

FCC SAR Compliance Test Report

For

ITEL MOBILE LIMITED

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

FOTAN NT HONGKONG

Model: P10003L

Test Engineer: Zeng Longhao

Report Number: WSCT-ANAB-R&E240900047A-SAR

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Modified History

REV.	Modification Description	Issued Date	Remark
REV.1.0	Initial Test Report Release	17 October 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: 2024-09-20
Start of test: 2024-09-21
End of test: 2024-10-15

1.3 Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for P10003L is as below:

Band	Position Test Points	MAX Reported SAR _{1g} (W/kg)
GSM850	Body & Hotspot 0mm	0.323
GSM1900	Body & Hotspot 0mm	0.050
UMTS Band 2	Body & Hotspot 0mm	0.378
UMTS Band 4	Body & Hotspot 0mm	0.467
UMTS Band 5	Body & Hotspot 0mm	0.413
LTE Band 2	Body & Hotspot 0mm	0.395
LTE Band 4	Body & Hotspot 0mm	0.370
LTE Band 5	Body & Hotspot 0mm	0.401
LTE Band 7	Body & Hotspot 0mm	0.210
LTE Band 38	Body & Hotspot 0mm	0.076
LTE Band 41	Body & Hotspot 0mm	0.081
Wi-Fi 2.4G	Body & Hotspot 0mm	0.828
WIFI5G Band1	Body & Hotspot 0mm	0.772
WIFI5G Band2	Body & Hotspot 0mm	0.724
WIFI5G Band3	Body & Hotspot 0mm	0.737
WIFI5G Band4	Body & Hotspot 0mm	0.747
BT	Body & Hotspot 0mm	0.009
Maximum Max. SAR Level(s) Measured: (Limit: 1.6W/Kg):	UMTS Band 4 Wi-Fi 2.4G	0.467W/kg1gBodyTissue 0.828W/kg1gBodyTissue
The highest simultaneous SAR :		1.295W/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 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:	Tablet
Model:	P10003L
Trade Name:	itel
Device Type:	Portable device
Exposure Category:	uncontrolled environment / general population
Production Unit or Identical Prototype:	Production Unit
Antenna Type :	BT/WIFI: FPC 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 Band38/ LTE Band41, Wi-Fi , BT
Modulation:	GFSK, $\pi/4$ -DQPSK, 8-DPSK QPSK(WCDMA) QPSK/16QAM (LTE) DSSS/ OFDM(WIFI)
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 Band38	2570-2620	2570-2620
	LTE Band 41	2496-2690	2496-2690
	Wi-Fi (2.4G)	2412-2462	
	Wi-Fi (5G)	5180-5240	5180-5240
		5260-5320	5260-5320
5500-5700		5500-5700	
5745-5825		5745-5825	
BT	2402~2480		
Antenna gain:	GSM 850,/WCDMA B5,/LTE B5:0.67dbi PCS 1900/WCDMA B2/LTE B2: 1.17dbi WCDMA B4/LTE B4: 1.05dbi LTE B7/B38/B41:1.36dbi 2.4GWIFI:1.21dbi 5GWIFI:1.32dbi		
Power Source:	Rechargeable Li-ion Polymer Battery: P10003L Rated Voltage: 3.8V Rated Capacity: 7000mAh/26.60Wh Typical Capacity: 7030mAh/26.71Wh Limited Charge Voltage: 4.35V		

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.
Test Location	Building A-B, Baoli'an Industrial Park, No. 58 Tangtuo Avenue, Shiyan Street, Bao'an District, Shenzhen, Guangdong, China
Telephone	+86-755-26996192
Fax	+86-755-86376605

3 ACCREDITATIONS

ANAB - Certificate Number: AT-3951

The EMC Laboratory has been accredited by the American Association for Laboratory Accreditation (ANAB). Certification Number: AT-3951

4 Test Environment

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

5 Applicant and Manufacturer

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

6 Test standard/s:

No.	Identity	Document Title
1	47 CFR Part 2.1093	Radiofrequency radiation exposure evaluation: portable devices
2	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/m³)

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 surface normal line: less than 30°



Figure 2 – MVG COMOSAR Dosimetric E field Dipole

Dynamic range: 0.01-100 W/kg

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

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

Angle between probe axis (evaluation axis) and surface 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 from 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 used to determine this highest local SAR values.
The extrapolation is based on a fourth-order least-square polynomial fit of measured data. The local SAR value is then extrapolated from the liquid surface with a 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 1 gram requires a very fine resolution in the three dimensional scanned data array.

7.6 Phantom

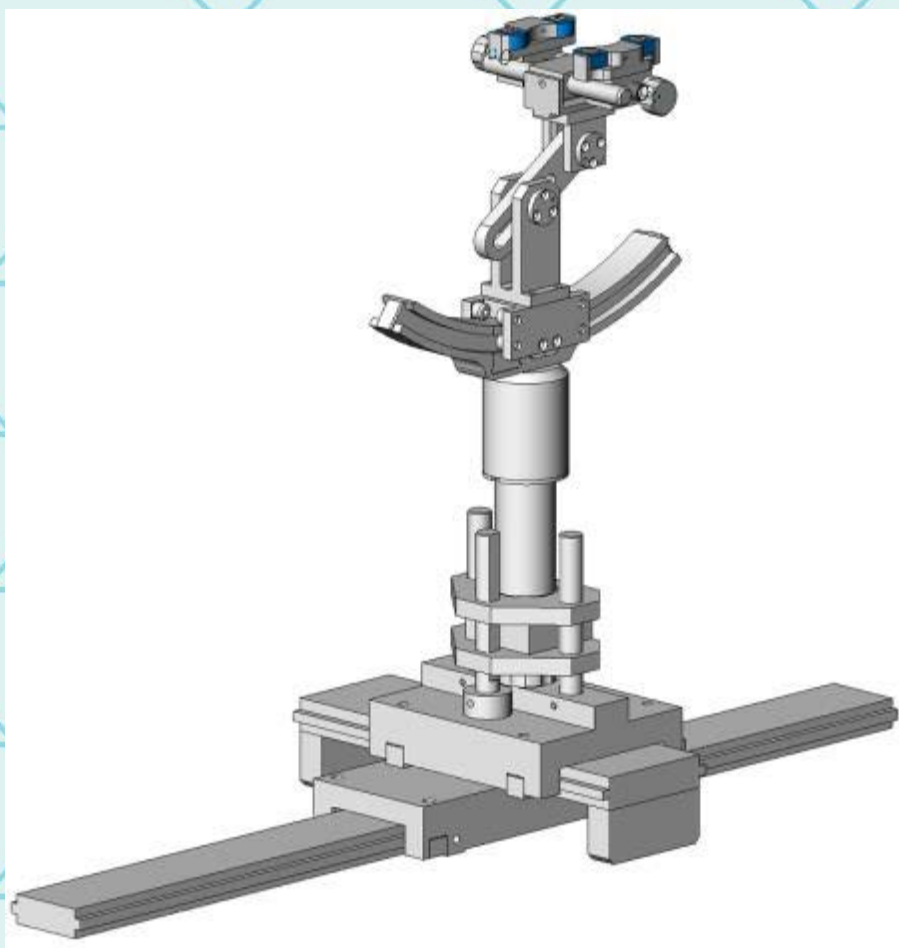
For the measurements the Specific Anthropomorphic Mannequin (SAM) defined by the IEEE SCC-34/SC2 group is used. The phantom is a polyurethane shell integrated in a wooden table. The thickness of the phantom amounts to 2mm +/- 0.2mm. It enables the dosimetric evaluation of left and right phone usage and 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 if the dielectric parameters are within the tolerances of the specified target values. The measured conductivity and relative permittivity should be within $\pm 5\%$ of the target values.

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

(Liquids used for tests are marked with ☒):

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

Salt: 99+% Pure Sodium Chloride

Sugar: 98+% Pure Sucrose

Water: De-ionized, 16MΩ+ resistivity

HEC: Hydroxyethyl Cellulose

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

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

7.10 Tissue simulating liquids: parameters

Tissue Type	Measured Frequency (MHz)	Target Tissue				Measured Tissue		Liquid Temp.	Test Date
		Target Permittivity ϵ_r	Range of $\pm 5\%$	Target Conductivity σ (S/m)	Range of $\pm 5\%$	ϵ_r	σ (S/m)		
835MHz Head	825	41.60	39.52~43.68	0.90	0.86~0.95	40.34	0.91	21.6°C	2024-09-21
	835	41.50	39.43~43.58	0.90	0.86~0.95	40.33	0.92		
	850	41.50	39.43~43.58	0.92	0.87~0.97	40.11	0.94		
835MHz Body	825	55.20	52.44~57.96	0.97	0.92~1.02	54.04	0.98	21.6°C	2024-09-21
	835	55.20	52.44~57.96	0.97	0.92~1.02	53.93	0.99		
	850	55.20	52.44~57.96	0.99	0.94~1.04	53.69	1.01		
1800MHz Head	1710	40.10	38.10~42.10	1.35	1.28~1.42	39.95	1.34	21.6°C	2024-09-23
	1730	40.10	38.10~42.10	1.35	1.29~1.43	39.87	1.36		
	1750	40.10	38.10~42.10	1.37	1.30~1.44	39.69	1.39		
	1800	40.00	38.00~42.00	1.40	1.33~1.47	39.48	1.44		
1800MHz Body	1710	53.50	50.83~56.18	1.46	1.39~1.53	53.24	1.45	21.6°C	2024-09-23
	1730	53.50	50.83~56.18	1.48	1.41~1.55	53.39	1.47		
	1750	53.40	50.73~56.07	1.49	1.42~1.56	53.19	1.49		
	1800	53.30	50.64~55.97	1.52	1.44~1.60	52.97	1.54		
1900MHz Head	1850	40.00	38.00~42.00	1.40	1.33~1.47	39.93	1.37	21.6°C	2024-09-25
	1880	40.00	38.00~42.00	1.40	1.33~1.47	39.91	1.40		
	1900	40.00	38.00~42.00	1.40	1.33~1.47	39.98	1.41		
	1910	40.00	38.00~42.00	1.40	1.33~1.47	39.97	1.42		
1900MHz Body	1850	53.30	50.64~55.97	1.52	1.44~1.60	53.23	1.49	21.6°C	2024-09-25
	1880	53.30	50.64~55.97	1.52	1.44~1.60	53.36	1.53		
	1900	53.30	50.64~55.97	1.52	1.44~1.60	53.37	1.56		
	1910	53.30	50.64~55.97	1.52	1.44~1.60	53.37	1.57		

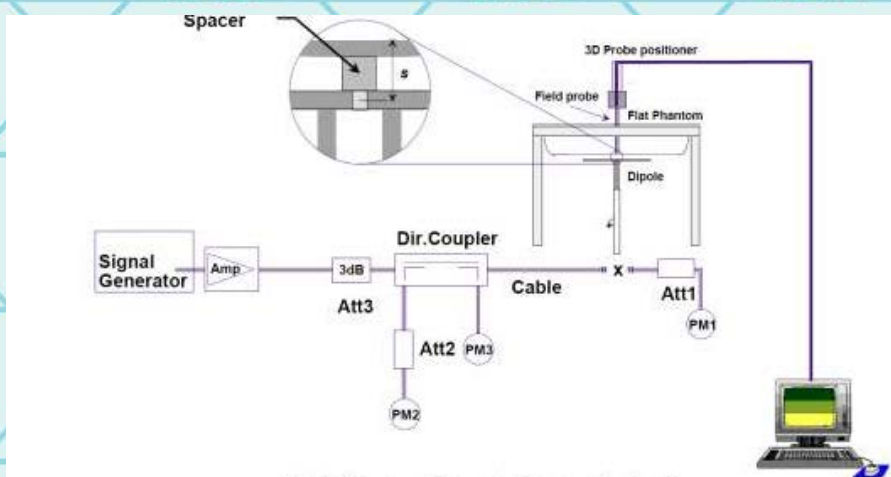
2450MHz Head	2410	39.30	37.34~41.26	1.76	1.67~1.85	39.22	1.78	21.6℃	2024-09-27
	2435	39.20	37.24~41.16	1.79	1.70~1.88	39.25	1.77		
	2450	39.20	37.24~41.16	1.80	1.71~1.89	39.24	1.76		
	2460	39.20	37.24~41.16	1.81	1.72~1.90	39.20	1.76		
2450MHz Body	2410	52.80	50.16~55.44	1.91	1.81~2.00	52.72	1.92		
	2435	52.70	50.07~55.34	1.94	1.84~2.04	52.75	1.92		
	2450	52.70	50.07~55.34	1.95	1.85~2.05	52.74	1.91		
	2460	52.70	50.07~55.34	1.96	1.86~2.06	52.70	1.91		
2600MHz Head	2510	39.00	37.05~40.95	1.96	1.86~2.06	38.87	1.93	21.6℃	2024-09-29
	2535	39.00	37.05~40.95	1.96	1.86~2.06	38.58	1.93		
	2560	39.00	37.05~40.95	1.96	1.86~2.06	38.98	2.02		
	2600	39.00	37.05~40.95	1.96	1.86~2.06	52.50	2.02		
2600MHz Body	2510	52.50	49.90~55.11	2.16	2.05~2.27	52.21	2.05		
	2535	52.50	49.90~55.11	2.16	2.05~2.27	51.92	2.06		
	2560	52.50	49.90~55.11	2.16	2.05~2.27	52.01	2.09		
	2600	52.50	49.90~55.11	2.16	2.05~2.27	38.87	1.93		
εr= Relative permittivity, σ= Conductivity									

8 System Check

8.1 System check procedure

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

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



8.2 System check results

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

System Check	Target SAR (1W) (+/-10%)				Measured SAR (Normalized to 1W)		Liquid Temp.	Test Date
	1-g (W/g)	Range of $\pm 10\%$ 1-g (W/g)	10-g (W/g)	Range of $\pm 10\%$ 10-g (W/g)	1-g (W/g)	10-g (W/g)		
D835V2 Head	9.82	8.84~10.80	6.35	5.72~6.99	9.700	6.150	21.6°C	2024-09-21
D1800V2 Head	37.09	33.38~40.80	19.77	17.93~21.75	39.980	20.600	21.6°C	2024-09-23
D1900V2 Head	38.93	35.04~42.82	20.27	18.45~22.55	39.980	21.070	21.6°C	2024-09-25
D2450V2 Head	53.41	48.07~58.75	23.95	21.56~26.35	53.930	24.530	21.6°C	2024-09-27
D2600V2 Head	56.88	51.20~62.56	24.92	22.43~27.41	53.180	23.430	21.6°C	2024-09-29
D835V2 Body	9.41	8.47~10.35	6.22	5.99~6.84	10.150	6.450	21.6°C	2024-09-21
D1800V2 Body	38.03	34.23~41.83	20.69	18.62~22.76	41.560	21.720	21.6°C	2024-09-23
D1900V2 Body	38.73	34.86~42.60	20.48	18.43~22.53	39.330	20.940	21.6°C	2024-09-25
D2450V2 Body	51.39	46.25~56.53	23.63	21.27~25.99	54.330	23.330	21.6°C	2024-09-27
D2600V2 Body	54.54	49.09~59.99	24.37	21.94~26.80	57.860	25.600	21.6°C	2024-09-29

Note: All SAR values are normalized to 1W forward power.

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

9 SAR Test 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 level 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 (DPDCH, DPDCHn and spreading codes, HSDPA, HSPA) are required 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 $\leq \frac{1}{4}$ 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. 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, HARQ processes, minimum inter-TTI interval, transport block sizes and RV coding sequence are defined by the H-set. To maintain a consistent test configuration and stable transmission 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 β_c and β_d gain factors for DPCCH and DPDCH were set according to the values in the below table, β_{hs} for HS-DPCCH is set automatically to the correct value when ΔACK , $\Delta NACK$, $\Delta CQI = 8$. The variation of the β_c / β_d ratio causes a power reduction at sub-tests 2 - 4.

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

Note 1: ΔACK , $\Delta NACK$ and $\Delta CQI = 8$ $A_{hs} = \beta_{hs} / \beta_c = 30/15$ $\beta_{hs} = 30/15 * \beta_c$
Note 2: CM=1 for $\beta_c / \beta_d = 12/15$, $\beta_{hs} / \beta_c = 24/15$. For all other combinations of DPDCH, DPCCH 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 $\beta_c = 11/15$ and $\beta_d = 15/15$

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 $\leq 1/4$ dB higher than the primary mode or when the highest reported SAR of the primary mode is scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for the secondary mode.

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
64 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 $> \frac{1}{2}$ dB higher than the same configuration in QPSK or when the reported SAR for the QPSK configuration is > 1.45 W/kg.

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 $> \frac{1}{2}$ 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.

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 frequency 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 $\frac{1}{4}$ 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)		33.50	32.63	32.33	33.10	-9.03	31.15	30.85	31.62
GPRS (GMSK)	1Tx slot	30.00	29.91	29.28	29.89	-9.03	28.43	27.80	28.41
	2Tx slots	30.50	29.18	29.71	30.00	-9.03	27.70	28.23	28.52
	3Tx slots	30.00	28.97	29.84	29.67	-6.02	27.49	28.36	28.19
	4Tx slots	29.50	29.35	28.72	29.48	-4.26	27.87	27.24	28.00
EGPRS (8PSK)	1Tx slot	26.00	25.55	25.54	25.54	-3.01	24.07	24.06	24.06
	2Tx slots	26.00	25.18	25.38	25.66	-9.03	23.70	23.90	24.18
	3Tx slots	26.00	25.32	25.42	25.81	-6.02	23.84	23.94	24.33
	4Tx slots	26.00	25.18	25.77	24.59	-4.26	23.70	24.29	23.11
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)		30.00	29.39	29.84	29.56	-9.03	30.56	31.01	30.73
GPRS (GMSK)	1Tx slot	28.00	26.29	27.55	26.52	-9.03	27.46	28.72	27.69
	2Tx slots	28.00	27.47	26.67	27.54	-9.03	28.64	27.84	28.71
	3Tx slots	28.00	27.09	27.84	26.86	-6.02	28.26	29.01	28.03
	4Tx slots	27.50	27.3	27.48	26.98	-4.26	28.47	28.65	28.15
EGPRS (8PSK)	1Tx slot	26.00	25.84	24.78	24.71	-3.01	27.01	25.95	25.88
	2Tx slots	26.00	24.68	25.98	24.93	-9.03	25.85	27.15	26.1
	3Tx slots	25.50	24.62	24.51	25.00	-6.02	25.79	25.68	26.17
	4Tx slots	25.50	25.51	24.92	25.43	-4.26	26.68	26.09	26.6

