_69	650000/3750	100%	0.381	0.00	15.80	17.50	1.479	0.564	22.4
Top side	100	QPSK 135_69	650000/3750	100%	0.079	-0.06	15.80	17.50	1.479	0.117	22.4
Hotspot Test data (Separate 10mm 50%RB) DSI10											
Back side	100	QPSK 135_69	650000/3750	100%	0.337	-0.03	15.80	17.50	1.479	0.498	22.4
Right side	100	QPSK 135_69	650000/3750	100%	0.381	0.00	15.80	17.50	1.479	0.564	22.4
Top side	100	QPSK 135_69	650000/3750	100%	0.079	-0.06	15.80	17.50	1.479	0.117	22.4
N78 (3700-3800) Ant 13 Test Record SRS											
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Head Test Data(1RB) DSI2											
Left cheek	100	QPSK 1_271	650000/3750	8.5%	0.037	0.05	14.68	16.50	0.258	0.010	22.5
Left tilted	100	QPSK 1_271	650000/3750	8.5%	0.049	0.01	14.68	16.50	0.258	0.013	22.5
Right cheek	100	QPSK 1_271	650000/3750	8.5%	0.108	0.02	14.68	16.50	0.258	0.028	22.5
Right tilted	100	QPSK 1_271	650000/3750	8.5%	0.092	0.05	14.68	16.50	0.258	0.024	22.5
Head Test Data(50%RB) DSI2											
Left cheek	100	QPSK 135_69	650000/3750	8.5%	0.099	0.01	14.68	16.50	0.258	0.026	22.5
Left tilted	100	QPSK 135_69	650000/3750	8.5%	0.049	0.02	14.68	16.50	0.258	0.013	22.5
Right cheek	100	QPSK 135_69	650000/3750	8.5%	0.084	0.05	14.68	16.50	0.258	0.022	22.5
Right tilted	100	QPSK 135_69	650000/3750	8.5%	0.095	0.02	14.68	16.50	0.258	0.025	22.5
Body worn Test data (Separate 15mm 1RB) DSI4											
Front side	100	QPSK 1_271	650000/3750	8.5%	0.106	0.08	25.22	27.00	0.256	0.027	22.5
Back side	100	QPSK 1_271	650000/3750	8.5%	0.233	0.01	25.22	27.00	0.256	0.060	22.5
Body worn Test data (Separate 15mm 50%RB) DSI4											

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86-755) 26012053 www.sgsgroup.com.cn
中国·广东·深圳市南山区科技园中区M-10栋1号厂房 邮编: 518057 t (86-755) 26012053 sgs.china@sgs.com

Front side	100	QPSK 135_69	650000/3750	8.5%	0.110	0.08	25.20	27.00	0.257	0.028	22.5
Back side	100	QPSK 135_69	650000/3750	8.5%	0.246	0.05	25.20	27.00	0.257	0.063	22.5
Hotspot Test data (Separate 10mm 1RB) DSI10											
Front side	100	QPSK 1_1	650000/3750	8.5%	0.069	0.01	18.32	20.00	0.250	0.017	22.5
Back side	100	QPSK 1_1	650000/3750	8.5%	0.102	0.05	18.32	20.00	0.250	0.026	22.5
Left side	100	QPSK 1_1	650000/3750	8.5%	0.054	0.08	18.32	20.00	0.250	0.014	22.5
Top side	100	QPSK 1_1	650000/3750	8.5%	0.119	0.01	18.32	20.00	0.250	0.030	22.4
Hotspot Test data (Separate 10mm 50%RB) DSI10											
Front side	100	QPSK 135_69	650000/3750	8.5%	0.053	0.02	18.08	20.00	0.265	0.014	22.5
Back side	100	QPSK 135_69	650000/3750	8.5%	0.086	0.01	18.08	20.00	0.265	0.023	22.5
Left side	100	QPSK 135_69	650000/3750	8.5%	0.056	0.01	18.08	20.00	0.265	0.015	22.5
Top side	100	QPSK 135_69	650000/3750	8.5%	0.095	0.04	18.08	20.00	0.265	0.025	22.4
N78 (3700-3800) Ant 21 Test Record SRS											
Test position	**BW.**	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test Data(1RB) DSI2											
Left cheek	100	QPSK 1_137	650000/3750	8.5%	0.173	0.01	19.09	20.50	0.235	0.041	21.9
Left tilted	100	QPSK 1_137	650000/3750	8.5%	0.182	0.05	19.09	20.50	0.235	0.043	21.9
Right cheek	100	QPSK 1_137	650000/3750	8.5%	0.130	0.05	19.09	20.50	0.235	0.031	21.9
Right tilted	100	QPSK 1_137	650000/3750	8.5%	0.132	-0.04	19.09	20.50	0.235	0.031	21.9
Head Test Data(50%RB) DSI2											
Left cheek	100	QPSK 135_69	650000/3750	8.5%	0.130	0.04	18.77	20.50	0.253	0.033	21.9
Left tilted	100	QPSK 135_69	650000/3750	8.5%	0.135	0.08	18.77	20.50	0.253	0.034	21.9
Right cheek	100	QPSK 135_69	650000/3750	8.5%	0.117	0.07	18.77	20.50	0.253	0.030	21.9
Right tilted	100	QPSK 135_69	650000/3750	8.5%	0.112	-0.09	18.77	20.50	0.253	0.028	21.9
Body worn Test data (Separate 15mm 1RB) DSI4											
Front side	100	QPSK 1_137	650000/3750	8.5%	0.066	-0.01	24.03	25.50	0.238	0.016	21.9
Back side	100	QPSK 1_137	650000/3750	8.5%	0.054	-0.02	24.03	25.50	0.238	0.013	21.9
Body worn Test data (Separate 15mm 50%RB) DSI4											
Front side	100	QPSK 135_69	650000/3750	8.5%	0.064	0.04	23.82	25.50	0.250	0.016	21.9
Back side	100	QPSK 135_69	650000/3750	8.5%	0.055	0.08	23.82	25.50	0.250	0.014	21.9
Hotspot Test data (Separate 10mm 1RB) DSI10											
Front side	100	QPSK 1_137	650000/3750	8.5%	0.109	0.05	24.03	25.50	0.238	0.026	21.9
Back side	100	QPSK 1_137	650000/3750	8.5%	0.114	0.02	24.03	25.50	0.238	0.027	21.9
Left side	100	QPSK 1_137	650000/3750	8.5%	0.005	0.02	24.03	25.50	0.238	0.001	21.9
Right side	100	QPSK 1_137	650000/3750	8.5%	0.012	-0.09	24.03	25.50	0.238	0.003	21.9
Top side	100	QPSK 1_137	650000/3750	8.5%	0.119	0.04	24.03	25.50	0.238	0.028	21.9
Hotspot Test data (Separate 10mm 50%RB) DSI10											
Front side	100	QPSK 135_69	650000/3750	8.5%	0.112	0.09	23.82	25.50	0.250	0.028	21.9
Back side	100	QPSK 135_69	650000/3750	8.5%	0.111	0.08	23.82	25.50	0.250	0.028	21.9
Left side	100	QPSK 135_69	650000/3750	8.5%	0.003	0.02	23.82	25.50	0.250	0.001	21.9
Right side	100	QPSK 135_69	650000/3750	8.5%	0.015	0.02	23.82	25.50	0.250	0.004	21.9
Top side	100	QPSK 135_69	650000/3750	8.5%	0.120	0.01	23.82	25.50	0.250	0.030	21.9

Table 30： SAR of 5G NR n78 for Head and Body and Product specific 10g SAR.
Note: For n78 antenna 13/21 support SRS, the max duty cycle is 8.5%, due to limitations of FTM testing tools, the SAR testing duty cycle is set to 50%, therefore, the duty cycle factor coefficient is 0.17.

8.2.21 SAR Result of WIFI 2.4G

Ant22 Test Record											
Test position	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**Duty Cycle Scaled factor**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test Data											
Left cheek	802.11b	11/2462	99.45%	1.006	0.282	0.18	14.94	16.00	1.276	**0.362**	22.4
Left tilted	802.11b	11/2462	99.45%	1.006	0.209	0.16	14.94	16.00	1.276	0.268	22.4
Right cheek	802.11b	11/2462	99.45%	1.006	0.119	0.09	14.94	16.00	1.276	0.153	22.4
Right tilted	802.11b	11/2462	99.45%	1.006	0.121	0.01	14.94	16.00	1.276	0.155	22.4
Body worn Test data (Separate 15mm)											
Front side	802.11b	11/2462	99.45%	1.006	0.065	0.09	18.91	20.00	1.285	0.084	22.4
Back side	802.11b	11/2462	99.45%	1.006	0.110	-0.08	18.91	20.00	1.285	**0.142**	22.4
Hotspot Test data (Separate 10mm)											
Front side	802.11b	11/2462	99.45%	1.006	0.110	-0.19	18.91	20.00	1.285	0.142	22.4
Back side	802.11b	11/2462	99.45%	1.006	0.217	-0.07	18.91	20.00	1.285	**0.280**	22.4
Right side	802.11b	11/2462	99.45%	1.006	0.090	0.04	18.91	20.00	1.285	0.116	22.4
Top side	802.11b	11/2462	99.45%	1.006	0.191	0.00	18.91	20.00	1.285	0.247	22.4

Table 31：SAR of WIFI 2.4G for Head and Body.

Note:

1) As the 802.11b highest reported SAR is smaller than 1.2 W/kg, and the tune-up of the other 802.11 modes is not higher than 802.11b, therefore the adjusted SAR is ≤ 1.2 W/kg for other 802.11 modes, SAR test for the other 802.11 modes is not required.

