FCC SAR Compliance Test Report

For

TECNO MOBILE LIMITED

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

Model: CM5

Test Engineer:	Zeng Longhao
Report Number:	WSCT-ANAB-R&E241100063A-SAR
Report Date:	28 November 2024
FCC ID:	2ADYY-CM5
Check By:	Jiang Xuling
Approved By:	Li Huaibi
Prepared By:	World Standardization Certification & Testing Group (Shenzhen) Co., Ltd. Building A-B,Baoli'an Industrial Park,No.58 and 60,Tangtou Avenue, Shiyan Street, Bao'an District, Shenzhen City, Guangdong Province, 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	28 November 2024	Li Huaibi

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: 2024-10-25
Start of test: 2024-10-26
End of test: 2024-11-10

1.3 Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for A669L is as below:

Band	Position	MAX Reported SAR_{1g} (W/kg)
GSM850	Head	0.039
	Body & Hotspot 10mm	0.107
GSM1900	Head	0.072
	Body & Hotspot 10mm	0.645
UMTS Band 2	Head	0.113
	Body & Hotspot 10mm	0.802
UMTS Band 4	Head	0.066
	Body & Hotspot 10mm	0.412
UMTS Band 5	Head	0.101
	Body & Hotspot 10mm	0.155
LTE Band 2	Head	0.078
	Body & Hotspot 10mm	0.601
LTE Band 4	Head	0.043
	Body & Hotspot 10mm	0.280
LTE Band 5	Head	0.105
	Body & Hotspot 10mm	0.150
LTE Band 7	Head	0.090
	Body & Hotspot 10mm	0.515
LTE Band 12	Head	0.104
	Body & Hotspot 10mm	0.162
LTE Band 17	Head	0.091
	Body & Hotspot 10mm	0.157

LTE Band 38	Head	0.056
	Body & Hotspot 10mm	0.229
LTE Band 41	Head	0.048
	Body & Hotspot 10mm	0.205
LTE Band 66	Head	0.050
	Body & Hotspot 10mm	0.300
BT	Head	0.102
	Body & Hotspot 10mm	0.025
BLE	Head	0.097
	Body & Hotspot 10mm	0.023
Wi-Fi 2.4G	Head	0.267
	Body & Hotspot 10mm	0.059
WIFI 5.2G	Head	0.191
	Body & Hotspot 10mm	0.058
WIFI 5.4G	Head	0.161
	Body & Hotspot 10mm	0.051
WIFI 5.6G	Head	0.119
	Body & Hotspot 10mm	0.033
WIFI 5.8G	Head	0.110
	Body & Hotspot 10mm	0.035
Maximum Max. SAR Level(s) Measured: (Limit: 1.6W/Kg):	WCDMA 2	0.113W/kg1gHeadTissue
	2.4G WIFI	0.267W/kg1gHeadTissue
	WCDMA 2	0.802W/kg1gBodyTissue
	2.4G WIFI	0.059W/kg1gBodyTissue
The Head highest simultaneous SAR :		0.380W/kg1gHeadTissue
The Body highest simultaneous SAR :		0.861W/kg1gBodyTissue

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:	CM5		
Trade Name:	TECNO		
Device Type:	Portable device		
Exposure Category:	uncontrolled environment / general population		
Production Unit or Identical Prototype：	Production Unit		
Software version :	CM5-H8918		
Hardware version:	V1.2		
Antenna Type :	PIFA Antenna		
NFC Antenna Type :	Coil 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 Band38/ LTE Band41/ LTE Band66, Wi-Fi , BT		
Modulation:	GSM/GPRS: GMSK;EGPRS: 8PSK;WCDMA: QPSK HSDPA/HSUPA: QPSK /16QAM;LTE: QPSK/16QAM DSSS (DBPSK, DQPSK, CCK) for IEEE 802.11b OFDM(BPSK,QPSK,16QAM,64QAM,256QAM,)for IEEE 802.11g/n IEEE802.11a/n/ac:OFDM(BPSK/QPSK/16QAM/64QAM/256QAM) BT:GFSK, π/4-DQPSK, 8-DPSK;BLE:GFSK;ASK(NFC)		
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	729~746
	LTE Band 17	704-716	734~746
	LTE Band38	2570-2620	2570-2620

	LTE Band 41	2335-2655	2535-2655
	LTE Band 66	1710-1780	2110~2200
	Wi-Fi (2.4G)	2412-2462	
	5GWIFI Band 1	5180-5240	5180-5240
	5GWIFI Band 2	5260-5320	5260-5320
	5GWIFI Band 3	5500-5700	5500-5700
	5GWIFI Band 4	5745-5825	5745-5825
	BT	2402~2480	
	NFC	13.553-13.567	
Antenna gain:	GSM 850/WCDMA B5/LTE B5：-6.89dbi PCS 1900/WCDMA B2/LTE B2: -2.8dbi WCDMA B4/LTE B4: -2.7dbi LTE B7/B38/B41: -0.88dbi LTE B12/B17: -7.95dbi LTE B66: -2.8dbi ANT14:2.4G WIFI/BT:-4.12dbi ANT13:2.4G WIFI:-3.37dbi 5G WIFI: -3.19dbi		
Power Source:	Rechargeable Li-ion Polymer Battery Model: BL-54AT Rated Voltage: 3.91V Rated Capacity: 5100mAh Nominal Energy:19.95Wh Typical Capacity: 5200mAh Limited Charge Voltage: 4.50V		

Note:1.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: For NFC evaluation, it is not necessary to test NFC because its power is very low

2 Testing laboratory

Test Site	World Standardization Certification & Testing Group (Shenzhen) Co., Ltd.
Laboratory A:	Building A-B,Baoli'an Industrial Park,No.58 and 60,Tangtou Avenue, Shiyan Street, Bao'an District, Shenzhen City, Guangdong Province, China
Laboratory B:	Building J-7F and Building D, Dongjiang Science & Technology Park, Tangjia Community, Fenghuang Street, Guangming District, Shenzhen City, Guangdong Province, China

3 ACCREDITATIONS

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

CBTL	IECEE(international Electrotechnical Commiss,The certificate registration number is TL672)	Laboratory A ☐ Laboratory B ☐
China	CNAS (The certificated registration number: L3732)	Laboratory A ☐ Laboratory B ☐
USA	A2LA (The certificated registration number: 5768.01)	Laboratory A ☐ Laboratory B ☐
USA	ANAB (The certificated registration number:AT-3951)	Laboratory A ☒ Laboratory B ☐

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:	TECNO MOBILE LIMITED
Applicant Address:	FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE 19-25 SHAN MEI STREET FOTAN NT HONGKONG
Manufacturer Name:	TECNO 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	IEC/IEEE 62209-1528	Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate in the Human Head from Wireless Communications Devices: Measurement Techniques
3	KDB447498 D01	General RF Exposure Guidance v06
4	KDB447498 D04	Interim General RF Exposure Guidance v01
5	KDB865664 D01	SAR measurement 100MHz to 6GHz v01r04
6	KDB865664 D02	RF Exposure Reporting v01r02
7	KDB941225 D01	3G SAR Procedures v03r01
8	KDB941225 D05	SAR for LTE Devices v02r05
9	KDB248227 D01	802.11 Wi-Fi SAR v02r02
10	KDB941225 D06	Hotspot Mode v02r01
11	KDB648474 D04	Handset SAR v01r03
12	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

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

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: 0.15GHz to 7.5GHz 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.

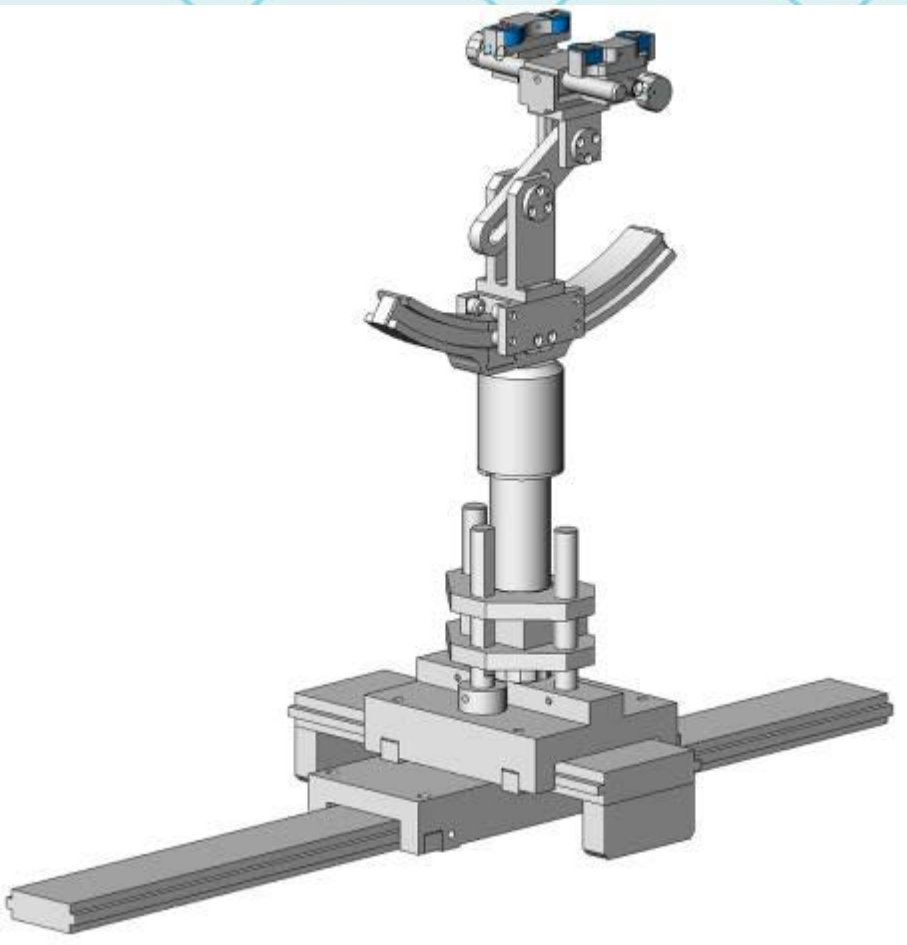
7.6 Phantom

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

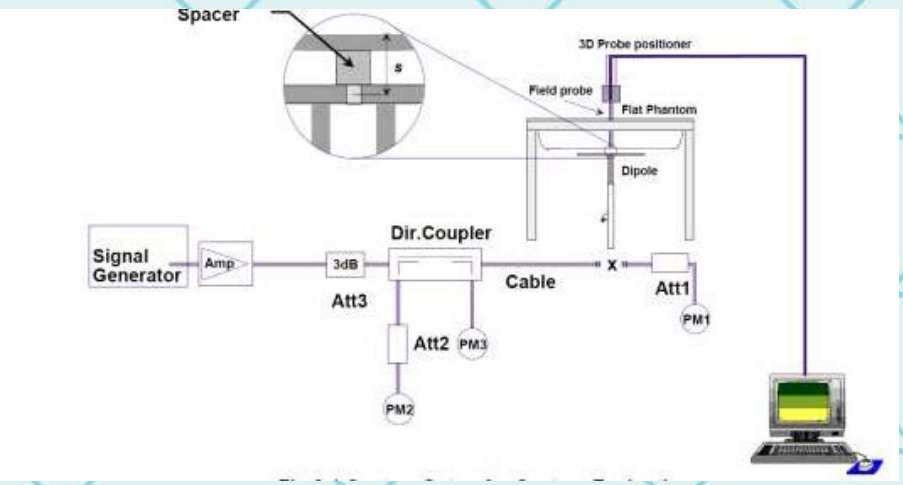
Used Target Frequency	Target Tissue		Measured Tissue		Liquid Temp.	Test Date
	ε_r (+/-5%)	σ (S/m) (+/-5%)	ε_r	σ (S/m)		
750MHz Head	41.90 (39.04~43.99)	0.89 (0.85~0.93)	41.35	0.89	21.6°C	2024-10-26
835MHz Head	41.50 (39.43~43.57)	0.90 (0.86~0.95)	40.53	0.93	21.6°C	2024-10-28
1800MHz Head	40.00 (38.00~42.00)	1.40 (1.33~1.47)	40.31	1.37	21.6°C	2024-10-30
1900MHz Head	40.00 (38.00~42.00)	1.40 (1.33~1.47)	38.84	1.43	21.6°C	2024-11-01
2450MHz Head	39.20 (37.24~41.16)	1.80 (1.71~1.89)	40.27	1.82	21.6°C	2024-11-03
2600MHz Head	39.00 (37.05~40.95)	1.96 (1.86~2.05)	39.87	1.94	21.6°C	2024-11-05
5200MHz Head	36.00 (34.20~37.80)	4.66 (4.43~4.89)	35.62	4.52	21.6°C	2024-11-07
5500MHz Head	35.60 (33.82~37.38)	4.96 (4.71~5.20)	36.11	5.02	21.6°C	2024-11-08
5800MHz Head	35.30 (33.54~37.06)	5.27 (5.01~5.53)	34.63	5.16	21.6°C	2024-11-09
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 (mW/g)	10-g (mW/g)	1-g (mW/g)	10-g (mW/g)		
D750V2 Body	8.49 (7.65~9.33)	5.55 (5.00~6.10)	7.84	5.37	21.6°C	2024-10-26
D835V2 Body	9.82 (8.61~10.51)	6.22 (5.60~6.84)	10.15	6.45	21.6°C	2024-10-28
D1800V2 Body	38.40 (34.56~42.24)	20.10 (18.09~22.11)	41.56	21.72	21.6°C	2024-10-30
D1900V2 Body	39.70 (35.73~43.67)	20.50 (18.45~22.55)	39.33	20.94	21.6°C	2024-11-01
D2450V2 Body	52.40 (47.16~57.64)	24.00 (21.60~26.40)	54.33	23.33	21.6°C	2024-11-03
D2600V2 Body	55.30 (49.77~60.83)	24.60 (22.14~27.06)	53.18	23.43	21.6°C	2024-11-05
D5200V2 Body	76.50 (68.85~84.15)	21.60 (19.44~23.76)	77.18	22.64	21.6°C	2024-11-07
D5500V2 Body	83.30 (74.97~91.63)	23.40 (21.06~25.74)	83.37	22.82	21.6°C	2024-11-08
D5800V2 Body	78.00 (70.20~85.50)	21.90 (19.71~24.09)	79.66	20.80	21.6°C	2024-11-09
Note: All SAR values are normalized to 1W forward power.						

