

TEST REPORT

Reference No. : WTX20X10075770W
FCC ID..... : 2AVFE-WILDFIREEE2
Applicant..... : Fortune Ship International Industrial Limited
Address : Unit C, 24/F, Golden Bear Industrial Centre, 66-82 Chai Wan Kok Street,
Tsuen Wan NT, HONGKONG
Product Name : 4G Smart Phone
Test Model..... : Wildfire E2
FCC Part 2.1093
Standards..... : ANSI / IEEE C95.1 : 2005+A1:2010
ANSI / IEEE C95.3 : 2002(R2008)
IEEE 1528 :2013
Date of Receipt sample : Oct.26, 2020
Date of Test..... : Oct.29, 2020 to Nov.13, 2020
Date of Issue : Nov.16, 2020
Test Result : Pass

Remarks:

The results shown in this test report refer only to the sample(s) tested, this test report cannot be Reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

Prepared By:

Waltek Testing Group (Shenzhen) Co., Ltd.

Address: 1/F., Room 101, Building 1, Hongwei Industrial Park, Liuxian 2nd Road,
Block 70 Bao'an District, Shenzhen, Guangdong, China

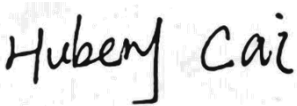
Tel.: +86-755-33663308

Fax.: +86-755-33663309

Tested by:

Reviewed By:

Approved & Authorized By:







Jack Sun / Project Engineer

Lion Cai / RF Manager

Silin Chen / Manager

TABLE OF CONTENTS

1. General Information.....	3
1.1 Product Description for Equipment Under Test (EUT).....	3
1.2 Test Standards.....	6
1.3 Test Methodology.....	6
1.4 Test Facility.....	6
2. Summary of Test Results.....	7
3. Specific Absorption Rate (SAR).....	8
3.1 Introduction	8
3.2 SAR Definition	8
4. SAR Measurement System	9
4.1 The Measurement System	9
4.2 Probe.....	9
4.3 Probe Calibration Process	11
4.4 Phantom.....	12
4.5 Device Holder.....	12
4.6 Test Equipment List	13
5. Tissue Simulating Liquids	14
5.1 Composition of Tissue Simulating Liquid	14
5.2 Tissue Dielectric Parameters for Head and Body Phantoms	15
5.3 Tissue Calibration Result	16
6. SAR Measurement Evaluation.....	17
6.1 Purpose of System Performance Check	17
6.2 System Setup	17
6.3 Validation Results	19
7. EUT Testing Position.....	20
7.1 Define Two Imaginary Lines on The Handset	20
7.2 Cheek Position	21
7.3 Tilted Position.....	21
7.4 Body Position	22
7.5 EUT Antenna Position.....	22
7.6 EUT Testing Position	23
8. SAR Measurement Procedures	24
8.1 Measurement Procedures	24
8.2 Spatial Peak SAR Evaluation	24
8.3 Area & Zoom Scan Procedures	25
8.4 Volume Scan Procedures	25
8.5 SAR Averaged Methods.....	25
8.6 Power Drift Monitoring.....	25
9. SAR Test Result.....	26
9.1 Conducted RF Output Power	26
9.2 Test Results for Standalone SAR Test	58
9.3 Simultaneous Multi-band Transmission SAR Analysis	69
10. Measurement Uncertainty	75
10.1 Uncertainty for EUT SAR Test	75
10.2 Uncertainty for System Performance Check	76
Annex A. Plots of System Performance Check.....	78
Annex B. Plots of SAR Measurement	110
Annex C. EUT Photos.....	170
Annex D. Test Setup Photos.....	172
Annex E. Calibration Certificate	177

1. General Information

1.1 Product Description for Equipment Under Test (EUT)

Client Information

Applicant: Fortune Ship International Industrial Limited
Address of applicant: Unit C, 24/F, Golden Bear Industrial Centre, 66-82 Chai Wan Kok Street, Tsuen Wan NT, HONGKONG

Manufacturer: Fortune Ship International Industrial Limited
Address of manufacturer: Unit C, 24/F, Golden Bear Industrial Centre, 66-82 Chai Wan Kok Street, Tsuen Wan NT, HONGKONG

General Description of EUT:	
Product Name:	4G Smart Phone
Brand Name:	HTC
Model No.:	Wildfire E2
Adding Model(s):	/
Rated Voltage:	DC3.85V
Battery:	4000mAh
Device Category:	Portable Device
Software Version:	HTC_WILDFIRE_E2
Hardware Version:	YK685-MB-V1.1
Note: The test data is gathered from a production sample provided by the manufacturer.	

Technical Characteristics of EUT:	
2G	
Support Networks:	GSM, GPRS, EDGE
Support Band:	GSM850/PCS1900
Uplink Frequency:	GSM/GPRS/EDGE 850: 824~849MHz GSM/GPRS/EDGE 1900: 1850~1910MHz
Downlink Frequency:	GSM/GPRS/EDGE 850: 869~894MHz GSM/GPRS/EDGE 1900: 1930~1990MHz
RF Output Power:	GSM850: 32.59dBm, GSM1900: 29.68dBm EDGE850: 26.64dBm, EDGE1900: 26.93dBm
Type of Modulation:	GMSK, 8PSK
Type of Antenna:	Integral Antenna
Antenna Gain:	GSM850: -2.24dBi; GSM1900: 0.32dBi
GPRS/EDGE Class:	Class 12
3G	
Support Networks:	WCDMA, HSDPA, HSUPA
Support Band:	WCDMA Band 2, WCDMA Band 4, WCDMA Band 5
Uplink Frequency:	WCDMA Band 2: 1850~1910MHz WCDMA Band 4: 1710~1755MHz WCDMA Band 5: 824~849MHz
Downlink Frequency:	WCDMA Band 2: 1930~1990MHz WCDMA Band 4: 2110~2155MHz WCDMA Band 5: 869~894MHz
RF Output Power:	WCDMA Band 2: 23.24dBm, WCDMA Band 4: 23.44dBm WCDMA Band 5: 23.57dBm
Type of Modulation:	BPSK
Antenna Type:	Integral Antenna
Antenna Gain:	WCDMA Band 2: 0.44dBi, WCDMA Band 4: 0.55dBi, WCDMA Band 5: -1.98dBi
4G	
Support Networks:	FDD-LTE
Support Band:	FDD-LTE Band 2, 4, 5, 7, 17
Uplink Frequency:	FDD-LTE Band 2: Tx: 1850-1910MHz, FDD-LTE Band 4: Tx: 1710-1755MHz, FDD-LTE Band 5: Tx: 824-849MHz, FDD-LTE Band 7: Tx: 2500-2570MHz, FDD-LTE Band 17: Tx: 704-716MHz
Downlink Frequency:	FDD-LTE Band 2: Rx: 1930-1990MHz, FDD-LTE Band 4: Rx: 2110-2155MHz,

	FDD-LTE Band 5: Rx: 869-894MHz, FDD-LTE Band 7: Rx: 2620-2690MHz, FDD-LTE Band 17: Rx: 734-746MHz
RF Output Power:	FDD-LTE Band 2: 25.19dBm; FDD-LTE Band 4: 24.65dBm FDD-LTE Band 5: 24.79dBm; FDD-LTE Band 7: 24.79dBm FDD-LTE Band 17: 24.89dBm
Type of Modulation:	QPSK, 16QAM
Antenna Type:	Integral Antenna
Antenna Gain:	FDD-LTE Band 2: 0.67dBi; FDD-LTE Band 4: 0.58dBi, FDD-LTE Band 5: -1.78dBi; FDD-LTE Band 7: 0.44dBi, FDD-LTE Band 17: -0.74dBi
WIFI(2.4G)	
Support Standards:	802.11b, 802.11g, 802.11n
Frequency Range:	2412-2462MHz for 11b/g/n(HT20) 2422-2452MHz for 11n(HT40)
RF Output Power:	15.61dBm (Conducted)
Type of Modulation:	CCK, OFDM, QPSK, BPSK, 16QAM, 64QAM
Data Rate:	1-11Mbps, 6-54Mbps, up to 150Mbps
Quantity of Channels:	11 for 802.11b/g/n(HT20) 7 for 802.11n(HT40)
Channel Separation:	5MHz
Antenna Type:	Integral Antenna
Antenna Gain:	1.12dBi
Bluetooth	
Bluetooth Version:	V4.2
Frequency Range:	2402-2480MHz
RF Output Power:	7.87dBm
Data Rate:	1Mbps, 2Mbps, 3Mbps
Modulation:	GFSK, Pi/4 QDPSK, 8DPSK
Quantity of Channels:	79/40
Channel Separation:	1MHz/2MHz
Antenna Type:	Integral Antenna
Antenna Gain:	1.12dBi
Wi-Fi(5GHz)	
Support Standards:	802.11a, 802.11n-HT20/40, 802.11ac-HT20/40/80
Frequency Range:	Band 1: 5180-5240MHz, Band 4: 5745-5825MHz
RF Output Power:	12.15dBm
Type of Modulation:	BPSK, QPSK, 16QAM, 64QAM, 256-QAM
Type of Antenna:	Integral Antenna
Antenna Gain:	1.03dBi;

1.2 Test Standards

The following report is prepared on behalf of the Fortune Ship International Industrial Limited in accordance with FCC 47 CFR Part 2.1093, ANSI/IEEE C95.1-2005, ANSI / IEEE C95.3 :2002, IEEE 1528-2013, KDB 447498 D01 v06, KDB 648474 D04 v01r03, KDB 248227 D01 v02r02, KDB 941225 D01 v03r01, KDB 941225 D05 v02r05 , and KDB 865664 D01 v01r04 and KDB 865664 D02 v01r02.

The objective is to determine compliance with FCC Part 2.1093 of the Federal Communication Commissions rules.

Maintenance of compliance is the responsibility of the manufacturer. Any modification of the product, which result in lowering the emission, should be checked to ensure compliance has been maintained.

1.3 Test Methodology

All measurements contained in this report were conducted with KDB 865664 D01 v01r04 and KDB 865664 D02 v01r02. The public notice KDB 447498 D01 v06 for Mobile and Portable Devices RF Exposure Procedure also.

1.4 Test Facility

Address of the test laboratory

Laboratory: Waltek Testing Group (Shenzhen) Co., Ltd.

Address: 1/F., Room 101, Building 1, Hongwei Industrial Park, Liuxian 2nd Road,Block 70 Bao'an District, Shenzhen, Guangdong, China

FCC – Registration No.: 125990

Waltek Testing Group (Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files. The Designation Number is CN5010. Test Firm Registration Number is 125990.

Industry Canada (IC) Registration No.: 11464A

The 3m Semi-anechoic chamber of Waltek Testing Group (Shenzhen) Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 11464A.

2. Summary of Test Results

The maximum results of Specific Absorption Rate (SAR) have found during testing are as follows:

Frequency Band	Head SAR	Body-worn (10mm Gap)	Hotspot (10mm Gap)	SAR _{1g} Limit (W/kg)
	Maximum SAR _{1g} (W/kg)	Maximum SAR _{1g} (W/kg)	Maximum SAR _{1g} (W/kg)	
GSM	0.290	0.187	0.349	1.6
WCDMA	0.588	0.256	0.256	1.6
LTE	0.516	0.474	0.474	1.6
WLAN 2.4G	0.337	0.252	0.252	1.6
WLAN 5G	0.152	0.160	0.160	1.6
Simultaneous Transmission	0.853	0.634	0.634	1.6

Remark:

*The highest reported SAR values for head, body-worn, router (hotspot) and simultaneous transmission conditions are **0.588W/kg**, **0.474W/kg**, **0.474W/kg**, and **0.853W/kg** respectively.*

The device is in compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits (1.6 W/kg) specified in FCC 47 CFR Part 2.1093 and ANSI/IEEE C95.1-2005, and had been tested in accordance with the measurement methods and procedure specified in IEEE 1528-2013 and KDB 865664 D01 v01r04 and KDB 865664 D02 v01r02

3. Specific Absorption Rate (SAR)

3.1 Introduction

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

3.2 SAR Definition

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

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

SAR is expressed in units of Watts per kilogram (W/kg)

SAR measurement can be either related to the temperature elevation in tissue by

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

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

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

Where: σ is the conductivity of the tissue, ρ is the mass density of the tissue and E is the RMS electrical field strength.

However for evaluating SAR of low power transmitter, electrical field measurement is typically applied.

4. SAR Measurement System

4.1 The Measurement System

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 10g mass.

