FCC SAR Compliance Test Report

For

ITEL MOBILE LIMITED

FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE 19-25 SHAN MEI STREET FOTAN NT HONGKONG

Model: A667LP

Test Engineer:	Zeng Longhao
Report Number:	WSCT-A2LA-R&E240200007A-SAR
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Check By:	Wei Liangmei
Approved By:	Liu Fuxin
Prepared By:	World Standardization Certification & Testing Group (Shenzhen) Co., Ltd. Building A-B, Baoshi Science & Technology Park, Baoshi Road, Bao'an District, Shenzhen, Guangdong, China Tel: +86-755-26996192 Fax: +86-755-86376605

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Modified History

REV.	Modification Description	Issued Date	Remark
REV.1.0	Initial Test Report Relesse	26 March 2024	Liu Fuxin

1 General information

1.1 Notes

The test results of this test report relate exclusively to the test item specified in this test report. Shenzhen Timeway Testing Laboratories does not assume responsibility for any conclusions and generalisations drawn from the test results with regard to other specimens or samples of the type of the equipment represented by the test item. The test report is not to be reproduced or published in full without the prior written permission.

1.2 Application details

Date of receipt of test item: 2024-02-20
Start of test: 2024-02-22
End of test: 2024-03-18

1.3 Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for A667LP is as below:

Band	Position	MAX Reported SAR_{1g} (W/kg)
GSM850	Head	0.747
	Body & Hotspot 10mm	0.556
GSM1900	Head	0.792
	Body & Hotspot 10mm	0.486
UMTS Band 2	Head	1.013
	Body & Hotspot 10mm	0.616
UMTS Band 4	Head	0.614
	Body & Hotspot 10mm	0.520
UMTS Band 5	Head	0.879
	Body & Hotspot 10mm	0.427
LTE Band 2	Head	**1.491**
	Body & Hotspot 10mm	**0.980**
LTE Band 4	Head	1.064
	Body & Hotspot 10mm	0.527
LTE Band 5	Head	0.824
	Body & Hotspot 10mm	0.409
LTE Band 7	Head	0.601
	Body & Hotspot 10mm	0.393
LTE Band 12	Head	0.542
	Body & Hotspot 10mm	0.410
LTE Band 17	Head	0.779
	Body & Hotspot 10mm	0.304

LTE Band 26	Head	0.395
	Body & Hotspot 10mm	0.154
LTE Band 38	Head	0.467
	Body & Hotspot 10mm	0.265
LTE Band 41	Head	0.731
	Body & Hotspot 10mm	0.266
LTE Band 66	Head	0.615
	Body & Hotspot 10mm	0.343
Wi-Fi 2.4G	Head	0.140
	Body & Hotspot 10mm	0.121
The highest simultaneous SAR is 1.491W/kg per KDB690783 D01		

The device is in compliance with Specific Absorption Rate（SAR）for general population/uncontraolled exposure limits of 1.6 W/Kg as averaged over any 1g tissue according to the FCC rule §2.1093, the ANSI/IEEE C95.1:2005, the NCRP Report Number 86 for uncontrolled environment, according to the Industry Canada Radio Standards Specification RSS-102 for General Population/Uncontrolled exposure, and had been tested in accordance with the measurement methods and procedures specified in IEEE Std 1528-2013.

1.4 EUT Information

Device Information：			
Product Type:	Mobile Phone		
Model:	A667LP		
Trade Name:	itel		
Device Type:	Portable device		
Exposure Category:	uncontrolled environment / general population		
Production Unit or Identical Prototype：	Production Unit		
Hardware version:	V1.1		
Software version :	A667LP-SQ373ABDE-Ugo-OP-240129V60DevT		
Antenna Type :	Internal Antenna		
Device Operating Configurations:			
Supporting Mode(s) :	GSM850,PCS1900, UMTS Band 2, UMTS Band 4 ,UMTS Band 5, LTE Band 2/ LTE Band4/LTE Band5/ LTE Band7/ LTE Band12/LTE Band17/LTE Band26 LTE Band38/ LTE Band41/ LTE Band66 Wi-Fi , BT		
Modulation:	GSM(GMSK),UMTS(QPSK/16QAM),LTE(QPSK/16QAM), WiFi(OFDM/CCK),BT(GFSK/π/4-DQPSK/ 8-DPSK)		
Device Class :	Class B, No DTM Mode		
Operating Frequency Range(s)	Band	TX(MHz)	RX(MHz)
	GSM850	824~849	869~894
	GSM1900	1850~1910	1930~1990
	UMTS Band 2	1850~1910	1930~1990
	UMTS Band 4	1710~1755	2110~2155
	UMTS Band 5	824~849	869~894
	LTE Band 2	1850~1910	1930~1990
	LTE Band 4	1710~1755	2110~2155
	LTE Band 5	824~849	869~894
	LTE Band 7	2500~2570	2620~2690
	LTE Band 12	699~716	729~749
	LTE Band 17	704-716	734~746
	LTE Band 26	832-862	859~894
	LTE Band 38	2570~2620	2570~2620
	LTE Band 41	2496~2690	2496~2690
	LTE Band 66	1710-1780	2110~2200
	Wi-Fi (2.4G)	2412-2462	
	BT	2402~2480	

GPRS class level:	GPRS class 12
Test Channels (low-mid-high):	128-190-251(GSM850) 512-661-810(GSM1900) 9262-9400-9538(UMTS Band 2) 1312-1413-1513(UMTS Band 4) 4132-4182-4233(UMTS Band 5) 18700-18900-19100(LTE Band 2) 20050-20175-20300(LTE Band 4) 20450-20525-20600(LTE Band 5) 21350-21100-21350(LTE Band 7) 23060-23095-23130(LTE Band 12) 23780-23790-23800(LTE Band 17) 26765-26865-26965(LTE Band 26) 37850-38000-38150(LTE Band 38) 40140-40640-41140(LTE Band 41) 132072-132322-132572(LTE Band 66) 1-6-11 (Wi-Fi 2.4G) 0-39-78(BT) 0-19-39(BLE)
Antenna gain:	PCS 1900: 1.54dBi, GSM850: -2.45dBi UTRA Band 2: 1.54dBi UTRA Band 4: 1.62dBi, UTRA Band 5:-2.45dBi E-UTRA Band 2: 1.54dBi E-UTRA Band 4: 1.62dBi E-UTRA Band 5: -2.45dBi E-UTRA Band 7: 1.32dBi E-UTRA Band 12: -2.58dBi E-UTRA Band 17: -2.58dBi E-UTRA Band 26: -2.45dBi E-UTRA Band 38: 0.52dBi E-UTRA Band 41: 0.32dBi E-UTRA Band 66: 1.62dBi
Power Source:	Li-ion Battery: BL-49NI Rated Voltage: 3.85V Rated Capacity: 4900mAh/18.86Wh Limited Capacity: 5000mAh/19.25Wh Limited Charge Voltage: 4.4V

Note:The test results of this test report relate exclusively to the test item specified in this test report. World Standardization Certification & Testing Group (Shenzhen) Co.,Ltd does not assume responsibility for any conclusions and generalisations drawn from the test results with regard to other specimens or samples of the type of the equipment represented by the test item. The test report is not to be reproduced or published in full without the prior written permission.

2 Testing laboratory

Test Site	World Standardization Certification & Testing Group (Shenzhen) Co., Ltd.
Test Location	Building A-B, Baoshi Science & Technology Park, Baoshi Road, Bao'an District, Shenzhen, Guangdong, China
Telephone	+86-755-26996192
Fax	+86-755-86376605

3 ACCREDITATIONS

Our laboratories are accredited and approved by the following approval agencies according to ISO/IEC 17025.

China	CNAS (Registration Number: L3732)
USA	A2LA (Certificate Number: 5768.01)

Copies of granted accreditation certificates are available for downloading from our web site, http://www.wsct-cert.com

4 Test Environment

	Required	Actual
Ambient temperature:	18 – 25 °C	22 ± 2 °C
Tissue Simulating liquid:	22 ± 2 °C	22 ± 2 °C
Relative humidity content:	30 – 70 %	30 – 70 %

5 Applicant and Manufacturer

Applicant/Client Name:	ITEL MOBILE LIMITED
Applicant Address:	FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE 19-25 SHAN MEI STREET FOTAN NT HONGKONG
Manufacturer Name:	ITEL MOBILE LIMITED
Manufacturer Address:	FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE 19-25 SHAN MEI STREET FOTAN NT HONGKONG

6 Test standard/s:

No.	Identity	Document Title
1	47 CFR Part 2.1093	Radiofrequency radiation exposure evaluation: portable devices
2	IEEE1528-2013	Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate in the Human Head from Wireless Communications Devices: Measurement Techniques
3	IEEE C95.1-2019	IEEE Standard for Safety Levels with Respect to Human Exposure to Electric, Magnetic, and Electromagnetic Fields, 0 Hz to 300 GHz
4	KDB447498 D01	General RF Exposure Guidance v06
5	KDB447498 D04	Interim General RF Exposure Guidance v01
6	KDB865664 D01	SAR measurement 100MHz to 6GHz v01r04
7	KDB865664 D02	RF Exposure Reporting v01r02
8	KDB941225 D01	3G SAR Procedures v03r01
9	KDB941225 D05	SAR for LTE Devices v02r05
10	KDB248227 D01	802.11 Wi-Fi SAR v02r02
11	KDB941225 D06	Hotspot Mode v02r01
12	KDB648474 D04	Handset SAR v01r03
13	KDB690783 D01	SAR Listings on Grant v01r03

6.1 RF exposure limits

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

The limit applied in this test report is shown in bold letters

Notes:

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

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

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

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

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

6.2 SAR Definition

Specific Absorption Rate is defined as 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).

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

SAR is expressed in units of watts per kilogram (W/kg). SAR can be related to the electric field at a point by

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

where:

σ = conductivity of the tissue (S/m)

ρ = mass density of the tissue (kg/m^3)

E = rms electric field strength (V/m)

7 SAR Measurement System

7.1 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
- Device 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.

7.2 Robot

The COMOSAR system uses the high precision robots KR 6 R900 sixx type out of the newer series from Satimo SA (France).For the 6-axis controller COMOSAR system, the KUKA robot controller version from Satimo is used. The KR 6 R900 sixx robot series have many features that are important for our application:

- High precision (repeatability 0.02 mm)
- High reliability (industrial design)
- Jerk-free straight movements
- Low ELF interference (the closed metallic construction shields against motor control fields)
- 6-axis controller

7.3 Probe

For the measurements the Specific Dosimetric E-Field Probe SSE 5 with following specifications is used

Figure 1 – MVG COMOSAR Dosimetric E field Dipole

- 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
Distance between dipoles / probe	2.7 mm

- Calibration range: 300MHz to 3GHz for head & body simulating liquid.

Angle between probe axis (evaluation axis) and suface normal line:less than 30°

Figure 2 – MVG COMOSAR Dosimetric E field Dipole

Dynamic range: 0.01-100 W/kg

Probe Length	330 mm
Length of Individual Dipoles	2 mm
Maximum external diameter	8 mm
Probe Tip External Diameter	2.5 mm
Distance between dipoles / probe	1 mm

- Calibration range: 5GHz to 6GHz for head & body simulating liquid.

Angle between probe axis (evaluation axis) and suface normal line:less than 30°

7.4 Measurement procedure

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 16 mm * 8 to 16 mm and a constant distance to the inner surface of the phantom.Since the sensors can not 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.

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 (A/D values and measurement parameters)
(c) Generation of a high-resolution mesh within the measured volume
(d) Interpolation of all measured values form the measurement grid to the high-resolution grid
(e) Extrapolation of the entire 3-D 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

SAR Averaged Methods

In SATIMO, the interpolation and extrapolation are both based on the modified Quadratic Shepard's method. The interpolation scheme combines a least-square fitted function method and a weighted average method which are the two basic types of computational interpolation and approximation.

Extrapolation routines are used to obtain SAR values between the lowest measurement points and the inner phantom surface. The extrapolation distance is determined by the surface detection distance and the probe sensor offset. The uncertainty increases with the extrapolation distance. To keep the uncertainty within 1% for the 1 g and 10 g cubes, the extrapolation distance should not be larger than 5 mm.

7.5 Description of interpolation/extrapolation scheme

- 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 minimise 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 afourth-order least-square polynomial fit of measured data.The local SAR value is then extrapolated from the liquid surface with a 1 mm 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 average over 10 grams and 1gram requires a very fine resolution in the three dimensional scanned data array.

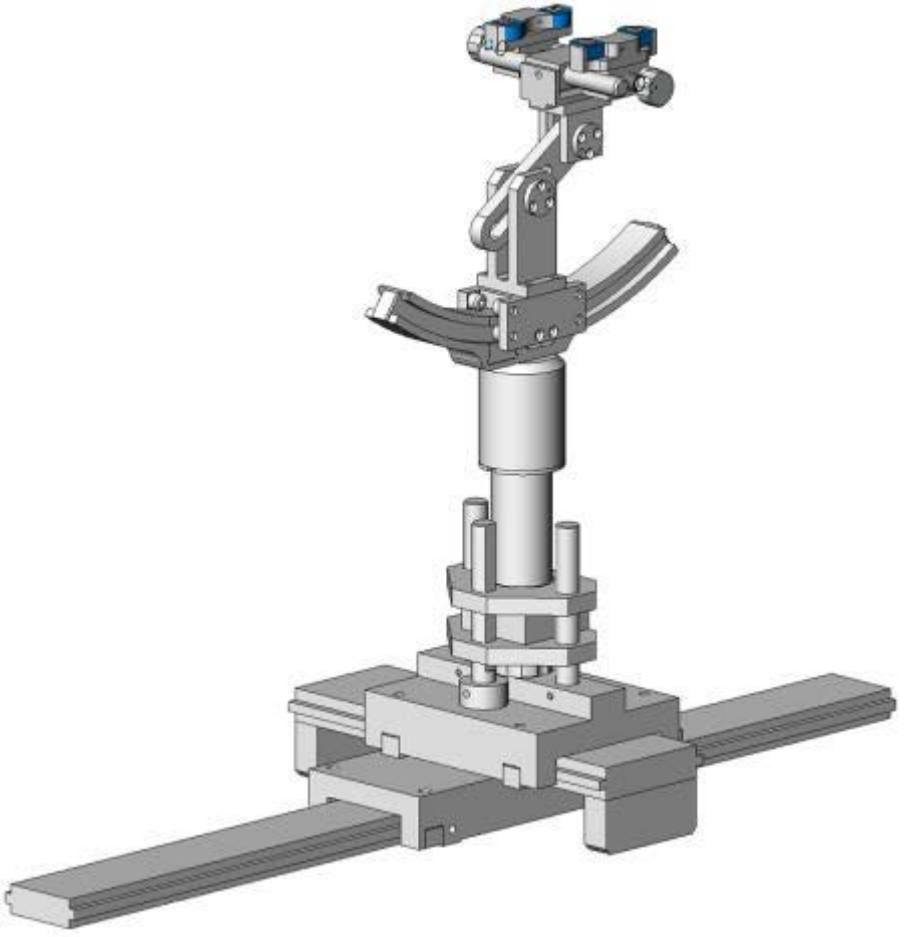
7.6 Phantom

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.

System Material	Permittivity	Loss Tangent
Delrin	3.7	0.005

7.7 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°.



Device holder

System Material	Permittivity	Loss Tangent
Delrin	3.7	0.005

7.8 Video Positioning System

- The video positioning system is used in OpenSAR to check the probe. Which is composed of a camera, LED, mirror and mechanical parts. The camera is piloted by the main computer with firewire link.

- During the process, the actual position of the probe tip with respect to the robot arm is measured, as well as the probe length and the horizontal probe offset. The software then corrects all movements, such that the robot coordinates are valid for the probe tip.

- The repeatability of this process is better than 0.1 mm. If a position has been taught with an aligned probe, the same position will be reached with another aligned probe within 0.1 mm, even if the other probe has different dimensions. During probe rotations, the probe tip will keep its actual position.

7.9 Tissue simulating liquids: dielectric properties

For SAR measurement of the field distribution inside the phantom, the phantom must be filled with homogeneous tissue simulating liquid to a depth of at least 15 cm. 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. The simulating liquids should be checked at the beginning of a series of SAR measurements to determine of the dielectic parameter are within the tolerances of the specified target values. The measured conductivity and relative permittivity should be within ± 5% of the target values.

The following materials are used for producing the tissue-equivalent materials.

