FCC SAR TEST REPORT

Application No.:	SEWM2209000170RG
Applicant:	Xiaomi Communications Co., Ltd.
Manufacturer:	Xiaomi Communications Co., Ltd.
Product Name:	Mobile Phone
Model No.(EUT):	22101316G
Trade Mark:	Redmi
FCC ID:	2AFZZ1316G
Standards:	FCC 47CFR §2.1093
Date of Receipt:	2022-09-08
Date of Test:	2022-09-10 to 2022-10-15
Date of Issue:	2022-10-20
Test conclusion:	**PASS ***

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

Authorized Signature:

Panta Sun

Panta Sun

Wireless Laboratory Manager

REVISION HISTORY

Report Number	Revision	Description	Issue Date
SEWM2209000170RG09	01	Original	2022-10-20

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TEST SUMMARY

Frequency Band	Maximum Reported SAR(W/kg)			
	Head	Body-worn	Hotspot	Product specific 10g SAR
GSM850	0.79	0.18	0.33	/
GSM1900	1.05	0.46	0.99	/
WCDMA Band II	1.09	0.90	0.96	/
WCDMA Band IV	1.05	1.06	0.99	/
WCDMA Band V	0.77	0.19	0.34	/
LTE Band 2	0.44	0.57	0.86	/
LTE Band 4	1.04	0.77	0.76	/
LTE Band 5	1.08	0.23	0.43	/
LTE Band 7	0.93	0.62	0.61	/
LTE Band 12	0.50	0.28	0.31	/
LTE Band 13	0.84	0.25	0.30	/
LTE Band 17	0.50	0.28	0.31	/
LTE Band 26	1.08	0.23	0.43	/
LTE Band 38	1.05	0.54	1.01	/
LTE Band 41	1.05	0.54	1.01	/
LTE Band 66	1.04	0.77	0.76	/
NR Band n5	1.08	0.21	0.39	/
NR Band n7	0.94	0.50	0.46	/
NR Band n38	0.90	0.69	0.58	/
NR Band n41	0.90	0.69	0.58	/
NR Band n66	0.89	1.06	0.58	/
NR Band n77	1.09	0.90	0.83	/
NR Band n78	1.09	0.90	0.83	/
WI-FI (2.4GHz)	0.62	0.11	0.24	/
WI-FI (5GHz)	1.07	1.05	1.01	1.90
BT	0.48	0.07	0.18	/
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	1.58	1.56	1.48	/
SPLSR	/	/	/	/
SPLSR Limited	0.04			0.1

Reviewed by

Well Wei

Well Wei

Prepared by

Nick Hu

Nick Hu

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1 General Information

1.1 Details of Client

Applicant:	Xiaomi Communications Co., Ltd.
Address:	#019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, China, 100085
Manufacturer:	Xiaomi Communications Co., Ltd.
Address:	#019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, China, 100085

1.2 Test Location

Company:	SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.
Address:	South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone
Post code:	215000
Test Engineer:	Leon-Xu, Leon-Liu, Alan-Zhang, Scola-Zou

1.3 Test Facility

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

• **A2LA (Certificate No. 6336.01)**

SGS-CSTC STANDARDS TECHNICAL SERVICES (SUZHOU) CO., LTD. is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 6336.01.

• **Innovation, Science and Economic Development Canada**

SGS-CSTC STANDARDS TECHNICAL SERVICES (SUZHOU) CO., LTD. has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0120.

IC#: 27594.

• **FCC –Designation Number: CN1312**

SGS-CSTC STANDARDS TECHNICAL SERVICES (SUZHOU) CO., LTD. has been recognized as an accredited testing laboratory.

Designation Number: CN1312.

Test Firm Registration Number: 717327

1.4 General Description of EUT

Device Type :	portable device		
Exposure Category:	uncontrolled environment / general population		
Product Name:	Mobile Phone		
Model No.(EUT):	22101316G		
FCC ID:	2AFZZ1316G		
Trade Mark:	Redmi		
Product Phase:	Identical Prototype		
IMEI:	1# 861485060047959/861485060047967 2# 861485060061471/861485060061489 3# 861485060061331/861485060061349 4# 861485060047991		
Hardware Version:	P2		
Software Version:	MIUI14		
Device Operating Configurations :			
Modulation Mode:	**GSM:** GMSK, 8PSK; **WCDMA:** QPSK; **LTE:** QPSK,16QAM,64QAM **5G NR:** DFT-s-OFDM (PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM), CP-OFDM (QPSK, 16QAM, 64QAM, 256QAM) **WIFI:** DSSS, OFDM, OFDMA; **BT:** GFSK, π/4DQPSK,8DPSK		
Device Class:	B		
GPRS Multi-slots Class:	33	EGPRS Multi-slots Class:	33
HSDPA UE Category:	24	HSUPA UE Category	6
DC-HSDPA UE Category:	24		
Power Class	4,tested with power level 5(GSM850)		
	1,tested with power level 0(GSM1900)		
	3, tested with power control “all 1”(WCDMA Band)		
	3, tested with power control Max Power(LTE Band)		
Frequency Bands:	Band	Tx (MHz)	Rx (MHz)
	GSM850	824~849	869~894
	GSM1900	1850~1910	1930~1990
	WCDMA Band II	1850~1910	1930~1990
	WCDMA Band IV	1710~1755	2110~2155
	WCDMA Band V	824~849	869~894
	LTE Band 2	1850 ~1910	1930 ~1990
	LTE Band 4	1710~1755	2110~2155
	LTE Band 5	824~849	869-894
	LTE Band 7	2500~2570	2620~2690
	LTE Band 12	699~716	729~746
	LTE Band 13	777 - 787	746 - 756
	LTE Band 17	704~716	734~746
	LTE Band 26	814~849	859~894
	LTE Band 66	1710 - 1780	2110 - 2200
	LTE Band 38	2570~2620	2570~2620
	LTE Band 41	2496~2690	2496~2690

	NR Band n5	824~849	869-894
	NR Band n7	2500~2570	2620~2690
	NR Band n38	2570~2620	2570~2620
	NR Band n41	2496~2690	2496~2690
	NR Band n66	1710 - 1780	2110 - 2200
	NR Band n77	3450~3550	3450~3550
		3700~3980	3700~3980
	NR Band n78	3450~3550	3450~3550
		3700~3800	3700~3800
	Bluetooth	2400~2483.5	2400~2483.5
	Wi-Fi 2.4G	2402~2462	2402~2462
	Wi-Fi 5G	5150~5250	5150~5250
		5250~5350	5250~5350
		5470~5725	5470~5725
		5725~5850	5725~5850
RF Cable:	☒ Provided by the aplicant ☐ Provided by the laboratory		
1# Battery Information:	Model:	BP4K	
	Normal Voltage:	+3.87V	
	Rated capacity:	4900mAh	
	Manufacturer:	Amperex Technology Limited	
2# Battery Information:	Model:	BP49	
	Normal Voltage:	+3.87V	
	Rated capacity:	4900mAh	
	Manufacturer:	Sunwoda Electronic Co., Ltd.	

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1.4.1 DUT Antenna Locations (Back View)

The DUT Antenna Locations (Back View) can refer to Appendix F.

Note:
1) The test device is a smart phone. The overall diagonal dimension of this device is 175 mm. Per KDB 648474 D04, because the diagonal distance of this device is ≥160mm, so it is a phablet.
2) Ant 0 is sensor pad 1
   Ant 1 is sensor pad 2
   Ant 5 is sensor pad 3

According to the distance between 5G NR/LTE/WCDMA/GSM&WIFI&BT antennas and the sides of the EUT we can draw the conclusion that:

EUT Sides for SAR Testing							
Mode	Exposure Condition	Front	Back	Left	Right	Top	Bottom
Ant 0	Hotspot/Product specific 10g SAR	Yes	Yes	Yes	Yes	No	Yes
Ant 1	Hotspot/Product specific 10g SAR	Yes	Yes	Yes	No	No	No
Ant 2	Hotspot/Product specific 10g SAR	Yes	Yes	Yes	No	No	No
Ant 3	Hotspot/Product specific 10g SAR	Yes	Yes	Yes	No	No	Yes
Ant 4	Hotspot/Product specific 10g SAR	Yes	Yes	No	Yes	Yes	No
Ant 5	Hotspot/Product specific 10g SAR	Yes	Yes	Yes	No	Yes	No
Ant 6	Hotspot/Product specific 10g SAR	Yes	Yes	No	Yes	Yes	No
Ant 7	Hotspot/Product specific 10g SAR	Yes	Yes	No	Yes	Yes	No
Ant 8	Hotspot/Product specific 10g SAR	Yes	Yes	No	Yes	No	No

Table 1： EUT Sides for SAR Testing

Note:
1) When the antenna-to-edge distance is greater than 2.5cm, such position does not need to be tested.

1.4.2 LTE CA additional specification

The device supports downlink and intra-band contiguous uplink 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 Section 8 of this report per 3GPP TS 36.521-1 V14.4.0. 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.

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.

Intra-band contiguous CA operating bands：

E-UTRA CA Band	E-UTRA Band	Uplink (UL) operating band BS receive / UE transmit F_{UL_low} – F_{UL_high}			Downlink (DL) operating band BS transmit / UE receive F_{DL_low} – F_{DL_high}			Duplex Mode
CA_7	7	2500 MHz	–	2570 MHz	2620 MHz	–	2690 MHz	FDD
CA_38	38	2570 MHz	–	2620 MHz	2570 MHz	–	2620 MHz	TDD
CA_41	41	2496 MHz	–	2690 MHz	2496 MHz	–	2690 MHz	TDD

c) The device supports Inter-band uplink LTE CA for CA_4A-7A with two component carriers in the uplink.

1. For Inter-band uplink LTE CA SAR, as the existing SAR test system cannot test the multiple different frequency bands simultaneous Transmission SAR at the same time, we suggest that the conservative “max + max” multi-Tx and SAR scaling method can be used to evaluate the inter-band Uplink LTE CA SAR from standalone SAR test results of each LTE component band and the conservative “max + max” multi-Tx method to combine the scaled SAR value from each Inter-band uplink LTE CA component band as the inter-band Uplink LTE CA SAR. All Simultaneous Transmission Scenarios will be evaluated independently in the final SAR report. Since the maximum output power of the LTE Inter-band uplink band is ≤ the LTE Band, the SAR data of the LTE Band is used instead of the SAR data of the LTE Inter-band uplink band.

2CC Downlink Carrier Aggregation	3CC Downlink Carrier Aggregation	4CC Downlink Carrier Aggregation
CA_2A-5A	CA_2A-4A-5A	CA_41E
CA_2A-66A	CA_2A-4A-7A	CA_2A-4A-7C
CA_2A-7A	CA_2A-7A-7A	
CA_2C	CA_2A-7C	
CA_38C	CA_4A-7C	
CA_41A-41A	CA_5A-7A-7A	
CA_41C	CA_5A-7C	
CA_4A-12A	CA_7A-66A-66A	
CA_4A-17A	CA_12A-66A-66A	
CA_4A-5A	CA_41D	
CA_4A-7A	CA_41A-41A-41A	
CA_5A-41A	CA_4A-5A-7A	
CA_5A-7A	CA_5A-66A-66A	
CA_66A-66A	CA_5A-7A-66A	
CA_7A-38A		
CA_7A-7A		
CA_7C		
CA_66B		
CA_66C		
CA_2A-12A		
CA_2A-17A		
CA_7A-26A		
CA_5A-66A		
CA_38A-66A		
CA_2A-2A		

1.4.3 Power reduction specification

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

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

2) A fixed level power reduction is applied for some frequency bands when simultaneously transmitting with the other antennas in certain simultaneous transmission conditions. The standalone SAR compliance still uses the standalone SAR results tested at the maximum output power level without any power reduction

3) A fixed level power reduction is applied for some frequency bands when handset operate "held to the ear" condition, the power reduction triggered by audio receiver detection. The audio receiver detection is used to determine head or body scenario.

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

The detailed power reduction information can be referred to Appendix E.

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 D01	General RF Exposure Guidance v06
KDB 865664 D01	SAR Measurement 100 MHz to 6 GHz v01r04
KDB 865664 D02	RF Exposure Reporting v01r02
KDB 690783 D01	SAR Listings on Grants v01r03
KDB 616217 D04	SAR for laptop and tablets v01r02

1.6 RF exposure limits

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

Notes:

* The Spatial Peak value of the SAR averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time

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

*** The Spatial Peak value of the SAR averaged over any 10 grams of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.

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

Controlled Environments are defined as locations where there is exposure that may be incurred by persons who are aware of the potential for exposure, (i.e. as a result of employment or occupation.)

2 Laboratory Environment

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

Table 2： The Ambient Conditions

3 SAR Measurements System Configuration

3.1 The SAR Measurement System

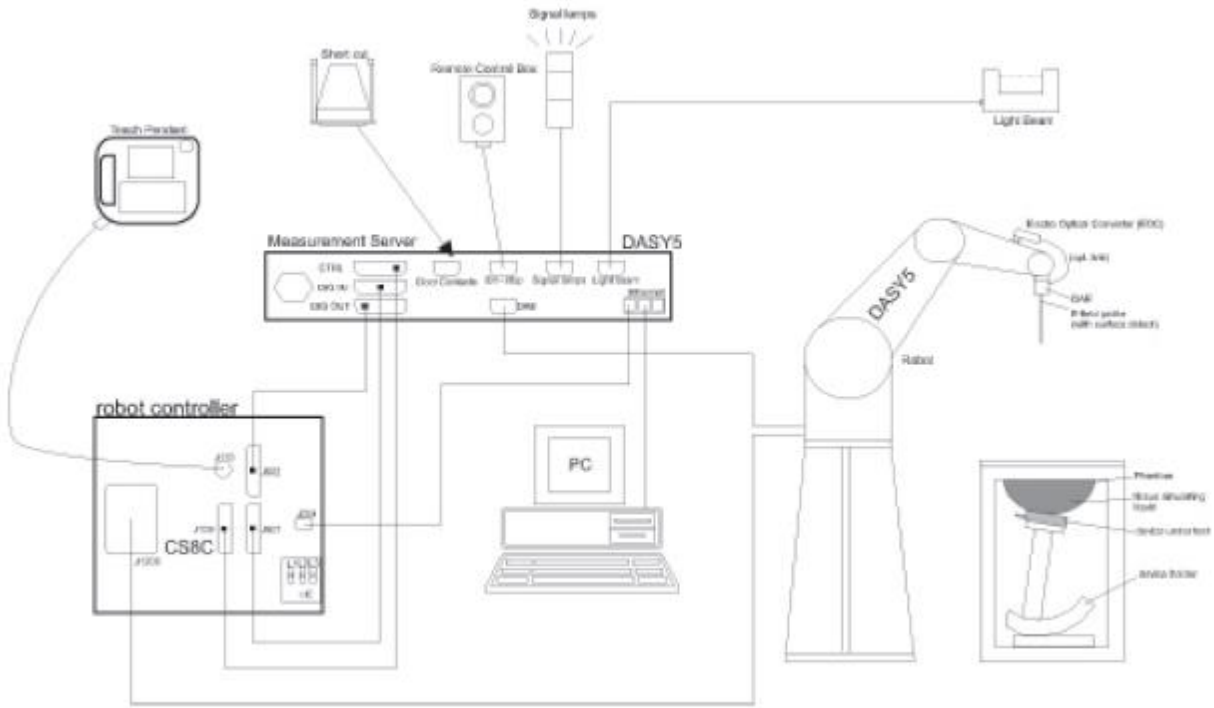
This SAR Measurement System uses a Computer-controlled 3-D stepper motor system (SPEAG DASY5 professional system). A E-field probe is used to determine the internal electric fields. The SAR can be obtained from the equation SAR= σ (|Ei|2)/ ρ where σ and ρ are the conductivity and mass density of the tissue-Simulate.

The DASY5 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 7.
- DASY5 software.
- Remote control with teach pendant and additional circuitry for robot safety such as warning lamps, etc.
- The SAM twin phantom enabling testing left-hand, right-hand and Body Worn usage.
- The device holder for handheld mobile phones.
- Tissue simulating liquid mixed according to the given recipes.
- Validation dipole kits allowing to validating the proper functioning of the system.

3.2 Isotropic E-field Probe EX3DV4

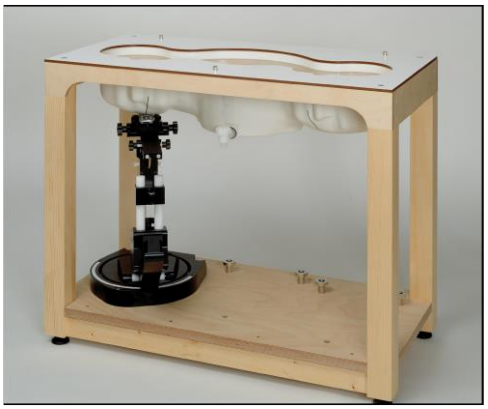
	Symmetrical design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)
Calibration	ISO/IEC 17025 calibration service available.
Frequency	10 MHz to > 6 GHz Linearity: ± 0.2 dB (30 MHz to 6 GHz)
Directivity	± 0.3 dB in TSL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

3.3 Data Acquisition Electronics (DAE)

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

3.4 SAM Twin Phantom

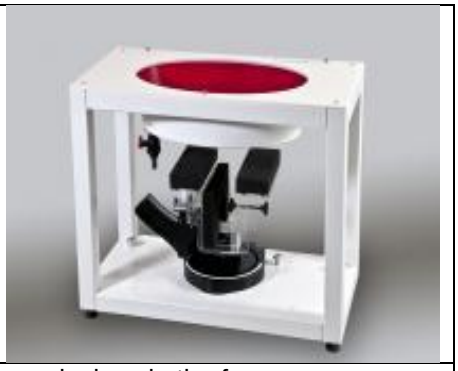
Material	Vinylester, glass fiber reinforced (VE-GF)
Liquid Compatibility	Compatible with all SPEAG tissue simulating liquids (incl. DGBE type)
Shell Thickness	2 ± 0.2 mm (6 ± 0.2 mm at ear point)
Dimensions (incl. Wooden Support)	Length: 1000 mm Width: 500 mm Height: adjustable feet
Filling Volume	approx.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



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

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

3.5 ELI Phantom

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

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

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

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

3.7.3 Data Evaluation by SEMCAD

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

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

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

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

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

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

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

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

E-field probes:

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

H-field probes:

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

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

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

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

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

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

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

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

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

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

4 SAR measurement variability and uncertainty

4.1 SAR measurement variability

Per KDB865664 D01 SAR measurement 100 MHz to 6 GHz v01r04, SAR measurement variability must be assessed for each frequency band, which is determined by the SAR probe calibration point and tissue-equivalent medium used for the device measurements. The additional measurements are repeated after the completion of all measurements requiring the same head or body tissue-equivalent medium in a frequency band. The test device should be returned to ambient conditions (normal room temperature) with the battery fully charged before it is re-mounted on the device holder for the repeated measurement(s) to minimize any unexpected variations in the repeated results.

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

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

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

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

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

4.2 SAR measurement uncertainty

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

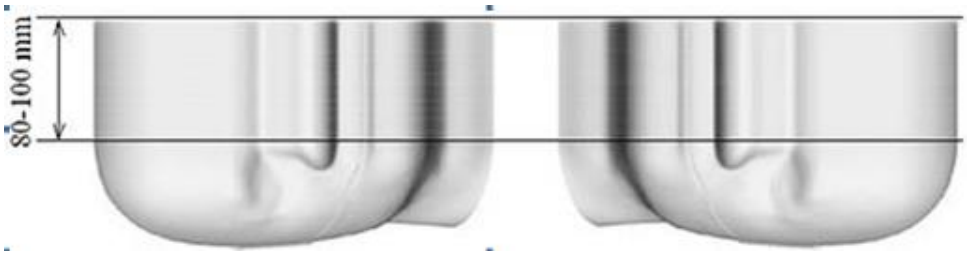
5 Description of Test Position

5.1 Head Exposure Condition

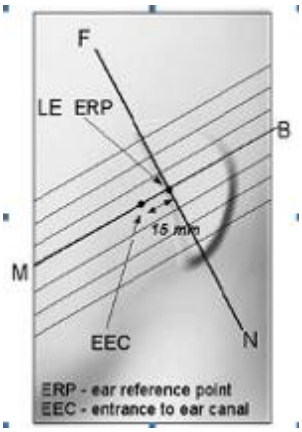
5.1.1 SAM Phantom Shape

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

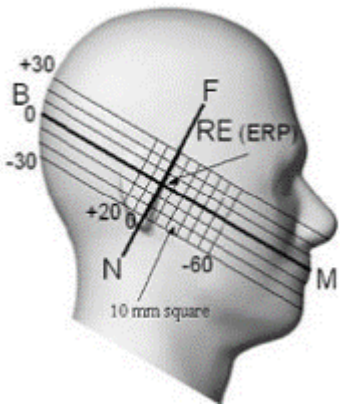
Note: The centre strip including the nose region has a different thickness tolerance.



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

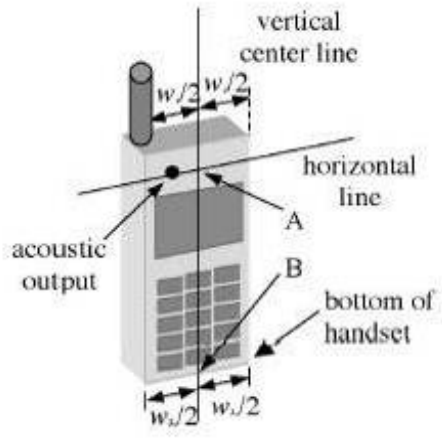


F-5. Close-up side view of phantom, showing the ear region, N-F and B-M lines, and seven cross-sectional plane locations

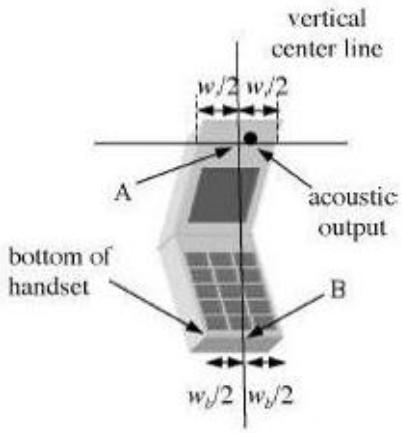


F-6. Side view of the phantom showing relevant markings and seven cross-sectional plane locations

5.1.2 EUT constructions



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



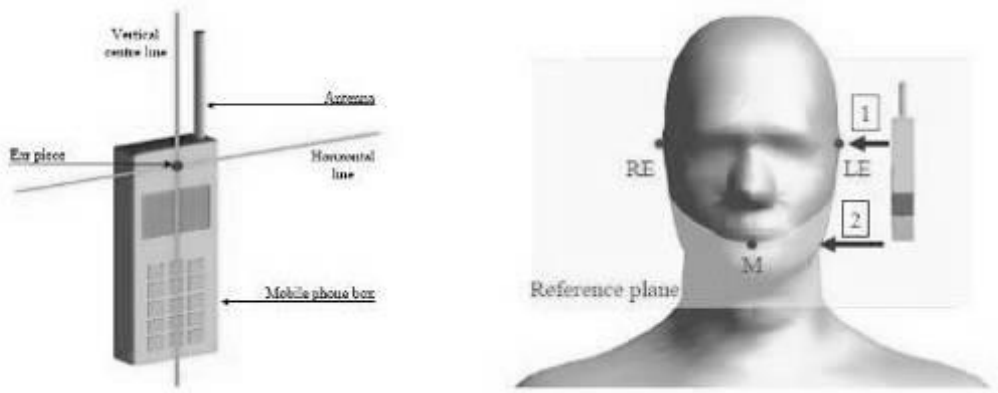
F-8. Handset vertical and horizontal reference lines-“clam-shell case”

5.1.3 Definition of the “cheek” position

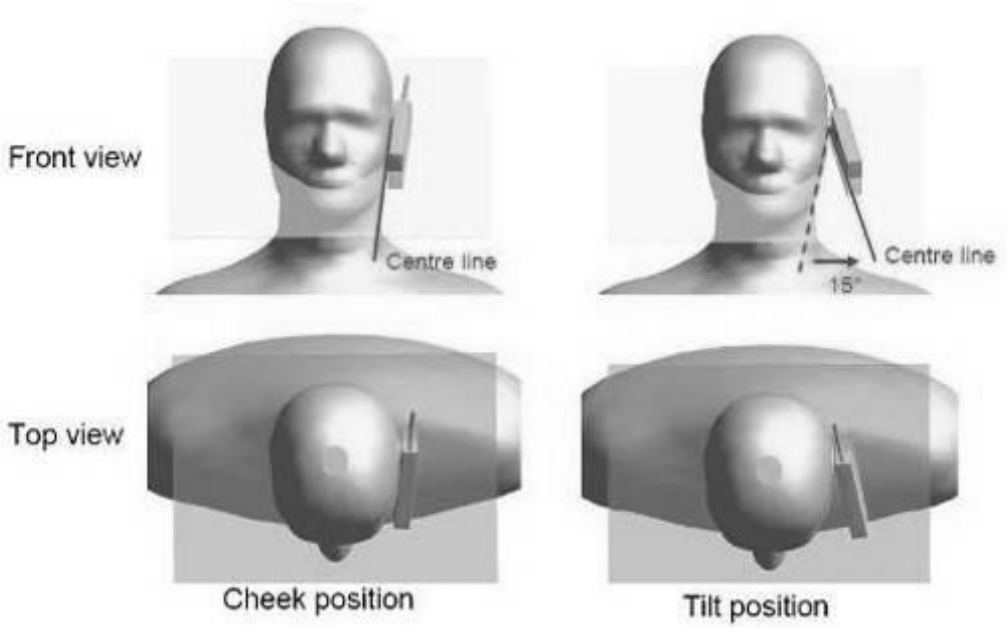
a) Position the device with the vertical centre line of the body of the device and the horizontal line crossing the centre of the ear piece in a plane parallel to the sagittal plane of the phantom ("initial position"). While maintaining the device in this plane, align the vertical centre line with the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

5.1.4 Definition of the “tilted” position

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



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



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

5.2 Body Exposure Condition

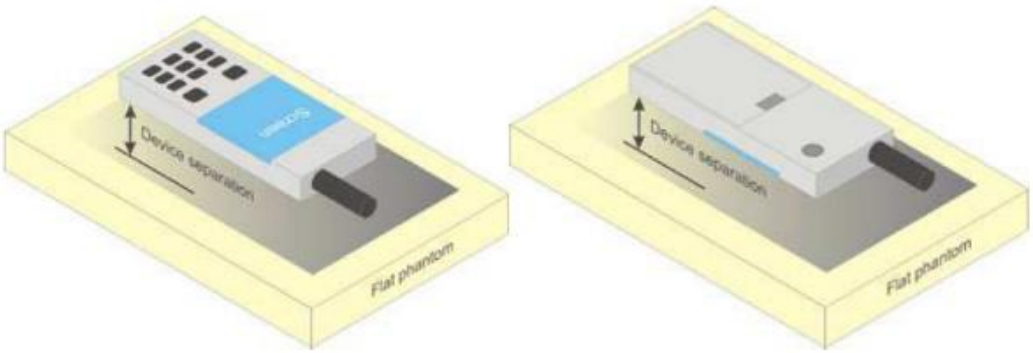
5.2.1 Body-worn accessory exposure conditions

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

Body-worn operating configurations are tested with the belt-clips and holsters attached to the device and positioned against a flat phantom in a normal use configuration. Per FCC KDB Publication 648474 D04, Body-worn accessory exposure is typically related to voice mode operations when handsets are carried in body-worn accessories. The body-worn accessory procedures in FCC KDB Publication 447498 D01 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 648474 D04, 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, no frequency bands need to test with 0mm for the Product Specific 10-g SAR are not required.

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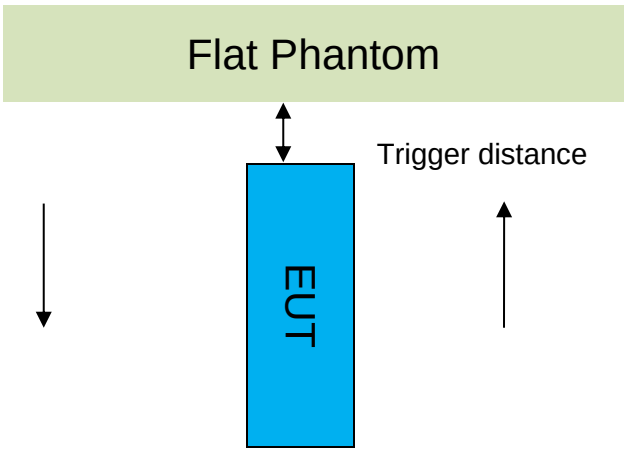
5.4 Proximity Sensor Triggering Test

Proximity sensor triggering distances：

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

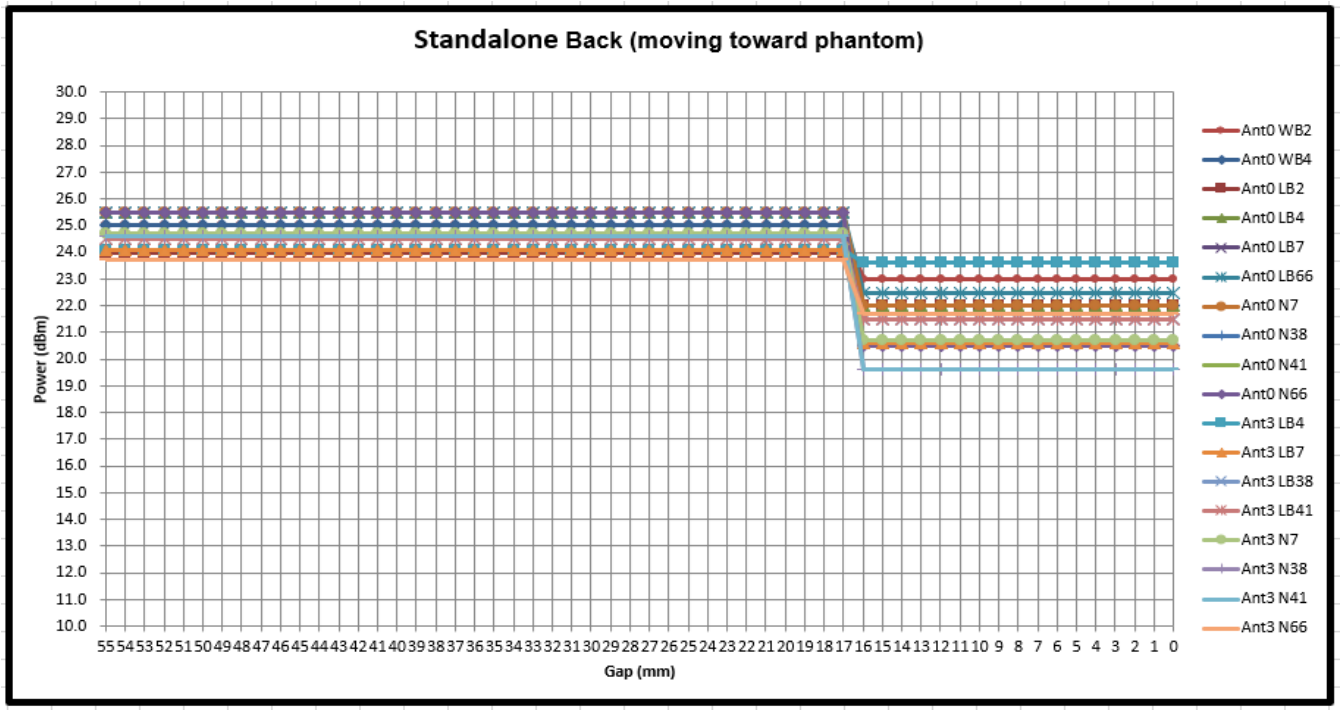


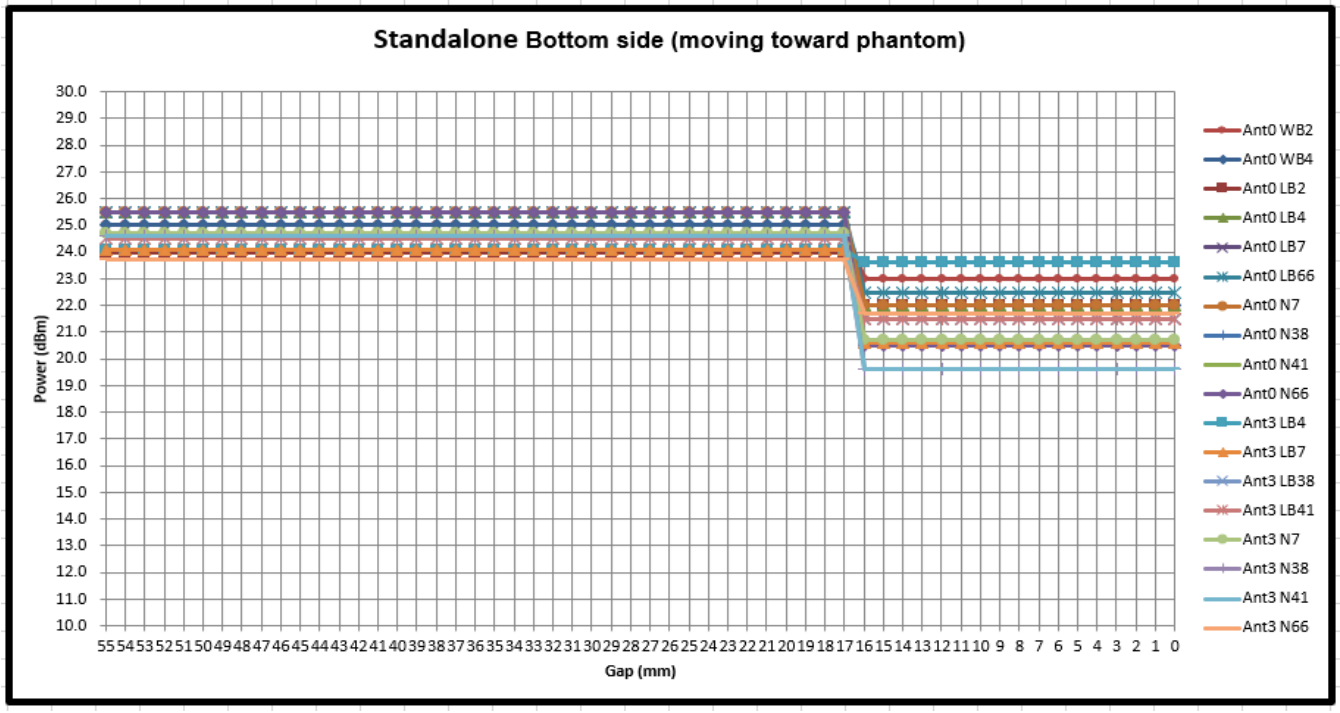
Proximity Sensor Triggering Distance(mm)			
Antenna	Ant0/3	Ant1/4	Ant2/5
Position	Back/Bottom side	Front/Back/Left/Top side	Back/Left
Minimum	16	6	6
Required SAR Test	15	5	5

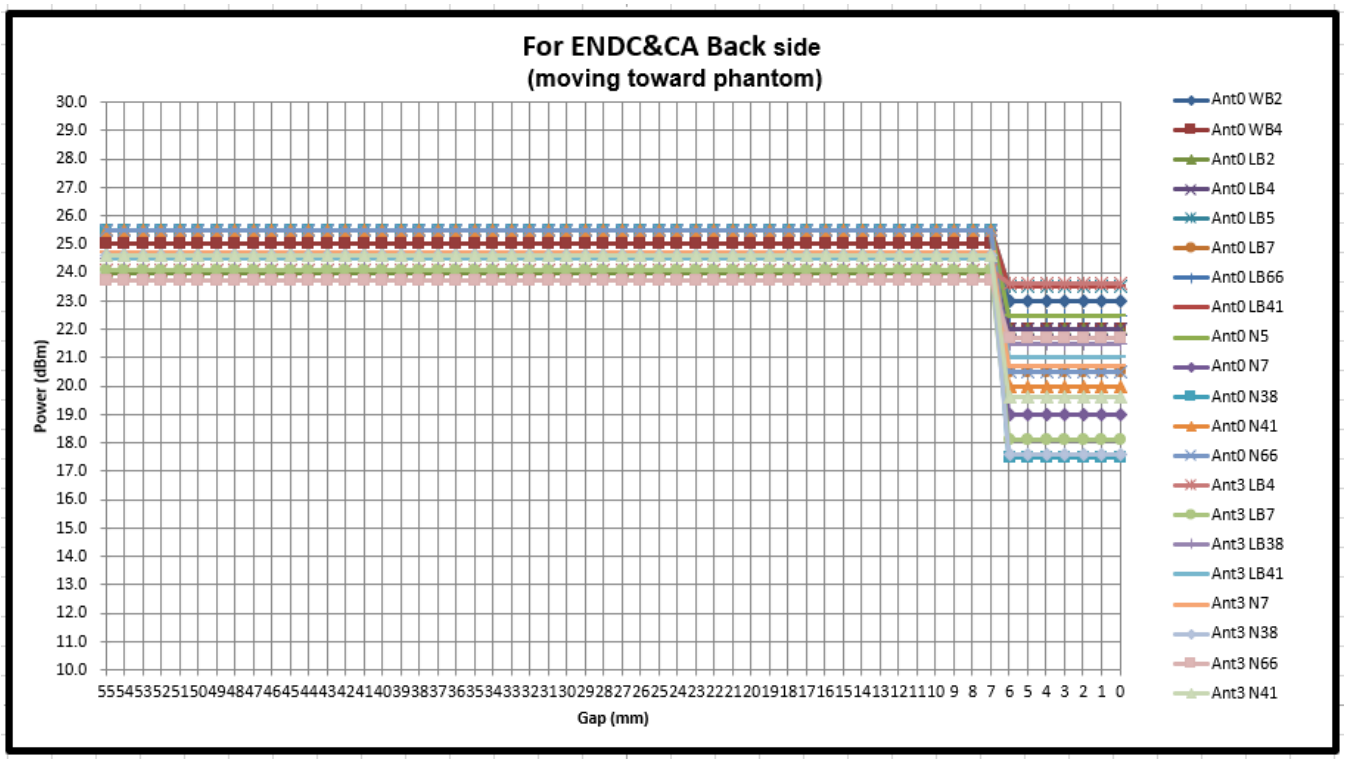
Note:

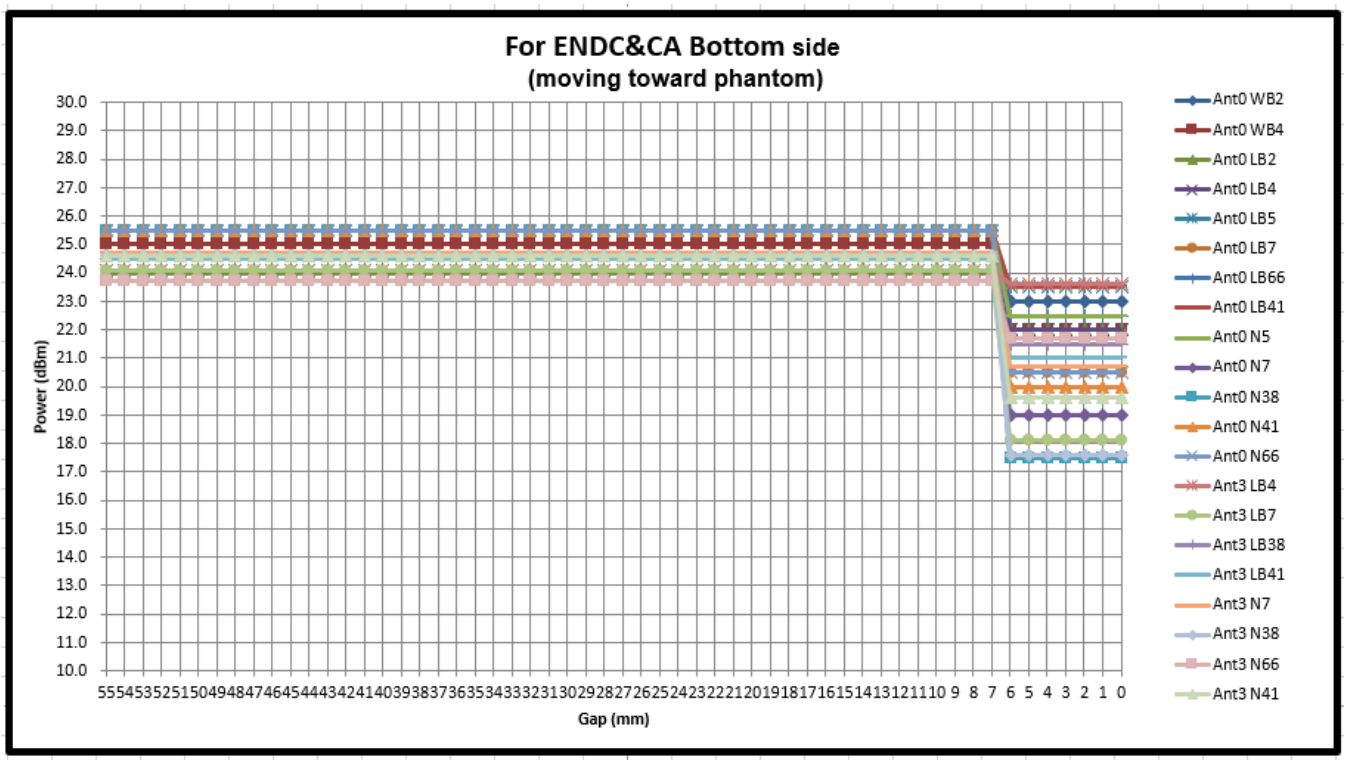
SAR tests with proximity sensor power reduction are only required for the sides of frequency bands in the table above. For the other sides or other frequency bands of the device, SAR is still tested at the maximum power level with sensor off.

