

# **SAR Test Report**

Report No.: AGC14246231201FH01

**FCC ID** : 2BD6M-X23

**APPLICATION PURPOSE**: Original Equipment

**PRODUCT DESIGNATION**: smartphone

**BRAND NAME** : N/A

MODEL NAME : X23

**APPLICANT**: GO MD USA LLC

**DATE OF ISSUE** : Jan. 17, 2024

IEEE Std. 1528:2013

**STANDARD(S)** : FCC 47 CFR Part 2§2.1093

IEEE Std C95.1 ™-2005

**REPORT VERSION**: V1.0

Attestation of Global Compliance (Shenzhen) Co., Ltd.



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# Report Revise Record

Report Version	Revise Time	Issued Date	Valid Version	Notes	
V1.0	1	Jan. 17, 2024	Valid	Initial Release	

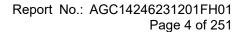


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Test Report				
Applicant Name	GO MD USA LLC			
Applicant Address	3385 Airways Blvd STE 201 Memphis Tennessee 38116 USA			
Manufacturer Name	LHPI Group Ince			
Manufacturer Address	Piso 8 Torre Universal, Federico Boyd, Panama City, Panama			
Factory Name	GOMDUSA			
Factory Address	3385 Airways Blvd STE 201 Memphis America			
Product Designation	smartphone			
Brand Name	N/A			
Model Name	X23			
EUT Voltage	DC3.8V by battery			
Applicable Standard	IEEE Std. 1528:2013 FCC 47 CFR Part 2§2.1093 IEEE Std C95.1 ™-2005			
Date of receipt of test item	Dec. 28, 2023			
Test Date	Jan. 03, 2024 to Jan. 12, 2024			
Report Template	AGCRT-US-4G/SAR (2021-04-20)			

Note: The results of testing in this report apply to the product/system which was tested only.

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#### 1. SUMMARY OF MAXIMUM SAR VALUE

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

The maximum results					
Frequency Band	Hoad		Body-worn(with Hotspot(with 10mm 10mm separation)		
GSM 850	0.377	0.559	0.409		
PCS 1900	0.080	0.261	0.261		
UMTS Band II	0.112	0.228	0.228		
UMTS Band IV	0.071	0.189	0.189		
UMTS Band V	0.322	0.429	0.429		
LTE Band 2	0.143	0.268	0.268		
LTE Band 4	0.108	0.249	0.249		
LTE Band 5	0.347	0.552	0.552		
LTE Band 12	0.256	0.381	0.381		
LTE Band 13	0.098	0.306	0.306		
LTE Band 25	0.123	0.298	0.298	1.6	
LTE Band 26a	0.342	0.684	0.684	<b>.</b>	
LTE Band 26b	0.286	0.414	0.414		
LTE Band 41	0.054	0.054 0.170 0.170			
LTE Band 71	0.205	0.205 0.391 0.391			
WIFI 2.4G	0.146	0.086	0.086		
5.2GHz (U-NII-1)	0.144	0.204	0.204		
5.3GHz (U-NII-2A)	0.179	0.263	0.263		
5.6GHz (U-NII-2C)	0.291	0.440	0.440		
5.8GHz (U-NII-3)	0.222	0.180	0.180		
Simultaneous Reported SAR	1.124				
SAR Test Result	PASS				

This device is compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits (1.6W/kg) specified in IEEE Std. 1528:2013; FCC 47CFR § 2.1093; IEEE/ANSI C95.1:2005 and the following specific FCC Test Procedures:

- KDB 447498 D01 General RF Exposure Guidance v06
- KDB 648474 D04 Handset SAR v01r03
- KDB 865664 D01 SAR Measurement 100MHz to 6GHz v01r04
- KDB 941225 D01 3G SAR Procedures v03r01
- KDB 941225 D06 Hotspot Mode v02r01
- KDB 248227 D01 802 11 Wi-Fi SAR v02r02
- KDB 941225 D05 SAR for LTE Devices v02r05



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# 2. GENERAL INFORMATION

2.1. EUT Description

Constal Information	
General Information	
Product Designation	smartphone
Test Model	X23
Sample ID	231206110
Hardware Version	H616_MB_V2
Software Version	V1.0
Device Category	Portable
RF Exposure Environment	Uncontrolled
Antenna Type	Internal
GSM and GPRS& EGPRS	
Support Band	☐ GSM 850 ☐ PCS 1900 ☐ GSM 900 ☐ DCS 1800
GPRS & EGPRS Type	Class B
GPRS & EGPRS Class	Class 12(1Tx+4Rx, 2Tx+3Rx, 3Tx+2Rx, 4Tx+1Rx)
TX Frequency Range	GSM 850 : 820-850MHz; PCS 1900: 1850-1910MHz;
RX Frequency Range	GSM 850 : 869~894MHz; PCS 1900: 1930~1990MHz
Release Version	R99
Type of modulation	GMSK for GSM/GPRS; GMSK & 8-PSK for EGPRS
Antenna Gain	GSM850: -0.27dBi; PCS1900: 0.67dBi
Max. Average Power	GSM850: 34.29dBm; PCS1900: 31.06dBm
WCDMA	
Support Band	☑ UMTS FDD Band II ☑ UMTS FDD Band V ☑ UMTS FDD Band IV ☐ UMTS FDD Band II ☐ UMTS FDD Band VIII
HS Type	HSPA(HSUPA/HSDPA)
TX Frequency Range	FDD Band II: 1850-1910MHz; FDD Band V: 824-849MHz
	FDD Band IV: 1710-1770MHz FDD Band II: 1930-1990MHz; FDD Band V: 869-894MHz
RX Frequency Range	FDD Band IV: 2110-2170MHz
Release Version	Release 6 and later
Type of modulation	HSDPA:QPSK/16QAM; HSUPA:BPSK; WCDMA:QPSK
Antenna Gain	Band II: 0.67dBi; Band IV: 0.58dBi; Band V: -0.27dBi
Max. Average Power	Band II: 24.47dBm; Band IV: 24.04 dBm; Band V: 24.73 dBm
Bluetooth	
Bluetooth Version	V5.3
Operation Frequency	2402~2480MHz
Type of modulation	⊠ GFSK ⊠ ∏/4-DQPSK ⊠ 8-DPSK
Peak Power	6.40dBm
Antenna Gain	0.88dBi
2.4GHz WIFI	
WIFI Specification	□ 802.11a $⊗$ 802.11b $⊗$ 802.11g $⊗$ 802.11n(20) $⊗$ 802.11n(40)
Operation Frequency	2412~2462MHz
Avg. Burst Power	11b: 15.92dBm,11g: 13.26dBm,11n(20): 11.75dBm,11n(40): 11.65dBm
Antenna Gain	0.88dBi



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# **EUT Description( Continue)**

LTE	
Support Band	<ul> <li>         □ FDD Band 2  □ FDD Band 4  □ FDD Band 5  □ FDD Band 12  □ FDD Band 17  □ FDD Band 25  □ FDD Band 26  □ TDD Band 41  □ FDD Band 66  □ FDD Band 71     </li> </ul>
TX Frequency Range	Band 2:1850-1910MHz; Band 4:1710-1755MHz;Band 5:824-849MHz; Band 12:699-716MHz; Band 13: 777-787MHz; Band 25: 1850-1915MHz; Band 26: 814-849MHz; Band 41:2496-2690MHz; Band 71:663-698MHz
RX Frequency Range	Band 2:1930-1990MHz; Band 4:2110-2155MHz; Band 5:869-894MHz; Band 12: 729-746 MHz; Band 13: 746-756MHz; Band 25: 1930-1995MHz; Band 26: 859-894MHz; Band 41:2496-2690MHz; Band 71:617-652MHz
Type of modulation	QPSK, 16QAM
Antenna Gain	Band 2: 0.67dBi; Band 4: 0.58dBi; Band 5: -0.27dBi; Band 12: -0.57dBi; Band 13: -0.57dBi; Band 25: 0.58dBi; Band 26a: -0.27dBi; Band 26b: -0.27dBi; Band 41: 0.88dBi; Band 71: -0.67dBi;
Max. Average Power	Band 2: 25.05dBm; Band 4: 24.61dBm; Band 5: 25.03dBm; Band 12: 24.94dBm; Band 13: 24.83dBm; Band 25: 25.12dBm; Band 26a: 25.13dBm; Band 26b: 24.88dBm; Band 41: 27.15dBm; Band 71: 24.75dBm;
5 GHz WIFI	
WIFI Specification	⊠ 802.11a ⊠ 802.11n20 ⊠ 802.11n40 ⊠ 802.11ac20 ⊠ 802.11ac40 ⊠ 802.11ac80
Operation Frequency	U-NII-1: 5180MHz~5240MHz; U-NII-2A: 5260MHz~5320MHz; U-NII-2C: 5470MHz~5725MHz;U-NII-3: 5745MHz~5825MHz
Max. conducted Power	U-NII-1: 9.13dBm; U-NII-2A: 10.31dBm; U-NII-2C: 11.50dBm; U-NII-3: 11.52dBm
Antenna Gain	-0.57dBi
Accessories	
Battery	Brand name: N/A Model No. : N/A Voltage and Capacitance: 3.8 V & 3000mAh
Earphone	Brand name: N/A Model No. : N/A

Note:1.CMU200 can measure the average power and Peak power at the same time

2. The sample used for testing is end product.

3. The test sample has no any deviation to the test method of standard mentioned in page 1.

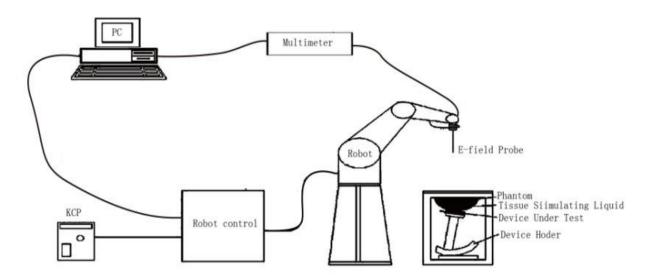
Product	Туре	
Product		☐ Identical Prototype



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#### 3. SAR MEASUREMENT SYSTEM

# 3.1. The SATIMO system used for performing compliance tests consists of following items



The COMOSAR system for performing compliance tests consists of the following items:

- The PC. It controls most of the bench devices and stores measurement data. A computer running WinXP and the Opensar software.
- The E-Field probe. The probe is a 3-axis system made of 3 distinct dipoles. Each dipole returns a voltage in function of the ambient electric field.
- · The Keithley multimeter measures each probe dipole voltages.
- · The SAM phantom simulates a human head. The measurement of the electric field is made inside the phantom.
- · The liquids simulate the dielectric properties of the human head tissues.
- · The network emulator controls the mobile phone under test.
- The validation dipoles are used to measure a reference SAR. They are used to periodically check the bench to make sure that there is no drift of the system characteristics over time.
- The phantom, the device holder and other accessories according to the targeted measurement.



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#### 3.2. COMOSAR E-Field Probe

The SAR measurement is conducted with the dosimetric probe manufactured by SATIMO. The probe is specially designed and calibrated for use in liquid with high permittivity. The dosimetric probe has special calibration in liquid at different frequency. SATIMO conducts the probe calibration in compliance with international and national standards (e.g. IEEE 1528 and relevant KDB files.) The calibration data are in Appendix D.

Isotropic E-Field Probe Specification

::::::::::::::::::::::::::::::::::::::	Probe Specification	
Model	SSE2	
Manufacture	MVG	
Identification No.	2023-EPGO-414	
Frequency	0.15GHz-7.5GHz Linearity:±0.09dB(0.15GHz-7.5GHz)	
Dynamic Range	0.01W/kg-100W/kg Linearity:±0.09dB	
Dimensions	Overall length:330mm Length of individual dipoles:24.5mm Maximum external diameter:8mm Probe Tip external diameter:2.55mm Distance between dipoles/ probe extremity:12.7mm	
Application	High precision dosimetric measureme (e.g., very strong gradient fields). Only compliance testing for frequencies up 30%.	probe which enables

#### 3.3. Robot

The COMOSAR system uses the KUKA robot from SATIMO SA (France). For the 6-axis controller COMOSAR system, the KUKA robot controller version from SATIMO is used.

The XL 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



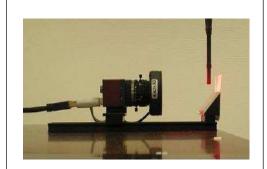


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# 3.4. Video Positioning System

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.

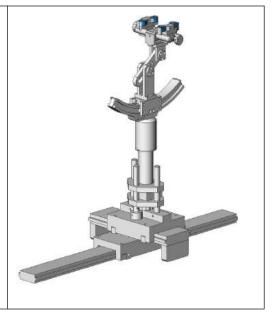


#### 3.5. Device Holder

The COMOSAR device holder is designed to cope with different positions given in the standard. It has two scales for the device rotation (with respect to the body axis) and the device inclination (with respect to the line between the ear reference points). The rotation center for both scales is the ear reference point (EPR).

Thus the device needs no repositioning when changing the angles. The COMOSAR device holder has been made out of low-loss POM material having the following dielectric parameters: relative permittivity

 $\epsilon r$  =3 and loss tangent  $\delta$  = 0.02. The amount of dielectric material has been reduced in the closest vicinity of the device, since measurements have suggested that the influence of the clamp on the test results could thus be lowered.





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#### 3.6. SAM Twin Phantom

The SAM twin phantom is a fiberglass shell phantom with 2mm shell thickness (except the ear region where shell thickness increases to 6mm). It has three measurement areas:

Left head Right head Flat phantom



The bottom plate contains three pair of bolts for locking the device holder. The device holder positions are adjusted to the standard measurement positions in the three sections. A white cover is provided to tap the phantom during off-periods to prevent water evaporation and changes in the liquid parameters. On the phantom top, three reference markers are provided to identify the phantom position with respect to the robot.



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#### 4. SAR MEASUREMENT PROCEDURE

# 4.1. Specific Absorption Rate (SAR)

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

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

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

SAR is expressed in units of Watts per kilogram (W/kg) SAR can be obtained using either of the following equations:

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

$$SAR = c_h \frac{dT}{dt} \Big|_{t=0}$$

Where

SAR is the specific absorption rate in watts per kilogram;
E is the r.m.s. value of the electric field strength in the tissue in volts per meter;
σ is the conductivity of the tissue in siemens per metre;
ρ is the density of the tissue in kilograms per cubic metre;
ch is the heat capacity of the tissue in joules per kilogram and Kelvin;

 $\frac{dT}{dt}$  | t=0 is the initial time derivative of temperature in the tissue in kelvins per second

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#### 4.2. SAR Measurement Procedure

#### Step 1: Power Reference Measurement

The Power Reference Measurement and Power Drift Measurement are for monitoring the power drift of the device under test in the batch process. The minimum distance of probe sensors to surface is 2.7mm This distance cannot be smaller than the distance os sensor calibration points to probe tip as `defined in the probe properties,

#### Step 2: Area Scan

The Area Scan is used as a fast scan in two dimensions to find the area of high field values, before doing a fine measurement around the hot spot. The sophisticated interpolation routines implemented in SATIMO software can find the maximum locations even in relatively coarse grids. When an Area Scan has measured all reachable points, it computes the field maximal found in the scanned area, within a range of the global maximum. The range (in db) is specified in the standards for compliance testing. For example, a 2db range is required in IEEE Standard 1528 standards, whereby 3db is a requirement when compliance is assessed in accordance with the ARIB standard (Japan) If one Zoom Scan follows the Area Scan, then only the absolute maximum will be taken as reference. For cases where multiple maximum are detected, the number of Zoom Scan has to be increased accordingly.

Area Scan Parameters extracted from KDB 865664 D01 SAR Measurement 100MHz to 6GHz

	≤ 3 GHz	> 3 GHz		
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface	5 ± 1 mm	$\frac{1}{2} \cdot \delta \cdot \ln(2) \pm 0.5 \text{ mm}$		
Maximum probe angle from probe axis to phantom surface normal at the measurement location	30° ± 1°	20° ± 1°		
	≤2 GHz: ≤15 mm 2 – 3 GHz: ≤12 mm	3 – 4 GHz: ≤ 12 mm 4 – 6 GHz: ≤ 10 mm		
Maximum area scan spatial resolution: $\Delta x_{Area}$ , $\Delta y_{Area}$	When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be ≤ the corresponding x or y dimension of the test device with at least one measurement point on the test device.			

### Step 3: Zoom Scan

Zoom Scan are used to assess the peak spatial SAR value within a cubic average volume containing 1g abd 10g of simulated tissue. The Zoom Scan measures points(refer to table below) within a cube whose base faces are centered on the maxima found in a preceding area scan job within the same procedure. When the measurement is done, the Zoom Scan evaluates the averaged SAR for 1g and 10g and displays these values next to the job's label.



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#### Zoom Scan Parameters extracted from KDB865664 d01 SAR Measurement 100MHz to 6GHz

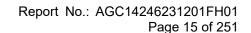
Maximum zoom scan spatial resolution: Δx <sub>Zoom</sub> , Δy <sub>Zoom</sub>			$\leq$ 2 GHz: $\leq$ 8 mm 2 - 3 GHz: $\leq$ 5 mm	3 – 4 GHz: ≤ 5 mm* 4 – 6 GHz: ≤ 4 mm*	
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: Δz <sub>Zoom</sub> (n)		≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm	
	$\begin{array}{c} \Delta z_{Z00m}(1)\text{: between} \\ 1^{st} \text{ two points closest} \\ \text{to phantom surface} \\ \\ \Delta z_{Z00m}(n>1)\text{:} \\ \text{between subsequent} \\ \text{points} \end{array}$		≤ 4 mm	3 – 4 GHz: ≤ 3 mm 4 – 5 GHz: ≤ 2.5 mm 5 – 6 GHz: ≤ 2 mm	
			$\leq 1.5 \cdot \Delta z_{Zoom}(n\text{-}1)$		
Minimum zoom scan volume	x, y, z		≥ 30 mm	3 – 4 GHz: ≥ 28 mm 4 – 5 GHz: ≥ 25 mm 5 – 6 GHz: ≥ 22 mm	

Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details.

#### Step 4: Power Drift Measurement

The Power Drift Measurement measures the field at the same location as the most recent power reference measurement within the same procedure, and with the same settings. The Power Drift Measurement gives the field difference in dB from the reading conducted within the same settings. This allows a user to monitor the power drift of the device under test within a batch process. The measurement procedure is the same as Step 1.

<sup>\*</sup> When zoom scan is required and the <u>reported</u> SAR from the area scan based 1-g SAR estimation procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.





# 4.3. RF Exposure Conditions

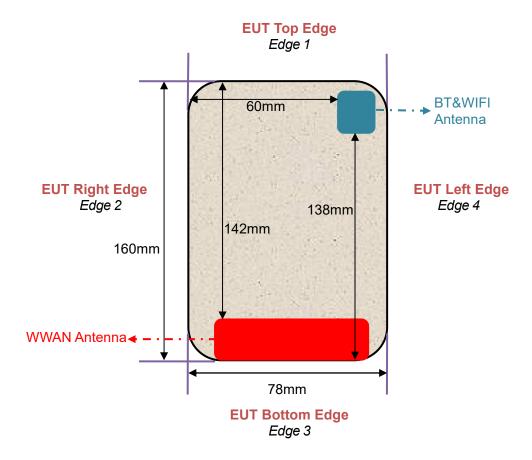
Test Configuration and setting:

The EUT is a model of GSM Portable Mobile Station (MS). It supports GSM/GPRS/EGPRS, WCDMA/HSPA, LTE, BT, WIFI, and support hot spot mode.

For WWAN SAR testing, the device was controlled by using a base station emulator. Communication between the device and the emulator were established by air link. The distance between the EUT and the antenna is larger than 50cm, and the output power radiated from the emulator antenna is at least 30db smaller than the output power of EUT.

For WLAN testing, the EUT is configured with the WLAN continuous TX tool through engineering command.

#### Antenna Location: (the back view)





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# 5. TISSUE SIMULATING LIQUID

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 15cm. For head SAR testing the liquid height from the ear reference point (ERP) of the phantom to the liquid top surface is larger than 15cm For body SAR testing, the liquid height from the center of the flat phantom to the liquid top surface is larger than 15cm. The nominal dielectric values of the tissue simulating liquids in the phantom and the tolerance of 10% are listed in 6.2

5.1. The composition of the tissue simulating liquid

5.1. The composition of the tissue simulating liquid							
Ingredient (% Weight) Frequency (MHz)	Water	Nacl	Polysorbate 20	DGBE	1,2- Propanediol	Triton X-100	Diethylen glycol monohex ylether
750 Head	35	2	0.0	0.0	63	0.0	0.0
835 Head	50.36	1.25	48.39	0.0	0.0	0.0	0.0
1750 Head	52.64	0.36	0.0	47	0.0	0.0	0.0
1900 Head	54.9	0.18	0.0	44.92	0.0	0.0	0.0
2450 Head	71.88	0.16	0.0	7.99	0.0	19.97	0.0
2600 Head	55.242	0.306	0	44.452	0	0	0.0
5000 Head	65.52	0.0	0.0	0.0	0.0	17.24	17.24



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# 5.2. Tissue Dielectric Parameters for Head and Body Phantoms

The head and body tissue dielectric parameters recommended by the IEEE Std. 1528 have been incorporated in the following table.

Target Frequency	h	ead	b	oody
(MHz)	εr	σ (S/m)	εr	σ (S/m)
300	45.3	0.87	45.3	0.87
450	43.5	0.87	43.5	0.87
750	41.9	0.89	41.9	0.89
835	41.5	0.90	41.5	0.90
900	41.5	0.97	41.5	0.97
915	41.5	1.01	41.5	1.01
1450	40.5	1.20	40.5	1.20
1610	40.3	1.29	40.3	1.29
1750	40.1	1.37	40.1	1.37
1800 – 2000	40.0	1.40	40.0	1.40
2300	39.5	1.67	39.5	1.67
2450	39.2	1.80	39.2	1.80
2600	39.0	1.96	39.0	1.96
3000	38.5	2.40	38.5	2.40
5200	36.0	4.66	36.0	4.66
5300	35.9	4.76	35.9	4.76
5600	35.5	5.07	35.5	5.07
5800	35.3	5.27	35.3	5.27

( $\epsilon r$  = relative permittivity,  $\sigma$  = conductivity and  $\rho$  = 1000 kg/m3



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#### 5.3. Tissue Calibration Result

The dielectric parameters of the liquids were verified prior to the SAR evaluation using SATIMO Dielectric Probe Kit and R&S Network Analyzer ZVL6.

	Tissue Stimulant Measurement for 750MHz						
	Fr.	Dielectric Para	Dielectric Parameters (±10%)				
	(MHz)	εr 41.9 (37.71-46.09)	δ[s/m] 0.89(0.801-0.979)	Temp [°C]	Test time		
Head	683	45.79	0.82				
1.05.5	707.5	44.36	0.85	21.3	Jan. 04,		
	750	42.57	0.90	21.3	2024		
	782	41.63	0.91				

	Tissue Stimulant Measurement for 835MHz						
	Fr.	Dielectric Para	ameters (±10%)	Tissue			
	(MHz)	εr 41.5 (37.35-45.65)	δ[s/m] 0.90(0.81-0.99)	Temp [°C]	Test time		
11	819	43.26	0.89				
Head	835	41.50	0.91		lan 00		
	836.4	40.67	0.94	20.8	Jan. 03, 2024		
	836.5	40.67	0.94		2024		
	836.6	40.67	0.94				

Tissue Stimulant Measurement for 1750MHz						
	Fr.	Dielectric Para	Tissue			
	(MHz)	εr 40.1 (36.09-44.11)	δ[s/m]1.37(1.233-1.507)	Temp [°C]	Test time	
Head	1732.4	41.39	1.28			
	1732.5	41.39	1.28	20.6	Jan. 07, 2024	
	1750	39.71	1.32		2024	

Tissue Stimulant Measurement for 1900MHz						
	Fr.	Dielectric Para	ameters (±10%)	Tissue		
lla a d	(MHz)	εr40.00(36.00-44.00)	δ[s/m]1.40(1.26-1.54)	Temp [°C]	Test time	
Head	1880	40.69	1.31		lan CC	
	1882.5	40.13	1.34	20.4	Jan. 08, 2024	
	1900	39.34	1.36		2024	



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Tissue Stimulant Measurement for 2450MHz						
	Fr.	Dielectric Para	ameters (±10%)	Tissue	T 11	
Head	(MHz)	εr39.2(35.28-43.12)	δ[s/m]1.80(1.62-1.98)	Temp [ºC]	Test time	
	2437	40.66	1.80	20.8	Jan. 06,	
	2450	39.43	1.82	20.6	2024	

Tissue Stimulant Measurement for 2600MHz					
	Fr.	Dielectric Parameters (±10%)		Tissue	
Head	(MHz)	εr39(35.1-42.9)	δ[s/m]1.96(1.764-2.156)	Temp [°C]	Test time
	2593	39.66	1.96	24.2	Jan. 05,
	2600	38.18	1.99	21.2	2024

Tissue Stimulant Measurement for 5200MHz						
	Fr.	Dielectric Para	ameters (±10%)	Tissue		
Head	(MHz)	εr 36.0(32.4-39.6)	δ[s/m] 4.66(4.194 -5.126)	Temp [°C]	Test time	
	5200	36.17	4.63	20.8	Jan. 09, 2024	

Tissue Stimulant Measurement for 5300MHz						
	Fr.	Dielectric Parameters (±5%)		Tissue		
Head	(MHz)	εr 35.9(34.105-37.695)	δ[s/m] 4.76(4.522-4.998)	Temp [ºC]	Test time	
	5300	36.28	4.69	21.1	Jan. 11, 2024	

Tissue Stimulant Measurement for 5600MHz						
	Fr.	Dielectric Parameters (±5%)		Tissue		
Head	(MHz)	εr 35.5(33.725-37.275)	δ[s/m] 5.07(4.8165-5.3235)	Temp [°C]	Test time	
	5580	37.26	5.21	21.2	Jan. 10,	
	5600	36.14	5.24	21.2	2024	

Tissue Stimulant Measurement for 5800MHz						
	Fr.	Dielectric Parameters (±10%)		Tissue		
	(MHz)	εr	δ[s/m]	Temp	Test time	
Head		35.3 (31.77-38.83)	5.27 (4.743-5.797)	[°C]		
	5785	37.19	5.19	20.9	Jan. 12,	
	5800	36.37	5.21	20.9	2024	



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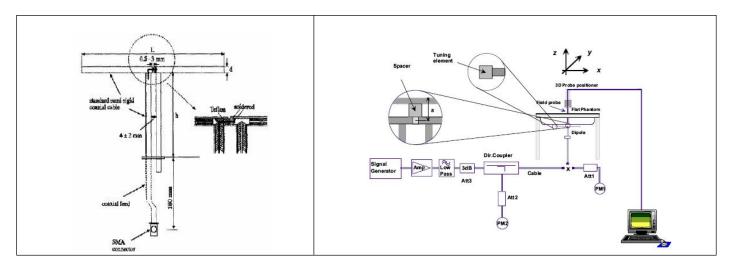
#### SAR SYSTEM CHECK PROCEDURE

#### 6.1. SAR System Check Procedures

SAR system check is required to confirm measurement accuracy, according to the tissue dielectric media, probe calibration points and other system operating parameters required for measuring the SAR of a test device. The system verification must be performed for each frequency band and within the valid range of each probe calibration point required for testing the device. The same SAR probe(s) and tissue-equivalent media combinations used with each specific SAR system for system verification must be used for device testing. When multiple probe calibration points are required to cover substantially large transmission bands, independent system verifications are required for each probe calibration point. A system verification must be performed before each series of SAR measurements using the same probe calibration point and tissue-equivalent medium. Additional system verification should be considered according to the conditions of the tissue-equivalent medium and measured tissue dielectric parameters, typically every three to four days when the liquid parameters are remeasured or sooner when marginal liquid parameters are used at the beginning of a series of measurements.

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

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

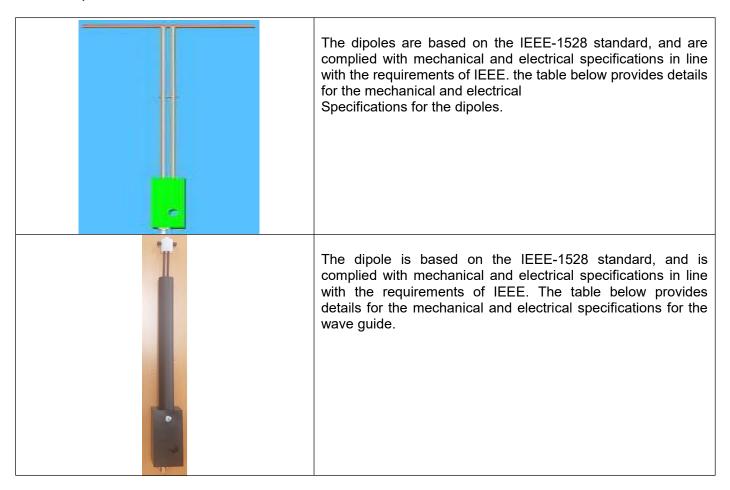




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# 6.2. SAR System Check

# 6.2.1. Dipoles



Frequency	L (mm)	h (mm)	d (mm)
750MHz	176	100	6.35
835MHz	161.0	89.8	3.6
1800MHz	71.6	41.7	3.6
1900MHz	68	39.5	3.6
2450MHz	51.5	30.4	3.6
2600MHz	48.5	28.8	3.6
5000MHz	20.6	40.3	3.6



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## 6.2.2. System Check Result

# System Performance Check at 750MHz&835MHz &1800MHz &1900MHz &2450MHz&2600MHz & 5200-5800MHz for Head

# Validation Kit: SN 22/16 DIP 0G750-417& SN 15/16 DIP 0G835-399& SN 46/11 DIP 1G800-186& SN 29/15 DIP 1G900-389& SN 29/15 DIP 2G450-393& SN 22/16 DIP 2G600-407& SN 17/22 DIP 5G000-671

Dii 10300-0	JUJU DIN Z	ווט פו יפ	20430-333& 3N	ZZI TO DII ZGOO	U- <del>-</del> U/ G C	)	טטטט וום	70-0 <i>1</i> 1
Гиодиором		get	Reference	ce Result		sted	Tissue	
Frequency [MHz]	Value	(W/kg)	(± 1	0%)	Value	(W/kg)	Temp.	Test time
[IVIIIZ]	1g	10g	1g	10g	1g	10g	[°C]	
750	8.33	5.44	7.497-9.163	4.896-5.984	8.76	5.61	21.3	Jan. 04, 2024
835	9.67	6.14	8.703-10.637	5.526-6.754	9.62	6.18	20.8	Jan. 03, 2024
1800	37.76	19.60	33.984-41.536	17.640-21.560	40.63	20.47	20.6	Jan. 07, 2024
1900	41.26	20.86	37.134-45.386	18.774-22.946	39.45	20.39	20.4	Jan. 08, 2024
2450	54.32	24.25	48.888-59.752	21.825-26.675	52.54	23.72	20.8	Jan. 06, 2024
2600	54.94	23.77	49.446-60.434	21.393-26.147	54.23	24.31	21.2	Jan. 05, 2024
5200	73.43	21.83	66.087-80.773	19.647-24.013	73.82	21.49	20.8	Jan. 09, 2024
5200	73.43	21.83	66.087-80.773	19.647-24.013	77.44	22.82	21.1	Jan. 11, 2024
5600	78.20	24.12	70.380-86.02	21.708-26.532	82.62	23.50	21.2	Jan. 10, 2024
5800	75.69	22.44	68.121-83.259	20.196-24.684	80.17	22.83	20.9	Jan. 12, 2024

#### Note:

(1) We use a CW signal of 18dBm for system check, and then all SAR value are normalized to 1W forward power. The result must be within  $\pm 10\%$  of target value.



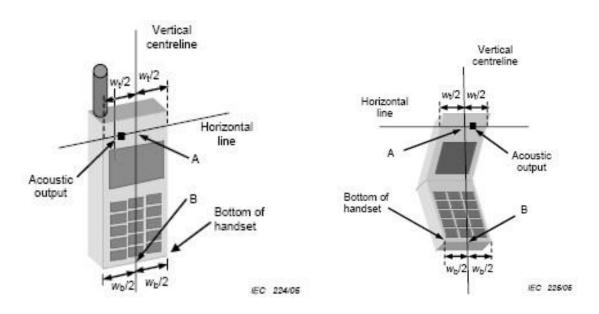
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#### 7. EUT TEST POSITION

This EUT was tested in Right Cheek, Right Tilted, Left Cheek, Left Tilted, Body back, Body front and 4 edges.

# 7.1. Define Two Imaginary Lines on the Handset

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





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#### 7.2. Cheek Position

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





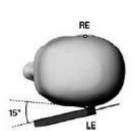


#### 7.3. Tilt Position

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





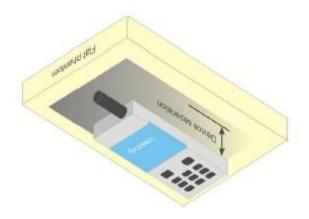


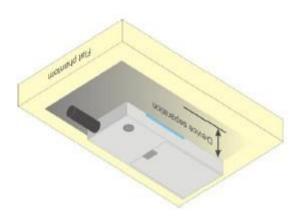


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# 7.4. Body Worn Position

- (1) To position the EUT parallel to the phantom surface.
- (2) To adjust the EUT parallel to the flat phantom.
- (3) To adjust the distance between the EUT surface and the flat phantom to 10mm.