8.2.22 SAR Result of WIFI 5G

Ant23 Test Record											
Test position	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**Duty Cycle Scaled factor**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test Data of U-NII-2A											
Left cheek	802.11n40	54/5270	98.22%	1.018	0.232	0.01	13.35	13.50	1.035	0.245	22.4
Left tilted	802.11n40	54/5270	98.22%	1.018	0.184	0.02	13.35	13.50	1.035	0.194	22.4
Right cheek	802.11n40	54/5270	98.22%	1.018	0.085	0.02	13.35	13.50	1.035	0.090	22.4
Right tilted	802.11n40	54/5270	98.22%	1.018	0.083	-0.02	13.35	13.50	1.035	0.087	22.4
Head Test Data of U-NII-2C											
Left cheek	802.11ac80	138/5690	87.28%	1.146	0.256	0.02	12.09	12.50	1.099	0.322	22.4
Left tilted	802.11ac80	138/5690	87.28%	1.146	0.213	0.01	12.09	12.50	1.099	0.268	22.4
Right cheek	802.11ac80	138/5690	87.28%	1.146	0.071	0.02	12.09	12.50	1.099	0.089	22.4
Right tilted	802.11ac80	138/5690	87.28%	1.146	0.050	-0.04	12.09	12.50	1.099	0.063	22.4
Head Test Data of U-NII-3											
Left cheek	802.11ac80	155/5775	87.28%	1.146	0.320	0.08	12.65	13.50	1.216	**0.446**	22.4
Left tilted	802.11ac80	155/5775	87.28%	1.146	0.157	0.02	12.65	13.50	1.216	0.219	22.4
Right cheek	802.11ac80	155/5775	87.28%	1.146	0.057	0.01	12.65	13.50	1.216	0.079	22.4
Right tilted	802.11ac80	155/5775	87.28%	1.146	0.042	0.01	12.65	13.50	1.216	0.059	22.4
Body worn Test data of U-NII-2A (Separate 15mm)											
Front side	802.11a	60/5300	98.22%	1.018	0.073	0.02	18.65	19.00	1.084	0.081	22.4
Back side	802.11a	60/5300	98.22%	1.018	0.123	0.01	18.65	19.00	1.084	0.136	22.4
Body worn Test data of U-NII-2C (Separate 15mm)											
Front side	802.11n40	126/5630	98.22%	1.018	0.099	0.01	16.57	17.00	1.104	0.111	22.4
Back side	802.11n40	126/5630	98.22%	1.018	0.358	0.05	16.57	17.00	1.104	**0.402**	22.4
Body worn Test data of U-NII-3 (Separate 15mm)											
Front side	802.11a	159/5795	98.22%	1.018	0.052	0.01	15.08	16.00	1.236	0.065	22.4
Back side	802.11a	159/5795	98.22%	1.018	0.235	-0.02	15.08	16.00	1.236	0.296	22.4
Hotspot Test data of U-NII-1 (Separate 10mm)											
Front side	802.11a	44/5220	98.22%	1.018	0.156	0.01	18.78	19.00	1.052	0.167	22.4
Back side	802.11a	44/5220	98.22%	1.018	0.366	0.02	18.78	19.00	1.052	0.392	22.4
Right side	802.11a	44/5220	98.22%	1.018	0.463	-0.09	18.78	19.00	1.052	0.496	22.4
Top side	802.11a	44/5220	98.22%	1.018	0.281	-0.03	18.78	19.00	1.052	0.301	22.4
Hotspot Test data of U-NII-3 (Separate 10mm)											
Front side	802.11n40	159/5795	98.22%	1.018	0.084	0.01	15.08	16.00	1.236	0.106	22.4
Back side	802.11n40	159/5795	98.22%	1.018	0.453	0.04	15.08	16.00	1.236	0.570	22.4
Right side	802.11n40	159/5795	98.22%	1.018	0.590	0.13	15.08	16.00	1.236	**0.742**	22.4
Top side	802.11n40	159/5795	98.22%	1.018	0.109	0.05	15.08	16.00	1.236	0.137	22.4
Test position	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**Duty Cycle Scaled factor**	**SAR (W/kg) 10-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 10-g (W/kg)**	**Liquid Temp.(℃)**
Product specific 10gSAR Test data of U-NII-2A (Separate 0mm)											
Front side	802.11a	60/5300	98.22%	1.018	0.525	-0.01	18.65	19.00	1.084	0.579	22.4
Back side	802.11a	60/5300	98.22%	1.018	0.712	0.01	18.65	19.00	1.084	0.786	22.4
Right side	802.11a	60/5300	98.22%	1.018	1.090	0.06	18.65	19.00	1.084	1.203	22.4
Top side	802.11a	60/5300	98.22%	1.018	0.335	0.07	18.65	19.00	1.084	0.370	22.4
Product specific 10gSAR Test data of U-NII-2C (Separate 0mm)											
Front side	802.11n40	126/5630	98.22%	1.018	0.657	0.05	16.57	17.00	1.104	0.739	22.4

Back side	802.11n40	126/5630	98.22%	1.018	0.844	0.04	16.57	17.00	1.104	0.949	22.4
Right side	802.11n40	126/5630	98.22%	1.018	1.630	-0.07	16.57	17.00	1.104	**1.832**	22.4
Top side	802.11n40	126/5630	98.22%	1.018	0.394	0.02	16.57	17.00	1.104	0.443	22.4

Table 32：SAR of WIFI 5G for Head, Body and Product specific 10g SAR.

Note:
1) As the above highest 1g reported SAR is smaller than 1.2 W/kg, and the tune-up of the other 802.11 modes are not higher than the SAR test mode above, therefore the adjusted SAR is ≤ 1.2 W/kg for other 802.11 modes, SAR test for the other 802.11 modes is not required. For Product specific 10gSAR the highest reported SAR is smaller than 3.0 W/kg, Product specific 10gSAR test for the other 802.11 modes is also not required.

8.2.23 SAR Result of BT

Ant22 Test Record											
Test position	Test mode	Test ch./Freq.	Duty Cycle	Duty Cycle Scaled factor	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Head Test Data											
Left cheek	DH5	39/2441	76.64%	1.305	0.105	0.19	11.03	12.50	1.403	**0.192**	22.3
Left tilted	DH5	39/2441	76.64%	1.305	0.087	0.03	11.03	12.50	1.403	0.159	22.3
Right cheek	DH5	39/2441	76.64%	1.305	0.046	0.01	11.03	12.50	1.403	0.084	22.3
Right tilted	DH5	39/2441	76.64%	1.305	0.048	-0.01	11.03	12.50	1.403	0.088	22.3
Body worn Test data (Separate 15mm)											
Front side	DH5	39/2441	76.64%	1.305	0.010	0.03	11.03	12.50	1.403	0.018	22.3
Back side	DH5	39/2441	76.64%	1.305	0.015	-0.01	11.03	12.50	1.403	**0.027**	22.3
Hotspot Test data (Separate 10mm)											
Front side	DH5	39/2441	76.64%	1.305	0.017	-0.01	11.03	12.50	1.403	0.031	22.3
Back side	DH5	39/2441	76.64%	1.305	0.031	0.07	11.03	12.50	1.403	**0.057**	22.3
Right side	DH5	39/2441	76.64%	1.305	0.014	-0.02	11.03	12.50	1.403	0.026	22.3
Top side	DH5	39/2441	76.64%	1.305	0.029	0.03	11.03	12.50	1.403	0.053	22.3

Table 33：SAR of BT for Head and Body.

8.3 Multiple Transmitter Evaluation

8.3.1 Simultaneous SAR SAR test evaluation

- **Simultaneous Transmission Possibilities**

No.	Simultaneous Tx Combination	Head	Body-worn	Hotspot	Product Specific 10-g (0mm)
1.	WWAN + WLAN 2.4GHz (Ant 22)	Yes	Yes	Yes	Yes
2.	WWAN + WLAN 5GHz (Ant 23)	Yes	Yes	Yes	Yes
3.	WWAN + BT (Ant 22)	Yes	Yes	Yes	Yes
4.	WWAN + WLAN 5GHz (Ant 23) + BT (Ant 22)	Yes	Yes	Yes	Yes
5.	WLAN 5GHz (Ant 23) + BT (Ant 22)	Yes	Yes	Yes	Yes
6.	WWAN + NFC	/	/	/	Yes
7.	WWAN + WLAN 2.4GHz (Ant 22)+NFC	/	/	/	Yes
8.	WWAN + WLAN 5GHz (Ant 23) +NFC	/	/	/	Yes
9.	WWAN + BT (Ant 22) +NFC	/	/	/	Yes
10.	WWAN + WLAN 5GHz (Ant 23) + BT (Ant 22) +NFC	/	/	/	Yes
11.	WLAN 5GHz (Ant 23) + BT (Ant 22) +NFC	/	/	/	Yes

Note:

1) The device does not support DTM function.
2) NFC is different from the working scenario of WWAN/WIFI(Head/Body-worn/Hotspot) and does not participate in the simultaneous transmission.
3) The NFC test data can be referred to NFC SAR test report (Report NO.: SEWM2309000347RG09).
4) For WiFi 5G,U-NII-2A and U-NII-2C band does not support hotspot function.

8.3.2 Simultaneous Transmission SAR Summation Scenario

Head:

Test position		WiFi 5G Ant23	BT Ant22	Summed SAR
		1	2	1+2
WLAN	Left cheek	0.446	0.192	0.638
	Left tilted	0.268	0.159	0.427
	Right cheek	0.090	0.084	0.174
	Right tilted	0.087	0.088	0.175

Test position		SARmax (W/kg)				Summed SAR			
		WWAN Ant11	WiFi 2.4G Ant22	WiFi 5G Ant23	BT Ant22				
		1	2	3	4	1+2	1+3	1+4	1+3+4
GSM 850	Left cheek	0.240	0.362	0.446	0.192	0.602	0.686	0.432	0.878
	Left tilted	0.099	0.268	0.268	0.159	0.367	0.367	0.258	0.526
	Right cheek	0.535	0.153	0.090	0.084	0.688	0.625	0.619	0.709
	Right tilted	0.159	0.155	0.087	0.088	0.314	0.246	0.247	0.334
WCDMA B5	Left cheek	0.303	0.362	0.446	0.192	0.665	0.749	0.495	0.941
	Left tilted	0.104	0.268	0.268	0.159	0.372	0.372	0.263	0.531
	Right cheek	0.457	0.153	0.090	0.084	0.610	0.547	0.541	0.631
	Right tilted	0.179	0.155	0.087	0.088	0.334	0.266	0.267	0.354
LTE B2	Left cheek	0.416	0.362	0.446	0.192	0.778	0.862	0.608	1.054
	Left tilted	0.086	0.268	0.268	0.159	0.354	0.354	0.245	0.513
	Right cheek	0.739	0.153	0.090	0.084	0.892	0.829	0.823	0.913
	Right tilted	0.153	0.155	0.087	0.088	0.308	0.240	0.241	0.328
LTE B7	Left cheek	0.292	0.362	0.446	0.192	0.654	0.738	0.484	0.930
	Left tilted	0.089	0.268	0.268	0.159	0.357	0.357	0.248	0.516
	Right cheek	0.805	0.153	0.090	0.084	0.958	0.895	0.889	0.979
	Right tilted	0.204	0.155	0.087	0.088	0.359	0.291	0.292	0.379
LTE B12	Left cheek	0.416	0.362	0.446	0.192	0.778	0.862	0.608	1.054
	Left tilted	0.086	0.268	0.268	0.159	0.354	0.354	0.245	0.513
	Right cheek	0.739	0.153	0.090	0.084	0.892	0.829	0.823	0.913
	Right tilted	0.153	0.155	0.087	0.088	0.308	0.240	0.241	0.328
LTE B13	Left cheek	0.237	0.362	0.446	0.192	0.599	0.683	0.429	0.875
	Left tilted	0.084	0.268	0.268	0.159	0.352	0.352	0.243	0.511
	Right cheek	0.400	0.153	0.090	0.084	0.553	0.490	0.484	0.574
	Right tilted	0.123	0.155	0.087	0.088	0.278	0.210	0.211	0.298
LTE B26	Left cheek	0.322	0.362	0.446	0.192	0.684	0.768	0.514	0.960
	Left tilted	0.111	0.268	0.268	0.159	0.379	0.379	0.270	0.538
	Right cheek	0.531	0.153	0.090	0.084	0.684	0.621	0.615	0.705
	Right tilted	0.174	0.155	0.087	0.088	0.329	0.261	0.262	0.349
LTE B66	Left cheek	0.429	0.362	0.446	0.192	0.791	0.875	0.621	1.067
	Left tilted	0.360	0.268	0.268	0.159	0.628	0.628	0.519	0.787
	Right cheek	0.739	0.153	0.090	0.084	0.892	0.829	0.823	0.913
	Right tilted	0.124	0.155	0.087	0.088	0.279	0.211	0.212	0.299
NR N7	Left cheek	0.287	0.362	0.446	0.192	0.649	0.733	0.479	0.925
	Left tilted	0.077	0.268	0.268	0.159	0.345	0.345	0.236	0.504
	Right cheek	0.661	0.153	0.090	0.084	0.814	0.751	0.745	0.835
	Right tilted	0.176	0.155	0.087	0.088	0.331	0.263	0.264	0.351
NR N26	Left cheek	0.385	0.362	0.446	0.192	0.747	0.831	0.577	1.023