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, □hs for HS-DPCCH is 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)		32.50	32.13	32.16	**32.18**	-9.03	23.09	23.12	23.14
GPRS (GMSK)	1Tx slot	31.00	30.39	29.80	30.72	-9.03	21.35	20.76	21.68
	2Tx slots	30.00	29..82	29.33	29.96	-9.03	20.78	20.29	20.92
	3Tx slots	30.50	29.71	29.42	30.28	-6.02	20.67	20.38	21.24
	4Tx slots	30.50	29.92	30.49	29.91	-4.26	20.86	21.45	20.87
EGPRS (8PSK)	1Tx slot	30.50	30.28	29.87	30.41	-3.01	21.24	20.83	21.37
	2Tx slots	31.00	30.70	30.06	30.12	-9.03	21.66	21.02	21.08
	3Tx slots	31.00	30.45	30.79	30.01	-6.02	21.41	21.75	21.06
	4Tx slots	30.00	29.33	29.97	29.67	-4.26	20.29	20.93	20.63

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)		30.50	29.54	30.07	**30.16**	-9.03	26.74	27.27	27.36
GPRS (GMSK)	1Tx slot	29.00	28.55	27.73	28.00	-9.03	25.75	24.93	25.20
	2Tx slots	28.00	27.54	27.94	27.53	-9.03	24.74	25.14	24.73
	3Tx slots	28.50	28.23	27.21	27.28	-6.02	25.43	24.41	24.48
	4Tx slots	28.00	27.84	27.94	27.61	-4.26	25.04	25.14	24.81
EGPRS (8PSK)	1Tx slot	27.50	27.01	27.23	27.10	-3.01	24.27	24.43	24.30
	2Tx slots	27.50	27.01	27.06	27.10	-9.03	24.21	24.26	24.30
	3Tx slots	27.50	26.88	27.04	27.15	-6.02	24.08	24.24	24.35
	4Tx slots	27.50	27.27	27.15	27.09	-4.26	24.47	24.35	24.29

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 WCDMA

Mode		Maximum Tune-up(dBm)	WCDMA Band 2		
			Conducted Power (dBm)		
			CH9262	CH9400	CH9538
			1852.4	1880.0	1907.6
RMC 12.2K		23.00	22.36	22.96	22.68
HSDPA	Subtest-1	23.00	22.48	22.44	22.67
	Subtest-2	23.50	22.93	**23.34**	22.94
	Subtest-3	23.00	22.65	22.09	22.75
	Subtest-4	23.00	21.69	22.97	22.04
HSUPA	Subtest-1	22.50	22.16	22.17	21.80
	Subtest-2	23.50	21.87	23.11	22.58
	Subtest-3	23.00	22.70	22.90	22.46
	Subtest-4	23.00	22.26	22.94	22.71
	Subtest-5	23.00	22.57	22.55	22.54

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	22.55	**23.08**	22.18
HSDPA	Subtest-1	22.00	21.59	21.76	21.84
	Subtest-2	23.50	22.85	22.11	23.05
	Subtest-3	23.50	22.72	23.01	22.21
	Subtest-4	23.00	22.98	22.05	21.74
HSUPA	Subtest-1	23.00	22.38	22.16	22.96
	Subtest-2	23.00	21.87	22.27	22.57
	Subtest-3	23.00	22.66	22.99	22.39
	Subtest-4	22.50	21.95	22.01	22.42
	Subtest-5	23.00	22.52	22.19	22.06

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	22.77	22.85	23.25
HSDPA	Subtest-1	22.50	22.38	22.20	22.41
	Subtest-2	23.00	22.51	22.30	22.02
	Subtest-3	23.50	22.26	22.60	23.05
	Subtest-4	23.50	22.13	22.41	23.02
HSUPA	Subtest-1	23.00	22.94	22.15	22.25
	Subtest-2	23.00	22.65	22.63	21.84
	Subtest-3	23.00	22.11	22.65	22.46
	Subtest-4	23.00	22.65	22.24	22.03
	Subtest-5	23.00	22.70	22.66	22.29

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	23.00	22.70	22.47	22.93
			2	23.50	22.94	22.57	23.07
			5	23.50	23.09	22.50	22.92
		3	0	23.50	23.05	22.57	23.11
			2	23.50	23.30	22.62	23.10
			3	23.50	23.20	22.57	23.00
		6	0	22.50	22.33	21.58	22.08
	16QAM	1	0	22.50	22.08	21.66	22.06
			2	22.50	22.12	21.73	22.14
			5	22.50	22.08	21.63	22.13
		3	0	22.50	22.21	21.79	22.23
			2	22.50	22.29	21.82	22.31
			3	22.50	22.26	21.80	22.22
		6	0	21.50	21.32	20.90	21.31
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	18615	18900	19185
					1851.5MHz	1880.0MHz	1908.5MHz
3MHz	QPSK	1	0	23.50	23.06	22.49	22.82
			7	23.50	23.09	22.56	22.98
			14	23.00	22.99	22.48	22.97
		8	0	22.50	22.29	21.70	22.07
			4	22.50	22.32	21.73	22.08
			7	22.50	22.29	21.69	22.07
		15	0	22.50	22.23	21.70	22.04
	16QAM	1	0	22.50	22.47	21.70	21.69
			7	22.50	22.48	21.79	21.78
			14	22.50	22.36	21.72	21.70
		8	0	21.50	21.31	20.75	21.00
			4	21.50	21.33	20.76	21.06
			7	21.50	21.27	20.68	21.07
		15	0	21.50	21.27	20.68	21.10
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	18625	18900	19175
					1852.5MHz	1880.0MHz	1907.5MHz
5MHz	QPSK	1	0	23.50	23.33	22.81	23.06
			13	23.50	23.34	22.85	23.19
			24	23.50	23.21	22.78	23.13
		12	0	22.50	22.32	21.80	22.17
			6	22.50	22.41	21.86	22.25
			13	22.50	22.30	21.83	22.25
		25	0	22.50	22.35	21.85	22.22
	16QAM	1	0	23.00	22.79	22.15	22.40
			13	23.00	22.84	22.23	22.53
			24	23.00	22.72	22.12	22.45
		12	0	21.50	21.30	20.80	21.25
			6	21.50	21.42	20.89	21.31
			13	21.50	21.34	20.85	21.23
		25	0	21.50	21.36	20.91	21.20

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	23.50	23.44	22.91	23.10
			25	23.50	23.35	22.89	23.25
			49	23.50	23.17	22.82	23.36
		25	0	22.50	22.39	21.84	22.00
			13	22.50	22.39	21.88	22.15
			25	22.50	22.25	21.85	22.14
		50	0	22.50	22.33	21.88	22.14
	16QAM	1	0	23.00	22.82	22.12	21.95
			25	23.00	22.76	22.06	22.01
			49	23.00	22.66	22.01	22.02
		25	0	21.50	21.41	20.84	21.06
			13	21.50	21.41	20.94	21.19
			25	21.50	21.29	20.85	21.17
		50	0	21.50	21.32	20.92	21.08
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	18675	18900	19125
					1857.5MHz	1880.0MHz	1902.5MHz
15MHz	QPSK	1	0	23.50	23.45	23.01	23.12
			38	23.50	23.36	22.99	23.34
			74	23.50	23.13	22.86	23.43
		36	0	22.50	22.42	21.88	22.07
			18	22.50	22.31	21.98	22.19
			39	22.50	22.18	21.90	22.29
		75	0	22.50	22.33	21.96	22.21
	16QAM	1	0	23.00	22.73	22.18	22.12
			38	23.00	22.71	22.11	22.32
			74	23.00	22.54	21.96	22.33
		36	0	21.50	21.45	20.99	21.05
			18	21.50	21.37	21.01	21.12
			39	21.50	21.22	20.96	21.16
		75	0	21.50	21.31	20.92	21.16
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	18700	18900	19100
					1860.0MHz	1880.0MHz	1900.0MHz
20MHz	QPSK	1	0	23.50	23.41	22.92	22.82
			50	23.50	23.30	23.02	23.14
			99	23.50	22.97	22.80	23.12
		50	0	22.50	22.34	21.80	22.01
			25	22.50	22.20	21.86	22.13
			50	22.50	22.12	21.84	22.16
		100	0	22.50	22.20	21.75	22.04
	16QAM	1	0	22.50	22.45	22.09	22.00
			50	22.50	22.47	22.10	22.34
			99	22.50	22.17	21.94	22.28
		50	0	21.50	21.36	20.77	21.06
			25	21.50	21.34	20.93	21.20
			50	21.50	21.22	20.85	21.19
		100	0	21.50	21.26	20.78	21.07

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	22.78	22.86	23.12
			2	23.50	22.93	22.96	23.22
			5	23.50	22.85	22.83	23.10
		3	0	23.50	22.85	22.99	23.19
			2	23.50	22.89	23.03	23.26
			3	23.50	22.86	22.98	23.17
		6	0	22.50	21.91	22.04	22.25
	16QAM	1	0	22.50	21.94	22.07	21.95
			2	22.50	22.04	22.11	22.09
			5	22.50	21.95	22.08	21.98
		3	0	22.50	22.04	22.19	22.35
			2	22.50	22.11	22.23	22.36
			3	22.50	22.03	22.19	22.35
		6	0	21.50	21.15	21.19	21.48
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	19965	20175	20385
					1711.5MHz	1732.5MHz	1753.5MHz
3MHz	QPSK	1	0	23.00	22.62	22.76	22.94
			7	23.50	22.73	22.81	23.06
			14	23.50	22.64	22.74	23.04
		8	0	22.50	21.85	21.91	22.15
			4	22.50	21.94	22.01	22.22
			7	22.50	21.91	21.94	22.18
		15	0	22.50	21.89	21.94	22.16
	16QAM	1	0	22.50	22.06	21.93	21.83
			7	22.50	22.15	21.99	21.94
			14	22.50	22.06	21.91	21.86
		8	0	21.50	20.88	20.96	21.10
			4	21.50	20.97	21.01	21.19
			7	21.50	20.90	20.96	21.18
		15	0	21.50	20.96	20.95	21.25
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	22.92	23.02	23.11
			13	23.50	23.00	23.08	23.19
			24	23.50	22.90	23.04	23.12
		12	0	22.50	21.94	22.02	22.20
			6	22.50	22.03	22.08	22.25
			13	22.50	22.00	22.02	22.24
		25	0	22.50	21.97	22.05	22.24
	16QAM	1	0	22.50	22.41	22.34	22.50
			13	23.00	22.57	22.38	22.58
			24	23.00	22.50	22.29	22.52
		12	0	21.50	20.97	20.98	21.26
			6	21.50	21.02	21.03	21.33
			13	21.50	21.01	20.98	21.27
		25	0	21.50	20.96	21.06	21.23

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	23.03	23.15	23.23
			25	23.50	23.13	23.16	23.28
			49	23.50	23.10	23.08	23.25
		25	0	22.50	21.98	22.03	22.24
			13	22.50	22.05	22.12	22.25
			25	22.50	22.05	22.04	22.17
		50	0	22.50	22.02	22.06	22.24
	16QAM	1	0	23.00	22.44	22.25	22.59
			25	23.00	22.50	22.30	22.67
			49	23.00	22.51	22.21	22.67
		25	0	21.50	21.03	21.05	21.36
			13	22.00	21.13	21.13	21.94
			25	21.50	21.11	21.05	21.04
		50	0	21.50	21.03	21.09	21.17
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	22.89	23.07	23.20
			38	23.50	23.05	23.12	23.32
			74	23.50	22.93	23.07	23.24
		36	0	22.50	21.96	22.06	22.22
			18	22.50	22.05	22.15	22.32
			39	22.50	22.06	22.12	22.22
		75	0	22.50	22.06	22.12	22.29
	16QAM	1	0	22.50	22.32	22.21	22.22
			38	22.50	22.49	22.27	22.36
			74	22.50	22.36	22.15	22.30
		36	0	21.50	21.02	21.09	21.21
			18	21.50	21.12	21.15	21.24
			39	21.50	21.18	21.15	21.19
		75	0	21.50	21.05	21.05	21.26
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	22.90	23.01	23.08
			50	23.50	23.17	23.24	23.37
			99	23.50	23.01	23.06	23.19
		50	0	22.50	22.02	22.02	22.21
			25	22.50	22.16	22.14	22.26
			50	22.50	22.14	22.10	22.17
		100	0	22.50	22.07	22.03	22.21
	16QAM	1	0	22.50	22.20	22.25	22.25
			50	23.00	22.51	22.41	22.52
			99	22.50	22.29	22.18	22.34
		50	0	21.50	21.09	21.01	21.26
			25	21.50	21.22	21.13	21.31
			50	21.50	21.21	21.07	21.19
		100	0	21.50	21.08	21.04	21.25

10.1.5 Conducted Power of LTE Band 5

LTE-FDD Band 5				Maximum Tune-up(dBm)	Conducted Power(dBm)		
Bandwidth	Modulation	RB allocation	RB offset		20407	20525	20643
					824.7MHz	836.5MHz	848.3MHz
1.4MHz	QPSK	1	0	24.00	23.01	23.39	23.59
			2	24.00	23.19	23.50	23.70
			5	24.00	23.12	23.44	23.63
		3	0	24.00	23.18	23.57	23.58
			2	24.00	23.12	23.65	23.62
			3	24.00	23.09	23.61	23.60
		6	0	23.00	22.18	22.66	22.69
	16QAM	1	0	23.00	22.30	22.37	22.64
			2	23.00	22.37	22.48	22.67
			5	23.00	22.40	22.37	22.62
		3	0	23.00	22.40	22.73	22.76
			2	23.00	22.49	22.83	22.75
			3	23.00	22.52	22.73	22.72
		6	0	22.00	21.47	21.84	21.87
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	20415	20525	20635
					825.5MHz	836.5MHz	847.5MHz
3MHz	QPSK	1	0	23.50	23.12	23.35	23.31
			7	23.50	23.24	23.43	23.47
			14	23.50	23.19	23.36	23.44
		8	0	23.00	22.34	22.53	22.53
			4	23.00	22.42	22.63	22.54
			7	23.00	22.44	22.63	22.49
		15	0	23.00	22.35	22.61	22.50
	16QAM	1	0	23.00	22.58	22.57	22.14
			7	23.00	22.74	22.64	22.27
			14	23.00	22.65	22.54	22.18
		8	0	22.00	21.42	21.46	21.53
			4	22.00	21.50	21.53	21.59
			7	22.00	21.51	21.52	21.48
		15	0	22.00	21.46	21.48	21.58

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	23.43	23.57	23.54
			13	24.00	23.51	23.64	23.55
			24	24.00	23.51	23.63	23.51
		12	0	23.00	22.29	22.63	22.69
			6	23.00	22.44	22.66	22.70
			13	23.00	22.53	22.60	22.56
		25	0	23.00	22.47	22.59	22.59
	16QAM	1	0	23.00	22.97	22.95	22.85
			13	23.50	23.12	23.04	22.91
			24	23.50	23.07	22.96	22.85
		12	0	22.00	21.41	21.61	21.60
			6	22.00	21.55	21.67	21.68
			13	22.00	21.62	21.61	21.50
		25	0	22.00	21.50	21.65	21.58
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	23.46	23.57	23.67
			25	24.00	23.56	23.65	23.70
			49	24.00	23.54	23.69	23.67
		25	0	23.00	22.34	22.55	22.57
			13	23.00	22.50	22.60	22.51
			25	22.50	22.50	22.46	22.23
		50	0	23.00	22.48	22.46	22.24
	16QAM	1	0	23.00	22.82	22.61	22.51
			25	23.00	22.94	22.73	22.48
			49	23.50	23.02	22.73	22.04
		25	0	22.00	21.44	21.43	21.53
			13	22.00	21.60	21.42	21.49
			25	22.00	21.59	21.45	21.06
		50	0	21.50	21.44	21.40	21.16

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	23.50	23.31	23.33	23.04
			13	23.50	23.40	23.38	23.10
			24	23.50	23.33	23.33	23.04
		12	0	22.50	22.26	22.30	22.16
			6	22.50	22.30	22.35	22.20
			13	22.50	22.27	22.32	22.13
		25	0	22.50	22.29	22.32	22.16
	16QAM	1	0	23.00	22.54	22.55	22.34
			13	23.00	22.62	22.60	22.37
			24	23.00	22.61	22.54	22.32
		12	0	21.50	21.18	21.24	21.19
			6	21.50	21.25	21.30	21.20
			13	21.50	21.21	21.25	21.16
		25	0	21.50	21.23	21.33	21.15
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	20800	21100	21400
					2505.0MHz	2535.0MHz	2565.0MHz
10MHz	QPSK	1	0	23.50	23.47	23.39	23.26
			25	23.50	23.48	23.43	23.24
			49	23.50	23.42	23.38	23.17
		25	0	22.50	22.34	22.39	22.06
			13	22.50	22.35	22.38	22.09
			25	22.50	22.36	22.29	21.95
		50	0	22.50	22.34	22.36	22.00
	16QAM	1	0	23.00	22.57	22.52	21.79
			25	23.00	22.62	22.49	21.82
			49	23.00	22.68	22.39	21.80
		25	0	21.50	21.32	21.34	21.04
			13	21.50	21.42	21.42	21.16
			25	21.50	21.38	21.32	21.00
		50	0	21.50	21.31	21.35	20.98

Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	20825	21100	21375
					2057.5MHz	2535.0MHz	2562.5MHz
15MHz	QPSK	1	0	23.50	23.24	23.12	23.04
			38	23.50	23.26	23.17	23.12
			74	23.50	23.13	23.10	23.01
		36	0	22.50	22.31	22.29	22.05
			18	22.50	22.36	22.32	22.04
			39	22.50	22.31	22.23	21.96
		75	0	22.50	22.37	22.23	22.08
	16QAM	1	0	22.50	22.32	22.30	21.98
			38	22.50	22.45	22.31	22.04
			74	22.50	22.49	22.19	21.98
		36	0	21.50	21.20	21.26	20.98
			18	21.50	21.29	21.24	21.01
			39	21.50	21.25	21.21	20.86
		75	0	21.50	21.23	21.17	21.01
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	21350	21100	21350
					2560.0MHz	2535.0MHz	2560.0MHz
20MHz	QPSK	1	0	23.50	23.13	23.22	22.96
			50	23.50	23.33	23.37	23.05
			99	23.50	23.13	23.15	22.87
		50	0	22.50	22.14	22.14	21.99
			25	22.50	22.25	22.26	22.02
			50	22.50	22.18	22.12	21.83
		100	0	22.50	22.15	22.11	21.90
	16QAM	1	0	22.50	22.19	22.29	22.07
			50	22.50	22.46	22.41	22.21
			99	22.50	22.40	22.11	22.06
		50	0	21.50	21.13	21.07	21.02
			25	21.50	21.26	21.18	21.04
			50	21.50	21.19	21.11	20.90
		100	0	21.50	21.14	21.10	20.92