4.2 Probe

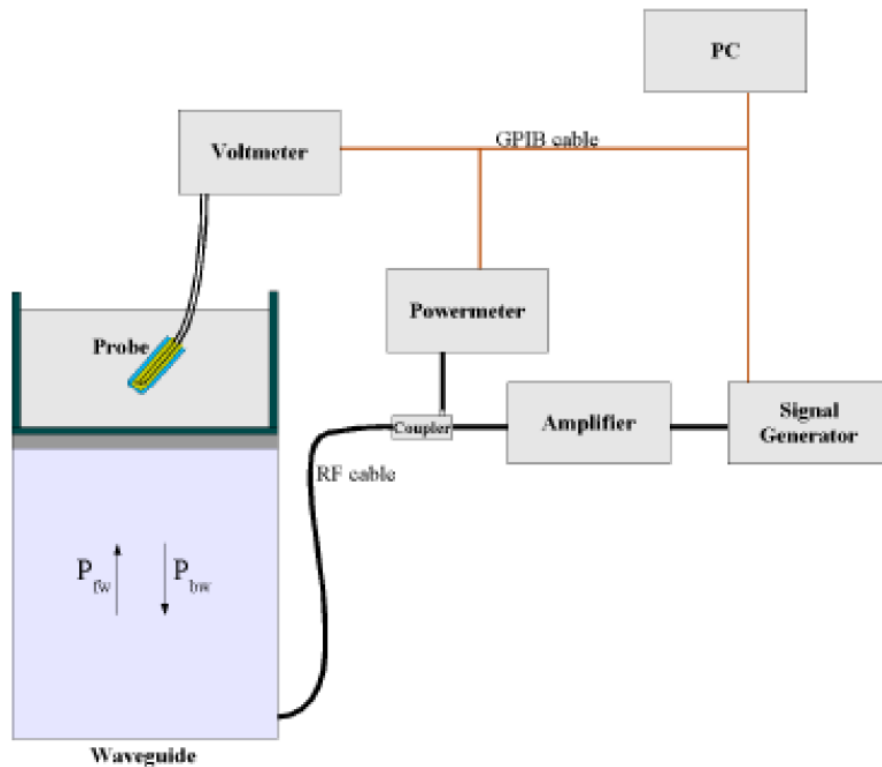
For the measurements the Specific Dosimetric E-Field Probe SSE2 SN 45/15 EPGO280 with following specifications is used

- Dynamic range: 0.01-100 W/kg
- Probe Length: 330 mm
- Length of Individual Dipoles: 4.5 mm
- Maximum external diameter: 8 mm
- Probe Tip External Diameter : 5 mm

Waltek Testing Group (Shenzhen) Co., Ltd.
<http://www.semtest.com.cn>

- Distance between dipoles / probe extremity: 2.7mm
 - Probe linearity: <0.25 dB
 - Axial Isotropy: <0.25 dB
 - Spherical Isotropy: <0.50 dB
 - Calibration range: 700 to 3000MHz for head & body simulating liquid.
- Angle between probe axis (evaluation axis) and surface normal line: less than 30°

Probe calibration is realized, in compliance with EN 62209-1 and IEEE 1528 STD, with CALISAR, Antennessa proprietary calibration system. The calibration is performed with the EN 62209-1 annexe technique using reference guide at the five frequencies.



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

Where :

P_{fw} = Forward Power

P_{bw} = Backward Power

a and b = Waveguide dimensions

δ = Skin depth

Keithley configuration:

Rate = Medium; Filter = ON; RDGS = 10; Filter type = Moving Average; Range auto after each calibration, a SAR measurement is performed on a validation dipole and compared with a NPL calibrated probe, to verify it.

Waltek Testing Group (Shenzhen) Co., Ltd.

<http://www.semtest.com.cn>

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

$$CF(N)=SAR(N)/V_{lin}(N) \quad (N=1,2,3)$$

The linearised output voltage $V_{lin}(N)$ is obtained from the displayed output voltage $V(N)$ using

$$V_{lin}(N)=V(N)*(1+V(N)/DCP(N)) \quad (N=1,2,3)$$

where DCP is the diode compression point in mV.

4.3 Probe Calibration Process

Dosimetric Assessment Procedure

Each E-Probe/Probe Amplifier combination has unique calibration parameters. SATIMO Probe calibration procedure is conducted to determine the proper amplifier settings to enter in the probe parameters. The amplifier settings are determined for a given frequency by subjecting the probe to a known E-field density (1 mW/cm²) using an with CALISAR, Antenna proprietary calibration system.

Free Space Assessment Procedure

The free space E-field from amplified probe outputs is determined in a test chamber. This calibration can be performed in a TEM cell if the frequency is below 1 GHz and in a waveguide or other methodologies above 1 GHz for free space. For the free space calibration, the probe is placed in the volumetric center of the cavity and at the proper orientation with the field. The probe is rotated 360 degrees until the three channels show the maximum reading. The power density readings equates to 1mW/cm².

Temperature Assessment Procedure

E-field temperature correlation calibration is performed in a flat phantom filled with the appropriate simulated head tissue. The E-field in the medium correlates with the temperature rise in the dielectric medium. For temperature correlation calibration a RF transparent thermistor-based temperature probe is used in conjunction with the E-field probe.

Where:

$$SAR = C \frac{\Delta T}{\Delta t}$$

Δt = exposure time (30 seconds),

C = heat capacity of tissue (brain or muscle),

ΔT = temperature increase due to RF exposure.

SAR is proportional to $\Delta T / \Delta t$, the initial rate of tissue heating, before thermal diffusion takes place. The electric field in the simulated tissue can be used to estimate SAR by equating the thermally derived SAR to that with the E- field component.

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

Where:

σ = simulated tissue conductivity,

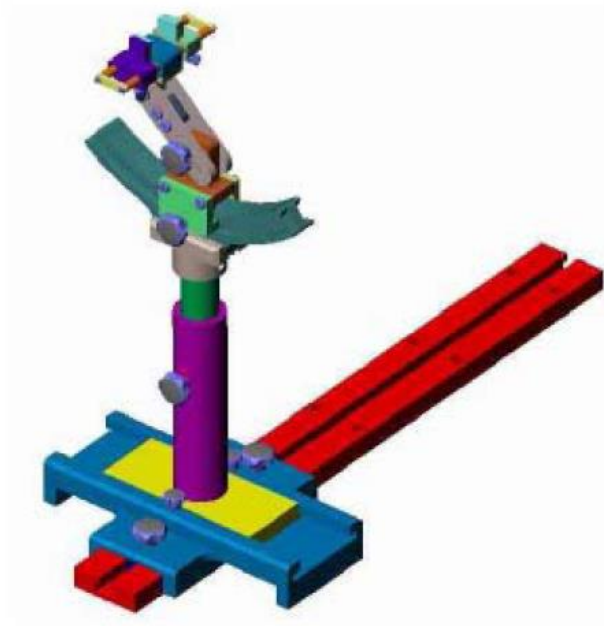
ρ = Tissue density (1.25 g/cm³ for brain tissue)

4.4 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.

4.5 Device Holder

The positioning system allows obtaining cheek and tilting position with a very good accuracy. In compliance with CENELEC, the tilt angle uncertainty is lower than 1 °.



System Material	Permittivity	Loss Tangent
Delrin	3.7	0.005

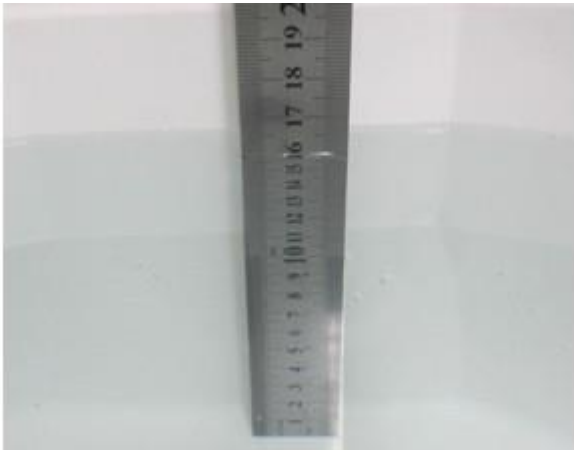
4.6 Test Equipment List

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
E-Field Probe	MVG	SSE2	SN 45/15 EPGO280	2020-07-03	2021-07-02
750MHz Dipole	MVG	SID750	SN 47/12 DIP 0G750-203	2020-03-11	2021-03-10
835MHz Dipole	MVG	SID835	SN 47/12 DIP 0G835-204	2020-03-11	2021-03-10
1800MHz Dipole	MVG	SID1800	SN 47/12 DIP 1G800-206	2020-03-11	2021-03-10
1900MHz Dipole	MVG	SID1900	SN 47/12 DIP 1G900-207	2020-03-11	2021-03-10
2450MHz Dipole	MVG	SID2450	SN 13/15 DIP 2G450-364	2020-03-11	2021-03-10
2600MHz Dipole	MVG	SID2600	SN 13/15 DIP 2G600-365	2020-03-11	2021-03-10
5 GHz Waveguide	MVG	SWG5500	SN 49/16 WGA45	2019-07-15	2020-07-14
Dielectric Probe Kit	MVG	SCLMP	SN 47/12 OCPG49	2020-03-11	2021-03-10
SAM Phantom	MVG	SAM	SN/ 47/12 SAM95	N/A	N/A
MULTIMETER	KEITHLEY	Keithley 2000	4006367	2020-04-28	2021-04-27
Signal Generator	Rohde & Schwarz	SMR20	100047	2020-04-28	2021-04-27
Universal Tester	Rohde & Schwarz	CMU200	112012	2020-04-28	2021-04-27
Communications Tester	Rohde & Schwarz	CMW500	148650	2020-04-28	2021-04-27
Network Analyzer	HP	8753C	2901A00831	2020-04-28	2021-04-27
Directional Couplers	Agilent	778D	20160	2020-04-28	2021-04-27

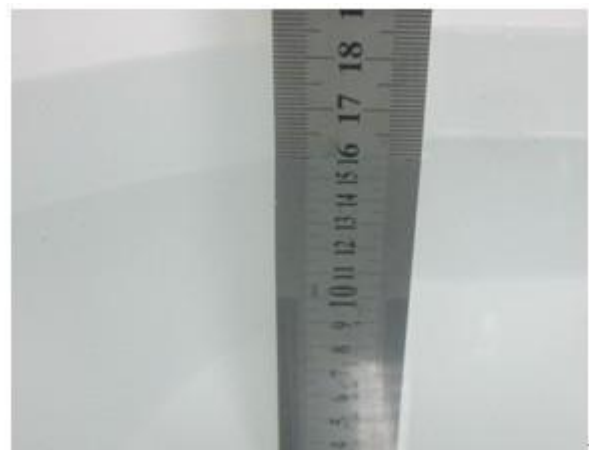
5. Tissue Simulating Liquids

5.1 Composition of Tissue Simulating Liquid

For the measurement of the field distribution inside the SAM phantom with SMTIMO, the phantom must be filled with around 25 liters of homogeneous body tissue simulating liquid. For head SAR testing, the liquid height from the ear reference point (ERP) of the phantom to the liquid top surface is larger than 15 cm. For body SAR testing, the liquid height from the center of the flat phantom to the liquid top surface is larger than 15 cm. Please see the following photos for the liquid height.



Liquid Height for Head SAR



Liquid Height for Body SAR

The Composition of Tissue Simulating Liquid

Frequency (MHz)	Water (%)	Salt (%)	Sugar (%)	HEC (%)	Preventol (%)	DGBE (%)
Head						
750	41.1	1.4	57.0	0.2	0.3	0
835	40.3	1.4	57.9	0.2	0.2	0
1700-1900	55.2	0.3	0	0	0	44.5
2450	55.0	0.1	0	0	0	44.9
2600	54.9	0.1	0	0	0	45.0
Body						
750	50.0	0.8	48.8	0.2	0.2	0
835	50.8	0.9	48.1	0.1	0.1	0
1700-1900	70.2	0.4	0	0	0	29.4
2450	68.6	0.1	0	0	0	31.3
2600	68.2	0.1	0	0	0	31.7

Frequency (MHz)	Water (%)	Hexyl Carbitol (%)	Triton X-100 (%)
Head			
5000-6000	65.52	17.24	17.24
Body			
5000-6000	78.6	10.7	10.7

5.2 Tissue Dielectric Parameters for Head and Body Phantoms

The head tissue dielectric parameters recommended by the IEEE SCC-34/SC-2 in P1528 have been incorporated in the following table. These head parameters are derived from planar layer models simulating the highest expected SAR for the dielectric properties and tissue thickness variations in a human head. Other head and body tissue parameters that have not been specified in P1528 are derived from the tissue dielectric parameters computed from the 4-Cole-Cole equations described in Reference [12] and extrapolated according to the head parameters specified in P1528.

Target Frequency (MHz)	Head		Body	
	Conductivity (σ)	Permittivity (ϵ_r)	Conductivity (σ)	Permittivity (ϵ_r)
150	0.76	52.3	0.80	61.9
300	0.87	45.3	0.92	58.2
450	0.87	43.5	0.94	56.7
750	0.89	41.9	0.96	55.5
835	0.90	41.5	0.97	55.2
900	0.97	41.5	1.05	55.0
915	0.98	41.5	1.06	55.0
1450	1.20	40.5	1.30	54.0
1610	1.29	40.3	1.40	53.8
1750	1.37	40.1	1.49	53.4
1800-2000	1.40	40.0	1.52	53.3
2450	1.80	39.2	1.95	52.7
3000	2.40	38.5	2.73	52.0
5200	4.66	36.0	5.30	49.0
5800	5.27	35.3	6.00	48.2

5.3 Tissue Calibration Result

The dielectric parameters of the liquids were verified prior to the SAR evaluation using COMOSAR Dielectric Probe Kit and an Agilent Network Analyzer.