- Ant 0/3 DUT Moving Toward(Trigger)the Phantom

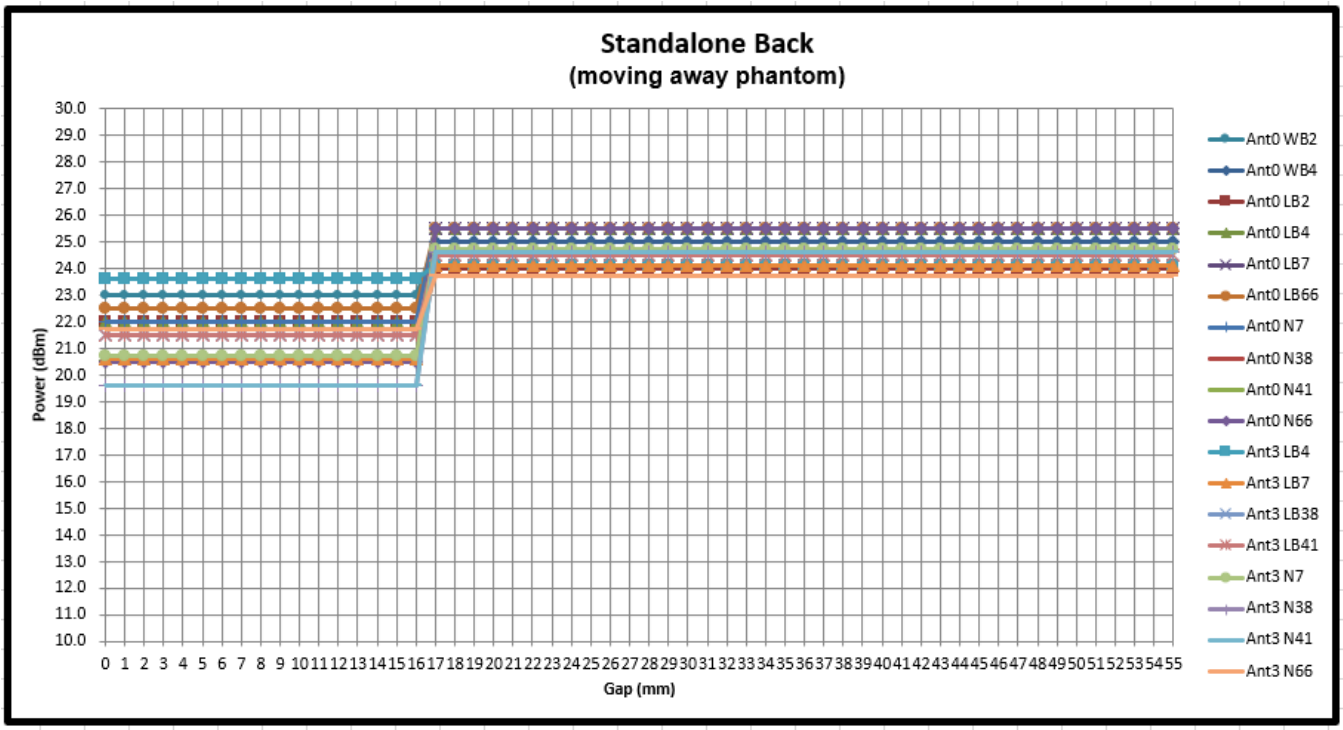


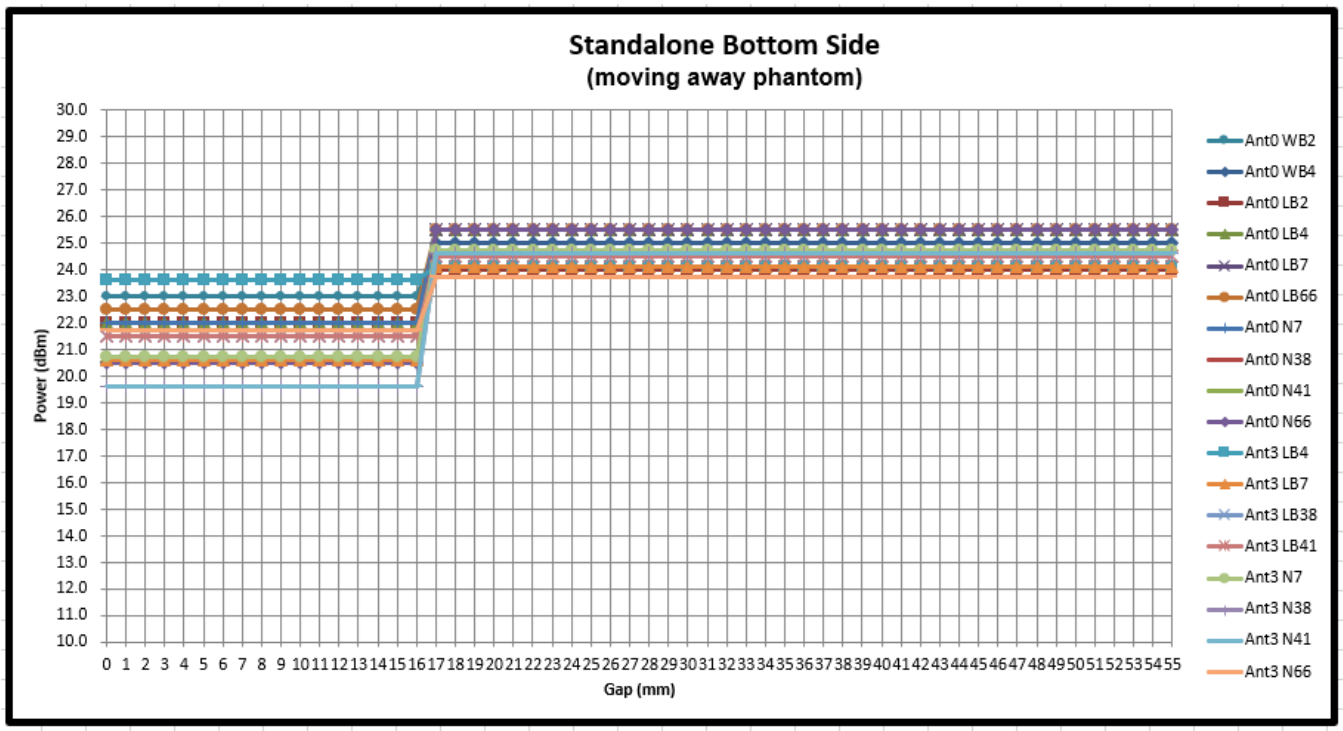


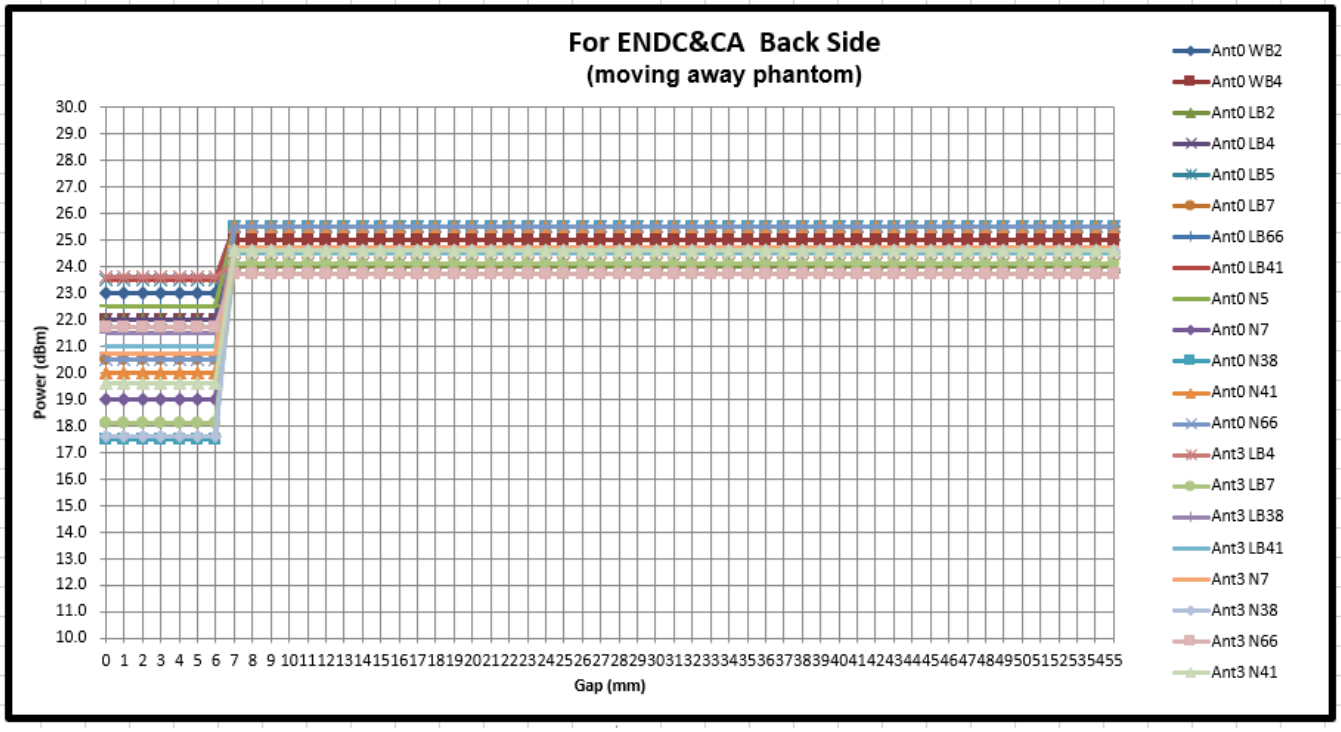


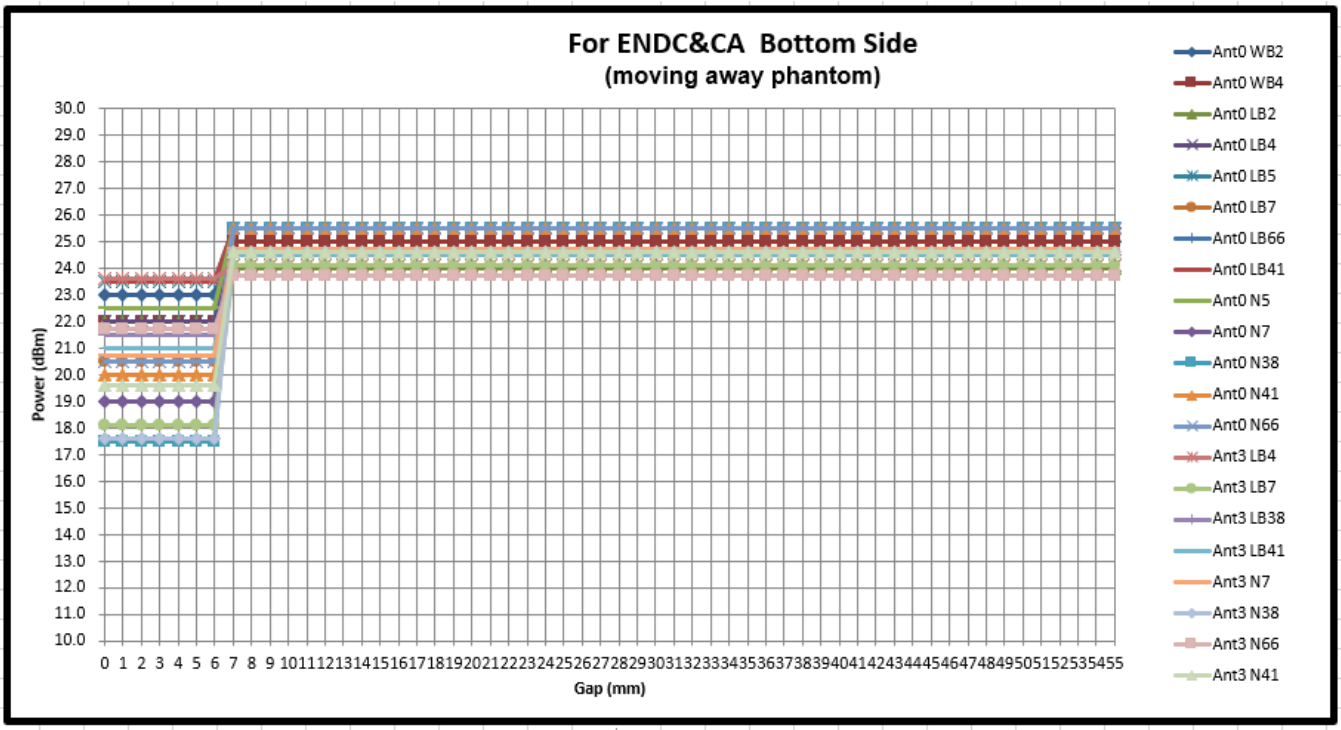


- Ant 0/3 DUT Moving Away(Release) from the Phantom

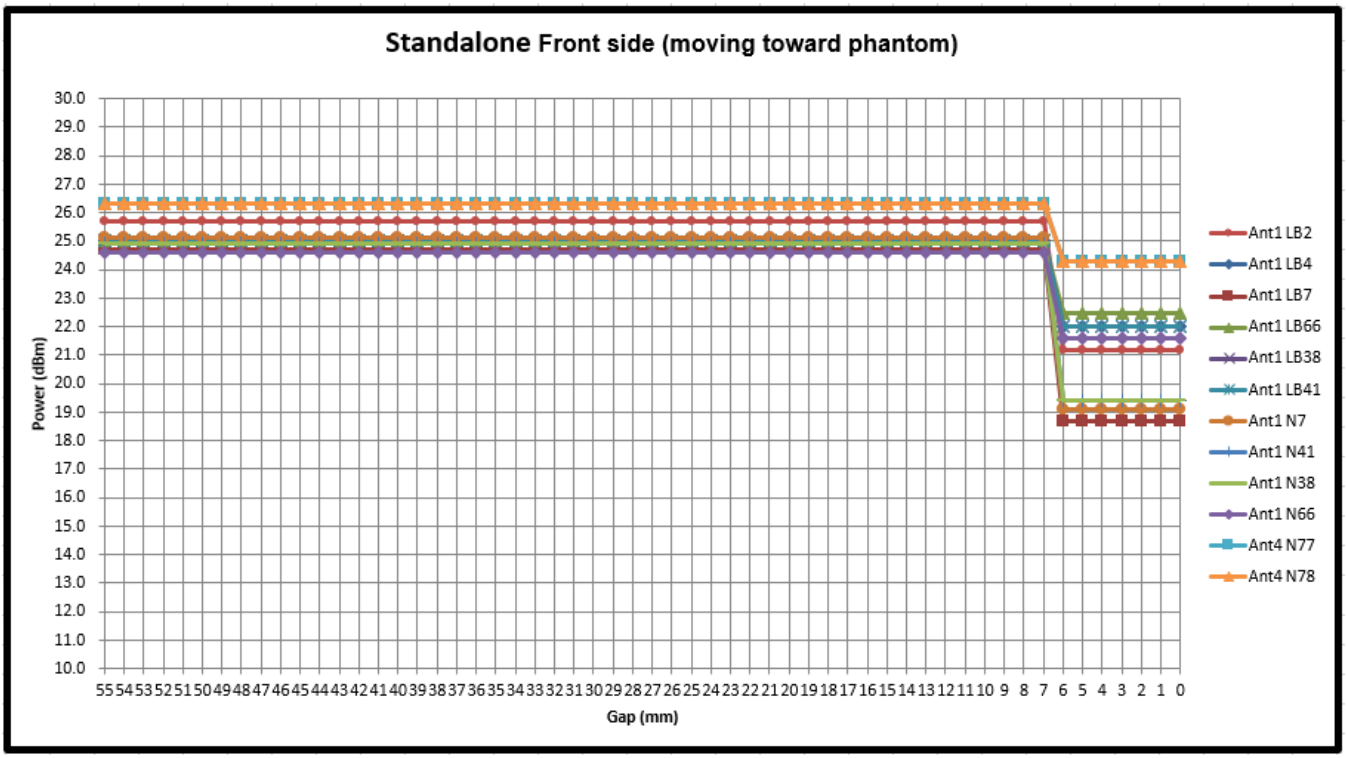


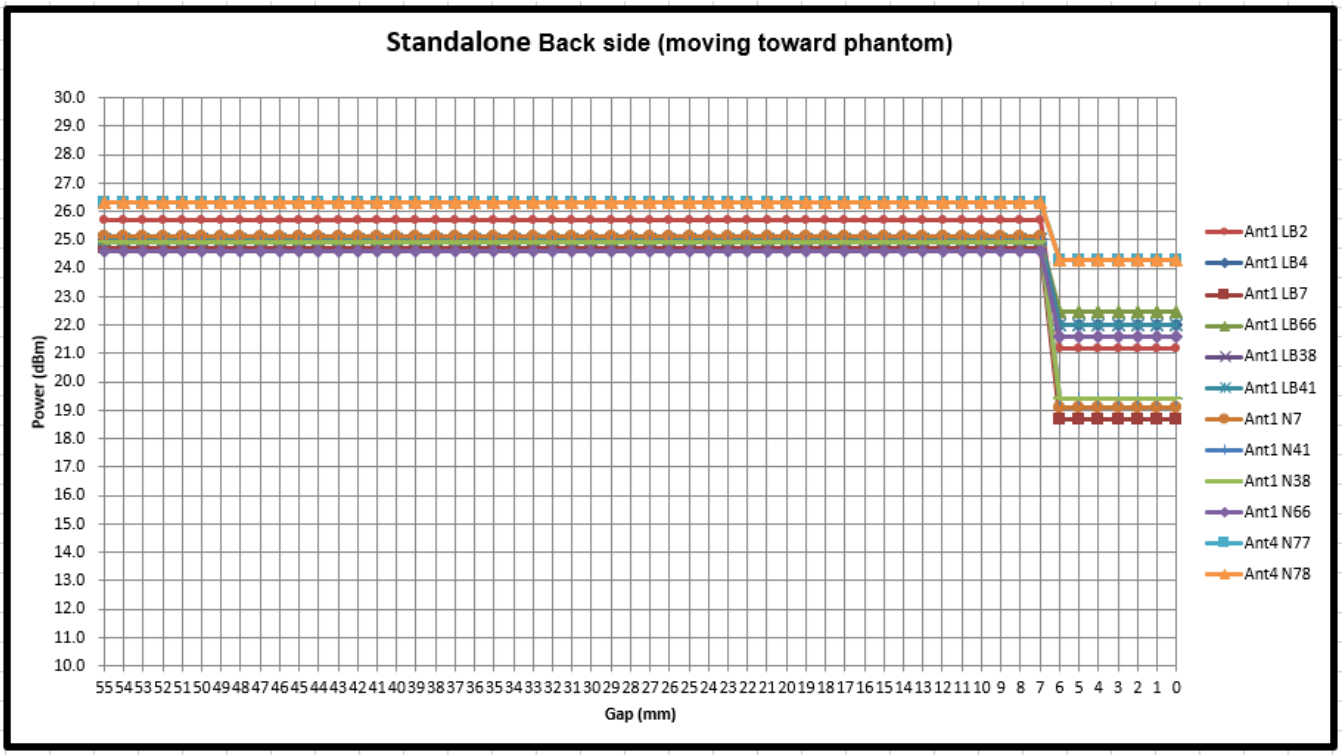


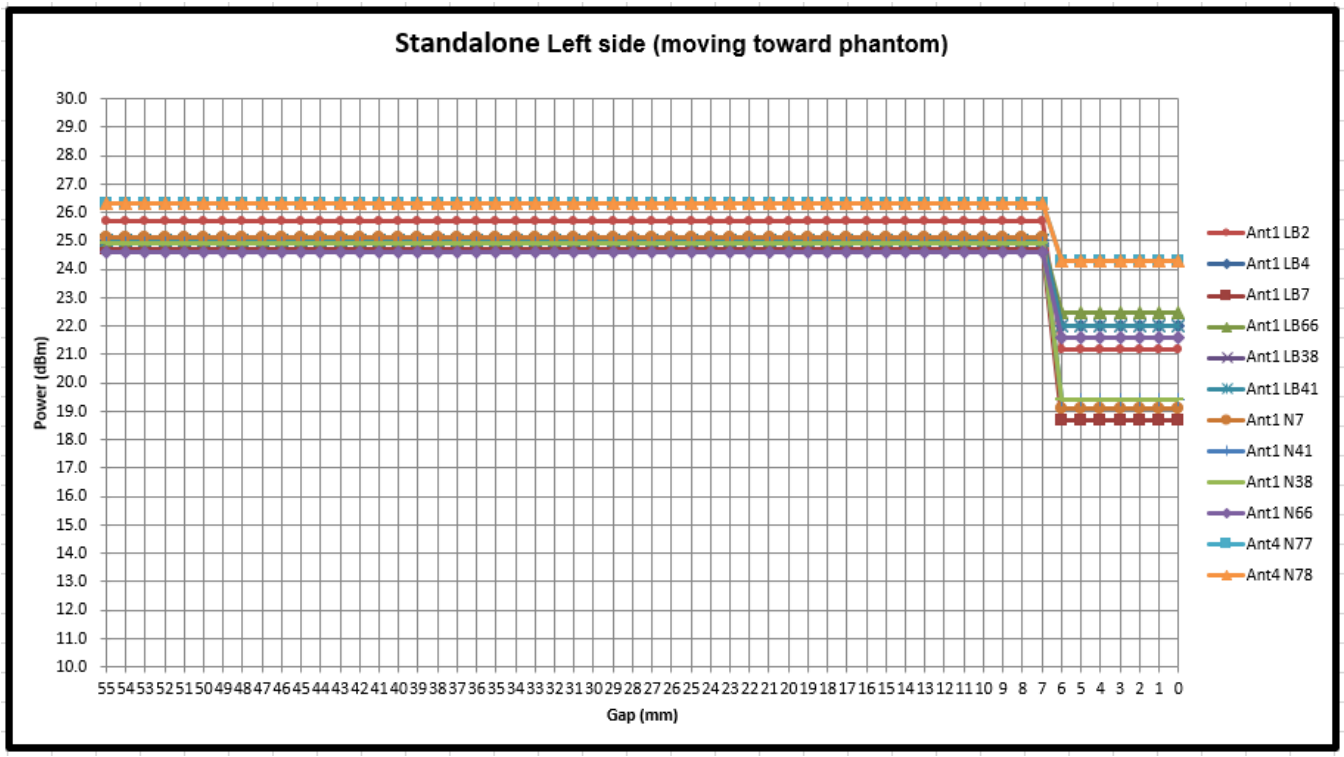


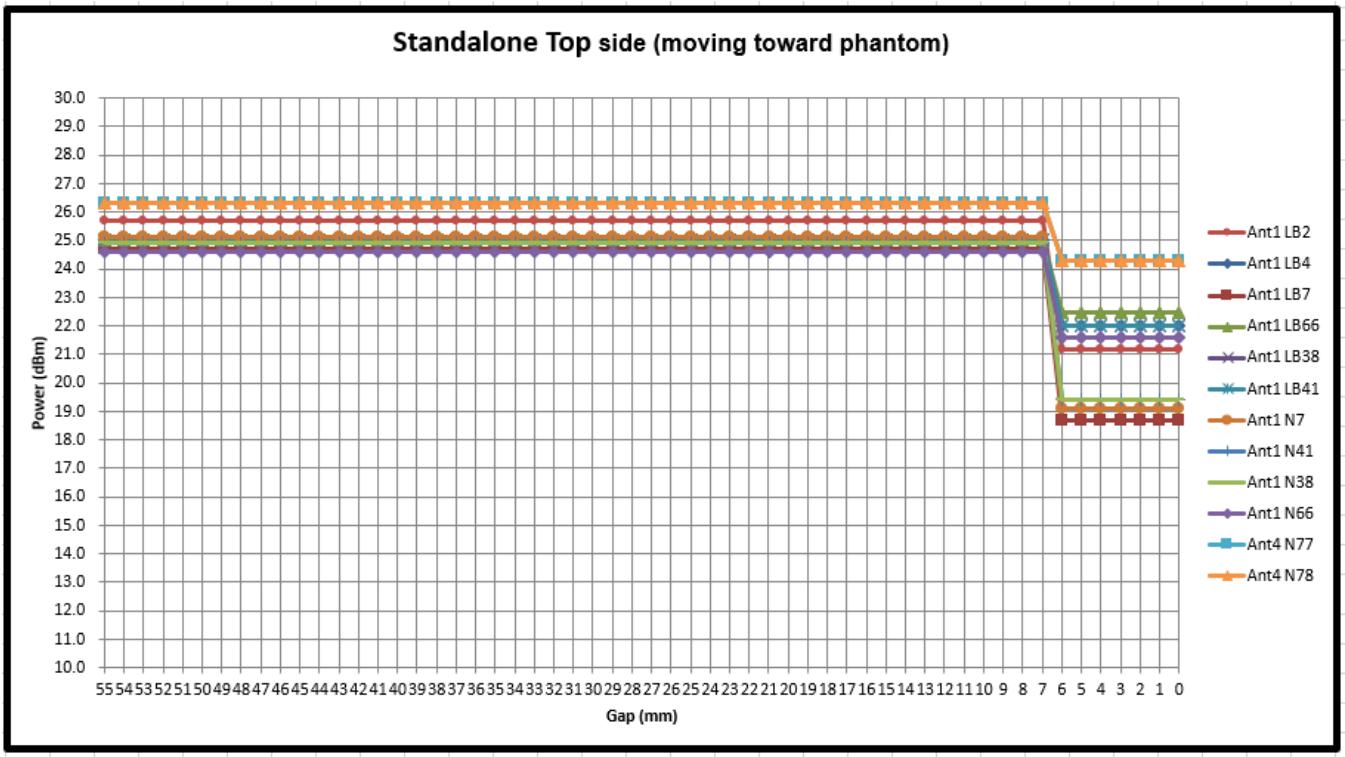


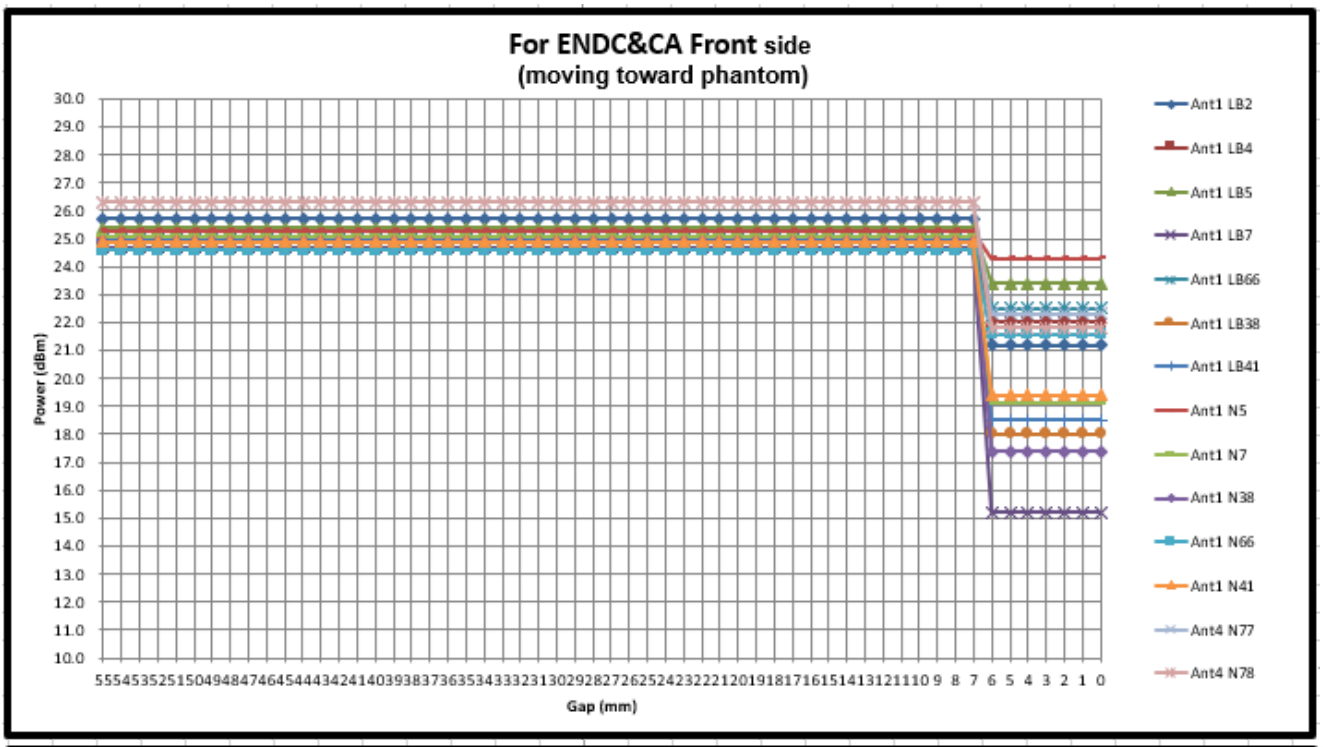
- Ant 1/4 DUT Moving Toward(Trigger)the Phantom

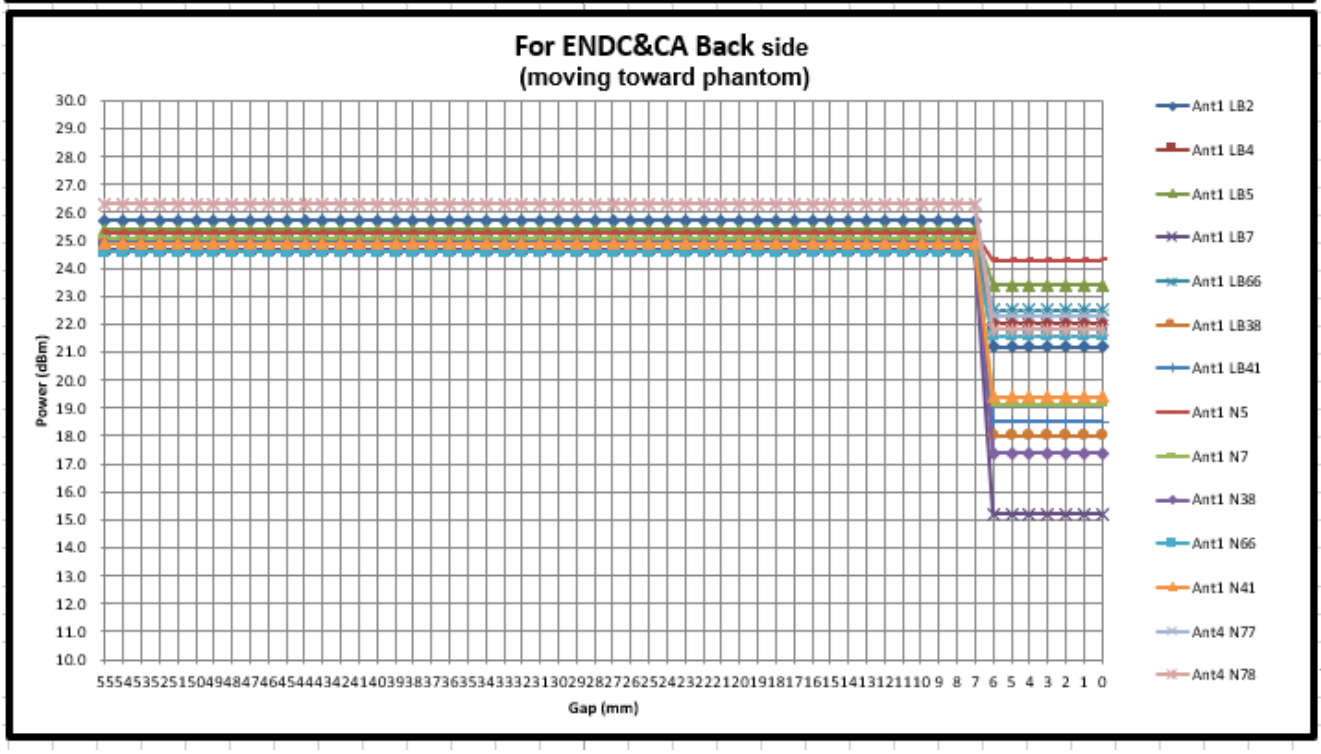


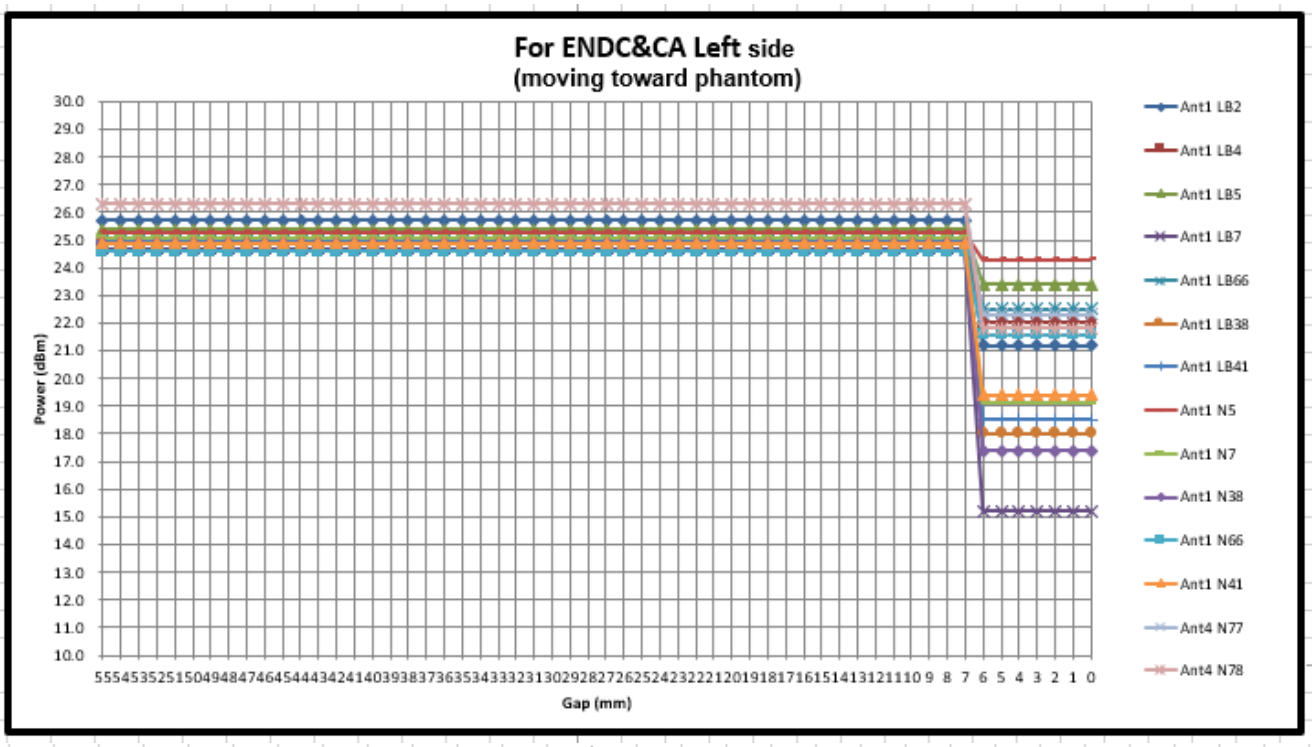


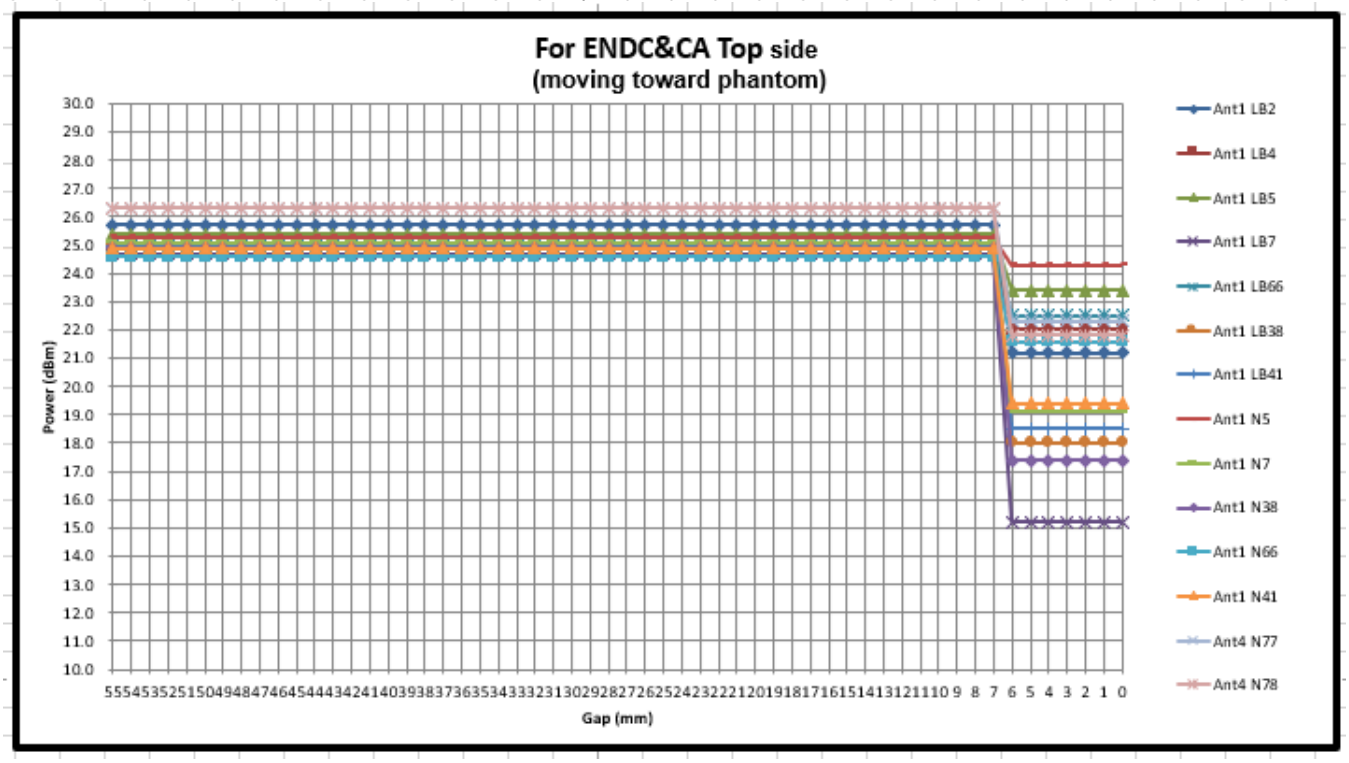












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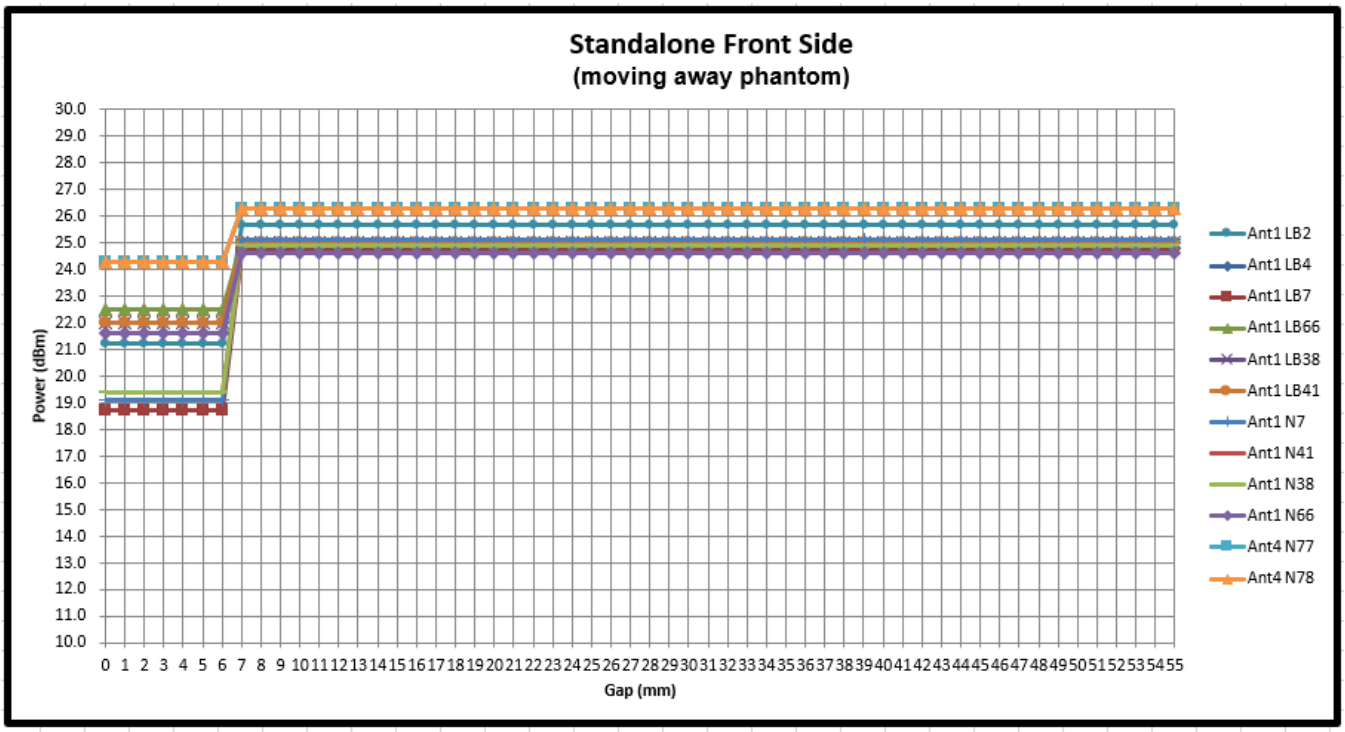
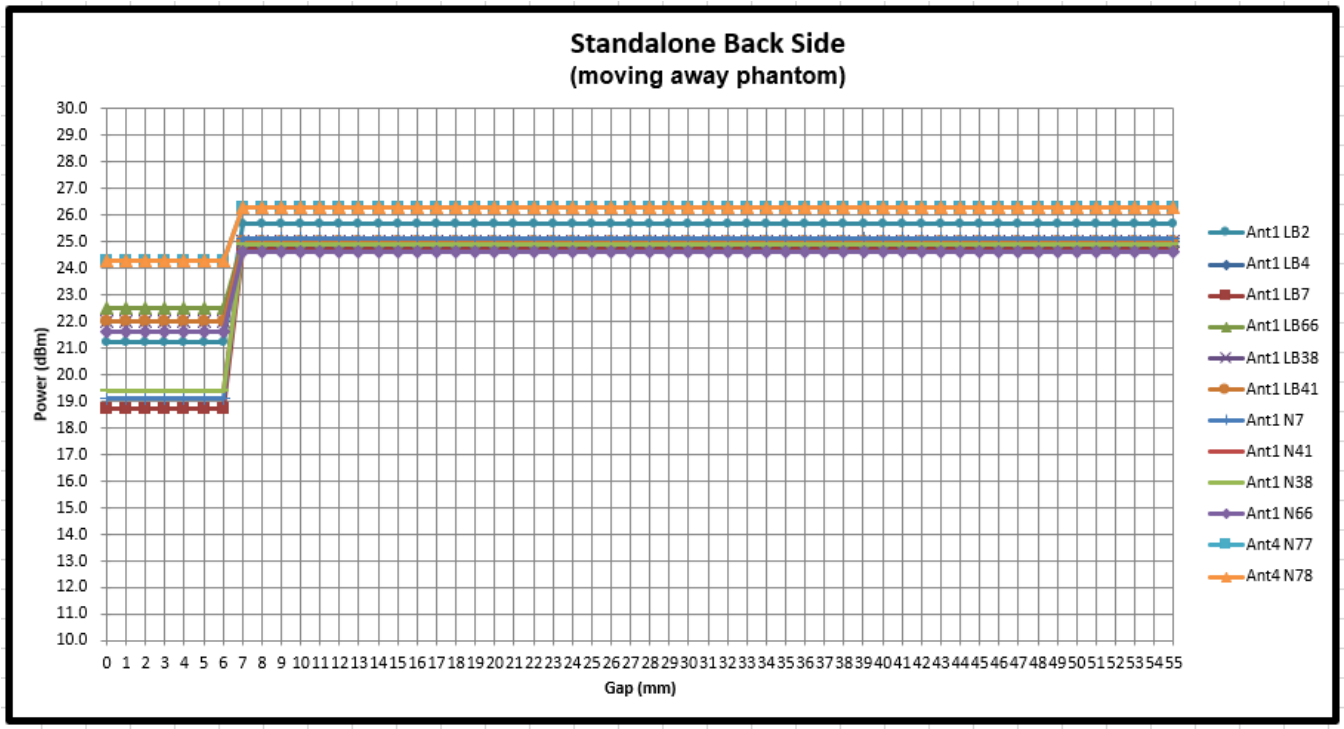
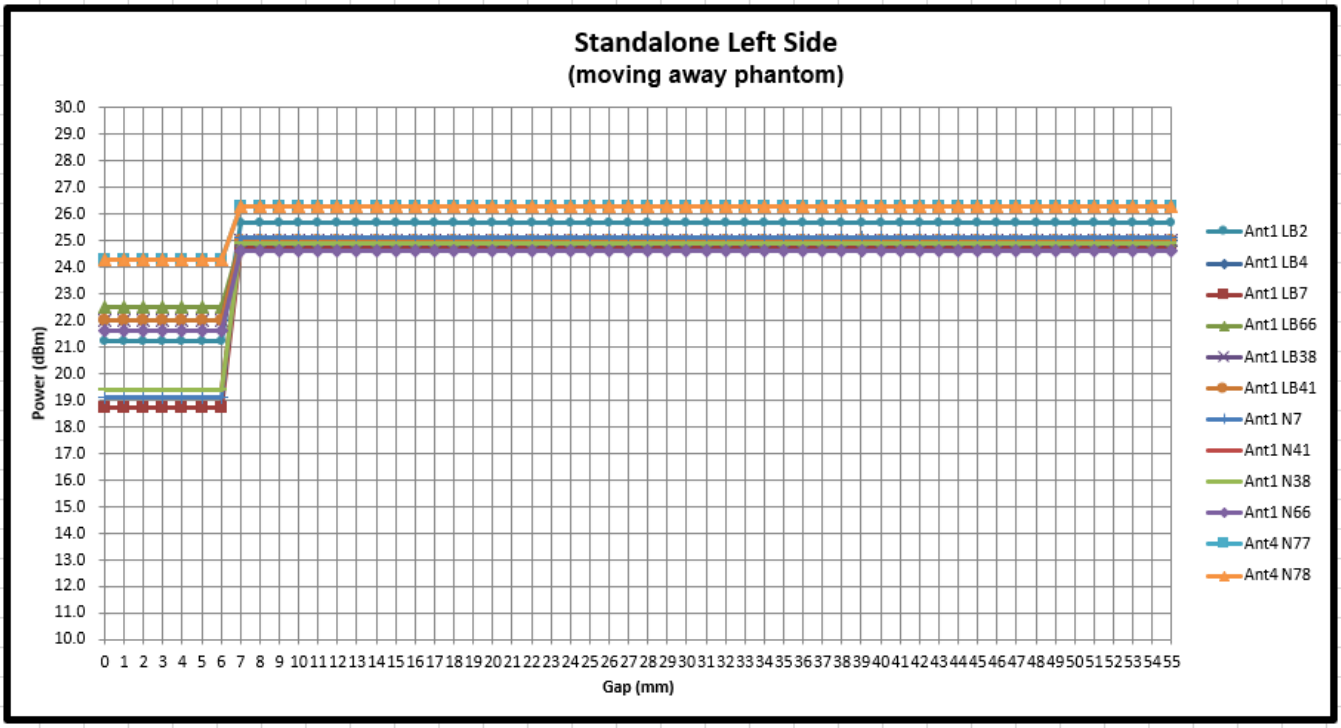
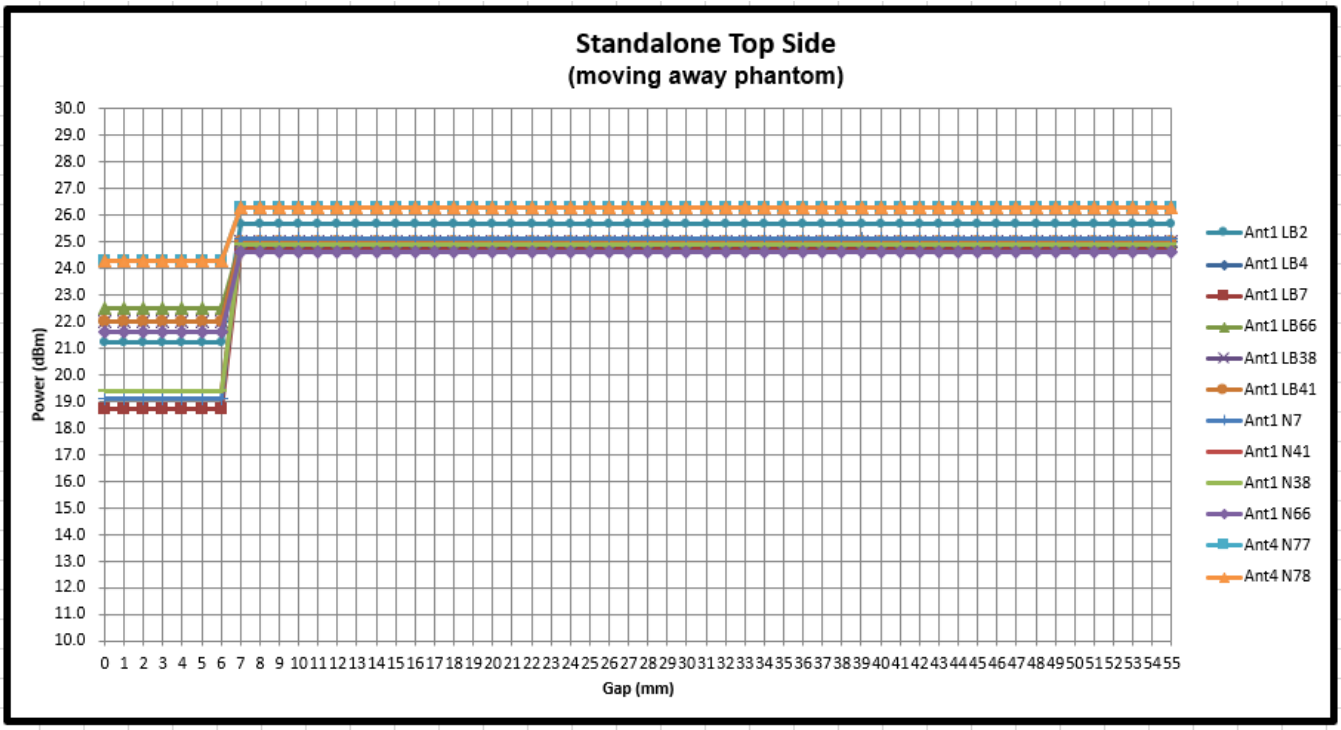
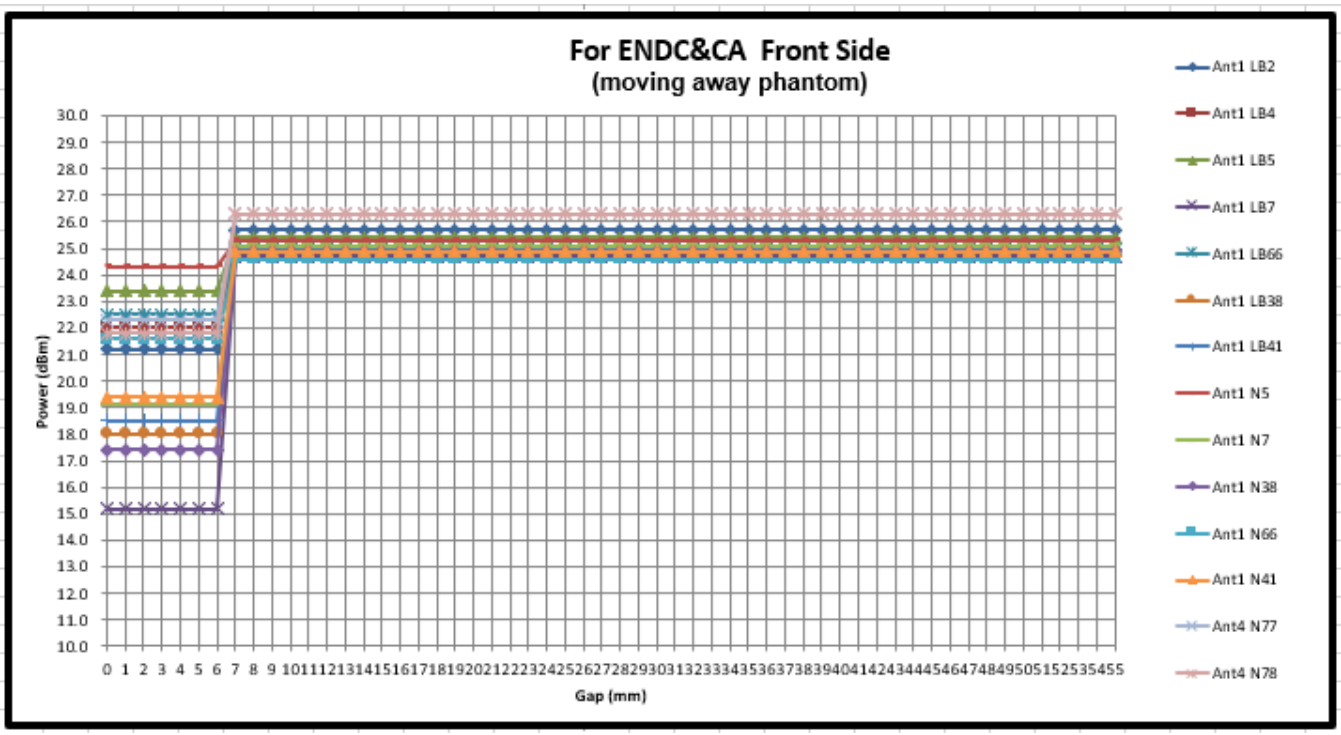
- Ant 1/4 DUT Moving Away(Release) from the Phantom

