

SAR Test Report

Report No.: AGC14246240304FH01

FCC ID : 2A9SNA540

APPLICATION PURPOSE: Original Equipment

PRODUCT DESIGNATION: Smart phone

BRAND NAME : INOI

MODEL NAME : A540, A54

APPLICANT: INOI Limited

DATE OF ISSUE : Apr. 10, 2024

IEEE Std. 1528:2013

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

IEEE Std C95.1 ™-2005

REPORT VERSION: V1.0

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



Page 2 of 192

Report Revise Record

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	Apr. 10, 2024	Valid	Initial Release



Page 3 of 192

	Test Report
Applicant Name INOI Limited	
Applicant Address	Office 302, Dominion Centre 43-59, Queens Road, East Wanchai, Hong Kong, China
Manufacturer Name	INOI Limited
Manufacturer Address	Office 302, Dominion Centre 43-59, Queens Road, East Wanchai, Hong Kong, China
Factory Name	Yibin MAGIC Communication Technology Co., LTD.
Factory Address	Building 6, Suge Intelligent Industrial Base, No.31 Gangyuan Road(W), Lingang Economic Development Zone Yibin, Sichuan
Product Designation	Smart phone
Brand Name	INOI
Model Name	A540
Series model	A54
Different Description	One is the market name and the other is the market model.
EUT Voltage	DC3.85V by battery
Applicable Standard	IEEE Std. 1528:2013 FCC 47 CFR Part 2§2.1093 IEEE Std C95.1 ™-2005
Date of receipt of test item	Mar. 22, 2024
Test Date	Mar. 25, 2024 to Apr. 03, 2024
Report Template	AGCRT-US-4G/SAR (2021-04-20)

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

Prepared By	Jour bai			
r repared by	Jack Gui(Project Engineer)	Apr. 10, 2024		
	Calin Lin	l .		
Reviewed By	Calvin Liu (Reviewer)	Apr. 10, 2024		
Approved By	Max Zhang			
	Max Zhang (Authorized Officer)	Apr. 10, 2024		

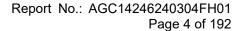




TABLE OF CONTENTS

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
3.3. ROBOT	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	21
6.1. SAR SYSTEM CHECK PROCEDURES	
7. EUT TEST POSITION	24
7.1. DEFINE TWO IMAGINARY LINES ON THE HANDSET	25 25
8. SAR EXPOSURE LIMITS	27
9. TEST FACILITY	28
10. TEST EQUIPMENT LIST	29
11. MEASUREMENT UNCERTAINTY	30
12. CONDUCTED POWER MEASUREMENT	33
13. TEST RESULTS	59
13.1. SAR Test Results Summary	
APPENDIX A. SAR SYSTEM CHECK DATA	87
APPENDIX B. SAR MEASUREMENT DATA	
APPENDIX C. TEST SETUP PHOTOGRAPHS	185
ADDENDIY D. CALIBRATION DATA	192



Page 5 of 192

1. SUMMARY OF MAXIMUM SAR VALUE

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

	ŀ			
Frequency Band	Head	Body-worn(with 10mm separation)	Hotspot(with 10mm separation)	SAR Test Limit (W/kg)
GSM 850	1.059	0.707	0.707	
PCS 1900	0.937	0.940	0.940	
UMTS Band II	1.142	0.939	0.939	
UMTS Band V	1.135	0.384	0.384	
LTE Band 2	1.150	0.727	0.727	
LTE Band 4	1.163	0.577	0.577	
LTE Band 5	1.117	0.428	0.428	
LTE Band 7	1.155	0.965	0.965	1.6
LTE Band 41	0.724	0.395	0.395	1.0
WIFI 2.4G	0.384	0.240	0.240	
5.2GHz (U-NII-1)	0.176	0.309	0.309	
5.3GHz (U-NII-2A)	0.166	0.353	0.353	
5.6GHz (U-NII-2C)	0.187	0.327	0.327	
5.8GHz (U-NII-3)	0.383	0.415	0.415	
Simultaneous Reported SAR	1.547			
SAR Test Result	PASS			

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

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



Page 6 of 192

2. GENERAL INFORMATION

2.1. EUT Description

Z. I. EO I Description			
General Information			
Product Designation	Smart phone		
Test Model	A540		
Sample ID	240322048		
Hardware Version	V1.0		
Software Version	INOI_A540_EEA T_V09_20240116_user		
Device Category	Portable		
RF Exposure Environment	Uncontrolled		
Antenna Type	Internal		
GSM and GPRS& EGPRS			
Support Band	□ GSM 850		
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: -1.74 dBi; PCS1900: -0.7dBi		
Max. Average Power	GSM850: 33.47dBm; PCS1900: 30.67dBm		
WCDMA			
Support Band	oxtimes UMTS FDD Band II $oxtimes$ UMTS FDD Band V $oxtimes$ UMTS FDD Band IV		
• •	☐ UMTS FDD Band I ☐ UMTS FDD Band III ☐ UMTS FDD Band VIII		
HS Type	HSPA(HSUPA/HSDPA)		
TX Frequency Range	FDD Band II: 1850-1910MHz; FDD Band V: 824-849MHz		
RX Frequency Range	FDD Band II: 1930-1990MHz; FDD Band V: 869-894MHz		
Release Version	Release 6 and later		
Type of modulation	HSDPA:QPSK/16QAM; HSUPA:BPSK; WCDMA:QPSK		
Antenna Gain	Band II: 0.64dBi; Band V: -1.74dBi		
Max. Average Power	Band II: 25.23 dBm; Band V: 25.05 dBm		
Bluetooth			
Bluetooth Version	V5.0		
Operation Frequency	2402~2480MHz		
Type of modulation	⊠ GFSK ⊠ ∏/4-DQPSK ⊠ 8-DPSK		
Peak Power	6.36dBm		
Antenna Gain	1.58dBi		
2.4GHz WIFI			
WIFI Specification	⊠802.11b ⊠802.11g ⊠802.11n(20) □802.11n(40)		
Operation Frequency	2412~2462MHz		
Avg. Burst Power	11b: 16.60dBm,11g: 14.25dBm,11n(20): 12.39dBm,		
Antenna Gain	1.58dBi		



Page 7 of 192

EUT Description(Continue)

LOT Description Co	Thursdy			
LTE				
Support Band	⊠ FDD Band 2 ⊠ FDD Band 4 ⊠ FDD Band 5 ⊠ FDD Band 7			
Зирроп Вапи	⊠TDD Band 41			
TX Frequency Range	Band 2:1850-1910MHz; Band 4:1710-1755MHz; Band 5:824-849MHz;			
TXT requeries range	Band 7:2500-2570MHz; Band 41:2496-2690MHz;			
RX Frequency Range	Band 2:1930-1990MHz; Band 4:2110-2155MHz; Band 5:869-894MHz;			
Turn requestion realings	Band 7:2620-2690MHz; Band 41:2496-2690MHz;			
Type of modulation	QPSK, 16QAM			
Antenna Gain	Band 2: 0.64dBi; Band 4: -0.7dBi; Band 5: -1.74dBi; Band 7: -3.62dBi; Band 41: 0.32dBi;			
Max. Average Power	Band 2: 24.16dBm; Band 4: 25.29dBm; Band 5: 25.21 dBm; Band 7: 23.99dBm;			
IVIAX. Average Fower	Band 41: 24.59dBm;			
5 GHz WIFI				
WIFI Specification	⊠ 802.11a ⊠ 802.11n20 ⊠ 802.11n40 ⊠ 802.11ac20 ⊠ 802.11ac40 ⊠ 802.11ac80			
Operation Frequency	U-NII-1: 5180MHz~5240MHz; U-NII-2A: 5260MHz~5320MHz;			
Operation requeitcy	U-NII-2C: 5470MHz~5725MHz;U-NII-3: 5745MHz~5825MHz			
Max. conducted Power	U-NII-1: 18.63dBm; U-NII-2A: 18.24dBm; U-NII-2C: 18.37dBm; U-NII-3: 17.75dBm			
Antenna Gain	0.35dBi			
Accessories				
	Brand name: INOI			
Battery	Model No. : 466495			
	Voltage and Capacitance: 3.85 V & 4900mAh			
Earphone	Brand name: N/A			
Laipilollo	Model No.: N/A			

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

2. The sample used for testing is end product.

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

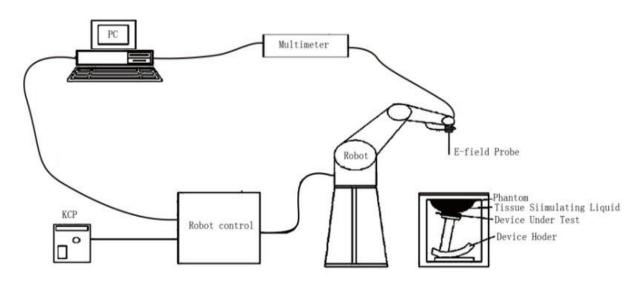
Product	Туре	
Product		☐ Identical Prototype





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 192

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

1000 Opio E i loid i	Probe Specification				
Model	SSE2				
Manufacture	MVG				
Identification No.	2023-EPGO-414				
Frequency	0.15GHz-7.5GHz Linearity:±0.09dB(0.15GHz-7.5GHz)				
Dynamic Range	0.01W/kg-100W/kg Linearity:±0.09dB				
Dimensions	Overall length:330mm Length of individual dipoles:24.5mm Maximum external diameter:8mm Probe Tip external diameter:2.55mm Distance between dipoles/ probe extremity:12.7mm				
Application	High precision dosimetric 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



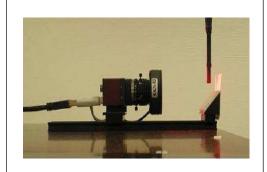


Report No.: AGC14246240304FH01 Page 10 of 192

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.

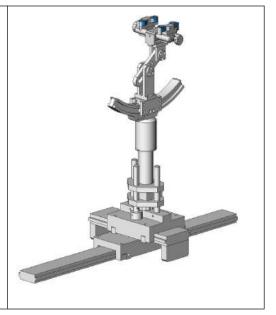


3.5. Device Holder

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 192

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 192

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 (ρ). 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 slemens per metre;
ρ is the density of the tissue in kilograms per cubic metre;

ch is the heat capacity of the tissue in joules per kilogram and Kelvin;

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



Page 13 of 192

4.2. SAR Measurement Procedure

Step 1: Power Reference Measurement

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

Step 2: Area Scan

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

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

	≤ 3 GHz	> 3 GHz	
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface	5 ± 1 mm	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_{Area} , Δy_{Area}	When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be \leq 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 192

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

Maximum zoom scan spatial resolution: Δx _{Zoom} , Δy _{Zoom}			\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 _{Zoom} (n)		≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm
	graded	Δz _{Zoom} (1): between 1 st two points closest to phantom surface	≤ 4 mm	3 – 4 GHz: ≤ 3 mm 4 – 5 GHz: ≤ 2.5 mm 5 – 6 GHz: ≤ 2 mm
	grid Δz _{Zoom} (n>1): between subsequent points		$\leq 1.5 \cdot \Delta z_{Zoom}(n\text{-}1)$	
Minimum zoom scan volume	n 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.

^{*} 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

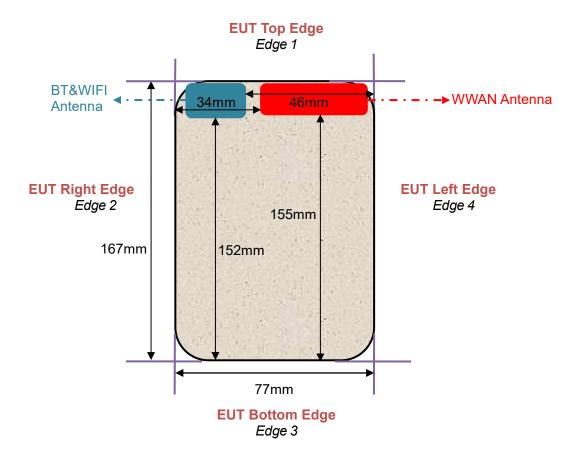
Test Configuration and setting:

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 192

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	Hotspot					
Back	<25mm	Yes				
Front	<25mm	Yes				
Edge 1 (Top)	1mm	Yes				
Edge 2 (Right)	34mm	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)	155mm	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)	1mm	Yes				

For WLAN mode:

For WLAN 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)	1mm	Yes				
Edge 2 (Right)	1mm	Yes				
Edge 3 (Bottom)	152mm	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) 46mm		No	SAR is not required for the distance between the antenna and the edge is >25mm as per KDB 941225 D06 Hotspot SAR			

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 17 of 192

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
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 192

5.2. Tissue Dielectric Parameters for Head and Body Phantoms

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

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

(ϵr = relative permittivity, σ = conductivity and ρ = 1000 kg/m3



Page 19 of 192

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 835MHz									
	Fr.	Dielectric Para	ameters (±10%)	Tissue						
	(MHz)	εr 41.5 (37.35-45.65)	δ[s/m] 0.90(0.81-0.99)	Temp [°C]	Test time					
	824.2	43.22	0.83							
	826.4	42.16	0.86							
	829	41.92	0.89							
Head	835	41.66	0.92							
	836.4	40.39	0.94	20.7	Mar. 27,					
	836.5	40.39	0.94	20.7	2024					
	836.6	40.39	0.94							
	844	39.43	0.95							
	846.6	39.27	0.96							
	848.8	38.62	0.98							

	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				
Head	1720	42.62	1.30						
1.155.5	1732.5	41.86	1.34	20.9	Mar. 25,				
	1745	40.69	1.36	20.9	2024				
	1750	39.51	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 [ºC]	Test time					
	1850.2	43.86	1.29							
11	1852.4	43.21	1.32							
Head	1860	42.69	1.35		Mar 26					
	1880	41.22	1.39	20.5	Mar. 26, 2024					
	1900	40.08	1.41		2024					
	1907.6	39.81	1.43							
	1909.8	39.12	1.44							

Tissue Stimulant Measurement for 2450MHz									
Fr. (MHz)	Fr.	Dielectric Parameters (±10%)		Tissue	T4 4:				
	(MHz)	εr39.2(35.28-43.12)	δ[s/m]1.80(1.62-1.98)	Temp [°C]	Test time				
	2437	40.33	1.80	21.5	Mar. 30,				
	2450	39.27	1.82	21.5	2024				



Page 20 of 192

	Tissue Stimulant Measurement for 2600MHz								
	Fr.	Dielectric Para	Dielectric Parameters (±10%)		+ .:				
	(MHz)	εr39(35.1-42.9)	δ[s/m]1.96(1.764-2.156)	Temp [°C]	Test time				
	2510	42.09	1.83						
Head	2535	41.43	1.86		Mar. 29, 2024				
	2593	40.73	1.88	21.8					
	2560	39.16	1.92		2024				
	2600	38.22	1.94						

	Tissue Stimulant Measurement for 5200MHz								
	Fr.	Dielectric Parameters (±10%)		Tissue					
Head	(MHz)	εr 36.0(32.4-39.6)	δ[s/m] 4.66(4.194 -5.126)	Temp [°C]	Test time				
	5200	36.34	4.54	21.3	Mar. 31, 2024				

Tissue Stimulant Measurement for 5300MHz								
	Fr.	Dielectric Parameters (±5%)		Tissue				
Head	(MHz)	εr 35.9(34.105-37.695)	δ[s/m] 4.76(4.522-4.998)	Temp [ºC]	Test time			
	5300	36.29	4.94	20.8	Apr. 01, 2024			

	Tissue Stimulant Measurement for 5600MHz							
	Fr.	Dielectric Par	ameters (±5%)	Tissue				
Head	(MHz)	εr 35.5(33.725-37.275)	δ[s/m] 5.07(4.8165-5.3235)	Temp [°C]	Test time			
	5580	37.66	5.11	20.5	Apr. 02,			
5600	5600	36.54	5.14	20.5	2024			

	Tissue Stimulant Measurement for 5800MHz								
	Fr.	Dielectric Para	Dielectric Parameters (±10%)						
	(MHz)	εr	δ[s/m]	Temp	Test time				
Head	(1411 12)	35.3 (31.77-38.83)	5.27 (4.743-5.797)	[°C]					
	5785	36.91	5.28	20.2	Apr. 03, 2024				
	5800	35.46	5.31	20.2	2024				



Page 21 of 192

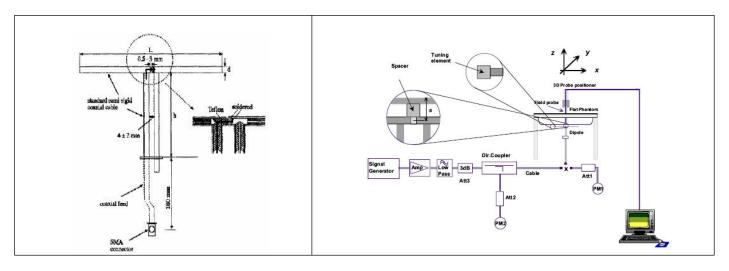
SAR SYSTEM CHECK PROCEDURE

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.

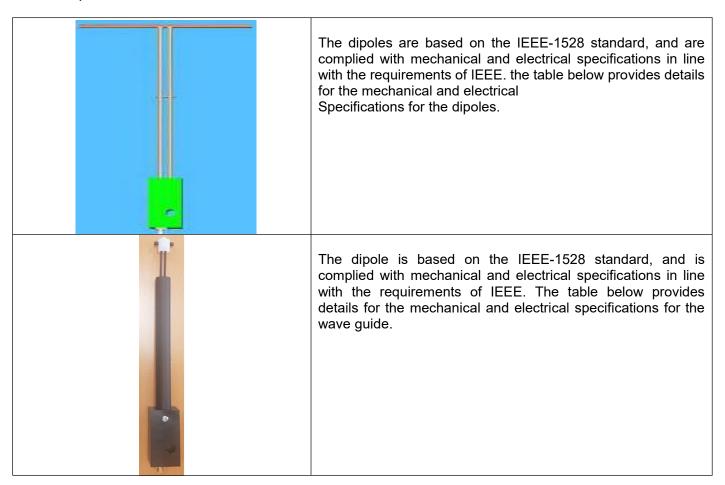




Page 22 of 192

6.2. SAR System Check

6.2.1. Dipoles



Frequency	L (mm)	h (mm)	d (mm)
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



Page 23 of 192

6.2.2. System Check Result

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

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

DII 20-00-0	700G CI1 2		20000-407 a ON 17722 DII 00000-071							
Frequency	Target Value(W/kg)			ce Result 0%)		sted (W/kg)	Tissue Temp.	Test time		
[MHz]	1g	10g	1g	10g	1g	10g	[°C]			
835	9.67	6.14	8.703-10.637	5.526-6.754	9.72	6.09	20.7	Mar. 27, 2024		
1800	37.76	19.60	33.984-41.536	17.640-21.560	40.62	20.55	20.9	Mar. 25, 2024		
1900	41.26	20.86	37.134-45.386	18.774-22.946	42.86	21.30	20.5	Mar. 26, 2024		
2450	54.32	24.25	48.888-59.752	21.825-26.675	52.62	23.53	21.5	Mar. 30, 2024		
2600	54.94	23.77	49.446-60.434	21.393-26.147	52.95	24.17	21.8	Mar. 29, 2024		
5200	73.43	21.83	66.087-80.773	19.647-24.013	74.71	21.71	21.3	Mar. 31, 2024		
5200	73.43	21.83	66.087-80.773	19.647-24.013	80.74	23.31	20.8	Apr. 01, 2024		
5600	78.20	24.12	70.380-86.02	21.708-26.532	82.23	23.20	20.5	Apr. 02, 2024		
5800	75.69	22.44	68.121-83.259	20.196-24.684	80.09	22.68	20.2	Apr. 03, 2024		

Note:

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



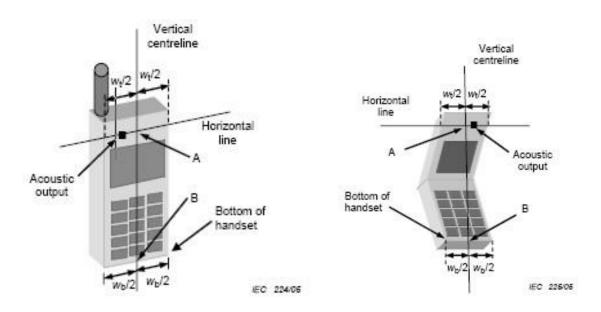
Page 24 of 192

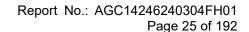
7. EUT TEST POSITION

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

7.1. Define Two Imaginary Lines on the Handset

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







7.2. Cheek Position

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





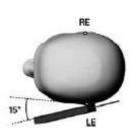


7.3. Tilt Position

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





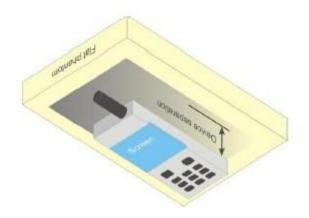


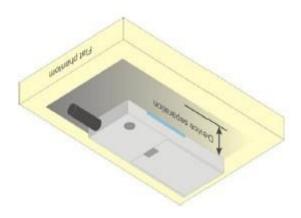


Page 26 of 192

7.4. Body Worn Position

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







Page 27 of 192

8. SAR EXPOSURE LIMITS

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

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 28 of 192

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 29 of 192

10. TEST EQUIPMENT LIST

Equipment description	Manufacturer/ Model	Identification No.	Software version	Current calibration date	Next calibration date
SAR Probe	MVG	2023-EPGO-414	N/A	May 31, 2023	May 30, 2024
Phantom	SATIMO	SN_4511_SAM90	N/A	Validated. No cal required.	Validated. No cal required.
Liquid	SATIMO	N/A	N/A	Validated. No cal required.	Validated. No cal required.
Comm Tester	Agilent-8960	GB46310822	A.13.07	Jun. 03, 2023	Jun. 02, 2024
Comm Tester	R&S- CMW500	121209	V3.7.40	Jun. 01, 2023	May 31, 2024
Multimeter	Keithley 2000	1350784	N/A	Jun. 02, 2023	Jun. 01, 2024
SAR Software	SATIMO-OpenSAR	N/A	OpenSAR V4_02_32	N/A	N/A
Dipole	SATIMO SID835	SN 15/16 DIP 0G835-399	N/A	Apr. 28,2022	Apr. 27,2025
Dipole	SATIMO SID1800	SN 46/11 DIP 1G800-186	N/A	Apr. 28,2022	Apr. 27,2025
Dipole	SATIMO SID1900	SN 29/15 DIP 1G900-389	N/A	Apr. 28,2022	Apr. 27,2025
Dipole	SATIMO SID2450	SN 29/15 DIP 2G450-393	N/A	Apr. 28,2022	Apr. 27,2025
Dipole	SATIMO SID2600	SN 22/16 DIP 2G600-407	N/A	Apr. 28,2022	Apr. 27, 2025
Dipole	SID5000	SN 17/22 DIP 5G000-671	N/A	Apr. 28,2022	Apr. 27, 2025
Signal Generator	Agilent-E4438C	US41461365	V5.03	Jun. 01, 2023	May 31, 2024
Vector Analyzer	Agilent / E4440A	MY44303916	N/A	Jun. 01, 2023	May 31, 2024
Network Analyzer	Rhode & Schwarz ZVL6	SN101443	3.2	Sep. 21, 2023	Sep. 20, 2024
Attenuator	Warison /WATT-6SR1211	S/N:WRJ34AYM2F1	N/A	June 07, 2023	June 06, 2024
Attenuator	Mini-circuits / VAT-10+	31405	N/A	June 07, 2023	June 06, 2024
Amplifier	AS0104-55_55	1004793	N/A	N/A	N/A
Directional Couple	Werlatone/ C5571-10	SN99463	N/A	Feb. 01, 2024	Jan. 31, 2026
Directional Couple	Werlatone/ C6026-10	SN99482	N/A	Feb. 01, 2024	Jan. 31, 2026
Power Sensor	NRP-Z21	1137.6000.02	N/A	Sep. 05, 2023	Sep. 04, 2024
Power Sensor	NRP-Z23	100323	N/A	Jun. 06, 2023	Jun. 05, 2024
Power Viewer	R&S	V2.3.1.0	N/A	N/A	N/A
Calibration standard parts for network sub - port	R&S/ ZV-Z132	N/A	V2.3.1.0	Nov. 11, 2023	Nov. 10, 2024