	Left tilted	0.180	0.268	0.268	0.159	0.448	0.448	0.339	0.607
	Right cheek	0.836	0.153	0.090	0.084	0.989	0.926	0.920	1.010
	Right tilted	0.270	0.155	0.087	0.088	0.425	0.357	0.358	0.445
NR N38	Left cheek	0.209	0.362	0.446	0.192	0.571	0.655	0.401	0.847
	Left tilted	0.096	0.268	0.268	0.159	0.364	0.364	0.255	0.523
	Right cheek	0.682	0.153	0.090	0.084	0.835	0.772	0.766	0.856
	Right tilted	0.183	0.155	0.087	0.088	0.338	0.270	0.271	0.358
NR N41	Left cheek	0.298	0.362	0.446	0.192	0.660	0.744	0.490	0.936
	Left tilted	0.100	0.268	0.268	0.159	0.368	0.368	0.259	0.527
	Right cheek	0.627	0.153	0.090	0.084	0.780	0.717	0.711	0.801
	Right tilted	0.209	0.155	0.087	0.088	0.364	0.296	0.297	0.384
NR N66	Left cheek	0.223	0.362	0.446	0.192	0.585	0.669	0.415	0.861
	Left tilted	0.096	0.268	0.268	0.159	0.364	0.364	0.255	0.523
	Right cheek	0.712	0.153	0.090	0.084	0.865	0.802	0.796	0.886
	Right tilted	0.151	0.155	0.087	0.088	0.306	0.238	0.239	0.326

Test position		SARmax (W/kg)				Summed SAR			
		WWAN Ant12	WiFi 2.4G Ant22	WiFi 5G Ant23	BT Ant22				
		1	2	3	4	1+2	1+3	1+4	1+3+4
NR N77 (3450-3550)	Left cheek	0.228	0.362	0.446	0.192	0.590	0.674	0.420	0.866
	Left tilted	0.287	0.268	0.268	0.159	0.555	0.555	0.446	0.714
	Right cheek	0.484	0.153	0.090	0.084	0.637	0.574	0.568	0.658
	Right tilted	0.619	0.155	0.087	0.088	0.774	0.706	0.707	0.794
NR N77 (3700-3980)	Left cheek	0.442	0.362	0.446	0.192	0.804	0.888	0.634	1.080
	Left tilted	0.247	0.268	0.268	0.159	0.515	0.515	0.406	0.674
	Right cheek	0.711	0.153	0.090	0.084	0.864	0.801	0.795	0.885
	Right tilted	0.336	0.155	0.087	0.088	0.491	0.423	0.424	0.511
NR N78 (3450-3550)	Left cheek	0.235	0.362	0.446	0.192	0.597	0.681	0.427	0.873
	Left tilted	0.321	0.268	0.268	0.159	0.589	0.589	0.480	0.748
	Right cheek	0.456	0.153	0.090	0.084	0.609	0.546	0.540	0.630
	Right tilted	0.712	0.155	0.087	0.088	0.867	0.799	0.800	0.887
NR N78 (3700-3800)	Left cheek	0.246	0.362	0.446	0.192	0.608	0.692	0.438	0.884
	Left tilted	0.380	0.268	0.268	0.159	0.648	0.648	0.539	0.807
	Right cheek	0.836	0.153	0.090	0.084	0.989	0.926	0.920	1.010
	Right tilted	0.543	0.155	0.087	0.088	0.698	0.630	0.631	0.718

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Test position		SARmax (W/kg)				Summed SAR			
		WWAN Ant13	WiFi 2.4G Ant22	WiFi 5G Ant23	BT Ant22				
		1	2	3	4	1+2	1+3	1+4	1+3+4
NR N77 (3450-3550)	Left cheek	0.012	0.362	0.446	0.192	0.374	0.458	0.204	0.650
	Left tilted	0.015	0.268	0.268	0.159	0.283	0.283	0.174	0.442
	Right cheek	0.020	0.153	0.090	0.084	0.173	0.110	0.104	0.194
	Right tilted	0.023	0.155	0.087	0.088	0.178	0.110	0.111	0.198
NR N77 (3700-3980)	Left cheek	0.009	0.362	0.446	0.192	0.371	0.455	0.201	0.647
	Left tilted	0.021	0.268	0.268	0.159	0.289	0.289	0.180	0.448
	Right cheek	0.012	0.153	0.090	0.084	0.165	0.102	0.096	0.186
	Right tilted	0.013	0.155	0.087	0.088	0.168	0.100	0.101	0.188
NR N78 (3450-3550)	Left cheek	0.017	0.362	0.446	0.192	0.379	0.463	0.209	0.655
	Left tilted	0.020	0.268	0.268	0.159	0.288	0.288	0.179	0.447
	Right cheek	0.040	0.153	0.090	0.084	0.193	0.130	0.124	0.214
	Right tilted	0.047	0.155	0.087	0.088	0.202	0.134	0.135	0.222
NR N78 (3700-3800)	Left cheek	0.026	0.362	0.446	0.192	0.388	0.472	0.218	0.664
	Left tilted	0.013	0.268	0.268	0.159	0.281	0.281	0.172	0.440
	Right cheek	0.028	0.153	0.090	0.084	0.181	0.118	0.112	0.202
	Right tilted	0.025	0.155	0.087	0.088	0.180	0.112	0.113	0.200

Test position		SARmax (W/kg)				Summed SAR			
		WWAN Ant14	WiFi 2.4G Ant22	WiFi 5G Ant23	BT Ant22				
		1	2	3	4	1+2	1+3	1+4	1+3+4
GSM 1900	Left cheek	0.463	0.362	0.446	0.192	0.825	0.909	0.655	1.101
	Left tilted	0.666	0.268	0.268	0.159	0.934	0.934	0.825	1.093
	Right cheek	0.745	0.153	0.090	0.084	0.898	0.835	0.829	0.919
	Right tilted	0.739	0.155	0.087	0.088	0.894	0.826	0.827	0.914

Test position		SARmax (W/kg)				Summed SAR			
		WWAN Ant21	WiFi 2.4G Ant22	WiFi 5G Ant23	BT Ant22				
		1	2	3	4	1+2	1+3	1+4	1+3+4
NR N77 (3450-3550)	Left cheek	0.058	0.362	0.446	0.192	0.420	0.504	0.250	0.696
	Left tilted	0.055	0.268	0.268	0.159	0.323	0.323	0.214	0.482
	Right cheek	0.042	0.153	0.090	0.084	0.195	0.132	0.126	0.216
	Right tilted	0.038	0.155	0.087	0.088	0.193	0.125	0.126	0.213
NR N77 (3700-3980)	Left cheek	0.025	0.362	0.446	0.192	0.387	0.471	0.217	0.663
	Left tilted	0.026	0.268	0.268	0.159	0.294	0.294	0.185	0.453
	Right cheek	0.020	0.153	0.090	0.084	0.173	0.110	0.104	0.194
	Right tilted	0.020	0.155	0.087	0.088	0.175	0.107	0.108	0.195
NR N78 (3450-3550)	Left cheek	0.047	0.362	0.446	0.192	0.409	0.493	0.239	0.685
	Left tilted	0.043	0.268	0.268	0.159	0.311	0.311	0.202	0.470
	Right cheek	0.038	0.153	0.090	0.084	0.191	0.128	0.122	0.212
	Right tilted	0.042	0.155	0.087	0.088	0.197	0.129	0.130	0.217
NR N78 (3700-3800)	Left cheek	0.041	0.362	0.446	0.192	0.403	0.487	0.233	0.679
	Left tilted	0.043	0.268	0.268	0.159	0.311	0.311	0.202	0.470
	Right cheek	0.031	0.153	0.090	0.084	0.184	0.121	0.115	0.205
	Right tilted	0.031	0.155	0.087	0.088	0.186	0.118	0.119	0.206

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Test position		SARmax (W/kg)				Summed SAR			
		WWAN Ant23	WiFi 2.4G Ant22	WiFi 5G Ant23	BT Ant22				
		1	2	3	4	1+2	1+3	1+4	1+3+4
NR N77 (3450-3550)	Left cheek	0.617	0.362	0.446	0.192	0.979	1.063	0.809	1.255
	Left tilted	0.288	0.268	0.268	0.159	0.556	0.556	0.447	0.715
	Right cheek	0.140	0.153	0.090	0.084	0.293	0.230	0.224	0.314
	Right tilted	0.123	0.155	0.087	0.088	0.278	0.210	0.211	0.298
NR N77 (3700-3980)	Left cheek	0.694	0.362	0.446	0.192	1.056	1.140	0.886	1.332
	Left tilted	0.246	0.268	0.268	0.159	0.514	0.514	0.405	0.673
	Right cheek	0.110	0.153	0.090	0.084	0.263	0.200	0.194	0.284
	Right tilted	0.093	0.155	0.087	0.088	0.248	0.180	0.181	0.268
NR N78 (3450-3550)	Left cheek	0.740	0.362	0.446	0.192	1.102	1.186	0.932	1.378
	Left tilted	0.368	0.268	0.268	0.159	0.636	0.636	0.527	0.795
	Right cheek	0.179	0.153	0.090	0.084	0.332	0.269	0.263	0.353
	Right tilted	0.139	0.155	0.087	0.088	0.294	0.226	0.227	0.314
NR N78 (3700-3800)	Left cheek	0.740	0.362	0.446	0.192	1.102	1.186	0.932	1.378
	Left tilted	0.368	0.268	0.268	0.159	0.636	0.636	0.527	0.795
	Right cheek	0.179	0.153	0.090	0.084	0.332	0.269	0.263	0.353
	Right tilted	0.139	0.155	0.087	0.088	0.294	0.226	0.227	0.314

Test position		SARmax (W/kg)				Summed SAR			
		WWAN Ant31	WiFi 2.4G Ant22	WiFi 5G Ant23	BT Ant22				
		1	2	3	4	1+2	1+3	1+4	1+3+4
GSM 1900	Left cheek	0.080	0.362	0.446	0.192	0.442	0.526	0.272	0.718
	Left tilted	0.050	0.268	0.268	0.159	0.318	0.318	0.209	0.477
	Right cheek	0.055	0.153	0.090	0.084	0.208	0.145	0.139	0.229
	Right tilted	0.091	0.155	0.087	0.088	0.246	0.178	0.179	0.266
WCDMA B2	Left cheek	0.116	0.362	0.446	0.192	0.478	0.562	0.308	0.754
	Left tilted	0.060	0.268	0.268	0.159	0.328	0.328	0.219	0.487
	Right cheek	0.059	0.153	0.090	0.084	0.212	0.149	0.143	0.233
	Right tilted	0.035	0.155	0.087	0.088	0.190	0.122	0.123	0.210
WCDMA B4	Left cheek	0.064	0.362	0.446	0.192	0.426	0.510	0.256	0.702
	Left tilted	0.059	0.268	0.268	0.159	0.327	0.327	0.218	0.486
	Right cheek	0.066	0.153	0.090	0.084	0.219	0.156	0.150	0.240
	Right tilted	0.049	0.155	0.087	0.088	0.204	0.136	0.137	0.224
LTE B2	Left cheek	0.093	0.362	0.446	0.192	0.455	0.539	0.285	0.731
	Left tilted	0.047	0.268	0.268	0.159	0.315	0.315	0.206	0.474
	Right cheek	0.055	0.153	0.090	0.084	0.208	0.145	0.139	0.229
	Right tilted	0.043	0.155	0.087	0.088	0.198	0.130	0.131	0.218
LTE B7	Left cheek	0.064	0.362	0.446	0.192	0.426	0.510	0.256	0.702
	Left tilted	0.078	0.268	0.268	0.159	0.346	0.346	0.237	0.505
	Right cheek	0.128	0.153	0.090	0.084	0.281	0.218	0.212	0.302
	Right tilted	0.062	0.155	0.087	0.088	0.217	0.149	0.150	0.237
LTE B41	Left cheek	0.088	0.362	0.446	0.192	0.450	0.534	0.280	0.726
	Left tilted	0.038	0.268	0.268	0.159	0.306	0.306	0.197	0.465
	Right cheek	0.088	0.153	0.090	0.084	0.241	0.178	0.172	0.262
	Right tilted	0.058	0.155	0.087	0.088	0.213	0.145	0.146	0.233
LTE B66	Left cheek	0.063	0.362	0.446	0.192	0.425	0.509	0.255	0.701
	Left tilted	0.054	0.268	0.268	0.159	0.322	0.322	0.213	0.481
	Right cheek	0.061	0.153	0.090	0.084	0.214	0.151	0.145	0.235
	Right tilted	0.039	0.155	0.087	0.088	0.194	0.126	0.127	0.214

