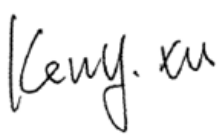
SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

FCC SAR TEST REPORT

Application No.:	SZCR2404001136WM
Applicant:	Guangdong OPPO Mobile Telecommunications Corp., Ltd.
Manufacturer:	Guangdong OPPO Mobile Telecommunications Corp., Ltd.
EUT Description:	Mobile Phone
Model No.:	CPH2637
Trade Mark:	OPPO
FCC ID:	R9C-OP23282
Standards:	FCC 47CFR §2.1093
Date of Receipt:	2024/04/08
Date of Test:	2024/04/08 to 2024/05/06
Date of Issue:	2024/05/08
Test Result :	**PASS ***

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

Authorized Signature:



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Laboratory Manager

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

Revision History			
Report Number	***Revision***	***Description***	***Issue Date***
SZCR240400113609	01	Original	2024/05/08

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	0.59	0.14	0.32	/
GSM1900	1.09	0.44	**1.02**	/
WCDMA Band II	1.06	0.39	0.45	/
WCDMA Band IV	0.73	0.22	0.43	/
WCDMA Band V	0.56	0.16	0.27	/
LTE Band 2	**1.19**	0.52	0.72	/
LTE Band 7	1.14	0.26	0.38	/
LTE Band 12(17)	0.63	0.28	0.27	/
LTE Band 13	0.71	0.25	0.25	/
LTE Band 26(5)	0.58	0.17	0.28	/
LTE Band 38	0.77	0.37	0.57	/
LTE Band 41	1.17	0.34	0.85	**2.93**
LTE Band 66(4)	0.96	0.27	0.60	/
NR Band n2	0.99	**0.67**	0.75	/
NR Band n7	1.12	0.35	0.52	/
NR Band n12	0.89	0.22	0.28	/
NR Band n26(5)	0.73	0.24	0.46	/
NR Band n38	1.09	0.44	0.66	/
NR Band n41	1.09	0.44	0.66	/
NR Band n66	1.13	0.31	0.60	/
WI-FI (2.4GHz)	1.13	0.15	0.37	/
WI-FI (5GHz)	1.01	0.45	0.87	1.44
BT	0.34	<0.10	<0.10	/
NFC	/	/	/	<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	1.53	0.87	1.58	2.95
SPLSR	/	/	/	/
SPLSR Limited	0.04			0.1

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 4 (frequency range: 1710-1755 MHz) is covered by LTE band 66 (frequency range: 1710-1780 MHz). SAR in LTE band 5 (frequency range: 824-849 MHz) are covered by LTE band 26 (frequency range: 814-849 MHz).SAR in LTE band 17 (frequency range: 704-716 MHz) is covered by LTE band 12 (frequency range: 699-716 MHz). The SAR in NR band 5 (frequency range: 824-849 MHz) is covered by NR band 26 (frequency range: 814-849 MHz).The SAR in NR band 38 (frequency range: 2570-2620 MHz) is covered by NR band 41 (frequency range: 2496-2690 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.

Contents

1 General Information

1.1 Details of Client

Applicant:	Guangdong OPPO Mobile Telecommunications Corp., Ltd.
Address of Applicant:	NO.18 HaiBin Road, Wusha Village, Chang'an Town, DongGuan City, Guangdong Province, P.R. China
Manufacturer:	Guangdong OPPO Mobile Telecommunications Corp., Ltd.
Address of Manufacturer:	NO.18 HaiBin Road, Wusha Village, Chang'an Town, DongGuan City, Guangdong Province, P.R. 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, Durant Lin, Bernie Zhuang, James Zheng

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

1.4 General Description of EUT

Product Name:	Mobile Phone		
Model No.:	CPH2637		
Trade Mark:	OPPO		
Product Phase:	Identical Prototype		
IMEI:	867650070020775, 867650070021799, 867650070023050 867650070022110, 867650070023233, 867650070021310		
Hardware Version:	11		
Software Version:	ColorOS 14.0		
Antenna Type:	IFA Antenna		
Device Operating Configurations:			
Modulation Mode:	**GSM**:GMSK,8PSK; **WCDMA**:QPSK,16QAM **LTE**:QPSK,16QAM,64QAM **5G NR**:DET-s-OFDM(QPSK,16QAM,64QAM,256QAM) CP-OFDM(QPSK,16QAM,64QAM,256QAM) **WIFI**:DSSS,OFDM; **BT**:GFSK, π/4DQPSK,8DPSK		
Device Class:	B		
GPRS Multi-slots Class:	12	EGPRS Multi-slots Class:	12
HSDPA UE Category:	24	HSUPA UE Category:	6
Power Class:	4, tested with power level 5(GSM850, GSM900)		
	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 (Class 2/3)	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 n12	699~716	729~746
	NR Band n26	814~849	859~894
	NR Band n38	2570~2620	2570~2620
	NR Band n41	2496~2690	2496~2690
	NR Band n66	1710~1780	2110~2120
	WIFI 2.4G	2412~2462	2412~2462
	WIFI 5G	5150~5350	5150~5350
		5470~5600	5470~5600
		5650~5725	5650~5725
		5725~5850	5725~5850
	BT	2402~2480	2402~2480
	NFC	13.56	13.56
RF Cable:	Provided by applicant Provided by the laboratory		
Battery Information:	Model:	BLPA79	
	Normal Voltage:	3.91V	
	Rated capacity:	4870mAh	
	Manufacturer:	Chongqing Cosmx Battery 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.

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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 171.28mm. 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
Ant0	≤25mm	≤25mm	≤25mm	≤25mm	>25mm	≤25mm
Ant1	≤25mm	≤25mm	≤25mm	>25mm	≤25mm	>25mm
Ant4	≤25mm	≤25mm	≤25mm	>25mm	≤25mm	>25mm
Ant7	≤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.

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 MTK 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 patameters obtained form 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	Plimit 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 < SARregulatory_limit x 10(-total uncertainty)/10

Uncertainty dB(k=2)	All Band
Total uncertainty	1.2

Exposure position	**Frequency band**	**SAR Regulatory Limit W/kg(1g)**	**SAR design target W/kg(1g)**
Head	WWAN	1.6	1.2
Body worn	WWAN	1.6	1.2

Hotsopt	WWAN	1.6	1.2
Exposure position	**Frequency band**	**SAR Regulatory Limit W/kg(10g)**	**SAR design target W/kg(10g)**
Limbs	WWAN	4.0	3.0

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 Pmax, when needed, but enforces power limiting to maintain time-averaged transmit power to Plimit. Below table shows Plimit EFS settings and maximum tune up output power Pmax configured for this EUT for various transmit conditions (DSI: Device State Index).

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

Band	Mode	Antenna	P_{max}-(average)	P_{limit} (average)			P_{max}- (burst)	P_{limit} (burst)		
				ECI1(State1) (Body_Worn)	ECI2(State2) (Head)	ECI3(State3) (Hotspot)		ECI1(State1) (Body_Worn)	ECI2(State2) (Head)	ECI3(State3) (Hotspot)
GSM 850	GPRS 4TS	0	24.00	24.00	24.00	24.00	27.01	27.01	27.01	27.01
	GPRS 4TS	1	24.00	24.00	23.00	24.00	27.01	27.01	26.01	27.01
GSM 1900	GPRS 2TS	0	21.00	21.00	21.00	21.00	27.02	27.02	27.02	27.02
	GPRS 2TS	1	21.00	21.00	16.00	20.50	27.02	27.02	22.02	26.52
WCDMA_B2	RMC	0	24.00	22.00	24.00	19.50	24.00	22.00	24.00	19.50
	RMC	1	24.00	21.00	16.50	18.50	24.00	21.00	16.50	18.50
WCDMA_B4	RMC	0	24.00	21.00	24.00	18.50	24.00	21.00	24.00	18.50
	RMC	1	24.00	20.50	16.00	18.00	24.00	20.50	16.00	18.00
WCDMA_B5	RMC	0	24.00	24.00	24.00	23.00	24.00	24.00	24.00	23.00
	RMC	1	24.00	24.00	21.50	23.50	24.00	24.00	21.50	23.50
LTE_B2	QPSK	0	23.00	22.50	23.00	20.50	23.00	22.50	23.00	20.50
	QPSK	1	23.00	21.50	16.50	19.50	23.00	21.50	16.50	19.50
LTE_B4	QPSK	0	24.20	21.70	24.20	19.20	24.20	21.70	24.20	19.20
	QPSK	1	24.20	21.20	17.20	19.20	24.20	21.20	17.20	19.20
	QPSK	4	23.20	23.20	23.20	21.70	23.20	23.20	23.20	21.70
LTE_B5	QPSK	0	24.20	24.20	24.20	23.70	24.20	24.20	24.20	23.70
	QPSK	1	24.20	24.20	21.70	24.20	24.20	24.20	21.70	24.20
LTE_B7	QPSK	0	24.20	22.70	24.20	20.20	24.20	22.70	24.20	20.20
	QPSK	1	24.20	18.70	16.20	16.70	24.20	18.70	16.20	16.70
	QPSK	4	23.20	21.70	21.70	19.20	23.20	21.70	21.70	19.20
LTE_B12	QPSK	0	24.20	24.20	24.20	24.20	24.20	24.20	24.20	24.20
	QPSK	1	24.20	24.20	22.70	23.70	24.20	24.20	22.70	23.70
LTE_B13	QPSK	0	23.50	23.50	23.50	23.50	23.50	23.50	23.50	23.50
	QPSK	1	23.50	23.50	22.00	23.50	23.50	23.50	22.00	23.50
LTE_B17	QPSK	0	24.20	24.20	24.20	24.20	24.20	24.20	24.20	24.20
	QPSK	1	24.20	24.20	22.70	23.70	24.20	24.20	22.70	23.70
LTE_B26	QPSK	0	24.20	24.20	24.20	23.70	24.20	24.20	24.20	23.70
	QPSK	1	24.20	24.20	21.70	24.20	24.20	24.20	21.70	24.20
LTE_B66	QPSK	0	24.20	21.70	24.20	19.20	24.20	21.70	24.20	19.20
	QPSK	1	24.20	21.20	17.20	19.20	24.20	21.20	17.20	19.20
	QPSK	4	23.30	23.30	23.30	21.80	23.30	23.30	23.30	21.80
LTE_B38	QPSK	0	22.20	22.20	22.20	21.20	24.19	24.19	24.19	23.19
	QPSK	1	22.20	21.70	18.20	19.20	24.19	23.69	20.19	21.19
	QPSK	4	20.20	20.20	20.20	18.70	22.19	22.19	22.19	20.69
LTE_B41 PC3	QPSK	0	23.00	23.00	23.00	23.00	24.99	24.99	24.99	24.99
	QPSK	1	22.60	22.60	18.10	21.10	24.59	24.59	20.09	23.09
	QPSK	4	21.30	21.30	21.30	20.80	23.29	23.29	23.29	22.79
LTE_B41 PC2	QPSK	0	22.20	22.20	22.20	22.20	25.84	25.84	25.84	25.84
	QPSK	1	22.20	22.20	17.70	20.70	25.84	25.84	21.34	24.34
	QPSK	4	20.80	20.80	20.80	20.30	24.44	24.44	24.44	23.94
NR5G_N2	QPSK	0	23.00	22.00	23.00	20.00	23.00	22.00	23.00	20.00
	QPSK	1	23.00	21.00	15.00	19.00	23.00	21.00	15.00	19.00

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NR5G_N5	QPSK	0	24.20	24.20	24.20	24.20	24.20	24.20	24.20	24.20
	QPSK	1	24.20	24.20	21.20	24.20	24.20	24.20	21.20	24.20
NR5G_N7	QPSK	0	24.30	22.30	24.30	19.80	24.30	22.30	24.30	19.80
	QPSK	1	24.30	18.30	15.80	15.80	24.30	18.30	15.80	15.80
	QPSK	4	23.30	21.30	19.80	18.80	23.30	21.30	19.80	18.80
NR5G_N12	QPSK	0	24.20	24.20	24.20	24.20	24.20	24.20	24.20	24.20
	QPSK	1	24.20	24.20	22.70	23.20	24.20	24.20	22.70	23.20
NR5G_N26	QPSK	0	24.20	24.20	24.20	24.20	24.20	24.20	24.20	24.20
	QPSK	1	24.20	24.20	21.20	24.20	24.20	24.20	21.20	24.20
NR5G_N38	QPSK	0	24.50	23.00	24.50	20.50	24.50	23.00	24.50	20.50
	QPSK	1	24.50	20.00	17.00	19.50	24.50	20.00	17.00	19.50
	QPSK	4	23.50	20.00	20.00	17.50	23.50	20.00	20.00	17.50
NR5G_N41	QPSK	0	24.50	23.00	24.50	20.50	24.50	23.00	24.50	20.50
	QPSK	1	24.50	20.00	17.00	18.00	24.50	20.00	17.00	18.00
	QPSK	4	23.50	20.00	20.00	17.50	23.50	20.00	20.00	17.50
NR5G_N66	QPSK	0	24.30	21.30	24.30	18.80	24.30	21.30	24.30	18.80
	QPSK	1	24.30	20.80	17.30	18.80	24.30	20.80	17.30	18.80
	QPSK	4	23.30	23.30	23.30	21.80	23.30	23.30	23.30	21.80

Note:
1) *Pmax is used for RF tune up procedure. The maximum allowed output power is equal to Pmax + Total uncertainty.
2) The max allowed output power is the Plimit + Total uncertainty, and if Plimit is higher than Pmax, the device output power will be Pmax 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 India 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) 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.

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

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

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 Configuraion

3.1 The SAR Measurement System

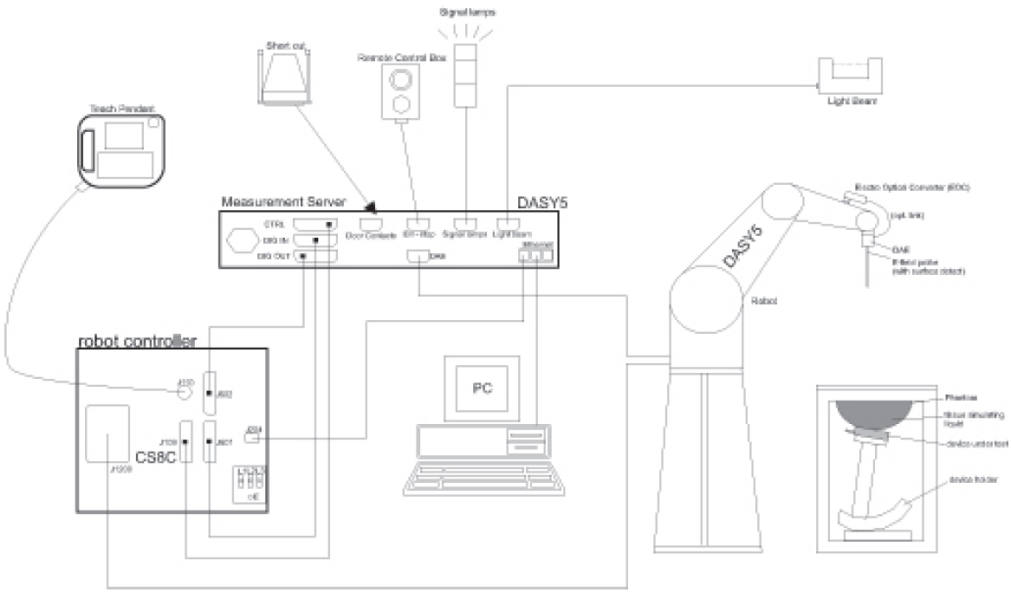
This SAR Measurement System uses a Computer-controlled 3-D stepper motor system (SPEAG DASY professional system). A E-field probe is used to determine the internal electric fields. The SAR can be obtained from the equation SAR= σ (|Ei|2)/ ρ where σ and ρ are the conductivity and mass density of the tissue-Simulate.

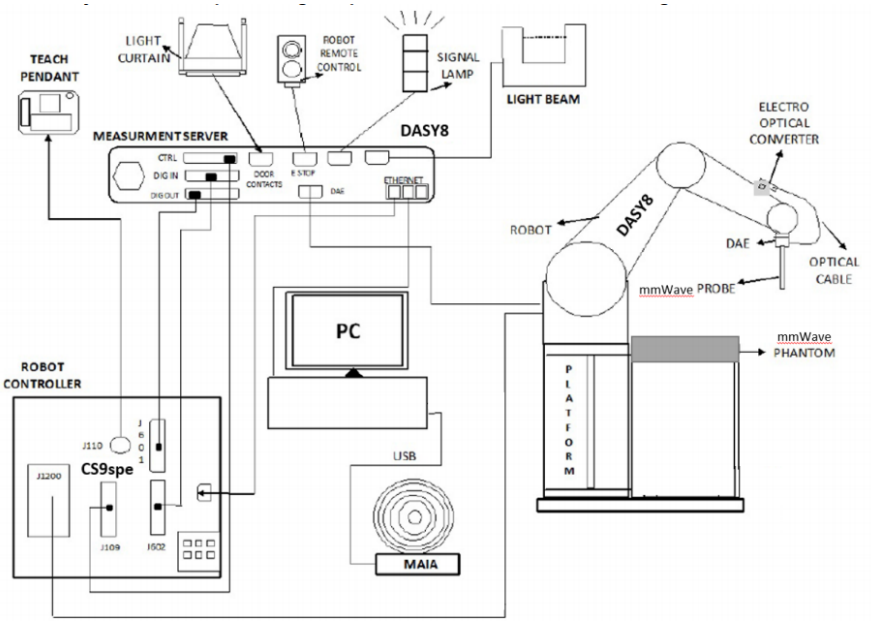
The DASY system for performing compliance tests consists of the following items:
A standard high precision 6-axis robot (Stabile RX family) with controller, teach pendant and software. An arm extension for accommodation the data acquisition electronics (DAE).

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

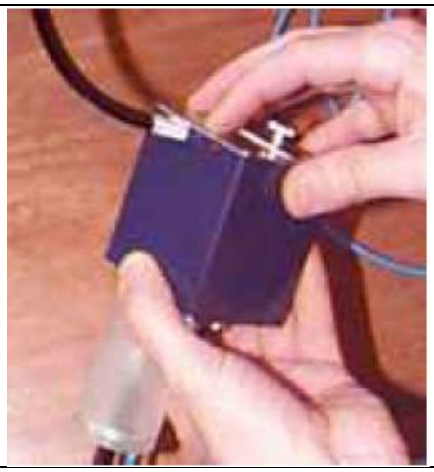
- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- A probe alignment unit which improves the (absolute) accuracy of the probe positioning.
- A computer operating Windows .
- DASY software.
- 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 Proble 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	DASY52 SAR and higher, EASY4/MRI

3.3 Data Acquistion Electronics (DAE)

Model	DAE
Construction	Signal amplifier, multiplexer, A/D converter and control logic. Serial optical link for communication with DASY 5 and higher 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	pprox.. 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	pprox.. 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.

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 “DAE”. 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.

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

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.

Measurements and results are all in compliance with the standards listed. All measurements and results are recorded and maintained at the laboratory performing the tests and measurement uncertainties are taken into account when comparing measurements to pass/ fail criteria. The expanded uncertainty (95% CONFIDENCE INTERVAL) is 21.02%.

a	b	c	d	e = f(d,k)	g	i = C*g/e	K
Uncertainty Component	Section in IEC/EN 62209-1	Tol (%)	Prob . Dist.	Div.	Ci (10g)	10g ui (%)	Vi (Veff)
Probe calibration	7.2.1	6.65	N	1	1	6.65	∞
Axial isotropy	7.2.1.2	0.5	R	$\sqrt{3}$	$(1-\mathrm{Cp})^{1/2}$	0.20	∞
hemispherical isotropy	7.2.1.2	2.6	R	$\sqrt{3}$	$\sqrt{\mathrm{Cp}}$	1.06	∞
Boundary effect	7.2.1.5	1.0	R	$\sqrt{3}$	1	0.58	∞

Linearity	7.2.1.3	0.6	R	$\sqrt{3}$	1	0.35	∞
System detection limit	7.2.1.4	0.25	R	$\sqrt{3}$	1	0.14	∞
Readout electronics	7.2.1.6	0.3	N	1	1	0.30	∞
Response time	7.2.1.7	0	R	$\sqrt{3}$	1	0.00	∞
Integration time	7.2.1.8	2.6	R	$\sqrt{3}$	1	1.50	∞
RF ambient Condition - Noise	7.2.3.6	3	R	$\sqrt{3}$	1	1.73	∞
RF ambient Condition - reflections	7.2.3.6	3	R	$\sqrt{3}$	1	1.73	∞
Probe positioning- mechanical tolerance	7.2.2.1	1.5	R	$\sqrt{3}$	1	0.87	∞
Probe positioning- with respect to phantom	7.2.2.3	2.9	R	$\sqrt{3}$	1	1.67	∞
Max. SAR evaluation	7.2.4	1	R	$\sqrt{3}$	1	0.58	∞
Test sample positioning	7.2.2.4	4.0	N	1	1	4.0	9
Device holder uncertainty	7.2.2.4.2	3.6	N	1	1	3.60	∞
Output power variation - SAR drift measurement	7.2.3.5	5	R	$\sqrt{3}$	1	2.89	∞
Phantom uncertainty (shape and thickness tolerances)	7.2.2.2	4	R	$\sqrt{3}$	1	2.31	∞
Liquid conductivity - deviation from target values	7.2.3.3	5	R	$\sqrt{3}$	0.43	1.24	∞
Liquid conductivity - measurement uncertainty	7.2.3.3	5.78	N	1	0.43	2.49	5
Liquid permittivity - deviation from target values	7.2.3.4	5	R	$\sqrt{3}$	0.49	1.41	∞
Liquid permittivity - measurement uncertainty	7.2.3.4	0.62	N	1	0.49	0.30	5
Combined standard uncertainty				RSS		10.51	334
Expanded uncertainty (95% CONFIDENCE INTERVAL)				k=2		**21.02**	

Table 3： Measurement Uncertainty

5 Desciption of Test Position

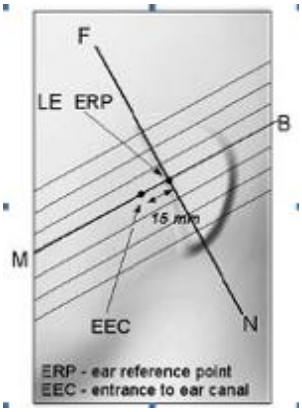
5.1 The Head Test Position

5.1.1 SAM Phantom Shape

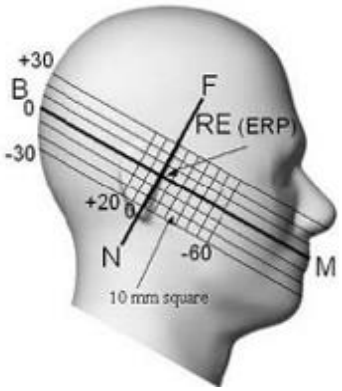
F-3. Front, back, and side views of SAM (model for the phantom shell). Full-head model is for illustration purposes only-procedures in this recommended practice are intended primarily for the phantom setup.

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)

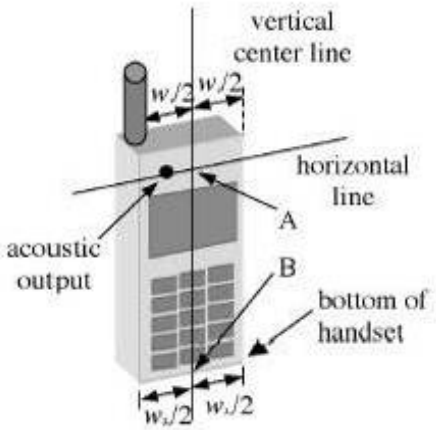


F-5. Close-up side view of phantom, showing the ear region, N-F and B-M lines, and seven cross-sectional plane locations

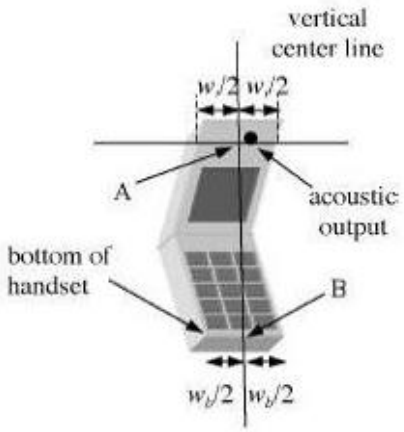


F-6.Side view of the phantom showing relevant markings and seven cross-sectional plane locations

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 “check” position

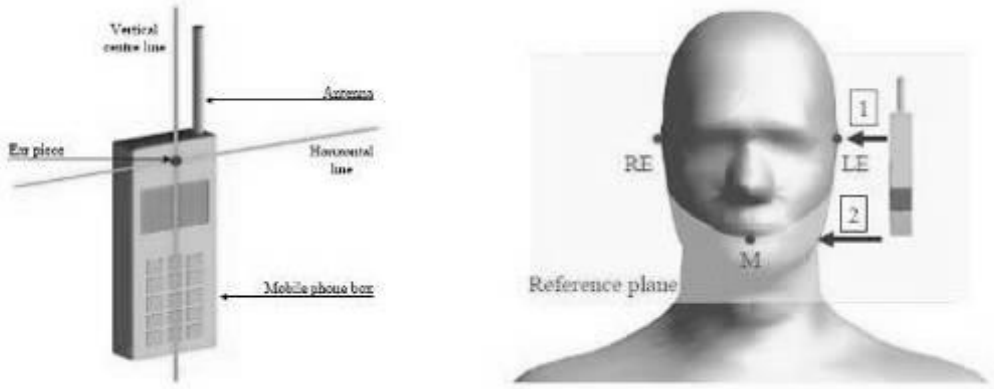
a) Position the device with the vertical centre line of the body of the device and the horizontal line crossing the centre of the ear piece in a plane parallel to the sagittal plane of the phantom (“initial position”). While maintaining the device in this plane, align the vertical centre line with the 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.

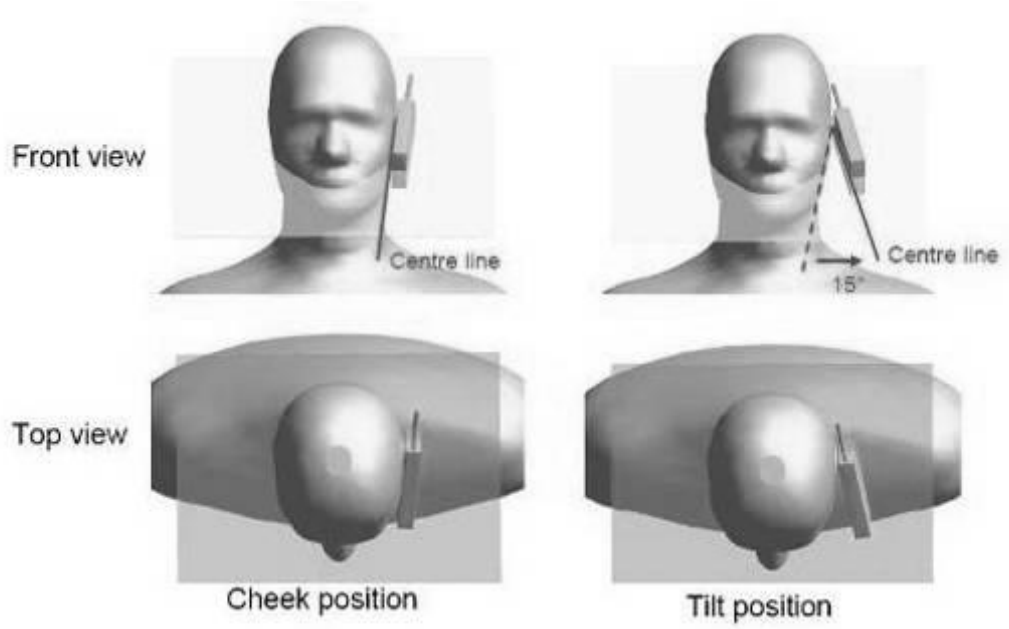
5.1.4 Definition of the “tilted” position

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

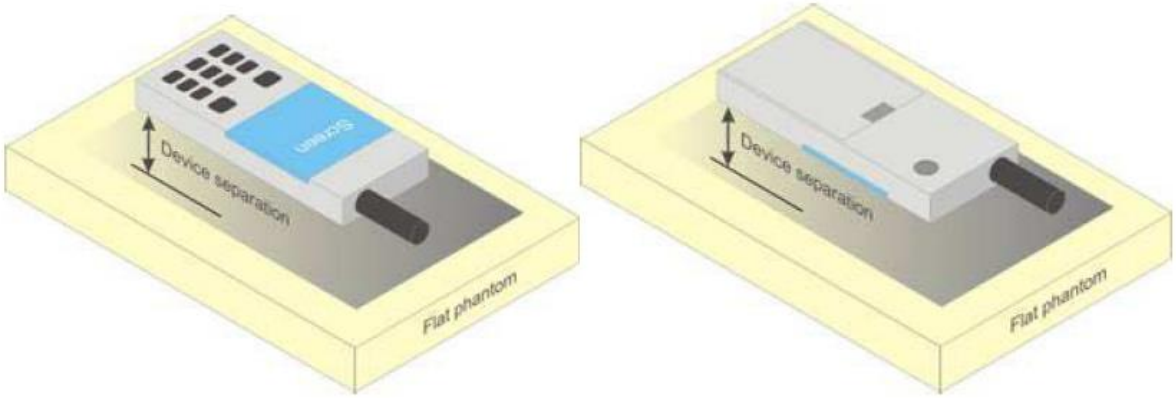
5.2 The Body Test Position

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 Band41 (Ant1):

Ant 1 Test Record													
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	SAR (W/kg) 10-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)	Product Specific 10-g SAR Exclusion
Hotspot Test data (Separate 10mm 1RB) with Class3 State3													
Front side	20	QPSK 1_0	40185/2549.5	1:1.58	0.247	0.135	0.14	22.22	24.60	1.730	0.427	22	Yes
Back side	20	QPSK 1_0	40185/2549.5	1:1.58	0.675	0.293	0.10	22.22	24.60	1.730	1.168	22	Yes
Left side	20	QPSK 1_0	40185/2549.5	1:1.58	0.265	0.130	0.05	22.22	24.60	1.730	0.458	22	Yes
Top side	20	QPSK 1_0	40185/2549.5	1:1.58	0.532	0.234	0.15	22.22	24.60	1.730	0.920	22	Yes
Back side	20	QPSK 1_99	39750/2506	1:1.58	0.655	0.294	-0.07	21.96	24.60	1.837	**1.203**	22	NO
Back side	20	QPSK 1_99	40620/2593	1:1.58	0.458	0.215	0.13	22.16	24.60	1.754	0.803	22	Yes
Back side	20	QPSK 1_0	41055/2636.5	1:1.58	0.371	0.181	-0.01	22.20	24.60	1.738	0.645	22	Yes
Back side	20	QPSK 1_99	41490/2680	1:1.58	0.270	0.145	0.15	22.10	24.60	1.778	0.480	22	Yes
Top side	20	QPSK 1_99	39750/2506	1:1.58	0.647	0.284	-0.05	22.04	24.60	1.803	1.167	22	Yes
Top side	20	QPSK 1_99	40620/2593	1:1.58	0.262	0.115	-0.05	22.16	24.60	1.754	0.460	22	Yes
Top side	20	QPSK 1_0	41055/2636.5	1:1.58	0.216	0.093	-0.19	22.20	24.60	1.738	0.375	22	Yes
Top side	20	QPSK 1_99	41490/2680	1:1.58	0.130	0.055	0.11	22.10	24.60	1.778	0.231	22	Yes
Back side	20	QPSK PCC 1_99	39750/2506	1:1.58	0.588	0.275	0.16	21.91	24.60	1.858	1.092	22.1	Yes
		QPSK SCC 1_0	39948/2525.8										
Hotspot Test data (Separate 10mm 50%RB) with Class3 State3													
Front side	20	QPSK 50_0	40185/2549.5	1:1.58	0.236	0.127	0.00	22.56	24.60	1.600	0.377	22	Yes
Back side	20	QPSK 50_0	40185/2549.5	1:1.58	0.443	0.146	-0.15	22.56	24.60	1.600	0.709	22	Yes
Left side	20	QPSK 50_0	40185/2549.5	1:1.58	0.252	0.128	-0.17	22.56	24.60	1.600	0.403	22	Yes
Top side	20	QPSK 50_0	40185/2549.5	1:1.58	0.525	0.219	0.10	22.56	24.60	1.600	0.840	22	Yes
Top side	20	QPSK 50_50	39750/2506	1:1.58	0.642	0.248	0.19	22.31	24.60	1.694	1.088	22	Yes
Top side	20	QPSK 50_0	40620/2593	1:1.58	0.308	0.134	-0.02	22.54	24.60	1.607	0.495	22	Yes

Top side	20	QPSK 50_50	41055/2636.5	1:1.58	0.176	0.081	0.19	22.42	24.60	1.652	0.291	22	Yes
Top side	20	QPSK 50_0	41490/2680	1:1.58	0.154	0.070	-0.14	22.39	24.60	1.663	0.256	22	Yes

6 SAR System Verificaion 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	700-1000	1700-2000	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% HSL13MHz is composed of the following ingredients: Water: 50-90% Non-ionic detergents: 5-50% Nacl: 0-2% Preservative: 0.03-0.1%					

Table 4： Recipe of Tissue Simulate Liquid

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6.1.2 Measurement for Tissue Simulate Liquid

The Conductivity (σ) and Permittivity (εr) are listed in Table 2. For the SAR measurement given in this report.

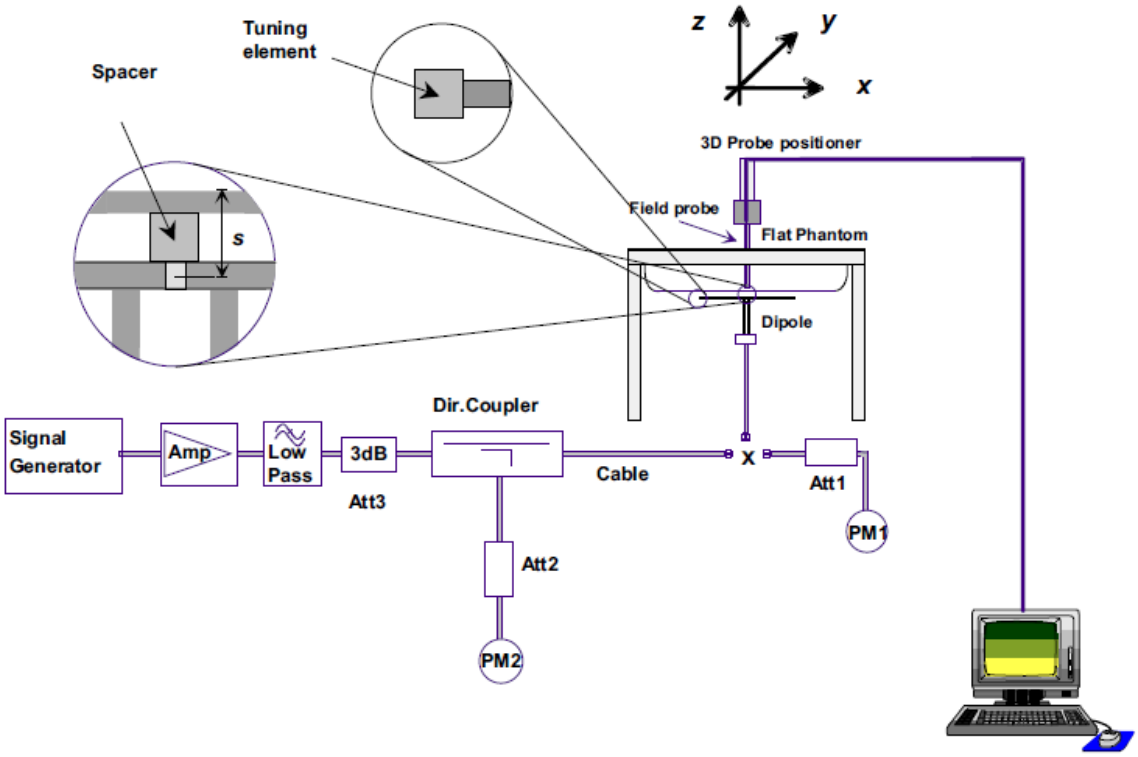
The temperature variation of the Tissue Simulate Liquids was 22±2°C.

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)		
13 Head	13	53.700	0.757	55.00	0.75	-2.36%	0.93%	22	2024/4/28
750 Head	750	41.600	0.900	41.90	0.89	-0.72%	1.12%	22.3	2024/4/10
750 Head	750	42.800	0.890	41.90	0.89	2.15%	0.00%	22.2	2024/4/19
835 Head	835	41.300	0.941	41.50	0.90	-0.48%	4.56%	22.3	2024/4/9
835 Head	835	43.053	0.914	41.50	0.90	3.74%	1.56%	22.2	2024/4/9
835 Head	835	42.400	0.929	41.50	0.90	2.17%	3.22%	22.5	2024/4/22
1750 Head	1750	40.566	1.331	40.10	1.37	1.16%	-2.85%	22.1	2024/4/8
1750 Head	1750	4/	1.410	40.10	1.37	-0.25%	2.92%	22.3	2024/4/11
1750 Head	1750	40.500	1.380	40.10	1.37	1.00%	0.73%	22.2	2024/4/15
1900 Head	1900	39.900	1.430	40.00	1.40	-0.25%	2.14%	22.3	2024/4/12
1900 Head	1900	40.400	1.410	40.00	1.40	1.00%	0.71%	22.4	2024/4/17
1900 Head	1900	40.181	1.383	40.00	1.40	0.45%	-1.21%	22.4	2024/4/18
2450 Head	2450	40.775	1.789	39.20	1.80	4.02%	-0.61%	22.2	2024/4/17
2600 Head	2600	38.888	1.975	39.00	1.96	-0.29%	0.77%	22.1	2024/4/11
2600 Head	2600	39.409	2.003	39.00	1.96	1.05%	2.19%	22.1	2024/4/12
2600 Head	2600	39.949	1.967	39.00	1.96	2.43%	0.36%	22.4	2024/4/13
2600 Head	2600	39.819	1.967	39.00	1.96	2.10%	0.36%	22.4	2024/4/15
2600 Head	2600	37.953	2.050	39.00	1.96	-2.69%	4.58%	22.1	2024/5/7
5250 Head	5250	37.286	4.677	35.90	4.66	3.86%	0.36%	22.2	2024/4/20
5600 Head	5600	36.886	5.010	35.50	5.07	3.90%	-1.18%	22.2	2024/4/20
5750 Head	5750	36.547	5.274	35.40	5.22	3.24%	1.03%	22.2	2024/4/20

Table 5： 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) 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 20% 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 Test System Verification

Per FCC KDB Publication 865664 D02v01r02, SAR system validation status should be documented to confirm measurement accuracy. The SAR systems (including SAR probes, system components and software versions) used for this device were validated against its performance specifications prior to the SAR measurements.

Reference dipoles were used with the required tissue- equivalent media for system validation, according to the procedures outlined in FCC KDB Publication 865664 D01v01r04 and IEEE 1528-2013. Since SAR probe calibrations are frequency dependent, each probe calibration point was validated at a frequency within the valid frequency range of the probe calibration point, using the system that normally operates with the probe for routine SAR measurements and according to the required tissue-equivalent media.

All the probes also have been calibrated for both CW and modulated signals. Related modulation test configurations for which the measurement system has been validated per FCC KDB Publication 865664 D01v01r04 for scenarios when CW probe calibrations are used with other signal types. SAR systems were validated for modulated signals with a periodic duty cycle, such as GMSK, or with a high peak to average ratio (>5 dB), such as OFDM according to FCC KDB Publication 865664 D01v01r04.

For some wider frequency points, according to KDB Publication 865664 D02v01r02 and System Verification, our probe meets the requirements for broadband SAR testing. For more probe calibration information, please refer to Appendix C.

