

# **SAR Test Report**

Report No.: AGC01689220805FH01

FCC ID : 2A2UU-P12

**APPLICATION PURPOSE**: Original Equipment

**PRODUCT DESIGNATION**: Mini POS Terminal

BRAND NAME : Kobile, Clip, Kripto, Foodics, Dejavoo

MODEL NAME : P12

**APPLICANT**: Shanghai Xiangcheng Communication Technology Co., Ltd

**DATE OF ISSUE** : Sep. 29, 2022

IEEE Std. 1528:2013

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

: IEEE 5td COE 1 ™ 2005

IEEE Std C95.1 ™-2005 IEC 62209-1: 2016

**REPORT VERSION**: V1.0

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





Page 2 of 159

# **Report Revise Record**

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	Sep. 29, 2022	Valid	Initial Release



Page 3 of 159

Test Report			
Applicant Name	Name Shanghai Xiangcheng Communication Technology Co., Ltd		
Applicant Address	6th Floor, Building 10, No.3000 Longdong Avenue, Pudong New District, Shanghai, China		
Manufacturer Name	Shanghai Xiangcheng Communication Technology Co., Ltd		
Manufacturer Address	6th Floor, Building 10, No.3000 Longdong Avenue, Pudong New District, Shanghai, China		
Factory Name	Sichuan Xiangcheng Intelligent Technology Co, Ltd		
Factory Address	Factory No. 2, Zone A, Intelligent Terminal Demonstration Park, West Section of Gangyuan Road, Lingang Economic Development Zone, Yibin City, Sichuan Province		
Product Designation	Mini POS Terminal		
Brand Name	Kobile, Clip, Kripto, Foodics, Dejavoo		
Model Name	P12		
EUT Voltage	DC3.85V by battery		
Applicable Standard	IEEE Std. 1528:2013 FCC 47 CFR Part 2§2.1093 IEEE Std C95.1 ™-2005 IEC 62209-1: 2016		
Test Date	Sep. 08, 2022 to Sep. 15, 2022		
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.

Prepared By

Thea Huang (Project Engineer) Sep. 15, 2022

Coluin Lin

Reviewed By

Calvin Liu (Reviewer) Sep. 29, 2022

Approved By

Max Zhang (Authorized Officer) Sep. 29, 2022





#### **TABLE OF CONTENTS**

1. SUMMARY OF MAXIMUM SAR VALUE	5
2. GENERAL INFORMATION	6
2.1. EUT DESCRIPTION	6
3. SAR MEASUREMENT SYSTEM	8
3.1. THE SATIMO SYSTEM USED FOR PERFORMING COMPLIANCE TESTS CONSISTS OF FOLLOWING ITEMS 3.2. COMOSAR E-FIELD PROBE	9 10 10
4. SAR MEASUREMENT PROCEDURE	12
4.1. SPECIFIC ABSORPTION RATE (SAR)	13
5. TISSUE SIMULATING LIQUID	17
5.1. THE COMPOSITION OF THE TISSUE SIMULATING LIQUID	18
6. SAR SYSTEM CHECK PROCEDURE	22
6.1. SAR SYSTEM CHECK PROCEDURES	
7. EUT TEST POSITION	25
7.4. Body Worn Position	25
8. SAR EXPOSURE LIMITS	26
9. TEST FACILITY	
10. TEST EQUIPMENT LIST	
11. MEASUREMENT UNCERTAINTY	
12. CONDUCTED POWER MEASUREMENT	
13. TEST RESULTS	
13.1. SAR TEST RESULTS SUMMARY	
APPENDIX A. SAR SYSTEM CHECK DATA	
APPENDIX B. SAR MEASUREMENT DATA	
APPENDIX C. TEST SETUP PHOTOGRAPHS	
APPENDIX D. CALIBRATION DATA	159



Page 5 of 159

#### 1. SUMMARY OF MAXIMUM SAR VALUE

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

Highest Reported 1g-SAR(W/kg)				
Frequency Band	Body-worn(with 0mm	Hotspot(with 0mm	SAR Test Limit (W/kg)	
	separation)	separation)		
GSM 850	0.751	0.751		
PCS 1900	1.278	1.278		
UMTS Band II	1.268	1.268		
UMTS Band IV	1.312	1.312		
UMTS Band V	1.404	1.404		
LTE Band 2	1.350	1.350		
LTE Band 4	1.256	1.256		
LTE Band 5	0.991	0.991		
LTE Band 7	1.408	1.408		
LTE Band 12	1.232	1.232		
LTE Band 17	1.259	1.259	1.6	
LTE Band 25	1.350	1.350		
LTE Band 26	0.612	0.612		
LTE Band 38	1.159	1.159		
LTE Band 41	1.189 1.189			
WIFI 2.4G	0.230 0.230			
5.2GHz (U-NII-1)	0.204	0.204		
5.3GHz U-NII-2A	0.212 0.212			
5.8GHz U-NII-3	0.140 0.140			
Simultaneous	1.598			
Reported SAR				
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 Interim 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



Page 6 of 159

# 2. GENERAL INFORMATION

2.1. EUT Description

2.1. EUT Description			
General Information			
Product Designation	Mini POS Terminal		
Test Model	P12		
Hardware Version	V1.0		
Software Version	P1291_ALL_DVT_V1.0_20220722		
Device Category	Portable		
RF Exposure Environment	Uncontrolled		
Antenna Type	Internal		
<b>GSM and GPRS&amp; EGPRS</b>			
Support Band	<ul><li></li></ul>		
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: -1.22dBi; PCS1900: -1.11dBi		
Max. Average Power	GSM850: 32.94dBm; PCS1900: 30.81dBm		
WCDMA			
Support Band	☑UMTS FDD Band II ☑UMTS FDD Band V ☑UMTS FDD Band IV (U.S. Bands) ☑UMTS FDD Band I ☑UMTS FDD Band VIII (Non-U.S. Bands)		
HS Type	HSPA(HSUPA/HSDPA)		
TX Frequency Range	FDD Band II: 1850-1910MHz; FDD Band V: 824-849MHz FDD Band IV: 1710-1770MHz		
RX Frequency Range	FDD Band II: 1930-1990MHz; FDD Band V: 869-894MHz FDD Band IV: 2110-2170MHz		
Release Version	Rel-6		
Type of modulation	HSDPA:QPSK/16QAM; HSUPA:BPSK; WCDMA:QPSK		
Antenna Gain	Band II: -1.11dBi; Band IV: -0.61dBi; Band V: -1.22dBi		
Max. Average Power	Band II: 23.09dBm; Band IV: 22.04dBm; Band V: 22.26dBm		
Bluetooth			
Bluetooth Version	□V2.0         □V2.1         □V2.1+EDR         □V3.0         □V3.0+HS         □V5.0		
Operation Frequency	2402~2480MHz		
Type of modulation	BR ⊠GFSK, EDR ⊠π /4-DQPSK, ⊠8DPSK BLE ⊠GFSK 1Mbps □GFSK 2Mbps		
Peak Power	BR&EDR:4.807dBm BLE:4.875dBm		
Antenna Gain	1.74dBi		
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: 14.03dBm,11g:12.42dBm,11n(20):11.23dBm,11n(40):11.29dBm		
Antenna Gain	1.74dBi		



Page 7 of 159

# **EUT Description (Continue)**

EOT Bescription (Oc	mundo)				
LTE					
Support Band	☑FDD Band 2 ☑FDD Band 4 ☑FDD Band 5 ☑FDD Band 7				
	☑FDD Band 12 ☑FDD Band 17 ☑FDD Band 25 ☑FDD Band 26				
Support Bariu	☑TDD Band 38 ☑TDD Band 41 (U.S. Bands)				
	☑FDD Band 1 ☑FDD Band 3 ☑FDD Band 28 (Non-U.S. Bands)				
	Band 2:1850-1910MHz; Band 4:1710-1755MHz;Band 5:824-849MHz;				
TX Frequency Range	Band 7:2500-2570MHz; Band 12:699-716MHz; Band 17: 704-716MHz;				
	Band 25: 1850-1915MHz; Band 26: 814-849MHz; Band 38: 2570-2620 MHz; Band 41:2496-2690MHz;				
	Band 2:1930-1990MHz; Band 4:2110-2155MHz; Band 5:869-894MHz;				
RX Frequency Range	Band 7:2620-2690MHz; Band 12: 729-746 MHz; Band 17: 734-746 MHz;				
Total requeries realige	Band 25: 1930-1995MHz; Band 26: 859-894MHz; Band 38: 2570-2620 MHz;				
Deleges Version	Band 41:2496-2690MHz;				
Release Version	Rel-8				
Type of modulation	QPSK, 16QAM				
Antenna Gain	Band 2:-1.11dBi; Band 4:-0.61dBi, Band 5:-1.22dBi, Band 7:-0.33dBi Band 12:-2.77dBi, Band 17:-2.77dBi, Band 25:-1.11dBi, Band 26A:-1.22dBi				
Antenna Gain	Band 26B:-1.52dBi, Band 38:-0.33dBi, Band 41:0.07dBi				
	Band 2:-8.22dBi; Band 4:-7.33dBi, Band 5:-3.22dBi, Band 7:-7.24dBi				
Diversity Gain	Band 12:-2.95dBi, Band 17:-2.95dBi, Band 25:-8.22dBi, Band 26A:-3.22dBi				
	Band 26B:-3.50dBi, Band 38:-7.24dBi, Band 41:-6.56dBi				
	Band 2: 21.75dBm; Band 4: 22.55dBm; Band 5: 22.91dBm; Band 7:21.27dBm;				
Max. Average Power	Band 12: 23.02dBm; Band 17: 21.87dBm; Band 25: 20.99dBm; Band 26A: 22.83dBm; Band 26B: 21.72dBm;Band 38: 21.92dBm; Band 41: 23.85dBm;				
5 GHz WIFI	Danu 20B. 21.720Bm, Danu 36. 21.920Bm, Danu 41. 23.050Bm,				
WIFI Specification	802.11ac80				
Operation Frequency	U-NII-1: 5180MHz~5240MHz; U-NII-2A: 5260MHz~5320MHz;				
	U-NII-3: 5745MHz~5825MHz				
Max. conducted Power	U-NII-1: 10.71dBm; U-NII-2A: 10.24dBm; U-NII-3: 10.25dBm				
Antenna Gain	U-NII-1: -0.71dBi; U-NII-2A: -1.37dBi; U-NII-3: -0.71dBi				
Accessories					
	Brand name: N/A				
Battery	Model No.: P12				
	Voltage and Capacitance: 3.85 V & 1700mAh  Brand name: N/A				
Earphone	Brand name: N/A   Model No. : N/A				
	I WOOD I TO I W/T				

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.

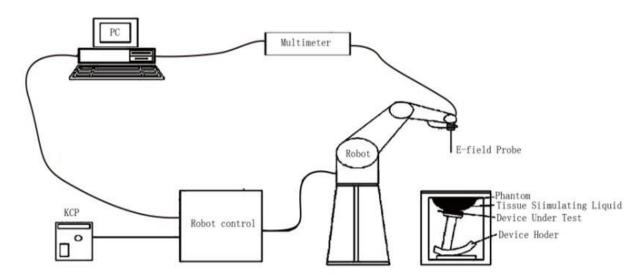
Product	Туре	
Product	□ Production unit	☐ Identical Prototype



Page 8 of 159

#### 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.



Page 9 of 159

#### 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** 

Isotropic E-Field	Probe Specification		
Model	SSE2		
Manufacture	MVG		
Identification No.	SN 13/22 EPGO368		
Frequency	0.15GHz-6GHz Linearity:±0.09dB(0.15GHz-6GHz)		
Dynamic Range	0.01W/kg-100W/kg Linearity:±0.09dB		
Dimensions	Overall length:330mm Length of individual dipoles:2mm Maximum external diameter:8mm Probe Tip external diameter:2.5mm Distance between dipoles/ probe extremity:1mm		
Application	High precision dosimetric measurements in any exposure scenario (e.g., very strong gradient fields). Only probe which enables compliance testing for frequencies up to 6 GHz with precisin of better 30%.		

#### 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





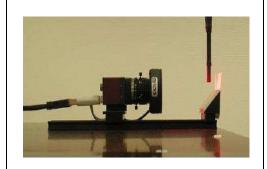
Page 10 of 159

# 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.

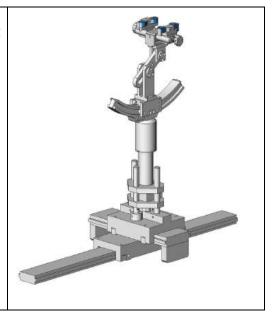


#### 3.5. Device Holder

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.





Page 11 of 159

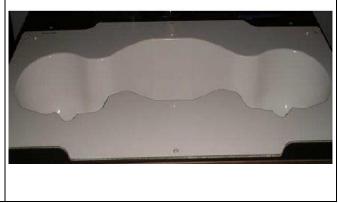
#### 3.6. SAM Twin Phantom

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.



Page 12 of 159

#### 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;
 c<sub>h</sub> 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



Page 13 of 159

#### 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 and IEC62209 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	½·δ·ln(2) ± 0.5 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: Δx <sub>Area</sub> , Δy <sub>Area</sub>	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.



Page 14 of 159

#### 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
	$\begin{array}{c} \Delta z_{Zoom}(1)\text{: between} \\ 1^{\text{st}} \text{ two points closest} \\ \text{to phantom surface} \\ \\ \Delta z_{Zoom}(n > 1)\text{:} \\ \text{between subsequent} \\ \text{points} \end{array}$	1 <sup>st</sup> two points closest	≤ 4 mm	3 – 4 GHz: ≤ 3 mm 4 – 5 GHz: ≤ 2.5 mm 5 – 6 GHz: ≤ 2 mm
		≤ 1.5·Δz	Zoom(n-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

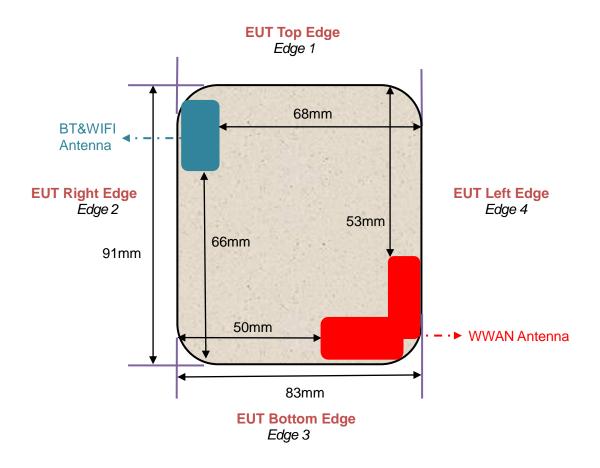
Test Configuration and setting:

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)





Page 16 of 159

#### For WWAN mode:

Test Configurations	Antenna to edges/surface	SAR required	Note	
Head	,			
Left Touch		Yes		
Left Tilt		Yes		
Right Touch		Yes		
Right Tilt		Yes		
Body				
Back	<25mm	Yes		
Front	<25mm	Yes		
Hotspot				
Back	<25mm	Yes		
Front	<25mm	Yes		
Edge 1 (Top)	53mm	No	SAR is not required for the distance between the antenna and the edge is >25mm as per KDB 941225 D06 Hotspot SAR	
Edge 2 (Right)	50mm	No	SAR is not required for the distance between the antenna and the edge is >25mm as per KDB 941225 D06 Hotspot SAR	
Edge 3 (Bottom)	1mm	Yes		
Edge 4 (Left)	1mm	Yes		

For WLAN mode:

For WLAN mode:	For WLAN mode:				
Test Configurations	Antenna to	SAR	Note		
1 631 Cornigulations	edges/surface	required	NOTE		
Head					
Left Touch		Yes			
Left Tilt		Yes			
Right Touch		Yes			
Right Tilt		Yes			
Body					
Back	<25mm	Yes			
Front	<25mm	Yes			
Hotspot					
Back	<25mm	Yes			
Front	<25mm	Yes			
Edge 1 (Top)	1mm	Yes			
Edge 2 (Right)	1mm	Yes			
Edge 3 (Bottom)	66mm	No	SAR is not required for the distance between the antenna and the edge is >25mm as per KDB 941225 D06 Hotspot SAR		
Edge 4 (Left)	68mm	No	SAR is not required for the distance between the antenna and the edge is >25mm as per KDB 941225 D06 Hotspot SAR		



Page 17 of 159

# 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

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



Page 18 of 159

# 5.2. Tissue Dielectric Parameters for Head and Body Phantoms

The head tissue dielectric parameters recommended by the IEC 62209-1 have been incorporated in the following table. The body tissue dielectric parameters recommended by the IEC 62209-2 have been incorporated in the following table.

Target Frequency	he	ead		body
(MHz)	٤r	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

( $\varepsilon r$  = relative permittivity,  $\sigma$  = conductivity and  $\rho$  = 1000 kg/m<sup>3</sup>



Page 19 of 159

#### 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	Tissue					
	(MHz)	εr 41.9 (37.71-46.09)	δ[s/m] 0.89(0.801-0.979)	Temp [°C]	Test time			
	704	42.54	0.83					
Head	709	42.36	0.84					
11000	707.5	42.02	0.85	24.7	Con 11 2022			
	710	41.95	0.86	21.7	Sep. 11, 2022			
	711	41.78	0.87					
	750	41.64	0.88					

	Tissue Stimulant Measurement for 835MHz							
	Fr.	Dielectric Parameters (±10%)			<b>-</b>			
	(MHz)	εr 41.5 (37.35-45.65)	δ[s/m] 0.90(0.81-0.99)	Temp [°C]	Test time			
	821.5	41.92	0.89					
	824.2	41.92	0.89					
	826.4	41.92	0.89					
	829	41.92	0.89					
	831.5	41.78	0.90					
Head	835	41.69	0.91					
	836.4	41.45	0.92	21.1	Sep. 14, 2022			
	836.5	41.45	0.92					
	836.6	41.45	0.92					
	841.5	41.38	0.93					
	844	41.38	0.93					
	846.6	41.21	0.94					
	848.8	41.21	0.94					



Page 20 of 159

Tissue Stimulant Measurement for 1750MHz							
	Fr.	Dielectric Para	ameters (±10%)	Tissue			
	(MHz)	εr 40.1 (36.09-44.11)	δ[s/m]1.37(1.233-1.507)	Temp [°C]	Test time		
	1712.4	40.41	1.34				
	1720	40.39	1.35				
Head	1732.4	40.25	1.36				
	1732.5	40.25	1.36	21.2	Sep. 12, 2022		
	1745	40.12	1.37				
	1750	39.99	1.38				
	1752.6	39.87	1.39				

	Tissue Stimulant Measurement for 1900MHz								
	Fr.	Dielectric Para	ameters (±10%)	Tissue					
	(MHz)	εr40.00(36.00-44.00)	δ[s/m]1.40(1.26-1.54)	Temp [°C]	Test time				
	1850.2	40.63	1.39						
	1852.4	40.63	1.39						
Hand	1860	40.48	1.40						
Head	1880	40.25	1.41						
	1882.5	40.25	1.41	21.3	Sep. 13, 2022				
	1900	40.14	1.42						
	1905	39.98	1.43						
	1907.6	39.98	1.43						
	1909.8	39.98	1.43						

Tissue Stimulant Measurement for 2450MHz							
	Fr.	Biologino i didiliotoro (=1070)		Tissue	T		
	(MHz)	εr39.2(35.28-43.12)	δ[s/m]1.80(1.62-1.98)	Temp [°C]	Test time		
Head	2412	39.78	1.80				
	2437	39.56	1.81	21.5	Sep. 12, 2022		
	2450	39.33	1.82	21.5	Sep. 12, 2022		
	2462	39.21	1.83				





Tissue Stimulant Measurement for 2600MHz								
	Fr.	Dielectric Para	ameters (±10%)	Tissue				
	(MHz)	εr39(35.1-42.9)	δ[s/m]1.96(1.764-2.156)	Temp [°C]	Test time			
	2506	39.67	1.93					
	2510	39.67	1.93	Ī				
	2535	39.45	1.94					
Head	2560	39.12	1.95					
	2580	38.99	1.96	21.0	Sep. 08, 2022			
	2593	38.79	1.97	21.0	Sep. 06, 2022			
	2595	38.79	1.97					
	2600	38.64	1.98					
	2610	38.52	1.99					
	2680	38.32	2.00					

Tissue Stimulant Measurement for 5200MHz							
	Fr.	Dielectric Para	ameters (±10%)	Tissue			
	(MHz)	εr 36.0(32.4-39.6)	δ[s/m] 4.66(4.194 -5.126)	Temp [°C]	Test time		
Head	5180	36.57	4.59				
	5200	36.38	4.60	21.2	Sep. 15, 2022		
	5220	36.25	4.61	21.2	Sep. 15, 2022		
	5240	36.10	4.62				

Tissue Stimulant Measurement for 5300MHz							
	Fr.	Dielectric Para	ameters (±10%)	Tissue			
	(MHz)	εr 35.9(32.31-39.49)	δ[s/m] 4.76(4.284-5.236)	Temp [°C]	Test time		
Head	5260	36.46	4.91				
	5280	36.21	4.92	24.2	Con 15 2022		
	5300	36.21	4.92	21.2	Sep. 15, 2022		
	5320	36.18	4.93				

Tissue Stimulant Measurement for 5800MHz								
	Fr.	Dielectric Para	ameters (±10%)	Tissue				
	(MHz)	εr 35.3 (31.77-38.83)	δ[s/m] 5.27 (4.743-5.797)	Temp [°C]	Test time			
Head	5745	35.86	5.31					
	5785	35.72	5.32	21.0	Sep. 15, 2022			
	5800	35.54	5.33	21.0	Sep. 15, 2022			
	5825	35.41	5.34					



Page 22 of 159

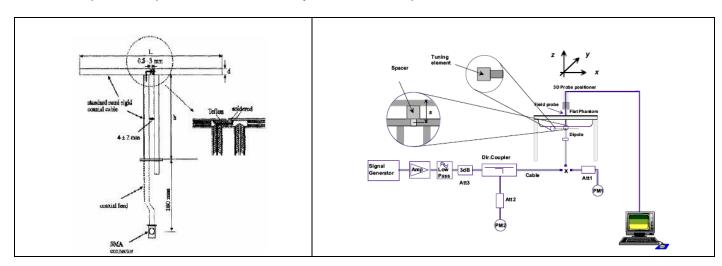
### 6. SAR SYSTEM CHECK PROCEDURE

#### 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.

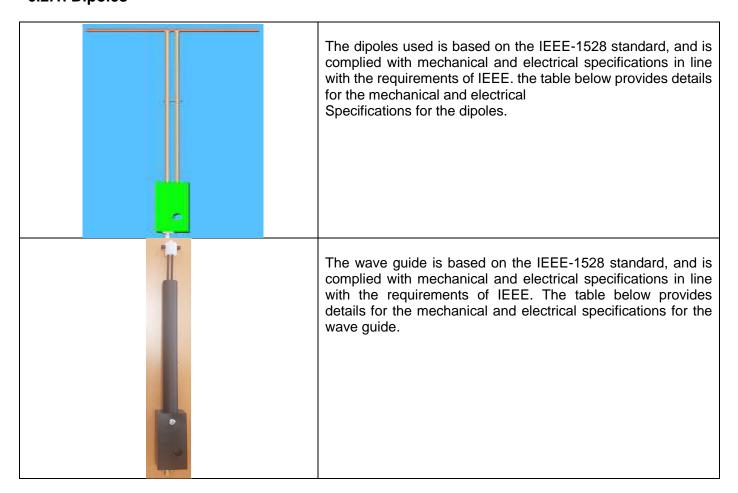
The system check verifies that the system operates within its specifications. It's performed daily or before every SAR measurement. The system check uses normal SAR measurement in the flat section of the phantom with a matched dipole at a specified distance. The system check setup is shown as below.





Page 23 of 159

# 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

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/



Page 24 of 159

# 6.2.2. System Check Result

System Performance Check at 750MHz&835MHz &1800MHz &1900MHz &2450MHz&2600MHz & 5000MHz 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

<b>DIII</b> 10000	<del></del>	1 20, 10	211 <b>20</b> 100 0000	011 22, 10 211 21	<del></del>			<u> </u>
Frequency		get (W/kg)		ce Result 0%)	Tested Val	ue(W/kg)	Tissue Temp.	Test time
[MHz]	1g	10g	1g	10g	1g	10g	[°Cj	
750	8.33	5.44	7.497-9.163	4.896-5.984	8.18	5.15	21.7	Sep. 11, 2022
835	9.67	6.14	8.703-10.637	5.526-6.754	9.54	5.93	21.1	Sep. 14, 2022
1800	37.76	19.60	33.984-41.536	17.640-21.560	36.92	18.82	21.2	Sep. 12, 2022
1900	41.26	20.86	37.134-45.386	18.774-22.946	42.90	21.34	21.3	Sep. 13, 2022
2450	54.32	24.25	48.888-59.752	21.825-26.675	52.93	23.72	21.5	Sep. 12, 2022
2600	54.94	23.77	49.446-60.434	21.393-26.147	53.32	23.41	21.0	Sep. 08, 2022
5200	73.43	21.83	66.087-80.773	19.647-24.013	76.51	22.03	21.2	Sep. 15, 2022
5200	78.43	23.90	70.587-86.020	21.510-26.290	80.45	23.04	21.2	Sep. 15, 2022
5800	75.69	22.44	68.121-83.259	20.196-24.684	80.36	23.00	21.0	Sep. 15, 2022

#### Note:

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



Page 25 of 159

# 7. EUT TEST POSITION

This EUT was tested in Body back, Body front and 4 edges.

# 7.1. 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 0mm.



Page 26 of 159

# 8. SAR EXPOSURE LIMITS

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

	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



Page 27 of 159

# 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



Page 28 of 159

# 10. TEST EQUIPMENT LIST

Equipment description	Manufacturer/ Model	Identification No.	Software version	Current calibration date	Next calibration date
SAR Probe	MVG	SN 13/22 EPGO368	N/A	Apr. 13, 2022	Apr. 12, 2023
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	Aug. 03,2022	Aug. 02,2023
Comm Tester	R&S- CMW500	121209	V3.7.40	Aug. 04,2022	Aug. 03,2023
Multimeter	Keithley 2000	4114939	N/A	Aug. 03,2022	Aug. 02,2023
SAR Software	MVG-OpenSAR	N/A	OpenSAR V4_02_35	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	SATIMO SID5000	SN 17/22 DIP 5G000-671	N/A	Apr. 28,2022	Apr. 27, 2025
Signal Generator	Agilent-E4438C	US41461365	V5.03	Aug. 03,2022	Aug. 02,2023
Vector Analyzer	Agilent / E4440A	MY44303916	N/A	Mar. 28,2022	Mar. 27,2023
Network Analyzer	Rhode & Schwarz ZVL6	SN101443	3.2	Oct. 28,2021	Oct. 27,2022
Attenuator	Warison /WATT-6SR1211	S/N:WRJ34AYM2F1	N/A	June 08,2022	June 07,2023
Attenuator	Mini-circuits / VAT-10+	31405	N/A	June 08,2022	June 07,2023
Amplifier	AS0104-55_55	1004793	N/A	June 09,2022	June 08,2023
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. 06,2022	Sep. 05,2023
Power Sensor	NRP-Z23	100323	N/A	Feb. 16,2022	Feb. 15,2023
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	Dec. 07,2021	Dec. 06,2022

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.