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	23.00	22.83	22.65	22.66
			2	23.00	22.89	22.70	22.75
			5	23.00	22.85	22.61	22.64
		3	0	23.00	22.77	22.72	22.67
			2	23.00	22.80	22.77	22.68
			3	23.00	22.81	22.70	22.65
		6	0	22.00	21.80	21.74	21.67
	16QAM	1	0	22.00	21.87	21.50	21.69
			2	22.00	21.88	21.58	21.78
			5	22.00	21.86	21.53	21.68
		3	0	22.00	21.93	21.91	21.85
			2	22.00	21.98	21.91	21.92
			3	22.00	21.94	21.89	21.82
		6	0	21.50	21.07	21.03	20.94
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	23025	23095	23165
					700.5MHz	707.5MHz	714.5MHz
3MHz	QPSK	1	0	22.50	22.46	22.48	22.46
			7	23.00	22.58	22.61	22.61
			14	23.00	22.52	22.50	22.58
		8	0	22.00	21.74	21.75	21.73
			4	22.00	21.76	21.77	21.74
			7	22.00	21.80	21.77	21.68
		15	0	22.00	21.72	21.73	21.65
	16QAM	1	0	22.00	21.99	21.73	21.41
			7	22.50	22.06	21.86	21.44
			14	22.00	21.97	21.79	21.37
		8	0	21.00	20.86	20.80	20.73
			4	21.00	20.89	20.88	20.78
			7	21.00	20.87	20.76	20.77
		15	0	21.00	20.80	20.79	20.82

Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	23035	23095	23155
					701.5MHz	707.5MHz	713.5MHz
5MHz	QPSK	1	0	23.00	22.89	22.76	22.73
			13	23.50	23.23	22.83	22.75
			24	23.50	23.07	22.75	22.64
		12	0	22.00	21.82	21.79	21.77
			6	22.00	21.86	21.84	21.87
			13	22.00	21.89	21.73	21.70
		25	0	22.00	21.85	21.81	21.79
	16QAM	1	0	22.50	22.30	22.12	22.08
			13	22.50	22.45	22.23	22.13
			24	22.50	22.39	22.14	22.04
		12	0	21.00	20.88	20.82	20.88
			6	21.00	20.99	20.85	20.94
			13	21.00	20.98	20.78	20.87
		25	0	21.00	20.90	20.91	20.83
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	23060	23095	23130
					704.0MHz	707.5MHz	711.0MHz
10MHz	QPSK	1	0	23.00	22.82	22.88	22.93
			25	23.50	23.00	22.87	22.94
			49	23.00	22.97	22.89	22.84
		25	0	22.00	21.93	21.84	21.76
			13	22.50	22.03	21.92	21.82
			25	22.00	21.92	21.83	21.69
		50	0	22.00	21.98	21.85	21.78
	16QAM	1	0	22.50	22.39	22.03	21.68
			25	22.50	22.32	22.12	21.76
			49	22.50	22.26	22.06	21.64
		25	0	21.00	20.87	20.87	20.86
			13	21.00	20.93	20.95	20.85
			25	21.00	20.96	20.91	20.79
		50	0	21.00	20.91	20.91	20.84

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	23.00	22.47	22.40	22.51
			13	23.00	22.51	22.48	22.54
			24	22.50	22.47	22.41	22.46
		12	0	22.00	21.49	21.51	21.46
			6	22.00	21.51	21.46	21.61
			13	21.50	21.45	21.38	21.49
		25	0	21.50	21.45	21.49	21.46
	16QAM	1	0	22.50	21.78	21.80	22.07
			13	22.50	21.86	21.87	22.11
			24	22.50	21.81	21.82	22.00
		12	0	21.00	20.46	20.66	20.57
			6	21.00	20.53	20.69	20.63
			13	21.00	20.41	20.62	20.55
		25	0	21.00	20.50	20.60	20.48
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	23780	23790	23800
					709.0MHz	710.0MHz	711.0MHz
10MHz	QPSK	1	0	23.00	22.49	22.47	22.55
			25	23.00	22.69	22.51	22.50
			49	23.00	22.59	22.44	22.41
		25	0	22.00	21.52	21.48	21.44
			13	22.00	21.57	21.50	21.51
			25	22.00	21.56	21.46	21.47
		50	0	22.00	21.54	21.49	21.56
	16QAM	1	0	22.00	21.45	21.93	21.68
			25	22.50	21.54	22.05	21.75
			49	22.00	21.46	21.99	21.62
		25	0	21.00	20.66	20.71	20.65
			13	21.00	20.65	20.73	20.66
			25	21.00	20.68	20.62	20.54
		50	0	21.00	20.67	20.63	20.69

10.1.9 Conducted Power of LTE Band 38

LTE-TDD Band 38				Maximum Tune-up(dBm)	Conducted Power(dBm)		
Bandwidth	Modulation	RB allocation	RB offset		40065	40640	41215
					2537.5MHz	2605.0MHz	2652.5MHz
5MHz	QPSK	1	0	23.00	22.73	22.92	22.93
			13	23.50	22.86	23.06	22.99
			24	23.00	22.74	22.92	22.87
		12	0	22.50	21.73	21.82	22.05
			6	22.50	21.78	21.90	22.05
			13	22.50	21.71	21.83	22.01
		25	0	22.50	21.68	21.85	22.04
	16QAM	1	0	22.50	22.18	21.96	22.25
			13	22.50	22.30	22.09	22.33
			24	22.50	22.20	21.98	22.24
		12	0	21.50	20.69	20.78	21.06
			6	21.50	20.82	20.82	21.08
			13	21.50	20.74	20.73	21.04
		25	0	21.50	20.76	20.89	21.01
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	40090	40640	41190
					2540.0MHz	2605.0MHz	2650.0MHz
10MHz	QPSK	1	0	23.00	22.69	22.77	22.98
			25	23.50	22.88	22.85	23.07
			49	23.50	22.86	22.84	23.02
		25	0	22.00	21.73	21.71	21.94
			13	22.00	21.82	21.75	21.98
			25	22.00	21.82	21.66	21.92
		50	0	22.00	21.78	21.66	21.95
	16QAM	1	0	22.50	21.69	22.00	22.01
			25	22.50	21.74	22.07	22.15
			49	22.50	21.52	22.10	22.05
		25	0	21.00	20.57	20.65	20.98
			13	21.50	20.59	20.73	21.05
			25	21.00	20.63	20.68	20.96
		50	0	21.50	20.58	20.62	21.01

Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	40115	40640	41165
					2542.5MHz	2605.0MHz	2647.5MHz
15MHz	QPSK	1	0	23.00	22.73	22.80	22.78
			38	23.00	22.94	22.83	22.90
			74	23.00	22.92	22.74	22.85
		36	0	22.00	21.69	21.81	21.96
			18	22.00	21.88	21.96	21.95
			39	22.00	21.89	21.87	21.89
		75	0	22.00	21.86	21.87	21.99
	16QAM	1	0	22.00	21.92	21.97	21.95
			38	22.50	22.01	22.12	22.09
			74	22.50	21.94	22.11	21.99
		36	0	21.50	20.66	20.71	21.02
			18	21.50	20.78	20.80	21.06
			39	21.50	20.79	20.81	21.02
		75	0	21.00	20.80	20.80	20.95
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	40140	40640	41140
					2545.0MHz	2605.0MHz	2645.0MHz
20MHz	QPSK	1	0	23.00	22.54	22.74	22.83
			50	23.50	22.90	23.03	23.04
			99	23.00	22.79	22.88	22.88
		50	0	22.00	21.55	21.75	21.97
			25	22.50	21.78	21.88	22.04
			50	22.00	21.82	21.81	21.92
		100	0	22.00	21.68	21.75	21.88
	16QAM	1	0	22.00	21.75	21.74	21.89
			50	22.50	21.95	22.01	22.20
			99	22.50	21.82	21.93	22.04
		50	0	21.50	20.58	20.66	21.04
			25	21.50	20.79	20.82	21.07
			50	21.50	20.80	20.78	21.00
		100	0	21.00	20.66	20.71	20.98

10.1.10 Conducted Power of LTE Band 41

LTE-TDD Band 41				Maximum Tune-up(dBm)	Conducted Power(dBm)				
Bandwidth	Modulation	RB allocation	RB offset		40065	40265	40640	41015	41215
					2537.5MHz	2557.5 MHz	2595.0MHz	2632.5 MHz	2652.5MHz
5MHz	QPSK	1	0	24.00	23.20	22.90	23.13	22.98	23.66
			13	24.00	23.25	22.89	23.23	22.95	23.80
			24	24.00	23.20	22.44	23.13	22.92	23.74
		12	0	23.00	22.17	21.77	22.18	21.20	22.63
			6	23.00	22.27	21.74	22.25	21.80	22.65
			13	23.00	22.16	21.77	22.20	21.48	22.56
		25	0	23.00	22.22	22.82	22.21	21.93	22.58
	16QAM	1	0	23.00	22.36	22.02	22.38	22.47	22.92
			13	23.50	22.44	22.81	22.48	22.78	23.02
			24	23.00	22.40	22.82	22.39	22.81	22.97
		12	0	22.00	21.15	21.14	21.19	20.80	21.57
			6	22.00	21.20	21.01	21.27	20.41	21.63
			13	22.00	21.11	21.04	21.21	20.40	21.53
		25	0	22.00	21.22	21.36	21.15	21.07	21.58
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	40090	40290	40640	40990	41190
					2540.0MHz	2560.0MHz	2595.0MHz	2630.0MHz	2650.0MHz
10MHz	QPSK	1	0	24.00	23.23	22.15	23.27	22.74	23.61
			25	24.00	23.24	22.23	23.31	22.73	23.78
			49	24.00	23.19	21.31	23.31	22.70	23.79
		25	0	23.00	22.24	21.42	22.21	21.67	22.57
			13	23.00	22.25	21.31	22.24	22.29	22.59
			25	22.50	22.25	21.72	22.21	21.52	22.50
		50	0	23.00	22.26	21.57	22.22	21.80	22.59
	16QAM	1	0	23.00	22.62	21.62	22.32	21.75	22.43
			25	23.00	22.69	21.32	22.39	22.28	22.49
			49	23.00	22.67	22.25	22.38	21.67	22.49
		25	0	22.50	21.26	21.35	21.19	22.21	21.59
			13	22.00	21.29	20.73	21.28	21.00	21.63
			25	22.00	21.27	21.87	21.21	21.25	21.56
		50	0	22.00	21.21	21.92	21.25	21.04	21.57

Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	40115	40315	40640	40965	41165
					2542.5MHz	2562.5MHz	2595.0MHz	2627.5MHz	2647.5MHz
15MHz	QPSK	1	0	24.00	23.16	23.12	23.20	22.97	23.60
			38	24.00	23.22	22.44	23.32	22.94	23.84
			74	24.00	23.09	23.20	23.24	23.12	23.84
		36	0	23.00	22.21	21.80	22.27	21.82	22.63
			18	23.00	22.29	21.79	22.37	21.93	22.73
			39	23.00	22.22	21.73	22.31	21.75	22.66
		75	0	23.00	22.28	21.81	22.31	22.69	22.70
	16QAM	1	0	23.00	22.57	21.42	22.26	22.26	22.64
			38	23.00	22.69	21.72	22.41	21.86	22.77
			74	23.00	22.57	21.48	22.32	22.09	22.70
		36	0	22.00	21.25	21.06	21.28	21.35	21.54
			18	22.00	21.30	21.28	21.35	21.15	21.60
			39	22.00	21.21	21.20	21.33	21.43	21.52
		75	0	22.00	21.24	21.26	21.25	21.18	21.63
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	40140	40340	40640	40940	41140
					2545.0MHz	2565.0MHz	2595.0MHz	2625.0MHz	2645.0MHz
20MHz	QPSK	1	0	23.50	23.13	22.92	23.11	22.88	23.37
			50	24.00	23.31	22.11	23.42	23.33	23.70
			99	24.00	23.07	22.20	23.24	23.25	23.63
		50	0	23.00	22.18	21.37	22.14	21.79	22.53
			25	23.00	22.29	21.51	22.27	22.38	22.63
			50	22.50	22.27	21.76	22.22	21.83	22.46
		100	0	22.50	22.24	21.23	22.16	22.35	22.48
	16QAM	1	0	22.50	22.28	21.86	22.19	21.76	22.48
			50	23.00	22.53	22.52	22.48	21.88	22.69
			99	23.00	22.30	21.58	22.36	21.65	22.54
		50	0	22.00	21.22	21.21	21.12	20.20	21.56
			25	22.00	21.31	21.38	21.28	20.15	21.68
			50	22.00	21.29	21.69	21.19	20.24	21.54
		100	0	22.00	21.21	21.17	21.12	20.23	21.50

10.1.11 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	23.50	22.85	23.20	23.50
			2	24.00	22.93	23.29	23.57
			5	23.50	22.85	23.17	23.47
		3	0	24.00	22.91	23.16	23.63
			2	24.00	22.94	23.22	23.64
			3	24.00	22.91	23.17	23.61
		6	0	23.00	21.99	22.29	22.70
	16QAM	1	0	23.00	21.71	22.22	22.65
			2	23.00	21.77	22.29	22.70
			5	23.00	21.68	22.20	22.68
		3	0	23.00	22.07	22.34	22.77
			2	23.00	22.09	22.34	22.83
			3	23.00	22.04	22.31	22.77
		6	0	22.00	21.20	21.45	21.85
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	131987	132322	132657
					1711.5MHz	1755.0MHz	1778.5MHz
3MHz	QPSK	1	0	23.50	22.71	23.03	23.47
			7	24.00	22.79	23.07	23.59
			14	24.00	22.75	22.99	23.51
		8	0	23.00	21.91	22.18	22.64
			4	23.00	22.01	22.24	22.70
			7	23.00	21.98	22.24	22.60
		15	0	23.00	21.93	22.21	22.62
	16QAM	1	0	22.50	22.15	22.15	22.26
			7	22.50	22.23	22.23	22.35
			14	22.50	22.18	22.16	22.23
		8	0	22.00	20.93	21.21	21.59
			4	22.00	21.04	21.25	21.67
			7	22.00	20.98	21.14	21.59
		15	0	22.00	20.97	21.16	21.67
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	131997	132322	132647
					1712.5MHz	1755.0MHz	1775.0MHz
5MHz	QPSK	1	0	24.00	23.01	23.30	23.60
			13	24.00	23.10	23.33	23.66
			24	24.00	23.02	23.25	23.55
		12	0	23.00	21.99	22.28	22.73
			6	23.00	22.07	22.32	22.75
			13	23.00	22.11	22.26	22.62
		25	0	23.00	22.02	22.27	22.70
	16QAM	1	0	23.00	22.50	22.51	22.89
			13	23.00	22.60	22.57	22.95
			24	23.00	22.56	22.53	22.90
		12	0	22.00	21.00	21.20	21.76
			6	22.00	21.08	21.21	21.77
			13	22.00	21.10	21.18	21.65
		25	0	22.00	21.02	21.27	21.68

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	24.00	23.12	23.36	23.79
			25	24.00	23.18	23.35	23.82
			49	24.00	23.17	23.34	23.81
		25	0	23.00	21.99	22.29	22.67
			13	23.00	22.15	22.33	22.77
			25	23.00	22.10	22.27	22.60
		50	0	23.00	22.10	22.32	22.70
	16QAM	1	0	23.00	22.49	22.43	22.55
			25	23.00	22.57	22.47	22.57
			49	23.00	22.57	22.49	22.55
		25	0	22.00	21.04	21.29	21.70
			13	22.00	21.19	21.35	21.75
			25	22.00	21.16	21.28	21.62
		50	0	22.00	21.09	21.34	21.63
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	132047	132322	132597
					1717.5MHz	1755.0MHz	1772.5MHz
15MHz	QPSK	1	0	24.00	23.03	23.29	23.67
			38	24.00	23.14	23.41	23.86
			74	24.00	23.13	23.33	23.73
		36	0	23.00	22.10	22.40	22.74
			18	23.00	22.15	22.40	22.81
			39	23.00	22.19	22.33	22.73
		75	0	23.00	22.14	22.39	22.79
	16QAM	1	0	23.00	22.45	22.37	22.71
			38	23.00	22.57	22.50	22.84
			74	23.00	22.52	22.42	22.73
		36	0	22.00	21.09	21.39	21.67
			18	22.00	21.18	21.41	21.75
			39	22.00	21.23	21.36	21.65
		75	0	22.00	21.14	21.32	21.76
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	132072	132322	132572
					1720.0MHz	1755.0MHz	1770.0MHz
20MHz	QPSK	1	0	23.50	22.97	23.14	23.50
			50	24.00	23.25	23.43	23.90
			99	24.00	23.09	23.25	23.72
		50	0	23.00	22.10	22.37	22.64
			25	23.00	22.19	22.39	22.80
			50	23.00	22.20	22.26	22.68
		100	0	23.00	22.13	22.35	22.66
	16QAM	1	0	23.00	22.30	22.44	22.71
			50	23.50	22.57	22.70	23.05
			99	23.00	22.32	22.57	22.83
		50	0	22.00	21.15	21.37	21.60
			25	22.00	21.24	21.44	21.78
			50	22.00	21.27	21.33	21.65
		100	0	22.00	21.14	21.31	21.64