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

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



Page 30 of 192

11. MEASUREMENT UNCERTAINTY

SATIMO Uncertainty- 2023-EPGO-414 Measurement uncertainty for DUT averaged over 1 gram / 10 gram.											
Uncertainty Component	Sec.	Tol	Prob.	Div.	Ci (1g)	Ci (10g)	1g Ui	10g Ui	vi		
Measurement System		(+- %)	Dist.		(-3)	(1-9)	(+-%)	(+-%)			
Probe calibration	E.2.1	7.000	N	1	1	1	7.000	7.000			
	E.2.1	1.695	R	1.732	0.707	0.707	0.692	0.692			
Axial Isotropy									∞		
Hemispherical Isotropy	E.2.2	1.695	R	1.732	0.707	0.707	0.692	0.692	∞		
Boundary effect Linearity	E.2.3 E.2.4	1.000 2.250	R R	1.732 1.732	1	1	0.577 1.299	0.577 1.299	∞		
									∞		
System detection limits	E.2.4	1.000	R	1.732	1	1	0.577	0.577	∞		
Modulation response	E2.5	3.000	R	1.732	1	1	1.732	1.732	∞		
Readout Electronics	E.2.6	0.021	N	1	1	1	0.021	0.021	∞		
Response Time	E.2.7	0.000	R	1.732	1	1	0.000	0.000	∞		
Integration Time	E.2.8	1.400	R	1.732	1	1	0.808	0.808	∞		
RF ambient conditions-Noise	E.6.1	3.000	R	1.732	1	1	1.732	1.732	∞		
RF ambient conditions-reflections	E.6.1	3.000	R	1.732	1	1	1.732	1.732	∞		
Probe positioner mechanical tolerance	E.6.2	1.400	R	1.732	1	1	0.808	0.808	∞		
Probe positioning with respect to phantom shell	E.6.3	1.400	R	1.732	1	1	0.808	0.808	∞		
Extrapolation, interpolation, and integrations algorithms for max. SAR evaluation	E.5	2.300	R	1.732	1	1	1.328	1.328	∞		
Test sample Related		•				,					
Test sample positioning	E.4.2	2.6	N	1	1	1	2.60	2.60	∞		
Device holder uncertainty	E.4.1	3	N	1	1	1	3.00	3.00	∞		
Output power variation—SAR drift measurement	E.2.9	5	R	1.732	1	1	2.89	2.89	∞		
SAR scaling	E.6.5	5	R	1.732	1	1	2.89	2.89	∞		
Phantom and tissue parameter	'S	1	•				ı				
Phantom shell uncertainty—shape, thickness, and permittivity	E.3.1	4	R	1.732	1	1	2.309	2.309	00		
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	N	1	0.78	0.71	3.120	2.840	М		
Liquid permittivity measurement	E.3.3	5	N	1	0.23	0.26	1.150	1.300	М		
Liquid conductivity—temperature uncertainty	E.3.4	2.5	R	1.732	0.78	0.71	1.126	1.025	000		
Liquid permittivity—temperature uncertainty	E.3.4	2.5	R	1.732	0.23	0.26	0.332	0.375	∞		
Combined Standard Uncertainty			RSS				10.616	10.432			
Expanded Uncertainty (95% Confidence interval)			K=2				21.232	20.865			





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



Page 32 of 192

SATIMO Uncertainty- 2023-EPGO-414 System Check uncertainty for DUT averaged over 1 gram / 10 gram.											
Uncertainty Component	Sec.	Tol (+- %)	Prob. Dist.	Div.	Ci (1g)	Ci (10g)	1g Ui (+-%)	10g Ui (+-%)	vi		
Measurement System		/			1						
Probe calibration drift	E.2.1.3	0.5	N	1	1	1	0.5	0.5	∞		
Axial Isotropy	E.2.2	1.695	R	$\sqrt{3}$	0	0	0	0	∞		
Hemispherical Isotropy	E.2.2	1.695	R	√3	0	0	0	0	∞		
Boundary effect	E.2.3	1.000	R	√3	0	0	0	0	∞		
Linearity	E.2.4	2.250	R	√3	0	0	0	0	∞		
System detection limits	E.2.4	1	R	√3	0	0	0	0			
-						-	-	-			
Modulation response	E2.5	3	R	√3 	0	0	0	0	∞		
Readout Electronics	E.2.6	0.021	N	$\sqrt{3}$	0	0	0	0	∞		
Response Time	E.2.7	0	R	$\sqrt{3}$	0	0	0	0	∞		
Integration Time	E.2.8	1.4	R	$\sqrt{3}$	0	0	0	0	∞		
RF ambient conditions-Noise	E.6.1	3	R	$\sqrt{3}$	0	0	0	0	∞		
RF ambient conditions-reflections	E.6.1	3	R	$\sqrt{3}$	0	0	0	0	8		
Probe positioner mechanical tolerance	E.6.2	1.4	R	$\sqrt{3}$	1	1	0.81	0.81	∞		
Probe positioning with respect to phantom shell	E.6.3	1.4	R	$\sqrt{3}$	1	1	0.81	0.81	∞		
Extrapolation, interpolation, and integrations algorithms for max. SAR evaluation	E.5	2.3	R	$\sqrt{3}$	0	0	0	0.00	∞		
System check source (dipole)		•	•		•		•				
Deviation of experimental dipoles	E.6.4	2	N	1	1	1	2	2	∞		
Input power and SAR drift measurement	8,6.6.4	5	R	$\sqrt{3}$	1	1	2.89	2.89	∞		
Dipole axis to liquid distance	8,E.6.6	2	R	$\sqrt{3}$	1	1	1.15	1.15	∞		
Phantom and tissue parameter	'S										
Phantom shell uncertainty—shape, thickness, and permittivity	E.3.1	4	R	$\sqrt{3}$	1	1	2.31	2.31	∞		
Uncertainty in SAR correction for deviations in permittivity and conductivity	E.3.2	1.9	N	1.000	1	0.84	1.90	1.60	∞		
Liquid conductivity measurement	E.3.3	4	N	1.000	0.78	0.71	3.12	2.84	∞		
Liquid permittivity measurement	E.3.3	5	N	1.000	0.23	0.26	1.15	1.30	М		
Liquid conductivity—temperature uncertainty	E.3.4	2.5	R	$\sqrt{3}$	0.78	0.71	1.13	1.02	∞		
Liquid permittivity—temperature uncertainty	E.3.4	2.5	R	$\sqrt{3}$	0.23	0.26	0.33	0.38	М		
Combined Standard Uncertainty			RSS				5.562	5.203			
Expanded Uncertainty (95% Confidence interval)			K=2				11.124	10.406			



Page 33 of 192

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	33.93	-9	24.93	
GSM 850	836.6	33.89	-9	24.89	
	848.8	34.13	-9	25.13	
GPRS 850	824.2	33.93	-9	24.93	
(1 Slot)	836.6	33.87	-9	24.87	
(1000)	848.8	34.12	-9	25.12	
GPRS 850	824.2	32.94	-6	26.94	
(2 Slot)	836.6	32.89	-6	26.89	
(2 0101)	848.8	33.14	-6	27.14	
ODD0 050	824.2	30.81	-4.26	26.55	
GPRS 850 (3 Slot)	836.6	30.77	-4.26	26.51	
(3 0101)	848.8	30.98	-4.26	26.72	
GPRS 850 (4 Slot)	824.2	29.60	-3	26.60	
	836.6	29.57	-3	26.57	
(4 0101)	848.8	29.79	-3	26.79	
E0000 050	824.2	28.08	-9	19.08	
EGPRS 850 (1 Slot)	836.6	27.67	-9	18.67	
(1 301)	848.8	27.75	-9	18.75	
50000.050	824.2	27.23	-6	21.23	
EGPRS 850 (2 Slot)	836.6	26.53	-6	20.53	
(2 3101)	848.8	26.65	-6	20.65	
50DDC	824.2	24.34	-4.26	20.08	
EGPRS 850 (3 Slot)	836.6	24.00	-4.26	19.74	
(3 3101)	848.8	24.29	-4.26	20.03	
	824.2	22.85	-3	19.85	
EGPRS 850	836.6	23.00	-3	20.00	
(4 Slot)	848.8	23.36	-3	20.36	



Page 34 of 192

GSM BAND CONTINUE

Mode	Frequency(MHz)	Avg. Burst Power(dBm)	Duty cycle Factor(dBm)	Frame Power(dBm)	
Maximum Power <1	>				
	1850.2	30.61	-9	21.61	
PCS1900	1880	30.62	-9	21.62	
	1909.8	30.44	-9	21.44	
GPRS1900	1850.2	30.62	-9	21.62	
(1 Slot)	1880	30.63	-9	21.63	
(1000)	1909.8	30.45	-9	21.45	
GPRS1900	1850.2	29.48	-6	23.48	
(2 Slot)	1880	29.60	-6	23.60	
(2 0101)	1909.8	29.48	-6	23.48	
CDDC4000	1850.2	27.41	-4.26	23.15	
GPRS1900 (3 Slot)	1880	27.55	-4.26	23.29	
(3 0101)	1909.8	27.45	-4.26	23.19	
CDDC1000	1850.2	26.23	-3	23.23	
GPRS1900 (4 Slot)	1880	26.44	-3	23.44	
(4 0101)	1909.8	26.41	-3	23.41	
E0DD04000	1850.2	26.75	-9	17.75	
EGPRS1900 (1 Slot)	1880	26.41	-9	17.41	
(1 3101)	1909.8	26.58	-9	17.58	
505504000	1850.2	25.14	-6	19.14	
EGPRS1900 (2 Slot)	1880	24.60	-6	18.60	
(2 3101)	1909.8	25.15	-6	19.15	
	1850.2	23.39	-4.26	19.13	
EGPRS1900 (3 Slot)	1880	23.31	-4.26	19.05	
(3 3101)	1909.8	23.12	-4.26	18.86	
	1850.2	21.91	-3	18.91	
EGPRS1900	1880	21.70	-3	18.70	
(4 Slot)	1909.8	21.72	-3	18.72	

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



Page 35 of 192

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(β c and β d) parameters set according to each
- (2) Set RMC 12.2Kbps+HSDPA mode.
- (3) Set Cell Power=-86dBm
- (4) Set HS-DSCH Configuration Type to FRC (H-set 1, QPSK)
- (5) Select HSDPA Uplink Parameters
- (6) Set Delta ACK, Delta NACK and Delta CQI=8
- (7) Set Ack Nack Repetition Factor to 3
- (8) Set CQI Feedback Cycle (k) to 4ms
- (9) Set CQI Repetition Factor to 2
- (10) Power Ctrl Mode=All Up bits

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

Sub-test	βc (Note5)	βd	βd (SF)	β с /β d	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 β_{hs} = 30/15 * β_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 β_{hs} = 30/15 * β_c , and \triangle CQI = 24/15 with β_{hs} = 24/15 * β_c .

Note 3: CM = 1 for β c/ β 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.

[·]The transmitted maximum output power was recorded.



Page 36 of 192

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 (β c and β d) and parameters (AG Index) were set according to each specific sub-test in the following table, C11.1.3, quoted from the TS 34.121
- (3) Set Cell Power = -86 dBm
- (4) Set Channel Type = 12.2k + HSPA
- (5) Set UE Target Power
- (6) Power Ctrl Mode= Alternating bits
- (7) Set and observe the E-TFCI
- (8) Confirm that E-TFCI is equal to the target E-TFCI of 75 for sub-test 1, and other subtest's E-TFCI
- · The transmitted maximum output power was recorded.

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

Sub- test	βс	βd	βd (SF)	βc/βd	βHS (Note 1)	βес	βed (Note 4) (Note 5)	βed (SF)	βed (Code s)	CM (dB) (Note 2)	MPR (dB) (Note 2) (Note 6)	AG Index (Note 5)	E-TF CI
1	11/15 (Note 3)	15/15 (Note 3)	64	11/15 (Note 3)	22/15	209/22 5	1309/225	4	1	1.0	0.0	20	75
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67
3	15/15	9/15	64	15/9	30/15	30/15	βed1: 47/15 βed2: 47/15	4 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 β_{hs} = 30/15 * β_c . For sub-test 5, \triangle ACK, \triangle NACK and \triangle CQI = 5/15 with β_{hs} = 5/15 * β_c .

Note 2: CM = 1 for β c/ β 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 37 of 192

UMTS BAND II

Mode	Frequency	Avg. Burst Power
Mode	(MHz)	(dBm)
NACODAA 4000	1852.4	23.42
WCDMA 1900	1880	23.33
RMC	1907.6	23.37
LICODA	1852.4	23.47
HSDPA Subtest 1	1880	23.44
Sublest 1	1907.6	23.41
LICEDA	1852.4	23.09
HSDPA	1880	23.05
Subtest 2	1907.6	22.97
HODDA	1852.4	21.87
HSDPA	1880	21.68
Subtest 3	1907.6	22.01
LICEDA	1852.4	21.89
HSDPA	1880	21.81
Subtest 4	1907.6	21.68
LIGUIDA	1852.4	21.96
HSUPA	1880	23.21
Subtest 1	1907.6	23.21
LICLIDA	1852.4	22.88
HSUPA Subtest 2	1880	23.35
Sublest 2	1907.6	23.22
LICLIDA	1852.4	21.64
HSUPA	1880	21.96
Subtest 3	(MHz) 1852.4 1880 1907.6 1852.4 1880 1907.6 1852.4 1880 1907.6 1852.4 1880 1907.6 1852.4 1880 1907.6 1852.4 1880 1907.6 1852.4 1880 1907.6 1852.4 1880 1907.6 1852.4 1880 1907.6	22.21
LIGUEA	1852.4	22.83
HSUPA	1880	23.44
Subtest 4	1907.6	23.41
LICLIDA	1852.4	21.86
HSUPA	1880	22.73
Subtest 5	1907.6	22.77



Page 38 of 192

UMTS BAND V

Mada	Frequency	Avg. Burst Power
Mode	(MHz)	(dBm)
VALODANA OCO	826.4	23.78
WCDMA 850	836.4	23.84
RMC	846.6	24.07
LIODDA	826.4	23.84
HSDPA	836.4	23.86
Subtest 1	846.6	24.14
HODDA	826.4	23.43
HSDPA	836.4	23.31
Subtest 2	846.6	23.66
LIODDA	826.4	22.37
HSDPA	836.4	22.22
Subtest 3	846.6	22.87
HODDA	826.4	22.06
HSDPA	836.4	22.16
Subtest 4	846.6	22.81
LIOLIDA	826.4	23.82
HSUPA	836.4	23.90
Subtest 1	846.6	24.09
LICLIDA	826.4	23.82
HSUPA	836.4	23.85
Subtest 2	846.6	24.13
1101104	826.4	23.79
HSUPA	836.4	23.86
Subtest 3	846.6	24.10
LIOLIDA	826.4	23.78
HSUPA	836.4	23.85
Subtest 4	846.6	24.00
LICLIDA	826.4	23.80
HSUPA	836.4	23.84
Subtest 5	846.6	23.87



Page 39 of 192

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 β $_{\rm c}/\beta$ $_{\rm d}$ =12/15, β $_{\rm hs}/\beta$ $_{\rm c}$ =24/15.For all	Note: CM=1 for β $_{\rm c}/\beta$ $_{\rm d}$ =12/15, β $_{\rm hs}/\beta$ $_{\rm c}$ =24/15.For all other combinations of DPDCH, DPCCH,							
E-DPDCH and E-DPCCH the MPR is based on the relative 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 192

LTE Band

LTE (TDD) Considerations

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

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

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

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

	Norm	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	$6592 \cdot T_{\rm s}$			$7680 \cdot T_{\rm s}$			
1	19760· <i>T</i> _s		$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		$2192 \cdot T_s$	$2560 \cdot T_{\rm s}$	
2	21952· <i>T</i> _s	$2192 \cdot T_{\rm s}$			$2192 \cdot I_{\rm S}$	2300 · 1 _s	
3	24144· T _s			25600·T _s			
4	26336·T _s			$7680 \cdot T_{\rm s}$			
5	$6592 \cdot T_{\rm s}$			20480·T _s	$4384 \cdot T_s$	5120 · T _s	
6	19760· <i>T</i> _s			23040·T _s	4304 · 1 _s	3120 · 1 _s	
7	21952· <i>T</i> _s	$4384 \cdot T_{\rm s}$	$5120 \cdot T_{\rm s}$	12800 · T _s			
8	24144·T _s			-	-	-	
9	$13168 \cdot T_{\rm s}$			-	-	-	

Table 4.2-2: Uplink-downlink configurations

Uplink-downlink	Subframe number										
configuration	Switch-point periodicity	0	1	2	3	4	5	6	7	8	9
0	5 ms	D	S	U	U	U	D	S	U	U	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		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 192

Calculated Duty Cycle

Uplink-	Downlink-to-				Sul	bframe	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	J	63.33
1	5ms	D	S	U	U	D	D	S	U	U	D	43.33
2	5ms	D	S	U	D	D	D	S	U	D	D	23.33
3	10ms	D	S	U	U	U	D	D	D	D	D	31.67
4	10ms	D	S	U	U	D	D	D	D	D	D	21.67
5	10ms	D	S	U	D	D	D	D	D	D	D	11.67
6	5ms	D	S	U	U	U	D	S	U	U	D	53.33

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

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



Page 42 of 192

LTE Band

Conducted Power of LTE Band 2(dBm)										
			RB	_	Channel	Channel	Channel			
Bandwidth	Modulation	RB size	offset	Target MPR	18607	18900	19193			
			0	0	21.62	21.63	21.63			
		1	3	0	21.78	21.78	21.81			
			5	0	21.66	21.62	21.65			
	QPSK		0	0	21.70	21.57	21.72			
		3	2	0	21.69	21.61	21.74			
			3	0	21.69	21.62	21.76			
1.4MHz		6	0	1	21.67	21.60	21.72			
1.4111172			0	1	21.52	21.79	21.88			
		1	3	1	21.69	21.93	22.01			
			5	1	21.54	21.78	21.88			
16QAM	16QAM		0	1	21.79	21.81	21.95			
		3	2	1	21.86	21.83	22.00			
			3	1	21.84	21.81	22.01			
		6	0	2	21.37	21.31	21.46			
				<u> </u>						
Randwidth	Modulation	RR siza	RB		Channel	Channel	Channel			
Bandwidth	Modulation	RB size		Target MPR			Channel 19185			
Bandwidth	Modulation	RB size	RB		Channel	Channel				
Bandwidth	Modulation	RB size	RB offset	Target MPR	Channel 18615	Channel 18900	19185			
Bandwidth	Modulation		RB offset	Target MPR	Channel 18615 21.65	Channel 18900 21.63	19185 21.75			
Bandwidth	Modulation QPSK		RB offset 0 7	Target MPR 0 0	Channel 18615 21.65 22.00	Channel 18900 21.63 21.81	19185 21.75 22.12			
Bandwidth			RB offset 0 7 14	Target MPR 0 0 0	Channel 18615 21.65 22.00 21.67	Channel 18900 21.63 21.81 21.60	19185 21.75 22.12 21.80			
Bandwidth		1	RB offset 0 7 14 0	0 0 0 0	Channel 18615 21.65 22.00 21.67 21.65	Channel 18900 21.63 21.81 21.60 21.58	19185 21.75 22.12 21.80 21.72			
		1	RB offset 0 7 14 0 4	0 0 0 0 1	Channel 18615 21.65 22.00 21.67 21.65 21.65	Channel 18900 21.63 21.81 21.60 21.58 21.57	19185 21.75 22.12 21.80 21.72 21.75			
Bandwidth 3MHz		1 8	RB offset 0 7 14 0 4 7	0 0 0 0 1 1	Channel 18615 21.65 22.00 21.67 21.65 21.65 21.66	Channel 18900 21.63 21.81 21.60 21.58 21.57 21.57	19185 21.75 22.12 21.80 21.72 21.75 21.72			
		1 8	RB offset 0 7 14 0 4 7 0	0 0 0 1 1 1	Channel 18615 21.65 22.00 21.67 21.65 21.65 21.66 21.61	Channel 18900 21.63 21.81 21.60 21.58 21.57 21.57 21.54	19185 21.75 22.12 21.80 21.72 21.75 21.72 21.68			
		1 8 15	RB offset 0 7 14 0 4 7 0 0	Target MPR 0 0 0 1 1 1 1 1	Channel 18615 21.65 22.00 21.67 21.65 21.65 21.66 21.61 22.11	Channel 18900 21.63 21.81 21.60 21.58 21.57 21.57 21.54 21.88	19185 21.75 22.12 21.80 21.72 21.75 21.72 21.68 21.67			
		1 8 15	RB offset 0 7 14 0 4 7 0 0 7	0 0 0 1 1 1 1 1	Channel 18615 21.65 22.00 21.67 21.65 21.65 21.66 21.61 22.11 22.37	Channel 18900 21.63 21.81 21.60 21.58 21.57 21.57 21.54 21.88 22.07	19185 21.75 22.12 21.80 21.72 21.75 21.72 21.68 21.67 21.97			
	QPSK	1 8 15	RB offset 0 7 14 0 4 7 0 0 7	Target MPR 0 0 0 1 1 1 1 1 1 1	Channel 18615 21.65 22.00 21.67 21.65 21.65 21.66 21.61 22.11 22.37 22.08	Channel 18900 21.63 21.81 21.60 21.58 21.57 21.57 21.54 21.88 22.07 21.84	19185 21.75 22.12 21.80 21.72 21.75 21.72 21.68 21.67 21.97 21.67			
	QPSK	1 8 15	RB offset 0 7 14 0 4 7 0 0 7 14 0 0 7	Target MPR 0 0 0 1 1 1 1 1 1 2	Channel 18615 21.65 22.00 21.67 21.65 21.65 21.66 21.61 22.11 22.37 22.08 21.24	Channel 18900 21.63 21.81 21.60 21.58 21.57 21.57 21.54 21.88 22.07 21.84 21.20	19185 21.75 22.12 21.80 21.72 21.75 21.72 21.68 21.67 21.97 21.67 21.30			