NR N2	Left cheek	0.127	0.362	0.446	0.192	0.489	0.573	0.319	0.765
	Left tilted	0.071	0.268	0.268	0.159	0.339	0.339	0.230	0.498
	Right cheek	0.056	0.153	0.090	0.084	0.209	0.146	0.140	0.230
	Right tilted	0.081	0.155	0.087	0.088	0.236	0.168	0.169	0.256
NR N7	Left cheek	0.098	0.362	0.446	0.192	0.460	0.544	0.290	0.736
	Left tilted	0.086	0.268	0.268	0.159	0.354	0.354	0.245	0.513
	Right cheek	0.192	0.153	0.090	0.084	0.345	0.282	0.276	0.366
	Right tilted	0.106	0.155	0.087	0.088	0.261	0.193	0.194	0.281
NR N38	Left cheek	0.072	0.362	0.446	0.192	0.434	0.518	0.264	0.710
	Left tilted	0.078	0.268	0.268	0.159	0.346	0.346	0.237	0.505
	Right cheek	0.167	0.153	0.090	0.084	0.320	0.257	0.251	0.341
	Right tilted	0.073	0.155	0.087	0.088	0.228	0.160	0.161	0.248
NR N41	Left cheek	0.078	0.362	0.446	0.192	0.440	0.524	0.270	0.716
	Left tilted	0.080	0.268	0.268	0.159	0.348	0.348	0.239	0.507
	Right cheek	0.226	0.153	0.090	0.084	0.379	0.316	0.310	0.400
	Right tilted	0.092	0.155	0.087	0.088	0.247	0.179	0.180	0.267
NR N66	Left cheek	0.062	0.362	0.446	0.192	0.424	0.508	0.254	0.700
	Left tilted	0.054	0.268	0.268	0.159	0.322	0.322	0.213	0.481
	Right cheek	0.063	0.153	0.090	0.084	0.216	0.153	0.147	0.237
	Right tilted	0.038	0.155	0.087	0.088	0.193	0.125	0.126	0.213

Test position		SARmax (W/kg)				Summed SAR			
		WWAN Ant41	WiFi 2.4G Ant22	WiFi 5G Ant23	BT Ant22				
		1	2	3	4	1+2	1+3	1+4	1+3+4
GSM 850	Left cheek	0.206	0.362	0.446	0.192	0.568	0.652	0.398	0.844
	Left tilted	0.106	0.268	0.268	0.159	0.374	0.374	0.265	0.533
	Right cheek	0.193	0.153	0.090	0.084	0.346	0.283	0.277	0.367
	Right tilted	0.096	0.155	0.087	0.088	0.251	0.183	0.184	0.271
WCDMA B5	Left cheek	0.174	0.362	0.446	0.192	0.536	0.620	0.366	0.812
	Left tilted	0.081	0.268	0.268	0.159	0.349	0.349	0.240	0.508
	Right cheek	0.157	0.153	0.090	0.084	0.310	0.247	0.241	0.331
	Right tilted	0.072	0.155	0.087	0.088	0.227	0.159	0.160	0.247
LTE B12	Left cheek	0.065	0.362	0.446	0.192	0.427	0.511	0.257	0.703
	Left tilted	0.033	0.268	0.268	0.159	0.301	0.301	0.192	0.460
	Right cheek	0.062	0.153	0.090	0.084	0.215	0.152	0.146	0.236
	Right tilted	0.028	0.155	0.087	0.088	0.183	0.115	0.116	0.203
LTE B13	Left cheek	0.082	0.362	0.446	0.192	0.444	0.528	0.274	0.720
	Left tilted	0.047	0.268	0.268	0.159	0.315	0.315	0.206	0.474
	Right cheek	0.088	0.153	0.090	0.084	0.241	0.178	0.172	0.262
	Right tilted	0.041	0.155	0.087	0.088	0.196	0.128	0.129	0.216
LTE B26	Left cheek	0.127	0.362	0.446	0.192	0.489	0.573	0.319	0.765
	Left tilted	0.065	0.268	0.268	0.159	0.333	0.333	0.224	0.492
	Right cheek	0.126	0.153	0.090	0.084	0.279	0.216	0.210	0.300
	Right tilted	0.059	0.155	0.087	0.088	0.214	0.146	0.147	0.234
NR N26	Left cheek	0.148	0.362	0.446	0.192	0.510	0.594	0.340	0.786
	Left tilted	0.068	0.268	0.268	0.159	0.336	0.336	0.227	0.495
	Right cheek	0.144	0.153	0.090	0.084	0.297	0.234	0.228	0.318
	Right tilted	0.062	0.155	0.087	0.088	0.217	0.149	0.150	0.237

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Body-Worn:

Test position		WiFi 5G Ant23	BT Ant22	Summed SAR
		1	2	1+2
WLAN	Front side	0.111	0.018	0.129
	Back side	0.402	0.027	0.429

Test position		SARmax (W/kg)				Summed SAR			
		WWAN Ant11	WiFi 2.4G Ant22	WiFi 5G Ant23	BT Ant22				
		1	2	3	4	1+2	1+3	1+4	1+3+4
GSM 850	Front side	0.144	0.084	0.111	0.018	0.228	0.255	0.162	0.273
	Back side	0.269	0.142	0.402	0.027	0.411	0.671	0.296	0.698
WCDMA B5	Front side	0.123	0.084	0.111	0.018	0.207	0.234	0.141	0.252
	Back side	0.236	0.142	0.402	0.027	0.378	0.638	0.263	0.665
LTE B2	Front side	0.178	0.084	0.111	0.018	0.262	0.289	0.196	0.307
	Back side	0.387	0.142	0.402	0.027	0.529	0.789	0.414	0.816
LTE B7	Front side	0.326	0.084	0.111	0.018	0.410	0.437	0.344	0.455
	Back side	0.633	0.142	0.402	0.027	0.775	1.035	0.660	1.062
LTE B12	Front side	0.049	0.084	0.111	0.018	0.133	0.160	0.067	0.178
	Back side	0.101	0.142	0.402	0.027	0.243	0.503	0.128	0.530
LTE B13	Front side	0.097	0.084	0.111	0.018	0.181	0.208	0.115	0.226
	Back side	0.205	0.142	0.402	0.027	0.347	0.607	0.232	0.634
LTE B26	Front side	0.121	0.084	0.111	0.018	0.205	0.232	0.139	0.250
	Back side	0.240	0.142	0.402	0.027	0.382	0.642	0.267	0.669
LTE B66	Front side	0.098	0.084	0.111	0.018	0.182	0.209	0.116	0.227
	Back side	0.180	0.142	0.402	0.027	0.322	0.582	0.207	0.609
NR N7	Front side	0.438	0.084	0.111	0.018	0.522	0.549	0.456	0.567
	Back side	0.751	0.142	0.402	0.027	0.893	1.153	0.778	1.180
NR N26	Front side	0.190	0.084	0.111	0.018	0.274	0.301	0.208	0.319
	Back side	0.256	0.142	0.402	0.027	0.398	0.658	0.283	0.685
NR N38	Front side	0.375	0.084	0.111	0.018	0.459	0.486	0.393	0.504
	Back side	0.574	0.142	0.402	0.027	0.716	0.976	0.601	1.003
NR N41	Front side	0.423	0.084	0.111	0.018	0.507	0.534	0.441	0.552
	Back side	0.715	0.142	0.402	0.027	0.857	1.117	0.742	1.144
NR N66	Front side	0.072	0.084	0.111	0.018	0.156	0.183	0.090	0.201
	Back side	0.208	0.142	0.402	0.027	0.350	0.610	0.235	0.637

Test position		SARmax (W/kg)				Summed SAR			
		WWAN Ant12	WiFi 2.4G Ant22	WiFi 5G Ant23	BT Ant22				
		1	2	3	4	1+2	1+3	1+4	1+3+4
NR N77 (3450-3550)	Front side	0.145	0.084	0.111	0.018	0.229	0.256	0.163	0.274
	Back side	0.507	0.142	0.402	0.027	0.649	0.909	0.534	0.936
NR N77 (3700-3980)	Front side	0.227	0.084	0.111	0.018	0.311	0.338	0.245	0.356
	Back side	0.761	0.142	0.402	0.027	0.903	1.163	0.788	1.190
NR N78 (3450-3550)	Front side	0.200	0.084	0.111	0.018	0.284	0.311	0.218	0.329
	Back side	0.678	0.142	0.402	0.027	0.820	1.080	0.705	1.107
NR N78 (3700-3800)	Front side	0.312	0.084	0.111	0.018	0.396	0.423	0.330	0.441
	Back side	0.933	0.142	0.402	0.027	1.075	1.335	0.960	1.362

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Test position		SARmax (W/kg)				Summed SAR			
		WWAN Ant13	WiFi 2.4G Ant22	WiFi 5G Ant23	BT Ant22				
		1	2	3	4	1+2	1+3	1+4	1+3+4
NR N77 (3450-3550)	Front side	0.016	0.084	0.111	0.018	0.100	0.127	0.034	0.145
	Back side	0.032	0.142	0.402	0.027	0.174	0.434	0.059	0.461
NR N77 (3700-3980)	Front side	0.008	0.084	0.111	0.018	0.092	0.119	0.026	0.137
	Back side	0.016	0.142	0.402	0.027	0.158	0.418	0.043	0.445
NR N78 (3450-3550)	Front side	0.045	0.084	0.111	0.018	0.129	0.156	0.063	0.174
	Back side	0.077	0.142	0.402	0.027	0.219	0.479	0.104	0.506
NR N78 (3700-3800)	Front side	0.028	0.084	0.111	0.018	0.112	0.139	0.046	0.157
	Back side	0.063	0.142	0.402	0.027	0.205	0.465	0.090	0.492

Test position		SARmax (W/kg)				Summed SAR			
		WWAN Ant14	WiFi 2.4G Ant22	WiFi 5G Ant23	BT Ant22				
		1	2	3	4	1+2	1+3	1+4	1+3+4
GSM 1900	Front side	0.129	0.084	0.111	0.018	0.213	0.240	0.147	0.258
	Back side	0.223	0.142	0.402	0.027	0.365	0.625	0.250	0.652
WCDMA B2	Front side	0.132	0.084	0.111	0.018	0.216	0.243	0.150	0.261
	Back side	0.323	0.142	0.402	0.027	0.465	0.725	0.350	0.752
WCDMA B4	Front side	0.139	0.084	0.111	0.018	0.223	0.250	0.157	0.268
	Back side	0.287	0.142	0.402	0.027	0.429	0.689	0.314	0.716
LTE B2	Front side	0.109	0.084	0.111	0.018	0.193	0.220	0.127	0.238
	Back side	0.198	0.142	0.402	0.027	0.340	0.600	0.225	0.627
LTE B7	Front side	0.104	0.084	0.111	0.018	0.188	0.215	0.122	0.233
	Back side	0.269	0.142	0.402	0.027	0.411	0.671	0.296	0.698
LTE B41	Front side	0.073	0.084	0.111	0.018	0.157	0.184	0.091	0.202
	Back side	0.234	0.142	0.402	0.027	0.376	0.636	0.261	0.663
LTE B66	Front side	0.158	0.084	0.111	0.018	0.242	0.269	0.176	0.287
	Back side	0.278	0.142	0.402	0.027	0.420	0.680	0.305	0.707
NR N2	Front side	0.202	0.084	0.111	0.018	0.286	0.313	0.220	0.331
	Back side	0.319	0.142	0.402	0.027	0.461	0.721	0.346	0.748
NR N7	Front side	0.215	0.084	0.111	0.018	0.299	0.326	0.233	0.344
	Back side	0.328	0.142	0.402	0.027	0.470	0.730	0.355	0.757
NR N38	Front side	0.210	0.084	0.111	0.018	0.294	0.321	0.228	0.339
	Back side	0.372	0.142	0.402	0.027	0.514	0.774	0.399	0.801
NR N41	Front side	0.219	0.084	0.111	0.018	0.303	0.330	0.237	0.348
	Back side	0.386	0.142	0.402	0.027	0.528	0.788	0.413	0.815
NR N66	Front side	0.164	0.084	0.111	0.018	0.248	0.275	0.182	0.293
	Back side	0.337	0.142	0.402	0.027	0.479	0.739	0.364	0.766

