SAR Test Report

Report No.: AGC10211220502FH01

FCC ID	:	2APX7K55G
APPLICATION PURPOSE	:	Original Equipment
PRODUCT DESIGNATION	:	Smart phone
BRAND NAME	:	N/A
MODEL NAME	:	K55g
APPLICANT	:	KRIPTO MOBILE CORPORATION
DATE OF ISSUE	:	Jul. 04, 2022
STANDARD(S)	:	IEEE Std. 1528:2013 FCC 47 CFR Part 2§2.1093 IEEE Std C95.1 ™-2005 IEC 62209-1: 2016
REPORT VERSION	:	V1.0

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

Report Revise Record

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	Jul. 04, 2022	Valid	Initial Release

Test Report	
Applicant Name	KRIPTO MOBILE CORPORATION
Applicant Address	7236 NW 31ST ST, MIAMI, FL 33122, United States
Manufacturer Name	HuaYueShiTong Software Technology Co., Ltd
Manufacturer Address	Room 703-704, Building B, Phase 1, WankeYuncheng Innovation Valley, Xili Street, Nanshan District, Shenzhen, China
Factory Name	HuaYueShiTong Software Technology Co., Ltd
Factory Address	Room 703-704, Building B, Phase 1, WankeYuncheng Innovation Valley, Xili Street, Nanshan District, Shenzhen, China
Product Designation	Smart phone
Brand Name	N/A
Model Name	K55g
EUT Voltage	DC3.8V by battery
Applicable Standard	IEEE Std. 1528:2013 FCC 47 CFR Part 2§2.1093 IEEE Std C95.1 ™-2005 IEC 62209-1: 2016
Test Date	Jun. 15, 2022 to Jun. 24, 2022
Report Template	AGCRT-US-4G/SAR (2021-04-20)

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

Prepared By — Thea Huang (Project Engineer) Jun. 24, 2022

Reviewed By — Calvin Liu (Reviewer) Jul. 04, 2022

Approved By — Max Zhang (Authorized Officer) Jul. 04, 2022

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1. SUMMARY OF MAXIMUM SAR VALUE

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

Frequency Band	Highest Reported 1g-SAR(W/kg)			SAR Test Limit (W/kg)
	Head	Body-worn	Hotspot	
GSM 850	0.329	0.388	0.388	1.6
PCS 1900	0.252	0.435	0.412	
UMTS Band II	0.507	0.743	0.743	
UMTS Band V	0.251	0.328	0.328	
LTE Band 2	0.496	1.053	1.053	
LTE Band 4	0.561	1.230	1.230	
LTE Band 7	0.113	0.674	0.674	
WIFI 2.4G	0.637	0.338	0.338	
Bluetooth(BR/EDR)	0.091	0.145	0.145	
Simultaneous Reported SAR	1.536			
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 D04 Interim General RF Exposure Guidance v01
- 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

2. GENERAL INFORMATION

2.1. EUT Description

General Information	
Product Designation	Smart phone
Test Model	K55g
Hardware Version	TG104S V1.0
Software Version	KRIP_K55g_EN_11_HW1_V003
Device Category	Portable
RF Exposure Environment	Uncontrolled
Antenna Type	Internal
GSM and GPRS& EGPRS	
Support Band	☒GSM 850 ☒PCS 1900 ☒GSM 900 ☒DCS 1800
GPRS & EGPRS Type	Class B
GPRS & EGPRS Class	Class 12(1Tx+4Rx, 2Tx+3Rx, 3Tx+2Rx, 4Tx+1Rx)
TX Frequency Range	GSM 850 : 820-850MHz;; PCS 1900: 1850-1910MHz;
RX Frequency Range	GSM 850 : 869~894MHz; PCS 1900: 1930~1990MHz
Release Version	R99
Type of modulation	GMSK for GSM/GPRS; GMSK & 8-PSK for EGPRS
Antenna Gain	GSM850: -0.51dBi; PCS1900: 0.91dBi
Max. Average Power	GSM850: 31.96dBm ;PCS1900: 28.19dBm
WCDMA	
Support Band	☒UMTS FDD Band II ☒UMTS FDD Band V ☒UMTS FDD Band I ☒UMTS FDD Band VIII
HS Type	HSPA(HSUPA/HSDPA)
TX Frequency Range	WCDMA FDD Band II: 1850-1910MHz; WCDMA FDD Band V: 824-849MHz
RX Frequency Range	WCDMA FDD Band II: 1930-1990MHz; WCDMA FDD Band V: 869-894MHz
Release Version	Rel-6
Type of modulation	HSDPA:QPSK/16QAM; HSUPA:BPSK; WCDMA:QPSK
Antenna Gain	Band II: 0.95dBi; Band V: -0.51dBi
Max. Average Power	Band II: 22.31dBm; Band V: 22.34dBm
Bluetooth	
Operation Frequency	2402~2480MHz
Antenna Gain	1.14dBi
Bluetooth Version	V4.2
Type of modulation	**BR/EDR**: GFSK, ∏/4-DQPSK, 8-DPSK; **BLE:** GFSK
EIRP	**BR/EDR**: 7.84dBm; **BLE:** -0.17dBm
WIFI	
WIFI Specification	☐802.11a ☒802.11b ☒802.11g ☒802.11n(20) ☐802.11n(40)
Operation Frequency	2412~2462MHz
Antenna Gain	1.14Bi
Avg. Burst Power	11b:17.09dBm,11g:13.23dBm,11n(20):12.87dBm

EUT Description (Continue)

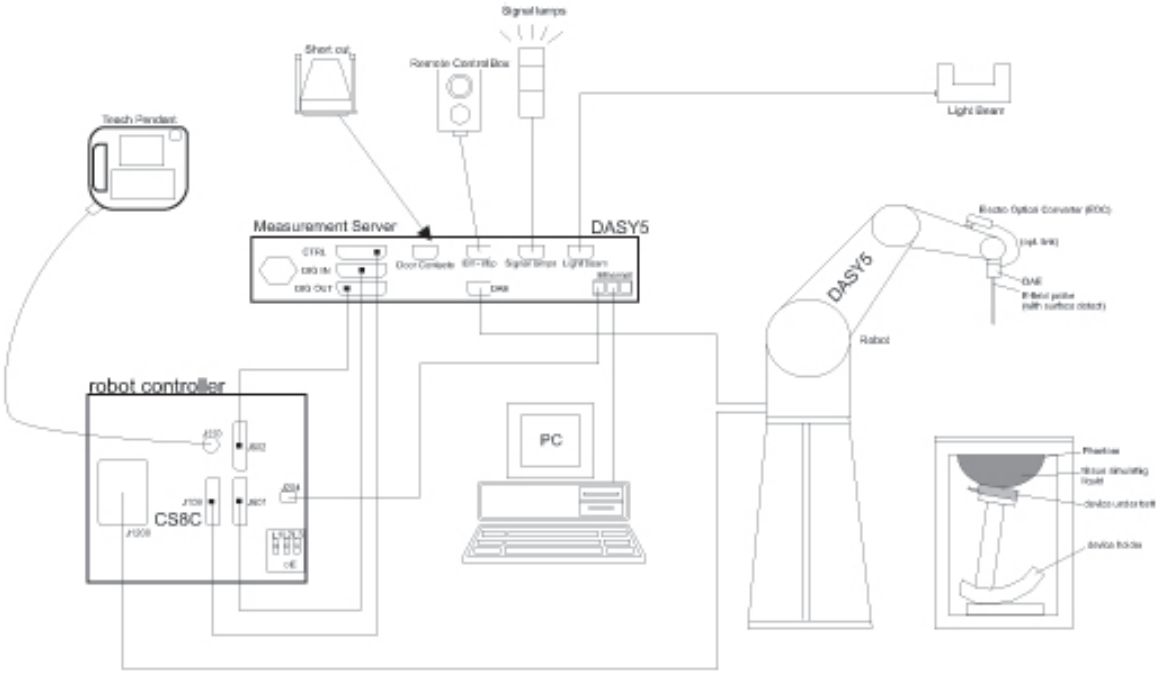
LTE	
Support Band	☒FDD Band 2 ☒FDD Band 4 ☒FDD Band 7 (U.S. Bands) ☒FDD Band 3 ☒TDD Band 28 (Non-U.S. Bands)
TX Frequency Range	Band 2:1850-1910MHz; Band 4:1710-1755MHz;Band 7:2500-2570MHz;
RX Frequency Range	Band 2:1930-1990MHz; Band 4:2110-2155MHz; Band 7:2620-2690MHz;
Release Version	Rel-8
Type of modulation	QPSK, 16QAM
Antenna Gain	Band 2: 0.95dBi; Band 4: 1.10dBi; Band 7: 0.93dBi;
Max. Average Power	Band 2: 22.42dBm; Band 4: 22.57dBm; Band 7:22.10dBm;
Accessories	
Battery	Brand name: N/A Model No. : B55g Voltage and Capacitance: 3.8 V & 2500mAh
Earphone	Brand name: N/A Model No. : N/A

Note: 1. CMU200 can measure the average power and Peak power at the same time
2. The sample used for testing is end product.
3. The test sample has no any deviation to the test method of standard mentioned in page 1.

Product	Type	
	☒ Production unit	☐ Identical Prototype

3. SAR MEASUREMENT SYSTEM

3.1. The DASY5 system used for performing compliance tests consists of following items



- A standard high precision 6-axis robot with controller, teach pendant and software.
- Data acquisition electronics (DAE) which attached to the robot arm extension. The DAE consist of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converter and a command decoder with a control logic unit. Transmission to the measurement server is accomplished through an optical downlink for data and status information, as well as an optical uplink for commands and the clock
- A dosimetric probe equipped with an optical surface detector system.
- The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital Communication to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.
- A Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.
- A computer running WinXP and the DASY5 software.
- Remote control and teach pendant as well as additional circuitry for robot safety such as warning lamps, etc.
- Phantoms, device holders and other accessories according to the targeted measurement.

3.2. DASY5 E-Field Probe

The SAR measurement is conducted with the dosimetric probe manufactured by SPEAG. 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. SPEAG conducts the probe calibration in compliance with international and national standards (e.g. IEEE-1528 etc.)Under ISO17025.The calibration data are in Appendix D.

Isotropic E-Field Probe Specification

Model	EX3DV4-SN:3953	
Manufacture	SPEAG	
frequency	0.7GHz-6GHz Linearity:±0.9%(k=2)	
Dynamic Range	0.01W/kg-100W/kg Linearity: ±0.9%(k=2)	
Dimensions	Overall length:337mm Tip diameter:2.5mm Typical distance from probe tip to dipole centers:1mm	
Application	High precision dosimetric measurements in any exposure scenario (e.g., very strong gradient fields). Only probe which enables compliance testing for frequencies up to 6 GHz with precision of better 30%.	

3.3. Data Acquisition Electronics description

The data acquisition electronics (DAE) consist if a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converte and a command decoder with a control logic unit. Transmission to the measurement sever is accomplished through an optical downlink fir data and status information, as well as an optical uplink for commands and the clock.

The mechanical probe mounting device includes two different sensor systems for frontal and sideways probe contacts. They are used for mechanical surface detection and probe collision detection.

DAE4

Input Impedance	200MOhm	
The Inputs	Symmetrical and floating	
Common mode rejection	above 80 dB	

3.4. Robot

The DASY system uses the high precision robots (DASY5:TX60) type from Stäubli SA (France). For the 6-axis controller system, the robot controller version from 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

3.5. Light Beam Unit

The light beam switch allows automatic “tooling” of the probe. 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 prob.1 mm, even if the other probe has different dimensions. During probe rotations, the probe tip will keep its actual position. e, the same position will be reached with another aligned probe within 0

3.6. Device Holder

The DASY 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 DASY device holder has been made out of low-loss POM material having the following dielectric parameters: relative permittivity ε=3 and loss tangent δ = 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.	

3.7. Measurement Server

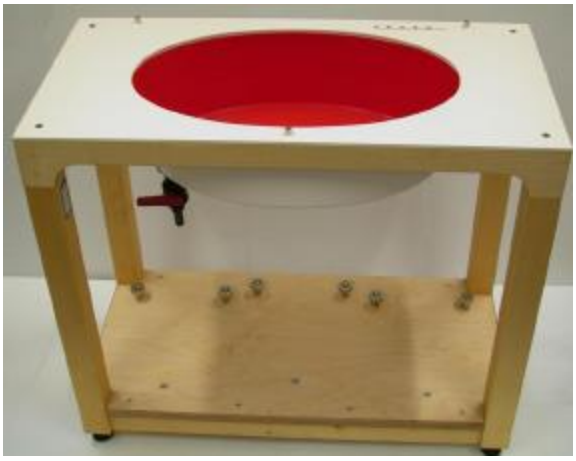
The measurement server is based on a PC/104 CPU board with CPU (DASY5: 400 MHz, Intel Celeron), chip-disk (DASY5: 128MB), RAM (DASY5: 128MB). The necessary circuits for communication with the DAE electronic box, as well as the 16 bit AD converter system for optical detection and digital I/O interface are contained on the DAYS I/O board, which is directly connected to the PC/104 bus of the CPU board. The measurement server performs all the real-time data evaluation for field measurements and surface detection, controls robot movements and handles safety operations.	

3.8. PHANTOM
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.

ELI4 Phantom

□ Flat phantom a fiberglass shell flat phantom with 2mm+/- 0.2 mm shell thickness. It has only one measurement area for Flat phantom	

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:

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

$$SAR = c_h \left.\frac{dT}{dt}\right|_{t=0}$$

Where

SAR	is the specific absorption rate in watts per kilogram;
E	is the r.m.s. value of the electric field strength in the tissue in volts per meter;
σ	is the conductivity of the tissue in siemens per metre;
ρ	is the density of the tissue in kilograms per cubic metre;
c_h	is the heat capacity of the tissue in joules per kilogram and Kelvin;
$\frac{dT}{dt} \mid t = 0$	is the initial time derivative of temperature in the tissue in kelvins per second

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 DASY 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, 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°
Maximum area scan spatial resolution: Δx_{Area}, Δy_{Area}	≤ 2 GHz: ≤ 15 mm 2 – 3 GHz: ≤ 12 mm	3 – 4 GHz: ≤ 12 mm 4 – 6 GHz: ≤ 10 mm
	When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be ≤ the corresponding x or y dimension of the test device with at least one measurement point on the test device.	

Step 3: Zoom Scan

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

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

Maximum zoom scan spatial resolution: Δx_{Zoom}, Δy_{Zoom}			≤ 2 GHz: ≤ 8 mm 2 – 3 GHz: ≤ 5 mm*	3 – 4 GHz: ≤ 5 mm* 4 – 6 GHz: ≤ 4 mm*
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{Zoom}(n)$		≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm
	graded grid	$\Delta z_{Zoom}(1)$: between 1st two points closest to phantom surface	≤ 4 mm	3 – 4 GHz: ≤ 3 mm 4 – 5 GHz: ≤ 2.5 mm 5 – 6 GHz: ≤ 2 mm
		$\Delta z_{Zoom}(n>1)$: between subsequent points	≤ 1.5·$\Delta z_{Zoom}(n-1)$	
Minimum zoom scan volume	x, y, z		≥ 30 mm	3 – 4 GHz: ≥ 28 mm 4 – 5 GHz: ≥ 25 mm 5 – 6 GHz: ≥ 22 mm
Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details. * When zoom scan is required and the *reported* 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.				

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.

4.3. RF Exposure Conditions

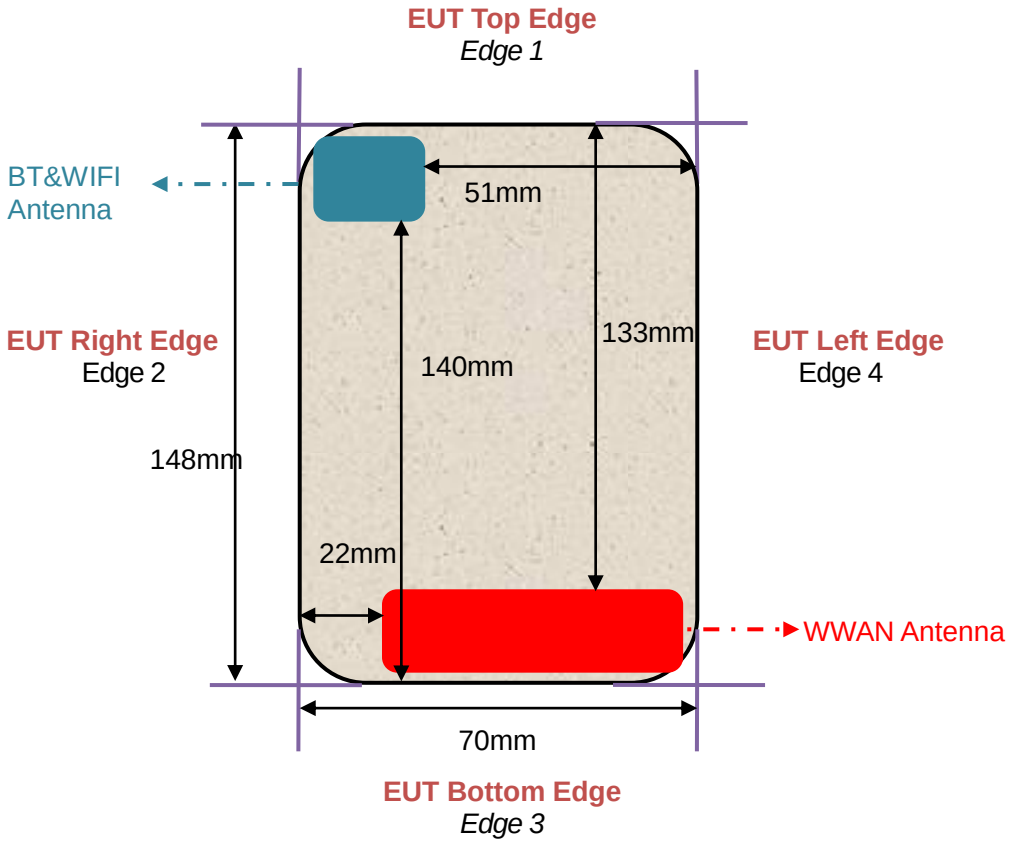
Test Configuration and setting:

The EUT is a model of GSM/WCDMA Portable Mobile Station (MS). It supports GSM/GPRS/EGPRS, WCDMA/HSPA, 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)



For WWAN mode:

Test Configurations	Antenna to edges/surface	SAR required	Note
Head			
Left Touch		Yes	--
Left Tilt		Yes	--
Right Touch		Yes	--
Right Tilt		Yes	--
Body			
Back	<25mm	Yes	--
Front	<25mm	Yes	--
Hotspot			
Back	<25mm	Yes	--
Front	<25mm	Yes	--
Edge 1 (Top)	133mm	No	SAR is not required for the distance between the antenna and the edge is >25mm as per KDB 941225 D06 Hotspot SAR
Edge 2 (Right)	22mm	Yes	--
Edge 3 (Bottom)	1mm	Yes	--
Edge 4 (Left)	1mm	Yes	--

For BT&WIFI 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)	140mm	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)	51mm	No	SAR is not required for the distance between the antenna and the edge is >25mm as per KDB 941225 D06 Hotspot SAR

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
835 Head	50.36	1.25	48.39	0.0	0.0	0.0
1750 Head	52.64	0.36	0.0	47	0.0	0.0
1900 Head	54.9	0.18	0.0	44.92	0.0	0.0
2450 Head	71.88	0.16	0.0	7.99	0.0	19.97
2600 Head	55.242	0.306	0	44.452	0	0

5.2. Tissue Dielectric Parameters for Head and Body Phantoms

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

Target Frequency (MHz)	head		body	
	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)

5.3. Tissue Calibration Result

The dielectric parameters of the liquids were verified prior to the SAR evaluation using DASY 5 Dielectric Probe Kit and R&S Network Analyzer ZVL6.

Tissue Stimulant Measurement for 835MHz					
	Fr. (MHz)	Dielectric Parameters (±10%)		Tissue Temp [°C]	Test time
		εr 41.5 (37.35-45.65)	δ[s/m] 0.90(0.81-0.99)		
Head	824.2	41.74	0.92	20.5	Jun. 23, 2022
	835	41.50	0.93		
	836.6	41.32	0.94		
	848.8	41.19	0.95		

Tissue Stimulant Measurement for 1750MHz					
	Fr. (MHz)	Dielectric Parameters (±10%)		Tissue Temp [°C]	Test time
		εr 40.1 (36.09-44.11)	δ[s/m]1.37(1.233-1.507)		
Head	1712.4	41.25	1.36	20.9	Jun. 24, 2022
	1720	41.25	1.36		
	1732.4	41.02	1.37		
	1732.5	41.02	1.37		
	1745	40.87	1.38		
	1750	40.70	1.39		
	1752.6	40.56	1.40		

Tissue Stimulant Measurement for 1900MHz					
	Fr. (MHz)	Dielectric Parameters (±10%)		Tissue Temp [°C]	Test time
		εr40.00(36.00-44.00)	δ[s/m]1.40(1.26-1.54)		
Head	1850.2	39.74	1.38	20.3	Jun. 17, 2022
	1852.4	39.56	1.39		
	1880	39.33	1.40		
	1900	39.15	1.41		
	1907.6	39.04	1.42		
	1909.8	38.89	1.43		

Tissue Stimulant Measurement for 1900MHz					
Head	Fr. (MHz)	Dielectric Parameters (±10%)		Tissue Temp [°C]	Test time
		εr40.00(36.00-44.00)	δ[s/m]1.40(1.26-1.54)		
	1860	39.89	1.42	21.2	Jun. 20, 2022
	1880	39.76	1.43		
	1900	39.58	1.44		

Tissue Stimulant Measurement for 2450MHz					
Head	Fr. (MHz)	Dielectric Parameters (±10%)		Tissue Temp [°C]	Test time
		εr39.2(35.28-43.12)	δ[s/m]1.80(1.62-1.98)		
	2412	39.58	1.76	21.2	Jun. 15, 2022
	2437	39.25	1.76		
	2441	39.23	1.77		
	2450	38.96	1.78		
	2462	38.71	1.79		

Tissue Stimulant Measurement for 2600MHz					
Head	Fr. (MHz)	Dielectric Parameters (±10%)		Tissue Temp [°C]	Test time
		εr39(35.1-42.9)	δ[s/m]1.96(1.764-2.156)		
	2510	40.22	1.91	21.0	Jun. 16, 2022
	2535	39.96	1.92		
	2560	39.78	1.93		
	2600	39.62	1.94		

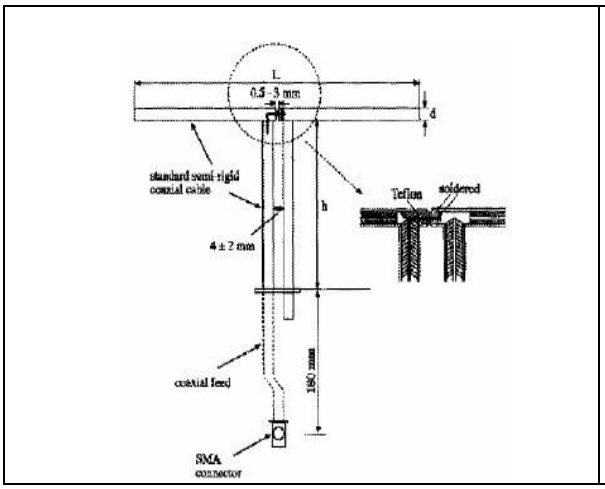
6. SAR SYSTEM CHECK PROCEDURE

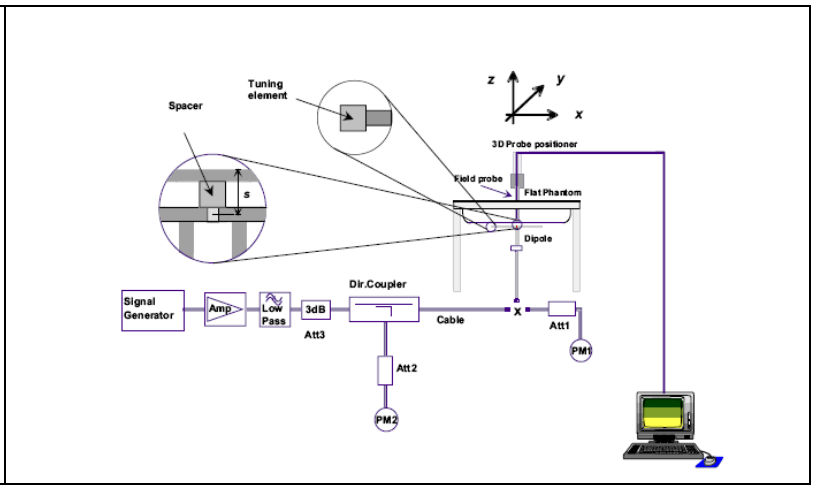
6.1. SAR System Check Procedures

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

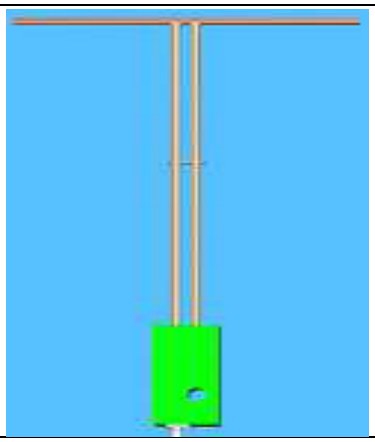
Each DASY system is equipped with one or more system check kits. These units, together with the predefined measurement procedures within the DASY software, enable the user to conduct the system check and system validation. System kit includes a dipole, and dipole device holder.

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.





6.2. SAR System Check
6.2.1. Dipoles



The dipoles used are based on the IEEE-1528 standard, and is complied with mechanical and electrical specifications in line with the requirements of IEEE. the table below provides details for the mechanical and electrical specifications for the 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

6.2.2. System Check Result

System Performance Check at 835MHz &1800MHz &1900MHz & 2450MHz& 2600MHz								
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								
Frequency [MHz]	Target Value(W/kg)		Reference Result (± 10%)		Tested Value(W/kg)		Tissue Temp. [°C]	Test time
	1g	10g	1g	10g	1g	10g		
835	9.67	6.14	8.703-10.637	5.526-6.754	9.84	6.09	20.5	Jun. 23, 2022
1800	37.76	19.60	33.984-41.536	17.640-21.560	38.35	19.81	20.9	Jun. 24, 2022
1900	41.26	20.86	37.134-45.386	18.774-22.946	39.94	21.08	20.3	Jun. 17, 2022
1900	41.26	20.86	37.134-45.386	18.774-22.946	39.78	20.45	21.2	Jun. 20, 2022
2450	54.32	24.25	48.888-59.752	21.825-26.675	52.62	23.30	21.2	Jun. 15, 2022
2600	54.94	23.77	49.446-60.434	21.393-26.147	53.41	24.25	21.0	Jun. 16, 2022

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

7. EUT TEST POSITION

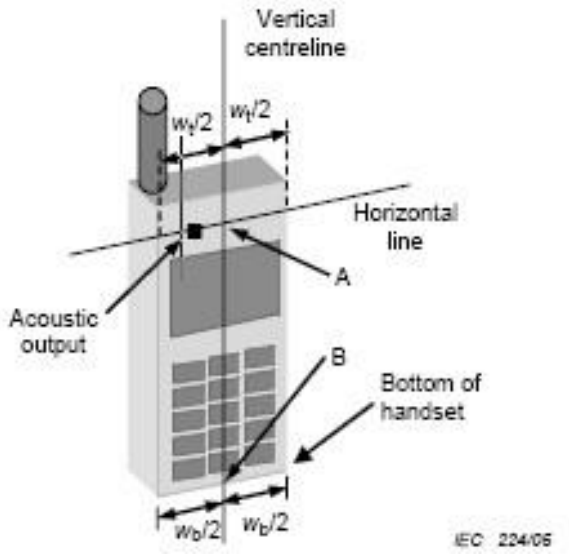
This EUT was tested in **Right Cheek, Right Tilted, Left Cheek, Left Tilted, Body back, Body front and 4 edges.**

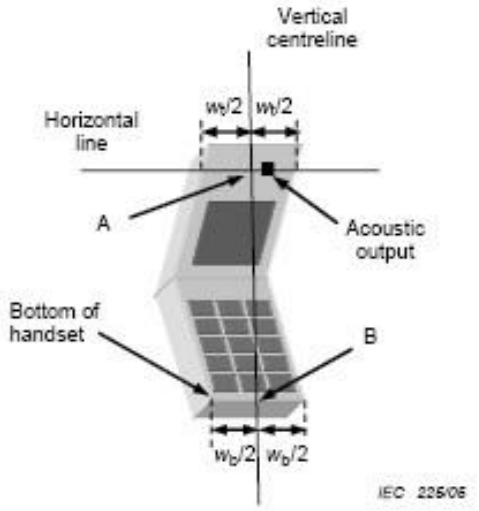
7.1. Define Two Imaginary Lines on the Handset

(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.

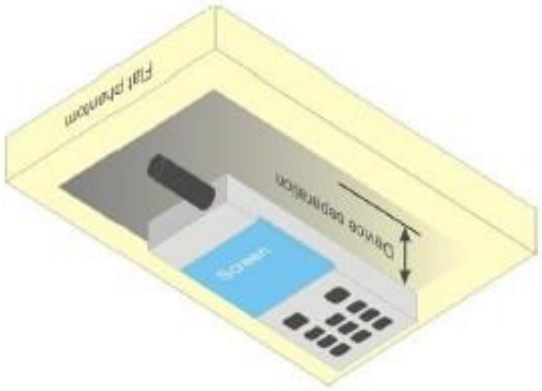
(2) While maintaining the device in the reference plane described above and pivoting against the ear, moves it outward away from the mouth by an angle of 15 degrees or until with the ear is lost.

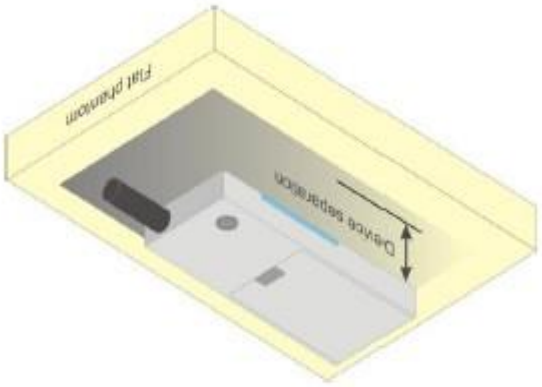
7.4. Body Worn Position

(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.**





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

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

10. TEST EQUIPMENT LIST

Equipment description	Manufacturer/ Model	Identification No.	Software version	Current calibration date	Next calibration date
Stäubli Robot	Stäubli-TX60	F13/5Q2UD1/A/01	N/A	N/A	N/A
Robot Controller	Stäubli-CS8	139522	N/A	N/A	N/A
E-Field Probe	Speag- EX3DV4	SN:3953	N/A	Aug. 27,2021	Aug. 26,2022
SAM Twin Phantom	Speag-SAM	1790	N/A	N/A	N/A
Device Holder	Speag-SD 000 H01 KA	SD 000 H01 KA	N/A	N/A	N/A
DAE4	Speag-SD 000 D04 BM	1398	N/A	May 17,2022	May 16,2023
SAR Software	Speag-DASY5	N/A	5.3da53	N/A	N/A
Liquid	SATIMO	N/A	N/A	N/A	N/A
Radio Communication Tester	R&S-CMU200	115532	N/A	Mar. 04, 2022	Mar. 03, 2023
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
Signal Generator	Agilent-E4438C	US41461365	V5.03	Aug. 18,2021	Aug. 17,2022
Vector Analyzer	Agilent / E4440A	MY44303916	N/A	Mar. 28, 2022	Mar. 27, 2023
Network Analyzer	Rhode & Schwarz ZVL6	SN101443	3.2	Oct. 28,2021	Oct. 27,2022
Attenuator	Warison /WATT-6SR1211	S/N:WRJ34AYM2F1	N/A	Jun. 08, 2022	Jun. 07, 2023
Attenuator	Mini-circuits / VAT-10+	31405	N/A	Jun. 08, 2022	Jun. 07, 2023
Amplifier	AS0104-55_55	1004793	N/A	Jun. 09, 2022	Jun. 08, 2023
Directional Couple	Werlatone/ C5571-10	SN99463	N/A	Mar. 10,2022	Mar. 09,2024
Directional Couple	Werlatone/ C6026-10	SN99482	N/A	Mar. 10,2022	Mar. 09,2024
Power Sensor	NRP-Z21	1137.6000.02	N/A	Sep. 07,2021	Sep. 06,2022
Power Sensor	NRP-Z23	100323	N/A	Feb. 16,2022	Feb. 15,2023
Power Viewer	R&S	V2.3.1.0	N/A	N/A	N/A
Calibration standard parts for network sub - port	R&S/ ZV-Z132	N/A	V2.3.1.0	Dec. 07, 2021	Dec. 06, 2022

Note: Per KDB 865664 Dipole SAR Validation, AGC Lab has adopted 3 years calibration intervals. On annual basis, every measurement dipole has been evaluated and is in compliance with the following criteria:
1. There is no physical damage on the dipole;
2. System validation with specific dipole is within 10% of calibrated value;
3. Return-loss is within 20% of calibrated measurement;
4. Impedance is within 5Ω of calibrated measurement.