10.1.12 Conducted Power of Wi-Fi 2.4G

Mode	802.11b		
Channel/Frequency(MHz)	1(2412)	6(2437)	11(2462)
Average Power(dBm)	15.53	13.86	14.71
Mode	802.11g		
Channel/Frequency(MHz)	1(2412)	6(2437)	11(2462)
Average Power(dBm)	17.32	16.90	16.36
Mode	802.11n(HT20)		
Channel/Frequency(MHz)	1(2412)	6(2437)	11(2462)
Average Power(dBm)	17.65	17.40	16.56
Mode	802.11n(HT40)		
Channel/Frequency(MHz)	7(2422)	6(2437)	9(2452)
Average Power(dBm)	**17.72**	16.51	17.13

10.1.13 Conducted Power of Wi-Fi 5G

Band	Mode	Frequency (MHz)	Tune-up	Average Power (dBm)	SAR Test (Yes/No)
U-NII-1 (5150-5250)	802.11a	5180	11.50 ±1.0dbm	11.15	No
		5240	11.50 ±1.0dbm	10.24	No
	802.11n-HT20	5180	13.00 ±1.0dbm	12.58	Yes
		5240	12.00 ±1.0dbm	11.67	No
	802.11n-HT40	5190	11.50 ±1.0dbm	11.40	No
		5230	11.50 ±1.0dbm	11.18	No
	802.11ac-VHT20	5180	11.50 ±1.0dbm	11.18	No
		5240	10.00 ±1.0dbm	10.99	No
	802.11ac-VHT40	5190	11.00 ±1.0dbm	10.96	No
		5230	11.00 ±1.0dbm	10.63	No
	802.11ac-VHT80	5210	10.50 ±1.0dbm	10.47	No
Band	Mode	Frequency (MHz)	Tune-up	Average Power (dBm)	SAR Test (Yes/No)
U-NII-2a (5250-5350)	802.11a	5260	10.50 ±1.0dbm	10.48	No
		5320	11.00 ±1.0dbm	10.52	No
	802.11n-HT20	5260	12.00 ±1.0dbm	11.80	No
		5320	12.00 ±1.0dbm	11.84	Yes
	802.11n-HT40	5270	11.00 ±1.0dbm	10.68	No
		5310	11.00 ±1.0dbm	10.78	No
	802.11ac-VHT20	5260	11.50 ±1.0dbm	11.04	No
		5320	11.50 ±1.0dbm	11.24	No
	802.11ac-VHT40	5270	6.50 ±1.0dbm	6.34	No
		5310	10.50 ±1.0dbm	10.47	No
	802.11ac-VHT80	5290	10.50 ±1.0dbm	10.08	No
Band	Mode	Frequency (MHz)	Tune-up	Average Power (dBm)	SAR Test (Yes/No)
U-NII-2c (5470-5725)	802.11a	5500	10.50 ±1.0dbm	10.33	No
		5700	8.50 ±1.0dbm	8.04	No
	802.11n-HT20	5500	12.00 ±1.0dbm	11.71	Yes
		5700	9.50 ±1.0dbm	9.41	No
	802.11n-HT40	5510	10.50 ±1.0dbm	10.21	No
		5670	9.50 ±1.0dbm	9.30	No
	802.11ac-VHT20	5500	11.50 ±1.0dbm	11.36	No
		5700	9.50 ±1.0dbm	9.26	No
	802.11ac-VHT40	5510	11.00 ±1.0dbm	10.69	No
		5670	9.50 ±1.0dbm	9.16	No
	802.11ac-VHT80	5530	11.00 ±1.0dbm	10.66	No
		5610	10.50 ±1.0dbm	10.10	No
Band	Mode	Frequency (MHz)	Tune-up	Average Power (dBm)	SAR Test (Yes/No)
U-NII-3 (5725-5825)	802.11a	5745	7.50 ±1.0dbm	7.04	No
		5825	6.50 ±1.0dbm	6.36	No
	802.11n-HT20	5745	9.00 ±1.0dbm	8.53	Yes
		5825	7.50 ±1.0dbm	7.20	No
	802.11n-HT40	5755	8.50 ±1.0dbm	8.05	No
		5795	8.00 ±1.0dbm	7.58	No
	802.11ac-VHT20	5745	8.50 ±1.0dbm	8.16	No
		5825	7.00 ±1.0dbm	6.94	No
	802.11ac-VHT40	5755	7.50 ±1.0dbm	7.31	No
		5795	7.00 ±1.0dbm	6.79	No
	802.11ac-VHT80	5775	7.00 ±1.0dbm	6.73	No

10.1.14 Conducted Power of BT

EDR	Mode	Maximum Tune-up(dBm)	Average Conducted Output Power (dBm)		
			0	39	78
			2402MHz	2441MHz	2480MHz
	GFSK	11.00	10.73	10.76	10.04
	π/4QPSK	12.50	10.66	9.95	12.01
	8DPSK	14.00	**13.70**	9.83	11.94
BLE	**Mode**	**Maximum Tune-up(dBm)**	**Average Conducted Output Power (dBm)**		
			0	19	39
			2402MHz	2440MHz	2480MHz
	1Mbps	6.50	3.30	**6.11**	4.09
	2Mbps	5.50	3.84	5.20	4.50

Channel	Frequency (GHz)	Max. Tune-up Power (dBm)	Max. Power (dBm)	Exclusion thresholds for 1-g SAR(dBm)	SAR evaluation required
0	2.402	14.00	13.70	4.77	Yes
19	2.440	6.50	6.11	4.77	Yes

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 =32.50±0.5dBm
		1TXslots	Max output power =31.00±0.5dBm
		2TXslots	Max output power =30.00±0.5dBm
		3TXslots	Max output power =30.50±0.5dBm
		4TXslots	Max output power =30.50±0.5dBm
GSM850	EGPRS (8-PSK)	1TXslots	Max output power =30.50±0.5dBm
		2TXslots	Max output power =31.00±0.5dBm
		3TXslots	Max output power =31.00±0.5dBm
		4TXslots	Max output power =30.00±0.5dBm
GSM1900	GSM/GPRS (GMSK)	GSM	Max output power =30.50±0.5dBm
		1TXslots	Max output power =29.00±0.5dBm
		2TXslots	Max output power =28.00±0.5dBm
		3TXslots	Max output power =28.50±0.5dBm
		4TXslots	Max output power =28.00±0.5dBm
GSM1900	EGPRS (8-PSK)	1TXslots	Max output power =27.50±0.5dBm
		2TXslots	Max output power =27.50±0.5dBm
		3TXslots	Max output power =27.50±0.5dBm
		4TXslots	Max output power =27.50±0.5dBm
WCDMA 2	Max output power =23.5dbm±0.5dbm		
WCDMA 4	Max output power =23.5dbm±0.5dbm		
WCDMA 5	Max output power =23.5dbm±0.5dbm		
LTE B2	Max output power =23.5dbm±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 =23.5dbm±0.5dbm		
LTE B12	Max output power =23.5dbm±0.5dbm		
LTE B17	Max output power =23.0dbm±0.5dbm		
LTE B38	Max output power =23.5dbm±0.5dbm		
LTE B41	Max output power =24.0dbm±0.5dbm		
LTE B66	Max output power =24.0dbm±0.5dbm		

Band	Tune-up power tolerance(dBm)		
WIFI	2.4GWIFI	802.11a	Max output power =16.00±1.0dBm
		802.11g	Max output power =17.50±1.0dBm
		802.11n (HT20)	Max output power =18.00±1.0dBm
		802.11n (HT40)	Max output power =18.00±1.0dBm
	U-NII-1(5150-5250)	802.11n (HT20)	Max output power =13.00±1.0dBm
	U-NII-2a(5250-5350)	802.11n (HT20)	Max output power =12.00±1.0dBm
	U-NII-2c(5470-5725)	802.11n (HT20)	Max output power =12.00±1.0dBm
	U-NII-3(5725-5825)	802.11n (HT20)	Max output power =9.00±1.0dBm
BT	GFSK		Max output power =11.00±1.0dBm
	π/4QPSK		Max output power =12.00±1.0dBm
	8DPSK		Max output power =14.00±1.0dBm
BLE	1Mbps		Max output power =6.50±1.0dBm
	2Mbps		Max output power =5.50±1.0dBm

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	4.580	0.036	100	1.00	32.18	32.50	1.076	0.039
	Left Tilt	251	848.8	-0.960	0.025	100	1.00	32.18	32.50	1.076	0.027
	Right Cheek	251	848.8	4.990	0.031	100	1.00	32.18	32.50	1.076	0.033
	Right Tilt	251	848.8	-2.820	0.017	100	1.00	32.18	32.50	1.076	0.018
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	-2.040	0.099	100	1.00	32.18	32.50	1.076	0.107
	Back	251	848.8	-3.230	0.096	100	1.00	32.18	32.50	1.076	0.103
	Left	251	848.8	-2.250	0.050	100	1.00	32.18	32.50	1.076	0.054
	right	251	848.8	-1.950	0.067	100	1.00	32.18	32.50	1.076	0.072
	Top	251	848.8	-2.990	0.002	100	1.00	32.18	32.50	1.076	0.002
	Bottom	251	848.8	3.190	0.071	100	1.00	32.18	32.50	1.076	0.076

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	4.370	0.067	100	1.00	30.16	30.50	1.081	0.072
	Left Tilt	810	1909.8	-2.400	0.059	100	1.00	30.16	30.50	1.081	0.064
	Right Cheek	810	1909.8	-1.750	0.056	100	1.00	30.16	30.50	1.081	0.061
	Right Tilt	810	1909.8	4.870	0.037	100	1.00	30.16	30.50	1.081	0.040
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	-1.840	0.596	100	1.00	30.16	30.50	1.081	0.645
	Back	810	1909.8	-2.620	0.435	100	1.00	30.16	30.50	1.081	0.470
	Left	810	1909.8	2.760	0.361	100	1.00	30.16	30.50	1.081	0.390
	right	810	1909.8	1.620	0.093	100	1.00	30.16	30.50	1.081	0.101
	Top	810	1909.8	3.250	0.024	100	1.00	30.16	30.50	1.081	0.026
	Bottom	810	1909.8	-3.800	0.517	100	1.00	30.16	30.50	1.081	0.559

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	9400	1880	4.560	0.109	100	1.00	23.34	23.50	1.038	0.113
	Left Tilt	9400	1880	-0.210	0.092	100	1.00	23.34	23.50	1.038	0.095
	Right Cheek	9400	1880	4.500	0.078	100	1.00	23.34	23.50	1.038	0.081
	Right Tilt	9400	1880	-0.080	0.056	100	1.00	23.34	23.50	1.038	0.058
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	9400	1880	-2.240	0.773	100	1.00	23.34	23.50	1.038	0.802
	Back	9400	1880	-2.280	0.517	100	1.00	23.34	23.50	1.038	0.536
	Left	9400	1880	-0.020	0.443	100	1.00	23.34	23.50	1.038	0.460
	right	9400	1880	-3.220	0.110	100	1.00	23.34	23.50	1.038	0.114
	Top	9400	1880	0.700	0.031	100	1.00	23.34	23.50	1.038	0.032
	Bottom	9400	1880	-0.660	0.592	100	1.00	23.34	23.50	1.038	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*)	Left Cheek	1412	1732.6	4.020	0.060	100	1.00	23.08	23.50	1.102	0.066
	Left Tilt	1412	1732.6	-2.530	0.043	100	1.00	23.08	23.50	1.102	0.047
	Right Cheek	1412	1732.6	-4.560	0.053	100	1.00	23.08	23.50	1.102	0.058
	Right Tilt	1412	1732.6	-4.780	0.045	100	1.00	23.08	23.50	1.102	0.050
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	1412	1732.6	-0.830	0.374	100	1.00	23.08	23.50	1.102	0.412
	Back	1412	1732.6	-1.430	0.359	100	1.00	23.08	23.50	1.102	0.395
	Left	1412	1732.6	3.680	0.284	100	1.00	23.08	23.50	1.102	0.313
	right	1412	1732.6	0.180	0.105	100	1.00	23.08	23.50	1.102	0.116
	Top	1412	1732.6	-4.740	0.006	100	1.00	23.08	23.50	1.102	0.007
	Bottom	1412	1732.6	4.450	0.261	100	1.00	23.08	23.50	1.102	0.288

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	2.170	0.095	100	1.00	23.25	23.50	1.059	0.101
	Left Tilt	4233	846.6	4.390	0.051	100	1.00	23.25	23.50	1.059	0.054
	Right Cheek	4233	846.6	-4.170	0.083	100	1.00	23.25	23.50	1.059	0.088
	Right Tilt	4233	846.6	-0.240	0.046	100	1.00	23.25	23.50	1.059	0.049
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	-0.120	0.129	100	1.00	23.25	23.50	1.059	0.137
	Back	4233	846.6	-0.900	0.146	100	1.00	23.25	23.50	1.059	0.155
	Left	4233	846.6	0.670	0.024	100	1.00	23.25	23.50	1.059	0.025
	right	4233	846.6	0.710	0.091	100	1.00	23.25	23.50	1.059	0.096
	Top	4233	846.6	1.240	0.005	100	1.00	23.25	23.50	1.059	0.005
	Bottom	4233	846.6	-0.090	0.097	100	1.00	23.25	23.50	1.059	0.103

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	18675	1857.5	4.240	0.077	100	1.00	23.45	23.50	1.012	0.078
		Left Tilt	18675	1857.5	-0.870	0.051	100	1.00	23.45	23.50	1.012	0.052
		Right Cheek	18675	1857.5	4.160	0.071	100	1.00	23.45	23.50	1.012	0.072
		Right Tilt	18675	1857.5	3.890	0.045	100	1.00	23.45	23.50	1.012	0.046
	50%RB	Left Cheek	18675	1857.5	-2.640	0.073	100	1.00	23.45	23.50	1.012	0.074
		Left Tilt	18675	1857.5	-4.160	0.048	100	1.00	23.45	23.50	1.012	0.049
		Right Cheek	18675	1857.5	-3.680	0.062	100	1.00	23.45	23.50	1.012	0.063
		Right Tilt	18675	1857.5	-2.590	0.036	100	1.00	23.45	23.50	1.012	0.036
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	18675	1857.5	-1.400	0.594	100	1.00	23.45	23.50	1.012	0.601
		Back	18675	1857.5	-2.420	0.425	100	1.00	23.45	23.50	1.012	0.430
		Left	18675	1857.5	2.010	0.265	100	1.00	23.45	23.50	1.012	0.268
		right	18675	1857.5	-1.060	0.173	100	1.00	23.45	23.50	1.012	0.175
		Top	18675	1857.5	0.530	0.035	100	1.00	23.45	23.50	1.012	0.035
		Bottom	18675	1857.5	-2.530	0.482	100	1.00	23.45	23.50	1.012	0.488
	50%RB	Front	18675	1857.5	-2.900	0.551	100	1.00	23.45	23.50	1.012	0.557
		Back	18675	1857.5	4.060	0.387	100	1.00	23.45	23.50	1.012	0.391
		Left	18675	1857.5	-1.060	0.215	100	1.00	23.45	23.50	1.012	0.217
		right	18675	1857.5	-3.320	0.131	100	1.00	23.45	23.50	1.012	0.133
		Top	18675	1857.5	-3.440	0.030	100	1.00	23.45	23.50	1.012	0.030
		Bottom	18675	1857.5	2.860	0.452	100	1.00	23.45	23.50	1.012	0.457