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
RMC 12.2K		22.50	1852.4	1880.0	1907.6
HSDPA	Subtest-1	22.00	21.02	22.07	22.31
	Subtest-2	22.50	21.99	21.95	21.65
	Subtest-3	22.00	22.23	21.35	22.12
	Subtest-4	22.00	21.86	21.95	21.97
HSUPA	Subtest-1	22.50	20.91	21.01	22.15
	Subtest-2	22.50	21.13	21.67	22.33
	Subtest-3	22.50	21.35	21.15	22.15
	Subtest-4	22.50	22.20	21.95	21.20
	Subtest-5	22.50	22.12	22.24	22.13
		22.50	21.77	21.53	22.43
Mode		Maximum Tune-up(dBm)	WCDMA Band 4		
			Conducted Power (dBm)		
			CH1312	CH1413	CH1513
RMC 12.2K		23.00	1712.4	1732.6	1752.6
HSDPA	Subtest-1	22.50	21.74	22.64	22.25
	Subtest-2	22.50	21.37	22.22	22.45
	Subtest-3	22.50	22.20	22.42	22.34
	Subtest-4	22.50	22.16	21.57	21.84
HSUPA	Subtest-1	22.50	22.32	21.68	21.80
	Subtest-2	22.00	21.97	21.8	21.65
	Subtest-3	22.50	21.90	21.35	22.40
	Subtest-4	23.00	22.70	21.68	21.79
	Subtest-5	22.00	21.75	21.81	21.89
		22.50	21.97	21.56	22.15
Mode		Maximum Tune-up(dBm)	WCDMA Band 5		
			Conducted Power (dBm)		
			CH4132	CH4183	CH4233
RMC 12.2K		23.00	826.4	836.6	846.6
HSDPA	Subtest-1	23.00	22.94	21.44	22.72
	Subtest-2	23.00	22.58	22.16	22.12
	Subtest-3	23.00	22.54	21.51	20.98
	Subtest-4	23.00	22.38	22.6	21.89
HSUPA	Subtest-1	23.00	22.86	21.63	22.27
	Subtest-2	23.00	22.18	22.83	21.52
	Subtest-3	22.50	22.07	22.11	21.60
	Subtest-4	23.00	21.18	21.98	22.76
	Subtest-5	22.50	21.97	22.13	21.49
		22.50	22.00	21.63	21.79
Per KDB 941225 D01, when the maximum output power and tune-up tolerance specified for production units in a secondary mode is $\leq 1/2$ dB 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 1850.7MHz	18900 1880.0MHz	19193 1909.3MHz
1.4MHz	QPSK	1	0	23.50	23.32	23.16	23.09
			2	23.50	23.40	23.08	23.17
			5	23.50	23.40	23.16	23.16
		3	0	23.50	23.29	23.20	23.14
			2	23.50	23.20	23.24	23.17
			3	23.50	23.20	23.18	23.17
	16QAM	6	0	22.00	21.78	21.60	21.64
			0	23.50	23.36	21.66	22.19
			2	23.50	23.40	21.68	22.20
		3	5	23.50	23.27	21.69	22.20
			0	23.00	22.52	22.14	22.14
			2	23.00	22.53	22.16	22.12
3MHz	QPSK	3	3	23.00	22.52	22.12	22.22
			0	21.50	21.42	21.45	21.27
		6	0	21.50	21.42	21.45	21.27
			0	23.50	23.36	21.66	22.19
			2	23.50	23.40	21.68	22.20
			5	23.50	23.27	21.69	22.20
	16QAM	8	0	23.00	22.52	22.14	22.14
			2	23.00	22.53	22.16	22.12
			3	23.00	22.52	22.12	22.22
		6	0	21.50	21.42	21.45	21.27
			0	23.50	23.36	21.66	22.19
			2	23.50	23.40	21.68	22.20
5MHz	QPSK	15	0	22.00	21.64	21.63	21.62
			0	23.50	23.45	21.69	22.19
			7	23.50	23.42	21.67	22.12
		8	14	23.50	23.46	21.65	22.21
			0	21.50	21.17	21.27	21.18
			4	21.50	21.23	21.34	21.14
	16QAM	15	7	21.50	21.27	21.22	21.21
			0	21.50	21.48	21.25	21.36
			0	23.50	23.13	23.31	22.88
		12	13	23.50	23.18	23.21	22.87
			24	23.50	23.12	23.27	22.85
			0	22.00	21.76	21.67	21.61
10MHz	QPSK	25	6	22.00	21.66	21.62	21.59
			13	22.00	21.63	21.76	21.62
			0	22.00	21.63	21.73	21.64
		12	0	23.00	22.53	22.34	22.82
			13	23.00	22.52	22.32	22.79
			24	23.00	22.47	22.30	22.80
	16QAM	25	0	21.50	21.30	21.08	21.19
			6	21.50	21.27	21.15	21.20
			13	21.50	21.25	21.06	21.24
		12	0	21.50	21.38	21.33	21.36
			0	23.50	23.13	23.31	22.88
			13	23.50	23.18	23.21	22.87

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	23.28	23.10	23.15
			25	23.50	23.16	23.10	23.17
			49	23.50	23.17	23.12	23.22
		25	0	22.00	21.70	21.74	21.55
			13	22.00	21.74	21.64	21.61
			25	22.00	21.78	21.68	21.54
	16QAM	1	0	24.00	23.54	23.08	22.46
			25	23.50	23.46	22.99	22.47
			49	23.50	23.43	22.93	22.48
		25	0	21.50	21.28	21.41	21.23
			13	21.50	21.30	21.36	21.29
			25	21.50	21.27	21.34	21.33
15MHz	QPSK	1	0	23.50	23.39	23.24	23.13
			38	23.50	23.27	23.23	23.00
			74	23.50	23.24	23.12	23.08
		36	0	22.00	21.78	21.67	21.65
			18	22.00	21.69	21.72	21.68
			39	22.00	21.77	21.61	21.67
	16QAM	1	0	24.00	23.53	23.10	23.07
			38	23.50	23.44	23.02	23.02
			74	23.50	23.41	22.93	23.01
		36	0	22.00	21.34	21.55	21.15
			18	21.50	21.35	21.44	21.13
			39	21.50	21.33	21.46	21.18
20MHz	QPSK	1	0	24.00	23.55	23.59	23.31
			50	24.00	23.34	23.58	23.20
			99	24.00	23.36	23.54	23.28
		50	0	22.00	21.80	21.80	21.64
			25	22.00	21.77	21.73	21.64
			50	22.00	21.68	21.73	21.60
	16QAM	100	0	22.00	21.72	21.62	21.66
			0	23.00	22.49	21.91	22.57
			50	22.50	22.41	21.85	22.46
		50	99	22.50	22.39	21.88	22.47
			0	21.50	21.49	21.35	21.24
			25	21.50	21.46	21.29	21.29

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 1710.7MHz	20175 1732.5MHz	20393 1754.3MHz
1.4MHz	QPSK	1	0	23.50	23.3	23.15	23.4
			2	23.50	23.25	23.20	23.37
			5	23.50	23.28	23.15	23.33
		3	0	23.50	23.04	23.12	23.26
			2	23.50	23.09	23.05	23.31
			3	23.50	23.05	23.09	23.27
	16QAM	1	0	22.50	22.23	22.07	22.22
			0	24.00	23.71	22.74	22.42
			2	24.00	23.71	22.72	22.39
		3	5	24.00	23.73	22.73	22.31
			0	22.50	22.43	22.12	22.24
			2	22.50	22.48	22.13	22.19
3MHz	QPSK	1	3	22.50	22.45	22.15	22.17
			0	22.00	21.52	21.42	21.32
		3	0	22.00	21.52	21.42	21.32
			0	24.00	23.71	22.74	22.42
			2	24.00	23.71	22.72	22.39
			5	24.00	23.73	22.73	22.31
	16QAM	1	0	22.50	22.43	22.12	22.24
			2	22.50	22.48	22.13	22.19
			3	22.50	22.45	22.15	22.17
		3	0	22.00	21.52	21.42	21.32
			0	24.00	23.71	22.74	22.42
			2	24.00	23.71	22.72	22.39
5MHz	QPSK	1	5	24.00	23.73	22.73	22.31
			0	22.50	22.43	22.12	22.24
			2	22.50	22.48	22.13	22.19
		3	3	22.50	22.45	22.15	22.17
			0	22.00	21.52	21.42	21.32
			0	24.00	23.71	22.74	22.42
	16QAM	1	2	24.00	23.71	22.72	22.39
			5	24.00	23.73	22.73	22.31
			0	22.50	22.43	22.12	22.24
		3	2	22.50	22.48	22.13	22.19
			3	22.50	22.45	22.15	22.17
			0	22.00	21.52	21.42	21.32

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	23.15	23.14	23.34
			25	23.50	23.03	23.03	23.3
			49	23.50	23.04	23.1	23.28
		25	0	22.50	22.07	22.16	22.27
			13	22.50	22.18	22.06	22.15
			25	22.50	22.04	22.09	22.24
	16QAM	1	0	24.00	23.86	23.43	23.34
			25	24.00	23.75	23.32	23.32
			49	24.00	23.82	23.3	23.33
		25	0	21.50	21.25	21.33	21.37
			13	21.50	21.28	21.31	21.38
			25	21.50	21.23	21.33	21.35
15MHz	QPSK	1	0	23.50	23.14	23.11	23.21
			38	23.50	23.01	23.04	23.16
			74	23.50	23.03	22.95	23.14
		36	0	22.50	22.12	22.21	22.29
			18	22.50	22.12	22.13	22.19
			39	22.50	22.14	22.14	22.23
	16QAM	1	0	24.00	23.84	23.43	23.7
			38	24.00	23.74	23.28	23.56
			74	24.00	23.81	23.18	23.6
		36	0	21.50	21.28	21.32	21.22
			18	21.50	21.22	21.33	21.17
			39	21.50	21.17	21.36	21.19
20MHz	QPSK	1	0	23.50	23.46	23.38	23.26
			50	23.50	23.26	23.38	23.2
			99	23.50	23.25	23.28	23.23
		50	0	22.50	22.15	22.14	22.21
			25	22.50	22.19	22.11	22.16
			50	22.50	22.12	22.06	22.15
	16QAM	100	0	22.50	22.08	22.24	22.2
			0	23.50	22.91	22.85	23.25
			50	23.50	22.7	22.78	23.18
		50	99	23.50	22.72	22.7	23.13
			0	21.50	21.36	21.26	21.41
			25	21.50	21.29	21.29	21.42
100	50	21.50	21.25	21.22	21.35		
	0	21.50	21.25	21.3	21.38		

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	23.50	23.45	23.31	23.43
			2	23.50	23.43	23.34	23.37
			5	23.50	23.39	23.33	23.37
		3	0	23.50	23.33	23.34	23.28
			2	23.50	23.39	23.28	23.29
			3	23.50	23.36	23.34	23.38
	16QAM	6	0	22.50	22.47	22.34	22.36
		1	0	24.00	23.86	22.85	22.87
			2	24.00	23.86	22.85	22.94
			5	24.00	23.88	22.88	22.96
		3	0	23.00	22.65	22.29	22.2
			2	23.00	22.69	22.35	22.22
3	23.00		22.67	22.32	22.23		
6	0	22.00	21.61	21.43	21.35		
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	23.32	23.37	23.4
			7	23.50	23.32	23.35	23.36
			14	23.50	23.28	23.38	23.43
		8	0	22.50	22.39	22.29	22.25
			4	22.50	22.46	22.36	22.24
			7	22.50	22.37	22.33	22.34
	16QAM	15	0	22.50	22.44	22.33	22.2
		1	0	24.00	23.88	22.84	22.91
			7	24.00	23.86	22.88	22.8
			14	24.00	23.74	22.85	22.91
		8	0	21.50	21.36	21.33	21.31
			4	21.50	21.39	21.36	21.3
7	21.50		21.26	21.33	21.4		
15	0	22.00	21.54	21.28	21.33		

LTE-FDD Band 5				Maximum Tune- up(dBm)	Conducted Power(dBm)		
Bandwidth	Modulation	RB allocation	RB offset		20425 826.5MHz	20525 836.5MHz	20625 846.5MHz
5MHz	QPSK	1	0	23.50	23.36	23.45	23.05
			13	23.50	23.26	23.37	23.09
			24	23.50	23.29	23.36	23.14
		12	0	23.00	22.52	22.3	22.32
			6	22.50	22.33	22.37	22.35
			13	22.50	22.48	22.38	22.33
	16QAM	1	0	22.50	22.44	22.39	22.23
			0	23.50	22.98	22.9	23.42
			13	23.50	22.9	22.89	23.25
		12	24	23.50	23	22.79	23.39
			0	21.50	21.42	21.18	21.31
			6	21.50	21.33	21.18	21.26
10MHz	QPSK	1	13	21.50	21.25	21.2	21.25
			25	21.50	21.49	21.39	21.46
			0	21.50	21.49	21.39	21.46
		25	0	21.50	21.49	21.39	21.46
			13	21.50	21.49	21.39	21.46
			25	21.50	21.49	21.39	21.46
		50	0	21.50	21.49	21.39	21.46
			13	21.50	21.49	21.39	21.46
			25	21.50	21.49	21.39	21.46
	16QAM	1	0	23.50	23.41	23.28	23.3
			25	23.50	23.26	23.29	23.35
			49	23.50	23.3	23.33	23.34
		25	0	23.00	22.51	22.31	22.29
			13	22.50	22.36	22.37	22.33
			25	22.50	22.45	22.35	22.23
		50	0	22.50	22.35	22.49	22.39
			13	22.50	22.35	22.49	22.39
			25	22.50	22.35	22.49	22.39
10MHz	QPSK	1	0	24.00	23.88	23.44	22.97
			25	24.00	23.87	23.43	23.02
			49	24.00	23.85	23.44	23.07
		25	0	21.50	21.42	21.35	21.42
			13	21.50	21.36	21.4	21.35
			25	21.50	21.36	21.32	21.43
		50	0	21.50	21.35	21.39	21.27
			13	21.50	21.35	21.39	21.27
			25	21.50	21.35	21.39	21.27
	16QAM	1	0	24.00	23.88	23.44	22.97
			25	24.00	23.87	23.43	23.02
			49	24.00	23.85	23.44	23.07
		25	0	21.50	21.42	21.35	21.42
			13	21.50	21.36	21.4	21.35
			25	21.50	21.36	21.32	21.43
		50	0	21.50	21.35	21.39	21.27
			13	21.50	21.35	21.39	21.27
			25	21.50	21.35	21.39	21.27

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	22.50	22.06	22.27	22.49
			13	22.50	21.94	22.24	22.5
			24	22.50	22.01	22.16	22.27
		12	0	21.00	20.8	20.79	20.86
			6	21.00	20.68	20.73	20.84
			13	21.00	20.66	20.68	20.83
	16QAM	25	0	21.00	20.73	20.68	20.85
			0	22.50	22.33	21.92	22.04
			13	22.50	22.37	21.93	21.98
		1	24	22.50	22.28	21.89	22.09
			0	20.50	20.38	20.29	20.37
			6	20.50	20.27	20.22	20.29
10MHz	QPSK	12	13	20.50	20.3	20.24	20.29
			0	21.00	20.5	20.57	20.56
			25	21.00	20.8	20.79	20.86
		25	0	22.50	22.33	21.92	22.04
			13	22.50	22.37	21.93	21.98
			24	22.50	22.28	21.89	22.09
	16QAM	1	0	23.00	22.59	22.65	22.38
			25	23.00	22.68	22.58	22.29
			49	23.00	22.82	22.58	22.2
		25	0	21.00	20.22	20.46	20.6
			13	21.00	20.19	20.41	20.6
			25	21.00	20.16	20.47	20.54

Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	20825	21100	21375
					2057.5MHz	2535.0MHz	2562.5MHz
15MHz	QPSK	1	0	22.50	22.14	22.25	22.23
			38	22.50	22.05	22.16	22.24
			74	22.50	22.03	22.12	22.27
		36	0	21.00	20.71	20.69	20.87
			18	21.00	20.75	20.75	20.89
			39	21.00	20.69	20.73	20.82
	16QAM	75	0	21.00	20.74	20.77	20.78
			0	23.00	22.73	22.6	22.57
			38	23.00	22.56	22.56	22.79
			74	23.00	22.71	22.58	22.51
		36	0	21.00	20.44	20.51	20.36
			18	21.00	20.36	20.5	20.43
			39	20.50	20.45	20.48	20.45
		75	0	21.00	20.3	20.51	20.6
			0	23.00	22.33	22.71	22.36
			50	23.00	22.17	22.69	22.42
			99	23.00	22.15	22.7	22.44
20MHz	QPSK	1	0	21.00	20.65	20.73	20.78
			25	21.00	20.57	20.78	20.82
			50	21.00	20.65	20.77	20.81
		50	0	21.00	20.75	20.81	20.87
			0	22.50	22.1	21.95	22.3
			50	22.50	21.96	21.91	22.34
	16QAM	1	99	22.50	21.99	21.86	22.31
			0	20.50	20.37	20.42	20.43
			25	21.00	20.41	20.42	20.53
		50	50	20.50	20.44	20.44	20.48
			0	20.50	20.36	20.41	20.45
			0	23.00	22.33	22.71	22.36
			50	23.00	22.17	22.69	22.42
			99	23.00	22.15	22.7	22.44
		50	0	21.00	20.65	20.73	20.78
			25	21.00	20.57	20.78	20.82
			50	21.00	20.65	20.77	20.81
		100	0	21.00	20.75	20.81	20.87
			0	22.50	22.1	21.95	22.3
			50	22.50	21.96	21.91	22.34
			99	22.50	21.99	21.86	22.31
		50	0	20.50	20.37	20.42	20.43
			25	21.00	20.41	20.42	20.53
			50	20.50	20.44	20.44	20.48
		100	0	20.50	20.36	20.41	20.45

10.1.7 Conducted Power of LTE Band 38

LTE-TDD Band 38				Maximum Tune- up(dBm)	Conducted Power(dBm)		
Bandwidth	Modulation	RB allocation	RB offset		37775 2572.5MHz	38000 2595.0MHz	38225 2617.5MHz
5MHz	QPSK	1	0	21.50	21.17	21.09	21.03
			13	21.50	21.09	21.05	21.03
			24	21.50	21.02	21.12	20.94
		12	0	20.00	19.75	19.84	19.75
			6	20.00	19.74	19.76	19.65
			13	20.00	19.76	19.76	19.6
	16QAM	25	0	20.00	19.83	19.81	19.67
			0	21.50	20.82	20.94	21.15
			13	21.50	20.81	20.84	21.22
		12	24	21.50	20.65	20.82	21.17
			0	19.50	19.43	19.3	19.26
			6	19.50	19.37	19.19	19.27
10MHz	QPSK	25	13	19.50	19.36	19.23	19.2
			0	20.00	19.48	19.66	19.58
		1	0	22.00	21.56	21.52	21.13
			25	21.50	21.49	21.49	21.09
			49	22.00	21.56	21.56	21.15
		25	0	20.00	19.83	19.74	19.76
			13	20.00	19.97	19.74	19.74
			25	20.00	19.87	19.87	19.77
		50	0	20.50	20.05	19.97	19.77
	16QAM	1	0	21.50	21.49	21.34	21.26
			25	22.00	21.96	21.05	21.24
			49	22.00	21.89	21.16	21.18
		25	0	20.00	19.55	19.6	19.45
			13	20.00	19.44	19.55	19.41
			25	20.00	19.53	19.52	19.45
		50	0	20.00	19.77	19.63	19.42

Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	37825	38000	38175
					2577.5MHz	2595.0MHz	2612.5MHz
15MHz	QPSK	1	0	22.00	21.66	21.61	21.24
			38	22.00	21.55	21.44	21.16
			74	22.00	21.52	21.47	21.1
		36	0	20.00	19.89	19.82	19.82
			18	20.00	19.92	19.81	19.62
			39	20.00	19.91	19.79	19.66
	16QAM	75	0	20.00	19.94	19.89	19.86
		1	0	22.00	21.61	21.37	21.03
			38	22.00	21.77	21.13	20.96
			36	74	22.00	21.6	21.17
		0		20.00	19.52	19.5	19.34
		18		19.50	19.47	19.37	19.27
39	20.00	19.55	19.32	19.35			
	75	0	20.00	19.58	19.55	19.59	
	Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	38750	38000
2580.0MHz						2595.0MHz	2610.0MHz
20MHz	QPSK	1	0	21.50	21.42	21.12	21.28
			50	21.50	21.33	21.06	21.13
			99	21.50	21.32	20.97	21.16
		50	0	20.00	19.89	19.81	19.77
			25	20.00	19.91	19.74	19.67
			50	20.00	19.91	19.74	19.63
	16QAM	100	0	20.00	19.95	19.88	19.87
		1	0	21.50	21.11	21.15	20.52
			50	21.50	21.03	21.06	20.38
			99	21.50	20.98	21.28	20.24
		50	0	20.00	19.75	19.41	19.43
			25	20.00	19.79	19.32	19.43
			50	20.00	19.78	19.29	19.33
		100	0	20.00	19.61	19.42	19.37

10.1.8 Conducted Power of LTE Band 41

LTE-TDD Band 41					Conducted Power(dBm)				
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	39675	40160	40620	41080	41565
					2498.5MHz	2552.0MHz	2593 MHz	2639.5 MHz	2687.5 MHz
5MHz	QPSK	1	0	21.50	21.12	21.14	21.31	21.10	20.9
			13	21.50	21.06	21.02	21.34	20.94	20.85
			24	21.50	20.99	20.85	21.36	20.92	20.86
		12	0	20.00	19.7	19.65	19.88	19.63	19.55
			6	20.00	19.63	19.72	19.85	19.51	19.46
			13	20.00	19.65	19.58	19.81	19.62	19.43
	16QAM	25	0	20.00	19.64	19.71	19.87	19.74	19.64
			0	21.50	20.67	20.58	20.67	20.84	21.12
			1	13	21.50	20.6	20.61	20.63	20.85
		12	24	21.50	20.59	20.47	20.69	20.27	21.1
			0	19.50	19.28	19.21	19.36	19.24	19.15
			6	19.50	19.27	19.31	19.32	19.25	19.1
10MHz	QPSK	1	13	21.50	20.6	20.61	20.63	20.85	21.08
			24	21.50	20.59	20.47	20.69	20.27	21.1
			0	19.50	19.28	19.21	19.36	19.24	19.15
		12	6	19.50	19.27	19.31	19.32	19.25	19.1
			13	19.50	19.25	19.28	19.29	19.14	19.16
			25	0	20.00	19.48	19.52	19.69	19.37
		25	0	20.00	19.48	19.52	19.69	19.45	19.37
			0	20.00	19.48	19.52	19.69	19.45	19.37
			0	20.00	19.48	19.52	19.69	19.45	19.37
	16QAM	1	0	20.00	19.48	19.52	19.69	19.45	19.37
			0	20.00	19.48	19.52	19.69	19.45	19.37
			0	20.00	19.48	19.52	19.69	19.45	19.37
		12	0	20.00	19.48	19.52	19.69	19.45	19.37
			0	20.00	19.48	19.52	19.69	19.45	19.37
			0	20.00	19.48	19.52	19.69	19.45	19.37
		25	0	20.00	19.48	19.52	19.69	19.45	19.37
			0	20.00	19.48	19.52	19.69	19.45	19.37
			0	20.00	19.48	19.52	19.69	19.45	19.37

Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	39725	40160	40620	41030	41515
					2503.5MHz	2547.0MHz	2593.0MHz	2634.0MHz	2682.5MHz
15MHz	QPSK	1	0	22.00	21.32	21.40	21.53	21.01	21.12
			38	21.50	21.36	21.14	21.37	20.98	21.01
		36	74	21.50	21.46	21.13	21.29	20.87	21.14
			0	20.00	19.85	19.74	19.83	19.41	19.66
			18	20.00	19.77	19.65	19.75	19.52	19.58
			39	20.00	19.85	19.82	19.84	19.31	19.49
			0	20.00	19.94	19.84	19.92	19.42	19.56
			75	0	20.00	19.94	19.84	19.92	19.56
	16QAM	1	0	21.00	21.58	20.95	20.8	20.65	20.77
			38	21.00	21.41	21.14	20.83	20.74	20.89
			74	21.00	21.39	20.96	20.7	20.82	20.86
		36	0	20.00	19.41	19.58	19.59	19.17	19.23
			18	20.00	19.37	19.41	19.52	19.14	19.15
			39	19.50	19.48	19.42	19.45	19.16	19.19
			0	20.00	19.49	19.52	19.6	19.25	19.32
			75	0	20.00	19.49	19.52	19.6	19.32
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	39750	40185	40620	41055	41490
					2506 MHz	2549.5MHz	2593 MHz	2636.5MHz	2680 MHz
20MHz	QPSK	1	0	21.50	21.3	21.36	21.42	21.06	21.16
			50	21.50	21.31	21.32	21.37	21.20	21.19
			99	21.50	21.34	21.16	21.2	21.15	21.11
		50	0	20.00	19.73	19.85	19.96	19.40	19.57
			25	20.00	19.77	19.82	19.81	19.64	19.48
			50	20.00	19.69	19.71	19.76	19.53	19.46
		100	0	20.00	19.88	19.84	19.86	19.92	19.71
			0	21.00	20.71	20.76	20.83	20.65	20.51
	16QAM	1	50	21.00	20.64	20.74	20.69	20.41	20.02
			99	21.00	20.61	20.81	20.9	19.89	19.83
			0	19.50	19.64	19.48	19.42	19.39	19.42
		50	25	19.50	19.6	19.51	19.45	19.38	19.32
			50	19.50	19.57	19.46	19.37	19.29	19.31
			0	20.00	19.6	19.62	19.69	19.14	19.31
		100	0	20.00	19.6	19.62	19.69	19.14	19.31
			0	20.00	19.6	19.62	19.69	19.14	19.31

10.1.9 Conducted Power of Wi-Fi 2.4G

Mode	802.11b		
Channel/Frequency(MHz)	1(2412)	6(2437)	11(2462)
Average Power(dBm)	18.55	17.48	18.32
Mode	802.11g		
Channel/Frequency(MHz)	1(2412)	6(2437)	11(2462)
Average Power(dBm)	23.60	22.37	23.46
Mode	802.11n(HT20)		
Channel/Frequency(MHz)	1(2412)	6(2437)	11(2462)
Average Power(dBm)	23.61	22.40	23.35
Mode	802.11n(HT40)		
Channel/Frequency(MHz)	7(2422)	6(2437)	9(2452)
Average Power(dBm)	22.50	22.16	22.76

10.1.10 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	16.50±1.0dbm	16.19	Yes
		5240	16.00±1.0dbm	15.98	No
	802.11n-HT20	5180	16.50±1.0dbm	16.03	No
		5240	16.50±1.0dbm	16.16	No
	802.11n-HT40	5190	16.50±1.0dbm	16.07	No
		5230	16.50±1.0dbm	16.05	No
	802.11ac-VHT20	5180	15.50±1.0dbm	15.16	No
		5240	15.50±1.0dbm	15.14	No
	802.11ac-VHT40	5190	15.50±1.0dbm	15.03	No
		5230	15.50±1.0dbm	15.11	No
	802.11ac-VHT80	5210	15.00±1.0dbm	14.79	No
Band	Mode	Frequency (MHz)	Tune-up	Average Power (dBm)	SAR Test (Yes/No)
U-NII-2a (5250-5350)	802.11a	5260	16.00±1.0dbm	15.72	No
		5320	16.00±1.0dbm	15.90	No
	802.11n-HT20	5260	16.50±1.0dbm	16.14	No
		5320	16.50±1.0dbm	16.30	Yes
	802.11n-HT40	5270	16.50±1.0dbm	16.08	No
		5310	16.50±1.0dbm	16.02	No
	802.11ac-VHT20	5260	15.50±1.0dbm	15.09	No
		5320	15.50±1.0dbm	15.39	No
	802.11ac-VHT40	5270	15.50±1.0dbm	15.05	No
		5310	15.50±1.0dbm	15.15	No
	802.11ac-VHT80	5290	15.00±1.0dbm	14.86	No
Band	Mode	Frequency (MHz)	Tune-up	Average Power (dBm)	SAR Test (Yes/No)
U-NII-2c (5470-5725)	802.11a	5500	16.00±1.0dbm	15.50	No
		5700	16.00±1.0dbm	15.50	No
	802.11n-HT20	5500	15.50±1.0dbm	15.48	No
		5700	16.00±1.0dbm	15.91	Yes
	802.11n-HT40	5510	15.00±1.0dbm	14.96	No
		5670	15.50±1.0dbm	15.17	No
	802.11ac-VHT20	5500	15.00±1.0dbm	14.66	No
		5700	15.50±1.0dbm	15.00	No
	802.11ac-VHT40	5510	14.50±1.0dbm	14.12	No
		5670	14.50±1.0dbm	14.41	No
	802.11ac-VHT80	5530	14.50±1.0dbm	14.44	No
		5610	15.00±1.0dbm	14.69	No
Band	Mode	Frequency (MHz)	Tune-up	Average Power (dBm)	SAR Test (Yes/No)
U-NII-3 (5725-5825)	802.11a	5745	16.00±1.0dbm	15.72	No
		5825	16.00±1.0dbm	15.93	No
	802.11n-HT20	5745	16.50±1.0dbm	16.08	No
		5825	16.50±1.0dbm	16.29	Yes
	802.11n-HT40	5755	16.00±1.0dbm	15.86	No
		5795	16.50±1.0dbm	16.01	No
	802.11ac-VHT20	5745	15.50±1.0dbm	15.27	No
		5825	15.50±1.0dbm	15.44	No
	802.11ac-VHT40	5755	15.00±1.0dbm	14.89	No
		5795	15.50±1.0dbm	15.09	No
	802.11ac-VHT80	5775	15.00±1.0dbm	14.91	No

10.1.11 Conducted Power of BT

EDR	Mode	Maximum Tune-up(dBm)	Average Conducted Output Power (dBm)			
			0	39	78	
			2402MHz	2441MHz	2480MHz	
	GFSK	7.50	7.40	7.31	6.46	
	π/4DQPSK	8.50	7.47	8.02	6.64	
8DPSK	8.50	7.52	8.01	6.66		
BLE	Mode	Maximum Tune-up(dBm)	Average Conducted Output Power (dBm)			
			0	20	39	
			2402MHz	2440MHz	2480MHz	
	1Mbps	-1.0	-3.84	-1.10	-1.31	
	2Mbps	-1.5	-2.46	-1.86	-1.86	
Channel	Frequency (GHz)	Max. Tune-up Power (dBm)	Max. Power (mW)	Test distance (mm)	Exclusion thresholds for 1-g SAR(mW)	RF exposure evaluation required
39	2.441	8.50	8.02	0	3	Yes
20	2.440	-1.0	-1.10	0	3	Yes

Note

- 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:

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

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

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.

- Per KDB 248227 D01 v02r02, choose the highest output power channel to test SAR and determine further SAR exclusion.
- The output power of all data rate were prescan, just the worst case (the lowest data rate) of all mode were shown in report.

10.1.12 Tune-up power tolerance

Band	Tune-up power tolerance(dBm)		
GSM850	GSM/GPRS (GMSK)	GSM	Max output power =33.50±1.0dBm
		1TXslots	Max output power =30.00 ±1.0dBm
		2TXslots	Max output power =30.50 ±1.0dBm
		3TXslots	Max output power =30.00 ±1.0dBm
	EGPRS (8-PSK)	4TXslots	Max output power =30.00 ±1.0dBm
		1TXslots	Max output power =26.00 ±1.0dBm
		2TXslots	Max output power =26.00 ±1.0dBm
		3TXslots	Max output power =26.00 ±1.0dBm
GSM1900	GSM/GPRS (GMSK)	4TXslots	Max output power =26.00 ±1.0dBm
		GSM	Max output power =30.00±1.0dBm
		1TXslots	Max output power =28.00 ±1.0dBm
		2TXslots	Max output power =28.00 ±1.0dBm
	EGPRS (8-PSK)	3TXslots	Max output power =28.00 ±1.0dBm
		4TXslots	Max output power =27.50 ±1.0dBm
		1TXslots	Max output power =26.00 ±1.0dBm
		2TXslots	Max output power =26.00 ±1.0dBm
WCDMA 2	Max output power =22.50±1.0dBm		
WCDMA 4	Max output power =23.00±1.0dBm		
WCDMA 5	Max output power =23.00±1.0dBm		
LTE B2	Max output power =24.00±1.0dBm		
LTE B4	Max output power =23.50±1.0dBm		
LTE B5	Max output power =23.50±1.0dBm		
LTE B7	Max output power =23.00±1.0dBm		
LTE B38	Max output power =22.00±1.0dBm		
LTE B41	Max output power =22.00±1.0dBm		
WIFI	2.4GWIFI	802.11b	Max output power =19.00±1.0dBm
		802.11g	Max output power =24.00±1.0dBm
		802.11n (HT20)	Max output power =24.00±1.0dBm
		802.11n (HT40)	Max output power =23.00±1.0dBm
	U-NII-1(5150-5250)	802.11a	Max output power =16.50±1.0dBm
	U-NII-2a(5250-5350)	802.11n (HT20)	Max output power =16.50±1.0dBm
	U-NII-2c(5470-5725)	802.11n (HT20)	Max output power =16.00±1.0dBm
	U-NII-3(5725-5825)	802.11n (HT20)	Max output power =16.50±1.0dBm
BT	GFSK		Max output power =7.50±1.0dBm
	π/4DQPSK		Max output power =8.50±1.0dBm
	8DPSK		Max output power =8.50±1.0dBm
BLE	1Mbps		Max output power =-1.00±1.0dBm
	2Mbps		Max output power =-1.50±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 ($< 0.8 \text{ W/kg}$), 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: $\leq 0.8 \text{ W/kg}$ or 2.0 W/kg , for 1-g or 10-g respectively, when the transmission band is $\leq 100 \text{ MHz}$. When the maximum output power variation across the required test channels is $> \frac{1}{2} \text{ dB}$, 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 $\leq 0.4 \text{ W/kg}$, 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 $\leq 0.8 \text{ W/kg}$ 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 $\leq 0.8 \text{ W/kg}$, no further SAR testing is required. Otherwise, SAR is evaluated at the next highest measured output power channel. When any reported SAR is $> 1.2 \text{ W/kg}$, 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 $\leq 1.2 \text{ W/kg}$.

(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 ≥ 0.8 W/Kg; if the deviation among the repeated measurement is $\leq 20\%$, and the measured SAR < 1.45 W/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 $\leq 1/4$ dB higher than the primary mode or when the highest reported SAR of the primary mode is scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for the secondary mode.

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)
GPRS 850+4slots	Front	190	836.6	-2.160	0.295	100	1.00	33.10	33.50	1.096	0.323
	Back	190	836.6	-2.550	0.056	100	1.00	33.10	33.50	1.096	0.061
	Left	190	836.6	-0.690	0.002	100	1.00	33.10	33.50	1.096	0.002
	Right	190	836.6	1.280	0.005	100	1.00	33.10	33.50	1.096	0.005
	Top	190	836.6	-1.650	0.003	100	1.00	33.10	33.50	1.096	0.003
	Bottom	190	836.6	-0.630	0.020	100	1.00	33.10	33.50	1.096	0.022

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	661	1880.0	-1.230	0.048	100	1.00	29.84	30.00	1.038	0.050
	Back	661	1880.0	-0.490	0.007	100	1.00	29.84	30.00	1.038	0.007
	Left	661	1880.0	-3.410	0.002	100	1.00	29.84	30.00	1.038	0.002
	Right	661	1880.0	-0.290	0.003	100	1.00	29.84	30.00	1.038	0.003
	Top	661	1880.0	-2.490	0.002	100	1.00	29.84	30.00	1.038	0.002
	Bottom	661	1880.0	-1.370	0.010	100	1.00	29.84	30.00	1.038	0.010

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*)	Front	9400	1880.0	-1.870	0.372	100	1.00	22.43	22.50	1.016	0.378
	Back	9400	1880.0	2.310	0.151	100	1.00	22.43	22.50	1.016	0.153
	Left	9400	1880.0	-0.680	0.004	100	1.00	22.43	22.50	1.016	0.004
	Right	9400	1880.0	-1.740	0.007	100	1.00	22.43	22.50	1.016	0.007
	Top	9400	1880.0	-3.850	0.002	100	1.00	22.43	22.50	1.016	0.002
	Bottom	9400	1880.0	-0.920	0.018	100	1.00	22.43	22.50	1.016	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)
WCDMA Band 4 (RMC*)	Front	1413	1732.5	-0.920	0.436	100	1.00	22.70	23.00	1.072	0.467
	Back	1413	1732.5	-0.050	0.189	100	1.00	22.70	23.00	1.072	0.203
	Left	1413	1732.5	-2.670	0.005	100	1.00	22.70	23.00	1.072	0.005
	Right	1413	1732.5	-3.910	0.009	100	1.00	22.70	23.00	1.072	0.010
	Top	1413	1732.5	-0.570	0.004	100	1.00	22.70	23.00	1.072	0.004
	Bottom	1413	1732.5	-1.690	0.024	100	1.00	22.70	23.00	1.072	0.026

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	4182	836.4	-2.710	0.407	100	1.00	22.94	23.00	1.014	0.413
	Back	4182	836.4	-0.830	0.168	100	1.00	22.94	23.00	1.014	0.170
	Left	4182	836.4	-0.310	0.006	100	1.00	22.94	23.00	1.014	0.006
	Right	4182	836.4	-3.820	0.008	100	1.00	22.94	23.00	1.014	0.008
	Top	4182	836.4	-4.090	0.003	100	1.00	22.94	23.00	1.014	0.003
	Bottom	4182	836.4	-1.660	0.021	100	1.00	22.94	23.00	1.014	0.021

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	Front	18900	1880.0	1.470	0.359	100	1.00	23.59	24.00	1.099	0.395
		Back	18900	1880.0	-2.510	0.145	100	1.00	23.59	24.00	1.099	0.159
		Left	18900	1880.0	-0.160	0.003	100	1.00	23.59	24.00	1.099	0.003
		Right	18900	1880.0	-2.730	0.005	100	1.00	23.59	24.00	1.099	0.005
		Top	18900	1880.0	-3.440	0.002	100	1.00	23.59	24.00	1.099	0.002
		Bottom	18900	1880.0	-4.150	0.015	100	1.00	23.59	24.00	1.099	0.016
	50%RB	Front	18900	1880.0	3.600	0.337	100	1.00	23.59	24.00	1.099	0.370
		Back	18900	1880.0	1.740	0.118	100	1.00	23.59	24.00	1.099	0.130
		Left	18900	1880.0	2.770	0.005	100	1.00	23.59	24.00	1.099	0.005
		Right	18900	1880.0	2.440	0.006	100	1.00	23.59	24.00	1.099	0.007
		Top	18900	1880.0	-1.540	0.030	100	1.00	23.59	24.00	1.099	0.033
		Bottom	18900	1880.0	1.730	0.012	100	1.00	23.59	24.00	1.099	0.013

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	20175	1732.5	-1.880	0.367	100	1.00	23.46	23.50	1.009	0.370
		Back	20175	1732.5	-0.210	0.147	100	1.00	23.46	23.50	1.009	0.148
		Left	20175	1732.5	-2.910	0.004	100	1.00	23.46	23.50	1.009	0.004
		Right	20175	1732.5	-0.560	0.005	100	1.00	23.46	23.50	1.009	0.005
		Top	20175	1732.5	-0.460	0.002	100	1.00	23.46	23.50	1.009	0.002
		Bottom	20175	1732.5	-4.380	0.016	100	1.00	23.46	23.50	1.009	0.016
	50%RB	Front	20175	1732.5	0.970	0.349	100	1.00	23.46	23.50	1.009	0.352
		Back	20175	1732.5	4.180	0.127	100	1.00	23.46	23.50	1.009	0.128
		Left	20175	1732.5	3.210	0.003	100	1.00	23.46	23.50	1.009	0.003
		Right	20175	1732.5	4.990	0.005	100	1.00	23.46	23.50	1.009	0.005
		Top	20175	1732.5	-4.870	0.002	100	1.00	23.46	23.50	1.009	0.002
		Bottom	20175	1732.5	0.970	0.013	100	1.00	23.46	23.50	1.009	0.013

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	20525	836.5	-0.370	0.396	100	1.00	23.45	23.50	1.012	0.401
		Back	20525	836.5	-1.560	0.163	100	1.00	23.45	23.50	1.012	0.165
		Left	20525	836.5	0.640	0.005	100	1.00	23.45	23.50	1.012	0.005
		Right	20525	836.5	-4.270	0.008	100	1.00	23.45	23.50	1.012	0.008
		Top	20525	836.5	-3.090	0.003	100	1.00	23.45	23.50	1.012	0.003
		Bottom	20525	836.5	-2.180	0.020	100	1.00	23.45	23.50	1.012	0.020
	50%RB	Front	20525	836.5	-2.790	0.386	100	1.00	23.45	23.50	1.012	0.390
		Back	20525	836.5	-1.130	0.152	100	1.00	23.45	23.50	1.012	0.154
		Left	20525	836.5	-2.020	0.006	100	1.00	23.45	23.50	1.012	0.006
		Right	20525	836.5	-0.020	0.007	100	1.00	23.45	23.50	1.012	0.007
		Top	20525	836.5	-2.460	0.003	100	1.00	23.45	23.50	1.012	0.003
		Bottom	20525	836.5	-3.870	0.015	100	1.00	23.45	23.50	1.012	0.015

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	20800	2505.0	-0.440	0.196	100	1.00	22.71	23.00	1.069	0.210
		Back	20800	2505.0	4.640	0.074	100	1.00	22.71	23.00	1.069	0.079
		Left	20800	2505.0	-4.370	0.005	100	1.00	22.71	23.00	1.069	0.005
		Right	20800	2505.0	-0.250	0.004	100	1.00	22.71	23.00	1.069	0.004
		Top	20800	2505.0	-0.920	0.003	100	1.00	22.71	23.00	1.069	0.003
		Bottom	20800	2505.0	-3.310	0.012	100	1.00	22.71	23.00	1.069	0.013
	50%RB	Front	20800	2505.0	-0.770	0.178	100	1.00	22.71	23.00	1.069	0.190
		Back	20800	2505.0	-4.540	0.065	100	1.00	22.71	23.00	1.069	0.069
		Left	20800	2505.0	0.530	0.004	100	1.00	22.71	23.00	1.069	0.004
		Right	20800	2505.0	3.120	0.003	100	1.00	22.71	23.00	1.069	0.003
		Top	20800	2505.0	-4.340	0.002	100	1.00	22.71	23.00	1.069	0.002
		Bottom	20800	2505.0	0.430	0.008	100	1.00	22.71	23.00	1.069	0.009