Calibration Result for Dielectric Parameters of Tissue Simulating Liquid

Head Tissue Simulating Liquid									
Freq. MHz.	Temp. (°C)	Conductivity			Permittivity			Limit (%)	Date
		Reading (σ)	Target (σ)	Delta (%)	Reading (ϵ_r)	Target (ϵ_r)	Delta (%)		
750	22.2	0.86	0.89	-3.37	41.02	41.90	-2.10	±5	2020-10-29
835	22.2	0.88	0.90	-2.22	40.75	41.50	-1.81	±5	2020-10-29
1800	22.2	1.38	1.40	-1.43	39.43	40.00	-1.43	±5	2020-11-09
1900	22.2	1.39	1.40	-0.71	39.06	40.00	-2.35	±5	2020-11-09
2450	22.2	1.77	1.80	-1.67	38.45	39.20	-1.91	±5	2020-11-10
2600	22.2	1.97	1.96	0.51	37.93	39.0	-2.74	±5	2020-11-10
5200	22.3	4.77	4.66	2.36	35.61	36.0	-1.11	±5	2020-11-13
5800	22.3	5.21	5.27	-1.14	34.31	35.3	-2.80	±5	2020-11-13

Body Tissue Simulating Liquid									
Freq. MHz.	Temp. (°C)	Conductivity			Permittivity			Limit (%)	Date
		Reading (σ)	Target (σ)	Delta (%)	Reading (ϵ_r)	Target (ϵ_r)	Delta (%)		
750	22.2	0.94	0.96	-2.08	56.16	55.50	1.19	±5	2020-10-29
835	22.2	0.97	0.97	0.00	55.68	55.20	0.87	±5	2020-10-29
1800	22.2	1.48	1.49	-0.67	52.17	53.40	-2.30	±5	2020-11-09
1900	22.2	1.53	1.52	0.66	51.82	53.30	-2.78	±5	2020-11-09
2450	22.2	1.97	1.95	1.03	53.21	52.70	0.97	±5	2020-11-10
2600	22.2	2.20	2.16	1.85	52.43	52.50	-0.13	±5	2020-11-10
5200	22.3	5.21	5.30	-1.70	50.05	49.0	2.14	±5	2020-11-13
5800	22.3	5.88	6.00	-2.00	47.85	48.2	-0.73	±5	2020-11-13

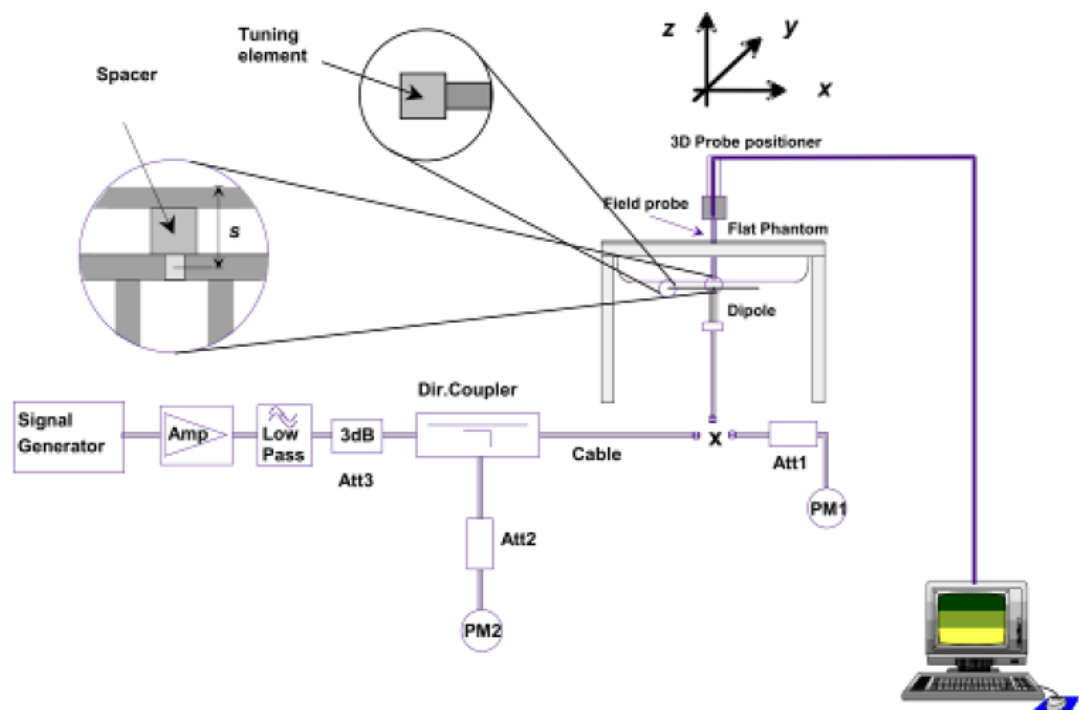
6. SAR Measurement Evaluation

6.1 Purpose of System Performance Check

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

6.2 System Setup

In the simplified setup for system evaluation, the EUT is replaced by a calibrated dipole and the power source is replaced by a continuous wave which comes from a signal generator at frequency 835MHz ,1800MHz, 1900MHz 2450MHz,2600MHz,and 5GHz. The calibrated dipole must be placed beneath the flat phantom section of the SAM twin phantom with the correct distance holder. The distance holder should touch the phantom surface with a light pressure at the reference marking and be oriented parallel to the long side of the phantom.



System Verification Setup Block Diagram



Setup Photo of Dipole Antenna

The output power on dipole port must be calibrated to 24 dBm(250 mW) before dipole is connected.

The output power on 5 GHz Waveguide must be calibrated to 20 dBm (100mW) before 5 GHz Waveguide is connected.

6.3 Validation Results

Comparing to the original SAR value provided by SATIMO, the validation data should be within its specification of 10 %. Table 6.1 shows the target SAR and measured SAR after normalized to 1W input power. The table below indicates the system performance check can meet the variation criterion.

Frequency	Targeted SAR _{1g}	Measured SAR _{1g}	Normalized SAR _{1g}	Tolerance	Date
MHz	(W/kg)	(W/kg)	(W/kg)	(%)	
Head					
750	8.40	2.18	8.72	3.81	2020-10-29
835	9.65	2.51	10.04	4.04	2020-10-29
1800	38.49	9.46	37.84	-1.69	2020-11-09
1900	39.59	9.91	39.64	0.13	2020-11-09
2450	53.76	13.75	55.0	2.31	2020-11-10
2600	55.70	13.54	54.16	-1.65	2020-11-10
5200	161.23	16.946	169.46	5.10	2020-11-13
5800	179.32	18.604	186.04	3.75	2020-11-13
Body					
750	8.40	2.17	8.68	3.33	2020-10-29
835	9.36	2.35	9.40	0.43	2020-10-29
1800	38.29	9.68	38.72	1.12	2020-11-09
1900	39.01	10.02	40.08	2.74	2020-11-09
2450	50.33	12.78	51.12	1.57	2020-11-10
2600	53.92	13.02	52.08	-3.41	2020-11-10
5200	154.45	16.602	166.02	7.49	2020-11-13
5800	170.71	16.418	164.18	-3.83	2020-11-13

Remark: Referring to IEEE 1528-2013, Section 8.2, The system check shall be performed at a test frequency that is within $\pm 10\%$ or ± 100 MHz of the compliance test mid-band frequency, so the 1750 MHz system verification is made of 1800MHz Dipole.

Targeted and Measurement SAR

Please refer to Annex A for the plots of system performance check.

7. EUT Testing Position

7.1 Define Two Imaginary Lines on The Handset

- (a) 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 bottom of the handset.
- (b) 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.
- (c) 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 parallel to the front face of the handset, especially for clamshell handsets, handsets with flip covers, and other irregularly shaped handsets.

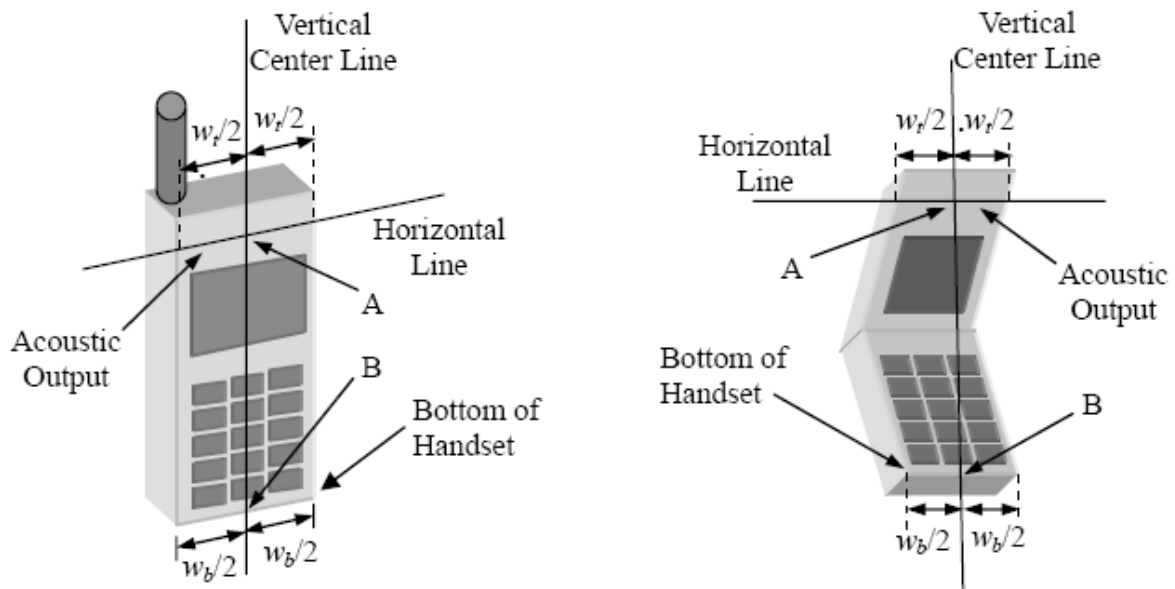


Illustration for Handset Vertical and Horizontal Reference Lines

7.2 Cheek Position

- (a) To position the device with the vertical center line of the body of the device and the horizontal line crossing the center piece in a plane parallel to the sagittal plane of the phantom. While maintaining the device in this plane, align the vertical center line with the reference plane containing the three ear and mouth reference point (M: Mouth, RE: Right Ear, and LE: Left Ear) and align the center of the ear piece with the line RE-LE.
- (b) To move the device towards the phantom with the ear piece aligned with the line LE-RE until the phone touched the ear. While maintaining the device in the reference plane and maintaining the phone contact with the ear, move the bottom of the phone until any point on the front side is in contact with the cheek of the phantom or until contact with the ear is lost (see Fig. 7.2).

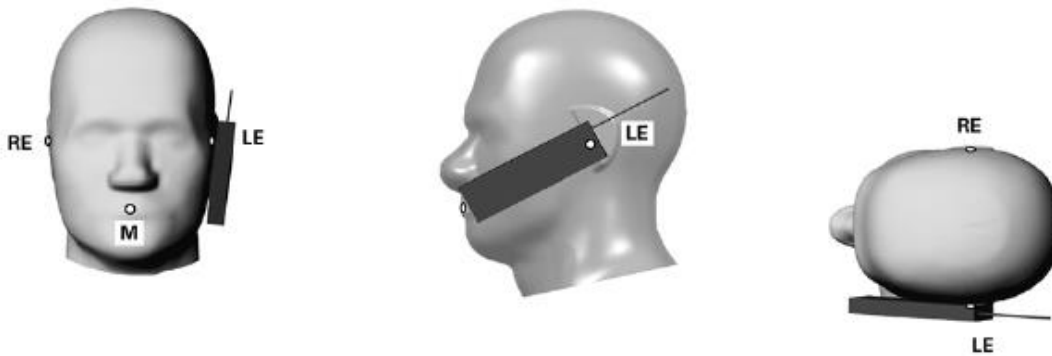


Illustration for Cheek Position

7.3 Tilted Position

- (a) To position the device in the “cheek” position described above.
- (b) While maintaining the device the reference plane described above and pivoting against the ear, moves it outward away from the mouth by an angle of 15 degrees or until contact with the ear is lost (see Fig. 7.3).

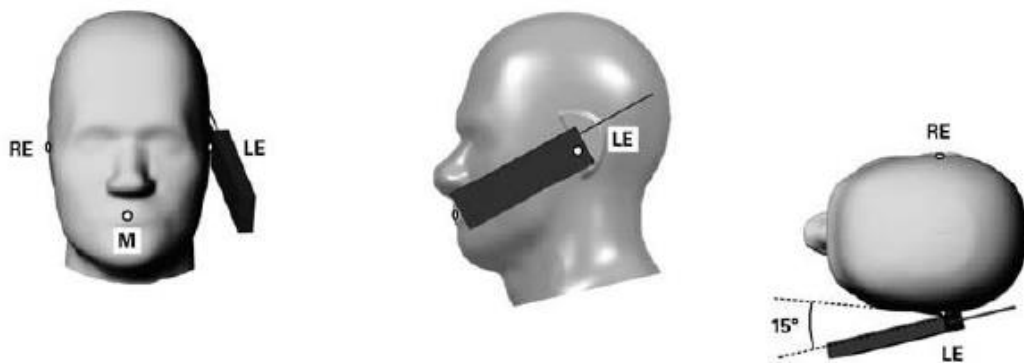


Illustration for Tilted Position

7.4 Body Position

- (a) To position the device parallel to the phantom surface with each side.
- (b) To adjust the device parallel to the flat phantom.
- (c) To adjust the distance between the device surface and the flat phantom to 10mm.