Test position		SARmax (W/kg)				Summed SAR			
		WWAN Ant21	WiFi 2.4G Ant22	WiFi 5G Ant23	BT Ant22				
		1	2	3	4	1+2	1+3	1+4	1+3+4
NR N77 (3450-3550)	Front side	0.013	0.084	0.111	0.018	0.097	0.124	0.031	0.142
	Back side	0.012	0.142	0.402	0.027	0.154	0.414	0.039	0.441
NR N77 (3700-3980)	Front side	0.011	0.084	0.111	0.018	0.095	0.122	0.029	0.140
	Back side	0.005	0.142	0.402	0.027	0.147	0.407	0.032	0.434
NR N78 (3450-3550)	Front side	0.020	0.084	0.111	0.018	0.104	0.131	0.038	0.149
	Back side	0.015	0.142	0.402	0.027	0.157	0.417	0.042	0.444
NR N78 (3700-3800)	Front side	0.016	0.084	0.111	0.018	0.100	0.127	0.034	0.145
	Back side	0.014	0.142	0.402	0.027	0.156	0.416	0.041	0.443

Test position		SARmax (W/kg)				Summed SAR			
		WWAN Ant23	WiFi 2.4G Ant22	WiFi 5G Ant23	BT Ant22				
		1	2	3	4	1+2	1+3	1+4	1+3+4
NR N77 (3450-3550)	Front side	0.126	0.084	0.111	0.018	0.210	0.237	0.144	0.255
	Back side	0.312	0.142	0.402	0.027	0.454	0.714	0.339	0.741
NR N77 (3700-3980)	Front side	0.151	0.084	0.111	0.018	0.235	0.262	0.169	0.280
	Back side	0.407	0.142	0.402	0.027	0.549	0.809	0.434	0.836
NR N78 (3450-3550)	Front side	0.105	0.084	0.111	0.018	0.189	0.216	0.123	0.234
	Back side	0.254	0.142	0.402	0.027	0.396	0.656	0.281	0.683
NR N78 (3700-3800)	Front side	0.135	0.084	0.111	0.018	0.219	0.246	0.153	0.264
	Back side	0.388	0.142	0.402	0.027	0.530	0.790	0.415	0.817

Test position		SARmax (W/kg)				Summed SAR			
		WWAN Ant31	WiFi 2.4G Ant22	WiFi 5G Ant23	BT Ant22				
		1	2	3	4	1+2	1+3	1+4	1+3+4
GSM 1900	Front side	0.203	0.084	0.111	0.018	0.287	0.314	0.221	0.332
	Back side	0.282	0.142	0.402	0.027	0.424	0.684	0.309	0.711
WCDMA B2	Front side	0.176	0.084	0.111	0.018	0.260	0.287	0.194	0.305
	Back side	0.241	0.142	0.402	0.027	0.383	0.643	0.268	0.670
WCDMA B4	Front side	0.141	0.084	0.111	0.018	0.225	0.252	0.159	0.270
	Back side	0.181	0.142	0.402	0.027	0.323	0.583	0.208	0.610
LTE B2	Front side	0.213	0.084	0.111	0.018	0.297	0.324	0.231	0.342
	Back side	0.285	0.142	0.402	0.027	0.427	0.687	0.312	0.714
LTE B7	Front side	0.092	0.084	0.111	0.018	0.176	0.203	0.110	0.221
	Back side	0.133	0.142	0.402	0.027	0.275	0.535	0.160	0.562
LTE B41	Front side	0.217	0.084	0.111	0.018	0.301	0.328	0.235	0.346
	Back side	0.217	0.142	0.402	0.027	0.359	0.619	0.244	0.646
LTE B66	Front side	0.240	0.084	0.111	0.018	0.324	0.351	0.258	0.369
	Back side	0.319	0.142	0.402	0.027	0.461	0.721	0.346	0.748
NR N2	Front side	0.204	0.084	0.111	0.018	0.288	0.315	0.222	0.333
	Back side	0.277	0.142	0.402	0.027	0.419	0.679	0.304	0.706
NR N7	Front side	0.140	0.084	0.111	0.018	0.224	0.251	0.158	0.269
	Back side	0.220	0.142	0.402	0.027	0.362	0.622	0.247	0.649
NR N38	Front side	0.135	0.084	0.111	0.018	0.219	0.246	0.153	0.264
	Back side	0.201	0.142	0.402	0.027	0.343	0.603	0.228	0.630
NR N41	Front side	0.119	0.084	0.111	0.018	0.203	0.230	0.137	0.248
	Back side	0.179	0.142	0.402	0.027	0.321	0.581	0.206	0.608

NR N66	Front side	0.162	0.084	0.111	0.018	0.246	0.273	0.180	0.291
	Back side	0.202	0.142	0.402	0.027	0.344	0.604	0.229	0.631

Test position		SARmax (W/kg)				Summed SAR			
		WWAN Ant41	WiFi 2.4G Ant22	WiFi 5G Ant23	BT Ant22				
		1	2	3	4	1+2	1+3	1+4	1+3+4
GSM 850	Front side	0.157	0.084	0.111	0.018	0.241	0.268	0.175	0.286
	Back side	0.222	0.142	0.402	0.027	0.364	0.624	0.249	0.651
WCDMA B5	Front side	0.144	0.084	0.111	0.018	0.228	0.255	0.162	0.273
	Back side	0.205	0.142	0.402	0.027	0.347	0.607	0.232	0.634
LTE B12	Front side	0.074	0.084	0.111	0.018	0.158	0.185	0.092	0.203
	Back side	0.091	0.142	0.402	0.027	0.233	0.493	0.118	0.520
LTE B13	Front side	0.114	0.084	0.111	0.018	0.198	0.225	0.132	0.243
	Back side	0.131	0.142	0.402	0.027	0.273	0.533	0.158	0.560
LTE B26	Front side	0.131	0.084	0.111	0.018	0.215	0.242	0.149	0.260
	Back side	0.153	0.142	0.402	0.027	0.295	0.555	0.180	0.582
NR N26	Front side	0.162	0.084	0.111	0.018	0.246	0.273	0.180	0.291
	Back side	0.168	0.142	0.402	0.027	0.310	0.570	0.195	0.597

Hotspot:

Test position		WiFi 5G Ant23	BT Ant22	Summed SAR
		1	2	1+2
WLAN	Front side	0.167	0.031	0.198
	Back side	0.570	0.057	0.627
	Left side	/	/	/
	Right side	0.742	0.026	0.768
	Top side	0.301	0.053	0.354
	Bottom side	/	/	/

Test position		SARmax (W/kg)				Summed SAR			
		WWAN Ant11	WiFi 2.4G Ant22	WiFi 5G Ant23	BT Ant22				
		1	2	3	4	1+2	1+3	1+4	1+3+4
GSM 850	Front side	0.192	0.142	0.167	0.031	0.334	0.359	0.223	0.390
	Back side	0.360	0.280	0.570	0.057	0.640	0.930	0.417	0.987
	Left side	0.369	/	/	/	0.369	0.369	0.369	0.369
	Right side	/	0.116	0.742	0.026	0.116	0.742	0.026	0.768
	Top side	0.025	0.247	0.301	0.053	0.272	0.326	0.078	0.379
	Bottom side	/	/	/	/	/	/	/	/
WCDMA BB	Front side	0.217	0.142	0.167	0.031	0.359	0.384	0.248	0.415
	Back side	0.446	0.280	0.570	0.057	0.726	1.016	0.503	1.073
	Left side	0.440	/	/	/	0.440	0.440	0.440	0.440
	Right side	/	0.116	0.742	0.026	0.116	0.742	0.026	0.768
	Top side	0.024	0.247	0.301	0.053	0.271	0.325	0.077	0.378
	Bottom side	/	/	/	/	/	/	/	/
LTE B2	Front side	0.191	0.142	0.167	0.031	0.333	0.358	0.222	0.389
	Back side	0.378	0.280	0.570	0.057	0.658	0.948	0.435	1.005
	Left side	0.683	/	/	/	0.683	0.683	0.683	0.683
	Right side	/	0.116	0.742	0.026	0.116	0.742	0.026	0.768
	Top side	0.030	0.247	0.301	0.053	0.277	0.331	0.083	0.384
	Bottom side	/	/	/	/	/	/	/	/
LTE B7	Front side	0.220	0.142	0.167	0.031	0.362	0.387	0.251	0.418
	Back side	0.463	0.280	0.570	0.057	0.743	1.033	0.520	1.090
	Left side	0.599	/	/	/	0.599	0.599	0.599	0.599
	Right side	/	0.116	0.742	0.026	0.116	0.742	0.026	0.768
	Top side	0.085	0.247	0.301	0.053	0.332	0.386	0.138	0.439
	Bottom side	/	/	/	/	/	/	/	/
LTE B12	Front side	0.129	0.142	0.167	0.031	0.271	0.296	0.160	0.327
	Back side	0.205	0.280	0.570	0.057	0.485	0.775	0.262	0.832
	Left side	0.265	/	/	/	0.265	0.265	0.265	0.265
	Right side	/	0.116	0.742	0.026	0.116	0.742	0.026	0.768
	Top side	0.015	0.247	0.301	0.053	0.262	0.316	0.068	0.369
	Bottom side	/	/	/	/	/	/	/	/
LTE B13	Front side	0.185	0.142	0.167	0.031	0.327	0.352	0.216	0.383
	Back side	0.375	0.280	0.570	0.057	0.655	0.945	0.432	1.002
	Left side	0.435	/	/	/	0.435	0.435	0.435	0.435
	Right side	/	0.116	0.742	0.026	0.116	0.742	0.026	0.768
	Top side	0.018	0.247	0.301	0.053	0.265	0.319	0.071	0.372
	Bottom side	/	/	/	/	/	/	/	/