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# 8. SAR EXPOSURE LIMITS

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

<b>_</b>	1 \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
Type Exposure	Uncontrolled Environment Limit (W/kg)
Spatial Peak SAR (1g cube tissue for brain or body)	1.60
Spatial Average SAR (Whole body)	0.08
Spatial Peak SAR (Limbs)	4.0



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# 9. TEST FACILITY

Test Site	Attestation of Global Compliance (Shenzhen) Co., Ltd
Location	1-2/F, Building 19, Junfeng Industrial Park, Chongqing Road, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China
Designation Number	CN1259
FCC Test Firm Registration Number	975832
A2LA Cert. No.	5054.02
Description	Attestation of Global Compliance(Shenzhen) Co., Ltd is accredited by A2LA



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# 10. TEST EQUIPMENT LIST

Equipment description	Manufacturer/ Model	Identification No.	Software version	Current calibration date	Next calibration date
SAR Probe	MVG	2023-EPGO-414	N/A	May 31, 2023	May 30, 2024
Phantom	SATIMO	SN_4511_SAM90	N/A	Validated. No cal required.	Validated. No cal required.
Liquid	SATIMO	N/A	N/A	Validated. No cal required.	Validated. No cal required.
Comm Tester	Agilent-8960	GB46310822	A.13.07	Jun. 03, 2023	Jun. 02, 2024
Comm Tester	R&S- CMW500	121209	V3.7.40	Jun. 01, 2023	May 31, 2024
Multimeter	Keithley 2000	1350784	N/A	Jun. 02, 2023	Jun. 01, 2024
SAR Software	SATIMO-OpenSAR	N/A	OpenSAR V4_02_32	N/A	N/A
Dipole	SATIMO SID750	SN 22/16 DIP 0G750-417	N/A-	Apr. 28,2022	Apr. 27,2025
Dipole	SATIMO SID835	SN 15/16 DIP 0G835-399	N/A	Apr. 28,2022	Apr. 27,2025
Dipole	SATIMO SID1800	SN 46/11 DIP 1G800-186	N/A	Apr. 28,2022	Apr. 27,2025
Dipole	SATIMO SID1900	SN 29/15 DIP 1G900-389	N/A	Apr. 28,2022	Apr. 27,2025
Dipole	SATIMO SID2450	SN 29/15 DIP 2G450-393	N/A	Apr. 28,2022	Apr. 27,2025
Dipole	SATIMO SID2600	SN 22/16 DIP 2G600-407	N/A	Apr. 28,2022	Apr. 27, 2025
Dipole	SID5000	SN 17/22 DIP 5G000-671	N/A	Apr. 28,2022	Apr. 27, 2025
Signal Generator	Agilent-E4438C	US41461365	V5.03	Jun. 01, 2023	May 31, 2024
Vector Analyzer	Agilent / E4440A	MY44303916	N/A	Jun. 01, 2023	May 31, 2024
Network Analyzer	Rhode & Schwarz ZVL6	SN101443	3.2	Sep. 21, 2023	Sep. 20, 2024
Attenuator	Warison /WATT-6SR1211	S/N:WRJ34AYM2F1	N/A	June 07, 2023	June 06, 2024
Attenuator	Mini-circuits / VAT-10+	31405	N/A	June 07, 2023	June 06, 2024
Amplifier	AS0104-55_55	1004793	N/A	N/A	N/A
Directional Couple	Werlatone/ C5571-10	SN99463	N/A	Mar. 10, 2022	Mar. 09, 2024
Directional Couple	Werlatone/ C6026-10	SN99482	N/A	Mar. 10, 2022	Mar. 09, 2024
Power Sensor	NRP-Z21	1137.6000.02	N/A	Sep. 05, 2023	Sep. 04, 2024
Power Sensor	NRP-Z23	100323	N/A	Feb. 15, 2023	Feb. 14, 2024
Power Viewer	R&S	V2.3.1.0	N/A	N/A	N/A
Calibration standard parts for network sub - port	R&S/ ZV-Z132	N/A	V2.3.1.0	Nov. 11, 2023	Nov. 10, 2024

Note: Per KDB 865664 Dipole SAR Validation, AGC Lab has adopted 3 years calibration intervals. On annual basis, every measurement dipole has been evaluated and is in compliance with the following criteria:

- 1. There is no physical damage on the dipole;
- 2. System validation with specific dipole is within 10% of calibrated value;
- 3. Return-loss is within 20% of calibrated measurement;
- 4. Impedance is within  $5\Omega$  of calibrated measurement.



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#### 11. MEASUREMENT UNCERTAINTY

11. MEASUREMENT		SATIMO Und	certainty-			40			
	easurement ι	Incertainty for Tol	or DUT av Prob.				1g Ui	10g Ui	
Uncertainty Component	Sec.	(+- %)	Dist.	Div.	Ci (1g)	Ci (10g)	(+-%)	(+-%)	vi
Measurement System									
Probe calibration	E.2.1	7.000	N	1	1	1	7.000	7.000	∞
Axial Isotropy	E.2.2	1.695	R	1.732	0.707	0.707	0.692	0.692	$\infty$
Hemispherical Isotropy	E.2.2	1.695	R	1.732	0.707	0.707	0.692	0.692	8
Boundary effect	E.2.3	1.000	R	1.732	1	1	0.577	0.577	∞
Linearity	E.2.4	2.250	R	1.732	1	1	1.299	1.299	× ×
System detection limits	E.2.4	1.000	R	1.732	1	1	0.577	0.577	∞
Modulation response	E2.5	3.000	R	1.732	1	1	1.732	1.732	8
Readout Electronics	E.2.6	0.021	N	1	1	1	0.021	0.021	∞
Response Time	E.2.7	0.000	R	1.732	1	1	0.000	0.000	∞
Integration Time	E.2.8	1.400	R	1.732	1	1	0.808	0.808	∞
RF ambient conditions-Noise	E.6.1	3.000	R	1.732	1	1	1.732	1.732	∞
RF ambient conditions-reflections	E.6.1	3.000	R	1.732	1	1	1.732	1.732	∞
Probe positioner mechanical tolerance	E.6.2	1.400	R	1.732	1	1	0.808	0.808	∞
Probe positioning with respect to phantom shell	E.6.3	1.400	R	1.732	1	1	0.808	0.808	∞
Extrapolation, interpolation, and integrations algorithms for max. SAR evaluation	E.5	2.300	R	1.732	1	1	1.328	1.328	00
Test sample Related	<b>!</b>	1		1	1	·			
Test sample positioning	E.4.2	2.6	N	1	1	1	2.60	2.60	∞
Device holder uncertainty	E.4.1	3	N	1	1	1	3.00	3.00	∞
Output power variation—SAR drift measurement	E.2.9	5	R	1.732	1	1	2.89	2.89	∞
SAR scaling	E.6.5	5	R	1.732	1	1	2.89	2.89	∞
Phantom and tissue parameter	rs								
Phantom shell uncertainty—shape, thickness, and permittivity	E.3.1	4	R	1.732	1	1	2.309	2.309	~
Uncertainty in SAR correction for deviations in permittivity and conductivity	E.3.2	1.9	N	1	1	0.84	1.900	1.596	∞
Liquid conductivity measurement	E.3.3	4	N	1	0.78	0.71	3.120	2.840	М
Liquid permittivity measurement	E.3.3	5	N	1	0.23	0.26	1.150	1.300	М
Liquid conductivity—temperature uncertainty	E.3.4	2.5	R	1.732	0.78	0.71	1.126	1.025	∞
Liquid permittivity—temperature uncertainty	E.3.4	2.5	R	1.732	0.23	0.26	0.332	0.375	8
Combined Standard Uncertainty			RSS				10.616	10.432	
Expanded Uncertainty (95% Confidence interval)			K=2				21.232	20.865	



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	S	SATIMO Uno	ertainty-	2023-EPG	0-414				
System		uncertainty	for DUT			n / 10 gram.			
Uncertainty Component	Sec.	Tol (+- %)	Prob. Dist.	Div.	Ci (1g)	Ci (10g)	1g Ui (+-%)	10g Ui (+-%)	vi
Measurement System	1			1	1				
Probe calibration	E.2.1	7.000	N	1	1	1	7.000	7.000	∞
Axial Isotropy	E.2.2	1.695	R	1.732	1.000	1.000	0.979	0.979	∞
Hemispherical Isotropy	E.2.2	1.695	R	1.732	0.000	0.000	0.000	0.000	∞
Boundary effect	E.2.3	1.000	R	1.732	1.000	1.000	0.577	0.577	∞
Linearity	E.2.4	2.250	R	1.732	1.000	1.000	1.299	1.299	$\infty$
System detection limits	E.2.4	1.000	R	1.732	1.000	1.000	0.577	0.577	8
Modulation response	E2.5	3.000	R	1.732	0.000	0.000	0.000	0.000	∞
Readout Electronics	E.2.6	0.021	N	1.000	1.000	1.000	0.021	0.021	∞
Response Time	E.2.7	0.000	R	1.732	0.000	0.000	0.000	0.000	× ×
Integration Time	E.2.8	1.400	R	1.732	0.000	0.000	0.000	0.000	∞
RF ambient conditions-Noise	E.6.1	3.000	R	1.732	1.000	1.000	1.732	1.732	∞
RF ambient conditions-reflections	E.6.1	3.000	R	1.732	1.000	1.000	1.732	1.732	×
Probe positioner mechanical tolerance	E.6.2	1.400	R	1.732	1.000	1.000	0.808	0.808	∞
Probe positioning with respect to phantom shell	E.6.3	1.400	R	1.732	1.000	1.000	0.808	0.808	8
Extrapolation, interpolation, and integrations algorithms for max. SAR evaluation	E.5	2.300	R	1.732	1.000	1.000	1.328	1.328	∞
System validation source							•		
Deviation of experimental dipole from numerical dipole	E.6.4	5	N	1	1	1	5	5	∞
Input power and SAR drift measurement	8,6.6.4	5	R	1.732	1	1	2.887	2.887	∞
Dipole axis to liquid distance	8,E.6.6	2	R	1.732	1	1	1.155	1.155	$\infty$
Phantom and set-up									
Phantom shell uncertainty—shape, thickness, and permittivity	E.3.1	4	R	1.732	1	1	2.309	2.309	∞
Uncertainty in SAR correction for deviations in permittivity and conductivity	E.3.2	1.9	N	1	1	0.84	1.9	1.596	∞
Liquid conductivity (temperature uncertainty)	E.3.3	4	N	1	0.78	0.71	3.12	2.84	∞
Liquid conductivity (measured)	E.3.3	5	N	1	0.23	0.26	1.15	1.3	М
Liquid permittivity (temperature uncertainty)	E.3.4	2.5	R	1.732	0.78	0.71	1.126	1.025	∞
Liquid permittivity (measured)	E.3.4	2.5	R	1.732	0.23	0.26	0.332	0.375	М
Combined Standard Uncertainty			RSS				10.572	10.387	
Expanded Uncertainty (95% Confidence interval)			K=2				21.143	20.775	



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Sy	stem Check ر	SATIMO Und				′ 10 gram.			
Uncertainty Component	Sec.	Tol (+- %)	Prob. Dist.	Div.	Ci (1g)	Ci (10g)	1g Ui (+-%)	10g Ui (+-%)	vi
Measurement System	ı	, ,		'		'		, , , , , , , , , , , , , , , , , , , ,	
Probe calibration drift	E.2.1.3	0.5	N	1	1	1	0.5	0.5	∞
Axial Isotropy	E.2.2	1.695	R	√3	0	0	0	0	∞
Hemispherical Isotropy	E.2.2	1.695	R	$\sqrt{3}$	0	0	0	0	
Boundary effect	E.2.3	1.000	R	$\sqrt{3}$	0	0	0	0	∞
Linearity	E.2.4	2.250	R	√3	0	0	0	0	
System detection limits	E.2.4	1	R	√3	0	0	0	0	∞
Modulation response	E2.5	3	R	$\sqrt{3}$	0	0	0	0	
Readout Electronics	E.2.6	0.021	N	$\sqrt{3}$	0	0	0	0	
	E.2.7	0.021	R	$\sqrt{3}$	0	0	0	0	
Response Time				$\sqrt{3}$		0	-		∞
Integration Time	E.2.8	1.4	R		0	_	0	0	∞
RF ambient conditions-Noise RF ambient	E.6.1	3	R	$\sqrt{3}$	0	0	0	0	∞
conditions-reflections	E.6.1	3	R	$\sqrt{3}$	0	0	0	0	∞
Probe positioner mechanical tolerance	E.6.2	1.4	R	$\sqrt{3}$	1	1	0.81	0.81	∞
Probe positioning with respect to phantom shell	E.6.3	1.4	R	√3	1	1	0.81	0.81	∞
Extrapolation, interpolation, and integrations algorithms for max. SAR evaluation	E.5	2.3	R	$\sqrt{3}$	0	0	0	0.00	∞
System check source (dipole)									
Deviation of experimental dipoles	E.6.4	2	N	1	1	1	2	2	∞
Input power and SAR drift measurement	8,6.6.4	5	R	$\sqrt{3}$	1	1	2.89	2.89	∞
Dipole axis to liquid distance	8,E.6.6	2	R	√3	1	1	1.15	1.15	∞
Phantom and tissue parameter	'S	1	1						
Phantom shell uncertainty—shape, thickness, and permittivity	E.3.1	4	R	$\sqrt{3}$	1	1	2.31	2.31	∞
Uncertainty in SAR correction for deviations in permittivity and conductivity	E.3.2	1.9	N	1.000	1	0.84	1.90	1.60	∞
Liquid conductivity measurement	E.3.3	4	N	1.000	0.78	0.71	3.12	2.84	∞
Liquid permittivity measurement	E.3.3	5	N	1.000	0.23	0.26	1.15	1.30	М
Liquid conductivity—temperature uncertainty	E.3.4	2.5	R	$\sqrt{3}$	0.78	0.71	1.13	1.02	∞
Liquid permittivity—temperature uncertainty	E.3.4	2.5	R	$\sqrt{3}$	0.23	0.26	0.33	0.38	М
Combined Standard Uncertainty			RSS				5.562	5.203	
Expanded Uncertainty (95% Confidence interval)			K=2				11.124	10.406	



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# 12. CONDUCTED POWER MEASUREMENT

Mode	Frequency(MHz)	Avg. Burst Power(dBm)	Duty cycle Factor(dBm)	Frame Power(dBm)
Maximum Power <1	>			
	824.2	33.98	-9	24.98
GSM 850	836.6	33.80	-9	24.80
	848.8	34.20	-9	25.20
GPRS 850	824.2	34.04	-9	25.04
(1 Slot)	836.6	33.87	-9	24.87
(1000)	848.8	34.29	-9	25.29
ODDC 050	824.2	33.26	-6	27.26
GPRS 850 (2 Slot)	836.6	32.99	-6	26.99
(2 Slot)	848.8	33.42	-6	27.42
0000 050	824.2	31.27	-4.26	27.01
GPRS 850 (3 Slot)	836.6	30.87	-4.26	26.61
(3 3101)	848.8	31.32	-4.26	27.06
0000.050	824.2	29.96	-3	26.96
GPRS 850 (4 Slot)	836.6	29.50	-3	26.50
(4 3101)	848.8	29.98	-3	26.98
	824.2	33.42	-9	24.42
EGPRS 850 (1 Slot)	836.6	33.12	-9	24.12
(13101)	848.8	33.58	-9	24.58
	824.2	33.31	-6	27.31
EGPRS 850 (2 Slot)	836.6	33.05	-6	27.05
(2 5101)	848.8	33.43	-6	27.43
	824.2	33.13	-4.26	28.87
EGPRS 850	836.6	32.98	-4.26	28.72
(3 Slot)	848.8	33.16	-4.26	28.90
	824.2	30.48	-3	27.48
EGPRS 850	836.6	30.17	-3	27.17
(4 Slot)	848.8	30.42	-3	27.42



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#### **GSM BAND CONTINUE**

Mode	Frequency(MHz)	Avg. Burst Power(dBm)	Duty cycle Factor(dBm)	Frame Power(dBm)
Maximum Power <1	>			
	1850.2	31.01	-9	22.01
PCS1900	1880	30.85	-9	21.85
	1909.8	30.64	-9	21.64
GPRS1900	1850.2	31.06	-9	22.06
(1 Slot)	1880	30.88	-9	21.88
(1000)	1909.8	30.69	-9	21.69
CDDC4000	1850.2	30.22	-6	24.22
GPRS1900 (2 Slot)	1880	30.02	-6	24.02
	1909.8	29.80	-6	23.80
00004000	1850.2	28.20	-4.26	23.94
GPRS1900 (3 Slot)	1880	27.95	-4.26	23.69
(3 3101)	1909.8	27.73	-4.26	23.47
00004000	1850.2	26.93	-3	23.93
GPRS1900 (4 Slot)	1880	26.69	-3	23.69
(4 3101)	1909.8	26.48	-3	23.48
505504000	1850.2	30.81	-9	21.81
EGPRS1900 (1 Slot)	1880	30.56	-9	21.56
(1 3101)	1909.8	30.40	-9	21.40
	1850.2	30.51	-6	24.51
EGPRS1900 (2 Slot)	1880	30.29	-6	24.29
(2 3101)	1909.8	30.18	-6	24.18
	1850.2	30.13	-4.26	25.87
EGPRS1900	1880	29.98	-4.26	25.72
(3 Slot)	1909.8	29.76	-4.26	25.50
	1850.2	29.68	-3	26.68
EGPRS1900	1880	29.51	-3	26.51
(4 Slot)	1909.8	29.13	-3	26.13

Note 1:

The Frame Power (Source-based time-averaged Power) is scaled the maximum burst average power based on time slots. The calculated methods are show as following:

Frame Power = Max burst power (1 Up Slot) - 9 dB

Frame Power = Max burst power (2 Up Slot) – 6 dB

Frame Power = Max burst power (3 Up Slot) – 4.26 dB

Frame Power = Max burst power (4 Up Slot) - 3 dB

Note 2:

SAR is not required for GPRS (1 Slot) Mode because its output power is less than of Voice Mode



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# UMTS BAND HSDPA Setup Configuration:

- ·The EUT was connected to Base Station Agilent-8960 referred to the Setup Configuration.
- ·The RF path losses were compensated into the measurements.
- ·A call was established between EUT and Based Station with following setting:
- (1) Set Gain Factors( $\beta$ c and  $\beta$ d) parameters set according to each
- (2) Set RMC 12.2Kbps+HSDPA mode.
- (3) Set Cell Power=-86dBm
- (4) Set HS-DSCH Configuration Type to FRC (H-set 1, QPSK)
- (5) Select HSDPA Uplink Parameters
- (6) Set Delta ACK, Delta NACK and Delta CQI=8
- (7) Set Ack Nack Repetition Factor to 3
- (8) Set CQI Feedback Cycle (k) to 4ms
- (9) Set CQI Repetition Factor to 2
- (10) Power Ctrl Mode=All Up bits

Table C.10.2.4: β values for transmitter characteristics tests with HS-DPCCH

Sub-test	βc (Note5)	βd	βd (SF)	βc/βd	βHS (Note1, Note 2)	CM (dB) (Note 3)	MPR (dB) (Note 3)
1	2/15	15/15	64	2/15	4/15	0.0	0.0
2	12/15(Note 4)	15/15(Note 4)	64	12/15(Note 4)	24/15	1.0	0.0
3	15/15	8/15	64	15/8	30/15	1.5	0.5
4	15/15	4/15	64	15/4	30/15	1.5	0.5

Note 1:  $\triangle$ ACK,  $\triangle$ NACK and  $\triangle$ CQI = 30/15 with  $\beta_{hs}$  = 30/15 \*  $\beta_c$ .

Note 2: For the HS-DPCCH power mask requirement test in clause 5.2C, 5.7A, and the Error Vector Magnitude (EVM) with HS-DPCCH test in clause 5.13.1A, and HSDPA EVM with phase discontinuity in clause

5.13.1AA,  $\triangle$ ACK and  $\triangle$ NACK = 30/15 with  $\beta_{hs}$  = 30/15 \*  $\beta_c$ , and  $\triangle$ CQI = 24/15 with  $\beta_{hs}$  = 24/15 \*  $\beta_c$ .

Note 3: CM = 1 for  $\beta$  c/ $\beta$  d =12/15, hs/ 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 4: For subtest 2 the c/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 c = 11/15 and d = 15/15.

<sup>·</sup>The transmitted maximum output power was recorded.



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#### **HSUPA Setup Configuration:**

- · The EUT was connected to Base Station Agilent-8960 referred to the Setup Configuration.
- · The RF path losses were compensated into the measurements.
- · A call was established between EUT and Base Station with following setting \*:
- (1) Call Configs = 5.2B, 5.9B, 5.10B, and 5.13.2B with QPSK
- (2) Set the Gain Factors (βc and βd) and parameters (AG Index) were set according to each specific sub-test in the following table, C11.1.3, quoted from the TS 34.121
- (3) Set Cell Power = -86 dBm
- (4) Set Channel Type = 12.2k + HSPA
- (5) Set UE Target Power
- (6) Power Ctrl Mode= Alternating bits
- (7) Set and observe the E-TFCI
- (8) Confirm that E-TFCI is equal to the target E-TFCI of 75 for sub-test 1, and other subtest's E-TFCI
- · The transmitted maximum output power was recorded.

Table C.11.1.3: β values for transmitter characteristics tests with HS-DPCCH and E-DCH

Sub- test	βс	βd	βd (SF )	βc/βd	βHS (Note 1)	βес	βed (Note 4) (Note 5)	βed (SF )	βed (Code s)	CM (dB) (Note 2)	MPR (dB) (Note 2) (Note 6)	AG Index (Note 5)	E-TF CI
1	11/15 (Note 3)	15/15 (Note 3)	64	11/15 (Note 3)	22/15	209/22 5	1309/225	4	1	1.0	0.0	20	75
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67
3	15/15	9/15	64	15/9	30/15	30/15	βed1: 47/15 βed2: 47/15	4	2	2.0	1.0	15	92
4	2/15	15/15	64	2/15	4/15	2/15	56/75	4	1	3.0	2.0	17	71
5	15/15	0	-	-	5/15	5/15	47/15	4	1	1.0	0.0	12	67

Note 1: For sub-test 1 to 4,  $\triangle$ ACK,  $\triangle$ NACK and  $\triangle$ CQI = 30/15 with  $\beta_{hs}$  = 30/15 \*  $\beta_c$  . For sub-test 5,  $\triangle$ ACK,  $\triangle$ NACK and  $\triangle$ CQI = 5/15 with  $\beta_{hs}$  = 5/15 \*  $\beta_c$  .

Note 2: CM = 1 for  $\beta$  c/ $\beta$  d =12/15, hs/ c=24/15. For all other combinations of DPDCH, DPCCH, HS-DPCCH, E-DPDCH and E-DPCCH the MPR is based on the relative CM difference.

Note 3: For subtest 1 the c/d ratio of 11/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to c = 10/15 and d = 15/15. Note 4: In case of testing by UE using E-DPDCH Physical Layer category 1, Sub-test 3 is omitted according to TS25.306 Table 5.1g.

Note 5: βed cannot be set directly; it is set by Absolute Grant Value.

Note 6: For subtests 2, 3 and 4, UE may perform E-DPDCH power scaling at max power which could results in slightly smaller MPR values.



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#### **UMTS BAND II**

Mada	Frequency	Avg. Burst Power
Mode	(MHz)	(dBm)
MCDMA 4000	1852.4	24.36
WCDMA 1900 RMC	1880	24.47
RIVIC	1907.6	24.30
LICDDA	1852.4	23.40
HSDPA Subtest 1	1880	22.68
Sublest 1	1907.6	22.06
LICDDA	1852.4	22.01
HSDPA Subtest 2	1880	23.39
Sublest 2	1907.6	22.95
HCDDA	1852.4	21.63
HSDPA	1880	21.85
Subtest 3	1907.6	23.19
LICDDA	1852.4	22.77
HSDPA	1880	21.63
Subtest 4	1907.6	21.67
HOLIDA	1852.4	22.18
HSUPA	1880	23.35
Subtest 1	1907.6	21.68
LICLIDA	1852.4	23.40
HSUPA Subtest 2	1880	21.83
Sublest 2	1907.6	23.35
LICLIDA	1852.4	23.32
HSUPA	1880	21.80
Subtest 3	1907.6	23.33
LICLIDA	1852.4	22.80
HSUPA Subtest 4	1880	23.00
Sublest 4	1907.6	22.97
LICLIDA	1852.4	21.84
HSUPA	1880	23.08
Subtest 5	1907.6	22.49



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# **UMTS BAND IV**

Mada	Frequency	Avg. Burst Power
Mode	(MHz)	(dBm)
14/ODMA 4700	1712.4	24.04
WCDMA 1700	1732.4	23.85
RMC	1752.6	24.04
HODDA	1712.4	23.08
HSDPA	1732.4	22.77
Subtest 1	1752.6	22.86
LICEDA	1712.4	22.66
HSDPA	1732.4	21.95
Subtest 2	1752.6	22.66
LICDDA	1712.4	21.34
HSDPA	1732.4	21.04
Subtest 3	1752.6	21.19
LICDDA	1712.4	21.48
HSDPA	1732.4	21.26
Subtest 4	1752.6	21.36
HSUPA	1712.4	21.97
	1732.4	22.70
Subtest 1	1752.6	22.69
LICLIDA	1712.4	22.95
HSUPA	1732.4	22.58
Subtest 2	1752.6	22.69
LICLIDA	1712.4	21.31
HSUPA	1732.4	21.33
Subtest 3	1752.6	21.59
LICLIDA	1712.4	23.05
HSUPA	1732.4	22.80
Subtest 4	1752.6	22.84
LICLIDA	1712.4	21.68
HSUPA	1732.4	22.25
Subtest 5	1752.6	21.79



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# **UMTS BAND V**

Mada	Frequency	Avg. Burst Power
Mode	(MHz)	(dBm)
VA/ODA44 050	826.4	24.39
WCDMA 850	836.4	24.59
RMC	846.6	24.73
HODDA	826.4	23.42
HSDPA	836.4	23.21
Subtest 1	846.6	21.70
110004	826.4	23.43
HSDPA	836.4	23.32
Subtest 2	846.6	21.78
110004	826.4	23.64
HSDPA	836.4	21.68
Subtest 3	846.6	21.74
HODDA	826.4	22.86
HSDPA	836.4	21.65
Subtest 4	846.6	21.93
LIQUIDA	826.4	23.01
HSUPA	836.4	23.38
Subtest 1	846.6	23.52
LIQUIDA	826.4	23.18
HSUPA	836.4	21.45
Subtest 2	846.6	23.51
HOUDA	826.4	23.36
HSUPA	836.4	22.05
Subtest 3	846.6	21.51
LIGUEA	826.4	23.13
HSUPA	836.4	22.35
Subtest 4	846.6	22.70
1101154	826.4	23.28
HSUPA	836.4	23.27
Subtest 5	846.6	22.93



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

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

UE Transmit Channel Configuration	CM(db)	MPR(db)
For all combinations of ,DPDCH,DPCCH HS-DPDCH,E-DPDCH and E-DPCCH	0≤ CM≤3.5	MAX(CM-1,0)
Note: CM=1 for $\beta$ d=12/15, $\beta$ hs/ $\beta$ c=24/15.For all	other combinations of [	OPDCH, DPCCH, HS-DPCCH,
E-DPDCH and E-DPCCH the MPR is based on the i	elative CM difference.	

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

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

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

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



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### LTE Band

# LTE (TDD) Considerations

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.

SAR was tested with the highest transmission duty factor (63.33%) using Uplink-downlink configuration 0 and Special subframe configuration 7.

LTE TDD Band 41 supports 3GPP TS 36.211 section 4.2 for Type 2 Frame Structure and Table 4.2-2 for uplink-downlink configurations and Table 4.2-1 for Special subframe configurations.

Table 4.2-1: Configuration of special subframe (lengths of DwPTS/GP/UpPTS)

	Norm	nal cyclic prefix i	n downlink	Ex	tended cyclic prefix	in downlink
Special subframe	DwPTS	Up	PTS	DwPTS	Up	PTS
configuration		Normal cyclic prefix in uplink	Extended cyclic prefix in uplink		Normal cyclic prefix in uplink	Extended cyclic prefix in uplink
0	$6592 \cdot T_{\rm s}$			$7680 \cdot T_{\rm s}$		
1	$19760 \cdot T_{\rm s}$	$20480  T_{\rm s}$		20480· <i>T</i> <sub>s</sub>	$2192 \cdot T_s$	2560 T
2	21952· <i>T</i> <sub>s</sub>	$2192 \cdot T_{\rm s}$	$2560 \cdot T_{\rm s}$	23040·T <sub>s</sub>	2192 · 1 <sub>s</sub>	$2560 \cdot T_{\rm s}$
3	24144·T <sub>s</sub>			25600·T <sub>s</sub>		
4	26336·T <sub>s</sub>			$7680 \cdot T_{\rm s}$		
5	$6592 \cdot T_{\rm s}$			20480·T <sub>s</sub>	$4384 \cdot T_s$	5120 · T <sub>s</sub>
6	19760 · T <sub>s</sub>			23040·T <sub>s</sub>	4364 · 1 <sub>s</sub>	3120 · 1 <sub>s</sub>
7	21952· <i>T</i> <sub>s</sub>	$4384 \cdot T_{\rm s}$	$5120 \cdot T_{\rm s}$	12800 · T <sub>s</sub>		
8	24144·T <sub>s</sub>			-	-	-
9	$13168 \cdot T_{\rm s}$			-	-	-

Table 4.2-2: Uplink-downlink configurations

Uplink-downlink					Subframe number								
configuration	Switch-point periodicity	0	1	2	3	4	5	6	7	8	9		
0	5 ms	D	S	U	U	U	D	S	U	U	С		
1	5 ms	D	S	U	U	D	D	S	U	U	D		
2	5 ms	D	S	U	D	D	D	S	U	D	D		
3	10 ms	D	S	U	U	U	D	D	D	D	D		
4	10 ms	D	S	U	U	D	D	D	D	D	D		
5	10 ms		S	U	D	D	D	D	D	D	D		
6	5 ms	D	S	U	U	U	D	S	U	U	D		



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# **Calculated Duty Cycle**

Uplink-	Downlink-to-				Sul	bframe	Num	ber				Calculated Duty Cycle(%)
Downlink Configuration	Uplink Switch- point Periodicity	0	1	2	3	4	5	6	7	8	9	
0	5ms	D	S	U	U	U	D	S	U	U	J	63.33
1	5ms	D	S	U	U	D	D	S	U	U	D	43.33
2	5ms	D	S	U	D	D	D	S	U	D	D	23.33
3	10ms	D	S	U	U	U	D	D	D	D	D	31.67
4	10ms	D	S	U	U	D	D	D	D	D	D	21.67
5	10ms	D	S	U	D	D	D	D	D	D	D	11.67
6	5ms	D	S	U	U	U	D	S	U	U	D	53.33

**Note:** Calculated Duty Cycle = Extended cyclic prefix in uplink x (Ts) x # of S + # of U Example for Calculated Duty Cycle for Uplink-Downlink Configuration 0: Calculated Duty Cycle =  $5120 \times [1/(15000 \times 2048)] \times 2 + 6 \text{ ms} = 63.33\%$  where

 $Ts = 1/(15000 \times 2048)$  seconds



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# **LTE Band**

Conducted Power of LTE Band 2(dBm)											
			RB		Channel	Channel	Channel				
Bandwidth	Modulation	RB size	offset	Target MPR	18607	18900	19193				
			0	0	24.71	24.52	24.44				
		1	3	0	24.81	24.70	24.60				
			5	0	24.67	24.52	24.44				
	QPSK		0	0	24.62	24.65	24.50				
		3	2	0	24.67	24.64	24.50				
			3	0	24.67	24.64	24.48				
1.4MHz		6	0	1	23.68	23.64	23.48				
1.411172			0	1	23.72	23.70	23.28				
		1	3	1	23.78	23.86	23.37				
16QAM		5	1	23.69	23.74	23.27					
	16QAM	3	0	1	23.77	23.75	23.58				
			2	1	23.77	23.81	23.60				
			3	1	23.75	23.82	23.64				
		6	0	2	22.80	22.75	22.66				
Bandwidth	BA1 1-41		RB		Channel	Channel	Channel				
	Modiliation	RR size		Target MPR		Onamici	0110111101				
Danawiatii	Modulation	RB size	offset	Target MPR	18615	18900	19185				
Danawiani	Modulation	RB size		Target MPR 0							
Danawidti	Modulation	RB size	offset		18615	18900	19185				
Danawiatii	Modulation		offset 0	0	<b>18615</b> 24.65	<b>18900</b> 24.68	<b>19185</b> 24.47				
Dandwidth	QPSK		0 7	0	18615 24.65 24.82	18900 24.68 24.99	19185 24.47 24.62				
Bandwidth			0 7 14	0 0 0	18615 24.65 24.82 24.61	18900 24.68 24.99 24.72	19185 24.47 24.62 24.43				
Bandwidth		1	0 7 14 0	0 0 0 0	24.65 24.65 24.82 24.61 23.61 23.64 23.65	18900 24.68 24.99 24.72 23.62 23.64 23.60	19185 24.47 24.62 24.43 23.43 23.47 23.48				
		1	0 7 14 0 4	0 0 0 0 1	24.65 24.82 24.61 23.61 23.64	18900 24.68 24.99 24.72 23.62 23.64	19185 24.47 24.62 24.43 23.43 23.47				
3MHz		1 8	0 7 14 0 4 7	0 0 0 1 1	24.65 24.65 24.82 24.61 23.61 23.64 23.65	18900 24.68 24.99 24.72 23.62 23.64 23.60	19185 24.47 24.62 24.43 23.43 23.47 23.48				
		1 8	0 7 14 0 4 7 0	0 0 0 1 1 1	24.65 24.65 24.82 24.61 23.61 23.64 23.65 23.60	24.68 24.99 24.72 23.62 23.64 23.60 23.59	19185 24.47 24.62 24.43 23.43 23.47 23.48 23.43				
		1 8 15	0 7 14 0 4 7 0 0	0 0 0 1 1 1 1	18615 24.65 24.82 24.61 23.61 23.64 23.65 23.60 23.77	18900 24.68 24.99 24.72 23.62 23.64 23.60 23.59 23.40	19185 24.47 24.62 24.43 23.43 23.47 23.48 23.43 23.87				
		1 8 15	0 7 14 0 4 7 0 0 7	0 0 0 1 1 1 1 1	18615 24.65 24.82 24.61 23.61 23.64 23.65 23.60 23.77 24.09	18900 24.68 24.99 24.72 23.62 23.64 23.60 23.59 23.40 23.70	19185 24.47 24.62 24.43 23.43 23.47 23.48 23.43 23.87 24.16				
	QPSK	1 8 15	0 7 14 0 4 7 0 0 7	0 0 0 1 1 1 1 1 1	18615 24.65 24.82 24.61 23.61 23.64 23.65 23.60 23.77 24.09 23.74	18900 24.68 24.99 24.72 23.62 23.64 23.60 23.59 23.40 23.70 23.41	19185 24.47 24.62 24.43 23.43 23.47 23.48 23.43 23.87 24.16 23.86				
	QPSK	1 8 15	0 7 14 0 0 7 14 0 0 7 14 0 0	0 0 0 1 1 1 1 1 1 1 1	18615 24.65 24.82 24.61 23.61 23.64 23.65 23.60 23.77 24.09 23.74 22.62	18900 24.68 24.99 24.72 23.62 23.64 23.60 23.59 23.40 23.70 23.41 22.58	19185 24.47 24.62 24.43 23.43 23.47 23.48 23.43 23.87 24.16 23.86 22.49				