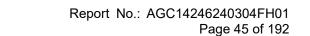
Page 43 of 192

		Conducte	ed Power	of LTE Band 2(d	Bm)		
Dan de dalla	Madelatian	DD -:	RB	Toward MDD	Channel	Channel	Channel
Bandwidth	Modulation	RB size	offset	Target MPR	18625	18900	19175
			0	0	21.58	21.56	21.61
		1	13	0	21.99	21.92	21.98
			24	0	21.61	21.55	21.63
	QPSK		0	1	21.62	21.57	21.72
		12	6	1	21.70	21.66	21.83
	IH2		13	1	21.64	21.57	21.74
5MHz		25	0	1	21.61	21.60	21.79
ЭМПЕ			0	1	22.18	21.93	22.01
		1	13	1	22.53	22.30	22.45
			24	1	22.17	21.92	22.01
16QAM		0	2	21.16	21.11	21.33	
		12	6	2	21.26	21.17	21.35
			13	2	21.22	21.08	21.37
		25	0	2	21.19	21.23	21.34
Bandwidth	Modulation	RB size	RB offset	Target MPR	Channel	Channel	Channel
Danawiatii	Woddiation	ND 3126		rarget wir ix	18650	18900	19150
			0	0	21.69	21.71	21.66
		1	25	0	21.85	21.85	21.86
			49	0	21.74	21.76	21.73
	QPSK		0	1	21.68	21.71	21.87
		25	13	1	21.75	21.69	21.83
			25	1	21.78	21.69	21.88
10MHz		50	0	1	21.72	21.66	21.84
10141112			0	1	21.86	21.59	22.11
		1	25	1	22.02	21.71	22.32
			49	1	21.93	21.54	22.17
	16QAM		0	2	21.23	21.34	21.48
		25	13	2	21.26	21.27	21.41
			25	2	21.34	21.28	21.49
		50	0	2	21.31	21.31	21.47



Page 44 of 192

		Conducte	ed Power	of LTE Band 2(d	Bm)		
			RB		Channel	Channel	Channel
Bandwidth	Modulation	RB size	offset	Target MPR	18675	18900	19125
			0	0	21.61	21.56	21.59
		1	38	0	22.04	21.90	21.92
			74	0	21.59	21.47	21.69
	QPSK		0	1	21.66	21.73	21.76
		36	18	1	21.77	21.67	21.74
			39	1	21.76	21.62	21.81
45MU-		75	0	1	21.72	21.65	21.73
15MHz			0	1	21.68	22.03	21.74
		1	38	1	22.08	22.38	22.22
	16QAM		74	1	21.73	21.97	21.89
		36	0	2	21.16	21.28	21.34
			18	2	21.25	21.26	21.36
			39	2	21.25	21.30	21.40
		75	0	2	21.25	21.23	21.36
Bandwidth	Modulation	RB size	RB	Target MPR	Channel	Channel	Channel
Danawiath	Wiodulation	IND SIZE	offset	Target WiFiX	18700	18900	19100
			0	0	21.42	21.42	21.41
		1	50	0	21.84	21.73	21.89
			99	0	21.51	21.32	21.62
	QPSK		0	1	21.62	21.82	21.75
		50	25	1	21.71	21.68	21.73
			50	1	21.73	21.70	21.70
20MHz		100	0	1	21.69	21.73	21.74
ZUIVIIIZ			0	1	21.70	21.77	21.65
		1	50	1	22.11	22.11	22.17
			99	1	21.78	21.74	21.88
	16QAM		0	2	21.27	21.43	21.32
		50	25	2	21.30	21.30	21.27
			50	2	21.31	21.35	21.28
		100	0	2	21.28	21.32	21.26





		Conducte	ed Power	of LTE Band 4(d	Bm)		
Danaduri déla	Madulatian	DD ains	RB	Toward MDD	Channel	Channel	Channel
Bandwidth	Modulation	RB size	offset	Target MPR	19957	20175	20393
			0	0	21.81	21.77	21.74
		1	3	0	21.94	22.00	21.90
			5	0	21.74	21.82	21.73
	QPSK		0	0	21.86	21.81	21.82
		3	2	0	21.86	21.82	21.81
			3	0	21.85	21.85	21.80
1.4MHz		6	0	1	21.76	21.77	21.71
1.4111172			0	1	21.72	21.93	21.96
		1	3	1	21.85	22.12	22.07
	16QAM		5	1	21.75	21.95	21.92
			0	1	22.03	22.04	22.07
		3	2	1	22.08	22.08	22.08
			3	1	22.08	22.02	22.05
		6	0	2	21.45	21.48	21.44
Bandwidth	Modulation	RB size	RB	Target MPR	Channel	Channel	Channel
Danawiatii	Woddiation	IND SIZE	offset	rarget wir ix	19965	20175	20385
			0	0	21.77	21.78	21.74
		1	7	0	22.07	22.08	22.21
			14	0	21.74	21.84	21.67
	QPSK		0	1	21.72	21.72	21.73
		8	4	1	21.76	21.75	21.78
			7	1	21.73	21.77	21.76
3MHz		15	0	1	21.73	21.78	21.73
SIVITIZ			0	1	22.03	21.65	22.19
		1	7	1	22.39	21.96	22.62
			14	1	22.02	21.68	22.16
	16QAM		0	2	21.31	21.25	21.29
		8	4	2	21.28	21.28	21.32
			7	2	21.28	21.29	21.25
		15	0	2	21.22	21.33	21.28



Page 46 of 192

		Conducte	ed Power	of LTE Band 4(d	Bm)		
Dan de dala	NA - ded - di	DD -:	RB	Townst MDD	Channel	Channel	Channel
Bandwidth	Modulation	RB size	offset	Target MPR	19975	20175	20375
			0	0	21.68	21.66	21.60
		1	13	0	22.17	22.13	21.98
			24	0	21.66	21.74	21.58
	QPSK		0	1	21.74	21.71	21.71
		12	6	1	21.78	21.80	21.83
			13	1	21.74	21.73	21.69
5MHz		25	0	1	21.77	21.75	21.75
ЭМПЕ			0	1	22.30	22.05	22.03
		1	13	1	22.73	22.44	22.37
	16QAM		24	1	22.27	22.09	22.01
			0	2	21.25	21.22	21.27
		12	6	2	21.36	21.30	21.36
			13	2	21.29	21.25	21.27
		25	0	2	21.28	21.31	21.23
Bandwidth	Modulation	RB size	RB	Target MPR	Channel	Channel	Channel
Bandwidth	Woddiation	IND SIZE	offset	raiget wii ix	20000	20175	20350
			0	0	21.77	21.67	21.86
		1	25	0	21.91	21.86	21.87
			49	0	21.70	21.81	21.80
	QPSK		0	1	21.76	21.72	21.85
		25	13	1	21.80	21.84	21.79
			25	1	21.79	21.82	21.76
10MHz		50	0	1	21.81	21.79	21.80
1011112			0	1	21.72	22.15	22.03
		1	25	1	21.82	22.36	22.10
			49	1	21.64	22.28	21.91
	16QAM		0	2	21.30	21.35	21.33
		25	13	2	21.34	21.43	21.36
			25	2	21.33	21.49	21.30
		50	0	2	21.38	21.38	21.34



Page 47 of 192

		Conducte	ed Power	of LTE Band 4(d	Bm)		
Dan de dala	NA - ded - di	DD -i	RB	Townst MDD	Channel	Channel	Channel
Bandwidth	Modulation	RB size	offset	Target MPR	20025	20175	20325
			0	0	21.70	21.59	21.72
		1	38	0	21.91	22.09	21.98
			74	0	21.88	21.72	21.67
	QPSK		0	1	21.73	21.74	21.90
		36	18	1	21.71	21.83	21.82
			39	1	21.76	21.84	21.76
15MHz		75	0	1	21.72	21.79	21.85
ISMITZ			0	1	21.96	21.73	22.21
		1	38	1	22.22	22.17	22.56
	16QAM		74	1	21.83	21.86	22.16
		36	0	2	21.33	21.21	21.39
			18	2	21.32	21.28	21.38
			39	2	21.32	21.33	21.28
		75	0	2	21.24	21.29	21.33
Bandwidth	Modulation	RB size	RB offset	Target MPR	Channel	Channel	Channel
Bandwidth	Woddiation	IND SIZE		raiget wii ix	20050	20175	20300
		1	0	0	21.49	21.34	21.61
		!	50	0	21.80	21.89	21.99
			99	0	21.50	21.66	21.55
	QPSK		0	1	21.76	21.73	21.86
		50	25	1	21.74	21.83	21.87
			50	1	21.74	21.86	21.81
20MHz		100	0	1	21.78	21.78	21.89
20111112			0	1	21.85	21.81	21.86
		1	50	1	22.15	22.22	22.25
			99	1	21.85	22.01	21.87
	16QAM		0	2	21.30	21.32	21.37
		50	25	2	21.32	21.43	21.38
			50	2	21.33	21.45	21.32
		100	0	2	21.35	21.36	21.39



Page 48 of 192

		Conducte	ed Power	of LTE Band 5(d	Bm)		
			RB		Channel	Channel	Channel
Bandwidth	Modulation	RB size	offset	Target MPR	20407	20525	20643
			0	0	23.39	23.53	23.56
		1	3	0	23.59	23.65	23.74
			5	0	23.41	23.60	23.57
	QPSK		0	0	23.43	23.47	23.68
		3	2	0	23.46	23.50	23.64
			3	0	23.44	23.53	23.64
4 4MU~		6	0	1	22.37	22.49	22.58
1.4MHz			0	1	22.31	22.62	22.73
		1	3	1	22.46	22.79	22.92
			5	1	22.30	22.67	22.75
	16QAM		0	1	22.67	22.68	22.89
		3	2	1	22.62	22.74	22.88
			3	1	22.65	22.69	22.91
		6	0	2	21.66	21.73	21.83
Bandwidth	Modulation	RB size	RB	Target MPR	Channel	Channel	Channel
Danawiatii	Woddiation	IND SIZE	offset	Target WiFiX	20415	20525	20635
		1	0	0	23.39	23.45	23.62
			7	0	23.66	23.76	23.98
			14	0	23.29	23.64	23.76
	QPSK		0	1	22.33	22.46	22.61
		8	4	1	22.37	22.46	22.63
			7	1	22.34	22.46	22.59
3MHz		15	0	1	22.32	22.44	22.60
SIVIFIZ			0	1	22.94	22.68	22.55
		1	7	1	23.13	22.99	22.80
			14	1	22.85	22.82	22.47
	16QAM		0	2	21.47	21.55	21.66
		8	4	2	21.48	21.56	21.70
			7	2	21.46	21.55	21.65
		15	0	2	21.47	21.46	21.71



Page 49 of 192

		Conducto	ed Power	of LTE Band 5(d	Bm)		
			RB		Channel	Channel	Channel
Bandwidth	Modulation	RB size	offset	Target MPR	20425	20525	20625
			0	0	23.36	23.33	23.56
		1	13	0	23.70	23.69	23.96
			24	0	23.33	23.46	23.60
	QPSK		0	1	22.41	22.55	22.56
		12	6	1	22.42	22.52	22.69
			13	1	22.47	22.47	22.58
EMILI-		25	0	1	22.46	22.52	22.62
5MHz			0	1	22.71	22.66	23.15
		1	13	1	23.12	23.12	23.51
			24	1	22.68	22.80	23.11
	16QAM		0	2	21.32	21.63	21.67
		12	6	2	21.45	21.62	21.75
			13	2	21.49	21.59	21.62
		25	0	2	21.52	21.54	21.65
Bandwidth	Modulation	RB size	RB	Target MPR	Channel	Channel	Channel
Balluwiutii	Wiodulation	KD SIZE	offset	Target WPK	20450	20525	20600
		1	0	0	23.40	23.33	23.56
			25	0	23.55	23.58	23.73
			49	0	23.53	23.62	23.66
	QPSK		0	1	22.26	22.60	22.58
		25	13	1	22.42	22.49	22.63
			25	1	22.35	22.61	22.69
10M⊔~		50	0	1	22.32	22.57	22.63
10MHz			0	1	22.26	22.77	22.72
		1	25	1	22.41	23.04	22.91
			49	1	22.32	23.09	22.85
	16QAM		0	2	21.34	21.65	21.63
		25	13	2	21.43	21.62	21.74
			25	2	21.42	21.69	21.75
		50	0	2	21.38	21.68	21.73



Page 50 of 192

Conducted Power of LTE Band 7 (dBm)										
5 1 1 1 1 1 1		·	RB	Target	Channel	Channel	Channel			
Bandwidth	Modulation	RB size	offset	MPR	20775	21100	21425			
			0	0	22.73	22.66	22.51			
		1	12	0	23.06	23.14	22.91			
			24	0	22.78	22.64	22.49			
	QPSK		0	1	21.87	21.72	21.68			
		12	6	1	21.94	21.82	21.71			
			13	1	21.84	21.74	21.69			
CRALL-		25	0	1	21.91	21.81	21.70			
5MHz -			0	1	22.27	22.03	21.90			
		1	12	1	22.69	22.40	22.35			
	16QAM		24	1	22.35	22.06	21.94			
		12	0	2	20.89	20.69	20.67			
			6	2	20.92	20.73	20.73			
			13	2	20.89	20.68	20.72			
		25	0	2	20.89	20.81	20.68			
Bandwidth	Modulation	RB size	RB	Target	Channel	Channel	Channel			
Danuwiuiii	Wiodulation	KD SIZE	offset	MPR	20800	21100	21400			
			0	0	22.84	22.79	22.74			
		1	24	0	22.92	22.80	22.85			
			49	0	22.90	22.80	22.73			
	QPSK		0	1	21.92	21.86	21.70			
		25	12	1	21.94	21.81	21.73			
			25	1	22.00	21.81	21.81			
40MU~		50	0	1	21.97	21.86	21.76			
10MHz			0	1	22.25	21.99	21.64			
		1	24	1	22.41	22.04	21.69			
			49	1	22.39	22.05	21.54			
	16QAM		0	2	20.97	20.84	20.72			
		25	12	2	20.95	20.81	20.73			
			25	2	21.03	20.87	20.82			
		50	0	2	20.98	20.89	20.74			



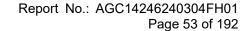
Page 51 of 192

		Co	nducted Pov	ver of LTE	Band 7 (dBm)		
5 1 1 1 1 1 1			RB	Target	Channel	Channel	Channel
Bandwidth	Modulation	RB size	offset	MPR	20825	21100	21375
			0	0	22.81	22.75	22.64
		1 [37	0	23.06	23.15	23.03
			74	0	22.77	22.75	22.55
	QPSK		0	1	21.97	21.84	21.75
		37	16	1	21.98	21.88	21.76
			35	1	21.96	21.85	21.79
15MHz		75	0	1	21.95	21.91	21.80
TOWINZ			0	1	22.04	21.84	22.13
		1 [37	1	22.48	22.16	22.54
	16QAM		74	1	22.09	21.90	22.04
			0	2	21.02	20.78	20.76
		37	16	2	21.03	20.86	20.82
			35	2	21.00	20.81	20.81
		75	0	2	20.93	20.92	20.80
Bandwidth	Modulation	RB size	RB	Target	Channel	Channel	Channel
Danawiatii	Wioddiation	IND SIZE	offset	MPR	20850	21100	21350
			0	0	22.74	22.59	22.57
		1	49	0	23.08	22.88	22.83
			99	0	22.73	22.60	22.45
	QPSK		0	1	21.91	21.81	21.73
		50	25	1	21.94	21.89	21.77
			49	1	21.93	21.76	21.80
20MHz		100	0	1	21.92	21.82	21.81
ZUIVITZ			0	1	21.95	21.86	21.96
		1 [49	1	22.27	22.20	22.16
			99	1	21.96	21.93	21.82
	16QAM		0	2	20.88	20.87	20.81
		50	25	2	20.96	20.90	20.85
			49	2	20.92	20.86	20.87
		100	0	2	20.94	20.82	20.79



Page 52 of 192

		Cond	ucted Po	wer of LTE Ban	d 41(dBn	n)			
Dan duvidéla	Madulation	DD eine	RB	Toward MDD			Channel		
Bandwidth	Modulation	RB size	offset	Target MPR	39675	40147	40620	41092	41565
			0	0	23.32	22.86	23.01	22.55	21.42
		1	12	0	23.57	23.12	23.22	22.77	21.71
			25	0	23.38	22.92	22.94	22.50	21.48
	QPSK		0	1	22.41	21.96	21.96	21.54	20.58
		12	6	1	22.45	22.01	22.08	21.65	20.61
			13	1	22.45	22.01	21.96	21.54	20.54
5MHz		25	0	1	22.40	21.96	22.02	21.59	20.55
SIVITIZ			0	1	23.02	22.56	22.33	21.90	20.80
		1	12	1	23.23	22.78	22.51	22.07	21.10
	16QAM		25	1	23.00	22.56	22.24	21.80	20.89
			0	2	21.37	20.95	20.99	20.58	19.56
		12	6	2	21.47	21.05	21.04	20.63	19.61
			13	2	21.44	21.02	20.99	20.59	19.54
		25	0	2	21.42	21.00	21.10	20.70	19.50
Bandwidth	Modulation	RB size	RB	Target MPR			Channel		
Danawiatii	Woddiation	IXD SIZE	offset	rarget iiii ix	39700	40160	40620	41080	41540
		1	0	0	23.41	22.95	23.15	22.70	21.58
			25	0	23.52	23.06	23.16	22.72	21.68
			50	0	23.47	23.02	23.01	22.55	21.63
	QPSK		0	1	22.45	22.02	22.18	21.74	20.66
		25	12	1	22.45	22.02	22.07	21.64	20.57
			25	1	22.51	22.07	22.02	21.59	20.52
10MHz		50	0	1	22.49	22.06	22.11	21.68	20.58
TOWITIE			0	1	22.90	22.45	22.31	21.86	20.61
		1	25	1	23.04	22.59	22.33	21.90	20.67
			50	1	23.02	22.56	22.11	21.67	20.60
	16QAM		0	2	21.50	21.07	21.21	20.79	19.66
		25	12	2	21.51	21.10	21.11	20.69	19.56
			25	2	21.57	21.15	21.09	20.68	19.52
		50	0	2	21.49	21.08	21.19	20.79	19.58





		Cond	ucted Po	wer of LTE Ban	d 41(dBn	1)			
Bandwidth	Modulation	RB size	RB	Target MDD			Channel		
Balluwiutii	Wodulation	KD SIZE	offset	Target MPR	39725	40172	40620	41067	41515
			0	0	23.30	22.85	23.13	22.69	21.58
		1	37	0	23.68	23.21	23.30	22.84	21.87
			74	0	23.37	22.92	22.85	22.41	21.61
	QPSK		0	1	22.44	21.99	22.13	21.69	20.59
		36	19	1	22.48	22.03	22.07	21.64	20.55
			38	1	22.56	22.13	22.04	21.61	20.53
15MHz		75	0	1	22.47	22.03	22.07	21.63	20.57
1 JIVII 12			0	1	22.83	22.38	22.28	21.84	20.76
		1	37	1	23.18	22.73	22.45	22.01	21.03
			74	1	22.91	22.47	22.03	21.60	20.79
	16QAM	36	0	2	21.45	21.03	21.20	20.78	19.53
			19	2	21.52	21.10	21.13	20.72	19.52
			38	2	21.57	21.16	21.09	20.68	19.50
		75	0	2	21.47	21.05	21.13	20.72	19.57
Bandwidth	Modulation	RB size	RB	Target MPR			Channel		
Danawiath	Woddiation	RD SIZE	offset		39750	40185	40620	41055	41490
			0	0	23.20	22.74	22.97	22.52	21.41
		1	49	0	23.65	23.20	23.21	22.75	21.76
			99	0	23.25	22.79	22.72	22.27	21.45
	QPSK		0	1	22.33	21.90	22.15	21.72	20.62
		50	25	1	22.49	22.05	22.07	21.64	20.57
			50	1	22.56	22.11	22.01	21.58	20.41
20MHz		100	0	1	22.46	22.03	22.11	21.68	20.51
20141112			0	1	22.40	21.95	22.30	21.87	20.62
		1	49	1	22.86	22.42	22.50	22.07	20.99
			99	1	22.44	21.99	22.01	21.59	20.66
	16QAM		0	2	21.43	21.01	21.25	20.83	19.58
		50	25	2	21.53	21.11	21.22	20.81	19.55
			50	2	21.62	21.20	21.13	20.71	19.39
		100	0	2	21.48	21.05	21.16	20.74	19.52



Page 54 of 192

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			MDD(4D)								
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 55 of 192

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

Network	3-1: Additional Max	Third in Fower Read	Channel	Resources	- Cquirements
Signaling	Requirements	E-UTRA Band	bandwidth	Blocks	A-MPR (dB)
value	(sub-clause)	L-OTIVA Ballu	(MHz)	(N _{RB})	A-WIFIX (UD)
NS 01	6.6.2.1.1	Table 5.2-1	1.4,3,5,10,15,20	Table 5.4.2-1	N/A
_			3	>5	≤ 1
		0.4.40.00	5	>6	≤ 1
NS 03	6.6.2.2.3.1	2,4,10, 23,	10	>6	≤ 1
_		25,35,36	15	>8	≤ 1
			20	>10	≤ 1
NC 04	00000	44	5	>6	≤1
NS_04	6.6.2.2.3.2	41	10, 15, 20	Table 6	.2.4.3-4
NS 05	6.6.3.3.3.1	1	10,15,20	≥ 50	≤ 1
NS_06	6.6.2.2.3.3	12, 13, 14, 17	1.4, 3, 5, 10	Table 5.4.2-1	N/A
NC 07	6.6.2.2.3.3	13	10	Table 6.2.4.3-2	Table 6.2.4.3-2
NS_07	6.6.3.3.3.2	13	10	Table 0.2.4.3-2	Table 6.2.4.3-2
NS_08	6.6.3.3.3.3	19	10, 15	> 44	≤ 3
NS 09	6.6.3.3.3.4	21	10, 15	> 40	≤1
143_09	0.0.3.3.3.4	21	10, 13	> 55	≤ 2
NS_10		20	15, 20	Table 6.2.4.3-3	Table 6.2.4.3-3
NS 11	6.6.2.2.1	231	1.4, 3, 5,	Table 6.2.4.3-5	Table 6.2.4.3-5
_	6.6.3.3.13		10,15,20		
NS_12	6.6.3.3.5	26	1.4, 3, 5	Table 6.2.4.3-6	Table 6.2.4.3-6
NS_13	6.6.3.3.6	26	5	Table 6.2.4.3-7	Table 6.2.4.3-7
NS_14	6.6.3.3.7	26	10, 15	Table 6.2.4.3-8	Table 6.2.4.3-8
NS 15	6.6.3.3.8	26	1.4, 3, 5, 10, 15	Table 6.2.4.3-9	Table 6.2.4.3-9,
140_10	0.0.3.3.0	20	1.4, 3, 3, 10, 13	Table 6.2.4.3-10	
NS 16	6.6.3.3.9	27	3, 5, 10		Table 6.2.4.3-12,
140_10					2.4.3-13
NS_17	6.6.3.3.10	28	5, 10	Table 5.4.2-1	N/A
_	6.6.3.3.11	28	5	≥ 2	≤ 1
NS_18			10, 15, 20	≥ 1	≤ 4
NS_19			10, 15, 20	Table 6.2.4.3-15	
NS_20			5, 10, 15, 20	Table 6.2.4.3-14	Table 6.2.4.3-14
NS_20	-	-	-	_	-
	_ i		i	I .	