Page 29 of 159

# 11. MEASUREMENT UNCERTAINTY

11. MEASUREMENT		TIMO Unce		N 13/22 FF	PG0368				
M	عری easurement u					10 gram.			
Uncertainty Component	Sec.	Tol (+- %)	Prob. Dist.	Div.	Ci (1g)	Ci (10g)	1g Ui (+-%)	10g Ui (+-%)	vi
Measurement System		(1 /0)	Dist.	J		I.	(1 70)	(1 70)	1
Probe calibration	E.2.1	7.000	N	1	1	1	7.000	7.000	∞
Axial Isotropy	E.2.2	0.175	R	√3	√0.5	√0.5	0.071	0.071	∞
Hemispherical Isotropy	E.2.2	0.175	R	√3	√0.5	√0.5	0.071	0.071	∞
Boundary effect	E.2.3	1.000	R	√3	1	1	0.577	0.577	∞
Linearity	E.2.4	0.990	R	√3	1	1	0.572	0.572	∞
System detection limits	E.2.4	1.000	R	√3	1	1	0.577	0.577	∞
Modulation response	E2.5	3.000	R	√3	1	1	1.732	1.732	∞
Readout Electronics	E.2.6	0.021	N	1	1	1	0.021	0.021	∞
Response Time	E.2.7	0.000	R	√3	1	1	0.000	0.000	∞
Integration Time	E.2.8	1.400	R	√3	1	1	0.808	0.808	∞
RF ambient conditions-Noise	E.6.1	3.000	R	√3	1	1	1.732	1.732	∞
RF ambient conditions-reflections	E.6.1	3.000	R	√3	1	1	1.732	1.732	∞
Probe positioner mechanical tolerance	E.6.2	1.400	R	√3	1	1	0.808	0.808	∞
Probe positioning with respect to phantom shell	E.6.3	1.400	R	√3	1	1	0.808	0.808	∞
Extrapolation, interpolation, and integrations algorithms for max. SAR evaluation	E.5	2.300	R	√3	1	1	1.328	1.328	8
Test sample Related									
Test sample positioning	E.4.2	2.6	N	1	1	1	2.600	2.600	$\infty$
Device holder uncertainty	E.4.1	3	N	1	1	1	3.000	3.000	8
Output power variation—SAR drift measurement	E.2.9	5	R	√3	1	1	2.887	2.887	∞
SAR scaling	E.6.5	5	R	$\sqrt{3}$	1	1	2.887	2.887	∞
Phantom and tissue parameter	rs								
Phantom shell uncertainty—shape, thickness, and permittivity	E.3.1	4	R	√3	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	00
Liquid conductivity measurement	E.3.3	4	R	√3	0.78	0.71	3.120	2.840	00
Liquid permittivity measurement	E.3.3	5	N	1	0.78	0.71	1.150	1.300	М
Liquid conductivity—temperature uncertainty	E.3.4	2.5	R	√3	0.23	0.26	1.126	1.025	000
Liquid permittivity—temperature uncertainty	E.3.4	2.5	N	1	0.23	0.26	0.332	0.375	М
Combined Standard Uncertainty			RSS				10.529	10.344	
Expanded Uncertainty (95% Confidence interval)			K=2				21.058	20.688	



Page 30 of 159

	SA	TIMO Unce	rtainty- S	N 13/22 EF	PGO368				
System	Validation	uncertainty		averaged	over 1 gram	n / 10 gram.		1.0 11:	
Uncertainty Component  Measurement System	Sec.	Tol (+- %)	Prob. Dist.	Div.	Ci (1g)	Ci (10g)	1g Ui (+-%)	10g Ui (+-%)	vi
<u> </u>	F 0.4	7.000	l N	1 4			7.000	7.000	T
Probe calibration	E.2.1	7.000	N	1 /-	1	1	7.000	7.000	∞
Axial Isotropy	E.2.2	0.175	R	$\sqrt{3}$	1	1	0.101	0.101	∞
Hemispherical Isotropy	E.2.2	0.175	R	√3 	0	0	0.000	0.000	∞
Boundary effect	E.2.3	1.000	R	√3	1	1	0.577	0.577	∞
Linearity	E.2.4	0.990	R	$\sqrt{3}$	1	1	0.572	0.572	∞
System detection limits	E.2.4	1.0	R	√3	1	1	0.58	0.58	∞
Modulation response	E2.5	3.0	R	√3	0	0	0.00	0.00	∞
Readout Electronics	E.2.6	0.021	N	1	1	1	0.021	0.021	∞
Response Time	E.2.7	0.0	R	√3	0	0	0.00	0.00	∞
Integration Time	E.2.8	1.4	R	√3	0	0	0.00	0.00	∞
RF ambient conditions-Noise	E.6.1	3.0	R	$\sqrt{3}$	1	1	1.73	1.73	$\infty$
RF ambient conditions-reflections	E.6.1	3.0	R	√3	1	1	1.73	1.73	∞
Probe positioner mechanical tolerance	E.6.2	1.4	R	√3	1	1	0.81	0.81	8
Probe positioning with respect to phantom shell	E.6.3	1.4	R	$\sqrt{3}$	1	1	0.81	0.81	8
Extrapolation, interpolation, and integrations algorithms for max. SAR evaluation	E.5	2.3	R	√3	1	1	1.33	1.33	8
System validation source					•				•
Deviation of experimental dipole from numerical dipole	E.6.4	5.0	N	1	1	1	5.00	5.00	× ×
Input power and SAR drift measurement	8,6.6.4	5.0	R	√3	1	1	2.89	2.89	8
Dipole axis to liquid distance	8,E.6.6	2.0	R	√3	1	1	1.15	1.15	∞
Phantom and set-up									
Phantom shell uncertainty—shape, thickness, and permittivity	E.3.1	4.0	R	√3	1	1	2.31	2.31	8
Uncertainty in SAR correction for deviations in permittivity and conductivity	E.3.2	1.9	N	1	1	0.84	1.90	1.60	8
Liquid conductivity (temperature uncertainty)	E.3.3	2.5	R	√3	0.78	0.71	1.13	1.02	8
Liquid conductivity (measured)	E.3.3	4	N	1	0.78	0.71	3.12	2.84	М
Liquid permittivity (temperature uncertainty)	E.3.4	2.5	R	√3	0.23	0.26	0.33	0.38	∞
Liquid permittivity (measured)	E.3.4	5	N	1	0.23	0.26	1.15	1.30	М
Combined Standard Uncertainty			RSS				10.462	10.276	
Expanded Uncertainty (95% Confidence interval)			K=2				20.924	20.551	



Page 31 of 159

		TIMO Unce							
	rstem Check u	incertainty f	Prob.				1g Ui	10g Ui	Ι.
Uncertainty Component	Sec.	(+- %)	Dist.	Div.	Ci (1g)	Ci (10g)	(+-%)	(+-%)	vi
Measurement System	T	ı	,	1		1	ı	ı	
Probe calibration drift	E.2.1.3	0.500	N	1	1	1	0.50	0.50	∞
Axial Isotropy	E.2.2	0.175	R	√3	0	0	0.00	0.00	∞
Hemispherical Isotropy	E.2.2	0.175	R	√3	0	0	0.00	0.00	$\infty$
Boundary effect	E.2.3	1.000	R	√3	0	0	0.00	0.00	∞
Linearity	E.2.4	0.990	R	√3	0	0	0.00	0.00	$\infty$
System detection limits	E.2.4	1.0	R	√3	0	0	0.00	0.00	$\infty$
Modulation response	E2.5	3.0	R	√3	0	0	0.00	0.00	∞
Readout Electronics	E.2.6	0.021	N	1	0	0	0.00	0.00	∞
Response Time	E.2.7	0	R	√3	0	0	0.00	0.00	∞
Integration Time	E.2.8	1.4	R	√3	0	0	0.00	0.00	∞
RF ambient conditions-Noise	E.6.1	3.0	R	√3	0	0	0.00	0.00	$\infty$
RF ambient conditions-reflections	E.6.1	3.0	R	√3	0	0	0.00	0.00	∞
Probe positioner mechanical tolerance	E.6.2	1.4	R	√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	√3	0	0	0.00	0.00	∞
System check source (dipole)									
Deviation of experimental dipoles	E.6.4	2.0	N	1	1	1	2.00	2.00	8
Input power and SAR drift measurement	8,6.6.4	5.0	R	√3	1	1	2.89	2.89	∞
Dipole axis to liquid distance	8,E.6.6	2.0	R	√3	1	1	1.15	1.15	$\infty$
Phantom and tissue parameter	's					•			
Phantom shell uncertainty—shape, thickness, and permittivity	E.3.1	4	R	√3	1	1	2.31	2.31	∞
Uncertainty in SAR correction for deviations in permittivity and conductivity	E.3.2	1.9	N	1	1	0.84	1.90	1.60	∞
Liquid conductivity measurement	E.3.3	4	R	√3	0.78	0.71	3.12	2.84	8
Liquid permittivity measurement	E.3.3	5	N	1	0.78	0.71	1.15	1.30	М
Liquid conductivity—temperature uncertainty	E.3.4	2.5	R	√3	0.23	0.26	1.13	1.02	∞
Liquid permittivity—temperature uncertainty	E.3.4	2.5	N	1	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	

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/



Page 32 of 159

# 12. CONDUCTED POWER MEASUREMENT GSM BAND

Mode	Frequency(MHz)	Avg. Burst Power(dBm)	Duty cycle Factor(dBm)	Frame Power(dBm)
Maximum Power <1	>			
	824.2	32.71	-9	23.71
GSM 850	836.6	32.77	-9	23.77
	848.8	32.78	-9	23.78
GPRS 850	824.2	32.70	-9	23.70
(1 Slot)	836.6	32.94	-9	23.94
(1 3101)	848.8	32.83	-9	23.83
CDDC 050	824.2	30.79	-6	24.79
GPRS 850 (2 Slot)	836.6	30.69	-6	24.69
(2 3101)	848.8	30.82	-6	24.82
000000	824.2	28.54	-4.26	24.28
GPRS 850 (3 Slot)	836.6	28.77	-4.26	24.51
(3 3101)	848.8	28.69	-4.26 24.43	24.43
0000000	824.2	26.49	-3	23.49
GPRS 850 (4 Slot)	836.6	26.39	-3	23.39
(4 5101)	848.8	26.55	-3	23.55
	824.2	26.90	-9	17.90
EGPRS 850	836.6	27.04	-9	18.04
(1 Slot)	848.8	27.17	-9	18.17
	824.2	24.86	-6	18.86
EGPRS 850	836.6	25.42	-6	19.42
(2 Slot)	848.8	25.74	-6	19.74
	824.2	22.37	-4.26	18.11
EGPRS 850	836.6	23.16	-4.26	18.90
(3 Slot)	848.8	23.69	-4.26	19.43
	824.2	20.29	-3	17.29
EGPRS 850	836.6	21.22	-3	18.22
(4 Slot)	848.8	21.05	-3	18.05



Page 33 of 159

#### **GSM BAND CONTINUE**

Mode	Frequency(MHz)	Avg. Burst Power(dBm)	Duty cycle Factor(dBm)	Frame Power(dBm)
Maximum Power <1	>			
	1850.2	29.63	-9	20.63
PCS1900	1880	30.20	-9	21.20
	1909.8	30.81	-9	21.81
GPRS1900	1850.2	29.65	-9	20.65
(1 Slot)	1880	30.23	-9	21.23
	1909.8	30.78	-9	21.78
GPRS1900	1850.2	27.76	-6	21.76
(2 Slot)	1880	28.09	-6	22.09
(2 0.01)	1909.8	28.11	-6	22.11
GPRS1900	1850.2	25.14	-4.26	20.88
(3 Slot)	1880	26.34	-4.26	22.08
(9 0101)	1909.8	25.44	-4.26	21.18
CDDC4000	1850.2	23.57	-3	20.57
GPRS1900 (4 Slot)	1880	24.26	-3	21.26
(4 3101)	1909.8	23.23	-3	20.23
EODD04000	1850.2	21.75	-9	12.75
EGPRS1900 (1 Slot)	1880	22.49	-9	13.49
(1 3101)	1909.8	21.37	-9	12.37
E00004000	1850.2	19.84	-6	13.84
EGPRS1900 (2 Slot)	1880	20.06	-6	14.06
(2 3101)	1909.8	20.46	-6	14.46
E00004000	1850.2	17.66	-4.26	13.40
EGPRS1900 (3 Slot)	1880	18.36	-4.26	14.10
(3 3101)	1909.8	18.74	-4.26	14.48
E00004000	1850.2	16.72	-3	13.72
EGPRS1900 (4 Slot)	1880	16.24	-3	13.24
(4 5101)	1909.8	16.50	-3	13.50

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



Page 34 of 159

# 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
- •The transmitted maximum output power was recorded.

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

Sub-test	βc (Note5)	βd	βd (SF)	β <b>с</b> /β <b>d</b>	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.



Page 35 of 159

#### **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:  $\beta$  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 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,

 $\Delta$ NACK and  $\Delta$ 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.



Page 36 of 159

#### **UMTS BAND II**

Mode	Frequency	Avg. Burst Power
Mode	(MHz)	(dBm)
\\\CD\\\\\ 1000	1852.4	22.85
WCDMA 1900 RMC	1880	23.07
RIVIC	1907.6	23.09
LICDDA	1852.4	21.89
HSDPA Subtest 1	1880	22.09
Sublest 1	1907.6	22.12
110004	1852.4	20.96
HSDPA	1880	21.28
Subtest 2	1907.6	21.28
LICDDA	1852.4	20.92
HSDPA Subtest 3	1880	21.19
Sublest 3	1907.6	21.18
110004	1852.4	20.89
HSDPA	1880	21.21
Subtest 4	1907.6	21.16
1101104	1852.4	19.70
HSUPA	1880	19.91
Subtest 1	1907.6	19.90
LICLIDA	1852.4	19.75
HSUPA	1880	20.02
Subtest 2	1907.6	20.04
LICLIDA	1852.4	20.67
HSUPA	1880	20.91
Subtest 3	1907.6	20.89
LICLIDA	1852.4	19.25
HSUPA	1880	19.33
Subtest 4	1907.6	19.50
LICUIDA	1852.4	18.79
HSUPA	1880	19.04
Subtest 5	1907.6	19.00



Page 37 of 159

### **UMTS BAND IV**

Mode	Frequency	Avg. Burst Power
Mode	(MHz)	(dBm)
VA/ODAA 4700	1712.4	22.00
WCDMA 1700	1732.4	21.99
RMC	1752.6	22.04
LICDDA	1712.4	21.03
HSDPA	1732.4	21.11
Subtest 1	1752.6	21.15
LICDDA	1712.4	20.28
HSDPA	1732.4	20.38
Subtest 2	1752.6	20.35
LICDDA	1712.4	20.31
HSDPA	1732.4	20.34
Subtest 3	1752.6	20.39
LICDDA	1712.4	20.22
HSDPA	1732.4	20.32
Subtest 4	1752.6	20.36
HSUPA	1712.4	18.83
	1732.4	18.81
Subtest 1	1752.6	18.87
HSUPA	1712.4	18.92
	1732.4	18.94
Subtest 2	1752.6	19.01
HSUPA	1712.4	19.90
	1732.4	19.88
Subtest 3	1752.6	19.89
HSUPA	1712.4	18.52
	1732.4	18.45
Subtest 4	1752.6	18.53
HELIDA	1712.4	18.05
HSUPA	1732.4	18.44
Subtest 5	1752.6	18.20



Page 38 of 159

## **UMTS BAND V**

Mode	Frequency	Avg. Burst Power
Widde	(MHz)	(dBm)
WCDMA 850	826.4	22.21
RMC	836.4	22.16
RIVIC	846.6	22.26
LICDDA	826.4	21.26
HSDPA Subtest 1	836.4	21.35
Sublest 1	846.6	21.35
LICDDA	826.4	20.56
HSDPA	836.4	20.62
Subtest 2	846.6	20.49
LICODA	826.4	20.44
HSDPA	836.4	20.55
Subtest 3	846.6	20.52
LICODA	826.4	20.49
HSDPA	836.4	20.47
Subtest 4	846.6	20.43
LICLIDA	826.4	19.02
HSUPA	836.4	19.03
Subtest 1	846.6	19.04
LICLIDA	826.4	19.08
HSUPA	836.4	19.08
Subtest 2	846.6	19.05
LICLIDA	826.4	20.05
HSUPA	836.4	20.04
Subtest 3	846.6	20.02
LICUDA	826.4	18.54
HSUPA	836.4	18.47
Subtest 4	846.6	18.61
LICUDA	826.4	18.27
HSUPA	836.4	18.03
Subtest 5	846.6	18.27



Page 39 of 159

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 $\beta$ $_{0}/\beta$ $_{d}$ =12/15, $\beta$ $_{hs}/\beta$ $_{c}$ =24/15.For all other combinations of DPDCH, DPCCH, HS-DPCCH,								
E-DPDCH and E-DPCCH the MPR is based on the r	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.



Page 40 of 159

### **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 38, 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	al 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 · T <sub>s</sub>			7680 · T <sub>s</sub>		
1	19760 · T <sub>s</sub>			20480 · T <sub>s</sub>	2102 T	2560 T
2	21952 · T <sub>s</sub>	$2192 \cdot T_{\rm s}$	3	23040 · T <sub>s</sub>	2192 · T <sub>s</sub>	2560 · T <sub>s</sub>
3	24144 · T <sub>s</sub>			25600 · T <sub>s</sub>		
4	26336 · T <sub>s</sub>			7680 · T <sub>s</sub>		
5	6592 · T <sub>s</sub>			20480 · T <sub>s</sub>	4384 · T <sub>s</sub>	5120 T
6	19760 · T <sub>s</sub>			23040 · T <sub>s</sub>	4384 · 1 <sub>s</sub>	5120 · T <sub>s</sub>
7	21952 · T <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	Downlink-to-Uplink	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	U
1	5 ms	D	S	U	U	D	D	S	U	U	D
2	5 ms		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	D	S	U	D	D	D	D	D	D	D
6	5 ms	D	S	U	U	U	D	S	U	U	D



Page 41 of 159

# **Calculated Duty Cycle**

Uplink-	Downlink-to-				Su	bframe	e Num	ber				Calculated
Downlink Configuration	Uplink Switch- point Periodicity	0	1	2	3	4	5	6	7	8	9	Duty Cycle(%)
0	5ms	D	S	U	U	U	D	S	U	U	U	63.33
1	5ms	D	S	U	U	D	D	S	U	U	D	43.33
2	5ms	D	S	J	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	J	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



Page 42 of 159

### LTE Band

Nodulation   RB size   RB offset   Target MPR   Channel   18607   18900	Bandwidth	Modulation			Conducted Power of LTE Band 2(dBm)												
1.4MHz    Colored   Colore	Bandwidth	MODILIZATION	RB size	RB	Toward MDD	Channel	Channel	Channel									
1.4MHz  1		Woddiation	RB SIZE	offset	Target MPR	18607	18900	19193									
1.4MHz    QPSK				0	0	18.51	18.63	18.87									
1.4MHz  1.4MHz  QPSK  3			1	2	0	18.09	18.78	19.02									
1.4MHz  3				5	0	18.25	18.63	18.89									
1.4MHz    1.4MHz   3		QPSK		0	0	18.10	18.78	18.95									
1.4MHz    1.4MHz			3	1	0	18.12	18.78	18.94									
1.4MHz  1				3	0	18.15	18.77	19.02									
1 2 1 20.98 20.88 5 1 20.91 20.74 16QAM 0 1 20.97 20.66 3 1 1 20.92 20.68 3 1 20.90 20.61 6 0 2 20.11 20.80	4 4MU=		6	0	1	17.09	17.73	17.98									
16QAM 5 1 20.91 20.74 0 1 20.97 20.66 3 1 1 20.92 20.68 3 1 20.90 20.61 6 0 2 20.11 20.80 Channel	1.4IVITZ			0	1	17.12	19.83	18.05									
16QAM 0 1 20.97 20.66 3 1 1 20.92 20.68 3 1 20.90 20.61 6 0 2 20.11 20.80	16QAM	1	2	1	20.98	20.88	18.33										
3 1 1 20.92 20.68 3 1 20.90 20.61 6 0 2 20.11 20.80			5	1	20.91	20.74	19.98										
3 1 20.90 20.61 6 0 2 20.11 20.80 PP Channel Channel		16QAM		0	1	20.97	20.66	20.87									
6 0 2 20.11 20.80  RP Channel Channel			3	1	1	20.92	20.68	19.87									
DP Channel Channel				3	1	20.90	20.61	20.85									
RR Channel Channel			6	0	2	20.11	20.80	20.90									
Randwidth   Modulation   RR size   ```   Target MPR	Bandwidth	Modulation	RB size	RB	Target MPR	Channel	Channel	Channel									
offset larger Will 18615 18900	Danawiatii	Woddiation	IND SIZE	offset	rarget wir it	18615	18900	19185									
0 0 19.47 20.22				0	0	19.47	20.22	19.69									
1 8 0 18.56 20.75			1	8	0	18.56	20.75	19.76									
14 0 18.61 19.59				14	0	18.61	19.59	19.71									
QPSK 0 1 20.48 20.69		QPSK		0	1	20.48	20.69	20.71									
8 4 1 20.49 20.70			8	4	1	20.49	20.70	20.70									
7 1 20.55 20.63				7	1	20.55	20.63	21.75									
15 0 1 20.47 20.61	2MU=		15	0	1	20.47	20.61	20.91									
3MHz	SIVITIZ			0	1	19.67	19.78	20.94									
0   1   19.67   19.78			1	8	1	19.71	20.57	20.92									
0 1 19.67 19.78				14	1	20.68	20.54	20.87									
0     1     19.67     19.78       1     8     1     19.71     20.57		16QAM		0	2	20.56	20.75	20.94									
1     8     1     19.71     20.57       14     1     20.68     20.54	100/11/1		8	4	2	20.56	20.73	20.86									
1 8 1 19.67 19.78 1 8 1 19.71 20.57 14 1 20.68 20.54 16QAM 0 2 20.56 20.75																	
1 8 1 19.67 19.78 1 8 1 19.71 20.57 14 1 20.68 20.54 16QAM 0 2 20.56 20.75				7	2	20.61	20.70	19.92									



Page 43 of 159

		Conducte	ed Power	of LTE Band 2(d	Bm)		
Donalis i dela	Madulation	DD oi-o	RB	Toward MDD	Channel	Channel	Channel
Bandwidth	Modulation	RB size	offset	Target MPR	18625	18900	19175
			0	0	19.49	19.36	18.76
		1	12	0	20.75	20.89	18.89
			24	0	20.68	20.64	18.76
	QPSK		0	1	20.49	20.76	20.72
		12	6	1	20.52	20.74	20.74
			13	1	20.67	20.73	20.85
5MHz		25	0	1	20.61	20.75	20.90
JIVITIZ			0	1	20.72	19.38	19.80
		1	12	1	20.97	18.02	20.91
	16QAM		24	1	20.89	19.57	17.75
			0	2	20.58	20.80	20.74
		12	6	2	20.57	20.81	20.75
			13	2	20.72	20.71	20.86
		25	0	2	20.67	20.86	20.01
Bandwidth	Modulation	RB size	RB	Target MPR	Channel	Channel	Channel
Banawiatii	Modulation	ND 3120	offset	rarget iiii ix	18650	18900	19150
			0	0	18.51	19.54	18.73
		1	24	0	18.79	19.43	19.19
			49	0	18.98	18.64	18.95
	QPSK		0	1	17.60	17.94	17.94
		25	12	1	17.58	17.91	17.93
			25	1	17.95	17.84	18.20
10MHz		50	0	1	17.75	17.83	20.04
10141112			0	1	20.72	20.43	20.95
		1	24	1	18.02	20.99	18.21
			49	1	18.12	20.47	18.12
	16QAM		0	2	20.68	20.02	20.95
		25	12	2	20.64	20.03	20.99
			25	2	20.03	20.92	20.17
		50	0	2	20.84	20.94	20.09



Page 44 of 159

		Conducte	ed Power	of LTE Band 2(d	Bm)		
Donalis i dela	Madulation	DD oi-o	RB	Toward MDD	Channel	Channel	Channel
Bandwidth	Modulation	RB size	offset	Target MPR	18675	18900	19125
			0	0	18.32	19.27	20.08
		1	38	0	18.74	20.84	20.69
			74	0	18.89	18.17	20.62
	QPSK		0	1	20.70	20.67	20.72
		36	18	1	20.75	20.66	20.75
			37	1	20.72	20.71	20.74
15MHz		75	0	1	20.75	20.67	20.72
ISIVITIZ			0	1	20.65	20.94	20.24
		1	38	1	20.00	20.61	20.89
	16QAM		74	1	18.20	20.07	20.77
			0	2	20.78	20.68	20.69
		36	18	2	20.72	20.66	20.73
			37	2	20.73	20.70	20.75
		75	0	2	2074	20.68	20.67
Bandwidth	Modulation	RB size	RB	Target MPR	Channel	Channel	Channel
Banawiatii	Modulation	ND 3120	offset	rarget iiii ix	18700	18900	19100
		1	0	0	20.98	20.72	20.68
		I	49	0	20.74	20.58	20.31
			99	0	20.74	20.59	20.38
	QPSK		0	1	20.20	20.44	20.12
		50	25	1	20.21	20.45	20.10
			50	1	20.50	20.33	20.55
20MHz		100	0	1	20.36	20.36	20.29
201411 12			0	1	20.19	20.34	20.70
		1	49	1	20.88	20.53	20.43
			99	1	20.90	20.67	20.40
	16QAM		0	2	20.25	20.58	20.16
		50	25	2	20.25	20.58	20.15
			50	2	20.59	20.38	20.54
		100	0	2	20.42	20.45	20.30



Page 45 of 159

		Conducte	ed Power	of LTE Band 4(d	Bm)		
			RB		Channel	Channel	Channel
Bandwidth	Modulation	RB size	offset	Target MPR	19957	20175	20393
			0	0	20.90	20.87	20.97
		1	2	0	20.10	20.93	21.87
			5	0	20.91	20.85	20.56
	QPSK		0	0	20.92	20.92	20.56
		3	1	0	20.71	20.93	20.57
			3	0	20.60	20.98	20.62
1.4MHz		6	0	1	20.78	20.90	20.57
1.4111712		-	0	1	20.13	21.01	20.58
		1	2	1	20.22	21.17	20.62
	16QAM		5	1	20.88	20.99	20.55
			0	1	20.86	20.85	20.45
		3	1	1	20.54	20.82	21.44
			3	1	20.40	20.85	21.46
		6	0	2	21.65	20.84	20.60
Bandwidth	Modulation	RB size	RB	Target MPR	Channel	Channel	Channel
Buridwidth	Modulation	NB SIZE	offset	rarget iii ix	19965	20175	20385
		1	0	0	20.71	20.76	20.72
			8	0	20.79	20.78	20.82
			14	0	20.72	20.68	20.78
	QPSK		0	1	20.81	20.75	20.72
		8	4	1	20.80	20.76	20.48
			7	1	20.80	20.76	20.80
3MHz		15	0	1	20.79	20.74	20.68
O.M. IZ			0	1	20.99	21.60	20.92
		1	8	1	20.96	21.60	20.72
			14	1	20.98	20.63	20.74
	16QAM		0	2	20.86	20.80	20.52
		8	4	2	20.85	20.82	20.73
			7	2	20.78	20.78	21.66
		15	0	2	20.75	20.69	21.70

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/



Page 46 of 159

		Conducte	ed Power	of LTE Band 4(d	Bm)		
Donalis i dela	Madulation	DD oi-o	RB	Toward MDD	Channel	Channel	Channel
Bandwidth	Modulation	RB size	offset	Target MPR	19975	20175	20375
			0	0	21.93	20.92	19.98
		1	12	0	19.15	18.12	20.21
			24	0	19.94	19.90	19.10
	QPSK		0	1	19.07	20.91	19.03
		12	6	1	19.04	20.99	20.19
			13	1	20.04	19.91	19.14
5MHz		25	0	1	20.12	16.93	19.17
SIVITIZ			0	1	19.14	20.94	20.97
		1	12	1	20.40	20.12	20.25
	16QAM		24	1	20.17	21.84	20.12
			0	2	20.13	19.98	20.20
		12	6	2	20.14	19.99	20.18
			13	2	20.12	19.02	20.16
		25	0	2	20.06	19.07	19.25
Bandwidth	Modulation	RB size	RB	Target MPR	Channel	Channel	Channel
	oudidion	IXD GIZO	offset	- rangot iiii ik	20000	20175	20350
			0	0	20.75	21.66	21.99
		1	25	0	21.89	21.83	20.86
			49	0	20.86	21.62	21.88
	QPSK		0	1	20.90	19.69	20.82
		25	12	1	20.91	19.71	20.86
			25	1	20.86	19.70	20.76
10MHz		50	0	1	20.91	20.63	20.76
10.00			0	1	21.84	20.83	20.90
		1	25	1	21.85	21.03	20.88
			49	1	21.37	21.00	20.98
	16QAM		0	2	20.68	19.73	19.91
		25	12	2	20.66	19.74	19.91
			25	2	20.45	19.92	19.82
		50	0	2	20.50	19.78	19.90