6.2.3 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)		
CLA-13	Head	0.11	0.07	0.46	0.29	0.42	0.27	8.31%	8.27%	22	2024/4/28
D750V3	Head	2.20	1.46	8.80	5.84	8.37	5.53	5.14%	5.61%	22.3	2024/4/10
D750V3	Head	2.11	1.39	8.44	5.56	8.37	5.53	0.84%	0.54%	22.2	2024/4/19
D835V2	Head	2.40	1.58	9.60	6.32	9.53	6.29	0.73%	0.48%	22.3	2024/4/9
D835V2	Head	2.38	1.56	9.52	6.24	9.53	6.29	-0.10%	-0.79%	22.2	2024/4/9
D835V2	Head	2.47	1.62	9.88	6.48	9.53	6.29	3.67%	3.02%	22.5	2024/4/22
D1750V2	Head	9.25	4.92	37.00	19.68	36.60	19.30	1.09%	1.97%	22.1	2024/4/8
D1750V2	Head	9.55	5.13	38.20	20.52	36.60	19.30	4.37%	6.32%	22.3	2024/4/11
D1750V2	Head	9.48	5.02	37.92	20.08	36.60	19.30	3.61%	4.04%	22.2	2024/4/15
D1900V2	Head	10.36	5.48	41.44	21.92	39.50	20.60	4.91%	6.41%	22.3	2024/4/12
D1900V2	Head	10.40	5.52	41.60	22.08	39.50	20.60	5.32%	7.18%	22.4	2024/4/17
D1900V2	Head	10.10	5.19	40.40	20.76	39.50	20.60	2.28%	0.78%	22.4	2024/4/18
D2450V2	Head	13.20	6.37	52.80	25.48	52.20	24.30	1.15%	4.86%	22.2	2024/4/17
D2600V2	Head	14.50	6.55	58.00	26.20	57.70	25.80	0.52%	1.55%	22.1	2024/4/11
D2600V2	Head	14.50	6.54	58.00	26.16	57.70	25.80	0.52%	1.40%	22.1	2024/4/12
D2600V2	Head	14.60	6.51	58.40	26.04	57.70	25.80	1.21%	0.93%	22.4	2024/4/13
D2600V2	Head	14.40	6.45	57.60	25.80	57.70	25.80	-0.17%	0.00%	22.4	2024/4/15
D2600V2	Head	14.20	6.41	56.80	25.64	57.70	25.80	-1.56%	-0.62%	22.1	2024/5/7
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)		
D5GHzV2	Head(5.25GHz)	7.59	2.16	75.90	21.60	77.30	22.10	-1.81%	-2.26%	22.2	2024/4/20
	Head(5.6GHz)	7.57	2.13	75.70	21.30	81.30	23.10	-6.89%	-7.79%	22.2	2024/4/20
	Head(5.75GHz)	7.52	2.17	75.20	21.70	77.10	21.30	-2.46%	1.88%	22.2	2024/4/20

Table 6： SAR System Check Result

6.2.4 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, GSM 900 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, GSM 900 and GSM 1900. The tests in the band of GSM 850, GSM 900 and GSM 1900 are performed in the mode of GPRS/EGPRS function. Since the GPRS class is 12 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 12 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. 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, 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

RMC 12.2kbps setting is used to evaluate SAR. If the maximum output power for production units in HSDPA / HSUPA is ≤ ¼ dB higher than RMC 12.2Kbps or when the highest measured SAR of the RMC12.2Kbps is scaled by the ratio of specified maximum output power of HSDPA / HSUPA to RMC12.2Kbps and the adjusted SAR is ≤ 1.5 W/kg, SAR measurement is not required for HSDPA / HSUPA.

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

HS-DSCH Category	MaximumHS-DSCH Codes Received	Minimum Inter-TTI Interval	MaximumHS-DSCH TransportBlockBits/HS-DSCH TTI	TotalSoft 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 8： 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_c (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 9： 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 10：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 11：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.

d) HSPA+

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 $\beta_{hs} = 30/15 * \beta_c$.

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.

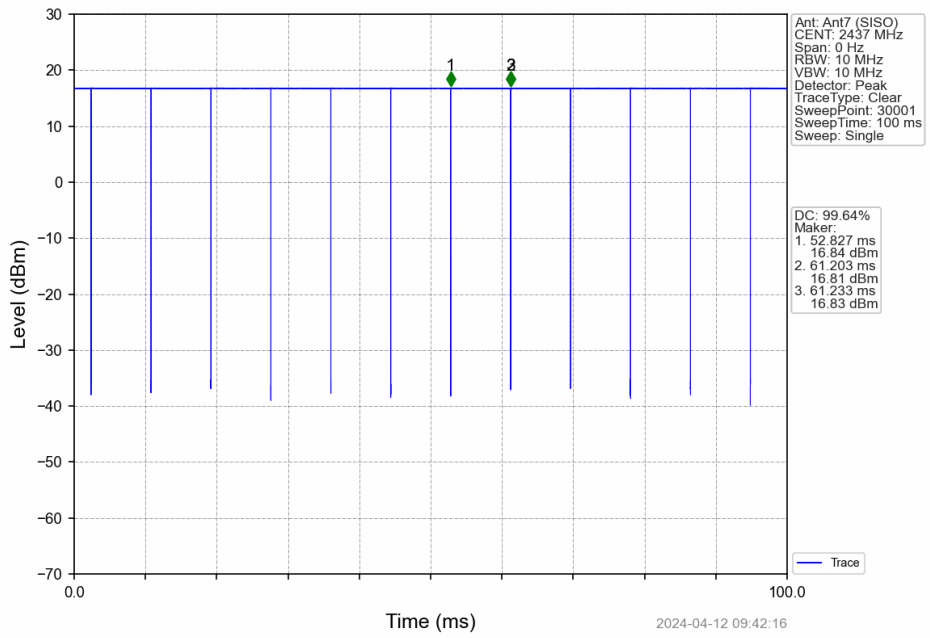
7.2.3 WIFI Test Configuration

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

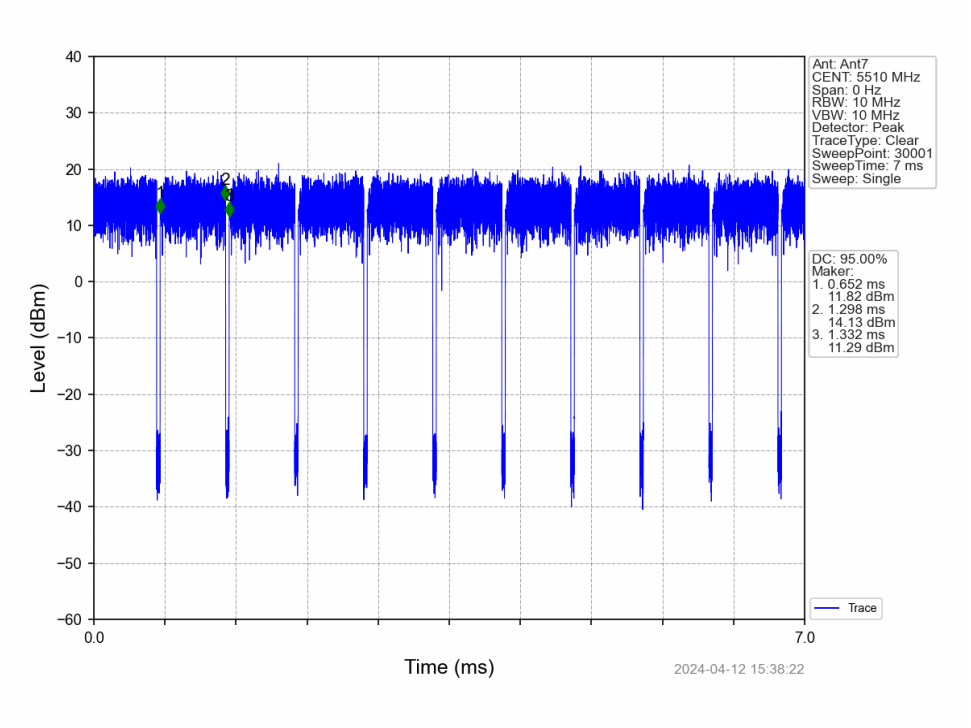
1) Wi-Fi 2.4GHz 802.11b:

Duty cycle=(61.203-52.827) / (61.233-52.827)=99.64%



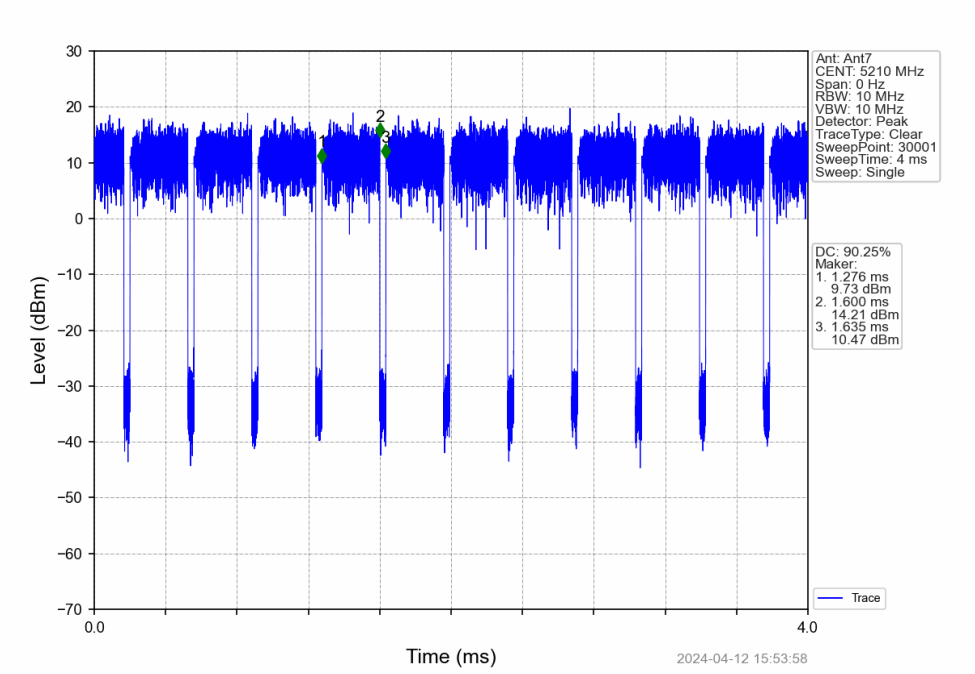
2) Wi-Fi 5GHz 802.11n40:

Duty cycle=(1.298-0.652) / (1.332-0.652)=95%



3) Wi-Fi 5GHz 802.11ac80:

Duty cycle=(1.6-1.276) / (1.635-1.276)=90.25 %



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 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”

7.2.3.4 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.

7.2.3.5 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.

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

Establishing connections with base station simulators ensure a consistent means for testing SAR and are recommended for evaluating SAR. 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:

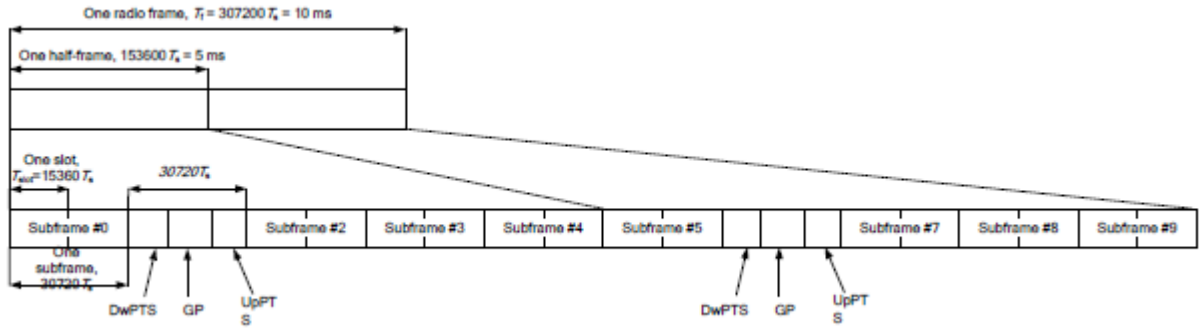


Table 4.2-1: Configuration of special subframe (lengths of DwPTS/GP/UpPTS).

Special subframe configuration	Normal cyclic prefix in downlink			Extended cyclic prefix in downlink		
	DwPTS	UpPTS		DwPTS	UpPTS	
		Normal cyclic prefix in uplink	Extended cyclic prefix in uplink		Normal cyclic prefix in uplink	Extended cyclic prefix in uplink
0	6592.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			-	-	-

Table 4.2-2: Uplink-downlink configurations.

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

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

Band	Bandwidth					
	1.4 MHz	3M MHz	5MHz	10MHz	15MHz	20MHz
LTE Band 2	Yes	Yes	Yes	Yes	Yes	Yes
LTE Band 4	Yes	Yes	Yes	Yes	Yes	Yes
LTE Band 5	Yes	Yes	Yes	Yes	N/A	N/A
LTE Band 7	N/A	N/A	Yes	Yes	Yes	Yes
LTE Band 12	Yes	Yes	Yes	Yes	N/A	N/A
LTE Band 13	N/A	N/A	Yes	Yes	N/A	N/A
LTE Band 17	N/A	N/A	Yes	Yes	N/A	N/A
LTE Band 26	Yes	Yes	Yes	Yes	Yes	N/A
LTE Band 38	N/A	N/A	Yes	Yes	Yes	Yes
LTE Band 41	N/A	N/A	Yes	Yes	Yes	Yes
LTE Band 66	Yes	Yes	Yes	Yes	Yes	Yes

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 ≤ 50% limit SAR value, 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 >90% limit SAR value, SAR is required for all three RB offset configurations for that required test channel.

2) QPSK with 50% RB allocation

For QPSK with 50%RB, SAR is not required when the highest maximum output power for 50%RB is not higher than the maximum output power in 1 RB allocations and the highest reported SAR for 1 RB in 1) is ≤ 75% limit SAR value. Otherwise, SAR is only required measure for the worst case of 1RB allocation used the highest maximum output power channel and if the reported SAR is> 90% limit SAR value, the remaining required test channels must also be tested.

3) QPSK with 100% RB allocation

For QPSK 100% RB allocation, SAR is not required when the highest maximum output power for 100%RB allocation is not higher than the maximum output power in 1 RB allocations and the highest reported SAR for 1 RB in 1) is ≤ 75% limit SAR value. Otherwise, SAR is only required measure for the worst case of 1RB allocation used the highest maximum output power channel and if the reported SAR is> 90% limit SAR value, 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 > 90% limit SAR value.

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 > 90% limit SAR value.

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_66B
CA_66C
CA_7B
CA_2A-2A
CA_4A-4A
CA_5A-5A
CA_7A-7A
CA_41A-41A
CA_66A-66A
CA_2A-4A
CA_2A-5A
CA_2A-7A
CA_2A-26A
CA_2A-38A
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-41A
CA_38A-66A
CA_2A-4A-5A
CA_2A-4A-7A
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_41A-41C
CA_5A-7C-66A
CA_5A-7A-66A-66A
CA_7C-66A-66A
CA_41A-41A-41C
CA_41C-41C
CA_41C-41D

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CA_41F
Uplink LTE CA
CA_7C
CA_38C
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

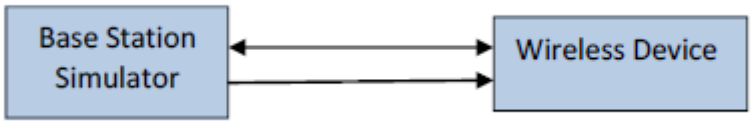
4)When the reported SAR for UL CA configuration, described above, is > 1.2 W/kg, UL CA SAR is also required for all required test channels (PCC based)

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.

6)General PCC and SCC configuration selection procedure
- PCC uplink channel, channel bandwidth, modulation and RB configurations were selected based on section C)3)b)ii) of KDB 941225 D05 V01r02. All LTE bandwidth conducted powers needed for PCC uplink configuration selection can be found in appendix E. The downlink PCC channel was paired with the selected PCC uplink channel according to normal configurations without carrier aggregation.

- To maximize aggregated bandwidth, highest channel bandwidth available for that CA combination was selected for SCC. For inter-band CA, the SCC downlink channels were selected near the middle of their transmission bands. For contiguous intra-band CA, the downlink channel spacing between the component carriers was set to multiple of 300 kHz less than the nominal channel spacing defined in section 5.4.1A of 3GPP TS 36.521. For non-contiguous intra-band CA, the downlink channel spacing between the component carriers was set to be larger than the nominal channel spacing and provided maximum separation between the component carriers.

All selected PCC and SCC(s) remained fully within the uplink/downlink transmission band of the respective component carrier.



DL CA Power Measurement Setup

c) Inter-band carrier aggregation requirements for uplink.

1. For Inter-band uplink CA mode, MTK 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.

7.2.5 NR Band Test Configuration

1. NR Band n2/n5/n7/n12/n26/n38/n41/n66 support SA mode. n5/n7/n26/n38/n41/n66 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 66		
		Ant0	Ant1	Ant4	Ant0	Ant1	Ant4	Ant0	Ant1	Ant0	Ant1	Ant4	Ant0	Ant1	Ant4
n5	Ant0										√	√		√	√
	Ant1									√		√	√		√
n7	Ant0		√	√		√	√							√	√
	Ant1	√		√	√		√						√		√
	Ant4	√	√		√	√							√	√	
n26	Ant0										√	√			
	Ant1									√		√			
n38	Ant0					√	√		√					√	√
	Ant1				√		√	√					√		√
	Ant4				√	√		√	√				√	√	
n41	Ant0					√	√							√	√
	Ant1				√		√						√		√
	Ant4				√	√							√	√	
n66	Ant0		√	√					√		√	√			
	Ant1	√		√				√		√		√			
	Ant4	√	√					√	√	√	√				

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

Band			n2	n5	n7	n12	n26	n38	n41	n66
NR mode		SA	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		NSA	No	Yes	No	No	No	Yes	Yes	Yes
Modulation	DFT-s-OFDM	QPSK	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		16QAM	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		64QAM	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		256QAM	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	CP-OFDM	QPSK	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		16QAM	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		64QAM	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		256QAM	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Max Duty Cycle			100%	100%	100%	100%	100%	100%	100%	100%

Band	SCS	Bandwidth												
		5MHz	10MHz	15MHz	20MHz	25MHz	30MHz	40MHz	50MHz	60MHz	70MHz	80MHz	90MHz	100MHz
n2	15 kHz	Yes	Yes	Yes	Yes	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	30 kHz	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	15 kHz	Yes	Yes	Yes	Yes	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	30 kHz	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	15 kHz	Yes	Yes	Yes	Yes	Yes	Yes	Yes	N/A	N/A	N/A	N/A	N/A	N/A
	30 kHz	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
n12	15 kHz	Yes	Yes	Yes	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	30 kHz	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	15 kHz	Yes	Yes	Yes	Yes	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	30 kHz	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	15 kHz	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
	30 kHz	N/A	Yes	Yes	Yes	N/A	Yes	Yes	N/A	N/A	N/A	N/A	N/A	N/A
n41	15 kHz	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
	30 kHz	N/A	Yes	Yes	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
n66	15 kHz	Yes	Yes	Yes	Yes	N/A	N/A	Yes	N/A	N/A	N/A	N/A	N/A	N/A
	30 kHz	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

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, MTK 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 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

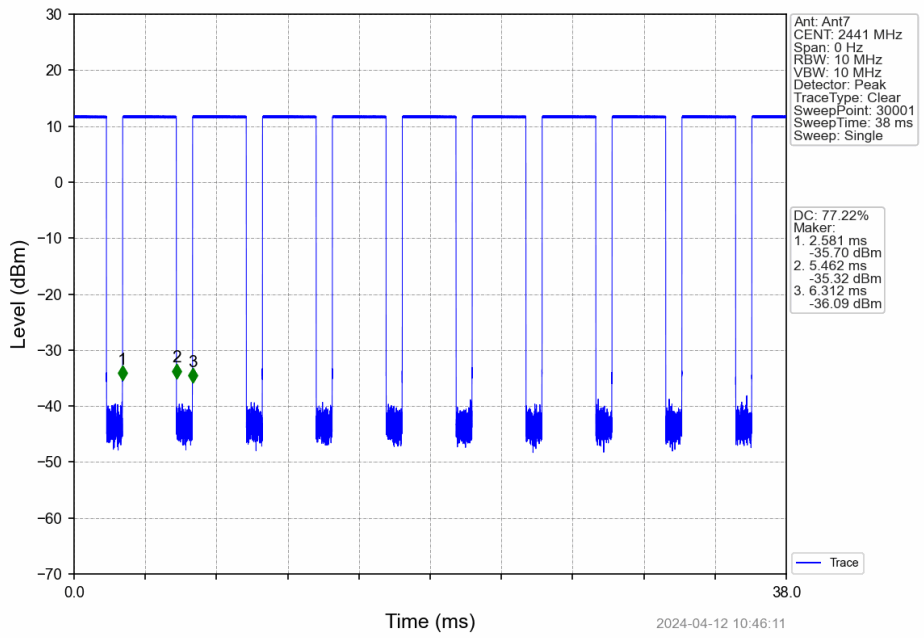
the mid-band channel(s) when there are at least 3 channels. For configurations with multiple mid-band channels, due to an even number of channels, both channels should be measured. Power measurement is required for the transmission mode configuration with the highest maximum output power specified for 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=(5.462-2.581) / (6.312-2.581)=77.22%



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

GSM850 SAR Test Record											
Ant 0 Test Record											
Test position	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	SAR (W/kg) 10-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Head Test Data State2											
Left cheek	GPRS 4TS	190/836.6	1:2.075	0.173	0.118	-0.07	27.06	28.00	1.242	0.215	22.2
Left tilted	GPRS 4TS	190/836.6	1:2.075	0.070	0.049	0.04	27.06	28.00	1.242	0.087	22.2
Right cheek	GPRS 4TS	190/836.6	1:2.075	0.115	0.080	0.10	27.06	28.00	1.242	0.143	22.2
Right tilted	GPRS 4TS	190/836.6	1:2.075	0.060	0.041	0.02	27.06	28.00	1.242	0.075	22.2
Body worn Test data(Separate 15mm) State1											
Front side	GPRS 4TS	190/836.6	1:2.075	0.099	0.069	0.07	27.06	28.00	1.242	0.123	22.2
Back side	GPRS 4TS	190/836.6	1:2.075	0.114	0.070	0.05	27.06	28.00	1.242	**0.142**	22.2
Hotspot Test data(Separate 10mm) State3											
Front side	GPRS 4TS	190/836.6	1:2.075	0.178	0.109	0.09	27.06	28.00	1.242	0.221	22.2
Back side	GPRS 4TS	190/836.6	1:2.075	0.260	0.151	0.05	27.06	28.00	1.242	**0.323**	22.2
Left side	GPRS 4TS	190/836.6	1:2.075	0.092	0.061	-0.01	27.06	28.00	1.242	0.114	22.2
Right side	GPRS 4TS	190/836.6	1:2.075	0.079	0.053	0.05	27.06	28.00	1.242	0.098	22.2
Bottom side	GPRS 4TS	190/836.6	1:2.075	0.209	0.110	0.08	27.06	28.00	1.242	0.260	22.2
Ant 1 Test Record											
Test position	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	SAR (W/kg) 10-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Head Test Data State2											
Left cheek	GPRS 4TS	190/836.6	1:2.075	0.334	0.221	-0.05	26.10	27.00	1.230	0.411	22.2
Left tilted	GPRS 4TS	190/836.6	1:2.075	0.268	0.177	0.08	26.10	27.00	1.230	0.330	22.2
Right cheek	GPRS 4TS	190/836.6	1:2.075	0.481	0.282	0.06	26.10	27.00	1.230	**0.592**	22.2
Right tilted	GPRS 4TS	190/836.6	1:2.075	0.416	0.256	0.00	26.10	27.00	1.230	0.512	22.2
Body worn Test data(Separate 15mm) State1											
Front side	GPRS 4TS	190/836.6	1:2.075	0.081	0.051	-0.05	27.05	28.00	1.245	0.101	22.2
Back side	GPRS 4TS	190/836.6	1:2.075	0.087	0.054	0.04	27.05	28.00	1.245	0.108	22.2
Hotspot Test data(Separate 10mm) State3											
Front side	GPRS 4TS	190/836.6	1:2.075	0.157	0.096	-0.17	27.05	28.00	1.245	0.195	22.2
Back side	GPRS 4TS	190/836.6	1:2.075	0.191	0.114	-0.09	27.05	28.00	1.245	0.238	22.2
Left side	GPRS 4TS	190/836.6	1:2.075	0.129	0.082	0.10	27.05	28.00	1.245	0.161	22.2
Top side	GPRS 4TS	190/836.6	1:2.075	0.142	0.090	0.13	27.05	28.00	1.245	0.177	22.2

Table 12：SAR of GSM850 for Head, Body and Hotspot.

8.2.2 SAR Result of GSM1900

GSM1900 SAR Test Record											
Ant 0 Test Record											
Test position	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	SAR (W/kg) 10-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Head Test Data State2											
Left cheek	GPRS 2TS	661/1880	1:4.15	0.054	0.032	0.06	27.24	28.00	1.191	0.065	22.2
Left tilted	GPRS 2TS	661/1880	1:4.15	0.024	0.015	0.09	27.24	28.00	1.191	0.029	22.2
Right cheek	GPRS 2TS	661/1880	1:4.15	0.050	0.031	0.01	27.24	28.00	1.191	0.060	22.2
Right tilted	GPRS 2TS	661/1880	1:4.15	0.033	0.019	0.08	27.24	28.00	1.191	0.039	22.2
Body worn Test data(Separate 15mm) State1											
Front side	GPRS 2TS	661/1880	1:4.15	0.114	0.069	0.05	27.29	28.00	1.178	0.134	21.9
Back side	GPRS 2TS	661/1880	1:4.15	0.192	0.115	0.04	27.29	28.00	1.178	0.226	21.9
Hotspot Test data(Separate 10mm) State3											
Front side	GPRS 2TS	661/1880	1:4.15	0.215	0.126	0.01	27.29	28.00	1.178	0.253	21.9
Back side	GPRS 2TS	661/1880	1:4.15	0.361	0.218	-0.17	27.29	28.00	1.178	0.425	21.9
Left side	GPRS 2TS	661/1880	1:4.15	0.058	0.034	0.08	27.29	28.00	1.178	0.068	21.9
Right side	GPRS 2TS	661/1880	1:4.15	0.124	0.068	0.08	27.29	28.00	1.178	0.146	21.9
Bottom side	GPRS 2TS	661/1880	1:4.15	0.336	0.189	0.12	27.29	28.00	1.178	0.396	21.9
Ant 1 Test Record											
Test position	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	SAR (W/kg) 10-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Head Test Data State2											
Left cheek	GPRS 2TS	661/1880	1:4.15	0.363	0.176	0.00	22.09	23.00	1.233	0.448	22.2
Left tilted	GPRS 2TS	661/1880	1:4.15	0.436	0.218	0.01	22.09	23.00	1.233	0.538	22.2
Right cheek	GPRS 2TS	661/1880	1:4.15	0.728	0.377	0.03	22.09	23.00	1.233	0.898	22.2
Right tilted	GPRS 2TS	661/1880	1:4.15	0.767	0.326	0.02	22.09	23.00	1.233	0.946	22.2
Right cheek	GPRS 2TS	512/1850.2	1:4.15	0.660	0.344	0.01	22.18	23.00	1.208	0.797	22.2
Right cheek	GPRS 2TS	810/1909.8	1:4.15	0.779	0.334	0.19	22.05	23.00	1.245	0.969	22.2
Right tilted	GPRS 2TS	512/1850.2	1:4.15	0.710	0.303	0.16	22.18	23.00	1.208	0.858	22.2
Right tilted	GPRS 2TS	810/1909.8	1:4.15	0.874	0.354	0.13	22.05	23.00	1.245	**1.088**	22.2
Right tilted with repeat	GPRS 2TS	810/1909.8	1:4.15	0.840	0.352	0.03	22.05	23.00	1.245	1.045	22.2
Body worn Test data(Separate 15mm) State1											
Front side	GPRS 2TS	661/1880	1:4.15	0.206	0.112	0.01	27.29	28.00	1.178	0.243	21.9
Back side	GPRS 2TS	661/1880	1:4.15	0.374	0.206	0.15	27.29	28.00	1.178	**0.440**	21.9
Hotspot Test data(Separate 10mm) State3											
Front side	GPRS 2TS	661/1880	1:4.15	0.344	0.175	0.12	26.64	27.50	1.219	0.419	21.9
Back side	GPRS 2TS	661/1880	1:4.15	0.578	0.286	0.01	26.64	27.50	1.219	0.705	21.9

Left side	GPRS 2TS	661/1880	1:4.15	0.091	0.050	0.08	26.64	27.50	1.219	0.111	21.9
Top side	GPRS 2TS	661/1880	1:4.15	0.839	0.409	-0.03	26.64	27.50	1.219	**1.023**	21.9
Top side	GPRS 2TS	512/1850.2	1:4.15	0.816	0.398	-0.05	26.72	27.50	1.197	0.977	21.9
Top side	GPRS 2TS	810/1909.8	1:4.15	0.805	0.400	0.09	26.60	27.50	1.230	0.990	21.9
Top side with repeat	GPRS 2TS	661/1880	1:4.15	0.778	0.387	0.12	26.64	27.50	1.219	0.948	21.9

Test Position	Channel/ Frequency (MHz)	Measured SAR (1g)	1st Repeated SAR (1g)	Ratio
Right tilted	810/1909.8	0.874	0.840	1.04

Table 13：SAR of GSM1900 for Head, Body and Hotspot.

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8.2.3 SAR Result of WCDMA Band II

WB2 SAR Test Record											
Ant 0 Test Record											
Test position	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	SAR (W/kg) 10-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Head Test Data State2											
Left cheek	RMC	9400/1880	1:1	0.150	0.089	-0.06	24.63	24.80	1.040	0.156	22.1
Left tilted	RMC	9400/1880	1:1	0.072	0.042	0.01	24.63	24.80	1.040	0.075	22.1
Right cheek	RMC	9400/1880	1:1	0.133	0.078	0.02	24.63	24.80	1.040	0.138	22.1
Right tilted	RMC	9400/1880	1:1	0.089	0.051	0.04	24.63	24.80	1.040	0.092	22.1
Body worn Test data(Separate 15mm) State1											
Front side	RMC	9400/1880	1:1	0.157	0.095	-0.01	22.61	22.80	1.045	0.164	22.1
Back side	RMC	9400/1880	1:1	0.230	0.145	-0.15	22.61	22.80	1.045	0.240	22.1
Hotspot Test data(Separate 10mm) State3											
Front side	RMC	9400/1880	1:1	0.147	0.088	0.05	20.11	20.30	1.045	0.154	22.1
Back side	RMC	9400/1880	1:1	0.247	0.140	-0.06	20.11	20.30	1.045	0.258	22.1
Left side	RMC	9400/1880	1:1	0.040	0.023	0.05	20.11	20.30	1.045	0.042	22.1
Right side	RMC	9400/1880	1:1	0.084	0.046	0.03	20.11	20.30	1.045	0.087	22.1
Bottom side	RMC	9400/1880	1:1	0.318	0.180	0.04	20.11	20.30	1.045	0.332	22.1
Ant 1 Test Record											
Test position	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	SAR (W/kg) 10-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Head Test Data State2											
Left cheek	RMC	9400/1880	1:1	0.489	0.242	-0.06	16.96	17.30	1.081	0.529	22.1
Left tilted	RMC	9400/1880	1:1	0.544	0.264	-0.01	16.96	17.30	1.081	0.588	22.1
Right cheek	RMC	9400/1880	1:1	0.782	0.390	0.08	16.96	17.30	1.081	0.846	22.1
Right tilted	RMC	9400/1880	1:1	0.983	0.423	0.13	16.96	17.30	1.081	**1.063**	22.1
Right cheek	RMC	9262/1852.4	1:1	0.815	0.397	0.06	16.91	17.30	1.094	0.892	22.1
Right cheek	RMC	9538/1907.6	1:1	0.938	0.456	0.08	16.92	17.30	1.091	1.024	22.1
Right tilted	RMC	9262/1852.4	1:1	0.740	0.365	-0.05	16.91	17.30	1.094	0.810	22.1
Right tilted	RMC	9538/1907.6	1:1	0.855	0.414	0.09	16.92	17.30	1.091	0.933	22.1
Right tilted with repeat	RMC	9400/1880	1:1	0.973	0.419	0.02	16.96	17.30	1.081	1.052	22.1
Body worn Test data(Separate 15mm) State1											
Front side	RMC	9400/1880	1:1	0.199	0.110	0.08	21.52	21.80	1.067	0.212	22.3
Back side	RMC	9400/1880	1:1	0.367	0.202	0.05	21.52	21.80	1.067	**0.391**	22.3
Hotspot Test data(Separate 10mm) State3											
Front side	RMC	9400/1880	1:1	0.223	0.119	-0.07	19.01	19.30	1.069	0.238	22.3
Back side	RMC	9400/1880	1:1	0.418	0.215	-0.09	19.01	19.30	1.069	**0.447**	22.3
Left side	RMC	9400/1880	1:1	0.082	0.045	-0.02	19.01	19.30	1.069	0.087	22.3
Top side	RMC	9400/1880	1:1	0.199	0.110	0.08	19.01	19.30	1.069	0.213	22.3

Test Position	Channel/ Frequency (MHz)	Measured SAR (1g)	1st Repeated SAR (1g)	Ratio
Right tilted	9400/1880	0.983	0.973	1.01

Table 14：SAR of WCDMA Band II for Head, Body and Hotspot.

8.2.4 SAR Result of WCDMA Band IV

WB4 SAR Test Record											
Ant 0 Test Record											
Test position	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	SAR (W/kg) 10-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Head Test Data State2											
Left cheek	RMC	1412/1732.4	1:1	0.095	0.058	0.09	24.51	24.80	1.069	0.102	22.1
Left tilted	RMC	1412/1732.4	1:1	0.040	0.023	0.05	24.51	24.80	1.069	0.043	22.1
Right cheek	RMC	1412/1732.4	1:1	0.063	0.038	0.08	24.51	24.80	1.069	0.067	22.1
Right tilted	RMC	1412/1732.4	1:1	0.060	0.033	0.01	24.51	24.80	1.069	0.064	22.1
Body worn Test data(Separate 15mm) State1											
Front side	RMC	1412/1732.4	1:1	0.031	0.017	0.06	21.51	21.80	1.069	0.033	22.1
Back side	RMC	1412/1732.4	1:1	0.123	0.079	-0.15	21.51	21.80	1.069	0.131	22.1
Hotspot Test data(Separate 10mm) State3											
Front side	RMC	1412/1732.4	1:1	0.075	0.046	0.02	18.72	19.30	1.143	0.086	22.1
Back side	RMC	1412/1732.4	1:1	0.134	0.073	-0.06	18.72	19.30	1.143	0.153	22.1
Left side	RMC	1412/1732.4	1:1	0.029	0.017	0.01	18.72	19.30	1.143	0.033	22.1
Right side	RMC	1412/1732.4	1:1	0.053	0.031	-0.08	18.72	19.30	1.143	0.061	22.1
Bottom side	RMC	1412/1732.4	1:1	0.233	0.126	0.08	18.72	19.30	1.143	0.266	22.1
Ant 1 Test Record											
Test position	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	SAR (W/kg) 10-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Head Test Data State2											
Left cheek	RMC	1412/1732.4	1:1	0.318	0.163	-0.10	16.27	16.80	1.130	0.359	22.3
Left tilted	RMC	1412/1732.4	1:1	0.358	0.177	-0.02	16.27	16.80	1.130	0.404	22.3
Right cheek	RMC	1412/1732.4	1:1	0.554	0.254	0.09	16.27	16.80	1.130	0.626	22.3
Right tilted	RMC	1412/1732.4	1:1	0.648	0.287	0.00	16.27	16.80	1.130	**0.732**	22.2
Body worn Test data(Separate 15mm) State1											
Front side	RMC	1412/1732.4	1:1	0.153	0.085	0.01	20.96	21.30	1.081	0.165	22.3
Back side	RMC	1412/1732.4	1:1	0.205	0.117	0.14	20.96	21.30	1.081	**0.222**	22.3
Hotspot Test data(Separate 10mm) State3											
Front side	RMC	1412/1732.4	1:1	0.203	0.104	0.16	18.24	18.80	1.138	0.231	22.2
Back side	RMC	1412/1732.4	1:1	0.256	0.135	-0.03	18.24	18.80	1.138	0.291	22.2
Left side	RMC	1412/1732.4	1:1	0.037	0.021	0.08	18.24	18.80	1.138	0.042	22.2
Top side	RMC	1412/1732.4	1:1	0.377	0.184	-0.09	18.24	18.80	1.138	**0.429**	22.2

Table 15：SAR of WCDMA Band IV for Head, Body and Hotspot.

8.2.5 SAR Result of WCDMA Band V

WB5 SAR Test Record											
Ant 0 Test Record											
Test position	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	SAR (W/kg) 10-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Head Test Data State2											
Left cheek	RMC	4182/836.4	1:1	0.182	0.123	0.04	24.34	24.80	1.112	0.202	22.1
Left tilted	RMC	4182/836.4	1:1	0.074	0.052	0.01	24.34	24.80	1.112	0.082	22.1
Right cheek	RMC	4182/836.4	1:1	0.135	0.093	0.06	24.34	24.80	1.112	0.150	22.1
Right tilted	RMC	4182/836.4	1:1	0.060	0.041	0.03	24.34	24.80	1.112	0.066	22.1
Body worn Test data(Separate 15mm) State1											
Front side	RMC	4182/836.4	1:1	0.118	0.083	0.10	24.34	24.80	1.112	0.131	22.1
Back side	RMC	4182/836.4	1:1	0.142	0.087	0.11	24.34	24.80	1.112	**0.158**	22.1
Hotspot Test data(Separate 10mm) State3											
Front side	RMC	4182/836.4	1:1	0.100	0.071	0.03	23.33	23.80	1.114	0.111	22.1
Back side	RMC	4182/836.4	1:1	0.243	0.144	0.06	23.33	23.80	1.114	**0.271**	22.1
Left side	RMC	4182/836.4	1:1	0.126	0.087	0.05	23.33	23.80	1.114	0.140	22.1
Right side	RMC	4182/836.4	1:1	0.079	0.053	-0.02	23.33	23.80	1.114	0.088	22.1
Bottom side	RMC	4182/836.4	1:1	0.225	0.116	0.11	23.33	23.80	1.114	0.251	22.1
Ant 1 Test Record											
Test position	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	SAR (W/kg) 10-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Head Test Data State2											
Left cheek	RMC	4182/836.4	1:1	0.422	0.257	-0.01	21.68	22.30	1.153	0.487	22.2
Left tilted	RMC	4182/836.4	1:1	0.306	0.188	0.03	21.68	22.30	1.153	0.353	22.2
Right cheek	RMC	4182/836.4	1:1	0.486	0.283	0.00	21.68	22.30	1.153	**0.561**	22.2
Right tilted	RMC	4182/836.4	1:1	0.397	0.207	-0.10	21.68	22.30	1.153	0.458	22.2
Body worn Test data(Separate 15mm) State1											
Front side	RMC	4182/836.4	1:1	0.117	0.078	-0.06	24.28	24.80	1.127	0.132	22.3
Back side	RMC	4182/836.4	1:1	0.136	0.085	0.02	24.28	24.80	1.127	0.153	22.3
Hotspot Test data(Separate 10mm) State3											
Front side	RMC	4182/836.4	1:1	0.181	0.112	-0.15	23.69	24.30	1.151	0.208	22.2
Back side	RMC	4182/836.4	1:1	0.212	0.127	0.01	23.69	24.30	1.151	0.244	22.2
Left side	RMC	4182/836.4	1:1	0.153	0.098	0.14	23.69	24.30	1.151	0.176	22.2
Top side	RMC	4182/836.4	1:1	0.137	0.080	-0.11	23.69	24.30	1.151	0.158	22.2

Table 16：SAR of WCDMA Band V for Head, Body and Hotspot.