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		Conducte	ed Power	of LTE Band 2(d	Bm)		
Donada della	Madulation	DD ei-e	RB	Toward MDD	Channel	Channel	Channel
Bandwidth	Modulation	RB size	offset	Target MPR	18625	18900	19175
			0	0	24.56	24.46	24.38
		1	13	0	24.82	24.78	24.85
			24	0	24.51	24.48	24.38
	QPSK		0	1	23.61	23.59	23.47
		12	6	1	23.61	23.62	23.52
			13	1	23.55	23.59	23.47
5MHz		25	0	1	23.59	23.62	23.46
SIVITIZ			0	1	23.83	23.66	23.84
		1	13	1	24.11	24.10	24.25
			24	1	23.75	23.77	23.89
16QAM		0	2	22.54	22.61	22.41	
		12	6	2	22.55	22.63	22.47
			13	2	22.54	22.63	22.46
		25	0	2	22.61	22.58	22.44
Bandwidth	Modulation	RB size	RB	Target MPR	Channel	Channel	Channel
Danawiatii	Wiodulation	IVD SIZE	offset	raiget wirt	18650	18900	19150
			0	0	24.69	24.58	24.45
		1	25	0	24.72	24.72	24.55
			49	0	24.57	24.56	24.49
	QPSK		0	1	23.54	23.63	23.54
		25	13	1	23.53	23.62	23.52
			25	1	23.55	23.75	23.59
10MHz		50	0	1	23.55	23.63	23.52
IOIVITIZ			0	1	23.38	23.80	23.53
		1	25	1	23.45	24.02	23.72
			49	1	23.27	23.97	23.63
	16QAM		0	2	22.55	22.64	22.53
		25	13	2	22.53	22.64	22.52
			25	2	22.55	22.77	22.59
		50	0	2	22.52	22.66	22.54



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		Conducte	ed Power	of LTE Band 2(d	Bm)		
Barri 199		DD .:	RB	T MDD	Channel	Channel	Channel
Bandwidth	Modulation	RB size	offset	Target MPR	18675	18900	19125
			0	0	24.52	24.59	24.41
		1	38	0	24.76	25.05	24.74
			74	0	24.35	24.62	24.35
	QPSK		0	1	23.66	23.76	23.65
		36	18	1	23.61	23.77	23.58
			39	1	23.60	23.79	23.60
45841-		75	0	1	23.64	23.84	23.64
15MHz			0	1	23.64	23.46	23.74
		1	38	1	23.85	23.91	24.00
			74	1	23.44	23.59	23.78
16QAM		0	2	22.61	22.63	22.60	
		36	18	2	22.58	22.64	22.57
			39	2	22.55	22.69	22.58
		75	0	2	22.56	22.75	22.56
Bandwidth	Modulation	RB size	RB	Torget MDD	Channel	Channel	Channel
Bandwidth	wodulation	RD SIZE	offset	Target MPR	18700	18900	19100
			0	0	24.31	24.32	24.29
		1	50	0	24.61	24.84	24.62
			99	0	24.30	24.37	24.23
	QPSK		0	1	23.42	23.54	23.61
		50	25	1	23.47	23.66	23.48
			50	1	23.36	23.78	23.44
201411-		100	0	1	23.38	23.68	23.55
20MHz			0	1	23.59	23.26	23.53
		1	50	1	23.82	23.86	23.76
			99	1	23.40	23.60	23.45
	16QAM		0	2	22.46	22.52	22.63
		50	25	2	22.51	22.63	22.57
			50	2	22.42	22.77	22.54
		100	0	2	22.37	22.68	22.58



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		Conducte	ed Power	of LTE Band 4(d	Bm)		
Bandwidth	Modulation	RB size	RB	Target MDD	Channel	Channel	Channel
Dandwidth	Wiodulation	RD SIZE	offset	Target MPR	19957	20175	20393
			0	0	24.33	24.20	24.23
		1	3	0	24.47	24.40	24.42
			5	0	24.29	24.19	24.20
	QPSK		0	0	24.30	24.21	24.37
		3	2	0	24.31	24.22	24.37
			3	0	24.32	24.24	24.35
1.4MHz		6	0	1	23.34	23.23	23.35
1.4111712			0	1	23.07	23.40	23.40
		1	3	1	23.24	23.51	23.52
			5	1	23.05	23.34	23.40
	16QAM		0	1	23.43	23.44	23.49
		3	2	1	23.41	23.47	23.53
			3	1	23.43	23.43	23.52
		6	0	2	22.49	22.39	22.49
Bandwidth	Modulation	RB size	RB	Target MPR	Channel	Channel	Channel
Danawiani	Woddiation	ND 3126	offset	rarget wir ix	19965	20175	20385
			0	0	24.12	24.17	24.10
		1	7	0	24.45	24.39	24.61
			14	0	24.17	24.11	24.37
	QPSK		0	1	23.22	23.12	23.26
		8	4	1	23.28	23.16	23.31
			7	1	23.26	23.13	23.27
3MHz		15	0	1	23.19	23.12	23.24
OHII IZ			0	1	23.55	23.40	23.04
		1	7	1	23.84	23.68	23.35
			14	1	23.55	23.34	23.07
	16QAM		0	2	22.23	22.18	22.24
		8	4	2	22.26	22.19	22.26
			7	2	22.25	22.15	22.25
		15	0	2	22.25	22.12	22.26



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		Conducte	ed Power	of LTE Band 4(d	Bm)		
			RB		Channel	Channel	Channel
Bandwidth	Modulation	RB size	offset	Target MPR	19975	20175	20375
			0	0	24.09	24.00	23.82
		1	13	0	24.46	24.38	24.50
			24	0	24.15	23.96	24.16
	QPSK		0	1	23.15	23.12	23.20
		12	6	1	23.28	23.19	23.31
			13	1	23.19	23.13	23.25
C8411-		25	0	1	23.25	23.15	23.28
5MHz			0	1	23.39	23.44	23.55
		1	13	1	23.83	23.77	23.91
			24	1	23.43	23.38	23.63
	16QAM	12	0	2	22.13	22.18	22.22
			6	2	22.24	22.24	22.27
			13	2	22.18	22.22	22.21
		25	0	2	22.27	22.15	22.21
Bandwidth	Modulation	RB size	RB	Torget MDD	Channel	Channel	Channel
Danawiath	Wodulation	RD SIZE	offset	Target MPR	20000	20175	20350
			0	0	24.19	23.79	23.61
		1	25	0	24.37	23.86	24.05
			49	0	24.32	23.62	24.02
	QPSK		0	1	23.31	23.13	23.26
		25	13	1	23.32	23.18	23.22
			25	1	23.27	23.20	23.32
10MU-		50	0	1	23.22	23.18	23.28
10MHz			0	1	23.10	23.11	23.40
		1	25	1	23.13	23.13	23.52
			49	1	23.14	22.83	23.33
	16QAM		0	2	22.13	22.29	22.28
		25	13	2	22.31	22.19	22.25
			25	2	22.23	22.23	22.33
		50	0	2	22.12	22.24	22.26



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		Conducte	ed Power	of LTE Band 4(d	Bm)		
D		DD .:	RB	T MDD	Channel	Channel	Channel
Bandwidth	Modulation	RB size	offset	Target MPR	20025	20175	20325
			0	0	24.11	24.05	23.41
		1	38	0	24.61	24.50	24.25
			74	0	24.21	24.02	23.97
	QPSK		0	1	23.29	23.26	23.21
		36	18	1	23.41	23.20	23.27
			39	1	23.42	23.18	23.38
15MHz		75	0	1	23.41	23.24	23.33
ISWITZ			0	1	23.29	23.18	23.29
		1	38	1	23.70	23.33	23.47
	16QAM		74	1	23.41	22.88	23.21
		36	0	2	22.31	22.14	22.17
			18	2	22.40	22.14	22.27
			39	2	22.44	22.16	22.31
		75	0	2	22.35	22.27	22.26
Bandwidth	Modulation	RB size	RB	Target MPR	Channel	Channel	Channel
Danawiatii	Woddiation	ND 3126	offset	raiget wii ix	20050	20175	20300
		4	0	0	24.01	23.54	23.25
		1	50	0	24.41	24.07	23.82
			99	0	23.72	23.64	23.64
	QPSK		0	1	23.07	23.06	23.07
		50	25	1	23.14	23.18	23.17
			50	1	22.98	23.07	23.07
20MHz		100	0	1	22.96	23.10	23.03
201411 12			0	1	22.72	22.96	22.69
		1	50	1	23.20	23.19	23.16
			99	1	22.85	22.69	22.83
	16QAM		0	2	21.77	22.01	21.80
		50	25	2	21.95	22.12	22.21
			50	2	21.92	22.11	22.04
		100	0	2	21.98	22.04	22.17



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	Conducted Power of LTE Band 5(dBm)											
Dan de dala	Madelatia.	DD -:	RB	Townst MDD	Channel	Channel	Channel					
Bandwidth	Modulation	RB size	offset	Target MPR	20407	20525	20643					
			0	0	24.46	24.63	24.73					
		1	3	0	24.62	24.79	24.91					
			5	0	24.50	24.62	24.74					
	QPSK		0	0	24.45	24.76	24.79					
		3	2	0	24.45	24.78	24.77					
			3	0	24.51	24.78	24.76					
4 4MU-	1.4MHz	6	0	1	23.46	23.67	23.74					
1.411172			0	1	23.59	23.82	23.55					
		1	3	1	23.72	23.96	23.66					
			5	1	23.66	23.89	23.55					
	16QAM	3	0	1	23.66	23.97	23.88					
			2	1	23.69	23.98	23.90					
			3	1	23.68	24.00	23.90					
		6	0	2	22.64	22.86	22.93					
Bandwidth	Modulation	RB size	RB	Target MPR	Channel	Channel	Channel					
Bandwidth	Woddiation	IND SIZE	offset	raiget wii ix	20415	20525	20635					
			0	0	24.36	24.70	24.76					
		1	7	0	24.71	25.02	25.00					
			14	0	24.43	24.82	24.67					
	QPSK		0	1	23.41	23.68	23.80					
		8	4	1	23.43	23.68	23.81					
			7	1	23.46	23.70	23.76					
3MHz		15	0	1	23.38	23.68	23.77					
OIVII IZ			0	1	23.64	23.52	24.19					
		1	7	1	24.04	23.84	24.45					
			14	1	23.71	23.61	24.08					
	16QAM		0	2	22.47	22.66	22.80					
		8	4	2	22.47	22.71	22.84					
			7	2	22.47	22.74	22.80					
		15	0	2	22.41	22.79	22.81					



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		Conducte	ed Power	of LTE Band 5(d	Bm)		
			RB		Channel	Channel	Channel
Bandwidth	Modulation	RB size	offset	Target MPR	20425	20525	20625
			0	0	24.30	24.53	24.59
		1	13	0	24.63	25.02	24.99
			24	0	24.44	24.68	24.61
QF	QPSK		0	1	23.43	23.65	23.79
		12	6	1	23.52	23.76	23.90
			13	1	23.52	23.68	23.72
EMU-		25	0	1	23.50	23.71	23.77
SIVITIZ	5MHz		0	1	23.85	23.85	23.99
		1	13	1	24.40	24.24	24.28
			24	1	24.01	24.03	23.94
	16QAM	12	0	2	22.45	22.61	22.85
			6	2	22.54	22.72	22.92
			13	2	22.53	22.59	22.72
		25	0	2	22.51	22.74	22.80
Bandwidth	Modulation	RB size	RB	Target MPR	Channel	Channel	Channel
Danawiatii	Woddiation	ND 3120	offset	raiget wii ix	20450	20525	20600
		1	0	0	24.37	24.62	24.80
			25	0	24.58	24.78	25.03
			49	0	24.63	24.80	24.86
	QPSK		0	1	23.53	23.64	23.86
		25	13	1	23.60	23.72	23.82
			25	1	23.75	23.71	23.81
10MHz		50	0	1	23.67	23.71	23.84
I O IVII IZ			0	1	23.82	23.83	23.63
		1	25	1	24.06	23.98	23.84
			49	1	24.07	24.07	23.63
	16QAM		0	2	22.63	22.69	22.90
		25	13	2	22.62	22.74	22.89
			25	2	22.83	22.75	22.82
		50	0	2	22.72	22.79	22.87



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		Conducte	d Power o	of LTE Band 12(d	dBm)		
Donalusialth	Meduletien	DD size	RB	Toward MDD	Channel	Channel	Channel
Bandwidth	Modulation	RB size	offset	Target MPR	23017	23095	23173
			0	0	24.48	24.58	24.66
		1	3	0	24.71	24.76	24.88
			5	0	24.50	24.60	24.73
	QPSK		0	0	24.64	24.60	24.67
		3	2	0	24.64	24.62	24.69
			3	0	24.63	24.64	24.71
1.4MHz		6	0	1	23.57	23.58	23.67
1.4111172			0	1	23.75	23.35	23.71
		1	3	1	23.86	23.57	23.91
			5	1	23.72	23.40	23.70
	16QAM	6QAM	0	1	23.84	23.76	23.84
		3	2	1	23.87	23.78	23.83
			3	1	23.86	23.79	23.82
		6	0	2	22.76	22.81	22.84
Bandwidth	Modulation	RB size	RB	Target MPR	Channel	Channel	Channel
Danawiani	Woddiation	ND SIZE	offset	rarget wir ix	23025	23095	23165
			0	0	24.53	24.52	24.65
		1	7	0	24.41	24.78	24.94
			14	0	24.48	24.53	24.73
	QPSK		0	1	23.49	23.49	23.55
		8	4	1	23.52	23.54	23.64
			7	1	23.55	23.52	23.65
3MHz		15	0	1	23.47	23.49	23.61
JIVITIZ			0	1	23.98	23.77	23.45
		1	7	1	24.26	24.03	23.73
			14	1	23.93	23.75	23.47
	16QAM		0	2	22.59	22.59	22.58
		8	4	2	22.61	22.58	22.58
			7	2	22.57	22.58	22.60
		15	0	2	22.58	22.50	22.66



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		Conducte	d Power o	of LTE Band 12(d	dBm)		
D		DD .:	RB	T 1 MDD	Channel	Channel	Channel
Bandwidth	Modulation	RB size	offset	Target MPR	23035	23095	23155
			0	0	24.42	24.37	24.46
		1	13	0	24.84	24.73	24.88
			24	0	24.48	24.43	24.56
QP	QPSK		0	1	23.53	23.51	23.56
		12	6	1	23.54	23.57	23.67
			13	1	23.48	23.55	23.67
EMU-		25	0	1	23.52	23.54	23.65
5MHz			0	1	23.80	23.72	23.96
		1	13	1	24.17	24.15	24.15
			24	1	23.83	23.74	24.05
	16QAM	12	0	2	22.54	22.60	22.57
			6	2	22.55	22.67	22.62
			13	2	22.50	22.62	22.64
		25	0	2	22.64	22.58	22.63
Bandwidth	Modulation	RB size	RB	Target MPR	Channel	Channel	Channel
Bandwidth	Wiodulation	ND SIZE	offset	Target WFK	23060	23095	23130
			0	0	24.51	24.57	24.52
		1	25	0	24.65	24.68	24.62
			49	0	24.59	24.70	24.66
	QPSK		0	1	23.60	23.55	23.58
		25	13	1	23.54	23.55	23.58
			25	1	23.64	23.67	23.67
10MHz		50	0	1	23.58	23.60	23.65
IOWITIZ			0	1	23.70	23.39	23.79
		1	25	1	23.82	23.50	23.95
			49	1	23.76	23.48	23.90
	16QAM		0	2	22.65	22.59	22.51
		25	13	2	22.61	22.62	22.64
			25	2	22.70	22.73	22.68
		50	0	2	22.73	22.64	22.54



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	Conducted Power of LTE Band 13(dBm)										
Donduidth	Madulation	DD size	RB	Toward MDD	Channel	Channel	Channel				
Bandwidth	Modulation	RB size	offset	Target MPR	23205	23230	23255				
			0	0	24.39	24.35	23.85				
		1	13	0	24.83	24.73	24.17				
			24	0	24.41	24.34	23.97				
	QPSK		0	1	23.52	23.41	22.88				
		12	6	1	23.50	23.43	22.99				
			13	1	23.40	23.37	23.09				
EMILI-	5MHz	25	0	1	23.48	23.22	23.10				
ЭМП			0	1	24.01	23.48	23.21				
		1	13	1	24.35	23.64	23.73				
	16QAM		24	1	24.02	23.27	23.27				
			0	2	22.51	21.92	22.03				
		12	6	2	22.55	21.94	22.05				
			13	2	22.47	21.96	22.14				
		25	0	2	22.49	22.05	22.08				
Bandwidth	Modulation	RB size	RB	Target MDD		Channel					
Balluwiutii	Wiodulation	ND SIZE	offset	Target MPR		23230					
			0	0		24.43					
		1	25	0		24.54					
			49	0		24.60					
	QPSK		0	1		23.65					
		25	13	1		23.53					
			25	1		23.73					
40MU-		50	0	1		23.68					
10MHz			0	1		23.95					
		1	25	1		24.00					
			49	1		24.06					
	16QAM		0	2		22.72					
		25	13	2		22.59					
			25	2		22.73					
		50	0	2		22.73					



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	Conducted Power of LTE Band 25(dBm)											
Dan de dala	NA - ded - di	DD -:	RB	Townst MDD	Channel	Channel	Channel					
Bandwidth	Modulation	RB size	offset	Target MPR	26047	26365	26683					
			0	0	24.74	24.80	24.55					
		1	2	0	24.82	24.97	24.72					
			5	0	24.73	24.81	24.54					
	QPSK		0	0	24.70	24.75	24.68					
		3	1	0	24.69	24.79	24.66					
			3	0	24.70	24.78	24.61					
1.4MHz		6	0	1	23.75	23.83	23.67					
1.4111172	1.411112		0	1	23.45	23.79	23.69					
		1	2	1	23.63	23.91	23.79					
			5	1	23.45	23.83	23.70					
	16QAM	3	0	1	23.76	23.90	23.79					
			1	1	23.79	23.89	23.80					
			3	1	23.80	23.89	23.78					
		6	0	2	22.85	22.92	22.77					
Bandwidth	Modulation	RB size	RB	Target MPR	Channel	Channel	Channel					
Bandwidth	Woddiation	IND SIZE	offset	raiget wii ix	26055	26365	26675					
			0	0	24.77	24.76	24.56					
		1	8	0	25.12	25.03	24.87					
			14	0	24.80	24.75	24.63					
	QPSK		0	1	23.75	23.80	23.61					
		8	4	1	23.74	23.80	23.67					
			7	1	23.73	23.78	23.63					
3MHz		15	0	1	23.69	23.71	23.62					
OIVII IZ			0	1	23.53	24.07	23.72					
		1	8	1	23.77	24.40	24.00					
			14	1	23.51	24.11	23.73					
	16QAM		0	2	22.67	22.78	22.62					
		8	4	2	22.69	22.80	22.64					
			7	2	22.72	22.81	22.61					
		15	0	2	22.72	22.76	22.57					



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	Conducted Power of LTE Band 25(dBm)											
Barri 199	Mari India	DD .: .	RB	T 1 MDD	Channel	Channel	Channel					
Bandwidth	Modulation	RB size	offset	Target MPR	26065	26365	26665					
			0	0	24.54	24.66	24.53					
		1	12	0	25.00	25.12	25.02					
			24	0	24.52	24.68	24.57					
	QPSK		0	1	23.64	23.70	23.60					
EMIL		12	6	1	23.73	23.80	23.63					
			13	1	23.67	23.79	23.59					
		25	0	1	23.68	23.81	23.58					
5MHz			0	1	23.79	24.03	23.78					
		1	12	1	24.29	24.43	24.16					
			24	1	23.80	24.17	23.78					
	16QAM	12	0	2	22.59	22.70	22.54					
			6	2	22.76	22.79	22.57					
			13	2	22.69	22.78	22.54					
		25	0	2	22.64	22.79	22.62					
Bandwidth	Modulation	RB size	RB	Target MPR	Channel	Channel	Channel					
Danuwium	Wiodulation	KD SIZE	offset	Target WIPK	26090	26365	26640					
			0	0	24.66	24.86	24.48					
		1	24	0	24.77	24.97	24.63					
			49	0	24.62	24.86	24.62					
	QPSK		0	1	23.69	23.77	23.58					
		25	12	1	23.64	23.81	23.60					
			25	1	23.71	23.94	23.68					
10MHz		50	0	1	23.67	23.85	23.61					
IOIVITIZ			0	1	23.72	23.49	23.90					
		1	24	1	23.87	23.67	24.07					
			49	1	23.66	23.60	23.94					
	16QAM		0	2	22.65	22.75	22.62					
		25	12	2	22.67	22.75	22.59					
			25	2	22.69	22.92	22.74					
		50	0	2	22.73	22.84	22.66					



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	Conducted Power of LTE Band 25(dBm)											
Dondusidth	Madulation	DR eine	RB	Toward MDD	Channel	Channel	Channel					
Bandwidth	Modulation	RB size	offset	Target MPR	26115	26365	26615					
			0	0	24.56	24.66	24.64					
		1	38	0	24.77	24.88	24.89					
			74	0	24.55	24.68	24.67					
	QPSK		0	1	23.69	23.92	23.70					
		38	18	1	23.76	23.94	23.71					
			37	1	23.75	23.98	23.76					
15MHz		75	0	1	23.75	23.95	23.75					
ISIVITZ			0	1	23.93	23.68	23.57					
		1	38	1	24.13	24.13	23.92					
			74	1	23.75	23.83	23.66					
	16QAM	38	0	2	22.68	22.85	22.61					
			18	2	22.69	22.92	22.60					
			37	2	22.65	22.99	22.64					
		75	0	2	22.67	22.87	22.74					
Bandwidth	Modulation	RB size	RB	Target MPR	Channel	Channel	Channel					
Ballawiatii	Woddiation	ND SIZE	offset	Target WFK	26140	26365	26590					
			0	0	24.40	24.51	24.46					
		1	49	0	24.74	24.89	24.79					
			99	0	24.47	24.48	24.50					
	QPSK		0	1	23.56	23.69	23.67					
		50	25	1	23.58	23.79	23.61					
			49	1	23.52	23.93	23.69					
20MU~		100	0	1	23.53	23.79	23.67					
20MHz			0	1	23.56	23.53	23.51					
		1 [	49	1	23.84	24.08	23.79					
			99	1	23.47	23.78	23.58					
	16QAM		0	2	22.62	22.73	22.73					
		50	25	2	22.63	22.92	22.59					
			49	2	22.50	23.02	22.65					
		100	0	2	22.49	22.82	22.68					



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	Conducted Power of LTE Band 26A(dBm)											
Donado della	Mandadatian	DD -:	RB	Tamast MDD	Channel	Channel	Channel					
Bandwidth	Modulation	RB size	offset	Target MPR	26797	26915	27033					
			0	0	24.47	24.74	24.67					
		1	2	0	24.62	24.90	24.85					
			5	0	24.51	24.77	24.64					
	QPSK		0	0	24.52	24.74	24.83					
		3	1	0	24.56	24.76	24.82					
			3	0	24.52	24.78	24.83					
1.4MHz		6	0	1	23.48	23.72	23.73					
1.4111172	1.4141712		0	1	23.29	23.85	23.93					
		1	2	1	23.51	24.00	24.04					
			5	1	23.41	23.91	23.93					
	16QAM		0	1	23.70	23.92	24.05					
		3	1	1	23.69	23.97	24.05					
			3	1	23.77	23.93	24.05					
		6	0	2	22.71	22.91	22.93					
Bandwidth	Modulation	RB size	RB	Target MPR	Channel	Channel	Channel					
Buildwidth	Wodalation	110 0120	offset		26805	26915	27025					
			0	0	24.48	24.62	24.77					
		1	8	0	24.83	24.94	25.04					
			14	0	24.56	24.67	24.73					
	QPSK		0	1	23.45	23.65	23.82					
		8	4	1	23.46	23.71	23.82					
			7	1	23.46	23.76	23.74					
3MHz		15	0	1	23.45	23.69	23.75					
OWN IZ			0	1	23.39	24.10	23.98					
		1	8	1	23.54	24.41	24.26					
			14	1	23.41	24.16	23.98					
	16QAM		0	2	22.47	22.74	22.81					
		8	4	2	22.49	22.75	22.83					
			7	2	22.51	22.78	22.75					
		15	0	2	22.56	22.78	22.74					



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	Conducted Power of LTE Band 26A(dBm)											
Dan de didi	NA o alvelodio se	DD -:	RB	Toward MDD	Channel	Channel	Channel					
Bandwidth	Modulation	RB size	offset	Target MPR	26815	26915	27015					
			0	0	24.26	24.56	24.71					
		1	12	0	24.65	24.77	25.07					
			24	0	24.41	24.68	24.71					
	QPSK		0	1	23.44	23.70	23.80					
		12	6	1	23.57	23.79	23.82					
			13	1	23.48	23.71	23.71					
5MHz		25	0	1	23.57	23.71	23.80					
SIVIFIZ			0	1	23.67	24.08	24.07					
		1	12	1	24.09	24.69	24.38					
			24	1	23.81	24.25	23.99					
	16QAM		0	2	22.58	22.67	22.79					
		12	6	2	22.61	22.81	22.75					
			13	2	22.57	22.72	22.65					
		25	0	2	22.54	22.75	22.85					
Bandwidth	Modulation	RB size	RB	Target MPR	Channel	Channel	Channel					
Danawaan	oudidion	113 0120	offset		26840	26915	26990					
			0	0	24.43	24.50	24.70					
		1	24	0	24.74	24.78	24.92					
			49	0	24.62	24.77	24.71					
	QPSK		0	1	23.60	23.67	23.91					
		25	12	1	23.58	23.74	23.89					
			25	1	23.73	23.70	23.75					
10MHz		50	0	1	23.64	23.70	23.84					
. Oilli IZ			0	1	23.31	23.99	24.00					
		1	24	1	23.63	24.23	24.15					
			49	1	23.49	24.28	23.93					
	16QAM		0	2	22.64	22.69	22.92					
		25	12	2	22.59	22.82	22.91					
			25	2	22.78	22.78	22.77					
		50	0	2	22.69	22.75	22.91					



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	Conducted Power of LTE Band 26A(dBm)											
Bandwidth	Madulation	RB size	RB	Torget MDD	Channel	Channel	Channel					
Bandwidth	Modulation	RD SIZE	offset	Target MPR	26865	26915	26965					
			0	0	24.32	24.46	24.56					
		1	38	0	24.85	24.98	25.13					
			74	0	24.63	24.76	24.80					
	QPSK		0	1	23.56	23.56	23.93					
		38	18	1	23.69	23.81	23.91					
			37	1	23.76	23.83	23.91					
45884-		75	0	1	23.68	23.70	23.89					
15MHz			0	1	23.84	23.70	23.69					
		1	38	1	24.37	24.13	24.28					
			74	1	24.15	24.03	23.83					
16QAM	16QAM		0	2	22.57	22.61	22.80					
		38	18	2	22.72	22.88	22.85					
			37	2	22.74	22.89	22.77					
		75	0	2	22.67	22.72	22.93					



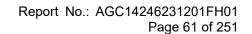
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	Conducted Power of LTE Band 26B(dBm)											
Donalysidib	Meduletien	DD size	RB	Toward MDD	Channel	Channel	Channel					
Bandwidth	Modulation	RB size	offset	Target MPR	26697	26740	26783					
			0	0	24.47	24.42	24.45					
		1	2	0	24.63	24.59	24.65					
			5	0	24.43	24.45	24.49					
	QPSK		0	0	24.62	24.51	24.48					
		3	1	0	24.61	24.50	24.49					
			3	0	24.58	24.49	24.53					
1.4MHz		6	0	1	23.54	23.46	23.47					
1.4111172	1.4WIT12		0	1	23.67	23.27	23.58					
		1	2	1	23.82	23.43	23.79					
			5	1	23.70	23.24	23.62					
	16QAM		0	1	23.80	23.60	23.69					
		3	1	1	23.83	23.63	23.69					
			3	1	23.83	23.64	23.69					
		6	0	2	22.70	22.64	22.66					
Bandwidth	Modulation	RB size	RB	Target MPR	Channel	Channel	Channel					
Banawian	Wodalation	110 0120	offset	- Target IIII T	26705	26740	26775					
			0	0	24.49	24.49	24.39					
		1	8	0	24.77	24.78	24.63					
			14	0	24.43	24.49	24.36					
	QPSK		0	1	23.47	23.37	23.44					
		8	4	1	23.52	23.44	23.44					
			7	1	23.47	23.40	23.42					
3MHz		15	0	1	23.50	23.37	23.39					
OWI IZ			0	1	23.73	23.32	23.86					
		1	8	1	24.03	23.55	24.17					
			14	1	23.63	23.24	23.90					
	16QAM		0	2	22.53	22.39	22.48					
		8	4	2	22.54	22.42	22.48					
			7	2	22.47	22.41	22.44					
		15	0	2	22.45	22.48	22.47					



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		Conducted	d Power o	f LTE Band 26B(	dBm)					
			RB		Channel	Channel	Channel			
Bandwidth	Modulation	RB size	offset	Target MPR	26715	26740	26765			
			0	0	24.35	24.30	24.31			
		1	12	0	24.88	24.69	24.72			
			24	0	24.29	24.34	24.35			
	QPSK		0	1	23.48	23.33	23.40			
		12	6	1	23.51	23.43	23.48			
			13	1	23.44	23.37	23.37			
5MHz		25	0	1	23.48	23.39	23.45			
ЭМП			0	1	23.72	23.89	23.66			
		1	12	1	24.11	24.30	24.07			
			24	1	23.69	23.89	23.71			
	16QAM		0	2	22.51	22.37	22.40			
		12	6	2	22.54	22.45	22.44			
				13	2	22.47	22.43	22.34		
		25	0	2	22.45	22.38	22.47			
Bandwidth	Modulation	RB size	RB	Target MPR	Channel					
<u> </u>	modulation	112 0120	offset			26740				
			0	0		24.41				
					1	24	0		24.49	
				49	0		24.37			
	QPSK		0	1		23.42				
		25	12	1		23.46				
			25	1		23.38				
10MHz		50	0	1		23.42				
	101112		0	1		23.86				
		1	24	1		23.93				
			49	1		23.86				
	16QAM		0	2		22.46				
		25	12	2		22.46				
			25	2		22.43				
		50	0	2		22.41				





	Conducted Power of LTE Band 41(dBm)							
			RB	Target	Channel	Channel	Channel	
Bandwidth	Modulation	RB size	offset	MPR	39675	40620	41565	
			0	0	26.14	26.30	26.61	
		1	12	0	26.40	26.63	26.93	
			24	0	26.08	26.39	26.57	
	QPSK		0	1	26.11	26.43	26.70	
		12	6	1	26.22	26.55	26.73	
			13	1	26.18	26.54	26.63	
CNALL-		25	0	1	26.21	26.51	26.68	
5MHz			0	1	26.37	26.67	27.01	
		1	12	1	26.57	26.99	27.15	
			24	1	26.30	26.76	26.96	
	16QAM		0	2	26.12	26.49	26.58	
		12	6	2	26.13	26.62	26.63	
			13	2	26.10	26.48	26.56	
		25	0	2	26.15	26.51	26.60	
Bandwidth	Modulation	RB size	RB	Target	Channel	Channel	Channel	
Balluwiutii	Woddiation	ND SIZE	offset	MPR	39700	40620	41540	
			0	0	26.22	26.43	26.77	
		1	24	0	26.30	26.67	26.89	
			49	0	26.07	26.60	26.68	
	QPSK		0	1	26.17	26.54	26.76	
		25	12	1	26.18	26.58	26.76	
			25	1	26.23	26.65	26.73	
40MU~	40141-	50	0	1	26.17	26.57	26.73	
10MHz	Z		0	1	26.66	26.55	26.62	
	1	24	1	26.75	26.82	26.38		
			49	1	26.50	26.78	26.22	
	16QAM		0	2	26.18	26.52	26.62	
		25	12	2	26.19	26.58	26.48	
			25	2	26.24	26.66	26.38	
		50	0	2	26.16	26.59	26.47	



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	Conducted Power of LTE Band 41(dBm)							
Dan de distin	B411-4:	DD -!	RB	Target	Channel	Channel	Channel	
Bandwidth	Modulation	RB size	offset	MPR	39725	40620	41515	
			0	0	26.10	26.34	26.67	
		1	37	0	26.32	26.79	27.08	
			74	0	25.96	26.60	26.71	
	QPSK		0	1	26.22	26.50	26.82	
		37	19	1	26.23	26.64	26.87	
			38	1	26.17	26.68	26.83	
4EMU-		75	0	1	26.21	26.60	26.83	
15MHz			0	1	26.52	26.48	26.72	
		1	37	1	26.74	26.93	26.56	
			74	1	26.48	26.76	26.37	
	16QAM		0	2	26.17	26.54	26.56	
		37	19	2	26.21	26.65	26.40	
			38	2	26.15	26.72	26.29	
		75	0	2	26.19	26.60	26.47	
Bandwidth	Modulation	RB size	RB	Target	Channel	Channel	Channel	
Danawiatii	Woddiation	IND SIZE	offset	MPR	39750	40620	41490	
			0	0	26.00	26.21	26.34	
		1 [	49	0	26.27	26.75	26.91	
			99	0	25.97	26.56	26.46	
	QPSK		0	1	26.00	26.43	26.68	
		50	25	1	26.09	26.55	26.73	
			50	1	26.09	26.65	26.70	
20MHz		100	0	1	26.04	26.53	26.67	
ZUIVITIZ	ZUIVITZ		0	1	26.10	26.34	26.52	
	1	49	1	26.39	26.88	26.51		
			99	1	26.11	26.73	26.04	
	16QAM		0	2	25.96	26.50	26.58	
		50	25	2	26.07	26.59	26.42	
			50	2	26.02	26.72	26.21	
		100	0	2	26.04	26.53	26.35	



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		Conducte	d Power o	of LTE Band 71(d	dBm)		
Donada della	Madulatian	DD ei-e	RB	Toward MDD	Channel	Channel	Channel
Bandwidth	Modulation	RB size	offset	Target MPR	133147	133297	133447
			0	0	23.75	23.85	23.85
		1	12	0	24.28	24.36	23.97
			24	0	23.76	23.98	23.83
	QPSK		0	1	22.65	23.02	23.03
		12	6	1	22.93	23.12	23.04
			13	1	22.87	23.14	23.07
5MHz		25	0	1	22.79	23.08	23.00
JIVII IZ			0	1	23.39	23.25	23.16
		1	12	1	23.79	23.61	23.63
			24	1	23.38	23.35	23.18
	16QAM		0	2	21.57	21.97	22.08
		12	6	2	21.90	22.06	22.11
			13	2	21.90	22.07	22.11
		25	0	2	21.79	22.12	22.04
Bandwidth	Modulation	RB size	RB	Target MPR	Channel	Channel	Channel
Banawiani	Woddiation	ND 3120	offset	rarget wir ix	133172	133297	133422
			0	0	24.34	24.45	24.59
		1	24	0	24.44	24.69	24.75
			49	0	24.42	24.55	24.61
	QPSK		0	1	23.23	23.51	23.69
		25	12	1	23.38	23.57	23.56
			25	1	23.45	23.61	23.53
10MHz		50	0	1	23.33	23.57	23.60
10111112	TOWITZ		0	1	23.76	23.60	23.44
		1	24	1	23.90	23.84	23.50
			49	1	23.88	23.80	23.37
	16QAM		0	2	22.27	22.61	22.74
		25	12	2	22.44	22.64	22.61
			25	2	22.52	22.68	22.58
		50	0	2	22.34	22.64	22.58



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		Conducte	d Power o	of LTE Band 71(d	dBm)		
			RB		Channel	Channel	Channel
Bandwidth	Modulation	RB size	offset	Target MPR	133197	133297	133397
			0	0	24.29	23.79	23.91
		1	38	0	24.75	24.20	24.26
			74	0	24.48	23.97	23.96
	QPSK		0	1	23.33	23.13	23.14
		38	18	1	23.44	23.18	23.12
			37	1	23.56	23.31	23.10
15MHz		75	0	1	23.41	23.17	23.07
ISWITZ			0	1	23.08	23.26	23.20
		1	38	1	23.53	23.69	23.45
			74	1	23.34	23.44	23.14
	16QAM		0	2	21.86	22.01	22.20
		38	18	2	22.00	22.13	22.22
			37	2	22.10	22.24	22.22
		75	0	2	22.07	22.14	22.18
Bandwidth	Modulation	RB size	RB	Target MPR	Channel	Channel	Channel
Danawiatii	Woddiation	IND SIZE	offset	rarget wir ix	133222	133322	133372
			0	0	23.57	23.56	23.67
		1	49	0	24.03	24.13	24.16
			99	0	23.91	23.86	23.77
	QPSK		0	1	22.78	22.88	23.09
		50	25	1	22.93	23.08	23.06
			50	1	23.02	23.03	22.97
20MHz		100	0	1	22.89	22.95	23.03
20.01112	2311112		0	1	22.79	22.87	23.06
		1	49	1	23.26	23.44	23.47
			99	1	23.18	23.14	23.12
	16QAM		0	2	21.75	21.94	22.15
		50	25	2	21.94	22.16	22.20
			50	2	22.00	22.08	22.11
		100	0	2	21.94	21.97	22.08



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The following tests were conducted according to the test requirements outlined in section 6.2 of the 3GPP TS36.101 specification.