Page 56 of 192

WIFI

Mode	Data Rate (Mbps)	Channel	Frequency(MHz)	Avg. Burst Power(dBm)
		01	2412	16.60
802.11b	1	06	2437	15.75
		11	2462	16.04
		01	2412	14.25
802.11g	6	06	2437	13.50
		11	2462	13.87
		01	2412	12.39
802.11n(20)	6.5	06	2437	11.41
		11	2462	11.82

Bluetooth_V5.0(BR/EDR)

Modulation	Channel	Frequency(MHz)	Peak Power (dBm)
	0	2402	2.57
GFSK	39	2441	3.50
	78	2480	4.37
	0	2402	4.30
π /4-DQPSK	39	2441	5.21
	78	2480	6.12
	0	2402	4.62
8-DPSK	39	2441	5.52
	78	2480	6.36

Bluetooth_V5.0(BLE)

Bidotootii_Tolo(BE	· - /		
Modulation	Channel	Frequency(MHz)	Peak Power (dBm)
	0	2402	1.49
GFSK	19	2440	-0.27
	39	2480	-0.31



Page 57 of 192

5GHz WIFI

5GHz WIF	_					Power	(dBm)			
Mode	channel	Frequency					ite(bps)			
			6M	9M	12M	18M	24M	36M	48M	54M
	36	5180	18.63	18.49	18.39	18.27	18.26	18.11	18.07	17.98
	40	5200	17.97	17.87	17.77	17.67	17.49	17.42	17.39	17.35
	48	5240	17.80	17.61	17.47	17.32	17.18	17.08	16.91	16.87
	52	5260	18.24	18.08	17.99	17.92	17.82	17.80	17.69	17.65
	60	5300	18.03	17.83	17.83	17.74	17.54	17.40	17.32	17.18
000.44	64	5320	17.73	17.56	17.37	17.34	17.16	17.08	17.04	16.86
802.11a	100	5500	18.37	18.23	18.22	18.15	17.99	17.95	17.89	17.85
	116	5580	17.61	17.43	17.26	17.20	17.15	17.14	17.06	16.86
	140	5700	17.15	17.08	16.89	16.73	16.54	16.46	16.31	16.18
	149	5745	17.42	17.28	17.19	17.16	16.97	16.95	16.90	16.86
	157	5785	17.30	17.17	17.13	16.98	16.87	16.79	16.65	16.49
	165	5825	17.75	17.57	17.44	17.34	17.29	17.11	17.05	16.86
			MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
	36	5180	17.14	16.96	16.89	16.80	16.65	16.48	16.43	16.26
	40	5200	17.04	16.85	16.82	16.77	16.65	16.62	16.52	16.43
	48	5240	16.69	16.59	16.52	16.50	16.42	16.27	16.09	15.93
	52	5260	17.42	17.31	17.24	17.13	17.07	16.92	16.75	16.67
	60	5300	17.20	17.06	16.96	16.79	16.61	16.52	16.34	16.23
802.11n	64	5320	16.46	16.26	16.22	16.20	16.08	16.03	15.86	15.75
(20)	100	5500	17.64	17.64	17.48	17.37	17.36	17.29	17.28	17.09
	116	5580	16.64	16.56	16.39	16.21	16.05	15.93	15.82	15.77
	140	5700	16.07	15.88	15.81	15.75	15.65	15.46	15.37	15.25
	149	5745	16.28	16.10	15.97	15.80	15.78	15.63	15.50	15.44
	157	5785	16.23	16.21	16.21	16.04	15.89	15.84	15.71	15.52
	165	5825	16.50	16.44	16.40	16.31	16.15	16.04	15.98	15.80
			MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
	38	5190	16.96	16.80	16.60	16.52	16.46	16.30	16.14	16.05
	46	5230	16.74	16.67	16.57	16.43	16.36	16.27	16.15	16.00
	54	5270	17.18	17.07	16.93	16.81	16.63	16.61	16.46	16.38
000 44=	62	5310	16.73	16.57	16.47	16.34	16.20	16.04	15.95	15.94
802.11n (40)	102	5510	17.54	17.43	17.34	17.23	17.18	17.02	16.83	16.64
(40)	110	5550	16.97	16.88	16.73	16.69	16.55	16.49	16.39	16.30
	134	5670	16.14	16.14	16.00	15.92	15.91	15.79	15.63	15.49
	151	5755	16.26	16.22	16.18	16.11	15.98	15.94	15.93	15.81
	159	5795	16.00	16.00	15.82	15.75	15.67	15.58	15.40	15.21



Page 58 of 192

Mada	ahannal	F				Power	(dBm)			
Mode	channel	Frequency				Data Ra	ite(bps)			
			MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
	36	5180	14.02	13.87	13.81	13.74	13.56	13.52	13.48	13.44
	40	5200	13.54	13.40	13.25	13.16	13.04	12.93	12.92	12.85
	48	5240	13.24	13.15	13.08	13.02	12.91	12.81	12.77	12.70
	52	5260	14.18	14.07	13.98	13.87	13.76	13.59	13.45	13.37
	60	5300	13.99	13.91	13.77	13.71	13.63	13.51	13.38	13.26
802.11ac	64	5320	13.51	13.45	13.45	13.26	13.26	13.08	12.93	12.74
(20)	100	5500	14.17	14.12	14.07	13.93	13.76	13.70	13.60	13.54
	116	5580	13.59	13.56	13.54	13.44	13.28	13.26	13.08	12.92
	140	5700	12.57	12.47	12.32	12.26	12.19	12.17	11.98	11.96
	149	5745	13.05	12.99	12.92	12.75	12.70	12.52	12.34	12.23
	157	5785	12.91	12.82	12.62	12.46	12.27	12.25	12.21	12.13
	165	5825	13.18	13.10	12.97	12.79	12.72	12.57	12.53	12.42
			MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
	38	5190	13.25	13.10	13.01	12.88	12.72	12.60	12.57	12.41
	46	5230	12.90	12.75	12.65	12.60	12.59	12.39	12.30	12.19
	54	5270	13.07	13.00	12.97	12.89	12.79	12.68	12.49	12.46
000.44	62	5310	12.92	12.82	12.79	12.68	12.51	12.44	12.42	12.35
802.11ac	102	5510	15.85	15.83	15.71	15.61	15.59	15.56	15.38	15.36
(40)	110	5550	13.24	13.10	13.05	13.03	13.00	12.84	12.66	12.64
	134	5670	12.43	12.31	12.21	12.02	11.88	11.70	11.70	11.65
	151	5755	12.80	12.62	12.48	12.36	12.22	12.14	12.06	12.03
	159	5795	12.86	12.72	12.64	12.47	12.34	12.18	12.05	11.96
			MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
	42	5210	12.52	12.44	12.34	12.25	12.19	12.11	11.91	11.88
000 1155	58	5290	12.81	12.64	12.49	12.35	12.21	12.20	12.09	12.03
802.11ac (80)	106	5530	13.03	12.97	12.84	12.78	12.74	12.66	12.61	12.50
(00)	122	5610	12.67	12.52	12.43	12.33	12.15	12.02	11.90	11.79
	155	5775	12.15	12.14	11.94	11.83	11.72	11.60	11.59	11.57



Page 59 of 192

13. TEST RESULTS

13.1. SAR Test Results Summary

13.1.1. Test position and configuration

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

13.1.2. Operation Mode

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



Page 60 of 192

- 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 61 of 192

13.1.3. Test Result

SAR MEASUREMENT	
Depth of Liquid (cm):>15	Relative Humidity (%): 58.7
Product: Smart phone	

Test Mode: GSM850 with GMSK modulation

Position	Mode	Ch.	Fr. (MHz)	Power Drift (<±5%)	SAR (1g) (W/kg)	Max. Tune-up Power (dBm)	Meas. output Power (dBm)	Scaled SAR (W/kg)	Limit (W/kg)
SIM 1 Card									
Left Cheek	voice	128	824.2	-0.27	0.631	34.20	33.93	0.671	1.6
Left Cheek	voice	190	836.6	0.12	0.828	34.20	33.89	0.889	1.6
Left Cheek	voice	251	848.8	-0.05	0.850	34.20	34.13	0.864	1.6
Left Tilt	voice	190	836.6	-0.24	0.706	34.20	33.89	0.758	1.6
Right Cheek	voice	128	824.2	0.17	0.917	34.20	33.93	0.976	1.6
Right Cheek	voice	190	836.6	-0.06	0.832	34.20	33.89	0.894	1.6
Right Cheek	voice	251	848.8	-0.31	1.042	34.20	34.13	1.059	1.6
Right Tilt	voice	190	836.6	0.13	0.720	34.20	33.89	0.773	1.6
Body back	voice	190	836.6	-0.06	0.357	34.20	33.89	0.383	1.6
Body front	voice	190	836.6	0.16	0.308	34.20	33.89	0.331	1.6
Body back	GPRS-2 slot	190	836.6	-0.20	0.658	33.20	32.89	0.707	1.6
Body front	GPRS-2 slot	190	836.6	0.12	0.457	33.20	32.89	0.491	1.6
Edge 1 (Top)	GPRS-2 slot	190	836.6	-0.08	0.472	33.20	32.89	0.507	1.6
Edge 4(Left)	GPRS-2 slot	190	836.6	-0.17	0.209	33.20	32.89	0.224	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 10mm of all above table.



Page 62 of 192

SAR MEASUREMENT

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

Product: Smart phone

Test Mode: PCS1900 with GMSK modulation

Position	Mode	Ch.	Fr. (MHz)	Power Drift (<±5%)	SAR (1g) (W/kg)	Max. Tune-up Power (dBm)	Meas. output Power (dBm)	Scaled SAR (W/kg)	Limit (W/kg)
SIM 1 Card									
Left Cheek	voice	661	1880.0	0.32	0.497	30.70	30.62	0.506	1.6
Left Tilt	voice	661	1880.0	-0.22	0.526	30.70	30.62	0.536	1.6
Right Cheek	voice	661	1880.0	0.10	0.712	30.70	30.62	0.725	1.6
Right Tilt	voice	512	1850.2	-0.14	0.773	30.70	30.61	0.789	1.6
Right Tilt	voice	661	1880	-0.30	0.862	30.70	30.62	0.878	1.6
Right Tilt	voice	810	1909.8	-0.23	0.883	30.70	30.44	0.937	1.6
Body back	voice	661	1880.0	0.04	0.547	30.70	30.62	0.557	1.6
Body front	voice	661	1880.0	0.22	0.185	30.70	30.62	0.188	1.6
Body back	GPRS-2 slot	512	1850.2	-0.06	0.735	29.70	29.48	0.773	1.6
Body back	GPRS-2 slot	661	1880	0.28	0.919	29.70	29.60	0.940	1.6
Body back	GPRS-2 slot	810	1909.8	-0.32	0.887	29.70	29.48	0.933	1.6
Body front	GPRS-2 slot	661	1880.0	-0.08	0.307	29.70	29.60	0.314	1.6
Edge 1 (Top)	GPRS-2 slot	661	1880.0	0.10	0.788	29.70	29.60	0.806	1.6
Edge 4(Left)	GPRS-2 slot	661	1880.0	0.26	0.163	29.70	29.60	0.167	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 10mm of all above table.



Page 63 of 192

SAR MEASUREMENT

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

Product: Smart phone

Test Mode: WCDMA Band II with QPSK modulation

Position	Mode	Ch.	Fr. (MHz)	Power Drift (<±5%)	SAR (1g) (W/kg)	Max. Tune-up Power (dBm)	Meas. output Power (dBm)	Scaled SAR (W/kg)	Limit (W/kg)
Left Cheek	RMC 12.2kbps	9400	1880	-0.27	0.673	23.50	23.33	0.700	1.6
Left Tilt	RMC 12.2kbps	9400	1880	0.11	0.721	23.50	23.33	0.750	1.6
Right Cheek	RMC 12.2kbps	9262	1852.4	-0.27	1.075	23.50	23.42	1.095	1.6
Right Cheek	RMC 12.2kbps	9400	1880	-0.14	1.040	23.50	23.33	1.082	1.6
Right Cheek	RMC 12.2kbps	9538	1907.6	0.09	1.073	23.50	23.37	1.106	1.6
Right Tilt	RMC 12.2kbps	9262	1852.4	0.03	1.101	23.50	23.42	1.121	1.6
Right Tilt	RMC 12.2kbps	9400	1880	-0.30	1.098	23.50	23.33	1.142	1.6
Right Tilt	RMC 12.2kbps	9538	1907.6	-0.15	1.039	23.50	23.37	1.071	1.6
Body back	RMC 12.2kbps	9262	1852.4	0.04	0.901	23.50	23.42	0.918	1.6
Body back	RMC 12.2kbps	9400	1880	-0.22	0.879	23.50	23.33	0.914	1.6
Body back	RMC 12.2kbps	9538	1907.6	-0.16	0.862	23.50	23.37	0.888	1.6
Body front	RMC 12.2kbps	9400	1880	1.01	0.312	23.50	23.33	0.324	1.6
Edge 1 (Top)	RMC 12.2kbps	9262	1852.4	-0.16	0.922	23.50	23.42	0.939	1.6
Edge 1 (Top)	RMC 12.2kbps	9400	1880	-0.15	0.875	23.50	23.33	0.910	1.6
Edge 1 (Top)	RMC 12.2kbps	9538	1907.6	0.25	0.903	23.50	23.37	0.930	1.6
Edge 4(Left)	RMC 12.2kbps	9400	1880	0.13	0.181	23.50	23.33	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 10mm of all above table.



Page 64 of 192

SAR MEASUREMENT

Depth of Liquid (cm):>15 Relative Humidity (%): 58.7

Product: Smart phone

Test Mode: WCDMA Band V with QPSK modulation

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)
RMC 12.2kbps	4132	826.4	-0.18	0.833	24.20	23.78	0.918	1.6
RMC 12.2kbps	4183	836.4	0.20	0.899	24.20	23.84	0.977	1.6
RMC 12.2kbps	4233	846.6	0.11	1.048	24.20	24.07	1.080	1.6
RMC 12.2kbps	4183	836.4	-0.24	0.712	24.20	23.84	0.774	1.6
RMC 12.2kbps	4132	826.4	-0.14	0.961	24.20	23.78	1.059	1.6
RMC 12.2kbps	4183	836.4	-0.09	0.910	24.20	23.84	0.989	1.6
RMC 12.2kbps	4233	846.6	0.24	1.102	24.20	24.07	1.135	1.6
RMC 12.2kbps	4183	836.4	0.34	0.747	24.20	23.84	0.812	1.6
RMC 12.2kbps	4183	836.4	0.86	0.353	24.20	23.84	0.384	1.6
RMC 12.2kbps	4183	836.4	-0.10	0.237	24.20	23.84	0.257	1.6
RMC 12.2kbps	4183	836.4	-0.21	0.268	24.20	23.84	0.291	1.6
RMC 12.2kbps	4183	836.4	0.25	0.124	24.20	23.84	0.135	1.6
	RMC 12.2kbps	RMC 12.2kbps 4132 RMC 12.2kbps 4183 RMC 12.2kbps 4233 RMC 12.2kbps 4183 RMC 12.2kbps 4132 RMC 12.2kbps 4132 RMC 12.2kbps 4183 RMC 12.2kbps 4233 RMC 12.2kbps 4233 RMC 12.2kbps 4183 RMC 12.2kbps 4183 RMC 12.2kbps 4183 RMC 12.2kbps 4183	Mode Ch. (MHz) RMC 12.2kbps 4132 826.4 RMC 12.2kbps 4183 836.4 RMC 12.2kbps 4233 846.6 RMC 12.2kbps 4183 836.4 RMC 12.2kbps 4132 826.4 RMC 12.2kbps 4183 836.4 RMC 12.2kbps 4233 846.6 RMC 12.2kbps 4183 836.4 RMC 12.2kbps 4183 836.4	Mode Ch. Fr. (MHz) Drift (<±5%) RMC 12.2kbps 4132 826.4 -0.18 RMC 12.2kbps 4183 836.4 0.20 RMC 12.2kbps 4233 846.6 0.11 RMC 12.2kbps 4183 836.4 -0.24 RMC 12.2kbps 4183 836.4 -0.09 RMC 12.2kbps 4233 846.6 0.24 RMC 12.2kbps 4183 836.4 0.34 RMC 12.2kbps 4183 836.4 0.86 RMC 12.2kbps 4183 836.4 -0.10 RMC 12.2kbps 4183 836.4 -0.21	Mode Ch. Fr. (MHz) Drift (<±5%) (1g) (W/kg) RMC 12.2kbps 4132 826.4 -0.18 0.833 RMC 12.2kbps 4183 836.4 0.20 0.899 RMC 12.2kbps 4233 846.6 0.11 1.048 RMC 12.2kbps 4183 836.4 -0.24 0.712 RMC 12.2kbps 4132 826.4 -0.14 0.961 RMC 12.2kbps 4183 836.4 -0.09 0.910 RMC 12.2kbps 4183 836.4 0.34 0.747 RMC 12.2kbps 4183 836.4 0.86 0.353 RMC 12.2kbps 4183 836.4 -0.10 0.237 RMC 12.2kbps 4183 836.4 -0.21 0.268	Mode Ch. Fr. (MHz) Power Orift (<±5%) SAR (1g) (W/kg) Tune-up Power (dBm) RMC 12.2kbps 4132 826.4 -0.18 0.833 24.20 RMC 12.2kbps 4183 836.4 0.20 0.899 24.20 RMC 12.2kbps 4233 846.6 0.11 1.048 24.20 RMC 12.2kbps 4183 836.4 -0.24 0.712 24.20 RMC 12.2kbps 4132 826.4 -0.14 0.961 24.20 RMC 12.2kbps 4183 836.4 -0.09 0.910 24.20 RMC 12.2kbps 4233 846.6 0.24 1.102 24.20 RMC 12.2kbps 4183 836.4 0.34 0.747 24.20 RMC 12.2kbps 4183 836.4 0.86 0.353 24.20 RMC 12.2kbps 4183 836.4 -0.10 0.237 24.20 RMC 12.2kbps 4183 836.4 -0.21 0.268 24.20	Mode Ch. Fr. (MHz) Power (1g) (ñ5%) Tune-up (1g) (W/kg) Meas. output Power (dBm) RMC 12.2kbps 4132 826.4 -0.18 0.833 24.20 23.78 RMC 12.2kbps 4183 836.4 0.20 0.899 24.20 23.84 RMC 12.2kbps 4233 846.6 0.11 1.048 24.20 24.07 RMC 12.2kbps 4183 836.4 -0.24 0.712 24.20 23.84 RMC 12.2kbps 4132 826.4 -0.14 0.961 24.20 23.78 RMC 12.2kbps 4183 836.4 -0.09 0.910 24.20 23.84 RMC 12.2kbps 4233 846.6 0.24 1.102 24.20 23.84 RMC 12.2kbps 4183 836.4 0.34 0.747 24.20 23.84 RMC 12.2kbps 4183 836.4 0.86 0.353 24.20 23.84 RMC 12.2kbps 4183 836.4 -0.10 0.237 24.20 23.84<	Mode Ch. Fr. (MHz) Power (1g) (<±5%) SAR (1g) (W/kg) Tune-up Power (dBm) Meas. output Power (dBm) Scaled SAR (W/kg) RMC 12.2kbps 4132 826.4 -0.18 0.833 24.20 23.78 0.918 RMC 12.2kbps 4183 836.4 0.20 0.899 24.20 23.84 0.977 RMC 12.2kbps 4233 846.6 0.11 1.048 24.20 24.07 1.080 RMC 12.2kbps 4183 836.4 -0.24 0.712 24.20 23.84 0.774 RMC 12.2kbps 4183 836.4 -0.14 0.961 24.20 23.78 1.059 RMC 12.2kbps 4183 836.4 -0.09 0.910 24.20 23.84 0.989 RMC 12.2kbps 4183 836.4 0.09 0.910 24.20 23.84 0.812 RMC 12.2kbps 4183 836.4 0.34 0.747 24.20 23.84 0.812 RMC 12.2kbps 4183 836.4 -0.10

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 10mm of all above table.



Page 65 of 192

SAR MEASUREMENT

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

Product: Smart phone

Test Mode: LTE Band 2

ВМ			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)
		Left Cheek	1	0	18900	1880	-0.21	0.595	21.50	21.42	0.606	1.6
		Left Tilt	1	0	18900	1880	0.03	0.510	21.50	21.42	0.519	1.6
		Right Cheek	1	0	18700	1860	0.09	1.006	21.50	21.42	1.025	1.6
		Right Cheek	1	0	18900	1880	0.08	1.000	21.50	21.42	1.019	1.6
		Right Cheek	1	0	19100	1900	-0.24	0.928	21.50	21.41	0.947	1.6
20	QPSK	Right Tilt	1	0	18700	1860	-0.31	1.106	21.50	21.42	1.127	1.6
20	QFSK	Right Tilt	1	0	18900	1880	-0.05	1.129	21.50	21.42	1.150	1.6
		Right Tilt	1	0	19100	1900	0.14	1.079	21.50	21.41	1.102	1.6
		Body back	1	0	18900	1880	0.10	0.714	21.50	21.42	0.727	1.6
		Body front	1	0	18900	1880	-0.15	0.246	21.50	21.42	0.251	1.6
		Edge 1 (Top)	1	0	18900	1880	-0.11	0.710	21.50	21.42	0.723	1.6
		Edge 4(Left)	1	0	18900	1880	0.17	0.141	21.50	21.42	0.144	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 10mm of all above table.



Page 66 of 192

SAR MEASUREMENT

Depth of Liquid (cm):>15 Relative Humidity (%): 62.3

Product: Smart phone

Test Mode: LTE Band 4

ВМ			Test M	lode	Ch	Freq.	Power	SAR	Max. Tuneu	Meas. output	Scaled	Limit
MHz	MOD	Position	UL RB Allocation	UL RB START	Ch.	(MHz)	Drift (<±5%)	(1g) (W/kg)	p Power (dBm)	Power (dBm)	SAR (W/kg)	(W/kg)
		Left Cheek	1	0	20175	1732.5	-0.22	0.653	21.70	21.34	0.709	1.6
		Left Tilt	1	0	20050	1720	0.02	0.816	21.70	21.49	0.856	1.6
		Left Tilt	1	0	20175	1732.5	0.17	0.821	21.70	21.34	0.892	1.6
		Left Tilt	1	0	20300	1745	-0.28	0.825	21.70	21.61	0.842	1.6
		Right Cheek	1	0	20050	1720	-0.29	0.964	21.70	21.49	1.012	1.6
		Right Cheek	1	0	20175	1732.5	0.19	1.011	21.70	21.34	1.098	1.6
20	QPSK	Right Cheek	1	0	20300	1745	-0.09	1.074	21.70	21.61	1.096	1.6
20	QFSK	Right Tilt	1	0	20050	1720	0.07	1.042	21.70	21.49	1.094	1.6
		Right Tilt	1	0	20175	1732.5	-0.20	1.053	21.70	21.34	1.144	1.6
		Right Tilt	1	0	20300	1745	-0.01	1.139	21.70	21.61	1.163	1.6
		Body back	1	0	20175	1732.5	0.23	0.531	21.70	21.34	0.577	1.6
		Body front	1	0	20175	1732.5	0.10	0.335	21.70	21.34	0.364	1.6
		Edge 1 (Top)	1	0	20175	1732.5	0.11	0.522	21.70	21.34	0.567	1.6
		Edge 4(Left)	1	0	20175	1732.5	-0.31	0.105	21.70	21.34	0.114	1.6

Note:

 $[\]cdot$ When the 1-g Reported SAR is \le 0.8 W/kg, testing for low and high channel is optional. Refer to KDB 447498. \cdot The test separation for body back, body front and 4 Edges is 10mm of all above table.