8.2.6 SAR Result of LTE Band 2

LTE Band 2 SAR Test Record												
Ant 0 Test Record												
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	SAR (W/kg) 10-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) State2												
Left cheek	20	QPSK 1_0	18900/1880	1:1	0.079	0.046	0.02	23.12	23.80	1.169	0.092	22
Left tilted	20	QPSK 1_0	18900/1880	1:1	0.043	0.024	0.01	23.12	23.80	1.169	0.050	22
Right cheek	20	QPSK 1_0	18900/1880	1:1	0.056	0.033	0.04	23.12	23.80	1.169	0.065	22
Right tilted	20	QPSK 1_0	18900/1880	1:1	0.048	0.028	0.06	23.12	23.80	1.169	0.056	22
Head Test Data (50%RB) State2												
Left cheek	20	QPSK 50_0	18900/1880	1:1	0.066	0.038	0.01	23.20	23.30	1.023	0.068	22
Left tilted	20	QPSK 50_0	18900/1880	1:1	0.039	0.022	0.05	23.20	23.30	1.023	0.040	22
Right cheek	20	QPSK 50_0	18900/1880	1:1	0.052	0.031	0.04	23.20	23.30	1.023	0.053	22
Right tilted	20	QPSK 50_0	18900/1880	1:1	0.044	0.025	0.07	23.20	23.30	1.023	0.045	22
Body worn Test data (Separate 15mm 1RB) State1												
Front side	20	QPSK 1_0	18900/1880	1:1	0.111	0.067	-0.12	22.99	23.30	1.074	0.119	22
Back side	20	QPSK 1_0	18900/1880	1:1	0.178	0.113	-0.01	22.99	23.30	1.074	0.191	22
Body worn Test data (Separate 15mm 50%RB) State1												
Front side	20	QPSK 50_0	18900/1880	1:1	0.110	0.066	-0.13	23.21	23.30	1.021	0.112	22
Back side	20	QPSK 50_0	18900/1880	1:1	0.182	0.114	-0.09	23.21	23.30	1.021	0.186	22
Hotspot Test data (Separate 10mm 1RB) State3												
Front side	20	QPSK 1_0	18900/1880	1:1	0.122	0.071	-0.15	20.97	21.30	1.079	0.132	22
Back side	20	QPSK 1_0	18900/1880	1:1	0.229	0.140	-0.12	20.97	21.30	1.079	0.247	22
Left side	20	QPSK 1_0	18900/1880	1:1	0.027	0.016	0.04	20.97	21.30	1.079	0.029	22
Right side	20	QPSK 1_0	18900/1880	1:1	0.066	0.037	0.05	20.97	21.30	1.079	0.071	22
Bottom side	20	QPSK 1_0	18900/1880	1:1	0.261	0.150	-0.01	20.97	21.30	1.079	0.282	22
Hotspot Test data (Separate 10mm 50%RB) State3												
Front side	20	QPSK 50_0	18900/1880	1:1	0.124	0.072	-0.06	21.19	21.30	1.026	0.127	22
Back side	20	QPSK 50_0	18900/1880	1:1	0.219	0.133	-0.18	21.19	21.30	1.026	0.225	22
Left side	20	QPSK 50_0	18900/1880	1:1	0.028	0.017	0.08	21.19	21.30	1.026	0.029	22
Right side	20	QPSK 50_0	18900/1880	1:1	0.067	0.037	-0.03	21.19	21.30	1.026	0.069	22
Bottom side	20	QPSK 50_0	18900/1880	1:1	0.262	0.151	-0.03	21.19	21.30	1.026	0.269	22
Ant 1 Test Record												
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	SAR (W/kg) 10-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) State2												
Left cheek	20	QPSK 1_99	19100/1900	1:1	0.493	0.249	0.02	16.94	17.30	1.086	0.536	22
Left tilted	20	QPSK 1_99	19100/1900	1:1	0.675	0.339	-0.05	16.94	17.30	1.086	0.733	22
Right cheek	20	QPSK 1_99	19100/1900	1:1	0.912	0.410	0.02	16.94	17.30	1.086	0.991	22
Right tilted	20	QPSK 1_99	19100/1900	1:1	1.080	0.481	0.02	17.04	17.30	1.062	1.147	22

Right cheek	20	QPSK 1_99	18700/1860	1:1	0.849	0.438	0.01	16.88	17.30	1.102	0.935	22
Right cheek	20	QPSK 1_99	18900/1880	1:1	0.880	0.398	0.08	16.89	17.30	1.099	0.967	22
Right tilted	20	QPSK 1_99	18700/1860	1:1	1.010	0.452	0.02	16.88	17.30	1.102	1.113	22
Right tilted	20	QPSK 1_99	18900/1880	1:1	1.050	0.472	0.04	16.89	17.30	1.099	1.154	22
Head Test Data (50%RB) State2												
Left cheek	20	QPSK 50_50	19100/1900	1:1	0.493	0.250	-0.04	16.91	17.30	1.094	0.539	22
Left tilted	20	QPSK 50_50	19100/1900	1:1	0.765	0.385	0.12	16.91	17.30	1.094	0.837	22
Right cheek	20	QPSK 50_50	19100/1900	1:1	0.903	0.405	-0.13	16.91	17.30	1.094	0.988	22
Right tilted	20	QPSK 50_50	19100/1900	1:1	1.060	0.471	0.01	16.91	17.30	1.094	1.160	22
Right cheek	20	QPSK 50_50	18700/1860	1:1	0.739	0.361	0.06	16.91	17.30	1.094	0.808	22
Right cheek	20	QPSK 50_50	18900/1880	1:1	0.888	0.401	0.06	16.91	17.30	1.094	0.971	22
Right tilted	20	QPSK 50_50	18700/1860	1:1	1.030	0.464	0.01	16.91	17.30	1.094	1.127	22
Right tilted	20	QPSK 50_50	18900/1880	1:1	1.060	0.475	0.05	16.91	17.30	1.094	1.160	22
Right tilted with repeat	20	QPSK 50_50	18900/1880	1:1	1.090	0.470	-0.08	16.91	17.30	1.094	**1.192**	22.3
Head Test Data (100%RB) State2												
Right cheek	20	QPSK 100_0	18700/1860	1:1	0.801	0.399	0.04	16.87	17.30	1.104	0.884	22.5
Right tilted	20	QPSK 100_0	18700/1860	1:1	1.020	0.460	0.05	16.87	17.30	1.104	1.126	22
Body worn Test data (Separate 15mm 1RB) State1												
Front side	20	QPSK 1_0	18700/1860	1:1	0.198	0.108	0.03	21.47	22.30	1.211	0.240	22
Back side	20	QPSK 1_0	18700/1860	1:1	0.427	0.236	-0.18	21.47	22.30	1.211	**0.517**	22
Body worn Test data (Separate 15mm 50%RB) State1												
Front side	20	QPSK 50_0	18700/1860	1:1	0.198	0.108	0.11	22.06	22.30	1.057	0.209	22
Back side	20	QPSK 50_0	18700/1860	1:1	0.425	0.234	-0.16	22.06	22.30	1.057	0.449	22
Hotspot Test data (Separate 10mm 1RB) State3												
Front side	20	QPSK 1_0	18700/1860	1:1	0.377	0.185	0.02	19.93	20.30	1.089	0.411	22
Back side	20	QPSK 1_0	18700/1860	1:1	0.622	0.309	0.17	19.93	20.30	1.089	0.677	22
Left side	20	QPSK 1_0	18700/1860	1:1	0.123	0.068	0.03	19.93	20.30	1.089	0.134	22
Top side	20	QPSK 1_0	18700/1860	1:1	0.657	0.319	0.05	19.93	20.30	1.089	0.715	22
Hotspot Test data (Separate 10mm 50%RB) State3												
Front side	20	QPSK 50_0	18700/1860	1:1	0.379	0.186	0.08	20.00	20.30	1.072	0.406	22
Back side	20	QPSK 50_0	18700/1860	1:1	0.630	0.313	0.11	20.00	20.30	1.072	0.675	22
Left side	20	QPSK 50_0	18700/1860	1:1	0.125	0.069	0.14	20.00	20.30	1.072	0.134	22
Top side	20	QPSK 50_0	18700/1860	1:1	0.669	0.323	-0.01	20.00	20.30	1.072	**0.717**	22

Test Position	Channel/ Frequency (MHz)	Measured SAR (1g)	1st Repeated SAR (1g)	Ratio
Right tilted	18900/1880	1.060	1.090	1.02

Table 17：SAR of LTE Band 2 for Head, Body and Hotspot.

8.2.7 SAR Result of LTE Band 7

LTE Band 7 SAR Test Record												
Ant 0 Test Record												
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	SAR (W/kg) 10-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) State2												
Left cheek	20	QPSK 1_0	21100/2535	1:1	0.213	0.125	-0.03	24.56	25.00	1.107	0.236	22
Left tilted	20	QPSK 1_0	21100/2535	1:1	0.126	0.070	0.15	24.56	25.00	1.107	0.139	22
Right cheek	20	QPSK 1_0	21100/2535	1:1	0.379	0.212	0.06	24.56	25.00	1.107	0.419	22
Right tilted	20	QPSK 1_0	21100/2535	1:1	0.149	0.078	-0.11	24.56	25.00	1.107	0.165	22
Right cheek	20	QPSK PCC 1_99	21100/2535	1:1	0.381	0.208	0.03	24.25	25.00	1.189	0.453	22
		QPSK SCC 1_0	21298/2554.8									
Head Test Data (50%RB) State2												
Left cheek	20	QPSK 50_0	21100/2535	1:1	0.192	0.112	-0.02	24.03	24.50	1.114	0.214	22
Left tilted	20	QPSK 50_0	21100/2535	1:1	0.111	0.062	0.08	24.03	24.50	1.114	0.124	22
Right cheek	20	QPSK 50_0	21100/2535	1:1	0.326	0.182	-0.18	24.03	24.50	1.114	0.363	22
Right tilted	20	QPSK 50_0	21100/2535	1:1	0.136	0.071	-0.18	24.03	24.50	1.114	0.152	22
Body worn Test data (Separate 15mm 1RB) State1												
Front side	20	QPSK 1_0	21100/2535	1:1	0.206	0.114	0.12	22.98	23.50	1.127	0.232	22
Back side	20	QPSK 1_0	21100/2535	1:1	0.230	0.126	0.03	22.98	23.50	1.127	0.259	22
Back side	20	QPSK PCC 1_99	21100/2535	1:1	0.226	0.124	0.05	23.69	23.50	0.957	0.216	22
		QPSK SCC 1_0	21298/2554.8									
Body worn Test data (Separate 15mm 50%RB) State1												
Front side	20	QPSK 50_0	21100/2535	1:1	0.197	0.110	0.07	23.15	23.50	1.084	0.214	22
Back side	20	QPSK 50_0	21100/2535	1:1	0.230	0.127	-0.13	23.15	23.50	1.084	0.249	22
Hotspot Test data (Separate 10mm 1RB) State3												
Front side	20	QPSK 1_0	21100/2535	1:1	0.219	0.118	-0.05	20.54	21.00	1.112	0.243	22
Back side	20	QPSK 1_0	21100/2535	1:1	0.261	0.135	0.06	20.54	21.00	1.112	0.290	22
Left side	20	QPSK 1_0	21100/2535	1:1	0.008	0.004	-0.18	20.54	21.00	1.112	0.009	22
Right side	20	QPSK 1_0	21100/2535	1:1	0.185	0.098	-0.07	20.54	21.00	1.112	0.206	22
Bottom side	20	QPSK 1_0	21100/2535	1:1	0.205	0.091	-0.13	20.54	21.00	1.112	0.228	22
Back side	20	QPSK PCC 1_99	21100/2535	1:1	0.241	0.128	-0.11	20.12	21.00	1.225	0.295	22
		QPSK SCC 1_0	21298/2554.8									
Hotspot Test data (Separate 10mm 50%RB) State3												
Front side	20	QPSK 50_0	21100/2535	1:1	0.221	0.120	-0.14	20.77	21.00	1.054	0.233	22
Back side	20	QPSK 50_0	21100/2535	1:1	0.260	0.135	-0.19	20.77	21.00	1.054	0.274	22
Left side	20	QPSK 50_0	21100/2535	1:1	0.006	0.003	-0.08	20.77	21.00	1.054	0.006	22
Right side	20	QPSK 50_0	21100/2535	1:1	0.186	0.099	-0.15	20.77	21.00	1.054	0.196	22
Bottom side	20	QPSK 50_0	21100/2535	1:1	0.212	0.093	0.09	20.77	21.00	1.054	0.224	22
Ant 1 Test Record												

Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	SAR (W/kg) 10-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) State2												
Left cheek	20	QPSK 1_0	21100/2535	1:1	0.148	0.070	0.09	16.29	17.00	1.178	0.174	22.2
Left tilted	20	QPSK 1_0	21100/2535	1:1	0.193	0.089	0.01	16.29	17.00	1.178	0.227	22.2
Right cheek	20	QPSK 1_0	21100/2535	1:1	0.499	0.225	0.09	16.29	17.00	1.178	0.588	22.2
Right tilted	20	QPSK 1_0	21100/2535	1:1	0.615	0.249	0.01	16.29	17.00	1.178	0.724	22.2
Right tilted	20	QPSK PCC 1_99	21100/2535	1:1	0.547	0.251	0.05	15.59	17.00	1.384	0.757	22
		QPSK SCC 1_0	21298/2554.8									
Head Test Data (50%RB) State2												
Left cheek	20	QPSK 1_0	21100/2535	1:1	0.132	0.070	0.09	16.25	17.00	1.189	0.157	22.2
Left tilted	20	QPSK 1_0	21100/2535	1:1	0.186	0.085	0.01	16.25	17.00	1.189	0.221	22.2
Right cheek	20	QPSK 1_0	21100/2535	1:1	0.500	0.228	0.18	16.25	17.00	1.189	0.594	22.2
Right tilted	20	QPSK 1_0	21100/2535	1:1	0.598	0.242	0.02	16.25	17.00	1.189	0.711	22.2
Body worn Test data (Separate 15mm 1RB) State1												
Front side	20	QPSK 1_0	21100/2535	1:1	0.105	0.059	-0.08	18.79	19.50	1.178	0.124	22.3
Back side	20	QPSK 1_0	21100/2535	1:1	0.199	0.094	-0.04	18.79	19.50	1.178	0.234	22.3
Back side	20	QPSK PCC 1_99	21100/2535	1:1	0.185	0.092	0.04	18.25	19.50	1.334	0.247	22
		QPSK SCC 1_0	21298/2554.8									
Body worn Test data (Separate 15mm 50%RB) State1												
Front side	20	QPSK 50_0	21100/2535	1:1	0.100	0.052	0.04	18.80	19.50	1.175	0.117	22.2
Back side	20	QPSK 50_0	21100/2535	1:1	0.195	0.092	-0.19	18.80	19.50	1.175	0.229	22.3
Hotspot Test data (Separate 10mm 1RB) State3												
Front side	20	QPSK 1_0	21100/2535	1:1	0.109	0.060	0.07	16.81	17.50	1.172	0.128	22.2
Back side	20	QPSK 1_0	21100/2535	1:1	0.290	0.126	-0.09	16.81	17.50	1.172	0.340	22.2
Left side	20	QPSK 1_0	21100/2535	1:1	0.140	0.075	0.02	16.81	17.50	1.172	0.164	22.2
Right side	20	QPSK 1_0	21100/2535	1:1	0.006	0.003	0.04	16.81	17.50	1.172	0.007	22.2
Top side	20	QPSK 1_0	21100/2535	1:1	0.304	0.130	-0.02	16.81	17.50	1.172	0.356	22.2
Top side	20	QPSK PCC 1_99	21100/2535	1:1	0.235	0.105	0.03	16.38	17.50	1.294	0.304	22
		QPSK SCC 1_0	21298/2554.8									
Hotspot Test data (Separate 10mm 50%RB) State3												
Front side	20	QPSK 50_0	21100/2535	1:1	0.108	0.059	0.03	16.75	17.50	1.189	0.128	22.2
Back side	20	QPSK 50_0	21100/2535	1:1	0.286	0.124	-0.06	16.75	17.50	1.189	0.340	22.2
Left side	20	QPSK 50_0	21100/2535	1:1	0.134	0.072	0.07	16.75	17.50	1.189	0.159	22.2
Right side	20	QPSK 50_0	21100/2535	1:1	0.006	0.002	0.01	16.75	17.50	1.189	0.007	22.2
Top side	20	QPSK 50_0	21100/2535	1:1	0.295	0.126	0.05	16.75	17.50	1.189	0.351	22.2
Ant 4 Test Record												
Test position	**BW.**	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**SAR (W/kg) 10-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) State2												
Left cheek	20	QPSK 1_0	21100/2535	1:1	0.413	0.229	-0.13	21.82	22.50	1.169	0.483	22

Left tilted	20	QPSK 1_0	21100/2535	1:1	0.156	0.085	0.10	21.82	22.50	1.169	0.182	22
Right cheek	20	QPSK 1_0	21100/2535	1:1	0.941	0.433	0.16	21.82	22.50	1.169	1.100	22
Right tilted	20	QPSK 1_0	21100/2535	1:1	0.354	0.187	0.03	21.82	22.50	1.169	0.414	22
Right cheek	20	QPSK 1_0	20850/2510	1:1	0.874	0.461	-0.19	21.82	22.50	1.169	1.022	22
Right cheek	20	QPSK 1_0	21350/2560	1:1	0.927	0.416	0.10	21.82	22.50	1.169	1.084	22
Right cheek	20	QPSK PCC 1_99	21100/2535	1:1	0.875	0.462	0.09	21.55	22.50	1.245	1.089	22
		QPSK SCC 1_0	21298/2554.8									
Head Test Data (50%RB) State2												
Left cheek	20	QPSK 50_0	21100/2535	1:1	0.420	0.234	0.08	21.77	22.50	1.183	0.497	22
Left tilted	20	QPSK 50_0	21100/2535	1:1	0.151	0.083	0.01	21.77	22.50	1.183	0.179	22
Right cheek	20	QPSK 50_0	21100/2535	1:1	0.960	0.442	0.11	21.77	22.50	1.183	**1.136**	22
Right tilted	20	QPSK 50_0	21100/2535	1:1	0.354	0.186	-0.02	21.77	22.50	1.183	0.419	22
Right cheek	20	QPSK 50_0	20850/2510	1:1	0.921	0.409	0.13	21.77	22.50	1.183	1.090	22
Right cheek	20	QPSK 50_0	21350/2560	1:1	0.914	0.401	-0.08	21.77	22.50	1.183	1.081	22
Right cheek-Repeat	20	QPSK 1_0	21100/2535	1:1	0.938	0.429	0.09	21.77	22.50	1.183	1.110	22
Head Test Data (100%RB) State2												
Right cheek	20	QPSK 100_0	21100/2535	1:1	0.906	0.397	-0.08	21.70	22.50	1.202	1.089	22
Body worn Test data (Separate 15mm 1RB) State1												
Front side	20	QPSK 1_0	21100/2535	1:1	0.109	0.060	0.09	21.82	22.50	1.169	0.127	22
Back side	20	QPSK 1_0	21100/2535	1:1	0.214	0.109	-0.05	21.82	22.50	1.169	0.250	22
Back side	20	QPSK PCC 1_99	21100/2535	1:1	0.201	0.110	0.02	21.55	22.50	1.245	0.250	22
		QPSK SCC 1_0	21298/2554.8									
Body worn Test data (Separate 15mm 50%RB) State1												
Front side	20	QPSK 50_0	21100/2535	1:1	0.111	0.062	0.15	21.77	22.50	1.183	0.131	22
Back side	20	QPSK 50_0	21100/2535	1:1	0.222	0.117	0.06	21.77	22.50	1.183	**0.263**	22
Hotspot Test data (Separate 10mm 1RB) State3												
Front side	20	QPSK 1_0	21100/2535	1:1	0.104	0.059	0.15	19.31	20.00	1.172	0.122	22
Back side	20	QPSK 1_0	21100/2535	1:1	0.295	0.147	0.13	19.31	20.00	1.172	0.346	22
Left side	20	QPSK 1_0	21100/2535	1:1	0.278	0.135	-0.10	19.31	20.00	1.172	0.326	22
Top side	20	QPSK 1_0	21100/2535	1:1	0.072	0.036	-0.11	19.31	20.00	1.172	0.084	22
Back side	20	QPSK PCC 1_99	21100/2535	1:1	0.264	0.137	0.12	19.02	20.00	1.253	0.331	22
		QPSK SCC 1_0	21298/2554.8									
Hotspot Test data (Separate 10mm 50%RB) State3												
Front side	20	QPSK 50_0	21100/2535	1:1	0.113	0.063	0.03	19.30	20.00	1.175	0.133	22
Back side	20	QPSK 50_0	21100/2535	1:1	0.321	0.151	-0.01	19.30	20.00	1.175	**0.377**	22
Left side	20	QPSK 50_0	21100/2535	1:1	0.297	0.146	0.01	19.30	20.00	1.175	0.349	22
Top side	20	QPSK 50_0	21100/2535	1:1	0.068	0.033	0.12	19.30	20.00	1.175	0.080	22

Test Position	Channel/ Frequency (MHz)	Measured SAR (1g)	1st Repeated SAR (1g)	Ratio
Right cheek	21100/2535	0.960	0.938	1.02

Table 18：SAR of LTE Band 7 for Head, Body and Hotspot.

8.2.8 SAR Result of LTE Band 12

LTE Band 12 SAR Test Record												
Ant 0 Test Record												
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	SAR (W/kg) 10-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) State2												
Left cheek	10	QPSK 1_0	23095/707.5	1:1	0.110	0.080	-0.04	24.38	25.00	1.153	0.127	22.1
Left tilted	10	QPSK 1_0	23095/707.5	1:1	0.045	0.034	0.17	24.38	25.00	1.153	0.052	22.1
Right cheek	10	QPSK 1_0	23095/707.5	1:1	0.073	0.054	-0.03	24.38	25.00	1.153	0.084	22.1
Right tilted	10	QPSK 1_0	23095/707.5	1:1	0.035	0.023	-0.05	24.38	25.00	1.153	0.040	22.1
Head Test Data (50%RB) State2												
Left cheek	10	QPSK 25_0	23095/707.5	1:1	0.087	0.069	-0.11	23.87	24.50	1.156	0.101	22.1
Left tilted	10	QPSK 25_0	23095/707.5	1:1	0.036	0.028	0.19	23.87	24.50	1.156	0.042	22.1
Right cheek	10	QPSK 25_0	23095/707.5	1:1	0.065	0.048	-0.07	23.87	24.50	1.156	0.075	22.1
Right tilted	10	QPSK 25_0	23095/707.5	1:1	0.032	0.022	-0.13	23.87	24.50	1.156	0.037	22.1
Body worn Test data (Separate 15mm 1RB) State1												
Front side	10	QPSK 1_0	23095/707.5	1:1	0.121	0.085	0.13	24.38	25.00	1.153	0.140	22.1
Back side	10	QPSK 1_0	23095/707.5	1:1	0.159	0.123	-0.02	24.38	25.00	1.153	0.183	22.1
Body worn Test data (Separate 15mm 50%RB) State1												
Front side	10	QPSK 25_0	23095/707.5	1:1	0.106	0.077	-0.02	23.87	24.50	1.156	0.123	22.1
Back side	10	QPSK 25_0	23095/707.5	1:1	0.125	0.096	-0.02	23.87	24.50	1.156	0.145	22.1
Hotspot Test data (Separate 10mm 1RB) State3												
Front side	10	QPSK 1_0	23095/707.5	1:1	0.111	0.081	0.12	24.38	25.00	1.153	0.128	22.1
Back side	10	QPSK 1_0	23095/707.5	1:1	0.134	0.098	0.14	24.38	25.00	1.153	0.155	22.1
Left side	10	QPSK 1_0	23095/707.5	1:1	0.210	0.148	0.06	24.38	25.00	1.153	0.242	22.1
Right side	10	QPSK 1_0	23095/707.5	1:1	0.100	0.067	-0.15	24.38	25.00	1.153	0.115	22.1
Bottom side	10	QPSK 1_0	23095/707.5	1:1	0.153	0.075	0.18	24.38	25.00	1.153	0.176	22.1
Hotspot Test data (Separate 10mm 50%RB) State3												
Front side	10	QPSK 25_0	23095/707.5	1:1	0.099	0.071	0.10	23.87	24.50	1.156	0.114	22.1
Back side	10	QPSK 25_0	23095/707.5	1:1	0.121	0.076	0.12	23.87	24.50	1.156	0.140	22.1
Left side	10	QPSK 25_0	23095/707.5	1:1	0.183	0.130	-0.06	23.87	24.50	1.156	0.212	22.1
Right side	10	QPSK 25_0	23095/707.5	1:1	0.089	0.059	-0.13	23.87	24.50	1.156	0.103	22.1
Bottom side	10	QPSK 25_0	23095/707.5	1:1	0.138	0.068	0.19	23.87	24.50	1.156	0.160	22.1
Ant 1 Test Record												
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	SAR (W/kg) 10-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) State2												
Left cheek	10	QPSK 1_0	23095/707.5	1:1	0.392	0.242	-0.13	22.86	23.50	1.159	0.454	22.1
Left tilted	10	QPSK 1_0	23095/707.5	1:1	0.367	0.209	0.19	22.86	23.50	1.159	0.425	22.1
Right cheek	10	QPSK 1_0	23095/707.5	1:1	0.546	0.332	0.01	22.86	23.50	1.159	**0.633**	22.1

Right tilted	10	QPSK 1_0	23095/707.5	1:1	0.544	0.278	0.14	22.86	23.50	1.159	0.630	22.1
Head Test Data (50%RB) State2												
Left cheek	10	QPSK 25_0	23095/707.5	1:1	0.396	0.244	-0.07	22.91	23.50	1.146	0.454	22.1
Left tilted	10	QPSK 25_0	23095/707.5	1:1	0.360	0.206	0.03	22.91	23.50	1.146	0.412	22.1
Right cheek	10	QPSK 25_0	23095/707.5	1:1	0.443	0.240	0.02	22.91	23.50	1.146	0.507	22.1
Right tilted	10	QPSK 25_0	23095/707.5	1:1	0.382	0.247	0.05	22.91	23.50	1.146	0.438	22.1
Body worn Test data (Separate 15mm 1RB) State1												
Front side	10	QPSK 1_0	23095/707.5	1:1	0.161	0.116	-0.10	24.77	25.00	1.054	0.170	22.1
Back side	10	QPSK 1_0	23095/707.5	1:1	0.263	0.203	-0.01	24.77	25.00	1.054	**0.277**	22.1
Body worn Test data (Separate 15mm 50%RB) State1												
Front side	10	QPSK 25_0	23095/707.5	1:1	0.144	0.105	0.05	23.88	24.50	1.153	0.166	22.1
Back side	10	QPSK 25_0	23095/707.5	1:1	0.208	0.159	-0.06	23.88	24.50	1.153	0.240	22.1
Hotspot Test data (Separate 10mm 1RB) State3												
Front side	10	QPSK 1_0	23095/707.5	1:1	0.134	0.091	-0.16	23.93	24.50	1.140	0.153	22.1
Back side	10	QPSK 1_0	23095/707.5	1:1	0.173	0.126	0.09	23.93	24.50	1.140	0.197	22.1
Left side	10	QPSK 1_0	23095/707.5	1:1	0.234	0.163	-0.15	23.93	24.50	1.140	**0.267**	22.1
Top side	10	QPSK 1_0	23095/707.5	1:1	0.102	0.061	0.10	23.93	24.50	1.140	0.116	22.1
Hotspot Test data (Separate 10mm 50%RB) State3												
Front side	10	QPSK 25_0	23095/707.5	1:1	0.137	0.093	-0.15	23.88	24.50	1.153	0.158	22.1
Back side	10	QPSK 25_0	23095/707.5	1:1	0.175	0.127	-0.06	23.88	24.50	1.153	0.202	22.1
Left side	10	QPSK 25_0	23095/707.5	1:1	0.206	0.143	-0.07	23.88	24.50	1.153	0.238	22.1
Top side	10	QPSK 25_0	23095/707.5	1:1	0.107	0.063	-0.07	23.88	24.50	1.153	0.123	22.1

Table 19：SAR of LTE Band 12 for Head, Body and Hotspot.

8.2.9 SAR Result of LTE Band 13

LTE Band 13 SAR Test Record												
Ant 0 Test Record												
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	SAR (W/kg) 10-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) State2												
Left cheek	10	QPSK 1_0	23230/782	1:1	0.074	0.058	0.00	23.83	24.30	1.114	0.082	22.1
Left tilted	10	QPSK 1_0	23230/782	1:1	0.042	0.031	-0.09	23.83	24.30	1.114	0.047	22.1
Right cheek	10	QPSK 1_0	23230/782	1:1	0.054	0.040	-0.14	23.83	24.30	1.114	0.060	22.1
Right tilted	10	QPSK 1_0	23230/782	1:1	0.015	0.008	-0.11	23.83	24.30	1.114	0.017	22.1
Head Test Data (50%RB) State2												
Left cheek	10	QPSK 25_0	23230/782	1:1	0.060	0.047	0.04	23.30	23.80	1.122	0.067	22.1
Left tilted	10	QPSK 25_0	23230/782	1:1	0.035	0.028	-0.07	23.30	23.80	1.122	0.039	22.1
Right cheek	10	QPSK 25_0	23230/782	1:1	0.045	0.034	0.16	23.30	23.80	1.122	0.050	22.1
Right tilted	10	QPSK 25_0	23230/782	1:1	0.022	0.018	0.13	23.30	23.80	1.122	0.025	22.1
Body worn Test data (Separate 15mm 1RB) State1												
Front side	10	QPSK 1_0	23230/782	1:1	0.081	0.059	0.02	23.83	24.30	1.114	0.090	22.1
Back side	10	QPSK 1_0	23230/782	1:1	0.098	0.075	0.03	23.83	24.30	1.114	0.109	22.1
Body worn Test data (Separate 15mm 50%RB) State1												
Front side	10	QPSK 25_0	23230/782	1:1	0.069	0.049	0.07	23.30	23.80	1.122	0.077	22.1
Back side	10	QPSK 25_0	23230/782	1:1	0.078	0.059	-0.11	23.30	23.80	1.122	0.088	22.1
Hotspot Test data (Separate 10mm 1RB) State3												
Front side	10	QPSK 1_0	23230/782	1:1	0.128	0.074	0.13	23.83	24.30	1.114	0.143	22.1
Back side	10	QPSK 1_0	23230/782	1:1	0.168	0.097	-0.18	23.83	24.30	1.114	0.187	22.1
Left side	10	QPSK 1_0	23230/782	1:1	0.125	0.082	0.17	23.83	24.30	1.114	0.139	22.1
Right side	10	QPSK 1_0	23230/782	1:1	0.048	0.032	-0.13	23.83	24.30	1.114	0.053	22.1
Bottom side	10	QPSK 1_0	23230/782	1:1	0.203	0.106	0.08	23.83	24.30	1.114	0.226	22.1
Hotspot Test data (Separate 10mm 50%RB) State3												
Front side	10	QPSK 25_0	23230/782	1:1	0.113	0.064	0.16	23.30	23.80	1.122	0.127	22.1
Back side	10	QPSK 25_0	23230/782	1:1	0.145	0.083	0.19	23.30	23.80	1.122	0.163	22.1
Left side	10	QPSK 25_0	23230/782	1:1	0.124	0.083	-0.15	23.30	23.80	1.122	0.139	22.1
Right side	10	QPSK 25_0	23230/782	1:1	0.040	0.031	0.15	23.30	23.80	1.122	0.045	22.1
Bottom side	10	QPSK 25_0	23230/782	1:1	0.152	0.080	0.01	23.30	23.80	1.122	0.171	22.1
Ant 1 Test Record												
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	SAR (W/kg) 10-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) State2												
Left cheek	10	QPSK 1_0	23230/782	1:1	0.482	0.311	0.02	22.28	22.80	1.127	0.543	22.1
Left tilted	10	QPSK 1_0	23230/782	1:1	0.421	0.247	0.05	22.28	22.80	1.127	0.475	22.1
Right cheek	10	QPSK 1_0	23230/782	1:1	0.629	0.404	0.02	22.28	22.80	1.127	**0.709**	22.1

Right tilted	10	QPSK 1_0	23230/782	1:1	0.567	0.297	-0.02	22.28	22.80	1.127	0.639	22.1
Head Test Data (50%RB) State2												
Left cheek	10	QPSK 25_0	23230/782	1:1	0.475	0.307	0.09	22.20	22.80	1.148	0.545	22.1
Left tilted	10	QPSK 25_0	23230/782	1:1	0.420	0.246	0.15	22.20	22.80	1.148	0.482	22.1
Right cheek	10	QPSK 25_0	23230/782	1:1	0.607	0.390	0.01	22.20	22.80	1.148	0.697	22.1
Right tilted	10	QPSK 25_0	23230/782	1:1	0.561	0.293	0.11	22.20	22.80	1.148	0.644	22.1
Body worn Test data (Separate 15mm 1RB) State1												
Front side	10	QPSK 1_0	23230/782	1:1	0.132	0.095	-0.07	23.53	24.30	1.194	0.158	22.1
Back side	10	QPSK 1_0	23230/782	1:1	0.208	0.159	-0.10	23.53	24.30	1.194	**0.248**	22.1
Body worn Test data (Separate 15mm 50%RB) State1												
Front side	10	QPSK 25_0	23230/782	1:1	0.126	0.091	-0.09	23.04	23.80	1.191	0.150	22.1
Back side	10	QPSK 25_0	23230/782	1:1	0.176	0.134	-0.11	23.04	23.80	1.191	0.210	22.1
Hotspot Test data (Separate 10mm 1RB) State3												
Front side	10	QPSK 1_0	23230/782	1:1	0.183	0.119	0.13	23.53	24.30	1.194	0.218	22.1
Back side	10	QPSK 1_0	23230/782	1:1	0.209	0.133	-0.19	23.53	24.30	1.194	**0.250**	22.1
Left side	10	QPSK 1_0	23230/782	1:1	0.128	0.086	0.17	23.53	24.30	1.194	0.153	22.1
Top side	10	QPSK 1_0	23230/782	1:1	0.164	0.100	0.04	23.53	24.30	1.194	0.196	22.1
Hotspot Test data (Separate 10mm 50%RB) State3												
Front side	10	QPSK 25_0	23230/782	1:1	0.168	0.108	0.01	23.04	23.80	1.191	0.200	22.1
Back side	10	QPSK 25_0	23230/782	1:1	0.178	0.113	-0.09	23.04	23.80	1.191	0.212	22.1
Left side	10	QPSK 25_0	23230/782	1:1	0.117	0.078	0.09	23.04	23.80	1.191	0.139	22.1
Top side	10	QPSK 25_0	23230/782	1:1	0.142	0.087	0.12	23.04	23.80	1.191	0.169	22.1

Table 20：SAR of LTE Band 13 for Head, Body and Hotspot.

8.2.10 SAR Result of LTE Band 26

LTE Band 26 SAR Test Record												
Ant 0 Test Record												
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	SAR (W/kg) 10-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) State2												
Left cheek	15	QPSK 1_0	26865/831.5	1:1	0.181	0.136	0.03	24.18	25.00	1.208	0.219	22.3
Left tilted	15	QPSK 1_0	26865/831.5	1:1	0.080	0.059	0.17	24.18	25.00	1.208	0.097	22.1
Right cheek	15	QPSK 1_0	26865/831.5	1:1	0.119	0.088	-0.15	24.18	25.00	1.208	0.144	22.1
Right tilted	15	QPSK 1_0	26865/831.5	1:1	0.068	0.050	-0.12	24.18	25.00	1.208	0.082	22.1
Head Test Data (50%RB) State2												
Left cheek	15	QPSK 36_0	26865/831.5	1:1	0.154	0.117	0.04	23.77	24.50	1.183	0.182	22.3
Left tilted	15	QPSK 36_0	26865/831.5	1:1	0.073	0.054	0.02	23.77	24.50	1.183	0.086	22.1
Right cheek	15	QPSK 36_0	26865/831.5	1:1	0.110	0.082	0.15	23.77	24.50	1.183	0.130	22.1
Right tilted	15	QPSK 36_0	26865/831.5	1:1	0.062	0.046	0.10	23.77	24.50	1.183	0.073	22.1
Body worn Test data (Separate 15mm 1RB) State1												
Front side	15	QPSK 1_0	26865/831.5	1:1	0.107	0.076	0.09	24.18	25.00	1.208	0.129	22.1
Back side	15	QPSK 1_0	26865/831.5	1:1	0.140	0.088	-0.03	24.18	25.00	1.208	**0.169**	22.3
Body worn Test data (Separate 15mm 50%RB) State1												
Front side	15	QPSK 36_0	26865/831.5	1:1	0.095	0.068	0.02	23.77	24.50	1.183	0.112	22.1
Back side	15	QPSK 36_0	26865/831.5	1:1	0.143	0.090	0.13	23.77	24.50	1.183	**0.169**	22.3
Hotspot Test data (Separate 10mm 1RB) State3												
Front side	15	QPSK 1_0	26865/831.5	1:1	0.175	0.103	-0.03	23.76	24.50	1.186	0.208	22.1
Back side	15	QPSK 1_0	26865/831.5	1:1	0.223	0.124	-0.05	23.76	24.50	1.186	0.264	22.1
Left side	15	QPSK 1_0	26865/831.5	1:1	0.071	0.049	-0.18	23.76	24.50	1.186	0.084	22.1
Right side	15	QPSK 1_0	26865/831.5	1:1	0.064	0.042	0.11	23.76	24.50	1.186	0.076	22.1
Bottom side	15	QPSK 1_0	26865/831.5	1:1	0.225	0.120	0.02	23.76	24.50	1.186	0.267	22.3
Hotspot Test data (Separate 10mm 50%RB) State3												
Front side	15	QPSK 36_0	26865/831.5	1:1	0.183	0.108	-0.01	23.73	24.50	1.194	0.218	22.1
Back side	15	QPSK 36_0	26865/831.5	1:1	0.225	0.124	0.00	23.73	24.50	1.194	0.269	22.1
Left side	15	QPSK 36_0	26865/831.5	1:1	0.072	0.039	0.16	23.73	24.50	1.194	0.086	22.1
Right side	15	QPSK 36_0	26865/831.5	1:1	0.070	0.045	0.10	23.73	24.50	1.194	0.084	22.1
Bottom side	15	QPSK 36_0	26865/831.5	1:1	0.238	0.126	-0.07	23.73	24.50	1.194	**0.284**	22.3
Ant 1 Test Record												
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	SAR (W/kg) 10-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) State2												
Left cheek	15	QPSK 1_0	26865/831.5	1:1	0.374	0.246	0.14	21.65	22.50	1.216	0.455	22.1
Left tilted	15	QPSK 1_0	26865/831.5	1:1	0.335	0.197	-0.06	21.65	22.50	1.216	0.407	22.1
Right cheek	15	QPSK 1_0	26865/831.5	1:1	0.473	0.286	-0.02	21.65	22.50	1.216	**0.575**	22.1

Right tilted	15	QPSK 1_0	26865/831.5	1:1	0.467	0.244	0.10	21.65	22.50	1.216	0.568	22.1
Head Test Data (50%RB) State2												
Left cheek	15	QPSK 36_0	26865/831.5	1:1	0.363	0.234	-0.09	21.82	22.50	1.169	0.425	22.1
Left tilted	15	QPSK 36_0	26865/831.5	1:1	0.319	0.188	-0.08	21.82	22.50	1.169	0.373	22.1
Right cheek	15	QPSK 36_0	26865/831.5	1:1	0.449	0.272	-0.05	21.82	22.50	1.169	0.525	22.1
Right tilted	15	QPSK 36_0	26865/831.5	1:1	0.454	0.237	-0.15	21.82	22.50	1.169	0.531	22.1
Body worn Test data (Separate 15mm 1RB) State1												
Front side	15	QPSK 1_0	26865/831.5	1:1	0.098	0.070	0.05	24.39	25.00	1.151	0.113	22.1
Back side	15	QPSK 1_0	26865/831.5	1:1	0.135	0.085	-0.11	24.39	25.00	1.151	0.155	22.1
Body worn Test data (Separate 15mm 50%RB) State1												
Front side	15	QPSK 36_0	26865/831.5	1:1	0.089	0.065	-0.16	23.83	24.50	1.167	0.104	22.1
Back side	15	QPSK 36_0	26865/831.5	1:1	0.109	0.085	-0.16	23.83	24.50	1.167	0.127	22.3
Hotspot Test data (Separate 10mm 1RB) State3												
Front side	15	QPSK 1_0	26865/831.5	1:1	0.183	0.113	0.04	24.39	25.00	1.151	0.211	22.1
Back side	15	QPSK 1_0	26865/831.5	1:1	0.220	0.135	-0.01	24.39	25.00	1.151	0.253	22.3
Left side	15	QPSK 1_0	26865/831.5	1:1	0.133	0.081	-0.02	24.39	25.00	1.151	0.153	22.1
Top side	15	QPSK 1_0	26865/831.5	1:1	0.162	0.099	0.02	24.39	25.00	1.151	0.186	22.1
Hotspot Test data (Separate 10mm 50%RB) State3												
Front side	15	QPSK 36_0	26865/831.5	1:1	0.166	0.102	-0.01	23.83	24.50	1.167	0.194	22.1
Back side	15	QPSK 36_0	26865/831.5	1:1	0.191	0.117	-0.09	23.83	24.50	1.167	0.223	22.3
Left side	15	QPSK 36_0	26865/831.5	1:1	0.134	0.081	0.15	23.83	24.50	1.167	0.156	22.1
Top side	15	QPSK 36_0	26865/831.5	1:1	0.133	0.081	-0.11	23.83	24.50	1.167	0.155	22.1

Table 21：SAR of LTE Band 26 for Head, Body and Hotspot.