(Liquids used for tests are marked with☒):

Ingredients(% of weight)	**Frequency (MHz)**					
frequency band	☐ 750	☒ 835	☒ 1800	☒ 1900	☒ 2450	☒ 2600
Tissue Type	Head	Head	Head	Head	Head	Head
Water	39.2	41.45	52.64	55.242	62.7	55.242
Salt (NaCl)	2.7	1.45	0.36	0.306	0.5	0.306
Sugar	57.0	56.0	0.0	0.0	0.0	0.0
HEC	0.0	1.0	0.0	0.0	0.0	0.0
Bactericide	0.0	0.1	0.0	0.0	0.0	0.0
Triton X-100	0.0	0.0	0.0	0.0	36.8	0.0
DGBE	0.0	0.0	47.0	44.542	0.0	44.452
Ingredients(% of weight)	**Frequency (MHz)**					
frequency band	☐ 750	☒ 835	☒ 1800	☒ 1900	☒ 2450	☒ 2600
Tissue Type	Body	Body	Body	Body	Body	Body
Water	50.30	52.4	69.91	69.91	73.2	64.493
Salt (NaCl)	1.60	1.40	0.13	0.13	0.04	0.024
Sugar	47.0	45.0	0.0	0.0	0.0	0.0
HEC	0.0	1.0	0.0	0.0	0.0	0.0
Bactericide	0.0	0.1	0.0	0.0	0.0	0.0
Triton X-100	0.0	0.0	0.0	0.0	0.0	0.0
DGBE	0.0	0.0	29.96	29.96	26.7	32.252

Salt: 99+% Pure Sodium Chloride

Sugar: 98+% Pure Sucrose

Water: De-ionized, 16MΩ+ resistivity

HEC: Hydroxyethyl Cellulose

DGBE: 99+% Di(ethylene glycol) butyl ether, [2-(2-butoxyethoxy)ethanol]

Triton X-100(ultra pure): Polyethylene glycol mono [4-(1,1,3,3-tetramethylbutyl)phenyl]ether

7.10 Tissue simulating liquids: parameters

Tissue Type	Measured Frequency (MHz)	Target Tissue				Measured Tissue		Liquid Temp.	Test Date
		Target Permittivity ε_r	Range of ±5%	Target Conductivity σ (S/m)	Range of ±5%	ε_r	σ (S/m)		
835MHz Head	825	41.60	39.52~43.68	0.90	0.86~0.95	40.34	0.91	21.6°C	2024-03-01
	835	41.50	39.43~43.58	0.90	0.86~0.95	40.33	0.92		
	850	41.50	39.43~43.58	0.92	0.87~0.97	40.11	0.94		
835MHz Body	825	55.20	52.44~57.96	0.97	0.92~1.02	54.04	0.98		
	835	55.20	52.44~57.96	0.97	0.92~1.02	53.93	0.99		
	850	55.20	52.44~57.96	0.99	0.94~1.04	53.69	1.01		
1800MHz Head	1710	40.10	38.10~42.10	1.35	1.28~1.42	39.95	1.34	21.6°C	2024-03-04
	1730	40.10	38.10~42.10	1.35	1.29~1.43	39.87	1.36		
	1750	40.10	38.10~42.10	1.37	1.30~1.44	39.69	1.39		
	1800	40.00	38.00~42.00	1.40	1.33~1.47	39.48	1.44		
1800MHz Body	1710	53.50	50.83~56.18	1.46	1.39~1.53	53.24	1.45		
	1730	53.50	50.83~56.18	1.48	1.41~1.55	53.39	1.47		
	1750	53.40	50.73~56.07	1.49	1.42~1.56	53.19	1.49		
	1800	53.30	50.64~55.97	1.52	1.44~1.60	52.97	1.54		
1900MHz Head	1850	40.00	38.00~42.00	1.40	1.33~1.47	39.93	1.37	21.6°C	2024-03-07
	1880	40.00	38.00~42.00	1.40	1.33~1.47	39.91	1.40		
	1900	40.00	38.00~42.00	1.40	1.33~1.47	39.98	1.41		
	1910	40.00	38.00~42.00	1.40	1.33~1.47	39.97	1.42		
1900MHz Body	1850	53.30	50.64~55.97	1.52	1.44~1.60	53.23	1.49		
	1880	53.30	50.64~55.97	1.52	1.44~1.60	53.36	1.53		
	1900	53.30	50.64~55.97	1.52	1.44~1.60	53.37	1.56		
	1910	53.30	50.64~55.97	1.52	1.44~1.60	53.37	1.57		

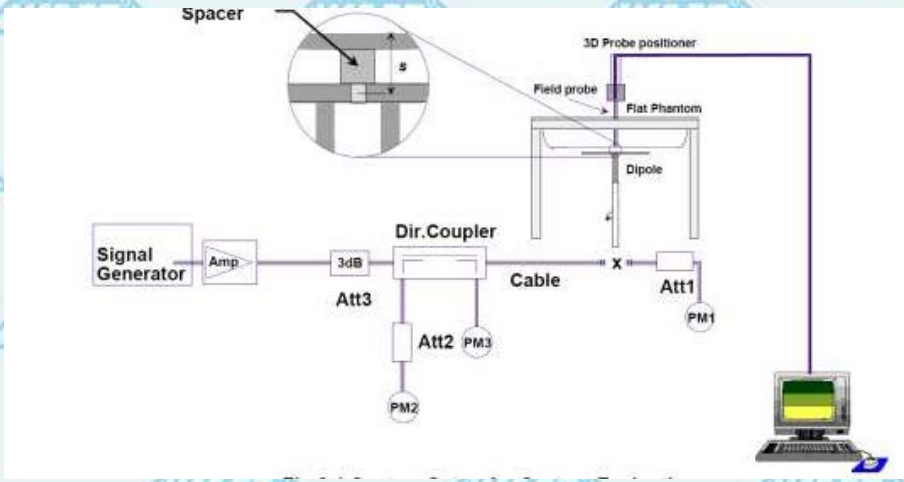
2450MHz Head	2410	39.30	37.34~41.26	1.76	1.67~1.85	39.22	1.78	21.6°C	2024-03-11
	2435	39.20	37.24~41.16	1.79	1.70~1.88	39.25	1.77		
	2450	39.20	37.24~41.16	1.80	1.71~1.89	39.24	1.76		
	2460	39.20	37.24~41.16	1.81	1.72~1.90	39.20	1.76		
2450MHz Body	2410	52.80	50.16~55.44	1.91	1.81~2.00	52.72	1.92		
	2435	52.70	50.07~55.34	1.94	1.84~2.04	52.75	1.92		
	2450	52.70	50.07~55.34	1.95	1.85~2.05	52.74	1.91		
	2460	52.70	50.07~55.34	1.96	1.86~2.06	52.70	1.91		
2600MHz Head	2510	39.00	37.05~40.95	1.96	1.86~2.06	38.87	1.93	21.6°C	2024-03-14
	2535	39.00	37.05~40.95	1.96	1.86~2.06	38.58	1.93		
	2560	39.00	37.05~40.95	1.96	1.86~2.06	38.98	2.02		
	2600	39.00	37.05~40.95	1.96	1.86~2.06	52.50	2.02		
2600MHz Body	2510	52.50	49.90~55.11	2.16	2.05~2.27	52.21	2.05		
	2535	52.50	49.90~55.11	2.16	2.05~2.27	51.92	2.06		
	2560	52.50	49.90~55.11	2.16	2.05~2.27	52.01	2.09		
	2600	52.50	49.90~55.11	2.16	2.05~2.27	38.87	1.93		
ε_r= Relative permittivity, σ= Conductivity									

8 System Check

8.1 System check procedure

The System check is performed by using a System check dipole which is positioned parallel to the planar part of the SAM phantom at the reference point. The distance of the dipole to the SAM phantom is determined by a spacer. The dipole is connected to the signal source consisting of signal generator and amplifier via a directional coupler, N-connector cable and adaption to SMA. It is fed with a power of 100 mW. To adjust this power a power meter is used. The power sensor is connected to the cable before the System check to measure the power at this point and do adjustments at the signal generator. At the outputs of the directional coupler both return loss as well as forward power are controlled during the validation to make sure that emitted power at the dipole is kept constant. This can also be checked by the power drift measurement after the test (result on plot).

System check results have to be equal or near the values determined during dipole calibration (target SAR in table above) with the relevant liquids and test system.



8.2 System check results

The system Check is performed for verifying the accuracy of the complete measurement system and performance of the software.The following table shows System check results for all frequency bands and tissue liquids used during the tests (plot(s) see annex A).

System Check	Target SAR (1W) (+/-10%)				Measured SAR (Normalized to 1W)		Liquid Temp.	Test Date
	1-g (W/g)	Range of ±10% 1-g (W/g)	10-g (W/g)	Range of ±10% 10-g (W/g)	1-g (W/g)	10-g (W/g)		
D835V2 Head	9.82	8.84~10.80	6.35	5.72~6.99	9.700	6.150	21.6°C	2024-03-01
D1800V2 Head	37.09	33.38~40.80	19.77	17.93~21.75	39.980	20.600	21.6°C	2024-03-04
D1900V2 Head	38.93	35.04~42.82	20.27	18.45~22.55	39.980	21.070	21.6°C	2024-03-07
D2450V2 Head	53.41	48.07~58.75	23.95	21.56~26.35	53.930	24.530	21.6°C	2024-03-011
D2600V2 Head	56.88	51.20~62.56	24.92	22.43~27.41	53.180	23.430	21.6°C	2024-03-014
D835V2 Body	9.41	8.47~10.35	6.22	5.99~6.84	10.150	6.450	21.6°C	2024-03-01
D1800V2 Body	38.03	34.23~41.83	20.69	18.62~22.76	41.560	21.720	21.6°C	2024-03-04
D1900V2 Body	38.73	34.86~42.60	20.48	18.43~22.53	39.330	20.940	21.6°C	2024-03-07
D2450V2 Body	51.39	46.25~56.53	23.63	21.27~25.99	54.330	23.330	21.6°C	2024-03-011
D2600V2 Body	54.54	49.09~59.99	24.37	21.94~26.80	57.860	25.600	21.6°C	2024-03-014
Note: All SAR values are normalized to 1W forward power.								

Note: 5G band system check USES standard waveguide, so the test results are standard en62209-2 table B2

9 SAR Test Test Configuration

9.1 GSM Test Configurations

SAR tests for GSM850 and GSM1900, a communication link is set up with a base station by air link. Using CMU200 the power lever is set to “5”and “0” in SAR of GSM850 and GSM1900. The tests in the band of GSM 850 and GSM 1900 are performed in the mode of GPRS/EGPRS function. Since the GPRS class is 12 for this EUT, it has at most 4 timeslots in uplink and at most 4 timeslots in downlink, the maximum total timeslot is 5.

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

9.2 UMTS Test Configuration

1) Output Power Verification

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

2) WCDMA

a. Head SAR Measurements

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

b. Body SAR Measurements

SAR for body-worn accessory configurations is measured using a 12.2 kbps RMC with TPC bits configured to all “1"s”. The 3G SAR test reduction procedure is applied to other spreading codes and multiple DPDCHn configurations supported by the Headset with 12.2 kbps RMC as the primary mode

3) HSDPA

SAR for body exposure configurations is measured according to the “Body SAR Measurements"" procedures of 3G device. When the maximum output power and tune-up tolerance specified for production units in a secondary mode is ≤ ¼ dB higher than the primary mode or when the highest reported SAR of the primary mode is scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for the secondary mode. This is referred to as the 3G SAR test reduction procedure in the following SAR test guidance, where the primary mode is identified in

the applicable wireless mode test procedures and the secondary mode is wireless mode being considered for SAR test reduction by that procedure. When the 3G SAR test reduction procedure is not satisfied, it is identified as “otherwise” in the applicable procedures; SAR measurement is required for the secondary mode.
Per KDB941225 D01, the 3G SAR test reduction procedure is applied to HSDPA body configurations with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured for HSDPA using the HSDPA body SAR procedures for the highest reported SAR body exposure configuration in 12.2 kbps RMC.
HSDPA should be configured according to UE category of a test device. The number of HS-DSCH/HS-PDSCHs, HAPRQ processes, minimum inter-TTI interval, transport block sizes and RV coding sequence are defined by the H-set. To maintain a consistent test configuration and stable transmission condition, QPSK is used in the H-set for SAR testing. HS-DPCCH should be configured with a CQI feedback cycle of 4ms with a CQI repetition factor of 2 to maintain a constant rate of active CQI slots. The βc andβd gain factors for DPCCH and DPDCH were set according to the values in the below table, HSDPA was set automatically to the correct value when ΔACK, ΔNACK, ΔCQI = 8. The variation of the βc /βd ratio causes a power reduction at sub-tests 2 - 4.

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

Note 1: △ACK, △NACK and △CQI = 8 $A_{hs} = \beta_{hs}/\beta_c = 30/15$ $\beta_{hs} = 30/15 * \beta_c$
Note 2 : CM=1 for β_c/β_d= 12/15, β_{hs}/β_c = 24/15. For all other combinations of DPDCH,DPCCH and HS-DPCCH the MPR is based on the relative CM difference. This is applicable for only UEs that support HSDPA in release 6 and later releases.
Note 3 : For subtest 2 the β_c/β_d ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1,TF1) to β_c = 11/15 and β_d = 15/15

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

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

4)HSUPA

SAR for body exposure configurations is measured according to the “Body SAR Measurements”” procedures of 3G device. When the maximum output power and tune-up tolerance specified for production units in a secondary mode is ≤ ¼ dB higher than the primary mode or when the highest reported SAR of the primary mode is scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for the secondary mode.

Per KDB941225 D01v03, the 3G SAR test reduction procedure is applied to HSPA (HSUPA/HSDPA with RMC) body configurations with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured for HSPA using the HSPA body SAR procedures for the highest reported body exposure SAR configuration in 12.2 kbps RMC.

9.3 LTE Test Configuration

SAR for LTE band exposure configurations is measured according to the procedures of KDB 941225 D05 SAR for LTE Devices. The CMW500 WideBand Radio Communication Tester was used for LTE output power measurements and SAR testing. Closed loop power control was used so the UE transmits with maximum output power during SAR testing.SAR test were performed with the same number of RB and RB offsets transmitting on all TTI frames(Maximum TTI)

1) Spectrum Plots for RB configurations

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

2) MPR

When MPR is implemented permanently within the UE, regardless of network requirements, only those RB configurations allowed by 3GPP for the channel bandwidth and modulation combinations may be tested with MPR active. Configurations with RB allocations less than the RB thresholds required by 3GPP must be tested without MPR.

The allowed Maximum Power Reduction (MPR) for the maximum output power due to higher order modulation and transmit bandwidth configuration (resource blocks) is specified in Table 6.2.3-1 of the 3GPP TS36.101.

Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 3

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

3) A-MPR

A-MPR(Additional MPR) has been disabled for all SAR tests by using Network Signalling Value of “NS_01”on the base station simulator.

4) LTE procedures for SAR testing

A) Largest channel bandwidth standalone SAR test requirements

i) QPSK with 1 RB allocation

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

ii) QPSK with 50% RB allocation

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

iii) QPSK with 100% RB allocation

For QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation in i) and ii) 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.

iv) Higher order modulations

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

B) Other channel bandwidth standalone SAR test requirements

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

5) TDD LTE test configuration

According to KDB 941225 D05 SAR for LTE Devices v02r04, for Time-Division Duplex (TDD) systems, SAR must be tested using a fixed periodic duty factor according to the highest transmission duty factor implemented for the device and supported by the defined 3GPP LTE TDD configurations.

9.4 Wi-Fi Test Configuration

For the 802.11b/g SAR tests, a communication link is set up with the test mode software for Wi-Fi mode test. The Absolute Radio Frequency Channel Number(ARFCN) is allocated to 1 ,6 and 11 respectively in the case of 2450 MHz.During the test,at the each test frequency channel, the EUT is operated at the RF continuous emission mode. Each channel should be tested at the lowest data rate. 802.11b/g operating modes are tested independently according to the service requirements in each frquency band. 802.11b/g modes are tested on channel 1, 6, 11; however,if output power reduction is necessary for channels 1 and/or 11 to meet restricted band requirements the highest output channel closest to each of these channels must be tested instead.

SAR is not required for 802.11g/n channels when the maximum average output power is less than

0.25dB higher than that measured on the corresponding 802.11b channels.

Mode	Band	GHz	Channel	"Default Test Channels"	
				802.11b	802.11g
802.11b/g	2.4 GHz	2412	1#	√	△
		2437	6	√	△
		2462	11#	√	△

Notes:

√ = "default test channels"

△= possible 802.11g channels with maximum average output ¼ dB the "default test channels"

= when output power is reduced for channel 1 and /or 11 to meet restricted band requirements the highest output channels closest to each of these channels should be tested.

802.11 Test Channels per FCC Requirements

9.5 WiFi 2.4G SAR Test Procedures

Separate SAR procedures are applied to DSSS and OFDM configurations in the 2.4 GHz band to simplify DSSS test requirements. For 802.11b DSSS SAR measurements, DSSS SAR procedure applies to fixed exposure test position and initial test position procedure applies to multiple exposure test positions.

A)802.11b DSSS SAR Test Requirements

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

1) When the reported SAR of the highest measured maximum output power channel (section 3.1 of of KDB 248227D01v02) for the exposure configuration is ≤ 0.8 W/kg, no further SAR testing is required for 802.11b DSSS in that exposure configuration.

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

B) 2.4GHz 802.11g/n OFDM SAR Test Exclusion Requirements

When SAR measurement is required for 2.4 GHz 802.11g/n OFDM configurations, the measurement and test reduction procedures for OFDM are applied (section 5.3 of of KDB 248227D01v02r01). SAR is not required for the following 2.4 GHz OFDM conditions.

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

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

C) SAR Test Requirements for OFDM configurations

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

10 Detailed Test Results

10.1 Conducted Power measurements

The maximum conducted average power (Unit: dBm) including tune-up tolerance is shown as below.

10.1.1 Conducted Power of GSM

Mode: GSM850		Maximum Tune-up(dBm)	Burst Average Power (dBm)			Division Factors	Frame-Average Power (dBm)		
			CH128	CH190	CH251		CH128	CH190	CH251
			824.2MHz	836.6MHz	848.8MHz		824.2MHz	836.6MHz	848.8MHz
GSM(CS)		31.00	32.94	32.55	32.05	-9.03	23.91	23.52	23.02
GPRS (GMSK)	1Tx slot	30.00	29.89	29.59	29.11	-9.03	20.86	20.56	20.08
	2Tx slots	30.00	29.34	29.93	29.02	-9.03	23.32	23.91	23.00
	3Tx slots	30.50	29.35	29.63	30.48	-6.02	25.09	25.37	26.22
	4Tx slots	30.50	30.37	29.52	29.15	-4.26	27.36	26.51	26.14
EGPRS (8PSK)	1Tx slot	28.50	28.24	27.03	26.83	-3.01	19.21	18.00	17.80
	2Tx slots	28.50	27.73	28.05	27.36	-9.03	21.71	22.03	21.34
	3Tx slots	28.50	26.75	27.48	28.19	-6.02	22.49	23.22	23.93
	4Tx slots	28.00	27.00	27.73	27.04	-4.26	23.99	24.72	24.03

Mode: GSM1900		Maximum Tune-up(dBm)	Burst Average Power (dBm)			Division Factors	Frame-Average Power (dBm)		
			CH512	CH661	CH810		CH512	CH661	CH810
			1850.2MHz	1880.0MHz	1909.8MHz		1850.2MHz	1880.0MHz	1909.8MHz
GSM(CS)		31.00	30.61	28.97	30.13	-9.03	21.58	19.94	21.10
GPRS (GMSK)	1Tx slot	28.00	27.35	26.74	27.75	-9.03	18.32	17.71	18.72
	2Tx slots	28.50	28.48	27.26	27.87	-9.03	22.46	21.24	21.85
	3Tx slots	28.00	27.95	27.31	26.85	-6.02	23.69	23.05	22.59
	4Tx slots	28.50	27.94	26.87	28.12	-4.26	24.93	23.86	25.11
EGPRS (8PSK)	1Tx slot	26.00	25.13	24.96	25.84	-3.01	16.10	15.93	16.81
	2Tx slots	26.00	25.70	25.73	25.96	-9.03	19.68	19.71	19.94
	3Tx slots	26.50	25.54	26.33	25.01	-6.02	21.28	22.07	20.75
	4Tx slots	26.50	25.57	25.28	26.00	-4.26	22.56	22.27	22.99

Note:

Division Factors

To average the power, the division factor is as follows:

1Tx-slots = 1 transmit time slots out of 8 time slots=> conducted power divided by (8/1) => -9.03dB

2Tx-slots = 2 transmit time slots out of 8 time slots=> conducted power divided by (8/2) => -6.02dB

3Tx-slots = 3 transmit time slots out of 8 time slots=> conducted power divided by (8/3) => -4.26dB

4Tx-slots = 4 transmit time slots out of 8 time slots=> conducted power divided by (8/4) => -3.01dB

10.1.2 Conducted Power of ECDMA

Mode		Maximum Tune-up(dBm)	WCDMA Band 2		
			Conducted Power (dBm)		
			CH9262	CH9400	CH9538
			1852.4	1880.0	1907.6
RMC 12.2K		23.50	22.76	**23.48**	22.82
HSDPA	Subtest-1	23.50	23.14	22.36	21.98
	Subtest-2	23.50	22.35	22.32	23.46
	Subtest-3	23.50	23.45	22.78	23.22
	Subtest-4	24.00	23.58	23.08	22.86
HSUPA	Subtest-1	23.00	22.73	23.04	22.27
	Subtest-2	23.50	22.97	22.26	23.20
	Subtest-3	23.50	23.06	22.98	22.00
	Subtest-4	23.50	23.20	21.66	23.26
	Subtest-5	23.00	22.85	22.25	22.67

Mode		Maximum Tune-up(dBm)	WCDMA Band 4		
			Conducted Power (dBm)		
			CH1312	CH1413	CH1513
			1712.4	1732.6	1752.6
RMC 12.2K		23.50	23.04	22.38	23.37
HSDPA	Subtest-1	23.50	21.85	22.70	23.47
	Subtest-2	23.00	22.90	22.74	22.59
	Subtest-3	23.00	21.84	22.58	22.90
	Subtest-4	23.50	23.09	22.00	21.89
HSUPA	Subtest-1	23.00	22.29	22.00	22.82
	Subtest-2	23.00	22.39	22.86	22.52
	Subtest-3	23.50	23.37	22.82	21.98
	Subtest-4	23.00	22.63	21.93	22.60
	Subtest-5	24.00	22.84	**23.52**	23.40

Mode		Maximum Tune-up(dBm)	WCDMA Band 5		
			Conducted Power (dBm)		
			CH4132	CH4183	CH4233
			826.4	836.6	846.6
RMC 12.2K		23.50	23.15	23.27	23.29
HSDPA	Subtest-1	22.00	21.66	21.88	21.71
	Subtest-2	23.00	22.56	21.75	22.33
	Subtest-3	24.00	22.74	23.02	23.51
	Subtest-4	23.50	23.21	23.42	22.13
HSUPA	Subtest-1	24.00	**23.55**	22.19	22.39
	Subtest-2	23.50	21.67	22.77	23.28
	Subtest-3	23.50	23.05	22.78	21.81
	Subtest-4	23.50	22.22	23.19	23.33
	Subtest-5	23.50	23.12	23.36	21.66

Per KDB 941225 D01, when the maximum output power and tune-up tolerance specified for production units in a secondary mode is ≤1/2dB higher than the primary mode (RMC12.2kbps) 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.