Page 67 of 192

SAR MEASUREMENT

Depth of Liquid (cm):>15 Relative Humidity (%): 58.7

Product: Smart phone

Test Mode: LTE Band 5

			Tes	t Mode		_	Power	SAR	Max.	Meas.	Scaled	
BM 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)
		Left Cheek	1	0	20450	829	-0.05	0.862	24.00	23.40	0.990	1.6
		Left Cheek	1	0	20525	836.5	0.32	0.945	24.00	23.33	1.103	1.6
		Left Cheek	1	0	20600	844	-0.04	1.009	24.00	23.56	1.117	1.6
		Left Tilt	1	0	20525	836.5	0.02	0.567	24.00	23.33	0.662	1.6
		Right Cheek	1	0	20450	829	0.29	0.787	24.00	23.40	0.904	1.6
		Right Cheek	1	0	20525	836.5	0.08	0.863	24.00	23.33	1.007	1.6
10	QPSK	Right Cheek	1	0	20600	844	-0.05	0.918	24.00	23.56	1.016	1.6
		Right Tilt	1	0	20525	836.5	0.18	0.690	24.00	23.33	0.805	1.6
		Body back	1	0	20525	836.5	-0.26	0.367	24.00	23.33	0.428	1.6
		Body front	1	0	20525	836.5	-0.24	0.201	24.00	23.33	0.235	1.6
		Edge 1 (Top)	1	0	20525	836.5	0.33	0.242	24.00	23.33	0.282	1.6
		Edge 4(Left)	1	0	20525	836.5	0.23	0.114	24.00	23.33	0.133	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 10mm of all above table.



Page 68 of 192

SAR MEASUREMENT

Depth of Liquid (cm):>15 Relative Humidity (%): 59.4

Product: Smart phone

Test Mode: LTE Band 7

ВМ			Test M	ode	21	Freq.	Power	SAR	Max. Tuneup	Meas.	Scaled	Limit
MHz	MOD	Position	UL RB Allocation	UL RB START	Ch.	(MHz)	Drift (<±5%)	(1g) (W/kg)	Power (dBm)	Power (dBm)	SAR (W/kg)	(W/kg)
		Left Cheek	1	0	21100	2535	-0.17	0.576	23.20	22.59	0.663	1.6
		Left Tilt	1	0	21100	2535	-0.16	0.675	23.20	22.59	0.777	1.6
		Right Cheek	1	0	20850	2510	-0.12	1.007	23.20	22.74	1.120	1.6
		Right Cheek	1	0	21100	2535	0.23	0.941	23.20	22.59	1.083	1.6
		Right Cheek	1	0	21350	2560	0.20	0.883	23.20	22.57	1.021	1.6
		Right Tilt	1	0	20850	2510	-0.18	1.023	23.20	22.74	1.137	1.6
		Right Tilt	1	0	21100	2535	-0.11	1.004	23.20	22.59	1.155	1.6
20	QPSK	Right Tilt	1	0	21350	2560	0.30	0.868	23.20	22.57	1.004	1.6
		Body back	1	0	21100	2535	-0.28	0.730	23.20	22.59	0.840	1.6
		Body front	1	0	21100	2535	-0.17	0.462	23.20	22.59	0.532	1.6
		Edge 1 (Top)	1	0	20850	2510	0.12	0.868	23.20	22.74	0.965	1.6
		Edge 1 (Top)	1	0	21100	2535	0.32	0.804	23.20	22.59	0.925	1.6
		Edge 1 (Top)	1	0	21350	2560	0.21	0.703	23.20	22.57	0.813	1.6
		Edge 4(Left)	1	0	21100	2535	0.04	0.608	23.20	22.59	0.700	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 10mm of all above table.



Page 69 of 192

SAR MEASUREMENT

Depth of Liquid (cm):>15 Relative Humidity (%): 59.4

Product: Smart phone

Test Mode: LTE Band 41

BW	MOD	Position	Test M	ode		Freq.	Power Drift	SAR (1g)	Max. Tuneup	Meas. output	Scaled SAR	Limit
MHz	MOD	Position	UL RB Allocation	UL RB START	CII.	(MHz)	(<±5%)	(W/kg)	Power (dBm)	Power (dBm)	(W/kg)	(W/kg)
		Left Cheek	1	0	40620	2593	-0.05	0.243	23.70	22.97	0.287	1.6
		Left Tilt	1	0	40620	2593	0.18	0.249	23.70	22.97	0.295	1.6
		Right Cheek	1	0	40620	2593	-0.22	0.612	23.70	22.97	0.724	1.6
20	QPSK	Right Tilt	1	0	40620	2593	0.21	0.529	23.70	22.97	0.626	1.6
20	QFSK	Body back	1	0	40620	2593	-0.05	0.305	23.70	22.97	0.361	1.6
		Body front	1	0	40620	2593	-0.29	0.179	23.70	22.97	0.212	1.6
		Edge 1 (Top)	1	0	40620	2593	0.19	0.334	23.70	22.97	0.395	1.6
		Edge 4(Left)	1	0	40620	2593	0.09	0.291	23.70	22.97	0.344	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 10mm of all above table



Page 70 of 192

SAR MEASUREMENT							
Depth of Liquid (cm):>15	Relative Humidity (%): 61.0						
Product: Smart phone							
Test Mode:802 11h							

Test Mode.002.	t Wode.002.11b									
Position	Mode	Ch.	Fr. (MHz)	Power Drift (<±5%)	SAR (1g) (W/kg)	Max. Tune-up Power (dBm)	Meas. output Power (dBm)	Scaled SAR (W/kg)	Limit (W/kg)	
Left Cheek	DTS	6	2437	-0.23	0.272	16.60	15.75	0.331	1.6	
Left Tilt	DTS	6	2437	0.14	0.293	16.60	15.75	0.356	1.6	
Right Cheek	DTS	6	2437	-0.07	0.273	16.60	15.75	0.332	1.6	
Right Tilt	DTS	6	2437	-0.21	0.316	16.60	15.75	0.384	1.6	
Body back	DTS	6	2437	-0.13	0.197	16.60	15.75	0.240	1.6	
Body front	DTS	6	2437	0.06	0.197	16.60	15.75	0.240	1.6	
Edge 1 (Top)	DTS	6	2437	-0.15	0.109	16.60	15.75	0.133	1.6	

Note:

Edge 2(Right)

0.112

16.60

15.75

0.136

1.6

DTS

2437

0.10

[·] 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 10mm of all above table.



Page 71 of 192

SAR MEASUREMENT

Depth of Liquid (cm):>15 Relative Humidity (%): 54.7

Product: Smart phone

Test Mode: 5.2GHz WIFI-802.11a

Position	Ch.	Fr. (MHz)	Power Drift (<±5%)	SAR (1g) (W/kg)	Max. Tune-up Power (dBm)	Meas. output Power (dBm)	Scaled SAR (W/kg)	Limit (W/kg)		
Left Cheek	40	5200	-0.22	0.140	18.70	17.97	0.166	1.6		
Left Tilt	40	5200	0.17	0.149	18.70	17.97	0.176	1.6		
Right Cheek	40	5200	-0.16	0.124	18.70	17.97	0.147	1.6		
Right Tilt	40	5200	-0.21	0.134	18.70	17.97	0.159	1.6		
Body back	40	5200	0.12	0.253	18.70	17.97	0.299	1.6		
Body front	40	5200	-0.29	0.054	18.70	17.97	0.064	1.6		
Edge 1 (Top)	40	5200	0.20	0.056	18.70	17.97	0.066	1.6		
Edge 2(Right)	40	5200	0.14	0.261	18.70	17.97	0.309	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 10mm of all above table



Page 72 of 192

SAR MEASUREMENT						
Depth of Liquid (cm):>15	Relative Humidity (%): 56.6					
Product: Smart phone						

Test Mode: 5.3GHz WIFI-802.11a

Position	Ch.	Fr. (MHz)	Power Drift (<±5%)	SAR (1g) (W/kg)	Max. Tune-up Power (dBm)	Meas. output Power (dBm)	Scaled SAR (W/kg)	Limit (W/kg)
Left Cheek	60	5300	-0.26	0.145	18.30	18.03	0.154	1.6
Left Tilt	60	5300	0.06	0.156	18.30	18.03	0.166	1.6
Right Cheek	60	5300	-0.22	0.120	18.30	18.03	0.128	1.6
Right Tilt	60	5300	0.02	0.124	18.30	18.03	0.132	1.6
Body back	60	5300	-0.03	0.316	18.30	18.03	0.336	1.6
Body front	60	5300	0.01	0.055	18.30	18.03	0.059	1.6
Edge 1 (Top)	60	5300	-0.16	0.059	18.30	18.03	0.063	1.6
Edge 2 (Right)	60	5300	0.04	0.332	18.30	18.03	0.353	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 10mm of all above table



Page 73 of 192

SAR MEASUREMENT	
Depth of Liquid (cm):>15	Relative Humidity (%): 59.2

Product: Smart phone

Test Mode: 5.6GHzWIFI- 802.11a

Test Mode. 5.001					Max.	Meas.		
Position	Ch.	Fr. (MHz)	Power Drift (<±5%)	SAR (1g) (W/kg)	Tune-up Power (dBm)	output Power (dBm)	Scaled SAR (W/kg)	Limit (W/kg)
Left Cheek	116	5580	-0.10	0.156	18.40	17.61	0.187	1.6
Left Tilt	116	5580	0.23	0.097	18.40	17.61	0.116	1.6
Right Cheek	116	5580	-0.20	0.072	18.40	17.61	0.086	1.6
Right Tilt	116	5580	0.20	0.055	18.40	17.61	0.066	1.6
Body back	116	5580	-0.24	0.243	18.40	17.61	0.291	1.6
Body front	116	5580	0.23	0.044	18.40	17.61	0.053	1.6
Edge 1 (Top)	116	5580	-0.33	0.046	18.40	17.61	0.055	1.6
Edge 2 (Right)	116	5580	0.21	0.273	18.40	17.61	0.327	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 10mm of all above table



Page 74 of 192

SAR MEASUREMENT

Depth of Liquid (cm):>15 Relative Humidity (%): 51.5

Product: Smart phone

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)
Left Cheek	157	5785	-0.06	0.341	17.80	17.30	0.383	1.6
Left Tilt	157	5785	0.08	0.223	17.80	17.30	0.250	1.6
Right Cheek	157	5785	0.12	0.080	17.80	17.30	0.090	1.6
Right Tilt	157	5785	0.18	0.080	17.80	17.30	0.090	1.6
Body back	157	5785	-0.15	0.337	17.80	17.30	0.378	1.6
Body front	157	5785	0.21	0.089	17.80	17.30	0.100	1.6
Edge 1 (Top)	157	5785	-0.33	0.150	17.80	17.30	0.168	1.6
Edge 2 (Right)	157	5785	0.31	0.370	17.80	17.30	0.415	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 10mm of all above table



Page 75 of 192

Repeated SAR

Product: Smart phone

Test Mode: GSM850& PCS1900& WCDMA Band II & WCDMA Band V& LTE Band 2& LTE Band 4& LTE Band 5& LTE Band 7

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
Right Cheek	voice		251	848.8	0.15	1.160					1.6
Body back	GPRS-2 slot		661	1880	-0.04	0.873					1.6
Right Tilt	RMC 12.2kb	ps	9262	1852.4	-0.13	1.102					1.6
Right Cheek	RMC 12.2kb	ps	4233	846.6	0.20	1.133					1.6
Position	Mode		Ch	Ch. Fr.		Once SAR	Power Drift	Twice SAR	Power Drift	Third SAR	Limit
Position	UL RB Allocation	UL RB START	Cn.	(MHz)	Drift (<±5%)	(1g) (W/kg)	(<±5%)	(1g) (W/kg)	(<±5%)	(1g) (W/kg)	W/kg
Right Tilt	1	0	18900	1880	-0.11	1.122					1.6
Right Tilt	1	0	20300	1745	0.08	1.108					1.6
Left Cheek	1	0	20600	844	-0.24	0.940					1.6
Right Tilt	1	0	20850	2510	0.30	1.021					1.6

The second repeated SAR judge reference

Product: Smart phone

Band	Position	Мос	de	Ch.	Fr. (MHz)	Orignal SAR (1g) (W/kg)	First SAR (1g) (W/kg)	Ratio	Limit
GSM850	Right Cheek	voice		251	848.8	1.042	1.160	1.113	<1.2
PCS1900	Body back	GPRS-2 slo	GPRS-2 slot RMC 12.2kbps		1880	0.919	0.873	1.053	<1.2
WCDMA Band II	Right Tilt	RMC 12.2k	bps	9262	1852.4	1.101	1.102	1.001	<1.2
WCDMA Band V	Right Cheek	RMC 12.2k	bps	4233	846.6	1.102	1.133	1.028	<1.2
Band	Position	UL RB Allocation	UL RB START	Ch.	Fr. (MHz)	Orignal SAR (1g) (W/kg)	First SAR (1g) (W/kg)	Ratio	Limit
LTE Band 2	Right Tilt	1	0	18900	1880	1.129	1.122	1.006	<1.2
LTE Band 4	Right Tilt	1	0	20300	1745	1.139	1.108	1.028	<1.2
LTE Band 5	Left Cheek	1	0	20600	844	1.009	0.940	1.073	<1.2
LTE Band 7	Right Tilt	1	0	20850	2510	1.023	1.021	1.002	<1.2



Page 76 of 192

Simultaneous Multi-band Transmission Evaluation:

Application Simultaneous Transmission information:

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

NOTE:

- 1. WIFI and BT share the same antenna, and cannot transmit simultaneously.
- 2. Simultaneous with every transmitter must be the same test position.
- 3. KDB 447498 D01, BT SAR is excluded as below table.
- 4. KDB 447498 D01, for handsets the test separation distance is determined by the smallest distance between the outer surface of the device and the user; which is 0mm for head SAR and 10mm for body-worn SAR.
- 5. According to KDB 447498 D01 4.3.1, Standalone SAR test exclusion is as follow:
 - For 100 MHz to 6 GHz and test separation distances \leq 50 mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following:
 - [(max. power of channel, including tune-up tolerance, mW) / (min. test separation distance, mm)] [$\sqrt{f(GHz)}$] ≤ 3.0 for 1-g SAR, and ≤ 7.5 for 10-g extremity SAR³⁰, where
 - f(GHz) is the RF channel transmit frequency in GHz
 - Power and distance are rounded to the nearest mW and mm before calculation³¹
 - 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 77 of 192

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.

Estimat	ed SAR	Max Power inc Toler	luding Tune-up ance	Separation Distance (mm)	Estimated SAR (W/kg)
		dBm	mW	Distance (min)	(VV/Kg)
ВТ	Head	6.5	4.467	0	0.188
ы	Body	6.5	4.467	10	0.094



Page 78 of 192

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

RF Exposure	Test	Simul	taneous Transmission	Scenario	Σ1-g SAR	SPLSR
Conditions	Position	GSM 850	WI-Fi DTS Band	Bluetooth	(W/kg)	(Yes/No
	Left Touch	0.889	0.331		1.220	No
Head	Left Tilt	0.758	0.356		1.114	No
(voice)	Right Touch	1.059	0.332		1.391	No
	Right Tilt	0.773	0.384		1.157	No
	Left Touch	0.889		0.188	1.077	No
Head	Left Tilt	0.758		0.188	0.946	No
(voice)	Right Touch	1.059		0.188	1.247	No
	Right Tilt	0.773		0.188	0.961	No
	Rear	0.383	0.240		0.623	No
Body-worn	1.00	0.383		0.094	0.477	No
(voice)	Front	0.331	0.240		0.571	No
	110	0.331		0.094	0.425	No
	Rear	0.707		0.094	0.801	No
Body-worn	iteai	0.707	0.240		0.947	No
(Data)	Front	0.491		0.094	0.585	No
		0.491	0.240		0.731	No
Body-worn	Edge 1	0.507	0.133		0.640	No
(Hotspot)	Edge 1	0.507		0.094	0.601	No
RF Exposure	Test	Simul	taneous Transmission		Σ1-g SAR	SPLSR
Conditions	Position	GSM 850	5.2GHz WI-Fi Band	5.3GHz WI-Fi Band	(W/kg)	(Yes/No)
	Left Touch	0.889	0.166		1.055	No
Head	Left Tilt	0.758	0.176		0.934	No
(voice)	Right Touch	1.059	0.147		1.206	No
` ,	Right Tilt	0.773	0.159		0.932	No
	Left Touch	0.889		0.154	1.043	No
Head	Left Tilt	0.758		0.166	0.924	No
(voice)	Right Touch	1.059		0.128	1.187	No
(10100)	Right Tilt	0.773		0.132	0.905	No
		0.383	0.299	0.102	0.682	No
Body-worn	Rear	0.383	0.200	0.336	0.719	No
(voice)	_	0.331	0.064	-	0.395	No
(10100)	Front	0.331	0.001	0.059	0.390	No
		0.707		0.336	1.043	No
Body-worn	Rear	0.707	0.299	0.000	1.006	No
(Data)		0.491	0.200	0.059	0.550	No
(2 4.6.)	Front	0.491	0.064	0.000	0.555	No
Body-worn	Edge 1	0.507	0.066		0.573	No
(Hotspot)	Edge 1	0.507	0.000	0.063	0.570	No
			taneous Transmission			
RF Exposure Conditions	Test Position	GSM 850	5.6GHz WI-Fi Band	5.8GHz WI-Fi Band	Σ1-g SAR (W/kg)	SPLSR (Yes/No)
	Left Touch	0.889	0.187		1.076	No
Head	Left Tilt	0.758	0.116		0.874	No
(voice)	Right Touch	1.059	0.086		1.145	No
(/	Right Tilt	0.773	0.066		0.839	No
	Left Touch	0.889	3.000	0.383	1.272	No
Head	Left Tilt	0.758		0.250	1.008	No
(voice)	Right Touch	1.059		0.090	1.149	No
, /	Right Tilt	0.773		0.090	0.863	No
		0.383	0.291	3.300	0.674	No
Body-worn	Rear	0.383	0.201	0.378	0.761	No
(voice)		0.331	0.053	0.570	0.384	No
(10.00)	Front	0.331	0.000	0.100	0.431	No
	+	0.707		0.378	1.085	No
Pody warn	Rear	0.707	0.291	0.370	0.998	No
Body-worn (Data)		0.707	0.291	0.100	0.998	No No
(Dala)	Front	0.491	0.053	0.100	0.591	No No
		U.49 I	0.053		0.044	NO
Body-worn	Edge 1	0.507	0.055		0.562	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.

 $[\]cdot$ SPLSR mean is "The SAR to Peak Location Separation Ratio "



Page 79 of 192

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

RF Exposure	Test		taneous Transmission WI-Fi		Σ1-g SAR	SPLSR
Conditions	Position	PCS 1900	DTS Band	Bluetooth	(W/kg)	(Yes/No)
	Left Touch	0.506	0.331		0.837	No
Head	Left Tilt	0.536	0.356		0.892	No
(voice)	Right Touch	0.725	0.332		1.057	No
	Right Tilt	0.937	0.384		1.321	No
	Left Touch	0.506		0.188	0.694	No
Head	Left Tilt	0.536		0.188	0.724	No
(voice)	Right Touch	0.725		0.188	0.913	No
	Right Tilt	0.937		0.188	1.125	No
	Rear	0.557	0.240		0.797	No
Body-worn	Neai	0.557		0.094	0.651	No
(voice)	Front	0.188	0.240		0.428	No
	Tione	0.188		0.094	0.282	No
	Rear	0.940		0.094	1.034	No
Body-worn	Real	0.940	0.240		1.180	No
(Data)	Front	0.314		0.094	0.408	No
	Tiont	0.314	0.240		0.554	No
Body-worn	Edge 1	0.806	0.133		0.939	No
(Hotspot)	Edge 1	0.806		0.094	0.900	No
RF Exposure	Test	Simul	taneous Transmission		Σ1-g SAR	SPLSR
Conditions	Position	PCS 1900	5.2GHz WI-Fi Band	5.3GHz WI-Fi Band	(W/kg)	(Yes/No)
	Left Touch	0.506	0.166		0.672	No
Head	Left Tilt	0.536	0.176		0.712	No
(voice)	Right Touch	0.725	0.147		0.872	No
	Right Tilt	0.937	0.159		1.096	No
	Left Touch	0.506		0.154	0.660	No
Head	Left Tilt	0.536		0.166	0.702	No
(voice)	Right Touch	0.725		0.128	0.853	No
	Right Tilt	0.937		0.132	1.069	No
	Rear	0.557	0.299		0.856	No
Body-worn	INGAI	0.557		0.336	0.893	No
(voice)	Front	0.188	0.064		0.252	No
	Tiont	0.188		0.059	0.247	No
	Rear	0.940		0.336	1.276	No
Body-worn	Real	0.940	0.299		1.239	No
(Data)	Front	0.314		0.059	0.373	No
	FIOIIL	0.314	0.064		0.378	No
Body-worn	Edge 1	0.806	0.066		0.872	No
(Hotspot)	Edge 1	0.806		0.063	0.869	No
RF Exposure	Test	Simul	taneous Transmission	Scenario	Σ1-g SAR	SPLSR
Conditions	Position	PCS 1900	5.6GHz WI-Fi	5.8GHz WI-Fi	(W/kg)	(Yes/No)
- Origination			Band	Band		` '
	Left Touch	0.506	0.187		0.693	No
Head	Left Tilt	0.536	0.116		0.652	No
(voice)	Right Touch	0.725	0.086		0.811	No
	Right Tilt	0.937	0.066		1.003	No
	Left Touch	0.506		0.383	0.889	No
Head	Left Tilt	0.536		0.250	0.786	No
(voice)	Right Touch	0.725		0.090	0.815	No
	Right Tilt	0.937		0.090	1.027	No
	Rear	0.557	0.291		0.848	No
Body-worn	1.001	0.557		0.378	0.935	No
(voice)	Front	0.188	0.053		0.241	No
	Tiont	0.188		0.100	0.288	No
	Door	0.940		0.378	1.318	No
Body-worn	Rear	0.940	0.291		1.231	No
(Data)	Eront	0.314		0.100	0.414	No
	Front	0.314	0.053		0.367	No
Body-worn	Edge 1	0.806	0.055		0.861	No
Dody-Worn					0.974	

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 "