8.2.11 SAR Result of LTE Band 38

LTE Band 38 SAR Test Record												
Ant 0 Test Record												
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	SAR (W/kg) 10-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) State2												
Left cheek	20	QPSK 1_50	38000/2595	1:1.58	0.082	0.047	0.07	24.35	25.00	1.161	0.095	22
Left tilted	20	QPSK 1_50	38000/2595	1:1.58	0.045	0.025	-0.10	24.35	25.00	1.161	0.052	22
Right cheek	20	QPSK 1_50	38000/2595	1:1.58	0.168	0.089	0.06	24.35	25.00	1.161	0.195	22
Right tilted	20	QPSK 1_50	38000/2595	1:1.58	0.058	0.031	0.09	24.35	25.00	1.161	0.067	22
Right cheek	20	QPSK PCC 1_99	37901/2585.1	1:1.58	0.206	0.112	0.07	23.96	25.00	1.271	0.262	22
Right cheek		QPSK SCC 1_0	38099/2604.9									
Head Test Data (50%RB) State2												
Left cheek	20	QPSK 50_25	37850/2580	1:1.58	0.076	0.043	-0.04	23.91	24.50	1.146	0.087	22
Left tilted	20	QPSK 50_25	37850/2580	1:1.58	0.041	0.023	-0.13	23.91	24.50	1.146	0.047	22
Right cheek	20	QPSK 50_25	37850/2580	1:1.58	0.146	0.077	-0.19	23.91	24.50	1.146	0.167	22
Right tilted	20	QPSK 50_25	37850/2580	1:1.58	0.053	0.029	0.17	23.91	24.50	1.146	0.061	22
Body worn Test data (Separate 15mm 1RB) State1												
Front side	20	QPSK 1_50	38000/2595	1:1.58	0.093	0.052	-0.19	24.35	25.00	1.161	0.108	22.1
Back side	20	QPSK 1_50	38000/2595	1:1.58	0.099	0.055	-0.04	24.35	25.00	1.161	0.115	22.1
Back side	20	QPSK PCC 1_99	37901/2585.1	1:1.58	0.138	0.076	0.09	23.96	25.00	1.271	0.175	22
		QPSK SCC 1_0	38099/2604.9									
Body worn Test data (Separate 15mm 50%RB) State1												
Front side	20	QPSK 50_25	37850/2580	1:1.58	0.081	0.045	0.10	23.91	24.50	1.146	0.093	22.1
Back side	20	QPSK 50_25	37850/2580	1:1.58	0.087	0.049	0.12	23.91	24.50	1.146	0.100	22.1
Hotspot Test data (Separate 10mm 1RB) State3												
Front side	20	QPSK 1_50	38000/2595	1:1.58	0.187	0.099	-0.19	23.34	24.00	1.164	0.218	22.1
Back side	20	QPSK 1_50	38000/2595	1:1.58	0.205	0.109	-0.02	23.34	24.00	1.164	0.239	22.1
Left side	20	QPSK 1_50	38000/2595	1:1.58	0.003	0.001	-0.14	23.34	24.00	1.164	0.003	22.1
Right side	20	QPSK 1_50	38000/2595	1:1.58	0.151	0.079	0.05	23.34	24.00	1.164	0.176	22.1
Bottom side	20	QPSK 1_50	38000/2595	1:1.58	0.178	0.078	-0.06	23.34	24.00	1.164	0.207	22.1
Back side	20	QPSK PCC 1_99	37901/2585.1	1:1.58	0.214	0.115	-0.03	22.82	24.00	1.312	0.281	22
		QPSK SCC 1_0	38099/2604.9									
Hotspot Test data (Separate 10mm 50%RB) State3												
Front side	20	QPSK 50_25	37850/2580	1:1.58	0.144	0.080	-0.18	23.27	24.00	1.183	0.170	22.1
Back side	20	QPSK 50_25	37850/2580	1:1.58	0.182	0.094	-0.11	23.27	24.00	1.183	0.215	22.1
Left side	20	QPSK 50_25	37850/2580	1:1.58	0.025	0.008	0.15	23.27	24.00	1.183	0.030	22.1
Right side	20	QPSK 50_25	37850/2580	1:1.58	0.131	0.069	-0.02	23.27	24.00	1.183	0.155	22.1
Bottom side	20	QPSK 50_25	37850/2580	1:1.58	0.156	0.069	-0.03	23.27	24.00	1.183	0.185	22.1
Ant 1 Test Record												

Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	SAR (W/kg) 10-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) State2												
Left cheek	20	QPSK 1_0	37850/2580	1:1.58	0.138	0.067	0.04	19.85	21.00	1.303	0.180	22
Left tilted	20	QPSK 1_0	37850/2580	1:1.58	0.177	0.081	0.02	19.85	21.00	1.303	0.231	22
Right cheek	20	QPSK 1_0	37850/2580	1:1.58	0.457	0.246	0.08	19.85	21.00	1.303	0.596	22
Right tilted	20	QPSK 1_0	37850/2580	1:1.58	0.507	0.239	-0.04	19.85	21.00	1.303	0.661	22
Right tilted	20	QPSK PCC 1_99	37850/2580	1:1.58	0.458	0.231	0.03	19.37	21.00	1.455	0.667	22
		QPSK SCC 1_0	38048/2599.8									
Head Test Data (50%RB) State2												
Left cheek	20	QPSK 50_0	37850/2580	1:1.58	0.131	0.065	0.01	19.84	21.00	1.306	0.171	22
Left tilted	20	QPSK 50_0	37850/2580	1:1.58	0.171	0.079	-0.07	19.84	21.00	1.306	0.223	22
Right cheek	20	QPSK 50_0	37850/2580	1:1.58	0.452	0.245	0.09	19.84	21.00	1.306	0.590	22
Right tilted	20	QPSK 50_0	37850/2580	1:1.58	0.494	0.232	-0.03	19.84	21.00	1.306	0.645	22
Body worn Test data (Separate 15mm 1RB) State1												
Front side	20	QPSK 1_0	37850/2580	1:1.58	0.085	0.046	0.11	23.30	24.50	1.318	0.112	22.1
Back side	20	QPSK 1_0	37850/2580	1:1.58	0.187	0.088	-0.15	23.30	24.50	1.318	0.247	22.1
Back side	20	QPSK PCC 1_99	37850/2580	1:1.58	0.230	0.113	0.08	22.99	24.50	1.416	0.326	22
		QPSK SCC 1_0	38048/2599.8									
Body worn Test data (Separate 15mm 50%RB) State1												
Front side	20	QPSK 50_50	37850/2580	1:1.58	0.069	0.039	-0.01	23.09	24.50	1.384	0.095	22.1
Back side	20	QPSK 50_50	37850/2580	1:1.58	0.150	0.071	0.15	23.09	24.50	1.384	0.208	22.1
Hotspot Test data (Separate 10mm 1RB) State3												
Front side	20	QPSK 1_0	37850/2580	1:1.58	0.110	0.059	-0.11	20.85	22.00	1.303	0.143	22.1
Back side	20	QPSK 1_0	37850/2580	1:1.58	0.438	0.190	-0.18	20.85	22.00	1.303	**0.571**	22.1
Left side	20	QPSK 1_0	37850/2580	1:1.58	0.127	0.064	0.15	20.85	22.00	1.303	0.166	22.1
Top side	20	QPSK 1_0	37850/2580	1:1.58	0.211	0.091	0.08	20.85	22.00	1.303	0.275	22.1
Back side	20	QPSK PCC 1_99	37850/2580	1:1.58	0.302	0.151	-0.04	20.57	22.00	1.390	0.420	22
		QPSK SCC 1_0	38048/2599.8									
Hotspot Test data (Separate 10mm 50%RB) State3												
Front side	20	QPSK 50_50	37850/2580	1:1.58	0.104	0.056	-0.04	20.89	22.00	1.291	0.134	22.1
Back side	20	QPSK 50_50	37850/2580	1:1.58	0.239	0.114	-0.03	20.89	22.00	1.291	0.309	22.1
Left side	20	QPSK 50_50	37850/2580	1:1.58	0.140	0.067	0.18	20.89	22.00	1.291	0.181	22.1
Top side	20	QPSK 50_50	37850/2580	1:1.58	0.193	0.085	-0.16	20.89	22.00	1.291	0.249	22.1
Ant 4 Test Record												
Test position	**BW.**	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**SAR (W/kg) 10-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) State2												
Left cheek	20	QPSK 1_0	37850/2580	1:1.58	0.271	0.151	0.07	22.66	23.00	1.081	0.293	22
Left tilted	20	QPSK 1_0	37850/2580	1:1.58	0.079	0.043	-0.02	22.66	23.00	1.081	0.085	22
Right cheek	20	QPSK 1_0	37850/2580	1:1.58	0.712	0.337	0.16	22.66	23.00	1.081	**0.770**	22

Right tilted	20	QPSK 1_0	37850/2580	1:1.58	0.246	0.114	-0.09	22.66	23.00	1.081	0.266	22
Right cheek	20	QPSK PCC 1_99	37850/2580	1:1.58	0.675	0.312	0.03	22.46	23.00	1.132	0.764	22
		QPSK SCC 1_0	38048/2599.8									
Head Test Data (50%RB) State2												
Left cheek	20	QPSK 50_50	38150/2610	1:1.58	0.182	0.102	-0.17	22.21	22.50	1.069	0.195	22
Left tilted	20	QPSK 50_50	38150/2610	1:1.58	0.082	0.043	0.01	22.21	22.50	1.069	0.088	22
Right cheek	20	QPSK 50_50	38150/2610	1:1.58	0.600	0.302	0.05	22.21	22.50	1.069	0.641	22
Right tilted	20	QPSK 50_50	38150/2610	1:1.58	0.262	0.122	0.08	22.21	22.50	1.069	0.280	22
Body worn Test data (Separate 15mm 1RB) State1												
Front side	20	QPSK 1_0	37850/2580	1:1.58	0.140	0.077	0.11	22.66	23.00	1.081	0.151	22.1
Back side	20	QPSK 1_0	37850/2580	1:1.58	0.343	0.172	-0.19	22.66	23.00	1.081	**0.371**	22.1
Back side	20	QPSK PCC 1_99	37850/2580	1:1.58	0.225	0.121	0.07	22.46	23.00	1.132	0.255	22
		QPSK SCC 1_0	38048/2599.8									
Body worn Test data (Separate 15mm 50%RB) State1												
Front side	20	QPSK 50_50	38150/2610	1:1.58	0.117	0.062	-0.03	22.21	22.50	1.069	0.125	22.1
Back side	20	QPSK 50_50	38150/2610	1:1.58	0.275	0.133	0.18	22.21	22.50	1.069	0.294	22.1
Hotspot Test data (Separate 10mm 1RB) State3												
Front side	20	QPSK 1_0	38000/2595	1:1.58	0.099	0.054	-0.16	20.24	21.50	1.337	0.132	22.1
Back side	20	QPSK 1_0	38000/2595	1:1.58	0.251	0.120	0.05	20.24	21.50	1.337	0.335	22.1
Left side	20	QPSK 1_0	38000/2595	1:1.58	0.250	0.122	0.12	20.24	21.50	1.337	0.334	22.1
Top side	20	QPSK 1_0	38000/2595	1:1.58	0.004	0.002	0.16	20.24	21.50	1.337	0.005	22.1
Back side	20	QPSK PCC 1_99	37901/2585.1	1:1.58	0.219	0.107	-0.06	21.04	21.50	1.112	0.243	22
		QPSK SCC 1_0	38099/2604.9									
Hotspot Test data (Separate 10mm 50%RB) State3												
Front side	20	QPSK 50_0	38000/2595	1:1.58	0.098	0.053	0.19	20.25	21.50	1.334	0.131	22.1
Back side	20	QPSK 50_0	38000/2595	1:1.58	0.238	0.121	-0.04	20.25	21.50	1.334	0.317	22.1
Left side	20	QPSK 50_0	38000/2595	1:1.58	0.239	0.122	0.12	20.25	21.50	1.334	0.319	22.1
Top side	20	QPSK 50_0	38000/2595	1:1.58	0.006	0.003	0.07	20.25	21.50	1.334	0.008	22.1

Table 22：SAR of LTE Band 38 for Head, Body and Hotspot.

8.2.12 SAR Result of LTE Band 41

LTE Band 41 SAR Test Record												
Ant 0 Test Record												
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	SAR (W/kg) 10-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) with Class3 State2												
Left cheek	20	QPSK 1_0	41055/2636.5	1:1.58	0.114	0.064	0.04	23.89	25.00	1.291	0.147	22
Left tilted	20	QPSK 1_0	41055/2636.5	1:1.58	0.062	0.034	0.01	23.89	25.00	1.291	0.080	22
Right cheek	20	QPSK 1_0	41055/2636.5	1:1.58	0.180	0.097	-0.14	23.89	25.00	1.291	0.232	22
Right tilted	20	QPSK 1_0	41055/2636.5	1:1.58	0.076	0.041	0.17	23.89	25.00	1.291	0.098	22
Right cheek with HPUE	20	QPSK 1_50	40620/2593	1:2.31	0.135	0.012	-0.14	25.14	25.80	1.164	0.157	22
Right cheek	20	QPSK PCC 1_0 QPSK SCC 1_99	41055/2636.5 40857/2616.7	1:1.58	0.193	0.103	0.06	23.76	25.00	1.330	0.257	22
Head Test Data (50%RB) with Class3 State2												
Left cheek	20	QPSK 50_0	41055/2636.5	1:1.58	0.097	0.056	0.00	23.92	25.00	1.282	0.124	22
Left tilted	20	QPSK 50_0	41055/2636.5	1:1.58	0.055	0.031	0.15	23.92	25.00	1.282	0.071	22
Right cheek	20	QPSK 50_0	41055/2636.5	1:1.58	0.163	0.087	-0.16	23.92	25.00	1.282	0.209	22
Right tilted	20	QPSK 50_0	41055/2636.5	1:1.58	0.063	0.034	-0.06	23.92	25.00	1.282	0.081	22
Body worn Test data (Separate 15mm 1RB) with Class3 State1												
Front side	20	QPSK 1_0	41055/2636.5	1:1.58	0.113	0.065	0.01	23.89	25.00	1.291	0.146	22
Back side	20	QPSK 1_0	41055/2636.5	1:1.58	0.127	0.068	0.12	23.89	25.00	1.291	0.164	22
Back side with HPUE	20	QPSK 1_50	40620/2593	1:2.31	0.127	0.069	0.01	25.14	25.80	1.164	0.148	22
Back side	20	QPSK PCC 1_0 QPSK SCC 1_99	41055/2636.5 40857/2616.7	1:1.58	0.114	0.063	0.00	23.76	25.00	1.330	0.152	22.1
Body worn Test data (Separate 15mm 50%RB) with Class3 State1												
Front side	20	QPSK 50_0	41055/2636.5	1:1.58	0.104	0.059	0.16	23.92	25.00	1.282	0.133	22
Back side	20	QPSK 50_0	41055/2636.5	1:1.58	0.118	0.065	0.02	23.92	25.00	1.282	0.151	22
Hotspot Test data (Separate 10mm 1RB) with Class3 State3												
Front side	20	QPSK 1_0	41055/2636.5	1:1.58	0.232	0.126	0.13	23.89	25.00	1.291	0.300	22
Back side	20	QPSK 1_0	41055/2636.5	1:1.58	0.251	0.131	-0.01	23.89	25.00	1.291	0.324	22
Left side	20	QPSK 1_0	41055/2636.5	1:1.58	0.000	0.000	0.16	23.89	25.00	1.291	0.000	22
Right side	20	QPSK 1_0	41055/2636.5	1:1.58	0.189	0.098	-0.07	23.89	25.00	1.291	0.244	22
Bottom side	20	QPSK 1_0	41055/2636.5	1:1.58	0.308	0.122	-0.13	23.89	25.00	1.291	0.398	22
Bottom side with HPUE	20	QPSK 1_50	40620/2593	1:2.31	0.244	0.112	0.17	25.14	25.80	1.164	0.284	22
Back side	20	QPSK PCC 1_0 QPSK SCC 1_99	41055/2636.5 40857/2616.7	1:1.58	0.253	0.132	-0.12	23.76	25.00	1.330	0.337	22
Hotspot Test data (Separate 10mm 50%RB) with Class3 State3												
Front side	20	QPSK 50_0	41055/2636.5	1:1.58	0.202	0.109	-0.11	23.92	25.00	1.282	0.259	22
Back side	20	QPSK 50_0	41055/2636.5	1:1.58	0.252	0.131	0.10	23.92	25.00	1.282	0.323	22
Left side	20	QPSK 50_0	41055/2636.5	1:1.58	0.036	0.016	0.11	23.92	25.00	1.282	0.046	22
Right side	20	QPSK 50_0	41055/2636.5	1:1.58	0.176	0.091	-0.06	23.92	25.00	1.282	0.226	22
Bottom side	20	QPSK 50_0	41055/2636.5	1:1.58	0.242	0.107	-0.17	23.92	25.00	1.282	0.310	22
Ant 1 Test Record												
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	SAR (W/kg) 10-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) with Class3 State2												
Left cheek	20	QPSK 1_50	41490/2680	1:1.58	0.119	0.066	-0.03	19.25	20.10	1.216	0.145	22
Left tilted	20	QPSK 1_50	41490/2680	1:1.58	0.125	0.060	0.13	19.25	20.10	1.216	0.152	22
Right cheek	20	QPSK 1_50	41490/2680	1:1.58	0.345	0.192	-0.02	19.25	20.10	1.216	0.420	22
Right tilted	20	QPSK 1_50	41490/2680	1:1.58	0.681	0.314	-0.17	19.25	20.10	1.216	0.828	22
Right tilted	20	QPSK 1_50	39750/2506	1:1.58	0.842	0.383	-0.07	18.98	20.10	1.294	1.090	22
Right tilted	20	QPSK 1_50	40185/2549.5	1:1.58	0.678	0.312	0.07	19.14	20.10	1.247	0.846	22
Right tilted	20	QPSK 1_0	40620/2593	1:1.58	0.547	0.251	-0.06	19.07	20.10	1.268	0.693	22
Right tilted	20	QPSK 1_50	41055/2636.5	1:1.58	0.377	0.174	0.02	19.25	20.10	1.216	0.459	22
Right tilted with HPUE	20	QPSK 1_50	39750/2506	1:1.58	0.730	0.336	-0.04	20.61	21.30	1.172	0.856	22
Right tilted	20	QPSK PCC 1_0 QPSK SCC 1_99	41055/2636.5 40857/2616.7	1:1.58	0.475	0.229	0.14	18.93	20.10	1.309	0.622	22
Head Test Data (50%RB) with Class3 State2												
Left cheek	20	QPSK 50_0	41490/2680	1:1.58	0.091	0.051	-0.01	19.26	20.10	1.213	0.110	22
Left tilted	20	QPSK 50_0	41490/2680	1:1.58	0.097	0.050	0.03	19.26	20.10	1.213	0.118	22
Right cheek	20	QPSK 50_0	41490/2680	1:1.58	0.300	0.147	-0.09	19.26	20.10	1.213	0.364	22
Right tilted	20	QPSK 50_0	41490/2680	1:1.58	0.345	0.180	-0.04	19.26	20.10	1.213	0.419	22
Head Test Data (100%RB) with Class3 State2												
Right tilted	20	QPSK 100_0	40620/2593	1:1.58	0.522	0.240	-0.19	19.50	20.10	1.148	0.599	22
Body worn Test data (Separate 15mm 1RB) with Class3 State1												
Front side	20	QPSK 1_0	41055/2636.5	1:1.58	0.109	0.062	-0.04	24.02	24.60	1.143	0.125	22
Back side	20	QPSK 1_0	41055/2636.5	1:1.58	0.174	0.091	0.01	24.02	24.60	1.143	0.199	22
Back side	20	QPSK PCC 1_0 QPSK SCC 1_99	41055/2636.5 40857/2616.7	1:1.58	0.182	0.094	0.11	23.61	24.60	1.256	0.229	22
Body worn Test data (Separate 15mm 50%RB) with Class3 State1												
Front side	20	QPSK 50_0	40620/2593	1:1.58	0.127	0.069	-0.16	23.54	24.60	1.276	0.162	22
Back side	20	QPSK 50_0	40620/2593	1:1.58	0.267	0.131	-0.06	23.54	24.60	1.276	**0.341**	22
Back side with HPUE	20	QPSK 50_0	41055/2636.5	1:2.31	0.223	0.108	0.07	24.90	25.30	1.096	0.245	22
Hotspot Test data (Separate 10mm 1RB) with Class3 State3												
Front side	20	QPSK 1_0	40185/2549.5	1:1.58	0.247	0.135	0.14	22.22	23.10	1.225	0.302	22
Back side	20	QPSK 1_0	40185/2549.5	1:1.58	0.675	0.293	0.10	22.22	23.10	1.225	0.827	22
Left side	20	QPSK 1_0	40185/2549.5	1:1.58	0.265	0.130	0.05	22.22	23.10	1.225	0.325	22
Top side	20	QPSK 1_0	40185/2549.5	1:1.58	0.532	0.234	0.15	22.22	23.10	1.225	0.651	22
Back side	20	QPSK 1_99	39750/2506	1:1.58	0.655	0.294	-0.07	21.96	23.10	1.300	**0.852**	22

Back side	20	QPSK 1_99	40620/2593	1:1.58	0.458	0.215	0.13	22.16	23.10	1.242	0.569	22
Back side	20	QPSK 1_0	41055/2636.5	1:1.58	0.371	0.181	-0.01	22.20	23.10	1.230	0.456	22
Back side	20	QPSK 1_99	41490/2680	1:1.58	0.270	0.145	0.15	22.10	23.10	1.259	0.340	22
Top side	20	QPSK 1_99	39750/2506	1:1.58	0.647	0.284	-0.05	22.04	23.10	1.276	0.826	22
Top side	20	QPSK 1_99	40620/2593	1:1.58	0.262	0.115	-0.05	22.16	23.10	1.242	0.325	22
Top side	20	QPSK 1_0	41055/2636.5	1:1.58	0.216	0.093	-0.19	22.20	23.10	1.230	0.266	22
Top side	20	QPSK 1_99	41490/2680	1:1.58	0.130	0.055	0.11	22.10	23.10	1.259	0.164	22
Back side with HPUE	20	QPSK 1_99	40185/2549.5	1:2.31	0.581	0.249	-0.19	23.68	24.30	1.153	0.670	22
Back side	20	QPSK PCC 1_99	39750/2506	1:1.58	0.588	0.275	0.16	21.91	23.10	1.315	0.773	22.1
		QPSK SCC 1_0	39948/2525.8									
Hotspot Test data (Separate 10mm 50%RB) with Class3 State3												
Front side	20	QPSK 50_0	40185/2549.5	1:1.58	0.236	0.127	0.00	22.56	23.10	1.132	0.267	22
Back side	20	QPSK 50_0	40185/2549.5	1:1.58	0.443	0.146	-0.15	22.56	23.10	1.132	0.502	22
Left side	20	QPSK 50_0	40185/2549.5	1:1.58	0.252	0.128	-0.17	22.56	23.10	1.132	0.285	22
Top side	20	QPSK 50_0	40185/2549.5	1:1.58	0.525	0.219	0.10	22.56	23.10	1.132	0.595	22
Top side	20	QPSK 50_50	39750/2506	1:1.58	0.642	0.248	0.19	22.31	23.10	1.199	0.770	22
Top side	20	QPSK 50_0	40620/2593	1:1.58	0.308	0.134	-0.02	22.54	23.10	1.138	0.350	22
Top side	20	QPSK 50_50	41055/2636.5	1:1.58	0.176	0.081	0.19	22.42	23.10	1.169	0.206	22
Top side	20	QPSK 50_0	41490/2680	1:1.58	0.154	0.070	-0.14	22.39	23.10	1.178	0.181	22
Test position	**BW.**	**Test mode**	**Test Ch./Freq.**	**Duty Cycle**	**SAR (W/kg)1-g**	**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) State1												
Back side	20	QPSK 1_0	41055/2636.5	1:1.58	3.440	1.400	-0.15	24.02	24.60	1.143	1.600	22
Product specific 10g SAR Test data (Separate 0mm 50%RB) State1												
Back side	20	QPSK 50_0	40620/2593	1:1.58	4.440	1.870	0.02	23.54	24.10	1.138	2.127	22
Back side	20	QPSK 50_50	39750/2506	1:1.58	6.090	2.440	0.17	23.31	24.10	1.199	**2.927**	22
Back side	20	QPSK 50_0	40185/2549.5	1:1.58	2.980	1.320	-0.08	23.40	24.10	1.175	1.551	22
Back side	20	QPSK 50_25	41055/2636.5	1:1.58	2.950	1.310	-0.04	23.42	24.10	1.169	1.532	22
Back side	20	QPSK 50_25	41490/2680	1:1.58	2.540	1.160	0.19	23.45	24.10	1.161	1.347	22
Product specific 10g SAR Test data (Separate 0mm 100%RB) State1												
Back side	20	QPSK 100_0	40620/2593	1:1.58	4.420	1.680	0.00	23.45	24.10	1.161	1.951	22
Product specific 10g SAR Test data (Separate 0mm 1RB) State3												
Back side	20	QPSK 1_0	41055/2636.5	1:1.58	3.440	1.400	-0.15	24.02	23.10	0.809	1.133	22
Product specific 10g SAR Test data (Separate 0mm 50%RB) State3												
Back side	20	QPSK 50_0	40620/2593	1:1.58	4.440	1.870	0.02	23.54	23.10	0.904	1.690	22
Back side	20	QPSK 50_50	39750/2506	1:1.58	6.090	2.440	0.17	23.31	23.10	0.953	2.325	22
Back side	20	QPSK 50_0	40185/2549.5	1:1.58	2.980	1.320	-0.08	23.40	23.10	0.933	1.232	22
Back side	20	QPSK 50_25	41055/2636.5	1:1.58	2.950	1.310	-0.04	23.42	23.10	0.929	1.217	22
Back side	20	QPSK 50_25	41490/2680	1:1.58	2.540	1.160	0.19	23.45	23.10	0.923	1.070	22
Product specific 10g SAR Test data (Separate 0mm 100%RB) State3												
Back side	20	QPSK 100_0	40620/2593	1:1.58	4.420	1.680	0.00	23.45	23.10	0.923	1.550	22
Ant 4 Test Record												
Test position	**BW.**	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**SAR (W/kg) 10-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) with Class3 State2												
Left cheek	20	QPSK 1_99	39750/2506	1:1.58	0.352	0.197	-0.03	22.89	23.30	1.099	0.387	22
Left tilted	20	QPSK 1_99	39750/2506	1:1.58	0.123	0.066	-0.19	22.89	23.30	1.099	0.135	22
Right cheek	20	QPSK 1_99	39750/2506	1:1.58	0.870	0.463	-0.19	22.89	23.30	1.099	0.956	22
Right tilted	20	QPSK 1_99	39750/2506	1:1.58	0.301	0.157	0.06	22.89	23.30	1.099	0.331	22
Right cheek	20	QPSK 1_0	40185/2549.5	1:1.58	0.989	0.518	-0.19	22.70	23.30	1.148	1.136	22
Right cheek	20	QPSK 1_0	40620/2593	1:1.58	1.030	0.435	-0.03	22.76	23.30	1.132	**1.166**	22
Right cheek	20	QPSK 1_0	41055/2636.5	1:1.58	1.040	0.493	-0.05	22.81	23.30	1.119	1.164	22
Right cheek	20	QPSK 1_99	41490/2680	1:1.58	0.885	0.427	-0.17	22.70	23.30	1.148	1.016	22
Right cheek with repeat	20	QPSK 1_0	40620/2593	1:1.58	1.000	0.423	-0.03	22.76	23.30	1.132	1.132	22
Right cheek	20	QPSK PCC 1_99	40185/2549.5	1:1.58	1.040	0.512	-0.04	22.81	23.30	1.119	1.164	22.1
		QPSK SCC 1_0	40383/2569.3									
Head Test Data (50%RB) with Class3 State2												
Left cheek	20	QPSK 50_50	39750/2506	1:1.58	0.294	0.162	-0.14	22.48	22.80	1.076	0.316	22
Left tilted	20	QPSK 50_50	39750/2506	1:1.58	0.098	0.052	-0.06	22.48	22.80	1.076	0.105	22
Right cheek	20	QPSK 50_50	39750/2506	1:1.58	0.770	0.409	-0.18	22.48	22.80	1.076	0.829	22
Right tilted	20	QPSK 50_50	39750/2506	1:1.58	0.271	0.141	-0.04	22.48	22.80	1.076	0.292	22
Right cheek	20	QPSK 50_0	40185/2549.5	1:1.58	0.912	0.476	0.08	22.24	22.80	1.138	1.038	22
Right cheek	20	QPSK 50_0	40620/2593	1:1.58	0.959	0.466	0.17	22.19	22.80	1.151	1.104	22
Right cheek	20	QPSK 50_25	41055/2636.5	1:1.58	0.914	0.432	0.15	22.24	22.80	1.138	1.040	22
Right cheek	20	QPSK 50_50	41490/2680	1:1.58	0.797	0.383	0.01	22.32	22.80	1.117	0.890	22
Head Test Data (100%RB) with Class3 State2												
Right cheek	20	QPSK 100_0	39750/2506	1:1.58	0.749	0.399	-0.07	22.42	22.80	1.091	0.817	22
Head Test Data (1RB) with HPUE State2												
Left cheek	20	QPSK 1_0	40620/2593	1:2.31	0.307	0.169	0.04	23.58	24.40	1.208	0.371	22
Left tilted	20	QPSK 1_0	40620/2593	1:2.31	0.107	0.058	0.11	23.58	24.40	1.208	0.129	22
Right cheek	20	QPSK 1_0	40620/2593	1:2.31	0.875	0.412	-0.08	23.58	24.40	1.208	1.057	22
Right tilted	20	QPSK 1_0	40620/2593	1:2.31	0.291	0.138	-0.15	23.58	24.40	1.208	0.351	22
Right cheek	20	QPSK 1_99	39750/2506	1:2.31	0.721	0.350	-0.09	23.57	24.40	1.211	0.873	22
Right cheek	20	QPSK 1_99	40185/2549.5	1:2.31	0.874	0.433	0.07	23.57	24.40	1.211	1.058	22
Right cheek	20	QPSK 1_0	41055/2636.5	1:2.31	0.877	0.387	0.05	23.43	24.40	1.250	1.096	22
Right cheek	20	QPSK 1_50	41490/2680	1:2.31	0.818	0.378	-0.16	23.53	24.40	1.222	0.999	22
Head Test Data (50%RB) with HPUE State2												
Left cheek	20	QPSK 50_0	40620/2593	1:2.31	0.266	0.146	-0.03	23.17	23.90	1.183	0.315	22
Left tilted	20	QPSK 50_0	40620/2593	1:2.31	0.101	0.054	-0.04	23.17	23.90	1.183	0.119	22
Right cheek	20	QPSK 50_0	40620/2593	1:2.31	0.860	0.405	-0.12	23.17	23.90	1.183	1.017	22
Right tilted	20	QPSK 50_0	40620/2593	1:2.31	0.263	0.125	0.04	23.17	23.90	1.183	0.311	22
Right cheek	20	QPSK 50_50	39750/2506	1:2.31	0.638	0.310	0.14	23.05	23.90	1.216	0.776	22
Right cheek	20	QPSK 50_50	40185/2549.5	1:2.31	0.761	0.378	-0.01	23.06	23.90	1.213	0.923	22

Right cheek	20	QPSK 50_25	41055/2636.5	1:2.31	0.850	0.382	-0.13	23.16	23.90	1.186	1.008	22
Right cheek	20	QPSK 50_0	41490/2680	1:2.31	0.763	0.349	0.10	23.06	23.90	1.213	0.926	22
Head Test Data (100%RB) with HPUE State2												
Right cheek	20	QPSK 100_0	40620/2593	1:2.31	0.864	0.405	0.18	23.04	23.90	1.219	1.053	22
Body worn Test data (Separate 15mm 1RB) with Class3 State1												
Front side	20	QPSK 1_99	39750/2506	1:1.58	0.088	0.051	0.07	22.89	23.30	1.099	0.097	22
Back side	20	QPSK 1_99	39750/2506	1:1.58	0.185	0.099	-0.03	22.89	23.30	1.099	0.203	22
Back side with HPUE	20	QPSK 1_0	40620/2593	1:2.31	0.183	0.100	-0.04	23.58	24.40	1.208	0.221	22
Back side	20	QPSK PCC 1_99 QPSK SCC 1_0	39750/2506 39948/2525.8	1:1.58	0.218	0.115	-0.02	22.80	23.30	1.122	0.245	22.3
Body worn Test data (Separate 15mm 50%RB) with Class3 State1												
Front side	20	QPSK 50_50	39750/2506	1:1.58	0.076	0.044	-0.11	22.48	22.80	1.076	0.082	22
Back side	20	QPSK 50_50	39750/2506	1:1.58	0.159	0.087	-0.01	22.48	22.80	1.076	0.171	22
Hotspot Test data (Separate 10mm 1RB) with Class3 State3												
Front side	20	QPSK 1_0	40620/2593	1:1.58	0.158	0.084	-0.19	22.19	22.80	1.151	0.182	22
Back side	20	QPSK 1_0	40620/2593	1:1.58	0.410	0.192	0.14	22.19	22.80	1.151	0.472	22
Left side	20	QPSK 1_0	40620/2593	1:1.58	0.418	0.193	0.07	22.19	22.80	1.151	0.481	22
Top side	20	QPSK 1_0	40620/2593	1:1.58	0.040	0.022	0.12	22.19	22.80	1.151	0.046	22
Left side with HPUE	20	QPSK 1_50	40185/2549.5	1:2.31	0.386	0.187	0.16	23.55	23.90	1.084	0.418	22
Left side	20	QPSK PCC 1_99 QPSK SCC 1_0	40620/2593 40818/2612.8	1:1.58	0.400	0.186	0.03	22.16	22.80	1.159	0.464	22.3
Hotspot Test data (Separate 10mm 50%RB) with Class3 State3												
Front side	20	QPSK 50_0	39750/2506	1:1.58	0.131	0.071	0.02	22.20	22.80	1.148	0.150	22
Back side	20	QPSK 50_0	39750/2506	1:1.58	0.253	0.132	-0.08	22.20	22.80	1.148	0.290	22
Left side	20	QPSK 50_0	39750/2506	1:1.58	0.336	0.165	0.02	22.20	22.80	1.148	0.386	22
Top side	20	QPSK 50_0	39750/2506	1:1.58	0.068	0.035	0.09	22.20	22.80	1.148	0.078	22

Test Position	Channel/ Frequency (MHz)	Measured SAR (1g)	1st Repeated SAR (1g)	Ratio
Right cheek	40620/2593	1.030	1.000	1.03

Table 23：SAR of LTE Band 41 for Head, Body,Hotspot and Limbs.

8.2.13 SAR Result of LTE Band 66

LTE Band 66 SAR Test Record												
Ant 0 Test Record												
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	SAR (W/kg) 10-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) State2												
Left cheek	20	QPSK 1_0	132322/1745	1:1	0.081	0.052	-0.09	24.44	25.00	1.138	0.092	22
Left tilted	20	QPSK 1_0	132322/1745	1:1	0.033	0.018	0.02	24.44	25.00	1.138	0.038	22
Right cheek	20	QPSK 1_0	132322/1745	1:1	0.053	0.032	0.04	24.44	25.00	1.138	0.060	22
Right tilted	20	QPSK 1_0	132322/1745	1:1	0.051	0.029	0.02	24.44	25.00	1.138	0.058	22
Head Test Data (50%RB) State2												
Left cheek	20	QPSK 50_0	132322/1745	1:1	0.078	0.047	0.02	23.87	24.50	1.156	0.090	22
Left tilted	20	QPSK 50_0	132322/1745	1:1	0.031	0.016	0.05	23.87	24.50	1.156	0.036	22
Right cheek	20	QPSK 50_0	132322/1745	1:1	0.052	0.031	0.04	23.87	24.50	1.156	0.060	22
Right tilted	20	QPSK 50_0	132322/1745	1:1	0.048	0.028	0.07	23.87	24.50	1.156	0.055	22
Body worn Test data (Separate 15mm 1RB) State1												
Front side	20	QPSK 1_0	132322/1745	1:1	0.119	0.073	-0.18	22.09	22.50	1.099	0.131	22
Back side	20	QPSK 1_0	132322/1745	1:1	0.131	0.085	-0.07	22.09	22.50	1.099	0.144	22
Body worn Test data (Separate 15mm 50%RB) State1												
Front side	20	QPSK 50_0	132322/1745	1:1	0.112	0.071	0.03	22.15	22.50	1.084	0.121	22
Back side	20	QPSK 50_0	132322/1745	1:1	0.128	0.083	-0.08	22.15	22.50	1.084	0.139	22
Hotspot Test data (Separate 10mm 1RB) State3												
Front side	20	QPSK 1_0	132322/1745	1:1	0.111	0.068	-0.04	19.75	20.00	1.059	0.118	22
Back side	20	QPSK 1_0	132322/1745	1:1	0.201	0.119	-0.15	19.75	20.00	1.059	0.213	22
Left side	20	QPSK 1_0	132322/1745	1:1	0.015	0.007	0.16	19.75	20.00	1.059	0.016	22
Right side	20	QPSK 1_0	132322/1745	1:1	0.063	0.033	-0.03	19.75	20.00	1.059	0.067	22
Bottom side	20	QPSK 1_0	132322/1745	1:1	0.242	0.138	0.01	19.75	20.00	1.059	0.256	22
Hotspot Test data (Separate 10mm 50%RB) State3												
Front side	20	QPSK 50_0	132322/1745	1:1	0.115	0.067	0.15	19.63	20.00	1.089	0.125	22
Back side	20	QPSK 50_0	132322/1745	1:1	0.194	0.115	-0.01	19.63	20.00	1.089	0.211	22
Left side	20	QPSK 50_0	132322/1745	1:1	0.012	0.005	0.10	19.63	20.00	1.089	0.013	22
Right side	20	QPSK 50_0	132322/1745	1:1	0.059	0.033	-0.12	19.63	20.00	1.089	0.064	22
Bottom side	20	QPSK 50_0	132322/1745	1:1	0.231	0.132	0.04	19.63	20.00	1.089	0.252	22
Ant 1 Test Record												
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	SAR (W/kg) 10-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) State2												
Left cheek	20	QPSK 1_0	132322/1745	1:1	0.372	0.197	0.05	17.60	18.00	1.096	0.408	22.1
Left tilted	20	QPSK 1_0	132322/1745	1:1	0.453	0.231	0.12	17.60	18.00	1.096	0.497	22.1
Right cheek	20	QPSK 1_0	132322/1745	1:1	0.574	0.282	0.10	17.60	18.00	1.096	0.629	22.1

Right tilted	20	QPSK 1_0	132322/1745	1:1	0.809	0.353	0.03	17.60	18.00	1.096	0.887	22.1
Head Test Data (50%RB) State2												
Left cheek	20	QPSK 50_0	132322/1745	1:1	0.366	0.192	-0.04	17.48	18.00	1.127	0.413	22.1
Left tilted	20	QPSK 50_0	132322/1745	1:1	0.451	0.233	-0.05	17.48	18.00	1.127	0.508	22.1
Right cheek	20	QPSK 50_0	132322/1745	1:1	0.569	0.280	0.13	17.48	18.00	1.127	0.641	22.1
Right tilted	20	QPSK 50_0	132322/1745	1:1	0.725	0.341	-0.01	17.48	18.00	1.127	0.817	22.1
Right tilted	20	QPSK 50_0	132072/1720	1:1	0.823	0.356	-0.01	17.46	18.00	1.132	0.932	22.1
Right tilted	20	QPSK 50_0	132572/1770	1:1	0.648	0.304	0.06	17.41	18.00	1.146	0.742	22.1
Right tilted with repeat	20	QPSK 50_0	132072/1720	1:1	0.851	0.381	-0.15	17.46	18.00	1.132	**0.964**	22.3
Head Test Data (100%RB) State2												
Right tilted	20	QPSK 100_0	132322/1745	1:1	0.692	0.325	0.18	17.45	18.00	1.135	0.785	22.1
Body worn Test data (Separate 15mm 1RB) State1												
Front side	20	QPSK 1_0	132322/1745	1:1	0.192	0.104	0.08	21.42	22.00	1.143	0.219	22.1
Back side	20	QPSK 1_0	132322/1745	1:1	0.240	0.138	0.07	21.42	22.00	1.143	**0.274**	22.1
Body worn Test data (Separate 15mm 50%RB) State1												
Front side	20	QPSK 50_0	132322/1745	1:1	0.190	0.102	0.08	21.54	22.00	1.112	0.211	22.1
Back side	20	QPSK 50_0	132322/1745	1:1	0.246	0.142	-0.06	21.54	22.00	1.112	0.273	22.1
Hotspot Test data (Separate 10mm 1RB) State3												
Front side	20	QPSK 1_0	132322/1745	1:1	0.254	0.131	0.08	19.55	20.00	1.109	0.282	22.1
Back side	20	QPSK 1_0	132322/1745	1:1	0.344	0.180	0.05	19.55	20.00	1.109	0.382	22.1
Left side	20	QPSK 1_0	132322/1745	1:1	0.046	0.026	-0.04	19.55	20.00	1.109	0.051	22.1
Top side	20	QPSK 1_0	132322/1745	1:1	0.492	0.243	0.00	19.55	20.00	1.109	0.546	22.1
Hotspot Test data (Separate 10mm 50%RB) State3												
Front side	20	QPSK 50_0	132322/1745	1:1	0.244	0.124	0.13	19.52	20.00	1.117	0.273	22.1
Back side	20	QPSK 50_0	132322/1745	1:1	0.344	0.181	-0.01	19.52	20.00	1.117	0.384	22.1
Left side	20	QPSK 50_0	132322/1745	1:1	0.047	0.026	-0.19	19.52	20.00	1.117	0.052	22.1
Top side	20	QPSK 50_0	132322/1745	1:1	0.503	0.248	-0.14	19.52	20.00	1.117	**0.562**	22.1
Ant 4 Test Record												
Test position	**BW.**	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**SAR (W/kg) 10-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) State2												
Left cheek	20	QPSK 1_0	132322/1745	1:1	0.174	0.155	0.06	23.50	24.10	1.148	0.200	22
Left tilted	20	QPSK 1_0	132322/1745	1:1	0.102	0.063	-0.16	23.50	24.10	1.148	0.117	22
Right cheek	20	QPSK 1_0	132322/1745	1:1	0.473	0.263	-0.08	23.50	24.10	1.148	0.543	22
Right tilted	20	QPSK 1_0	132322/1745	1:1	0.163	0.092	0.02	23.50	24.10	1.148	0.187	22
Head Test Data (50%RB) State2												
Left cheek	20	QPSK 50_25	132322/1745	1:1	0.185	0.123	-0.08	22.93	23.60	1.167	0.216	22
Left tilted	20	QPSK 50_25	132322/1745	1:1	0.118	0.072	0.06	22.93	23.60	1.167	0.138	22
Right cheek	20	QPSK 50_25	132322/1745	1:1	0.520	0.297	-0.05	22.93	23.60	1.167	0.607	22
Right tilted	20	QPSK 50_25	132322/1745	1:1	0.163	0.094	0.18	22.93	23.60	1.167	0.190	22
Body worn Test data (Separate 15mm 1RB) State1												
Front side	20	QPSK 1_0	132322/1745	1:1	0.054	0.035	-0.02	23.50	24.10	1.148	0.062	22

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Back side	20	QPSK 1_0	132322/1745	1:1	0.122	0.076	-0.04	23.50	24.10	1.148	0.140	22
Body worn Test data (Separate 15mm 50%RB) State1												
Front side	20	QPSK 50_25	132322/1745	1:1	0.056	0.037	-0.19	22.93	23.60	1.167	0.065	22
Back side	20	QPSK 50_25	132322/1745	1:1	0.128	0.080	0.08	22.93	23.60	1.167	0.149	22
Hotspot Test data (Separate 10mm 1RB) State3												
Front side	20	QPSK 1_0	132322/1745	1:1	0.074	0.046	0.17	22.02	22.60	1.143	0.085	22
Back side	20	QPSK 1_0	132322/1745	1:1	0.193	0.109	-0.06	22.02	22.60	1.143	0.221	22
Left side	20	QPSK 1_0	132322/1745	1:1	0.191	0.106	0.12	22.02	22.60	1.143	0.218	22
Top side	20	QPSK 1_0	132322/1745	1:1	0.005	0.001	0.10	22.02	22.60	1.143	0.006	22
Hotspot Test data (Separate 10mm 50%RB) State3												
Front side	20	QPSK 50_25	132322/1745	1:1	0.081	0.049	-0.12	22.06	22.60	1.132	0.092	22
Back side	20	QPSK 50_25	132322/1745	1:1	0.209	0.119	-0.06	22.06	22.60	1.132	0.237	22
Left side	20	QPSK 50_25	132322/1745	1:1	0.198	0.110	-0.18	22.06	22.60	1.132	0.224	22
Top side	20	QPSK 50_25	132322/1745	1:1	0.006	0.001	0.07	22.06	22.60	1.132	0.007	22

Test Position	Channel/ Frequency (MHz)	Measured SAR (1g)	1st Repeated SAR (1g)	Ratio
Right tilted	132072/1720	0.823	0.851	1.03

Table 24：SAR of LTE Band 66 for Head, Body and Hotspot.