11. MEASUREMENT UNCERTAINTY

DASY Uncertainty- EX3DV4 Measurement uncertainty for Dipole averaged over 1 gram / 10 gram.									
a	b	c	d	e f(d,k)	f	g	h c×f/e	i c×g/e	k
Uncertainty Component	Sec.	Tol (± %)	Prob. Dist.	Div.	Ci (1g)	Ci (10g)	1g Ui (±%)	10g Ui (±%)	vi
Measurement System									
Probe calibration	E.2.1	6.65	N	1	1	1	6.65	6.65	∞
Axial Isotropy	E.2.2	0.6	R	$\sqrt{3}$	√0.5	√0.5	0.24	0.24	∞
Hemispherical Isotropy	E.2.2	1.6	R	$\sqrt{3}$	√0.5	√0.5	0.65	0.65	∞
Boundary effect	E.2.3	1	R	$\sqrt{3}$	1	1	0.58	0.58	∞
Linearity	E.2.4	0.45	R	$\sqrt{3}$	1	1	0.26	0.26	∞
System detection limits	E.2.4	1	R	$\sqrt{3}$	1	1	0.58	0.58	∞
Modulation response	E2.5	3.3	R	$\sqrt{3}$	1	1	1.91	1.91	∞
Readout Electronics	E.2.6	0.15	N	1	1	1	0.15	0.15	∞
Response Time	E.2.7	0	R	$\sqrt{3}$	1	1	0.00	0.00	∞
Integration Time	E.2.8	1.7	R	$\sqrt{3}$	1	1	0.98	0.98	∞
RF ambient conditions-Noise	E.6.1	3	R	$\sqrt{3}$	1	1	1.73	1.73	∞
RF ambient conditions-reflections	E.6.1	3	R	$\sqrt{3}$	1	1	1.73	1.73	∞
Probe positioner mechanical tolerance	E.6.2	0.4	R	$\sqrt{3}$	1	1	0.23	0.23	∞
Probe positioning with respect to phantom shell	E.6.3	6.7	R	$\sqrt{3}$	1	1	3.87	3.87	∞
Extrapolation, interpolation, and integrations algorithms for max. SAR evaluation	E.5	4	R	$\sqrt{3}$	1	1	2.31	2.31	∞
Test sample Related									
Test sample positioning	E.4.2	2.9	N	1	1	1	2.90	2.90	∞
Device holder uncertainty	E.4.1	3.6	N	1	1	1	3.60	3.60	∞
Output power variation—SAR drift measurement	E.2.9	5	R	$\sqrt{3}$	1	1	2.89	2.89	∞
SAR scaling	E.6.5	5	R	$\sqrt{3}$	1	1	2.89	2.89	∞
Phantom and tissue parameters									
Phantom shell uncertainty—shape, thickness, and permittivity	E.3.1	6.6	R	$\sqrt{3}$	1	1	3.81	3.81	∞
Uncertainty in SAR correction for deviations in permittivity and conductivity	E.3.2	1.9	N	1	1	0.84	1.90	1.60	∞
Liquid conductivity measurement	E.3.3	4	N	1	0.78	0.71	3.12	2.84	M
Liquid permittivity measurement	E.3.3	5	N	1	0.23	0.26	1.15	1.30	M
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	∞
Combined Standard Uncertainty			RSS				11.79	11.63	
Expanded Uncertainty (95% Confidence interval)			K=2				23.59	23.26	

DASY Uncertainty- EX3DV4 System Check uncertainty for Dipole averaged over 1 gram / 10 gram.									
a	b	c	d	e f(d,k)	f	g	h c×f/e	i c×g/e	k
Uncertainty Component	Sec.	Tol (± %)	Prob. Dist.	Div.	Ci (1g)	Ci (10g)	1g Ui (±%)	10g Ui (±%)	vi
Measurement System									
Probe calibration drift	E.2.1	0.5	N	1	1	1	0.5	0.5	∞
Axial Isotropy	E.2.2	0.6	R	$\sqrt{3}$	0	0	0.00	0.00	∞
Hemispherical Isotropy	E.2.2	1.6	R	$\sqrt{3}$	0	0	0.00	0.00	∞
Boundary effect	E.2.3	1	R	$\sqrt{3}$	0	0	0.00	0.00	∞
Linearity	E.2.4	0.45	R	$\sqrt{3}$	0	0	0.00	0.00	∞
System detection limits	E.2.4	1	R	$\sqrt{3}$	0	0	0.00	0.00	∞
Modulation response	E2.5	3.3	R	$\sqrt{3}$	0	0	0.00	0.00	∞
Readout Electronics	E.2.6	0.15	N	1	0	0	0.00	0.00	∞
Response Time	E.2.7	0	R	$\sqrt{3}$	0	0	0.00	0.00	∞
Integration Time	E.2.8	1.7	R	$\sqrt{3}$	0	0	0.00	0.00	∞
RF ambient conditions-Noise	E.6.1	3	R	$\sqrt{3}$	0	0	0.00	0.00	∞
RF ambient conditions-reflections	E.6.1	3	R	$\sqrt{3}$	0	0	0.00	0.00	∞
Probe positioner mechanical tolerance	E.6.2	0.4	R	$\sqrt{3}$	1	1	0.37	0.37	∞
Probe positioning with respect to phantom shell	E.6.3	6.7	R	$\sqrt{3}$	1	1	3.87	3.87	∞
Extrapolation, interpolation, and integrations algorithms for max. SAR evaluation	E.5	4	R	$\sqrt{3}$	0	0	0.00	0.00	∞
System check source (dipole)									
Deviation of experimental dipoles	E.6.4	2.0	N	1	1	1	2.00	2.00	∞
Input power and SAR drift measurement	8,6.6.4	5.0	R	$\sqrt{3}$	1	1	2.89	2.89	∞
Dipole axis to liquid distance	8,E.6.6	2.0	R	$\sqrt{3}$	1	1	1.15	1.15	∞
Phantom and tissue parameters									
Phantom shell uncertainty—shape, thickness, and permittivity	E.3.1	6.6	R	$\sqrt{3}$	1	1	3.81	3.81	∞
Uncertainty in SAR correction for deviations in permittivity and conductivity	E.3.2	1.9	N	1	1	0.84	1.90	1.60	∞
Liquid conductivity measurement	E.3.3	4	N	1	0.78	0.71	3.12	2.84	M
Liquid permittivity measurement	E.3.3	5	N	1	0.23	0.26	1.15	1.30	M
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	∞
Combined Standard Uncertainty			RSS				7.34	7.07	
Expanded Uncertainty (95% Confidence interval)			K=2				14.67	14.14	

DASY Uncertainty- EX3DV4 System Validation uncertainty for Dipole averaged over 1 gram / 10 gram.									
a	b	c	d	e f(d,k)	f	g	h c×f/e	i c×g/e	k
Uncertainty Component	Sec.	Tol (±%)	Prob. Dist.	Div.	Ci (1g)	Ci (10g)	1g Ui (±%)	10g Ui (±%)	vi
Measurement System									
Probe calibration	E.2.1	6.65	N	1	1	1	6.65	6.65	∞
Axial Isotropy	E.2.2	0.6	R	$\sqrt{3}$	1	1	0.35	0.35	∞
Hemispherical Isotropy	E.2.2	1.6	R	$\sqrt{3}$	0	0	0.00	0.00	∞
Boundary effect	E.2.3	1	R	$\sqrt{3}$	1	1	0.58	0.58	∞
Linearity	E.2.4	0.45	R	$\sqrt{3}$	1	1	0.26	0.26	∞
System detection limits	E.2.4	1	R	$\sqrt{3}$	1	1	0.58	0.58	∞
Modulation response	E2.5	3.3	R	$\sqrt{3}$	0	0	0.00	0.00	∞
Readout Electronics	E.2.6	0.15	N	1	1	1	0.15	0.15	∞
Response Time	E.2.7	0	R	$\sqrt{3}$	0	0	0.00	0.00	∞
Integration Time	E.2.8	1.7	R	$\sqrt{3}$	0	0	0.00	0.00	∞
RF ambient conditions-Noise	E.6.1	3	R	$\sqrt{3}$	1	1	1.73	1.73	∞
RF ambient conditions-reflections	E.6.1	3	R	$\sqrt{3}$	1	1	1.73	1.73	∞
Probe positioner mechanical tolerance	E.6.2	0.4	R	$\sqrt{3}$	1	1	0.23	0.23	∞
Probe positioning with respect to phantom shell	E.6.3	6.7	R	$\sqrt{3}$	1	1	3.87	3.87	∞
Extrapolation, interpolation, and integrations algorithms for max. SAR evaluation	E.5	4	R	$\sqrt{3}$	1	1	2.31	2.31	∞
System check source (dipole)									
Deviation of experimental dipole from numerical dipole	E.6.4	5.0	N	1	1	1	5.00	5.00	∞
Input power and SAR drift measurement	8,6.6.4	5.0	R	$\sqrt{3}$	1	1	2.89	2.89	∞
Dipole axis to liquid distance	8,E.6.6	2.0	R	$\sqrt{3}$	1	1	1.15	1.15	∞
Phantom and tissue parameters									
Phantom shell uncertainty—shape, thickness, and permittivity	E.3.1	6.6	R	$\sqrt{3}$	1	1	3.81	3.81	∞
Uncertainty in SAR correction for deviations in permittivity and conductivity	E.3.2	1.9	N	1	1	0.84	1.90	1.60	∞
Liquid conductivity measurement	E.3.3	4	N	1	0.78	0.71	3.12	2.84	M
Liquid permittivity measurement	E.3.3	5	N	1	0.23	0.26	1.15	1.30	M
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	∞
Combined Standard Uncertainty			RSS				11.45	11.28	
Expanded Uncertainty (95% Confidence interval)			K=2				22.89	22.55	

12. CONDUCTED POWER MEASUREMENT

GSM BAND

Mode	Frequency(MHz)	Avg. Burst Power(dBm)	Duty cycle Factor(dBm)	Frame Power(dBm)
Maximum Power <1>				
GSM 850	824.2	31.55	-9	22.55
	836.6	31.84	-9	22.84
	848.8	**31.95**	-9	22.95
GPRS 850 （1 Slot）	824.2	31.61	-9	22.61
	836.6	31.88	-9	22.88
	848.8	31.96	-9	22.96
GPRS 850 （2 Slot）	824.2	29.79	-6	23.79
	836.6	29.84	-6	**23.84**
	848.8	29.81	-6	23.81
GPRS 850 （3 Slot）	824.2	27.83	-4.26	23.57
	836.6	27.87	-4.26	23.61
	848.8	27.88	-4.26	23.62
GPRS 850 （4 Slot）	824.2	25.63	-3	22.63
	836.6	25.66	-3	22.66
	848.8	25.66	-3	22.66
EGPRS 850 （1 Slot）	824.2	24.16	-9	15.16
	836.6	24.35	-9	15.35
	848.8	24.44	-9	15.44
EGPRS 850 （2 Slot）	824.2	24.27	-6	18.27
	836.6	24.43	-6	18.43
	848.8	24.16	-6	18.16
EGPRS 850 （3 Slot）	824.2	22.86	-4.26	18.60
	836.6	23.36	-4.26	19.10
	848.8	23.93	-4.26	19.67
EGPRS 850 （4 Slot）	824.2	20.46	-3	17.46
	836.6	20.36	-3	17.36
	848.8	20.42	-3	17.42

GSM BAND CONTINUE

Mode	Frequency(MHz)	Avg. Burst Power(dBm)	Duty cycle Factor(dBm)	Frame Power(dBm)
Maximum Power <1>				
PCS1900	1850.2	27.94	-9	18.94
	1880	28.04	-9	19.04
	1909.8	**28.19**	-9	19.19
GPRS1900 （1 Slot）	1850.2	27.97	-9	18.97
	1880	28	-9	19.00
	1909.8	28.16	-9	19.16
GPRS1900 （2 Slot）	1850.2	25.81	-6	19.81
	1880	25.71	-6	19.71
	1909.8	25.56	-6	19.56
GPRS1900 （3 Slot）	1850.2	24.26	-4.26	**20.00**
	1880	24.21	-4.26	19.95
	1909.8	24.04	-4.26	19.78
GPRS1900 （4 Slot）	1850.2	22.12	-3	19.12
	1880	22.05	-3	19.05
	1909.8	21.88	-3	18.88
EGPRS1900 （1 Slot）	1850.2	23.72	-9	14.72
	1880	23.72	-9	14.72
	1909.8	24.82	-9	15.82
EGPRS1900 （2 Slot）	1850.2	24.1	-6	18.10
	1880	24.1	-6	18.10
	1909.8	24.75	-6	18.75
EGPRS1900 （3 Slot）	1850.2	22.16	-4.26	17.90
	1880	22.16	-4.26	17.90
	1909.8	23.22	-4.26	18.96
EGPRS1900 （4 Slot）	1850.2	19.4	-3	16.40
	1880	19.4	-3	16.40
	1909.8	20.24	-3	17.24

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

UMTS BAND
HSDPA Setup Configuration:

·The EUT was connected to Base Station CMU200 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(βc and βd) parameters set according to each

(2) Set RMC 12.2Kbps+HSDPA mode.

(3) Set Cell Power=-86dBm

(4) Set HS-DSCH Configuration Type to FRC (H-set 1, QPSK)

(5) Select HSDPA Uplink Parameters

(6) Set Delta ACK, Delta NACK and Delta CQI=8

(7) Set Ack - Nack Repetition Factor to 3

(8) Set CQI Feedback Cycle (k) to 4ms

(9) Set CQI Repetition Factor to 2

(10) Power Ctrl Mode=All Up bits

·The transmitted maximum output power was recorded.

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

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

Note 1: ΔACK, ΔNACK and ΔCQI = 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, ΔACK and ΔNACK = 30/15 with β_{hs} = 30/15 * β_c , and ΔCQI = 24/15 with β_{hs} = 24/15 * β_c .
Note 3: CM = 1 for βc/βd =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.

HSUPA Setup Configuration:

· The EUT was connected to Base Station CMU200 referred to the Setup Configuration.

· The RF path losses were compensated into the measurements.

· A call was established between EUT and Base Station with following setting * :

(1) Call Configs = 5.2B, 5.9B, 5.10B, and 5.13.2B with QPSK

(2) Set the Gain Factors (βc and βd) and parameters (AG Index) were set according to each specific sub-test in the following table, C11.1.3, quoted from the TS 34.121

(3) Set Cell Power = -86 dBm

(4) Set Channel Type = 12.2k + HSPA

(5) Set UE Target Power

(6) Power Ctrl Mode= Alternating bits

(7) Set and observe the E-TFCI

(8) Confirm that E-TFCI is equal to the target E-TFCI of 75 for sub-test 1, and other subtest's E-TFCI

· The transmitted maximum output power was recorded.

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

Sub-test	βc	βd	βd (SF)	βc/βd	βHS (Note 1)	βec	βed (Note 4) (Note 5)	βed (SF)	βed (Codes)	CM (dB) (Note 2)	MPR (dB) (Note 2) (Note 6)	AG Index (Note 5)	E-TFCI
1	11/15 (Note 3)	15/15 (Note 3)	64	11/15 (Note 3)	22/15	209/225	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, ΔACK, ΔNACK and ΔCQI = 30/15 with β_{hs} = 30/15 * β_c. For sub-test 5, ΔACK, ΔNACK and ΔCQI = 5/15 with β_{hs} = 5/15 * β_c.

Note 2: CM = 1 for βc/βd =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.

UMTS BAND II

Mode	Frequency (MHz)	Avg. Burst Power (dBm)
WCDMA 1900 RMC	1852.4	**22.31**
	1880	22.12
	1907.6	22.30
WCDMA 1900 AMR	1852.4	22.04
	1880	21.93
	1907.6	21.76
HSDPA Subtest 1	1852.4	21.14
	1880	20.94
	1907.6	20.75
HSDPA Subtest 2	1852.4	20.15
	1880	19.86
	1907.6	20.74
HSDPA Subtest 3	1852.4	19.87
	1880	19.78
	1907.6	20.01
HSDPA Subtest 4	1852.4	20.37
	1880	20.40
	1907.6	20.58
HSUPA Subtest 1	1852.4	20.59
	1880	20.27
	1907.6	20.48
HSUPA Subtest 2	1852.4	21.31
	1880	21.63
	1907.6	21.41
HSUPA Subtest 3	1852.4	21.22
	1880	21.19
	1907.6	21.36
HSUPA Subtest 4	1852.4	21.23
	1880	22.29
	1907.6	22.01
HSUPA Subtest 5	1852.4	21.04
	1880	21.63
	1907.6	21.90

UMTS BAND V

Mode	Frequency (MHz)	Avg. Burst Power (dBm)
WCDMA 850 RMC	826.4	**22.34**
	836.6	22.04
	846.6	22.13
WCDMA 850 AMR	826.4	22.08
	836.6	22.03
	846.6	22.01
HSDPA Subtest 1	826.4	21.07
	836.6	20.78
	846.6	20.85
HSDPA Subtest 2	826.4	20.31
	836.6	19.92
	846.6	20.44
HSDPA Subtest 3	826.4	20.04
	836.6	19.82
	846.6	20.19
HSDPA Subtest 4	826.4	20.11
	836.6	20.66
	846.6	20.68
HSUPA Subtest 1	826.4	20.45
	836.6	20.37
	846.6	20.41
HSUPA Subtest 2	826.4	21.48
	836.6	21.80
	846.6	21.44
HSUPA Subtest 3	826.4	21.26
	836.6	21.00
	846.6	21.27
HSUPA Subtest 4	826.4	21.15
	836.6	22.03
	846.6	22.28
HSUPA Subtest 5	826.4	21.10
	836.6	21.69
	846.6	22.05

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_c/β_d=12/15, β_{hs}/β_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.		

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.

LTE Band

Conducted Power of LTE Band 2(dBm)							
Bandwidth	**Modulation**	**RB size**	**RB offset**	**Target MPR**	**Channel**	**Channel**	**Channel**
					18607	**18900**	**19193**
1.4MHz	QPSK	1	0	0	22.21	19.90	19.88
			3	0	19.53	19.87	19.85
			5	0	19.40	19.98	22.17
		3	0	0	19.58	19.82	19.84
			2	0	19.56	19.81	19.82
			3	0	19.59	19.77	19.89
		6	0	1	20.96	18.69	21.12
	16QAM	1	0	1	21.47	18.94	19.54
			3	1	18.68	18.99	19.64
			5	1	18.62	19.07	21.84
		3	0	1	18.90	18.80	18.78
			2	1	18.88	18.80	18.77
			3	1	18.90	19.03	18.88
		6	0	2	20.37	17.87	20.32
Bandwidth	**Modulation**	**RB size**	**RB offset**	**Target MPR**	**Channel**	**Channel**	**Channel**
					18615	**18900**	**19185**
3MHz	QPSK	1	0	0	22.01	19.72	19.65
			7	0	19.65	19.71	19.8
			14	0	19.52	19.80	22.14
		8	0	1	18.51	18.85	18.85
			4	1	18.51	18.85	18.83
			7	1	18.56	18.80	18.79
		15	0	1	20.99	18.80	21.03
	16QAM	1	0	1	21.42	19.46	18.89
			7	1	18.96	19.44	18.78
			14	1	18.84	19.54	21.83
		8	0	2	18.00	17.91	18.23
			4	2	18.01	17.92	18.23
			7	2	17.82	17.88	18.23
		15	0	2	20.20	17.87	20.30

Conducted Power of LTE Band 2(dBm)							
Bandwidth	Modulation	RB size	RB offset	Target MPR	Channel 18625	Channel 18900	Channel 19175
5MHz	QPSK	1	0	0	22.04	19.7	19.87
			13	0	19.45	19.73	19.94
			24	0	19.54	19.73	22.26
		12	0	1	18.61	18.86	18.83
			6	1	18.60	18.86	18.84
			13	1	18.43	18.79	18.84
		25	0	1	20.91	18.78	21.08
	16QAM	1	0	1	20.52	18.12	19.01
			13	1	18.61	18.07	19.25
			24	1	18.60	18.21	21.37
		12	0	2	17.68	18.00	18.13
			6	2	17.82	18.01	18.01
			13	2	17.77	17.92	18.15
		25	0	2	20.21	17.98	20.39
Bandwidth	Modulation	RB size	RB offset	Target MPR	Channel 18650	Channel 18900	Channel 19150
10MHz	QPSK	1	0	0	22.06	19.88	19.94
			25	0	19.48	20.01	19.79
			49	0	19.46	20.00	22.30
		25	0	1	18.50	18.71	18.77
			13	1	18.50	18.71	18.78
			25	1	18.54	18.83	18.85
		50	0	1	20.97	18.86	21.10
	16QAM	1	0	1	21.66	19.06	18.75
			25	1	18.83	19.06	18.63
			49	1	18.89	19.06	21.35
		25	0	2	17.61	18.29	18.07
			13	2	17.61	18.30	18.08
			25	2	17.98	18.39	18.08
		50	0	2	20.12	17.97	20.27

Conducted Power of LTE Band 2(dBm)							
Bandwidth	Modulation	RB size	RB offset	Target MPR	Channel 18675	Channel 18900	Channel 19125
15MHz	QPSK	1	0	0	22.05	22.14	22.10
			38	0	21.93	22.21	22.04
			74	0	21.97	22.25	22.12
		36	0	1	20.99	21.10	21.15
			18	1	20.99	21.10	21.15
			39	1	20.99	21.10	21.15
		75	0	1	20.91	21.09	21.08
	16QAM	1	0	1	21.42	21.51	21.65
			38	1	21.38	21.53	21.74
			74	1	21.36	21.43	21.73
		36	0	2	20.22	20.28	20.28
			18	2	20.23	20.30	20.19
			39	2	20.23	20.19	20.20
		75	0	2	20.18	20.29	20.30
Bandwidth	Modulation	RB size	RB offset	Target MPR	Channel 18700	Channel 18900	Channel 19100
20MHz	QPSK	1	0	0	22.20	22.34	22.31
			50	0	22.10	**22.42**	22.24
			99	0	22.09	22.35	22.24
		50	0	1	20.96	21.02	21.21
			25	1	20.90	21.02	21.21
			50	1	21.00	21.10	21.26
		100	0	1	20.97	21.08	21.13
	16QAM	1	0	1	21.48	21.18	21.94
			50	1	21.29	21.13	21.86
			99	1	21.31	21.10	21.88
		50	0	2	20.28	20.22	20.23
			25	2	20.29	20.24	20.25
			50	2	20.17	20.28	20.27
		100	0	2	20.12	20.17	20.36

Conducted Power of LTE Band 4(dBm)							
Bandwidth	Modulation	RB size	RB offset	Target MPR	Channel	Channel	Channel
					19957	20175	20393
1.4MHz	QPSK	1	0	0	21.82	21.70	21.60
			3	0	21.92	21.61	21.56
			5	0	21.96	21.65	21.61
		3	0	0	21.80	21.77	21.32
			2	0	21.79	21.87	21.41
			3	0	21.81	21.80	21.35
		6	0	1	20.83	20.57	20.29
	16QAM	1	0	1	21.78	20.63	21.56
			3	1	21.75	20.69	21.59
			5	1	21.80	20.65	21.75
		3	0	1	20.94	20.80	20.77
			2	1	21.02	20.79	20.76
			3	1	20.98	20.76	20.72
		6	0	2	20.75	20.54	20.25
Bandwidth	Modulation	RB size	RB offset	Target MPR	Channel	Channel	Channel
					19965	20175	20385
3MHz	QPSK	1	0	0	21.87	21.80	21.46
			7	0	21.99	21.80	21.54
			14	0	21.94	21.73	21.46
		8	0	1	20.73	20.67	20.42
			4	1	20.94	20.67	20.41
			7	1	20.72	20.66	20.46
		15	0	1	20.82	20.60	20.35
	16QAM	1	0	1	21.60	21.49	20.79
			7	1	21.49	21.51	20.77
			14	1	21.39	21.55	20.75
		8	0	2	20.42	19.84	19.73
			4	2	20.42	19.85	19.74
			7	2	20.30	19.75	19.81
		15	0	2	20.48	20.43	20.17

Conducted Power of LTE Band 4(dBm)							
Bandwidth	Modulation	RB size	RB offset	Target MPR	Channel 19975	Channel 20175	Channel 20375
5MHz	QPSK	1	0	0	21.89	21.73	21.23
			13	0	21.86	21.81	21.11
			24	0	21.85	21.89	21.12
		12	0	1	20.92	20.70	20.48
			6	1	20.92	20.69	20.49
			13	1	20.83	20.72	20.38
		25	0	1	20.87	20.60	20.35
	16QAM	1	0	1	20.38	20.94	20.55
			13	1	20.34	20.90	20.60
			24	1	20.14	20.92	20.58
		12	0	2	20.08	19.72	19.48
			6	2	20.07	19.73	19.52
			13	2	19.98	19.71	19.53
		25	0	2	20.54	20.40	20.27
Bandwidth	Modulation	RB size	RB offset	Target MPR	Channel 20000	Channel 20175	Channel 20350
10MHz	QPSK	1	0	0	21.74	21.89	21.78
			25	0	21.76	21.86	21.71
			49	0	21.69	21.84	21.67
		25	0	1	20.79	20.64	20.48
			13	1	20.80	20.65	20.56
			25	1	20.70	20.73	20.31
		50	0	1	20.88	20.60	20.41
	16QAM	1	0	1	21.26	20.94	20.31
			25	1	21.22	20.89	20.34
			49	1	21.02	20.88	20.28
		25	0	2	19.81	19.89	19.71
			13	2	19.89	19.80	19.73
			25	2	19.87	19.84	19.68
		50	0	2	21.16	20.31	20.26

Conducted Power of LTE Band 4(dBm)							
Bandwidth	Modulation	RB size	RB offset	Target MPR	Channel 20025	Channel 20175	Channel 20325
15MHz	QPSK	1	0	0	22.37	22.42	**22.57**
			38	0	22.35	22.50	22.33
			74	0	22.22	22.36	22.22
		36	0	1	21.28	21.23	21.16
			18	1	21.28	21.23	21.17
			39	1	21.27	21.22	21.17
		75	0	1	21.27	21.18	21.09
	16QAM	1	0	1	22.09	21.50	21.76
			38	1	22.09	21.44	21.67
			74	1	21.90	21.44	21.65
		36	0	2	20.43	20.36	20.32
			18	2	20.44	20.37	20.30
			39	2	20.44	20.38	20.18
		75	0	2	20.35	20.34	20.28
Bandwidth	Modulation	RB size	RB offset	Target MPR	Channel 20050	Channel 20175	Channel 20300
20MHz	QPSK	1	0	0	22.53	22.42	22.27
			50	0	22.48	22.32	22.19
			99	0	22.32	22.36	22.17
		50	0	1	21.26	21.25	21.09
			25	1	21.27	21.24	21.09
			50	1	21.22	21.39	21.09
		100	0	1	21.34	21.15	21.02
	16QAM	1	0	1	21.74	21.83	21.85
			50	1	21.68	21.81	21.78
			99	1	21.52	21.62	21.75
		50	0	2	20.64	20.41	20.17
			25	2	20.53	20.40	20.19
			50	2	20.40	20.38	20.20
		100	0	2	20.41	20.34	20.42

Conducted Power of LTE Band 7 (dBm)							
Bandwidth	Modulation	RB size	RB offset	Target MPR	Channel	Channel	Channel
					20775	21100	21425
5MHz	QPSK	1	0	0	20.56	20.56	20.72
			12	0	20.50	20.44	20.81
			24	0	20.46	20.38	20.88
		12	0	1	19.78	19.43	19.77
			6	1	19.72	19.43	19.76
			13	1	19.65	19.46	19.76
		25	0	1	19.53	19.49	19.57
	16QAM	1	0	1	19.23	19.02	19.70
			12	1	19.29	18.97	19.85
			24	1	19.20	19.06	19.79
		12	0	2	18.65	18.70	18.78
			6	2	18.66	18.71	18.78
			13	2	18.77	18.94	18.90
		25	0	2	20.09	19.76	19.96
Bandwidth	Modulation	RB size	RB offset	Target MPR	Channel	Channel	Channel
					20800	21100	21400
10MHz	QPSK	1	0	0	20.78	20.49	20.92
			24	0	20.82	20.71	20.89
			49	0	20.56	20.54	21.01
		25	0	1	19.72	19.38	19.63
			12	1	19.73	19.37	19.72
			25	1	19.77	19.37	19.72
		50	0	1	19.56	19.51	19.58
	16QAM	1	0	1	19.87	19.98	19.4
			24	1	19.87	19.82	19.56
			49	1	19.92	19.85	19.47
		25	0	2	18.70	18.84	18.86
			12	2	18.71	18.90	18.82
			25	2	18.74	19.14	18.94
		50	0	2	20.02	19.7	19.87

Conducted Power of LTE Band 7 (dBm)							
Bandwidth	**Modulation**	**RB size**	**RB offset**	**Target MPR**	**Channel**	**Channel**	**Channel**
					20825	**21100**	**21375**
15MHz	QPSK	1	0	0	21.64	21.88	21.85
			37	0	21.59	21.68	21.88
			74	0	21.75	21.96	21.94
		37	0	1	19.98	20.61	20.76
			16	1	19.99	20.6	20.76
			35	1	19.95	20.6	20.76
		75	0	1	20.75	20.76	20.59
	16QAM	1	0	1	20.98	21.29	21.46
			37	1	21.06	21.24	21.47
			74	1	21.16	21.25	21.47
		37	0	2	19.87	19.93	19.89
			16	2	19.88	19.95	19.90
			35	2	19.88	19.81	19.91
		75	0	2	19.94	19.64	20.01
Bandwidth	**Modulation**	**RB size**	**RB offset**	**Target MPR**	**Channel**	**Channel**	**Channel**
					20850	**21100**	**21350**
20MHz	QPSK	1	0	0	21.88	**22.10**	21.79
			49	0	21.82	21.95	21.90
			99	0	21.81	22.05	22.10
		50	0	1	20.77	20.55	20.88
			25	1	20.79	20.55	20.87
			49	1	20.89	20.64	20.83
		100	0	1	20.64	20.70	20.74
	16QAM	1	0	1	20.98	21.24	21.57
			49	1	20.93	21.10	21.67
			99	1	20.73	21.14	21.64
		50	0	2	19.9	19.94	19.88
			25	2	19.92	19.95	19.88
			49	2	20.33	19.93	19.80
		100	0	2	19.91	19.65	20.12

The following tests were conducted according to the test requirements outlined in section 6.2 of the 3GPP TS36.101 specification.
UE Power Class: 3 (23 +/- 2dBm). The allowed Maximum Power Reduction (MPR) for the maximum output power due to higher order modulation and transmit bandwidth configuration (resource blocks) is specified in Table 6.2.3.3-1 of the 3GPP TS36.101.