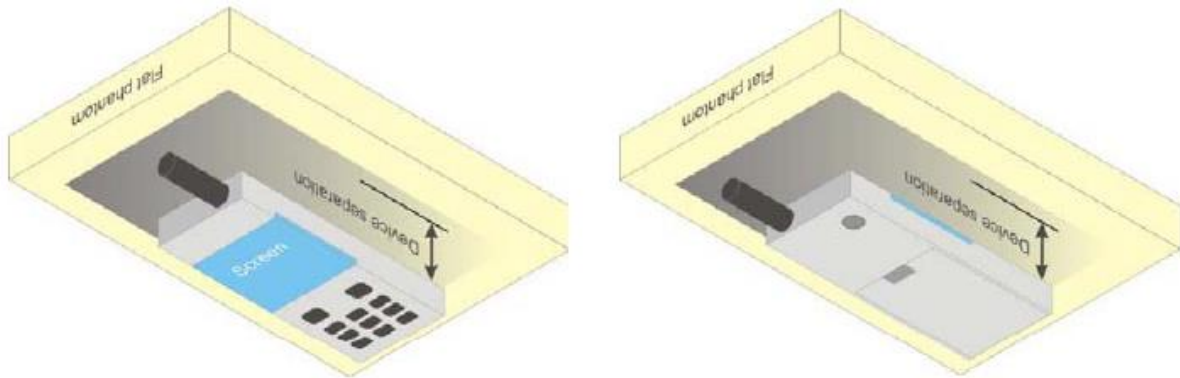
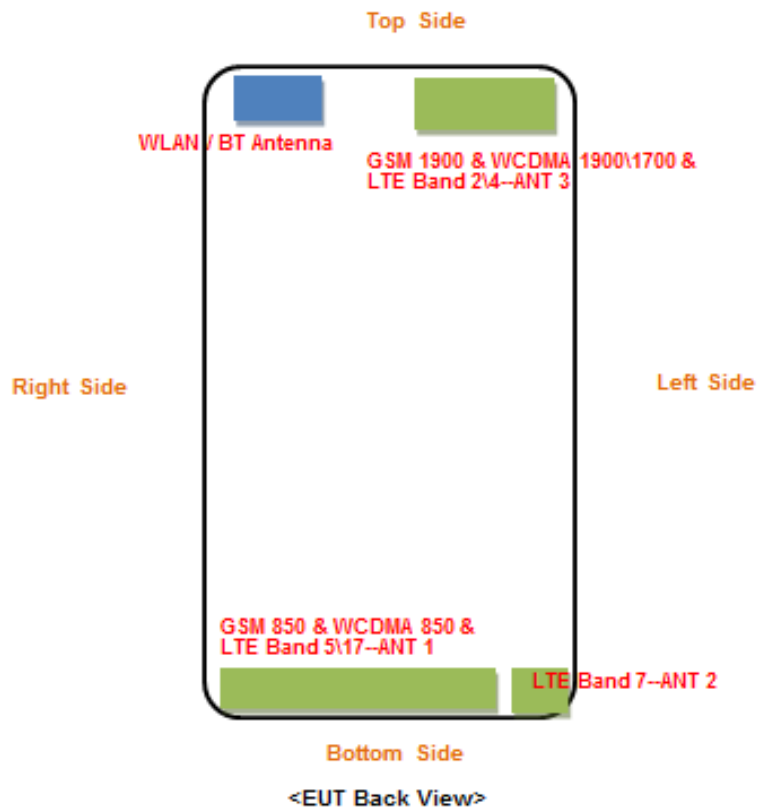


Illustration for Body Position

7.5 EUT Antenna Position



Block Diagram for EUT Antenna Position

Distance of EUT antenna-to-edge/surface(mm), Test distance:10mm						
Antennas	Back side	Front side	Left Edge	Right Edge	Top Edge	Bottom Edge
WWAN-ANT1	<25	<25	<25	<25	146	<25
WWAN-ANT2	<25	<25	<25	60	149	<25
WWAN-ANT3	<25	<25	<25	54	<25	143
WLAN	<25	<25	46	<25	<25	140

7.6 EUT Testing Position

Head/Body mode SAR assessments are required for this device. This EUT was tested in different positions for different SAR test modes, more information as below:

Head SAR tests				
Antennas	Right Cheek	Left Cheek	Right Tilted	Left Tilted
WWAN	Yes	Yes	Yes	Yes
WLAN	Yes	Yes	Yes	Yes

Body SAR tests, Test distance: 10mm						
Antennas	Back side	Front side	Left Edge	Right Edge	Top Edge	Bottom Edge
WWAN-ANT1	Yes	Yes	Yes	Yes	No	Yes
WWAN-ANT2	Yes	Yes	Yes	No	No	Yes
WWAN-ANT3	Yes	Yes	Yes	No	Yes	No
WLAN	Yes	Yes	No	Yes	Yes	No

Remark:

- Referring to KDB 941225 D06, when the overall device length and width are $\geq 9\text{cm} \times 5\text{cm}$, the test separation distances is 10 mm. SAR must be measured for all sides and surfaces with a transmitting antenna located within 25mm from that surface or edge.
- Referring to KDB 648474 D04 Handset SAR v01r03, 10-g extremity SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR $> 1.2 \text{ W/kg}$

Please refer to Annex D for the EUT test setup photos.

8. SAR Measurement Procedures

8.1 Measurement Procedures

The measurement procedures are as follows:

- (a) Use base station simulator (if applicable) or engineering software to transmit RF power continuously (continuous Tx) in the highest power channel.
- (b) Keep EUT to radiate maximum output power or 100% factor (if applicable)
- (c) Measure output power through RF cable and power meter.
- (d) Place the EUT in the positions as Annex D demonstrates.
- (e) Set scan area, grid size and other setting on the SATIMO software.
- (f) Measure SAR results for the highest power channel on each testing position.
- (g) Find out the largest SAR result on these testing positions of each band
- (h) Measure SAR results for other channels in worst SAR testing position if the SAR of highest power channel is larger than 0.8 W/kg

According to the test standard, the recommended procedure for assessing the peak spatial-average SAR value consists of the following steps:

- (a) Power reference measurement
- (b) Area scan
- (c) Zoom scan
- (d) Power drift measurement

8.2 Spatial Peak SAR Evaluation

The procedure for spatial peak SAR evaluation has been implemented according to the test standard. It can be conducted for 1g and 10g, as well as for user-specific masses. The SATIMO software includes all numerical procedures necessary to evaluate the spatial peak SAR value.

The base for the evaluation is a "cube" measurement. The measured volume must include the 1g and 10g cubes with the highest averaged SAR values. For that purpose, the center of the measured volume is aligned to the interpolated peak SAR value of a previously performed area scan.

The entire evaluation of the spatial peak values is performed within the post-processing engine. The system always gives the maximum values for the 1g and 10g cubes. The algorithm to find the cube with highest averaged SAR is divided into the following stages:

- (a) Extraction of the measured data (grid and values) from the Zoom Scan
- (b) Calculation of the SAR value at every measurement point based on all stored data
- (c) Generation of a high-resolution mesh within the measured volume
- (d) Interpolation of all measured values from the measurement grid to the high-resolution grid
- (e) Extrapolation of the entire 3D field distribution to the phantom surface over the distance from sensor to surface
- (f) Calculation of the averaged SAR within masses of 1g and 10g

8.3 Area & Zoom Scan Procedures

First Area Scan is used to locate the approximate location(s) of the local peak SAR value(s). The measurement grid within an Area Scan is defined by the grid extent, grid step size and grid offset. Next, in order to determine the EM field distribution in a three-dimensional spatial extension, Zoom Scan is required. The Zoom Scan measures 5x5x7 points with step size 8, 8 and 5 mm for 300 MHz to 3 GHz, and 8x8x8 points with step size 4, 4 and 2.5 mm for 3 GHz to 6 GHz. The Zoom Scan is performed around the highest E-field value to determine the averaged SAR-distribution over 10 g.

8.4 Volume Scan Procedures

The volume scan is used for assess overlapping SAR distributions for antennas transmitting in different frequency bands. It is equivalent to an oversized zoom scan used in standalone measurements. The measurement volume will be used to enclose all the simultaneous transmitting antennas. For antennas transmitting simultaneously in different frequency bands, the volume scan is measured separately in each frequency band. In order to sum correctly to compute the 1g aggregate SAR, the EUT remain in the same test position for all measurements and all volume scan use the same spatial resolution and grid spacing (step-size is 4, 4 and 2.5 mm). When all volume scan were completed, the software can combine and subsequently superpose these measurement data to calculating the multiband SAR.

8.5 SAR Averaged Methods

The local SAR inside the phantom is measured using small dipole sensing elements inside a probe body. The probe tip must not be in contact with the phantom surface in order to minimize measurements errors, but the highest local SAR will occur at the surface of the phantom.

An extrapolation is using to determinate this highest local SAR values. The extrapolation is based on a fourth-order least-square polynomial fit of measured data. The local SAR value is then extrapolated from the liquid surface with a 1mm step.

The measurements have to be performed over a limited time (due to the duration of the battery) so the step of measurement is high. It could vary between 5 and 8 mm. To obtain an accurate assessment of the maximum SAR averaged over 10g and 1 g requires a very fine resolution in the three dimensional scanned data array.

8.6 Power Drift Monitoring

All SAR testing is under the EUT install full charged battery and transmit maximum output power. In SATIMO measurement software, the power reference measurement and power drift measurement procedures are used for monitoring the power drift of EUT during SAR test. Both these procedures measure the field at a specified reference position before and after the SAR testing. The software will calculate the field difference in dB. If the power drift more than 5%, the SAR will be retested.

9. SAR Test Result

9.1 Conducted RF Output Power

GSM - Burst Average Power (dBm)								
Band	GSM850			Tune-up power (dBm)	PCS1900			Tune-up power (dBm)
Channel	128	190	251		512	661	810	
Frequency (MHz)	824.2	836.6	848.8		1850.2	1880	1909.8	
GSM	32.56	32.52	32.41	33.0	29.68	29.01	29.49	30.0
GPRS (1 slot)	32.59	32.55	32.45	33.0	29.62	28.97	29.53	30.0
GPRS (2 slots)	31.92	31.91	31.82	32.0	28.00	28.48	27.92	28.0
GPRS (3 slots)	30.19	30.20	30.14	30.5	26.39	26.83	27.11	27.5
GPRS (4 slots)	28.81	28.89	28.87	29.0	25.22	25.58	25.65	26.0
EDGE (1 slot)	26.57	26.64	26.58	27.0	26.43	26.79	26.93	27.0
EDGE (2 slots)	25.23	25.41	25.38	25.5	25.34	25.70	25.87	26.0
EDGE (3 slots)	23.34	23.33	23.33	23.5	23.46	23.78	23.96	24.0
EDGE (4 slots)	22.27	22.36	22.40	22.5	22.44	22.75	23.00	23.5

GSM - Source-Based Time-Average Power (dBm)								
Band	GSM850			Tune-up power (dBm)	PCS1900			Tune-up power (dBm)
Channel	128	190	251		512	661	810	
Frequency (MHz)	824.2	836.6	848.8		1850.2	1880	1909.8	
GSM	23.56	23.52	23.41	24.0	20.68	20.01	20.49	21.0
GPRS (1 slot)	23.59	23.55	23.45	24.0	20.62	19.97	20.53	21.0
GPRS (2 slots)	25.92	25.91	25.82	26.0	22.00	22.48	21.92	22.5
GPRS (3 slots)	25.94	25.95	25.89	26.0	22.14	22.58	22.86	23.0
GPRS (4 slots)	25.81	25.89	25.87	26.0	22.22	22.58	22.65	23.0
EDGE (1 slot)	17.57	17.64	17.58	18.0	17.43	17.79	17.93	18.0
EDGE (2 slots)	19.23	19.41	19.38	19.5	19.34	19.70	19.87	20.0
EDGE (3 slots)	19.09	19.08	19.08	19.5	19.21	19.53	19.71	20.0
EDGE (4 slots)	19.27	19.36	19.40	19.5	19.44	19.75	20.00	20.5
Note: The source-based time-averaged power is linearly scaled the maximum burst averaged power based on time slots. The calculated method are shown as below: Source based time-average power = Burst averaged power - Duty cycle factor in dB Duty cycle factor = 9 dB for 1 Tx slot, 6 dB for 2 Tx slots, 4.25 dB for 3 Tx slots, 3 dB for 4 Tx slots								

Remark:

1. For Head SAR testing, GSM should be evaluated; therefore the EUT was set in GSM for GSM850 and GSM1900 due to its highest source-based time-average power.
2. For Body SAR testing, GPRS should be evaluated; therefore the EUT was set in GPRS (3TX slots) for GSM850 and GPRS (3TX slots) for GSM1900 due to its highest source-based time-average power.

Waltek Testing Group (Shenzhen) Co., Ltd.

<http://www.semtest.com.cn>

3. Per KDB 447498 D01 v06, the maximum output power channel is used for SAR testing and for further SAR test reduction.
4. The DUT do not support DTM function.
5. The DUT do not support Hotspot function.