8.2.14 SAR Result of NR Band n2

NR N2 SAR Test Record												
Ant 0 Test Record												
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	SAR (W/kg) 10-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) State2												
Left cheek	20	QPSK 1_53	376000/1880	100%	0.065	0.042	0.07	22.88	24.20	1.355	0.088	22.1
Left tilted	20	QPSK 1_53	376000/1880	100%	0.039	0.022	-0.06	22.88	24.20	1.355	0.053	22.1
Right cheek	20	QPSK 1_53	376000/1880	100%	0.058	0.034	0.04	22.88	24.20	1.355	0.079	22.1
Right tilted	20	QPSK 1_53	376000/1880	100%	0.046	0.027	-0.07	22.88	24.20	1.355	0.062	22.1
Head Test Data (50%RB) State2												
Left cheek	20	QPSK 50_28	372000/1860	100%	0.100	0.060	-0.15	22.93	24.20	1.340	0.134	22.1
Left tilted	20	QPSK 50_28	372000/1860	100%	0.069	0.042	0.17	22.93	24.20	1.340	0.092	22.1
Right cheek	20	QPSK 50_28	372000/1860	100%	0.091	0.057	-0.16	22.93	24.20	1.340	0.122	22.1
Right tilted	20	QPSK 50_28	372000/1860	100%	0.070	0.042	0.11	22.93	24.20	1.340	0.094	22.1
Body worn Test data (Separate 15mm 1RB) State1												
Front side	20	QPSK 1_53	376000/1880	100%	0.102	0.062	-0.01	21.90	23.20	1.349	0.138	22.1
Back side	20	QPSK 1_53	376000/1880	100%	0.172	0.105	0.01	21.90	23.20	1.349	0.232	22.1
Body worn Test data (Separate 15mm 50%RB) State1												
Front side	20	QPSK 50_28	372000/1860	100%	0.112	0.072	-0.02	21.93	23.20	1.340	0.150	22.1
Back side	20	QPSK 50_28	372000/1860	100%	0.226	0.143	-0.13	21.93	23.20	1.340	0.303	22.1
Hotspot Test data (Separate 10mm 1RB) State3												
Front side	20	QPSK 1_53	376000/1880	100%	0.150	0.090	0.07	19.92	21.20	1.343	0.201	22.1
Back side	20	QPSK 1_53	376000/1880	100%	0.280	0.167	-0.02	19.92	21.20	1.343	0.376	22.1
Left side	20	QPSK 1_53	376000/1880	100%	0.041	0.020	0.03	19.92	21.20	1.343	0.055	22.1
Right side	20	QPSK 1_53	376000/1880	100%	0.112	0.062	0.10	19.92	21.20	1.343	0.150	22.1
Bottom side	20	QPSK 1_53	376000/1880	100%	0.242	0.135	-0.06	19.92	21.20	1.343	0.325	22.1
Hotspot Test data (Separate 10mm 50%RB) State3												
Front side	20	QPSK 50_28	376000/1880	100%	0.154	0.094	-0.10	19.91	21.20	1.346	0.207	22.1
Back side	20	QPSK 50_28	376000/1880	100%	0.288	0.173	-0.11	19.91	21.20	1.346	0.388	22.1
Left side	20	QPSK 50_28	376000/1880	100%	0.044	0.026	0.19	19.91	21.20	1.346	0.059	22.1
Right side	20	QPSK 50_28	376000/1880	100%	0.118	0.063	-0.10	19.91	21.20	1.346	0.159	22.1
Bottom side	20	QPSK 50_28	376000/1880	100%	0.242	0.136	0.12	19.91	21.20	1.346	0.326	22.1
Ant 1 Test Record												
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	SAR (W/kg) 10-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) State2												
Left cheek	20	QPSK 1_53	376000/1880	100%	0.342	0.181	-0.02	15.07	16.20	1.297	0.444	22.5
Left tilted	20	QPSK 1_53	376000/1880	100%	0.434	0.231	-0.08	15.07	16.20	1.297	0.563	22.5
Right cheek	20	QPSK 1_53	376000/1880	100%	0.652	0.308	0.01	15.07	16.20	1.297	0.846	22.4

Right tilted	20	QPSK 1_53	376000/1880	100%	0.737	0.340	0.06	15.07	16.20	1.297	0.956	22.4
Right cheek	20	QPSK 1_53	372000/1860	100%	0.642	0.303	0.01	15.03	16.20	1.309	0.840	22.4
Right cheek	20	QPSK 1_53	380000/1900	100%	0.665	0.312	0.04	15.04	16.20	1.306	0.869	22.4
Right tilted	20	QPSK 1_53	372000/1860	100%	0.705	0.327	0.04	15.03	16.20	1.309	0.923	22.4
Right tilted	20	QPSK 1_53	380000/1900	100%	0.743	0.340	0.08	15.04	16.20	1.306	0.970	22.4
Head Test Data (50%RB) State2												
Left cheek	20	QPSK 50_28	376000/1880	100%	0.330	0.181	-0.11	15.03	16.20	1.309	0.432	22.5
Left tilted	20	QPSK 50_28	376000/1880	100%	0.352	0.189	-0.16	15.03	16.20	1.309	0.461	22.5
Right cheek	20	QPSK 50_28	376000/1880	100%	0.671	0.317	0.02	15.03	16.20	1.309	0.878	22.4
Right tilted	20	QPSK 50_28	376000/1880	100%	0.746	0.343	0.04	15.03	16.20	1.309	0.977	22.4
Right cheek	20	QPSK 50_28	372000/1860	100%	0.656	0.309	0.04	14.96	16.20	1.330	0.873	22.4
Right cheek	20	QPSK 50_28	380000/1900	100%	0.673	0.315	0.01	14.98	16.20	1.324	0.891	22.4
Right tilted	20	QPSK 50_28	372000/1860	100%	0.725	0.336	0.04	14.96	16.20	1.330	0.965	22.4
Right tilted	20	QPSK 50_28	380000/1900	100%	0.744	0.340	-0.12	14.98	16.20	1.324	**0.985**	22.4
Head Test Data (100%RB) State2												
Right cheek	20	QPSK 100_0	372000/1860	100%	0.525	0.247	0.06	14.04	15.20	1.306	0.686	22.4
Right tilted	20	QPSK 100_0	372000/1860	100%	0.470	0.251	0.01	14.04	15.20	1.306	0.614	22.4
Body worn Test data (Separate 15mm 1RB) State1												
Front side	20	QPSK 1_53	380000/1900	100%	0.235	0.136	0.06	21.13	22.20	1.279	0.301	22.4
Back side	20	QPSK 1_53	380000/1900	100%	0.523	0.291	0.02	21.13	22.20	1.279	**0.669**	22.4
Body worn Test data (Separate 15mm 50%RB) State1												
Front side	20	QPSK 50_28	376000/1880	100%	0.228	0.132	0.04	21.07	22.20	1.297	0.296	22.4
Back side	20	QPSK 50_28	376000/1880	100%	0.425	0.240	0.05	21.07	22.20	1.297	0.551	22.4
Hotspot Test data (Separate 10mm 1RB) State3												
Front side	20	QPSK 1_53	372000/1860	100%	0.284	0.156	0.01	19.15	20.20	1.274	0.362	22.4
Back side	20	QPSK 1_53	372000/1860	100%	0.505	0.271	0.02	19.15	20.20	1.274	0.643	22.4
Left side	20	QPSK 1_53	372000/1860	100%	0.096	0.056	0.04	19.15	20.20	1.274	0.122	22.4
Top side	20	QPSK 1_53	372000/1860	100%	0.543	0.271	0.08	19.15	20.20	1.274	0.692	22.4
Hotspot Test data (Separate 10mm 50%RB) State3												
Front side	20	QPSK 50_28	376000/1880	100%	0.293	0.159	0.04	19.21	20.20	1.256	0.368	22.4
Back side	20	QPSK 50_28	376000/1880	100%	0.557	0.299	0.02	19.21	20.20	1.256	0.700	22.4
Left side	20	QPSK 50_28	376000/1880	100%	0.110	0.061	0.04	19.21	20.20	1.256	0.138	22.4
Top side	20	QPSK 50_28	376000/1880	100%	0.600	0.296	0.02	19.21	20.20	1.256	**0.754**	22.4

Table 25：SAR of NR Band n2 for Head, Body and Hotspot.

8.2.15 SAR Result of NR Band n7

NR N7 SAR Test Record												
Ant 0 Test Record												
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	SAR (W/kg) 10-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) State2												
Left cheek	40	QPSK 1_108	504000/2520	100%	0.182	0.107	0.00	24.30	25.50	1.318	0.240	22.2
Left tilted	40	QPSK 1_108	504000/2520	100%	0.134	0.073	-0.11	24.30	25.50	1.318	0.177	22.2
Right cheek	40	QPSK 1_108	504000/2520	100%	0.344	0.190	0.13	24.30	25.50	1.318	0.453	22.2
Right tilted	40	QPSK 1_108	504000/2520	100%	0.091	0.053	0.02	24.30	25.50	1.318	0.120	22.2
Head Test Data (50%RB) State2												
Left cheek	40	QPSK 108_54	510000/2550	100%	0.178	0.104	-0.16	24.39	25.50	1.291	0.230	22.2
Left tilted	40	QPSK 108_54	510000/2550	100%	0.134	0.073	0.15	24.39	25.50	1.291	0.173	22.2
Right cheek	40	QPSK 108_54	510000/2550	100%	0.319	0.174	-0.16	24.39	25.50	1.291	0.412	22.2
Right tilted	40	QPSK 108_54	510000/2550	100%	0.080	0.046	-0.04	24.39	25.50	1.291	0.103	22.2
Body worn Test data (Separate 15mm 1RB) State1												
Front side	40	QPSK 1_1	504000/2520	100%	0.140	0.079	0.19	22.29	23.50	1.321	0.185	22
Back side	40	QPSK 1_1	504000/2520	100%	0.208	0.111	-0.10	22.29	23.50	1.321	0.275	22
Body worn Test data (Separate 15mm 50%RB) State1												
Front side	40	QPSK 108_54	510000/2550	100%	0.133	0.075	-0.16	22.37	23.50	1.297	0.173	22
Back side	40	QPSK 108_54	510000/2550	100%	0.177	0.095	0.00	22.37	23.50	1.297	0.230	22
Hotspot Test data (Separate 10mm 1RB) State3												
Front side	20	QPSK 1_108	504000/2520	100%	0.149	0.077	-0.08	19.80	21.00	1.318	0.196	22
Back side	40	QPSK 1_108	504000/2520	100%	0.246	0.123	-0.13	19.80	21.00	1.318	0.324	22
Left side	40	QPSK 1_108	504000/2520	100%	0.004	0.002	0.17	19.80	21.00	1.318	0.005	22
Right side	40	QPSK 1_108	504000/2520	100%	0.139	0.075	0.13	19.80	21.00	1.318	0.183	22
Bottom side	40	QPSK 1_108	504000/2520	100%	0.157	0.074	0.18	19.80	21.00	1.318	0.207	22
Hotspot Test data (Separate 10mm 50%RB) State3												
Front side	40	QPSK 108_54	510000/2550	100%	0.180	0.096	0.02	19.83	21.00	1.309	0.236	22
Back side	40	QPSK 108_54	510000/2550	100%	0.225	0.121	-0.11	19.83	21.00	1.309	0.295	22
Left side	40	QPSK 108_54	510000/2550	100%	0.005	0.002	0.01	19.83	21.00	1.309	0.007	22
Right side	40	QPSK 108_54	510000/2550	100%	0.148	0.079	-0.13	19.83	21.00	1.309	0.194	22
Bottom side	40	QPSK 108_54	510000/2550	100%	0.188	0.081	-0.07	19.83	21.00	1.309	0.246	22
Ant 1 Test Record												

Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	SAR (W/kg) 10-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) State2												
Left cheek	40	QPSK 1_1	510000/2550	100%	0.170	0.094	0.06	15.74	17.00	1.337	0.227	22.2
Left tilted	40	QPSK 1_1	510000/2550	100%	0.195	0.098	-0.14	15.74	17.00	1.337	0.261	22.2
Right cheek	40	QPSK 1_1	510000/2550	100%	0.555	0.305	-0.07	15.74	17.00	1.337	0.742	22.2
Right tilted	40	QPSK 1_1	510000/2550	100%	0.523	0.275	-0.09	15.74	17.00	1.337	0.699	22.2
Head Test Data (50%RB) State2												
Left cheek	40	QPSK 108_54	507000/2535	100%	0.163	0.090	-0.13	15.76	17.00	1.330	0.217	22.2
Left tilted	40	QPSK 108_54	507000/2535	100%	0.190	0.096	-0.17	15.76	17.00	1.330	0.253	22.2
Right cheek	40	QPSK 108_54	507000/2535	100%	0.539	0.297	-0.14	15.76	17.00	1.330	0.717	22.2
Right tilted	40	QPSK 108_54	507000/2535	100%	0.486	0.221	-0.14	15.76	17.00	1.330	0.647	22.4
Body worn Test data (Separate 15mm 1RB) State1												
Front side	40	QPSK 1_108	507000/2535	100%	0.116	0.066	-0.09	18.25	19.50	1.334	0.155	22
Back side	40	QPSK 1_108	507000/2535	100%	0.173	0.087	0.03	18.25	19.50	1.334	0.231	22
Body worn Test data (Separate 15mm 50%RB) State1												
Front side	40	QPSK 108_54	507000/2535	100%	0.135	0.077	-0.12	18.32	19.50	1.312	0.177	22
Back side	40	QPSK 108_54	507000/2535	100%	0.176	0.088	-0.04	18.32	19.50	1.312	0.231	22
Hotspot Test data (Separate 10mm 1RB) State3												
Front side	40	QPSK 1_1	510000/2550	100%	0.125	0.069	-0.13	15.74	17.00	1.337	0.167	22
Back side	40	QPSK 1_1	510000/2550	100%	0.266	0.121	-0.17	15.74	17.00	1.337	0.356	22
Left side	40	QPSK 1_1	510000/2550	100%	0.171	0.089	0.10	15.74	17.00	1.337	0.229	22
Top side	40	QPSK 1_1	510000/2550	100%	0.241	0.106	0.09	15.74	17.00	1.337	0.322	22
Hotspot Test data (Separate 10mm 50%RB) State3												
Front side	40	QPSK 108_54	507000/2535	100%	0.123	0.067	0.14	15.76	17.00	1.330	0.164	22
Back side	40	QPSK 108_54	507000/2535	100%	0.251	0.118	-0.09	15.76	17.00	1.330	0.334	22
Left side	40	QPSK 108_54	507000/2535	100%	0.158	0.083	-0.08	15.76	17.00	1.330	0.210	22
Top side	40	QPSK 108_54	507000/2535	100%	0.236	0.104	-0.10	15.76	17.00	1.330	0.314	22
Ant 4 Test Record												
Test position	**BW.**	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**SAR (W/kg) 10-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) State2												
Left cheek	40	QPSK 1_108	507000/2535	100%	0.385	0.190	0.09	19.96	21.00	1.271	0.489	22.2
Left tilted	40	QPSK 1_108	507000/2535	100%	0.093	0.047	0.03	19.96	21.00	1.271	0.118	22.2
Right cheek	40	QPSK 1_108	507000/2535	100%	0.860	0.403	0.10	19.96	21.00	1.271	1.093	22.4
Right tilted	40	QPSK 1_108	507000/2535	100%	0.331	0.148	-0.03	19.96	21.00	1.271	0.421	22.2
Right cheek	40	QPSK 1_1	504000/2520	100%	0.758	0.339	-0.15	19.92	21.00	1.282	0.972	22.4

Head Test Data (50%RB) State2												
Left cheek	40	QPSK 108_54	507000/2535	100%	0.351	0.173	0.06	19.97	21.00	1.268	0.445	22.2
Left tilted	40	QPSK 108_54	507000/2535	100%	0.096	0.048	0.03	19.97	21.00	1.268	0.122	22.2
Right cheek	40	QPSK 108_54	507000/2535	100%	0.884	0.414	0.04	19.97	21.00	1.268	**1.121**	22.4
Right tilted	40	QPSK 108_54	507000/2535	100%	0.309	0.137	0.02	19.97	21.00	1.268	0.392	22.2
Right cheek	40	QPSK 108_54	504000/2520	100%	0.856	0.396	-0.03	19.96	21.00	1.271	1.088	22.2
Right cheek	40	QPSK 108_54	510000/2550	100%	0.858	0.413	0.07	19.95	21.00	1.274	1.093	22.2
Right cheek with Repeat	40	QPSK 108_54	507000/2535	100%	0.870	0.402	-0.03	19.97	21.00	1.268	1.103	22.4
Head Test Data (100%RB) State2												
Right cheek	40	QPSK 216_0	510000/2550	100%	0.698	0.316	0.05	18.99	20.00	1.262	0.881	22.2
Body worn Test data (Separate 15mm 1RB) State1												
Front side	40	QPSK 1_108	510000/2550	100%	0.117	0.066	-0.09	21.30	22.50	1.318	0.154	22.4
Back side	40	QPSK 1_108	510000/2550	100%	0.241	0.129	0.09	21.30	22.50	1.318	0.318	22.4
Body worn Test data (Separate 15mm 50%RB) State1												
Front side	40	QPSK 108_54	504000/2520	100%	0.108	0.060	0.07	21.34	22.50	1.306	0.141	22.4
Back side	40	QPSK 108_54	504000/2520	100%	0.268	0.141	0.04	21.34	22.50	1.306	**0.350**	22.4
Hotspot Test data (Separate 10mm 1RB) State3												
Front side	40	QPSK 1_108	510000/2550	100%	0.144	0.076	0.03	18.79	20.00	1.321	0.190	22.4
Back side	40	QPSK 1_108	510000/2550	100%	0.364	0.177	-0.03	18.79	20.00	1.321	0.481	22.4
Left side	40	QPSK 1_108	510000/2550	100%	0.391	0.186	-0.16	18.79	20.00	1.321	**0.517**	22.4
Top side	40	QPSK 1_108	510000/2550	100%	0.032	0.016	0.01	18.79	20.00	1.321	0.042	22.4
Hotspot Test data (Separate 10mm 50%RB) State3												
Front side	40	QPSK 108_54	504000/2520	100%	0.126	0.065	-0.09	18.86	20.00	1.300	0.164	22.4
Back side	40	QPSK 108_54	504000/2520	100%	0.331	0.157	0.05	18.86	20.00	1.300	0.430	22.4
Left side	40	QPSK 108_54	504000/2520	100%	0.307	0.146	0.01	18.86	20.00	1.300	0.399	22.4
Top side	40	QPSK 108_54	504000/2520	100%	0.041	0.021	0.03	18.86	20.00	1.300	0.053	22.4

Test Position	Channel/ Frequency (MHz)	Measured SAR (1g)	1st Repeated SAR (1g)	Ratio
Right cheek	507000/2535	0.884	0.870	1.02

Table 26：SAR of NR Band n7 for Head, Body and Hotspot.

8.2.16 SAR Result of NR Band n12

SA N12 SAR Test Record												
Ant 0 Test Record												
Test position	BW.	Modulation	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	SAR (W/kg) 10-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) State2												
Left cheek	15	QPSK 1_40	141300/706.5	100%	0.093	0.066	-0.11	24.14	25.40	1.337	0.124	22.3
Left tilted	15	QPSK 1_40	141300/706.5	100%	0.051	0.037	-0.19	24.14	25.40	1.337	0.068	22.3
Right cheek	15	QPSK 1_40	141300/706.5	100%	0.073	0.053	0.06	24.14	25.40	1.337	0.098	22.3
Right tilted	15	QPSK 1_40	141300/706.5	100%	0.032	0.015	-0.10	24.14	25.40	1.337	0.043	22.3
Head Test Data (50%RB) State2												
Left cheek	15	QPSK 36_22	141700/708.5	100%	0.106	0.076	-0.09	24.16	25.40	1.330	0.141	22.3
Left tilted	15	QPSK 36_22	141700/708.5	100%	0.058	0.043	-0.01	24.16	25.40	1.330	0.077	22.3
Right cheek	15	QPSK 36_22	141700/708.5	100%	0.080	0.058	-0.16	24.16	25.40	1.330	0.106	22.3
Right tilted	15	QPSK 36_22	141700/708.5	100%	0.031	0.011	-0.15	24.16	25.40	1.330	0.041	22.3
Body worn Test data (Separate 15mm 1RB) State1												
Front side	15	QPSK 1_40	141300/706.5	100%	0.122	0.087	-0.14	24.14	25.40	1.337	0.163	22.3
Back side	15	QPSK 1_40	141300/706.5	100%	0.141	0.109	0.03	24.14	25.40	1.337	0.188	22.3
Body worn Test data (Separate 15mm 50%RB) State1												
Front side	15	QPSK 36_22	141700/708.5	100%	0.129	0.093	0.06	24.16	25.40	1.330	0.172	22.3
Back side	15	QPSK 36_22	141700/708.5	100%	0.157	0.113	-0.02	24.16	25.40	1.330	0.209	22.3
Hotspot Test data (Separate 10mm 1RB) State3												
Front side	15	QPSK 1_40	141300/706.5	100%	0.130	0.093	-0.08	24.14	25.40	1.337	0.174	22.3
Back side	15	QPSK 1_40	141300/706.5	100%	0.177	0.104	-0.09	24.14	25.40	1.337	0.237	22.3
Left side	15	QPSK 1_40	141300/706.5	100%	0.211	0.147	0.02	24.14	25.40	1.337	**0.282**	22.3
Right side	15	QPSK 1_40	141300/706.5	100%	0.109	0.076	-0.02	24.14	25.40	1.337	0.146	22.3
Bottom side	15	QPSK 1_40	141300/706.5	100%	0.148	0.078	-0.04	24.14	25.40	1.337	0.198	22.3
Hotspot Test data (Separate 10mm 50%RB) State3												
Front side	15	QPSK 36_22	141700/708.5	100%	0.121	0.087	0.12	24.16	25.40	1.330	0.161	22.3
Back side	15	QPSK 36_22	141700/708.5	100%	0.154	0.112	-0.07	24.16	25.40	1.330	0.205	22.3
Left side	15	QPSK 36_22	141700/708.5	100%	0.198	0.132	0.11	24.16	25.40	1.330	0.263	22.3
Right side	15	QPSK 36_22	141700/708.5	100%	0.106	0.071	-0.04	24.16	25.40	1.330	0.141	22.3
Bottom side	15	QPSK 36_22	141700/708.5	100%	0.130	0.065	-0.18	24.16	25.40	1.330	0.173	22.3
Ant 1 Test Record												
Test position	BW.	Modulation	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	SAR (W/kg) 10-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) State2												
Left cheek	15	QPSK 1_40	141700/708.5	100%	0.332	0.226	-0.05	22.34	23.90	1.432	0.475	22.3
Left tilted	15	QPSK 1_40	141700/708.5	100%	0.297	0.196	-0.04	22.34	23.90	1.432	0.425	22.3
Right cheek	15	QPSK 1_40	141700/708.5	100%	0.593	0.359	0.00	22.34	23.90	1.432	0.849	22.1
Right tilted	15	QPSK 1_40	141700/708.5	100%	0.461	0.239	-0.02	22.34	23.90	1.432	0.660	22.1
Right cheek	15	QPSK 1_40	141300/706.5	100%	0.562	0.344	-0.06	22.28	23.90	1.452	0.816	22.3

Right cheek	15	QPSK 1_40	141500/707.5	100%	0.560	0.343	-0.02	22.31	23.90	1.442	0.808	22.3
Head Test Data (50%RB) State2												
Left cheek	15	QPSK 36_22	141700/708.5	100%	0.332	0.225	-0.13	22.38	23.90	1.419	0.471	22.3
Left tilted	15	QPSK 36_22	141700/708.5	100%	0.283	0.187	-0.16	22.38	23.90	1.419	0.402	22.3
Right cheek	15	QPSK 36_22	141700/708.5	100%	0.619	0.377	-0.17	22.38	23.90	1.419	0.878	22.3
Right tilted	15	QPSK 36_22	141700/708.5	100%	0.446	0.230	0.00	22.38	23.90	1.419	0.633	22.3
Right cheek	15	QPSK 36_22	141300/706.5	100%	0.593	0.351	0.02	22.15	23.90	1.496	**0.887**	22.3
Right cheek	15	QPSK 36_22	141500/707.5	100%	0.598	0.363	-0.05	22.33	23.90	1.435	0.858	22.3
Body worn Test data (Separate 15mm 1RB) State1												
Front side	15	QPSK 1_40	141700/708.5	100%	0.148	0.103	-0.05	23.82	25.40	1.439	0.213	22.3
Back side	15	QPSK 1_40	141700/708.5	100%	0.154	0.110	-0.03	23.82	25.40	1.439	**0.222**	22.3
Body worn Test data (Separate 15mm 50%RB) State												
Front side	15	QPSK 36_22	141700/708.5	100%	0.135	0.094	-0.02	23.86	25.40	1.426	0.192	22.3
Back side	15	QPSK 36_22	141700/708.5	100%	0.154	0.116	-0.12	23.86	25.40	1.426	0.220	22.3
Hotspot Test data (Separate 10mm 1RB) State3												
Front side	15	QPSK 1_1	141300/706.5	100%	0.176	0.120	-0.09	22.79	24.40	1.449	0.255	22.3
Back side	15	QPSK 1_1	141300/706.5	100%	0.153	0.104	0.02	22.79	24.40	1.449	0.222	22.3
Left side	15	QPSK 1_1	141300/706.5	100%	0.089	0.062	-0.04	22.79	24.40	1.449	0.129	22.3
Top side	15	QPSK 1_1	141300/706.5	100%	0.092	0.057	-0.02	22.79	24.40	1.449	0.133	22.3
Hotspot Test data (Separate 10mm 50%RB) State3												
Front side	15	QPSK 36_22	141700/708.5	100%	0.152	0.102	-0.03	22.83	24.40	1.435	0.218	22.3
Back side	15	QPSK 36_22	141700/708.5	100%	0.182	0.120	-0.05	22.83	24.40	1.435	0.261	22.3
Left side	15	QPSK 36_22	141700/708.5	100%	0.095	0.066	-0.12	22.83	24.40	1.435	0.136	22.3
Top side	15	QPSK 36_22	141700/708.5	100%	0.091	0.061	-0.11	22.83	24.40	1.435	0.131	22.3

Table 27：SAR of NR Band n12 for Head, Body and Hotspot.

8.2.17 SAR Result of NR Band n26

SA N26 SAR Test Record												
Ant 0 Test Record												
Test position	**BW.**	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**SAR (W/kg) 10-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) State2												
Left cheek	20	QPSK 1_53	167800/839	100%	0.173	0.119	0.15	24.09	25.40	1.352	0.234	22.1
Left tilted	20	QPSK 1_53	167800/839	100%	0.084	0.061	-0.04	24.09	25.40	1.352	0.114	22.1
Right cheek	20	QPSK 1_53	167800/839	100%	0.123	0.089	0.11	24.09	25.40	1.352	0.166	22.1
Right tilted	20	QPSK 1_53	167800/839	100%	0.066	0.048	0.00	24.09	25.40	1.352	0.089	22.1
Head Test Data (50%RB) State2												
Left cheek	20	QPSK 50_28	164800/824	100%	0.162	0.113	0.10	24.14	25.40	1.337	0.217	22.1
Left tilted	20	QPSK 50_28	164800/824	100%	0.086	0.063	0.16	24.14	25.40	1.337	0.115	22.1
Right cheek	20	QPSK 50_28	164800/824	100%	0.128	0.093	-0.10	24.14	25.40	1.337	0.171	22.1
Right tilted	20	QPSK 50_28	164800/824	100%	0.069	0.051	0.17	24.14	25.40	1.337	0.092	22.1
Body worn Test data (Separate 15mm 1RB) State1												
Front side	20	QPSK 1_53	167800/839	100%	0.095	0.060	0.06	24.09	25.40	1.352	0.128	22.1
Back side	20	QPSK 1_53	167800/839	100%	0.174	0.108	-0.09	24.09	25.40	1.352	**0.235**	22.3
Body worn Test data (Separate 15mm 50%RB) State1												
Front side	20	QPSK 50_28	164800/824	100%	0.113	0.081	0.01	24.14	25.40	1.337	0.151	22.1
Back side	20	QPSK 50_28	164800/824	100%	0.124	0.087	0.17	24.14	25.40	1.337	0.166	22.1
Hotspot Test data (Separate 10mm 1RB) State3												
Front side	20	QPSK 1_53	167800/839	100%	0.200	0.119	-0.16	24.09	25.40	1.352	0.270	22.1
Back side	20	QPSK 1_53	167800/839	100%	0.342	0.204	-0.16	24.09	25.40	1.352	**0.462**	22.3
Left side	20	QPSK 1_53	167800/839	100%	0.087	0.060	-0.07	24.09	25.40	1.352	0.118	22.1
Right side	20	QPSK 1_53	167800/839	100%	0.062	0.040	0.04	24.09	25.40	1.352	0.084	22.1
Bottom side	20	QPSK 1_53	167800/839	100%	0.207	0.104	0.03	24.09	25.40	1.352	0.280	22.1
Hotspot Test data (Separate 10mm 50%RB) State3												
Front side	20	QPSK 50_28	164800/824	100%	0.151	0.091	0.18	24.14	25.40	1.337	0.202	22.1
Back side	20	QPSK 50_28	164800/824	100%	0.217	0.131	-0.17	24.14	25.40	1.337	0.290	22.1
Left side	20	QPSK 50_28	164800/824	100%	0.073	0.048	0.12	24.14	25.40	1.337	0.098	22.1
Right side	20	QPSK 50_28	164800/824	100%	0.081	0.054	-0.07	24.14	25.40	1.337	0.108	22.1
Bottom side	20	QPSK 50_28	164800/824	100%	0.170	0.088	-0.04	24.14	25.40	1.337	0.227	22.1
Ant 1 Test Record												
Test position	**BW.**	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**SAR (W/kg) 10-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) State2												
Left cheek	20	QPSK 1_1	164800/824	100%	0.268	0.186	0.13	20.88	22.40	1.419	0.380	22.1
Left tilted	20	QPSK 1_1	164800/824	100%	0.263	0.158	-0.11	20.88	22.40	1.419	0.373	22.1
Right cheek	20	QPSK 1_1	164800/824	100%	0.513	0.315	-0.09	20.88	22.40	1.419	**0.728**	22.1
Right tilted	20	QPSK 1_1	164800/824	100%	0.393	0.214	-0.02	20.88	22.40	1.419	0.558	22.1

Head Test Data (50%RB) State2												
Left cheek	20	QPSK 50_28	166300/831.5	100%	0.368	0.229	-0.15	20.95	22.40	1.396	0.514	22.1
Left tilted	20	QPSK 50_28	166300/831.5	100%	0.367	0.190	0.15	20.95	22.40	1.396	0.512	22.1
Right cheek	20	QPSK 50_28	166300/831.5	100%	0.295	0.189	-0.19	20.95	22.40	1.396	0.412	22.1
Right tilted	20	QPSK 50_28	166300/831.5	100%	0.257	0.149	-0.18	20.95	22.40	1.396	0.359	22.1
Body worn Test data (Separate 15mm 1RB) State1												
Front side	20	QPSK 1_1	164800/824	100%	0.116	0.074	0.15	23.92	25.40	1.406	0.163	22.1
Back side	20	QPSK 1_1	164800/824	100%	0.113	0.073	0.15	23.92	25.40	1.406	0.159	22.1
Body worn Test data (Separate 15mm 50%RB) State1												
Front side	20	QPSK 50_28	167800/839	100%	0.120	0.077	-0.08	23.97	25.40	1.390	0.167	22.1
Back side	20	QPSK 50_28	167800/839	100%	0.112	0.073	-0.14	23.97	25.40	1.390	0.156	22.1
Hotspot Test data (Separate 10mm 1RB) State3												
Front side	20	QPSK 1_1	164800/824	100%	0.190	0.119	-0.14	23.92	25.40	1.406	0.267	22.1
Back side	20	QPSK 1_1	164800/824	100%	0.205	0.127	-0.16	23.92	25.40	1.406	0.288	22.1
Left side	20	QPSK 1_1	164800/824	100%	0.121	0.073	0.07	23.92	25.40	1.406	0.170	22.1
Top side	20	QPSK 1_1	164800/824	100%	0.183	0.099	0.15	23.92	25.40	1.406	0.257	22.1
Hotspot Test data (Separate 10mm 50%RB) State3												
Front side	20	QPSK 50_28	167800/839	100%	0.194	0.116	0.16	23.97	25.40	1.390	0.270	22.1
Back side	20	QPSK 50_28	167800/839	100%	0.187	0.116	0.09	23.97	25.40	1.390	0.260	22.1
Left side	20	QPSK 50_28	167800/839	100%	0.151	0.095	0.04	23.97	25.40	1.390	0.210	22.1
Top side	20	QPSK 50_28	167800/839	100%	0.155	0.096	0.15	23.97	25.40	1.390	0.215	22.1

Table 28：SAR of NR Band n26 for Head, Body and Hotspot.

8.2.18 SAR Result of NR Band n38

NR N38 SAR Test Record												
Ant 1 Test Record												
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	SAR (W/kg) 10-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) State3												
Front side	40	QPSK 1_53	519000/2595	100%	0.203	0.113	0.02	19.37	20.70	1.358	0.276	22
Back side	40	QPSK 1_53	519000/2595	100%	0.409	0.194	-0.18	19.37	20.70	1.358	**0.556**	22.4
Left side	40	QPSK 1_53	519000/2595	100%	0.275	0.146	0.05	19.37	20.70	1.358	0.374	22
Top side	40	QPSK 1_53	519000/2595	100%	0.229	0.102	0.01	19.37	20.70	1.358	0.311	22
Hotspot Test data (Separate 10mm 50%RB) State3												
Front side	40	QPSK 50_28	519000/2595	100%	0.214	0.119	0.05	19.38	20.70	1.355	0.290	22
Back side	40	QPSK 50_28	519000/2595	100%	0.320	0.153	0.09	19.38	20.70	1.355	0.434	22
Left side	40	QPSK 50_28	519000/2595	100%	0.306	0.159	0.02	19.38	20.70	1.355	0.415	22
Top side	40	QPSK 50_28	519000/2595	100%	0.236	0.105	0.01	19.38	20.70	1.355	0.320	22

Table 29： SAR of NR Band n38 for Hotspot.