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

Modulation	Maximum Power Reduction (MPR) for Power[RB]						MPR(dB)
	1.4MHz	3MHz	5MHz	10MHz	15MHz	20MHz	
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

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

Network Signaling value	Requirements (sub-clause)	E-UTRA Band	Channel bandwidth (MHz)	Resources Blocks (N_{RB})	A-MPR (dB)
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
NS_03	6.6.2.2.3.1	2,4,10, 23, 25,35,36	3	>5	≤ 1
			5	>6	≤ 1
			10	>6	≤ 1
			15	>8	≤ 1
			20	>10	≤ 1
NS_04	6.6.2.2.3.2	41	5	>6	≤1
			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
NS_07	6.6.2.2.3.3 6.6.3.3.3.2	13	10	Table 6.2.4.3-2	Table 6.2.4.3-2
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
				> 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 6.6.3.3.13	231	1.4, 3, 5, 10,15,20	Table 6.2.4.3-5	Table 6.2.4.3-5
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 6.2.4.3-10	Table 6.2.4.3-9, Table 6.2.4.3-10
NS_16	6.6.3.3.9	27	3, 5, 10	Table 6.2.4.3-11, Table 6.2.4.3-12, Table 6.2.4.3-13	
NS_17	6.6.3.3.10 6.6.3.3.11	28 28	5, 10	Table 5.4.2-1	N/A
			5	≥ 2	≤ 1
NS_18			10, 15, 20	≥ 1	≤ 4
NS_19			10, 15, 20	Table 6.2.4.3-15	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	-	-	-	-	-

WIFI

Mode	Data Rate (Mbps)	Channel	Frequency(MHz)	Avg. Burst Power(dBm)
802.11b	1	01	2412	16.63
		06	2437	14.80
		11	2462	**17.09**
802.11g	6	01	2412	10.94
		06	2437	11.64
		11	2462	13.23
802.11n(20)	6.5	01	2412	12.40
		06	2437	11.22
		11	2462	12.87

Bluetooth_V4.2(BR/EDR)

Modulation	Channel	Frequency(MHz)	Peak Power (dBm)
GFSK	0	2402	4.96
	39	2441	5.92
	78	2480	4.96
π /4-DQPSK	0	2402	7.01
	39	2441	7.60
	78	2480	6.48
8-DPSK	0	2402	7.26
	39	2441	**7.84**
	78	2480	6.78

Bluetooth_V4.2(BLE)

Modulation	Channel	Frequency(MHz)	Peak Power (dBm)
GFSK	0	2402	-0.35
	19	2440	**-0.17**
	39	2480	-1.21

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 D04 v01 ,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 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.
7. 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)]
8. Proximity sensor, just for avoiding the wrong operation in the phone screen when call, and has no influence on output power or SAR result
9. 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.
10. Per KDB 941125 D05v02r05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
11. 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.

12. 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.
13. 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 D05v02r03, smaller bandwidth SAR testing is not required.

13.1.3. Test Result

SAR MEASUREMENT									
Depth of Liquid (cm):>15				Relative Humidity (%): 56.7					
Product: Smart phone									
Test Mode: GSM850 with GMSK modulation									
Position	**Mode**	**Ch.**	**Fr. (MHz)**	**Power Drift (<±0.2 dB)**	**SAR (1g) (W/kg)**	**Max. Tune-up Power (dBm)**	**Meas. output Power (dBm)**	**Scaled SAR (W/kg)**	**Limit (W/kg)**
SIM 1 Card									
Left Cheek	voice	190	836.6	-0.16	0.316	32.00	31.84	0.328	1.6
Left Tilt	voice	190	836.6	0.06	0.151	32.00	31.84	0.157	1.6
Right Cheek	voice	190	836.6	-0.03	**0.317**	32.00	31.84	**0.329**	1.6
Right Tilt	voice	190	836.6	0.08	0.151	32.00	31.84	0.157	1.6
Body back	voice	190	836.6	-0.04	0.359	32.00	31.84	0.372	1.6
Body front	voice	190	836.6	-0.04	0.277	32.00	31.84	0.287	1.6
Body back	GPRS-2 slot	190	836.6	-0.11	**0.359**	30.18	29.84	**0.388**	1.6
Body front	GPRS-2 slot	190	836.6	-0.05	0.287	30.18	29.84	0.310	1.6
Edge 2(Right)	GPRS-2 slot	190	836.6	0.12	0.230	30.18	29.84	0.249	1.6
Edge 3(Bottom)	GPRS-2 slot	190	836.6	0.01	0.075	30.18	29.84	0.081	1.6
Edge 4(Left)	GPRS-2 slot	190	836.6	0.19	0.157	30.18	29.84	0.170	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.

SAR MEASUREMENT									
Depth of Liquid (cm):>15				Relative Humidity (%): 56.8					
Product: Smart phone									
Test Mode: PCS1900 with GMSK modulation									
Position	**Mode**	**Ch.**	**Fr. (MHz)**	**Power Drift (<±0.2 dB)**	**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	0.16	0.241	28.20	28.04	0.250	1.6
Left Tilt	voice	661	1880.0	0.03	0.110	28.20	28.04	0.114	1.6
Right Cheek	voice	661	1880.0	0.15	**0.243**	28.20	28.04	**0.252**	1.6
Right Tilt	voice	661	1880.0	-0.06	0.074	28.20	28.04	0.077	1.6
Body back	voice	661	1880.0	0.09	0.394	28.20	28.04	0.409	1.6
Body front	voice	661	1880.0	-0.04	**0.419**	28.20	28.04	**0.435**	1.6
Body back	GPRS-3slot	661	1880.0	-0.01	0.376	24.26	24.21	0.380	1.6
Body front	GPRS-3 slot	661	1880.0	-0.07	0.407	24.26	24.21	0.412	1.6
Edge 2(Right)	GPRS-3 slot	661	1880.0	0.09	0.111	24.26	24.21	0.112	1.6
Edge 3(Bottom)	GPRS-3 slot	661	1880.0	0.14	0.371	24.26	24.21	0.375	1.6
Edge 4(Left)	GPRS-3 slot	661	1880.0	0.17	0.248	24.26	24.21	0.251	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.

SAR MEASUREMENT									
Depth of Liquid (cm):>15				Relative Humidity (%): 56.8					
Product: Smart phone									
Test Mode: WCDMA Band II with QPSK modulation									
Position	**Mode**	**Ch.**	**Fr. (MHz)**	**Power Drift (<±0.2 dB)**	**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	0.14	**0.475**	22.40	22.12	**0.507**	1.6
Left Tilt	RMC 12.2kbps	9400	1880	-0.07	0.198	22.40	22.12	0.211	1.6
Right Cheek	RMC 12.2kbps	9400	1880	0.13	0.303	22.40	22.12	0.323	1.6
Right Tilt	RMC 12.2kbps	9400	1880	0.14	0.120	22.40	22.12	0.128	1.6
Body back	RMC 12.2kbps	9400	1880	0.02	**0.697**	22.40	22.12	**0.743**	1.6
Body front	RMC 12.2kbps	9400	1880	0.08	0.665	22.40	22.12	0.709	1.6
Edge 2(Right)	RMC 12.2kbps	9400	1880	0.12	0.179	22.40	22.12	0.191	1.6
Edge 3(Bottom)	RMC 12.2kbps	9400	1880	0.17	0.639	22.40	22.12	0.682	1.6
Edge 4(Left)	RMC 12.2kbps	9400	1880	0.10	0.431	22.40	22.12	0.460	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.

SAR MEASUREMENT									
Depth of Liquid (cm):>15				Relative Humidity (%): 56.7					
Product: Smart phone									
Test Mode: WCDMA Band V with QPSK modulation									
Position	**Mode**	**Ch.**	**Fr. (MHz)**	**Power Drift (<±0.2 dB)**	**SAR (1g) (W/kg)**	**Max. Tune-up Power (dBm)**	**Meas. output Power (dBm)**	**Scaled SAR (W/kg)**	**Limit (W/kg)**
Left Cheek	RMC 12.2kbps	4183	836.6	0.15	**0.231**	22.40	22.04	**0.251**	1.6
Left Tilt	RMC 12.2kbps	4183	836.6	0.00	0.124	22.40	22.04	0.135	1.6
Right Cheek	RMC 12.2kbps	4183	836.6	0.11	0.223	22.40	22.04	0.242	1.6
Right Tilt	RMC 12.2kbps	4183	836.6	0.11	0.102	22.40	22.04	0.111	1.6
Body back	RMC 12.2kbps	4183	836.6	0.19	0.230	22.40	22.04	0.250	1.6
Body front	RMC 12.2kbps	4183	836.6	0.13	0.196	22.40	22.04	0.213	1.6
Edge 2(Right)	RMC 12.2kbps	4183	836.6	-0.01	0.201	22.40	22.04	0.218	1.6
Edge 3(Bottom)	RMC 12.2kbps	4183	836.6	0.17	**0.302**	22.40	22.04	**0.328**	1.6
Edge 4(Left)	RMC 12.2kbps	4183	836.6	0.16	0.090	22.40	22.04	0.098	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.

SAR MEASUREMENT												
Depth of Liquid (cm):>15					Relative Humidity (%): 53.9							
Product: Smart phone												
Test Mode: LTE Band 2												
BM MHz	MOD	Position	Test Mode		Ch.	Freq. (MHz)	Power Drift (<±0.2 dB)	SAR (1g) (W/kg)	Max. Tune up Power (dBm)	Meas. output Power (dBm)	Scaled SAR (W/kg)	Limit (W/kg)
			UL RB Allocation	UL RB Allocation								
20	QPSK	Left Cheek	1	0	18900	1880	0.12	**0.478**	22.50	22.34	**0.496**	1.6
		Left Tilt	1	0	18900	1880	-0.01	0.208	22.50	22.34	0.216	1.6
		Right Cheek	1	0	18900	1880	0.11	0.445	22.50	22.34	0.462	1.6
		Right Tilt	1	0	18900	1880	0.05	0.162	22.50	22.34	0.168	1.6
		Body back	1	0	18700	1860	0.02	0.966	22.50	22.20	1.035	1.6
		Body back	1	0	18900	1880	0.06	0.773	22.50	22.34	0.802	1.6
		Body back	1	0	19100	1900	0.13	0.967	22.50	22.31	1.010	1.6
		Body front	1	0	18700	1860	-0.06	**0.983**	22.50	22.20	**1.053**	1.6
		Body front	1	0	18900	1880	-0.05	0.882	22.50	22.34	0.915	1.6
		Body front	1	0	19100	1900	-0.06	0.865	22.50	22.31	0.904	1.6
		Edge 2(Right)	1	0	18900	1880	-0.04	0.188	22.50	22.34	0.195	1.6
		Edge 3(Bottom)	1	0	18900	1880	0.13	0.751	22.50	22.34	0.779	1.6
		Edge 4(Left)	1	0	18900	1880	0.13	0.487	22.50	22.34	0.505	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.

SAR MEASUREMENT												
Depth of Liquid (cm):>15					Relative Humidity (%): 56.8							
Product: Smart phone												
Test Mode: LTE Band 4												
BM MHz	**MOD**	**Position**	**Test Mode**		**Ch.**	**Freq. (MHz)**	**Power Drift (<±0.2 dB)**	**SAR (1g) (W/kg)**	**Max. Tuneup Power (dBm)**	**Meas. output Power (dBm)**	**Scaled SAR (W/kg)**	**Limit (W/kg)**
			UL RB Allocation	**UL RB START**								
20	**QPSK**	Left Cheek	1	0	20175	1732.5	0.13	**0.561**	22.42	22.42	**0.561**	1.6
		Left Tilt	1	0	20175	1732.5	0.07	0.211	22.42	22.42	0.211	1.6
		Right Cheek	1	0	20175	1732.5	0.09	0.462	22.42	22.42	0.462	1.6
		Right Tilt	1	0	20175	1732.5	-0.10	0.285	22.42	22.42	0.285	1.6
		Body back	1	0	20050	1720	0.14	1.080	22.53	22.53	1.080	1.6
		Body back	1	0	20175	1732.5	0.12	1.100	22.42	22.42	1.100	1.6
		Body back	1	0	20300	1745	0.01	0.978	22.27	22.27	0.978	1.6
		Body front	1	0	20050	1720	-0.09	1.190	22.53	22.53	1.190	1.6
		Body front	1	0	20175	1732.5	-0.00	**1.230**	22.42	22.42	**1.230**	1.6
		Body front	1	0	20300	1745	-0.07	1.180	22.27	22.27	1.180	1.6
		Body front + Ear.	1	0	20050	1720	-0.08	1.230	22.53	22.53	1.230	1.6
		Body front + Ear.	1	0	20175	1732.5	-0.04	1.230	22.42	22.42	1.230	1.6
		Body front + Ear.	1	0	20300	1745	-0.06	1.180	22.27	22.27	1.180	1.6
		Edge 2(Right)	1	0	20175	1732.5	0.19	0.205	22.42	22.42	0.205	1.6
		Edge 3(Bottom)	1	0	20175	1732.5	0.15	0.673	22.42	22.42	0.673	1.6
		Edge 4(Left)	1	0	20175	1732.5	0.10	0.538	22.42	22.42	0.538	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.

SAR MEASUREMENT												
Depth of Liquid (cm):>15					Relative Humidity (%): 52.1							
Product: Smart phone												
Test Mode: LTE Band 7												
BM MHz	**MOD**	**Position**	**Test Mode**		**Ch.**	**Freq. (MHz)**	**Power Drift (<±0.2 dB)**	**SAR (1g) (W/kg)**	**Max. Tuneup Power (dBm)**	**Meas. output Power (dBm)**	**Scaled SAR (W/kg)**	**Limit (W/kg)**
			UL RB Allocation	**UL RB START**								
20	**QPSK**	Left Cheek	1	0	21100	2535	0.12	**0.110**	22.20	22.10	**0.113**	1.6
		Left Tilt	1	0	21100	2535	0.06	0.021	22.20	22.10	0.021	1.6
		Right Cheek	1	0	21100	2535	-0.17	0.057	22.20	22.10	0.058	1.6
		Right Tilt	1	0	21100	2535	0.10	0.041	22.20	22.10	0.042	1.6
		Body back	1	0	21100	2535	0.04	0.600	22.20	22.10	0.614	1.6
		Body front	1	0	21100	2535	-0.01	0.290	22.20	22.10	0.297	1.6
		Edge 2(Right)	1	0	21100	2535	0.16	0.012	22.20	22.10	0.012	1.6
		Edge 3(Bottom)	1	0	21100	2535	-0.03	**0.659**	22.20	22.10	**0.674**	1.6
		Edge 4(Left)	1	0	21100	2535	0.09	0.071	22.20	22.10	0.073	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.

SAR Test Exclusion Consideration

According to KDB 447498 D04 Appendix B, Standalone SAR test exclusion is as follow:
This method shall only be used at separation distances from 0.5 cm to 40 cm and at frequencies from 0.3 GHz to 6 GHz (inclusive). P_{th} is given by Formula

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

Where

$$x = -\log_{10}\left(\frac{60}{ERP_{20\ cm}\sqrt{f}}\right)$$ and f is in GHz;

and

$$ERP_{20\ cm}\ (\text{mW}) = \begin{cases} 2040f & 0.3\ \text{GHz} \le f < 1.5\ \text{GHz} \\ 3060 & 1.5\ \text{GHz} \le f \le 6\ \text{GHz} \end{cases}$$

d = the separation distance (cm);

Technology	f(GHz)	d(cm)	ERP_{20CM} (mW)	√f(GHz)	x	P_{th}(mW)	Max Power including Tune-up Tolerance		SAR required
							dBm	mW	
WIFI	2.462	0.5	3060	1.569	1.903	2.733	17.09	51.168	Yes
BT(BR&EDR)	2.441	0.5	3060	1.562	1.901	2.752	7.84	6.081	Yes
BT(BLE)	2.44	0.5	3060	1.562	1.901	2.753	-0.17	0.962	No

Conclusion

There is need to test standalone WIFI SAR, BT(BR&EDR) SAR and need to evaluate simultaneous transmission

SAR MEASUREMENT									
Depth of Liquid (cm):>15				Relative Humidity (%): 56.4					
Product: Smart phone									
Test Mode:802.11b									
Position	**Mode**	**Ch.**	**Fr. (MHz)**	**Power Drift (<±0.2 dB)**	**SAR (1g) (W/kg)**	**Max. Tune-up Power (dBm)**	**Meas. output Power (dBm)**	**Scaled SAR (W/kg)**	**Limit (W/kg)**
Left Cheek	DTS	11	2462	-0.02	**0.637**	17.09	17.09	**0.637**	1.6
Left Tilt	DTS	11	2462	-0.01	0.418	17.09	17.09	0.418	1.6
Right Cheek	DTS	11	2462	-0.03	0.505	17.09	17.09	0.505	1.6
Right Tilt	DTS	11	2462	0.04	0.359	17.09	17.09	0.359	1.6
Body back	DTS	11	2462	-0.10	**0.338**	17.09	17.09	**0.338**	1.6
Body front	DTS	11	2462	0.16	0.306	17.09	17.09	0.306	1.6
Edge 1 (Top)	DTS	11	2462	0.19	0.106	17.09	17.09	0.106	1.6
Edge 2(Right)	DTS	11	2462	0.11	0.192	17.09	17.09	0.192	1.6

Note:
- According to KDB248227, SAR is not required for 802.11n HT20/HT40 channels when the maximum average output power is less than 1/4 dB higher than that measured on the corresponding 802.11a/b channels.
- All of above “DTS” means data transmitters.
- The test separation for body back, body front and 4 Edges is 10mm of all above table.

SAR MEASUREMENT									
Depth of Liquid (cm):>15				Relative Humidity (%): 56.4					
Product: Smart phone									
Test Mode: Bluetooth(BR&EDR)									
Position	**Mode**	**Ch.**	**Fr. (MHz)**	**Power Drift (<±0.2dB)**	**SAR (1g) (W/kg)**	**Max. Tune-up Power (dBm)**	**Meas. output Power (dBm)**	**Scaled SAR (W/kg)**	**Limit W/kg**
Left Cheek	8-DPSK	39	2441	0.16	**0.089**	7.94	7.84	**0.091**	1.6
Left Tilt	8-DPSK	39	2441	0.12	0.059	7.94	7.84	0.060	1.6
Right Cheek	8-DPSK	39	2441	-0.04	0.042	7.94	7.84	0.043	1.6
Right Tilt	8-DPSK	39	2441	0.14	0.030	7.94	7.84	0.031	1.6
Body back	8-DPSK	39	2441	-0.07	**0.142**	7.94	7.84	**0.145**	1.6
Body front	8-DPSK	39	2441	0.15	0.127	7.94	7.84	0.130	1.6
Edge 1 (Top)	8-DPSK	39	2441	-0.02	0.113	7.94	7.84	0.116	1.6
Edge 2(Right)	8-DPSK	39	2441	-0.11	0.075	7.94	7.84	0.077	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.

Repeated SAR											
Product: Smart phone											
Test Mode: LTE Band 2& LTE Band 4											
Position	Mode		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
	UL RB Allocation	UL RB START									
Body front	1	0	18700	1860	-0.04	**0.990**	--	--	--	--	1.6
Body front	1	0	20175	1732.5	-0.06	**1.160**	--	--	--	--	1.6

The second repeated SAR judge reference									
Product: Smart phone									
Band	Position	Mode		Ch.	Fr. (MHz)	Orignal SAR (1g) (W/kg)	First SAR (1g) (W/kg)	Ratio	Limit
		UL RB Allocation	UL RB START						
LTE Band 2	Body front	1	0	18700	1860	0.983	0.990	0.993	＜1.2
LTE Band 4	Body front	1	0	20175	1732.5	1.240	1.160	1.069	＜1.2

Simultaneous Multi-band Transmission Evaluation:

Application Simultaneous Transmission information:

NO	Simultaneous state	Portable Handset		
		Head	Body-worn	Hotspot
1	GSM(voice)+ WLAN 2.4GHz (data)	Yes	Yes	-
2	GSM(voice)+ Bluetooth(data)	Yes	Yes	-
3	GSM (Data) + WLAN 2.4GHz (data)	-	Yes	Yes
4	GSM (Data) + Bluetooth(data)	-	Yes	Yes
5	WCDMA+ WLAN 2.4GHz (data)	Yes	Yes	Yes
6	WCDMA+ Bluetooth(data)	Yes	Yes	Yes
7	LTE + WLAN 2.4GHz (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 D04, 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.
4. 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.

5. According to KDB 447498 D04 Appendix E, When the standalone 1g SAR test exclusion is applied, the standalone 1g SAR must be estimated according to the following equation, with Pant < Pth, where Pant is maximum time-averaged power or effective radiated power (ERP), whichever is greater, and Pth is defined in Formula (B.2).
   $SAR_{est} = 1.6 \cdot P_{ant} / P_{th}$ [W/kg]

   For BT(BLE)head :Estimated 1g SAR = SAR_{lim} ×[(P_{ant} (mW) / P_{th}(mW)]= 1.6*(0.962/2.753) = 0.559 W/kg
   For BT(BLE) body:Estimated 1g SAR = SAR_{lim} ×[(P_{ant} (mW) / P_{th}(mW)]= 1.6*(0.962/10.283) = 0.150 W/kg

	WWAN （GSM&WCDMA&LTE） SAR (W/kg)	BT(BLE) Estimated 1g SAR (W/kg)	Simultaneous SAR BT(BLE)+WWAN
Head	0.561	0.559	1.120
Body	1.230	0.150	1.380

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

RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		GSM 850	WI-Fi DTS Band	Bluetooth (BR&EDR)		
Head (voice)	Left Touch	0.328	0.637		0.965	No
	Left Tilt	0.157	0.418		0.575	No
	Right Touch	0.329	0.505		0.834	No
	Right Tilt	0.157	0.359		0.516	No
Head (voice)	Left Touch	0.328		0.091	0.419	No
	Left Tilt	0.157		0.060	0.217	No
	Right Touch	0.329		0.043	0.372	No
	Right Tilt	0.157		0.031	0.188	No
Body-worn (voice)	Rear	0.372	0.338		0.710	No
		0.372		0.145	0.517	No
	Front	0.287	0.306		0.593	No
		0.287		0.129	0.416	No
Body-worn (Data)	Rear	0.388		0.145	0.533	No
		0.388	0.338		0.726	No
	Front	0.310		0.130	0.440	No
		0.310	0.306		0.616	No
Body-worn (Hotspot)	Edge 2	0.249	0.192		0.441	No
	Edge 2	0.249		0.077	0.326	No

Note:

·According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than1.6 W/kg, SPLSR assessment is not required.

·SPLSR mean is “The SAR to Peak Location Separation Ratio “

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

RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		PCS 1900	WI-Fi DTS Band	Bluetooth (BR&EDR)		
Head (voice)	Left Touch	0.250	0.637		0.887	No
	Left Tilt	0.114	0.418		0.532	No
	Right Touch	0.252	0.505		0.757	No
	Right Tilt	0.077	0.359		0.436	No
Head (voice)	Left Touch	0.250		0.091	0.341	No
	Left Tilt	0.114		0.060	0.174	No
	Right Touch	0.252		0.043	0.295	No
	Right Tilt	0.077		0.031	0.108	No
Body-worn (voice)	Rear	0.409	0.338		0.747	No
		0.409		0.145	0.554	No
	Front	0.435	0.306		0.741	No
		0.435		0.129	0.564	No
Body-worn (Data)	Rear	0.380		0.145	0.525	No
		0.380	0.338		0.718	No
	Front	0.412		0.130	0.542	No
		0.412	0.306		0.718	No
Body-worn (Hotspot)	Edge 2	0.112	0.192		0.304	No
	Edge 2	0.112		0.077	0.189	No

Note:

·According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than1.6 W/kg, SPLSR assessment is not required.
·SPLSR mean is “The SAR to Peak Location Separation Ratio “

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

RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		WCDMA Band II	Wi-Fi DTS Band	Bluetooth (BR&EDR)		
Head	Left Touch	0.507	0.637		1.144	No
	Left Tilt	0.211	0.418		0.629	No
	Right Touch	0.323	0.505		0.828	No
	Right Tilt	0.128	0.359		0.487	No
Head	Left Touch	0.507		0.091	0.598	No
	Left Tilt	0.211		0.060	0.271	No
	Right Touch	0.323		0.043	0.366	No
	Right Tilt	0.128		0.031	0.159	No
Body-worn	Rear	0.743	0.338		1.081	No
	Front	0.709	0.306		1.015	No
	Edge 2	0.191	0.192		0.383	No
	Rear	0.743		0.145	0.888	No
	Front	0.709		0.130	0.839	No
	Edge 2	0.191		0.077	0.268	No

Note:

·According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than1.6 W/kg, SPLSR assessment is not required.
·SPLSR mean is “The SAR to Peak Location Separation Ratio “

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

RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		WCDMA Band V	Wi-Fi DTS Band	Bluetooth (BR&EDR)		
Head	Left Touch	0.251	0.637		0.888	No
	Left Tilt	0.135	0.418		0.553	No
	Right Touch	0.242	0.505		0.747	No
	Right Tilt	0.111	0.359		0.470	No
Head	Left Touch	0.251		0.091	0.342	No
	Left Tilt	0.135		0.060	0.195	No
	Right Touch	0.242		0.043	0.285	No
	Right Tilt	0.111		0.031	0.142	No
Body-worn	Rear	0.250	0.338		0.588	No
	Front	0.213	0.306		0.519	No
	Edge 2	0.218	0.192		0.410	No
	Rear	0.250		0.145	0.395	No
	Front	0.213		0.130	0.343	No
	Edge 2	0.218		0.077	0.295	No

Note:

·According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than1.6 W/kg, SPLSR assessment is not required.
·SPLSR mean is “The SAR to Peak Location Separation Ratio “

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

RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		LTE Band 2	Wi-Fi DTS Band	Bluetooth (BR&EDR)		
Head	Left Touch	0.496	0.637		1.133	No
	Left Tilt	0.216	0.418		0.634	No
	Right Touch	0.462	0.505		0.967	No
	Right Tilt	0.168	0.359		0.527	No
Head	Left Touch	0.496		0.091	0.587	No
	Left Tilt	0.216		0.060	0.276	No
	Right Touch	0.462		0.043	0.505	No
	Right Tilt	0.168		0.031	0.199	No
Body-worn	Rear	1.035	0.338		1.373	No
	Front	1.053	0.306		1.359	No
	Edge 2	0.195	0.192		0.387	No
	Rear	1.035		0.145	1.180	No
	Front	1.053		0.130	1.183	No
	Edge 2	0.195		0.077	0.272	No

Note:

·According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than1.6 W/kg, SPLSR assessment is not required.
·SPLSR mean is “The SAR to Peak Location Separation Ratio “

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

RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		LTE Band 4	Wi-Fi DTS Band	Bluetooth (BR&EDR)		
Head	Left Touch	0.561	0.637		1.198	No
	Left Tilt	0.211	0.418		0.629	No
	Right Touch	0.462	0.505		0.967	No
	Right Tilt	0.285	0.359		0.644	No
Head	Left Touch	0.561		0.091	0.652	No
	Left Tilt	0.211		0.060	0.271	No
	Right Touch	0.462		0.043	0.505	No
	Right Tilt	0.285		0.031	0.316	No
Body-worn	Rear	1.100	0.338		1.438	No
	Front	1.230	0.306		**1.536**	No
	Edge 2	0.205	0.192		0.397	No
	Rear	1.100		0.145	1.245	No
	Front	1.230		0.130	1.360	No
	Edge 2	0.205		0.077	0.282	No

Note:

·According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than1.6 W/kg, SPLSR assessment is not required.
·SPLSR mean is “The SAR to Peak Location Separation Ratio “

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

RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		LTE Band 7	Wi-Fi DTS Band	Bluetooth (BR&EDR)		
Head	Left Touch	0.113	0.637		0.750	No
	Left Tilt	0.021	0.418		0.439	No
	Right Touch	0.058	0.505		0.563	No
	Right Tilt	0.042	0.359		0.401	No
Head	Left Touch	0.113		0.091	0.204	No
	Left Tilt	0.021		0.060	0.081	No
	Right Touch	0.058		0.043	0.101	No
	Right Tilt	0.042		0.031	0.073	No
Body-worn	Rear	0.614	0.338		0.952	No
	Front	0.297	0.306		0.603	No
	Edge 2	0.012	0.192		0.204	No
	Rear	0.614		0.145	0.759	No
	Front	0.297		0.130	0.427	No
	Edge 2	0.012		0.077	0.089	No

Note:

·According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than1.6 W/kg, SPLSR assessment is not required.
·SPLSR mean is “The SAR to Peak Location Separation Ratio “

APPENDIX A. SAR SYSTEM CHECK DATA

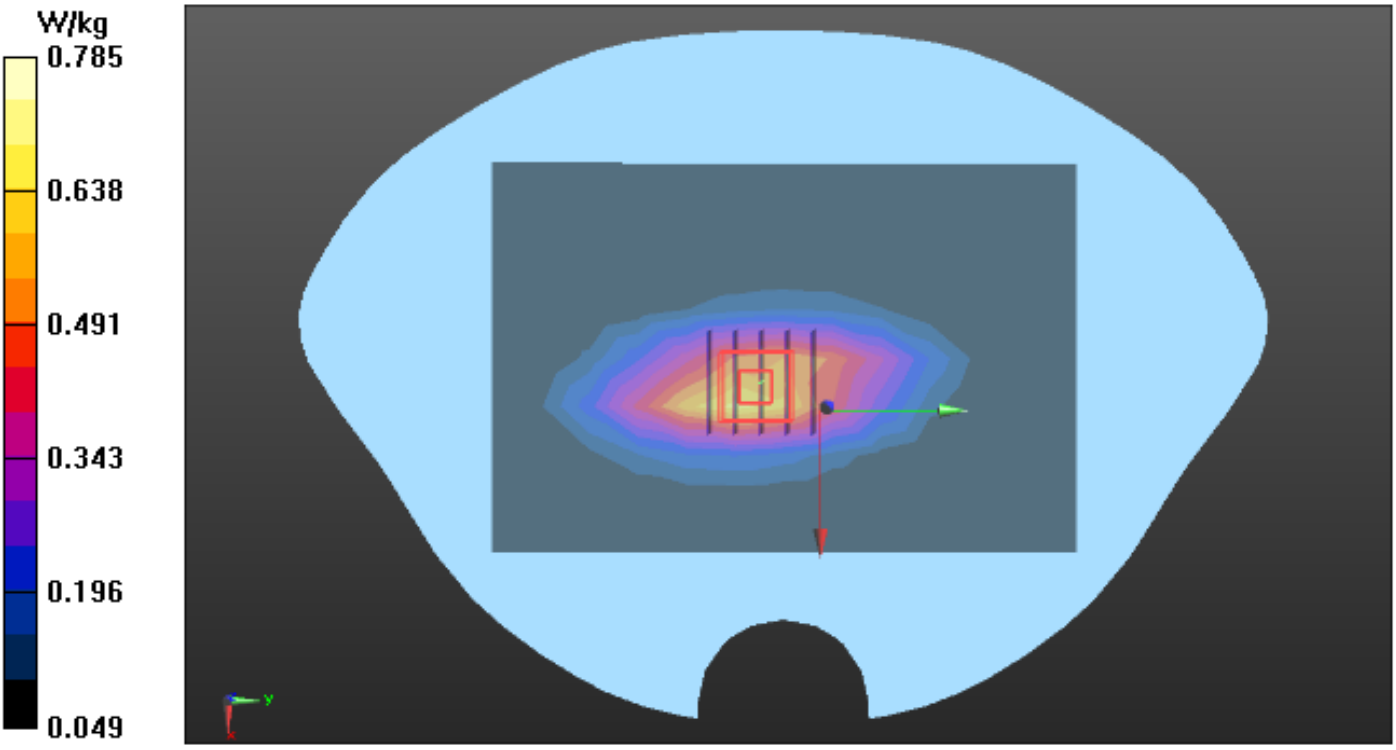
Test Laboratory: AGC Lab **Date: Jun. 23, 2022**
System Check Head 835 MHz
DUT: Dipole 835 MHz Type: SID 835

Communication System CW; Communication System Band: D835 (835.0 MHz); Duty Cycle: 1:1;
Frequency: 835 MHz; Medium parameters used: f = 835 MHz; σ=0.93 mho/m; εr =41.50; ρ= 1000 kg/m³ ;
Phantom section: Flat Section; Input Power=18dBm
Ambient temperature (℃):20.9, Liquid temperature (℃): 20.5

DASY Configuration:
• Probe: EX3DV4 – SN:3953; ConvF(10.01, 10.01, 10.01); Calibrated: Aug. 27,2021;
• Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = 1.0, 31.0
• Electronics: DAE4 SN1398; Calibrated: May 17, 2022
• Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD;
• DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Configuration/System Check Head 850 MHz/Area Scan (9x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.761 W/kg

Configuration/System Check Head 850 MHz/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 29.113 V/m; Power Drift = -0.13 dB
Peak SAR (extrapolated) = 1.07 W/kg
SAR(1 g) = 0.621 W/kg; SAR(10 g) = 0.384 W/kg
Maximum value of SAR (measured) = 0.785 W/kg