UE Power Class: 3 (23 +/- 2dBm). 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 6.2.3.3-1 of the 3GPP TS36.101.

Table 6.2.3.3-1 Maximum Power Reduction (MPR) for Power class3

Modulation	Maximum Power Reduction (MPR) for Power[RB]						MPR(dB)
Modulation	1.4MHz	3MHz	5MHz	10MHz	15MHz	20MHz	WIFK(UB)
QPSK	>5	>4	>8	>12	>16	>18	≤1
16QAM	≤5	≤4	≤8	≤12	≤16	≤18	≤1
16QAM	>5	>4	>8	>12	>16	>18	≤2

The allowed A-MPR values specified below in Table 6.2.4.3-1 of 3GPP TS36.101 are in addition to the allowed MPR requirements. All the measurements below were performed with A-MPR disabled, by using Network Signaling Value of "NS\_01".3



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Table 6.2.4.3-1: Additional Maximum Power Reduction (A-MPR) / Spectrum Emission requirements

Network	3-1: Additional Max	illialli i owel iteaa	Channel	Resources		
Signaling	Requirements	E-UTRA Band	bandwidth	Blocks	A-MPR (dB)	
value	(sub-clause)	E-UTRA Ballu	(MHz)	(N <sub>RB</sub> )	A-IVIPR (UD)	
NS 01	6.6.2.1.1	Table 5.2-1	1.4,3,5,10,15,20	Table 5.4.2-1	N/A	
_			3	>5	≤ 1	
			5	>6	≤ 1	
NS 03	6.6.2.2.3.1	2,4,10, 23,	10	>6	≤ 1	
		25,35,36	15	>8	≤ 1	
			20	>10	≤ 1	
110.04	00000	4.4	5	>6	≤1	
NS_04	6.6.2.2.3.2	41	10, 15, 20	Table 6	.2.4.3-4	
NS 05	6.6.3.3.3.1	1	10,15,20	≥ 50	≤ 1	
NS 06	6.6.2.2.3.3	12, 13, 14, 17	1.4, 3, 5, 10	Table 5.4.2-1	N/A	
_	6.6.2.2.3.3			T-1-1-00400	T-1-1- C O 4 O O	
NS_07	6.6.3.3.3.2	13	6.6.3.3.3.2	10	Table 6.2.4.3-2	Table 6.2.4.3-2
NS 08	6.6.3.3.3.3	19	10, 15	> 44	≤ 3	
NC 00	662224	24	10 15	> 40	≤ 1	
NS_09	6.6.3.3.3.4	21	10, 15	> 55	≤ 2	
NS 10		20	15, 20	Table 6.2.4.3-3	Table 6.2.4.3-3	
NC 44	6.6.2.2.1	004	1.4, 3, 5,	T-bl- 00405	T-bl- C 2 4 2 5	
NS_11	6.6.3.3.13	231	10,15,20	Table 6.2.4.3-5	Table 6.2.4.3-5	
NS_12	6.6.3.3.5	26	1.4, 3, 5	Table 6.2.4.3-6	Table 6.2.4.3-6	
NS_13	6.6.3.3.6	26	5	Table 6.2.4.3-7	Table 6.2.4.3-7	
NS_14	6.6.3.3.7	26	10, 15	Table 6.2.4.3-8	Table 6.2.4.3-8	
NS 15	6.6.3.3.8	26	1.4, 3, 5, 10, 15	Table 6.2.4.3-9	Table 6.2.4.3-9,	
140_10	0.0.3.3.0	20	1.4, 3, 3, 10, 13	Table 6.2.4.3-10	Table 6.2.4.3-10	
NS 16	6.6.3.3.9	27	3, 5, 10		Table 6.2.4.3-12,	
143_10	0.0.3.3.9	21	3, 3, 10	Table 6.	2.4.3-13	
NS_17	6.6.3.3.10	28	5, 10	Table 5.4.2-1	N/A	
_	6.6.3.3.11	28	5	≥ 2	≤ 1	
NS_18			10, 15, 20	≥ 1	≤ 4	
NS_19			10, 15, 20	Table 6.2.4.3-15		
NS_20			5, 10, 15, 20	Table 6.2.4.3-14	Table 6.2.4.3-14	
NS_20	-	-	-	_	-	
L		1	1	l		



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### WIFI

Mode	Data Rate (Mbps)	Channel	Frequency(MHz)	Avg. Burst Power(dBm)
		01	2412	15.92
802.11b	1	06	2437	15.57
		11	2462	15.07
		01	2412	13.26
802.11g	6	06	2437	12.99
		11	2462	12.46
		01	2412	11.75
802.11n(20)	6.5	06	2437	11.38
		11	2462	10.79
		03	2422	11.65
802.11n(40)	13.5	06	2437	11.59
		09	2452	11.23

Bluetooth V5.3(BR/EDR)

Modulation	Channel	Frequency(MHz)	Peak Power (dBm)
	0	2402	4.55
GFSK	39	2441	6.06
	78	2480	6.40
	0	2402	4.53
π /4-DQPSK	39	2441	5.24
	78	2480	5.67
	0	2402	4.56
8-DPSK	39	2441	5.30
	78	2480	5.75

Bluetooth\_V5.3 (BLE)

Modulation	Channel	Frequency(MHz)	Peak Power (dBm)			
	0	2402	-1.71			
GFSK_1M	19	2440	-0.23			
	39	2480	-0.34			
	0	2402	-1.84			
GFSK_2M	19	2440	-0.38			
	39	2480	-0.28			

### Note 1:

**BR/EDR:** Calculation Value =[(max. power of channel, mW)/(min. test separation distance, mm)]  $\cdot [\sqrt{f(GHz)}] = 4.365/5*\sqrt{2.480} = 1.375 \le 3.0$ 

**BLE\_GFSK\_1M:** Calculation Value =[(max. power of channel, mW)/(min. test separation distance, mm)]  $\cdot [\sqrt{f(GHz)}] = 0.948/5*\sqrt{2.440} = 0.296 \le 3.0$ 

**BLE\_GFSK\_2M:** Calculation Value =[(max. power of channel, mW)/(min. test separation distance, mm)]  $\cdot [\sqrt{f(GHz)}] = 0.938/5*\sqrt{2.480} = 0.295 \le 3.0$ 

According to KDB447498 D01 V06, threshold at which no SAR required is ≤3.0 for 1-g SAR, separation distance is 5mm, and the SAR evaluation for BT is not required.

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#### 5GHz WIFI

5GHz WIFI	channel	Eroguenov	Power(dBm)
Mode	channel	Frequency	Data Rate(bps)
	36	5180	8.91
	40	5200	8.91
	48	5240	9.13
	52	5260	9.74
	60	5300	10.24
	64	5320	10.31
802.11a	100	5500	10.94
	116	5580	11.12
	140	5700	11.50
	149	5745	11.52
	157	5785	11.51
	165	5825	11.35
	36	5180	6.88
	40	5200	6.13
	48	5240	6.20
	52	5260	6.85
	60	5300	9.91
802.11n	64	5320	7.81
(20)	100	5500	8.77
	116	5580	8.91
	140	5700	9.21
	149	5745	9.31
	157	5785	9.28
	165	5825	9.00
	38	5190	6.65
	46	5230	6.38
	54	5270	6.87
	62	5310	7.35
802.11n	102	5510	8.31
(40)	110	5550	8.41
	134	5670	9.15
	151	5755	9.40
	159	5795	8.80





NA - d -	- h l	F	Power(dBm)
Mode	channel	Frequency	Data Rate(bps)
	36	5180	4.66
	40	5200	4.35
	48	5240	4.28
	52	5260	4.87
	60	5300	5.59
802.11ac	64	5320	5.61
(20)	100	5500	6.84
` ′ _	116	5580	6.80
	140	5700	7.10
	149	5745	7.30
	157	5785	7.39
	165	5825	7.01
	38	5190	4.14
	46	5230	4.43
	54	5270	4.83
	62	5310	5.46
802.11ac	102	5510	6.39
(40)	110	5550	6.60
	134	5670	7.28
	151	5755	7.59
	159	5795	7.04
	42	5210	4.47
200 44	58	5290	4.99
802.11ac	106	5530	6.40
(80)	122	5610	7.04
	155	5775	7.09



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# 13. TEST RESULTS

# 13.1. SAR Test Results Summary

13.1.1. Test position and configuration

Head SAR was performed with the device configured in the positions according to IEEE 1528-2013, Body-worn and 4 Edges SAR was performed with the device 10mm from the phantom.

### 13.1.2. Operation Mode

- 1. Per KDB 447498 D01 v06 ,for each exposure position, if the highest 1-g SAR is ≤ 0.8 W/kg, testing for low and high channel is optional.
- 2. Per KDB 865664 D01 v01r04,for each frequency band, if the measured SAR is ≥ 0.8W/kg, testing for repeated SAR measurement is required, that the highest measured SAR is only to be tested. When the SAR results are near the limit, the following procedures are required for each device to verify these types of SAR measurement related variation concerns by repeating the highest measured SAR configuration in each frequency band.
  - (1) When the original highest measured SAR is ≥0.8W/kg, repeat that measurement once.
  - (2) Perform a second repeated measurement only if the ratio of largest to smallest SAR for the original and first repeated measurements is >1.20 or when the original or repeated measurement is ≥1.45 W/kg.
  - (3) Perform a third repeated measurement only if the original, first and second repeated measurement is ≥ 1.5 W/kg and ratio of largest to smallest SAR for the original, first and second measurement is ≥ 1.20.
- 3. Body-worn exposure conditions are intended to voice call operations, therefore GSM voice call mode is selected to be test.
- 4. Per KDB 648474 D04 v01r03,when the reported SAR for a body-worn accessory measured without a headset connected to the handset is ≤1.2W/kg, SAR testing with a headset connected is not required.
- 5. Per KDB 248227 D01v02r02,for 2.4GHz 802.11g/n SAR testing is not required 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 ≤1.2W/kg.
- 6. Per KDB 248227 D01 v02r02 Chapter 5.3.4, SAR measurement requirements for the remaining 802.11 transmission mode configurations that have not been tested in the initial test configuration are determined separately for each standalone and aggregated frequency band, in each exposure condition, according to the maximum output power specified for production units. The initial test position procedure is applied to next to the ear, UMPC mini-tablet and hotspot mode configurations. When the same maximum output power is specified for multiple transmission modes, the procedures in 5.3.2 are applied to determine the test configuration. Additional power measurements may be required to determine if SAR measurements are required for subsequent highest output power channels in a subsequent test configuration. The subsequent test configuration and SAR measurement procedures are described in the following.
  - (1) When SAR test exclusion provisions of KDB Publication 447498 D01 are applicable and SAR measurement is not required for the initial test configuration, SAR is also not required for the next highest maximum output power transmission mode subsequent test configuration(s) in that frequency band or aggregated band and exposure configuration.
  - (2) When the highest reported SAR for the initial test configuration (when applicable, include subsequent highest output channels), according to the initial test position or fixed exposure position requirements, is adjusted by the ratio of the subsequent test configuration to initial test configuration specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg, SAR is not required for that subsequent test configuration.



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- 7. Per KDB 941225 D06 V02r01, When the same wireless mode transmission configurations for voice and data are required for SAR measurements, the more conservative configuration with a smaller separation distance should be tested for the overlapping SAR configurations.
- 8. Maximum Scaling SAR in order to calculate the Maximum SAR values to test under the standard Peak Power, Calculation method is as follows:

  Maximum Scaling SAR =tested SAR (Max.) ×[maximum turn-up power (mw)/ maximum measurement output power(mw)]
- 9. Proximity sensor, just for avoiding the wrong operation in the phone screen when call, and has no influence on output power or SAR result
- 10. Per KDB 941225 D05v02r05, start with the largest channel bandwidth and measure SAR for QPSK with 1RB allocation using the RB offset and required test channel combination with highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
- 11. Per KDB 941125 D05v02r05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
- 12. Per KDB 941125 D05v02r05. 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 1RB allocation and the highest reported SAR is >1.45 W/kg, the remaining required test channels must also be tested.
- 13. Per KDB 941125 D05v02r05. 16QAM output power for each RB allocation configuration is not 1/2 dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is ≤1.45W/kg, Per KDB 941225 D05v02r05, 16QAM SAR testing is not required.
- 14. Per KDB 941125 D05v02r05. Smaller bandwidth output power for each RB allocation configuration is >not 1/2 dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤1.45W/kg. Per KDB 941125 D05v02r05, smaller bandwidth SAR testing is not required.



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# 13.1.3. Test Result

SAR MEASURE	MENT								
Depth of Liquid (cm):>15				Relative Humidity (%):51.2					
Product: smartph	one								
Test Mode: GSM	850 with GMSK m	odulatio	on						
Position	Mode	Ch.	Fr. (MHz)	Power Drift (<±5%)	SAR (1g) (W/kg)	Max. Tune-up Power (dBm)	Meas. output Power (dBm)	Scaled SAR (W/kg)	Limit (W/kg)
SIM 1 Card									
Left Cheek	voice	190	836.6	-0.31	0.272	34.50	33.80	0.320	1.6
Left Tilt	voice	190	836.6	0.23	0.186	34.50	33.80	0.219	1.6
Right Cheek	voice	190	836.6	-0.05	0.321	34.50	33.80	0.377	1.6
Right Tilt	voice	190	836.6	-0.03	0.203	34.50	33.80	0.239	1.6
Body back	voice	190	836.6	-0.12	0.476	34.50	33.80	0.559	1.6
Body front	voice	190	836.6	0.45	0.159	34.50	33.80	0.187	1.6
Body back	GPRS-2 slot	190	836.6	0.10	0.364	33.50	32.99	0.409	1.6
Body front	GPRS-2 slot	190	836.6	-0.07	0.261	33.50	32.99	0.294	1.6
Edge 1 (Top)	GPRS-2 slot	190	836.6	-0.07	0.042	33.50	32.99	0.047	1.6
Edge 2(Right)	GPRS-2 slot	190	836.6	0.31	0.082	33.50	32.99	0.092	1.6
Edge 3(Bottom)	GPRS-2 slot	190	836.6	-0.19	0.144	33.50	32.99	0.162	1.6
Edge 4(Left)	GPRS-2 slot	190	836.6	0.02	0.097	33.50	32.99	0.109	1.6

### Note:

<sup>·</sup> When the 1-g Reported SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. Refer to KDB 447498.

<sup>·</sup>The test separation for body back, body front and 4 Edges is 10mm of all above table.



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## **SAR MEASUREMENT**

Depth of Liquid (cm):>15 Relative Humidity (%):56.9

Product: smartphone

Test Mode: PCS1900 with GMSK modulation

Position	Mode	Ch.	Fr. (MHz)	Power Drift (<±5%)	SAR (1g) (W/kg)	Max. Tune-up Power (dBm)	Meas. output Power (dBm)	Scaled SAR (W/kg)	Limit (W/kg)
SIM 1 Card									
Left Cheek	voice	661	1880.0	-0.11	0.042	31.50	30.85	0.049	1.6
Left Tilt	voice	661	1880.0	-0.33	0.029	31.50	30.85	0.034	1.6
Right Cheek	voice	661	1880.0	0.24	0.069	31.50	30.85	0.080	1.6
Right Tilt	voice	661	1880.0	-0.24	0.047	31.50	30.85	0.055	1.6
Body back	voice	661	1880.0	-0.32	0.111	31.50	30.85	0.129	1.6
Body front	voice	661	1880.0	0.27	0.102	31.50	30.85	0.118	1.6
Body back	GPRS-2 slot	661	1880	0.27	0.234	30.50	30.02	0.261	1.6
Body front	GPRS-2 slot	661	1880.0	-0.37	0.185	30.50	30.02	0.207	1.6
Edge 1 (Top)	GPRS-2 slot	661	1880.0	-0.49	0.083	30.50	30.02	0.093	1.6
Edge 2(Right)	GPRS-2 slot	661	1880.0	0.22	0.097	30.50	30.02	0.108	1.6
Edge 3(Bottom)	GPRS-2 slot	661	1880.0	-0.44	0.182	30.50	30.02	0.203	1.6
Edge 4(Left)	GPRS-2 slot	661	1880.0	-0.13	0.103	30.50	30.02	0.115	1.6

## Note:

<sup>·</sup> When the 1-g Reported SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. Refer to KDB 447498.

<sup>•</sup>The test separation for body back, body front and 4 Edges is 10mm of all above table.



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## **SAR MEASUREMENT**

Depth of Liquid (cm):>15 Relative Humidity (%):56.9

Product: smartphone

Test Mode: WCDMA Band II with QPSK modulation

Position	Mode	Ch.	Fr. (MHz)	Power Drift (<±5%)	SAR (1g) (W/kg)	Max. Tune-up Power (dBm)	Meas. output Power (dBm)	Scaled SAR (W/kg)	Limit (W/kg)
Left Cheek	RMC 12.2kbps	9400	1880	-0.21	0.105	24.50	24.47	0.106	1.6
Left Tilt	RMC 12.2kbps	9400	1880	-0.40	0.043	24.50	24.47	0.043	1.6
Right Cheek	RMC 12.2kbps	9400	1880	-0.41	0.111	24.50	24.47	0.112	1.6
Right Tilt	RMC 12.2kbps	9400	1880	-0.31	0.059	24.50	24.47	0.059	1.6
Body back	RMC 12.2kbps	9400	1880	-0.49	0.226	24.50	24.47	0.228	1.6
Body front	RMC 12.2kbps	9400	1880	0.50	0.162	24.50	24.47	0.163	1.6
Edge 1 (Top)	RMC 12.2kbps	9400	1880	-0.41	0.072	24.50	24.47	0.072	1.6
Edge 2(Right)	RMC 12.2kbps	9400	1880	-0.10	0.094	24.50	24.47	0.095	1.6
Edge 3(Bottom)	RMC 12.2kbps	9400	1880	0.04	0.153	24.50	24.47	0.154	1.6
Edge 4(Left)	RMC 12.2kbps	9400	1880	0.20	0.106	24.50	24.47	0.107	1.6

<sup>·</sup> When the 1-g Reported SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. Refer to KDB 447498.

<sup>•</sup>The test separation for body back, body front and 4 Edges is 10mm of all above table.



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## **SAR MEASUREMENT**

Depth of Liquid (cm):>15 Relative Humidity (%):51.9

Product: smartphone

Test Mode: WCDMA Band IV with QPSK modulation

Position	Mode	Ch.	Fr. (MHz)	Power Drift (<±5%)	SAR (1g) (W/kg)	Max. Tune-up Power (dBm)	Meas. output Power (dBm)	Scaled SAR (W/kg)	Limit (W/kg)
Left Cheek	RMC 12.2kbps	8662	1732.4	-0.18	0.052	24.50	23.85	0.060	1.6
Left Tilt	RMC 12.2kbps	8662	1732.4	-0.10	0.043	24.50	23.85	0.050	1.6
Right Cheek	RMC 12.2kbps	8662	1732.4	0.22	0.061	24.50	23.85	0.071	1.6
Right Tilt	RMC 12.2kbps	8662	1732.4	-0.36	0.047	24.50	23.85	0.055	1.6
Body back	RMC 12.2kbps	8662	1732.4	-0.21	0.163	24.50	23.85	0.189	1.6
Body front	RMC 12.2kbps	8662	1732.4	-0.02	0.088	24.50	23.85	0.102	1.6
Edge 1 (Top)	RMC 12.2kbps	8662	1732.4	0.33	0.041	24.50	23.85	0.048	1.6
Edge 2(Right)	RMC 12.2kbps	8662	1732.4	-0.02	0.055	24.50	23.85	0.064	1.6
Edge 3(Bottom)	RMC 12.2kbps	8662	1732.4	-0.38	0.097	24.50	23.85	0.113	1.6
Edge 4(Left)	RMC 12.2kbps	8662	1732.4	0.40	0.080	24.50	23.85	0.093	1.6

<sup>·</sup> When the 1-g Reported SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. Refer to KDB 447498.

<sup>•</sup>The test separation for body back, body front and 4 Edges is 10mm of all above table.



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**SAR MEASUREMENT** 

Depth of Liquid (cm):>15 Relative Humidity (%):51.2

Product: smartphone

Test Mode: WCDMA Band V with QPSK modulation

Position	Mode	Ch.	Fr. (MHz)	Power Drift (<±5%)	SAR (1g) (W/kg)	Max. Tune-up Power (dBm)	Meas. output Power (dBm)	Scaled SAR (W/kg)	Limit (W/kg)
Left Cheek	RMC 12.2kbps	4183	836.4	-0.16	0.242	25.00	24.59	0.266	1.6
Left Tilt	RMC 12.2kbps	4183	836.4	-0.11	0.151	25.00	24.59	0.166	1.6
Right Cheek	RMC 12.2kbps	4183	836.4	0.31	0.293	25.00	24.59	0.322	1.6
Right Tilt	RMC 12.2kbps	4183	836.4	-0.25	0.173	25.00	24.59	0.190	1.6
Body back	RMC 12.2kbps	4183	836.4	-0.38	0.390	25.00	24.59	0.429	1.6
Body front	RMC 12.2kbps	4183	836.4	0.08	0.207	25.00	24.59	0.227	1.6
Edge 1 (Top)	RMC 12.2kbps	4183	836.4	-0.40	0.052	25.00	24.59	0.057	1.6
Edge 2(Right)	RMC 12.2kbps	4183	836.4	-0.23	0.069	25.00	24.59	0.076	1.6
Edge 3(Bottom)	RMC 12.2kbps	4183	836.4	-0.31	0.125	25.00	24.59	0.137	1.6
Edge 4(Left)	RMC 12.2kbps	4183	836.4	0.01	0.087	25.00	24.59	0.096	1.6

<sup>·</sup> When the 1-g Reported SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. Refer to KDB 447498.

<sup>•</sup>The test separation for body back, body front and 4 Edges is 10mm of all above table.



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## **SAR MEASUREMENT**

Depth of Liquid (cm):>15 Relative Humidity (%):56.9

Product: smartphone

Test Mode: LTE Band 2

ВМ			Test M	lode	Ch	Freq.	Power	SAR	Max. Tune	Meas. output	Scaled	Limit
MHz	MOD	Position	UL RB Allocation	UL RB START	Ch.	(MHz)	Drift (<±5%)	(1g) (W/kg)	up Power (dBm)	Power (dBm)	SAR (W/kg)	(W/kg)
		Left Cheek	1	0	18900	1880	-0.33	0.103	25.50	24.32	0.135	1.6
		Left Tilt	1	0	18900	1880	-0.35	0.044	25.50	24.32	0.058	1.6
		Right Cheek	1	0	18900	1880	-0.06	0.109	25.50	24.32	0.143	1.6
		Right Tilt	1	0	18900	1880	-0.01	0.062	25.50	24.32	0.081	1.6
20	QPSK	Body back	1	0	18900	1880	0.50	0.204	25.50	24.32	0.268	1.6
20	QFSK	Body front	1	0	18900	1880	-0.17	0.121	25.50	24.32	0.159	1.6
		Edge 1 (Top)	1	0	18900	1880	-0.40	0.063	25.50	24.32	0.083	1.6
		Edge 2(Right)	1	0	18900	1880	0.39	0.092	25.50	24.32	0.121	1.6
		Edge 3(Bottom)	1	0	18900	1880	-0.42	0.110	25.50	24.32	0.144	1.6
		Edge 4(Left)	1	0	18900	1880	0.30	0.079	25.50	24.32	0.104	1.6

#### Note:

<sup>·</sup> When the 1-g Reported SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. Refer to KDB 447498.

<sup>•</sup>The test separation for body back, body front and 4 Edges is 10mm of all above table.



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## **SAR MEASUREMENT**

Depth of Liquid (cm):>15 Relative Humidity (%):51.9

Product: smartphone

Test Mode: LTE Band 4

ВМ			Test M	lode		Freq.	Power	SAR	Max. Tuneu	Meas. output	Scaled	Limit
MHz	MOD	Position	UL RB Allocation	UL RB START	Ch.	(MHz)	Drift (<±5%)	(1g) (W/kg)	p Power (dBm)	Power (dBm)	SAR (W/kg)	(W/kg)
		Left Cheek	1	0	20175	1732.5	-0.11	0.059	25.00	23.54	0.083	1.6
		Left Tilt	1	0	20175	1732.5	-0.42	0.032	25.00	23.54	0.045	1.6
		Right Cheek	1	0	20175	1732.5	-0.01	0.077	25.00	23.54	0.108	1.6
		Right Tilt	1	0	20175	1732.5	-0.11	0.041	25.00	23.54	0.057	1.6
		Body back	1	0	20175	1732.5	0.25	0.178	25.00	23.54	0.249	1.6
20	QPSK	Body front	1	0	20175	1732.5	-0.15	0.112	25.00	23.54	0.157	1.6
		Edge 1 (Top)	1	0	20175	1732.5	0.02	0.031	25.00	23.54	0.043	1.6
		Edge 2(Right)	1	0	20175	1732.5	-0.21	0.049	25.00	23.54	0.069	1.6
		Edge 3(Bottom)	1	0	20175	1732.5	0.30	0.092	25.00	23.54	0.129	1.6
		Edge 4(Left)	1	0	20175	1732.5	-0.16	0.061	25.00	23.54	0.085	1.6

<sup>·</sup> When the 1-g Reported SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. Refer to KDB 447498.

<sup>•</sup>The test separation for body back, body front and 4 Edges is 10mm of all above table.



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## **SAR MEASUREMENT**

Depth of Liquid (cm):>15 Relative Humidity (%):51.2

Product: smartphone

Test Mode: LTE Band 5

		L Bana o				1	ı				1	1
ВМ				t Mode		Freq.	Power	SAR (1g)	Max. Tuneup	Meas. output	Scaled	Limit
MHz	MOD	Position	UL RB Allocati on	UL RB START	Ch.	(MHz)	Drift (<±5%)	(W/kg)	Power (dBm)	Power (dBm)	SAR (W/kg)	(W/kg)
		Left Cheek	1	0	20525	836.5	-0.14	0.244	25.50	24.62	0.299	1.6
		Left Tilt	1	0	20525	836.5	0.01	0.162	25.50	24.62	0.198	1.6
		Right Cheek	1	0	20525	836.5	-0.50	0.283	25.50	24.62	0.347	1.6
		Right Tilt	1	0	20525	836.5	0.41	0.177	25.50	24.62	0.217	1.6
		Body back	1	0	20525	836.5	-0.03	0.451	25.50	24.62	0.552	1.6
10	QPSK	Body front	1	0	20525	836.5	-0.34	0.329	25.50	24.62	0.403	1.6
		Edge 1 (Top)	1	0	20525	836.5	0.28	0.029	25.50	24.62	0.036	1.6
		Edge 2(Right)	1	0	20525	836.5	-0.25	0.042	25.50	24.62	0.051	1.6
		Edge 3(Bottom)	1	0	20525	836.5	-0.05	0.101	25.50	24.62	0.124	1.6
		Edge 4(Left)	1	0	20525	836.5	-0.04	0.080	25.50	24.62	0.098	1.6

 $<sup>\</sup>cdot$  When the 1-g Reported SAR is  $\le$  0.8 W/kg, testing for low and high channel is optional. Refer to KDB 447498.

<sup>•</sup>The test separation for body back, body front and 4 Edges is 10mm of all above table.



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SAR MEASUREMENT		
Depth of Liquid (cm):>15	Relative Humidity (%):56.7	
Product: smartphone		
Test Mode: LTF Band 12		

ВМ	мор	Position	Test M	ode	O.b.	Freq.	Power	SAR	Max. Tuneup	Meas. output	Scaled	Limit
MHz	MOD	Position	UL RB Allocation	UL RB START	Ch.	(MHz)	Drift (<±5%)	(1g) (W/kg)	Power (dBm)	Power (dBm)	SAR (W/kg)	(W/kg)
		Left Cheek	1	0	23095	707.5	-0.10	0.215	25.00	24.57	0.237	1.6
		Left Tilt	1	0	23095	707.5	0.08	0.175	25.00	24.57	0.193	1.6
		Right Cheek	1	0	23095	707.5	-0.33	0.232	25.00	24.57	0.256	1.6
		Right Tilt	1	0	23095	707.5	-0.30	0.188	25.00	24.57	0.208	1.6
		Body back	1	0	23095	707.5	0.24	0.345	25.00	24.57	0.381	1.6
10	QPSK	Body front	1	0	23095	707.5	-0.13	0.214	25.00	24.57	0.236	1.6
		Edge 1 (Top)	1	0	23095	707.5	-0.25	0.052	25.00	24.57	0.057	1.6
		Edge 2(Right)	1	0	23095	707.5	0.43	0.071	25.00	24.57	0.078	1.6
		Edge 3(Bottom)	1	0	23095	707.5	-0.07	0.149	25.00	24.57	0.165	1.6
		Edge 4(Left)	1	0	23095	707.5	0.27	0.097	25.00	24.57	0.107	1.6

### Note:

<sup>·</sup> When the 1-g Reported SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. Refer to KDB 447498.

<sup>•</sup>The test separation for body back, body front and 4 Edges is 10mm of all above table.



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## **SAR MEASUREMENT**

Depth of Liquid (cm):>15 Relative Humidity (%):56.7

Product: smartphone

Test Mode: LTE Band 13

	Tool Mode. ETE Bank 10												
ВМ	MOD	Position	Test Mo		Ch.	Freq.	Power Drift	SAR (1g)	Max. Tuneup	Meas. output	Scaled SAR	Limit	
MHz			UL RB Allocation	UL RB START		(MHz)	(<±5%)	(W/kg)	Power (dBm)	Power (dBm)	(W/kg)	(W/kg)	
		Left Cheek	1	0	23230	782	-0.23	0.072	25.00	24.43	0.082	1.6	
		Left Tilt	1	0	23230	782	-0.22	0.041	25.00	24.43	0.047	1.6	
		Right Cheek	1	0	23230	782	-0.39	0.086	25.00	24.43	0.098	1.6	
		Right Tilt	1	0	23230	782	0.17	0.053	25.00	24.43	0.060	1.6	
		Body back	1	0	23230	782	-0.05	0.268	25.00	24.43	0.306	1.6	
10	QPSK	Body front	1	0	23230	782	-0.11	0.109	25.00	24.43	0.124	1.6	
		Edge 1 (Top)	1	0	23230	782	-0.09	0.032	25.00	24.43	0.036	1.6	
		Edge 2(Right)	1	0	23230	782	0.14	0.048	25.00	24.43	0.055	1.6	
		Edge 3(Bottom)	1	0	23230	782	-0.43	0.097	25.00	24.43	0.111	1.6	
		Edge 4(Left)	1	0	23230	782	0.38	0.063	25.00	24.43	0.072	1.6	

<sup>·</sup> When the 1-g Reported SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. Refer to KDB 447498.

<sup>•</sup>The test separation for body back, body front and 4 Edges is 10mm of all above table.



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SAR MEASUREMENT	
Depth of Liquid (cm):>15	Relative Humidity (%):56.9
Product: smartphone	
Test Mode: LTE Band 25	

BM MOD	MOD	Position	Test Me	ode	Ch.	Freq.	Power	SAR	Max. Tuneup	Meas. output	Scaled	Limit
MHz	MOD	Position	UL RB Allocation	UL RB START	OII.	(MHz)	Drift (<±5%)	(1g) (W/kg)	Power (dBm)	Power (dBm)	SAR (W/kg)	(W/kg)
		Left Cheek	1	0	26365	1882.5	-0.47	0.072	25.50	24.51	0.090	1.6
		Left Tilt	1	0	26365	1882.5	-0.14	0.043	25.50	24.51	0.054	1.6
		Right Cheek	1	0	26365	1882.5	-0.10	0.098	25.50	24.51	0.123	1.6
		Right Tilt	1	0	26365	1882.5	0.14	0.054	25.50	24.51	0.068	1.6
		Body back	1	0	26365	1882.5	-0.38	0.237	25.50	24.51	0.298	1.6
20	QPSK	Body front	1	0	26365	1882.5	-0.37	0.182	25.50	24.51	0.229	1.6
		Edge 1 (Top)	1	0	26365	1882.5	0.40	0.028	25.50	24.51	0.035	1.6
		Edge 2(Right)	1	0	26365	1882.5	-0.13	0.033	25.50	24.51	0.041	1.6
		Edge 3(Bottom)	1	0	26365	1882.5	0.15	0.095	25.50	24.51	0.119	1.6
		Edge 4(Left)	1	0	26365	1882.5	-0.17	0.060	25.50	24.51	0.075	1.6

### Note:

<sup>·</sup> When the 1-g Reported SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. Refer to KDB 447498.

<sup>•</sup>The test separation for body back, body front and 4 Edges is 10mm of all above table.