10.1.3 Conducted Power of LTE Band 2

LTE-FDD Band 2				Maximum Tune-up(dBm)	Conducted Power(dBm)		
Bandwidth	Modulation	RB allocation	RB offset		18607	18900	19193
					1850.7MHz	1880.0MHz	1909.3MHz
1.4MHz	QPSK	1	0	24.00	22.85	22.76	22.94
			2	24.00	22.88	22.83	22.95
			5	24.00	22.95	22.75	23.00
		3	0	24.00	22.72	22.96	23.02
			2	24.00	22.78	22.93	23.04
			3	24.00	22.73	22.85	23.02
		6	0	24.00	22.31	22.33	22.60
	16QAM	1	0	24.00	23.43	22.45	22.76
			2	24.00	23.41	22.40	22.73
			5	24.00	23.43	22.40	22.71
		3	0	24.00	22.03	21.88	22.42
			2	24.00	22.01	21.85	22.34
			3	24.00	22.06	21.76	22.35
		6	0	24.00	20.90	21.32	21.16
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	18615	18900	19185
					1851.5MHz	1880.0MHz	1908.5MHz
3MHz	QPSK	1	0	24.00	22.69	22.76	22.92
			7	24.00	22.75	22.78	22.96
			14	24.00	22.73	22.74	23.03
		8	0	24.00	22.32	22.38	22.52
			4	24.00	22.38	22.38	22.50
			7	24.00	22.38	22.30	22.37
		15	0	24.00	22.32	22.33	22.45
	16QAM	1	0	24.00	23.44	22.34	22.67
			7	24.00	23.44	22.43	22.82
			14	24.00	23.44	22.37	22.75
		8	0	24.00	20.84	21.38	21.01
			4	24.00	20.82	21.32	21.03
			7	24.00	20.84	20.90	21.05
		15	0	24.00	20.97	21.23	21.07
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	18625	18900	19175
					1852.5MHz	1880.0MHz	1907.5MHz
5MHz	QPSK	1	0	24.00	22.63	22.70	22.85
			13	24.00	22.73	22.86	22.92
			24	24.00	22.71	22.81	22.95
		12	0	24.00	22.38	22.28	22.45
			6	24.00	22.24	22.36	22.56
			13	24.00	22.37	22.32	22.50
		25	0	24.00	22.29	22.37	22.58
	16QAM	1	0	24.00	22.53	21.95	22.42
			13	24.00	22.50	22.09	22.44
			24	24.00	22.52	22.07	22.46
		12	0	24.00	20.85	21.20	20.97
			6	24.00	20.79	21.22	20.99
			13	24.00	20.77	20.74	21.02
		25	0	24.00	20.92	21.40	20.90

LTE-FDD Band 2				Maximum Tune-up(dBm)	Conducted Power(dBm)		
Bandwidth	Modulation	RB allocation	RB offset		18650	18900	19150
					1855.0MHz	1880.0MHz	1905.0MHz
10MHz	QPSK	1	0	24.00	22.80	22.94	22.89
			25	24.00	22.79	23.01	22.94
			49	24.00	22.83	23.05	23.10
		25	0	24.00	22.39	22.41	22.38
			13	24.00	22.27	22.36	22.40
			25	24.00	22.39	22.46	22.57
		50	0	24.00	22.36	22.42	22.41
	16QAM	1	0	24.00	23.49	22.30	22.33
			25	24.00	23.56	22.45	22.37
			49	24.00	23.51	22.48	22.48
		25	0	24.00	20.79	20.96	20.92
			13	24.00	21.16	21.38	21.39
			25	24.00	20.69	21.47	21.00
		50	0	24.00	21.24	21.45	21.42
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	18675	18900	19125
					1857.5MHz	1880.0MHz	1902.5MHz
15MHz	QPSK	1	0	24.00	22.84	22.93	22.90
			38	24.00	22.83	23.02	22.84
			74	24.00	22.66	23.01	22.99
		36	0	24.00	22.39	22.30	22.40
			18	24.00	22.18	22.44	22.39
			39	24.00	22.20	22.39	22.55
		75	0	24.00	22.26	22.50	22.39
	16QAM	1	0	24.00	**23.58**	22.31	23.03
			38	24.00	23.49	22.39	22.96
			74	24.00	23.44	22.47	23.17
		36	0	24.00	21.27	21.07	20.94
			18	24.00	20.85	21.49	21.00
			39	24.00	21.26	21.53	21.04
		75	0	24.00	20.90	21.37	21.06
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	18700	18900	19100
					1860.0MHz	1880.0MHz	1900.0MHz
20MHz	QPSK	1	0	24.00	22.77	22.85	23.10
			50	24.00	22.65	22.97	23.01
			99	24.00	22.66	23.15	23.19
		50	0	24.00	22.33	22.24	22.49
			25	24.00	22.22	22.44	22.40
			50	24.00	22.18	22.41	22.42
		100	0	24.00	22.34	22.33	22.39
	16QAM	1	0	24.00	22.01	21.82	22.38
			50	24.00	21.96	21.97	22.33
			99	24.00	21.91	22.07	22.46
		50	0	24.00	21.35	20.87	20.93
			25	24.00	20.89	21.28	20.93
			50	24.00	20.83	20.84	21.33
		100	0	24.00	20.87	21.38	21.00

10.1.4 Conducted Power of LTE Band 4

LTE-FDD Band 4				Maximum Tune-up(dBm)	Conducted Power(dBm)		
Bandwidth	Modulation	RB allocation	RB offset		19957	20175	20393
					1710.7MHz	1732.5MHz	1754.3MHz
1.4MHz	QPSK	1	0	23.50	22.52	22.43	22.95
			2	23.50	22.56	22.44	22.82
			5	23.50	22.54	22.42	22.88
		3	0	23.50	22.43	22.52	22.68
			2	23.50	22.49	22.56	22.61
			3	23.50	22.46	22.49	22.65
		6	0	23.50	21.94	21.96	22.25
	16QAM	1	0	23.50	22.95	22.71	22.72
			2	23.50	22.91	22.69	22.68
			5	23.50	23.02	22.68	22.69
		3	0	23.50	21.65	21.59	22.06
			2	23.50	21.67	21.57	21.99
			3	23.50	21.70	21.53	22.05
		6	0	23.50	20.55	20.44	20.84
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	19965	20175	20385
					1711.5MHz	1732.5MHz	1753.5MHz
3MHz	QPSK	1	0	23.50	22.40	22.39	22.75
			7	23.50	22.35	22.41	22.86
			14	23.50	22.36	22.40	22.92
		8	0	23.50	22.00	22.02	22.12
			4	23.50	21.87	22.05	22.14
			7	23.50	21.89	22.00	22.07
		15	0	23.50	21.86	22.01	22.11
	16QAM	1	0	23.50	23.00	22.73	22.55
			7	23.50	23.04	22.73	22.67
			14	23.50	22.96	22.68	22.72
		8	0	23.50	20.43	20.73	20.69
			4	23.50	20.41	20.75	20.74
			7	23.50	20.36	20.76	20.72
		15	0	23.50	20.58	20.56	20.77
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	19976	20175	20375
					1712.5MHz	1732.5MHz	1752.5MHz
5MHz	QPSK	1	0	23.50	22.38	22.41	22.45
			13	23.50	22.33	22.42	22.49
			24	23.50	22.36	22.50	22.44
		12	0	23.50	21.96	21.95	22.09
			6	23.50	21.88	21.92	22.08
			13	23.50	21.90	22.04	22.16
		25	0	23.50	21.88	21.95	22.20
	16QAM	1	0	23.50	22.17	21.69	22.30
			13	23.50	22.11	21.68	22.28
			24	23.50	22.11	21.66	22.30
		12	0	23.50	20.43	20.48	20.67
			6	23.50	20.28	20.40	20.66
			13	23.50	20.36	20.37	20.66
		25	0	23.50	20.45	20.57	20.62

LTE-FDD Band 4				Maximum Tune-up(dBm)	Conducted Power(dBm)		
Bandwidth	Modulation	RB allocation	RB offset		20000	20175	20350
					1715.0MHz	1732.5MHz	1750.0MHz
10MHz	QPSK	1	0	23.50	22.41	22.62	22.75
			25	23.50	22.39	22.58	22.72
			49	23.50	22.47	22.62	22.77
		25	0	23.50	21.91	22.03	22.11
			13	23.50	21.97	21.91	22.04
			25	23.50	21.94	22.10	22.14
		50	0	23.50	22.04	21.98	22.13
	16QAM	1	0	23.50	23.10	22.05	22.45
			25	23.50	23.04	22.02	22.36
			49	23.50	**23.15**	22.10	22.41
		25	0	23.50	20.41	20.62	20.75
			13	23.50	20.41	20.53	21.01
			25	23.50	20.43	20.57	20.73
		50	0	23.50	20.47	20.63	21.02
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	20025	20175	20325
					1717.5MHz	1732.5MHz	1747.5MHz
15MHz	QPSK	1	0	23.50	22.41	22.63	22.73
			38	23.50	22.43	22.61	22.80
			74	23.50	22.58	22.69	22.80
		36	0	23.50	21.95	21.92	22.24
			18	23.50	22.00	21.93	22.19
			39	23.50	21.99	21.95	22.12
		75	0	23.50	22.05	21.95	22.07
	16QAM	1	0	23.50	23.08	22.03	22.85
			38	23.50	23.10	22.00	22.85
			74	23.50	23.13	22.06	22.83
		36	0	23.50	20.49	20.74	21.06
			18	23.50	20.46	20.70	20.74
			39	23.50	20.46	20.66	20.69
		75	0	23.50	20.60	20.50	20.78
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	20050	20175	20300
					1720.0MHz	1732.5MHz	1745.0MHz
20MHz	QPSK	1	0	23.50	22.40	22.55	22.65
			50	23.50	22.37	22.57	22.76
			99	23.50	22.41	22.59	22.72
		50	0	23.50	21.97	21.99	22.24
			25	23.50	22.05	22.05	22.29
			50	23.50	21.99	21.99	22.19
		100	0	23.50	22.04	21.95	22.18
	16QAM	1	0	23.50	21.69	22.11	22.31
			50	23.50	21.61	22.10	22.38
			99	23.50	21.76	22.17	22.40
		50	0	23.50	20.59	20.52	20.70
			25	23.50	20.55	20.54	21.00
			50	23.50	20.53	20.55	21.00
		100	0	23.50	20.42	20.54	21.00

10.1.5 Conducted Power of LTE Band 5

LTE-FDD Band 5				**Maximum Tune-up(dBm)**	Conducted Power(dBm)		
					20407	20525	20643
Bandwidth	Modulation	RB allocation	RB offset		824.7MHz	836.5MHz	848.3MHz
1.4MHz	QPSK	1	0	24.00	22.99	23.17	23.06
			2	24.00	23.02	23.05	23.12
			5	24.00	23.04	23.07	23.13
		3	0	24.00	23.04	23.21	22.93
			2	24.00	23.07	23.24	23.13
			3	24.00	23.04	23.16	23.12
		6	0	24.00	22.37	22.69	22.59
	16QAM	1	0	24.00	23.40	23.32	23.64
			2	24.00	23.42	23.37	**23.74**
			5	24.00	23.41	23.32	23.57
		3	0	24.00	22.09	22.19	22.52
			2	24.00	22.15	22.17	22.54
			3	24.00	22.06	22.16	22.39
		6	0	24.00	21.03	21.12	21.18
Bandwidth	Modulation	RB allocation	RB offset	**Maximum Tune-up(dBm)**	20415	20525	20635
					825.5MHz	836.5MHz	847.5MHz
3MHz	QPSK	1	0	24.00	22.89	23.10	23.11
			7	24.00	22.84	23.08	23.06
			14	24.00	22.96	23.10	23.12
		8	0	24.00	22.38	22.59	22.61
			4	24.00	22.37	22.60	22.53
			7	24.00	22.43	22.72	22.53
		15	0	24.00	22.46	22.64	22.52
	16QAM	1	0	24.00	23.34	23.36	23.60
			7	24.00	23.33	23.30	23.61
			14	24.00	23.37	23.30	23.42
		8	0	24.00	20.88	21.64	21.45
			4	24.00	20.80	21.44	21.41
			7	24.00	20.73	21.38	20.98
		15	0	24.00	20.97	21.26	21.45

LTE-FDD Band 5				Maximum Tune-up(dBm)	Conducted Power(dBm)		
Bandwidth	Modulation	RB allocation	RB offset		20425	20525	20625
					826.5MHz	836.5MHz	846.5MHz
5MHz	QPSK	1	0	24.00	22.68	23.00	22.98
			13	24.00	22.77	23.01	22.93
			24	24.00	22.77	23.02	22.90
		12	0	24.00	22.39	22.66	22.59
			6	24.00	22.45	22.56	22.58
			13	24.00	22.41	22.55	22.53
		25	0	24.00	22.39	22.61	22.56
	16QAM	1	0	24.00	22.47	22.23	22.54
			13	24.00	22.56	22.25	22.57
			24	24.00	22.61	22.29	22.53
		12	0	24.00	20.77	21.41	21.47
			6	24.00	20.68	21.07	21.42
			13	24.00	20.79	21.01	21.38
		25	0	24.00	20.91	21.17	21.44
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	20450	20525	20600
					829.0MHz	836.5MHz	844.0MHz
10MHz	QPSK	1	0	24.00	22.81	23.11	23.07
			25	24.00	22.92	23.20	23.07
			49	24.00	23.09	23.11	23.12
		25	0	24.00	22.47	22.54	22.51
			13	24.00	22.51	22.60	22.55
			25	24.00	22.52	22.61	22.60
		50	0	24.00	22.48	22.55	22.52
	16QAM	1	0	24.00	23.36	22.45	22.53
			25	24.00	23.59	22.57	22.47
			49	24.00	23.53	22.47	22.53
		25	0	24.00	20.70	21.54	21.47
			13	24.00	20.87	21.19	21.42
			25	24.00	21.37	21.15	21.47
		50	0	24.00	20.96	21.18	21.53

10.1.6 Conducted Power of LTE Band 7

LTE-FDD Band 7				Maximum Tune-up(dBm)	Conducted Power(dBm)		
Bandwidth	Modulation	RB allocation	RB offset		20775	21100	21425
					2502.5MHz	2535.0MHz	2567.5MHz
5MHz	QPSK	1	0	23.00	22.15	21.94	21.96
			13	23.00	22.19	21.93	21.84
			24	23.00	22.21	21.85	21.87
		12	0	23.00	21.68	21.55	21.44
			6	23.00	21.68	21.50	21.48
			13	23.00	21.73	21.50	21.44
		25	0	23.00	21.70	21.52	21.36
	16QAM	1	0	23.00	21.53	21.63	21.56
			13	23.00	21.46	21.63	21.54
			24	23.00	21.46	21.60	21.51
		12	0	23.00	20.15	20.07	19.96
			6	23.00	20.15	20.12	19.93
			13	23.00	20.16	20.07	19.92
		25	0	23.00	20.35	20.08	20.20
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	20800	21100	21400
					2505.0MHz	2535.0MHz	2565.0MHz
10MHz	QPSK	1	0	23.00	22.13	22.10	22.03
			25	23.00	22.20	22.10	21.97
			49	23.00	22.17	22.09	21.94
		25	0	23.00	21.72	21.46	21.62
			13	23.00	21.72	21.51	21.41
			25	23.00	21.73	21.47	21.50
		50	0	23.00	21.82	21.62	21.51
	16QAM	1	0	23.00	22.87	21.64	21.67
			25	23.00	22.92	21.59	21.57
			49	23.00	22.93	21.64	21.48
		25	0	23.00	20.15	20.13	20.22
			13	23.00	20.28	20.13	20.11
			25	23.00	20.24	20.11	20.14
		50	0	23.00	20.28	20.15	20.06

Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	20825	21100	21375
					2057.5MHz	2535.0MHz	2562.5MHz
15MHz	QPSK	1	0	23.00	22.14	22.14	22.13
			38	23.00	22.06	22.08	22.05
			74	23.00	22.08	22.12	21.94
		36	0	23.00	21.67	21.53	21.62
			18	23.00	21.82	21.50	21.64
			39	23.00	21.72	21.51	21.51
		75	0	23.00	21.76	21.55	21.48
	16QAM	1	0	23.00	22.90	21.70	22.52
			38	23.00	22.79	21.59	22.38
			74	23.00	**22.94**	21.64	22.30
		36	0	23.00	20.39	20.28	20.20
			18	23.00	20.30	20.26	20.20
			39	23.00	20.35	20.29	20.12
		75	0	23.00	20.37	20.09	20.28
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	21350	21100	21350
					2560.0MHz	2535.0MHz	2560.0MHz
20MHz	QPSK	1	0	23.00	21.99	22.23	22.36
			50	23.00	22.10	22.16	22.24
			99	23.00	22.09	22.19	22.16
		50	0	23.00	21.68	21.50	21.56
			25	23.00	21.70	21.50	21.62
			50	23.00	21.71	21.64	21.46
		100	0	23.00	21.63	21.64	21.66
	16QAM	1	0	23.00	21.45	21.87	21.62
			50	23.00	21.53	21.78	21.56
			99	23.00	21.60	21.89	21.42
		50	0	23.00	20.46	20.21	20.34
			25	23.00	20.45	20.21	20.21
			50	23.00	20.45	20.14	20.16
		100	0	23.00	20.34	20.21	20.29

10.1.7 Conducted Power of LTE Band 12

LTE-FDD Band 12				Maximum Tune-up(dBm)	Conducted Power(dBm)		
Bandwidth	Modulation	RB allocation	RB offset		23017	23095	23173
					699.7MHz	707.5MHz	715.5MHz
1.4MHz	QPSK	1	0	23.50	22.95	22.63	22.62
			2	23.50	22.95	22.61	22.62
			5	23.50	22.80	22.48	22.49
		3	0	23.50	22.68	22.66	22.49
			2	23.50	22.76	22.71	22.44
			3	23.50	22.75	22.69	22.55
		6	0	23.50	22.35	22.19	21.86
	16QAM	1	0	23.50	**23.35**	22.94	22.91
			2	23.50	23.34	22.73	22.98
			5	23.50	23.19	22.82	22.98
		3	0	23.50	22.09	21.68	21.95
			2	23.50	22.06	21.63	21.85
			3	23.50	22.04	21.69	21.82
		6	0	23.50	21.22	20.66	20.62
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	23025	23095	23165
					700.5MHz	707.5MHz	714.5MHz
3MHz	QPSK	1	0	23.50	22.67	22.67	22.74
			7	23.50	22.74	22.60	22.64
			14	23.50	22.72	22.62	22.74
		8	0	23.50	22.64	22.25	22.08
			4	23.50	22.23	22.30	22.03
			7	23.50	22.58	22.28	22.05
		15	0	23.50	22.15	22.27	22.09
	16QAM	1	0	23.50	23.32	22.91	23.00
			7	23.50	23.25	22.75	23.06
			14	23.50	23.22	22.80	22.98
		8	0	23.50	21.08	20.84	20.77
			4	23.50	21.08	20.72	20.70
			7	23.50	21.09	20.70	20.64
		15	0	23.50	21.18	20.86	20.77

Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	23035	23095	23155
					701.5MHz	707.5MHz	713.5MHz
5MHz	QPSK	1	0	23.50	22.61	22.67	22.63
			13	23.50	22.65	22.61	22.53
			24	23.50	22.73	22.60	22.50
		12	0	23.50	22.29	22.21	22.07
			6	23.50	22.28	22.12	22.01
			13	23.50	22.23	21.99	21.99
		25	0	23.50	22.27	22.00	22.04
	16QAM	1	0	23.50	22.41	22.01	22.03
			13	23.50	22.42	21.81	21.98
			24	23.50	22.37	21.87	22.03
		12	0	23.50	21.07	20.49	21.02
			6	23.50	21.12	20.67	20.69
			13	23.50	21.07	20.67	20.69
		25	0	23.50	21.27	20.82	20.69
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	23060	23095	23130
					704.0MHz	707.5MHz	711.0MHz
10MHz	QPSK	1	0	23.50	22.73	22.84	22.74
			25	23.50	22.82	22.76	22.72
			49	23.50	22.71	22.74	22.68
		25	0	23.50	22.25	22.39	22.26
			13	23.50	22.31	22.03	22.15
			25	23.50	22.33	22.08	22.08
		50	0	23.50	22.37	22.26	22.09
	16QAM	1	0	23.50	23.24	22.31	22.29
			25	23.50	23.29	22.21	22.15
			49	23.50	23.18	22.18	22.00
		25	0	23.50	21.08	20.77	20.84
			13	23.50	21.02	20.86	20.77
			25	23.50	20.58	20.83	20.94
		50	0	23.50	21.13	20.87	20.72

10.1.8 Conducted Power of LTE Band 17

LTE-FDD Band 17				Maximum Tune-up(dBm)	Conducted Power(dBm)		
Bandwidth	Modulation	RB allocation	RB offset		23755	23790	23825
					706.5MHz	710.0MHz	713.5MHz
5MHz	QPSK	1	0	23.50	22.75	22.48	22.60
			13	23.50	22.68	22.60	22.52
			24	23.50	22.59	22.45	22.49
		12	0	23.50	22.24	22.11	22.16
			6	23.50	22.30	22.05	22.14
			13	23.50	22.13	22.28	22.07
		25	0	23.50	22.38	22.27	22.14
	16QAM	1	0	23.50	21.94	22.27	22.33
			13	23.50	22.03	22.28	22.16
			24	23.50	21.81	22.30	22.16
		12	0	23.50	20.54	20.70	20.97
			6	23.50	20.50	20.60	20.69
			13	23.50	20.66	21.09	20.60
		25	0	23.50	20.75	20.64	20.88
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	23780	23790	23800
					709.0MHz	710.0MHz	711.0MHz
10MHz	QPSK	1	0	23.50	22.77	22.84	22.77
			25	23.50	22.57	22.82	22.78
			49	23.50	22.59	22.72	22.75
		25	0	23.50	22.41	22.03	21.99
			13	23.50	22.14	22.10	22.22
			25	23.50	22.12	22.17	22.16
		50	0	23.50	22.03	22.09	22.15
	16QAM	1	0	23.50	**23.25**	22.39	22.23
			25	23.50	23.14	22.25	22.16
			49	23.50	23.12	22.14	21.99
		25	0	23.50	20.46	20.81	20.76
			13	23.50	20.56	20.78	20.72
			25	23.50	20.97	21.12	20.80
		50	0	23.50	20.76	20.87	20.79

10.1.9 Conducted Power of LTE Band 26

LTE-FDD Band 26				Maximum Tune-up(dBm)	Conducted Power(dBm)		
Bandwidth	Modulation	RB allocation	RB offset		26697	26865	27033
					814.7MHz	831.5MHz	848.3MHz
1.4MHz	QPSK	1	0	24.00	23.16	23.16	23.35
			2	24.00	23.17	23.18	23.40
			5	24.00	23.15	23.23	23.31
		3	0	24.00	23.03	23.36	23.26
			2	24.00	23.09	23.24	23.26
			3	24.00	23.05	23.33	23.25
		6	0	24.00	22.65	22.82	22.87
	16QAM	1	0	24.00	23.55	23.33	23.74
			2	24.00	23.67	23.45	23.84
			5	24.00	23.58	23.41	23.73
		3	0	24.00	22.21	22.26	22.62
			2	24.00	22.27	22.28	22.67
			3	24.00	22.25	22.23	22.51
		6	0	24.00	21.27	21.58	21.54
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	26705	26865	27025
					815.5MHz	831.5MHz	847.5MHz
3MHz	QPSK	1	0	24.00	23.03	23.15	23.41
			7	24.00	23.02	23.27	23.31
			14	24.00	23.02	23.34	23.42
		8	0	24.00	22.48	22.82	22.80
			4	24.00	22.54	22.83	22.72
			7	24.00	22.51	22.82	22.86
		15	0	24.00	22.48	22.83	22.81
	16QAM	1	0	24.00	23.61	23.43	23.78
			7	24.00	23.61	23.38	23.64
			14	24.00	23.58	23.49	23.50
		8	0	24.00	21.04	21.78	21.34
			4	24.00	21.00	21.90	21.31
			7	24.00	20.99	21.91	21.36
		15	0	24.00	21.25	21.72	21.35
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	26715	26865	27015
					816.5MHz	831.5MHz	846.5MHz
5MHz	QPSK	1	0	24.00	22.96	23.17	23.18
			13	24.00	22.79	23.16	23.24
			24	24.00	22.87	23.26	23.18
		12	0	24.00	22.58	22.67	22.73
			6	24.00	22.53	22.72	22.88
			13	24.00	22.38	22.84	22.72
		25	0	24.00	22.61	22.70	22.76
	16QAM	1	0	24.00	22.83	22.36	22.71
			13	24.00	22.70	22.37	22.73
			24	24.00	22.86	22.49	22.70
		12	0	24.00	21.06	21.54	21.33
			6	24.00	21.06	21.57	21.27
			13	24.00	20.96	21.59	21.18
		25	0	24.00	21.17	21.69	21.29

LTE-FDD Band 26				Maximum Tune-up(dBm)	Conducted Power(dBm)		
Bandwidth	Modulation	RB allocation	RB offset		26740	26865	26990
					819.0MHz	831.5MHz	844.0MHz
10MHz	QPSK	1	0	24.00	23.04	23.15	23.43
			25	24.00	23.11	23.27	23.36
			49	24.00	23.05	23.55	23.33
		25	0	24.00	22.43	22.75	22.87
			13	24.00	22.69	22.76	22.80
			25	24.00	22.45	22.86	22.80
		50	0	24.00	22.63	22.75	22.81
	16QAM	1	0	24.00	23.59	22.56	22.74
			25	24.00	23.66	22.73	22.78
			49	24.00	23.61	22.94	22.73
		25	0	24.00	20.98	21.29	21.71
			13	24.00	20.98	21.74	21.70
			25	24.00	21.32	21.74	21.39
		50	0	24.00	21.05	21.75	21.71
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	26765	26865	26965
					821.5MHz	831.5MHz	841.5MHz
15MHz	QPSK	1	0	24.00	23.05	23.13	23.36
			38	24.00	23.03	23.31	23.27
			74	24.00	23.21	23.61	23.32
		36	0	24.00	22.71	22.64	22.90
			18	24.00	22.61	22.75	22.87
			39	24.00	22.64	22.89	22.78
		75	0	24.00	22.47	22.72	22.80
	16QAM	1	0	24.00	23.62	22.50	23.36
			38	24.00	**23.86**	22.70	23.44
			74	24.00	23.72	22.86	23.41
		36	0	24.00	21.06	21.40	21.28
			18	24.00	21.40	21.84	21.73
			39	24.00	21.16	21.43	21.45
		75	0	24.00	21.57	21.58	21.76

10.1.10 Conducted Power of LTE Band 38

LTE-FDD Band 38				Maximum Tune-up(dBm)	Conducted Power(dBm)		
Bandwidth	Modulation	RB allocation	RB offset		37775	38000	38225
					2572.5MHz	2595.0MHz	2517.5MHz
5MHz	QPSK	1	0	23.50	22.53	22.62	22.54
			13	23.50	22.61	22.66	22.53
			24	23.50	22.48	22.77	22.54
		12	0	23.50	21.98	22.14	22.25
			6	23.50	22.08	22.22	22.31
			13	23.50	22.12	22.09	22.20
		25	0	23.50	22.13	22.13	22.19
	16QAM	1	0	23.50	21.85	21.92	22.59
			13	23.50	21.96	21.77	22.65
			24	23.50	21.99	21.88	22.62
		12	0	23.50	20.68	20.58	20.79
			6	23.50	20.71	20.70	20.85
			13	23.50	20.68	20.55	20.73
		25	0	23.50	20.80	20.88	20.94
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	37800	38000	38200
					2575.0MHz	2595.0MHz	2515.0MHz
10MHz	QPSK	1	0	23.50	22.67	22.75	22.63
			25	23.50	22.74	22.78	22.58
			49	23.50	22.85	22.74	22.66
		25	0	23.50	22.12	22.09	22.19
			13	23.50	22.02	22.11	22.26
			25	23.50	22.20	22.16	22.36
		50	0	23.50	22.06	22.04	22.11
	16QAM	1	0	23.50	22.46	22.00	22.51
			25	23.50	22.99	21.83	22.53
			49	23.50	23.03	21.87	22.54
		25	0	23.50	20.65	20.82	20.90
			13	23.50	20.67	20.86	20.94
			25	23.50	20.78	20.85	20.95
		50	0	23.50	20.74	20.82	20.82

Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	37825	38000	38175
					2577.5MHz	2595.0MHz	2512.5MHz
15MHz	QPSK	1	0	23.50	22.72	22.77	22.58
			38	23.50	22.83	22.66	22.63
			74	23.50	22.92	22.68	22.72
		36	0	23.50	22.11	22.07	22.18
			18	23.50	22.14	21.98	22.22
			39	23.50	22.18	21.96	22.23
		75	0	23.50	22.05	22.13	22.10
	16QAM	1	0	23.50	22.65	21.97	22.20
			38	23.50	22.67	21.87	22.38
			74	23.50	**23.04**	21.84	22.34
		36	0	23.50	20.64	20.77	20.69
			18	23.50	20.74	20.65	20.84
			39	23.50	20.76	20.66	20.86
		75	0	23.50	20.74	20.70	20.82
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	37850	38000	38150
					2580.0MHz	2595.0MHz	2610.0MHz
20MHz	QPSK	1	0	23.50	22.56	22.63	22.60
			50	23.50	22.77	22.47	22.70
			99	23.50	22.77	22.41	22.85
		50	0	23.50	21.98	22.17	21.95
			25	23.50	22.20	22.06	22.16
			50	23.50	22.17	21.95	22.12
		100	0	23.50	22.10	22.09	22.06
	16QAM	1	0	23.50	21.99	21.48	22.14
			50	23.50	22.16	21.49	22.30
			99	23.50	22.16	21.40	22.42
		50	0	23.50	20.81	20.81	20.73
			25	23.50	21.00	20.74	20.77
			50	23.50	21.06	20.69	20.89
		100	0	23.50	20.68	20.61	20.80

10.1.11 Conducted Power of LTE Band 41

LTE-TDD Band 41				Maximum Tune-up(dBm)	Conducted Power(dBm)		
Bandwidth	Modulation	RB allocation	RB offset		40265	40640	41215
					2557.5MHz	2605.0MHz	2652.5MHz
5MHz	QPSK	1	0	23.00	22.18	22.55	22.49
			13	23.00	22.20	22.53	22.57
			24	23.00	22.33	22.46	22.52
		12	0	23.00	21.84	21.93	22.02
			6	23.00	21.92	22.03	22.07
			13	23.00	21.93	21.89	22.00
		25	0	23.00	21.81	21.92	22.13
	16QAM	1	0	23.00	21.58	21.66	21.74
			13	23.00	21.59	21.49	21.76
			24	23.00	21.73	21.48	21.82
		12	0	23.00	20.51	20.51	20.55
			6	23.00	20.59	20.48	20.61
			13	23.00	20.59	20.51	20.49
		25	0	23.00	20.43	20.74	20.83
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	40290	40640	41190
					2560.0MHz	2605.0MHz	2650.0MHz
10MHz	QPSK	1	0	23.00	22.49	22.60	22.36
			25	23.00	22.56	22.60	22.38
			49	23.00	22.70	22.55	22.42
		25	0	23.00	21.91	22.03	22.10
			13	23.00	22.00	21.91	22.05
			25	23.00	22.01	21.95	22.05
		50	0	23.00	21.91	21.83	22.08
	16QAM	1	0	23.00	22.37	21.72	22.27
			25	23.00	22.56	21.60	22.42
			49	23.00	22.59	21.72	22.48
		25	0	23.00	20.45	20.65	20.76
			13	23.00	20.55	20.65	20.73
			25	23.00	20.54	20.61	20.75
		50	0	23.00	20.65	20.61	20.70

Bandwidth	Modulation	RB allocation	RB offset	**Maximum Tune-up(dBm)**	40315	40640	41165
					2562.5MHz	2605.0MHz	2647.5MHz
15MHz	QPSK	1	0	23.00	22.49	22.57	22.30
			38	23.00	22.55	22.53	22.46
			74	23.00	22.72	22.46	22.53
		36	0	23.00	21.89	21.94	21.97
			18	23.00	21.97	21.85	21.92
			39	23.00	22.06	21.97	22.08
		75	0	23.00	21.94	21.94	21.99
	16QAM	1	0	23.00	22.31	21.78	22.15
			38	23.00	22.60	21.71	22.25
			74	23.00	22.71	21.64	22.31
		36	0	23.00	20.63	20.63	20.69
			18	23.00	20.71	20.52	20.75
			39	23.00	20.64	20.60	20.68
		75	0	23.00	20.53	20.58	20.73
Bandwidth	Modulation	RB allocation	RB offset	**Maximum Tune-up(dBm)**	40340	40640	41140
					2565.0MHz	2605.0MHz	2645.0MHz
20MHz	QPSK	1	0	23.00	22.32	22.45	22.57
			50	23.00	22.57	22.30	22.67
			99	23.00	22.51	22.23	**22.83**
		50	0	23.00	21.92	22.02	21.84
			25	23.00	22.11	21.90	21.88
			50	23.00	22.20	21.85	22.04
		100	0	23.00	22.01	21.87	22.00
	16QAM	1	0	23.00	21.62	21.32	22.39
			50	23.00	21.79	21.27	22.47
			99	23.00	21.74	21.26	22.69
		50	0	23.00	20.68	20.65	20.53
			25	23.00	20.75	20.67	20.68
			50	23.00	20.88	20.52	20.73
		100	0	23.00	20.57	20.46	20.65