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	4.000	0.042	100	1.00	23.37	23.50	1.030	0.043
		Left Tilt	20300	1745	-3.650	0.037	100	1.00	23.37	23.50	1.030	0.038
		Right Cheek	20300	1745	4.370	0.038	100	1.00	23.37	23.50	1.030	0.039
		Right Tilt	20300	1745	-3.060	0.032	100	1.00	23.37	23.50	1.030	0.033
	50%RB	Left Cheek	20300	1745	-3.780	0.040	100	1.00	23.37	23.50	1.030	0.041
		Left Tilt	20300	1745	3.430	0.032	100	1.00	23.37	23.50	1.030	0.033
		Right Cheek	20300	1745	2.460	0.036	100	1.00	23.37	23.50	1.030	0.037
		Right Tilt	20300	1745	-2.050	0.027	100	1.00	23.37	23.50	1.030	0.028
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	-2.110	0.272	100	1.00	23.37	23.50	1.030	0.280
		Back	20300	1745	-1.150	0.211	100	1.00	23.37	23.50	1.030	0.217
		Left	20300	1745	3.950	0.132	100	1.00	23.37	23.50	1.030	0.136
		right	20300	1745	4.370	0.060	100	1.00	23.37	23.50	1.030	0.062
		Top	20300	1745	-3.610	0.009	100	1.00	23.37	23.50	1.030	0.009
		Bottom	20300	1745	-4.560	0.124	100	1.00	23.37	23.50	1.030	0.128
	50%RB	Front	20300	1745	-4.080	0.263	100	1.00	23.37	23.50	1.030	0.271
		Back	20300	1745	-0.950	0.193	100	1.00	23.37	23.50	1.030	0.199
		Left	20300	1745	-1.830	0.126	100	1.00	23.37	23.50	1.030	0.130
		right	20300	1745	-0.830	0.057	100	1.00	23.37	23.50	1.030	0.059
		Top	20300	1745	3.930	0.007	100	1.00	23.37	23.50	1.030	0.007
		Bottom	20300	1745	-3.570	0.121	100	1.00	23.37	23.50	1.030	0.125

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	20643	848.3	-1.500	0.098	100	1.00	23.70	24.00	1.072	0.105
		Left Tilt	20643	848.3	-1.160	0.067	100	1.00	23.70	24.00	1.072	0.072
		Right Cheek	20643	848.3	0.650	0.079	100	1.00	23.70	24.00	1.072	0.085
		Right Tilt	20643	848.3	-0.070	0.054	100	1.00	23.70	24.00	1.072	0.058
	50%RB	Left Cheek	20643	848.3	2.650	0.088	100	1.00	23.70	24.00	1.072	0.094
		Left Tilt	20643	848.3	-0.740	0.060	100	1.00	23.70	24.00	1.072	0.064
		Right Cheek	20643	848.3	-3.620	0.071	100	1.00	23.70	24.00	1.072	0.076
		Right Tilt	20643	848.3	-0.300	0.044	100	1.00	23.70	24.00	1.072	0.047
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	20643	848.3	-0.270	0.117	100	1.00	23.70	24.00	1.072	0.125
		Back	20643	848.3	-2.390	0.140	100	1.00	23.70	24.00	1.072	0.150
		Left	20643	848.3	1.960	0.033	100	1.00	23.70	24.00	1.072	0.035
		right	20643	848.3	2.620	0.078	100	1.00	23.70	24.00	1.072	0.084
		Top	20643	848.3	1.180	0.003	100	1.00	23.70	24.00	1.072	0.003
		Bottom	20643	848.3	-2.100	0.097	100	1.00	23.70	24.00	1.072	0.104
	50%RB	Front	20643	848.3	0.410	0.106	100	1.00	23.70	24.00	1.072	0.114
		Back	20643	848.3	4.880	0.128	100	1.00	23.70	24.00	1.072	0.137
		Left	20643	848.3	2.730	0.029	100	1.00	23.70	24.00	1.072	0.031
		right	20643	848.3	-4.220	0.076	100	1.00	23.70	24.00	1.072	0.081
		Top	20643	848.3	-3.040	0.003	100	1.00	23.70	24.00	1.072	0.003
		Bottom	20643	848.3	-1.240	0.092	100	1.00	23.70	24.00	1.072	0.099

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	20800	2505	4.210	0.090	100	1.00	23.48	23.50	1.005	0.090
		Left Tilt	18625	1852.5	-1.010	0.082	100	1.00	22.36	22.50	1.033	0.085
		Right Cheek	18625	1852.5	-4.590	0.066	100	1.00	22.36	22.50	1.033	0.068
		Right Tilt	18625	1852.5	4.050	0.067	100	1.00	22.36	22.50	1.033	0.069
	50%RB	Left Cheek	18625	1852.5	0.810	0.083	100	1.00	22.36	22.50	1.033	0.086
		Left Tilt	18625	1852.5	4.650	0.076	100	1.00	22.36	22.50	1.033	0.078
		Right Cheek	18625	1852.5	2.940	0.053	100	1.00	22.36	22.50	1.033	0.055
		Right Tilt	18625	1852.5	-0.450	0.039	100	1.00	22.36	22.50	1.033	0.040
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	18625	1852.5	-1.300	0.499	100	1.00	22.36	22.50	1.033	0.515
		Back	18625	1852.5	0.150	0.299	100	1.00	22.36	22.50	1.033	0.309
		Left	18625	1852.5	0.680	0.238	100	1.00	22.36	22.50	1.033	0.246
		right	18625	1852.5	2.390	0.062	100	1.00	22.36	22.50	1.033	0.064
		Top	18625	1852.5	-1.900	0.023	100	1.00	22.36	22.50	1.033	0.024
		Bottom	18625	1852.5	-3.880	0.347	100	1.00	22.36	22.50	1.033	0.358
	50%RB	Front	18625	1852.5	3.810	0.480	100	1.00	22.36	22.50	1.033	0.496
		Back	18625	1852.5	-4.440	0.263	100	1.00	22.36	22.50	1.033	0.272
		Left	18625	1852.5	2.400	0.215	100	1.00	22.36	22.50	1.033	0.222
		right	18625	1852.5	2.940	0.058	100	1.00	22.36	22.50	1.033	0.060
		Top	18625	1852.5	0.030	0.018	100	1.00	22.36	22.50	1.033	0.019
		Bottom	18625	1852.5	2.390	0.334	100	1.00	22.36	22.50	1.033	0.345

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	23035	701.5	4.550	0.098	100	1.00	23.23	23.50	1.064	0.104
		Left Tilt	23035	701.5	-3.890	0.064	100	1.00	23.23	23.50	1.064	0.068
		Right Cheek	23035	701.5	-0.860	0.082	100	1.00	23.23	23.50	1.064	0.087
		Right Tilt	23035	701.5	1.560	0.055	100	1.00	23.23	23.50	1.064	0.059
	50%RB	Left Cheek	23035	701.5	2.130	0.090	100	1.00	23.23	23.50	1.064	0.096
		Left Tilt	23035	701.5	-3.020	0.058	100	1.00	23.23	23.50	1.064	0.062
		Right Cheek	23035	701.5	-1.960	0.073	100	1.00	23.23	23.50	1.064	0.078
		Right Tilt	23035	701.5	4.630	0.043	100	1.00	23.23	23.50	1.064	0.046
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	23035	701.5	-0.080	0.152	100	1.00	23.23	23.50	1.064	0.162
		Back	23035	701.5	0.250	0.148	100	1.00	23.23	23.50	1.064	0.157
		Left	23035	701.5	3.110	0.021	100	1.00	23.23	23.50	1.064	0.022
		right	23035	701.5	-0.050	0.097	100	1.00	23.23	23.50	1.064	0.103
		Top	23035	701.5	-2.630	0.003	100	1.00	23.23	23.50	1.064	0.003
		Bottom	23035	701.5	2.930	0.095	100	1.00	23.23	23.50	1.064	0.101
	50%RB	Front	23035	701.5	4.670	0.144	100	1.00	23.23	23.50	1.064	0.153
		Back	23035	701.5	-0.180	0.122	100	1.00	23.23	23.50	1.064	0.130
		Left	23035	701.5	-2.100	0.019	100	1.00	23.23	23.50	1.064	0.020
		right	23035	701.5	-0.230	0.093	100	1.00	23.23	23.50	1.064	0.099
		Top	23035	701.5	-1.780	0.003	100	1.00	23.23	23.50	1.064	0.003
		Bottom	23035	701.5	1.980	0.082	100	1.00	23.23	23.50	1.064	0.087

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	23780	709	4.080	0.080	100	1.00	22.69	23.00	1.074	0.086
		Left Tilt	23780	709	-4.410	0.054	100	1.00	22.69	23.00	1.074	0.058
		Right Cheek	23780	709	-4.680	0.085	100	1.00	22.69	23.00	1.074	0.091
		Right Tilt	23780	709	-4.350	0.069	100	1.00	22.69	23.00	1.074	0.074
	50%RB	Left Cheek	23780	709	-4.900	0.072	100	1.00	22.69	23.00	1.074	0.077
		Left Tilt	23780	709	-2.440	0.047	100	1.00	22.69	23.00	1.074	0.050
		Right Cheek	23780	709	-2.480	0.077	100	1.00	22.69	23.00	1.074	0.083
		Right Tilt	23780	709	2.030	0.060	100	1.00	22.69	23.00	1.074	0.064
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	23780	709	0.360	0.146	100	1.00	22.69	23.00	1.074	0.157
		Back	23780	709	0.180	0.136	100	1.00	22.69	23.00	1.074	0.146
		Left	23780	709	-2.250	0.017	100	1.00	22.69	23.00	1.074	0.018
		right	23780	709	0.300	0.083	100	1.00	22.69	23.00	1.074	0.089
		Top	23780	709	-3.470	0.007	100	1.00	22.69	23.00	1.074	0.008
		Bottom	23780	709	-1.480	0.090	100	1.00	22.69	23.00	1.074	0.097
	50%RB	Front	23780	709	4.490	0.125	100	1.00	22.69	23.00	1.074	0.134
		Back	23780	709	3.990	0.114	100	1.00	22.69	23.00	1.074	0.122
		Left	23780	709	4.290	0.016	100	1.00	22.69	23.00	1.074	0.017
		right	23780	709	-4.050	0.076	100	1.00	22.69	23.00	1.074	0.082
		Top	23780	709	-4.430	0.005	100	1.00	22.69	23.00	1.074	0.005
		Bottom	23780	709	3.810	0.084	100	1.00	22.69	23.00	1.074	0.090

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	38200	2615	4.350	0.051	100	1.00	23.07	23.50	1.104	0.056
		Left Tilt	38200	2615	1.610	0.046	100	1.00	23.07	23.50	1.104	0.051
		Right Cheek	38200	2615	1.590	0.042	100	1.00	23.07	23.50	1.104	0.046
		Right Tilt	38200	2615	4.950	0.036	100	1.00	23.07	23.50	1.104	0.040
	50%RB	Left Cheek	38200	2615	4.350	0.048	100	1.00	23.07	23.50	1.104	0.053
		Left Tilt	38200	2615	1.610	0.040	100	1.00	23.07	23.50	1.104	0.044
		Right Cheek	38200	2615	1.590	0.039	100	1.00	23.07	23.50	1.104	0.043
		Right Tilt	38200	2615	4.950	0.030	100	1.00	23.07	23.50	1.104	0.033
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	38200	2615	1.760	0.207	100	1.00	23.07	23.50	1.104	0.229
		Back	38200	2615	-4.820	0.131	100	1.00	23.07	23.50	1.104	0.145
		Left	38200	2615	-1.990	0.021	100	1.00	23.07	23.50	1.104	0.023
		right	38200	2615	1.520	0.075	100	1.00	23.07	23.50	1.104	0.083
		Top	38200	2615	3.700	0.003	100	1.00	23.07	23.50	1.104	0.003
		Bottom	38200	2615	3.370	0.081	100	1.00	23.07	23.50	1.104	0.089
	50%RB	Front	38200	2615	0.680	0.183	100	1.00	23.07	23.50	1.104	0.202
		Back	38200	2615	1.070	0.124	100	1.00	23.07	23.50	1.104	0.137
		Left	38200	2615	-4.040	0.017	100	1.00	23.07	23.50	1.104	0.019
		right	38200	2615	0.930	0.069	100	1.00	23.07	23.50	1.104	0.076
		Top	38200	2615	4.320	0.002	100	1.00	23.07	23.50	1.104	0.002
		Bottom	38200	2615	-1.880	0.074	100	1.00	23.07	23.50	1.104	0.082

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	40620	2593	-1.880	0.046	100	1.00	23.84	24.00	1.038	0.048
		Left Tilt	40620	2593	0.520	0.044	100	1.00	23.84	24.00	1.038	0.046
		Right Cheek	40620	2593	-4.050	0.044	100	1.00	23.84	24.00	1.038	0.046
		Right Tilt	40620	2593	-0.350	0.025	100	1.00	23.84	24.00	1.038	0.026
5MHZ		Left Cheek	41565	2687.5	0.960	0.041	100	1.00	23.84	24.00	1.038	0.043
10MHZ		Left Cheek	41540	2685	1.340	0.029	100	1.00	23.84	24.00	1.038	0.030
15MHZ		Left Cheek	41515	2682.5	4.250	0.038	100	1.00	23.84	24.00	1.038	0.039
20MHZ		Left Cheek	41490	2680	-3.640	0.035	100	1.00	23.84	24.00	1.038	0.036
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	40620	2593	-4.700	0.198	100	1.00	23.84	24.00	1.038	0.205
		Back	40620	2593	-1.000	0.125	100	1.00	23.84	24.00	1.038	0.130
		Left	40620	2593	-3.590	0.017	100	1.00	23.84	24.00	1.038	0.018
		Right	40620	2593	2.840	0.078	100	1.00	23.84	24.00	1.038	0.081
		Top	40620	2593	-1.310	0.003	100	1.00	23.84	24.00	1.038	0.003
		Bottom	40620	2593	4.230	0.083	100	1.00	23.84	24.00	1.038	0.086
5MHZ		Front	41565	2687.5	2.030	0.164	100	1.00	23.84	24.00	1.038	0.170
10MHZ		Front	41540	2685	-1.300	0.129	100	1.00	23.84	24.00	1.038	0.134
15MHZ		Front	41515	2682.5	4.120	0.104	100	1.00	23.84	24.00	1.038	0.108
20MHZ		Front	41490	2680	-2.150	0.153	100	1.00	23.84	24.00	1.038	0.159

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)	50%RB	Left Cheek	40620	2593	-2.580	0.042	100	1.00	23.84	24.00	1.038	0.044
		Left Tilt	40620	2593	-0.550	0.039	100	1.00	23.84	24.00	1.038	0.040
		Right Cheek	40620	2593	-1.820	0.037	100	1.00	23.84	24.00	1.038	0.038
		Right Tilt	40620	2593	-1.590	0.020	100	1.00	23.84	24.00	1.038	0.021
5MHZ		Left Cheek	41565	2687.5	3.020	0.040	100	1.00	23.84	24.00	1.038	0.042
10MHZ		Left Cheek	41540	2685	-4.810	0.036	100	1.00	23.84	24.00	1.038	0.037
15MHZ		Left Cheek	41515	2682.5	0.850	0.035	100	1.00	23.84	24.00	1.038	0.036
20MHZ		Left Cheek	41490	2680	1.250	0.038	100	1.00	23.84	24.00	1.038	0.039
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)	50%RB	Front	40620	2593	-4.620	0.189	100	1.00	23.84	24.00	1.038	0.196
		Back	40620	2593	-0.450	0.112	100	1.00	23.84	24.00	1.038	0.116
		Left	40620	2593	2.060	0.015	100	1.00	23.84	24.00	1.038	0.016
		Right	40620	2593	1.080	0.072	100	1.00	23.84	24.00	1.038	0.075
		Top	40620	2593	4.830	0.003	100	1.00	23.84	24.00	1.038	0.003
		Bottom	40620	2593	-0.440	0.076	100	1.00	23.84	24.00	1.038	0.079
5MHZ		Front	41565	2687.5	4.230	0.170	100	1.00	23.84	24.00	1.038	0.176
10MHZ		Front	41540	2685	-0.370	0.132	100	1.00	23.84	24.00	1.038	0.137
15MHZ		Front	41515	2682.5	0.650	0.098	100	1.00	23.84	24.00	1.038	0.102
20MHZ		Front	41490	2680	3.280	0.117	100	1.00	23.84	24.00	1.038	0.121