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## **SAR MEASUREMENT**

Depth of Liquid (cm):>15 Relative Humidity (%):51.2

Product: LTE smartphone

Test Mode: LTE Band 26A

	1	L Bana 2071			1	1					T	
вм	MOD	Position	Test Mode		Ch.	Freq.	Power Drift	SAR (1g)	Max. Tuneup	Meas. output	Scaled SAR	Limit
MHz	MOD		UL RB Allocation	UL RB START		(MHz)	(<±5%)	(W/kg)	Power (dBm)	Power (dBm)	(W/Kg)	(W/kg)
		Left Cheek	1	0	26915	836.5	-0.09	0.219	25.50	24.46	0.278	1.6
		Left Tilt	1	0	26915	836.5	0.28	0.150	25.50	24.46	0.191	1.6
		Right Cheek	1	0	26915	836.5	-0.39	0.269	25.50	24.46	0.342	1.6
		Right Tilt	1	0	26915	836.5	-0.31	0.174	25.50	24.46	0.221	1.6
		Body back	1	0	26915	836.5	0.03	0.538	25.50	24.46	0.684	1.6
15	QPSK	Body front	1	0	26915	836.5	-0.41	0.263	25.50	24.46	0.334	1.6
		Edge 1 (Top)	1	0	26915	836.5	-0.16	0.074	25.50	24.46	0.094	1.6
		Edge 2(Right)	1	0	26915	836.5	0.09	0.095	25.50	24.46	0.121	1.6
		Edge 3(Bottom)	1	0	26915	836.5	-0.04	0.102	25.50	24.46	0.130	1.6
		Edge 4(Left)	1	0	26915	836.5	-0.01	0.082	25.50	24.46	0.104	1.6

<sup>·</sup> When the 1-g Reported SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. Refer to KDB 447498.

<sup>•</sup>The test separation for body back, body front and 4 Edges is 10mm of all above table.



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## **SAR MEASUREMENT**

Depth of Liquid (cm):>15 Relative Humidity (%):51.2

Product: LTE smartphone

Test Mode: LTE Band 26B

		L Dana 20D							May	Mana		
вм		Position	Test Mode			Freq.	Power	SAR	Max. Tuneup	Meas. output	Scaled	Limit
MHz	MOD		UL RB Allocation	UL RB START	Ch.	(MHz)	Drift (<±5%)	(1g) (W/kg)	Power (dBm)	Power (dBm)	SAR (W/Kg)	(W/kg)
		Left Cheek	1	0	26740	819	-0.23	0.202	25.00	24.41	0.231	1.6
		Left Tilt	1	0	26740	819	-0.30	0.139	25.00	24.41	0.159	1.6
		Right Cheek	1	0	26740	819	-0.17	0.250	25.00	24.41	0.286	1.6
		Right Tilt	1	0	26740	819	0.40	0.162	25.00	24.41	0.186	1.6
		Body back	1	0	26740	819	-0.28	0.361	25.00	24.41	0.414	1.6
10	QPSK	Body front	1	0	26740	819	-0.31	0.243	25.00	24.41	0.278	1.6
		Edge 1 (Top)	1	0	26740	819	0.36	0.065	25.00	24.41	0.074	1.6
		Edge 2(Right)	1	0	26740	819	-0.42	0.087	25.00	24.41	0.100	1.6
		Edge 3(Bottom)	1	0	26740	819	0.27	0.104	25.00	24.41	0.119	1.6
		Edge 4(Left)	1	0	26740	819	-0.09	0.088	25.00	24.41	0.101	1.6

<sup>·</sup> When the 1-g Reported SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. Refer to KDB 447498.

<sup>•</sup>The test separation for body back, body front and 4 Edges is 10mm of all above table.



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SAR MEASUREMENT	
Depth of Liquid (cm):>15	Relative Humidity (%):58.2
Product: smartphone	
Test Mode: LTE Band 41	

BW	MOD	D 141	Test M	ode	O.	Freg.	Power	SAR (1g)	Max. Tuneup	Meas. output	Scaled SAR (W/kg)	Limit (W/kg)
MHz	MOD	Position	UL RB Allocation	UL RB START	Ch.	(MHz)	Drift (<±5%)	(W/kg)	Power (dBm)	Power (dBm)		
		Left Cheek	1	0	40620	2593	-0.29	0.032	27.50	26.21	0.043	1.6
		Left Tilt	1	0	40620	2593	-0.11	0.029	27.50	26.21	0.039	1.6
		Right Cheek	1	0	40620	2593	0.19	0.040	27.50	26.21	0.054	1.6
		Right Tilt	1	0	40620	2593	-0.07	0.026	27.50	26.21	0.035	1.6
		Body back	1	0	40620	2593	-0.05	0.126	27.50	26.21	0.170	1.6
20	QPSK	Body front	1	0	40620	2593	0.38	0.102	27.50	26.21	0.137	1.6
		Edge 1 (Top)	1	0	40620	2593	-0.15	0.051	27.50	26.21	0.069	1.6
		Edge 2(Right)	1	0	40620	2593	-0.31	0.068	27.50	26.21	0.092	1.6
		Edge 3(Bottom)	1	0	40620	2593	-0.18	0.092	27.50	26.21	0.124	1.6
		Edge 4(Left)	1	0	40620	2593	0.30	0.077	27.50	26.21	0.104	1.6

<sup>·</sup> When the 1-g Reported SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. Refer to KDB 447498.

<sup>•</sup>The test separation for body back, body front and 4 Edges is 10mm of all above table



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SAR MEASUREMENT	
Depth of Liquid (cm):>15	Relative Humidity (%):56.7
Product: LTE smartphone	

Test Mode: LTE Band 71

BW	мор	Position	Test M	ode	Ch.	Freq.	Power	SAR (1g)	Max. Tuneup	Meas. output	Scaled SAR	Limit
MHz	MOD		UL RB Allocation	UL RB START		(MHz)	Drift (<±5%)	(W/kg)	Power (dBm)	Power (dBm)	(W/Kg)	(W/kg)
		Left Cheek	1	0	133322	683	-0.41	0.142	24.80	23.56	0.189	1.6
		Left Tilt	1	0	133322	683	-0.19	0.093	24.80	23.56	0.124	1.6
		Right Cheek	1	0	133322	683	-0.10	0.154	24.80	23.56	0.205	1.6
		Right Tilt	1	0	133322	683	-0.24	0.102	24.80	23.56	0.136	1.6
		Body back	1	0	133322	683	0.20	0.294	24.80	23.56	0.391	1.6
20	QPSK	Body front	1	0	133322	683	-0.27	0.113	24.80	23.56	0.150	1.6
		Edge 1 (Top)	1	0	133322	683	-0.08	0.047	24.80	23.56	0.063	1.6
		Edge 2(Right)	1	0	133322	683	-0.28	0.059	24.80	23.56	0.078	1.6
		Edge 3(Bottom)	1	0	133322	683	0.17	0.095	24.80	23.56	0.126	1.6
		Edge 4(Left)	1	0	133322	683	-0.25	0.079	24.80	23.56	0.105	1.6

## Note:

<sup>·</sup> When the 1-g Reported SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. Refer to KDB 447498.

<sup>•</sup>The test separation for body back, body front and 4 Edges is 10mm of all above table



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SAR MEASUREMENT									
Depth of Liquid (cm):>15	Relative Humidity (%):54.3								
Product: smartphone									
Test Mode:802.11b									

Position	Mode	Ch.	Fr. (MHz)	Power Drift (<±5%)	SAR (1g) (W/kg)	Max. Tune-up Power (dBm)	Meas. output Power (dBm)	Scaled SAR (W/kg)	Limit (W/kg)
Left Cheek	DTS	6	2437	-0.37	0.130	16.00	15.57	0.144	1.6
Left Tilt	DTS	6	2437	-0.18	0.105	16.00	15.57	0.116	1.6
Right Cheek	DTS	6	2437	0.32	0.132	16.00	15.57	0.146	1.6
Right Tilt	DTS	6	2437	-0.31	0.107	16.00	15.57	0.118	1.6
Body back	DTS	6	2437	-0.10	0.078	16.00	15.57	0.086	1.6
Body front	DTS	6	2437	-0.23	0.042	16.00	15.57	0.046	1.6
Edge 1 (Top)	DTS	6	2437	0.29	0.075	16.00	15.57	0.083	1.6
Edge 2(Right)	DTS	6	2437	0.23	0.052	16.00	15.57	0.057	1.6
Edge 3(Bottom)	DTS	6	2437	-0.22	0.042	16.00	15.57	0.046	1.6
Edge 4(Left)	DTS	6	2437	0.17	0.066	16.00	15.57	0.073	1.6

## Note:

According to KDB248227, SAR is not required for 802.11n HT20/HT40 channels when the maximum average output power is less than 1/4 dB higher than that measured on the corresponding 802.11a/b channels.

<sup>·</sup> All of above "DTS" means data transmitters.

<sup>•</sup>The test separation for body back, body front and 4 Edges is 10mm of all above table.



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## SAR MEASUREMENT

Depth of Liquid (cm):>15 Relative Humidity (%):56.9

Product: smartphone

Test Mode: 5.2GHz WIFI-802.11a

Position	Ch.	Fr. (MHz)	Power Drift (<±5%)	SAR (1g) (W/kg)	Max. Tune-up Power (dBm)	Meas. output Power (dBm)	Scaled SAR (W/kg)	Limit (W/kg)
Left Cheek	40	5200	-0.20	0.117	9.50	8.91	0.134	1.6
Left Tilt	40	5200	-0.28	0.085	9.50	8.91	0.097	1.6
Right Cheek	40	5200	0.49	0.126	9.50	8.91	0.144	1.6
Right Tilt	40	5200	-0.07	0.093	9.50	8.91	0.107	1.6
Body back	40	5200	0.00	0.178	9.50	8.91	0.204	1.6
Body front	40	5200	0.37	0.106	9.50	8.91	0.121	1.6
Edge 1 (Top)	40	5200	-0.43	0.169	9.50	8.91	0.194	1.6
Edge 2(Right)	40	5200	-0.29	0.105	9.50	8.91	0.120	1.6
Edge 3(Bottom)	40	5200	0.31	0.023	9.50	8.91	0.026	1.6
Edge 4(Left)	40	5200	0.36	0.101	9.50	8.91	0.116	1.6

<sup>·</sup> When the 1-g Reported SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. Refer to KDB 447498.

<sup>•</sup>The test separation for body back, body front and 4 Edges is 10mm of all above table



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SAR	MEAS	SURE	MENT
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Depth of Liquid (cm):>15

Relative Humidity (%):49.3

Product: smartphone

Test Mode: 5.3GHz WIFI-802.11a

Test Mode. 5.5GI	12 1711 1-002.1	1a						
Position	Ch.	Fr. (MHz)	Power Drift (<±5%)	SAR (1g) (W/kg)	Max. Tune-up Power (dBm)	Meas. output Power (dBm)	Scaled SAR (W/kg)	Limit (W/kg)
Left Cheek	60	5300	-0.49	0.152	10.50	10.24	0.161	1.6
Left Tilt	60	5300	-0.30	0.069	10.50	10.24	0.073	1.6
Right Cheek	60	5300	-0.28	0.169	10.50	10.24	0.179	1.6
Right Tilt	60	5300	-0.18	0.071	10.50	10.24	0.075	1.6
Body back	60	5300	-0.25	0.248	10.50	10.24	0.263	1.6
Body front	60	5300	0.08	0.134	10.50	10.24	0.142	1.6
Edge 1 (Top)	60	5300	-0.24	0.205	10.50	10.24	0.218	1.6
Edge 2 (Right)	60	5300	-0.40	0.096	10.50	10.24	0.102	1.6
Edge 3 (Bottom)	60	5300	0.23	0.051	10.50	10.24	0.054	1.6
Edge 4 (Left)	60	5300	0.41	0.098	10.50	10.24	0.104	1.6

### Note:

<sup>·</sup> When the 1-g Reported SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. Refer to KDB 447498.

<sup>•</sup>The test separation for body back, body front and 4 Edges is 10mm of all above table



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## SAR MEASUREMENT

Depth of Liquid (cm):>15

Relative Humidity (%):53.8

Product: smartphone

Test Mode: Test Mode: 5.6GHzWIFI- 802.11a

Tool Mode. Tool I		002						
Position	Ch.	Fr. (MHz)	Power Drift (<±5%)	SAR (1g) (W/kg)	Max. Tune-up Power (dBm)	Meas. output Power (dBm)	Scaled SAR (W/kg)	Limit (W/kg)
Left Cheek	116	5580	-0.25	0.215	11.50	11.12	0.235	1.6
Left Tilt	116	5580	-0.09	0.069	11.50	11.12	0.075	1.6
Right Cheek	116	5580	0.13	0.267	11.50	11.12	0.291	1.6
Right Tilt	116	5580	-0.37	0.073	11.50	11.12	0.080	1.6
Body back	116	5580	-0.07	0.403	11.50	11.12	0.440	1.6
Body front	116	5580	-0.43	0.172	11.50	11.12	0.188	1.6
Edge 1 (Top)	116	5580	0.32	0.119	11.50	11.12	0.130	1.6
Edge 2 (Right)	116	5580	-0.16	0.084	11.50	11.12	0.092	1.6
Edge 3 (Bottom)	116	5580	-0.35	0.053	11.50	11.12	0.058	1.6
Edge 4 (Left)	116	5580	0.20	0.067	11.50	11.12	0.073	1.6

## Note:

<sup>·</sup> When the 1-g Reported SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. Refer to KDB 447498.

<sup>•</sup>The test separation for body back, body front and 4 Edges is 10mm of all above table



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## SAR MEASUREMENT

Depth of Liquid (cm):>15 Relative Humidity (%): 57.1

Product: smartphone

Test Mode: 5.8GHz WIFI-802.11a

Test Wide. 0.00112 VVII 1-002.114									
Position	Ch.	Fr. (MHz)	Power Drift (<±5%)	SAR (1g) (W/kg)	Max. Tune-up Power (dBm)	Meas. output Power (dBm)	Scaled SAR (W/kg)	Limit (W/kg)	
Left Cheek	157	5785	-0.35	0.175	12.00	11.51	0.196	1.6	
Left Tilt	157	5785	0.45	0.081	12.00	11.51	0.091	1.6	
Right Cheek	157	5785	-0.22	0.198	12.00	11.51	0.222	1.6	
Right Tilt	157	5785	-0.35	0.097	12.00	11.51	0.109	1.6	
Body back	157	5785	-0.20	0.161	12.00	11.51	0.180	1.6	
Body front	157	5785	0.19	0.107	12.00	11.51	0.120	1.6	
Edge 1 (Top)	157	5785	-0.21	0.102	12.00	11.51	0.114	1.6	
Edge 2 (Right)	157	5785	-0.06	0.055	12.00	11.51	0.062	1.6	
Edge 3 (Bottom)	157	5785	0.25	0.037	12.00	11.51	0.041	1.6	
Edge 4 (Left)	157	5785	-0.34	0.079	12.00	11.51	0.088	1.6	
A.L. d									

## Note:

<sup>·</sup> When the 1-g Reported SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. Refer to KDB 447498.

<sup>•</sup>The test separation for body back, body front and 4 Edges is 10mm of all above table



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## Simultaneous Multi-band Transmission Evaluation:

**Application Simultaneous Transmission information:** 

NO	Simultaneous state		Portable Handse	ortable Handset  Body-worn Hotspot Yes - Yes
NO	Simultaneous state	Head	Body-worn	Hotspot
1	GSM(voice)+ WLAN 2.4GHz/ 5GHz (data)	Yes	Yes	-
2	GSM(voice)+ Bluetooth(data)	Yes	Yes	-
3	GSM (Data) + WLAN 2.4GHz/ 5GHz (data)	-	Yes	Yes
4	GSM (Data) + Bluetooth(data)	-	Yes	Yes
5	WCDMA+ WLAN 2.4GHz/ 5GHz (data)	Yes	Yes	Yes
6	WCDMA+ Bluetooth(data)	Yes	Yes	Yes
7	LTE + WLAN 2.4GHz/ 5GHz (data)	Yes	Yes	Yes
8	LTE + Bluetooth(data)	Yes	Yes	Yes

#### NOTE:

- 1. WIFI and BT share the same antenna, and cannot transmit simultaneously.
- 2. Simultaneous with every transmitter must be the same test position.
- 3. KDB 447498 D01, BT SAR is excluded as below table.
- 4. KDB 447498 D01, for handsets the test separation distance is determined by the smallest distance between the outer surface of the device and the user; which is 0mm for head SAR and 10mm for body-worn SAR.
- 5. According to KDB 447498 D01 4.3.1, Standalone SAR test exclusion is as follow:
  - For 100 MHz to 6 GHz and test separation distances  $\leq$  50 mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following:
  - [(max. power of channel, including tune-up tolerance, mW) / (min. test separation distance, mm)] [ $\sqrt{f(GHz)}$ ]  $\leq 3.0$  for 1-g SAR, and  $\leq 7.5$  for 10-g extremity SAR<sup>30</sup>, where
  - f(GHz) is the RF channel transmit frequency in GHz
  - Power and distance are rounded to the nearest mW and mm before calculation<sup>31</sup>
  - The result is rounded to one decimal place for comparison
  - The values 3.0 and 7.5 are referred to as numeric thresholds in step b) below

The test exclusions are applicable only when the minimum test separation distance is  $\leq$  50 mm, and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm according to 4.1 f) is applied to determine SAR test exclusion.

- 6. If the test separation distance is <5mm, 5mm is used for excluded SAR calculation.
- 7. According to KDB 447498 D01 4.3.2, simultaneous transmission SAR test exclusion is as follow:
  - (1) Simultaneous transmission SAR test exclusion is determined for each operating configuration and exposure condition according to the reported standalone SAR of each applicable simultaneous transmitting antenna.
  - (2) Any transmitters and antennas should be considered when calculating simultaneous mode.
  - (3) For mobile phone and PC, it's the sum of all transmitters and antennas at the same mode with same position in each applicable exposure condition
  - (4)When the standalone SAR test exclusion of section 4.3.2 is applied to an antenna that transmits simultaneously with other antennas, the standalone SAR must be estimated according to the following to det

(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)]·[ $\sqrt{f(GHz)/x}$ ] W/kg for test separation distances  $\leq$  50 mm; where x = 7.5 for 1-g SAR, and x = 18.75 for 10-g SAR.



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8. When the sum of SAR is larger than the limit, SAR test exclusion is determined by the SAR to peak location separation ratio. The simultaneous transmitting antennas in each operating mode and exposure condition combination must be considered one pair at a time to determine the SAR to peak location separation ratio to qualify for test exclusion. The ratio is determined by (SAR1 + SAR2)1.5/Ri, rounded to two decimal digits, and must be ≤ 0.04 for all antenna pairs in the configuration to qualify for 1-g SAR test exclusion.

Estimated SAR		Max Power inc Toler	luding Tune-up ance	Separation Distance (mm)	Estimated SAR (W/kg)
		dBm	mW Distance (mm)		(vv/kg)
ВТ	Head	6.50	4.467	0	0.188
ы	Body	6.50	4.467	10	0.094



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# Sum of the SAR for GSM 850 &Wi-Fi & BT:

RF Exposure	Test	Simultane	eous Transmissi	on Scenario	Σ1-g SAR	CDI CD
Conditions	Position	GSM 850	WI-Fi DTS Band	Bluetooth	(W/kg)	(Yes/No)
	Left Touch	0.320	0.144		0.464	No
Head	Left Tilt	0.219	0.116		0.335	No
(voice)	Right Touch	0.377	0.146		0.523	No
	Right Tilt	0.239	0.118		0.357	No
	Left Touch	0.320		0.188	0.508	No
Head	Left Tilt	0.219		0.188	0.407	No
(voice)	Right Touch	0.377		0.188	0.565	No
	Right Tilt	0.239		0.188	0.427	No
	Deer	0.559	0.086		0.645	No
Body-worn	Rear	0.559		0.094	0.653	No
(voice)	Front	0.187	0.046		0.233	No
	Front	0.187		0.094	0.281	No
	Deen	0.409		0.094	0.503	No
Body-worn	Rear	0.409	0.086		0.495	No N
(Data)	F	0.294		0.094	0.388	No
	Front	0.294	0.046		0.340	No
	Edge 1	0.047	0.083		0.130	No
	Edge 2	0.092	0.057		0.149	No
	Edge 3	0.162	0.046		0.208	No
Body-worn	Edge 4	0.109	0.073		0.182	No
(Hotspot)	Edge 1	0.047		0.094	0.141	No
	Edge 2	0.092		0.094	0.186	No
	Edge 3	0.162		0.094	0.256	No
	Edge 4	0.109		0.094	0.203	No

<sup>·</sup>According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than 1.6 W/kg, SPLSR assessment is not required.

<sup>·</sup>SPLSR mean is "The SAR to Peak Location Separation Ratio "



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RF Exposure	Test	Simultane	ous Transmiss	on Scenario	Σ1-g SAR	SPLSR
Conditions	Position	GSM 850	U-NII-1	U-NII-2A	(W/kg)	(Yes/No)
	Left Touch	0.320	0.134		0.454	No
Head	Left Tilt	0.219	0.097		0.316	No
(voice)	Right Touch	0.377	0.144		0.521	No
	Right Tilt	0.239	0.107		0.346	No
	Left Touch	0.320		0.161	0.481	No
Head	Left Tilt	0.219		0.073	0.292	No
(voice)	Right Touch	0.377		0.179	0.556	No
	Right Tilt	0.239		0.075	0.314	No
	Rear	0.559	0.204		0.763	No
Body-worn	Real	0.559		0.263	0.822	No
(voice)	Front	0.187	0.121		0.308	No
	Front	0.187		0.142	0.329	No
	Deer	0.409		0.263	0.672	No
Body-worn	Rear	0.409	0.204		0.613	No
(Data)	Front	0.294		0.142	0.436	No
	Front	0.294	0.121		0.415	No
	Edge 1	0.047	0.194		0.241	No
	Edge 2	0.092	0.120		0.212	No
	Edge 3	0.162	0.026		0.188	No
Body-worn	Edge 4	0.109	0.116		0.225	No
(Hotspot)	Edge 1	0.047		0.218	0.265	No
	Edge 2	0.092		0.102	0.194	No
	Edge 3	0.162		0.054	0.216	No
	Edge 4	0.109		0.104	0.213	No

<sup>·</sup>According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than 1.6 W/kg, SPLSR assessment is not required.

<sup>·</sup>SPLSR mean is "The SAR to Peak Location Separation Ratio "



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RF Exposure	Test	Simultane	ous Transmissi	on Scenario	Σ1-g SAR	SPLSR
Conditions	Position	GSM 850	U-NII-2C	U-NII-3	(W/kg)	(Yes/No)
	Left Touch	0.320	0.235		0.555	No
Head	Left Tilt	0.219	0.075		0.294	No
(voice)	Right Touch	0.377	0.291		0.668	No
	Right Tilt	0.239	0.080		0.319	No
	Left Touch	0.320		0.196	0.516	No
Head	Left Tilt	0.219		0.091	0.310	No
(voice)	Right Touch	0.377		0.222	0.599	No
	Right Tilt	0.239		0.109	0.348	No
	Rear	0.559	0.440		0.999	No
Body-worn	Rear	0.559		0.180	0.739	No
(voice)	Front	0.187	0.188		0.375	No
	Front	0.187		0.120	0.307	No
	Веси	0.409		0.180	0.589	No
Body-worn	Rear	0.409	0.440		0.849	No
(Data)	Front	0.294		0.120	0.294	No
	Front	0.294	0.188		0.482	No
	Edge 1	0.047	0.130		0.177	No
	Edge 2	0.092	0.092		0.184	No
	Edge 3	0.162	0.058		0.220	No
Body-worn	Edge 4	0.109	0.073		0.182	No
(Hotspot)	Edge 1	0.047		0.114	0.047	No
	Edge 2	0.092		0.062	0.092	No
	Edge 3	0.162		0.041	0.162	No
	Edge 4	0.109		0.088	0.109	No

<sup>·</sup>According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than 1.6 W/kg, SPLSR assessment is not required.

<sup>·</sup>SPLSR mean is "The SAR to Peak Location Separation Ratio "



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## Sum of the SAR for GSM 1900 &Wi-Fi & BT:

RF Exposure	Test	Simultane	ous Transmission	on Scenario	Σ1-g SAR	SPLSR
Conditions	Position	PCS 1900	WI-Fi DTS Band	Bluetooth	(W/kg)	(Yes/No)
	Left Touch	0.049	0.144		0.193	No
Head	Left Tilt	0.034	0.116		0.150	No
(voice)	Right Touch	0.080	0.146		0.226	No
	Right Tilt	0.055	0.118		0.173	No
	Left Touch	0.049		0.188	0.237	No
Head	Left Tilt	0.034		0.188	0.222	No
(voice)	Right Touch	0.080		0.188	0.268	No
	Right Tilt	0.055		0.188	0.243	No
	Вест	0.129	0.086		0.215	No
Body-worn	Rear	0.129		0.094	0.223	No
(voice)	Front	0.118	0.046		0.164	No
	Front	0.118		0.094	0.212	No
	Poor	0.261		0.094	0.355	No
Body-worn	Rear	0.261	0.086		0.347	No
(Data)	F	0.207		0.094	0.301	No
	Front	0.207	0.046		0.253	No
	Edge 1	0.093	0.083		0.176	No
	Edge 2	0.108	0.057		0.165	No
	Edge 3	0.203	0.046		0.249	No
Body-worn	Edge 4	0.115	0.073		0.188	No
(Hotspot)	Edge 1	0.093		0.094	0.187	No
	Edge 2	0.108		0.094	0.202	No
	Edge 3	0.203		0.094	0.297	No
	Edge 4	0.115		0.094	0.209	No

<sup>·</sup>According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than 1.6 W/kg, SPLSR assessment is not required.

<sup>·</sup>SPLSR mean is "The SAR to Peak Location Separation Ratio "



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RF Exposure	Test	Simultane	ous Transmiss	ion Scenario	Σ1-g SAR	SPLSR
Conditions	Position	PCS 1900	U-NII-1	U-NII-2A	(W/kg)	(Yes/No)
	Left Touch	0.049	0.134		0.183	No
Head	Left Tilt	0.034	0.097		0.131	No
(voice)	Right Touch	0.080	0.144		0.224	No
	Right Tilt	0.055	0.107		0.162	No
	Left Touch	0.049		0.161	0.210	No
Head	Left Tilt	0.034		0.073	0.107	No
(voice)	Right Touch	0.080		0.179	0.259	No
	Right Tilt	0.055		0.075	0.130	No
	Веси	0.129	0.204		0.333	No
Body-worn	Rear	0.129		0.263	0.392	No
(voice)	Fuent	0.118	0.121		0.239	No
	Front	0.118		0.142	0.260	No
	Deen	0.261		0.263	0.524	No
Body-worn	Rear	0.261	0.204		0.465	No
(Ďata)	F	0.207		0.142	0.349	No
	Front	0.207	0.121		0.328	No
	Edge 1	0.093	0.194		0.287	No
	Edge 2	0.108	0.120		0.228	No
	Edge 3	0.203	0.026		0.229	No
Body-worn	Edge 4	0.115	0.116		0.231	No
(Hotspot)	Edge 1	0.093		0.218	0.311	No
	Edge 2	0.108		0.102	0.210	No
	Edge 3	0.203		0.054	0.257	No
	Edge 4	0.115		0.104	0.219	No

# Note:

<sup>·</sup>According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than 1.6 W/kg, SPLSR assessment is not required.

<sup>·</sup>SPLSR mean is "The SAR to Peak Location Separation Ratio "



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RF Exposure	Test	Simultane	ous Transmissi	on Scenario	Σ1-g SAR	SPLSR
Conditions	Position	PCS 1900	U-NII-2C	U-NII-3	(W/kg)	(Yes/No)
	Left Touch	0.049	0.235		0.284	No
Head	Left Tilt	0.034	0.075		0.109	No
(voice)	Right Touch	0.080	0.291		0.371	No
	Right Tilt	0.055	0.080		0.135	No
	Left Touch	0.049		0.196	0.245	No
Head	Left Tilt	0.034		0.091	0.125	No
(voice)	Right Touch	0.080		0.222	0.302	No
	Right Tilt	0.055		0.109	0.164	No
	Rear	0.129	0.440		0.569	No
Body-worn	Rear	0.129		0.180	0.309	No
(voice)	Front	0.118	0.188		0.306	No
	Front	0.118		0.120	0.238	No
	Deer	0.261		0.180	0.441	No
Body-worn	Rear	0.261	0.440		0.701	No
(Data)	Front	0.207		0.120	0.327	No
	Front	0.207	0.188		0.395	No
	Edge 1	0.093	0.130		0.223	No
	Edge 2	0.108	0.092		0.200	No
	Edge 3	0.203	0.058		0.261	No
Body-worn	Edge 4	0.115	0.073		0.188	No
(Hotspot)	Edge 1	0.093		0.114	0.207	No
	Edge 2	0.108		0.062	0.170	No
	Edge 3	0.203		0.041	0.244	No
	Edge 4	0.115		0.088	0.203	No

# Note:

<sup>·</sup>According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than 1.6 W/kg, SPLSR assessment is not required.

<sup>·</sup>SPLSR mean is "The SAR to Peak Location Separation Ratio "



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## Sum of the SAR for WCDMA Band II &Wi-Fi & BT:

DE Exposuro	Test	Simultaneo	us Transmissi	on Scenario	Σ1-g SAR	SPLSR
RF Exposure Conditions	Position	WCDMA Band II	Wi-Fi DTS Band	Bluetooth	(W/kg)	(Yes/No)
	Left Touch	0.106	0.144		0.250	No
Llood	Left Tilt	0.043	0.116		0.159	No
Head	Right Touch	0.112	0.146		0.258	No
	Right Tilt	0.059	0.118		0.177	No
	Left Touch	0.106		0.188	0.294	No
Hood	Left Tilt	0.043		0.188	0.231	No
Head	Right Touch	0.112		0.188	0.300	No
	Right Tilt	0.059		0.188	0.247	No
	Rear	0.228	0.086		0.314	No
	Front	0.163	0.046		0.209	No
	Edge 1	0.072	0.083		0.155	No
	Edge 2	0.095	0.057		0.152	No
	Edge 3	0.154	0.046		0.200	No
Pody worn	Edge 4	0.107	0.073		0.180	No
Body-worn	Rear	0.228		0.094	0.322	No
	Front	0.163		0.094	0.257	No
	Edge 1	0.072		0.094	0.166	No
	Edge 2	0.095		0.094	0.189	No
	Edge 3	0.154		0.094	0.248	No
	Edge 4	0.107		0.094	0.201	No

<sup>·</sup>According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than 1.6 W/kg, SPLSR assessment is not required.

<sup>·</sup>SPLSR mean is "The SAR to Peak Location Separation Ratio "



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DE Evnoque	Test	Simultaneo	us Transmissi	on Scenario	Σ1-g SAR	SPLSR
RF Exposure Conditions	Position	WCDMA Band II	U-NII-1	U-NII-2A		(Yes/No)
	Left Touch	0.106	0.134		0.240	No
Head	Left Tilt	0.043	0.097		0.140	No
Head	Right Touch	0.112	0.144		0.256	No
	Right Tilt	0.059	0.107		0.166	No
	Left Touch	0.106		0.161	0.267	No
Used	Left Tilt	0.043		0.073	0.116	No
Head	Right Touch	0.112		0.179	0.291	No
	Right Tilt	0.059		0.075	0.134	No
	Rear	0.228	0.204		0.432	No
	Front	0.163	0.121		0.284	No
	Edge 1	0.072	0.194		0.266	No
	Edge 2	0.095	0.120		0.215	No
	Edge 3	0.154	0.026		0.180	No
Dody was	Edge 4	0.107	0.116		0.223	No
Body-worn	Rear	0.228		0.263	0.491	No
	Front	0.163		0.142	0.305	No
	Edge 1	0.072		0.218	0.290	No
	Edge 2	0.095		0.102	0.197	No
	Edge 3	0.154		0.054	0.208	No
	Edge 4	0.107		0.104	0.211	No

<sup>·</sup>According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than 1.6 W/kg, SPLSR assessment is not required.

<sup>·</sup>SPLSR mean is "The SAR to Peak Location Separation Ratio "



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DE Evneeure	Test	Simultaneo	ous Transmissi	on Scenario	74 a 8AB	SPLSR
RF Exposure Conditions	Position	WCDMA Band II	U-NII-2C	U-NII-3	Σ1-g SAR (W/kg)	(Yes/No)
	Left Touch	0.106	0.235		0.341	No
Head	Left Tilt	0.043	0.075		0.118	No
пеац	Right Touch	0.112	0.291		0.403	No
	Right Tilt	0.059	0.080		0.139	No
	Left Touch	0.106		0.196	0.302	No
Heed	Left Tilt	0.043		0.091	0.134	No
Head	Right Touch	0.112		0.222	0.334	No
	Right Tilt	0.059		0.109	0.168	No
	Rear	0.228	0.440		0.668	No
	Front	0.163	0.188		0.351	No
	Edge 1	0.072	0.130		0.202	No
	Edge 2	0.095	0.092		0.187	No
	Edge 3	0.154	0.058		0.212	No
Dody wor	Edge 4	0.107	0.073		0.180	No
Body-worn	Rear	0.228		0.180	0.408	No
	Front	0.163		0.120	0.283	No
	Edge 1	0.072		0.114	0.186	No
	Edge 2	0.095		0.062	0.157	No
	Edge 3	0.154		0.041	0.195	No
	Edge 4	0.107		0.088	0.195	No

<sup>·</sup>According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than 1.6 W/kg, SPLSR assessment is not required.

<sup>·</sup>SPLSR mean is "The SAR to Peak Location Separation Ratio "



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# Sum of the SAR for WCDMA Band IV &Wi-Fi & BT:

RF Exposure Conditions	Test Position	Simultaneo	ous Transmissi	Σ1-g SAR	SPLSR	
		WCDMA Band IV	Wi-Fi DTS Band	Bluetooth	(W/kg)	(Yes/No)
lla a d	Left Touch	0.060	0.144		0.204	No
	Left Tilt	0.050	0.116		0.166	No
Head	Right Touch	0.071	0.146		0.217	No
	Right Tilt	0.055	0.118		0.173	No
	Left Touch	0.060		0.188	0.248	No
llaad	Left Tilt	0.050		0.188	0.238	No
Head	Right Touch	0.071		0.188	0.259	No
	Right Tilt	0.055		0.188	0.243	No
	Rear	0.189	0.086		0.275	No
	Front	0.102	0.046		0.148	No
	Edge 1	0.048	0.083		0.131	No
	Edge 2	0.064	0.057		0.121	No
	Edge 3	0.113	0.046		0.159	No
Dodu wan	Edge 4	0.093	0.073		0.166	No
Body-worn	Rear	0.189		0.094	0.283	No
	Front	0.102		0.094	0.196	No
	Edge 1	0.048		0.094	0.142	No
	Edge 2	0.064		0.094	0.158	No
	Edge 3	0.113		0.094	0.207	No
	Edge 4	0.093		0.094	0.187	No

<sup>·</sup>According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than 1.6 W/kg, SPLSR assessment is not required.

