



SAR TEST REPORT

Product Name: Vasco Translator M4

Model Number: VEM4KA, VEM4PA, VEM4MA

FCC ID: 2A6YY-M4

Issued For : Vasco Electronics Goralski Group S.K.A.

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Issued By : Shenzhen LGT Test Service Co., Ltd.

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Sample Received Date: Dec. 10, 2025

Date of Test Dec. 10, 2025 ~Jan. 22, 2026

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Max. SAR Body: 1.004 W/kg(1g)

Limbs: 3.128 W/kg(10g)

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Table of Contents

1. General Information	5
1.1 EUT Description	5
1.2 Test Environment	7
1.3 Test Factory	7
2. Test Standards and Limits	8
3. SAR Measurement System	9
3.1 Definition of Specific Absorption Rate (SAR)	9
3.2 SAR System	9
4. Tissue Simulating Liquids	12
4.1 Simulating Liquids Parameter Check	12
5. SAR System Validation	15
5.1 Validation System	15
5.2 Validation Result	16
6. SAR Evaluation Procedures	17
7. EUT Antenna Location Sketch	18
7.1 SAR test exclusion consider table	19
8. EUT Test Position	25
8.1 Define Two Imaginary Lines on the Handset	25
8.2 Hotspot mode exposure position condition	26
9. Uncertainty	27
9.1 Measurement Uncertainty	27
9.2 System validation Uncertainty	28
10. Conducted Power Measurement	29
10.1 Test Result	29
11. EUT and Test Setup Photo	58
11.1 EUT Photos	58
11.2 Setup Photos	61
12. SAR Result Summary	68
12.1 Body-worn and Hotspot SAR	68
12.2 Limbs SAR	74
12.3 Repeated SAR	78
12.4 Repeated SAR measurement	79
12.5 Simultaneous Multi-band Transmission Evaluation	80
13. Equipment List	82
Appendix A. System Validation Plots	83

**Appendix B. SAR Test Plots****113****Appendix C. Probe Calibration and Dipole Calibration Report****153****Revision History**

Rev.	Issue Date	Contents
00	Jan. 22, 2026	Initial Issue



TEST REPORT CERTIFICATION

Applicant Vasco Electronics Goralski Group S.K.A.
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Product Name Vasco Translator M4

Trademark VASCO

Model Number VEM4KA, VEM4PA, VEM4MA

Sample number LGT2512219

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
ANSI/IEEE Std. C95.1-2019 FCC 47 CFR Part 2 (2.1093) IEEE 1528: 2013	PASS

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1. General Information

Environmental evaluation measurements of specific absorption rate (SAR) distributions in emulated human head and body tissues exposed to radio frequency (RF) radiation from wireless portable devices for compliance with the rules and regulations of the U.S. Federal Communications Commission (FCC).

1.1 EUT Description

Product Name	Vasco Translator M4
Test Model Number	VEM4KA
Series Number	VEM4PA, VEM4MA
Model Difference	Only color difference
Device Category	Portable
Product stage	Production unit
RF Exposure Environment	General Population / Uncontrolled
Hardware Version	G252_MB_V02
Software Version	G252_VEM4KA_FW_V01
Frequency Range	GSM 850: 824 ~ 849 MHz PCS 1900: 1850 ~ 1910 MHz WCDMA Band II: 1850 ~ 1910 MHz WCDMA Band V: 824 ~ 849 MHz LTE Band 2:1850 ~1910MHz LTE Band 4:1710 ~1755MHz LTE Band 5:824 ~ 849MHz LTE Band 7:2500 ~ 2570MHz LTE Band 12:699~716MHz LTE Band 13:777~787MHz LTE Band 17:704 ~ 716MHz LTE Band 38:2570~2620MHz LTE Band 40:2305~2315MHz/2350-2360MHz LTE Band 41:2496~2690MHz LTE Band 66:1710~1780MHz WLAN 802.11b/g/n20: 2412 MHz ~ 2462 MHz WLAN 802.11n40: 2422 MHz ~ 2452 MHz WLAN 802.11a/n20/n40/ac20/ac40/ac80: 5150 ~ 5250 MHz WLAN 802.11a/n20/n40/ac20/ac40/ac80: 5250 ~ 5350 MHz WLAN 802.11a/n20/n40/ac20/ac40/ac80: 5470 ~ 5725 MHz WLAN 802.11a/n20/n40/ac20/ac40/ac80: 5725 ~ 5850 MHz Bluetooth: 2402 ~ 2480 MHz



Max. Reported SAR: Test distance: Body:5mm Limbs:0mm	Mode	Body Worn and Hotspot (W/ kg) (1g)	Limbs (W/ kg) (10g)
	GSM 850	0.635	3.128
	PCS 1900	0.19	0.259
	WCDMA Band II	0.747	0.954
	WCDMA Band V	0.396	1.276
	LTE Band 2	0.844	1.249
	LTE Band 4	0.576	0.86
	LTE Band 5	0.421	1.591
	LTE Band 7	0.947	1.052
	LTE Band 12	0.769	0.307
	LTE Band 13	0.099	0.329
	LTE Band 17	0.872	0.327
	LTE Band 38	0.515	0.381
	LTE Band 40	0.407	0.664
	LTE Band 41	0.529	0.398
	LTE Band 66	1.004	1.568
	2.4G WLAN	0.451	0.277
	5.2G WLAN	0.39	0.23
	5.3G WLAN	0.331	0.167
	5.6G WLAN	0.452	0.106
	5.8G WLAN	0.361	0.119
	Bluetooth ^{Note}	0.105	0.419
Sum SAR		1.456	3.580
Limit		1.6	4
Battery	Rated Voltage:3.85V Capacity: 2000mAh		
Description test modes	SIM 1 and SIM 2 is a chipset unit and tested as single chipset, SIM 1 is used to tested		
Operating Mode:	GSM: GSM Voice; GPRS/EGPRS Class 12 WCDMA: RMC, HSDPA, HSUPA Release 6 LTE: QPSK, 16QAM 2.4G WLAN: 802.11b(DSSS): CCK, DQPSK, DBPSK 802.11g(OFDM): BPSK, QPSK,16-QAM,64-QAM 802.11n(OFDM): BPSK, QPSK,16-QAM,64-QAM 5G WLAN: 802.11a(OFDM): BPSK, QPSK,16-QAM,64-QAM 802.11n(OFDM): BPSK, QPSK,16-QAM,64-QAM 802.11ac (OFDM): BPSK, QPSK,16-QAM,64-QAM,256-QAM Bluetooth: GFSK + π /4DQPSK+8DPSK BLE: GFSK		
Antenna Specification	GSM/WCDMA/LTE: PIFA Antenna Bluetooth: PIFA Antenna WLAN: PIFA Antenna		
Operating Mode	Maximum continuous output		
SIM Card	Support dual-SIM, dual standby, the multiple SIM card with two lines cannot trans mitting at the same time		
Hotspot Mode	Support		
DTM Mode	Not Support		
Note 1: The BT value was Estimated.			



1.2 Test Environment

Ambient conditions in the SAR laboratory:

Items	Required
Temperature (°C)	18-25
Humidity (%RH)	30-70

1.3 Test Factory

Company Name:	Shenzhen LGT Test Service Co., Ltd.
Address:	Room 205, Building 13, Zone B, Zhenxiong Industrial Park, No.177, Renmin West Road, Jinsha, Kengzi Street, Pingshan District, Shenzhen, Guangdong, China
Accreditation Certificate	FCC Registration No.: 746540
	CAB ID: CN0136



2. Test Standards and Limits

No.	Identity	Document Title
1	47 CFR Part 2	Frequency Allocations and Radio Treaty Matters; General Rules and Regulations
2	ANSI/IEEE Std. C95.1-2019	IEEE Standard for Safety Levels with Respect to Human Exposure to Electric, Magnetic, and Electromagnetic Fields, 0 Hz to 300 GHz
3	IEEE Std. 1528-2013	Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques
4	FCC KDB 447498 D01 v06	Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Policies
5	FCC KDB 865664 D01 v01r04	SAR Measurement 100 MHz to 6 GHz
6	FCC KDB 865664 D02 v01r02	RF Exposure Reporting
7	FCC KDB 941225 D01 v03r01	SAR Measurement Procedures for 3G Devices
8	FCC KDB 941225 D05 v02r05	SAR for LTE Devices
9	FCC KDB 941225 D06 v02r01	Hotspot Mode SAR
10	FCC KDB 648474 D04 v01r03	SAR Evaluation Considerations for Wireless Handsets
11	FCC KDB 248227 D01 Wi-Fi SAR v02r02	SAR Considerations for 802.11 Devices

(A). Limits for Occupational/Controlled Exposure (W/kg)

Whole-Body Partial-Body Hands, Wrists, Feet and Ankles

0.4 8.0 20.0

(B). Limits for General Population/Uncontrolled Exposure (W/kg)

Whole-Body Partial-Body Hands, Wrists, Feet and Ankles

0.08 1.6 4.0

NOTE: Whole-Body SAR is averaged over the entire body, partial-body SAR is averaged over any 1 gram of tissue defined as a tissue volume in the shape of a cube. SAR for hands, wrists, feet and ankles is averaged over any 10 grams of tissue defined as a tissue volume in the shape of a cube.

Population/Uncontrolled Environments:

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

Occupational/Controlled Environments:

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

NOTE GENERAL POPULATION/UNCONTROLLED EXPOSURE PARTIAL BODY LIMIT 1.6 W/kg



3. SAR Measurement System

3.1 Definition of Specific Absorption Rate (SAR)

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

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

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

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

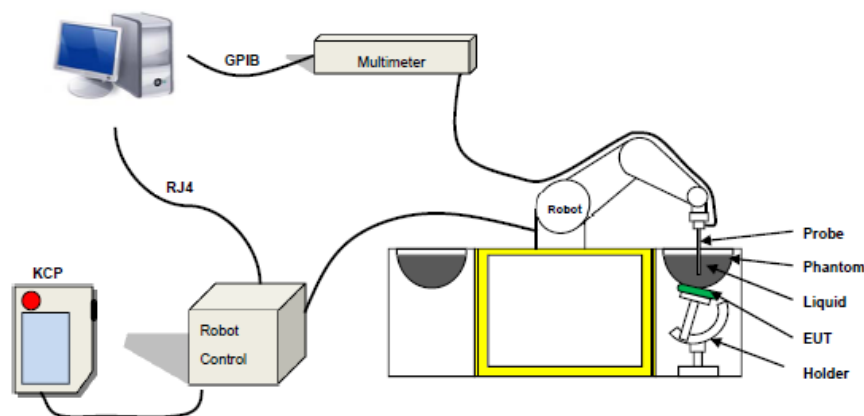
$$SAR = \frac{\sigma E^2}{\rho}$$

Where: σ is the conductivity of the tissue;

ρ is the mass density of the tissue and E is the RMS electrical field strength.

3.2 SAR System

MVG SAR System Diagram:



COMOSAR is a system that is able to determine the SAR distribution inside a phantom of human being according to different standards. The COMOSAR system consists of the following items:

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

The following figure shows the system.



The EUT under test operating at the maximum power level is placed in the phone holder, under the phantom, which is filled with head simulating liquid. The E-Field probe measures the electric field inside the phantom. The OpenSAR software computes the results to give a SAR value in a 1g or 1g mass.

3.2.1 Probe

For the measurements the Specific Dosimetric E-Field Probe 2225-EPGO-450 with following specifications is used

- Probe Length: 330 mm
- Length of Individual Dipoles: 2mm
- Maximum external diameter: 8 mm
- Probe Tip External Diameter: 2.5 mm
- Distance between dipole/probe extremity: 1 mm
- Dynamic range: 0.01-100 W/kg
- Probe linearity: 3%
- Axial Isotropy: < 0.10 dB
- Spherical Isotropy: < 0.10 dB
- Calibration range: 0.15 GHz to 7.5 GHz for head simulating liquid.
- Angle between probe axis (evaluation axis) and surface normal line: less than 30°



Figure 1-MVG COMOSAR Dosimetric E field Probe



3.2.2 Phantom

For the measurements the Specific Anthropomorphic Mannequin (SAM) defined by the IEEE SCC-34/SC2 group is used. The phantom is a polyurethane shell integrated in a wooden table. The thickness of the phantom amounts to 2mm +/- 0.2mm. It enables the dosimetric evaluation of left and right phone usage and includes an additional flat phantom part for the simplified performance check. The phantom set-up includes a cover, which prevents the evaporation of the liquid.

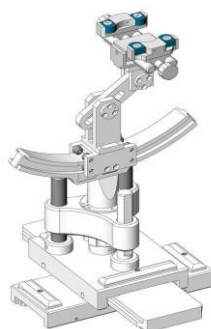


Figure-SN 06/22 SAM 148



Figure-SN 06/22 ELLI 51

3.2.3 Device Holder



The SAR in the phantom is approximately inversely proportional to the square of the distance between the source and the liquid surface. For a source at 5 mm distance, a positioning uncertainty of ± 0.5 mm would produce a SAR uncertainty of ± 20 %. Accurate device positioning is therefore crucial for accurate and repeatable measurements. The positions in which the devices must be measured are defined by the standards.



4. Tissue Simulating Liquids

4.1 Simulating Liquids Parameter Check

The simulating liquids should be checked at the beginning of a series of SAR measurements to determine if the dielectric parameters are within the tolerances of the specified target values

The uncertainty due to the liquid conductivity and permittivity arises from two different sources. The first source of error is the deviation of the liquid conductivity from its target value (max _ 5 %) and the second source of error arises from the measurement procedures used to assess conductivity. The uncertainty shall be assessed using a rectangular probability For 1 g averaging, the maximum weighting coefficient for SAR is 0,5.

IEEE SCC-34/SC-2 RECOMMENDED TISSUE DIELECTRIC PARAMETERS

The head and body tissue dielectric parameters recommended by the IEEE SCC-34/SC-2 have been incorporated in the following table.

Frequency	ϵ_r	σ 10g S/m
300	45.3	0.87
450	43.5	0.87
750	41.9	0.89
835	41.5	0.90
900	41.5	0.97
1450	40.5	1.20
1800 to 2000	40.0	1.40
2100	39.8	1.49
2450	39.2	1.80
2600	39.0	1.96
3000	38.5	2.40
3500	37.9	2.91
4000	37.4	3.43
4500	36.8	3.94
5000	36.2	4.45
5200	36.0	4.66
5400	35.8	4.86
5600	35.5	5.07
5800	35.3	5.27



LIQUID MEASUREMENT RESULTS

Date	Ambient		Simulating Liquid		Parameters	Target	Measured	Deviation %	Limited %
	Temp . [°C]	Humidity %	Frequency (MHz)	Temp . [°C]					
2025-12-31	21	50	750	20.7	Permittivity	41.90	41.83	-0.17	±5
					Conductivity	0.89	0.88	-1.12	±5
2025-12-26	22.9	57	750	22.7	Permittivity	41.90	42.36	1.10	±5
					Conductivity	0.89	0.86	-3.37	±5
2025-12-31	21	50	709	20.8	Permittivity	42.12	42.90	1.85	±5
					Conductivity	0.89	0.86	-3.37	±5
2025-12-31	21.1	51	710	20.8	Permittivity	42.11	43.23	2.66	±5
					Conductivity	0.89	0.85	-4.49	±5
2025-12-31	21.2	51	711	20.9	Permittivity	42.11	43.28	2.78	±5
					Conductivity	0.89	0.87	-2.25	±5
2025-12-31	21.2	51	782	20.9	Permittivity	41.73	42.48	1.80	±5
					Conductivity	0.89	0.91	2.25	±5
2025-12-26	23	57	782	22.8	Permittivity	41.73	42.05	0.77	±5
					Conductivity	0.89	0.90	1.12	±5
2025-12-24	20.1	55	835	19.8	Permittivity	41.50	41.78	0.67	±5
					Conductivity	0.90	0.93	3.33	±5
2026-01-03	21	40	835	20.7	Permittivity	41.50	41.55	0.12	±5
					Conductivity	0.90	0.94	4.44	±5
2025-12-24	20.2	55	824.2	20	Permittivity	41.55	41.38	-0.41	±5
					Conductivity	0.90	0.92	2.22	±5
2025-12-24	20.3	55	836.6	20	Permittivity	41.49	40.67	-1.98	±5
					Conductivity	0.90	0.89	-1.11	±5
2025-12-24	20.3	55	844	20	Permittivity	41.46	41.55	0.22	±5
					Conductivity	0.90	0.91	1.11	±5
2026-01-03	21	40	846.6	20.7	Permittivity	41.45	40.39	-2.56	±5
					Conductivity	0.90	0.94	4.44	±5
2026-01-03	21	40	848.8	20.8	Permittivity	41.44	41.78	0.82	±5
					Conductivity	0.90	0.91	1.11	±5
2025-12-25	21.4	46	1800	21	Permittivity	40.00	40.52	1.30	±5
					Conductivity	1.40	1.38	-1.43	±5
2026-01-05	22	54	1800	21.7	Permittivity	40.00	40.51	1.28	±5
					Conductivity	1.40	1.36	-2.86	±5
2025-12-25	21.5	46	1720	21.2	Permittivity	40.11	41.15	2.59	±5
					Conductivity	1.35	1.37	1.48	±5
2026-01-05	22	54	1732.5	21.8	Permittivity	40.10	40.39	0.72	±5
					Conductivity	1.36	1.34	-1.47	±5
2025-12-25	21.5	46	1745	21.2	Permittivity	40.08	40.11	0.07	±5
					Conductivity	1.37	1.34	-2.19	±5
2025-12-25	21.4	46	1770	21.1	Permittivity	40.04	40.76	1.80	±5
					Conductivity	1.38	1.37	-0.72	±5
2026-01-02	21.8	47	1900	21.5	Permittivity	40.00	40.65	1.63	±5
					Conductivity	1.40	1.39	-0.71	±5