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	37800	2575.0	-2.270	0.070	100	1.00	21.66	22.00	1.081	0.076
		Back	37800	2575.0	-2.410	0.009	100	1.00	21.66	22.00	1.081	0.010
		Left	37800	2575.0	-0.340	0.002	100	1.00	21.66	22.00	1.081	0.002
		Right	37800	2575.0	2.160	0.003	100	1.00	21.66	22.00	1.081	0.003
		Top	37800	2575.0	-1.390	0.002	100	1.00	21.66	22.00	1.081	0.002
		Bottom	37800	2575.0	-2.050	0.006	100	1.00	21.66	22.00	1.081	0.006
	50%RB	Front	37800	2575.0	0.350	0.061	100	1.00	21.66	22.00	1.081	0.066
		Back	37800	2575.0	3.230	0.007	100	1.00	21.66	22.00	1.081	0.008
		Left	37800	2575.0	-3.810	0.004	100	1.00	21.66	22.00	1.081	0.004
		Right	37800	2575.0	-4.280	0.003	100	1.00	21.66	22.00	1.081	0.003
		Top	37800	2575.0	1.690	0.002	100	1.00	21.66	22.00	1.081	0.002
		Bottom	37800	2575.0	2.060	0.005	100	1.00	21.66	22.00	1.081	0.005

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	2593.0	3.110	0.073	100	1.00	21.53	22.00	1.114	0.081
		Back	40620	2593.0	-1.640	0.009	100	1.00	21.53	22.00	1.114	0.010
		Left	40620	2593.0	0.290	0.003	100	1.00	21.53	22.00	1.114	0.003
		Right	40620	2593.0	-3.250	0.003	100	1.00	21.53	22.00	1.114	0.003
		Top	40620	2593.0	-4.710	0.002	100	1.00	21.53	22.00	1.114	0.002
		Bottom	40620	2593.0	3.590	0.007	100	1.00	21.53	22.00	1.114	0.008
	50%RB	Front	39750	2506.0	2.660	0.020	100	1.00	21.53	22.00	1.114	0.022
		Front	41490	2680.0	1.190	0.006	100	1.00	21.53	22.00	1.114	0.007
		Front	40185	2549.0	1.190	0.018	100	1.00	21.53	22.00	1.114	0.020
		Front	41055	2635.5	-2.550	0.005	100	1.00	21.53	22.00	1.114	0.006
		Front	40620	2593.0	-3.600	0.062	100	1.00	21.53	22.00	1.114	0.069
		Back	40620	2593.0	-3.950	0.006	100	1.00	21.53	22.00	1.114	0.007
		Left	40620	2593.0	2.340	0.004	100	1.00	21.53	22.00	1.114	0.004
		Right	40620	2593.0	3.860	0.003	100	1.00	21.53	22.00	1.114	0.003
		Top	40620	2593.0	2.980	0.002	100	1.00	21.53	22.00	1.114	0.002
		Bottom	40620	2593.0	0.250	0.005	100	1.00	21.53	22.00	1.114	0.006

10.3.4 Results overview of Wifi

Mode	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas. SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)
2.4g (2.4~2.4835) 802.11b	Front	11	2462	-1.280	0.757	100	1.00	23.61	24.00	1.094	0.828
	Back	11	2462	-4.480	0.572	100	1.00	23.61	24.00	1.094	0.626
	Left	11	2462	-0.610	0.005	100	1.00	23.61	24.00	1.094	0.005
	Right	11	2462	-3.040	0.020	100	1.00	23.61	24.00	1.094	0.022
	Top	11	2462	-2.250	0.015	100	1.00	23.61	24.00	1.094	0.016
	Bottom	11	2462	0.760	0.007	100	1.00	23.61	24.00	1.094	0.008

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	1.450	0.719	100	1.00	16.19	16.50	1.074	0.772
	Back	36	5180	1.660	0.531	100	1.00	16.19	16.50	1.074	0.570
	Left	36	5180	3.180	0.004	100	1.00	16.19	16.50	1.074	0.004
	Right	36	5180	1.520	0.012	100	1.00	16.19	16.50	1.074	0.013
	Top	36	5180	1.530	0.010	100	1.00	16.19	16.50	1.074	0.011
	Bottom	36	5180	0.590	0.005	100	1.00	16.19	16.50	1.074	0.005

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	2.140	0.691	100	1.00	16.30	16.50	1.047	0.724
	Back	64	5320	-0.420	0.505	100	1.00	16.30	16.50	1.047	0.529
	Left	64	5320	1.340	0.015	100	1.00	16.30	16.50	1.047	0.016
	Right	64	5320	-4.710	0.019	100	1.00	16.30	16.50	1.047	0.020
	Top	64	5320	3.060	0.014	100	1.00	16.30	16.50	1.047	0.015
	Bottom	64	5320	1.250	0.009	100	1.00	16.30	16.50	1.047	0.009

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	140	5700	1.730	0.722	100	1.00	15.91	16.00	1.021	0.737
	Back	140	5700	1.360	0.534	100	1.00	15.91	16.00	1.021	0.545
	Left	140	5700	-0.910	0.005	100	1.00	15.91	16.00	1.021	0.005
	Right	140	5700	1.580	0.012	100	1.00	15.91	16.00	1.021	0.012
	Top	140	5700	4.320	0.009	100	1.00	15.91	16.00	1.021	0.009
	Bottom	140	5700	-2.040	0.005	100	1.00	15.91	16.00	1.021	0.005

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	165	5825	-4.900	0.712	100	1.00	16.29	16.50	1.050	0.747
	Back	165	5825	-3.250	0.528	100	1.00	16.29	16.50	1.050	0.554
	Left	165	5825	0.510	0.003	100	1.00	16.29	16.50	1.050	0.003
	Right	165	5825	-2.200	0.011	100	1.00	16.29	16.50	1.050	0.012
	Top	165	5825	3.400	0.008	100	1.00	16.29	16.50	1.050	0.008
	Bottom	165	5825	-4.320	0.004	100	1.00	16.29	16.50	1.050	0.004

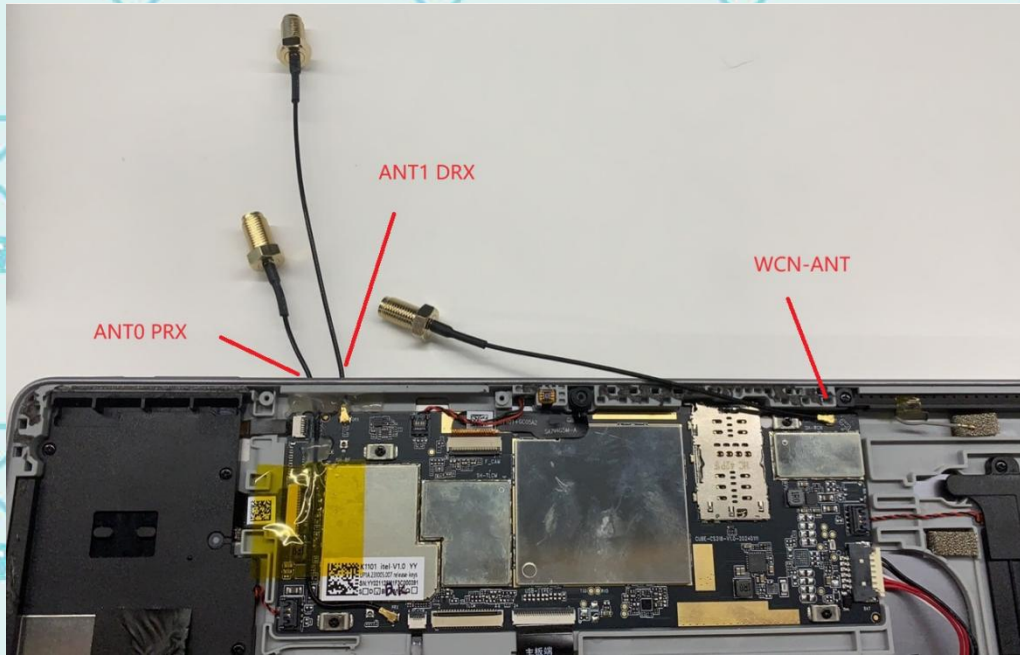
Mode	Position	Ch.	Freq. (MHz)	Power Drift (%)	1g Meas. SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)
Bluetooth	Front	0	2402	-2.250	0.008	100	1.00	8.02	8.50	1.117	0.009
	Back	0	2402	3.610	0.006	100	1.00	8.02	8.50	1.117	0.007
	Left	0	2402	-1.760	0.004	100	1.00	8.02	8.50	1.117	0.004
	Right	0	2402	4.190	0.007	100	1.00	8.02	8.50	1.117	0.008
	Top	0	2402	-2.600	0.002	100	1.00	8.02	8.50	1.117	0.002
	Bottom	0	2402	2.590	0.003	100	1.00	8.02	8.50	1.117	0.003

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 $\leq 0.8\text{W/kg}$, 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 ($L \times W \geq 9 \text{ cm} \times 5 \text{ cm}$) 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= $10^{[(\text{tune-up limit power(dBm)} - \text{Ave.power power (dBm)})/10]}$, 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

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	Body	Hotspot
1	GSM/GPRS/UMTS/LTE +Wi-Fi	YES	YES
2	GSM/GPRS/UMTS/LTE +BT	NO	NO

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

11.2 SAR Summation Scenario

Hotspot(body-worn0mm)

Band	Test Position	Scaled SAR			BT SAR 1g(W/kg)	Σ SAR (W/kg)	Limit (W/kg)
		WWAN SAR 1g(W/kg)	WIFI2.4G SAR 1g(W/kg)	Wi-Fi 5G(Band 4) 1g(W/kg)			
GSM850 (GPRS 4slots)	Front	0.323	0.828	0.772	0.009	1.151	1.6
	Back	0.061	0.626	0.570	0.007	0.687	
	Left	0.002	0.005	0.004	0.004	0.007	
	Right	0.005	0.022	0.013	0.008	0.027	
	Top	0.003	0.016	0.011	0.002	0.019	
	Bottom	0.022	0.008	0.005	0.003	0.030	
GSM1900 (GPRS 4slots)	Front	0.050	0.828	0.772	0.009	0.878	
	Back	0.007	0.626	0.570	0.007	0.633	
	Left	0.002	0.005	0.004	0.004	0.007	
	Right	0.003	0.022	0.013	0.008	0.025	
	Top	0.002	0.016	0.011	0.002	0.018	
	Bottom	0.010	0.008	0.005	0.003	0.018	
WCDMA Band 2	Front	0.378	0.828	0.772	0.009	1.206	
	Back	0.153	0.626	0.570	0.007	0.779	
	Left	0.004	0.005	0.004	0.004	0.009	
	Right	0.007	0.022	0.013	0.008	0.029	
	Top	0.002	0.016	0.011	0.002	0.018	
	Bottom	0.018	0.008	0.005	0.003	0.026	
WCDMA Band 4	Front	0.467	0.828	0.772	0.009	1.295	
	Back	0.203	0.626	0.570	0.007	0.829	
	Left	0.005	0.005	0.004	0.004	0.010	
	Right	0.010	0.022	0.013	0.008	0.032	
	Top	0.004	0.016	0.011	0.002	0.020	
	Bottom	0.026	0.008	0.005	0.003	0.034	
WCDMA Band 5	Front	0.413	0.828	0.772	0.009	1.241	
	Back	0.170	0.626	0.570	0.007	0.796	
	Left	0.006	0.005	0.004	0.004	0.011	
	Right	0.008	0.022	0.013	0.008	0.030	
	Top	0.003	0.016	0.011	0.002	0.019	
	Bottom	0.021	0.008	0.005	0.003	0.029	

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	0.395	0.828	0.772	0.009	1.223	1.6
	Back		0.159	0.626	0.570	0.007	0.785	
	Left		0.003	0.005	0.004	0.004	0.008	
	Right		0.005	0.022	0.013	0.008	0.027	
	Top		0.002	0.016	0.011	0.002	0.018	
	Bottom		0.016	0.008	0.005	0.003	0.024	
	Front	50%RB	0.370	0.828	0.772	0.009	1.198	
	Back		0.130	0.626	0.570	0.007	0.756	
	Left		0.005	0.005	0.004	0.004	0.010	
	Right		0.007	0.022	0.013	0.008	0.029	
	Top		0.033	0.016	0.011	0.002	0.049	
	Bottom		0.013	0.008	0.005	0.003	0.021	
LTE Band 4	Front	1RB	0.370	0.828	0.772	0.009	1.198	
	Back		0.148	0.626	0.570	0.007	0.774	
	Left		0.004	0.005	0.004	0.004	0.009	
	Right		0.005	0.022	0.013	0.008	0.027	
	Top		0.002	0.016	0.011	0.002	0.018	
	Bottom		0.016	0.008	0.005	0.003	0.024	
	Front	50%RB	0.352	0.828	0.772	0.009	1.180	
	Back		0.128	0.626	0.570	0.007	0.754	
	Left		0.003	0.005	0.004	0.004	0.008	
	Right		0.005	0.022	0.013	0.008	0.027	
	Top		0.002	0.016	0.011	0.002	0.018	
	Bottom		0.013	0.008	0.005	0.003	0.021	
LTE Band 5	Front	1RB	0.401	0.828	0.772	0.009	1.229	
	Back		0.165	0.626	0.570	0.007	0.791	
	Left		0.005	0.005	0.004	0.004	0.010	
	Right		0.008	0.022	0.013	0.008	0.030	
	Top		0.003	0.016	0.011	0.002	0.019	
	Bottom		0.020	0.008	0.005	0.003	0.028	
	Front	50%RB	0.390	0.828	0.772	0.009	1.218	
	Back		0.154	0.626	0.570	0.007	0.780	
	Left		0.006	0.005	0.004	0.004	0.011	
	Right		0.007	0.022	0.013	0.008	0.029	
	Top		0.003	0.016	0.011	0.002	0.019	
	Bottom		0.015	0.008	0.005	0.003	0.023	
LTE Band 7	Front	1RB	0.210	0.828	0.772	0.009	1.038	
	Back		0.079	0.626	0.570	0.007	0.705	
	Left		0.005	0.005	0.004	0.004	0.010	
	Right		0.004	0.022	0.013	0.008	0.026	
	Top		0.003	0.016	0.011	0.002	0.019	
	Bottom		0.013	0.008	0.005	0.003	0.021	
	Front	50%RB	0.190	0.828	0.772	0.009	1.018	
	Back		0.069	0.626	0.570	0.007	0.695	
	Left		0.004	0.005	0.004	0.004	0.009	
	Right		0.003	0.022	0.013	0.008	0.025	
	Top		0.002	0.016	0.011	0.002	0.018	
	Bottom		0.009	0.008	0.005	0.003	0.017	

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 38	Front	1RB	0.076	0.828	0.772	0.009	0.904	1.6
	Back		0.010	0.626	0.570	0.007	0.636	
	Left		0.002	0.005	0.004	0.004	0.007	
	Right		0.003	0.022	0.013	0.008	0.025	
	Top		0.002	0.016	0.011	0.002	0.018	
	Bottom		0.006	0.008	0.005	0.003	0.014	
	Front	50%RB	0.066	0.828	0.772	0.009	0.894	
	Back		0.008	0.626	0.570	0.007	0.634	
	Left		0.004	0.005	0.004	0.004	0.009	
	Right		0.003	0.022	0.013	0.008	0.025	
	Top		0.002	0.016	0.011	0.002	0.018	
	Bottom		0.005	0.008	0.005	0.003	0.013	
LTE Band 41	Front	1RB	0.081	0.828	0.772	0.009	0.909	
	Back		0.010	0.626	0.570	0.007	0.636	
	Left		0.003	0.005	0.004	0.004	0.008	
	Right		0.003	0.022	0.013	0.008	0.025	
	Top		0.002	0.016	0.011	0.002	0.018	
	Bottom		0.008	0.008	0.005	0.003	0.016	
	Front		0.022	0.828	0.772	0.009	0.850	
	Front		0.007	0.828	0.772	0.009	0.835	
	Front		0.020	0.828	0.772	0.009	0.848	
	Front		0.006	0.828	0.772	0.009	0.834	
	Front		0.069	0.828	0.772	0.009	0.897	
	Back		0.007	0.626	0.570	0.007	0.633	
	Left	50%RB	0.004	0.005	0.004	0.004	0.009	
	Right		0.003	0.022	0.013	0.008	0.025	
	Top		0.002	0.016	0.011	0.002	0.018	
	Bottom		0.006	0.008	0.005	0.003	0.014	

12 Measurement uncertainty evaluation

12.1 Measurement uncertainty evaluation for SAR test

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

Measurement Uncertainty evaluation for SAR test								
Uncertainty Component	Tol. (±%)	Prob. Dist.	Div.	C _i (1g)	C _i (10g)	1g U _i (±%)	10g U _i (±%)	V _i
measurement system								
Probe Calibration	5.8	N	1	1	1	5.8	5.8	∞
Axial Isotropy	3.5	R	$\sqrt{3}$	$(1-C_p)^{1/2}$	$(1-C_p)^{1/2}$	1.43	1.43	∞
Hemispherical Isotropy	5.9	R	$\sqrt{3}$	$\sqrt{C_p}$	$\sqrt{C_p}$	2.41	2.41	∞
Boundary Effect	1	R	$\sqrt{3}$	1	1	0.58	0.58	∞
Linearity	4.7	R	$\sqrt{3}$	1	1	2.71	2.71	∞
system Detection Limits	1	R	$\sqrt{3}$	1	1	0.58	0.58	∞
Modulation response	3	N	1	1	1	3.00	3.00	∞
Readout Electronics	0.5	N	1	1	1	0.50	0.50	∞
Response Time	0	R	$\sqrt{3}$	1	1	0.00	0.00	∞
Integration Time	1.4	R	$\sqrt{3}$	1	1	0.81	0.81	∞
RF Ambient Conditions-Noise	3	R	$\sqrt{3}$	1	1	1.73	1.73	∞
RF Ambient Conditions-Reflections	3	R	$\sqrt{3}$	1	1	1.73	1.73	∞
Probe Positioner Mechanical Tolerance	1.4	R	$\sqrt{3}$	1	1	0.81	0.81	∞
Probe positioning with respect to Phantom Shell	1.4	R	$\sqrt{3}$	1	1	0.81	0.81	∞
Extrapolation, interpolation and Integration Algorithms for Max.SAR Evaluation	2.3	R	$\sqrt{3}$	1	1	1.33	1.33	∞
Test sample Related								
Test Sample Positioning	2.6	N	1	1	1	2.60	2.60	11
Device Holder Uncertainty	3	N	1	1	1	3.00	3.00	7
Output Power Variation-SAR drift measurement	5	R	$\sqrt{3}$	1	1	2.89	2.89	∞
SAR scaling	2	R	$\sqrt{3}$	1	1	1.15	1.15	∞

Phantom and Tissue Parameters								
Phantom Uncertainty (shape and thickness tolerances)	4	R	$\sqrt{3}$	1	1	2.31	2.31	∞
Uncertainty in SAR correction for deviation (in permittivity and conductivity)	2	N	1	1	0.84	2.00	1.68	∞
Liquid conductivity (meas.)	2.5	N	1	0.64	0.43	1.60	1.08	5
Liquid conductivity (target.)	5	R	$\sqrt{3}$	0.64	0.43	1.85	1.24	5
Liquid Permittivity (meas.)	2.5	N	1	0.60	0.49	1.50	1.23	∞
Liquid Permittivity (target.)	5	R	$\sqrt{3}$	0.60	0.49	1.73	1.42	∞
Combined Standard Uncertainty		Rss				10.63	10.54	
Expanded Uncertainty{95% CONFIDENCE INTERVAL}		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	2023-11-09	2026-11-08
☒	SATIMO	COMOSAR 835 MHz REFERENCE DIPOLE	SID835	SN 14/13 DIP0G835-235	2023-11-09	2026-11-08
☒	SATIMO	COMOSAR 900 MHz REFERENCE DIPOLE	SID900	SN 14/13 DIP0G900-231	2023-11-09	2026-11-08
☒	SATIMO	COMOSAR 1800 MHz REFERENCE DIPOLE	SID1800	SN 14/13 DIP1G800-232	2023-11-09	2026-11-08
☐	SATIMO	COMOSAR 1900 MHz REFERENCE DIPOLE	SID1900	SN 14/13 DIP1G900-236	2023-11-09	2026-11-08
☒	SATIMO	COMOSAR 2000 MHz REFERENCE DIPOLE	SID2000	SN 14/13 DIP2G000-237	2023-11-09	2026-11-08
☒	SATIMO	COMOSAR 2450 MHz REFERENCE DIPOLE	SID2450	SN 14/13 DIP2G450-238	2023-11-09	2026-11-08
☒	SATIMO	COMOSAR 2600 MHz REFERENCE DIPOLE	SID2600	SN 28/14 DIP2G600-327	2023-11-09	2026-11-08
☒	SATIMO	Software	OPENSAR	N/A	N/A	N/A
☒	SATIMO	Phantom	COMOSAR IEEE SAM PHANTOM	SN 14/13 SAM99	N/A	N/A
☒	R & S	Universal Radio Communication Tester	CMU 200	119733	2023-11-02	2024-11-01
☒	R & S	Universal Radio Communication Tester	CMW500	144459	2023-11-02	2024-11-01
☒	R & S	UXM5G Wireless Test Platform	E7515B	MY60192341	2023-11-02	2024-11-01
☒	HP	Network Analyser	8753D	3410A08889	2023-11-02	2024-11-01
☒	HP	Signal Generator	E4421B	GB39340770	2023-11-02	2024-11-01
☒	Keithley	Multimeter	Keithley 2000	4014539	2023-11-02	2024-11-01
☒	SATIMO	Amplifier	Power Amplifier	MODU-023-A-0004	2023-11-02	2024-11-01
☒	Agilent	Power Meter	E4418B	GB43312909	2023-11-02	2024-11-01
☒	Agilent	Power Meter Sensor	E4412A	MY41500046	2023-11-02	2024-11-01

Annex A: System performance verification

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

Annex B: Measurement results

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

Annex C: Calibration reports

(Please See the Calibration reports of annex C.)