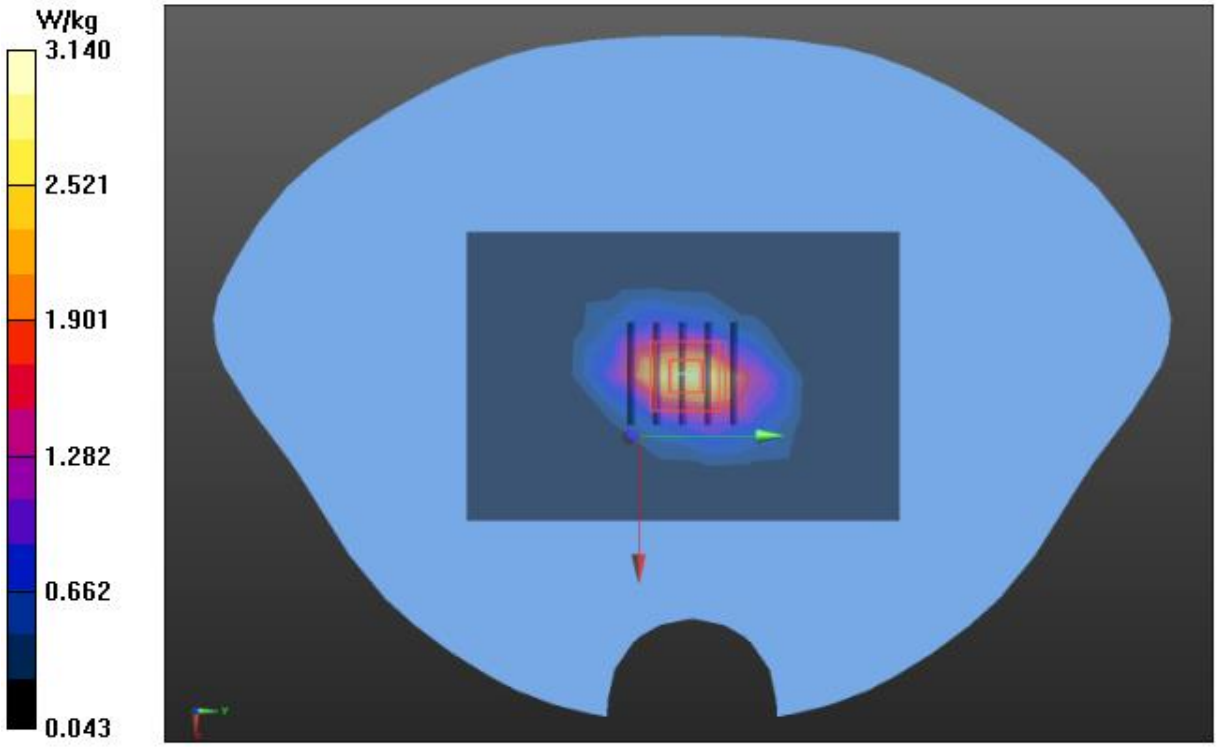
Test Laboratory: AGC Lab **Date: Jun. 24, 2022**
System Check Head 1750MHz
DUT: Dipole 1800 MHz; Type: SID 1800

Communication System: CW; Communication System Band: D1700 (1750.0 MHz); Duty Cycle: 1:1;
Frequency: 1750 MHz; Medium parameters used: f = 1750 MHz; σ=1.39 mho/m; ε_r =40.70; ρ= 1000 kg/m^3 ;
Phantom section: Flat Section; Input Power=18dBm
Ambient temperature (℃): 21.1, Liquid temperature (℃): 20.9

DASY Configuration:
• Probe: EX3DV4 – SN:3953; ConvF(8.55, 8.55, 8.55); Calibrated: Aug. 27,2021;
• Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = 1.0, 31.0
• Electronics: DAE4 SN1398; Calibrated: May 17, 2022
• Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD;
• DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Configuration/System Check Head 1750MHz/Area Scan (7x10x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.93 W/kg

Configuration/System Check Head 1750MHz/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 48.918 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 4.59 W/kg
SAR(1 g) = 2.42 W/kg; SAR(10 g) = 1.25 W/kg
Maximum value of SAR (measured) = 3.14 W/kg



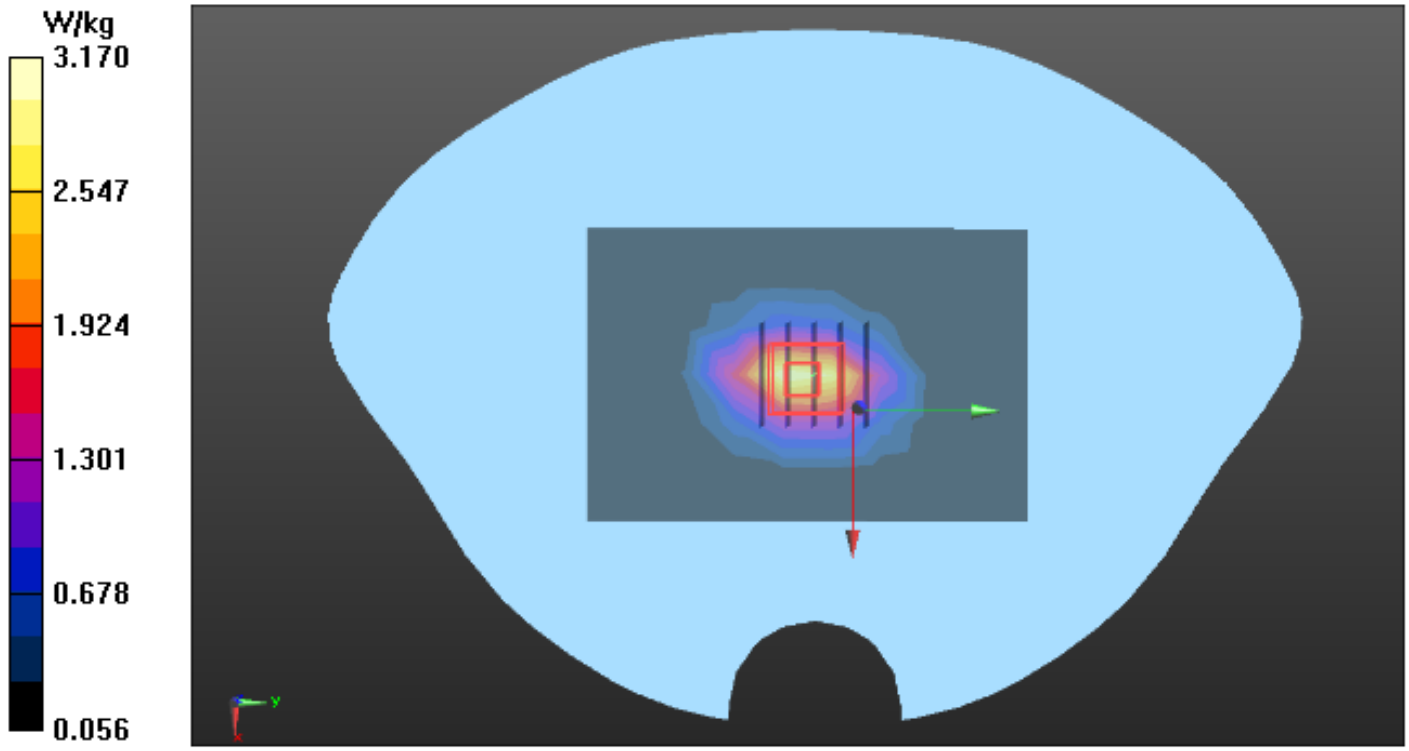
Test Laboratory: AGC Lab **Date: Jun. 17, 2022**
System Check Head 1900MHz
DUT: Dipole 1900 MHz; Type: SID 1900

Communication System: CW; Communication System Band: D1900 (1900.0 MHz); Duty Cycle:1:1;
Frequency: 1900 MHz; Medium parameters used: f = 1900 MHz; σ=1.41 mho/m; εr =39.15; ρ= 1000 kg/m³ ;
Phantom section: Flat Section; Input Power=18dBm
Ambient temperature (℃):20.8, Liquid temperature (℃): 20.3

DASY Configuration:
• Probe: EX3DV4 – SN:3953; ConvF(8.26, 8.26, 8.26); Calibrated: Aug. 27,2021;
• Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = 1.0, 31.0
• Electronics: DAE4 SN1398; Calibrated: May 17, 2022
• Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD;
• DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Configuration/System Check Head 1900MHz/Area Scan (7x10x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.99 W/kg

Configuration/System Check Head 1900MHz/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 48.273 V/m; Power Drift = -0.16 dB
Peak SAR (extrapolated) = 4.68 W/kg
SAR(1 g) = 2.52 W/kg; SAR(10 g) = 1.33 W/kg
Maximum value of SAR (measured) = 3.17 W/kg



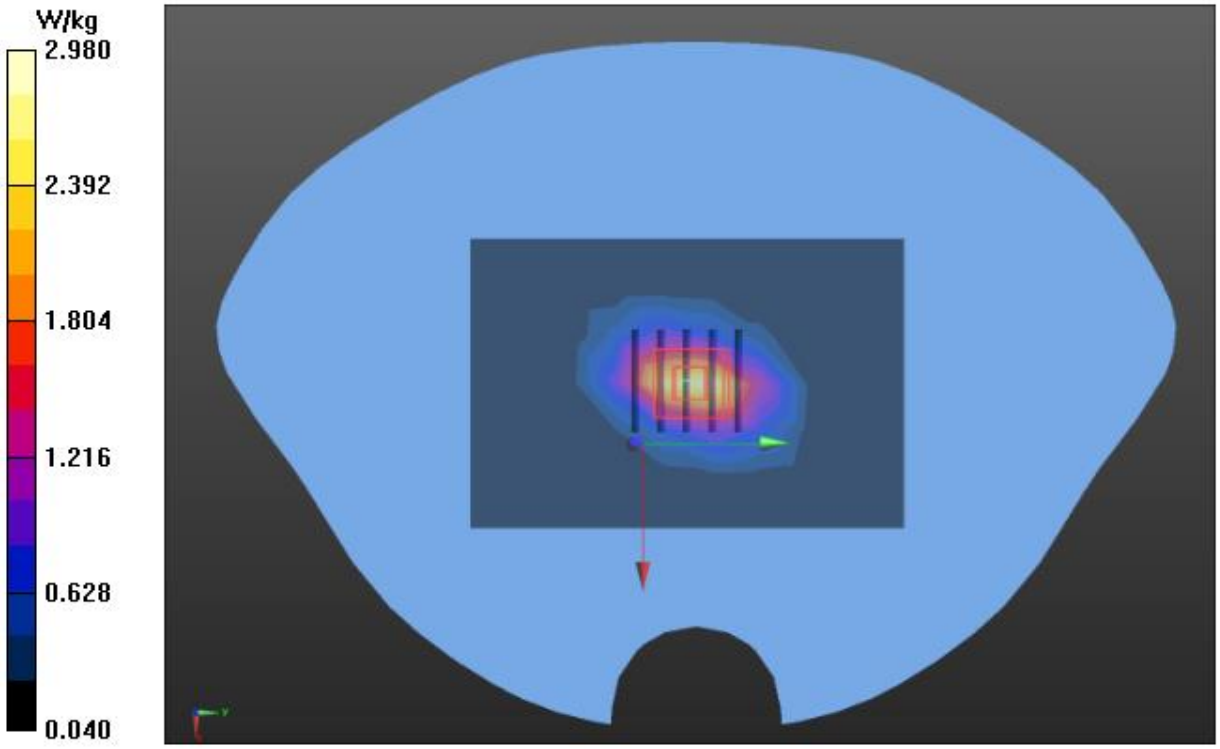
Test Laboratory: AGC Lab **Date: Jun. 20, 2022**
System Check Head 1900MHz
DUT: Dipole 1900 MHz; Type: SID 1900

Communication System: CW; Communication System Band: D1900 (1900.0 MHz); Duty Cycle:1:1;
Frequency: 1900 MHz; Medium parameters used: f = 1900 MHz; σ=1.44 mho/m; ε_r =39.58;; ρ= 1000 kg/m³ ;
Phantom section: Flat Section; Input Power=18dBm
Ambient temperature (℃): 21.7, Liquid temperature (℃): 21.2

DASY Configuration:
• Probe: EX3DV4 – SN:3953; ConvF(8.26, 8.26, 8.26); Calibrated: Aug. 27,2021;
• Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = 1.0, 31.0
• Electronics: DAE4 SN1398; Calibrated: May 17, 2022
• Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD;
• DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Configuration/System Check Head 1900MHz/Area Scan (7x10x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.79 W/kg

Configuration/System Check Head 1900MHz/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 47.257 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 4.25 W/kg
SAR(1 g) = 2.51 W/kg; SAR(10 g) = 1.29 W/kg
Maximum value of SAR (measured) = 2.98 W/kg



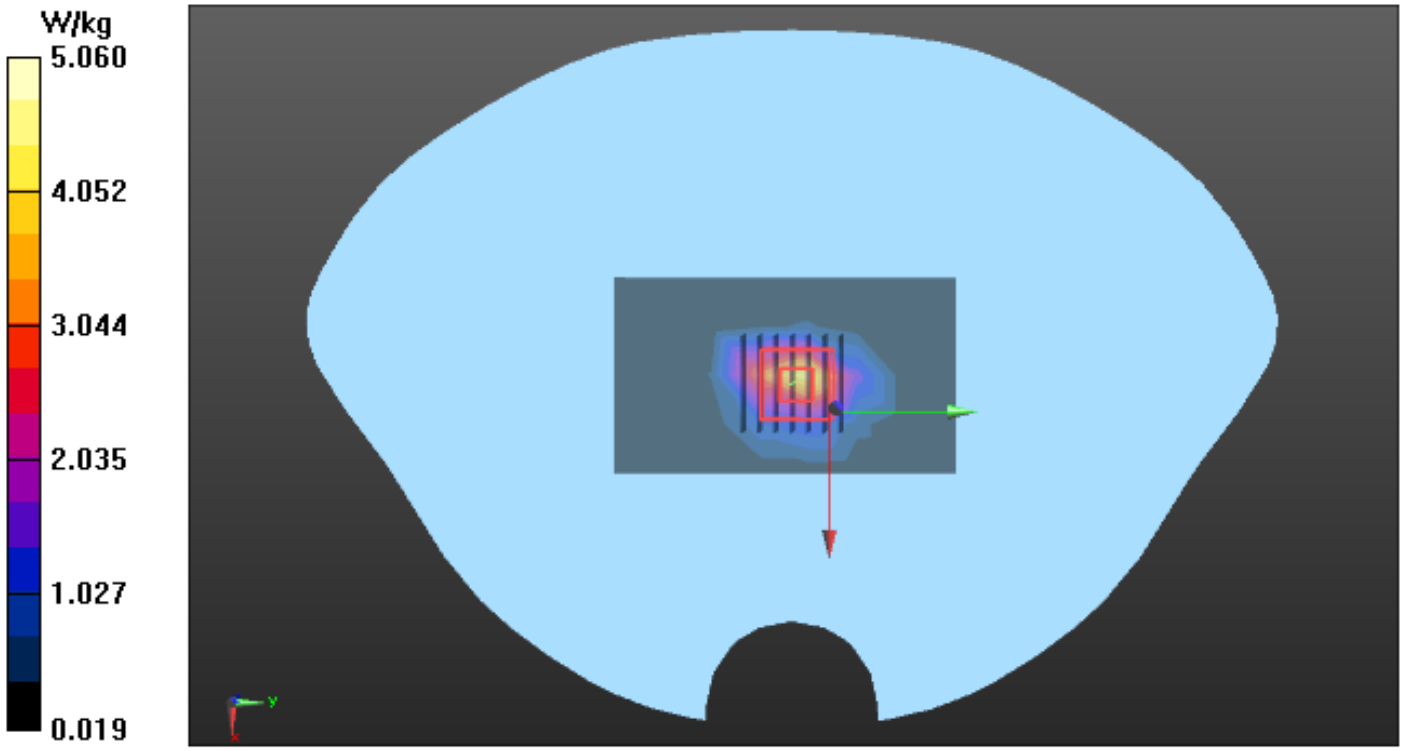
Test Laboratory: AGC Lab **Date: Jun. 15, 2022**
System Check Head 2450 MHz
DUT: Dipole 2450 MHz Type: SID 2450

Communication System CW; Communication System Band: D2450 (2450.0 MHz); Duty Cycle: 1:1;
Frequency: 2450 MHz; Medium parameters used: f = 2450 MHz; σ=1.78 mho/m; εr =38.96; ρ= 1000 kg/m³ ;
Phantom section: Flat Section; Input Power=18dBm
Ambient temperature (℃): 21.6, Liquid temperature (℃): 21.2

DASY Configuration:
• Probe: EX3DV4 – SN:3953; ConvF(7.60, 7.60, 7.60); Calibrated: Aug. 27,2021;
• Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = 1.0, 31.0
• Electronics: DAE4 SN1398; Calibrated: May 17, 2022
• Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD;
• DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Configuration/System Check Head 2450Hz/Area Scan (5x8x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 4.49 W/kg

Configuration/System Check Head 2450Hz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 51.190 V/m; Power Drift = -0.15 dB
Peak SAR (extrapolated) = 7.22 W/kg
SAR(1 g) = 3.32 W/kg; SAR(10 g) = 1.47 W/kg
Maximum value of SAR (measured) = 5.06 W/kg



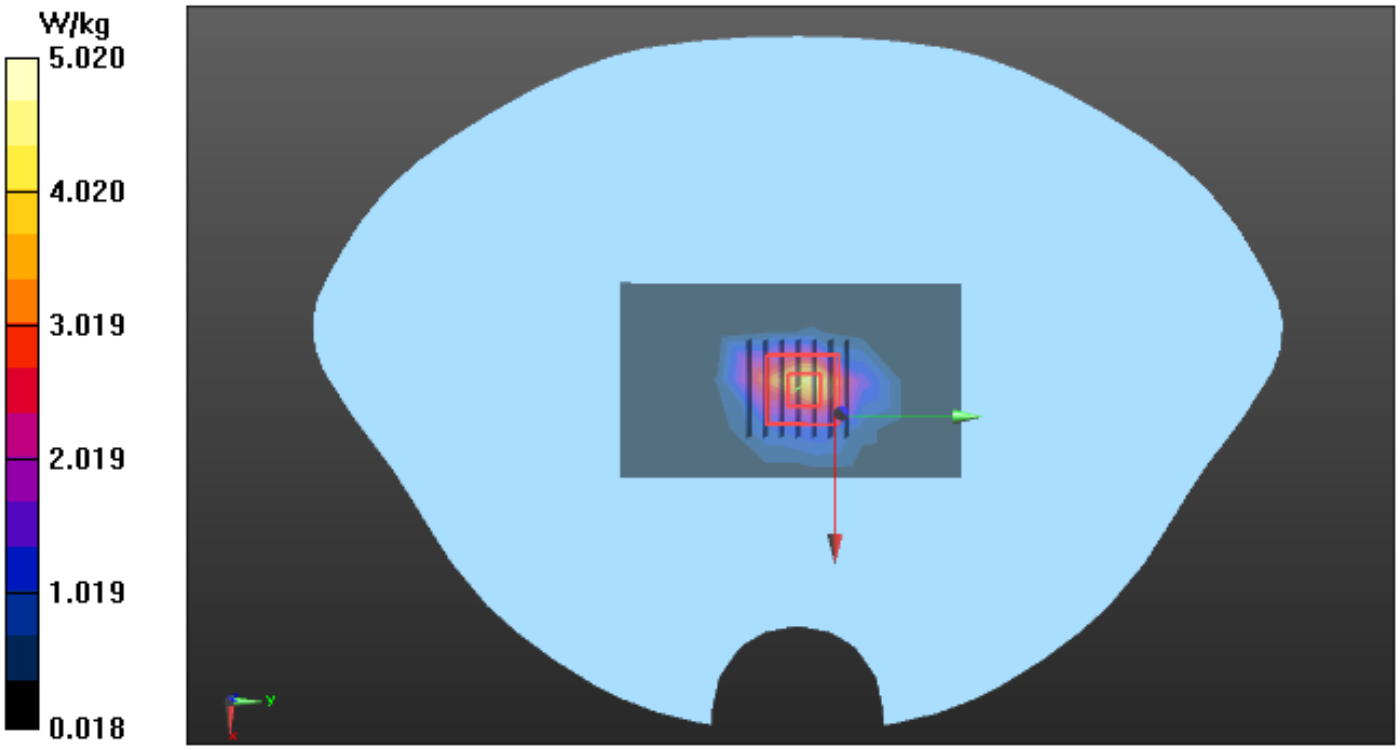
Test Laboratory: AGC Lab **Date: Jun. 16, 2022**
System Check Head 2600 MHz
DUT: Dipole 2600 MHz; Type: SID 2600

Communication System: CW; Communication System Band: D2600 (2600.0 MHz); Duty Cycle: 1:1;
Frequency: 2600 MHz; Medium parameters used: f = 2600 MHz; σ=1.94 mho/m; εr =39.62; ρ= 1000 kg/m³ ;
Phantom section: Flat Section; Input Power=18dBm
Ambient temperature (℃): 21.2, Liquid temperature (℃): 21.0

DASY Configuration:
• Probe: EX3DV4 – SN:3953; ConvF(7.42, 7.42, 7.42); Calibrated: Aug. 27,2021;
• Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = 1.0, 31.0
• Electronics: DAE4 SN1398; Calibrated: May 17, 2022
• Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD;
• DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Configuration/System Check Head 2600Hz/Area Scan (5x8x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 4.43 W/kg

Configuration/System Check Head 2600Hz//Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 51.208 V/m; Power Drift = -0.16 dB
Peak SAR (extrapolated) = 7.16 W/kg
SAR(1 g) = 3.37 W/kg; SAR(10 g) = 1.53 W/kg
Maximum value of SAR (measured) = 5.02 W/kg



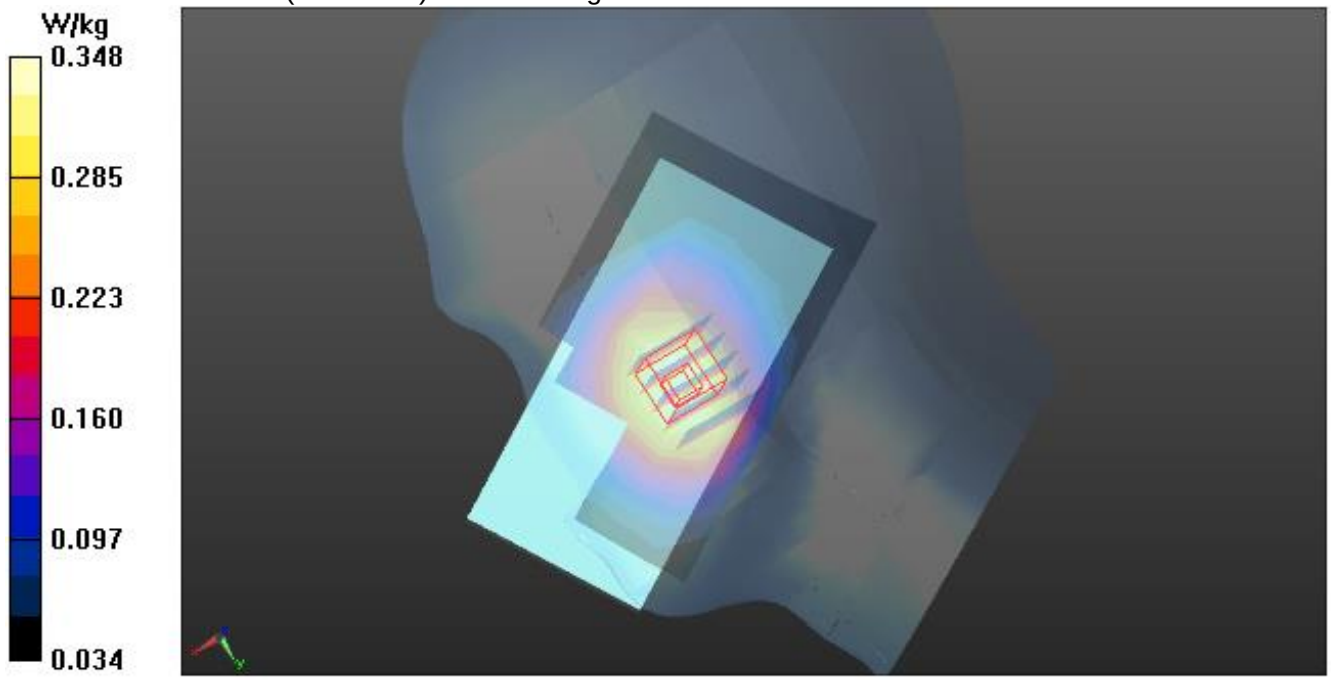
APPENDIX B. SAR MEASUREMENT DATA

Test Laboratory: AGC Lab **Date: Jun. 23, 2022**
GSM 850 Mid-Touch-Right <SIM 1>
DUT: Smart phone; Type: K55g

Communication System: Generic GSM; Communication System Band: GSM 850; Duty Cycle: 1:8.3;
Frequency: 836.6 MHz; Medium parameters used: f = 835 MHz; σ=0.94 mho/m; εr =41.32; ρ= 1000 kg/m³ ;
Phantom section: Right Section
Ambient temperature (℃):20.9, Liquid temperature (℃): 20.5

DASY Configuration:
• Probe: EX3DV4 – SN:3953; ConvF(10.01, 10.01, 10.01); Calibrated: Aug. 27,2021;
• Sensor-Surface: 3mm (Mechanical Surface Detection), z = 1.0, 31.0
• Electronics: DAE4 SN1398; Calibrated: May 17, 2022
• Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD;
• DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Configuration 4/R-C/Area Scan (7x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.357 W/kg
Configuration 4/R-C/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.275 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 0.399 W/kg
SAR(1 g) = 0.317 W/kg; SAR(10 g) = 0.237 W/kg
Maximum value of SAR (measured) = 0.348 W/kg

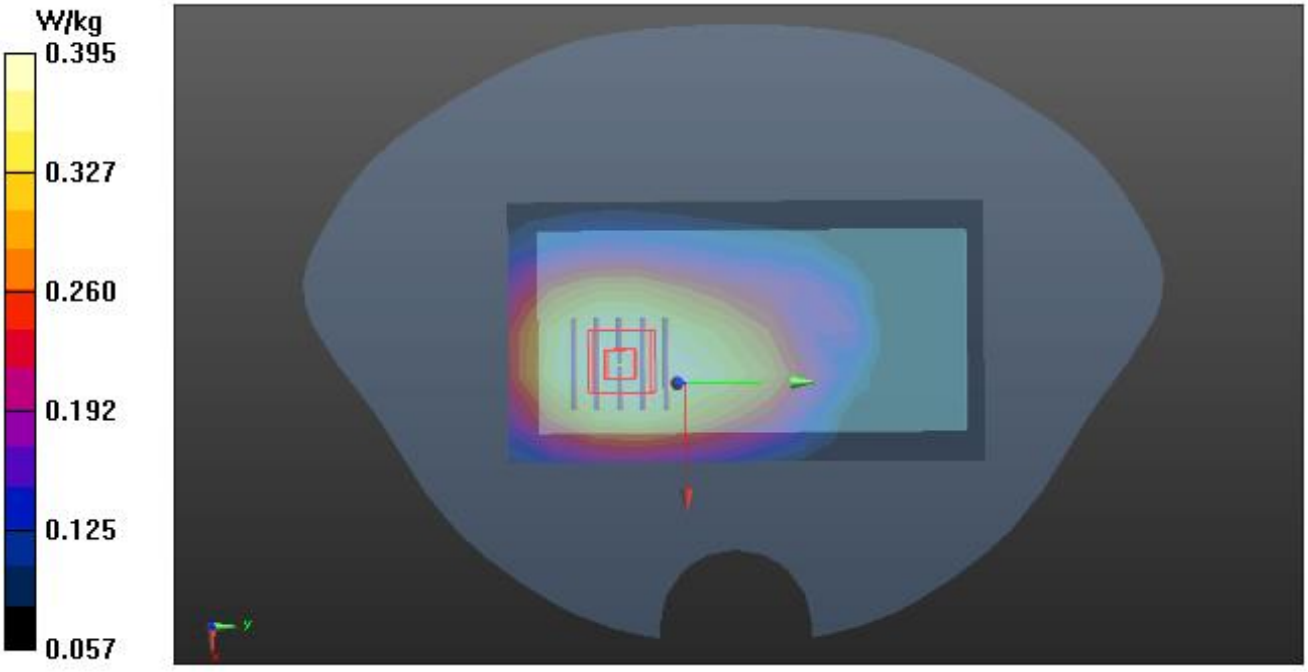


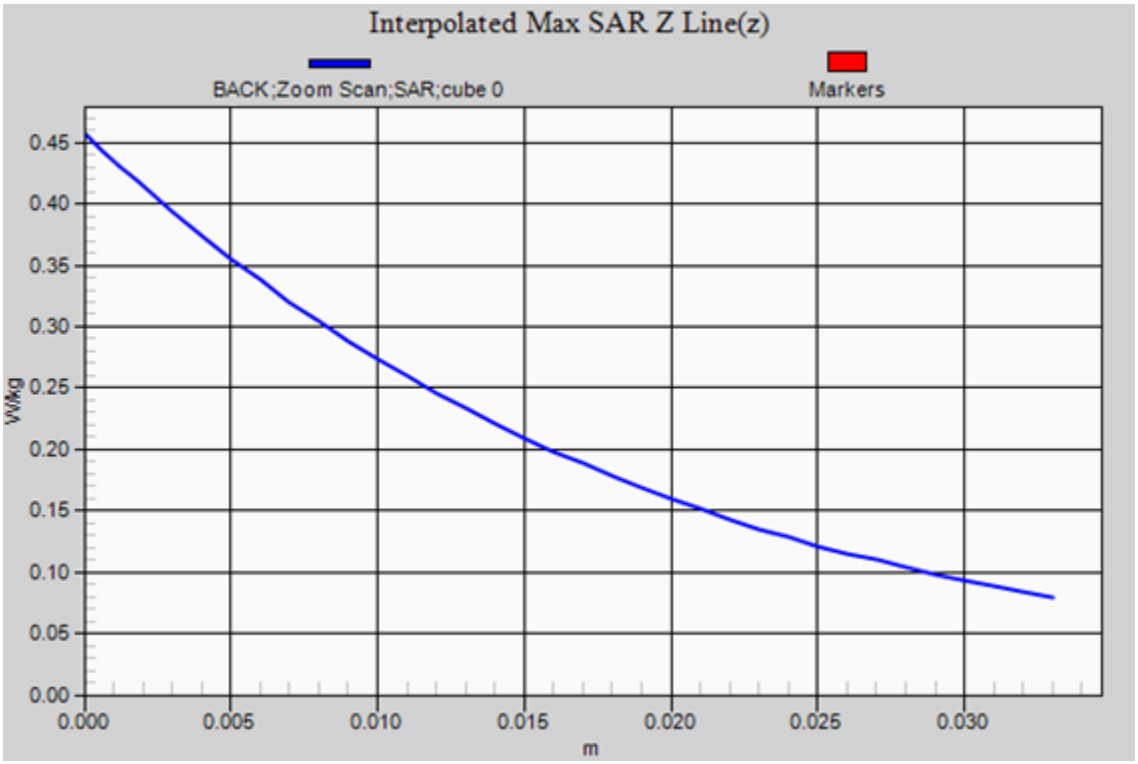
Test Laboratory: AGC Lab **Date: Jun. 23, 2022**
GPRS 850 Mid- Body- Back (2up) < SIM 1>
DUT: Smart phone; Type: K55g

Communication System: GPRS-2 Slot; Communication System Band: GSM 850; Duty Cycle: 1:4.2;
Frequency: 836.6 MHz; Medium parameters used: f = 835 MHz; σ= 0.94 mho/m; εr = 41.32; ρ= 1000 kg/m³ ;
Phantom section: Flat Section
Ambient temperature (℃):20.9, Liquid temperature (℃): 20.5

DASY Configuration:
• Probe: EX3DV4 – SN:3953; ConvF(10.01, 10.01, 10.01); Calibrated: Aug. 27,2021;
• Sensor-Surface: 3mm (Mechanical Surface Detection), z = 1.0, 31.0
• Electronics: DAE4 SN1398; Calibrated: May 17, 2022
• Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QDOVA002AA;
• DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

BODY/BACK 2ST/Area Scan (7x12x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.419 W/kg
BODY/BACK 2ST/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.081 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 0.457 W/kg
SAR(1 g) = 0.359 W/kg; SAR(10 g) = 0.270 W/kg
Maximum value of SAR (measured) = 0.395 W/kg