2026-01-02	21.9	47	1852.4	21.6	Permittivity	40.00	40.75	1.88	±5
					Conductivity	1.40	1.39	-0.71	±5
2026-01-02	22	47	1860	21.7	Permittivity	40.00	40.75	1.88	±5
					Conductivity	1.40	1.38	-1.43	±5
2026-01-02	22.1	48	1880	21.8	Permittivity	40.00	40.54	1.35	±5
					Conductivity	1.40	1.42	1.43	±5
2026-01-02	22.1	48	1909.8	21.8	Permittivity	40.00	40.25	0.63	±5
					Conductivity	1.40	1.39	-0.71	±5
2026-01-04	23.1	49	2300	22.9	Permittivity	39.47	40.31	2.13	±5
					Conductivity	1.67	1.68	0.60	±5
2026-01-04	23.2	49	2310	22.9	Permittivity	39.45	40.69	3.14	±5
					Conductivity	1.68	1.72	2.38	±5
2026-01-02	21.8	47	2450	21.5	Permittivity	39.20	40.20	2.55	±5
					Conductivity	1.80	1.84	2.22	±5
2026-01-02	21.8	48	2412	21.4	Permittivity	39.27	39.61	0.87	±5
					Conductivity	1.77	1.75	-1.13	±5
2026-01-01	22.1	40	2600	21.8	Permittivity	39.00	39.64	1.64	±5
					Conductivity	1.96	1.98	1.02	±5
2025-12-27	20.1	55	2600	19.9	Permittivity	39.00	39.91	2.33	±5
					Conductivity	1.96	1.97	0.51	±5
2026-01-01	22.1	40	2510	21.7	Permittivity	39.11	39.61	1.28	±5
					Conductivity	1.86	1.87	0.54	±5
2026-01-01	22.2	40	2535	21.9	Permittivity	39.08	40.09	2.58	±5
					Conductivity	1.89	1.95	3.17	±5
2026-01-01	22.3	41	2560	22	Permittivity	39.05	39.57	1.33	±5
					Conductivity	1.92	1.95	1.56	±5
2026-01-01	22.3	41	2610	21.9	Permittivity	38.99	39.73	1.90	±5
					Conductivity	1.97	1.96	-0.51	±5
2025-12-27	20.2	55	2680	19.9	Permittivity	38.90	40.36	3.75	±5
					Conductivity	2.05	2.04	-0.49	±5
2026-01-07	22	40	5200	21.7	Permittivity	36.00	37.21	3.36	±5
					Conductivity	4.66	4.69	0.64	±5
2026-01-07	22.1	40	5180	21.8	Permittivity	36.02	36.80	2.17	±5
					Conductivity	4.64	4.70	1.29	±5
2026-01-07	22.2	40	5400	21.9	Permittivity	35.80	36.94	3.18	±5
					Conductivity	4.86	4.90	0.82	±5
2026-01-07	22.3	41	5260	22	Permittivity	35.94	36.32	1.06	±5
					Conductivity	4.72	4.75	0.64	±5
2026-01-08	23.9	40	5600	23.6	Permittivity	35.55	35.83	0.79	±5
					Conductivity	5.07	5.05	-0.39	±5
2026-01-08	23.9	40	5700	23.6	Permittivity	35.43	36.19	2.15	±5
					Conductivity	5.17	5.13	-0.77	±5
2026-01-08	23.9	40	5800	23.6	Permittivity	35.30	36.25	2.69	±5
					Conductivity	5.27	5.26	-0.19	±5
2026-01-08	23.9	40	5825	23.6	Permittivity	35.28	36.26	2.78	±5
					Conductivity	5.30	5.25	-0.94	±5

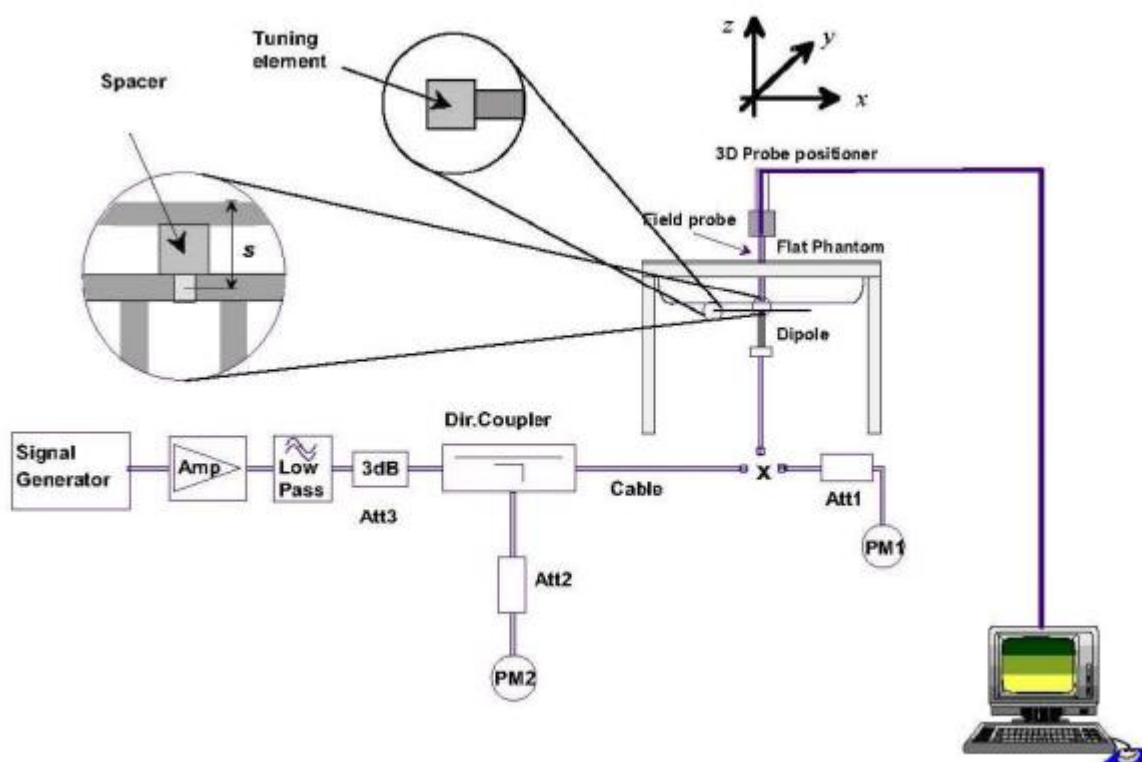


5. SAR System Validation

5.1 Validation System

Each MVG system is equipped with one or more system validation kits. These units, together with the predefined measurement procedures within the MVG software, enable the user to conduct the system performance check and system validation. System kit includes a dipole, and dipole device holder.

The system check verifies that the system operates within its specifications. It's performed daily or before every SAR measurement. The system check uses normal SAR measurement in the flat section of the phantom with a matched dipole at a specified distance. The system validation setup is shown as below.





5.2 Validation Result

Comparing to the original SAR value provided by MVG, the validation data should be within its specification of $\pm 10\%$.

Date	Freq.	Power	Tested Value	Normalized SAR	Target SAR	Tolerance	Limit
	(MHz)	(mW)	(W/Kg)	(W/kg)	1g(W/kg)	(%)	(%)
2025-12-31	750	100	0.843	8.43	8.51	-0.94	10
2025-12-26	750	100	0.830	8.30	8.51	-2.47	10
2025-12-24	835	100	0.953	9.53	9.63	-1.04	10
2026-01-03	835	100	0.978	9.78	9.63	1.56	10
2025-12-25	1800	100	3.675	36.75	36.60	0.41	10
2026-01-05	1800	100	3.746	37.46	36.60	2.35	10
2026-01-02	1900	100	4.119	41.19	40.20	2.46	10
2026-01-04	2100	100	4.247	42.47	42.52	-0.12	10
2026-01-02	2450	100	5.397	53.97	52.98	1.87	10
2026-01-01	2600	100	5.647	56.47	56.15	0.57	10
2025-12-27	2600	100	5.715	57.15	56.15	1.78	10
2026-01-07	5200	100	7.758	77.58	77.84	-0.33	10
2026-01-07	5400	100	7.698	76.98	76.82	0.21	10
2026-01-08	5600	100	8.423	84.23	82.15	2.53	10
2026-01-08	5800	100	8.020	80.20	80.51	-0.39	10

Note:

1. The tolerance limit of System validation $\pm 10\%$.
2. The dipole input power (forward power) was 100 mW.
3. The results are normalized to 1 W input power.



6. SAR Evaluation Procedures

The procedure for assessing the average SAR value consists of the following steps:

The following steps are used for each test position

- Establish a call with the maximum output power with a base station simulator. The connection between the mobile and the base station simulator is established via air interface
- Measurement of the local E-field value at a fixed location. This value serves as a reference value for calculating a possible power drift.
- Measurement of the SAR distribution with a grid of 8 to 16mm * 8 to 16 mm and a constant distance to the inner surface of the phantom. Since the sensors cannot directly measure at the inner phantom surface, the values between the sensors and the inner phantom surface are extrapolated. With these values the area of the maximum SAR is calculated by an interpolation scheme.
- Around this point, a cube of 30 * 30 * 30 mm or 32 * 32 * 32 mm is assessed by measuring 5 or 8 * 5 or 8*4 or 5 mm. With these data, the peak spatial-average SAR value can be calculated.

➤ Area Scan & Zoom Scan

First Area Scan is used to locate the approximate location(s) of the local peak SAR value(s). The measurement grid within an Area Scan is defined by the grid extent, grid step size and grid offset. Next, in order to determine the EM field distribution in a three-dimensional spatial extension, Zoom Scan is required. The Zoom Scan is performed around the highest E-field value to determine the averaged SAR-distribution over 10 g. Area scan and zoom scan resolution setting follows KDB 865664 D01 quoted below.

When the 1-g SAR of the highest peak is within 2 dB of the SAR limit, additional zoom scans are required for other peaks within 2 dB of the highest peak that have not been included in any zoom scan to ensure there is no increase in SAR.



7. EUT Antenna Location Sketch

It is a Vasco Translator M4, support GSM/WCDMA/LTE/WLAN/BT mode.

Top side



Bottom side
(Back view)

Antenna Separation Distance(mm)						
ANT	Back Side	Front Side	Left Side	Right Side	Top Side	Bottom Side
WLAN/BT	≤5	≤5	≤5	40	≤5	91
WWAN	≤5	≤5	≤5	≤5	97	≤5

Note 1: The antenna information refer the manufacturer provide report, applicable only to the tested sample identified in the report.



7.1 SAR test exclusion consider table

The WWAN/WLAN/BT SAR evaluation of Maximum power (dBm) summing tolerance.

Exposure Position	Wireless Interface	GSM850	PCS1900	WCDMA II	WCDMA V	LTE Band 2
	Calculated Frequency (MHz)	824.2	1909.8	1852.4	846.6	1860
	Maximum Turn-up power (dBm)	34	31.3	24	24	24.5
	Maximum rated power(mW)	2511.89	1348.96	251.19	251.19	281.84
Back Side	Separation distance (mm)	5	5	5	5	5
	exclusion threshold(mW)	16.52	10.85	11.02	16.30	11.00
	Testing required?	YES	YES	YES	YES	YES
Front Side	Separation distance (mm)	5	5	5	5	5
	exclusion threshold(mW)	16.52	10.85	11.02	16.30	11.00
	Testing required?	YES	YES	YES	YES	YES
Left Edge	Separation distance (mm)	5	5	5	5	5
	exclusion threshold(mW)	16.52	10.85	11.02	16.30	11.00
	Testing required?	YES	YES	YES	YES	YES
Right Edge	Separation distance (mm)	5	5	5	5	5
	exclusion threshold(mW)	16.52	10.85	11.02	16.30	11.00
	Testing required?	YES	YES	YES	YES	YES
Top Edge	Separation distance (mm)	97	97	97	97	97
	exclusion threshold(mW)	423.47	578.54	580.21	428.29	579.99
	Testing required?	YES	YES	NO	NO	NO
Bottom Edge	Separation distance (mm)	5	5	5	5	5
	exclusion threshold(mW)	16.52	10.85	11.02	16.30	11.00
	Testing required?	YES	YES	YES	YES	YES



Exposure Position	Wireless Interface	LTE Band 4	LTE Band 5	LTE Band 7	LTE Band 12	LTE Band 13
	Calculated Frequency (MHz)	1732.5	844	2510	711	782
	Maximum Turn-up power (dBm)	25	25.1	24	24.8	25
	Maximum rated power(mW)	316.23	323.59	251.19	302.00	316.23
Back Side	Separation distance (mm)	5	5	5	5	5
	exclusion threshold(mW)	11.40	16.33	9.47	17.79	16.96
	Testing required?	YES	YES	YES	YES	YES
Front Side	Separation distance (mm)	5	5	5	5	5
	exclusion threshold(mW)	11.40	16.33	9.47	17.79	16.96
	Testing required?	YES	YES	YES	YES	YES
Left Edge	Separation distance (mm)	5	5	5	5	5
	exclusion threshold(mW)	11.40	16.33	9.47	17.79	16.96
	Testing required?	YES	YES	YES	YES	YES
Right Edge	Separation distance (mm)	5	5	5	5	5
	exclusion threshold(mW)	11.40	16.33	9.47	17.79	16.96
	Testing required?	YES	YES	YES	YES	YES
Top Edge	Separation distance (mm)	97	97	97	97	97
	exclusion threshold(mW)	583.96	427.73	564.68	400.67	414.65
	Testing required?	NO	NO	NO	NO	NO
Bottom Edge	Separation distance (mm)	5	5	5	5	5
	exclusion threshold(mW)	11.40	16.33	9.47	17.79	16.96
	Testing required?	YES	YES	YES	YES	YES



Exposure Position	Wireless Interface	LTE Band 17	LTE Band 38	LTE Band 40	LTE Band 41	LTE Band 66
	Calculated Frequency (MHz)	711	2610	2310	2680	1745
	Maximum Turn-up power (dBm)	25	24.3	10.1	24.3	25.3
	Maximum rated power(mW)	316.23	269.15	10.23	269.15	338.84
Back Side	Separation distance (mm)	5	5	5	5	5
	exclusion threshold(mW)	17.79	9.28	9.87	9.16	11.36
	Testing required?	YES	YES	YES	YES	YES
Front Side	Separation distance (mm)	5	5	5	5	5
	exclusion threshold(mW)	17.79	9.28	9.87	9.16	11.36
	Testing required?	YES	YES	YES	YES	YES
Left Edge	Separation distance (mm)	5	5	5	5	5
	exclusion threshold(mW)	17.79	9.28	9.87	9.16	11.36
	Testing required?	YES	YES	YES	YES	YES
Right Edge	Separation distance (mm)	5	5	5	5	5
	exclusion threshold(mW)	17.79	9.28	9.87	9.16	11.36
	Testing required?	YES	YES	YES	YES	YES
Top Edge	Separation distance (mm)	97	97	97	97	97
	exclusion threshold(mW)	400.67	562.85	568.69	561.63	583.55
	Testing required?	NO	NO	NO	NO	NO
Bottom Edge	Separation distance (mm)	5	5	5	5	5
	exclusion threshold(mW)	17.79	9.28	9.87	9.16	11.36
	Testing required?	YES	YES	YES	YES	YES



Exposure Position	Wireless Interface	BT	2.4G WLAN	5.2G WLAN	5.3G WLAN
	Calculated Frequency (MHz)	2441	2412	5180	5260
	Maximum Turn-up power (dBm)	4	15.5	12.5	12.5
	Maximum rated power(mW)	2.51	35.48	17.78	17.78
Back Side	Separation distance (mm)	5	5	5	5
	exclusion threshold(mW)	9.60	9.66	6.59	6.54
	Testing required?	NO	YES	YES	YES
Front Side	Separation distance (mm)	5	5	5	5
	exclusion threshold(mW)	9.60	9.66	6.59	6.54
	Testing required?	NO	YES	YES	YES
Left Edge	Separation distance (mm)	5	5	5	5
	exclusion threshold(mW)	9.60	9.66	6.59	6.54
	Testing required?	NO	YES	YES	YES
Right Edge	Separation distance (mm)	40	40	40	40
	exclusion threshold(mW)	76.81	77.27	52.72	52.32
	Testing required?	NO	NO	NO	NO
Top Edge	Separation distance (mm)	5	5	5	5
	exclusion threshold(mW)	9.60	9.66	6.59	6.54
	Testing required?	NO	YES	YES	YES
Bottom Edge	Separation distance (mm)	91	91	91	91
	exclusion threshold(mW)	506.01	506.58	475.91	475.40
	Testing required?	NO	NO	NO	NO



Exposure Position	Wireless Interface	5.6G WLAN	5.8G WLAN
	Calculated Frequency (MHz)	5700	5825
	Maximum Turn-up power (dBm)	15.8	15.8
	Maximum rated power(mW)	38.02	38.02
Back Side	Separation distance (mm)	5	5
	exclusion threshold(mW)	6.28	6.22
	Testing required?	YES	YES
Front Side	Separation distance (mm)	5	5
	exclusion threshold(mW)	6.28	6.22
	Testing required?	YES	YES
Left Edge	Separation distance (mm)	5	5
	exclusion threshold(mW)	6.28	6.22
	Testing required?	YES	YES
Right Edge	Separation distance (mm)	40	40
	exclusion threshold(mW)	50.26	49.72
	Testing required?	NO	NO
Top Edge	Separation distance (mm)	5	5
	exclusion threshold(mW)	6.28	6.22
	Testing required?	YES	YES
Bottom Edge	Separation distance (mm)	91	91
	exclusion threshold(mW)	472.83	472.15
	Testing required?	NO	NO

Note:

1. maximum power is the source-based time-average power and represents the maximum RF output power among production units.
2. per KDB 447498 D01, for larger devices, the test separation distance of adjacent edge configuration is determined by the closest separation between the antenna and the user.
3. per KDB 447498 D01, standalone SAR test exclusion threshold is applied; if the distance of the antenna to the user is <25mm, 25mm is user to determine SAR exclusion threshold
4. per KDB 447498 D01, the 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distance ≤ 50 mm are determined by:

$$\frac{[(\text{max.power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance,}]}{}$$



mm)]*[$\sqrt{f(\text{GHz})}$] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, $f(\text{GHz})$ is the RF channel transmit frequency in GHz. Power and distance are rounded to the nearest mW and mm before calculation.

The result is rounded to one decimal place for comparison

For <50mm distance, we just calculate mW of the exclusion threshold value(3.0)to do compare

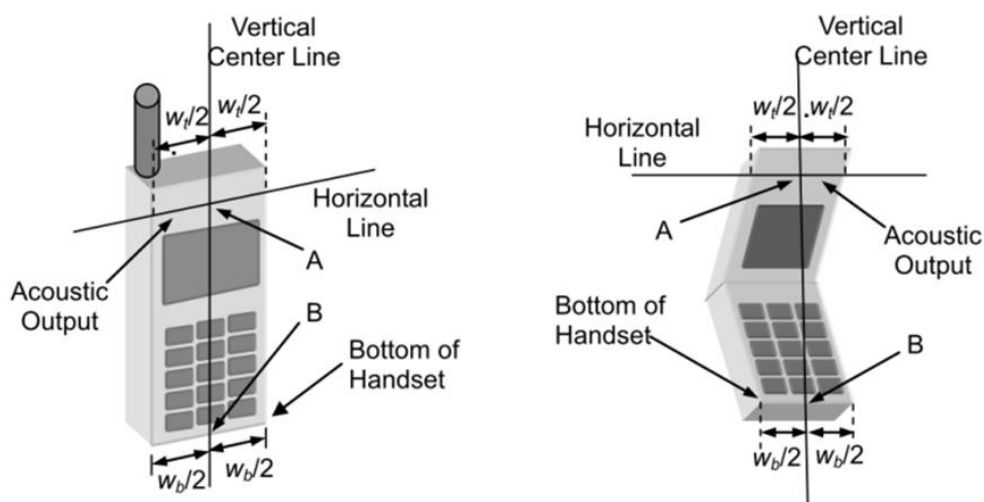
5. per KDB 447498 D01, at 100 MHz to 6GHz and for test separation distances >50mm, the SAR test exclusion threshold is determined according to the following
 - a)[threshold at 50mm in step 1]+(test separation distance -50mm)*($f(\text{MHz})/150$)]mW, at 100 MHz to 1500 MHz
 - b) [threshold at 50mm in step1]+(test separation distance -50mm) *10]mW at > 1500MHz and $\leq 6\text{GHz}$
6. Per KDB 248227 D01, choose the highest output power channel to test SAR and determine further SAR exclusion 8.for each frequency band ,testing at higher data rates and higher order modulations is not required when the maximum average output power for each of each of these configurations is less than 1/4db higher than those measured at the lower data rate than 11b mode ,thus the SAR can be excluded.