Page 47 of 159

		Conducte	ed Power	of LTE Band 4(d	Bm)		
Dan desidab	Ma delation	DD sins	RB	Towns (MDD	Channel	Channel	Channel
Bandwidth	Modulation	RB size	offset	Target MPR	20025	20175	20325
			0	0	22.55	21.54	21.81
		1	38	0	22.28	21.82	21.78
			74	0	22.12	21.71	21.82
	QPSK		0	1	21.39	20.82	20.93
		36	18	1	21.41	20.82	20.90
			37	1	21.42	20.85	20.90
15MHz		75	0	1	21.47	20.87	20.94
TOWITZ			0	1	21.89	20.72	21.00
		1	38	1	21.61	20.97	21.07
	16QAM		74	1	21.40	20.88	21.03
			0	2	21.39	20.85	20.92
		36	18	2	21.40	20.87	20.91
			37	2	21.46	20.88	20.93
		75	0	2	20.46	19.79	19.95
Bandwidth	Modulation	RB size	RB	Target MPR	Channel	Channel	Channel
Banawiatii	Woddiation	IVD SIZE	offset	rarget wir ix	20050	20175	20300
		4	0	0	22.52	21.02	21.38
		1	49	0	22.22	21.51	21.45
			99	0	22.00	21.28	21.21
	QPSK		0	1	21.19	20.04	20.50
		50	25	1	21.01	20.03	20.50
			50	1	20.79	20.30	20.09
20MHz		100	0	1	20.87	20.28	20.35
ZOIVII IZ			0	1	21.67	20.09	20.51
		1	49	1	21.55	20.54	20.73
			99	1	21.25	20.39	20.44
	16QAM		0	2	20.02	19.03	19.54
		50	25	2	20.03	19.25	19.62
			50	2	20.07	19.51	19.12
		100	0	2	19.91	19.18	19.48



Page 48 of 159

	Conducted Power of LTE Band 5(dBm)											
Donalis i dela	Madulation	DD oi-o	RB	Toward MDD	Channel	Channel	Channel					
Bandwidth	Modulation	RB size	offset	Target MPR	20407	20525	20643					
			0	0	20.06	22.12	22.55					
		1	2	0	20.14	22.32	22.63					
			5	0	21.00	22.24	22.55					
	QPSK		0	0	22.91	22.51	22.74					
	1.4MHz	3	1	0	22.84	22.28	22.21					
			3	0	22.55	22.74	22.68					
4 4MU-		6	0	1	21.65	21.69	21.70					
1.4IVIПZ			0	1	22.15	21.89	21.73					
		1	2	1	22.31	21.33	21.96					
			5	1	22.14	21.71	21.73					
	16QAM		0	1	21.81	21.52	21.57					
		3	1	1	21.54	21.51	21.54					
			3	1	21.45	21.56	21.54					
		6	0	2	20.66	20.70	20.58					
Bandwidth	Modulation	RB size	RB	Target MPR	Channel	Channel	Channel					
Ballawiatii	Woddiation	ND SIZE	offset	Target WFK	20415	20525	20635					
			0	0	22.80	22.44	22.58					
		1	8	0	22.48	22.53	22.56					
			14	0	22.47	22.59	22.53					
	QPSK		0	1	21.57	21.58	21.62					
		8	4	1	21.57	21.57	21.62					
			7	1	21.56	21.64	21.58					
3MHz		15	0	1	21.49	21.60	21.58					
SIVITIZ			0	1	21.70	21.69	21.82					
		1	8	1	21.66	21.74	21.45					
			14	1	21.66	21.77	21.71					
	16QAM		0	2	20.51	20.62	20.25					
		8	4	2	20.54	20.62	20.36					
			7	2	20.52	20.62	20.57					
		15	0	2	20.41	20.12	20.25					



Page 49 of 159

	Conducted Power of LTE Band 5(dBm)											
D	Mar I Jadian	DD at a	RB	Tanana MDD	Channel	Channel	Channel					
Bandwidth	Modulation	RB size	offset	Target MPR	20425	20525	20625					
			0	0	22.41	22.38	22.56					
		1	12	0	22.88	22.60	22.67					
			24	0	22.51	22.02	22.11					
	QPSK		0	1	21.54	21.01	21.65					
		12	6	1	21.55	21.72	21.66					
			13	1	21.58	21.35	21.22					
5MHz		25	0	1	21.56	21.62	21.60					
ЭМП			0	1	21.70	21.44	21.85					
		1	12	1	21.84	21.68	21.91					
			24	1	21.78	21.66	21.74					
	16QAM		0	2	20.51	20.49	20.71					
		12	6	2	20.50	20.47	20.66					
			13	2	20.60	20.60	20.53					
		25	0	2	20.48	20.58	20.58					
Bandwidth	Modulation	RB size	RB	Target MPR	Channel	Channel	Channel					
Balluwidili	Woddiation	ND SIZE	offset	Target WIFK	20450	20525	20600					
			0	0	22.21	22.30	22.63					
		1	24	0	21.96	22.65	22.67					
			49	0	22.39	22.68	22.52					
	QPSK		0	1	20.89	21.56	21.77					
		25	12	1	20.89	21.60	21.77					
			25	1	21.24	21.77	21.67					
10MHz		50	0	1	21.07	21.64	21.71					
I OIVIT IZ			0	1	21.07	21.30	21.89					
		1	24	1	21.17	21.63	21.91					
			49	1	21.59	21.70	21.82					
	16QAM		0	2	19.88	20.61	20.73					
		25	12	2	19.91	20.62	20.75					
			25	2	20.24	20.77	20.61					
		50	0	2	20.06	20.63	20.68					



Page 50 of 159

	Conducted Power of LTE Band 7 (dBm)											
5		- ·	RB	Target	Channel	Channel	Channel					
Bandwidth	Modulation	RB size	offset	MPR	20775	21100	21425					
			0	0	21.15	20.42	20.89					
		1	12	0	21.27	20.15	20.96					
			24	0	21.11	20.05	20.92					
	QPSK		0	1	20.17	19.16	19.91					
		12	6	1	20.21	19.14	19.93					
5MHz		13	1	20.10	19.14	19.91						
	25	0	1	19.97	19.14	19.91						
		0	1	20.13	19.36	19.93						
	1	12	1	20.15	19.34	20.02						
		24	1	19.98	19.27	19.89						
	16QAM		0	2	19.11	18.19	18.95					
		12	6	2	19.16	18.17	18.94					
			13	2	18.98	18.17	18.87					
		25	0	2	18.89	18.10	18.96					
Bandwidth	Modulation	RB size	RB	Target	Channel	Channel	Channel					
Danuwium	Wodulation		offset	MPR	20800	21100	21400					
			0	0	20.45	20.05	20.61					
		1	24	0	20.59	20.03	20.80					
			49	0	20.45	19.92	20.61					
	QPSK		0	1	19.55	19.00	19.75					
		25	12	1	19.55	19.03	19.76					
			25	1	19.54	19.04	19.77					
10MHz		50	0	1	19.51	19.06	19.73					
ΙΟΙΝΙΠΖ			0	1	19.62	18.99	19.86					
		1	24	1	19.73	18.98	19.96					
			49	1	19.62	18.87	19.76					
	16QAM		0	2	18.59	18.06	18.76					
		25	12	2	18.55	18.08	18.75					
			25	2	18.55	18.11	18.77					
		50	0	2	18.54	18.03	18.78					



Page 51 of 159

	Conducted Power of LTE Band 7 (dBm)											
			RB	Target	Channel	Channel	Channel					
Bandwidth	Modulation	RB size	offset	MPR	20825	21100	21375					
			0	0	20.67	20.30	20.64					
		1	38	0	20.69	20.12	20.92					
			74	0	20.71	20.17	20.75					
	QPSK		0	1	19.82	19.37	20.13					
		37	18	1	19.86	19.34	20.08					
			37	1	19.84	19.34	20.14					
15MHz	75	0	1	19.86	19.38	20.09						
		0	1	19.84	19.24	19.86						
		1	38	1	19.84	19.07	20.11					
		74	1	19.99	19.09	19.91						
	16QAM		0	2	19.82	19.33	20.08					
		37	18	2	19.86	19.37	20.07					
	_		37	2	19.84	19.34	20.09					
		75	0	2	18.75	18.31	18.97					
Bandwidth	Modulation	RB size	RB	Target	Channel	Channel	Channel					
Danuwium	Wodulation	KD SIZE	offset	MPR	20850	21100	21350					
			0	0	20.51	20.24	20.36					
		1	49	0	20.77	20.07	20.84					
			99	0	20.79	19.95	20.61					
	QPSK		0	1	19.56	19.17	19.65					
		50	25	1	19.51	19.16	19.61					
			50	1	19.82	19.12	19.75					
20MHz		100	0	1	19.65	19.16	19.64					
20141112			0	1	19.60	19.37	19.32					
		1	49	1	19.94	19.15	19.81					
			99	1	19.92	19.06	19.67					
	16QAM		0	2	18.58	18.18	18.60					
		50	25	2	18.73	18.22	18.60					
			50	2	18.81	18.18	18.77					
		100	0	2	18.66	18.13	18.70					



Page 52 of 159

	Conducted Power of LTE Band 12(dBm)											
Dan desidab	Madulation	DD si-s	RB	Toward MDD	Channel	Channel	Channel					
Bandwidth	Modulation	RB size	offset	Target MPR	23017	23095	23173					
			0	0	18.21	18.74	19.87					
		1	2	0	18.00	18.99	19.06					
			5	0	18.05	18.64	18.89					
	QPSK		0	0	18.54	18.78	18.95					
		3	1	0	18.78	18.71	18.94					
			3	0	18.15	18.75	19.55					
1.4MHz		6	0	1	20.54	20.73	20.98					
1.411172			0	1	20.12	19.83	19.17					
		1	2	1	20.91	20.85	20.12					
			5	1	20.78	20.74	19.13					
	16QAM	3	0	1	20.93	20.61	20.01					
			1	1	20.92	20.51	19.63					
			3	1	20.92	21.09	19.78					
		6	0	2	20.11	19.21	18.61					
Bandwidth	Modulation	RB size	RB	Target MPR	Channel	Channel	Channel					
Banaman	oudidion	IND GIZO	offset	- rangot iiii ik	23025	23095	23165					
			0	0	18.55	20.95	20.97					
		1	8	0	19.78	21.94	20.14					
			14	0	19.77	19.41	20.92					
	OPSK											
	QPSK		0	1	21.73	20.98	20.45					
	QPSK	8	0 4				20.45 19.82					
	QPSK	8		1	21.73 20.82 19.44	20.98 20.12 20.98	19.82 20.17					
3MHz	QPSK	8 15	4	1	21.73 20.82	20.98 20.12	19.82					
3MHz	QPSK		4 7	1 1 1	21.73 20.82 19.44	20.98 20.12 20.98	19.82 20.17					
ЗМНг	QPSK		4 7 0	1 1 1	21.73 20.82 19.44 18.97	20.98 20.12 20.98 20.91	19.82 20.17 20.78					
3MHz	QPSK	15	4 7 0	1 1 1 1	21.73 20.82 19.44 18.97 20.64	20.98 20.12 20.98 20.91 18.47	19.82 20.17 20.78 19.78					
3MHz	QPSK 16QAM	15	4 7 0 0 8	1 1 1 1 1	21.73 20.82 19.44 18.97 20.64 18.31	20.98 20.12 20.98 20.91 18.47 19.55	19.82 20.17 20.78 19.78 20.63					
3MHz		15	4 7 0 0 8 14	1 1 1 1 1 1	21.73 20.82 19.44 18.97 20.64 18.31 18.67	20.98 20.12 20.98 20.91 18.47 19.55 20.11	19.82 20.17 20.78 19.78 20.63 20.78					
3MHz		15 1	4 7 0 0 8 14 0	1 1 1 1 1 1 1 2	21.73 20.82 19.44 18.97 20.64 18.31 18.67 19.25	20.98 20.12 20.98 20.91 18.47 19.55 20.11 20.12	19.82 20.17 20.78 19.78 20.63 20.78 19.78					



Page 53 of 159

	Conducted Power of LTE Band 12(dBm)											
5 1 1 11			RB		Channel	Channel	Channel					
Bandwidth	Modulation	RB size	offset	Target MPR	23035	23095	23155					
			0	0	20.09	20.98	20.88					
		1	12	0	20.81	20.91	20.28					
			24	0	20.95	20.57	20.66					
	QPSK		0	1	19.94	20.44	19.51					
		12	6	1	19.08	20.91	20.09					
			13	1	17.98	20.11	19.25					
5MU-	5MHz	25	0	1	17.12	19.39	18.10					
SIVITIZ			0	1	18.96	21.77	20.01					
		1	12	1	21.39	21.35	21.16					
			24	1	21.51	21.37	21.14					
	16QAM	12	0	2	20.14	20.85	20.18					
			6	2	21.30	21.22	20.57					
			13	2	21.02	20.16	21.92					
		25	0	2	22.94	20.67	21.41					
Bandwidth	Modulation	RB size	RB	Target MPR	Channel	Channel	Channel					
Banawiani	Modulation	NB SIZE	offset	rarget iii ix	23060	23095	23130					
			0	0	21.54	21.14	20.35					
		1	24	0	20.54	20.30	21.41					
			49	0	20.53	20.02	20.43					
	QPSK		0	1	21.11	20.94	21.51					
		25	12	1	21.32	21.77	21.50					
			25	1	20.51	21.36	21.14					
10MHz		50	0	1	20.51	21.37	21.30					
I OIVII IZ			0	1	23.02	22.16	21.92					
		1	24	1	22.94	21.67	21.44					
			49	1	21.77	21.01	21.15					
	16QAM		0	2	21.35	21.12	20.54					
		25	12	2	21.37	21.14	20.52					
			25	2	20.85	20.39	20.11					
		50	0	2	21.22	20.74	20.32					



Page 54 of 159

	Conducted Power of LTE Band 17(dBm)											
Don duvidala	Madulation	DD oi-o	RB	Toward MDD	Channel	Channel	Channel					
Bandwidth	Modulation	RB size	offset	Target MPR	23755	23790	23825					
			0	0	20.91	20.37	20.97					
		1	12	0	20.14	20.93	21.87					
			24	0	20.57	20.28	20.67					
	QPSK		0	1	20.93	20.92	20.56					
		12	6	1	20.72	20.24	20.51					
			13	1	20.60	20.36	20.01					
5MU-	5MHz	25	0	1	20.69	20.90	20.57					
SIVIFIZ			0	1	20.43	21.36	20.72					
		1	12	1	20.04	21.47	20.51					
			24	1	20.88	20.86	20.61					
	16QAM	12	0	2	20.86	20.24	20.78					
			6	2	20.25	20.25	20.85					
			13	2	20.40	20.14	20.93					
		25	0	2	21.47	20.33	20.85					
Bandwidth	Modulation	RB size	RB	Target MPR	Channel	Channel	Channel					
Barrawiatir	Modulation	IND SIZE	offset	rarget iii ix	23780	23790	23800					
			0	0	20.59	20.57	20.38					
		1	24	0	20.32	20.57	20.54					
			49	0	20.98	20.62	20.02					
	QPSK		0	1	20.94	20.25	21.05					
		25	12	1	20.96	20.13	21.01					
			25	1	21.35	20.22	21.17					
10MHz		50	0	1	20.51	20.41	20.44					
. 0.311			0	1	20.85	20.30	20.20					
		1	24	1	20.90	20.47	20.85					
			49	1	20.12	20.05	20.09					
	16QAM		0	2	20.34	20.94	20.93					
		25	12	2	20.74	20.64	20.77					
			25	2	20.71	20.58	20.71					
		50	0	2	20.22	20.33	20.55					



Page 55 of 159

	Conducted Power of LTE Band 25(dBm)											
Donalis i dela	Madulation	DD oi-o	RB	Toward MDD	Channel	Channel	Channel					
Bandwidth	Modulation	RB size	offset	Target MPR	26047	26365	26683					
			0	0	19.81	20.96	20.27					
		1	2	0	20.42	20.09	20.39					
			5	0	20.33	20.90	20.29					
	QPSK		0	0	20.41	20.04	20.33					
	1.4MHz	3	1	0	20.41	20.02	20.33					
			3	0	20.44	20.04	20.36					
4 4MU=		6	0	1	20.33	20.01	20.42					
1.4IVIПZ			0	1	20.47	19.10	20.11					
		1	2	1	20.66	19.25	20.33					
			5	1	20.52	19.01	20.14					
	16QAM		0	1	19.31	19.96	20.10					
		3	1	1	19.30	20.95	20.12					
			3	1	19.32	20.92	20.15					
		6	0	2	19.48	20.92	20.41					
Bandwidth	Modulation	RB size	RB	Target MPR	Channel	Channel	Channel					
Danawiatii	Woddiation	ND SIZE	offset	rarget wir ix	26055	26365	26675					
			0	0	20.99	20.39	20.44					
		1	8	0	20.74	20.29	18.53					
			14	0	20.73	20.15	18.51					
	QPSK		0	1	20.65	20.30	20.60					
		8	4	1	20.60	20.28	20.62					
			7	1	20.70	20.20	20.57					
3MHz		15	0	1	20.61	20.20	20.47					
SIVITIZ			0	1	20.11	20.24	20.58					
		1	8	1	20.85	20.17	20.59					
			14	1	20.91	20.11	20.61					
	16QAM		0	2	20.71	20.34	20.57					
		8	4	2	20.72	20.35	20.56					
			7	2	20.75	20.29	20.53					
		15	0	2	20.60	20.20	20.52					



Page 56 of 159

	Conducted Power of LTE Band 25(dBm)											
Donalis i dela	Madulation	DD oi-o	RB	Toward MDD	Channel	Channel	Channel					
Bandwidth	Modulation	RB size	offset	Target MPR	26065	26365	26665					
			0	0	20.87	20.11	18.13					
		1	12	0	20.89	20.11	18.31					
			24	0	20.52	20.83	18.26					
	QPSK		0	1	20.54	20.98	20.30					
		12	6	1	20.53	20.99	20.29					
			13	1	20.67	20.00	20.11					
5MHz		25	0	1	20.81	20.99	20.19					
SIVIFIZ			0	1	20.97	20.13	20.11					
		1	12	1	20.85	20.08	20.19					
			24	1	20.98	20.86	20.17					
	16QAM		0	2	20.78	20.03	20.28					
		12	6	2	20.59	20.03	20.32					
			13	2	20.73	20.95	20.07					
		25	0	2	20.73	20.08	20.21					
Bandwidth	Modulation	RB size	RB	Target MPR	Channel	Channel	Channel					
Danawian	Modulation	IND SIZE	offset	rarget iiii ix	26090	26365	26640					
			0	0	20.16	18.85	20.52					
		1	24	0	20.49	18.53	20.63					
			49	0	18.57	18.06	18.69					
	QPSK		0	1	20.20	20.40	20.54					
		25	12	1	20.22	20.43	20.57					
			25	1	20.60	20.42	20.39					
10MHz		50	0	1	20.39	20.40	20.47					
10.00			0	1	20.39	20.51	20.76					
		1	24	1	20.61	20.40	20.82					
			49	1	20.77	20.99	20.76					
	16QAM		0	2	20.28	20.52	20.60					
		25	12	2	20.29	20.51	20.58					
			25	2	20.63	20.48	20.40					
		50	0	2	20.45	20.49	20.49					



Page 57 of 159

	Conducted Power of LTE Band 25(dBm)											
Bandwidth	Modulation	DD oi=o	RB	Torget MDD	Channel	Channel	Channel					
Bandwidth	wodulation	RB size	offset	Target MPR	26115	26365	26615					
			0	0	20.94	18.46	18.07					
		1	38	0	20.23	18.21	18.45					
			74	0	18.35	20.70	18.33					
QPSK	QPSK		0	1	20.33	20.18	20.35					
		38	18	1	20.36	20.15	20.32					
			37	1	20.35	19.16	20.33					
15MHz	75	0	1	20.14	20.18	20.34						
ISIVITIZ			0	1	20.26	20.34	20.20					
		1	38	1	20.48	20.07	20.56					
			74	1	20.44	20.64	20.44					
	16QAM		0	2	20.34	20.17	20.36					
		38	18	2	20.31	20.14	20.31					
			37	2	20.23	20.17	20.35					
		75	0	2	20.13	20.18	20.32					
Bandwidth	Modulation	RB size	RB	Target MPR	Channel	Channel	Channel					
Barrawiatir	Modulation	ND SIZE	offset	rarget iii ix	26140	26365	26590					
			0	0	20.89	20.75	20.83					
		1	49	0	20.64	20.23	20.72					
			99	0	18.65	20.50	20.51					
	QPSK		0	1	20.08	20.33	20.37					
		50	25	1	20.15	20.29	20.35					
			50	1	20.53	20.09	20.53					
20MHz		100	0	1	20.25	20.17	20.38					
ZOMII IZ			0	1	20.06	20.36	20.87					
		1	49	1	20.82	20.42	20.84					
			99	1	20.29	20.64	20.47					
	16QAM		0	2	20.19	20.42	20.34					
		50	25	2	20.17	20.37	20.38					
			50	2	20.58	20.19	20.59					
		100	0	2	20.34	20.24	20.42					



Page 58 of 159

	Conducted Power of LTE Band 26A (dBm)											
Barri 1 1 M	Ma Latian	DD .: .	RB	Towns (MDD	Channel	Channel	Channel					
Bandwidth	Modulation	RB size	offset	Target MPR	26797	26915	27033					
			0	0	22.72	22.64	22.66					
		1	2	0	22.83	22.73	22.69					
			5	0	22.66	22.64	22.55					
	QPSK		0	0	22.74	22.64	22.66					
		3	1	0	22.73	22.64	22.67					
			3	0	22.70	22.63	22.62					
4 4844-	1.4MHz	6	0	1	21.76	21.63	21.67					
1.4IVI [7Z			0	1	21.83	21.68	21.77					
		1	2	1	21.95	21.72	21.93					
			5	1	21.68	21.68	21.71					
	16QAM		0	1	21.56	21.48	21.59					
		3	1	1	21.64	21.55	21.59					
			3	1	21.56	21.51	21.56					
		6	0	2	20.76	20.66	20.50					
Bandwidth	Modulation	RB size	RB	Target MPR	Channel	Channel	Channel					
Banawiani	Modulation	ND 3120	offset	rarget wir ix	26805	26915	27025					
			0	0	22.64	22.37	22.52					
		1	8	0	22.51	22.53	22.51					
			14	0	22.48	22.50	22.48					
	QPSK		0	1	21.53	21.45	21.50					
		8	4	1	21.57	21.39	21.51					
			7	1	21.52	21.49	21.46					
3MHz		15	0	1	21.51	21.42	21.44					
OWN IZ			0	1	21.73	21.50	21.71					
		1	8	1	21.61	21.57	21.70					
			14	1	21.53	21.57	21.54					
	16QAM		0	2	20.50	20.44	20.50					
		8	4	2	20.54	20.44	20.53					
			7	2	20.47	20.54	20.47					
		15	0	2	20.35	20.38	20.38					



Page 59 of 159

	Conducted Power of LTE Band 26A(dBm)											
Donalis i dela		DD oi-o	RB	Toward MDD	Channel	Channel	Channel					
Bandwidth	Modulation	RB size	offset	Target MPR	26815	26915	27015					
			0	0	20.10	20.97	20.47					
		1	12	0	20.29	20.53	20.70					
			24	0	20.57	20.54	20.32					
	QPSK		0	1	20.98	20.10	20.48					
		12	6	1	20.03	20.17	20.43					
			13	1	20.22	20.38	20.44					
5MHz		25	0	1	20.10	20.23	20.47					
SIVIFIZ			0	1	20.20	20.99	20.56					
		1	12	1	20.42	20.47	20.92					
			24	1	20.62	20.53	20.55					
	16QAM		0	2	20.02	20.13	20.45					
		12	6	2	20.00	20.14	20.45					
			13	2	20.24	20.33	20.47					
		25	0	2	20.97	20.18	20.39					
Bandwidth	Modulation	RB size	RB	Target MPR	Channel	Channel	Channel					
- Danawiatii	Modulation	IND SIZE	offset	rarget iiii ix	26840	26915	26990					
			0	0	20.22	20.39	20.42					
		1	24	0	20.76	20.44	20.54					
			49	0	20.72	20.50	20.26					
	QPSK		0	1	20.39	20.00	20.46					
		25	12	1	20.39	20.97	20.41					
			25	1	20.13	20.29	20.16					
10MHz		50	0	1	20.73	20.08	20.34					
10.00			0	1	20.30	20.29	20.50					
		1	24	1	20.84	20.34	20.60					
			49	1	20.77	20.22	20.42					
	16QAM		0	2	20.30	20.95	20.35					
		25	12	2	20.37	20.92	20.33					
			25	2	20.10	20.33	20.11					
		50	0	2	20.73	20.02	20.26					



Page 60 of 159

	Conducted Power of LTE Band 26A(dBm)									
Bandwidth	Modulation	RB size	RB T		Channel	Channel	Channel			
Bandwidth	Wiodulation	RD SIZE	offset	Target MPR	26865	26915	26965			
			0	0	21.87	21.75	21.89			
		1	38	0	21.29	21.30	21.36			
			74	0	21.17	21.30	21.21			
	QPSK		0	1	21.28	21.94	21.14			
		38	18	1	21.19	21.90	21.14			
			37	1	21.14	21.88	21.11			
15MHz		75	0	1	21.12	21.86	21.12			
ISWITZ			0	1	21.24	21.64	21.04			
		1	38	1	21.50	21.11	21.41			
	16QAM		74	1	21.44	21.07	21.31			
			0	2	21.19	21.89	21.11			
		38	18	2	21.19	21.89	21.12			
			37	2	21.15	21.87	21.10			
		75	0	2	21.10	21.81	21.00			



Page 61 of 159

		Conducted	d Power o	f LTE Band 26B(	(dBm)		
Donalusialth	Medulation	DD size	RB	Toward MDD	Channel	Channel	Channel
Bandwidth	Modulation	RB size	offset	Target MPR	26697	26740	26783
			0	0	20.15	20.79	20.29
		1	2	0	20.35	20.96	20.36
			5	0	19.10	20.71	20.24
	QPSK		0	0	20.20	20.80	20.35
		3	1	0	20.20	20.78	20.32
			3	0	20.16	20.66	20.32
1.4MHz		6	0	1	20.22	20.73	20.34
1.41811712			0	1	20.27	20.85	19.41
		1	2	1	20.42	20.07	20.58
			5	1	20.17	20.83	20.33
	16QAM		0	1	20.15	20.68	19.24
		3	1	1	20.11	19.70	20.22
			3	1	20.06	19.58	20.19
		6	0	2	20.16	20.69	20.16
Bandwidth	Modulation	RB size	RB	Target MPR	Channel	Channel	Channel
Barrawiani	modulation	112 0120	offset	- Iai got iiii ix	26705	26740	26775
			0	0	18.76	20.57	20.11
		1	8	0	20.68	20.35	20.98
			14	0	20.58	20.26	20.96
	QPSK		0	1	20.68	22.36	19.05
		8	4	1	21.72	20.39	19.05
			7	1	20.61	20.28	19.95
3MHz		15	0	1	21.65	20.26	20.97
VIII 12	эмпг		0	1	20.98	20.33	20.26
		1	8	1	20.82	20.23	20.06
			14	1	20.66	20.07	20.98
	16QAM		0	2	18.69	20.35	20.05
		8	4	2	20.71	19.34	20.07
			7	2	20.63	20.27	20.98
		15	0	2	20.56	20.20	20.95



Page 62 of 159

		Conducted	d Power o	f LTE Band 26B(	(dBm)		
Don duvidata	Madulatian	DD oi-o	RB	Toward MDD	Channel	Channel	Channel
Bandwidth	Modulation	RB size	offset	Target MPR	26715	26740	26765
			0	0	20.72	20.43	20.10
		1	12	0	19.64	20.27	20.00
			24	0	20.28	20.97	20.77
	QPSK		0	1	20.47	20.21	20.00
		12	6	1	20.48	20.24	20.91
			13	1	20.35	20.01	20.78
5MHz		25	0	1	20.45	20.21	20.92
SIVITIZ			0	1	20.86	18.40	20.12
		1	12	1	19.73	20.25	20.98
			24	1	19.40	20.01	20.70
	16QAM		0	2	19.54	20.25	20.93
		12	6	2	20.48	20.19	20.98
			13	2	18.41	20.04	20.81
		25	0	2	18.41	20.18	20.90
Bandwidth	Modulation	RB size	e RB	Target MPR	Channel	Channel	Channel
			offset			26740	
			0	0		20.67	
		1	24	0		20.39	
			49	0		20.82	
	QPSK		0	1		20.36	
		25	12	1		20.37	
			25	1		20.15	
10MHz		50	0	1		20.19	
			0	1	20.82		
		1	24	1		20.46	
	16QAM		49	1		20.96	
			0	2		20.40	
		25	12	2		20.36	
			25	2		20.14	
		50	0	2		20.21	