WCDMA - Average Power (dBm)								
Band	WCDMA Band II				WCDMA Band V			
Channel	9262	9400	9538	Tune-up	4132	4183	4233	Tune-up
Frequency (MHz)	1852.4	1880.0	1907.6	power (dBm)	826.4	836.4	846.6	power (dBm)
RMC 12.2k	23.08	23.22	23.24	23.5	23.57	23.54	23.49	24.0
HSDPA Subtest-1	22.09	22.22	22.34	22.5	22.58	22.54	22.52	23.0
HSDPA Subtest-2	22.05	22.19	22.31	22.5	22.56	22.51	22.49	23.0
HSDPA Subtest-3	22.04	22.18	22.31	22.5	22.57	22.53	22.48	23.0
HSDPA Subtest-4	22.06	22.18	22.32	22.5	22.56	22.52	22.49	23.0
HSUPA Subtest-1	22.09	22.21	22.27	22.5	22.55	22.49	22.50	23.0
HSUPA Subtest-2	22.05	22.19	22.26	22.5	22.51	22.46	22.48	23.0
HSUPA Subtest-3	22.06	22.18	22.25	22.5	22.53	22.47	22.47	23.0
HSUPA Subtest-4	22.07	22.19	22.24	22.5	22.52	22.48	22.46	23.0
HSUPA Subtest-5	22.07	22.19	22.25	22.5	22.53	22.48	22.47	23.0

WCDMA - Average Power (dBm)				
Band	WCDMA Band IV			
Channel	1312	1412	1513	Tune-up
Frequency (MHz)	1712.4	1732.4	1752.6	power (dBm)
RMC 12.2k	23.44	23.39	23.39	23.5
HSDPA Subtest-1	22.44	22.39	22.38	22.5
HSDPA Subtest-2	22.42	22.35	22.35	22.5
HSDPA Subtest-3	22.43	22.36	22.34	22.5
HSDPA Subtest-4	22.41	22.37	22.37	22.5
HSUPA Subtest-1	22.37	22.32	22.35	22.5
HSUPA Subtest-2	22.31	22.29	22.31	22.5
HSUPA Subtest-3	22.35	22.28	22.32	22.5
HSUPA Subtest-4	22.32	22.29	22.33	22.5
HSUPA Subtest-5	22.35	22.30	22.32	22.5

Remark:

1. Per KDB 941225 D01 v03, the 12.2kbps RMC mode was selected for SAR testing (the primary mode).
2. When the maximum output power and tune-up tolerance specified for production units in a secondary mode is $\leq 1/4$ 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

Waltek Testing Group (Shenzhen) Co., Ltd.

<http://www.semtest.com.cn>

FDD-LTE Band 2:

Channel Bandwidth: 1.4 MHz					
Modulation	Channel	RB Configuration		Average Power [dBm]	MPR (dB)
		Size	Offset		
QPSK	LCH	1	0	24.70	0
		1	3	24.82	0
		1	5	24.71	0
		3	0	24.82	0
		3	2	24.88	0
		3	3	24.85	0
		6	0	23.83	1
	MCH	1	0	24.90	0
		1	3	24.96	0
		1	5	24.92	0
		3	0	25.03	0
		3	2	25.01	0
		3	3	25.01	0
		6	0	24.00	1
	HCH	1	0	25.03	0
		1	3	25.06	0
		1	5	25.02	0
		3	0	25.01	0
		3	2	25.06	0
		3	3	25.01	0
		6	0	24.24	1
16QAM	LCH	1	0	23.97	1
		1	3	24.25	1
		1	5	23.97	1
		3	0	23.97	1
		3	2	23.98	1
		3	3	23.95	1
		6	0	22.80	2
	MCH	1	0	24.22	1
		1	3	24.40	1
		1	5	24.25	1
		3	0	23.99	1
		3	2	24.03	1
		3	3	24.01	1
		6	0	22.94	2
	HCH	1	0	24.27	1
		1	3	24.47	1

		1	5	24.29	1
		3	0	24.19	1
		3	2	24.21	1
		3	3	24.17	1
		6	0	23.34	2

Channel Bandwidth: 3 MHz					
Modulation	Channel	RB Configuration		Average Power [dBm]	MPR (dB)
		Size	Offset		
QPSK	LCH	1	0	24.70	0
		1	7	24.96	0
		1	14	24.74	0
		8	0	23.80	1
		8	4	23.81	1
		8	7	23.81	1
		15	0	23.79	1
	MCH	1	0	24.89	0
		1	7	25.12	0
		1	14	24.86	0
		8	0	23.94	1
		8	4	23.99	1
		8	7	23.92	1
		15	0	23.87	1
	HCH	1	0	25.11	0
		1	7	25.10	0
		1	14	25.12	0
		8	0	24.12	1
		8	4	24.17	1
		8	7	24.12	1
		15	0	24.11	1
16QAM	LCH	1	0	24.00	1
		1	7	24.26	1
		1	14	23.98	1
		8	0	22.87	2
		8	4	22.93	2
		8	7	22.85	2
		15	0	22.76	2
	MCH	1	0	24.21	1
		1	7	24.43	1
		1	14	24.28	1
		8	0	22.96	2
		8	4	22.94	2

		8	7	22.92	2
		15	0	22.91	2
	HCH	1	0	24.25	1
		1	7	24.50	1
		1	14	24.27	1
		8	0	23.06	2
		8	4	23.13	2
		8	7	23.08	2
		15	0	23.12	2

Channel Bandwidth: 5 MHz					
Modulation	Channel	RB Configuration		Average Power [dBm]	MPR (dB)
		Size	Offset		
QPSK	LCH	1	0	24.71	0
		1	12	25.03	0
		1	24	24.75	0
		12	0	23.76	1
		12	6	23.84	1
		12	13	23.80	1
		25	0	23.81	1
	MCH	1	0	24.84	0
		1	12	25.18	0
		1	24	24.85	0
		12	0	23.94	1
		12	6	23.99	1
		12	13	23.88	1
		25	0	23.96	1
	HCH	1	0	25.04	0
		1	12	25.11	0
		1	24	25.10	0
		12	0	24.15	1
		12	6	24.14	1
		12	13	24.10	1
		25	0	24.09	1
16QAM	LCH	1	0	23.97	1
		1	12	24.32	1
		1	24	23.98	1
		12	0	22.83	2
		12	6	22.92	2
		12	13	22.91	2
		25	0	22.86	2
	MCH	1	0	24.10	1

		1	12	24.30	1
		1	24	24.11	1
		12	0	23.04	2
		12	6	23.10	2
		12	13	23.03	2
		25	0	22.98	2
	HCH	1	0	24.14	1
		1	12	24.51	1
		1	24	24.20	1
		12	0	23.09	2
		12	6	23.11	2
		12	13	23.10	2
		25	0	23.16	2

Channel Bandwidth: 10 MHz					
Modulation	Channel	RB Configuration		Average Power [dBm]	MPR (dB)
		Size	Offset		
QPSK	LCH	1	0	24.72	0
		1	24	24.90	0
		1	49	24.77	0
		25	0	23.85	1
		25	12	23.84	1
		25	25	23.96	1
		50	0	23.85	1
	MCH	1	0	24.90	0
		1	24	25.01	0
		1	49	24.86	0
		25	0	24.00	1
		25	12	23.92	1
		25	25	23.95	1
		50	0	23.99	1
	HCH	1	0	25.03	0
		1	24	25.18	0
		1	49	25.13	0
		25	0	24.15	1
		25	12	24.07	1
		25	25	24.08	1
		50	0	24.05	1
16QAM	LCH	1	0	24.04	1
		1	24	24.17	1
		1	49	24.05	1
		25	0	22.89	2

		25	12	22.87	2
		25	25	22.96	2
		50	0	22.92	2
	MCH	1	0	24.22	1
		1	24	24.40	1
		1	49	24.29	1
		25	0	23.06	2
		25	12	22.98	2
		25	25	23.02	2
		50	0	23.04	2
	HCH	1	0	24.16	1
		1	24	24.33	1
		1	49	24.29	1
		25	0	23.18	2
		25	12	23.07	2
		25	25	23.06	2
		50	0	23.10	2

Channel Bandwidth: 15 MHz					
Modulation	Channel	RB Configuration		Average Power [dBm]	MPR (dB)
		Size	Offset		
QPSK	LCH	1	0	24.66	0
		1	37	25.02	0
		1	74	24.73	0
		37	0	23.89	1
		37	18	23.94	1
		37	38	24.00	1
		75	0	23.95	1
	MCH	1	0	24.90	0
		1	37	25.14	0
		1	74	24.83	0
		37	0	24.10	1
		37	18	24.06	1
		37	38	24.02	1
		75	0	24.08	1
	HCH	1	0	24.97	0
		1	37	25.17	0
		1	74	25.08	0
		37	0	24.23	1
		37	18	24.25	1
		37	38	24.19	1
		75	0	24.17	1

16QAM	LCH	1	0	24.01	1
		1	37	24.29	1
		1	74	23.98	1
		37	0	22.83	2
		37	18	22.88	2
		37	38	22.91	2
		75	0	22.91	2
	MCH	1	0	24.12	1
		1	37	24.35	1
		1	74	24.13	1
		37	0	23.03	2
		37	18	23.01	2
		37	38	22.95	2
		75	0	23.04	2
	HCH	1	0	24.14	1
		1	37	24.45	1
		1	74	24.23	1
		37	0	23.12	2
		37	18	23.17	2
		37	38	23.13	2
		75	0	23.14	2

Channel Bandwidth: 20 MHz					
Modulation	Channel	RB Configuration		Average Power [dBm]	MPR (dB)
		Size	Offset		
QPSK	LCH	1	0	24.61	0
		1	49	25.19	0
		1	99	24.74	0
		50	0	23.80	1
		50	25	23.93	1
		50	50	23.93	1
		100	0	23.84	1
	MCH	1	0	24.76	0
		1	49	25.12	0
		1	99	24.71	0
		50	0	24.02	1
		50	25	24.01	1
		50	50	24.01	1
		100	0	23.97	1
	HCH	1	0	24.65	0
		1	49	25.09	0
		1	99	24.80	0

		50	0	24.01	1
		50	25	24.05	1
		50	50	23.92	1
		100	0	23.98	1
16QAM	LCH	1	0	23.88	1
		1	49	24.27	1
		1	99	23.92	1
		50	0	22.82	2
		50	25	22.93	2
		50	50	22.90	2
		100	0	22.84	2
	MCH	1	0	24.06	1
		1	49	24.45	1
		1	99	24.07	1
		50	0	23.08	2
		50	25	23.06	2
		50	50	23.06	2
		100	0	22.97	2
	HCH	1	0	23.98	1
		1	49	24.28	1
		1	99	24.03	1
		50	0	23.06	2
		50	25	23.06	2
		50	50	22.92	2
		100	0	22.99	2

FDD-LTE Band 4:

Channel Bandwidth: 1.4 MHz					
Modulation	Channel	RB Configuration		Average Power [dBm]	MPR (dB)
		Size	Offset		
QPSK	LCH	1	0	24.37	0
		1	3	24.51	0
		1	5	24.39	0
		3	0	24.48	0
		3	2	24.51	0
		3	3	24.43	0
		6	0	23.48	1
	MCH	1	0	24.31	0
		1	3	24.38	0
		1	5	24.26	0
		3	0	24.37	0
		3	2	24.37	0
		3	3	24.37	0
		6	0	23.34	1
	HCH	1	0	24.13	0
		1	3	24.28	0
		1	5	24.12	0
		3	0	24.23	0
		3	2	24.26	0
		3	3	24.22	0
		6	0	23.26	1
16QAM	LCH	1	0	23.59	1
		1	3	23.80	1
		1	5	23.59	1
		3	0	23.58	1
		3	2	23.62	1
		3	3	23.59	1
		6	0	22.46	2
	MCH	1	0	23.67	1
		1	3	23.85	1
		1	5	23.64	1
		3	0	23.37	1
		3	2	23.41	1
		3	3	23.38	1
		6	0	22.32	2
	HCH	1	0	23.39	1
		1	3	23.55	1

		1	5	23.37	1
		3	0	23.29	1
		3	2	23.30	1
		3	3	23.29	1
		6	0	22.36	2

Channel Bandwidth: 3 MHz					
Modulation	Channel	RB Configuration		Average Power [dBm]	MPR (dB)
		Size	Offset		
QPSK	LCH	1	0	24.37	0
		1	7	24.61	0
		1	14	24.34	0
		8	0	23.45	1
		8	4	23.46	1
		8	7	23.44	1
		15	0	23.42	1
	MCH	1	0	24.27	0
		1	7	24.52	0
		1	14	24.24	0
		8	0	23.32	1
		8	4	23.34	1
		8	7	23.31	1
		15	0	23.26	1
	HCH	1	0	24.23	0
		1	7	24.43	0
		1	14	24.16	0
		8	0	23.22	1
		8	4	23.23	1
		8	7	23.17	1
		15	0	23.17	1
16QAM	LCH	1	0	23.68	1
		1	7	23.83	1
		1	14	23.63	1
		8	0	22.51	2
		8	4	22.56	2
		8	7	22.49	2
		15	0	22.40	2
	MCH	1	0	23.67	1
		1	7	23.95	1
		1	14	23.67	1
		8	0	22.36	2
		8	4	22.37	2

		8	7	22.30	2
		15	0	22.30	2
	HCH	1	0	23.47	1
		1	7	23.60	1
		1	14	23.40	1
		8	0	22.19	2
		8	4	22.22	2
		8	7	22.15	2
		15	0	22.18	2

Channel Bandwidth: 5 MHz					
Modulation	Channel	RB Configuration		Average Power [dBm]	MPR (dB)
		Size	Offset		
QPSK	LCH	1	0	24.37	0
		1	12	24.52	0
		1	24	24.35	0
		12	0	23.45	1
		12	6	23.49	1
		12	13	23.36	1
		25	0	23.42	1
	MCH	1	0	24.28	0
		1	12	24.57	0
		1	24	24.24	0
		12	0	23.36	1
		12	6	23.38	1
		12	13	23.31	1
		25	0	23.34	1
	HCH	1	0	24.22	0
		1	12	24.55	0
		1	24	24.17	0
		12	0	23.21	1
		12	6	23.28	1
		12	13	23.19	1
		25	0	23.24	1
16QAM	LCH	1	0	23.62	1
		1	12	23.89	1
		1	24	23.64	1
		12	0	22.47	2
		12	6	22.53	2
		12	13	22.41	2
		25	0	22.46	2
	MCH	1	0	23.56	1