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)	50%RB	Left Cheek	40620	2593	-1.500	0.042	100	1.00	23.15	23.50	1.084	0.046
		Left Tilt	40620	2593	-2.000	0.074	100	1.00	23.15	23.50	1.084	0.080
		Right Cheek	40620	2593	-2.500	0.128	100	1.00	23.15	23.50	1.084	0.139
		Right Tilt	40620	2593	-1.750	0.193	100	1.00	23.15	23.50	1.084	0.209
5MHZ		Right Tilt	41565	2687.5	0.250	0.277	100	1.00	23.15	23.50	1.084	0.300
10MHZ		Right Tilt	41540	2685	-1.000	0.198	100	1.00	23.15	23.50	1.084	0.215
15MHZ		Right Tilt	41515	2682.5	-2.500	0.142	100	1.00	23.15	23.50	1.084	0.154
20MHZ		Right Tilt	41490	2680	-3.250	0.072	100	1.00	23.15	23.50	1.084	0.078
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)	50%RB	Front	40620	2593	3.500	0.037	100	1.00	23.15	23.50	1.084	0.040
		Back	40620	2593	-1.500	0.055	100	1.00	23.15	23.50	1.084	0.060
		Left	40620	2593	1.250	0.031	100	1.00	23.15	23.50	1.084	0.034
		Right	40620	2593	3.250	0.005	100	1.00	23.15	23.50	1.084	0.005
		Top	40620	2593	-2.250	0.037	100	1.00	23.15	23.50	1.084	0.040
		Bottom	40620	2593	-1.750	0.002	100	1.00	23.15	23.50	1.084	0.002
5MHZ		Back	41565	2687.5	0.250	0.077	100	1.00	23.15	23.50	1.084	0.083
10MHZ		Back	41540	2685	-1.500	0.055	100	1.00	23.15	23.50	1.084	0.060
15MHZ		Back	41515	2682.5	-3.750	0.049	100	1.00	23.15	23.50	1.084	0.053
20MHZ		Back	41490	2680	2.500	0.024	100	1.00	23.15	23.50	1.084	0.026

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	4.760	0.049	100	1.00	23.90	24.00	1.023	0.050
		Left Tilt	132572	1770	0.720	0.043	100	1.00	23.90	24.00	1.023	0.044
		Right Cheek	132572	1770	4.770	0.041	100	1.00	23.90	24.00	1.023	0.042
		Right Tilt	132572	1770	3.870	0.037	100	1.00	23.90	24.00	1.023	0.038
	50%RB	Left Cheek	132572	1770	-3.550	0.047	100	1.00	23.90	24.00	1.023	0.048
		Left Tilt	132572	1770	4.370	0.040	100	1.00	23.90	24.00	1.023	0.041
		Right Cheek	132572	1770	3.200	0.038	100	1.00	23.90	24.00	1.023	0.039
		Right Tilt	132572	1770	2.110	0.032	100	1.00	23.90	24.00	1.023	0.033
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	1.790	0.293	100	1.00	23.90	24.00	1.023	0.300
		Back	132572	1770	-1.240	0.262	100	1.00	23.90	24.00	1.023	0.268
		Left	132572	1770	-3.820	0.050	100	1.00	23.90	24.00	1.023	0.051
		right	132572	1770	3.290	0.102	100	1.00	23.90	24.00	1.023	0.104
		Top	132572	1770	-0.690	0.019	100	1.00	23.90	24.00	1.023	0.019
		Bottom	132572	1770	4.500	0.161	100	1.00	23.90	24.00	1.023	0.165
	50%RB	Front	132572	1770	-1.230	0.263	100	1.00	23.90	24.00	1.023	0.269
		Back	132572	1770	-3.770	0.227	100	1.00	23.90	24.00	1.023	0.232
		Left	132572	1770	0.080	0.048	100	1.00	23.90	24.00	1.023	0.049
		right	132572	1770	0.040	0.094	100	1.00	23.90	24.00	1.023	0.096
		Top	132572	1770	1.000	0.016	100	1.00	23.90	24.00	1.023	0.016
		Bottom	132572	1770	4.160	0.138	100	1.00	23.90	24.00	1.023	0.141

10.3.4 Results overview of WI-FI&BT

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) 802.11n	Left Cheek	3	2442	-4.680	0.158	100	1.00	17.72	18.00	1.067	0.169
	Left Tilt	3	2442	-4.110	0.250	100	1.00	17.72	18.00	1.067	0.267
	Right Cheek	3	2442	4.890	0.141	100	1.00	17.72	18.00	1.067	0.150
	Right Tilt	3	2442	4.720	0.239	100	1.00	17.72	18.00	1.067	0.255
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) 802.11n	Front	3	2442	-4.410	0.036	100	1.00	17.72	18.00	1.067	0.038
	Back	3	2442	-0.600	0.055	100	1.00	17.72	18.00	1.067	0.059
	Left	3	2442	-2.780	0.013	100	1.00	17.72	18.00	1.067	0.014
	right	3	2442	-3.560	0.018	100	1.00	17.72	18.00	1.067	0.019
	Top	3	2442	0.350	0.016	100	1.00	17.72	18.00	1.067	0.017
	Bottom	3	2442	-4.970	0.002	100	1.00	17.72	18.00	1.067	0.002

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)
5g Band1 5180-5240	Left Cheek	36	5180	2.040	0.118	100	1.00	12.58	13.00	1.102	0.130
	Left Tilt	36	5180	-4.630	0.173	100	1.00	12.58	13.00	1.102	0.191
	Right Cheek	36	5180	4.980	0.061	100	1.00	12.58	13.00	1.102	0.067
	Right Tilt	36	5180	-1.260	0.136	100	1.00	12.58	13.00	1.102	0.150
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)
5g Band1 5180-5240	Front	36	5180	4.290	0.040	100	1.00	12.58	13.00	1.102	0.044
	Back	36	5180	4.690	0.053	100	1.00	12.58	13.00	1.102	0.058
	Left	36	5180	-0.550	0.026	100	1.00	12.58	13.00	1.102	0.029
	Right	36	5180	4.710	0.036	100	1.00	12.58	13.00	1.102	0.040
	Top	36	5180	1.540	0.046	100	1.00	12.58	13.00	1.102	0.051
	Bottom	36	5180	4.310	0.003	100	1.00	12.58	13.00	1.102	0.003

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)
5g Band2 5260-5320	Left Cheek	64	5320	4.030	0.090	100	1.00	11.84	12.00	1.038	0.093
	Left Tilt	64	5320	-3.000	0.155	100	1.00	11.84	12.00	1.038	0.161
	Right Cheek	64	5320	-1.040	0.073	100	1.00	11.84	12.00	1.038	0.076
	Right Tilt	64	5320	-0.930	0.117	100	1.00	11.84	12.00	1.038	0.121
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)
5g Band2 5260-5320	Front	64	5320	1.840	0.030	100	1.00	11.84	12.00	1.038	0.031
	Back	64	5320	-4.760	0.049	100	1.00	11.84	12.00	1.038	0.051
	Left	64	5320	-0.780	0.026	100	1.00	11.84	12.00	1.038	0.027
	Right	64	5320	4.200	0.034	100	1.00	11.84	12.00	1.038	0.035
	Top	64	5320	3.990	0.038	100	1.00	11.84	12.00	1.038	0.039
	Bottom	64	5320	4.730	0.004	100	1.00	11.84	12.00	1.038	0.004

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)
5g Band3 5500-5700	Left Cheek	100	5500	-2.100	0.050	100	1.00	11.71	12.00	1.069	0.053
	Left Tilt	100	5500	0.360	0.111	100	1.00	11.71	12.00	1.069	0.119
	Right Cheek	100	5500	1.260	0.038	100	1.00	11.71	12.00	1.069	0.041
	Right Tilt	100	5500	1.190	0.072	100	1.00	11.71	12.00	1.069	0.077
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)
5g Band3 5500-5700	Front	100	5500	-4.840	0.011	100	1.00	11.71	12.00	1.069	0.012
	Back	100	5500	2.570	0.031	100	1.00	11.71	12.00	1.069	0.033
	Left	100	5500	0.450	0.004	100	1.00	11.71	12.00	1.069	0.004
	Right	100	5500	-1.790	0.018	100	1.00	11.71	12.00	1.069	0.019
	Top	100	5500	2.800	0.021	100	1.00	11.71	12.00	1.069	0.022
	Bottom	100	5500	3.880	0.003	100	1.00	11.71	12.00	1.069	0.003

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)
5g Band4 5745-5825	Left Cheek	149	5745	-2.720	0.041	100	1.00	8.53	9.00	1.114	0.046
	Left Tilt	149	5745	1.280	0.099	100	1.00	8.53	9.00	1.114	0.110
	Right Cheek	149	5745	-2.140	0.030	100	1.00	8.53	9.00	1.114	0.033
	Right Tilt	149	5745	-1.780	0.068	100	1.00	8.53	9.00	1.114	0.076
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)
5g Band4 5745-5825	Front	149	5745	-2.870	0.012	100	1.00	8.53	9.00	1.114	0.013
	Back	149	5745	-1.380	0.031	100	1.00	8.53	9.00	1.114	0.035
	Left	149	5745	0.730	0.004	100	1.00	8.53	9.00	1.114	0.004
	Right	149	5745	-2.620	0.021	100	1.00	8.53	9.00	1.114	0.023
	Top	149	5745	1.770	0.026	100	1.00	8.53	9.00	1.114	0.029
	Bottom	149	5745	-0.870	0.003	100	1.00	8.53	9.00	1.114	0.003

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	-3.650	0.069	100	1.00	13.70	14.00	1.072	0.074
	Left Tilt	0	2402	3.790	0.095	100	1.00	13.70	14.00	1.072	0.102
	Right Cheek	0	2402	2.700	0.055	100	1.00	13.70	14.00	1.072	0.059
	Right Tilt	0	2402	-4.690	0.075	100	1.00	13.70	14.00	1.072	0.080
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	-3.930	0.016	100	1.00	13.70	14.00	1.072	0.017
	Back	0	2402	2.510	0.023	100	1.00	13.70	14.00	1.072	0.025
	Left	0	2402	-0.040	0.003	100	1.00	13.70	14.00	1.072	0.003
	right	0	2402	-3.430	0.014	100	1.00	13.70	14.00	1.072	0.015
	Top	0	2402	-2.920	0.017	100	1.00	13.70	14.00	1.072	0.018
	Bottom	0	2402	-1.790	0.002	100	1.00	13.70	14.00	1.072	0.002

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)
BLE-1M	Left Cheek	19	2440	-2.510	0.075	100	1.00	6.11	6.50	1.094	0.082
	Left Tilt	19	2440	3.690	0.089	100	1.00	6.11	6.50	1.094	0.097
	Right Cheek	19	2440	1.470	0.059	100	1.00	6.11	6.50	1.094	0.065
	Right Tilt	19	2440	0.290	0.081	100	1.00	6.11	6.50	1.094	0.089
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)
BLE-1M	Front	19	2440	1.410	0.012	100	1.00	6.11	6.50	1.094	0.013
	Back	19	2440	-4.360	0.021	100	1.00	6.11	6.50	1.094	0.023
	Left	19	2440	-1.020	0.005	100	1.00	6.11	6.50	1.094	0.005
	right	19	2440	2.360	0.011	100	1.00	6.11	6.50	1.094	0.012
	Top	19	2440	3.010	0.010	100	1.00	6.11	6.50	1.094	0.011
	Bottom	19	2440	2.510	0.004	100	1.00	6.11	6.50	1.094	0.004

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.

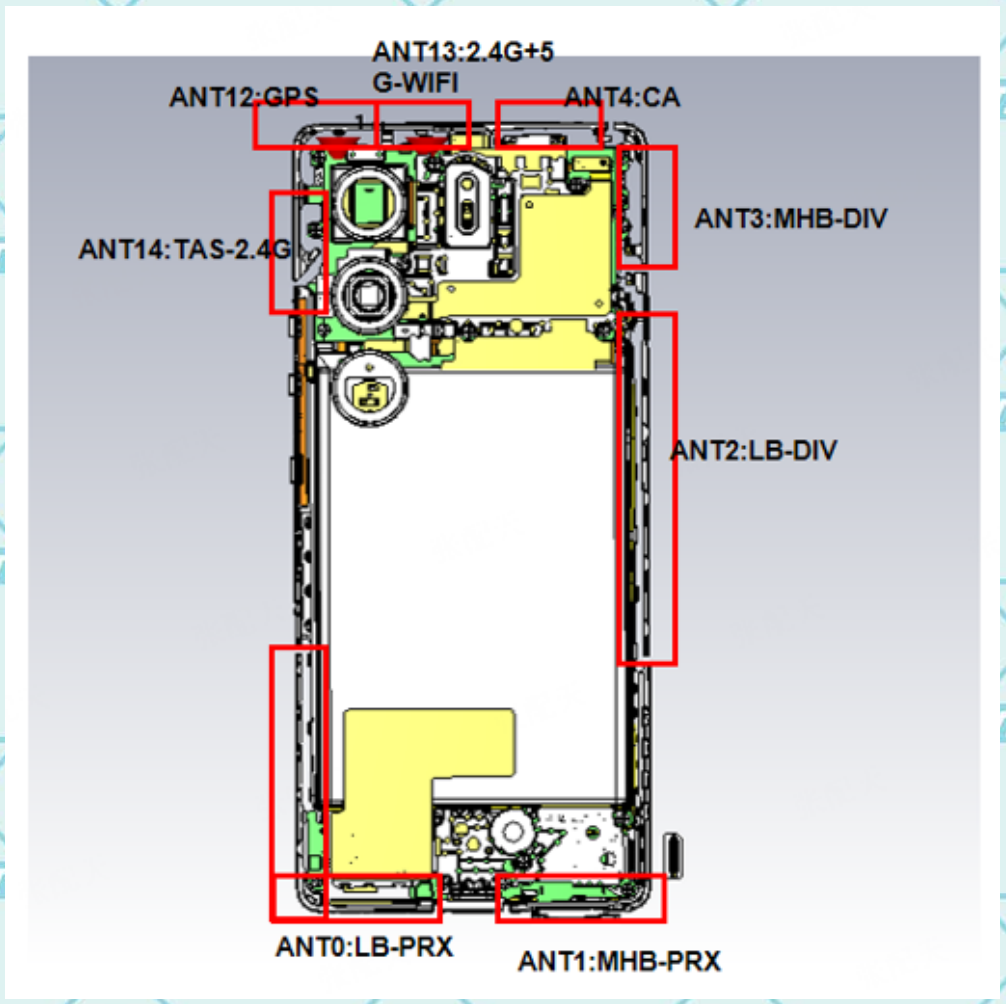
5.Per KDB Publication 941225 D06 where SAR test considerations for handsets (L x W ≥ 9 cm x 5 cm) are based on a composite test separation distance of 10 mm from the front, back and edges of the device with antennas 2.5 cm or closer to the edge of the device, determined from general mixed use conditions 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	Yes	Yes	Yes
Wi-Fi/BT Antenna	Yes	Yes	Yes	Yes	Yes	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 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	YES	YES

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.