Page 63 of 159

	Conducted Power of LTE Band 26B(dBm)									
Bandwidth	Modulation	RB size	RB	Target MPR	Channel	Channel	Channel			
Danawidin	Wiodulation	RD SIZE	offset	Target WIPK		26765				
			0	0		20.44				
	QPSK	1	38	0		20.91				
			74	0		20.91				
		QPSK		0	1		19.93			
		38	18	1		19.89				
			37	1	20.94					
15MHz		75	0	1		20.97				
ISIVITIZ			0	1	20.78					
		1	38	1	20.11					
			74	1		20.17				
	16QAM		0	2		20.96				
		38	18	2	20.96					
			37	2	20.95					
		75	0	2		20.96				





		Cond	ucted Power	of LTE Ba	nd 38 (dBm)		
			RB	Target	Channel	Channel	Channel
Bandwidth	Modulation	RB size	offset	MPR	37775	38000	38225
			0	0	21.69	20.44	21.83
		1	12	0	21.72	20.68	21.92
			24	0	21.58	20.71	21.78
	QPSK		0	1	20.73	19.62	20.94
		12	6	1	20.70	19.65	20.83
			13	1	20.72	19.80	20.82
53411		25	0	1	20.76	19.68	20.91
5MHz			0	1	21.04	19.80	21.05
		1	12	1	21.12	20.03	21.08
			24	1	20.94	20.04	20.96
	16QAM		0	2	19.66	18.63	19.84
		12	6	2	19.66	18.60	19.84
			13	2	19.66	18.80	19.81
		25	0	2	19.72	18.68	19.92
Bandwidth	Modulation	RB size	RB	RB Target MPR	Channel	Channel	Channel
Bandwidth	Wiodulation	ND SIZE	offset		37800	38000	38200
			0	0	21.51	20.32	21.58
		1	24	0	21.56	20.69	21.89
			49	0	21.17	20.81	21.74
	QPSK		0	1	20.43	19.38	20.77
		25	12	1	20.46	19.40	20.77
			25	1	20.39	19.71	20.78
40MU-		50	0	1	20.43	19.57	20.76
10MHz		<u> </u>	0	1	20.39	19.44	20.96
		1	24	1	20.53	19.78	21.28
			49	1	20.09	19.86	21.01
	16QAM		0	2	19.41	18.46	19.88
		25	12	2	19.45	18.48	19.88
			25	2	19.35	18.73	19.91
		50	0	2	19.44	18.55	19.86



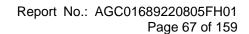
Page 65 of 159

		Col	nducted Pow	er of LTE I	Band 38 (dBm)		
			RB	Target	Channel	Channel	Channel
Bandwidth	Modulation	RB size	offset	MPR	37825	38000	38175
			0	0	21.74	20.56	21.48
		1	38	0	21.59	20.78	21.87
			74	0	20.89	21.15	21.78
	QPSK		0	1	20.49	19.84	20.84
		37	18	1	20.50	19.84	20.81
			37	1	20.48	19.81	20.81
15MHz		75	0	1	20.48	19.83	20.80
TOIVIEZ			0	1	20.77	19.61	20.91
		1	38	1	20.66	19.84	21.24
			74	1	19.93	20.24	21.10
	16QAM		0	2	20.48	19.82	20.83
		37	18	2	20.48	19.84	20.82
			37	2	20.48	19.82	20.83
		75	0	2	19.43	18.77	19.82
Bandwidth	Modulation		Target	Channel	Channel	Channel	
Banawian	Modulation	IVD 312C	offset	MPR	37850	38000	38150
			0	0	21.37	20.44	20.96
		1	49	0	21.25	20.74	21.83
			99	0	20.24	21.21	21.65
	QPSK		0	1	20.26	19.44	20.49
		50	25	1	20.27	19.43	20.48
			49	1	19.68	20.03	20.72
20MHz		100	0	1	19.99	19.75	20.61
ZV.711 12			0	1	20.02	19.41	20.20
		1	49	1	19.95	19.76	20.99
			99	1	18.94	20.17	20.83
	16QAM		0	2	19.25	18.42	19.51
		50	25	2	19.25	18.43	19.51
			49	2	18.73	19.01	19.78
		100	0	2	19.01	18.75	19.68



Page 66 of 159

	Conducted Power of LTE Band 41(dBm)									
			RB	Target	Channel	Channel	Channel			
Bandwidth	Modulation	RB size	offset	MPR	39675	40620	41565			
			0	0	21.01	22.23	22.31			
		1	12	0	22.12	22.26	20.26			
			24	0	20.35	22.31	21.94			
	QPSK		0	1	21.91	23.85	21.01			
		12	6	1	21.41	22.75	22.18			
			13	1	21.52	22.44	21.86			
EMIL-		25	0	1	22.74	21.01	20.10			
5MHz			0	1	20.59	21.89	21.18			
		1	12	1	22.22	21.31	22.32			
			24	1	21.42	21.05	22.46			
	16QAM		0	2	21.20	22.07	23.31			
		12	6	2	21.22	21.25	22.08			
			13	2	22.69	21.24	21.09			
		25	0	2	22.04	20.77	23.44			
Bandwidth	Modulation	RB size	RB -	Target	Channel	Channel	Channel			
Bandwidth	Wiodulation	ND SIZE	offset	MPR	39700	40620	41540			
			0	0	20.33	21.51	20.63			
		1	24	0	19.57	21.75	18.96			
			49	0	20.41	21.52	20.56			
	QPSK		0	1	19.51	20.52	19.64			
		25	12	1	20.49	20.55	19.62			
			25	1	20.91	20.51	18.02			
10MHz		50	0	1	19.33	20.54	20.88			
IUNITZ		<u> </u>	0	1	20.48	20.09	20.41			
		1	24	1	18.97	20.05	20.23			
			49	1	20.37	20.11	20.01			
	16QAM		0	2	20.97	19.24	19.52			
		25	12	2	20.69	19.27	19.58			
			25	2	20.26	19.88	19.79			
		50	0	2	19.72	19.29	19.33			





		Condu	ucted Power o	of LTE Baı	nd 41(dBm)		
			RB	Target	Channel	Channel	Channel
Bandwidth	Modulation	RB size	offset	MPR	39725	40620	41515
			0	0	20.64	20.54	20.51
		1	37	0	20.68	20.51	20.52
			74	0	21.12	20.38	20.35
	QPSK		0	1	20.66	20.12	20.52
		37	19	1	20.66	20.11	20.44
			38	1	21.07	20.82	20.31
45841-		75	0	1	20.39	19.98	20.96
15MHz			0	1	20.60	20.17	20.52
		1	37	1	20.75	20.09	20.47
			74	1	21.07	20.05	20.28
	16QAM		0	2	20.66	20.38	20.36
		37	19	2	20.88	20.12	20.43
			38	2	21.01	20.89	20.30
		75	0	2	19.65	19.97	19.54
Bandwidth	Modulation	RB size	RB	Target MPR	Channel	Channel	Channel
Ballawiatii	Wiodulation	ND SIZE	offset		39750	40620	41490
			0	0	21.44	20.36	20.67
		1	49	0	21.85	20.17	20.83
			99	0	21.97	20.27	20.74
	QPSK		0	1	20.31	19.99	20.71
		50	25	1	20.15	19.87	21.88
			50	1	20.65	19.58	20.69
20MHz		100	0	1	20.54	19.74	20.79
ΖυίνιπΖ			0	1	21.01	20.10	20.30
		1	49	1	19.36	19.88	19.97
			99	1	20.17	20.54	21.05
	16QAM		0	2	20.09	20.47	21.48
		50	25	2	20.28	20.28	21.65
			50	2	20.19	20.99	20.34
		100	0	2	20.12	20.89	20.48



Page 68 of 159

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]						
Modulation	1.4MHz	3MHz	5MHz	10MHz	15MHz	20MHz	MPR(dB)	
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



Page 69 of 159

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

Requirements (sub-clause)	E-UTRA Band	Channel bandwidth (MHz)	Resources Blocks (N <sub>RB</sub> )	A-MPR (dB)
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
	2 4 40 22	5	>6	≤1
6.6.2.2.3.1		10	>6	≤ 1
	25,55,56	15	>8	≤1
		20	>10	≤ 1
662222	44	5	>6	≤1
0.0.2.2.3.2	41	10, 15, 20	Table 6	.2.4.3-4
6.6.3.3.3.1	1	10,15,20	≥ 50	≤1
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 6.6.3.3.3.2	13	10	Table 6.2.4.3-2	Table 6.2.4.3-2
6.6.3.3.3.3	19	10, 15	> 44	≤ 3
6.6.3.3.3.4	21	10, 15	> 40	≤ 1 ≤ 2
	20	4F 20		
66004	20		Table 6.2.4.3-3	Table 6.2.4.3-3
6.6.3.3.13	231	1.4, 3, 5, 10,15,20	Table 6.2.4.3-5	Table 6.2.4.3-5
				Table 6.2.4.3-6
6.6.3.3.6			Table 6.2.4.3-7	Table 6.2.4.3-7
6.6.3.3.7	26	10, 15	Table 6.2.4.3-8	Table 6.2.4.3-8
66338	26	1 / 3 5 10 15		Table 6.2.4.3-9,
0.0.5.5.0	20	1.4, 0, 0, 10, 10		
6.6.3.3.9	27	3, 5, 10		Table 6.2.4.3-12, 2.4.3-13
6.6.3.3.10	28	5, 10	Table 5.4.2-1	N/A
6.6.3.3.11	28	5	≥ 2	≤ 1
		10, 15, 20	≥ 1	≤ 4
		10, 15, 20	Table 6.2.4.3-15	Table 6.2.4.3-15
		5, 10, 15, 20	Table 6.2.4.3-14	
_	-	-	-	-
	6.6.2.2.3.1  6.6.2.2.3.2  6.6.3.3.3.1  6.6.2.2.3.3  6.6.2.2.3.3  6.6.3.3.3.2  6.6.3.3.3.4  6.6.3.3.3.4  6.6.3.3.5  6.6.3.3.5  6.6.3.3.7  6.6.3.3.7  6.6.3.3.9  6.6.3.3.10	(sub-clause)         E-OTRA Band           6.6.2.1.1         Table 5.2-1           6.6.2.2.3.1         2,4,10, 23, 25,35,36           6.6.2.2.3.2         41           6.6.3.3.3.1         1           6.6.2.2.3.3         12, 13, 14, 17           6.6.2.2.3.3         13           6.6.3.3.3.2         13           6.6.3.3.3.3         19           6.6.3.3.3.4         21           20         6.6.2.2.1           6.6.3.3.13         231           6.6.3.3.5         26           6.6.3.3.7         26           6.6.3.3.8         26           6.6.3.3.9         27           6.6.3.3.10         28	Requirements (sub-clause)         E-UTRA Band         bandwidth (MHz)           6.6.2.1.1         Table 5.2-1         1.4,3,5,10,15,20           3         3         5           10         15           20         5           6.6.2.2.3.2         41         10,15,20           6.6.3.3.3.1         1         10,15,20           6.6.2.2.3.3         12, 13, 14, 17         1.4, 3, 5, 10           6.6.3.3.3.2         13         10           6.6.3.3.3.3         19         10, 15           6.6.3.3.3.4         21         10, 15           6.6.3.3.3.3         21         14, 3, 5, 10           6.6.3.3.13         26         1.4, 3, 5, 10           6.6.3.3.6         26         5           6.6.3.3.7         26         10, 15           6.6.3.3.8         26         1.4, 3, 5, 10, 15           6.6.3.3.9         27         3, 5, 10           6.6.3.3.11         28         5, 10           6.6.3.3.11         28         5           10, 15, 20         10, 15, 20	Requirements (sub-clause)         E-UTRA Band         bandwidth (MHz)         Blocks (N <sub>RB</sub> )           6.6.2.1.1         Table 5.2-1         1.4,3,5,10,15,20         Table 5.4.2-1           3         >5           5         >6           10         >6           2,4,10, 23, 25,35,36         10         >6           15         >8           20         >10         5           6.6.2.2.3.2         41         10,15,20         ≥50           6.6.2.2.3.3         12,13,14,17         1.4,3,5,10         Table 6.2.4.3-2           6.6.2.2.3.3         13         10         Table 6.2.4.3-2           6.6.3.3.3.3         19         10,15         >44           6.6.3.3.3.4         21         10,15         >44           6.6.3.3.3.3         19         10,15         >44           6.6.3.3.3.4         21         10,15         >44           6.6.3.3.3.1         231         1.4,3,5         Table 6.2.4.3-3           6.6.3.3.13         231         1.4,3,5         Table 6.2.4.3-5           6.6.3.3.6         26         5         Table 6.2.4.3-8           7         7.5         7.0         Table 6.2.4.3-9           7



Page 70 of 159

## WIFI

Mode	Data Rate (Mbps)	Channel	Frequency(MHz)	Avg. Burst Power(dBm)
		01	2412	13.55
802.11b	1	06	2437	13.72
		11	2462	14.03
		01	2412	10.86
802.11g	6	06	2437	11.64
		11	2462	12.42
		01	2412	10.71
802.11n(20)	6.5	06	2437	11.23
		11	2462	10.87
		03	2422	11.29
802.11n(40)	13.5	06	2437	10.72
		09	2452	10.60

Bluetooth\_V5.0(BR/EDR)

Modulation	Channel	Frequency(MHz)	Peak Power (dBm)
	0	2402	4.681
GFSK	39	2441	4.595
	78	2480	4.807
	0	2402	3.670
π /4-DQPSK	39	2441	3.587
	78	2480	3.983
	0	2402	3.857
8-DPSK	39	2441	3.716
	78	2480	4.121

Bluetooth\_V5.0(BLE)

Modulation	Channel	Frequency(MHz)	Peak Power (dBm)
GFSK 1M	0	2402	4.797
	19	2440	4.556
	39	2480	4.875



Page 71 of 159

### **5GHz WIFI**

5GHZ WIF	channel	Frequency	Power(dBm)							
Mode			Data Rate(bps)							
			6M	9M	12M	18M	24M	36M	48M	54M
	36	5180	10.47	10.32	10.27	10.16	10.08	9.92	9.87	9.71
	40	5200	10.39	10.26	10.14	10.07	9.92	9.87	9.74	9.66
	44	5220	10.28	10.18	10.02	9.93	9.85	9.71	9.65	9.53
	48	5240	10.71	10.59	10.45	10.37	10.27	10.18	10.02	9.94
	52	5260	10.23	10.14	10.08	9.87	9.74	9.68	9.55	9.51
802.11a	56	5280	10.09	9.99	9.86	9.72	9.63	9.57	9.41	9.35
	60	5300	10.01	9.85	9.75	9.68	9.56	9.42	9.37	9.25
	64	5320	10.08	9.95	9.89	9.76	9.69	9.51	9.34	9.33
	149	5745	10.01	9.86	9.72	9.66	9.55	9.43	9.32	9.29
	157	5785	10.25	10.13	9.94	9.86	9.88	9.73	9.65	9.52
	165	5825	9.94	9.80	9.77	9.58	9.44	9.37	9.36	9.19
	· · · · · · · · · · · · · · · · · · ·		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
	36	5180	10.15	10.05	9.93	9.89	9.69	9.67	9.48	9.39
	40	5200	10.20	10.07	9.94	9.85	9.77	9.64	9.51	9.47
	44	5220	10.14	10.04	9.86	9.74	9.72	9.55	9.46	9.39
	48	5240	10.09	9.92	9.82	9.78	9.65	9.58	9.46	9.32
802.11n	52	5260	10.08	9.96	9.85	9.77	9.64	9.53	9.41	9.36
(20)	56	5280	10.15	10.04	9.93	9.72	9.69	9.62	9.47	9.41
, ,	60	5300	10.24	10.01	10.00	9.95	9.77	9.66	9.59	9.48
	64	5320	9.96	9.85	9.75	9.64	9.49	9.35	9.27	9.21
	149	5745	9.80	9.63	9.55	9.41	9.34	9.28	9.12	9.08
	157	5785	9.73	9.68	9.46	9.36	9.33	9.24	9.08	9.00
	165	5825	9.55	9.44	9.32	9.13	9.06	8.98	8.91	8.80
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	
	38	5190	10.30	10.15	10.05	9.99	9.87	9.75	9.67	9.59
	46	5230	10.44	10.31	10.18	10.12	10.04	9.92	9.74	9.75
802.11n	54	5270	10.02	9.92	9.74	9.67	9.62	9.45	9.35	9.24
(40)	62	5310	9.81	9.69	9.54	9.47	9.35	9.28	9.12	9.01
, ,	151	5755	9.64	9.55	9.41	9.28	9.24	9.07	8.93	8.95
	159	5795	9.71	9.61	9.49	9.34	9.23	9.19	9.02	8.97



Page 72 of 159

	channel	Frequency	Power(dBm)							
Mode			Data Rate(bps)							
·			MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
802.11ac (20)	36	5180	9.94	9.72	9.72	9.63	9.45	9.39	9.27	9.13
	40	5200	9.39	9.25	9.13	9.07	8.94	8.87	8.70	8.66
	44	5220	9.31	9.24	9.03	8.96	8.87	8.74	8.63	8.58
	48	5240	9.53	9.47	9.26	9.19	9.08	9.00	8.90	8.75
	52	5260	9.93	9.83	9.70	9.57	9.42	9.38	9.26	9.27
	56	5280	9.78	9.66	9.56	9.41	9.36	9.26	9.10	9.04
	60	5300	9.85	9.68	9.61	9.52	9.39	9.26	9.20	9.02
	64	5320	9.90	9.75	9.69	9.58	9.48	9.33	9.21	9.15
	149	5745	9.39	9.24	9.14	9.04	8.90	8.81	8.71	8.61
	157	5785	9.41	9.21	9.14	9.02	9.05	8.89	8.76	8.68
	165	5825	9.48	9.38	9.25	9.12	8.94	8.91	8.84	8.74
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	
802.11ac (40)	38	5190	9.93	9.78	9.71	9.65	9.47	9.38	9.26	9.17
	46	5230	9.57	9.44	9.31	9.24	9.14	9.05	8.87	8.85
	54	5270	9.67	9.57	9.39	9.37	9.25	9.10	8.94	8.92
	62	5310	9.62	9.50	9.35	9.28	9.18	9.09	8.95	8.83
	151	5755	9.11	9.02	8.88	8.76	8.67	8.56	8.44	8.38
	159	5795	9.14	9.04	8.92	8.72	8.68	8.62	8.46	8.46



Page 73 of 159

# 13. TEST RESULTS

# 13.1. SAR Test Results Summary

# 13.1.1. Test position and configuration

Body-worn and 4 Edges SAR was performed with the device 0mm 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.



Page 74 of 159

- 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.



Page 75 of 159

# 13.1.3. Test Result

SAR MEASURE	MENT								
Depth of Liquid (d	cm):>15			Relative H	lumidity (%	): 54.1			
Product: Mini PO	S Terminal								
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									
Body back	voice	190	836.6	0.09	0.425	32.80	32.77	0.428	1.6
Body front	voice	190	836.6	-0.14	0.223	32.80	32.77	0.225	1.6
Body back	GPRS-2 slot	190	836.6	0.07	0.749	30.70	30.69	0.751	1.6
Body front	GPRS-2 slot	190	836.6	0.02	0.405	30.70	30.69	0.406	1.6
Edge 3(Bottom)	GPRS-2 slot	190	836.6	-0.06	0.571	30.70	30.69	0.572	1.6
Edge 4(Left)	GPRS-2 slot	190	836.6	-0.08	0.654	30.70	30.69	0.656	1.6

## Note:

- When the 1-g Reported SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. Refer to KDB 447498.
- •The test separation for body back, body front and 4 Edges is 0mm of all above table.

SAR MEASUREMENT												
Depth of Liquid (d	cm):>15			Relative H	lumidity (%	): 52.4						
Product: Mini PO	S Terminal											
Test Mode: PCS1	1900 with GMSK	modulati	ion									
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												
Body back	voice	661	1880.0	-0.09	0.688	30.30	30.20	0.704	1.6			
Body front	voice	661	1880.0	-0.10	0.087	30.30	30.20	0.089	1.6			
Body back	GPRS-2 slot	512	1850.2	0.14	0.767	28.20	27.76	0.849	1.6			
Body back	GPRS-2 slot	661	1880	0.08	0.960	28.20	28.09	0.985	1.6			
Body back	GPRS-2 slot	810	1909.8	-0.11	1.252	28.20	28.11	1.278	1.6			
Body front	GPRS-2 slot	661	1880.0	0.18	0.137	28.20	28.09	0.141	1.6			
Edge 3(Bottom)	GPRS-2 slot	661	1880.0	-0.13	0.548	28.20	28.09	0.562	1.6			
Edge 4(Left)	GPRS-2 slot	661	1880.0	-0.16	0.145	28.20	28.09	0.149	1.6			
Note:												

### Note:

- When the 1-g Reported SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. Refer to KDB 447498.
- ·The test separation for body back, body front and 4 Edges is 0mm of all above table.

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/



Page 76 of 159

SAR MEASUREMENT	
Depth of Liquid (cm):>15	Relative Humidity (%): 52.4
Product: Mini POS Terminal	
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)
Body back	RMC 12.2kbps	9262	1852.4	0.10	1.197	23.10	22.85	1.268	1.6
Body back	RMC 12.2kbps	9400	1880	-0.18	1.160	23.10	23.07	1.168	1.6
Body back	RMC 12.2kbps	9538	1907.6	0.12	1.190	23.10	23.09	1.193	1.6
Body front	RMC 12.2kbps	9400	1880	-0.06	0.205	23.10	23.07	0.206	1.6
Edge 3(Bottom)	RMC 12.2kbps	9400	1880	-0.19	0.744	23.10	23.07	0.749	1.6
Edge 4(Left)	RMC 12.2kbps	9400	1880	0.07	0.148	23.10	23.07	0.149	1.6

### Note:

**SAR MEASUREMENT** 

- When the 1-g Reported SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. Refer to KDB 447498.
- •The test separation for body back, body front and 4 Edges is 0mm of all above table.

Depth of Liquid (c	m):>15			Relative H	lumidity (%	5): 57.2						
Product: Mini POS	S Terminal											
Test Mode: WCDN	MA Band IV with QP	SK modu	ulation									
Position Mode Ch. Fr. (MHz) Power Drift (1g) (W/kg) (W/kg) Meas. output Power (dBm) SAR (W/kg) Limit (W/kg)												
Body back	RMC 12.2kbps	8562	1712.4	-0.14	1.282	22.10	22.00	1.312	1.6			
Body back	RMC 12.2kbps	8662	1732.4	0.08	1.222	22.10	21.99	1.253	1.6			
Body back	RMC 12.2kbps	8763	1752.6	-0.05	1.159	22.10	22.04	1.175	1.6			
Body front	RMC 12.2kbps	8662	1732.4	0.12	0.204	22.10	21.99	0.209	1.6			

-0.09

0.11

0.703

0.238

22.10

22.10

21.99

21.99

0.721

0.244

1.6 1.6

# Note:

Edge 3(Bottom)

Edge 4(Left)

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

1732.4

1732.4

•The test separation for body back, body front and 4 Edges is 0mm of all above table.

8662

8662

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.

RMC 12.2kbps

RMC 12.2kbps



Page 77 of 159

## **SAR MEASUREMENT**

Depth of Liquid (cm):>15 Relative Humidity (%): 54.1

Product: Mini POS Terminal

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)
Body back	RMC 12.2kbps	4132	826.4	-0.10	1.187	22.30	22.21	1.212	1.6
Body back	RMC 12.2kbps	4183	836.4	0.18	1.214	22.30	22.16	1.254	1.6
Body back	RMC 12.2kbps	4233	846.6	-0.17	1.197	22.30	22.26	1.208	1.6
Body front	RMC 12.2kbps	4132	826.4	-0.27	0.934	22.30	22.21	0.954	1.6
Body front	RMC 12.2kbps	4183	836.4	0.14	0.934	22.30	22.16	0.965	1.6
Body front	RMC 12.2kbps	4233	846.6	-0.21	1.197	22.30	22.26	1.208	1.6
Edge 3(Bottom)	RMC 12.2kbps	4132	826.4	0.12	1.320	22.30	22.21	1.348	1.6
Edge 3(Bottom)	RMC 12.2kbps	4183	836.4	-0.25	1.359	22.30	22.16	1.404	1.6
Edge 3(Bottom)	RMC 12.2kbps	4233	846.6	0.18	1.129	22.30	22.26	1.139	1.6
Edge 4(Left)	RMC 12.2kbps	4132	826.4	-0.16	0.964	22.30	22.21	0.984	1.6
Edge 4(Left)	RMC 12.2kbps	4183	836.4	-0.19	1.082	22.30	22.16	1.117	1.6
Edge 4(Left)	RMC 12.2kbps	4233	846.6	0.25	0.965	22.30	22.26	0.974	1.6

## Note:

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

•The test separation for body back, body front and 4 Edges is 0mm of all above table.

SAR MEASUREMENT		
Depth of Liquid (cm):>15	Relative Humidity (%): 52.4	
Product: Mini POS Terminal		

Test Mode: LTE Band 2

ВМ		Position	Test M	lode	Ch	Freq.	Power	SAR	Max. Tune	Meas.	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)
		Body back	1	0	18700	1860	0.16	1.211	21.00	20.98	1.217	1.6
		Body back	1	0	18900	1880	-0.08	1.266	21.00	20.72	1.350	1.6
		Body back	1	0	19100	1900	0.17	1.204	21.00	20.68	1.296	1.6
20	QPSK	Body front	1	0	18900	1880	-0.05	0.265	21.00	20.72	0.283	1.6
20	QF3K	Edge 3(Bottom)	1	0	18700	1860	0.08	0.917	21.00	20.98	0.921	1.6
		Edge 3(Bottom)	1	0	18900	1880	-0.11	0.903	21.00	20.72	0.963	1.6
		Edge 3(Bottom)	1	0	19100	1900	-0.04	0.932	21.00	20.68	1.003	1.6
		Edge 4(Left)	1	0	18900	1880	0.12	0.069	21.00	20.72	0.074	1.6

### Note:

- When the 1-g Reported SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. Refer to KDB 447498.
- -The test separation for body back, body front and 4 Edges is 0mm of all above table.



Page 78 of 159

# **SAR MEASUREMENT**

Depth of Liquid (cm):>15 Relative Humidity (%): 57.2

Product: Mini POS Terminal

Test Mode: LTE Band 4

ВМ			Test M	lode	Ch	Freq.	Power	SAR	Max. Tuneu	Meas.	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)
		Body back	1	0	20050	1720	0.17	1.174	22.60	22.52	1.196	1.6
		Body back	1	0	20175	1732.5	0.25	1.188	21.10	21.02	1.210	1.6
		Body back	1	0	20300	1745	-0.13	1.250	21.40	21.38	1.256	1.6
		Body front	1	0	20175	1732.5	0.19	0.208	21.40	21.02	0.227	1.6
20	QPSK	Edge 3(Bottom)	1	0	20050	1720	-0.18	1.079	22.60	22.52	1.099	1.6
		Edge 3(Bottom)	1	0	20175	1732.5	0.14	1.090	21.10	21.02	1.110	1.6
		Edge 3(Bottom)	1	0	20300	1745	-0.11	1.099	21.40	21.38	1.104	1.6
		Edge 4(Left)	1	0	20175	1732.5	-0.25	0.226	21.40	21.02	0.247	1.6

#### Note:

**SAR MEASUREMENT** 

- When the 1-g Reported SAR is  $\leq$  0.8 W/kg, testing for low and high channel is optional. Refer to KDB 447498.
- •The test separation for body back, body front and 4 Edges is 0mm of all above table.