10.1.12 Conducted Power of LTE Band 66

LTE-FDD Band 66				Maximum Tune-up(dBm)	Conducted Power(dBm)		
Bandwidth	Modulation	RB allocation	RB offset		131979	132322	132665
					1710.7MHz	1755.0MHz	1779.3MHz
1.4MHz	QPSK	1	0	22.50	21.30	21.54	21.55
			2	22.50	21.41	21.57	21.64
			5	22.50	21.49	21.53	21.66
		3	0	22.50	21.23	21.59	21.58
			2	22.50	21.30	21.64	21.60
			3	22.50	21.28	21.60	21.65
		6	0	22.50	20.93	21.13	21.21
	16QAM	1	0	22.50	21.81	21.77	21.54
			2	22.50	21.83	21.84	21.45
			5	22.50	21.93	21.78	21.54
		3	0	22.50	20.57	21.05	21.12
			2	22.50	20.54	21.02	21.03
			3	22.50	20.51	21.05	21.07
		6	0	22.50	19.51	19.91	19.92
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	131987	132322	132657
					1711.5MHz	1755.0MHz	1778.5MHz
3MHz	QPSK	1	0	22.50	21.17	21.50	21.49
			7	22.50	21.32	21.47	21.63
			14	22.50	21.27	21.59	21.64
		8	0	22.50	20.69	20.94	21.09
			4	22.50	20.91	21.22	21.18
			7	22.50	20.94	21.20	21.16
		15	0	22.50	20.85	21.14	21.15
	16QAM	1	0	22.50	21.90	21.76	21.40
			7	22.50	21.83	21.72	21.42
			14	22.50	21.89	21.82	21.55
		8	0	22.50	19.32	20.07	19.96
			4	22.50	19.31	20.12	19.67
			7	22.50	19.32	20.08	19.86
		15	0	22.50	19.48	20.05	19.83
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	131997	132322	132647
					1712.5MHz	1755.0MHz	1775.0MHz
5MHz	QPSK	1	0	22.50	21.20	21.46	21.55
			13	22.50	21.31	21.53	21.50
			24	22.50	21.22	21.51	21.58
		12	0	22.50	20.75	20.97	21.07
			6	22.50	20.98	21.12	21.04
			13	22.50	20.95	21.01	21.14
		25	0	22.50	20.86	21.02	21.10
	16QAM	1	0	22.50	20.95	20.69	21.02
			13	22.50	21.01	20.72	21.00
			24	22.50	21.01	20.81	21.16
		12	0	22.50	19.24	19.82	19.96
			6	22.50	19.27	19.83	19.93
			13	22.50	19.30	19.55	19.58
		25	0	22.50	19.34	20.03	19.86

LTE-FDD Band 66				Maximum Tune-up(dBm)	Conducted Power(dBm)		
Bandwidth	Modulation	RB allocation	RB offset		132022	132322	132622
					1715.0MHz	1755.0MHz	1775.0MHz
10MHz	QPSK	1	0	22.50	21.24	21.62	21.51
			25	22.50	21.29	21.65	21.58
			49	22.50	21.41	21.70	21.75
		25	0	22.50	20.89	21.16	21.08
			13	22.50	20.93	21.11	21.00
			25	22.50	20.99	21.21	21.09
		50	0	22.50	20.91	21.17	21.04
	16QAM	1	0	22.50	21.92	21.11	21.11
			25	22.50	21.92	21.06	21.35
			49	22.50	22.01	21.18	21.47
		25	0	22.50	19.22	19.99	19.66
			13	22.50	19.30	20.02	19.58
			25	22.50	19.67	19.81	20.00
		50	0	22.50	19.35	20.03	19.53
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	132047	132322	132597
					1717.5MHz	1755.0MHz	1772.5MHz
15MHz	QPSK	1	0	22.50	21.27	21.66	21.60
			38	22.50	21.35	21.61	21.46
			74	22.50	21.59	21.75	21.56
		36	0	22.50	20.90	21.08	20.98
			18	22.50	20.89	21.03	21.02
			39	22.50	20.97	21.23	20.94
		75	0	22.50	20.94	21.15	21.00
	16QAM	1	0	22.50	21.94	21.07	21.72
			38	22.50	21.95	21.11	21.62
			74	22.50	**22.10**	21.04	21.78
		36	0	22.50	19.34	19.70	19.91
			18	22.50	19.80	20.02	19.59
			39	22.50	19.46	20.04	19.96
		75	0	22.50	19.82	20.01	19.64
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	132072	132322	132572
					1720.0MHz	1755.0MHz	1770.0MHz
20MHz	QPSK	1	0	22.50	21.23	21.72	21.59
			50	22.50	21.36	21.68	21.65
			99	22.50	21.39	21.72	21.71
		50	0	22.50	20.92	21.15	21.04
			25	22.50	20.97	21.13	20.98
			50	22.50	21.03	21.19	20.98
		100	0	22.50	20.83	21.07	21.15
	16QAM	1	0	22.50	20.52	21.41	20.97
			50	22.50	20.63	21.38	20.90
			99	22.50	20.68	21.42	21.02
		50	0	22.50	19.47	19.55	19.52
			25	22.50	19.91	19.95	19.88
			50	22.50	19.59	19.92	19.50
		100	0	22.50	19.81	19.97	19.95

10.1.13 Conducted Power of Wi-Fi 2.4G

Band (GHz)	Mode	Channel	Freq. (MHz)	Average Power (dBm)	Maximum Tune-up(dBm)	SAR Test Require.
2.4g Wifi (2.4~2.4835)	802.11b	1	2412	16.38	16.50	No
		6	2437	13.24	13.50	No
		11	2462	17.12	17.50	No
	802.11g	1	2412	18.84	19.00	No
		6	2437	16.20	16.50	No
		11	2462	19.34	19.50	Yes
	802.11n(HT20)	1	2412	17.82	18.00	No
		6	2437	15.04	15.50	No
		11	2462	18.32	18.50	No
Note: SAR is not required for the following 2.4 GHz OFDM conditions as the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2W/kg.						

10.1.14 Conducted Power of BT

	Mode	Maximum Tune-up(dBm)	Average Conducted Output Power (dBm)		
			0	39	78
EDR			2402MHz	2441MHz	2480MHz
	GFSK	7.00	5.83	**6.91**	5.46
	π/4QPSK	6.50	5.46	6.42	4.95
	8DPSK	6.50	5.40	6.30	5.18
	Mode	Maximum Tune-up(dBm)	Average Conducted Output Power (dBm)		
BLE			0	20	39
			2402MHz	2440MHz	2480MHz
	1Mbps	-2.00	-2.97	**-2.00**	-3.50

Channel	Frequency (GHz)	Max. Tune-up Power (dBm)	Max. Power (mW)	Test distance (mm)	Exclusion thresholds for 1-g SAR(mW)	RF exposure evaluation required
39	2.402	6.91	4.91	0	10	Yes
20	2.440	-2.00	0.63	0	10	No

Note

1. Per KDB 447498 D04 Interim General RF Exposure Guidance v01, the 1-g SAR test exclusion thresholds for 300 MHz to 6 GHz at *test separation distances* ≤ 40 cm are determined by:

$$P_{th}\,(\text{mW}) = ERP_{20\,\text{cm}}\,(\text{mW}) = \begin{cases} 2040f & 0.3\ \text{GHz} \le f < 1.5\ \text{GHz} \\ 3060 & 1.5\ \text{GHz} \le f \le 6\ \text{GHz} \end{cases} \quad \text{(B.1)}$$

$$P_{th}\,(\text{mW}) = \begin{cases} ERP_{20\,\text{cm}}(d/20\ \text{cm})^{x} & d \le 20\ \text{cm} \\ ERP_{20\,\text{cm}} & 20\ \text{cm} < d \le 40\ \text{cm} \end{cases} \quad \text{(B.2)}$$

where

$$x = -\log_{10}\left(\frac{60}{ERP_{20\,\text{cm}}\sqrt{f}}\right)$$

and f is in GHz, d is the separation distance (cm), and $ERP_{20\text{cm}}$ is per Formula (B.1).

*When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine estimated SAR.

2. Per KDB 248227 D01 v02r02, choose the highest output power channel to test SAR and determine further SAR exclusion.

3 . The output power of all data rate were prescan, just the worst case (the lowest data rate) of all mode were shown in report.

10.1.15 Tune-up power tolerance

Band	Tune-up power tolerance(dBm)		
GSM850	GSM/GPRS (GMSK)	GSM	Max output power =31.0dBm±0.5dBm
		1TXslots	Max output power =30.0dBm±0.5dBm
		2TXslots	Max output power =30.0dBm±0.5dBm
		3TXslots	Max output power =30.5dBm±0.5dBm
		4TXslots	Max output power =30.5dBm±0.5dBm
GSM850	EGPRS (8-PSK)	1TXslots	Max output power =28.5dBm±0.5dBm
		2TXslots	Max output power =28.5dBm±0.5dBm
		3TXslots	Max output power =28.5dBm±0.5dBm
		4TXslots	Max output power =28.0dBm±0.5dBm
GSM1900	GSM/GPRS (GMSK)	GSM	Max output power =31.0dBm±0.5dBm
		1TXslots	Max output power =28.0dBm±0.5dBm
		2TXslots	Max output power =28.5dBm±0.5dBm
		3TXslots	Max output power =28.0dBm±0.5dBm
		4TXslots	Max output power =28.5dBm±0.5dBm
GSM1900	EGPRS (8-PSK)	1TXslots	Max output power =26.0dBm±0.5dBm
		2TXslots	Max output power =26.0dBm±0.5dBm
		3TXslots	Max output power =26.5dBm±0.5dBm
		4TXslots	Max output power =26.5dBm±0.5dBm
WCDMA 2	Max output power =23.5dbm±0.5dbm		
WCDMA 4	Max output power =24.0dbm±0.5dbm		
WCDMA 5	Max output power =24.0dbm±0.5dbm		
LTE B2	Max output power =24.0dbm±0.5dbm		
LTE B4	Max output power =23.5dbm±0.5dbm		
LTE B5	Max output power =24.0dbm±0.5dbm		
LTE B7	Max output power =23.0dbm±0.5dbm		
LTE B12	Max output power =23.5dbm±0.5dbm		
LTE B17	Max output power =23.5dbm±0.5dbm		
LTE B26	Max output power =24.0dbm±0.5dbm		
LTE B38	Max output power =23.5dbm±0.5dbm		
LTE B41	Max output power =23.0dbm±0.5dbm		
LTE B66	Max output power =22.5dbm±0.5dbm		
2.4G Wi-Fi	802.11b		Max output power =17.5±0.5dbm
	802.11g		Max output power =19.5±0.5dbm
	802.11n (HT20)		Max output power =18.5 ±0.5dbm
BT	GFSK		Max output power =7.0dBm±0.5dbm
	π/4QPSK		Max output power =6.5dBm±0.5dbm
	8DPSK		Max output power =6.5dBm±0.5dbm
BLE	1Mbps		Max output power =0.0dBm±0.5dbm

10.2 SAR test results

Notes:

1) Per KDB447498 D01v05 r02,the SAR test shall be performed at the high, middle and low frequency channels of each operating mode. If the scaled SAR measured at mid-band channel for each test configuration is at least 3.0 dB lower than the SAR limit (< 0.8 W/kg), testing at the high and low channels is optional.

2) Per KDB447498 D01v05r02, testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is: ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz. When the maximum output power variation across the required test channels is > ½ dB, instead of the middle channel, the highest output power channel must be used.

3) Per KDB447498 D01v05r02, All measurement SAR result is scaled-up to account for tune-up tolerance is compliant.

4) Per KDB648474 D04v01r02, body-worn accessory testing is typically associated with voice operations. Therefore, GSM voice was evaluated for body-worn with headset SAR.

5)Per KDB248227 D01v01r02, the procedures required to establish specific device operating configurations for testing the SAR of 802.11 a/b/g transmitters.

(1) For Headsets operating next to ear, hotspot mode or mini-tablet configurations, the initial test position procedures were applied. The test position with the highest extrapolated peak SAR will be used as the initial test position. When the reported SAR of initial test position is <= 0.4 W/kg, SAR testing for remaining test positions is not required. Otherwise, SAR is evaluated at the subsequent highest peak SAR positions until the reported SAR result is <= 0.8 W/kg or all test positions are measured.

(2) For WLAN 2.4 GHz, the highest measured maximum output power channel for DSSS was selected for SAR measurement. When the reported SAR is <= 0.8 W/kg, no further SAR testing is required. Otherwise, SAR is evaluated at the next highest measured output power channel. When any reported SAR is > 1.2 W/kg, SAR is required for the third channel. 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.

(3) For WLAN 5 GHz, the initial test configuration was selected according to the transmission mode with the highest maximum output power. When the reported SAR of initial test configuration is > 0.8 W/kg, SAR is required for the subsequent highest measured output power channel until the reported SAR result is <= 1.2 W/kg or all required channels are measured. For other transmission modes, SAR is not required when the highest reported SAR for initial test configuration is adjusted by the ratio of subsequent test configuration to initial test configuration specified maximum output power and it is <= 1.2 W/kg.

6) Per KDB865664 D01v01r04,for each frequency band,repeated SAR measurement is required only when the measured SAR is ≥0.8W/Kg; if the deviation among the repeated measurement is ≤20%,and the measured SAR <1.45W/Kg,only one repeated measurement is required.

7) Per KDB865664 D02v01r01, SAR plot is only required for the highest measured SAR in each exposure configuration, wireless mode and frequency band combination; Plots are also required when the measured SAR is > 1.5 W/kg, or > 7.0 W/kg for occupational exposure. The published RF exposure KDB procedures may require additional plots; for example, to support SAR to peak location separation ratio test exclusion and/or volume scan post-processing(Refer to appendix B for details).

8) Per KDB941225 D06v01r01, the DUT Dimension is bigger than 9 cm x 5 cm, so 10mm is chosen as the test separation distance for Hotspot mode. When the antenna-to-edge distance is greater than 2.5cm,such position does not need to be tested.

9) Per KDB 941225 D01, 3G SAR Measurement Procedures ,The mode tested for SAR is referred to as the primary mode. The equivalent modes considered for SAR test reduction are denoted as secondary modes. Both primary and secondary modes must be in the same frequency band. When the maximum output power and tune-up tolerance specified for production units in a secondary mode is≤ 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.

10)Per KDB 941225 D05, SAR Evaluation Considerations for LTE Devices

(1)QPSK with 1 RB and 50% RB allocation

Start with the largest channel bandwidth and measure SAR, 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; otherwise, SAR is required for the remaining required test channels and only for the RB offset configuration with the highest output power for that channel. When the reported SAR of a required test channel is > 1.45 W/kg, SAR is required for all three RB offset configurations for that required test channel.

(2)QPSK with 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.

(3)Higher order modulations

SAR is required only when the highest maximum output power for the configuration in the higher order modulation is > 1/2 dB higher than the same configuration in QPSK or when the reported SAR for the QPSK configuration is >1.45 W/kg.

(4)Other channel bandwidth

SAR is required when the highest maximum output power of the smaller channel bandwidth is > 1/2 dB higher than the equivalent channel configurations in the largest channel bandwidth configuration or the reported SAR of a configuration for the largest channel bandwidth is > 1.45 W/kg.

10.3 Test Result

10.3.1 Results overview of GSM

Mode	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas. SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)
GSM 850 (voice)	Left Cheek	251	848.8	3.670	0.609	100.00	1.000	32.94	33.00	1.014	0.617
	Left Tilt	251	848.8	-1.780	0.737	100.00	1.000	32.94	33.00	1.014	**0.747**
	Right Cheek	251	848.8	-1.910	0.618	100.00	1.000	32.94	33.00	1.014	0.627
	Right Tilt	251	848.8	-3.870	0.712	100.00	1.000	32.94	33.00	1.014	0.722
Mode	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas. SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)
GPRS 850+4slots	Front	251	848.8	3.150	0.259	100.00	1.000	28.24	28.50	1.062	0.275
	Back	251	848.8	-3.150	0.524	100.00	1.000	28.24	28.50	1.062	**0.556**
	Left	251	848.8	4.570	0.327	100.00	1.000	28.24	28.50	1.062	0.347
	Top	251	848.8	-1.870	0.161	100.00	1.000	28.24	28.50	1.062	0.171

Mode	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas. SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)
GSM 1900 (voice)	Left Cheek	810	1909.8	-1.720	0.457	100.00	1.000	30.61	31.00	1.094	0.500
	Left Tilt	810	1909.8	-1.230	0.684	100.00	1.000	30.61	31.00	1.094	0.748
	Right Cheek	810	1909.8	-3.630	0.548	100.00	1.000	30.61	31.00	1.094	0.599
	Right Tilt	810	1909.8	4.820	0.724	100.00	1.000	30.61	31.00	1.094	**0.792**
Mode	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas. SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)
GPRS 1900+4slots	Front	810	1909.8	4.960	0.205	100.00	1.000	26.00	26.50	1.122	0.230
	Back	810	1909.8	0.300	0.433	100.00	1.000	26.00	26.50	1.122	**0.486**
	Left	810	1909.8	0.990	0.176	100.00	1.000	26.00	26.50	1.122	0.197
	Top	810	1909.8	0.770	0.097	100.00	1.000	26.00	26.50	1.122	0.109

10.3.2 Results overview of WCDMA

Mode	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas. SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)
WCDMA Band 2 (RMC*)	Left Cheek	9538	1907.6	-2.110	0.449	100.00	1.000	23.48	23.50	1.005	0.451
	Left Tilt	9538	1907.6	-3.110	0.617	100.00	1.000	23.48	23.50	1.005	0.620
	Right Cheek	9538	1907.6	2.150	0.772	100.00	1.000	23.48	23.50	1.005	0.776
	Right Tilt	9538	1907.6	-1.540	1.008	100.00	1.000	23.48	23.50	1.005	**1.013**
Mode	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas. SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)
WCDMA Band 2 (RMC*)	Front	9538	1907.6	-2.960	0.238	100.00	1.000	23.26	23.50	1.057	0.252
	Back	9538	1907.6	1.950	0.583	100.00	1.000	23.26	23.50	1.057	**0.616**
	Left	9538	1907.6	1.230	0.293	100.00	1.000	23.26	23.50	1.057	0.310
	Top	9538	1907.6	-3.450	0.147	100.00	1.000	23.26	23.50	1.057	0.155

Mode	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas. SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)
WCDMA Band 4 (RMC*)	Left Cheek	1513	1752.6	-2.050	0.485	100.00	1.000	23.47	23.50	1.007	0.488
	Left Tilt	1513	1752.6	1.610	0.526	100.00	1.000	23.47	23.50	1.007	0.530
	Right Cheek	1513	1752.6	-1.450	0.557	100.00	1.000	23.48	23.50	1.007	0.561
	Right Tilt	1513	1752.6	2.210	0.610	100.00	1.000	23.48	23.50	1.007	**0.614**
Mode	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas. SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)
WCDMA Band 4 (RMC*)	Front	1513	1752.6	-2.500	0.369	100.00	1.000	23.52	24.00	1.117	0.412
	Back	1513	1752.6	0.910	0.466	100.00	1.000	23.52	24.00	1.117	**0.520**
	Left	1513	1752.6	0.810	0.398	100.00	1.000	23.52	24.00	1.117	0.445
	Top	1513	1752.6	-4.120	0.332	100.00	1.000	23.52	24.00	1.117	0.371