		1	12	23.78	1
		1	24	23.47	1
		12	0	22.43	2
		12	6	22.51	2
		12	13	22.42	2
		25	0	22.38	2
	HCH	1	0	23.38	1
		1	12	23.65	1
		1	24	23.37	1
		12	0	22.24	2
		12	6	22.24	2
		12	13	22.21	2
		25	0	22.29	2

Channel Bandwidth: 10 MHz					
Modulation	Channel	RB Configuration		Average Power [dBm]	MPR (dB)
		Size	Offset		
QPSK	LCH	1	0	24.34	0
		1	24	24.53	0
		1	49	24.34	0
		25	0	23.53	1
		25	12	23.46	1
		25	25	23.42	1
		50	0	23.46	1
	MCH	1	0	24.31	0
		1	24	24.41	0
		1	49	24.20	0
		25	0	23.41	1
		25	12	23.36	1
		25	25	23.37	1
		50	0	23.36	1
	HCH	1	0	24.18	0
		1	24	24.33	0
		1	49	24.15	0
		25	0	23.28	1
		25	12	23.27	1
		25	25	23.29	1
		50	0	23.29	1
16QAM	LCH	1	0	23.68	1
		1	24	23.83	1
		1	49	23.64	1
		25	0	22.51	2

		25	12	22.46	2
		25	25	22.48	2
		50	0	22.46	2
	MCH	1	0	23.72	1
		1	24	23.86	1
		1	49	23.64	1
		25	0	22.45	2
		25	12	22.41	2
		25	25	22.41	2
		50	0	22.43	2
	HCH	1	0	23.47	1
		1	24	23.59	1
		1	49	23.40	1
		25	0	22.30	2
		25	12	22.25	2
		25	25	22.28	2
		50	0	22.29	2

Channel Bandwidth: 15 MHz					
Modulation	Channel	RB Configuration		Average Power [dBm]	MPR (dB)
		Size	Offset		
QPSK	LCH	1	0	24.33	0
		1	37	24.47	0
		1	74	24.20	0
		37	0	23.55	1
		37	18	23.55	1
		37	38	23.45	1
		75	0	23.55	1
	MCH	1	0	24.26	0
		1	37	24.37	0
		1	74	24.15	0
		37	0	23.43	1
		37	18	23.40	1
		37	38	23.37	1
		75	0	23.44	1
	HCH	1	0	24.21	0
		1	37	24.35	0
		1	74	24.10	0
		37	0	23.36	1
		37	18	23.30	1
		37	38	23.30	1
		75	0	23.33	1

16QAM	LCH	1	0	23.62	1
		1	37	23.82	1
		1	74	23.52	1
		37	0	22.43	2
		37	18	22.49	2
		37	38	22.42	2
		75	0	22.51	2
	MCH	1	0	23.59	1
		1	37	23.77	1
		1	74	23.44	1
		37	0	22.42	2
		37	18	22.40	2
		37	38	22.34	2
		75	0	22.41	2
	HCH	1	0	23.49	1
		1	37	23.81	1
		1	74	23.36	1
		37	0	22.28	2
		37	18	22.28	2
		37	38	22.25	2
		75	0	22.31	2

Channel Bandwidth: 20 MHz					
Modulation	Channel	RB Configuration		Average Power [dBm]	MPR (dB)
		Size	Offset		
QPSK	LCH	1	0	24.27	0
		1	49	24.65	0
		1	99	24.10	0
		50	0	23.46	1
		50	25	23.42	1
		50	50	23.34	1
		100	0	23.39	1
	MCH	1	0	24.16	0
		1	49	24.49	0
		1	99	23.98	0
		50	0	23.41	1
		50	25	23.37	1
		50	50	23.26	1
		100	0	23.30	1
	HCH	1	0	23.98	0
		1	49	24.26	0
		1	99	23.85	0

		50	0	23.28	1
		50	25	23.24	1
		50	50	23.24	1
		100	0	23.26	1
16QAM	LCH	1	0	23.47	1
		1	49	23.77	1
		1	99	23.34	1
		50	0	22.44	2
		50	25	22.47	2
		50	50	22.36	2
		100	0	22.42	2
	MCH	1	0	23.54	1
		1	49	23.84	1
		1	99	23.36	1
		50	0	22.46	2
		50	25	22.41	2
		50	50	22.32	2
		100	0	22.33	2
	HCH	1	0	23.29	1
		1	49	23.59	1
		1	99	23.16	1
		50	0	22.31	2
		50	25	22.27	2
		50	50	22.24	2
		100	0	22.29	2

FDD-LTE Band 5:

Channel Bandwidth: 1.4 MHz					
Modulation	Channel	RB Configuration		Average Power [dBm]	MPR (dB)
		Size	Offset		
QPSK	LCH	1	0	24.31	0
		1	3	24.37	0
		1	5	24.32	0
		3	0	24.37	0
		3	2	24.43	0
		3	3	24.38	0
		6	0	23.44	1
	MCH	1	0	24.31	0
		1	3	24.49	0
		1	5	24.32	0
		3	0	24.37	0
		3	2	24.36	0
		3	3	24.32	0
		6	0	23.48	1
	HCH	1	0	24.27	0
		1	3	24.45	0
		1	5	24.29	0
		3	0	24.33	0
		3	2	24.34	0
		3	3	24.30	0
		6	0	23.48	1
16QAM	LCH	1	0	23.46	1
		1	3	23.67	1
		1	5	23.50	1
		3	0	23.41	1
		3	2	23.46	1
		3	3	23.46	1
		6	0	22.34	2
	MCH	1	0	23.51	1
		1	3	23.71	1
		1	5	23.53	1
		3	0	23.21	1
		3	2	23.23	1
		3	3	23.23	1
		6	0	22.35	2
	HCH	1	0	23.40	1
		1	3	23.58	1

		1	5	23.40	1
		3	0	23.29	1
		3	2	23.30	1
		3	3	23.27	1
		6	0	22.49	2

Channel Bandwidth: 3 MHz					
Modulation	Channel	RB Configuration		Average Power [dBm]	MPR (dB)
		Size	Offset		
QPSK	LCH	1	0	24.29	0
		1	7	24.60	0
		1	14	24.35	0
		8	0	23.45	1
		8	4	23.46	1
		8	7	23.41	1
		15	0	23.38	1
	MCH	1	0	24.40	0
		1	7	24.58	0
		1	14	24.37	0
		8	0	23.47	1
		8	4	23.49	1
		8	7	23.44	1
		15	0	23.35	1
	HCH	1	0	24.40	0
		1	7	24.57	0
		1	14	24.33	0
		8	0	23.40	1
		8	4	23.46	1
		8	7	23.40	1
		15	0	23.38	1
16QAM	LCH	1	0	23.54	1
		1	7	23.76	1
		1	14	23.65	1
		8	0	22.48	2
		8	4	22.53	2
		8	7	22.46	2
		15	0	22.34	2
	MCH	1	0	23.65	1
		1	7	23.79	1
		1	14	23.60	1
		8	0	22.38	2
		8	4	22.38	2

		8	7	22.35	2
		15	0	22.30	2
	HCH	1	0	23.64	1
		1	7	23.74	1
		1	14	23.44	1
		8	0	22.34	2
		8	4	22.35	2
		8	7	22.29	2
		15	0	22.29	2

Channel Bandwidth: 5 MHz					
Modulation	Channel	RB Configuration		Average Power [dBm]	MPR (dB)
		Size	Offset		
QPSK	LCH	1	0	24.29	0
		1	12	24.75	0
		1	24	24.42	0
		12	0	23.45	1
		12	6	23.46	1
		12	13	23.40	1
		25	0	23.45	1
	MCH	1	0	24.36	0
		1	12	24.62	0
		1	24	24.27	0
		12	0	23.35	1
		12	6	23.43	1
		12	13	23.41	1
		25	0	23.36	1
	HCH	1	0	24.37	0
		1	12	24.66	0
		1	24	24.36	0
		12	0	23.40	1
		12	6	23.43	1
		12	13	23.36	1
		25	0	23.36	1
16QAM	LCH	1	0	23.53	1
		1	12	23.82	1
		1	24	23.61	1
		12	0	22.43	2
		12	6	22.50	2
		12	13	22.39	2
		25	0	22.44	2
	MCH	1	0	23.46	1

		1	12	23.69	1
		1	24	23.40	1
		12	0	22.38	2
		12	6	22.46	2
		12	13	22.43	2
		25	0	22.34	2
	HCH	1	0	23.55	1
		1	12	23.73	1
		1	24	23.41	1
		12	0	22.35	2
		12	6	22.40	2
		12	13	22.31	2
		25	0	22.42	2

Channel Bandwidth: 10 MHz					
Modulation	Channel	RB Configuration		Average Power [dBm]	MPR (dB)
		Size	Offset		
QPSK	LCH	1	0	24.31	0
		1	24	24.57	0
		1	49	24.34	0
		25	0	23.57	1
		25	12	23.42	1
		25	25	23.53	1
		50	0	23.50	1
	MCH	1	0	24.79	0
		1	24	24.55	0
		1	49	24.27	0
		25	0	23.37	1
		25	12	23.46	1
		25	25	23.43	1
		50	0	23.35	1
	HCH	1	0	24.38	0
		1	24	24.57	0
		1	49	24.33	0
		25	0	23.55	1
		25	12	23.44	1
		25	25	23.41	1
		50	0	23.47	1
16QAM	LCH	1	0	23.55	1
		1	24	23.86	1
		1	49	23.56	1
		25	0	22.59	2

		25	12	22.49	2
		25	25	22.53	2
		50	0	22.47	2
	MCH	1	0	23.72	1
		1	24	23.74	1
		1	49	23.64	1
		25	0	22.35	2
		25	12	22.36	2
		25	25	22.40	2
		50	0	22.35	2
	HCH	1	0	23.59	1
		1	24	23.80	1
		1	49	23.48	1
		25	0	22.58	2
		25	12	22.44	2
		25	25	22.40	2
		50	0	22.46	2

FDD-LTE Band 7:

Channel Bandwidth: 5 MHz					
Modulation	Channel	RB Configuration		Average Power [dBm]	MPR (dB)
		Size	Offset		
QPSK	LCH	1	0	24.52	0
		1	12	24.77	0
		1	24	24.46	0
		12	0	23.52	1
		12	6	23.63	1
		12	13	23.61	1
		25	0	23.63	1
	MCH	1	0	24.37	0
		1	12	24.67	0
		1	24	24.28	0
		12	0	23.37	1
		12	6	23.44	1
		12	13	23.38	1
		25	0	23.43	1
	HCH	1	0	24.11	0
		1	12	24.40	0
		1	24	24.08	0
		12	0	23.14	1
		12	6	23.22	1
		12	13	23.17	1
		25	0	23.17	1
16QAM	LCH	1	0	23.84	1
		1	12	23.91	1
		1	24	23.74	1
		12	0	22.59	2
		12	6	22.71	2
		12	13	22.66	2
		25	0	22.65	2
	MCH	1	0	23.66	1
		1	12	23.92	1
		1	24	23.59	1
		12	0	22.50	2
		12	6	22.56	2
		12	13	22.55	2
		25	0	22.51	2
	HCH	1	0	23.34	1
		1	12	23.78	1

		1	24	23.23	1
		12	0	22.15	2
		12	6	22.26	2
		12	13	22.23	2
		25	0	22.23	2

Channel Bandwidth: 10 MHz					
Modulation	Channel	RB Configuration		Average Power [dBm]	MPR (dB)
		Size	Offset		
QPSK	LCH	1	0	24.52	0
		1	24	24.63	0
		1	49	24.50	0
		25	0	23.58	1
		25	12	23.59	1
		25	25	23.60	1
		50	0	23.60	1
	MCH	1	0	24.37	0
		1	24	24.51	0
		1	49	24.28	0
		25	0	23.40	1
		25	12	23.42	1
		25	25	23.51	1
		50	0	23.48	1
	HCH	1	0	24.16	0
		1	24	24.31	0
		1	49	24.08	0
		25	0	23.12	1
		25	12	23.22	1
		25	25	23.33	1
		50	0	23.24	1
16QAM	LCH	1	0	23.85	1
		1	24	23.95	1
		1	49	23.83	1
		25	0	22.58	2
		25	12	22.61	2
		25	25	22.66	2
		50	0	22.60	2
	MCH	1	0	23.78	1
		1	24	23.91	1
		1	49	23.70	1
		25	0	22.42	2
		25	12	22.49	2

		25	25	22.61	2
		50	0	22.53	2
	HCH	1	0	23.38	1
		1	24	23.57	1
		1	49	23.34	1
		25	0	22.18	2
		25	12	22.24	2
		25	25	22.42	2
		50	0	22.32	2

Channel Bandwidth: 15 MHz					
Modulation	Channel	RB Configuration		Average Power [dBm]	MPR (dB)
		Size	Offset		
QPSK	LCH	1	0	24.52	0
		1	37	24.60	0
		1	74	24.38	0
		37	0	23.58	1
		37	18	23.65	1
		37	38	23.59	1
		75	0	23.59	1
	MCH	1	0	24.39	0
		1	37	24.49	0
		1	74	24.15	0
		37	0	23.40	1
		37	18	23.42	1
		37	38	23.46	1
		75	0	23.46	1
	HCH	1	0	24.12	0
		1	37	24.28	0
		1	74	24.00	0
		37	0	23.31	1
		37	18	23.32	1
		37	38	23.40	1
		75	0	23.35	1
16QAM	LCH	1	0	23.84	1
		1	37	24.04	1
		1	74	23.68	1
		37	0	22.56	2
		37	18	22.62	2
		37	38	22.53	2
		75	0	22.57	2
	MCH	1	0	23.67	1