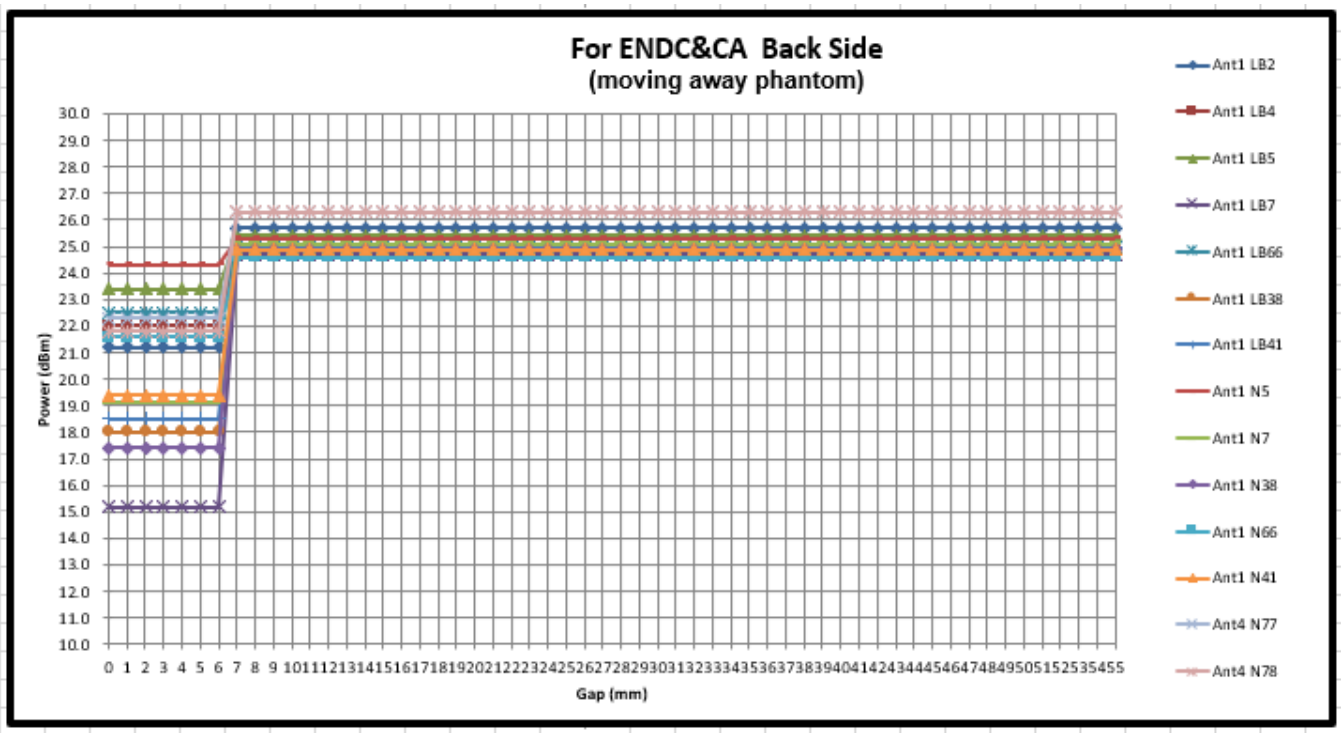


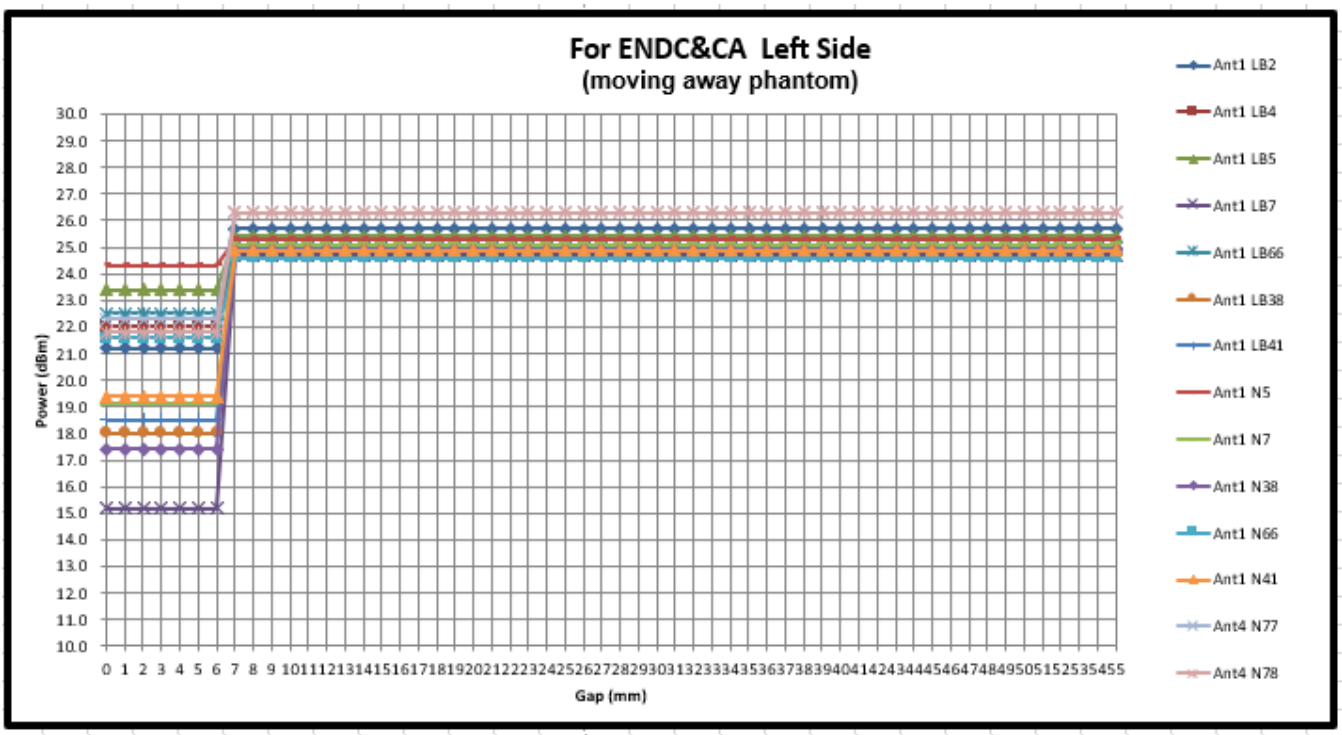


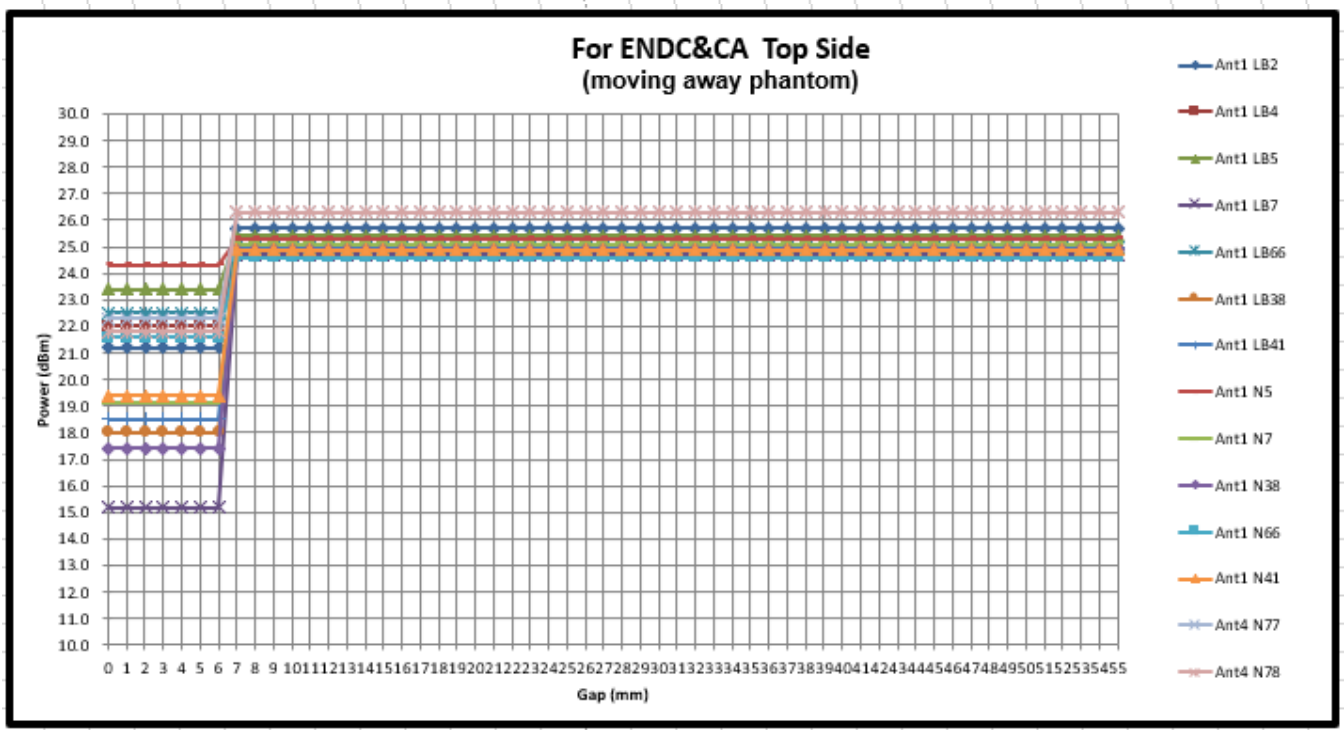




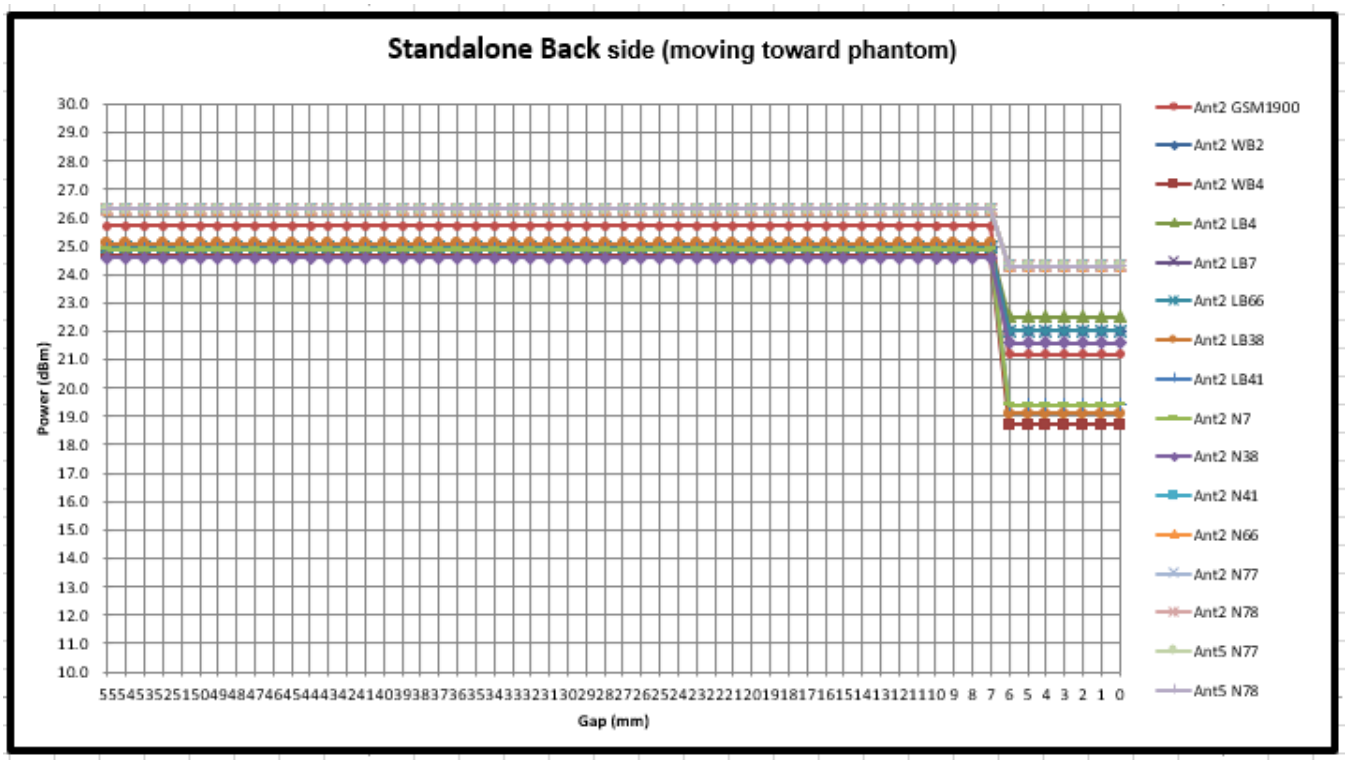


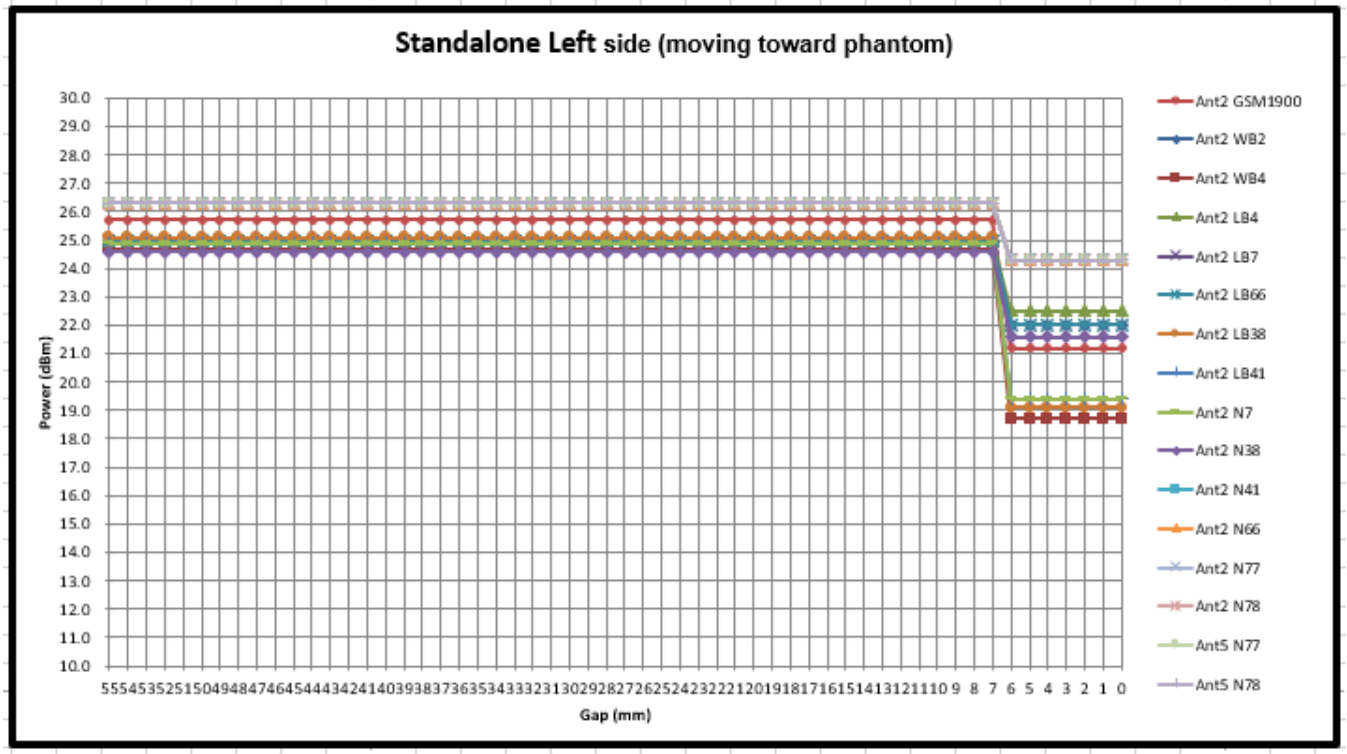


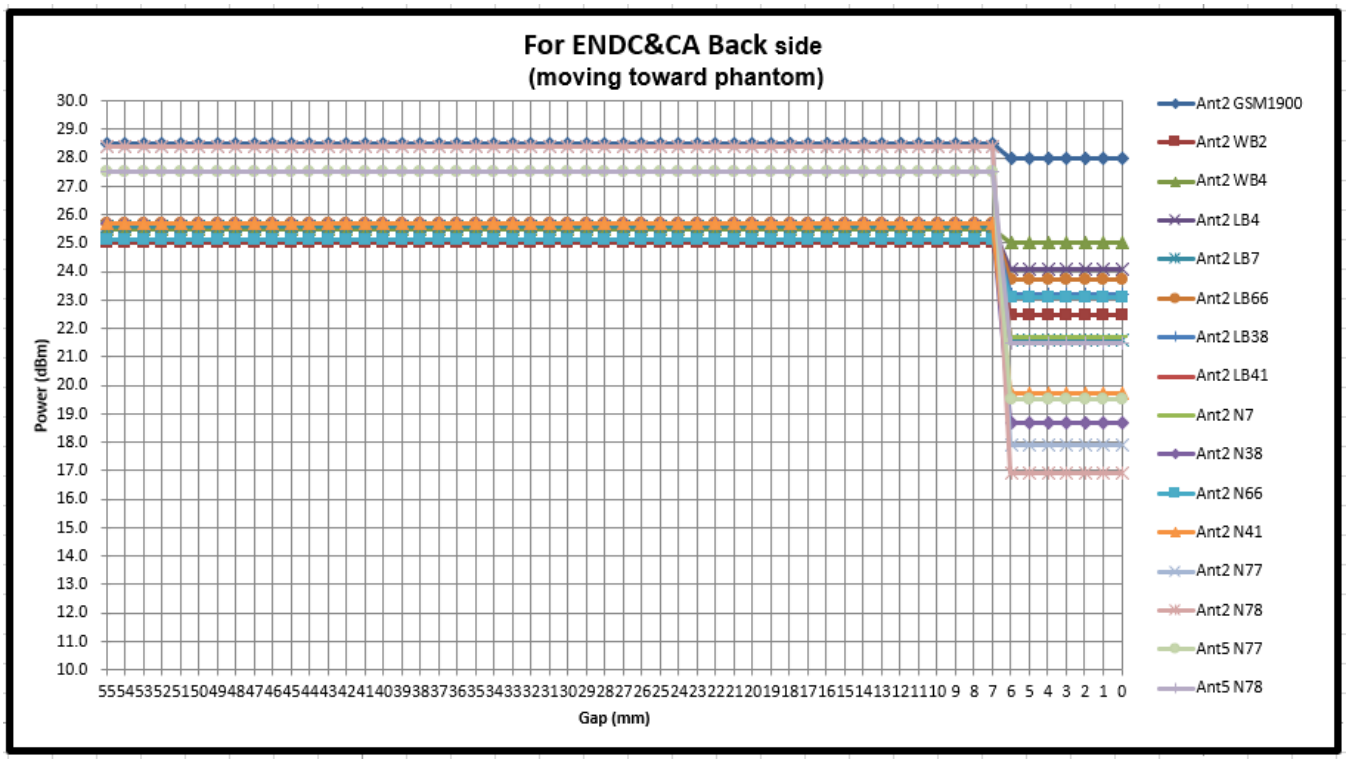


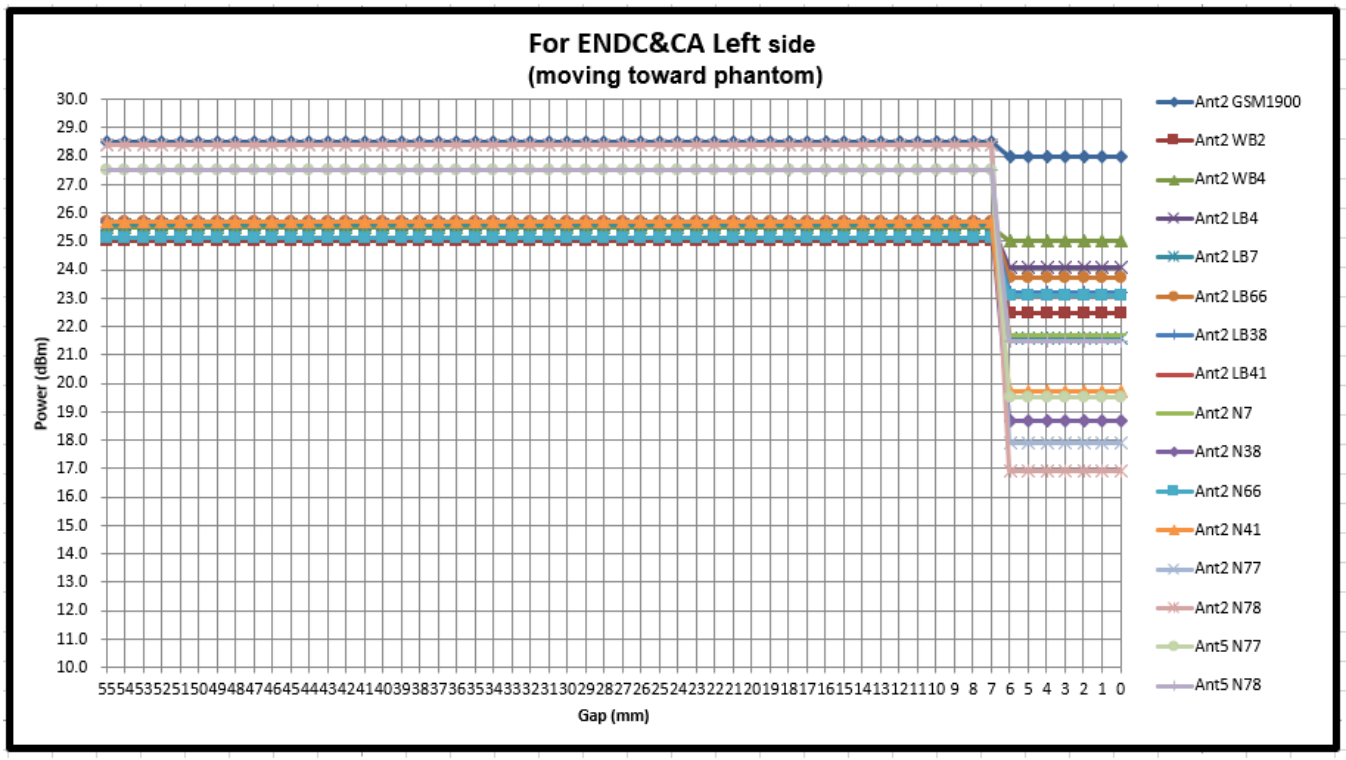


- Ant 2/5 DUT Moving Toward(Trigger)the Phantom

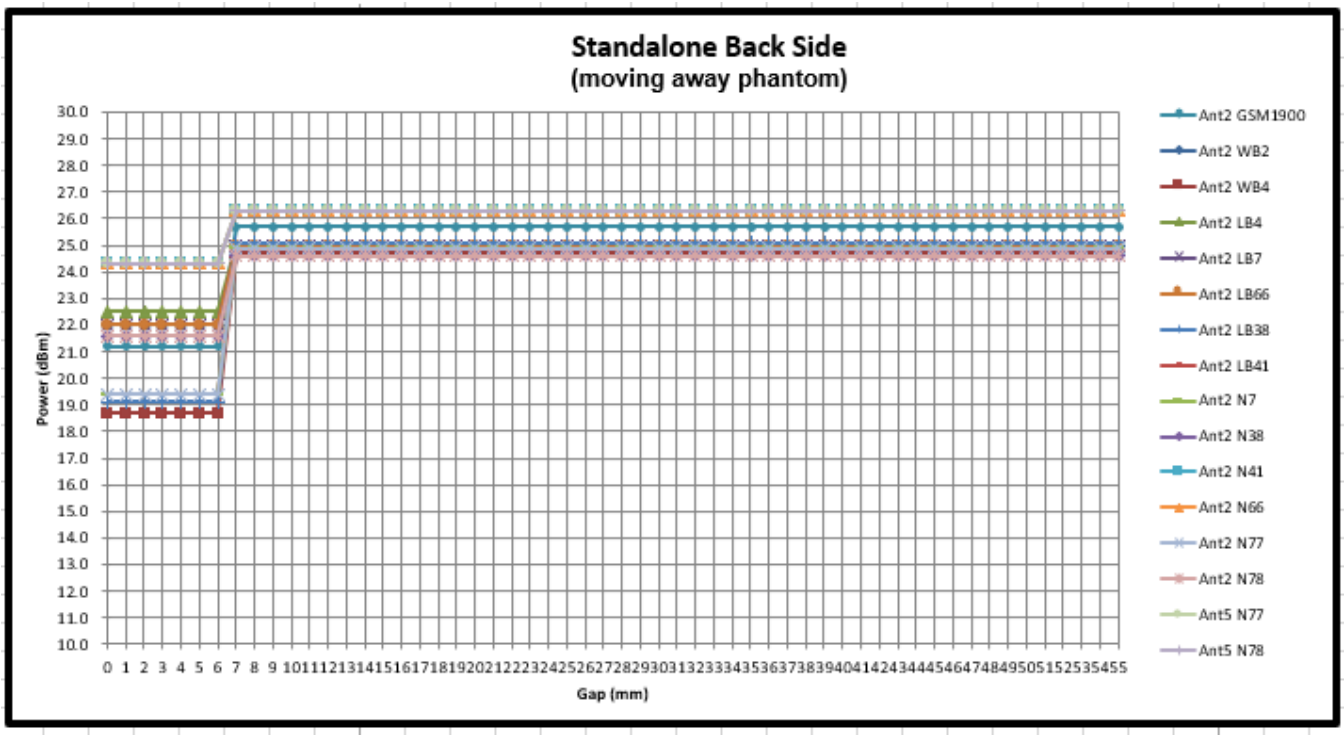


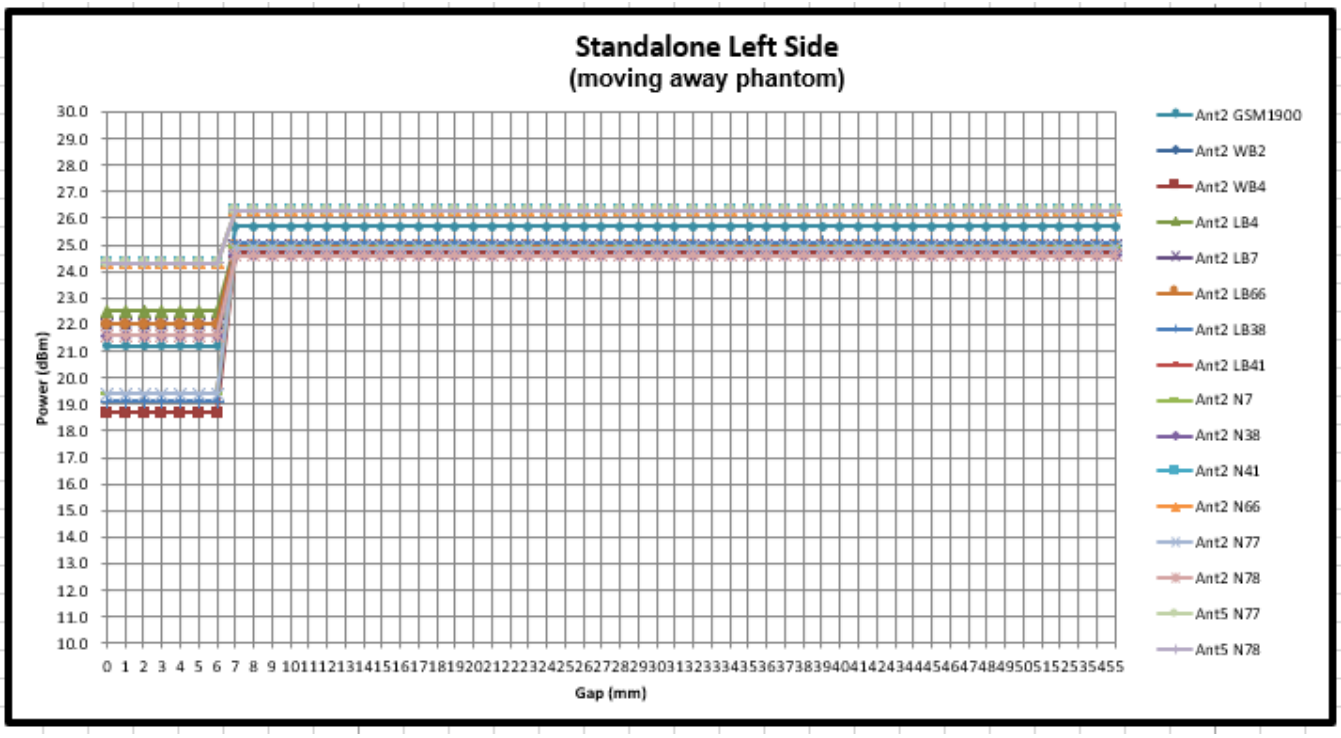


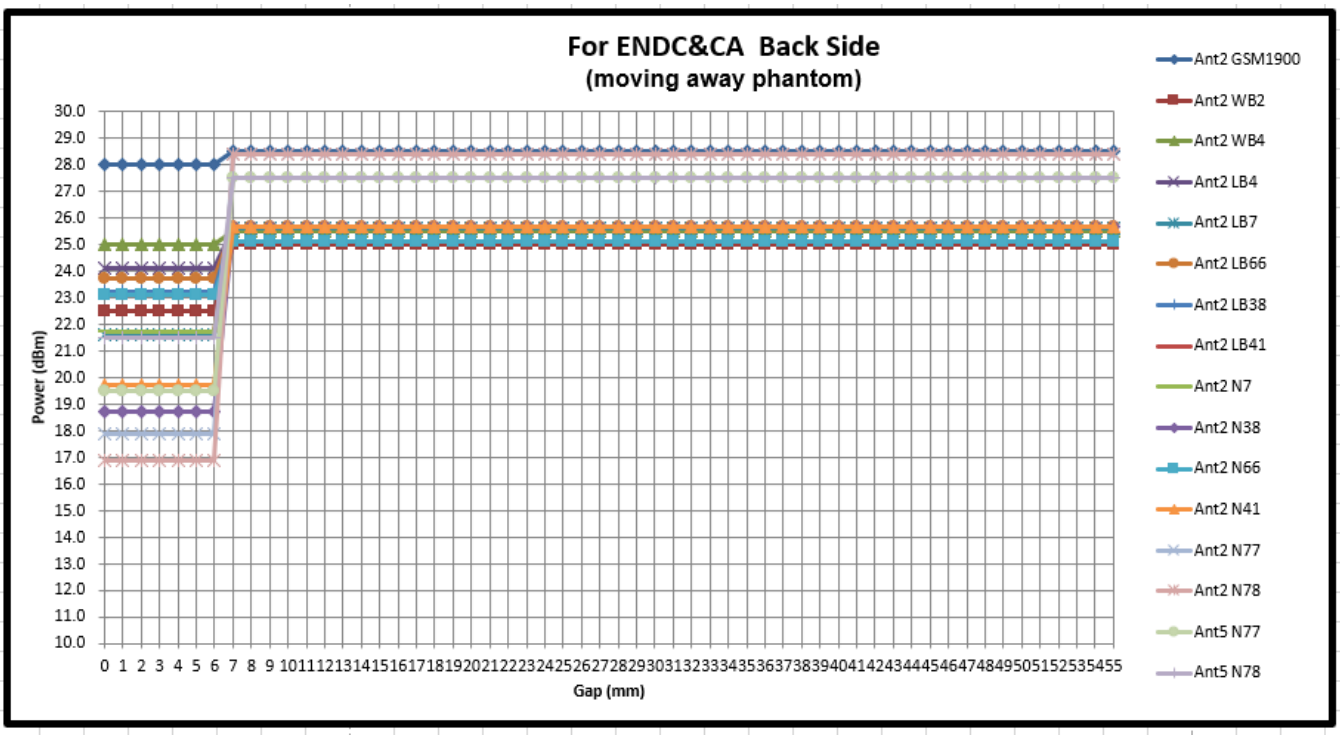


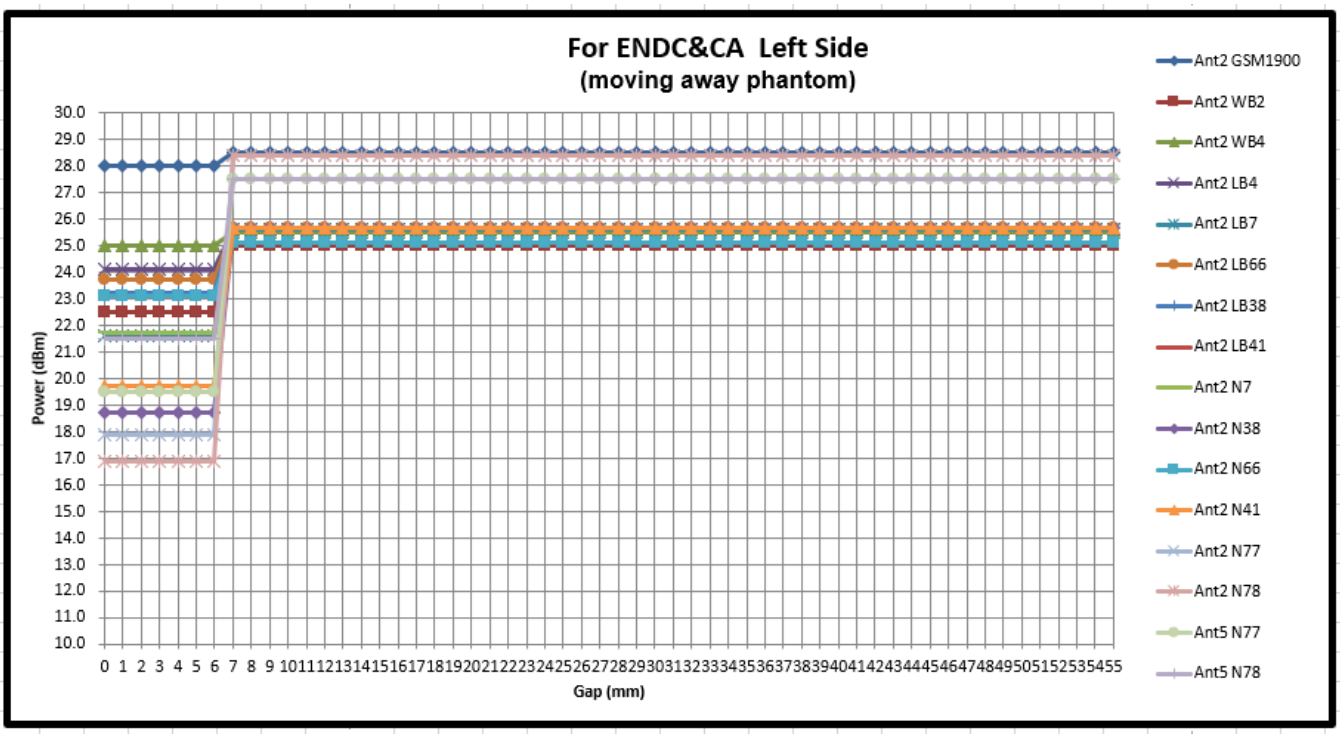


- Ant 2/5 DUT Moving Away(Release) from the Phantom









Proximity sensor coverage

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

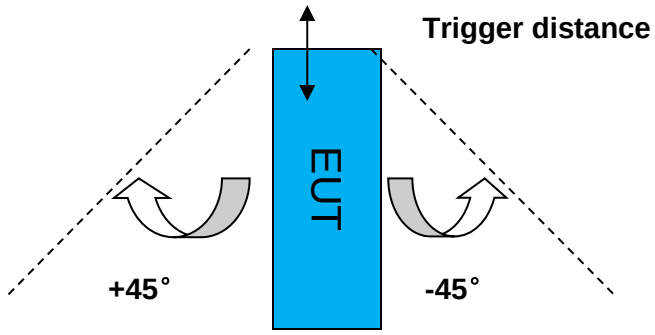
The proximity sensor and main antenna use same metallic electrode, so there is no spatial offset.

Device tilt angle influences to proximity sensor triggering

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

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

Flat Phantom



Summary of Tablet Tilt Angle Influence to Proximity Sensor Triggering for Top Side												
Band (MHz)	Minimum trigger distance Per KDB616217§6.2	Minimum trigger distance at which power reduction was maintained over ±45°	Power Reduction Status									
			-45°	-35°	-25°	-15°	-5°	0°	5°	15°	25°	35°	45°
Ant0/3	Bottom side:16mm	Bottom side:16mm	on	on	on	on	on	on	on	on	on	on	on
Ant1/4	Left/Top side:6mm	Left/Bottom side:6mm	on	on	on	on	on	on	on	on	on	on	on
Ant2/5	Left side:6mm	Left side:6mm	on	on	on	on	on	on	on	on	on	on	on

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6 SAR System Verification Procedure

6.1 Tissue Simulate Liquid

6.1.1 Recipes for Tissue Simulate Liquid

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

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

Table 3： Recipe of Tissue Simulate Liquid

6.1.2 Measurement for Tissue Simulate Liquid

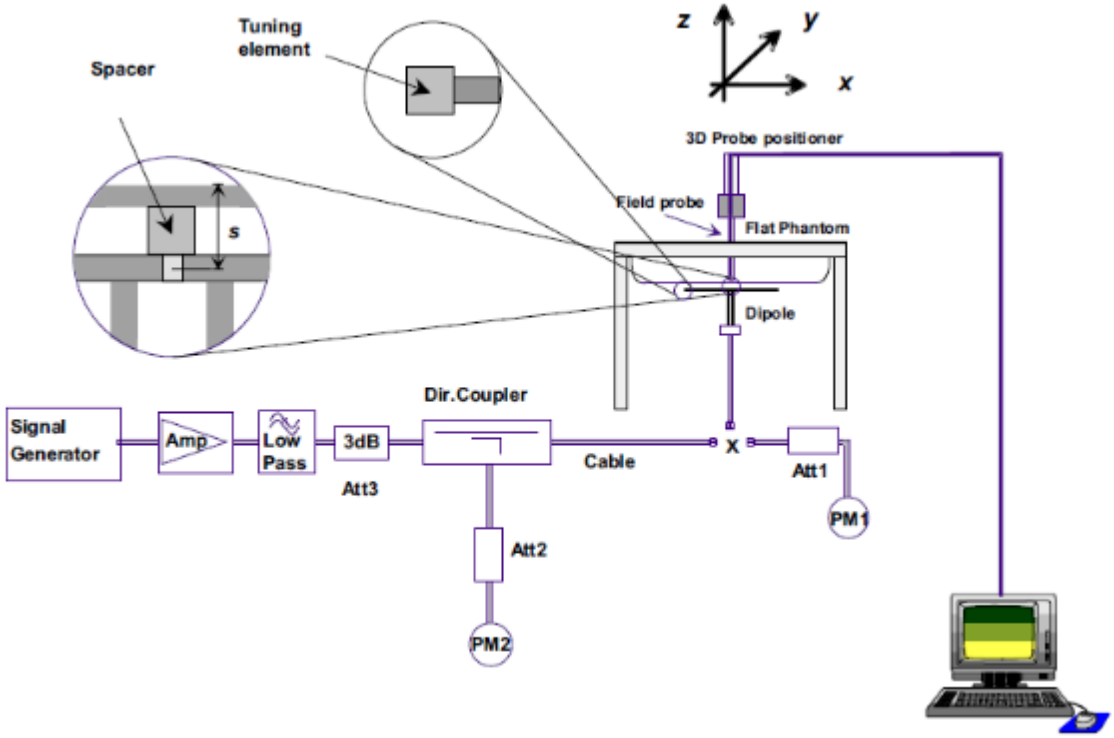
The Conductivity (σ) and Permittivity (ρ) are listed in bellow table. For the SAR measurement given in this report. The temperature variation of the Tissue Simulate Liquids was 22±2°C.

Tissue Type	Measured Frequency (MHz)	Target Tissue (±5%)		Measured Tissue		Deviation (Within ±5%)		Liquid Temp. (℃)	Test Date
		ε_r	σ(S/m)	ε_r	σ(S/m)	ε_r	σ(S/m)		
750 Head	750	41.90	0.89	40.395	0.896	-3.59%	0.67%	21.9	2022/9/22
750 Head	750	41.90	0.89	43.580	0.899	4.01%	1.01%	22.0	2022/9/18
835 Head	835	41.50	0.90	41.623	0.893	0.30%	-0.78%	22.3	2022/9/10
835 Head	835	41.50	0.90	43.190	0.923	4.07%	2.56%	22.4	2022/9/21
835 Head	835	41.50	0.90	43.120	0.878	3.90%	-2.44%	22.1	2022/10/1
835 Head	835	41.50	0.90	40.980	0.863	-1.25%	-4.11%	22.2	2022/9/14
835 Head	835	41.50	0.90	41.980	0.890	1.16%	-1.11%	22.5	2022/9/29
1750 Head	1750	40.10	1.37	39.632	1.346	-1.17%	-1.75%	22.4	2022/9/16
1750 Head	1750	40.10	1.37	40.679	1.336	1.44%	-2.48%	22.1	2022/10/4
1750 Head	1750	40.10	1.37	40.666	1.335	1.41%	-2.55%	22.4	2022/10/2
1750 Head	1750	40.10	1.37	40.270	1.408	0.42%	2.77%	22.3	2022/10/4
1750 Head	1750	40.10	1.37	40.140	1.395	0.10%	1.82%	22.2	2022/10/2
1900 Head	1900	40.00	1.40	40.131	1.405	0.33%	0.36%	22.1	2022/9/13
1900 Head	1900	40.00	1.40	40.105	1.403	0.26%	0.21%	22.2	2022/9/14
1900 Head	1900	40.00	1.40	40.340	1.442	0.85%	3.00%	22.5	2022/9/23
2450 Head	2450	39.20	1.80	38.568	1.808	-1.61%	0.44%	22.3	2022/10/4
2600 Head	2600	39.00	1.96	37.270	2.040	-4.44%	4.08%	22.2	2022/9/19
2600 Head	2600	39.00	1.96	37.291	2.044	-4.38%	4.29%	22.3	2022/9/20
2600 Head	2600	39.00	1.96	37.322	2.051	-4.30%	4.64%	22.0	2022/9/25
2600 Head	2600	39.00	1.96	39.601	2.017	1.54%	2.91%	22.1	2022/9/28
2600 Head	2600	39.00	1.96	39.450	1.993	1.15%	1.68%	22.3	2022/9/30
2600 Head	2600	39.00	1.96	39.240	1.977	0.62%	0.87%	22.4	2022/10/2
2600 Head	2600	39.00	1.96	39.600	1.990	1.54%	1.53%	22.5	2022/10/5
2600 Head	2600	39.00	1.96	39.510	2.008	1.31%	2.45%	22.4	2022/10/7
3500 Head	3500	37.90	2.91	38.025	2.954	0.33%	1.51%	22.3	2022/10/9
3500 Head	3500	37.90	2.91	37.994	2.943	0.25%	1.13%	22.1	2022/10/11
3900 Head	3900	37.50	3.32	36.282	3.265	-3.25%	-1.66%	22.2	2022/10/13
3900 Head	3900	37.50	3.32	36.207	3.292	-3.45%	-0.84%	22.0	2022/10/15
5250 Head	5250	35.90	4.66	35.725	4.674	-0.49%	0.30%	22.4	2022/9/27
5600 Head	5600	35.50	5.07	34.857	5.055	-1.81%	-0.30%	22.3	2022/9/29
5750 Head	5750	35.40	5.22	34.676	5.246	-2.05%	0.50%	22.1	2022/10/1

Table 4： Measurement result of Tissue electric parameters

6.2 SAR System Check

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



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

6.2.1 Justification for Extended SAR Dipole Calibrations

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

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

6.2.2 Summary System Check Result(s)

Validation Kit		Measured SAR 250mW	Measured SAR 250mW	Measured SAR (normalized to 1W)	Measured SAR (normalized to 1W)	Target SAR (normalized to 1W)	Target SAR (normalized to 1W)	Deviation (Within ±10%)		Liquid Temp. (℃)	Test Date
		1g (W/kg)	10g (W/kg)	1g (W/kg)	10g (W/kg)	1-g(W/kg)	10-g(W/kg)	1-g(W/kg)	10-g(W/kg)		
D750V3	Head	1.95	1.28	7.80	5.12	8.48	5.56	-8.02%	-7.91%	21.9	2022/9/22
D750V3	Head	2.23	1.48	8.92	5.92	8.48	5.56	5.19%	6.47%	22.0	2022/9/18
D835V2	Head	2.25	1.47	9.00	5.88	9.52	6.17	-5.46%	-4.70%	22.3	2022/9/10
D835V2	Head	2.54	1.69	10.16	6.76	9.52	6.17	6.72%	9.56%	22.4	2022/9/21
D835V2	Head	2.45	1.60	9.80	6.40	9.52	6.17	2.94%	3.73%	22.1	2022/10/1
D835V2	Head	2.41	1.57	9.64	6.28	9.52	6.17	1.26%	1.78%	22.2	2022/9/14
D835V2	Head	2.46	1.63	9.84	6.52	9.52	6.17	3.36%	5.67%	22.5	2022/9/29
D1750V2	Head	8.23	4.34	32.92	17.36	35.30	18.70	-6.74%	-7.17%	22.4	2022/9/16
D1750V2	Head	8.44	4.48	33.76	17.92	35.30	18.70	-4.36%	-4.17%	22.1	2022/10/4
D1750V2	Head	8.43	4.47	33.72	17.88	35.30	18.70	-4.48%	-4.39%	22.4	2022/10/2
D1750V2	Head	9.14	4.74	36.56	18.96	35.30	18.70	3.57%	1.39%	22.3	2022/10/4
D1750V2	Head	9.36	4.99	37.44	19.96	35.30	18.70	6.06%	6.74%	22.2	2022/10/2
D1900V2	Head	9.63	4.92	38.52	19.68	39.70	20.30	-2.97%	-3.05%	22.1	2022/9/13
D1900V2	Head	9.62	4.92	38.48	19.68	39.70	20.30	-3.07%	-3.05%	22.2	2022/9/14
D1900V2	Head	10.70	5.53	42.80	22.12	39.70	20.30	7.81%	8.97%	22.5	2022/9/23
D2450V2	Head	13.50	6.33	54.00	25.32	52.20	24.50	3.45%	3.35%	22.3	2022/10/4
D2600V2	Head	13.20	5.91	52.80	23.64	57.10	25.40	-7.53%	-6.93%	22.2	2022/9/19
D2600V2	Head	12.90	5.88	51.60	23.52	57.10	25.40	-9.63%	-7.40%	22.3	2022/9/20
D2600V2	Head	13.20	5.94	52.80	23.76	57.10	25.40	-7.53%	-6.46%	22.0	2022/9/25
D2600V2	Head	13.00	5.84	52.00	23.36	57.10	25.40	-8.93%	-8.03%	22.1	2022/9/28
D2600V2	Head	13.70	6.32	54.80	25.28	57.10	25.40	-4.03%	-0.47%	22.3	2022/9/30
D2600V2	Head	13.70	6.11	54.80	24.44	57.10	25.40	-4.03%	-3.78%	22.4	2022/10/2
D2600V2	Head	13.70	6.13	54.80	24.52	57.10	25.40	-4.03%	-3.46%	22.5	2022/10/5
D2600V2	Head	14.10	6.34	56.40	25.36	57.10	25.40	-1.23%	-0.16%	22.4	2022/10/7

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)		
D3500V2	Head(3.5GHz)	6.20	2.36	62.00	23.60	66.60	24.90	-6.91%	-5.22%	22.3	2022/10/9
	Head(3.5GHz)	6.46	2.44	64.60	24.40	66.60	24.90	-3.00%	-2.01%	22.1	2022/10/11
D3900V2	Head(3.9GHz)	6.98	2.50	69.80	25.00	69.70	24.00	0.14%	4.17%	22.2	2022/10/13
	Head(3.9GHz)	7.13	2.55	71.30	25.50	69.70	24.00	2.30%	6.25%	22.0	2022/10/15
D5GHzV2	Head(5.25GHz)	7.43	2.15	74.30	21.50	78.00	21.80	-4.74%	-1.38%	22.4	2022/9/27
	Head(5.6GHz)	8.29	2.38	82.90	23.80	79.90	22.50	3.75%	5.78%	22.3	2022/9/29
	Head(5.75GHz)	8.10	2.32	81.00	23.20	76.40	21.20	6.02%	9.43%	22.1	2022/10/1

Table 5： SAR System Check Result

6.2.3 Detailed System Check Results

Please see the Appendix A

7 Test Configuration

7.1 3G SAR Test Reduction Procedure

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

7.2 Operation Configurations

7.2.1 GSM Test Configuration

SAR tests for GSM 850 and GSM 1900, a communication link is set up with a base station by air link. Using CMW500 the power lever is set to “5”and “0” in SAR of GSM 850 and GSM 1900. The tests in the band of GSM 850 and GSM 1900 are performed in the mode of GPRS/EGPRS function. Since the GPRS class is 33 for this EUT, it has at most 4 timeslots in uplink and at most 4 timeslots in downlink, the maximum total timeslot is 5. The EGPRS class is 33 for this EUT, it has at most 4 timeslots in uplink, and at most 4 timeslots in downlink, the maximum total timeslot is 5.

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

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

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

7.2.2 WCDMA Test Configuration

1）. Output Power Verification

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

2）. Head SAR

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

3）. Body SAR

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

4）. HSDPA / HSUPA / DC-HSDPA

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

a) HSDPA

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

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

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

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

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

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

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

Table 7： HSDPA UE category

b) HSUPA

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

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

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

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

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

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

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

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

Table 8： Subtests for UMTS Release 6 HSUPA

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

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

Table 9： HSUPA UE category

c) DC-HSDPA

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

Table E.5.0: Levels for HSDPA connection setup

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

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

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

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

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

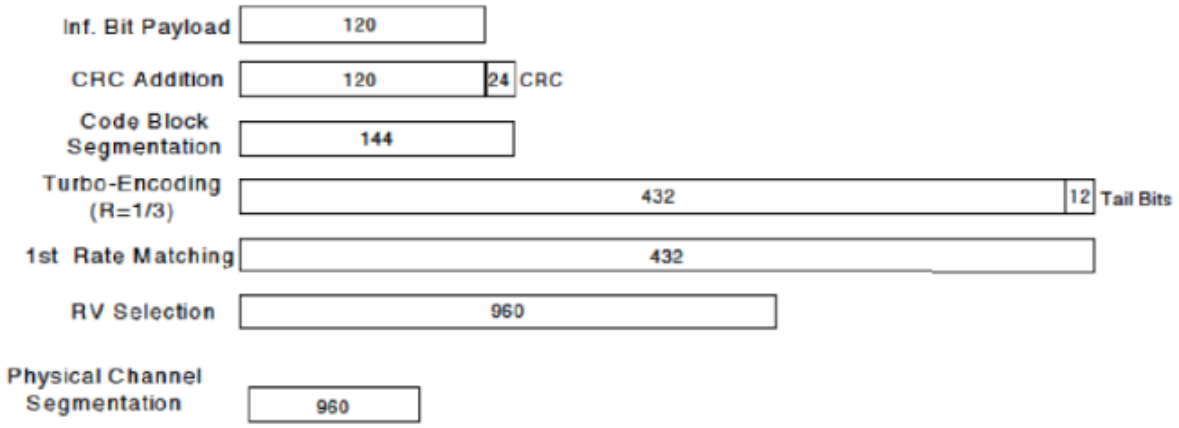


Figure C.8.19: Coding rate for Fixed reference Channel H-Set 12 (QPSK)

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

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

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

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

Note 3: For subtest 2 the β_c/β_d ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to β_c = 11/15 and β_d = 15/15

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

Note:

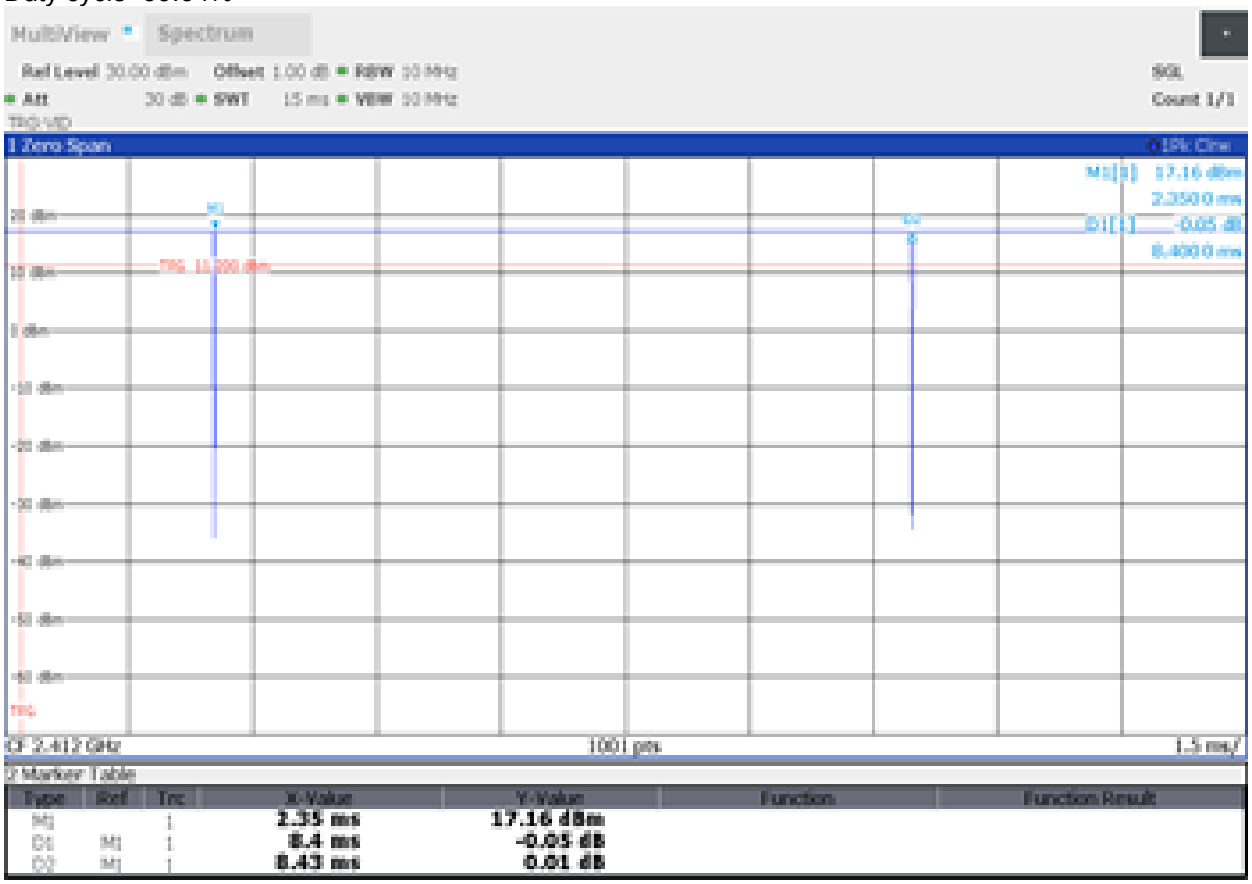
1. The Dual Carriers transmission only applies to HSDPA physical channels
2. The Dual Carriers belong to the same Node and are on adjacent carriers.
3. The Dual Carriers do not support MIMO to serve UEs configured for dual cell operation
4. The Dual Carriers operate in the same frequency band.
5. The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

7.2.3 WiFi Test Configuration

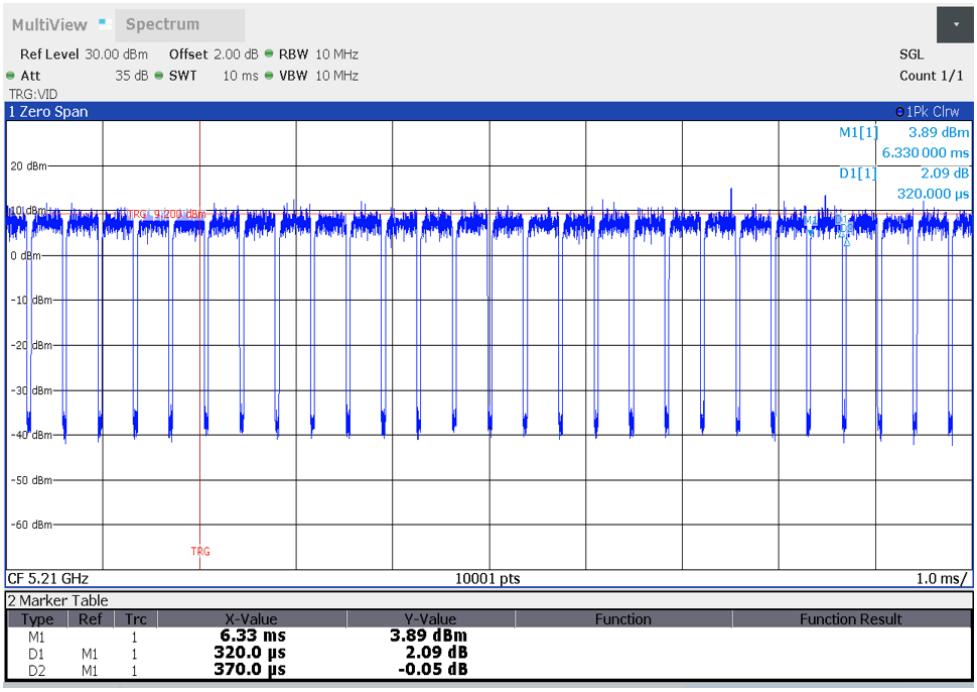
A Wi-Fi device must be configured to transmit continuously at the required data rate, channel bandwidth and signal modulation, using the highest transmission duty factor supported by the test mode tools for SAR measurement.

7.2.3.1 Duty cycle

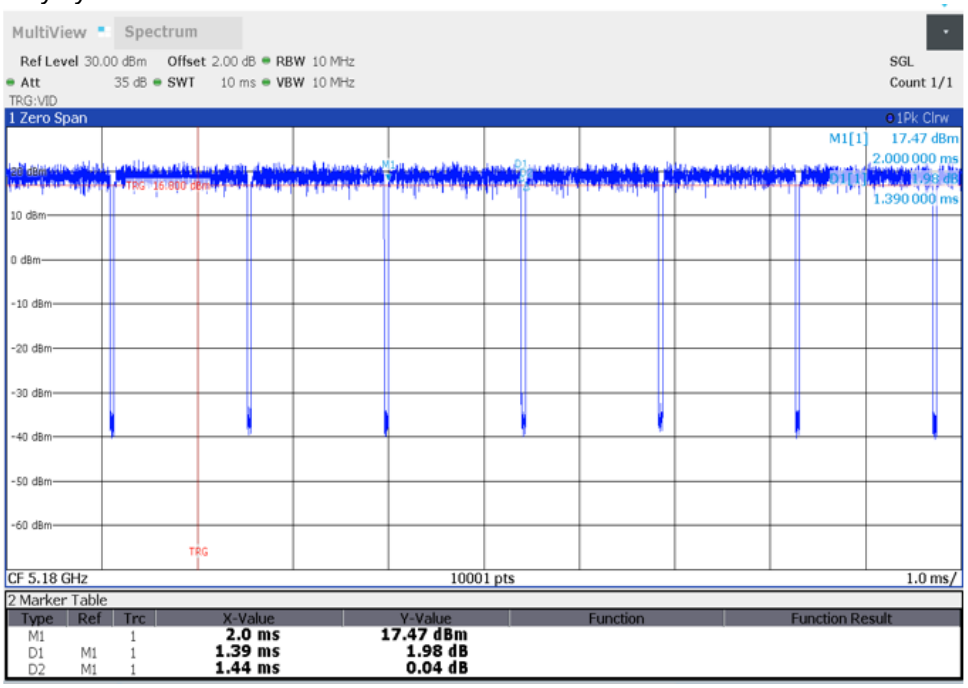
Wi-Fi 2.4GHz 802.11b MIMO:
Duty cycle=99.64%



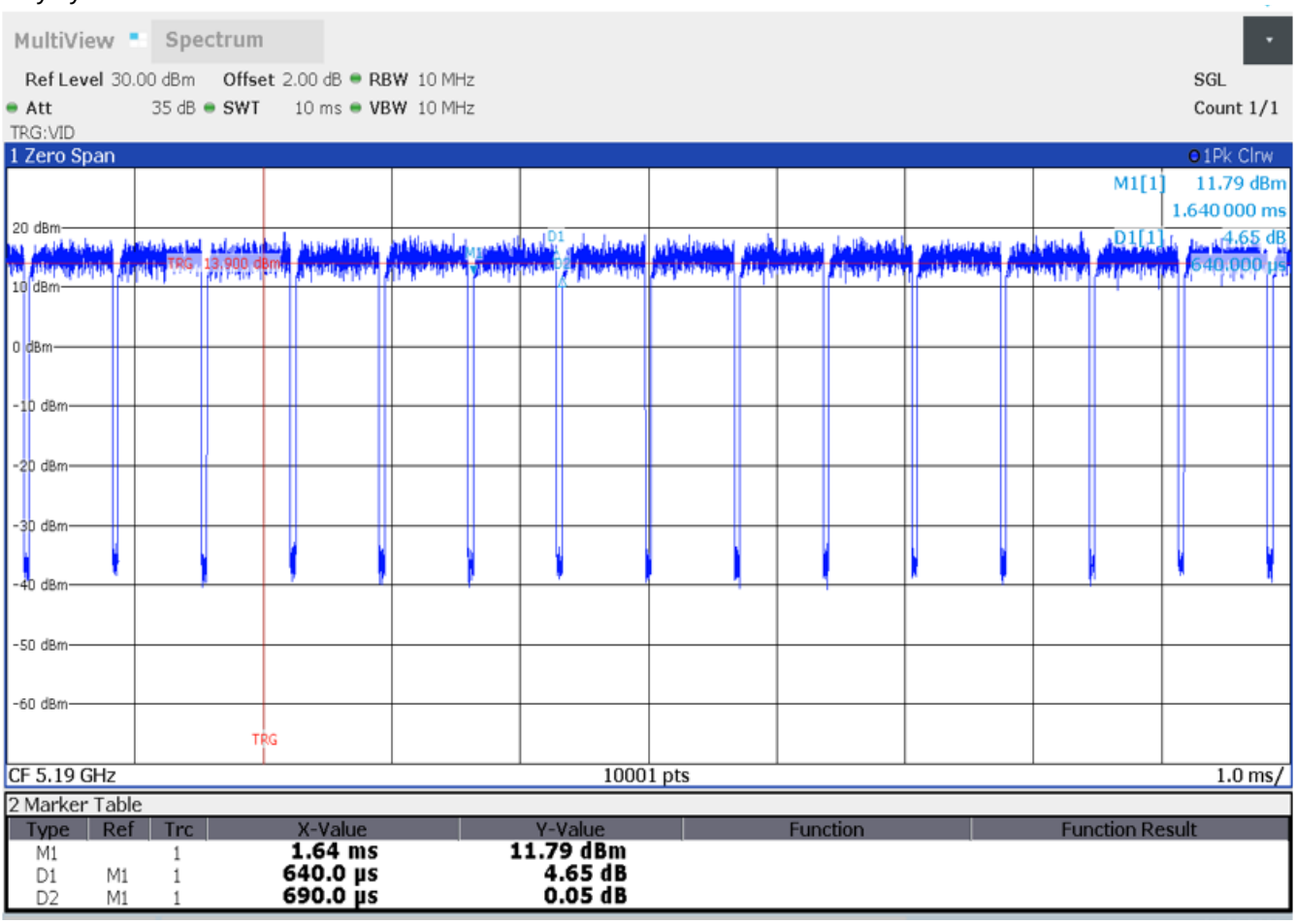
Wi-Fi 5GHz 802.11ac VHT80 MIMO:
Duty cycle=86.49%



Wi-Fi 5GHz 802.11a MIMO:
Duty cycle=96.53%



Wi-Fi 5GHz 802.11an 40M MIMO:
Duty cycle=92.75%



7.2.3.2 Initial Test Position SAR Test Reduction Procedure

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

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

7.2.3.3 Initial Test Configuration Procedures

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

7.2.3.4 Subsequent Test Configuration Procedures

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

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

band and exposure configuration.