Page 80 of 192

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

RF Exposure	Test	Simultan	eous Transmission	Scenario	Σ1-g SAR	SPLSR
Conditions	Position	WCDMA Band II	Wi-Fi DTS Band	Bluetooth	(W/kg)	(Yes/No)
	Left Touch	0.700	0.331		1.031	No
Head	Left Tilt	0.750	0.356		1.106	No
пеац	Right Touch	1.106	0.332		1.438	No
	Right Tilt	1.142	0.384		1.526	No
	Left Touch	0.700		0.188	0.888	No
	Left Tilt	0.750		0.188	0.938	No
Head	Right Touch	1.106		0.188	1.294	No
	Right Tilt	1.142		0.188	1.330	No
	Rear	0.918	0.240		1.158	No
	Front	0.324	0.240		0.564	No
	Edge 1	0.939	0.133		1.072	No
Body-worn	Rear	0.918		0.094	1.012	No
	Front	0.324		0.094	0.418	No
	Edge 1	0.939		0.094	1.033	No
		Simultan	eous Transmission	Scenario		
RF Exposure Conditions	Test Position	WCDMA Band II	5.2GHz WI-Fi Band	5.3GHz WI-Fi Band	Σ1-g SAR (W/kg)	SPLSR (Yes/No)
	Left Touch	0.700	0.166		0.866	No
	Left Tilt	0.750	0.176		0.926	No
Head	Right Touch	1.106	0.147		1.253	No
•	Right Tilt	1.142	0.159		1.301	No
	Left Touch	0.700	0.100	0.154	0.854	No
	Left Tilt	0.750		0.166	0.916	No
Head	Right Touch	1.106		0.128	1.234	No
-	Right Tilt	1.142		0.132	1.274	No
	Rear	0.918	0.299	0.102	1.217	No
	Front	0.324	0.064		0.388	No
	Edge 1	0.939	0.066		1.005	No
Body-worn	Rear	0.918	0.000	0.336	1.254	No
-	Front	0.324		0.059	0.383	No
-	Edge 1	0.939		0.063	1.002	No
	Luge		eous Transmission		1.002	
RF Exposure Conditions	Test Position	WCDMA Band II	5.6GHz WI-Fi Band	5.8GHz WI-Fi Band	Σ1-g SAR (W/kg)	SPLSR (Yes/No)
	Left Touch	0.700	0.187		0.887	No
	Left Tilt	0.750	0.116		0.866	No
Head	Right Touch	1.106	0.086		1.192	No
	Right Tilt	1.142	0.066		1.208	No
	Left Touch	0.700	0.000	0.383	1.083	No
	Left Tilt	0.750		0.250	1.000	No
Head	Right Touch	1.106		0.090	1.196	No
ŀ	Right Tilt	1.142		0.090	1.232	No
	Rear	0.918	0.291	0.000	1.209	No
ŀ	Front	0.324	0.053		0.377	No
-	Edge 1	0.939	0.055		0.994	No
Body-worn	Rear	0.939	0.000	0.378	1.296	No
ŀ	Front	0.324		0.100	0.424	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 "



Page 81 of 192

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

RF Exposure	Test	Simultan	eous Transmission	Scenario	Σ1-g SAR	SPLSR
Conditions	Position	WCDMA Band V	Wi-Fi DTS Band	Bluetooth	(W/kg)	(Yes/No)
	Left Touch	1.080	0.331		1.411	No
Head	Left Tilt	0.774	0.356		1.130	No
пеац	Right Touch	1.135	0.332		1.467	No
	Right Tilt	0.812	0.384		1.196	No
	Left Touch	1.080		0.188	1.268	No
	Left Tilt	0.774		0.188	0.962	No
Head	Right Touch	1.135		0.188	1.323	No
	Right Tilt	0.812		0.188	1.000	No
	Rear	0.384	0.240		0.624	No
	Front	0.257	0.240		0.497	No
	Edge 1	0.291	0.133		0.424	No
Body-worn	Rear	0.384		0.094	0.478	No
	Front	0.257		0.094	0.351	No
ļ	Edge 1	0.291		0.094	0.385	No
			eous Transmission			
RF Exposure Conditions	Test Position	WCDMA Band V	5.2GHz WI-Fi Band	5.3GHz WI-Fi Band	Σ1-g SAR (W/kg)	SPLSR (Yes/No)
	Left Touch	1.080	0.166		1.246	No
	Left Tilt	0.774	0.176		0.950	No
Head	Right Touch	1.135	0.147		1.282	No
•	Right Tilt	0.812	0.159		0.971	No
	Left Touch	1.080	0.100	0.154	1.234	No
	Left Tilt	0.774		0.166	0.940	No
Head	Right Touch	1.135		0.128	1.263	No
-	Right Tilt	0.812		0.132	0.944	No
	Rear	0.384	0.299	0.102	0.683	No
	Front	0.257	0.064		0.321	No
	Edge 1	0.291	0.066		0.357	No
Body-worn	Rear	0.384	0.000	0.336	0.720	No
-	Front	0.257		0.059	0.316	No
ŀ	Edge 1	0.291		0.063	0.354	No
			eous Transmission			
RF Exposure Conditions	Test Position	WCDMA Band V	5.6GHz WI-Fi Band	5.8GHz WI-Fi Band	Σ1-g SAR (W/kg)	SPLSR (Yes/No)
	Left Touch	1.080	0.187		1.267	No
	Left Tilt	0.774	0.116		0.890	No
Head	Right Touch	1.135	0.086		1.221	No
	Right Tilt	0.812	0.066		0.878	No
	Left Touch	1.080	0.000	0.383	1.463	No
	Left Tilt	0.774		0.250	1.024	No
Head	Right Touch	1.135		0.090	1.225	No
ŀ	Right Tilt	0.812		0.090	0.902	No
	Rear	0.384	0.291	0.000	0.675	No
ŀ	Front	0.354	0.053		0.310	No
-	Edge 1	0.291	0.055		0.346	No
Body-worn	Rear	0.384	0.000	0.378	0.762	No
				0.376	0.762	No No
	Front	0.257				

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 "



Page 82 of 192

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

RF Exposure	Test	Simulta	neous Transmission S	cenario	Σ1-g SAR	SPLSR
Conditions	Position	LTE Band 2	Wi-Fi DTS Band	Bluetooth	(W/kg)	(Yes/No)
	Left Touch	0.606	0.331		0.937	No
Head	Left Tilt	0.519	0.356		0.875	No
пеаи	Right Touch	1.025	0.332		1.357	No
	Right Tilt	1.150	0.384		1.534	No
	Left Touch	0.606		0.188	0.794	No
Used	Left Tilt	0.519		0.188	0.707	No
Head	Right Touch	1.025		0.188	1.213	No
	Right Tilt	1.150		0.188	1.338	No
	Rear	0.727	0.240		0.967	No
	Front	0.251	0.240		0.491	No
	Edge 1	0.723	0.133		0.856	No
Body-worn	Rear	0.727		0.094	0.821	No
	Front	0.251		0.094	0.345	No
	Edge 1	0.723		0.094	0.817	No
			Scenario			
RF Exposure Conditions	Test Position	LTE Band 2	5.2GHz WI-Fi Band	5.3GHz WI-Fi Band	Σ1-g SAR (W/kg)	SPLSR (Yes/No)
	Left Touch	0.606	0.166		0.772	No
	Left Tilt	0.519	0.176		0.695	No
Head	Right Touch	1.025	0.147		1.172	No
	Right Tilt	1.150	0.159		1.309	No
	Left Touch	0.606	0.100	0.154	0.760	No
	Left Tilt	0.519		0.166	0.685	No
Head	Right Touch	1.025		0.128	1.153	No
	Right Tilt	1.150		0.132	1.282	No
	Rear	0.727	0.299	0.102	1.026	No
	Front	0.251	0.064		0.315	No
	Edge 1	0.723	0.066		0.789	No
Body-worn	Rear	0.727	0.000	0.336	1.063	No
	Front	0.727		0.059	0.310	No
		0.723		0.063	0.786	No No
	Edge 1		neous Transmission S		0.700	NO
RF Exposure	Test	Silliulta	5.6GHz WI-Fi	5.8GHz WI-Fi	Σ1-g SAR	SPLSR
Conditions	Position	LTE Band 2	Band	Band	(W/kg)	(Yes/No)
	Left Touch	0.606	0.187		0.793	No
Head	Left Tilt	0.519	0.116		0.635	No
ileau	Right Touch	1.025	0.086		1.111	No
	Right Tilt	1.150	0.066		1.216	No
	Left Touch	0.606		0.383	0.989	No
Haad	Left Tilt	0.519		0.250	0.769	No
Head	Right Touch	1.025		0.090	1.115	No
	Right Tilt	1.150		0.090	1.240	No
	Rear	0.727	0.291		1.018	No
	Front	0.251	0.053		0.304	No
	Edge 1	0.723	0.055		0.778	No
Body-worn	Rear	0.727		0.378	1.105	No
	Front	0.251		0.100	0.351	No
-	Edge 1	0.723		0.168	0.891	No

Note:

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/

[·]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 "



Page 83 of 192

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

RF Exposure	Test	Simulta	neous Transmission S	Scenario	Σ1-g SAR	SPLSR	
Conditions	Position	LTE Band 4	Wi-Fi DTS Band	Bluetooth	(W/kg)	(Yes/No)	
	Left Touch	0.709	0.331		1.040	No	
Head	Left Tilt	0.892	0.356		1.248	No	
пеаи	Right Touch	1.098	0.332		1.430	No	
	Right Tilt	1.163	0.384		1.547	No	
	Left Touch	0.709		0.188	0.897	No	
Head	Left Tilt	0.892		0.188	1.080	No	
пеаа	Right Touch	1.098		0.188	1.286	No	
	Right Tilt	1.163		0.188	1.351	No	
	Rear	0.577	0.240		0.817	No	
	Front	0.364	0.240		0.604	No	
Dady was	Edge 1	0.567	0.133		0.700	No	
Body-worn	Rear	0.577		0.094	0.671	No	
	Front	0.364		0.094	0.458	No	
	Edge 1	0.567		0.094	0.661	No	
		Simulta	neous Transmission S	Scenario			
RF Exposure Conditions	Test Position	LTE Band 4	5.2GHz WI-Fi Band	5.3GHz WI-Fi Band	Σ1-g SAR (W/kg)	SPLSR (Yes/No)	
	Left Touch	0.709	0.166		0.875	No	
	Left Tilt	0.892	0.176		1.068	No	
Head	Right Touch	1.098	0.147		1.245	No	
	Right Tilt	1.163	0.159		1.322	No	
	Left Touch	0.709		0.154	0.863	No	
	Left Tilt	0.892		0.166	1.058	No	
Head	Right Touch	1.098		0.128	1.226	No	
	Right Tilt	1.163		0.132	1.295	No	
	Rear	0.577	0.299	002	0.876	No	
	Front	0.364	0.064		0.428	No	
	Edge 1	0.567	0.066		0.633	No	
Body-worn	Rear	0.577	0.000	0.336	0.913	No	
	Front	0.364		0.059	0.423	No	
	Edge 1	0.567		0.063	0.630	No	
			neous Transmission S				
RF Exposure Conditions	Test Position	LTE Band 4	5.6GHz WI-Fi Band	5.8GHz WI-Fi Band	Σ1-g SAR (W/kg)	SPLSR (Yes/No)	
	Left Touch	0.709	0.187		0.896	No	
112	Left Tilt	0.892	0.116		1.008	No	
Head	Right Touch	1.098	0.086		1.184	No	
	Right Tilt	1.163	0.066		1.229	No	
	Left Touch	0.709		0.383	1.092	No	
	Left Tilt	0.892		0.250	1.142	No	
Head	Right Touch	1.098		0.090	1.188	No	
	Right Tilt	1.163		0.090	1.253	No	
	Rear	0.577	0.291	0.000	0.868	No	
	Front	0.364	0.053		0.417	No	
	Edge 1	0.567	0.055		0.622	No	
Body-worn	Rear	0.577	0.000	0.378	0.955	No	
	Front	0.364		0.378	0.955	No No	
						INU	

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"



Page 84 of 192

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

RF Exposure	Test	Simulta	neous Transmission S	Scenario	Σ1-g SAR	SPLSR	
Conditions	Position	LTE Band 5	Wi-Fi DTS Band	Bluetooth	(W/kg)	(Yes/No)	
	Left Touch	1.117	0.331		1.448	No	
Head	Left Tilt	0.662	0.356		1.018	No	
пеац	Right Touch	1.016	0.332		1.348	No	
	Right Tilt	0.805	0.384		1.189	No	
	Left Touch	1.117		0.188	1.305	No	
Head	Left Tilt	0.662		0.188	0.850	No	
пеаа	Right Touch	1.016		0.188	1.204	No	
	Right Tilt	0.805		0.188	0.993	No	
	Rear	0.428	0.240		0.668	No	
	Front	0.235	0.240		0.475	No	
D - d	Edge 1	0.282	0.133		0.415	No	
Body-worn	Rear	0.428		0.094	0.522	No	
	Front	0.235		0.094	0.329	No	
	Edge 1	0.282		0.094	0.376	No	
			neous Transmission S	Scenario			
RF Exposure Conditions	Test Position	LTE Band 5	5.2GHz WI-Fi Band	5.3GHz WI-Fi Band	Σ1-g SAR (W/kg)	SPLSR (Yes/No)	
	Left Touch	1.117	0.166		1.283	No	
	Left Tilt	0.662	0.176		0.838	No	
Head	Right Touch	1.016	0.147		1.163	No	
	Right Tilt	0.805	0.159		0.964	No	
	Left Touch	1.117	0.100	0.154	1.271	No	
	Left Tilt	0.662		0.166	0.828	No	
Head	Right Touch	1.016		0.128	1.144	No	
	Right Tilt	0.805		0.132	0.937	No	
	Rear	0.428	0.299	0.102	0.727	No	
	Front	0.235	0.064		0.299	No	
	Edge 1	0.282	0.066		0.348	No	
Body-worn	Rear	0.428	0.000	0.336	0.764	No	
	Front	0.235		0.059	0.294	No	
	Edge 1	0.282		0.063	0.345	No	
	Euge		Ineous Transmission S		0.343	NU	
RF Exposure Conditions	Test Position	LTE Band 5	5.6GHz WI-Fi Band	5.8GHz WI-Fi Band	Σ1-g SAR (W/kg)	SPLSR (Yes/No)	
	Left Touch	1.117	0.187	Duna	1.304	No	
	Left Tilt	0.662	0.116		0.778	No	
Head	Right Touch	1.016	0.086		1.102	No	
	Right Tilt	0.805	0.066		0.871	No No	
	Left Touch	1.117	0.000	0.383	1.500	No	
	Left Tilt	0.662		0.363	0.912	No	
Head	Right Touch	1.016		0.250	1.106	No No	
	Right Tilt	0.805		0.090	0.895	No No	
		0.428	0.291	0.090	0.895		
	Rear					No No	
	Front	0.235	0.053		0.288	No.	
Body-worn	Edge 1	0.282	0.055	0.070	0.337	No	
-	Rear	0.428		0.378	0.806	No No	
	Front	0.235		0.100	0.335	No	
	Edge 1	0.282		0.168	0.450	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 "



Page 85 of 192

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

RF Exposure	Test	Simulta	neous Transmission S	Scenario	Σ1-g SAR	SPLSR
Conditions	Position	LTE Band 7	Wi-Fi DTS Band	Bluetooth	(W/kg)	(Yes/No)
	Left Touch	0.663	0.331		0.994	No
Head	Left Tilt	0.777	0.356		1.133	No
neau	Right Touch	1.120	0.332		1.452	No
	Right Tilt	1.155	0.384		1.539	No
	Left Touch	0.663		0.188	0.851	No
Head	Left Tilt	0.777		0.188	0.965	No
пеаа	Right Touch	1.120		0.188	1.308	No
	Right Tilt	1.155		0.188	1.343	No
	Rear	0.840	0.240		1.080	No
	Front	0.532	0.240		0.772	No
Pody worn	Edge 1	0.965	0.133		1.098	No
Body-worn	Rear	0.840		0.094	0.934	No
	Front	0.532		0.094	0.626	No
	Edge 1	0.965		0.094	1.059	No
NF F			neous Transmission S	Scenario		
RF Exposure Conditions	Test Position	LTE Band 7	5.2GHz WI-Fi Band	5.3GHz WI-Fi Band	Σ1-g SAR (W/kg)	SPLSR (Yes/No)
	Left Touch	0.663	0.166		0.829	No
11	Left Tilt	0.777	0.176		0.953	No
Head	Right Touch	1.120	0.147		1.267	No
	Right Tilt	1.155	0.159		1.314	No
	Left Touch	0.663		0.154	0.817	No
	Left Tilt	0.777		0.166	0.943	No
Head	Right Touch	1.120		0.128	1.248	No
	Right Tilt	1.155		0.132	1.287	No
	Rear	0.840	0.299		1.139	No
	Front	0.532	0.064		0.596	No
	Edge 1	0.965	0.066		1.031	No
Body-worn	Rear	0.840	2.300	0.336	1.176	No
	Front	0.532		0.059	0.591	No
	Edge 1	0.965		0.063	1.028	No
			neous Transmission S			
RF Exposure Conditions	Test Position	LTE Band 7	5.6GHz WI-Fi Band	5.8GHz WI-Fi Band	Σ1-g SAR (W/kg)	SPLSR (Yes/No)
	Left Touch	0.663	0.187		0.850	No
11	Left Tilt	0.777	0.116		0.893	No
Head	Right Touch	1.120	0.086		1.206	No
	Right Tilt	1.155	0.066		1.221	No
	Left Touch	0.663		0.383	1.046	No
	Left Tilt	0.777		0.250	1.027	No
Head	Right Touch	1.120		0.090	1.210	No
	Right Tilt	1.155		0.090	1.245	No
	Rear	0.840	0.291	3.300	1.131	No
	Front	0.532	0.053		0.585	No
	Edge 1	0.965	0.055		1.020	No
Body-worn	Rear	0.840	0.000	0.378	1.218	No No
	Front	0.532		0.378	0.632	No No
				. 0.100	1 0.00	INC

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 "



Page 86 of 192

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

RF Exposure	Test	Simulta	neous Transmission S	cenario	Σ1-g SAR	SPLSR	
Conditions	Position	LTE Band 41	Wi-Fi DTS Band	Bluetooth	(W/kg)	(Yes/No)	
	Left Touch	0.287	0.331		0.618	No	
Head	Left Tilt	0.295	0.356		0.651	No	
пеаи	Right Touch	0.724	0.332		1.056	No	
	Right Tilt	0.626	0.384		1.010	No	
	Left Touch	0.287		0.188	0.475	No	
Head	Left Tilt	0.295		0.188	0.483	No	
пеац	Right Touch	0.724		0.188	0.912	No	
	Right Tilt	0.626		0.188	0.814	No	
	Rear	0.361	0.240		0.601	No	
	Front	0.212	0.240		0.452	No	
Daduum	Edge 1	0.395	0.133		0.528	No	
Body-worn	Rear	0.361		0.094	0.455	No	
	Front	0.212		0.094	0.306	No	
	Edge 1	0.395		0.094	0.489	No	
			neous Transmission S	Scenario			
RF Exposure Conditions	Test Position	LTE Band 41	5.2GHz WI-Fi Band	5.3GHz WI-Fi Band	Σ1-g SAR (W/kg)	SPLSR (Yes/No)	
	Left Touch	0.287	0.166		0.453	No	
	Left Tilt	0.295	0.176		0.471	No	
Head	Right Touch	0.724	0.147		0.871	No	
	Right Tilt	0.626	0.159		0.785	No	
	Left Touch	0.287	0.100	0.154	0.441	No	
	Left Tilt	0.295		0.166	0.461	No	
Head	Right Touch	0.724		0.128	0.852	No	
	Right Tilt	0.626		0.132	0.758	No	
	Rear	0.361	0.299	0.102	0.660	No	
	Front	0.212	0.064		0.276	No	
	Edge 1	0.395	0.066		0.461	No	
Body-worn	Rear	0.361	0.000	0.336	0.697	No	
	Front	0.212		0.059	0.097	No	
		0.395		0.063	0.458	No No	
	Edge 1		nacus Transmission S		0.436	NO	
RF Exposure	Test	Simulta	neous Transmission S 5.6GHz WI-Fi	5.8GHz WI-Fi	Σ1-g SAR	SPLSR	
Conditions	Position	LTE Band 41	Band	5.8GHZ WI-FI Band	(W/kg)	(Yes/No)	
	Left Touch	0.287	0.187		0.474	No	
Head	Left Tilt	0.295	0.116		0.411	No	
· iouu	Right Touch	0.724	0.086		0.810	No	
	Right Tilt	0.626	0.066		0.692	No	
	Left Touch	0.287		0.383	0.670	No	
Head	Left Tilt	0.295		0.250	0.545	No	
пеац	Right Touch	0.724		0.090	0.814	No	
	Right Tilt	0.626		0.090	0.716	No	
	Rear	0.361	0.291		0.652	No	
	Front	0.212	0.053		0.265	No	
Daduum	Edge 1	0.395	0.055		0.450	No	
Body-worn	Rear	0.361		0.378	0.739	No	
	Front	0.212		0.100	0.312	No	
	Edge 1	0.395		0.168	0.563	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"



Page 87 of 192

APPENDIX A. SAR SYSTEM CHECK DATA

Test Laboratory: AGC Lab Date: Mar. 27, 2024

System Check Head 835 MHz

DUT: Dipole 835 MHz Type: SID 835

Communication System CW; Communication System Band: D835 (835.0 MHz); Duty Cycle: 1:1; Conv.F=2.02 Frequency: 835 MHz; Medium parameters used: f = 835 MHz; $\sigma = 0.92$ mho/m; $\epsilon r = 41.66$; $\rho = 1000$ kg/m³;

Phantom section: Flat Section; Input Power=18dBm

Ambient temperature (°C):21.2, Liquid temperature (°C): 20.7

SATIMO Configuration:

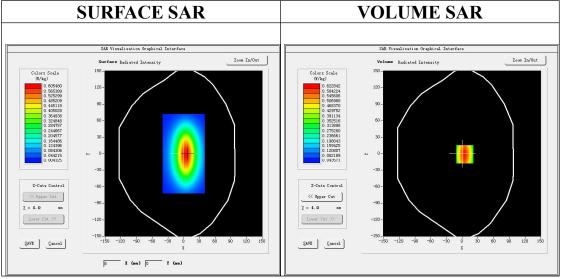
Probe: SSE2; Calibrated: May 31, 2023; Serial No.: 2023-EPGO-414

Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: SAM twin phantom

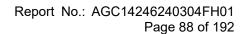
Measurement SW: OpenSAR V4_02_35

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

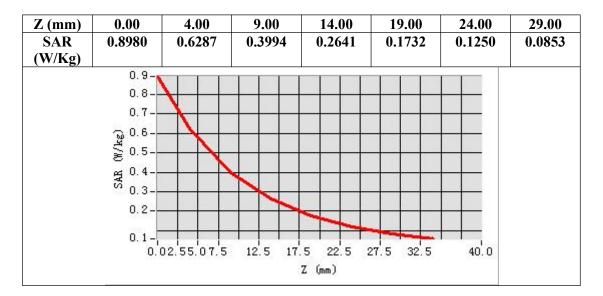


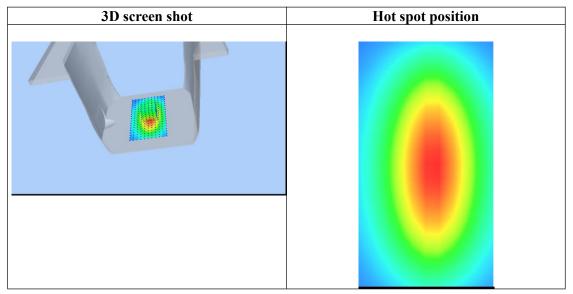
Maximum location: X=5.00, Y=-1.00 SAR Peak: 0.90 W/kg