8.2.19 SAR Result of NR Band n41

NR N41 SAR Test Record												
Ant 0 Test Record												
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	SAR (W/kg) 10-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) State2												
Left cheek	100	QPSK 1_1	513900/2569.5	100%	0.278	0.159	0.11	24.54	25.70	1.306	0.363	22.1
Left tilted	100	QPSK 1_1	513900/2569.5	100%	0.161	0.089	0.02	24.54	25.70	1.306	0.210	22.1
Right cheek	100	QPSK 1_1	513900/2569.5	100%	0.458	0.254	0.04	24.54	25.70	1.306	0.598	22.1
Right tilted	100	QPSK 1_1	513900/2569.5	100%	0.220	0.112	-0.11	24.54	25.70	1.306	0.287	22.1
Head Test Data (50%RB) State2												
Left cheek	100	QPSK 135_69	509202/2546.01	100%	0.254	0.146	-0.05	24.59	25.70	1.291	0.328	22.1
Left tilted	100	QPSK 135_69	509202/2546.01	100%	0.143	0.079	0.13	24.59	25.70	1.291	0.185	22.1
Right cheek	100	QPSK 135_69	509202/2546.01	100%	0.445	0.243	0.11	24.59	25.70	1.291	0.575	22.1
Right tilted	100	QPSK 135_69	509202/2546.01	100%	0.190	0.100	-0.05	24.59	25.70	1.291	0.245	22.1
Body worn Test data (Separate 15mm 1RB) State1												
Front side	100	QPSK 1_1	513900/2569.5	100%	0.191	0.108	0.14	23.08	24.20	1.294	0.247	22.1
Back side	100	QPSK 1_1	513900/2569.5	100%	0.241	0.132	-0.01	23.08	24.20	1.294	0.312	22.1
Body worn Test data (Separate 15mm 50%RB) State1												
Front side	100	QPSK 135_69	509202/2546.01	100%	0.188	0.108	-0.02	23.09	24.20	1.291	0.243	22.1
Back side	100	QPSK 135_69	509202/2546.01	100%	0.231	0.127	0.14	23.09	24.20	1.291	0.298	22.1
Hotspot Test data (Separate 10mm 1RB) State3												
Front side	100	QPSK 1_1	513900/2569.5	100%	0.219	0.117	-0.19	20.53	21.70	1.309	0.287	22.1
Back side	100	QPSK 1_1	513900/2569.5	100%	0.268	0.143	0.05	20.53	21.70	1.309	0.351	22.1
Left side	100	QPSK 1_1	513900/2569.5	100%	0.032	0.011	-0.13	20.53	21.70	1.309	0.042	22.1
Right side	100	QPSK 1_1	513900/2569.5	100%	0.187	0.100	-0.17	20.53	21.70	1.309	0.245	22.1
Bottom side	100	QPSK 1_1	513900/2569.5	100%	0.223	0.098	0.02	20.53	21.70	1.309	0.292	22.1
Hotspot Test data (Separate 10mm 50%RB) State3												
Front side	100	QPSK 135_69	509202/2546.01	100%	0.210	0.114	0.07	20.56	21.70	1.300	0.273	22.1
Back side	100	QPSK 135_69	509202/2546.01	100%	0.264	0.141	-0.15	20.56	21.70	1.300	0.343	22.1
Left side	100	QPSK 135_69	509202/2546.01	100%	0.029	0.009	0.13	20.56	21.70	1.300	0.038	22.1
Right side	100	QPSK 135_69	509202/2546.01	100%	0.175	0.092	-0.03	20.56	21.70	1.300	0.228	22.1
Bottom side	100	QPSK 135_69	509202/2546.01	100%	0.191	0.089	-0.08	20.56	21.70	1.300	0.248	22.1
Ant 1 Test Record												
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	SAR (W/kg) 10-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) State2												
Left cheek	100	QPSK 1_1	509202/2546.01	100%	0.221	0.120	-0.11	16.99	18.20	1.321	0.292	22.4
Left tilted	100	QPSK 1_1	509202/2546.01	100%	0.285	0.146	0.12	16.99	18.20	1.321	0.377	22.4
Right cheek	100	QPSK 1_1	509202/2546.01	100%	0.760	0.405	0.11	16.99	18.20	1.321	1.004	22.4

Right tilted	100	QPSK 1_1	509202/2546.01	100%	0.827	0.365	0.01	16.99	18.20	1.321	**1.093**	22.4
Right cheek	100	QPSK 1_137	513900/2569.5	100%	0.596	0.319	0.18	16.88	18.20	1.355	0.808	22.4
Right cheek	100	QPSK 1_271	518598/2592.99	100%	0.409	0.220	0.01	16.83	18.20	1.371	0.561	22.4
Right cheek	100	QPSK 1_1	523302/2616.51	100%	0.601	0.330	0.00	16.91	18.20	1.346	0.809	22.4
Right cheek	100	QPSK 1_137	528000/2640	100%	0.432	0.224	-0.07	16.76	18.20	1.393	0.602	22.4
Right tilted	100	QPSK 1_137	513900/2569.5	100%	0.617	0.294	-0.18	16.88	18.20	1.355	0.836	22.4
Right tilted	100	QPSK 1_271	518598/2592.99	100%	0.360	0.184	-0.16	16.83	18.20	1.371	0.494	22.4
Right tilted	100	QPSK 1_1	523302/2616.51	100%	0.661	0.306	0.18	16.91	18.20	1.346	0.890	22.4
Right tilted	100	QPSK 1_137	528000/2640	100%	0.395	0.195	0.11	16.76	18.20	1.393	0.550	22.4
Right tilted -Repeat	100	QPSK 1_1	509202/2546.01	100%	0.807	0.420	-0.17	16.99	18.20	1.321	1.066	22.4
Head Test Data (50%RB) State2												
Left cheek	100	QPSK 135_69	509202/2546.01	100%	0.224	0.124	0.04	16.99	18.20	1.321	0.296	22.4
Left tilted	100	QPSK 135_69	509202/2546.01	100%	0.240	0.121	0.02	16.99	18.20	1.321	0.317	22.4
Right cheek	100	QPSK 135_69	509202/2546.01	100%	0.561	0.303	-0.14	16.99	18.20	1.321	0.741	22.4
Right tilted	100	QPSK 135_69	509202/2546.01	100%	0.639	0.307	0.08	16.99	18.20	1.321	0.844	22.4
Right cheek	100	QPSK 135_69	513900/2569.5	100%	0.589	0.319	0.09	16.98	18.20	1.324	0.780	22.4
Right cheek	100	QPSK 135_69	518598/2592.99	100%	0.608	0.316	-0.08	16.94	18.20	1.337	0.813	22.4
Right cheek	100	QPSK 135_69	523302/2616.51	100%	0.554	0.286	-0.05	16.80	18.20	1.380	0.765	22.4
Right cheek	100	QPSK 135_69	528000/2640	100%	0.459	0.241	-0.05	16.86	18.20	1.361	0.625	22.4
Right tilted	100	QPSK 135_69	513900/2569.5	100%	0.634	0.293	0.02	16.98	18.20	1.324	0.840	22.4
Right tilted	100	QPSK 135_69	518598/2592.99	100%	0.551	0.258	0.04	16.94	18.20	1.337	0.736	22.4
Right tilted	100	QPSK 135_69	523302/2616.51	100%	0.466	0.231	0.12	16.80	18.20	1.380	0.643	22.4
Right tilted	100	QPSK 135_69	528000/2640	100%	0.385	0.195	0.08	16.86	18.20	1.361	0.524	22.4
Head Test Data (100%RB) State2												
Right tilted	100	QPSK 270_0	509202/2546.01	100%	0.489	0.242	-0.14	16.17	17.20	1.268	0.620	22.4
Body worn Test data (Separate 15mm 1RB) State1												
Front side	100	QPSK 1_1	509202/2546.01	100%	0.191	0.109	-0.19	19.96	21.20	1.330	0.254	22
Back side	100	QPSK 1_1	509202/2546.01	100%	0.330	0.166	-0.03	19.96	21.20	1.330	**0.439**	22.4
Body worn Test data (Separate 15mm 50%RB) State1												
Front side	100	QPSK 135_69	509202/2546.01	100%	0.163	0.094	-0.16	19.97	21.20	1.327	0.216	22
Back side	100	QPSK 135_69	509202/2546.01	100%	0.269	0.132	-0.09	19.97	21.20	1.327	0.357	22
Hotspot Test data (Separate 10mm 1RB) State3												
Front side	100	QPSK 1_1	513900/2569.5	100%	0.175	0.100	-0.14	17.97	19.20	1.327	0.232	22
Back side	100	QPSK 1_1	513900/2569.5	100%	0.388	0.173	0.15	17.97	19.20	1.327	0.515	22
Back side	100	QPSK 1_1	513900/2569.5	100%	0.496	0.229	-0.14	17.97	19.20	1.327	**0.658**	22.4
Left side	100	QPSK 1_1	513900/2569.5	100%	0.257	0.133	0.14	17.97	19.20	1.327	0.341	22
Top side	100	QPSK 1_1	513900/2569.5	100%	0.324	0.143	0.10	17.97	19.20	1.327	0.430	22
Back side	100	QPSK 135_69	509202/2546.01	100%	0.284	0.128	0.13	17.93	19.20	1.340	0.380	22.4
Back side	100	QPSK 135_69	518598/2592.99	100%	0.284	0.134	0.08	17.86	19.20	1.361	0.387	22.4
Back side	100	QPSK 1_1	523302/2616.51	100%	0.345	0.160	-0.19	17.90	19.20	1.349	0.465	22.4
Back side	100	QPSK 1_137	528000/2640	100%	0.188	0.093	0.03	17.79	19.20	1.384	0.260	22.4
Hotspot Test data (Separate 10mm 50%RB) State3												
Front side	100	QPSK 135_69	509202/2546.01	100%	0.184	0.103	0.07	17.93	19.20	1.340	0.247	22

Back side	100	QPSK 135_69	509202/2546.01	100%	0.320	0.152	0.16	17.93	19.20	1.340	0.429	22
Left side	100	QPSK 135_69	509202/2546.01	100%	0.243	0.129	-0.06	17.93	19.20	1.340	0.326	22
Top side	100	QPSK 135_69	509202/2546.01	100%	0.333	0.147	-0.17	17.93	19.20	1.340	0.446	22
Ant 4 Test Record												
Test position	**BW.**	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**SAR (W/kg) 10-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) State2												
Left cheek	100	QPSK 1_1	513900/2569.5	100%	0.364	0.186	-0.01	20.12	21.20	1.282	0.467	22.4
Left tilted	100	QPSK 1_1	513900/2569.5	100%	0.114	0.058	-0.10	20.12	21.20	1.282	0.146	22.4
Right cheek	100	QPSK 1_1	513900/2569.5	100%	0.147	0.082	-0.16	20.12	21.20	1.282	0.189	22.4
Right tilted	100	QPSK 1_1	513900/2569.5	100%	0.044	0.024	0.16	20.12	21.20	1.282	0.056	22.4
Head Test Data (50%RB) State2												
Left cheek	100	QPSK 135_69	509202/2546.01	100%	0.168	0.092	-0.14	20.06	21.20	1.300	0.218	22.4
Left tilted	100	QPSK 135_69	509202/2546.01	100%	0.046	0.025	-0.13	20.06	21.20	1.300	0.060	22.4
Right cheek	100	QPSK 135_69	509202/2546.01	100%	0.375	0.192	-0.15	20.06	21.20	1.300	0.488	22.4
Right tilted	100	QPSK 135_69	509202/2546.01	100%	0.386	0.217	0.15	20.06	21.20	1.300	0.502	22.4
Right tilted	100	QPSK 135_69	509202/2546.01	100%	0.304	0.129	0.08	20.06	21.20	1.300	0.395	22.4
Body worn Test data (Separate 15mm 1RB) State1												
Front side	100	QPSK 1_1	513900/2569.5	100%	0.173	0.091	0.05	20.12	21.20	1.282	0.222	22
Back side	100	QPSK 1_1	513900/2569.5	100%	0.205	0.115	0.05	20.12	21.20	1.282	0.263	22
Body worn Test data (Separate 15mm 50%RB) State1												
Front side	100	QPSK 135_69	509202/2546.01	100%	0.190	0.105	0.00	20.06	21.20	1.300	0.247	22
Back side	100	QPSK 135_69	509202/2546.01	100%	0.215	0.115	-0.04	20.06	21.20	1.300	0.280	22.4
Hotspot Test data (Separate 10mm 1RB) State3												
Front side	100	QPSK 1_1	513900/2569.5	100%	0.098	0.051	0.17	17.65	18.70	1.274	0.125	22
Back side	100	QPSK 1_1	513900/2569.5	100%	0.250	0.119	0.04	17.65	18.70	1.274	0.318	22
Left side	100	QPSK 1_1	513900/2569.5	100%	0.243	0.129	-0.08	17.65	18.70	1.274	0.309	22
Top side	100	QPSK 1_1	513900/2569.5	100%	0.044	0.022	-0.01	17.65	18.70	1.274	0.056	22
Hotspot Test data (Separate 10mm 50%RB) State3												
Front side	100	QPSK 135_69	513900/2569.5	100%	0.111	0.061	0.10	17.53	18.70	1.309	0.145	22
Back side	100	QPSK 135_69	513900/2569.5	100%	0.266	0.135	-0.12	17.53	18.70	1.309	0.348	22
Left side	100	QPSK 135_69	513900/2569.5	100%	0.298	0.144	0.13	17.53	18.70	1.309	0.390	22
Top side	100	QPSK 135_69	513900/2569.5	100%	0.051	0.018	-0.15	17.53	18.70	1.309	0.067	22

Test Position	Channel/ Frequency (MHz)	Measured SAR (1g)	1st Repeated SAR (1g)	Ratio
Right tilted	509202/2546.01	0.827	0.807	1.02

Table 30：SAR of NR Band n41 for Head, Body and Hotspot.

8.2.20 SAR Result of NR Band n66

NR N66 SAR Test Record												
Ant 0 Test Record												
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	SAR (W/kg) 10-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) State2												
Left cheek	40	QPSK 1_108	346000/1730	100%	0.078	0.049	-0.12	24.36	25.50	1.300	0.101	22.1
Left tilted	40	QPSK 1_108	346000/1730	100%	0.005	0.001	-0.16	24.36	25.50	1.300	0.007	22.1
Right cheek	40	QPSK 1_108	346000/1730	100%	0.049	0.033	-0.12	24.36	25.50	1.300	0.064	22.1
Right tilted	40	QPSK 1_108	346000/1730	100%	0.035	0.022	0.09	24.36	25.50	1.300	0.046	22.1
Head Test Data (50%RB) State2												
Left cheek	40	QPSK 108_54	346000/1730	100%	0.097	0.061	0.14	24.42	25.50	1.282	0.124	22.1
Left tilted	40	QPSK 108_54	346000/1730	100%	0.005	0.002	-0.06	24.42	25.50	1.282	0.006	22.1
Right cheek	40	QPSK 108_54	346000/1730	100%	0.066	0.042	-0.17	24.42	25.50	1.282	0.085	22.1
Right tilted	40	QPSK 108_54	346000/1730	100%	0.054	0.032	0.16	24.42	25.50	1.282	0.069	22.1
Body worn Test data (Separate 15mm 1RB) State1												
Front side	40	QPSK 1_108	346000/1730	100%	0.090	0.057	-0.13	21.34	22.50	1.306	0.118	22.1
Back side	40	QPSK 1_108	346000/1730	100%	0.152	0.095	-0.09	21.34	22.50	1.306	0.199	22.1
Body worn Test data (Separate 15mm 50%RB) State1												
Front side	40	QPSK 108_54	346000/1730	100%	0.098	0.062	0.11	21.45	22.50	1.274	0.125	22.1
Back side	40	QPSK 108_54	346000/1730	100%	0.161	0.102	-0.15	21.45	22.50	1.274	0.205	22.1
Hotspot Test data (Separate 10mm 1RB) State3												
Front side	40	QPSK 1_108	346000/1730	100%	0.096	0.059	-0.16	18.87	20.00	1.297	0.125	22.1
Back side	40	QPSK 1_108	346000/1730	100%	0.177	0.105	-0.01	18.87	20.00	1.297	0.230	22.1
Left side	40	QPSK 1_108	346000/1730	100%	0.009	0.002	0.00	18.87	20.00	1.297	0.012	22.1
Right side	40	QPSK 1_108	346000/1730	100%	0.045	0.025	0.00	18.87	20.00	1.297	0.058	22.1
Bottom side	40	QPSK 1_108	346000/1730	100%	0.173	0.096	0.00	18.87	20.00	1.297	0.224	22.1
Hotspot Test data (Separate 10mm 50%RB) State3												
Front side	40	QPSK 108_54	349000/1745	100%	0.092	0.056	-0.07	18.91	20.00	1.285	0.118	22.1
Back side	40	QPSK 108_54	349000/1745	100%	0.176	0.104	-0.04	18.91	20.00	1.285	0.226	22.1
Left side	40	QPSK 108_54	349000/1745	100%	0.008	0.001	0.01	18.91	20.00	1.285	0.010	22.1
Right side	40	QPSK 108_54	349000/1745	100%	0.052	0.028	0.04	18.91	20.00	1.285	0.067	22.1
Bottom side	40	QPSK 108_54	349000/1745	100%	0.171	0.095	0.06	18.91	20.00	1.285	0.220	22.1
Ant 1 Test Record												
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	SAR (W/kg) 10-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) State2												
Left cheek	40	QPSK 1_108	346000/1730	100%	0.406	0.207	0.01	17.34	18.50	1.306	0.530	22.1
Left tilted	40	QPSK 1_108	346000/1730	100%	0.357	0.207	0.02	17.34	18.50	1.306	0.466	22.1
Right cheek	40	QPSK 1_108	346000/1730	100%	0.736	0.336	-0.02	17.34	18.50	1.306	0.961	22.1

Right tilted	40	QPSK 1_108	346000/1730	100%	0.867	0.382	-0.10	17.34	18.50	1.306	**1.132**	22.1
Right cheek	40	QPSK 1_108	349000/1745	100%	0.712	0.324	-0.03	17.19	18.50	1.352	0.963	22.1
Right cheek	40	QPSK 1_214	352000/1760	100%	0.582	0.273	0.01	17.31	18.50	1.315	0.765	22.4
Right tilted	40	QPSK 1_108	349000/1745	100%	0.793	0.353	-0.02	17.19	18.50	1.352	1.072	22.1
Right tilted	40	QPSK 1_214	352000/1760	100%	0.744	0.349	0.02	17.31	18.50	1.315	0.979	22.4
Right tilted with repeat	40	QPSK 1_108	346000/1730	100%	0.794	0.362	-0.11	17.34	18.50	1.306	1.037	22.3
Head Test Data (50%RB) State2												
Left cheek	40	QPSK 108_54	349000/1745	100%	0.381	0.204	0.01	17.30	18.50	1.318	0.502	22.4
Left tilted	40	QPSK 108_54	349000/1745	100%	0.493	0.256	0.02	17.30	18.50	1.318	0.650	22.4
Right cheek	40	QPSK 108_54	349000/1745	100%	0.731	0.348	0.02	17.30	18.50	1.318	0.964	22.4
Right tilted	40	QPSK 108_54	349000/1745	100%	0.809	0.378	0.01	17.30	18.50	1.318	1.066	22.4
Right cheek	40	QPSK 108_54	346000/1730	100%	0.715	0.343	0.02	17.28	18.50	1.324	0.947	22.4
Right cheek	40	QPSK 108_54	352000/1760	100%	0.672	0.322	0.04	17.26	18.50	1.330	0.894	22.4
Right tilted	40	QPSK 108_54	346000/1730	100%	0.845	0.393	0.08	17.28	18.50	1.324	1.119	22.4
Right tilted	40	QPSK 108_54	352000/1760	100%	0.807	0.375	0.02	17.26	18.50	1.330	1.074	22.4
Head Test Data (100%RB) State2												
Right cheek	20	QPSK 216_0	352000/1760	100%	0.525	0.256	0.08	16.42	17.50	1.282	0.673	22.4
Right tilted	20	QPSK 216_0	352000/1760	100%	0.638	0.296	-0.07	16.42	17.50	1.282	0.818	22.4
Body worn Test data (Separate 15mm 1RB) State1												
Front side	40	QPSK 1_108	349000/1745	100%	0.176	0.106	-0.02	20.82	22.00	1.312	0.231	22.4
Back side	40	QPSK 1_108	349000/1745	100%	0.236	0.140	0.05	20.82	22.00	1.312	**0.310**	22.4
Body worn Test data (Separate 15mm 50%RB) State1												
Front side	40	QPSK 108_54	349000/1745	100%	0.181	0.107	0.04	20.81	22.00	1.315	0.238	22.4
Back side	40	QPSK 108_54	349000/1745	100%	0.227	0.136	-0.04	20.81	22.00	1.315	0.299	22.4
Hotspot Test data (Separate 10mm 1RB) State3												
Front side	40	QPSK 1_108	349000/1745	100%	0.243	0.134	-0.08	18.79	20.00	1.321	0.321	22.4
Back side	40	QPSK 1_108	349000/1745	100%	0.307	0.171	-0.01	18.79	20.00	1.321	0.406	22.4
Left side	40	QPSK 1_108	349000/1745	100%	0.021	0.014	-0.01	18.79	20.00	1.321	0.028	22.4
Top side	40	QPSK 1_108	349000/1745	100%	0.427	0.215	0.05	18.79	20.00	1.321	0.564	22.4
Hotspot Test data (Separate 10mm 50%RB) State3												
Front side	40	QPSK 108_54	352000/1760	100%	0.247	0.137	-0.15	18.79	20.00	1.321	0.326	22.4
Back side	40	QPSK 108_54	352000/1760	100%	0.315	0.175	-0.12	18.79	20.00	1.321	0.416	22.4
Left side	40	QPSK 108_54	352000/1760	100%	0.057	0.036	0.02	18.79	20.00	1.321	0.075	22.4
Top side	40	QPSK 108_54	352000/1760	100%	0.450	0.225	0.07	18.79	20.00	1.321	**0.595**	22.4
Ant 4 Test Record												
Test position	**BW.**	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**SAR (W/kg) 10-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) State2												
Left cheek	40	QPSK 1_1	346000/1730	100%	0.114	0.064	0.01	23.15	24.50	1.365	0.156	22.4
Left tilted	40	QPSK 1_1	346000/1730	100%	0.065	0.039	0.01	23.15	24.50	1.365	0.089	22.4
Right cheek	40	QPSK 1_1	346000/1730	100%	0.361	0.194	-0.02	23.15	24.50	1.365	0.493	22.4
Right tilted	40	QPSK 1_1	346000/1730	100%	0.148	0.074	0.06	23.15	24.50	1.365	0.202	22.4

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Head Test Data (50%RB) State2												
Left cheek	40	QPSK 108_54	349000/1745	100%	0.168	0.100	0.02	23.18	24.50	1.355	0.228	22.4
Left tilted	40	QPSK 108_54	349000/1745	100%	0.084	0.047	0.01	23.18	24.50	1.355	0.114	22.4
Right cheek	40	QPSK 108_54	349000/1745	100%	0.410	0.240	-0.12	23.18	24.50	1.355	0.556	22.4
Right tilted	40	QPSK 108_54	349000/1745	100%	0.178	0.092	0.01	23.18	24.50	1.355	0.241	22.4
Body worn Test data (Separate 15mm 1RB) State1												
Front side	40	QPSK 1_1	346000/1730	100%	0.040	0.025	0.01	23.15	24.50	1.365	0.055	22.4
Back side	40	QPSK 1_1	346000/1730	100%	0.106	0.067	0.02	23.15	24.50	1.365	0.145	22.4
Body worn Test data (Separate 15mm 50%RB) State1												
Front side	40	QPSK 108_54	349000/1745	100%	0.045	0.029	0.01	23.18	24.50	1.355	0.061	22.4
Back side	40	QPSK 108_54	349000/1745	100%	0.114	0.072	0.01	23.18	24.50	1.355	0.154	22.4
Hotspot Test data (Separate 10mm 1RB) State3												
Front side	40	QPSK 1_1	346000/1730	100%	0.050	0.031	0.06	21.60	23.00	1.380	0.069	22.4
Back side	40	QPSK 1_1	346000/1730	100%	0.156	0.087	0.01	21.60	23.00	1.380	0.215	22.4
Left side	40	QPSK 1_1	346000/1730	100%	0.195	0.111	0.06	21.60	23.00	1.380	0.269	22.4
Top side	40	QPSK 1_1	346000/1730	100%	0.028	0.012	0.02	21.60	23.00	1.380	0.039	22.4
Hotspot Test data (Separate 10mm 50%RB) State3												
Front side	40	QPSK 108_54	349000/1745	100%	0.058	0.035	0.06	21.66	23.00	1.361	0.079	22.4
Back side	40	QPSK 108_54	349000/1745	100%	0.178	0.100	0.02	21.66	23.00	1.361	0.242	22.4
Left side	40	QPSK 108_54	349000/1745	100%	0.219	0.124	0.01	21.66	23.00	1.361	0.298	22.4
Top side	40	QPSK 108_54	349000/1745	100%	0.021	0.012	0.05	21.66	23.00	1.361	0.029	22.4

Test Position	Channel/ Frequency (MHz)	Measured SAR (1g)	1st Repeated SAR (1g)	Ratio
Right tilted	346000/1730	0.867	0.794	1.09

Table 31：SAR of NR Band n66 for Head, Body and Hotspot.

8.2.21 SAR Result of WIFI 2.4G

Wi-Fi 2.4G SAR Test Record												
Ant7 Test Record												
Test position	Test mode	Test ch./Freq.	Duty Cycle	Duty Cycle Scaled factor	SAR (W/kg) 1-g	SAR (W/kg) 10-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	6/2437	99.64%	1.004	0.871	0.409	-0.03	15.93	17.00	1.279	1.118	22.3
Left tilted	802.11b	6/2437	99.64%	1.004	0.618	0.307	0.07	15.93	17.00	1.279	0.794	22.3
Right cheek	802.11b	6/2437	99.64%	1.004	0.332	0.181	-0.03	15.93	17.00	1.279	0.426	22.3
Right tilted	802.11b	6/2437	99.64%	1.004	0.412	0.196	-0.05	15.93	17.00	1.279	0.529	22.3
Left cheek	802.11b	1/2412	99.64%	1.004	0.817	0.385	0.16	15.60	17.00	1.380	**1.132**	22.3
Left cheek	802.11b	11/2462	99.64%	1.004	0.810	0.392	0.15	15.64	17.00	1.368	1.112	22.3
Left tilted	802.11b	1/2412	99.64%	1.004	0.575	0.286	0.12	15.60	17.00	1.380	0.797	22.3
Left tilted	802.11b	11/2462	99.64%	1.004	0.660	0.321	0.05	15.64	17.00	1.368	0.906	22.3
Left cheek with repeat	802.11b	1/2412	99.64%	1.004	0.807	0.380	0.05	15.60	17.00	1.380	1.118	22.3
Head Test Data(Simultaneous)												
Left cheek	802.11b	6/2437	99.64%	1.004	0.871	0.409	-0.03	15.93	15.00	0.807	0.706	22.3
Left tilted	802.11b	6/2437	99.64%	1.004	0.618	0.307	0.07	15.93	15.00	0.807	0.501	22.3
Right cheek	802.11b	6/2437	99.64%	1.004	0.332	0.181	-0.03	15.93	15.00	0.807	0.269	22.3
Right tilted	802.11b	6/2437	99.64%	1.004	0.412	0.196	-0.05	15.93	15.00	0.807	0.334	22.3
Left cheek	802.11b	1/2412	99.64%	1.004	0.817	0.385	0.16	15.60	15.00	0.871	0.714	22.3
Left cheek	802.11b	11/2462	99.64%	1.004	0.810	0.392	0.15	15.64	15.00	0.863	0.702	22.3
Left tilted	802.11b	1/2412	99.64%	1.004	0.575	0.286	0.12	15.60	15.00	0.871	0.503	22.3
Left tilted	802.11b	11/2462	99.64%	1.004	0.660	0.321	0.05	15.64	15.00	0.863	0.572	22.3
Body worn Test data (Separate 15mm)												
Front side	802.11b	6/2437	99.64%	1.004	0.112	0.065	0.02	17.92	19.00	1.282	0.144	22
Back side	802.11b	6/2437	99.64%	1.004	0.114	0.059	0.04	17.92	19.00	1.282	**0.147**	22.4
Hotspot Test data (Separate 10mm)												
Front side	802.11b	6/2437	99.64%	1.004	0.223	0.116	0.04	17.92	19.00	1.282	0.287	22
Back side	802.11b	6/2437	99.64%	1.004	0.288	0.138	-0.02	17.92	19.00	1.282	**0.371**	22.4
Right side	802.11b	6/2437	99.64%	1.004	0.113	0.060	0.09	17.92	19.00	1.282	0.145	22
Top side	802.11b	6/2437	99.64%	1.004	0.249	0.129	0.01	17.92	19.00	1.282	0.320	22

Test Position	Channel/ Frequency (MHz)	Measured SAR (1g)	1st Repeated SAR (1g)	Ratio
Left cheek	1/2412	0.817	0.807	1.01

Table 32：SAR of WIFI 2.4G for Head, Body and Hotspot.

8.2.22 SAR Result of WIFI 5G

Wi-Fi 5G SAR Test Record												
Ant7 Test Record												
Test position	Test mode	Test ch./Freq.	Duty Cycle	Duty Cycle Scaled factor	SAR (W/kg) 1-g	SAR (W/kg) 10-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	802.11 HT40	54/5270	95.00%	1.053	0.725	0.208	0.04	15.30	16.50	1.318	**1.006**	22.2
Left tilted	802.11 HT40	54/5270	95.00%	1.053	0.338	0.134	0.13	15.30	16.50	1.318	0.469	22.2
Right cheek	802.11 HT40	54/5270	95.00%	1.053	0.140	0.054	0.13	15.30	16.50	1.318	0.194	22.2
Right tilted	802.11 HT40	54/5270	95.00%	1.053	0.089	0.036	0.01	15.30	16.50	1.318	0.123	22.2
Left cheek	802.11 HT40	62/5310	95.00%	1.053	0.358	0.124	0.00	12.10	13.50	1.380	0.520	22.2
Head Test Data of U-NII-2C												
Left cheek	802.11 HT40	118/5590	95.00%	1.053	0.469	0.160	0.02	15.39	16.50	1.291	0.637	22.2
Left tilted	802.11 HT40	118/5590	95.00%	1.053	0.160	0.066	0.11	15.39	16.50	1.291	0.217	22.2
Right cheek	802.11 HT40	118/5590	95.00%	1.053	0.079	0.032	0.11	15.39	16.50	1.291	0.107	22.2
Right tilted	802.11 HT40	118/5590	95.00%	1.053	0.068	0.028	0.08	15.39	16.50	1.291	0.092	22.2
Head Test Data of U-NII-3												
Left cheek	802.11 HT40	151/5755	95.00%	1.053	0.449	0.157	0.01	15.11	16.50	1.377	0.651	22.2
Left tilted	802.11 HT40	151/5755	95.00%	1.053	0.185	0.070	0.10	15.11	16.50	1.377	0.268	22.2
Right cheek	802.11 HT40	151/5755	95.00%	1.053	0.066	0.027	0.07	15.11	16.50	1.377	0.096	22.2
Right tilted	802.11 HT40	151/5755	95.00%	1.053	0.080	0.031	-0.04	15.11	16.50	1.377	0.116	22.2
Head Test Data of U-NII-2A(Simultaneous WWAN+WIFI5G)												
Left cheek	802.11 HT40	54/5270	95.00%	1.053	0.725	0.208	0.04	15.30	14.50	0.832	0.635	22.2
Left tilted	802.11 HT40	54/5270	95.00%	1.053	0.338	0.134	0.13	15.30	14.50	0.832	0.296	22.2
Right cheek	802.11 HT40	54/5270	95.00%	1.053	0.140	0.054	0.13	15.30	14.50	0.832	0.123	22.2
Right tilted	802.11 HT40	54/5270	95.00%	1.053	0.089	0.036	0.01	15.30	14.50	0.832	0.078	22.2
Left cheek	802.11 HT40	62/5310	95.00%	1.053	0.358	0.124	0.00	12.10	14.50	1.738	**0.655**	22.2
Head Test Data of U-NII-2C(Simultaneous WWAN+WIFI5G)												
Left cheek	802.11 HT40	118/5590	95.00%	1.053	0.469	0.160	0.02	15.39	14.50	0.815	0.402	22.2
Left tilted	802.11 HT40	118/5590	95.00%	1.053	0.160	0.066	0.11	15.39	14.50	0.815	0.137	22.2
Right cheek	802.11 HT40	118/5590	95.00%	1.053	0.079	0.032	0.11	15.39	14.50	0.815	0.068	22.2
Right tilted	802.11 HT40	118/5590	95.00%	1.053	0.068	0.028	0.08	15.39	14.50	0.815	0.058	22.2
Head Test Data of U-NII-3(Simultaneous WWAN+WIFI5G)												
Left cheek	802.11 HT40	151/5755	95.00%	1.053	0.449	0.157	0.01	15.11	14.50	0.869	0.411	22.2
Left tilted	802.11 HT40	151/5755	95.00%	1.053	0.185	0.070	0.10	15.11	14.50	0.869	0.169	22.2
Right cheek	802.11 HT40	151/5755	95.00%	1.053	0.066	0.027	0.07	15.11	14.50	0.869	0.060	22.2
Right tilted	802.11 HT40	151/5755	95.00%	1.053	0.080	0.031	-0.04	15.11	14.50	0.869	0.073	22.2
Head Test Data of U-NII-2A(Simultaneous WWAN+WIFI5G+BT)												
Left cheek	802.11 HT40	54/5270	95.00%	1.053	0.725	0.208	0.04	15.30	14.00	0.741	0.566	22.2
Left tilted	802.11 HT40	54/5270	95.00%	1.053	0.338	0.134	0.13	15.30	14.00	0.741	0.264	22.2
Right cheek	802.11 HT40	54/5270	95.00%	1.053	0.140	0.054	0.13	15.30	14.00	0.741	0.109	22.2
Right tilted	802.11 HT40	54/5270	95.00%	1.053	0.089	0.036	0.01	15.30	14.00	0.741	0.069	22.2
Left cheek	802.11 HT40	62/5310	95.00%	1.053	0.358	0.124	0.00	12.10	14.00	1.549	0.584	22.2
Head Test Data of U-NII-2C(Simultaneous WWAN+WIFI5G+BT)												
Left cheek	802.11 HT40	118/5590	95.00%	1.053	0.469	0.160	0.02	15.39	14.00	0.726	0.358	22.2
Left tilted	802.11 HT40	118/5590	95.00%	1.053	0.160	0.066	0.11	15.39	14.00	0.726	0.122	22.2
Right cheek	802.11 HT40	118/5590	95.00%	1.053	0.079	0.032	0.11	15.39	14.00	0.726	0.060	22.2
Right tilted	802.11 HT40	118/5590	95.00%	1.053	0.068	0.028	0.08	15.39	14.00	0.726	0.052	22.2
Head Test Data of U-NII-3(Simultaneous WWAN+WIFI5G+BT)												
Left cheek	802.11 HT40	151/5755	95.00%	1.053	0.449	0.157	0.01	15.11	14.00	0.774	0.366	22.2
Left tilted	802.11 HT40	151/5755	95.00%	1.053	0.185	0.070	0.10	15.11	14.00	0.774	0.151	22.2
Right cheek	802.11 HT40	151/5755	95.00%	1.053	0.066	0.027	0.07	15.11	14.00	0.774	0.054	22.2
Right tilted	802.11 HT40	151/5755	95.00%	1.053	0.080	0.031	-0.04	15.11	14.00	0.774	0.065	22.2
Body worn Test data of U-NII-2A (Separate 15mm)												
Front side	802.11 HT40	54/5270	95.00%	1.053	0.153	0.066	-0.11	17.33	18.50	1.309	0.211	22.2
Back side	802.11 HT40	54/5270	95.00%	1.053	0.210	0.085	0.06	17.33	18.50	1.309	0.289	22.2
Body worn Test data of U-NII-2C (Separate 15mm)												
Front side	802.11 HT40	118/5590	95.00%	1.053	0.135	0.054	0.05	17.54	18.50	1.247	0.177	22.2
Back side	802.11 HT40	118/5590	95.00%	1.053	0.268	0.065	-0.14	17.54	18.50	1.247	0.352	22.2
Body worn Test data of U-NII-3 (Separate 15mm)												
Front side	802.11 HT40	151/5755	95.00%	1.053	0.074	0.032	0.17	17.15	18.50	1.365	0.106	22.2
Back side	802.11 HT40	151/5755	95.00%	1.053	0.310	0.121	0.06	17.15	18.50	1.365	**0.445**	22.2
Body worn Test data of U-NII-2A (Separate 15mm)(Simultaneous WWAN+WIFI5G)												
Front side	802.11 HT40	54/5270	95.00%	1.053	0.153	0.066	-0.11	17.33	17.50	1.040	0.167	22.2
Back side	802.11 HT40	54/5270	95.00%	1.053	0.210	0.085	0.06	17.33	17.50	1.040	0.230	22.2
Body worn Test data of U-NII-2C (Separate 15mm)(Simultaneous WWAN+WIFI5G)												
Front side	802.11 HT40	118/5590	95.00%	1.053	0.135	0.054	0.05	17.54	17.50	0.991	0.141	22.2
Back side	802.11 HT40	118/5590	95.00%	1.053	0.268	0.065	-0.14	17.54	17.50	0.991	0.280	22.2

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Body worn Test data of U-NII-3 (Separate 15mm)(Simultaneous WWAN+WIFI5G)												
Front side	802.11 HT40	151/5755	95.00%	1.053	0.074	0.032	0.17	17.15	17.50	1.084	0.084	22.2
Back side	802.11 HT40	151/5755	95.00%	1.053	0.310	0.121	0.06	17.15	17.50	1.084	0.354	22.2
Body worn Test data of U-NII-2A (Separate 15mm)(Simultaneous WWAN+WIFI5G+BT)												
Front side	802.11 HT40	54/5270	95.00%	1.053	0.153	0.066	-0.11	17.33	17.00	0.927	0.149	22.2
Back side	802.11 HT40	54/5270	95.00%	1.053	0.210	0.085	0.06	17.33	17.00	0.927	0.205	22.2
Body worn Test data of U-NII-2C (Separate 15mm)(Simultaneous WWAN+WIFI5G+BT)												
Front side	802.11 HT40	118/5590	95.00%	1.053	0.135	0.054	0.05	17.54	17.00	0.883	0.125	22.2
Back side	802.11 HT40	118/5590	95.00%	1.053	0.268	0.065	-0.14	17.54	17.00	0.883	0.249	22.2
Body worn Test data of U-NII-3 (Separate 15mm)(Simultaneous WWAN+WIFI5G+BT)												
Front side	802.11 HT40	151/5755	95.00%	1.053	0.074	0.032	0.17	17.15	17.00	0.966	0.075	22.2
Back side	802.11 HT40	151/5755	95.00%	1.053	0.310	0.121	0.06	17.15	17.00	0.966	0.315	22.2
Hotspot Test data of U-NII-1 (Separate 10mm)												
Front side	802.11 VTH80	42/5210	95.00%	1.053	0.162	0.062	-0.03	17.08	18.50	1.387	0.236	22.2
Back side	802.11 VTH80	42/5210	95.00%	1.053	0.597	0.190	0.02	17.08	18.50	1.387	**0.871**	22.2
Right side	802.11 VTH80	42/5210	95.00%	1.053	0.241	0.092	-0.17	17.08	18.50	1.387	0.352	22.2
Top side	802.11 VTH80	42/5210	95.00%	1.053	0.191	0.081	-0.07	17.08	18.50	1.387	0.279	22.2
Hotspot Test data of U-NII-3 (Separate 10mm)												
Front side	802.11 HT40	151/5755	95.00%	1.053	0.129	0.051	0.03	17.15	18.50	1.365	0.185	22.2
Back side	802.11 HT40	151/5755	95.00%	1.053	0.467	0.163	0.02	17.15	18.50	1.365	0.671	22.2
Right side	802.11 HT40	151/5755	95.00%	1.053	0.306	0.123	-0.04	17.15	18.50	1.365	0.440	22.2
Top side	802.11 HT40	151/5755	95.00%	1.053	0.258	0.092	0.15	17.15	18.50	1.365	0.371	22.2
Hotspot Test data of U-NII-1 (Separate 10mm)(Simultaneous WWAN+WIFI5G)												
Front side	802.11 VTH80	42/5210	90.25%	1.108	0.162	0.062	-0.03	17.08	17.50	1.102	0.198	22.2
Back side	802.11 VTH80	42/5210	90.25%	1.108	0.597	0.190	0.02	17.08	17.50	1.102	0.729	22.2
Right side	802.11 VTH80	42/5210	90.25%	1.108	0.241	0.092	-0.17	17.08	17.50	1.102	0.294	22.2
Top side	802.11 VTH80	42/5210	90.25%	1.108	0.191	0.081	-0.07	17.08	17.50	1.102	0.233	22.2
Hotspot Test data of U-NII-3 (Separate 10mm)(Simultaneous WWAN+WIFI5G)												
Front side	802.11 HT40	151/5755	95.00%	1.053	0.129	0.051	0.03	17.15	17.50	1.084	0.147	22.2
Back side	802.11 HT40	151/5755	95.00%	1.053	0.467	0.163	0.02	17.15	17.50	1.084	0.533	22.2
Right side	802.11 HT40	151/5755	95.00%	1.053	0.306	0.123	-0.04	17.15	17.50	1.084	0.349	22.2
Top side	802.11 HT40	151/5755	95.00%	1.053	0.258	0.092	0.15	17.15	17.50	1.084	0.294	22.2
Hotspot Test data of U-NII-1 (Separate 10mm)(Simultaneous WWAN+WIFI5G+BT)												
Front side	802.11 VTH80	42/5210	90.25%	1.108	0.162	0.062	-0.03	17.08	17.00	0.982	0.176	22.2
Back side	802.11 VTH80	42/5210	90.25%	1.108	0.597	0.190	0.02	17.08	17.00	0.982	0.649	22.2
Right side	802.11 VTH80	42/5210	90.25%	1.108	0.241	0.092	-0.17	17.08	17.00	0.982	0.262	22.2
Top side	802.11 VTH80	42/5210	90.25%	1.108	0.191	0.081	-0.07	17.08	17.00	0.982	0.208	22.2
Hotspot Test data of U-NII-3 (Separate 10mm)(Simultaneous WWAN+WIFI5G+BT)												
Front side	802.11 HT40	151/5755	95.00%	1.053	0.129	0.051	0.03	17.15	17.00	0.966	0.131	22.2
Back side	802.11 HT40	151/5755	95.00%	1.053	0.467	0.163	0.02	17.15	17.00	0.966	0.475	22.2
Right side	802.11 HT40	151/5755	95.00%	1.053	0.306	0.123	-0.04	17.15	17.00	0.966	0.311	22.2
Top side	802.11 HT40	151/5755	95.00%	1.053	0.258	0.092	0.15	17.15	17.00	0.966	0.262	22.2
Test position	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**Duty Cycle Scaled factor**	**SAR (W/kg) 1-g**	**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	802.11 HT40	54/5270	95.00%	1.053	1.570	0.438	-0.17	17.33	18.50	1.309	0.604	22.2
Back side	802.11 HT40	54/5270	95.00%	1.053	1.380	0.484	0.04	17.33	18.50	1.309	0.667	22.2
Right side	802.11 HT40	54/5270	95.00%	1.053	3.830	0.909	0.07	17.33	18.50	1.309	1.253	22.2
Top side	802.11 HT40	54/5270	95.00%	1.053	1.480	0.379	-0.16	17.33	18.50	1.309	0.522	22.2
Product specific 10gSAR Test data of U-NII-2C (Separate 0mm)												
Front side	802.11 HT40	118/5590	95.00%	1.053	1.070	0.360	0.11	17.54	18.50	1.247	0.473	22.2
Back side	802.11 HT40	118/5590	95.00%	1.053	1.900	0.578	-0.16	17.54	18.50	1.247	0.759	22.2
Right side	802.11 HT40	118/5590	95.00%	1.053	4.990	1.100	0.03	17.54	18.50	1.247	**1.444**	22.2
Top side	802.11 HT40	118/5590	95.00%	1.053	1.100	0.331	0.03	17.54	18.50	1.247	0.435	22.2
Product specific 10gSAR Test data of U-NII-2A (Separate 0mm) Simultaneous WWAN+WIFI5G												
Front side	802.11 HT40	54/5270	95.00%	1.053	1.570	0.438	-0.17	17.33	17.50	1.040	0.479	22.2
Back side	802.11 HT40	54/5270	95.00%	1.053	1.380	0.484	0.04	17.33	17.50	1.040	0.530	22.2
Right side	802.11 HT40	54/5270	95.00%	1.053	3.830	0.909	0.07	17.33	17.50	1.040	0.995	22.2
Top side	802.11 HT40	54/5270	95.00%	1.053	1.480	0.379	-0.16	17.33	17.50	1.040	0.415	22.2
Product specific 10gSAR Test data of U-NII-2C (Separate 0mm) Simultaneous WWAN+WIFI5G												
Front side	802.11 HT40	118/5590	95.00%	1.053	1.070	0.360	0.11	17.54	17.50	0.991	0.375	22.2
Back side	802.11 HT40	118/5590	95.00%	1.053	1.900	0.578	-0.16	17.54	17.50	0.991	0.603	22.2
Right side	802.11 HT40	118/5590	95.00%	1.053	4.990	1.100	0.03	17.54	17.50	0.991	1.147	22.2
Top side	802.11 HT40	118/5590	95.00%	1.053	1.100	0.331	0.03	17.54	17.50	0.991	0.345	22.2

Table 33：SAR of WIFI 5G for Head, Body, Hotspot, Limbs.