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

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

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

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

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

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

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

7.2.3.5 2.4 GHz WiFi SAR Procedures

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

- **802.11b DSSS SAR Test Requirements**

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

1）. When the reported SAR of the highest measured maximum output power channel for the exposure configuration is ≤ 0.8 W/kg, no further SAR testing is required for 802.11b DSSS in that exposure configuration.

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

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

When SAR measurement is required for 2.4 GHz 802.11g/n OFDM configurations, the measurement and test reduction procedures for OFDM are applied (section 5.3, including sub-sections). SAR is not required for the following 2.4 GHz OFDM conditions.

1）. When KDB Publication 447498 SAR test exclusion applies to the OFDM configuration.

2）. When the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg.

- **SAR Test Requirements for OFDM configurations**

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

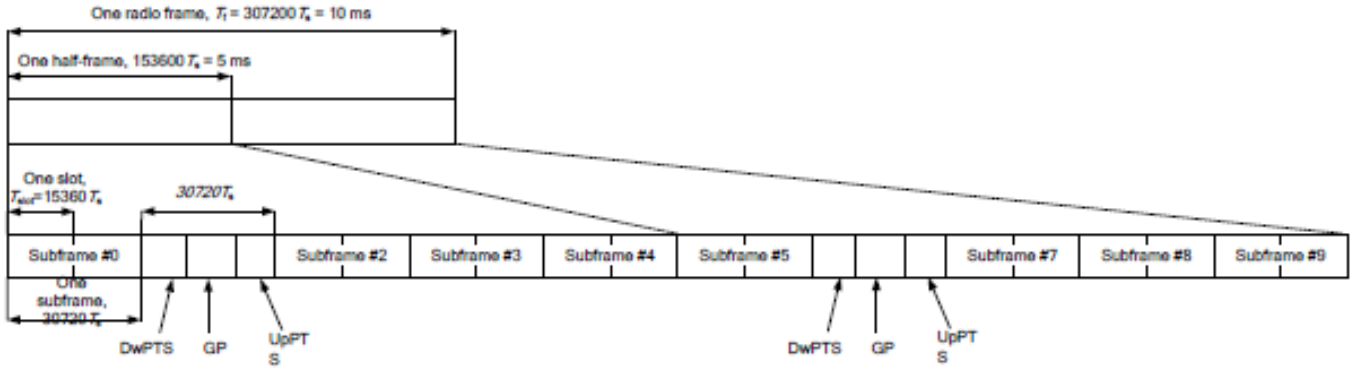
7.2.4 LTE Test Configuration

LTE modes were tested according to FCC KDB 941225 D05 publication. Please see notes after the tabulated SAR data for required test configurations. Establishing connections with base station simulators ensure a consistent means for testing SAR and are recommended for evaluating SAR [4]. The Anritsu MT8820C was used for LTE output power measurements and SAR testing. Max power control was used so the UE transmits with maximum output power during SAR testing. SAR must be measured with the maximum TTI (transmit time interval) supported by the device in each LTE configuration.

TDD LTE test consideration

For Time-Division Duplex (TDD) systems, SAR must be tested using a fixed periodic duty factor according to the highest transmission duty factor implemented for the device and supported by the defined 3GPP LTE TDD configurations.
SAR was tested with the highest transmission duty factor (63.33%) using Uplink-downlink configuration 0 and Special subframe configuration 7.
LTE TDD Band support 3GPP TS 36.211 section 4.2 for Type 2 Frame Structure and Table 4.2-2 for uplink-downlink configurations and Table 4.2-1 for Special subframe configurations.

Frame structure type 2:



Configuration of special subframe (lengths of DwPTS/GP/UpPTS).

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

Uplink-downlink configurations.

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

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

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

A) Spectrum Plots for RB Configurations

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

B) MPR

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

Modulation	Channel bandwidth / Transmission bandwidth (N_{RB})						MPR (dB)
	1.4 MHz	3.0 MHz	5 MHz	10 MHz	15 MHz	20 MHz	
QPSK	> 5	> 4	> 8	> 12	> 16	> 18	≤ 1
16 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 1
16 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 2
64 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 2
64 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 3

C) A-MPR

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

D) Largest channel bandwidth standalone SAR test requirements

1) QPSK with 1 RB allocation

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

2) QPSK with 50% RB allocation

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

3) QPSK with 100% RB allocation

For QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation in 1) and 2) are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.

4) Higher order modulations

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

E) Other channel bandwidth standalone SAR test requirements

For the other channel bandwidths used by the device in a frequency band, apply all the procedures required for the largest channel bandwidth in section A) to determine the channels and RB configurations that need SAR testing and only measure SAR when the highest maximum output power of a configuration requiring testing in the smaller channel bandwidth is > ½ dB higher than the equivalent channel configurations in the largest channel bandwidth configuration or the reported SAR of a configuration for the largest channel bandwidth is > 1.45 W/kg.

7.2.5 NR Band Test Configuration

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

Band/Antenna		LTE Band 2		LTE Band 5		LTE Band 7				LTE Band 12		LTE Band 66				LTE Band 38		LTE Band 41			
		Ant1	Ant3	Ant0	Ant1	Ant0	Ant1	Ant2	Ant3	Ant0	Ant1	Ant0	Ant1	Ant2	Ant3	Ant1	Ant3	Ant0	Ant1	Ant2	Ant3
n5	Ant0						√	√	√												
	Ant1					√		√	√												
n7	Ant0						√		√				√		√						
	Ant1														√						
	Ant2						√		√				√		√						
	Ant3												√								
n38	Ant0												√		√						
	Ant1														√						
	Ant2												√		√						
	Ant3												√								
n41	Ant0												√		√	√	√		√		√
	Ant1														√						
	Ant2												√		√	√	√		√		√
	Ant3												√								
n66	Ant0	√	√		√						√		√		√						
	Ant1			√						√											
	Ant2	√	√	√	√					√	√		√		√						
	Ant3			√	√					√	√										
n78	Ant2	√	√	√	√	√	√		√			√	√		√	√	√	√	√		√
	Ant4	√	√	√	√	√	√	√	√			√	√	√	√	√	√	√	√	√	√
	Ant5	√	√	√	√	√	√	√	√			√	√	√	√	√	√	√	√	√	√
	Ant6	√	√	√	√	√	√	√	√			√	√	√	√	√	√	√	√	√	√

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

Band			n5	n7	n38	n41	N66	n77	n78
Modulation	DFT-s-OFDM	PI/2 BPSK	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		QPSK	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		16QAM	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		64QAM	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		256QAM	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	CP-OFDM	QPSK	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		16QAM	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		64QAM	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		256QAM	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Duty Cycle			100%	100%	100%	100%	100%	50%	50%

Band	SCS	Bandwidth												
		5Mhz	10Mhz	15Mhz	20Mhz	25Mhz	30Mhz	40Mhz	50Mhz	60Mhz	70Mhz	80Mhz	90Mhz	100Mhz
n5	15KHZ	Yes	Yes	Yes	Yes	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
n7	15KHZ	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	N/A	N/A	N/A	N/A	N/A
N66	15KHZ	Yes	Yes	Yes	Yes	N/A	Yes	Yes	N/A	N/A	N/A	N/A	N/A	N/A
n38	30KHZ	N/A	N/A	N/A	Yes	N/A	Yes	Yes	N/A	N/A	N/A	N/A	N/A	N/A
n41	30KHZ	N/A	N/A	N/A	Yes	N/A	Yes	Yes	Yes	Yes	N/A	Yes	Yes	Yes
n77	30KHZ	N/A	N/A	N/A	Yes	N/A	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
n78	30KHZ	N/A	N/A	N/A	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

3. For 5G NR test procedure was following step similar FCC KDB 941225 D05:
   a. For DFT-OFDM and CP-OFDM output power measurement reduction, according to 3GPP 38.101 maximum power reduction for power class 3, the CP-OFDM mode will not higher than DFT-OFDM mode, therefore, similar FCC KDB 941225 D05 procedure for other modulation output power for each RB allocation configuration is > not ½ dB higher than the same configuration in DFT-QPSK and the reported SAR for the DFT-QPSK configuration is ≤ 1.45 W/kg; CP-OFDM testing is not required.
   b. For DFT-OFDM output power measurement reduction, according to 38.101 maximum power reduction for power class 3, for PI/2 BPSK/16QAM/64QMA/256QAM and smaller bandwidth output power will spot check largest channel bandwidth worst RB configuration to ensure the PI/2 BPSK/16QAM/64QMA/256QAM and smaller bandwidth output power will not ½ dB higher than the same configuration in the largest supported bandwidth.
   c. SAR testing start with the largest SCS and largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
   d. 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure
   e. QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
   f. PI/2 BPSK/16QAM/64QAM/256QAM output powers according to 3GPP MPR will not ½ dB higher than the same configuration in QPSK, also reported SAR for the QPSK configuration is less than 1.45 W/kg, PI/2 BPSK/16QAM/64QAM/256QAM SAR testing are not required.
   g. Smaller SCS/bandwidth output power for each RB allocation configuration for this device will not ½ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg, smaller bandwidth SAR testing is not required for this device

4. MPR

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

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

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

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

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

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

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

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

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

7. For EN-DC SAR, as the existing SAR test system cannot test the multiple different frequency bands simultaneous Transmission SAR at the same time, we suggest that the conservative “max + max” multi-Tx and SAR scaling method can be used to evaluate the inter-band Uplink EN-DC SAR from standalone SAR test results of each LTE and NR EN-DC component band and the conservative “max + max” multi-Tx method to combine the scaled SAR value from each EN-DC component band as the inter-band Uplink EN-DC SAR. All Simultaneous Transmission Scenarios will be evaluated independently in the final SAR report.

8. When the reported SAR for and EN DC configuration is greater than 1.2 W/kg, EN DC SAR is also required for other NR based test channels.

9. EN DC SAR is also required for standalone NR configurations greater than 1.2 W/kg when scaled to the EN DC power level.

8 Test Result

8.1 Measurement of RF conducted Power

The detailed conducted power table can refer to Appendix E.

Note:

1）. For GSM 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.

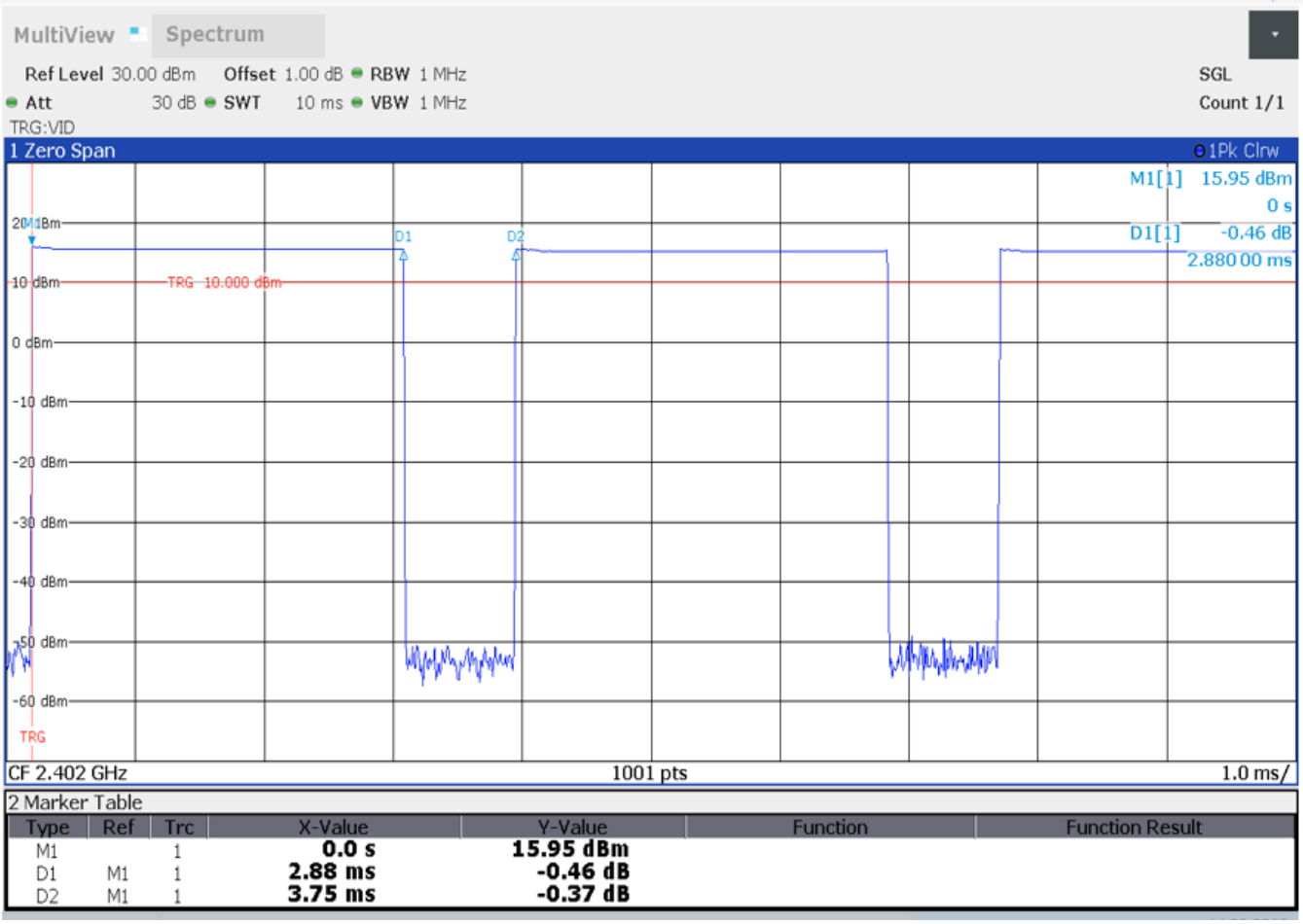
6）. Maximum output power measurement is required for each UL CA configuration for the required test channels described in KDB 941225 D05.

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=76.8%



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 D01, 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.

3) Maximum bandwidth does not support at least three non-overlapping channels in certain channel bandwidths. When a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

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.

3) 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**	**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	GSM	190/836.6	1:8.3	0.151	-0.02	32.86	33.50	1.159	**0.175**	22.3
Left tilted	GSM	190/836.6	1:8.3	0.068	0.12	32.86	33.50	1.159	0.078	22.3
Right cheek	GSM	190/836.6	1:8.3	0.141	0.02	32.86	33.50	1.159	0.163	22.3
Right tilted	GSM	190/836.6	1:8.3	0.075	0.12	32.86	33.50	1.159	0.087	22.3
Body worn Test data(Separate 15mm)										
Front side	GSM	190/836.6	1:8.3	0.102	0.03	32.86	33.50	1.159	0.118	22.3
Back side	GSM	190/836.6	1:8.3	0.148	0.11	32.86	33.50	1.159	**0.171**	22.3
Hotspot Test data(Separate 10mm)										
Front side	GPRS 2TS	190/836.6	1:4.15	0.117	0.14	30.00	31.50	1.413	0.165	22.3
Back side	GPRS 2TS	190/836.6	1:4.15	0.234	0.15	30.00	31.50	1.413	**0.331**	22.3
Left side	GPRS 2TS	190/836.6	1:4.15	0.116	0.03	30.00	31.50	1.413	0.164	22.3
Rightt side	GPRS 2TS	190/836.6	1:4.15	0.118	-0.07	30.00	31.50	1.413	0.167	22.3
Bottom side	GPRS 2TS	190/836.6	1:4.15	0.129	0.06	30.00	31.50	1.413	0.182	22.3
Ant 1 Test Record										
Test position	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test Data										
Left cheek	GSM	190/836.6	1:8.3	0.546	0.01	32.22	33.50	1.343	0.733	22.3
Left tilted	GSM	190/836.6	1:8.3	0.460	0.06	32.22	33.50	1.343	0.618	22.3
Right cheek	GSM	190/836.6	1:8.3	0.589	0.12	32.22	33.50	1.343	**0.791**	22.3
Right tilted	GSM	190/836.6	1:8.3	0.507	-0.07	32.22	33.50	1.343	0.681	22.3
Body worn Test data(Separate 15mm)										
Front side	GSM	190/836.6	1:8.3	0.114	0.04	32.22	33.50	1.343	0.153	22.3
Back side	GSM	190/836.6	1:8.3	0.135	0.07	32.22	33.50	1.343	**0.181**	22.3
Hotspot Test data(Separate 10mm)										
Front side	GPRS 2TS	190/836.6	1:4.15	0.152	0.05	29.59	31.50	1.552	0.236	22.3
Back side	GPRS 2TS	190/836.6	1:4.15	0.214	0.01	29.59	31.50	1.552	**0.332**	22.3
Left side	GPRS 2TS	190/836.6	1:4.15	0.113	0.03	29.59	31.50	1.552	0.175	22.3
Top side	GPRS 2TS	190/836.6	1:4.15	0.138	0.08	29.59	31.50	1.552	0.214	22.3

Table 11： SAR of GSM850 for Head and Body

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**	**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	GSM	661/1880	1:8.3	0.131	0.04	29.13	30.50	1.371	**0.180**	22.1
Left tilted	GSM	661/1880	1:8.3	0.059	0.06	29.13	30.50	1.371	0.081	22.1
Right cheek	GSM	661/1880	1:8.3	0.093	0.12	29.13	30.50	1.371	0.128	22.1
Right tilted	GSM	661/1880	1:8.3	0.056	-0.16	29.13	30.50	1.371	0.076	22.1
Body worn Test data(Separate 15mm)										
Front side	GSM	661/1880	1:8.3	0.210	0.04	29.13	30.50	1.371	0.288	22.1
Back side	GSM	661/1880	1:8.3	0.333	0.07	29.13	30.50	1.371	**0.457**	22.1
Hotspot Test data(Separate 10mm)										
Front side	GPRS 2TS	661/1880	1:4.15	0.330	0.12	27.38	28.50	1.294	0.427	22.1
Back side	GPRS 2TS	661/1880	1:4.15	0.767	0.07	27.38	28.50	1.294	**0.993**	22.1
Back side	GPRS 2TS	512/1850.2	1:4.15	0.669	0.13	27.36	28.50	1.300	0.870	22.1
Back side	GPRS 2TS	810/1909.8	1:4.15	0.674	0.03	27.34	28.50	1.306	0.880	22.1
Left side	GPRS 2TS	661/1880	1:4.15	0.124	-0.13	27.38	28.50	1.294	0.160	22.1
Rightt side	GPRS 2TS	661/1880	1:4.15	0.107	0.02	27.38	28.50	1.294	0.138	22.1
Bottom side	GPRS 2TS	661/1880	1:4.15	0.603	0.14	27.38	28.50	1.294	0.780	22.1
Ant 2 Test Record										
Test position	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test Data										
Left cheek	GSM	661/1880	1:8.3	0.277	0.12	26.48	27.50	1.26	0.350	22.1
Left tilted	GSM	661/1880	1:8.3	0.146	0.18	26.48	27.50	1.26	0.185	22.1
Right cheek	GSM	661/1880	1:8.3	0.749	-0.05	26.48	27.50	1.26	0.947	22.1
Right cheek	GSM	512/1850.2	1:8.3	0.612	0.01	26.48	27.50	1.26	0.774	22.1
Right cheek	GSM	810/1909.8	1:8.3	0.814	0.09	26.41	27.50	1.29	**1.046**	22.1
Right cheek-repeat	GSM	810/1909.8	1:8.3	0.805	0.06	26.44	27.50	1.28	1.028	22.1
Right tilted	GSM	661/1880	1:8.3	0.182	0.13	26.48	27.50	1.26	0.230	22.1
Body worn Test data(Separate 15mm)										
Front side	GSM	661/1880	1:8.3	0.166	0.15	29.30	30.50	1.32	0.219	22.1
Back side	GSM	661/1880	1:8.3	0.238	-0.04	29.30	30.50	1.32	**0.314**	22.1
Hotspot Test data(Separate 10mm)										
Front side	GPRS 2TS	661/1880	1:4.15	0.177	0.14	23.93	25.50	1.44	0.254	22.1
Back side	GPRS 2TS	661/1880	1:4.15	0.331	0.09	23.93	25.50	1.44	0.475	22.1
Left side	GPRS 2TS	661/1880	1:4.15	0.402	0.09	23.93	25.50	1.44	**0.577**	22.1

Table 12： SAR of GSM1900 for Head and Body.

Test Position	Channel/ Frequency (MHz)	Measured SAR (1g)	1st Repeated SAR (1g)	Ratio	2nd Repeated SAR (1g)	3rd Repeated SAR (1g)
Right cheek	810/1909.8	0.814	0.805	1.011	N/A	N/A
Note: 1) When the original highest measured SAR is ≥ 0.80 W/kg, the measurement was repeated once.						
2) A second repeated measurement was preformed only if the ratio of largest to smallest SAR for the original and first repeated measurements was > 1.20 or when the original or repeated measurement was ≥ 1.45 W/kg (~ 10% from the 1-g SAR limit).						
3) A third repeated measurement was preformed only if the original, first or second repeated measurement was ⩾ 1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20.						
4) Repeated measurements are not required when the original highest measured SAR is < 0.80 W/kg						

8.2.3 SAR Result of WCDMA Band II

W B2 SAR Test Record									
Ant 0 Test Record									
Test position	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**
Head Test Data									
Left cheek	RMC	9400/1880	1:1	0.208	0.06	23.34	24.50	1.306	**0.272**
Left tilted	RMC	9400/1880	1:1	0.109	0.15	23.34	24.50	1.306	0.142
Right cheek	RMC	9400/1880	1:1	0.120	0.13	23.34	24.50	1.306	0.157
Right tilted	RMC	9400/1880	1:1	0.117	-0.16	23.34	24.50	1.306	0.153
Body worn Test data(Separate 15mm)									
Front side	RMC	9400/1880	1:1	0.230	-0.11	23.34	24.50	1.306	0.300
Back side	RMC	9400/1880	1:1	0.660	0.16	23.34	24.50	1.306	0.862
Back side	RMC	9262/1852.4	1:1	0.675	0.15	23.27	24.50	1.327	**0.896**
Back side	RMC	9538/1907.6	1:1	0.650	0.01	23.11	24.50	1.377	0.895
Hotspot Test data(Separate 10mm)									
Front side	RMC	9400/1880	1:1	0.370	0.12	21.53	22.50	1.250	0.463
Back side	RMC	9400/1880	1:1	0.699	0.08	21.53	22.50	1.250	0.874
Back side	RMC	9262/1852.4	1:1	0.727	0.03	21.49	22.50	1.262	0.917
Back side	RMC	9538/1907.6	1:1	0.721	0.04	21.35	22.50	1.303	0.940
Left side	RMC	9400/1880	1:1	0.153	-0.06	21.53	22.50	1.250	0.191
Rightt side	RMC	9400/1880	1:1	0.110	0.17	21.53	22.50	1.250	0.138
Bottom side	RMC	9400/1880	1:1	0.668	0.04	21.53	22.50	1.250	0.835
Bottom side	RMC	9262/1852.4	1:1	0.542	-0.13	21.49	22.50	1.262	0.684
Bottom side	RMC	9538/1907.6	1:1	0.735	-0.13	21.35	22.50	1.303	**0.958**
Ant 2 Test Record									
Test position	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**
Head Test Data									
Left cheek	RMC	9400/1880	1:1	0.321	0.16	19.40	20.50	1.288	0.414
Left tilted	RMC	9400/1880	1:1	0.227	-0.11	19.40	20.50	1.288	0.292
Right cheek	RMC	9400/1880	1:1	0.844	0.08	19.40	20.50	1.288	**1.087**
Right cheek repeat	RMC	9400/1880	1:1	0.813	0.01	19.40	20.50	1.288	1.047
Right cheek	RMC	9262/1852.4	1:1	0.713	0.18	19.37	20.50	1.297	0.925
Right cheek	RMC	9538/1907.6	1:1	0.754	0.07	19.28	20.50	1.324	0.999
Right tilted	RMC	9400/1880	1:1	0.240	-0.12	19.40	20.50	1.288	0.309
Body worn Test data(Separate 15mm)									
Front side	RMC	9400/1880	1:1	0.070	0.13	23.40	25.00	1.445	0.101
Back side	RMC	9400/1880	1:1	0.249	0.17	23.40	25.00	1.445	**0.360**
Hotspot Test data(Separate 10mm)									
Front side	RMC	9400/1880	1:1	0.182	-0.18	19.40	20.50	1.288	0.234

Back side	RMC	9400/1880	1:1	0.329	0.05	19.40	20.50	1.288	**0.424**
Left side	RMC	9400/1880	1:1	0.189	0.12	19.40	20.50	1.288	0.243

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

Test Position	Channel/ Frequency (MHz)	Measured SAR (1g)	1st Repeated SAR (1g)	Ratio	2nd Repeated SAR (1g)	3rd Repeated SAR (1g)
Right cheek	9400/1880	0.844	0.813	1.038	N/A	N/A
Note: 1) When the original highest measured SAR is ≥ 0.80 W/kg, the measurement was repeated once.						
2) A second repeated measurement was preformed only if the ratio of largest to smallest SAR for the original and first repeated measurements was > 1.20 or when the original or repeated measurement was ≥ 1.45 W/kg (~ 10% from the 1-g SAR limit).						
3) A third repeated measurement was preformed only if the original, first or second repeated measurement was ⩾ 1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20.						
4) Repeated measurements are not required when the original highest measured SAR is < 0.80 W/kg						

8.2.4 SAR Result of WCDMA Band IV

W B4 SAR Test Record										
Ant 0 Test Record										
Test position	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test Data										
Left cheek	RMC	1412/1732.4	1:1	0.444	0.06	23.66	25.00	1.361	**0.604**	22.4
Left tilted	RMC	1412/1732.4	1:1	0.124	-0.07	23.66	25.00	1.361	0.169	22.4
Right cheek	RMC	1412/1732.4	1:1	0.078	0.19	23.66	25.00	1.361	0.106	22.4
Right tilted	RMC	1412/1732.4	1:1	0.093	0.12	23.66	25.00	1.361	0.126	22.4
Body worn Test data(Separate 15mm)										
Front side	RMC	1412/1732.4	1:1	0.282	0.14	23.66	25.00	1.361	0.384	22.4
Back side	RMC	1412/1732.4	1:1	0.741	0.09	23.45	25.00	1.429	1.059	22.4
Back side	RMC	1312/1712.4	1:1	0.656	-0.20	23.66	25.00	1.361	0.893	22.4
Back side	RMC	1513/1752.6	1:1	0.745	0.09	23.62	25.00	1.374	**1.024**	22.4
Hotspot Test data(Separate 10mm)										
Front side	RMC	1412/1732.4	1:1	0.205	0.12	20.25	21.50	1.334	0.273	22.4
Back side	RMC	1412/1732.4	1:1	0.667	0.01	20.25	21.50	1.334	0.889	22.4
Back side	RMC	1312/1712.4	1:1	0.482	0.03	20.22	21.50	1.343	0.647	22.4
Back side	RMC	1513/1752.6	1:1	0.720	0.07	20.13	21.50	1.371	0.987	22.4
Left side	RMC	1412/1732.4	1:1	0.088	-0.08	20.25	21.50	1.334	0.117	22.4
Rightt side	RMC	1412/1732.4	1:1	0.089	0.19	20.25	21.50	1.334	0.119	22.4
Bottom side	RMC	1412/1732.4	1:1	0.476	-0.10	20.25	21.50	1.334	0.635	22.4
Ant 2 Test Record										
Test position	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test Data										
Left cheek	RMC	1412/1732.4	1:1	0.299	-0.11	20.57	21.50	1.239	0.370	22.4
Left tilted	RMC	1412/1732.4	1:1	0.250	0.14	20.57	21.50	1.239	0.310	22.4
Right cheek	RMC	1412/1732.4	1:1	0.795	0.02	20.57	21.50	1.239	0.985	22.4
Right cheek	RMC	1312/1712.4	1:1	0.760	-0.07	20.53	21.50	1.250	0.950	22.4
Right cheek	RMC	1513/1752.6	1:1	0.842	0.02	20.54	21.50	1.247	**1.050**	22.4
Right cheek repeat	RMC	1513/1752.6	1:1	0.821	0.01	20.54	21.50	1.247	1.024	22.4
Right tilted	RMC	1412/1732.4	1:1	0.217	0.16	20.57	21.50	1.239	0.269	22.4
Body worn Test data(Separate 15mm)										
Front side	RMC	1412/1732.4	1:1	0.153	0.16	23.79	25.50	1.483	0.227	22.4
Back side	RMC	1412/1732.4	1:1	0.343	-0.04	23.79	25.50	1.483	0.509	22.4
Hotspot Test data(Separate 10mm)										
Front side	RMC	1412/1732.4	1:1	0.168	0.02	20.57	21.50	1.239	0.208	22.4
Back side	RMC	1412/1732.4	1:1	0.314	0.01	20.57	21.50	1.239	0.389	22.4
Left side	RMC	1412/1732.4	1:1	0.181	0.12	20.57	21.50	1.239	0.224	22.4

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

Test Position	Channel/ Frequency (MHz)	Measured SAR (1g)	1st Repeated SAR (1g)	Ratio	2nd Repeated SAR (1g)	3rd Repeated SAR (1g)
Right cheek	0	0.842	0.821	1.026	N/A	N/A
Note: 1) When the original highest measured SAR is ≥ 0.80 W/kg, the measurement was repeated once.						
2) A second repeated measurement was preformed only if the ratio of largest to smallest SAR for the original and first repeated measurements was > 1.20 or when the original or repeated measurement was ≥ 1.45 W/kg (~ 10% from the 1-g SAR limit).						
3) A third repeated measurement was preformed only if the original, first or second repeated measurement was ⩾ 1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20.						
4) Repeated measurements are not required when the original highest measured SAR is < 0.80 W/kg						

8.2.5 SAR Result of WCDMA Band V

W B5 SAR Test Record										
Ant 0 Test Record										
Test position	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test Data										
Left cheek	RMC	4182/836.4	1:1	0.136	-0.07	24.02	25.00	1.253	0.170	22.4
Left tilted	RMC	4182/836.4	1:1	0.073	0.05	24.02	25.00	1.253	0.092	22.4
Right cheek	RMC	4182/836.4	1:1	0.145	-0.02	24.02	25.00	1.253	**0.182**	22.4
Right tilted	RMC	4182/836.4	1:1	0.068	0.17	24.02	25.00	1.253	0.086	22.4
Body worn Test data(Separate 15mm)										
Front side	RMC	4182/836.4	1:1	0.101	0.14	24.02	25.00	1.253	0.127	22.4
Back side	RMC	4182/836.4	1:1	0.148	0.06	24.02	25.00	1.253	**0.185**	22.4
Hotspot Test data(Separate 10mm)										
Front side	RMC	4182/836.4	1:1	0.107	0.11	24.02	25.00	1.253	0.134	22.4
Back side	RMC	4182/836.4	1:1	0.236	0.15	24.02	25.00	1.253	**0.296**	22.4
Left side	RMC	4182/836.4	1:1	0.114	-0.14	24.02	25.00	1.253	0.143	22.4
Rightt side	RMC	4182/836.4	1:1	0.015	-0.06	24.02	25.00	1.253	0.019	22.4
Bottom side	RMC	4182/836.4	1:1	0.101	-0.07	24.02	25.00	1.253	0.127	22.4
Ant 1 Test Record										
Test position	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test Data										
Left cheek	RMC	4182/836.4	1:1	0.556	0.06	24.38	25.00	1.153	0.641	22.4
Left tilted	RMC	4182/836.4	1:1	0.524	0.04	24.38	25.00	1.153	0.604	22.4
Right cheek	RMC	4182/836.4	1:1	0.670	0.03	24.38	25.00	1.153	**0.773**	22.4
Right tilted	RMC	4182/836.4	1:1	0.646	0.06	24.38	25.00	1.153	0.745	22.4
Body worn Test data(Separate 15mm)										
Front side	RMC	4182/836.4	1:1	0.128	0.08	24.38	25.00	1.153	0.148	22.4
Back side	RMC	4182/836.4	1:1	0.136	-0.08	24.38	25.00	1.153	**0.157**	22.4
Hotspot Test data(Separate 10mm)										
Front side	RMC	4182/836.4	1:1	0.192	0.02	24.38	25.00	1.153	0.221	22.4
Back side	RMC	4182/836.4	1:1	0.290	-0.08	24.38	25.00	1.153	**0.335**	22.4
Left side	RMC	4182/836.4	1:1	0.116	0.06	24.38	25.00	1.153	0.134	22.4
Top side	RMC	4182/836.4	1:1	0.165	0.05	24.38	25.00	1.153	0.190	22.4

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

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**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test Data(1RB)											
Left cheek	20	QPSK 1_0	18900/1880	1:1	0.173	0.08	23.56	24.00	1.107	**0.191**	22.5
Left tilted	20	QPSK 1_0	18900/1880	1:1	0.085	0.15	23.56	24.00	1.107	0.094	22.5
Right cheek	20	QPSK 1_0	18900/1880	1:1	0.110	0.02	23.56	24.00	1.107	0.122	22.5
Right tilted	20	QPSK 1_0	18900/1880	1:1	0.115	0.03	23.56	24.00	1.107	0.127	22.5
Head Test Data(50%RB)											
Left cheek	20	QPSK 50_0	18900/1880	1:1	0.168	0.06	22.68	23.00	1.076	0.181	22.5
Left tilted	20	QPSK 50_0	18900/1880	1:1	0.063	0.13	22.68	23.00	1.076	0.067	22.5
Right cheek	20	QPSK 50_0	18900/1880	1:1	0.146	0.12	22.68	23.00	1.076	0.157	22.5
Right tilted	20	QPSK 50_0	18900/1880	1:1	0.091	0.16	22.68	23.00	1.076	0.098	22.5
Body worn Test data(Separate 15mm 1RB)											
Front side	20	QPSK 1_0	18900/1880	1:1	0.218	-0.07	23.56	24.00	1.107	0.241	22.5
Back side	20	QPSK 1_0	18900/1880	1:1	0.519	0.05	23.56	24.00	1.107	**0.574**	22.5
Body worn Test data(Separate 15mm 50%RB)											
Front side	20	QPSK 50_0	18900/1880	1:1	0.249	-0.18	22.68	23.00	1.076	0.268	22.5
Back side	20	QPSK 50_0	18900/1880	1:1	0.482	0.12	22.68	23.00	1.076	0.519	22.5
Hotspot Test data(Separate 10mm 1RB)											
Front side	20	QPSK 1_0	18900/1880	1:1	0.369	0.14	21.81	22.00	1.045	0.386	22.5
Back side	20	QPSK 1_0	18900/1880	1:1	0.630	0.09	21.81	22.00	1.045	0.658	22.5
Left side	20	QPSK 1_0	18900/1880	1:1	0.139	0.07	21.81	22.00	1.045	0.145	22.5
Rightt side	20	QPSK 1_0	18900/1880	1:1	0.111	-0.04	21.81	22.00	1.045	0.116	22.5
Bottom side	20	QPSK 1_0	18900/1880	1:1	0.600	-0.16	21.81	22.00	1.045	0.627	22.5
Hotspot Test data(Separate 10mm 50%RB)											
Front side	20	QPSK 50_0	18900/1880	1:1	0.356	0.02	21.78	22.00	1.052	0.374	22.5
Back side	20	QPSK 50_0	18900/1880	1:1	0.793	0.08	21.78	22.00	1.052	0.834	22.5
Back side	20	QPSK 50_0	18700/1860	1:1	0.714	0.06	21.72	22.00	1.067	0.762	22.5
Back side	20	QPSK 50_0	19100/1900	1:1	0.724	0.02	21.70	22.00	1.072	0.776	22.5
Left side	20	QPSK 50_0	18900/1880	1:1	0.140	-0.18	21.78	22.00	1.052	0.147	22.5
Rightt side	20	QPSK 50_0	18900/1880	1:1	0.119	-0.13	21.78	22.00	1.052	0.125	22.5
Bottom side	20	QPSK 50_0	18900/1880	1:1	0.651	-0.08	21.78	22.00	1.052	0.685	22.5
Hotspot Test data(Separate 10mm 100%RB)											
Back side	20	QPSK 100_0	18900/1880	1:1	0.799	0.18	21.69	22.00	1.074	**0.858**	22.5
Ant 1 Test Record											
Test position	**BW.**	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test Data(1RB)											
Left cheek	20	QPSK 1_0	18900/1880	1:1	0.179	0.07	15.13	15.70	1.140	0.204	22.5

Left tilted	20	QPSK 1_0	18900/1880	1:1	0.214	0.02	15.13	15.70	1.140	0.244	22.5
Right cheek	20	QPSK 1_0	18900/1880	1:1	0.236	0.07	15.13	15.70	1.140	0.269	22.5
Right tilted	20	QPSK 1_0	18900/1880	1:1	0.389	0.01	15.13	15.70	1.140	**0.444**	22.5
Left cheek for ENDC	20	QPSK 1_0	18900/1880	1:1	0.156	0.01	13.78	14.50	1.180	0.184	22.5
Left tilted for ENDC	20	QPSK 1_0	18900/1880	1:1	0.198	-0.09	13.78	14.50	1.180	0.234	22.5
Right cheek for ENDC	20	QPSK 1_0	18900/1880	1:1	0.284	0.08	13.78	14.50	1.180	0.335	22.5
Right tilted for ENDC	20	QPSK 1_0	18900/1880	1:1	0.364	-0.01	13.78	14.50	1.180	0.430	22.5
Head Test Data(50%RB)											
Left cheek	20	QPSK 50_0	18900/1880	1:1	0.179	0.07	15.09	15.70	1.151	0.206	22.5
Left tilted	20	QPSK 50_0	18900/1880	1:1	0.232	0.01	15.09	15.70	1.151	0.267	22.5
Right cheek	20	QPSK 50_0	18900/1880	1:1	0.240	0.03	15.09	15.70	1.151	0.276	22.5
Right tilted	20	QPSK 50_0	18900/1880	1:1	0.332	0.05	15.09	15.70	1.151	0.382	22.5
Left cheek for ENDC	20	QPSK 50_0	18900/1880	1:1	0.142	0.04	13.62	14.50	1.225	0.174	22.5
Left tilted for ENDC	20	QPSK 50_0	18900/1880	1:1	0.165	0.07	13.62	14.50	1.225	0.202	22.5
Right cheek for ENDC	20	QPSK 50_0	18900/1880	1:1	0.275	0.01	13.62	14.50	1.225	0.337	22.5
Right tilted for ENDC	20	QPSK 50_0	18900/1880	1:1	0.341	0.08	13.62	14.50	1.225	0.418	22.5
Body worn Test data(Separate 15mm 1RB)											
Front side	20	QPSK 1_0	18900/1880	1:1	0.199	0.04	24.95	25.70	1.189	0.237	22.5
Back side	20	QPSK 1_0	18900/1880	1:1	0.444	0.01	24.95	25.70	1.189	**0.528**	22.5
Front side for ENDC	20	QPSK 1_0	18900/1880	1:1	0.213	0.12	20.81	21.50	1.172	0.250	22.5
Back side for ENDC	20	QPSK 1_0	18900/1880	1:1	0.410	-0.01	20.81	21.50	1.172	0.481	22.5
Body worn Test data(Separate 15mm 50%RB)											
Front side	20	QPSK 50_0	18900/1880	1:1	0.175	0.03	23.95	24.70	1.189	0.208	22.5
Back side	20	QPSK 50_0	18900/1880	1:1	0.380	0.09	23.95	24.70	1.189	0.452	22.5
Front side for ENDC	20	QPSK 50_0	18900/1880	1:1	0.206	0.01	19.82	20.50	1.169	0.241	22.5
Back side for ENDC	20	QPSK 50_0	18900/1880	1:1	0.393	0.08	19.82	20.50	1.169	0.460	22.5
Hotspot Test data(Separate 10mm 1RB)											
Front side	20	QPSK 1_0	18900/1880	1:1	0.068	0.02	15.13	15.70	1.140	0.078	22.5
Back side	20	QPSK 1_0	18900/1880	1:1	0.163	-0.09	15.13	15.70	1.140	0.186	22.5
Left side	20	QPSK 1_0	18900/1880	1:1	0.017	0.01	15.13	15.70	1.140	0.019	22.5
Top side	20	QPSK 1_0	18900/1880	1:1	0.112	0.03	15.13	15.70	1.140	0.128	22.5
Front side for ENDC	20	QPSK 1_0	18900/1880	1:1	0.194	0.07	17.87	18.50	1.156	0.224	22.5
Back side for ENDC	20	QPSK 1_0	18900/1880	1:1	0.419	0.04	17.87	18.50	1.156	0.484	22.5
Left side for ENDC	20	QPSK 1_0	18900/1880	1:1	0.064	-0.11	17.87	18.50	1.156	0.074	22.5
Top side for ENDC	20	QPSK 1_0	18900/1880	1:1	0.426	0.02	17.87	18.50	1.156	0.493	22.5
Hotspot Test data(Separate 10mm 50%RB)											
Front side	20	QPSK 50_0	18900/1880	1:1	0.068	0.08	15.09	15.70	1.151	0.078	22.5
Back side	20	QPSK 50_0	18900/1880	1:1	0.162	-0.11	15.09	15.70	1.151	0.186	22.5
Left side	20	QPSK 50_0	18900/1880	1:1	0.017	0.03	15.09	15.70	1.151	0.020	22.5
Top side	20	QPSK 50_0	18900/1880	1:1	0.106	0.07	15.09	15.70	1.151	0.122	22.5
Front side for ENDC	20	QPSK 50_0	18900/1880	1:1	0.212	0.15	17.55	18.50	1.245	0.264	22.5
Back side for ENDC	20	QPSK 50_0	18900/1880	1:1	0.411	0.04	17.55	18.50	1.245	0.511	22.5
Left side for ENDC	20	QPSK 50_0	18900/1880	1:1	0.064	0.07	17.55	18.50	1.245	0.080	22.5

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Top side for ENDC	20	QPSK 50_0	18900/1880	1:1	0.411	-0.01	17.55	18.50	1.245	**0.511**	22.5
Ant 3 Test Record											
Test position	**BW.**	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test Data(1RB)											
Left cheek for ENDC	20	QPSK 1_0	18900/1880	1:1	0.000	0.03	23.39	24.50	1.291	0.000	22.5
Left tilted for ENDC	20	QPSK 1_0	18900/1880	1:1	0.000	0.09	23.39	24.50	1.291	0.000	22.5
Right cheek for ENDC	20	QPSK 1_0	18900/1880	1:1	0.000	0.01	23.39	24.50	1.291	0.000	22.5
Right tilted for ENDC	20	QPSK 1_0	18900/1880	1:1	0.000	0.05	23.39	24.50	1.291	0.000	22.5
Head Test Data(50%RB)											
Left cheek for ENDC	20	QPSK 50_0	18900/1880	1:1	0.000	-0.09	22.44	23.50	1.276	0.000	22.5
Left tilted for ENDC	20	QPSK 50_0	18900/1880	1:1	0.000	0.11	22.44	23.50	1.276	0.000	22.5
Right cheek for ENDC	20	QPSK 50_0	18900/1880	1:1	0.000	0.04	22.44	23.50	1.276	0.000	22.5
Right tilted for ENDC	20	QPSK 50_0	18900/1880	1:1	0.000	0.02	22.44	23.50	1.276	0.000	22.5
Body worn Test data(Separate 15mm 1RB)											
Front side for ENDC	20	QPSK 1_0	18900/1880	1:1	0.000	-0.05	23.39	24.50	1.291	0.000	22.5
Back side for ENDC	20	QPSK 1_0	18900/1880	1:1	0.000	0.04	23.39	24.50	1.291	0.000	22.5
Body worn Test data(Separate 15mm 50%RB)											
Front side for ENDC	20	QPSK 50_0	18900/1880	1:1	0.000	0.17	22.44	23.50	1.276	0.000	22.5
Back side for ENDC	20	QPSK 50_0	18900/1880	1:1	0.000	0.02	22.44	23.50	1.276	0.000	22.5
Hotspot Test data(Separate 10mm 1RB)											
Front side for ENDC	20	QPSK 1_0	18900/1880	1:1	0.005	0.01	23.39	24.50	1.291	0.006	22.5
Back side for ENDC	20	QPSK 1_0	18900/1880	1:1	0.048	-0.09	23.39	24.50	1.291	0.062	22.5
Left side for ENDC	20	QPSK 1_0	18900/1880	1:1	0.000	0.04	23.39	24.50	1.291	0.000	22.5
Bottom side for ENDC	20	QPSK 1_0	18900/1880	1:1	0.000	0.01	23.39	24.50	1.291	0.000	22.5
Hotspot Test data(Separate 10mm 50%RB)											
Front side for ENDC	20	QPSK 50_0	18900/1880	1:1	0.003	0.06	22.44	23.50	1.276	0.004	22.5
Back side for ENDC	20	QPSK 50_0	18900/1880	1:1	0.042	0.07	22.44	23.50	1.276	0.054	22.5
Left side for ENDC	20	QPSK 50_0	18900/1880	1:1	0.000	0.01	22.44	23.50	1.276	0.000	22.5
Bottom side for ENDC	20	QPSK 50_0	18900/1880	1:1	0.000	0.05	22.44	23.50	1.276	0.000	22.5

Table 16：SAR of LTE Band 2 for Head and Body.