8. EUT Test Position

This EUT was tested in Right Cheek, Right Titled, Left Cheek, Left Titled, Front Face and Rear Face.

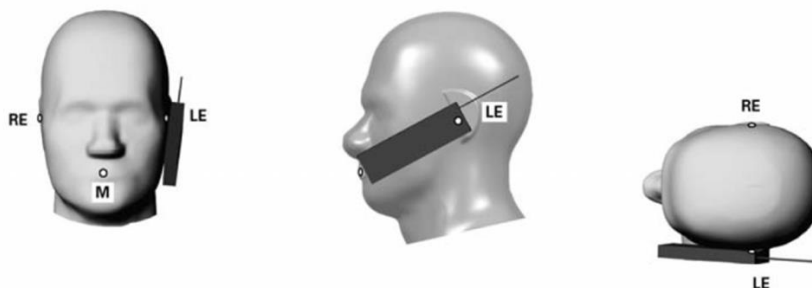
8.1 Define Two Imaginary Lines on the Handset

- (1) The vertical centerline passes through two points on the front side of the handset the midpoint of the width w_t of the handset at the level of the acoustic output, and the midpoint of the width w_b of the handset.
- (2) The horizontal line is perpendicular to the vertical centerline and passes through the center of the acoustic output. The horizontal line is also tangential to the face of the handset at point A.
- (3) The two lines intersect at point A. Note that for many handsets, point A coincides with the center of the acoustic output; however, the acoustic output may be located elsewhere on the horizontal line. Also note that the vertical centerline is not necessarily to the front face of the handset, especially for clamshell handsets, handsets with flip covers, and other irregularly shaped handsets.



Cheek Position

- 1) To position the device with the vertical center line of the body of the device and the horizontal line crossing the center piece in a plane parallel to the sagittal plane of the phantom. While maintaining the device in this plane, align the vertical center line with the reference plane containing the ear and mouth reference point (M: Mouth, RE: Right Ear, and LE: Left Ear) and align the center of the ear piece with the line RE-LE.
- 2) To move the device towards the phantom with the ear piece aligned with the line LE-RE until the phone touched the ear. While maintaining the device in the reference plane and maintaining the phone contact with ear, move the bottom of the phone until any point on the front side is in contact with the cheek of the phantom or until contact with the ear is lost





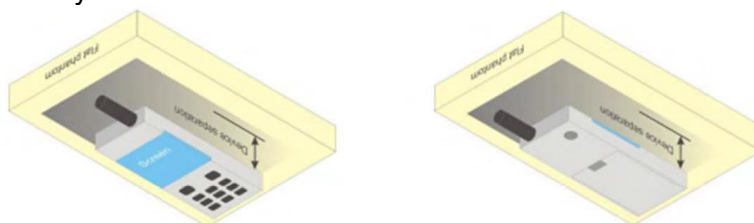
Title Position

- (1) To position the device in the “cheek” position described above.
- (2) While maintaining the device in the reference plane described above and pivoting against the ear, moves it outward away from the mouth by an angle of 15 degrees or until with the ear is lost.



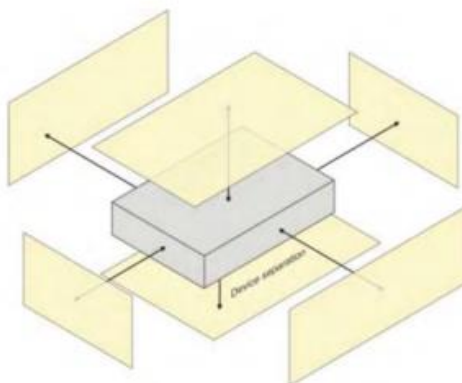
Body-worn Position Conditions:

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 KDB Publication 447498 D01 should be used to test for body-worn accessory SAR compliance, without a headset connected to it. When the same wireless transmission configuration is used for testing body-worn accessory and hotspot mode SAR, respectively, in voice and data mode, SAR results for the most conservative *test separation distance* configuration may be used to support both SAR conditions. When the *reported* SAR for a body-worn accessory, measured without a headset connected to the handset, is $> 1.2 \text{ W/kg}$, the highest *reported* SAR configuration for that wireless mode and frequency band should be repeated for the body-worn accessory with a headset attached to the handset.



8.2 Hotspot mode exposure position condition

For handsets that support hotspot mode operations, with wireless router capabilities and various web browsing function, the relevant hand and body exposure condition are tested according to the hotspot SAR procedures in KDB 941225. A test separation distance of 10 mm is required between the phantom and all surface and edges with a transmitting antenna located within 25 mm from that surface or edge. When form factor of a handset is smaller than 9cm x 5cm, a test separation distance of 5mm (instead of 10mm) is required for testing hotspot mode. When the separate distance required for body-worn accessory testing is larger than or equal to that tested for hotspot mode, in the same wireless mode and for the same surface of the phone, the hotspot mode SAR data may be used to support body-worn accessory SAR compliance for that particular configuration (surface).





9. Uncertainty

9.1 Measurement Uncertainty

The following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in IEEE 1528: 2013. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$.

Uncertainty Component	Tol (+/- %)	Prob. Dist.	Div.	Ci (1g)	Ci (10g)	1g Ui (+/-%)	10g Ui (+/-%)	vi
Measurement System								
Probe calibration	5.8	N	1	1	1	5.8	5.8	∞
Axial Isotropy	3.5	R	$\sqrt{3}$	$\sqrt{0.5}$	$\sqrt{0.5}$	1.43	1.43	∞
Hemispherical Isotropy	5.9	R	$\sqrt{3}$	$\sqrt{0.5}$	$\sqrt{0.5}$	2.41	2.41	∞
Boundary effect	1	R	$\sqrt{3}$	1	1	0.58	0.58	∞
Linearity	4.7	R	$\sqrt{3}$	1	1	2.71	2.71	∞
System detection limits	1	R	$\sqrt{3}$	1	1	0.58	0.58	∞
Modulation response	3	R	$\sqrt{3}$	1	1	1.73	1.73	∞
Readout Electronics	0.5	N	1	1	1	0.50	0.50	∞
Response Time	0	R	$\sqrt{3}$	1	1	0.00	0.00	∞
Integration Time	1.4	R	$\sqrt{3}$	1	1	1.81	1.81	∞
RF ambient conditions-Noise	3	R	$\sqrt{3}$	1	1	1.73	1.73	∞
RF ambient conditions-reflections	3	R	$\sqrt{3}$	1	1	1.73	1.73	∞
Probe positioner mechanical tolerance	1.4	R	$\sqrt{3}$	1	1	0.81	0.81	∞
Probe positioning with respect to phantom shell	1.4	R	$\sqrt{3}$	1	1	0.81	0.81	∞
Extrapolation, Interpolation and Integration Algorithms for Max, SAR	2.3	R	$\sqrt{3}$	1	1	1.33	1.33	∞
Test sample Related								
Test sample positioning	2.6	N	1	1	1	2.60	2.60	11
Device holder uncertainty	3	N	1	1	1	3.00	3.00	7
Output Power Variation - SAR Drift Measurement	5	R	$\sqrt{3}$	1	1	2.89	2.89	∞
SAR scaling	2	R	$\sqrt{3}$	1	1	1.15	1.15	∞
Phantom and tissue parameters								
Phantom uncertainty (shape and thickness uncertainty)	4	R	$\sqrt{3}$	1	1	2.31	2.31	∞
Uncertainty in SAR correction for deviations in permittivity and conductivity	2	N	1	1	0.84	2.00	1.68	∞
Liquid Conductivity - Measurement Uncertainty)	4	N	1	0.78	0.71	3.12	2.84	5
Liquid Permittivity - Measurement Uncertainty	5	N	1	0.23	0.26	1.15	1.30	5
Liquid Conductivity (Temperature Uncertainty)	2.5	R	$\sqrt{3}$	0.78	0.71	1.13	1.02	∞
Liquid Permittivity (Temperature Uncertainty)	2.5	R	$\sqrt{3}$	0.23	0.26	0.33	0.38	∞
Combined Standard Uncertainty		RSS				10.47	10.34	
Expanded Uncertainty (95% Confidence interval)		K				20.95	20.69	



9.2 System validation Uncertainty

Uncertainty Component	Tol (+ - %)	Prob. Dist.	Div.	Ci (1g)	Ci (10g)	1g Ui (+ - %)	10g Ui (+ - %)	vi
Measurement System								
Probe calibration	5.8	N	1	1	1	5.8	5.8	∞
Axial Isotropy	3.5	R	$\sqrt{3}$	1	1	2.02	2.02	∞
Hemispherical Isotropy	5.9	R	$\sqrt{3}$	0	0	0.00	0.00	∞
Boundary effect	1	R	$\sqrt{3}$	1	1	0.58	0.58	∞
Linearity	4.7	R	$\sqrt{3}$	1	1	0.71	0.71	∞
System detection limits	1	R	$\sqrt{3}$	1	1	0.58	0.58	∞
Modulation response	0	N	$\sqrt{3}$	0	0	0.00	0.00	∞
Readout Electronics	0.5	N	1	1	1	0.50	0.50	∞
Response Time	0	R	$\sqrt{3}$	0	0	0.00	0.00	∞
Integration Time	1.4	R	$\sqrt{3}$	0	0	0.00	0.00	∞
RF ambient conditions-Noise	3	R	$\sqrt{3}$	1	1	1.73	1.73	∞
RF ambient conditions- reflections	3	R	$\sqrt{3}$	1	1	1.73	1.73	∞
Probe positioner mechanical tolerance	1.4	R	$\sqrt{3}$	1	1	0.81	0.81	∞
Probe positioning with respect to phantom shell	1.4	R	$\sqrt{3}$	1	1	0.81	0.81	∞
Extrapolation, Interpolation and Integration Algorithms for Max, SAR	2.3	R	$\sqrt{3}$	1	1	1.33	1.33	∞
Dipole								
Deviation of Experimental Source from Numerical Source	5	N	1	1	1	5.00	5.00	∞
Input Power and SAR Drift Measurement	0.5	R	$\sqrt{3}$	1	1	0.29	0.29	∞
Dipole Axis to Liquid Distance	2	R	$\sqrt{3}$	1	1	1.15	1.15	∞
Phantom and Tissue Parameters								
Phantom uncertainty (shape and thickness uncertainty)	4	R	$\sqrt{3}$	1	1	2.31	2.31	∞
Uncertainty in SAR correction for deviations in permittivity and conductivity	2	N	1	1	0.84	2.00	1.68	∞
Liquid Conductivity - Measurement Uncertainty)	4	N	1	0.78	0.71	3.12	2.84	5
Liquid Permittivity - Measurement Uncertainty	5	N	1	0.23	0.26	1.15	1.30	5
Liquid Conductivity (Temperature Uncertainty)	2.5	R	$\sqrt{3}$	0.78	0.71	1.13	1.02	∞
Liquid Permittivity (Temperature Uncertainty)	2.5	R	$\sqrt{3}$	0.23	0.26	0.33	0.38	∞
Combined Standard Uncertainty		RSS				10.16	10.03	
Expanded Uncertainty (95% Confidence interval)		K				20.32	20.06	



10. Conducted Power Measurement

10.1 Test Result

Burst Average Power (dBm)						
Band	GSM 850			PCS 1900		
Channel	128	190	251	512	661	810
Frequency (MHz)	824.2	836.6	848.8	1850.2	1880.0	1909.8
GSM (GMSK, 1-Slot)	33.81	33.35	33.38	31.14	31.12	31.15
GPRS (GMSK, 1-Slot)	33.80	33.34	33.34	31.16	31.17	31.15
GPRS (GMSK, 2-Slot)	33.06	32.58	32.49	30.32	30.32	30.33
GPRS (GMSK, 3-Slot)	31.40	30.92	30.70	28.16	28.14	28.20
GPRS (GMSK, 4-Slot)	30.37	29.87	29.59	26.82	26.79	26.84
EGPRS (8PSK, 1-Slot)	27.40	27.59	27.96	26.78	26.25	26.32
EGPRS (8PSK, 2-Slot)	26.76	26.72	26.11	25.37	25.66	25.52
EGPRS (8PSK, 3-Slot)	24.83	24.28	24.30	23.06	23.20	23.03
EGPRS (8PSK, 4-Slot)	23.92	23.20	22.94	22.04	22.46	22.06
Remark: GPRS, CS4 coding scheme. EGPRS, MCS5 coding scheme. Multi-Slot Class 8, Support Max 4 downlink, 1 uplink, 5 working link Multi-Slot Class 10, Support Max 4 downlink, 2 uplink, 5 working link Multi-Slot Class 12, Support Max 4 downlink, 4 uplink, 5 working link						

Frame- Average Power(dBm)						
Band	GSM 850			PCS 1900		
Channel	128	190	251	512	661	810
Frequency (MHz)	824.2	836.6	848.8	1850.2	1880.0	1909.8
GSM (GMSK, 1-Slot)	24.78	24.32	24.35	22.11	22.09	22.12
GPRS (GMSK, 1-Slot)	24.77	24.31	24.31	22.13	22.14	22.12
GPRS (GMSK, 2-Slot)	27.04	26.56	26.47	24.30	24.30	24.31
GPRS (GMSK, 3-Slot)	27.14	26.66	26.44	23.90	23.88	23.94
GPRS (GMSK, 4-Slot)	27.36	26.86	26.58	23.81	23.78	23.83
EGPRS (8PSK, 1-Slot)	18.37	18.56	18.93	17.75	17.22	17.29
EGPRS (8PSK, 2-Slot)	20.74	20.70	20.09	19.35	19.64	19.50
EGPRS (8PSK, 3-Slot)	20.57	20.02	20.04	18.80	18.94	18.77
EGPRS (8PSK, 4-Slot)	20.91	20.19	19.93	19.03	19.45	19.05
Remark: 1. SAR testing was performed on the maximum frame-averaged power mode. 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 = Burst averaged power (1 TX Slot) – 9.03 dB Frame-averaged power = Burst averaged power (2 TX Slots) – 6.02 dB Frame-averaged power = Burst averaged power (3 TX Slots) - 4.26 dB Frame-averaged power = Burst averaged power (4 TX Slots) – 3.01 dB						



WCDMA

Band	WCDMA Band 2			WCDMA Band 4		
Channel	9262	9400	9538	1312	1450	1513
Frequency (MHz)	1852.4	1880	1907.6	1712.6	1740	1752.4
RMC 12.2Kbps	23.68	23.56	23.61	23.13	23.36	23.72
HSDPA Subtest-1	22.79	22.7	22.72	22.15	22.41	22.81
HSDPA Subtest-2	22.36	22.07	22.1	21.72	22.02	22.33
HSDPA Subtest-3	21.19	21.09	20.81	20.23	20.49	21.46
HSDPA Subtest-4	21.27	21.09	21.28	21.1	20.98	21.37
HSUPA Subtest-1	21.62	22.46	22.46	20.98	22.17	22.61
HSUPA Subtest-2	22.66	22.5	22.47	22.06	22.31	22.69
HSUPA Subtest-3	20.97	21.37	21.33	20.36	21.19	21.59
HSUPA Subtest-4	22.76	22.62	22.68	22.2	22.4	22.8
HSUPA Subtest-5	21.39	21.87	22.01	20.67	21.78	22.07

According to 3GPP 25.101 sub-clause 6.2.2, the maximum output power is allowed to be reduced by following the table.

Table 6.1A: UE maximum output power with HS-DPCCH and E-DCH

UE Transmit Channel Configuration	CM (db)	MPR (db)
For all combinations of ,DPDCH,DPCCH HS-DPDCH,E-DPDCH and E-DPCCH	$0 \leq CM \leq 3.5$	$MAX(CM-1,0)$
Note: 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.		

The device supports MPR to solve linearity issues (ACLR or SEM) due to the higher peak-to average ratios (PAR) of the HSUPA signal. This prevents saturating the full range of the TX DAC inside of device and provides a reduced power output to the RF transceiver chip according to the Cubic Metric (a function of the combinations of DPDCH, DPCCH, HS-DPCCH, E-DPDCH and E-DPCCH).

When E-DPDCH channels are present the beta gains on those channels are reduced firsts to try to get the power under the allowed limit. If the beta gains are lowered as far as possible, then a hard limiting is applied at the maximum allowed level.

The SW currently recalculates the cubic metric every time the beta gains on the E-DPDCH are reduced. The cubic metric will likely get lower each time this is done .However, there is no reported reduction of maximum output power in the HSUPA mode since the device also provides a compensation for the power back-off by increasing the gain of TX_AGC in the transceiver (PA) device.

The end effect is that the DUT output power is identical to the case where there is no MPR in the device.