Mode	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)
WCDMA Band 5 (RMC*)	Left Cheek	4233	846.6	0.810	0.665	100.00	1.000	23.51	24.00	1.119	0.744
	Left Tilt	4233	846.6	-4.250	0.684	100.00	1.000	23.51	24.00	1.119	0.766
	Right Cheek	4233	846.6	-4.600	0.756	100.00	1.000	23.51	24.00	1.119	0.846
	Right Tilt	4233	846.6	-0.160	0.785	100.00	1.000	23.51	24.00	1.119	**0.879**
Mode	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)
WCDMA Band 5 (RMC*)	Front	4233	846.6	-1.420	0.247	100.00	1.000	23.55	24.00	1.109	0.274
	Back	4233	846.6	-4.460	0.385	100.00	1.000	23.55	24.00	1.109	**0.427**
	Left	4233	846.6	0.560	0.289	100.00	1.000	23.55	24.00	1.109	0.321
	Top	4233	846.6	-1.400	0.122	100.00	1.000	23.55	24.00	1.109	0.135

10.3.3 Results overview of LTE

Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)
Band 2 (BW: 20MHz)	1RB	Left Cheek	19100	1900	-3.710	1.031	100.00	1.000	23.58	24.00	1.102	1.136
		Left Tilt	19100	1900	-1.580	0.919	100.00	1.000	23.58	24.00	1.102	1.012
		Right Cheek	19100	1900	1.070	1.117	100.00	1.000	23.58	24.00	1.102	1.230
		Right Tilt	19100	1900	0.350	1.354	100.00	1.000	23.58	24.00	1.102	**1.491**
	50%RB	Left Cheek	19100	1900	0.210	0.815	100.00	1.000	23.58	24.00	1.102	0.898
		Left Tilt	19100	1900	1.750	0.765	100.00	1.000	23.58	24.00	1.102	0.843
		Right Cheek	19100	1900	-2.720	0.835	100.00	1.000	23.58	24.00	1.102	0.920
		Right Tilt	19100	1900	3.910	1.029	100.00	1.000	23.58	24.00	1.102	1.133
Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)
Band 2 (BW: 20MHz)	1RB	Front	19100	1900	-3.040	0.661	100.00	1.000	23.58	24.00	1.102	0.728
		Back	19100	1900	0.360	0.890	100.00	1.000	23.58	24.00	1.102	**0.980**
		Left	19100	1900	-4.260	0.707	100.00	1.000	23.58	24.00	1.102	0.779
		Top	19100	1900	2.030	0.622	100.00	1.000	23.58	24.00	1.102	0.685
	50%RB	Front	19100	1900	-2.740	0.632	100.00	1.000	23.58	24.00	1.102	0.696
		Back	19100	1900	-0.570	0.597	100.00	1.000	23.58	24.00	1.102	0.658
		Left	19100	1900	-3.690	0.556	100.00	1.000	23.58	24.00	1.102	0.612
		Top	19100	1900	-2.570	0.717	100.00	1.000	23.58	24.00	1.102	0.790

Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)
Band 4 (BW: 20MHz)	1RB	Left Cheek	20300	1745.0	-1.570	0.709	100.00	1.000	23.15	23.50	1.084	0.769
		Left Tilt	20300	1745.0	-2.560	0.915	100.00	1.000	23.15	23.50	1.084	0.992
		Right Cheek	20300	1745.0	1.450	0.776	100.00	1.000	23.15	23.50	1.084	0.841
		Right Tilt	20300	1745.0	4.310	0.982	100.00	1.000	23.15	23.50	1.084	**1.064**
	50%RB	Left Cheek	20050	1720.0	0.990	0.890	100.00	1.000	23.15	23.50	1.084	0.965
		Left Tilt	20050	1720.0	4.650	0.845	100.00	1.000	23.15	23.50	1.084	0.916
		Right Cheek	20050	1720.0	-0.300	0.698	100.00	1.000	23.15	23.50	1.084	0.757
		Right Tilt	20050	1720.0	2.210	0.732	100.00	1.000	23.15	23.50	1.084	0.793
Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)
Band 4 (BW: 20MHz)	1RB	Front	20300	1745.0	0.440	0.192	100.00	1.000	23.15	23.50	1.084	0.208
		Back	20300	1745.0	-2.050	0.486	100.00	1.000	23.15	23.50	1.084	**0.527**
		Left	20300	1745.0	-3.640	0.231	100.00	1.000	23.15	23.50	1.084	0.250
		Top	20300	1745.0	-0.300	0.148	100.00	1.000	23.15	23.50	1.084	0.160
	50%RB	Front	20050	1720.0	-3.300	0.383	100.00	1.000	23.15	23.50	1.084	0.415
		Back	20050	1720.0	-0.580	0.033	100.00	1.000	23.15	23.50	1.084	0.036
		Left	20050	1720.0	-4.450	0.350	100.00	1.000	23.15	23.50	1.084	0.379
		Top	20050	1720.0	-0.410	0.310	100.00	1.000	23.15	23.50	1.084	0.336

Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)
Band 5 (BW: 10MHz)	1RB	Left Cheek	20600	844.0	0.040	0.638	100.00	1.000	23.74	24.00	1.062	0.677
		Left Tilt	20600	844.0	-2.490	0.681	100.00	1.000	23.74	24.00	1.062	0.723
		Right Cheek	20600	844.0	2.160	0.734	100.00	1.000	23.74	24.00	1.062	0.779
		Right Tilt	20600	844.0	1.450	0.776	100.00	1.000	23.74	24.00	1.062	**0.824**
	50%RB	Left Cheek	20450	829.0	2.750	0.640	100.00	1.000	23.74	24.00	1.062	0.679
		Left Tilt	20450	829.0	-3.840	0.595	100.00	1.000	23.74	24.00	1.062	0.632
		Right Cheek	20450	829.0	-2.620	0.538	100.00	1.000	23.74	24.00	1.062	0.571
		Right Tilt	20450	829.0	-3.470	0.622	100.00	1.000	23.74	24.00	1.062	0.660
Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)
Band 5 (BW: 10MHz)	1RB	Front	20600	844.0	0.090	0.299	100.00	1.000	23.74	24.00	1.062	0.317
		Back	20600	844.0	-4.460	0.385	100.00	1.000	23.74	24.00	1.062	**0.409**
		Left	20600	844.0	2.890	0.314	100.00	1.000	23.74	24.00	1.062	0.333
		Top	20600	844.0	2.650	0.247	100.00	1.000	23.74	24.00	1.062	0.262
	50%RB	Front	20450	829.0	2.570	0.315	100.00	1.000	23.74	24.00	1.062	0.334
		Back	20450	829.0	0.510	0.298	100.00	1.000	23.74	24.00	1.062	0.316
		Left	20450	829.0	4.500	0.253	100.00	1.000	23.74	24.00	1.062	0.269
		Top	20450	829.0	4.620	0.314	100.00	1.000	23.74	24.00	1.062	0.333

Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)
Band 7 (BW: 20MHz)	1RB	Left Cheek	21100	2535.0	2.980	0.384	100.00	1.000	22.94	23.00	1.014	0.389
		Left Tilt	21100	2535.0	-4.180	0.447	100.00	1.000	22.94	23.00	1.014	0.453
		Right Cheek	21100	2535.0	0.420	0.469	100.00	1.000	22.94	23.00	1.014	0.476
		Right Tilt	21100	2535.0	-0.600	0.593	100.00	1.000	22.94	23.00	1.014	**0.601**
	50%RB	Left Cheek	21350	2560.0	2.710	0.457	100.00	1.000	22.94	23.00	1.014	0.463
		Left Tilt	21350	2560.0	1.490	0.400	100.00	1.000	22.94	23.00	1.014	0.406
		Right Cheek	21350	2560.0	1.120	0.355	100.00	1.000	22.94	23.00	1.014	0.360
		Right Tilt	21350	2560.0	0.950	0.450	100.00	1.000	22.94	23.00	1.014	0.456
Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)
Band 7 (BW: 20MHz)	1RB	Front	21100	2535.0	4.470	0.159	100.00	1.000	22.94	23.00	1.014	0.161
		Back	21100	2535.0	2.370	0.388	100.00	1.000	22.94	23.00	1.014	**0.393**
		Left	21100	2535.0	2.890	0.185	100.00	1.000	22.94	23.00	1.014	0.188
		Top	21100	2535.0	-2.900	0.117	100.00	1.000	22.94	23.00	1.014	0.119
	50%RB	Front	21350	2560.0	4.500	0.333	100.00	1.000	22.94	23.00	1.014	0.338
		Back	21350	2560.0	4.600	0.292	100.00	1.000	22.94	23.00	1.014	0.296
		Left	21350	2560.0	-1.020	0.247	100.00	1.000	22.94	23.00	1.014	0.250
		Top	21350	2560.0	0.530	0.308	100.00	1.000	22.94	23.00	1.014	0.312

Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)
Band 12 (BW: 10MHz)	1RB	Left Cheek	23130	711.0	4.200	0.524	100.00	1.000	23.35	23.50	1.035	**0.542**
		Left Tilt	23130	711.0	-2.470	0.504	100.00	1.000	23.35	23.50	1.035	0.522
		Right Cheek	23130	711.0	-2.160	0.512	100.00	1.000	23.35	23.50	1.035	0.530
		Right Tilt	23130	711.0	4.950	0.492	100.00	1.000	23.35	23.50	1.035	0.509
	50%RB	Left Cheek	23060	704.0	3.310	0.384	100.00	1.000	23.35	23.50	1.035	0.397
		Left Tilt	23060	704.0	-1.250	0.344	100.00	1.000	23.35	23.50	1.035	0.356
		Right Cheek	23060	704.0	2.930	0.276	100.00	1.000	23.35	23.50	1.035	0.286
		Right Tilt	23060	704.0	0.420	0.375	100.00	1.000	23.35	23.50	1.035	0.388
Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)
Band 12 (BW: 10MHz)	1RB	Front	23130	711.0	-0.150	0.239	100.00	1.000	23.35	23.50	1.035	0.247
		Back	23130	711.0	-2.140	0.396	100.00	1.000	23.35	23.50	1.035	**0.410**
		Left	23130	711.0	-4.280	0.386	100.00	1.000	23.35	23.50	1.035	0.400
		Top	23130	711.0	2.810	0.122	100.00	1.000	23.35	23.50	1.035	0.126
	50%RB	Front	23060	704.0	-1.980	0.340	100.00	1.000	23.35	23.50	1.035	0.352
		Back	23060	704.0	-2.500	0.306	100.00	1.000	23.35	23.50	1.035	0.317
		Left	23060	704.0	2.530	0.257	100.00	1.000	23.35	23.50	1.035	0.266
		Top	23060	704.0	3.500	0.315	100.00	1.000	23.35	23.50	1.035	0.326

Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)
Band 17 (BW: 10MHz)	1RB	Left Cheek	23800	711.0	-3.050	0.548	100.00	1.000	23.35	23.50	1.035	0.567
		Left Tilt	23800	711.0	-2.280	0.608	100.00	1.000	23.35	23.50	1.035	0.629
		Right Cheek	23800	711.0	1.380	0.706	100.00	1.000	23.35	23.50	1.035	0.731
		Right Tilt	23800	711.0	-2.760	0.753	100.00	1.000	23.35	23.50	1.035	**0.779**
	50%RB	Left Cheek	23800	711.0	-4.430	0.408	100.00	1.000	23.35	23.50	1.035	0.422
		Left Tilt	23800	711.0	4.520	0.367	100.00	1.000	23.35	23.50	1.035	0.380
		Right Cheek	23800	711.0	-2.000	0.310	100.00	1.000	23.35	23.50	1.035	0.321
		Right Tilt	23800	711.0	-2.980	0.396	100.00	1.000	23.35	23.50	1.035	0.410
Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)
Band 17 (BW: 10MHz)	1RB	Front	23800	711.0	-4.650	0.152	100.00	1.000	23.35	23.50	1.035	0.157
		Back	23800	711.0	1.000	0.294	100.00	1.000	23.35	23.50	1.035	**0.304**
		Left	23800	711.0	-0.810	0.168	100.00	1.000	23.35	23.50	1.035	0.174
		Top	23800	711.0	-2.310	0.076	100.00	1.000	23.35	23.50	1.035	0.079
	50%RB	Front	23800	711.0	-0.310	0.234	100.00	1.000	23.35	23.50	1.035	0.242
		Back	23800	711.0	3.920	0.197	100.00	1.000	23.35	23.50	1.035	0.204
		Left	23800	711.0	3.310	0.157	100.00	1.000	23.35	23.50	1.035	0.163
		Top	23800	711.0	2.010	0.215	100.00	1.000	23.35	23.50	1.035	0.223

Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)
Band 26 (BW: 15MHz)	1RB	Left Cheek	26965	841.5	-0.470	0.238	100.00	1.000	23.86	24.00	1.033	0.246
		Left Tilt	26965	841.5	-2.550	0.275	100.00	1.000	23.86	24.00	1.033	0.284
		Right Cheek	26965	841.5	-2.370	0.311	100.00	1.000	23.86	24.00	1.033	0.321
		Right Tilt	26965	841.5	0.690	0.382	100.00	1.000	23.86	24.00	1.033	**0.395**
	50%RB	Left Cheek	26765	821.5	-4.110	0.344	100.00	1.000	23.86	24.00	1.033	0.355
		Left Tilt	26765	821.5	-3.590	0.286	100.00	1.000	23.86	24.00	1.033	0.295
		Right Cheek	26765	821.5	-4.850	0.328	100.00	1.000	23.86	24.00	1.033	0.339
		Right Tilt	26765	821.5	4.750	0.268	100.00	1.000	23.86	24.00	1.033	0.277
Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)
Band 26 (BW: 15MHz)	1RB	Front	26965	841.5	3.400	0.073	100.00	1.000	23.86	24.00	1.033	0.075
		Back	26965	841.5	-4.040	0.149	100.00	1.000	23.86	24.00	1.033	**0.154**
		Left	26965	841.5	4.890	0.046	100.00	1.000	23.86	24.00	1.033	0.048
		Top	26965	841.5	1.520	0.039	100.00	1.000	23.86	24.00	1.033	0.040
	50%RB	Front	26765	821.5	-1.920	0.098	100.00	1.000	23.86	24.00	1.033	0.101
		Back	26765	821.5	-1.020	0.134	100.00	1.000	23.86	24.00	1.033	0.138
		Left	26765	821.5	-2.330	0.102	100.00	1.000	23.86	24.00	1.033	0.105
		Top	26765	821.5	-4.960	0.100	100.00	1.000	23.86	24.00	1.033	0.103

Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)
Band 38 (BW: 20MHz)	1RB	Left Cheek	37850	2580.0	4.470	0.212	100.00	1.000	23.04	23.50	1.112	0.236
		Left Tilt	37850	2580.0	-4.080	0.260	100.00	1.000	23.04	23.50	1.112	0.289
		Right Cheek	37850	2580.0	1.590	0.364	100.00	1.000	23.04	23.50	1.112	0.405
		Right Tilt	37850	2580.0	4.340	0.420	100.00	1.000	23.04	23.50	1.112	**0.467**
	50%RB	Left Cheek	38000	2595.0	0.370	0.375	100.00	1.000	23.04	23.50	1.112	0.417
		Left Tilt	38000	2595.0	-2.570	0.323	100.00	1.000	23.04	23.50	1.112	0.359
		Right Cheek	38000	2595.0	3.970	0.361	100.00	1.000	23.04	23.50	1.112	0.401
		Right Tilt	38000	2595.0	3.850	0.303	100.00	1.000	23.04	23.50	1.112	0.337
Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)
Band 38 (BW: 20MHz)	1RB	Front	37850	2580.0	-2.020	0.118	100.00	1.000	23.04	23.50	1.112	0.131
		Back	37850	2580.0	-4.930	0.238	100.00	1.000	23.04	23.50	1.112	**0.265**
		Left	37850	2580.0	-0.190	0.137	100.00	1.000	23.04	23.50	1.112	0.152
		Top	37850	2580.0	0.970	0.079	100.00	1.000	23.04	23.50	1.112	0.088
	50%RB	Front	38000	2595.0	-4.630	0.169	100.00	1.000	23.04	23.50	1.112	0.188
		Back	38000	2595.0	-3.840	0.224	100.00	1.000	23.04	23.50	1.112	0.249
		Left	38000	2595.0	4.750	0.190	100.00	1.000	23.04	23.50	1.112	0.211
		Top	38000	2595.0	3.580	0.198	100.00	1.000	23.04	23.50	1.112	0.220

Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)
Band 41 (BW: 20MHz)	1RB	Left Cheek	41140	2645.0	0.750	0.328	100.00	1.000	22.83	23.00	1.040	0.341
		Left Tilt	41140	2645.0	4.480	0.394	100.00	1.000	22.83	23.00	1.040	0.410
		Right Cheek	41140	2645.0	-0.530	0.482	100.00	1.000	22.83	23.00	1.040	0.501
		Right Tilt	41140	2645.0	-2.940	0.703	100.00	1.000	22.83	23.00	1.040	**0.731**
	50%RB	Left Cheek	40340	2565.0	4.490	0.608	100.00	1.000	22.83	23.00	1.040	0.632
		Left Tilt	40340	2565.0	-2.010	0.559	100.00	1.000	22.83	23.00	1.040	0.581
		Right Cheek	40340	2565.0	2.610	0.538	100.00	1.000	22.83	23.00	1.040	0.559
		Right Tilt	40340	2565.0	0.370	0.598	100.00	1.000	22.83	23.00	1.040	0.622
Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)
Band 41 (BW: 20MHz)	1RB	Front	41140	2645.0	2.340	0.155	100.00	1.000	22.83	23.00	1.040	0.161
		Back	41140	2645.0	-2.690	0.256	100.00	1.000	22.83	23.00	1.040	**0.266**
		Left	41140	2645.0	-4.780	0.163	100.00	1.000	22.83	23.00	1.040	0.170
		Top	41140	2645.0	4.480	0.098	100.00	1.000	22.83	23.00	1.040	0.102
	50%RB	Front	40340	2565.0	4.110	0.195	100.00	1.000	22.83	23.00	1.040	0.203
		Back	40340	2565.0	3.330	0.237	100.00	1.000	22.83	23.00	1.040	0.246
		Left	40340	2565.0	1.590	0.212	100.00	1.000	22.83	23.00	1.040	0.220
		Top	40340	2565.0	-1.060	0.206	100.00	1.000	22.83	23.00	1.040	0.214

Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)
Band 66 (BW: 20MHz)	1RB	Left Cheek	132572	1770.0	-3.160	0.434	100.00	1.000	22.10	22.50	1.096	0.476
		Left Tilt	132572	1770.0	-4.070	0.476	100.00	1.000	22.10	22.50	1.096	0.522
		Right Cheek	132572	1770.0	4.650	0.506	100.00	1.000	22.10	22.50	1.096	0.555
		Right Tilt	132572	1770.0	1.240	0.561	100.00	1.000	22.10	22.50	1.096	**0.615**
	50%RB	Left Cheek	132072	1720.0	2.100	0.476	100.00	1.000	22.10	22.50	1.096	0.522
		Left Tilt	132072	1720.0	2.110	0.417	100.00	1.000	22.10	22.50	1.096	0.457
		Right Cheek	132072	1720.0	-2.940	0.410	100.00	1.000	22.10	22.50	1.096	0.450
		Right Tilt	132072	1720.0	1.090	0.445	100.00	1.000	22.10	22.50	1.096	0.488
Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)
Band 66 (BW: 20MHz)	1RB	Front	132572	1770.0	-2.430	0.227	100.00	1.000	22.10	22.50	1.096	0.249
		Back	132572	1770.0	4.460	0.313	100.00	1.000	22.10	22.50	1.096	**0.343**
		Left	132572	1770.0	1.040	0.234	100.00	1.000	22.10	22.50	1.096	0.257
		Top	132572	1770.0	3.760	0.189	100.00	1.000	22.10	22.50	1.096	0.207
	50%RB	Front	132072	1720.0	-0.720	0.258	100.00	1.000	22.10	22.50	1.096	0.283
		Back	132072	1720.0	2.720	0.225	100.00	1.000	22.10	22.50	1.096	0.247
		Left	132072	1720.0	-0.290	0.233	100.00	1.000	22.10	22.50	1.096	0.255
		Top	132072	1720.0	0.360	0.265	100.00	1.000	22.10	22.50	1.096	0.291

10.3.4 Results overview of Wifi

Mode	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)
2.4g (2.4~2.4835) 802.11b	Left Cheek	3	2422	-0.080	0.107	100.00	1.000	19.34	19.50	1.038	0.111
	Left Tilt	3	2422	1.300	0.135	100.00	1.000	19.34	19.50	1.038	**0.140**
	Right Cheek	3	2422	4.850	0.123	100.00	1.000	19.34	19.50	1.038	0.128
	Right Tilt	3	2422	-0.640	0.100	100.00	1.000	19.34	19.50	1.038	0.104
Mode	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)
2.4g (2.4~2.4835) 802.11b	Front	3	2422	-3.660	0.086	100.00	1.000	19.34	19.50	1.038	0.089
	Back	3	2422	0.530	0.117	100.00	1.000	19.34	19.50	1.038	**0.121**
	Right	3	2422	4.370	0.104	100.00	1.000	19.34	19.50	1.038	0.108
	Bottom	3	2422	-0.500	0.079	100.00	1.000	19.34	19.50	1.038	0.082

Mode	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)
Bluetooth	Left Cheek	0	2402	0.110	0.150	100.00	1.000	6.91	7.00	1.021	**0.153**
	Left Tilt	0	2402	4.620	0.119	100.00	1.000	6.91	7.00	1.021	0.121
	Right Cheek	0	2402	1.280	0.079	100.00	1.000	6.91	7.00	1.021	0.081
	Right Tilt	0	2402	1.200	0.096	100.00	1.000	6.91	7.00	1.021	0.098
Mode	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)
Bluetooth	Front	0	2402	-0.310	0.095	100.00	1.000	6.91	7.00	1.021	0.097
	Back	0	2402	0.510	0.132	100.00	1.000	6.91	7.00	1.021	**0.135**
	Right	0	2402	0.500	0.083	100.00	1.000	6.91	7.00	1.021	0.085
	Bottom	0	2402	-3.350	0.099	100.00	1.000	6.91	7.00	1.021	0.101

Note:

1.The maximum SAR Value of each test band is marked bold.

2.SAR plot is provided only for the highest measured SAR in each exposure configuration, wireless mode and frequency band combination.

3.Per KDB 447498 D01 v06, for each exposure position, if the highest output power channel Reported SAR ≤ 0.8W/kg, other channels SAR testing is not necessary.

4.Per KDB 447498 D01 v06, head/body-worn use is evaluated with the device positioned at 0mm/10 mm from a head/flat phantom respectively filled with head tissue-equivalent medium.

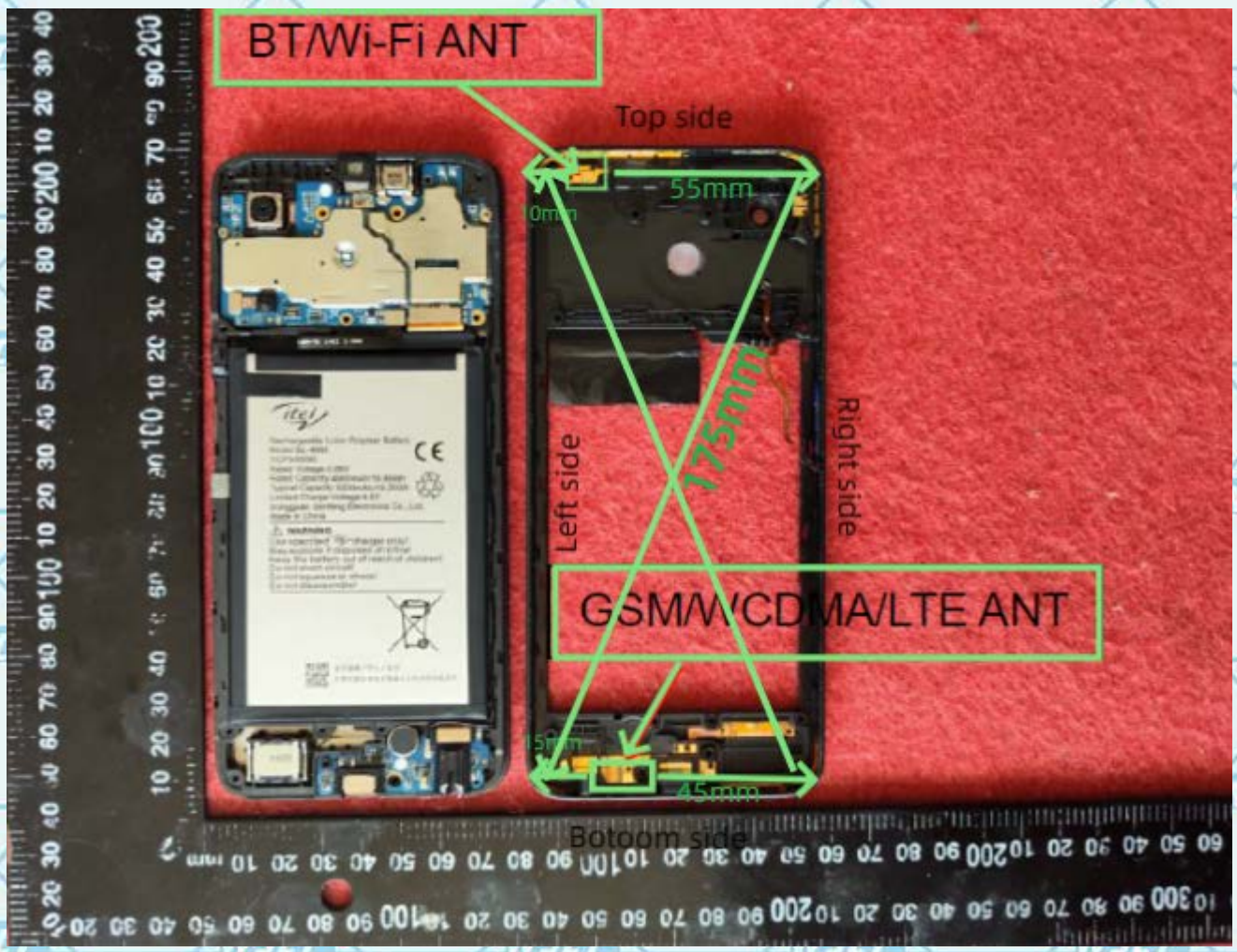
5.Per KDB Publication 941225 D06 where SAR test considerations for handsets (L x W ≥ 9 cm x 5 cm) are based on a composite test separation distance of 10 mm from the front, back and edges of the device with antennas 2.5 cm or closer to the edge of the device, determined from general mixed use conditions for this type of devices. Since the hotspot SAR results may overlap with the body-worn accessory SAR requirements, the more conservative configurations can be considered, thus excluding some body-worn accessory SAR tests.

6.Per KDB 447498 D01 v06, the report SAR is measured SAR value adjusted for maximum tune-up tolerance. Scaling Factor=10^[(tune-up limit power(dBm) - Ave.power power (dBm))/10], where tune-up limit is the maximum rated power among all production units.

7.Reported SAR(W/kg)=Measured SAR (W/kg)*Scaling Factor.

11 Multiple Transmitter Information

The SAR measurement positions of each side are as below:



< Rear Side >

Mode	Front side	Rear side	Left side	Right side	Top side	Bottom side
2G/3G/4G Antenna	Yes	Yes	Yes	No	No	Yes
Wi-Fi/BT Antenna	Yes	Yes	Yes	No	No	Yes

1) Per KDB941225 D06v01r01, the DUT Dimension is bigger than 9 cm x 5 cm, so 10mm is chosen as the test separation distance for Hotspot mode. When the antenna-to-edge distance is greater than 2.5cm,such position does not need to be tested.

11.1.1 Stand-alone SAR test exclusion

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:

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] · [√f(GHz)] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR,where

• f(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

When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

a)Head position

Mode	Pmax(dBm)	Pmax(mW)	Distance(mm)	f(GHz)	Calculation Result	exclusion Threshold	SAR test exclusion
BT	6.91	4.91	5.00	2.45	1.54	3.00	Yes

Body-Worn position

Mode	Pmax(dBm)	Pmax(mW)	Distance(mm)	f(GHz)	Calculation Result	exclusion Threshold	SAR test exclusion
BT	6.91	4.91	10.00	2.45	0.77	3.00	Yes

When the standalone SAR test exclusion applies to an antenna that transmits simultaneously with other antennas, the standalone SAR must be estimated according to the following to determine simultaneous transmission SAR test exclusion

(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)]·[√f(GHz)/x] W/kg for test separation distances ≤ 50 mm, where x = 7.5 for 1-g SAR.

When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

Mode	Position	Pmax(dBm)	Pmax(mW)	Distance(mm)	f(GHz)	X	Estimated SAR(W/Kg)
BT	Head	6.91	4.91	5.00	2.45	7.50	0.205
BT	Body	6.91	4.91	10.00	2.45	7.50	0.102

11.1.2 Simultaneous Transmission Possibilities

The Simultaneous Transmission Possibilities are as below:

Simultaneous Transmission Possibilities				
Simultaneous Tx Combination	Configuration	Head	Body	Hotspot
1	GSM/GPRS/UMTS/LTE +Wi-Fi	YES	YES	YES
2	GSM/GPRS/UMTS/LTE +BT	YES	NO	NO

Note: The device does not support simultaneous BT and Wi-Fi ,because the BT and Wi-Fi share the same antenna and can't transmit simultaneously.

11.1.3 SAR Summation Scenario

Head

Band	Test Position	Scaled SAR			Σ SAR (W/kg) WWAN + WIFI 2.4G	Σ SAR (W/kg) WWAN + BT	SPLSR	Remark
		WWAN	WIFI 2.4G	BT				
GSM850 (voice)	Left Cheek	0.617	0.423	0.153	1.040	0.770	N/A	N/A
	Left Tilt	0.747	0.428	0.121	1.175	0.868	N/A	N/A
	Right Cheek	0.627	0.223	0.081	0.850	0.708	N/A	N/A
	Right Tilt	0.722	0.324	0.098	1.046	0.820	N/A	N/A
GSM1900 (voice)	Left Cheek	0.500	0.423	0.153	0.923	0.653	N/A	N/A
	Left Tilt	0.748	0.428	0.121	1.176	0.869	N/A	N/A
	Right Cheek	0.599	0.223	0.081	0.822	0.680	N/A	N/A
	Right Tilt	0.792	0.324	0.098	1.116	0.890	N/A	N/A
WCDMA Band 2	Left Cheek	0.451	0.423	0.153	0.874	0.604	N/A	N/A
	Left Tilt	0.620	0.428	0.121	1.048	0.741	N/A	N/A
	Right Cheek	0.776	0.223	0.081	0.999	0.857	N/A	N/A
	Right Tilt	1.013	0.324	0.098	1.337	1.111	N/A	N/A
WCDMA Band 4	Left Cheek	0.488	0.423	0.153	0.911	0.641	N/A	N/A
	Left Tilt	0.530	0.428	0.121	0.958	0.651	N/A	N/A
	Right Cheek	0.561	0.223	0.081	0.784	0.642	N/A	N/A
	Right Tilt	0.614	0.324	0.098	0.938	0.712	N/A	N/A
WCDMA Band 5	Left Cheek	0.744	0.423	0.153	1.167	0.897	N/A	N/A
	Left Tilt	0.766	0.428	0.121	1.194	0.887	N/A	N/A
	Right Cheek	0.846	0.223	0.081	1.069	0.927	N/A	N/A
	Right Tilt	0.879	0.324	0.098	1.203	0.977	N/A	N/A

Band	Test Position	RB allocation	Scaled			Σ SAR (W/kg) WWAN + WIFI 2.4G	Σ SAR (W/kg) WWAN + BT	SPLSR	Remark
			WWAN	WIFI 2.4G	Bluetooth				
LTE Band 2 QPSK (20MHz)	Left Cheek	1RB	0.730	0.423	0.153	1.153	0.883	N/A	N/A
	Left Tilt		0.813	0.428	0.121	1.241	0.934	N/A	N/A
	Right Cheek		0.933	0.223	0.081	1.156	1.014	N/A	N/A
	Right Tilt		1.030	0.324	0.098	1.354	1.128	N/A	N/A
	Left Cheek	50%RB	0.687	0.423	0.153	1.110	0.840	N/A	N/A
	Left Tilt		0.669	0.428	0.121	1.097	0.790	N/A	N/A
	Right Cheek		0.639	0.223	0.081	0.862	0.720	N/A	N/A
	Right Tilt		0.666	0.324	0.098	0.990	0.764	N/A	N/A
LTE Band 4 QPSK (20MHz)	Left Cheek	1RB	0.769	0.423	0.153	1.192	0.922	N/A	N/A
	Left Tilt		0.992	0.428	0.121	1.420	1.113	N/A	N/A
	Right Cheek		0.841	0.223	0.081	1.064	0.922	N/A	N/A
	Right Tilt		1.064	0.324	0.098	1.388	1.162	N/A	N/A
	Left Cheek	50%RB	0.965	0.423	0.153	1.388	1.118	N/A	N/A
	Left Tilt		0.916	0.428	0.121	1.344	1.037	N/A	N/A
	Right Cheek		0.757	0.223	0.081	0.980	0.838	N/A	N/A
	Right Tilt		0.793	0.324	0.098	1.117	0.891	N/A	N/A
LTE Band 5 QPSK (10MHz)	Left Cheek	1RB	0.677	0.423	0.153	1.100	0.830	N/A	N/A
	Left Tilt		0.723	0.428	0.121	1.151	0.844	N/A	N/A
	Right Cheek		0.779	0.223	0.081	1.002	0.860	N/A	N/A
	Right Tilt		0.824	0.324	0.098	1.148	0.922	N/A	N/A
	Left Cheek	50%RB	0.679	0.423	0.153	1.102	0.832	N/A	N/A
	Left Tilt		0.632	0.428	0.121	1.060	0.753	N/A	N/A
	Right Cheek		0.571	0.223	0.081	0.794	0.652	N/A	N/A
	Right Tilt		0.660	0.324	0.098	0.984	0.758	N/A	N/A
LTE Band 7 QPSK (10MHz)	Left Cheek	1RB	0.389	0.423	0.153	0.812	0.542	N/A	N/A
	Left Tilt		0.453	0.428	0.121	0.881	0.574	N/A	N/A
	Right Cheek		0.476	0.223	0.081	0.699	0.557	N/A	N/A
	Right Tilt		0.601	0.324	0.098	0.925	0.699	N/A	N/A
	Left Cheek	50%RB	0.463	0.423	0.153	0.886	0.616	N/A	N/A
	Left Tilt		0.406	0.428	0.121	0.834	0.527	N/A	N/A
	Right Cheek		0.360	0.223	0.081	0.583	0.441	N/A	N/A
	Right Tilt		0.456	0.324	0.098	0.780	0.554	N/A	N/A
LTE Band 12 QPSK (10MHz)	Left Cheek	1RB	0.542	0.423	0.153	0.965	0.695	N/A	N/A
	Left Tilt		0.522	0.428	0.121	0.950	0.643	N/A	N/A
	Right Cheek		0.530	0.223	0.081	0.753	0.611	N/A	N/A
	Right Tilt		0.509	0.324	0.098	0.833	0.607	N/A	N/A
	Left Cheek	50%RB	0.397	0.423	0.153	0.820	0.550	N/A	N/A
	Left Tilt		0.356	0.428	0.121	0.784	0.477	N/A	N/A
	Right Cheek		0.286	0.223	0.081	0.509	0.367	N/A	N/A
	Right Tilt		0.388	0.324	0.098	0.712	0.486	N/A	N/A
LTE Band 17 QPSK (10MHz)	Left Cheek	1RB	0.567	0.423	0.153	0.990	0.720	N/A	N/A
	Left Tilt		0.629	0.428	0.121	1.057	0.750	N/A	N/A
	Right Cheek		0.731	0.223	0.081	0.954	0.812	N/A	N/A
	Right Tilt		0.779	0.324	0.098	1.103	0.877	N/A	N/A
	Left Cheek	50%RB	0.422	0.423	0.153	0.845	0.575	N/A	N/A
	Left Tilt		0.380	0.428	0.121	0.808	0.501	N/A	N/A
	Right Cheek		0.321	0.223	0.081	0.544	0.402	N/A	N/A
	Right Tilt		0.410	0.324	0.098	0.734	0.508	N/A	N/A
LTE Band 26 QPSK (10MHz)	Left Cheek	1RB	0.246	0.423	0.153	0.669	0.399	N/A	N/A
	Left Tilt		0.284	0.428	0.121	0.712	0.405	N/A	N/A
	Right Cheek		0.321	0.223	0.081	0.544	0.402	N/A	N/A
	Right Tilt		0.395	0.324	0.098	0.719	0.493	N/A	N/A
	Left Cheek	50%RB	0.355	0.423	0.153	0.778	0.508	N/A	N/A
	Left Tilt		0.295	0.428	0.121	0.723	0.416	N/A	N/A
	Right Cheek		0.339	0.223	0.081	0.562	0.420	N/A	N/A
	Right Tilt		0.277	0.324	0.098	0.601	0.375	N/A	N/A