8.2.7 SAR Result of LTE Band 5

LTE Band 5 SAR Test Record											
Ant 0 Test Record											
Test position	**BW.**	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test Data(1RB)											
Left cheek for ENDC	10	QPSK 1_0	20525/836.5	1:1	0.132	0.08	24.67	25.70	1.268	**0.167**	22.1
Left tilted for ENDC	10	QPSK 1_0	20525/836.5	1:1	0.087	0.03	24.67	25.70	1.268	0.110	22.1
Right cheek for ENDC	10	QPSK 1_0	20525/836.5	1:1	0.124	0.09	24.67	25.70	1.268	0.157	22.1
Right tilted for ENDC	10	QPSK 1_0	20525/836.5	1:1	0.074	-0.01	24.67	25.70	1.268	0.094	22.1
Head Test Data(50%RB)											
Left cheek for ENDC	10	QPSK 25_0	20525/836.5	1:1	0.116	0.04	23.76	24.70	1.242	0.144	22.1
Left tilted for ENDC	10	QPSK 25_0	20525/836.5	1:1	0.075	0.02	23.76	24.70	1.242	0.093	22.1
Right cheek for ENDC	10	QPSK 25_0	20525/836.5	1:1	0.097	0.07	23.76	24.70	1.242	0.120	22.1
Right tilted for ENDC	10	QPSK 25_0	20525/836.5	1:1	0.066	0.09	23.76	24.70	1.242	0.082	22.1
Body worn Test data(Separate 15mm 1RB)											
Front side for ENDC	10	QPSK 1_0	20525/836.5	1:1	0.110	0.11	24.67	25.70	1.268	0.139	22.1
Back side for ENDC	10	QPSK 1_0	20525/836.5	1:1	0.183	-0.06	24.67	25.70	1.268	**0.232**	22.1
Body worn Test data(Separate 15mm 50%RB)											
Front side for ENDC	10	QPSK 25_0	20525/836.5	1:1	0.096	0.03	23.76	24.70	1.242	0.119	22.1
Back side for ENDC	10	QPSK 25_0	20525/836.5	1:1	0.175	0.05	23.76	24.70	1.242	0.217	22.1
Hotspot Test data(Separate 10mm 1RB)											
Front side for ENDC	10	QPSK 1_0	20525/836.5	1:1	0.123	0.06	24.67	25.70	1.268	0.156	22.1
Back side for ENDC	10	QPSK 1_0	20525/836.5	1:1	0.238	-0.10	24.67	25.70	1.268	**0.302**	22.1
Left side for ENDC	10	QPSK 1_0	20525/836.5	1:1	0.079	0.17	24.67	25.70	1.268	0.100	22.1
Rightt side for ENDC	10	QPSK 1_0	20525/836.5	1:1	0.117	0.02	24.67	25.70	1.268	0.148	22.1
Bottom side for ENDC	10	QPSK 1_0	20525/836.5	1:1	0.074	0.01	24.67	25.70	1.268	0.094	22.1
Hotspot Test data(Separate 10mm 50%RB)											
Front side for ENDC	10	QPSK 25_0	20525/836.5	1:1	0.114	0.08	23.76	24.70	1.242	0.142	22.1
Back side for ENDC	10	QPSK 25_0	20525/836.5	1:1	0.227	0.04	23.76	24.70	1.242	0.282	22.1
Left side for ENDC	10	QPSK 25_0	20525/836.5	1:1	0.072	0.01	23.76	24.70	1.242	0.089	22.1
Rightt side for ENDC	10	QPSK 25_0	20525/836.5	1:1	0.106	0.05	23.76	24.70	1.242	0.132	22.1
Bottom side for ENDC	10	QPSK 25_0	20525/836.5	1:1	0.071	0.02	23.76	24.70	1.242	0.088	22.1
Ant 1 Test Record											
Test position	**BW.**	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test Data(1RB)											
Left cheek for ENDC	10	QPSK 1_0	20525/836.5	1:1	0.369	0.04	22.87	23.50	1.156	0.427	22.1
Left tilted for ENDC	10	QPSK 1_0	20525/836.5	1:1	0.349	0.03	22.87	23.50	1.156	0.403	22.1
Right cheek for ENDC	10	QPSK 1_0	20525/836.5	1:1	0.405	0.05	22.87	23.50	1.156	0.468	22.1
Right tilted for ENDC	10	QPSK 1_0	20525/836.5	1:1	0.345	-0.09	22.87	23.50	1.156	0.399	22.1

Head Test Data(50%RB)											
Left cheek for ENDC	10	QPSK 25_0	20525/836.5	1:1	0.354	0.07	22.78	23.50	1.180	0.418	22.1
Left tilted for ENDC	10	QPSK 25_0	20525/836.5	1:1	0.326	0.03	22.78	23.50	1.180	0.385	22.1
Right cheek for ENDC	10	QPSK 25_0	20525/836.5	1:1	0.397	-0.02	22.78	23.50	1.180	**0.469**	22.1
Right tilted for ENDC	10	QPSK 25_0	20525/836.5	1:1	0.341	0.01	22.78	23.50	1.180	0.402	22.1
Body worn Test data(Separate 15mm 1RB)											
Front side for ENDC	10	QPSK 1_0	20525/836.5	1:1	0.128	0.03	24.54	25.50	1.247	0.160	22.1
Back side for ENDC	10	QPSK 1_0	20525/836.5	1:1	0.173	0.07	24.54	25.50	1.247	**0.216**	22.1
Body worn Test data(Separate 15mm 50%RB)											
Front side for ENDC	10	QPSK 25_0	20525/836.5	1:1	0.121	0.04	23.68	24.50	1.208	0.146	22.1
Back side for ENDC	10	QPSK 25_0	20525/836.5	1:1	0.166	-0.09	23.68	24.50	1.208	0.200	22.1
Hotspot Test data(Separate 10mm 1RB)											
Front side for ENDC	10	QPSK 1_0	20525/836.5	1:1	0.143	0.11	24.54	25.50	1.247	0.178	22.1
Back side for ENDC	10	QPSK 1_0	20525/836.5	1:1	0.180	-0.07	24.54	25.50	1.247	**0.225**	22.1
Left side for ENDC	10	QPSK 1_0	20525/836.5	1:1	0.115	0.02	24.54	25.50	1.247	0.143	22.1
Top side for ENDC	10	QPSK 1_0	20525/836.5	1:1	0.126	0.03	24.54	25.50	1.247	0.157	22.1
Hotspot Test data(Separate 10mm 50%RB)											
Front side for ENDC	10	QPSK 25_0	20525/836.5	1:1	0.143	-0.05	23.68	24.50	1.208	0.173	22.1
Back side for ENDC	10	QPSK 25_0	20525/836.5	1:1	0.175	0.07	23.68	24.50	1.208	0.211	22.1
Left side for ENDC	10	QPSK 25_0	20525/836.5	1:1	0.106	0.12	23.68	24.50	1.208	0.128	22.1
Top side for ENDC	10	QPSK 25_0	20525/836.5	1:1	0.118	0.03	23.68	24.50	1.208	0.143	22.1

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8.2.8 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	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Head Test Data(1RB)											
Left cheek	20	QPSK 1_0	21100/2535	1:1	0.254	0.07	25.09	25.50	1.099	0.279	22.2
Left tilted	20	QPSK 1_0	21100/2535	1:1	0.209	0.05	25.09	25.50	1.099	0.230	22.2
Right cheek	20	QPSK 1_0	21100/2535	1:1	0.431	0.06	25.09	25.50	1.099	0.474	22.2
Right tilted	20	QPSK 1_0	21100/2535	1:1	0.123	-0.18	25.09	25.50	1.099	0.135	22.2
Left cheek for ENDC	20	QPSK 1_0	21100/2535	1:1	0.207	0.01	24.08	25.00	1.236	0.256	22.2
Left tilted for ENDC	20	QPSK 1_0	21100/2535	1:1	0.166	0.09	24.08	25.00	1.236	0.205	22.2
Right cheek for ENDC	20	QPSK 1_0	21100/2535	1:1	0.357	0.04	24.08	25.00	1.236	0.441	22.2
Right tilted for ENDC	20	QPSK 1_0	21100/2535	1:1	0.171	-0.11	24.08	25.00	1.236	0.211	22.2
Head Test Data(50%RB)											
Left cheek	20	QPSK 50_0	21100/2535	1:1	0.240	0.06	24.21	24.50	1.069	0.257	22.2
Left tilted	20	QPSK 50_0	21100/2535	1:1	0.178	-0.13	24.21	24.50	1.069	0.190	22.2
Right cheek	20	QPSK 50_0	21100/2535	1:1	0.454	0.12	24.21	24.50	1.069	**0.485**	22.2
Right cheek CA_7C	20	QPSK 50_0	21100+20902/ 2535+2515.2	1:1	0.354	0.10	23.69	24.50	1.205	0.427	22.2
Right tilted	20	QPSK 50_0	21100/2535	1:1	0.196	0.09	24.21	24.50	1.069	0.210	22.2
Left cheek for ENDC	20	QPSK 50_0	21100/2535	1:1	0.186	0.08	23.21	24.00	1.199	0.223	22.2
Left tilted for ENDC	20	QPSK 50_0	21100/2535	1:1	0.152	0.13	23.21	24.00	1.199	0.182	22.2
Right cheek for ENDC	20	QPSK 50_0	21100/2535	1:1	0.345	0.02	23.21	24.00	1.199	0.414	22.2
Right tilted for ENDC	20	QPSK 50_0	21100/2535	1:1	0.165	-0.01	23.21	24.00	1.199	0.198	22.2
Body worn Test data(Separate 15mm 1RB)											
Front side	20	QPSK 1_0	21100/2535	1:1	0.464	0.12	25.09	25.50	1.099	0.510	22.2
Back side	20	QPSK 1_0	21100/2535	1:1	0.543	-0.08	25.09	25.50	1.099	0.597	22.2
Front side for ENDC	20	QPSK 1_0	21100/2535	1:1	0.304	0.03	24.08	25.00	1.236	0.376	22.2
Back side for ENDC	20	QPSK 1_0	21100/2535	1:1	0.380	-0.20	24.08	25.00	1.236	**0.470**	22.2
Body worn Test data(Separate 15mm 50%RB)											
Front side	20	QPSK 50_0	21100/2535	1:1	0.496	0.03	24.21	24.50	1.069	0.530	22.2
Back side	20	QPSK 50_0	21100/2535	1:1	0.581	0.09	24.21	24.50	1.069	**0.621**	22.2
Back side CA_7C	20	QPSK 50_0	21100+20902/ 2535+2515.2	1:1	0.477	0.09	23.69	24.50	1.205	0.575	22.2
Front side for ENDC	20	QPSK 50_0	21100/2535	1:1	0.277	0.04	23.21	24.00	1.199	0.332	22.2
Back side for ENDC	20	QPSK 50_0	21100/2535	1:1	0.356	0.01	23.21	24.00	1.199	0.427	22.2
Hotspot Test data(Separate 10mm 1RB)											
Front side	20	QPSK 1_0	21100/2535	1:1	0.409	0.09	21.13	21.50	1.089	0.445	22.2
Back side	20	QPSK 1_0	21100/2535	1:1	0.458	0.01	21.13	21.50	1.089	0.499	22.2
Left side	20	QPSK 1_0	21100/2535	1:1	0.066	-0.17	21.13	21.50	1.089	0.072	22.2
Rightt side	20	QPSK 1_0	21100/2535	1:1	0.351	-0.07	21.13	21.50	1.089	0.382	22.2
Bottom side	20	QPSK 1_0	21100/2535	1:1	0.433	0.12	21.13	21.50	1.089	0.472	22.2

Front side for ENDC	20	QPSK 1_0	21100/2535	1:1	0.312	-0.05	22.49	23.00	1.125	0.351	22.2
Back side for ENDC	20	QPSK 1_0	21100/2535	1:1	0.432	0.01	22.49	23.00	1.125	0.486	22.2
Left side for ENDC	20	QPSK 1_0	21100/2535	1:1	0.079	0.09	22.49	23.00	1.125	0.089	22.2
Rightt side for ENDC	20	QPSK 1_0	21100/2535	1:1	0.232	0.14	22.49	23.00	1.125	0.261	22.2
Bottom side for ENDC	20	QPSK 1_0	21100/2535	1:1	0.308	0.01	22.49	23.00	1.125	0.346	22.2
Hotspot Test data(Separate 10mm 50%RB)											
Front side	20	QPSK 50_0	21100/2535	1:1	0.429	0.14	21.12	21.50	1.091	0.468	22.2
Back side	20	QPSK 50_0	21100/2535	1:1	0.563	0.05	21.12	21.50	1.091	**0.614**	22.2
Back side CA_7C	20	QPSK 50_0	21100+20902/ 2535+2515.2	1:1	0.503	0.03	20.79	21.50	1.178	0.592	22.2
Left side	20	QPSK 50_0	21100/2535	1:1	0.065	0.07	21.12	21.50	1.091	0.071	22.2
Rightt side	20	QPSK 50_0	21100/2535	1:1	0.366	0.19	21.12	21.50	1.091	0.399	22.2
Bottom side	20	QPSK 50_0	21100/2535	1:1	0.452	0.14	21.12	21.50	1.091	0.493	22.2
Front side for ENDC	20	QPSK 50_0	21100/2535	1:1	0.304	0.07	22.35	23.00	1.161	0.353	22.2
Back side for ENDC	20	QPSK 50_0	21100/2535	1:1	0.418	0.02	22.35	23.00	1.161	0.485	22.2
Left side for ENDC	20	QPSK 50_0	21100/2535	1:1	0.071	-0.04	22.35	23.00	1.161	0.082	22.2
Rightt side for ENDC	20	QPSK 50_0	21100/2535	1:1	0.215	0.01	22.35	23.00	1.161	0.250	22.2
Bottom side for ENDC	20	QPSK 50_0	21100/2535	1:1	0.294	0.04	22.35	23.00	1.161	0.341	22.2
Ant 1 Test Record											
Test position	**BW.**	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test Data(1RB)											
Left cheek	20	QPSK 1_0	21100/2535	1:1	0.220	0.02	14.17	14.70	1.130	0.249	22.2
Left tilted	20	QPSK 1_0	21100/2535	1:1	0.282	0.03	14.17	14.70	1.130	0.319	22.2
Right cheek	20	QPSK 1_0	21100/2535	1:1	0.323	0.04	14.17	14.70	1.130	0.365	22.2
Right tilted	20	QPSK 1_0	21100/2535	1:1	0.330	0.19	14.17	14.70	1.130	0.373	22.2
Left cheek for ENDC	20	QPSK 1_0	21100/2535	1:1	0.219	0.01	15.09	15.50	1.099	0.241	22.2
Left tilted for ENDC	20	QPSK 1_0	21100/2535	1:1	0.275	0.02	15.09	15.50	1.099	0.302	22.2
Right cheek for ENDC	20	QPSK 1_0	21100/2535	1:1	0.347	-0.09	15.09	15.50	1.099	0.381	22.2
Right tilted for ENDC	20	QPSK 1_0	21100/2535	1:1	0.408	0.01	15.09	15.50	1.099	0.448	22.2
Head Test Data(50%RB)											
Left cheek	20	QPSK 50_0	21100/2535	1:1	0.230	-0.01	14.16	14.70	1.132	0.260	22.2
Left tilted	20	QPSK 50_0	21100/2535	1:1	0.298	0.05	14.16	14.70	1.132	0.337	22.2
Right cheek	20	QPSK 50_0	21100/2535	1:1	0.305	0.01	14.16	14.70	1.132	0.345	22.2
Right tilted	20	QPSK 50_0	21100/2535	1:1	0.396	0.01	14.16	14.70	1.132	0.448	22.2
Right tilted CA_7C	20	QPSK 50_0	21100+20902/ 2535+2515.2	1:1	0.231	0.03	13.77	14.70	1.239	0.286	22.2
Left cheek for ENDC	20	QPSK 50_0	21100/2535	1:1	0.226	0.02	14.94	15.50	1.138	0.257	22.2
Left tilted for ENDC	20	QPSK 50_0	21100/2535	1:1	0.286	0.03	14.94	15.50	1.138	0.325	22.2
Right cheek for ENDC	20	QPSK 50_0	21100/2535	1:1	0.353	0.09	14.94	15.50	1.138	0.402	22.2
Right tilted for ENDC	20	QPSK 50_0	21100/2535	1:1	0.424	0.11	14.94	15.50	1.138	**0.482**	22.2
Body worn Test data(Separate 15mm 1RB)											

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Front side	20	QPSK 1_0	21100/2535	1:1	0.085	0.05	23.96	24.70	1.186	0.101	22.2
Back side	20	QPSK 1_0	21100/2535	1:1	0.115	-0.04	23.96	24.70	1.186	0.136	22.2
Back side CA_7C	20	QPSK 1_0	21100+20902/ 2535+2515.2	1:1	0.093	-0.04	23.67	24.70	1.268	0.118	22.2
Front side for ENDC	20	QPSK 1_0	21100/2535	1:1	0.349	0.01	24.78	25.50	1.180	0.412	22.2
Back side for ENDC	20	QPSK 1_0	21100/2535	1:1	0.382	-0.05	24.78	25.50	1.180	**0.451**	22.2
Body worn Test data(Separate 15mm 50%RB)											
Front side	20	QPSK 50_0	21100/2535	1:1	0.090	0.04	23.16	23.70	1.132	0.102	22.2
Back side	20	QPSK 50_0	21100/2535	1:1	0.119	0.09	23.16	23.70	1.132	0.135	22.2
Front side for ENDC	20	QPSK 50_0	21100/2535	1:1	0.294	0.03	23.89	24.50	1.151	0.338	22.2
Back side for ENDC	20	QPSK 50_0	21100/2535	1:1	0.339	0.04	23.89	24.50	1.151	0.390	22.2
Hotspot Test data(Separate 10mm 1RB)											
Front side	20	QPSK 1_0	21100/2535	1:1	0.041	0.03	14.17	14.70	1.130	0.046	22.2
Back side	20	QPSK 1_0	21100/2535	1:1	0.051	0.01	14.17	14.70	1.130	0.058	22.2
Left side	20	QPSK 1_0	21100/2535	1:1	0.029	-0.12	14.17	14.70	1.13	0.033	22.2
Top side	20	QPSK 1_0	21100/2535	1:1	0.123	0.04	14.17	14.70	1.130	**0.139**	22.2
Top side CA_7C	20	QPSK 1_0	21100+20902/ 2535+2515.2	1:1	0.101	0.06	13.79	14.70	1.233	0.125	22.2
Front side for ENDC	20	QPSK 1_0	21100/2535	1:1	0.225	0.07	19.94	20.50	1.138	0.256	22.2
Back side for ENDC	20	QPSK 1_0	21100/2535	1:1	0.239	0.01	19.94	20.50	1.138	0.272	22.2
Left side for ENDC	20	QPSK 1_0	21100/2535	1:1	0.134	0.05	19.94	20.50	1.14	0.152	22.2
Top side for ENDC	20	QPSK 1_0	21100/2535	1:1	0.406	0.02	19.94	20.50	1.138	0.462	22.2
Hotspot Test data(Separate 10mm 50%RB)											
Front side	20	QPSK 50_0	21100/2535	1:1	0.046	0.07	14.16	14.70	1.132	0.052	22.2
Back side	20	QPSK 50_0	21100/2535	1:1	0.053	0.01	14.16	14.70	1.132	0.060	22.2
Left side	20	QPSK 50_0	21100/2535	1:1	0.031	0.09	14.16	14.70	1.132	0.035	22.2
Top side	20	QPSK 50_0	21100/2535	1:1	0.101	-0.05	14.16	14.70	1.132	0.114	22.2
Front side for ENDC	20	QPSK 50_0	21100/2535	1:1	0.221	0.14	19.92	20.50	1.143	0.253	22.2
Back side for ENDC	20	QPSK 50_0	21100/2535	1:1	0.228	-0.13	19.92	20.50	1.143	0.261	22.2
Left side for ENDC	20	QPSK 50_0	21100/2535	1:1	0.124	0.17	19.92	20.50	1.143	0.142	22.2
Top side for ENDC	20	QPSK 50_0	21100/2535	1:1	0.396	-0.15	19.92	20.50	1.143	0.453	22.2
Ant 2 Test Record											
Test position	**BW.**	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test Data(1RB)											
Left cheek	20	QPSK 1_0	21100/2535	1:1	0.278	0.09	17.98	18.60	1.153	0.321	22.3
Left tilted	20	QPSK 1_0	21100/2535	1:1	0.374	0.19	17.98	18.60	1.153	0.431	22.3
Right cheek	20	QPSK 1_0	21100/2535	1:1	0.710	0.07	17.98	18.60	1.153	0.819	22.3
Right cheek	20	QPSK 1_0	20850/2510	1:1	0.648	0.14	17.98	18.60	1.153	0.747	22.3
Right cheek	20	QPSK 1_0	21350/2560	1:1	0.773	0.07	17.98	18.60	1.153	0.892	22.3
Right tilted	20	QPSK 1_0	21100/2535	1:1	0.204	0.10	17.98	18.60	1.153	0.235	22.3
Left cheek for ENDC	20	QPSK 1_0	21100/2535	1:1	0.165	-0.13	21.74	22.50	1.191	0.197	22.3

Left tilted for ENDC	20	QPSK 1_0	21100/2535	1:1	0.058	-0.15	21.74	22.50	1.191	0.069	22.3
Right cheek for ENDC	20	QPSK 1_0	21100/2535	1:1	0.346	-0.09	21.74	22.50	1.191	0.412	22.3
Right tilted for ENDC	20	QPSK 1_0	21100/2535	1:1	0.131	-0.01	21.74	22.50	1.191	0.156	22.3
Head Test Data(50%RB)											
Left cheek	20	QPSK 50_0	21100/2535	1:1	0.296	0.14	17.96	18.60	1.159	0.343	22.3
Left tilted	20	QPSK 50_0	21100/2535	1:1	0.382	0.12	17.96	18.60	1.159	0.443	22.3
Right cheek	20	QPSK 50_0	21100/2535	1:1	0.751	0.08	17.96	18.60	1.159	0.870	22.3
Right cheek	20	QPSK 50_0	20850/2510	1:1	0.632	-0.12	17.96	18.60	1.159	0.732	22.3
Right cheek	20	QPSK 50_0	21350/2560	1:1	0.801	0.05	17.96	18.60	1.159	**0.928**	22.3
Right cheek repeat	20	QPSK 50_0	21350/2560	1:1	0.795	0.04	17.96	18.60	1.159	0.921	22.3
Right cheek CA_7C	20	QPSK 50_0	21350+21152/ 2560+2540.2	1:1	0.731	0.11	17.62	18.60	1.253	0.916	22.3
Right tilted	20	QPSK 50_0	21350/2560	1:1	0.220	0.18	17.96	18.60	1.159	0.255	22.3
Left cheek for ENDC	20	QPSK 50_0	21100/2535	1:1	0.173	0.12	21.66	22.50	1.213	0.210	22.3
Left tilted for ENDC	20	QPSK 50_0	21100/2535	1:1	0.062	0.09	21.66	22.50	1.213	0.075	22.3
Right cheek for ENDC	20	QPSK 50_0	21100/2535	1:1	0.355	0.02	21.66	22.50	1.213	0.431	22.3
Right tilted for ENDC	20	QPSK 50_0	21350/2560	1:1	0.124	-0.02	21.66	22.50	1.213	0.150	22.3
Head Test Data(100%RB)											
Right cheek	20	QPSK 100_0	21100/2535	1:1	0.715	0.06	17.94	18.60	1.164	0.832	22.3
Body worn Test data(Separate 15mm 1RB)											
Front side	20	QPSK 1_0	21100/2535	1:1	0.282	0.13	23.64	24.10	1.112	0.314	22.3
Back side	20	QPSK 1_0	21100/2535	1:1	0.418	-0.04	23.64	24.10	1.112	**0.465**	22.3
Back side	20	QPSK 1_0	21100+20902/ 2535+2515.2	1:1	0.351	0.02	23.12	24.10	1.253	0.440	22.3
Front side for ENDC	20	QPSK 1_0	21100/2535	1:1	0.068	0.16	23.71	25.50	1.510	0.103	22.3
Back side for ENDC	20	QPSK 1_0	21100/2535	1:1	0.074	0.00	23.71	25.50	1.510	0.112	22.3
Body worn Test data(Separate 15mm 50%RB)											
Front side	20	QPSK 50_0	21100/2535	1:1	0.206	0.17	22.76	23.10	1.081	0.223	22.3
Back side	20	QPSK 50_0	21100/2535	1:1	0.333	0.03	22.76	23.10	1.081	0.360	22.3
Front side for ENDC	20	QPSK 50_0	21100/2535	1:1	0.062	-0.05	22.76	24.50	1.493	0.093	22.3
Back side for ENDC	20	QPSK 50_0	21100/2535	1:1	0.067	0.01	22.76	24.50	1.493	0.100	22.3
Hotspot Test data(Separate 10mm 1RB)											
Front side	20	QPSK 1_0	21100/2535	1:1	0.177	0.18	17.98	18.60	1.153	0.204	22.3
Back side	20	QPSK 1_0	21100/2535	1:1	0.225	0.04	17.98	18.60	1.153	0.260	22.3
Left side	20	QPSK 1_0	21100/2535	1:1	0.186	0.05	17.98	18.60	1.153	0.215	22.3
Front side for ENDC	20	QPSK 1_0	21100/2535	1:1	0.162	0.11	23.71	25.50	1.510	0.245	22.3
Back side for ENDC	20	QPSK 1_0	21100/2535	1:1	0.189	-0.16	23.71	25.50	1.510	0.285	22.3
Left side for ENDC	20	QPSK 1_0	21100/2535	1:1	0.191	-0.13	23.71	25.50	1.510	0.288	22.3
Hotspot Test data(Separate 10mm 50%RB)											
Front side	20	QPSK 50_0	21100/2535	1:1	0.191	0.17	17.96	18.60	1.159	0.221	22.3
Back side	20	QPSK 50_0	21100/2535	1:1	0.252	-0.15	17.96	18.60	1.159	**0.292**	22.3
Back side CA_7C	20	QPSK 50_0	21100+20902/ 2535+2515.2	1:1	0.212	0.04	17.62	18.60	1.253	0.266	22.3

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Left side	20	QPSK 50_0	21100/2535	1:1	0.228	-0.17	17.96	18.60	1.159	0.264	22.3
Front side for ENDC	20	QPSK 50_0	21100/2535	1:1	0.160	0.02	22.76	24.50	1.493	0.239	22.3
Back side for ENDC	20	QPSK 50_0	21100/2535	1:1	0.181	-0.17	22.76	24.50	1.493	0.270	22.3
Left side for ENDC	20	QPSK 50_0	21100/2535	1:1	0.186	0.04	22.76	24.50	1.493	0.278	22.3
Ant 3 Test Record											
Test position	**BW.**	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test Data(1RB)											
Left cheek	20	QPSK 1_0	21100/2535	1:1	0.094	0.02	23.56	24.10	1.132	**0.106**	22.3
Left cheek CA_7C	20	QPSK 1_0	21100+20902/ 2535+2515.2	1:1	0.072	-0.09	23.07	24.10	1.268	0.091	22.3
Left tilted	20	QPSK 1_0	21100/2535	1:1	0.036	0.12	23.56	24.10	1.132	0.041	22.3
Right cheek	20	QPSK 1_0	21100/2535	1:1	0.045	0.09	23.56	24.10	1.132	0.050	22.3
Right tilted	20	QPSK 1_0	21100/2535	1:1	0.038	0.14	23.56	24.10	1.132	0.043	22.3
Left cheek for ENDC	20	QPSK 1_0	21100/2535	1:1	0.167	-0.08	23.14	24.50	1.368	0.228	22.3
Left tilted for ENDC	20	QPSK 1_0	21100/2535	1:1	0.077	0.05	23.14	24.50	1.368	0.105	22.3
Right cheek for ENDC	20	QPSK 1_0	21100/2535	1:1	0.112	-0.05	23.14	24.50	1.368	0.153	22.3
Right tilted for ENDC	20	QPSK 1_0	21100/2535	1:1	0.119	0.10	23.14	24.50	1.368	0.163	22.3
Head Test Data(50%RB)											
Left cheek	20	QPSK 50_0	21100/2535	1:1	0.090	0.02	22.74	23.10	1.086	0.097	22.3
Left tilted	20	QPSK 50_0	21100/2535	1:1	0.045	0.02	22.74	23.10	1.086	0.049	22.3
Right cheek	20	QPSK 50_0	21100/2535	1:1	0.046	-0.07	22.74	23.10	1.086	0.050	22.3
Right tilted	20	QPSK 50_0	21100/2535	1:1	0.043	0.01	22.74	23.10	1.086	0.046	22.3
Left cheek for ENDC	20	QPSK 50_0	21100/2535	1:1	0.153	-0.17	23.09	24.50	1.384	0.212	22.3
Left tilted for ENDC	20	QPSK 50_0	21100/2535	1:1	0.068	-0.12	23.09	24.50	1.384	0.094	22.3
Right cheek for ENDC	20	QPSK 50_0	21100/2535	1:1	0.099	-0.06	23.09	24.50	1.384	0.137	22.3
Right tilted for ENDC	20	QPSK 50_0	21100/2535	1:1	0.101	-0.09	23.09	24.50	1.384	0.140	22.3
Body worn Test data(Separate 15mm 1RB)											
Front side	20	QPSK 1_0	21100/2535	1:1	0.142	-0.17	17.56	18.10	1.132	0.161	22.3
Back side	20	QPSK 1_0	21100/2535	1:1	0.225	0.08	17.56	18.10	1.132	**0.255**	22.3
Back side CA_7C	20	QPSK 1_0	21100+20902/ 2535+2515.2	1:1	0.188	0.04	17.07	18.10	1.268	0.238	22.3
Front side for ENDC	20	QPSK 1_0	21100/2535	1:1	0.146	0.00	23.14	24.50	1.368	0.200	22.3
Back side for ENDC	20	QPSK 1_0	21100/2535	1:1	0.269	0.02	23.14	24.50	1.368	0.368	22.3
Body worn Test data(Separate 15mm 50%RB)											
Front side	20	QPSK 50_0	21100/2535	1:1	0.099	0.16	17.74	18.10	1.086	0.108	22.3
Back side	20	QPSK 50_0	21100/2535	1:1	0.213	0.05	17.74	18.10	1.086	0.231	22.3
Front side for ENDC	20	QPSK 50_0	21100/2535	1:1	0.142	-0.12	23.09	24.50	1.384	0.196	22.3
Back side for ENDC	20	QPSK 50_0	21100/2535	1:1	0.257	0.03	23.09	24.50	1.384	0.356	22.3
Hotspot Test data(Separate 10mm 1RB)											
Front side	20	QPSK 1_0	21100/2535	1:1	0.097	0.04	19.97	20.60	1.156	0.112	22.3
Back side	20	QPSK 1_0	21100/2535	1:1	0.258	-0.07	19.97	20.60	1.156	0.298	22.3

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Left side	20	QPSK 1_0	21100/2535	1:1	0.192	0.06	19.97	20.60	1.156	0.222	22.3
Bottom side	20	QPSK 1_0	21100/2535	1:1	0.066	0.06	19.97	20.60	1.156	0.076	22.3
Front side for ENDC	20	QPSK 1_0	21100/2535	1:1	0.147	-0.12	21.72	22.50	1.197	0.176	22.3
Back side for ENDC	20	QPSK 1_0	21100/2535	1:1	0.401	0.05	21.72	22.50	1.197	**0.480**	22.3
Left side for ENDC	20	QPSK 1_0	21100/2535	1:1	0.351	-0.09	21.72	22.50	1.197	0.420	22.3
Bottom side for ENDC	20	QPSK 1_0	21100/2535	1:1	0.087	-0.07	21.72	22.50	1.197	0.104	22.3
Hotspot Test data(Separate 10mm 50%RB)											
Front side	20	QPSK 50_0	21100/2535	1:1	0.101	0.14	19.94	20.60	1.164	0.118	22.3
Back side	20	QPSK 50_0	21100/2535	1:1	0.309	-0.03	19.94	20.60	1.164	**0.360**	22.3
Back side CA_7C	20	QPSK 50_0	21100+20902/ 2535+2515.2	1:1	0.265	0.04	19.63	20.60	1.250	0.331	22.3
Left side	20	QPSK 50_0	21100/2535	1:1	0.220	0.02	19.94	20.60	1.164	0.256	22.3
Bottom side	20	QPSK 50_0	21100/2535	1:1	0.065	-0.13	19.94	20.60	1.164	0.076	22.3
Front side for ENDC	20	QPSK 50_0	21100/2535	1:1	0.142	-0.09	21.68	22.50	1.208	0.172	22.3
Back side for ENDC	20	QPSK 50_0	21100/2535	1:1	0.386	-0.13	21.68	22.50	1.208	0.466	22.3
Left side for ENDC	20	QPSK 50_0	21100/2535	1:1	0.353	-0.02	21.68	22.50	1.208	0.426	22.3
Bottom side for ENDC	20	QPSK 50_0	21100/2535	1:1	0.085	-0.19	21.68	22.50	1.208	0.103	22.3

Table 17：SAR of LTE Band 7 for Head and Body.

Test Position	Channel/ Frequency	Measured SAR (1g)	1st Repeated	Ratio	2nd Repeated	3rd Repeated
	(MHz)		SAR (1g)		SAR (1g)	SAR (1g)
Right cheek	21350/2560	0.801	0.795	1.008	N/A	N/A
Note: 1) When the original highest measured SAR is ≥ 0.80 W/kg, the measurement was repeated once.						
2) A second repeated measurement was preformed only if the ratio of largest to smallest SAR for the original and first repeated measurements was > 1.20 or when the original or repeated measurement was ≥ 1.45 W/kg (~ 10% from the 1-g SAR limit).						
3) A third repeated measurement was preformed only if the original, first or second repeated measurement was ⩾ 1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20.						
4) Repeated measurements are not required when the original highest measured SAR is < 0.80 W/kg						

8.2.9 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	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Head Test Data(1RB)											
Left cheek	10	QPSK 1_0	23095/707.5	1:1	0.111	0.14	24.35	25.50	1.303	0.145	21.9
Left tilted	10	QPSK 1_0	23095/707.5	1:1	0.068	0.13	24.35	25.50	1.303	0.089	21.9
Right cheek	10	QPSK 1_0	23095/707.5	1:1	0.087	0.030	24.35	25.50	1.303	0.114	21.9
Right tilted	10	QPSK 1_0	23095/707.5	1:1	0.057	0.07	24.35	25.50	1.303	0.074	21.9
Left cheek for ENDC	10	QPSK 1_0	23095/707.5	1:1	0.084	-0.03	24.19	25.50	1.352	0.114	21.9
Left tilted for ENDC	10	QPSK 1_0	23095/707.5	1:1	0.050	-0.10	24.19	25.50	1.352	0.068	21.9
Right cheek for ENDC	10	QPSK 1_0	23095/707.5	1:1	0.102	0.040	24.19	25.50	1.352	**0.138**	21.9
Right tilted for ENDC	10	QPSK 1_0	23095/707.5	1:1	0.014	-0.19	24.19	25.50	1.352	0.019	21.9
Head Test Data(50%RB)											
Left cheek	10	QPSK 25_0	23095/707.5	1:1	0.133	0.05	23.48	24.50	1.265	**0.168**	21.9
Left tilted	10	QPSK 25_0	23095/707.5	1:1	0.063	-0.08	23.48	24.50	1.265	0.080	21.9
Right cheek	10	QPSK 25_0	23095/707.5	1:1	0.101	0.170	23.48	24.50	1.265	0.128	21.9
Right tilted	10	QPSK 25_0	23095/707.5	1:1	0.053	0.16	23.48	24.50	1.265	0.067	21.9
Left cheek for ENDC	10	QPSK 25_0	23095/707.5	1:1	0.076	0.17	23.28	24.50	1.324	0.101	21.9
Left tilted for ENDC	10	QPSK 25_0	23095/707.5	1:1	0.042	0.16	23.28	24.50	1.324	0.056	21.9
Right cheek for ENDC	10	QPSK 25_0	23095/707.5	1:1	0.094	0.19	23.28	24.50	1.324	0.124	21.9
Right tilted for ENDC	10	QPSK 25_0	23095/707.5	1:1	0.010	0.17	23.28	24.50	1.324	0.013	21.9
Body worn Test data(Separate 15mm 1RB)											
Front side	10	QPSK 1_0	23095/707.5	1:1	0.135	-0.07	24.35	25.50	1.303	0.176	21.9
Back side	10	QPSK 1_0	23095/707.5	1:1	0.196	0.02	24.35	25.50	1.303	**0.255**	21.9
Front side for ENDC	10	QPSK 1_0	23095/707.5	1:1	0.101	0.04	24.19	25.50	1.352	0.137	21.9
Back side for ENDC	10	QPSK 1_0	23095/707.5	1:1	0.204	0.02	24.19	25.50	1.352	**0.276**	21.9
Body worn Test data(Separate 15mm 50%RB)											
Front side	10	QPSK 25_0	23095/707.5	1:1	0.102	0.08	23.48	24.50	1.265	0.129	21.9
Back side	10	QPSK 25_0	23095/707.5	1:1	0.171	0.02	23.48	24.50	1.265	0.216	21.9
Front side for ENDC	10	QPSK 25_0	23095/707.5	1:1	0.086	0.11	23.28	24.50	1.324	0.114	21.9
Back side for ENDC	10	QPSK 25_0	23095/707.5	1:1	0.192	0.18	23.28	24.50	1.324	0.254	21.9
Hotspot Test data(Separate 10mm 1RB)											
Front side	10	QPSK 1_0	23095/707.5	1:1	0.098	0.17	24.35	25.50	1.303	0.127	21.9
Back side	10	QPSK 1_0	23095/707.5	1:1	0.191	0.07	24.35	25.50	1.303	**0.249**	21.9
Left side	10	QPSK 1_0	23095/707.5	1:1	0.170	-0.03	24.35	25.50	1.303	0.222	21.9
Rightt side	10	QPSK 1_0	23095/707.5	1:1	0.153	0.14	24.35	25.50	1.303	0.199	21.9
Bottom side	10	QPSK 1_0	23095/707.5	1:1	0.094	0.09	24.35	25.50	1.303	0.122	21.9
Front side for ENDC	10	QPSK 1_0	23095/707.5	1:1	0.105	0.08	24.19	25.50	1.352	0.142	21.9
Back side for ENDC	10	QPSK 1_0	23095/707.5	1:1	0.226	0.04	24.19	25.50	1.352	**0.306**	21.9

Left side for ENDC	10	QPSK 1_0	23095/707.5	1:1	0.162	0.10	24.19	25.50	1.352	0.219	21.9
Rightt side for ENDC	10	QPSK 1_0	23095/707.5	1:1	0.130	0.03	24.19	25.50	1.352	0.176	21.9
Bottom side for ENDC	10	QPSK 1_0	23095/707.5	1:1	0.109	0.13	24.19	25.50	1.352	0.147	21.9
Hotspot Test data(Separate 10mm 50%RB)											
Front side	10	QPSK 25_0	23095/707.5	1:1	0.111	-0.14	23.48	24.50	1.265	0.140	21.9
Back side	10	QPSK 25_0	23095/707.5	1:1	0.165	0.02	23.48	24.50	1.265	0.209	21.9
Left side	10	QPSK 25_0	23095/707.5	1:1	0.146	0.11	23.48	24.50	1.265	0.185	21.9
Rightt side	10	QPSK 25_0	23095/707.5	1:1	0.135	0.14	23.48	24.50	1.265	0.171	21.9
Bottom side	10	QPSK 25_0	23095/707.5	1:1	0.085	0.06	23.48	24.50	1.265	0.108	21.9
Front side for ENDC	10	QPSK 25_0	23095/707.5	1:1	0.099	-0.05	23.28	24.50	1.324	0.131	21.9
Back side for ENDC	10	QPSK 25_0	23095/707.5	1:1	0.211	0.17	23.28	24.50	1.324	0.279	21.9
Left side for ENDC	10	QPSK 25_0	23095/707.5	1:1	0.146	0.01	23.28	24.50	1.324	0.193	21.9
Rightt side for ENDC	10	QPSK 25_0	23095/707.5	1:1	0.125	0.18	23.28	24.50	1.324	0.166	21.9
Bottom side for ENDC	10	QPSK 25_0	23095/707.5	1:1	0.101	0.15	23.28	24.50	1.324	0.134	21.9
Ant 1 Test Record											
Test position	**BW.**	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test Data(1RB)											
Left cheek	10	QPSK 1_0	23095/707.5	1:1	0.373	0.03	23.51	24.80	1.346	0.502	21.9
Left tilted	10	QPSK 1_0	23095/707.5	1:1	0.286	0.04	23.51	24.80	1.346	0.385	21.9
Right cheek	10	QPSK 1_0	23095/707.5	1:1	0.367	-0.06	23.51	24.80	1.346	**0.494**	21.9
Right tilted	10	QPSK 1_0	23095/707.5	1:1	0.312	0.09	23.51	24.80	1.346	0.420	21.9
Left cheek for ENDC	10	QPSK 1_0	23095/707.5	1:1	0.261	0.02	23.94	25.00	1.276	0.333	21.9
Left tilted for ENDC	10	QPSK 1_0	23095/707.5	1:1	0.260	0.01	23.94	25.00	1.276	0.332	21.9
Right cheek for ENDC	10	QPSK 1_0	23095/707.5	1:1	0.294	-0.18	23.94	25.00	1.276	**0.375**	21.9
Right tilted for ENDC	10	QPSK 1_0	23095/707.5	1:1	0.284	-0.05	23.94	25.00	1.276	0.363	21.9
Head Test Data(50%RB)											
Left cheek	10	QPSK 25_0	23095/707.5	1:1	0.341	0.01	22.59	23.80	1.321	0.451	21.9
Left tilted	10	QPSK 25_0	23095/707.5	1:1	0.241	0.01	22.59	23.80	1.321	0.318	21.9
Right cheek	10	QPSK 25_0	23095/707.5	1:1	0.356	0.06	22.59	23.80	1.321	0.470	21.9
Right tilted	10	QPSK 25_0	23095/707.5	1:1	0.293	0.05	22.59	23.80	1.321	0.387	21.9
Left cheek for ENDC	10	QPSK 25_0	23095/707.5	1:1	0.246	-0.12	23.01	24.00	1.256	0.309	21.9
Left tilted for ENDC	10	QPSK 25_0	23095/707.5	1:1	0.255	-0.15	23.01	24.00	1.256	0.320	21.9
Right cheek for ENDC	10	QPSK 25_0	23095/707.5	1:1	0.286	0.11	23.01	24.00	1.256	0.359	21.9
Right tilted for ENDC	10	QPSK 25_0	23095/707.5	1:1	0.284	-0.06	23.01	24.00	1.256	0.357	21.9
Body worn Test data(Separate 15mm 1RB)											
Front side	10	QPSK 1_0	23095/707.5	1:1	0.079	-0.03	23.51	24.80	1.346	0.106	21.9
Back side	10	QPSK 1_0	23095/707.5	1:1	0.109	-0.04	23.51	24.80	1.346	**0.147**	21.9
Front side for ENDC	10	QPSK 1_0	23095/707.5	1:1	0.054	0.03	23.94	25.00	1.276	0.069	21.9
Back side for ENDC	10	QPSK 1_0	23095/707.5	1:1	0.186	-0.01	23.94	25.00	1.276	**0.237**	21.9
Body worn Test data(Separate 15mm 50%RB)											

Front side	10	QPSK 25_0	23095/707.5	1:1	0.073	0.01	22.59	23.80	1.321	0.096	21.9
Back side	10	QPSK 25_0	23095/707.5	1:1	0.094	0.08	22.59	23.80	1.321	0.124	21.9
Front side for ENDC	10	QPSK 25_0	23095/707.5	1:1	0.049	0.01	23.01	24.00	1.256	0.062	21.9
Back side for ENDC	10	QPSK 25_0	23095/707.5	1:1	0.182	0.14	23.01	24.00	1.256	0.229	21.9
Hotspot Test data(Separate 10mm 1RB)											
Front side	10	QPSK 1_0	23095/707.5	1:1	0.066	0.04	23.51	24.80	1.346	0.089	21.9
Back side	10	QPSK 1_0	23095/707.5	1:1	0.128	-0.09	23.51	24.80	1.346	0.172	21.9
Left side	10	QPSK 1_0	23095/707.5	1:1	0.095	0.01	23.51	24.80	1.346	0.128	21.9
Top side	10	QPSK 1_0	23095/707.5	1:1	0.049	0.02	23.51	24.80	1.346	0.066	21.9
Front side for ENDC	10	QPSK 1_0	23095/707.5	1:1	0.064	0.12	23.94	25.00	1.276	0.082	21.9
Back side for ENDC	10	QPSK 1_0	23095/707.5	1:1	0.200	0.04	23.94	25.00	1.276	**0.255**	21.9
Left side for ENDC	10	QPSK 1_0	23095/707.5	1:1	0.068	-0.17	23.94	25.00	1.276	0.087	21.9
Top side for ENDC	10	QPSK 1_0	23095/707.5	1:1	0.053	-0.12	23.94	25.00	1.276	0.068	21.9
Hotspot Test data(Separate 10mm 50%RB)											
Front side	10	QPSK 25_0	23095/707.5	1:1	0.072	-0.02	22.59	23.80	1.321	0.095	21.9
Back side	10	QPSK 25_0	23095/707.5	1:1	0.143	0.01	22.59	23.80	1.321	**0.189**	21.9
Left side	10	QPSK 25_0	23095/707.5	1:1	0.087	0.03	22.59	23.80	1.321	0.115	21.9
Top side	10	QPSK 25_0	23095/707.5	1:1	0.057	0.08	22.59	23.80	1.321	0.075	21.9
Front side for ENDC	10	QPSK 25_0	23095/707.5	1:1	0.061	0.09	23.01	24.00	1.256	0.077	21.9
Back side for ENDC	10	QPSK 25_0	23095/707.5	1:1	0.192	-0.17	23.01	24.00	1.256	0.241	21.9
Left side for ENDC	10	QPSK 25_0	23095/707.5	1:1	0.061	0.10	23.01	24.00	1.256	0.077	21.9
Top side for ENDC	10	QPSK 25_0	23095/707.5	1:1	0.048	0.12	23.01	24.00	1.256	0.060	21.9

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

8.2.10SAR 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**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test Data(1RB)											
Left cheek	10	QPSK 1_0	23230/782	1:1	0.113	-0.14	24.55	25.50	1.245	0.141	22.0
Left tilted	10	QPSK 1_0	23230/782	1:1	0.062	0.12	24.55	25.50	1.245	0.077	22.0
Right cheek	10	QPSK 1_0	23230/782	1:1	0.127	0.01	24.55	25.50	1.245	**0.158**	22.0
Right tilted	10	QPSK 1_0	23230/782	1:1	0.048	-0.03	24.55	25.50	1.245	0.060	22.0
Head Test Data(50%RB)											
Left cheek	10	QPSK 25_0	23230/782	1:1	0.096	-0.03	23.63	24.50	1.222	0.117	22.0
Left tilted	10	QPSK 25_0	23230/782	1:1	0.058	0.13	23.63	24.50	1.222	0.071	22.0
Right cheek	10	QPSK 25_0	23230/782	1:1	0.098	0.08	23.63	24.50	1.222	0.120	22.0
Right tilted	10	QPSK 25_0	23230/782	1:1	0.042	0.15	23.63	24.50	1.222	0.052	22.0
Body worn Test data(Separate 15mm 1RB)											
Front side	10	QPSK 1_0	23230/782	1:1	0.091	0.14	24.55	25.50	1.245	0.113	22.0
Back side	10	QPSK 1_0	23230/782	1:1	0.162	-0.07	24.55	25.50	1.245	**0.202**	22.0
Body worn Test data(Separate 15mm 50%RB)											
Front side	10	QPSK 25_0	23230/782	1:1	0.067	-0.03	23.63	24.50	1.222	0.082	22.0
Back side	10	QPSK 25_0	23230/782	1:1	0.135	0.08	23.63	24.50	1.222	0.165	22.0
Hotspot Test data(Separate 10mm 1RB)											
Front side	10	QPSK 1_0	23230/782	1:1	0.097	-0.06	24.55	25.50	1.245	0.121	22.0
Back side	10	QPSK 1_0	23230/782	1:1	0.213	0.01	24.55	25.50	1.245	**0.265**	22.0
Left side	10	QPSK 1_0	23230/782	1:1	0.154	0.12	24.55	25.50	1.245	0.192	22.0
Rightt side	10	QPSK 1_0	23230/782	1:1	0.164	0.05	24.55	25.50	1.245	0.204	22.0
Bottom side	10	QPSK 1_0	23230/782	1:1	0.121	0.04	24.55	25.50	1.245	0.151	22.0
Hotspot Test data(Separate 10mm 50%RB)											
Front side	10	QPSK 25_0	23230/782	1:1	0.095	-0.17	23.63	24.50	1.222	0.115	22.0
Back side	10	QPSK 25_0	23230/782	1:1	0.198	0.05	23.63	24.50	1.222	0.242	22.0
Left side	10	QPSK 25_0	23230/782	1:1	0.126	0.11	23.63	24.50	1.222	0.154	22.0
Rightt side	10	QPSK 25_0	23230/782	1:1	0.127	-0.08	23.63	24.50	1.222	0.155	22.0
Bottom side	10	QPSK 25_0	23230/782	1:1	0.103	-0.13	23.63	24.50	1.222	0.126	22.0
Ant 1 Test Record											
Test position	**BW.**	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test Data(1RB)											
Left cheek	10	QPSK 1_0	23230/782	1:1	0.557	-0.01	23.75	24.90	1.303	0.726	22.0
Left tilted	10	QPSK 1_0	23230/782	1:1	0.499	-0.03	23.75	24.90	1.303	0.650	22.0
Right cheek	10	QPSK 1_0	23230/782	1:1	0.643	0.13	23.75	24.90	1.303	**0.838**	22.0
Right tilted	10	QPSK 1_0	23230/782	1:1	0.486	-0.07	23.75	24.90	1.303	0.633	22.0

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Head Test Data(50%RB)											
Left cheek	10	QPSK 25_0	23230/782	1:1	0.509	0.01	22.92	23.90	1.253	0.638	22.0
Left tilted	10	QPSK 25_0	23230/782	1:1	0.410	0.08	22.92	23.90	1.253	0.514	22.0
Right cheek	10	QPSK 25_0	23230/782	1:1	0.558	0.09	22.92	23.90	1.253	0.699	22.0
Right tilted	10	QPSK 25_0	23230/782	1:1	0.534	0.04	22.92	23.90	1.253	0.669	22.0
Head Test Data(100%RB)											
Right cheek	10	QPSK 50_0	23230/782	1:1	0.548	0.08	22.83	23.90	1.279	0.701	22.0
Body worn Test data(Separate 15mm 1RB)											
Front side	10	QPSK 1_0	23230/782	1:1	0.143	0.02	23.75	24.90	1.303	0.186	22.0
Back side	10	QPSK 1_0	23230/782	1:1	0.189	-0.01	23.75	24.90	1.303	**0.246**	22.0
Body worn Test data(Separate 15mm 50%RB)											
Front side	10	QPSK 25_0	23230/782	1:1	0.125	0.05	22.92	23.90	1.253	0.157	22.0
Back side	10	QPSK 25_0	23230/782	1:1	0.159	-0.11	22.92	23.90	1.253	0.199	22.0
Hotspot Test data(Separate 10mm 1RB)											
Front side	10	QPSK 1_0	23230/782	1:1	0.150	0.07	23.75	24.90	1.303	0.195	22.0
Back side	10	QPSK 1_0	23230/782	1:1	0.212	0.12	23.75	24.90	1.303	0.276	22.0
Left side	10	QPSK 1_0	23230/782	1:1	0.169	0.02	23.75	24.90	1.303	0.220	22.0
Top side	10	QPSK 1_0	23230/782	1:1	0.107	0.03	23.75	24.90	1.303	0.139	22.0
Hotspot Test data(Separate 10mm 50%RB)											
Front side	10	QPSK 25_0	23230/782	1:1	0.136	0.07	22.92	23.90	1.253	0.170	22.0
Back side	10	QPSK 25_0	23230/782	1:1	0.237	0.09	22.92	23.90	1.253	**0.297**	22.0
Left side	10	QPSK 25_0	23230/782	1:1	0.146	-0.12	22.92	23.90	1.253	0.183	22.0
Top side	10	QPSK 25_0	23230/782	1:1	0.109	0.03	22.92	23.90	1.253	0.137	22.0

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

8.2.11 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**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test Data(1RB)											
Left cheek	15	QPSK 1_0	26865/831.5	1:1	0.114	0.08	24.36	25.50	1.300	**0.148**	22.2
Left tilted	15	QPSK 1_0	26865/831.5	1:1	0.066	-0.13	24.36	25.50	1.300	0.086	22.2
Right cheek	15	QPSK 1_0	26865/831.5	1:1	0.092	0.05	24.36	25.50	1.300	0.119	22.2
Right tilted	15	QPSK 1_0	26865/831.5	1:1	0.055	0.15	24.36	25.50	1.300	0.072	22.2
Head Test Data(50%RB)											
Left cheek	15	QPSK 36_0	26865/831.5	1:1	0.096	0.09	23.47	24.50	1.268	0.121	22.2
Left tilted	15	QPSK 36_0	26865/831.5	1:1	0.062	-0.07	23.47	24.50	1.268	0.079	22.2
Right cheek	15	QPSK 36_0	26865/831.5	1:1	0.082	0.12	23.47	24.50	1.268	0.103	22.2
Right tilted	15	QPSK 36_0	26865/831.5	1:1	0.043	0.18	23.47	24.50	1.268	0.054	22.2
Body worn Test data(Separate 15mm 1RB)											
Front side	15	QPSK 1_0	26865/831.5	1:1	0.069	0.15	24.36	25.50	1.300	0.090	22.2
Back side	15	QPSK 1_0	26865/831.5	1:1	0.138	0.11	24.36	25.50	1.300	**0.179**	22.2
Body worn Test data(Separate 15mm 50%RB)											
Front side	15	QPSK 36_0	26865/831.5	1:1	0.061	0.04	23.47	24.50	1.268	0.078	22.2
Back side	15	QPSK 36_0	26865/831.5	1:1	0.124	0.03	23.47	24.50	1.268	0.157	22.2
Hotspot Test data(Separate 10mm 1RB)											
Front side	15	QPSK 1_0	26865/831.5	1:1	0.082	0.06	24.36	25.50	1.300	0.106	22.2
Back side	15	QPSK 1_0	26865/831.5	1:1	0.187	-0.11	24.36	25.50	1.300	**0.243**	22.2
Left side	15	QPSK 1_0	26865/831.5	1:1	0.123	0.01	24.36	25.50	1.300	0.160	22.2
Rightt side	15	QPSK 1_0	26865/831.5	1:1	0.117	0.03	24.36	25.50	1.300	0.152	22.2
Bottom side	15	QPSK 1_0	26865/831.5	1:1	0.118	0.08	24.36	25.50	1.300	0.153	22.2
Hotspot Test data(Separate 10mm 50%RB)											
Front side	15	QPSK 36_0	26865/831.5	1:1	0.089	-0.12	23.47	24.50	1.268	0.112	22.2
Back side	15	QPSK 36_0	26865/831.5	1:1	0.180	0.03	23.47	24.50	1.268	0.228	22.2
Left side	15	QPSK 36_0	26865/831.5	1:1	0.096	0.19	23.47	24.50	1.268	0.122	22.2
Rightt side	15	QPSK 36_0	26865/831.5	1:1	0.115	-0.11	23.47	24.50	1.268	0.146	22.2
Bottom side	15	QPSK 36_0	26865/831.5	1:1	0.097	0.14	23.47	24.50	1.268	0.122	22.2
Ant 1 Test Record											
Test position	**BW.**	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test Data(1RB)											
Left cheek	15	QPSK 1_0	26865/831.5	1:1	0.731	0.01	23.90	25.40	1.413	1.033	22.2
Left tilted	15	QPSK 1_0	26865/831.5	1:1	0.626	0.06	23.90	25.40	1.413	0.884	22.2
Right cheek	15	QPSK 1_0	26865/831.5	1:1	0.767	0.02	23.90	25.40	1.413	**1.083**	22.2
Right tilted	15	QPSK 1_0	26865/831.5	1:1	0.657	0.01	23.90	25.40	1.413	0.928	22.2