8.2.23 SAR Result of BT

Bluetooth SAR Test Record												
Ant7 Test Record												
Test position	Test mode	Test ch./Freq.	Duty Cycle	Duty Cycle Scaled factor	SAR (W/kg) 1-g	SAR (W/kg) 10-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	78/2480	77.22%	1.295	0.187	0.086	0.09	12.02	13.50	1.406	**0.340**	22.2
Left tilted	DH5	78/2480	77.22%	1.295	0.132	0.065	0.07	12.02	13.50	1.406	0.240	22.2
Right cheek	DH5	78/2480	77.22%	1.295	0.068	0.039	0.06	12.02	13.50	1.406	0.124	22.2
Right tilted	DH5	78/2480	77.22%	1.295	0.080	0.043	-0.01	12.02	13.50	1.406	0.146	22.2
Body worn Test data (Separate 15mm)												
Front side	DH5	78/2480	77.22%	1.295	0.004	0.001	0.03	12.02	13.50	1.406	0.007	22.2
Back side	DH5	78/2480	77.22%	1.295	0.014	0.006	0.09	12.02	13.50	1.406	**0.026**	22.2
Hotspot Test data (Separate 10mm)												
Front side	DH5	78/2480	77.22%	1.295	0.010	0.003	0.09	12.02	13.50	1.406	0.018	22.2
Back side	DH5	78/2480	77.22%	1.295	0.035	0.016	0.13	12.02	13.50	1.406	0.064	22.2
Right side	DH5	78/2480	77.22%	1.295	0.025	0.005	-0.13	12.02	13.50	1.406	0.046	22.2
Top side	DH5	78/2480	77.22%	1.295	0.040	0.021	0.03	12.02	13.50	1.406	**0.073**	22.2

Table 34：SAR of BT for Head, Body and Hotspot.

8.2.24 SAR Result of NFC

NFC SAR Test Record										
Test position	Test mode	Test ch./Freq.	Duty Cycle	Duty Cycle Scaled factor	SAR (W/kg) 1-g	SAR (W/kg) 10-g	Power drift (dB)	Scaled factor	Scaled SAR 10-g (W/kg)	Liquid Temp.(℃)
NFC Test data (Separate 0mm)										
Front side	NFC	13.56Mhz	100.00%	1.000	0.006	0.002	0.02	1.000	0.002	22.1
Back side	NFC	13.56Mhz	100.00%	1.000	0.060	0.018	0.00	1.000	**0.018**	22.1
Left side	NFC	13.56Mhz	100.00%	1.000	0.007	0.003	0.12	1.000	0.003	22.1
Right side	NFC	13.56Mhz	100.00%	1.000	0.002	0.001	0.03	1.000	0.001	22.1
Top side	NFC	13.56Mhz	100.00%	1.000	0.005	0.002	0.05	1.000	0.002	22.1
Bottom side	NFC	13.56Mhz	100.00%	1.000	0.002	0.001	0.02	1.000	0.001	22.1

Table 35：SAR of NFC for Limbs.

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8.3 Multiple Transmitter Evaluation

8.3.1 Simultaneous SAR test evaluation

No.	Simultaneous Tx Combination	Head	Body worn	Hotspot	Limbs
1	WWAN + WLAN 2.4GHz	Yes	Yes	Yes	Yes
2	WWAN + WLAN 5GHz	Yes	Yes	Yes	Yes
3	WWAN + BT	Yes	Yes	Yes	Yes
4	WLAN 5GHz + BT	Yes	Yes	Yes	Yes
5	WWAN + WLAN 5GHz + BT	Yes	Yes	Yes	Yes
6	WWAN +NFC	Yes	Yes	Yes	Yes
7	WWAN + WLAN 2.4GHz+NFC	Yes	Yes	Yes	Yes
8	WWAN + WLAN 5GHz+NFC	Yes	Yes	Yes	Yes
9	WWAN + BT+NFC	Yes	Yes	Yes	Yes
10	WLAN 5GHz + BT+NFC	Yes	Yes	Yes	Yes
11	WWAN + WLAN 5GHz + BT+NFC	Yes	Yes	Yes	Yes

1) The device does not support DTM function.

8.3.2 Simultaneous Transmission SAR Summation Scenario

Head:

Test position		SARmax (W/kg)						Summed SAR				
		WWAN	WiFi 2.4G Ant7chain0)	WiFi 5G Ant7(chain0) WiFi 5G+BT	WiFi 5G Ant7(chain0) WWAN+WiFi 5G	WiFi 5G Ant7(chain0) WWAN+WiFi 5G+BT	BT					
		1	2	3	4	5	6	1+2	1+4	1+6	3+6	1+5+6
GSM850 (Ant0)	Left cheek	0.215	0.714	1.006	0.655	0.584	0.340	0.929	0.870	0.555	1.346	1.139
	Left tilted	0.087	0.572	0.469	0.296	0.264	0.240	0.659	0.383	0.327	0.709	0.591
	Right cheek	0.143	0.269	0.194	0.123	0.109	0.124	0.412	0.266	0.267	0.318	0.376
	Right tilted	0.075	0.334	0.123	0.078	0.069	0.146	0.409	0.153	0.221	0.269	0.290
GSM850 (Ant1)	Left cheek	0.411	0.714	1.006	0.655	0.584	0.340	1.125	1.066	0.751	1.346	1.335
	Left tilted	0.330	0.572	0.469	0.296	0.264	0.240	0.902	0.626	0.570	0.709	0.834
	Right cheek	0.592	0.269	0.194	0.123	0.109	0.124	0.861	0.715	0.716	0.318	0.825
	Right tilted	0.512	0.334	0.123	0.078	0.069	0.146	0.846	0.590	0.658	0.269	0.727
GSM1900 (Ant0)	Left cheek	0.065	0.714	1.006	0.655	0.584	0.340	0.779	0.720	0.405	1.346	0.989
	Left tilted	0.029	0.572	0.469	0.296	0.264	0.240	0.601	0.325	0.269	0.709	0.533
	Right cheek	0.060	0.269	0.194	0.123	0.109	0.124	0.329	0.183	0.184	0.318	0.293
	Right tilted	0.039	0.334	0.123	0.078	0.069	0.146	0.373	0.117	0.185	0.269	0.254
GSM1900 (Ant1)	Left cheek	0.448	0.714	1.006	0.655	0.584	0.340	1.162	1.103	0.788	1.346	1.372
	Left tilted	0.538	0.572	0.469	0.296	0.264	0.240	1.110	0.834	0.778	0.709	1.042
	Right cheek	0.969	0.269	0.194	0.123	0.109	0.124	1.238	1.092	1.093	0.318	1.202
	Right tilted	1.088	0.334	0.123	0.078	0.069	0.146	1.422	1.166	1.234	0.269	1.303
WCDMA B2 (Ant0)	Left cheek	0.156	0.714	1.006	0.655	0.584	0.340	0.870	0.811	0.496	1.346	1.080
	Left tilted	0.075	0.572	0.469	0.296	0.264	0.240	0.647	0.371	0.315	0.709	0.579
	Right cheek	0.138	0.269	0.194	0.123	0.109	0.124	0.407	0.261	0.262	0.318	0.371
	Right tilted	0.092	0.334	0.123	0.078	0.069	0.146	0.426	0.170	0.238	0.269	0.307
WCDMA B2 (Ant1)	Left cheek	0.529	0.714	1.006	0.655	0.584	0.340	1.243	1.184	0.869	1.346	1.453
	Left tilted	0.588	0.572	0.469	0.296	0.264	0.240	1.160	0.884	0.828	0.709	1.092
	Right cheek	1.024	0.269	0.194	0.123	0.109	0.124	1.293	1.147	1.148	0.318	1.257
	Right tilted	1.063	0.334	0.123	0.078	0.069	0.146	1.397	1.141	1.209	0.269	1.278
WCDMA B4 (Ant0)	Left cheek	0.102	0.714	1.006	0.655	0.584	0.340	0.816	0.757	0.442	1.346	1.026
	Left tilted	0.043	0.572	0.469	0.296	0.264	0.240	0.615	0.339	0.283	0.709	0.547
	Right cheek	0.067	0.269	0.194	0.123	0.109	0.124	0.336	0.190	0.191	0.318	0.300
	Right tilted	0.064	0.334	0.123	0.078	0.069	0.146	0.398	0.142	0.210	0.269	0.279
WCDMA B4 (Ant1)	Left cheek	0.359	0.714	1.006	0.655	0.584	0.340	1.073	1.014	0.699	1.346	1.283
	Left tilted	0.404	0.572	0.469	0.296	0.264	0.240	0.976	0.700	0.644	0.709	0.908
	Right cheek	0.626	0.269	0.194	0.123	0.109	0.124	0.895	0.749	0.750	0.318	0.859
	Right tilted	0.732	0.334	0.123	0.078	0.069	0.146	1.066	0.810	0.878	0.269	0.947
WCDMA B5 (Ant0)	Left cheek	0.202	0.714	1.006	0.655	0.584	0.340	0.916	0.857	0.542	1.346	1.126
	Left tilted	0.082	0.572	0.469	0.296	0.264	0.240	0.654	0.378	0.322	0.709	0.586
	Right cheek	0.150	0.269	0.194	0.123	0.109	0.124	0.419	0.273	0.274	0.318	0.383
	Right tilted	0.066	0.334	0.123	0.078	0.069	0.146	0.400	0.144	0.212	0.269	0.281
WCDMA B5 (Ant1)	Left cheek	0.487	0.714	1.006	0.655	0.584	0.340	1.201	1.142	0.827	1.346	1.411
	Left tilted	0.353	0.572	0.469	0.296	0.264	0.240	0.925	0.649	0.593	0.709	0.857
	Right cheek	0.561	0.269	0.194	0.123	0.109	0.124	0.830	0.684	0.685	0.318	0.794
	Right tilted	0.458	0.334	0.123	0.078	0.069	0.146	0.792	0.536	0.604	0.269	0.673
LTE B2 (Ant0)	Left cheek	0.092	0.714	1.006	0.655	0.584	0.340	0.806	0.747	0.432	1.346	1.016
	Left tilted	0.050	0.572	0.469	0.296	0.264	0.240	0.622	0.346	0.290	0.709	0.554
	Right cheek	0.065	0.269	0.194	0.123	0.109	0.124	0.334	0.188	0.189	0.318	0.298
	Right tilted	0.056	0.334	0.123	0.078	0.069	0.146	0.390	0.134	0.202	0.269	0.271
LTE B2 (Ant1)	Left cheek	0.539	0.714	1.006	0.655	0.584	0.340	1.253	1.194	0.879	1.346	1.463
	Left tilted	0.837	0.572	0.469	0.296	0.264	0.240	1.409	1.133	1.077	0.709	1.341
	Right cheek	0.991	0.269	0.194	0.123	0.109	0.124	1.260	1.114	1.115	0.318	1.224
	Right tilted	1.192	0.334	0.123	0.078	0.069	0.146	1.526	1.270	1.338	0.269	1.407

LTE B7 (Ant0)	Left cheek	0.236	0.714	1.006	0.655	0.584	0.340	0.950	0.891	0.576	1.346	1.160
	Left tilted	0.139	0.572	0.469	0.296	0.264	0.240	0.711	0.435	0.379	0.709	0.643
	Right cheek	0.453	0.269	0.194	0.123	0.109	0.124	0.722	0.576	0.577	0.318	0.686
	Right tilted	0.165	0.334	0.123	0.078	0.069	0.146	0.499	0.243	0.311	0.269	0.380
LTE B7 (Ant1)	Left cheek	0.174	0.714	1.006	0.655	0.584	0.340	0.888	0.829	0.514	1.346	1.098
	Left tilted	0.227	0.572	0.469	0.296	0.264	0.240	0.799	0.523	0.467	0.709	0.731
	Right cheek	0.594	0.269	0.194	0.123	0.109	0.124	0.863	0.717	0.718	0.318	0.827
	Right tilted	0.757	0.334	0.123	0.078	0.069	0.146	1.091	0.835	0.903	0.269	0.972
LTE B7 (Ant4)	Left cheek	0.236	0.714	1.006	0.655	0.584	0.340	0.950	0.891	0.576	1.346	1.160
	Left tilted	0.139	0.572	0.469	0.296	0.264	0.240	0.711	0.435	0.379	0.709	0.643
	Right cheek	0.453	0.269	0.194	0.123	0.109	0.124	0.722	0.576	0.577	0.318	0.686
	Right tilted	0.165	0.334	0.123	0.078	0.069	0.146	0.499	0.243	0.311	0.269	0.380
LTE B12 (Ant0)	Left cheek	0.127	0.714	1.006	0.655	0.584	0.340	0.841	0.782	0.467	1.346	1.051
	Left tilted	0.052	0.572	0.469	0.296	0.264	0.240	0.624	0.348	0.292	0.709	0.556
	Right cheek	0.084	0.269	0.194	0.123	0.109	0.124	0.353	0.207	0.208	0.318	0.317
	Right tilted	0.040	0.334	0.123	0.078	0.069	0.146	0.374	0.118	0.186	0.269	0.255
LTE B12 (Ant1)	Left cheek	0.454	0.714	1.006	0.655	0.584	0.340	1.168	1.109	0.794	1.346	1.378
	Left tilted	0.425	0.572	0.469	0.296	0.264	0.240	0.997	0.721	0.665	0.709	0.929
	Right cheek	0.633	0.269	0.194	0.123	0.109	0.124	0.902	0.756	0.757	0.318	0.866
	Right tilted	0.630	0.334	0.123	0.078	0.069	0.146	0.964	0.708	0.776	0.269	0.845
LTE B13 (Ant0)	Left cheek	0.082	0.714	1.006	0.655	0.584	0.340	0.796	0.737	0.422	1.346	1.006
	Left tilted	0.047	0.572	0.469	0.296	0.264	0.240	0.619	0.343	0.287	0.709	0.551
	Right cheek	0.060	0.269	0.194	0.123	0.109	0.124	0.329	0.183	0.184	0.318	0.293
	Right tilted	0.025	0.334	0.123	0.078	0.069	0.146	0.359	0.103	0.171	0.269	0.240
LTE B13 (Ant1)	Left cheek	0.545	0.714	1.006	0.655	0.584	0.340	1.259	1.200	0.885	1.346	1.469
	Left tilted	0.482	0.572	0.469	0.296	0.264	0.240	1.054	0.778	0.722	0.709	0.986
	Right cheek	0.709	0.269	0.194	0.123	0.109	0.124	0.978	0.832	0.833	0.318	0.942
	Right tilted	0.644	0.334	0.123	0.078	0.069	0.146	0.978	0.722	0.790	0.269	0.859
LTE B26 (Ant0)	Left cheek	0.219	0.714	1.006	0.655	0.584	0.340	0.933	0.874	0.559	1.346	1.143
	Left tilted	0.097	0.572	0.469	0.296	0.264	0.240	0.669	0.393	0.337	0.709	0.601
	Right cheek	0.144	0.269	0.194	0.123	0.109	0.124	0.413	0.267	0.268	0.318	0.377
	Right tilted	0.082	0.334	0.123	0.078	0.069	0.146	0.416	0.160	0.228	0.269	0.297
LTE B26 (Ant1)	Left cheek	0.455	0.714	1.006	0.655	0.584	0.340	1.169	1.110	0.795	1.346	1.379
	Left tilted	0.407	0.572	0.469	0.296	0.264	0.240	0.979	0.703	0.647	0.709	0.911
	Right cheek	0.575	0.269	0.194	0.123	0.109	0.124	0.844	0.698	0.699	0.318	0.808
	Right tilted	0.568	0.334	0.123	0.078	0.069	0.146	0.902	0.646	0.714	0.269	0.783
LTE B38 (Ant0)	Left cheek	0.095	0.714	1.006	0.655	0.584	0.340	0.809	0.750	0.435	1.346	1.019
	Left tilted	0.052	0.572	0.469	0.296	0.264	0.240	0.624	0.348	0.292	0.709	0.556
	Right cheek	0.262	0.269	0.194	0.123	0.109	0.124	0.531	0.385	0.386	0.318	0.495
	Right tilted	0.067	0.334	0.123	0.078	0.069	0.146	0.401	0.145	0.213	0.269	0.282
LTE B38 (Ant1)	Left cheek	0.180	0.714	1.006	0.655	0.584	0.340	0.894	0.835	0.520	1.346	1.104
	Left tilted	0.231	0.572	0.469	0.296	0.264	0.240	0.803	0.527	0.471	0.709	0.735
	Right cheek	0.596	0.269	0.194	0.123	0.109	0.124	0.865	0.719	0.720	0.318	0.829
	Right tilted	0.667	0.334	0.123	0.078	0.069	0.146	1.001	0.745	0.813	0.269	0.882
LTE B38 (Ant4)	Left cheek	0.293	0.714	1.006	0.655	0.584	0.340	1.007	0.948	0.633	1.346	1.217
	Left tilted	0.088	0.572	0.469	0.296	0.264	0.240	0.660	0.384	0.328	0.709	0.592
	Right cheek	0.770	0.269	0.194	0.123	0.109	0.124	1.039	0.893	0.894	0.318	1.003
	Right tilted	0.280	0.334	0.123	0.078	0.069	0.146	0.614	0.358	0.426	0.269	0.495
LTE B41 (Ant0)	Left cheek	0.147	0.714	1.006	0.655	0.584	0.340	0.861	0.802	0.487	1.346	1.071
	Left tilted	0.080	0.572	0.469	0.296	0.264	0.240	0.652	0.376	0.320	0.709	0.584
	Right cheek	0.257	0.269	0.194	0.123	0.109	0.124	0.526	0.380	0.381	0.318	0.490
	Right tilted	0.098	0.334	0.123	0.078	0.069	0.146	0.432	0.176	0.244	0.269	0.313
LTE B41 (Ant1)	Left cheek	0.145	0.714	1.006	0.655	0.584	0.340	0.859	0.800	0.485	1.346	1.069
	Left tilted	0.152	0.572	0.469	0.296	0.264	0.240	0.724	0.448	0.392	0.709	0.656
	Right cheek	0.420	0.269	0.194	0.123	0.109	0.124	0.689	0.543	0.544	0.318	0.653
	Right tilted	1.090	0.334	0.123	0.078	0.069	0.146	1.424	1.168	1.236	0.269	1.305
LTE B41 (Ant4)	Left cheek	0.387	0.714	1.006	0.655	0.584	0.340	1.101	1.042	0.727	1.346	1.311
	Left tilted	0.135	0.572	0.469	0.296	0.264	0.240	0.707	0.431	0.375	0.709	0.639
	Right cheek	1.166	0.269	0.194	0.123	0.109	0.124	1.435	1.289	1.290	0.318	1.399

	Right tilted	0.351	0.334	0.123	0.078	0.069	0.146	0.685	0.429	0.497	0.269	0.566
LTE B66 (Ant0)	Left cheek	0.092	0.714	1.006	0.655	0.584	0.340	0.806	0.747	0.432	1.346	1.016
	Left tilted	0.038	0.572	0.469	0.296	0.264	0.240	0.610	0.334	0.278	0.709	0.542
	Right cheek	0.060	0.269	0.194	0.123	0.109	0.124	0.329	0.183	0.184	0.318	0.293
	Right tilted	0.058	0.334	0.123	0.078	0.069	0.146	0.392	0.136	0.204	0.269	0.273
LTE B66 (Ant1)	Left cheek	0.413	0.714	1.006	0.655	0.584	0.340	1.127	1.068	0.753	1.346	1.337
	Left tilted	0.508	0.572	0.469	0.296	0.264	0.240	1.080	0.804	0.748	0.709	1.012
	Right cheek	0.641	0.269	0.194	0.123	0.109	0.124	0.910	0.764	0.765	0.318	0.874
	Right tilted	0.964	0.334	0.123	0.078	0.069	0.146	1.298	1.042	1.110	0.269	1.179
LTE B66 (Ant4)	Left cheek	0.216	0.714	1.006	0.655	0.584	0.340	0.930	0.871	0.556	1.346	1.140
	Left tilted	0.138	0.572	0.469	0.296	0.264	0.240	0.710	0.434	0.378	0.709	0.642
	Right cheek	0.607	0.269	0.194	0.123	0.109	0.124	0.876	0.730	0.731	0.318	0.840
	Right tilted	0.190	0.334	0.123	0.078	0.069	0.146	0.524	0.268	0.336	0.269	0.405
N2 (Ant0)	Left cheek	0.134	0.714	1.006	0.655	0.584	0.340	0.848	0.789	0.474	1.346	1.058
	Left tilted	0.092	0.572	0.469	0.296	0.264	0.240	0.664	0.388	0.332	0.709	0.596
	Right cheek	0.122	0.269	0.194	0.123	0.109	0.124	0.391	0.245	0.246	0.318	0.355
	Right tilted	0.094	0.334	0.123	0.078	0.069	0.146	0.428	0.172	0.240	0.269	0.309
N2 (Ant1)	Left cheek	0.444	0.714	1.006	0.655	0.584	0.340	1.158	1.099	0.784	1.346	1.368
	Left tilted	0.563	0.572	0.469	0.296	0.264	0.240	1.135	0.859	0.803	0.709	1.067
	Right cheek	0.891	0.269	0.194	0.123	0.109	0.124	1.160	1.014	1.015	0.318	1.124
	Right tilted	0.985	0.334	0.123	0.078	0.069	0.146	1.319	1.063	1.131	0.269	1.200
N7 (Ant0)	Left cheek	0.240	0.714	1.006	0.655	0.584	0.340	0.954	0.895	0.580	1.346	1.164
	Left tilted	0.177	0.572	0.469	0.296	0.264	0.240	0.749	0.473	0.417	0.709	0.681
	Right cheek	0.453	0.269	0.194	0.123	0.109	0.124	0.722	0.576	0.577	0.318	0.686
	Right tilted	0.120	0.334	0.123	0.078	0.069	0.146	0.454	0.198	0.266	0.269	0.335
N7 (Ant1)	Left cheek	0.227	0.714	1.006	0.655	0.584	0.340	0.941	0.882	0.567	1.346	1.151
	Left tilted	0.261	0.572	0.469	0.296	0.264	0.240	0.833	0.557	0.501	0.709	0.765
	Right cheek	0.742	0.269	0.194	0.123	0.109	0.124	1.011	0.865	0.866	0.318	0.975
	Right tilted	0.699	0.334	0.123	0.078	0.069	0.146	1.033	0.777	0.845	0.269	0.914
N7 (Ant4)	Left cheek	0.489	0.714	1.006	0.655	0.584	0.340	1.203	1.144	0.829	1.346	1.413
	Left tilted	0.122	0.572	0.469	0.296	0.264	0.240	0.694	0.418	0.362	0.709	0.626
	Right cheek	1.121	0.269	0.194	0.123	0.109	0.124	1.390	1.244	1.245	0.318	1.354
	Right tilted	0.421	0.334	0.123	0.078	0.069	0.146	0.755	0.499	0.567	0.269	0.636
N12 (Ant0)	Left cheek	0.141	0.714	1.006	0.655	0.584	0.340	0.855	0.796	0.481	1.346	1.065
	Left tilted	0.077	0.572	0.469	0.296	0.264	0.240	0.649	0.373	0.317	0.709	0.581
	Right cheek	0.106	0.269	0.194	0.123	0.109	0.124	0.375	0.229	0.230	0.318	0.339
	Right tilted	0.043	0.334	0.123	0.078	0.069	0.146	0.377	0.121	0.189	0.269	0.258
N12 (Ant1)	Left cheek	0.475	0.714	1.006	0.655	0.584	0.340	1.189	1.130	0.815	1.346	1.399
	Left tilted	0.425	0.572	0.469	0.296	0.264	0.240	0.997	0.721	0.665	0.709	0.929
	Right cheek	0.887	0.269	0.194	0.123	0.109	0.124	1.156	1.010	1.011	0.318	1.120
	Right tilted	0.660	0.334	0.123	0.078	0.069	0.146	0.994	0.738	0.806	0.269	0.875
N26 (Ant0)	Left cheek	0.234	0.714	1.006	0.655	0.584	0.340	0.948	0.889	0.574	1.346	1.158
	Left tilted	0.115	0.572	0.469	0.296	0.264	0.240	0.687	0.411	0.355	0.709	0.619
	Right cheek	0.171	0.269	0.194	0.123	0.109	0.124	0.440	0.294	0.295	0.318	0.404
	Right tilted	0.092	0.334	0.123	0.078	0.069	0.146	0.426	0.170	0.238	0.269	0.307
N26 (Ant1)	Left cheek	0.514	0.714	1.006	0.655	0.584	0.340	1.228	1.169	0.854	1.346	1.438
	Left tilted	0.512	0.572	0.469	0.296	0.264	0.240	1.084	0.808	0.752	0.709	1.016
	Right cheek	0.728	0.269	0.194	0.123	0.109	0.124	0.997	0.851	0.852	0.318	0.961
	Right tilted	0.558	0.334	0.123	0.078	0.069	0.146	0.892	0.636	0.704	0.269	0.773
N38 (Ant0)	Left cheek	0.363	0.714	1.006	0.655	0.584	0.340	1.077	1.018	0.703	1.346	1.287
	Left tilted	0.210	0.572	0.469	0.296	0.264	0.240	0.782	0.506	0.450	0.709	0.714
	Right cheek	0.598	0.269	0.194	0.123	0.109	0.124	0.867	0.721	0.722	0.318	0.831
	Right tilted	0.287	0.334	0.123	0.078	0.069	0.146	0.621	0.365	0.433	0.269	0.502
N38 (Ant1)	Left cheek	0.296	0.714	1.006	0.655	0.584	0.340	1.010	0.951	0.636	1.346	1.220
	Left tilted	0.377	0.572	0.469	0.296	0.264	0.240	0.949	0.673	0.617	0.709	0.881
	Right cheek	1.004	0.269	0.194	0.123	0.109	0.124	1.273	1.127	1.128	0.318	1.237
	Right tilted	1.093	0.334	0.123	0.078	0.069	0.146	1.427	1.171	1.239	0.269	1.308
N38 (Ant4)	Left cheek	0.467	0.714	1.006	0.655	0.584	0.340	1.181	1.122	0.807	1.346	1.391
	Left tilted	0.146	0.572	0.469	0.296	0.264	0.240	0.718	0.442	0.386	0.709	0.650

	Right cheek	0.488	0.269	0.194	0.123	0.109	0.124	0.757	0.611	0.612	0.318	0.721
	Right tilted	0.502	0.334	0.123	0.078	0.069	0.146	0.836	0.580	0.648	0.269	0.717
N41 (Ant0)	Left cheek	0.363	0.714	1.006	0.655	0.584	0.340	1.077	1.018	0.703	1.346	1.287
	Left tilted	0.210	0.572	0.469	0.296	0.264	0.240	0.782	0.506	0.450	0.709	0.714
	Right cheek	0.598	0.269	0.194	0.123	0.109	0.124	0.867	0.721	0.722	0.318	0.831
	Right tilted	0.287	0.334	0.123	0.078	0.069	0.146	0.621	0.365	0.433	0.269	0.502
N41 (Ant1)	Left cheek	0.296	0.714	1.006	0.655	0.584	0.340	1.010	0.951	0.636	1.346	1.220
	Left tilted	0.377	0.572	0.469	0.296	0.264	0.240	0.949	0.673	0.617	0.709	0.881
	Right cheek	1.004	0.269	0.194	0.123	0.109	0.124	1.273	1.127	1.128	0.318	1.237
	Right tilted	1.093	0.334	0.123	0.078	0.069	0.146	1.427	1.171	1.239	0.269	1.308
N41 (Ant4)	Left cheek	0.467	0.714	1.006	0.655	0.584	0.340	1.181	1.122	0.807	1.346	1.391
	Left tilted	0.146	0.572	0.469	0.296	0.264	0.240	0.718	0.442	0.386	0.709	0.650
	Right cheek	0.488	0.269	0.194	0.123	0.109	0.124	0.757	0.611	0.612	0.318	0.721
	Right tilted	0.502	0.334	0.123	0.078	0.069	0.146	0.836	0.580	0.648	0.269	0.717
N66 (Ant0)	Left cheek	0.124	0.714	1.006	0.655	0.584	0.340	0.838	0.779	0.464	1.346	1.048
	Left tilted	0.007	0.572	0.469	0.296	0.264	0.240	0.579	0.303	0.247	0.709	0.511
	Right cheek	0.085	0.269	0.194	0.123	0.109	0.124	0.354	0.208	0.209	0.318	0.318
	Right tilted	0.069	0.334	0.123	0.078	0.069	0.146	0.403	0.147	0.215	0.269	0.284
N66 (Ant1)	Left cheek	0.530	0.714	1.006	0.655	0.584	0.340	1.244	1.185	0.870	1.346	1.454
	Left tilted	0.650	0.572	0.469	0.296	0.264	0.240	1.222	0.946	0.890	0.709	1.154
	Right cheek	0.964	0.269	0.194	0.123	0.109	0.124	1.233	1.087	1.088	0.318	1.197
	Right tilted	1.132	0.334	0.123	0.078	0.069	0.146	1.466	1.210	1.278	0.269	1.347
N66 (Ant4)	Left cheek	0.228	0.714	1.006	0.655	0.584	0.340	0.942	0.883	0.568	1.346	1.152
	Left tilted	0.114	0.572	0.469	0.296	0.264	0.240	0.686	0.410	0.354	0.709	0.618
	Right cheek	0.556	0.269	0.194	0.123	0.109	0.124	0.825	0.679	0.680	0.318	0.789
	Right tilted	0.241	0.334	0.123	0.078	0.069	0.146	0.575	0.319	0.387	0.269	0.456

Body:

Test position		SARmax (W/kg)						Summed SAR				
		WWAN	WiFi 2.4G Ant7(chain0)	WiFi 5G Ant7(chain0) WiFi 5G+BT	WiFi 5G Ant7(chain0) WWAN+WiFi 5G	WiFi 5G Ant7(chain0) WWAN+WiFi 5G+BT	BT					
		1	2	3	4	5	6	1+2	1+4	1+6	3+6	1+5+6
GSM850 (Ant0)	Front side	0.123	0.144	0.211	0.167	0.149	0.007	0.267	0.290	0.272	0.218	0.279
	Back side	0.142	0.147	0.445	0.354	0.315	0.026	0.289	0.496	0.457	0.471	0.483
GSM850 (Ant1)	Front side	0.101	0.144	0.211	0.167	0.149	0.007	0.245	0.268	0.250	0.218	0.257
	Back side	0.108	0.147	0.445	0.354	0.315	0.026	0.255	0.462	0.423	0.471	0.449
GSM1900 (Ant0)	Front side	0.134	0.144	0.211	0.167	0.149	0.007	0.278	0.301	0.283	0.218	0.290
	Back side	0.226	0.147	0.445	0.354	0.315	0.026	0.373	0.580	0.541	0.471	0.567
GSM1900 (Ant1)	Front side	0.243	0.144	0.211	0.167	0.149	0.007	0.387	0.410	0.392	0.218	0.399
	Back side	0.440	0.147	0.445	0.354	0.315	0.026	0.587	0.794	0.755	0.471	0.781
WCDMA B2 (Ant0)	Front side	0.164	0.144	0.211	0.167	0.149	0.007	0.308	0.331	0.313	0.218	0.320
	Back side	0.240	0.147	0.445	0.354	0.315	0.026	0.387	0.594	0.555	0.471	0.581
WCDMA B2 (Ant1)	Front side	0.212	0.144	0.211	0.167	0.149	0.007	0.356	0.379	0.361	0.218	0.368
	Back side	0.391	0.147	0.445	0.354	0.315	0.026	0.538	0.745	0.706	0.471	0.732
WCDMA B4 (Ant0)	Front side	0.033	0.144	0.211	0.167	0.149	0.007	0.177	0.200	0.182	0.218	0.189
	Back side	0.131	0.147	0.445	0.354	0.315	0.026	0.278	0.485	0.446	0.471	0.472
WCDMA B4 (Ant1)	Front side	0.165	0.144	0.211	0.167	0.149	0.007	0.309	0.332	0.314	0.218	0.321
	Back side	0.222	0.147	0.445	0.354	0.315	0.026	0.369	0.576	0.537	0.471	0.563
WCDMA B5 (Ant0)	Front side	0.131	0.144	0.211	0.167	0.149	0.007	0.275	0.298	0.280	0.218	0.287
	Back side	0.158	0.147	0.445	0.354	0.315	0.026	0.305	0.512	0.473	0.471	0.499
WCDMA B5 (Ant1)	Front side	0.132	0.144	0.211	0.167	0.149	0.007	0.276	0.299	0.281	0.218	0.288
	Back side	0.153	0.147	0.445	0.354	0.315	0.026	0.300	0.507	0.468	0.471	0.494
LTE B2 (Ant0)	Front side	0.119	0.144	0.211	0.167	0.149	0.007	0.263	0.286	0.268	0.218	0.275
	Back side	0.191	0.147	0.445	0.354	0.315	0.026	0.338	0.545	0.506	0.471	0.532
LTE B2 (Ant1)	Front side	0.240	0.144	0.211	0.167	0.149	0.007	0.384	0.407	0.389	0.218	0.396
	Back side	0.517	0.147	0.445	0.354	0.315	0.026	0.664	0.871	0.832	0.471	0.858
LTE B7 (Ant0)	Front side	0.232	0.144	0.211	0.167	0.149	0.007	0.376	0.399	0.381	0.218	0.388
	Back side	0.259	0.147	0.445	0.354	0.315	0.026	0.406	0.613	0.574	0.471	0.600
LTE B7 (Ant1)	Front side	0.124	0.144	0.211	0.167	0.149	0.007	0.268	0.291	0.273	0.218	0.280
	Back side	0.247	0.147	0.445	0.354	0.315	0.026	0.394	0.601	0.562	0.471	0.588
LTE B7 (Ant4)	Front side	0.131	0.144	0.211	0.167	0.149	0.007	0.275	0.298	0.280	0.218	0.287
	Back side	0.250	0.147	0.445	0.354	0.315	0.026	0.397	0.604	0.565	0.471	0.591
LTE B12(17) (Ant0)	Front side	0.140	0.144	0.211	0.167	0.149	0.007	0.284	0.307	0.289	0.218	0.296
	Back side	0.183	0.147	0.445	0.354	0.315	0.026	0.330	0.537	0.498	0.471	0.524
LTE B12(17) (Ant1)	Front side	0.170	0.144	0.211	0.167	0.149	0.007	0.314	0.337	0.319	0.218	0.326
	Back side	0.277	0.147	0.445	0.354	0.315	0.026	0.424	0.631	0.592	0.471	0.618
LTE B13 (Ant0)	Front side	0.090	0.144	0.211	0.167	0.149	0.007	0.234	0.257	0.239	0.218	0.246
	Back side	0.109	0.147	0.445	0.354	0.315	0.026	0.256	0.463	0.424	0.471	0.450
LTE B13 (Ant1)	Front side	0.158	0.144	0.211	0.167	0.149	0.007	0.302	0.325	0.307	0.218	0.314
	Back side	0.248	0.147	0.445	0.354	0.315	0.026	0.395	0.602	0.563	0.471	0.589
LTE B26(5) (Ant0)	Front side	0.129	0.144	0.211	0.167	0.149	0.007	0.273	0.296	0.278	0.218	0.285
	Back side	0.169	0.147	0.445	0.354	0.315	0.026	0.316	0.523	0.484	0.471	0.510
LTE B26(5)	Front side	0.113	0.144	0.211	0.167	0.149	0.007	0.257	0.280	0.262	0.218	0.269

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(Ant1)	Back side	0.155	0.147	0.445	0.354	0.315	0.026	0.302	0.509	0.470	0.471	0.496
LTE B38 (Ant0)	Front side	0.108	0.144	0.211	0.167	0.149	0.007	0.252	0.275	0.257	0.218	0.264
	Back side	0.175	0.147	0.445	0.354	0.315	0.026	0.322	0.529	0.490	0.471	0.516
LTE B38 (Ant1)	Front side	0.112	0.144	0.211	0.167	0.149	0.007	0.256	0.279	0.261	0.218	0.268
	Back side	0.326	0.147	0.445	0.354	0.315	0.026	0.473	0.680	0.641	0.471	0.667
LTE B38 (Ant4)	Front side	0.151	0.144	0.211	0.167	0.149	0.007	0.295	0.318	0.300	0.218	0.307
	Back side	0.371	0.147	0.445	0.354	0.315	0.026	0.518	0.725	0.686	0.471	0.712
LTE B41 (Ant0)	Front side	0.146	0.144	0.211	0.167	0.149	0.007	0.290	0.313	0.295	0.218	0.302
	Back side	0.164	0.147	0.445	0.354	0.315	0.026	0.311	0.518	0.479	0.471	0.505
LTE B41 (Ant1)	Front side	0.162	0.144	0.211	0.167	0.149	0.007	0.306	0.329	0.311	0.218	0.318
	Back side	0.341	0.147	0.445	0.354	0.315	0.026	0.488	0.695	0.656	0.471	0.682
LTE B41 (Ant4)	Front side	0.097	0.144	0.211	0.167	0.149	0.007	0.241	0.264	0.246	0.218	0.253
	Back side	0.245	0.147	0.445	0.354	0.315	0.026	0.392	0.599	0.560	0.471	0.586
LTE B66(4) (Ant0)	Front side	0.131	0.144	0.211	0.167	0.149	0.007	0.275	0.298	0.280	0.218	0.287
	Back side	0.144	0.147	0.445	0.354	0.315	0.026	0.291	0.498	0.459	0.471	0.485
LTE B664) (Ant1)	Front side	0.219	0.144	0.211	0.167	0.149	0.007	0.363	0.386	0.368	0.218	0.375
	Back side	0.274	0.147	0.445	0.354	0.315	0.026	0.421	0.628	0.589	0.471	0.615
LTE B66(4) (Ant4)	Front side	0.065	0.144	0.211	0.167	0.149	0.007	0.209	0.232	0.214	0.218	0.221
	Back side	0.149	0.147	0.445	0.354	0.315	0.026	0.296	0.503	0.464	0.471	0.490
N2 (Ant0)	Front side	0.150	0.144	0.211	0.167	0.149	0.007	0.294	0.317	0.299	0.218	0.306
	Back side	0.303	0.147	0.445	0.354	0.315	0.026	0.450	0.657	0.618	0.471	0.644
N2 (Ant1)	Front side	0.301	0.144	0.211	0.167	0.149	0.007	0.445	0.468	0.450	0.218	0.457
	Back side	0.669	0.147	0.445	0.354	0.315	0.026	0.816	1.023	0.984	0.471	1.010
N7 (Ant0)	Front side	0.185	0.144	0.211	0.167	0.149	0.007	0.329	0.352	0.334	0.218	0.341
	Back side	0.275	0.147	0.445	0.354	0.315	0.026	0.422	0.629	0.590	0.471	0.616
N7 (Ant1)	Front side	0.177	0.144	0.211	0.167	0.149	0.007	0.321	0.344	0.326	0.218	0.333
	Back side	0.231	0.147	0.445	0.354	0.315	0.026	0.378	0.585	0.546	0.471	0.572
N7 (Ant4)	Front side	0.154	0.144	0.211	0.167	0.149	0.007	0.298	0.321	0.303	0.218	0.310
	Back side	0.350	0.147	0.445	0.354	0.315	0.026	0.497	0.704	0.665	0.471	0.691
N12 (Ant0)	Front side	0.172	0.144	0.211	0.167	0.149	0.007	0.316	0.339	0.321	0.218	0.328
	Back side	0.209	0.147	0.445	0.354	0.315	0.026	0.356	0.563	0.524	0.471	0.550
N12 (Ant1)	Front side	0.213	0.144	0.211	0.167	0.149	0.007	0.357	0.380	0.362	0.218	0.369
	Back side	0.222	0.147	0.445	0.354	0.315	0.026	0.369	0.576	0.537	0.471	0.563
N26 (Ant0)	Front side	0.151	0.144	0.211	0.167	0.149	0.007	0.295	0.318	0.300	0.218	0.307
	Back side	0.235	0.147	0.445	0.354	0.315	0.026	0.382	0.589	0.550	0.471	0.576
N26 (Ant1)	Front side	0.167	0.144	0.211	0.167	0.149	0.007	0.311	0.334	0.316	0.218	0.323
	Back side	0.159	0.147	0.445	0.354	0.315	0.026	0.306	0.513	0.474	0.471	0.500
N41(38) (Ant0)	Front side	0.247	0.144	0.211	0.167	0.149	0.007	0.391	0.414	0.396	0.218	0.403
	Back side	0.312	0.147	0.445	0.354	0.315	0.026	0.459	0.666	0.627	0.471	0.653
N41(38) (Ant1)	Front side	0.254	0.144	0.211	0.167	0.149	0.007	0.398	0.421	0.403	0.218	0.410
	Back side	0.439	0.147	0.445	0.354	0.315	0.026	0.586	0.793	0.754	0.471	0.780
N41(38) (Ant4)	Front side	0.247	0.144	0.211	0.167	0.149	0.007	0.391	0.414	0.396	0.218	0.403
	Back side	0.280	0.147	0.445	0.354	0.315	0.026	0.427	0.634	0.595	0.471	0.621
N66 (Ant0)	Front side	0.125	0.144	0.211	0.167	0.149	0.007	0.269	0.292	0.274	0.218	0.281
	Back side	0.205	0.147	0.445	0.354	0.315	0.026	0.352	0.559	0.520	0.471	0.546
N66 (Ant1)	Front side	0.238	0.144	0.211	0.167	0.149	0.007	0.382	0.405	0.387	0.218	0.394
	Back side	0.310	0.147	0.445	0.354	0.315	0.026	0.457	0.664	0.625	0.471	0.651
N66	Front side	0.061	0.144	0.211	0.167	0.149	0.007	0.205	0.228	0.210	0.218	0.217