LTE B26	Front side	0.262	0.142	0.167	0.031	0.404	0.429	0.293	0.460
	Back side	0.485	0.280	0.570	0.057	0.765	1.055	0.542	1.112
	Left side	0.441	/	/	/	0.441	0.441	0.441	0.441
	Right side	/	0.116	0.742	0.026	0.116	0.742	0.026	0.768
	Top side	0.027	0.247	0.301	0.053	0.274	0.328	0.080	0.381
	Bottom side	/	/	/	/	/	/	/	/
LTE B66	Front side	0.107	0.142	0.167	0.031	0.249	0.274	0.138	0.305
	Back side	0.240	0.280	0.570	0.057	0.520	0.810	0.297	0.867
	Left side	0.369	/	/	/	0.369	0.369	0.369	0.369
	Right side	/	0.116	0.742	0.026	0.116	0.742	0.026	0.768
	Top side	0.024	0.247	0.301	0.053	0.271	0.325	0.077	0.378
	Bottom side	/	/	/	/	/	/	/	/
NR N7	Front side	0.223	0.142	0.167	0.031	0.365	0.390	0.254	0.421
	Back side	0.445	0.280	0.570	0.057	0.725	1.015	0.502	1.072
	Left side	0.562	/	/	/	0.562	0.562	0.562	0.562
	Right side	/	0.116	0.742	0.026	0.116	0.742	0.026	0.768
	Top side	0.073	0.247	0.301	0.053	0.320	0.374	0.126	0.427
	Bottom side	/	/	/	/	/	/	/	/
NR N26	Front side	0.388	0.142	0.167	0.031	0.530	0.555	0.419	0.586
	Back side	0.571	0.280	0.570	0.057	0.851	1.141	0.628	1.198
	Left side	0.532	/	/	/	0.532	0.532	0.532	0.532
	Right side	/	0.116	0.742	0.026	0.116	0.742	0.026	0.768
	Top side	0.032	0.247	0.301	0.053	0.279	0.333	0.085	0.386
	Bottom side	/	/	/	/	/	/	/	/
NR N38	Front side	0.194	0.142	0.167	0.031	0.336	0.361	0.225	0.392
	Back side	0.338	0.280	0.570	0.057	0.618	0.908	0.395	0.965
	Left side	0.596	/	/	/	0.596	0.596	0.596	0.596
	Right side	/	0.116	0.742	0.026	0.116	0.742	0.026	0.768
	Top side	0.116	0.247	0.301	0.053	0.363	0.417	0.169	0.470
	Bottom side	/	/	/	/	/	/	/	/
NR N41	Front side	0.196	0.142	0.167	0.031	0.338	0.363	0.227	0.394
	Back side	0.404	0.280	0.570	0.057	0.684	0.974	0.461	1.031
	Left side	0.526	/	/	/	0.526	0.526	0.526	0.526
	Right side	/	0.116	0.742	0.026	0.116	0.742	0.026	0.768
	Top side	0.101	0.247	0.301	0.053	0.348	0.402	0.154	0.455
	Bottom side	/	/	/	/	/	/	/	/
NR N66	Front side	0.114	0.142	0.167	0.031	0.256	0.281	0.145	0.312
	Back side	0.218	0.280	0.570	0.057	0.498	0.788	0.275	0.845
	Left side	0.374	/	/	/	0.374	0.374	0.374	0.374
	Right side	/	0.116	0.742	0.026	0.116	0.742	0.026	0.768
	Top side	0.247	0.247	0.301	0.053	0.494	0.548	0.300	0.601
	Bottom side	/	/	/	/	/	/	/	/

Test position		SARmax (W/kg)				Summed SAR			
		WWAN Ant12	WiFi 2.4G Ant22	WiFi 5G Ant23	BT Ant22				
		1	2	3	4	1+2	1+3	1+4	1+3+4
NR N77 (3450-3550)	Front side	0.080	0.142	0.167	0.031	0.222	0.247	0.111	0.278
	Back side	0.279	0.280	0.570	0.057	0.559	0.849	0.336	0.906
	Left side	0.226	/	/	/	0.226	0.226	0.226	0.226
	Right side	/	0.116	0.742	0.026	0.116	0.742	0.026	0.768
	Top side	0.274	0.247	0.301	0.053	0.521	0.575	0.327	0.628
	Bottom side	/	/	/	/	/	/	/	/
NR N77 (3700-3980)	Front side	0.110	0.142	0.167	0.031	0.252	0.277	0.141	0.308
	Back side	0.454	0.280	0.570	0.057	0.734	1.024	0.511	1.081
	Left side	0.351	/	/	/	0.351	0.351	0.351	0.351
	Right side	/	0.116	0.742	0.026	0.116	0.742	0.026	0.768
	Top side	0.144	0.247	0.301	0.053	0.391	0.445	0.197	0.498
	Bottom side	/	/	/	/	/	/	/	/
NR N78 (3450-3550)	Front side	0.088	0.142	0.167	0.031	0.230	0.255	0.119	0.286
	Back side	0.294	0.280	0.570	0.057	0.574	0.864	0.351	0.921
	Left side	0.277	/	/	/	0.277	0.277	0.277	0.277
	Right side	/	0.116	0.742	0.026	0.116	0.742	0.026	0.768
	Top side	0.315	0.247	0.301	0.053	0.562	0.616	0.368	0.669
	Bottom side	/	/	/	/	/	/	/	/
NR N78 (3700-3800)	Front side	0.135	0.142	0.167	0.031	0.277	0.302	0.166	0.333
	Back side	0.420	0.280	0.570	0.057	0.700	0.990	0.477	1.047
	Left side	0.401	/	/	/	0.401	0.401	0.401	0.401
	Right side	/	0.116	0.742	0.026	0.116	0.742	0.026	0.768
	Top side	0.262	0.247	0.301	0.053	0.509	0.563	0.315	0.616
	Bottom side	/	/	/	/	/	/	/	/

Test position		SARmax (W/kg)				Summed SAR			
		WWAN Ant13	WiFi 2.4G Ant22	WiFi 5G Ant23	BT Ant22				
		1	2	3	4	1+2	1+3	1+4	1+3+4
NR N77 (3450-3550)	Front side	0.009	0.142	0.167	0.031	0.151	0.176	0.040	0.207
	Back side	0.017	0.280	0.570	0.057	0.297	0.587	0.074	0.644
	Left side	0.008	/	/	/	0.008	0.008	0.008	0.008
	Right side	/	0.116	0.742	0.026	0.116	0.742	0.026	0.768
	Top side	0.020	0.247	0.301	0.053	0.267	0.321	0.073	0.374
	Bottom side	/	/	/	/	/	/	/	/
NR N77 (3700-3980)	Front side	0.004	0.142	0.167	0.031	0.146	0.171	0.035	0.202
	Back side	0.010	0.280	0.570	0.057	0.290	0.580	0.067	0.637
	Left side	0.007	/	/	/	0.007	0.007	0.007	0.007
	Right side	/	0.116	0.742	0.026	0.116	0.742	0.026	0.768
	Top side	0.010	0.247	0.301	0.053	0.257	0.311	0.063	0.364
	Bottom side	/	/	/	/	/	/	/	/
NR N78 (3450-3550)	Front side	0.016	0.142	0.167	0.031	0.158	0.183	0.047	0.214
	Back side	0.033	0.280	0.570	0.057	0.313	0.603	0.090	0.660
	Left side	0.012	/	/	/	0.012	0.012	0.012	0.012
	Right side	/	0.116	0.742	0.026	0.116	0.742	0.026	0.768
	Top side	0.035	0.247	0.301	0.053	0.282	0.336	0.088	0.389
	Bottom side	/	/	/	/	/	/	/	/
NR N78 (3700-	Front side	0.017	0.142	0.167	0.031	0.159	0.184	0.048	0.215
	Back side	0.026	0.280	0.570	0.057	0.306	0.596	0.083	0.653

3800)	Left side	0.015	/	/	/	0.015	0.015	0.015	0.015
	Right side	/	0.116	0.742	0.026	0.116	0.742	0.026	0.768
	Top side	0.030	0.247	0.301	0.053	0.277	0.331	0.083	0.384
	Bottom side	/	/	/	/	/	/	/	/

Test position		SARmax (W/kg)				Summed SAR			
		WWAN Ant14	WiFi 2.4G Ant22	WiFi 5G Ant23	BT Ant22				
		1	2	3	4	1+2	1+3	1+4	1+3+4
GSM 1900	Front side	0.296	0.142	0.167	0.031	0.438	0.463	0.327	0.494
	Back side	0.338	0.280	0.570	0.057	0.618	0.908	0.395	0.965
	Left side	0.054	/	/	/	0.054	0.054	0.054	0.054
	Right side	/	0.116	0.742	0.026	0.116	0.742	0.026	0.768
	Top side	0.386	0.247	0.301	0.053	0.633	0.687	0.439	0.740
	Bottom side	/	/	/	/	/	/	/	/
WCDMA B2	Front side	0.193	0.142	0.167	0.031	0.335	0.360	0.224	0.391
	Back side	0.429	0.280	0.570	0.057	0.709	0.999	0.486	1.056
	Left side	0.046	/	/	/	0.046	0.046	0.046	0.046
	Right side	/	0.116	0.742	0.026	0.116	0.742	0.026	0.768
	Top side	0.490	0.247	0.301	0.053	0.737	0.791	0.543	0.844
	Bottom side	/	/	/	/	/	/	/	/
WCDMA B4	Front side	0.188	0.142	0.167	0.031	0.330	0.355	0.219	0.386
	Back side	0.380	0.280	0.570	0.057	0.660	0.950	0.437	1.007
	Left side	0.124	/	/	/	0.124	0.124	0.124	0.124
	Right side	/	0.116	0.742	0.026	0.116	0.742	0.026	0.768
	Top side	0.499	0.247	0.301	0.053	0.746	0.800	0.552	0.853
	Bottom side	/	/	/	/	/	/	/	/
LTE B2	Front side	0.158	0.142	0.167	0.031	0.300	0.325	0.189	0.356
	Back side	0.321	0.280	0.570	0.057	0.601	0.891	0.378	0.948
	Left side	0.069	/	/	/	0.069	0.069	0.069	0.069
	Right side	/	0.116	0.742	0.026	0.116	0.742	0.026	0.768
	Top side	0.444	0.247	0.301	0.053	0.691	0.745	0.497	0.798
	Bottom side	/	/	/	/	/	/	/	/
LTE B7	Front side	0.101	0.142	0.167	0.031	0.243	0.268	0.132	0.299
	Back side	0.390	0.280	0.570	0.057	0.670	0.960	0.447	1.017
	Left side	0.035	/	/	/	0.035	0.035	0.035	0.035
	Right side	/	0.116	0.742	0.026	0.116	0.742	0.026	0.768
	Top side	0.334	0.247	0.301	0.053	0.581	0.635	0.387	0.688
	Bottom side	/	/	/	/	/	/	/	/
LTE B41	Front side	0.086	0.142	0.167	0.031	0.228	0.253	0.117	0.284
	Back side	0.323	0.280	0.570	0.057	0.603	0.893	0.380	0.950
	Left side	0.049	/	/	/	0.049	0.049	0.049	0.049
	Right side	/	0.116	0.742	0.026	0.116	0.742	0.026	0.768
	Top side	0.333	0.247	0.301	0.053	0.580	0.634	0.386	0.687
	Bottom side	/	/	/	/	/	/	/	/
LTE B66	Front side	0.214	0.142	0.167	0.031	0.356	0.381	0.245	0.412
	Back side	0.472	0.280	0.570	0.057	0.752	1.042	0.529	1.099
	Left side	0.135	/	/	/	0.135	0.135	0.135	0.135
	Right side	/	0.116	0.742	0.026	0.116	0.742	0.026	0.768
	Top side	0.576	0.247	0.301	0.053	0.823	0.877	0.629	0.930
	Bottom side	/	/	/	/	/	/	/	/