Head Test Data(50%RB)											
Left cheek	15	QPSK 36_0	26865/831.5	1:1	0.594	0.04	22.80	24.40	1.445	0.859	22.2
Left tilted	15	QPSK 36_0	26865/831.5	1:1	0.508	0.08	22.80	24.40	1.445	0.734	22.2
Right cheek	15	QPSK 36_0	26865/831.5	1:1	0.658	0.08	22.80	24.40	1.445	0.951	22.2
Right tilted	15	QPSK 36_0	26865/831.5	1:1	0.525	0.05	22.80	24.40	1.445	0.759	22.2
Head Test Data(100%RB)											
Left cheek	15	QPSK 75_0	26865/831.5	1:1	0.570	0.01	22.79	24.40	1.449	0.826	22.2
Left tilted	15	QPSK 75_0	26865/831.5	1:1	0.502	0.09	22.79	24.40	1.449	0.727	22.2
Right cheek	15	QPSK 75_0	26865/831.5	1:1	0.640	0.04	22.79	24.40	1.449	0.927	22.2
Right tilted	15	QPSK 75_0	26865/831.5	1:1	0.517	0.07	22.79	24.40	1.449	0.749	22.2
Body worn Test data(Separate 15mm 1RB)											
Front side	15	QPSK 1_0	26865/831.5	1:1	0.121	0.04	23.90	25.40	1.413	0.171	22.2
Back side	15	QPSK 1_0	26865/831.5	1:1	0.162	0.03	23.90	25.40	1.413	**0.229**	22.2
Body worn Test data(Separate 15mm 50%RB)											
Front side	15	QPSK 36_0	26865/831.5	1:1	0.104	0.09	22.80	24.40	1.445	0.150	22.2
Back side	15	QPSK 36_0	26865/831.5	1:1	0.138	-0.11	22.80	24.40	1.445	0.199	22.2
Hotspot Test data(Separate 10mm 1RB)											
Front side	15	QPSK 1_0	26865/831.5	1:1	0.184	0.07	23.90	25.40	1.413	0.260	22.2
Back side	15	QPSK 1_0	26865/831.5	1:1	0.268	0.08	23.90	25.40	1.413	0.379	22.2
Left side	15	QPSK 1_0	26865/831.5	1:1	0.124	0.01	23.90	25.40	1.413	0.175	22.2
Top side	15	QPSK 1_0	26865/831.5	1:1	0.148	0.08	23.90	25.40	1.413	0.209	22.2
Hotspot Test data(Separate 10mm 50%RB)											
Front side	15	QPSK 36_0	26865/831.5	1:1	0.163	0.09	22.80	24.40	1.445	0.236	22.2
Back side	15	QPSK 36_0	26865/831.5	1:1	0.294	0.04	22.80	24.40	1.445	**0.425**	22.2
Left side	15	QPSK 36_0	26865/831.5	1:1	0.105	-0.09	22.80	24.40	1.445	0.152	22.2
Top side	15	QPSK 36_0	26865/831.5	1:1	0.147	0.01	22.80	24.40	1.445	0.212	22.2

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

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8.2.12SAR 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	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Head Test Data(1RB)											
Left cheek	20	QPSK 1_0	40620/2593	1:1.58	0.209	0.05	24.76	25.50	1.186	0.248	22.0
Left tilted	20	QPSK 1_0	40620/2593	1:1.58	0.096	0.12	24.76	25.50	1.186	0.114	22.0
Right cheek	20	QPSK 1_0	40620/2593	1:1.58	0.348	-0.08	24.76	25.50	1.186	**0.413**	22.0
Right cheek CA_38C	20	QPSK 1_0	37901+38099/ 2585.1+2604.9	1:1.58	0.301	0.04	24.32	25.50	1.312	0.395	22.0
Right tilted	20	QPSK 1_0	40620/2593	1:1.58	0.143	-0.16	24.76	25.50	1.186	0.170	22.0
Left cheek for ENDC	20	QPSK 1_0	40620/2593	1:1.58	0.129	0.00	22.55	23.30	1.189	0.153	22.0
Left tilted for ENDC	20	QPSK 1_0	40620/2593	1:1.58	0.108	-0.07	22.55	23.30	1.189	0.128	22.0
Right cheek for ENDC	20	QPSK 1_0	40620/2593	1:1.58	0.241	0.07	22.55	23.30	1.189	**0.286**	22.0
Right tilted for ENDC	20	QPSK 1_0	40620/2593	1:1.58	0.100	0.02	22.55	23.30	1.189	0.119	22.0
Head Test Data(50%RB)											
Left cheek	20	QPSK 50_0	40620/2593	1:1.58	0.176	0.11	23.89	24.50	1.151	0.203	22.0
Left tilted	20	QPSK 50_0	40620/2593	1:1.58	0.104	-0.06	23.89	24.50	1.151	0.120	22.0
Right cheek	20	QPSK 50_0	40620/2593	1:1.58	0.303	0.03	23.89	24.50	1.151	0.349	22.0
Right tilted	20	QPSK 50_0	40620/2593	1:1.58	0.195	0.11	23.89	24.50	1.151	0.224	22.0
Left cheek for ENDC	20	QPSK 50_0	40620/2593	1:1.58	0.106	0.10	21.44	22.30	1.219	0.129	22.0
Left tilted for ENDC	20	QPSK 50_0	40620/2593	1:1.58	0.085	0.09	21.44	22.30	1.219	0.104	22.0
Right cheek for ENDC	20	QPSK 50_0	40620/2593	1:1.58	0.216	-0.15	21.44	22.30	1.219	0.263	22.0
Right tilted for ENDC	20	QPSK 50_0	40620/2593	1:1.58	0.121	0.05	21.44	22.30	1.219	0.147	22.0
Body worn Test data(Separate 15mm 1RB)											
Front side	20	QPSK 1_0	40620/2593	1:1.58	0.340	0.06	24.76	25.50	1.186	0.403	22.0
Back side	20	QPSK 1_0	40620/2593	1:1.58	0.456	0.05	24.76	25.50	1.186	**0.541**	22.0
Back side CA_38C	20	QPSK 1_0	37901+38099/ 2585.1+2604.9	1:1.58	0.411	-0.02	24.32	25.50	1.312	0.539	22.0
Front side for ENDC	20	QPSK 1_0	40620/2593	1:1.58	0.177	-0.07	22.55	23.30	1.189	0.210	22.0
Back side for ENDC	20	QPSK 1_0	40620/2593	1:1.58	0.257	0.03	22.55	23.30	1.189	**0.305**	22.0
Body worn Test data(Separate 15mm 50%RB)											
Front side	20	QPSK 50_0	40620/2593	1:1.58	0.309	-0.03	23.89	24.50	1.151	0.356	22.0
Back side	20	QPSK 50_0	40620/2593	1:1.58	0.414	0.02	23.89	24.50	1.151	0.476	22.0
Front side for ENDC	20	QPSK 50_0	40620/2593	1:1.58	0.166	-0.15	21.44	22.30	1.219	0.202	22.0
Back side for ENDC	20	QPSK 50_0	40620/2593	1:1.58	0.249	-0.10	21.44	22.30	1.219	0.304	22.0
Hotspot Test data(Separate 10mm 1RB)											
Front side	20	QPSK 1_0	40620/2593	1:1.58	0.541	0.16	24.76	25.50	1.186	0.642	22.0
Front side	20	QPSK 1_0	39750/2506	1:1.58	0.596	0.14	24.57	25.50	1.239	0.738	22.0
Front side	20	QPSK 1_0	40185/2549.5	1:1.58	0.558	0.03	24.70	25.50	1.202	0.671	22.0
Front side	20	QPSK 1_0	41055/2636.5	1:1.58	0.660	0.05	24.69	25.50	1.205	0.795	22.0

Front side	20	QPSK 1_0	41490/2680	1:1.58	0.434	-0.15	24.70	25.50	1.202	0.522	22.0
Back side	20	QPSK 1_0	40620/2593	1:1.58	0.684	0.03	24.76	25.50	1.186	0.811	22.0
Back side	20	QPSK 1_0	39750/2506	1:1.58	0.639	0.12	24.57	25.50	1.239	0.792	22.0
Back side	20	QPSK 1_0	40185/2549.5	1:1.58	0.723	0.04	24.70	25.50	1.202	0.869	22.0
Back side	20	QPSK 1_0	41055/2636.5	1:1.58	0.840	0.02	24.69	25.50	1.205	**1.012**	22.0
Back side UL CA	20	QPSK 1_0	38150+37952/ 2610+2590.2	1:1.58	0.745	0.01	24.34	25.50	1.306	0.973	22.0
Back side	20	QPSK 1_0	41490/2680	1:1.58	0.836	0.12	24.70	25.50	1.202	1.005	22.0
Left side	20	QPSK 1_0	40620/2593	1:1.58	0.117	-0.18	24.76	25.50	1.186	0.139	22.0
Rightt side	20	QPSK 1_0	40620/2593	1:1.58	0.366	0.08	24.76	25.50	1.186	0.434	22.0
Bottom side	20	QPSK 1_0	40620/2593	1:1.58	0.698	0.07	24.76	25.50	1.186	0.828	22.0
Bottom side	20	QPSK 1_0	39750/2506	1:1.58	0.518	0.06	24.57	25.50	1.239	0.642	22.0
Bottom side	20	QPSK 1_0	40185/2549.5	1:1.58	0.504	-0.01	24.70	25.50	1.202	0.606	22.0
Bottom side	20	QPSK 1_0	41055/2636.5	1:1.58	0.698	-0.05	24.69	25.50	1.205	0.841	22.0
Bottom side	20	QPSK 1_0	41490/2680	1:1.58	0.698	-0.08	24.70	25.50	1.202	0.839	22.0
Front side for ENDC	20	QPSK 1_0	40620/2593	1:1.58	0.321	-0.09	22.55	23.30	1.189	0.382	22.0
Back side for ENDC	20	QPSK 1_0	40620/2593	1:1.58	0.460	0.03	22.55	23.30	1.189	**0.547**	22.0
Left side for ENDC	20	QPSK 1_0	40620/2593	1:1.58	0.081	-0.11	22.55	23.30	1.189	0.096	22.0
Rightt side for ENDC	20	QPSK 1_0	40620/2593	1:1.58	0.237	-0.17	22.55	23.30	1.189	0.282	22.0
Bottom side for ENDC	20	QPSK 1_0	40620/2593	1:1.58	0.348	-0.08	22.55	23.30	1.189	0.414	22.0
Hotspot Test data(Separate 10mm 50%RB)											
Front side	20	QPSK 50_0	40620/2593	1:1.58	0.588	0.08	23.89	24.50	1.151	0.677	22.0
Front side	20	QPSK 50_0	39750/2506	1:1.58	0.447	-0.16	23.72	24.50	1.197	0.535	22.0
Front side	20	QPSK 50_0	40185/2549.5	1:1.58	0.458	0.05	23.88	24.50	1.153	0.528	22.0
Front side	20	QPSK 50_0	41055/2636.5	1:1.58	0.541	0.14	23.86	24.50	1.159	0.627	22.0
Front side	20	QPSK 50_0	41490/2680	1:1.58	0.561	0.13	23.73	24.50	1.194	0.670	22.0
Back side	20	QPSK 50_0	40620/2593	1:1.58	0.625	0.05	23.89	24.50	1.151	0.719	22.0
Back side	20	QPSK 50_0	39750/2506	1:1.58	0.572	0.19	23.72	24.50	1.197	0.685	22.0
Back side	20	QPSK 50_0	40185/2549.5	1:1.58	0.584	-0.16	23.88	24.50	1.153	0.674	22.0
Back side	20	QPSK 50_0	41055/2636.5	1:1.58	0.685	0.12	23.86	24.50	1.159	0.794	22.0
Back side	20	QPSK 50_0	41490/2680	1:1.58	0.700	-0.03	23.73	24.50	1.194	0.836	22.0
Left side	20	QPSK 50_0	40620/2593	1:1.58	0.091	0.17	23.89	24.50	1.151	0.105	22.0
Rightt side	20	QPSK 50_0	40620/2593	1:1.58	0.310	0.04	23.89	24.50	1.151	0.357	22.0
Bottom side	20	QPSK 50_0	40620/2593	1:1.58	0.584	-0.10	23.89	24.50	1.151	0.672	22.0
Bottom side	20	QPSK 50_0	39750/2506	1:1.58	0.547	0.16	23.72	24.50	1.197	0.655	22.0
Bottom side	20	QPSK 50_0	40185/2549.5	1:1.58	0.509	-0.06	23.88	24.50	1.153	0.587	22.0
Bottom side	20	QPSK 50_0	41055/2636.5	1:1.58	0.593	0.03	23.86	24.50	1.159	0.687	22.0
Bottom side	20	QPSK 50_0	41490/2680	1:1.58	0.604	0.04	23.73	24.50	1.194	0.721	22.0
Front side for ENDC	20	QPSK 50_0	40620/2593	1:1.58	0.312	-0.13	21.44	22.30	1.219	0.380	22.0
Back side for ENDC	20	QPSK 50_0	40620/2593	1:1.58	0.448	0.04	21.44	22.30	1.219	0.546	22.0
Left side for ENDC	20	QPSK 50_0	40620/2593	1:1.58	0.076	-0.19	21.44	22.30	1.219	0.093	22.0
Rightt side for ENDC	20	QPSK 50_0	40620/2593	1:1.58	0.231	-0.03	21.44	22.30	1.219	0.282	22.0
Bottom side for ENDC	20	QPSK 50_0	40620/2593	1:1.58	0.316	-0.02	21.44	22.30	1.219	0.385	22.0

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Hotspot Test data(Separate 10mm 100%RB)											
Front side	20	QPSK 100_0	40620/2593	1:1.58	0.579	0.03	23.97	24.50	1.130	0.654	22.0
Back side	20	QPSK 100_0	40620/2593	1:1.58	0.723	0.19	23.97	24.50	1.130	0.817	22.0
Bottom side	20	QPSK 100_0	40620/2593	1:1.58	0.551	-0.16	23.97	24.50	1.130	0.623	22.0
Ant 1 Test Record											
Test position	**BW.**	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test Data(1RB)											
Left cheek	20	QPSK 1_0	40620/2593	1:1.58	0.268	0.04	17.29	18.00	1.178	0.316	22.0
Left tilted	20	QPSK 1_0	40620/2593	1:1.58	0.306	0.06	17.29	18.00	1.178	0.360	22.0
Right cheek	20	QPSK 1_0	40620/2593	1:1.58	0.429	-0.13	17.29	18.00	1.178	0.505	22.0
Right tilted	20	QPSK 1_0	40620/2593	1:1.58	0.507	0.07	17.29	18.00	1.178	**0.597**	22.0
Right tilted CA_38C	20	QPSK 1_0	37901+38099/ 2585.1+2604.9	1:1.58	0.345	-0.02	15.45	17.00	1.429	0.493	22.0
Left cheek for ENDC	20	QPSK 1_0	40620/2593	1:1.58	0.202	-0.12	16.77	17.00	1.054	0.213	22.0
Left tilted for ENDC	20	QPSK 1_0	40620/2593	1:1.58	0.223	-0.09	16.77	17.00	1.054	0.235	22.0
Right cheek for ENDC	20	QPSK 1_0	40620/2593	1:1.58	0.292	-0.10	16.77	17.00	1.054	0.308	22.0
Right tilted for ENDC	20	QPSK 1_0	40620/2593	1:1.58	0.386	0.07	16.77	17.00	1.054	**0.407**	22.0
Head Test Data(50%RB)											
Left cheek	20	QPSK 50_0	40620/2593	1:1.58	0.277	0.07	17.15	18.00	1.216	0.337	22.0
Left tilted	20	QPSK 50_0	40620/2593	1:1.58	0.312	-0.11	17.15	18.00	1.216	0.379	22.0
Right cheek	20	QPSK 50_0	40620/2593	1:1.58	0.436	0.12	17.15	18.00	1.216	0.530	22.0
Right tilted	20	QPSK 50_0	40620/2593	1:1.58	0.475	0.03	17.15	18.00	1.216	0.578	22.0
Left cheek for ENDC	20	QPSK 50_0	40620/2593	1:1.58	0.194	0.02	16.66	17.00	1.081	0.210	22.0
Left tilted for ENDC	20	QPSK 50_0	40620/2593	1:1.58	0.212	-0.04	16.66	17.00	1.081	0.229	22.0
Right cheek for ENDC	20	QPSK 50_0	40620/2593	1:1.58	0.276	-0.19	16.66	17.00	1.081	0.298	22.0
Right tilted for ENDC	20	QPSK 50_0	40620/2593	1:1.58	0.366	0.03	16.66	17.00	1.081	0.396	22.0
Body worn Test data(Separate 15mm 1RB)											
Front side	20	QPSK 1_0	40620/2593	1:1.58	0.086	0.14	23.55	25.00	1.396	0.120	22.0
Back side	20	QPSK 1_0	40620/2593	1:1.58	0.127	0.02	23.55	25.00	1.396	0.177	22.0
Back side CA_38C	20	QPSK 1_0	37901+38099/ 2585.1+2604.9	1:1.58	0.127	0.02	23.55	25.00	1.396	0.177	22.0
Front side for ENDC	20	QPSK 1_0	40620/2593	1:1.58	0.207	-0.03	24.33	25.00	1.167	0.242	22.0
Back side for ENDC	20	QPSK 1_0	40620/2593	1:1.58	0.219	-0.05	24.33	25.00	1.167	**0.256**	22.0
Body worn Test data(Separate 15mm 50%RB)											
Front side	20	QPSK 50_0	40620/2593	1:1.58	0.087	0.01	22.89	24.00	1.291	0.112	22.0
Back side	20	QPSK 50_0	40620/2593	1:1.58	0.125	-0.06	22.89	24.00	1.291	0.161	22.0
Front side for ENDC	20	QPSK 50_0	40620/2593	1:1.58	0.186	-0.06	23.43	24.00	1.140	0.212	22.0
Back side for ENDC	20	QPSK 50_0	40620/2593	1:1.58	0.201	0.06	23.43	24.00	1.140	0.229	22.0
Hotspot Test data(Separate 10mm 1RB)											
Front side	20	QPSK 1_0	40620/2593	1:1.58	0.074	0.03	17.29	18.00	1.178	0.087	22.0
Back side	20	QPSK 1_0	40620/2593	1:1.58	0.093	0.02	17.29	18.00	1.178	0.109	22.0

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Left side	20	QPSK 1_0	40620/2593	1:1.58	0.061	0.01	17.29	18.00	1.178	0.072	22.0
Top side	20	QPSK 1_0	40620/2593	1:1.58	0.185	0.04	17.29	18.00	1.178	0.218	22.0
Front side for ENDC	20	QPSK 1_0	40620/2593	1:1.58	0.195	0.07	21.70	22.00	1.072	0.209	22.0
Back side for ENDC	20	QPSK 1_0	40620/2593	1:1.58	0.218	-0.19	21.70	22.00	1.072	0.234	22.0
Left side for ENDC	20	QPSK 1_0	40620/2593	1:1.58	0.120	-0.01	21.70	22.00	1.072	0.129	22.0
Top side for ENDC	20	QPSK 1_0	40620/2593	1:1.58	0.365	0.06	21.70	22.00	1.072	**0.391**	22.0
Hotspot Test data(Separate 10mm 50%RB)											
Front side	20	QPSK 50_0	40620/2593	1:1.58	0.074	0.09	17.15	18.00	1.216	0.090	22.0
Back side	20	QPSK 50_0	40620/2593	1:1.58	0.094	-0.07	17.15	18.00	1.216	0.114	22.0
Left side	20	QPSK 50_0	40620/2593	1:1.58	0.061	0.04	17.15	18.00	1.216	0.074	22.0
Top side	20	QPSK 50_0	40620/2593	1:1.58	0.190	-0.04	17.15	18.00	1.216	0.231	22.0
Top side CA_38C	20	QPSK 50_0	40620/2593	1:1.58	0.119	0.02	15.43	17.00	1.435	0.171	22.0
Front side for ENDC	20	QPSK 50_0	40620/2593	1:1.58	0.182	0.13	21.69	22.00	1.074	0.195	22.0
Back side for ENDC	20	QPSK 50_0	40620/2593	1:1.58	0.203	0.05	21.69	22.00	1.074	0.218	22.0
Left side for ENDC	20	QPSK 50_0	40620/2593	1:1.58	0.111	0.01	21.69	22.00	1.074	0.119	22.0
Top side for ENDC	20	QPSK 50_0	40620/2593	1:1.58	0.352	-0.09	21.69	22.00	1.074	0.378	22.0
Ant 2 Test Record											
Test position	**BW.**	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test Data(1RB)											
Left cheek	20	QPSK 1_0	40620/2593	1:1.58	0.314	0.06	21.37	21.70	1.079	0.339	22.1
Left tilted	20	QPSK 1_0	40620/2593	1:1.58	0.110	0.05	21.37	21.70	1.079	0.119	22.1
Right cheek	20	QPSK 1_0	40620/2593	1:1.58	0.804	0.13	21.37	21.70	1.079	0.867	22.1
Right cheek	20	QPSK 1_0	39750/2506	1:1.58	0.795	0.03	21.29	21.70	1.099	0.874	22.1
Right cheek	20	QPSK 1_0	40185/2549.5	1:1.58	0.595	0.17	21.32	21.70	1.091	0.649	22.1
Right cheek	20	QPSK 1_0	41055/2636.5	1:1.58	0.876	0.05	21.30	21.70	1.096	0.961	22.1
Right cheek	20	QPSK 1_0	41490/2680	1:1.58	0.956	0.13	21.32	21.70	1.091	1.043	22.1
Right tilted	20	QPSK 1_0	40620/2593	1:1.58	0.257	0.08	21.37	21.70	1.079	0.277	22.1
Left cheek for ENDC	20	QPSK 1_0	40620/2593	1:1.58	0.152	-0.10	17.48	18.60	1.294	0.197	22.1
Left tilted for ENDC	20	QPSK 1_0	40620/2593	1:1.58	0.067	-0.18	17.48	18.60	1.294	0.087	22.1
Right cheek for ENDC	20	QPSK 1_0	40620/2593	1:1.58	0.421	0.08	17.48	18.60	1.294	**0.545**	22.1
Right tilted for ENDC	20	QPSK 1_0	40620/2593	1:1.58	0.141	0.02	17.48	18.60	1.294	0.182	22.1
Head Test Data(50%RB)											
Left cheek	20	QPSK 50_0	40620/2593	1:1.58	0.324	-0.14	21.36	21.70	1.081	0.350	22.1
Left tilted	20	QPSK 50_0	40620/2593	1:1.58	0.111	0.12	21.36	21.70	1.081	0.120	22.1
Right cheek	20	QPSK 50_0	40620/2593	1:1.58	0.763	0.14	21.36	21.70	1.081	0.825	22.1
Right cheek	20	QPSK 50_0	39750/2506	1:1.58	0.782	-0.03	21.32	21.70	1.091	0.854	22.1
Right cheek	20	QPSK 50_0	40185/2549.5	1:1.58	0.502	0.00	21.33	21.70	1.089	0.547	22.1
Right cheek	20	QPSK 50_0	41055/2636.5	1:1.58	0.949	-0.17	21.27	21.70	1.104	1.048	22.1
Right cheek	20	QPSK 50_0	41490/2680	1:1.58	0.957	-0.18	21.30	21.70	1.096	1.049	22.1
Right cheek CA_38C	20	QPSK 50_0	38150+37952/ 2610+2590.2	1:1.58	0.794	0.07	20.79	21.70	1.233	0.979	22.1

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Right tilted	20	QPSK 50_0	40620/2593	1:1.58	0.258	0.08	21.36	21.70	1.081	0.279	22.1
Left cheek for ENDC	20	QPSK 50_0	40620/2593	1:1.58	0.143	0.13	17.46	18.60	1.300	0.186	22.1
Left tilted for ENDC	20	QPSK 50_0	40620/2593	1:1.58	0.052	-0.13	17.46	18.60	1.300	0.068	22.1
Right cheek for ENDC	20	QPSK 50_0	40620/2593	1:1.58	0.416	0.06	17.46	18.60	1.300	0.541	22.1
Right tilted for ENDC	20	QPSK 50_0	40620/2593	1:1.58	0.144	0.08	17.46	18.60	1.300	0.187	22.1
Head Test Data(100%RB)											
Right cheek	20	QPSK 100_0	40620/2593	1:1.58	0.794	0.79	21.33	21.70	1.089	0.865	22.1
Body worn Test data(Separate 15mm 1RB)											
Front side	20	QPSK 1_0	40620/2593	1:1.58	0.276	0.14	24.81	25.70	1.227	0.339	22.1
Back side	20	QPSK 1_0	40620/2593	1:1.58	0.311	0.07	24.81	25.70	1.227	0.382	22.1
Front side for ENDC	20	QPSK 1_0	40620/2593	1:1.58	0.276	0.11	23.02	24.60	1.439	0.397	22.1
Back side for ENDC	20	QPSK 1_0	40620/2593	1:1.58	0.345	-0.04	23.02	24.60	1.439	**0.496**	22.1
Body worn Test data(Separate 15mm 50%RB)											
Front side	20	QPSK 50_0	40620/2593	1:1.58	0.338	0.17	23.97	24.70	1.183	0.400	22.1
Back side	20	QPSK 50_0	40620/2593	1:1.58	0.354	0.09	23.97	24.70	1.183	**0.419**	22.1
Back side CA_38C	20	QPSK 50_0	37901+38099/ 2585.1+2604.9	1:1.58	0.243	0.07	22.78	24.20	1.387	0.337	22.1
Front side for ENDC	20	QPSK 50_0	40620/2593	1:1.58	0.263	0.04	22.16	23.60	1.393	0.366	22.1
Back side for ENDC	20	QPSK 50_0	40620/2593	1:1.58	0.325	0.01	22.16	23.60	1.393	0.453	22.1
Hotspot Test data(Separate 10mm 1RB)											
Front side	20	QPSK 1_0	40620/2593	1:1.58	0.223	0.18	21.37	21.70	1.079	0.241	22.1
Back side	20	QPSK 1_0	40620/2593	1:1.58	0.373	0.09	21.37	21.70	1.079	**0.402**	22.1
Back side CA_38C	20	QPSK 1_0	37901+38099/ 2585.1+2604.9	1:1.58	0.315	0.02	20.81	21.70	1.227	0.387	22.1
Left side	20	QPSK 1_0	40620/2593	1:1.58	0.336	-0.01	21.37	21.70	1.079	0.363	22.1
Front side for ENDC	20	QPSK 1_0	40620/2593	1:1.58	0.253	0.17	20.79	21.60	1.205	0.305	22.1
Back side for ENDC	20	QPSK 1_0	40620/2593	1:1.58	0.312	-0.19	20.79	21.60	1.205	0.376	22.1
Left side for ENDC	20	QPSK 1_0	40620/2593	1:1.58	0.380	0.03	20.79	21.60	1.205	0.458	22.1
Hotspot Test data(Separate 10mm 50%RB)											
Front side	20	QPSK 50_0	40620/2593	1:1.58	0.224	0.14	21.36	21.70	1.081	0.242	22.1
Back side	20	QPSK 50_0	40620/2593	1:1.58	0.338	0.08	21.36	21.70	1.081	0.366	22.1
Left side	20	QPSK 50_0	40620/2593	1:1.58	0.371	-0.08	21.36	21.70	1.081	0.401	22.1
Front side for ENDC	20	QPSK 50_0	40620/2593	1:1.58	0.243	0.16	20.75	21.60	1.216	0.296	22.1
Back side for ENDC	20	QPSK 50_0	40620/2593	1:1.58	0.311	-0.13	20.75	21.60	1.216	0.378	22.1
Left side for ENDC	20	QPSK 50_0	40620/2593	1:1.58	0.372	0.08	20.75	21.60	1.216	0.452	22.1
Ant 3 Test Record											
Test position	**BW.**	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test Data(1RB)											
Left cheek	20	QPSK 1_0	40620/2593	1:1.58	0.102	0.06	23.44	24.50	1.276	**0.130**	22.1

Left cheek CA_38C	20	QPSK 1_0	37901+38099/ 2585.1+2604.9	1:1.58	0.064	0.01	22.84	24.50	1.466	**0.094**	22.1
Left tilted	20	QPSK 1_0	40620/2593	1:1.58	0.027	0.13	23.44	24.50	1.276	0.034	22.1
Right cheek	20	QPSK 1_0	40620/2593	1:1.58	0.032	0.16	23.44	24.50	1.276	0.041	22.1
Right tilted	20	QPSK 1_0	40620/2593	1:1.58	0.052	0.06	23.44	24.50	1.276	0.066	22.1
Left cheek for ENDC	20	QPSK 1_0	40620/2593	1:1.58	0.052	0.08	23.82	24.30	1.117	0.058	22.1
Left tilted for ENDC	20	QPSK 1_0	40620/2593	1:1.58	0.026	0.07	23.82	24.30	1.117	0.029	22.1
Right cheek for ENDC	20	QPSK 1_0	40620/2593	1:1.58	0.054	0.09	23.82	24.30	1.117	**0.060**	22.1
Right tilted for ENDC	20	QPSK 1_0	40620/2593	1:1.58	0.034	-0.18	23.82	24.30	1.117	0.038	22.1
Head Test Data(50%RB)											
Left cheek	20	QPSK 50_0	40620/2593	1:1.58	0.086	-0.04	22.62	23.50	1.225	0.105	22.1
Left tilted	20	QPSK 50_0	40620/2593	1:1.58	0.019	0.09	22.62	23.50	1.225	0.024	22.1
Right cheek	20	QPSK 50_0	40620/2593	1:1.58	0.039	0.08	22.62	23.50	1.225	0.047	22.1
Right tilted	20	QPSK 50_0	40620/2593	1:1.58	0.053	0.04	22.62	23.50	1.225	0.065	22.1
Left cheek for ENDC	20	QPSK 50_0	40620/2593	1:1.58	0.043	0.14	22.76	23.30	1.132	0.048	22.1
Left tilted for ENDC	20	QPSK 50_0	40620/2593	1:1.58	0.023	0.03	22.76	23.30	1.132	0.026	22.1
Right cheek for ENDC	20	QPSK 50_0	40620/2593	1:1.58	0.051	-0.18	22.76	23.30	1.132	0.058	22.1
Right tilted for ENDC	20	QPSK 50_0	40620/2593	1:1.58	0.033	-0.15	22.76	23.30	1.132	0.037	22.1
Body worn Test data(Separate 15mm 1RB)											
Front side	20	QPSK 1_0	40620/2593	1:1.58	0.088	0.08	21.69	22.50	1.205	0.105	22.1
Back side	20	QPSK 1_0	40620/2593	1:1.58	0.250	0.03	21.69	22.50	1.205	**0.301**	22.1
Back side CA_38C	20	QPSK 1_0	40620/2593	1:1.58	0.133	0.07	20.92	22.50	1.439	0.191	22.1
Front side for ENDC	20	QPSK 1_0	40620/2593	1:1.58	0.102	-0.01	23.82	24.30	1.117	0.114	22.1
Back side for ENDC	20	QPSK 1_0	40620/2593	1:1.58	0.235	0.02	23.82	24.30	1.117	**0.262**	22.1
Body worn Test data(Separate 15mm 50%RB)											
Front side	20	QPSK 50_0	40620/2593	1:1.58	0.076	0.01	20.88	21.50	1.153	0.088	22.1
Back side	20	QPSK 50_0	40620/2593	1:1.58	0.204	0.10	20.88	21.50	1.153	0.235	22.1
Front side for ENDC	20	QPSK 50_0	40620/2593	1:1.58	0.097	0.13	22.76	23.30	1.132	0.110	22.1
Back side for ENDC	20	QPSK 50_0	40620/2593	1:1.58	0.224	0.03	22.76	23.30	1.132	0.254	22.1
Hotspot Test data(Separate 10mm 1RB)											
Front side	20	QPSK 1_0	40620/2593	1:1.58	0.094	0.14	20.90	21.50	1.148	0.108	22.1
Back side	20	QPSK 1_0	40620/2593	1:1.58	0.308	0.13	20.90	21.50	1.148	0.354	22.1
Left side	20	QPSK 1_0	40620/2593	1:1.58	0.293	0.08	20.90	21.50	1.148	0.336	22.1
Bottom side	20	QPSK 1_0	40620/2593	1:1.58	0.057	-0.12	20.90	21.50	1.148	0.065	22.1
Front side for ENDC	20	QPSK 1_0	40620/2593	1:1.58	0.192	0.15	23.82	24.30	1.117	0.214	22.1
Back side for ENDC	20	QPSK 1_0	40620/2593	1:1.58	0.416	0.08	23.82	24.30	1.117	0.465	22.1
Left side for ENDC	20	QPSK 1_0	40620/2593	1:1.58	0.485	-0.04	23.82	24.30	1.117	**0.542**	22.1
Bottom side for ENDC	20	QPSK 1_0	40620/2593	1:1.58	0.117	0.09	23.82	24.30	1.117	0.131	22.1
Hotspot Test data(Separate 10mm 50%RB)											
Front side	20	QPSK 50_0	40620/2593	1:1.58	0.102	-0.17	20.88	21.50	1.153	0.118	22.1
Back side	20	QPSK 50_0	40620/2593	1:1.58	0.356	0.05	20.88	21.50	1.153	**0.411**	22.1
Back side CA_38C	20	QPSK 50_0	37901+38099/ 2585.1+2604.9	1:1.58	0.247	0.04	19.87	21.50	1.455	0.359	22.1

Left side	20	QPSK 50_0	40620/2593	1:1.58	0.307	0.10	20.88	21.50	1.153	0.354	22.1
Bottom side	20	QPSK 50_0	40620/2593	1:1.58	0.065	0.09	20.88	21.50	1.153	0.074	22.1
Front side for ENDC	20	QPSK 50_0	40620/2593	1:1.58	0.176	0.08	22.76	23.30	1.132	0.199	22.1
Back side for ENDC	20	QPSK 50_0	40620/2593	1:1.58	0.406	0.01	22.76	23.30	1.132	0.460	22.1
Left side for ENDC	20	QPSK 50_0	40620/2593	1:1.58	0.471	-0.01	22.76	23.30	1.132	0.533	22.1
Bottom side for ENDC	20	QPSK 50_0	40620/2593	1:1.58	0.126	-0.08	22.76	23.30	1.132	0.143	22.1

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

Note: LTE B38 Intra-band U-L CA test at the worst case of LTE B41.

8.2.1 SAR Result of LTE Band66

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	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Head Test Data(1RB)											
Left cheek	20	QPSK 1_0	132322/1745	1:1	0.117	0.09	24.56	25.50	1.242	**0.145**	22.1
Left tilted	20	QPSK 1_0	132322/1745	1:1	0.054	0.17	24.56	25.50	1.242	0.067	22.1
Right cheek	20	QPSK 1_0	132322/1745	1:1	0.075	0.12	24.56	25.50	1.242	0.093	22.1
Right tilted	20	QPSK 1_0	132322/1745	1:1	0.087	0.16	24.56	25.50	1.242	0.108	22.1
Left cheek for ENDC	20	QPSK 1_0	132322/1745	1:1	0.113	0.03	24.31	25.20	1.227	**0.139**	22.1
Left tiltedfor ENDC	20	QPSK 1_0	132322/1745	1:1	0.056	-0.16	24.31	25.20	1.227	0.069	22.1
Right cheek for ENDC	20	QPSK 1_0	132322/1745	1:1	0.069	0.15	24.31	25.20	1.227	0.085	22.1
Right tiltedfor ENDC	20	QPSK 1_0	132322/1745	1:1	0.069	-0.04	24.31	25.20	1.227	0.085	22.1
Head Test Data(50%RB)											
Left cheek	20	QPSK 50_0	132322/1745	1:1	0.110	-0.02	23.67	24.50	1.211	0.133	22.1
Left tilted	20	QPSK 50_0	132322/1745	1:1	0.042	0.02	23.67	24.50	1.211	0.051	22.1
Right cheek	20	QPSK 50_0	132322/1745	1:1	0.067	-0.07	23.67	24.50	1.211	0.082	22.1
Right tilted	20	QPSK 50_0	132322/1745	1:1	0.080	0.14	23.67	24.50	1.211	0.097	22.1
Left cheek for ENDC	20	QPSK 50_0	132322/1745	1:1	0.104	0.12	23.28	24.20	1.236	0.129	22.1
Left tilted for ENDC	20	QPSK 50_0	132322/1745	1:1	0.062	0.19	23.28	24.20	1.236	0.077	22.1
Right cheek for ENDC	20	QPSK 50_0	132322/1745	1:1	0.056	0.03	23.28	24.20	1.236	0.069	22.1
Right tilted for ENDC	20	QPSK 50_0	132322/1745	1:1	0.061	0.10	23.28	24.20	1.236	0.075	22.1
Body worn Test data(Separate 15mm 1RB)											
Front side	20	QPSK 1_0	132322/1745	1:1	0.217	0.02	24.56	25.50	1.242	0.269	22.1
Back side	20	QPSK 1_0	132322/1745	1:1	0.606	0.07	24.56	25.50	1.242	0.752	22.1
Front side for ENDC	20	QPSK 1_0	132322/1745	1:1	0.188	0.17	23.49	24.20	1.178	0.221	22.1
Back side for ENDC	20	QPSK 1_0	132322/1745	1:1	0.456	0.04	23.49	24.20	1.178	**0.537**	22.1
Body worn Test data(Separate 15mm 50%RB)											
Front side	20	QPSK 50_0	132322/1745	1:1	0.256	0.14	23.67	24.50	1.211	0.310	22.1
Back side	20	QPSK 50_0	132322/1745	1:1	0.635	0.02	23.67	24.50	1.211	**0.769**	22.1
Back side for UL CA	20	QPSK 50_0	132322/1745	1:1	0.635	0.02	23.67	23.00	0.857	0.544	22.1
Front side for ENDC	20	QPSK 50_0	132322/1745	1:1	0.176	0.16	22.38	23.20	1.208	0.213	22.1
Back side for ENDC	20	QPSK 50_0	132322/1745	1:1	0.434	-0.13	22.38	23.20	1.208	0.524	22.1
Hotspot Test data(Separate 10mm 1RB)											
Front side	20	QPSK 1_0	132322/1745	1:1	0.212	0.04	20.94	21.50	1.138	0.241	22.1
Back side	20	QPSK 1_0	132322/1745	1:1	0.611	0.01	20.94	21.50	1.138	0.695	22.1
Left side	20	QPSK 1_0	132322/1745	1:1	0.080	0.19	20.94	21.50	1.138	0.091	22.1
Rightt side	20	QPSK 1_0	132322/1745	1:1	0.101	0.13	20.94	21.50	1.138	0.115	22.1
Bottom side	20	QPSK 1_0	132322/1745	1:1	0.518	0.09	20.94	21.50	1.138	0.589	22.1
Front side for ENDC	20	QPSK 1_0	132322/1745	1:1	0.383	-0.14	20.72	21.20	1.117	0.428	22.1

Back side for ENDC	20	QPSK 1_0	132322/1745	1:1	0.463	-0.19	20.72	21.20	1.117	**0.517**	22.1
Left side for ENDC	20	QPSK 1_0	132322/1745	1:1	0.045	0.19	20.72	21.20	1.117	0.050	22.1
Rightt side for ENDC	20	QPSK 1_0	132322/1745	1:1	0.059	-0.07	20.72	21.20	1.117	0.066	22.1
Bottom side for ENDC	20	QPSK 1_0	132322/1745	1:1	0.415	0.09	20.72	21.20	1.117	0.463	22.1
Hotspot Test data(Separate 10mm 50%RB)											
Front side	20	QPSK 50_0	132322/1745	1:1	0.226	0.16	20.91	21.50	1.146	0.259	22.1
Back side	20	QPSK 50_0	132322/1745	1:1	0.661	0.09	20.91	21.50	1.146	**0.757**	22.1
Back side for UL CA	20	QPSK 50_0	132322/1745	1:1	0.661	0.09	20.91	19.50	0.723	0.478	22.1
Left side	20	QPSK 50_0	132322/1745	1:1	0.086	0.15	20.91	21.50	1.146	0.098	22.1
Rightt side	20	QPSK 50_0	132322/1745	1:1	0.109	-0.05	20.91	21.50	1.146	0.125	22.1
Bottom side	20	QPSK 50_0	132322/1745	1:1	0.56	0.15	20.91	21.50	1.146	0.641	22.1
Front side for ENDC	20	QPSK 50_0	132322/1745	1:1	0.359	0.08	20.71	21.20	1.119	0.402	22.1
Back side for ENDC	20	QPSK 50_0	132322/1745	1:1	0.452	0.16	20.71	21.20	1.119	0.506	22.1
Left side for ENDC	20	QPSK 50_0	132322/1745	1:1	0.039	0.02	20.71	21.20	1.119	0.044	22.1
Rightt side for ENDC	20	QPSK 50_0	132322/1745	1:1	0.051	0.05	20.71	21.20	1.119	0.057	22.1
Bottom side for ENDC	20	QPSK 50_0	132322/1745	1:1	0.405	-0.12	20.71	21.20	1.119	0.453	22.1
Ant 1 Test Record											
Test position	**BW.**	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test Data(1RB)											
Left cheek	20	QPSK 1_0	132322/1745	1:1	0.372	-0.15	20.21	20.50	1.069	0.398	22.1
Left tilted	20	QPSK 1_0	132322/1745	1:1	0.534	0.04	20.21	20.50	1.069	0.571	22.1
Right cheek	20	QPSK 1_0	132322/1745	1:1	0.586	0.15	20.21	20.50	1.069	0.626	22.1
Right tilted	20	QPSK 1_0	132322/1745	1:1	0.704	0.05	20.21	20.50	1.069	0.753	22.1
Left cheek for ENDC	20	QPSK 1_0	132322/1745	1:1	0.160	-0.13	15.50	16.00	1.122	0.180	22.1
Left tilted for ENDC	20	QPSK 1_0	132322/1745	1:1	0.216	0.09	15.50	16.00	1.122	0.242	22.1
Right cheek for ENDC	20	QPSK 1_0	132322/1745	1:1	0.227	0.09	15.50	16.00	1.122	0.255	22.1
Right tiltedother PA for ENDC	20	QPSK 1_0	132322/1745	1:1	0.434	0.08	15.50	16.00	1.122	**0.487**	22.1
Head Test Data(50%RB)											
Left cheek	20	QPSK 50_0	132322/1745	1:1	0.364	0.13	20.20	20.50	1.072	0.390	22.1
Left tilted	20	QPSK 50_0	132322/1745	1:1	0.530	0.17	20.20	20.50	1.072	0.568	22.1
Right cheek	20	QPSK 50_0	132322/1745	1:1	0.580	0.01	20.20	20.50	1.072	0.621	22.1
Right tilted	20	QPSK 50_0	132322/1745	1:1	0.847	0.09	20.20	20.50	1.072	**0.908**	22.1
Right tilted	20	QPSK 50_0	132072/1720	1:1	0.732	-0.06	20.20	20.50	1.072	0.784	22.1
Right tilted	20	QPSK 50_0	132572/1770	1:1	0.636	0.06	20.20	20.50	1.072	0.681	22.1
Left cheek for ENDC	20	QPSK 50_0	132322/1745	1:1	0.153	0.07	15.46	16.00	1.132	0.173	22.1
Left tilted for ENDC	20	QPSK 50_0	132322/1745	1:1	0.201	-0.12	15.46	16.00	1.132	0.228	22.1
Right cheek for ENDC	20	QPSK 50_0	132322/1745	1:1	0.216	0.07	15.46	16.00	1.132	0.245	22.1
Right tilted for ENDC	20	QPSK 50_0	132322/1745	1:1	0.411	-0.05	15.46	16.00	1.132	0.465	22.1
Head Test Data(100%RB)											
Right tilted	20	QPSK 100_0	132322/1745	1:1	0.672	0.12	20.19	20.50	1.074	0.722	22.1

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Body worn Test data(Separate 15mm 1RB)											
Front side	20	QPSK 1_0	132322/1745	1:1	0.227	0.10	23.97	25.00	1.268	0.288	22.1
Back side	20	QPSK 1_0	132322/1745	1:1	0.340	-0.01	23.97	25.00	1.268	**0.431**	22.1
Front side for ENDC	20	QPSK 1_0	132322/1745	1:1	0.237	-0.19	23.49	24.00	1.125	0.267	22.1
Back side for ENDC	20	QPSK 1_0	132322/1745	1:1	0.480	-0.04	23.49	24.00	1.125	0.540	22.1
Body worn Test data(Separate 15mm 50%RB)											
Front side	20	QPSK 50_0	132322/1745	1:1	0.199	0.14	23.11	24.00	1.227	0.244	22.1
Back side	20	QPSK 50_0	132322/1745	1:1	0.313	-0.15	23.11	24.00	1.227	0.384	22.1
Front side for ENDC	20	QPSK 50_0	132322/1745	1:1	0.215	0.12	22.42	23.00	1.143	0.246	22.1
Back side for ENDC	20	QPSK 50_0	132322/1745	1:1	0.464	-0.03	22.42	23.00	1.143	0.530	22.1
Hotspot Test data(Separate 10mm 1RB)											
Front side	20	QPSK 1_0	132322/1745	1:1	0.149	-0.14	20.21	20.50	1.069	0.159	22.1
Back side	20	QPSK 1_0	132322/1745	1:1	0.359	-0.04	20.21	20.50	1.069	0.384	22.1
Left side	20	QPSK 1_0	132322/1745	1:1	0.037	-0.16	20.21	20.50	1.069	0.039	22.1
Top side	20	QPSK 1_0	132322/1745	1:1	0.600	0.06	20.21	20.50	1.069	**0.641**	22.1
Front side for ENDC	20	QPSK 1_0	132322/1745	1:1	0.188	-0.12	20.47	21.00	1.130	0.212	22.1
Back side for ENDC	20	QPSK 1_0	132322/1745	1:1	0.363	0.19	20.47	21.00	1.130	0.410	22.1
Left side for ENDC	20	QPSK 1_0	132322/1745	1:1	0.053	-0.12	20.47	21.00	1.130	0.060	22.1
Top side for ENDC	20	QPSK 1_0	132322/1745	1:1	0.407	0.04	20.47	21.00	1.130	**0.460**	22.1
Hotspot Test data(Separate 10mm 50%RB)											
Front side	20	QPSK 50_0	132322/1745	1:1	0.145	-0.11	20.20	20.50	1.072	0.155	22.1
Back side	20	QPSK 50_0	132322/1745	1:1	0.349	0.15	20.20	20.50	1.072	0.374	22.1
Left side	20	QPSK 50_0	132322/1745	1:1	0.037	-0.01	20.20	20.50	1.072	0.040	22.1
Top side	20	QPSK 50_0	132322/1745	1:1	0.501	0.06	20.20	20.50	1.072	0.537	22.1
Front side for ENDC	20	QPSK 50_0	132322/1745	1:1	0.175	-0.11	20.42	21.00	1.143	0.200	22.1
Back side for ENDC	20	QPSK 50_0	132322/1745	1:1	0.346	-0.02	20.42	21.00	1.143	0.395	22.1
Left side for ENDC	20	QPSK 50_0	132322/1745	1:1	0.045	0.05	20.42	21.00	1.143	0.051	22.1
Top side for ENDC	20	QPSK 50_0	132322/1745	1:1	0.401	0.17	20.42	21.00	1.143	0.458	22.1
Ant 2 Test Record											
Test position	**BW.**	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test Data(1RB)											
Left cheek	20	QPSK 1_0	132322/1745	1:1	0.361	0.02	20.31	21.20	1.227	0.443	22.4
Left tilted	20	QPSK 1_0	132322/1745	1:1	0.240	-0.14	20.31	21.20	1.227	0.295	22.4
Right cheek	20	QPSK 1_0	132322/1745	1:1	0.771	0.05	20.31	21.20	1.227	0.946	22.4
Right cheek	20	QPSK 1_0	132322/1745	1:1	0.718	0.07	20.21	21.20	1.256	0.902	22.4
Right cheek	20	QPSK 1_0	132322/1745	1:1	0.818	0.06	20.18	21.20	1.265	**1.035**	22.4
Right cheek for UL CA	20	QPSK 1_0	132322/1745	1:1	0.818	0.06	20.18	17.20	0.504	0.412	22.4
Right tilted	20	QPSK 1_0	132322/1745	1:1	0.230	0.12	20.31	21.20	1.227	0.282	22.4
Left cheek for ENDC	20	QPSK 1_0	132322/1745	1:1	0.043	-0.17	23.46	24.20	1.186	0.051	22.4
Left tilted for ENDC	20	QPSK 1_0	132322/1745	1:1	0.054	0.05	23.46	24.20	1.186	0.064	22.4

Right cheek for ENDC	20	QPSK 1_0	132322/1745	1:1	0.102	0.14	23.46	24.20	1.186	0.121	22.4
Right tilted for ENDC	20	QPSK 1_0	132322/1745	1:1	0.059	-0.17	23.46	24.20	1.186	0.070	22.4
Head Test Data(50%RB)											
Left cheek	20	QPSK 50_0	132322/1745	1:1	0.375	0.09	20.27	21.20	1.239	0.465	22.4
Left tilted	20	QPSK 50_0	132322/1745	1:1	0.246	0.04	20.27	21.20	1.239	0.305	22.4
Right cheek	20	QPSK 50_0	132322/1745	1:1	0.821	0.05	20.24	21.20	1.247	1.024	22.4
Right cheek	20	QPSK 50_0	132072/1720	1:1	0.748	-0.09	20.20	21.20	1.259	0.942	22.4
Right cheek	20	QPSK 50_0	132572/1770	1:1	0.821	0.04	20.27	21.20	1.239	1.017	22.4
Right tilted	20	QPSK 50_0	132322/1745	1:1	0.242	-0.01	20.27	21.20	1.239	0.300	22.4
Left cheek for ENDC	20	QPSK 50_0	132322/1745	1:1	0.038	0.04	22.48	23.20	1.180	0.045	22.4
Left tilted for ENDC	20	QPSK 50_0	132322/1745	1:1	0.042	-0.09	22.48	23.20	1.180	0.050	22.4
Right cheek for ENDC	20	QPSK 50_0	132322/1745	1:1	0.096	-0.17	22.48	23.20	1.180	0.113	22.4
Right tilted for ENDC	20	QPSK 50_0	132322/1745	1:1	0.053	0.12	22.48	23.20	1.180	0.063	22.4
Head Test Data(100%RB)											
Right cheek	20	QPSK 100_0	132322/1745	1:1	0.819	0.05	20.20	21.20	1.259	1.031	22.4
Body worn Test data(Separate 15mm 1RB)											
Front side	20	QPSK 1_0	132322/1745	1:1	0.263	0.02	24.48	25.70	1.324	0.348	22.4
Back side	20	QPSK 1_0	132322/1745	1:1	0.343	0.05	24.48	25.70	1.324	**0.454**	22.4
Front side for ENDC	20	QPSK 1_0	132322/1745	1:1	0.000	-0.11	23.46	24.20	1.186	0.000	22.4
Back side for ENDC	20	QPSK 1_0	132322/1745	1:1	0.000	-0.15	23.46	24.20	1.186	0.000	22.4
Body worn Test data(Separate 15mm 50%RB)											
Front side	20	QPSK 50_0	132322/1745	1:1	0.213	0.07	23.64	24.70	1.276	0.272	22.4
Back side	20	QPSK 50_0	132322/1745	1:1	0.337	0.05	23.64	24.70	1.276	0.430	22.4
Front side for ENDC	20	QPSK 50_0	132322/1745	1:1	0.000	-0.03	22.48	23.20	1.180	0.000	22.4
Back side for ENDC	20	QPSK 50_0	132322/1745	1:1	0.000	0.05	22.48	23.20	1.180	0.000	22.4
Hotspot Test data(Separate 10mm 1RB)											
Front side	20	QPSK 1_0	132322/1745	1:1	0.173	0.01	20.31	21.20	1.227	0.212	22.4
Back side	20	QPSK 1_0	132322/1745	1:1	0.295	0.06	20.31	21.20	1.227	0.362	22.4
Left side	20	QPSK 1_0	132322/1745	1:1	0.363	0.01	20.31	21.20	1.227	0.446	22.4
Front side for ENDC	20	QPSK 1_0	132322/1745	1:1	0.000	-0.02	23.46	24.20	1.186	0.000	22.4
Back side for ENDC	20	QPSK 1_0	132322/1745	1:1	0.000	-0.11	23.46	24.20	1.186	0.000	22.4
Left side for ENDC	20	QPSK 1_0	132322/1745	1:1	0.000	0.12	23.46	24.20	1.186	0.000	22.4
Hotspot Test data(Separate 10mm 50%RB)											
Front side	20	QPSK 50_0	132322/1745	1:1	0.212	0.03	20.27	21.20	1.239	0.263	22.4
Back side	20	QPSK 50_0	132322/1745	1:1	0.311	0.15	20.27	21.20	1.239	0.385	22.4
Left side	20	QPSK 50_0	132322/1745	1:1	0.386	-0.06	20.27	21.20	1.239	**0.478**	22.4
Front side for ENDC	20	QPSK 50_0	132322/1745	1:1	0.000	-0.16	22.48	23.20	1.180	0.000	22.4
Back side for ENDC	20	QPSK 50_0	132322/1745	1:1	0.000	0.17	22.48	23.20	1.180	0.000	22.4
Left side for ENDC	20	QPSK 50_0	132322/1745	1:1	0.000	0.06	22.48	23.20	1.180	0.000	22.4
Ant 3 Test Record											