		1	37	23.87	1
		1	74	23.47	1
		37	0	22.39	2
		37	18	22.44	2
		37	38	22.47	2
		75	0	22.49	2
	HCH	1	0	23.35	1
		1	37	23.56	1
		1	74	23.25	1
		37	0	22.25	2
		37	18	22.23	2
		37	38	22.33	2
		75	0	22.30	2

Channel Bandwidth: 20 MHz					
Modulation	Channel	RB Configuration		Average Power [dBm]	MPR (dB)
		Size	Offset		
QPSK	LCH	1	0	24.41	0
		1	49	24.79	0
		1	99	24.27	0
		50	0	23.61	1
		50	25	23.60	1
		50	50	23.37	1
		100	0	23.44	1
	MCH	1	0	24.26	0
		1	49	24.57	0
		1	99	24.02	0
		50	0	23.30	1
		50	25	23.46	1
		50	50	23.46	1
		100	0	23.37	1
	HCH	1	0	23.87	0
		1	49	24.24	0
		1	99	23.77	0
		50	0	23.39	1
		50	25	23.27	1
		50	50	23.45	1
		100	0	23.38	1
16QAM	LCH	1	0	23.69	1
		1	49	24.01	1
		1	99	23.55	1
		50	0	22.57	2

		50	25	22.65	2
		50	50	22.43	2
		100	0	22.50	2
	MCH	1	0	23.61	1
		1	49	23.95	1
		1	99	23.40	1
		50	0	22.36	2
		50	25	22.55	2
		50	50	22.56	2
		100	0	22.42	2
	HCH	1	0	23.17	1
		1	49	23.52	1
		1	99	23.09	1
		50	0	22.42	2
		50	25	22.33	2
		50	50	22.50	2
		100	0	22.38	2

FDD-LTE Band 17:

Channel Bandwidth: 5 MHz					
Modulation	Channel	RB Configuration		Average Power [dBm]	MPR (dB)
		Size	Offset		
QPSK	LCH	1	0	24.56	0
		1	12	24.77	0
		1	24	24.55	0
		12	0	23.59	1
		12	6	23.59	1
		12	13	23.56	1
		25	0	23.58	1
	MCH	1	0	24.54	0
		1	12	24.84	0
		1	24	24.50	0
		12	0	23.53	1
		12	6	23.59	1
		12	13	23.66	1
		25	0	23.61	1
	HCH	1	0	24.57	0
		1	12	24.80	0
		1	24	24.47	0
		12	0	23.43	1
		12	6	23.54	1
		12	13	23.53	1
		25	0	23.48	1
16QAM	LCH	1	0	23.61	1
		1	12	23.98	1
		1	24	23.73	1
		12	0	22.57	2
		12	6	22.57	2
		12	13	22.56	2
		25	0	22.56	2
	MCH	1	0	23.66	1
		1	12	23.98	1
		1	24	23.75	1
		12	0	22.60	2
		12	6	22.63	2
		12	13	22.70	2
		25	0	22.60	2
	HCH	1	0	23.72	1
		1	12	23.99	1

		1	24	23.62	1
		12	0	22.41	2
		12	6	22.49	2
		12	13	22.49	2
		25	0	22.53	2

Channel Bandwidth: 10 MHz					
Modulation	Channel	RB Configuration		Average Power [dBm]	MPR (dB)
		Size	Offset		
QPSK	LCH	1	0	24.89	0
		1	24	24.66	0
		1	49	24.50	0
		25	0	23.70	1
		25	12	23.64	1
		25	25	23.82	1
		50	0	23.72	1
	MCH	1	0	24.66	0
		1	24	24.70	0
		1	49	24.47	0
		25	0	23.63	1
		25	12	23.60	1
		25	25	23.80	1
		50	0	23.69	1
	HCH	1	0	24.62	0
		1	24	24.71	0
		1	49	24.53	0
		25	0	23.59	1
		25	12	23.61	1
		25	25	23.76	1
		50	0	23.68	1
16QAM	LCH	1	0	23.67	1
		1	24	23.89	1
		1	49	23.74	1
		25	0	22.70	2
		25	12	22.59	2
		25	25	22.81	2
		50	0	22.71	2
	MCH	1	0	23.80	1
		1	24	24.03	1
		1	49	23.83	1
		25	0	22.67	2
		25	12	22.60	2

		25	25	22.82	2
		50	0	22.73	2
	HCH	1	0	23.73	1
		1	24	23.95	1
		1	49	23.73	1
		25	0	22.53	2
		25	12	22.57	2
		25	25	22.74	2
		50	0	22.67	2

Remark:

1. Per KDB941225 D05 v02r05, Start with the largest channel bandwidth then measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power among RB offsets at the upper edge, middle, and lower edge of each required test channel. When the reported SAR is ≤ 0.8 W/kg, testing of the remaining RB offset configurations and required test channels is not required for 1 RB allocation; otherwise, SAR is required for the remaining required test channels and only for the RB offset configuration with the highest output power for that channel. 6 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. Per KDB941225 D05 v02r05, The procedures required for 1 RB allocation in 5.2.1 are applied to measure the SAR for QPSK with 50% RB allocation.
3. Per KDB941225 D05 v02r05, 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 5.2.1 and 5.2.2 are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
4. Per KDB941225 D05 v02r05, For each modulation besides QPSK; e.g., 16-QAM, 64-QAM, apply the QPSK procedures in 5.2.1, 5.2.2, and 5.2.3 to determine the QAM configurations that may need SAR measurement. For each configuration identified as required for testing, SAR is required only when the highest maximum output power for the configuration in the higher order modulation is $> \frac{1}{2}$ dB higher than the same configuration in QPSK or when the reported SAR for the QPSK configuration is > 1.45 W/kg.

WLAN(2.4G) - Maximum Average Power					
Test Mode	Data Rate	Channel	Frequency (MHz)	Average Power (dBm)	Tune-up power (dBm)
802.11b	1Mbps	CH 01	2412	15.61	16.0
		CH 06	2437	15.08	15.5
		CH 11	2462	14.35	14.5
802.11g	6Mbps	CH 01	2412	14.21	14.5
		CH 06	2437	14.42	14.5
		CH 11	2462	13.77	14.0
802.11n (20MHz)	MCS7	CH 01	2412	13.26	13.5
		CH 06	2437	13.39	13.5
		CH 11	2462	12.74	13.0
802.11n (40MHz)	MCS7	CH 03	2422	13.41	13.5
		CH 06	2437	13.42	13.5
		CH 09	2452	12.68	13.0

WLAN(5.2G) - Conducted Power				
Test Mode	Channel	Frequency (MHz)	Average Power (dBm)	Tune-up power (dBm)
802.11a	36	5180	11.16	11.5
	40	5200	10.95	11.0
	48	5240	12.15	12.5
802.11n (HT20)	36	5180	11.35	11.5
	40	5200	11.13	11.5
	48	5240	11.51	12.0
802.11n (HT40)	38	5190	11.23	11.5
	46	5230	11.48	11.5
802.11ac (VHT80)	42	5210	11.04	11.5

WLAN(5.8G) - Conducted Power				
Test Mode	Channel	Frequency (MHz)	Average Power (dBm)	Tune-up power (dBm)
802.11a	CH 149	5745	9.99	10.0
	CH 157	5785	9.94	10.0
	CH 165	5825	10.02	10.5
802.11n (HT20)	CH 149	5745	9.92	10.0

	CH 157	5785	9.82	10.0
	CH 165	5825	10.02	10.5
802.11n (HT40)	CH 151	5755	10.21	10.5
	CH159	5795	9.54	10.0
802.11ac (VHT80)	CH155	5775	9.68	10.0

Remark:

1. Per KDB 248227 D01 v02r02, 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.
2. Per KDB 248227 D01 v02r02, For 802.11b DSSS SAR measurements ,when the reported SAR of the highest measured maximum output power channel (see 3.1) for the exposure configuration is ≤ 0.8 W/kg, no further SAR testing is required for 802.11b DSSS in that exposure configuration. 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.
- 3 .For OFDM modes (802.11g/n), SAR is not required when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and it is ≤ 1.2 W/kg.
4. Per KDB 248227 D01 v02r02, When multiple channel bandwidth configurations in a frequency band have the same specified maximum output power, the initial test configuration is determined by applying the following steps sequentially.
 - 1) The largest channel bandwidth configuration is selected among the multiple configurations in a frequency band with the same specified maximum output power.
 - 2) If multiple configurations have the same specified maximum output power and largest channel bandwidth, the lowest order modulation among the largest channel bandwidth configurations is selected.
 - 3) If multiple configurations have the same specified maximum output power, largest channel bandwidth and lowest order modulation, the lowest data rate configuration among these configurations is selected.
 - 4) When multiple transmission modes (802.11a/g/n/ac) have the same specified maximum output power, largest channel bandwidth, lowest order modulation and lowest data rate, the lowest order 802.11 mode is selected; i.e., 802.11a is chosen over 802.11n then 802.11ac or 802.11g is chosen over 802.11n.

Bluetooth - Maximum Average Power			
Test Mode	Data Rate	Average Power(dBm)	Tune-up power (dBm)
GFSK	1Mbps	7.873	8.0
Pi/4 QDPSK	2Mbps	7.321	7.5
8DPSK	3Mbps	7.322	7.5

Bluetooth - Maximum Average Power					
Test Mode	Data Rate	Channel	Frequency (MHz)	Average Power (dBm)	Tune-up power (dBm)
BLE	1Mbps	CH 00	2402	-6.89	-6.5
		CH 19	2440	-4.653	-4.5
		CH 39	2480	-5.128	-5.0

Remark:

Bluetooth maximum output power is 3.820dBm and Maximum Tune-Up output power is 4.0dBm,. Per KDB 447498 D01 V06, the 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR,¹⁶ where

- f(GHz) is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation¹⁷
- The result is rounded to one decimal place for comparison

Bluetooth:

Tune-Up Power (dBm)	Max. Power (mW)	Distance (mm)	Frequency (GHz)	Result	Limit
8.0	6.31	5	2.480	1.99	3

The exclusion threshold is $1.99 < 3$, therefore, the RF exposure evaluation is not required.

9.2 Test Results for Standalone SAR Test

Head SAR

GSM850 – Head SAR Test									
Plot No.	Mode	Test Position Head	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
1.	GSM	Right Cheek	128	824.2	32.56	33.0	1.107	0.262	0.290
2.	GSM	Right Tilted	128	824.2	32.56	33.0	1.107	0.124	0.137
3.	GSM	Left Cheek	128	824.2	32.56	33.0	1.107	0.231	0.256
4.	GSM	Left Tilted	128	824.2	32.56	33.0	1.107	0.108	0.120

GSM1900 – Head SAR Test									
Plot No.	Mode	Test Position Head	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	M Hz					
5.	GSM	Right Cheek	512	1850.2	29.68	30.0	1.076	0.053	0.057
6.	GSM	Right Tilted	512	1850.2	29.68	30.0	1.076	0.044	0.047
7.	GSM	Left Cheek	512	1850.2	29.68	30.0	1.076	0.028	0.030
8.	GSM	Left Tilted	512	1850.2	29.68	30.0	1.076	0.020	0.022

WCDMA Band 2 – Head SAR Test									
Plot No.	Mode	Test Position Head	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
9.	RMC	Right Cheek	9538	1907.6	23.24	23.5	1.062	0.173	0.184
10.	RMC	Right Tilted	9538	1907.6	23.24	23.5	1.062	0.135	0.143
11.	RMC	Left Cheek	9538	1907.6	23.24	23.5	1.062	0.068	0.072
12.	RMC	Left Tilted	9538	1907.6	23.24	23.5	1.062	0.056	0.059

WCDMA Band 4 – Head SAR Test									
Plot No.	Mode	Test Position Head	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
13.	RMC	Right Cheek	1312	1712.4	23.44	23.5	1.014	0.580	0.588
14.	RMC	Right Tilted	1312	1712.4	23.44	23.5	1.014	0.432	0.438
15.	RMC	Left Cheek	1312	1712.4	23.44	23.5	1.014	0.191	0.194
16.	RMC	Left Tilted	1312	1712.4	23.44	23.5	1.014	0.165	0.167

WCDMA Band 5 – Head SAR Test									
Plot No.	Mode	Test Position Head	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
17.	RMC	Right Cheek	4132	826.4	23.57	24.0	1.104	0.295	0.326
18.	RMC	Right Tilted	4132	826.4	23.57	24.0	1.104	0.142	0.157
19.	RMC	Left Cheek	4132	826.4	23.57	24.0	1.104	0.251	0.277
20.	RMC	Left Tilted	4132	826.4	23.57	24.0	1.104	0.113	0.125

LTE Band 2– Head SAR Test								
Plot No.	Mode	Test Position Head	Freque ncy	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
21.	QPSK 20MHz 1RB	Right Cheek	1860	25.19	25.5	1.074	0.327	0.351
22.	QPSK 20MHz 1RB	Right Tilted	1860	25.19	25.5	1.074	0.284	0.305
23.	QPSK 20MHz 1RB	Left Cheek	1860	25.19	25.5	1.074	0.158	0.170
24.	QPSK 20MHz 1RB	Left Tilted	1860	25.19	25.5	1.074	0.132	0.142
25.	QPSK 20MHz 50%RB	Right Cheek	1900	24.05	24.5	1.109	0.289	0.321
26.	QPSK 20MHz 50%RB	Right Tilted	1900	24.05	24.5	1.109	0.254	0.282
27.	QPSK 20MHz 50%RB	Left Cheek	1900	24.05	24.5	1.109	0.143	0.159
28.	QPSK 20MHz 50%RB	Left Tilted	1900	24.05	24.5	1.109	0.117	0.130