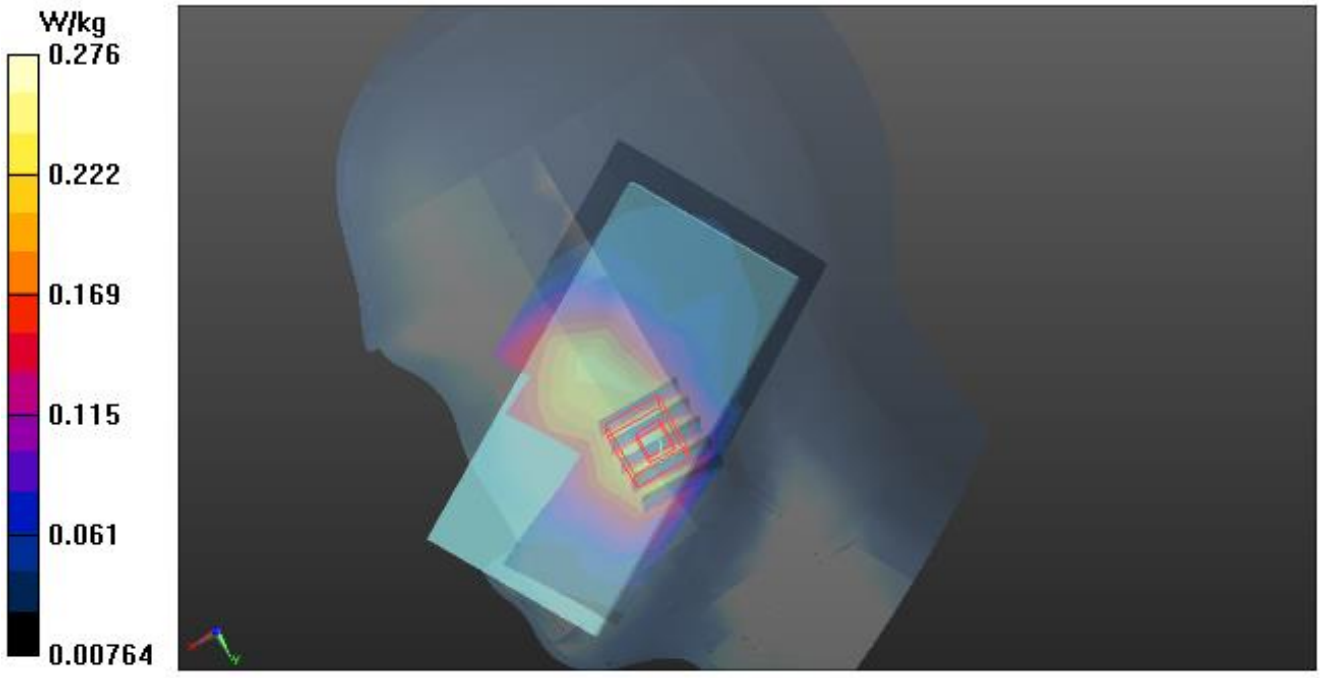


Test Laboratory: AGC Lab **Date: Jun. 17, 2022**
PCS 1900 Mid-Touch-Right <SIM 1>
DUT: Smart phone; Type: K55g

Communication System: Generic GSM; Communication System Band: PCS 1900; Duty Cycle: 1:8.3;
Frequency: 1880 MHz; Medium parameters used: f = 1900 MHz; σ= 1.40 mho/m; εr =39.33; ρ= 1000 kg/m³ ;
Phantom section: Right Section
Ambient temperature (℃):20.8, Liquid temperature (℃): 20.3

DASY Configuration:
• Probe: EX3DV4 – SN:3953; ConvF(8.26, 8.26, 8.26); Calibrated: Aug. 27,2021;
• Sensor-Surface: 3mm (Mechanical Surface Detection), z = 1.0, 31.0
• Electronics: DAE4 SN1398; Calibrated: May 17, 2022
• Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD;
• DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Configuration 4/R-C/Area Scan (7x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.271 W/kg
Configuration 4/R-C/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.295 V/m; Power Drift = 0.15 dB
Peak SAR (extrapolated) = 0.363 W/kg
SAR(1 g) = 0.243 W/kg; SAR(10 g) = 0.156 W/kg
Maximum value of SAR (measured) = 0.276 W/kg

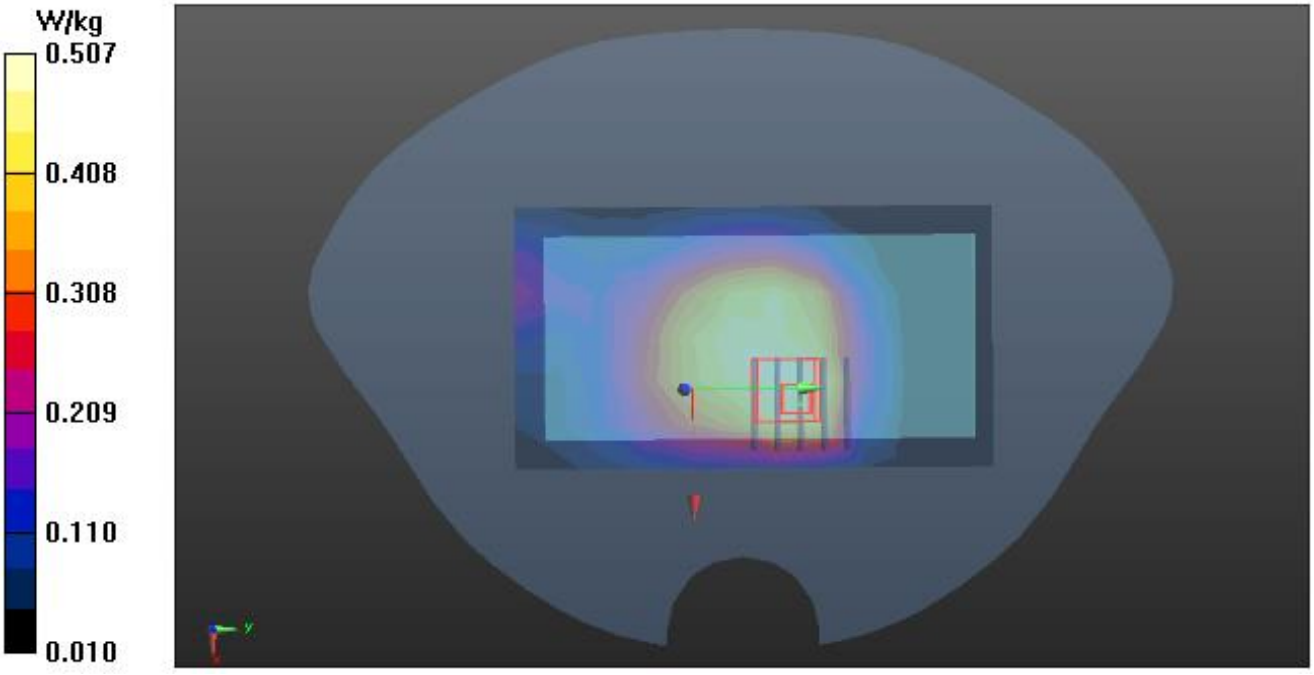


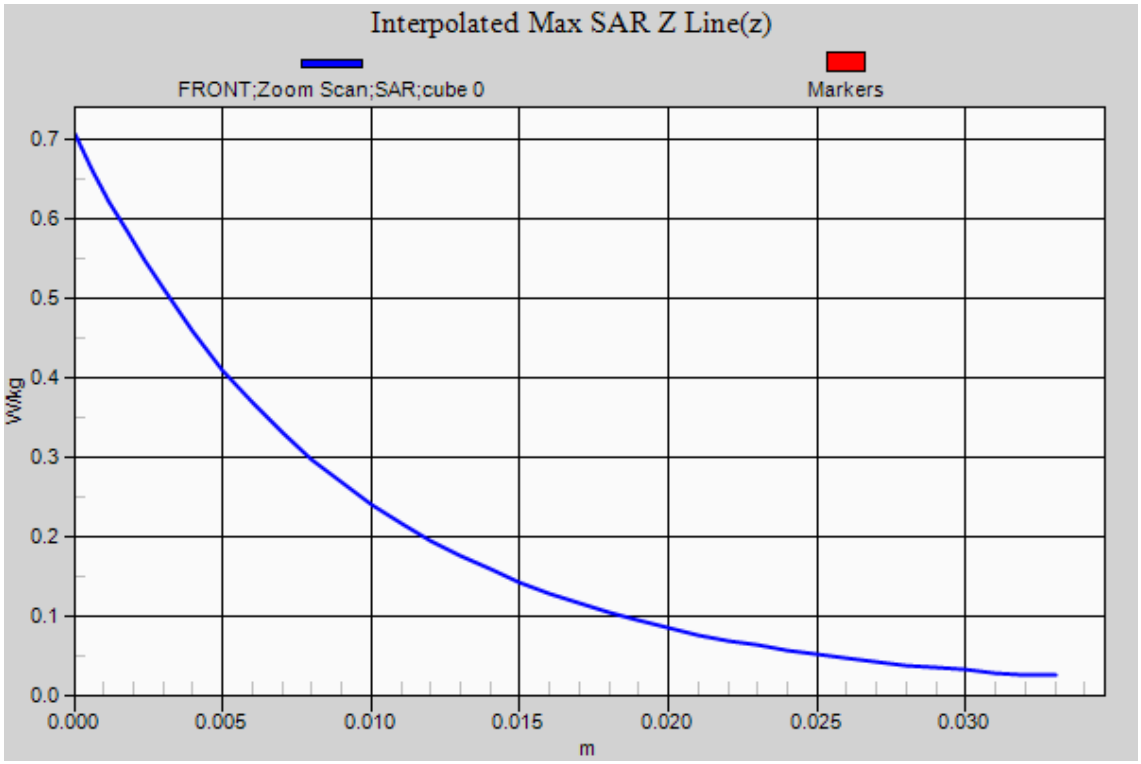
Test Laboratory: AGC Lab **Date: Jun. 17, 2022**
PCS 1900 Mid-Body -Front(MS)<SIM 1>
DUT: Smart phone; Type: K55g

Communication System: Generic GSM; Communication System Band: PCS 1900; Duty Cycle: 1:8.3;
Frequency: 1880 MHz; Medium parameters used: f = 1900 MHz; σ= 1.40 mho/m; εr =39.33; ρ= 1000 kg/m³ ;
Phantom section: Flat Section
Ambient temperature (℃):20.8, Liquid temperature (℃): 20.3

DASY Configuration:
• Probe: EX3DV4 – SN:3953; ConvF(8.26, 8.26, 8.26); Calibrated: Aug. 27,2021;
• Sensor-Surface: 3mm (Mechanical Surface Detection), z = 1.0, 31.0
• Electronics: DAE4 SN1398; Calibrated: May 17, 2022
• Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD;
• DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

BODY/FRONT/Area Scan (7x12x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.502 W/kg
BODY/FRONT/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 17.575 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 0.707 W/kg
SAR(1 g) = 0.419 W/kg; SAR(10 g) = 0.253 W/kg
Maximum value of SAR (measured) = 0.507 W/kg



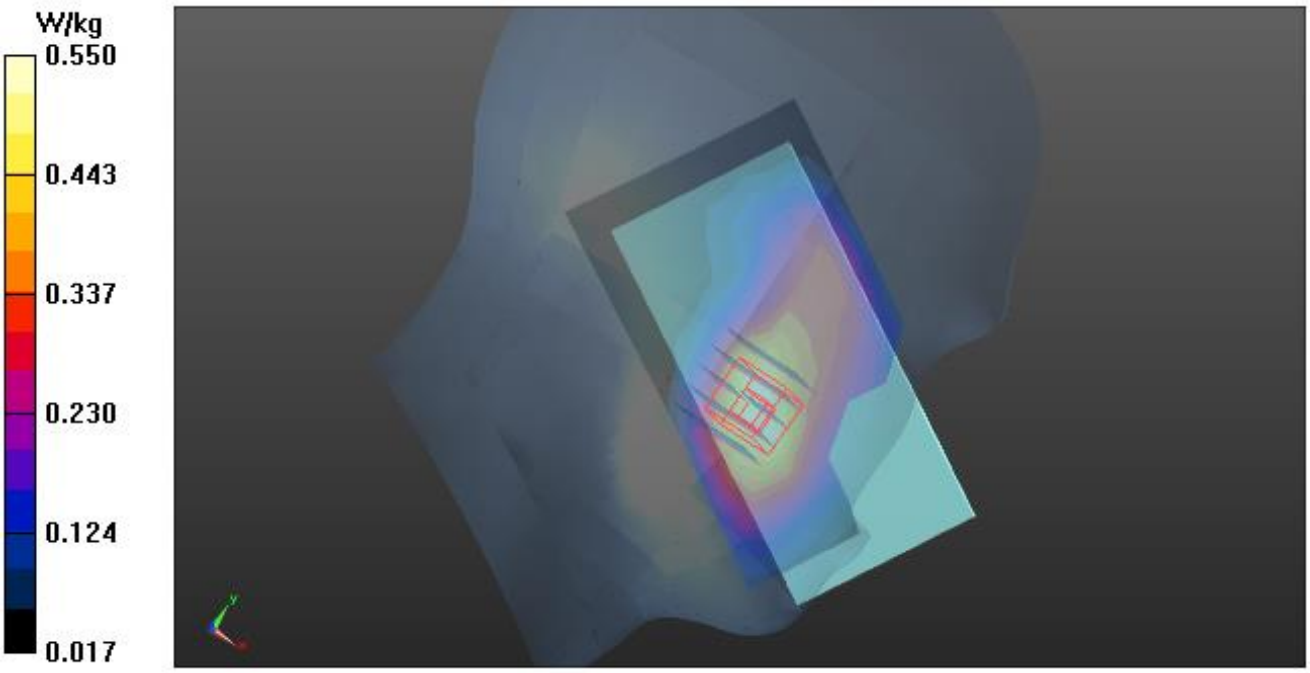


Test Laboratory: AGC Lab **Date: Jun. 17, 2022**
WCDMA Band II Mid-Touch-Left
DUT: Smart phone; Type: K55g

Communication System: UMTS; Communication System Band: Band II UTRA/FDD ;Duty Cycle:1:1; Frequency: 1880 MHz; Medium parameters used: f = 1900 MHz; σ= 1.40 mho/m; εr =39.33; ρ= 1000 kg/m³ ;
Phantom section: Left Section
Ambient temperature (℃):20.8, Liquid temperature (℃): 20.3

DASY Configuration:
• Probe: EX3DV4 – SN:3953; ConvF(8.26, 8.26, 8.26); Calibrated: Aug. 27,2021;
• Sensor-Surface: 3mm (Mechanical Surface Detection), z = 1.0, 31.0
• Electronics: DAE4 SN1398; Calibrated: May 17, 2022
• Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD;
• DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

HEAD LEFT/L-C/Area Scan (7x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.587 W/kg
HEAD LEFT/L-C/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.191 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 0.726 W/kg
SAR(1 g) = 0.475 W/kg; SAR(10 g) = 0.300 W/kg
Maximum value of SAR (measured) = 0.550 W/kg

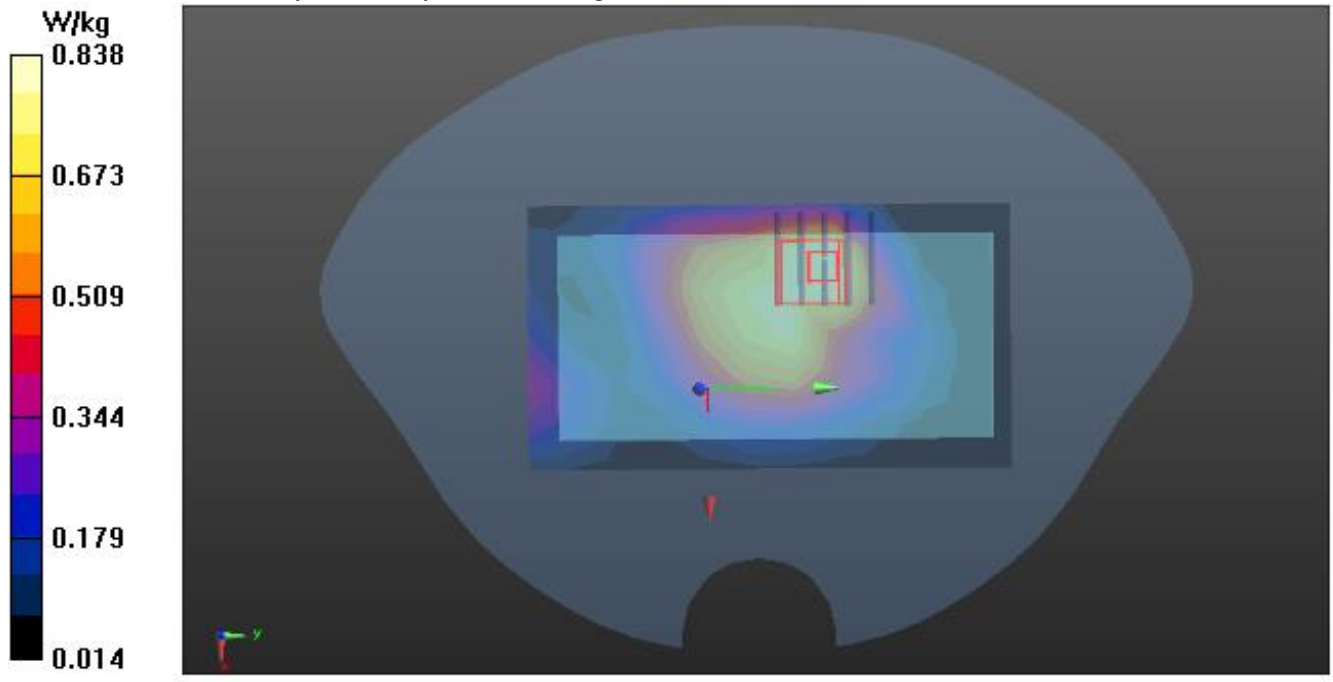


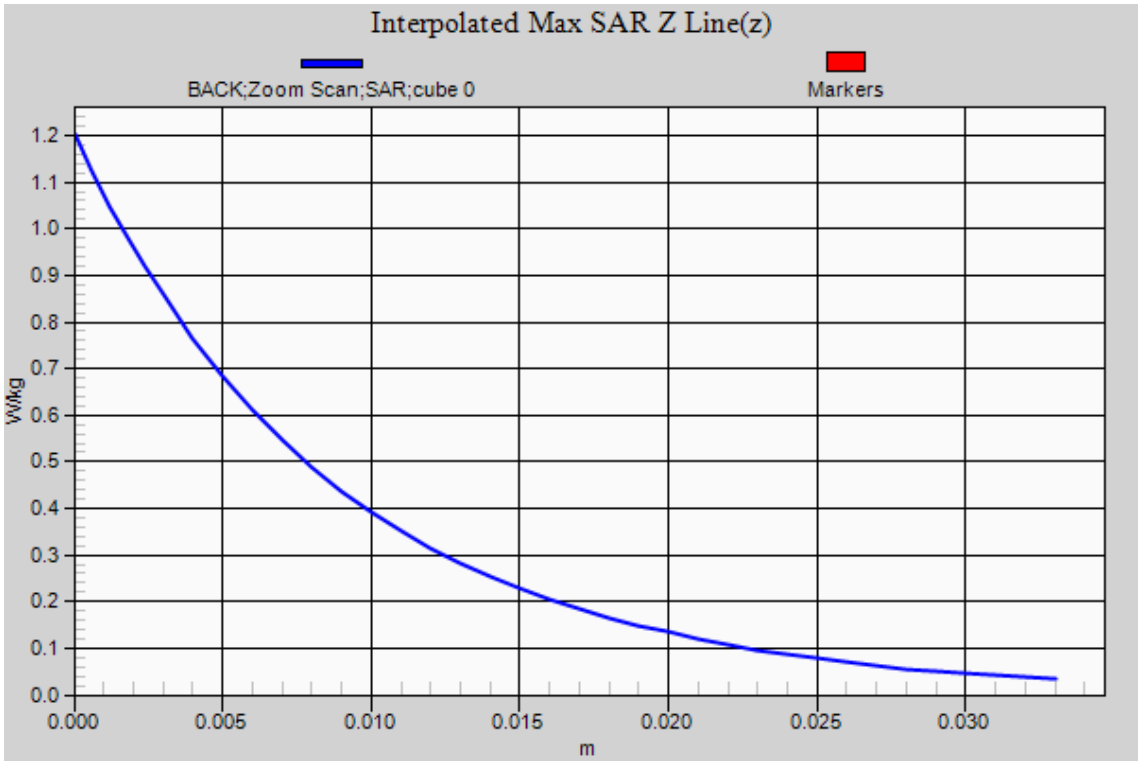
Test Laboratory: AGC Lab **Date: Jun. 17, 2022**
WCDMA Band II Mid -Body-Towards Grounds
DUT: Smart phone; Type: K55g

Communication System: UMTS; Communication System Band: Band II UTRA/FDD ;Duty Cycle:1:1; Frequency: 1880 MHz; Medium parameters used: f = 1900 MHz; σ=1.40 mho/m; εr =39.33; ρ= 1000 kg/m³ ;
Phantom section: Flat Section
Ambient temperature (℃):20.8, Liquid temperature (℃): 20.3

DASY Configuration:
• Probe: EX3DV4 – SN:3953; ConvF(8.26, 8.26, 8.26); Calibrated: Aug. 27,2021;
• Sensor-Surface: 3mm (Mechanical Surface Detection), z = 1.0, 31.0
• Electronics: DAE4 SN1398; Calibrated: May 17, 2022
• Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD;
• DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

BODY/BACK/Area Scan (7x12x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.830 W/kg
BODY/BACK/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 21.350 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 1.20 W/kg
SAR(1 g) = 0.697 W/kg; SAR(10 g) = 0.412 W/kg
Maximum value of SAR (measured) = 0.838 W/kg



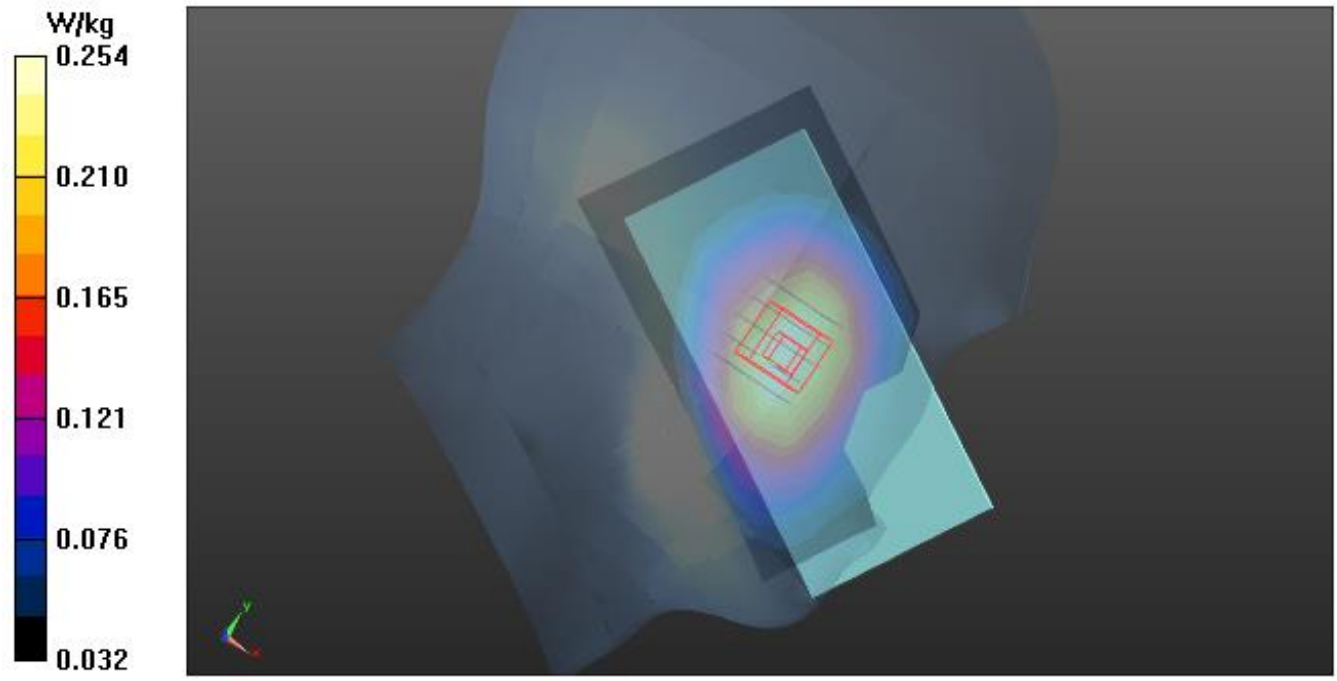


Test Laboratory: AGC Lab **Date: Jun. 23, 2022**
WCDMA Band V Mid-Touch-Left
DUT: Smart phone; Type: K55g

Communication System: UMTS; Communication System Band: BAND V UTRA/FDD;Duty Cycle:1:1;
Frequency: 836.6 MHz; Medium parameters used: f = 835 MHz; σ=0.94 mho/m; εr =41.32; ρ= 1000 kg/m³ ;
Phantom section: Left Section
Ambient temperature (℃):20.9, Liquid temperature (℃): 20.5

DASY Configuration:
• Probe: EX3DV4 – SN:3953; ConvF(10.01, 10.01, 10.01); Calibrated: Aug. 27,2021;
• Sensor-Surface: 3mm (Mechanical Surface Detection), z = 1.0, 31.0
• Electronics: DAE4 SN1398; Calibrated: May 17, 2022
• Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD;
• DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

HEAD LEFT/L-C/Area Scan (7x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.258 W/kg
HEAD LEFT/L-C/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.096 V/m; Power Drift = 0.15 dB
Peak SAR (extrapolated) = 0.290 W/kg
SAR(1 g) = 0.231 W/kg; SAR(10 g) = 0.175 W/kg
Maximum value of SAR (measured) = 0.254 W/kg

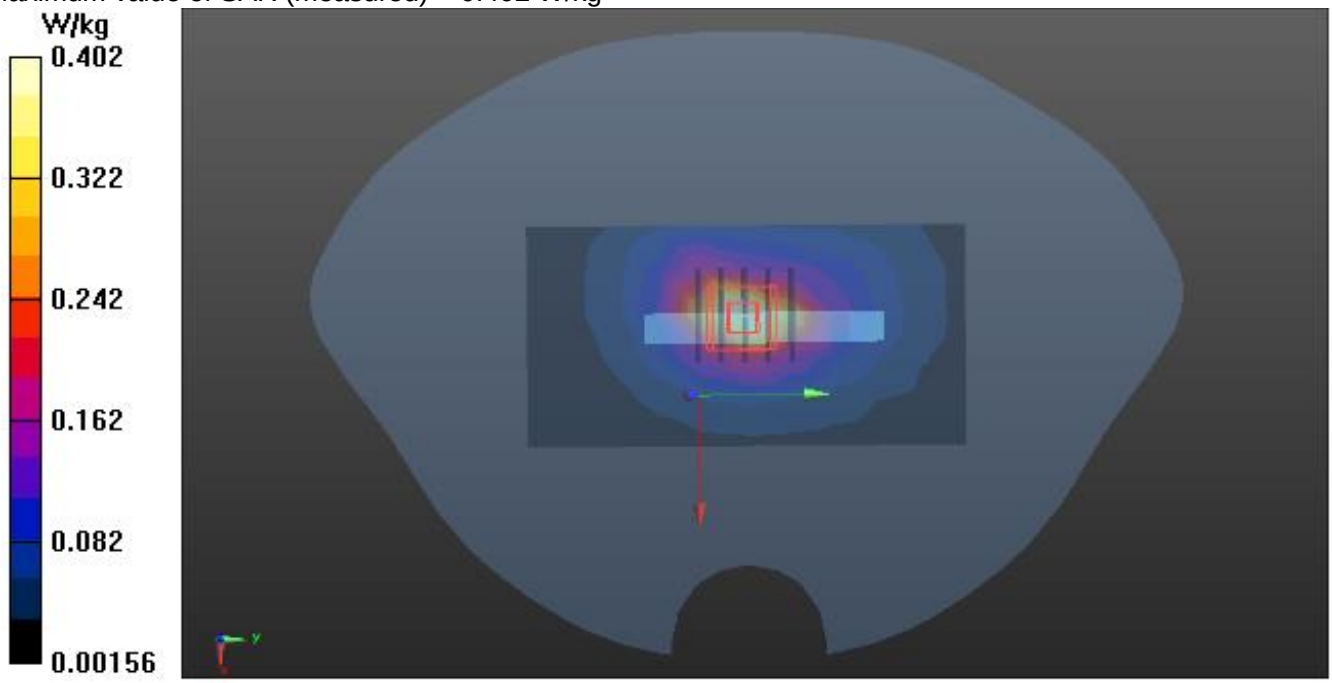


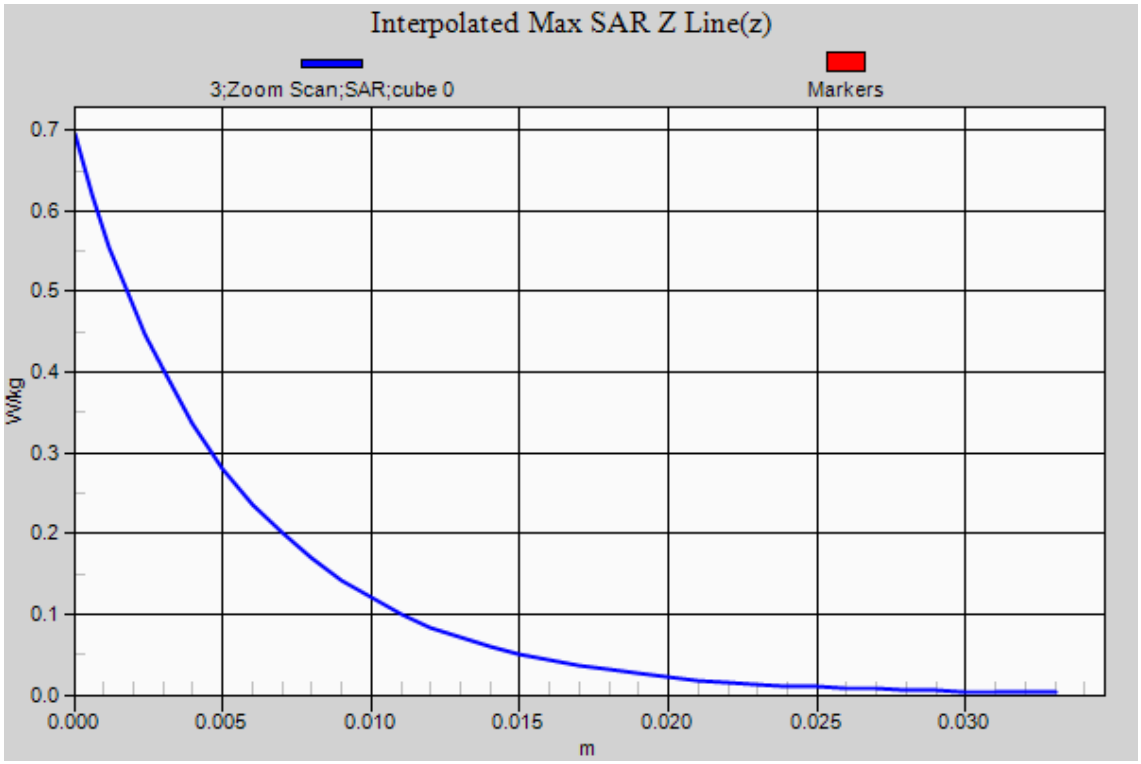
Test Laboratory: AGC Lab **Date: Jun. 23, 2022**
WCDMA Band V Mid- Edge 3
DUT: Smart phone; Type: K55g

Communication System: UMTS; Communication System Band: BAND V UTRA/FDD;Duty Cycle:1:1;
Frequency: 836.6 MHz; Medium parameters used: f = 835 MHz; σ=0.94 mho/m; εr =41.32;ρ= 1000 kg/m³ ;
Phantom section: Flat Section
Ambient temperature (℃):20.9, Liquid temperature (℃): 20.5

DASY Configuration:
• Probe: EX3DV4 – SN:3953; ConvF(10.01, 10.01, 10.01); Calibrated: Aug. 27,2021;
• Sensor-Surface: 3mm (Mechanical Surface Detection), z = 1.0, 31.0
• Electronics: DAE4 SN1398; Calibrated: May 17, 2022
• Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD;
• DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