	Annex A: System Check
	Tested Model : P10003L
	Report Number: WSCT-ANAB-R&E240900047A-SAR

I. RESULTS

<u>TYPE</u>	<u>BAND</u>	<u>PARAMETERS</u>
Validation	CW835	<u>Measurement 1</u> : Validation Plane with Dipole device position on Middle Channel in CW mode
Validation	CW1800	<u>Measurement 2</u> : Validation Plane with Dipole device position on Middle Channel in CW mode
Validation	CW1900	<u>Measurement 3</u> : Validation Plane with Dipole device position on Middle Channel in CW mode
Validation	CW2450	<u>Measurement 4</u> : Validation Plane with Dipole device position on Middle Channel in CW mode
Validation	CW260	<u>Measurement 5</u> : Validation Plane with Dipole device position on Middle Channel in CW mode

MEASUREMENT 1

BODY

Type: Validation measurement (Complete)

Date of measurement: 21/09/2024

Measurement duration: 11 minutes 54 seconds

A. Experimental conditions.

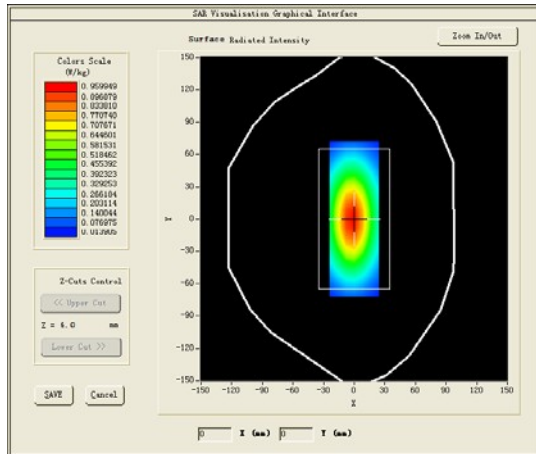
<u>Area Scan</u>	<u>dx=8mm dy=8mm</u>
<u>ZoomScan</u>	<u>5x5x7, dx=8mm dy=8mm</u> <u>dz=5mm, Complete</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Dipole</u>
<u>Band</u>	<u>CW835</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>CW (Crest factor: 1.0)</u>

B. SAR Measurement Results

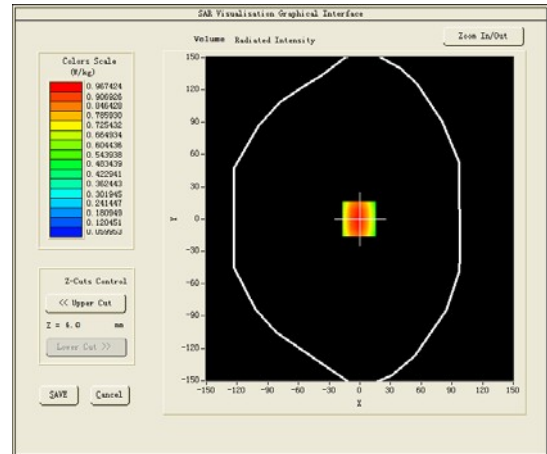
Middle Band SAR (Channel -1):

Frequency (MHz)	835.000000
Relative permittivity (real part)	53.927799
Relative permittivity (imaginary part)	21.281300
Conductivity (S/m)	0.987216
Variation (%)	0.120000

SURFACE SAR



VOLUME SAR

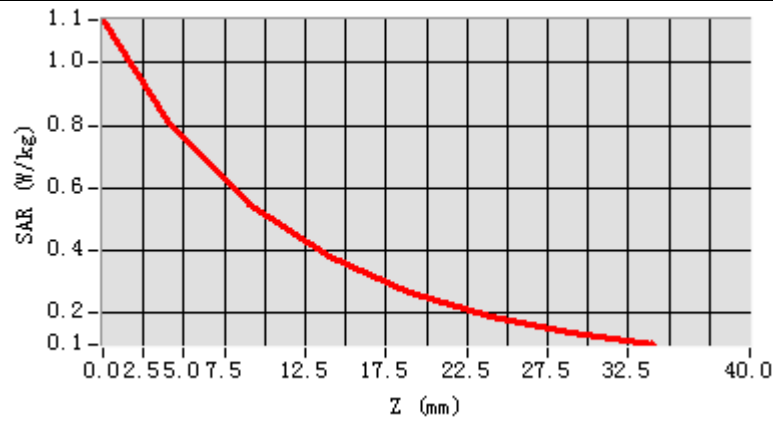


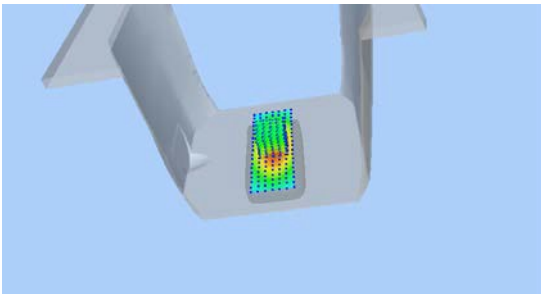
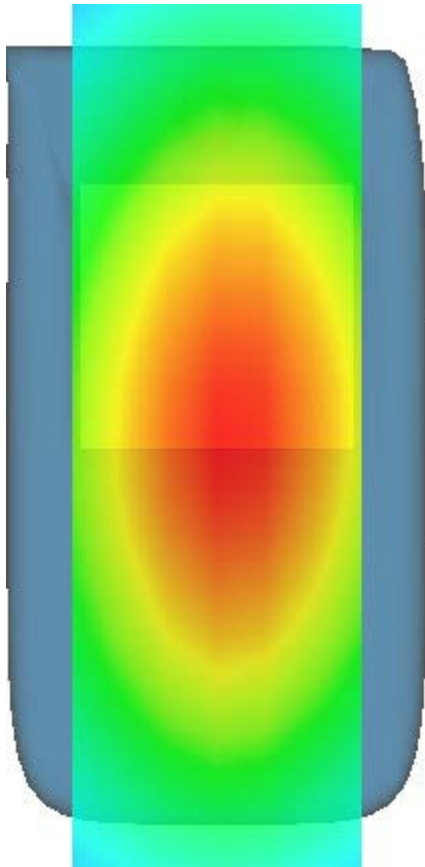
Maximum location: X=-1.00, Y=0.00

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 2

BODY

Type: Validation measurement (Complete)

Date of measurement: 23/09/2024

Measurement duration: 11 minutes 22 seconds

A. Experimental conditions.

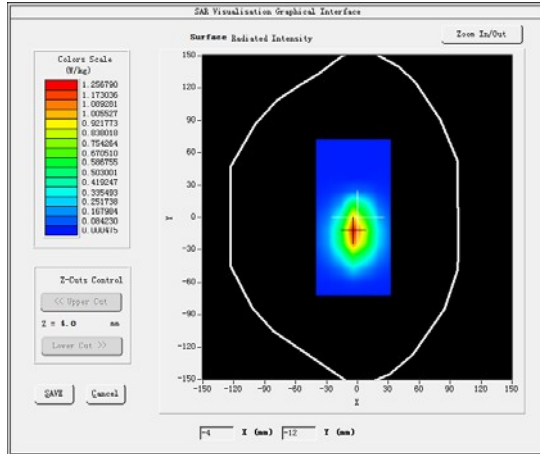
<u>Area Scan</u>	<u>dx=8mm dy=8mm</u>
<u>ZoomScan</u>	<u>5x5x7, dx=8mm dy=8mm</u> <u>dz=5mm, Complete</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Dipole</u>
<u>Band</u>	<u>CW1800</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>CW (Crest factor: 1.0)</u>

B. SAR Measurement Results

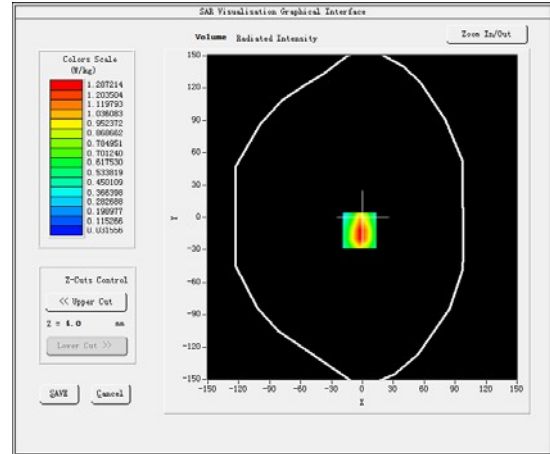
Middle Band SAR (Channel -1):

Frequency (MHz)	1800.000000
Relative permittivity (real part)	53.112099
Relative permittivity (imaginary part)	15.286700
Conductivity (S/m)	1.528670
Variation (%)	-0.410000

SURFACE SAR



VOLUME SAR

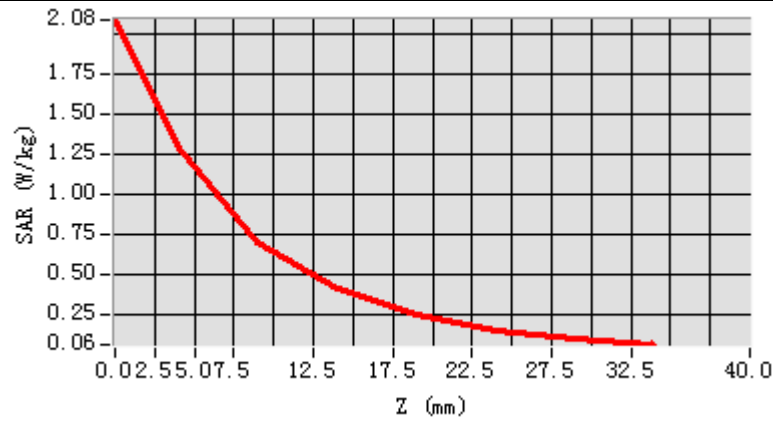


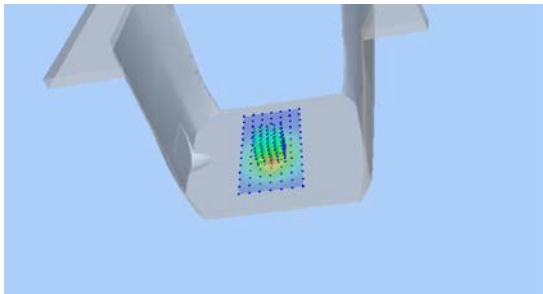
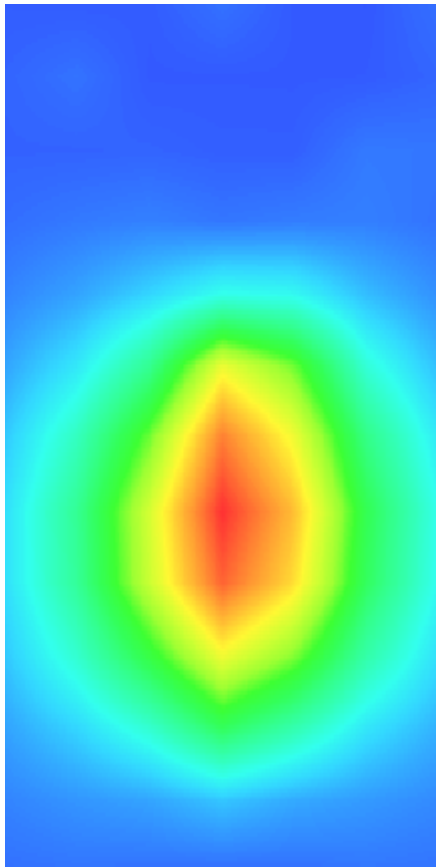
Maximum location: X=-0.00, Y=-0.00

SAR Peak: 7.72 W/kg

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

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	7.7941	4.9087	2.6873	1.5154	0.8724	0.5075	0.2958



3D screen shot	Hot spot position
	

MEASUREMENT 3

BODY

Type: Validation measurement (Complete)

Date of measurement: 25/09/2024

Measurement duration: 14 minutes 21 seconds

A. Experimental conditions.

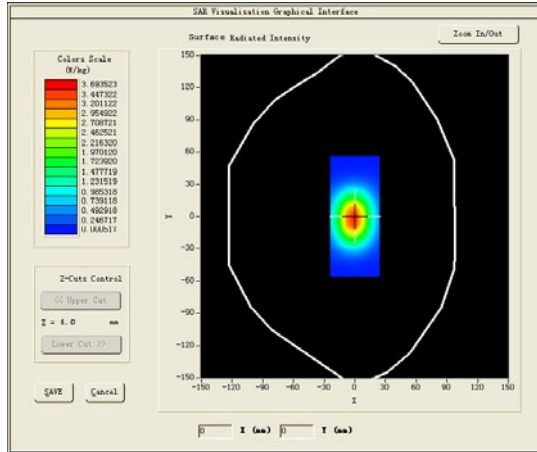
<u>Area Scan</u>	<u>dx=8mm dy=8mm</u>
<u>ZoomScan</u>	<u>5x5x7, dx=8mm dy=8mm</u> <u>dz=5mm, Complete</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Dipole</u>
<u>Band</u>	<u>CW1900</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>CW (Crest factor: 1.0)</u>

B. SAR Measurement Results

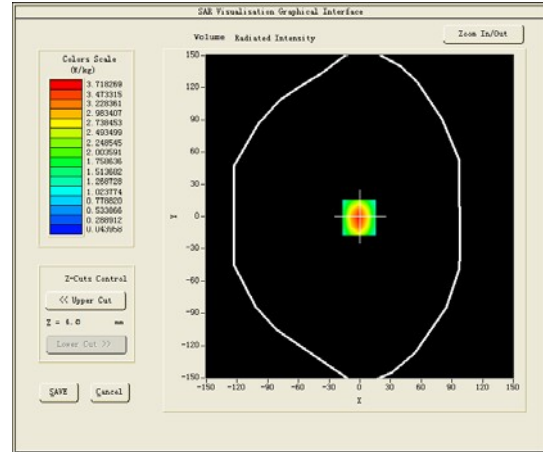
Middle Band SAR (Channel -1):

Frequency (MHz)	1900.000000
Relative permittivity (real part)	53.365299
Relative permittivity (imaginary part)	14.757600
Conductivity (S/m)	1.557747
Variation (%)	-0.450000

SURFACE SAR



VOLUME SAR

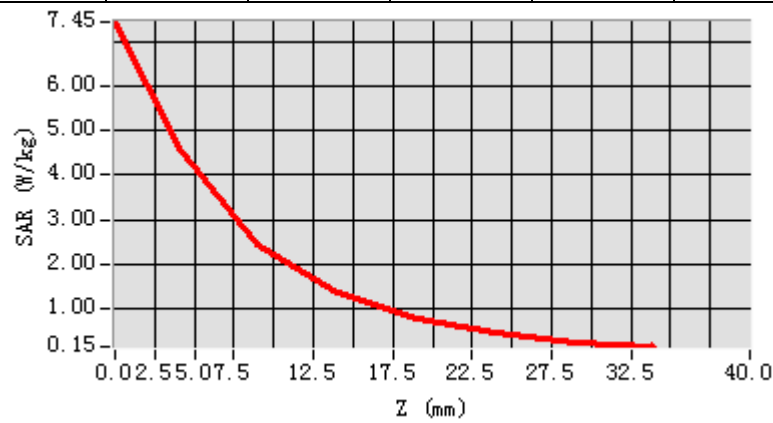


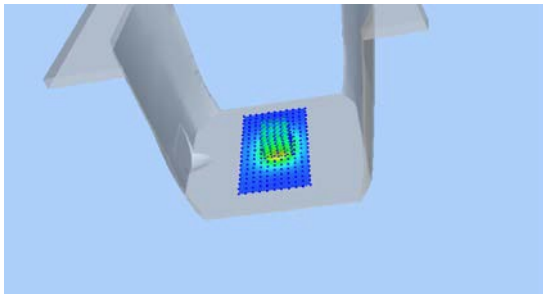
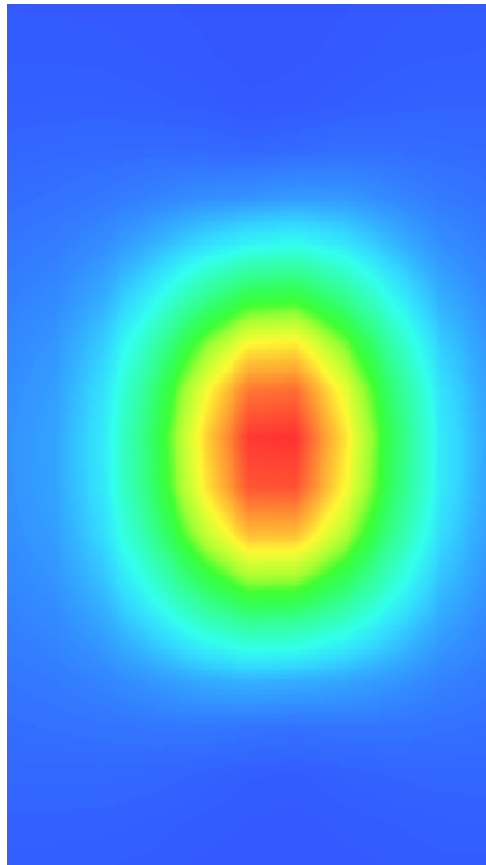
Maximum location: X=1.00, Y=-1.00

SAR Peak: 7.40 W/kg

SAR 10g (W/Kg)	2.093533
SAR 1g (W/Kg)	3.932904

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	5.7034	3.7183	2.1347	1.2560	0.7338	0.4260	0.2429



3D screen shot	Hot spot position
	

MEASUREMENT 4

BODY

Type: Validation measurement (Complete)

Date of measurement: 27/09/2024

Measurement duration: 13 minutes 46 seconds

A. Experimental conditions.

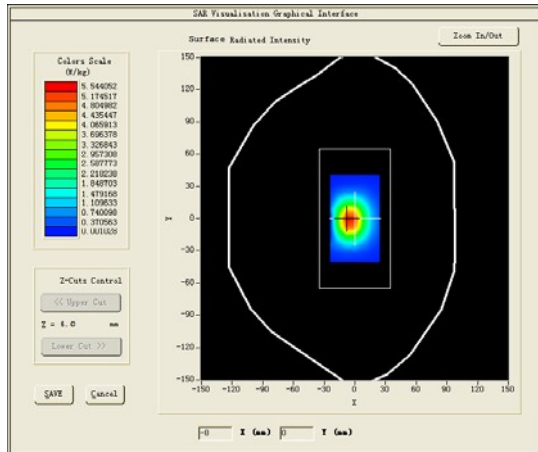
<u>Area Scan</u>	<u>dx=8mm dy=8mm</u>
<u>ZoomScan</u>	<u>5x5x7, dx=8mm dy=8mm</u> <u>dz=5mm, Complete</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Dipole</u>
<u>Band</u>	<u>CW2450</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>CW (Crest factor: 1.0)</u>