(Ant4)	Back side	0.154	0.147	0.445	0.354	0.315	0.026	0.301	0.508	0.469	0.471	0.495

Hotspot

Test position		SARmax (W/kg)						Summed SAR				
		WWAN	WiFi 2.4G Ant7(chain0)	WiFi 5G Ant7(chain0) WiFi 5G+BT	WiFi 5G Ant7(chain0) WWAN+WiFi 5G	WiFi 5G Ant7(chain0) WWAN+WiFi 5G+BT	BT					
		1	2	3	4	5	6	1+2	1+4	1+6	3+6	1+5+6
GSM850 (Ant0)	Front side	0.221	0.287	0.236	0.198	0.176	0.018	0.508	0.419	0.239	0.254	0.415
	Back side	0.323	0.371	0.871	0.729	0.649	0.064	0.694	1.052	0.387	0.935	1.036
	Left side	0.114	0.000	0.000	0.000	0.311	0.000	0.114	0.114	0.114	0.000	0.425
	Right side	0.098	0.145	0.440	0.349	0.262	0.046	0.243	0.447	0.144	0.486	0.406
	Top side	0.000	0.320	0.371	0.294	0.000	0.073	0.320	0.294	0.073	0.444	0.073
	Bottom side	0.260	0.000	0.000	0.000	0.000	0.000	0.260	0.260	0.260	0.000	0.260
GSM850 (Ant1)	Front side	0.195	0.287	0.236	0.198	0.176	0.018	0.482	0.393	0.213	0.254	0.389
	Back side	0.238	0.371	0.871	0.729	0.649	0.064	0.609	0.967	0.302	0.935	0.951
	Left side	0.161	0.000	0.000	0.000	0.311	0.000	0.161	0.161	0.161	0.000	0.472
	Right side	0.000	0.145	0.440	0.349	0.262	0.046	0.145	0.349	0.046	0.486	0.308
	Top side	0.177	0.320	0.371	0.294	0.000	0.073	0.497	0.471	0.250	0.444	0.250
	Bottom side	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
GSM1900 (Ant0)	Front side	0.253	0.287	0.236	0.198	0.176	0.018	0.540	0.451	0.271	0.254	0.447
	Back side	0.425	0.371	0.871	0.729	0.649	0.064	0.796	1.154	0.489	0.935	1.138
	Left side	0.068	0.000	0.000	0.000	0.311	0.000	0.068	0.068	0.068	0.000	0.379
	Right side	0.146	0.145	0.440	0.349	0.262	0.046	0.291	0.495	0.192	0.486	0.454
	Top side	0.000	0.320	0.371	0.294	0.000	0.073	0.320	0.294	0.073	0.444	0.073
	Bottom side	0.396	0.000	0.000	0.000	0.000	0.000	0.396	0.396	0.396	0.000	0.396
GSM1900 (Ant1)	Front side	0.419	0.287	0.236	0.198	0.176	0.018	0.706	0.617	0.437	0.254	0.613
	Back side	0.705	0.371	0.871	0.729	0.649	0.064	1.076	1.434	0.769	0.935	1.418
	Left side	0.111	0.000	0.000	0.000	0.311	0.000	0.111	0.111	0.111	0.000	0.422
	Right side	0.000	0.145	0.440	0.349	0.262	0.046	0.145	0.349	0.046	0.486	0.308
	Top side	1.023	0.320	0.371	0.294	0.000	0.073	1.343	1.317	1.096	0.444	1.096
	Bottom side	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WCDMA B2 (Ant0)	Front side	0.154	0.287	0.236	0.198	0.176	0.018	0.441	0.352	0.172	0.254	0.348
	Back side	0.258	0.371	0.871	0.729	0.649	0.064	0.629	0.987	0.322	0.935	0.971
	Left side	0.042	0.000	0.000	0.000	0.311	0.000	0.042	0.042	0.042	0.000	0.353
	Right side	0.087	0.145	0.440	0.349	0.262	0.046	0.232	0.436	0.133	0.486	0.395
	Top side	0.000	0.320	0.371	0.294	0.000	0.073	0.320	0.294	0.073	0.444	0.073
	Bottom side	0.332	0.000	0.000	0.000	0.000	0.000	0.332	0.332	0.332	0.000	0.332
WCDMA B2 (Ant1)	Front side	0.238	0.287	0.236	0.198	0.176	0.018	0.525	0.436	0.256	0.254	0.432
	Back side	0.447	0.371	0.871	0.729	0.649	0.064	0.818	1.176	0.511	0.935	1.160
	Left side	0.087	0.000	0.000	0.000	0.311	0.000	0.087	0.087	0.087	0.000	0.398
	Right side	0.000	0.145	0.440	0.349	0.262	0.046	0.145	0.349	0.046	0.486	0.308
	Top side	0.213	0.320	0.371	0.294	0.000	0.073	0.533	0.507	0.286	0.444	0.286
	Bottom side	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WCDMA B4 (Ant0)	Front side	0.086	0.287	0.236	0.198	0.176	0.018	0.373	0.284	0.104	0.254	0.280
	Back side	0.153	0.371	0.871	0.729	0.649	0.064	0.524	0.882	0.217	0.935	0.866
	Left side	0.033	0.000	0.000	0.000	0.311	0.000	0.033	0.033	0.033	0.000	0.344
	Right side	0.061	0.145	0.440	0.349	0.262	0.046	0.206	0.410	0.107	0.486	0.369
	Top side	0.000	0.320	0.371	0.294	0.000	0.073	0.320	0.294	0.073	0.444	0.073
	Bottom side	0.266	0.000	0.000	0.000	0.000	0.000	0.266	0.266	0.266	0.000	0.266
WCDMA B4 (Ant1)	Front side	0.231	0.287	0.236	0.198	0.176	0.018	0.518	0.429	0.249	0.254	0.425
	Back side	0.291	0.371	0.871	0.729	0.649	0.064	0.662	1.020	0.355	0.935	1.004
	Left side	0.042	0.000	0.000	0.000	0.311	0.000	0.042	0.042	0.042	0.000	0.353
	Right side	0.000	0.145	0.440	0.349	0.262	0.046	0.145	0.349	0.046	0.486	0.308
	Top side	0.429	0.320	0.371	0.294	0.000	0.073	0.749	0.723	0.502	0.444	0.502
	Bottom side	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WCDMA B5 (Ant0)	Front side	0.111	0.287	0.236	0.198	0.176	0.018	0.398	0.309	0.129	0.254	0.305
	Back side	0.271	0.371	0.871	0.729	0.649	0.064	0.642	1.000	0.335	0.935	0.984
	Left side	0.140	0.000	0.000	0.000	0.311	0.000	0.140	0.140	0.140	0.000	0.451
	Right side	0.088	0.145	0.440	0.349	0.262	0.046	0.233	0.437	0.134	0.486	0.396
	Top side	0.000	0.320	0.371	0.294	0.000	0.073	0.320	0.294	0.073	0.444	0.073
	Bottom side	0.251	0.000	0.000	0.000	0.000	0.000	0.251	0.251	0.251	0.000	0.251
WCDMA B5	Front side	0.208	0.287	0.236	0.198	0.176	0.018	0.495	0.406	0.226	0.254	0.402

(Ant1)	Back side	0.244	0.371	0.871	0.729	0.649	0.064	0.615	0.973	0.308	0.935	0.957
	Left side	0.176	0.000	0.000	0.000	0.311	0.000	0.176	0.176	0.176	0.000	0.487
	Right side	0.000	0.145	0.440	0.349	0.262	0.046	0.145	0.349	0.046	0.486	0.308
	Top side	0.158	0.320	0.371	0.294	0.000	0.073	0.478	0.452	0.231	0.444	0.231
	Bottom side	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LTE B2 (Ant0)	Front side	0.132	0.287	0.236	0.198	0.176	0.018	0.419	0.330	0.150	0.254	0.326
	Back side	0.247	0.371	0.871	0.729	0.649	0.064	0.618	0.976	0.311	0.935	0.960
	Left side	0.029	0.000	0.000	0.000	0.311	0.000	0.029	0.029	0.029	0.000	0.340
	Right side	0.071	0.145	0.440	0.349	0.262	0.046	0.216	0.420	0.117	0.486	0.379
	Top side	0.000	0.320	0.371	0.294	0.000	0.073	0.320	0.294	0.073	0.444	0.073
	Bottom side	0.282	0.000	0.000	0.000	0.000	0.000	0.282	0.282	0.282	0.000	0.282
LTE B2 (Ant1)	Front side	0.411	0.287	0.236	0.198	0.176	0.018	0.698	0.609	0.429	0.254	0.605
	Back side	0.677	0.371	0.871	0.729	0.649	0.064	1.048	1.406	0.741	0.935	1.390
	Left side	0.134	0.000	0.000	0.000	0.311	0.000	0.134	0.134	0.134	0.000	0.445
	Right side	0.000	0.145	0.440	0.349	0.262	0.046	0.145	0.349	0.046	0.486	0.308
	Top side	0.717	0.320	0.371	0.294	0.000	0.073	1.037	1.011	0.790	0.444	0.790
	Bottom side	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LTE B7 (Ant0)	Front side	0.243	0.287	0.236	0.198	0.176	0.018	0.530	0.441	0.261	0.254	0.437
	Back side	0.295	0.371	0.871	0.729	0.649	0.064	0.666	1.024	0.359	0.935	1.008
	Left side	0.009	0.000	0.000	0.000	0.311	0.000	0.009	0.009	0.009	0.000	0.320
	Right side	0.206	0.145	0.440	0.349	0.262	0.046	0.351	0.555	0.252	0.486	0.514
	Top side	0.000	0.320	0.371	0.294	0.000	0.073	0.320	0.294	0.073	0.444	0.073
	Bottom side	0.228	0.000	0.000	0.000	0.000	0.000	0.228	0.228	0.228	0.000	0.228
LTE B7 (Ant1)	Front side	0.128	0.287	0.236	0.198	0.176	0.018	0.415	0.326	0.146	0.254	0.322
	Back side	0.340	0.371	0.871	0.729	0.649	0.064	0.711	1.069	0.404	0.935	1.053
	Left side	0.164	0.000	0.000	0.000	0.311	0.000	0.164	0.164	0.164	0.000	0.475
	Right side	0.007	0.145	0.440	0.349	0.262	0.046	0.152	0.356	0.053	0.486	0.315
	Top side	0.356	0.320	0.371	0.294	0.000	0.073	0.676	0.650	0.429	0.444	0.429
	Bottom side	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LTE B7 (Ant4)	Front side	0.133	0.287	0.236	0.198	0.176	0.018	0.420	0.331	0.151	0.254	0.327
	Back side	0.377	0.371	0.871	0.729	0.649	0.064	0.748	1.106	0.441	0.935	1.090
	Left side	0.349	0.000	0.000	0.000	0.311	0.000	0.349	0.349	0.349	0.000	0.660
	Right side	0.000	0.145	0.440	0.349	0.262	0.046	0.145	0.349	0.046	0.486	0.308
	Top side	0.084	0.320	0.371	0.294	0.000	0.073	0.404	0.378	0.157	0.444	0.157
	Bottom side	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LTE B12 (Ant0)	Front side	0.128	0.287	0.236	0.198	0.176	0.018	0.415	0.326	0.146	0.254	0.322
	Back side	0.155	0.371	0.871	0.729	0.649	0.064	0.526	0.884	0.219	0.935	0.868
	Left side	0.242	0.000	0.000	0.000	0.311	0.000	0.242	0.242	0.242	0.000	0.553
	Right side	0.115	0.145	0.440	0.349	0.262	0.046	0.260	0.464	0.161	0.486	0.423
	Top side	0.000	0.320	0.371	0.294	0.000	0.073	0.320	0.294	0.073	0.444	0.073
	Bottom side	0.176	0.000	0.000	0.000	0.000	0.000	0.176	0.176	0.176	0.000	0.176
LTE B12 (Ant1)	Front side	0.158	0.287	0.236	0.198	0.176	0.018	0.445	0.356	0.176	0.254	0.352
	Back side	0.202	0.371	0.871	0.729	0.649	0.064	0.573	0.931	0.266	0.935	0.915
	Left side	0.267	0.000	0.000	0.000	0.311	0.000	0.267	0.267	0.267	0.000	0.578
	Right side	0.000	0.145	0.440	0.349	0.262	0.046	0.145	0.349	0.046	0.486	0.308
	Top side	0.123	0.320	0.371	0.294	0.000	0.073	0.443	0.417	0.196	0.444	0.196
	Bottom side	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LTE B13 (Ant0)	Front side	0.143	0.287	0.236	0.198	0.176	0.018	0.430	0.341	0.161	0.254	0.337
	Back side	0.187	0.371	0.871	0.729	0.649	0.064	0.558	0.916	0.251	0.935	0.900
	Left side	0.139	0.000	0.000	0.000	0.311	0.000	0.139	0.139	0.139	0.000	0.450
	Right side	0.053	0.145	0.440	0.349	0.262	0.046	0.198	0.402	0.099	0.486	0.361
	Top side	0.000	0.320	0.371	0.294	0.000	0.073	0.320	0.294	0.073	0.444	0.073
	Bottom side	0.226	0.000	0.000	0.000	0.000	0.000	0.226	0.226	0.226	0.000	0.226
LTE B13 (Ant1)	Front side	0.218	0.287	0.236	0.198	0.176	0.018	0.505	0.416	0.236	0.254	0.412
	Back side	0.250	0.371	0.871	0.729	0.649	0.064	0.621	0.979	0.314	0.935	0.963
	Left side	0.153	0.000	0.000	0.000	0.311	0.000	0.153	0.153	0.153	0.000	0.464
	Right side	0.000	0.145	0.440	0.349	0.262	0.046	0.145	0.349	0.046	0.486	0.308
	Top side	0.196	0.320	0.371	0.294	0.000	0.073	0.516	0.490	0.269	0.444	0.269
	Bottom side	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LTE B26 (Ant0)	Front side	0.218	0.287	0.236	0.198	0.176	0.018	0.505	0.416	0.236	0.254	0.412
	Back side	0.269	0.371	0.871	0.729	0.649	0.064	0.640	0.998	0.333	0.935	0.982
	Left side	0.086	0.000	0.000	0.000	0.311	0.000	0.086	0.086	0.086	0.000	0.397
	Right side	0.084	0.145	0.440	0.349	0.262	0.046	0.229	0.433	0.130	0.486	0.392

	Top side	0.000	0.320	0.371	0.294	0.000	0.073	0.320	0.294	0.073	0.444	0.073
	Bottom side	0.284	0.000	0.000	0.000	0.000	0.000	0.284	0.284	0.284	0.000	0.284
LTE B26 (Ant1)	Front side	0.211	0.287	0.236	0.198	0.176	0.018	0.498	0.409	0.229	0.254	0.405
	Back side	0.253	0.371	0.871	0.729	0.649	0.064	0.624	0.982	0.317	0.935	0.966
	Left side	0.156	0.000	0.000	0.000	0.311	0.000	0.156	0.156	0.156	0.000	0.467
	Right side	0.000	0.145	0.440	0.349	0.262	0.046	0.145	0.349	0.046	0.486	0.308
	Top side	0.186	0.320	0.371	0.294	0.000	0.073	0.506	0.480	0.259	0.444	0.259
	Bottom side	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LTE B38 (Ant0)	Front side	0.218	0.287	0.236	0.198	0.176	0.018	0.505	0.416	0.236	0.254	0.412
	Back side	0.281	0.371	0.871	0.729	0.649	0.064	0.652	1.010	0.345	0.935	0.994
	Left side	0.030	0.000	0.000	0.000	0.311	0.000	0.030	0.030	0.030	0.000	0.341
	Right side	0.176	0.145	0.440	0.349	0.262	0.046	0.321	0.525	0.222	0.486	0.484
	Top side	0.000	0.320	0.371	0.294	0.000	0.073	0.320	0.294	0.073	0.444	0.073
	Bottom side	0.207	0.000	0.000	0.000	0.000	0.000	0.207	0.207	0.207	0.000	0.207
LTE B38 (Ant1)	Front side	0.143	0.287	0.236	0.198	0.176	0.018	0.430	0.341	0.161	0.254	0.337
	Back side	0.571	0.371	0.871	0.729	0.649	0.064	0.942	1.300	0.635	0.935	1.284
	Left side	0.181	0.000	0.000	0.000	0.311	0.000	0.181	0.181	0.181	0.000	0.492
	Right side	0.000	0.145	0.440	0.349	0.262	0.046	0.145	0.349	0.046	0.486	0.308
	Top side	0.275	0.320	0.371	0.294	0.000	0.073	0.595	0.569	0.348	0.444	0.348
	Bottom side	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LTE B38 (Ant4)	Front side	0.132	0.287	0.236	0.198	0.176	0.018	0.419	0.330	0.150	0.254	0.326
	Back side	0.335	0.371	0.871	0.729	0.649	0.064	0.706	1.064	0.399	0.935	1.048
	Left side	0.334	0.000	0.000	0.000	0.311	0.000	0.334	0.334	0.334	0.000	0.645
	Right side	0.000	0.145	0.440	0.349	0.262	0.046	0.145	0.349	0.046	0.486	0.308
	Top side	0.005	0.320	0.371	0.294	0.000	0.073	0.325	0.299	0.078	0.444	0.078
	Bottom side	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LTE B41 (Ant0)	Front side	0.300	0.287	0.236	0.198	0.176	0.018	0.587	0.498	0.318	0.254	0.494
	Back side	0.337	0.371	0.871	0.729	0.649	0.064	0.708	1.066	0.401	0.935	1.050
	Left side	0.046	0.000	0.000	0.000	0.311	0.000	0.046	0.046	0.046	0.000	0.357
	Right side	0.244	0.145	0.440	0.349	0.262	0.046	0.389	0.593	0.290	0.486	0.552
	Top side	0.000	0.320	0.371	0.294	0.000	0.073	0.320	0.294	0.073	0.444	0.073
	Bottom side	0.398	0.000	0.000	0.000	0.000	0.000	0.398	0.398	0.398	0.000	0.398
LTE B41 (Ant1)	Front side	0.302	0.287	0.236	0.198	0.176	0.018	0.589	0.500	0.320	0.254	0.496
	Back side	0.852	0.371	0.871	0.729	0.649	0.064	1.223	1.581	0.916	0.935	1.565
	Left side	0.325	0.000	0.000	0.000	0.311	0.000	0.325	0.325	0.325	0.000	0.636
	Right side	0.000	0.145	0.440	0.349	0.262	0.046	0.145	0.349	0.046	0.486	0.308
	Top side	0.826	0.320	0.371	0.294	0.000	0.073	1.146	1.120	0.899	0.444	0.899
	Bottom side	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LTE B41 (Ant4)	Front side	0.182	0.287	0.236	0.198	0.176	0.018	0.469	0.380	0.200	0.254	0.376
	Back side	0.472	0.371	0.871	0.729	0.649	0.064	0.843	1.201	0.536	0.935	1.185
	Left side	0.481	0.000	0.000	0.000	0.311	0.000	0.481	0.481	0.481	0.000	0.792
	Right side	0.000	0.145	0.440	0.349	0.262	0.046	0.145	0.349	0.046	0.486	0.308
	Top side	0.078	0.320	0.371	0.294	0.000	0.073	0.398	0.372	0.151	0.444	0.151
	Bottom side	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LTE B66 (Ant0)	Front side	0.125	0.287	0.236	0.198	0.176	0.018	0.412	0.323	0.143	0.254	0.319
	Back side	0.213	0.371	0.871	0.729	0.649	0.064	0.584	0.942	0.277	0.935	0.926
	Left side	0.016	0.000	0.000	0.000	0.311	0.000	0.016	0.016	0.016	0.000	0.327
	Right side	0.067	0.145	0.440	0.349	0.262	0.046	0.212	0.416	0.113	0.486	0.375
	Top side	0.000	0.320	0.371	0.294	0.000	0.073	0.320	0.294	0.073	0.444	0.073
	Bottom side	0.256	0.000	0.000	0.000	0.000	0.000	0.256	0.256	0.256	0.000	0.256
LTE B66 (Ant1)	Front side	0.282	0.287	0.236	0.198	0.176	0.018	0.569	0.480	0.300	0.254	0.476
	Back side	0.384	0.371	0.871	0.729	0.649	0.064	0.755	1.113	0.448	0.935	1.097
	Left side	0.052	0.000	0.000	0.000	0.311	0.000	0.052	0.052	0.052	0.000	0.363
	Right side	0.000	0.145	0.440	0.349	0.262	0.046	0.145	0.349	0.046	0.486	0.308
	Top side	0.562	0.320	0.371	0.294	0.000	0.073	0.882	0.856	0.635	0.444	0.635
	Bottom side	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LTE B66 (Ant4)	Front side	0.092	0.287	0.236	0.198	0.176	0.018	0.379	0.290	0.110	0.254	0.286
	Back side	0.237	0.371	0.871	0.729	0.649	0.064	0.608	0.966	0.301	0.935	0.950
	Left side	0.224	0.000	0.000	0.000	0.311	0.000	0.224	0.224	0.224	0.000	0.535
	Right side	0.000	0.145	0.440	0.349	0.262	0.046	0.145	0.349	0.046	0.486	0.308
	Top side	0.007	0.320	0.371	0.294	0.000	0.073	0.327	0.301	0.080	0.444	0.080
	Bottom side	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
N2	Front side	0.207	0.287	0.236	0.198	0.176	0.018	0.494	0.405	0.225	0.254	0.401

(Ant0)	Back side	0.388	0.371	0.871	0.729	0.649	0.064	0.759	1.117	0.452	0.935	1.101
	Left side	0.059	0.000	0.000	0.000	0.311	0.000	0.059	0.059	0.059	0.000	0.370
	Right side	0.159	0.145	0.440	0.349	0.262	0.046	0.304	0.508	0.205	0.486	0.467
	Top side	0.000	0.320	0.371	0.294	0.000	0.073	0.320	0.294	0.073	0.444	0.073
	Bottom side	0.326	0.000	0.000	0.000	0.000	0.000	0.326	0.326	0.326	0.000	0.326
N2 (Ant1)	Front side	0.368	0.287	0.236	0.198	0.176	0.018	0.655	0.566	0.386	0.254	0.562
	Back side	0.700	0.371	0.871	0.729	0.649	0.064	1.071	1.429	0.764	0.935	1.413
	Left side	0.138	0.000	0.000	0.000	0.311	0.000	0.138	0.138	0.138	0.000	0.449
	Right side	0.000	0.145	0.440	0.349	0.262	0.046	0.145	0.349	0.046	0.486	0.308
	Top side	0.754	0.320	0.371	0.294	0.000	0.073	1.074	1.048	0.827	0.444	0.827
	Bottom side	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
N7 (Ant0)	Front side	0.236	0.287	0.236	0.198	0.176	0.018	0.523	0.434	0.254	0.254	0.430
	Back side	0.324	0.371	0.871	0.729	0.649	0.064	0.695	1.053	0.388	0.935	1.037
	Left side	0.007	0.000	0.000	0.000	0.311	0.000	0.007	0.007	0.007	0.000	0.318
	Right side	0.194	0.145	0.440	0.349	0.262	0.046	0.339	0.543	0.240	0.486	0.502
	Top side	0.000	0.320	0.371	0.294	0.000	0.073	0.320	0.294	0.073	0.444	0.073
	Bottom side	0.246	0.000	0.000	0.000	0.000	0.000	0.246	0.246	0.246	0.000	0.246
N7 (Ant1)	Front side	0.167	0.287	0.236	0.198	0.176	0.018	0.454	0.365	0.185	0.254	0.361
	Back side	0.356	0.371	0.871	0.729	0.649	0.064	0.727	1.085	0.420	0.935	1.069
	Left side	0.229	0.000	0.000	0.000	0.311	0.000	0.229	0.229	0.229	0.000	0.540
	Right side	0.000	0.145	0.440	0.349	0.262	0.046	0.145	0.349	0.046	0.486	0.308
	Top side	0.322	0.320	0.371	0.294	0.000	0.073	0.642	0.616	0.395	0.444	0.395
	Bottom side	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
N7 (Ant4)	Front side	0.190	0.287	0.236	0.198	0.176	0.018	0.477	0.388	0.208	0.254	0.384
	Back side	0.481	0.371	0.871	0.729	0.649	0.064	0.852	1.210	0.545	0.935	1.194
	Left side	0.517	0.000	0.000	0.000	0.311	0.000	0.517	0.517	0.517	0.000	0.828
	Right side	0.000	0.145	0.440	0.349	0.262	0.046	0.145	0.349	0.046	0.486	0.308
	Top side	0.053	0.320	0.371	0.294	0.000	0.073	0.373	0.347	0.126	0.444	0.126
	Bottom side	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
N12 (Ant0)	Front side	0.174	0.287	0.236	0.198	0.176	0.018	0.461	0.372	0.192	0.254	0.368
	Back side	0.237	0.371	0.871	0.729	0.649	0.064	0.608	0.966	0.301	0.935	0.950
	Left side	0.282	0.000	0.000	0.000	0.311	0.000	0.282	0.282	0.282	0.000	0.593
	Right side	0.146	0.145	0.440	0.349	0.262	0.046	0.291	0.495	0.192	0.486	0.454
	Top side	0.000	0.320	0.371	0.294	0.000	0.073	0.320	0.294	0.073	0.444	0.073
	Bottom side	0.198	0.000	0.000	0.000	0.000	0.000	0.198	0.198	0.198	0.000	0.198
N12 (Ant1)	Front side	0.255	0.287	0.236	0.198	0.176	0.018	0.542	0.453	0.273	0.254	0.449
	Back side	0.261	0.371	0.871	0.729	0.649	0.064	0.632	0.990	0.325	0.935	0.974
	Left side	0.136	0.000	0.000	0.000	0.311	0.000	0.136	0.136	0.136	0.000	0.447
	Right side	0.000	0.145	0.440	0.349	0.262	0.046	0.145	0.349	0.046	0.486	0.308
	Top side	0.133	0.320	0.371	0.294	0.000	0.073	0.453	0.427	0.206	0.444	0.206
	Bottom side	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
N26 (Ant0)	Front side	0.270	0.287	0.236	0.198	0.176	0.018	0.557	0.468	0.288	0.254	0.464
	Back side	0.462	0.371	0.871	0.729	0.649	0.064	0.833	1.191	0.526	0.935	1.175
	Left side	0.118	0.000	0.000	0.000	0.311	0.000	0.118	0.118	0.118	0.000	0.429
	Right side	0.108	0.145	0.440	0.349	0.262	0.046	0.253	0.457	0.154	0.486	0.416
	Top side	0.000	0.320	0.371	0.294	0.000	0.073	0.320	0.294	0.073	0.444	0.073
	Bottom side	0.280	0.000	0.000	0.000	0.000	0.000	0.280	0.280	0.280	0.000	0.280
N26 (Ant1)	Front side	0.270	0.287	0.236	0.198	0.176	0.018	0.557	0.468	0.288	0.254	0.464
	Back side	0.288	0.371	0.871	0.729	0.649	0.064	0.659	1.017	0.352	0.935	1.001
	Left side	0.210	0.000	0.000	0.000	0.311	0.000	0.210	0.210	0.210	0.000	0.521
	Right side	0.000	0.145	0.440	0.349	0.262	0.046	0.145	0.349	0.046	0.486	0.308
	Top side	0.257	0.320	0.371	0.294	0.000	0.073	0.577	0.551	0.330	0.444	0.330
	Bottom side	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
N38 (Ant0)	Front side	0.287	0.287	0.236	0.198	0.176	0.018	0.574	0.485	0.305	0.254	0.481
	Back side	0.351	0.371	0.871	0.729	0.649	0.064	0.722	1.080	0.415	0.935	1.064
	Left side	0.042	0.000	0.000	0.000	0.311	0.000	0.042	0.042	0.042	0.000	0.353
	Right side	0.245	0.145	0.440	0.349	0.262	0.046	0.390	0.594	0.291	0.486	0.553
	Top side	0.000	0.320	0.371	0.294	0.000	0.073	0.320	0.294	0.073	0.444	0.073
	Bottom side	0.292	0.000	0.000	0.000	0.000	0.000	0.292	0.292	0.292	0.000	0.292
N38 (Ant1)	Front side	0.290	0.287	0.236	0.198	0.176	0.018	0.577	0.488	0.308	0.254	0.484
	Back side	0.556	0.371	0.871	0.729	0.649	0.064	0.927	1.285	0.620	0.935	1.269
	Left side	0.415	0.000	0.000	0.000	0.311	0.000	0.415	0.415	0.415	0.000	0.726
	Right side	0.000	0.145	0.440	0.349	0.262	0.046	0.145	0.349	0.046	0.486	0.308

	Top side	0.320	0.320	0.371	0.294	0.000	0.073	0.640	0.614	0.393	0.444	0.393
	Bottom side	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
N38 (Ant4)	Front side	0.145	0.287	0.236	0.198	0.176	0.018	0.432	0.343	0.163	0.254	0.339
	Back side	0.348	0.371	0.871	0.729	0.649	0.064	0.719	1.077	0.412	0.935	1.061
	Left side	0.390	0.000	0.000	0.000	0.311	0.000	0.390	0.390	0.390	0.000	0.701
	Right side	0.000	0.145	0.440	0.349	0.262	0.046	0.145	0.349	0.046	0.486	0.308
	Top side	0.067	0.320	0.371	0.294	0.000	0.073	0.387	0.361	0.140	0.444	0.140
	Bottom side	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
N41 (Ant0)	Front side	0.287	0.287	0.236	0.198	0.176	0.018	0.574	0.485	0.305	0.254	0.481
	Back side	0.351	0.371	0.871	0.729	0.649	0.064	0.722	1.080	0.415	0.935	1.064
	Left side	0.042	0.000	0.000	0.000	0.311	0.000	0.042	0.042	0.042	0.000	0.353
	Right side	0.245	0.145	0.440	0.349	0.262	0.046	0.390	0.594	0.291	0.486	0.553
	Top side	0.000	0.320	0.371	0.294	0.000	0.073	0.320	0.294	0.073	0.444	0.073
	Bottom side	0.292	0.000	0.000	0.000	0.000	0.000	0.292	0.292	0.292	0.000	0.292
N41 (Ant1)	Front side	0.247	0.287	0.236	0.198	0.176	0.018	0.534	0.445	0.265	0.254	0.441
	Back side	0.658	0.371	0.871	0.729	0.649	0.064	1.029	1.387	0.722	0.935	1.371
	Left side	0.341	0.000	0.000	0.000	0.311	0.000	0.341	0.341	0.341	0.000	0.652
	Right side	0.000	0.145	0.440	0.349	0.262	0.046	0.145	0.349	0.046	0.486	0.308
	Top side	0.446	0.320	0.371	0.294	0.000	0.073	0.766	0.740	0.519	0.444	0.519
	Bottom side	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
N41 (Ant4)	Front side	0.145	0.287	0.236	0.198	0.176	0.018	0.432	0.343	0.163	0.254	0.339
	Back side	0.348	0.371	0.871	0.729	0.649	0.064	0.719	1.077	0.412	0.935	1.061
	Left side	0.390	0.000	0.000	0.000	0.311	0.000	0.390	0.390	0.390	0.000	0.701
	Right side	0.000	0.145	0.440	0.349	0.262	0.046	0.145	0.349	0.046	0.486	0.308
	Top side	0.067	0.320	0.371	0.294	0.000	0.073	0.387	0.361	0.140	0.444	0.140
	Bottom side	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
N66 (Ant0)	Front side	0.125	0.287	0.236	0.198	0.176	0.018	0.412	0.323	0.143	0.254	0.319
	Back side	0.230	0.371	0.871	0.729	0.649	0.064	0.601	0.959	0.294	0.935	0.943
	Left side	0.012	0.000	0.000	0.000	0.311	0.000	0.012	0.012	0.012	0.000	0.323
	Right side	0.067	0.145	0.440	0.349	0.262	0.046	0.212	0.416	0.113	0.486	0.375
	Top side	0.000	0.320	0.371	0.294	0.000	0.073	0.320	0.294	0.073	0.444	0.073
	Bottom side	0.224	0.000	0.000	0.000	0.000	0.000	0.224	0.224	0.224	0.000	0.224
N66 (Ant1)	Front side	0.326	0.287	0.236	0.198	0.176	0.018	0.613	0.524	0.344	0.254	0.520
	Back side	0.416	0.371	0.871	0.729	0.649	0.064	0.787	1.145	0.480	0.935	1.129
	Left side	0.075	0.000	0.000	0.000	0.311	0.000	0.075	0.075	0.075	0.000	0.386
	Right side	0.000	0.145	0.440	0.349	0.262	0.046	0.145	0.349	0.046	0.486	0.308
	Top side	0.595	0.320	0.371	0.294	0.000	0.073	0.915	0.889	0.668	0.444	0.668
	Bottom side	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
N66 (Ant4)	Front side	0.079	0.287	0.236	0.198	0.176	0.018	0.366	0.277	0.097	0.254	0.273
	Back side	0.242	0.371	0.871	0.729	0.649	0.064	0.613	0.971	0.306	0.935	0.955
	Left side	0.298	0.000	0.000	0.000	0.311	0.000	0.298	0.298	0.298	0.000	0.609
	Right side	0.000	0.145	0.440	0.349	0.262	0.046	0.145	0.349	0.046	0.486	0.308
	Top side	0.039	0.320	0.371	0.294	0.000	0.073	0.359	0.333	0.112	0.444	0.112
	Bottom side	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Limbs

Test position		SARmax (W/kg)				Summed SAR			
		WWAN	WIFI 5G Ant7	WiFi 5G Ant7(chain0) WWAN+WiFi 5G	NFC				
		1	2	3	4	1+3	1+4	2+4	1+3+4
LTE Band41	Front side	0.000	0.604	0.479	0.002	0.479	0.002	0.606	0.481
	Back side	2.325	0.759	0.603	0.018	2.928	2.343	0.777	2.946
	Left side	0.000	0.000	0.000	0.003	0.000	0.003	0.003	0.003
	Right side	0.000	1.444	1.147	0.001	1.147	0.001	1.445	1.148
	Top side	0.000	0.522	0.415	0.002	0.415	0.002	0.524	0.417
	Bottom side	0.000	0.000	0.000	0.001	0.000	0.001	0.001	0.001

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	SN	Calibration Date	Due date of calibration
☒	DAE	SPEAG	DAE4	702	2023/11/17	2024/11/16
☒	DAE	SPEAG	DAE4	896	2024/3/18	2025/3/17
☒	DAE	SPEAG	DAE4	1267	2024/1/3	2025/1/2
☒	DAE	SPEAG	DAE4ip	1803	2023/7/14	2024/7/13
☒	DAE	SPEAG	DAE4ip	1830	2023/9/12	2024/9/11
☒	E-Field Probe	SPEAG	EX3DV4	3789	2023/11/23	2024/11/22
☒	E-Field Probe	SPEAG	EX3DV4	3836	2023/8/7	2024/8/6
☒	E-Field Probe	SPEAG	EX3DV4	7620	2023/12/13	2024/12/12
☒	E-Field Probe	SPEAG	EX3DV4	7636	2023/6/5	2024/6/4
☒	E-Field Probe	SPEAG	EX3DV4	7821	2023/7/14	2024/7/13
☒	E-Field Probe	SPEAG	EX3DV4	7735	2023/12/19	2024/12/18
☒	Validation Kits	SPEAG	CLA-13	1032	2023/2/9	2026/2/8
☒	Validation Kits	SPEAG	D750V3	1160	2022/6/6	2025/6/5
☒	Validation Kits	SPEAG	D835V2	4d105	2022/11/2	2025/11/1
☒	Validation Kits	SPEAG	D1750V2	1149	2022/6/17	2025/6/16
☒	Validation Kits	SPEAG	D1900V2	5d028	2022/11/2	2025/11/1
☒	Validation Kits	SPEAG	D2450V2	733	2022/11/2	2025/11/1
☒	Validation Kits	SPEAG	D2600V2	1125	2022/6/14	2025/6/13
☒	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
☒	Dielectric parameter probes	SPEAG	DAKS-12	1043	2023/07/31	2024/07/30
☒	Vector Network Analyzer and Vector Reflectometer	SPEAG	DAKS_VNA R60	21423005	2023/07/31	2024/07/30
☒	Radio Communication Analyzer	Anritsu	MT8820C	6201616273	2024/1/30	2025/1/29
☒	Radio Communication Analyzer	Anritsu	MT8820C	6201381734	2023/5/25	2024/5/24

☒	Radio Communication Analyzer	Anritsu	MT8820C	6201074424	2023/9/14	2024/9/13
☒	RF Bi-Directional Coupler	Agilent	86205-60001	MY31400031	NCR	NCR
☒	Signal Generator	Agilent	N5171B	MY53050736	2024/1/30	2025/1/29
☒	Preamplifier	Mini-Circuits	ZHL-42W	15542	NCR	NCR
☒	Preamplifier	Compliance Directions Systems Inc.	AMP28-3W	073501433	NCR	NCR
☒	Spectrum Analyzer	Rohde & Schwarz	FSV	SZ-WRG-M-012	2024/01/30	2025/01/29
☒	Power Meter	Agilent	E4416A	GB41292095	2024/1/30	2025/1/29
☒	Power Sensor	Agilent	8481H	MY41091234	2024/1/30	2025/1/29
☒	Power Sensor	R&S	NRP-Z92	100025	2024/1/30	2025/1/29
☒	Attenuator	SHX	TS2-3dB	30704	NCR	NCR
☒	Speed reading thermometer	MingGao	T809	NA	2023/5/26	2024/5/25
☒	Humidity and Temperature Indicator	CHIGAO	HTC-1	ZGL2020120550458	2023/5/26	2024/5/25
☒	Humidity and Temperature Indicator	CHIGAO	HTC-1	ZGL2020120550471	2023/5/26	2024/5/25
☒	Humidity and Temperature Indicator	CHIGAO	HTC-1	ZGL2020120550472	2023/5/26	2024/5/25

Note: All the equipment 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

--- End of report ---

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