<sup>·</sup>SPLSR mean is "The SAR to Peak Location Separation Ratio "



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RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			74 ~ CAD	SPLSR
		WCDMA Band IV	U-NII-1	U-NII-2A	Σ1-g SAR (W/kg)	(Yes/No)
lla a d	Left Touch	0.060	0.134		0.194	No
	Left Tilt	0.050	0.097		0.147	No
Head	Right Touch	0.071	0.144		0.215	No
	Right Tilt	0.055	0.107		0.162	No
	Left Touch	0.060		0.161	0.221	No
Head	Left Tilt	0.050		0.073	0.123	No
пеац	Right Touch	0.071		0.179	0.250	No
	Right Tilt	0.055		0.075	0.130	No
	Rear	0.189	0.204		0.393	No
	Front	0.102	0.121		0.223	No
	Edge 1	0.048	0.194		0.242	No
	Edge 2	0.064	0.120		0.184	No
	Edge 3	0.113	0.026		0.139	No
Dody wor	Edge 4	0.093	0.116		0.209	No
Body-worn	Rear	0.189		0.263	0.452	No
	Front	0.102		0.142	0.244	No
	Edge 1	0.048		0.218	0.266	No
	Edge 2	0.064		0.102	0.166	No
	Edge 3	0.113		0.054	0.167	No
	Edge 4	0.093		0.104	0.197	No

<sup>·</sup>According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than 1.6 W/kg, SPLSR assessment is not required.

<sup>·</sup>SPLSR mean is "The SAR to Peak Location Separation Ratio "



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RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			74 a 8AB	SPLSR
		WCDMA Band IV	U-NII-2C	U-NII-3	Σ1-g SAR (W/kg)	(Yes/No)
	Left Touch	0.060	0.235		0.295	No
	Left Tilt	0.050	0.075		0.125	No
Head	Right Touch	0.071	0.291		0.362	No
	Right Tilt	0.055	0.080		0.135	No
	Left Touch	0.060		0.196	0.256	No
Heed	Left Tilt	0.050		0.091	0.141	No
Head	Right Touch	0.071		0.222	0.293	No
	Right Tilt	0.055		0.109	0.164	No
	Rear	0.189	0.440		0.629	No
	Front	0.102	0.188		0.290	No
	Edge 1	0.048	0.130		0.178	No
	Edge 2	0.064	0.092		0.156	No
	Edge 3	0.113	0.058		0.171	No
Daderman	Edge 4	0.093	0.073		0.166	No
Body-worn	Rear	0.189		0.180	0.369	No
	Front	0.102		0.120	0.222	No
	Edge 1	0.048		0.114	0.162	No
	Edge 2	0.064		0.062	0.126	No
	Edge 3	0.113		0.041	0.154	No
	Edge 4	0.093		0.088	0.181	No

<sup>·</sup>According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than 1.6 W/kg, SPLSR assessment is not required.

<sup>·</sup>SPLSR mean is "The SAR to Peak Location Separation Ratio "



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# Sum of the SAR for WCDMA Band V &Wi-Fi & BT:

RF Exposure Conditions	Test Position	Simultaneo	us Transmissio	Σ1-g SAR	SPLSR	
		WCDMA Band V	Wi-Fi DTS Band	Bluetooth	(W/kg)	(Yes/No)
	Left Touch	0.266	0.144		0.410	No
	Left Tilt	0.166	0.116		0.282	No
Head	Right Touch	0.322	0.146		0.468	No
	Right Tilt	0.190	0.118		0.308	No
	Left Touch	0.266		0.188	0.454	No
Used	Left Tilt	0.166		0.188	0.354	No
Head	Right Touch	0.322		0.188	0.510	No
	Right Tilt	0.190		0.188	0.378	No
	Rear	0.429	0.086		0.515	No
	Front	0.227	0.046		0.273	No
	Edge 1	0.057	0.083		0.140	No
	Edge 2	0.076	0.057		0.133	No
	Edge 3	0.137	0.046		0.183	No
Dodywan	Edge 4	0.096	0.073		0.169	No
Body-worn	Rear	0.429		0.094	0.523	No
	Front	0.227		0.094	0.321	No
	Edge 1	0.057		0.094	0.151	No
	Edge 2	0.076		0.094	0.170	No
	Edge 3	0.137		0.094	0.231	No
	Edge 4	0.096		0.094	0.190	No

<sup>·</sup>According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than 1.6 W/kg, SPLSR assessment is not required.

<sup>·</sup>SPLSR mean is "The SAR to Peak Location Separation Ratio "



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RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			74 a 8AB	SPLSR
		WCDMA Band V	U-NII-1	U-NII-2A	Σ1-g SAR (W/kg)	(Yes/No)
	Left Touch	0.266	0.134		0.400	No
Head	Left Tilt	0.166	0.097		0.263	No
пеац	Right Touch	0.322	0.144		0.466	No
	Right Tilt	0.190	0.107		0.297	No
	Left Touch	0.266		0.161	0.427	No
Head	Left Tilt	0.166		0.073	0.239	No
пеац	Right Touch	0.322		0.179	0.501	No
	Right Tilt	0.190		0.075	0.265	No
	Rear	0.429	0.204		0.633	No
	Front	0.227	0.121		0.348	No
	Edge 1	0.057	0.194		0.251	No
	Edge 2	0.076	0.120		0.196	No
	Edge 3	0.137	0.026		0.163	No
Dody worn	Edge 4	0.096	0.116		0.212	No
Body-worn	Rear	0.429		0.263	0.692	No
	Front	0.227		0.142	0.369	No
	Edge 1	0.057		0.218	0.275	No
	Edge 2	0.076		0.102	0.178	No
	Edge 3	0.137		0.054	0.191	No
	Edge 4	0.096		0.104	0.200	No

<sup>·</sup>According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than 1.6 W/kg, SPLSR assessment is not required.

<sup>·</sup>SPLSR mean is "The SAR to Peak Location Separation Ratio "



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RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			71 ~ CAD	SPLSR
		WCDMA Band V	U-NII-2C	U-NII-3	Σ1-g SAR (W/kg)	(Yes/No)
	Left Touch	0.266	0.235		0.501	No
Head	Left Tilt	0.166	0.075		0.241	No
пеац	Right Touch	0.322	0.291		0.613	No
	Right Tilt	0.190	0.080		0.270	No
	Left Touch	0.266		0.196	0.462	No
Head	Left Tilt	0.166		0.091	0.257	No
пеац	Right Touch	0.322		0.222	0.544	No
	Right Tilt	0.190		0.109	0.299	No
	Rear	0.429	0.440		0.869	No
	Front	0.227	0.188		0.415	No
	Edge 1	0.057	0.130		0.187	No
	Edge 2	0.076	0.092		0.168	No
	Edge 3	0.137	0.058		0.195	No
Dody worn	Edge 4	0.096	0.073		0.169	No
Body-worn	Rear	0.429		0.180	0.609	No
	Front	0.227		0.120	0.347	No
	Edge 1	0.057		0.114	0.171	No
	Edge 2	0.076		0.062	0.138	No
	Edge 3	0.137		0.041	0.178	No
	Edge 4	0.096		0.088	0.184	No

<sup>·</sup>According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than 1.6 W/kg, SPLSR assessment is not required.

<sup>·</sup>SPLSR mean is "The SAR to Peak Location Separation Ratio "



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# Sum of the SAR for LTE Band 2 &Wi-Fi & BT:

DE Exposuro	Test	Simultaneo	ous Transmissio	n Scenario	Σ1-g SAR	SPLSR
RF Exposure Conditions	Position	LTE Band 2	Wi-Fi DTS Band	Bluetooth	(W/kg)	(Yes/No)
	Left Touch	0.135	0.144		0.279	No
	Left Tilt	0.058	0.116		0.174	No
Head	Right Touch	0.143	0.146		0.289	No
	Right Tilt	0.081	0.118		0.199	No
	Left Touch	0.135		0.188	0.323	No
	Left Tilt	0.058		0.188	0.246	No
Head	Right Touch	0.143		0.188	0.331	No
	Right Tilt	0.081		0.188	0.269	No
	Rear	0.268	0.086		0.354	No
	Front	0.159	0.046		0.205	No
	Edge 1	0.083	0.083		0.166	No
	Edge 2	0.121	0.057		0.178	No
	Edge 3	0.144	0.046		0.190	No
Pody worn	Edge 4	0.104	0.073		0.177	No
Body-worn	Rear	0.268		0.094	0.362	No
	Front	0.159		0.094	0.253	No
	Edge 1	0.083		0.094	0.177	No
	Edge 2	0.121		0.094	0.215	No
	Edge 3	0.144		0.094	0.238	No
	Edge 4	0.104		0.094	0.198	No

<sup>·</sup>According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than 1.6 W/kg, SPLSR assessment is not required.

<sup>·</sup>SPLSR mean is "The SAR to Peak Location Separation Ratio "



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RF Exposure	Test	Simultaneo	ous Transmissio	on Scenario	Σ1-g SAR	SPLSR
Conditions	Position	LTE Band 2	U-NII-1	U-NII-2A	(W/kg)	(Yes/No)
	Left Touch	0.135	0.134		0.269	No
	Left Tilt	0.058	0.097		0.155	No
Head	Right Touch	0.143	0.144		0.287	No
	Right Tilt	0.081	0.107		0.188	No
	Left Touch	0.135		0.161	0.296	No
	Left Tilt	0.058		0.073	0.131	No
Head	Right Touch	0.143		0.179	0.322	No
	Right Tilt	0.081		0.075	0.156	No
	Rear	0.268	0.204		0.472	No
	Front	0.159	0.121		0.280	No
	Edge 1	0.083	0.194		0.277	No
	Edge 2	0.121	0.120		0.241	No
	Edge 3	0.144	0.026		0.170	No
Pody worn	Edge 4	0.104	0.116		0.220	No
Body-worn	Rear	0.268		0.263	0.531	No
	Front	0.159		0.142	0.301	No
	Edge 1	0.083		0.218	0.301	No
	Edge 2	0.121		0.102	0.223	No
	Edge 3	0.144		0.054	0.198	No
	Edge 4	0.104		0.104	0.208	No

<sup>·</sup>According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than 1.6 W/kg, SPLSR assessment is not required.

<sup>·</sup>SPLSR mean is "The SAR to Peak Location Separation Ratio "



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RF Exposure	Test	Simultaneo	ous Transmissio	on Scenario	Σ1-g SAR	SPLSR
Conditions	Position	LTE Band 2	U-NII-2C	U-NII-3	(W/kg)	(Yes/No)
	Left Touch	0.135	0.235		0.370	No
	Left Tilt	0.058	0.075		0.133	No
Head	Right Touch	0.143	0.291		0.434	No
	Right Tilt	0.081	0.080		0.161	No
	Left Touch	0.135		0.196	0.331	No
	Left Tilt	0.058		0.091	0.149	No
Head	Right Touch	0.143		0.222	0.365	No
	Right Tilt	0.081		0.109	0.190	No
	Rear	0.268	0.440		0.708	No
	Front	0.159	0.188		0.347	No
	Edge 1	0.083	0.130		0.213	No
	Edge 2	0.121	0.092		0.213	No
	Edge 3	0.144	0.058		0.202	No
Dody wor	Edge 4	0.104	0.073		0.177	No
Body-worn	Rear	0.268		0.180	0.448	No
	Front	0.159		0.120	0.279	No
	Edge 1	0.083		0.114	0.197	No
	Edge 2	0.121		0.062	0.183	No
	Edge 3	0.144		0.041	0.185	No
	Edge 4	0.104		0.088	0.192	No

<sup>·</sup>According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than 1.6 W/kg, SPLSR assessment is not required.

<sup>·</sup>SPLSR mean is "The SAR to Peak Location Separation Ratio "



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# Sum of the SAR for LTE Band 4 &Wi-Fi & BT:

RF Exposure	Test	Simultaneo	ous Transmissio	n Scenario	Σ1-g SAR	SPLSR
Conditions	Position	LTE Band 4	Wi-Fi DTS Band	Bluetooth	(W/kg)	(Yes/No)
	Left Touch	0.083	0.144		0.227	No
	Left Tilt	0.045	0.116		0.161	No
Head	Right Touch	0.108	0.146		0.254	No
	Right Tilt	0.057	0.118		0.175	No
	Left Touch	0.083		0.188	0.271	No
	Left Tilt	0.045		0.188	0.233	No
Head	Right Touch	0.108		0.188	0.296	No
	Right Tilt	0.057		0.188	0.245	No
	Rear	0.249	0.086		0.335	No
	Front	0.157	0.046		0.203	No
	Edge 1	0.043	0.083		0.126	No
	Edge 2	0.069	0.057		0.126	No
	Edge 3	0.129	0.046		0.175	No
Pody worn	Edge 4	0.085	0.073		0.158	No
Body-worn	Rear	0.249		0.094	0.343	No
	Front	0.157		0.094	0.251	No
	Edge 1	0.043		0.094	0.137	No
	Edge 2	0.069		0.094	0.163	No
	Edge 3	0.129		0.094	0.223	No
	Edge 4	0.085		0.094	0.179	No

<sup>·</sup>According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than 1.6 W/kg, SPLSR assessment is not required.

<sup>·</sup>SPLSR mean is "The SAR to Peak Location Separation Ratio "



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RF Exposure	Test	Simultaneo	ous Transmissi	on Scenario	Σ1-g SAR	SPLSR
Conditions	Position	LTE Band 4	U-NII-1	U-NII-2A	(W/kg)	(Yes/No)
	Left Touch	0.083	0.134		0.217	No
	Left Tilt	0.045	0.097		0.142	No
Head	Right Touch	0.108	0.144		0.252	No
	Right Tilt	0.057	0.107		0.164	No
	Left Touch	0.083		0.161	0.244	No
	Left Tilt	0.045		0.073	0.118	No
Head	Right Touch	0.108		0.179	0.287	No
	Right Tilt	0.057		0.075	0.132	No
	Rear	0.249	0.204		0.453	No
	Front	0.157	0.121		0.278	No
	Edge 1	0.043	0.194		0.237	No
	Edge 2	0.069	0.120		0.189	No
	Edge 3	0.129	0.026		0.155	No
Body worn	Edge 4	0.085	0.116		0.201	No
Body-worn	Rear	0.249		0.263	0.512	No
	Front	0.157		0.142	0.299	No
	Edge 1	0.043		0.218	0.261	No
	Edge 2	0.069		0.102	0.171	No
	Edge 3	0.129		0.054	0.183	No
	Edge 4	0.085		0.104	0.189	No

<sup>·</sup>According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than 1.6 W/kg, SPLSR assessment is not required.

<sup>·</sup>SPLSR mean is "The SAR to Peak Location Separation Ratio "



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RF Exposure	Test	Simultaneo	ous Transmissio	on Scenario	Σ1-g SAR	SPLSR
Conditions	Position	LTE Band 4	U-NII-2C	U-NII-3	(W/kg)	(Yes/No)
	Left Touch	0.083	0.235		0.318	No
	Left Tilt	0.045	0.075		0.120	No
Head	Right Touch	0.108	0.291		0.399	No
	Right Tilt	0.057	0.080		0.137	No
	Left Touch	0.083		0.196	0.279	No
	Left Tilt	0.045		0.091	0.136	No
Head	Right Touch	0.108		0.222	0.330	No
	Right Tilt	0.057		0.109	0.166	No
	Rear	0.249	0.440		0.689	No
	Front	0.157	0.188		0.345	No
	Edge 1	0.043	0.130		0.173	No
	Edge 2	0.069	0.092		0.161	No
	Edge 3	0.129	0.058		0.187	No
Pody worn	Edge 4	0.085	0.073		0.158	No
Body-worn	Rear	0.249		0.180	0.429	No
	Front	0.157		0.120	0.277	No
	Edge 1	0.043		0.114	0.157	No
	Edge 2	0.069		0.062	0.131	No
	Edge 3	0.129		0.041	0.170	No
	Edge 4	0.085		0.088	0.173	No

<sup>·</sup>According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than 1.6 W/kg, SPLSR assessment is not required.

<sup>·</sup>SPLSR mean is "The SAR to Peak Location Separation Ratio "



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# Sum of the SAR for LTE Band 5 &Wi-Fi & BT:

DE Exposuro	Test	Simultaneo	ous Transmissio	n Scenario	Σ1-g SAR	SPLSR
RF Exposure Conditions	Position	LTE Band 5	Wi-Fi DTS Band	Bluetooth	(W/kg)	(Yes/No)
	Left Touch	0.299	0.144		0.443	No
	Left Tilt	0.198	0.116		0.314	No
Head	Right Touch	0.347	0.146		0.493	No
	Right Tilt	0.217	0.118		0.335	No
	Left Touch	0.299		0.188	0.487	No
	Left Tilt	0.198		0.188	0.386	No
Head	Right Touch	0.347		0.188	0.535	No
	Right Tilt	0.217		0.188	0.405	No
	Rear	0.552	0.086		0.638	No
	Front	0.403	0.046		0.449	No
	Edge 1	0.036	0.083		0.119	No
	Edge 2	0.051	0.057		0.108	No
	Edge 3	0.124	0.046		0.170	No
Dody wore	Edge 4	0.098	0.073		0.171	No
Body-worn	Rear	0.552		0.094	0.646	No
	Front	0.403		0.094	0.497	No
	Edge 1	0.036		0.094	0.130	No
	Edge 2	0.051		0.094	0.145	No
	Edge 3	0.124		0.094	0.218	No
	Edge 4	0.098		0.094	0.192	No

<sup>·</sup>According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than 1.6 W/kg, SPLSR assessment is not required.

<sup>·</sup>SPLSR mean is "The SAR to Peak Location Separation Ratio "



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RF Exposure	Test	Simultaneo	ous Transmissi	on Scenario	Σ1-g SAR	SPLSR
Conditions	Position	LTE Band 5	U-NII-1	U-NII-2A	(W/kg)	(Yes/No)
	Left Touch	0.299	0.134		0.433	No
	Left Tilt	0.198	0.097		0.295	No
Head	Right Touch	0.347	0.144		0.491	No
	Right Tilt	0.217	0.107		0.324	No
	Left Touch	0.299		0.161	0.460	No
	Left Tilt	0.198		0.073	0.271	No
Head	Right Touch	0.347		0.179	0.526	No
	Right Tilt	0.217		0.075	0.292	No
	Rear	0.552	0.204		0.756	No
	Front	0.403	0.121		0.524	No
	Edge 1	0.036	0.194		0.230	No
	Edge 2	0.051	0.120		0.171	No
	Edge 3	0.124	0.026		0.150	No
Pody worn	Edge 4	0.098	0.116		0.214	No
Body-worn	Rear	0.552		0.263	0.815	No
	Front	0.403		0.142	0.545	No
	Edge 1	0.036		0.218	0.254	No
	Edge 2	0.051		0.102	0.153	No
	Edge 3	0.124		0.054	0.178	No
	Edge 4	0.098		0.104	0.202	No

<sup>·</sup>According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than 1.6 W/kg, SPLSR assessment is not required.

<sup>·</sup>SPLSR mean is "The SAR to Peak Location Separation Ratio "



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RF Exposure	Test	Simultaneo	ous Transmissio	on Scenario	Σ1-g SAR	SPLSR
Conditions	Position	LTE Band 5	U-NII-2C	U-NII-3	(W/kg)	(Yes/No)
	Left Touch	0.299	0.235		0.534	No
	Left Tilt	0.198	0.075		0.273	No
Head	Right Touch	0.347	0.291		0.638	No
	Right Tilt	0.217	0.080		0.297	No
	Left Touch	0.299		0.196	0.495	No
	Left Tilt	0.198		0.091	0.289	No
Head	Right Touch	0.347		0.222	0.569	No
	Right Tilt	0.217		0.109	0.326	No
	Rear	0.552	0.440		0.992	No
	Front	0.403	0.188		0.591	No
	Edge 1	0.036	0.130		0.166	No
	Edge 2	0.051	0.092		0.143	No
	Edge 3	0.124	0.058		0.182	No
Pody worn	Edge 4	0.098	0.073		0.171	No
Body-worn	Rear	0.552		0.180	0.732	No
	Front	0.403		0.120	0.523	No
	Edge 1	0.036		0.114	0.150	No
	Edge 2	0.051		0.062	0.113	No
	Edge 3	0.124		0.041	0.165	No
	Edge 4	0.098		0.088	0.186	No

<sup>·</sup>According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than 1.6 W/kg, SPLSR assessment is not required.

<sup>·</sup>SPLSR mean is "The SAR to Peak Location Separation Ratio "



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# Sum of the SAR for LTE Band 12 &Wi-Fi & BT:

DE Evnosuro	Test	Simultaneo	us Transmissio	n Scenario	Σ1-g SAR	SPLSR
RF Exposure Conditions	Position	LTE Band 12	Wi-Fi DTS Band	Bluetooth	(W/kg)	(Yes/No)
	Left Touch	0.237	0.144		0.381	No
	Left Tilt	0.193	0.116		0.309	No
Head	Right Touch	0.256	0.146		0.402	No
	Right Tilt	0.208	0.118		0.326	No
	Left Touch	0.237		0.188	0.425	No
	Left Tilt	0.193		0.188	0.381	No
Head	Right Touch	0.256		0.188	0.444	No
	Right Tilt	0.208		0.188	0.396	No
	Rear	0.381	0.086		0.467	No
	Front	0.236	0.046		0.282	No
	Edge 1	0.057	0.083		0.140	No
	Edge 2	0.078	0.057		0.135	No
	Edge 3	0.165	0.046		0.211	No
Dody wor	Edge 4	0.107	0.073		0.180	No
Body-worn	Rear	0.381		0.094	0.475	No
	Front	0.236		0.094	0.330	No
	Edge 1	0.057		0.094	0.151	No
	Edge 2	0.078		0.094	0.172	No
	Edge 3	0.165		0.094	0.259	No
	Edge 4	0.107		0.094	0.201	No

<sup>·</sup>According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than 1.6 W/kg, SPLSR assessment is not required.

<sup>·</sup>SPLSR mean is "The SAR to Peak Location Separation Ratio "



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RF Exposure	Test	Simultaneo	us Transmissi	on Scenario	Σ1-g SAR	SPLSR
Conditions	Position	LTE Band 12	U-NII-1	U-NII-2A	(W/kg)	(Yes/No)
	Left Touch	0.237	0.134		0.371	No
	Left Tilt	0.193	0.097		0.290	No
Head	Right Touch	0.256	0.144		0.400	No
	Right Tilt	0.208	0.107		0.315	No
	Left Touch	0.237		0.161	0.398	No
	Left Tilt	0.193		0.073	0.266	No
Head	Right Touch	0.256		0.179	0.435	No
	Right Tilt	0.208		0.075	0.283	No
	Rear	0.381	0.204		0.585	No
	Front	0.236	0.121		0.357	No
	Edge 1	0.057	0.194		0.251	No
	Edge 2	0.078	0.120		0.198	No
	Edge 3	0.165	0.026		0.191	No
Pody worn	Edge 4	0.107	0.116		0.223	No
Body-worn	Rear	0.381		0.263	0.644	No
	Front	0.236		0.142	0.378	No
	Edge 1	0.057		0.218	0.275	No
	Edge 2	0.078		0.102	0.180	No
	Edge 3	0.165		0.054	0.219	No
	Edge 4	0.107		0.104	0.211	No

<sup>·</sup>According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than 1.6 W/kg, SPLSR assessment is not required.

<sup>·</sup>SPLSR mean is "The SAR to Peak Location Separation Ratio "



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RF Exposure	Test	Simultaneo	ous Transmissio	on Scenario	Σ1-g SAR	SPLSR
Conditions	Position	LTE Band 12	U-NII-2C	U-NII-3	(W/kg)	(Yes/No)
	Left Touch	0.237	0.235		0.472	No
	Left Tilt	0.193	0.075		0.268	No
Head	Right Touch	0.256	0.291		0.547	No
	Right Tilt	0.208	0.080		0.288	No
	Left Touch	0.237		0.196	0.433	No
	Left Tilt	0.193		0.091	0.284	No
Head	Right Touch	0.256		0.222	0.478	No
	Right Tilt	0.208		0.109	0.317	No
	Rear	0.381	0.440		0.821	No
	Front	0.236	0.188		0.424	No
	Edge 1	0.057	0.130		0.187	No
	Edge 2	0.078	0.092		0.170	No
	Edge 3	0.165	0.058		0.223	No
Pody worn	Edge 4	0.107	0.073		0.180	No
Body-worn	Rear	0.381		0.180	0.561	No
	Front	0.236		0.120	0.356	No
	Edge 1	0.057		0.114	0.171	No
	Edge 2	0.078		0.062	0.140	No
	Edge 3	0.165		0.041	0.206	No
	Edge 4	0.107		0.088	0.195	No

<sup>·</sup>According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than 1.6 W/kg, SPLSR assessment is not required.

<sup>·</sup>SPLSR mean is "The SAR to Peak Location Separation Ratio "



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# Sum of the SAR for LTE Band 13 &Wi-Fi & BT:

RF Exposure	Test	Simultaneo	ous Transmissio	n Scenario	Σ1-g SAR	SPLSR
Conditions	Position	LTE Band 13	Wi-Fi DTS Band	Bluetooth	(W/kg)	(Yes/No)
	Left Touch	0.082	0.144		0.226	No
	Left Tilt	0.047	0.116		0.163	No
Head	Right Touch	0.098	0.146		0.244	No
	Right Tilt	0.060	0.118		0.178	No
	Left Touch	0.082		0.188	0.270	No
	Left Tilt	0.047		0.188	0.235	No
Head	Right Touch	0.098		0.188	0.286	No
	Right Tilt	0.060		0.188	0.248	No
	Rear	0.306	0.086		0.392	No
	Front	0.124	0.046		0.170	No
	Edge 1	0.036	0.083		0.119	No
	Edge 2	0.055	0.057		0.112	No
	Edge 3	0.111	0.046		0.157	No
Body-worn	Edge 4	0.072	0.073		0.145	No
Body-worn	Rear	0.306		0.094	0.400	No
	Front	0.124		0.094	0.218	No
	Edge 1	0.036		0.094	0.130	No
	Edge 2	0.055		0.094	0.149	No
	Edge 3	0.111		0.094	0.205	No
	Edge 4	0.072		0.094	0.166	No

<sup>·</sup>According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than 1.6 W/kg, SPLSR assessment is not required.

<sup>·</sup>SPLSR mean is "The SAR to Peak Location Separation Ratio "



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RF Exposure	Test	Simultaneo	us Transmissi	on Scenario	Σ1-g SAR	SPLSR
Conditions	Position	LTE Band 13	U-NII-1	U-NII-2A	(W/kg)	(Yes/No)
	Left Touch	0.082	0.134		0.216	No
	Left Tilt	0.047	0.097		0.144	No
Head	Right Touch	0.098	0.144		0.242	No
	Right Tilt	0.060	0.107		0.167	No
	Left Touch	0.082		0.161	0.243	No
	Left Tilt	0.047		0.073	0.120	No
Head	Right Touch	0.098		0.179	0.277	No
	Right Tilt	0.060		0.075	0.135	No
	Rear	0.306	0.204		0.510	No
	Front	0.124	0.121		0.245	No
	Edge 1	0.036	0.194		0.230	No
	Edge 2	0.055	0.120		0.175	No
	Edge 3	0.111	0.026		0.137	No
Pody worn	Edge 4	0.072	0.116		0.188	No
Body-worn	Rear	0.306		0.263	0.569	No
	Front	0.124		0.142	0.266	No
	Edge 1	0.036		0.218	0.254	No
	Edge 2	0.055		0.102	0.157	No
	Edge 3	0.111		0.054	0.165	No
	Edge 4	0.072		0.104	0.176	No

<sup>·</sup>According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than 1.6 W/kg, SPLSR assessment is not required.

<sup>·</sup>SPLSR mean is "The SAR to Peak Location Separation Ratio "



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RF Exposure	Test	Simultaneo	ous Transmissio	on Scenario	Σ1-g SAR	SPLSR
Conditions	Position	LTE Band 13	U-NII-2C	U-NII-3	(W/kg)	(Yes/No)
	Left Touch	0.082	0.235		0.317	No
	Left Tilt	0.047	0.075		0.122	No
Head	Right Touch	0.098	0.291		0.389	No
	Right Tilt	0.060	0.080		0.140	No
	Left Touch	0.082		0.196	0.278	No
	Left Tilt	0.047		0.091	0.138	No
Head	Right Touch	0.098		0.222	0.320	No
	Right Tilt	0.060		0.109	0.169	No
	Rear	0.306	0.440		0.746	No
	Front	0.124	0.188		0.312	No
	Edge 1	0.036	0.130		0.166	No
	Edge 2	0.055	0.092		0.147	No
	Edge 3	0.111	0.058		0.169	No
Pody worn	Edge 4	0.072	0.073		0.145	No
Body-worn	Rear	0.306		0.180	0.486	No
	Front	0.124		0.120	0.244	No
	Edge 1	0.036		0.114	0.150	No
	Edge 2	0.055		0.062	0.117	No
	Edge 3	0.111		0.041	0.152	No
	Edge 4	0.072		0.088	0.160	No

<sup>·</sup>According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than 1.6 W/kg, SPLSR assessment is not required.

<sup>·</sup>SPLSR mean is "The SAR to Peak Location Separation Ratio "



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# Sum of the SAR for LTE Band 25 &Wi-Fi & BT:

RF Exposure	Test	Simultaneo	ous Transmissio	n Scenario	Σ1-g SAR	SPLSR
Conditions	Position	LTE Band 25	Wi-Fi DTS Band	Bluetooth	(W/kg)	(Yes/No)
	Left Touch	0.090	0.144		0.234	No
	Left Tilt	0.054	0.116		0.170	No
Head	Right Touch	0.123	0.146		0.269	No
	Right Tilt	0.068	0.118		0.186	No
	Left Touch	0.090		0.188	0.278	No
	Left Tilt	0.054		0.188	0.242	No
Head	Right Touch	0.123		0.188	0.311	No
	Right Tilt	0.068		0.188	0.256	No
	Rear	0.298	0.086		0.384	No
	Front	0.229	0.046		0.275	No
	Edge 1	0.035	0.083		0.118	No
	Edge 2	0.041	0.057		0.098	No
	Edge 3	0.119	0.046		0.165	No
Dody wor	Edge 4	0.075	0.073		0.148	No
Body-worn	Rear	0.298		0.094	0.392	No
	Front	0.229		0.094	0.323	No
	Edge 1	0.035		0.094	0.129	No
	Edge 2	0.041		0.094	0.135	No
	Edge 3	0.119		0.094	0.213	No
	Edge 4	0.075		0.094	0.169	No

<sup>·</sup>According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than 1.6 W/kg, SPLSR assessment is not required.

<sup>·</sup>SPLSR mean is "The SAR to Peak Location Separation Ratio "



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RF Exposure	Test	Simultaneo	ous Transmissio	n Scenario	Σ1-g SAR	SPLSR
Conditions	Position	LTE Band 25	U-NII-1	U-NII-2A	(W/kg)	(Yes/No)
	Left Touch	0.090	0.134		0.224	No
	Left Tilt	0.054	0.097		0.151	No
Head	Right Touch	0.123	0.144		0.267	No
	Right Tilt	0.068	0.107		0.175	No
	Left Touch	0.090		0.161	0.251	No
	Left Tilt	0.054		0.073	0.127	No
Head	Right Touch	0.123		0.179	0.302	No
	Right Tilt	0.068		0.075	0.143	No
	Rear	0.298	0.204		0.502	No
	Front	0.229	0.121		0.350	No
	Edge 1	0.035	0.194		0.229	No
	Edge 2	0.041	0.120		0.161	No
	Edge 3	0.119	0.026		0.145	No
Pody worn	Edge 4	0.075	0.116		0.191	No
Body-worn	Rear	0.298		0.263	0.561	No
	Front	0.229		0.142	0.371	No
	Edge 1	0.035		0.218	0.253	No
	Edge 2	0.041		0.102	0.143	No
	Edge 3	0.119		0.054	0.173	No
	Edge 4	0.075		0.104	0.179	No

<sup>·</sup>According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than 1.6 W/kg, SPLSR assessment is not required.

<sup>·</sup>SPLSR mean is "The SAR to Peak Location Separation Ratio "



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RF Exposure	Test	Simultaneo	ous Transmissio	n Scenario	Σ1-g SAR	SPLSR
Conditions	Position	LTE Band 25	U-NII-2C	U-NII-3	(W/kg)	(Yes/No)
	Left Touch	0.090	0.235		0.325	No
	Left Tilt	0.054	0.075		0.129	No
Head	Right Touch	0.123	0.291		0.414	No
	Right Tilt	0.068	0.080		0.148	No
	Left Touch	0.090		0.196	0.286	No
	Left Tilt	0.054		0.091	0.145	No
Head	Right Touch	0.123		0.222	0.345	No
	Right Tilt	0.068		0.109	0.177	No
	Rear	0.298	0.440		0.738	No
	Front	0.229	0.188		0.417	No
	Edge 1	0.035	0.130		0.165	No
	Edge 2	0.041	0.092		0.133	No
	Edge 3	0.119	0.058		0.177	No
Pody worn	Edge 4	0.075	0.073		0.148	No
Body-worn	Rear	0.298		0.180	0.478	No
	Front	0.229		0.120	0.349	No
	Edge 1	0.035		0.114	0.149	No
	Edge 2	0.041		0.062	0.103	No
	Edge 3	0.119		0.041	0.160	No
	Edge 4	0.075		0.088	0.163	No

<sup>·</sup>According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than 1.6 W/kg, SPLSR assessment is not required.

<sup>·</sup>SPLSR mean is "The SAR to Peak Location Separation Ratio "



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# Sum of the SAR for LTE Band 26a &Wi-Fi & BT:

RF Exposure	Test	Simultane	ous Transmissio	on Scenario	Σ1-g SAR	SPLSR
Conditions	Position	LTE Band 26a	Wi-Fi DTS Band	Bluetooth	(W/kg)	(Yes/No)
	Left Touch	0.278	0.144		0.422	No
	Left Tilt	0.191	0.116		0.307	No
Head	Right Touch	0.342	0.146		0.488	No
	Right Tilt	0.221	0.118		0.339	No
	Left Touch	0.278		0.188	0.466	No
	Left Tilt	0.191		0.188	0.379	No
Head	Right Touch	0.342		0.188	0.530	No
	Right Tilt	0.221		0.188	0.409	No
	Rear	0.684	0.086		0.770	No
	Front	0.334	0.046		0.380	No
	Edge 1	0.094	0.083		0.177	No
	Edge 2	0.121	0.057		0.178	No
	Edge 3	0.130	0.046		0.176	No
Body-worn	Edge 4	0.104	0.073		0.177	No
Body-worn	Rear	0.684		0.094	0.778	No
	Front	0.334		0.094	0.428	No
	Edge 1	0.094		0.094	0.188	No
	Edge 2	0.121		0.094	0.215	No
	Edge 3	0.130		0.094	0.224	No
	Edge 4	0.104		0.094	0.198	No

<sup>·</sup>According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than 1.6 W/kg, SPLSR assessment is not required.