B. SAR Measurement Results

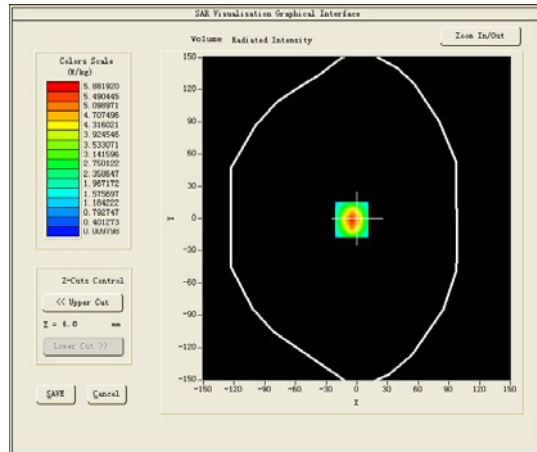
Middle Band SAR (Channel -1):

Frequency (MHz)	2450.000000
Relative permittivity (real part)	52.735699
Relative permittivity (imaginary part)	14.017300
Conductivity (S/m)	1.907910
Variation (%)	0.390000

SURFACE SAR



VOLUME SAR

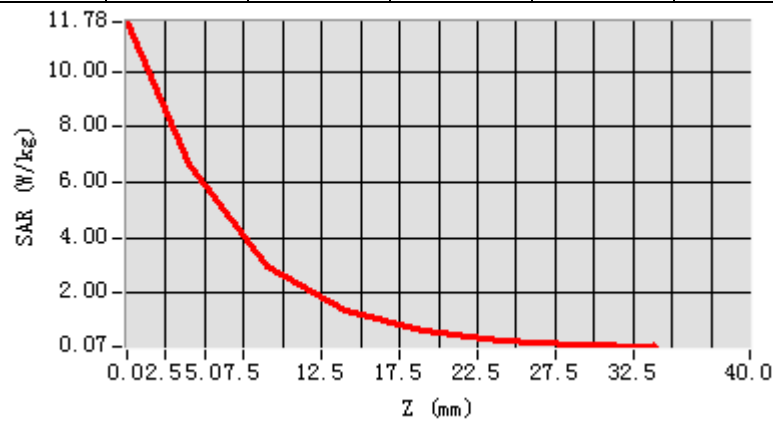


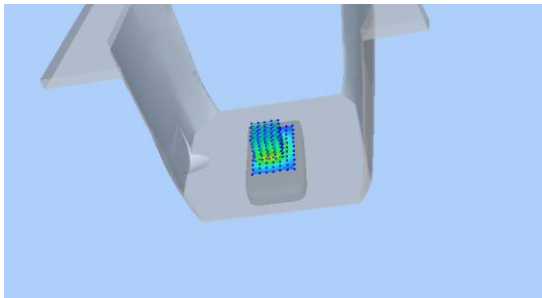
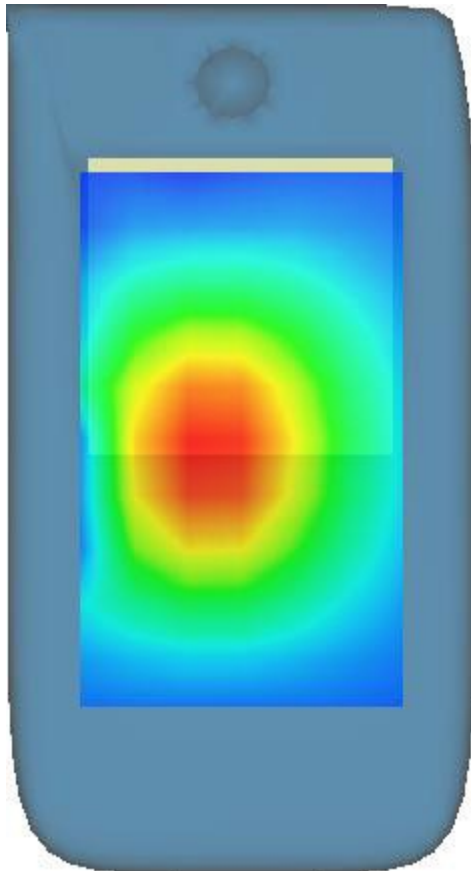
Maximum location: X=5.00, Y=-1.00

SAR Peak: 10.96 W/kg

SAR 10g (W/Kg)	2.333453
SAR 1g (W/Kg)	5.433343

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	10.2188	5.8819	2.7478	1.3151	0.6266	0.2969	0.1341



3D screen shot	Hot spot position
	

MEASUREMENT 5

BODY

Type: Validation measurement (Complete)

Date of measurement: 29/09/2024

Measurement duration: 29 minutes 30 seconds

A. Experimental conditions.

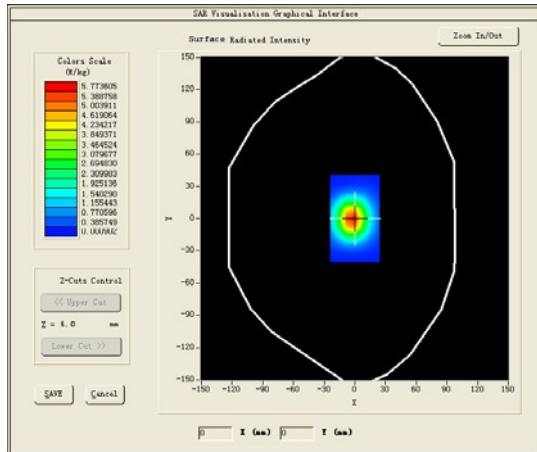
<u>Area Scan</u>	<u>dx=8mm dy=8mm</u>
<u>ZoomScan</u>	<u>8x8x7,dx=4mm dy=4mm</u> <u>dz=2mm,Complete</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Dipole</u>
<u>Band</u>	<u>CW2600</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>CW (Duty cycle:1.0)</u>

B. SAR Measurement Results

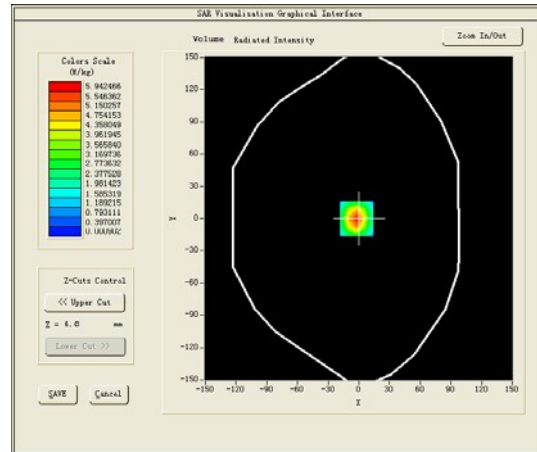
Middle Band SAR (Channel -1):

Frequency (MHz)	2600.000000
Relative permittivity (real part)	52.007900
Relative permittivity (imaginary part)	14.458500
Conductivity (S/m)	2.088450
Variation (%)	-0.220000

SURFACE SAR



VOLUME SAR

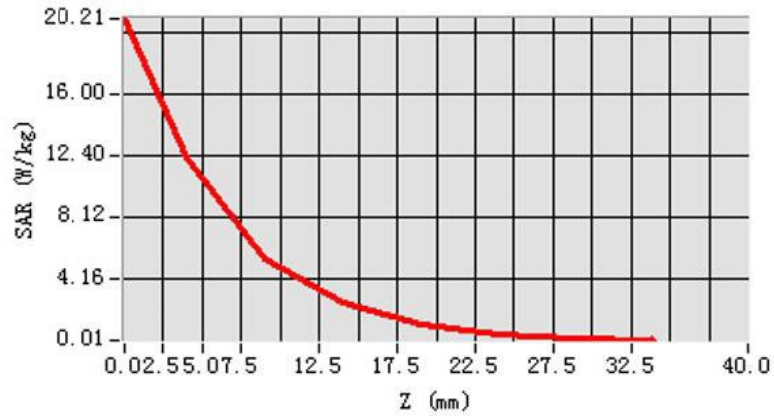


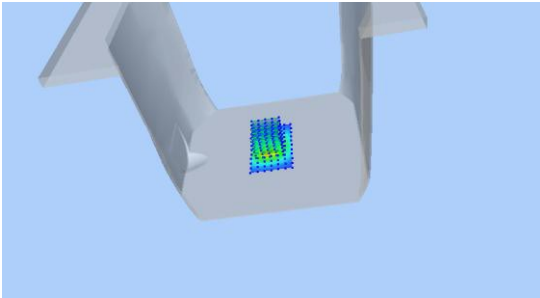
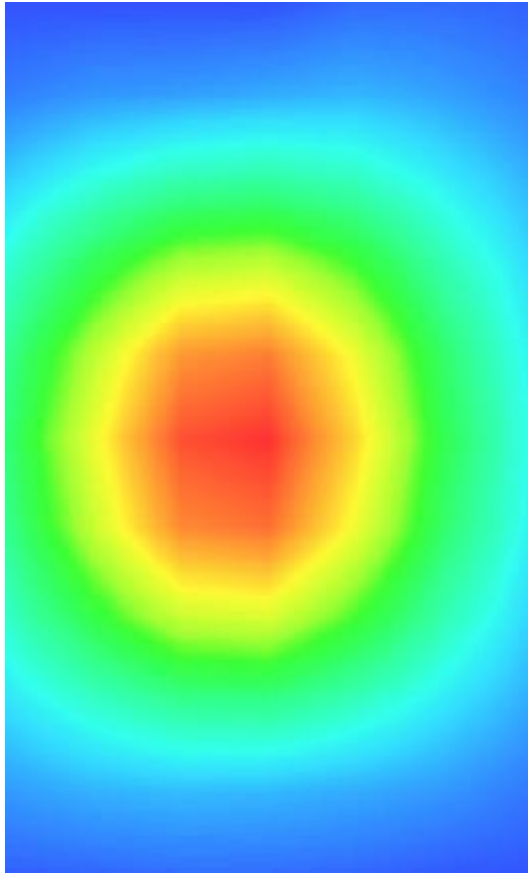
Maximum location: X=-2.00,Y=0.00

SAR Peak: 10.74 W/kg

SAR 10g (W/Kg)	2.559674
SAR 1g (W/Kg)	5.786435

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	10.4745	5.9425	2.6827	1.2126	0.5266	0.2069	0.0714



3D screen shot	Hot spot position
	



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Annex B: Measurement Results

Tested Model : P10003L

Report Number:

WSCT-ANAB-R&E240900047A-SAR

MEASUREMENT 1

Front-side-middle

Type: Phone measurement (Complete)

Date of measurement: 25/9/2024

Measurement duration: 6 minutes 55 seconds

A. Experimental conditions.

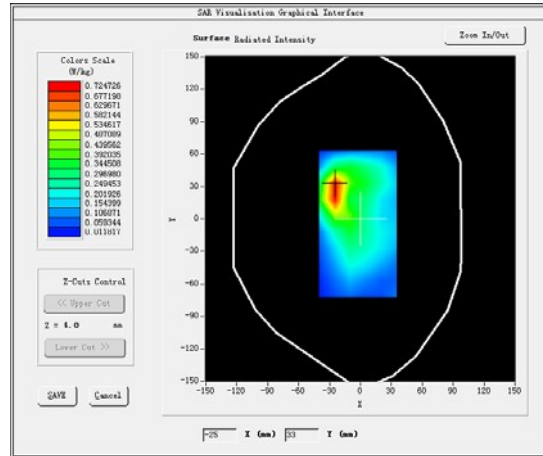
<u>Area Scan</u>	<u>dx=15mm dy=15mm</u>
<u>ZoomScan</u>	<u>7x7x7, dx=5mm</u> <u>dy=5mm dz=5mm, Complete</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Body</u>
<u>Band</u>	<u>Band2 UMTS</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>WCDMA (Crest factor: 1.0)</u>

B. SAR Measurement Results

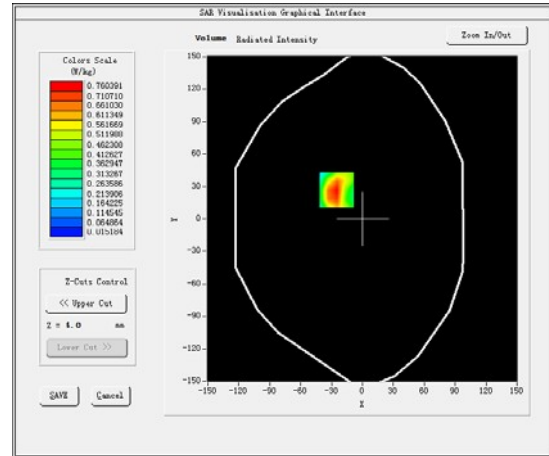
Middle Band SAR (Channel 9400):

Frequency (MHz)	1880.000000
Relative permittivity (real part)	40.000000
Relative permittivity (imaginary part)	12.930000
Conductivity (S/m)	1.400750
Variation (%)	-1.870000

SURFACE SAR



VOLUME SAR

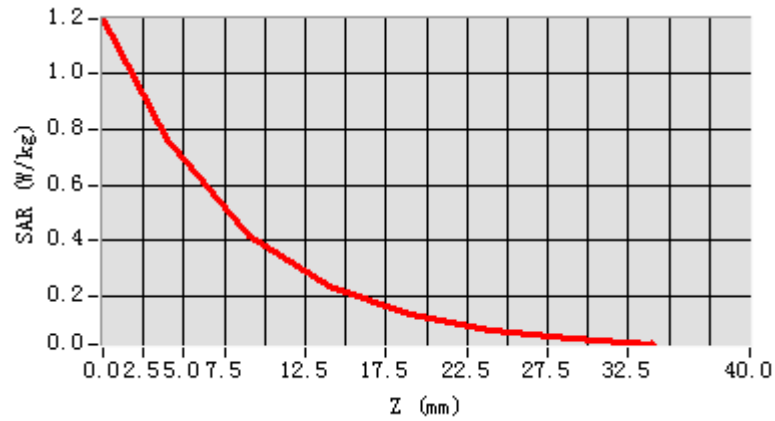


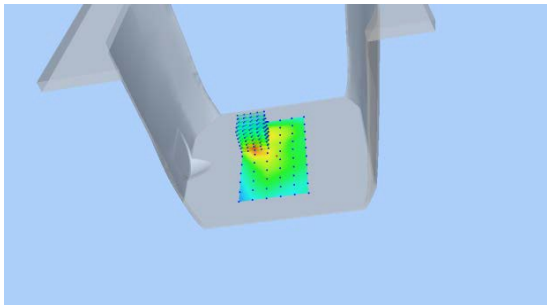
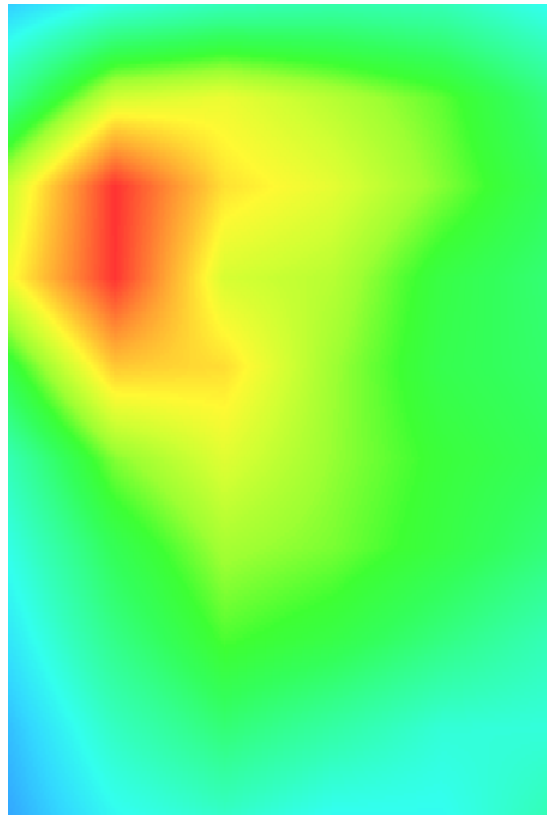
Maximum location: X=-25.00, Y=27.00

SAR Peak: 0.39 W/kg

SAR 10g (W/Kg)	0.161316
SAR1g (W/Kg)	0.372165

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	1.1960	0.7604	0.4196	0.2366	0.1341	0.0763	0.0450



3D screen shot	Hot spot position
	

MEASUREMENT 2

Front-side-middle

Type: Phone measurement (Complete)

Date of measurement: 23/9/2024

Measurement duration: 6 minutes 55 seconds

A. Experimental conditions.

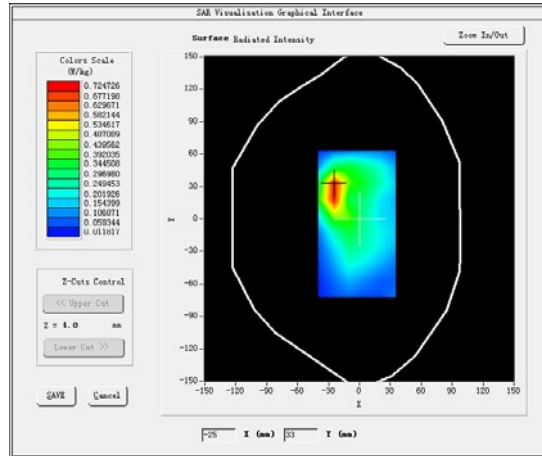
<u>Area Scan</u>	<u>dx=15mm dy=15mm</u>
<u>ZoomScan</u>	<u>7x7x7, dx=5mm</u> <u>dy=5mm dz=5mm, Complete</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Body</u>
<u>Band</u>	<u>Band4 _UMTS</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>WCDMA (Crest factor: 1.0)</u>

B. SAR Measurement Results

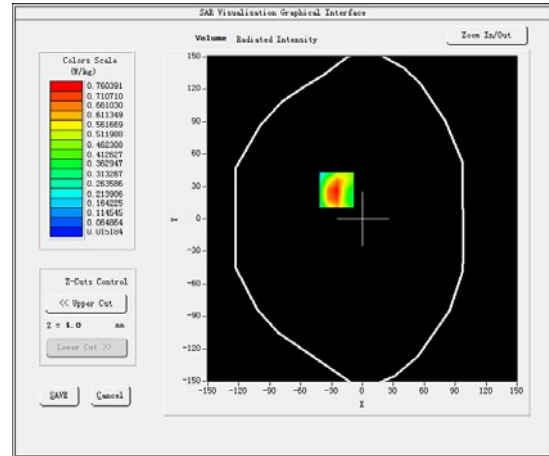
Middle Band SAR (Channel 1412):

Frequency (MHz)	1732.600000
Relative permittivity (real part)	40.000000
Relative permittivity (imaginary part)	12.930000
Conductivity (S/m)	1.400750
Variation (%)	-0.920000