BT				
Mode	Channel Number	Frequency (MHz)	Average Power (dBm)	Output Power (mW)
GFSK(1Mbps)	0	2402	2.96	1.98
	39	2441	3.61	2.30
	78	2480	1.99	1.58
$\pi/4$ -QPSK(2Mbps)	0	2402	2.16	1.64
	39	2441	2.83	1.92
	78	2480	1.23	1.33
8DPSK(3Mbps)	0	2402	2.15	1.64
	39	2441	2.81	1.91
	78	2480	1.21	1.32

BLE				
Mode	Channel Number	Frequency (MHz)	Average Power (dBm)	Output Power (mW)
GFSK(1Mbps)	0	2402	-4.11	0.39
	19	2440	-3.48	0.45
	39	2480	-5.11	0.31
GFSK(2Mbps)	0	2402	-4.05	0.39
	19	2440	-3.43	0.45
	39	2480	-5.02	0.31

2.4GWIFI				
Mode	Channel Number	Frequency (MHz)	Average Power (dBm)	Output Power (mW)
802.11b	1	2412	15.32	34.04
	7	2437	15.2	33.11
	11	2462	14.82	30.34
802.11g	1	2412	14.11	25.76
	7	2437	14.1	25.70
	11	2462	13.28	21.28
802.11n-HT20	1	2412	14.72	29.65
	7	2437	14.7	29.51
	11	2462	13.48	22.28
802.11n-HT40	3	2422	15.3	33.88
	6	2437	14.8	30.20
	9	2452	14.19	26.24



5.2G WLAN				
Mode	Channel Number	Frequency (MHz)	Output Power (dBm)	Output Power (mW)
802.11a20	36	5180	12.31	17.02
	40	5200	12.1	16.22
	48	5240	12.24	16.75
802.11n-HT20	36	5180	11.68	14.72
	40	5200	11.6	14.45
	48	5240	11.8	15.14
802.11n-HT40	38	5190	11.67	14.69
	46	5230	11.73	14.89
802.11ac-VHT20	36	5180	11.66	14.66
	40	5200	11.59	14.42
	48	5240	11.86	15.35
802.11ac-VHT40	38	5190	11.8	15.14
	46	5230	11.75	14.96
802.11ac-VHT80	42	5210	11.6	14.45

5.3G WLAN				
Mode	Channel Number	Frequency (MHz)	Output Power (dBm)	Output Power (mW)
802.11a20	52	5260	12.26	16.83
	60	5300	12.04	16.00
	64	5320	12.1	16.22
802.11n-HT20	52	5260	11.67	14.69
	60	5300	11.44	13.93
	64	5320	11.46	14.00
802.11n-HT40	54	5270	11.66	14.66
	62	5310	11.46	14.00
802.11ac-VHT20	52	5260	11.64	14.59
	60	5300	11.47	14.03
	64	5320	11.66	14.66
802.11ac-VHT40	54	5270	11.68	14.72
	62	5310	11.56	14.32
802.11ac-VHT80	58	5290	11.39	13.77



5.6G WLAN				
Mode	Channel Number	Frequency (MHz)	Output Power (dBm)	Output Power (mW)
802.11a20	100	5500	15.27	33.65
	116	5580	15.38	34.51
	140	5700	15.53	35.73
802.11n-HT20	100	5500	14.54	28.44
	116	5580	14.76	29.92
	140	5700	14.81	30.27
802.11n-HT40	102	5510	14.71	29.58
	110	5550	14.82	30.34
	134	5670	14.89	30.83
802.11ac-VHT20	100	5500	14.57	28.64
	116	5580	14.78	30.06
	140	5700	14.96	31.33
802.11ac-VHT40	102	5510	14.65	29.17
	110	5550	14.77	29.99
	134	5670	14.95	31.26
802.11ac-VHT80	106	5530	14.92	31.05
	122	5610	14.86	30.62

5.8G WLAN				
Mode	Channel Number	Frequency (MHz)	Output Power (dBm)	Output Power (mW)
802.11a20	149	5745	15.33	34.12
	157	5785	15.42	34.83
	165	5825	15.52	35.65
802.11n-HT20	149	5745	14.96	31.33
	157	5785	14.88	30.76
	165	5825	14.94	31.19
802.11n-HT40	151	5755	14.93	31.12
	159	5795	14.91	30.97
802.11ac-VHT20	149	5745	14.98	31.48
	157	5785	14.82	30.34
	165	5825	14.92	31.05
802.11ac-VHT40	151	5755	15.02	31.77
	159	5795	14.97	31.41
802.11ac-VHT80	155	5775	15.04	31.92



LTE Conducted Power

General Note:

1. CMW500 base station simulator was used to setup the connection with EUT; the frequency band, channel bandwidth, RB allocation configuration, modulation type are set in the base station simulator to configure EUT transmitting at maximum power and at different configurations which are requested to be reported to FCC, for conducted power measurement and SAR testing.
2. Per KDB 941225 D05, when a properly configured base station simulator is used for the SAR and power measurements, spectrum plots for each RB allocation and offset configuration is not required.
3. Per KDB 941225 D05, 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.
4. Per KDB 941225 D05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
5. Per KDB 941225 D05, 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 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.
6. Per KDB 941225 D05, 16QAM output power for each RB allocation configuration is $>$ not $\frac{1}{2}$ dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is ≤ 1.45 W/kg; Per KDB 941225 D05, 16QAM SAR testing is not required.
7. Per KDB 941225 D05, Smaller bandwidth output power for each RB allocation configuration is $>$ not $\frac{1}{2}$ 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; Per KDB 941225 D05, smaller bandwidth SAR testing is not required.



LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	23.93	23.69	23.75
1.4	1	2		24.12	23.84	23.91
1.4	1	5		23.90	23.71	23.75
1.4	3	0		23.90	23.77	23.79
1.4	3	1		23.90	23.80	23.78
1.4	3	2		23.94	23.75	23.78
1.4	6	0		22.96	22.75	22.78
1.4	1	0	16-QAM	23.06	22.96	22.63
1.4	1	2		23.17	23.07	22.81
1.4	1	5		23.07	22.93	22.59
1.4	3	0		23.13	23.05	22.95
1.4	3	1		23.14	23.08	22.97
1.4	3	2		23.11	23.07	22.98
1.4	6	0		22.10	21.94	21.96
3	1	0	QPSK	23.82	23.69	23.76
3	1	7		24.15	24.04	23.86
3	1	14		23.87	23.78	23.69
3	8	0		22.86	22.73	22.83
3	8	4		22.96	22.79	22.82
3	8	7		22.89	22.79	22.82
3	15	0		22.86	22.73	22.75
3	1	0	16-QAM	23.05	22.67	23.21
3	1	7		23.32	22.95	23.46
3	1	14		23.06	22.66	23.11
3	8	0		21.93	21.74	21.85
3	8	4		21.96	21.82	21.85
3	8	7		21.89	21.79	21.81
3	15	0		21.83	21.81	21.80



LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	23.70	23.54	23.61
5	1	12		24.19	24.06	24.08
5	1	24		23.71	23.69	23.58
5	12	0		22.87	22.70	22.76
5	12	6		22.96	22.79	22.89
5	12	11		22.97	22.80	22.81
5	25	0		22.91	22.80	22.81
5	1	0	16-QAM	23.33	22.94	23.02
5	1	12		23.59	23.46	23.41
5	1	24		23.29	23.12	22.98
5	12	0		21.81	21.62	21.81
5	12	6		21.93	21.76	21.88
5	12	11		21.95	21.81	21.76
5	25	0		21.87	21.77	21.81
10	1	0	QPSK	23.83	23.58	23.88
10	1	24		23.95	23.85	23.96
10	1	49		23.69	23.85	23.79
10	25	0		22.81	22.81	22.90
10	25	12		22.89	22.79	22.86
10	25	24		22.92	22.84	22.85
10	50	0		22.88	22.81	22.94
10	1	0	16-QAM	23.33	22.82	22.75
10	1	24		23.38	23.12	22.90
10	1	49		23.15	23.06	22.61
10	25	0		21.89	21.77	21.90
10	25	12		21.92	21.81	21.84
10	25	24		21.93	21.90	21.89
10	50	0		21.87	21.85	21.85



LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
15	1	0	QPSK	23.68	23.38	23.74
15	1	37		23.83	23.85	24.07
15	1	74		23.38	23.79	23.64
15	36	0		22.65	22.81	22.97
15	36	18		22.76	22.82	22.98
15	36	39		22.72	22.95	22.92
15	75	0		22.69	22.89	22.92
15	1	0	16-QAM	22.96	22.99	23.10
15	1	38		23.22	23.47	23.33
15	1	75		22.63	23.34	22.94
15	36	0		21.70	21.76	22.08
15	36	18		21.81	21.87	22.03
15	36	39		21.72	21.92	21.92
15	75	0		21.86	21.87	21.95
20	1	0	QPSK	23.81	23.45	23.82
20	1	49		24.23	24.07	24.12
20	1	99		23.63	23.84	23.71
20	50	0		22.83	22.74	23.02
20	50	24		22.91	22.87	22.97
20	50	49		22.83	22.89	22.97
20	100	0		22.86	22.86	22.98
20	1	0	16-QAM	22.95	22.71	23.04
20	1	49		23.12	23.24	23.30
20	1	99		22.73	23.20	22.92
20	50	0		21.68	21.90	21.98
20	50	24		21.83	21.89	21.93
20	50	49		21.72	22.05	21.90
20	100	0		21.67	21.92	21.94



LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	24.23	24.42	24.44
1.4	1	2		24.30	24.59	24.60
1.4	1	5		24.15	24.38	24.47
1.4	3	0		24.05	24.52	24.46
1.4	3	1		24.05	24.49	24.43
1.4	3	2		24.09	24.50	24.44
1.4	6	0		23.10	23.52	23.46
1.4	1	0	16-QAM	23.13	23.66	23.25
1.4	1	2		23.24	23.74	23.39
1.4	1	5		23.21	23.62	23.26
1.4	3	0		23.25	23.74	23.59
1.4	3	1		23.26	23.73	23.61
1.4	3	2		23.20	23.73	23.62
1.4	6	0		22.19	22.67	22.65
3	1	0	QPSK	24.02	24.46	24.49
3	1	7		24.37	24.81	24.83
3	1	14		24.11	24.43	24.57
3	8	0		23.08	23.53	23.48
3	8	4		23.11	23.59	23.51
3	8	7		23.13	23.54	23.52
3	15	0		23.07	23.50	23.48
3	1	0	16-QAM	23.45	23.68	23.32
3	1	7		23.79	24.01	23.58
3	1	14		23.51	23.65	23.33
3	8	0		22.07	22.52	22.46
3	8	4		22.12	22.52	22.49
3	8	7		22.11	22.49	22.47
3	15	0		22.09	22.45	22.52



LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	24.02	24.26	24.24
5	1	12		24.58	24.63	24.54
5	1	24		24.49	24.27	24.29
5	12	0		23.08	23.56	23.50
5	12	6		23.16	23.57	23.53
5	12	11		23.16	23.46	23.48
5	25	0		23.14	23.52	23.48
5	1	0	16-QAM	23.47	23.74	23.67
5	1	12		23.88	24.09	24.11
5	1	24		23.58	23.74	23.67
5	12	0		22.06	22.43	22.48
5	12	6		22.15	22.52	22.54
5	12	11		22.18	22.40	22.50
5	25	0		22.09	22.56	22.47
10	1	0	QPSK	24.18	24.51	24.39
10	1	24		24.38	24.54	24.45
10	1	49		24.43	24.46	24.45
10	25	0		23.09	23.63	23.44
10	25	12		23.17	23.53	23.42
10	25	24		23.33	23.52	23.50
10	50	0		23.23	23.52	23.50
10	1	0	16-QAM	22.92	23.89	23.58
10	1	24		23.11	23.94	23.62
10	1	49		23.17	23.88	23.63
10	25	0		22.10	22.61	22.48
10	25	12		22.21	22.57	22.46
10	25	24		22.35	22.57	22.50
10	50	0		22.18	22.58	22.51



LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
15	1	0	QPSK	24.11	24.40	24.31
15	1	37		24.59	24.69	24.61
15	1	74		24.47	24.37	24.38
15	36	0		23.22	23.64	23.52
15	36	18		23.38	23.65	23.56
15	36	39		23.50	23.54	23.58
15	75	0		23.39	23.65	23.55
15	1	0	16-QAM	23.11	23.75	23.54
15	1	38		23.55	24.11	23.80
15	1	75		23.51	23.83	23.58
15	36	0		22.12	22.62	22.52
15	36	18		22.29	22.57	22.57
15	36	39		22.42	22.60	22.62
15	75	0		22.39	22.58	22.49
20	1	0	QPSK	23.98	24.44	24.22
20	1	49		24.40	24.87	24.74
20	1	99		24.08	24.46	24.33
20	50	0		23.13	23.53	23.54
20	50	24		23.38	23.60	23.47
20	50	49		23.49	23.43	23.46
20	100	0		23.29	23.50	23.47
20	1	0	16-QAM	23.16	23.47	23.61
20	1	49		23.68	23.86	23.95
20	1	99		23.59	23.56	23.63
20	50	0		22.10	22.57	22.58
20	50	24		22.34	22.62	22.55
20	50	49		22.49	22.48	22.52
20	100	0		22.35	22.50	22.53



LTE Band 5 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	23.90	24.21	24.50
1.4	1	2		24.07	24.40	24.63
1.4	1	5		23.91	24.28	24.46
1.4	3	0		23.96	24.20	24.60
1.4	3	1		23.95	24.23	24.61
1.4	3	2		23.96	24.27	24.57
1.4	6	0		22.95	23.24	23.55
1.4	1	0	16-QAM	22.78	23.37	23.74
1.4	1	2		22.86	23.51	23.81
1.4	1	5		22.72	23.40	23.69
1.4	3	0		23.02	23.39	23.78
1.4	3	1		23.04	23.43	23.80
1.4	3	2		23.04	23.37	23.78
1.4	6	0		22.14	22.38	22.71
3	1	0	QPSK	23.87	24.15	24.53
3	1	7		24.12	24.45	24.67
3	1	14		23.99	24.20	24.54
3	8	0		22.85	23.12	23.52
3	8	4		22.86	23.17	23.57
3	8	7		22.82	23.23	23.54
3	15	0		22.85	23.10	23.49
3	1	0	16-QAM	22.74	23.55	23.71
3	1	7		22.98	24.09	24.04
3	1	14		22.65	23.62	23.72
3	8	0		21.84	22.17	22.59
3	8	4		21.87	22.21	22.56
3	8	7		21.84	22.20	22.52
3	15	0		21.88	22.16	22.46



LTE Band 5 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	23.88	24.06	24.29
5	1	12		23.99	24.31	24.55
5	1	24		24.08	24.52	24.60
5	12	0		22.91	23.12	23.50
5	12	6		22.90	23.21	23.54
5	12	11		22.95	23.38	23.61
5	25	0		22.93	23.24	23.57
5	1	0	16-QAM	23.10	23.33	23.89
5	1	12		23.20	23.83	24.20
5	1	24		23.08	23.51	24.01
5	12	0		21.79	22.12	22.56
5	12	6		21.83	22.22	22.57
5	12	11		21.82	22.26	22.59
5	25	0		21.86	22.14	22.58
10	1	0	QPSK	23.81	23.94	24.48
10	1	24		24.01	24.45	24.94
10	1	49		23.87	24.14	24.55
10	25	0		22.83	23.08	23.56
10	25	12		22.88	23.20	23.62
10	25	24		22.85	23.23	23.58
10	50	0		22.87	23.20	23.63
10	1	0	16-QAM	23.02	22.86	23.71
10	1	24		23.09	23.20	23.91
10	1	49		23.23	23.23	24.02
10	25	0		21.91	22.11	22.50
10	25	12		21.88	22.21	22.53
10	25	24		21.98	22.36	22.62
10	50	0		21.97	22.25	22.52



LTE Band 7 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	23.30	22.89	22.78
5	1	12		23.39	23.48	23.16
5	1	24		23.00	23.06	22.90
5	12	0		22.17	22.37	21.97
5	12	6		22.27	22.36	22.07
5	12	11		22.21	22.37	22.04
5	25	0		22.18	22.33	22.00
5	1	0	16-QAM	22.76	22.77	22.40
5	1	12		23.08	23.17	22.79
5	1	24		22.63	22.75	22.43
5	12	0		21.54	21.40	21.10
5	12	6		21.57	21.46	21.17
5	12	11		21.48	21.40	21.08
5	25	0		21.48	21.39	21.23
10	1	0	QPSK	23.51	23.20	23.02
10	1	24		23.53	23.41	23.18
10	1	49		23.26	23.33	23.16
10	25	0		22.43	22.37	22.19
10	25	12		22.36	22.34	22.20
10	25	24		22.41	22.38	22.13
10	50	0		22.41	22.36	22.14
10	1	0	16-QAM	22.36	22.63	22.25
10	1	24		22.35	22.85	22.49
10	1	49		22.08	22.76	22.32
10	25	0		21.47	21.48	21.20
10	25	12		21.40	21.43	21.15
10	25	24		21.46	21.45	21.16
10	50	0		21.44	21.46	21.24



LTE Band 7 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
15	1	0	QPSK	23.44	23.06	22.91
15	1	37		23.57	23.58	23.44
15	1	74		23.09	23.22	23.04
15	36	0		22.39	22.38	22.10
15	36	18		22.38	22.46	22.18
15	36	39		22.30	22.46	22.16
15	75	0		22.37	22.38	22.12
15	1	0	16-QAM	22.51	22.51	22.17
15	1	38		22.60	23.00	22.37
15	1	75		22.18	22.61	22.24
15	36	0		21.37	21.43	21.13
15	36	18		21.36	21.46	21.19
15	36	39		21.25	21.42	21.19
15	75	0		21.41	21.48	21.09
20	1	0	QPSK	23.37	23.24	23.09
20	1	49		23.67	23.66	23.55
20	1	99		23.24	23.28	23.12
20	50	0		22.46	22.37	22.23
20	50	24		22.53	22.41	22.24
20	50	49		22.42	22.32	22.17
20	100	0		22.48	22.37	22.21
20	1	0	16-QAM	22.48	22.10	22.15
20	1	49		22.60	22.72	22.55
20	1	99		22.26	22.26	22.28
20	50	0		21.20	21.47	21.03
20	50	24		21.28	21.47	21.14
20	50	49		21.27	21.46	21.11
20	100	0		21.25	21.39	21.00



LTE Band 12 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	24.08	24.11	24.32
1.4	1	2		24.21	24.27	24.49
1.4	1	5		24.08	24.10	24.32
1.4	3	0		24.11	24.04	24.43
1.4	3	1		24.10	24.02	24.41
1.4	3	2		24.04	24.09	24.42
1.4	6	0		23.10	23.13	23.43
1.4	1	0	16-QAM	22.92	23.20	23.51
1.4	1	2		23.04	23.31	23.62
1.4	1	5		22.86	23.20	23.50
1.4	3	0		23.17	23.22	23.57
1.4	3	1		23.18	23.26	23.62
1.4	3	2		23.18	23.21	23.61
1.4	6	0		22.23	22.24	22.56
3	1	0	QPSK	24.10	24.03	24.26
3	1	7		24.30	24.23	24.34
3	1	14		24.15	24.03	24.40
3	8	0		23.07	23.04	23.33
3	8	4		23.09	23.04	23.35
3	8	7		23.03	23.10	23.39
3	15	0		23.01	22.99	23.33
3	1	0	16-QAM	22.93	23.44	23.43
3	1	7		23.23	23.76	23.86
3	1	14		22.92	23.44	23.54
3	8	0		21.98	22.03	22.33
3	8	4		22.02	22.08	22.36
3	8	7		22.00	22.06	22.35
3	15	0		22.08	22.03	22.26