Depth	of Liquid	d (cm):>15			Relative I	Humidity (%	%): 54.1					
Produ	ct: Mini F	OS Termina										
Test N	/lode: LT	E Band 5										
ВМ			Tes	t Mode		From	Power	SAR	Max.	Meas.	Scaled	Limit
MHz	MOD	Position	UL RB Allocati on	UL RB START	Ch.	Freq. (MHz)	Drift (<±5%)	(1g) (W/kg)	Tuneup Power (dBm)	output Power (dBm)	SAR (W/kg)	Limit (W/kg)
		Body back	1	0	20450	829	0.05	0.847	22.70	22.21	0.948	1.6
		Body back	1	0	20525	836.5	-0.16	0.838	22.70	22.30	0.919	1.6
		Body back	1	0	20600	844	0.04	0.789	22.70	22.63	0.802	1.6
		Body front	1	0	20525	836.5	-0.11	0.568	22.70	22.30	0.623	1.6
10	QPSK	Edge 3(Bottom)	1	0	20450	829	0.07	0.885	22.70	22.21	0.991	1.6
		Edge 3(Bottom)	1	0	20525	836.5	-0.12	0.865	22.70	22.30	0.948	1.6
		Edge 3(Bottom)	1	0	20600	844	-0.05	0.803	22.70	22.63	0.816	1.6
		Edge 4(Left)	1	0	20525	836.5	0.16	0.680	22.70	22.30	0.746	1.6
Note:												

### Note:

- When the 1-g Reported SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. Refer to KDB 447498.
- •The test separation for body back, body front and 4 Edges is 0mm of all above table.



Page 79 of 159

SARI	MEASUR	REMENT										
Depth	of Liquid	d (cm):>15			Relative	Humidity (	%): 49.1					
Produ	ct: Mini F	POS Terminal										
Test N	/lode: LT	E Band 7										
вм	MOD	Position	Test Mo	ode	Ch.	Freq.	Power Drift	SAR	Max. Tuneup	Meas. output	Scaled SAR	Limit
MHz	WIOD	Position	UL RB Allocation	UL RB START	CII.	(MHz)	(<±5%)	(1g) (W/kg)	Power (dBm)	Power (dBm)	(W/kg)	(W/kg)
		Body back	1	0	20850	2510	-0.16	1.203	20.60	20.51	1.228	1.6
		Body back	1	0	21100	2535	0.02	1.285	20.30	20.24	1.303	1.6
		Body back	1	0	21350	2560	-0.17	1.368	20.36	20.36	1.368	1.6
		Body front	1	0	21100	2535	0.17	0.235	20.30	20.24	0.238	1.6
20	QPSK	Edge 3(Bottom)	1	0	21100	2535	0.15	0.442	20.30	20.24	0.448	1.6
		Edge 4(Left)	1	0	20850	2510	-0.08	1.372	20.60	20.51	1.401	1.6
		Edge 4(Left)	1	0	21100	2535	-0.06	1.332	20.30	20.24	1.351	1.6
		Edge	1	0	21350	2560	0.19	1.408	20.36	20.36	1.408	1.6

2560

0.19

20.36

20.36

1.408

1.6

### Note:

4(Left)

SAR MEASUREMENT

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

21350

•The test separation for body back, body front and 4 Edges is 0mm of all above table.

Depth	Depth of Liquid (cm):>15 Relative Humidity (%): 56.6												
Produ	ct: Mini F	OS Terminal											
Test N	/lode: LT	E Band 12											
ВМ	MOD	Position	Test M	ode	Ch.	Freq.	Power Drift	SAR	Max. Tuneup	Meas. output	Scaled SAR	Limit	
MHz	WOD	Position	UL RB Allocation	UL RB START	CII.	(MHz)	(<±5%)	(1g) (W/kg)	Power (dBm)	Power (dBm)	(W/kg)	(W/kg)	
		Body back	1	0	23060	704	0.21	1.215	21.60	21.54	1.232	1.6	
		Body back	1	0	23095	707.5	-0.15	1.181	21.20	21.14	1.197	1.6	
		Body back	1	0	23130	711	0.23	1.208	20.40	20.35	1.222	1.6	
		Body front	1	0	23095	707.5	-0.24	0.396	21.20	21.14	0.402	1.6	
		Edge 3(Bottom)	1	0	23060	704	0.18	0.816	21.60	21.54	0.827	1.6	
10	QPSK	Edge 3(Bottom)	1	0	23095	707.5	-0.27	0.819	21.20	21.14	0.830	1.6	
		Edge 3(Bottom)	1	0	23130	711	0.14	0.811	20.40	20.35	0.820	1.6	
		Edge 4(Left)	1	0	23060	704	-0.21	0.998	21.60	21.54	1.012	1.6	
		Edge 4(Left)	1	0	23095	707.5	-0.23	1.007	21.20	21.14	1.021	1.6	
		Edge 4(Left)	1	0	23130	711	0.19	0.992	20.40	20.35	1.003	1.6	

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

•The test separation for body back, body front and 4 Edges is 0mm of all above table.



Page 80 of 159

SAR I	MEASUR	REMENT										
Depth	of Liquid	d (cm):>15			Relative I	Humidity (	%): 56.6					
Produ	ct: Mini F	POS Terminal										
Test N	/lode: LT	E Band 17										
вм	MOD	Position	Test M	ode	Ch.	Freq.	Power Drift	SAR (1g)	Max. Tuneup	Meas. output	Scaled SAR	Limit
MHz	WIOD	rosition	UL RB Allocation	UL RB START	CII.	(MHz)	(<±5%)	(W/kg)	Power (dBm)	Power (dBm)	(W/kg)	(W/kg)
		Body back	1	0	23780	709	0.16	1.197	20.60	20.59	1.200	1.6
		Body back	1	0	23790	710	-0.05	1.191	20.60	20.57	1.199	1.6
		Body back	1	0	23800	711	0.11	1.197	20.60	20.38	1.259	1.6
		Body front	1	0	23790	710	-0.12	0.473	20.60	20.57	0.476	1.6
10	QPSK	Edge 3(Bottom)	1	0	23790	710	0.05	0.705	20.60	20.57	0.710	1.6
		Edge 4(Left)	1	0	23780	709	0.18	0.940	20.60	20.59	0.942	1.6
		Edge	1	0	23790	710	-0.07	0.858	20.60	20.57	0.864	1.6

711

-0.14

0.942

20.60

20.38

0.991

1.6

# Note:

4(Left) Edge

4(Left)

**SAR MEASUREMENT** 

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

23800

-The test separation for body back, body front and 4 Edges is 0mm of all above table.

0

Depth	of Liquid	d (cm):>15			Relative	Humidity (9	%): 52.4					
Produ	ct: Mini F	POS Terminal										
Test N	/lode: LT	E Band 25										
вм	MOD	Position	Test M	ode	Ch.	Freq.	Power Drift	SAR (1g)	Max. Tuneup	Meas. output	Scaled SAR	Limit
MHz	WOD	Position	UL RB Allocation	UL RB START	CII.	(MHz)	(<±5%)	(W/kg)	Power (dBm)	Power (dBm)	(W/kg)	(W/kg)
		Body back	1	0	26140	1860	-0.14	1.275	20.90	20.89	1.278	1.6
		Body back	1	0	26365	1882.5	0.02	1.304	20.90	20.75	1.350	1.6
	-	Body back	1	0	26590	1905	-0.18	1.274	20.90	20.83	1.295	1.6
		Body front	1	0	26365	1882.5	0.13	0.253	20.90	20.75	0.262	1.6
20	QPSK	Edge 3(Bottom)	1	0	26140	1860	-0.16	1.014	20.90	20.89	1.016	1.6
	QI ON	Edge 3(Bottom)	1	0	26365	1882.5	0.09	0.977	20.90	20.75	1.011	1.6
		Edge 3(Bottom)	1	0	26590	1905	-0.15	0.933	20.90	20.83	0.948	1.6
		Edge 4(Left)	1	0	26365	1882.5	0.17	0.166	20.90	20.75	0.172	1.6

# Note:

• When the 1-g Reported SAR is  $\leq$  0.8 W/kg, testing for low and high channel is optional. Refer to KDB 447498.

The test separation for body back, body front and 4 Edges is 0mm of all above table.



Page 81 of 159

SARI	MEASUR	REMENT										
Depth	of Liquid	d (cm):>15			Relative	Humidity (9	%): 54.1					
Produ	ct: LTE s	martphone										
Test N	/lode: LT	E Band 26A										
ВМ	M())) Position				Ch	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)
		Body back	1	0	26915	836.5	0.04	0.605	21.80	21.75	0.612	1.6
		Body front	1	0	26915	836.5	-0.12	0.477	21.80	21.75	0.483	1.6
15	QPSK	Edge 3(Bottom)	1	0	26915	836.5	-0.08	0.605	21.80	21.75	0.612	1.6
		Edge 4(Left)	1	0	26915	836.5	0.06	0.526	21.80	21.75	0.532	1.6

#### Note

- When the 1-g Reported SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. Refer to KDB 447498.
- •The test separation for body back, body front and 4 Edges is 0mm of all above table.

SAR	SAR MEASUREMENT												
Deptl	n of Liqui	d (cm):>15			Relative	e Humid	lity (%): 49	).1					
Produ	uct: Mini	POS Terminal											
Test I	est Mode: LTE Band 38												
BW			Test M	ode		Freq.	Power	SAR (1g)	Max. Tuneup	Meas. output	Scaled	Limit	
MHz	MOD	Position	UL RB Allocation	UL RB START	Ch.	(MHz)	Drift (<±5%)	(W/kg)	Power (dBm)	Power (dBm)	SAR (W/kg)	(W/kg)	
		Body back	1	0	37850	2580	0.19	1.136	21.40	21.37	1.144	1.6	
		Body back	1	0	38000	2595	-0.12	1.143	20.50	20.44	1.159	1.6	
		Body back	1	0	38150	2610	-0.14	1.112	21.00	20.96	1.122	1.6	
		Body front	1	0	38000	2595	0.17	0.200	20.50	20.44	0.203	1.6	
20	QPSK	Edge 3(Bottom)	1	0	38000	2595	-0.14	0.415	20.50	20.44	0.421	1.6	
		Edge 4(Left)	1	0	37850	2580	0.15	1.087	21.40	21.37	1.095	1.6	
		Edge 4(Left)	1	0	38000	2595	-0.18	1.042	20.50	20.44	1.056	1.6	
		Edge 4(Left)	1	0	38150	2610	-0.13	1.111	21.00	20.96	1.121	1.6	

### Note

- When the 1-g Reported SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. Refer to KDB 447498.
- •The test separation for body back, body front and 4 Edges is 0mm of all above table



Page 82 of 159

SAR MEASUREMENT	
Depth of Liquid (cm):>15	Relative Humidity (%): 49.1
Product: Mini POS Terminal	

Test Mode: LTE Band 41

BW	MOD	Position -	Test M	ode	Ch. Freq.	Power Drift	SAR (1g)	Max. Tuneup	Meas. output	Scaled	Limit	
MHz	MOD	Position	UL RB Allocation	UL RB START	Gn.	(MHz)	(<±5%)	(W/kg)	Power (dBm)	Power (dBm)	SAR (W/kg)	(W/kg)
		Body back	1	0	39750	2506	0.09	1.046	21.50	21.44	1.061	1.6
		Body back	1	0	40620	2593	-0.12	1.170	20.40	20.36	1.181	1.6
		Body back	1	0	41490	2680	0.15	1.181	20.70	20.67	1.189	1.6
		Body front	1	0	40620	2593	-0.07	0.218	20.40	20.36	0.220	1.6
20		Edge 3(Bottom)	1	0	40620	2593	-0.08	0.410	20.40	20.36	0.414	1.6
		Edge 4(Left)	1	0	39750	2506	-0.03	1.025	21.50	21.44	1.039	1.6
		Edge 4(Left)	1	0	40620	2593	-0.04	1.059	20.40	20.36	1.069	1.6
		Edge 4(Left)	1	0	41490	2680	0.11	1.177	20.70	20.67	1.185	1.6

## Note:

• 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 0mm of all above table



Page 83 of 159

SAR MEASUREMENT				
Depth of Liquid (cm):>15	Relative Humidity (%)	52.1		
Product: Mini POS Terminal				
Test Mode: 2.4GHz 802.11b				
		B4		

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)
Body back	DTS	6	2437	0.05	0.226	13.80	13.72	0.230	1.6
Body front	DTS	6	2437	-0.02	0.048	13.80	13.72	0.049	1.6
Edge 1 (Top)	DTS	6	2437	0.08	0.139	13.80	13.72	0.142	1.6
Edge 2(Right)	DTS	6	2437	-0.02	0.068	13.80	13.72	0.069	1.6

### Note:

**SAR MEASUREMENT** 

- 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.
- All of above "DTS" means data transmitters.
- •The test separation for body back, body front and 4 Edges is 0mm of all above table.

Depth of Liquid (cm):	>15				Relative Humidity (%	): 59.1		
Product: Mini POS To	erminal							
Test Mode: 5.2GHz V	VIFI-802.	11a						
Position         Ch.         Fr. (MHz)         Power Drift (<±5%)					Scaled SAR (W/kg)	Limit (W/kg)		
Body back	40	5200	0.07	0.204	10.40	10.39	0.204	1.6
Body front	40	5200	-0.02	0.009	10.40	10.39	0.009	1.6
Edge 1 (Top)	40	5200	0.05	0.016	10.40	10.39	0.016	1.6
Edge 2(Right)	40	5200	-0.01	0.188	10.40	10 30	0.188	1.6

### Note:

- When the 1-g Reported SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. Refer to KDB 447498.
- •The test separation for body back, body front and 4 Edges is 0mm of all above table



Page 84 of 159

SAR MEASUREME	NT											
Depth of Liquid (cm	):>15			Relative Hur	nidity (%): 59.							
Product: Mini POS	Terminal		<u>.</u>									
Test Mode:5.3GHz	est Mode:5.3GHz WIFI-802.11n(20)											
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)				
Body back	56	5280	0.12	0.210	10.20	10.15	0.212	1.6				
Body front	56	5280	-0.08	0.007	10.20	10.15	0.007	1.6				
Edge 1 (Top)	56	5280	0.10	0.014	10.20	10.15	0.014	1.6				
Edge 2(Right)	56	5280	-0.06	0.175	10.20	10.15	0.177	1.6				

### Note:

- 1. When the 1-g Reported SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. Refer to KDB447498.
- 2. The test separation for body back, body front and 4 Edges is 0mm of all above table.

SAR MEASUREME	NT							
Depth of Liquid (cm)	:>15				Relative Hu	ımidity (%): 52	.3	
Product: Mini POS T	erminal							
Test Mode: 5.8GHz	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)
Body back	157	5785	0.06	0.138	10.30	10.25	0.140	1.6
Body front	157	5785	-0.13	0.007	10.30	10.25	0.007	1.6
Edge 1 (Top)	157	5785	0.09	0.006	10.30	10.25	0.006	1.6
Edge 2(Right)	157	5785	-0.12	0.120	10.30	10.25	0.121	1.6

# Note:

- When the 1-g Reported SAR is  $\leq$  0.8 W/kg, testing for low and high channel is optional. Refer to KDB 447498.
- -The test separation for body back, body front and 4 Edges is 0mm of all above table



Page 85 of 159

# Repeated SAR

Product: Mini POS Terminal

Test Mode: PCS1900& WCDMA Band II& WCDMA Band IV& WCDMA Band V& LTE Band 2& LTE Band 4& LTE Band 5& LTE Band 7& LTE Band 12& LTE Band 17& LTE Band 25& LTE Band 38& LTE Band 41

Position	Mod	e	Ch.	Fr. (MHz)	Power Drift (<±5%)	Once SAR (1g) (W/kg)	Power Drift (<±5%)	Twice SAR (1g) (W/kg)	Power Drift (<±5%)	Third SAR (1g) (W/kg)	Limit W/kg
Body back	GPRS-2 slot		810	1909.8	0.08	1.139					1.6
Body back	RMC 12.2kb	ps	9262	1852.4	-0.12	1.171					1.6
Body back	RMC 12.2kb	ps	8562	1712.4	0.17	1.276					1.6
Edge 3(Bottom)	RMC 12.2kb	ps	4183	836.4	0.08	1.110	0.07	1.113			1.6
Position	Mod		Ch.	Fr.	Power Drift	Once SAR	Power Drift	Twice SAR	Power Drift	Third SAR	Limit
1 OSILION	UL RB Allocation	UL RB START		(MHz)	(<±5%)	(1g) (W/kg)	(<±5%)	(1g) (W/kg)	(<±5%)	(1g) (W/kg)	W/kg
Body back	1	0	18900	1880	0.09	1.210					1.6
Body back	1	0	20300	1745	-0.17	1.336					1.6
Edge 3(Bottom)	1	0	20450	829	-0.05	0.887					1.6
Edge 4(Left)	1	0	21350	2560	0.12	1.396					1.6
Body back	1	0	23060	704	-0.07	1.207					1.6
Body back	1	0	23780	709	0.15	1.221					1.6
Body back	1	0	26365	1882.5	-0.09	1.279					1.6
Body back	1	0	38000	2595	-0.13	1.141					1.6
	1	0	41490	2680	0.06		1		1	1	1



Page 86 of 159

# The second repeated SAR judge reference

Product: Mini POS Terminal

Product: Min	Product: Mini POS Terminal								
Band	Position	Мо	de	Ch.	Fr. (MHz)	Orignal SAR (1g) (W/kg)	First SAR (1g) (W/kg)	Ratio	Limit
PCS1900	Body back	GPRS-2 slo	t	810	1909.8	1.252	1.139	1.099	<1.2
WCDMA Band II	Body back	RMC 12.2k	bps	9262	1852.4	1.197	1.171	1.022	<1.2
WCDMA Band IV	Body back	RMC 12.2k	bps	8562	1712.4	1.282	1.276	1.005	<1.2
WCDMA Band V	Edge 3(Bottom)	RMC 12.2k	bps	4183	836.4	1.359	1.110	1.224	>1.2
		Mod	de			Orignal	First SAR		
Band	Position	UL RB Allocatio n	UL RB START	Ch.	Fr. (MHz)	SAR (1g) (W/kg)	(1g) (W/kg)	Ratio	Limit
LTE Band 2	Body back	1	0	18900	1880	1.266	1.210	1.046	<1.2
LTE Band 4	Body back	1	0	20300	1745	1.250	1.336	0.936	<1.2
LTE Band 5	Edge 3(Bottom)	1	0	20450	829	0.885	0.887	0.998	<1.2
LTE Band 7	Edge 4(Left)	1	0	21350	2560	1.408	1.396	1.009	<1.2
LTE Band 12	Body back	1	0	23060	704	1.215	1.207	1.007	<1.2
LTE Band 17	Body back	1	0	23780	709	1.197	1.221	0.980	<1.2
LTE Band 25	Body back	1	0	26365	1882.5	1.304	1.279	1.020	<1.2
LTE Band 38	Body back	1	0	38000	2595	1.143	1.141	1.002	<1.2
LTE Band 41	Body back	1	0	41490	2680	1.181	1.216	0.971	<1.2



Page 87 of 159

# **Simultaneous Multi-band Transmission Evaluation:**

**Application Simultaneous Transmission information:** 

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



Page 88 of 159

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			luding Tune-up ance	Separation Distance (mm)	Estimated SAR (W/kg)	
		dBm	mW	Distance (IIIII)	(VV/Kg)	
ВТ	Body	5	3.16	0	0.133	



Page 89 of 159

# Sum of the SAR for GSM 850 &2.4GHz Wi-Fi & BT:

DE Evnocuro	Test	Simultane	ous Transmissio	on Scenario	Σ1-g SAR	CDI CD
RF Exposure Conditions	Position	GSM 850	2.4GHz WI-Fi DTS Band	Bluetooth	(W/kg)	(Yes/No)
	Rear	0.428	0.230		0.658	No
Body-worn	Real	0.428		0.133	0.561	
(voice)	Frant	0.225	0.049		0.274	No
	Front	0.225		0.133	0.358	No
	Rear	0.751		0.133	0.884	No
Body-worn	Real	0.751	0.230		0.981	No
(Data)	Front	0.406		0.133	0.539	No
		0.406	0.049		0.455	No
	Edge 1		0.142		0.142	No
	Edge 2		0.069		0.069	No
	Edge 3	0.572			0.572	No
Body-worn	Edge 4	0.656			0.656	No
(Hotspot)	Edge 1			0.133	0.133	No
	Edge 2			0.133	0.133	No
	Edge 3	0.572		0.133	0.705	No
	Edge 4	0.656		0.133	0.789	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"

<sup>•</sup>The report only records the worst mode of simultaneous multi-band transmission evaluation.



Page 90 of 159

# Sum of the SAR for GSM 1900 &2.4GHz Wi-Fi & BT:

RF Exposure	Test	Simultane	ous Transmission	on Scenario	71 a 84D	SPLSR
Conditions	Position	PCS 1900	2.4GHz WI-Fi DTS Band	Bluetooth	(W/kg)	(Yes/No)
	Rear	0.704	0.230		0.934	No
Body-worn	Real	0.704		0.133	(W/kg) (Y	No
(voice)	Front	0.089	0.049		0.138	No
	Front	0.089		0.133	0.222	No
	Rear	1.278		0.133	1.411	No
Body-worn	Real	1.278	0.230		1.508	No
(Data)	Front	0.141		0.133	0.274	No
		0.141	0.049		0.190	No
	Edge 1		0.142		0.142	No
	Edge 2		0.069		0.069	No
	Edge 3	0.562			0.562	No
Body-worn	Edge 4	0.149			0.149	No
(Hotspot)	Edge 1			0.133	0.133	No
	Edge 2			0.133	0.133	No
	Edge 3	0.562		0.133	0.695	No
	Edge 4	0.149		0.133	0.282	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"

<sup>•</sup>The report only records the worst mode of simultaneous multi-band transmission evaluation.



Page 91 of 159

# Sum of the SAR for WCDMA Band II &2.4GHz Wi-Fi & BT:

	Test Position	Simultaneo	us Transmissi	on Scenario		
RF Exposure Conditions		WCDMA Band II	2.4GHz Wi-Fi DTS Band	Bluetooth	Σ1-g SAR (W/kg)	SPLSR (Yes/No)
	Rear	1.268	0.230		1.498	No
	Front	0.206	0.049		0.255	No
	Edge 1		0.142		0.142	No
	Edge 2		0.069		0.069	No
	Edge 3	0.749			0.749	No
Pody worn	Edge 4	0.149			0.149	No
Body-worn	Rear	1.268		0.133	1.401	No
	Front	0.206		0.133	0.339	No
	Edge 1			0.133	0.133	No
	Edge 2			0.133	0.133	No
	Edge 3	0.749		0.133	0.882	No
	Edge 4	0.149		0.133	0.282	No

# Note:

- -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.
- -SPLSR mean is "The SAR to Peak Location Separation Ratio"
- •The report only records the worst mode of simultaneous multi-band transmission evaluation.

# Sum of the SAR for WCDMA Band IV &2.4GHz Wi-Fi & BT:

		Simultaneo	us Transmissi	on Scenario		
RF Exposure Conditions	Test Position	WCDMA Band IV	2.4GHz Wi-Fi DTS Band	Bluetooth	Σ1-g SAR (W/kg)	SPLSR (Yes/No)
	Rear	1.312	0.230		1.542	No
	Front	0.209	0.049		0.258	No
	Edge 1		0.142		0.142	No
	Edge 2		0.069		0.069	No
	Edge 3	0.721			0.721	No
Pody worn	Edge 4	0.244			0.244	No
Body-worn	Rear	1.312		0.133	1.445	No
	Front	0.209		0.133	0.342	No
	Edge 1			0.133	0.133	No
	Edge 2			0.133	0.133	No
	Edge 3	0.721		0.133	0.854	No
	Edge 4	0.244		0.133	0.377	No

# Note:

- -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.
- -SPLSR mean is "The SAR to Peak Location Separation Ratio"
- •The report only records the worst mode of simultaneous multi-band transmission evaluation.



Page 92 of 159

# Sum of the SAR for WCDMA Band V &2.4GHz Wi-Fi & BT:

		Simultaneo	us Transmissio	on Scenario		
RF Exposure Conditions	Test Position	WCDMA Band V	2.4GHz Wi-Fi DTS Band	Bluetooth	Σ1-g SAR (W/kg)	SPLSR (Yes/No)
	Rear	1.254	0.230		1.484	No
	Front	1.208	0.049		1.257	No
	Edge 1		0.142		0.142	No
	Edge 2		0.069		0.069	No
	Edge 3	1.404			1.404	No
Pody worn	Edge 4	1.117			1.117	No
Body-worn	Rear	1.254		0.133	1.387	No
	Front	1.208		0.133	1.341	No
	Edge 1			0.133	0.133	No
	Edge 2			0.133	0.133	No
	Edge 3	1.404		0.133	1.537	No
	Edge 4	1.117		0.133	1.250	No

### Note:

- ·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.
- -SPLSR mean is "The SAR to Peak Location Separation Ratio"
- •The report only records the worst mode of simultaneous multi-band transmission evaluation.

# Sum of the SAR for LTE Band 2 &2.4GHz Wi-Fi & BT:

RF Exposure	Test	Simultaneo	ous Transmissio	n Scenario	Σ1-g SAR	SPLSR (Yes/No)
Conditions	Position	LTE Band 2	2.4GHz Wi-Fi DTS Band	Bluetooth	(W/kg)	
	Rear	1.350	0.230		1.580	No
	Front	0.283	0.049		0.332	No
	Edge 1		0.142		0.142	No
	Edge 2		0.069		0.069	No
	Edge 3	1.003			1.003	No
Body-worn	Edge 4	0.074			0.074	No
Body-worn	Rear	1.350		0.133	1.483	No
	Front	0.283		0.133	0.416	No
	Edge 1			0.133	0.133	No
	Edge 2			0.133	0.133	No
	Edge 3	1.003		0.133	1.136	No
	Edge 4	0.074		0.133	0.207	No

### Note:

- -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.
- -SPLSR mean is "The SAR to Peak Location Separation Ratio"
- •The report only records the worst mode of simultaneous multi-band transmission evaluation.



Page 93 of 159

# Sum of the SAR for LTE Band 4 &2.4GHz Wi-Fi & BT:

RF Exposure	Test	Simultaneo	ous Transmissio	n Scenario	Σ1-g SAR	SPLSR
Conditions	Position	LTE Band 4	2.4GHz Wi-Fi DTS Band	Bluetooth	(W/kg)	(Yes/No)
	Rear	1.256	0.230		1.486	No
	Front	0.227	0.049		0.276	No
	Edge 1		0.142		0.142	No
	Edge 2		0.069		0.069	No
	Edge 3	1.110			1.110	No
Body-worn	Edge 4	0.247			0.247	No
Body-worn	Rear	1.256		0.133	1.389	No
	Front	0.227		0.133	0.360	No
	Edge 1			0.133	0.133	No
	Edge 2			0.133	0.133	No
	Edge 3	1.110		0.133	1.243	No
	Edge 4	0.247		0.133	0.380	No

### Note:

- -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.
- ·SPLSR mean is "The SAR to Peak Location Separation Ratio"
- •The report only records the worst mode of simultaneous multi-band transmission evaluation.

## Sum of the SAR for LTE Band 5 &2.4GHz Wi-Fi & BT:

RF Exposure	Test	Simultaneo	ous Transmissio	n Scenario	Σ1-g SAR	SPLSR
Conditions	Position	LTE Band 5	2.4GHz Wi-Fi DTS Band	Bluetooth	(W/kg)	(Yes/No)
	Rear	0.948	0.230		1.178	No
	Front	0.623	0.049		0.672	No
	Edge 1		0.142		0.142	No
	Edge 2		0.069		0.069	No
	Edge 3	0.991			0.991	No
Pody worn	Edge 4	0.746			0.746	No
Body-worn	Rear	0.948		0.133	1.081	No
	Front	0.623		0.133	0.756	No
	Edge 1			0.133	0.133	No
	Edge 2			0.133	0.133	No
	Edge 3	0.991		0.133	1.124	No
	Edge 4	0.746		0.133	0.879	No

# Note:

- -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.
- -SPLSR mean is "The SAR to Peak Location Separation Ratio"
- •The report only records the worst mode of simultaneous multi-band transmission evaluation.