SURFACE SAR



VOLUME SAR

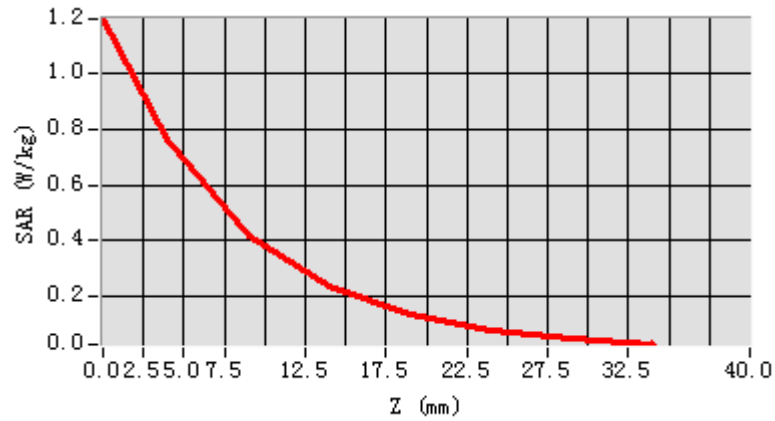


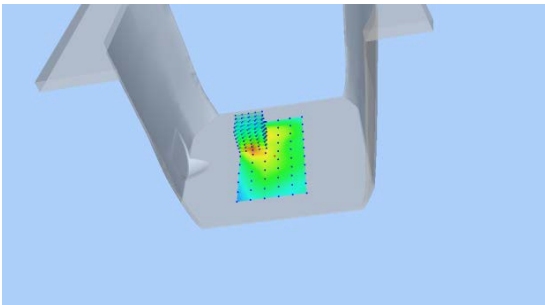
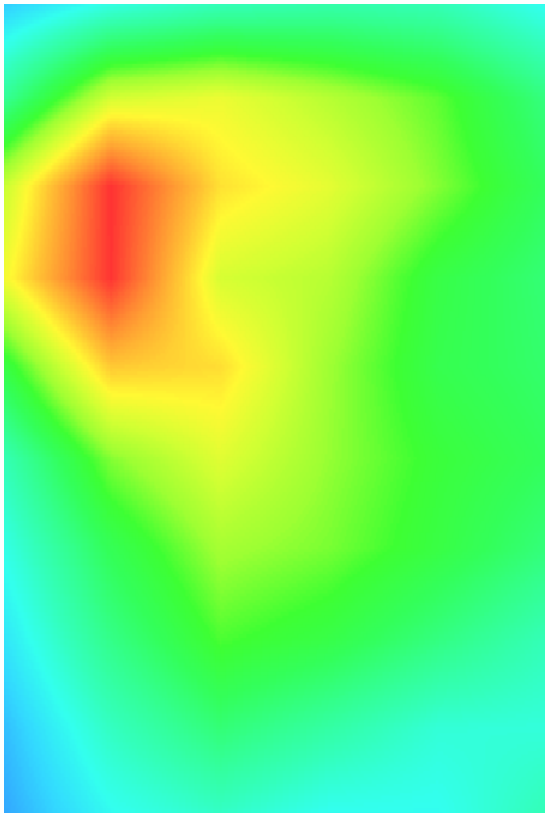
Maximum location: X=-25.00, Y=27.00

SAR Peak: 0.25 W/kg

SAR 10g (W/Kg)	0.187512
SAR1g (W/Kg)	0.435615

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	1.1960	0.7604	0.4196	0.2366	0.1341	0.0763	0.0450



3D screen shot	Hot spot position
	

MEASUREMENT 3

Front-side-middle

Type: Phone measurement (Complete)

Date of measurement: 21/9/2024

Measurement duration: 16 minutes 27 seconds

A. Experimental conditions.

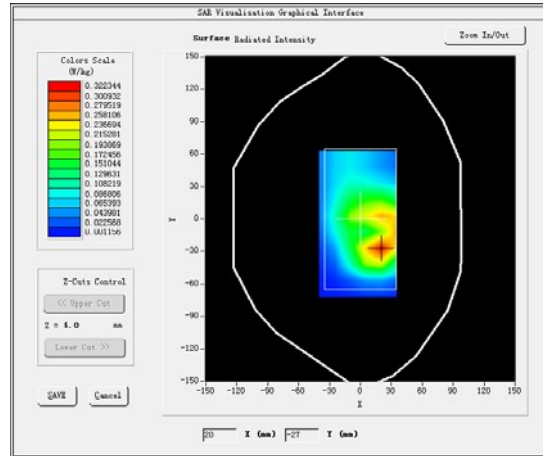
<u>Area Scan</u>	<u>dx=15mm dy=15mm</u>
<u>ZoomScan</u>	<u>7x7x7, dx=5mm</u> <u>dy=5mm dz=5mm, Complete</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Body</u>
<u>Band</u>	<u>Band5_WCDMA900</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>WCDMA (Crest factor: 1.0)</u>

B. SAR Measurement Results

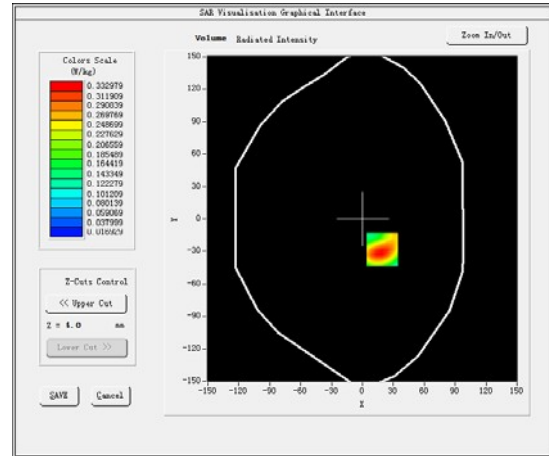
Middle Band SAR (Channel 4182):

Frequency (MHz)	836.400000
Relative permittivity (real part)	44.488998
Relative permittivity (imaginary part)	18.550301
Conductivity (S/m)	0.924423
Variation (%)	-2.710000

SURFACE SAR



VOLUME SAR

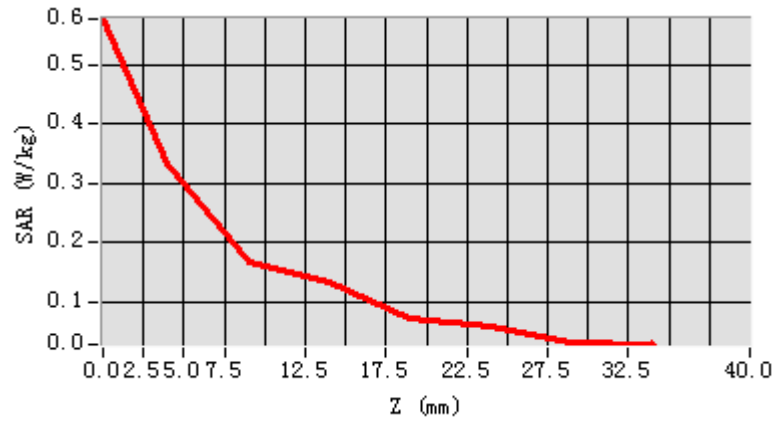


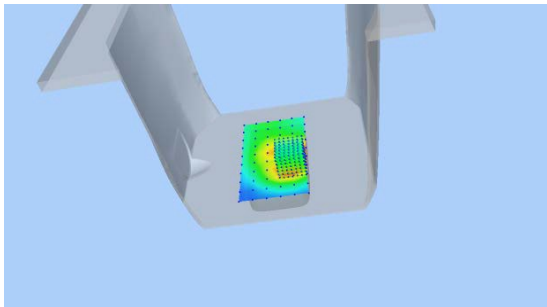
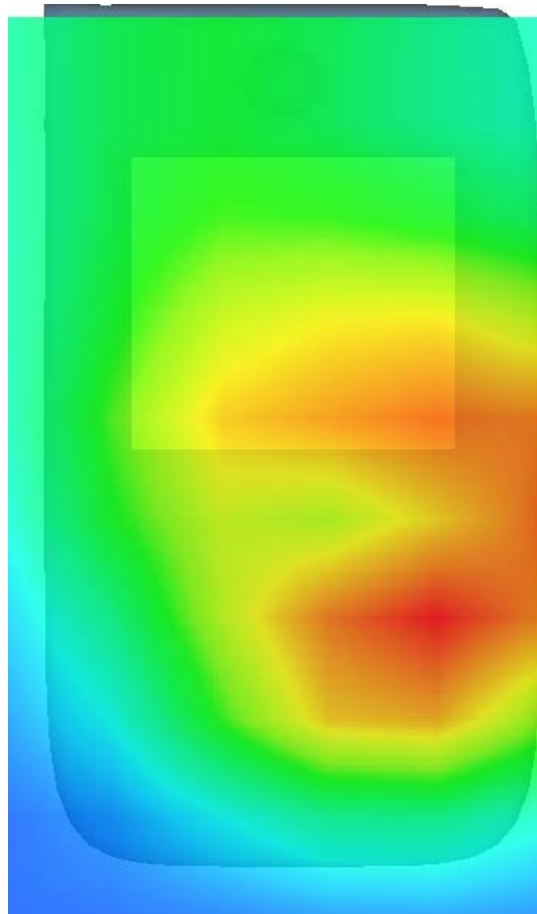
Maximum location: X=19.00, Y=-28.00

SAR Peak: 0.24 W/kg

SAR 10g (W/Kg)	0.209865
SAR1g (W/Kg)	0.406519

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.5781	0.3330	0.1661	0.1339	0.0710	0.0594	0.0313



3D screen shot	Hot spot position
	

MEASUREMENT 4

Front-side-20M-1RB#99-Middle

Type: Phone measurement (Complete)

Date of measurement: 25/9/2024

Measurement duration: 8 minutes 0 seconds

A. Experimental conditions.

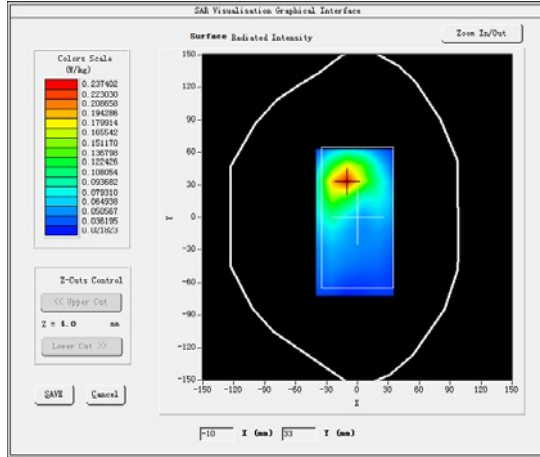
<u>Area Scan</u>	<u>dx=15mm dy=15mm</u>
<u>ZoomScan</u>	<u>5x5x7, dx=8mm</u> <u>dy=8mm dz=5mm, Complete</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Body</u>
<u>Band</u>	<u>LTE band 2</u>
<u>Channels</u>	Middle
<u>Signal</u>	<u>LTE (Crest factor: 1.0)</u>

B. SAR Measurement Results

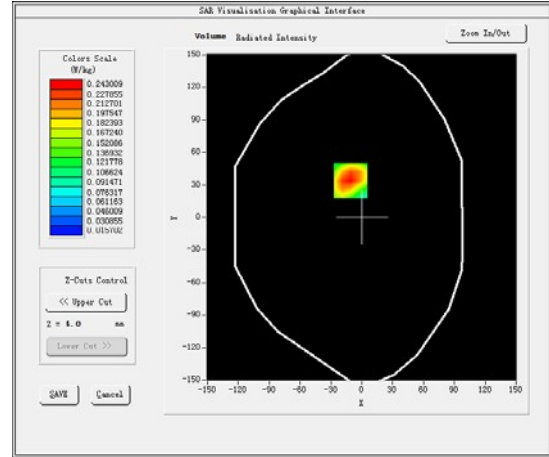
Middle Band SAR (Channel 18900):

Frequency (MHz)	1880.000000
Relative permittivity (real part)	53.143749
Relative permittivity (imaginary part)	14.735750
Conductivity (S/m)	1.559124
Variation (%)	1.470000

SURFACE SAR



VOLUME SAR

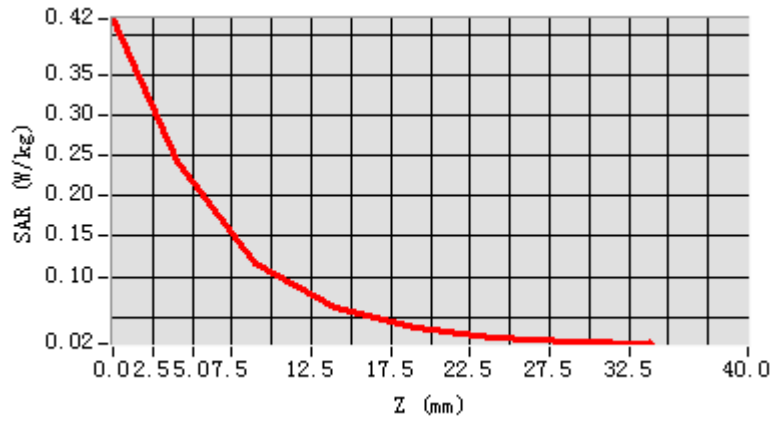


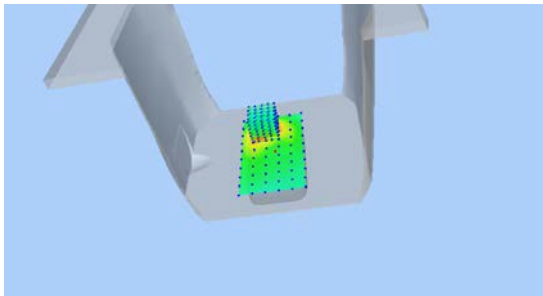
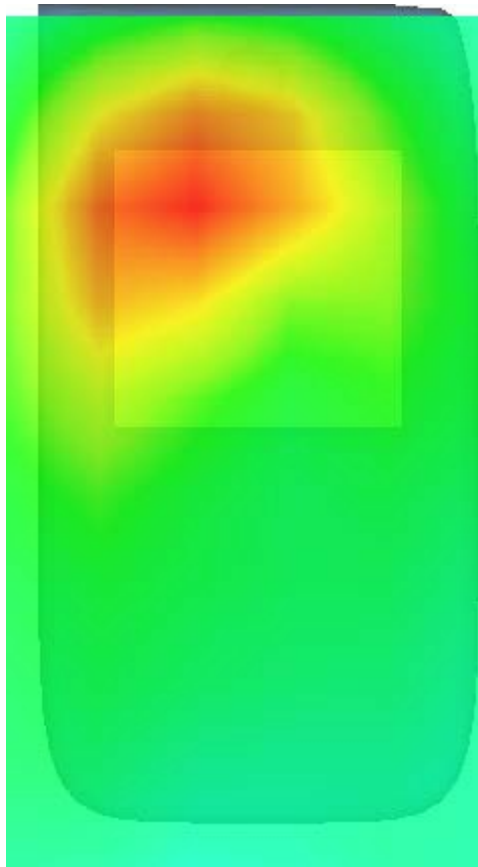
Maximum location: X=-11.00, Y=34.00

SAR Peak: 0.41 W/kg

SAR 10g (W/Kg)	0.150436
SAR1g (W/Kg)	0.359217

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.4194	0.2430	0.1171	0.0614	0.0359	0.0245	0.0194



3D screen shot	Hot spot position
	

MEASUREMENT 5

Front-side-20M-1RB#99-middle

Type: Phone measurement (Complete)

Date of measurement: 23/9/2024

Measurement duration: 6 minutes 53 seconds

A. Experimental conditions.

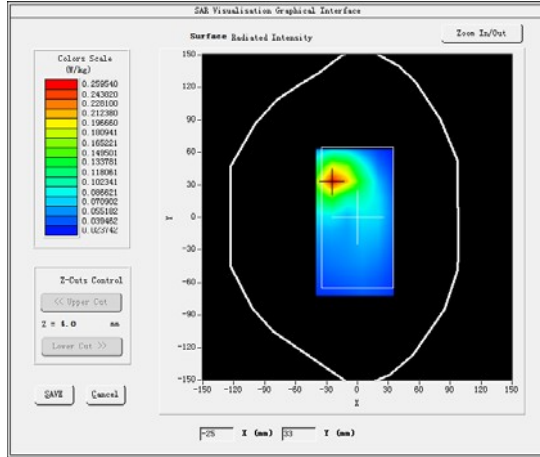
<u>Area Scan</u>	<u>dx=15mm dy=15mm</u>
<u>ZoomScan</u>	<u>5x5x7, dx=8mm</u> <u>dy=8mm dz=5mm, Complete</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Body</u>
<u>Band</u>	<u>LTE band 4</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>LTE (Crest factor: 1.0)</u>

B. SAR Measurement Results

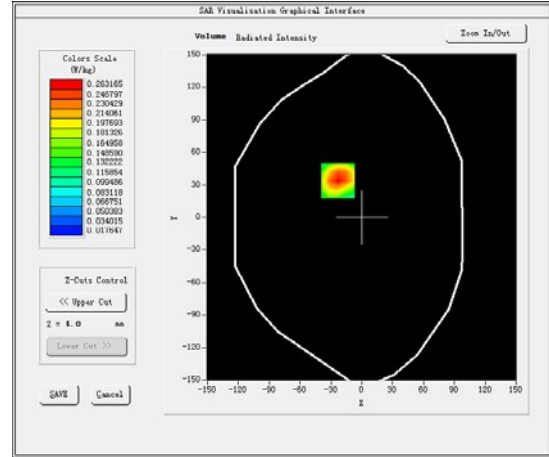
Middle Band SAR (Channel 20175):

Frequency (MHz)	1732.500000
Relative permittivity (real part)	54.198448
Relative permittivity (imaginary part)	15.770850
Conductivity (S/m)	1.517944
Variation (%)	-1.880000

SURFACE SAR



VOLUME SAR

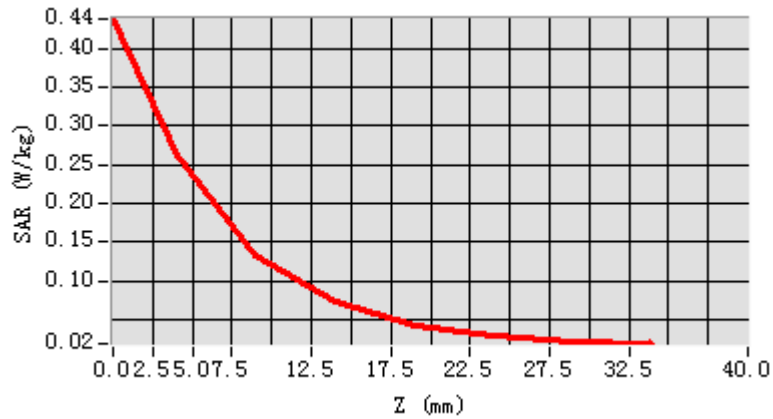


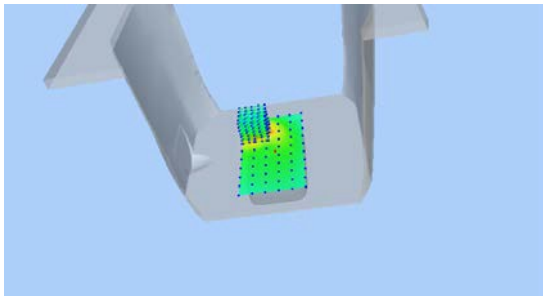
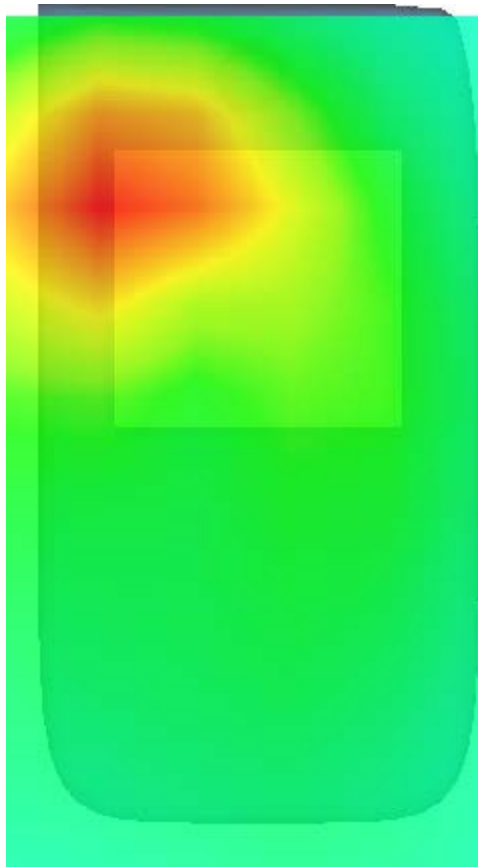
Maximum location: X = -23.00, Y = 34.00

SAR Peak: 0.17 W/kg

SAR 10g (W/Kg)	0.159324
SAR1g (W/Kg)	0.367145

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.4383	0.2632	0.1342	0.0730	0.0433	0.0293	0.0228



3D screen shot	Hot spot position
	

MEASUREMENT 6

Front-side-20M-1RB#99 -Middle

Type: Phone measurement (Complete)

Date of measurement: 21/9/2024

Measurement duration: 8 minutes 16 seconds

A. Experimental conditions.

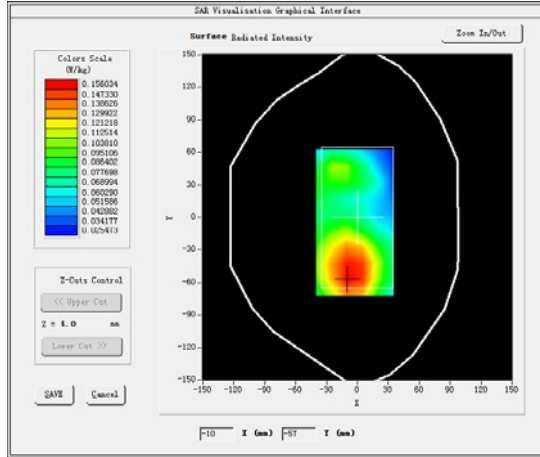
<u>Area Scan</u>	<u>dx=15mm dy=15mm</u>
<u>ZoomScan</u>	<u>5x5x7, dx=8mm</u> <u>dy=8mm dz=5mm, Complete</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Body</u>
<u>Band</u>	<u>LTE band 5</u>
<u>Channels</u>	Middle
<u>Signal</u>	<u>LTE (Crest factor: 1.0)</u>