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Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Head Test Data(1RB)											
Left cheek	20	QPSK 1_0	132322/1745	1:1	0.093	0.09	23.10	24.10	1.259	**0.117**	22.4
Left tilted	20	QPSK 1_0	132322/1745	1:1	0.052	0.17	23.10	24.10	1.259	0.065	22.4
Right cheek	20	QPSK 1_0	132322/1745	1:1	0.023	-0.06	23.10	24.10	1.259	0.029	22.4
Right tilted	20	QPSK 1_0	132322/1745	1:1	0.014	0.06	23.10	24.10	1.259	0.018	22.4
Left cheek for ENDC	20	QPSK 1_0	132322/1745	1:1	0.142	0.10	23.54	24.20	1.164	0.165	22.4
Left tilted for ENDC	20	QPSK 1_0	132322/1745	1:1	0.067	-0.17	23.54	24.20	1.164	0.078	22.4
Right cheek for ENDC	20	QPSK 1_0	132322/1745	1:1	0.075	-0.15	23.54	24.20	1.164	0.087	22.4
Right tilted for ENDC	20	QPSK 1_0	132322/1745	1:1	0.082	-0.13	23.54	24.20	1.164	0.095	22.4
Head Test Data(50%RB)											
Left cheek	20	QPSK 50_0	132322/1745	1:1	0.085	0.05	22.33	23.10	1.194	0.102	22.4
Left tilted	20	QPSK 50_0	132322/1745	1:1	0.049	0.14	22.33	23.10	1.194	0.059	22.4
Right cheek	20	QPSK 50_0	132322/1745	1:1	0.044	0.08	22.33	23.10	1.194	0.052	22.4
Right tilted	20	QPSK 50_0	132322/1745	1:1	0.018	0.17	22.33	23.10	1.194	0.021	22.4
Left cheek for ENDC	20	QPSK 50_0	132322/1745	1:1	0.134	-0.19	22.58	23.20	1.153	0.155	22.4
Left tilted for ENDC	20	QPSK 50_0	132322/1745	1:1	0.053	0.19	22.58	23.20	1.153	0.061	22.4
Right cheek for ENDC	20	QPSK 50_0	132322/1745	1:1	0.064	-0.03	22.58	23.20	1.153	0.074	22.4
Right tilted for ENDC	20	QPSK 50_0	132322/1745	1:1	0.076	0.08	22.58	23.20	1.153	0.088	22.4
Body worn Test data(Separate 15mm 1RB)											
Front side	20	QPSK 1_0	132322/1745	1:1	0.130	0.08	23.10	24.10	1.259	0.164	22.4
Back side	20	QPSK 1_0	132322/1745	1:1	0.135	0.06	23.10	24.10	1.259	**0.170**	22.4
Front side for ENDC	20	QPSK 1_0	132322/1745	1:1	0.152	0.02	23.54	24.20	1.164	0.177	22.4
Back side for ENDC	20	QPSK 1_0	132322/1745	1:1	0.183	0.13	23.54	24.20	1.164	0.213	22.4
Body worn Test data(Separate 15mm 50%RB)											
Front side	20	QPSK 50_0	132322/1745	1:1	0.118	-0.09	22.33	23.10	1.194	0.141	22.4
Back side	20	QPSK 50_0	132322/1745	1:1	0.123	0.12	22.33	23.10	1.194	0.147	22.4
Front side for ENDC	20	QPSK 50_0	132322/1745	1:1	0.142	-0.08	22.58	23.20	1.153	0.164	22.4
Back side for ENDC	20	QPSK 50_0	132322/1745	1:1	0.178	-0.16	22.58	23.20	1.153	0.205	22.4
Hotspot Test data(Separate 10mm 1RB)											
Front side	20	QPSK 1_0	132322/1745	1:1	0.202	-0.06	23.10	24.10	1.259	0.254	22.4
Back side	20	QPSK 1_0	132322/1745	1:1	0.306	0.15	23.10	24.10	1.259	**0.385**	22.4
Left side	20	QPSK 1_0	132322/1745	1:1	0.167	0.05	23.10	24.10	1.259	0.210	22.4
Bottom side	20	QPSK 1_0	132322/1745	1:1	0.064	-0.03	23.10	24.10	1.259	0.080	22.4
Front side for ENDC	20	QPSK 1_0	132322/1745	1:1	0.218	-0.06	23.54	24.20	1.164	0.254	22.4
Back side for ENDC		QPSK 1_0	132322/1745	1:1	0.430	0.02	23.54	24.20	1.164	0.501	22.4
Left side for ENDC	20	QPSK 1_0	132322/1745	1:1	0.289	0.07	23.54	24.20	1.164	0.336	22.4
Bottom side for ENDC	20	QPSK 1_0	132322/1745	1:1	0.166	0.17	23.54	24.20	1.164	0.193	22.4
Hotspot Test data(Separate 10mm 50%RB)											
Front side	20	QPSK 50_0	132322/1745	1:1	0.196	0.12	22.33	23.10	1.194	0.234	22.4

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Back side	20	QPSK 50_0	132322/1745	1:1	0.296	-0.03	22.33	23.10	1.194	0.353	22.4
Left side	20	QPSK 50_0	132322/1745	1:1	0.233	-0.07	22.33	23.10	1.194	0.278	22.4
Bottom side	20	QPSK 50_0	132322/1745	1:1	0.075	0.11	22.33	23.10	1.194	0.089	22.4
Front side for ENDC	20	QPSK 50_0	132322/1745	1:1	0.210	0.16	22.58	23.20	1.153	0.242	22.4
Back side for ENDC	20	QPSK 50_0	132322/1745	1:1	0.421	0.02	22.58	23.20	1.153	0.486	22.4
Left side for ENDC	20	QPSK 50_0	132322/1745	1:1	0.275	-0.03	22.58	23.20	1.153	0.317	22.4
Bottom side for ENDC	20	QPSK 50_0	132322/1745	1:1	0.166	-0.15	22.58	23.20	1.153	0.191	22.4

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8.2.2 SAR Result of 5G NR n5

SA N5 SAR Test Record											
Ant0 Test Record											
Test position	**BW.**	**Modulation**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test data(1RB)											
Left cheek	20	QPSK 1_1	167300/836.5	1:1	0.121	0.00	24.52	25.50	1.253	0.152	22.5
Left tilted	20	QPSK 1_1	167300/836.5	1:1	0.065	0.02	24.52	25.50	1.253	0.081	22.5
Right cheek	20	QPSK 1_1	167300/836.5	1:1	0.111	0.05	24.52	25.50	1.253	0.139	22.5
Right tilted	20	QPSK 1_1	167300/836.5	1:1	0.059	-0.04	24.52	25.50	1.253	0.074	22.5
Head Test data(50%RB)											
Left cheek	20	QPSK 50_28	167300/836.5	1:1	0.142	0.03	24.37	25.50	1.297	0.184	22.5
Left tilted	20	QPSK 50_28	167300/836.5	1:1	0.068	-0.11	24.37	25.50	1.297	0.088	22.5
Right cheek	20	QPSK 50_28	167300/836.5	1:1	0.126	0.08	24.37	25.50	1.297	0.163	22.5
Right tilted	20	QPSK 50_28	167300/836.5	1:1	0.060	-0.10	24.37	25.50	1.297	0.078	22.5
Body worn Test data(Separate 15mm 1RB)											
Front side	20	QPSK 1_1	167300/836.5	1:1	0.100	-0.18	24.52	25.50	1.253	0.125	22.5
Back side	20	QPSK 1_1	167300/836.5	1:1	0.134	-0.11	24.52	25.50	1.253	0.168	22.5
Body worn Test data(Separate 15mm 50%RB)											
Front side	20	QPSK 50_28	167300/836.5	1:1	0.111	0.18	24.37	25.50	1.297	0.144	22.5
Back side	20	QPSK 50_28	167300/836.5	1:1	0.165	0.06	24.37	25.50	1.297	**0.214**	22.5
Hotspot Test data(Separate 10mm 1RB)											
Front side	20	QPSK 1_1	167300/836.5	1:1	0.101	0.02	24.52	25.50	1.253	0.127	22.5
Back side	20	QPSK 1_1	167300/836.5	1:1	0.190	0.19	24.52	25.50	1.253	0.238	22.5
Left side	20	QPSK 1_1	167300/836.5	1:1	0.116	-0.17	24.52	25.50	1.253	0.145	22.5
Rightt side	20	QPSK 1_1	167300/836.5	1:1	0.120	0.12	24.52	25.50	1.253	0.150	22.5
Bottom side	20	QPSK 1_1	167300/836.5	1:1	0.086	0.08	24.52	25.50	1.253	0.107	22.5
Hotspot Test data (Separate 10mm 50%RB)											
Front side	20	QPSK 50_28	167300/836.5	1:1	0.111	-0.11	24.37	25.50	1.297	0.144	22.5
Back side	20	QPSK 50_28	167300/836.5	1:1	0.212	-0.04	24.37	25.50	1.297	**0.275**	22.5
Left side	20	QPSK 50_28	167300/836.5	1:1	0.102	0.08	24.37	25.50	1.297	0.132	22.5
Rightt side	20	QPSK 50_28	167300/836.5	1:1	0.125	-0.16	24.37	25.50	1.297	0.162	22.5
Bottom side	20	QPSK 50_28	167300/836.5	1:1	0.099	0.09	24.37	25.50	1.297	0.128	22.5
Ant1 Test Record											
Test position	**BW.**	**Modulation**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test data(1RB)											
Left cheek	20	QPSK 1_1	167300/836.5	1:1	0.710	0.02	24.37	25.30	1.239	0.880	22.5
Left tilted	20	QPSK 1_1	167300/836.5	1:1	0.635	0.07	24.37	25.30	1.239	0.787	22.5
Right cheek	20	QPSK 1_1	167300/836.5	1:1	0.872	0.04	24.37	25.30	1.239	**1.080**	22.5
Right cheek-repeat	20	QPSK 1_1	167300/836.5	1:1	0.831	-0.02	24.37	25.30	1.239	1.029	22.5
Right cheek for ENDC	20	QPSK 1_1	167300/836.5	1:1	0.872	0.04	24.37	22.30	0.621	0.541	22.5

Right tilted	20	QPSK 1_1	167300/836.5	1:1	0.806	0.17	24.37	25.30	1.239	0.998	22.5
Head Test data(50%RB)											
Left cheek	20	QPSK 50_28	167300/836.5	1:1	0.740	-0.09	24.31	25.30	1.256	0.929	22.5
Left tilted	20	QPSK 50_28	167300/836.5	1:1	0.643	-0.12	24.31	25.30	1.256	0.808	22.5
Right cheek	20	QPSK 50_28	167300/836.5	1:1	0.789	0.16	24.31	25.30	1.256	0.991	22.5
Right tilted	20	QPSK 50_28	167300/836.5	1:1	0.791	0.12	24.31	25.30	1.256	0.994	22.5
Head Test data(100%RB)											
Right cheek	20	QPSK 100_0	167300/836.5	1:1	0.846	0.12	23.32	24.30	1.253	1.060	22.5
Right tilted	20	QPSK 100_0	167300/836.5	1:1	0.789	-0.15	23.32	24.30	1.253	0.989	22.5
Body worn Test data(Separate 15mm 1RB)											
Front side	20	QPSK 1_1	167300/836.5	1:1	0.112	0.08	24.37	25.30	1.239	0.139	22.5
Back side	20	QPSK 1_1	167300/836.5	1:1	0.137	0.05	24.37	25.30	1.239	0.170	22.5
Body worn Test data (Separate 15mm 50%RB)											
Front side	20	QPSK 50_28	167300/836.5	1:1	0.111	0.18	24.31	25.30	1.256	0.139	22.5
Back side	20	QPSK 50_28	167300/836.5	1:1	0.139	-0.09	24.31	25.30	1.256	0.175	22.5
Hotspot Test data(Separate 10mm 1RB)											
Front side	20	QPSK 1_1	167300/836.5	1:1	0.183	0.11	24.37	25.30	1.239	0.227	22.5
Back side	20	QPSK 1_1	167300/836.5	1:1	0.296	-0.16	24.37	25.30	1.239	0.367	22.5
Left side	20	QPSK 1_1	167300/836.5	1:1	0.140	-0.04	24.37	25.30	1.239	0.173	22.5
Top side	20	QPSK 1_1	167300/836.5	1:1	0.188	-0.13	24.37	25.30	1.239	0.233	22.5
Hotspot Test data (Separate 10mm 50%RB)											
Front side	20	QPSK 50_28	167300/836.5	1:1	0.205	-0.10	24.31	25.30	1.256	0.257	22.5
Back side	20	QPSK 50_28	167300/836.5	1:1	0.310	0.09	24.31	25.30	1.256	**0.389**	22.5
Left side	20	QPSK 50_28	167300/836.5	1:1	0.124	0.12	24.31	25.30	1.256	0.156	22.5
Top side	20	QPSK 50_28	167300/836.5	1:1	0.190	0.04	24.31	25.30	1.256	0.239	22.5

Table 22：SAR of 5G NR n5 for Head and Body.

Test Position	**Channel/ Frequency**		**Measured SAR (1g)**	**1st Repeated**	**Ratio**	**2nd Repeated**	**3rd Repeated**
	(MHz)			**SAR (1g)**		**SAR (1g)**	**SAR (1g)**
Right cheek	167300/836.5		0.872	0.831	1.049	N/A	N/A
Note: 1) When the original highest measured SAR is ≥ 0.80 W/kg, the measurement was repeated once.							
2) A second repeated measurement was preformed only if the ratio of largest to smallest SAR for the original and first repeated measurements was > 1.20 or when the original or repeated measurement was ≥ 1.45 W/kg (~ 10% from the 1-g SAR limit).							
3) A third repeated measurement was preformed only if the original, first or second repeated measurement was ⩾ 1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20.							
4) Repeated measurements are not required when the original highest measured SAR is < 0.80 W/kg							

8.2.1 SAR Result of 5G NR n7

SA N7 SAR Test Record											
Ant0 Test Record											
Test position	**BW.**	**Modulation**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test data(1RB)											
Left cheek	50	QPSK 1_1	507000/2535	1:1	0.250	0.07	24.54	25.50	1.247	0.312	22.3
Left tilted	50	QPSK 1_1	507000/2535	1:1	0.185	0.07	24.54	25.50	1.247	0.231	22.3
Right cheek	50	QPSK 1_1	507000/2535	1:1	0.419	0.12	24.54	25.50	1.247	0.523	22.3
Right tilted	50	QPSK 1_1	507000/2535	1:1	0.194	-0.11	24.54	25.50	1.247	0.242	22.3
Head Test data(50%RB)											
Left cheek	50	QPSK 135_67	507000/2535	1:1	0.281	-0.08	24.36	25.50	1.300	0.365	22.3
Left tilted	50	QPSK 135_67	507000/2535	1:1	0.266	-0.18	24.36	25.50	1.300	0.346	22.3
Right cheek	50	QPSK 135_67	507000/2535	1:1	0.495	-0.04	24.36	25.50	1.300	**0.644**	22.3
Right cheek for ENDC	50	QPSK 135_67	507000/2535	1:1	0.495	-0.04	24.36	24.50	1.033	0.511	22.3
Right tilted	50	QPSK 135_67	507000/2535	1:1	0.231	-0.16	24.36	25.50	1.300	0.300	22.3
Body worn Test data(Separate 15mm 1RB)											
Front side	50	QPSK 1_1	507000/2535	1:1	0.268	0.18	22.55	23.50	1.245	0.334	22.3
Back side	50	QPSK 1_1	507000/2535	1:1	0.316	0.14	22.55	23.50	1.245	0.393	22.3
Body worn Test data(Separate 15mm 50%RB)											
Front side	50	QPSK 135_67	507000/2535	1:1	0.267	0.16	22.35	23.50	1.303	0.348	22.3
Back side	50	QPSK 135_67	507000/2535	1:1	0.324	-0.02	22.35	23.50	1.303	**0.422**	22.3
Hotspot Test data(Separate 10mm 1RB)											
Front side	50	QPSK 1_1	507000/2535	1:1	0.312	-0.13	20.49	21.00	1.125	0.351	22.3
Back side	50	QPSK 1_1	507000/2535	1:1	0.386	0.14	20.49	21.00	1.125	0.434	22.3
Left side	50	QPSK 1_1	507000/2535	1:1	0.040	0.06	20.49	21.00	1.125	0.045	22.3
Rightt side	50	QPSK 1_1	507000/2535	1:1	0.159	-0.16	20.49	21.00	1.125	0.179	22.3
Bottom side	50	QPSK 1_1	507000/2535	1:1	0.245	-0.18	20.49	21.00	1.125	0.276	22.3
Hotspot Test data (Separate 10mm 50%RB)											
Front side	50	QPSK 135_67	507000/2535	1:1	0.335	-0.03	20.43	21.00	1.140	0.382	22.3
Back side	50	QPSK 135_67	507000/2535	1:1	0.399	-0.06	20.43	21.00	1.140	**0.455**	22.3
Left side	50	QPSK 135_67	507000/2535	1:1	0.048	-0.04	20.43	21.00	1.140	0.055	22.3
Rightt side	50	QPSK 135_67	507000/2535	1:1	0.167	0.10	20.43	21.00	1.140	0.190	22.3
Bottom side	50	QPSK 135_67	507000/2535	1:1	0.267	-0.11	20.43	21.00	1.140	0.304	22.3
Ant1 Test Record											
Test position	**BW.**	**Modulation**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test data(1RB)											
Left cheek	50	QPSK 1_1	507000/2535	1:1	0.564	0.14	16.98	18.10	1.294	0.730	22.3
Left tilted	50	QPSK 1_1	507000/2535	1:1	0.463	0.12	16.98	18.10	1.294	0.599	22.3
Right cheek	50	QPSK 1_1	507000/2535	1:1	0.588	-0.18	16.98	18.10	1.294	0.761	22.3
Right tilted	50	QPSK 1_1	507000/2535	1:1	0.561	0.04	16.98	18.10	1.294	0.726	22.3

Head Test data(50%RB)											
Left cheek	50	QPSK 135_67	507000/2535	1:1	0.443	0.15	16.97	18.10	1.297	0.575	22.3
Left tilted	50	QPSK 135_67	507000/2535	1:1	0.436	-0.16	16.97	18.10	1.297	0.566	22.3
Right cheek	50	QPSK 135_67	507000/2535	1:1	0.555	0.11	16.97	18.10	1.297	0.720	22.3
Right tilted	50	QPSK 135_67	507000/2535	1:1	0.723	0.05	16.97	18.10	1.297	**0.938**	22.3
Right tilted for ENDC	50	QPSK 135_67	507000/2535	1:1	0.723	0.05	16.97	15.60	0.729	0.527	22.3
Head Test data(100%RB)											
Right tilted	50	QPSK 270_0	507000/2535	1:1	0.675	0.02	16.93	18.10	1.309	0.884	22.3
Body worn Test data(Separate 15mm 1RB)											
Front side	50	QPSK 1_1	507000/2535	1:1	0.267	-0.07	23.75	25.10	1.365	0.364	22.3
Back side	50	QPSK 1_1	507000/2535	1:1	0.325	0.18	23.75	25.10	1.365	0.443	22.3
Body worn Test data (Separate 15mm 50%RB)											
Front side	50	QPSK 135_67	507000/2535	1:1	0.293	0.03	23.64	25.10	1.400	0.410	22.3
Back side	50	QPSK 135_67	507000/2535	1:1	0.359	-0.04	23.64	25.10	1.400	**0.502**	22.3
Hotspot Test data(Separate 10mm 1RB)											
Front side	50	QPSK 1_1	507000/2535	1:1	0.113	0.00	16.98	18.10	1.294	0.146	22.3
Back side	50	QPSK 1_1	507000/2535	1:1	0.144	0.17	16.98	18.10	1.294	0.186	22.3
Left side	50	QPSK 1_1	507000/2535	1:1	0.084	-0.15	16.98	18.10	1.294	0.108	22.3
Top side	50	QPSK 1_1	507000/2535	1:1	0.217	0.14	16.98	18.10	1.294	0.281	22.3
Hotspot Test data (Separate 10mm 50%RB)											
Front side	50	QPSK 135_67	507000/2535	1:1	0.115	0.01	16.97	18.10	1.297	0.149	22.3
Back side	50	QPSK 135_67	507000/2535	1:1	0.158	-0.01	16.97	18.10	1.297	0.205	22.3
Left side	50	QPSK 135_67	507000/2535	1:1	0.070	-0.07	16.97	18.10	1.297	0.091	22.3
Top side	50	QPSK 135_67	507000/2535	1:1	0.267	-0.12	16.97	18.10	1.297	**0.346**	22.3
Ant2 Test Record											
Test position	**BW.**	**Modulation**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test data(1RB)											
Left cheek	50	QPSK 1_1	507000/2535	1:1	0.113	-0.07	18.27	19.20	1.239	0.140	22.4
Left tilted	50	QPSK 1_1	507000/2535	1:1	0.059	0.04	18.27	19.20	1.239	0.073	22.4
Right cheek	50	QPSK 1_1	507000/2535	1:1	0.454	0.13	18.27	19.20	1.239	0.562	22.4
Right tilted	50	QPSK 1_1	507000/2535	1:1	0.144	0.09	18.27	19.20	1.239	0.178	22.4
Head Test data(50%RB)											
Left cheek	50	QPSK 135_67	507000/2535	1:1	0.150	0.13	18.19	19.20	1.262	0.189	22.4
Left tilted	50	QPSK 135_67	507000/2535	1:1	0.094	0.00	18.19	19.20	1.262	0.119	22.4
Right cheek	50	QPSK 135_67	507000/2535	1:1	0.612	0.14	18.19	19.20	1.262	**0.772**	22.4
Right cheek for ENDC	50	QPSK 135_67	507000/2535	1:1	0.612	0.01	18.19	17.70	0.893	0.547	22.4
Right tilted	50	QPSK 135_67	507000/2535	1:1	0.182	-0.07	18.19	19.20	1.262	0.230	22.4
Body worn Test data(Separate 15mm 1RB)											
Front side	50	QPSK 1_1	507000/2535	1:1	0.187	0.04	23.49	24.70	1.321	0.247	22.4
Back side	50	QPSK 1_1	507000/2535	1:1	0.199	-0.07	23.49	24.70	1.321	0.263	22.4
Body worn Test data (Separate 15mm 50%RB)											
Front side	50	QPSK 135_67	507000/2535	1:1	0.310	0.19	23.46	24.70	1.330	0.412	22.4

Back side	50	QPSK 135_67	507000/2535	1:1	0.379	-0.01	23.46	24.70	1.330	**0.504**	22.4
Hotspot Test data(Separate 10mm 1RB)											
Front side	50	QPSK 1_1	507000/2535	1:1	0.067	0.16	18.27	19.20	1.239	0.083	22.4
Back side	50	QPSK 1_1	507000/2535	1:1	0.081	-0.06	18.27	19.20	1.239	0.100	22.4
Left side	50	QPSK 1_1	507000/2535	1:1	0.065	-0.05	18.27	19.20	1.239	0.080	22.4
Hotspot Test data (Separate 10mm 50%RB)											
Front side	50	QPSK 135_67	507000/2535	1:1	0.097	-0.14	18.19	19.20	1.262	0.122	22.4
Back side	50	QPSK 135_67	507000/2535	1:1	0.128	-0.03	18.19	19.20	1.262	**0.162**	22.4
Left side	50	QPSK 135_67	507000/2535	1:1	0.073	0.10	18.19	19.20	1.262	0.091	22.4
Ant3 Test Record											
Test position	**BW.**	**Modulation**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test data(1RB)											
Left cheek	50	QPSK 1_1	507000/2535	1:1	0.050	-0.01	23.79	24.70	1.233	0.061	22.4
Left tilted	50	QPSK 1_1	507000/2535	1:1	0.003	-0.15	23.79	24.70	1.233	0.004	22.4
Right cheek	50	QPSK 1_1	507000/2535	1:1	0.054	-0.03	23.79	24.70	1.233	0.067	22.4
Right tilted	50	QPSK 1_1	507000/2535	1:1	0.037	0.05	23.79	24.70	1.233	0.045	22.4
Head Test data(50%RB)											
Left cheek	50	QPSK 135_67	507000/2535	1:1	0.098	0.04	23.59	24.70	1.291	0.126	22.4
Left tilted	50	QPSK 135_67	507000/2535	1:1	0.046	-0.16	23.59	24.70	1.291	0.059	22.4
Right cheek	50	QPSK 135_67	507000/2535	1:1	0.086	-0.18	23.59	24.70	1.291	**0.111**	22.4
Right tilted	50	QPSK 135_67	507000/2535	1:1	0.066	-0.01	23.59	24.70	1.291	0.085	22.4
Body worn Test data(Separate 15mm 1RB)											
Front side	50	QPSK 1_1	507000/2535	1:1	0.096	-0.18	23.79	24.70	1.233	0.118	22.4
Back side	50	QPSK 1_1	507000/2535	1:1	0.160	-0.19	23.79	24.70	1.233	0.197	22.4
Body worn Test data (Separate 15mm 50%RB)											
Front side	50	QPSK 135_67	507000/2535	1:1	0.117	-0.17	23.59	24.70	1.291	0.151	22.4
Back side	50	QPSK 135_67	507000/2535	1:1	0.293	0.17	23.59	24.70	1.291	**0.378**	22.4
Hotspot Test data(Separate 10mm 1RB)											
Front side	50	QPSK 1_1	507000/2535	1:1	0.073	-0.19	19.91	20.70	1.199	0.087	22.4
Back side	50	QPSK 1_1	507000/2535	1:1	0.140	0.04	19.91	20.70	1.199	0.168	22.4
Left side	50	QPSK 1_1	507000/2535	1:1	0.138	-0.12	19.91	20.70	1.199	0.166	22.4
Bottom side	50	QPSK 1_1	507000/2535	1:1	0.044	0.08	19.91	20.70	1.199	0.053	22.4
Hotspot Test data (Separate 10mm 50%RB)											
Front side	50	QPSK 135_67	507000/2535	1:1	0.103	0.04	19.88	20.70	1.208	0.124	22.4
Back side	50	QPSK 135_67	507000/2535	1:1	0.249	0.06	19.88	20.70	1.208	**0.301**	22.4
Left side	50	QPSK 135_67	507000/2535	1:1	0.229	-0.04	19.88	20.70	1.208	0.277	22.4
Bottom side	50	QPSK 135_67	507000/2535	1:1	0.055	0.01	19.88	20.70	1.208	0.067	22.4

Table 23：SAR of 5G NR n7 for Head and Body.

8.2.2 SAR Result of 5G NR n41

SA N41 SAR Test Record											
Ant0 Test Record											
Test position	**BW.**	**Modulation**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test data(1RB)											
Left cheek	100	QPSK 1_1	518598/2592.99	1:1	0.167	0.00	24.43	25.50	1.279	0.214	22.5
Left tilted	100	QPSK 1_1	518598/2592.99	1:1	0.178	0.13	24.43	25.50	1.279	0.228	22.5
Right cheek	100	QPSK 1_1	518598/2592.99	1:1	0.706	0.08	24.43	25.50	1.279	**0.903**	22.5
Right cheek for ENDC	100	QPSK 1_1	518598/2592.99	1:1	0.706	0.08	24.43	23.00	0.719	0.508	22.5
Right tilted	100	QPSK 1_1	518598/2592.99	1:1	0.264	-0.03	24.43	25.50	1.279	0.338	22.5
Head Test data(50%RB)											
Left cheek	100	QPSK 135_69	518598/2592.99	1:1	0.163	0.00	24.30	25.50	1.318	0.215	22.5
Left tilted	100	QPSK 135_69	518598/2592.99	1:1	0.175	-0.08	24.30	25.50	1.318	0.231	22.5
Right cheek	100	QPSK 135_69	518598/2592.99	1:1	0.445	-0.11	24.30	25.50	1.318	0.587	22.5
Right tilted	100	QPSK 135_69	518598/2592.99	1:1	0.264	0.10	24.30	25.50	1.318	0.348	22.5
Head Test data(100%RB)											
Right cheek	100	QPSK 270_0	518598/2592.99	1:1	0.439	-0.08	23.18	25.50	1.706	0.749	22.5
Body worn Test data(Separate 15mm 1RB)											
Front side	100	QPSK 1_1	518598/2592.99	1:1	0.200	0.03	24.43	25.50	1.279	0.256	22.5
Back side	100	QPSK 1_1	518598/2592.99	1:1	0.241	-0.05	24.43	25.50	1.279	0.308	22.5
Body worn Test data(Separate 15mm 50%RB)											
Front side	100	QPSK 135_69	518598/2592.99	1:1	0.308	-0.05	24.30	25.50	1.318	0.406	22.5
Back side	100	QPSK 135_69	518598/2592.99	1:1	0.390	0.09	24.30	25.50	1.318	**0.514**	22.5
Hotspot Test data(Separate 10mm 1RB)											
Front side	100	QPSK 1_1	518598/2592.99	1:1	0.164	0.05	19.84	20.50	1.164	0.191	22.5
Back side	100	QPSK 1_1	518598/2592.99	1:1	0.205	-0.03	19.84	20.50	1.164	0.239	22.5
Left side	100	QPSK 1_1	518598/2592.99	1:1	0.042	-0.10	19.84	20.50	1.164	0.049	22.5
Right side	100	QPSK 1_1	518598/2592.99	1:1	0.141	-0.11	19.84	20.50	1.164	0.164	22.5
Bottom side	100	QPSK 1_1	518598/2592.99	1:1	0.183	-0.09	19.84	20.50	1.164	0.213	22.5
Hotspot Test data (Separate 10mm 50%RB)											
Front side	100	QPSK 135_69	518598/2592.99	1:1	0.224	-0.09	19.81	20.50	1.172	0.263	22.5
Back side	100	QPSK 135_69	518598/2592.99	1:1	0.278	0.03	19.81	20.50	1.172	**0.326**	22.5
Left side	100	QPSK 135_69	518598/2592.99	1:1	0.047	-0.02	19.81	20.50	1.172	0.055	22.5
Right side	100	QPSK 135_69	518598/2592.99	1:1	0.211	-0.08	19.81	20.50	1.172	0.247	22.5
Bottom side	100	QPSK 135_69	518598/2592.99	1:1	0.255	-0.08	19.81	20.50	1.172	0.299	22.5
Ant1 Test Record											
Test position	**BW.**	**Modulation**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test data(1RB)											
Left cheek	100	QPSK 1_1	518598/2592.99	1:1	0.366	0.04	16.84	17.90	1.276	0.467	22.5
Left tilted	100	QPSK 1_1	518598/2592.99	1:1	0.459	-0.03	16.84	17.90	1.276	0.586	22.5

Right cheek	100	QPSK 1_1	518598/2592.99	1:1	0.451	-0.09	16.84	17.90	1.276	0.576	22.5
Right tilted	100	QPSK 1_1	518598/2592.99	1:1	0.584	-0.03	16.84	17.90	1.276	0.745	22.5
Head Test data(50%RB)											
Left cheek	100	QPSK 135_69	518598/2592.99	1:1	0.324	-0.08	16.82	17.90	1.282	0.415	22.5
Left tilted	100	QPSK 135_69	518598/2592.99	1:1	0.438	-0.06	16.82	17.90	1.282	0.562	22.5
Right cheek	100	QPSK 135_69	518598/2592.99	1:1	0.475	0.04	16.82	17.90	1.282	0.609	22.5
Right tilted	100	QPSK 135_69	518598/2592.99	1:1	0.654	0.07	16.82	17.90	1.282	**0.839**	22.5
Right tilted for ENDC	100	QPSK 135_69	518598/2592.99	1:1	0.654	0.07	16.82	15.90	0.809	0.529	22.5
Body worn Test data(Separate 15mm 1RB)											
Front side	100	QPSK 1_1	518598/2592.99	1:1	0.227	0.06	23.24	24.90	1.466	0.333	22.5
Back side	100	QPSK 1_1	518598/2592.99	1:1	0.297	-0.09	23.24	24.90	1.466	0.435	22.5
Body worn Test data (Separate 15mm 50%RB)											
Front side	100	QPSK 135_69	518598/2592.99	1:1	0.254	0.00	23.29	24.90	1.449	0.368	22.5
Back side	100	QPSK 135_69	518598/2592.99	1:1	0.319	-0.03	23.29	24.90	1.449	**0.462**	22.5
Hotspot Test data(Separate 10mm 1RB)											
Front side	100	QPSK 1_1	518598/2592.99	1:1	0.086	0.08	16.84	17.90	1.276	0.109	22.5
Back side	100	QPSK 1_1	518598/2592.99	1:1	0.132	-0.05	16.84	17.90	1.276	0.168	22.5
Left side	100	QPSK 1_1	518598/2592.99	1:1	0.061	-0.10	16.84	17.90	1.276	0.077	22.5
Top side	100	QPSK 1_1	518598/2592.99	1:1	0.219	0.08	16.84	17.90	1.276	**0.280**	22.5
Hotspot Test data (Separate 10mm 50%RB)											
Front side	100	QPSK 135_69	518598/2592.99	1:1	0.080	0.09	16.82	17.90	1.282	0.103	22.5
Back side	100	QPSK 135_69	518598/2592.99	1:1	0.130	-0.12	16.82	17.90	1.282	0.167	22.5
Left side	100	QPSK 135_69	518598/2592.99	1:1	0.060	0.13	16.82	17.90	1.282	0.076	22.5
Top side	100	QPSK 135_69	518598/2592.99	1:1	0.211	-0.13	16.82	17.90	1.282	0.271	22.5
Ant2 Test Record											
Test position	**BW.**	**Modulation**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test data(1RB)											
Left cheek	100	QPSK 1_1	518598/2592.99	1:1	0.139	0.04	18.24	19.20	1.247	0.173	22.4
Left tilted	100	QPSK 1_1	518598/2592.99	1:1	0.053	-0.03	18.24	19.20	1.247	0.066	22.4
Right cheek	100	QPSK 1_1	518598/2592.99	1:1	0.275	0.11	18.24	19.20	1.247	0.343	22.4
Right tilted	100	QPSK 1_1	518598/2592.99	1:1	0.103	0.11	18.24	19.20	1.247	0.128	22.4
Head Test data(50%RB)											
Left cheek	100	QPSK 135_69	518598/2592.99	1:1	0.124	-0.02	18.14	19.20	1.276	0.158	22.4
Left tilted	100	QPSK 135_69	518598/2592.99	1:1	0.041	-0.07	18.14	19.20	1.276	0.053	22.4
Right cheek	100	QPSK 135_69	518598/2592.99	1:1	0.299	-0.09	18.14	19.20	1.276	**0.382**	22.4
Right tilted	100	QPSK 135_69	518598/2592.99	1:1	0.097	-0.08	18.14	19.20	1.276	0.123	22.4
Body worn Test data(Separate 15mm 1RB)											
Front side	100	QPSK 1_1	518598/2592.99	1:1	0.279	-0.02	24.43	25.70	1.340	0.374	22.4
Back side	100	QPSK 1_1	518598/2592.99	1:1	0.464	-0.01	24.43	25.70	1.340	0.622	22.4
Body worn Test data (Separate 15mm 50%RB)											
Front side	100	QPSK 135_69	518598/2592.99	1:1	0.291	0.05	24.31	25.70	1.377	0.401	22.4
Back side	100	QPSK 135_69	518598/2592.99	1:1	0.502	0.01	24.31	25.70	1.377	**0.691**	22.4

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Back side for ENDC	100	QPSK 135_69	518598/2592.99	1:1	0.502	0.07	24.31	24.70	1.094	0.549	22.4
Hotspot Test data(Separate 10mm 1RB)											
Front side	100	QPSK 1_1	518598/2592.99	1:1	0.103	-0.04	18.24	19.20	1.247	0.128	22.4
Back side	100	QPSK 1_1	518598/2592.99	1:1	0.185	-0.04	18.24	19.20	1.247	0.231	22.4
Left side	100	QPSK 1_1	518598/2592.99	1:1	0.173	-0.13	18.24	19.20	1.247	0.216	22.4
Hotspot Test data (Separate 10mm 50%RB)											
Front side	100	QPSK 135_69	518598/2592.99	1:1	0.102	-0.02	18.14	19.20	1.276	0.130	22.4
Back side	100	QPSK 135_69	518598/2592.99	1:1	0.154	0.12	18.14	19.20	1.276	0.197	22.4
Left side	100	QPSK 135_69	518598/2592.99	1:1	0.198	0.03	18.14	19.20	1.276	**0.253**	22.4
Ant3 Test Record											
Test position	**BW.**	**Modulation**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test data(1RB)											
Left cheek	100	QPSK 1_1	518598/2592.99	1:1	0.155	0.05	23.60	24.60	1.259	**0.195**	22.4
Left tilted	100	QPSK 1_1	518598/2592.99	1:1	0.045	-0.01	23.60	24.60	1.259	0.056	22.4
Right cheek	100	QPSK 1_1	518598/2592.99	1:1	0.075	0.05	23.60	24.60	1.259	0.094	22.4
Right tilted	100	QPSK 1_1	518598/2592.99	1:1	0.058	-0.09	23.60	24.60	1.259	0.073	22.4
Head Test data(50%RB)											
Left cheek	100	QPSK 135_69	518598/2592.99	1:1	0.158	0.17	23.52	24.60	1.282	0.203	22.4
Left tilted	100	QPSK 135_69	518598/2592.99	1:1	0.042	0.11	23.52	24.60	1.282	0.054	22.4
Right cheek	100	QPSK 135_69	518598/2592.99	1:1	0.080	0.10	23.52	24.60	1.282	0.102	22.4
Right tilted	100	QPSK 135_69	518598/2592.99	1:1	0.072	-0.09	23.52	24.60	1.282	0.093	22.4
Body worn Test data(Separate 15mm 1RB)											
Front side	100	QPSK 1_1	518598/2592.99	1:1	0.080	-0.03	20.75	21.60	1.216	0.098	22.4
Back side	100	QPSK 1_1	518598/2592.99	1:1	0.197	-0.01	20.75	21.60	1.216	0.240	22.4
Body worn Test data (Separate 15mm 50%RB)											
Front side	100	QPSK 135_69	518598/2592.99	1:1	0.167	0.05	20.67	21.60	1.239	0.207	22.4
Back side	100	QPSK 135_69	518598/2592.99	1:1	0.477	0.03	20.67	21.60	1.239	**0.591**	22.4
Back side for ENDC	100	QPSK 135_69	518598/2592.99	1:1	0.477	0.10	20.67	21.10	1.104	0.527	22.4
Hotspot Test data(Separate 10mm 1RB)											
Front side	100	QPSK 1_1	518598/2592.99	1:1	0.049	-0.06	18.71	19.60	1.227	0.060	22.4
Back side	100	QPSK 1_1	518598/2592.99	1:1	0.141	0.13	18.71	19.60	1.227	0.173	22.4
Left side	100	QPSK 1_1	518598/2592.99	1:1	0.106	0.07	18.71	19.60	1.227	0.130	22.4
Bottom side	100	QPSK 1_1	518598/2592.99	1:1	0.038	-0.07	18.71	19.60	1.227	0.046	22.4
Hotspot Test data (Separate 10mm 50%RB)											
Front side	100	QPSK 135_69	518598/2592.99	1:1	0.063	0.12	18.69	19.60	1.233	0.077	22.4
Back side	100	QPSK 135_69	518598/2592.99	1:1	0.185	0.08	18.69	19.60	1.233	0.228	22.4
Left side	100	QPSK 135_69	518598/2592.99	1:1	0.238	-0.02	18.69	19.60	1.233	**0.293**	22.4
Bottom side	100	QPSK 135_69	518598/2592.99	1:1	0.037	0.04	18.69	19.60	1.233	0.045	22.4

Table 24：SAR of 5G NR n41 for Head and Body.

8.2.3 SAR Result of 5G NR n66

SA N66 SAR Test Record											
Ant0 Test Record											
Test position	**BW.**	**Modulation**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test data(1RB)											
Left cheek	40	QPSK 1_1	349000/1745	1:1	0.119	0.05	24.35	25.50	1.303	0.155	22.3
Left tilted	40	QPSK 1_1	349000/1745	1:1	0.081	0.12	24.35	25.50	1.303	0.106	22.3
Right cheek	40	QPSK 1_1	349000/1745	1:1	0.059	0.11	24.35	25.50	1.303	0.077	22.3
Right tilted	40	QPSK 1_1	349000/1745	1:1	0.080	-0.14	24.35	25.50	1.303	0.104	22.3
Head Test data(50%RB)											
Left cheek	40	QPSK 108_54	349000/1745	1:1	0.164	0.03	24.23	25.50	1.340	**0.220**	22.3
Left tilted	40	QPSK 108_54	349000/1745	1:1	0.079	-0.14	24.23	25.50	1.340	0.106	22.3
Right cheek	40	QPSK 108_54	349000/1745	1:1	0.073	-0.09	24.23	25.50	1.340	0.098	22.3
Right tilted	40	QPSK 108_54	349000/1745	1:1	0.064	0.12	24.23	25.50	1.340	0.086	22.3
Body worn Test data(Separate 15mm 1RB)											
Front side	40	QPSK 1_1	349000/1745	1:1	0.224	0.13	24.35	25.50	1.303	0.292	22.3
Back side	40	QPSK 1_1	349000/1745	1:1	0.586	-0.17	24.35	25.50	1.303	0.764	22.3
Body worn Test data(Separate 15mm 50%RB)											
Front side	40	QPSK 108_54	349000/1745	1:1	0.264	0.15	24.23	25.50	1.340	0.354	22.3
Back side	40	QPSK 108_54	349000/1745	1:1	0.718	-0.07	24.23	25.50	1.340	0.962	22.3
Body worn Test data(Separate 15mm 100%RB)											
Back side	40	QPSK 216_0	349000/1745	1:1	0.809	-0.07	23.31	24.50	1.315	**1.064**	22.3
Back side repeat	40	QPSK 216_0	349000/1745	1:1	0.798	-0.01	23.31	24.50	1.315	1.050	22.3
Back side for ENDC	40	QPSK 216_0	349000/1745	1:1	0.809	-0.07	23.31	21.50	0.659	0.533	22.3
Hotspot Test data(Separate 10mm 1RB)											
Front side	40	QPSK 1_1	349000/1745	1:1	0.101	0.06	19.74	20.50	1.191	0.120	22.3
Back side	40	QPSK 1_1	349000/1745	1:1	0.334	0.13	19.74	20.50	1.191	0.398	22.3
Left side	40	QPSK 1_1	349000/1745	1:1	0.048	0.16	19.74	20.50	1.191	0.057	22.3
Right side	40	QPSK 1_1	349000/1745	1:1	0.051	0.04	19.74	20.50	1.191	0.061	22.3
Bottom side	40	QPSK 1_1	349000/1745	1:1	0.237	-0.10	19.74	20.50	1.191	0.282	22.3
Hotspot Test data (Separate 10mm 50%RB)											
Front side	40	QPSK 108_54	349000/1745	1:1	0.139	-0.08	19.73	20.50	1.194	0.166	22.3
Back side	40	QPSK 108_54	349000/1745	1:1	0.485	-0.05	19.73	20.50	1.194	**0.579**	22.3
Back side for ENDC	40	QPSK 108_54	349000/1745	1:1	0.485	-0.05	19.73	19.50	0.948	0.460	22.3
Left side	40	QPSK 108_54	349000/1745	1:1	0.062	0.13	19.73	20.50	1.194	0.074	22.3
Right side	40	QPSK 108_54	349000/1745	1:1	0.069	-0.04	19.73	20.50	1.194	0.083	22.3
Bottom side	40	QPSK 108_54	349000/1745	1:1	0.376	0.09	19.73	20.50	1.194	0.449	22.3
Ant1 Test Record											
Test position	**BW.**	**Modulation**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test data(1RB)											
Left cheek	40	QPSK 1_1	349000/1745	1:1	0.364	0.12	18.97	19.60	1.156	0.421	22.3

Left tilted	40	QPSK 1_1	349000/1745	1:1	0.416	-0.08	18.97	19.60	1.156	0.481	22.3
Right cheek	40	QPSK 1_1	349000/1745	1:1	0.519	0.16	18.97	19.60	1.156	0.600	22.3
Right tilted	40	QPSK 1_1	349000/1745	1:1	0.570	-0.09	18.97	19.60	1.156	0.659	22.3
Head Test data(50%RB)											
Left cheek	40	QPSK 108_54	349000/1745	1:1	0.388	-0.18	18.94	19.60	1.164	0.452	22.3
Left tilted	40	QPSK 108_54	349000/1745	1:1	0.460	0.14	18.94	19.60	1.164	0.535	22.3
Right cheek	40	QPSK 108_54	349000/1745	1:1	0.548	0.06	18.94	19.60	1.164	0.638	22.3
Right tilted	40	QPSK 108_54	349000/1745	1:1	0.724	-0.19	18.94	19.60	1.164	0.843	22.3
Head Test data(100%RB)											
Right tilted	40	QPSK 216_0	349000/1745	1:1	0.743	-0.18	18.82	19.60	1.197	**0.889**	22.3
Right tilted for ENDC	40	QPSK 216_0	349000/1745	1:1	0.743	-0.18	18.82	17.10	0.673	0.500	22.3
Body worn Test data(Separate 15mm 1RB)											
Front side	40	QPSK 1_1	349000/1745	1:1	0.208	-0.07	23.56	24.60	1.271	0.264	22.3
Back side	40	QPSK 1_1	349000/1745	1:1	0.396	0.13	23.56	24.60	1.271	0.503	22.3
Body worn Test data (Separate 15mm 50%RB)											
Front side	40	QPSK 108_54	349000/1745	1:1	0.209	0.11	23.49	24.60	1.291	0.270	22.3
Back side	40	QPSK 108_54	349000/1745	1:1	0.492	-0.10	23.49	24.60	1.291	**0.635**	22.3
Back side for ENDC	40	QPSK 108_54	349000/1745	1:1	0.492	-0.10	23.29	23.10	0.957	0.471	22.3
Hotspot Test data(Separate 10mm 1RB)											
Front side	40	QPSK 1_1	349000/1745	1:1	0.157	0.13	18.97	19.60	1.156	0.182	22.3
Back side	40	QPSK 1_1	349000/1745	1:1	0.316	0.03	18.97	19.60	1.156	0.365	22.3
Left side	40	QPSK 1_1	349000/1745	1:1	0.034	0.12	18.97	19.60	1.156	0.039	22.3
Top side	40	QPSK 1_1	349000/1745	1:1	0.350	-0.02	18.97	19.60	1.156	0.405	22.3
Hotspot Test data (Separate 10mm 50%RB)											
Front side	40	QPSK 108_54	349000/1745	1:1	0.136	-0.12	18.94	19.60	1.164	0.158	22.3
Back side	40	QPSK 108_54	349000/1745	1:1	0.322	0.02	18.94	19.60	1.164	0.375	22.3
Left side	40	QPSK 108_54	349000/1745	1:1	0.032	0.11	18.94	19.60	1.164	0.037	22.3
Top side	40	QPSK 108_54	349000/1745	1:1	0.372	0.07	18.94	19.60	1.164	**0.433**	22.3
Ant2 Test Record											
Test position	**BW.**	**Modulation**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test data(1RB)											
Left cheek	40	QPSK 1_1	349000/1745	1:1	0.247	0.13	19.79	20.10	1.074	0.265	22.2
Left tilted	40	QPSK 1_1	349000/1745	1:1	0.165	0.16	19.79	20.10	1.074	0.177	22.2
Right cheek	40	QPSK 1_1	349000/1745	1:1	0.617	0.00	19.79	20.10	1.074	0.663	22.2
Right tilted	40	QPSK 1_1	349000/1745	1:1	0.182	-0.10	19.79	20.10	1.074	0.195	22.2
Head Test data(50%RB)											
Left cheek	40	QPSK 108_54	349000/1745	1:1	0.324	-0.04	19.78	20.10	1.076	0.349	22.2
Left tilted	40	QPSK 108_54	349000/1745	1:1	0.216	0.09	19.78	20.10	1.076	0.233	22.2
Right cheek	40	QPSK 108_54	349000/1745	1:1	0.700	-0.02	19.78	20.10	1.076	**0.754**	22.2
Right cheek for ENDC	40	QPSK 108_54	349000/1745	1:1	0.700	-0.02	19.78	18.60	0.762	0.533	22.2
Right tilted	40	QPSK 108_54	349000/1745	1:1	0.214	0.01	19.78	20.10	1.076	0.230	22.2
Body worn Test data(Separate 15mm 1RB)											

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Front side	40	QPSK 1_1	349000/1745	1:1	0.245	-0.15	24.38	25.10	1.180	0.289	22.2
Back side	40	QPSK 1_1	349000/1745	1:1	0.301	0.11	24.38	25.10	1.180	0.355	22.2
Body worn Test data (Separate 15mm 50%RB)											
Front side	40	QPSK 108_54	349000/1745	1:1	0.317	0.16	24.32	25.10	1.197	0.379	22.2
Back side	40	QPSK 108_54	349000/1745	1:1	0.386	0.05	24.32	25.10	1.197	**0.462**	22.2
Hotspot Test data(Separate 10mm 1RB)											
Front side	40	QPSK 1_1	349000/1745	1:1	0.104	-0.19	19.79	20.10	1.074	0.112	22.2
Back side	40	QPSK 1_1	349000/1745	1:1	0.209	0.08	19.79	20.10	1.074	0.224	22.2
Left side	40	QPSK 1_1	349000/1745	1:1	0.215	0.04	19.79	20.10	1.074	0.231	22.2
Hotspot Test data (Separate 10mm 50%RB)											
Front side	40	QPSK 108_54	349000/1745	1:1	0.178	0.06	19.78	20.10	1.076	0.192	22.2
Back side	40	QPSK 108_54	349000/1745	1:1	0.253	0.05	19.78	20.10	1.076	0.272	22.2
Left side	40	QPSK 108_54	349000/1745	1:1	0.299	-0.15	19.78	20.10	1.076	**0.322**	22.2
Ant3 Test Record											
Test position	**BW.**	**Modulation**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test data(1RB)											
Left cheek	40	QPSK 1_1	349000/1745	1:1	0.068	0.06	23.67	23.70	1.007	0.068	22.2
Left tilted	40	QPSK 1_1	349000/1745	1:1	0.027	0.13	23.67	23.70	1.007	0.027	22.2
Right cheek	40	QPSK 1_1	349000/1745	1:1	0.030	-0.07	23.67	23.70	1.007	0.031	22.2
Right tilted	40	QPSK 1_1	349000/1745	1:1	0.037	0.09	23.67	23.70	1.007	0.037	22.2
Head Test data(50%RB)											
Left cheek	40	QPSK 108_54	349000/1745	1:1	0.118	0.05	23.65	23.70	1.012	**0.119**	22.2
Left tilted	40	QPSK 108_54	349000/1745	1:1	0.051	-0.06	23.65	23.70	1.012	0.052	22.2
Right cheek	40	QPSK 108_54	349000/1745	1:1	0.055	0.03	23.65	23.70	1.012	0.056	22.2
Right tilted	40	QPSK 108_54	349000/1745	1:1	0.065	0.03	23.65	23.70	1.012	0.066	22.2
Body worn Test data(Separate 15mm 1RB)											
Front side	40	QPSK 1_1	349000/1745	1:1	0.075	-0.11	23.67	23.70	1.007	0.075	22.2
Back side	40	QPSK 1_1	349000/1745	1:1	0.079	-0.05	23.67	23.70	1.007	0.079	22.2
Body worn Test data (Separate 15mm 50%RB)											
Front side	40	QPSK 108_54	349000/1745	1:1	0.074	0.05	23.65	23.70	1.012	0.074	22.2
Back side	40	QPSK 108_54	349000/1745	1:1	0.112	0.04	23.65	23.70	1.012	**0.113**	22.2
Hotspot Test data(Separate 10mm 1RB)											
Front side	40	QPSK 1_1	349000/1745	1:1	0.075	-0.01	21.69	21.70	1.002	0.075	22.2
Back side	40	QPSK 1_1	349000/1745	1:1	0.106	-0.05	21.69	21.70	1.002	0.106	22.2
Left side	40	QPSK 1_1	349000/1745	1:1	0.097	0.06	21.69	21.70	1.002	0.097	22.2
Bottom side	40	QPSK 1_1	349000/1745	1:1	0.040	0.11	21.69	21.70	1.002	0.040	22.2
Hotspot Test data (Separate 10mm 50%RB)											
Front side	40	QPSK 108_54	349000/1745	1:1	0.078	-0.12	21.66	21.70	1.009	0.079	22.2
Back side	40	QPSK 108_54	349000/1745	1:1	0.107	-0.10	21.66	21.70	1.009	**0.108**	22.2
Left side	40	QPSK 108_54	349000/1745	1:1	0.097	0.07	21.66	21.70	1.009	0.098	22.2
Bottom side	40	QPSK 108_54	349000/1745	1:1	0.037	0.01	21.66	21.70	1.009	0.038	22.2

Table 25：SAR of 5G NR n66 for Head and Body.