Page 94 of 159

# Sum of the SAR for LTE Band 7 &2.4GHz Wi-Fi & BT:

RF Exposure	Test	Simultaneo	ous Transmissio	n Scenario	Σ1-g SAR	SPLSR
Conditions	Position	LTE Band 7	2.4GHz Wi-Fi DTS Band	Bluetooth	(W/kg)	(Yes/No)
	Rear	1.368	0.230		1.598	No
	Front	0.238	0.049		0.287	No
	Edge 1		0.142		0.142	No
	Edge 2		0.069		0.069	No
	Edge 3	0.448			0.448	No
Pody worn	Edge 4	1.408			1.408	No
Body-worn	Rear	1.368		0.133	1.501	No
	Front	0.238		0.133	0.371	No
	Edge 1			0.133	0.133	No
	Edge 2			0.133	0.133	No
	Edge 3	0.448		0.133	0.581	No
	Edge 4	1.408		0.133	1.541	No

### Note:

- -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.
- ·SPLSR mean is "The SAR to Peak Location Separation Ratio"
- •The report only records the worst mode of simultaneous multi-band transmission evaluation.

# Sum of the SAR for LTE Band 12 &2.4GHz Wi-Fi & BT:

RF Exposure Conditions	Test	Simultaneo	ous Transmission Scenario		Σ1-g SAR	SPLSR
	Position	LTE Band 12	2.4GHz Wi-Fi DTS Band	Bluetooth	(W/kg)	(Yes/No)
	Rear	1.232	0.230		1.462	No
	Front	0.402	0.049		0.451	No
	Edge 1		0.142		0.142	No
	Edge 2		0.069		0.069	No
	Edge 3	0.830			0.830	No
Body-worn	Edge 4	1.021			1.021	No
Body-worn	Rear	1.232		0.133	1.365	No
	Front	0.402		0.133	0.535	No
	Edge 1			0.133	0.133	No
	Edge 2			0.133	0.133	No
	Edge 3	0.830		0.133	0.963	No
	Edge 4	1.021		0.133	1.154	No

### Note:

- -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.
- SPLSR mean is "The SAR to Peak Location Separation Ratio"
- •The report only records the worst mode of simultaneous multi-band transmission evaluation.



Page 95 of 159

# Sum of the SAR for LTE Band 17 &2.4GHz Wi-Fi & BT:

RF Exposure	Test	Simultaneo	ous Transmissio	n Scenario	Σ1-g SAR	SPLSR (Yes/No)
Conditions	Position	LTE Band 17	2.4GHz Wi-Fi DTS Band	Bluetooth	(W/kg)	
	Rear	1.259	0.230		1.489	No
	Front	0.476	0.049		0.525	No
	Edge 1		0.142		0.142	No
	Edge 2		0.069		0.069	No
	Edge 3	0.710			0.710	No
Dody worn	Edge 4	0.991			0.991	No
Body-worn	Rear	1.259		0.133	1.392	No
	Front	0.476		0.133	0.609	No
	Edge 1			0.133	0.133	No
	Edge 2			0.133	0.133	No
	Edge 3	0.710		0.133	0.843	No
	Edge 4	0.991		0.133	1.124	No

### Note:

- ·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.
- ·SPLSR mean is "The SAR to Peak Location Separation Ratio"
- •The report only records the worst mode of simultaneous multi-band transmission evaluation.

# Sum of the SAR for LTE Band 25 &2.4GHz Wi-Fi & BT:

RF Exposure	Test	Simultaneo	ous Transmission Scenario		Σ1-g SAR	SPLSR
Conditions	Position	LTE Band 25	2.4GHz Wi-Fi DTS Band	Bluetooth	(W/kg)	(Yes/No)
	Rear	1.350	0.230		1.580	No
	Front	0.262	0.049		0.311	No
	Edge 1		0.142		0.142	No
	Edge 2		0.069		0.069	No
	Edge 3	1.016			1.016	No
Body-worn	Edge 4	0.172			0.172	No
Body-worn	Rear	1.350		0.133	1.483	No
	Front	0.262		0.133	0.395	No
	Edge 1			0.133	0.133	No
	Edge 2			0.133	0.133	No
	Edge 3	1.016		0.133	1.149	No
	Edge 4	0.172		0.133	0.305	No

# Note:

- -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.
- -SPLSR mean is "The SAR to Peak Location Separation Ratio"
- •The report only records the worst mode of simultaneous multi-band transmission evaluation.



Page 96 of 159

# Sum of the SAR for LTE Band 26A &2.4GHz Wi-Fi & BT:

RF Exposure Conditions	Test	Simultaneo	ous Transmissio	n Scenario	Σ1-g SAR	SPLSR
	Position	LTE Band 26	2.4GHz Wi-Fi DTS Band	Bluetooth	(W/kg)	(Yes/No)
	Rear	0.612	0.230		0.842	No
	Front	0.483	0.049		0.532	No
	Edge 1		0.142		0.142	No
	Edge 2		0.069		0.069	No
	Edge 3	0.612			0.612	No
Pody worn	Edge 4	0.532			0.532	No
Body-worn	Rear	0.612		0.133	0.745	No
	Front	0.483		0.133	0.616	No
	Edge 1			0.133	0.133	No
	Edge 2			0.133	0.133	No
	Edge 3	0.612		0.133	0.745	No
	Edge 4	0.532		0.133	0.665	No

### Note:

- ·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.
- ·SPLSR mean is "The SAR to Peak Location Separation Ratio"
- •The report only records the worst mode of simultaneous multi-band transmission evaluation.

# Sum of the SAR for LTE Band 38 &2.4GHz Wi-Fi & BT:

RF Exposure	Test	Simultaneo	ous Transmissio	n Scenario	Σ1-g SAR	SPLSR (Yes/No)
Conditions	Position	LTE Band 38	2.4GHz Wi-Fi DTS Band	Bluetooth	(W/kg)	
	Rear	1.159	0.230		1.389	No
	Front	0.203	0.049		0.252	No
	Edge 1		0.142		0.142	No
	Edge 2		0.069		0.069	No
	Edge 3	0.421			0.421	No
Body-worn	Edge 4	1.121			1.121	No
Body-worn	Rear	1.159		0.133	1.292	No
	Front	0.203		0.133	0.336	No
	Edge 1			0.133	0.133	No
	Edge 2			0.133	0.133	No
	Edge 3	0.421		0.133	0.554	No
	Edge 4	1.121		0.133	1.254	No

# Note:

- -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.
- -SPLSR mean is "The SAR to Peak Location Separation Ratio"
- •The report only records the worst mode of simultaneous multi-band transmission evaluation.



Page 97 of 159

## Sum of the SAR for LTE Band 41 &2.4GHz Wi-Fi & BT:

DE Evnosuro	Test	Simultaneo	Simultaneous Transmission Scenario			SPLSR
RF Exposure Conditions	Position	LTE Band 41	2.4GHz Wi-Fi DTS Band	Bluetooth	Σ1-g SAR (W/kg)	(Yes/No)
	Rear	1.189	0.230		1.419	No
	Front	0.220	0.049		0.269	No
	Edge 1		0.142		0.142	No
	Edge 2		0.069		0.069	No
	Edge 3	0.414			0.414	No
Pody worn	Edge 4	1.185			1.185	No
Body-worn	Rear	1.189		0.133	1.322	No
	Front	0.220		0.133	0.353	No
	Edge 1			0.133	0.133	No
	Edge 2			0.133	0.133	No
	Edge 3	0.414		0.133	0.547	No
	Edge 4	1.185		0.133	1.318	No

## Note:

- -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.
- ·SPLSR mean is "The SAR to Peak Location Separation Ratio "
- •The report only records the worst mode of simultaneous multi-band transmission evaluation.



Page 98 of 159

# APPENDIX A. SAR SYSTEM CHECK DATA

Test Laboratory: AGC Lab Date: Sep. 11, 2022

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=1.39 Frequency: 750 MHz; Medium parameters used: f = 750 MHz;  $\sigma = 0.88$  mho/m;  $\epsilon r = 41.64$ ;  $\rho = 1000$  kg/m³;

Phantom section: Flat Section; Input Power=18dBm

Ambient temperature ( $^{\circ}$ C):21.9, Liquid temperature ( $^{\circ}$ C): 21.7

# **SATIMO Configuration:**

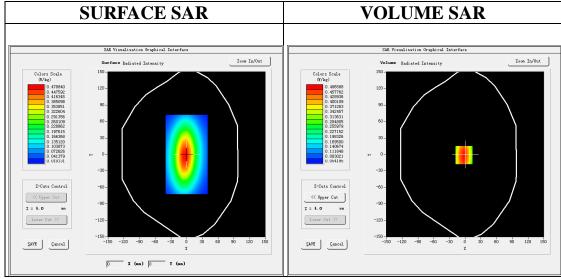
• Probe: SSE2; Calibrated: Apr. 13, 2022; Serial No.: SN 13/22 EPGO368

• 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



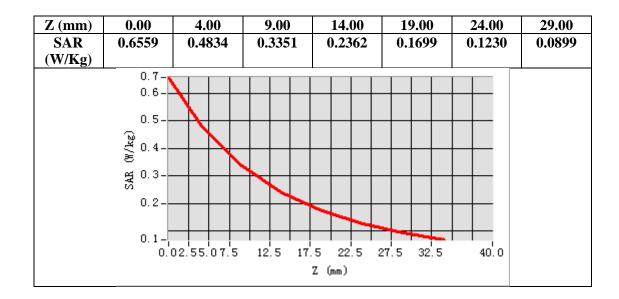
Maximum location: X=-2.00, Y=-1.00

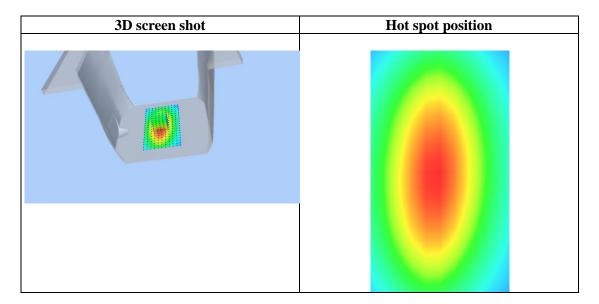
SAR Peak: 0.67W/kg

SAR 10g (W/Kg)	0.325040
SAR 1g (W/Kg)	0.516324











Date: Sep. 14, 2022

Page 100 of 159

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=1.42 Frequency: 835 MHz; Medium parameters used: f = 835 MHz;  $\sigma = 0.91$  mho/m;  $\epsilon r = 41.69$ ;  $\rho = 1000$  kg/m³;

Phantom section: Flat Section; Input Power=18dBm

Ambient temperature ( $^{\circ}$ C):21.3, Liquid temperature ( $^{\circ}$ C): 21.1

# SATIMO Configuration:

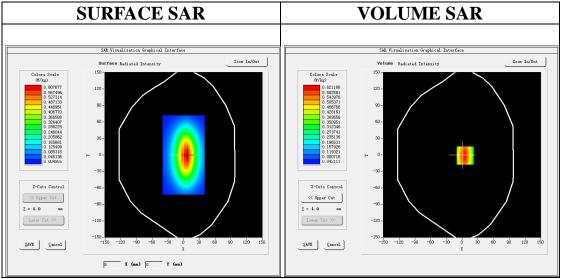
• Probe: SSE2; Calibrated: Apr. 13, 2022; Serial No.: SN 13/22 EPGO368

• 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

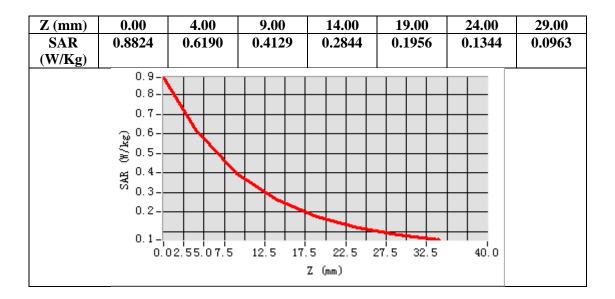


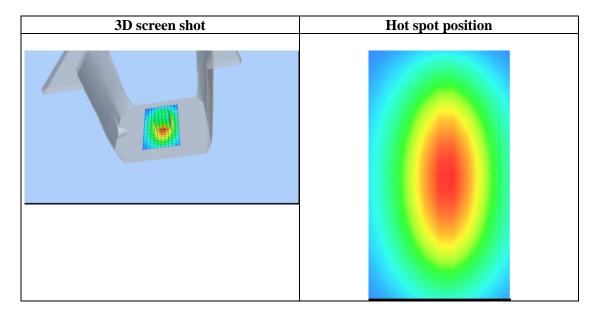
Maximum location: X=6.00, Y=-1.00 SAR Peak: 0.86 W/kg

<b>SAR 10g (W/Kg)</b>	0.373921
SAR 1g (W/Kg)	0.601836











Date: Sep. 12, 2022

Page 102 of 159

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=1.73 Frequency: 1750 MHz; Medium parameters used: f = 1750 MHz;  $\sigma = 1.38 \text{ mho/m}$ ;  $\epsilon r = 39.99$ ;  $\rho = 1000 \text{ kg/m}^3$ ;

Phantom section: Flat Section; Input Power=18dBm

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

# **SATIMO Configuration:**

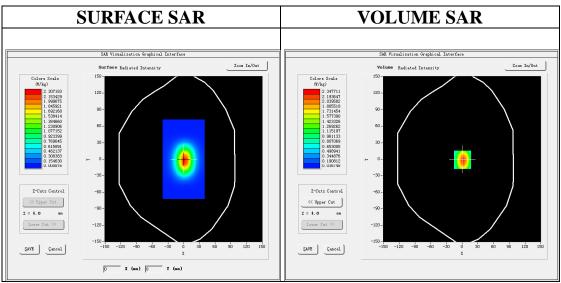
Probe: SSE2; Calibrated: Apr. 13, 2022; Serial No.: SN 13/22 EPGO368

• 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

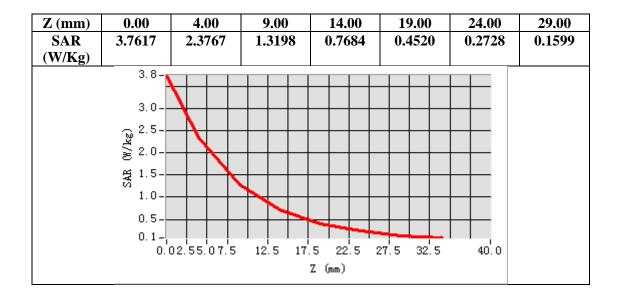


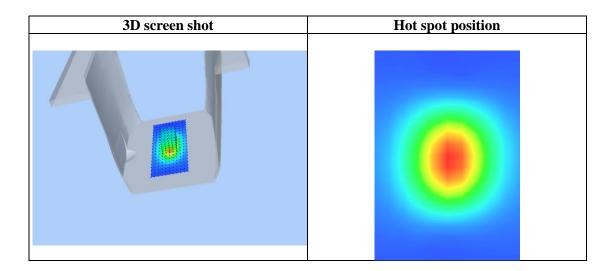
Maximum location: X=1.00, Y=-1.00 SAR Peak: 3.75 W/kg

<b>SAR 10g (W/Kg)</b>	1.187414
SAR 1g (W/Kg)	2.329737











Date: Sep. 13, 2022

Page 104 of 159

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=1.77 Frequency: 1900 MHz; Medium parameters used: f = 1900 MHz;  $\sigma = 1.42$  mho/m;  $\epsilon r = 40.14$ ;  $\rho = 1000$  kg/m<sup>3</sup>;

Phantom section: Flat Section; Input Power=18dBm

Ambient temperature ( $^{\circ}$ C):21.5, Liquid temperature ( $^{\circ}$ C): 21.3

# SATIMO Configuration:

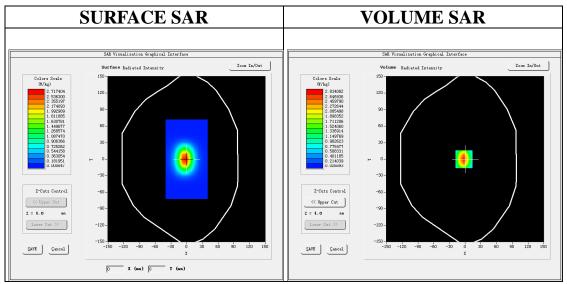
Probe: SSE2; Calibrated: Apr. 13, 2022; Serial No.: SN 13/22 EPGO368

• 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



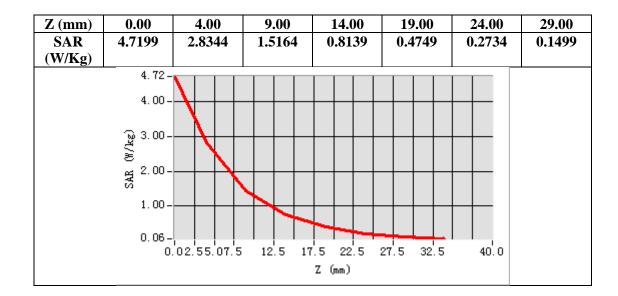
Maximum location: X=-2.00, Y=0.00

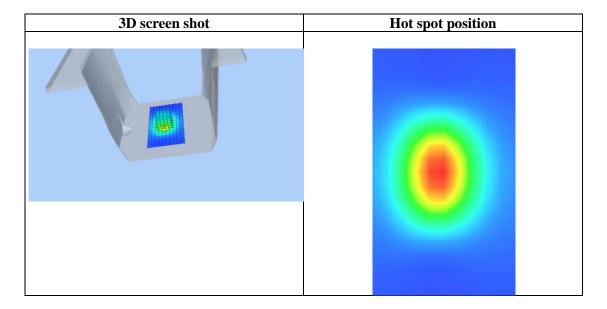
SAR Peak: 4.68 W/kg
SAR 10g (W/Kg) 1.34

<b>SAR 10g (W/Kg)</b>	1.346687
SAR 1g (W/Kg)	2.707040











Date: Sep. 12, 2022

Page 106 of 159

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=1.99 Frequency: 2450 MHz; Medium parameters used: f = 2450 MHz;  $\sigma = 1.82$  mho/m;  $\epsilon r = 39.33$ ;  $\rho = 1000$  kg/m³;

Phantom section: Flat Section; Input Power=18dBm

Ambient temperature (°C):21.7, Liquid temperature (°C): 21.5

# **SATIMO Configuration**

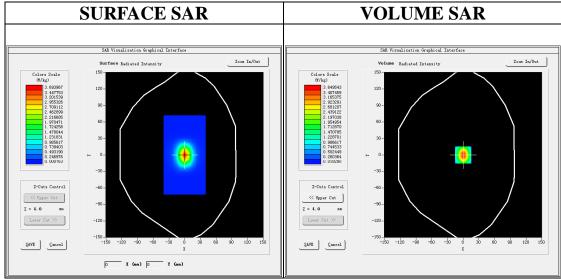
Probe: SSE2; Calibrated: Apr. 13, 2022; Serial No.: SN 13/22 EPGO368

• 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

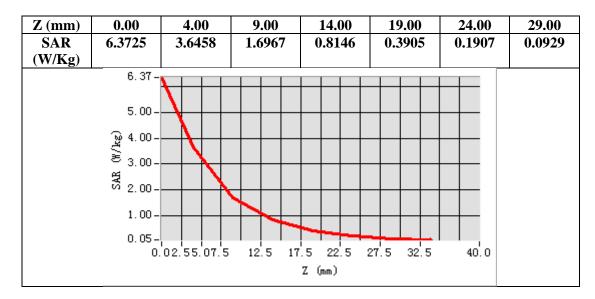


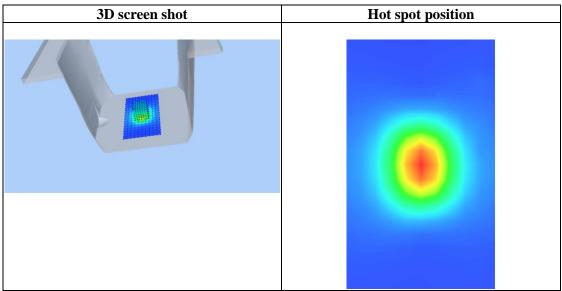
Maximum location: X=0.00, Y=0.00 SAR Peak: 6.21 W/kg

<b>SAR 10g (W/Kg)</b>	1.496684
SAR 1g (W/Kg)	3.339361











Date: Sep. 08, 2022

Page 108 of 159

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=1.82 Frequency:2600 MHz; Medium parameters used: f = 2600 MHz;  $\sigma = 1.98$  mho/m;  $\epsilon r = 38.64$ ;  $\rho = 1000$  kg/m<sup>3</sup>;

Phantom section: Flat Section; Input Power=18dBm

Ambient temperature ( $^{\circ}$ ): 21.2, Liquid temperature ( $^{\circ}$ ): 21.0

# **SATIMO Configuration:**

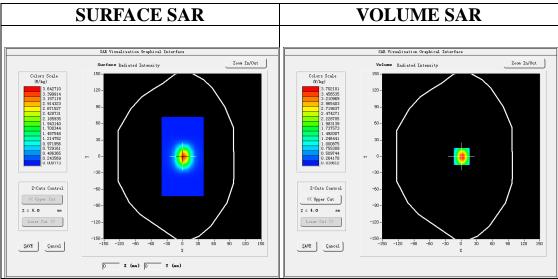
• Probe: SSE2; Calibrated: Apr. 13, 2022; Serial No.: SN 13/22 EPGO368

• 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

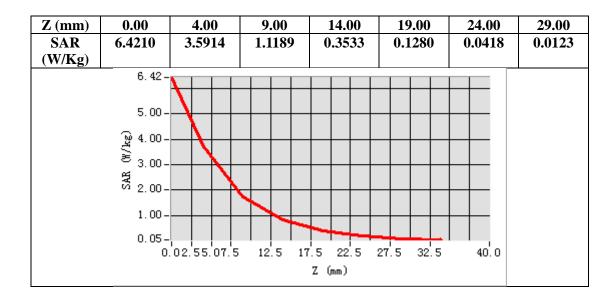


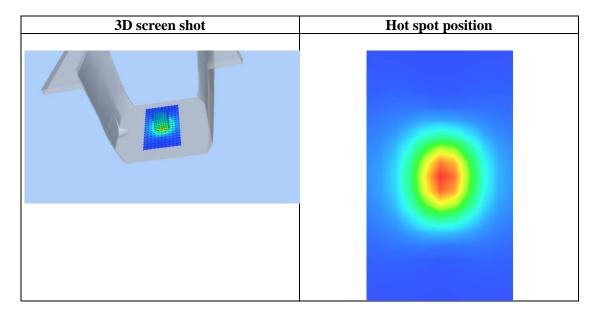
Maximum location: X=1.00, Y=0.00 SAR Peak: 6.41 W/kg

<b>SAR 10g (W/Kg)</b>	1.476787
SAR 1g (W/Kg)	3.364309











Date: Sep. 15, 2022

Page 110 of 159

Test Laboratory: AGC Lab System Check 5200 MHz

DUT: Dipole 5000MHz Type: SWG5500

Communication System: CW; Communication System Band: D5000 (5000.0 MHz); Duty Cycle: 1:1; Conv.F=1.28 Frequency: 5200 MHz; Medium parameters used: f = 5200 MHz;  $\sigma = 4.60$  mho/m;  $\epsilon r = 36.38$ ;  $\rho = 1000$  kg/m³;

Phantom section: Flat Section; Input Power=10dBm

Ambient temperature (°C): 21.4, Liquid temperature (°C): 21.2

### SATIMO Configuration:

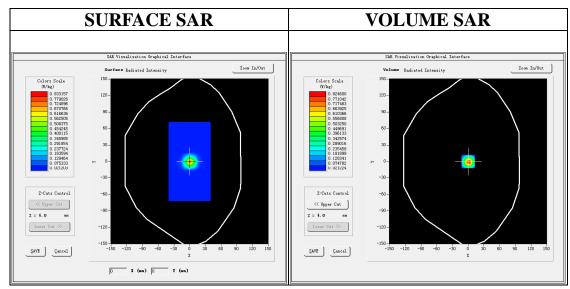
• Probe: SSE2; Calibrated: Apr. 13, 2022; Serial No.: SN 13/22 EPGO368

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

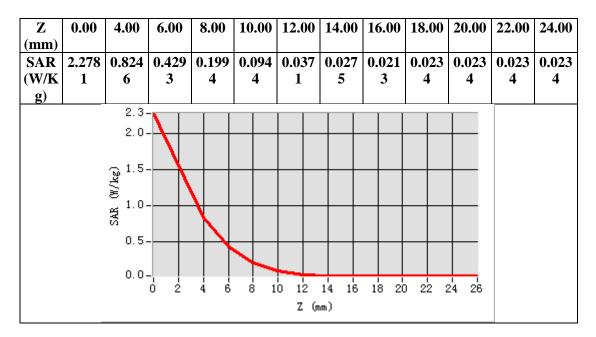


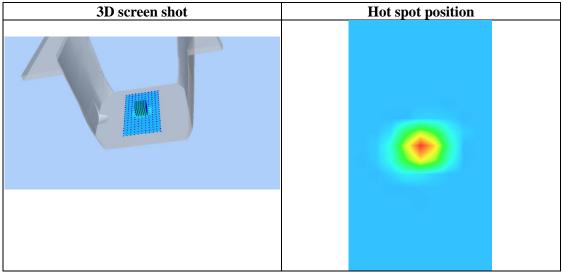
Maximum location: X=0.00, Y=0.00 SAR Peak: 2.27 W/kg

<b>SAR 10g (W/Kg)</b>	0.220321
SAR 1g (W/Kg)	0.765126











Date: Sep. 15, 2022

Page 112 of 159

Test Laboratory: AGC Lab
System Check 5200 MHz

DUT: Dipole 5000MHz Type: SWG5500

Communication System: CW; Communication System Band: D5000 (5000.0 MHz); Duty Cycle: 1:1; Conv.F=1.49 Frequency: 5200 MHz; Medium parameters used: f = 5200 MHz;  $\sigma = 4.92$  mho/m;  $\epsilon r = 36.21$ ;  $\rho = 1000$  kg/m³;

Phantom section: Flat Section; Input Power=10dBm

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

### SATIMO Configuration:

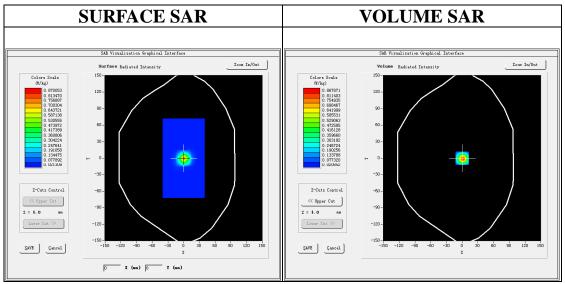
Probe: SSE2; Calibrated: Apr. 13, 2022; Serial No.: SN 13/22 EPGO368

• 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

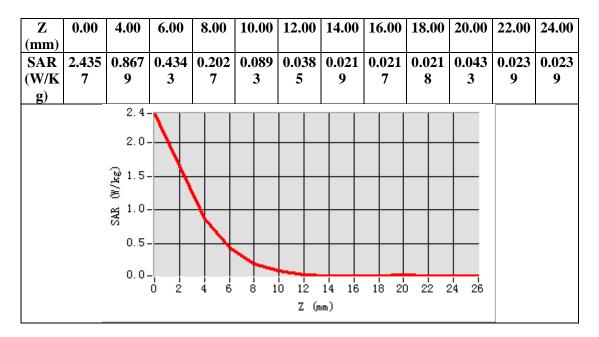


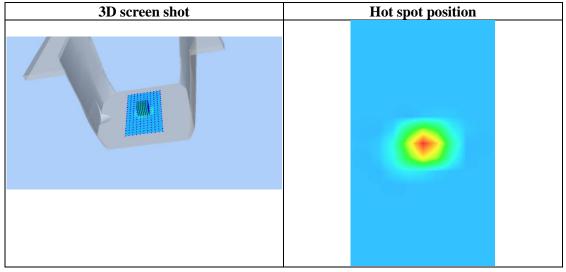
Maximum location: X=0.00, Y=0.00 SAR Peak: 2.42 W/kg

<b>SAR 10g (W/Kg)</b>	0.230377
SAR 1g (W/Kg)	0.804481











Date: Sep. 15, 2022

Page 114 of 159

Test Laboratory: AGC Lab System Check Head 5800 MHz

DUT: Dipole 5000MHz Type: SWG5500

Communication System: CW; Communication System Band: D5000 (5000.0 MHz); Duty Cycle: 1:1; Conv.F=1.42 Frequency: 5800 MHz; Medium parameters used: f = 5800 MHz;  $\sigma = 5.33$  mho/m;  $\epsilon r = 35.54$ ;  $\rho = 1000$  kg/m³;