LTE Band 4– Head SAR Test								
Plot No.	Mode	Test Position	Freque ncy	Output Power	Rated Limit	Scaling	SAR1g	Scaled
	Modulation, Bandwidth, RB	Head	MHz	(dBm)	(dBm)	Factor	(W/kg)	SAR1g (W/kg)
29.	QPSK 20MHz 1RB	Right Cheek	1720	24.65	25.0	1.084	0.476	0.516
30.	QPSK 20MHz 1RB	Right Tilted	1720	24.65	25.0	1.084	0.412	0.447
31.	QPSK 20MHz 1RB	Left Cheek	1720	24.65	25.0	1.084	0.187	0.203
32.	QPSK 20MHz 1RB	Left Tilted	1720	24.65	25.0	1.084	0.156	0.169
33.	QPSK 20MHz 50%RB	Right Cheek	1720	23.46	23.5	1.009	0.358	0.361
34.	QPSK 20MHz 50%RB	Right Tilted	1720	23.46	23.5	1.009	0.321	0.324
35.	QPSK 20MHz 50%RB	Left Cheek	1720	23.46	23.5	1.009	0.164	0.166
36.	QPSK 20MHz 50%RB	Left Tilted	1720	23.46	23.5	1.009	0.125	0.126

LTE Band 5– Head SAR Test								
Plot No.	Mode	Test Position Head	Freque ncy	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth		MHz					
37.	QPSK 10MHz 1RB	Right Cheek	836.5	24.79	25.0	1.050	0.376	0.395
38.	QPSK 10MHz 1RB	Right Tilted	836.5	24.79	25.0	1.050	0.168	0.176
39.	QPSK 10MHz 1RB	Left Cheek	836.5	24.79	25.0	1.050	0.330	0.346

40.	QPSK 10MHz 1RB	Left Tilted	836.5	24.79	25.0	1.050	0.151	0.158
41.	QPSK 10MHz 50%RB	Right Cheek	829.0	23.57	24.0	1.104	0.290	0.320
42.	QPSK 10MHz 50%RB	Right Tilted	829.0	23.57	24.0	1.104	0.134	0.148
43.	QPSK 10MHz 50%RB	Left Cheek	829.0	23.57	24.0	1.104	0.262	0.289
44.	QPSK 10MHz 50%RB	Left Tilted	829.0	23.57	24.0	1.104	0.120	0.132

LTE Band 7– Head SAR Test								
Plot No.	Mode	Test Position Head	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth		MHz					
45.	QPSK 20MHz 1RB	Right Cheek	2510	24.79	25.0	1.050	0.111	0.116
46.	QPSK 20MHz 1RB	Right Tilted	2510	24.79	25.0	1.050	0.046	0.048
47.	QPSK 20MHz 1RB	Left Cheek	2510	24.79	25.0	1.050	0.071	0.075
48.	QPSK 20MHz 1RB	Left Tilted	2510	24.79	25.0	1.050	0.030	0.031
49.	QPSK 20MHz 50%RB	Right Cheek	2510	23.61	24.0	1.094	0.092	0.101
50.	QPSK 20MHz 50%RB	Right Tilted	2510	23.61	24.0	1.094	0.039	0.043
51.	QPSK 20MHz 50%RB	Left Cheek	2510	23.61	24.0	1.094	0.056	0.061
52.	QPSK 20MHz 50%RB	Left Tilted	2510	23.61	24.0	1.094	0.024	0.026

LTE Band 17– Head SAR Test								
Plot No.	Mode	Test Position Head	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth		MHz					
53.	QPSK 10MHz 1RB	Right Cheek	709	24.89	25.0	1.026	0.232	0.238
54.	QPSK 10MHz 1RB	Right Tilted	709	24.89	25.0	1.026	0.146	0.150
55.	QPSK 10MHz 1RB	Left Cheek	709	24.89	25.0	1.026	0.184	0.189
56.	QPSK 10MHz 1RB	Left Tilted	709	24.89	25.0	1.026	0.081	0.083
57.	QPSK 10MHz 50%RB	Right Cheek	709	23.82	24.0	1.042	0.195	0.203
58.	QPSK 10MHz 50%RB	Right Tilted	709	23.82	24.0	1.042	0.092	0.096
59.	QPSK 10MHz 50%RB	Left Cheek	709	23.82	24.0	1.042	0.156	0.163
60.	QPSK 10MHz 50%RB	Left Tilted	709	23.82	24.0	1.042	0.070	0.073

WLAN 2.4GHz – Head SAR Test									
Plot No.	Mode	Test Position Head	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
61.	802.11b	Right Cheek	01	2412	15.61	16.0	1.094	0.183	0.200
62.	802.11b	Right Tilted	01	2412	15.61	16.0	1.094	0.166	0.182
63.	802.11b	Left Cheek	01	2412	15.61	16.0	1.094	0.308	0.337
64.	802.11b	Left Tilted	01	2412	15.61	16.0	1.094	0.287	0.314

WLAN 5.2GHz – Head SAR Test									
Plot No.	Mode	Test Position Head	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
65.	802.11a	Right Cheek	48	5240	12.15	12.5	1.084	0.140	0.152
66.	802.11a	Right Tilted	48	5240	12.15	12.5	1.084	0.121	0.131
67.	802.11a	Left Cheek	48	5240	12.15	12.5	1.084	0.109	0.118
68.	802.11a	Left Tilted	48	5240	12.15	12.5	1.084	0.094	0.102

WLAN 5.8GHz – Head SAR Test									
Plot No.	Mode	Test Position Head	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
69.	802.11n (HT40)	Right Cheek	151	5755	10.21	10.5	1.069	0.135	0.144
70.	802.11n (HT40)	Right Tilted	151	5755	10.21	10.5	1.069	0.106	0.113
71.	802.11n (HT40)	Left Cheek	151	5755	10.21	10.5	1.069	0.141	0.151
72.	802.11n (HT40)	Left Tilted	151	5755	10.21	10.5	1.069	0.110	0.118

Remark: Per KDB 447498 D01 v06, if the highest output channel SAR for each exposure position ≤ 0.8 W/kg other channels SAR tests are not necessary.

Body-worn SAR

GSM850 – Body SAR Test (Gap: 10mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
73.	GSM	Back	128	824.2	32.56	33.0	1.107	0.166	0.184
74.	GSM	Front	128	824.2	32.56	33.0	1.107	0.169	0.187

GSM1900 – Body SAR Test (Gap: 10mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
75.	GSM	Back	512	1850.2	29.68	30.0	1.076	0.116	0.125
76.	GSM	Front	512	1850.2	29.68	30.0	1.076	0.029	0.031

WCDMA Band 2 – Body SAR Test (Gap: 10mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
77.	RMC 12.2k	Back Side	9538	1907.6	23.24	23.5	1.062	0.095	0.101
78.	RMC 12.2k	Front Face	9538	1907.6	23.24	23.5	1.062	0.038	0.040

WCDMA Band 4 – Body SAR Test (Gap: 10mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
79.	RMC 12.2k	Back Side	1312	1712.4	23.44	23.5	1.014	0.215	0.218
80.	RMC 12.2k	Front Face	1312	1712.4	23.44	23.5	1.014	0.117	0.119

WCDMA Band 5 – Body SAR Test (Gap: 10mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
81.	RMC 12.2k	Back Side	4132	826.4	23.57	24.0	1.104	0.232	0.256
82.	RMC 12.2k	Front Side	4132	826.4	23.57	24.0	1.104	0.208	0.230

LTE Band 2–Body SAR Test (Gap: 10mm)								
Plot No.	Mode	Test Position Body	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
83.	QPSK 20MHz 1RB	Back Side	1860	25.19	25.5	1.074	0.173	0.186
84.	QPSK 20MHz 1RB	Front Side	1860	25.19	25.5	1.074	0.108	0.116
85.	QPSK 20MHz 50%RB	Back Side	1900	24.05	24.5	1.109	0.136	0.151
86.	QPSK 20MHz 50%RB	Front Side	1900	24.05	24.5	1.109	0.085	0.094

LTE Band 4–Body SAR Test (Gap: 10mm)								
Plot No.	Mode	Test Position Body	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
87.	QPSK 20MHz 1RB	Back Side	1720	24.65	25.0	1.084	0.205	0.222
88.	QPSK 20MHz 1RB	Front Side	1720	24.65	25.0	1.084	0.106	0.115
89.	QPSK 20MHz 50%RB	Back Side	1720	23.46	23.5	1.009	0.158	0.159
90.	QPSK 20MHz 50%RB	Front Side	1720	23.46	23.5	1.009	0.077	0.078

LTE Band 5–Body SAR Test (Gap: 10mm)								
Plot No.	Mode	Test Position Body	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
91.	QPSK 10MHz 1RB	Back Side	836.5	24.79	25.0	1.050	0.282	0.296
92.	QPSK 10MHz 1RB	Front Side	836.5	24.79	25.0	1.050	0.245	0.257
93.	QPSK 10MHz 50%RB	Back Side	829.0	23.57	24.0	1.104	0.215	0.237
94.	QPSK 10MHz 50%RB	Front Side	829.0	23.57	24.0	1.104	0.198	0.219

LTE Band 7–Body SAR Test (Gap: 10mm)								
Plot No.	Mode	Test Position Body	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
95.	QPSK 20MHz 1RB	Back Side	2510	24.79	25.0	1.050	0.361	0.379
96.	QPSK 20MHz 1RB	Front Side	2510	24.79	25.0	1.050	0.452	0.474
97.	QPSK 20MHz 50%RB	Back Side	2510	23.61	24.0	1.094	0.304	0.333
98.	QPSK 20MHz 50%RB	Front Side	2510	23.61	24.0	1.094	0.378	0.414

LTE Band 17–Body SAR Test (Gap: 10mm)								
Plot No.	Mode	Test Position Body	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
99.	QPSK 10MHz 1RB	Back Side	709	24.89	25.0	1.026	0.310	0.318
100.	QPSK 10MHz 1RB	Front Side	709	24.89	25.0	1.026	0.335	0.344
101.	QPSK 10MHz 50%RB	Back Side	709	23.82	24.0	1.042	0.271	0.282
102.	QPSK 10MHz 50%RB	Front Side	709	23.82	24.0	1.042	0.285	0.297

WLAN 2.4GHz –Body SAR Test									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
103.	802.11b	Back Side	01	2412	15.61	16.0	1.094	0.230	0.252
104.	802.11b	Front Side	01	2412	15.61	16.0	1.094	0.125	0.137

WLAN 5.2GHz –Body SAR Test									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
105.	802.11a	Back Side	48	5240	12.15	12.5	1.084	0.123	0.133
106.	802.11a	Front Side	48	5240	12.15	12.5	1.084	0.116	0.126

WLAN 5.8GHz –Body SAR Test									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
107.	802.11 n (HT40)	Back Side	151	5755	10.21	10.5	1.069	0.145	0.155
108.	802.11 n (HT40)	Front Side	151	5755	10.21	10.5	1.069	0.150	0.160

Hotspot SAR

GSM850 – Body SAR Test (Gap: 10mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
109.	GPRS_3TX	Back Side	190	836.6	30.20	30.5	1.072	0.326	0.349
110.	GPRS_3TX	Front Side	190	836.6	30.20	30.5	1.072	0.305	0.327
111.	GPRS_3TX	Right side	190	836.6	30.20	30.5	1.072	0.209	0.224
112.	GPRS_3TX	Left side	190	836.6	30.20	30.5	1.072	0.142	0.152
113.	GPRS_3TX	Bottom side	190	836.6	30.20	30.5	1.072	0.188	0.201

GSM1900 – Body SAR Test (Gap: 10mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
114.	GPRS_3TX	Back Side	810	1909.8	27.11	27.5	1.094	0.104	0.114
115.	GPRS_3TX	Front Side	810	1909.8	27.11	27.5	1.094	0.027	0.030
116.	GPRS_3TX	Left side	810	1909.8	27.11	27.5	1.094	0.032	0.035
117.	GPRS_3TX	Top side	810	1909.8	27.11	27.5	1.094	0.060	0.066

WCDMA Band 2 – Body SAR Test (Gap: 10mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
118.	RMC 12.2k	Back Side	9538	1907.6	23.24	23.5	1.062	0.095	0.101
119.	RMC 12.2k	Front Side	9538	1907.6	23.24	23.5	1.062	0.038	0.040
120.	RMC 12.2k	Left side	9538	1907.6	23.24	23.5	1.062	0.016	0.017
121.	RMC 12.2k	Top side	9538	1907.6	23.24	23.5	1.062	0.062	0.066

WCDMA Band 4 – Body SAR Test (Gap: 10mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
122.	RMC 12.2k	Back Side	1312	1712.4	23.44	23.5	1.014	0.215	0.218
123.	RMC 12.2k	Front Side	1312	1712.4	23.44	23.5	1.014	0.117	0.119
124.	RMC 12.2k	Left side	1312	1712.4	23.44	23.5	1.014	0.039	0.040
125.	RMC 12.2k	Top side	1312	1712.4	23.44	23.5	1.014	0.117	0.119