LTE Band 38 QPSK (20MHz)	Left Cheek	1RB	0.236	0.423	0.153	0.659	0.389	N/A	N/A
	Left Tilt		0.289	0.428	0.121	0.717	0.410	N/A	N/A
	Right Cheek		0.405	0.223	0.081	0.628	0.486	N/A	N/A
	Right Tilt		0.467	0.324	0.098	0.791	0.565	N/A	N/A
	Left Cheek	50%RB	0.417	0.423	0.153	0.840	0.570	N/A	N/A
	Left Tilt		0.359	0.428	0.121	0.787	0.480	N/A	N/A
	Right Cheek		0.401	0.223	0.081	0.624	0.482	N/A	N/A
	Right Tilt		0.337	0.324	0.098	0.661	0.435	N/A	N/A
LTE Band 41 QPSK (20MHz)	Left Cheek	1RB	0.341	0.423	0.153	0.764	0.494	N/A	N/A
	Left Tilt		0.410	0.428	0.121	0.838	0.531	N/A	N/A
	Right Cheek		0.501	0.223	0.081	0.724	0.582	N/A	N/A
	Right Tilt		0.731	0.324	0.098	1.055	0.829	N/A	N/A
	Left Cheek	50%RB	0.632	0.423	0.153	1.055	0.785	N/A	N/A
	Left Tilt		0.581	0.428	0.121	1.009	0.702	N/A	N/A
	Right Cheek		0.559	0.223	0.081	0.782	0.640	N/A	N/A
	Right Tilt		0.622	0.324	0.098	0.946	0.720	N/A	N/A
LTE Band 66 QPSK (20MHz)	Left Cheek	1RB	0.476	0.423	0.153	0.899	0.629	N/A	N/A
	Left Tilt		0.522	0.428	0.121	0.950	0.643	N/A	N/A
	Right Cheek		0.555	0.223	0.081	0.778	0.636	N/A	N/A
	Right Tilt		0.615	0.324	0.098	0.939	0.713	N/A	N/A
	Left Cheek	50%RB	0.522	0.423	0.153	0.945	0.675	N/A	N/A
	Left Tilt		0.457	0.428	0.121	0.885	0.578	N/A	N/A
	Right Cheek		0.450	0.223	0.081	0.673	0.531	N/A	N/A
	Right Tilt		0.488	0.324	0.098	0.812	0.586	N/A	N/A

Hotspot(body-worn)

Band	Test Position	Scaled SAR			Σ SAR (W/kg) WWAN + WIFI 2.4G	Σ SAR (W/kg) WWAN + BT	SPLSR	Remark
		WWAN	WIFI 2.4G	BT				
GSM850 (GPRS 4slots)	Front	0.275	0.259	0.097	0.534	0.372	N/A	N/A
	Back	0.556	0.412	0.135	0.968	0.691	N/A	N/A
	Left	0.347	0.157	0.085	0.504	0.432	N/A	N/A
	Right	0.171	0.306	0.101	0.477	0.272	N/A	N/A
GSM1900 (GPRS 4slots)	Front	0.230	0.259	0.097	0.489	0.327	N/A	N/A
	Back	0.486	0.412	0.135	0.898	0.621	N/A	N/A
	Left	0.197	0.157	0.085	0.354	0.282	N/A	N/A
	Right	0.109	0.306	0.101	0.415	0.210	N/A	N/A
WCDMA Band 2	Front	0.252	0.259	0.097	0.511	0.349	N/A	N/A
	Back	0.616	0.412	0.135	1.028	0.751	N/A	N/A
	Left	0.310	0.157	0.085	0.467	0.395	N/A	N/A
	Right	0.155	0.306	0.101	0.461	0.256	N/A	N/A
WCDMA Band 4	Front	0.412	0.259	0.097	0.671	0.509	N/A	N/A
	Back	0.520	0.412	0.135	0.932	0.655	N/A	N/A
	Left	0.445	0.157	0.085	0.602	0.530	N/A	N/A
	Right	0.371	0.306	0.101	0.677	0.472	N/A	N/A
WCDMA Band 5	Front	0.274	0.259	0.097	0.533	0.371	N/A	N/A
	Back	0.427	0.412	0.135	0.839	0.562	N/A	N/A
	Left	0.321	0.157	0.085	0.478	0.406	N/A	N/A
	Right	0.135	0.306	0.101	0.441	0.236	N/A	N/A

Band	Test Position	RB allocation	Scaled			Σ SAR (W/kg) WWAN + WIFI 2.4G	Σ SAR (W/kg) WWAN + BT	SPLSR	Remark
			WWAN	WIFI 2.4G	Bluetooth				
LTE Band 2 QPSK (20MHz)	Front	1RB	0.200	0.259	0.097	0.459	0.297	N/A	N/A
	Back		0.557	0.412	0.135	0.969	0.692	N/A	N/A
	Left		0.292	0.157	0.085	0.449	0.377	N/A	N/A
	Right		0.128	0.306	0.101	0.434	0.229	N/A	N/A
	Front	50%RB	0.475	0.259	0.097	0.734	0.572	N/A	N/A
	Back		0.034	0.412	0.135	0.446	0.169	N/A	N/A
	Left		0.408	0.157	0.085	0.565	0.493	N/A	N/A
	Right		0.357	0.306	0.101	0.663	0.458	N/A	N/A
LTE Band 4 QPSK (20MHz)	Front	1RB	0.208	0.259	0.097	0.467	0.305	N/A	N/A
	Back		0.527	0.412	0.135	0.939	0.662	N/A	N/A
	Left		0.250	0.157	0.085	0.407	0.335	N/A	N/A
	Right		0.160	0.306	0.101	0.466	0.261	N/A	N/A
	Front	50%RB	0.415	0.259	0.097	0.674	0.512	N/A	N/A
	Back		0.036	0.412	0.135	0.448	0.171	N/A	N/A
	Left		0.379	0.157	0.085	0.536	0.464	N/A	N/A
	Right		0.336	0.306	0.101	0.642	0.437	N/A	N/A
LTE Band 5 QPSK (10MHz)	Front	1RB	0.317	0.259	0.097	0.576	0.414	N/A	N/A
	Back		0.409	0.412	0.135	0.821	0.544	N/A	N/A
	Left		0.333	0.157	0.085	0.490	0.418	N/A	N/A
	Right		0.262	0.306	0.101	0.568	0.363	N/A	N/A
	Front	50%RB	0.334	0.259	0.097	0.593	0.431	N/A	N/A
	Back		0.316	0.412	0.135	0.728	0.451	N/A	N/A
	Left		0.269	0.157	0.085	0.426	0.354	N/A	N/A
	Right		0.333	0.306	0.101	0.639	0.434	N/A	N/A
LTE Band 7 QPSK (10MHz)	Front	1RB	0.161	0.259	0.097	0.420	0.258	N/A	N/A
	Back		0.393	0.412	0.135	0.805	0.528	N/A	N/A
	Left		0.188	0.157	0.085	0.345	0.273	N/A	N/A
	Right		0.119	0.306	0.101	0.425	0.220	N/A	N/A
	Front	50%RB	0.338	0.259	0.097	0.597	0.435	N/A	N/A
	Back		0.296	0.412	0.135	0.708	0.431	N/A	N/A
	Left		0.250	0.157	0.085	0.407	0.335	N/A	N/A
	Right		0.312	0.306	0.101	0.618	0.413	N/A	N/A
LTE Band 12 QPSK (10MHz)	Front	1RB	0.247	0.259	0.097	0.506	0.344	N/A	N/A
	Back		0.410	0.412	0.135	0.822	0.545	N/A	N/A
	Left		0.400	0.157	0.085	0.557	0.485	N/A	N/A
	Right		0.126	0.306	0.101	0.432	0.227	N/A	N/A
	Front	50%RB	0.352	0.259	0.097	0.611	0.449	N/A	N/A
	Back		0.317	0.412	0.135	0.729	0.452	N/A	N/A
	Left		0.266	0.157	0.085	0.423	0.351	N/A	N/A
	Right		0.326	0.306	0.101	0.632	0.427	N/A	N/A
LTE Band 17 QPSK (10MHz)	Front	1RB	0.157	0.259	0.097	0.416	0.254	N/A	N/A
	Back		0.304	0.412	0.135	0.716	0.439	N/A	N/A
	Left		0.174	0.157	0.085	0.331	0.259	N/A	N/A
	Right		0.079	0.306	0.101	0.385	0.180	N/A	N/A
	Front	50%RB	0.242	0.259	0.097	0.501	0.339	N/A	N/A
	Back		0.204	0.412	0.135	0.616	0.339	N/A	N/A
	Left		0.163	0.157	0.085	0.320	0.248	N/A	N/A
	Right		0.223	0.306	0.101	0.529	0.324	N/A	N/A
LTE Band 26 QPSK (10MHz)	Front	1RB	0.075	0.259	0.097	0.334	0.172	N/A	N/A
	Back		0.154	0.412	0.135	0.566	0.289	N/A	N/A
	Left		0.048	0.157	0.085	0.205	0.133	N/A	N/A
	Right		0.040	0.306	0.101	0.346	0.141	N/A	N/A
	Front	50%RB	0.101	0.259	0.097	0.360	0.198	N/A	N/A
	Back		0.138	0.412	0.135	0.550	0.273	N/A	N/A
	Left		0.105	0.157	0.085	0.262	0.190	N/A	N/A
	Right		0.103	0.306	0.101	0.409	0.204	N/A	N/A

LTE Band 38 QPSK (20MHz)	Front	1RB	0.131	0.351	0.112	0.482	0.243	N/A	N/A
	Back		0.265	0.259	0.075	0.524	0.340	N/A	N/A
	Left		0.152	0.325	0.091	0.477	0.243	N/A	N/A
	Right		0.088	0.231	0.046	0.319	0.134	N/A	N/A
	Front	50%RB	0.188	0.351	0.112	0.539	0.300	N/A	N/A
	Back		0.249	0.259	0.075	0.508	0.324	N/A	N/A
	Left		0.211	0.325	0.091	0.536	0.302	N/A	N/A
	Right		0.220	0.231	0.046	0.451	0.266	N/A	N/A
LTE Band 41 QPSK (20MHz)	Front	1RB	0.161	0.351	0.112	0.512	0.273	N/A	N/A
	Back		0.266	0.259	0.075	0.525	0.341	N/A	N/A
	Left		0.170	0.325	0.091	0.495	0.261	N/A	N/A
	Right		0.102	0.231	0.046	0.333	0.148	N/A	N/A
	Front	50%RB	0.203	0.351	0.112	0.554	0.315	N/A	N/A
	Back		0.246	0.259	0.075	0.505	0.321	N/A	N/A
	Left		0.220	0.325	0.091	0.545	0.311	N/A	N/A
	Right		0.214	0.231	0.046	0.445	0.260	N/A	N/A
LTE Band 66 QPSK (20MHz)	Front	1RB	0.249	0.351	0.112	0.600	0.361	N/A	N/A
	Back		0.343	0.259	0.075	0.602	0.418	N/A	N/A
	Left		0.257	0.325	0.091	0.582	0.348	N/A	N/A
	Right		0.207	0.231	0.046	0.438	0.253	N/A	N/A
	Front	50%RB	0.283	0.351	0.112	0.634	0.395	N/A	N/A
	Back		0.247	0.259	0.075	0.506	0.322	N/A	N/A
	Left		0.255	0.325	0.091	0.580	0.346	N/A	N/A
	Right		0.291	0.231	0.046	0.522	0.337	N/A	N/A

12 Measurement uncertainty evaluation

12.1 Measurement uncertainty evaluation for SAR test

The following table includes the uncertainty table of the IEEE 1528. The values are determined by Satimo.The breakdown of the individual uncertainties is as follows:

Measurement Uncertainty evaluation for SAR test								
Uncertainty Component	Tol. (±%)	Prob. Dist.	Div.	C_i (1g)	C_i (10g)	1g U_i (±%)	10g U_i (±%)	V_i
measurement system								
Probe Calibration	5.8	N	1	1	1	5.8	5.8	∞
Axial Isotropy	3.5	R	$\sqrt{3}$	$(1-C_p)^{1/2}$	$(1-C_p)^{1/2}$	1.43	1.43	∞
Hemispherical Isotropy	5.9	R	$\sqrt{3}$	$\sqrt{C_p}$	$\sqrt{C_p}$	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	N	1	1	1	3.00	3.00	∞
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	0.81	0.81	∞
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 Evaluation	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 tolerances)	4	R	$\sqrt{3}$	1	1	2.31	2.31	∞
Uncertainty in SAR correction for deviation (in permittivity and conductivity)	2	N	1	1	0.84	2.00	1.68	∞
Liquid conductivity（meas.）	2.5	N	1	0.64	0.43	1.60	1.08	5
Liquid conductivity (target.)	5	R	$\sqrt{3}$	0.64	0.43	1.85	1.24	5
Liquid Permittivity（meas.）	2.5	N	1	0.60	0.49	1.50	1.23	∞
Liquid Permittivity (target.)	5	R	$\sqrt{3}$	0.60	0.49	1.73	1.42	∞
Combined Standard Uncertainly		Rss				10.63	10.54	
Expanded Uncertainty{95% CONFIDENCE INTERRVAL}		k				21.26	21.08	

12.2 Measurement uncertainty evaluation for system check

The following table includes the uncertainty table of the IEEE 1528. The values are determined by Satimo.The breakdown of the individual uncertainties is as follows:

Uncertainty For System Performance Check								
Uncertainty Component	Tol. (±%)	Prob. Dist.	Div.	C_i 1g	C_i 10g	1g U_i(±%)	10g U_i (±%)	V_i
measurement system								
Probe Calibration	5.8	N	1	1	1	5.80	5.80	∞
Axial Isotropy	3.5	R	$\sqrt{3}$	$(1-C_p)^{1/2}$	$(1-C_p)^{1/2}$	1.43	1.43	∞
Hemispherical Isotropy	5.9	R	$\sqrt{3}$	$\sqrt{C_p}$	$\sqrt{C_p}$	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	0	N	1	1	1	0.00	0.00	∞
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	0.81	0.81	∞
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 positioned 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 Evaluation	2.3	R	$\sqrt{3}$	1	1	1.33	1.33	∞
Dipole								
Deviation of experimental source from numerical source	4	N	1	1	1	4.00	4.00	∞
Input power and SAR drift measurement	5	R	$\sqrt{3}$	1	1	2.89	2.89	∞
Dipole axis to liquid Distance	2	R	$\sqrt{3}$	1	1	1.16	1.16	∞
Phantom and Tissue Parameters								
Phantom Uncertainty (shape and thickness tolerances)	4	R	$\sqrt{3}$	1	1	2.31	2.31	∞
Uncertainty in SAR correction for deviation (in permittivity and conductivity)	2	N	1	1	0.84	2.00	1.68	∞
Liquid conductivity（meas.）	2.5	N	1	0.64	0.43	1.60	1.08	5
Liquid conductivity (target.)	5	R	$\sqrt{3}$	0.64	0.43	1.85	1.24	5
Liquid Permittivity（meas.）	2.5	N	1	0.60	0.49	1.50	1.23	∞
Liquid Permittivity (target.)	5	R	$\sqrt{3}$	0.60	0.49	1.73	1.41	∞
Combined Standard Uncertainty		Rss				10.28	9.98	
Expanded Uncertainty (95% Confidence interval)		k				20.57	19.95	

13 Test equipment and ancillaries used for tests

To simplify the identification of the test equipment and/or ancillaries which were used, the reporting of the relevant test cases only refer to the test item number as specified in the table below.

	Manufacturer	Device Type	Type(Model)	Serial number	calibration	
					Last Cal.	Due Date
☒	SATIMO	COMOSAR DOSIMETRIC E FIELD PROBE	SSE5	3323-EPGO-424	2023-07-09	2024-07-08
☒	SATIMO	COMOSAR 750 MHz REFERENCE DIPOLE	SID750	SN 48/16 DIP0G750-444	2023-11-09	2026-11-08
☒	SATIMO	COMOSAR 835 MHz REFERENCE DIPOLE	SID835	SN 14/13 DIP0G835-235	2023-11-09	2026-11-08
☒	SATIMO	COMOSAR 900 MHz REFERENCE DIPOLE	SID900	SN 14/13 DIP0G900-231	2023-11-09	2026-11-08
☒	SATIMO	COMOSAR 1800 MHz REFERENCE DIPOLE	SID1800	SN 14/13 DIP1G800-232	2023-11-09	2026-11-08
☐	SATIMO	COMOSAR 1900 MHz REFERENCE DIPOLE	SID1900	SN 14/13 DIP1G900-236	2023-11-09	2026-11-08
☒	SATIMO	COMOSAR 2000 MHz REFERENCE DIPOLE	SID2000	SN 14/13 DIP2G000-237	2023-11-09	2026-11-08
☒	SATIMO	COMOSAR 2450 MHz REFERENCE DIPOLE	SID2450	SN 14/13 DIP2G450-238	2023-11-09	2026-11-08
☒	SATIMO	COMOSAR 2600 MHz REFERENCE DIPOLE	SID2600	SN 28/14 DIP2G600-327	2023-11-09	2026-11-08
☒	SATIMO	Software	OPENSAR	N/A	N/A	N/A
☒	SATIMO	Phantom	COMOSAR IEEE SAM PHANTOM	SN 14/13 SAM99	N/A	N/A
☒	R & S	Universal Radio Communication Tester	CMU 200	119733	2023-11-02	2024-11-01
☒	R & S	Universal Radio Communication Tester	CMW500	144459	2023-11-02	2024-11-01
☒	R & S	UXM5G Wireless Test Platform	E7515B	MY60192341	2023-11-02	2024-11-01
☒	HP	Network Analyser	8753D	3410A08889	2023-11-02	2024-11-01
☒	HP	Signal Generator	E4421B	GB39340770	2023-11-02	2024-11-01
☒	Keithley	Multimeter	Keithley 2000	4014539	2023-11-02	2024-11-01
☒	SATIMO	Amplifier	Power Amplifier	MODU-023-A-0004	2023-11-02	2024-11-01
☒	Agilent	Power Meter	E4418B	GB43312909	2023-11-02	2024-11-01
☒	Agilent	Power Meter Sensor	E4412A	MY41500046	2023-11-02	2024-11-01

Annex A:System performance verification

(**Please See the SAR Measurement Plots of annex A.**)

Annex B:Measurement results

(**Please See the SAR Measurement Plots of annex B.**)

Annex C:Calibration reports

(Please See the Calibration reports of annex C.)