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NR N2	Front side	0.295	0.142	0.167	0.031	0.437	0.462	0.326	0.493
	Back side	0.408	0.280	0.570	0.057	0.688	0.978	0.465	1.035
	Left side	0.100	/	/	/	0.100	0.100	0.100	0.100
	Right side	/	0.116	0.742	0.026	0.116	0.742	0.026	0.768
	Top side	0.536	0.247	0.301	0.053	0.783	0.837	0.589	0.890
	Bottom side	/	/	/	/	/	/	/	/
NR N7	Front side	0.205	0.142	0.167	0.031	0.347	0.372	0.236	0.403
	Back side	0.370	0.280	0.570	0.057	0.650	0.940	0.427	0.997
	Left side	0.056	/	/	/	0.056	0.056	0.056	0.056
	Right side	/	0.116	0.742	0.026	0.116	0.742	0.026	0.768
	Top side	0.422	0.247	0.301	0.053	0.669	0.723	0.475	0.776
	Bottom side	/	/	/	/	/	/	/	/
NR N38	Front side	0.281	0.142	0.167	0.031	0.423	0.448	0.312	0.479
	Back side	0.559	0.280	0.570	0.057	0.839	1.129	0.616	1.186
	Left side	0.086	/	/	/	0.086	0.086	0.086	0.086
	Right side	/	0.116	0.742	0.026	0.116	0.742	0.026	0.768
	Top side	0.528	0.247	0.301	0.053	0.775	0.829	0.581	0.882
	Bottom side	/	/	/	/	/	/	/	/
NR N41	Front side	0.292	0.142	0.167	0.031	0.434	0.459	0.323	0.490
	Back side	0.532	0.280	0.570	0.057	0.812	1.102	0.589	1.159
	Left side	0.081	/	/	/	0.081	0.081	0.081	0.081
	Right side	/	0.116	0.742	0.026	0.116	0.742	0.026	0.768
	Top side	0.566	0.247	0.301	0.053	0.813	0.867	0.619	0.920
	Bottom side	/	/	/	/	/	/	/	/
NR N66	Front side	0.253	0.142	0.167	0.031	0.395	0.420	0.284	0.451
	Back side	0.510	0.280	0.570	0.057	0.790	1.080	0.567	1.137
	Left side	0.147	/	/	/	0.147	0.147	0.147	0.147
	Right side	/	0.116	0.742	0.026	0.116	0.742	0.026	0.768
	Top side	0.653	0.247	0.301	0.053	0.900	0.954	0.706	1.007
	Bottom side	/	/	/	/	/	/	/	/

Test position		SARmax (W/kg)				Summed SAR			
		WWAN Ant21	WiFi 2.4G Ant22	WiFi 5G Ant23	BT Ant22				
		1	2	3	4	1+2	1+3	1+4	1+3+4
NR N77 (3450-3550)	Front side	0.023	0.142	0.167	0.031	0.165	0.190	0.054	0.221
	Back side	0.022	0.280	0.570	0.057	0.302	0.592	0.079	0.649
	Left side	0.003	/	/	/	0.003	0.003	0.003	0.003
	Right side	0.005	0.116	0.742	0.026	0.121	0.747	0.031	0.773
	Top side	0.021	0.247	0.301	0.053	0.268	0.322	0.074	0.375
	Bottom side	/	/	/	/	/	/	/	/
NR N77 (3700-3980)	Front side	0.010	0.142	0.167	0.031	0.152	0.177	0.041	0.208
	Back side	0.009	0.280	0.570	0.057	0.289	0.579	0.066	0.636
	Left side	0.001	/	/	/	0.001	0.001	0.001	0.001
	Right side	0.003	0.116	0.742	0.026	0.119	0.745	0.029	0.771
	Top side	0.011	0.247	0.301	0.053	0.258	0.312	0.064	0.365
	Bottom side	/	/	/	/	/	/	/	/
NR N78 (3450-3550)	Front side	0.035	0.142	0.167	0.031	0.177	0.202	0.066	0.233
	Back side	0.036	0.280	0.570	0.057	0.316	0.606	0.093	0.663
	Left side	0.006	/	/	/	0.006	0.006	0.006	0.006
	Right side	0.011	0.116	0.742	0.026	0.127	0.753	0.037	0.779
	Top side	0.033	0.247	0.301	0.053	0.280	0.334	0.086	0.387
	Bottom side	/	/	/	/	/	/	/	/

NR N78 (3700-3800)	Front side	0.028	0.142	0.167	0.031	0.170	0.195	0.059	0.226
	Back side	0.028	0.280	0.570	0.057	0.308	0.598	0.085	0.655
	Left side	0.001	/	/	/	0.001	0.001	0.001	0.001
	Right side	0.004	0.116	0.742	0.026	0.120	0.746	0.030	0.772
	Top side	0.030	0.247	0.301	0.053	0.277	0.331	0.083	0.384
	Bottom side	/	/	/	/	/	/	/	/

Test position		SARmax (W/kg)				Summed SAR			
		WWAN Ant23	WiFi 2.4G Ant22	WiFi 5G Ant23	BT Ant22				
		1	2	3	4	1+2	1+3	1+4	1+3+4
NR N77 (3450-3550)	Front side	0.146	0.142	0.167	0.031	0.288	0.313	0.177	0.344
	Back side	0.342	0.280	0.570	0.057	0.622	0.912	0.399	0.969
	Left side	/	/	/	/	/	/	/	/
	Right side	0.482	0.116	0.742	0.026	0.598	1.224	0.508	1.250
	Top side	0.131	0.247	0.301	0.053	0.378	0.432	0.184	0.485
	Bottom side	/	/	/	/	/	/	/	/
NR N77 (3700-3980)	Front side	0.126	0.142	0.167	0.031	0.268	0.293	0.157	0.324
	Back side	0.275	0.280	0.570	0.057	0.555	0.845	0.332	0.902
	Left side	/	/	/	/	/	/	/	/
	Right side	0.380	0.116	0.742	0.026	0.496	1.122	0.406	1.148
	Top side	0.126	0.247	0.301	0.053	0.373	0.427	0.179	0.480
	Bottom side	/	/	/	/	/	/	/	/
NR N78 (3450-3550)	Front side	0.126	0.142	0.167	0.031	0.268	0.293	0.157	0.324
	Back side	0.275	0.280	0.570	0.057	0.555	0.845	0.332	0.902
	Left side	/	/	/	/	/	/	/	/
	Right side	0.380	0.116	0.742	0.026	0.496	1.122	0.406	1.148
	Top side	0.126	0.247	0.301	0.053	0.373	0.427	0.179	0.480
	Bottom side	/	/	/	/	/	/	/	/
NR N78 (3700-3800)	Front side	0.172	0.142	0.167	0.031	0.314	0.339	0.203	0.370
	Back side	0.498	0.280	0.570	0.057	0.778	1.068	0.555	1.125
	Left side	/	/	/	/	/	/	/	/
	Right side	0.602	0.116	0.742	0.026	0.718	1.344	0.628	1.370
	Top side	0.117	0.247	0.301	0.053	0.364	0.418	0.170	0.471
	Bottom side	/	/	/	/	/	/	/	/

Test position		SARmax (W/kg)				Summed SAR			
		WWAN Ant31	WiFi 2.4G Ant22	WiFi 5G Ant23	BT Ant22				
		1	2	3	4	1+2	1+3	1+4	1+3+4
GSM 1900	Front side	0.293	0.142	0.167	0.031	0.435	0.460	0.324	0.491
	Back side	0.408	0.280	0.570	0.057	0.688	0.978	0.465	1.035
	Left side	/	/	/	/	/	/	/	/
	Right side	0.053	0.116	0.742	0.026	0.169	0.795	0.079	0.821
	Top side	/	0.247	0.301	0.053	0.247	0.301	0.053	0.354
	Bottom side	0.524	/	/	/	0.524	0.524	0.524	0.524
WCDMA B2	Front side	0.289	0.142	0.167	0.031	0.431	0.456	0.320	0.487
	Back side	0.382	0.280	0.570	0.057	0.662	0.952	0.439	1.009
	Left side	/	/	/	/	/	/	/	/
	Right side	0.052	0.116	0.742	0.026	0.168	0.794	0.078	0.820
	Top side	/	0.247	0.301	0.053	0.247	0.301	0.053	0.354
	Bottom side	0.576	/	/	/	0.576	0.576	0.576	0.576

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WCDMA B4	Front side	0.235	0.142	0.167	0.031	0.377	0.402	0.266	0.433
	Back side	0.278	0.280	0.570	0.057	0.558	0.848	0.335	0.905
	Left side	/	/	/	/	/	/	/	/
	Right side	0.059	0.116	0.742	0.026	0.175	0.801	0.085	0.827
	Top side	/	0.247	0.301	0.053	0.247	0.301	0.053	0.354
	Bottom side	0.453	/	/	/	0.453	0.453	0.453	0.453
LTE B2	Front side	0.310	0.142	0.167	0.031	0.452	0.477	0.341	0.508
	Back side	0.457	0.280	0.570	0.057	0.737	1.027	0.514	1.084
	Left side	/	/	/	/	/	/	/	/
	Right side	0.077	0.116	0.742	0.026	0.193	0.819	0.103	0.845
	Top side	/	0.247	0.301	0.053	0.247	0.301	0.053	0.354
	Bottom side	0.604	/	/	/	0.604	0.604	0.604	0.604
LTE B7	Front side	0.130	0.142	0.167	0.031	0.272	0.297	0.161	0.328
	Back side	0.246	0.280	0.570	0.057	0.526	0.816	0.303	0.873
	Left side	/	/	/	/	/	/	/	/
	Right side	0.130	0.116	0.742	0.026	0.246	0.872	0.156	0.898
	Top side	/	0.247	0.301	0.053	0.247	0.301	0.053	0.354
	Bottom side	0.175	/	/	/	0.175	0.175	0.175	0.175
LTE B41	Front side	0.220	0.142	0.167	0.031	0.362	0.387	0.251	0.418
	Back side	0.220	0.280	0.570	0.057	0.500	0.790	0.277	0.847
	Left side	/	/	/	/	/	/	/	/
	Right side	0.103	0.116	0.742	0.026	0.219	0.845	0.129	0.871
	Top side	/	0.247	0.301	0.053	0.247	0.301	0.053	0.354
	Bottom side	0.156	/	/	/	0.156	0.156	0.156	0.156
LTE B66	Front side	0.264	0.142	0.167	0.031	0.406	0.431	0.295	0.462
	Back side	0.352	0.280	0.570	0.057	0.632	0.922	0.409	0.979
	Left side	/	/	/	/	/	/	/	/
	Right side	0.062	0.116	0.742	0.026	0.178	0.804	0.088	0.830
	Top side	/	0.247	0.301	0.053	0.247	0.301	0.053	0.354
	Bottom side	0.456	/	/	/	0.456	0.456	0.456	0.456
NR N2	Front side	0.268	0.142	0.167	0.031	0.410	0.435	0.299	0.466
	Back side	0.398	0.280	0.570	0.057	0.678	0.968	0.455	1.025
	Left side	/	/	/	/	/	/	/	/
	Right side	0.067	0.116	0.742	0.026	0.183	0.809	0.093	0.835
	Top side	/	0.247	0.301	0.053	0.247	0.301	0.053	0.354
	Bottom side	0.553	/	/	/	0.553	0.553	0.553	0.553
NR N7	Front side	0.260	0.142	0.167	0.031	0.402	0.427	0.291	0.458
	Back side	0.337	0.280	0.570	0.057	0.617	0.907	0.394	0.964
	Left side	/	/	/	/	/	/	/	/
	Right side	0.241	0.116	0.742	0.026	0.357	0.983	0.267	1.009
	Top side	/	0.247	0.301	0.053	0.247	0.301	0.053	0.354
	Bottom side	0.356	/	/	/	0.356	0.356	0.356	0.356
NR N38	Front side	0.188	0.142	0.167	0.031	0.330	0.355	0.219	0.386
	Back side	0.313	0.280	0.570	0.057	0.593	0.883	0.370	0.940
	Left side	/	/	/	/	/	/	/	/
	Right side	0.192	0.116	0.742	0.026	0.308	0.934	0.218	0.960
	Top side	/	0.247	0.301	0.053	0.247	0.301	0.053	0.354
	Bottom side	0.264	/	/	/	0.264	0.264	0.264	0.264
NR N41	Front side	0.160	0.142	0.167	0.031	0.302	0.327	0.191	0.358
	Back side	0.293	0.280	0.570	0.057	0.573	0.863	0.350	0.920
	Left side	/	/	/	/	/	/	/	/
	Right side	0.135	0.116	0.742	0.026	0.251	0.877	0.161	0.903
	Top side	/	0.247	0.301	0.053	0.247	0.301	0.053	0.354