11.1.1 SAR Summation Scenario

Head

Band	Test Position	Scaled SAR			BT SAR 1g(W/kg)	Σ SAR (W/kg)	Llimit (W/kg)
		WWAN SAR 1g(W/kg)	WIFI2.4G SAR 1g(W/kg)	Wi-Fi 5G(Band 1) SAR 1g(W/kg)			
GSM850 (voice)	Left Cheek	0.039	0.169	0.130	0.074	0.208	1.6
	Left Tilt	0.027	0.267	0.191	0.102	0.294	
	Right Cheek	0.033	0.150	0.067	0.059	0.183	
	Right Tilt	0.018	0.255	0.150	0.080	0.273	
GSM1900 (voice)	Left Cheek	0.072	0.169	0.130	0.074	0.241	
	Left Tilt	0.064	0.267	0.191	0.102	0.331	
	Right Cheek	0.061	0.150	0.067	0.059	0.211	
	Right Tilt	0.040	0.255	0.150	0.080	0.295	
WCDMA Band 2	Left Cheek	0.113	0.169	0.130	0.074	0.282	
	Left Tilt	0.095	0.267	0.191	0.102	0.362	
	Right Cheek	0.081	0.150	0.067	0.059	0.231	
	Right Tilt	0.058	0.255	0.150	0.080	0.313	
WCDMA Band 4	Left Cheek	0.066	0.169	0.130	0.074	0.235	
	Left Tilt	0.047	0.267	0.191	0.102	0.314	
	Right Cheek	0.058	0.150	0.067	0.059	0.208	
	Right Tilt	0.050	0.255	0.150	0.080	0.305	
WCDMA Band 5	Left Cheek	0.101	0.169	0.130	0.074	0.270	
	Left Tilt	0.054	0.267	0.191	0.102	0.321	
	Right Cheek	0.088	0.150	0.067	0.059	0.238	
	Right Tilt	0.049	0.255	0.150	0.080	0.304	

Band	Test Position	Scaled SAR				BT SAR 1g(W/kg)	Σ SAR (W/kg)	Llimit (W/kg)
		RB allocation	WWAN SAR 1g(W/kg)	WIFI2.4G SAR 1g(W/kg)	Wi-Fi 5G(Band 1) 1g(W/kg)			
LTE Band 2 QPSK (20MHz)	Left Cheek	1RB	0.078	0.169	0.130	0.074	0.247	1.6
	Left Tilt		0.052	0.267	0.191	0.102	0.319	
	Right Cheek		0.072	0.150	0.067	0.059	0.222	
	Right Tilt		0.046	0.255	0.150	0.080	0.301	
	Left Cheek	50%RB	0.074	0.169	0.130	0.074	0.243	
	Left Tilt		0.049	0.267	0.191	0.102	0.316	
	Right Cheek		0.063	0.150	0.067	0.059	0.213	
	Right Tilt		0.036	0.255	0.150	0.080	0.291	
LTE Band 4 QPSK (20MHz)	Left Cheek	1RB	0.043	0.169	0.130	0.074	0.212	
	Left Tilt		0.038	0.267	0.191	0.102	0.305	
	Right Cheek		0.039	0.150	0.067	0.059	0.189	
	Right Tilt		0.033	0.255	0.150	0.080	0.288	
	Left Cheek	50%RB	0.041	0.169	0.130	0.074	0.210	
	Left Tilt		0.033	0.267	0.191	0.102	0.300	
	Right Cheek		0.037	0.150	0.067	0.059	0.187	
	Right Tilt		0.028	0.255	0.150	0.080	0.283	
LTE Band 5 QPSK (10MHz)	Left Cheek	1RB	0.105	0.169	0.130	0.074	0.274	
	Left Tilt		0.072	0.267	0.191	0.102	0.339	
	Right Cheek		0.085	0.150	0.067	0.059	0.235	
	Right Tilt		0.058	0.255	0.150	0.080	0.313	
	Left Cheek	50%RB	0.094	0.169	0.130	0.074	0.263	
	Left Tilt		0.064	0.267	0.191	0.102	0.331	
	Right Cheek		0.076	0.150	0.067	0.059	0.226	
	Right Tilt		0.047	0.255	0.150	0.080	0.302	
LTE Band 7 QPSK (10MHz)	Left Cheek	1RB	0.090	0.169	0.130	0.074	0.259	
	Left Tilt		0.085	0.267	0.191	0.102	0.352	
	Right Cheek		0.068	0.150	0.067	0.059	0.218	
	Right Tilt		0.069	0.255	0.150	0.080	0.324	
	Left Cheek	50%RB	0.086	0.169	0.130	0.074	0.255	
	Left Tilt		0.078	0.267	0.191	0.102	0.345	
	Right Cheek		0.055	0.150	0.067	0.059	0.205	
	Right Tilt		0.040	0.255	0.150	0.080	0.295	
LTE Band 12 QPSK (10MHz)	Left Cheek	1RB	0.104	0.169	0.130	0.074	0.273	
	Left Tilt		0.068	0.267	0.191	0.102	0.335	
	Right Cheek		0.087	0.150	0.067	0.059	0.237	
	Right Tilt		0.059	0.255	0.150	0.080	0.314	
	Left Cheek	50%RB	0.096	0.169	0.130	0.074	0.265	
	Left Tilt		0.062	0.267	0.191	0.102	0.329	
	Right Cheek		0.078	0.150	0.067	0.059	0.228	
	Right Tilt		0.046	0.255	0.150	0.080	0.301	
LTE Band 17 QPSK (10MHz)	Left Cheek	1RB	0.086	0.169	0.130	0.074	0.255	
	Left Tilt		0.058	0.267	0.191	0.102	0.325	
	Right Cheek		0.091	0.150	0.067	0.059	0.241	
	Right Tilt		0.074	0.255	0.150	0.080	0.329	
	Left Cheek	50%RB	0.077	0.169	0.130	0.074	0.246	
	Left Tilt		0.050	0.267	0.191	0.102	0.317	
	Right Cheek		0.083	0.150	0.067	0.059	0.233	
	Right Tilt		0.064	0.255	0.150	0.080	0.319	
LTE Band 38 QPSK (20MHz)	Left Cheek	1RB	0.056	0.169	0.130	0.074	0.225	
	Left Tilt		0.051	0.267	0.191	0.102	0.318	
	Right Cheek		0.046	0.150	0.067	0.059	0.196	
	Right Tilt		0.040	0.255	0.150	0.080	0.295	
	Left Cheek	50%RB	0.053	0.169	0.130	0.074	0.222	
	Left Tilt		0.044	0.267	0.191	0.102	0.311	
	Right Cheek		0.043	0.150	0.067	0.059	0.193	
	Right Tilt		0.033	0.255	0.150	0.080	0.288	

Band	Test Position	Scaled SAR				BT SAR 1g(W/kg)	Σ SAR (W/kg)	Llimit (W/kg)
		RB allocation	WWAN SAR 1g(W/kg)	WIFI2.4G SAR 1g(W/kg)	Wi-Fi 5G(Band 1) 1g(W/kg)			
LTE Band 41 QPSK (20MHz)	Left Cheek	1RB	0.048	0.169	0.130	0.074	0.217	1.6
	Left Tilt		0.046	0.267	0.191	0.102	0.313	
	Right Cheek		0.046	0.150	0.067	0.059	0.196	
	Right Tilt		0.026	0.255	0.150	0.080	0.281	
	Left Cheek	50%RB	0.044	0.169	0.130	0.074	0.213	
	Left Tilt		0.040	0.267	0.191	0.102	0.307	
	Right Cheek		0.038	0.150	0.067	0.059	0.188	
	Right Tilt		0.021	0.255	0.150	0.080	0.276	
LTE Band 66 QPSK (20MHz)	Left Cheek	1RB	0.050	0.169	0.130	0.074	0.219	
	Left Tilt		0.044	0.267	0.191	0.102	0.311	
	Right Cheek		0.042	0.150	0.067	0.059	0.192	
	Right Tilt		0.038	0.255	0.150	0.080	0.293	
	Left Cheek	50%RB	0.048	0.169	0.130	0.074	0.217	
	Left Tilt		0.041	0.267	0.191	0.102	0.308	
	Right Cheek		0.039	0.150	0.067	0.059	0.189	
	Right Tilt		0.033	0.255	0.150	0.080	0.288	

Hotspot(body-worn 10mm)

Band	Test Position	Scaled SAR			BT SAR 1g(W/kg)	Σ SAR (W/kg)	Llimit (W/kg)
		WWAN SAR 1g(W/kg)	WIFI2.4G SAR 1g(W/kg)	Wi-Fi 5G(Band 1) 1g(W/kg)			
GSM850 (GPRS 4slots)	Front	0.107	0.038	0.044	0.017	0.151	1.6
	Back	0.103	0.059	0.058	0.025	0.162	
	Left	0.054	0.014	0.029	0.003	0.083	
	right	0.072	0.019	0.040	0.015	0.112	
	Top	0.002	0.017	0.051	0.018	0.053	
	Bottom	0.076	0.002	0.003	0.002	0.079	
GSM1900 (GPRS 4slots)	Front	0.645	0.038	0.044	0.017	0.689	
	Back	0.470	0.059	0.058	0.025	0.529	
	Left	0.390	0.014	0.029	0.003	0.419	
	right	0.101	0.019	0.040	0.015	0.141	
	Top	0.026	0.017	0.051	0.018	0.077	
	Bottom	0.559	0.002	0.003	0.002	0.562	
WCDMA Band 2	Front	0.802	0.038	0.044	0.017	0.846	
	Back	0.536	0.059	0.058	0.025	0.595	
	Left	0.460	0.014	0.029	0.003	0.489	
	right	0.114	0.019	0.040	0.015	0.154	
	Top	0.032	0.017	0.051	0.018	0.083	
	Bottom	0.614	0.002	0.003	0.002	0.617	
WCDMA Band 4	Front	0.412	0.038	0.044	0.017	0.456	
	Back	0.395	0.059	0.058	0.025	0.454	
	Left	0.313	0.014	0.029	0.003	0.342	
	right	0.116	0.019	0.040	0.015	0.156	
	Top	0.007	0.017	0.051	0.018	0.058	
	Bottom	0.288	0.002	0.003	0.002	0.291	
WCDMA Band 5	Front	0.137	0.038	0.044	0.017	0.181	
	Back	0.155	0.059	0.058	0.025	0.214	
	Left	0.025	0.014	0.029	0.003	0.054	
	right	0.096	0.019	0.040	0.015	0.136	
	Top	0.005	0.017	0.051	0.018	0.056	
	Bottom	0.103	0.002	0.003	0.002	0.106	

Band	Test Position	RB allocation	Scaled SAR			BT SAR 1g(W/kg)	Σ SAR (W/kg)	Llimit (W/kg)
			WWAN SAR 1g(W/kg)	WIFI2.4G SAR 1g(W/kg)	Wi-Fi 5G(Band 1) 1g(W/kg)			
LTE Band 2	Front	1RB	0.601	0.038	0.044	0.017	0.645	1.6
	Back		0.430	0.059	0.058	0.025	0.489	
	Left		0.268	0.014	0.029	0.003	0.297	
	right		0.175	0.019	0.040	0.015	0.215	
	Top		0.035	0.017	0.051	0.018	0.086	
	Bottom		0.488	0.002	0.003	0.002	0.491	
	Front	50%RB	0.557	0.038	0.044	0.017	0.601	
	Back		0.391	0.059	0.058	0.025	0.450	
	Left		0.217	0.014	0.029	0.003	0.246	
	right		0.133	0.019	0.040	0.015	0.173	
	Top		0.030	0.017	0.051	0.018	0.081	
	Bottom		0.457	0.002	0.003	0.002	0.460	
LTE Band 4	Front	1RB	0.280	0.038	0.044	0.017	0.324	
	Back		0.217	0.059	0.058	0.025	0.276	
	Left		0.136	0.014	0.029	0.003	0.165	
	right		0.062	0.019	0.040	0.015	0.102	
	Top		0.009	0.017	0.051	0.018	0.060	
	Bottom		0.128	0.002	0.003	0.002	0.131	
	Front	50%RB	0.271	0.038	0.044	0.017	0.315	
	Back		0.199	0.059	0.058	0.025	0.258	
	Left		0.130	0.014	0.029	0.003	0.159	
	right		0.059	0.019	0.040	0.015	0.099	
	Top		0.007	0.017	0.051	0.018	0.058	
	Bottom		0.125	0.002	0.003	0.002	0.128	
LTE Band 5	Front	1RB	0.125	0.038	0.044	0.017	0.169	
	Back		0.150	0.059	0.058	0.025	0.209	
	Left		0.035	0.014	0.029	0.003	0.064	
	right		0.084	0.019	0.040	0.015	0.124	
	Top		0.003	0.017	0.051	0.018	0.054	
	Bottom		0.104	0.002	0.003	0.002	0.107	
	Front	50%RB	0.114	0.038	0.044	0.017	0.158	
	Back		0.137	0.059	0.058	0.025	0.196	
	Left		0.031	0.014	0.029	0.003	0.060	
	right		0.081	0.019	0.040	0.015	0.121	
	Top		0.003	0.017	0.051	0.018	0.054	
	Bottom		0.099	0.002	0.003	0.002	0.102	
LTE Band 7	Front	1RB	0.515	0.038	0.044	0.017	0.559	
	Back		0.309	0.059	0.058	0.025	0.368	
	Left		0.246	0.014	0.029	0.003	0.275	
	right		0.064	0.019	0.040	0.015	0.104	
	Top		0.024	0.017	0.051	0.018	0.075	
	Bottom		0.358	0.002	0.003	0.002	0.361	
	Front	50%RB	0.496	0.038	0.044	0.017	0.540	
	Back		0.272	0.059	0.058	0.025	0.331	
	Left		0.222	0.014	0.029	0.003	0.251	
	right		0.060	0.019	0.040	0.015	0.100	
	Top		0.019	0.017	0.051	0.018	0.070	
	Bottom		0.345	0.002	0.003	0.002	0.348	

Band	Test Position	RB allocation	Scaled SAR			BT SAR 1g(W/kg)	Σ SAR (W/kg)	Llimit (W/kg)
			WWAN SAR 1g(W/kg)	WIFI2.4G SAR 1g(W/kg)	Wi-Fi 5G(Band 1) 1g(W/kg)			
LTE Band 12	Front	1RB	0.162	0.038	0.044	0.017	0.206	1.6
	Back		0.157	0.059	0.058	0.025	0.216	
	Left		0.022	0.014	0.029	0.003	0.051	
	right		0.103	0.019	0.040	0.015	0.143	
	Top		0.003	0.017	0.051	0.018	0.054	
	Bottom		0.101	0.002	0.003	0.002	0.104	
	Front	50%RB	0.153	0.038	0.044	0.017	0.197	
	Back		0.130	0.059	0.058	0.025	0.189	
	Left		0.020	0.014	0.029	0.003	0.049	
	right		0.099	0.019	0.040	0.015	0.139	
	Top		0.003	0.017	0.051	0.018	0.054	
	Bottom		0.087	0.002	0.003	0.002	0.090	
LTE Band 17	Front	1RB	0.157	0.038	0.044	0.017	0.201	
	Back		0.146	0.059	0.058	0.025	0.205	
	Left		0.018	0.014	0.029	0.003	0.047	
	right		0.089	0.019	0.040	0.015	0.129	
	Top		0.008	0.017	0.051	0.018	0.059	
	Bottom		0.097	0.002	0.003	0.002	0.100	
	Front	50%RB	0.134	0.038	0.044	0.017	0.178	
	Back		0.122	0.059	0.058	0.025	0.181	
	Left		0.017	0.014	0.029	0.003	0.046	
	right		0.082	0.019	0.040	0.015	0.122	
	Top		0.005	0.017	0.051	0.018	0.056	
	Bottom		0.090	0.002	0.003	0.002	0.093	
LTE Band 38	Front	1RB	0.229	0.038	0.044	0.017	0.273	
	Back		0.145	0.059	0.058	0.025	0.204	
	Left		0.023	0.014	0.029	0.003	0.052	
	right		0.083	0.019	0.040	0.015	0.123	
	Top		0.003	0.017	0.051	0.018	0.054	
	Bottom		0.089	0.002	0.003	0.002	0.092	
	Front	50%RB	0.202	0.038	0.044	0.017	0.246	
	Back		0.137	0.059	0.058	0.025	0.196	
	Left		0.019	0.014	0.029	0.003	0.048	
	right		0.076	0.019	0.040	0.015	0.116	
	Top		0.002	0.017	0.051	0.018	0.053	
	Bottom		0.082	0.002	0.003	0.002	0.085	
LTE Band 41	Front	1RB	0.205	0.038	0.044	0.017	0.249	
	Back		0.130	0.059	0.058	0.025	0.189	
	Left		0.018	0.014	0.029	0.003	0.047	
	right		0.081	0.019	0.040	0.015	0.121	
	Top		0.003	0.017	0.051	0.018	0.054	
	Bottom		0.086	0.002	0.003	0.002	0.089	
	Front	50%RB	0.196	0.038	0.044	0.017	0.240	
	Back		0.116	0.059	0.058	0.025	0.175	
	Left		0.016	0.014	0.029	0.003	0.045	
	right		0.075	0.019	0.040	0.015	0.115	
	Top		0.003	0.017	0.051	0.018	0.054	
	Bottom		0.079	0.002	0.003	0.002	0.082	
LTE Band 66	Front	1RB	0.300	0.038	0.044	0.017	0.344	
	Back		0.268	0.059	0.058	0.025	0.327	
	Left		0.051	0.014	0.029	0.003	0.080	
	right		0.104	0.019	0.040	0.015	0.144	
	Top		0.019	0.017	0.051	0.018	0.070	
	Bottom		0.165	0.002	0.003	0.002	0.168	
	Front	50%RB	0.269	0.038	0.044	0.017	0.313	
	Back		0.232	0.059	0.058	0.025	0.291	
	Left		0.049	0.014	0.029	0.003	0.078	
	right		0.096	0.019	0.040	0.015	0.136	
	Top		0.016	0.017	0.051	0.018	0.067	
	Bottom		0.141	0.002	0.003	0.002	0.144	

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	$\sqrt{3}$	$(1\text{-}C_p)^{1/2}$	$(1\text{-}C_p)^{1/2}$	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	SSE2	3523-EPGO-428	2024-06-18	2025-06-17
☒	SATIMO	COMOSAR 750 MHz REFERENCE DIPOLE	SID750	SN 48/16 DIP0G750-444	2023-06-25	2026-06-24
☒	SATIMO	COMOSAR 835 MHz REFERENCE DIPOLE	SID835	SN 14/13 DIP0G835-235	2023-06-25	2026-06-24
☒	SATIMO	COMOSAR 900 MHz REFERENCE DIPOLE	SID900	SN 14/13 DIP0G900-231	2023-06-25	2026-06-24
☒	SATIMO	COMOSAR 1800 MHz REFERENCE DIPOLE	SID1800	SN 14/13 DIP1G800-232	2023-06-25	2026-06-24
☐	SATIMO	COMOSAR 1900 MHz REFERENCE DIPOLE	SID1900	SN 14/13 DIP1G900-236	2023-06-25	2026-06-24
☒	SATIMO	COMOSAR 2000 MHz REFERENCE DIPOLE	SID2000	SN 14/13 DIP2G000-237	2023-06-25	2026-06-24
☒	SATIMO	COMOSAR 2450 MHz REFERENCE DIPOLE	SID2450	SN 14/13 DIP2G450-238	2023-06-25	2026-06-24
☒	SATIMO	COMOSAR 2600 MHz REFERENCE DIPOLE	SID2600	SN 28/14 DIP2G600-327	2023-06-25	2026-06-24
☒	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	2024-10-21	2025-10-20
☒	R & S	Universal Radio Communication Tester	CMW500	144459	2024-10-21	2025-10-20
☒	R & S	UXM5G Wireless Test Platform	E7515B	MY60192341	2024-10-21	2025-10-20
☒	HP	Network Analyser	8753D	3410A08889	2024-10-21	2025-10-20
☒	HP	Signal Generator	E4421B	GB39340770	2024-10-28	2025-10-27
☒	Keithley	Multimeter	Keithley 2000	4014539	2024-10-28	2025-10-27
☒	SATIMO	Amplifier	Power Amplifier	MODU-023-A-0004	2024-10-21	2025-10-20
☒	Agilent	Power Meter	E4418B	GB43312909	2024-10-21	2025-10-20
☒	Agilent	Power Meter Sensor	E4412A	MY41500046	2024-10-21	2025-10-20

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.)