B. SAR Measurement Results

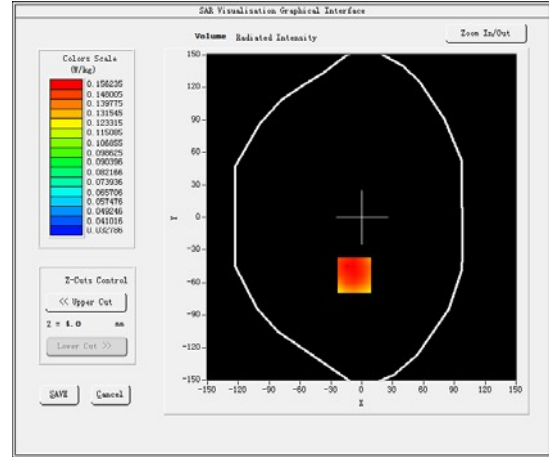
Middle Band SAR (Channel 20525):

Frequency (MHz)	836.500000
Relative permittivity (real part)	53.594849
Relative permittivity (imaginary part)	20.783649
Conductivity (S/m)	0.973945
Variation (%)	-0.370000

SURFACE SAR



VOLUME SAR

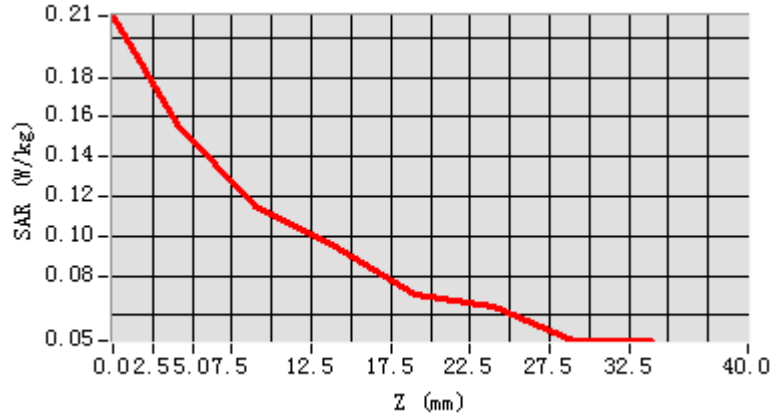


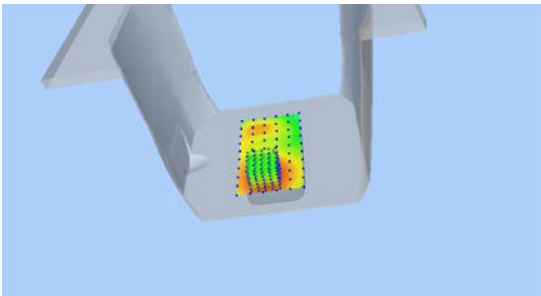
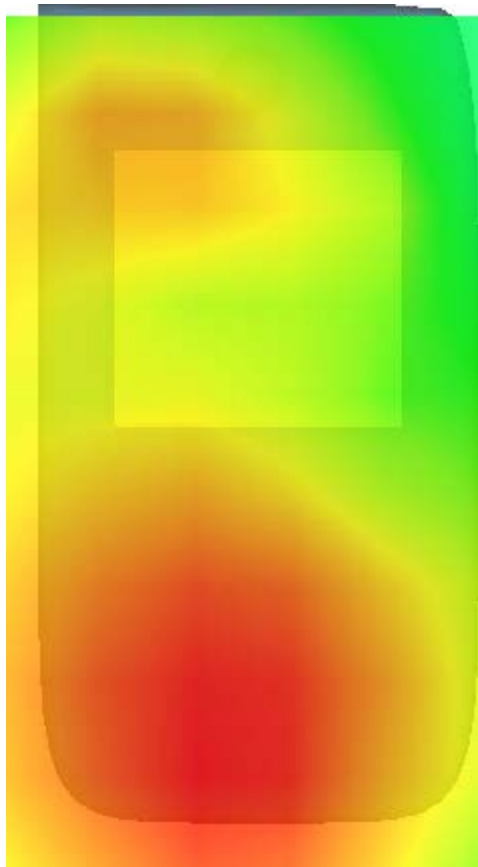
Maximum location: X=-7.00, Y=-53.00

SAR Peak: 0.31 W/kg

SAR 10g (W/Kg)	0.203681
SAR1g (W/Kg)	0.395724

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.2108	0.1562	0.1148	0.0951	0.0709	0.0643	0.0474



3D screen shot	Hot spot position
	

MEASUREMENT 7

Front-side-20M-1RB#99-middle-Low

Type: Phone measurement (Complete)

Date of measurement: 29/9/2024

Measurement duration: 8 minutes 0 seconds

A. Experimental conditions.

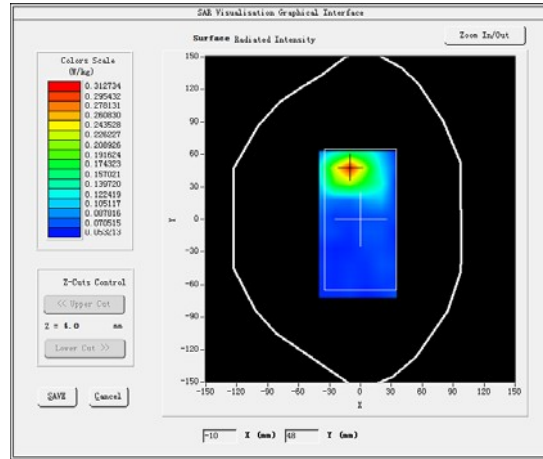
<u>Area Scan</u>	<u>dx=15mm dy=15mm</u>
<u>ZoomScan</u>	<u>5x5x7, dx=8mm</u> <u>dy=8mm dz=5mm, Complete</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Body</u>
<u>Band</u>	<u>LTE band 7</u>
<u>Channels</u>	Middle
<u>Signal</u>	<u>LTE (Crest factor: 1.0)</u>

B. SAR Measurement Results

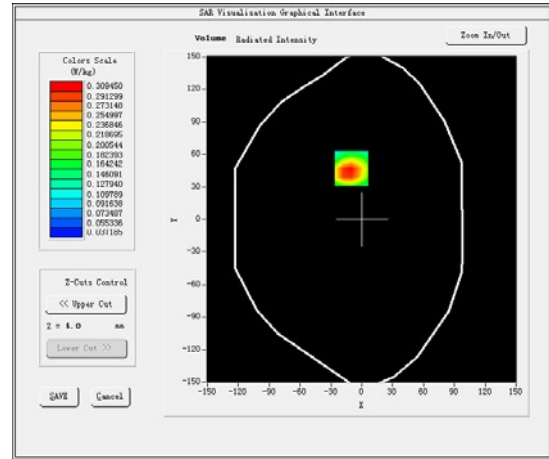
Middle Band SAR (Channel 21100):

Frequency (MHz)	2535.000000
Relative permittivity (real part)	52.697201
Relative permittivity (imaginary part)	15.070500
Conductivity (S/m)	2.101497
Variation (%)	-0.440000

SURFACE SAR



VOLUME SAR

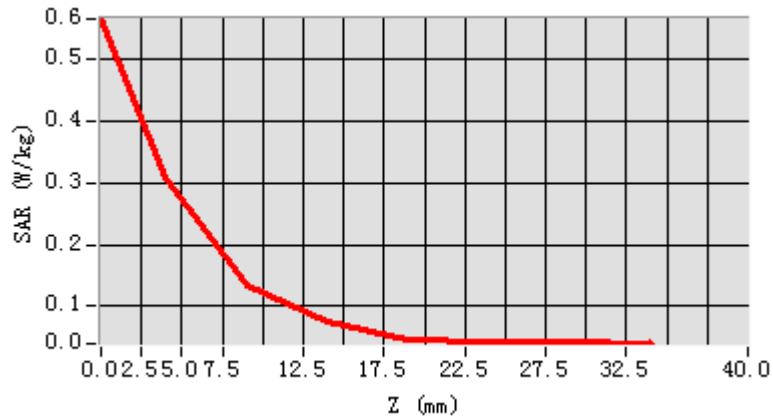


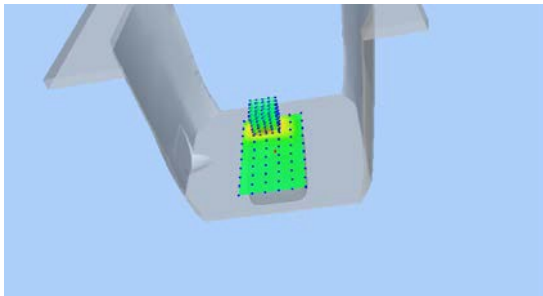
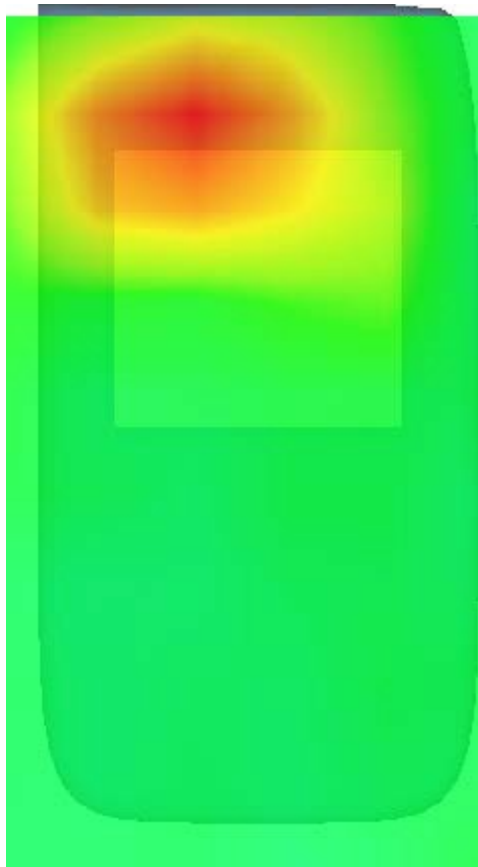
Maximum location: X=-10.00, Y=47.00

SAR Peak: 0.17 W/kg

SAR 10g (W/Kg)	0.079214
SAR1g (W/Kg)	0.196327

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.5665	0.3095	0.1338	0.0742	0.0451	0.0424	0.0412



3D screen shot	Hot spot position
	

MEASUREMENT 8

Front-side-20M-1RB#99-middle

Type: Phone measurement (Complete)

Date of measurement: 29/9/2024

Measurement duration: 10 minutes 45 seconds

A. Experimental conditions.

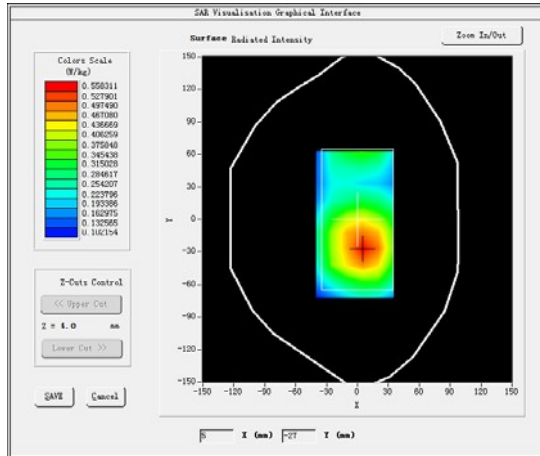
<u>Area Scan</u>	<u>dx=15mm dy=15mm</u>
<u>ZoomScan</u>	<u>5x5x7, dx=8mm</u> <u>dy=8mm dz=5mm, Complete</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Body</u>
<u>Band</u>	<u>LTE band 38</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>LTE (Crest factor: 1:1.58)</u>

B. SAR Measurement Results

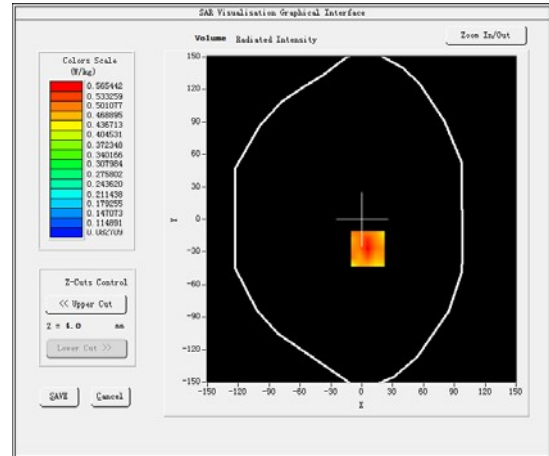
Middle Band SAR (Channel 38000):

Frequency (MHz)	2595.000000
Relative permittivity (real part)	39.920200
Relative permittivity (imaginary part)	13.553000
Conductivity (S/m)	1.953891
Variation (%)	-2.270000

SURFACE SAR



VOLUME SAR

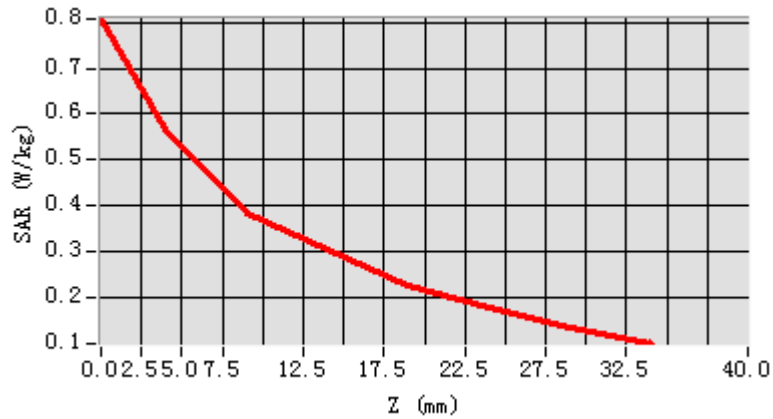


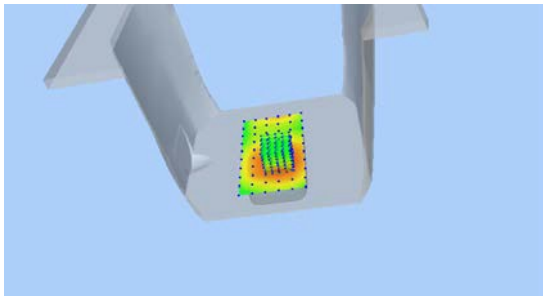
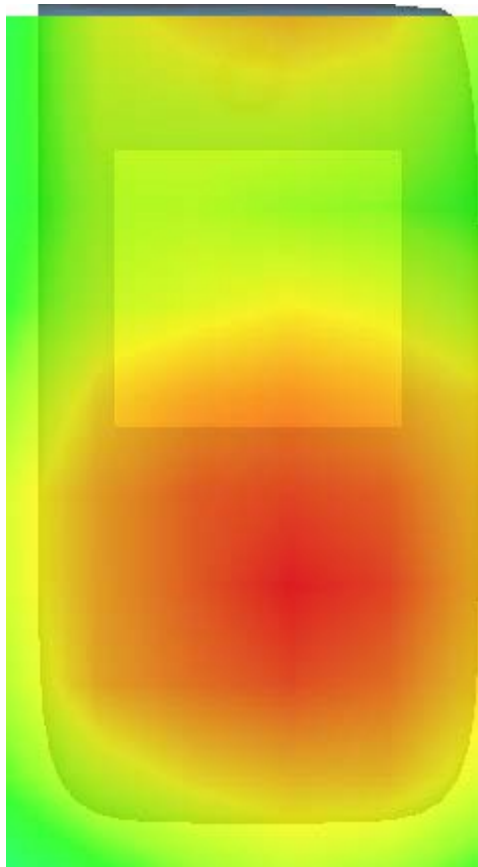
Maximum location: X=6.00, Y=-27.00

SAR Peak: 0.28 W / kg

SAR 10g (W/Kg)	0.028653
SAR1g (W/Kg)	0.070314

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.8077	0.5654	0.3809	0.3025	0.2263	0.1773	0.1341



3D screen shot	Hot spot position
	

MEASUREMENT 9

Front-side-20M-1RB#99-middle-Low

Type: Phone measurement (Complete)

Date of measurement: 29/9/2024

Measurement duration: 7 minutes 31 seconds

A. Experimental conditions.

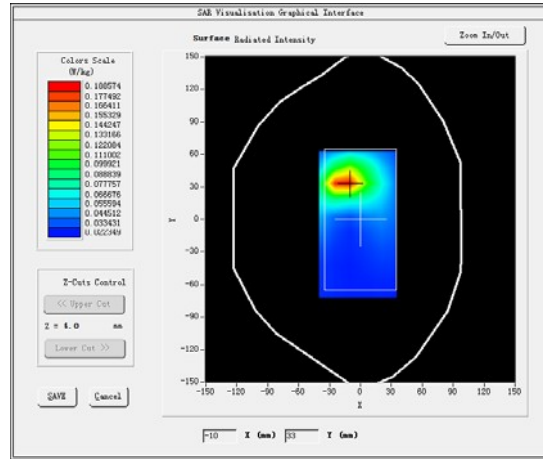
<u>Area Scan</u>	<u>dx=15mm dy=15mm</u>
<u>ZoomScan</u>	<u>5x5x7, dx=8mm</u> <u>dy=8mm dz=5mm, Complete</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Body</u>
<u>Band</u>	<u>LTE band 41</u>
<u>Channels</u>	Middle
<u>Signal</u>	<u>LTE (Crest factor: 1.0)</u>

B. SAR Measurement Results

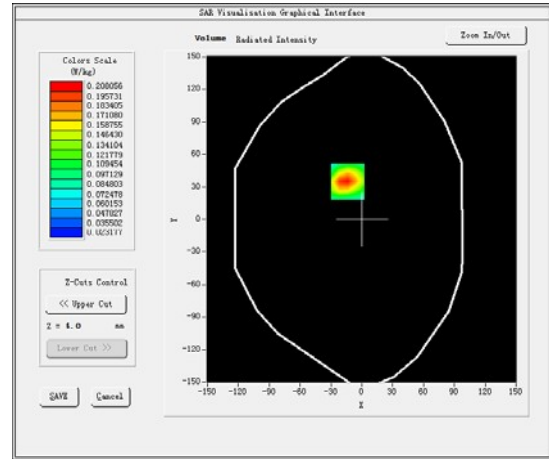
Middle Band SAR (Channel 40620):

Frequency (MHz)	2593.000000
Relative permittivity (real part)	52.628727
Relative permittivity (imaginary part)	14.538727
Conductivity (S/m)	2.024114
Variation (%)	3.110000

SURFACE SAR



VOLUME SAR

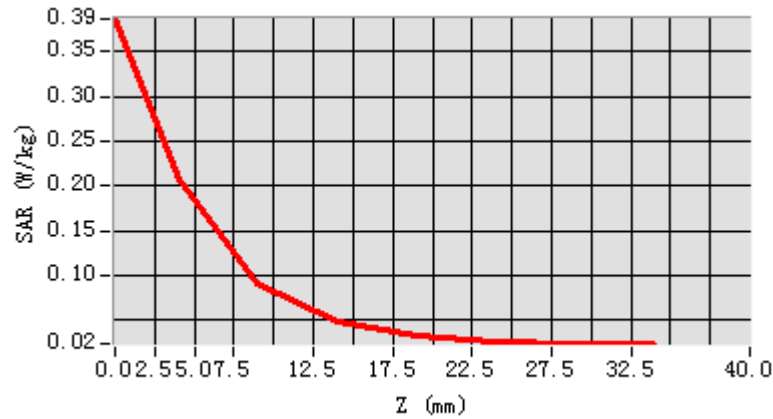


Maximum location: X=-14.00, Y=35.00

SAR Peak: 0.28 W/kg

SAR 10g (W/Kg)	0.029143
SAR1g (W/Kg)	0.072835

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.3869	0.2081	0.0900	0.0482	0.0324	0.0262	0.0243



3D screen shot	Hot spot position