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	Bottom side	0.261	/	/	/	0.261	0.261	0.261	0.261
NR N66	Front side	0.247	0.142	0.167	0.031	0.389	0.414	0.278	0.445
	Back side	0.271	0.280	0.570	0.057	0.551	0.841	0.328	0.898
	Left side	/	/	/	/	/	/	/	/
	Right side	0.052	0.116	0.742	0.026	0.168	0.794	0.078	0.820
	Top side	/	0.247	0.301	0.053	0.247	0.301	0.053	0.354
	Bottom side	0.452	/	/	/	0.452	0.452	0.452	0.452

Test position		SARmax (W/kg)				Summed SAR			
		WWAN Ant31	WiFi 2.4G Ant22	WiFi 5G Ant23	BT Ant22				
		1	2	3	4	1+2	1+3	1+4	1+3+4
GSM 850	Front side	0.441	0.142	0.167	0.031	0.583	0.608	0.472	0.639
	Back side	0.583	0.280	0.570	0.057	0.863	1.153	0.640	1.210
	Left side	0.272	/	/	/	0.272	0.272	0.272	0.272
	Right side	/	0.116	0.742	0.026	0.116	0.742	0.026	0.768
	Top side	/	0.247	0.301	0.053	0.247	0.301	0.053	0.354
	Bottom side	0.286	/	/	/	0.286	0.286	0.286	0.286
WCDMA B5	Front side	0.257	0.142	0.167	0.031	0.399	0.424	0.288	0.455
	Back side	0.369	0.280	0.570	0.057	0.649	0.939	0.426	0.996
	Left side	0.213	/	/	/	0.213	0.213	0.213	0.213
	Right side	/	0.116	0.742	0.026	0.116	0.742	0.026	0.768
	Top side	/	0.247	0.301	0.053	0.247	0.301	0.053	0.354
	Bottom side	0.174	/	/	/	0.174	0.174	0.174	0.174
LTE B12	Front side	0.104	0.142	0.167	0.031	0.246	0.271	0.135	0.302
	Back side	0.117	0.280	0.570	0.057	0.397	0.687	0.174	0.744
	Left side	0.100	/	/	/	0.100	0.100	0.100	0.100
	Right side	/	0.116	0.742	0.026	0.116	0.742	0.026	0.768
	Top side	/	0.247	0.301	0.053	0.247	0.301	0.053	0.354
	Bottom side	0.047	/	/	/	0.047	0.047	0.047	0.047
LTE B13	Front side	0.143	0.142	0.167	0.031	0.285	0.310	0.174	0.341
	Back side	0.187	0.280	0.570	0.057	0.467	0.757	0.244	0.814
	Left side	0.128	/	/	/	0.128	0.128	0.128	0.128
	Right side	/	0.116	0.742	0.026	0.116	0.742	0.026	0.768
	Top side	/	0.247	0.301	0.053	0.247	0.301	0.053	0.354
	Bottom side	0.081	/	/	/	0.081	0.081	0.081	0.081
LTE B26	Front side	0.200	0.142	0.167	0.031	0.342	0.367	0.231	0.398
	Back side	0.258	0.280	0.570	0.057	0.538	0.828	0.315	0.885
	Left side	0.167	/	/	/	0.167	0.167	0.167	0.167
	Right side	/	0.116	0.742	0.026	0.116	0.742	0.026	0.768
	Top side	/	0.247	0.301	0.053	0.247	0.301	0.053	0.354
	Bottom side	0.113	/	/	/	0.113	0.113	0.113	0.113
NR N26	Front side	0.226	0.142	0.167	0.031	0.368	0.393	0.257	0.424
	Back side	0.329	0.280	0.570	0.057	0.609	0.899	0.386	0.956
	Left side	0.208	/	/	/	0.208	0.208	0.208	0.208
	Right side	/	0.116	0.742	0.026	0.116	0.742	0.026	0.768
	Top side	/	0.247	0.301	0.053	0.247	0.301	0.053	0.354
	Bottom side	0.153	/	/	/	0.153	0.153	0.153	0.153

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Product specific 10g SAR:

Test position		SARmax (W/kg)			Summed SAR		
		WWAN Ant11	WiFi 5G Ant23	NFC			
		1	2	3	1+2	1+3	1+2+3
LTE B2	Front side	/	0.739	0.001	0.739	0.001	0.740
	Back side	/	0.949	0.044	0.949	0.044	0.993
	Left side	2.140	/	0.001	2.140	2.141	2.141
	Right side	/	1.832	0.001	1.832	0.001	1.833
	Top side	/	0.443	0.001	0.443	0.001	0.444
	Bottom side	/	/	0.110	/	0.110	0.110
LTE B7	Front side	/	0.739	0.001	0.739	0.001	0.740
	Back side	2.115	0.949	0.044	3.064	2.159	3.108
	Left side	2.143	/	0.001	2.143	2.144	2.144
	Right side	/	1.832	0.001	1.832	0.001	1.833
	Top side	/	0.443	0.001	0.443	0.001	0.444
	Bottom side	/	/	0.110	/	0.110	0.110
NR N7	Front side	/	0.739	0.001	0.739	0.001	0.740
	Back side	1.828	0.949	0.044	2.777	1.872	2.821
	Left side	1.437	/	0.001	1.437	1.438	1.438
	Right side	/	1.832	0.001	1.832	0.001	1.833
	Top side	/	0.443	0.001	0.443	0.001	0.444
	Bottom side	/	/	0.110	/	0.110	0.110
NR N38	Front side	/	0.739	0.001	0.739	0.001	0.740
	Back side	1.241	0.949	0.044	2.190	1.285	2.234
	Left side	1.552	/	0.001	1.552	1.553	1.553
	Right side	/	1.832	0.001	1.832	0.001	1.833
	Top side	/	0.443	0.001	0.443	0.001	0.444
	Bottom side	/	/	0.110	/	0.110	0.110
NR N41	Front side	/	0.739	0.001	0.739	0.001	0.740
	Back side	1.219	0.949	0.044	2.168	1.263	2.212
	Left side	1.526	/	0.001	1.526	1.527	1.527
	Right side	/	1.832	0.001	1.832	0.001	1.833
	Top side	/	0.443	0.001	0.443	0.001	0.444
	Bottom side	/	/	0.110	/	0.110	0.110

Test position		SARmax (W/kg)			Summed SAR		
		WWAN Ant11	WiFi 5G Ant23	NFC			
		1	2	3	1+2	1+3	1+2+3
NR N77 (3700-3980)	Front side	/	0.739	0.001	0.739	0.001	0.740
	Back side	1.863	0.949	0.044	2.812	1.907	2.856
	Left side	1.724	/	0.001	1.724	1.725	1.725
	Right side	/	1.832	0.001	1.832	0.001	1.833
	Top side	/	0.443	0.001	0.443	0.001	0.444
	Bottom side	/	/	0.110	/	0.110	0.110
NR N78 (3450-3550)	Front side	/	0.739	0.001	0.739	0.001	0.740
	Back side	1.250	0.949	0.044	2.199	1.294	2.243
	Left side	1.878	/	0.001	1.878	1.879	1.879
	Right side	/	1.832	0.001	1.832	0.001	1.833
	Top side	1.012	0.443	0.001	1.455	1.013	1.456
	Bottom side	/	/	0.110	/	0.110	0.110
NR N78 (3700-3800)	Front side	/	0.739	0.001	0.739	0.001	0.740
	Back side	1.476	0.949	0.044	2.425	1.520	2.469
	Left side	1.994	/	0.001	1.994	1.995	1.995
	Right side	/	1.832	0.001	1.832	0.001	1.833
	Top side	/	0.443	0.001	0.443	0.001	0.444
	Bottom side	/	/	0.110	/	0.110	0.110

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9 Equipment list

Test Platform	SPEAG DASY Professional
Description	SAR Test System (Frequency range 300MHz-6GHz)
Software Reference	DASY52 52.10.4(1527); SEMCAD X 14.6.14(7483); DASY8 Module SAR V16.2.4.2524

Hardware Reference

	Equipment	Manufacturer	Model	Serial Number	Calibration Date	Due date of calibration
☒	Twin Phantom	SPEAG	SAM 1	1673	NCR	NCR
☒	Twin Phantom	SPEAG	SAM V8.0	2146	NCR	NCR
☒	DAE	SPEAG	DAE4ip	1803	2023/07/14	2024/07/13
☒	DAE	SPEAG	DAE4	760	2023/06/26	2024/06/25
☒	E-Field Probe	SPEAG	EX3DV4	7821	2023/07/17	2024/07/16
☒	E-Field Probe	SPEAG	EX3DV4	3836	2023/08/07	2024/08/06
☒	Validation Kits	SPEAG	D750V3	1160	2022/06/06	2025/06/05
☒	Validation Kits	SPEAG	D835V2	4d105	2022/11/02	2025/11/01
☒	Validation Kits	SPEAG	D1750V2	1149	2022/06/17	2025/06/16
☒	Validation Kits	SPEAG	D1900V2	5d028	2022/11/02	2023/11/01
☒	Validation Kits	SPEAG	D2450V2	733	2022/11/02	2025/11/01
☒	Validation Kits	SPEAG	D2600V2	1125	2022/06/14	2025/06/13
☒	Validation Kits	SPEAG	D3500V2	1082	2022/09/19	2025/09/18
☒	Validation Kits	SPEAG	D3700V2	1046	2022/09/15	2025/09/14
☒	Validation Kits	SPEAG	D3900V2	1026	2022/09/16	2025/09/15
☒	Validation Kits	SPEAG	D5GHzV2	1165	2022/11/01	2025/10/31
☒	Dielectric parameter probes	SPEAG	DAKS-3.5	0005	2023/6/15	2024/6/14
☒	Vector Network Analyzer and Vector Reflectometer	SPEAG	DAKS_VNA R140	0140913	2023/6/7	2024/6/6
☒	Radio Communication Analyzer	Anritsu	MT8820C	6201616273	2023/02/16	2024/02/15
☒	Radio Communication Analyzer	Anritsu	MT8820C	6201381734	2023/05/25	2024/05/24
☒	Radio Communication Analyzer	Anritsu	MT8820C	6201074424	2022/11/18	2023/11/17
☒	RF Bi-Directional Coupler	Agilent	86205-60001	MY31400031	NCR	NCR
☒	Signal Generator	Agilent	N5171B	MY53050736	2023/02/16	2024/02/15
☒	Preamplifier	Mini-Circuits	ZHL-42W	15542	NCR	NCR
☒	Preamplifier	Compliance Directions Systems Inc.	AMP28-3W	073501433	NCR	NCR
☒	Power Meter	Agilent	E4416A	GB41292095	2023/02/16	2024/02/15
☒	Power Sensor	Agilent	8481H	MY41091234	2023/02/16	2024/02/15
☒	Power Sensor	R&S	NRP-Z92	100025	2023/02/16	2024/02/15

☒	Attenuator	SHX	TS2-3dB	30704	NCR	NCR
☒	Speed reading thermometer	MingGao	T809	NA	2023/05/26	2024/05/25
☒	Humidity and Temperature Indicator	KIMTOKA	KIMTOKA	NA	2023/02/17	2024/02/16
☒	Humidity and Temperature Indicator	CHIGAO	HTC-1	ZGL2020120550471	2023/05/26	2024/05/25
☒	Humidity and Temperature Indicator	CHIGAO	HTC-1	ZGL2020120550472	2023/05/26	2024/05/25

Note: All the equipments are within the valid period when the tests are performed.

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10 Calibration certificate

Please see the Appendix C

11 Photographs

Please see the Appendix D

Appendix A: Detailed System Check Results

Appendix B: Detailed Test Results

Appendix C: Calibration certificate

Appendix D: Photographs

Appendix E: Conducted RF Output Power

Appendix F: Antenna Locations

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