8.2.4 SAR Result of 5G NR n77

SA N77 SAR Test Record											
Ant2 Test Record											
Test position	BW.	Modulation	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Head Test data(1RB)											
Left cheek	100	QPSK 1_1	633334/3500	1:1	0.306	0.05	18.01	18.40	1.094	0.335	22.3
Left tilted	100	QPSK 1_1	633334/3500	1:1	0.081	-0.04	18.01	18.40	1.094	0.089	22.3
Right cheek	100	QPSK 1_1	633334/3500	1:1	0.886	0.02	18.01	18.40	1.094	0.969	22.3
Right tilted	100	QPSK 1_1	633334/3500	1:1	0.190	0.16	18.01	18.40	1.094	0.208	22.3
Head Test data(50%RB)											
Left cheek	100	QPSK 135_69	633334/3500	1:1	0.344	0.02	17.98	18.40	1.102	0.379	22.3
Left tilted	100	QPSK 135_69	633334/3500	1:1	0.099	0.06	17.98	18.40	1.102	0.109	22.3
Right cheek	100	QPSK 135_69	633334/3500	1:1	0.990	0.07	17.98	18.40	1.102	**1.091**	22.3
Right cheek for ENDC	100	QPSK 135_69	633334/3500	1:1	0.990	0.07	17.98	15.40	0.552	0.547	22.3
Right tilted	100	QPSK 135_69	633334/3500	1:1	0.247	-0.05	17.98	18.40	1.102	0.272	22.3
Head Test data(100%RB)											
Right cheek	100	QPSK 270_0	633334/3500	1:1	0.911	0.03	17.91	18.40	1.119	1.020	22.3
Body worn Test data(Separate 15mm 1RB)											
Front side	100	QPSK 1_1	633334/3500	1:1	0.429	0.06	22.77	23.40	1.156	0.496	22.3
Back side	100	QPSK 1_1	633334/3500	1:1	0.746	-0.06	22.77	23.40	1.156	0.862	22.3
Body worn Test data(Separate 15mm 50%RB)											
Front side	100	QPSK 135_69	633334/3500	1:1	0.449	0.01	22.80	23.40	1.148	0.516	22.3
Back side	100	QPSK 135_69	633334/3500	1:1	0.784	-0.08	22.80	23.40	**1.148**	**0.900**	22.3
Back side for ENDC	100	QPSK 135_69	633334/3500	1:1	0.784	-0.08	22.80	20.90	0.646	0.506	22.3
Body worn Test data(Separate 15mm 100%RB)											
Back side	100	QPSK 135_69	633334/3500	1:1	0.716	0.05	21.53	22.40	1.222	0.875	22.3
Hotspot Test data(Separate 10mm 1RB)											
Front side	100	QPSK 1_1	633334/3500	1:1	0.198	-0.08	18.01	18.40	1.094	0.217	22.3
Back side	100	QPSK 1_1	633334/3500	1:1	0.446	0.01	18.01	18.40	1.094	0.488	22.3
Left side	100	QPSK 1_1	633334/3500	1:1	0.703	0.09	18.01	18.40	1.094	0.769	22.3
Hotspot Test data (Separate 10mm 50%RB)											
Front side	100	QPSK 135_69	633334/3500	1:1	0.225	-0.09	17.98	18.40	1.102	0.248	22.3
Back side	100	QPSK 135_69	633334/3500	1:1	0.511	0.01	17.98	18.40	1.102	0.563	22.3
Left side	100	QPSK 135_69	633334/3500	1:1	0.749	0.02	17.98	18.40	1.102	**0.825**	22.3
Left side for ENDC	100	QPSK 135_69	633334/3500	1:1	0.749	0.02	17.98	15.90	0.619	0.464	22.3
Hotspot Test data (Separate 10mm 100%RB)											
Left side	100	QPSK 270_0	633334/3500	1:1	0.734	0.02	17.91	18.40	1.119	0.822	22.3
Ant4 Test Record											
Test position	BW.	Modulation	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Head Test data(1RB)											

Left cheek	100	QPSK 1_1	633334/3500	1:1	0.655	0.02	21.51	22.30	1.199	0.786	22.3
Left tilted	100	QPSK 1_1	633334/3500	1:1	0.675	0.09	21.51	22.30	1.199	0.810	22.3
Right cheek	100	QPSK 1_1	633334/3500	1:1	0.468	0.06	21.51	22.30	1.199	0.561	22.3
Right tilted	100	QPSK 1_1	633334/3500	1:1	0.520	0.04	21.51	22.30	1.199	0.624	22.3
Head Test data(50%RB)											
Left cheek	100	QPSK 135_69	633334/3500	1:1	0.698	0.06	21.49	22.30	1.205	0.841	22.3
Left tilted	100	QPSK 135_69	633334/3500	1:1	0.724	-0.11	21.49	22.30	1.205	0.872	22.3
Left tilted for ENDC	100	QPSK 135_69	633334/3500	1:1	0.724	-0.11	21.49	19.80	0.678	0.491	22.3
Right cheek	100	QPSK 135_69	633334/3500	1:1	0.506	0.03	21.49	22.30	1.205	0.610	22.3
Right tilted	100	QPSK 135_69	633334/3500	1:1	0.559	0.08	21.49	22.30	1.205	0.674	22.3
Head Test data(100%RB)											
Left cheek	100	QPSK 270_0	633334/3500	1:1	0.688	0.03	21.44	22.80	1.368	0.941	22.3
Left tilted	100	QPSK 270_0	633334/3500	1:1	0.706	-0.15	21.44	22.80	1.368	0.966	22.3
Body worn Test data(Separate 15mm 1RB)											
Front side	100	QPSK 1_1	633334/3500	1:1	0.124	0.09	25.35	26.30	1.245	0.154	22.3
Back side	100	QPSK 1_1	633334/3500	1:1	0.356	0.04	25.35	26.30	1.245	0.443	22.3
Body worn Test data (Separate 15mm 50%RB)											
Front side	100	QPSK 135_69	633334/3500	1:1	0.149	-0.08	25.33	26.30	1.250	0.186	22.3
Back side	100	QPSK 135_69	633334/3500	1:1	0.377	0.07	25.33	26.30	1.250	**0.471**	22.3
Hotspot Test data(Separate 10mm 1RB)											
Front side	100	QPSK 1_137	633334/3500	1:1	0.079	0.05	21.51	22.30	1.199	0.095	22.3
Back side	100	QPSK 1_137	633334/3500	1:1	0.311	0.08	21.51	22.30	1.199	0.373	22.3
Right side	100	QPSK 1_137	633334/3500	1:1	0.063	-0.11	21.51	22.30	1.199	0.076	22.3
Top side	100	QPSK 1_137	633334/3500	1:1	0.197	0.15	21.51	22.30	1.199	0.236	22.3
Hotspot Test data (Separate 10mm 50%RB)											
Front side	100	QPSK 135_69	633334/3500	1:1	0.097	0.01	21.49	22.30	1.205	0.117	22.3
Back side	100	QPSK 135_69	633334/3500	1:1	0.331	0.07	21.49	22.30	1.205	**0.399**	22.3
Right side	100	QPSK 135_69	633334/3500	1:1	0.072	-0.06	21.49	22.30	1.205	0.087	22.3
Top side	100	QPSK 135_69	633334/3500	1:1	0.218	0.08	21.49	22.30	1.205	0.263	22.3
Ant5 Test Record											
Test position	**BW.**	**Modulation**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test data(1RB)											
Left cheek	100	QPSK 1_1	633334/3500	1:1	0.246	0.01	16.63	17.50	1.222	0.301	22.3
Left tilted	100	QPSK 1_1	633334/3500	1:1	0.216	0.06	16.63	17.50	1.222	0.264	22.3
Right cheek	100	QPSK 1_1	633334/3500	1:1	0.711	0.05	16.63	17.50	1.222	0.869	22.3
Right tilted	100	QPSK 1_1	633334/3500	1:1	0.412	0.09	16.63	17.50	1.222	0.503	22.3
Head Test data(50%RB)											
Left cheek	100	QPSK 135_69	633334/3500	1:1	0.256	-0.06	16.62	17.50	1.225	0.314	22.1
Left tilted	100	QPSK 135_69	633334/3500	1:1	0.229	0.06	16.62	17.50	1.225	0.280	22.1
Right cheek	100	QPSK 135_69	633334/3500	1:1	0.725	0.01	16.62	17.50	1.225	**0.888**	22.1
Right cheek for ENDC	100	QPSK 135_69	633334/3500	1:1	0.725	0.01	16.62	14.50	0.614	0.445	22.1
Right tilted	100	QPSK 135_69	633334/3500	1:1	0.424	0.11	16.62	17.50	1.225	0.519	22.1

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Head Test data(100%RB)											
Right cheek	100	QPSK 270_0	633334/3500	1:1	0.703	0.14	16.49	17.50	1.262	0.887	22.1
Body worn Test data(Separate 15mm 1RB)											
Front side	100	QPSK 1_1	633334/3500	1:1	0.246	0.01	24.05	25.00	1.245	0.306	22.1
Back side	100	QPSK 1_1	633334/3500	1:1	0.244	0.05	24.05	25.00	1.245	0.304	22.1
Body worn Test data (Separate 15mm 50%RB)											
Front side	100	QPSK 135_69	633334/3500	1:1	0.269	0.01	24.00	25.00	1.259	**0.339**	22.1
Back side	100	QPSK 135_69	633334/3500	1:1	0.255	-0.07	24.00	25.00	1.259	0.321	22.1
Hotspot Test data(Separate 10mm 1RB)											
Front side	100	QPSK 1_1	633334/3500	1:1	0.164	0.05	16.63	17.50	1.222	0.200	22.1
Back side	100	QPSK 1_1	633334/3500	1:1	0.185	0.01	16.63	17.50	1.222	0.226	22.1
Left side	100	QPSK 1_1	633334/3500	1:1	0.209	0.03	16.63	17.50	1.222	0.255	22.1
Top side	100	QPSK 1_1	633334/3500	1:1	0.107	0.08	16.63	17.50	1.222	0.131	22.1
Hotspot Test data (Separate 10mm 50%RB)											
Front side	100	QPSK 135_69	633334/3500	1:1	0.186	-0.07	16.62	17.50	1.225	0.228	22.1
Back side	100	QPSK 135_69	633334/3500	1:1	0.208	0.06	16.62	17.50	1.225	0.255	22.1
Left side	100	QPSK 135_69	633334/3500	1:1	0.221	0.09	16.62	17.50	1.225	**0.271**	22.1
Left side for ENDC	100	QPSK 135_69	633334/3500	1:1	0.221	0.09	16.62	14.50	0.614	0.136	22.1
Top side	100	QPSK 135_69	633334/3500	1:1	0.123	0.03	16.62	17.50	1.225	0.151	22.1
Ant6 Test Record											
Test position	**BW.**	**Modulation**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test data(1RB)											
Left cheek	100	QPSK 1_137	633334/3500	1:1	0.785	0.05	17.32	18.30	1.253	0.984	22.1
Left tilted	100	QPSK 1_137	633334/3500	1:1	0.346	0.03	17.32	18.30	1.253	0.434	22.1
Right cheek	100	QPSK 1_137	633334/3500	1:1	0.144	0.06	17.32	18.30	1.253	0.180	22.1
Right tilted	100	QPSK 1_137	633334/3500	1:1	0.116	-0.07	17.32	18.30	1.253	0.145	22.1
Head Test data(50%RB)											
Left cheek	100	QPSK 135_69	633334/3500	1:1	0.802	0.10	17.28	18.30	1.265	**1.014**	22.1
Left cheek for ENDC	100	QPSK 135_69	633334/3500	1:1	0.802	0.10	17.28	15.30	0.634	0.508	22.1
Left tilted	100	QPSK 135_69	633334/3500	1:1	0.368	0.05	17.28	18.30	1.265	0.465	22.1
Right cheek	100	QPSK 135_69	633334/3500	1:1	0.164	0.03	17.28	18.30	1.265	0.207	22.1
Right tilted	100	QPSK 135_69	633334/3500	1:1	0.121	-0.04	17.28	18.30	1.265	0.153	22.1
Head Test data(100RB)											
Left cheek	100	QPSK 270_0	633334/3500	1:1	0.746	0.16	17.26	18.30	1.271	0.948	22.1
Body worn Test data(Separate 15mm 1RB)											
Front side	100	QPSK 1_137	633334/3500	1:1	0.241	-0.06	22.85	24.30	1.396	0.337	22.1
Back side	100	QPSK 1_137	633334/3500	1:1	0.242	0.05	22.85	24.30	1.396	0.338	22.1
Body worn Test data (Separate 15mm 50%RB)											
Front side	100	QPSK 135_69	633334/3500	1:1	0.257	-0.06	22.95	24.30	1.365	**0.351**	22.1
Back side	100	QPSK 135_69	633334/3500	1:1	0.255	0.01	22.95	24.30	1.365	0.348	22.1
Hotspot Test data(Separate 10mm 1RB)											
Front side	100	QPSK 1_137	633334/3500	1:1	0.134	-0.11	17.32	18.30	1.253	0.168	22.1

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Back side	100	QPSK 1_137	633334/3500	1:1	0.138	0.05	17.32	18.30	1.253	0.173	22.1
Right side	100	QPSK 1_137	633334/3500	1:1	0.211	0.09	17.32	18.30	1.253	0.264	22.1
Top side	100	QPSK 1_137	633334/3500	1:1	0.042	0.02	17.32	18.30	1.253	0.053	22.1
Hotspot Test data (Separate 10mm 50%RB)											
Front side	100	QPSK 135_69	633334/3500	1:1	0.152	0.06	17.28	18.30	1.265	0.192	22.1
Back side	100	QPSK 135_69	633334/3500	1:1	0.153	0.04	17.28	18.30	1.265	0.194	22.1
Right side	100	QPSK 135_69	633334/3500	1:1	0.226	0.09	17.28	18.30	1.265	**0.286**	22.1
Top side	100	QPSK 135_69	633334/3500	1:1	0.044	0.04	17.28	18.30	1.265	0.056	22.1

Table 26：SAR of 5G NR n77(3450MHz-3550MHz) for Head and Body.

Ant2 Test Record											
Test position	BW.	Modulation	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Head Test data(1RB)											
Left cheek	100	QPSK 1_1	656000/3840	1:1	0.201	0.09	17.81	18.40	1.146	0.230	22.2
Left tilted	100	QPSK 1_1	656000/3840	1:1	0.071	0.13	17.81	18.40	1.146	0.081	22.2
Right cheek	100	QPSK 1_1	656000/3840	1:1	0.703	-0.03	17.81	18.40	1.146	0.805	22.2
Right tilted	100	QPSK 1_1	656000/3840	1:1	0.142	0.07	17.81	18.40	1.146	0.163	22.2
Head Test data(50%RB)											
Left cheek	100	QPSK 135_69	656000/3840	1:1	0.216	0.12	17.78	18.40	1.153	0.249	22.2
Left tilted	100	QPSK 135_69	656000/3840	1:1	0.086	-0.05	17.78	18.40	1.153	0.099	22.2
Right cheek	100	QPSK 135_69	656000/3840	1:1	0.727	0.01	17.78	18.40	1.153	0.839	22.2
Right cheek for ENDC	100	QPSK 135_69	656000/3840	1:1	0.727	0.01	17.78	15.40	0.578	0.420	22.2
Right tilted	100	QPSK 135_69	656000/3840	1:1	0.155	0.13	17.78	18.40	1.153	0.179	22.2
Head Test data(100%RB)											
Right cheek	100	QPSK 270_0	656000/3840	1:1	0.691	-0.13	17.63	18.40	1.194	0.825	22.2
Body worn Test data(Separate 15mm 1RB)											
Front side	100	QPSK 1_1	656000/3840	1:1	0.239	0.02	22.89	23.40	1.125	0.269	22.2
Back side	100	QPSK 1_1	656000/3840	1:1	0.414	0.13	22.89	23.40	1.125	0.466	22.2
Body worn Test data(Separate 15mm 50%RB)											
Front side	100	QPSK 135_69	656000/3840	1:1	0.281	0.12	22.83	23.40	1.140	0.320	22.2
Back side	100	QPSK 135_69	656000/3840	1:1	0.481	0.07	22.83	23.40	1.140	**0.548**	22.2
Back side for ENDC	100	QPSK 135_69	656000/3840	1:1	0.481	0.07	22.83	20.90	0.641	0.308	22.2
Hotspot Test data(Separate 10mm 1RB)											
Front side	100	QPSK 1_137	656000/3840	1:1	0.055	-0.11	17.81	18.40	1.146	0.063	22.2
Back side	100	QPSK 1_137	656000/3840	1:1	0.092	0.09	17.81	18.40	1.146	0.105	22.2
Left side	100	QPSK 1_137	656000/3840	1:1	0.138	-0.04	17.81	18.40	1.146	0.158	22.2
Hotspot Test data (Separate 10mm 50%RB)											
Front side	100	QPSK 135_69	656000/3840	1:1	0.071	0.02	17.78	18.40	1.153	0.082	22.2
Back side	100	QPSK 135_69	656000/3840	1:1	0.103	-0.12	17.78	18.40	1.153	0.119	22.2
Left side	100	QPSK 135_69	656000/3840	1:1	0.167	0.09	17.78	18.40	1.153	**0.193**	22.2
Left side for ENDC	100	QPSK 135_69	656000/3840	1:1	0.167	0.09	17.78	16.90	0.817	0.136	22.2
Ant4 Test Record											
Test position	BW.	Modulation	Test ch./Freq.	Duty Cycle	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Head Test data(1RB)											
Left cheek	100	QPSK 1_1	656000/3840	1:1	0.381	-0.05	21.62	22.30	1.169	0.446	22.2
Left tilted	100	QPSK 1_1	656000/3840	1:1	0.437	0.03	21.62	22.30	1.169	0.511	22.2
Right cheek	100	QPSK 1_1	656000/3840	1:1	0.220	-0.11	21.62	22.30	1.169	0.257	22.2
Right tilted	100	QPSK 1_1	656000/3840	1:1	0.265	0.04	21.62	22.30	1.169	0.310	22.2
Head Test data(50%RB)											
Left cheek	100	QPSK 135_69	656000/3840	1:1	0.392	0.18	21.54	22.30	1.191	0.467	22.2
Left tilted	100	QPSK 135_69	656000/3840	1:1	0.450	0.01	21.54	22.30	1.191	**0.536**	22.2

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Left tilted for ENDC	100	QPSK 135_69	656000/3840	1:1	0.450	0.01	21.54	20.30	0.752	0.338	22.2
Right cheek	100	QPSK 135_69	656000/3840	1:1	0.249	0.06	21.54	22.30	1.191	0.297	22.2
Right tilted	100	QPSK 135_69	656000/3840	1:1	0.288	0.01	21.54	22.30	1.191	0.343	22.2
Head Test data(100%RB)											
Left tilted	100	QPSK 270_0	656000/3840	1:1	0.426	0.06	21.44	22.30	1.219	0.519	22.2
Body worn Test data(Separate 15mm 1RB)											
Front side	100	QPSK 1_1	656000/3840	1:1	0.073	0.09	25.37	26.30	1.239	0.090	22.2
Back side	100	QPSK 1_1	656000/3840	1:1	0.182	-0.12	25.37	26.30	1.239	0.225	22.2
Body worn Test data (Separate 15mm 50%RB)											
Front side	100	QPSK 135_69	656000/3840	1:1	0.077	0.03	25.35	26.30	1.245	0.096	22.2
Back side	100	QPSK 135_69	656000/3840	1:1	0.200	0.02	25.35	26.30	1.245	**0.249**	22.2
Hotspot Test data(Separate 10mm 1RB)											
Front side	100	QPSK 1_1	656000/3840	1:1	0.041	-0.04	21.62	22.30	1.169	0.048	22.2
Back side	100	QPSK 1_1	656000/3840	1:1	0.111	-0.03	21.62	22.30	1.169	0.130	22.2
Right side	100	QPSK 1_1	656000/3840	1:1	0.037	-0.02	21.62	22.30	1.169	0.043	22.2
Top side	100	QPSK 1_1	656000/3840	1:1	0.092	0.11	21.62	22.30	1.169	0.108	22.2
Hotspot Test data (Separate 10mm 50%RB)											
Front side	100	QPSK 135_69	656000/3840	1:1	0.048	-0.12	21.54	22.30	1.191	0.057	22.2
Back side	100	QPSK 135_69	656000/3840	1:1	0.125	0.06	21.54	22.30	1.191	**0.149**	22.2
Right side	100	QPSK 135_69	656000/3840	1:1	0.043	0.05	21.54	22.30	1.191	0.051	22.2
Top side	100	QPSK 135_69	656000/3840	1:1	0.102	0.11	21.54	22.30	1.191	0.122	22.2
Ant5 Test Record											
Test position	**BW.**	**Modulation**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test data(1RB)											
Left cheek	100	QPSK 1_1	656000/3840	1:1	0.441	-0.11	16.61	17.50	1.227	0.541	22.0
Left tilted	100	QPSK 1_1	656000/3840	1:1	0.406	0.12	16.61	17.50	1.227	0.498	22.0
Right cheek	100	QPSK 1_1	656000/3840	1:1	0.718	-0.09	16.61	17.50	1.227	0.881	22.0
Right tilted	100	QPSK 1_1	656000/3840	1:1	0.734	0.02	16.61	17.50	1.227	0.901	22.0
Head Test data(50%RB)											
Left cheek	100	QPSK 135_69	656000/3840	1:1	0.449	-0.04	16.58	17.50	1.236	0.555	22.0
Left tilted	100	QPSK 135_69	656000/3840	1:1	0.416	0.08	16.58	17.50	1.236	0.514	22.0
Right cheek	100	QPSK 135_69	656000/3840	1:1	0.723	-0.10	16.58	17.50	1.236	0.894	22.0
Right tilted	100	QPSK 135_69	656000/3840	1:1	0.751	0.07	16.58	17.50	1.236	**0.928**	22.0
Right tilted for ENDC	100	QPSK 135_69	656000/3840	1:1	0.751	0.07	16.58	14.50	0.619	0.465	22.0
Head Test data(100%RB)											
Right cheek	100	QPSK 270_0	656000/3840	1:1	0.706	-0.08	16.49	17.50	1.262	0.891	22.0
Right tilted	100	QPSK 270_0	656000/3840	1:1	0.727	0.02	16.49	17.50	1.262	0.917	22.0
Body worn Test data(Separate 15mm 1RB)											
Front side	100	QPSK 1_1	656000/3840	1:1	0.395	0.02	23.96	25.00	1.271	0.502	22.0
Back side	100	QPSK 1_1	656000/3840	1:1	0.377	0.10	23.96	25.00	1.271	0.479	22.0
Body worn Test data (Separate 15mm 50%RB)											
Front side	100	QPSK 135_69	656000/3840	1:1	0.415	0.05	23.94	25.00	1.276	**0.530**	22.0

Back side	100	QPSK 135_69	656000/3840	1:1	0.406	0.11	23.94	25.00	1.276	0.518	22.0
Hotspot Test data(Separate 10mm 1RB)											
Front side	100	QPSK 1_1	656000/3840	1:1	0.186	0.00	16.61	17.50	1.227	0.228	22.0
Back side	100	QPSK 1_1	656000/3840	1:1	0.156	0.05	16.61	17.50	1.227	0.191	22.0
Left side	100	QPSK 1_1	656000/3840	1:1	0.233	0.03	16.61	17.50	1.227	0.286	22.0
Top side	100	QPSK 1_1	656000/3840	1:1	0.152	-0.01	16.61	17.50	1.227	0.187	22.0
Hotspot Test data (Separate 10mm 50%RB)											
Front side	100	QPSK 135_69	656000/3840	1:1	0.208	-0.04	16.58	17.50	1.236	0.257	22.0
Back side	100	QPSK 135_69	656000/3840	1:1	0.176	0.12	16.58	17.50	1.236	0.218	22.0
Left side	100	QPSK 135_69	656000/3840	1:1	0.256	0.12	16.58	17.50	1.236	**0.316**	22.0
Left side for ENDC	100	QPSK 135_69	656000/3840	1:1	0.256	0.12	16.58	14.50	0.619	0.159	22.0
Top side	100	QPSK 135_69	656000/3840	1:1	0.181	-0.01	16.58	17.50	1.236	0.224	22.0
Ant6 Test Record											
Test position	**BW.**	**Modulation**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 1-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test data(1RB)											
Left cheek	100	QPSK 1_1	656000/3840	1:1	0.378	-0.05	17.08	18.30	1.324	0.501	22.0
Left tilted	100	QPSK 1_1	656000/3840	1:1	0.175	0.06	17.08	18.30	1.324	0.232	22.0
Right cheek	100	QPSK 1_1	656000/3840	1:1	0.072	0.00	17.08	18.30	1.324	0.095	22.0
Right tilted	100	QPSK 1_1	656000/3840	1:1	0.061	0.00	17.08	18.30	1.324	0.081	22.0
Head Test data(50%RB)											
Left cheek	100	QPSK 135_69	656000/3840	1:1	0.407	0.07	17.05	18.30	1.334	**0.543**	22.0
Left cheek for ENDC	100	QPSK 135_69	656000/3840	1:1	0.407	0.07	17.05	15.30	0.668	0.272	22.0
Left tilted	100	QPSK 135_69	656000/3840	1:1	0.194	-0.07	17.05	18.30	1.334	0.259	22.0
Right cheek	100	QPSK 135_69	656000/3840	1:1	0.086	0.11	17.05	18.30	1.334	0.115	22.0
Right tilted	100	QPSK 135_69	656000/3840	1:1	0.064	0.08	17.05	18.30	1.334	0.085	22.0
Body worn Test data(Separate 15mm 1RB)											
Front side	100	QPSK 1_1	656000/3840	1:1	0.116	0.06	22.02	22.80	1.197	0.139	22.0
Back side	100	QPSK 1_1	656000/3840	1:1	0.125	-0.11	22.02	22.80	1.197	0.150	22.0
Body worn Test data (Separate 15mm 50%RB)											
Front side	100	QPSK 135_69	656000/3840	1:1	0.131	-0.07	21.98	22.80	1.208	0.158	22.0
Back side	100	QPSK 135_69	656000/3840	1:1	0.144	0.05	21.98	22.80	1.208	**0.174**	22.0
Hotspot Test data(Separate 10mm 1RB)											
Front side	100	QPSK 1_1	656000/3840	1:1	0.046	0.01	17.01	18.30	1.346	0.062	22.0
Back side	100	QPSK 1_1	656000/3840	1:1	0.069	-0.05	17.08	18.30	1.324	0.091	22.0
Right side	100	QPSK 1_1	656000/3840	1:1	0.085	-0.03	17.08	18.30	1.324	0.113	22.0
Top side	100	QPSK 1_1	656000/3840	1:1	0.024	-0.12	17.08	18.30	1.324	0.032	22.0
Hotspot Test data (Separate 10mm 50%RB)											
Front side	100	QPSK 135_69	656000/3840	1:1	0.054	-0.07	17.05	18.30	1.334	0.072	22.0
Back side	100	QPSK 135_69	656000/3840	1:1	0.075	-0.03	17.05	18.30	1.334	0.100	22.0
Right side	100	QPSK 135_69	656000/3840	1:1	0.092	0.06	17.05	18.30	1.334	**0.122**	22.0
Top side	100	QPSK 135_69	656000/3840	1:1	0.031	0.05	17.05	18.30	1.334	0.041	22.0

Table 27：SAR of 5G NR n77(3700MHz -3980MHz) for Head and Body.

8.2.5 SAR Result of WIFI 2.4G

Wi-Fi 2.4G SAR Test Record											
MIMO Test Record											
Test position	Test mode	Test ch./Freq.	Duty Cycle	Duty Cycle Scaled factor	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Head Test data											
Left cheek	802.11b	11/2462	99.64%	1.004	0.438	0.04	16.48	18.00	1.419	0.624	22.3
Left cheek Simultaneous	802.11b	11/2462	99.64%	1.004	0.438	0.04	16.48	14.00	0.565	0.248	22.3
Left tilted	802.11b	11/2462	99.64%	1.004	0.344	0.05	16.48	18.00	1.419	0.490	22.3
Right cheek	802.11b	11/2462	99.64%	1.004	0.226	0.02	16.48	18.00	1.419	0.322	22.3
Right tilted	802.11b	11/2462	99.64%	1.004	0.238	0.05	16.48	18.00	1.419	0.339	22.3
Body worn Test data(Separate 15mm)											
Front side	802.11b	11/2462	99.64%	1.004	0.040	0.01	16.48	18.00	1.419	0.057	22.3
Back side	802.11b	11/2462	99.64%	1.004	0.078	-0.09	16.48	18.00	1.419	0.111	22.3
Hotspot Test data (Separate 10mm)											
Front side	802.11b	11/2462	99.64%	1.004	0.069	0.11	16.48	18.00	1.419	0.098	22.3
Back side	802.11b	11/2462	99.64%	1.004	0.171	-0.07	16.48	18.00	1.419	0.243	22.3
Right side	802.11b	11/2462	99.64%	1.004	0.103	-0.09	16.48	18.00	1.419	0.147	22.3
Top side	802.11b	11/2462	99.64%	1.004	0.106	-0.04	16.48	18.00	1.419	0.151	22.3

Table 28：SAR of WIFI 2.4G for Head and Body.

Note: 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.

Mode	Tune-up (dBm)	Tune-up (mw)	Hightest Reported SAR1-g(W/kg)	Adjusted SAR1-g(W/kg)	SAR test
Head					
802.11b	18.00	63.10	0.624	/	Yes
802.11g	18.00	63.10	/	0.624	No
802.11n 20M	19.50	89.13	/	0.881	No
802.11ax 20M	19.50	89.13	/	0.881	No
Body worn Test data(Separate 15mm)					
802.11b	18.00	63.10	0.111	/	Yes
802.11g	18.00	63.10	/	0.111	No
802.11n 20M	19.50	89.13	/	0.157	No
802.11ax 20M	19.50	89.13	/	0.157	No
Hotspot Test data (Separate 10mm)					
802.11b	18.00	63.10	0.243	/	Yes
802.11g	18.00	63.10	/	0.243	No
802.11n 20M	19.50	89.13	/	0.343	No
802.11ax 20M	19.50	89.13	/	0.343	No

8.2.1 SAR Result of WIFI 5G

Wi-Fi 5G SAR Test Record											
MIMO Test Record											
Test position	Test mode	Test ch./Freq.	Duty Cycle	Duty Cycle Scaled factor	SAR (W/kg) 1-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Head Test data of U-NII-2A											
Left cheek	802.11ax 80M	58/5290	87.88%	1.138	0.563	0.02	17.07	17.50	1.105	0.708	22.4
Left tilted	802.11ax 80M	58/5290	87.88%	1.138	0.853	-0.08	17.07	17.50	1.105	**1.072**	22.4
Left tilted Simultaneous	802.11ax 80M	58/5290	87.88%	1.138	0.853	-0.08	17.07	11.00	0.247	0.240	22.4
Right cheek	802.11ax 80M	58/5290	87.88%	1.138	0.479	0.03	17.07	17.50	1.105	0.602	22.4
Right tilted	802.11ax 80M	58/5290	87.88%	1.138	0.508	0.01	17.07	17.50	1.105	0.639	22.4
Head Test data of U-NII-2C											
Left cheek	802.11n 40M	102/5510	92.75%	1.078	0.457	0.02	16.54	17.50	1.246	0.614	22.3
Left tilted	802.11n 40M	102/5510	92.75%	1.078	0.713	-0.02	16.54	17.50	1.246	**0.958**	22.3
Left tilted Simultaneous	802.11n 40M	102/5510	92.75%	1.078	0.713	-0.02	16.54	11.00	0.279	0.214	22.3
Left tilted	802.11n 40M	118/5590	92.75%	1.078	0.634	0.04	16.51	17.50	1.256	0.859	22.3
Right cheek	802.11n 40M	102/5510	92.75%	1.078	0.435	0.12	16.54	17.50	1.246	0.584	22.3
Right tilted	802.11n 40M	102/5510	92.75%	1.078	0.554	0.03	16.54	17.50	1.246	0.744	22.3
Head Test data of U-NII-3											
Left cheek	802.11ac 80M	155/5775	86.49%	1.156	0.311	0.02	18.04	19.00	1.247	0.449	22.1
Left tilted	802.11ac 80M	155/5775	86.49%	1.156	0.722	0.06	18.04	19.00	1.247	**1.041**	22.1
Left tilted Simultaneous	802.11ac 80M	155/5775	86.49%	1.156	0.722	0.06	18.04	12.50	0.279	0.233	22.1
Right cheek	802.11ac 80M	155/5775	86.49%	1.156	0.598	0.02	18.04	19.00	1.247	0.862	22.1
Right tilted	802.11ac 80M	155/5775	86.49%	1.156	0.604	-0.01	18.04	19.00	1.247	0.871	22.1
Body worn Test data of U-NII-2A (Separate 15mm)											
Front side	802.11a	56/5280	96.53%	1.036	0.101	0.03	20.55	21.50	1.245	0.130	22.4
Back side	802.11a	56/5280	96.53%	1.036	0.811	-0.02	20.55	21.50	1.245	**1.046**	22.4
Back side	802.11a	52/5260	96.53%	1.036	0.781	0.01	20.37	21.50	1.298	1.050	22.4
Back side Simultaneous	802.11a	56/5280	96.53%	1.036	0.831	-0.02	20.55	14.50	0.248	0.214	22.4
Body worn Test data of U-NII-2C(Separate 15mm)											
Front side	802.11a	100/5500	96.53%	1.036	0.025	0.03	17.86	18.50	1.159	0.029	22.3
Back side	802.11a	100/5500	96.53%	1.036	0.338	0.05	17.86	18.50	1.159	**0.406**	22.3
Back side Simultaneous	802.11a	100/5500	96.53%	1.036	0.338	0.05	17.86	16.00	0.652	0.228	22.3
Body worn Test data of U-NII-3(Separate 15mm)											
Front side	802.11a	157/5785	96.53%	1.036	0.262	0.01	21.55	22.50	1.245	0.338	22.1
Back side	802.11a	157/5785	96.53%	1.036	0.615	0.06	21.55	22.50	1.245	**0.793**	22.1
Back side Simultaneous	802.11a	157/5785	96.53%	1.036	0.615	0.06	21.55	17.00	0.351	0.223	22.1
Hotspot Test data of U-NII-1(Separate 10mm)											
Front side	802.11n 40M	46/5230	92.75%	1.078	0.084	0.05	16.73	17.50	1.194	0.108	22.4
Back side	802.11n 40M	46/5230	92.75%	1.078	0.753	-0.09	16.73	17.50	1.194	0.969	22.4

Back side	802.11n 40M	38/5190	92.75%	1.078	0.712	-0.09	16.58	17.50	1.236	0.949	22.4
Back side Simultaneous	802.11n 40M	46/5230	92.75%	1.078	0.753	-0.09	16.73	11.00	0.267	0.217	22.4
Right side	802.11n 40M	46/5230	92.75%	1.078	0.092	0.08	16.73	17.50	1.194	0.119	22.4
Top side	802.11n 40M	46/5230	92.75%	1.078	0.418	-0.03	16.73	17.50	1.194	0.538	22.4
Hotspot Test data of U-NII-3 (Separate 10mm)											
Front side	802.11ax 80M	155/5775	87.88%	1.138	0.203	0.02	21.18	21.50	1.076	0.249	22.1
Back side	802.11ax 80M	155/5775	87.88%	1.138	0.819	-0.01	21.18	21.50	1.076	1.003	22.1
Right side	802.11ax 80M	155/5775	87.88%	1.138	0.690	0.01	21.18	21.50	1.076	0.845	22.1
Top side	802.11ax 80M	155/5775	87.88%	1.138	0.828	-0.16	21.18	21.50	1.076	**1.014**	22.1
Top side Simultaneous	802.11ax 80M	155/5775	87.88%	1.138	0.828	-0.16	21.18	15.00	0.241	0.227	22.1
Test position	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**Duty Cycle Scaled factor**	**SAR (W/kg) 10-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 10-g (W/kg)**	**Liquid Temp.(℃)**
Product specific 10gSAR Test data of U-NII-1(Separate 0mm)											
Back side	802.11a	44/5520	96.53%	1.036	1.190	0.09	19.62	20.50	1.224	1.509	22.4
Top side	802.11a	44/5520	96.53%	1.036	1.290	0.09	19.62	20.50	1.224	**1.636**	22.4
Product specific 10gSAR Test data of U-NII-2A(Separate 0mm)											
Front side	802.11a	60/5300	96.53%	1.036	0.298	0.06	20.37	21.50	1.298	0.401	22.4
Back side	802.11a	60/5300	96.53%	1.036	0.930	0.04	20.37	21.50	1.298	1.250	22.4
Right side	802.11a	60/5300	96.53%	1.036	0.397	0.01	20.37	21.50	1.298	0.534	22.4
Top side	802.11a	60/5300	96.53%	1.036	1.410	-0.03	20.37	21.50	1.298	**1.896**	22.4
Product specific 10gSAR Test data of U-NII-2C(Separate 0mm)											
Front side	802.11a	100/5500	96.53%	1.036	0.267	0.04	17.86	18.50	1.159	0.321	22.3
Back side	802.11a	100/5500	96.53%	1.036	0.696	0.01	17.86	18.50	1.159	0.836	22.3
Right side	802.11a	100/5500	96.53%	1.036	0.611	-0.05	17.86	18.50	1.159	0.733	22.3
Top side	802.11a	100/5500	96.53%	1.036	1.020	-0.08	17.86	18.50	1.159	**1.224**	22.3
Product specific 10gSAR Test data of U-NII-3 (Separate 0mm)											
Back side	802.11a	157/5785	96.53%	1.036	0.639	0.09	21.55	22.50	1.245	0.824	22.1
Top side	802.11a	157/5785	96.53%	1.036	1.470	-0.07	21.55	22.50	1.245	**1.895**	22.1

Table 29：SAR of WIFI 5G for Head and Body.
Note:

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

8.2.2 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	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 1-g (W/kg)	Liquid Temp.(℃)
Head Test data											
Left cheek	DH5	39/2441	76.80%	1.085	0.375	-0.03	16.26	17.00	1.186	**0.482**	22.3
Left cheek Simultaneous	DH5	39/2441	76.80%	1.085	0.375	-0.03	16.26	14.00	0.594	0.242	22.3
Left tilted	DH5	39/2441	76.80%	1.085	0.323	-0.11	16.26	17.00	1.186	0.415	22.3
Right cheek	DH5	39/2441	76.80%	1.085	0.209	0.05	16.26	17.00	1.186	0.269	22.3
Right tilted	DH5	39/2441	76.80%	1.085	0.257	0.04	16.26	17.00	1.186	0.331	22.3
Body worn Test data(Separate 15mm)											
Front side	DH5	39/2441	76.80%	1.085	0.026	-0.05	16.26	17.00	1.186	0.034	22.3
Back side	DH5	39/2441	76.80%	1.085	0.057	0.08	16.26	17.00	1.186	**0.073**	22.3
Hotspot Test data (Separate 10mm)											
Front side	DH5	39/2441	76.80%	1.085	0.063	0.04	16.26	17.00	1.186	0.081	22.3
Back side	DH5	39/2441	76.80%	1.085	0.142	0.09	16.26	17.00	1.186	**0.183**	22.3
Right side	DH5	39/2441	76.80%	1.085	0.079	0.07	16.26	17.00	1.186	0.102	22.3
Top side	DH5	39/2441	76.80%	1.085	0.104	0.09	16.26	17.00	1.186	0.134	22.3

Table 30：SAR of BT for Head and Body.

8.3 Multiple Transmitter Evaluation

8.3.1 Simultaneous SAR SAR test evaluation

- **Simultaneous Transmission Possibilities**

NO	Simultaneous Tx Combination	Head	Body- worn	Hotspot	Product Specific 10-g (0mm)
1	WIFI 2.4G SISO2+BT	Y	Y	Y	Y
2	WIFI 5G MIMO(SISO1+SISO2)+BT	Y	Y	Y	Y
3	WIFI 2.4G SISO1+WIFI 5G SISO2	Y	Y	Y	Y
4	WWAN + WIFI 5G MIMO(SISO1+SISO2)+BT	Y	Y	Y	Y
5	WWAN + WIFI 2.4G MIMO+BT	Y	Y	Y	Y

Note:

1. BT1= BT ANT7, SISO1= ANT 7, SISO1= ANT 6
2. Simultaneous SAR is use MIMO cover SISO according to conducted power
3. Standalone/ENDC Simultaneous SAR is don't distinguish between antenna and frequency band, and select the worst position value for evaluation
4. UL CA Simultaneous SAR is don't distinguish between antenna, and select the worst position value for evaluatio

8.3.2 Simultaneous Transmission SAR Summation Scenario

Simultaneous Transmission SAR Summation Scenario for WLAN Head:

Test position		SARmax (W/kg)				Summed SAR	
		Main Ant0	WiFi 2.4G MIMO	WiFi 5G MIMO	BT		
		1	2	3	4	1+2+3	1+3+4
WWAN All	Left cheek	1.033	0.248	0.248	0.242	1.529	1.523
	Left tilted	0.966	0.248	0.240	0.242	1.454	1.448
	Right cheek	1.091	0.248	0.240	0.242	1.579	1.573
	Right tilted	0.998	0.248	0.240	0.242	1.486	1.480

CA_2A_4A	SARmax (W/kg)					Summed SAR	
	LTE Band 2	LTE Band 4	WiFi 2.4G MIMO	WiFi 5G MIMO	BT		
	1	2	3	4	5	1+2+3+	1+2+4+5
Left cheek	0.206	0.412	0.248	0.248	0.242	1.114	1.108
Left tilted	0.267	0.412	0.248	0.240	0.242	1.167	1.161
Right cheek	0.276	0.412	0.248	0.240	0.242	1.176	1.170
Right tilted	0.444	0.412	0.248	0.240	0.242	1.344	1.338

CA_4A_7A	SARmax (W/kg)					Summed SAR	
	LTE Band 4	LTE Band 7	WiFi 2.4G MIMO	WiFi 5G MIMO	BT		
	1	2	3	4	5	1+2+3+	1+2+4+5
Left cheek	0.412	0.260	0.248	0.248	0.242	1.168	1.162
Left tilted	0.412	0.337	0.248	0.240	0.242	1.237	1.231
Right cheek	0.412	0.365	0.248	0.240	0.242	1.265	1.259
Right tilted	0.412	0.448	0.248	0.240	0.242	1.348	1.342

ENDC	SARmax (W/kg)					Summed SAR	
	LTE Band	5G NR Band	WiFi 2.4G MIMO	WiFi 5G MIMO	BT		
	1	2	3	4	5	1+2+3+4	1+2+4+5
Left cheek	0.427	0.547	0.248	0.248	0.242	1.470	1.464
Left tilted	0.403	0.547	0.248	0.240	0.242	1.438	1.432
Right cheek	0.545	0.547	0.248	0.240	0.242	1.580	1.574
Right tilted	0.487	0.547	0.248	0.240	0.242	1.522	1.516

Simultaneous Transmission SAR Summation Scenario for WLAN Body:
Body-worn:

Test position		SARmax (W/kg)				Summed SAR	
		Main Ant0	WiFi 2.4G MIMO	WiFi 5G MIMO	BT		
		1	2	3	4	1+2+3	1+3+4
WWAN All	Front side	0.530	0.057	0.228	0.034	0.815	0.792
	Back side	1.064	0.111	0.228	0.073	1.403	1.365

CA_2A_4A	SARmax (W/kg)					Summed SAR	
	LTE Band 2	LTE Band 4	WiFi 2.4G MIMO	WiFi 5G MIMO	BT		
	1	2	3	4	5	1+2+3+4	1+2+4+5
Front side	0.237	0.544	0.248	0.248	0.242	1.277	1.271
Back side	0.528	0.544	0.248	0.240	0.242	1.560	1.554

CA_4A_7A	SARmax (W/kg)					Summed SAR	
	LTE Band 4	LTE Band 7	WiFi 2.4G MIMO	WiFi 5G MIMO	BT		
	1	2	3	4	5	1+2+3+4	1+2+4+5
Front side	0.544	0.161	0.248	0.248	0.242	1.201	1.195
Back side	0.544	0.255	0.248	0.240	0.242	1.287	1.281

ENDC	SARmax (W/kg)					Summed SAR	
	LTE Band	5G NR Band	WiFi 2.4G MIMO	WiFi 5G MIMO	BT		
	1	2	3	4	5	1+2+3+4	1+2+4+5
Front side	0.412	0.549	0.057	0.228	0.034	1.246	1.223
Back side	0.496	0.549	0.111	0.228	0.073	1.384	1.346

Hotspot:

Test position		SARmax (W/kg)				Summed SAR	
		Main Ant0	WiFi 2.4G MIMO	WiFi 5G MIMO	BT		
		1	4	7	8	1+2+3	1+3+4
WWAN All	Front side	0.795	0.098	0.227	0.081	1.120	1.103
	Back side	1.012	0.243	0.227	0.183	1.482	1.422
	Left side	0.825	0.000	0.227	0.000	1.052	1.052
	Right side	0.434	0.147	0.227	0.102	0.808	0.763
	Top side	0.641	0.151	0.227	0.134	1.019	1.002
	Bottom side	0.958	0.000	0.227	0.000	1.185	1.185

CA 2A_4A	SARmax (W/kg)					Summed SAR	
	LTE Band 2	LTE Band 4	WiFi 2.4G MIMO	WiFi 5G MIMO	BT		
	1	2	3	4	5	1+2+3+4	1+2+4+5
Front side	0.078	0.478	0.098	0.227	0.081	0.881	0.864
Back side	0.186	0.478	0.243	0.227	0.183	1.134	1.074
Left side	0.020	0.478	0.000	0.227	0.000	0.725	0.725
Right side	0.000	0.478	0.147	0.227	0.102	0.852	0.807
Top side	0.264	0.478	0.151	0.227	0.134	1.120	1.103
Bottom side	0.000	0.478	0.000	0.227	0.000	0.705	0.705

CA 4A_7A	SARmax (W/kg)					Summed SAR	
	LTE Band 4	LTE Band 7	WiFi 2.4G MIMO	WiFi 5G MIMO	BT		
	1	2	3	4	5	1+2+3+4	1+2+4+5
Front side	0.478	0.118	0.098	0.227	0.081	0.921	0.904
Back side	0.478	0.360	0.243	0.227	0.183	1.308	1.248
Left side	0.478	0.256	0.000	0.227	0.000	0.961	0.961
Right side	0.478	0.000	0.147	0.227	0.102	0.852	0.807
Top side	0.478	0.139	0.151	0.227	0.134	0.995	0.978
Bottom side	0.478	0.076	0.000	0.227	0.000	0.781	0.781

ENDC	SARmax (W/kg)					Summed SAR	
	LTE Band	5G NR Band	WiFi 2.4G MIMO	WiFi 5G MIMO	BT		
	1	2	3	4	5	1+2+3+4	1+2+4+5
Front side	0.428	0.464	0.098	0.227	0.081	1.217	1.200
Back side	0.547	0.464	0.243	0.227	0.183	1.481	1.421
Left side	0.542	0.464	0.000	0.227	0.000	1.233	1.233
Right side	0.391	0.464	0.147	0.227	0.102	1.229	1.184
Top side	0.511	0.464	0.151	0.227	0.134	1.353	1.336
Bottom side	0.463	0.464	0.000	0.227	0.000	1.154	1.154

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9 Equipment list

Test Platform	SPEAG DASY Professional
Description	SAR Test System
Software Reference	DASY52 52.10.4(1527); SEMCAD X 14.6.14(7483)

Hardware Reference

	Equipment	Manufacturer	Model	Serial Number	Calibration Date	Due date of calibration
☒	Twin Phantom	SPEAG	SAM2	1563	NCR	NCR
☒	Twin Phantom	SPEAG	SAM5	1481	NCR	NCR
☒	DAE	SPEAG	DAE4	1428	2022-04-27	2022-04-26
☒	DAE	SPEAG	DAE4	1455	2021-12-29	2022-12-28
☒	E-Field Probe	SPEAG	EX3DV4	3962	2022-05-26	2023-05-25
☒	E-Field Probe	SPEAG	EX3DV4	3982	2021-12-29	2022-12-28
☒	Validation Kits	SPEAG	D750V3	1210	2021-09-08	2024-09-07
☒	Validation Kits	SPEAG	D835V2	4d256	2020-04-15	2023-04-14
☒	Validation Kits	SPEAG	D1750V2	1105	2020-08-29	2023-08-28
☒	Validation Kits	SPEAG	D1900V2	5d114	2020-08-27	2023-08-26
☒	Validation Kits	SPEAG	D2450V2	1038	2020-04-08	2023-04-07
☒	Validation Kits	SPEAG	D2600V2	1180	2021-05-12	2024-05-11
☒	Validation Kits	SPEAG	D3500V2	1124	2021-05-17	2024-05-16
☒	Validation Kits	SPEAG	D3900V2	1071	2021-05-20	2024-05-19
☒	Validation Kits	SPEAG	D5GHzV2	1313	2022-01-25	2025-01-24
☒	Dielectric parameter probes	SPEAG	DAKS-3.5	1120	2022-05-30	2023-05-29
☒	Vector Network Analyzer and Vector Reflectometer	SPEAG	DAKS_VNA R140	0050920	2022-05-23	2023-05-22
☒	Universal Radio Communication Tester	R&S	CMW500	111637	2022-09-26	2023-09-26
☒	Radio Communication Analyzer	Anritsu	MT8821C	6261991088	2022-09-16	2023-09-15
☒	RF Bi-Directional Coupler	Agilent	86205-60001	MY31400031	NCR	NCR
☒	Signal Generator	R&S	SMB100A	182393	2022-02-14	2023-02-13
☒	Preamplifier	Qiji	YX28980933	202104001	NCR	NCR
☒	Power Meter	Anritsu	ML2495A	2136003	2021-12-04	2022-12-03
☒	Power Sensor	Anritsu	MA2411B	1911376	2021-12-04	2022-12-03
☒	Power Sensor	Keysight	U2002H	MY5639004	2022-9-16	2023-9-15

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☒	Attenuator	SHX	TS2-3dB	30704	NCR	NCR
☒	Coaxial low pass filter	Mini-Circuits	VLF-2500(+)	NA	NCR	NCR
☒	Coaxial low pass filter	Microlab Fxr	LA-F13	NA	NCR	NCR
☒	DC POWER SUPPLY	SAKO	SK1730SL5A	NA	NCR	NCR
☒	Speed reading thermometer	LKM	DTM3000	SUW201-30-01	2022-09-19	2023-09-18
☒	Humidity and Temperature Indicator	MingGao	MingGao	NA	2022-09-19	2023-09-18

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

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10 Calibration certificate

Please see the Appendix C

11 Photographs

Please see the Appendix D

Appendix A: Detailed System Check Results

Appendix B: Detailed Test Results

Appendix C: Calibration certificate

Appendix D: Photographs

Appendix E: Conducted RF Output Power

Appendix F: Antenna Locations

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