Phantom section: Flat Section; Input Power=10dBm

Ambient temperature ( $^{\circ}$ C): 21.2, Liquid temperature ( $^{\circ}$ C): 21.0

### **SATIMO Configuration:**

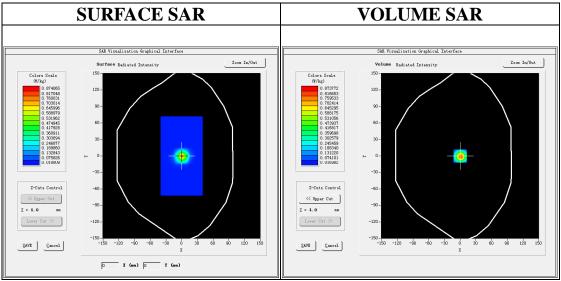
• Probe: SSE2; Calibrated: Apr. 13, 2022; Serial No.: SN 13/22 EPGO368

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

• Phantom: SAM twin phantom

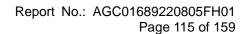
Measurement SW: OpenSAR V4 02 35

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



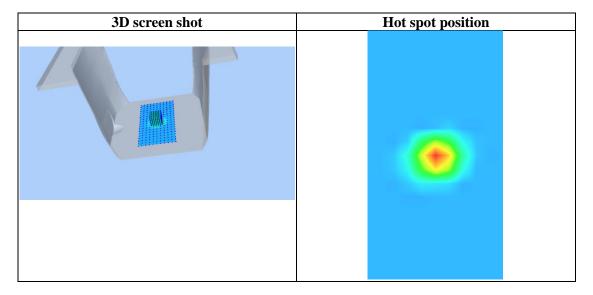
Maximum location: X=0.00, Y=0.00 SAR Peak: 2.42 W/kg

<b>SAR 10g (W/Kg)</b>	0.229985
SAR 1g (W/Kg)	0.803615





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
SAR	2.445	0.873	0.439	0.205	0.093	0.027	0.021	0.021	0.021	0.021	0.021	0.021
(W/K	1	8	8	8	5	3	0	0	0	0	0	0
g)												
		2.4- 2.0- 2.1.5- 3.1.0- 2.0- 0.0-		4 6	8 1	0 12 Z (n	14 16	18 20	) 22 3	1 1 24 26		





Page 116 of 159

# APPENDIX B. SAR MEASUREMENT DATA

Test Laboratory: AGC Lab Date: Sep. 14, 2022

GPRS 850 Mid- Body- Back (2up) DUT: Mini POS Terminal; Type: P12

Communication System: GPRS-2 Slot; Communication System Band: GSM 850; Duty Cycle: 1:4.2; Conv.F=1.42; Frequency: 836.6 MHz; Medium parameters used: f = 835 MHz;  $\sigma = 0.92$  mho/m;  $\epsilon r = 41.45$ ;  $\rho = 1000$  kg/m<sup>3</sup>;

Phantom section: Flat Section

Ambient temperature (°C): 21.3, Liquid temperature (°C): 21.1

## **SATIMO Configuration:**

Probe: SSE2; Calibrated: Apr. 13, 2022; Serial No.: SN 13/22 EPGO368

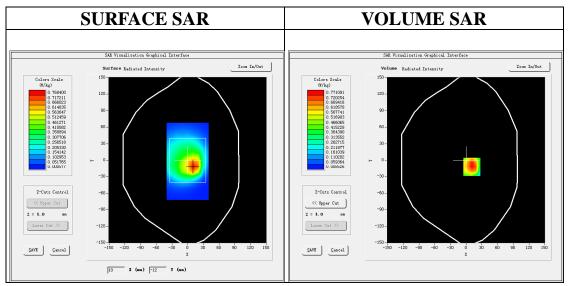
• Sensor-Surface: 4mm (Mechanical Surface Detection)

• Phantom: SAM twin phantom

• Measurement SW: OpenSAR V4\_02\_35

Configuration/GPRS 850 Mid-Body-Back/Area Scan: Measurement grid: dx=10mm, dy=10mm 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
Phantom	Validation plane
Device Position	Body Back
Band	GSM 850
Channels	Middle
Signal	TDMA (Crest factor: 4.0)



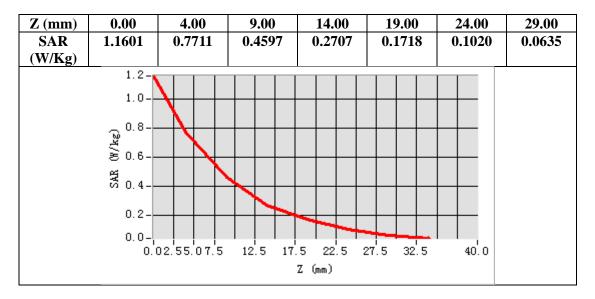
**Maximum location: X=11.00, Y=-12.00** 

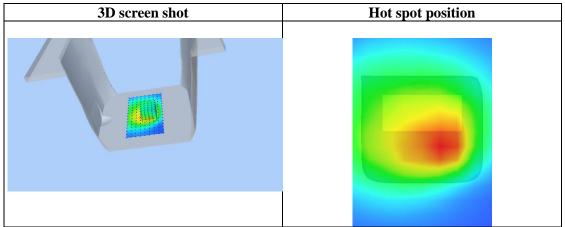
SAR Peak: 1.31 W/kg

SAR 10g (W/Kg)	0.419197
SAR 1g (W/Kg)	0.748587











Page 118 of 159

Test Laboratory: AGC Lab Date: Sep. 13, 2022

GPRS 1900 High-Body-Back (2up) DUT: Mini POS Terminal; Type: P12

Communication System: GPRS-2Slot; Communication System Band: PCS 1900; Duty Cycle: 1:4.2; Conv.F=1.77; Frequency: 1909.8 MHz; Medium parameters used: f = 1800 MHz;  $\sigma = 1.43 \text{ mho/m}$ ;  $\epsilon r = 39.98$ ;  $\rho = 1000 \text{ kg/m}^3$ ;

Phantom section: Flat Section

Ambient temperature ( $^{\circ}$ C): 21.5, Liquid temperature ( $^{\circ}$ C): 21.3

# SATIMO Configuration:

• Probe: SSE2; Calibrated: Apr. 13, 2022; Serial No.: SN 13/22 EPGO368

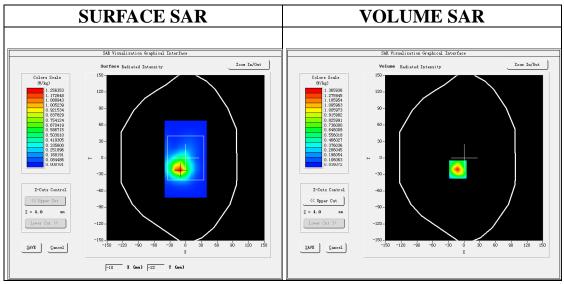
• Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: SAM twin phantom

Measurement SW: OpenSAR V4\_02\_35

**Configuration/GPRS1900 High-Body-Back/Area Scan:** Measurement grid: dx=10mm, dy=10mm **Configuration/GPRS1900 High-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
Phantom	Validation plane
Device Position	Body Back
Band	PCS 1900
Channels	High
Signal	TDMA (Crest factor: 4.0)

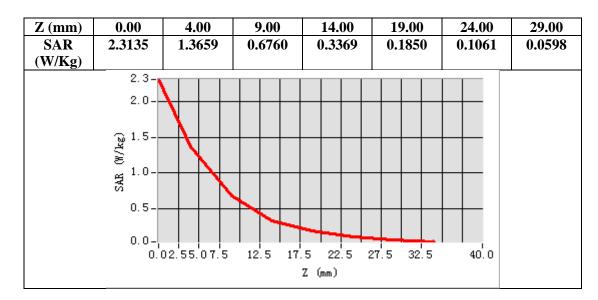


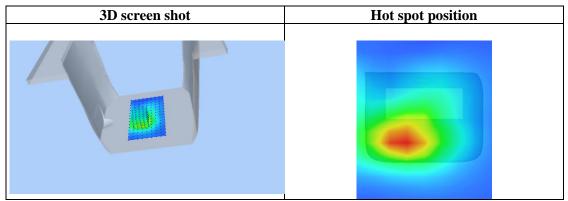
Maximum location: X=-12.00, Y=-21.00 SAR Peak: 2.30 W/kg

CAD 40 (TILITE)	0.505000
SAR 10g (W/Kg)	0.587902
SAR 1g (W/Kg)	1.252413











Page 120 of 159

Test Laboratory: AGC Lab Date: Sep. 13, 2022

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

DUT: Mini POS Terminal; Type: P12

Communication System: UMTS; Communication System Band: Band II UTRA/FDD ;Duty Cycle:1:1; Conv.F=1.77; Frequency: 1852.4 MHz; Medium parameters used: f = 1800 MHz;  $\sigma = 1.39 \text{ mho/m}$ ;  $\epsilon r = 40.63$ ;  $\rho = 1000 \text{ kg/m}^3$ ;

Phantom section: Flat Section

Ambient temperature ( $^{\circ}$ C): 21.5, Liquid temperature ( $^{\circ}$ C): 21.3

#### SATIMO Configuration:

• Probe: SSE2; Calibrated: Apr. 13, 2022; Serial No.: SN 13/22 EPGO368

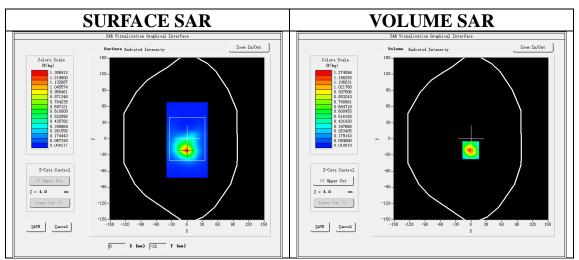
• Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: SAM twin phantom

• Measurement SW: OpenSAR V4\_02\_35

Configuration/ WCDMA band II Low-Body-Back/Area Scan: Measurement grid: dx=10mm, dy=10mm Configuration/ WCDMA band II Low-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
Phantom	Validation plane
Device Position	Body Back
Band	WCDMA band II
Channels	Low
Signal	CDMA (Crest factor: 1.0)

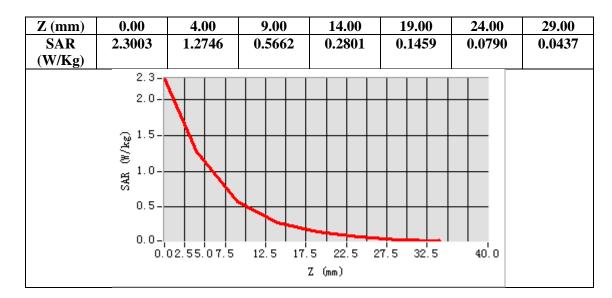


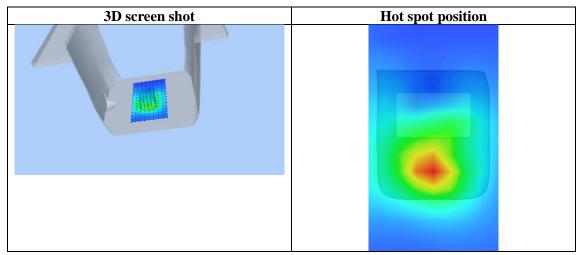
Maximum location: X=-1.00, Y=-21.00 SAR Peak: 2.28 W/kg

SAR 10g (W/Kg)	0.524459
SAR 1g (W/Kg)	1.197377











Page 122 of 159

Test Laboratory: AGC Lab Date: Sep. 12, 2022

WCDMA Band IV Low-Body-Towards Grounds (RMC 12.2kbps)

DUT: Mini POS Terminal; Type: P12

Communication System: UMTS; Communication System Band: Band IV UTRA/FDD ;Duty Cycle:1:1; Conv.F=1.73; Frequency: 1712.4 MHz; Medium parameters used: f = 1750 MHz;  $\sigma = 1.34$  mho/m;  $\epsilon r = 40.41$ ;  $\rho = 1000$  kg/m³;

Phantom section: Flat Section

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

#### SATIMO Configuration:

• Probe: SSE2; Calibrated: Apr. 13, 2022; Serial No.: SN 13/22 EPGO368

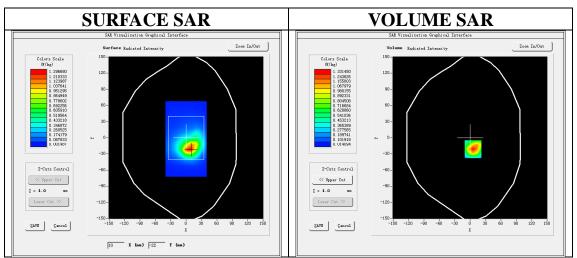
• Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: SAM twin phantom

Measurement SW: OpenSAR V4\_02\_35

Configuration/ WCDMA Band IV Low-Body-Back/Area Scan: Measurement grid: dx=10mm, dy=10mm Configuration/ WCDMA Band IV Low-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
Phantom	Validation plane
Device Position	Body Back
Band	WCDMA Band IV
Channels	Low
Signal	CDMA (Crest factor: 1.0)

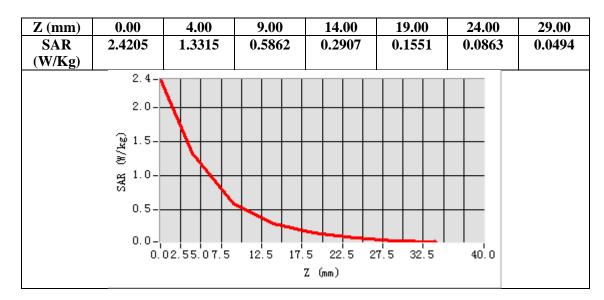


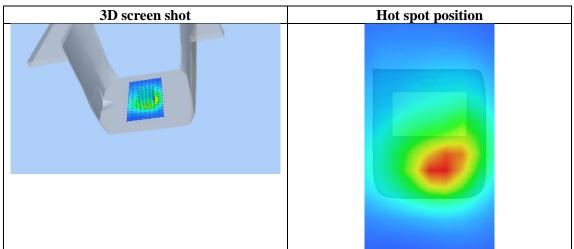
Maximum location: X=6.00, Y=-21.00 SAR Peak: 2.39 W/kg

<b>SAR 10g (W/Kg)</b>	0.592475
SAR 1g (W/Kg)	1.281985











Page 124 of 159

Test Laboratory: AGC Lab Date: Sep. 14, 2022

WCDMA Band V Mid-Body- Edge 3 (RMC) DUT: Mini POS Terminal; Type: P12

Communication System: UMTS; Communication System Band: BAND V UTRA/FDD; Duty Cycle:1: 1; Conv.F=1.42; Frequency: 836.4 MHz; Medium parameters used: f = 835MHz;  $\sigma = 0.92 \text{ mho/m}$ ;  $\epsilon r = 41.45$ ;  $\rho = 1000 \text{ kg/m}^3$ ;

Phantom section: Flat Section

Ambient temperature ( $^{\circ}$ C): 21.3, Liquid temperature ( $^{\circ}$ C): 21.1

### **SATIMO Configuration:**

• Probe: SSE2; Calibrated: Apr. 13, 2022; Serial No.: SN 13/22 EPGO368

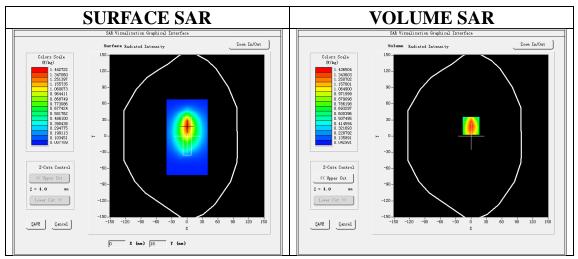
• Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: SAM twin phantom

Measurement SW: OpenSAR V4 02 35

Configuration/ WCDMA Band V Mid-Body- Edge 3/Area Scan: Measurement grid: dx=10mm, dy=10mm Configuration/ WCDMA Band V Mid-Body- Edge 3/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
Phantom	Validation plane
Device Position	Edge 3
Band	WCDMA Band V
Channels	Middle
Signal	CDMA (Crest factor: 1.0)



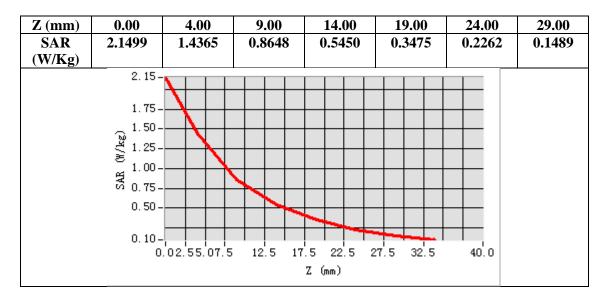
Maximum location: X=0.00, Y=19.00

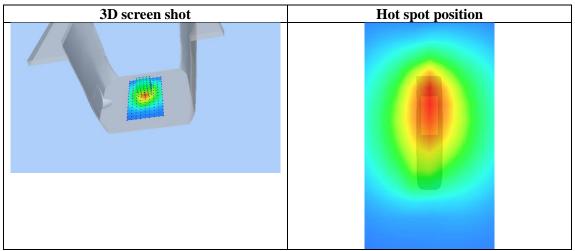
SAR Peak: 2.20 W/kg

<b>SAR 10g (W/Kg)</b>	0.787840
SAR 1g (W/Kg)	1.359127











Page 126 of 159

Test Laboratory: AGC Lab Date: Sep. 13, 2022

LTE Band 2 Mid-Body-Back (1 RB#0) DUT: Mini POS Terminal; Type: P12

Communication System: LTE; Communication System Band: LTE Band 2; Duty Cycle:1:1; Conv.F=1.77;

Frequency:1880MHz; Medium parameters used: f = 1800 MHz;  $\sigma = 1.41 \text{ mho/m}$ ;  $\epsilon r = 40.25$ ;  $\rho = 1000 \text{ kg/m}^3$ ;

Phantom section: Flat Section

Ambient temperature ( $^{\circ}$ ): 21.5, Liquid temperature ( $^{\circ}$ ): 21.3

# **SATIMO Configuration:**

Probe: SSE2; Calibrated: Apr. 13, 2022; Serial No.: SN 13/22 EPGO368

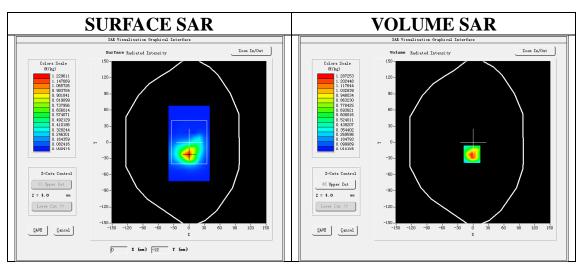
• Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: SAM twin phantom

Measurement SW: OpenSAR V4 02 35

Configuration/ LTE Band 2 Mid-Body-Back/Area Scan: Measurement grid: dx=10mm, dy=10mm Configuration/ LTE Band 2 Mid-Body-Back/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5m;

Area Scan	surf_sam_plan.txt, h= 5.00 mm
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Body Back
Band	LTE Band 2
Channels	Middle
Signal	OFDM (Crest factor: 1.0)

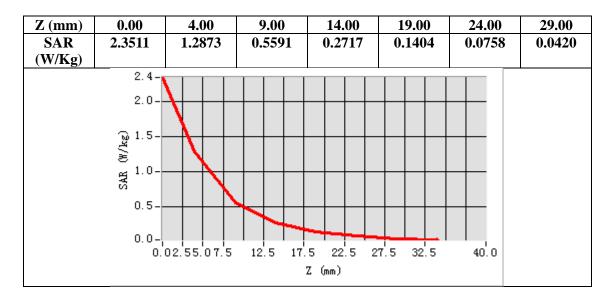


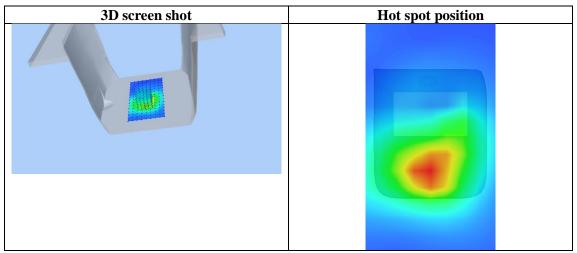
Maximum location: X=-2.00, Y=-22.00 SAR Peak: 2.45 W/kg

SAR 10g (W/Kg) 0.544856 SAR 1g (W/Kg) 1.266010











Page 128 of 159

Test Laboratory: AGC Lab Date: Sep. 12, 2022

LTE Band 4 High-Body-Back (1 RB#0) DUT: Mini POS Terminal; Type: P12

Communication System: LTE; Communication System Band: LTE Band 4; Duty Cycle:1:1; Conv.F=1.73;

Frequency:1745 MHz; Medium parameters used: f = 1800 MHz;  $\sigma = 1.37 \text{ mho/m}$ ;  $\epsilon r = 40.12$ ;  $\rho = 1000 \text{ kg/m}^3$  ;

Phantom section: Flat Section

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

# **SATIMO Configuration:**

• Probe: SSE2; Calibrated: Apr. 13, 2022; Serial No.: SN 13/22 EPGO368

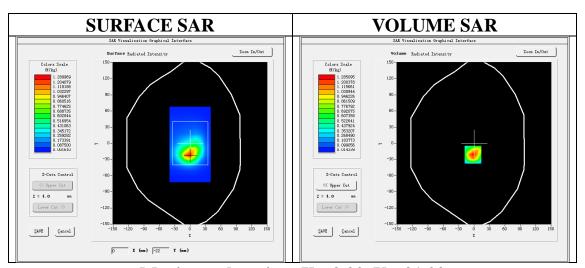
• Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: SAM twin phantom

Measurement SW: OpenSAR V4 02 35

Configuration/ LTE Band 4 High-Body-Back/Area Scan: Measurement grid: dx=10mm, dy=10mm Configuration/ LTE Band 4 High-Body-Back/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5m;

Area Scan	surf_sam_plan.txt, h= 5.00 mm
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Body Back
Band	LTE Band 4
Channels	High
Signal	OFDM (Crest factor: 1.0)



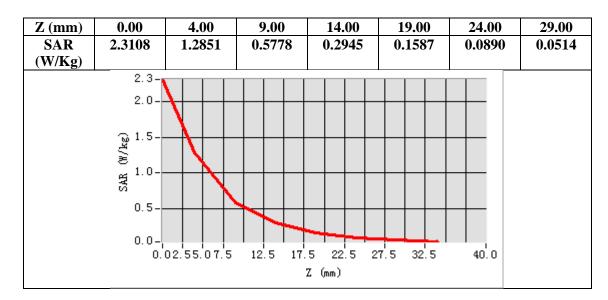
**Maximum location:** X=-2.00, Y=-21.00

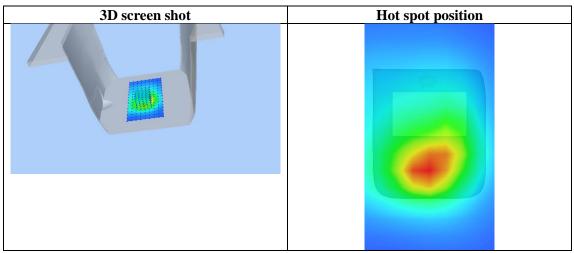
SAR Peak: 2.34 W/kg Kg) 0.572

SAR 10g (W/Kg)	0.572008
SAR 1g (W/Kg)	1.249638











Page 130 of 159

Test Laboratory: AGC Lab Date: Sep. 14, 2022

LTE Band 5 Low - Body-Edge 3 (1 RB#0) DUT: Mini POS Terminal; Type: P12

Communication System: LTE; Communication System Band: LTE Band 5; Duty Cycle:1:1; Conv.F=1.42 Frequency:829 MHz; Medium parameters used: f = 835 MHz;  $\sigma = 0.89$ mho/m;  $\epsilon r = 41.92$ ;  $\rho = 1000$  kg/m³;

Phantom section: Flat Section

Ambient temperature ( $^{\circ}$ C): 21.3, Liquid temperature ( $^{\circ}$ C): 21.1

### **SATIMO Configuration:**

• Probe: SSE2; Calibrated: Apr. 13, 2022; Serial No.: SN 13/22 EPGO368

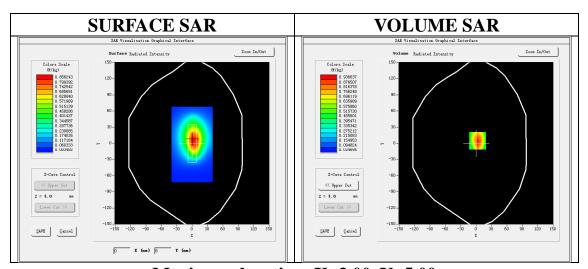
• Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: SAM twin phantom

Measurement SW: OpenSAR V4\_02\_35

Configuration/ LTE Band 5 Low- Body-Edge 3/Area Scan: Measurement grid: dx=10mm, dy=10mm Configuration/ LTE Band 5 Low- Body-Edge 3/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5m;

Area Scan	surf_sam_plan.txt, h= 5.00 mm
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Edge 3
Band	LTE Band 5
Channels	Low
Signal	OFDM (Crest factor: 1.0)

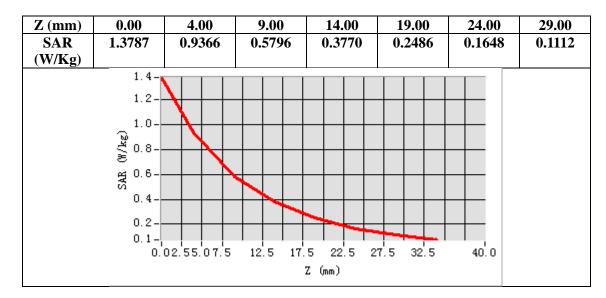


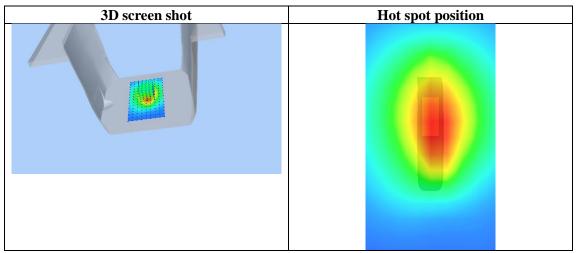
Maximum location: X=3.00, Y=5.00 SAR Peak: 1.38 W/kg

SAR 10g (W/Kg)	0.522188
SAR 1g (W/Kg)	0.884778











Page 132 of 159

Test Laboratory: AGC Lab Date: Sep. 08, 2022

LTE Band 7 High- Body-Edge 4 (1RB#0) DUT: Mini POS Terminal; Type: P12

Communication System: LTE; Communication System Band: LTE Band 7; Duty Cycle:1:1; Conv.F=1.82 Frequency: 2560MHz; Medium parameters used: f = 2600 MHz;  $\sigma = 1.95 \text{ mho/m}$ ;  $\epsilon r = 39.12$ ;  $\rho = 1000 \text{ kg/m}^3$ ;

Phantom section: Flat Section

Ambient temperature ( $^{\circ}$ ): 21.2, Liquid temperature ( $^{\circ}$ ): 21.0

# **SATIMO Configuration:**

• Probe: SSE2; Calibrated: Apr. 13, 2022; Serial No.: SN 13/22 EPGO368

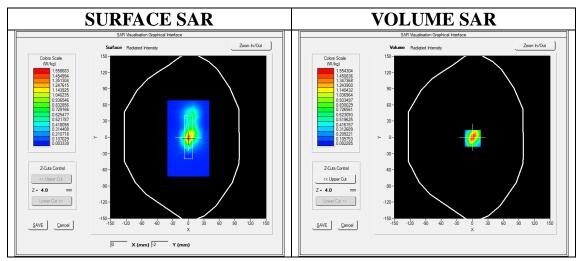
• Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: SAM twin phantom

Measurement SW: OpenSAR V4 02 35

Configuration/ LTE BAND 7 High- Body-Edge 4 /Area Scan: Measurement grid: dx=10mm, y=10mm Configuration/ LTE BAND 7 High- Body-Edge 4 /Zoom Scan: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Area Scan	surf_sam_plan.txt, h= 5.00 mm
ZoomScan	7x7x7,dx=5mm dy=5mm dz=5mm
Phantom	Validation plane
Device Position	Edge 4
Band	LTE BAND 7
Channels	High
Signal	OFDM (Crest factor: 1.0)