LTE Band 12 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	24.12	23.98	24.08
5	1	12		24.20	24.13	24.27
5	1	24		24.19	24.23	24.47
5	12	0		23.11	23.02	23.21
5	12	6		23.05	23.05	23.22
5	12	11		23.18	23.10	23.31
5	25	0		23.13	23.04	23.23
5	1	0	16-QAM	23.47	23.24	23.42
5	1	12		23.84	23.70	23.78
5	1	24		23.54	23.34	23.60
5	12	0		21.99	21.89	22.25
5	12	6		22.01	22.01	22.33
5	12	11		21.97	21.98	22.32
5	25	0		21.94	22.01	22.26
10	1	0	QPSK	23.99	23.97	24.07
10	1	24		24.30	24.52	24.58
10	1	49		23.97	24.09	24.31
10	25	0		23.04	22.98	23.26
10	25	12		23.04	23.10	23.35
10	25	24		22.97	23.06	23.33
10	50	0		23.02	23.04	23.31
10	1	0	16-QAM	22.91	23.42	23.20
10	1	24		23.03	23.54	23.37
10	1	49		22.98	23.63	23.58
10	25	0		22.05	22.00	22.14
10	25	12		21.98	22.05	22.18
10	25	24		22.12	22.12	22.24
10	50	0		22.06	22.03	22.21



LTE Band 13 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	24.51	24.36	24.32
5	1	12		24.66	24.77	24.63
5	1	24		24.33	24.30	24.31
5	12	0		23.59	23.45	23.32
5	12	6		23.56	23.46	23.42
5	12	11		23.53	23.40	23.31
5	25	0		23.57	23.45	23.33
5	1	0	16-QAM	23.86	23.94	23.65
5	1	12		24.11	24.32	23.98
5	1	24		23.69	23.80	23.65
5	12	0		22.58	22.42	22.35
5	12	6		22.62	22.49	22.38
5	12	11		22.54	22.45	22.29
5	25	0		22.53	22.42	22.37
10	1	0	QPSK	/	24.85	/
10	1	24		/	24.79	/
10	1	49		/	24.66	/
10	25	0		/	23.51	/
10	25	12		/	23.46	/
10	25	24		/	23.37	/
10	50	0		/	23.40	/
10	1	0	16-QAM	/	23.99	/
10	1	24		/	23.93	/
10	1	49		/	23.77	/
10	25	0		/	22.50	/
10	25	12		/	22.45	/
10	25	24		/	22.42	/
10	50	0		/	22.46	/



LTE Band 17 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	24.10	24.10	24.10
5	1	12		24.38	24.29	24.36
5	1	24		24.45	24.43	24.52
5	12	0		23.11	23.19	23.26
5	12	6		23.20	23.22	23.30
5	12	11		23.25	23.28	23.35
5	25	0		23.11	23.22	23.32
5	1	0	16-QAM	23.37	23.57	23.47
5	1	12		23.69	24.04	23.97
5	1	24		23.37	23.74	23.74
5	12	0		22.03	22.19	22.29
5	12	6		22.17	22.23	22.36
5	12	11		22.21	22.19	22.33
5	25	0		22.10	22.17	22.39
10	1	0	QPSK	24.01	24.10	24.14
10	1	24		24.45	24.47	24.74
10	1	49		24.10	24.26	24.46
10	25	0		23.07	23.25	23.37
10	25	12		23.16	23.32	23.46
10	25	24		23.21	23.25	23.41
10	50	0		23.16	23.26	23.40
10	1	0	16-QAM	22.92	23.46	23.23
10	1	24		23.17	23.67	23.50
10	1	49		23.29	23.78	23.66
10	25	0		22.04	22.15	22.19
10	25	12		22.14	22.25	22.27
10	25	24		22.23	22.29	22.34
10	50	0		22.08	22.20	22.32



LTE Band 38 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	22.93	22.93	23.16
5	1	12		23.12	23.23	23.85
5	1	24		22.59	23.12	23.65
5	12	0		22.04	22.09	22.52
5	12	6		22.00	22.12	22.69
5	12	11		21.91	22.17	22.69
5	25	0		21.98	22.18	22.62
5	1	0	16-QAM	22.32	22.27	23.36
5	1	12		22.51	22.60	23.64
5	1	24		22.23	22.35	23.37
5	12	0		21.04	21.11	21.80
5	12	6		21.08	21.16	21.89
5	12	11		20.99	21.11	21.83
5	25	0		21.14	21.07	21.77
10	1	0	QPSK	23.12	22.99	23.70
10	1	24		23.23	23.16	23.93
10	1	49		23.00	23.12	23.85
10	25	0		22.09	22.12	22.81
10	25	12		22.06	22.16	22.83
10	25	24		22.08	22.17	22.85
10	50	0		22.08	22.17	22.83
10	1	0	16-QAM	22.07	22.51	22.83
10	1	24		22.17	22.71	23.09
10	1	49		21.95	22.68	22.98
10	25	0		21.14	21.19	21.82
10	25	12		21.11	21.17	21.86
10	25	24		21.13	21.23	21.86
10	50	0		21.13	21.19	21.88



LTE Band 38 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
15	1	0	QPSK	23.14	23.03	23.44
15	1	37		23.35	23.28	23.94
15	1	74		22.88	23.15	23.73
15	36	0		22.11	22.11	22.70
15	36	18		22.08	22.17	22.80
15	36	39		21.99	22.25	22.84
15	75	0		22.04	22.19	22.77
15	1	0	16-QAM	22.25	22.49	22.59
15	1	38		22.50	22.81	23.08
15	1	75		22.01	22.68	22.87
15	36	0		21.08	21.14	21.71
15	36	18		21.02	21.19	21.82
15	36	39		20.97	21.25	21.86
15	75	0		21.13	21.18	21.71
20	1	0	QPSK	23.07	22.92	23.73
20	1	49		23.27	23.23	24.04
20	1	99		22.96	22.96	23.73
20	50	0		22.03	22.05	22.83
20	50	24		22.07	22.13	22.91
20	50	49		22.01	22.06	22.85
20	100	0		22.06	22.08	22.80
20	1	0	16-QAM	22.17	22.16	22.39
20	1	49		22.40	22.49	23.03
20	1	99		21.88	22.37	22.83
20	50	0		21.14	21.15	21.57
20	50	24		21.10	21.15	21.72
20	50	49		21.02	21.17	21.75
20	100	0		21.02	21.19	21.68



LTE Band 40 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	9.59	9.49	9.45
5	1	12		9.85	9.72	9.70
5	1	24		9.48	9.36	9.35
5	12	0		8.60	8.56	8.53
5	12	6		8.63	8.63	8.53
5	12	11		8.56	8.52	8.45
5	25	0		8.58	8.50	8.46
5	1	0	16-QAM	8.91	8.85	9.11
5	1	12		9.14	9.10	9.35
5	1	24		8.80	8.77	9.01
5	12	0		7.51	7.52	7.46
5	12	6		7.57	7.57	7.46
5	12	11		7.47	7.48	7.41
5	25	0		7.57	7.48	7.41
10	1	0	QPSK	/	9.85	/
10	1	24		/	9.91	/
10	1	49		/	9.64	/
10	25	0		/	8.66	/
10	25	12		/	8.59	/
10	25	24		/	8.56	/
10	50	0		/	8.55	/
10	1	0	16-QAM	/	9.16	/
10	1	24		/	9.20	/
10	1	49		/	8.94	/
10	25	0		/	7.63	/
10	25	12		/	7.58	/
10	25	24		/	7.55	/
10	50	0		/	7.56	/



LTE Band 40 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	9.08	8.97	9.02
5	1	12		9.31	9.26	9.31
5	1	24		9.00	8.90	8.98
5	12	0		8.09	8.04	8.03
5	12	6		8.15	8.14	8.17
5	12	11		8.08	8.08	8.07
5	25	0		8.08	8.03	8.04
5	1	0	16-QAM	8.38	8.36	8.66
5	1	12		8.65	8.61	8.96
5	1	24		8.31	8.32	8.65
5	12	0		6.98	6.98	6.96
5	12	6		7.08	7.12	7.06
5	12	11		6.98	7.03	7.01
5	25	0		7.09	7.02	7.04
10	1	0	QPSK	/	9.34	/
10	1	24		/	9.56	/
10	1	49		/	9.35	/
10	25	0		/	8.13	/
10	25	12		/	8.08	/
10	25	24		/	8.11	/
10	50	0		/	8.10	/
10	1	0	16-QAM	/	8.29	/
10	1	24		/	8.39	/
10	1	49		/	8.22	/
10	25	0		/	7.07	/
10	25	12		/	7.08	/
10	25	24		/	7.08	/
10	50	0		/	7.09	/



LTE Band 41 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	23.71	23.18	23.53
5	1	12		24.00	23.46	23.90
5	1	24		23.62	23.17	23.60
5	12	0		22.75	22.33	22.64
5	12	6		22.76	22.31	22.76
5	12	11		22.67	22.26	22.69
5	25	0		22.77	22.29	22.70
5	1	0	16-QAM	22.90	22.50	23.14
5	1	12		23.18	22.80	23.44
5	1	24		22.83	22.51	23.16
5	12	0		21.72	21.35	21.65
5	12	6		21.75	21.36	21.73
5	12	11		21.65	21.33	21.68
5	25	0		21.79	21.29	21.66
10	1	0	QPSK	23.79	23.39	23.51
10	1	24		23.81	23.47	23.75
10	1	49		23.54	23.38	23.66
10	25	0		22.79	22.37	22.67
10	25	12		22.67	22.32	22.68
10	25	24		22.61	22.33	22.76
10	50	0		22.68	22.34	22.72
10	1	0	16-QAM	22.88	22.32	23.02
10	1	24		22.91	22.41	23.25
10	1	49		22.61	22.30	23.20
10	25	0		21.80	21.41	21.69
10	25	12		21.70	21.38	21.72
10	25	24		21.64	21.38	21.78
10	50	0		21.76	21.38	21.71



LTE Band 41 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
15	1	0	QPSK	23.57	23.27	23.14
15	1	37		23.61	23.49	23.82
15	1	74		23.18	23.28	23.70
15	36	0		22.62	22.33	22.50
15	36	18		22.49	22.34	22.64
15	36	39		22.39	22.28	22.78
15	75	0		22.52	22.31	22.61
15	1	0	16-QAM	23.10	22.45	22.63
15	1	38		23.16	22.69	23.19
15	1	75		22.73	22.48	22.99
15	36	0		21.76	21.47	21.62
15	36	18		21.67	21.46	21.72
15	36	39		21.53	21.44	21.81
15	75	0		21.65	21.36	21.77
20	1	0	QPSK	23.68	23.35	23.43
20	1	49		23.74	23.55	24.04
20	1	99		23.31	23.36	23.84
20	50	0		22.75	22.38	22.68
20	50	24		22.64	22.40	22.79
20	50	49		22.52	22.36	22.91
20	100	0		22.66	22.35	22.77
20	1	0	16-QAM	22.76	22.46	22.36
20	1	49		22.80	22.66	22.99
20	1	99		22.39	22.47	22.89
20	50	0		21.70	21.41	21.54
20	50	24		21.59	21.39	21.71
20	50	49		21.45	21.33	21.79
20	100	0		21.57	21.37	21.63



LTE Band 66 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	24.44	24.62	24.52
1.4	1	2		24.52	24.79	24.68
1.4	1	5		24.38	24.61	24.52
1.4	3	0		24.25	24.72	24.46
1.4	3	1		24.29	24.75	24.44
1.4	3	2		24.31	24.71	24.45
1.4	6	0		23.37	23.73	23.57
1.4	1	0	16-QAM	23.41	23.86	23.29
1.4	1	2		23.55	23.96	23.38
1.4	1	5		23.46	23.86	23.24
1.4	3	0		23.48	24.00	23.59
1.4	3	1		23.53	23.95	23.57
1.4	3	2		23.51	23.97	23.56
1.4	6	0		22.47	22.87	22.66
3	1	0	QPSK	24.16	24.55	24.66
3	1	7		24.80	24.83	24.94
3	1	14		24.71	24.62	24.31
3	8	0		23.40	23.87	23.69
3	8	4		23.59	23.80	23.75
3	8	7		23.76	23.74	23.65
3	15	0		23.53	23.82	23.63
3	1	0	16-QAM	23.44	23.66	23.91
3	1	7		23.78	23.84	24.16
3	1	14		23.53	23.56	23.79
3	8	0		22.31	22.73	22.57
3	8	4		22.38	22.79	22.54
3	8	7		22.39	22.74	22.54
3	15	0		22.31	22.82	22.51



LTE Band 66 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	24.18	24.62	24.46
5	1	12		24.70	24.91	24.90
5	1	24		24.34	24.60	24.32
5	12	0		23.35	23.74	23.57
5	12	6		23.41	23.79	23.58
5	12	11		23.45	23.71	23.48
5	25	0		23.40	23.77	23.55
5	1	0	16-QAM	23.69	23.96	23.76
5	1	12		24.18	24.25	24.01
5	1	24		23.87	23.94	23.61
5	12	0		22.28	22.70	22.57
5	12	6		22.39	22.70	22.59
5	12	11		22.41	22.66	22.48
5	25	0		22.34	22.79	22.49
10	1	0	QPSK	24.32	24.68	24.73
10	1	24		24.64	24.75	24.71
10	1	49		24.68	24.69	24.49
10	25	0		23.34	23.79	23.69
10	25	12		23.41	23.78	23.63
10	25	24		23.59	23.78	23.59
10	50	0		23.47	23.79	23.62
10	1	0	16-QAM	23.10	24.14	23.81
10	1	24		23.36	24.18	23.81
10	1	49		23.39	24.11	23.60
10	25	0		22.31	22.82	22.63
10	25	12		22.42	22.78	22.59
10	25	24		22.55	22.83	22.59
10	50	0		22.44	22.82	22.64



LTE Band 66 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
15	1	0	QPSK	24.19	24.67	24.90
15	1	37		24.69	24.99	25.09
15	1	74		24.67	24.67	24.53
15	36	0		23.53	23.91	23.93
15	36	18		23.66	23.88	23.91
15	36	39		23.85	23.86	23.75
15	75	0		23.68	23.89	23.83
15	1	0	16-QAM	23.64	23.86	23.88
15	1	38		24.11	24.14	24.08
15	1	75		24.04	23.84	23.55
15	36	0		22.48	22.92	22.75
15	36	18		22.63	22.89	22.76
15	36	39		22.79	22.88	22.63
15	75	0		22.63	22.81	22.77
20	1	0	QPSK	24.30	24.79	24.53
20	1	49		24.56	25.09	24.84
20	1	99		24.40	24.75	24.45
20	50	0		23.37	23.77	23.60
20	50	24		23.33	23.78	23.59
20	50	49		23.41	23.74	23.57
20	100	0		23.35	23.74	23.50
20	1	0	16-QAM	23.34	23.80	23.90
20	1	49		23.87	24.05	24.10
20	1	99		23.85	23.82	23.57
20	50	0		22.38	22.93	22.67
20	50	24		22.60	22.84	22.79
20	50	49		22.71	22.78	22.68
20	100	0		22.56	22.79	22.63