EDGE 3/Area Scan (6x11x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.480 W/kg
EDGE 3/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 17.097 V/m; Power Drift = 0.17 dB
Peak SAR (extrapolated) = 0.695 W/kg
SAR(1 g) = 0.302 W/kg; SAR(10 g) = 0.139 W/kg
Maximum value of SAR (measured) = 0.402 W/kg



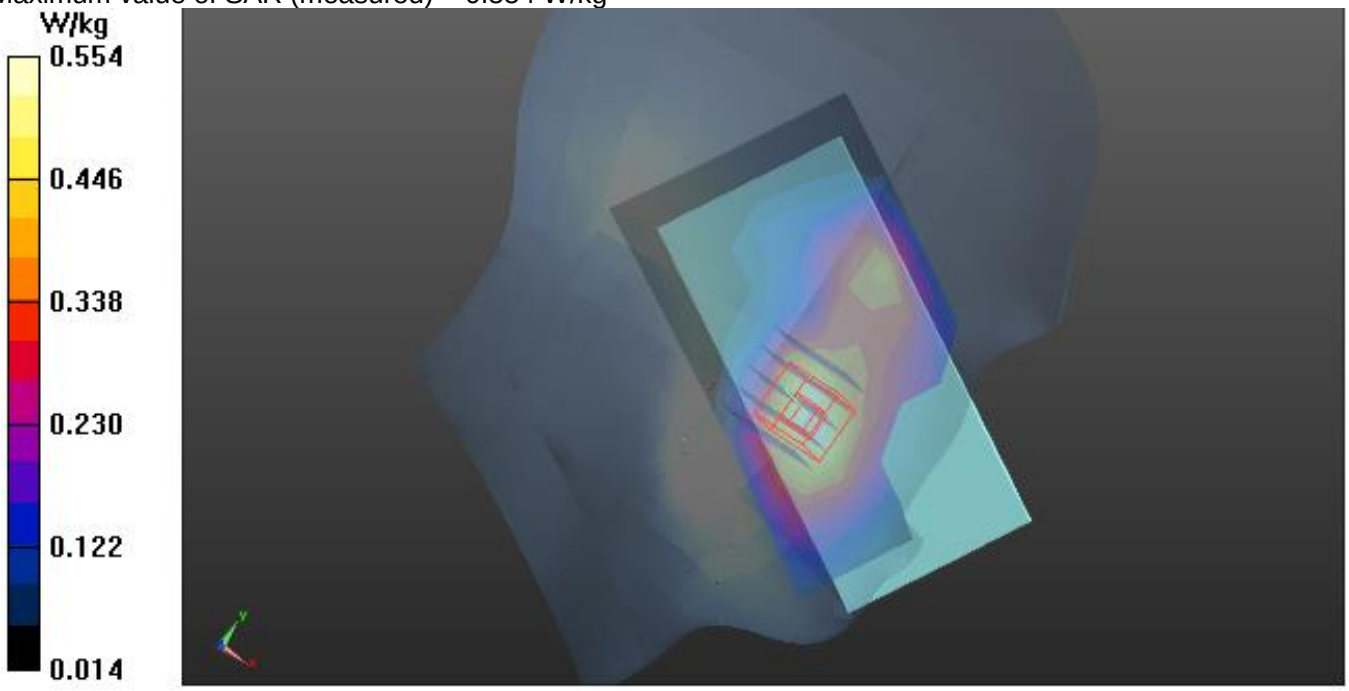


Test Laboratory: AGC Lab **Date: Jun. 20, 2022**
LTE Band 2 Mid-Touch-Left <SIM 1>
DUT: Smart phone; Type: K55g

Communication System: LTE; Communication System Band: LTE Band 2; Duty Cycle: 1:1;
Frequency: 1880 MHz; Medium parameters used: f = 1900 MHz; σ= 1.43 mho/m; εr =39.76; ρ= 1000 kg/m³ ;
Phantom section: Left Section
Ambient temperature (℃): 21.7, Liquid temperature (℃): 21.2

DASY Configuration:
• Probe: EX3DV4 – SN:3953; ConvF(8.26, 8.26, 8.26); Calibrated: Aug. 27,2021;
• Sensor-Surface: 3mm (Mechanical Surface Detection), z = 1.0, 31.0
• Electronics: DAE4 SN1398; Calibrated: May 17, 2022
• Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD;
• DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

HEAD LEFT/L-C/Area Scan (7x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.583 W/kg
HEAD LEFT/L-C/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.846 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 0.735 W/kg
SAR(1 g) = 0.478 W/kg; SAR(10 g) = 0.299 W/kg
Maximum value of SAR (measured) = 0.554 W/kg

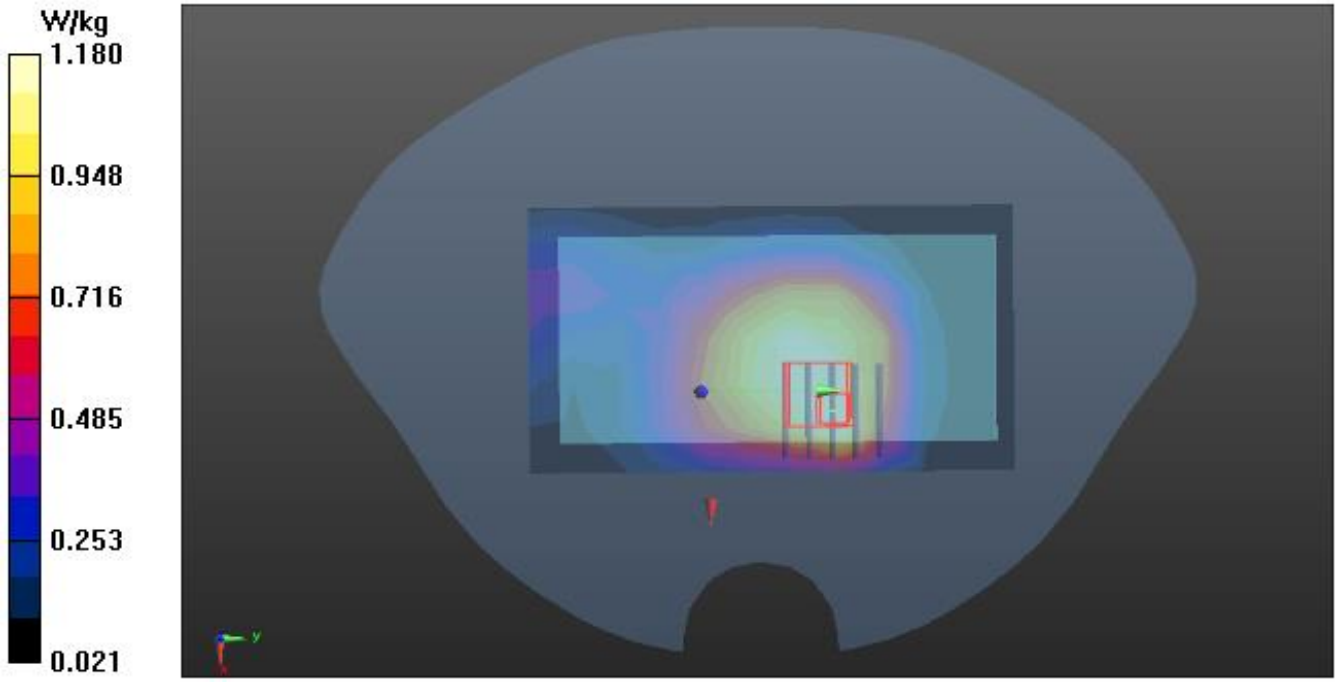


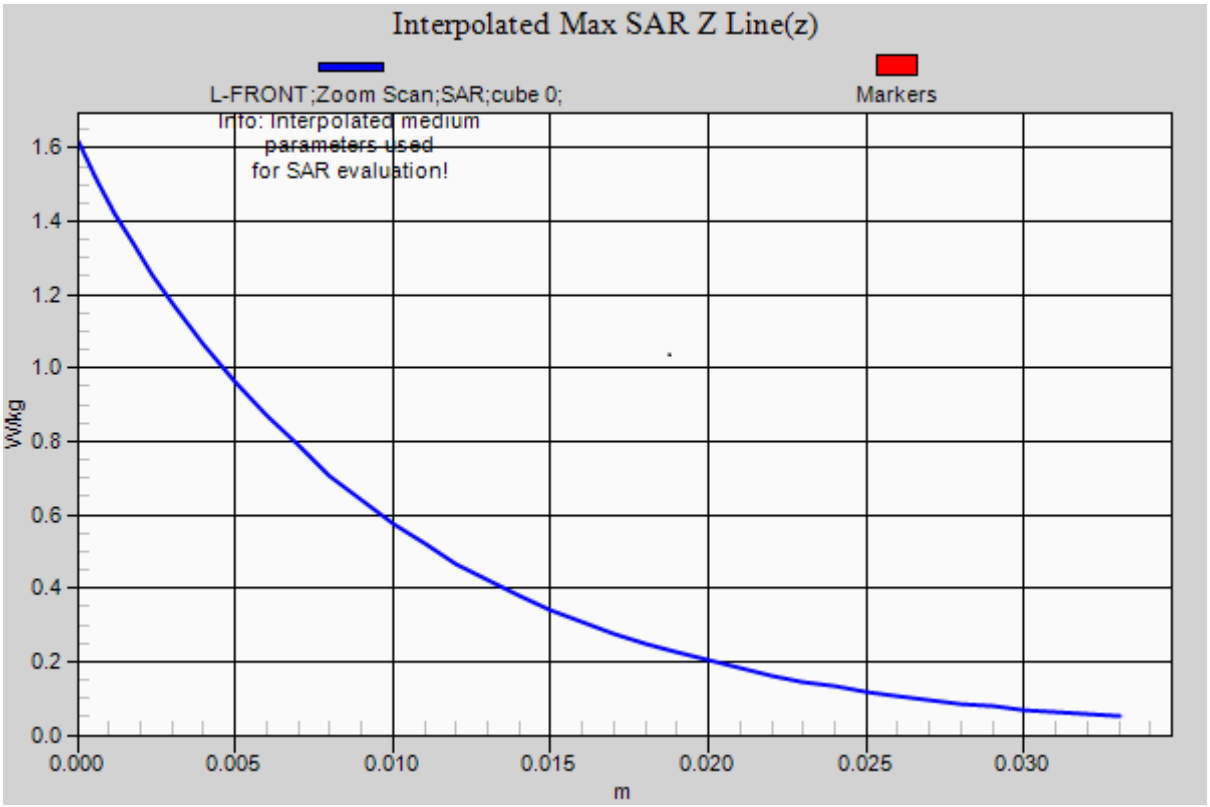
Test Laboratory: AGC Lab **Date: Jun. 20, 2022**
LTE Band 2 Low-Body- Front (1 RB#0)
DUT: Smart phone; Type: K55g

Communication System: LTE; Communication System Band: LTE Band 2; Duty Cycle: 1:1;
Frequency: 1860 MHz; Medium parameters used: f = 1900 MHz; σ= 1.42 mho/m; εr =39.89; ρ= 1000 kg/m³ ;
Phantom section: Flat Section
Ambient temperature (℃): 21.7, Liquid temperature (℃): 21.2

DASY Configuration:
• Probe: EX3DV4 – SN:3953; ConvF(8.26, 8.26, 8.26); Calibrated: Aug. 27,2021;
• Sensor-Surface: 3mm (Mechanical Surface Detection), z = 1.0, 31.0
• Electronics: DAE4 SN1398; Calibrated: May 17, 2022
• Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD;
• DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

BODY/FRONT-LOW/Area Scan (7x12x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.24 W/kg
BODY/FRONT-LOW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 26.055 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 1.61 W/kg
SAR(1 g) = 0.983 W/kg; SAR(10 g) = 0.613 W/kg
Maximum value of SAR (measured) = 1.18 W/kg



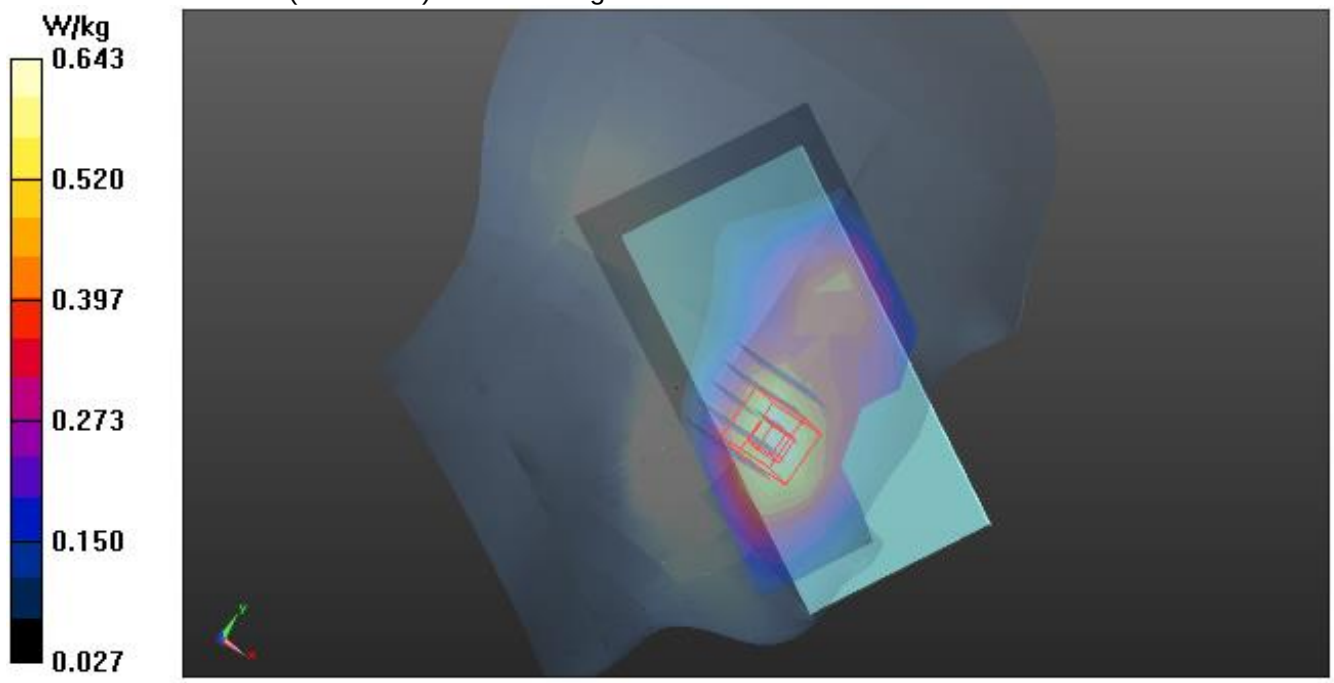


Test Laboratory: AGC Lab **Date: Jun. 24, 2022**
LTE Band 4 Mid-Touch-Left (1 RB#0)
DUT: Smart phone; Type: K55g

Communication System: LTE; Communication System Band: LTE Band 4; Duty Cycle:1:1;
Frequency:1732.5 MHz; Medium parameters used: f =1750 MHz; σ= 1.37 mho/m; εr =41.02; ρ= 1000 kg/m³ ;
Phantom section: Left Section
Ambient temperature (℃): 21.1, Liquid temperature (℃): 20.9

DASY Configuration:
• Probe: EX3DV4 – SN:3953; ConvF(8.55, 8.55, 8.55); Calibrated: Aug. 27,2021;
• Sensor-Surface: 3mm (Mechanical Surface Detection), z = 1.0, 31.0
• Electronics: DAE4 SN1398; Calibrated: May 17, 2022
• Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD;
• DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

HEAD LEFT/L-C/Area Scan (7x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.667 W/kg
HEAD LEFT/L-C/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.012 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 0.834 W/kg
SAR(1 g) = 0.561 W/kg; SAR(10 g) = 0.363 W/kg
Maximum value of SAR (measured) = 0.643 W/kg

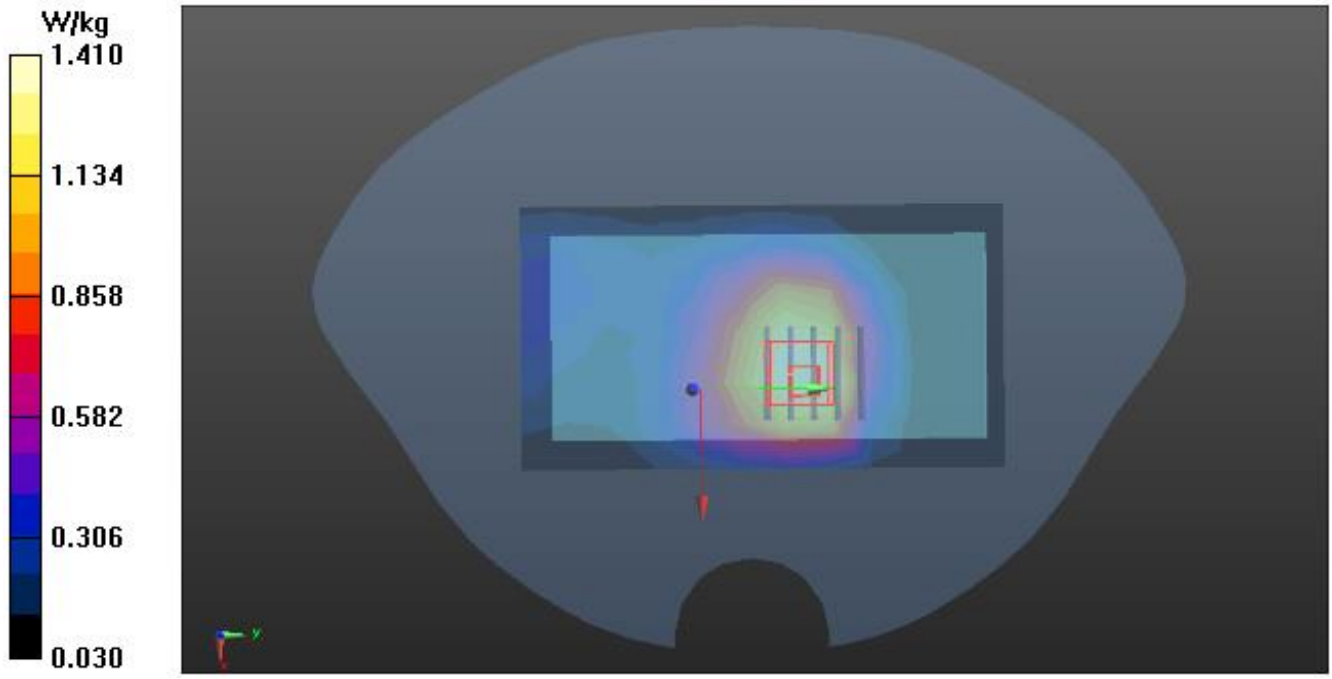


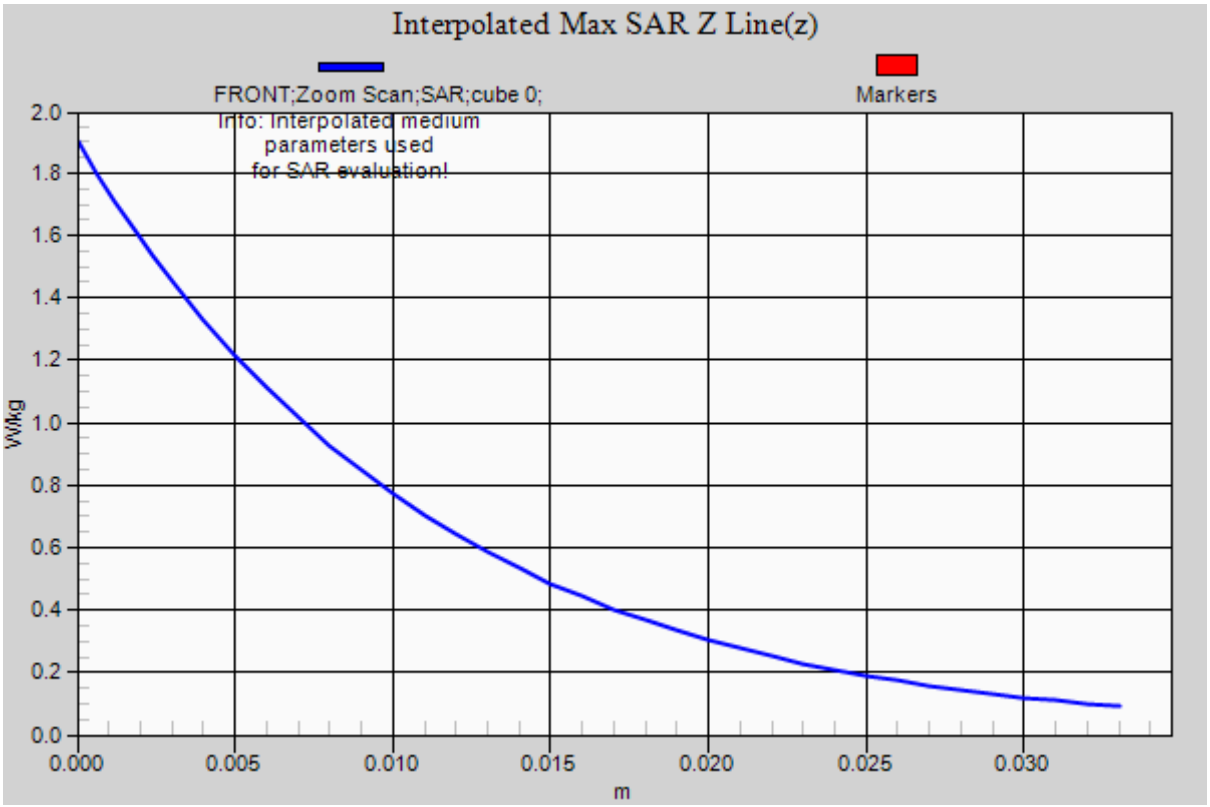
Test Laboratory: AGC Lab **Date: Jun. 24, 2022**
LTE Band 4 Mid-Body-Front (1 RB#0)
DUT: Smart phone; Type: K55g

Communication System: LTE; Communication System Band: LTE Band 4; Duty Cycle:1:1;
Frequency:1732.5 MHz; Medium parameters used: f = 1750 MHz; σ= 1.37 mho/m; εr =41.02; ρ= 1000 kg/m^3 ;
Phantom section: Flat Section
Ambient temperature (℃): 21.1, Liquid temperature (℃): 20.9

DASY Configuration:
• Probe: EX3DV4 – SN:3953; ConvF(8.55, 8.55, 8.55); Calibrated: Aug. 27,2021;
• Sensor-Surface: 3mm (Mechanical Surface Detection), z = 1.0, 31.0
• Electronics: DAE4 SN1398; Calibrated: May 17, 2022
• Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD;
• DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

BODY/FRONT/Area Scan (7x12x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.47 W/kg
BODY/FRONT/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 26.313 V/m; Power Drift = -0.00 dB
Peak SAR (extrapolated) = 1.93 W/kg
SAR(1 g) = 1.23 W/kg; SAR(10 g) = 0.780 W/kg
Maximum value of SAR (measured) = 1.41 W/kg



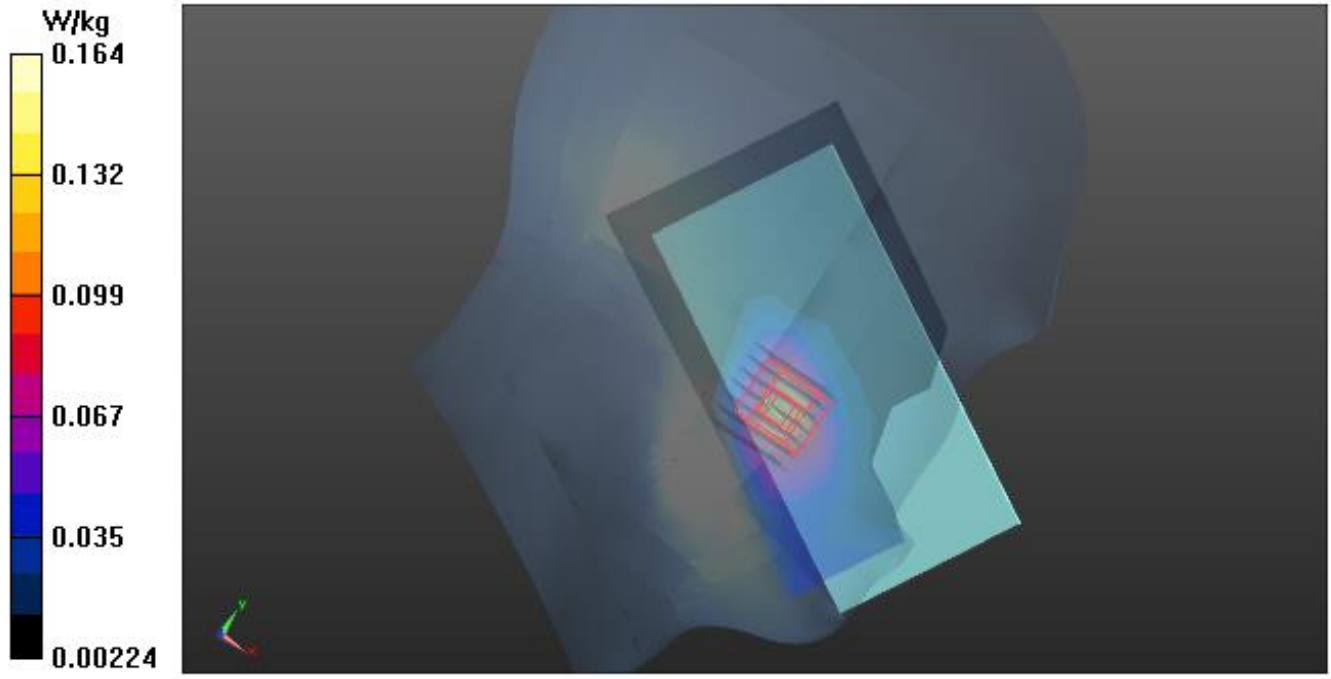


Test Laboratory: AGC Lab **Date: Jun. 16, 2022**
LTE Band 7 Mid-Touch-Left (1RB#0)
DUT: Smart phone; Type: K55g

Communication System: LTE; Communication System Band: LTE Band 7; Duty Cycle:1:1;
Frequency: 2535MHz; Medium parameters used: f =2600 MHz; σ=1.92 mho/m; εr =39.96; ρ= 1000 kg/m³ ;
Phantom section: Left Section
Ambient temperature (℃): 21.2, Liquid temperature (℃): 21.0

DASY Configuration:
• Probe: EX3DV4 – SN:3953; ConvF(7.42, 7.42, 7.42); Calibrated: Aug. 27,2021;
• Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = 1.0, 31.0
• Electronics: DAE4 SN1398; Calibrated: May 17, 2022
• Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD;
• DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

HEAD LEFT/L-C/Area Scan (7x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.122 W/kg
HEAD LEFT/L-C/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.227 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 0.226 W/kg
SAR(1 g) = 0.110 W/kg; SAR(10 g) = 0.053 W/kg
Maximum value of SAR (measured) = 0.164 W/kg

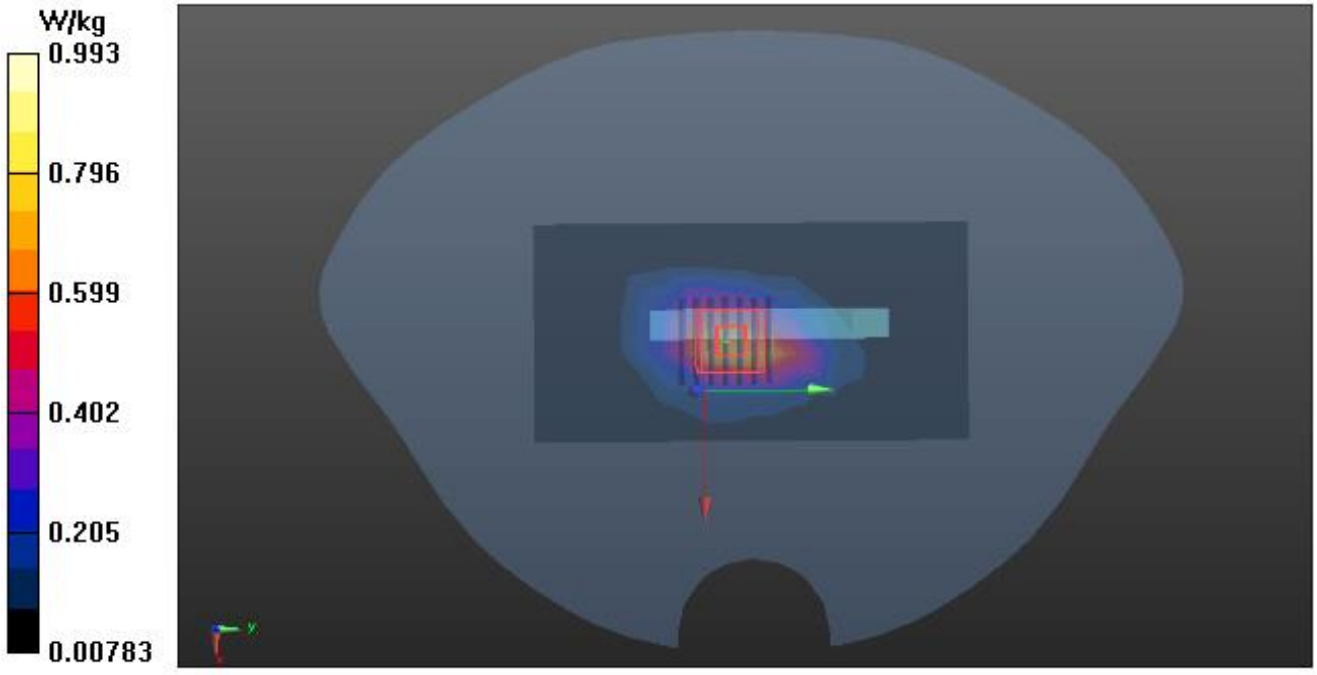


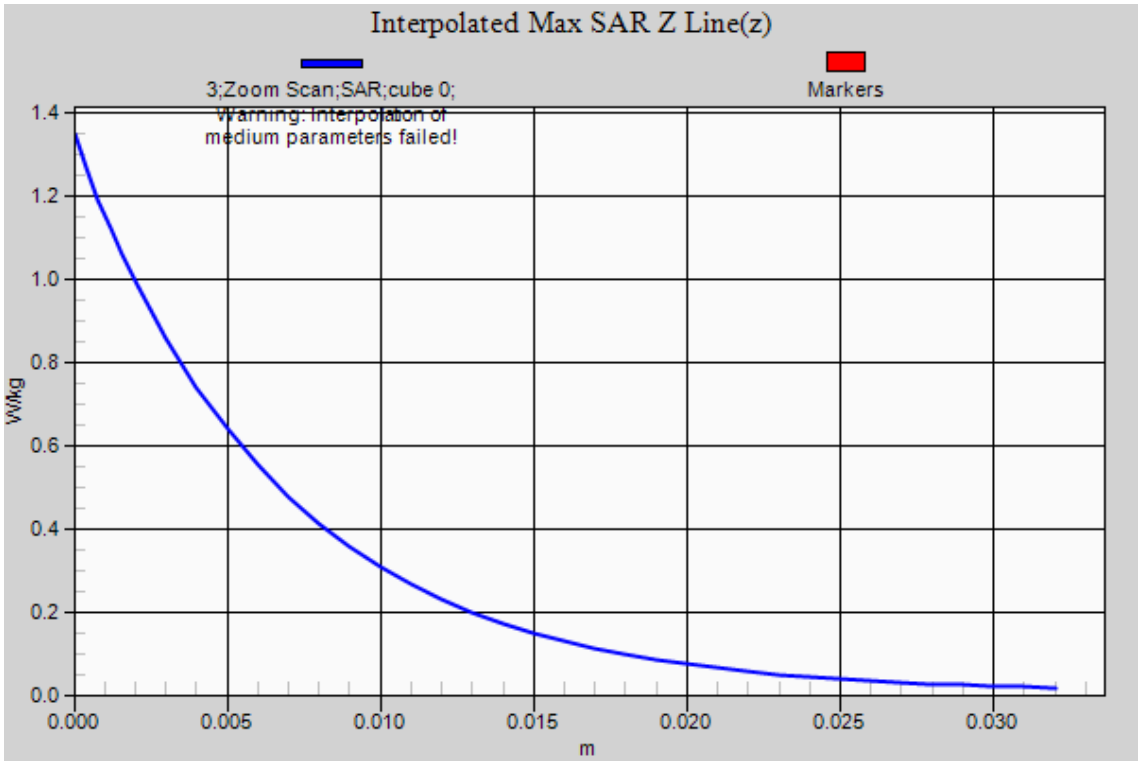
Test Laboratory: AGC Lab **Date: Jun. 16, 2022**
LTE Band 7 Mid- Edge 3(Bottom) (1RB#0)
DUT: Smart phone; Type: K55g