Annex A: System Check

Tested Model : CM5

Report Number:

WSCT-ANAB-R&E241100063A-SAR

I. RESULTS

TYPE	BAND	PARAMETERS
Validation	**CW750**	Measurement 1: Validation Plane with Dipole device position on Middle Channel in CW mode
Validation	**CW835**	Measurement 2: Validation Plane with Dipole device position on Middle Channel in CW mode
Validation	**CW1800**	Measurement 3: Validation Plane with Dipole device position on Middle Channel in CW mode
Validation	**CW1900**	Measurement 4: Validation Plane with Dipole device position on Middle Channel in CW mode
Validation	**CW2450**	Measurement 5: Validation Plane with Dipole device position on Middle Channel in CW mode
Validation	**CW2600**	Measurement 6: Validation Plane with Dipole device position on Middle Channel in CW mode
Validation	**CW5200**	Measurement 9: Validation Plane with Dipole device position on Middle Channel in CW mode
Validation	**CW5300**	Measurement 10: Validation Plane with Dipole device position on Middle Channel in CW mode
Validation	**CW5800**	Measurement 11: Validation Plane with Dipole device position on Middle Channel in CW mode

MEASUREMENT 1

Type: Validation measurement (Complete)

Date of measurement: 26/10/2024

Measurement duration: 11 minutes 54 seconds

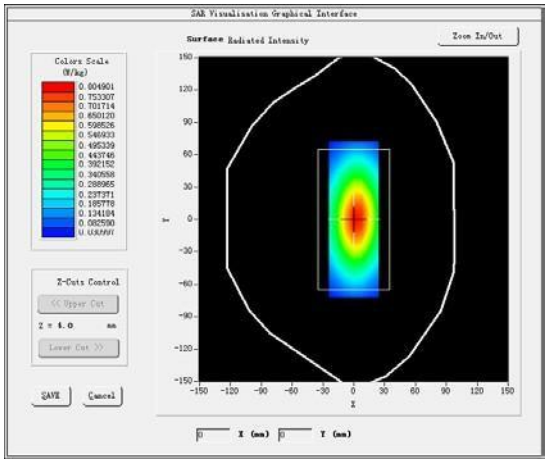
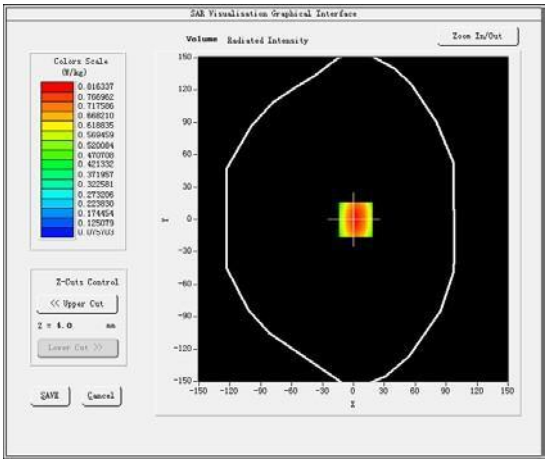
A. Experimental conditions.

Area Scan	dx=8mm dy=8mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Dipole
Band	CW750
Channels	Middle
Signal	CW (Crest factor: 1.0)

B. SAR Measurement Results

Middle Band SAR (Channel -1):

Frequency (MHz)	750.000000
Relative permittivity (real part)	41.350601
Relative permittivity (imaginary part)	21.254601
Conductivity (S/m)	0.885608
Variation (%)	1.030000

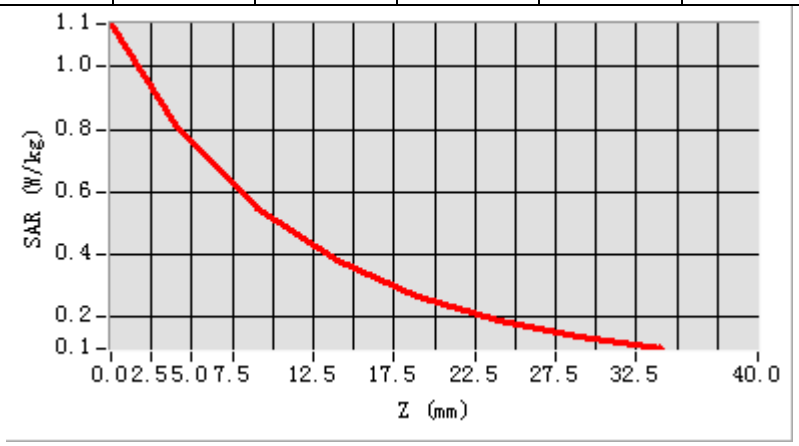
SURFACE SAR	VOLUME SAR
	

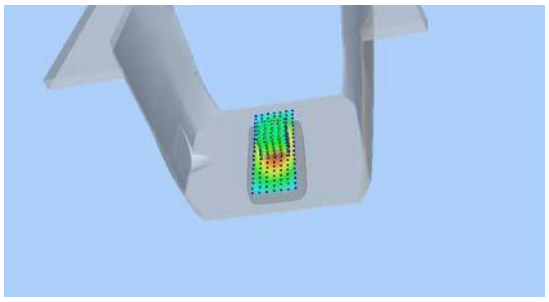
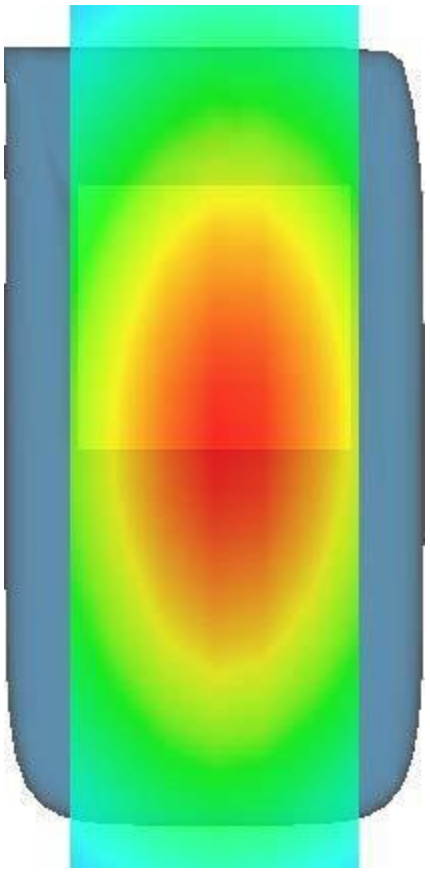
Maximum location: X=2.00, Y=0.00

SAR Peak: 1.13 W/kg

SAR 10g (W/Kg)	0.537155
SAR 1g (W/Kg)	0.783648

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	1.1379	0.8163	0.5446	0.3776	0.2647	0.1886	0.1348



3D screen shot	Hot spot position
	

MEASUREMENT 2

Type: Validation measurement (Complete)

Date of measurement: 28/10/2024

Measurement duration: 11 minutes 54 seconds

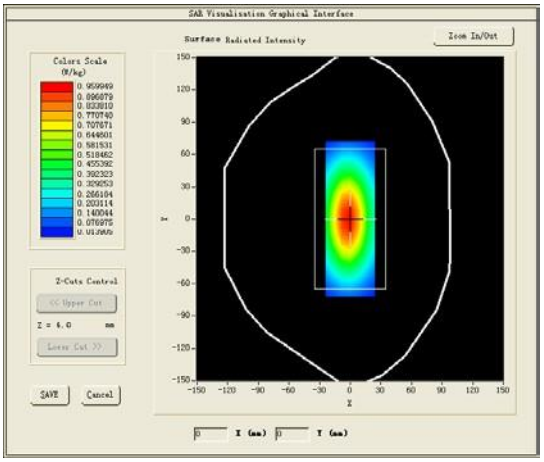
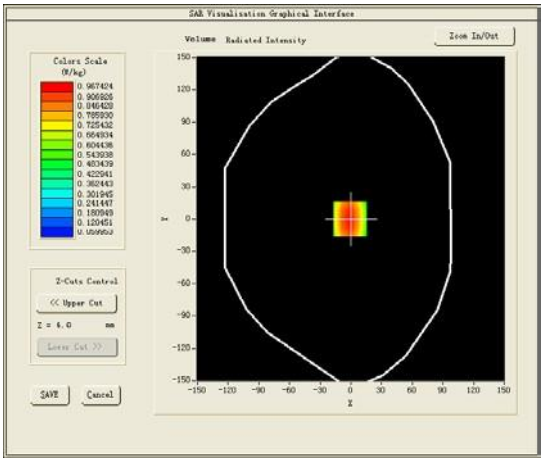
A. Experimental conditions.

Area Scan	dx=8mm dy=8mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Dipole
Band	CW835
Channels	Middle
Signal	CW (Crest factor: 1.0)

B. SAR Measurement Results

Middle Band SAR (Channel -1):

Frequency (MHz)	835.000000
Relative permittivity (real part)	40.534712
Relative permittivity (imaginary part)	21.274156
Conductivity (S/m)	0.924581
Variation (%)	0.120000

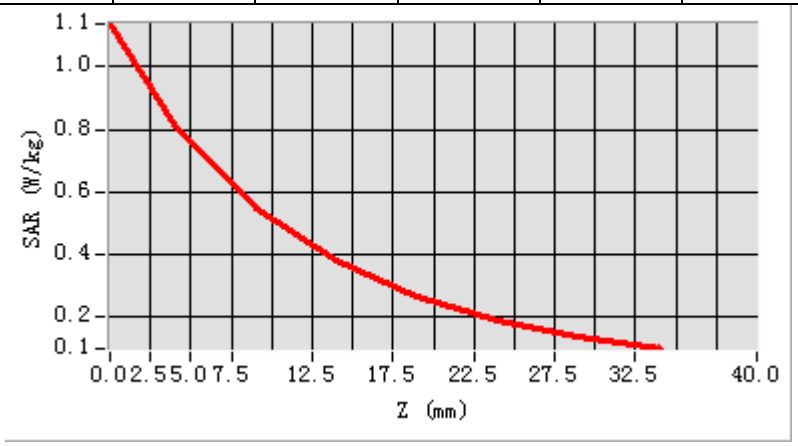
SURFACE SAR	VOLUME SAR
	

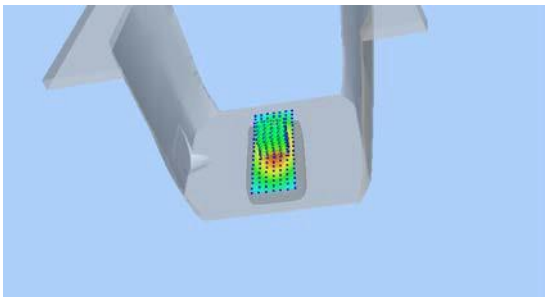
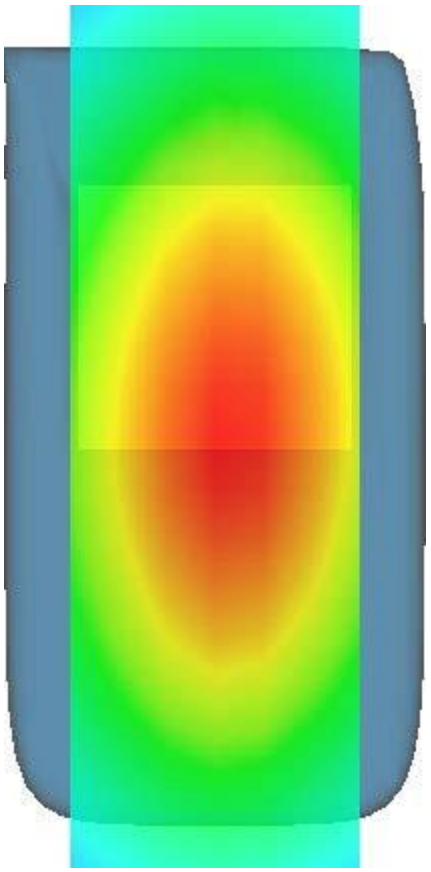
Maximum location: X=-1.00, Y=0.00

SAR Peak: 1.44 W/kg

SAR 10g (W/Kg)	0.644746
SAR 1g (W/Kg)	1.014583

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	1.1418	0.9674	0.6426	0.4358	0.2947	0.1989	0.1326



3D screen shot	Hot spot position
	

MEASUREMENT 3

Type: Validation measurement (Complete)

Date of measurement: 30/10/2024

Measurement duration: 11 minutes 22 seconds

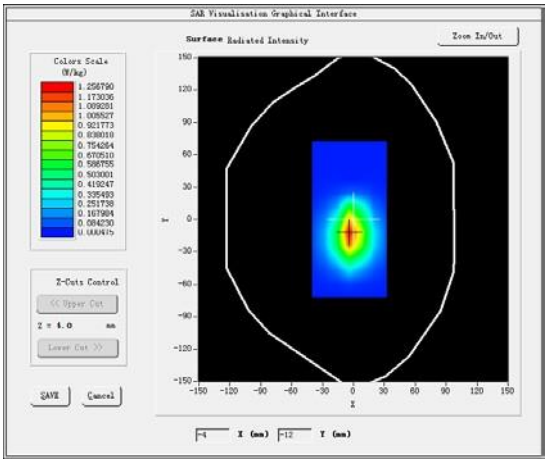
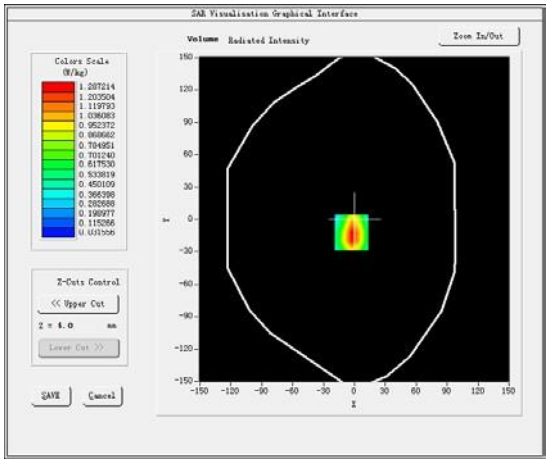
A. Experimental conditions.

Area Scan	dx=8mm dy=8mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Dipole
Band	CW1800
Channels	Middle
Signal	CW (Crest factor: 1.0)

B. SAR Measurement Results

Middle Band SAR (Channel -1):

Frequency (MHz)	1800.000000
Relative permittivity (real part)	40.312505
Relative permittivity (imaginary part)	15.293284
Conductivity (S/m)	1.374256
Variation (%)	-0.410000

SURFACE SAR	VOLUME SAR
	

Maximum location: X=-0.00, Y=-0.00

SAR Peak: 7.72 W/kg

SAR 10g (W/Kg)	2.171888
SAR 1g (W/Kg)	4.156173