11. EUT and Test Setup Photo

11.1 EUT Photos

Front side

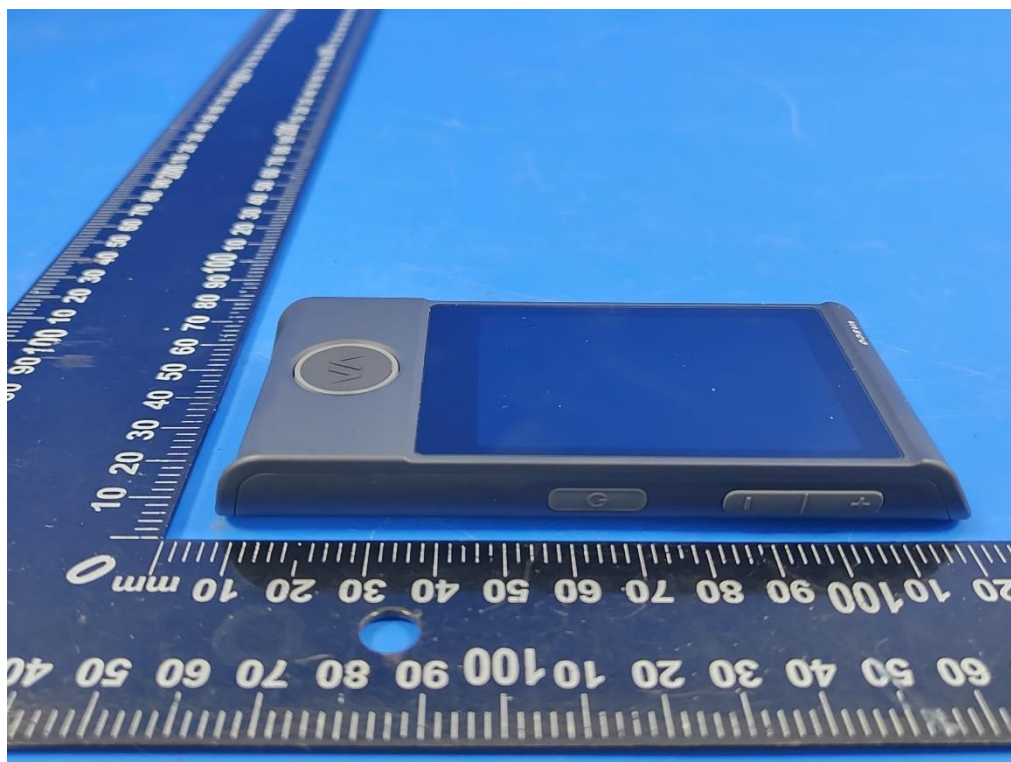


Back side

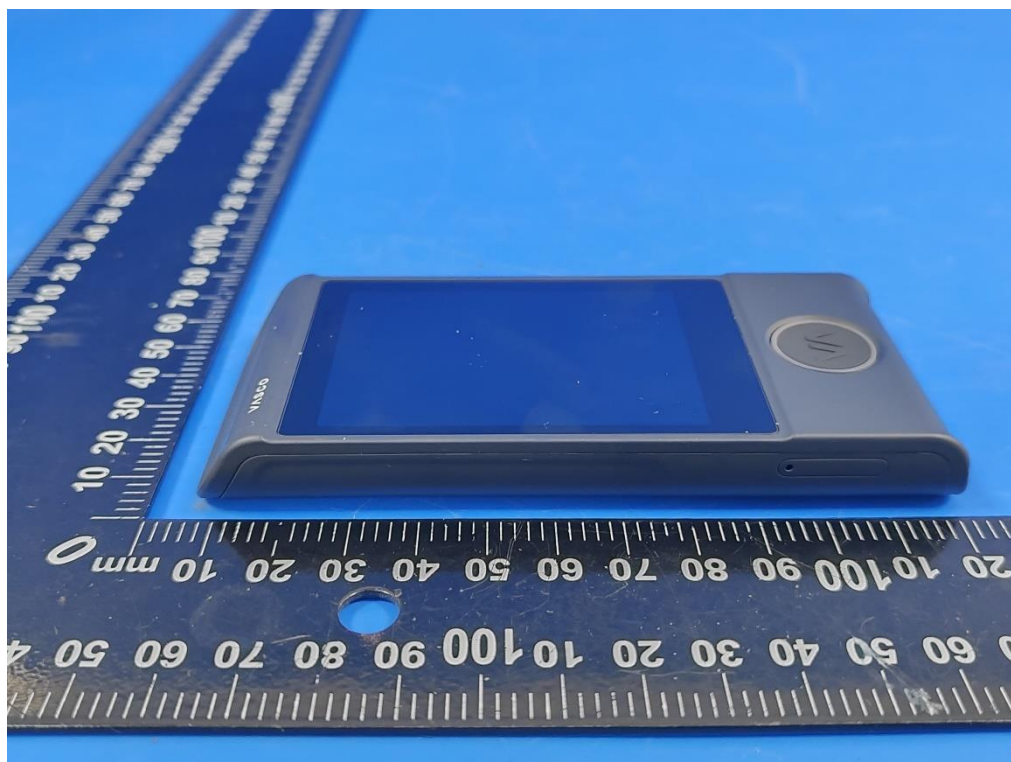




Right Edge



Left Edge

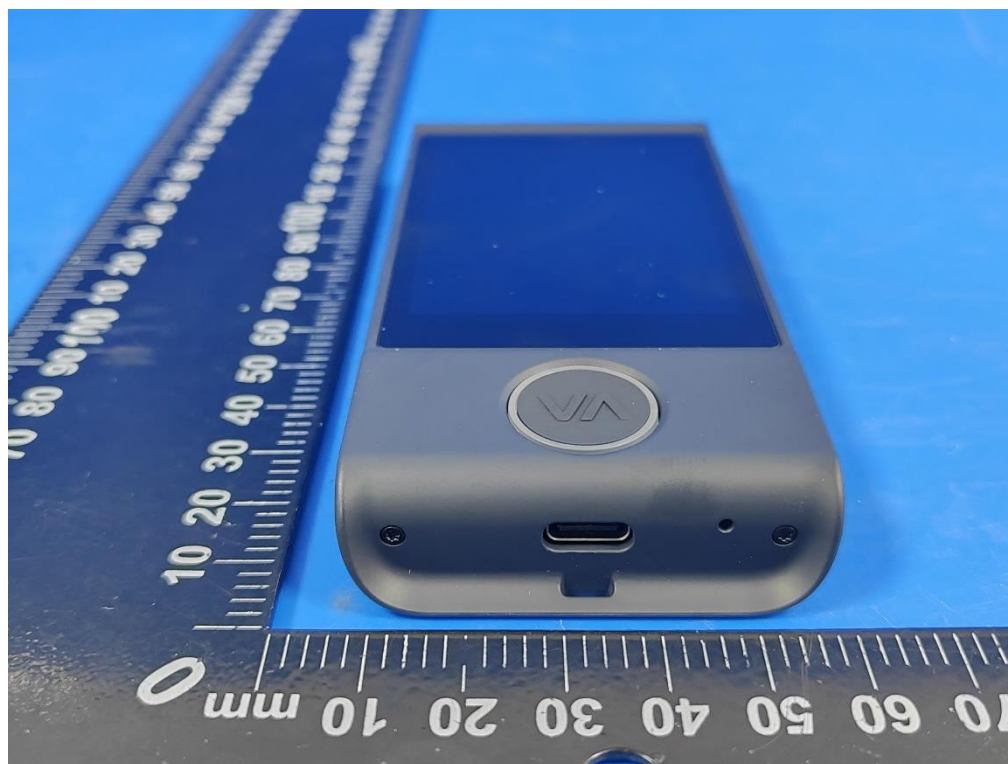




Top Edge



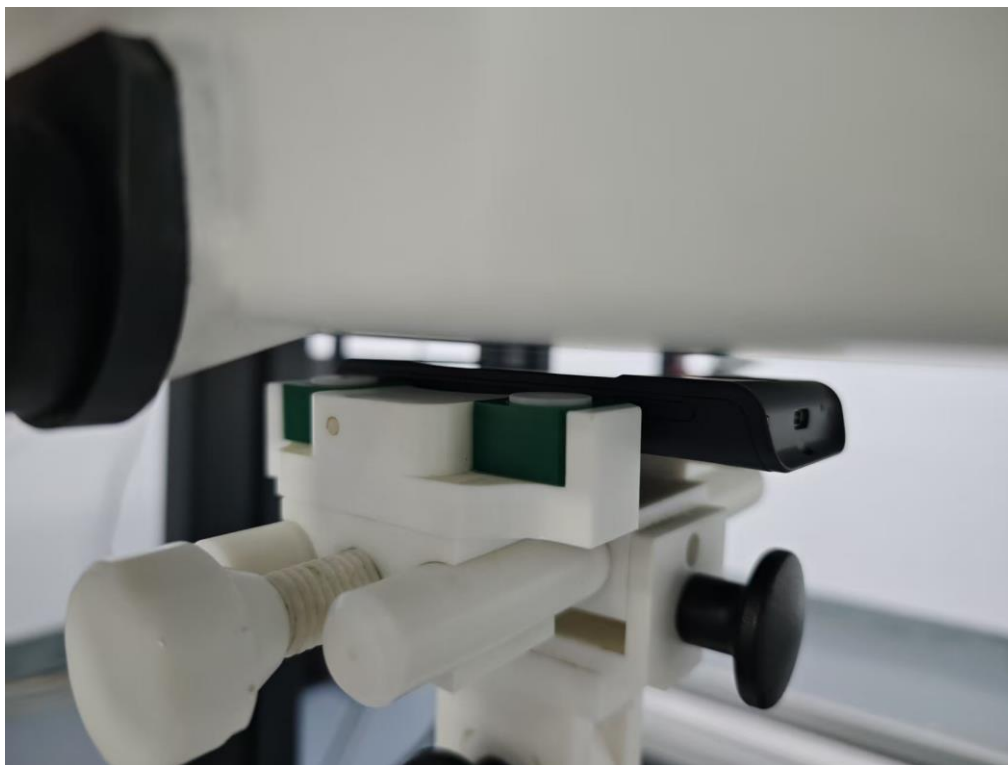
Bottom Edge



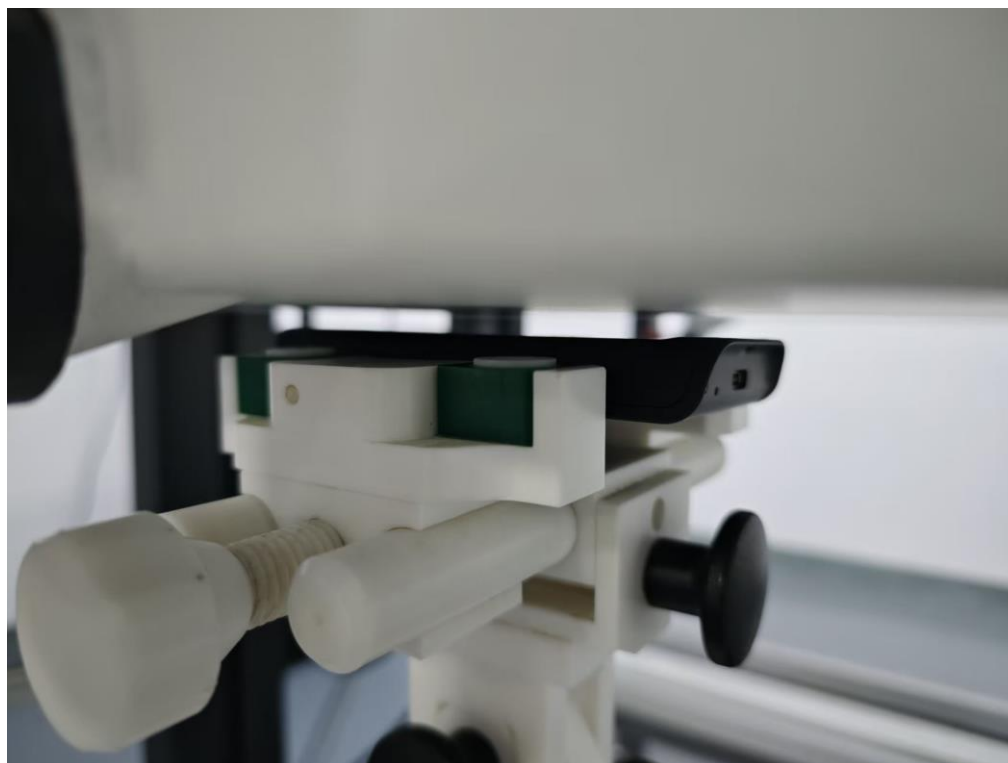


11.2 Setup Photos

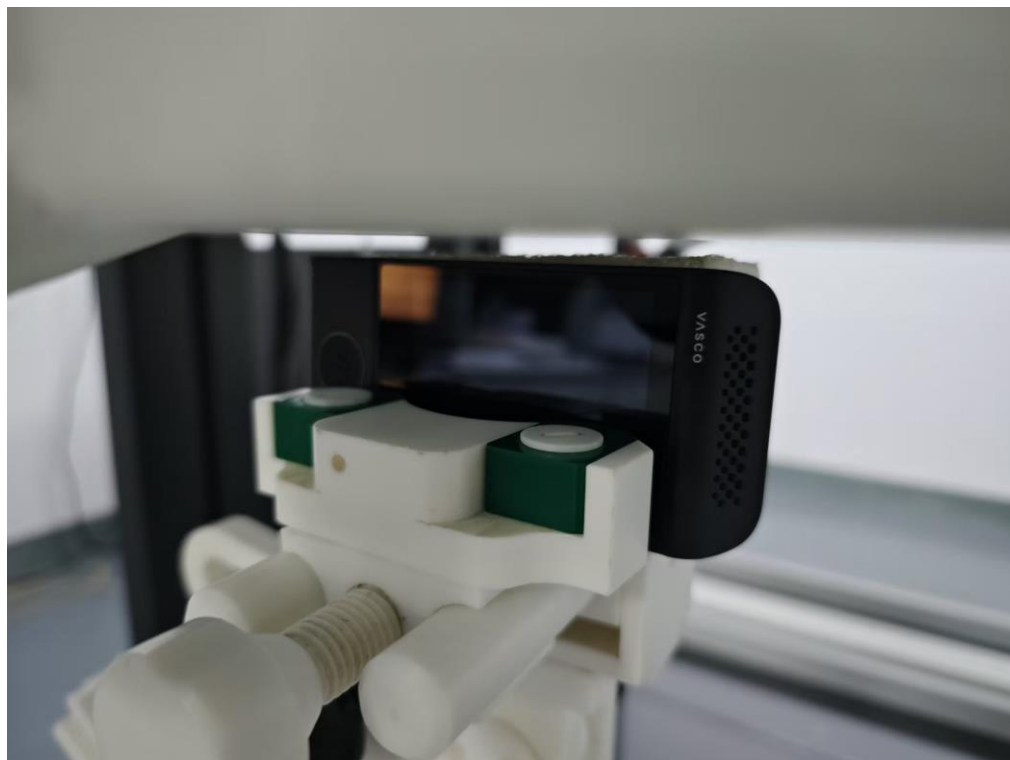
Body Front side (separation distance is 5mm)



Body Back side (separation distance is 5mm)



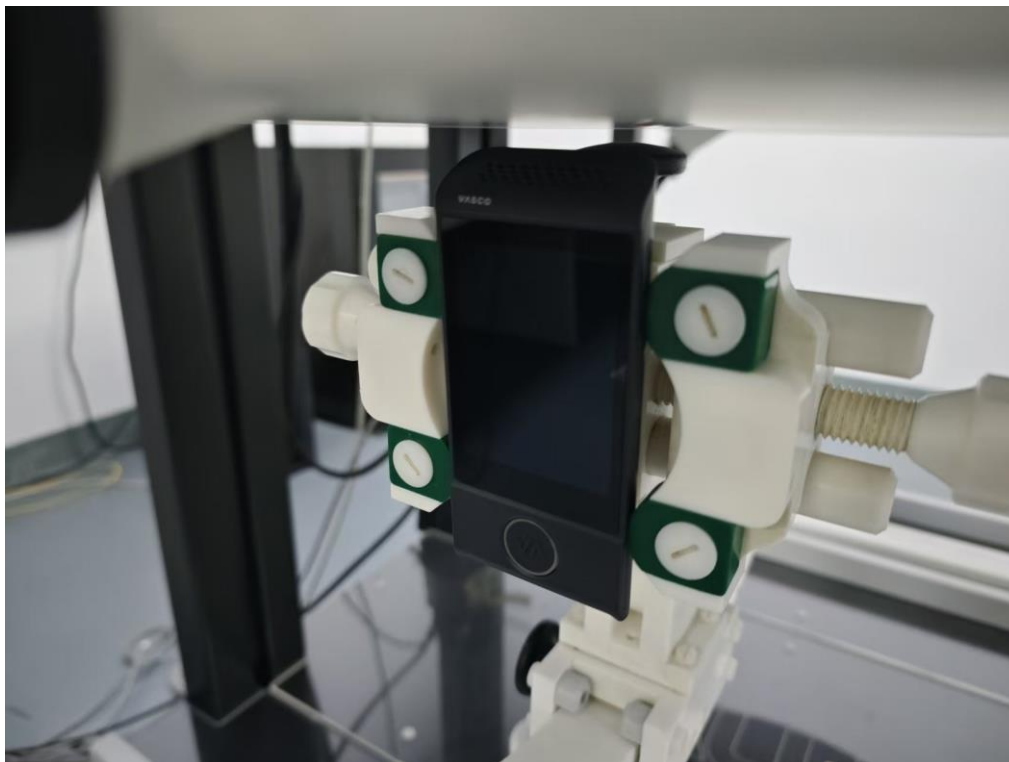
Body Left side (separation distance is 5mm)



Body Right side (separation distance is 5mm)



Body Top side (separation distance is 5mm)



Body Bottom side (separation distance is 5mm)

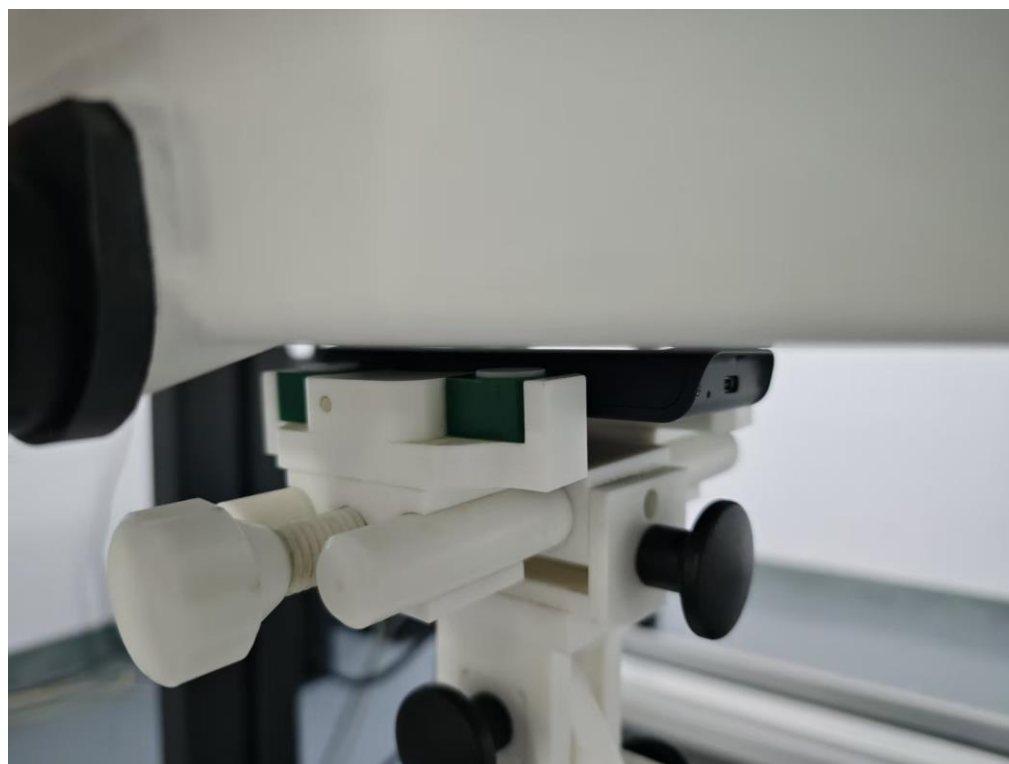




Limbs Front side (separation distance is 0mm)

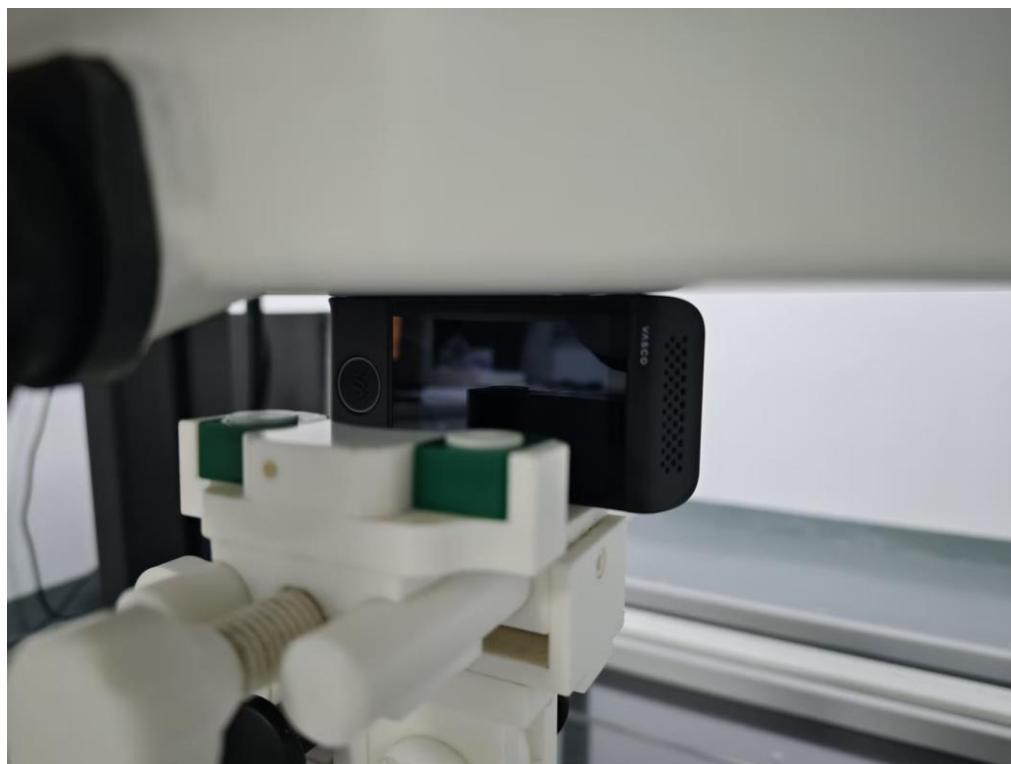


Limbs Back side (separation distance is 0mm)