SAR 10g (W/Kg)	0.384460
SAR 1g (W/Kg)	0.613085











Date: Mar. 25, 2024

Page 89 of 192

Test Laboratory: AGC Lab System Check Head 1750MHz

DUT: Dipole 1800 MHz; Type: SID 1800

Communication System: CW; Communication System Band: D1700 (1750.0 MHz); Duty Cycle:1:1; Conv.F=2.17 Frequency: 1750 MHz; Medium parameters used: f = 1750 MHz; $\sigma = 1.39 \text{ mho/m}$; $\epsilon r = 39.51$; $\rho = 1000 \text{ kg/m}^3$;

Phantom section: Flat Section; Input Power=18dBm

Ambient temperature ($^{\circ}$ C): 21.4, Liquid temperature ($^{\circ}$ C): 20.9

SATIMO Configuration:

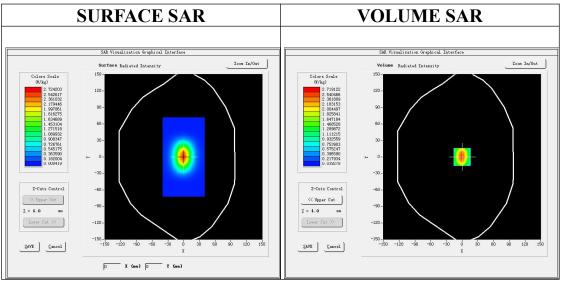
Probe: SSE2; Calibrated: May 31, 2023; Serial No.: 2023-EPGO-414

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

· Phantom: SAM twin phantom

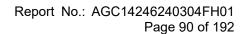
Measurement SW: OpenSAR V4_02_35

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

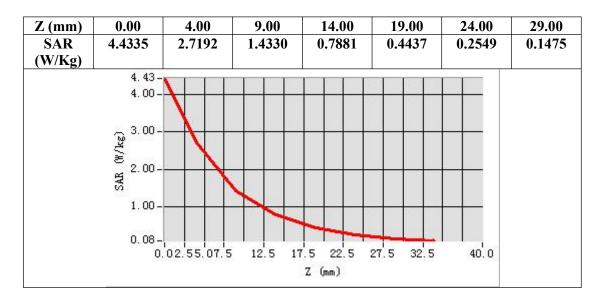


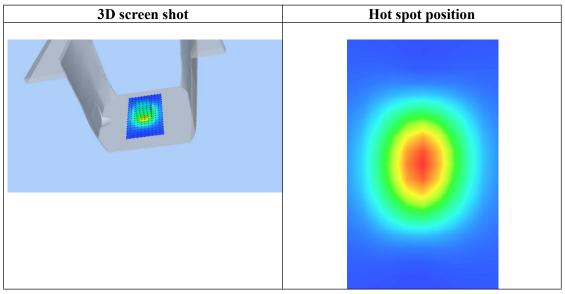
Maximum location: X=0.00, Y=0.00 SAR Peak: 4.42 W/kg

SAR 10g (W/Kg)	1.296603
SAR 1g (W/Kg)	2.563148











Page 91 of 192

Test Laboratory: AGC Lab

Date: Mar. 26, 2024

System Check Head 1900MHz

DUT: Dipole 1900 MHz; Type: SID 1900

Communication System: CW; Communication System Band: D1900 (1900.0 MHz); Duty Cycle:1:1; Conv.F=2.15 Frequency: 1900 MHz; Medium parameters used: f = 1900 MHz; $\sigma = 40.08$ mho/m; $\epsilon r = 40.08$; $\rho = 1000$ kg/m³;

Phantom section: Flat Section; Input Power=18dBm

Ambient temperature (°C):20.9, Liquid temperature (°C): 20.5

SATIMO Configuration:

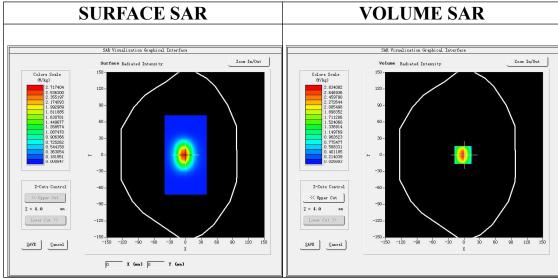
• Probe: SSE2; Calibrated: May 31, 2023; Serial No.: 2023-EPGO-414

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

· Phantom: SAM twin phantom

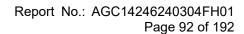
Measurement SW: OpenSAR V4_02_35

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

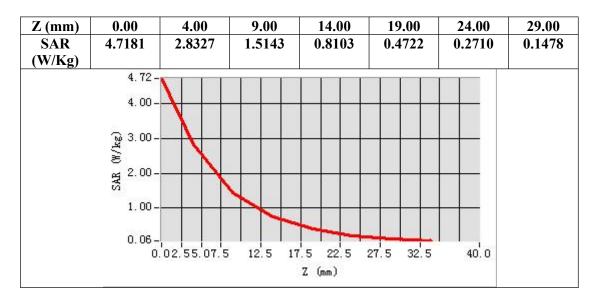


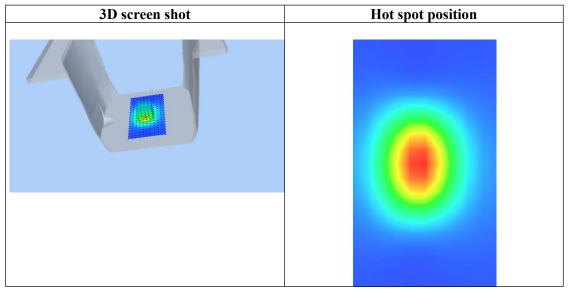
Maximum location: X=-2.00, Y=0.00 SAR Peak: 4.67 W/kg

SAR 10g (W/Kg)	1.343951
SAR 1g (W/Kg)	2.704133











Date: Mar. 30, 2024

Page 93 of 192

Test Laboratory: AGC Lab System Check Head 2450 MHz

DUT: Dipole 2450 MHz Type: SID 2450

Communication System CW; Communication System Band: D2450 (2450.0 MHz); Duty Cycle: 1:1; Conv.F=2.29 Frequency: 2450 MHz; Medium parameters used: f = 2450 MHz; $\sigma = 1.82$ mho/m; $\epsilon r = 39.27$; $\rho = 1000$ kg/m³;

Phantom section: Flat Section; Input Power=18dBm

Ambient temperature (°C):22.1, Liquid temperature (°C): 21.5

SATIMO Configuration

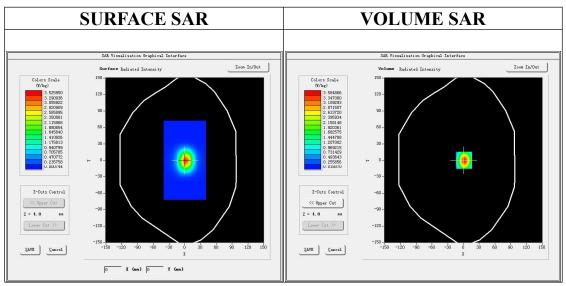
• Probe: SSE2; Calibrated: May 31, 2023; Serial No.: 2023-EPGO-414

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

· Phantom: SAM twin phantom

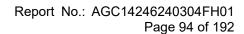
Measurement SW: OpenSAR V4_02_35

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

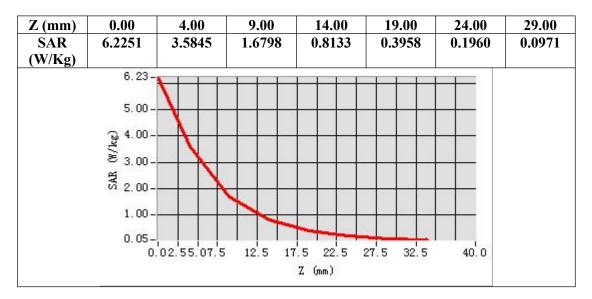


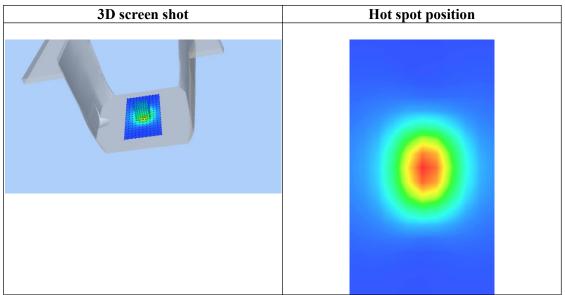
Maximum location: X=1.00, Y=0.00 SAR Peak: 6.21 W/kg

SAR 10g (W/Kg)	1.484517
SAR 1g (W/Kg)	3.319852











Date: Mar. 29, 2024

Page 95 of 192

Test Laboratory: AGC Lab System Check Head 2600MHz

DUT: Dipole 2600 MHz; Type: SID 2600

Communication System: CW; Communication System Band: D2600 (2600.0 MHz); Duty Cycle: 1:1; Conv.F=2.13 Frequency:2600 MHz; Medium parameters used: f = 2600 MHz; σ=1.94 mho/m; εr =38.22; ρ= 1000 kg/m³;

Phantom section: Flat Section; Input Power=18dBm

Ambient temperature (°C): 22.3, Liquid temperature (°C): 21.8

SATIMO Configuration:

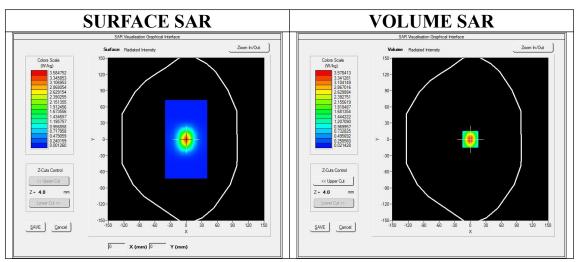
Probe: SSE2; Calibrated: May 31, 2023; Serial No.: 2023-EPGO-414

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

· Phantom: SAM twin phantom

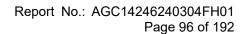
Measurement SW: OpenSAR V4_02_35

Configuration/System Check 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

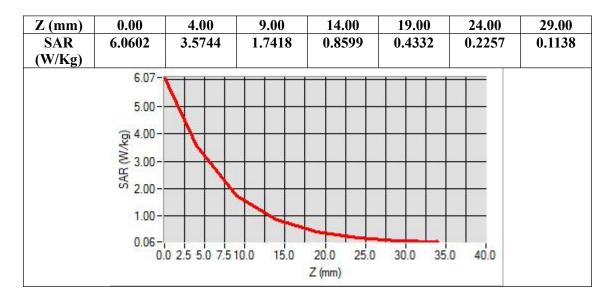


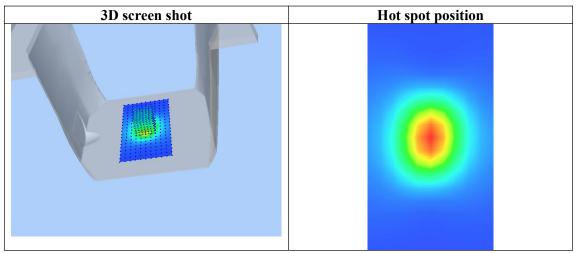
Maximum location: X=0.00, Y=0.00 SAR Peak: 6.00 W/kg

SAR 10g (W/Kg)	1.524759
SAR 1g (W/Kg)	3.341091











Date: Mar. 31, 2024

Page 97 of 192

Test Laboratory: AGC Lab

System Check 5200 MHz

DUT: Dipole 5000MHz Type: SID5500

Communication System: CW; Communication System Band: D5000 (5000.0 MHz); Duty Cycle: 1:1; Conv.F=1.35 Frequency: 5200 MHz; Medium parameters used: f = 5200 MHz; $\sigma = 4.54$ mho/m; $\epsilon r = 36.34$; $\rho = 1000$ kg/m³;

Phantom section: Flat Section; Input Power=10dBm

Ambient temperature ($^{\circ}$): 21.8, Liquid temperature ($^{\circ}$): 21.3

SATIMO Configuration:

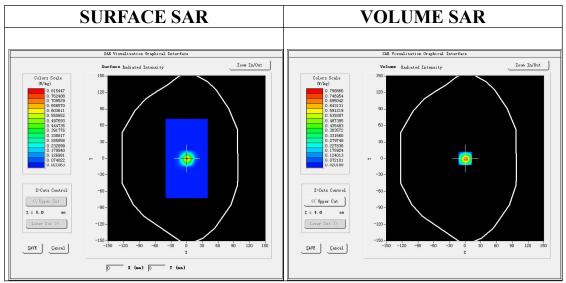
Probe: SSE2; Calibrated: May 31, 2023; Serial No.: 2023-EPGO-414

Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: SAM twin phantom

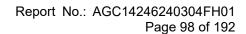
Measurement SW: OpenSAR V4 02 35

Configuration/System Check 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



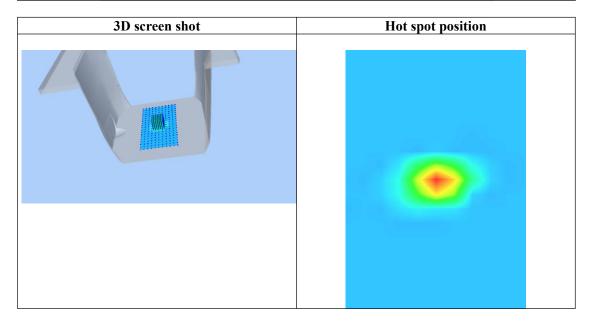
Maximum location: X=0.00, Y=0.00 SAR Peak: 2.26 W/kg

SAR 10g (W/Kg)	0.217102
SAR 1g (W/Kg)	0.747081





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	2.2629	0.7993	0.4041	0.1834	0.0866	0.0387	0.0290	0.0236	0.0252	0.0258	0.0251	0.0255
(W/K g)												
		2.3- 2.0-										
		(2) 1.5	1					30.00				
		SAR (#/kg) 1.0.			-		++	-				
		ಡ 0.5										
					1							
		0.0	0 2	4 6	8 1	0 12	14 16	18 20	22 :	24 26		
						Z (r	nm)					





Date: Apr. 01, 2024

Page 99 of 192

Test Laboratory: AGC Lab

System Check Head 5300 MHz DUT: Dipole 5000MHz Type: SID5000

Communication System: CW; Communication System Band: D5000 (5000.0 MHz); Duty Cycle: 1:1; Conv.F=1.35 Frequency: 5300 MHz; Medium parameters used: f = 5300 MHz; $\sigma = 4.94$ mho/m; $\epsilon r = 36.29$; $\rho = 1000$ kg/m³;

Phantom section: Flat Section; Input Power=10dBm

Ambient temperature ($^{\circ}$ C): 21.2, Liquid temperature ($^{\circ}$ C): 20.8

SATIMO Configuration:

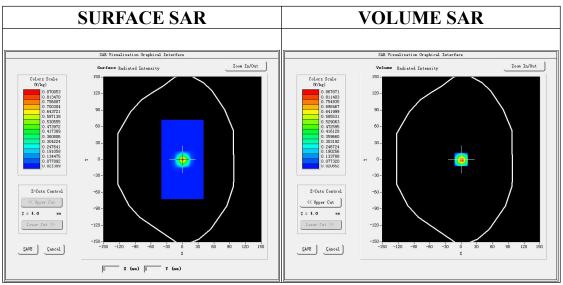
Probe: SSE2; Calibrated: May 31, 2023; Serial No.: 2023-EPGO-414

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

· Phantom: SAM twin phantom

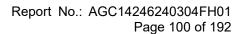
Measurement SW: OpenSAR V4_02_35

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



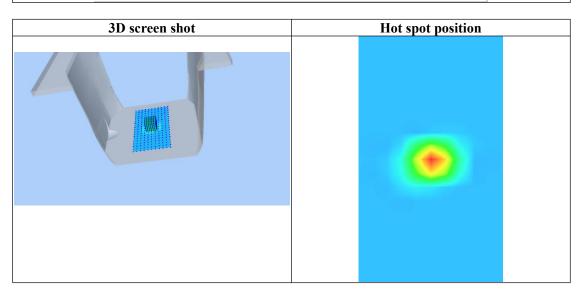
Maximum location: X=0.00, Y=0.00 SAR Peak: 2.43 W/kg

SAR 10g (W/Kg)	0.233145
SAR 1g (W/Kg)	0.807402





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 (W/K g)	2.4375	0.8691	0.4368	0.2043	0.0911	0.0399	0.0235	0.0230	0.0238	0.0453	0.0258	0.0257
		2.4-										,
		(%/kg) (%/kg)	1							3		
		왕 1.0·		\forall		8 8						
		0.5-										
		0.0	0 2	4 6	8 1	0 12 Z (n	14 16 nm)	18 20	22 2	24 26		





Date: Apr. 02, 2024

Page 101 of 192

Test Laboratory: AGC Lab

System Check Head 5600 MHz

DUT: Dipole 5000MHz Type: SID5000

Communication System: CW; Communication System Band: D5000 (5000.0 MHz); Duty Cycle: 1:1; Conv.F=1.53 Frequency: 5600 MHz; Medium parameters used: f = 5600 MHz; $\sigma = 5.14$ mho/m; $\epsilon r = 36.54$; $\rho = 1000$ kg/m³;

Phantom section: Flat Section; Input Power=10dBm

Ambient temperature ($^{\circ}$ C): 20.9, Liquid temperature ($^{\circ}$ C): 20.5

SATIMO Configuration:

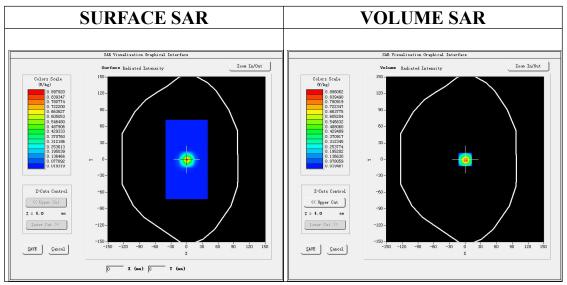
Probe: SSE2; Calibrated: May 31, 2023; Serial No.: 2023-EPGO-414

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

· Phantom: SAM twin phantom

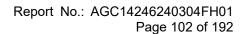
Measurement SW: OpenSAR V4 02 35

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



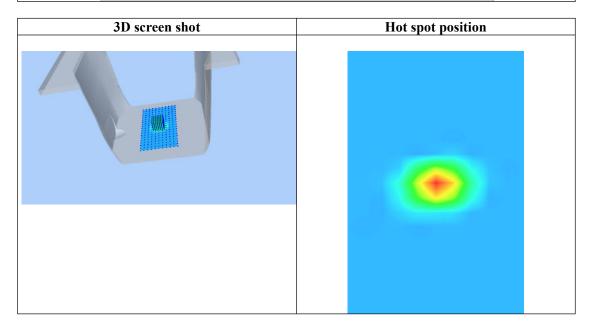
Maximum location: X=0.00, Y=0.00 SAR Peak: 2.49 W/kg

SAR 10g (W/Kg)	0.231954
SAR 1g (W/Kg)	0.822340





Z	0.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	22.00	24.00
(mm)												
	2.5122	0.8963	0.4507	0.2101	0.0929	0.0345	0.0238	0.0174	0.0202	0.0201	0.0205	0.0208
(W/K												
g)												
		2.5										
		2.0	-	9 9	-		+ +	_	-			
		2										
		(a) 1.5 (a) (a)	1		- 23		++					
			9	\								
		¥ 1.0			_		1					
		0.5										
		0.0				1000						
		0.0	0 2	4 6	8 1	0 12	14 16	18 20	0 22	24 26		
			7 7	e 18			nm)			T. T.		
						4 0	11117					





Date: Apr. 03, 2024

Page 103 of 192

Test Laboratory: AGC Lab

System Check Head 5800 MHz

DUT: Dipole 5000MHz Type: SID5500

Communication System: CW; Communication System Band: D5000 (5000.0 MHz); Duty Cycle: 1:1; Conv.F=1.41 Frequency: 5800 MHz; Medium parameters used: f = 5800 MHz; $\sigma = 5.31$ mho/m; $\epsilon r = 35.46$; $\rho = 1000$ kg/m³;

Phantom section: Flat Section; Input Power=10dBm

Ambient temperature ($^{\circ}$ C): 20.8, Liquid temperature ($^{\circ}$ C): 20.2

SATIMO Configuration:

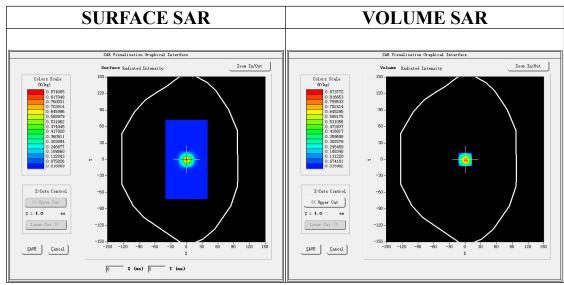
• Probe: SSE2; Calibrated: May 31, 2023; Serial No.: 2023-EPGO-414

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

· Phantom: SAM twin phantom

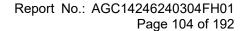
Measurement SW: OpenSAR V4_02_35

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



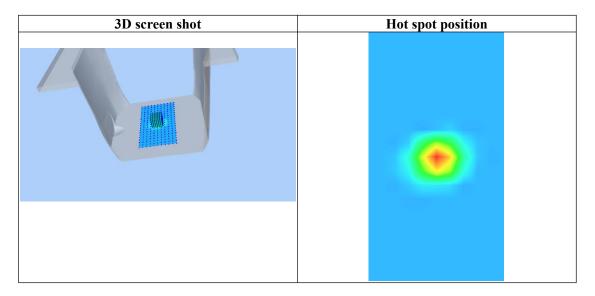
Maximum location: X=0.00, Y=0.00 SAR Peak: 2.41 W/kg

SAR 10g (W/Kg)	0.226753
SAR 1g (W/Kg)	0.800941





Z	0.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	22.00	24.00
(mm)												
	2.4439	0.8715	0.4377	0.2030	0.0912	0.0256	0.0198	0.0190	0.0194	0.0199	0.0192	0.0191
(W/K												
g)												
		2.4		3 3	- 12	2		3 3		1		
		2.0			- "							
		a	N.									
		(%) 1.5- (%) (%)	1		- 0			3 3				
		පි		N I								
		왕 1.0-			-		+ +			1		
[0.5	-				+ +	1 1				
			8		1					_		
		0.0	0 2	4 6	8 1	0 12	14 16	18 20) 22 2	24 26		
			0 2	* °	0 1			10 20	, 22 6	.4 20		
i						Z (n	m)					





Page 105 of 192

APPENDIX B. SAR MEASUREMENT DATA

Test Laboratory: AGC Lab Date: Mar. 27, 2024

GSM 850 High-Touch-Right <SIM 1> DUT: Smart phone; Type: A540

Communication System: Generic GSM; Communication System Band: GSM 850; Duty Cycle: 1:8.3; Conv.F=2.02; Frequency: 848.8 MHz; Medium parameters used: f = 835 MHz; $\sigma = 0.98$ mho/m; $\epsilon r = 38.62$; $\rho = 1000$ kg/m³;

Phantom section: Right Section

Ambient temperature (°C): 21.2, Liquid temperature (°C): 20.7

SATIMO Configuration:

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

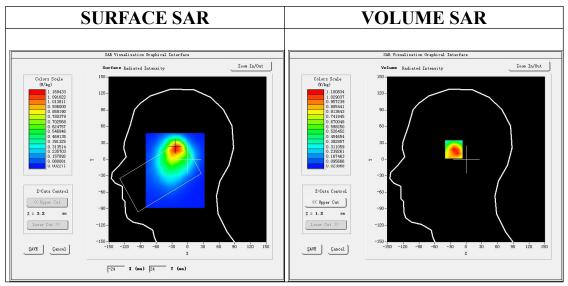
· Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: SAM twin phantom

• Measurement SW: OpenSAR V4_02_35

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

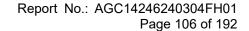
Area Scan	dx=8mm dy=8mm, h= 5.00 mm		
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete		
Phantom	Right head		
Device Position	Cheek		
Band	GSM 850		
Channels	High		
Signal	TDMA (Crest factor: 8.0)		



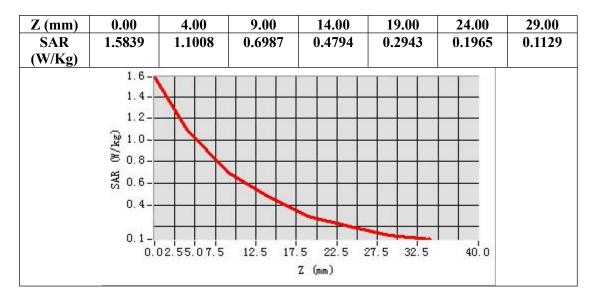
Maximum location: X=-23.00, Y=22.00

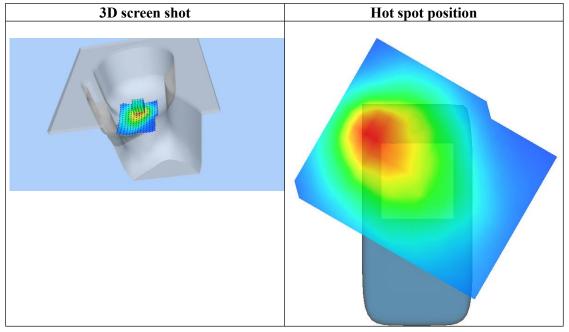
SAR Peak: 1.62 W/kg

SAR 10g (W/Kg)	0.637583
SAR 1g (W/Kg)	1.041562











Page 107 of 192

Test Laboratory: AGC Lab Date: Mar. 27, 2024

GSM 850 Mid-Body-Back (MS)<SIM 1> DUT: Smart phone; Type: A540

Communication System: Generic GSM; Communication System Band: GSM 850; Duty Cycle: 1:8.3; Conv.F=2.02; Frequency: 836.6 MHz; Medium parameters used: f = 835 MHz; $\sigma = 0.94$ mho/m; $\epsilon r = 40.39$; $\rho = 1000$ kg/m³;

Phantom section: Flat Section

Ambient temperature (°C): 21.2, Liquid temperature (°C): 20.7

SATIMO Configuration:

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

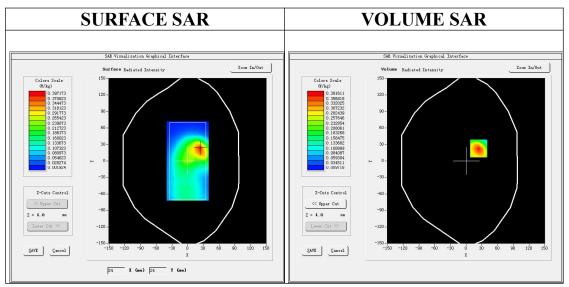
• Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: SAM twin phantom

Measurement SW: OpenSAR V4 02 35

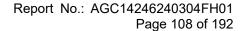
Configuration/GSM 850 Mid-Body-Back/Area Scan: Measurement grid: dx=8mm, dy=8mm Configuration/GSM 850 Mid-Body-Back/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm;

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

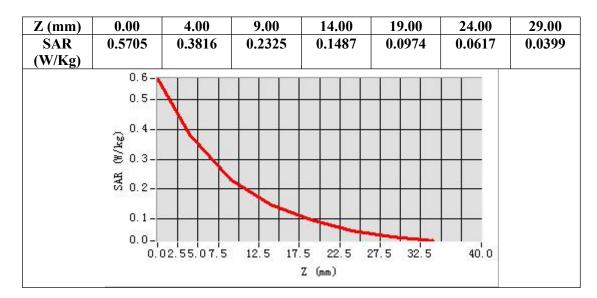


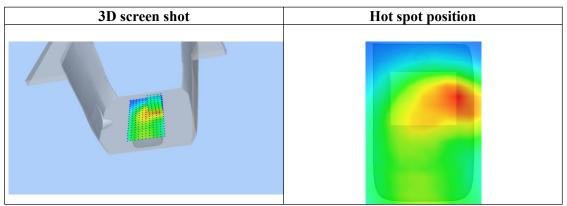
Maximum location: X=24.00, Y=23.00 SAR Peak: 0.57 W/kg

SAR 10g (W/Kg)	0.207214
SAR 1g (W/Kg)	0.356563











Page 109 of 192

Test Laboratory: AGC Lab

GPRS 850 Mid- Body- Back (2up)

Date: Mar. 27, 2024

DUT: Smart phone; Type: A540

Communication System: GPRS-2 Slot; Communication System Band: GSM 850; Duty Cycle: 1:4.2; Conv.F=2.02; Frequency: 836.6 MHz; Medium parameters used: f = 835 MHz; $\sigma = 0.94$ mho/m; $\epsilon r = 40.39$; $\rho = 1000$ kg/m³;

Phantom section: Flat Section

Ambient temperature (°C): 21.2, Liquid temperature (°C): 20.7

SATIMO Configuration:

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

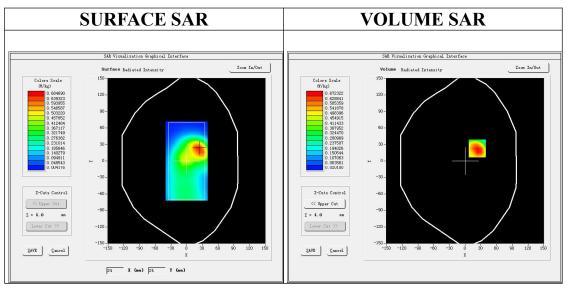
• Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: SAM twin phantom

Measurement SW: OpenSAR V4 02 35

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

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

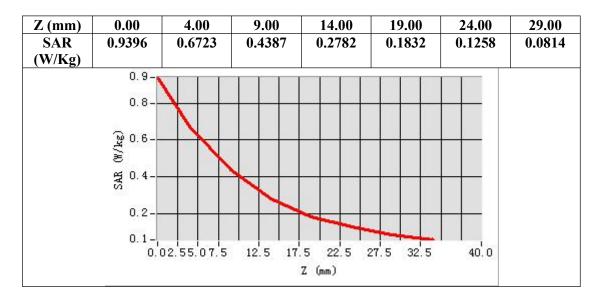


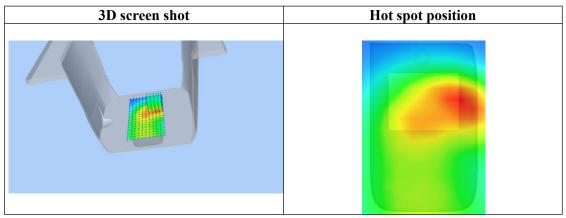
Maximum location: X=23.00, Y=23.00 SAR Peak: 1.04 W/kg

	<u> </u>
SAR 10g (W/Kg)	0.393392
SAR 1g (W/Kg)	0.658464











Page 111 of 192

Test Laboratory: AGC Lab
PCS 1900 High-Tilt-Right <SIM 1>
Date: Mar. 26, 2024

DUT: Smart phone; Type: A540

Communication System: Generic GSM; Communication System Band: PCS 1900; Duty Cycle: 1:8.3; Conv.F=2.15; Frequency: 1909.8 MHz; Medium parameters used: f = 1900 MHz; $\sigma = 1.44 \text{ mho/m}$; $\epsilon = 39.12$; $\rho = 1000 \text{ kg/m}^3$;

Phantom section: Right Section

Ambient temperature (°C): 20.9, Liquid temperature (°C): 20.5

SATIMO Configuration:

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

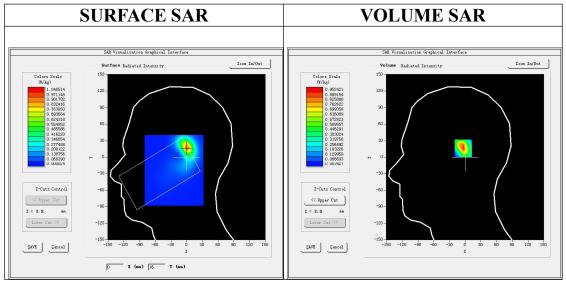
· Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: SAM twin phantom

• Measurement SW: OpenSAR V4 02 35

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

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

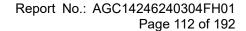


Maximum location: X=1.00, Y=16.00 SAR Peak: 1.64 W/kg

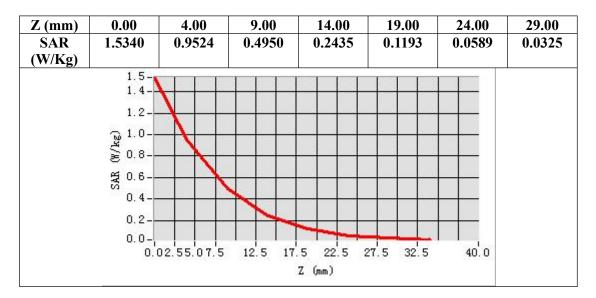
SAR 10g (W/Kg)	0.393495
SAR 1g (W/Kg)	0.882503

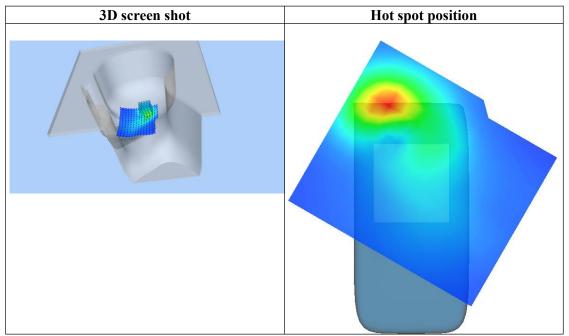
Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the 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 113 of 192

Test Laboratory: AGC Lab Date: Mar. 26, 2024

PCS 1900 Mid-Body-Back (MS)<SIM 1> DUT: Smart phone; Type: A540

Communication System: Generic GSM; Communication System Band: PCS 1900; Duty Cycle: 1:8.3; Conv.F=2.15; Frequency: 1880 MHz; Medium parameters used: f = 1900 MHz; $\sigma = 1.39 \text{ mho/m}$; $\epsilon = 41.22$; $\rho = 1000 \text{ kg/m}^3$;

Phantom section: Flat Section

Ambient temperature (°C): 20.9, Liquid temperature (°C): 20.5

SATIMO Configuration:

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

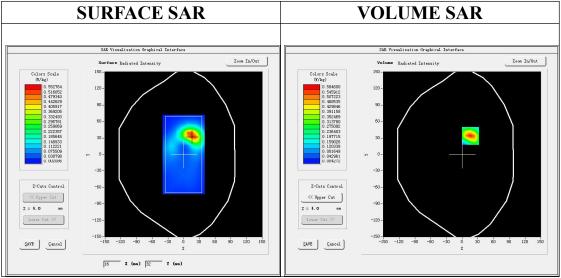
• Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: SAM twin phantom

Measurement SW: OpenSAR V4_02_35

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

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

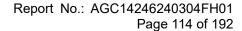


Maximum location: X=16.00, Y=34.00 SAR Peak: 1.00 W/kg

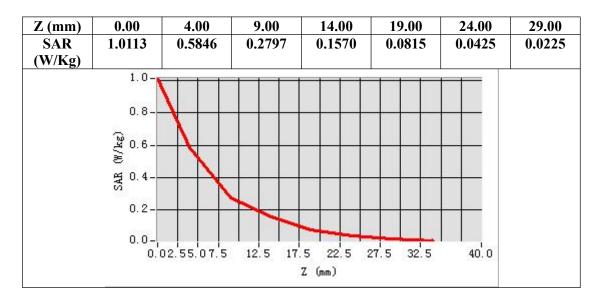
SAR 10g (W/Kg)	0.256372
SAR 1g (W/Kg)	0.546918

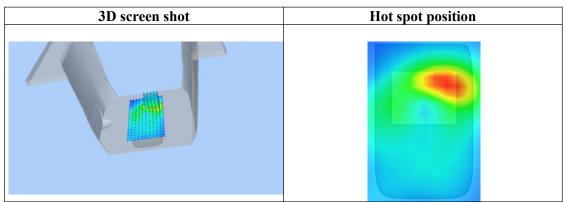
Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the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

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











Date: Mar. 26, 2024

Page 115 of 192

Test Laboratory: AGC Lab
GPRS 1900 Mid-Body-Back (2up)

DUT: Smart phone; Type: A540

Communication System: GPRS-2Slot; Communication System Band: PCS 1900; Duty Cycle: 1:4.2; Conv.F=2.15; Frequency: 1880 MHz; Medium parameters used: f = 1900 MHz; $\sigma = 1.39$ mho/m; $\epsilon r = 41.22$; $\rho = 1000$ kg/m³;

Phantom section: Flat Section

Ambient temperature (°C): 20.9, Liquid temperature (°C): 20.5

SATIMO Configuration:

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

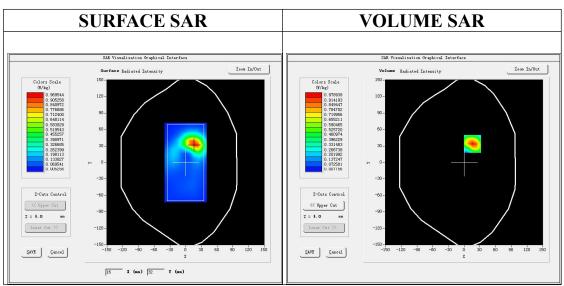
• Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: SAM twin phantom

Measurement SW: OpenSAR V4_02_35

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

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

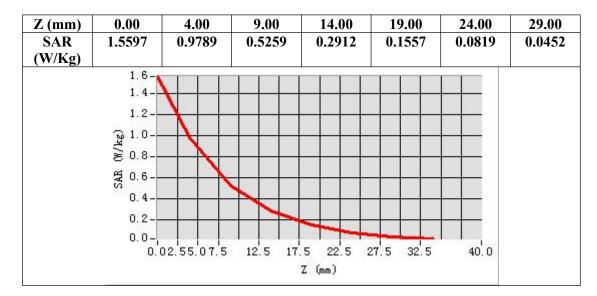


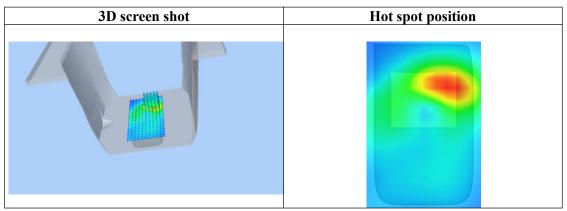
Maximum location: X=16.00, Y=34.00 SAR Peak: 1.58 W/kg

SAR 10g (W/Kg)	0.459117
SAR 1g (W/Kg)	0.918616











Page 117 of 192

Test Laboratory: AGC Lab Date: Mar. 26, 2024

WCDMA Band II Low-Tilt-Right <RMC> DUT: Smart phone; Type: A540

Communication System: UMTS; Communication System Band: Band II UTRA/FDD ;Duty Cycle:1:1; Conv.F=2.15; Frequency: 1852.4 MHz; Medium parameters used: f = 1900 MHz; $\sigma = 1.32 \text{ mho/m}; \epsilon = 43.21$; $\rho = 1000 \text{ kg/m}^3$;

Phantom section: Right Section

Ambient temperature (°C): 20.9, Liquid temperature (°C): 20.5

SATIMO Configuration:

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

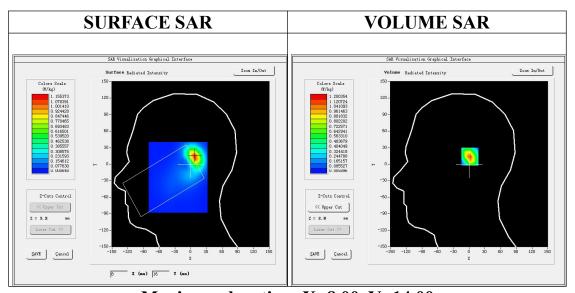
Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: SAM twin phantom

Measurement SW: OpenSAR V4 02 35

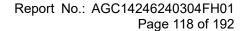
Configuration/WCDMA Band II Low -Tilt-Right/Area Scan: Measurement grid: dx=8mm, dy=8mm Configuration/WCDMA Band II Low -Tilt-Right/Zoom Scan: Measurement grid: dx=8mm, dy=8mm, dz=5mm;

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

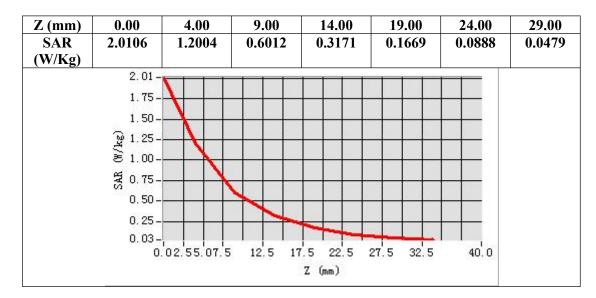


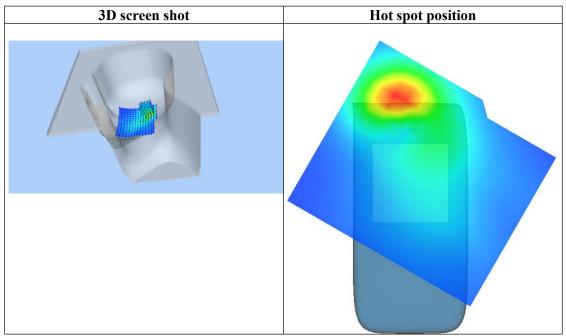
Maximum location: X=8.00, Y=14.00 SAR Peak: 2.02 W/kg

SAR 10g (W/Kg) 0.509414 SAR 1g (W/Kg) 1.101236











Page 119 of 192

Test Laboratory: AGC Lab Date: Mar. 26, 2024

WCDMA Band II Mid-Tilt-Right <RMC> DUT: Smart phone; Type: A540

Communication System: UMTS; Communication System Band: Band II UTRA/FDD ;Duty Cycle:1:1; Conv.F=2.15; Frequency: 1880 MHz; Medium parameters used: f = 1900 MHz; $\sigma = 1.39 \text{ mho/m}$; $\epsilon = 41.22$; $\rho = 1000 \text{ kg/m}^3$;

Phantom section: Right Section

Ambient temperature (°C): 20.9, Liquid temperature (°C): 20.5

SATIMO Configuration:

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

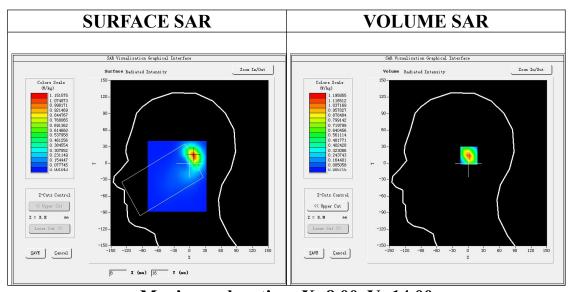
• Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: SAM twin phantom

• Measurement SW: OpenSAR V4 02 35

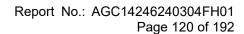
Configuration/WCDMA Band II Mid-Tilt-Right/Area Scan: Measurement grid: dx=8mm, dy=8mm Configuration/WCDMA Band II Mid-Tilt-Right/Zoom Scan: Measurement grid: dx=8mm, dy=8mm, dz=5mm;

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

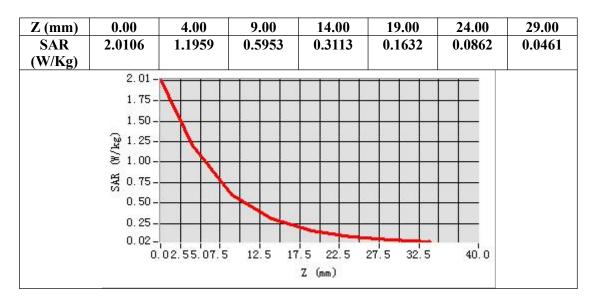


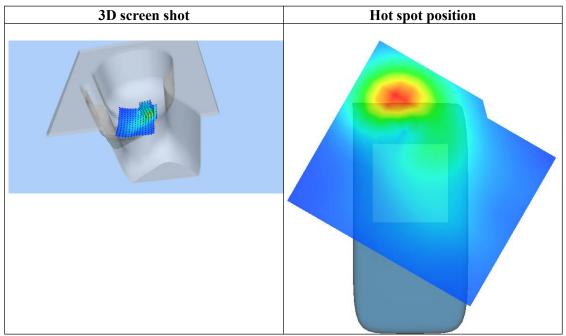
Maximum location: X=8.00, Y=14.00 SAR Peak: 2.01 W/kg

SAR 10g (W/Kg)	0.505126
SAR 1g (W/Kg)	1.097538











Page 121 of 192

Test Laboratory: AGC Lab Date: Mar. 26, 2024

WCDMA Band II Low-Edge 1(RMC) DUT: Smart phone; Type: A540

Communication System: UMTS; Communication System Band: Band II UTRA/FDD ;Duty Cycle:1:1; Conv.F=2.15 Frequency: 1852.4 MHz; Medium parameters used: f = 1900 MHz; $\sigma = 1.32 \text{ mho/m}$; $\epsilon r = 43.21$; $\rho = 1000 \text{ kg/m}^3$;

Phantom section: Flat Section

Ambient temperature (°C): 20.9, Liquid temperature (°C): 20.5

SATIMO Configuration:

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

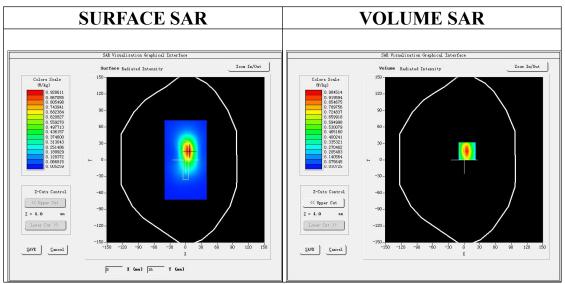
• Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: SAM twin phantom

Measurement SW: OpenSAR V4 02 35

Configuration/ WCDMA band II Low-Edge 1/Area Scan: Measurement grid: dx=8mm, dy=8mm Configuration/ WCDMA band II Low-Edge 1/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm;

Area Scan	surf_sam_plan.txt, h= 5.00 mm
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Edge 1
Band	WCDMA band II
Channels	Low
Signal	CDMA (Crest factor: 1.0)



Maximum location: X=6.00, Y=16.00 SAR Peak: 1.62 W/kg

SAR 10g (W/Kg)	0.444545
SAR 1g (W/Kg)	0.921540