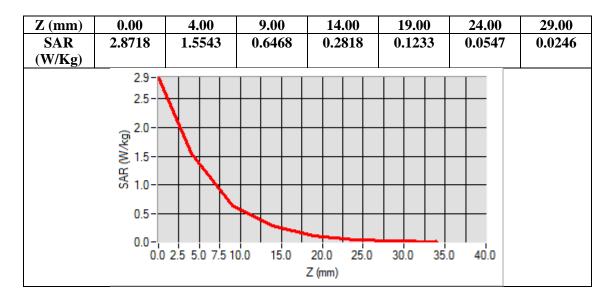


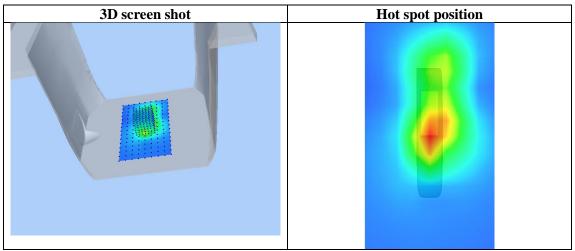
Maximum location: X=1.00, Y=-2.00 SAR Peak: 2.83 W/kg

SAR 10g (W/Kg)	0.579286
SAR 1g (W/Kg)	1.407837











Page 134 of 159

Test Laboratory: AGC Lab Date: Sep. 11, 2022

LTE Band 12 Low-Body-Back (1 RB#0) DUT: Mini POS Terminal; Type: P12

Communication System: LTE; Communication System Band: LTE Band 12; Duty Cycle:1:1; Conv.F=1.39; Frequency: 704 MHz; Medium parameters used: f = 750 MHz;  $\sigma = 0.83$  mho/m;  $\epsilon r = 42.54$ ;  $\rho = 1000$  kg/m³;

Phantom section: Flat Section

Ambient temperature ( $^{\circ}$ ): 21.9, Liquid temperature ( $^{\circ}$ ): 21.7

# **SATIMO Configuration:**

• Probe: SSE2; Calibrated: Apr. 13, 2022; Serial No.: SN 13/22 EPGO368

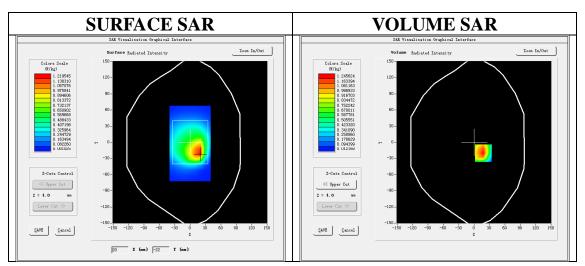
• Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: SAM twin phantom

Measurement SW: OpenSAR V4\_02\_35

Configuration/ LTE Band 12 Low-Body-Back/Area Scan: Measurement grid: dx=10mm, dy=10mm Configuration/ LTE Band 12 Low-Body-Back/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5m;

Area Scan	surf_sam_plan.txt, h= 5.00 mm
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Body Back
Band	LTE Band 12
Channels	Low
Signal	OFDM (Crest factor: 1.0)

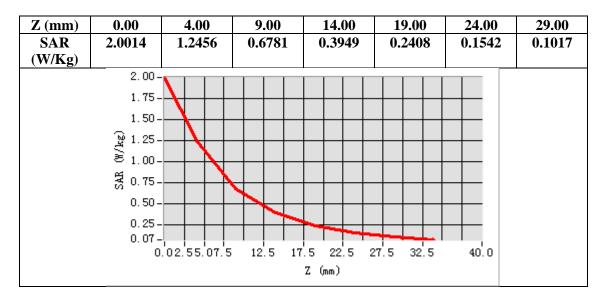


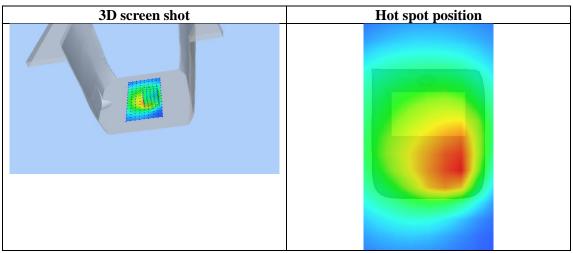
Maximum location: X=18.00, Y=-20.00 SAR Peak: 2.05 W/kg

SAR 10g (W/Kg)	0.686738
SAR 1g (W/Kg)	1.215490











Date: Sep. 11, 2022

Page 136 of 159

Test Laboratory: AGC Lab

LTE Band 17 High-Body-Back (1 RB#0) DUT: Mini POS Terminal; Type: P12

Communication System: LTE; Communication System Band: LTE Band 17; Duty Cycle:1:1; Conv.F=1.39; Frequency: 711 MHz; Medium parameters used: f = 750 MHz;  $\sigma = 0.87$  mho/m;  $\epsilon r = 41.78$ ;  $\rho = 1000$  kg/m³;

Phantom section: Flat Section

Ambient temperature ( $^{\circ}$ ): 21.9, Liquid temperature ( $^{\circ}$ ): 21.7

# **SATIMO Configuration:**

Probe: SSE2; Calibrated: Apr. 13, 2022; Serial No.: SN 13/22 EPGO368

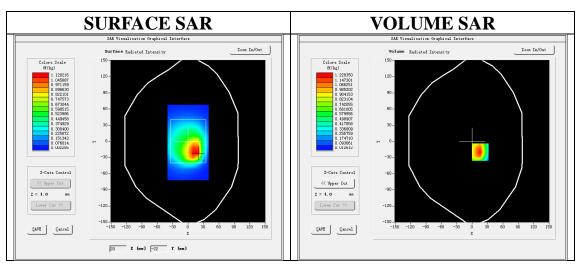
• Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: SAM twin phantom

Measurement SW: OpenSAR V4 02 35

Configuration/ LTE Band 17 High-Body-Back/Area Scan: Measurement grid: dx=10mm, dy=10mm Configuration/ LTE Band 17 High-Body-Back/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5m;

Area Scan	surf_sam_plan.txt, h= 5.00 mm
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Body Back
Band	LTE Band 17
Channels	High
Signal	OFDM (Crest factor: 1.0)

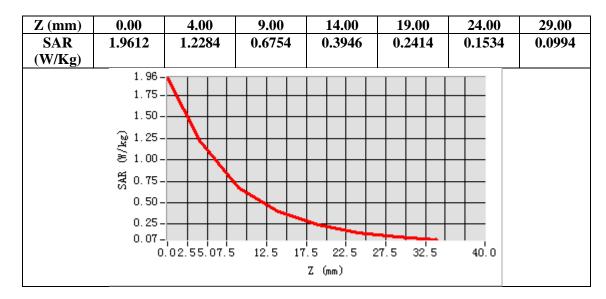


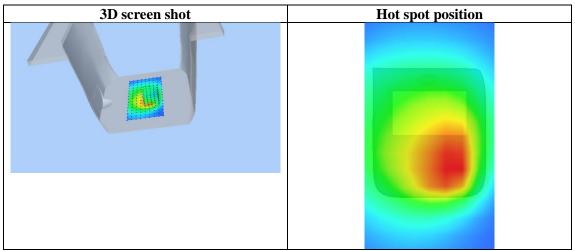
Maximum location: X=16.00, Y=-20.00 SAR Peak: 2.03 W/kg

SAR 10g (W/Kg)	0.672191
SAR 1g (W/Kg)	1.196903











Page 138 of 159

Test Laboratory: AGC Lab Date: Sep. 13, 2022

LTE Band 25 Mid-Body-Back (1 RB#0) DUT: Mini POS Terminal; Type: P12

Communication System: LTE; Communication System Band: LTE Band 25; Duty Cycle:1:1; Conv.F=1.77;

Frequency:1882.5MHz; Medium parameters used: f = 1900 MHz;  $\sigma = 1.41 \text{ mho/m}$ ;  $\epsilon r = 40.25$ ;  $\rho = 1000 \text{ kg/m}^3$ ;

Phantom section: Flat Section

Ambient temperature ( $^{\circ}$ C): 21.5, Liquid temperature ( $^{\circ}$ C): 21.3

# **SATIMO Configuration:**

Probe: SSE2; Calibrated: Apr. 13, 2022; Serial No.: SN 13/22 EPGO368

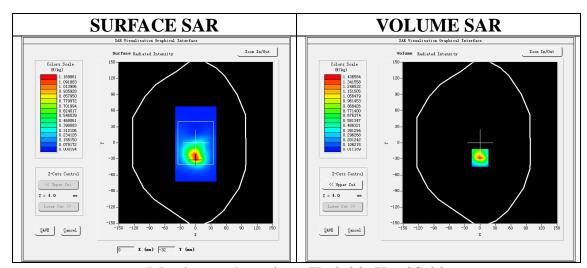
• Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: SAM twin phantom

Measurement SW: OpenSAR V4\_02\_35

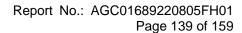
Configuration/ LTE Band 25 Mid-Body-Back/Area Scan: Measurement grid: dx=10mm, dy=10mm Configuration/ LTE Band 25 Mid-Body-Back/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5m;

Area Scan	surf_sam_plan.txt, h= 5.00 mm
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Body Back
Band	LTE Band 25
Channels	Middle
Signal	OFDM (Crest factor: 1.0)

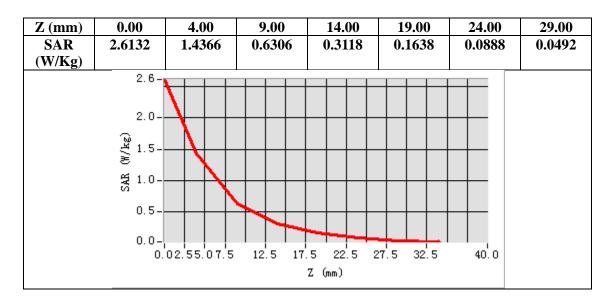


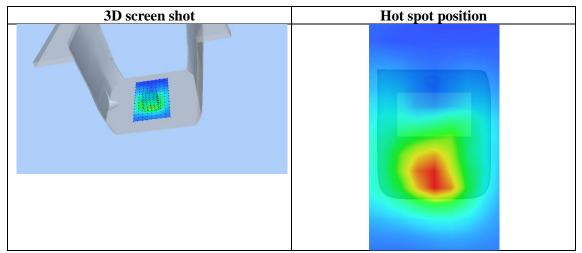
Maximum location: X=0.00, Y=-28.00 SAR Peak: 2.58 W/kg

51111 1 00010 100 0 117118	
SAR 10g (W/Kg)	0.557934
SAR 1g (W/Kg)	1.304485











Page 140 of 159

Test Laboratory: AGC Lab Date: Sep. 14, 2022

LTE Band 26A Mid-Body-Back (1 RB#0) DUT: Mini POS Terminal; Type: P12

Communication System: LTE; Communication System Band: LTE Band 26; Duty Cycle:1:1; Conv.F=1.42 Frequency:836.5 MHz; Medium parameters used: f = 835 MHz;  $\sigma = 0.92$  mho/m;  $\epsilon r = 41.45$ ;  $\rho = 1000$  kg/m³;

Phantom section: Flat Section

Ambient temperature ( $^{\circ}$ C): 21.3, Liquid temperature ( $^{\circ}$ C): 21.1

# **SATIMO Configuration:**

Probe: SSE2; Calibrated: Apr. 13, 2022; Serial No.: SN 13/22 EPGO368

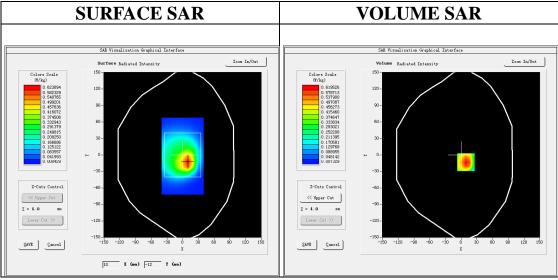
• Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: SAM twin phantom

Measurement SW: OpenSAR V4\_02\_35

Configuration/ LTE Band 26A Mid-Body-Back/Area Scan: Measurement grid: dx=10mm, dy=10mm Configuration/ LTE Band 26A Mid-Body-Back/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5m;

Area Scan	surf_sam_plan.txt, h= 5.00 mm
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Body Back
Band	LTE Band 26A
Channels	Middle
Signal	OFDM (Crest factor: 1.0)



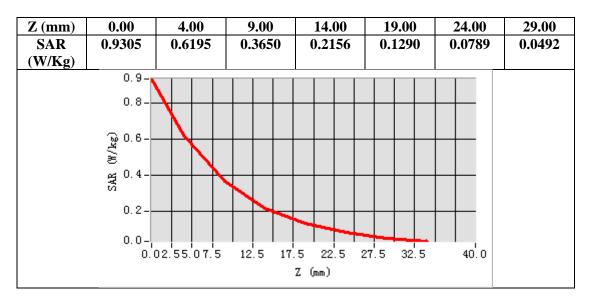
Maximum location: X=9.00, Y=-13.00

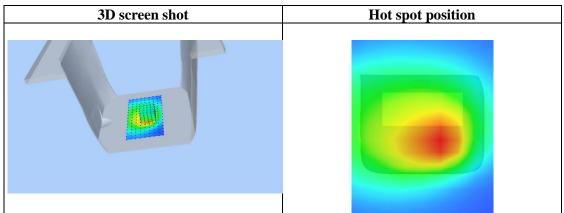
SAR Peak: 1.07 W/kg

<b>SAR 10g (W/Kg)</b>	0.333081
SAR 1g (W/Kg)	0.605311











Page 142 of 159

Test Laboratory: AGC Lab Date: Sep. 08, 2022

LTE Band 38 Mid-Body-Back (1RB#0) DUT: Mini POS Terminal; Type: P12

Communication System: LTE; Communication System Band: LTE Band 38; Duty Cycle:1:1.58; Conv.F=1.82 Frequency: 2595MHz; Medium parameters used: f = 2600 MHz;  $\sigma = 1.97 \text{ mho/m}$ ;  $\epsilon r = 38.79$ ;  $\rho = 1000 \text{ kg/m}^3$ ;

Phantom section: Flat Section

Ambient temperature ( $^{\circ}$ ): 21.2, Liquid temperature ( $^{\circ}$ ): 21.0

# **SATIMO Configuration:**

• Probe: SSE2; Calibrated: Apr. 13, 2022; Serial No.: SN 13/22 EPGO368

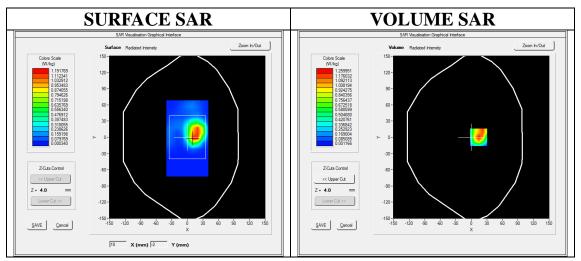
Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: SAM twin phantom

Measurement SW: OpenSAR V4 02 35

Configuration/ LTE BAND 38 Mid-Body-Back /Area Scan: Measurement grid: dx=10mm, y=10mm Configuration/ LTE BAND 38 Mid-Body-Back /Zoom Scan: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Area Scan	surf_sam_plan.txt, h= 5.00 mm
ZoomScan	7x7x7,dx=5mm dy=5mm dz=5mm
Phantom	Validation plane
Device Position	Body Back
Band	LTE BAND 38
Channels	Middle
Signal	Crest factor: 1.58

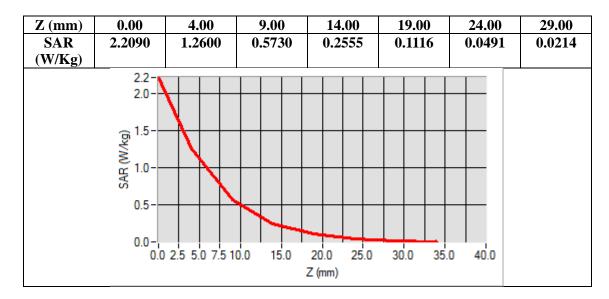


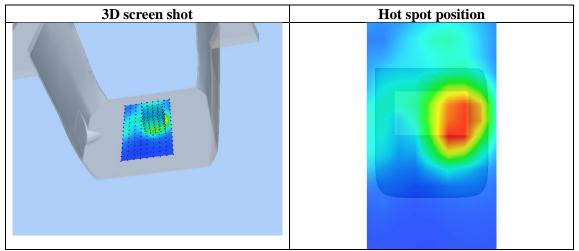
Maximum location: X=14.00, Y=0.00 SAR Peak: 2.24 W/kg

<b>SAR 10g (W/Kg)</b>	0.528686
SAR 1g (W/Kg)	1.142810











Page 144 of 159

Test Laboratory: AGC Lab Date: Sep. 08, 2022

LTE Band 41 High-Body-Back(1RB#0) DUT: Mini POS Terminal; Type: P12

Communication System: LTE; Communication System Band: LTE Band 41; Duty Cycle:1:1.58; Conv.F=1.82 Frequency: 2680MHz; Medium parameters used: f = 2600 MHz;  $\sigma = 2.00 \text{ mho/m}$ ;  $\epsilon r = 38.32$ ;  $\rho = 1000 \text{ kg/m}^3$ ;

Phantom section: Flat Section

Ambient temperature ( $^{\circ}$ ): 21.2, Liquid temperature ( $^{\circ}$ ): 21.0

# **SATIMO Configuration:**

• Probe: SSE2; Calibrated: Apr. 13, 2022; Serial No.: SN 13/22 EPGO368

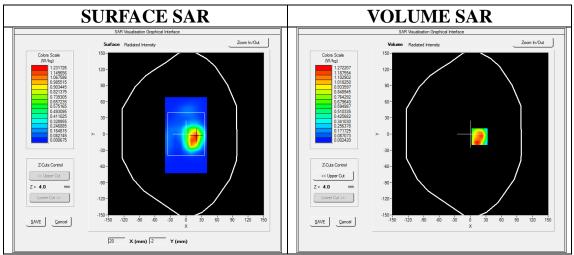
• Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: SAM twin phantom

Measurement SW: OpenSAR V4 02 35

Configuration/ LTE BAND 41 High-Body-Back /Area Scan: Measurement grid: dx=10mm, y=10mm Configuration/ LTE BAND 41 High-Body-Back /Zoom Scan: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Area Scan	surf_sam_plan.txt, h= 5.00 mm
ZoomScan	7x7x7,dx=5mm dy=5mm dz=5mm
Phantom	Validation plane
Device Position	Body Back
Band	LTE BAND 41
Channels	High
Signal	OFDM (Crest factor: 1.58)

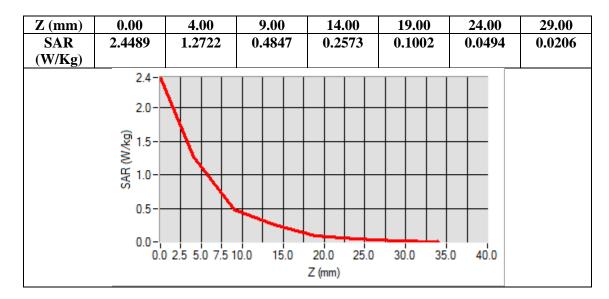


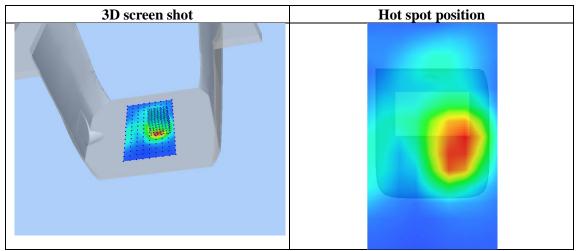
Maximum location: X=18.00, Y=-5.00 SAR Peak: 2.21 W/kg

21212 00011	S1221 2 VVIII	
SAR 10g (W/Kg)	0.568993	
SAR 1g (W/Kg)	1.180938	











Page 146 of 159

# 2.4GHz WIFI MODE

Test Laboratory: AGC Lab Date: Sep. 12, 2022

802.11b Mid-Body-Worn- Back DUT: Mini POS Terminal; Type: P12

Communication System: Wi-Fi; Communication System Band: 802.11b; Duty Cycle: 1:1; Conv.F=1.99;

Frequency: 2437 MHz; Medium parameters used: f = 2450 MHz;  $\sigma = 1.81 \text{mho/m}$ ;  $\epsilon r = 39.56$ ;  $\rho = 1000 \text{ kg/m}^3$ ;

Phantom section: Flat Section

Ambient temperature ( $^{\circ}$ C):21.7, Liquid temperature ( $^{\circ}$ C): 21.5

### SATIMO Configuration:

• Probe: SSE2; Calibrated: Apr. 13, 2022; Serial No.: SN 13/22 EPGO368

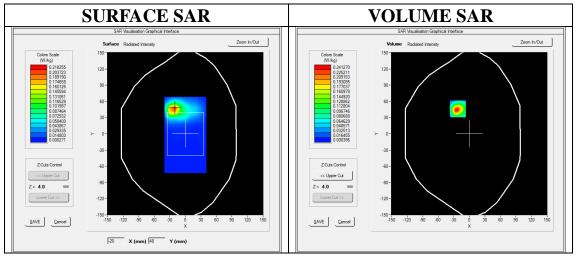
• Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: SAM twin phantom

• Measurement SW: OpenSAR V4\_02\_35

Configuration/802.11b Mid- Body- Back /Area Scan: Measurement grid: dx=10mm, dy=10mm Configuration/802.11b Mid- Body- Back /Zoom Scan: Measurement grid: dx=5mm, dy=5mm, dz=5mm;

Area Scan	surf_sam_plan.txt, h= 5.00 mm
ZoomScan	7x7x7,dx=5mm dy=5mm dz=5mm
Phantom	Validation plane
Device Position	Body Back
Band	2450MHz
Channels	Middle
Signal	Crest factor: 1.0

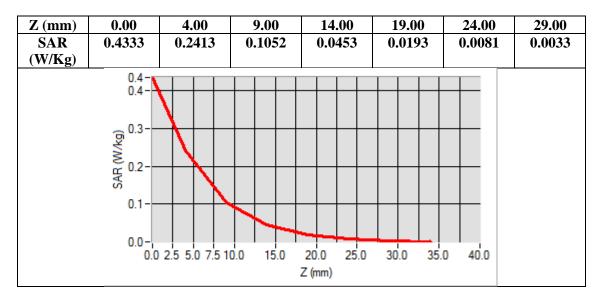


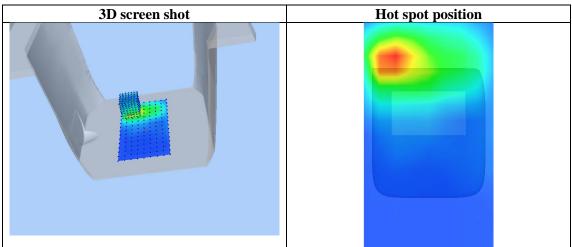
Maximum location: X=-22.00, Y=46.00 SAR Peak: 0.46 W/kg

<b>SAR 10g (W/Kg)</b>	0.089109
SAR 1g (W/Kg)	0.226136











Page 148 of 159

# WIFI 5.2GHz MODE

Test Laboratory: AGC Lab Date: Sep. 15, 2022

802.11a - CH40- Mid-Body-Worn- Back DUT: Mini POS Terminal; Type: P12

Communication System: Wi-Fi; Communication System Band: 802.11a; Duty Cycle: 1:1; Conv.F=2.35;

Frequency: 5200MHz; Medium parameters used: f = 5200 MHz;  $\sigma = 4.60 \text{mho/m}$ ;  $\epsilon r = 36.38$ ;  $\rho = 1000 \text{ kg/m}^3$ ;

Phantom section: Flat Section

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

### SATIMO Configuration:

• Probe: SSE2; Calibrated: Apr. 13, 2022; Serial No.: SN 13/22 EPGO368

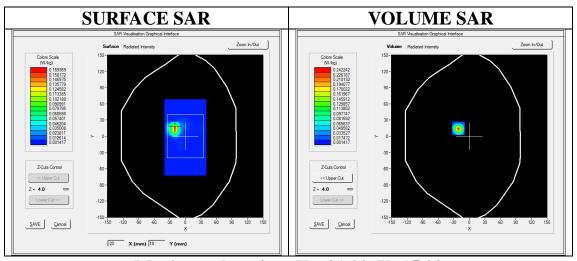
Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: SAM twin phantom

Measurement SW: OpenSAR V4\_02\_35

Configuration/802.11a - CH40- Body- Back /Area Scan: Measurement grid: dx=10mm, dy=10mm Configuration/802.11a - CH40- Body- Back /Zoom Scan: Measurement grid: dx=4mm,dy=4mm, dz=2mm

Area Scan	sam_direct_droit2_surf8mm.txt
ZoomScan	7x7x12 dx=4mm dy=4mm dz=2mm
Phantom	Validation plane
<b>Device Position</b>	Body Back
Band	5200MHz
Channels	Middle
Signal	Crest factor: 1.0



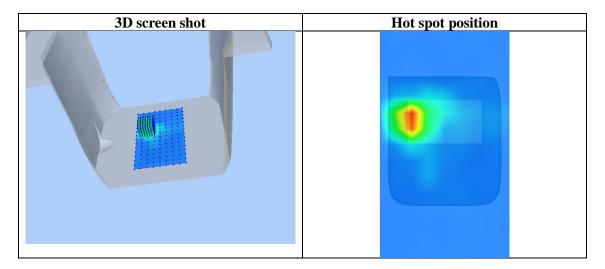
Maximum location: X=-21.00, Y=15.00 SAR Peak: 0.69 W/kg

<b>SAR 10g (W/Kg)</b>	0.047578		
SAR 1g (W/Kg)	0.203730		





Z (m m) SA R (W/ Kg)	0.00 0.68 58	0.24 22	6.00 0.11 72	8.00 0.05 53	10.0 0 0.02 62	12.0 0 0.01 32	14.0 0 0.00 67	16.0 0 0.00 36	18.0 0 0.00 21	20.0 0 0.00 17	22.0 0 0.00 17	24.0 0 0.00 17
		0.7- 0.6- 0.5- 0.4- 0.3- 0.2- 0.1- 0.0-		4 6	8 1	0 12 Z (mr	14 16 m)	18 20	22 2	4 26		





Page 150 of 159

### WIFI 5.3GHz MODE

Test Laboratory: AGC Lab Date: Sep. 15, 2022

802.11n(20)-CH56- Mid-Body-Worn- Back DUT: Mini POS Terminal; Type: P12

Communication System: Wi-Fi; Communication System Band: 802.11n(20); Duty Cycle: 1:1; Conv.F=2.35; Frequency: 5280MHz; Medium parameters used: f = 5200 MHz;  $\sigma = 4.92$  mho/m;  $\epsilon r = 36.21$ ;  $\rho = 1000$  kg/m³;

Phantom section: Flat Section

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

## SATIMO Configuration:

Probe: SSE2; Calibrated: Apr. 13, 2022; Serial No.: SN 13/22 EPGO368

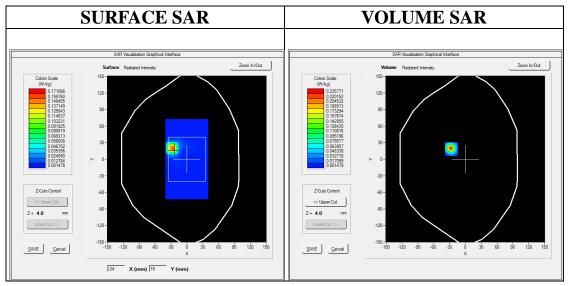
• Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: SAM twin phantom

• Measurement SW: OpenSAR V4\_02\_35

Configuration/802.11n(20)-CH56-Mid- Body- Back /Area Scan: Measurement grid: dx=8mm, dy=8mm Configuration/802.11n(20)-CH56-Mid- Body- Back /Zoom Scan: Measurement grid: dx=4mm,dy=4mm, dz=2mm

Area Scan	sam_direct_droit2_surf8mm.txt
ZoomScan	7x7x12 dx=4mm dy=4mm dz=2mm
Phantom	Validation plane
Device Position	Body Back
Band	5200MHz
Channels	Middle
Signal	Crest factor: 1.0



Maximum location: X=-26.00, Y=18.00 SAR Peak: 0.70 W/kg

SAR 10g (W/Kg)	0.049329
SAR 1g (W/Kg)	0.210117