Communication System: LTE; Communication System Band: LTE Band 7; Duty Cycle:1:1;
Frequency: 2535MHz; Medium parameters used: f =2600 MHz; σ=1.92 mho/m; εr =39.96; ρ= 1000 kg/m³ ;
Phantom section: Flat Section
Ambient temperature (℃): 21.2, Liquid temperature (℃): 21.0

DASY Configuration:
• Probe: EX3DV4 – SN:3953; ConvF(7.42, 7.42, 7.42); Calibrated: Aug. 27,2021;
• Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = 1.0, 31.0
• Electronics: DAE4 SN1398; Calibrated: May 17, 2022
• Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD;
• DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

EDGE 3/Area Scan (6x11x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.820 W/kg
EDGE 3/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 20.794 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 1.35 W/kg
SAR(1 g) = 0.659 W/kg; SAR(10 g) = 0.316 W/kg
Maximum value of SAR (measured) = 0.993 W/kg



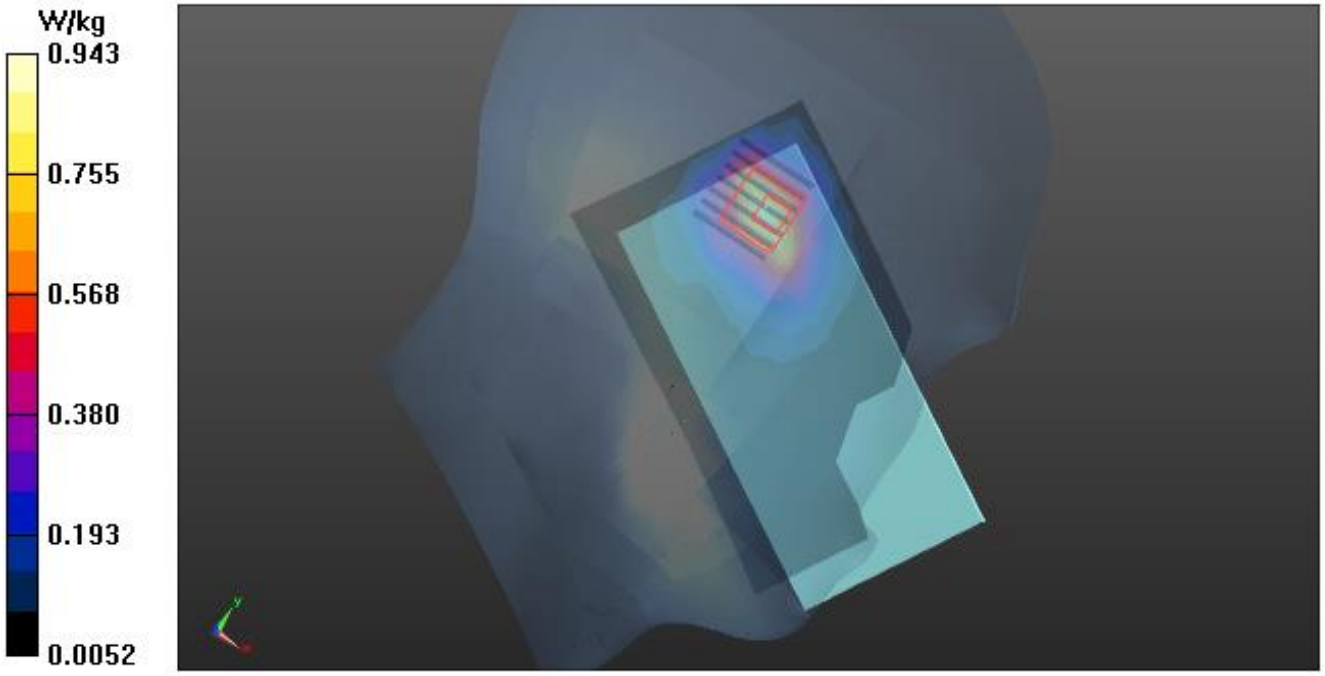


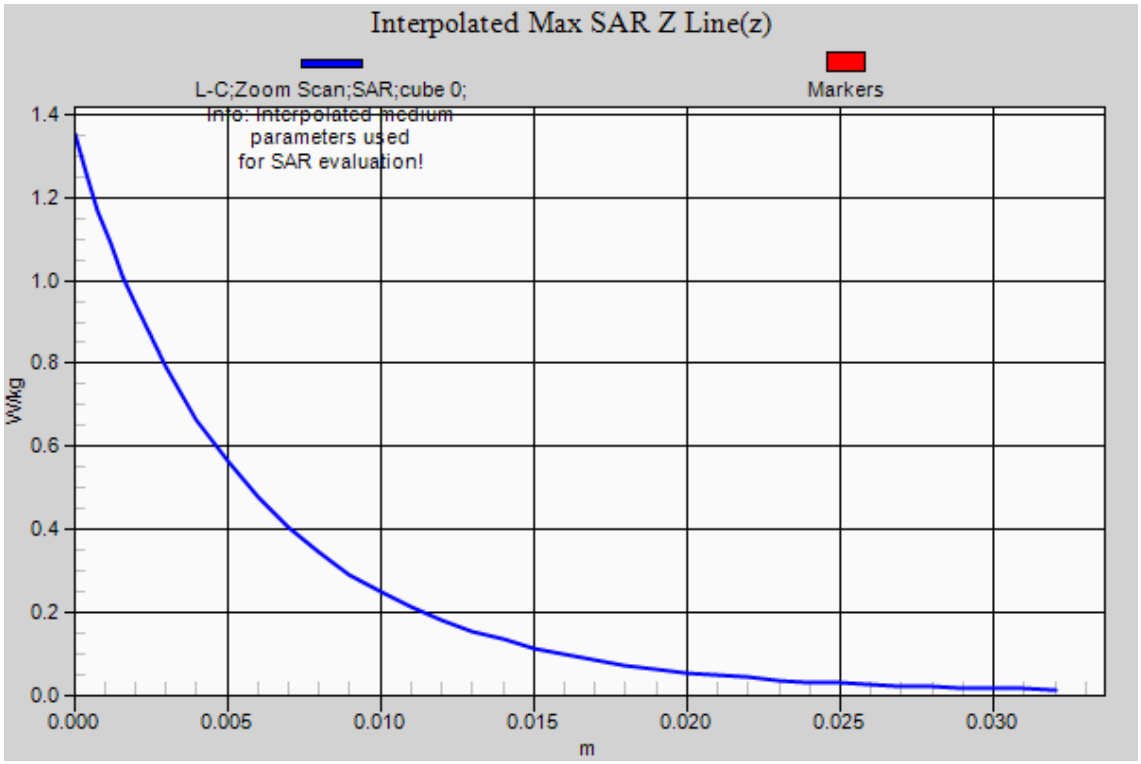
WIFI MODE
Test Laboratory: AGC Lab **Date: Jun. 15, 2022**
802.11b High-Touch-Left
DUT: Smart phone; Type: K55g

Communication System: Wi-Fi; Communication System Band: 802.11b; Duty Cycle: 1:1;
Frequency: 2462 MHz; Medium parameters used: f = 2450 MHz; σ=1.79 mho/m; εr =38.71; ρ= 1000 kg/m³ ;
Phantom section: Left Section
Ambient temperature (℃): 21.6, Liquid temperature (℃): 21.2

DASY Configuration:
• Probe: EX3DV4 – SN:3953; ConvF(7.60, 7.60, 7.60); Calibrated: Aug. 27,2021;
• Sensor-Surface: 3mm (Mechanical Surface Detection), z = 1.0, 31.0
• Electronics: DAE4 SN1398; Calibrated: May 17, 2022
• Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD;
• DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

HEAD LEFT/L-C/Area Scan (7x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.919 W/kg
HEAD LEFT/L-C/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.614 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 1.35 W/kg
SAR(1 g) = 0.637 W/kg; SAR(10 g) = 0.311 W/kg
Maximum value of SAR (measured) = 0.943 W/kg



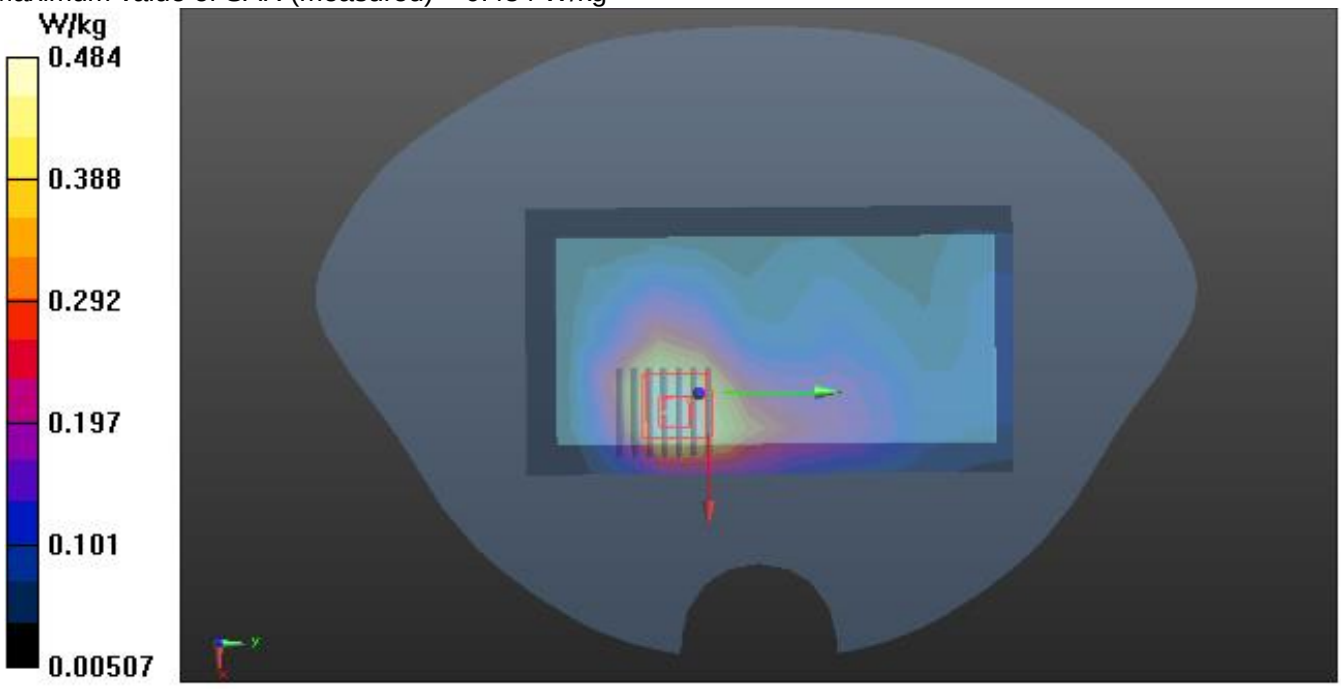


Test Laboratory: AGC Lab **Date: Jun. 15, 2022**
802.11b High - Body- Back (DTS)
DUT: Smart phone; Type: K55g

Communication System: Wi-Fi; Communication System Band: 802.11b; Duty Cycle: 1:1;
Frequency: 2462 MHz; Medium parameters used: f = 2450 MHz; σ=1.79 mho/m; εr =38.71; ρ= 1000 kg/m³ ;
Phantom section: Flat Section
Ambient temperature (℃): 21.6, Liquid temperature (℃): 21.2

DASY Configuration:
• Probe: EX3DV4 – SN:3953; ConvF(7.60, 7.60, 7.60); Calibrated: Aug. 27,2021;
• Sensor-Surface: 3mm (Mechanical Surface Detection), z = 1.0, 31.0
• Electronics: DAE4 SN1398; Calibrated: May 17, 2022
• Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD;
• DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

BODY/BACK/Area Scan (7x12x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.486 W/kg
BODY/BACK/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.298 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 0.649 W/kg
SAR(1 g) = 0.338 W/kg; SAR(10 g) = 0.183 W/kg
Maximum value of SAR (measured) = 0.484 W/kg

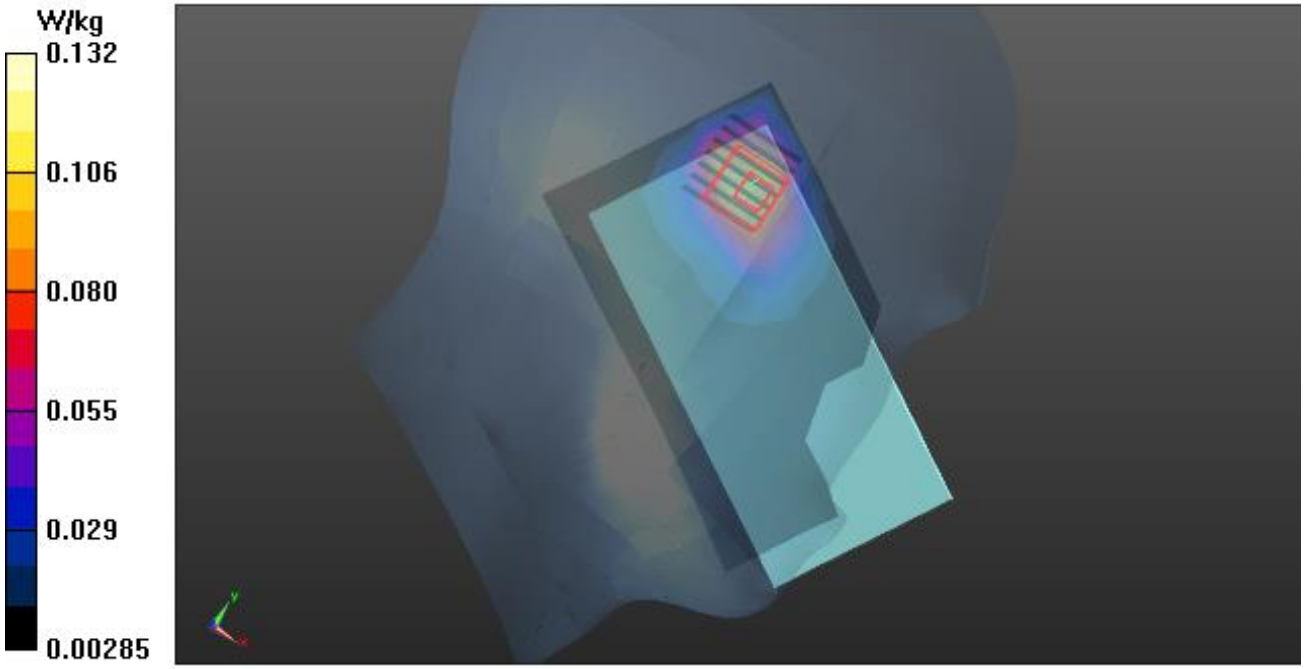


Bluetooth (BR&EDR) MODE
Test Laboratory: AGC Lab **Date: Jun. 15, 2022**
Bluetooth Mid-Touch-Left (8-DPSK)
DUT: Smart phone; Type: K55g

Communication System: BT; Communication System Band: Bluetooth; Duty Cycle: 77%;
Frequency: 2441 MHz; Medium parameters used: f = 2450 MHz; σ=1.77 mho/m; εr =39.23; ρ= 1000 kg/m³ ;
Phantom section: Left Section
Ambient temperature (℃): 21.6, Liquid temperature (℃): 21.2

DASY Configuration:
• Probe: EX3DV4 – SN:3953; ConvF(7.60, 7.60, 7.60); Calibrated: Aug. 27,2021;
• Sensor-Surface: 3mm (Mechanical Surface Detection), z = 1.0, 31.0
• Electronics: DAE4 SN1398; Calibrated: May 17, 2022
• Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD;
• DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

HEAD LEFT/L-C/Area Scan (7x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.111 W/kg
HEAD LEFT/L-C/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.071 V/m; Power Drift = 0.16 dB
Peak SAR (extrapolated) = 0.183 W/kg
SAR(1 g) = 0.089 W/kg; SAR(10 g) = 0.045 W/kg
Maximum value of SAR (measured) = 0.132 W/kg

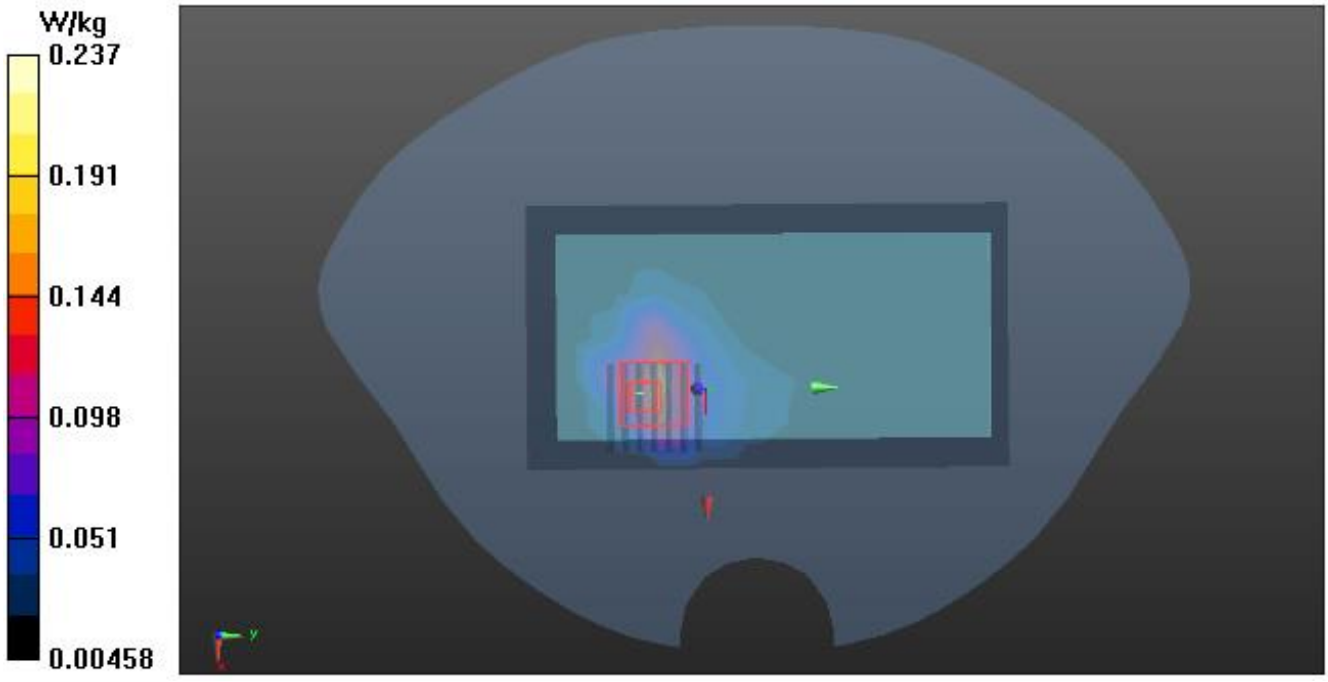


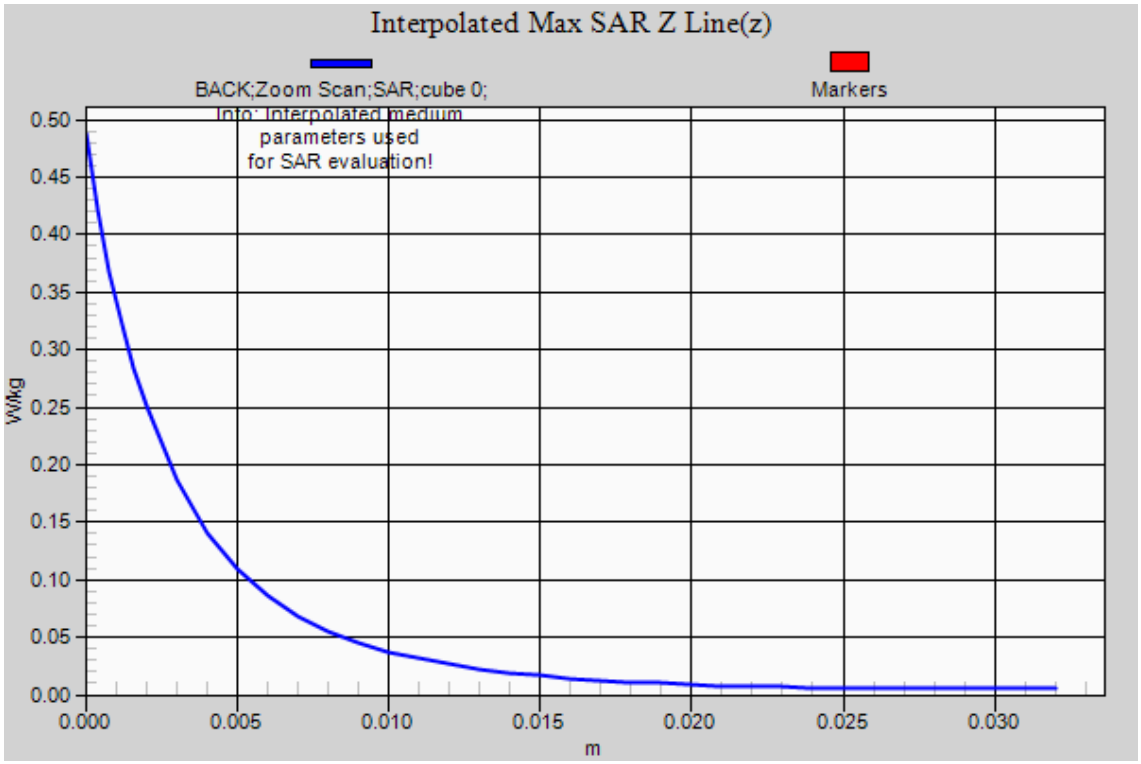
Test Laboratory: AGC Lab **Date: Jun. 15, 2022**
Bluetooth Mid- Body- Back (8-DPSK)
DUT: Smart phone; Type: K55g

Communication System: BT; Communication System Band: Bluetooth; Duty Cycle: 77%;
Frequency: 2441 MHz; Medium parameters used: f = 2450 MHz; σ=1.77 mho/m; εr =39.23; ρ= 1000 kg/m³ ;
Phantom section: Flat Section
Ambient temperature (℃): 21.6, Liquid temperature (℃): 21.2

DASY Configuration:
• Probe: EX3DV4 – SN:3953; ConvF(7.60, 7.60, 7.60); Calibrated: Aug. 27,2021;
• Sensor-Surface: 3mm (Mechanical Surface Detection), z = 1.0, 31.0
• Electronics: DAE4 SN1398; Calibrated: May 17, 2022
• Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD;
• DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

BODY/BACK/Area Scan (7x12x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.161 W/kg
BODY/BACK/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.715 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 0.487 W/kg
SAR(1 g) = 0.142 W/kg; SAR(10 g) = 0.065 W/kg
Maximum value of SAR (measured) = 0.237 W/kg



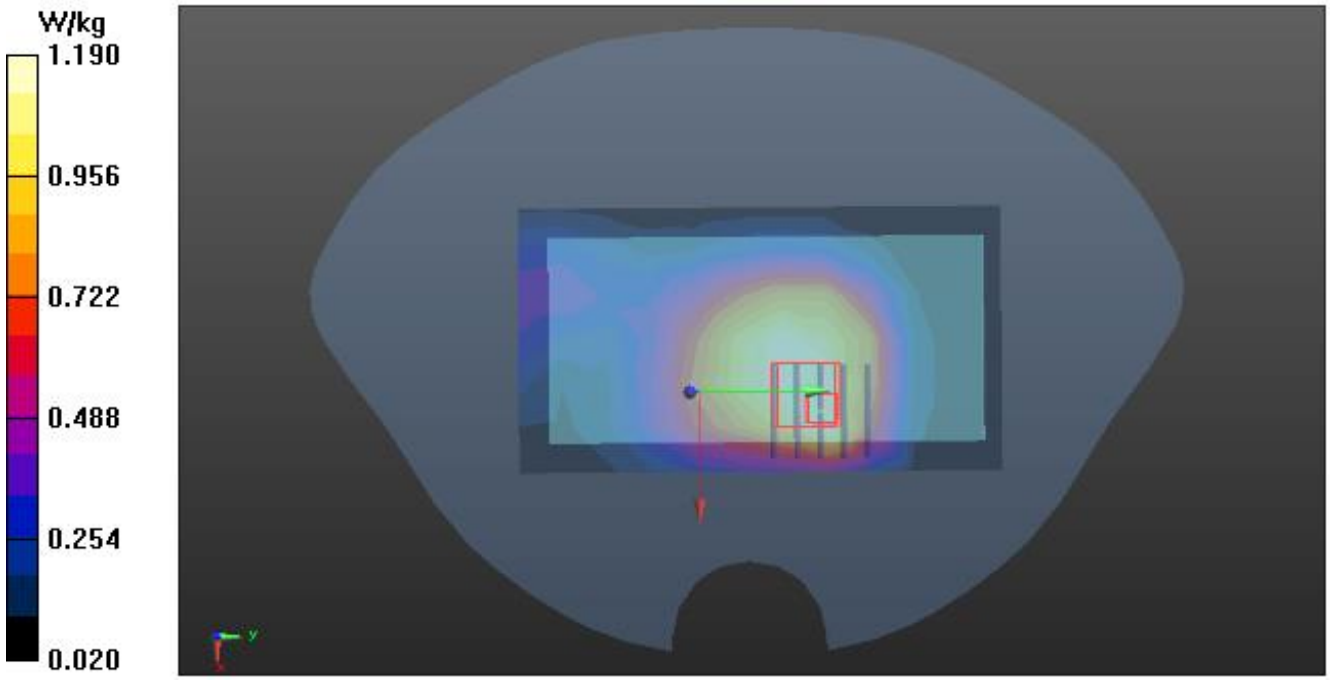


Repeated SAR
Test Laboratory: AGC Lab **Date: Jun. 20, 2022**
LTE Band 2 Low-Body- Front (1 RB#0)
DUT: Smart phone; Type: K55g

Communication System: LTE; Communication System Band: LTE Band 2; Duty Cycle: 1:1;
Frequency: 1860 MHz; Medium parameters used: f = 1900 MHz; σ= 1.42 mho/m; εr =39.89; ρ= 1000 kg/m³ ;
Phantom section: Flat Section
Ambient temperature (℃): 21.7, Liquid temperature (℃): 21.2

DASY Configuration:
• Probe: EX3DV4 – SN:3953; ConvF(8.26, 8.26, 8.26); Calibrated: Aug. 27,2021;
• Sensor-Surface: 3mm (Mechanical Surface Detection), z = 1.0, 31.0
• Electronics: DAE4 SN1398; Calibrated: May 17, 2022
• Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD;
• DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

BODY/FRONT-REPEAT/Area Scan (7x12x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.25 W/kg
BODY/FRONT-REPEAT/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 26.071 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 1.62 W/kg
SAR(1 g) = 0.990 W/kg; SAR(10 g) = 0.618 W/kg
Maximum value of SAR (measured) = 1.19 W/kg

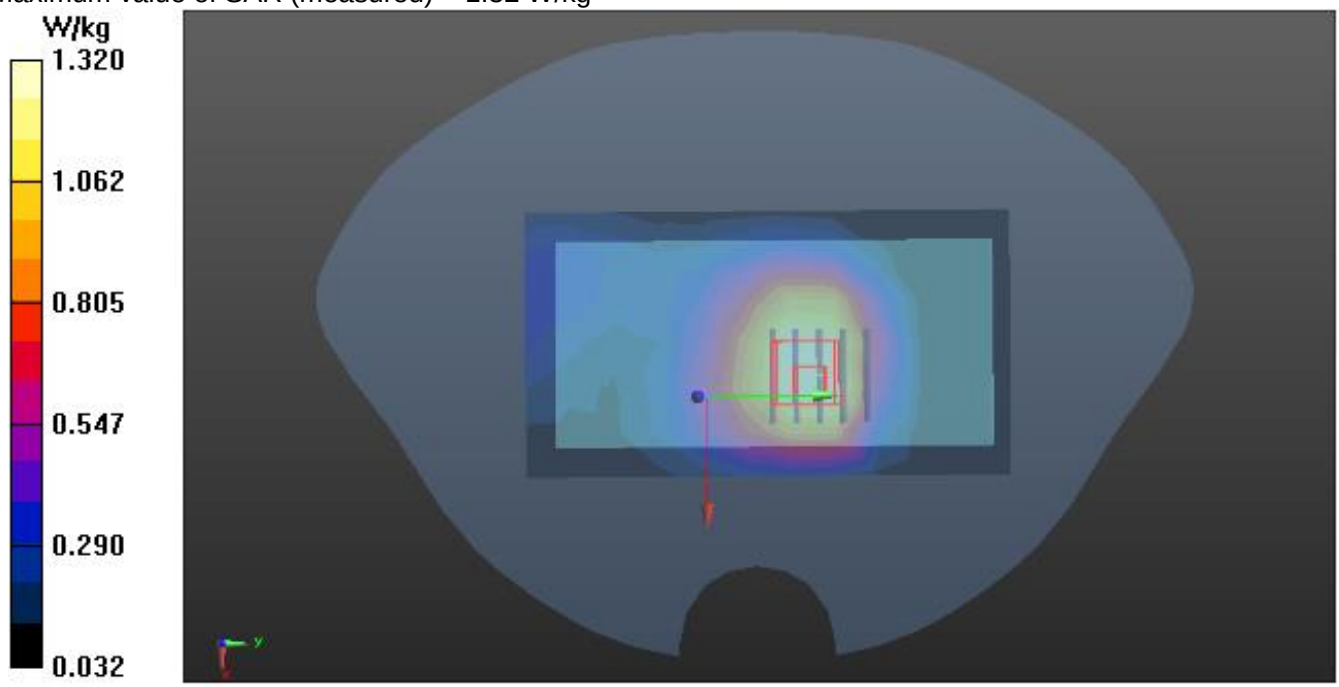


Test Laboratory: AGC Lab **Date: Jun. 24, 2022**
LTE Band 4 Mid-Body-Front (1 RB#0)
DUT: Smart phone; Type: K55g

Communication System: LTE; Communication System Band: LTE Band 4; Duty Cycle:1:1;
Frequency:1732.5 MHz; Medium parameters used: f = 1750 MHz; σ= 1.37 mho/m; εr =41.02; ρ= 1000 kg/m^3 ;
Phantom section: Flat Section
Ambient temperature (℃): 21.1, Liquid temperature (℃): 20.9

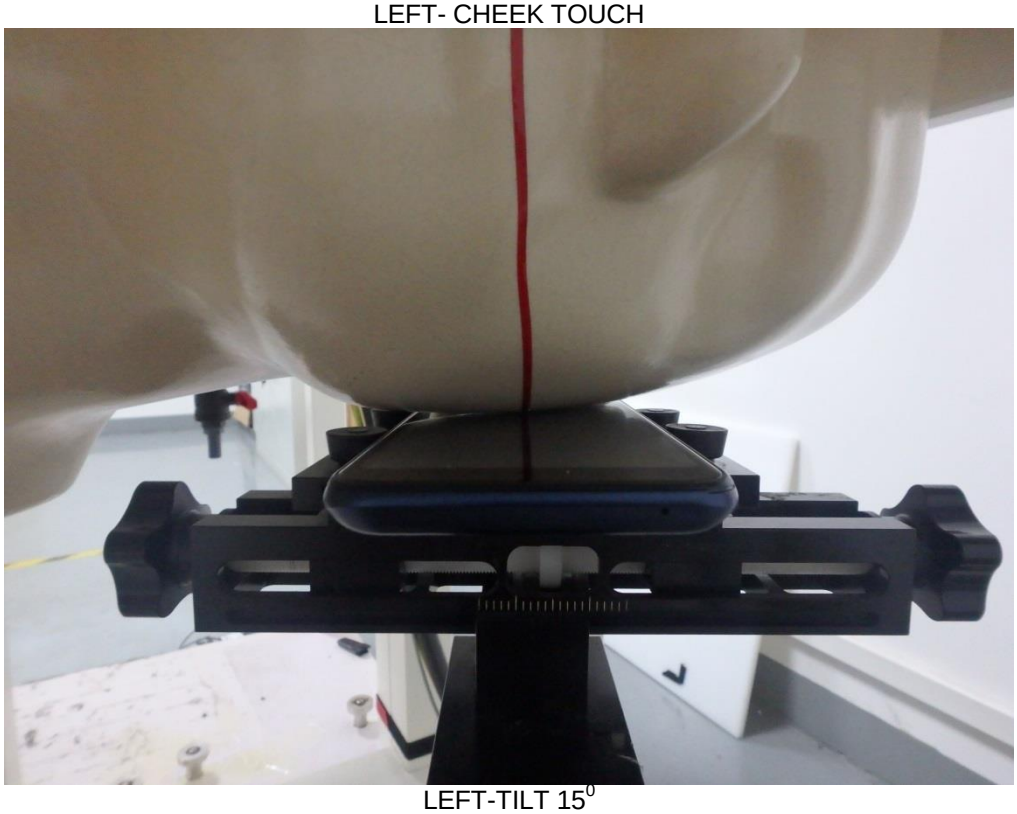
DASY Configuration:
• Probe: EX3DV4 – SN:3953; ConvF(8.55, 8.55, 8.55); Calibrated: Aug. 27,2021;
• Sensor-Surface: 3mm (Mechanical Surface Detection), z = 1.0, 31.0
• Electronics: DAE4 SN1398; Calibrated: May 17, 2022
• Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD;
• DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