<sup>·</sup>SPLSR mean is "The SAR to Peak Location Separation Ratio "



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DE Evnouve	Test	Simultaneo	ous Transmissi	on Scenario	71 ~ CAD	SPLSR
RF Exposure Conditions	Position	LTE Band 26a	U-NII-1	U-NII-2A	Σ1-g SAR (W/kg)	(Yes/No)
	Left Touch	0.278	0.134		0.412	No
	Left Tilt	0.191	0.097		0.288	No
Head	Right Touch	0.342	0.144		0.486	No
	Right Tilt	0.221	0.107		0.328	No
	Left Touch	0.278		0.161	0.439	No
	Left Tilt	0.191		0.073	0.264	No
Head	Right Touch	0.342		0.179	0.521	No
	Right Tilt	0.221		0.075	0.296	No
	Rear	0.684	0.204		0.888	No
	Front	0.334	0.121		0.455	No
	Edge 1	0.094	0.194		0.288	No
	Edge 2	0.121	0.120		0.241	No
	Edge 3	0.130	0.026		0.156	No
Dody worm	Edge 4	0.104	0.116		0.220	No
Body-worn	Rear	0.684		0.263	0.947	No
	Front	0.334		0.142	0.476	No
	Edge 1	0.094		0.218	0.312	No
	Edge 2	0.121		0.102	0.223	No
	Edge 3	0.130		0.054	0.184	No
	Edge 4	0.104		0.104	0.208	No

<sup>·</sup>According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than 1.6 W/kg, SPLSR assessment is not required.

<sup>·</sup>SPLSR mean is "The SAR to Peak Location Separation Ratio "



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DE Evpoure	Test	Simultane	ous Transmissio	on Scenario	71 ~ CAD	SPLSR
RF Exposure Conditions	Position	LTE Band 26a	U-NII-2C	U-NII-3	Σ1-g SAR (W/kg)	(Yes/No)
	Left Touch	0.278	0.235		0.513	No
	Left Tilt	0.191	0.075		0.266	No
Head	Right Touch	0.342	0.291		0.633	No
	Right Tilt	0.221	0.080		0.301	No
	Left Touch	0.278		0.196	0.474	No
	Left Tilt	0.191		0.091	0.282	No
Head	Right Touch	0.342		0.222	0.564	No
	Right Tilt	0.221		0.109	0.330	No
	Rear	0.684	0.440		1.124	No
	Front	0.334	0.188		0.522	No
	Edge 1	0.094	0.130		0.224	No
	Edge 2	0.121	0.092		0.213	No
	Edge 3	0.130	0.058		0.188	No
Dadywara	Edge 4	0.104	0.073		0.177	No
Body-worn	Rear	0.684		0.180	0.864	No
	Front	0.334		0.120	0.454	No
	Edge 1	0.094		0.114	0.208	No
	Edge 2	0.121		0.062	0.183	No
	Edge 3	0.130		0.041	0.171	No
	Edge 4	0.104		0.088	0.192	No

<sup>·</sup>According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than 1.6 W/kg, SPLSR assessment is not required.

<sup>·</sup>SPLSR mean is "The SAR to Peak Location Separation Ratio "



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# Sum of the SAR for LTE Band 26b &Wi-Fi & BT:

RF Exposure	Test	Simultane	ous Transmissio	n Scenario	Σ1-g SAR	SPLSR
Conditions	Position	LTE Band 26b	Wi-Fi DTS Band	Bluetooth	(W/kg)	(Yes/No)
	Left Touch	0.231	0.144		0.375	No
	Left Tilt	0.159	0.116		0.275	No
Head	Right Touch	0.286	0.146		0.432	No
	Right Tilt	0.186	0.118		0.304	No
	Left Touch	0.231		0.188	0.419	No
	Left Tilt	0.159		0.188	0.347	No
Head	Right Touch	0.286		0.188	0.474	No
	Right Tilt	0.186		0.188	0.374	No
	Rear	0.414	0.086		0.500	No
	Front	0.278	0.046		0.324	No
	Edge 1	0.074	0.083		0.157	No
	Edge 2	0.100	0.057		0.157	No
	Edge 3	0.119	0.046		0.165	No
Body-worn	Edge 4	0.101	0.073		0.174	No
Body-worn	Rear	0.414		0.094	0.414	No
	Front	0.278		0.094	0.278	No
	Edge 1	0.074		0.094	0.074	No
	Edge 2	0.100		0.094	0.100	No
	Edge 3	0.119		0.094	0.119	No
	Edge 4	0.101		0.094	0.101	No

<sup>·</sup>According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than 1.6 W/kg, SPLSR assessment is not required.

<sup>·</sup>SPLSR mean is "The SAR to Peak Location Separation Ratio "



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DE Evnoques	Test	Simultaneo	ous Transmissio	on Scenario	74 ~ CAD	SPLSR
RF Exposure Conditions	Position	LTE Band 26b	U-NII-1	U-NII-2A	Σ1-g SAR (W/kg)	(Yes/No)
	Left Touch	0.231	0.134		0.365	No
	Left Tilt	0.159	0.097		0.256	No
Head	Right Touch	0.286	0.144		0.430	No
	Right Tilt	0.186	0.107		0.293	No
	Left Touch	0.231		0.161	0.392	No
	Left Tilt	0.159		0.073	0.232	No
Head	Right Touch	0.286		0.179	0.465	No
	Right Tilt	0.186		0.075	0.261	No
	Rear	0.414	0.204		0.618	No
	Front	0.278	0.121		0.399	No
	Edge 1	0.074	0.194		0.268	No
	Edge 2	0.100	0.120		0.220	No
	Edge 3	0.119	0.026		0.145	No
Body worn	Edge 4	0.101	0.116		0.217	No
Body-worn	Rear	0.414		0.263	0.414	No
	Front	0.278		0.142	0.278	No
	Edge 1	0.074		0.218	0.074	No
	Edge 2	0.100		0.102	0.100	No
	Edge 3	0.119		0.054	0.119	No
	Edge 4	0.101		0.104	0.101	No

# Note:

<sup>·</sup>According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than 1.6 W/kg, SPLSR assessment is not required.

<sup>·</sup>SPLSR mean is "The SAR to Peak Location Separation Ratio "



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DE Everage	Tool	Simultane	ous Transmissio	on Scenario	54 ~ CAD	CDI CD
RF Exposure Conditions	Test Position	LTE Band 26b	U-NII-2C	U-NII-3	Σ1-g SAR (W/kg)	SPLSR (Yes/No)
	Left Touch	0.231	0.235		0.466	No
	Left Tilt	0.159	0.075		0.234	No
Head	Right Touch	0.286	0.291		0.577	No
	Right Tilt	0.186	0.080		0.266	No
	Left Touch	0.231		0.196	0.427	No
	Left Tilt	0.159		0.091	0.250	No
Head	Right Touch	0.286		0.222	0.508	No
	Right Tilt	0.186		0.109	0.295	No
	Rear	0.414	0.440		0.854	No
	Front	0.278	0.188		0.466	No
	Edge 1	0.074	0.130		0.204	No
	Edge 2	0.100	0.092		0.192	No
	Edge 3	0.119	0.058		0.177	No
Body worn	Edge 4	0.101	0.073		0.174	No
Body-worn	Rear	0.414		0.180	0.414	No
	Front	0.278		0.120	0.278	No
	Edge 1	0.074		0.114	0.074	No
	Edge 2	0.100		0.062	0.100	No
	Edge 3	0.119		0.041	0.119	No
	Edge 4	0.101		0.088	0.101	No

<sup>·</sup>According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than 1.6 W/kg, SPLSR assessment is not required.

<sup>·</sup>SPLSR mean is "The SAR to Peak Location Separation Ratio "



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# Sum of the SAR for LTE Band 41 &Wi-Fi & BT:

RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR	SPLSR
		LTE Band 41	Wi-Fi DTS Band	Bluetooth	(W/kg)	(Yes/No)
	Left Touch	0.043	0.144		0.187	No
	Left Tilt	0.039	0.116		0.155	No
Head	Right Touch	0.054	0.146		0.200	No
	Right Tilt	0.035	0.118		0.153	No
	Left Touch	0.043		0.188	0.231	No
	Left Tilt	0.039		0.188	0.227	No
Head	Right Touch	0.054		0.188	0.242	No
	Right Tilt	0.035		0.188	0.223	No
	Rear	0.170	0.086		0.256	No
	Front	0.137	0.046		0.183	No
	Edge 1	0.069	0.083		0.152	No
	Edge 2	0.092	0.057		0.149	No
	Edge 3	0.124	0.046		0.170	No
Pody worn	Edge 4	0.104	0.073		0.177	No
Body-worn	Rear	0.170		0.094	0.170	No
	Front	0.137		0.094	0.137	No
	Edge 1	0.069		0.094	0.069	No
	Edge 2	0.092		0.094	0.092	No
	Edge 3	0.124		0.094	0.124	No
	Edge 4	0.104		0.094	0.104	No

<sup>·</sup>According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than 1.6 W/kg, SPLSR assessment is not required.

<sup>·</sup>SPLSR mean is "The SAR to Peak Location Separation Ratio "



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RF Exposure	Test	Simultaneo	us Transmissi	on Scenario	Σ1-g SAR	SPLSR (Yes/No)
Conditions	Position	LTE Band 41	U-NII-1	U-NII-2A	(W/kg)	
	Left Touch	0.043	0.134		0.177	No
	Left Tilt	0.039	0.097		0.136	No
Head	Right Touch	0.054	0.144		0.198	No
	Right Tilt	0.035	0.107		0.142	No
	Left Touch	0.043		0.161	0.204	No
	Left Tilt	0.039		0.073	0.112	No
Head	Right Touch	0.054		0.179	0.233	No
	Right Tilt	0.035		0.075	0.110	No
	Rear	0.170	0.204		0.374	No
	Front	0.137	0.121		0.258	No
	Edge 1	0.069	0.194		0.263	No
	Edge 2	0.092	0.120		0.212	No
	Edge 3	0.124	0.026		0.150	No
Body-worn	Edge 4	0.104	0.116		0.220	No
Body-worn	Rear	0.170		0.263	0.170	No
	Front	0.137		0.142	0.137	No
	Edge 1	0.069		0.218	0.069	No
	Edge 2	0.092		0.102	0.092	No
	Edge 3	0.124		0.054	0.124	No
	Edge 4	0.104		0.104	0.104	No

<sup>·</sup>According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than 1.6 W/kg, SPLSR assessment is not required.

<sup>·</sup>SPLSR mean is "The SAR to Peak Location Separation Ratio "



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RF Exposure	Test	Simultaneous Transmission Scenario			Σ1-g SAR	SPLSR
Conditions	Position	LTE Band 41	U-NII-2C	U-NII-3	(W/kg)	(Yes/No)
	Left Touch	0.043	0.235		0.278	No
	Left Tilt	0.039	0.075		0.114	No
Head	Right Touch	0.054	0.291		0.345	No
	Right Tilt	0.035	0.080		0.115	No
	Left Touch	0.043		0.196	0.239	No
	Left Tilt	0.039		0.091	0.130	No
Head	Right Touch	0.054		0.222	0.276	No
	Right Tilt	0.035		0.109	0.144	No
	Rear	0.170	0.440		0.610	No
	Front	0.137	0.188		0.325	No
	Edge 1	0.069	0.130		0.199	No
	Edge 2	0.092	0.092		0.184	No
	Edge 3	0.124	0.058		0.182	No
Pody worn	Edge 4	0.104	0.073		0.177	No
Body-worn	Rear	0.170		0.180	0.170	No
	Front	0.137		0.120	0.137	No
	Edge 1	0.069		0.114	0.069	No
	Edge 2	0.092		0.062	0.092	No
	Edge 3	0.124		0.041	0.124	No
	Edge 4	0.104		0.088	0.104	No

<sup>·</sup>According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than 1.6 W/kg, SPLSR assessment is not required.

<sup>·</sup>SPLSR mean is "The SAR to Peak Location Separation Ratio "



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# Sum of the SAR for LTE Band 71 &Wi-Fi & BT:

RF Exposure Conditions	Test	Simultaneous Transmission Scenario			Σ1-g SAR	SPLSR
	Position	LTE Band 71	Wi-Fi DTS Band	Bluetooth	(W/kg)	(Yes/No)
	Left Touch	0.189	0.144		0.333	No
	Left Tilt	0.124	0.116		0.240	No
Head	Right Touch	0.205	0.146		0.351	No
	Right Tilt	0.136	0.118		0.254	No
	Left Touch	0.189		0.188	0.377	No
	Left Tilt	0.124		0.188	0.312	No
Head	Right Touch	0.205		0.188	0.393	No
	Right Tilt	0.136		0.188	0.324	No
	Rear	0.391	0.086		0.477	No
	Front	0.150	0.046		0.196	No
	Edge 1	0.063	0.083		0.146	No
	Edge 2	0.078	0.057		0.135	No
	Edge 3	0.126	0.046		0.172	No
Dody worm	Edge 4	0.105	0.073		0.178	No
Body-worn	Rear	0.391		0.094	0.485	No
	Front	0.150		0.094	0.244	No
	Edge 1	0.063		0.094	0.157	No
	Edge 2	0.078		0.094	0.172	No
	Edge 3	0.126		0.094	0.220	No
	Edge 4	0.105		0.094	0.199	No

<sup>·</sup>According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than 1.6 W/kg, SPLSR assessment is not required.

<sup>·</sup>SPLSR mean is "The SAR to Peak Location Separation Ratio "



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RF Exposure	Test	Simultaneo	us Transmissi	Σ1-g SAR	SPLSR	
Conditions	Position	LTE Band 71	U-NII-1	U-NII-2A	(W/kg)	(Yes/No)
	Left Touch	0.189	0.134		0.323	No
	Left Tilt	0.124	0.097		0.221	No
Head	Right Touch	0.205	0.144		0.349	No
	Right Tilt	0.136	0.107		0.243	No
	Left Touch	0.189		0.161	0.350	No
	Left Tilt	0.124		0.073	0.197	No
Head	Right Touch	0.205		0.179	0.384	No
	Right Tilt	0.136		0.075	0.211	No
	Rear	0.391	0.204		0.595	No
	Front	0.150	0.121		0.271	No
	Edge 1	0.063	0.194		0.257	No
	Edge 2	0.078	0.120		0.198	No
	Edge 3	0.126	0.026		0.152	No
Pody worn	Edge 4	0.105	0.116		0.221	No
Body-worn	Rear	0.391		0.263	0.654	No
	Front 0	0.150		0.142	0.292	No
	Edge 1	0.063		0.218	0.281	No
	Edge 2	0.078		0.102	0.180	No
	Edge 3	0.126		0.054	0.180	No
	Edge 4	0.105		0.104	0.209	No

<sup>·</sup>According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than 1.6 W/kg, SPLSR assessment is not required.

<sup>·</sup>SPLSR mean is "The SAR to Peak Location Separation Ratio "



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RF Exposure	Test	Simultaneo	Simultaneous Transmission Scenario		Σ1-g SAR	SPLSR (Yes/No) No No No
Conditions	Position	LTE Band 71	U-NII-2C	U-NII-3	(W/kg)	(Yes/No)
	Left Touch	0.189	0.235		0.424	No
	Left Tilt	0.124	0.075		0.199	No
Head	Right Touch	0.205	0.291		0.496	No
	Right Tilt	0.136	0.080		0.216	No
	Left Touch	0.189		0.196	0.385	No
	Left Tilt	0.124		0.091	0.215	No
Head	Right Touch	0.205		0.222	0.427	No
	Right Tilt	0.136		0.109	0.245	No
	Rear	0.391	0.440		0.831	No
	Front	0.150	0.188		0.338	No
	Edge 1	0.063	0.130		0.193	No
	Edge 2	0.078	0.092		0.170	No
	Edge 3	0.126	0.058		0.184	No
Pody worn	Edge 4	0.105	0.073		0.178	No
Body-worn	Rear	0.391		0.180	0.571	No
	Front	0.150		0.120	0.270	No
	Edge 1	0.063		0.114	0.177	No
	Edge 2	0.078		0.062	0.140	No
	Edge 3	0.126		0.041	0.167	No
	Edge 4	0.105		0.088	0.193	No

<sup>·</sup>According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than 1.6 W/kg, SPLSR assessment is not required.

<sup>·</sup>SPLSR mean is "The SAR to Peak Location Separation Ratio "



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# APPENDIX A. SAR SYSTEM CHECK DATA

Test Laboratory: AGC Lab Date: Jan. 04, 2024

System Check Head 750 MHz

DUT: Dipole 750 MHz Type: SID 750

Communication System CW; Communication System Band: D750 (750.0 MHz); Duty Cycle: 1:1; Conv.F=1.95 Frequency: 750 MHz; Medium parameters used: f = 750 MHz;  $\sigma = 0.90$  mho/m;  $\epsilon r = 42.57$ ;  $\rho = 1000$  kg/m³;

Phantom section: Flat Section; Input Power=18dBm

Ambient temperature (°C):21.5, Liquid temperature (°C): 21.3

# **SATIMO Configuration:**

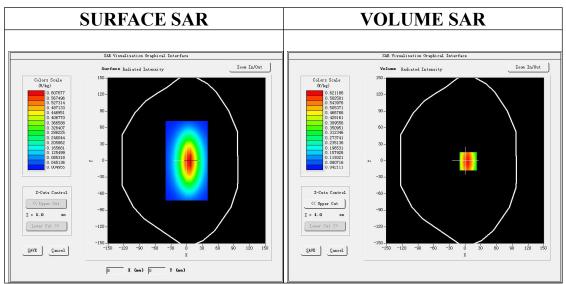
Probe: SSE2; Calibrated: May 31, 2023; Serial No.: 2023-EPGO-414

• Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: SAM twin phantom

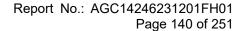
• Measurement SW: OpenSAR V4\_02\_35

Configuration/System Check 750MHz Head/Area Scan: Measurement grid: dx=8mm, dy=8mm Configuration/System Check 750MHz Head/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm

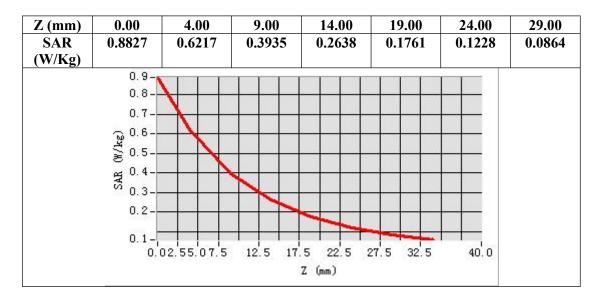


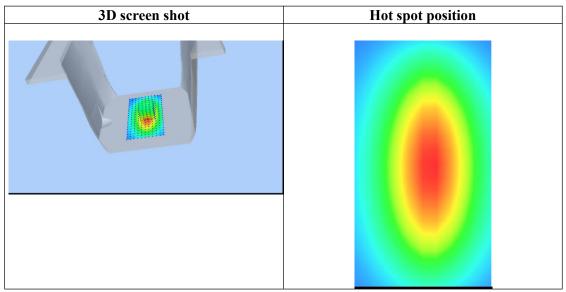
Maximum location: X=6.00, Y=-1.00 SAR Peak: 0.89 W/kg

SAR 10g (W/Kg)	0.353875	
SAR 1g (W/Kg)	0.552985	











Date: Jan. 03, 2024

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Test Laboratory: AGC Lab System Check Head 835 MHz

DUT: Dipole 835 MHz Type: SID 835

Communication System CW; Communication System Band: D835 (835.0 MHz); Duty Cycle: 1:1; Conv.F=2.02 Frequency: 835 MHz; Medium parameters used: f = 835 MHz;  $\sigma = 0.91$  mho/m;  $\epsilon r = 41.50$ ;  $\rho = 1000$  kg/m³;

Phantom section: Flat Section; Input Power=18dBm

Ambient temperature (°C):21.1, Liquid temperature (°C): 20.8

## SATIMO Configuration:

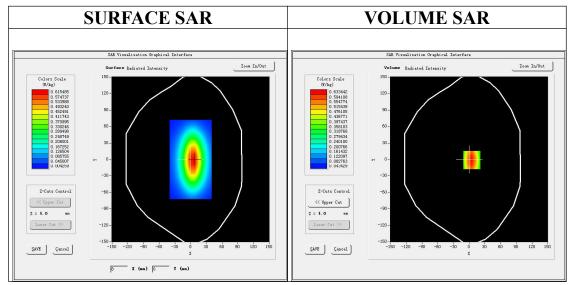
Probe: SSE2; Calibrated: May 31, 2023; Serial No.: 2023-EPGO-414

• Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: SAM twin phantom

Measurement SW: OpenSAR V4\_02\_35

Configuration/System Check 835MHz Head/Area Scan: Measurement grid: dx=8mm, dy=8mm Configuration/System Check 835MHz Head/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm

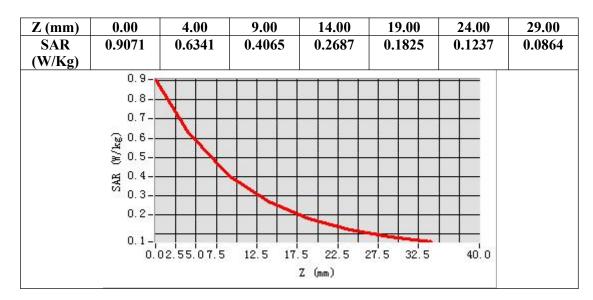


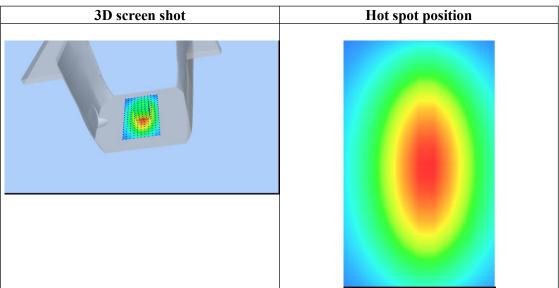
Maximum location: X=5.00, Y=-1.00 SAR Peak: 0.90 W/kg

SAR 10g (W/Kg)	0.389852	
SAR 1g (W/Kg)	0.606834	











Date: Jan. 07, 2024

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Test Laboratory: AGC Lab System Check Head 1750MHz

DUT: Dipole 1800 MHz; Type: SID 1800

Communication System: CW; Communication System Band: D1700 (1750.0 MHz); Duty Cycle:1:1; Conv.F=2.17 Frequency: 1750 MHz; Medium parameters used: f = 1750 MHz;  $\sigma = 1.32 mho/m$ ;  $\epsilon r = 39.71$ ;  $\rho = 1000 kg/m^3$ ;

Phantom section: Flat Section; Input Power=18dBm

Ambient temperature (°C): 20.9, Liquid temperature (°C): 20.6

**SATIMO Configuration:** 

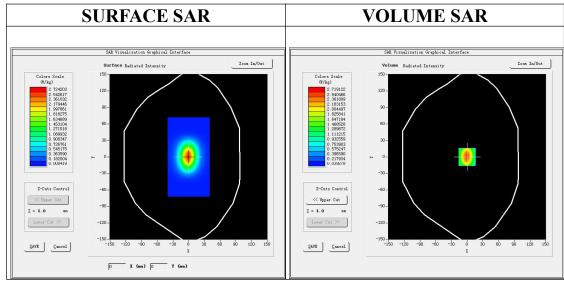
Probe: SSE2; Calibrated: May 31, 2023; Serial No.: 2023-EPGO-414

• Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: SAM twin phantom

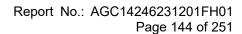
Measurement SW: OpenSAR V4\_02\_35

Configuration/System Check 1750MHz Head/Area Scan: Measurement grid: dx=8mm,dy=8mm Configuration/System Check 1750MHz Head/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm

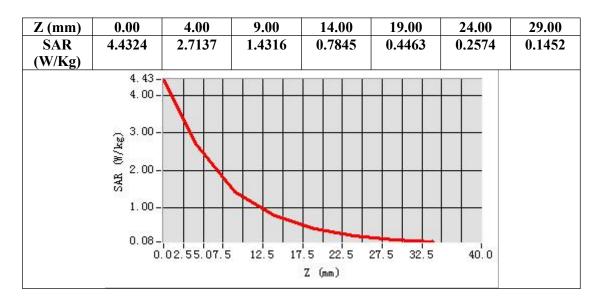


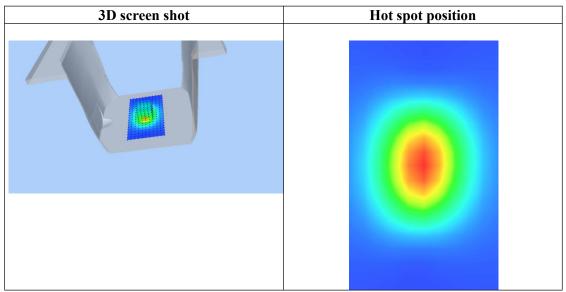
Maximum location: X=0.00, Y=0.00 SAR Peak: 4.41 W/kg

SAR 10g (W/Kg)	1.291432	
SAR 1g (W/Kg)	2.563877	











Date: Jan. 08, 2024

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Test Laboratory: AGC Lab System Check Head 1900MHz

DUT: Dipole 1900 MHz; Type: SID 1900

Communication System: CW; Communication System Band: D1900 (1900.0 MHz); Duty Cycle:1:1; Conv.F=2.15 Frequency: 1900 MHz; Medium parameters used: f = 1900 MHz;  $\sigma = 1.36$  mho/m;  $\epsilon r = 39.34$ ;  $\rho = 1000$  kg/m³;

Phantom section: Flat Section; Input Power=18dBm

Ambient temperature ( $^{\circ}$ ):20.9, Liquid temperature ( $^{\circ}$ ): 20.4

# SATIMO Configuration:

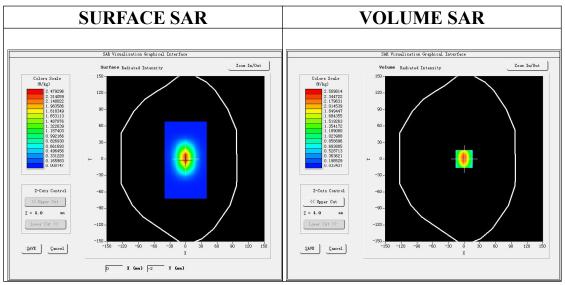
Probe: SSE2; Calibrated: May 31, 2023; Serial No.: 2023-EPGO-414

• Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: SAM twin phantom

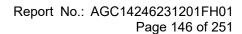
Measurement SW: OpenSAR V4\_02\_35

Configuration/System Check 1900MHz Head/Area Scan: Measurement grid: dx=8mm, dy=8mm Configuration/System Check 1900MHz Head/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm

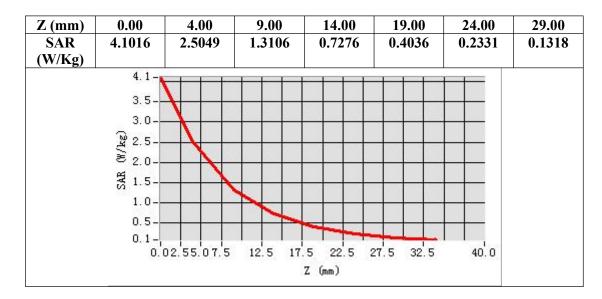


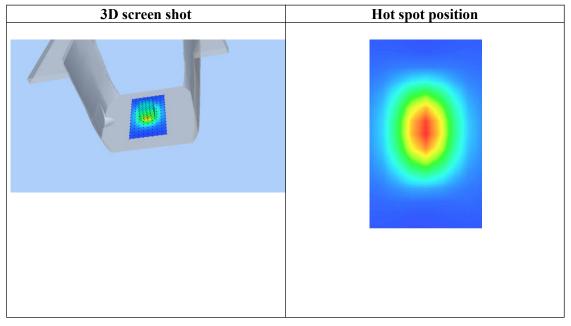
Maximum location: X=0.00, Y=0.00 SAR Peak: 4.09 W/kg

SAR 10g (W/Kg)	1.286741
SAR 1g (W/Kg)	2.489352











Date: Jan. 06, 2024

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Test Laboratory: AGC Lab System Check Head 2450 MHz

DUT: Dipole 2450 MHz Type: SID 2450

Communication System CW; Communication System Band: D2450 (2450.0 MHz); Duty Cycle: 1:1; Conv.F=2.29 Frequency: 2450 MHz; Medium parameters used: f = 2450 MHz;  $\sigma = 1.82$  mho/m;  $\epsilon r = 39.43$ ;  $\rho = 1000$  kg/m³;

Phantom section: Flat Section; Input Power=18dBm

Ambient temperature (°C):21.2, Liquid temperature (°C): 20.8

## **SATIMO Configuration**

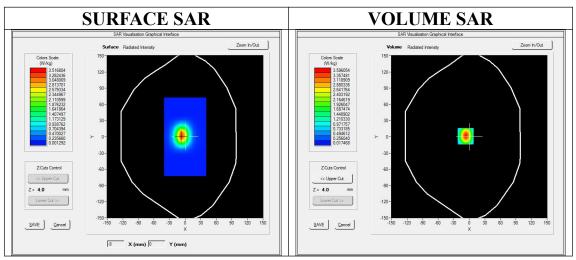
Probe: SSE2; Calibrated: May 31, 2023; Serial No.: 2023-EPGO-414

• Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: SAM twin phantom

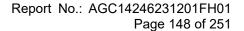
Measurement SW: OpenSAR V4\_02\_35

Configuration/System Check 2450MHz Head/Area Scan: Measurement grid: dx=8mm, dy=8mm Configuration/System Check 2450MHz Head/Zoom Scan: Measurement grid: dx=5mm,dy=5mm, dz=5mm

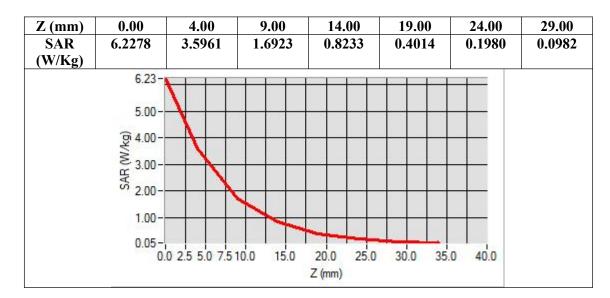


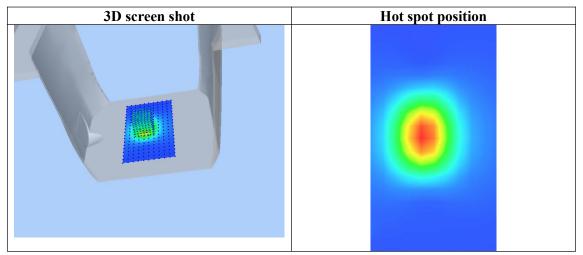
Maximum location: X=-7.00, Y=1.00 SAR Peak: 6.16 W/kg

SAR 10g (W/Kg) 1.496380 SAR 1g (W/Kg) 3.315274











Date: Jan. 05, 2024

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Test Laboratory: AGC Lab System Check Head 2600MHz

DUT: Dipole 2600 MHz; Type: SID 2600

Communication System: CW; Communication System Band: D2600 (2600.0 MHz); Duty Cycle: 1:1; Conv.F=2.13 Frequency: 2600 MHz; Medium parameters used: f = 2600 MHz;  $\sigma = 1.99$  mho/m;  $\epsilon r = 38.18$ ;  $\rho = 1000$  kg/m³;

Phantom section: Flat Section; Input Power=18dBm

Ambient temperature ( $^{\circ}$ ): 21.4, Liquid temperature ( $^{\circ}$ ): 21.2

## **SATIMO Configuration:**

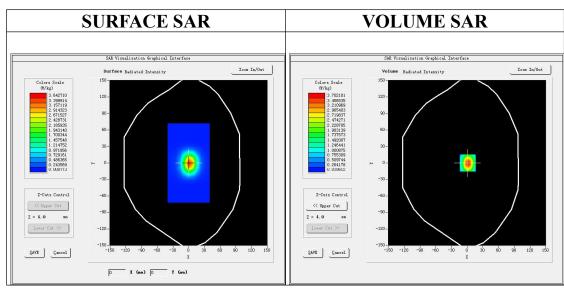
Probe: SSE2; Calibrated: May 31, 2023; Serial No.: 2023-EPGO-414

• Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: SAM twin phantom

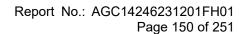
Measurement SW: OpenSAR V4\_02\_35

Configuration/System Check 2600 Head/Area Scan: Measurement grid: dx=8mm,dy=8mm Configuration/System Check 2600 Head/Zoom Scan: Measurement grid: dx=5mm,dy=5mm, dz=5mm

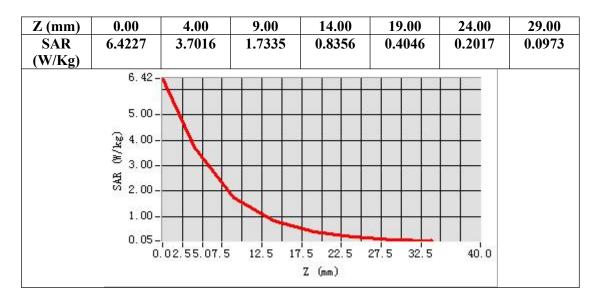


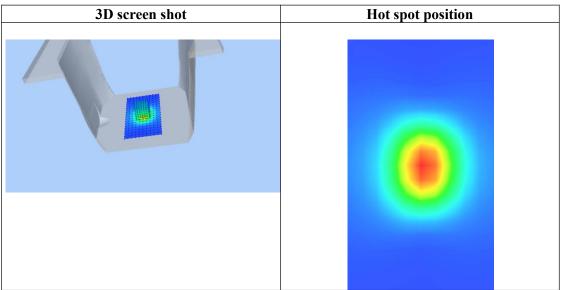
Maximum location: X=1.00, Y=0.00 SAR Peak: 6.40 W/kg

<b>SAR 10g (W/Kg)</b>	1.533942
SAR 1g (W/Kg)	3.421758











Date: Jan. 09, 2024

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## **Test Laboratory: AGC Lab**

System Check 5200 MHz

DUT: Dipole 5000MHz Type: SID5500

Communication System: CW; Communication System Band: D5000 (5000.0 MHz); Duty Cycle: 1:1; Conv.F=1.35 Frequency: 5200 MHz; Medium parameters used: f = 5200 MHz;  $\sigma = 4.63$  mho/m;  $\epsilon r = 36.17$ ;  $\rho = 1000$  kg/m³;