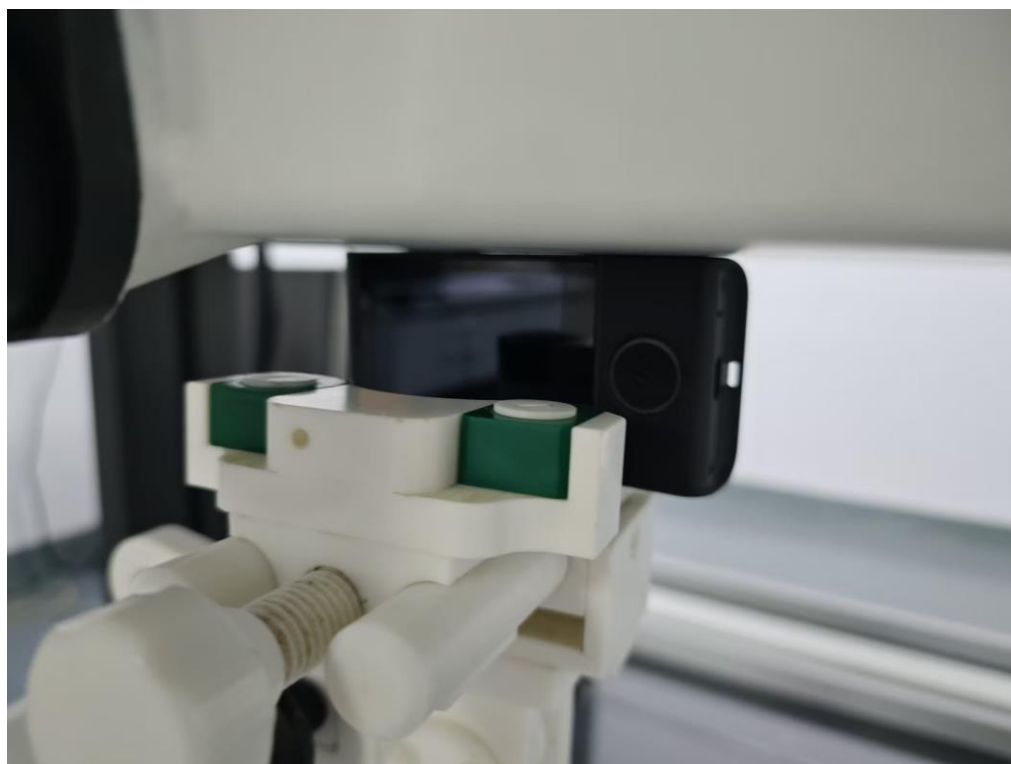




Limbs Left side (separation distance is 0mm)



Limbs Right side (separation distance is 0mm)



Limbs Top side (separation distance is 0mm)

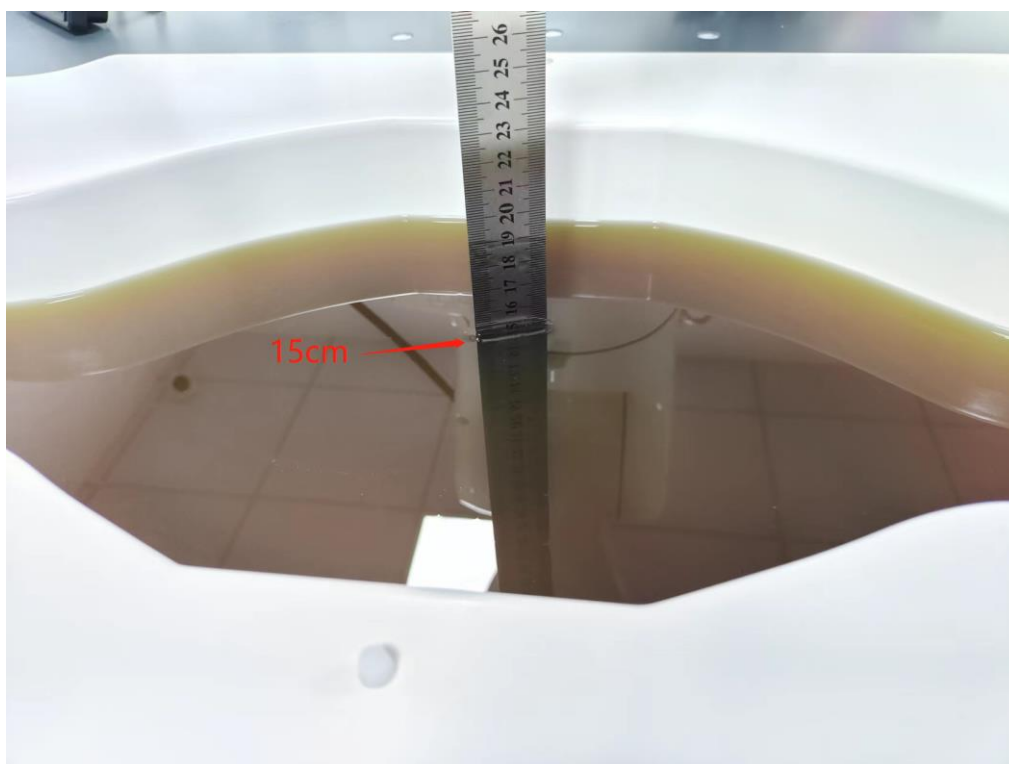


Limbs Bottom side (separation distance is 0mm)





Liquid depth (15 cm)





12. SAR Result Summary

12.1 Body-worn and Hotspot SAR

Band	Model	Test Position	Freq.	SAR (1g) (W/kg)	Power Drift(%)	Max. Turn-up Power (dBm)	Meas. Output Power (dBm)	Scaling Factor	Scaled SAR (W/Kg)	Meas. No.
GSM850	GSM	Front Side	824.2	0.227	0.51	34.00	33.81	1.045	0.237	/
		Back Side	824.2	0.608	-1.28	34.00	33.81	1.045	0.635	1
		Left Side	824.2	0.204	-2.58	34.00	33.81	1.045	0.213	/
		Right Side	824.2	0.366	0.04	34.00	33.81	1.045	0.382	/
		Top Side	824.2	0.139	2.01	34.00	33.81	1.045	0.145	/
		Bottom Side	824.2	0.18	1.54	34.00	33.81	1.045	0.188	/
PCS 1900	GSM	Front Side	1909.8	0.072	1.49	31.30	31.15	1.035	0.075	/
		Back Side	1909.8	0.184	-2.47	31.30	31.15	1.035	0.190	2
		Left Side	1909.8	0.061	-0.16	31.30	31.15	1.035	0.063	/
		Right Side	1909.8	0.113	-3.77	31.30	31.15	1.035	0.117	/
		Top Side	1909.8	0.043	-2.40	31.30	31.15	1.035	0.045	/
		Bottom Side	1909.8	0.056	-2.95	31.30	31.15	1.035	0.058	/
WCDMA Band II	RMC	Front Side	1852.4	0.259	2.84	24.00	23.68	1.076	0.279	/
		Back Side	1852.4	0.694	-3.95	24.00	23.68	1.076	0.747	3
		Left Side	1852.4	0.231	-3.89	24.00	23.68	1.076	0.249	/
		Right Side	1852.4	0.416	-2.79	24.00	23.68	1.076	0.448	/
		Bottom Side	1852.4	0.201	3.26	24.00	23.68	1.076	0.216	/
WCDMA Band V	RMC	Front Side	846.6	0.120	-1.81	24.00	23.72	1.067	0.128	/
		Back Side	846.6	0.371	-2.35	24.00	23.72	1.067	0.396	4
		Left Side	846.6	0.117	2.22	24.00	23.72	1.067	0.125	/
		Right Side	846.6	0.191	3.02	24.00	23.72	1.067	0.204	/
		Bottom Side	846.6	0.108	-2.40	24.00	23.72	1.067	0.115	/
2.4GHz WLAN	802.11b	Front Side	2412	0.150	-0.20	15.50	15.32	1.042	0.156	/
		Back Side	2412	0.399	-2.45	15.50	15.32	1.042	0.416	/
		Left Side	2412	0.433	-2.45	15.50	15.32	1.042	0.451	5
		Top Side	2412	0.135	0.43	15.50	15.32	1.042	0.141	/
5.2GHz WLAN	802.11a	Front Side	5180	0.128	1.50	12.50	12.31	1.045	0.134	/
		Back Side	5180	0.345	3.08	12.50	12.31	1.045	0.360	/
		Left Side	5180	0.373	0.76	12.50	12.31	1.045	0.390	6
		Top Side	5180	0.113	0.52	12.50	12.31	1.045	0.118	/
5.3GHz WLAN	802.11a	Front Side	5260	0.109	3.89	12.50	12.26	1.057	0.115	/
		Back Side	5260	0.291	3.97	12.50	12.26	1.057	0.308	/
		Left Side	5260	0.313	-1.28	12.50	12.26	1.057	0.331	7
		Top Side	5260	0.095	-3.53	12.50	12.26	1.057	0.100	/
5.6GHz WLAN	802.11a	Front Side	5700	0.146	2.26	15.80	15.53	1.064	0.155	/
		Back Side	5700	0.395	2.29	15.80	15.53	1.064	0.420	/
		Left Side	5700	0.425	-2.57	15.80	15.53	1.064	0.452	8
		Top Side	5700	0.133	0.54	15.80	15.53	1.064	0.142	/
5.8GHz WLAN	802.11a	Front Side	5825	0.118	-2.54	15.80	15.52	1.067	0.126	/
		Back Side	5825	0.311	-1.05	15.80	15.52	1.067	0.332	/
		Left Side	5825	0.338	1.65	15.80	15.52	1.067	0.361	9
		Top Side	5825	0.103	0.58	15.80	15.52	1.067	0.110	/



Band	BW (MHz)	Mod.	RB Size	RB offset	Test Position	Freq.	Result 1g (W/Kg)	Power Drift (%)	Max. Turn-up Power (dBm)	Meas. Output Power (dBm)	Scaling Factor	Scaled SAR (W/Kg)	Meas. No.
LTE Band 2	20M	QPSK	1	49	Front side	1860	0.298	2.21	24.50	24.23	1.064	0.317	/
			50	0	Front side	1900	0.268	1.15	23.20	23.02	1.042	0.279	/
			1	49	Back Side	1860	0.793	1.45	24.50	24.23	1.064	0.844	10
			1	49	Back Side	1880	0.743	-3.01	24.20	24.07	1.030	0.766	/
			1	49	Back Side	1900	0.766	0.88	24.30	24.12	1.042	0.798	/
			50	0	Back Side	1900	0.714	-2.14	23.20	23.02	1.042	0.744	/
			1	49	Left Side	1860	0.262	3.68	24.50	24.23	1.064	0.279	/
			50	0	Left Side	1900	0.240	-1.80	23.20	23.02	1.042	0.250	/
			1	49	Right Side	1860	0.476	-0.32	24.50	24.23	1.064	0.507	/
			50	0	Right Side	1900	0.431	3.56	23.20	23.02	1.042	0.449	/
			1	49	Bottom Side	1860	0.232	0.31	24.50	24.23	1.064	0.247	/
			50	0	Bottom Side	1900	0.210	0.84	23.20	23.02	1.042	0.219	/
LTE Band 4	20M	QPSK	1	49	Front side	1732.5	0.211	-2.13	25.00	24.87	1.030	0.217	/
			50	24	Front side	1732.5	0.190	0.48	23.80	23.60	1.047	0.199	/
			1	49	Back Side	1732.5	0.559	-0.22	25.00	24.87	1.030	0.576	11
			50	24	Back Side	1732.5	0.507	2.49	23.80	23.60	1.047	0.531	/
			1	49	Left Side	1732.5	0.188	0.96	25.00	24.87	1.030	0.194	/
			50	24	Left Side	1732.5	0.173	-2.41	23.80	23.60	1.047	0.181	/
			1	49	Right Side	1732.5	0.337	0.12	25.00	24.87	1.030	0.347	/
			50	24	Right Side	1732.5	0.303	1.57	23.80	23.60	1.047	0.317	/
			1	49	Bottom Side	1732.5	0.166	2.37	25.00	24.87	1.030	0.171	/
			50	24	Bottom Side	1732.5	0.149	-3.17	23.80	23.60	1.047	0.156	/
LTE Band 5	10M	QPSK	1	24	Front side	844	0.151	-2.34	25.10	24.94	1.038	0.157	/
			25	12	Front side	844	0.136	0.61	24.00	23.62	1.091	0.148	/
			1	24	Back Side	844	0.406	2.31	25.10	24.94	1.038	0.421	12
			25	12	Back Side	844	0.370	-1.75	24.00	23.62	1.091	0.404	/
			1	24	Left Side	844	0.137	3.41	25.10	24.94	1.038	0.142	/
			25	12	Left Side	844	0.125	2.74	24.00	23.62	1.091	0.136	/
			1	24	Right Side	844	0.248	-3.27	25.10	24.94	1.038	0.257	/
			25	12	Right Side	844	0.227	-2.97	24.00	23.62	1.091	0.248	/
			1	24	Top Side	844	0.096	3.67	25.10	24.94	1.038	0.100	/



			25	12	Top Side	844	0.088	-0.74	24.00	23.62	1.091	0.096	/
			1	24	Bottom Side	844	0.118	-1.47	25.10	24.94	1.038	0.122	/
			25	12	Bottom Side	844	0.111	-2.93	24.00	23.62	1.091	0.121	/
LTE Band 7	20M	QPSK	1	49	Front side	2510	0.327	0.33	24.00	23.67	1.079	0.353	/
			50	24	Front side	2510	0.295	-0.87	22.70	22.53	1.040	0.307	/
			1	49	Back Side	2510	0.878	-2.16	24.00	23.67	1.079	0.947	13
			1	49	Back Side	2535	0.835	1.13	24.00	23.66	1.081	0.903	/
			1	49	Back Side	2560	0.769	-2.56	24.00	23.55	1.109	0.853	/
			50	24	Back Side	2510	0.794	1.52	22.70	22.53	1.040	0.826	/
			50	24	Back Side	2535	0.760	0.40	22.50	22.41	1.021	0.776	/
			50	24	Back Side	2560	0.712	-0.78	22.50	22.24	1.062	0.756	/
			100	0	Back Side	2510	0.732	2.55	22.60	22.48	1.028	0.753	/
			1	49	Left Side	2510	0.294	-1.86	24.00	23.67	1.079	0.317	/
			50	24	Left Side	2510	0.265	-0.90	22.70	22.53	1.040	0.276	/
			1	49	Right Side	2510	0.530	-2.21	24.00	23.67	1.079	0.572	/
			50	24	Right Side	2510	0.480	-0.54	22.70	22.53	1.040	0.499	/
			1	49	Top Side	2510	0.201	2.26	24.00	23.67	1.079	0.217	/
			50	24	Top Side	2510	0.183	-0.67	22.70	22.53	1.040	0.190	/
			1	49	Bottom Side	2510	0.255	1.42	24.00	23.67	1.079	0.275	/
			50	24	Bottom Side	2510	0.230	3.34	22.70	22.53	1.040	0.239	/
LTE Band 12	10M	QPSK	1	24	Front side	711	0.274	3.85	24.80	24.58	1.052	0.288	/
			25	12	Front side	711	0.246	-2.41	23.50	23.35	1.035	0.255	/
			1	24	Back Side	711	0.731	-1.13	24.80	24.58	1.052	0.769	14
			25	12	Back Side	711	0.662	-2.21	23.50	23.35	1.035	0.685	/
			1	24	Left Side	711	0.241	-0.32	24.80	24.58	1.052	0.254	/
			25	12	Left Side	711	0.220	1.37	23.50	23.35	1.035	0.228	/
			1	24	Right Side	711	0.441	-3.23	24.80	24.58	1.052	0.464	/
			25	12	Right Side	711	0.401	-1.15	23.50	23.35	1.035	0.415	/
			1	24	Top Side	711	0.170	0.58	24.80	24.58	1.052	0.179	/
			25	12	Top Side	711	0.155	1.36	23.50	23.35	1.035	0.160	/
			1	24	Bottom Side	711	0.212	2.18	24.80	24.58	1.052	0.223	/
			25	12	Bottom Side	711	0.193	-3.18	23.50	23.35	1.035	0.200	/
LTE Band 13	10M	QPSK	1	0	Front side	782	0.037	-0.36	25.00	24.85	1.035	0.038	/



			25	0	Front side	782	0.036	-3.95	23.70	23.51	1.045	0.038	/
			1	0	Back Side	782	0.096	2.16	25.00	24.85	1.035	0.099	15
			25	0	Back Side	782	0.088	3.60	23.70	23.51	1.045	0.092	/
			1	0	Left Side	782	0.032	-1.26	25.00	24.85	1.035	0.033	/
			25	0	Left Side	782	0.033	-3.56	23.70	23.51	1.045	0.034	/
			1	0	Right Side	782	0.061	3.55	25.00	24.85	1.035	0.063	/
			25	0	Right Side	782	0.059	-0.29	23.70	23.51	1.045	0.062	/
			1	0	Top Side	782	0.025	-1.87	25.00	24.85	1.035	0.026	/
			25	0	Top Side	782	0.027	1.40	23.70	23.51	1.045	0.028	/
			1	0	Bottom Side	782	0.029	0.19	25.00	24.85	1.035	0.030	/
			25	0	Bottom Side	782	0.027	-3.76	23.70	23.51	1.045	0.028	/
LTE Band 17	10M	QPSK	1	24	Front side	711	0.305	-2.26	25.00	24.74	1.062	0.324	/
			25	12	Front side	711	0.278	1.14	23.60	23.46	1.033	0.287	/
			1	24	Back Side	709	0.743	3.13	24.60	24.45	1.035	0.769	/
			1	24	Back Side	710	0.789	-2.58	24.60	24.47	1.030	0.813	/
			1	24	Back Side	711	0.821	1.44	25.00	24.74	1.062	0.872	16
			25	12	Back Side	711	0.742	-2.85	23.60	23.46	1.033	0.766	/
			1	24	Left Side	711	0.271	-0.70	25.00	24.74	1.062	0.288	/
			25	12	Left Side	711	0.248	-1.12	23.60	23.46	1.033	0.256	/
			1	24	Right Side	711	0.494	-2.66	25.00	24.74	1.062	0.524	/
			25	12	Right Side	711	0.449	2.36	23.60	23.46	1.033	0.464	/
			1	24	Top Side	711	0.193	0.99	25.00	24.74	1.062	0.205	/
			25	12	Top Side	711	0.177	-0.48	23.60	23.46	1.033	0.183	/
			1	24	Bottom Side	711	0.242	-1.35	25.00	24.74	1.062	0.257	/
			25	12	Bottom Side	711	0.220	1.00	23.60	23.46	1.033	0.227	/
LTE Band 38	20M	QPSK	1	49	Front side	2610	0.183	-2.44	24.30	24.04	1.062	0.194	/
			50	24	Front side	2610	0.165	-1.68	23.10	22.91	1.045	0.172	/
			1	49	Back Side	2610	0.485	-2.39	24.30	24.04	1.062	0.515	17
			50	24	Back Side	2610	0.441	-0.86	23.10	22.91	1.045	0.461	/
			1	49	Left Side	2610	0.164	0.51	24.30	24.04	1.062	0.174	/
			50	24	Left Side	2610	0.152	3.53	23.10	22.91	1.045	0.159	/
			1	49	Right Side	2610	0.291	-1.81	24.30	24.04	1.062	0.309	/
			50	24	Right Side	2610	0.263	-0.09	23.10	22.91	1.045	0.275	/