BODY/FRONT REPEAT/Area Scan (7x12x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.38 W/kg
BODY/FRONT REPEAT/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 25.897 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 1.76 W/kg
SAR(1 g) = 1.16 W/kg; SAR(10 g) = 0.743 W/kg
Maximum value of SAR (measured) = 1.32 W/kg

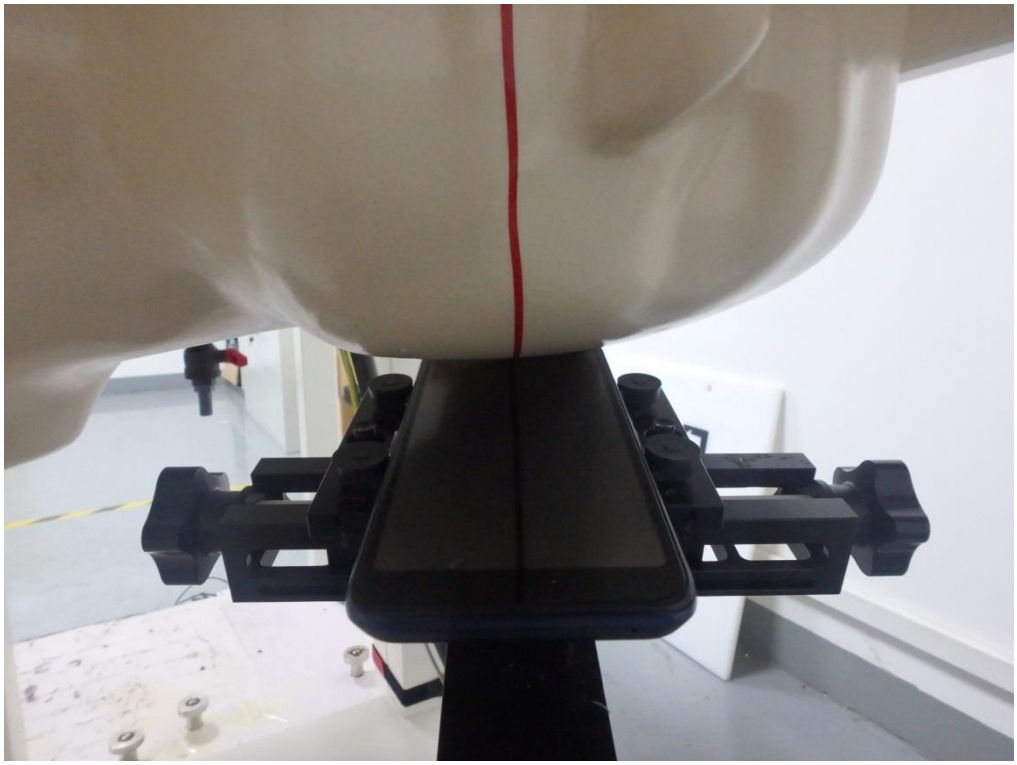


APPENDIX C. TEST SETUP PHOTOGRAPHS

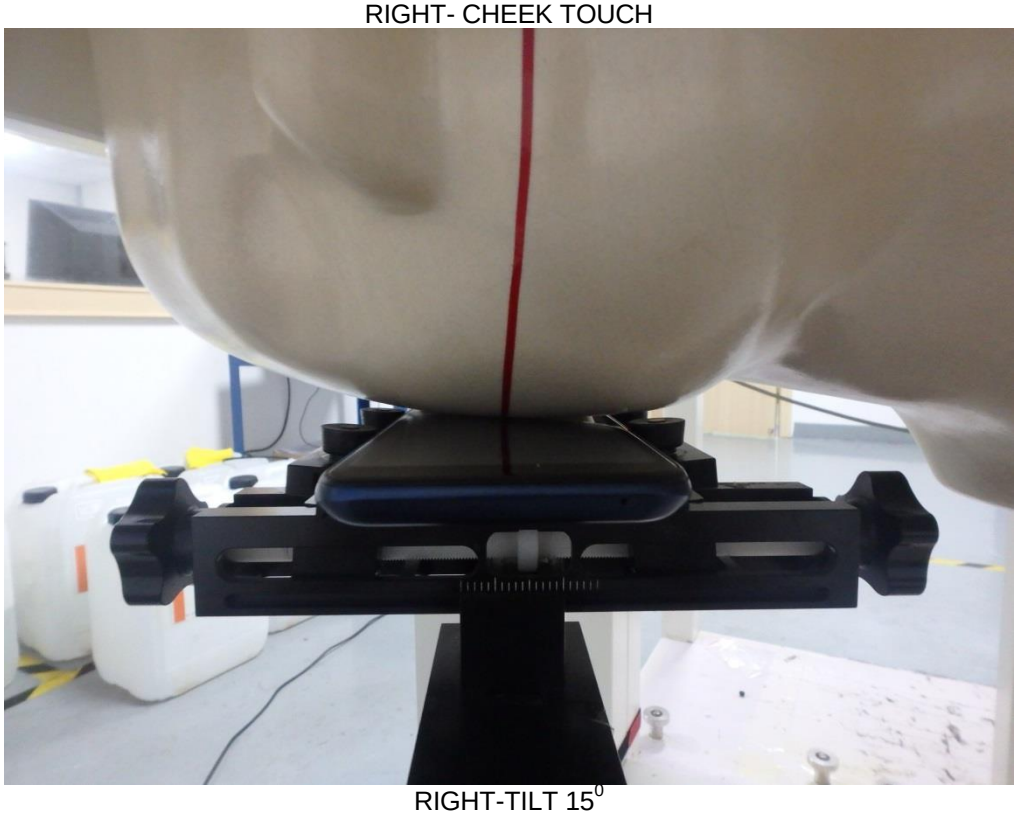
LEFT- CHEEK TOUCH



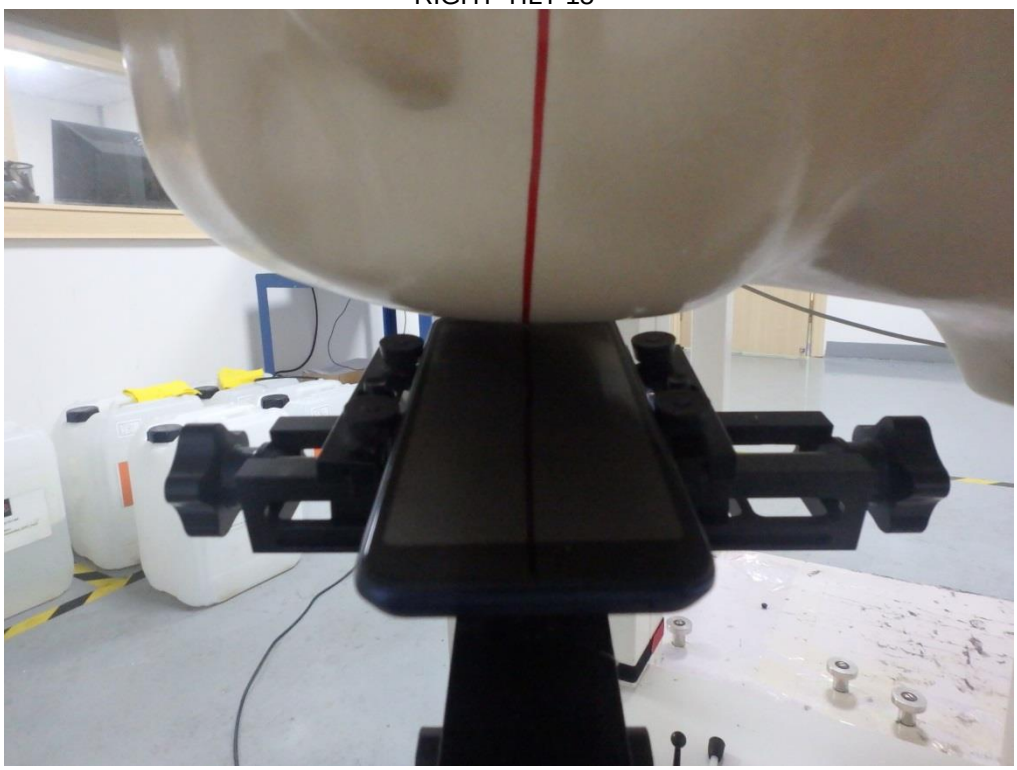
LEFT-TILT 15^0



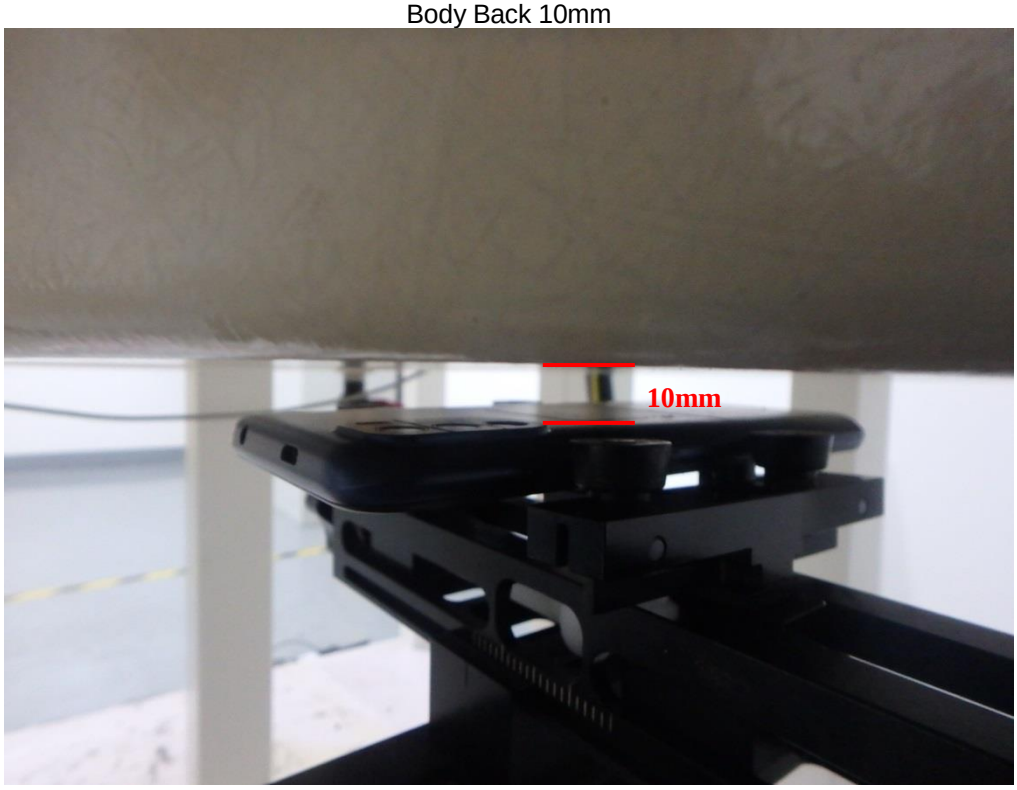
RIGHT- CHEEK TOUCH



RIGHT-TILT 15^0

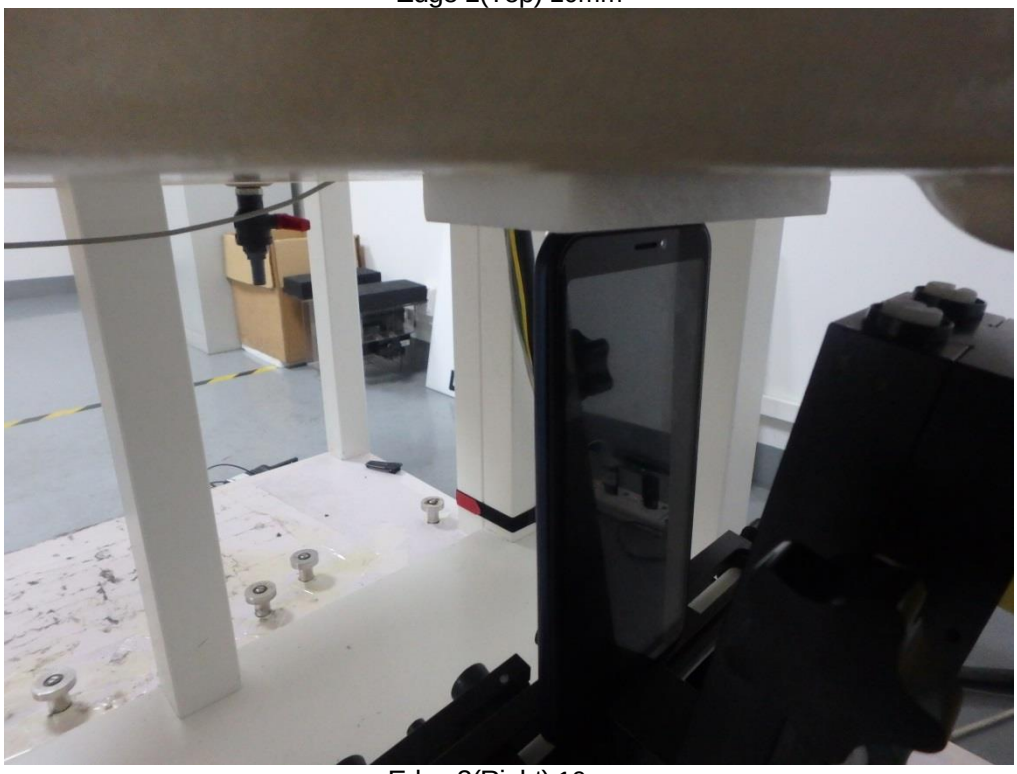


Body Back 10mm

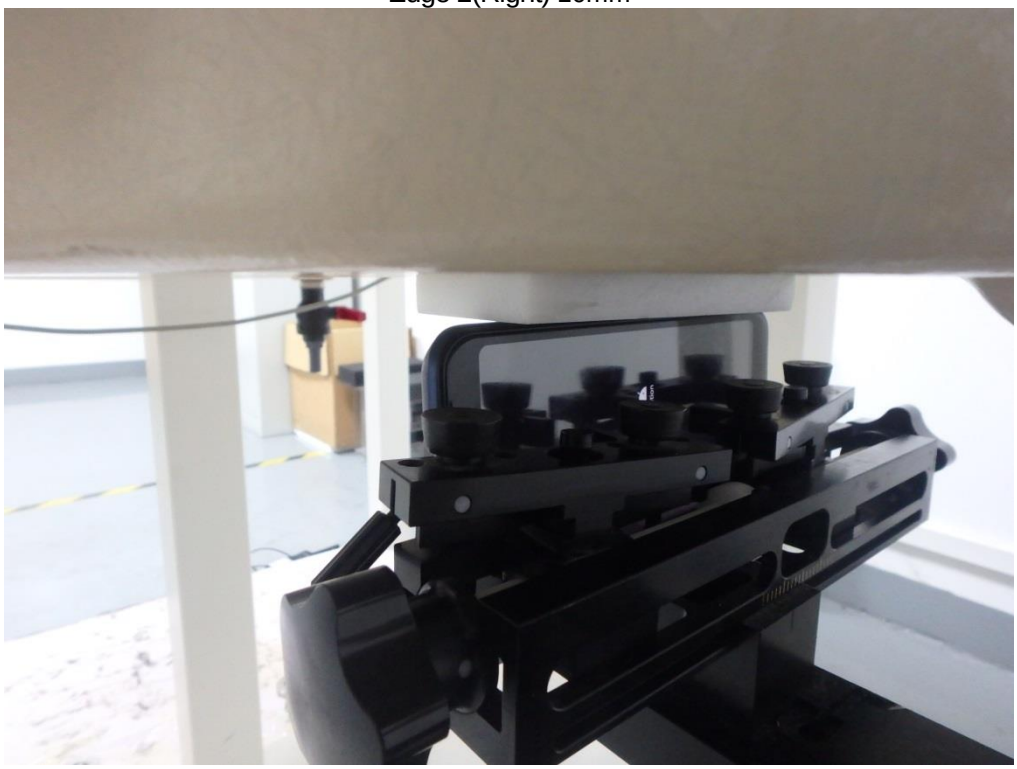


Body Front 10mm

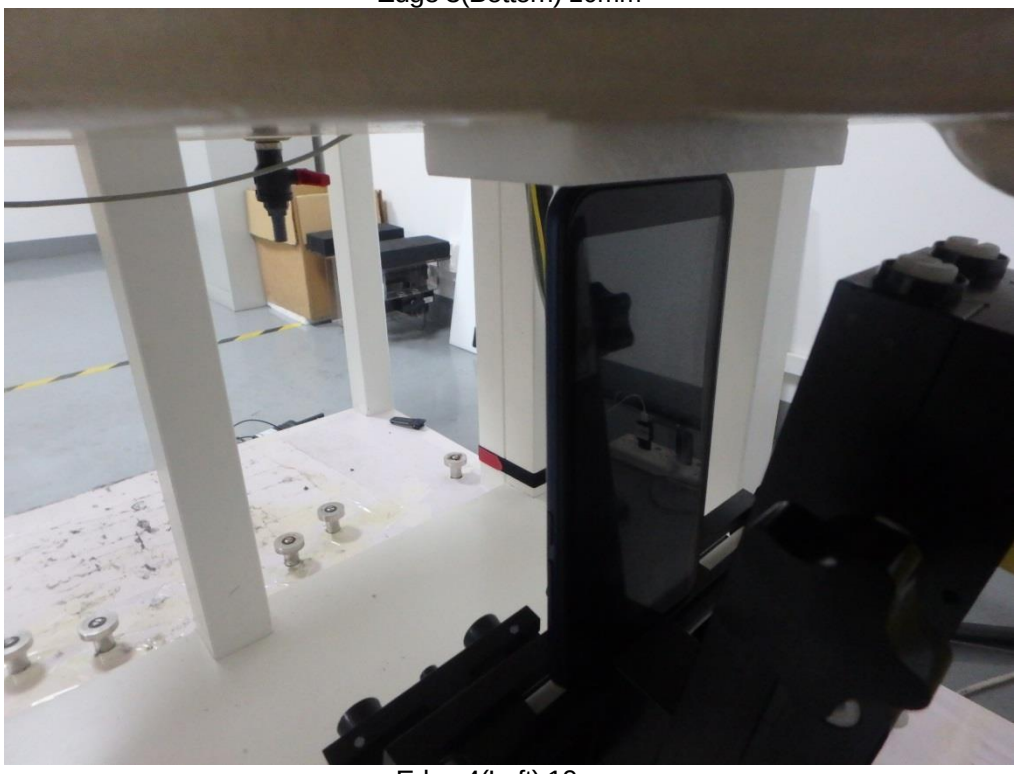
Edge 1(Top) 10mm



Edge 2(Right) 10mm



Edge 3(Bottom) 10mm

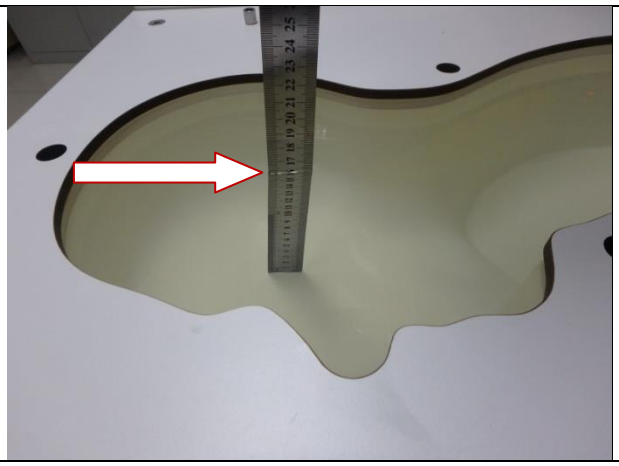
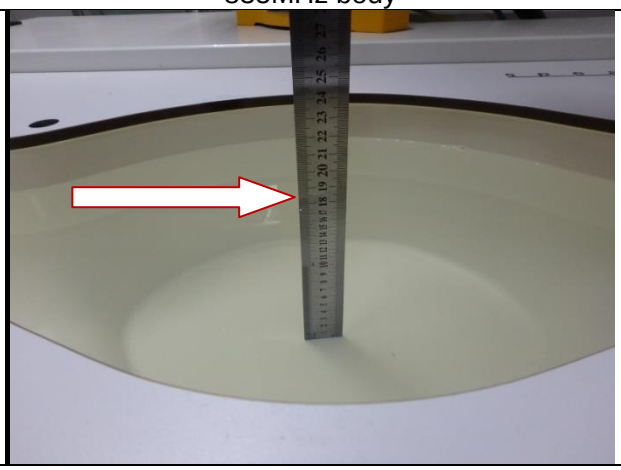
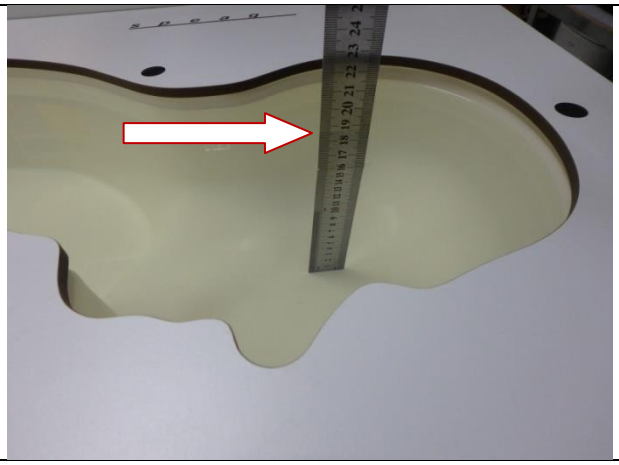
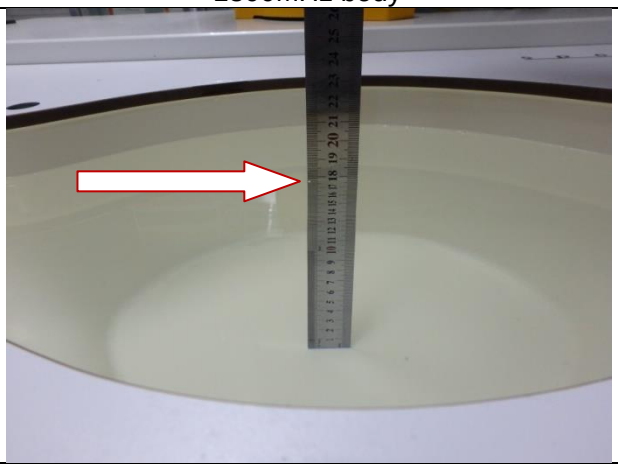
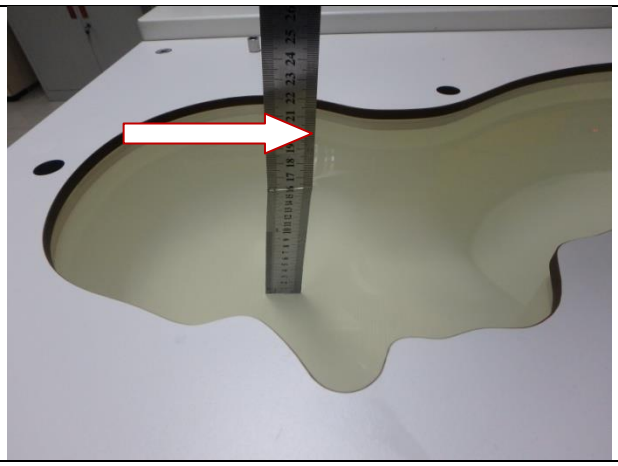
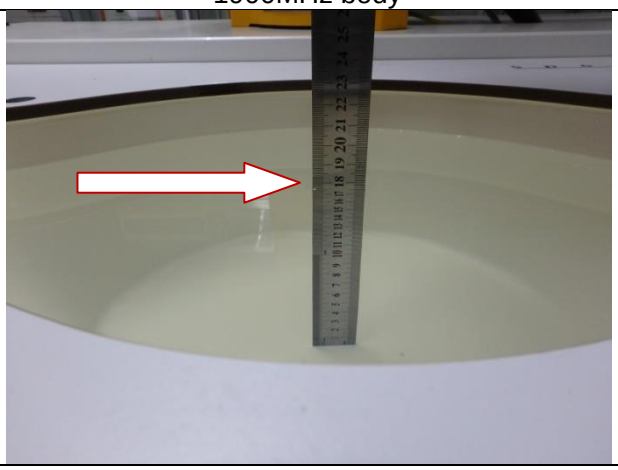


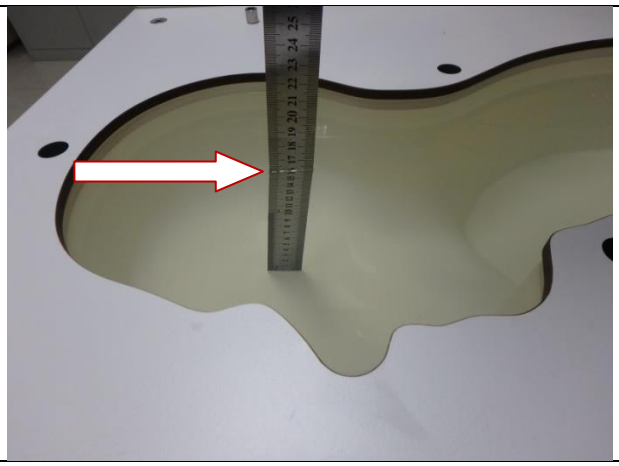
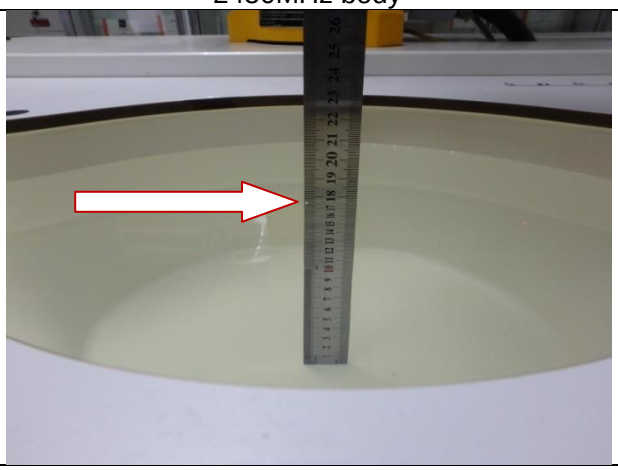
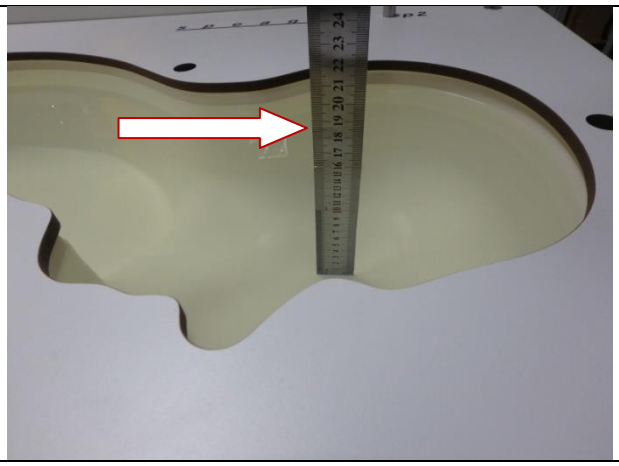
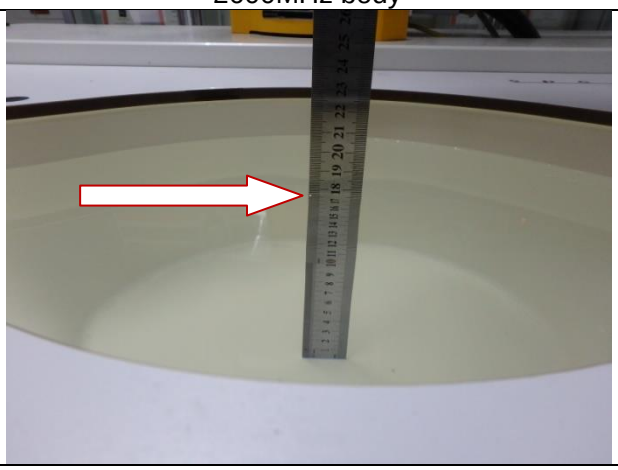
Edge 4(Left) 10mm

Body front with Headset 10mm

DEPTH OF THE LIQUID IN THE PHANTOM—ZOOM IN

Note：The position used in the measurement were according to IEEE 1528-2013

835MHz head	835MHz body
	
1800MHz head	1800MHz body
	
1900MHz head	1900MHz body
	

2450MHz head	2450MHz body
	
2600MHz head	2600MHz body
	

APPENDIX D. CALIBRATION DATA

Refer to Attached files.

APPENDIX E. EUT PHOTOGRAPHS

Refer to the Report No.: AGC10211220502AP01.

----END OF REPORT----

Conditions of Issuance of Test Reports

1. All samples and goods are accepted by the Attestation of Global Compliance (Shenzhen) Co., Ltd. (the "Company") solely for testing and reporting in accordance with the following terms and conditions. The company provides its services on the basis that such terms and conditions constitute express agreement between the company and any person, firm or company requesting its services (the "Clients").
2. Any report issued by Company as a result of this application for testing services (the "Report") shall be issued in confidence to the Clients and the Report will be strictly treated as such by the Company. It may not be reproduced either in its entirety or in part and it may not be used for advertising or other unauthorized purposes without the written consent of the Company. The Clients to whom the Report is issued may, however, show or send it, or a certified copy thereof prepared by the Company to its customer, supplier or other persons directly concerned. The Company will not, without the consent of the Clients, enter into any discussion or correspondence with any third party concerning the contents of the Report, unless required by the relevant governmental authorities, laws or court orders.
3.The Company shall not be called or be liable to be called to give evidence or testimony on the Report in a court of law without its prior written consent, unless required by the relevant governmental authorities, laws or court orders.
4. In the event of the improper use of the report as determined by the Company, the Company reserves the right to withdraw it, and to adopt any other additional remedies which may be appropriate.
5. Samples submitted for testing are accepted on the understanding that the Report issued cannot form the basis of, or be the instrument for, any legal action against the Company.
6. The Company will not be liable for or accept responsibility for any loss or damage however arising from the use of information contained in any of its Reports or in any communication whatsoever about its said tests or investigations.
7.Clients wishing to use the Report in court proceedings or arbitration shall inform the Company to that effect prior to submitting the sample for testing.
8. The Company is not responsible for recalling the electronic version of the original report when any revision is made to them. The Client assumes the responsibility to providing the revised version to any interested party who uses them.
9. Subject to the variable length of retention time for test data and report stored hereinto as otherwise specifically required by individual accreditation authorities, the Company will only keep the supporting test data and information of the test report for a period of six years. The data and information will be disposed of after the aforementioned retention period has elapsed. Under no circumstances shall we provide any data and information which has been disposed of after retention period. Under no circumstances shall we be liable for damage of any kind, including (but not limited to) compensatory damages, lost profits, lost data, or any form of special, incidental, indirect, consequential or punitive damages of any kind, whether based on breach of contract of warranty, tort (including negligence), product liability or otherwise, even if we are informed in advance of the possibility of such damages.