Phantom section: Flat Section; Input Power=18dBm

Ambient temperature (°C): 20.9, Liquid temperature (°C): 20.8

## **SATIMO Configuration:**

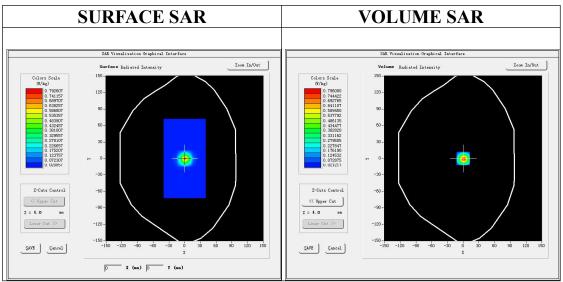
Probe: SSE2; Calibrated: May 31, 2023; Serial No.: 2023-EPGO-414

· Sensor-Surface: 4mm (Mechanical Surface Detection)

• Phantom: SAM twin phantom

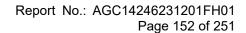
Measurement SW: OpenSAR V4 02 35

Configuration/System Check 5200 MHz Body/Area Scan: Measurement grid: dx=8mm, dy=8mm Configuration/System Check 5200 MHz Body/Zoom Scan: Measurement grid: dx=4mm,dy=4mm, dz=2mm



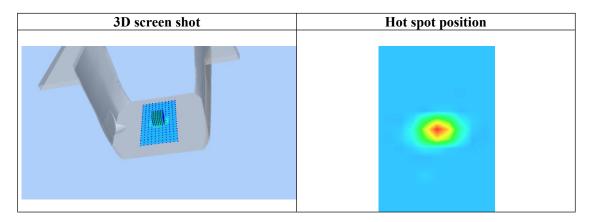
Maximum location: X=0.00, Y=0.00 SAR Peak: 2.23 W/kg

<b>SAR 10g (W/Kg)</b>	0.214934		
SAR 1g (W/Kg)	0.738241		





Z	0.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	22.00	24.00
(mm)												
	2.2593	0.7982	0.3997	0.1813	0.0837	0.0361	0.0271	0.0213	0.0234	0.0234	0.0234	0.0234
(W/K												
g)												
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						Z 6	mm)					





Date: Jan. 11, 2024

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**Test Laboratory: AGC Lab** 

System Check Head 5300 MHz

DUT: Dipole 5000MHz Type: SID5000

Communication System: CW; Communication System Band: D5000 (5000.0 MHz); Duty Cycle: 1:1; Conv.F=1.35 Frequency: 5300 MHz; Medium parameters used: f = 5300 MHz;  $\sigma = 4.69$  mho/m;  $\epsilon r = 36.28$ ;  $\rho = 1000$  kg/m³;

Phantom section: Flat Section; Input Power=18dBm

Ambient temperature ( $^{\circ}$ ): 21.5, Liquid temperature ( $^{\circ}$ ): 21.1

## **SATIMO Configuration:**

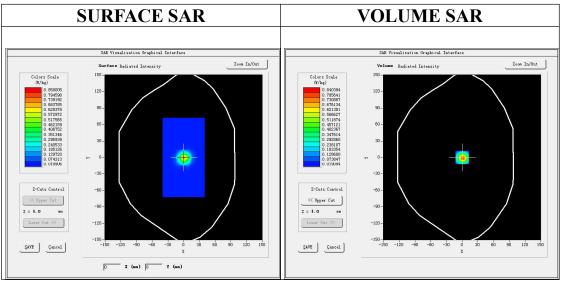
Probe: SSE2; Calibrated: May 31, 2023; Serial No.: 2023-EPGO-414

• Sensor-Surface: 4mm (Mechanical Surface Detection)

• Phantom: SAM twin phantom

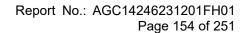
Measurement SW: OpenSAR V4 02 35

Configuration/System Check 5300 MHz Head/Area Scan: Measurement grid: dx=8mm, dy=8mm Configuration/System Check 5300 MHz Head/Zoom Scan: Measurement grid: dx=4mm,dy=4mm, dz=2mm



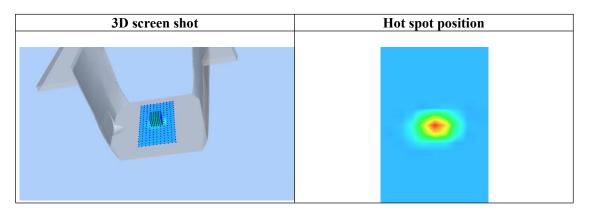
Maximum location: X=0.00, Y=0.00 SAR Peak: 2.34 W/kg

SAR 10g (W/Kg)	0.228241
SAR 1g (W/Kg)	0.774396





Z	0.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	22.00	24.00
(mm)												
SAR	2.3695	0.8404	0.4122	0.1968	0.0894	0.0355	0.0257	0.0191	0.0210	0.0210	0.0210	0.0210
(W/K												
g)												
		2.4			- 1							
		2.0	1									
		2.0		7 7								
			A.									
		(3y/) (3y/)	<b>\</b>			2	+ +	$\pm$				
		€										
		₹ 1.0		1	- 01			- 1				
		స్ట										
		0.5		1								
		0.0				1000						
		0.0	0 2	4 6	8 1	0 12	14 16	18 20	22 :	24 26		
			× 5	8, 19					5693 <del>55</del> 8			
						Z G	nm)					





Date: Jan. 10, 2024

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**Test Laboratory: AGC Lab** 

System Check Head 5600 MHz

DUT: Dipole 5000MHz Type: SID5000

Communication System: CW; Communication System Band: D5000 (5000.0 MHz); Duty Cycle: 1:1; Conv.F=1.53 Frequency: 5600 MHz; Medium parameters used: f = 5600 MHz;  $\sigma = 5.24$  mho/m;  $\epsilon r = 36.14$ ;  $\rho = 1000$  kg/m³;

Phantom section: Flat Section; Input Power=18dBm

Ambient temperature ( $^{\circ}$ ): 21.3, Liquid temperature ( $^{\circ}$ ): 21.2

## **SATIMO Configuration:**

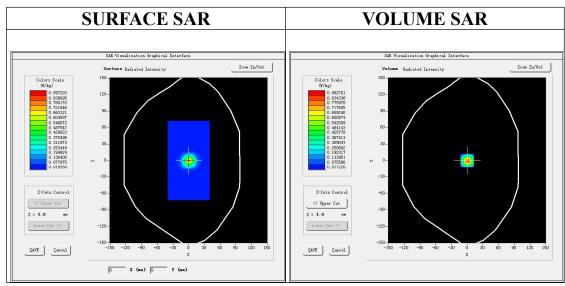
Probe: SSE2; Calibrated: May 31, 2023; Serial No.: 2023-EPGO-414

• Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: SAM twin phantom

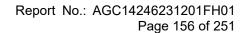
Measurement SW: OpenSAR V4\_02\_35

Configuration/System Check 5600 MHz Head/Area Scan: Measurement grid: dx=8mm, dy=8mm Configuration/System Check 5600 MHz Head/Zoom Scan: Measurement grid: dx=4mm,dy=4mm, dz=2mm



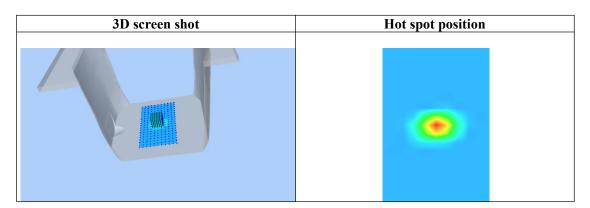
Maximum location: X=0.00, Y=0.00 SAR Peak: 2.47 W/kg

SAR 10g (W/Kg)	0.235021
SAR 1g (W/Kg)	0.826175





Z	0.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	22.00	24.00
(mm) SAR	2.4893	0.8941	0.4499	0.2161	0.0954	0.0376	0.0253	0.0197	0.0217	0.0215	0.0215	0.0215
(W/K												
g)												
		2.5	\		12			- 1				
		2.0										
		2.0						av a				
		(20) 24/∦ (20)	-									
			8									
		¥ 1.0			-		++		+			
		0.5										
		0.0				-						
			0 2	4 6	8 1	0 12	14 16	18 20	22 2	24 26		
						Z G	nm)					





Date: Jan. 12, 2024

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**Test Laboratory: AGC Lab** 

System Check Head 5800 MHz

DUT: Dipole 5000MHz Type: SID5500

Communication System: CW; Communication System Band: D5000 (5000.0 MHz); Duty Cycle: 1:1; Conv.F=1.41 Frequency: 5800 MHz; Medium parameters used: f = 5800 MHz;  $\sigma = 5.21$  mho/m;  $\epsilon r = 36.37$ ;  $\rho = 1000$  kg/m³;

Phantom section: Flat Section; Input Power=18dBm

Ambient temperature ( $^{\circ}$ C): 21.2, Liquid temperature ( $^{\circ}$ C): 20.9

## **SATIMO Configuration:**

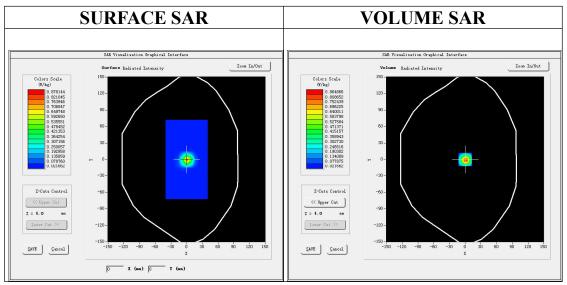
Probe: SSE2; Calibrated: May 31, 2023; Serial No.: 2023-EPGO-414

• Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: SAM twin phantom

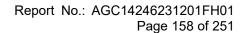
Measurement SW: OpenSAR V4\_02\_35

Configuration/System Check 5800 MHz Head/Area Scan: Measurement grid: dx=8mm, dy=8mm Configuration/System Check 5800 MHz Head/Zoom Scan: Measurement grid: dx=4mm,dy=4mm, dz=2mm



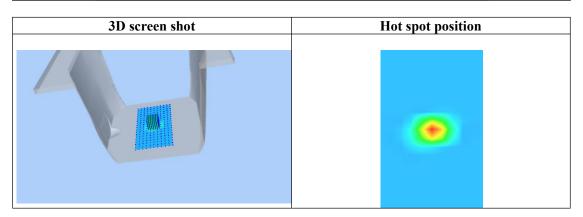
Maximum location: X=0.00, Y=0.00 SAR Peak: 2.41 W/kg

SAR 10g (W/Kg)	0.228345
SAR 1g (W/Kg)	0.801739





Z (mm)	0.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	22.00	24.00
	2.4267	0.8638	0.4324	0.2043	0.0922	0.0394	0.0271	0.0235	0.0239	0.0218	0.0239	0.0239
		2.4										
		(∰/kg)	-	<b>.</b>	- 8		$\blacksquare$					
		W 1.0						87 8				
		0.5			-							
			o ż	4 6	8 1	0 12 Z (	14 16 nm)	18 2	0 22 :	24 26		





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# APPENDIX B. SAR MEASUREMENT DATA

Test Laboratory: AGC Lab Date: Jan. 03, 2024

GSM 850 Mid-Touch-Right <SIM 1> DUT: smartphone; Type: X23

Communication System: Generic GSM; Communication System Band: GSM 850; Duty Cycle: 1:8.3; Conv.F=2.02; Frequency: 836.6 MHz; Medium parameters used: f = 835 MHz;  $\sigma = 0.94$  mho/m;  $\epsilon r = 40.67$ ;  $\rho = 1000$  kg/m³;

Phantom section: Right Section

Ambient temperature (°C): 21.1, Liquid temperature (°C): 20.8

# SATIMO Configuration:

Probe: SSE2; Calibrated: May 31, 2023; Serial No.: 2023-EPGO-414

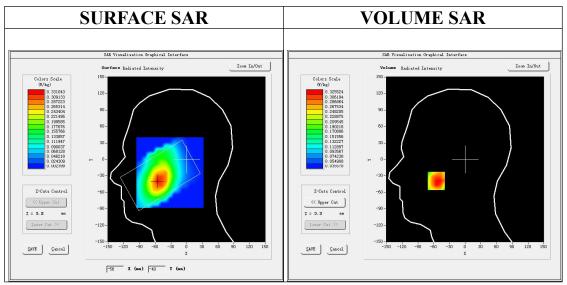
· Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: SAM twin phantom

• Measurement SW: OpenSAR V4\_02\_35

Configuration/GSM 850 Mid-Touch-Right/Area Scan: Measurement grid: dx=8mm, dy=8mm Configuration/GSM 850 Mid-Touch-Right/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm;

Area Scan	dx=8mm dy=8mm, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Right head
Device Position	Cheek
Band	GSM 850
Channels	Middle
Signal	TDMA (Crest factor: 8.0)



**Maximum location: X=-55.00, Y=-39.00** 

SAR Peak: 0.43 W/kg

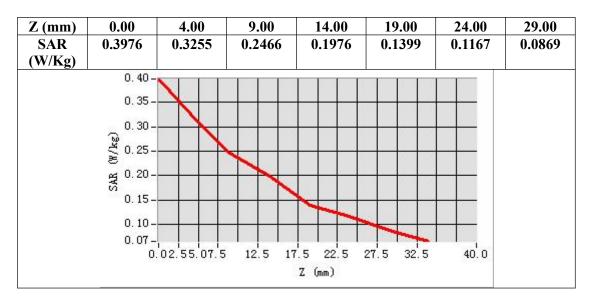
SAR 10g (W/Kg)	0.224248
SAR 1g (W/Kg)	0.320641

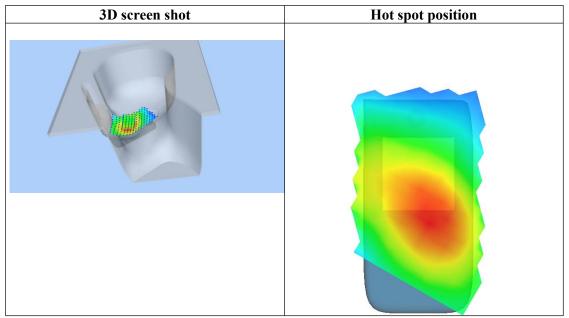
Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.

Tel: +86-755 2523 4088 E-mail: agc@agccert.com Web: http://www.agccert.com/











Date: Jan. 03, 2024

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Test Laboratory: AGC Lab

GSM 850 Mid-Body-Back (MS)<SIM 1>

DUT: smartphone; Type: X23

Communication System: Generic GSM; Communication System Band: GSM 850; Duty Cycle: 1:8.3; Conv.F=2.02; Frequency: 836.6 MHz; Medium parameters used: f = 835 MHz;  $\sigma = 0.94$  mho/m;  $\epsilon r = 40.67$ ;  $\rho = 1000$  kg/m³;

Phantom section: Flat Section

Ambient temperature ( $^{\circ}$ ): 21.1, Liquid temperature ( $^{\circ}$ ): 20.8

# **SATIMO Configuration:**

Probe: SSE2; Calibrated: May 31, 2023; Serial No.: 2023-EPGO-414

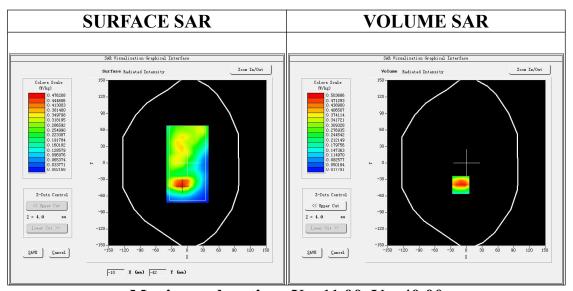
• Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: SAM twin phantom

• Measurement SW: OpenSAR V4 02 35

Configuration/GSM 850 Mid-Body-Back/Area Scan: Measurement grid: dx=8mm, dy=8mm Configuration/GSM 850 Mid-Body-Back/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm;

Area Scan	surf_sam_plan.txt, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Body Back
Band	GSM 850
Channels	Middle
Signal	TDMA (Crest factor: 8.0)

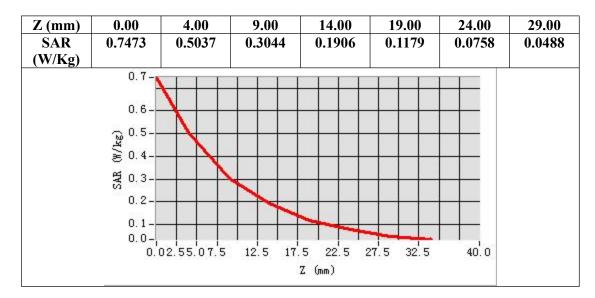


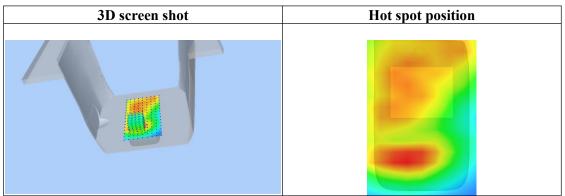
Maximum location: X=-11.00, Y=-40.00 SAR Peak: 0.74 W/kg

SAR 10g (W/Kg)	0.269713
SAR 1g (W/Kg)	0.476381











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Test Laboratory: AGC Lab

Date: Jan. 03, 2024

GPRS 850 Mid-Body-Back (2up) DUT: smartphone; Type: X23

Communication System: GPRS-2 Slot; Communication System Band: GSM 850; Duty Cycle: 1:4.2; Conv.F=2.02; Frequency: 836.6 MHz; Medium parameters used: f = 835 MHz;  $\sigma = 0.94$  mho/m;  $\epsilon r = 40.67$ ;  $\rho = 1000$  kg/m³;

Phantom section: Flat Section

Ambient temperature ( $^{\circ}$ ): 21.1, Liquid temperature ( $^{\circ}$ ): 20.8

## **SATIMO Configuration:**

Probe: SSE2; Calibrated: May 31, 2023; Serial No.: 2023-EPGO-414

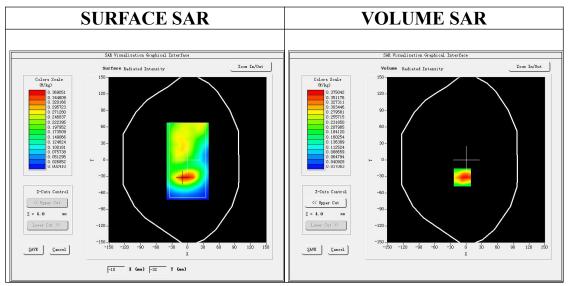
• Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: SAM twin phantom

Measurement SW: OpenSAR V4 02 35

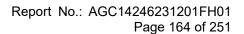
Configuration/GPRS 850 Mid-Body-Back/Area Scan: Measurement grid: dx=8mm, dy=8mm Configuration/GPRS 850 Mid-Body-Back/Zoom Scan: Measurement grid: dx=8mm, dy=8mm, dz=5mm;

Area Scan	surf_sam_plan.txt, h= 5.00 mm
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Body Back
Band	GSM 850
Channels	Middle
Signal	TDMA (Crest factor: 4.0)

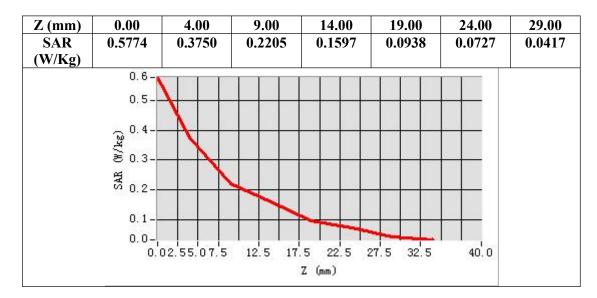


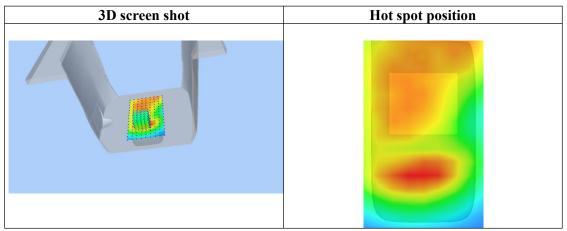
Maximum location: X=-7.00, Y=-32.00 SAR Peak: 0.57 W/kg

	<u> </u>
<b>SAR 10g (W/Kg)</b>	0.215251
SAR 1g (W/Kg)	0.364463











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Test Laboratory: AGC Lab Date: Jan. 08, 2024

PCS 1900 Mid-Touch-Right <SIM 1> DUT: smartphone; Type: X23

Communication System: Generic GSM; Communication System Band: PCS 1900; Duty Cycle: 1:8.3; Conv.F=2.15; Frequency: 1880 MHz; Medium parameters used: f = 1900 MHz;  $\sigma = 1.31$  mho/m;  $\epsilon = 40.69$ ;  $\rho = 1000$  kg/m<sup>3</sup>;

Phantom section: Right Section

Ambient temperature ( $^{\circ}$ ): 20.9, Liquid temperature ( $^{\circ}$ ): 20.4

## **SATIMO Configuration:**

Probe: SSE2; Calibrated: May 31, 2023; Serial No.: 2023-EPGO-414

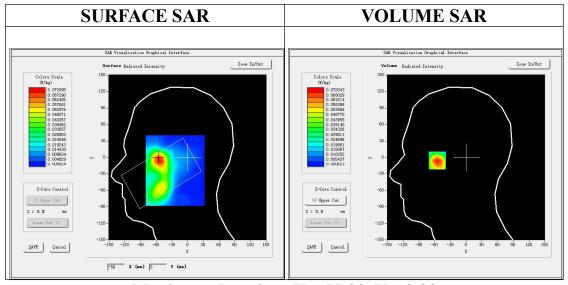
• Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: SAM twin phantom

Measurement SW: OpenSAR V4 02 35

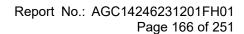
Configuration/PCS1900 Mid-Touch-Right/Area Scan: Measurement grid: dx=8mm, dy=8mm Configuration/PCS1900 Mid-Touch-Right/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm;

Area Scan	dx=8mm dy=8mm, h= 5.00 mm	
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete	
Phantom	Right head	
Device Position	Cheek	
Band	PCS 1900	
Channels	Middle	
Signal	TDMA (Crest factor: 8.0)	

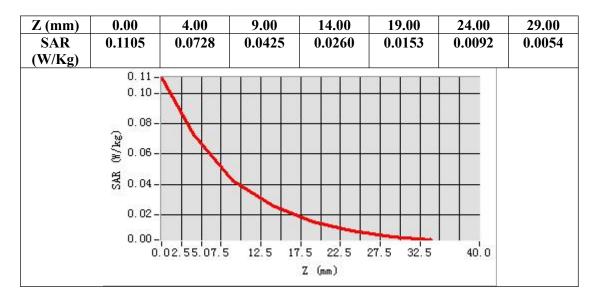


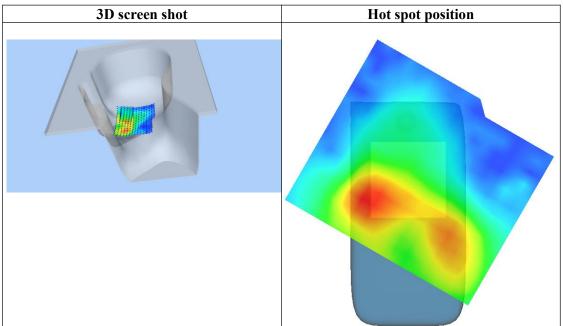
Maximum location: X=-55.00, Y=-2.00 SAR Peak: 0.11 W/kg

SAR 10g (W/Kg)	0.038386
SAR 1g (W/Kg)	0.069356











Date: Jan. 08, 2024

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Test Laboratory: AGC Lab

PCS 1900 Mid-Body-Back (MS)<SIM 1> DUT: smartphone; Type: X23

Communication System: Generic GSM; Communication System Band: PCS 1900; Duty Cycle: 1:8.3; Conv.F=2.15; Frequency: 1880 MHz; Medium parameters used: f = 1900 MHz;  $\sigma = 1.31 \text{ mho/m}$ ;  $\epsilon = 40.69$ ;  $\rho = 1000 \text{ kg/m}^3$ ;

Phantom section: Flat Section

Ambient temperature (°C): 20.9, Liquid temperature (°C): 20.4

#### **SATIMO Configuration:**

Probe: SSE2; Calibrated: May 31, 2023; Serial No.: 2023-EPGO-414

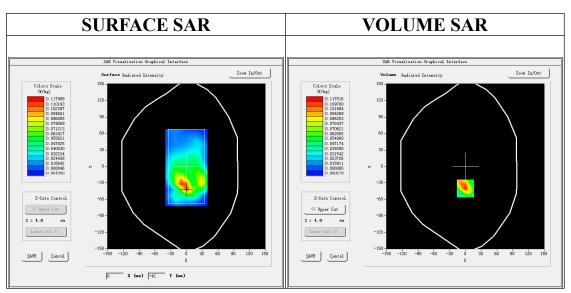
• Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: SAM twin phantom

Measurement SW: OpenSAR V4 02 35

Configuration/PCS1900 Mid-Body-Back/Area Scan: Measurement grid: dx=8mm, dy=8mm Configuration/PCS1900 Mid-Body-Back/Zoom Scan: Measurement grid: dx=8mm, dy=8mm, dz=5mm;

Area Scan	surf_sam_plan.txt, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Body Back
Band	PCS 1900
Channels	Middle
Signal	TDMA (Crest factor: 8.0)

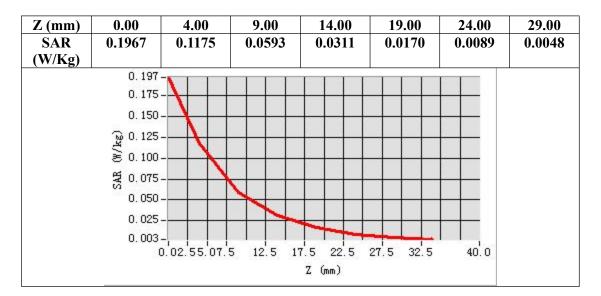


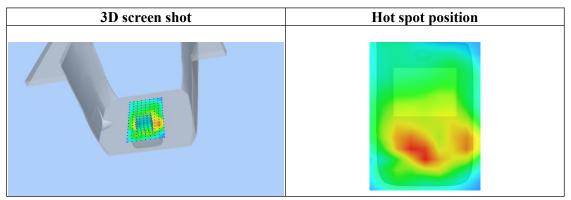
Maximum location: X=0.00, Y=-40.00 SAR Peak: 0.20 W/kg

SAR 10g (W/Kg)	0.055132
SAR 1g (W/Kg)	0.111218











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Test Laboratory: AGC Lab

Date: Jan. 08, 2024

GPRS 1900 Mid-Body-Back (2up)

DUT: smartphone; Type: X23

Communication System: GPRS-2Slot; Communication System Band: PCS 1900; Duty Cycle: 1:4.2; Conv.F=2.15; Frequency: 1880 MHz; Medium parameters used: f = 1900 MHz;  $\sigma = 1.31$  mho/m;  $\epsilon r = 40.69$ ;  $\rho = 1000$  kg/m³;

Phantom section: Flat Section

Ambient temperature (°C): 20.9, Liquid temperature (°C): 20.4

#### **SATIMO Configuration:**

Probe: SSE2; Calibrated: May 31, 2023; Serial No.: 2023-EPGO-414

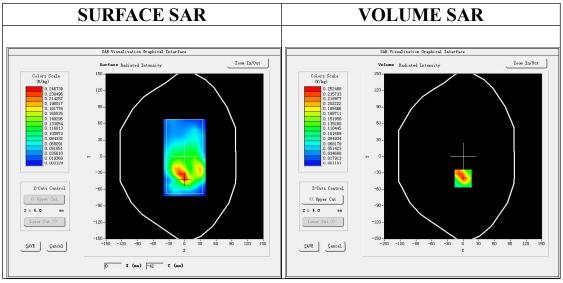
• Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: SAM twin phantom

Measurement SW: OpenSAR V4\_02\_35

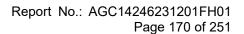
Configuration/GPRS1900 Mid-Body-Back/Area Scan: Measurement grid: dx=8mm, dy=8mm Configuration/GPRS1900 Mid-Body-Back/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm;

Area Scan	surf_sam_plan.txt, h= 5.00 mm
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Body Back
Band	PCS 1900
Channels	Middle
Signal	TDMA (Crest factor: 4.0)

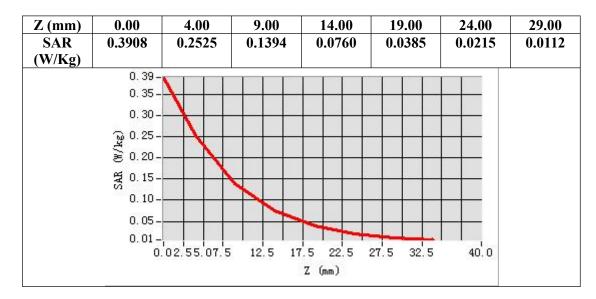


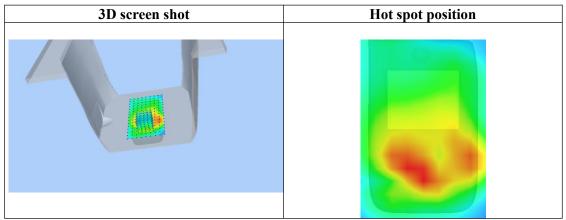
Maximum location: X=0.00, Y=-40.00 SAR Peak: 0.39 W/kg

SAR 10g (W/Kg)	0.123011
SAR 1g (W/Kg)	0.234456











Date: Jan. 08, 2024

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Test Laboratory: AGC Lab

WCDMA Band II Mid-Touch-Right (RMC)

DUT: smartphone; Type: X23

Communication System: UMTS; Communication System Band: Band II UTRA/FDD ;Duty Cycle:1:1; Conv.F=2.15; Frequency: 1880 MHz; Medium parameters used: f = 1900 MHz;  $\sigma = 1.31$  mho/m;  $\epsilon r = 40.69$ ;  $\rho = 1000$  kg/m³;

Phantom section: Right Section

Ambient temperature ( $^{\circ}$ ): 20.9, Liquid temperature ( $^{\circ}$ ): 20.4

## **SATIMO Configuration:**

Probe: SSE2; Calibrated: May 31, 2023; Serial No.: 2023-EPGO-414

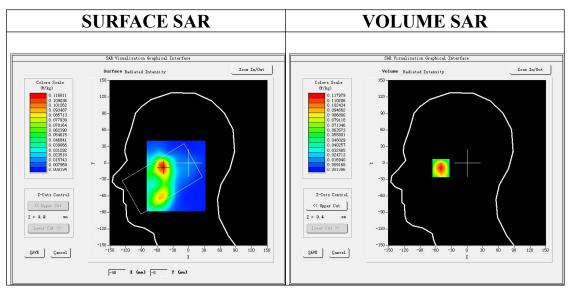
• Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: SAM twin phantom

Measurement SW: OpenSAR V4 02 35

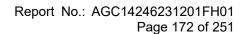
Configuration/WCDMA band II Mid-Touch-Right/Area Scan: Measurement grid: dx=8mm, dy=8mm Configuration/WCDMA band II Mid-Touch-Right/Zoom Scan: Measurement grid: dx=8mm, dy=8mm, dz=5mm;

Area Scan	dx=8mm dy=8mm, h= 5.00 mm	
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete	
Phantom	Right head	
Device Position	Cheek	
Band	WCDMA band II	
Channels	Middle	
Signal	CDMA (Crest factor: 1.0)	

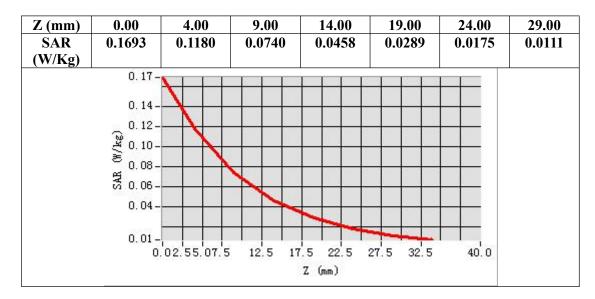


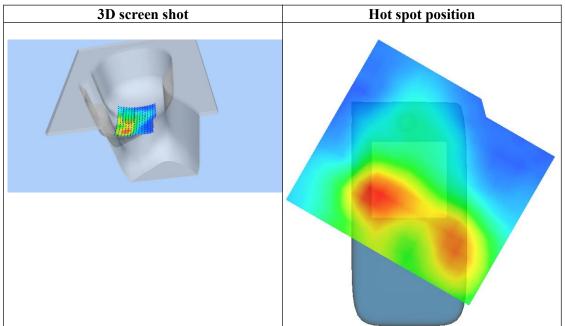
Maximum location: X=-50.00, Y=-7.00 SAR Peak: 0.18 W/kg

SAR 10g (W/Kg)	0.062159
SAR 1g (W/Kg)	0.111431











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Test Laboratory: AGC Lab Date: Jan. 08, 2024

WCDMA Band II Mid-Body-Towards Grounds (RMC 12.2kbps)

DUT: smartphone; Type: X23

Communication System: UMTS; Communication System Band: Band II UTRA/FDD ;Duty Cycle:1:1; Conv.F=2.15; Frequency: 1880 MHz; Medium parameters used: f = 1900 MHz;  $\sigma = 1.31$  mho/m;  $\epsilon = 40.69$ ;  $\rho = 1000$  kg/m³;

Phantom section: Flat Section

Ambient temperature ( $^{\circ}$ ): 20.9, Liquid temperature ( $^{\circ}$ ): 20.4

#### **SATIMO Configuration:**

Probe: SSE2; Calibrated: May 31, 2023; Serial No.: 2023-EPGO-414

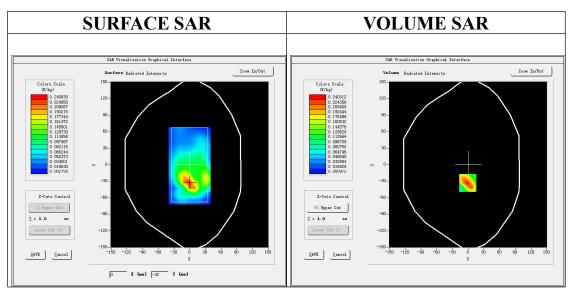
• Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: SAM twin phantom

• Measurement SW: OpenSAR V4 02 35

Configuration/ WCDMA band II Mid-Body-Back/Area Scan: Measurement grid: dx=8mm, dy=8mm Configuration/ WCDMA band II Mid-Body-Back/Zoom Scan: Measurement grid: dx=8mm, dy=8mm, dz=5m;

Area Scan	surf sam plan.txt, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Body Back
Band	WCDMA band II
Channels	Middle
Signal	CDMA (Crest factor: 1.0)



Maximum location: X=-1.00, Y=-33.00 SAR Peak: 0.40 W/kg

SAR 10g (W/Kg)	0.116614
SAR 1g (W/Kg)	0.225757