			1	49	Top Side	2610	0.111	-2.83	24.30	24.04	1.062	0.118	/
			50	24	Top Side	2610	0.104	3.25	23.10	22.91	1.045	0.109	/
			1	49	Bottom Side	2610	0.145	2.41	24.30	24.04	1.062	0.154	/
			50	24	Bottom Side	2610	0.131	2.43	23.10	22.91	1.045	0.137	/
LTE Band 40	10M	QPSK	1	24	Front side	2310	0.148	2.94	10.10	9.91	1.045	0.155	/
			50	0	Front side	2310	0.136	-2.52	9.00	8.66	1.081	0.147	/
			1	24	Back Side	2310	0.390	3.80	10.10	9.91	1.045	0.407	18
			50	0	Back Side	2310	0.355	-0.64	9.00	8.66	1.081	0.384	/
			1	24	Left Side	2310	0.129	-2.06	10.10	9.91	1.045	0.135	/
			50	0	Left Side	2310	0.119	-1.39	9.00	8.66	1.081	0.129	/
			1	24	Right Side	2310	0.237	3.98	10.10	9.91	1.045	0.248	/
			50	0	Right Side	2310	0.215	3.51	9.00	8.66	1.081	0.233	/
			1	24	Bottom Side	2310	0.115	3.26	10.10	9.91	1.045	0.120	/
			50	0	Bottom Side	2310	0.103	-3.19	9.00	8.66	1.081	0.111	/
LTE Band 41	20M	QPSK	1	49	Front side	2680	0.184	-2.52	24.30	24.04	1.062	0.195	/
			50	49	Front side	2680	0.165	-0.23	23.10	22.91	1.045	0.172	/
			1	49	Back Side	2680	0.498	-0.64	24.30	24.04	1.062	0.529	19
			50	49	Back Side	2680	0.451	-1.45	23.10	22.91	1.045	0.471	/
			1	49	Left Side	2680	0.164	3.86	24.30	24.04	1.062	0.174	/
			50	49	Left Side	2680	0.150	-3.77	23.10	22.91	1.045	0.157	/
			1	49	Right Side	2680	0.303	-3.88	24.30	24.04	1.062	0.322	/
			50	49	Right Side	2680	0.273	0.97	23.10	22.91	1.045	0.285	/
			1	49	Top Side	2680	0.113	3.36	24.30	24.04	1.062	0.120	/
			50	49	Top Side	2680	0.105	-1.86	23.10	22.91	1.045	0.110	/
			1	49	Bottom Side	2680	0.144	-0.03	24.30	24.04	1.062	0.153	/
			50	49	Bottom Side	2680	0.132	-2.65	23.10	22.91	1.045	0.138	/
LTE Band 66	20M	QPSK	1	49	Front side	1745	0.355	0.78	25.30	25.09	1.050	0.373	/
			50	24	Front side	1745	0.323	-3.55	24.00	23.78	1.052	0.340	/
			1	49	Back Side	1720	0.826	-2.88	24.70	24.56	1.033	0.853	/
			1	49	Back Side	1745	0.957	-1.55	25.30	25.09	1.050	1.004	20
			1	49	Back Side	1770	0.891	0.32	25.00	24.84	1.038	0.924	/
			50	24	Back Side	1720	0.788	-2.98	23.50	23.33	1.040	0.819	/
			50	24	Back Side	1745	0.862	-3.09	24.00	23.78	1.052	0.907	/



			50	24	Back Side	1770	0.812	0.16	23.80	23.59	1.050	0.852	/
			100	0	Back Side	1745	0.743	-2.10	24.00	23.74	1.062	0.789	/
			1	49	Left Side	1745	0.319	-3.21	25.30	25.09	1.050	0.335	/
			50	24	Left Side	1745	0.290	0.01	24.00	23.78	1.052	0.305	/
			1	49	Right Side	1745	0.576	-2.62	25.30	25.09	1.050	0.605	/
			50	24	Right Side	1745	0.523	2.73	24.00	23.78	1.052	0.550	/
			1	49	Top Side	1745	0.223	-1.05	25.30	25.09	1.050	0.234	/
			50	24	Top Side	1745	0.201	0.24	24.00	23.78	1.052	0.211	/
			1	49	Bottom Side	1745	0.278	0.05	25.30	25.09	1.050	0.292	/
			50	24	Bottom Side	1745	0.252	-3.47	24.00	23.78	1.052	0.265	/

Note:

1. The test separation of all above table is 5mm.
2. Per KDB 447498 D01, the reported SAR is the measured SAR value adjusted for maximum tune-up tolerance.
 - a. Tune-up scaling Factor = tune-up limit power (mW) / EUT RF power (mW), where tune-up limit is the maximum rated power among all production units.
 - b. Scaled SAR(W/kg) = Measured SAR(W/kg) *Tune-up Scaling Factor
3. When the user enables the personal Wireless router functions for the handsets, actual operations include simultaneous transmission of both the Wi-Fi transmitting frequency and thus cannot be evaluated for SAR under actual use conditions. The "Portable Hotspot" feature on the handset was NOT activated, to ensure the SAR measurements were evaluated for a single transmission frequency RF signal.



12.2 Limbs SAR

Band	Model	Test Position	Freq.	SAR (10g) (W/kg)	Power Drift(%)	Max. Turn-up Power (dBm)	Meas. Output Power (dBm)	Scaling Factor	Scaled SAR (W/Kg)	Meas. No.
GSM850	GSM	Front Side	824.2	1.112	2.78	34.00	33.81	1.045	1.162	/
		Back Side	824.2	2.994	-2.96	34.00	33.81	1.045	3.128	21
		Back Side	836.6	2.650	-1.98	33.50	33.35	1.035	2.743	/
		Back Side	848.8	2.718	0.69	33.50	33.38	1.028	2.794	/
		Left Side	824.2	0.990	0.66	34.00	33.81	1.045	1.034	/
		Right Side	824.2	1.798	1.29	34.00	33.81	1.045	1.878	/
		Top Side	824.2	0.690	2.88	34.00	33.81	1.045	0.721	/
PCS 1900	GSM	Bottom Side	824.2	0.869	-2.41	34.00	33.81	1.045	0.908	/
		Front Side	1909.8	0.095	-0.61	31.30	31.15	1.035	0.098	/
		Back Side	1909.8	0.250	3.41	31.30	31.15	1.035	0.259	22
		Left Side	1909.8	0.086	-3.49	31.30	31.15	1.035	0.089	/
		Right Side	1909.8	0.154	3.77	31.30	31.15	1.035	0.159	/
		Top Side	1909.8	0.059	0.84	31.30	31.15	1.035	0.061	/
WCDMA Band II	RMC	Bottom Side	1909.8	0.072	0.28	31.30	31.15	1.035	0.075	/
		Front Side	1852.4	0.329	0.81	24.00	23.68	1.076	0.354	/
		Back Side	1852.4	0.886	-3.11	24.00	23.68	1.076	0.954	23
		Left Side	1852.4	0.296	-3.36	24.00	23.68	1.076	0.319	/
		Right Side	1852.4	0.535	-2.74	24.00	23.68	1.076	0.576	/
WCDMA Band V	RMC	Bottom Side	1852.4	0.260	-3.15	24.00	23.68	1.076	0.280	/
		Front Side	846.6	0.445	3.27	24.00	23.72	1.067	0.475	/
		Back Side	846.6	1.196	-0.47	24.00	23.72	1.067	1.276	24
		Left Side	846.6	0.395	0.07	24.00	23.72	1.067	0.421	/
		Right Side	846.6	0.718	-1.53	24.00	23.72	1.067	0.766	/
2.4GHz WLAN	802.11b	Bottom Side	846.6	0.347	-2.91	24.00	23.72	1.067	0.370	/
		Front Side	2412	0.228	2.34	15.50	15.32	1.042	0.238	/
		Back Side	2412	0.266	1.67	15.50	15.32	1.042	0.277	25
		Left Side	2412	0.239	-2.79	15.50	15.32	1.042	0.249	/
5.2GHz WLAN	802.11a	Top Side	2412	0.099	0.72	15.50	15.32	1.042	0.103	/
		Front Side	5180	0.084	-2.16	12.50	12.31	1.045	0.088	/
		Back Side	5180	0.220	-0.79	12.50	12.31	1.045	0.230	26
		Left Side	5180	0.197	-1.19	12.50	12.31	1.045	0.206	/
5.3GHz WLAN	802.11a	Top Side	5180	0.073	-2.42	12.50	12.31	1.045	0.076	/
		Front Side	5260	0.058	-2.09	12.50	12.26	1.057	0.061	/
		Back Side	5260	0.158	3.43	12.50	12.26	1.057	0.167	27
		Left Side	5260	0.140	-2.50	12.50	12.26	1.057	0.148	/
5.6GHz WLAN	802.11a	Top Side	5260	0.051	4.00	12.50	12.26	1.057	0.054	/
		Front Side	5700	0.038	2.55	15.80	15.53	1.064	0.040	/
		Back Side	5700	0.100	-2.57	15.80	15.53	1.064	0.106	28
		Left Side	5700	0.092	-0.62	15.80	15.53	1.064	0.098	/
5.8GHz WLAN	802.11a	Top Side	5700	0.035	-0.68	15.80	15.53	1.064	0.037	/
		Front Side	5825	0.044	1.79	15.80	15.52	1.067	0.047	/
		Back Side	5825	0.112	0.05	15.80	15.52	1.067	0.119	29
		Left Side	5825	0.100	-3.86	15.80	15.52	1.067	0.107	/
5.8GHz WLAN	802.11a	Top Side	5825	0.038	-0.61	15.80	15.52	1.067	0.041	/



Band	BW (MHz)	Mod.	RB Size	RB offset	Test Position	Freq.	Result 10g (W/Kg)	Power Drift (%)	Max. Turn-up Power (dBm)	Meas. Output Power (dBm)	Scaling Factor	Scaled SAR (W/Kg)	Meas. No.
LTE Band 2	20M	QPSK	1	49	Front side	1860	0.435	0.31	24.50	24.23	1.064	0.463	/
			50	0	Front side	1900	0.395	1.73	23.20	23.02	1.042	0.412	/
			1	49	Back Side	1860	1.174	0.49	24.50	24.23	1.064	1.249	30
			50	0	Back Side	1900	1.059	-2.01	23.20	23.02	1.042	1.104	/
			1	49	Left Side	1860	0.388	0.14	24.50	24.23	1.064	0.413	/
			50	0	Left Side	1900	0.349	2.86	23.20	23.02	1.042	0.364	/
			1	49	Right Side	1860	0.704	-3.00	24.50	24.23	1.064	0.749	/
			50	0	Right Side	1900	0.636	-1.85	23.20	23.02	1.042	0.663	/
			1	49	Bottom Side	1860	0.341	-1.71	24.50	24.23	1.064	0.363	/
			50	0	Bottom Side	1900	0.310	-3.99	23.20	23.02	1.042	0.323	/
LTE Band 4	20M	QPSK	1	49	Front side	1732.5	0.311	3.53	25.00	24.87	1.030	0.320	/
			50	24	Front side	1732.5	0.284	-1.41	23.80	23.60	1.047	0.297	/
			1	49	Back Side	1732.5	0.835	0.67	25.00	24.87	1.030	0.860	31
			50	24	Back Side	1732.5	0.752	0.99	23.80	23.60	1.047	0.787	/
			1	49	Left Side	1732.5	0.276	2.10	25.00	24.87	1.030	0.284	/
			50	24	Left Side	1732.5	0.251	0.33	23.80	23.60	1.047	0.263	/
			1	49	Right Side	1732.5	0.502	0.25	25.00	24.87	1.030	0.517	/
			50	24	Right Side	1732.5	0.453	-0.21	23.80	23.60	1.047	0.474	/
			1	49	Bottom Side	1732.5	0.246	3.45	25.00	24.87	1.030	0.253	/
LTE Band 5	10M	QPSK	1	24	Front side	844	0.570	1.46	25.10	24.94	1.038	0.591	/
			25	12	Front side	844	0.515	0.43	24.00	23.62	1.091	0.562	/
			1	24	Back Side	844	1.533	-3.93	25.10	24.94	1.038	1.591	32
			25	12	Back Side	844	1.384	0.98	24.00	23.62	1.091	1.511	/
			1	24	Left Side	844	0.510	1.14	25.10	24.94	1.038	0.529	/
			25	12	Left Side	844	0.459	3.77	24.00	23.62	1.091	0.501	/
			1	24	Right Side	844	0.920	-2.64	25.10	24.94	1.038	0.955	/
			25	12	Right Side	844	0.831	-3.49	24.00	23.62	1.091	0.907	/
			1	24	Top Side	844	0.352	3.85	25.10	24.94	1.038	0.365	/
			25	12	Top Side	844	0.321	1.88	24.00	23.62	1.091	0.350	/
			1	24	Bottom Side	844	0.448	-3.75	25.10	24.94	1.038	0.465	/
			25	12	Bottom Side	844	0.406	-3.09	24.00	23.62	1.091	0.443	/
LTE Band 7	20M	QPSK	1	49	Front side	2510	0.364	-1.00	24.00	23.67	1.079	0.393	/
			50	24	Front side	2510	0.329	-1.21	22.70	22.53	1.040	0.342	/
			1	49	Back Side	2510	0.975	-3.46	24.00	23.67	1.079	1.052	33
			50	24	Back Side	2510	0.881	2.06	22.70	22.53	1.040	0.916	/
			1	49	Left Side	2510	0.324	-1.17	24.00	23.67	1.079	0.350	/
			50	24	Left Side	2510	0.292	-3.61	22.70	22.53	1.040	0.304	/
			1	49	Right Side	2510	0.589	3.27	24.00	23.67	1.079	0.635	/
			50	24	Right Side	2510	0.534	-3.76	22.70	22.53	1.040	0.555	/
			1	49	Top Side	2510	0.228	1.97	24.00	23.67	1.079	0.246	/
			50	24	Top Side	2510	0.207	2.12	22.70	22.53	1.040	0.215	/



			1	49	Bottom Side	2510	0.286	-1.54	24.00	23.67	1.079	0.309	/
			50	24	Bottom Side	2510	0.260	2.40	22.70	22.53	1.040	0.270	/
LTE Band 12	10M	QPSK	1	24	Front side	711	0.111	3.42	24.80	24.58	1.052	0.117	/
			25	12	Front side	711	0.100	3.55	23.50	23.35	1.035	0.104	/
			1	24	Back Side	711	0.292	3.20	24.80	24.58	1.052	0.307	34
			25	12	Back Side	711	0.266	1.16	23.50	23.35	1.035	0.275	/
			1	24	Left Side	711	0.100	0.21	24.80	24.58	1.052	0.105	/
			25	12	Left Side	711	0.094	0.23	23.50	23.35	1.035	0.097	/
			1	24	Right Side	711	0.179	-2.60	24.80	24.58	1.052	0.188	/
			25	12	Right Side	711	0.161	-0.35	23.50	23.35	1.035	0.167	/
			1	24	Top Side	711	0.067	-1.88	24.80	24.58	1.052	0.070	/
			25	12	Top Side	711	0.064	-3.70	23.50	23.35	1.035	0.066	/
			1	24	Bottom Side	711	0.089	-3.31	24.80	24.58	1.052	0.094	/
			25	12	Bottom Side	711	0.081	-0.01	23.50	23.35	1.035	0.084	/
LTE Band 13	10M	QPSK	1	0	Front side	782	0.119	0.74	25.00	24.85	1.035	0.123	/
			25	0	Front side	782	0.112	2.24	23.70	23.51	1.045	0.117	/
			1	0	Back Side	782	0.318	0.50	25.00	24.85	1.035	0.329	35
			25	0	Back Side	782	0.289	0.44	23.70	23.51	1.045	0.302	/
			1	0	Left Side	782	0.106	-0.67	25.00	24.85	1.035	0.110	/
			25	0	Left Side	782	0.097	-1.96	23.70	23.51	1.045	0.101	/
			1	0	Right Side	782	0.194	0.36	25.00	24.85	1.035	0.201	/
			25	0	Right Side	782	0.178	2.69	23.70	23.51	1.045	0.186	/
			1	0	Top Side	782	0.075	3.36	25.00	24.85	1.035	0.078	/
			25	0	Top Side	782	0.070	2.16	23.70	23.51	1.045	0.073	/
			1	0	Bottom Side	782	0.093	1.35	25.00	24.85	1.035	0.096	/
			25	0	Bottom Side	782	0.085	3.32	23.70	23.51	1.045	0.089	/
LTE Band 17	10M	QPSK	1	24	Front side	711	0.116	-1.92	25.00	24.74	1.062	0.123	/
			25	12	Front side	711	0.106	1.33	23.60	23.46	1.033	0.109	/
			1	24	Back Side	711	0.308	-0.61	25.00	24.74	1.062	0.327	36
			25	12	Back Side	711	0.279	1.33	23.60	23.46	1.033	0.288	/
			1	24	Left Side	711	0.104	-3.78	25.00	24.74	1.062	0.110	/
			25	12	Left Side	711	0.094	-3.92	23.60	23.46	1.033	0.097	/
			1	24	Right Side	711	0.187	-2.11	25.00	24.74	1.062	0.199	/
			25	12	Right Side	711	0.169	-0.21	23.60	23.46	1.033	0.175	/
			1	24	Top Side	711	0.072	-3.31	25.00	24.74	1.062	0.076	/
			25	12	Top Side	711	0.069	0.72	23.60	23.46	1.033	0.071	/
			1	24	Bottom Side	711	0.089	1.56	25.00	24.74	1.062	0.094	/
			25	12	Bottom Side	711	0.082	0.88	23.60	23.46	1.033	0.085	/
LTE Band 38	20M	QPSK	1	49	Front side	2610	0.135	-0.18	24.30	24.04	1.062	0.143	/
			50	24	Front side	2610	0.122	1.38	23.10	22.91	1.045	0.127	/
			1	49	Back Side	2610	0.359	-0.80	24.30	24.04	1.062	0.381	37
			50	24	Back Side	2610	0.324	1.22	23.10	22.91	1.045	0.338	/
			1	49	Left Side	2610	0.122	-2.17	24.30	24.04	1.062	0.130	/
			50	24	Left Side	2610	0.110	0.90	23.10	22.91	1.045	0.115	/
			1	49	Right Side	2610	0.218	-0.74	24.30	24.04	1.062	0.231	/
			50	24	Right Side	2610	0.197	-0.86	23.10	22.91	1.045	0.206	/